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Documents: ADMINISTRATIVE SITE PLAN APPROVALS FOR JANUARY 1, 2016 TO MARCH 31, 2016.PDF

PLANNING COMMISSION
CITY OF ROYAL OAK, MICHIGAN
www.romi.gov

Tuesday, April 12, 2016
7:30 P.M.
Room 315

AGENDA

A. Call to Order

B. Approval of Minutes for March 15, 2016

C. Public Comment on Non-Agenda Items

D. New Business

1. **Public Hearing – SP 16-04-05 – Amendment** to **Final Planned Unit Development (PUD) Site Plan** (SP 15-03-06) to construct 10,240-sq. ft. shopping center with restaurants, outdoor cafés, barber shop / hair salon, optometrist, and urgent care clinic on Outlot "A" at **southeast corner of E. Twelve Mile Rd. & N. Edgeworth Ave.** (parcel no. 25-14-126-009)
   Versa Development, LLC, Petitioner & Owner
   Giffels-Webster, Engineer
   Rogvoy Architects, Architect

2. **Public Hearing – Conditional Rezoning** from **Mixed Use 2** to **Neighborhood Business** and associated **Site Plan (SP 16-04-06)** to construct 2,929-sq. ft. financial institution with drive-through ATM (Community Choice Credit Union) at **1722-1740 Crooks Rd.** (parcel nos. 25-16-204-001 & 004)
   Community Choice Credit Union, Petitioner & Owner
   Facilinet Services, Inc., Representative
   SA+A Architects, Architect

3. **Public Hearing – Conditional Rezoning** from **One Family Residential** to **Multiple Family Residential** and associated **Site Plan (SP 16-04-07)** to construct 6 multiple-family dwelling units in 3-story building (31-ft. height) at **326 Oakland Ave.** (parcel no. 25-16-477-021)
   Jeff Dawkins Architect, LLC, Petitioner & Architect
   R. Coburn, Owner

E. Other Business

1. **SV 16-04-03 – Sign Variance** request to install wall sign for hospital (Beaumont Health System) at **3601 W. Thirteen Mile Rd.** (parcel no. 25-07-251-024) with variance to waive 170 sq. ft. from maximum permitted 150-sq. ft. wall sign area.
   Phillips Sign & Lighting, Inc., Petitioner & Contractor
   Beaumont Health System, Owner

2. **Preliminary Report to Establish L.A. Young Historic District**

3. **City of Troy Master Plan**

4. **City of Southfield Master Plan**

5. **Adopted Capital Improvements Program for 2016-2017 Fiscal Year**

6. **Administrative Site Plan Approvals**

Individuals with disabilities requiring special aids or services should contact the City Clerk at 211 Williams St., PO Box 64, Royal Oak, MI 48068-0064 or call (248) 246-3050. Call (248) 246-3010 for telecommunications device for the deaf (TDD).

ROYAL OAK PLANNING COMMISSION
CITY OF ROYAL OAK, MICHIGAN

Tuesday, March 15, 2016
7:30p.m.

AGENDA

A. Call to Order

B. Approval of Minutes for February 9, 2016

C. Public Comment on Non-Agenda Items

D. New Business

1. **Public Hearing – Special Land Use** & **Site Plan (SP 16-03-02)** to construct child day-care center (Learning Care Academy) on site of former elementary school at **3704 W. Thirteen Mile Rd.** (parcel no. 25-06-455-018)
   AF Jonna Development & Mgt. Co., Petitioner
   Tower Construction, LLC, Contractor
   Beaumont Health System, Owner

2. **SP 16-03-03 – Site Plan** to expand convenience store for automobile filling station (Mobil) at **1617 E. Twelve Mile Rd.** (parcel no. 25-10-480-013)
   Sara Corp. / Makki Investments, LLC, Petitioner & Owner
   Ziad El-Baba, Engineer

3. **SP 16-03-04 – Site Plan** to develop public park (Center Street Parklet) at **222 S. Center St.** (parcel no. 25-21-232-001)
   City of Royal Oak, Petitioner & Owner
   Living Lab Design Studio, Designer

E. Other Business

1. **SV 16-03-02 – Sign Variance** request to install off-premise wall sign for multiple-family development (Harrison Lofts) at **1108 S. Main St.** (parcel no. 25-21-433-012) with following variances:
   (a) Allow off-premise sign; and
   (b) Waive 131.1 sq. ft. from maximum permitted 15.9-sq. ft. wall sign area.
   Harrison Lofts II, LLC, Petitioner
   W4 Signs, Contractor
   Karen M. Shea & Jean Bower, Owners

2. **Public Hearing – Capital Improvements Program for 2016-2017 Fiscal Year**

Present
Rebecca Black
Robert Bruner
Jeffrey Chase
Jim Ellison, Mayor
Clyde Esbri, Chairperson
Dan Godek
Gary Quesada (@ 7:35 p.m.)
Anne Vaara, Vice-Chairperson

Absent
Sharlan Douglas, City Commissioner

Staff
Tim Thwing, Director of Community Development

DRAFT

A. Call to Order

Chairperson Esbri called the March 15, 2016 regular meeting of the Planning Commission to order at 7:30 p.m.

B. Approval of Minutes for February 9, 2016

Moved by Mr. Chase
Supported by Ms. Black

To approve the minutes of the February 9, 2016 regular meeting of the Planning Commission as **presented**.

Motion adopted unanimously.

C. Public Comment on Non-Agenda Items

Mr. Quesada arrived at 7:35 p.m.

Chairperson Esbri invited members of the audience to comment on any issues that were not part of the meeting's agenda. As no members of the audience came forward Chairperson Esbri closed the public comment portion of the agenda.

D. New Business

1. **Public Hearing – Special Land Use** & **Site Plan (SP 16-03-02)** to construct child day-care center (Learning Care Academy) on site of former elementary school at **3704 W. Thirteen Mile Rd.** (parcel no. 25-06-455-018)
   AF Jonna Development & Mgt. Co., Petitioner
   Tower Construction, LLC, Contractor
   Beaumont Health System, Owner

   Moved by Mayor Ellison
   Supported by Ms. Vaara

   To approve a **special land use permit** to construct a child day-care center (Learning Care Academy) on the site of a former elementary school at **3704 West Thirteen Mile Road** (parcel no. 25-06-455-018).

   Motion adopted unanimously.

   Moved by Mayor Ellison
   Supported by Mr. Godek

   To approve SP 16-03-02, a **site plan** to construct a child day-care center (Learning Care Academy) on the site of a former elementary school at **3704 West Thirteen Mile Road** (parcel no. 25-06-455-018), with the following **contingencies**:

DRAFT

a. The day-care center shall comply with the requirements for hours of operation, overnight activity, and maintaining state licenses in § 770-59 (A)(5) and (6) of the Zoning Ordinance.

b. The petitioner shall provide a joint access agreement with the property owner of 3600 West Thirteen Mile Road (parcel no. 25-06-455-014) to be reviewed and approved by the City Attorney and recorded with the Oakland County Register of Deeds. The agreement shall state that the adjacent property owner agrees to the closing of their existing driveways to and from Thirteen Mile Road, and that the petitioner agrees to provide a permanent access easement to that adjacent property through the petitioner's site.

c. All improvements to the public right-of-way shall be in accordance with the specifications and standards of the City Engineer, including, but not limited to: narrowing of both driveway approaches; installation of a pedestrian crosswalks over Thirteen Mile Road on both sides of the intersection; and installation of a four-way traffic signal.

d. All signage shall comply with the Sign Ordinance (Chapter 607 Signs, Article II Sign Regulations) or receive necessary variances from the Planning Commission.

e. A performance bond shall be posted in an amount to be determined by the Building Official.

f. The site plan shall meet all other code and ordinance requirements, as determined by the Building Official, Fire Marshall, and City Engineer, prior to issuance of any building permit. Such requirements include, but are not limited to, the Michigan Building Code, the Fire Prevention Ordinance (Chapter 340), and the Stormwater Detention Ordinance (Chapter 644).

Motion adopted unanimously.

2. **SP 16-03-03 – Site Plan** to expand convenience store for automobile filling station (Mobil) at **1617 E. Twelve Mile Rd.** (parcel no. 25-10-480-013)
Sara Corp. / Makki Investments, LLC, Petitioner & Owner
Ziad El-Baba, Engineer

The application was withdrawn by the petitioner prior to the meeting.

3. **SP 16-03-04 – Site Plan** to develop public park (Center Street Parklet) at **222 S. Center St.** (parcel no. 25-21-232-001)
City of Royal Oak, Petitioner & Owner
Living Lab Design Studio, Designer

Ms. Vaara announced should abstain from this case due to a conflict of interest and left the table.

Moved by Mr. Bruner
Supported by Mr. Chase

To approve SP 16-03-04, a **site plan** to develop a public park (Center Street Parklet) at **222 South Center Street** (parcel no. 25-21-232-001), provided the site plan meets all other code and ordinance requirements, as determined by the Building Official and City Engineer, prior to issuance of any building permit, including, but not limited to, the Michigan Building Code and the Stormwater Detention Ordinance (Chapter 644).

Motion adopted unanimously.

Ms. Vaara returned to the table.

DRAFT

E. Other Business

1. **SV 16-03-02 – Sign Variance** request to install off-premise wall sign for multiple-family development (Harrison Lofts) at **1108 S. Main St.** (parcel no. 25-21-433-012) with following variances:
(a) Allow off-premise sign; and
(b) Waive 131.1 sq. ft. from maximum permitted 15.9-sq. ft. wall sign area.
Harrison Lofts II, LLC, Petitioner
W4 Signs, Contractor
Karen M. Shea & Jean Bower, Owners

Moved by Mayor Ellison
Supported by Ms. Vaara

To grant SV 16-03-02, a **temporary sign variance** request to install an off-premise wall sign for a multiple-family development (Harrison Lofts) at **1108 South Main Street** (parcel no. 25-21-433-012) **until December 31, 2016**, with the following variances:
(a) Allow an off-premise sign; and
(b) Waive 131.1 square feet from the maximum permitted 15.9-sqare foot wall sign area.

Motion adopted 5 to 3.
Yes: Ms. Black, Mayor Ellison, Mr. Esbri, Mr. Quesada, Ms. Vaara
No: Mr. Bruner, Mr. Chase, Mr. Godek

2. **Public Hearing – Capital Improvements Program for 2016-2017 Fiscal Year**

Moved by Mayor Ellison
Supported by Mr. Godek

Be it resolved, that the Planning Commission approves the capital improvements program for the 2016-2017 fiscal year as presented, with priority given to environmentally-friendly projects involving the protection of natural resources, and recommends its adoption by the City Commission as part of the 2016-2017 fiscal year budget.

Motion adopted unanimously.

F. Adjournment

Moved by Mr. Godek
Supported by Ms. Black

To **adjourn** the March 15, 2016 regular meeting of the Planning Commission at 8:52 p.m.

Motion adopted unanimously.

Clyde Esbri
Chairperson, Planning Commission

Timothy E. Thwing
Director of Community Development

DRAFT

M E M O R A N D U M

Community Development Department

City of Royal Oak, Michigan

Meeting Date: April 12, 2016
211 Williams St. / P.O. Box 64
Royal Oak, MI 48068-0064
Phone: (248) 246-3280
Fax: (248) 246-3005
www.romi.gov

DATE: April 1, 2016

TO: Planning Commission

FROM: Planning Division

SUBJECT: **SP 16-04-05 –** Amendment to Final Planned Unit Development (PUD) Site Plan (SP 15-03-06) to construct 10,240-sq. ft. shopping center with restaurants, outdoor cafés, barber shop / hair salon, optometrist, and urgent care clinic on Outlot "A" at **southeast corner of E. Twelve Mile Rd. & N. Edgeworth Ave.** (parcel no. 25-14-126-009)
Versa Development, LLC, Petitioner & Owner
Giffels-Webster, Engineer
Rogvoy Architects, Architect

The above-referenced application for an amendment to a final planned unit development (PUD) site plan is scheduled for consideration at the next regular meeting. The Planning Commission may recommend approval of an amendment to a final PUD site plan to the City Commission provided it determines the amended plan meets the criteria and standards of § 770-12, Site Plan Review, and § 770-100, Project Design Standards (PUD), of the Zoning Ordinance.

In 2015, the Planning Commission and City Commission approved a final PUD site plan to construct a large-scale retail establishment (Kroger) with an automobile filling station at this location. The approved plan included two outlots that were to be developed at a later date. The petitioner now proposes to construct a 10,240-square foot shopping center on one of the outlots (Outlot "A") located at the southeast corner of Twelve Mile Road and Edgeworth Avenue. The shopping center would contain the following uses:

- Parthenon Coney Island, a restaurant with an outdoor café;
- A second unnamed restaurant also with an outdoor café;
- Supercuts, a barber shop or hair salon;
- RX Optical, an optometrist office with eye examinations and sales of eye glasses; and
- Med Post, an urgent care clinic or medical office.

According to the development agreement approved as part of the original PUD site plan, the outlots could be developed with any permitted use in the Neighborhood Business zoning district, or other uses that may be approved by the city. All of the proposed uses would be permitted uses in the Neighborhood Business zoning district if developed as separate projects. However, restaurants within a shopping center and outdoor dining are special land uses in that zoning district.

The shopping center would not have any direct vehicular access to either Twelve Mile Road or Edgeworth Avenue. All access to the shopping center would be provided from Kroger's parking lot. A joint access agreement will therefore be necessary to ensure permanent access to the shopping center is maintained through the Kroger property.

The required off-street parking for the shopping center as calculated by staff is as follows:

Use	Gross Floor Area (s.f.)	Usable Floor Area (s.f.)	# Per	Spaces Required
Parthenon Coney Island	2,400	1,920	65	30
Outdoor Café	-	270	65	5
Restaurant - East	2,200	1,760	65	28
Outdoor Café	-	290	65	5
Super Cuts / RX Optical / Med Post	5,640	4,512	300	16
TOTAL	**10,240**	**8,752**		**84**
Spaces Provided				**87**
Surplus / (Deficiency)				**3**

The usable floor area proposed by the petitioner is 80% of the gross floor area for each use or tenant space. The usable floor area for all uses could be increased to 85% of gross floor area and still meet the minimum amount of off-street parking required for the shopping center. However, should the final PUD site plan amendment be approved without a more detailed floor plan, any plans submitted for permits with a usable floor area exceeding the amount of provided parking will require a subsequent amendment approved by the Planning Commission and City Commission.

There are a few items on the petitioner's plan that should be corrected before it is reviewed by the City Commission. First, the shopping center's gross floor area is listed as 10,510 square feet on the site plan but 10,240 square feet on the floor plan. On the site plan the building's dimensions are 132.7 feet by 80.7 feet while on the floor plan they are 128 feet by 80 feet. The building's dimensions and gross floor area should be consistent on all plan sheets.

Second, the usable floor area and off-street parking table on the site plan does not correctly reflect required Zoning Ordinance standards, and they are not consistent with the dimensions of the submitted floor plan. The table should be revised to include the usable floor area and off-street parking as calculated by staff in the table above.

Finally, the dimensions of the outdoor cafés are not consistent between the site plan and the floor plan. The actual area of the outdoor cafés used to calculate off-street parking would be the space inside of the proposed railing or fence.

Provided the Planning Commission approves the restaurants and outdoor cafés, no additional waivers to Zoning Ordinance standards would be required as part of the proposed shopping center.

Following the required public hearing, the Planning Commission may recommend approval, table, or recommend denial of an amendment to a final PUD site plan. The basis for the Planning Commission's decision can be found in §770-98 (C) of the Zoning Ordinance, which reads as follows:

C. The applicant for a PUD must demonstrate all of the following criteria as a condition to being entitled to PUD treatment:

(1) Granting of the PUD will result in one of the following:

(a) A recognizable and material benefit to the ultimate users of the project and to the community, where such benefit would otherwise be unfeasible or unlikely to be achieved without application of the PUD regulations; or

(b) A nonconforming use shall, to a material extent, be rendered more conforming, or less offensive, to the zoning district in which it is situated.

(2) The proposed type and density of use shall not result in an unreasonable increase in the need for or burden upon public services, facilities, streets and utilities.

(3) The proposed development shall be consistent with the public health, safety and welfare of the City.

(4) The proposed development shall not result in an unreasonable negative economic impact upon surrounding properties.

(5) The proposed development shall be under single ownership and/or control such that there is a single entity having responsibility for completing the project in conformity with this chapter.

(6) The proposed development shall be consistent with the goals and policies of the City of Royal Oak Master Plan.

The Planning Commission's recommendation on a final PUD site plan amendment is forwarded to the City Commission. In addition to a recommendation on the amended site plan, the City Commission will also review a draft amendment to the previously-approved development agreement.

Should the Planning Commission wish to recommend that the City Commission approve the final PUD site plan amendment, including all discretionary items, the Planning Division recommends the following contingencies:

1. The petitioner shall prepare and submit an application for review of the final PUD site plan amendment by the City Commission containing all information required under § 770-99 (C) of the Zoning Ordinance, including a draft amendment to the development agreement. The final PUD site plan amendment to be reviewed by the City Commission shall comply with the Zoning Ordinance (Chapter 770) unless otherwise specified within these contingencies.

2. Prior to review by the City Commission, the final PUD site plan amendment shall be revised to include the following items and any further revisions or additional contingencies required by the Planning Commission:

    a) The dimensions and floor area of the shopping center and outdoor cafés shall be consistent on all plan sheets.
    b) The usable floor area and required off-street parking for all uses shall be as calculated by staff.
    c) A joint access agreement shall be submitted verifying permanent access will be maintained between outlot "A" (the shopping center) and the development parcel (Kroger).

3. The final PUD site plan amendment to be reviewed by the City Commission shall include separate boundaries, dimensions, and a legal description for outlot "A" and the proposed shopping center, specifying both the ownership and party responsible for future maintenance of outlot "A."

4. The amendments to the final PUD site plan and/or development agreement to be reviewed by the City Commission shall include, as required under § 770-99 (C)(1)(c) and (d) of the Zoning Ordinance, a specific schedule of the intended development and construction details, including phasing or timing, a staging plan, and a specific schedule of general improvements, including, without limitation, lighting, signage, the mechanisms designed to reduce noise, utilities, and visual screening features.

5. All paving, utilities, and other improvements, including work within public rights-of-way, shall be in accordance with the specifications and standards of the City Engineer. All electrical, telephone, and similar utilities shall be placed underground.

6. A performance bond shall be posted in an amount to be determined by the Building Official.

7. The final PUD site plan amendment shall meet all other code and ordinance requirements, as determined by the Building Official and City Engineer, including, but not limited to, the Michigan Building Code and the city's Stormwater Detention Ordinance (Chapter 644), and the City Commission shall approve an amendment to the associated development agreement, **prior** to issuance of **any** building or right-of-way permits.

cc: Ryan Schultz, Versa Development, LLC
Nancy M. Standish, PE, Giffels-Webster

It is recommended that the petitioner or a representative attend the April 12, 2016 Planning Commission meeting. The meeting starts at 7:30 p.m. in the City Commission Chambers on the 3rd floor of City Hall.

VERSA ROYAL OAK

CITY OF ROYAL OAK, OAKLAND COUNTY, MICHIGAN

OWNER/APPLICANT
VERSA DEVELOPMENT
MR. RYAN SCHULTZ
25900 W. 11 MILE ROAD, SUITE 250
SOUTHFIELD, MI 48034
(248) 421-7140

ARCHITECT
ROGVOY ARCHITECTS
MR. MARK DRANE
32500 TELEGRAPH ROAD, SUITE 250
BINGHAM FARMS, MI 48025
(248) 540-7700

ENGINEER
GIFFELS WEBSTER
MS. NANCY STANDISH, PE
1025 E. MAPLE, SUITE 100
BIRMINGHAM, MI 48009
(248) 852-3100

SURVEYOR
GIFFELS WEBSTER
MR. JOHN REDASH, PS
28 W. ADAMS, SUITE 1200
DETROIT, MI 48226
(313) 962-4442

LANDSCAPE ARCHITECT
ALLEN DESIGN
MR. JIM ALLEN, RLA
557 CARPENTER
NORTHVILLE, MI 48187
(248) 467-4668

SITE PLAN

LOCATION MAP
NOT TO SCALE

N

APPROVALS AND PERMITS

NAME	SUBMITTAL DATE	REVISION DATE(S)	APPROVAL DATE	PERMIT NO.
SITE PLAN APPROVAL	12.07.2015	-	-	-
	-	-	-	-
CITY ENGINEERING APPROVAL				
CITY SANITARY APPROVAL	-	-	-	-
CITY WATERMAIN APPROVAL				
	-	-	-	-
OCWRC SESC PERMIT	-	-	-	-

SHEET INDEX

01 COVER SHEET
02 TOPOGRAPHIC SURVEY
03 SESC PLAN
04 PAVING PLAN
05 GRADING PLAN
06 UTILITY PLAN
07 ROYAL OAK STANDARD NOTES
08 SITE DETAILS

SHEETS BY OTHERS

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A-2 SITE DETAILS
LTG-1 SITE LIGHTING PLAN
L-1 LANDSCAPE PLAN
L-2 LANDSCAPE DETAILS

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Executive:	M.P.
Manager:	N.M.S.
Designer:	N.M.S.
Quality Control:	
Section:	7
	T-6-N R-7-E

Professional Seal:

STATE OF MICHIGAN
NANCY M. STANDISH
ENGINEER
No. 61386
REGISTERED PROFESSIONAL ENGINEER

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DATE:	ISSUE:
01.19.2016	SUBMIT SITE PLAN
02.22.2016	RESUBMIT SITE PLAN

Developed For:

VERSA DEVELOPMENT
25900 W. 11 MILE ROAD
SUITE 250
SOUTHFIELD, MI 48034
(248) 421-7140

COVER SHEET

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
Scale:	N/A
Sheet:	1
Project:	18970.00

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H:\18\18900\18970 Versa Royal Oak\Drawing Files\Site plan\01 Cover.dwg

12 MILE ROAD
(PUBLIC, VARIABLE WIDTH)

N. EDGEWORTH AVENUE
(PUBLIC, 60' WIDE)

OUTLOT 'A'
1.54 ACRES
PART OF 25-14-126-007

EXISTING KROGER ACCESS DRIVE

BENCHMARKS:

CONTROL BENCHMARK:
CONTROL BM: CITY OF ROYAL OAK BM #1455, NORTH BOLT ON FIRE HYDRANT AT SOUTHEAST CORNER OF GARDENIA AND EDISON AVENUE. ELEVATION = 641.52 (U.S.G.S.) 643.52 (ROYAL OAK DATUM)

BENCHMARK #1:
SITE BM #1: SET RAILROAD SPIKE IN NORTHEAST FACE OF UTILITY POLE LOCATED 45'± WEST AND 10'± NORTH OF THE NORTHEAST CORNER OF PARCEL 1 (2100 BELLAIRE AVENUE) ELEVATION = 642.57 (U.S.G.S.)

BENCHMARK #2:
SITE BM #2: SCRIBED "+" ON SOUTHWEST ANCHOR BOLT FOR TRAFFIC LIGHT POLE LOCATED 15'± SOUTH AND 20'± EAST OF THE SOUTHWEST CORNER OF 12 MILE ROAD AND STEPHENSON HIGHWAY. ELEVATION = 640.98 (U.S.G.S.)

SCALE: 1"= 20'
0 10 20 40 60

giffels webster
Engineers
Surveyors
Planners
Landscape Architects
Environmental Specialists

1025 E. Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (248) 852-6372
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Executive:	M.P.
Manager:	N.M.S.
Designer:	N.M.S.
Quality Control:	
Section:	7
	T-6-N R-7-E

Professional Seal:

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DATE:	ISSUE:
01.19.2016	SUBMIT SITE PLAN
02.22.2016	RESUBMIT SITE PLAN

Developed For:

VERSA DEVELOPMENT
25900 W. 11 MILE ROAD
SUITE 250
SOUTHFIELD, MI 48034
(248) 421-7140

TOPOGRAPHIC SURVEY

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
Scale:	1" = 20'
Sheet:	2
Project:	18970.00

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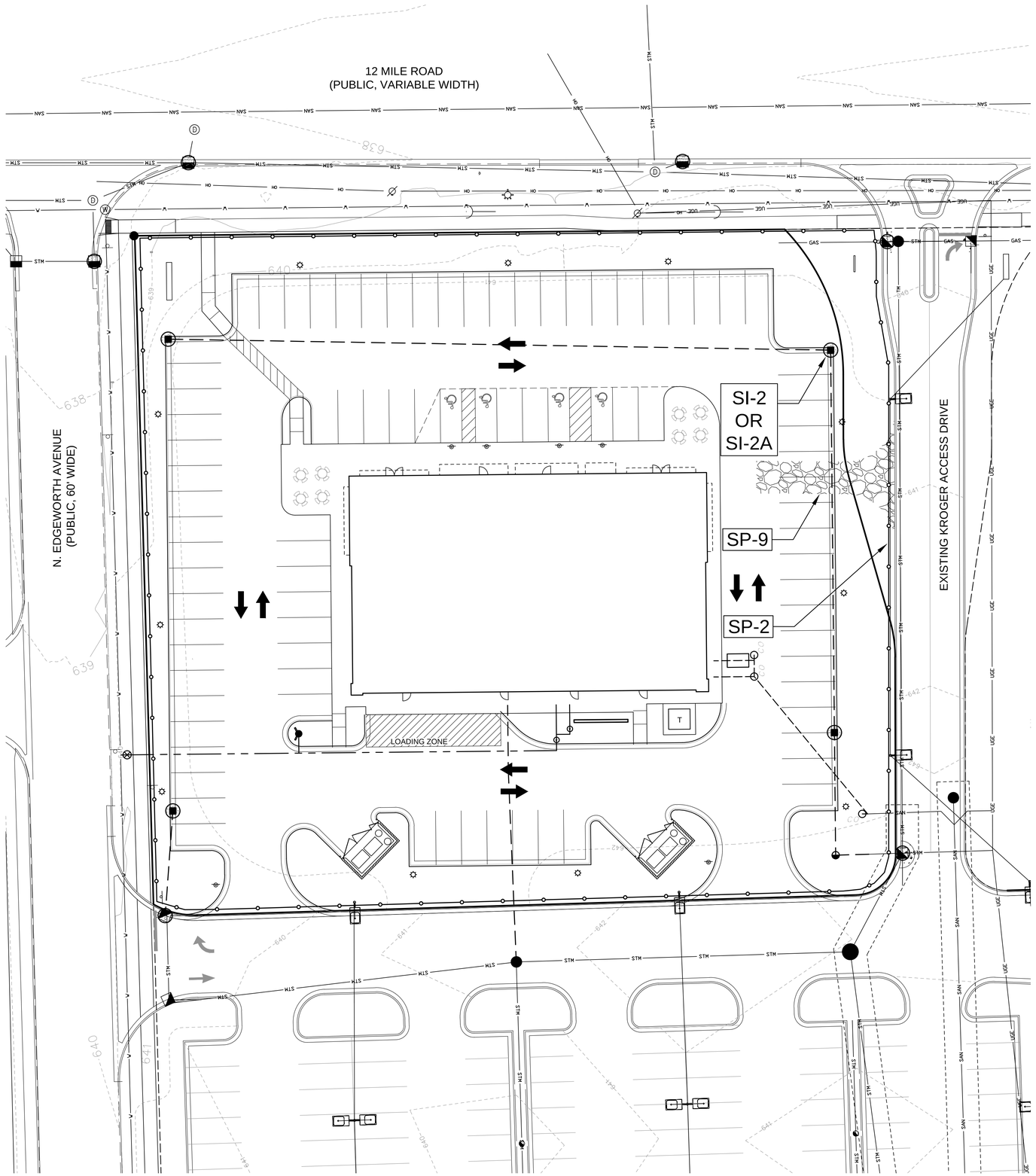

SESC NOTES:

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF OAKLAND COUNTY WATER RESOURCE COMMISSION.
2. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
3. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
4. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS PROJECT SHALL BE CONTAINED AND SHALL NOT BE ALLOWED TO COLLECT IN ANY ADJACENT AREA OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS, AND WETLANDS.
5. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
6. CONSTRUCTION, INCLUDING INSTALLATION OF PIPE AND ASSOCIATED VALVES AND IN STRUCTURES, BACK FILLING, SURFACE RESTORATION, AND REMOVAL OF EXCESS EXCAVATED MATERIAL SHALL BE ACCOMPLISHED IN ONE CONTINUOUS OPERATION.
7. PAVEMENT AND/OR VEGETATION SHALL NOT BE STRIPPED FROM AN AREA UNLESS PIPE LAYING OPERATIONS ARE TO COMMENCE IN THAT AREA WITHIN THE NEXT THREE DAYS.
8. BACKFILLING AND REMOVAL OF EXCESS EXCAVATED MATERIAL SHALL FOLLOW PIPE LAYING BY NO MORE THAN 100'.
9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
10. TEMPORARY STABILIZATION SHALL BE PROVIDED DURING THE NON-GROWING SEASON FOR ALL AREAS TO BE SEEDED. THIS TIME PERIOD CONSIDERED TO BE FROM OCTOBER 1 THROUGH APRIL 20.
11. IF FOR ANY REASON, PERMANENT STABILIZATION CANNOT BE PROVIDED, TEMPORARY STABILIZATION SHALL BE PROVIDED AT ALL DISTURBED AREAS.
12. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
13. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED, AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
14. ALL DEWATERING SHALL BE DONE IN A MANNER WHICH WILL NOT CONTRIBUTE TO DEPOSITION OF SEDIMENT IN ROAD DITCHES OR OPEN WATER.
15. PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN 5 DAYS OF FINAL GRADE IF PERMANENT STABILIZATION CANNOT BE COMPLETED WITHIN 5 DAYS OF FINAL GRADE THEN ALL SOIL EROSION CONTROL MEASURES WILL STAY IN PLACE AND WILL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED.
16. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91OF ACT 451 OF 1994, AS AMENDED THE SOIL EROSION & SEDIMENT ACT.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES AND PRACTICES.
18. CONTRACTOR SHALL KEEP DEBRIS AND TRASH CLEANED UP AT ALL TIMES TO PREVENT CONTAMINATION OF RUNOFF.
19. CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROLS AFTER FINAL STABILIZATION.
20. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE STREET SWEEPING AND DUST CONTROL.

SESC MAINTENANCE NOTES:

1. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FO EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
2. TEMPORARY STABILIZATION SHALL BE REPAIRED WHEN, AND AS OFTEN AS NECESSARY, AS DETERMINED BY THE INSPECTOR.
3. THROUGHOUT THE CONSTRUCTION PERIOD, ALL MUD/SILT TRACKED ON TO EXISTING COUNTY AND CITY ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.
4. CATCH BASIN INLET FILTERS SHALL BE MAINTAINED CLEAN AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. IF A FILTER HAS HOLES OR IS INUNDATED WITH SEDIMENT, THE FILTER WILL REQUIRE REPLACEMENT.
5. CONSTRUCTION ACCESS ROAD AND LAYDOWN MUST BE MAINTAINED AS NECESSARY. REPLENISH CRUSHED AGGREGATE IF PRESENT LAYER IS FILLED WITH SEDIMENT, POOLING WATER OR HAS RUTS. A NEW LAYER MAY BE ADDED IF OLD LAYERS BECOME COMPACTED.
6. IF REPAIR OR REPLACEMENT IS NECESSARY TO SILT FENCE, IT SHALL BE PERFORMED IMMEDIATELY. THE SILT FENCE SHOULD BE TRENCHED IN, BACK-FILLED, AND STAPLED OR STAKED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. MAINTENANCE INCLUDES THE REMOVING OF BUILT-UP SEDIMENT. WHEN THE SEDIMENT ACCUMULATES TO 1/4 OF THE HEIGHT OF THE FENCE, CONTRACTOR MAY HAVE TO REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE FENCE IF IT FAILS. IT WOULD ALSO BE NECESSARY TO RE-INSTALL IF ANY PORTION OF THE FENCING WAS DAMAGED BY CONSTRUCTION MACHINERY.
7. ANY SEDIMENT CONTROL FENCING WHICH BECOMES TORN, RIPPED, FALLEN OR FAILS TO PREVENT EROSION AS INTENDED, SHALL BE IMMEDIATELY REMOVED AND REPLACED WITH NEW EROSION CONTROL FENCING.
8. SEEDING OR RESEEDING MAY BE REQUIRED IMMEDIATELY TO AREAS WHICH HAVE BEEN DAMAGED BY RUNOFF.
9. ANY MULCH MAT OR SOIL STABILIZATION MEASURES WHICH ARE DISTURBED DUE TO CONSTRUCTION, HEAVY RAIN EVENTS, ETC. SHALL BE RESTORED IMMEDIATELY TO PREVENT FURTHER EROSION.

SESC SEQUENCE:

A. CONTRACTOR MUST SUBMIT A NOTICE OF COVERAGE APPLICATION WITH DESIGNATED AGENT SIGNATURE 48 HOURS PRIOR TO COMMENCING WORK.

B. CONSTRUCT TEMPORARY CONSTRUCTION DRIVE AT LOCATION SHOWN AND MAINTAIN DAILY.

C. INSTALL PERIMETER SILT FENCE AND INLET FILTERS ON EXISTING CATCH BASINS. NO CLEARING OR GRADING MAY BEGIN UNTIL ALL PERIMETER SEDIMENT CONTROL DEVICES ARE IN PLACE AND FUNCTIONAL.

D. REMOVE DESIGNATED TREES AND DEMOLISH SITE AS SHOWN ON DEMOLITION PLAN.

E. COMMENCE SITE GRADING AND STOCKPILE TOPSOIL IN LOCATION APPROVED BY OWNER AND ENGINEER.

F. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED. FREQUENT WATERING AS NEEDED OF EXCAVATION AND FILL AREAS SHALL BE DONE TO MINIMIZE WIND EROSION.

G. TRANSITION GRADING ACTIVITIES FROM MASS GRADING TO FINE GRADING.

J. INSTALL SANITARY SEWER, WATER MAIN, AND STORM DRAINAGE SYSTEM.

K. INSTALL INLET/OUTLET PROTECTION AT THE LOCATIONS OF ALL GRATE INLETS, CURB INLETS, AND AT THE ENDS OF ALL EXPOSED STORM SEWER PIPES.

L. INSTALL ALL UTILITIES (PHONE, GAS, AND ELECTRIC). IT IS THE CONTRACTOR'S RESPONSIBILITY TO GRADE AND STABILIZE DISTURBANCES DUE TO THE INSTALLATION OF PUBLIC UTILITIES.

M. FINALIZE PAVEMENT SUBGRADE PREPARATION. CONSTRUCT ALL CURB AND GUTTER. INLET PROTECTION MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION. PLACE REQUIRED RIPRAP AT LOCATIONS SHOWN ON THE PLANS.

N. REMOVE INLET PROTECTION AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.

O. REMOVE TEMPORARY CONSTRUCTION EXITS ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THESE AREAS (THESE AREAS ARE TO BE PAVED LAST).

P. INSTALL PAVEMENT COMPLETELY, REPAIR OR REPLACE INLET FILTERS AS REQUIRED.

Q. CARRY OUT FINAL GRADING, SEEDING AND PLANTING

R. REMOVE SILT FENCING AND INLET FILTERS AFTER ALL PAVING IS COMPLETE AND EXPOSED SURFACES ARE STABILIZED.

SOIL EROSION CONTROL QUANTITIES	
SILT FENCE - CHECK WEEKLY AND AFTER SIGNIFICANT RAIN EVENT	1031 LF
MUD MAT - CHECK WEEKLY	1 EA
INLET FILTERS - CHECK AFTER RAIN EVENT	10 EA

SESC LEGEND:

SILT FENCE

INLET FILTER

MUD MAT

N

SCALE: 1"= 20'

0 10 20 40 60

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DATE:	ISSUE:
01.19.2016	SUBMIT SITE PLAN
02.22.2016	RESUBMIT SITE PLAN

Developed For:

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SOUTHFIELD, MI 48034
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SOIL EROSION AND SEDIMENTATION CONTROL PLAN

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
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Project:	18970.00

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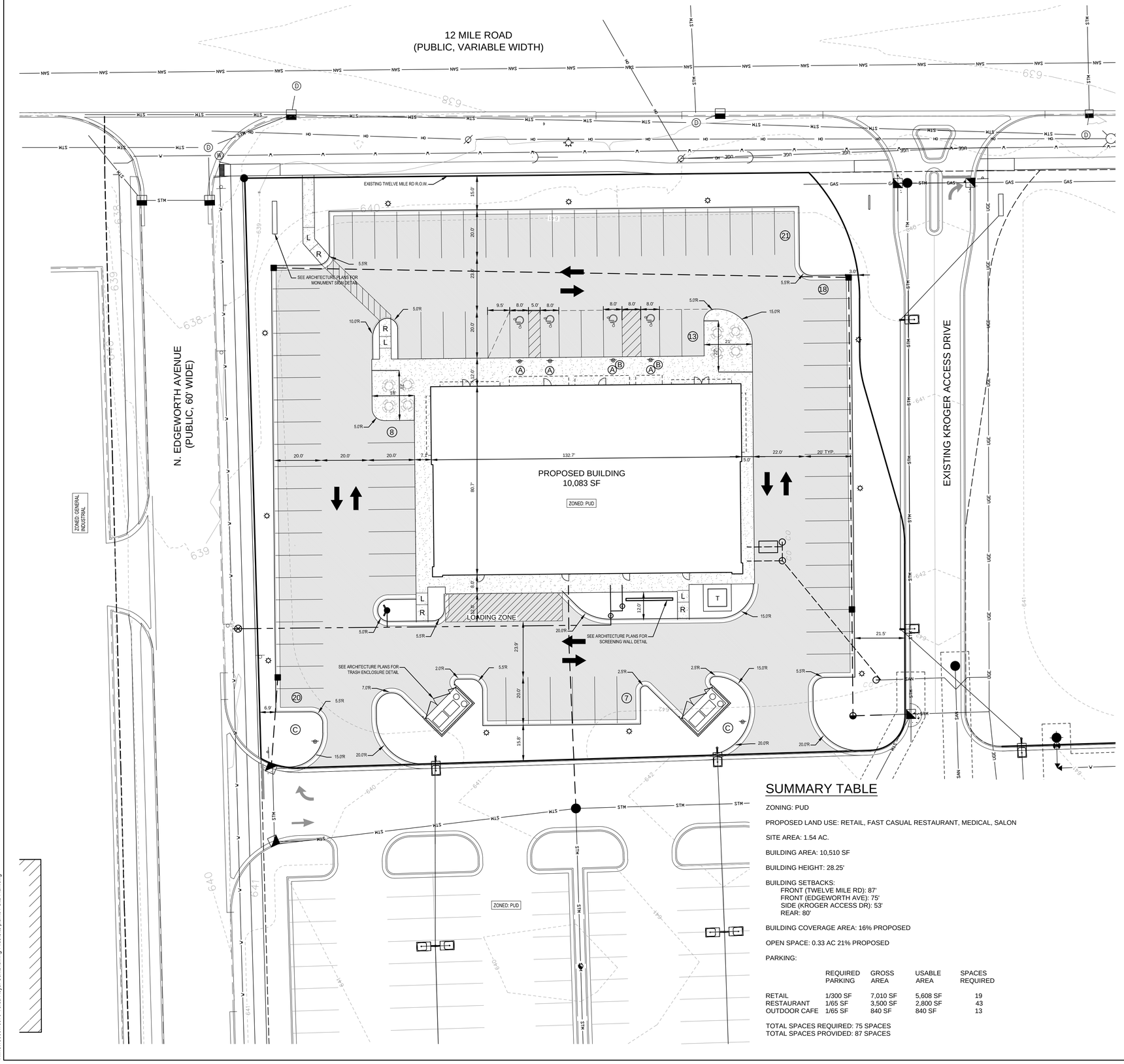

PAVING NOTES

1. THE PAVING CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
2. BUTT JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE AN EXISTING ASPHALT PAVEMENT SURFACE IS BEING DISTURBED BY REMOVALS AND/OR THE INSTALLATION OF NEW ASPHALT PAVEMENT.
3. ALL PAVEMENT AREAS SHOULD BE CLEARED AND GRUBBED BY REMOVING SURFACE VEGETATION, TOPSOIL, DEBRIS AND OTHER DELETERIOUS MATERIALS.
4. THE PLACEMENT OF THE FINAL ASPHALT LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED, OR AS APPROVED BY THE OWNER. A BOND COAT OF SS-1H EMULSION SHALL BE APPLIED (AT A RATE OF 0.10 GALLONS/S.Y.D.) BETWEEN THE LEVELING AND WEARING COURSE WHEN 48 HOURS HAVE ELAPSED BETWEEN PLACEMENTS.
5. THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
6. PROPOSED AGGREGATE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVEMENT EDGE/BACK OF CURB.
7. BARRIER FREE SIGNAGE SHALL BE PLACED IN FRONT OF EVERY DESIGNATED BARRIER FREE STALL. THE CONTRACTOR SHALL COORDINATE STANDARD AND VAN ACCESSIBILITY SIGNAGE AS INDICATED ON THE PLANS.
8. ALL BARRIER FREE RAMPS SHALL BE A.D.A. COMPLIANT AND MEET MDOT STANDARD PLAN R-28-H
9. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
   A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION
   B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
   C. GAS, ELECTRIC AND COMMUNICATION SERVICES AND LIGHTING DETAILS AND COORDINATION.
   D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
   E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
10. PRIOR TO THE PLACEMENT OF ANY BASE ASPHALT OR LEVELING COURSE, THE CURBS SHALL BE PARTIALLY BACKFILLED AND THE SUB-GRADE SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF THE SOILS ENGINEER.
11. ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.
12. DIMENSIONS ARE TO FACE OF CURB.

TRAFFIC SIGNING:

ITEM	MMUTCD CODE	DESCRIPTION	SIZE	QUANTITY
(A)	R7-8	HANDICAP PARKING ONLY (SEE DETAIL SHEET)	12"x18"	4
(B)	R7-8P	VAN ACCESSIBLE (SEE DETAIL SHEET)	18"x9"	2
(C)	R1-1	STOP	30"x30"	2

LEGEND

- PROPERTY LINE
- EX ROW
- PR GATE VALVE AND BOX
- PR HYDRANT
- PR WATERMAIN
- PR STORM CATCH BASIN
- PR STORM MANHOLE
- PR STORM END SECTION
- PR RIP RAP
- PR STORM SEWER
- PR CLEAN OUT
- PR SANITARY MANHOLE
- PR SANITARY SEWER
- PR UNDERGROUND ELECTRIC SERVICE
- PR UNDERGROUND GAS SERVICE
- PR UNDERGROUND TELEPHONE SERVICE
- PR UTILITY CROSSING
- PR CONTOUR MINOR (1')
- PR CONTOUR MAJOR (5')
- PR SPOT ELEVATION
- PR SWALE
- PR CURB AND GUTTER
- PR REVERSE CURB AND GUTTER
- PR STD. DUTY ASPHALT
- PR CONCRETE PAVEMENT

SUMMARY TABLE

ZONING: PUD

PROPOSED LAND USE: RETAIL, FAST CASUAL RESTAURANT, MEDICAL, SALON

SITE AREA: 1.54 AC.

BUILDING AREA: 10,510 SF

BUILDING HEIGHT: 28.25'

BUILDING SETBACKS:
FRONT (TWELVE MILE RD): 87'
FRONT (EDGEWORTH AVE): 75'
SIDE (KROGER ACCESS DR): 53'
REAR: 80'

BUILDING COVERAGE AREA: 16% PROPOSED

OPEN SPACE: 0.33 AC 21% PROPOSED

PARKING:

	REQUIRED PARKING	GROSS AREA	USABLE AREA	SPACES REQUIRED
RETAIL	1/300 SF	7,010 SF	5,608 SF	19
RESTAURANT	1/65 SF	3,500 SF	2,800 SF	43
OUTDOOR CAFE	1/65 SF	840 SF	840 SF	13

TOTAL SPACES REQUIRED: 75 SPACES
TOTAL SPACES PROVIDED: 87 SPACES

SCALE: 1"= 20'

0 10 20 40 60

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Developed For:

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SOUTHFIELD, MI 48034
(248) 421-7140

OVERALL SITE PLAN

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
Scale:	1" = 20'
Sheet:	4
Project:	18970.00

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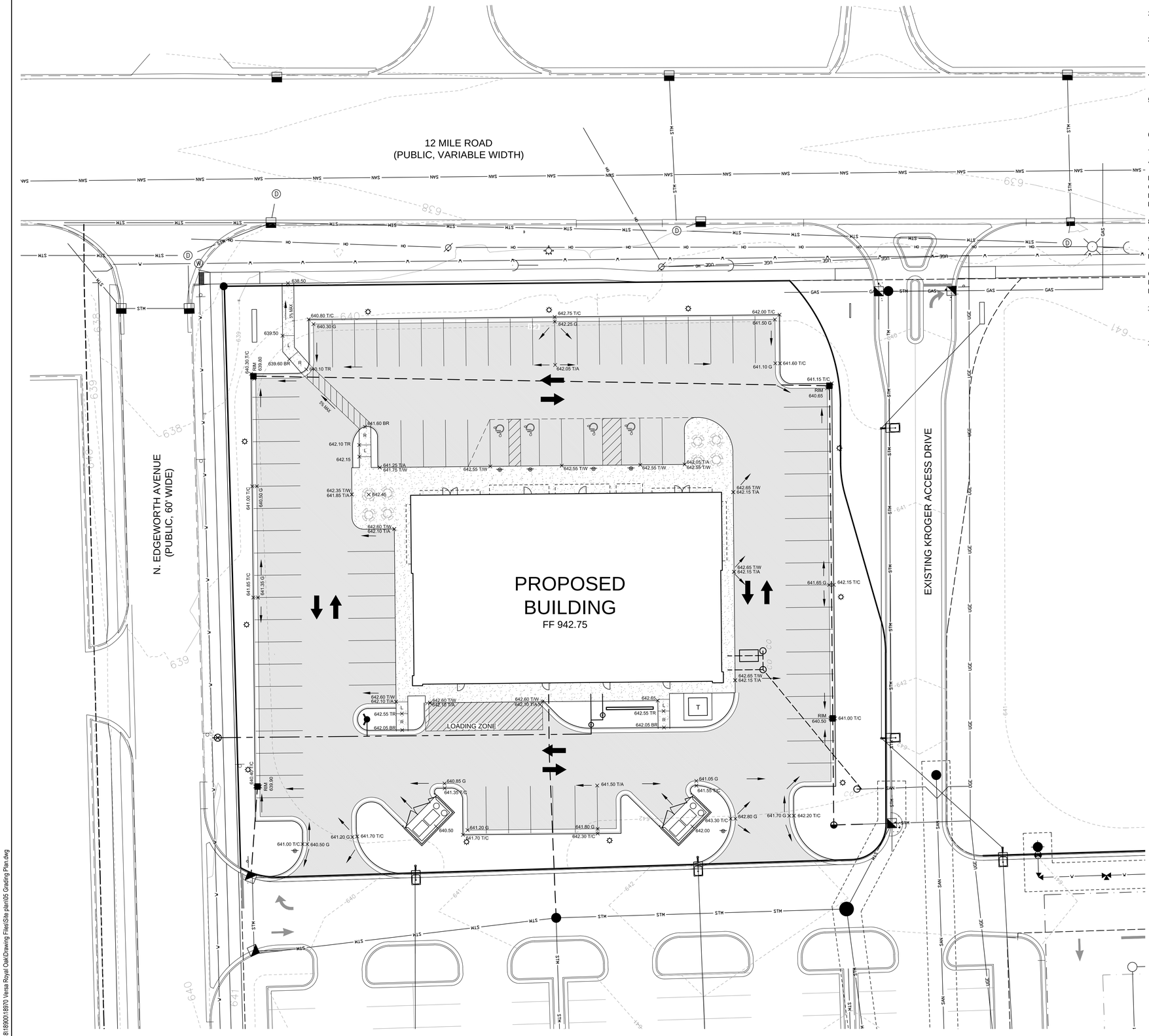

GRADING NOTES

1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
3. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557.
4. NO FROZEN MATERIAL SHALL BE PERMITTED AS BACKFILL UNDER ANY ROADWAY, DRIVEWAY OR PARKING AREA.
5. PRIOR TO THE START OF ANY FILLING, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ALL OTHER UNACCEPTABLE SOIL FROM THE FILL AREAS, AND PROPERLY BACKFILL WITH ACCEPTABLE SOIL.
6. ALL BARRIER FREE RAMPS SHALL BE A.D.A. COMPLIANT AND MEET MDOT STANDARD PLAN R-28-H.
7. GENERAL GRADING REQUIREMENTS ARE AS FOLLOWS:
   A. FINISH GRADE AT EXISTING BUILDING SHALL MATCH BRICK LEDGES, DOORWAYS OR BASEMENT WINDOWS
   B. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING: 5% WITHIN THE FIRST 10' AND 2% AFTER.
   C. SIDEWALK CROSS SLOPE SHALL BE NO MORE THAN 2%.
   D. PAVEMENT SLOPES (1.0% MINIMUM, 4.0% MAXIMUM) UNIFORMLY BETWEEN FINISH GRADE ON PLANS
   E. LAWN AREAS ± 2% MINIMUM TO 25% (BERMS) MAXIMUM
8. GRADES ARE NOTED AS FOLLOWS: T/C - TOP OF CURB, T/A - TOP OF ASPHALT
9. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
   A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION
   B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
   C. GAS, ELECTRIC AND COMMUNICATION SERVICES AND LIGHTING DETAILS AND COORDINATION.
   D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
   E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
10. PRIOR TO THE PLACEMENT OF ANY BASE ASPHALT OR LEVELING COURSE, THE CURBS SHALL BE PARTIALLY BACKFILLED AND THE SUB-GRADE SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF THE SOILS ENGINEER.
11. 11. ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.

LEGEND

- PROPERTY LINE
- EX ROW
- PR GATE VALVE AND BOX
- PR HYDRANT
- PR WATERMAIN
- PR STORM CATCH BASIN
- PR STORM MANHOLE
- PR STORM END SECTION
- PR RIP RAP
- PR STORM SEWER
- PR CLEAN OUT
- PR SANITARY MANHOLE
- PR SANITARY SEWER
- PR UNDERGROUND ELECTRIC SERVICE
- PR UNDERGROUND GAS SERVICE
- PR UNDERGROUND TELEPHONE SERVICE
- PR UTILITY CROSSING
- PR CONTOUR MINOR (1')
- PR CONTOUR MAJOR (5')
- PR SPOT ELEVATION
- PR SWALE
- PR CURB AND GUTTER
- PR REVERSE CURB AND GUTTER
- PR STD. DUTY ASPHALT
- PR CONCRETE PAVEMENT

N

SCALE: 1"= 20'

0 10 20 40 60

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GRADING PLAN

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
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Sheet:	5
Project:	18970.00

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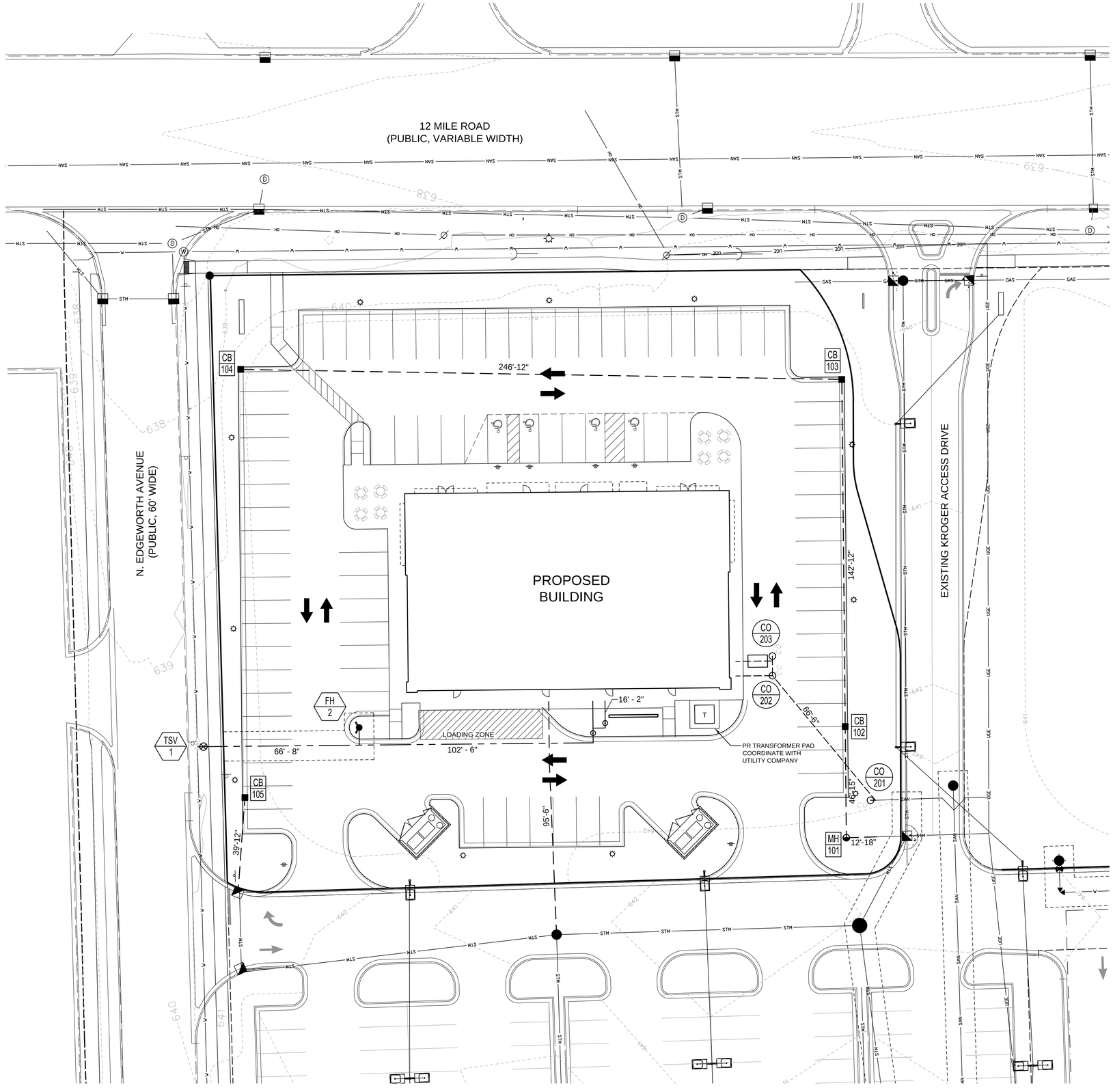

UTILITY NOTES

1. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
   A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION
   B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
   C. GAS, ELECTRIC AND COMMUNICATION SERVICES, AND LIGHTING DETAILS
   D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
   E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT

2. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT.

3. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MEASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.

4. THE MINIMUM SLOPE FOR A BUILDING LEAD IS 1%. LEADS SHALL ONLY BE CONNECTED TO THE MAIN LINE WITH WYES.

5. CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS ETC., IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.

6. NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.

7. ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARILY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.

8. WATER LEADS SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER.

LEGEND

- PROPERTY LINE
- EX ROW
- PR GATE VALVE AND BOX
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- PR STORM CATCH BASIN
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- PR STORM END SECTION
- PR RIP RAP
- PR STORM SEWER
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- PR SANITARY SEWER
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- PR UNDERGROUND GAS SERVICE
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UTILITY PLAN

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

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CITY OF ROYAL OAK STANDARD NOTES:

1. NOTIFY THE CITY OF ROYAL OAK ENGINEERING DEPARTMENT AT (248)246-3260 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO INSPECTIONS.
2. ALL CONSTRUCTION MUST BE CONFORMING TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF ROYAL OAK.
3. CALL MISS DIG (800)482-7171 OR 811 A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. ALL SOIL EROSION AND SEDIMENT MUST BE CONTROLLED AND CONTAINED ON SITE. ALL PUBLIC DRAINAGE STRUCTURES REQUIRING CLEANING SHALL BE COMPLETED PRIOR TO FINAL INSPECTION BY THE CITY.
5. ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED, SHALL BE BACKFILLED AND COMPACTED WITH MDOT CLASS II SAND PER THE CITY OF ROYAL OAK REQUIREMENTS.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO PUBLIC UTILITIES, PAVEMENT, CURB, CURB AND GUTTER AND SIDEWALK IN THE PUBLIC RIGHT-OF-WAY.
7. PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT, ALL RIGHT-OFWAY AND STORM DETENTION WORK SHALL BE COMPLETED AND APPROVED AND ALL REQUIRED AS-BUILT PLANS SHALL BE APPROVED.
8. FOR ANY PROJECT REQUIRING AN EASEMENT OR LICENSE AGREEMENT, THE CITY WILL REQUIRE THE DEVELOPER OR PROPERTY OWNER TO PROVIDE A BOUNDARY SURVEY AND PLAN EXHIBITS PREPARED BY A PROFESSIONAL SURVEYOR, LICENSED IN THE STATE OF MICHIGAN, FOR REVIEW AND APPROVAL PRIOR TO ISSUING ANY PERMITS.

CITY OF ROYAL OAK GENERAL NOTES:

1. ALL WORK WITHIN THE CITY RIGHT-OF-WAY SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONTRACTORS MUST OBTAIN A RIGHT-OF-WAY PERMIT FROM THE CITY ENGINEERING DEPARTMENT PRIOR TO PERFORMING THIS WORK. THE CITY OF ROYAL OAK ENGINEERING DEPARTMENT SHALL BE CONTACTED AT (248)246-3260 REGARDING PERMIT REQUIREMENTS.
2. THE CONTRACTOR IS REQUIRED TO USE THE MOST CURRENT CITY OF ROYAL OAK STANDARD SPECIFICATIONS, NOTES AND DETAILS AVAILABLE AT THE TIME OF RIGHT-OF-WAY PERMIT ISSUANCE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE CURRENT STATUS OR REVISION TO ANY CITY STANDARD DETAILS OR SPECIFICATIONS, WHICH MAY HAVE BEEN SHOWN, CALLED OUT OR IMPLIED ON THE APPROVED PLANS.
3. CONTRACTOR MUST MAINTAIN ONE (1) LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES IN THE ROADWAY ADJACENT TO THE PROJECT UNLESS OTHER AGREEMENTS ARE REACHED WITH THE CITY FOR TEMPORARY OR PERMANENT ROAD CLOSURES. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH SECTIONS 6B AND 6C OF THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. ALL UTILITY TRENCHES AND EXCAVATED AREAS IN THE PUBLIC RIGHT-OFWAY OR FOR PUBLIC UTILITIES IN EASEMENTS ON PRIVATE PROPERTY SHALL BE BACKFILLED WITH MDOT CLASS II SAND IN MAXIMUM NINE INCH LIFTS AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
5. ALL LAWN AREAS DISTURBED WITHIN CITY RIGHT-OF-WAY SHALL BE RESTORED WITH 3" OF TOPSOIL AND CLASS A SOD.
6. "AS-BUILT" DRAWINGS OF ALL PUBLIC SEWER, WATER MAIN, LIGHTING AND IRRIGATION WORK WITHIN CITY RIGHT-OF-WAY INCLUDING PRIVATE SERVICES AND STORM DETENTION FACILITIES SHALL BE PREPARED BY THE DEVELOPER OR CONTRACTOR AND FURNISHED TO THE CITY ENGINEERING DEPARTMENT WITHIN THIRTY (30) DAYS AFTER COMPLETION OF THE WORK. DRAWINGS SHALL INCLUDE "AS-BUILT" LOCATIONS AND INVERTS OR COVER OVER ALL WYES, LEADS, STRUCTURES, AND VALVES, RESTRICTORS ETC. INSTALLED.
7. WHEN CONFLICTS ARISE BETWEEN NOTES AND DETAILS ON THE PLANS AND IN THE SPECIFICATIONS, THE CITY ENGINEER SHALL MAKE THE FINAL DECISION AS TO WHICH DETAIL OR NOTE APPLIES TO THE PROPOSED CONSTRUCTION.
8. THE CONTRACTOR SHALL COORDINATE AND COOPERATE THE WORK SO AS NOT TO DELAY OR INTERFERE UTILITY COMPANIES, AND CITY FORCES WORKING IN THE RIGHT-OF-WAY OR EASEMENTS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO COORDINATE HIS WORK WITH THE OTHER CONTRACTORS WORKING IN THE IMMEDIATE AREA.
9. ALL EXCESS FILL AND OTHER MISCELLANEOUS DEBRIS OR OTHER MATERIAL GENERATED BY THE PROJECT SHALL BE PROPERLY AND EXPEDITIOUSLY HAULED AWAY FROM THE PROJECT AREA TO A LANDFILL APPROVED BY THE CITY.
10. ALL INSPECTION FOR THE CONSTRUCTION OF THE PROJECT WILL BE PERFORMED AS OUTLINED IN THE RIGHT-OF-WAY PERMIT, EXCLUDING INSPECTION REQUIRED BY THE OAKLAND COUNTY DRAIN COMMISSIONER'S OFFICE, THE MICHIGAN DEPARTMENT OF TRANSPORTATION OR THE ROAD COMMISSION FOR OAKLAND COUNTY. ALL TESTING NECESSARY FOR THE CONSTRUCTION OF THE PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL SURVEY STAKES AND MARKS NECESSARY FOR THE CONSTRUCTION OF ALL WORK UNLESS OTHER AGREEMENTS ARE MADE WITH THE CITY.
12. MATERIAL, TOOLS, AND EQUIPMENT SHALL NOT BE DISTRIBUTED UPON OR NEAR THE SITE OF THE WORK IN SUCH A MANNER AS TO OBSTRUCT LOCAL VEHICLE OR PEDESTRIAN TRAFFIC OR CAUSE UNNECESSARY INCONVENIENCE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MATERIALS UNTIL THEY ARE FINALLY INCORPORATED INTO THE WORK AND ACCEPTED BY THE CITY. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR AND REPAIR ANY DAMAGE DONE BY REASON OF THE STORAGE OF TOOLS, MATERIALS, AND EQUIPMENT.
13. THE CONTRACTOR SHALL SECURE PERMISSION FROM THE AUTHORITIES HAVING JURISDICTION FOR THE USE OF A PARTICULAR ROAD AS A HAUL ROAD. LOADING RESTRICTIONS AS ESTABLISHED BY LAW OR ORDINANCE SHALL BE OBSERVED. TRUCKS HAULING EXCAVATED MATERIAL, BITUMINOUS MATERIAL, CONCRETE, SAND, STONE, OR OTHER LOOSE MATERIAL FROM OR TO THE SITE SHALL BE TIGHT SO THAT NO SPILLAGE WILL OCCUR ON ADJACENT STREETS OR HAUL ROUTES. BEFORE TRUCKS START AWAY FROM THE SITE, THEIR LOADS SHALL BE CAREFULLY TRIMMED BY HAND AND TIRES SHALL BE CLEANED IF NECESSARY.
14. THE CONTRACTOR SHALL BE REQUIRED TO CLEAN AND SWEEP ALL PAVED SURFACES THAT HE HAS PLACED OR DISTURBED, AS WELL AS THOSE OVER WHICH HE HAS HAULED OR PLACED MATERIALS. THE CONTRACTOR SHALL REMOVE SPILLAGE OF CONCRETE AND COMPACTED BITUMINOUS MATERIAL FROM PAVED SURFACES. SWEEPING SHALL BE PERFORMED WITH A SELF-PROPELLED OR TOWED STREET SWEEPER EQUIPPED WITH PICK-UP ATTACHMENTS AND CURB BRUSHES THAT DO NOT CAUSE AIRBORNE DUST. ALL DEBRIS MATERIAL SHALL BE HAULED AND DISPOSED OF OFF-SITE. PAVED SURFACES SHALL BE SWEPT AS OFTEN AS NECESSARY AS DIRECTED BY THE ENGINEER.
15. THROUGHOUT THE LENGTH OF THE PROJECT, STORM DRAINS, SANITARY, AND COMBINED SEWERS ARE TO BE MAINTAINED IN A CLEAN SERVICEABLE CONDITION. PRIOR TO FINAL APPROVAL OF THIS WORK, ALL UTILITY STRUCTURES WITHIN THE CONSTRUCTION INFLUENCE AREA SHALL BE POWER VACUUMED CLEAN OF DEBRIS.
16. THE CONTRACTOR SHALL NOTIFY THE FIRE DEPARTMENT OF THE CITY OF ROYAL OAK AT (248)246-3800 WHENEVER THE CONSTRUCTION WORK SHALL IN ANY WAY INTERFERE WITH THE USE OF A STREET BY FIRE VEHICLES. IN CASE OF DOUBT, THE CITY MAY, IN THE INTERESTS OF PUBLIC SAFETY, NOTIFY THE FIRE DEPARTMENT, BUT SUCH NOTIFICATION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY.
17. THE CONTRACTOR SHALL PROVIDE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH THE CONSTRUCTION PROGRESS SCHEDULE. IN THE EVENT THE CONTRACTOR IS CONTACTED BY THE CITY OF ROYAL OAK POLICE DEPARTMENT OR THE ENGINEER TO RESPOND TO EMERGENCY SITUATIONS, THE CONTRACTOR SHALL RESPOND IMMEDIATELY, OR THE CITY OF ROYAL OAK WILL PROCEED WITH THE NECESSARY EMERGENCY RESPONSE AND TAKE ALL ACTION THE CITY DEEMS NECESSARY. THE CONTRACTOR SHALL REIMBURSE THE CITY OF ROYAL OAK FOR ALL EXPENSES INCURRED FOR THE EMERGENCY RESPONSE UPON RECEIPT OF BILLING.
18. ALL MATERIALS SUPPLIED BY THE CONTRACTOR SHALL BE CERTIFIED IN WRITING BY THE MANUFACTURER SHOWING THAT THE MATERIALS SUPPLIED MEET THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS. THEIR CERTIFICATIONS SHALL INCLUDE THE SPECIFICATION OF THE MATERIAL SUPPLIED. NO WORK MAY BE DONE WITHIN THE PUBLIC RIGHTOF-WAY OR EASEMENT WITH MATERIALS SUPPLIED BY THE CONTRACTOR WITHOUT A WRITTEN MATERIAL CERTIFICATION APPROVED BY THE ENGINEER.
19. THE CONTRACTOR IS RESPONSIBLE FOR SIGNING AREAS FOR NO PARKING 24 HOURS IN ADVANCE OF COMMENCING WORK WHEN NECESSARY. "NO PARKING TOW AWAY ZONE" SIGNS CAN BE PURCHASED FROM THE CITY,HOWEVER, SIGN STAKES OR HOLDERS ARE THE RESPONSIBILITY OF THE CONTRACTOR. TREES CANNOT BE USED AS SIGNPOSTS. SIGNS MUST BE POSTED 24 HOURS BEFORE THE WORK IS TO BEGIN.

CITY OF ROYAL OAK GENERAL NOTES cont.:

20. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE MICHIGAN DEPARTMENT OF TRANSPORTATION FOR WORK WITHIN THE RIGHT-OF-WAY OF WOODWARD AVENUE (M-1) OR I-696 SERVICE DRIVES, AS APPLICABLE.
21. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE ROAD COMMISSION FOR OAKLAND COUNTY FOR WORK WITHIN THE I-696 SERVICE DRIVES, GREENFIELD ROAD OR 11 MILE ROAD, AS APPLICABLE.
22. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER FOR WORK WITHIN THE INFLUENCE AN OAKLAND COUNTY DRAIN.
23. THE CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO RIGHTS-OF-WAY, CITY PROPERTY, OR EASEMENTS WITHIN PRIVATE PROPERTY. THE CONTRACTOR SHALL NOT TRESPASS ON PRIVATE PROPERTY AND HE SHALL NOT USE NOR REQUEST THE USE OF ANY UTILITY, INCLUDING WATER, FROM A PROPERTY OWNER. WHERE THE PLANS INDICATE WORK OUTSIDE OF AN EASEMENT ON PRIVATE PROPERTY, OR WHEN THE ENGINEER DIRECTS THE CONTRACTOR TO PERFORM WORK OUTSIDE OF AN EASEMENT, THE CITY WILL SECURE A PERMIT FROM THE PROPERTY OWNER PRIOR TO COMMENCEMENT OF WORK.
24. THE CONTRACTOR SHALL REPLACE, AT NO ADDITIONAL COST, ANY NEW PAVEMENT, BASE, DRIVEWAY OR SIDEWALK THAT IS DAMAGED DUE TO A LACK OF TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BEAR THE COST OF REPAIR OR REPLACEMENT OF ANY SURFACE FEATURES, STRUCTURES, SEWERS, OR SEWER LEADS DAMAGED AS A RESULT OF HIS OPERATIONS. DAMAGED STRUCTURES OR PIPES SHALL BE REPAIRED OR REPLACED TO THE CONDITION AT THE TIME OF DAMAGE. ALL REPAIRS AND REPLACEMENTS MADE BY THE CONTRACTOR SHALL BE IN CONFORMANCE WITH THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY DAMAGE TO PRIVATE PROPERTY CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR.
25. THE CONTRACTOR SHALL PROVIDE TRENCH BOXES, SHEETING, TIE BACKS, AND ANCHORS AS REQUIRED TO PROTECT PERSONNEL AND TO CONTAIN EXCAVATIONS WITHIN THE RIGHTS-OF-WAY, EASEMENTS, AND CONSTRUCTION LIMITS SHOWN ON THE PLANS. REFER TO SECTION 2.10 OF THE CITY OF ROYAL OAK GENERAL SPECIFICATIONS FOR EXCAVATING AND BACKFILLING. THE DECISION TO DEWATER FOR UNDERGROUND INSTALLATION IS SOLELY THE RESPONSIBILITY AND DETERMINATION OFTHE CONTRACTOR. IF WELL POINTS ARE INSTALLED AND USED IT SHALL BE AT LOCATIONS APPROVED BY THE ENGINEER.
26. THE CITY HAS DETERMINED THAT ALL UTILITY STRUCTURES AND PIPES UNDER ITS JURISDICTION ARE POTENTIALLY PERMIT-REQUIRED CONFINED SPACES AS DEFINED BY MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MIOSHA) STANDARD 1910.146, PART 90 INCLUSIVE. THE CONTRACTOR MUST COMPLY WITH MIOSHA REQUIREMENTS FOR PRACTICES AND PROCEDURES TO PROTECT EMPLOYEES FROM THE HAZARDS OF ENTRY INTO PERMIT-REQUIRED CONFINED SPACES. PRIOR TO COMMENCING ANY UNDERGROUND WORK, THE CONTRACTOR SHALL FURNISH THE ENGINEER WRITTEN CERTIFICATION THAT THE COMPANY HAS IMPLEMENTED A PERMIT-REQUIRED CONFINED SPACE PROGRAM CONFORMING TO MIOSHA REQUIREMENTS. QUESTIONS CONCERNING MIOSHA REQUIREMENTS SHOULD BE DIRECTED TO THE MICHIGAN DEPARTMENT OF LABOR, SAFETY REGULATIONS DIVISION AT (517)322-1809.
27. WORKMANSHIP AND MATERIALS FURNISHED FOR THIS PROJECT SHALL PRODUCE CONCRETE PAVEMENT, DRIVEWAY, AND SIDEWALK WHOSE OVERALL FINISHED QUALITY MUST EQUAL OR EXCEED THAT OF NEW CONCRETE IN ADJACENT AREAS OF THE CITY OF ROYAL OAK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO PRODUCE A FINISHED PRODUCT THAT EQUAL OR EXCEEDS THE FINISH, DURABILITY, AND APPEARANCE OF NEW PAVEMENT AND CURB AND GUTTER PREVIOUSLY CONSTRUCTED WITHIN THE GENERAL AREA.
28. WORKMANSHIP AND MATERIALS FURNISHED UNDER FOR THIS PROJECT SHALL PRODUCE BITUMINOUS SURFACES AND CONCRETE CURB AND GUTTER, WHOSE OVERALL FINISHED QUALITY MUST EQUAL OR EXCEED THAT OF NEW BITUMINOUS PAVEMENT AND CONCRETE CURB AND GUTTER IN ADJACENT AREAS OF THE CITY OF ROYAL OAK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO PRODUCE A FINISHED PRODUCT THAT EQUAL OR EXCEEDS THE FINISH, DURABILITY, AND APPEARANCE OF NEW PAVEMENT AND CURB AND GUTTER PREVIOUSLY CONSTRUCTED WITHIN THE GENERAL AREA.
29. FOR STREETSCAPE PROJECTS, WORKMANSHIP AND MATERIALS FURNISHED SHALL PRODUCE CONCRETE AND CONCRETE BLOCK PAVER SIDEWALK, TREE AND TREE GRATE, LIGHTING AND IRRIGATION SYSTEM INSTALLATION WHOSE OVERALL FINISHED QUALITY MUST EQUAL OR EXCEED THAT OF NEW MATERIALS PLACED IN ADJACENT AREAS OF THE CITY OF ROYAL OAK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO PRODUCE A FINISHED PRODUCT THAT EQUAL OR EXCEEDS THE FINISH, DURABILITY, AND APPEARANCE OF NEW SIDEWALK AND STREETSCAPE FEATURES PREVIOUSLY CONSTRUCTED WITHIN THE GENERAL AREA.
30. FOR ANY PROJECT PERFORMING RIGHT-OF-WAY OR STREETSCAPE CONSTRUCTION; OR REQUIRING AN EASEMENT OR LICENSE AGREEMENT, THE CITY WILL REQUIRE THE DEVELOPER OR PROPERTY OWNER TO PROVIDE A BOUNDARY SURVEY AND PLANS PREPARED BY A PROFESSIONAL SURVEYOR, LICENSED IN THE STATE OF MICHIGAN, FOR REVIEW AND APPROVAL, PRIOR TO ISSUING ANY PERMITS.

CITY OF ROYAL OAK SANITARY SERVICE NOTES:

1. ALL SANITARY SEWER LEAD WORK SHALL CONFORM TO THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. ALL SANITARY 4-INCH AND 6-INCH SANITARY LEADS SHALL BE PVC SDR 23.5 PIPE INSTALLED AT A SLOPE OF NO LESS THAN 1.04%. LEADS SHALL EXIT THE PROPERTY AT APPROXIMATELY 90 DEGREES FROM PROPERTY LINE TO THE PUBLIC SEWER CONNECTION/TAP UNLESS OTHERWISE APPROVED BY THE CITY. LEADS SHALL NOT BE CONNECTED TO PUBLIC OR PRIVATE STORM DRAINS. THE PVC PIPE USED FOR THE LEADS SHALL CONFORM TO ASTM D 3034 (SDR 23.5). JOINTS SHALL BE BELL-AND-SPIGOT TYPE RUBBER GASKETED JOINTS CONFORMING TO ASTM F 477.
3. EACH SANITARY LEAD SHALL CONNECT TO CITY'S SANITARY OR COMBINED SEWER AT A WYE CONNECTION OR BLIND TAP, AS REQUIRED BY THE CITY ENGINEER.

CITY OF ROYAL OAK WATER SERVICE NOTES:

1. ALL WATER SERVICE WORK SHALL CONFORM TO THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. WATER SERVICE WORK UP TO 2 INCHES IN DIAMETER WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT, INCLUDING INSTALLATION OF VALVES AND BOXES, SHALL BE PERFORMED BY CITY FORCES. CONTACT THE CITY TREASURER AT (248)546-6300 FOR WATER TAP FEES AND SCHEDULING OF TAPS AND METERING REQUIREMENTS.
3. WATER SERVICE PIPE SHALL BE COPPER TUBING IN ACCORDANCE WITH ASTM SPECIFICATIONS B 88-55 "TYPE K", OR FEDERAL SPECIFICATIONS WWT-799 "TYPE K", INSTALLED WITH NO LESS THAN 48" OF FINAL COVER. FITTINGS AND REDUCERS SHALL BE FLARED TYPE MUELLER COPPER SERVICE THREAD UNIONS AND COUPLINGS.
4. WHEN MULTI-UNIT BUILDINGS REQUIRE INDIVIDUAL METERS AND SHUT OFF VALVES, SHUT OFF VALVES SHALL BE MUELLER H-15200 AND BOXES SHALL BE MUELLER H-10314, OR CITY APPROVED EQUALS. ALL 1" SHUT OFF VALVES AND BOXES TO BE INSTALLED AT 4' OFF BUILDING LINES.
5. WHEN MULTI-UNIT BUILDINGS REQUIRE A SINGLE WATER SERVICE, A METER ROOM THAT INCLUDES INDIVIDUAL UNIT SHUTOFFS WILL BE REQUIRED WITH KEYS ISSUED TO THE CITY WATER DEPARTMENT ALONG WITH AN ACCESS EASEMENT.

CITY OF ROYAL OAK WATERMAIN NOTES:

1. ALL WATER MAIN WORK SHALL CONFORM TO THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. PROPOSED WATER MAIN TAPS SHALL BE MADE WITH AN APPROPRIATELY SIZED CUT IN TEE OR TAPPING SLEEVE WITH VALVE AND WELL OR ROAD TAPPING SLEEVES SHALL BE EAST JORDAN IRON WORKS (EJIW) MJ TAPPING SLEEVES. GATE VALVES SHALL BE EJIW RESILIENT SEATED GATE VALVE W/NON-RISING STEM AND DESIGNED FOR RIGHT-HAND (CLOCKWISE) OPENING. GATE WELLS AND/ROAD BOXS SHALL BE CONSTRUCTED PER THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. PROPOSED WATER MAIN SHALL BE INSTALLED WITH NO LESS THAN 5.5 FEET OF FINAL COVER.
4. WATER MAIN SHALL BE DUCTILE IRON PIPE CONFORMING TO USA S-A21.51 AND SHALL HAVE DOUBLE THICKNESS CEMENT MORTAR LINING CONFORMING TO USA S-A21.4. THE DUCTILE IRON PIPE SHALL BE "SUPER BELL-TITE" PUSH-ON JOINT TYPE.
5. WATER MAIN FITTINGS SHALL BE TYLER PIPE LINE OF MECHANICAL JOINT FITTINGS CONFORMING TO ANSI/AWWA C153/A21.53-84 STANDARD FOR DUCTILE IRON FITTINGS AND ANSI/AWWA C111/A21.11-85 STANDARD FOR GRAY IRON FITTINGS. WORKING PRESSURE RATING SHALL BE 350 PSI. ALL BOLTS SHALL BE CORTEN.
6. PROPOSED WATER MAIN SHALL BE SUCCESSFULLY CHLORINATED AND PRESSURE TESTED PRIOR TO ACTIVATING THE LINE. PRESSURE TESTING AND CHLORINATION SHALL CONFORM TO CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHLORINATION TESTING ARRANGEMENTS BY CONTACTING THE SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY AT (248) 288-5150.
7. NEW HYDRANT ASSEMBLIES AND LEADS SHALL BE CONSTRUCTED PER THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY REQUIRED TAPS FOR THE PROPOSED HYDRANTS SHALL BE MADE WITH EJIW TAPPING SLEEVES OR TEES AS NOTED ON THE PLANS.
8. CITY OF ROYAL OAK STANDARD WATER MAIN AND HYDRANT DETAILS SHALL BE USED FOR ALL HYDRANT INSTALLATION. THE HYDRANTS SHALL BE E.J.I.W. 5BR-250 MODEL WITH TWO (2) 4" PUMPER NOZZLES OR APPROVED EQUAL ONE OF WHICH SHALL BE FITTED WITH A 3½" HARRINGTON INTEGRAL HYDRANT STORZ (HIHS).
9. PROPOSED PUBLIC WATER MAIN WILL REQUIRE APPROVAL OF THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE SOUTHEAST OAKLAND COUNTY WATER AUTHORITY (SOWCA). ELEVEN (11) COPIES OF THE PERTINENT SHEETS SHALL BE SUBMITTED TO THE CITY OF ROYAL OAK ENGINEERING DEPARTMENT FOR REVIEW AND SUBMITTAL TO THE PROPER AGENCIES.

CITY OF ROYAL OAK STORM DRAINAGE NOTES:

1. ALL STORM DRAINAGE WORK SHALL CONFORM TO CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. PVC STORM SEWER PIPE SHALL BE PVC SDR 23.5 PIPE CONFORMING TO ASTM D 3034 (SDR 23.5). JOINTS SHALL BE BELL-AND-SPIGOT TYPE RUBBER GASKETED JOINTS CONFORMING TO ASTM F 477.
3. CONTRACTOR SHALL LOWER EXISTING WATER MAINS, IF NECESSARY, TO AVOID CONFLICTS WITH PROPOSED STORM DRAIN ELEVATION.
4. PROPOSED MANHOLES, INLETS AND CATCH BASINS SHALL CONFORM TO CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION.

CITY OF ROYAL OAK STORM DETENTION NOTES:

1. PROPOSED ON-SITE STORM DRAINAGE SYSTEMS SHALL CONNECTED TO AN EXISTING ON-SITE STORM DRAIN, PUBLIC STORM DRAIN OR COMBINED SEWER AND SHALL BE SHOWN ON THE PLANS. AN UNRESTRICTED OVERFLOW FOR THE STORM WATER DETENTION SYSTEM SHALL BE CLEARLY SHOWN AND LABELED ON THE PLANS.
2. THE CONTRACTOR OR ENGINEER SHALL VERIFY THAT EXISTING STORM MANHOLES ARE TRAPPED UPSTREAM OF CONNECTIONS TO COMBINED SEWERS, AS DETAILED IN THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION. IF NO TRAP EXISTS, A TRAP SHALL BE INSTALLED IN THE OUTLET PIPE OF THE FURTHEST DOWNSTREAM MANHOLE OR CATCH BASIN.
3. ROOF DRAINS OR DOWN SPOUTS SHALL BE DISCONNECTED FROM ANY EXISTING OR PROPOSED SANITARY OR STORM SYSTEM ACCORDING TO CITY ORDINANCE 90-3 AND MICHIGAN LAW. ROOF DRAINS SHALL DISCHARGE ONTO PRIVATE PROPERTY GROUND AND SHALL BE DETAINED IN A STORM WATER DETENTION SYSTEM.
4. TIERED DETENTION SYSTEMS (PONDED WATER LEVELS AT DIFFERENT ELEVATIONS) REQUIRE A SERIES OF RESTRICTORS/RESTRICTED LIDS TO POND (HEAD) WATER TO THE PROPER STORAGE ELEVATIONS. THESE RESTRICTORS SHALL BE SIZED ACCORDING TO THE FINAL DISCHARGE RATE AND INTERMEDIATE FLOW RATES OUT OF EACH BASIN AREA. A LIST OF RESTRICTORS AND THEIR LOCATIONS SHALL BE SHOWN ON THE PLANS.

CITY OF ROYAL OAK PAVING NOTES:

1. ALL PAVING WORK SHALL CONFORM TO CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. EXISTING PAVEMENT SHALL BE SAW CUT, FULL DEPTH, PRIOR TO REMOVAL. PAVEMENT SHALL BE SAWCUT 2 FEET OFF THE BACK-OF-CURB WHERE CONCRETE CURB AND GUTTER IS TO BE INSTALLED WITHIN CONCRETE ROADWAYS AND 2½ FEET OFF THE BACK-OF-CURB WHERE CONCRETE CURB AND GUTTER IS TO BE INSTALLED WITHIN ASPHALT CAPPED CONCRETE ROADWAYS.
3. WHERE PORTIONS OF PAVEMENTS CONSISTING OF A CONCRETE BASE COURSE WITH AN ASPHALT OVERLAY ARE REMOVED FOR PROPOSED UTILITY WORK, A NEW CONCRETE BASE COURSE AND ASPHALT OVERLAY SHALL BE PLACED TO MATCH THE THICKNESSES OF THE EXISTING MATERIALS. ASPHALT MATERIALS SHALL MEET THE REQUIREMENTS OF MDOT MIXTURE 4C FOR WEARING COURSE AND MDOT MIXTURE 3C FOR LEVELING COURSE AND MDOT MIXTURE 2C FOR BASE COURSE.
4. CONCRETE CURB AND GUTTER INSTALLED IN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO DETAIL A. ⅛ INCH WIDE X 2½ INCH DEEP CONTRACTION JOINTS SHALL BE PROVIDED IN THE CURB AND GUTTER AT CONSISTANT INTERVALS NOT EXCEEDING 10 FEET IN LENGTH. THE EXISTING ASPHALT SURFACE SHALL BE MILLED TO A STRAIGHT EDGE AND REPLACED, MATCHING THE NEW CURB AND GUTTER, AS NECESSARY.
5. PRIOR TO PLACING CONCRETE BASE COURSE OR CONCRETE CURB AND GUTTER, ⅝ INCH STANDARD EXPANSION ANCHORED HOOK BOLTS OR LANE TIES, SHALL BE INSTALLED ALONG PAVEMENT SAW CUTS AND SPACED AT 36 INCHES, ON CENTER OR AS DIRECTED BY THE ENGINEER.
6. DRIVEWAY OPENINGS TO BE INSTALLED SHALL CONFORM TO EITHER AN MDOT DETAIL 'M' DRIVEWAY OPENING PER MDOT STANDARD PLAN R-29 OR THE CITY OF ROYAL OAK STANDARD DETAIL A ON PAGE P-11 OF THE CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION, EXCEPT WITHIN THE INFLUENCE OF STREETSCAPE.
7. DRIVE APPROACHES AND PUBLIC SIDEWALK WITHIN THE INFLUENCE OF COMMERCIAL DRIVEWAY SHALL BE 8 INCH THICK CONCRETE WITH 2½ INCH DEEP TOOLED CONTRACTION JOINTS, EXCEPT WITHIN THE INFLUENCE OF STREETSCAPE WHERE CONCRETE SHALL BE 7 INCHES THICK.
8. SIDEWALK TO BE INSTALLED OUTSIDE THE INFLUENCE OF THE DRIVE APPROACH SHALL BE A MINIMUM 5 FOOT WIDE, 4 INCH THICK CONCRETE WITH 2 INCH DEEP TOOLED CONTRACTION JOINTS AT ±5 FOOT INTERVALS. A ½ INCH WIDE FULL DEPTH FIBER EXPANSION JOINT SHALL BE INSTALLED AT LOCATIONS DETERMINED BY THE ENGINEER
9. ALL SIDEWALKS SHALL HAVE A MINIMUM 1.0% TRANSVERSE SLOPE TOWARDS THE RIGHT-OF-WAY CENTERLINE AND A MAXIMUM OF 2.0%.
10. ALL PAVEMENT INCLUDING CONCRETE BASE COURSE, CURB, CURB AND GUTTER AND DRIVE APPROACH SHALL BE PLACED ON A MINIMUM 6 INCH THICK AGGREGATE BASE MATERIAL COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT. ALL SIDEWALK INCLUDING STREETSCAPE BRICK PAVER BASE COURSE SHALL BE PLACED ON A MINIMUM 4 INCH THICK GRANULAR BASE MATERIAL COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
11. THE CONCRETE MIX SHALL BE READY-MIXED TRANSIT CONCRETE AND SHALL BE COMPOSED OF PORTLAND CEMENT, FINE AGGREGATE, COARSE AGGREGATE, WATER AND AIR-ENTRAINING AGENT. A MINIMUM OF 564 POUNDS OF CEMENT PER CUBIC YARD OF CONCRETE REACHING 3500 P.S.I. UNCONFINED COMPRESSIVE STRENGTH IN TWENTY-EIGHT (28) DAYS WITH A SLUMP OF 3" ± 1" AND 6.5% ± 1.5% ENTRAINED AIR SHALL BE USED, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
12. ANY PORTION OF A TRENCH, HOLE, OR PIT THAT IS OUTSIDE A 1 ON 1 INFLUENCE LINE OF AN EDGE OF SIDEWALK, DRIVEWAY, PAVEMENT, OR BACK OF CURB THAT IS EITHER PROPOSED OR TO REMAIN IN PLACE, SHALL BE BACKFILLED WITH SUITABLE EXCAVATED MATERIAL (EXCLUDING WET PLACED IN LAYERS NOT EXCEEDING 12 INCHES, AND COMPACTED TO 90% OF ITS MAXIMUM UNIT WEIGHT.

CITY OF ROYAL OAK UTILITY NOTES:

1. ALL UTILITY CONSTRUCTION SHALL CONFORM TO CITY OF ROYAL OAK STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. PREVIOUSLY ABANDONED PIPES OR STRUCTURES AND PROPOSED STORM DRAIN OR SEWER PIPES OR STRUCTURES TO BE ABANDONED SHALL BE CUT & REMOVED AS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITY IMPROVEMENTS INDICATED ON THE PLANS. OPEN ENDS OF ABANDONED PIPES OR STRUCTURES TO BE ABANDONED SHALL BE BULKHEADED WITH A 12 INCH THICK WATERTIGHT MASONRY BULKHEAD.
3. PLUGS SHALL BE INSTALLED AT ALL OPEN ENDS OF WATER MAIN TO BE ABANDONED.
4. EXISTING HYDRANTS TO BE REMOVED SHALL NOT BE REMOVED UNTIL AFTER THE ADJACENT NEW HYDRANT IS IN SERVICE. THE CONTRACTOR SHALL PUT A TEMPORARY COVERING OVER ANY NEW HYDRANT INSTALLED THAT IS NOT IN SERVICE.
5. THE CONTRACTOR SHALL DELIVER ANY HYDRANTS, GATE VALVES OR UTILITY CASTINGS THAT ARE REMOVED AS A PART OF THE PROJECT TO THE CITY OF ROYAL OAK DPS YARD AT 1600 N. CAMPBELL ROAD.
6. WHEN CONNECTING A NEW WATER MAIN TO THE EXISTING MAIN, THE DIMENSIONS OF THE EXISTING MAIN MAY NOT ALLOW THE USE OF STANDARD MECHANICAL JOINT FITTINGS SINCE THESE MAINS MAY BE PITCAST OR IN CLASSES OTHER THAN THE STANDARD. IN SUCH CASES, SPECIAL OVERSIZE SOLID SLEEVES SHALL BE FURNISHED AND INSTALLED. DRESSER STYLE COUPLINGS SHALL NOT BE USED.
7. WHEN CONNECTING A NEW WATER MAIN TO THE EXISTING MAIN, THE FITTINGS SHALL BE INSTALLED WITH RETAINER GLANDS OR OTHER APPROVED JOINT RESTRAINT SYSTEMS.
8. IN ORDER TO ELIMINATE CONFLICT WITH OTHER UNDERGROUND UTILITIES, ROAD BOXES MAY BE INSTALLED WHERE GATE WELL INSTALLATION IS INDICATED ON THE PLANS, WHEN DIRECTED BY THE ENGINEER.
9. EXISTING ROAD BOXES AND CURB STOP BOXES SHALL BE REMOVED, REPLACED OR ADJUSTED, AS DIRECTED BY THE ENGINEER.
10. WHEN CURB STOP BOXES FOR 1-INCH WATER SERVICES FALL WITHIN PROPOSED SIDEWALK, DRIVEWAY, OR PAVEMENT, THE CONTRACTOR SHALL FURNISH AND INSTALL A CURB STOP BOX SLEEVE EQUAL TO MUELLER H-10342 AS.
11. ALL TRENCHES, HOLES, AND PITS RESULTING FROM THE LIGHTING/UTILITY IMPROVEMENTS (I.E. REMOVAL OF HYDRANT ASSEMBLIES, WATER MAIN, FOUNDATIONS, AND STRUCTURES; ABANDONING OR RECONSTRUCTING STRUCTURES; INSTALLING CONDUIT, WATER SERVICES, WATER MAIN, OR SEWER; AND CONSTRUCTING FOUNDATIONS, HANDHOLES, GATE WELLS, OR DRAINAGE STRUCTURES) SHALL BE BACKFILLED AS FOLLOWS: ANY PORTION OF A TRENCH, HOLE, OR PIT THAT IS WITHIN A 1 ON 1 INFLUENCE LINE OF AN EDGE OF SIDEWALK, DRIVEWAY, PAVEMENT, OR BACK OF CURB THAT IS EITHER PROPOSED OR TO REMAIN IN PLACE, SHALL BE BACKFILLED WITH MDOT CLASS II GRANUALR MATERIAL. ANY PORTION OF A TRENCH, HOLE, OR PIT THAT IS OUTSIDE A 1 ON 1 INFLUENCE LINE OF AN EDGE OF SIDEWALK, DRIVEWAY, PAVEMENT, OR BACK OF CURB THAT IS EITHER PROPOSED OR TO REMAIN IN PLACE, SHALL BE BACKFILLED WITH SUITABLE EXCAVATED MATERIAL (EXCLUDING WET PLACED IN LAYERS NOT EXCEEDING 12 INCHES, AND COMPACTED TO 90% OF ITS MAXIMUM UNIT WEIGHT.
12. ALL CONNECTIONS BETWEEN NEW SEWER AND EXISTING SEWER UP TO 15 INCHES IN DIAMETER SHALL BE MADE USING FLEXIBLE RUBBER COUPLINGS WITH STAINLESS STEEL CLAMPS. COUPLINGS FOR THIS WORK SHALL BE FERNCO SERIES 1001 OR LOGAN LCP COUPLINGS. THE MAXIMUM DISPLACEMENT BETWEEN SEWER PIPE AT ALL CONNECTION POINTS SHALL NOT EXCEED ¼ INCH VERTICAL OR 1 INCH LONGITUDINAL.
13. ALL PUBLIC STORM DRAIN, SANITARY AND COMBINED SEWER RUNS CONTAINING SECTIONS OF PIPE TO BE REMOVED AND REPLACED SHALL BE CLEANED & TELEVISED AFTER THE PIPE IS REPLACED AND PRIOR TO REPLACING THE PAVEMENT ABOVE THE REPAIR. ONE (1) COPY OF THE VIDEO RECORDING OF THE TELEVISING SHALL BE FURNISHED TO THE ENGINEER SO THAT THE STRUCTURAL INTEGRITY OF THE REPAIR CAN BE APPROVED BY THE ENGINEER PRIOR TO THE CONTRACTOR REPLACING PAVEMENT ABOVE THE REPAIR.
14. 10-INCH AND 12-INCH SEWER TRAPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MDOT STANDARD PLAN R-19. 10-INCH SEWER TRAP DIMENSIONS SHALL BE PROPORTIONAL, MORE OR LESS, TO THE DIMENSIONS SPECIFIED FOR THE 12-INCH SEWER TRAP.
15. THE CONTRACTOR SHALL RECONSTRUCT DRAINAGE STRUCTURES OR GATE WELLS IN AREAS OF PAVEMENT REPLACEMENT OR IF THE STRUCTURE IS TO BE TAPPED, AS DIRECTED BY THE ENGINEER. THE DEPTH OF THE RECONSTRUCTION OF ANY STRUCTURE WILL BE DETERMINED BY THE ENGINEER.
16. IF REQUIRED TO CENTER CASTINGS AT THE LOCATIONS INDICATED ON THE PLANS, THE CONTRACTOR SHALL FURNISH AND INSTALL A PRECAST FLAT TOP COVER AT EXISTING DRAINAGE STRUCTURES AND GATE WELLS, AS DIRECTED BY THE ENGINEER.
17. FLOW CHANNELS SHALL BE INSTALLED AT ALL PROPOSED MANHOLES AS INDICATED IN MDOT STANDARD PLAN R-1.
18. WHEN PAVING ASPHALT SURFACES, THE FINAL ADJUSTMENT OF ALL CASTINGS OR ROAD BOXES TO FINISHED GRADE SHALL BE MADE IMMEDIATELY PRIOR TO PLACING THE WEARING COURSE.

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Designer:	N.M.S.
Quality Control:	
Section:	7
	T-6-N R-7-E

Professional Seal:

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DATE:	ISSUE:
01.19.2016	SUBMIT SITE PLAN
02.22.2016	RESUBMIT SITE PLAN

Developed For:

VERSA DEVELOPMENT
25900 W. 11 MILE ROAD
SUITE 250
SOUTHFIELD, MI 48034
(248) 421-7140

CITY OF ROYAL OAK NOTES

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
Scale:	NA
Sheet:	7
Project:	18970.00

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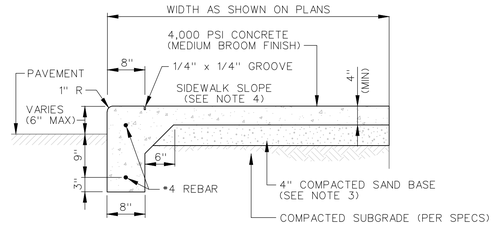
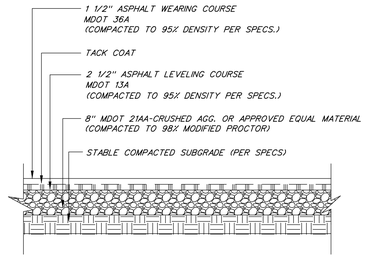


NOTES:
1. EXPANSION JOINTS: 1/2" WIDE x FULL DEPTH, AT 25' INTERVALS TRANSVERSELY, AROUND EMBEDDED ITEMS SUCH AS LIGHT BASES AND AT ABUTTING STRUCTURES SUCH AS BUILDINGS OR CURBS.
2. CONTRACTION JOINTS: 1/4" WIDE x 1" DEEP, ARRANGE TO FORM PANELS 6' MAXIMUM IN EITHER DIRECTION.
3. SAND BASE MATERIAL SHALL MEET THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR GRADATION AND OTHER SPECIFIED MATERIAL REQUIREMENTS.
4. SIDEWALK SLOPE SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 2.0% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.0%.

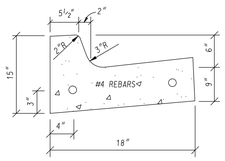
INTEGRAL CONCRETE CURB AND SIDEWALK DETAIL

NOT TO SCALE



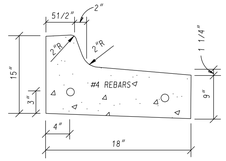
STANDARD DUTY ASPHALT PAVEMENT SECTION

NO SCALE



6" STRAIGHT CURB & GUTTER

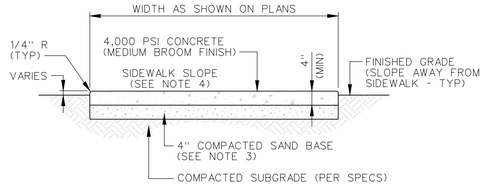
NO SCALE



6" REVERSE STRAIGHT CURB & GUTTER

NO SCALE

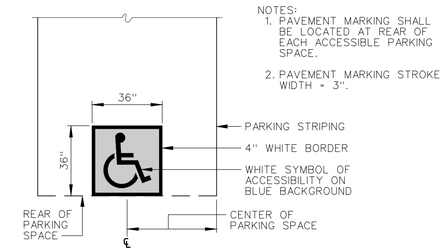
NOTE:
CONTRACTOR SHALL REVIEW PROPOSED AND EXISTING PAVEMENT SLOPE PRIOR TO INSTALLING APPROPIATE CURB AND GUTTER SECTION.



NOTES:
1. EXPANSION JOINTS: 1/2" WIDE x FULL DEPTH, AT 25' INTERVALS TRANSVERSELY, AROUND EMBEDDED ITEMS SUCH AS LIGHT BASES AND AT ABUTTING STRUCTURES SUCH AS BUILDINGS OR CURBS.
2. CONTRACTION JOINTS: 1/4" WIDE x 1" DEEP, ARRANGE TO FORM PANELS 6' MAXIMUM IN EITHER DIRECTION.
3. SAND BASE MATERIAL SHALL MEET THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR GRADATION AND OTHER SPECIFIED MATERIAL REQUIREMENTS.
4. SIDEWALK SLOPE SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 2.0% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.0%.

4" CONCRETE SIDEWALK DETAIL

NOT TO SCALE



NOTES:
1. PAVEMENT MARKING SHALL BE LOCATED AT REAR OF EACH ACCESSIBLE PARKING SPACE.
2. PAVEMENT MARKING STROKE WIDTH = 3".

PERPENDICULAR PARKING

SYMBOL OF ACCESSIBILITY PAVEMENT MARKING DETAIL

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DATE:	ISSUE:
01.19.2016	SUBMIT SITE PLAN
02.22.2016	RESUBMIT SITE PLAN

Developed For:

VERSA DEVELOPMENT
25900 W. 11 MILE ROAD
SUITE 250
SOUTHFIELD, MI 48034
(248) 421-7140

SITE DETAILS

VERSA ROYAL OAK

CITY OF ROYAL OAK
OAKLAND COUNTY
MICHIGAN

Date:	01.19.2016
Scale:	NA
Sheet:	8
Project:	18970.00

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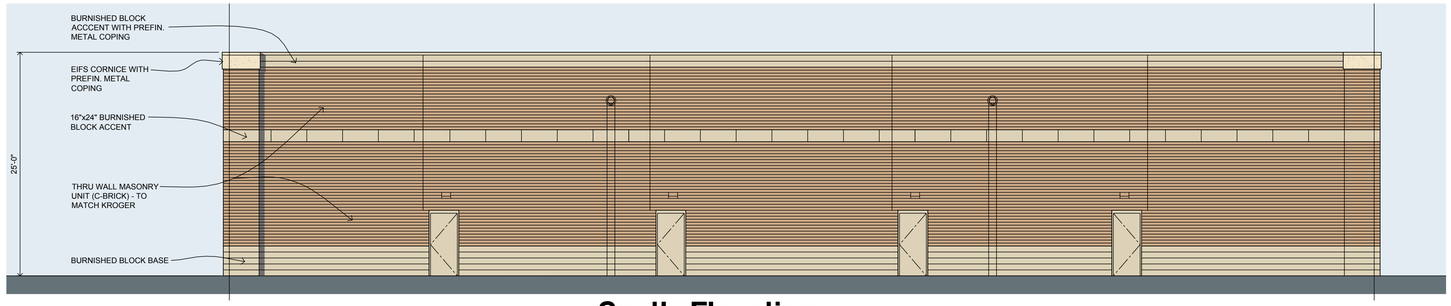
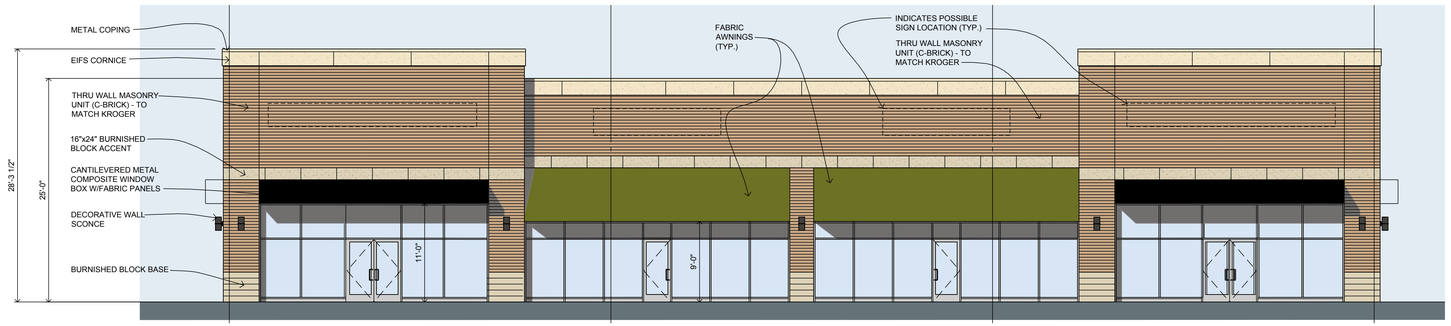


South Elevation

Scale: 1/8"=1'-0"



North Elevation

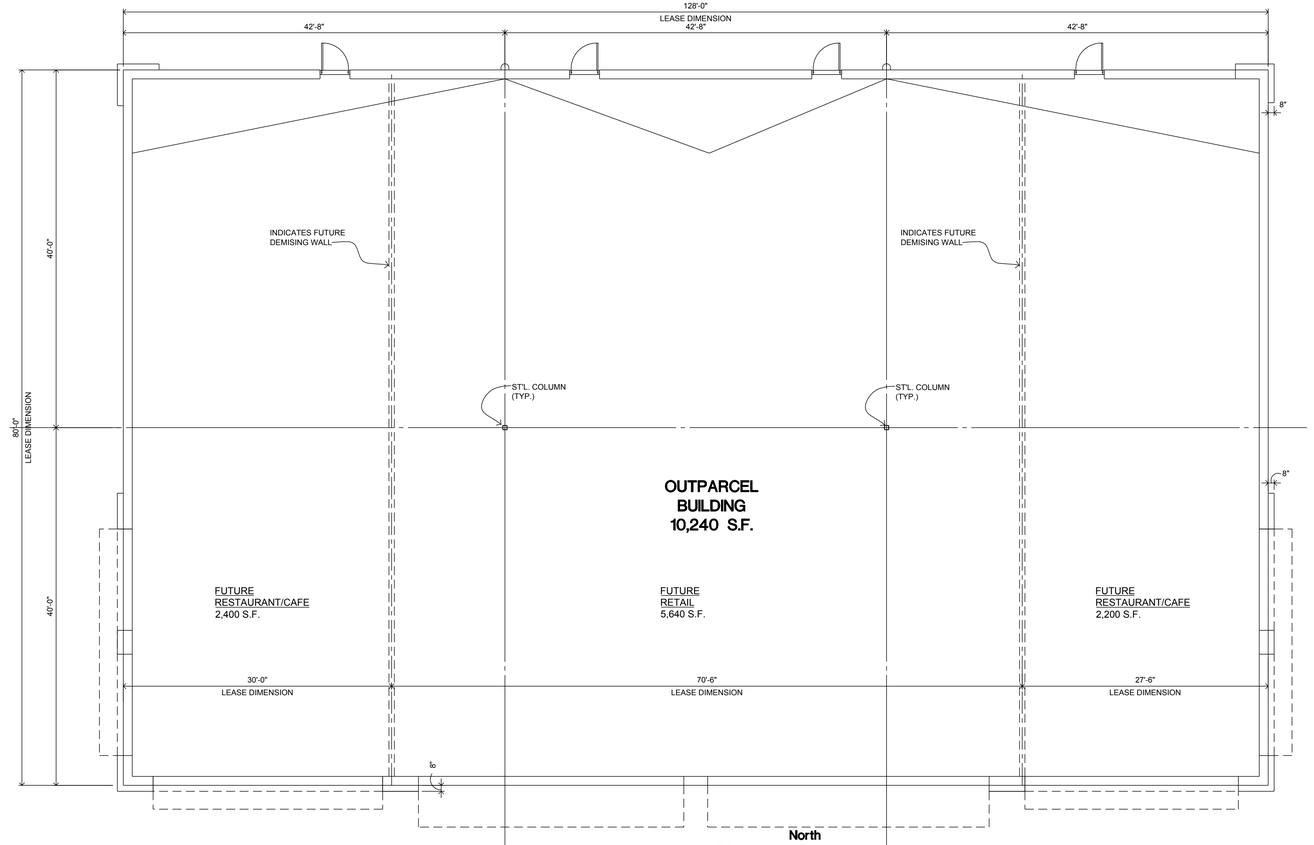
Scale: 1/8"=1'-0"

East Elevation

Scale: 1/8"=1'-0"

West Elevation

Scale: 1/8"=1'-0"



Floor Plan

1/8" = 1'-0"

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issued for:

SITE PLAN REVIEW	21 JAN. 16
SITE PLAN REVIEW	22 FEB. 16

project:

Proposed

Outparcel Building

SWC 12 Mile Rd. & Stephenson Hwy.
Royal Oak, Michigan

ROGVOY ARCHITECTS

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SUITE 250
BINGHAM FARMS, MICHIGAN
48025-2404

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STATE OF MICHIGAN
MARK DRANE
ARCHITECT
No. 34180
LICENSED ARCHITECT

drawing:

Outparcel Bldg. Elevations & Floor Plan

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issue date: 27 Oct. 15
drawn: KL
checked: MD
approved: MD

file number: 14031

sheet:

A-1

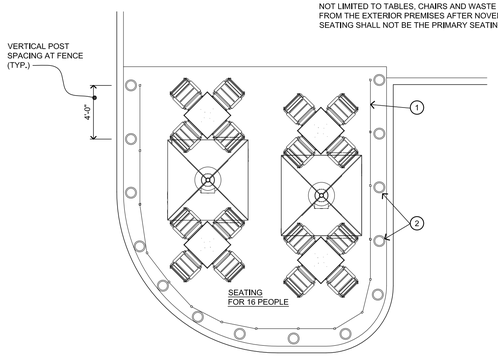
OUTDOOR SEATING AREA NOTES :

1. 42" HIGH GALVANIZED DECORATIVE METAL FENCE, AMERISTAR FENCE PRODUCTS, AEGIS PLUS - MAJESTIC STYLE, 3-RAIL WITH FLUSH TOP RAIL AND BLACK POWDER COAT FINISH OR APPROVED EQUAL, SEE DECORATIVE FENCE DETAIL SHEET SP-1A.

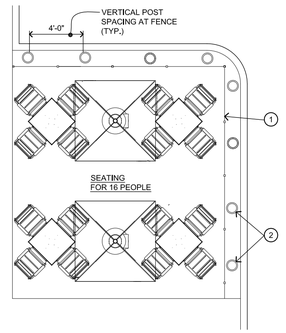
2. DECORATIVE PRECAST CONCRETE BOLLARD

HOURS OF OPERATION :

1. THE HOURS OF OPERATION FOR THE OUTSIDE RESTAURANT SHALL BE CONSISTENT WITH THE HOURS OF OPERATION OF THE INSIDE RESTAURANT.
2. OUTDOOR SEATING SHALL BE PERMITTED BETWEEN MARCH 1ST AND NOVEMBER 30TH WITH ALL FURNITURE AND FIXTURES INCLUDING, BUT NOT LIMITED TO TABLES, CHAIRS AND WASTE RECEPTACLES REMOVED FROM THE EXTERIOR PREMISES AFTER NOVEMBER 30TH. OUTDOOR SEATING SHALL NOT BE THE PRIMARY SEATING OF THE RESTAURANT.



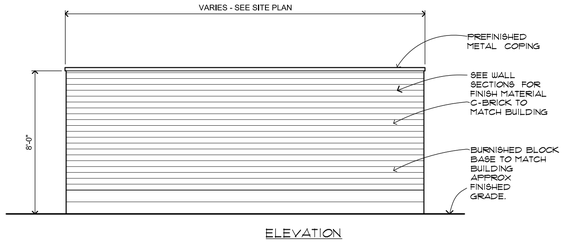
East Seating Area - 375 S.F.



West Seating Area - 320 S.F.

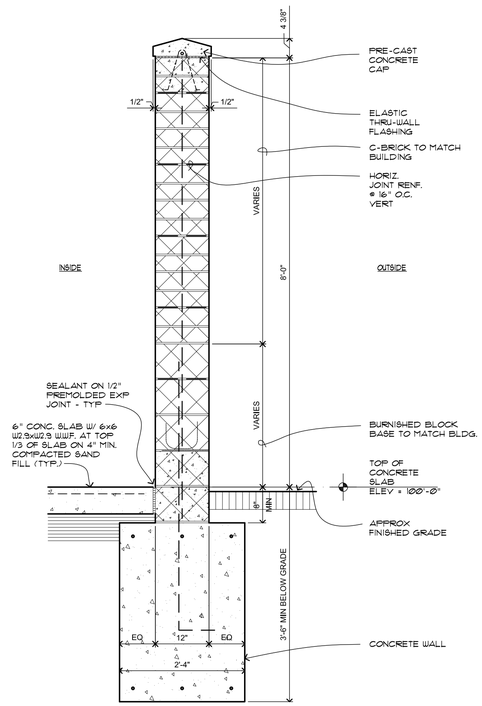
Outdoor Seating Area Plans

Scale: 3/16"=1'-0"



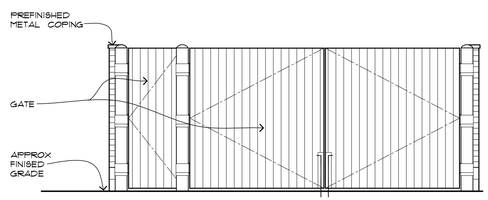
Decorative Screen Wall Elevation

Scale: 1/4"=1'-0"



Dumpster Enclosure & Screenwall Secton

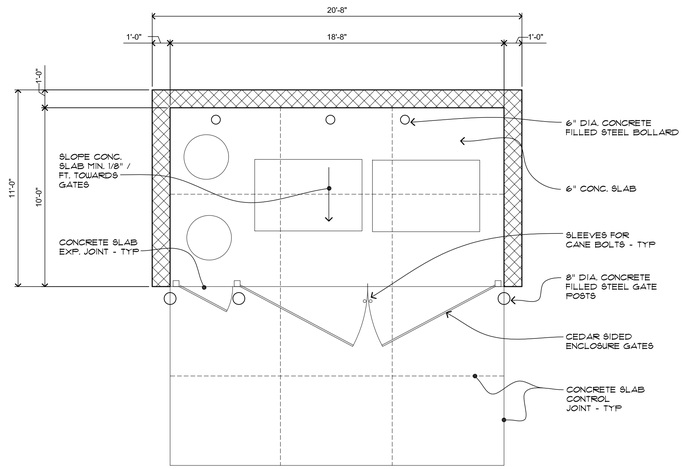
Scale: 3/4"=1'-0"



Gate/Front Elevation

Dumpster Enclosure

Scale: 1/4"=1'-0"



Dumpster Enclosure Plan

Scale: 1/4"=1'-0"

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project:

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STATE OF MICHIGAN LICENSED ARCHITECT MARK DRANE ARCHITECT No. 34180

drawing:

Architectural Site Details

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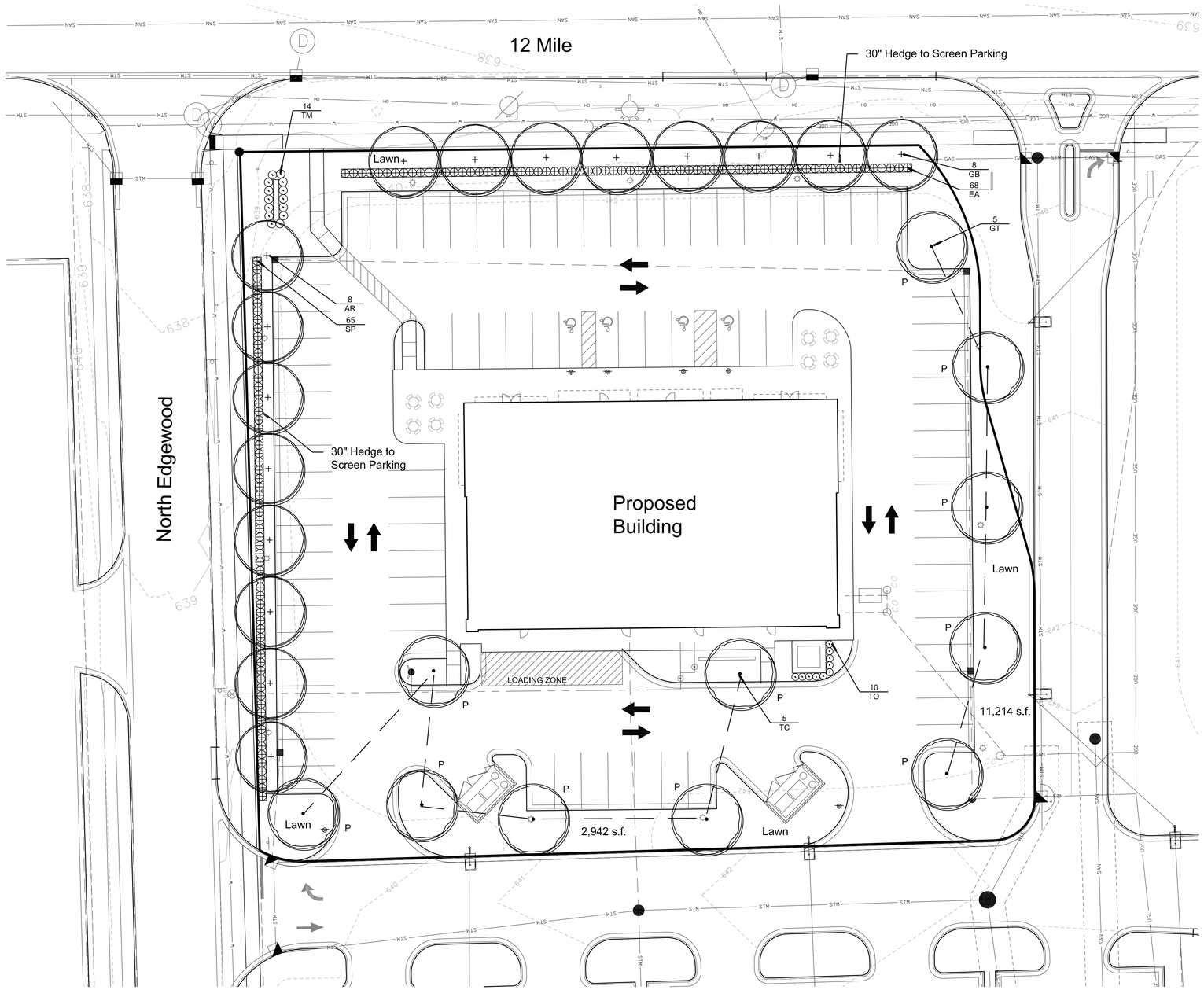
issue date: 10 FEB. 16
drawn: KL
checked: MD
approved: MD

file number: 14031

sheet:

A-2



Landscape Summary

Parking Lot Tree Requirement

Spaces Shown	87 Spaces
"P" Trees Required	11 Trees (1 Tree per 8 Spaces)
Trees Provided	11 Trees

Frontage Trees

Total Fronatge	489' - Edgewood and 12 Mile
Trees Required	16 Trees (1 per 30')
Trees Provided	16 Trees

Interior Open Space

Site Area	67,082 s.f.
Open Space Required	6,708 s.f. (10% of Total Site)
Open Space Provided	14,156 s.f. (21%)

Notes:

- All Lawn Areas Shall be Sod.
- All Beds Shall be Edged with Steel Edging.

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
AR	8	Acer rubrum 'Red Sunset'	Red Sunset Maple	2.5"	as shown	B&B	
EA	68	Euonymus alta 'Compact'	Compact Burning Bush		as shown		30"-36"
GB	8	Ginko biloba 'Autumn Gold'	Autumn Gold Ginko	2.5"	as shown	B&B	
GT	5	Gleditsia triacanthos var. 'Inermis'	Honey Locust	2.5"	as shown	B&B	
SP	65	Spirea x bumalda 'Anthony Waterer"	Anthony Waterer Spirea		as shown		30"-36"
TC	6	Tilia cordata 'Greenspire'	Greenspire Linden	2.5"	as shown	B&B	
TO	10	Thuja occidentalis 'Techny'"	Techny Arborvitae		as shown	B&B	5', Clip tp 4'
TM	14	Taxus x. m. 'Densiformis'	Dense Yew		as shown		30"-36"

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LAND PLANNING / LANDSCAPE ARCHITECTURE
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248.467.4668 • Fax 248.349.0559
Email: jca@wideopenwest.com

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Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Plan

Project:

Commercial Building
Royal Oak, Michigan

Prepared for:

Versa Development
25900 West 11 Mile, Suite 250
Southfield, Michigan 48034
248.996.1712

Revision:	Issued:
Submission	January 21, 2016
Revised	February 22, 2016

Job Number:

16-002

Drawn By:	Checked By:
jca	jca

0' 5' 10' 20'

NORTH
1"=20'

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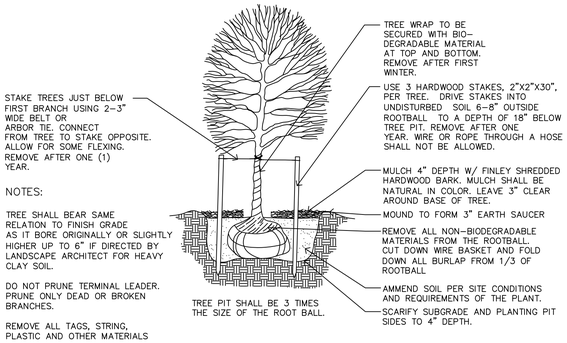
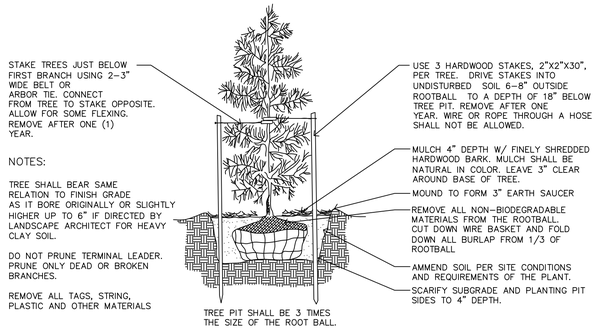
L-1



DECIDUOUS TREE PLANTING DETAIL

NTS



EVERGREEN TREE PLANTING DETAIL

NTS

LANDSCAPE NOTES

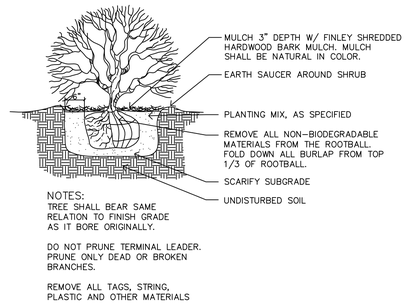
1. All plants shall be north Midwest American region grown, No. 1 grade plant materials, and shall be true to name, free from physical damage and wind burn.
2. Plants shall be full, well-branched, and in healthy vigorous growing condition.
3. Plants shall be watered before and after planting is complete.
4. All trees must be staked, fertilized and mulched and shall be guaranteed to exhibit a normal growth cycle for at least two (2) full years following City approval.
5. All material shall conform to the guidelines established in the most recent edition of the American Standard for Nursery Stock.
6. Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, and stone.
7. "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
8. Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand and 1/3 peat, mixed well and spread to the depth as indicated in planting details.
9. All plantings shall be mulched per planting details located on this sheet.
10. The Landscape Contractor shall be responsible for all work shown on the landscape drawings and specifications.
11. No substitutions or changes of location, or plant types shall be made without the approval of the Landscape Architect.
12. The City's Landscape Architect shall be notified of any discrepancies between the plans and field conditions prior to installation.
13. The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
14. The Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans and specifications, if requested by owner.
15. Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a discrepancy, the quantities on the plans shall prevail.
16. The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
17. A pre-emergent weed control agent, "Preen" or equal, shall be applied uniformly on top of all mulching in all planting beds.
18. All landscape areas shall be provided with an underground automatic sprinkler system.
19. Sod shall be two year old "Baron/Cheriadelphi" Kentucky Blue Grass grown in a sod nursery on loam soil.

NOTES:
THE APPROXIMATE DATE OF INSTALLATION FOR THE PROPOSED LANDSCAPE WILL BE SPRING 2016 / FALL 2016.

THE SITE WILL BE MAINTAINED BY THE DEVELOPER IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE CITY OF SOUTHFIELD ZONING ORDINANCE. THIS INCLUDES WEEDING AND WATERING AS REQUIRED BY NORMAL MAINTENANCE PRACTICES.

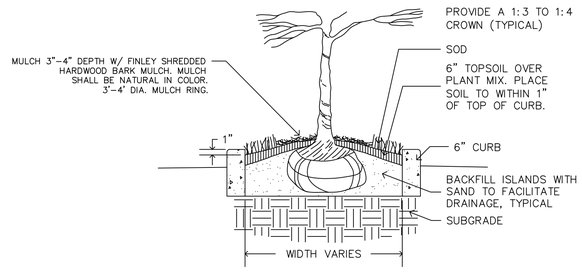
DEVELOPER SHALL BE RESPONSIBLE FOR REPLACING ANY TREES WITHIN UTILITY EASEMENTS THAT ARE DAMAGED THROUGH NORMAL MAINTENANCE OR REPAIRS.

PLANT MATERIALS SHALL BE GUARANTEED FOR 2 YEARS AND SHALL BE MAINTAINED IN ACCORDANCE WITH CITY ORDINANCES. WARRENTY PERIOD BEGINS AT THE TIME OF CITY APPROVAL. WATERING AS NECESSARY SHALL OCCUR DURING THIS WARRANTY PERIOD.



SHRUB PLANTING DETAIL

NTS



CURBED ISLAND DETAIL

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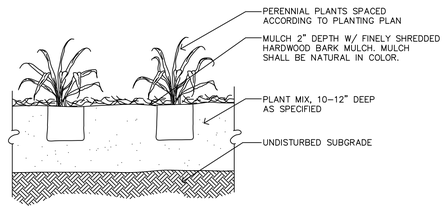

PERENNIAL PLANTING DETAIL

NTS

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ALLEN DESIGN
LAND PLANNING / LANDSCAPE ARCHITECTURE
557 CARPENTER • NORTHVILLE, MI 48167
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Versa | real estate

Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
No. 1301
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Details

Project:

Commercial Building
Royal Oak, Michigan

Prepared for:

Versa Development
25900 West 11 Mile, Suite 250
Southfield, Michigan 48034
248.996.1712

Revision:	Issued:
Submission	January 21, 2016
Revised	February 22, 2016

Job Number:

16-002

Drawn By:	Checked By:
jca	jca

NORTH

Know what's below. Call before you dig.

Sheet No.

L-2

FIXTURE 'SA'

LED AREA LIGHTS - LSI SLICE MEDIUM (XLCM)

UL & IeT, patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTION - DIM - 0-10 volt dimming enabled with controls by others. Available with High Output (HO) drive current only.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in Cool White (5000K), or Neutral White (4000K) color temperature, 70 CRI.

DISTRIBUTION/PERFORMANCE - Types 3, IT, FT-L, FT-R, FT-S, and enhanced SE and FTE. FT-L and FT-R allow for D180 mounting configurations with factory set optics for applications such as automotive front row. Exceptional uniformity creates bright environment at lower light levels. Internal Louver (IL) option available for improved backlight control without sacrificing street side performance for FT distribution. Consult factory for internal louver for FT-L and FT-R applications.

HOUSING - One-piece, die-formed aluminum housing contains factory pewtered driver. Wiring access door (with safety lanyard) located underneath.

OPTICAL UNIT - Clear tempered optical-grade flat glass lens permanently sealed to weather-tight aluminum optic frame creates an IP65 rated optical unit (includes pressure-stabilizing breather).

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (SKS-XBG-WM- * -CLR). Proprietary pole quick mount accessories available with horizontal mounting or fixed 15° angled mounting (PQMH-KIT-CLR and PQMS-KIT-CLR) for mounting to square poles. See Accessory Ordering Information chart for all brackets.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

DRIVER - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - One fixture: 25.25 lbs. (11.5 kg). Packed two per carton: 43.5 lbs. (19.7 kg).

LISTING - UL listed to U.S. and international safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

ARRA Rating Category · IP65

Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

DOE LIGHTING FACTS
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XLCM

		Type 3	Type FT	Lumens (Nominal) Type 3 - TypeSE	TypeFTE	Watts (Nominal)
Cool White (5000K)	SS	19000	22800	22900	15000	150
	HO	31500	30900	31100	21200	210
Neutral White (4000K)	SS	18000	29000	29000	15000	150
	HO	29200	37800	28000	20300	200

LED Chips are frequently updated therefore values may increase.

LED AREA LIGHTS - LSI SLICE MEDIUM (XLCM)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCM 5 LED SS CW UE BLK PCI120**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
XLCM - Slice Medium	3 - Type III 5 - Type V FT - Forward Throw FTL - Forward Optic Rotated for D180 Mount (Left Side) FTR - Forward Optic Rotated for D180 Mount (Right Side) SE - Type V Enhanced FTE - Forward Throw Enhanced	LED	SS - Super Saver HO - High Output	CW - Cool White NW - Neutral White (4000K)	UE - Universal Voltage (120-277V) 347-480 Universal Voltage (347-480V)	BLK - Black BRZ - Bronze WHT - White	DIM - 0-10V Dimming (from external signal) available with High Output drive current only. Button Type Photocells PCI120 - 120V PCI208-277V - 208-277V PCI347 - 347V IL - Internal Louver (available with FT distribution only)

LUMINAIRE EPA CHART - XLCM

Single	0.5
D180	1.0
D90°	0.8
T90°	1.7
TW120°	1.7
D90°	1.9

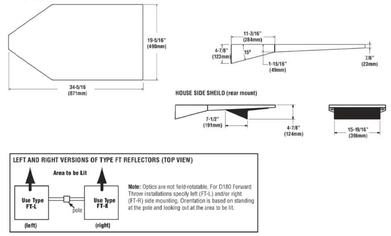
Note: House Side Shield adds to fixture EPA. Consult factory.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

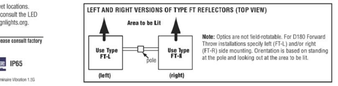
Description	Order Number
BKS-SKS-WM- * -CLR Wall Mount Bracket	SKS-XBG-WM- * -CLR
XLCM-SHT-HSS-SM External House Side Shield (Mats only - rear mounted)	6001599LA*
XLCM-FTL/FTR-HSS-SM External House Side Shield (Mats only - side mounted)	6001601R/L*
KARY Round Pole Plate for 4" Poles	3796072LR
KARY Round Pole Plate for 5" Poles	3796062LR
PQMH-KIT-CLR Square Pole Quick Mount Horizontal Bracket	5822052LR
PQMS-KIT-CLR Square Pole Quick Mount Bracket w/Slant 15° Angle	5822052LR

FOOTNOTES:
1 - House Side Shields add to fixture EPA. Consult factory.
2 - Fusing must be located in the hand hole of pole.

DIMENSIONS



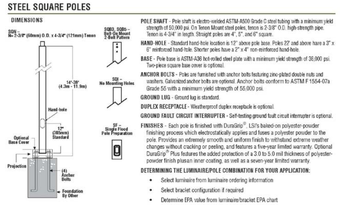
LEFT AND RIGHT VERSIONS OF TYPE FT REFLECTORS (TOP VIEW)



Note: Optics are not field-rotatable. For D180 Forward Throw installations specify left (FT-L) and/or right (FT-R) side mounting. Orientation is based on standing at the pole and looking out at the area to be lit.

STEEL SQUARE POLES

DIMENSIONS



DRILLING LOCATIONS

Poles	A	B	C	D
Round 10SS	X			
10SS	X			X
10HO	X	X		
12SS	X		X	
12HO	X	X	X	
12SQ	X			X
12SQ-HO	X	X		X
Fluted 10SS	X			

* Other hole locations will be 120° to the left and right of Side A.

Note: Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, unless otherwise specified.

SHIPPING WEIGHTS - Steel Square Poles

10' (3.0m) sq. (1.7 lbs./ft. (2.5kg/m) nominal)	210 lbs. (95kg)
12' (3.7m) sq. (1.7 lbs./ft. (2.5kg/m) nominal)	250 lbs. (113kg)
14' (4.3m) sq. (2.1 lbs./ft. (3.1kg/m) nominal)	410 lbs. (186kg)
16' (4.9m) sq. (2.1 lbs./ft. (3.1kg/m) nominal)	510 lbs. (231kg)
Anchor Bolts (SSPS / SPS 10'-16')	15 lbs. (7kg) set
Anchor Bolts (SSPS / SPS 18'-20')	30 lbs. (14kg) set

POLE SELECTION CHART - 4"(102mm), 5"(127mm) and 6"(152mm) thick square poles

Height	EPA** (2 MPH)	EPA** (90 MPH)	EPA** (100 MPH)	Outside Dimensions	Material	Bolt Circle
10' (3.0m)	20.3	9.0	11.2	10" (254mm)	5" (127mm)	11" (279mm)
12' (3.7m)	19.3	8.5	10.6	10" (254mm)	5" (127mm)	11" (279mm)
14' (4.3m)	18.5	8.2	10.1	10" (254mm)	5" (127mm)	11" (279mm)
16' (4.9m)	17.8	7.9	9.7	10" (254mm)	5" (127mm)	11" (279mm)
18' (5.5m)	17.3	7.7	9.5	10" (254mm)	5" (127mm)	11" (279mm)
20' (6.1m)	16.8	7.5	9.2	10" (254mm)	5" (127mm)	11" (279mm)
10' (3.0m)	38.2	17.0	21.0	12" (305mm)	6" (152mm)	13" (330mm)
12' (3.7m)	37.4	16.6	20.4	12" (305mm)	6" (152mm)	13" (330mm)
14' (4.3m)	36.6	16.3	20.0	12" (305mm)	6" (152mm)	13" (330mm)
16' (4.9m)	35.9	16.0	19.6	12" (305mm)	6" (152mm)	13" (330mm)
18' (5.5m)	35.3	15.7	19.3	12" (305mm)	6" (152mm)	13" (330mm)
20' (6.1m)	34.8	15.5	19.0	12" (305mm)	6" (152mm)	13" (330mm)
10' (3.0m)	59.4	26.4	32.5	14" (356mm)	8" (203mm)	16" (406mm)
12' (3.7m)	58.6	26.0	32.0	14" (356mm)	8" (203mm)	16" (406mm)
14' (4.3m)	57.8	25.7	31.6	14" (356mm)	8" (203mm)	16" (406mm)
16' (4.9m)	57.1	25.4	31.2	14" (356mm)	8" (203mm)	16" (406mm)
18' (5.5m)	56.5	25.1	30.9	14" (356mm)	8" (203mm)	16" (406mm)
20' (6.1m)	56.0	24.9	30.6	14" (356mm)	8" (203mm)	16" (406mm)

** EPA based on ANSI/ASCE 7-10. Refer to EPA information on next page. For applications in Canada and areas using code requirements other than ANSI/ASCE 7-10, consult factory. If luminaire weight exceeds 250 lbs. (113.4 kg), consult factory.

ARRA Rating Category

STEEL SQUARE POLES

POLE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **SSQB5 S07G 24 S PLP SF DGP**

Pole Series	Material	Height*	Mounting Configuration	Pole Finish	Options
Bolt-on Arm Mount - Size pole selection guide - for antenna and ladder mounting **SSQB5** - 5" Tradetenal drilling pattern **SSQB7** - 7" Tradetenal drilling pattern **4SQB5** - 5" Tradetenal drilling pattern **4SQB7** - 7" Tradetenal drilling pattern **6SQB5** - 5" Tradetenal drilling pattern **Tenon Mount** - See pole selection guide for tenon and ladder/basket mounting. **4SQB** **6SQB** **8SQB** **No Mounting Holes** - Ship with 3" (76mm) Tenon • HSQ, AHSQ & AMLS ONLY **Internal Slip-fitter** **4SQI** **6SQI**	S07G - 5" Sq. Steel S09G - 6" Sq. Steel	10 12 14 16 18 20 22 24 26 28 30 35 40 **Consult Pole Selection Chart on opposite page**	S1 - Single Pendant S2 - Single Double D1 - Double Pendant D2 - Double T1 - Triple T2 - Triple Single Q1 - Quad Q2 - Quad Single **Color Decal:** 45 - Light Gray Metallic 50 - Black 55 - Chestnut Metallic 84 - Blue Metallic 91 - Dunes Red 350 - Aztec Silver Metallic	BRZ - Bronze BLK - Black WHT - White WHM - Weathered Plus SVG - Satin Vivid Gloss SVB - Satin Vivid Black MGV - Metallic Silver	GA - Galvanized Anchor Bolts SF - Single Fixed DF - Double Fixed DGP - Duraspot® Plus LAB - Less Anchor Bolts PLP - Pole Locking Provision PMCR Engraving Service*

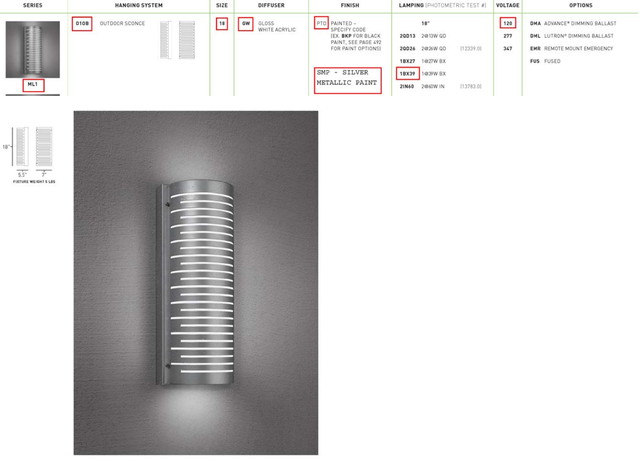
Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, unless otherwise specified.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
4" Square Base Cover	1129662LR
5" Square Base Cover	1129612LR
6" Square Base Cover	1129613LR
Anchor Bolts (Galvanized)	1129625LR
5/8" - Straight Hole Plug (1 plug for use with 2 Traditional arms)	1333361
5/8" - Mounting Hole Plug (1 plug for use with 2 Traditional arms)	1333362
5/8" - Mounting Hole Reinforced Cover for use with 1" reducer/adapter	1333363

Description	Order Number
Knuckle Clamps - 4" Square Pole (bolt on mount only)	1129669
Knuckle Clamps - 5" Square Pole (bolt on mount only)	1129661
Knuckle Clamps - 6" Square Pole (bolt on mount only)	1129662
Pole Base Cover - 4" Square Pole (Cast Aluminum)	5130340LL07
PMCR3/PMCR5 - DOL, MPH Engraving Service	5130340LL07
PMCR7 - 7070 Engraving Service	5130340LL07
PMCR9 - 9500 Tri-anthony Service	5130340LL07

NOTES:
1 - See Area Lighting Brochure - Slate on pole EXCEPT for Area Lighting Brackets pages for Internal Slip-fitter brackets.
2 - Other heights and those in 1/2' increments.
3 - Round Pole Lightning Brackets section for internal 1180 brackets.
4 - Order PMCR3 separately. Change "03" to indicate height and add a Code to select the desired engraving. Example: PMCR3-24-SF-GA-PLP-DGP-A1 for 24' pole with SF and GA and below and A1. Custom engraving available, consult factory.
5 - 10SS option required. Not for use with Model 4 brackets.



ML1-010B-18-GW-SMP

FIXTURE 'A'

LED GREENBRIAR® WALL SCONCE (XGBWM3)

Shown with optional decal striping

DOE LIGHTING FACTS
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XGBWM3

	Millilumens	# of LEDs	Type FT	Type WT	Type WW	Watts
Cool White (5000K)	4K	24	5100	3600	5200	34
	6K	48	6700	5100	5200	55
	8K	36	5700	4000	4900	54
	10K	48	6200	6100	6300	72
Neutral White (4000K)	4K	24	5100	3600	5200	34
	6K	48	4900	4600	4900	55
	8K	36	3500	3600	3700	44
	10K	48	5300	5700	5300	72

LED Chips are frequently updated therefore values may increase.

US patent 7628506, 8002420 and CAN 2136757 & 2728757 and MX patent 29631 and ISRL 49679 and AUS 2008215568 and US & IeT, patents pending

SMARTTEC™ ENERGY SAVING FEATURES:

THERMAL CONTROL - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

OPTIONAL INTEGRAL MOTION SENSOR - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Available with 24 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.

OPTICS/DISTRIBUTIONS - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

HOUSING - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with molded EPDM bushing.

OPTICAL UNIT - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure-stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.

WALL MOUNTING - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.

POLE MOUNTING - XPMA (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

DRIVER - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed and removed.

EMERGENCY OPTIONS - Integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

DECAL STRIPING - Optional color-coordinated decals in 9 standard colors to accent the fixture. Decals are guaranteed for five years against peeling, cracking, or fading.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data

SHIPPING WEIGHT (in carton) - 31 lbs./14kg

LISTING - ETL listed to ANSI/UL 1598. UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

for your specific requirements.

ARRA Rating Category · IP65

LED GREENBRIAR® WALL SCONCE (XGBWM3)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XGBWM3 FT LED 48 450 CW UE WHT BE**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XGBWM3 - LED Greenbriar Wall Sconce	WT - Wide Throw FT - Forward Throw WW - Wall Wash	LED	24 48	350 - 350mA 450 - 450mA	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Voltage (120-277) 120*	BLK - Black BRZ - Bronze GPT - Graphite MSV - Metallic Silver WHM - Weathered Plus WHT - White	BB - Battery Back-up* CWBB - Cold Weather Battery Back-up* SMD - Integral Motion Sensor* PCI120 - 120V Button-Type Photocell PCI208 - 208V Button-Type Photocell PCI240 - 240V Button-Type Photocell PCI277 - 277V Button-Type Photocell PCI347 - 347V Button-Type Photocell XPMA - Pole Mount Adapter w/fixture backplate for use with 4" O.D. round poles* XPMAR - Pole Mount Adapter w/fixture backplate for use with 3" O.D. round poles* TP - Tamper Proof*

Color Decal:
45 - Light Gray Metallic · 50 - Black
55 - Chestnut Metallic · 84 - Blue Metallic
91 - Dunes Red · 350 - Aztec Silver Metallic

NOTES:
1 - On 28 LED Luminaires, 120 Volt only is DLC qualified. Specify 120 in place of UE.
2 - Available with UE voltage only.
3 - Designed with 3" reduced drilling pattern. For 5" to 3"/4"/6" mounting configuration only.
4 - Tamper proof Screwdriver must be ordered separately (See Accessory Ordering Information).
5 - Will be not compatible with XPMA or XPMAR options. Available in black only.
6 - Fusing to be installed in a compatible junction box supplied by contractor.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
XGBWM3 BW BLK - Surface Wiring Box	1731568LA*
SCD - Tamper proof Screwdriver	4219934
PKT20 - Single Fusing	PKT20*
PKT27 - Single Fusing	PKT27*
DPK36B, 240 - Double Fusing	DPK36B,240*
DPK480 - Double Fusing	DPK480*
PKT47 - Single Fusing	PKT47*

FIXTURE 'C'

LED PATRIOT® WALL SCONCE (XPWS3)

US patent 7628506, 8002420 and CAN 2136757 & 2728757 and MX patent 29631 and ISRL 49679 and AUS 2008215568 and US & IeT, patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTIONS - DIM- 0-10 volt dimming enabled with controls by others.

OPTIONAL INTEGRAL MOTION SENSOR - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.

OPTICS/DISTRIBUTIONS - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

HOUSING - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with molded EPDM bushing.

OPTICAL UNIT - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure-stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.

WALL MOUNTING - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.

POLE MOUNTING - XPMA (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

DRIVER - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for IP66 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.

EMERGENCY OPTIONS - Optional integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - 59 lbs./17.9Kg

LISTING - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C, &D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

DOE LIGHTING FACTS
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XPWS3

	Millilumens	# of LEDs	Type FT	Type WT	Type WW	Watts
Cool White (5000K)	4K	28	5100	3600	5200	34
	6K	48	6700	5100	5200	55
	8K	28	5700	4000	4900	54
	10K	48	6200	6100	6300	72
Neutral White (4000K)	4K	28	5100	3600	5200	34
	6K	48	4900	4600	4900	55
	8K	28	3500	3600	3700	44
	10K	48	5300	5700	5300	72

LED Chips are frequently updated therefore values may increase.

Also available in traditional light sources

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

ARRA Rating Category · IP65

LED PATRIOT® WALL SCONCE (XPWS3)

LUMINAIRE ORDERING INFORMATION

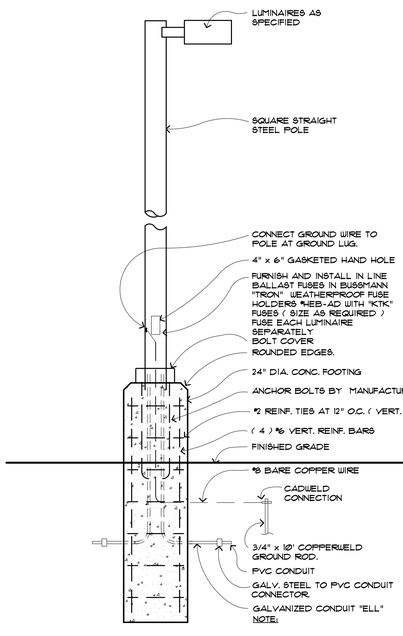
TYPICAL ORDER EXAMPLE: **XPWS3 FT LED 48 450 CW UE WHT BB**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Optional Controls	Optional Sensor Options
XPWS3 - LED Patriot Wall Sconce	WT - Wide Throw FT - Forward Throw WW - Wall Wash	LED	28 48	350 - 350mA 450 - 450mA	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Voltage (120-277) 347-480	BLK - Black BRZ - Bronze GPT - Graphite MSV - Metallic Silver WHM - Weathered Plus WHT - White	**Wireless Control Network*** - None PCR - Photocell Control System PCMH - Hardwired to Photocell SCB - Solid State Dimming Control System SCBP - Solid State Dimming Control System DIM - 0-10 volt dimming (required for Lead/Lag Mode) **Stand Alone Control** - None EM-E - 0-10 volt (Commercial) (From external signal)	**Sensor** - None SMS - Integral Motion Sensor* PCI120 - 120V Button-Type Photocell* PCI208 - 208V Button-Type Photocell* PCI240 - 240V Button-Type Photocell* PCI277 - 277V Button-Type Photocell* PCI347 - 347V Button-Type Photocell* **Options** - None BB - Battery Back-up* CWBB - Cold Weather Battery Back-up* EMRC - Tele-Emergency 120 Circuit Provisions with (2) 25 Watt Halogen Lamps* EMRC-L - Tele-Emergency Programmable Locations Battery (1), Listed to UL924* XPMA - Pole Mounting Adapter w/ Fixture Back Plate for Use with Square Poles* XPMAR4 - Pole Mounting Adapter w/ Fixture Back Plate for Use with 4" O.D. Round Poles* XPMAR5 - Pole Mounting Adapter w/ Fixture Back Plate for Use with 5" O.D. Round Poles*

ACCESSORY ORDERING INFORMATION* (Accessories are field installed)

Description	Order Number
XPWS3 Polycarbonate Shield	1344557
XPWS3 BR BLK Surface Wiring Box (Available in black only)	3168316LC
PKT20 - Single Fusing	PKT20*
PKT27 - Single Fusing	PKT27*

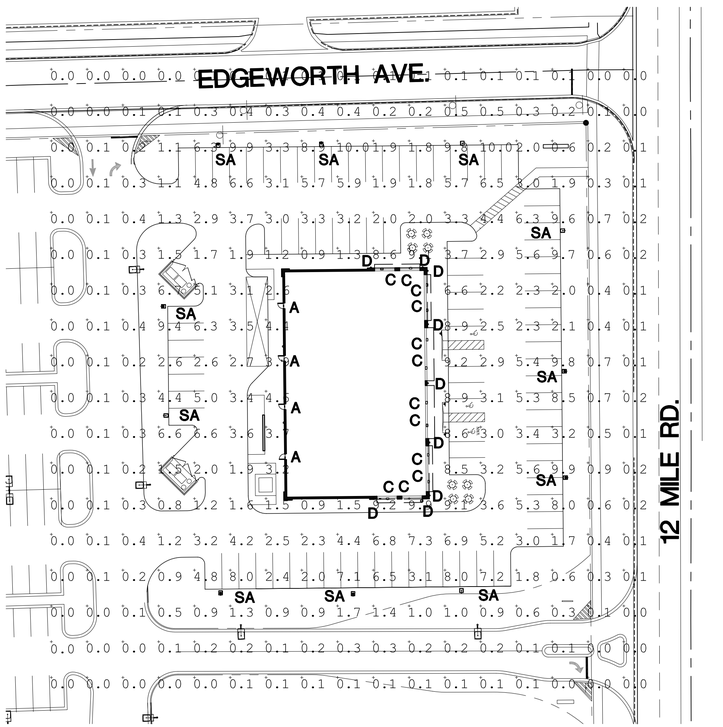
FOOTNOTES:
1 - For wireless controls information and accessories, see Controls section.
2 - Requires a Multi-Manager and inverter switch. Not compatible with battery back-up, EMS, EMRC or HL Options.
3 - Not compatible with SMS option.
4 - Not compatible with wireless controls system or EMC.
5 - Not compatible with EMRC or HL option.
6 - Available with UE voltage only. Not compatible with wireless controls system, EMRC or HL option.
7 - 4/10mil SCA barrels. 10 watt separate circuits required. Not available with wireless controls system, battery back-up, photocell, HL, SPWA or SPWAR options.
8 - Not available with wireless controls system, battery back-up, photocell or EMRC option.
9 - Not available with EMRC option. Designed for 3" reduced drilling pattern. For 5 or 3/4/6 mounting configurations only. Not fusing to be installed in a compatible junction box supplied by contractor.



Site Lighting Fixture Detail 1/2" = 1'-0"

Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	Arrangement	Total Lamp Lumens	LLF	Description	Tag
	4	XGBWM3-FT-LED-28-450-NW-UE	9' ABOVE FIN. FL.	SINGLE	N.A.	0.912	XGBWM3-FT-LED-28-450-NW-UE	A
	9	OCL-12339	9' ABOVE FIN. FL.	SINGLE	2850	0.880	RBSW-09-7-X-2DP-2	B
	11	XLCM-FT-LED-SS-NW	20' ABOVE FIN. GRADE	SINGLE	N.A.	0.912	XLCM-FT-LED-SS-NW	SA
	12	XPWS3-FT-LED-48-350-NW-UE	12' ABOVE FIN. FL.	SINGLE	N.A.	0.912	XPWS3-FT-LED-48-350-NW-UE	C

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	2.20	10.0	0.0	N.A.	N.A.



SITE LIGHTING PLAN

SCALE: 1"=40'-0"

© COPYRIGHT 2013: ROGVOY ARCHITECTS, P.C.

issued for:
SITE PLAN REVIEW: 21 JAN. 16
SITE PLAN REVIEW: 22 FEB. 16

project:

Proposed
Outparcel Building
SWC 12 Mile Rd. & Stephenson Hwy.
Royal Oak, Michigan

ROGVOY ARCHITECTS
32500 TELEGRAPH ROAD
SUITE 250
BINGHAM FARMS, MICHIGAN
48025-2404
PH 248.540.7700 FX 248.540.2710
www.rogvoy.com

STATE OF MICHIGAN · MARK DRANE · ARCHITECT · No. 34180 · LICENSED ARCHITECT

drawing:
Site Lighting Plan

DO NOT SCALE DRAWING

issue date: 13 JAN. 16
drawn: KL
checked: MD
approved: MD

file number: 14031

sheet:
LTG-1

NOTES

1. BENCHMARKS
   CONTROL BENCHMARK:
   CONTROL BM: CITY OF ROYAL OAK BM #1455, NORTH BOLT ON FIRE HYDRANT AT SOUTHEAST CORNER OF GARDENIA AND EDISON AVENUE.
   ELEVATION = 641.52 (U.S.G.S.) 643.52 (ROYAL OAK DATUM)

   BENCHMARK #1:
   SITE BM #1: SET RAILROAD SPIKE IN NORTHEAST FACE OF UTILITY POLE LOCATED 45'± WEST AND 10'± NORTH OF THE NORTHEAST CORNER OF PARCEL 1 (2100 BELLAIRE AVENUE)
   ELEVATION = 642.57 (U.S.G.S.)

   BENCHMARK #2:
   SITE BM #2: SCRIBED "+" ON SOUTHWEST ANCHOR BOLT FOR TRAFFIC LIGHT POLE LOCATED 15'± SOUTH AND 20'± EAST OF THE SOUTHWEST CORNER OF 12 MILE ROAD AND STEPHENSON HIGHWAY.
   ELEVATION = 640.98 (U.S.G.S.)

2. THE CONTRACTOR SHALL CALL "MISS DIG" AT 1-800-482-7171 AT LEAST THREE (3) WORKING DAYS (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO CONSTRUCTION.

3. LSG ENGINEERS & SURVEYORS WILL NOT BE RESPONSIBLE FOR FIELD DESIGN CHANGES MADE BY THE CONTRACTOR OR THE CONTRACTOR'S SURVEYOR WHERE THESE DESIGN CHANGES HAVE NOT BEEN APPROVED BY LSG ENGINEERS & SURVEYORS.

4. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE FACE OF CURB AND ALL BUILDING AND PAVEMENT LINES ARE PARALLEL AND/OR PERPENDICULAR TO THE PROPERTY LINE DENOTED WITH THE MEASURED BEARING OF X00°00'00"X.

DELIVERY ROUTES

STORE DELIVERY TRUCKS WILL ENTER AND EXIT THE SITE FROM STEPHENSON AT THE CURB CUT BEHIND THE STORE.

LIGHTING NOTES

ALL LIGHT POLES, FIXTURES, AND ANCHOR BOLTS ARE PROVIDED BY THE OWNER, KROGER, AND MUST BE COORDINATED, RECEIVED, HANDLED, ASSEMBLED, AND INSTALLED BY THE SITE CONTRACTOR. ALL WARRANTY WORK AND REPAIRS ARE THE SITE CONTRACTOR'S RESPONSIBILITY.

FIXTURE NUMBER	DESCRIPTION
1-18, 38-41, 46-49	20' POLE
19-36	FUEL CANOPY, REFER TO TPC PLANS
37, 42-45	15' POLE
50-61	WALL MOUNT

LEGEND

PARKING COUNT (12)

ACCESSIBLE PARKING

VAN ACCESSIBLE (VAN)

TRAFFIC FLOW

MODIFIED CURB & GUTTER

REGULAR CURB & GUTTER

SCREEN WALL OR RETAINING WALL

FINISH FLOOR F.F.

HEAVY DUTY ASPHALT AREA

LIGHT DUTY ASPHALT AREA

CONCRETE SURFACE

PERVIOUS PAVEMENT

PARKING

	REQUIRED	MIN. SPACES**	MAX. SPACES**	SPACES PROVIDED	SURPLUS
KROGER	1/300 SF*	356	427	565	138

*ORDINANCE REQUIREMENT PER SQUARE FOOT OF USABLE FLOOR AREA FOR LARGE SCALE RETAIL. GROSS FLOOR AREA = 126,666 SQ. FT., USABLE FLOOR AREA = 111,410 SQ. FT. PER COMMENT LETTER DATED 11/26/14.
**PER ORDINANCE AND 11/26/14 LETTER.

SIGNS

FIVE SIGNS ARE PROPOSED FOR THE STORE, FUEL CENTER, AND OUTLOTS.

SUMMARY TABLE

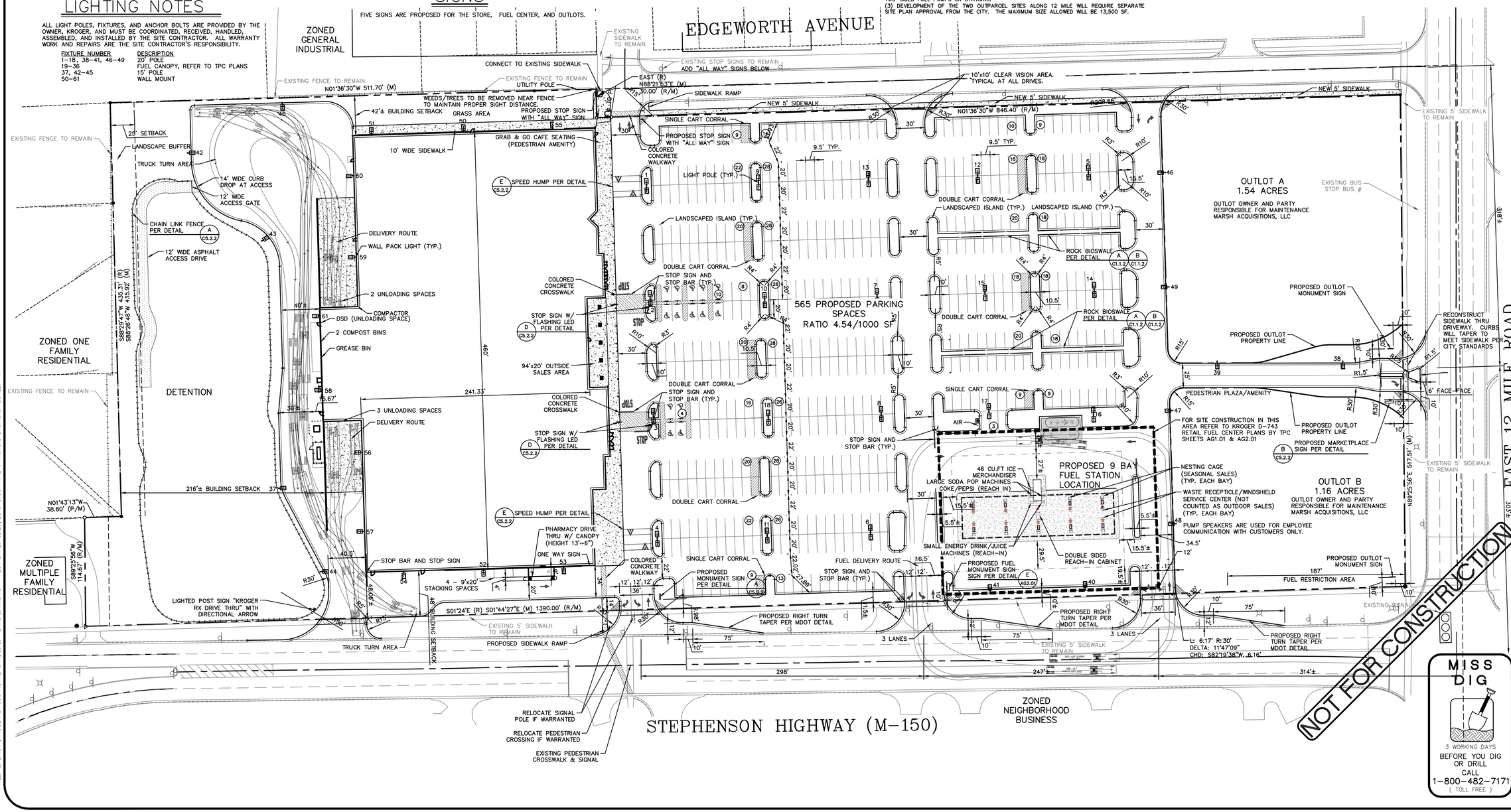
ZONING:	EXISTING: ONE FAMILY AND MULTIPLE FAMILY RESIDENTIAL PROPOSED: PLANNED UNIT DEVELOPMENT
PROPOSED LAND USE:	RETAIL
SITE AREA:	16.59 AC (722,447 SF)
BUILDING AREA:	BUILDING: 119,530 SF DOCK: 4,800 SF TOTAL: 124,330 SF
BUILDING HEIGHT:	30' MAX. PROPOSED 26' PROPOSED T/GABLE 44'5"
SETBACKS: FRONT:	REQUIREMENTS SUBJECT TO PLANNING COMMISSION REVIEW 835±' PROPOSED (12 MILE) 48'± PROPOSED (STEPHENSON)
REAR:	25' REQUIRED (ADJACENT TO RESIDENTIAL) 216±' PROPOSED
SIDE:	11±' PROPOSED (AT FRONT CORNER)
BUILDING COVERAGE RATIO:	16.7% PROPOSED (120,359 SF FOOTPRINT – MARKETPLACE) 0% PROPOSED (207 SF KIOSK)
KROGER PARCEL OPEN SPACE	OPEN SPACE: 2.86 ACRES (21%) TOTAL KROGER PARCEL: 13.89 ACRES

10' CORNER SETBACK

WAIVERS REQUESTED

1) § 770-30 (B)(2) Primary building facades and entrances must face adjacent streets. Waiver.
2) § 770-34 (B) & (C) Commercial uses within a residential zoning district. Proposed rezoning to PUD.
3) § 770-37 (B) & (C) Commercial uses within a residential zoning district. Proposed rezoning to PUD.
4) § 770-64 (K) Maximum permitted illumination levels (10 foot-candles at any given area). See § 770-96 (B)(3)(c). Waiver requested at fuel station to meet Illuminating Engineering Society of North America Recommended Practice for Lighting Merchandise Areas guidelines. Lighting is recessed and shielded.
5) §770-82(A)(1)(a) Minimum percentage of projections or recesses along length of facade (20%). Revised to comply.
6) §770-82(A)(1)(b) Minimum percentage of arcades, windows, entrances, etc., over length of facade (50%). Waiver.
7) §770-82(A)(2) Minimum required roof features (at least 2 of 4) parapet walls, overhanging eaves, sloping roofs, slope planes). waiver requested on Stephenson side.
8) §770-82(A)(2)(a) Maximum permitted extension of parapet walls (1/3 height of supporting walls). Waiver requested at the two entrances.
9) § 770-82 (B)(1) Maximum percentage of off-street parking lots between front of building and street (50%). Waiver.
10) § 770-82 (B)(4) Minimum required central features or community spaces (at least 2 of those listed). Grab & Go Seating and an pedestrian plaza are provided.
11) §770-90 (E)(1)(a) Minimum required number of deciduous trees within off-street parking lot (one for every 8 spaces) and landscape islands within row of off-street parking (one for every 16 spaces). Revised to comply.
12) § 770-90(1) Minimum required screening for refuse and recycling containers (6-foot masonry wall). The compactor is screened within the dock. A waiver is requested for the compost bins.
13) § 770-90 (1) Minimum required screening for electrical equipment and transformers (plantings or enclosure). Plantings surrounding the basin provide screening.
14) § 770-96 (B)(3)(c) Maximum permitted illumination levels (10 foot-candles at any given area). Waiver requested at fuel station to meet Illuminating Engineering Society of North America Recommended Practice for Lighting Merchandise Areas guidelines. Lighting is recessed and shielded.
15) §770-107 Maximum permitted number of off-street parking spaces (one space for every 250 square feet). Waiver requested. Low impact development incorporated to allow additional spaces.
16) §770-109 (D) Minimum required setback of driveway from street intersection (25 feet) and maximum permitted driveway width at property line (30 feet). Setback resolved by removing the driveway. Waiver requested for driveway width.
17) § 607-10 (B)(2) Maximum permitted monument sign height and area (5 feet and 30 square feet). Revised.
18) § 607-11 (A)(1) Maximum permitted number of wall signs (one per facade). Waiver.
19) § 607-11 (A)(2) Maximum permitted wall sign area (100 square feet). Waiver.
20) § 607-11 (B)(2) Maximum permitted free-standing sign height and area (16 feet and 42 square feet). Revised.
21) § 607-15 (A)(1) Maximum permitted fuel canopy sign area and number of signs (one sign per side and 8 square feet). Waiver.
22) § 607-15 (A)(2)(b) Maximum permitted product price sign area (25 square feet). Revised.
23) § 607-15 (H) Additional wall sign area permitted (50 square feet). Waiver.
24) § 607-16 (F) Roof signs prohibited (wall signs placed above roof line of building). Waiver.
25) § 607-16 (Q) Off-premise signs prohibited (free-standing sign for store placed on outlot). Waiver.

FUTURE USE OF THE KROGER SITE SHALL BE LIMITED TO THE FOLLOWING:
(1) A LARGE-SCALE RETAIL ESTABLISHMENT WITH NO MORE THAN 126,266 SQUARE FEET OF GROSS FLOOR AREA, INCLUDING ACCESSORY USES SUCH AS A COFFEE HOUSE AND/OR RESTAURANT, AN OUTDOOR DINING AREA, A PHARMACY WITH A DRIVE-THROUGH SERVICE LANE, A MEDICAL CLINIC, A JEWELRY STORE, AND SEASONAL OUTDOOR SALES OF FLOWERS, PLANTS, AND SIMILAR ITEMS.
(2) A SEPARATE STRUCTURE FOR AN AUTOMOBILE FILLING STATION WITH NO MORE THAN 9 TWO-SIDED FUEL PUMPS OR STATIONS.
(3) DEVELOPMENT OF THE TWO OUTPARCEL SITES ALONG 12 MILE WILL REQUIRE SEPARATE SITE PLAN APPROVAL FROM THE CITY. THE MAXIMUM SIZE ALLOWED WILL BE 13,500 SF.



50 0 50 100 150

Scale 1" = 50'

NO.	DATE	REVISIONS/SUBMITTALS	BY
	2/12/15	ENTRANCE DRIVE	MLS
	2/19/15	PER CITY COMMENTS	MLS
	3/18/15	12 MILE ENTRANCE REVISIONS	MLS
	3/20/15	PER CITY COMMENTS	MLS
	3/25/15	ENTRANCE/TAPER REVISIONS	MLS
	3/27/15	FINAL SITE PLAN SUBMITTAL	MLS
	10/23/14	PRELIMINARY SITE PLAN SUBMITTAL	MLS
	10/27/14	PARKING ASLES	MLS
	11/19/14	PER PLANNER COMMENTS	MLS
	12/12/14	REVISED DRIVE LOCATION	MLS
	12/16/14	REVISED EDGEWORTH ENTRANCE	MLS
	12/16/14	CROSSWALK	MLS

LSG Engineers & Surveyors
3135 PINE TREE ROAD
SUITE D
LANSING, MI 48911
PH. (517) 393-2902
FAX (517) 393-2608
www.lsg-es.com

PREPARED FOR:

Kroger

THE KROGER CO. OF MICHIGAN
40399 GRAND RIVER RD.
SUITE 110
NOVI, MI 48375
PHONE: (248) 536-1500

SITE PLAN AND MASTER SIGN PLAN

FOR

KROGER STORE #D-743

EAST 12 MILE AND STEPHENSON HIGHWAY (M-150)

ROYAL OAK, MICHIGAN

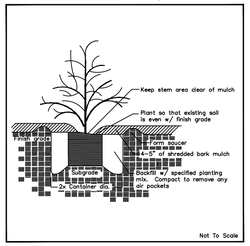
MISS DIG
3 WORKING DAYS
BEFORE YOU DIG OR DRILL CALL
1-800-482-7171
(TOLL FREE)

FILE	C1.1.DWG
DESIGNED BY	ADB
DRAWN BY	MLS
CHECKED BY	ADB
DATE	OCTOBER 20, 2014
SCALE HOR.	1" = 50'
SCALE VERT.	N/A
PROJECT NO.	1401
SHEET NO.	C1.1

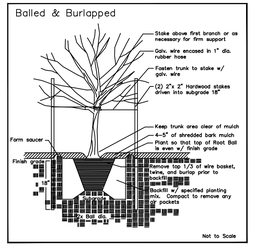
FILE: L:\1401 (KROGER D-000 ROYAL OAK)\CVL6 PLANS\C1.1.DWG - PLOT DATE: 3/26/2015 3:30 PM BY: Michelle Shumaker SCALE: 1:1

LANDSCAPE PLAN

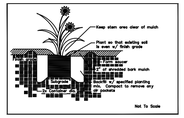
Shrub Planting Detail



Tree Planting Detail



Perennia/Grassl Planting Detail



Plant List

Quantity	Key	Botanical	Common	Size
5	AC	Amelanchier canadensis	Serviceberry (multi-stem)	8-10'
22	AR	Acer rubrum 'Red Sunset'	Red Sunset Maple	2.5-3"
36	AS	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2.5-3"
20	GB	Ginkgo biloba 'Autumn Gold'	Autumn Gold Maidenhair Tree	2.5-3"
28	QR	Quercus robur 'Fastigiata'	Columnar English Oak	2.5-3"
20	PC	Pyrus calleryana 'Cleveland Select'	Cleveland Select Pear	2.5-3"
9	TC	Tillia cordata 'Greenspire'	Greensire Little Leaf Linden	2.5-3"
34	PD	Picea omorika	Serbian Spruce	6'
19	PS	Pinus strobus	Eastern White Pine	6'
21	CB	Cornus sericea 'Baileyi'	Redstem Dogwood	3 Gal
10	CF	Cornus sericea 'Flaviramea'	Yellowstem Dogwood	3 Gal
20	FL	Forsythia intermedia 'Lynwood Gold'	Lynwood Gold Forsythia	3 Gal
89	HA	Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea	3 Gal
21	RR	Rosa Radtko	Double Knockout Rose	3 Gal
50	VT	Viburnum tomentosum 'Mariesii'	Doublefile Viburnum	3 Gal
24	PH	Pennisetum 'Hameln'	Dwarf Fountain Grass	2 Gal
56	HS	Hermocallis 'Stella de Oro	Stella de Oro Daylily	2 Gal

LEGEND

TREE LEGEND

(AS / 1) = Plant Key / Quantity

= Proposed Tree

Existing Tree =

= Proposed Shrub

= Proposed Perennial/Orn Grass

General Notes:

1. Start of work indicates acceptance of existing conditions left by other contractors. If conditions are not acceptable contact the General Contractor.
2. Contractor is responsible for verifying quantities. The quantity on the drawing is the quantity to be installed.
3. All plant material to meet American Nursery Standards. Landscape Contractor to guarantee plant material for 1 year from date of completion.
4. Landscape Contractor is responsible for finish grade and verifying positive drainage.
5. Landscape Contractor to install 6" of topsoil in all plant beds and all lawn areas. All lawn areas to be seeded with Spartan Grade A seed or equal. Seeding must be completed between April 15th and June 15th or August 15th and October 15th.
6. Twice ground pine bark mulch or equal will be placed around all plant material unless otherwise specified. Install bark mulch 3" deep.
7. Edge King by Ply Dia edging or equal to be installed between all lawn areas and plant beds.
8. Washed Stone (2-2.5" dia.) Mulch in all beds.

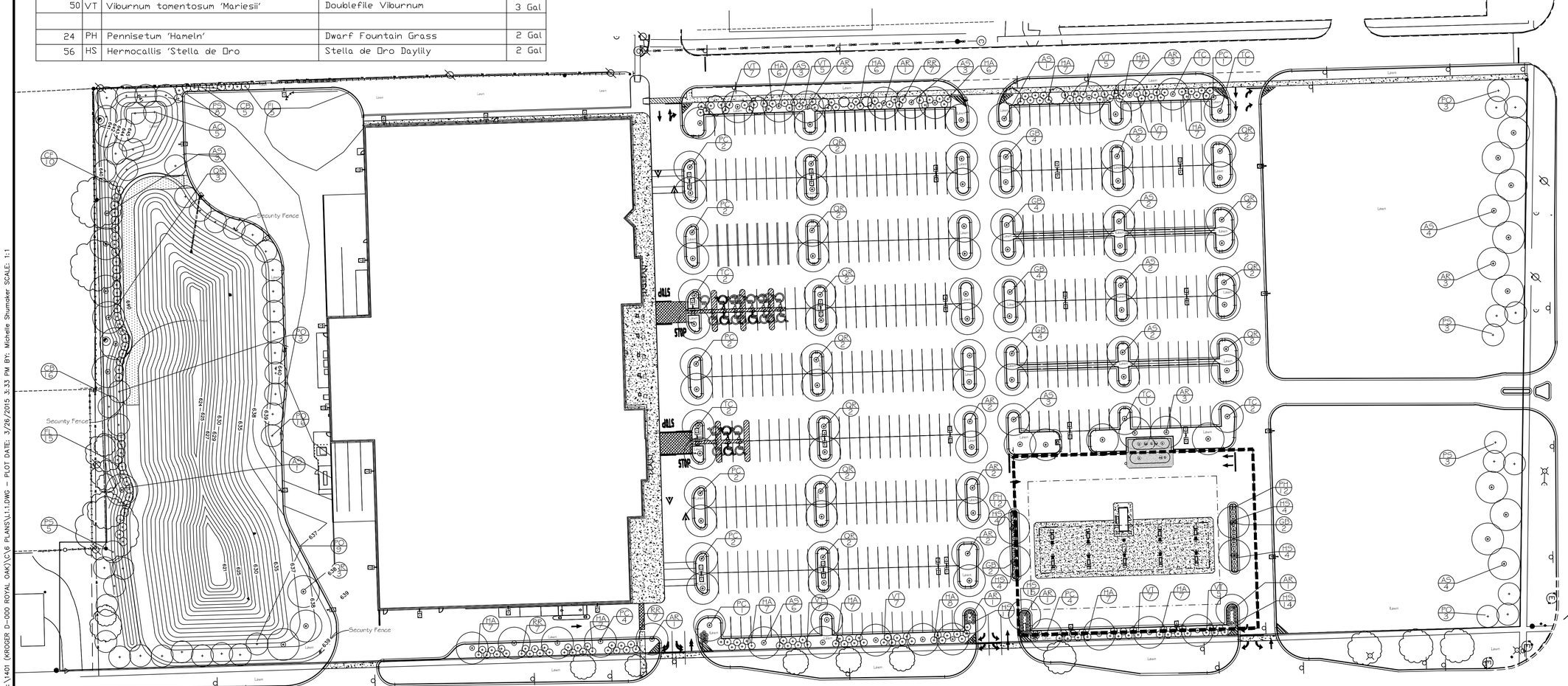
NORTH

50' 25' 0' 50' 100' 150'

Scale: 1"=50'-0"

NOT FOR CONSTRUCTION

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL-FREE)



MISS DIG

3 WORKING DAYS BEFORE YOU DIG OR DRILL CALL 1-800-482-7171 (TOLL FREE)

REVISIONS/SUBMITTALS

BY	DESCRIPTION	DATE
MLS	FINAL SITE PLAN SUBMITTAL	3/27/15
MLS	PER CITY COMMENTS	2/19/15
MLS	PER CITY COMMENTS	1/8/15
MLS	PER PLANNER COMMENTS	11/19/14
MLS	PRELIMINARY SITE PLAN SUBMITTAL	10/27/14

LSG Engineers & Surveyors
3135 PINE TREE ROAD
SUITE D
LANSING, MI 48911
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PREPARED FOR:

THE KROGER CO. OF MICHIGAN
40399 GRAND RIVER RD.
SUITE 110
NOVI, MI 48375
PHONE: (248) 536-1500

LANDSCAPE PLAN
FOR
KROGER STORE #D-743
EAST 12 MILE AND STEPHENSON HIGHWAY (M-150)
ROYAL OAK, MICHIGAN

STATE OF MICHIGAN TIMOTHY ILE BANFIELD LANDSCAPE ARCHITECT No. 859 REGISTERED LANDSCAPE ARCHITECT

FILE	L1.1.DWG
DESIGNED BY	ADB
DRAWN BY	MLS
CHECKED BY	ADB
DATE	OCTOBER 20, 2014
SCALE	
HOR.	1" = 50'
VERT.	N/A
PROJECT NO.	1401
SHEET NO.	L1.1

FILE: L:\1401 (KROGER D-000 ROYAL OAK)\CAD PLANS\L1.1.DWG - PLOT DATE: 3/26/2015 3:33 PM BY: Michelle Shumaker SCALE: 1:1

M E M O R A N D U M

Community Development Department

City of Royal Oak, Michigan

Meeting Date: April 12, 2016
211 Williams St. / P.O. Box 64
Royal Oak, MI 48068-0064
Phone: (248) 246-3280
Fax: (248) 246-3005
www.romi.gov

DATE: April 1, 2016

TO: Planning Commission

FROM: Planning Division

SUBJECT: **Conditional Rezoning** from **Mixed Use 2** to **Neighborhood Business** and associated **Site Plan (SP 16-04-06)** to construct 2,929-sq. ft. financial institution with drive-through ATM (Community Choice Credit Union) at **1722-1740 Crooks Rd.** (parcel nos. 25-16-204-001 & 004)
Community Choice Credit Union, Petitioner & Owner
Facilinet Services, Inc., Representative
SA+A Architects, Architect

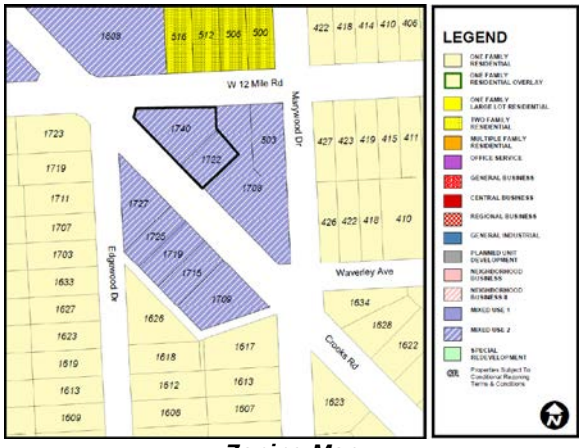
---

1. Location & Existing Conditions

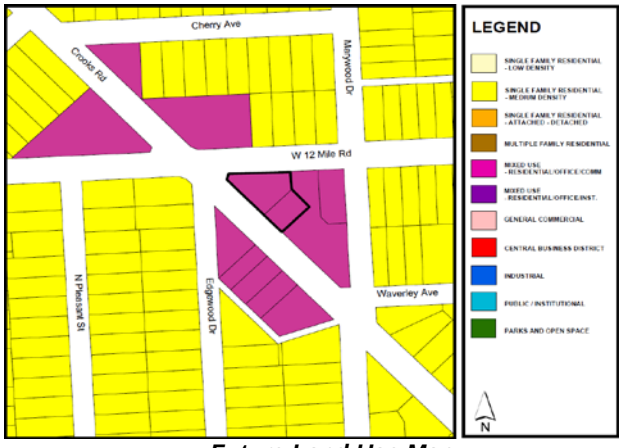
The site is located at the southeast corner of West Twelve Mile Road and Crooks Road and consists of two parcels with a total lot area of 15,434 square feet or 0.35 acres. All structures have been demolished and the site is now vacant. The properties were most recently occupied by an automobile filling station with a convenience store (Citgo) and a hair salon (Tori Hair Stylist). Surrounding uses include single-family, two-family, and multiple-family dwellings, professional and medical offices, financial institutions, and automobile filling stations.

2. Zoning & Future Land Use

The site is zoned “Mixed Use 2” (left) while its planned future use on the Future Land Use Map of the city’s Master Plan is designated as “Mixed Use – Residential / Office / Commercial” (right).



Zoning Map



Future Land Use Map

3. Road Classification

The city's Functional Road Classification System identifies both Twelve Mile Road and Crooks Road as "principal arterials." Arterials are at the top of the classification hierarchy and their primary functions are to carry vehicles relatively long distances and provide through-travel movements.

4. Proposed Conditional Rezoning

The petitioner is proposing to change the zoning of these parcels from Mixed Use 2 to Neighborhood Business as a conditional rezoning under Section 405 of the Michigan Zoning Enabling Act (Act 110 of 2006). A site plan is also proposed as part of the conditional rezoning to construct a financial institution (Community Choice Credit Union) with a drive-through automated teller machine.

Under Section 405 of the Zoning Enabling Act, a petitioner may voluntarily offer in writing and the city may approve certain uses and development of property as a condition to rezoning land. Such conditions must be offered voluntarily by a petitioner; the city may not require a petitioner to offer conditions as a prerequisite for rezoning property. The conditions proposed by a petitioner as part of a conditional rezoning are supposed to result in recognizable and material benefits to the city that would unlikely be achieved otherwise under the site's existing zoning.

As part of a conditional rezoning request, the petitioner needs to specify what conditions they offer, what recognizable and material benefits these conditions will achieve that cannot be realized under the site's existing zoning, and how these benefits justify the rezoning and outweigh having certain aspects of their proposed site plan not meet required Zoning Ordinance standards.

In approving conditions to a rezoning, the city may establish a time period during which the conditions apply. If the conditions are not satisfied within the time specified then the land reverts to its former zoning classification. During the approved time period, the city can neither add to nor alter the conditions. The time period can be extended by mutual agreement between the city and petitioner.

As part of a conditional rezoning, the city may waive required standards of the Zoning Ordinance if they feel the conditions proposed by the petitioner and the benefits that would result from them outweigh the need to meet such standards. Conversely, compliance with some or all Zoning Ordinance standards may be required by the city.

5. Proposed Use & Site Plan

A. Proposed Use. The petitioner proposes to construct a new building and relocate a branch office of a nearby financial institution (Community Choice Credit Union) from its current location at 1709 Crooks Road. In addition to the building, a drive-through automated teller machine is proposed along the south side lot line.

Financial institutions such as banks and credit unions are a permitted use in both the Mixed Use 2 and Neighborhood Business zoning districts under § 770-39 (B)(1) and § 770-46 (B)(2) of the Zoning Ordinance. However, drive-through facilities are specifically

prohibited in the Mixed Use 2 zoning district according to § 770-46 (C)(1). Drive-through facilities for any use require a special land use permit in the Neighborhood Business zoning district under § 770-39 (C)(9). In order to allow the drive-through ATM the site must therefore be rezoned to Neighborhood Business or another zoning district that allows drive-through facilities.

B. Building Placement & Dimensions. The triangular-shaped building would be placed at the northwest corner of the site next to the intersection of Twelve Mile Road and Crooks Road. It would have setbacks of 5 feet from Twelve Mile Road and 4 feet 10 inches from Crooks Road and approximately 2,929 square feet of gross floor area.

According to § 770-39 (D)(2)(a) of the Zoning Ordinance, no setbacks would be required from the west, south, or east lot lines if the property was zoned Neighborhood Business since none of these boundaries are adjacent to residential zoning. A 5-foot setback from Twelve Mile Road would be required under that same subparagraph due to the Two Family Residential zoning of parcels on the north side of that street across from this site. Alternatively, the Planning Commission may modify all required setbacks during site plan review in the Neighborhood Business zoning district under § 770-39 (D)(2)(b).

The building's height would be 21 feet 4 inches to its highest roof line and 25 feet to the top of a parapet wall. A maximum building height of 30 feet is allowed in the Neighborhood Business zoning district under § 770-39 (D)(1).

C. Off-Street Parking & Stacking Spaces. Financial institutions are required to provide one off-street parking spaces for every 225 square feet of usable floor area under § 770-107 of the Zoning Ordinance. The building would have a usable floor area of 2,134 square feet as calculated by staff and require 10 off-street parking spaces. An off-street parking lot with 14 total spaces is proposed to the east and south of the building.

Drive-through lanes for financial institutions are required to have at least 5 stacking spaces under § 770-111 (E). Five stacking spaces are shown in a drive-through lane behind the ATM. A 12-foot wide escape aisle is also required under § 770-111 (D). An escape aisle is adjacent to the drive-through lane but a width of 12 feet is provided only along the first three stacking spaces. The escape lane next to last two stacking spaces does not have the minimum required 12-foot width and is 5 feet at its narrowest.

A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow the reduced escape lane width adjacent to the last two drive-through stacking spaces.

D. Vehicular Access. Two driveways are proposed, one each from Twelve Mile Road and Crooks Road. The driveway to Twelve Mile Road would have a width of 20 feet while the one to Crooks Road would have a width of 18 feet. Both driveways would be further than 25 feet from the intersection of Twelve Mile Road and Crooks Road as required under § 770-109 (D) of the Zoning Ordinance.

E. Exterior Lighting. According to § 770-96 (B)(3)(c) of the Zoning Ordinance, illumination from exterior lighting may not exceed 0.5 foot-candles along any property line adjacent to non-residential uses. The petitioner's photo-metric grid indicates illumination from exterior light fixtures would exceed this maximum permitted level along the north, east, and south lot lines. Levels range from 1.2 to 3.7 foot-candles along Twelve Mile Road

adjacent to the parking lot. Levels range from 1.2 to 2.0 foot-candles along the east side lot line and 0.9 to 5.5 foot-candles along the south side lot line.

A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow the proposed illumination levels. Alternatively, the petitioner can be required to modify their exterior lighting in order to comply with maximum permitted illumination levels.

F. Landscaping & Screening. Landscaping including shrubs, planting beds, and seeded lawns is proposed along the west and north sides of the building adjacent to both streets. A 3-foot masonry wall with benches and a monument sign is also proposed at the northwest corner of the building. Deciduous trees and seeded lawns are also proposed within the parking lot and along the east, south, and west lot lines.

G. Refuse Disposal. An enclosure for refuse containers is proposed at the south end of the building. The enclosure would be 4 feet from the west lot line along Crooks Road and have a height of 4 feet 4 inches. Enclosures for refuse containers are required to have a minimum height of 6 feet and be located as far as possible away from public view according to § 770-90 (I)(1) and (3) of the Zoning Ordinance. A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow the proposed location and height of the refuse container enclosure.

H. Signage. Wall signs ranging in size from 16 square feet to 50 square feet are proposed on the north, east, and west side façade elevations of the building. A monument sign with a height of 6 feet 4 inches at its highest point, a width of 6 feet 8 inches, and approximately 20 square feet of sign area is also proposed at the northwest corner of the building as part of a masonry screening wall.

The 16-square foot wall sign would be placed on a parapet will with a portion of the sign extending above the building's highest roof line. Walls signs are not permitted to extend above the roof line of a building under § 607-8 and § 607-9 (E) of the Sign Ordinance. The site is also located within Sign Area 4 and free-standing signs including monument signs are specifically prohibited within that sign area according to § 607-13 (A)(2).

Waivers from the Planning Commission will therefore be necessary to allow the proposed wall and monument signs.

I. Deviations from Zoning & Sign Ordinance Standards. The following is a list of deviations from required Zoning and Sign Ordinance standards as identified by staff that would be required as part of the conditional rezoning proposed by the petitioner:

- *Minimum required 12-ft. drive-through escape lane width [width of 5 ft. to 12 ft. proposed adjacent to last 2 stacking spaces]*
- *Maximum permitted illumination levels of 0.5 f/c along any property line adjacent to non-residential land uses [levels range from 0.9 to 5.5 f/c along north, east, and south lot line]*
- *Minimum required 6-ft. height for a refuse container enclosure [4 ft. 4 in. proposed]*
- *Location of a refuse container enclosure away from public view insofar as possible [4-ft. setback from Crooks Rd. proposed]*

- *Installation of prohibited roof sign [wall sign proposed on east side façade partially above building's roofline]*
- *Installation of free-standing sign prohibited in Sign Area 4 [monument sign proposed at northeast corner of building]*

6. Results of Approval

Following a public hearing, the Planning Commission may recommend that the City Commission approve or deny a conditional rezoning request including any conditions voluntarily offered by the petitioner. The Planning Commission may also postpone making a recommendation and request additional information from the petitioner. A recommendation for approval or denial is forwarded to the City Commission with two readings required before changing the zoning of any property.

7. Recommendations

In reviewing an application for an amendment to the Zoning Map, the Planning Commission shall consider the following criteria contained in § 770-129 of the Zoning Ordinance, among other factors they may deem appropriate, in making their findings, recommendation, and decision:

A. The requested zone should be consistent with the goals, policies and future land use map of the Master Plan, including any location-specific or corridor studies. If conditions have changed since the Master Plan was adopted, as determined by the Planning Commission or City Commission, the consistency with recent development trends in the site's area shall be considered.

B. The site's physical, geological, hydrological and other environmental features should be compatible with the host of principal permitted and special land uses in the proposed zone.

C Evidence should document the applicant cannot receive a reasonable return on investment through developing the property with one or more of the principal permitted and special land uses under the current zoning.

D. The potential uses allowed in the proposed zone should be compatible with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic volumes, aesthetics, infrastructure, and potential influence on property values.

E. The street system should be capable of safely and efficiently accommodating expected traffic volumes generated by potential uses in the requested zone.

F. The capacity of public utilities and services should be sufficient to accommodate the potential uses in the requested zone without compromising the City's health, safety and welfare.

G. There should be an apparent demand in the City for the types of potential uses in the requested zone in relation to the amount of land in the City currently zoned and available to accommodate the demand.

H. The requested zone shall not create an isolated and unplanned spot zone.

I. Other criteria as determined by the Planning Commission or City Commission which would protect the public health, safety and welfare, protect public and private investment in the City, promote implementation of the goals, objectives and policies of the Master Plan and any amendments thereto, and enhance the overall quality of life in the City.

Should the Planning Commission recommend approval of the conditional rezoning and its associated site plan to the City Commission, the Planning Division recommends the following contingencies:

A. Prior to review by the City Commission, a conditional zoning agreement between the petitioner and the city shall be submitted for review and approval by the City Attorney specifying all conditions voluntarily offered by the petitioner and all requested waivers from required Zoning Ordinance and Sign Ordinance standards.

B. Prior to review by the City Commission, a revised site plan shall be submitted by the petitioner that includes any additional revisions or contingencies required by the Planning Commission.

C. Exterior lighting fixtures shall be modified to comply with § 770-96 (B) of the Zoning Ordinance and other city codes and ordinances, including being directed downward and shielded so as not to shine on adjacent property, and within maximum permitted fixture heights and illumination levels.

D. All work and/or improvements within the public right-of-way shall be in accordance with the specifications and standards of the City Engineer.

E. A performance bond shall be posted in an amount to be determined by the Building Official.

F. The site plan shall meet all other code and ordinance requirements, as determined by the Building Official and City Engineer, **prior** to issuance of **any** building permit. Such requirements include, but are not limited to, the Michigan Building Code and the Stormwater Detention Ordinance (Chapter 644).

It is recommended that the petitioner or a representative attend the April 12, 2016 Planning Commission meeting. The meeting starts at 7:30 p.m. in the City Commission Chambers on the 3rd floor of City Hall.

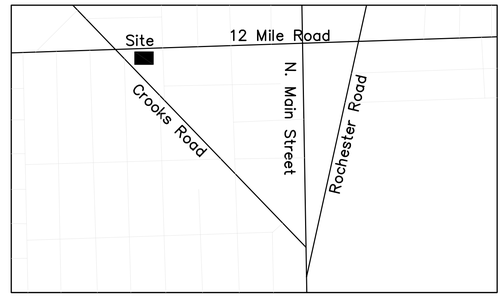
cc: Stephanie Kolpacke, Assoc. AIA, SA+A Architects
Stephen Auger, AIA, SA+A Architects
Dan Munro, Community Choice Credit Union
Gordon E. Sommerville, Facilinet Services, Inc.

Conditional Rezone March 22, 2016	Site Plan Approval March 1, 2016	Pre-Planning February 12, 2016	Pre-Planning October 30, 2015		
				SHEET INDEX	
				Sheet No.	Sheet Description
■	■	■	■		Drawing Issued
□	□	□	□		For Reference Only
■	■	■	■	A-CVR	Cover Sheet
■			■	C-1	Existing Conditions
■				C-2	Supplemental Civil Site Plan
■	■	■	■	SP-1	Architectural Site Plan
■	■			SP-2	Architectural Site Plan
■	■			A-101	Floor Plan
■	■			A-102	Photometric Plan
■	■	■	■	A-201	Exterior Elevations
■	■	■	■	A-301	Exterior Perspectives

STEPHEN AUGER + ASSOCIATES
ARCHITECTS INC

214 S. BROADWAY
SUITE 110
LAKE ORION, MICHIGAN
48362-3274
248. 814. 9160

WWW.SAA-ARCHITECTS.COM



Location Map
No Scale

March 22, 2016

Conditional Rezoning from Mixed Use 2 to Neighborhood Business

Project

Community Choice Credit Union Member Center

1740 Crooks Road
Royal Oak, Michigan 48067

SA + A Architects Inc. Project Number 1524.01

Owners Representative

FaciliNet Services Inc.
28400 Northwestern Highway
Southfield, MI 48034

voice 248-763-2211
fax 248-351-3508

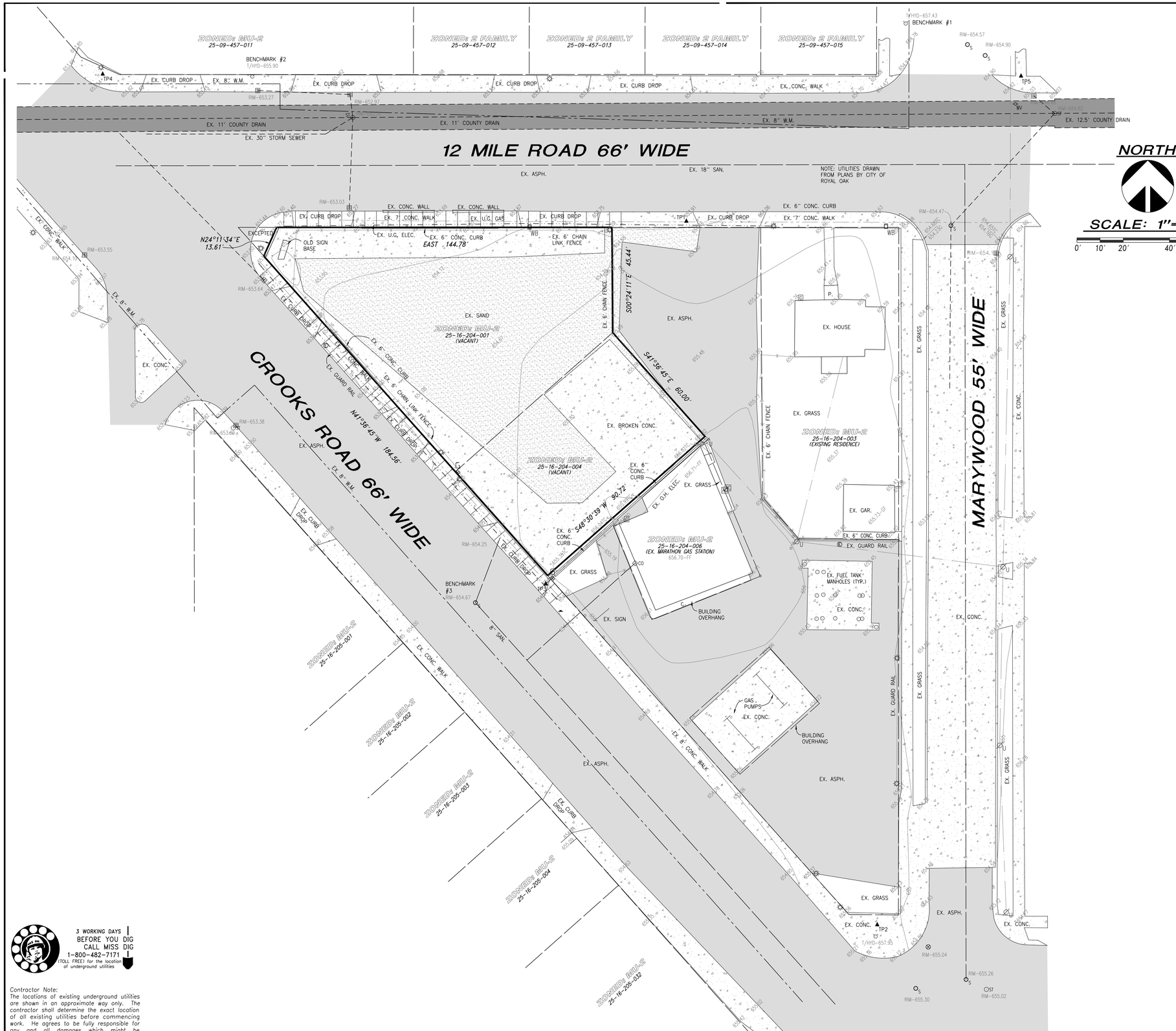
Civil Engineer

Urban Land Consultants, LLC
8800 23 Mile Road
Shelby Township, MI 48316

voice 586-731-8030
fax 586-731-2605

CCCU Royal Oak 1524.01

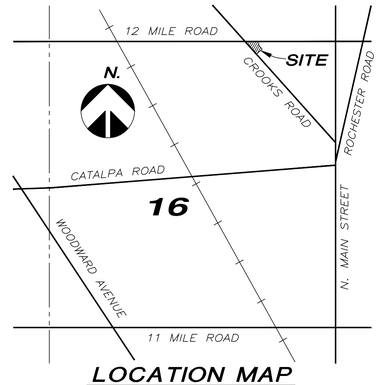
STEPHEN AUGER + ASSOCIATES
ARCHITECTS INC
214 SOUTH BROADWAY, STE. 110
LAKE ORION, MICHIGAN
48362



NORTH

SCALE: 1"=20'

0' 10' 20' 40' 60'



LOCATION MAP

SCALE: 4" = 1 MILE

PROPERTY DESCRIPTION

Property Description: #25-16-204-001
Lot 3 excluding Beginning at the NW corner of Lot 3 thence East 16.60 feet; thence S.24°11'34W., 13.61 feet; thence N.41°36'45"W., 16.60 feet to the Point of Beginning "Assessor's Plat No. 15," part of the NW 1/4 of the NE 1/4 of Section 16, T.1N., R.11E., City of Royal Oak, Oakland County, Michigan as record in Liber 53, Page 29 of Oakland County Records.

Property Description: #25-16-204-004
Lot 4, "Assessor's Plat No. 15," part of the NW 1/4 of the NE 1/4 of Section 16, T.1N., R.11E., City of Royal Oak, Oakland County, Michigan as record in Liber 53, Page 29 of Oakland County Records.

PARCELS MUST BE COMBINED COMBINED PROPERTY DESCRIPTION:

Lot 4, together with Lot 3 excluding Beginning at the NW corner of Lot 3 thence East 16.60 feet; thence S.24°11'34W., 13.61 feet; thence N.41°36'45"W., 16.60 feet to the Point of Beginning "Assessor's Plat No. 15," part of the NW 1/4 of the NE 1/4 of Section 16, T.1N., R.11E., City of Royal Oak, Oakland County, Michigan as record in Liber 53, Page 29 of Oakland County Records.

BENCHMARKS

DATUM-NAVD88
B.M. #1 ELEV.=657.43
T/HYD. @ NW. CORNER 12 MILE & MARYWOOD

B.M. #2 ELEV.=655.90
T/HYD @ NE. CORNER OF CROOKS RD. AND 12 MILE RD.

B.M. #3 ELEV.=654.67
SAN. MH ℄ OF CROOKS RD. OPP. SW PROPERTY CORNER

LEGEND

- 100 — EXISTING CONTOURS
- 100.00 — EXISTING GRADE
- EXISTING ASPHALT
- EXISTING SAND
- EXISTING CONCRETE

TOPOGRAPHY LEGEND

- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- EASEMENT
- EX. U.G. ELEC.
- EX.O.H. WIRES
- EX. U.G. TELE.
- EX. U.G. GAS
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
- U — UTILITY MANHOLE
- ST — STORM MANHOLE
- END OF PIPE
- S — SANITARY MANHOLE
- CO — CLEAN-OUT
- MH — MANHOLE
- HYDRANT
- GW — GATE VALVE WELL
- WV — WATER VALVE
- WB — WATER BOX
- V — VALVE
- LIGHT POLE
- AC — AIR CONDITIONER
- MB — MAIL BOX
- FENCE POST
- DOWN SPOUT
- SB — SOIL BORING
- TPAD — ELEC TRANS PAD
- U — UTILITY POLE
- GUY ANCHOR
- GUY POLE
- SIGN POST
- SPRINKLER HEAD
- GM — GAS METER
- T — TELEPHONE RISER
- E — ELECTRICAL RISER
- TV — CABLE TV RISER
- FF — FINISHED FLOOR
- GF — GARAGE FLOOR
- BF — BASEMENT FLOOR
- CONC. — CONCRETE
- SMN — SET MAG. NAIL
- SIB — SET IRON BAR
- FIB — FOUND IRON BAR
- ●C — FOUND C. MONUMENT

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
(TOLL FREE) for the location of underground utilities

Contractor Note:
The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

EXISTING CONDITIONS PLAN - SHEET 2 of 2

SHEET NO 2 OF 2

EXISTING CONDITIONS

PART OF THE N.E. 1/4 OF SECTION 16 T.1N., R.11E., ROYAL OAK TOWNSHIP, OAKLAND COUNTY, MICHIGAN

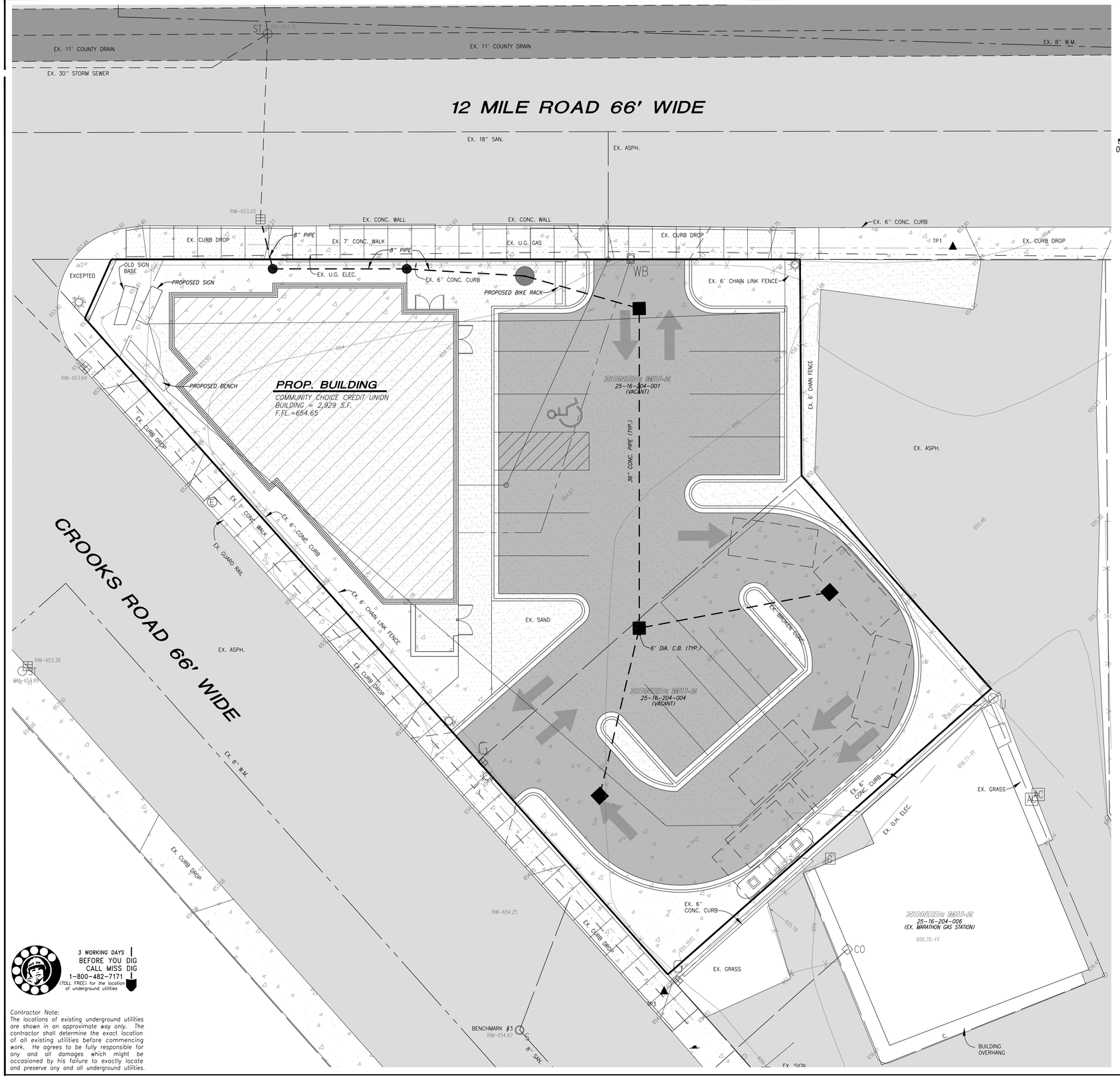
BY:	DATE	ADDITIONS AND/OR REVISIONS

160225-8854
Job No.
Date 3-21-2016
Scale 1"=20'
Drawn DKZ
Check PGS
Sheet 2 OF 2
Fld. Bk.

PROPOSED CREDIT UNION

FOR: STEVE AUGER, AIA
SA&A ARCHITECTS, INC.
214 SOUTH BROADWAY ST., SUITE 110
LAKE ORION, MICHIGAN 48362
(888) 814-2199

URBAN LAND CONSULTANTS ©
CIVIL ENGINEERS PLANNERS LAND SURVEYORS
8800 23 MILE ROAD SHELBY TWP., MI 48316-4516
PHONE 586 731-8030
FAX 586 731-2605



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NORTH

SCALE: 1"=10'

0' 10' 20' 40' 60'

BENCHMARKS

DATUM–NAVD88

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T/HYD @ NE. CORNER OF CROOKS RD. AND 12 MILE RD.

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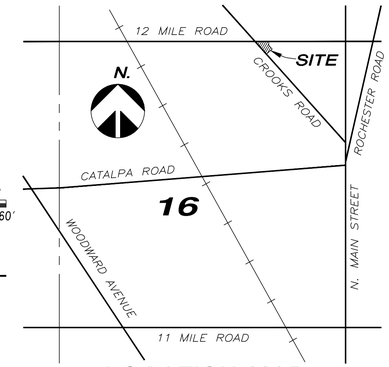
SAN. MH ℄ OF CROOKS RD. OPP. SW PROPERTY CORNER



LOCATION MAP

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Property Description: #25-16-204-004
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LEGEND

- EXISTING CONTOURS (100)
- EXISTING GRADE (100.00)
- PROPOSED GRADE (0.0)
- EXISTING ASPHALT
- EXISTING SAND
- EXISTING CONCRETE
- PROPOSED PAVEMENT
- PROPOSED CONCRETE
- PROPOSED STORM
- PROPOSED SANITARY LEAD
- PROPOSED WATER LEAD

SITE CRITERIA

- PARCEL IDENTIFICATION #: 25-16-204-001, 25-16-204-004
- EXISTING ZONING: MIXED USE 2
- ADJACENT ZONINGS: MIXED USE 2
- AREA OF SITE: 0.35 ACRES
- PROPOSED USE: CREDIT UNION
- BUILDING AREA: 2,929 S.F.
- UTILITY SUMMARY
  - WATER MAIN: MUNICIPAL
  - SANITARY SEWER: MUNICIPAL
  - STORM SEWER: ENCLOSED PIPE WITH OUTLET TO CROOKS ROAD AND 12 MILE ROAD
- SIGNAGE: NOT PART OF THIS SUBMITTAL

TOPOGRAPHY LEGEND

- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- EASEMENT
- EX. U.G. ELEC.
- EX.O.H. WIRES
- EX. U.G. TELE.
- EX. U.G. GAS
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
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- WATER BOX
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- MAIL BOX
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- DOWN SPOUT
- SOIL BORING
- ELEC TRANS PAD
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- GUY ANCHOR
- GUY POLE
- SIGN POST
- SPRINKLER HEAD
- GAS METER
- TELEPHONE RISER
- ELECTRICAL RISER
- CABLE TV RISER
- FF FINISHED FLOOR
- GF GARAGE FLOOR
- BF BASEMENT FLOOR
- CONC. CONCRETE
- SMN SET MAG. NAIL
- SIB SET IRON BAR
- FIB FOUND IRON BAR
- MON FOUND C. MONUMENT

DETENTION DESIGN

WEIGHTED "C" CALCULATION:

TOTAL SITE = 15,410 S.F. PER SURVEY
IMPERVIOUS AREA (BUILDING, WALKS, PAVING) = 12,597 S.F.
PERVIOUS AREA (ALL UNBUILT/UNPAVED) = 2,813 S.F.

$$C_{AVG} = \frac{(12{,}597 \times 0.9) + (2{,}813 \times 0.15)}{15{,}410} = 0.77$$

REQUIRED DETENTION VOLUME CALCULATION:

TOTAL SITE AREA = 0.35 ACRES
0.35 Ac < 1.5 Ac. ∴ 0.30 C.F.S. ALLOWED
OAK. CO. MODIFIED 10 YEAR BASIN DESIGN:

$$Q_o = \frac{0.30 \text{ C.F.S.}}{0.77 \times 0.35 \text{ Ac.}} = 1.11 \text{ C.F.S./Ac.-imp.}$$

$$T_{10} = -25 + \sqrt{\frac{6{,}652.5}{1.11}} = 52.4 \text{ min.}$$

$$V_{\%10} = \frac{10500 \times T_{10}}{T_{10} + 25} - 40 \times Q_o \times T_{10}$$

$$V_{\%10} = \frac{10500 \times 52.4}{52.4 + 25} - 40 \times 1.11 \times 52.4$$

$V_{\%10} = (7{,}109 - 2{,}327) = 4{,}782$ cu. ft./Ac.-imp

$V_{REQ.} = 4{,}782 \times 0.35$ Ac. $\times 0.77 =$ 1,289 cu. ft.

ORIFICE MAXIMUM ELEVATION HEAD:

CALCULATE MAXIMUM HEAD ON OF 2 1/2" RESTRICTOR PIPE:
A = 0.0341 SQ. FT. FOR A 2 1/2" DIA. PIPE
Q = 0.30 CFS

$$Q = 0.62 \times \sqrt{64.4 \times h} \times A$$

SOLVING FOR h, h = 3.12'

PROVIDED VOLUME PROVIDED:

169 L.F. OF 36" @ 7.06 CU.FT/FT = 1,193 CU. FT.
5 EA. 6' DIA. STRUCTURES @ 85 CU. FT. / STRUCTURE = 425 CU. FT.
1,618 CU. FT. > 1,289 CU. FT. ∴ (OK)

SUPPLEMENTAL CIVIL SITE PLAN - SHEET 1 of 2

SHEET NO. 1 OF 2

SUPPLEMENTAL CIVIL SITE PLAN

PART OF THE N.E. 1/4 OF SECTION 16 T.1N., R.11E., CITY OF ROYAL OAK, OAKLAND COUNTY, MICHIGAN

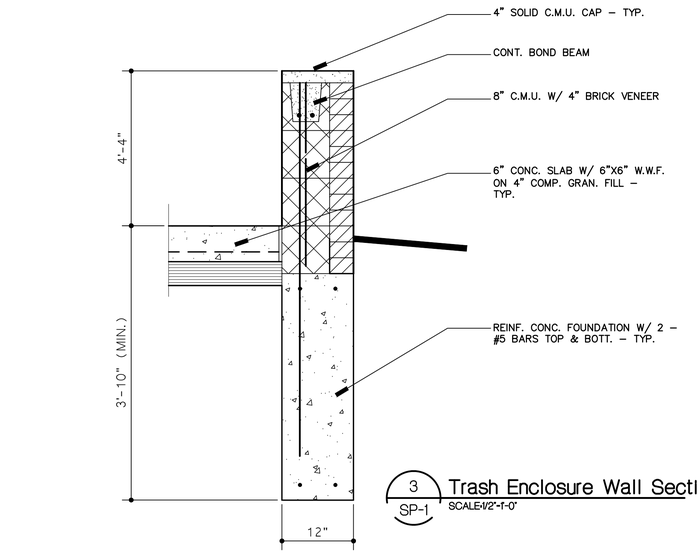
BY:	DATE	ADDITIONS AND/OR REVISIONS

160225-8854
Job No.
Date 3-15-2016
Scale 1"=10'
Drawn DKZ
Check PGS
Sheet 1 OF 2
Fld. Bk.

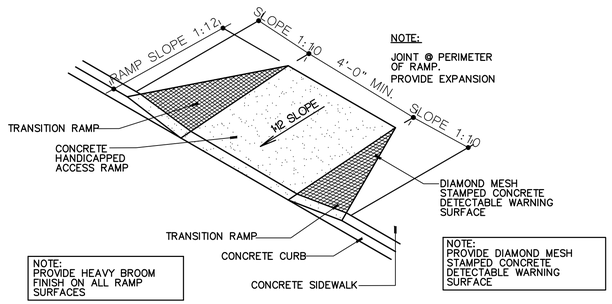
PROPOSED
CREDIT UNION

FOR: STEVE AUGER, AIA
SA&A ARCHITECTS, INC.
214 SOUTH BROADWAY ST., SUITE 110
LAKE ORION, MICHIGAN 48362
(888) 814-2199

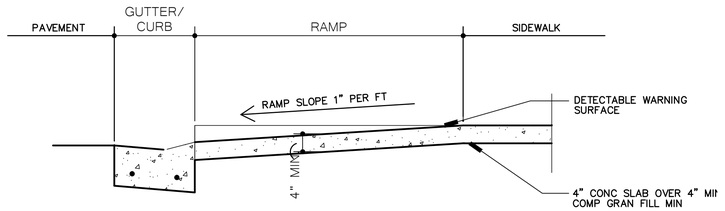
URBAN LAND CONSULTANTS ©
CIVIL ENGINEERS PLANNERS LAND SURVEYORS
8800 23 MILE ROAD SHELBY TWP., MI 48316-4516
PHONE 586 731-8030
FAX 586 731-2605



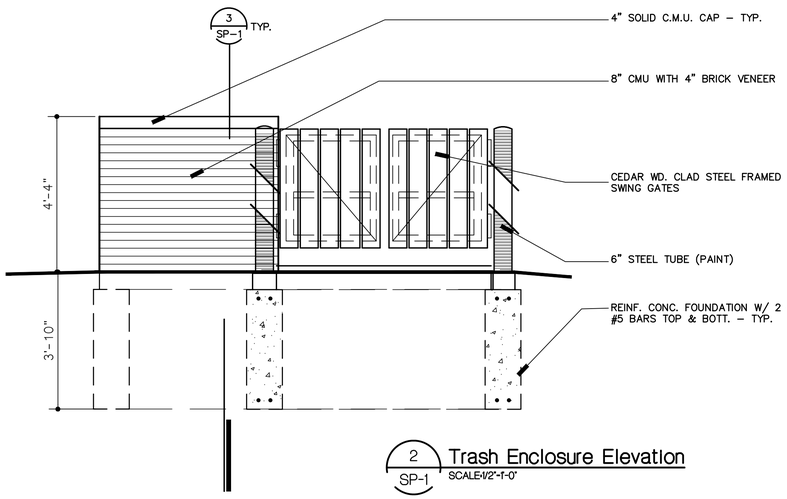
3 SP-1 **Trash Enclosure Wall Section**
SCALE:1/2"-1'-0"



4 SP-1 **P.H. Ramp Detail**
SCALE:1/2"-1'-0"



5 SP-1 **P.H. Ramp Section**
SCALE:1/2"-1'-0"



2 SP-1 **Trash Enclosure Elevation**
SCALE:1/2"-1'-0"

1 SP-1 **Proposed Site Plan**
SCALE:1"-10'-0"

SITE CRITERIA

Parcel I.D.: 25-16-204-001 & 25-16-204-004

Address: 1740 Crooks Road Royal Oak, MI 48073

Area of Site: 0.35 Acres (15,434 Sq. Ft.)

Existing Zoning: Mixed Use 2

Proposed Zoning: Neighborhood Business

Proposed Use: Credit Union (Financial Institution)

Building Area:
- -Gross: 2,929 Sq. Ft.
- -Net: 2,705 Sq. Ft.
- -Usable: 2,134 Sq. Ft.

Parking Summary:
- -Spaces Required: 1 space per 225 usable Sq. Ft. 2,134 Sq. Ft./ 225= 10 spaces
- -Spaces Provided: 15 spaces + 1 (Barrier Free Space)

Space Dimension:
- -Required: 9' wide x 20' long
- -Provided: 9'-0" x 20'-0" (15 Spaces) 8'-0"x 20'-0" (1 Spaces Barrier Free)

Water Supply: Municipal

Sanitary: Municipal

Storm: Enclosed Pipe W/ Outlet To Existing Storm Sewer

Landscape:
- -Street Trees: 1 Tree Per 30 Linear Feet of frontage 343 linear feet/ 30= 11 street trees 6 Street Trees Provided
- -Parking Trees: 1 tree for every 8 parking spaces 16 parking spaces/ 8= 2 parking trees 2 Parking Trees Provided
- -Landscape: 10% of Lot 10% of 15,434 Sq. Ft. = 1,543Sq. Ft. 1,964 Sq. Ft. Landscaping Provided
- -Foundation Landscape: 1 ornamental tree & 6 shrubs per 30 linear feet of applicable building frontage 238' / 30 linear feet =8 units 8 ornamental trees and 48 shrubs

GENERAL NOTES

1. Site is currently zoned as Mixed Use 2
2. Refer to Civil Drawings prepared by Urban Land Consultants, LLC., for survey and full description of site layout, public right-of-ways, adjacent properties, existing tree and new and existing utilities information.
3. Outside storage of any materials, supplies, equipment or similar items excluding that which is to be specifically used for construction of the proposed development is prohibited.
4. This site does not involve equipment with the potential of emitting air contaminants such as smoke, open fire, gasses, or noises.
5. Hazardous materials do not exist, nor are they stored on this site.
6. This site shall be prepared in accordance with the provisions in the wetlands protection ordinances and as such shall not pollute, impair or destroy wetlands. No wetlands are present on site.
7. All new utility lines shall be buried underground.
8. Final number and location of fire lane signage and fire hydrants shall be coordinated by the City Engineer and with the Royal Oak Fire Department.
9. All site lighting shall conform to local codes and ordinances. Exterior lighting shall be fully shielded and directed downward to prevent off-site glare. Site illumination intensity shall not exceed 10 footcandles within any site, 0.5 foot-candle along property lines adjacent to residential properties, or 1.0 foot-candle along non-residential property lines.
10. This drawing is to show intent of landscaping. Coordinate exact species of landscaping with owner, maintenance, and landscape architect.

LEGEND

SYMBOL	DESCRIPTION
	IRRIGATED PLANTER BED W/ ANNUALS
	IRRIGATED PLANTER BED W/ PERENNIALS/ SHRUBS
	IRRIGATED SEED LAWN
	PROPOSED CONCRETE. REF. CIVIL DWGS FOR THICKNESS
	PROPOSED ASPHALT. REF.CIVIL DWGS FOR THICKNESS
	SHRUBS/ GROUND COVER PLANTED @ AVERAGE 30" O.C.
P	MIN. REQ'D. PARKING LOT TREE, 1.75" CAL. FLOWERING PEAR
S	MIN. REQ'D. STREET TREE, 2.5" CAL. MAPLE
	PARKING LOT LIGHT POLE

LEGAL DESCRIPTION

As shown in supplied title commitment, from Chirco Title Agency, inc, file no. c-133844, dated 12-8-2014.

Parcel 25-16-204-001/1740 crooks rd
land in the n.e. 1/4 of section 16, t.1n, r.11e., City of Royal Oak, Oakland County, Michigan described as:
lot 3 in "assessor's plat no. 15" (liber 53 of plats, page 29) except that portion of lot 3 described as beginning at the n.w. corner of said lot 3; thence east 16.6 feet; thence s.24°1'138"w. 13.65 feet; thence n.41°36'45"w. 16.6 feet to the point of beginning.

As shown in supplied title commitment, from Chirco Title Agency, inc, file no. c-133845, dated 12-8-2014.

parcel 25-16-204-004/1722 crooks rd
land in the n.e. 1/4 of section 16, t.1n, r.11e., City of Royal Oak, Oakland County, Michigan described as:
lot 4 in "assessor's plat no. 15" (liber 53 of plats, page 29).

all subject to easements and restrictions of record.

SITE VARIANCES

	REQUIRED	PROPOSED	VARIANCE	NOTES
LOT COVERAGE	N/A	2,929 SQ. FT.	N/A	2,705 USE SQ. FT.
NORTH SETBACK	0'-0"	0'-0"	NONE	
SOUTH SETBACK	0'-0"	5'-0"	NONE	
EAST SETBACK	0'-0"	1'-6"	NONE	
WEST SETBACK	0"-0"	4'-10"	NONE	
CORNER SETBACK	10'-0"	10'-0"	NONE	
MAX HEIGHT	30'-0"	25'-0"	NONE	
PARKING	10	15 + 1 (H.C.)	NONE	
DRIVE UP KIOSK	0	1	1	
KIOSK STACKING	5	5	NONE	STACKING UNIT 8'X20'
STREET TREES	11	5	6	
PARKING TREES	2	2	NONE	
LANDSCAPE	1,543 SQ.FT.	1,964 SQ.FT.	NONE	
FOUND. LAND.	8 TREES, 48 SHRUBS	5 TREES, 31 SHRUBS	3 TREES, 17 SHRUBS	
LOADING ZONE	1	0	1	

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PROJECT

Community Choice Credit Union

1740 Crooks Rd.
Royal Oak, MI

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02.11.16	City Review
03.01.16	SPA
03.22.16	Cond. Rezone
.	.
.	.
.	.
.	.
DRAWN	SK
CHECKED	SA
APPROVED	SA

SHEET

Architectural Site Plan

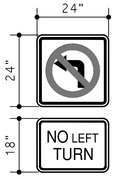
scale as shown

FILE NUMBER

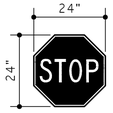
1524.01

SHEET NUMBER

SP-1



METAL SIGNS WITH CONTRASTING COLORS (BLACK BORDER, TEXT AND ARROW GRAPHIC WITH RED CIRCLE GRAPHIC ON WHITE BACKGROUND)



METAL SIGN WITH CONTRASTING COLORS (WHITE LETTERS AND BORDER ON A RED BACKGROUND)

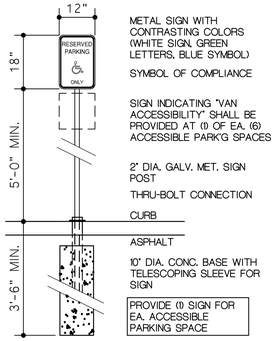
METAL SIGN WITH CONTRASTING COLORS (RED LETTERS AND BORDER ON A WHITE BACKGROUND)

METAL SIGN WITH CONTRASTING COLORS (RED LETTERS AND BORDER ON A WHITE BACKGROUND)

PREFERRED FIRE LANE SIGN OF THE ORION TOWNSHIP FIRE DEPARTMENT

Tree Legend

Key	Quanity	Botanical / Common Name	Size	Spacing	Root	Mulch	Comment
Deciduous							
As	5	Acer Saccharum Sugar Maple	2 1/2"-3" cal.	10' min.	B&B	4" depth	Full Head
Pc	2	Pyrus Callervana Bradford Pear	2 1/2"-3" cal.	10' min.	B&B	4" depth	Full Head
Shrub							
Ea	10	Euonymus Alatus Dwarf Burning Bush		30"-36"		Container	4" depth
Ef	10	Euonymus fortunei 'Coloratus' Purpleleaf Wintercreeper		2"x8" plugs		Flats	4" depth
Jp	10	Juniperus C. Pfitzeriana 'Compacta' Compact Andora Juniper		24"-30"		Container	4" depth
Vd	9	Viburnum Dentatum Arrowwood Viburnum		30"-36"		B&B	4" depth



METAL SIGN WITH CONTRASTING COLORS (WHITE SIGN, GREEN LETTERS, BLUE SYMBOL)

SYMBOL OF COMPLIANCE

SIGN INDICATING "VAN ACCESSIBILITY" SHALL BE PROVIDED AT (1) OF EA. (6) ACCESSIBLE PARK'G SPACES

2" DIA. GALV. MET. SIGN POST

THRU-BOLT CONNECTION

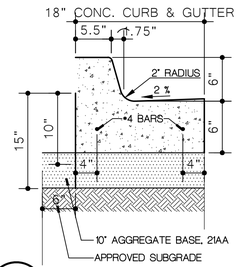
CURB

ASPHALT

10" DIA. CONC. BASE WITH TELESCOPING SLEEVE FOR SIGN

PROVIDE (1) SIGN FOR EA. ACCESSIBLE PARKING SPACE

8 SP-2 **Typical Signage Details**
SCALE: 1/2"-1'-0"



7 SP-2 **Conc. Curb & Gutter Detail**
SCALE: 1/2"-1'-0"

Landscape Notes

1. ALL AREAS TO BE SEEDED IN 4" OF TOPSOIL UNLESS NOTED OTHERWISE.

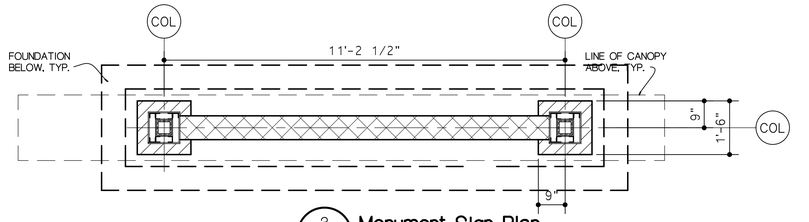
2. ALL PLANTING BEDS TO BE MULCHED W/4" CEDAR WOOD CHIPS.

3. ALL DISTURBED AREAS TO BE REGRADED TO MATCH ADJACENT AND SEED UNLESS NOTED OTHERWISE.

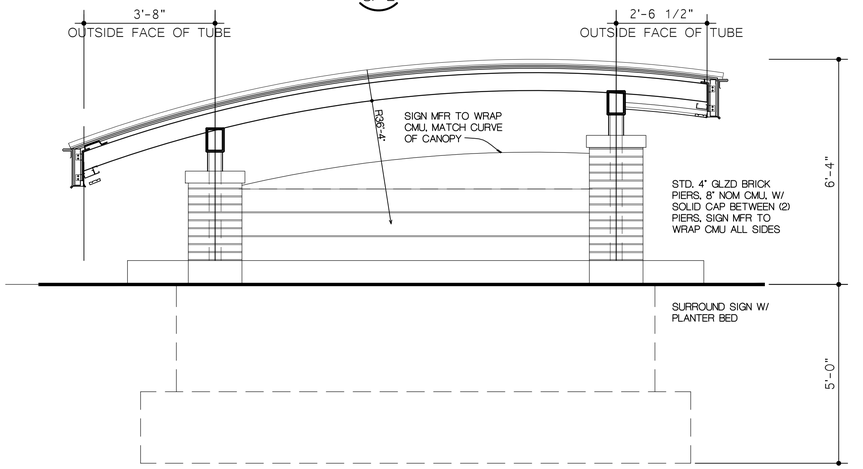
4. HYDRO-SEED ALL GRASS AREAS.

5. ALL PLANTS WILL BE MAINTAINED IN A HEALTHY GROWING CONDITION, REGULARLY WATERED, PRUNED, FED AND GRASS KEPT MOWED. ANY DISEASED OR DEAD PLANT MATERIAL WILL BE REPLACED ANNUALLY OR IN THE NEXT APPROPRIATE PLANTING SESON, WHICHEVER COMES FIRST.

6. ALL LANDSCAPE TO BE IRRIGATED WITH IN-GROUND LANDSCAPE SPRINKLING SYSTEM.



3 SP-2 **Monument Sign Plan**
SCALE: 1/2"-1'-0"



2 SP-2 **Monument Sign Elevation**
SCALE: 1/2"-1'-0"

GENERAL PAVING NOTES

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

CONCRETE: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.

ASPHALT: BASE COURSE - MDOT BITUMINOUS MIXTURE NO. 1100L, 20AA, SURFACE COURSE - MDOT BITUMINOUS MIXTURE NO. 1100T, 20AA, ASPHALT CEMENT PENETRATION GRADE 85-100, BOND COAT - MDOT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD, MAXIMUM 2 INCH LIFT.

PAVEMENT BASE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-S164.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.

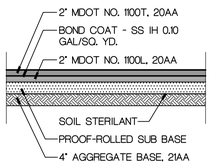
EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.

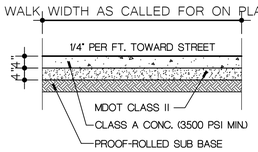
SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.

ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

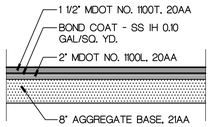
FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.



6 SP-2 **4" Asphalt Pathway Section**
SCALE: 1/2"-1'-0"



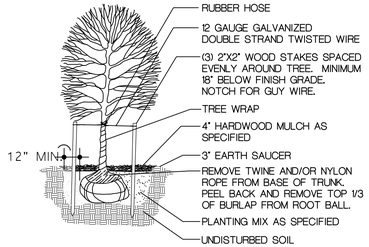
5 SP-2 **Conc. Sidewalk Section**
SCALE: 1/2"-1'-0"



4 SP-2 **Asphalt Pavement Section (Drive and Parking)**
SCALE: 1/2"-1'-0"

DO NOT CUT LEADER.
20% OF BRANCHES MAY BE PRUNED IF NECESSARY, BUT NATURAL SHAPE OF TREE MUST BE RETAINED.

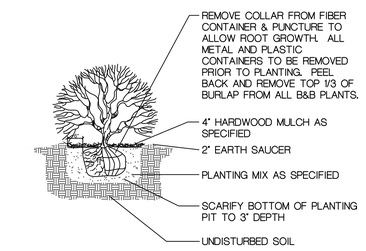
TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE



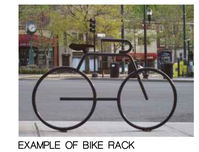
1 SP-2 **Deciduous Tree Planting Detail**
SCALE: Not to Scale

PRUNE ALL DEAD, DAMAGED, OR BROKEN BRANCHES. NATURAL SHAPE OF THE PLANT MUST BE RETAINED.

SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE



1 SP-2 **Shrub Planting Detail**
SCALE: Not to Scale



EXAMPLE OF BIKE RACK

EXAMPLE OF BIKE RACK + PLANTERS

1 SP-2 **Proposed Landscape Plan**
SCALE: 1" - 20'-0"

EXAMPLE OF BENCH

EXAMPLE OF MONUMENT SIGN + BENCH

FaciliNet Services, Inc.

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Royal Oak, MI

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02.11.16	City Review
03.01.16	SPA
03.22.16	Cond. Rezone
.	.
.	.
.	.
.	.

DRAWN	SK
CHECKED	SA
APPROVED	SA

SHEET

Architectural Site Plan Details

scale as shown

FILE NUMBER

1524.01

SHEET NUMBER

SP-2

1 A-101 **Floor Plan**
SCALE: 1/4"-1'-0"

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DRAWN	SK
CHECKED	SA
APPROVED	SA

SHEET

Floor Plan

scale as shown

FILE NUMBER

1524.01

SHEET NUMBER

A-101

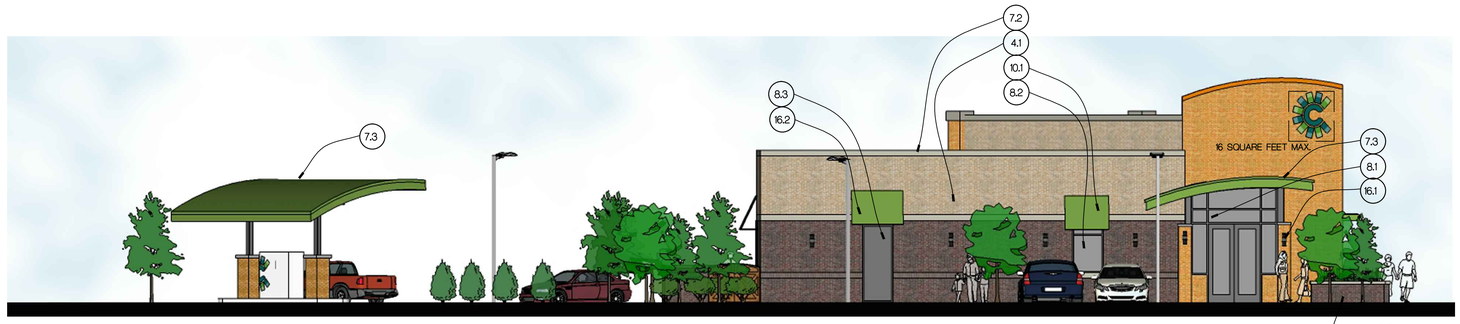
KEYNOTES

- 4.1 — 4" NOM. BRICK MAS. VENEER RUNNING COMMON BOND ON 2" AIR SPACE OVER 2" RIGID INSULATION OVER METAL FRAMING.
- 4.2 — PRE-CAST CONC. SILL
- 4.3 — MASONRY LANDSCAPE BUFFER WITH INTEGRATED BENCHES AND COMPANY BRANDING ELEMENT.
- 7.2 — PRE-FIN. TWO-PIECE MET. COP'G ON 2X PT WD BLOCK'G
- 7.3 — PRE-MANUF. ALUM CANOPY
- 8.1 — 1" LOW-E INSULATING GLASS IN ALUM. STOREFRONT, WINDOW, AND DOOR FRAM'G SYSTEM
- 8.2 — 1" LOW-E INSULATING GLASS IN ALUM. CLAD WINDOW FRAMING SYSTEM
- 8.3 — HOLLOW MET. DOOR AND FRAME (PAINT).
- 10.1 — PRE- MANUF. FABRIC AWNING
- 16.1 — WALL SCONE LIGHT FIXTURE -TYP.
- 16.2 — EXTERIOR EMERGENCY LIGHT FIXTURE WITH BATTERY BACK UP -TYP.

3 A-201 **North Elevation**
SCALE: 1/8"-1'-0"

2 A-201 **West Elevation**
SCALE: 1/8"-1'-0"

Sign Regulations - Chapter 607, Signs, Sign Area 4		
SIGN TYPE	**ALLOWED**	**PROPOSED**
Wall	Shall not exceed 10 % of building facade or 100 square feet, which ever is less. Not to project more than 30 inches horizontally beyond the wall of a building. Not to project above the roof line of a building.	Proposed Wall Sign, 50 S.F. (Max.) Wall Sign. Proposed Secondary Wall Sign, 50 S.F. (Max.) Wall Sign. Proposed Rear Wall Sign, 16 S.F. (Max.) Wall Sign.
Landscape/ Monument	See Location on Site Plan. Design to be provided in Sign package for approval	Proposed landscape buffer with integrated branding element
Directional	Single sign shall not exceed 4 feet. May be illuminated. Number of signs permitted shall be determined based on the number of driveways and arrangement of parking	Proposed Sign, 4 S.F. (Max.) Directional Sign.



1 A-201 **East Elevation**
SCALE: 1/8"-1'-0"

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DRAWN SK
CHECKED SA
APPROVED SA

SHEET

Exterior Elevations

scale as shown

FILE NUMBER

1524.01

SHEET NUMBER

A-201

4 A-301 — 12 Mile East Bound
SCALE: Not to Scale

3 A-301 — 12 Mile West Bound
SCALE: Not to Scale

2 A-301 — Crooks South Bound
SCALE: Not to Scale

1 A-301 — Crooks North Bound
SCALE: Not to Scale

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APPROVED	SA

SHEET

Exterior Views

scale as shown

FILE NUMBER

1524.01

SHEET NUMBER

A-301

Schedule											
Symbol	**Label**	**Quantity**	**Manufacturer**	**Catalog Number**	**Description**	**Lamp**	**Number Lamps**	**Filename**	**Lumens Per Lamp**	**Light Loss Factor**	**Wattage**
	A	2	Lithonia Lighting	DSX0 LED 40C 1000 40K T4M MVOLT	DSX0 LED with 40 LEDs @1000 mA , 4000K, Type 4 Medium Optics	LED	1	DSX0_LED_40C_1000_40K_T4M_MVOLT.ies	15212.89	0.9	138
	B	1	Lithonia Lighting	DSX0 LED 40C 1000 40K T5M MVOLT	DSX0 LED with 40 LEDs @1000 mA , 4000K, Type 5 Medium Optics	LED	1	DSX0_LED_40C_1000_40K_T5M_MVOLT.ies	15975.55	0.9	138
	C	1	Lithonia Lighting	WST LED 1 10A700/30K SR4 MVOLT	WST LED WITH 1 MODULE, 10 LED's, 700mA DRIVER, 3000K COLOR TEMPERATURE, TYPE 4 LENS	LED	1	WST_LED_1_10A700_30K_SR4_MVOLT.ies	1626.204	0.9	24
	D	10	VISA LIGHTING	OW2304	Wall Mount LED Medium Down Light	LED 3500K	1	OW2304-L35K--MED DOWN.ies	460.2992	0.9	6.7
	E	2	PINNACLE ARCHITECTURAL LIGHTING	EV3B-40HO-4	FABRICATED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH, FORMED WHITE PAINTED METAL REFLECTOR, 4 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, EXTRUDED TRANSLUCENT WHITE FROSTED PLASTIC DIFFUSER. DIFFUSER FROSTED BOTH SIDES.	ONE HUNDRED FORTY-FOUR WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.	144	EV3A-40HO-4--ITL82919.IES	19.80133	0.9	39.9

D-Series Size 0
LED Area Luminaire

Catalog Number
Notes
Type

Example: DSX0 LED 40C 1000 40K T4M MVOLT SPA DDBXD

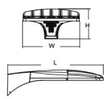
Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

Specifications

EPA:	0.8 ft² (.07 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height:	7" (17.5 cm)
Weight (max):	16 lbs (7.0 kg)



Ordering Information EXAMPLE: DSX0 LED 40C 1000 40K T3M MVOLT SPA DDBXD

DSX0 LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** 20C 20 LEDs (one engine) 40C 40 LEDs (two engines) **Rotated optics**[1] 30C 30 LEDs (one engine)	530 530 mA 700 700 mA 1000 1000 mA (1 A)*	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T1S Type 1 short T2S Type 2 short T2M Type 2 medium T3S Type 3 short T3M Type 3 medium T4M Type 4 medium T4FT4M Forward throw medium T5VS Type 5 very short	T5S Type 5 short T5M Type 5 medium T5W Type 5 wide BLC Backlight control[2] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT[4] 120-277V 120[5] 120V[5] 208[5] 208V[5] 240[5] 240V[5] 277[5] 277V[5] 347[5] 347V[5] 480[5] 480V[5] **Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[6] RPUMBA Round pole universal mounting adaptor[6] **Shipped separately**[7] KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)

Control options		Other options	Finish (required)
Shipped installed PER NEMA® twist-lock receptacle only (no controls)[8] PERS Five-wire receptacle only (no controls)[8] PIRT Seven-wire receptacle only (no controls)[8] DMG 0-10V dimming driver (no controls)[9] DCR Dimmable and controllable via ROAM® (no controls)[10] PIR Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[11] PIRH Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[11] PIRH1FC3V Motion/ambient sensor, 15-30'mounting height, ambient sensor enabled at 1fc[11] BL30 Bi-level switched dimming, 30% [12, 13] BL50 Bi-level switched dimming, 50% [12, 13] PNMTD3S3 Part night, dim till dawn [13] PNMTD2S3 Part night, dim 3 hrs [13] PNMTD4S3 Part night, dim 6 hrs [13] PNMTD7S3 Part night, dim 7 hrs [13]	**Shipped installed** HS House-side shield [14] SF Single fuse (120, 277, 347V) [15] DF Double fuse (208, 240, 480V) [15] L90 Left rotated optics [16] R90 Right rotated optics [16] DDL Diffused drop lens [17]	DDBXD Dark bronze DBLBD Black DNAXD Natural aluminum DWHXD White DSSTXD Sandstone DDBTXD Textured dark bronze DBLBTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Controls & Shields

Accessories

BLS1FC1V-LB-U	Photocell - DLL twist-lock (120-277V) *
BLS1-MVOLT-LB-U	Photocell - DLL twist-lock (347V) *
BLS1-480V-LB-U	Photocell - DLL twist-lock (480V) *
DSHS	Shorting cap
DSHSM 240 U	House-side shield for 20 LED unit *
DSHSM 300 U	House-side shield for 30 LED unit *
DSHSM 440 U	House-side shield for 40 LED unit *
DSHSSD S	Diffused drop lens (polycarbonate) *
PUMBA DDBXD U*	Square and round pole universal mount adaptor (specify finish)
KMA8 DDBXD U*	Mast arm mounting bracket adaptor (specify finish)

For more control options, visit DTL and ROAM online.

NOTES
1. 30 LEDs (30C option) and rotated optics (LR3 or RR3 only available together) are purchased separately. Call 1-800-442-6745 or email CanadaCS@acuitybrands.com. Not with PIR options PDBS, PDBT, BL30, BL50 or PNMT options.
2. PIR and PIRTCW specify the SensorSwitch SBGK-1LCMP control. PIRH and PIRHTCW specify the SensorSwitch SBGK-1LCMP control; see SensorSwitch Motion Sensor Guide for details. Includes ambient light sensor; not available with PIRR or PIRT. Ambient sensor disabled when ordered with DCR.
3. Not available with single board, 530mA product (30C 530 or 30C 530). Not available with BL30, BL50 or PNMT options.
4. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120V, 208V, 240V or 277V options only when ordering with fusing (SF or DF).
5. Not available with single board, 530mA product (30C 530 or 30C 530). Not available with BL30, BL50 or PNMT options.
6. Universal square and round pole universal mount. PUMBA (finish) U, 1.5 G vibration load rating per ANSI C136.31.
7. Must be ordered as a separate accessory; see Accessories information. For use on 2-3/8" O.D. tenon mounting only.
8. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories.
9. 0-10V dimming wires are pre-wired to the driver and must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR.
10. DMG option for 347V or 480V requires 1000mA.
11. Specifies a BIGARM enabled luminaire with 0-10V dimming capability. PIR sensor ordered and shipped as a separate line item from Acuity Brands Controls. Must be purchased separately. Call 1-800-442-6745 or email CanadaCS@acuitybrands.com. Not with PIR options PDBS, PDBT, BL30, BL50 or PNMT options.
12. Not available with 1000mA.
13. Not available with emergency battery backup, PUMBA (finish) U, 1.5 G vibration load rating per ANSI C136.31.
14. Diffused drop lens (polycarbonate) * Square and round pole universal mount adaptor (specify finish) * Mast arm mounting bracket adaptor (specify finish) * Shipped separately
15. Single fuse (120, 277, 347V). Not available with 347V, 480V, DCR, PDBS, PDBT or PNMT options.
16. Double fuse (208, 240, 480V). Not available with 347V, 480V, DCR, PDBS, PDBT, BL30 or BL50.
17. Also available as a separate accessory; see Accessories information.
18. Requires Luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

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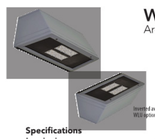


WST LED
Architectural Wall Sconce

Catalog Number
Notes
Type

Example: WST LED 2 10A700/40K SR3 MVOLT DDBTXD

Introduction

The classic Architectural Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 75% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a back-box or remote gear, so installations maintain their aesthetic integrity.

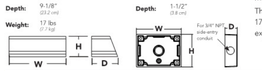
The WST LED is ideal for replacing existing 50 – 175W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Specifications
Luminaire

Height:	7-1/4" (18.4 cm)
Width:	16-1/4" (41.3 cm)
Depth:	9-1/8" (23.2 cm)
Weight:	17 lbs (7.7 kg)

Optional Back Box (BBW)

Height:	4" (10.2 cm)
Width:	5-1/2" (14.0 cm)
Depth:	1-1/2" (3.8 cm)



Ordering Information EXAMPLE: WST LED 2 10A700/40K SR3 MVOLT DDBTXD

WST LED

Series	Light Engines	Performance Package	Distribution	Voltage	Mounting	Options[1]	Finish (required)
WST LED	1 One engine (1S) (10 LEDs) 2 Two engines (2S) (20 LEDs)	**700 mA options:** 10A700/30K 3000K 10A700/40K 4000K 10A700/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT[2] 120-277V 120[3] 120V 208[3] 208V 240[3] 240V 277[3] 277V 347[3] 347V 480[3] 480V	**Shipped included** BLank Surface mount **Shipped separately**[4] BBW Surface-mounted back box U75 Uplift 5 degrees	**Shipped installed** PE Photoelectric cell, button type[4,5] SF Single fuse (120, 277, 347V) [6] DF Double fuse (208, 240, 480V) [6] DMG 0-10V dimming driver (no controls) ELCW Emergency battery backup[7] WLU Wet location door lit up orientation[8] PIR Motion/ambient light sensor[9] DS Dual switching[10] **Shipped separately** VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLBD Black DNAXD Natural aluminum DWHXD White DSSTXD Sandstone DDBTXD Textured dark bronze DBLBTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

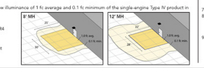
Emergency Battery Operation

The emergency battery backup (ELCW option) is integral to the luminaire - no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product.

All ELCW configurations include an independent secondary driver with an integral relay to immediately detect AC power loss. Dual light engines are wired in parallel so both engines operate in emergency mode and provide additional component redundancy. These design features meet various interpretations of NFPA 70/NEC 2008 - 700.16.

The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions.

The examples below show illuminance of 1 fc average and 0.1 fc minimum of the single-engine Type IV product in emergency mode.



WST LED 1 10A700/40K SR4 MVOLT ELCW
10' x 10' Gridlines
8' and 12' Mounting Height

NOTES
1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with photocell (PE), fusing (SF, DF), or dual switching (DS).
2. May also be ordered separately as an accessory. Ex: WSWH DDBXD U. Must specify finish.
3. Must be ordered with fixture, cannot be field installed.
4. Not available with MVOLT option. Button photocell (PE) can be ordered separately as an accessory; see Accessories. Ex: WSPE DDBXD U. Specify 120 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
5. Not available with 480V option. Not available with motion/ambient light sensor (PIR).
6. Integral battery pack is rated for -20° to 40°C operating temperature. Battery life is rated for 3 year period. Not available with 347V or 480V. Not available with WLU.
7. WLU not available with PIR or ELCW.
8. Specifies the SensorSwitch SFOD-7-DDP control (photocell included); see Motion Sensor Guide for details. Includes ambient light sensor. Not available with ELCW, WLU, VG or WG (motion/uplift). Dimming driver standard. Not available with WLU, VG or WG.
9. Provides 50/50 luminaire operation via two independent drivers and light engines. Not available with ELCW, WLU, VG or WG (motion/uplift). Not with WLU, ELCW, WLU, VG or DF. Must specify voltage; voltage must be the same for both drivers. When ordered with photocell (PE) or motion sensor (PIR), only the primary power source leads will be controlled.

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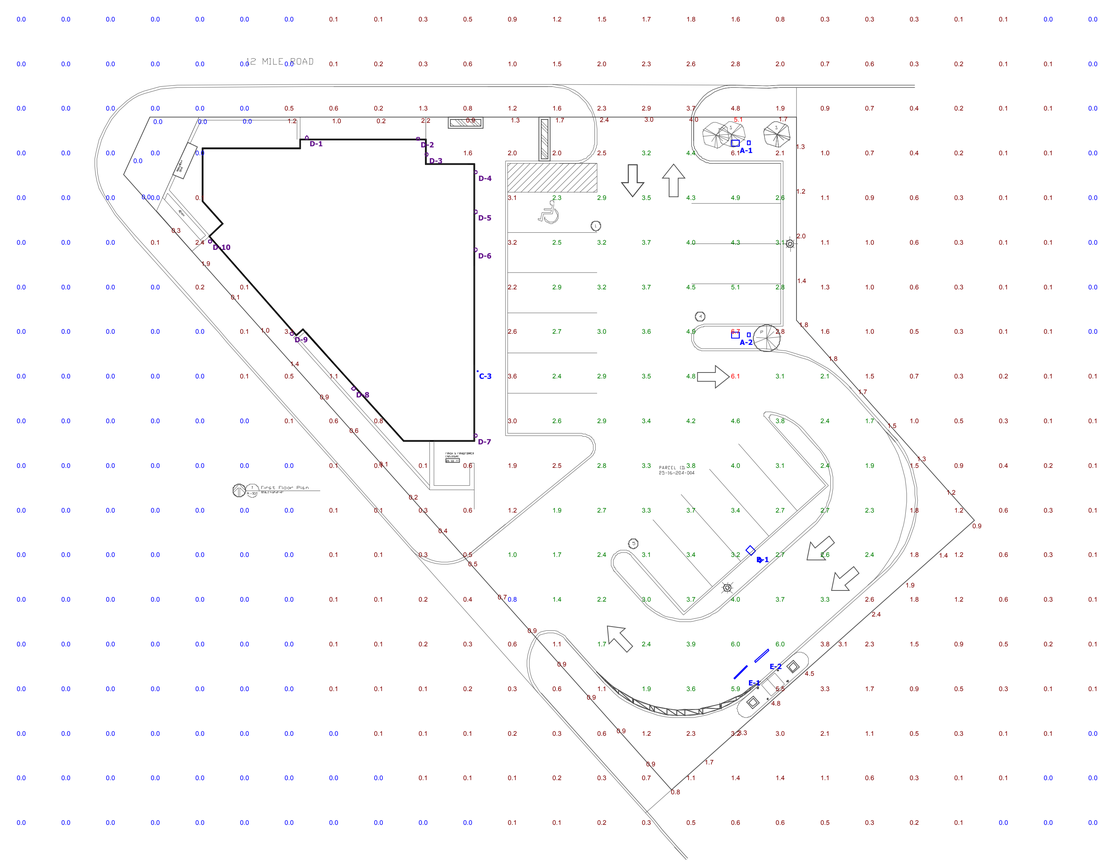


Plan View
Scale - 1" = 16'

Note

1. SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT
TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS
CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH
ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S
LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER
VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.
GBA DOES NOT ACT AS THE CIVIL OR STRUCTURAL ENGINEER AND DOES NOT DETERMINE BASE REQUIREMENTS.
POLES SPECIFICATIONS ARE NOT INCLUDED WITH EXTERIOR LIGHTING PHOTOMETRIC ANALYSIS.
THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING
ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT
IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

Luminaire Locations

		Location					
No.	**Label**	**X**	**Y**	**Z**	**MH**	**Orientation**	**Tilt**
1	A	5790.00	-913.15	20.00	20.00	270.00	0.00
2	A	5790.00	-956.15	20.00	20.00	270.00	0.00
1	B	5792.51	-1006.62	20.00	20.00	315.80	0.00
3	C	5729.22	-964.27	10.00	10.00	90.00	0.00
1	D	5691.00	-912.00	10.00	10.00	0.00	0.00
2	D	5715.90	-912.20	10.00	10.00	0.00	0.00
3	D	5717.85	-915.76	10.00	10.00	0.00	0.00
4	D	5728.84	-919.71	10.00	10.00	0.00	0.00
5	D	5728.78	-928.62	10.00	10.00	0.00	0.00
6	D	5728.77	-937.10	10.00	10.00	0.00	0.00
7	D	5728.74	-978.74	10.00	10.00	0.00	0.00
8	D	5701.43	-968.17	10.00	10.00	0.00	0.00
9	D	5687.67	-955.87	10.00	10.00	0.00	0.00
10	D	5669.33	-935.18	10.00	10.00	0.00	0.00
1	E	5788.17	-1031.70	20.00	20.00	46.12	0.00
2	E	5792.91	-1028.05	20.00	20.00	47.29	0.00

Statistics

Description	**Symbol**	**Min**	**Max**	**Max/Min**	**Avg/Min**	**Avg**
OVERALL LTG VALUES AT GRADE	+	0.0 fc	6.7 fc	N/A	N/A	1.0 fc
PARKING LOT	X	0.8 fc	6.1 fc	7.6:1	4.0:1	3.2 fc
PROPERTY LINE	+	0.0 fc	5.1 fc	N/A	N/A	1.4 fc

VISUAL

COMMUNITY CHOICE CREDIT UNION
SITE LIGHTING
PREPARED FOR: SAA ARCHITECTS
GASSER BUSH ASSOCIATES

Designer
LB/KJS/JAB
Date
03-21-2016
Scale
Not to Scale
Drawing No.
#16-50958-V4

M E M O R A N D U M

Community Development Department

City of Royal Oak, Michigan

Meeting Date: April 12, 2016
211 Williams St. / P.O. Box 64
Royal Oak, MI 48068-0064
Phone: (248) 246-3280
Fax: (248) 246-3005
www.romi.gov

DATE: April 1, 2016

TO: Planning Commission

FROM: Planning Division

SUBJECT: **Conditional Rezoning** from **One Family Residential** to **Multiple Family Residential** and associated **Site Plan (SP 16-04-07)** to construct 6 multiple-family dwelling units in 3-story building (31-ft. height) at **326 Oakland Ave.** (parcel no. 25-16-477-021)
Jeff Dawkins Architect, LLC, Petitioner & Architect
R. Coburn, Owner

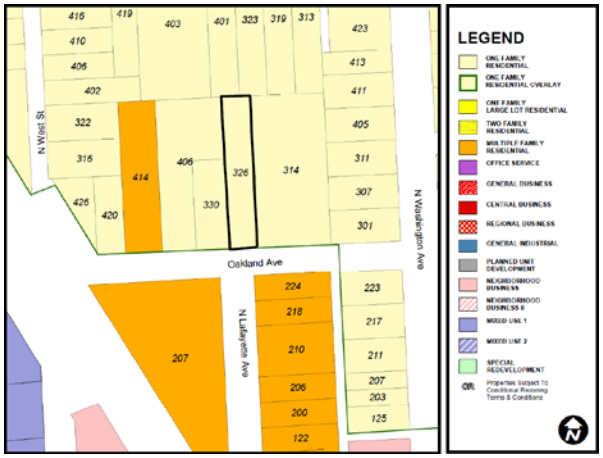
---

1. Location & Existing Conditions

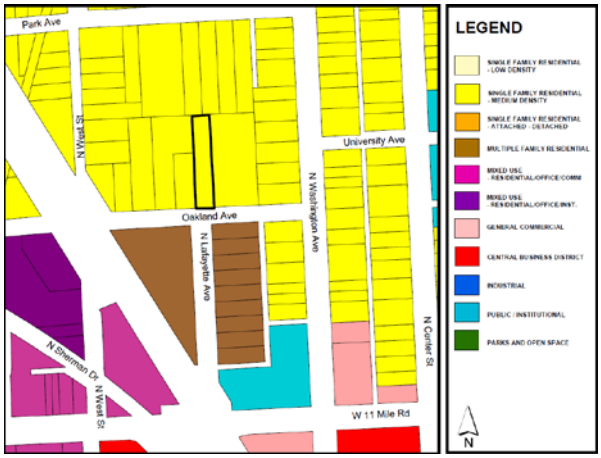
The property is located on the north side of Oakland Avenue, north of West Eleven Mile Road and west of North Washington Avenue. The parcel has a lot width of 50 feet, a lot depth of 269.325 feet, and approximately 13,460 square feet or 0.31 acres of lot area. The property is developed with a one-story building that is used as a two-family dwelling or duplex. Surrounding uses include a mixture of single-family dwellings to the north and southeast and multiple-family dwellings to the east, west, northwest, and southwest.

2. Zoning & Future Land Use

The site is zoned “One Family Residential” (left) while its planned future use on the Future Land Use Map of the city’s Master Plan is designated as “Single Family Residential – Medium Density” (right).



Zoning Map



Future Land Use Map

The site is also located within the One Family Residential Overlay district. The existing two-family dwelling is therefore considered to be conforming in terms of use, parking, setbacks, and density in accordance with § 770-58 (A)(2)(a) of the Zoning Ordinance.

3. Road Classification

The city's Functional Road Classification System identifies Oakland Avenue as a "local street." Local streets are intended to provide access to individual properties with limited continuity and mobility. They are designed for low traffic volumes and are linked to other land uses or arterials by collector streets.

4. Proposed Conditional Rezoning

The petitioner is proposing to change the zoning of this parcel from One Family Residential to Multiple Family Residential as a conditional rezoning under Section 405 of the Michigan Zoning Enabling Act (Act 110 of 2006). A site plan is also proposed as part of the conditional rezoning to construct one building with six multiple-family dwelling units.

Under Section 405 of the Zoning Enabling Act, a petitioner may voluntarily offer in writing and the city may approve certain uses and development of property as a condition to rezoning land. Such conditions must be offered voluntarily by a petitioner; the city may not require a petitioner to offer conditions as a prerequisite for rezoning property. The conditions proposed by a petitioner as part of a conditional rezoning are supposed to result in recognizable and material benefits to the city that would unlikely be achieved otherwise under the site's existing zoning.

As part of a conditional rezoning request, the petitioner needs to specify what conditions they offer, what recognizable and material benefits these conditions will achieve that cannot be realized under the site's existing zoning, and how these benefits justify the rezoning and outweigh having certain aspects of their proposed site plan not meet required Zoning Ordinance standards.

In approving conditions to a rezoning, the city may establish a time period during which the conditions apply. If the conditions are not satisfied within the time specified then the land reverts to its former zoning classification. During the approved time period, the city can neither add to nor alter the conditions. The time period can be extended by mutual agreement between the city and petitioner.

As part of a conditional rezoning, the city may waive required standards of the Zoning Ordinance if they feel the conditions proposed by the petitioner and the benefits that would result from them outweigh the need to meet such standards. Conversely, compliance with some or all Zoning Ordinance standards may be required by the city.

5. Proposed Use & Site Plan

A. Use & Density. The petitioner proposes to construct one building with six multiple-family dwelling units on the property. The site is zoned One Family Residential and no more than one dwelling unit is allowed per lot within that zoning district according to § 770-34 (B)(1) of the Zoning Ordinance. Two or more dwelling units per lot are allowed as a permitted use in the Multiple Family Residential zoning district under § 770-37 (B)(3).

Density for multiple-family dwellings is determined by lot size according to § 770-37 (D)(3)(a). The first two dwelling units require 9,000 square feet of lot area and each additional unit requires 3,000 more square feet of lot area. The parcel has approximately 13,460 square feet of lot area which could permit up to three dwelling units if zoned Multiple Family Residential. The petitioner is proposing six units which would require 21,000 square feet of total lot area.

A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow construction of six dwelling units on a parcel with only 13,460 square feet of lot area.

B. Setbacks & Building Height. A minimum setback of 25 feet from all lot lines is required for multiple-family structures in the Multiple Family Residential zoning district according to § 770-37 (D)(3)(c) of the Zoning Ordinance. The Planning Commission may allow reduced setbacks under that same subparagraph during site plan review even if that plan is not part of a conditional rezoning application.

The proposed building would have a south front yard setback of 27 feet, a west side yard setback of 18 feet, an east side yard setback of 5 feet, and a north rear yard setback of 44 feet 4 inches. A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow east and west side yard setbacks that are less than 25 feet.

A maximum building height of 30 feet is permitted in the Multiple Family Residential zoning district under § 770-37 (D)(3)(b). The same maximum building height is permitted in the One Family Residential zoning district.

The building would have a height of 31 feet to its roofline. Another waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow the additional one foot of building height.

C. Off-Street Parking. Two off-street parking spaces are required for each dwelling unit according to § 770-107 of the Zoning Ordinance. Twelve parking spaces are therefore required for the six proposed units. Each unit has a two-car attached garage on the ground level providing a total of 12 parking spaces.

D. Vehicular Access. The development would be accessed from a single 18-foot wide driveway to Oakland Avenue along the south front lot line. The driveway continues along the west side of building forming a maneuvering aisle that provides access to each garage and a turnaround at the rear of the site. A minimum maneuvering aisle width of 20 feet is required for two-way traffic according to § 770-109 (F) of the Zoning Ordinance. A waiver from the Planning Commission will therefore be necessary as part of the conditional rezoning to allow the reduced maneuvering aisle width of 18 feet.

E. Landscaping & Screening. Screening is required along all parcel boundaries in accordance with § 770-90 (D) of the Zoning Ordinance due to the One Family Residential zoning of all adjacent properties, even though parcels to the east and west are developed with multiple-family dwellings. A row of six trees is shown along the north rear lot line and another tree is shown within the front yard. The size and type of the proposed trees are not specified on the site plan.

F. Refuse Disposal. No exterior refuse container is proposed. The site plan indicates that individual waste and recycling containers will be stored in each unit's garage and placed at the curb along Oakland Avenue on collection days.

G. Signage. The site is not located within a designated sign area. Wall and monument signs are permitted for multiple-family developments under § 607-14 (J) of the Sign Ordinance but only along major streets. Since Oakland Avenue is a local street no signage would be allowed.

H. Deviations from Zoning Ordinance Standards. The following is a list of deviations from required Zoning Ordinance standards as identified by the Planning Division that are proposed as part of the conditional rezoning:

- *Minimum required lot area of 21,000 sq. ft. for 6 dwelling units [existing lot area of 13,460 sq. ft. allows 3 units]*
- *Minimum required 25-ft. east and west side yard setbacks [proposed side yard setbacks of 5 ft. (east) and 18 ft. (west)]*
- *Maximum permitted 30-ft. building height [31 ft. proposed]*
- *Minimum required 20-ft. maneuvering aisle width [18 ft. proposed]*

6. Results of Approval

Following a public hearing, the Planning Commission may recommend that the City Commission approve or deny a conditional rezoning request including any conditions voluntarily offered by the petitioner. The Planning Commission may also postpone making a recommendation and request additional information from the petitioner. A recommendation for approval or denial is forwarded to the City Commission with two readings required before changing the zoning of any property.

7. Recommendations

In reviewing an application for an amendment to the Zoning Map, the Planning Commission shall consider the following criteria contained in § 770-129 of the Zoning Ordinance, among other factors they may deem appropriate, in making their findings, recommendation, and decision:

A. The requested zone should be consistent with the goals, policies and future land use map of the Master Plan, including any location-specific or corridor studies. If conditions have changed since the Master Plan was adopted, as determined by the Planning Commission or City Commission, the consistency with recent development trends in the site's area shall be considered.

B. The site's physical, geological, hydrological and other environmental features should be compatible with the host of principal permitted and special land uses in the proposed zone.

C Evidence should document the applicant cannot receive a reasonable return on investment through developing the property with one or more of the principal permitted and special land uses under the current zoning.

D. The potential uses allowed in the proposed zone should be compatible with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic volumes, aesthetics, infrastructure, and potential influence on property values.

E. The street system should be capable of safely and efficiently accommodating expected traffic volumes generated by potential uses in the requested zone.

F. The capacity of public utilities and services should be sufficient to accommodate the potential uses in the requested zone without compromising the City's health, safety and welfare.

G. There should be an apparent demand in the City for the types of potential uses in the requested zone in relation to the amount of land in the City currently zoned and available to accommodate the demand.
H. The requested zone shall not create an isolated and unplanned spot zone.
I. Other criteria as determined by the Planning Commission or City Commission which would protect the public health, safety and welfare, protect public and private investment in the City, promote implementation of the goals, objectives and policies of the Master Plan and any amendments thereto, and enhance the overall quality of life in the City.

Should the Planning Commission recommend approval of the conditional rezoning and its associated site plan by the City Commission, the Planning Division recommends the following contingencies:

A. Prior to review by the City Commission, a conditional zoning agreement between the petitioner and the city shall be submitted for review and approval by the City Attorney specifying all conditions voluntarily offered by the petitioner and all requested waivers from required Zoning Ordinance standards.

B. Prior to review by the City Commission, the petitioner shall submit a revised site plan that includes any additional revisions or contingencies required by the Planning Commission, and also a detailed landscaping plan containing all elements required under § 770-90 (C)(1) through (7) of the Zoning Ordinance. Landscaping and screening as determined necessary and advisable by the Planning Commission shall be provided in accordance with § 770-90 (D) through (H) of the Zoning Ordinance.

C. All work and/or improvements within the public right-of-way shall be in accordance with the specifications and standards of the City Engineer.

D. Any exterior lighting fixtures shall comply with § 770-96 (B) of the Zoning Ordinance and other city codes and ordinances, including being directed downward and shielded so as not to shine on adjacent property, and within maximum permitted fixture heights and illumination levels.

E. A performance bond shall be posted in an amount to be determined by the Building Official.

F. The site plan shall meet all other Code and Ordinance requirements, as determined by the Building Official, Fire Marshall, and City Engineer, **prior** to issuance of **any** building permit. Such requirements include, but are not limited to, the Michigan Building Code, the Fire Prevention Ordinance (Chapter 340), and the Stormwater Detention Ordinance (Chapter 644).

It is recommended that the petitioner or a representative attend the April 12, 2016 Planning Commission meeting. The meeting starts at 7:30 p.m. in the City Commission Chambers on the 3rd floor of City Hall.

cc: Jeff Dawkins, Jeff Dawkins Architect, LLC
Robert Coburn

326 Oakland Avenue
Royal Oak . Michigan

partial elevations
1/4" = 1'-0"
25 November 2015

jeff dawkins architect . llc
2565 west maple road . suite 101
troy . michigan . 48084
248.321.0640

jeffthearchitect@gmail.com

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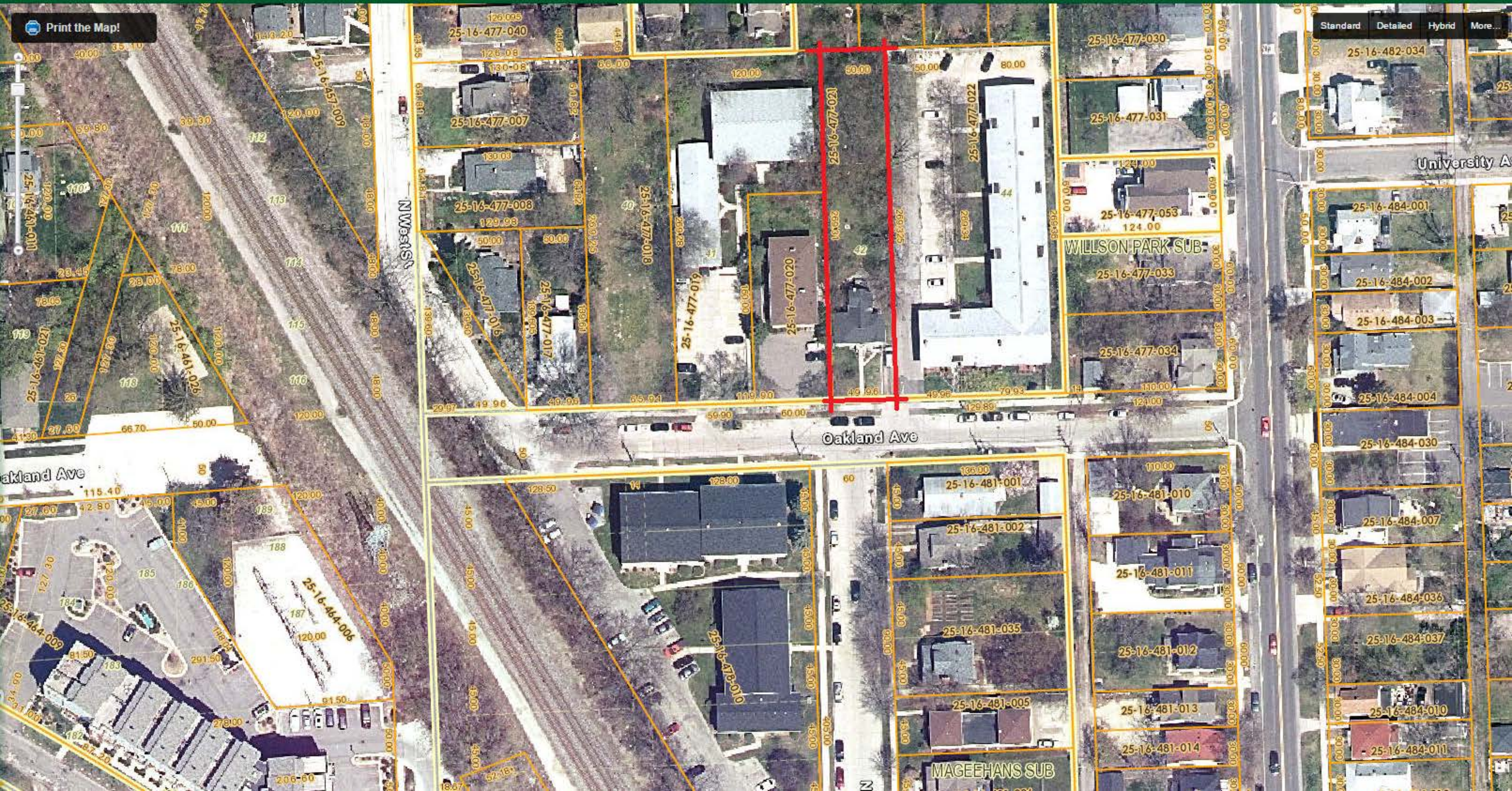
25-16-457-007
25-16-477-043
25-16-477-040
25-16-457-009
25-16-477-007
25-16-477-008
25-16-477-018
25-16-477-017
25-16-477-019
25-16-477-020
25-16-477-021
25-16-477-022
25-16-477-029
25-16-477-030
25-16-477-031
25-16-477-053
25-16-477-033
25-16-477-034
West St
Oakland Ave
University Ave
WILLSON PARK SUB
25-16-483-015
25-16-485-001
N Main St
25-15-353-016
E University Av
25-15-356-038
25-15-356-040
25-15-356-041
ASSESS
25-15-356-048
25-16-485-020
25-16-485-027
25-16-486-001
N Cedar St
25-16-484-031
25-16-481-001
25-16-481-002
25-16-481-035
25-16-481-005
25-16-481-006
25-16-481-007
25-16-481-008
25-16-481-009
25-16-481-034
25-16-478-010
MAGEEHANS SUB
25-16-479-001
N West St
N Lafayette Ave
25-16-464-006
25-16-466-001
N Laurel St


Print the Map!
Standard
Detailed
Hybrid
More...
25-16-477-040
25-16-477-007
25-16-477-008
25-16-477-018
25-16-477-019
25-16-477-020
25-16-477-021
25-16-477-022
25-16-477-030
25-16-477-031
25-16-477-053
25-16-477-033
25-16-477-034
25-16-482-034
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25-16-484-002
25-16-484-003
25-16-484-004
25-16-484-030
25-16-484-007
25-16-484-036
25-16-484-037
25-16-484-010
25-16-484-011
25-16-481-001
25-16-481-002
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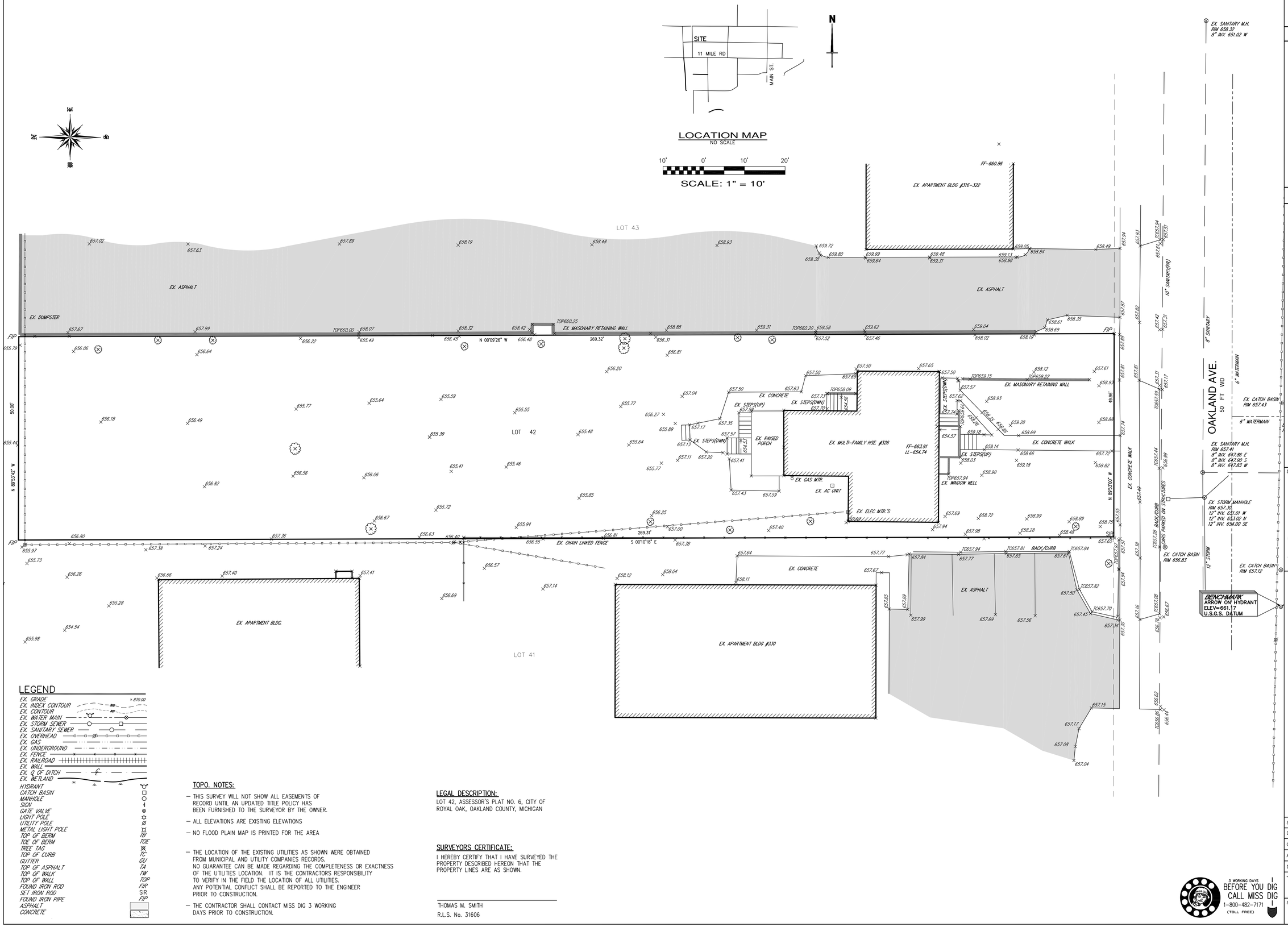
25-16-481-010
25-16-481-011
25-16-481-012
25-16-481-013
25-16-481-014
25-16-478-010
25-16-464-006
25-16-464-009
25-16-461-026
25-16-461-021
25-16-457-009
WILLSON PARK SUB
MAGEEHANS SUB
Oakland Ave
NWest St
University A



LEGEND

EX. GRADE	× 870.00
EX. INDEX CONTOUR	
EX. CONTOUR	
EX. WATER MAIN	
EX. STORM SEWER	
EX. SANITARY SEWER	
EX. OVERHEAD	
EX. GAS	
EX. UNDERGROUND	
EX. FENCE	
EX. RAILROAD	
EX. WALL	
EX. Q. OF DITCH	
EX. WETLAND	
HYDRANT	
CATCH BASIN	
MANHOLE	
SIGN	
GATE VALVE	
LIGHT POLE	
UTILITY POLE	
METAL LIGHT POLE	
TOP OF BERM	TB
TOE OF BERM	TOE
TREE TAG	
TOP OF CURB	TC
GUTTER	GU
TOP OF ASPHALT	TA
TOP OF WALK	TW
TOP OF WALL	TOP
FOUND IRON ROD	FIR
SET IRON ROD	SIR
FOUND IRON PIPE	FIP
ASPHALT	
CONCRETE	

TOPO. NOTES:

- THIS SURVEY WILL NOT SHOW ALL EASEMENTS OF RECORD UNTIL AN UPDATED TITLE POLICY HAS BEEN FURNISHED TO THE SURVEYOR BY THE OWNER.
- ALL ELEVATIONS ARE EXISTING ELEVATIONS
- NO FLOOD PLAIN MAP IS PRINTED FOR THE AREA
- THE LOCATION OF THE EXISTING UTILITIES AS SHOWN WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANIES RECORDS. NO GUARANTEE CAN BE MADE REGARDING THE COMPLETENESS OR EXACTNESS OF THE UTILITIES LOCATION. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY IN THE FIELD THE LOCATION OF ALL UTILITIES. ANY POTENTIAL CONFLICT SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION:

LOT 42, ASSESSOR'S PLAT NO. 6, CITY OF ROYAL OAK, OAKLAND COUNTY, MICHIGAN

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT I HAVE SURVEYED THE PROPERTY DESCRIBED HEREON THAT THE PROPERTY LINES ARE AS SHOWN.

THOMAS M. SMITH
R.L.S. No. 31606

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
(TOLL FREE)

REV.	DESCRIPTION	BY	DATE

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Sujak Engineering PLC
CIVIL ENGINEERING § PLANNING § DESIGN
4031 Coolidge Highway
Troy, MI 48098
Phone: (248) 885-8431
Fax: (248) 885-8432
Email: SujakEngineering@Comcast.net

Seal

ORIGINAL SIGNATURE IN BLUE

Teon C. Sujak, P.E. No. 046896

326 Oakland
Royal Oak, MI

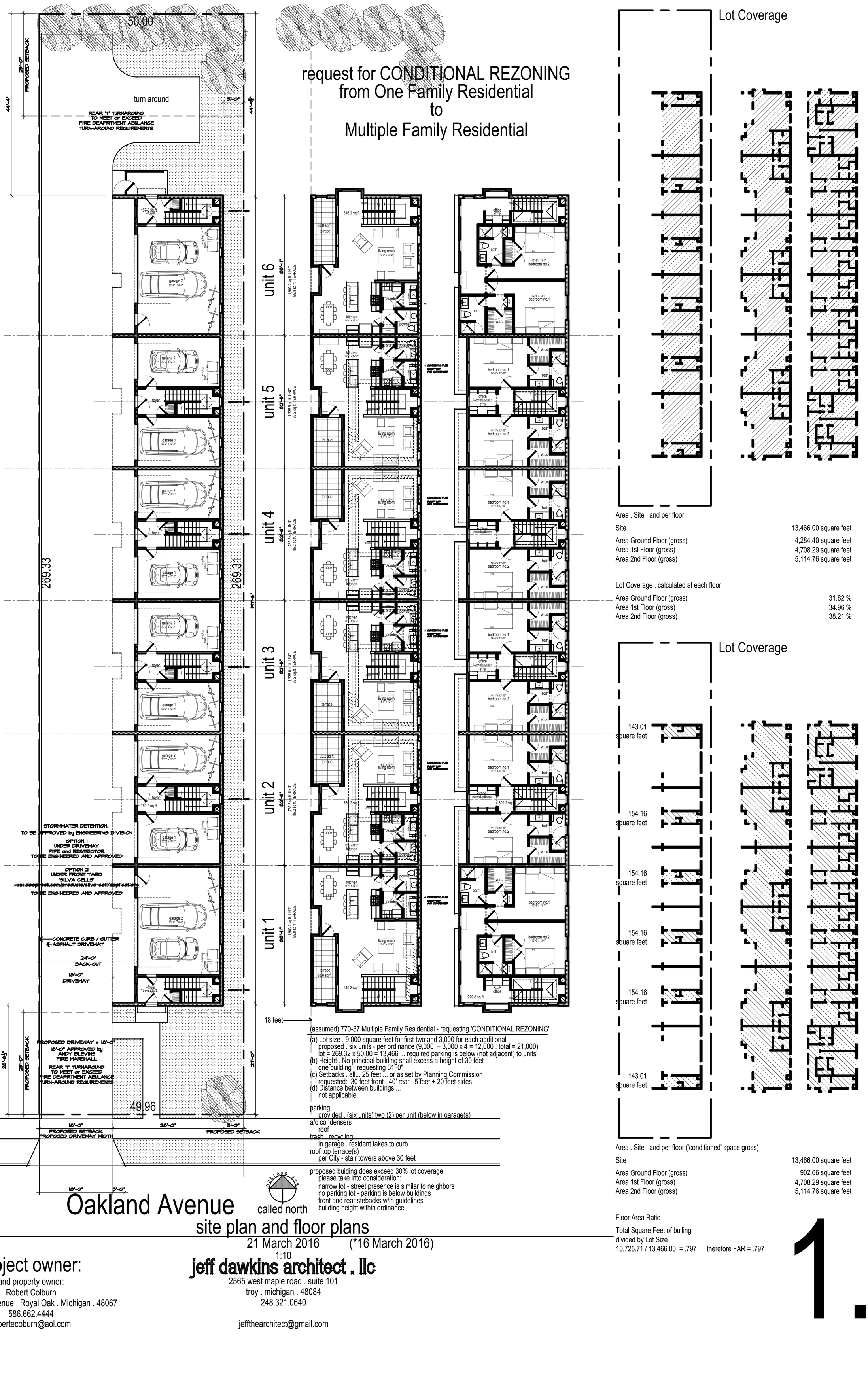
Topographic Survey

Scale:	1" = 10'
Drawn:	TMS
Checked:	TCS
Approved:	TMS
Date:	2/09/2016
Job. no.	16-009
Sheet No.	CS1.0

326 Oakland Avenue

Royal Oak . Michigan

request for CONDITIONAL REZONING
from One Family Residential
to
Multiple Family Residential



(assumed) 770-37 Multiple Family Residential - requesting 'CONDITIONAL REZONING'

(a) Lot size . 9,000 square feet for first two and 3,000 for each additional
proposed . six units - per ordinance (9,000 + 3,000 x 4 = 12,000 . total = 21,000)
lot = 269.32 x 50.00 = 13,466 ... required parking is below (not adjacent) to units

(b) Height . No principal building shall excess a height of 30 feet
one building - requesting 31'-0"

(c) Setbacks . all... 25 feet ... or as set by Planning Commission
requested: 30 feet front . 40' rear . 5 feet + 20 feet sides

(d) Distance between buildings ...
not applicable

parking
provided . (six units) two (2) per unit (below in garage(s)

a/c condensers
roof

trash recycling
in garage . resident takes to curb

roof top terrace(s)
per City - stair towers above 30 feet

proposed buiding does exceed 30% lot coverage
please take into consideration:
narrow lot - street presence is similar to neighbors
no parking lot - parking is below buildings
front and rear stebacks w/in guidelines
building height within ordinance

Lot Coverage

Area . Site . and per floor

Site	13,466.00 square feet
Area Ground Floor (gross)	4,284.40 square feet
Area 1st Floor (gross)	4,708.29 square feet
Area 2nd Floor (gross)	5,114.76 square feet

Lot Coverage . calculated at each floor

Area Ground Floor (gross)	31.82 %
Area 1st Floor (gross)	34.96 %
Area 2nd Floor (gross)	38.21 %

Lot Coverage

Area . Site . and per floor ('conditioned' space gross)

Site	13,466.00 square feet
Area Ground Floor (gross)	902.66 square feet
Area 1st Floor (gross)	4,708.29 square feet
Area 2nd Floor (gross)	5,114.76 square feet

Floor Area Ratio

Total Square Feet of builing
divided by Lot Size
10,725.71 / 13,466.00 = .797 therefore FAR = .797

Oakland Avenue

site plan and floor plans

21 March 2016 (*16 March 2016)

1:10

1.

project owner:
and property owner:
Robert Colburn
520 Wellesly Avenue . Royal Oak . Michigan . 48067
586.662.4444
robertecoburn@aol.com

jeff dawkins architect . llc
2565 west maple road . suite 101
troy . michigan . 48084
248.321.0640

jeffthearchitect@gmail.com

326 Oakland Avenue

Royal Oak . Michigan

request for CONDITIONAL REZONING
from One Family Residential
to
Multiple Family Residential

STORMWATER DETENTION:
TO BE APPROVED by ENGINEERING DIVISION

OPTION 1
UNDER DRIVEWAY
PIPE and RESTRICTOR
TO BE ENGINEERED AND APPROVED

TO BE ENGINEERED AND APPROVED

OPTION 2
UNDER FRONT YARD
'SILVA CELLS'
www.deeproot.com/products/silva-cell/applications

TO BE ENGINEERED AND APPROVED

PROPOSED DRIVEWAY = 18'-0"
18'-0" APPROVED by
ANDY BLEVINS
FIRE MARSHALL

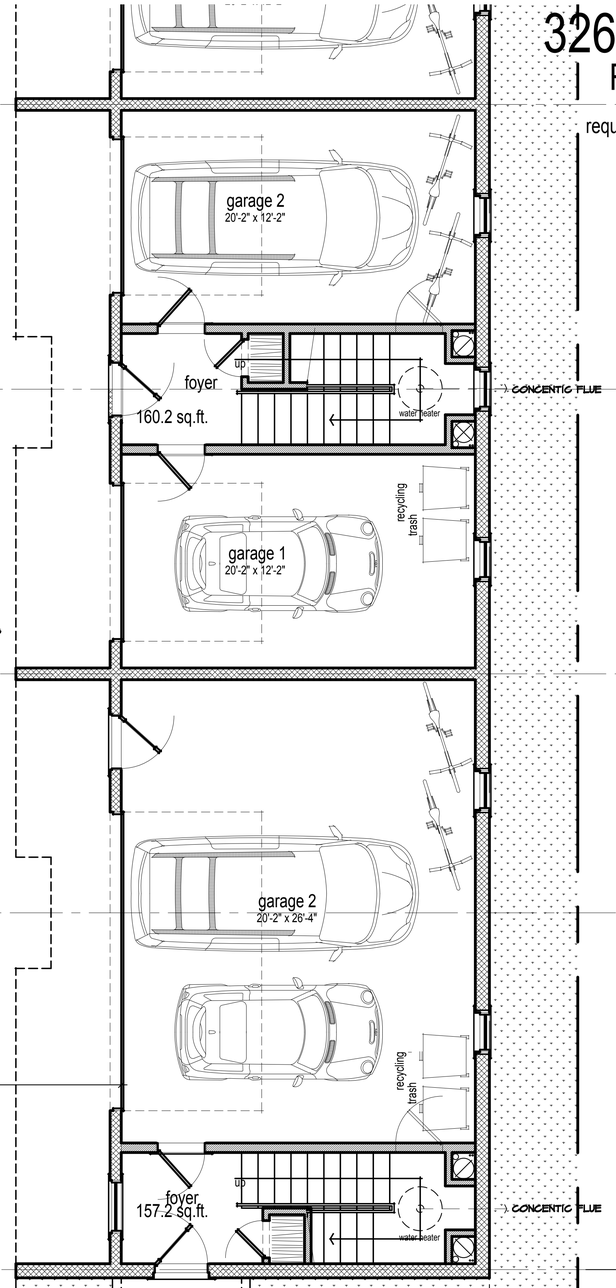
REAR 'T' TURNAROUND
TO MEET or EXCEED
FIRE DEAPRTMENT ABULANCE
TURN-AROUND REQUIREMENTS

24'-0"

18'-0"
PROPOSED SETBACK
PROPOSED DRIVEWAY WIDTH

26'-6½"

25'-0"



unit 2

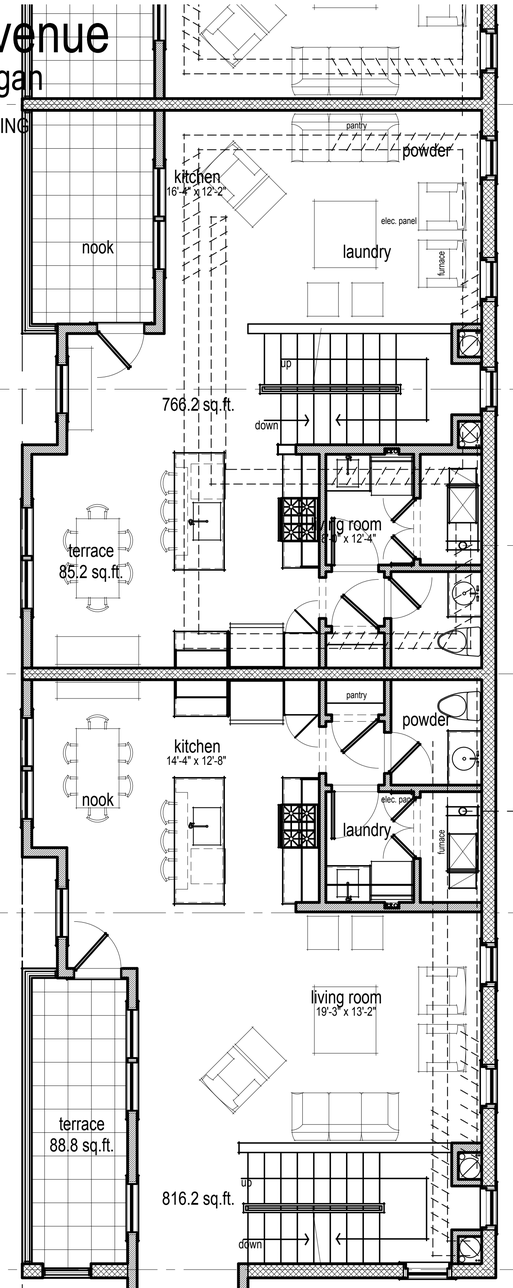
52'-5"

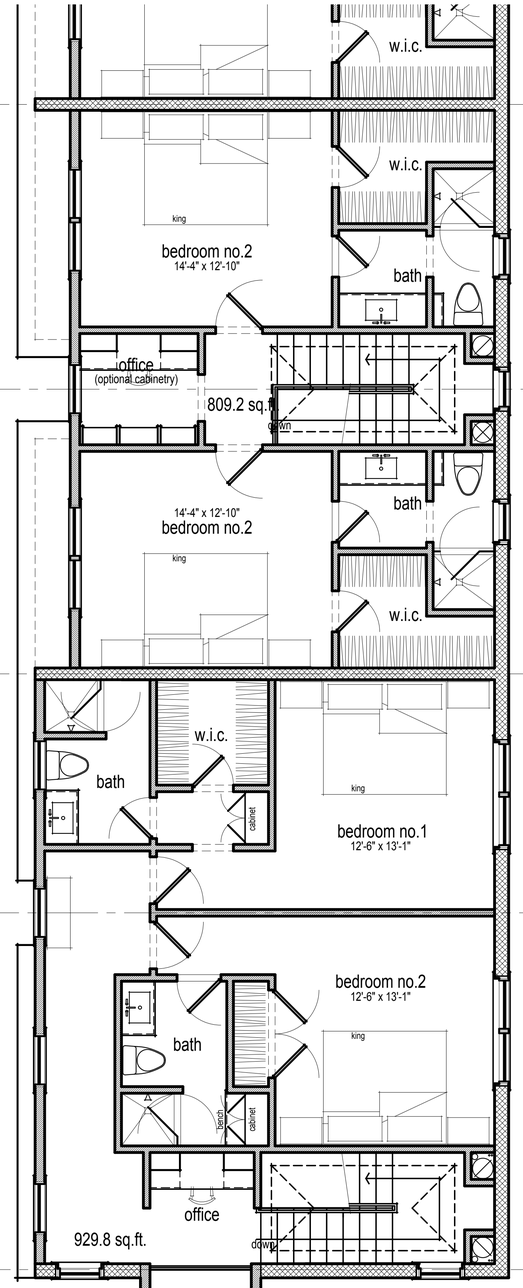
1,735.6 sq.ft. UNIT
85.2 sq.ft. TERRACE

unit 1

89'-11"

1,903.2 sq.ft. UNIT
88.8 sq.ft. TERRACE





ground floor

1st floor

2nd floor

called north

21 March 2016
1/4" = 1'-0"

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troy . michigan . 48084
248.321.0640

jeffthearchitect@gmail.com

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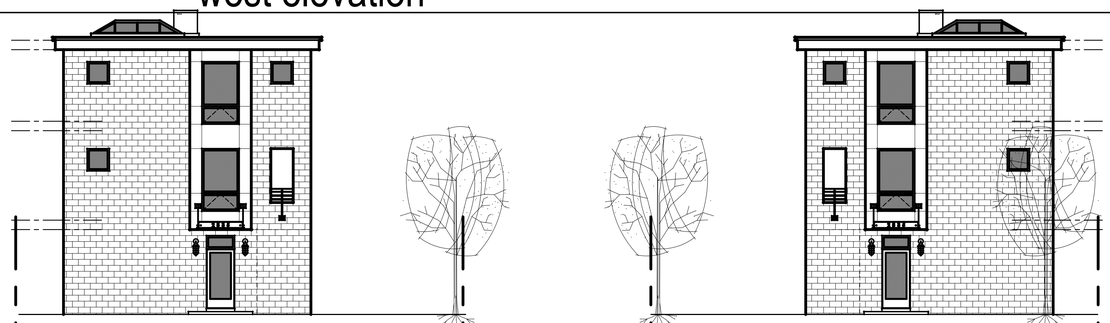
326 Oakland Avenue

Royal Oak . Michigan

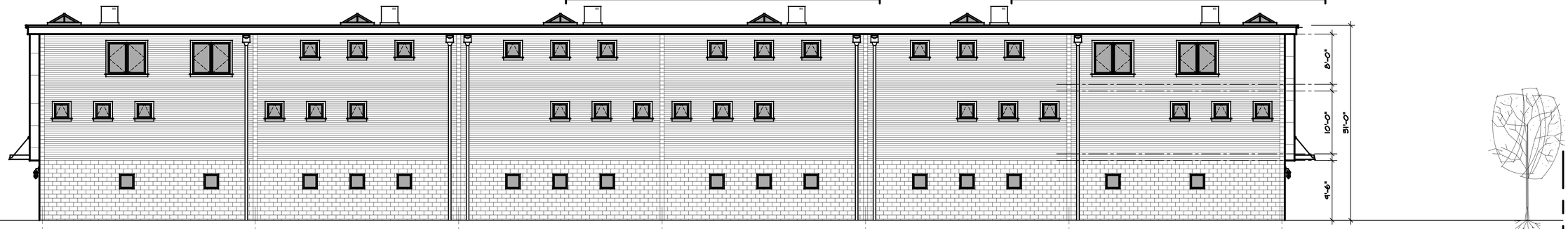
request for CONDITIONAL REZONING
from One Family Residential
to
Multiple Family Residential

west elevation



north elevation

south elevation



east elevation

elevations

1/8" = 1'-0"

21 March 2016

project owner:
and property owner:
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3.

326 Oakland Avenue
Royal Oak . Michigan

request for CONDITIONAL REZONING
from One Family Residential
to
Multiple Family Residential

exterior lighting
60 WATT maximum

partial elevations

1/4" = 1'-0"

21 March 2016

project owner:
and property owner:
Robert Colburn
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586.662.4444
robertecoburn@aol.com

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326 Oakland Avenue
Royal Oak . Michigan

proximity
1:20

21 March 2016

project owner:
and property owner:
Robert Colburn
520 Wellesly Avenue . Royal Oak . Michigan . 48067
586.662.4444
robertecoburn@aol.com

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NRG half-high offers brick look plus energy efficiency.

NRG Block

Fully Insulated / Thermally Broken

Structural

Available in many colors / finishes

Once installed – has the appearance

Of a masonry / brick wall

Emagine Theater, Royal Oak

An example of NRG Block

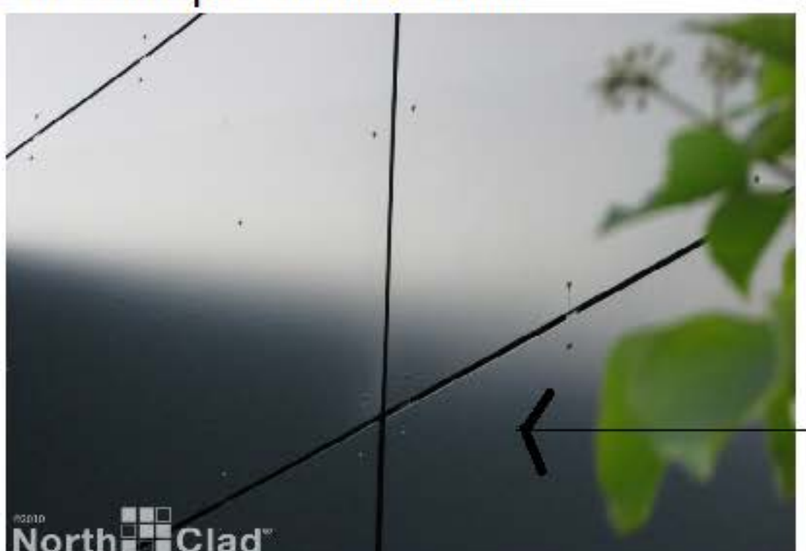
Metal Awning

Metropolitan 13 apartments

Royal Oak

Jeff Dawkins Architect and

I.F.Metalworks . Roseville



Example of **Exposed Fastener Wall Cladding**

326 Oakland

Royal Oak

Example or **LASER CUT address**

Metropolitan Lafayette apartments

Royal Oak

Jeff Dawkins Architect and

I.F.Metalworks . Roseville

M E M O R A N D U M

Community Development Department

City of Royal Oak, Michigan

Meeting Date: April 12, 2016
211 Williams St. / P.O. Box 64
Royal Oak, MI 48068-0064
Phone: (248) 246-3280
Fax: (248) 246-3005
www.romi.gov

DATE: April 1, 2016

TO: Planning Commission

FROM: Planning Division

SUBJECT: **SV 16-04-03 – Sign Variance** request to install wall sign for hospital (Beaumont Health System) at **3601 W. Thirteen Mile Rd.** (parcel no. 25-07-251-024) with variance to waive 170 sq. ft. from maximum permitted 150-sq. ft. wall sign area.
Phillips Sign & Lighting, Inc., Petitioner & Contractor
Beaumont Health System, Owner

The above referenced sign variance request is scheduled for consideration by the Planning Commission at the next regular meeting. The request is from Beaumont Hospital at 3601 West Thirteen Mile Road. The property is located within Sign Area 1 and must meet the required standards of § 607-10 and all other applicable sections of the Sign Ordinance.

The petitioner proposes to install a wall sign with 320 square feet of sign area on the east side façade of the hospital's south addition. A sign permit application to install the wall sign was denied by the Building Division because it would exceed the maximum wall sign area of 150 square feet permitted in Sign Area 1 under § 607-10 (A)(2) and § 607-15 (H) of the Sign Ordinance.

According to § 607-22 (D)(1), the Planning Commission is authorized to grant variances from the strict provisions of the Sign Ordinance "…whereby extraordinary or exceptional conditions of such property, the strict application of the regulations enacted would result in peculiar or exceptional practical difficulties to or exceptional undue hardship upon the owner of such property, provided such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of this article."

In order to grant the requested variance, the Planning Commission must determine that the variance, either as proposed by the applicant or as otherwise determined by the Planning Commission based upon the record, is the minimum relief necessary in order to achieve substantial justice. Further, in granting a variance, the Planning Commission must state the grounds upon which it justifies the granting of a variance as outlined below:

The applicant must present evidence to show that, if this article is applied strictly, unnecessary hardship and/or practical difficulties to the applicant will result, and that all eight of the following findings of fact are met:

(a) That the property could not reasonably accommodate a sign permitted at that specific location;
(b) That the appeal results from exceptional and unique circumstances peculiar to the property and not from general neighborhood or City-wide conditions, including unique architectural character of the building or innovative techniques that are determined not to be detrimental to the building or the character of the area;
(c) That the sign requested by the variance would not alter the essential character of the area;
(d) That the alleged hardships and practical difficulties, or both, which will result from a failure to grant the variance include substantially more than mere inconvenience or monetary concern;

(e) That the alleged hardship has not been created by the petitioner or any other person presently having an interest in the property;
(f) That the article's restrictions unreasonably prevent the owner from using the property for a permitted land use;
(g) That the variance would do substantial justice to the applicant as well as to other property owners in the immediate vicinity that would be affected by granting the variance, considering the public benefits intended to be secured by this article, and the individual hardship that will be suffered by a failure of the Planning Commission to grant a variance; and
(h) That a lesser relaxation than that requested would not give substantial relief to the owner of the property or be more consistent with justice to other property owners.

The Planning Commission must therefore consider one of the following actions: 1) approve the requested variance; 2) approve the requested variance with conditions; or 3) deny the requested variance.

It is recommended that the petitioner or a representative attend the April 12, 2016 Planning Commission meeting. The meeting starts at 7:30 p.m. in the City Commission Chambers on the 3rd floor of City Hall.

cc: Ed Phillips, Phillips Sign & Lighting, Inc.
Samy Husseini, Beaumont Health System

Royal Oak
COMMUNITY
DEVELOPMENT

3/1/16

Phillips Sign & Lighting, Inc.
Ed Phillips
40920 Executive Drive
Harrison Township, MI 48045

Re: 3587 W. 13 Mile Royal Oak, MI 48073
William Beaumont Hospital South Addition

Mr. Phillips,

Based upon the Code of the City of Royal Oak, Chapter 607-10, Signs, Sign Area 1, the application to install a wall sign on the east façade of the South Addition at the above referenced address has been **denied** due to the following:

Wall sign area allowed per 607-10 A (2) [100 Sq. ft.] & 607-15 H [+ 50%]: 150 square feet
Wall sign area proposed: 320 square feet (8' H x 40' W)

If you have any questions, please do not hesitate to contact me at (248) 246-3230. If you would like to apply for a sign variance, please contact Doug Hedges at (248) 246-3281.

Sincerely,
City of Royal Oak

Kevin Duhonich

Kevin Duhonich
Deputy Building Official

Beaumont® | HEALTH SYSTEM

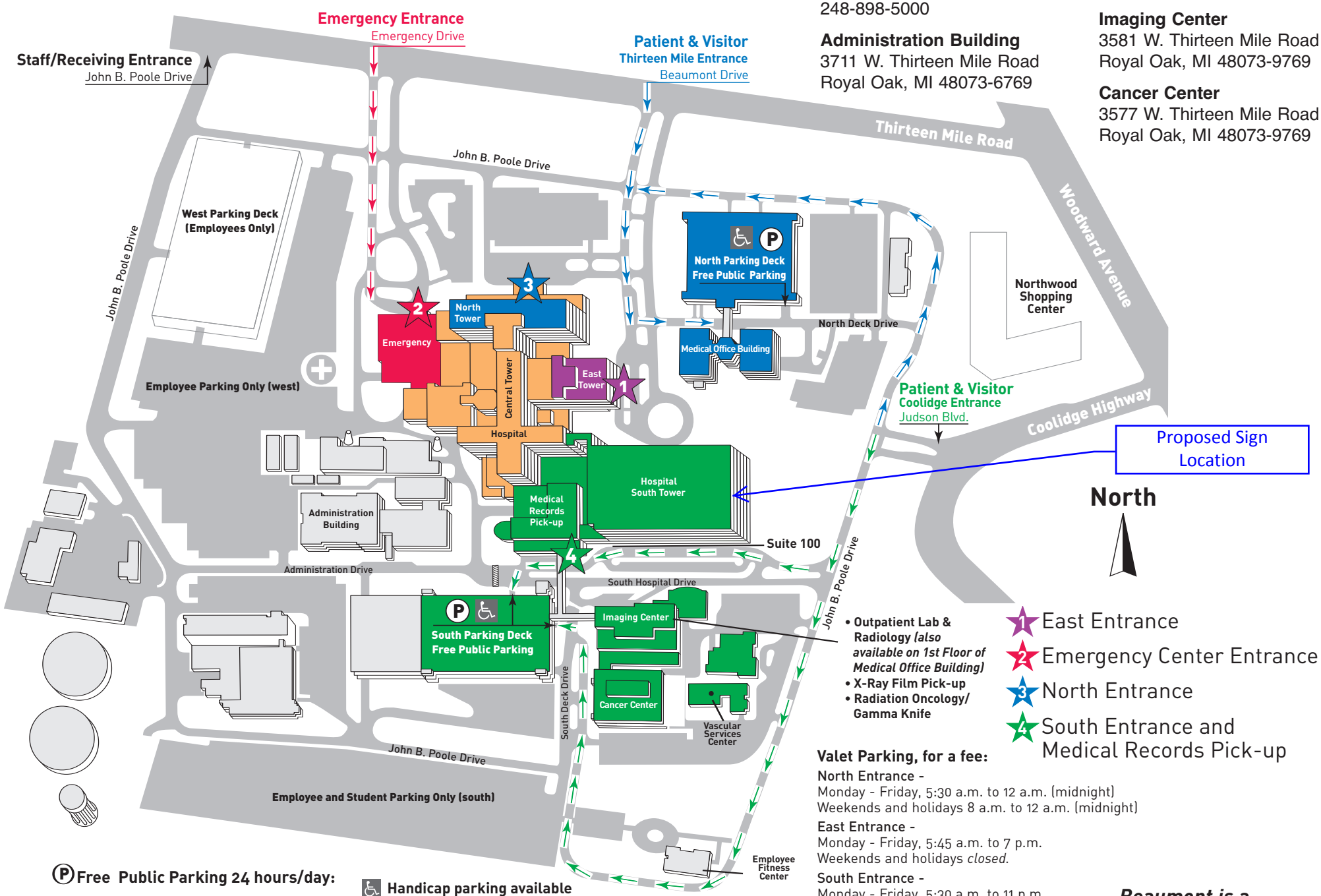
Beaumont Hospital, Royal Oak
3601 W. Thirteen Mile Road
Royal Oak, MI 48073-9769
248-898-5000

Administration Building
3711 W. Thirteen Mile Road
Royal Oak, MI 48073-6769

Medical Office Building
3535 W. Thirteen Mile Road
Royal Oak, MI 48073-6769

Imaging Center
3581 W. Thirteen Mile Road
Royal Oak, MI 48073-9769

Cancer Center
3577 W. Thirteen Mile Road
Royal Oak, MI 48073-9769



- Outpatient Lab & Radiology *(also available on 1st Floor of Medical Office Building)*
- X-Ray Film Pick-up
- Radiation Oncology/ Gamma Knife

1 East Entrance
2 Emergency Center Entrance
3 North Entrance
4 South Entrance and Medical Records Pick-up

Valet Parking, for a fee:

North Entrance -
Monday - Friday, 5:30 a.m. to 12 a.m. (midnight)
Weekends and holidays 8 a.m. to 12 a.m. (midnight)

East Entrance -
Monday - Friday, 5:45 a.m. to 7 p.m.
Weekends and holidays *closed*.

South Entrance -
Monday - Friday, 5:30 a.m. to 11 p.m.
Weekends and holidays 8 a.m. to 11 p.m.

Emergency Entrance -
10:00 a.m. to 12 a.m. (midnight) daily

Beaumont is a smoke-free campus

Ⓟ Free Public Parking 24 hours/day:
North Parking Deck NORTH Blue
South Parking Deck SOUTH Green

Handicap parking available in all parking areas.
Special equipped oversize vehicles - see door attendant

1050 043012 OSM

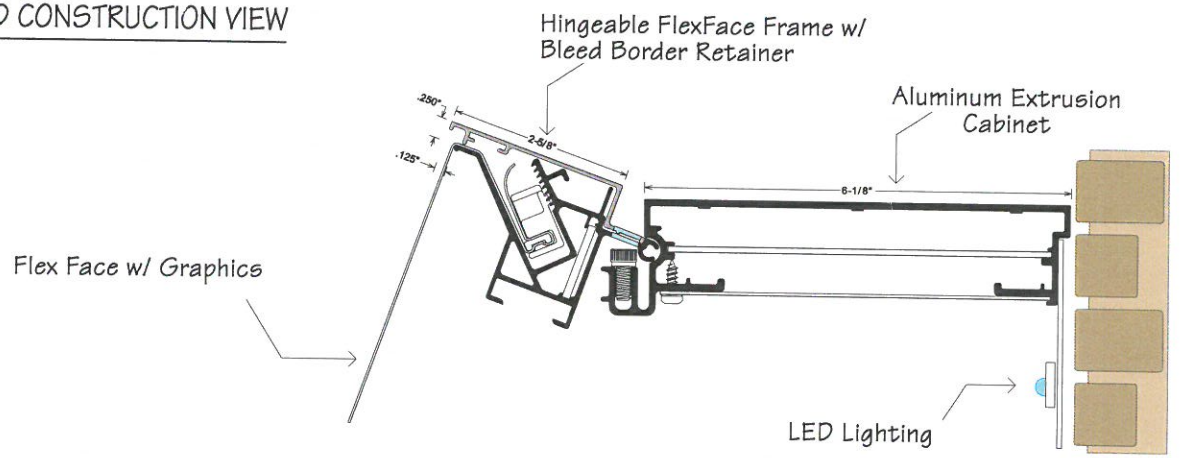
Item #2: Internally Illuminated Cabinet

East Elevation

Hingeable FlexFace Frame with Bleed Border Retainers

TOTAL SIGN AREA: 320 Sq. Ft.(each)

ENLARGED CONSTRUCTION VIEW



TOTAL SIGN AREA: 320 Sq. Ft.

Client Approval: _____ **Date:** _____

phillips SIGN & LIGHTING inc.
40920 Executive Drive
Harrison Twp., MI
48045-1363
Ph: 586.468.7110 Fx: 586.468.7441

JOB NO: _____

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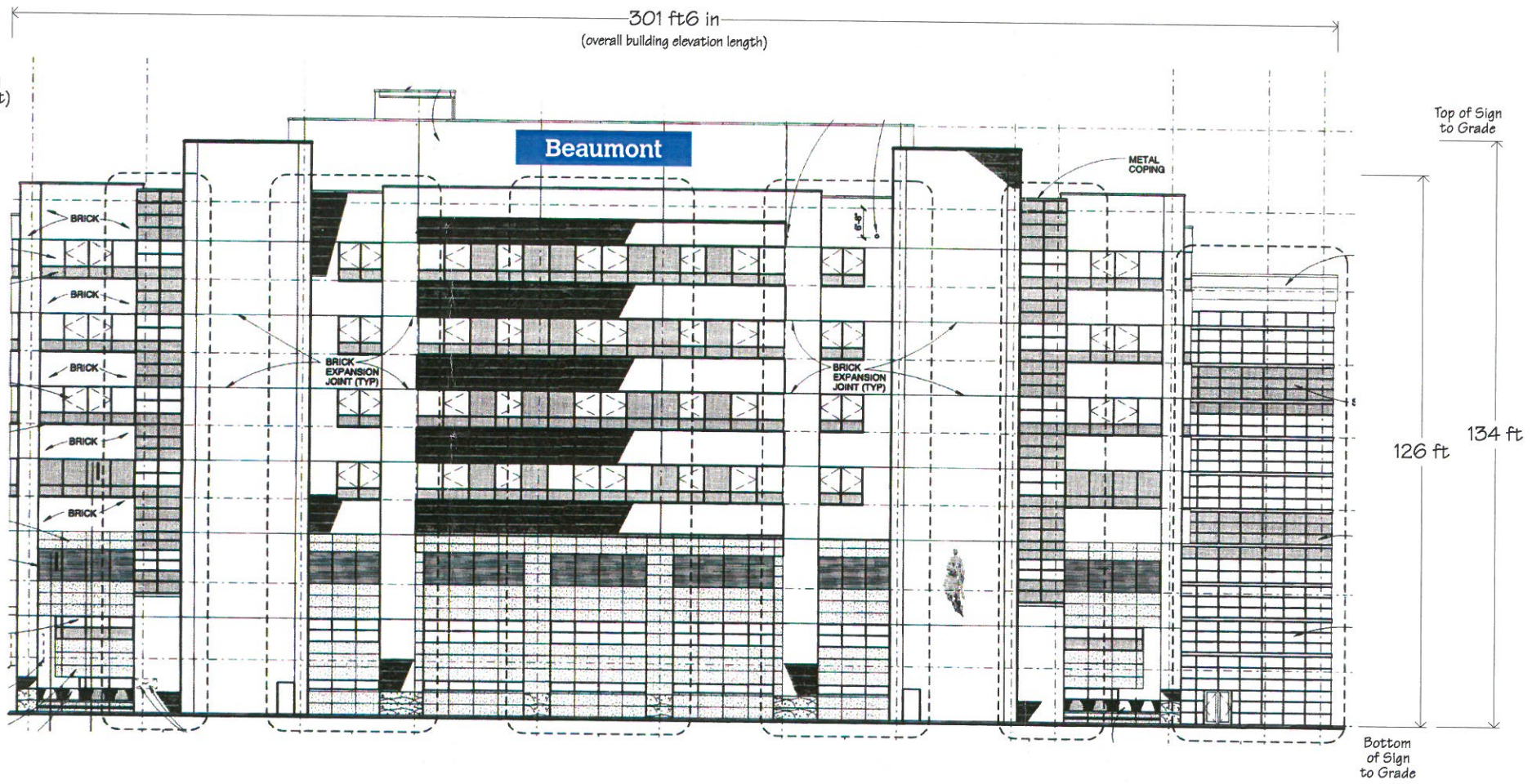
PROJECT: **Beaumont Hospital**
FILE: **Beaumont Hospital-Royal Oak**
SITE ADDRESS: **3601 W. 13 Mile Rd., Royal Oak, MI**
ARTIST: **KP** DATE: **12-4-15** REV: **KP-2-23-16**

PS&L
www.phillipssign.com

Item #1: Internally Illuminated Cabinet

EAST ELEVATION



TOTAL SIGN AREA: 320 Sq. Ft.

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PS&L
www.phillipssign.com

phillips SIGN & LIGHTING INC.

40920 Executive Drive, Harrison Township, MI 48045
Phone: 586.468.7110 Fax: 586.468.7441 www.phillipssign.com

A. The building elevations shown demonstrate that the property can and does accommodate the sign we are requesting.

B. Our property is unique in size – construction and road setbacks. Please see Page 1 of our handouts.

C. The sign we are requesting would have no effect on the essential character of the area.

D. We believe we have demonstrated that the small 6 x 30 sign, Page 8 of our handout, demonstrates our need for the larger sign shown on Page 9. We are a hospital, often sought out when people are under the most stress. We believe good clear identification is imperative.

E. We did not create the existing site conditions. The site today is the result of years of growth and expansion.

F. Beaumont has a new brand. The blue box and white copy. We are implementing this at all of our facilities. We are proud of the branding.

G. We feel once again, that good clear hospital identification is crucial. We all benefit.

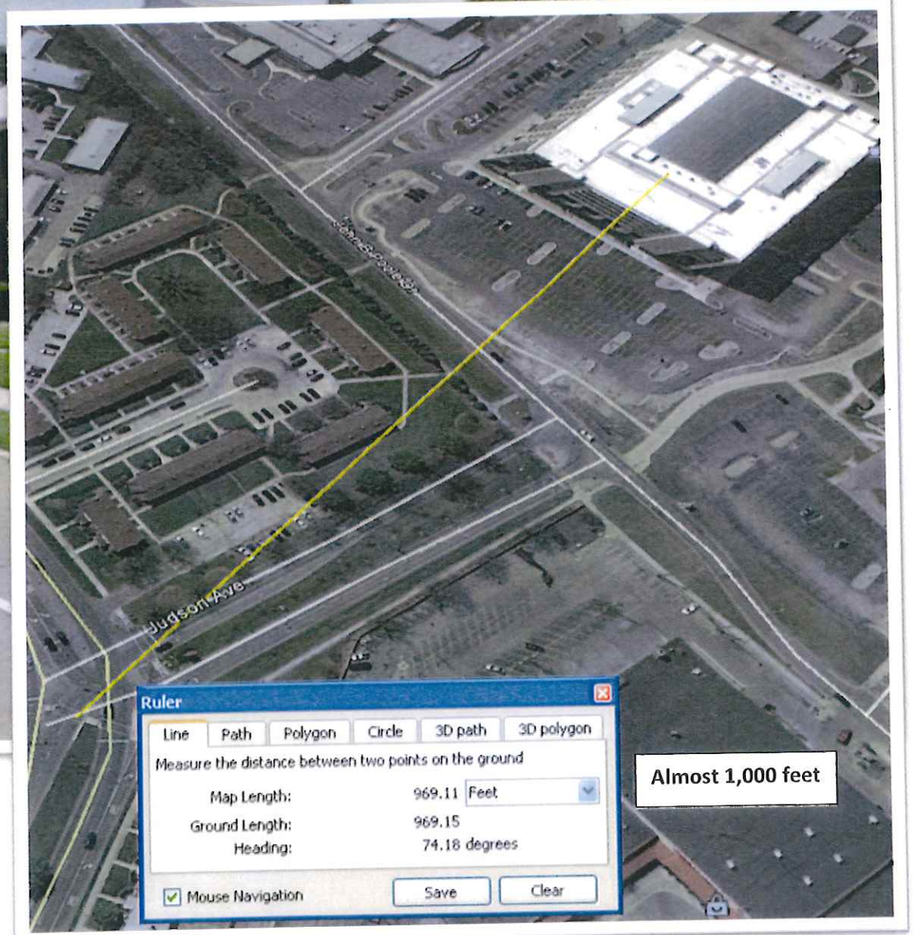
H. Page 9, hopefully demonstrates our need for a legible sign.

phillips SIGN & LIGHTING INC.

BEAUMONT SIGN ELEVATION

COOLIDGE (different view)
CURRENTLY EXISTING
Judson Ave
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length:
969.11
Feet
Ground Length:
969.15
Heading:
74.18 degrees
Mouse Navigation
Save
Clear
Almost 1,000 feet

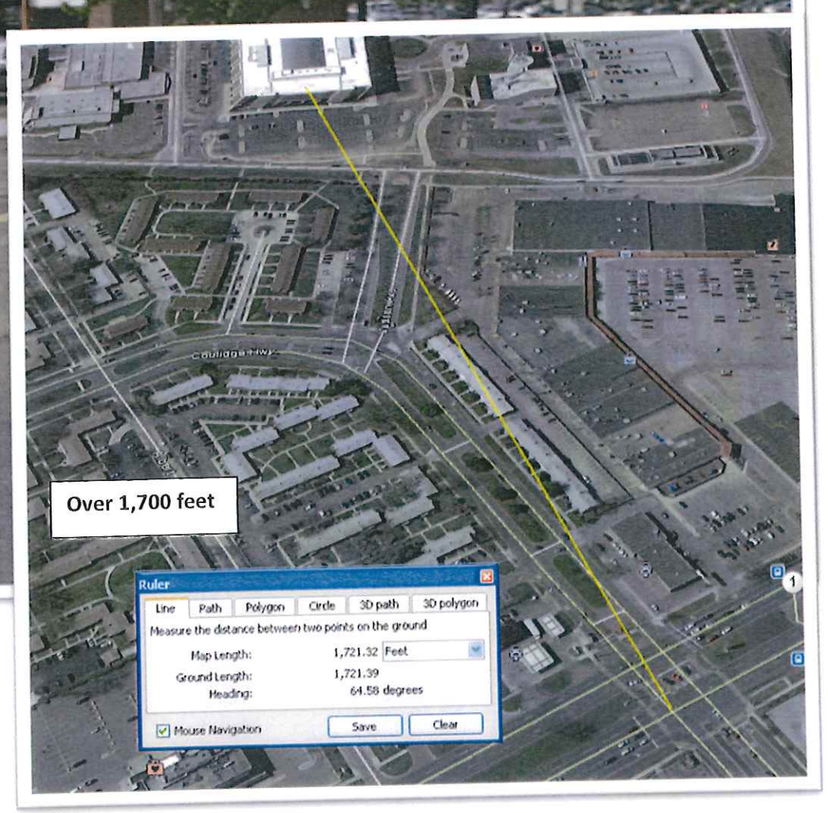
COOLIDGE



Almost 1,000 feet

phillips SIGN & LIGHTING INC.

WOODWARD 13 MILE ROAD
Beaumont Ho
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length:
1,618.39
Feet
Ground Length:
1,618.45
Heading:
222.67 degrees
Mouse Navigation
Save
Clear
Over 1,600 feet
© 2016 Google



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phillips SIGN & LIGHTING INC.

LEGIBILITY CHART

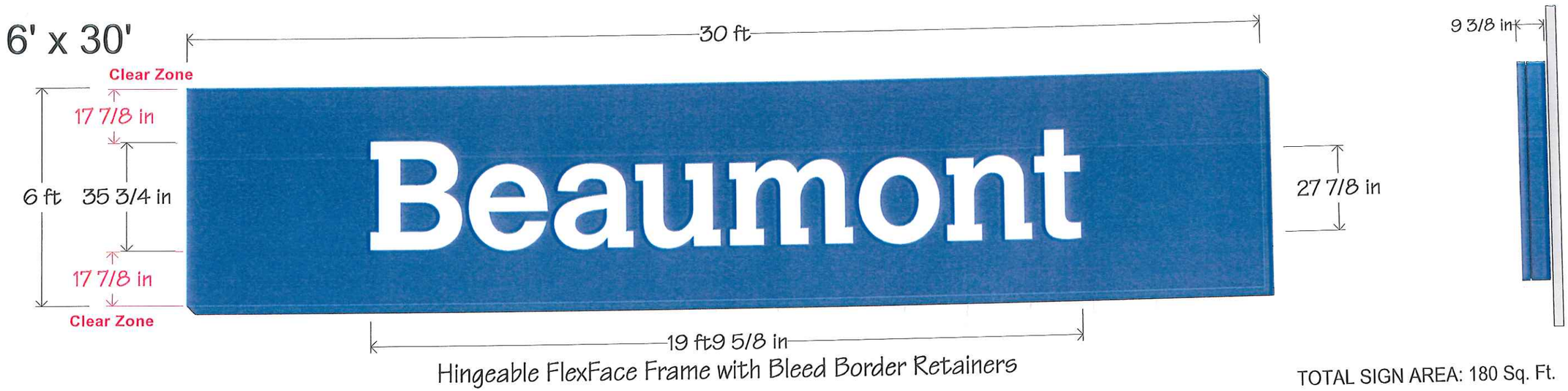
MAXIMUM READABLE DISTANCE	READABLE DISTANCE FOR MAXIMUM IMPACT	LETTER HEIGHT
100'	30'	3"
150'	40'	4"
200'	60'	6"
350'	80'	8"
400'	90'	9"
450'	100'	10"
525'	120'	12"
630'	150'	15"
750'	180'	18"
1000'	240'	24"
1250'	300'	30"
1500'	360'	36"
1750'	420'	42"
2000'	480'	48"
2250'	540'	54"
2500'	600'	60"

Previous Channel Letters

48" Capital letter
34-3/8" Lower case letters

FILE: **Beaumont Hospital- Royal Oak**
SITE ADDRESS: **3601 W. 13 Mile Rd., Royal Oak, MI**

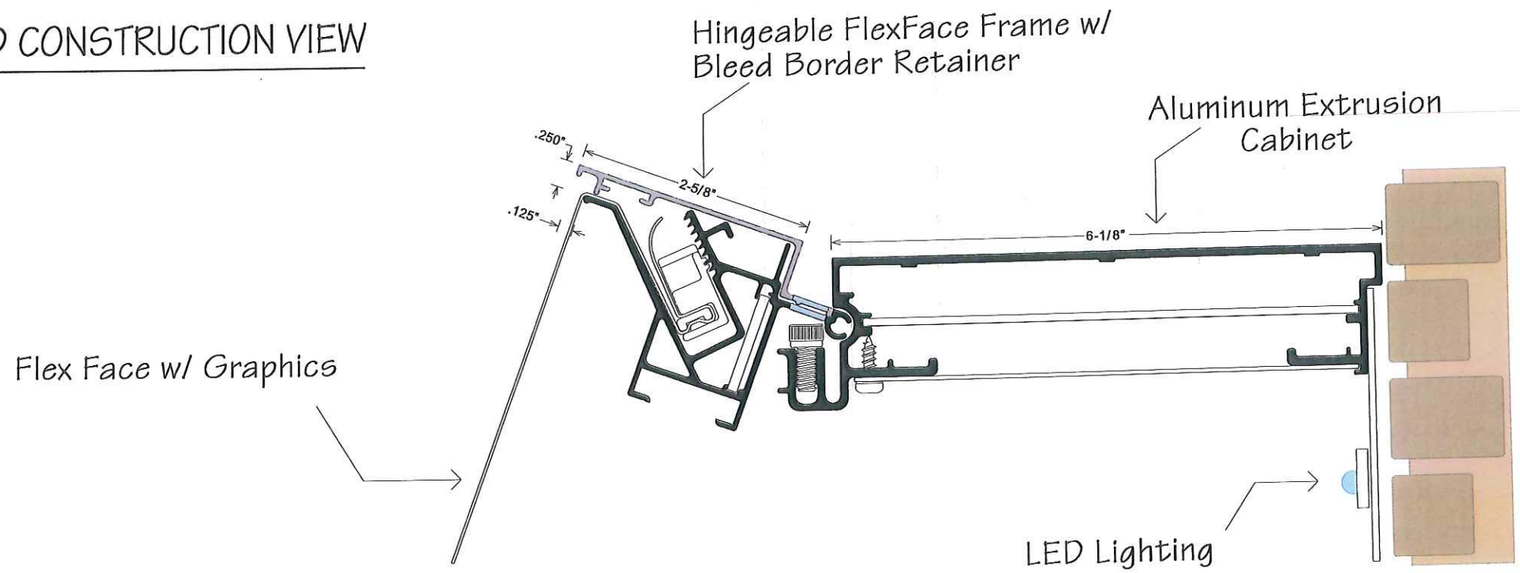
phillips SIGN & LIGHTING INC.



Hingeable FlexFace Frame with Bleed Border Retainers

TOTAL SIGN AREA: 180 Sq. Ft.

ENLARGED CONSTRUCTION VIEW

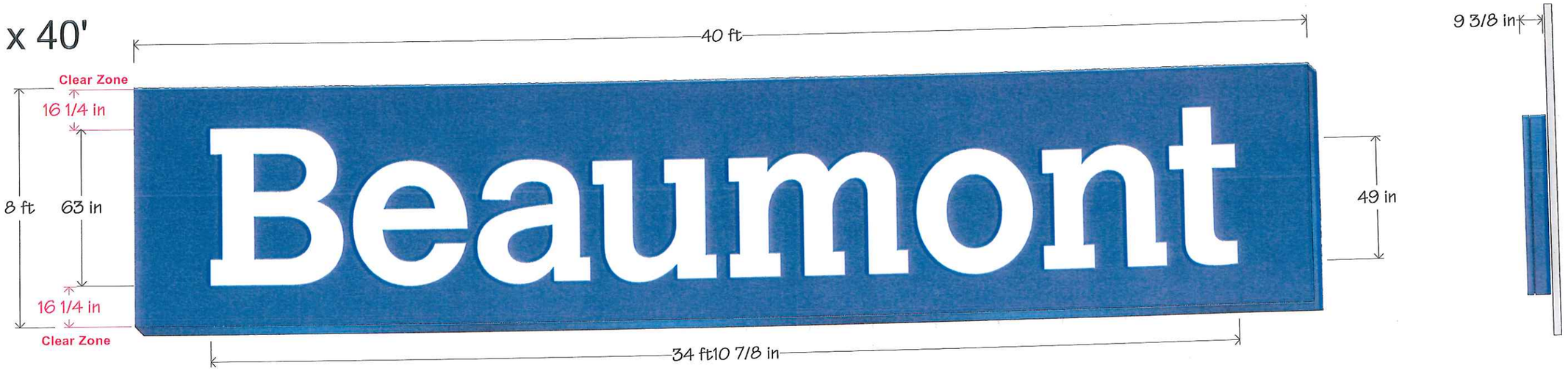


FILE: **Beaumont Hospital- Royal Oak**

SITE ADDRESS: **3601 W. 13 Mile Rd., Royal Oak, MI**

phillips SIGN & LIGHTING INC.

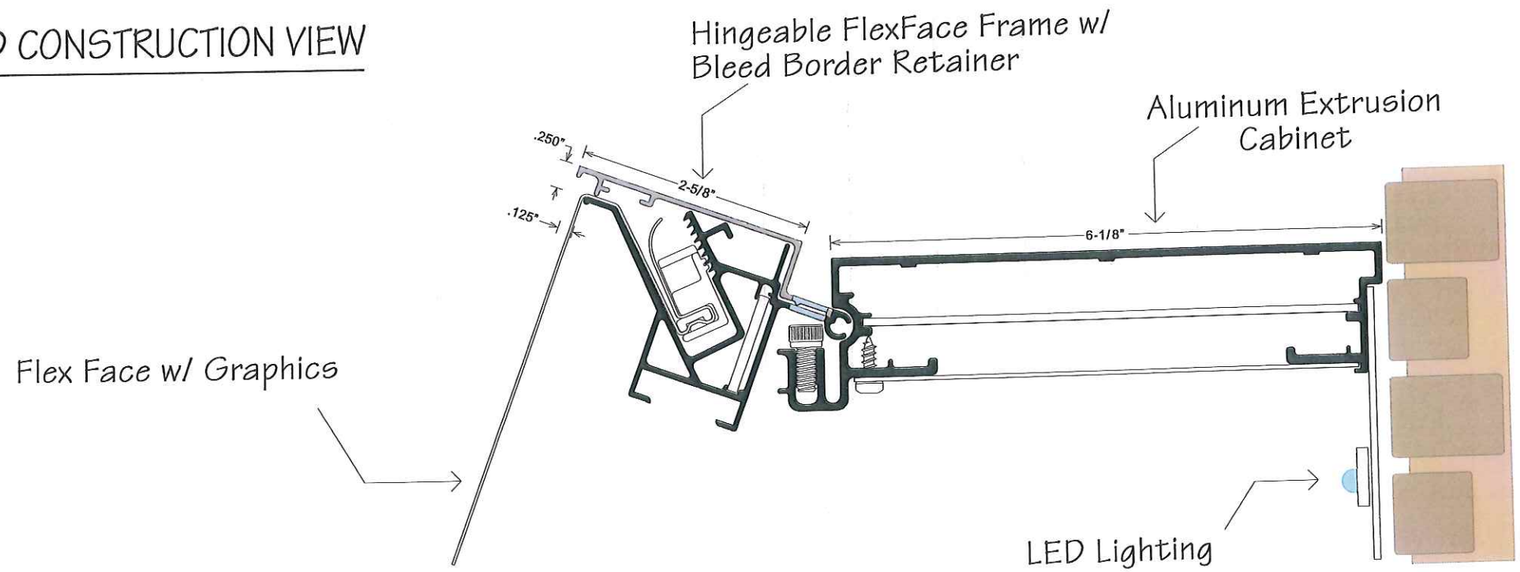
8' x 40'



Hingeable FlexFace Frame with Bleed Border Retainers

TOTAL SIGN AREA: 320 Sq. Ft.

ENLARGED CONSTRUCTION VIEW



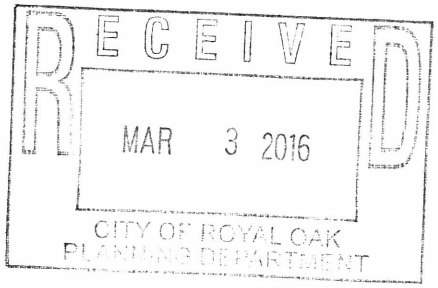
FILE: **Beaumont Hospital- Royal Oak**

SITE ADDRESS: **3601 W. 13 Mile Rd., Royal Oak, MI**

City of Troy

500 W. Big Beaver.
Troy, MI 48084
248.524.3300
troymi.gov

February 29, 2016



Tim Thwing Director of Planning
City of Royal Oak
211 S. Williams Street
Royal Oak MI 48067

SUBJECT: Proposed City of Troy Master Plan

Please find enclosed a digital copy of the Draft City of Troy Master Plan. Troy City Council approved the distribution of the Draft Plan on February 8, 2016. In compliance with State statute, we are forwarding this copy to you for review and comment.

Please send any written comments on the proposed document to the following address by May 6, 2016:

R. Brent Savidant, AICP
Planning Director
City of Troy Planning Department
500 W. Big Beaver
Troy, MI 48084

You can contact the City of Troy Planning Department at 248.524.3364 or by email to planning@troymi.gov with any questions you might have.

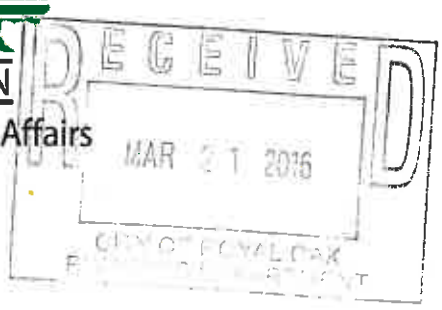
Sincerely,

R. Brent Savidant, AICP, PCP
Planning Director

Enclosure: Draft City of Troy Master Plan (on CD)

G:\Master Plan\Update 2014-2015\Notice\Notice of Proposed City of Troy Master Plan_Form Letter.doc

OAKLAND®
COUNTY MICHIGAN
Economic Development & Community Affairs



March 17, 2016

Mr. Clyde Esbri, Planning Commission Chair
City of Royal Oak
211 Williams
Royal Oak MI 48068

Dear Mr. Esbri:

According to the City of Troy, they sent you a copy of the draft **City of Troy Master Plan (County Code Master Plan No. 16-02)** for review and comment. Under the Michigan Planning Enabling Act, neighboring communities, utilities, and Oakland County have 63 days to submit comments on draft plans.

The Oakland County Coordinating Zoning Committee (CZC) will consider the draft plan at a meeting on Tuesday, **April 26, 2016** scheduled to begin at **9:00 a.m.** It will be held in the Board of Commissioners' Auditorium, Committee Room A, 1200 N. Telegraph Road, Pontiac. This meeting falls within the 63-day comment period.

Under state law, our review shall include a statement indicating whether the proposed master plan is "inconsistent with the plan of any city, village, or township" that received notice of the draft plan. Therefore, you are encouraged to comment if you have any concerns. If you have comments on the plan, send them directly to the City of Troy and we request that you send a copy to Oakland County as well. Please direct the County's copy to my attention. I would appreciate receiving your comments by **April 14, 2016,** if possible.

You are welcome to attend the Coordinating Zoning Committee meeting. If you have questions, please feel free to call me at (248) 858-7935 or email me at kapelanskik@oakgov.com.

Sincerely,

Kristen Kapelanski

Kristen Kapelanski, AICP
Senior Planner

Cc: Melanie Halas, Royal Oak Clerk
Timothy Thwing, Royal Oak Planning Director
O.C. Commissioner Gary McGillivray
O.C. Commissioner Wade Fleming
O.C. Commissioner David Woodward

City of Troy MASTER PLAN

Mayor

Dane Slater

City Council

Ed Pennington, Mayor Pro Tem

Edna Abrahim

Ethan Baker

Jim Campbell

Dave Henderson

Ellen Hodorek

Planning Commission

Chair

Donald Edmunds

Members

Ollie Apahidean

Michael Hutson

Karen Crusse

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Padma Kuppa

Philip Sanzica

John Tagle

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Director of Economic and Community Development

Mark Miller

Director of Financial Services

Thomas Darling

Planning Department

Brent Savidant, Planning Director

Paul Evans, Zoning and Compliance Specialist

Kathy Czarnecki, Secretary

Information Technology Department

Gert Paraskevin, I.T. Director

Alex Bellak, GIS Administrator

City Planning Consultant

Carlisle/Wortman Associates

Ann Arbor and Clarkston, Michigan

Photographer

All Troy photos, unless otherwise credited, were provided by Acacia Photography of Troy, Michigan

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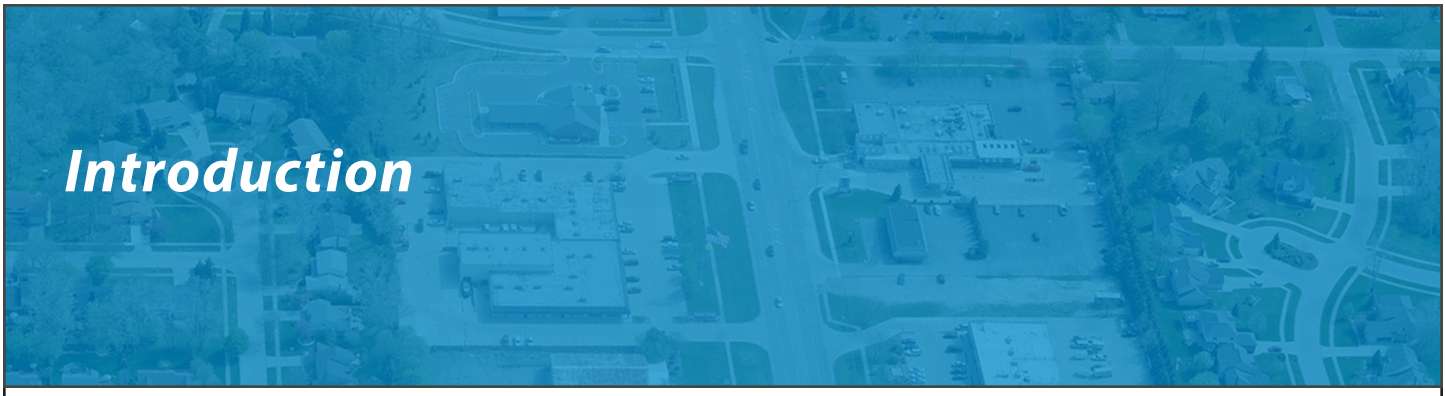


Introduction

Introduction

Fueled by necessity and inspired by a changing population, economy and region, the City of Troy has determined that the preparation and periodic revision of the Troy Master Plan is critical to help the community cope with the realities of the 21st century in Michigan. The Master Plan is the official policy guide for the resolution of community development issues, and is relied upon to illustrate the desires of the City with regard to future growth and development. The Master Plan adopted in 2008 represented a major effort to rewrite the plan that was originally adopted in 1965.

The 2008 Master Plan remains relevant and needs little revision. However, specific goals and policies within this document have been revised to respond to the changes that have taken place in Troy. These changes in goals and policies are necessary to respond to new conditions and projected trends in order to continue to ensure that **Troy is an attractive place to live and work. Community planning is the process which involves a willful effort to draw from a variety of sources to develop those new goals and policies.** In addition, background data which serves as the foundation of the Plan has been updated.

The City derives its authority for the preparation of a Master Plan from the Municipal Planning Act, P.A. 33 of 2008.

What is this Master Plan's true function?

The Plan serves many functions and is to be used in a variety of ways including, but not limited to, the following:

- **The Master Plan is a general statement of the City's goals and policies** and provides a single, comprehensive view of the community's desire for the future.
- **The Master Plan serves as an aid in daily decision-making.** The goals and policies outlined in the Master Plan guide the Planning Commission and City Council in their deliberations on zoning, subdivisions, capital improvements, and other matters relating to land use and development. This provides a stable, long-term basis for decision-making.
- **The Master Plan attempts to coordinate public improvements and private development.** For example, public investments such as road improvements should be located in areas identified in the Master Plan as having the greatest benefit to the City and its residents.
- **The Master Plan serves as an educational tool** and gives citizens, property owners, developers, and adjacent communities a clear indication of the City's direction for the future.
- **The Master Plan provides the statutory foundation upon which zoning decisions are based.** The Michigan Zoning Enabling Act (P.A. 110 of 2006, as amended) requires that the zoning ordinance be in Introduction

The Creation and Care of the Master Plan

The Planning Commission of the City of Troy is the primary agency responsible for the preparation of the Troy Master Plan. Supported by City staff, consultants, and public involvement, it is the role of the Planning Commission to develop and adopt this Plan and encourage its implementation.

In a large, complex community such as Troy, however, the Planning Commission must broaden its planning process to go beyond conventional land use planning and explore a variety of topic areas which play a role in the development, redevelopment and well-being of the community. This Plan was designed from the ground up to relate to a broad range of topics

and build momentum for the future of Troy.

Master Plan Leadership

The Master Plan is a document that should and must be embraced by as large a representation of the leadership of the City of Troy as possible. While ultimately the responsibility of the Planning Commission, the Master Plan must inspire consistent decision making throughout the community to live up to its potential. The Plan serves as a basis for the fundamental responsibilities of the Planning Commission, such as review of development proposals and maintenance of the Zoning Ordinance, but also serves a larger purpose to inspire informed, innovative community development. In that spirit, it is also the responsibility of the Planning Commission to advocate for the Master Plan outside of its own reach, to ensure that it is implemented community-wide.

Studies Relating to the Master Plan

The concepts introduced in the Master Plan are drawn from many sources, including the previous Master Plan, other planning documents in the City, such as the Big Beaver Corridor Study, the goals of the City Council, and the Ten Tenets of Smart Growth, (see sidebar, next page) explored in depth during this Plan's development. **The Big Beaver Corridor Study shall be considered an integrated component of this Master Plan, and is also adopted as part of the Master Plan adoption process.**

The Plan was further inspired by the previous efforts of the Troy Futures Group; an organization of motivated "civic entrepreneurs" who collectively developed a document entitled "Vision 2020." Troy Futures consisted of over 150 volunteers who served on seven separate task forces eager to work on important issues such as infrastructure, community image, lifestyles, learning, mobility, the role of Troy in the region, and economics. These areas of study, along with the Ten Tenets of Smart Growth, in part inspired the topic areas covered in this Master Plan.

Organization of the Plan

In order to bring together the wide variety of topic areas relating to community development beyond conventional land use planning, the Troy Master Plan represents a new generation of community planning document. The Plan is more strategic in nature and focuses on a series of subjects, such as transportation, urban design, or housing, and is designed to go beyond a simple basis for decision making. The Plan will also act as a vehicle for the development of new ideas in the City.

In many traditional community plans, the master plan is arranged around the process, and seeks to explain the steps taken to complete the Plan, rather

The Ten Tenets of Smart Growth are those principles adopted by the Smart Growth Network to encourage the idea that growth can improve conditions. These Tenets are:

1. *Create a range of housing opportunities and choices.*
2. *Create walkable communities.*
3. *Encourage community and stakeholder collaboration in development decisions.*
4. *Foster distinctive, attractive communities with a strong sense of place.*
5. *Make development decisions predictable, fair, and cost-effective.*
6. *Mix land uses.*
7. *Preserve open space, farmland, natural beauty and critical environmental areas.*
8. *Provide a variety of transportation options.*
9. *Strengthen and direct development towards existing communities.*
10. *Take advantage of compact building design.*

www.smartgrowth.org

than focus on the subject matter itself. While this conventional approach has worked in the past, it is far more useful to a smaller, less developed community for which land use allocation is still a primary concern. In a community such as Troy, where the City is nearly built out and in which the land use pattern is firmly established, new issues emerge. A more focused and strategic approach is necessary to fully appreciate the character, assets, and potential of the community.

In addition, many conventional master plans are simply impractical to use on a daily basis. A burdensome document with hundreds of pages of background data and exhaustive analysis is difficult to navigate. While this Plan is supported by similar research and analysis, such supporting elements are collected in an appendix and are distributed throughout the document within the topic areas where they are most appropriate. Therefore, when the reader is investigating a topic such as transportation, the salient research and data necessary to substantiate the policies for that topic are found in the most relevant Chapter.

The Plan is also designed to be used as a series of stand-alone documents, where an individual interested in a topic can rely upon the applicable Chapter of the Plan to learn where the City stands and where it desires to go. In that spirit, the Plan has been arranged around the following topics:

Infrastructure: the Assets and Care of the City

In order to implement most of the measures that will ultimately be recommended by the Master Plan, upgrading and maintaining civil infrastructure must be considered. In that regard, this Chapter will contain the Master Plan's discussion of sewer, water, and stormwater infrastructure. It will describe some of the key needs or opportunities with regard to these utilities and discuss the City's ability to maintain them, while describing and recommending alternative methods of meeting the needs of the City.

Green City: Responsibility to Natural & Energy Resources

This Chapter will provide the City with a forum for establishing itself as a regional and national leader in the responsible treatment of natural

resources and energy. The concept of sustainability will appear throughout the Chapter in many areas, from stormwater management to green building technology, to the preservation of natural features.

Specific techniques to preserve the quality of existing natural spaces and features related to development and redevelopment will be discussed. Formal programs such as Low Impact Development (LID) for watershed protection and Leadership in Energy and Environmental Design (LEED) for architecture and site design will be included.

Potential next steps beyond Master Planning will be outlined to provide additional guidance to the City in an effort to allow for the continued growth of green elements in the City while allowing for a balance of new construction and reconstruction.

People: Planning a Community for All Ages and Stages

This Chapter will analyze the changing nature of Troy's population and compare local trends to regional and national trends. Topics such as household size and age will be used to make recommendations to improve the utility of the City's housing stock to meet the changing demand for housing types of many varieties. The concepts of affordability and housing an aging population will be covered in detail.

Land Patterns: City Design and Image

The goals and objectives established in the previous Chapters of this Plan will be translated into land use policy within this Chapter. The Future Land Use Map will formalize the input, research, and conclusions of the Plan by establishing clear land use policy. While it is intended to be a fluid document, the Future Land Use Map establishes a continuous basis for land use decision-making through changes in the makeup of elected and appointed boards, and therefore encourages the implementation of the long-term goals and objectives adopted within the Master Plan.

This Chapter will also expand on the Future Land Use Map and discuss visual and design characteristics in the City of Troy. The physical differences which affect the daily function and success of developed areas, especially corridors, will be pointed out in order to more accurately focus on those areas which could benefit from change.

The Chapter will promote smart growth principles related to compact, mixed-use development, and will describe the benefits to Troy in this regard. This Chapter will center on a series of sub-area plans and will highlight the importance and utility of form-based codes.

Special Area Plans

As part of the 2015 Master Plan update, the city undertook a special area study of four areas of the city: Rochester Road, Maple Road, North Troy, and Big Beaver.

While the future land use plan ensures compatible and coordinated growth throughout Troy, key areas of the City will undergo significant change. In those areas where substantial development and redevelopment activity is likely, special area plans provide an illustrative framework to guide development in a way that fosters a sense of place and establishes community identity in key locations.

The plans provide schematic representations of potential development areas at a variety of scales and levels of detail, and may include illustrative configurations for new streets, buildings, parking, open space and circulation as may be appropriate to the area. They are accompanied by descriptive text that explains existing site characteristics, planning challenges, design considerations, and planning goals for each area.

How will the Plan be used?

Day to day

On a daily basis, the City Staff will refer to the Master Plan when conducting the regular business of the City. Whether discussing development options with a potential developer, working on drafting new Zoning Ordinance amendments, or making recommendations to the Planning Commission or City Council, the Master Plan will inform and guide the policies of the City's professionals. In addition, the Plan will serve as a reference for neighborhood groups, the local investment community, and for non-profit community development organizations.

Month to month

On a weekly or monthly basis, the elected and appointed officials of the City will refer to the Master Plan when making decisions about land use development proposals, and in the setting of City policies relating to community development. The improvement of infrastructure, development of regulations and ordinances, and budgeting of the City will all be influenced by the goals and policies established by this Master Plan.

Year to year

It is critical that the Master Plan be annually evaluated to ensure that it still represents the policy direction of the City. The City should audit its effort on a regular basis to reflect on the Plan and recognize the accomplishments it has made towards the execution of the goals and policies of the Plan. Revisions and updates to the Plan should be considered annually to make sure the Plan continues to enjoy widespread support.

Community Participation

The development of a community's master plan must involve not only elected and appointed officials within that community, but also leaders within the community at large. The community participation measures taken throughout the process are essential in establishing public support for the policies within the document, and to ensure that the plan is indicative of the preferences of as broad a representation of the population as possible.

Therefore, during the planning process, the importance of "civic entrepreneurship," such as that displayed by the Troy Vision 2020 group, becomes significant. These and other community leaders have brought their considerable knowledge and experience to the table to ask difficult questions about the future of the City, and to do their part to help the City evolve. The Planning Commission has called on groups such as Troy Vision 2020 to participate in the planning process, as well as other boards, commissions, and agencies throughout City government and beyond.

Civic Entrepreneurs

The phrase "Civic Entrepreneur" was coined in 1997 in the book "Grassroots Leaders for a New Economy—How Civic Entrepreneurs are Building Prosperous Communities" by Collaborative Economics. The main theme of civic entrepreneurship as stated by the authors is that an individual of influence, be it social, economic, political or some combination of these, chooses to volunteer their time and attention for a greater good at a large scale. Often associated with regional initiatives, civic entrepreneurs are known to use their connections and resources to lead opinions and bring visibility to large-scale initiatives.

Collaborative Economics state that civic entrepreneurs "…have the personality traits commonly associated with entrepreneurial business leaders. They are risk takers. They are not afraid of failure. They possess courage born of strong conviction. They are people of vision. They are passionate and energetic. They bring out the best in people and know how to encourage them along."

Workshop

An extensive public engagement program was conducted in conjunction with the Master Plan adopted in 2008. A Master Plan workshop which involved a selected participant list of over 150 invitees initiated the public engagement process. Those invited to participate on the workshop process represented a wide cross section of Troy's population, and included residents, business owners, City officials, volunteers, and other participants.

The five common traits of civic entrepreneurs according to the authors of "Grassroots Leaders for a New Economy" are that they:

1. *See opportunity in the new economy*
2. *Possess an entrepreneurial personality*
3. *Provide collaborative leadership to connect the economy and the community*
4. *Are motivated by broad, enlightened, long term interests*
5. *Work in teams, playing complementary roles*

(Information from "Grassroots Leaders for a New Economy— How Civic Entrepreneurs are Building Prosperous Communities" Collaborative Economics, 1997 and "The civic entrepreneur— a new leadership model is taking root, but not here" Charleston Regional Business Journal 07/30/2001, http://www. charlestonbusiness.com/pub/4_16/news/1875-1.html)

In this workshop, the participants were engaged to employ the "Smart Growth Readiness Assessment Tool," (SGRAT) a new program designed by the Michigan Land Policy Institute at Michigan State University. The tool is designed to help communities learn how to incorporate "Smart Growth" principles into their land use management practices. "Smart Growth" is a term conceived in 1996, when the Environmental Protection Agency lead a group of organizations to form the Smart Growth Network. The Smart Growth Network is a group dedicated to creating new land development practices which "...boost the economy, protect the environment, and enhance community vitality," as stated by the Smart Growth Network.

A comprehensive document including the results of the June 21, 2007 workshop and an analysis of the findings uncovered by the SGRAT can be found in an appendix to this Plan.

2015 Master Plan Public Engagement

For the current revision of the Master Plan, public engagement was equally extensive but more targeted to specific subject matter. The following summarizes the content of each workshop:

Real Estate Forum

The City of Troy hosted a Real Estate Forum on Tuesday, April 29, 2014 at the Troy Community Center. Over 60 community leaders, business owners, real estate developers, and interested citizens participated in a productive dialogue regarding the future direction of key economic areas of the city, specifically Maple Road, Big Beaver, North Troy, and Rochester Road. Participants were presented with target area snapshots and were asked to identify and describe the assets and challenges of these four areas. Participants also offered strategies for reinforcing assets, re-envisioning challenges, and ultimately attracting new development that is right for the corridor and the community. Participants emphasized the need for collaboration between city departments and community stakeholders, as well as a coordinated vision that is responsive to market demands and focused on quality of life. By building on the unique strengths of each area, activating established nodes and reinforcing new development with pedestrian amenities, transit connections, and a desirable mix of uses those sites that were once viewed as challenges will appear as opportunities for reinvestment.

Key takeways from Real Estate Forum:

- Density is key
- Plan should be market driven and forward thinking
- Transportation and pedestrian improvements are important
- Zoning should align with the Master Plan and offer flexibility to encourage the right development at the right time
- North/South corridors provide important connections between the target areas and adjacent communities
- Residential development should attract and accommodate different ages, lifestyles, and income levels
- New developments should be connected
- Strategic, tactical, and creative placemaking strategies can activate node

Move Across Troy Symposium

The opportunity exists to create a transportation corridor along Big Beaver Road that is not only unique in Michigan, but in the United States

– a corridor that not only carries a high volume of vehicles, but is walkable, hosts continuous pedestrian activity, and provides a variety of transportation options. To identify and address transportation and pedestrian options along and across Big Beaver, the City hosted a Symposium with both the general public and key stakeholders. Two sessions were held. The first was a technical meeting with representatives from MDOT, Oakland County, and City of Troy. The purpose of the meeting to discuss specialized solutions to address issues.

The second session was a public meeting to identify potential pedestrian issues and solutions. Over 60 attendees provided comments on targeted elements including I-75 underpass, grade-seperated crossings, intersection crossings, and mid-block crossings. The results informed the Big Beaver Pedestrian Special Area Plan.

High School Forum

In order to gain input from the future leaders, a session way held with twenty high school students (ten each from Troy and Athens High Schools). The students were intended to serve as a cross-section of the high school population. The students were quite impressive and were motivated at their responses.

Attendances were asked to use one word to describe Troy today and one word to describe Troy in 10 years:

Troy Today	Troy in 10 Years
Versatile	Fun
Peaceful	Advanced
Family-oriented	Utopia
Upscale	Safer
Quiet	Educated
Potential	Expanded
Diverse	More Diverse
Well-rounded	Innovative
Residential	Modern
Safe	Creative
Fun	Changing

Busy	Less-Congested
Close	Professional
Engaging	Busy
Boring	Beautiful
Suburbia	Affordable
Opportunity	Home-owner oriented

The students were then asked a series of questions about Troy including what they like best about living in Troy, what they like least, their desire to move back to Troy after school, and Troy's most pressing needs. The full results are located in the appendix. The students enjoy the quality of schools; however most students noted that they do not plan on moving back to Troy in the future. If they did move back to Troy it would be because of family and the quality of the schools. They note that Troy is missing entertainment options, and "cool" housing options, and does not provide walkable or bike-able places. Most students desire to live in a big city after college graduation.

Neighborhood Association Forum

City of Troy hosted a neighborhood forum with Presidents and representatives from the various neighborhood associations. All geographic residential portions of the city were represented.

We started the discussion with asking those in attendance one word to describe Troy today and one word to describe Troy in 10 years:

Troy Today	Troy in 10 Years
Suburban	Advanced
Future	Economic Leader
Random	Attractive
Evolving	Progressive
Bedroom-community	Education
Attractive	Birmingham; More Parking
Youth	Envied
Opportunity	Futuristic
Diverse	The standard
Accommodating	Smart
Modern	Advanced

Participants were asked a series of 15 questions. The full results are located in the appendix. The questions focused on neighborhood issues affecting their neighborhoods including property upkeep and maintenance, transportation improvements, land use transitions and buffers, desired community amenities, and need for housing options.

There were two big takeaways from the neighborhood forum discussion. The first takeaway was that residents like living in Troy and cited a number of reasons including high quality of the public schools, entertainment options, safety, and housing stability. Maintaining a quality school district was cited of critical importance, especially for neighborhood and property value stabilization. The second major takeaway was the biggest issue facing Troy is a lack services within walking distance and lack of non-automobile transportation options.

Boomer and Shaker Forum -

The City of Troy hosted a Boomer and Shaker Forum on Monday, August 17, 2015 at the Troy Community Center. The purpose of the forum was to meet with Troy residents to identify issues and determine strategies to ensure Troy assists its aging population and creates an aging friendly place. The intent was to focus on issues facing Troy's boomer and senior population but also address issues that cross-generational lines:

- Housing
- Transportation
- Placemaking
- Walkability
- Safety and Security
- Health Services
- Recreation and Cultural Activities

Over 80 community residents participated in a productive input session to make Troy an aging friendly location.

Most of the participating residents are likely to remain living in Troy as they age. Many noted the high quality of life living in the city. For those that identified that they are likely to leave Troy, the most listed reason was a lack of housing option and a lack of transportation options. Underserved senior housing options and a need for increased public and dedicated senior transportation options was a common discussion point of the Forum.

The first major takeaway was there is an identified underserved housing type of senior-friendly housing such as smaller, single-family homes, condominiums, or apartments with first floor master bedrooms. Housing affordability was listed as a significant housing limitation. Many remarked that they are on a fixed income and cannot afford a $400,000 house/condo. They noted that affordable, smaller housing options are difficult to find in Troy and the city should push development of those types.

The second major takeaway was the need for improved transportation options, particularly serving seniors. Most attendees noted that because they are able to drive they are able to obtain their daily needs (health services, retail goods, social, recreational, and cultural). However, they are unsure if they will be able to once they are unable to drive.

To improve transportation options, the city should work with SMART to increase bus hours

and locations. While Medi-go, a transportation service for Troy disabled residents and those age 60, provides a valuable service, the hours are limited and should be expanded. Medi-go should be complimented with a dedicated transportation system or on-call shuttle service for seniors for daily needs in addition to just medical appointments, like grocery shopping, recreation activities, etc. Lastly, the City should focus on improving the sidewalk system and street crossing at major thoroughfares, and build trails. The results from the community engagement was used to establish the vision, priorities, and policies as set forth in the plan.

Troy's Context: From Local to Global

Troy is a leader in Michigan. **Home to a large number of international corporations, and about 6,000 individual businesses, the City of Troy has a workforce of over 129,000 and a daytime population of over 170,000 people, nearly twice as many people than reside in the City.** Given the scale of these estimates, it is clear that Troy possesses a business culture rivaling any in the Midwest. Building on this success, the City has seized upon the opportunity to establish itself as the international gateway to Southeast Michigan for the global business community.

The national manufacturing economy is becoming a "Knowledge Economy." The Knowledge Economy, which will be explored in subsequent Chapters, is essentially a new competitive environment empowered by the availability of information from new sources. This Master Plan includes many topics which relate directly to managing change in Troy to capitalize on this fundamental shift. Troy has a head start in this regard, given its substantial office presence, and its lesser dependence on conventional manufacturing land uses, when compared with other local communities.

Knowledge Economy businesses depend on global communication and 21st century technology to reach out to markets around the world. These types of practices tie communities together in new ways, for new purposes, than ever before. The emergence of such businesses demands a new set of assets for a City to attract the best new companies and workforce. Knowledge-based businesses, for instance, rely on telecommuting and home-based businesses more than ever before. Businesses that conduct much of their business over the internet may have specific building and use needs, which could benefit Troy in that it has a great deal of available light industrial and office complex property.

The integration of communities like Troy into these worldwide markets also creates opportunities for them to expand their horizons and introduce themselves to new, expanding or relocating businesses that may never have been aware of them otherwise. **Competing for these businesses and the workforce necessary to support them will be a major focus of this Master Plan.**

A Global Market

Troy has adopted a strategy to position itself globally, in terms of international business connections and with regard to marketing its assets to attract worldwide investment. Southeast

City of Troy Facts:

Population (Census 2010) - 80,980

Population (SEMCOG est. 2015) - 81,261

Retail Space - 7 Million sq. ft.

Office Space - 18 Million sq. ft.

Manufacturing/Engineering Space - 20 Million sq. ft.

Businesses - 6,100

Employment - 129,000

Number of Households - 30,703

Average Cost of Housing - $226,200

Household Income - $86,469

www.troymi.gov

Michigan is a region founded on innovation in industry. Troy is a community within that region with unique attributes which will empower it to serve as a gateway in the 21st century between this important region and the rest of the world.

The International Population

Troy has embraced international populations and now benefits from a great deal of diversity. Troy has a much higher percentage of foreign-born residents than any community in the area, nearly 20 percent, or double that over Oakland County on average. Troy's foreign-born population is over 62 percent Asian, which provides a unique opportunity to link Troy with the fast-growing markets of Asia. Figures 2.1 and 2.2 demonstrate these statistics. The Troy Vision 2020 Wealth Creation Task Force specifically mentioned Troy's Asian population as a asset for worldwide outreach.

By engaging the international population of Troy more actively, and collaborating with people from around the world, Troy will benefit from broad points of view and an international perspective.

Empowering International Investors

This City plays a central role in the establishment of a new business or the redevelopment of an old business. Approvals and permitting for new facility construction, provision of City services, taxing policies, and other elements of City governance are taken into account when a business investigates potential locations or markets. These complex elements become even more intimidating for international businesses, who may be facing hurdles with regard to language or understanding of Federal, State, or local laws and regulations.

With this in mind, **the City has formed a strong partnership with Automation Alley, home of the International Business Center.**

Troy in the Regional Economy

The use of effective communication is a key ingredient of building and nurturing partnerships or celebrating social, economic and physical diversity. Communication must include all forms of transmission and media. The importance of regional collaboration, a sentiment echoed by Troy Vision 2020, which stresses that Troy is part of a greater region, which must grow together for Troy to meet its full potential. The Regionalism Task Force for Troy Vision 2020 dealt exclusively with developing visions for all of Southeast Michigan, with the goal of contributing to a region with a cooperative spirit, willing to coordinate and consolidate services, and to improve relationships pertaining to water and sewer regional service.

Cities cannot thrive alone. Systems and relationships are needed between the public and private and non-profit environments. Coordination and consolidation efforts between public entities are also critical as resources become more expensive and services more

Figure 2.1 Percent Foreign Born

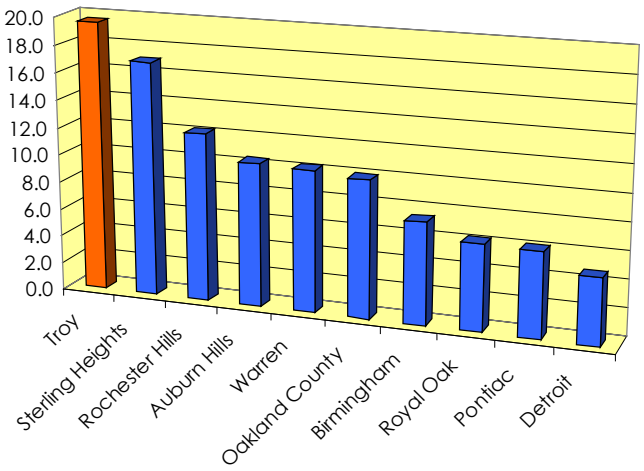
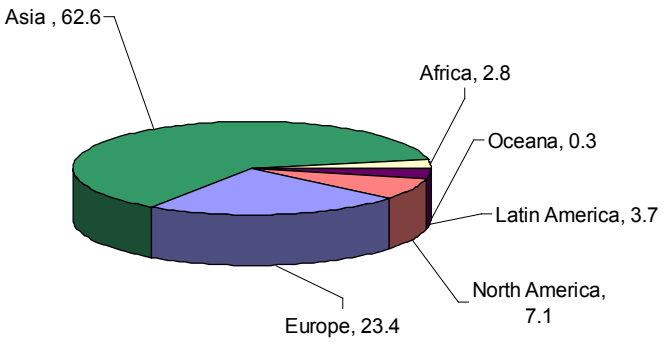


Figure 2.2 Area of Origin by Percentage, Foreign Born Troy Residents



difficult to sustain. Partnerships between the City and these other agencies, as well as partnerships that are regional in scope, have a place for the City of Troy. Through communication and partnering, the City can take an active part in making all of Southeast Michigan a better place to live and work.

Troy will continue to take the lead within Oakland County and Southeast Michigan to arrange networking functions, lead regional discussions, host events and functions, and take responsibility for managing projects relating to regional cooperation.

The City of Troy can advocate for common goals in the region by sharing its findings, plans, and studies with other communities. Given Troy's willingness to develop new and innovative ways to develop solutions and provide a high quality of life for its residents, Troy has developed resources that would be helpful in other area communities. The City can set an example for others to follow, and develop consensus on important issues like the environment and transportation.

Leadership

Becoming a regional leader in the areas of transit, environmental concerns, and civic infrastructure is an important theme of the Master Plan. While the City does have an opportunity to advocate for regional cooperation, it must also establish firm precedents that will gain it increased credibility in the region to position itself as a leader and authority.

In order to provide the most successful example of a community thriving in the 21st Century economy, Troy must think strategically about focused areas which represent community values and which will differentiate Troy amongst its peers. If Troy is to provide leadership to other Southeast Michigan communities to establish firm partnerships geared toward regional improvement, it must select focused areas that serve the dual purpose of inspiring other communities, and in which Troy can be competitive. The City must find niche markets where it can lead the Midwest and the nation, which build on its strengths. Two areas where the City of Troy can excel, and which are important throughout the region, are preservation of the natural environment, and enhanced transportation.

Regional Collaboration

The City of Troy, in collaboration with public and private-sector partners, is focused on helping businesses grow. The City of Troy has formed a strong alliance with key stakeholders including Automation Alley, Walsh College, Troy Chamber of Commerce, Oakland County's Economic Development Office and the Michigan Economic Development Corporation to provide targeted business assistance. Through an economic gardening approach, Troy's economic development staff assists local companies by identifying specific business needs and providing the information, infrastructure and connectivity necessary to address those needs. By leveraging Troy's unique community assets, partnerships and available tools to promote business growth, the City is creating an environment for investment.

One of the key regional assets that the City makes use of is Automation Alley. There is no better example of regional collaboration than Automation Alley with the bulk of its members located in Oakland, Macomb, Wayne and Washtenaw Counties and membership growing in Livingston, Genesee, Ingham and St. Clair Counties.

Transportation

Troy is a complex place that contains diverse neighborhoods, business districts, industrial and educational campuses, and a wide variety of roads, from freeways to neighborhood streets. These ingredients are in place and complement one another to make up the City of Troy. To sustain the positive relationship between land uses and street characters, linking and connecting the City through multiple methods is critical. Linking the City to other communities and to the greater region is just as important.

Advocating for enhanced regional transportation

is an important step in Troy's goal to become a regional leader. The development of the planned Troy Transit Center will bring Troy to the forefront of Southeast Michigan in providing an example of coordinated planning for new transportation options in Michigan.

Mobility, which is presented in a comprehensive Chapter later in this Master Plan, will be a crucial area for the City moving forward with regional cooperation and enhancement. Connecting the employment centers of Troy with a wide variety of housing markets in the area, including those in other nearby communities, and regional shopping, entertainment, and educational facilities is an important strategy for bringing Southeast Michigan together. Shared access to a successful multi-modal transportation framework will be a major step in providing access between communities for all residents, to allow people to experience other regional communities in new ways.

Troy Transit Center

Located on a three-acre parcel of land behind the Midtown Square at Coolidge Highway and Maple Road in Troy, the Troy Transit Center is designed to offer users a central hub for train, taxi, rental car, or bus service. The project replaces the train station in Birmingham with the new facility, located in the City of Troy.

www.michigan.gov/mdot

Sustainable Development

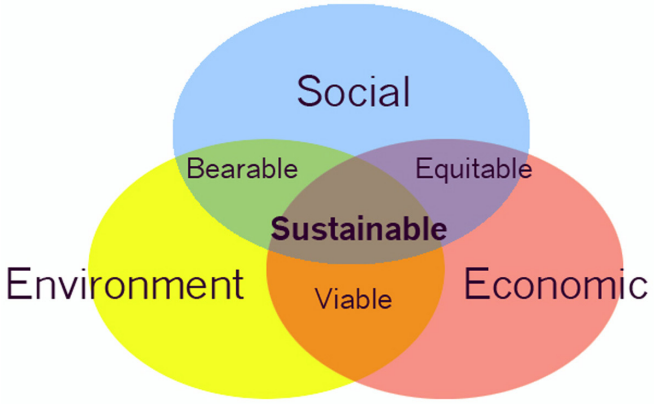
An area where the City can accomplish a variety of objectives is the adoption of a strong philosophy toward sustainable development. Continuing to incorporate sustainable development standards into City policies will encourage environmentally, socially, and economically responsible development and enhance the preservation of the City and region's assets. This philosophy will also demonstrate to the greater Southeast Michigan Community that Troy is leading the effort to promote sustainability.

This important topic is being addressed in many Michigan communities, providing Troy with another opportunity to promote regional cooperation.

Another positive benefit that a City-wide philosophy encouraging sustainable development would be the creation of a new global reputation for environmental stewardship, under which the City could market itself to eco-conscious businesses throughout the world. The Master Plan will describe many techniques for enhancing the City's natural features in Chapter 7

By demonstrating and marketing the City's commitment to sustainability, and specifically eco-friendliness, a new niche to attract green energy and other environmentally concerned businesses would emerge. Troy can become the model of an environmentally friendly community envisioned by the Image and Feel Task Force of Vision 2020, while enhancing its attraction to the Creative Class and welcoming Knowledge Economy businesses operating with a renewed interest in environmental protection.

FIGURE 2.3: SUSTAINABLE DEVELOPMENT
GRAPHIC BY CARLISLE/WORTMAN, CONTENT FROM JOHANN DRÉO



Sustainable Development

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development essentially means improving quality of life without increasing the use of natural resources to the point of exhaustion or compromising economic or social well-being.

Sustainability covers many areas, including the environment, economics and social responsibility. In terms of the Master Plan, sustainable development *may be the most important concept to be familiar with. Environmentally friendly building design and a reduced dependence on the automobile, for instance, are elements that contribute to a philosophy of sustainable development. A simple, common definition for sustainable development was originally presented in the report "Our Common Future."*

(Information from http://www.epa.gov/sustainability/, World Commission on Environment and Development (WCED). Our common future. Oxford: Oxford University Press, 1987 p. 43 and http://www.sdgateway.net/introsd/definitions.htm)

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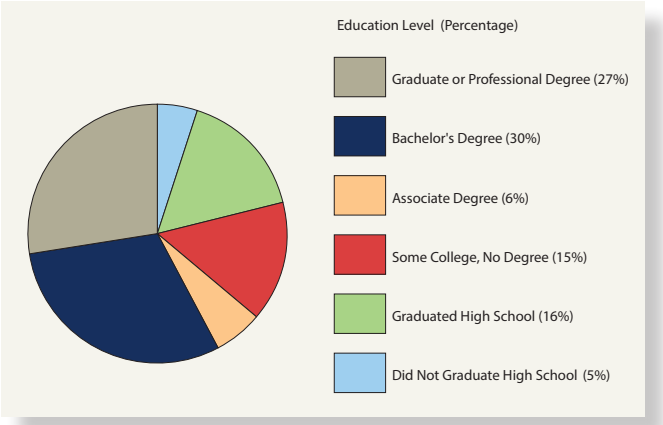
A Place to Learn and Play: The Quality of Life in Troy

Quality of life is what makes a community thrive. Elements like schools, parks, and cultural amenities contribute to the quality of life, but must be complemented by innovative development and supporting infrastructure. **A dedication to learning, healthy citizens, and strong institutions will help create a community which attracts a workforce of educated and talented members of young generations.** Excellence in these areas will enhance Troy beyond expectations, and therefore this Chapter provides a foundation for all other areas of this Master Plan.

People have a choice of where to live, and every community has its own unique elements to attract residents. What makes Troy a special community where people aspire to live and work? Troy Vision 2020 explored this issue in depth. **Beyond strong employment, attractive and affordable housing, and efficient access to goods and services, people seek communities with the amenities that will enhance their lives.**

FIGURE 3:1 EDUCATIONAL ACHIEVEMENT OF RESIDENTS OVER 25 YEARS OF AGE
U.S. Census



Troy has invested greatly in its parks and cultural amenities and must continue to do so to grow as a community and differentiate itself from other Southeast Michigan cities and townships. Troy must embrace innovative development styles which capitalize on economic and social diversity, and cultural, educational, and recreational amenities. In that spirit, this Chapter will focus on the enhancement of quality of life issues to secure Troy's status as a global city.

A Philosophy of Learning

A critical theme to emerge from the Troy Vision 2020 was the concept of "Lifetime Learning." In order to become a competitive community in the Knowledge Economy and a community renowned for its attention to the enhancement of its citizens' changing educational needs, the City must adopt a new philosophy. This philosophy includes, but goes beyond, conventional formal education and introduces the idea that all aspects of community life must consider and promote the continued enhancement of Troy's citizens. **The way in which learning is regarded in the City of Troy will continue to support and impact the future enrichment of the community in this area.**

As it stands today, the City of Troy has a well-educated population. As indicated in figure 3.1, almost 78 percent of Troy's residents have some college education. Twenty-six percent of residents have graduate/professional degrees. Only 5 percent of residents did not graduate high school.

The Troy Vision 2020 Lifetime Learning Task Force developed ideas to ensure that "Troy will be globally recognized as a community that provides its citizens

with the opportunity to achieve social enrichment and personal growth via lifetime learning." The Troy Vision 2020 Report indicates that the Lifetime Learning Task Force was asked to examine "access to personal, professional, and organizational intellectual stimulus and growth" within the Troy community. The Executive Summary from this Chapter of the Report states that the Task Force created a vision statement and goals for learning in Troy:

"Our vision is for Troy to be globally recognized as a community that places a high value on lifetime learning for its citizens. A collective community effort is required for this effort to be successful. The vision can be achieved by taking action on five broad goals:"

1. *Coordinate the efforts of our learning institutions — establish a new City of Troy committee focused on lifetime learning, with the responsibility for strategic coordination of Troy's learning resources. This will strengthen the connection between the needs of the community and Troy's lifetime learning assets.*

2. *Improve communication about the learning opportunities that are available in the Troy community — establish and maintain a "Learning Clearinghouse" and make it the primary resource for information about lifetime learning resources within the Troy community. This will increase the awareness of lifetime learning opportunities; establish a focal point for this information and make efficient use of the resources of the Troy Public Library.*

3. *Utilize the expertise and knowledge of Troy citizens — maintain and expand programs (ex. Sights & Sounds, APT to Succeed) that encourage the shared personal knowledge and discourse among different cultural, professional, public and private organizations. This benefit will strengthen the sense of community in Troy.*

4. *Invest in world-class lifetime learning services and facilities — build a bigger and better library. Now. The Troy Public Library is extremely popular and far too small. Additional parking and program space are desperately needed.*

5. *Provide opportunity, encouragement and recognition for the highest levels of academic achievement – actively pursue regional and national academic competitions (ex. Math Olympiad) and host them in Troy. Publicly celebrate academic*

High Quality Schools

The Troy School District operates twelve elementary, four middle, and three high schools within the City. In addition to the schools, the Troy School District has other properties in the City, including Niles Continuing Education Building, the Administration Building, bus garage, and several vacant properties. The Troy School District encompasses most of the City, but small segments along its perimeter are served by six other school districts. Three of these school districts, Birmingham School District, Warren Consolidated Schools, and Avondale Schools, have elementary schools in Troy.

Troy is also home to universities and colleges. Campuses or facilities of Central Michigan University, Michigan State University, ITT Technical Institute, the International Academy of Design and Technology, Walsh College, Spring Arbor College and the University of Phoenix can all be found within Troy.

achievement more often than once a year. This will enhance Troy's reputation as a center of high-quality K-16 education.

These formal goals must be supported by other measures which enhance Troy's culture of learning. To attract the Creative Class, Troy must continue to evolve into a regional leader for innovation. Troy Vision 2020 accurately observes that Southeast Michigan has historically been an "incubator" for innovative ideas, within the industrial sector especially. Troy has an opportunity to rekindle this reputation.

The development of formal City programs and facilities, like the "Learning Clearinghouse" introduced by Troy Vision 2020, and the further improvement or replacement of the Troy Library represent active steps the City can take to establish a basis for lifetime learning. **Continuing education, higher education, job training, career counseling, and a renewed cooperation with local public and private schools, colleges and universities are measures Troy should take to build momentum for a culture of learning.**

The enhancement of educational opportunities throughout all phases of community life will allow people from a wider variety of economic and age groups to enjoy a quality of life already enjoyed by the most educated residents of Troy. Increased job opportunities and better income, as well as a more visible and meaningful role in community life can in this way be made available to anyone in the City. Complemented by the strong reputation of Troy schools, the regional image of Troy as a community dedicated to lifelong enhancement and engagement will continue to grow.

The Integral Role of Educational and Cultural Institutions

Schools, parks, vibrant downtowns, natural features, and many other land uses which factor into a community's quality of life consequently play a large role in the physical development of the community. **The location of schools, for instance, has a profound effect on residential housing values.** In fact, central civic uses like schools have always driven the success of whole communities, especially colleges and universities, which can greatly influence community development.

School Location

With this in mind, the City must closely monitor the demographics to prepare for the changing nature of schools. Given that schools, from elementary through college, are such a critical component of how cities develop, the continued presence of existing facilities and the placement of future facilities must be anticipated by the City through close communication with local public and private school leaders, and university and college officials.

This Master Plan can suggest physical planning and land use policies which support and improve the educational framework in the City by enhancing access and vitality of those areas where educational centers are located. Given the correlation between a good neighborhood school and its effect on nearby property values, the City must ensure that these institutions remain relevant and successful.

In order to secure continued enrollment in neighborhood schools, the City must permit residential densities within their districts which support and are compatible with their student capacity. Furthermore, the City can integrate safe, walkable school access into new mixed-use development in instances where such development is nearby existing or proposed neighborhood schools. As the demand for new or different schools arises, the City must partner with local school leaders to encourage the establishment of schools within mixed-use areas, rather than automobile-dependent locations, to promote interaction between classrooms and the greater community.

A City of Villages

Troy does not have a conventional "city center" or downtown. The vibrant core of many successful communities known for their ability to attract the creative class is often cited as a primary determinant of that community's image. **Respondents to the Master Plan survey felt strongly that while Troy may not be able to have a single focused center, it must create activity nodes throughout the City, capitalizing on**

the diversity of Troy for shopping and entertainment experiences.

This type of response was preceded by Troy Vision 2020, which introduced the concept of "Villaging" in Troy. **The idea of "Villaging" could be described as a means of staging complementary development in a focused manner intended to create vibrant "nodes" of activity which have an identifiable character.** Similar to smaller towns, these areas would be compact, would have a clear edge, would generally be supported by a common theme, and would incorporate dense, mixed-use development. Such "Villages" should incorporate common community elements, be designed to encourage active living, and should have uses which support a successful business foundation.

The Big Beaver Corridor Study supports the concept of focused development areas. The area described by the Study as the "Troy City Center" is intended to be the "ultimate people place," an area which would build off of its most successful commercial and office tenants, such as Somerset Collection, to foster a mixed-use, vibrant area with significant year-round activity. The Study aspires for the Troy City Center to become the "heart" of Troy, where urban residents can live, work and play in a single area. The predominant building uses prescribed by the Study in the City Center are large mixed-use buildings with retail at grade and office and residential uses on upper floors.

Safe Routes to School

Michigan's Safe Routes to School program is managed by the Michigan Department of Transportation (MDOT), with support from the Governor's Council on Physical Fitness, Health and Sports. A State coalition and steering committee provide leadership for all aspects of the program. The Federal Safe Routes to School program was created by Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), (P.L. 109-59) of August 10, 2005 (www.saferoutesmichigan.org) The purposes of the Safe Routes to School program are:

- *To enable and encourage children, including those with disabilities, to walk and bicycle to school;*
- *To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age;*

For the period from 2005 to 2009, at total of 612 million dollars has been set aside for this program across the United States. In this period, Michigan will receive a total over five years of 19.26 million dollars, based on its share of national enrollment in grades K-8.

Cultural Spaces

The Big Beaver Study also includes an area labeled "The Promenade" designed for restaurants and entertainment uses in close proximity to hotels and business meeting places. The Promenade would also serve as a large local draw, and could include a gathering public space for enjoyment for residents, visitors, workers, etc. Within Troy's focus areas, the City has an opportunity to leverage physical development to casually introduce cultural life to the City.

How can a City "casually" introduce cultural life? What should a Master Plan, a document focused on land use and physical planning, have to do with cultural life? While it may not be the direction of this document to introduce techniques for programming cultural activities, it can establish a direction for the provision of space for such activities to occur, either formally or informally. **A city must have central, unprogrammed open spaces in close proximity to its homes and businesses to encourage a flourishing cultural atmosphere.**

While many communities are home to traditional brick-and-mortar cultural facilities, such as theaters and art museums, those communities renowned for cultural atmosphere are so recognized for the things that take place in public spaces. Art in the park, street performers, summer theater programs, and many other forms of cultural expression are common in cities that allow for such activity by providing

central, unprogrammed open space. Thousands of European cities have supported central parks or small unprogrammed open spaces for centuries.

The introduction of small, intimate public open spaces in select areas could be a positive step in encouraging a thriving cultural atmosphere in Troy. Those efforts outside of the Master Plan, such as the introduction of formal cultural facilities, are critical for the enhancement of Troy, but they must not be left to stand alone if Troy wishes to achieve the regional reputation expressed by Troy Vision 2020. To be successful, these spaces must have some of these traits:

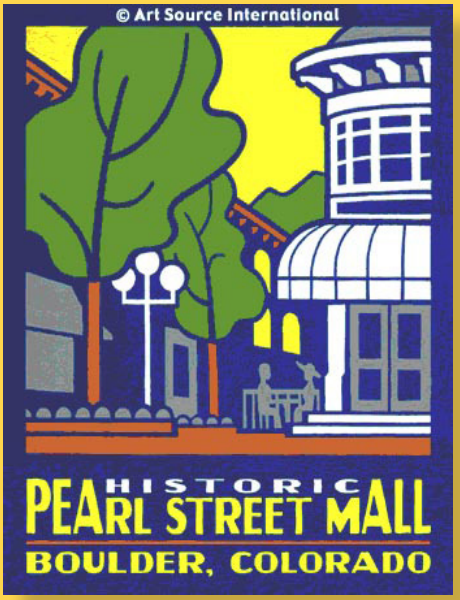
- Little or no programming; that is, the space cannot be dominated by formal gardens or active recreation, such as baseball fields.
- The space must be located directly adjacent to vibrant, mixed-use development with both residential and commercial concerns nearby, to draw people throughout the day.
- The spaces must be walkable and accessible for pedestrians.
- The space must be located in a central area. Large unprogrammed spaces are located in many European cities at the intersection of major roads. In a community like Troy, they could be best located very near a major corridor, such as Big Beaver, but surrounded by a mixed-use development.
- The space should be intimate, that is, surrounded on several sides by buildings, to provide a feeling of enclosure and protection from the elements.

The creation of common areas for social interaction is a theme that threads throughout the Big Beaver Corridor Study. Along Big Beaver, the Study described potential "Experiential Moments," like a walk along the boulevard, interaction within a large public plaza enhanced by public art, and experiencing pocket parks throughout the community. The Study specifically calls for mixed-use development that makes Big Beaver a round-the-clock "people place," which attracts cultural and entertainment uses to the Corridor.

"...the casual introduction of cultural life is part of the historic mission of cities." -Jane Jacobs , Death and Life of Great American Cities

Pearl Street Mall in Boulder, Colorado. Photo by Mark Ruckman

A good example in the United States of unprogrammed open space is Boulder, Colorado's Pearl Street Mall. Pearl Street Mall is a section of blocks in the center of Boulder which were closed off to automobile traffic, and finished with seating areas, landscaping, and most of all, large areas of open, unprogrammed space. These areas have become popular for political and artistic expression in the summer months. Given their strategic location and limited space, they provide a series of intimate outdoor "rooms" that enhance the surrounding businesses.



The central philosophy of the Big Beaver Corridor Study is that social interaction, and therefore quality of life, can be improved by the careful design of new elements and select redevelopment within the Big Beaver Corridor. The provision of public greens for example, is described in the Pedestrian Circulation and Greenspace Plan as focal points amid denser development to help draw people to these focus areas; a strategy for implementing the casual introduction of cultural life in Troy.

Quality of Life, the Knowledge Economy, and the Creative Class

In order to attract a premium workforce and support the long-term health of the City, Troy must recognize that the working world is changing. Many of the most valuable members of the new workforce come from the Creative Class. The term was coined by the sociologist Richard Florida, who describes the Creative Class as an emerging class of working professional from a younger generation. The Creative Class is a demographic of worker with more education and a greater focus on high-tech or intellectual fields, rather than the previous generations, which were primarily based on agriculture and industry.

The Knowledge Economy, put very simply, is a competitive economy centered on knowledge-based industries which require high-tech facilities and which are empowered by the availability of information from new sources around the world. Knowledge-based businesses are less likely to manufacture a product as they are to conceive or design one.

In light of the struggling manufacturing economy of Michigan, the State has initiated programs to help communities more fully understand what they can do to attract the workforce and the employers functioning in these new areas. Troy Vision 2020 explored this concept and developed specific ideas about what Troy can do to become a leader in the cultivation of the Creative Class in Southeast Michigan.

Today, employers are no longer tied to railroads, rivers, highways, or resources to succeed. Knowledge-based businesses, especially, rely totally on the availability of a good workforce comprised of the most talented and creative individuals available. Quite commonly, emerging knowledge-based businesses will succeed in college towns or other communities reputed for an educated workforce and a high quality of life. This is a critical notion; the idea that communities with a high quality of life attract the potential workers who attract the businesses that need them.

What attracts the valuable workforce for knowledge-based businesses? In addition to diverse, vibrant mixed-use areas, which will be explored in depth in subsequent chapters of this Master Plan, these individuals seek communities that embody the lifetime learning philosophy and the availability of amenities that enhance their lives, like quality parks and recreation programs, cultural amenities, and a diverse and welcoming community.

Parks and Recreation

Similar to schools and downtown areas, parks have the potential to transform a neighborhood. Recreational development in Troy is guided by the Parks and Recreation Plan, which is developed under criteria established by the Michigan Department of Natural Resources (MDNR). The current Parks and Recreation Plan was developed with strong public input and contains a series of goals and objectives relating to recreation improvements.

The City must be diligent in executing the Parks and Recreation Plan, which calls for many improvements to the City's existing parks and recreation inventory, and provides a basis for the introduction of new facilities. Successful parks, with good access and a focus on active lifestyles will be a strong asset in the competition for a globally recognized workforce.

Much of the public input suggests that people consider trails and pathways to be more than simple recreational amenities, and genuinely consider them valid transportation corridors for access to the important places and institutions discussed in this Section. Furthermore, they drive property values and can be seen as an amenity for real estate development.

The development of a trail system in Troy is the City's number one recreational priority based on the results of the public input. There is a wide range of benefits associated with the establishment of a trail system:

- Health and physical fitness
- Increases property values
- Promotes community enrichment/character
- Provides connectivity to neighboring communities
- Improve landscape aesthetics
- Recreation for diverse users
- Income for Michigan's tourism related business

Top 10 Reasons Parks Are Important:

1. Public parks provide the opportunity to be physically active. Physical activity is an essential part of an individual's efforts to stay healthy, fight obesity and prevent chronic conditions that lead to coronary disease, high blood pressure and diabetes.

2. Parks have true economic benefits. Proximity to a park improves property value. Parks provide increased local and regional revenue from heritage tourism, steady jobs, and numerous small business benefits.

3. Parks provide vital green space in a fast-developing American landscape, and keep our living environment healthy.

4. Parks preserve critical wildlife habitat while providing enjoyment and educational opportunities for children and families.

5. Parks provide a meeting place where community members can develop social ties, and where healthy behavior is modeled and admired.

6. Leisure activities in parks improve moods, reduce stress and enhance a sense of wellness.

7. Recreational programs provide organized, structured, enjoyable activities for all ages. Quality recreational programs facilitate safety, good sportsmanship and community participation.

8. Community recreation services provide a refuge of safety for at-risk youth and give valuable life lessons to help steer young people to success.

9. Therapeutic recreation is an outlet that individuals with disabilities have to be physically active, socially engaged and cognitively stimulated.

10. Public parks embody the American tradition of preserving public lands for the benefit and use of all.

Summarized from the original

By Richard J. Dolesh, Monica Hobbs Vinluan and Michael Phillips

- Linkages for a statewide network of trails
- Safe non-motorized transportation routes
- Conservation of green space and wildlife habitat
- Environmental quality education opportunities
- Transportation alternative
- Connect with existing and proposed bicycle lanes

The City of Troy's Trail and Pathway Project's goal is to provide safe, accessible and convenient non-motorized transportation facilities to support and encourage increase level of bicycling and walking throughout the city while providing connections to local and regional amenities. The City of Troy hosted two public engagement meetings where it received numerous responses and useful information from residents about the type of route the trails and pathway should be. After compiling information and results from the meetings, it was determined that the Transportation Pathway was the most desired option among those who participated in our public engagement efforts, which uses major roads for placement of the trail and pathway. The Troy City Council gave their approval for this plan by resolution. City staff along with Trail and Pathway Committee actively is pursuing implementing this project.

Parks and Recreation Mission Statement

It is the mission of the Parks and Recreation Departments to enhance the quality of life for residents and businesses by providing recreation programs, facilities, and related services. The Department promotes a healthy lifestyle for all age groups regardless of physical abilities, and enriches cultural and natural resources through community programs.

The City of Troy offers a wide range of recreational facilities and programming to its residents. The parks system includes eight neighborhood parks and six community parks totaling approximately 360 acres distributed throughout the City. The City also owns and maintains a number of special use facilities, including the following:

- *Troy Community Center*
- *Two (2) 18-hole golf courses*
- *Troy Farm*
- *Troy Family Aquatic Center*

A comprehensive study of each facility can be found in the Troy Parks and Recreation Plan.

The City of Troy utilized a Parks and Recreation Survey in preparation of the Parks and Recreation Plan complete in 2013. Surveys were posted on the City's website and distributed in City offices. A total of 931 surveys were returned and analyzed.

Respondents were asked to list their first, second and third choices of facilities they would like to have in their community. Trails were the most popular facility chosen, followed by building and a dog park.

Cultural Amenities

Cultural institutions, like museums and theaters, must be complemented by a wider appreciation of the importance of cultural life in the community. As noted earlier in this Chapter, perhaps the most critical thing Troy can do to enhance the cultural life of the City is to provide the venue for cultural life to emerge in small parks and unprogrammed open spaces.

The Task Force most closely examining the issue of cultural facilities or events was the Vision 2020 Lifestyles Task Force. This group explored a number of concepts selected to help Troy continue to grow into a truly diverse, unique, global community. The Lifestyles Task Force established a direct call for the improvement and encouragement of existing and new cultural facilities in its "Preferred Future 5" which states that "In 2020, Troy is a 'Gotta Have Art' type of place, with opportunities to celebrate and experience all of the fine arts. **This preferred future describes potential public spaces to experience art, and suggests music in the park events, theater, a symphony, art galleries, and public art as areas of focus.**

Another important area where the City can be active in introducing cultural amenities is the encouragement of diverse, mixed-use development. **One of the many positive attributes of mixed-use development, which will be explored throughout this Master Plan, is the creation of new areas for social interaction.** Rather than isolate homes from entertainment and dining venues, and separate places of work from places of play, mixed-use development is uniquely capable of creating energetic, memorable places where a person can experience new points of view, witness personal expression, and enjoy a variety of activities with other people. While this can be said for many types of communities, those places where mixed-use development occurs are more likely to succeed.

*Troy is home to several notable formal **cultural amenities**, and is in a region famous for its cultural diversity. Some amenities in the City of Troy itself include:*

- *The Troy Museum and Historic Village, which is intended to encourage hands-on learning, especially on topics relating to Troy's heritage. The Museum is also responsible for the preservation of cultural heritage through physical structures, collection of artifacts, and archival materials. The Museum is located in the former Troy Township and City Hall.*
- *The Lloyd A. Stage Nature Center is a 100 acre sanctuary with a wide range of programs, including school programs.*
- *The Troy Public Library is a popular, award winning facility which provides free wireless internet service. The Troy Public Library is #1in Michigan among libraries serving populations of 50,000 or greater per Hennen's American Public Library Rating Index.*
- *The Ridgedale Playhouse is home to the Ridgedale Players, one of the oldest community theaters in Michigan. The Players are in their 75th season.*

Public Art

The importance of public art can not be overstated. Many of the great communities of the world are identified by their public works of art. **Public art makes a statement that the community supports the arts, and contributes greatly to the creation of unique, memorable urban places.** The City of Troy can support public art by encouraging private development to include public art, by reserving public funds for art projects, and by pursuing grants for public art initiatives.

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A Place of Prosperity: The Economy of Troy

Troy is in a unique position among Southeast Michigan communities. **The assets of Troy lend themselves to a rapid transition from the manufacturing economy to the knowledge economy.** The high quality of life, availability of prime office and light industrial real estate, and an emerging regional commitment to building a new foundation for global economic leadership make Troy a competitive choice for 21st century businesses. County-wide programs such as the Oakland County Emerging Sectors program and regional organizations like Automation Alley provide the resources for a community like Troy to emerge as a national leader in business growth.

This Chapter will expand on the concepts alluded to in Chapter 2, will discuss sustainability in business, and will describe the needs of new businesses in the changing economy. It is these changing needs that Troy can focus on, coupled with the quality of life elements described in Chapter 3, to become an economically stronger and more sustainable place to live and work.

Hub for Employment

With a large number of employees and robust economic activity, it is not surprising that Troy is home to nearly 130,000 jobs. Of the people who work in Troy only 14% actually reside in Troy.

The major industry of employment are knowledge-based services, which will continue to grow at a much higher rate than any other source of employment. Currently, 35% of the workforce is employed in a knowledge-based industry. The next two highest sources of employment are retail trade and private education and health care.

Sustainable Business

A critical theme in Troy Vision 2020 was the concept of sustainability. As noted in Chapter 2, sustainability involves social responsibility, environmental stewardship, and economic vitality. These three elements contribute to one another. **A commitment to sustainability makes good business sense in that companies can realize a reduction in operating costs, energy consumption, and win over customers with reduced prices and a good image by becoming a good neighbor.** In other words, the first two elements of sustainability, social and environmental responsibility, can contribute to the third component, economic vitality.

The City can promote sustainability in a variety of ways. Leading by example by managing and governing itself using sustainable practices is a start, but the City can also promote sustainable development amongst its businesses, residents, and visitors. **It is critical that the City of Troy encourage sustainable development practices to enhance the quality of life for this generation and future generations.** Furthermore, the City can secure a positive financial future while protecting the natural environment by supporting sustainable business practices.

There are many measures the City can take with regard to sustainability, perhaps most notably those measures directly relating to environmental protection. Alternative fuel city-owned vehicles, innovative stormwater management, recycling programs and many other programs allow communities to lead by example. Many of these techniques will be described in Chapter 7.

The City took a major step towards promoting economic sustainability by adopting an economic gardening approach. The traditional approach to economic development placed a focus on seeking out and attracting the relocation of large companies. While some communities applying this "hunter and gatherer" method have had limited success, this approach has significant limitations including: 1) expense; 2) the layout of substantial financial incentives without the sure guarantee of success; 3) the requirement of a significant amount of time to see a positive return on such investment; 4) inefficiently leveraging a community's existing assets; 5) the cost of providing tax abatement and incentives reduces tax revenues. The economic crisis of the past ten (10) years has shown that a recalibration of the traditional approach to business development is needed.

A more successful method of economic development consists of a "Grass Roots" approach. Appropriately labeled as "Economic Gardening", this approach focuses on retaining and "cultivating" local 'second stage' businesses in the community by investing in and promoting existing community assets and infrastructure. A large company that was not founded in Troy may be able to survive in Troy for a short period of time, but if the economic climate is not suitable or the foundation for potential growth is weak or unstable, there is no guarantee that the company will have a prolonged survival. The emphasis instead is on cultivating and improving the foundation for existing Troy companies that have already shown growth. These companies already have firm roots in the community and may ultimately be the key to stimulating the economy.

Troy's economic gardening initiative is called **Troy Michigan Business Connect.** The program provides assistance to all growing Troy companies, particularly those considered "second stage" (generally between 6 and 99 employees and $750,000 to $50M in annual revenue). Through a partnership network, a wide

Sustainable Business *is a non-traditional strategy that strives to maximize efficiency and effectiveness while restoring environmental quality, building social equity and increasing long-term profitability. Since the industrial revolution, industry has intensified environmental degradation by exploiting natural resources and releasing unfathomable quantities of hazardous pollutants into the biosphere. On the other hand, business has spent billions of dollars to comply with governmental regulations aimed at minimizing contamination by prescribing the amount of toxic substances that can enter the air, water and landfills. An adversarial relationship has developed between business people and environmentalists, each seeing the other as a main source of the world's problems.*

Emerging just under two decades ago, a movement began within the business sector to change the way companies operate. People began to recognize that environmental degradation and commerce do not have to go hand in hand. Some of the changes have included:

- *The reduction and, in some cases, elimination of hazardous materials from industrial processes*
- *Equitable treatment of employees, which in turn increases productivity and worker retention*
- *Operating as a responsible member of the community*

The same business practices that improve social and environmental capital have been shown to also improve long-term profitability. When implemented, sustainable business practices provide an avenue to achieve mutual benefits in the natural world, the community, and the economy.

Aquinas College Center for Sustainability
www.ceneterforsustainability.org

Michigan's Premier Address for Business, Retail and Commerce

Troy is the prime location for new and expanding businesses like yours. Home to 7 million square feet of retail space, 21 million square feet of office and engineering space and 16 million square feet of manufacturing space, Troy's business environment is progressive and diverse with a solid mix of major corporations and small local businesses. Troy is home to Automation Alley, Michigan's largest technology business association driving growth in Southeast Michigan's economy, and at the center of global technology and manufacturing. Troy is also a major contributor for Michigan's ranking as one of the largest high-tech workforce employers in the country.

Troy was one of only eight Michigan communities named a "Top Performing Community" for attracting and retaining entrepreneurial companies in 2012 by the University of Michigan-Dearborn's eCities study. Combine the City's abundant job opportunities with an excellent quality of life and it comes as no surprise that Troy is one of the nation's fastest-growing employment centers.

https://www.troymi.gov/WorkHere/LocateYourBusinessHere

range of assistance is provided to help Troy companies grow. Assistance is available in areas such as business development, market analysis, logistics, Geographic Information Systems (GIS), finance, human resources development, talent recruitment, supported employment, site selection, utility issues, building permits and inspections, planning, zoning and other areas. By leveraging Troy's unique community assets, partnerships and available tools to promote business growth, the City is creating an environment for investment.

The advantage the City of Troy enjoys in this regard is that developers seek Troy as a desirable place to live and work with a broad portfolio of assets. This puts the community in a position to offer benefits to those who choose to develop sustainable projects which include mixed-use, innovative stormwater management, green buildings, and excellent architecture in exchange for increased density or other benefits. In other words, the City can become the carrot, rather than the stick.

The Changing Economic Environment

Shopping, working, communicating, and socializing are all aspects of our daily lives that have been impacted by the advent of the internet. **While industrial properties have traditionally been located near railroads or waterways, new technology-based clean industries are locating nearly anywhere.** In many cases, the prime determination a company must make is where does it want to locate, rather than where must it locate. Chapter 3 detailed the quality of life characteristics of successful communities in the knowledge economy, and recommended courses of action to raise the City's profile in this regard. This section will address three core areas of the local business environment and describe ways in which the City can preserve and enhance its position in these areas:

- retail and service
- office and information technology
- research and research technology

Retail and Services

The past 10 years have seen a revolution in the way people buy goods and secure services. **The emergence of the internet has forever changed the way companies do business around the world.** Small shops and family owned businesses can reach customers around the world, while giant corporations can maximize economics of scale and improve the position immeasurably. In this way the internet can be both a blessing and curse for retail. Those businesses that have embraced the internet to promote and sell their goods and services have an advantage over all but the strongest brick and mortar stores. Convenience and selection have become greater than ever.

There are a number of immediate advantages that traditional retail establishments have over e-commerce businesses. First, web-based businesses

B2B

Business-To-Business. A transaction that occurs between two companies, as opposed to a transaction involving a consumer. The term may also describe a company that provides goods or services for another company.

B2C

Business-To-Consumer. A transaction that occurs between a company and a consumer, as opposed to a transaction between companies. The term may also describe a company that provides goods or services for consumers.

www.investorwords.com

do not allow for consumers to see products in person or to speak face-to-face with salespeople who can assist the buyer in determining needs and preferences. Also, some goods do not lend themselves to shipping, such as foods or household items. Convenience is also a factor in many consumers' choice to purchase goods in person. Selecting an item in person and taking it home immediately requires a trip to the store, but usually does not involve a wait or additional costs associated with shipping.

Perhaps one of the more critical elements of retail success is the act of shopping as a social activity. Troy has an advantage in that it has a critical mass of large-scale retail developments, such as Somerset Collection and Oakland Mall, and has the opportunity along Big Beaver Road and other corridors to encourage retail in mixed-use developments with integrated residential units, open spaces, and other uses. **The emerging trend of walkable, mixed-use areas enhances traditional retail establishments in that it counts on retail uses as anchors for neighborhood development.** Book stores, coffee shops, shopping centers, and other retail and restaurant uses allow for social interaction and contribute to the City's quality of life.

B2B and B2C

It would be unwise to not consider the impact of e-commerce on the traditional retail community. **In 2006, e-commerce accounted for about 3 percent of all retail sales in the United States, and the trend is continuing upward.**[1] Troy serves as a retail hub for the region, and must be prepared to support brick and mortar retail establishments in order to help them remain viable moving forward. Given the central role the primary retail areas in Troy have within the City, it is critical that the continued success of these areas is taken into consideration.

It is important for the City to understand and consider that there are two types of retail or service businesses, business to business (B2B) and business to consumer (B2C). B2C businesses are those conventional retail establishments offering goods and services directly to consumers. Comparison shopping, convenience shopping, and restaurant and service uses fall in this category.

Given Troy's considerable office, commercial, and industrial presence, the City should devote significant marketing and promotional efforts specifically towards B2B uses to make up for any real decline of conventional B2C uses due to e-commerce or other factors. While conventional retail and service remain strong in Troy for many of the reasons outline above, there is no guarantee that this trend will continue indefinitely. In many cases, B2B companies are not the first to come to mind when planning for commercial uses. Given that these uses are not always open to the public, often require warehousing, and rarely market themselves directly to the public, they are not as readily understood.

B2B businesses have embraced the internet as well, and where brick-and-mortar B2C businesses are still relevant for both practical and social reasons, B2B businesses cater to a market concerned only with convenience, quality, cost, service, and availability. **B2B businesses, in other words, may have an even easier time transitioning to an e-commerce platform than conventional retail.**

The City should investigate the needs of B2B businesses in the information age. The availability of

1. *United States Economic and Statistics Administration*

office space in Troy can provide easy entry for a B2B business, while the available high-quality industrial properties in Troy's strategic location allows for B2B businesses to develop warehousing and shipping centers nearby. The presence of a significant business community in Troy and throughout Southeast Michigan provides an immediate market for B2B businesses.

Office and Information Technology

The Wealth Creation Task Force for Troy Vision 2020 suggests that Troy must become a link to international business. The City has a head start in that many of its largest office tenants are international corporations based in countries around the world. Troy has 14 million square feet of office space, providing facilities in every imaginable shape, size, and form with any package of amenities a potential tenant may require. The Big Beaver Corridor is home to over 100 businesses and the headquarters for companies like Kelly Services, Kojaian Companies, Bank of America, Behr, National City Bank, Altair Engineering, and Kirco.[2]

What are information technology and other knowledge economy businesses looking for when seeking new office space? Assuming that many new information-based businesses can be very selective in their location, given that they are no longer tied to availability of materials or railroads, etc., when a business has chosen Troy based on other factors, what is a company looking for in a specific facility? If Troy is able to attract new office and high-tech businesses, it must then address the second part of the equation and ensure that the City's office spaces are qualified for the businesses it attracts.

Infrastructure for advanced technology offices and businesses includes fiber optics, wireless communication, multiple carriers, power redundancy and other components. Troy must ensure that new office spaces have this essential technology infrastructure. When new buildings are developed incorporating new technology standards, they enjoy lower vacancy rates and increased lease income based on higher rents.[3]

The City should consider encouraging physical components to ensure that new or redeveloped office spaces are more conducive to knowledge economy businesses. These elements will contribute to the economic sustainability of the structure, and when complemented by green building design will ensure that new or redeveloped structures are competitive and viable for generations to come. These elements could include:

- Elevated Ceiling Heights
- High Floor Load Capacity
- Power Redundancy Components
- Telecommunications Space
- Raised Flooring
- Flexible Connectivity
- Advanced Fire Protection Systems
- Closed Circuit Security Television Monitoring
- Tenant Controlled HVAC
- Flexible Work Stations

Given a choice between a conventional office space and one having many or all of the features described above, with all other factors being equal, the facility with these upgrades will be far more competitive. **The City can explore incentives and regulations which enhance the City's stock of existing office space with an even more technologically advanced stock of desirable spaces.** In this way, the City can ensure that those businesses attracted to Troy by the quality of life and other factors will find a physical space which allows them to excel in their sector and provide an optimal environment to attract the highest quality workforce.

Research and Research Technology

Troy has a tradition of innovation in research and research technology in a variety of sectors. Troy's top employers include automotive industrial giants such as GM, Volkswagen, Chrysler, Ford, Nissan, Delphi, Behr, Magna, Valeo, Lear, Porsche, and Arvin-Meritor. Other top employers include medical entities such as Beaumont, Quest Diagnostics, Trinity Health, Henry Ford, Oakwood, St. John's, and Wayne State Physician's Group.Other technological leaders include IBM, Fanuc Robotics, and ECD Ovonics, a developer of alternative energy products like photovoltaic shingles to capture solar energy and fuel cells under development for alternative automotive power. **It is a mix of companies like these, and especially companies in a growing field such as green energy like ECD Ovonics, for which the City of Troy must compete moving forward.**

3. Troy Chamber of Commerce: http://www.troychamber.com/gli/whytroy.htm#office
3. Real Estate Knowledge Center

Automation Alley

Automation Alley is a "regionally-focused technology organization" intended to bring local business, educational institutions, and local units of government together in order to coordinate and promote technology-based businesses in Southeast Michigan.

The organization's members are located in Genesee County, Livingston County, Macomb County, Monroe County, Oakland County, St. Clair County, Washtenaw County, Wayne County and the City of Detroit. The mission of the organization is to "…act as a catalyst to enhance the image of Southeast Michigan to help members grow their businesses."

Automation Alley provides products and services to its members to stimulate and highlight technological excellence and economic diversity. Ultimately, Automation Alley aims to help industry, government and academia attract, develop and retain the skilled workforce required to be competitive in the new knowledge-based economy.

Automation Alley assists its members through three specific programs:

- ***International Business Center**: the Automation Alley International Business Center helps small and medium size companies become export ready, organizes trade missions and conducts international business attraction services.*
- ***Technology Center**: the Automation Alley Technology Center leverages businesses, educators and government to help entrepreneurs bring new technologies to market quicker and more efficiently.*
- ***GLIMA Network**: GLIMA, Automation Alley's association for technology professionals, provides significant learning opportunities for individuals within Michigan's technology community.*

www.automationalley.com

The Emerging Sectors program launched by Oakland County targets ten business sectors in which the County wants to become more competitive. It is designed to capture and develop businesses which operate in the area of new and emerging technology. Emerging Sectors functions first as a promotional program to attract businesses in these ten sectors, and also acts as an information clearinghouse to assist companies considering new locations. The program specifically targets its promotional efforts towards those companies within each sector which the County feels are most likely to consider expanding into Oakland County. These sectors are:

- Advanced Electronics & Controls
- Advanced Materials & Chemicals
- Aerospace
- Automotive
- Alternative Energy & Power Generation
- Communications & Information Technology
- Film & Digital Media
- Robotics & Automation
- Defense and Homeland Security
- Oakland County's Medical Main Street

The Strategy of Emerging Sectors includes:

- Attracting high-tech businesses from around the world to Oakland County.
- Facilitating new collaborations between existing Oakland County businesses and outside companies looking to expand into North America.
- Assisting Oakland County companies as they identify and promote new applications for their existing technologies in domestic and international markets.
- Linking research and development projects at local universities with proven entrepreneurs to accelerate participation in the global marketplace.
- Aggressively identifying and increasing local sources of venture and growth capital for emerging sector companies.
- Continuing to attract and develop a highly-skilled workforce.[4]

One of the primary initiatives the City of Troy has

4. https://www.oakgov.com/advantageoakland/International/Pages/emerging-sectors-default.aspx

undertaken with regard to targeting emerging sector businesses is the establishment of the Smart Zone. The Big Beaver Corridor Study envisions the Smart Zone as an area in which high-technology uses at the cutting edge of innovation are cultivated. **The Study calls this location a "paragon of innovation" and prescribes a combination of "signature" light industrial, research and development, and office uses.**

As noted previously, Troy is also part of Automation Alley, and is home to the Automation Alley headquarters and Technical Center. Automation Alley is actually a broader multi-community Great Lakes Interchange Smart Zone, with a focus on business and technology in the advanced automotive, information technology and homeland security sectors.[5]

The Land Use Balance

A balanced tax base is an essential element of effective community governance. A balanced tax base ensures that residential taxes can be kept at reasonable levels without having to sacrifice quality of services.

The City has a reputation of strong, diversified tax base. However, as with many Michigan communities, there are challenges. The City's taxable value was $4.3 billion in fiscal year 2014. This is roughly equal to the value in 2013 and indicates a leveling trend of the significant declines incurred from 2008's great recession. As a point of reference, the fiscal year 2008 taxable value was $5.5 billion.

Despite the challenges faced by the great recession, Troy's diversified business community, strong residential market and conservative financial management perpetuates a stable economy through regional and national market fluctuations. A wide range of industries in the business community, well maintained neighborhoods, excellent schools, and continued investment into roads and infrastructure all contribute to Troy's resilience.

Emerging Sectors

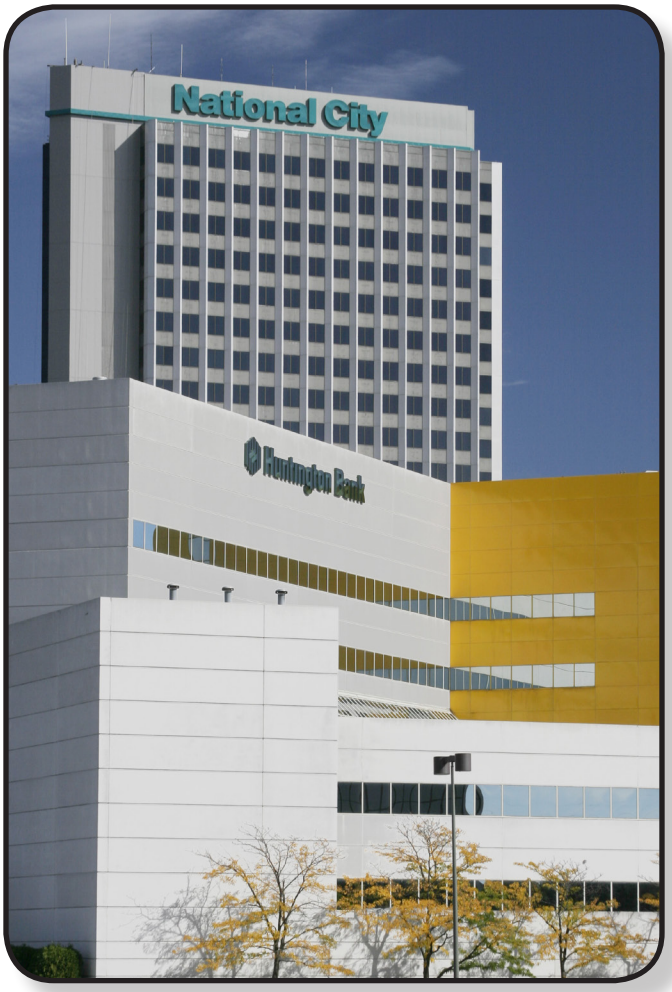
Job creation and diversification are transforming Oakland County's economy from manufacturing-based to knowledge-based through Oakland County's Emerging Sectors initiative. Since inception, the initiative has generated $3.2 billion in private investment and has created and retained more than 57,000 jobs.

- *$3.2 Billion in private investment*
- *36,630 jobs created*
- *20,704 jobs retained*
- *Successes 358*

https://www.oakgov.com/advantageoakland/International/Pages/emerging-sectors-default.aspx

Mixed-Use and Tax Base

One of the many advantages of mixed-use development is its ability to help offset residential development's impact on the tax base by integrating it with commercial development. That is, while new residential development alone would help tilt the land use balance towards residential overall, therefore requiring that residential pay a larger portion of the overall tax obligation, incorporating commercial, office, or even light industrial development can offset that obligation. Depending on the scale, nature, and location of the mixed use project, the non-residential component could be calculated to directly offset any increased burden created by adding the new residential uses. Employed consistently, mixed-use development could ensure that the tax base balance is maintained as new residential units are developed in Troy.



Troy as a Hub for the Regional Economy

In many ways, Troy is a primary center of urban Oakland County. Over 100,000 people come into Troy every day for work, and thousands more City residents also work in the City. **Troy's workforce is over 121,000 people, yet only about fourteen (14%) percent of those workers actually reside in the City.**

Troy is an educational hub, with its strong tradition of higher education and exemplary school systems. Troy is also a financial center in Southeast Michigan, as it is home to a large number of international banking and financial institutions. Troy is also home to regionally acclaimed retail and entertainment, and is a central location for shopping in Southeast Michigan. **The City must capitalize on these facts and adopt the philosophies contained in Chapter 3 in order to encourage more of its daytime workforce to consider Troy the best place to live.**

The DDA as a Center for the Regional Hub

The Downtown Development Authority Area is highly visible when compared to the rest of Troy and when compared to the surrounding area. **While Troy may not have a traditional, small-scale downtown, its DDA is a regional center of activity.** Within Troy's Downtown Development Authority boundary, there is approximately 1.1 billion dollars of building market value. The parcels within the DDA comprise only 3 percent of those in the City as a whole, and 1.6 percent of the acreage, but account for about 36 percent of the overall community building market value.

The City of Troy can capitalize on this role by allowing the evolution of the DDA to include increased residential uses and other mixed uses as envisioned in the Big Beaver Corridor Study.

The Study is a forward-thinking blueprint to the continued development of the Corridor, and includes a series of recommendations that will help Troy capture more of the dollars spent by the over 100,000 commuters who enter and leave Troy everyday. **Mixed-use projects with integrated residences will allow more people to live and work in Troy.** The inclusion of more such properties will open Troy up as a popular place for young professionals who seek new residential styles in close proximity to their places of employment. **Often, these individuals have money to spend at Troy retail businesses, and can contribute to the dynamic and vibrant community Troy desires to be.**

The City in Motion: Local and Regional Mobility

Mobility is changing as rapidly as the economy. Companies are more mobile than ever, telecommuting is rising as a popular way to work, and e-commerce is taking a share of the conventional retail market, all of which have a dramatic effect on transportation needs. Fuel prices have changed the way consumers choose their homes or even plan their daily errands. Non-motorized transportation is becoming a viable option in many communities, especially when integrated with other forms of transportation to create a true multi-modal system. In that spirit, this Chapter will analyze the existing transportation network within the City of Troy and explore new ways the City can think about transportation.

Previous work by the Vision 2020 Task Force established a series of five preferred futures in the City. These five visions address the need for safer transportation, more transportation options for all age groups, and the desire for a regionally prominent non-motorized transportation network. Vision 2020 also acknowledged the emergence of virtual pathways and their importance as communication supplants transportation in many applications. The final vision of the Mobility Task Force was that Troy will become a "green" city where a series of actions contribute to make Troy an environmentally sustainable place within which to travel.

Stakeholder input also reveals that strong support exists for many of the concepts envisioned by Troy Futures, and specifically for the enhancement of non-motorized transportation options in the form of pathways or bike lanes.

Troy's Existing Transportation Infrastructure

This Section will detail the existing conditions of the transportation infrastructure in Troy and also describe City programs and entities charged with maintaining and developing that infrastructure.

Existing Conditions: Roadways

The primary method of transportation as it stands today in Troy is the private automobile. The City has a comprehensive roadway network, described in the following subsection.

Streets and Roads

The surface street network in the City of Troy is developed and maintained jointly by the City of Troy and the Road Commission for Oakland County (RCOC). Table 5.1, on the following page, demonstrates the major roadway jurisdictions in Troy, from north to south, then west to east.

There are over 319 miles of roads maintained by the City, which equates to over 1700 lane miles. **These roads are used by approximately 400,000 vehicles a day.** The complete road network consists of 364 miles of roads, when all local and County roads are included. The City also maintains over 500 miles of sidewalks in Troy.[1]

1 *www.troymi.gov*

Functional Classification

The National Functional Classification (NFC) System is a planning and identification tool used by most transportation agencies. The classifications are used to group streets and highways into classes according to the character of traffic service they are designed for.

Principal Arterials

These roadways are at the top of the classification hierarchy. The primary function of such roadways is to carry relatively long distance, through-travel movements. Examples include interstates and other freeways as well as state routes between larger cities.

Minor Arterials

Minor arterials include roads connecting intra-urban land uses. These roads tend to accommodate slightly shorter trips than principal arterials.

Major Collectors

Major collectors provide access and mobility within residential, commercial, or industrial use and connect local roads to arterials. Major collectors generally carry more traffic than minor collectors.

Minor Collectors

Minor collectors also provide access amongst varying land uses, but generally have less traffic than Major Collectors.

Local Roads

Local Roads provide access to individual properties and typically have moderate to low speeds. The improvement of local roads typically rates the lowest priority. Most residential streets in Troy are classified as local roads, and are often located in subdivisions.

TABLE 5.1: ROADWAY JURISDICTION
Source: City of Troy Traffic Engineering

Roadway	Jurisdiction
Interstate 75	State of Michigan
South Blvd.	Road Commission for Oakland County.
Square Lake Rd.	City of Troy
Long Lake Rd.	Road Commission for Oakland County
Wattles Rd.	City of Troy
Big Beaver Rd.	Road Commission for Oakland County
Maple Rd.	City of Troy and RCOC
14 Mile Rd.	Road Commission for Oakland County
Adams Rd.	Road Commission for Oakland County
Coolidge Highway	City of Troy
Crooks Rd.	Road Commission for Oakland County
Livernois Rd.	City of Troy and RCOC
Rochester Rd.	City of Troy
Stephenson High-way	City of Troy
John R Rd.	Road Commission for Oakland County
Dequindre Rd.	Road Commission for Oakland County

Roadway Improvement Program

The City has a sophisticated Roadway Improvement Program which forecasts maintenance and enhancement needs for the City's streets. This program identifies timetables, projected costs and scheduling, and assists the City in obtaining transportation dollars and grant funding for road projects.[2]

FAST-TRAC

The City of Troy is a participant in the Road Commission for Oakland County FAST-TRAC (Faster And Safer Travel Through Routing and Advanced Controls) program. The system is a computerized real-time traffic signal timing program employing hardware and software to **monitor and adjust traffic signalization in order to constantly optimize signals based on current traffic demands** at times when traffic demand exceeds roadway capacity. The City of Troy has participated in the program since 1992, and has grown its reach within the City from 28 signals to over 300 signals.[3]

2. City of Troy Traffic Engineering Department
3. Road Commission for Oakland County

Traffic Committee

The City of Troy has a Traffic Committee which consists of seven members appointed to three-year terms. The Committee includes the Police Chief, Fire Chief and Traffic Engineer as ex-officio members. The Traffic Committee advises the City Manager and City Council with regard to traffic regulations and safety considerations.

Existing Conditions: Highway Access

The City of Troy is bisected by Interstate 75. The Interstate has access to the City at 14 Mile Road, Rochester Road, Big Beaver Road, Crooks Road, and Adams Road. Interstate 75 is over 1775 miles long and extends from southern Florida to Northern Michigan, and provides regional access to the City of Detroit, Canada, Northern Oakland County and beyond.

Existing Conditions: Air Travel

The Oakland/Troy Airport is owned and managed by Oakland County and provides executive airport service for private, corporate and charter air travel. The Oakland/Troy Airport is located at 2672 Industrial Row and is also used for limited air freight service. Aircraft maintenance and fuel are also available.

The Oakland County International Airport is located in Waterford and is the nation's 6th busiest general aviation airport. Originally known as Pontiac Municipal Airport, it provides corporate and general aviation service to Oakland County and Metro Detroit, and also provides a more advanced ground support network including major repair and full contract maintenance, fueling, catering and charter services.

The majority of commercial air passengers in Troy utilize the Detroit Wayne County Metropolitan Airport in Romulus, Michigan. The Airport is owned and operated by Wayne County, and is managed by The Wayne County Airport Authority. Detroit Wayne County Metropolitan Airport has undergone significant enhancement in recent years, including the construction of a new terminal and runway.

Existing Conditions: Transit

The City of Troy is served by the SMART (Suburban Mobility Authority for Regional Transportation) System. SMART is Southeast Michigan's bus system, which provides fixed route service over 54 routes and also provides a variety of curb-to-curb services including Dial-A-Ride and flexible routes, to access otherwise inaccessible locations.

SMART's primary routes within the City of Troy provide access to Big Beaver Road between Coolidge Road and Livernois Road, all across the City's south boundary, and north to Auburn Hills via Coolidge Road, Long Lake Road, and Interstate 75.

The SMART system extends throughout Oakland, Wayne, and Macomb Counties, and provides regional service to and from major employment centers in Southeast Michigan, including the City of Detroit. SMART also provides a wide variety of special, charter, private, and remote access services.

Transit Center

As mentioned in Chapter 2, the City developed the Troy Transit Center to provide a central, multi-modal hub primarily for rail and bus service. The Troy Transit Facility will serve the region by strengthening the existing transit options in the area through a centralized facility that will allow users to access intercity rail service, regional bus routes and other modes such as air and taxi services. A bridge over the railway line will provide a barrier-free non-motorized link between the regional bus terminal in Troy with the rail platform in Birmingham. This facility is included as a hub in the Detroit Regional Mass Transit plan (DRMT) and will serve included as a hub in the Detroit

SMART

(Suburban Mobility Authority for Regional Transportation).

SMART is Southeast Michigan's bus system. SMART provides fixed route service over 54 routes and also provides a variety of curb-to-curb service including Dial-A-Ride and flexible routes, to access otherwise inaccessible locations.

SMART employs nearly 1,000 people and serves approximately 225,000 riders per week. SMART estimates that nearly 60 percent of its ridership uses the system to access their places of employment. SMART serves nearly all of Wayne and Oakland Counties, and also serves all of Macomb County.

www.smartbus.org

Regional Mass Transit plan (DRMT) and will serve as a catalyst for coordinated regional and mass transit in Southeastern Michigan.

The Future of Mobility in Troy

Mobility needs are continuing to evolve. As mentioned in the opening paragraph of this Chapter, many significant factors are changing the way Americans address transportation. This section will introduce new measures intended to ensure that all people in Troy, regardless of age, remain mobile, that the attributes of the City and region are accessible, and that the transportation infrastructure of Troy contributes to a positive quality of life in the City.

Thoroughfare Plan

The City of Troy Thoroughfare Plan (see map, next page) is incorporated as a part of this Master Plan. The Thoroughfare Plan enables the City to better direct resources for roadway improvement by basing its decisions on the planned right-of-way and other enhancements provided on the Plan. The Thoroughfare Plan also enables the coordination of efforts between various levels of government responsible for the building and improving of roads.

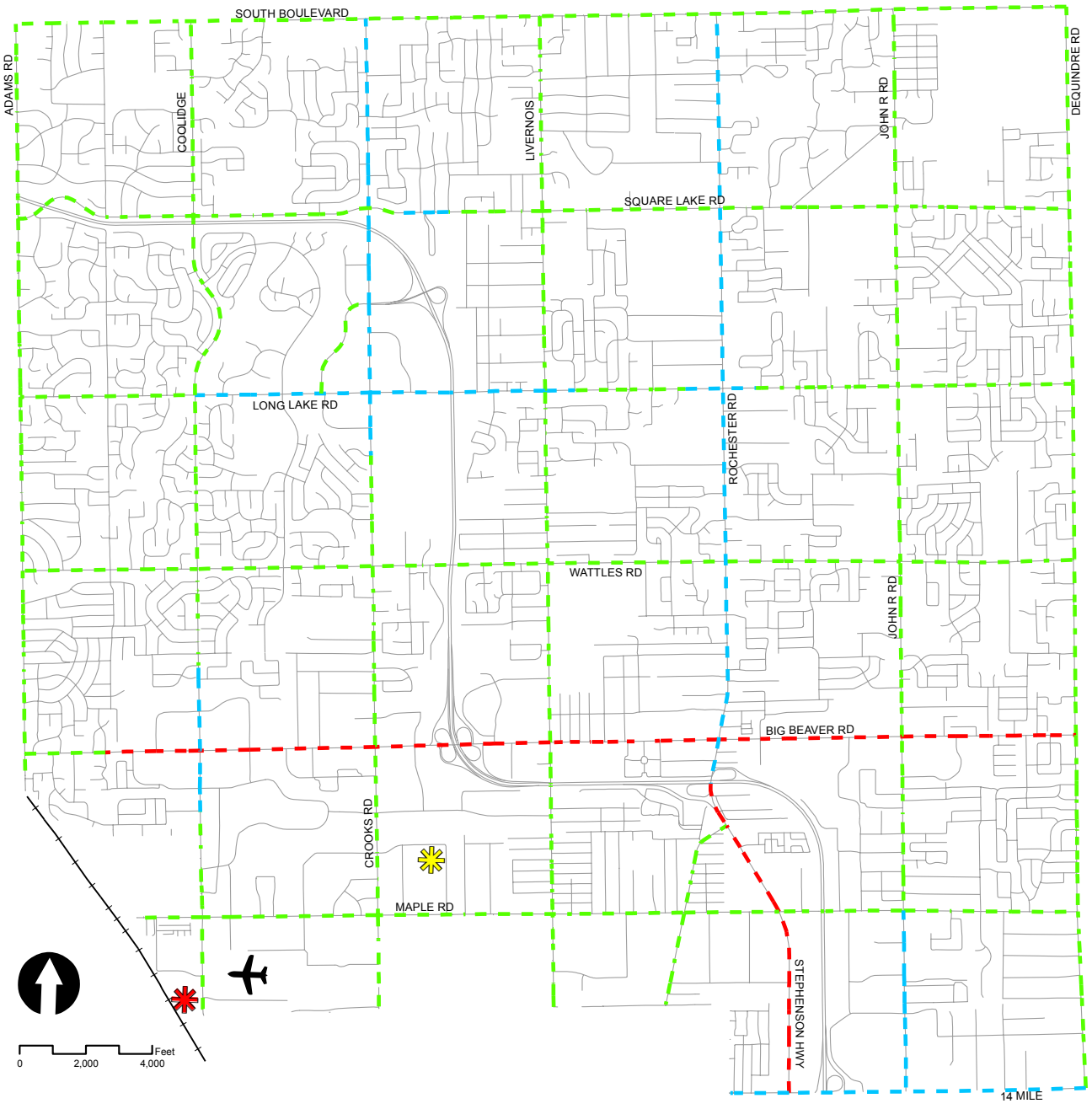
Access Management

Access management is the development of a program intended to ensure that the major arterials, intersections and freeway systems serving a community or region will operate safely and efficiently while adequately meeting the access needs of the abutting land uses along the roadway. Implementing access management techniques can help increase roadway capacity, manage congestion and reduce crashes. In the case of businesses, there are also less obvious benefits such as a reduction in maintenance and other costs by utilizing shared driveways or eliminating entrance and exit points. Increased road frontage and improved aesthetics are also a result of eliminating driveways. [4]

The Big Beaver Corridor Study included an analysis of access management concerns within the Big Beaver Corridor. **The Study concludes that while there are many positive attributes with regard to access management in this critical area, there is room for improvement in the future.** Specifically, poor spacing between driveways, frequency of driveways, and driveways too close to certain intersections are areas where access issues have a significant effect on traffic management in the Corridor.

Successful access management practices in the Big Beaver Corridor that were noted by the Study include the area surrounding Somerset Collection, where limited, protected driveway "throats" provide access to consolidated areas. This design results in fewer overall driveways and reduces potential conflict between internal circulation and the entering traffic from Big Beaver Road. The Study also identifies several areas throughout the Corridor where consolidated driveways to Big Beaver Road or to other major north-south roads are used to provide access to multiple sites via collector streets or internal shared driveways.

4. Federal Highway Administration



Legend

- 204 ft. R.O.W.
- 150 ft. R.O.W.
- 120 ft. R.O.W.
- Transit Center
- Transit Service
- Airport

THOROUGHFARE PLAN

CITY of TROY

Oakland County, Michigan

Date: May 27, 2008

Provided By: Carlisle/Wortman Assoc., Inc.
Community Planners & Landscape Architects

Access Management

Basic design principles:

1. *Provide a specialized road system; design roadways according to the function they are intended to provide.*
2. *Limit direct access to major roadways; preserve the traffic function of higher volume roads serving regional thru traffic.*
3. *Promote intersection hierarchy; transition from one classification of roadway to another.*
4. *Locate signals to favor through movements; proper placement of signals allows for better coordination of signals, continuous movement of traffic at the desired speed and reduces delays.*
5. *Preserve the functional areas of intersections and interchanges; the area where motorists respond to the intersection or interchange, decelerate, accelerate, or complete turns.*
6. *Limit the number of conflict points; collisions and mistakes occur when the driving environment is complex.*
7. *Separate conflict areas; traffic conflicts can also be reduced by separating conflict areas.*
8. *Remove turning vehicles from through traffic lanes; when turning vehicles are removed from through traffic lanes, better traffic flow and is maintained, capacity is preserved and safety is improved.*
9. *Use non-traversable medians to manage left-turn movements; the majority of access-related crashes involve left turns.*
10. *Provide a supporting street system and circulation system; interconnected street and circulation systems better support alternative forms of transportation.*

TRB Access Management Manual, 2003

Complete Streets

The MICHIGAN COMPLETE STREETS legislation was signed into law in 2010 through two public acts, Public Act 134 and Public Act 135. The Michigan Planning Act was also amended to require the consideration of complete streets in the Master Plan. The legislation defines Complete Streets as "roadways planned, designed, and constructed to provide appropriate access to all legal users...whether by car, truck, transit, assistive device, foot or bicycle." It gives new responsibilities to local government and county and state transportation agencies to address transportation needs of all legal users (including pedestrians and bicyclists) in their community Master Plans.

Communities with Complete Streets policies help to ensure that roadways are designed to accomodate all users, not just motorists. Facilities that make a street "complete" depend on existing conditions and the intended users. It's never a "one-size-fits-all" scenario. Examples include curb ramps, audible or tactile signals for blind pedestrians, longer crossing times, smooth sidewalks and bike lanes that are free of obstacles.

The Road Commission for Oakland County (RCOC) developed Complete Streets guidelines for use when

COMPLETE STREETS

Complete Streets provide a number of benefits including, but not limited to:

- *Improved safety for all users, including pedestrians, bicyclists, transit riders and drivers;*
- *Improved human health by encouraging walking and bicycling;*
- *Decreased car traffic, reducing dependence on gasoline and petroleum products, and improved air quality;*
- *More transportation options; and*
- *Fosters livable communities and improved quality of life.*

designing future road improvements and considering the transportation needs of all legal users. The guidelines evaluate issues such as liability, funding, maintenance, connectivity, local involvement, environmental concerns and specific user needs.

To that end, the City will need to address the following key principles in all planning related to Complete Streets:

1. Consider all legal users - vehicles, bicycles and pedestrians of all ages and abilities - in the discussion of its transportation system.

2. Encompass all modes of transportation.

3. Ensure that the improvements identified in the Plan are appropriate to the context of the community.

4. Identify the means of cooperating with the Road Commission or MDOT when implementing transportation elements of the plan.

Non-Motorized Transportation Plans

The City of Troy has initiated a significant City-lead effort to construct and improve trails and pathways in the City. As evidenced by the overwhelming support for trails received during the Parks and Recreation Master Plan process, the Master Plan Survey, and within Troy Vision 2020, the community has expressed a great deal of interest in alternative transportation.

With that in mind, the City of Troy created the Troy Trails and Pathways Committee, a group charged with developing a world-class trails system in Troy. The Committee was allocated funding for assistance in developing strategies for trails and pathways. The City intends to fund the Parks and Recreation Department for Committee activities in each budget year for the foreseeable future.

The Trails and Pathways Committee determined that there are three main purposes for the development of trails in Troy:

- **Interconnectivity between retail, restaurants, public facilities, and other trails**
- **Recreation**
- **Improved walkability and an opportunity for non-motorized transportation**

In the summer of 2007, the Trails and Pathways Committee developed a series of long term and short term goals. Some of the predominant themes in the long term goals are:

- Provision of scenic trails throughout the City
- Overall safety, security, and sustained funding
- The inclusion of bike lanes, trails and pathways into road construction projects
- The development of bicycle and pedestrian friendly destinations throughout Troy
- The incorporation of trails and pathway systems into private developments
- The development of community education programs about trails and alternative transportation

As noted in Chapter 3, the responses collected from the Parks and Recreation Plan Survey and the input of the SGRAT suggest that people consider trails and pathways to be more than simple recreational amenities, and genuinely consider them valid transportation options that drive property values up and can be seen as an amenity for real estate development.

The Transit Center and Transit-Oriented Development

A central theme of the Master Plan includes the establishment of activity nodes with a connected sense of place, centered on a range of different concepts or themes. These areas would be compact, walkable, and would provide a mix of uses to contribute to an atmosphere of vitality and diversity. The "Villages" throughout the City would each have a unique character and would allow visitors or residents to have access to services, entertainment, and even employment within walking distance, with access to the other nodes, the rest of the City, and areas around the region available by transit.

The "Villaging" concept can be achieved by following the principles of Transit Oriented

Transit-oriented development (TOD)

TOD is compact, walkable development centered around transit stations, generally including a mix of uses, such as housing, shopping, employment, and recreational facilities. TOD is designed with transit and pedestrians as high priorities, making it possible for visitors and residents to move around without complete dependence on a car.

Components of TOD include:

- *Walkable design with pedestrian as the highest priority*
- *Train station as prominent feature of town center*
- *A regional node containing a mixture of uses in close proximity including office, residential, retail, and civic uses*
- *High density, high-quality development within 10-minute walk circle surrounding train station*
- *Collector support transit systems including trolleys, streetcars, light rail, and buses, etc*
- *Designed to include the easy use of bicycles, scooters, and rollerblades as daily support transportation systems*
- *Reduced and managed parking inside 10-minute walk circle around town center / train station*

Massachusetts Bay Transportation Authority, http://www.mbta.com/projects_underway/tod.asp

and

http://www.transitorienteddevelopment.org/index.html

Development, or TOD. The TOD principles are centered on the basic idea that mixed-use, walkable, compact development surrounding transit stations contributes to the health of the community and helps support the transit itself. The non-profit group Reconnecting America, an organization dedicated to encouraging TOD development, states that a TOD is more than development near transit, it is also development that achieves the following:

- It increases "location efficiency" so people can walk, bike, and take transit
- It boosts overall transit ridership and minimizes the impacts of traffic
- It provides a rich mix of housing, jobs, shopping, and recreation
- It provides a value to the public and private sectors, and for both new and existing residents
- It creates a sense of community and sense of place[5]

In order for TOD to work, there are a number of coordinated efforts that must succeed. **First, the City must demonstrate commitment to the provision of transit.** The City of Troy has already expressed its support of transit, and the regional SMART system shows that the region is interested in expanding and enhancing its transit capabilities. The Transit Center project constitutes a strong local commitment to the provision of efficient, equitable, and world-class transit options for Troy residents.

A successful TOD strategy must also have the support and leadership of elected officials and investors. This is ultimately expressed by the adoption of policies that coordinate development with transit corridors and facilities. Strategies can be incentive-based or regulatory and could include the development of station area plans, the adoption of higher density, mixed use zoning, the development of design guidelines for station areas, strong public investment policies, and incentives like the sharing of infrastructure development costs, providing for brownfield remediation, or streamlining the development process for TOD projects.[6]

5. Reconnecting America, "Why Transit Oriented Development and Why Now?"

6. http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-tod.html

Virtual Pathways

New advances in telecommunications could have dramatic impacts on transportation in the future, but the actual effects are still uncertain. In particular, **the advent of telecommuting will allow a great number of people to work remotely,** usually out of their homes or satellite offices. This kind of arrangement was not possible before high speed internet and other technological breakthroughs.

According to the U.S. Census, telecommuting has been increasing and will likely continue to increase. **Approximately 4 percent of Michigan workers are telecommuters and projections indicate that as many as 20 percent could ultimately become home-based.**

On its face, telecommuting would appear to relieve traffic congestion by taking more drivers off the streets and reducing the number of trips per day. However, in the long term, telecommuting could have the same effect that the emergence of knowledge based businesses has had in that workers will no longer be required to locate near their employers. While many employers locate strategically to secure a solid workforce, there are also firms which exist virtually online. That is, employees work all over the country and contribute via the internet.

Given this phenomenon, communities like Troy may have to rely even more heavily on the quality of life elements of the City to retain residents even if industry and professional offices succeed in the community. **In fact, on a regional scale, telecommuting could result in a greater demand for more remote development and could ultimately contribute to urban sprawl. Without the requirement of proximity to an employer, employees can live wherever they wish.**

Impacts of Telecommuting

The Research and Innovative Technology Administration of the Bureau of Transportation Statistics, a department within the United States Department of Transportation, identified a number of key issues with regard to the impact of telecommuting on transportation demand. They include, but are not limited to, the following:

- The actual amount and impact of telecommuting in any particular region will depend strongly on the local transportation environment and travel demand measures.
- The congestion and air quality improvements potentially attainable through telecommuting could be substantially diminished if telecommuters removed from the highways are replaced by the emergence of latent travel demand.
- Telecommuting could stimulate urban sprawl and have other adverse impacts on land use and public transportation.
- Factors which will impact the rate of growth of telecommuting include uncertainty of benefits for employers and the considerable time and effort inherently required to bring about major changes in work styles and ways of doing business.

The City must continue to consider the potential needs of telecommuters in order to combat the potential flight of knowledge economy workers in the City.[7]

7. Transportation Implications of Telecommuting, Bureau of Transportation Statistics

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Infrastructure: The Assets and Care of the City

A critical component to Troy's quality of life is the quality of its municipal services. **Excellent water, efficient storm and sanitary sewer facilities, and well-maintained roads are elements that have provided the foundation for Troy's success.** For a community of Troy's population and considerable size, providing these services is a vast undertaking.

Infrastructure, such as water and sewer lines, plays a significant role in what can be developed where, and must be planned in concert with land use to ensure that the City's capacity matches the City's vision for itself. In other words, planning for highly intensive uses is fruitless if the municipal services in the area are unable to support those uses. The converse is also true; planning for low-density uses in an area where desirable land has ready access to excellent sewer and water service is not practical. **Fortunately for Troy, the City has a comprehensive system that allows a great deal of flexibility**.

"A civilization's rise and fall is linked to its ability to feed and shelter its people and defend itself. ***These capabilities depend on infrastructure - the underlying, often hidden foundation of a society's wealth and quality of life.*** *A society that neglects its infrastructure loses the ability to transport people and food, provide clean air and water, control disease, and conduct commerce."*

United States National Science Foundation, 1995

With this in mind, this Chapter will describe significant opportunities and issues related to physical infrastructure and discuss the City's efforts to maintain them. Integral to the discussion of infrastructure is adherence to three key principles: **investment, coordination, and innovation**. The investment portion of this Chapter will provide an overview of the scope

of the City's services and briefly describe how services are currently provided. Coordination will emphasize the importance of planning for infrastructure improvements and address the relationship between land use development and infrastructure. The coordination section will also describe how the City can play a role in regional smart growth based on the strength of its infrastructure. The innovation section will identify and reference concepts to improve current practices with sustainability in mind, and will describe regional initiatives to improve water quality and stormwater management. This Chapter will focus only on the physical assets of the City, and will not discuss the City's public services, such as fire and police protection.

Investment

The City of Troy prides itself on providing the highest quality municipal services. In partnership with the Detroit Water and Sewerage Department (DWSD), the Michigan Department of Environmental Quality (MDEQ), and the Oakland County Drain Commission, residents and businesses in Troy enjoy reliable, affordable, municipal services.

Water and sanitary sewer service in the City are managed by the City's Water and Sewer Division within the Department of Public Works. The Division is responsible for ensuring that the quality of the City's water supply exceeds expectations and that water is always available and sufficient to fight fires.

Troy is one of 126 customer communities who work with DWSD for regional water service. In Troy, there are **500 miles of water main, more than 5,300 fire hydrants, and over 26,000 water meters.** Troy residents and businesses use more than 5 billion gallons of water annually.[1]

The Water and Sewer Division is also responsible for monitoring the discharge of wastewater to the Detroit Water and Sewerage Department (DWSD) waste treatment facility.

Stormwater in the City of Troy is managed in partnership with the Oakland County Drain Commission. The City's Streets and Storm Drains Division investigates residential storm water issues and maintains the City's storm water drainage as regulated by Oakland County Storm Water Permit and the MDEQ. In addition to the hundreds of miles of water mains in the City, there are also many hundreds of miles of storm drains, which empty into **134 detention basins and the City's 6 lakes**.[2]

The City of Troy falls within two watersheds. The northwest quarter of the City lies within the **Rouge River Watershed**, specifically, it is entirely within the Main 1-2 Subwatershed of the Rouge River. The remainder of the City is located within the Red Run Subwatershed of the **Clinton River Watershed**. The City is served by a complex and extensive network of County Drains, and many are enclosed. Major open drains in the City include Sprague Ditch, Sturgis Ditch, Big Beaver Creek, and Gibson Drain.

The Streets and Storm Drains Division is responsible for a network of 364 miles of roads and 500 miles of sidewalks, as well as traffic control devices and signs. Troy is a community that is very tightly integrated with its surrounding communities, and as such, is home to many major regional roads and highways. **Many of the City's major thoroughfares are under the jurisdiction of other agencies, as was demonstrated in Chapter 5**.

Coordination

Management of infrastructure assets must include coordination between jurisdictions. Just as with its natural systems, Troy's infrastructure is largely part of a regional joint effort. Coordination also refers to that between departments and between boards and commissions within the City's administration itself.

Troy is a leader in many areas within the region. **The City is a center of commerce, and is second only to the City of Detroit in the State of Michigan in terms of total property valuation**. Consequently, relative to other communities in the area, the City has a low millage rate and excellent property values. This results in a financially stable City prepared to maintain its infrastructure at a very high level.[3]

Regional Smart Growth Development Patterns and Infrastructure Improvements

Given the high quality of Troy's sanitary sewer, water, and storm sewer infrastructure, Troy is able to continue to absorb new development in selected areas. This situation makes Troy unique to other regional communities that suffer from aging infrastructure, facilities already at their maximum capacity, and insufficient finances to update the systems without relying on outside assistance. Therefore, Troy can serve a larger smart growth purpose that extends beyond its own borders in that it can accept a larger regional share of new development than outlying areas in the region.

1. 2006 Troy Annual Water Quality Report
2. 2007/8 Streets and Drains Budget
3. http://www.troychamber.com/gli/whytroy.htm

A national study conducted by the United States Department of Commerce Economic Development Administration (USEDA) showed conclusively that **money spent updating or building new urban water and sewer facilities yielded much greater economic benefits than money spent on new systems in largely rural areas**. Although construction costs for infrastructure projects in urban locations was slightly higher (1.3 times higher) than those in rural areas, the study concluded that the improvements in urban areas allowed new businesses to create 1.9 times as many new, permanent jobs than those in rural areas. Furthermore, the **urban improvements were linked to 2.8 times as much private investment as rural areas realized, and added 2.9 times as much to the tax base** as similar improvements in rural areas.[4,5]

With this in mind, it is plain to see that investment in infrastructure improvements in already established communities results in significant economic and smart growth benefits to the region as a whole. Tenet 9 of the Ten Tenets of Smart Growth challenges communities to "Strengthen and direct development towards existing communities." Given the quality of its infrastructure, Troy is in an excellent position to accomodate and absorb new development. This philosophy towards Troy's position in the regional growth pattern **complements findings of the Big Beaver Corridor Study and Troy Vision 2020** to be both strategic and selective regarding growth.

In other words, by accepting a degree of new development and redevelopment, Troy can use its strong position in terms of infrastructure capacity to accommodate a significant portion of the region's growth. Consequently, Troy can help alleviate pressure on outlying areas.

Coordination Between Land Use Planning & Capital Improvements

Troy's capital improvement planning is largely done as part of the City's budgeting process. As part of the Capital Improvements Plan process, the City forecasts needs and plans projects 5 years in advance. Capital improvement planning done as part of budgeting includes planning for roadway, drain, sewer, sidewalk, and water main maintenance and improvements.

4. United States Department of Commerce Economic Development Administration, "Public Works Program: Perfromance Evaluation, "
5. Bagli, Fagir, "Economic Impact of Water/Sewer Facilities on Rural and Urban Communities," Rural America Vol. 17, Issue 4

In the next 5 years, the City anticipates investing more than 118 million dollars into the continued improvement of its infrastructure.

As noted previously, it is critical that areas planned for additional development be coordinated with capital improvement planning to ensure that City facilities can accommodate the vision for that specific area. Conversely, the City should be aware that spending on infrastructure improvements in some areas may not be a priority, given the recommendations of this Master Plan.

Innovation

The City has an opportunity to encourage and practice innovative infrastructure design and management, as well as encourage practices that help protect water supplies and reduce the stress on stormwater management, sanitary sewer, and water services. **The primary area where the City of Troy can have an immediate impact with regard to environmental sustainability as it relates to infrastructure is stormwater management**.

Low Impact Development

Later in this Master Plan, Chapter 7 will include Low Impact Development (LID) in its discussion of environmental sustainability. LID represents design techniques that manage rainfall at the source using uniformly distributed, decentralized techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source.

The primary concept behind LID is that stormwater runoff must be treated as a resource, rather than a waste product to be eliminated as efficiently as possible. Irrigation is perhaps the most obvious use for collected stormwater, but LID includes far more potential techniques for maximizing the potential of runoff. LID techniques generally stress infiltration rather than detention, and reduce the dependency on central stormwater systems. By allowing rainwater to infiltrate on site, there are many environmental benefits and often cost savings which result in a reduced need for underground systems. Innovation in stormwater management must be encouraged in both commercial and residential development.

Specific LID techniques include, but are not limited to, the following:

- Use permeable pavers for emergency stopping areas, crosswalks, sidewalks, road shoulders, on-street parking areas, vehicle crossovers and low-traffic roads.
- Disconnect the downspouts from roofs and direct the flow to permeable pavement or other vegetated infiltration and filtration practices.
- Use multi-functional open drainage systems in lieu of more conventional curb-and-gutter systems.
- Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
- Landscape with a rain garden to provide on-lot detention, filtering of rainwater, groundwater recharge, and to reduce runoff volume
- Redirect the flow from gutters and downspouts to a rain garden or retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden irrigation.
- Combine rain gardens with grassed swales to replace a curb-and-gutter system.
- When parking demands do not dictate, build narrower residential streets or restrict parking and sidewalk areas to one side of the road rather than both. Replace the space gained with pervious areas, bioretention (planted areas designed to retain and filter runoff), or vegetated channels.
- Use a linear bioretention cell in the highway median to treat runoff. [6]

Water Quality

The limitation of contaminants which ultimately enter the water system is the best way to ensure that water supplies will remain clean and viable. This is an area where SEMCOG has invested a great deal of energy locally, and which the City of Troy can play a large role. SEMCOG's **"Seven simple steps to clean water" is an example of a successful approach to limiting water supply contamination at its source.** This program is designed to educate individuals about basic techniques that they can adopt in order to help limit pollution. They include:

6. Low Impact Development Center, www. lid-stormwater.net

1. Help keep pollution out of storm drains: Sweep, rather than hose off your driveway, and keep storm drains clean.
2. Fertilize sparingly and caringly: Use fertilizer with low or no phosphorus, allow your lawn to remain taller, and prevent fertilizer from getting on the driveway or other impermeable surfaces, where it is likely to be swept up in runoff.
3. Carefully store and dispose of household cleaners, chemicals, and oil: Practice responsible disposal of potential pollutants.
4. Clean up after your pet: Practice appropriate pet waste disposal by using refuse containers or by flushing material down the toilet.
5. Practice good car care: Wash your car on the grass or go to a car wash facility, where dirty water is treated before it is allowed to leave the site.
6. Choose earth friendly landscaping: Choose native plants, use mulch around the base of trees to retain water, and be conservative with watering and irrigation.
7. Save water: Collect rainwater for irrigation or use less water generally for lawns and other plants. [7]

7. www.semcog.org/OursToProtect

Green City: Responsibility to Natural & Energy Resources

Every level of government bears responsibility for the protection of the natural environment. The United States Government sets policy and protects national resources, like the national parks and other important wildlife refuges. The State of Michigan regulates wetlands and sets uniform statewide policies for the protection of critical Michigan resources. The State also empowers local units of government to establish laws to protect those resources in their own front yards. **Local units of government are the front line of environmental protection and natural resource conservation.** This Chapter will establish the philosophy of environmental sustainability in Troy, framed around a series of policies designed to make the most of the tools available to the City.

Troy is characterized as a vibrant and engaging place to live and work, where environmental and ecological resources play a role in creating a community that will draw the best workforce in the region. Troy can be an environmental leader, demonstrating to others how to grow while embracing its natural resources, and making wise use of energy resources. As discussed in Chapter 2, sustainable cities integrate the concepts of sustainability into policies covering social, economic and environmental topics. Troy and its citizens can use the community's environmental resources responsibly, without compromising the ability of tomorrow's residents to meet their needs.

Preservation and Enhancement of Existing Natural Features

Economic growth and environmental preservation are elements that are commonly perceived as two forces that must be at odds. However, **environmental considerations have the ability to enhance economic developmen**t. Efficiency reduces the cost of products and services, and preservation of natural features increases the value of developed properties.

The City of Troy is nearly built out. However, the City manages over 900 acres of parkland. Some of the existing park land is used for active recreation areas, and some is maintained as natural areas for passive recreation and general open space. The City's current Parks and Recreation Master Plan identifies these City-owned properties, and provides a brief description of each.

Development and Natural Feature Preservation

The value of home sites adjacent to open space, parks, wetlands, greenbelts and other green amenities is greater, all things being equal, to similar sites not adjacent to such amenities. A report published by the Metropolitan Council, a regional planning agency for the Twin Cities of Minneapolis and St. Paul and surrounding seven-county metropolitan

area, showed a conclusive positive impact of open space on residential property values.[1]

In addition, **preservation of the existing natural systems can reduce infrastructure costs.** For example, the preservation of woodlands and open space reduces the amount of stormwater infrastructure necessary to accommodate the site's runoff. Clustering of home sites is another preservation technique that reduces costs in that the developer does not need to unnecessarily extend underground infrastructure to accommodate a more sprawling site layout. The reduction of infrastructure costs results in a greater return on investment.

Encouraging natural feature preservation can be accomplished through ordinance regulations or guidelines that ensure the least amount of impact on a site so that it continues to function at its pre-development level. This can be done by limiting disturbance, imitating natural systems with built replacements, and mitigating the reduction in vegetation and infiltration when the land is covered with impervious surfaces. These design techniques are called Low Impact Development (LID) techniques. While these techniques generally concentrate on stormwater management, they also help preserve existing natural features, like woodlands, that contribute more to the community than just absorbing stormwater runoff. Troy does not have wetland or woodland protection ordinances in place.

The City of Troy must engage its neighbors to preserve features that cross more than one jurisdiction, such as a wetland system or watershed. **Natural features provide significantly more benefits if they are maintained in larger units**, such as a complex system of woodlands, wetlands, and rivers or streams. These larger, connected systems are more successful at maintaining their ecological integrity. The less fragmented natural features are, the higher quality they remain.

1. http://www.metrocouncil.org/Directions/development/dev2006/OpenSpaceStudyNov06.htm

Low Impact Development

Low Impact Development (LID) represents a different way of thinking about stormwater. It is a series of design techniques that manage rainfall at the source using uniformly distributed, decentralized techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source.

Under LID, stormwater runoff is not a waste product, but a resource. For instance, LID techniques such as cisterns and rain barrels use collected rain water for irrigation, or as gray water for toilet flushing. LID also advances the idea that almost all elements of a site plan (open space and built features) can be used for stormwater control. For instance, the parking lot can be made out of porous pavement. When stormwater drains through the pavement, it recharges the groundwater. Similarly, rooftops can be used as planting areas, soaking up rainwater and reducing runoff.

LID techniques often cost less to construct than traditional closed designs. Case studies conducted by the Low Impact Development Center show a 25-30 percent reduction in site development costs over traditional techniques. One reason for the lower costs is that LID techniques keep stormwater on top of the ground, rather than building the infrastructure underground to handle stormwater. Another reason is that small infiltration areas are generally less expensive to construct than one large detention area, particularly if the site is designed to limit the amount of stormwater generated by impervious surfaces.

Low Impact Development Center, www.lowimpactdevelopment.org

Urban Redevelopment

Troy Futures suggested several development methods that will influence natural feature preservation within the City. Villaging, for instance, will act to cluster commercial and cultural services in higher density locations within the community. This, in turn, will allow the few remaining greenfields, or undeveloped areas, to be less densely developed, enhancing the possibility of natural feature preservation on these sites.

For the remaining undeveloped parcels, emphasis should be placed on preserving any existing natural features to the greatest extent possible, clustering in already cleared areas of each site, and ensuring that open spaces are contiguous with adjoining open spaces.

Redevelopment of obsolete or underutilized properties provides opportunities to restore or recreate vegetated communities that enhance the site's ecological value. While not completely natural systems, tree plantings mimic woodlands or native wildflowers plantings that simulate a meadow can be aesthetically pleasing and provide environmental benefits. For instance, one LID technique is to plant deep rooted plants, such as tall grasses typically found in a prairie. The root systems of these grasses grow up to 8 feet deep, and as they grow and die, they provide tiny waterways through the soil that improves infiltration of stormwater runoff. While these techniques would provide benefits in any situation, they could be especially effective in the case of a redevelopment property.

Benefits of Brownfield Redevelopment

There are obvious environmental benefits to cleaning up brownfield sites in a community. These actions create a cleaner and safer environment, reducing risks to public health, safety and welfare, and other benefits:

- *Redeveloping a brownfield site transforms property that is most likely not generating substantial tax revenues to a property that contributes to the local tax base, eliminating an opportunity cost. Also, by not redeveloping brownfields, they could potentially have a depressing effect on property values, leading to further tax revenue loss.*
- *Idle properties that were once viable businesses do not contribute to the job base. Turning them over for new, productive uses creates new job opportunities.*
- *It is likely that brownfield sites have the infrastructure in place to serve a new land use. This can represent a substantial savings by a community or developer compared to building on a green field site.*
- *Re-using property in urban areas decreases development pressure in green fields, which in turn, increases the opportunity to preserve open space and combat urban sprawl.*

Brownfield Redevelopment Guide; Consumers Renaissance Development Corporation; 1998.

Brownfield Redevelopment Authority

The City Council established the Brownfield Redevelopment Authority in 1999, expressing Troy's interest in redeveloping brownfield and other idle or underutilized sites in the city. The Brownfield Redevelopment Authority can offer financial incentives for cleanup and redevelopment or for demolition of functionally obsolete buildings in the form of Tax Increment Financing (TIF) reimbursements.

TIF Reimbursement: The Brownfield Authority may capture the incremental real and personal property tax revenues generated by a developer's project to pay for eligible environmental clean up and contamination prevention incurred on the property.

Single Business Tax Credit: A tax credit of 10 percent up to ten million dollars is available for an owner or operator of a facility for capital and equipment expenditures for redevelopment.

The Troy Brownfield Redevelopment Authority has assisted in the redevelopment of sites throughout the community. Its first project was the redevelopment of the former Ford New Holland Tractor Plant at the southwest corner of Maple Road and Coolidge Highway. The site, which sat underutilized for nearly a decade because of liability and other issues concerning contamination, is now know as Midtown Square, a $200 million mixed use development boasting 600,000 square feet of retail space and 285 residential units.

Redevelopment Incentives

Ordinance regulations are the first line of environmental stewardship in many communities. However, there are other ways of encouraging sustainable development. **The following incentive-based techniques encourage sustainable development:**

- Fee adjustments for infill housing: Riverside, California waives certain fees, such as grading permit fees and water distribution fees, if the property being redeveloped meets the definition of residential infill.[2]

- Smart Growth Zone: Developments in Smart Growth Zones in the City of Austin Texas are charged reduced fees for zoning, subdivision, and site plan applications, and for water and wastewater capital recovery fees.[3]

- Primary employer incentives: Incentives such as application fee waivers, utility and transportation improvements, streetscape improvements, and expedited processing of development applications are offered by the City of Austin, Texas to guide large employers to the Desired Development Zone. These types of employers generate significant levels of growth, both within their specific project and in the surrounding area.[4]

- Built Green Program: In partnership with local counties and builders, the City of Seattle promotes best known practices in energy, air quality, stormwater management and water efficiency to give homeowners added value and home builders a competitive advantage. To stimulate growth in Built Green-certified homes, the City launched a design competition, and highlighted winners on their website.[5]

- Green Review Track: King County, Washington, offers a dedicated "Green Track" for green buildings and projects that incorporate Low Impact Development techniques. Proposals on this track are assigned to a green team, composed of County staff with expertise in green development practices. Staff provides assistance to customers on sustainable development techniques including green roofs, alternative energy systems (solar, wind, geothermal), rain water collection, resource efficient framing, recycled materials, and Low Impact Development site design. Green developments follow a customized review schedule with a single point of contact.[6]

2. www.riversideca.gov/planning/infill.htm
3. www.ci.austin.tx.us/smartgrowth/sgincentives.htm
4. www.ci.austin.tx.us/smartgrowth/sgincentives.htm
5. www.seattle.gov/dpd/GreenBuilding/OurProgram/Design-ToolsStrategies/BuiltGreen/default.asp
6. http://www.metrokc.gov/dnrp/swd/greenbuilding/

Transportation

Methods to reduce the dependence on the automobile were introduced in Chapter 5. **Improving opportunities for non-motorized transportation, transit-oriented development, mixed-use, and technological pathways will contribute to the changing mobility needs of Troy**.

Green Building

There is an emerging, global trend to encourage the development of environmentally sustainable buildings and neighborhoods. Commonly referred to as "green building," this trend has been fueled by numerous organizations who have worked to develop standards around which architects and builders can design their projects. The most prominent of these groups is the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program.

The LEED rating system was originally designed for individual buildings. LEED Certification can be achieved through the use of green techniques applied to new construction or renovations to existing buildings, including historic structures. Over 4,000 buildings have either already been LEED certified, or are registered and going through the certification process in the U.S. Michigan has almost 200 LEED-certified buildings including office buildings, university buildings, churches, nature centers and private residences.

Many green buildings across the country have been completed because the owner was self-motivated, based on the benefits those buildings enjoy. However, **communities can also develop incentives to encourage green buildings** and green site design techniques. Incentives could include property tax credits, tax abatement and tax exemptions, density bonuses, expedited permit review and waiving of permit fees.

In Troy, several notable green buildings have gained regional notoriety. The Kresge Foundation, highlighted on this page, is a model of green development located on Big Beaver Road. **Walsh College** is also adopting a green building philosophy. The College's 15 million dollar expansion at the Troy Campus will seek LEED Certification by choosing recycled or environmentally sensitive material, by incorporating rain water harvesting for irrigation and other uses, and the use of design techniques to capitalize on solar energy for heating.

Troy is also home to the first previously existing building in Michigan to earn LEED Certification. **Bank of America's facility i**n Troy earned gold status due to its use of many environmentally-friendly technologies. The Bank of America facility has the second largest green roof in Michigan, over 53,000 square feet in area. The building also uses heat generated from the computer servers to warm the building, heat water, and melt snow. Other features include the use of underground well to provide water to the decorative fountain, whose wastewater is used to irrigate the landscaping and pull heat from the building during hotter periods.

In addition to LEED, the National Association of Homebuilders have developed their own, voluntary certification program for residential construction, which the Michigan Association of Homebuilders have adopted as part of their program known as GreenBuilt. **GreenBuilt is a program intended to allow Michigan homebuilders to create more sustainable home developments that are energy efficient and more respectful of natural resources**. The GreenBuilt program requires that all members who elect to secure GreenBuilt status attend a 3-hour Green Built training session. GreenBuilt also provides professional assistance to members.[7]

In Troy, the Cedar Pines of Troy project is the only entirely GreenBuilt project in southeast Michigan. This project includes homes that are designed to use 52 percent less electricity, 54 percent less natural gas, and 46 percent less water. The development also features homes with dual flush toilets, rain water harvesting, low flow faucets, renewable flooring materials, no VOC Paints, trim made from sustainable forests and plantations, high efficiency dual stage furnaces, high efficiency water heaters, and photovoltaic solar cells.[8]

7. www.greenbuiltmichigan.org
8. Wake-Pratt Construction Company

Other green development techniques are reflected in projects such as Caswell Town Center, which incorporated innovative stormwater management techniques.

Urban Form and Neighborhood Design

Neighborhoods can be designed to reduce energy consumption by providing opportunities for shorter vehicle trips and the use of alternative forms of transportation. Some techniques include the locating of residential units near neighborhood shops and existing utilities, the provision of bicycle and transit facilities, and proximity to schools and parks.

The U.S. Green Building Council is piloting a program for energy-efficient neighborhoods. The LEED Neighborhood Development Pilot Program includes many site design techniques that preserve natural features, habitat and open space, such as:[9]

- Limit parking to encourage people to use alternative methods of transportation, like walking or bicycling.
- Promote local food production to minimize the impacts of transporting food long distances. Farmer's markets allow such goods to be sold locally.
- Use energy saving technology for infrastructure needs such as street lights, water and waste water pumps.
- Capture and use stormwater runoff and use in place of potable water for irrigation and toilet flushing.
- Use recycled concrete and asphalt for roadways and parking lots.

9. Pilot Version, LEED for Neighborhood Development Rating System, U.S. Green Building Council

Community Energy Planning

In light of rising energy prices, many communities are looking for ways to reduce their energy consumption and their carbon footprint. **New ideas like community energy planning are emerging to identify ways communities can reduce the amount of energy they use.** Community energy planning also encourages communities to closely analyze transportation and land use planning in light of energy efficiency and consumption.

What is LEED?

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. LEED provides a roadmap for measuring and documenting success for every building type and phase of a building lifecycle.

United States Green Building Council, www.usgbc.org

Troy has developed a Comprehensive Energy Plan (CEP), focused on energy efficiency and how the City can reach energy goals. Unique features of a CEP include creating an energy profile by identifying where the community's energy comes from, how much it costs, and how it affects the local and global environment. Involvement of local energy and water utilities in the plan development process is also important, since they may be involved in the implementation of the plan. Elements that were considered in the CEP included:

- Land Use Planning and Transportation; to develop compact complete land use patterns where a variety of uses are mixed to increase alternatives to automobile travel. Strategies include contiguous development patterns, parking plans, street design and traffic rules, trip reduction measures, and stakeholder participation.
- Site Planning and Building Design; to increase the use of design to improve energy performance. Strategies include building and appliance efficiency, solar orientation of buildings, landscaping, wind shielding and shading, pedestrian facilities and orientation, and transit facilities and orientation.
- Infrastructure Efficiency; to increase the use of energy-efficient infrastructure, and to increase the production of energy from regional or municipal facilities. Areas where the City can analyze energy efficiency are water supply and use, wastewater collection and storm drainage, recycling programs, heat and power recovery, and joint infrastructure planning and delivery.
- Alternative Energy Supply; to increase local and high efficiency energy supply options. Strategies include waste heat utilization, heat pumps, co-generation of heat and power, wood-waste systems, solar technologies, and alternative fuels.[10]

Kresge Foundation

In 2006, the Kresge Foundation has completed renovations to its headquarters in Troy in 2006 and 2015, which include the addition of a new a series of environmentally friendly site improvements. The project also restored 19th century farm buildings on the 3 acre site. The use of green roof materials, geothermal wells, and recycled materials help the facility function efficiently. The Kresge Foundation also provides challenge grants to other non-profits that adopt green building principles.

KRESGE FOUNDATION HEADQUARTERS
Source: www.worldarchitecturenews.com

City Demonstration Projects

Many of the ideas presented in this chapter for environmental preservation and energy efficiency are long-term techniques. However, there are many initiatives the City can accomplish relatively quickly to communicate its commitment to the environment. These "next steps" will engage citizens and inspire community members to think about the environmental issues Troy is facing.

Hands-On Projects

One way to foster a bond between residents and a particular natural feature, such as a wetland or stream, is to get them involved in a hands-on restoration or clean-up project on City-owned properties. **Once people have been introduced to the plants in the ecosystem, and the function that those plants play, they have a greater understanding and appreciation for that place.** Hands-on projects give residents a chance to learn about the ecosystems in the City.

10. http://www.wcel.org/issues/urban/sbg/Part1/integratedplanning/CEP.htm

LEED Across Michigan

Michigan is a national leader in the area of green building. As of 2013 there are 410 LEED certified projects in Michigan. West Michigan is especially successful in its encouragement of green building. In fact, the City of Grand Rapids has been recognized by the U.S. Green Building Council as a national award-winner in green building. Grand Rapids has more square footage per capita of LEED certified buildings than any other city in the United States. The City itself has lead the way with the development of its own new LEED certified Water and Environmental Services Facility, which uses 23 percent less gas and 35 percent less water than similar buildings of its use and size.

Private industry in Grand Rapids has also taken the green building initiative seriously. Steelcase and Herman Miller have voluntarily followed environmentally safe procedures for manufacture of furniture and Crystal Flash, a gasoline station chain, has begun offering biodiesel on a more widespread scale.

These and other Michigan companies, including large corporations like Ford, have begun to realize the benefits to green building in more ways than one. Not only do these companies realize actual savings in terms of building maintenance and energy use, but they also contribute to their public image by encouraging environmental stewardship.

Michigan Business Report; Michigan Economic Development Corporation, Volume 5, Issue 2, 2007

Once the project is complete, interpretive signage should be installed to describe the "why," "what" and "who" of the project.

The City currently has such a program in **River Day**, a volunteer-driven annual project focused on environmental cleanup projects. In 2007, along a tributary to the Clinton River, over 70 volunteers dedicated over 400 total volunteer hours to stabilize 300 feet of streambank by creating new wildflower beds and planting native species.

Maintenance of Parks and Recreation Facilities

Another relatively short-term effort is to ensure that the City staff maintain parks and natural areas in an environmentally friendly way. New alternatives for maintaining turf, ball fields, roadways and other elements of City parks are now available. Better practices ensure that facility maintenance does not negatively impact adjacent wetlands or other natural features. A regular evaluation of how City activities are done should be considered in light of natural feature preservation objectives. If practices do change, interpretive signage can be used to inform the public of changes to a park's visual appearance.

Planting Trees

Climate change and stormwater management are two important environmental topics. One common thread between these two is the impact trees have on each. Trees sequester a large amount of carbon, a greenhouse gas. For example, a 2.5 acre Oak woodland can sequester about 3 tons of carbon in one year. Trees also intercept and absorb a large amount of stormwater. A typical woodland can absorb 20,000 gallons of rain in one hour through holding water on its leaves and trunk, absorption into the tree, and absorption into the deep leaf litter on the woodland floor. The City can lead community planting programs and encourage additional trees with incentive techniques in the Zoning Ordinance.

Planting trees can be an annual community event that is also relatively inexpensive. The City is now working with the Alliance of Rouge Communities (ARC) to conduct a City-wide tree canopy survey using City Green software to quantify and evaluate the City's urban forest.

Waste Reduction

While the City has an extensive recycling program for its residents, the City could also institute a waste reduction program for its own operations. Waste reduction makes good business sense because it saves money through reduced purchasing and waste disposal costs. The US Environmental Protection Agency has a program called "WasteWise" that provides free technical assistance to help develop, implement, and measure waste reduction activities.

Adaptive Reuse

The City should also continue to identify opportunities for adaptive reuse of obsolete properties within its own facilities network. A good example of City-initiated adaptive reuse is the creation of the Sanctuary lakes Golf Course from a former landfill site. This 18-hole golf course is a critically acclaimed asset to the City and makes use of challenging property to create a significant asset for the community.

Lawrence Technological University Solar Decathlon House

The Solar Decathlon house, located adjacent the Troy Community Center, is an energy-positive house designed and built by a team of students and faculty from Lawrence Technological University with help of volunteers from the Michigan Regional Council of Carpenters and Millrights in 2007. The house uses a variety of advanced energy conservation features to showcase potential "green" housing options.

The Solar Decathlon, held in Washington, D.C., was an event which included a competition between more than 20 schools that contributed a solar-powered structure to a "solar village,' which was set up on the National Mall.

The Troy Chamber of Commerce purchased the home and donated it to the City to maintain as a showcase for environmentally-friendly development.

Waste Wise

WasteWise is a free, voluntary, EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes, benefiting their bottom line and the environment. WasteWise is a flexible program that allows partners to design their own waste reduction programs tailored to their needs.

All organizations within the United States may join the program. Large and small businesses from any industry sector are welcome to participate. Institutions, such as hospitals and universities, non-profits, and other organizations, as well as state, local, and tribal governments, are also eligible to participate in WasteWise.

Waste reduction makes good business sense because it can save your organization money through reduced purchasing and waste disposal costs. WasteWise provides free technical assistance to help you develop, implement, and measure your waste reduction activities. WasteWise offers publicity to organizations that are successful in reducing waste through EPA publications, case studies, and national and regional events. These events also provide networking opportunities for organizations to share waste reduction ideas and success stories.

http://www.epa.gov/wastewise/about/overview.htm

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People: Planning a Community for All Ages and Stages

Since 2008, Troy's housing market has changed dramatically. While the focus on "Urban Villages" and promoting mixed use residential has been a positive force on the market, the foreclosure crisis and economic recession had serious consequences for homeowners and housing developers. What did we learn in the last 5 years? When change is the only constant, diversity is the City's key to success. A diverse mix of housing types is essential to meeting the needs of current residents, while attracting new households to the community. The City of Troy is a leader in the Knowledge Economy and should continue to meet the needs of this young, ambitious workforce by providing desirable entry level housing options. The City is also a leader in public education, recreation amenities, and community services; such quality of life factors make Troy an attractive community for families and empty nesters.

The City should continue to protect homeowners and the character of residential neighborhoods, while providing new opportunities and greater flexibility. Supporting townhomes and other multi-family housing options as infill development will allow residents to transition through the various housing types while staying rooted in the Troy community.

This Chapter will analyze the changing nature of Troy's population and compare certain local demographic and housing trends to regional and national trends. Household size, age and other characteristics of the population will be used to make recommendations designed to improve the utility of the City's housing stock as well as other community elements to meet the changing demand.

The driving force behind many changes Troy will experience is changing characteristics of its population. The median age of Troy's population has increased and by 2030 over 26% of the population will be over 65. While the City will remain very attractive for families, both the younger and older population will desire a community that looks somewhat different than the current one.

Changing demographics can have the most profound impact on housing. A mix of housing types allows communities to retain existing residents while attracting new residents. The supply of entry level housing and housing which allows aging residents to "age in place" must be proportional to the population of those potential buyers. In a community that is also seeking to position itself as a leader in the knowledge economy, the most desirable housing to attract a younger workforce must exist at a variety of housing values in order to capitalize on other quality of life factors in the City. In other words, **the City must strive to have the right housing for the right workforce at the right time**, all without jeopardizing the previous generation's ability to continue their life in Troy.

A healthy and livable city is also one that provides a variety of elements that contribute to a high quality of life including; economic and education opportunities; access to cultural, religious, recreation, shopping and entertainment resources; quality built and natural environment; and the ability to have a safe and healthy lifestyle.

Population and Households: Who are we and who are we becoming?

The changes in Troy's population will occur not so much in number but in characteristics.

The population of the City of Troy has steadily increased since the 1960 U.S. Census but this growth trend has tapered off since 2008. As shown in figure

8.1, the population in 2010 was 80,980, a modest increase over 2000. In 2015, SEMCOG estimates the population to be 81,261.

As with similar communities, approaching a "built out" stage, population growth is slowing. SEMCOG predicts that by the year 2040, the City of Troy can expect to have a total population of 83,062, an increase of 2.6 percent from the 2010 Census population.

According to the 2010 Census, the community had 30,703 households. By the year 2040, SEMCOG predicts that the number of households will increase by approximately 6 percent from the 2000 Census (figure 8.2). Current household size in the City of Troy is 2.63 (2010 U. S. Census) and 35 percent of households have children. A common trend in Southeast Michigan is a higher rate of increase in the number of households than total population growth. In the City of Troy, between 2000 and 2010, total population increased by 0.03 percent while the number of households rose by 2.23 percent.

Commensurate with an increased number of households is a decrease in the size of households. By 2040, household size in Troy is projected to be 2.50 persons per household. Given that fewer people in Troy will be living in each household, the demand for housing may actually increase, even though the population is dropping. The trend towards increased households with a decline in total population is due to several factors, including: a decrease in the number of children being born to women, couples having children later in life, and an increasing number of aging baby boomers, individuals born between 1946 and 1964.

The following population characteristics, complemented by the population growth projections above, provide critical information to be considered moving forward in the City of Troy:

- *Household Type:* Over 75 percent of the City's population live in family households. The percentage of family households is slightly higher than Oakland County's which is 66.9 percent. The remainder of the population is composed of non-family households. Non-family households consist of a group of unrelated persons or one person living alone.

FIGURE 8.1: CITY OF TROY FUTURE POPULATION
Source: 2010 U.S. Census and 2015 SEMCOG estimates.

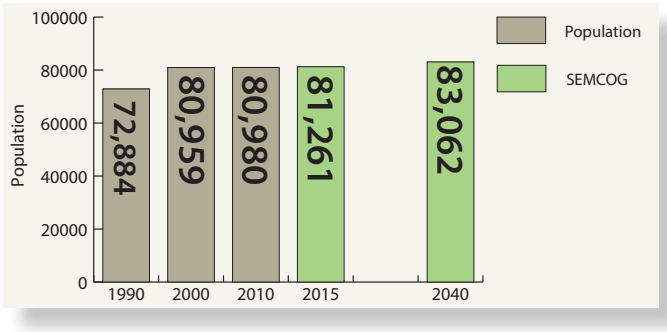
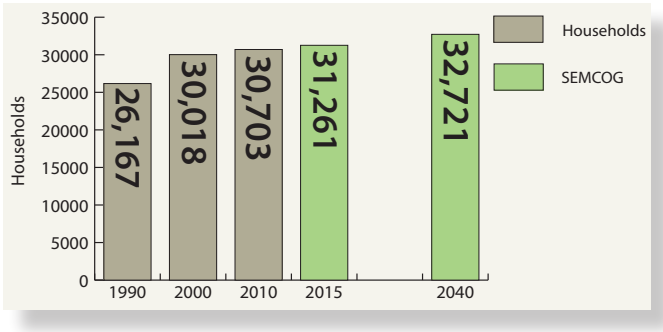


FIGURE 8.2: NUMBER OF HOUSEHOLDS
Source: 2010 U.S. Census, SEMCOG, City of Troy



Today's Seniors
How they are different

- *Living longer*
- *Highly educated*
- *Diverse*
- *Wealthy but with debt*
- *Remaining in workforce*
- *Technologically savvy*
- *More single living arrangements*
- *Physically active*

- *Age Composition*: **Consistent with State and National trends, the population of Troy is aging.** As shown in figure 8.3, 45 percent of Troy's residents are between the ages of 35-64. The median age in the City of Troy is 41.8 years, as opposed to 38.1 in 2000 according to the U.S. Census Bureau. All trends remaining the same, a substantial shift is expected in the age distribution by 2030. **As indicated in figure 8.3, the age 65 or older age range is currently 14% of the population up from 10% in 2000. Over 26 % of the population will be 65 and older by 2030.**

- *Income*: Like many Michigan communities, the City of Troy experienced a significant drop in household income levels due to the economic recession of 2008. According to 2008-2012 ACS Estimates, the median household income in the City of Troy was $86,465 (2012 dollars), a 16.9 percent decrease from the 2000 median income of $101,092 (2012 inflation-adjusted dollars). Despite setbacks and slow growth through 2012, the City of Troy maintains its position as "Michigan's Premier Address for Business, Retail, and Commerce," and well exceeds the Oakland County 2012 median household income of $64,637 (2012 dollars).

- *Education*: **The City of Troy has a well-educated population**. As indicated in figure 8.4, over 78 percent of Troy's residents have some college education. Twenty-six percent of residents have a graduate/professional degree. Only 5.3 percent of Troy residents did not graduate high school, similar to Oakland County as a whole, but about half of the Statewide average.

- *Racial Composition*: **The City of Troy's population is diverse with a higher percentage of Asian residents than any other city in Michigan**. According to the 2010 U.S. Census, the racial makeup of the City was 81.3 percent White, 2.1 percent African American, 13.2 percent Asian, and 1.7 percent from two or more races. 1.5 percent of the population is of Hispanic or Latino origin.

Given what we know about the current population, and trends based on historical data, what must the City do to best respond? The next section of this Chapter will explore specific solutions to specific issues facing the City in this regard.

FIGURE 8.3: POPULATION DISTRIBUTION BY AGE GROUP (2010)
Source: SEMCOG

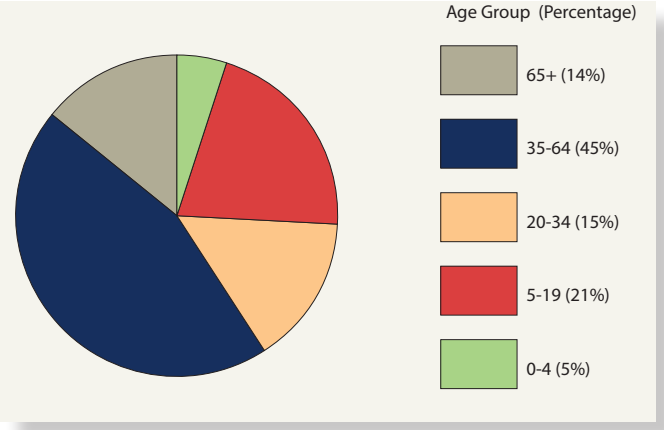
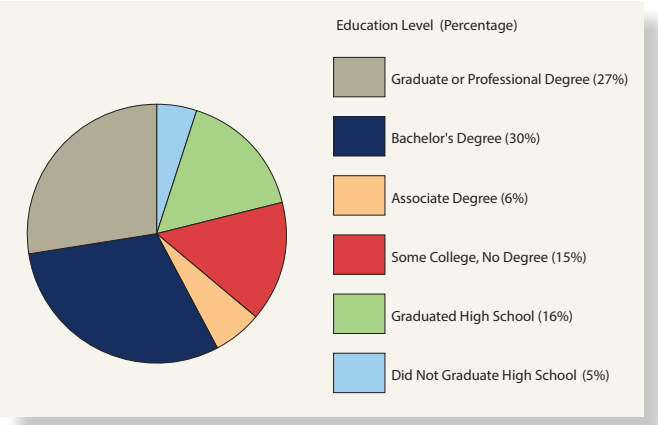


FIGURE 8.4: EDUCATIONAL ACHIEVEMENT OF RESIDENTS OVER 25 YEARS



Housing Options in Troy

Ranked as one of the "Best Places to Live" in America in 2012, the City has become a desirable place to call home for people of all backgrounds (CNN Money, 2012). The most challenging part of long-range planning for housing a changing population involves taking account of the existing housing stock in the City and understanding in what areas it could be augmented to meet the anticipated changes in demand based on population trends and characteristics. For many years, Troy has been a magnet for families. Excellent schools, a safe environment, and attractive amenities have made Troy a very desirable place to live. The characteristics of the population have also driven the housing stock. As depicted in Figure 8.5, housing in Troy is overwhelmingly single-family detached.

There are several critical themes facing the City with regard to housing. First, national trends and local projections indicate that the residents of Troy are aging. As people mature, their needs change with regard to housing as a result in changes in employment, household size, mobility, income, and personal needs. Secondly, the City desires to encourage homeownership, and must therefore be concerned with ensuring that high-quality, but affordable housing options are available. Finally, as the City labors to provide modern amenities and foster a globally recognized center for knowledge economy businesses, it must ensure that this workforce finds Troy to be rich with the best housing options in the region.

Nothing in this plan is intended to change the overwhelmingly single family nature of the community. However, changes in the age and characteristics of the population will influence the characteristic of the housing stock. Large three and four bedroom homes appeal to families, but may not be ideal for seniors, young professionals or small families.

Plans for the future must include a variety of housing options for both a younger workforce as well as an aging population.

Housing an Aging Population

The next generation of older adults is one with a new perspective on aging; one that includes being physically active, staying close to family and friends, moving into a new second career, pursuing education, or accomplishing a lifelong dream. Given the expected shift in the City of Troy's population, this Plan must address how the housing needs of active seniors will be met. It is important to note that population age shifts and the resulting housing demands are largely cyclical, though not necessarily consistent, from cycle to cycle. Many of the concepts described here also provide options both for a younger population as well as persons with disabilities in Troy.

Where the previous generation of older Americans may have aspired to live in a resort-style destination community, today's active seniors are staying active longer than ever before.

Key Findings of Boomers and Shakers Forum

Most of the participating residents are likely to remain living in Troy as they age. Many noted the high quality of life living in the city. For those that identified that they are likely to leave Troy, the most listed reason was a lack of housing option and a lack of transportation options. Underserved senior housing options and a need for increased public and dedicated senior transportation options was a common discussion point of the Forum.

The most identified underserved housing type was senior-friendly housing such as smaller, single-family homes, condominiums, or apartments with first floor master bedrooms. Housing affordability was listed as a significant housing limitation. Many remarked that they are on a fixed income and cannot afford a $400,000 house/condo. They noted that affordable, smaller housing options are difficult to find in Troy and the city should push development of those types.

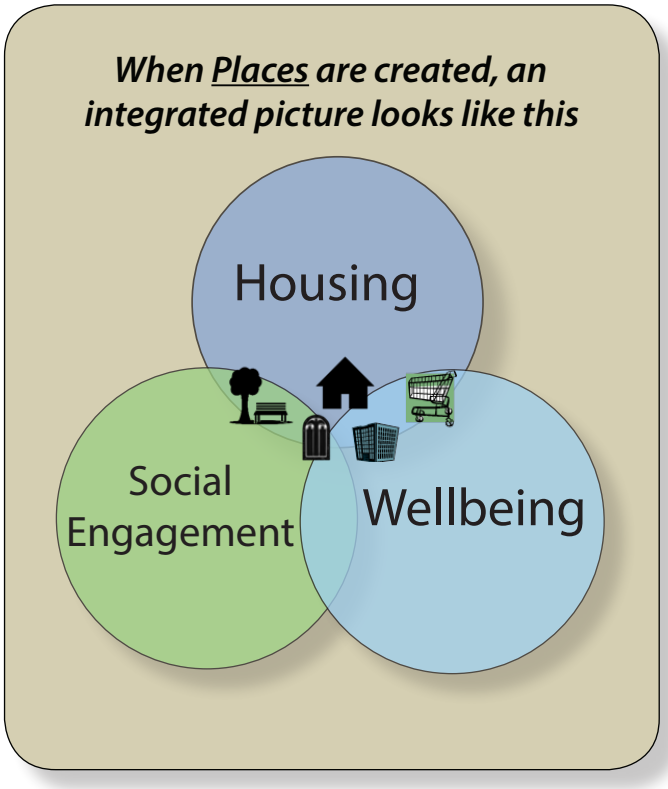
To that end, there is an overwhelming desire of the "over 65" population to age in place. Given the complications, limitations, and expense in retrofitting existing homes to meet the needs of an aging tenant, many homes no longer remain practical as the homeowner ages.

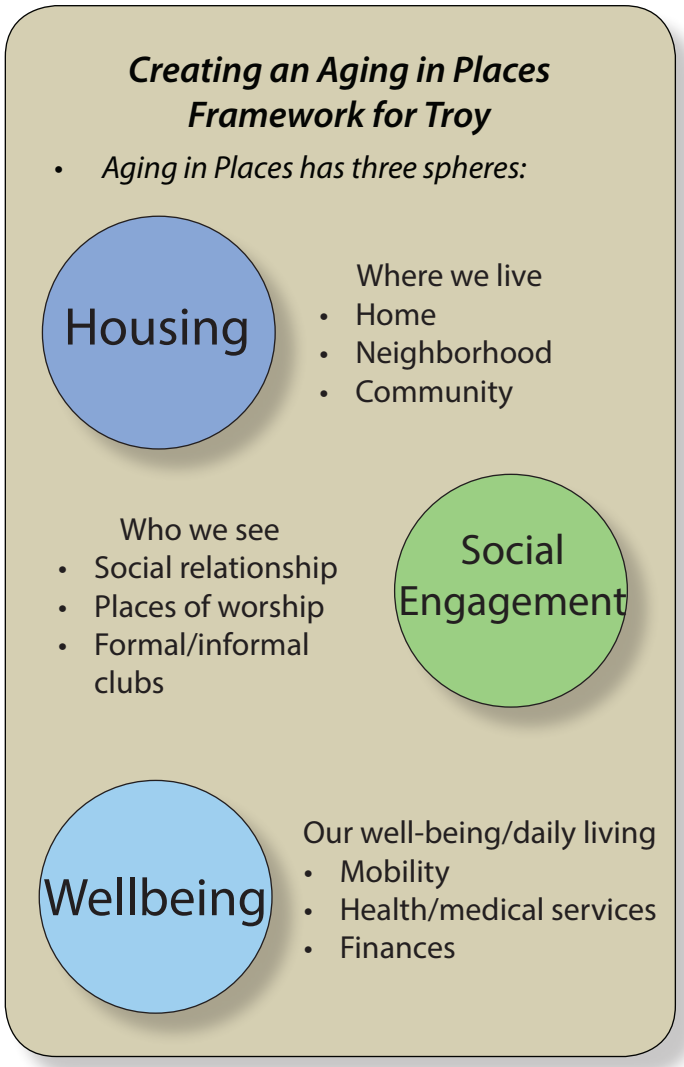
Promoting an **Aging in Places** strategy will more fully address the full complement of the needs of an aging population. While Aging in Place is the preference of the vast majority of seniors, there can be limitations in fulfilling every need. Active seniors are looking for a rich social environment, walkable neighborhoods and access to needed services, as well as living in a comfortable home. A full environment for active seniors can be created by addressing the housing, well being and social engagement needs on a more complete basis.

"Universal Design" and "Visitability" are first steps towards making a community and its housing more inclusive, and one which can empower a homeowner to age in place. Universal Design is a broad concept which involves design products and spaces so they can be used by the widest range of possible users. Coined in the 1980s, the term "visitability" is used to describe a few basic, affordable design options which broaden the equity in housing accessibility without necessarily stressing full accessibility for persons with disabilities, or older adults: These design elements are far more important to the functionality and safety of a home than many traditional full-accessibility standards, such as lower mirrors and sinks, etc. These features are critical to even permit the entry of a disabled or aging person into the structure. The elements include:

- At least one no-step entrance;
- All doors and hallways wide enough to navigate through with a walker or wheelchair; and,
- A bathroom on the first floor big enough to get into in a wheelchair, and close the door.

In any new development or redevelopment, designers can easily gain a wider market by thinking about access and visitability at the concept phase. The visitability movement argues all new homes





should be made visitable, which allows for them to be more easily converted to full-accessibility for an aging resident or to a resident with disabilities, and to provide for increased mobility for all persons, and therefore increased social equity. The proponents of visitability argue that if only those homes occupied by disabled or older adults are designed for visitability or full accessibility, that housing suitable for aging in place of older adults will be effectively cut-off from the mainstream public.

For those residents desiring a more structured housing situation or those that need a higher level of care or assistance, a wide variety of housing products are available. Traditional age-restricted multiple-unit senior housing developments continue to thrive in communities across the United States. Assisted living and nursing home care centers, which can provide different levels of care from basic assistance to full dementia care, are also growing.

Missing Middle Housing

In order to capitalize on the quality of life elements this Plan suggests to create a lively and vibrant community, the City must also have the right housing to retain and attract the changing population, mobility and proximity between civic elements, quality parks, shopping, dining and other amenities is critical, but what is even more critical is the proximity of those elements to innovative new housing.

Over 125,000 people work in Troy every day, but only about 12,000 of those people reside in the City. The City must identify ways to capture more new residents from this critical group. Two factors contributing to this phenomenon could be the cost barrier, and the availability of innovative housing styles. The predominant housing type in the City of Troy (73 percent) is a single-family detached home. Twenty-percent of units are multi-unit apartments with the remaining 7 percent being one-family attached homes or duplexes and townhomes.

While most people characterized as part of knowledge economy workforce benefit from rising incomes and a great deal of investment mobility, not all members of this valuable demographic have the means to buy into new housing. Many members of this workforce will be first time homebuyers.

While most people characterized as part of knowledge economy workforce benefit from rising incomes and a great deal of investment mobility, not all members of this valuable demographic have the means to buy into new housing. Many members of this workforce will be first time homebuyers.

According to the 2004-2005 Community Profiles compiled by the Oakland County Department of Planning and Economic Development, housing costs in the City of Troy have risen in recent years. The average housing cost in 1999 was $215,062, compared to $253,889 in 2001 and $270,745 in 2003. The City of Troy Assessor reports that the 2006 average sale price was $332,076, a significant increase.

The increase in housing costs is attributable to new construction, the increased popularity of the City of Troy as a residential and business setting within the metropolitan Detroit community and general rises in housing costs within southeast Michigan.

With new white-collar business also comes a need for additional service industry businesses, which require a high-quality workforce themselves. Many members of the service workforce are priced out of communities they work in, and must commute into places like Troy.

There is a mismatch between the current housing stock in Troy and both the characteristics and desires of the population. There is increased preference for living in walkable environment, near shopping and parks. The solution is neither found in building large

Visitability Standards

The concept of "visitability" emerged in the 1980s and has been a growing trend nationwide. Some of the states and localities that have already incorporated visitability standards include Naperville, Bollingbrook, and Champagne, Illinois, Atlanta, Vermont, Texas, Kansas, and Arizona. The term refers to single-family housing designed to be lived in or visited by people with disabilities.

(http://www.accessiblesociety.org/topics/housing/visit-ability)

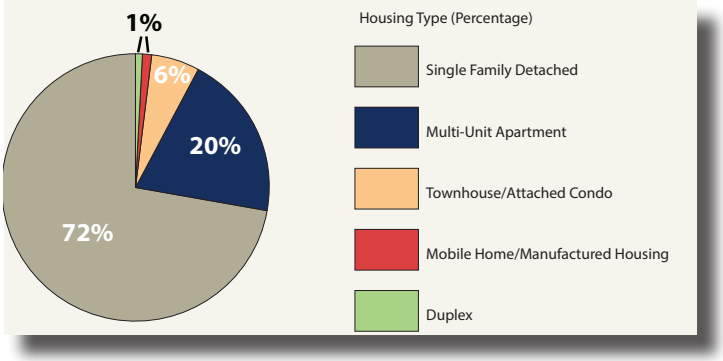
single family homes nor in traditional multiple family apartments.

The type of housing option that is lacking in Troy is the "Missing Middle." Missing middle housing is composed of smaller single family homes, duplexes, fourplexes, lofts, townhouses, mid-scale apartments and live-work units. Missing middle housing achieves moderate density that can be appealing to both younger and older populations. Missing middle housing offers a range of multi-unit or clustered housing types compatible in scale with single-family homes.

High quality entry level housing does not necessarily mean subsidized or public housing. Housing becomes affordable when supply and demand for different housing types are balanced. For instance, if a majority of housing units in a community are small lot, small square footage, older homes, the few large, new homes with property may be all the more desirable, and vice versa. Conversely, if a community is exclusively single family detached homes and the only attached units are downtown luxury condominiums with 2,000 or more square feet, entry-level housing becomes scarce and the market for it becomes competitive.

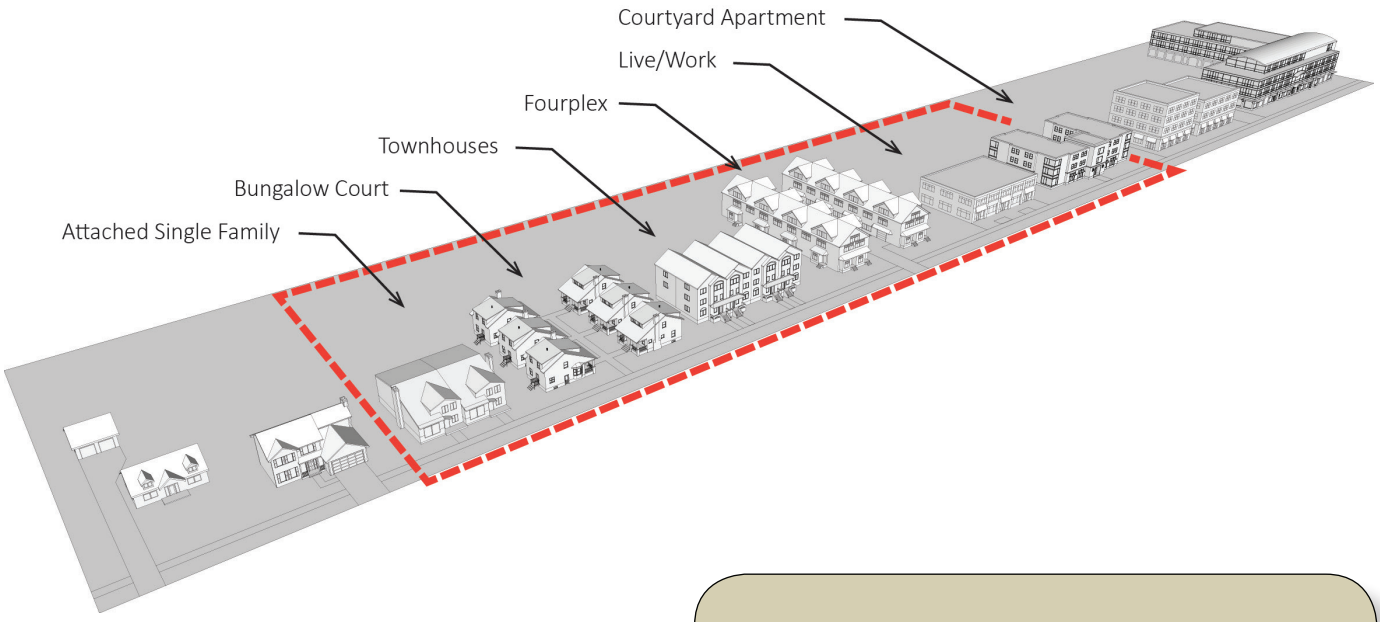
In order to combat this in Troy, the City must encourage a variety of housing types to allow for a balanced housing stock. Smaller units for sale in newer developments allow for new homebuyers to invest in the City without a high cost barrier for entry.

FIGURE 8.5: TROY HOUSING BY TYPE (2010)
Source: SEMCOG



"Missing Middle" Housing can include attached single-family, fourplex, townhome, live-work, or apartment.

The Missing Middle



Targeted Locations in Troy for Missing Middle

- *Neighborhood Nodes*
- *Maple Road*
- *Big Beaver, as part of mixed use development*
- *Rochester Road*

Characteristics of Missing Middle Housing

- *Walkable context and sense of community - Location within an area which is in walking distance of services and amenities is essential. Sense of community is created through shared community space, either within or in close proximity to the development.*
- *Transitional density - The Missing Middle Market offers an opportunity to create housing at densities which fall between traditional single family and multiple family. Introducing a mixture of design and styles can reduce the perception of density.*
- *Smaller, well designed units. Combined with smaller footprints, there is a strong emphasis on quality and efficient use of space.*
- *De-emphasizing parking. Providing too much parking on-site defeats many of the efficiencies to be achieved. Again, location in a walkable environment, preferably near transit, can reduce the need for on-street parking.*

(Source: Dan Parolek, blog post, Apr. 3, 2012, Better Cities and Towns)

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Land Patterns: City Design and Image

Future Land Use Categories

Single Family Residential	75
Neighborhood Nodes	77
High Density Residential	83
Big Beaver Road	85
Rochester Road	87
Maple Road	89
South John R Road	91
Northfield	93
Smart Zone	95
Automall	97
Transit Center	99
21st Century Industry	101
Recreation and Open Space	103
Public and Quasi-Public	103

The term "Future Land Use" brings to mind a prescription for isolated, parcel-by-parcel land use classifications that permit the development of a very limited number of land uses. This model tends to perpetuate the separation of land uses, even when it is not always the best option. This type of traditional land use planning was brought about in an age when zoning was in its infancy and land was readily available. There was less concern about the conservation of natural resources, and economic factors took precedence. While frequently effective, this kind of planning has had unintended consequences.

As cities and regions have grown over the years, traditional land use plans have fostered sprawl in Southeast Michigan and impeded compact communities served by close proximity to jobs, schools, and community services. At risk has been quality of life, an area which is critical to remaining competitive in the 21st Century, as discussed in detail in many Chapters of this Plan.

Today, Troy and many other communities have begun looking for new ways to improve quality of life by creating vibrant, mixed-use areas where jobs, great schools, opportunities for social interaction, excellent services and shopping, and high-quality neighborhoods exist in close proximity. Techniques such as Planned Unit Development (PUD) have been developed for just this reason. PUDs demonstrate that different land uses are compatible and supportive of each another.

As a result, this Future Land Use Plan will expand on the concept of "villaging" established by Troy Vision 2020, and translate that concept into policies that manifest themselves on the Future Land Use Map. It will introduce the concept of the "Social Neighborhood" and describe how it is intended to interact with the "Economic Neighborhood." It will describe the character and role of places like the Big Beaver Corridor and Oakland Mall, an alternative way to think about Maple and Rochester Roads, and the industrial areas of the City.

There are many traditional land use elements that should be maintained in Troy. Adherence to conventional approaches in all areas of the community will not allow the City to realize its vision.

A shortfall of traditional land use planning is the primary focus on land use, and the lack of

attention toward physical form. The Troy Master Plan will incorporate city design and image as primary areas of focus. This Chapter will establish future land use categories on which the Plan is based, and define the urban design characteristics of established categories.

Land Use and City Design

The Troy Future Land Use Map does not allocate specific uses on a parcel-by-parcel basis, but **represents a graphic illustration of the overall policies of this Plan, and describes the intended character of the various areas of the City**. The primary categories will be supported by urban design guidelines and, in certain cases, sub-area plans which provide additional detail with regard to the intended styles and patterns of development.

The Future Land Use Plan of the City of Troy will be implemented through a variety of techniques. The most significant of these tools is the application of Zoning Classifications consistent with the Plan. It is important to note, however, that the Future Land Use Map is a long-range guide, and is not a "Zoning Map" intended to indicate the geographic extent of all land use classifications or to enable all indicated uses to occur immediately. The Future Land Use Map is included on the following page.

Neighborhoods are vital components of the City. **Historically, neighborhoods provide societal, educational, recreational and economic needs within a half-mile walking distance.** The Vision 2020 strategy establishes the idea of fostering "villages" within the City. Residents want to enjoy a personal sense of place which is best found at the neighborhood scale. **For Troy, the ingredients are in place for classic walkable neighborhoods.** Major thoroughfares delineate square mile grid patterns. Elementary and Middle Schools are centrally located within many of the neighborhoods. The corners of most neighborhoods are developed with convenience retail and service businesses.

The Master Plan recognizes that current lifestyles warrant modifying the walkable neighborhood concept. Not every person will

Elements of Great Streets and Neighborhoods

Great Streets

- *Accommodate many users with various modes of transportation.*
- *Connect smoothly with the rest of the street network.*
- *Encourage social interaction.*
- *Allow for safe and pleasant pedestrian activity.*
- *Have a unique sense of public space created through physical elements.*
- *Consider the scale and architecture of surrounding building infrastructure.*
- *Benefits from community involvement.*
- *Reflect the culture or history of the community.*
- *Complement the visual qualities of the community.*
- *Utilize green and sustainable practices.*

Great Neighborhoods

- *Consider the scale and architecture of the building infrastructure.*
- *Foster social interaction.*
- *Enable multiple modes of transportation safely and efficiently.*
- *Are safe.*
- *Are good stewards of the natural environment.*
- *Reflect the community's character and have unique characteristics that provide a sense of place.*
- *Retain the community's history.*
- *Promote and protect air quality and stewardship of natural resources.*
- *Protect or enhance the local environment and biodiversity.*

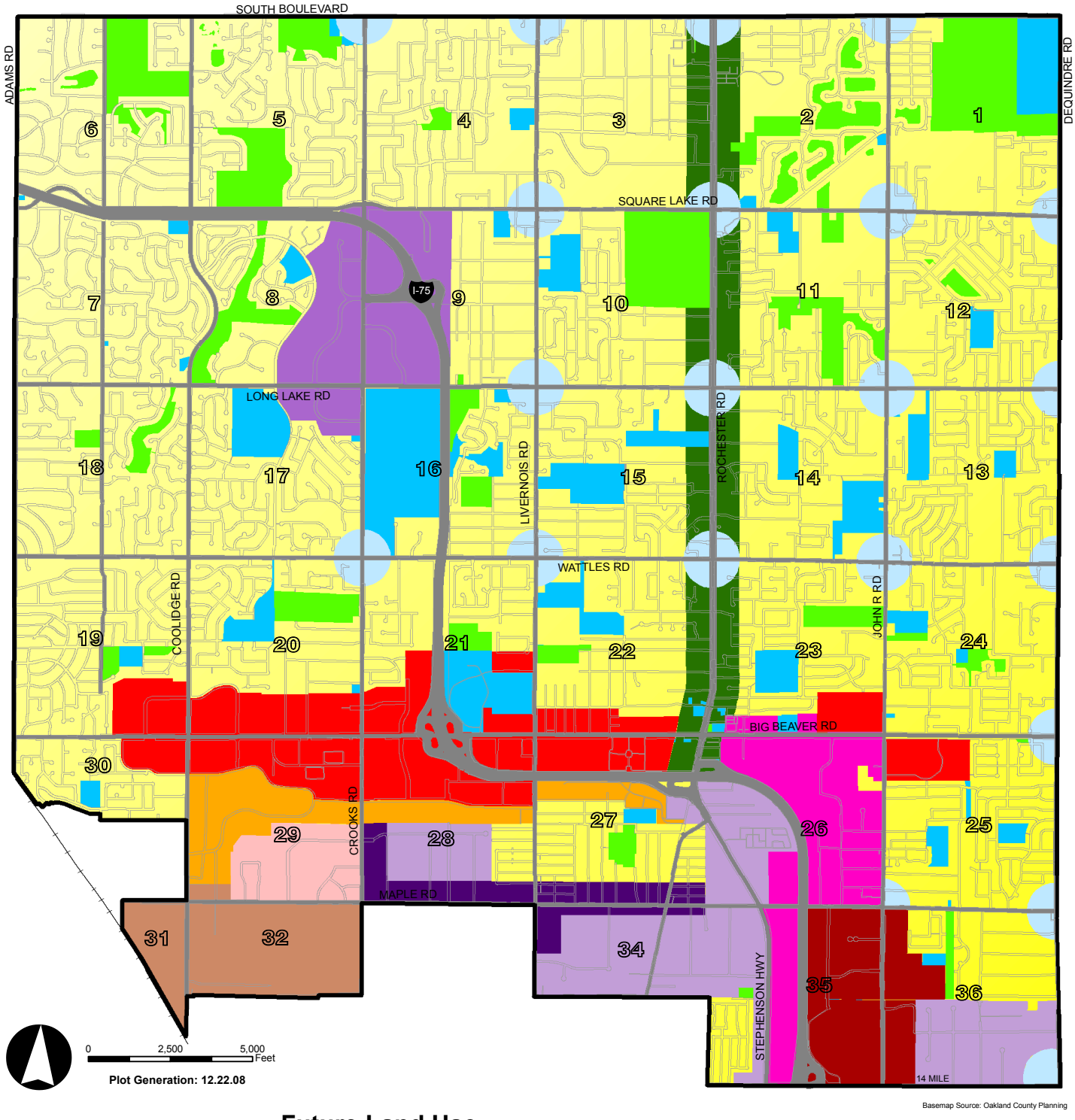
Great Streets and Neighborhoods:

- *Implement LEED standards in construction and neighborhood design.*
- *Have planted street trees.*
- *Reuse materials when possible.*
- *Make recycling convenient.*
- *Facilitate non-motorized and/or public transportation.*

Planning and Zoning News, October 2007

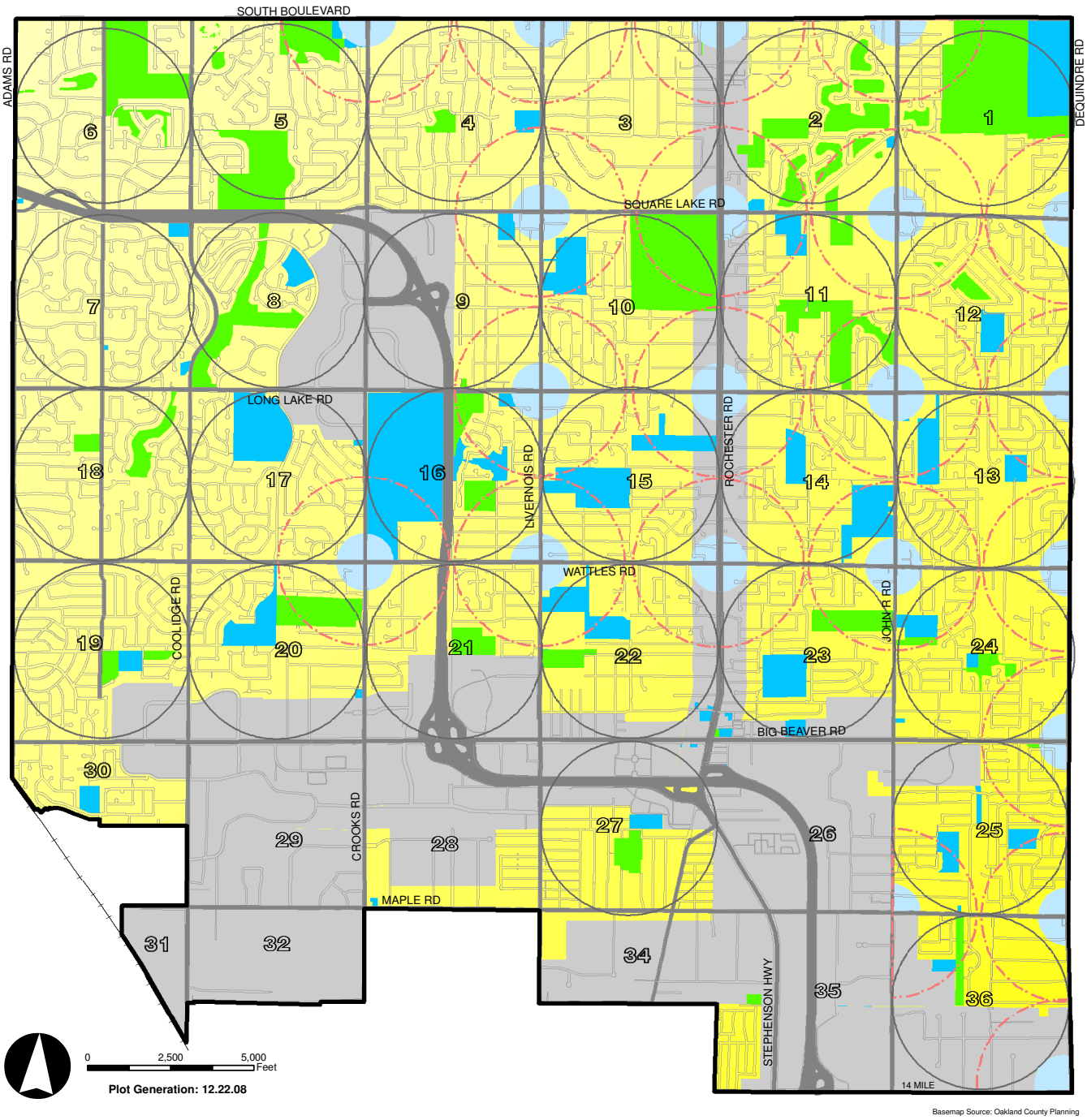
walk a half-mile to get to a store or school. Most people will walk five minutes, or about one quarter of a mile. Typical comparison shopping for clothing, hardware and the like are measured by service radii related to drive times which are not realistically walkable. Furthermore, Michigan has cold winters that limit year-round walkability. Troy's neighborhoods, now and in the foreseeable future, will serve its residents in two roles: the Social Neighborhood and the Economic Neighborhood.

The Social and Economic Neighborhoods of the City are shown on this Neighborhoods Map. The circles surrounding the Neighborhood Nodes and the circles within the Social Neighborhoods are meant to demonstrate a rough service area for each neighborhood. While not necessarily precise, the circles are meant to demonstrate the basic relationship between the Social Neighborhood and the Economic Neighborhood. The circles are not meant to establish a formal land use category or policy in and of themselves, but rather to validate the planned uses at and around the Economic Nodes.



Future Land Use

- Single Family Residential
- High Density Residential
- Neighborhood Nodes
- South John R. Road
- Big Beaver Road
- Rochester Road
- Maple Road
- Northfield
- The Smart Zone
- Automall
- The Transit Center
- 21st Century Industrial
- Public and Quasi-Public
- Recreation and Open Space
- 15 Section Number



Neighborhoods

- Social Neighborhood
- Single Family Residential: The Social Neighborhood
- Economic Neighborhood
- Neighborhood Nodes: The Economic Neighborhood
- Recreation and Open Space: Extraordinary Amenities
- Public and Quasi-Public: The Foundation of Troy's Neighborhoods
- All Other Uses
- 15 Section Number

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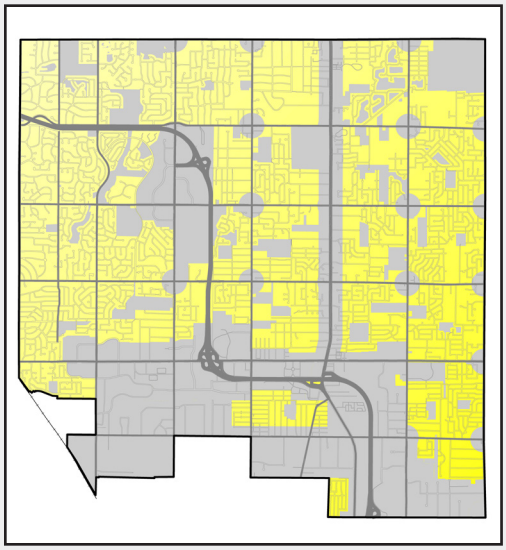
Single-Family Residential: The Social Neighborhood



- ***Social units of the City.***
- ***Walkable, safe places to live.***
- ***Centered on schools or other community facilities.***
- ***Linked with nearby services.***

The predominant land use in the City of Troy is single family residential. **This category is intended to preserve the existing quality residential neighborhoods of the City while recognizing the need for other uses that support the main function of residential areas.** The single family areas of the City are arranged around Social Neighborhoods. Social Neighborhoods are unique, self-contained areas bounded by Troy's main thoroughfares. They are mostly single-family areas centered on community elements like schools or parks. Social Neighborhoods are described in more depth at the end of this Chapter, and are illustrated by the solid circles shown on the Neighborhoods Map.

In the Single Family Residential areas of the City, non-residential uses will be considered only when the use is clearly incidental to and ancillary to single-family residential, or when the use is a park, school, or other community-oriented public or quasi-public use.

The Social Neighborhoods of the City are bounded by the mile square grid pattern of Troy's thoroughfares. These defined areas can provide the sense of place that Vision 2020 and this Master Plan are striving for. **In most cases, they have a school as central focus.** Schools continue to be a means of stimulating social interaction on many fronts; children establish their first friendships, parents meet other local parents, schools often host public events. Furthermore, the play areas at school provide readily accessible recreation opportunities. Many Social Neighborhoods in Troy have sidewalks promoting accessibility and exercise, and Troy schools have walking paths that are open to the public.

The ideal Social Neighborhood will exemplify the safer, more enjoyable walking environments envisioned by the "Safe Routes to School" program.

DESIGN CONCEPT

- Neighborhoods are approximately 15 minutes walking from end-to-end.
- A wide variety of residential architecture characterizes the various neighborhoods of the City. Non-residential architecture for schools and places of worship complement the residential setting.

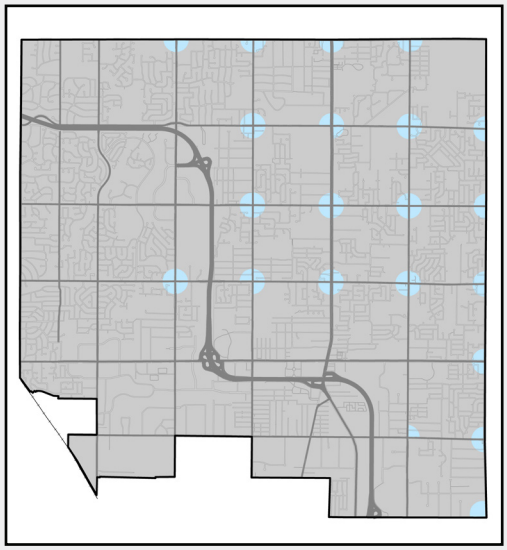
BUILDING LOCATION

- Homes must be located in relation to the street in a manner that complements surrounding, established homes.

SITE DESIGN ATTRIBUTES

- Walks which link residences to destinations such as schools, libraries, abutting neighborhood commercial service areas, coffee shops, and other neighborhoods are critical.
- The neighborhoods must include improved perimeter walks that are functional and aesthetically pleasing. These exterior walks will directly connect to the activity nodes at major intersections and adjacent neighborhoods. Wide walks will be constructed which will incorporate landscaping and innovative stormwater detention areas. These areas will be artistically developed, but functional landforms that carry visual interest. The perimeter walks have the ability to bring residents of adjacent neighborhoods together.
- Neighborhoods should be connected to one another to increase the area where residents can readily navigate on foot and expand the boundaries of social interaction. Crosswalks near the mid-mile areas of each grid will improve outside linkages.
- Lighting will not encroach on adjacent properties, and will be used carefully to provide safety and security, and for accent illumination.

Neighborhood Nodes: The Economic Neighborhood



- *Located at intersections of the City's main roads.*
- *Work together with Social Neighborhoods to create a more livable community.*
- *Mixed use.*
- *Provide neighborhood gathering places.*
- *Accommodate the daily needs of residents.*

Neighborhood Nodes are the concentrated, commercial and mixed-use centers situated at major intersections of Troy thoroughfares that serve as the center of the City's Economic Neighborhoods. The nodes are specifically identified on pages 95 and 96. Economic Neighborhoods are destinations created as "go to" places that take on a social role, serving both as a place to meet basic needs of the community and as 21st century village centers. The attributes of Economic Neighborhoods are described in more detail in the final section of this Chapter, and the urban design characteristics of Neighborhood Nodes will be described in depth in Chapter 10. The nodes will typically permit a mix of commercial, office, and high-density residential, although the predominant uses in any Neighborhood Node development must be in keeping with the node characteristics described on pages 95 and 96. Industrial uses will not be permitted in the Neighborhood Nodes.

The Economic Neighborhoods of Troy also center on the square mile grid system. Unlike the social neighborhood, the **Economic Neighborhoods are centered on major road intersections where commercial and office development occurs.** When destinations are created, these nodes become a "go to" place and take on a social role. Each of these nodes serves four quadrants of the overlapping social neighborhoods and has the ability to bring residents of four neighborhoods together.

These Economic Neighborhood nodes are destinations that draw people, visually distinguished from the balance of corridor strips through greater density and scale. Variation in building height will often be used to separate the node from the surrounding area, but will not be so extreme as to visually overpower abutting neighborhoods. The separation of building heights at intersections with the "between" segments of corridors stimulates the visual concept of "pulsing" development and sets up a system of visual anchors.

Moderately dense residential environments may be encouraged within some nodes to provide steady activity for longer periods of the day. In these cases, residences may be mixed with offices on upper floors or be developed immediately adjacent to the commercial areas. Connections between the commercial activity and residences must be directly and seamlessly integrated.

During the course of the planning process, the Planning Commission closely analyzed the need for additional neighborhood nodes throughout the City. The City will continue to consider the demand for additional nodes as part of subsequent plan revisions.

DESIGN CONCEPT

- These nodes are within a fifteen minute walking distance of residential neighborhoods to permit alternative modes of transportation.
- Development will be denser and taller than the surrounding area, encouraging visual prominence to signal a gathering space.
- Nodes should be generally confined to a 1,000 foot radius from a major intersection.
- The nodes provide uses and spaces that attract and welcome neighborhood residents.

SITE DESIGN ATTRIBUTES

- Buildings should be separated from the right-of-way line by a landscaped greenbelt, one lane of off-street parking or a pedestrian walk, or a combination of these.
- Primary parking areas will be located within rear or interior side yards.
- Off-street parking should be screened from the public right-of-way by a knee wall or low decorative fence with a hedge of plantings.
- Walks will connect adjacent developments and the public sidewalks.
- Well-defined crosswalks with timed signalization will permit safe crossings.
- Flexible use of space allowing modest outdoor gathering spaces, such as plazas, will be encouraged.

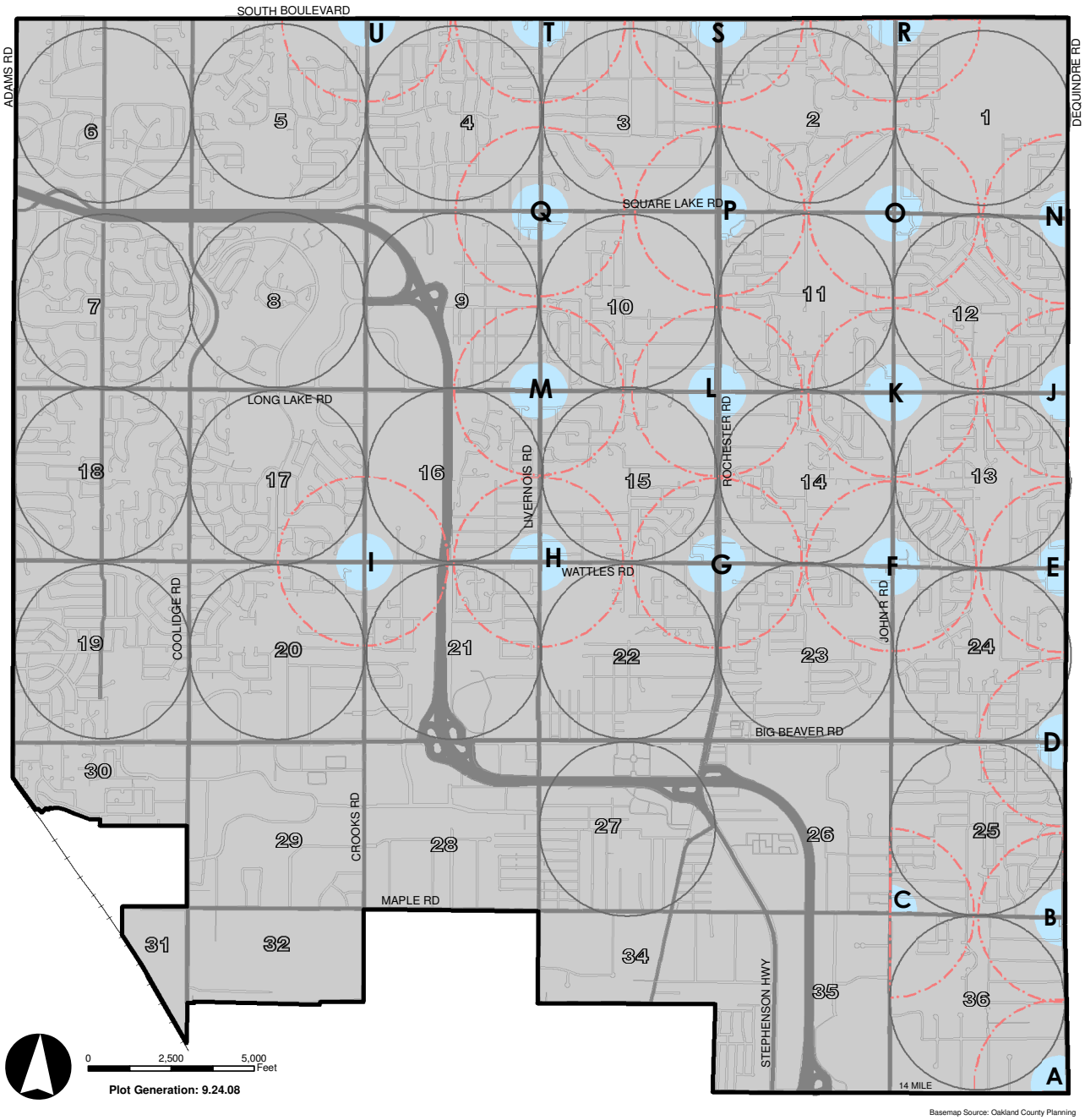
BUILDING DESIGN ATTRIBUTES

- Buildings should be between two and three stories, although one–story structures accommodating gas stations or other special situations may be permitted.
- One-story buildings should have a minimum exterior height of sixteen feet.
- A ground level story should have a minimum height of twelve feet from finished floor to finished ceiling.
- Facades facing major thoroughfares will be treated as fronts and should have a minimum of half transparent glass and special architectural design treatments.
- Fenestration (the arrangement of windows and doors) should be highlighted through the use of awnings, overhangs or trim detailing.
- Lighting will be carefully managed so as not to encroach on adjacent residential areas.

The following pages contain a table describing the primary intended uses and character of the Neighborhood Nodes designated on the Future Land Use Map. Individual Nodes are numbered and identified on the Economic Nodes Map following the table.

	Node/Intersection	Primary Uses and Character
A	14 Mile and Dequindre Road	Non-residential uses catering to the day-to-day needs of the workforce in the surrounding industrial area. Restaurants and convenience needs integrated with banks and other service uses in compact developments would suit the needs of this area.
B	Maple Road and Dequindre Road	The unique neighborhood node is home to a collection of uses serving the local Polish population. Uses complementary to the cultural center and bank which help this area serve as a gathering place and focus area for the neighborhood could include limited housing, service uses, or specialty retail and dining.
C	John R. Road and Maple Road	The node would best serve the area with a predominantly commercial mix of uses catering to the immediate residential area coming and going from their homes. The node should serve as a transition to the more intense commercial development to the south.
D	Big Beaver Road and Dequindre Road	This area should be a high-intensity, high-density, compact area that serves as a notable entry point to the community. Development may include residential, retail, office, and service-oriented uses, but should be designed to create a very noticeable "gateway" into Troy with its complex, high-density, mixed-use character.
E	Wattles Road and Dequindre Road	The predominant use in this node should be offices, both medical and professional. Limited commercial service uses designed to complement the main focus of the area as an office node serving this area of the City may also be permissible, if clearly secondary to the primary office character of the area.
F	John R Road and Wattles Road	This node may include all uses from high-density residential in combination with restaurants, limited office, and retail. Development at this intersection should include at least two of these uses in any one development, in order to better complement and strengthen the already mixed-use character of the node.
G	Rochester Road and Wattles Road	A careful blend of commercial uses and office uses, effectively transitioned into the adjoining residential neighborhoods, should be the main uses at this intersection. Recent residential development in the area has taken pedestrian access to the intersection into consideration with effective pathways and sidewalks, and any new development at the intersection must continue this positive trend.
H	Livernois Road and Wattles Road	This lower-intensity area is characterized by single-family residential directly abutting the southwest corner of the intersection, and uses which generate only sporadic activity, such as churches and day care. This node contains the Troy Museum and Historic Village. New development or redevelopment at this node must be especially considerate of the adjoining residential and low-intensity uses and should not include any retail or restaurant uses. Office and other uses similar to the existing uses would likely provide the best combination here.
I	Crooks Road and Wattles Road	Development at this location should be low-impact and provide a high benefit to the neighborhood using the least amount of land. Compact, walkable mixed use development with a combination of uses serving the immediate surroundings would be an ideal fit. Integrated compact development which would allow a user to park once and meet several daily needs would be a positive contribution to the node. The City also recognizes that expansion of the White Chapel Cemetery into the northeast corner of this node would be appropriate.
J	Dequindre Road and Long Lake Road	Predominantly commercial, catering to both local needs and regional traffic, new development and redevelopment should be mostly commercial, identifying opportunities for small office mixed-use and variations in floor area to allow for a wide range of commercial types. Pedestrian access to the adjoining area and effective screening should be primary areas of focus during the site design process.

	Node/Intersection	Primary Uses and Character
K	John R Road and Long Lake Road	Like Crooks Road and Wattles Road, compact, walkable mixed use development with a combination of uses serving the immediate surroundings would be an ideal fit. Integrated compact development which would allow a user to park once and meet several daily needs would be a positive contribution to the node.
L	Rochester Road and Long Lake Road	Intersections L, M, and U and should remain, predominantly commercial, catering to local needs and regional traffic, new development and redevelopment should be mostly commercial and should serve to further enhance this successful commercial area. Opportunities for integrated residential or office development should be considered only when clearly secondary to commercial development.
M	Livernois Road and Long Lake Road	Intersections L, M, and U and should remain, predominantly commercial, catering to local needs and regional traffic, new development and redevelopment should be mostly commercial and should serve to further enhance this successful commercial area. Opportunities for integrated residential or office development should be considered only when clearly secondary to commercial development.
N	Dequindre Road and Square Lake Road	Low-intensity commercial uses should remain, but redevelopment should include an integrated compact residential component, live/work units, or small office. Service-oriented use development in combination with new residential development would provide a unique setting here.
O	John R Road and Square Lake Road	Near a known heron rookery, this node must be careful to respect this important natural resource. New development or redevelopment should complement the churches and limited commercial uses in the area, and should incorporate above-average landscaping, natural buffers, and conscientious site design to enhance the known natural features in the area.
P	Rochester Road and Square Lake Road	Major commercial uses dominate and should continue to provide a foundation for this neighborhood node. While uses in the area may cater to regional traffic, service uses, retail, and limited office uses designed to provide service to the immediate residential neighborhood should be incorporated into any new development or redevelopment plans.
Q	Livernois Road and Square Lake Road	Development in this area should be especially considerate of the remaining historic asset of the neighborhood. Adaptive use of existing historic structures must be considered before demolition or relocation of these resources. Low-intensity uses working in conjunction with one another to form a central neighborhood village, walkable and accessible, would create an ideal complement to the predominantly residential surroundings.
R	John R Road and South Boulevard	Small local commercial uses and office uses should be the focus of this node, to complement the large scale office development across the City's boundary to the north, within the City of Rochester Hills.
S	Rochester Road and South Boulevard	This neighborhood node provides a suitable mix of uses to cater to the daily needs of the immediate residential area, while also providing a unique opportunity for specialty retailers, compact walkable residential development, and small-scale office development in an integrated, mixed-use setting.
T	Livernois Road and South Boulevard	Limited local commercial and housing for seniors in a dense development pattern should remain the primary focus of this neighborhood node.
U	Crooks Road and South Boulevard	Intersections L, M, and U and should remain, predominantly commercial, catering to local needs and regional traffic, new development and redevelopment should be mostly commercial and should serve to further enhance this successful commercial area. Opportunities for integrated residential or office development should be considered only when clearly secondary to commercial development.



Economic Nodes

- Social Neighborhood
- Economic Neighborhood
- Neighborhood Nodes: The Economic Neighborhood
- 15 Section Number
- A Economic Node
- All Other Uses

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High Density Residential: Housing Choice

- *In close proximity to the most high-intensity nonresidential areas of the City.*
- *Diversify the City's housing stock.*
- *Excellent regional access and multi-modal access.*
- *Complementary to Big Beaver Road.*

The High Density Residential classification primarily includes multiple-family residential development made up of housing having three or more dwelling units per structure. This classification may have some limited mixed-use elements, especially those non-residential uses primarily geared towards day-to-day service needs of the resident population, although it is intended primarily to serve as the most dense residential development permitted by the City. The primary use in any development within this area must be residential.

The High-Density Residential classification is not the only area in the City in which high-density residential development may be appropriate. This category is, however, specifically identified for areas where high-density residential should be the primary, or exclusive land use. Other areas of the community, where mixed-use development is called for, may also integrate high-density residential as part of a mixed-use development. **High-density residential development may also be appropriate along Maple Road in redevelopment projects or new development projects with a focus on open-floorplan, loft-style housing in new or renovated buildings.**

The High-Density Residential classification may also include some redevelopment areas which may be better used for uses that support high-density residential. On a limited basis, small scale commercial development designed to cater to the day-to-day needs of the residents may be appropriate. **The City should continually monitor the status of this classification to ensure that it remains viable, given the growing trend of integrating high-density residential projects in mixed-use settings.**

Urban townhouses in Ann Arbor, Michigan; Photo by CWA

DESIGN CONCEPT

- The high-density residential district is integrated with surrounding land uses, and not simply considered a transitional use between traditionally intense and less-intense land uses.
- These areas will have a path system for access, exercise and leisurely strolls, designed to link residential communities, provides more land use efficiency with open space and access to neighborhood shopping and other services.
- Buildings frame the street network enclosing outdoor spaces.

SITE DESIGN ATTRIBUTES

- Front greenbelts with large street trees, decorative trees and low landscaping soften the environment between the street and building.
- Creative storm water detention should be designed as a focal point, including the use of appropriate landscaping and sitting areas.
- A path system that connects the building entries, parks, public sidewalk system and adjacent developments should be included in new development.
- Sites will be well-appointed with large trees and landscaping.

ARCHITECTURAL ATTRIBUTES

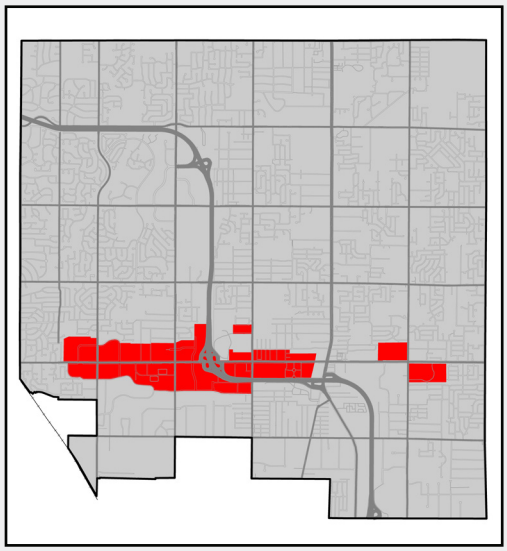
- Buildings will be between two and four stories.
- Front porches and tenant entries will be clearly defined through the use of canopies, overhangs, façade treatment or landscape.
- Fenestration will be accentuated with architectural trim work or decorative brick or stonework.

Urban townhouses in Ann Arbor, Michigan; Photo by CWA

Internal public spaces in a high-density residential development

Innovative facade and architecture in a high-density setting

Big Beaver Road: A World Class Boulevard



- ***Home to large, landmark projects and mixed-use regional destinations.***
- ***Central gathering area of the community.***
- ***A collection of international corporations, local companies, and establishments which complement these high-visibility uses.***

The Big Beaver Road corridor is responsible for the first impression many people have throughout Michigan when they think of the City of Troy. The high-rise buildings, Somerset Collection, and its immediate proximity to I-75 are frequently the main elements visitors remember about the Corridor and the City. **In order to remain competitive and continue to be a leader in economic development in Southeast Michigan, Troy must plan for this Corridor to evolve in light of a changing economy.** In that spirit, the City adopted the key concepts of the Big Beaver Corridor Study in 2006:

- Gateways, Districts and Transitions
- Trees and Landscape as Ceilings and Walls
- Walking Becomes Entertainment - Much to Observe & Engage In
- Mixing the Uses Turns on the Lights - Energetic Dynamic of Mixed Uses with a Focus on Residential
- The Automobile & Parking are No Longer #1.
- Civic Art as the Wise Sage of the Boulevard

The uses and character of this future land use category are driven by the recommendations of the Big Beaver Corridor Study and subsequent efforts of the Planning Commission to create new zoning techniques to implement those recommendations.

This Study provided a comprehensive analysis of the existing and potential characteristics of this important area. The planned future land uses in the Big Beaver Corridor are in large part considered mixed-use, to allow for a wave of new residential development and the redevelopment of individual sites to make a more meaningful contribution to the quality of life of the City. The main difference between the various mixed-use districts planned in the Study is building height. The intended characteristics of the various districts are also very different, and are the topic of in-depth analysis in the Study. Some important recommendations of that Study are listed below.

- Moving toward the creation of distinct physical districts by building from lot line to lot line along the right-of-way rather than continuing to be a collection of isolated towers.
- Becoming flexible with land use relationships. The use of vertically integrated mixed-use commercial, office and residential towers should be promoted. The use of prominent ground floor retail, restaurants and cafes allows visual interest and activity for visitors and residents.
- Contain parking in structures that are shared by surrounding developments. Do not allow off-street parking to be visible from major thoroughfares.
- Landscape Big Beaver and intersecting thoroughfares with rows of mature trees.

DESIGN CONCEPT

- This will be a vibrant high-rise business and residential district.
- Pedestrian use will be promoted through massive landscaping, wide sidewalks, outdoor cafes, and public art.
- The Big Beaver Corridor Study and Big Beaver Development Code provide for a specific land development pattern.
- Architectural design must create an interesting visual experience for both sidewalk users at close range and for those viewing the skyline from a distance.

SITE DESIGN ATTRIBUTES

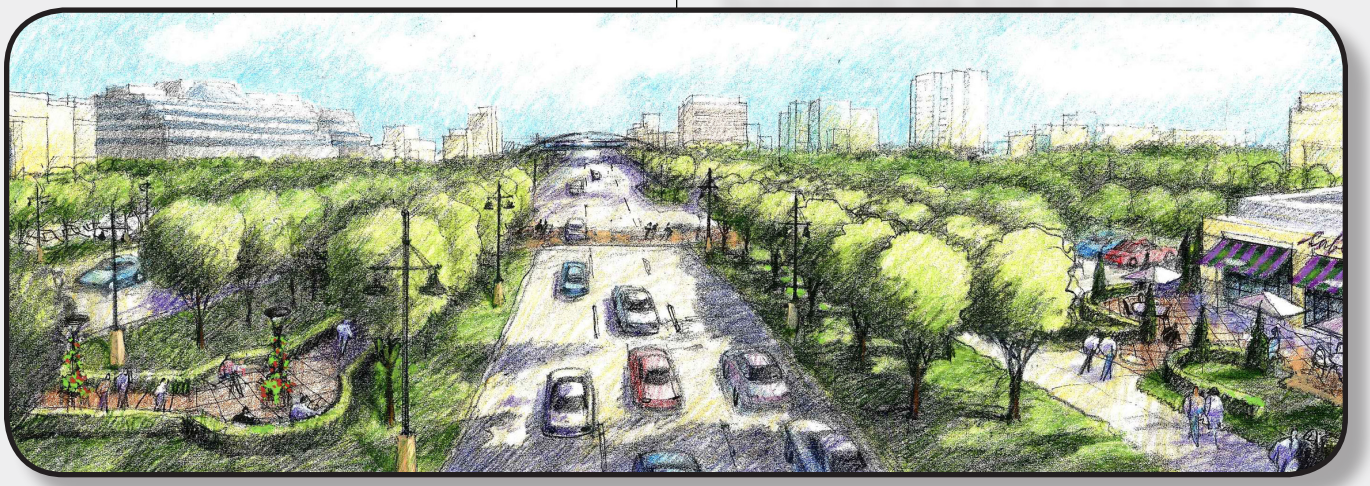
- Parking should be located in rear yards.
- Development should include intense street tree planting along Big Beaver.
- Cafes, plazas, parks and similar amenities to draw pedestrians will be encouraged.
- Buildings will frame the street network by building to the front and side property lines. Exceptions for cafes, plazas and access roads may be permitted.

BUILDING DESIGN ATTRIBUTES

- Buildings should rise in height toward Crooks Road in the east-west direction.
- Buildings should rise in height toward Big Beaver in the north-south direction.
- Ground level stories should be a minimum of twelve feet in height; with large expanses of transparent glass.
- Fenestration at the ground level should be highlighted through the use of awnings, overhangs or trim detailing, and building caps or roofs should provide a visually interesting skyline.

Additional goals, policies, and strategies for Big Beaver are set forth in the Big Beaver Pedestrian Special Area Plan on Page 205.

Big Beaver Corridor Study; Birchler Arroyo Associates, Inc.



Concept Sketch from the Big Beaver Corridor Study; Birchler Arroyo Associates, Inc.

Rochester Road: Green Corridor

- *Regional model for a green corridor*
- *A strong focus on access management*
- *Heightened emphasis on strong stormwater management techniques*
- *Retail catering to regional traffic*
- *Innovative site design techniques applied through PUD use to allow for redevelopment for shallow lots*

Rochester Road carries high volumes of traffic causing backups at intersections. The abutting development pattern from Big Beaver Road north to Long Lake Road is a continuous row of highway-oriented commercial uses. North of Long Lake Road, the land use pattern evolves, becoming a mix of commercial and office near the intersections and older single-family homes and multiple-family complexes in between.

If Rochester Road is to have a defined role and pleasing character in the City, it must undergo a significant transformation over time. Ultimately, the Rochester Road Corridor will become a regional showcase for effective stormwater management and enhancement of the natural environment, while encouraging a combination of high-quality land uses. Effective landscaping focused on native plantings, and improved land use and access management along Rochester will create a green corridor that provides a high level of service for motorists, and which provides an effective natural buffer between high traffic volumes and people visiting adjacent properties. The creation of this green corridor would occur primarily in the right-of-way along road frontages and in the median of a future boulevard.

While the emphasis on innovative stormwater management is specifically called on for the Rochester Road Corridor, new low-impact techniques are to be encouraged elsewhere throughout the City of Troy. As noted in Chapter 7, innovative stormwater management is a priority for the community. Rochester Road will play an important role in this City-wide initiative by proving a regional showcase for such techniques.

New construction along the corridor may include detention and retention basins that work together from site-to-site with other features to create a continuous, linear landscape feature. By connecting properties, the basins create visual relief from traffic. **Low impact development methods will be used throughout the corridor to filter stormwater runoff.** Rochester Road will also be characterized by effective new signage, high-quality lighting, and effective, complementary site and architectural design.

Uses along Rochester Road will include a variety of mixed uses, established in a "pulsing" pattern where the most intense mixed-use or exclusively non-residential development will occur near the Neighborhood Nodes situated along its main intersections. Lower-impact uses, such as small scale retail or condominiums should be encouraged along the corridor frontage between these nodes.

DESIGN CONCEPT

- Commercial strip development should be limited and gradually replaced with mixed use.
- Commercial development should be encouraged to expand in the form of dense multi-story mixed-use concentrations at major intersections. Concentrations are limited to within 1,000 feet of the intersection.
- The areas between nodes should develop as lower-rise office and multiple-family. The height differences encourage a visual "pulse."

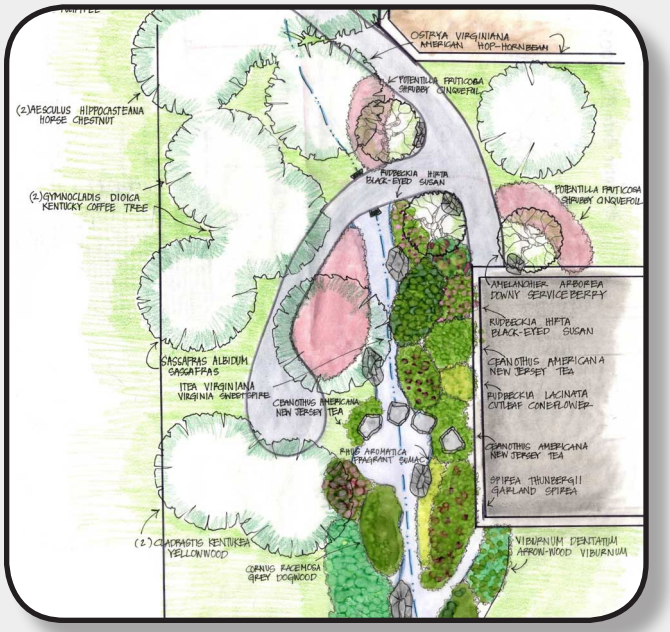
SITE DESIGN ATTRIBUTES

- Parking areas should be within rear yards or interior parts of the site. A single row of parking may be appropriate in front and exterior side yards in limited applications.
- Parking will connect to adjacent sites, eventually linking several developments with a rear access lane. The number of drives connecting to Rochester Road should be minimized.
- Defined internal walks will connect the businesses and buildings together.
- Internal walks will be connected to the public sidewalk system.
- Buildings will be separated from street traffic by a greenbelt or sculptural storm water detention basin.
- Height and size of signage will be reduced to contain visual clutter.

BUILDING DESIGN ATTRIBUTES

- The height at nodes will be multi-story not exceeding four stories.
- The height between nodes should not exceed two stories.
- Ground level stories should be, at a minimum, twelve feet in height; with large expanses of transparent glass at intersection nodes.
- Fenestration for the ground level of buildings in nodes will be accentuated through the use of awnings, overhangs or trim detailing.

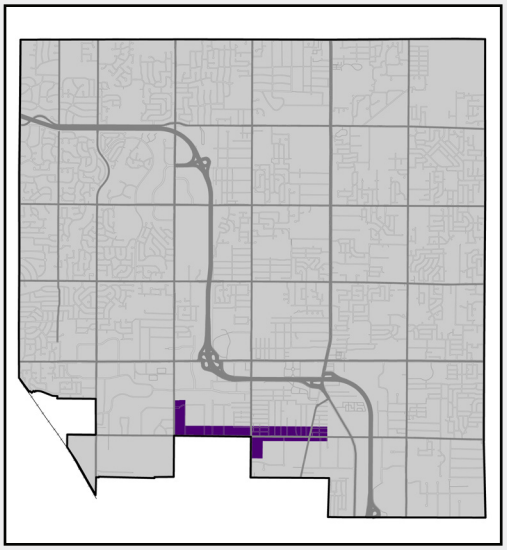
Additional goals, policies, and strategies for Rochester Road are set forth in the Rochester Road Special Area Plan on Page 113.



Design for a Rain Garden in Troy; City of Troy

Lovell Pond in Troy; an example of an innovative, urban stormwater basin; Photo by Jennifer Lawson

Maple Road: Mixed-Use



- ***Predominantly industrial area, but with limited opportunities for transitional or service-oriented uses that complement the primary adjacent industrial areas***
- ***Potential for urban-style open floorplan housing in redeveloping areas***
- ***Focus on the quality of access management throughout Maple Road***

The Maple Road Corridor provides an opportunity for new, emerging land use types in the City of Troy. Limited development of industrial-style 3 to 4 story buildings with open-floorplan housing, developed in a transit-oriented setting, for instance, may be appropriate in some places. This type of development would help diversify the City's housing stock and provide a more effective buffer between the Corridor and the industrial uses located in the immediate area.

Uses designed to support the workforce in the area may also be appropriate. Local commercial or small, mixed-use developments having a combination of such uses could greatly improve the character and image of this area. Such amenities would also help smaller, local industrial uses to recruit the best workforce.

DESIGN CONCEPT

- This area will be a high-quality, eclectic mix of land uses and architectural types.
- Emphasis should be placed less on land use and more on building and site design. Design should not reflect traditional forms of "colonial" architecture.

New loft style, open floorplan residential development in Nashville

- Development should be linked together visually and functionally throughout the corridor.

SITE DESIGN ATTRIBUTES

- Uniform "build-to" lines guiding a uniform containment of open space within the right-of-way should be established.
- Primary parking areas should be within rear or interior side yards.
- Landscape design creativity will be encouraged by setting general parameters relating to environmental sustainability such as limiting storm water runoff.
- Larger sites with deep set buildings should redevelop with buildings near the Maple Road right-of-way line.
- Mass transit stops should be accommodated (see page 115)

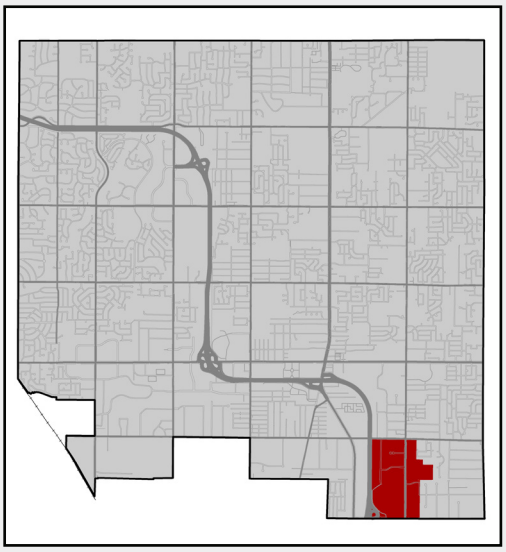
BUILDING DESIGN ATTRIBUTES

- Maximum height should not exceed four stories and limited to two stories for properties abutting single-family residential neighborhoods.
- Design creativity with regard to materials will be encouraged, although low quality materials or building designs that inhibit activity on the corridor will not be permitted.
- Primary parking areas within rear or interior side yards.
- Landscape design creativity should be encouraged by setting broad general parameters relating to environmental sustainability such as limiting storm water runoff or reusing gray water for irrigation.

Additional goals, policies, and strategies for Maple Road are set forth in the Maple Road Special Area Plan on Page 139.

Maple Road may provide a unique venue to expand opportunities for public art placement and for area artists to work and live.

South John R Road: Connections



- *Provides a significant entryway into the City*
- *Walkable, mixed-use development and redevelopment*
- *Provides a central focus for the southeast area of the City*
- *Enhanced focus on Transit Oriented Design (page 48)*

The South John R Road future land use designation is reserved for Oakland Mall and the immediate surrounding area along John R Road. This classification is intended to allow for the continued operation and long term improvement to the area, focused on the provision of "comparison" commercial products. This area serves a large region, beyond the City of Troy, and blends with the area to the south, outside the City's boundaries.

However, the City recognizes that the nature of traditional retail is changing throughout the United States and that many conventional enclosed shopping centers are being redeveloped into a variety of new uses. Mixed-use developments with office and residential, and walkable outdoor shopping centers are two examples of uses that have replaced former enclosed shopping centers. The current configuration of Oakland Mall and its surrounding area may no longer be competitive in the near future and may necessitate additional study for this area.

Redevelopment in this area should carefully consider the opportunity for restoration of natural features. Existing underground drains, for instance, should be analyzed for potential to be integrated within redevelopment projects, Native landscaping and innovative stormwater management techniques should be considered in the area. The resurrection of urban waterways may provide an opportunity to introduce a valuable asset and differentiating feature for redevelopment projects in the South John R area.

Aracadia Creek Festival Place in Downtown Kalamazoo, Michigan, offers an excellent case study of the renovation of an historic urban stream to create a new, vibrant urban gathering place.

The San Antonio Riverwalk

DESIGN CONCEPT

- This area will be a mix of retail, office and higher-density uses in multi-story buildings in an urban village.
- Building height will increase toward the center of the site.
- Height should not compete with the Big Beaver area.
- This area of opportunity will transform to a district of linked developments accentuated by significant landscaping and open space to off-set the increased height and density.
- Workforce housing, a part of the City's economic strategy, can be incorporated here.

SITE DESIGN ATTRIBUTES

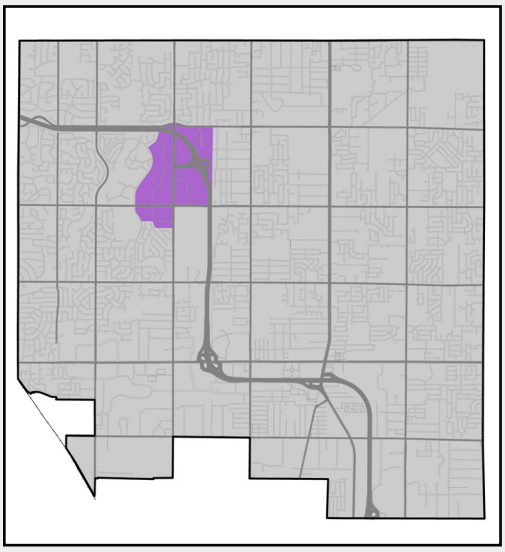
- Buildings setback from the major road right-of-way should have a minimum distance that permits a greenbelt, single row of parking and wide sidewalk.
- Primary parking areas should be within rear or interior side yards, separated into modest-sized components for better storm water management and landscaping
- Internal walk system connects businesses, adjacent developments and the public sidewalks. Walks designed with trees, landscaping, water features or similar features to enhance the experience.
- Storm water detention should be captured in pedestrian friendly landscaped designs.
- Mass transit stops should be accommodated (see page 115).

BUILDING DESIGN ATTRIBUTES

- A maximum of three stories or equivalent height in feet should be allowed at the perimeter of a site.
- A minimum of three stories and maximum of six stories or equivalent height in feet should be allowed near the center. One-story retail buildings should have a minimum height of twenty four feet.
- Ground level stories should have a minimum height of twelve feet from finished floor to finished ceiling.
- Facades should be over half transparent glass.
- Entries must be well-defined.
- Fenestration should be highlighted through the use of awnings, overhangs or trim detailing.

Walkable, mixed-use development with integrated parking

Northfield: A Focus On Innovation



- ***A complement to the Smart Zone, but with an even broader mix of uses***
- ***Outlot development to provide services to workers in the area***
- ***Consistent site design throughout the District to create a unique identity***

The Master Plan identifies two primary districts for the encouragement of 21st Century, Knowledge Economy business development. The Smart Zone is situated along Big Beaver Road and an area to the south, along Interstate 75. Northfield, the second office and research area, is similar to the Smart Zone in its makeup, but will reflect its own unique style of development.

In terms of use, the emphasis in Northfield will be placed on office and planned research-office uses. Other uses primarily relating to the support of workers and activities in Northfield, such as supporting commercial uses, will also be considered on a limited basis. Residential uses, traditional industrial uses, and regional commercial uses will be encouraged within mixed-use developments only when they are designed to support the primary function of the Northfield area.

Medical, professional, general, service-related office uses, and research –based uses, especially those planned in a campus or park-like setting, will be the primary focus in Northfield. These uses are intended to be enclosed within a building, and in the case of research and development uses, external effects are not to be experienced beyond their property boundaries.

DESIGN CONCEPT

- The contemporary architectural image should be continued.
- Infill construction will provide a physical link between semi-isolated towers.
- Demarcated crosswalks, an internal and external walk system and plazas/pocket parks will support physical linkages.
- Higher-density housing of twenty units per acre will be encouraged at the immediate periphery.
- Streets will be framed and the public right-of-way space will be delineated.

SITE DESIGN ATTRIBUTES

- Primary parking areas will be within rear or interior side yards and separated into modest-sized components by storm water management and landscaping.
- Walks will connect businesses, adjacent developments and public sidewalks.
- Storm water detention should be captured in pedestrian friendly landscape designs.
- Outdoor cafes, plazas, pocket parks and similar pedestrian amenities will be key features.

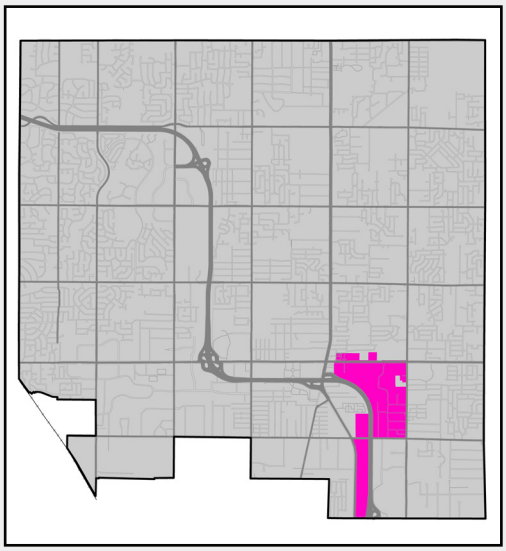
- Mass transit stops should be accommodated.

BUILDING DESIGN ATTRIBUTES

- Ground level story should have a minimum height of twelve feet from finished floor to finished ceiling.
- Facades should be half transparent glass.
- Entries should be well-defined.
- Fenestration on the ground level should be highlighted through the use of awnings, overhangs or trim detailing.

Additional goals, policies, and strategies for Rochester Road are set forth in the Rochester Road Special Area Plan on Page 113.

The Smart Zone: Big Beaver and Beyond



- ***A special focus on high-technology uses that complement one another***
- ***Potential high-density housing in proximity of 21st Century knowledge economy employers***
- ***Regionally prominent location for technologically advanced companies***

The Smart Zone was strongly emphasized in the Big Beaver Corridor Study and is the only proposed district within the Study to be called out specifically as a future land use category in the Master Plan. The Study envisions the Smart Zone as a unique area dominated by high-technology uses which are at the cutting edge of innovation. The Study calls this location a "paragon of innovation" and prescribes a combination of "signature" light industrial, research and development, and office uses.

The Master Plan uses this category in an area expanded beyond the boundaries shown in the Big Beaver Corridor Study. The area south of the main Smart Zone area, situated around Interstate 75 provides an opportunity to foster additional Smart Zone uses and development. Furthermore, much of this area is occupied by vacant or underutilized office and industrial facilities that could be readily redeveloped into Knowledge Economy uses, or into uses that work in direct support of those uses. This area is highly visible from Interstate 75. Business-to-business functions, such as materials suppliers or office support uses also represent an ideal fit in this southern section of the Smart Zone.

DESIGN CONCEPT

- New construction and redeveloping properties should be set in an integrated campus environment.
- Paths, generous landscaping, water features and similar features found in first-class

Ford Rouge LEED Rated Assembly Plant and Visitor Center

Automation Alley Technology Park in Troy; Photo by Brent Savidant

business parks should be infused throughout the site.

- Mass-transit stops should be located along routes to accommodate the workforce.

SITE DESIGN ATTRIBUTES

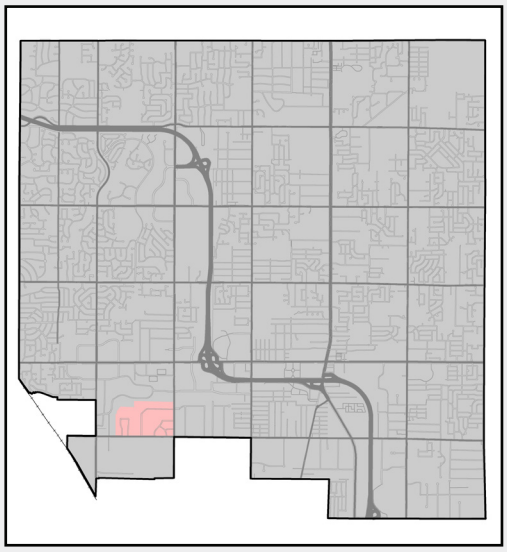
- Primary parking areas will be within rear or interior side yards and separated into modest-sized components by storm water management and landscaping.
- All parking should be screened from view by landscaping or walls.
- Walks should connect businesses, adjacent developments and the public sidewalks.
- Storm water detention should be captured in pedestrian friendly landscaped designs.
- Mass transit stops should be provided on the exterior and within the interior of the district.

ARCHITECTURAL ATTRIBUTES

- Height should be encouraged in cases where the development makes unique contributions to the area.
- Non-industrial portions of businesses should face the street system.
- Durable metal, glass, masonry and other materials should be used to promote the scientific image of emerging technology.
- Entries should be well-defined.

High-tech industry within the Smart Zone; Photos by Brent Savidant

Automall:
A Unique Approach & Competitive Advantage



- ***A coordinated collection of automobile sales lots that have a competitive advantage in that they provide a comparison shopping experience in one area***
- ***New development should include walkable elements to allow for users to experience more than one dealership without moving their car***
- ***Coordinated site design characteristics throughout the area.***

The Automall is a category that is unique to Troy. This area is home to a comprehensive collection of retailers of nearly every automobile make in the Country, and their grouping in one small, planned district provides a distinct advantage over similar automobile retailers around the region. In this location, potential buyers can see a variety of makes and models up close and make more informed buying decisions. The City continues to encourage the development of the Automall for this purpose. While the predominant use in this location is auto dealerships, other ancillary uses directly relating and in support of these dealerships will also be considered.

Auto dealerships in the Automall should be encouraged to develop outstanding automotive displays and engaging facades. The combination of these upscale automobile dealerships in a dense collection, offering unique permanant displays will complement one another to create a showcase for automotive design as well as for autombile sales and service.

The Michigan Design Center, located at the northwest corner of the Automall area on Stutz Drive, provides a unique asset for Troy. This facility offers a unique collection of over 40 showrooms in a 215,000 square foot facility. These showrooms display the latest in home furnishings and interior design elements. Primarily geared toward design professionals, the facility also provides an exceptional resource for design students. Potential future opportunities for open floorplan, artist-loft residential development or other land uses located to capitalize on and strengthen the relationship to the Michigan Design Center should be strongly encouraged in the western section of the Automall area.

DESIGN CONCEPT

- The unique atmosphere of the Automall will be enhanced. Vehicle displays will provide the enhancement.
- Showrooms will provide the setting for the people and products.
- Large expanses of transparent glass, and uniquely designed outdoor lighting will define the experience.

*SITE DESIGN ATTRIBUTES*Install pervious surfaces for walks and low-use parking areas to limit surface storm water runoff.

- Development should conform to a uniform "build-to" line corresponding to the line of currently existing buildings.

- Support businesses for the dealerships shall locate on Maple Road and not infill between dealerships.

BUILDING DESIGN ATTRIBUTES

- Showrooms should have a minimum height of sixteen feet.

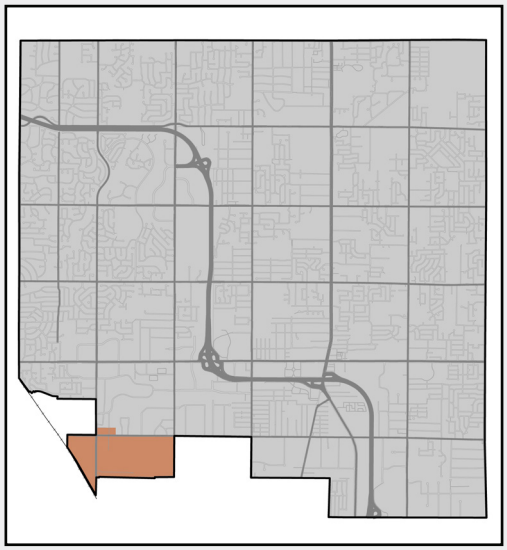
- A minimum of 75 percent of a showroom façade should be sheathed in transparent glass.

- Support businesses not conducting individual customer sales will locate the office portion of the business along the public street. Site and building maintenance will be the primary design emphasis.

- Dealerships should visually differentiate themselves from one another; the variety of architectural styles will enhance the diversity of the product offerings.

High quality display area within the Automall; Photo by Brent Savidant

The Transit Center: Air, Train, and Transit in a Unique Setting



- ***Uses focused on providing pedestrian access***
- ***New infill development designed to be compact and complement the Troy/ Birmingham Transit Center and airport***
- ***Integration of new transit options as they become available will make this area a true hub for multi-modal transportation and a gateway for the community for those entering by rail, plane, or bus, or for those people seeking a rental car.***

The Transit Center is a mixed use area made up of a complementary combination of residential, commercial, and service-oriented land uses. This mixed-use area is centered between the existing Oakland/Troy Airport and the planned Troy Transit Center. The combination of air, rail, bus and non-motorized transportation in one compact area, supported by a high-density residential development and regional commercial uses, will work to create a vibrant gateway to the southwest corner of Troy.

The Transit Center provides a unique amenity to the area in that it will ultimately evolve into a fully walkable area where visitors to the City can experience a variety of activities and enjoy access to more than one transportation option to get around Troy, or the Southeast Michigan Region. The continuation of the existing development pattern in this area is encouraged, as are the long-term infill of existing open areas and underutilized parking areas with uses complementary to the vision of a vibrant multi-modal transit hub are encouraged. The Troy Oakland Airport is a critical part of the Transit Center.

DESIGN CONCEPT

- This will be a high-density mid-rise area in close proximity to the proposed train station and business airport.
- The area will become a lively village for residents and business customers alike.
- The amount of surface parking will be limited.

A step in transit

Troy could become regional center for buses, light rail

IN TRANSIT

A proposed transit center brings hopes of regional connections between Troy, Birmingham and possibly Detroit.

Somerset Collection
Pavilions of Troy
Big Beaver Rd.
Troy
Coolidge Highway
Eton St.
Maple Rd.
Transit Center
Downtown Birmingham
Woodward Ave.

By Daniel Duggan
Crain's Detroit Business

High hopes surround a plan for a $3 million transit center in Troy that is expected to spur walkable development and connect the sprawling suburb to Detroit and other communities.

Regional planners say the center, near the edge of Birmingham, could act like a regional transit point as the area's struggling transportation system develops around it.

Whether it's the first step toward mass transit in the Motor City or part of the growing Troy-Birmingham rail district

Blouse

Blouse, president and CEO of the Detroit Regional Chamber.

"If we want to stop the talent-job drain and preserve the knowledge-based jobs here, we have to create a different quality of life," he said at a two-day real estate conference in Troy last week. "Mass transit is a very important piece for an economic transformation."

SITE DESIGN ATTRIBUTES

- New construction will provide parking at the periphery of development sites.
- The internal street network is encouraged to use a grid pattern of access streets to divide the larger area into a network of development "blocks."
- Storm water detention will be captured in pedestrian friendly landscaped designs.
- Outdoor cafes, plazas, pocket parks and similar pedestrian amenities will be key features.
- Non-motorized transportation will be encouraged and enhanced by pathways and storage for bicycles, rollerblades, skateboards, and new emerging types of personal transportation.

BUILDING DESIGN ATTRIBUTES

- Height should be between two and four stories or equivalent height in feet. Federal Aviation Administration requirements limiting building height take precedence.
- Building massing will frame external and internal streets.
- The ground level story should have a minimum height of twelve feet from finished floor to finished ceiling.
- Facades should be at least half transparent glass to promote connectivity between the interior private space and exterior public space.
- Entries will be well-defined.

CALDOT Transit-Oriented Development in Oakland, CA City Center

- Fenestration should be highlighted through the use of awnings, overhangs or trim detailing.
- Materials that instill a sense of permanence will be encouraged.

21st Century Industry: A New Opportunity for Growth

- ***Continued encouragement of a variety of industrial uses***
- ***Light industrial uses with no outdoor storage or external nuisances are especially encouraged***
- ***The emphasis for site design should be on screening, landscaping, buffering, and effective transitioning to allow this important category to succeed without negative impacts on residential or commercial areas of the City***

The 21st Century Industry classification provides area for conventional manufacturing and assembly uses, but with a broader interpretation of what industrial areas can become. In addition to conventional industrial uses, shops, and warehousing, this category can be home to business-to-business uses that don't require a significant public presence, but which work in tandem with the Knowledge Economy uses encouraged within the Smart Zone and Northfield. Suppliers, fabricators, printers, and many other supporting uses which strengthen the City's appeal as a home to 21st Century businesses are all encouraged in this category.

An alternative use that may be considered on a very limited basis in the 21st Century Industrial area is loft-style residential development in reclaimed industrial buildings. Opportunities for artist lofts and open-floorplan residential development may exist within new, innovative mixed-use projects. Such projects would be an ideal fit within the 21st Century Industrial area. Such housing will only be considered when all potential environmental limitations have been identified, and if necessary, neutralized.

The majority of the 21st Century Industrial lands in Troy surround the Maple Road category (see page 105), although they are intermingled with areas planned for the Automall, the Smart Zone, and the Transit Center. Existing land uses along Maple Road vary widely, and do not have a clear, identifiable character. Maple Road is primarily experienced as a series of nodes that center on north-to-south traffic leading into and out of Troy from the Big Beaver Corridor. For this reason, Maple Road is planned as a series of areas designed to support the Big Beaver Corridor and the Smart Zone, such as the business-to-business uses noted above.

DESIGN CONCEPT

- This area will recognize that manufacturing and distribution will continue to provide valuable jobs and a tax base. Emphasis will be on maintaining a strong image by concentrating on site and building maintenance as well as redevelopment, rather than redevelopment alone.
- Code enforcement will be a critical tool to maintain the visual and physical health of the district.
- As land becomes available, green space should double and storm water management should improve.

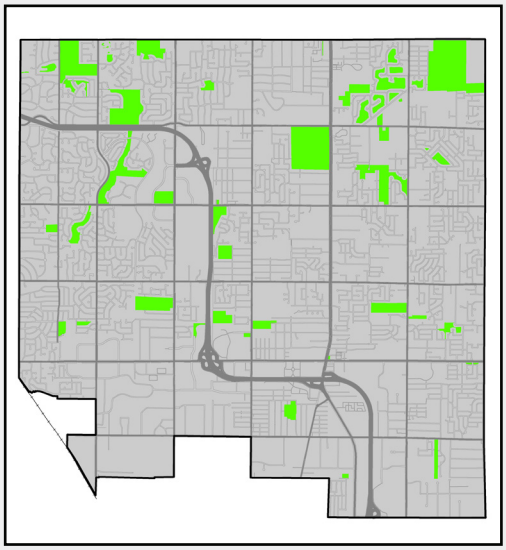
SITE DESIGN ATTRIBUTES

- Primary parking areas are located within rear or interior side yards.
- Front yards will be landscaped and well-maintained to continue an improved image.
- Green space will be placed along property perimeters to assist with controlling surface storm water runoff.

BUILDING DESIGN ATTRIBUTES

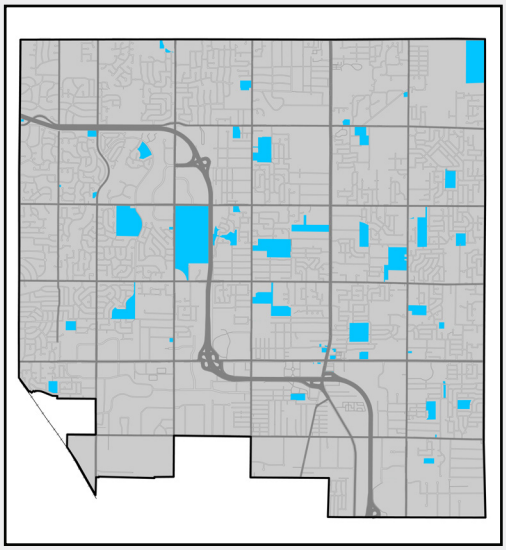
- The office portion of industrial developments will locate nearest the public street.

Recreation and Open Space: Extraordinary Amenities



The designation of Recreation and Open Space provides areas for both active recreation and conservation of natural resources. This land use can be either publicly or privately owned. Maintenance of these areas are essential to the preservation of fish and wildlife habitat, water quality, wetlands, scenic amenities, and outdoor recreation opportunities. Other significant areas are designated throughout the City and include private parks and common open areas associated with other private development.

Public and Quasi-Public: The Foundation of Troy's Neighborhoods



The Future Land Use Plan designates existing areas set aside for institutional uses such as schools, cemeteries, and other public and quasi-public activities. These sites are scattered throughout the City and are often at the center of the social neighborhood. Schools, especially, play a large role in the creation of social neighborhoods and provide a community center function.

This category also includes the Civic Center site, which contains the main operations of the City of Troy. Since the acquisition of the former Troy High School site in 1993 and construction of the Troy Community Center, this location has empowered the City to greatly enhance its operations and plan for future growth. With the addition of the model Solar Decathlon house and the potential future improvements to other facilities, the City has an outstanding opportunity to showcase innovative and responsible development practices in a visible location. It is expected that the current City, Court, and Library functions will continue at the present location.

This future land use category also includes the Beaumont Health Care Campus on Dequindre Road. The City supports the long term development of this site and encourages its growth and success.

Finally, the quality of utilities and service are inextricably tied to the quality of living, working and conducting business in the City. This category includes some areas reserved for meeting the basic needs and expectations of City residents through utility installations. Detention and retention basins are also included in this category.

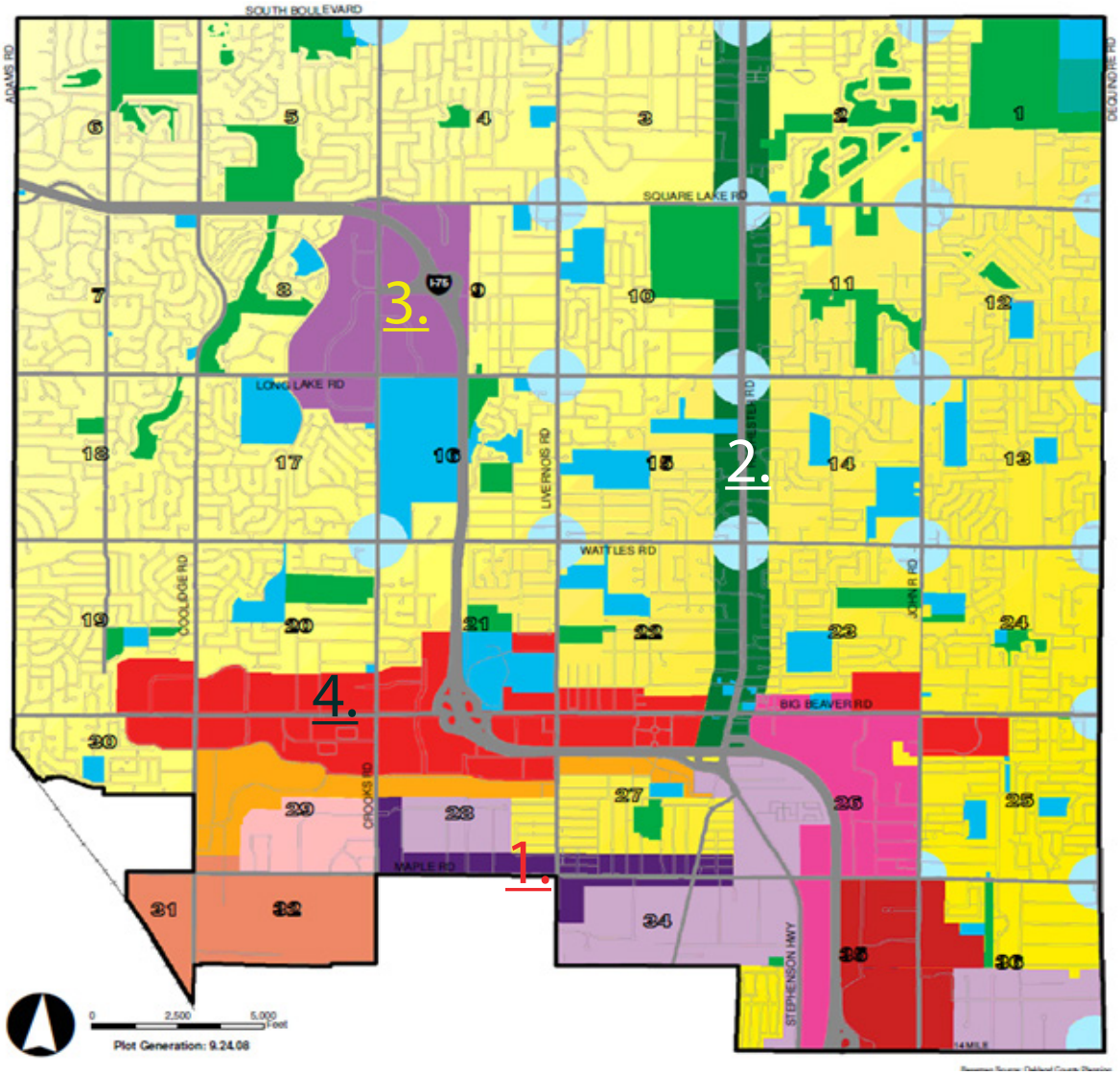
Special Area Plans

Rochester Road Special Area Plan	113
Maple Road Special Area Plan	139
North Troy Special Area Plan	179
Big Beaver Pedestrain Special Area Plan	205

As part of the 2015 Master Plan update, the city undertook a special area study of four areas of the city: Rochester Road, Maple Road, North Troy, and Big Beaver.

While the future land use plan ensures compatible and coordinated growth throughout Troy, key areas of the City will undergo significant change. In those areas where substantial development and redevelopment activity is likely, special area plans provide an illustrative framework to guide development in a way that fosters a sense of place and establishes community identity in key locations.

The plans provide schematic representations of potential development areas at a variety of scales and levels of detail, and may include illustrative configurations for new streets, buildings, parking, open space and circulation as may be appropriate to the area. They are accompanied by descriptive text that explains existing site characteristics, planning challenges, design considerations, and planning goals for each area.



Target Area	*Geographic Area*	*Focus of Study*
1. Maple Rd and IB Zoning Area	The Transit Center, Maple Road, 21st Century Industrial, and the Smart Zone as described in Master Plan that are located along Maple Road/ Stephenson Road and south to the city border	Market issues, pedestrian circulation, and minor zoning code amendments.
2. Rochester Rd	Big Beaver Road to Wattles Road	Address concerns of adjacent neighbors regarding height, and land use buffers and transitions. Will require amendments to zoning regulations for GB and CB.
3. North Troy	The Northfield area as described in Master Plan	Office vacancy and diversifying land uses
4. Big Beaver Pedestrian	The Big Beaver Form-Based District and the area from Rochester Road to John R. Road	Pedestrian circulation

In 2008, the City of Troy inquired about a comprehensive revision to the Master Plan. The previous plan was adopted in 1965 and had twenty amendments with a complete revision.

The Michigan Planning Enabling Act, PA 33 of 2008 requires that the Master Plan shall be reviewed by the Planning Commission at least every five (5) years. The purpose of such review is to determine if the Plan requires revision. The Planning Commission reviewed the Plan and made a determination that a complete revision of the Plan was not necessary although there were several specific areas of the Plan which should be addressed.

While the future land use plan ensures compatible and coordinated growth throughout Troy, there are identified areas of the city that are undergoing significant change. In those areas where substantial development and redevelopment activity is likely, special area plans provide an illustrative framework to guide development in a way that fosters a sense of place and establishes community identity in key locations. The plans are intended to act as a catalyst for future economic redevelopment within the boundaries established by each plan.

As part of the 2015 Master Plan update, the city undertook a special area study of four areas of the city: Rochester Road, Maple Road, North Troy, and Big Beaver.

While the future land use plan ensures compatible and coordinated growth throughout Troy, key areas of the City will undergo significant change. In those areas where substantial development and redevelopment activity is likely, special area plans provide an illustrative framework to guide development in a way that fosters a sense of place and establishes community identity in key locations.

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Public Engagement

The city pursued a unique approach in public engagement by holding a series of targeted forums focusing on specific issues. Feedback from the community guided the overall direction of the plan. The following summarizes the content of each forums:

Real Estate Forum -

The City of Troy hosted a Real Estate Forum on Tuesday, April 29, 2014 at the Troy Community Center. Over 60 community leaders, business owners, real estate developers, and interested citizens participated in a productive dialogue regarding the future direction of key economic areas of the city, specifically Maple Road, Big Beaver, North Troy, and Rochester Road. Participants were presented with target area snapshots and were asked to identify and describe the assets and challenges of these four areas. Participants also offered strategies for reinforcing assets, re-envisioning challenges, and ultimately attracting new development that is right for the corridor and

the community. Participants emphasized the need for collaboration between city departments and community stakeholders, as well as a coordinated vision that is responsive to market demands and focused on quality of life. By building on the unique strengths of each area, activating established nodes and reinforcing new development with pedestrian amenities, transit connections, and a desirable mix of uses those sites that were once viewed as challenges will appear as opportunities for reinvestment.

- Density is key
- Plan should be market driven and forward thinking
- Transportation and pedestrian improvements are important
- Zoning should align with the Master Plan and offer flexibility to encourage the right development at the right time
- North/South corridors provide important connections between the target areas and adjacent communities
- Residential development should attract and accommodate different ages, lifestyles, and income levels
- New developments should be connected
- Strategic, tactical, and creative placemaking strategies can activate node

Move Across Troy Symposium -

The opportunity exists to create a transportation corridor along Big Beaver Road that is not only unique in Michigan, but in the United States – a corridor that not only carries a high volume of vehicles, but is walkable, hosts continuous pedestrian activity, and provides a variety of transportation options. To identify and address transportation and pedestrian options along and across Big Beaver, the City hosted a Symposium with both the general public and key stakeholders. Two sessions were held. The first was a technical meeting with representatives from MDOT, Oakland County, and City of Troy. The purpose of the meeting to discuss specialized solutions to address issues.

The second session was a public meeting to identify potential pedestrian issues and solutions. Over 60 attendees provided comments on targeted elements including I-75 underpass, grade-seperated crossings, intersection crossings, and mid-block crossings. The results informed the Big Beaver Pedestrian Special Area Plan.

High School Forum -

In order to gain input from the future leaders, a session way held with twenty high school students (ten each from Troy and Athens High Schools). The students were intended to serve as a cross-section of the high school population. The students were quite impressive and were motivated at their responses.

Attendances were asked to use one word to describe Troy today and one word to describe Troy in 10 years:

Troy Today	Troy in 10 Years
Versatile	Fun
Peaceful	Advanced
Family-oriented	Utopia
Upscale	Safer
Quiet	Educated
Potential	Expanded
Diverse	More Diverse
Well-rounded	Innovative
Residential	Modern
Safe	Creative
Fun	Changing
Busy	Less-Congested
Close	Professional
Engaging	Busy
Boring	Beautiful
Suburbia	Affordable
Opportunity	Home-owner oriented

The students were then asked a series of questions about Troy including what they like best about living in Troy, what they like least, their desire to move back to Troy after school, and Troy's most pressing needs. The full results are located in the appendix. The students enjoy the quality of schools; however most students noted that they do not plan on moving back to Troy in the future. If they did move back to Troy it would be because of family and the quality of the schools. They note that Troy is missing entertainment options, and "cool" housing options, and does not provide walkable or bike-able places. Most students desire to live in a big city after college graduation.

Neighborhood Association Forum -

City of Troy hosted a neighborhood forum with Presidents and representatives from the various neighborhood associations. All geographic residential portions of the city were represented.

We started the discussion with asking those in attendance one word to describe Troy today and one word to describe Troy in 10 years:

Troy Today	Troy in 10 Years
Suburban	Advanced
Future	Economic Leader
Random	Attractive
Evolving	Progressive
Bedroom-community	Education
Attractive	Birmingham; More Parking

Youth	Envied
Opportunity	Futuristic
Diverse	The standard
Accommodating	Smart
Modern	Advanced

Participants were asked a series of 15 questions. The full results are located in the appendix. The questions focused on neighborhood issues affecting their neighborhoods including property upkeep and maintenance, transportation improvements, land use transitions and buffers, desired community amenities, and need for housing options.

There were two big takeaways from the neighborhood forum discussion. The first takeaway was that residents like living in Troy and cited a number of reasons including high quality of the public schools, entertainment options, safety, and housing stability. Maintaining a quality school district was cited of critical importance, especially for neighborhood and property value stabilization. The second major takeaway was the biggest issue facing Troy is a lack services within walking distance and lack of non-automobile transportation options.

Boomer and Shaker Forum -

The City of Troy hosted a "Boomer and Shaker" Forum on Monday, August 17, 2015 at the Troy Community Center. The purpose of the forum was to meet with Troy residents to identify issues and determine strategies to ensure Troy assists its aging population and creates an aging friendly place. The intent was to focus on issues facing Troy's boomer and senior population but also address issues that cross-generational lines:

- Housing
- Transportation
- Placemaking
- Walkability
- Safety and Security
- Health Services
- Recreation and Cultural Activities

Over 80 community residents participated in a productive input session to make Troy an aging friendly location.

Most of the participating residents are likely to remain living in Troy as they age. Many noted the high quality of life living in the city. For those that identified that they are likely to leave Troy, the most listed reason was a lack of housing option and a lack of transportation options. Underserved senior housing options and a need for increased public and dedicated senior transportation options was a common discussion point of the Forum.

The first major takeaway was there is an identified underserved housing type of senior-friendly housing such as smaller, single-family homes, condominiums, or apartments with first floor master bedrooms. Housing affordability was listed as a significant housing limitation. Many remarked that they are on a fixed income and cannot afford a $400,000 house/condo. They noted that affordable, smaller housing options are difficult to find in Troy and the city should push development of those types. The second major takeaway was the need for improved transportation options, particularly

serving seniors. Most attendees noted that because they are able to drive they are able to obtain their daily needs (health services, retail goods, social, recreational, and cultural). However, they are unsure if they will be able to once they are unable to drive.

To improve transportation options, the city should work with SMART to increase bus hours and locations. While Medi-go, a transportation service for Troy disabled residents and those age 60, provides a valuable service, the hours are limited and should be expanded. Medi-go should be complimented with a dedicated transportation system or on-call shuttle service for seniors for daily needs in addition to just medical appointments, like grocery shopping, recreation activities, etc. Lastly, the City should focus on improving the sidewalk system and street crossing at major thoroughfares, and build trails.

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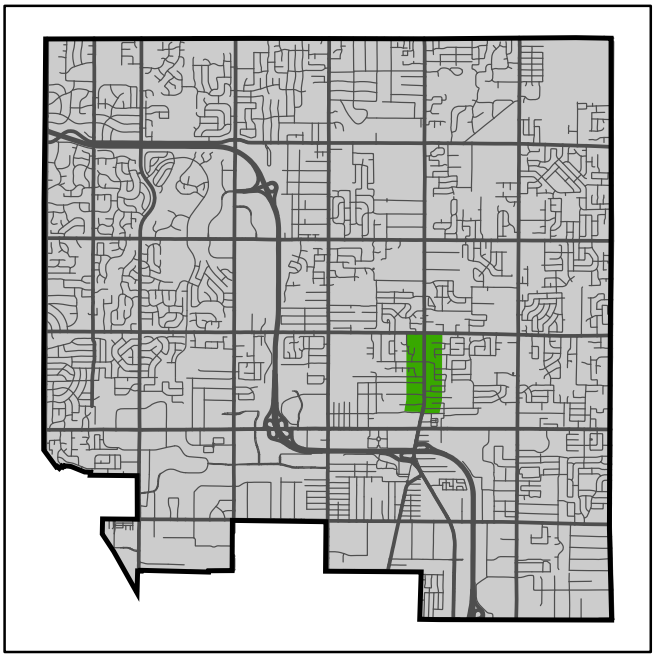
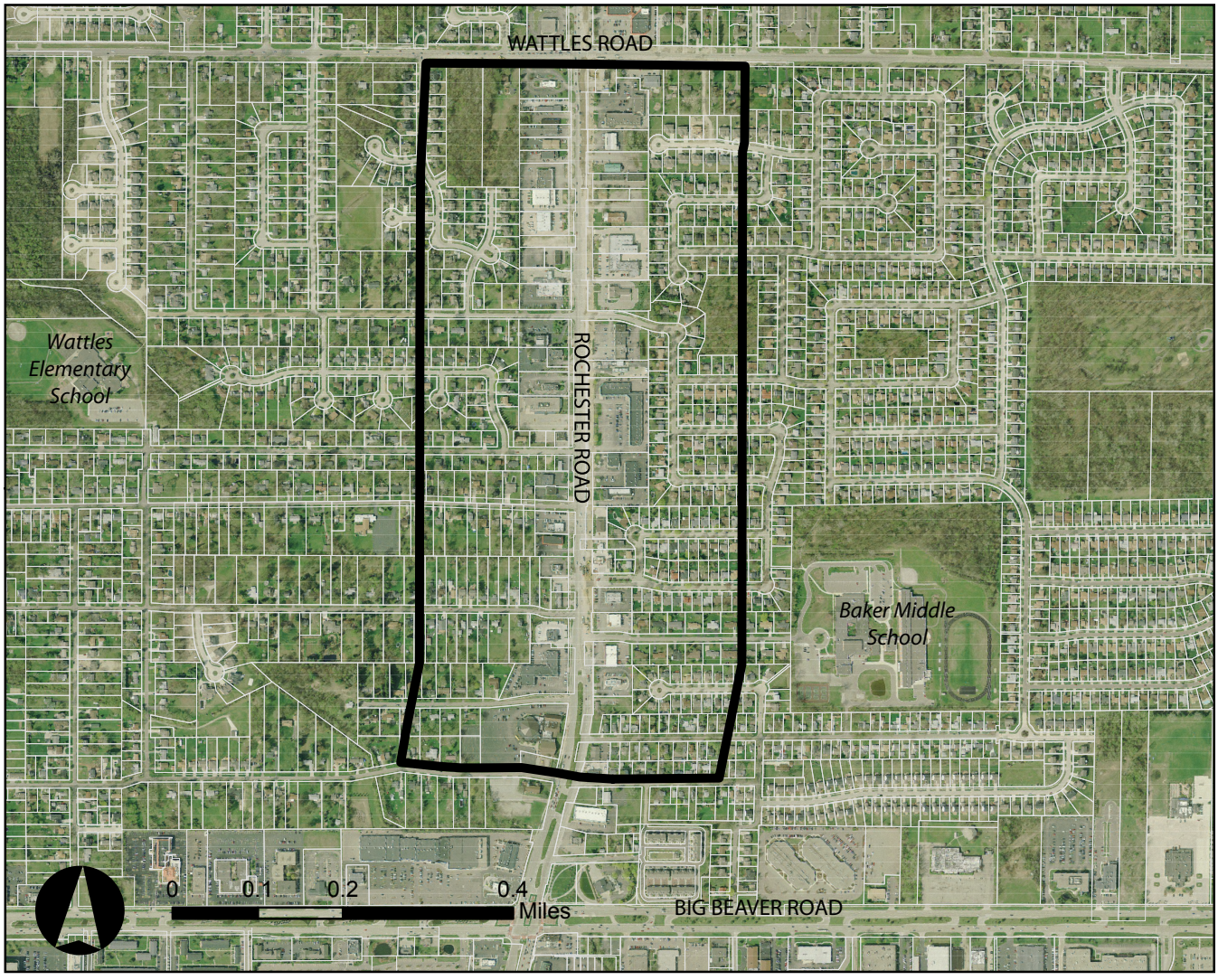
Rochester Road

Special Area Plan



Right: *Locator map*
Below: *Target Area map*



Introduction

The Rochester Road corridor is a major north-south thoroughfare traversing Oakland County, with convenient access to I-75, M-59, Big Beaver Road, Maple Road, and Stephenson Highway. Recent road improvements and the creation of a boulevard have improved traffic flow along the corridor but the vision of a green corridor as envisioned in the 2008 Master Plan has not yet been realized. Development along the corridor has been inconsistent with variation in the size and location of buildings. Other challenges include the location of parking areas, outdated façades and nondescript architecture, landscaping, lighting, and signage. The goal of this Plan is to provide a unifying framework built around public and private improvements that will change the function and character of the corridor over time. Rochester Road has the potential to become a hub for small businesses, independent restaurants, neighborhood services, and live-work development.

Evolving to Meet New Challenges

Rochester Road offers a convenient local commercial node close to the Big Beaver corridor. Adjacent to attractive neighborhoods of primarily single family homes in a great school district; it is principally service and retail use. The challenge for Rochester Road is to develop an active, aesthetically pleasing, commercial corridor that will attract customers, increase taxable value, provide and grow the Troy economy, while protecting the adjacent residential neighborhoods.

In general, Rochester Road has a split personality. In terms of traffic, commuters are trying to get through the area as fast as possible, while residents and businesses are calling for a much slower pace that will provide a safe, pedestrian friendly environment. The new boulevard has improved traffic; however it is only the first step in effectively addressing the pedestrian realm and access management. Continued public/private investment will be needed to transform the corridor. In terms of development, real estate professionals reiterate that "density is key" for corridor revitalization, while residents push to maintain height restrictions. The area is dominated by shallow, narrow lots with limited pedestrian access and inconsistent setbacks. Most users agree that excessive signage and inconsistent façade design result in the perception of visual clutter.

Development along the corridor has been uneven with tremendous variation in the size and scope, location of parking areas and roadway access, architecture, landscaping, lighting and signage. The goal of this Plan is to provide a unifying framework built around public and private improvements that will change the function and character of the corridor over time. The plan identifies three complementary concepts for dealing with these issues and creating a solution that all users will welcome. The first concept deals with restructuring the pattern of land use and development lining the corridor, the second involves incorporating the redesign of the public right-of-way, and finally, creating a cohesive image and stronger identity for the corridor.

Vision Statement

Rochester Road will be a welcoming, pedestrian friendly neighborhood shopping destination known for its small business incubation and stormwater management best practices. Green infrastructure, landscaping, and streetscaping enhance the character of the corridor, while also providing a buffer between commercials areas and adjacent residential uses.

Existing Conditions

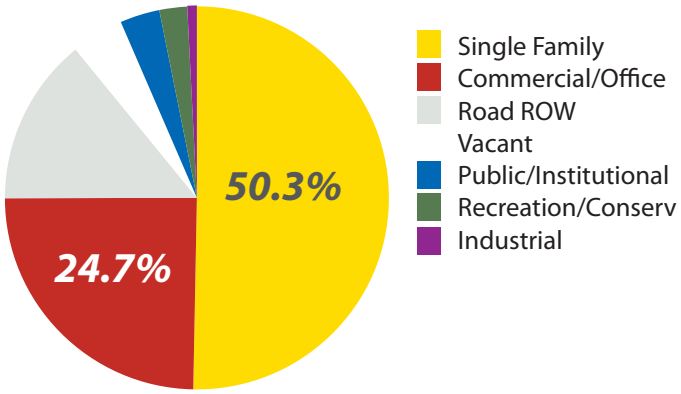
2013 Target area statistics

Total taxable value	$43,612,770
Total area (acres)	164
Total businesses	131
Total employees	1,037

2010 Market area statistics [1]

Population	9,651
Households	3,321
Percent owner occupied	81.4 %
Median household income	$86,712
Per capita income	$34,928

Land Use[2]



Source: Esri 2013 Estimates Business Summary from Oakland County EDCA, Census 2010, City of Troy GIS data 2013 Note: 1. Market Area includes households within 1 mile of Target Area. 2. Employee and Business data use NAICS codes. 2. Land Use calculations include all parcels within the Target Area.

Property Data

	Target Area	Commercial	Industrial	Residential
Total Parcels	392	57	1	334
Total Structures	376	53	1	322
Total Acres	164	50	1	113
Median Year Structure Built		1982	NA	1976
Total Floor Area (SF)		379,321	NA	601,131
Median Floor Area (SF)		4,800	NA	1,709
Total Taxable Value	$ 43,612,770	$ 14,911,860	NA	$ 28,700,910

Source: City of Troy GIS data 2013

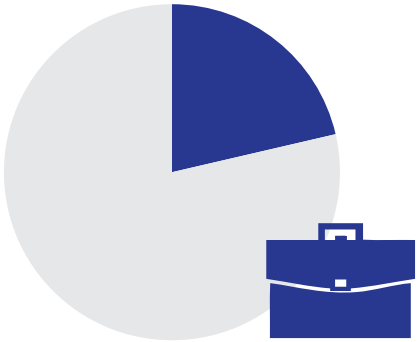
Top Industries in Target Area by Employment [2]

32.1% ***Finance & Insurance***

	Employees	Percent (%)
Finance & Insurance	333	32.1
Administrative & Support & Waste Management	135	13.0
Accommodation & Food Services	124	12.0
Retail Trade	109	10.5
Professional, Scientific & Tech Services	83	8.0

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

Top Industries in Target Area by Number of Businesses



21.4 % ***Professional, Scientific & Tech Services***

	Businesses	Percent (%)
Professional, Scientific & Tech Services	28	21.4
Administrative & Support & Waste Management	22	16.8
Retail Trade	15	11.5
Other Services (except Public Administration)	11	8.4
Health Care & Social Assistance	10	7.6

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

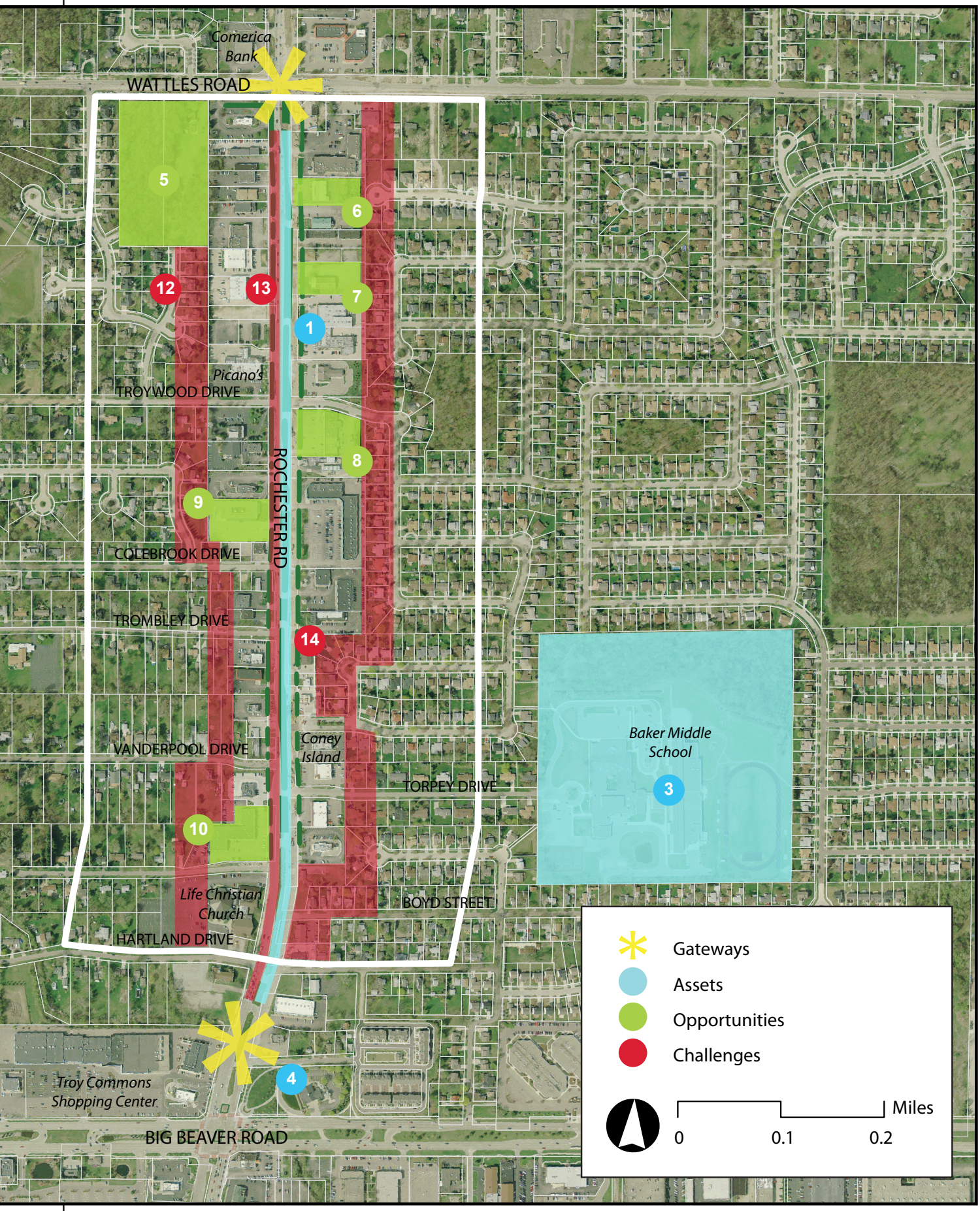
Existing Conditions

Gateways
- Wattles Road
- Big Beaver Road

Assets
1. Rochester Road street improvements
2. Wattles Elementary School
3. Baker Middle School
4. Gateway Park on Big Beaver Road

Opportunities
5. Potential development site
6. Recent redevelopment
7. Potential development site
8. SE of Rochester Rd and Troywood Drive
9. NW of Rochester Rd and Colebrook Drive
10. Troy Pointe Plaza
11. Mom and Pop character

Challenges
12. Boundary/transition between single-family residential Boundary/transition between single-family residential
13. Inconsistent building setback
14. Shallow depth of commercial frontage


Comerica Bank
WATTLES ROAD
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Picano's
TROYWOOD DRIVE
ROCHESTER RD
COLEBROOK DRIVE
TROMBLEY DRIVE
VANDERPOOL DRIVE
Coney Island
TORPEY DRIVE
Baker Middle School
Life Christian Church
BOYD STREET
HARTLAND DRIVE
Troy Commons Shopping Center
BIG BEAVER ROAD
Gateways
Assets
Opportunities
Challenges
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Rochester Road Public Engagement Findings

Rochester Road offers a convenient economic node close to residential neighborhoods. It is primarily service and retail use. The corridor could be marketed as the "Entrepreneurial Center" for the city as it provides an incubator for small start-up businesses. The area is dominated by shallow, narrow lots with limited pedestrian access and inconsistent setbacks. Excessive signage and inconsistent façade design result in the perception of visual clutter. New development may require the consolidation of parcels, but there are concerns from the community about increasing building heights where adjacent to residential properties.

There needs to be a conscious effort in branding Rochester Road and making it a notable place. Streetscape should not be underestimated. Sidewalk connections and pedestrian access must be accommodated in new developments. In some ways infrastructure can be used to mask the visual clutter and give the corridor a unified image.

Considerations

- Keep integrity of residential as more commercial frontage is developed
- Reface retail and create more pedestrian friendly intersections
- Clean corridor and remove or revitalize obsolete buildings by finding incentives for redevelopment
- Reduce setbacks and parking associated with strip malls
- Develop retail and restaurants that reflect the needs of nearby residents
- Encourage senior housing and compatible uses

Priorities and Strategies

This plan recommends three priorities for establishing Rochester Road as a vibrant and walkable corridor with ample pedestrian amenities, convenient neighborhood services, and great accessibility. These priorities and strategies include:

Priority and Strategy Interconnection: *These priorities and their strategies are not mutually exclusive; rather they reinforce each other and together they have the ability to attract users and spark investment, and ultimately achieve these aims of vibrancy, identity, and walkability.*

1. Enhance the image and identity through private investment and public/private partnerships

Strategies:

- Adopt Design Guidelines/Standards
- Establish building improvement programs
- Coordinate streetscape improvements
- Encourage innovative stormwater management

2. Improve access management

Strategies:

- Implement Rochester Road Access Management Plan between Big Beaver and Wattles Road
- Support lot consolidation
- Require consistent building and parking location placement

3. Preserve adjacent residential character and encourage compatible development

Strategies:

- Provide rear setback and landscape buffers between Rochester Road frontage parcel and adjacent residential properties

Priority 1: Enhance image and identity through private investment and public/ private partnerships

Rochester Road offers a different kind of retail environment, one that is focused on neighborhood service and affordable to small businesses. Despite recent improvements to the right-of-way, Rochester Road lacks a unified identity and cohesion. Excessive signage and outdated strip malls result in the corridor feeling visually cluttered. Updating existing buildings, eliminating blight, and creating a cohesive streetscape will require financial incentives, comprehensive planning, and coordinated public and private investment. However, with targeted interventions and plan implementation the corridor can elevate the aesthetic quality of the area and embrace its green corridor identity.

Renovating commercial storefronts and addressing code violations will enhance the corridor's appearance and economic strength.

Rochester Road Image and Identity

Priority 1: Enhance image and identity through private investment and public/ private partnerships

Strategy: Develop Design Guidelines

The City has made a significant investment in the public portion of Rochester Road and private development should reflect that high quality investment. Design guidelines will facilitate the phased redevelopment of the corridor. These standards are a paradigm shift - from customary single use zoning and automobile oriented development patterns to development decisions focused on building placement, integrated use, universal access, and pedestrian amenities. The fundamental element of the Design Guidelines is the relationship of the building to the street which includes building mass, site access, parking arrangement, and treatment of the pedestrian realm.

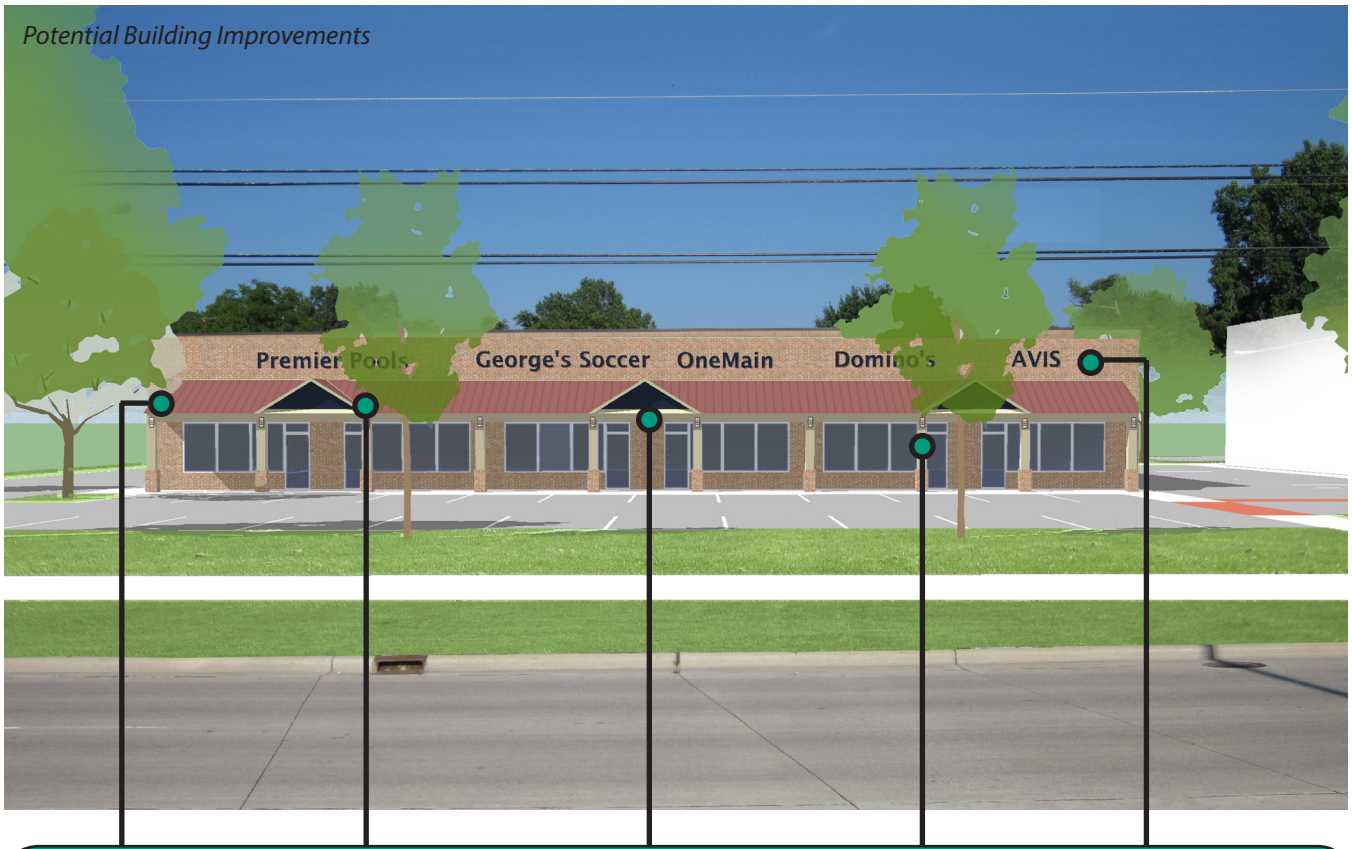
It is important the design guidelines be crafted to encourage quality design while not reducing development incentives.

Strategy: Establish building improvement programs

Many of the commercial buildings along Rochester Road are over 30 years old, including a few structures built in the 1950s and 60s. Establishing a façade improvement grant program will provide the necessary incentive and guidance to update and enhance tired exteriors. Increased focus on beautification and code enforcement is necessary, and can be promoted through social media and neighborhood groups. Even the newer buildings constructed in the last 10 years will benefit from formal design guidelines.

Existing Conditions

Potential Building Improvements



New awning

High quality materials

Architectural details

New light fixtures

Consistent signage

Priority 1: Enhance image and identity through private investment and public/ private partnerships

Strategy: Coordinate streetscape improvements

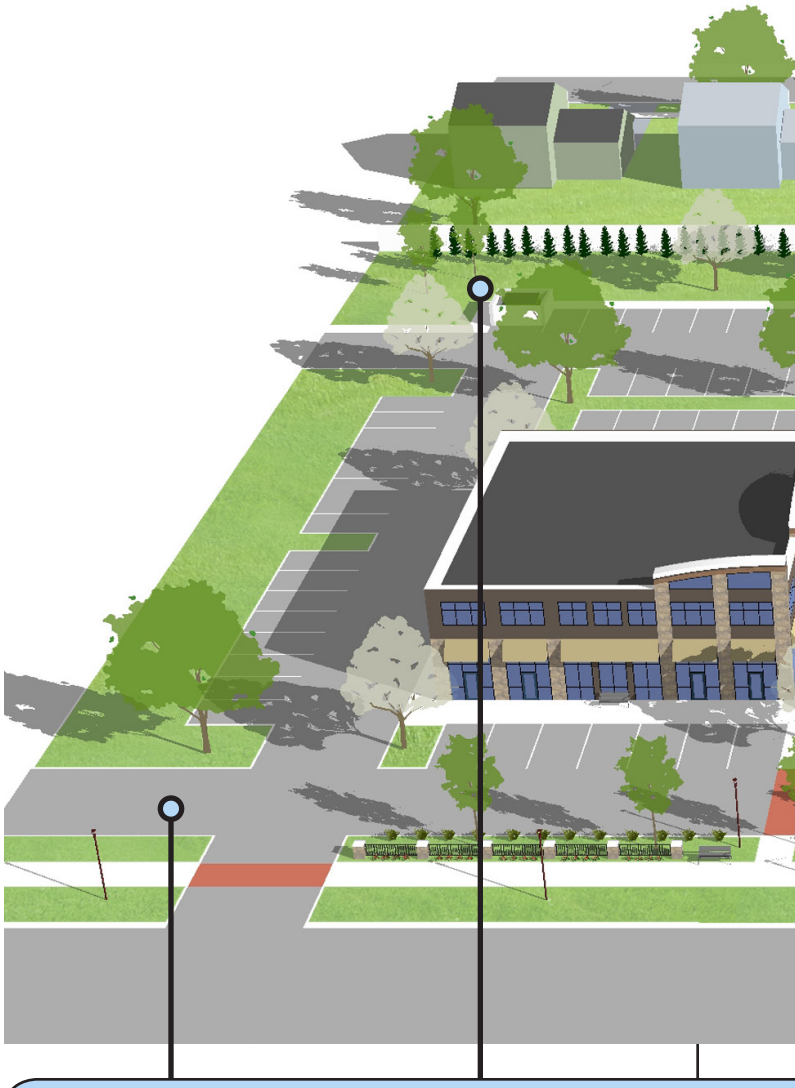
Streetscape elements can identify an area as a special and distinct place for residents, shoppers, visitors, and employees. The City should establish a conceptual Streetscape Plan that sets recommended standards for landscaping, signage, lighting, sidewalks, intersections and access. The Rochester Road streetscape should provide:

- A defined edge between the pedestrian and automobile areas
- A unified relationship between the public/ pedestrian realm and private domain
- The use of street trees and landscaping, furniture, paving, lighting, and other streetscape elements
- Attractive street lighting that reinforces the corridor image and minimizes extraneous light

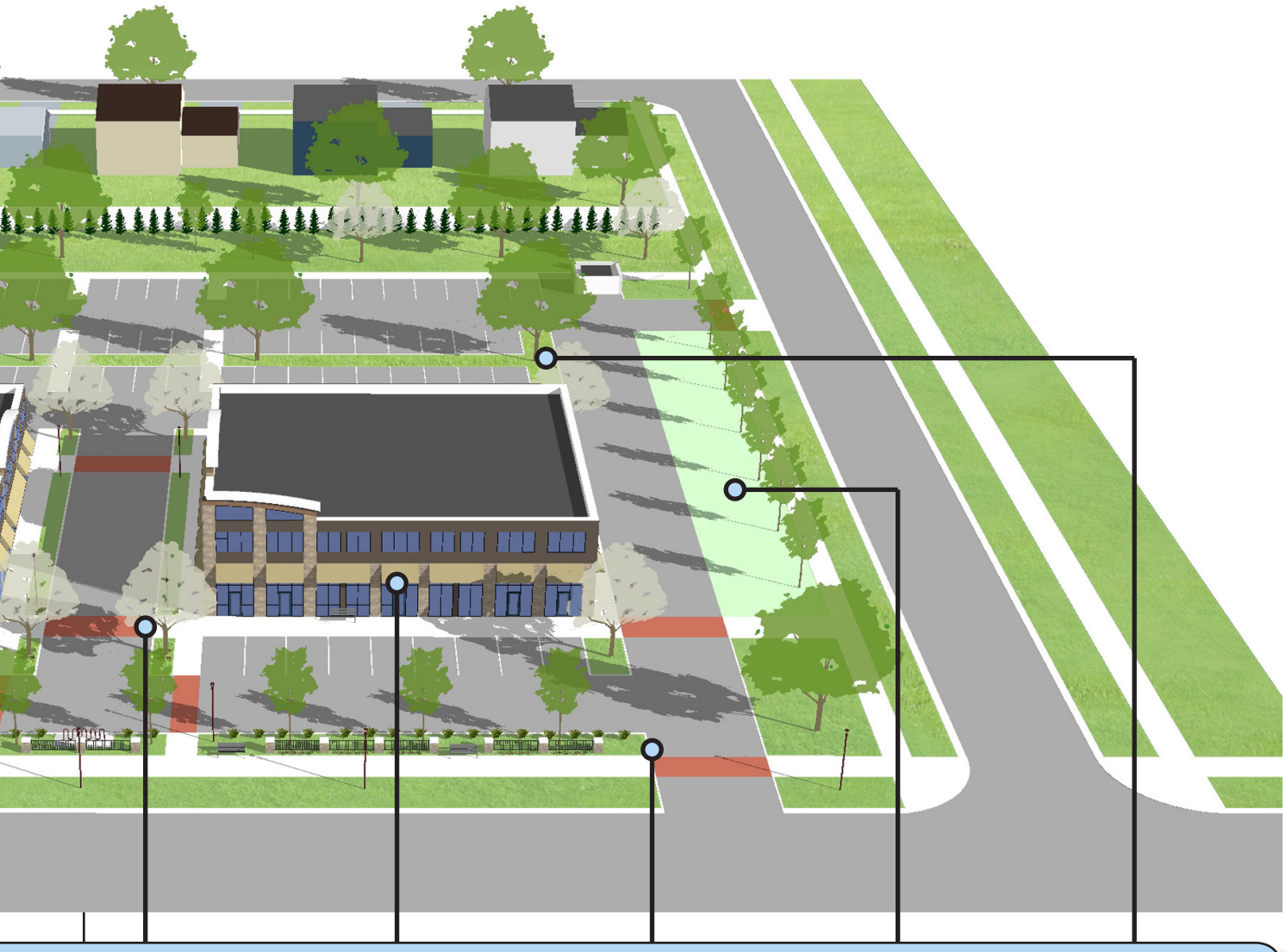
Streetscape may occur corridor wide or occur as redevelopment does.

Strategy: Encourage innovative stormwater management

The 2008 plan identified Rochester Road as a green corridor as this section of the corridor is intersected by the Shanahan and Lane Drains. Use of green infrastructure in coordination with infrastructure and nonstructural stormwater best management practices (BMP) should be incorporated. New development should protect natural flow pathways and reduce impervious surfaces. The Plan encourages installing rain gardens, vegetated filter, pervious pavement, vegetated roof, and native plants. Project considerations should include land use, runoff quality, site factors, costs, construction coordination, and maintenance issues. Property owners should reference the Low Impact Development (LID) Manual for Michigan produced by SEMCOG.



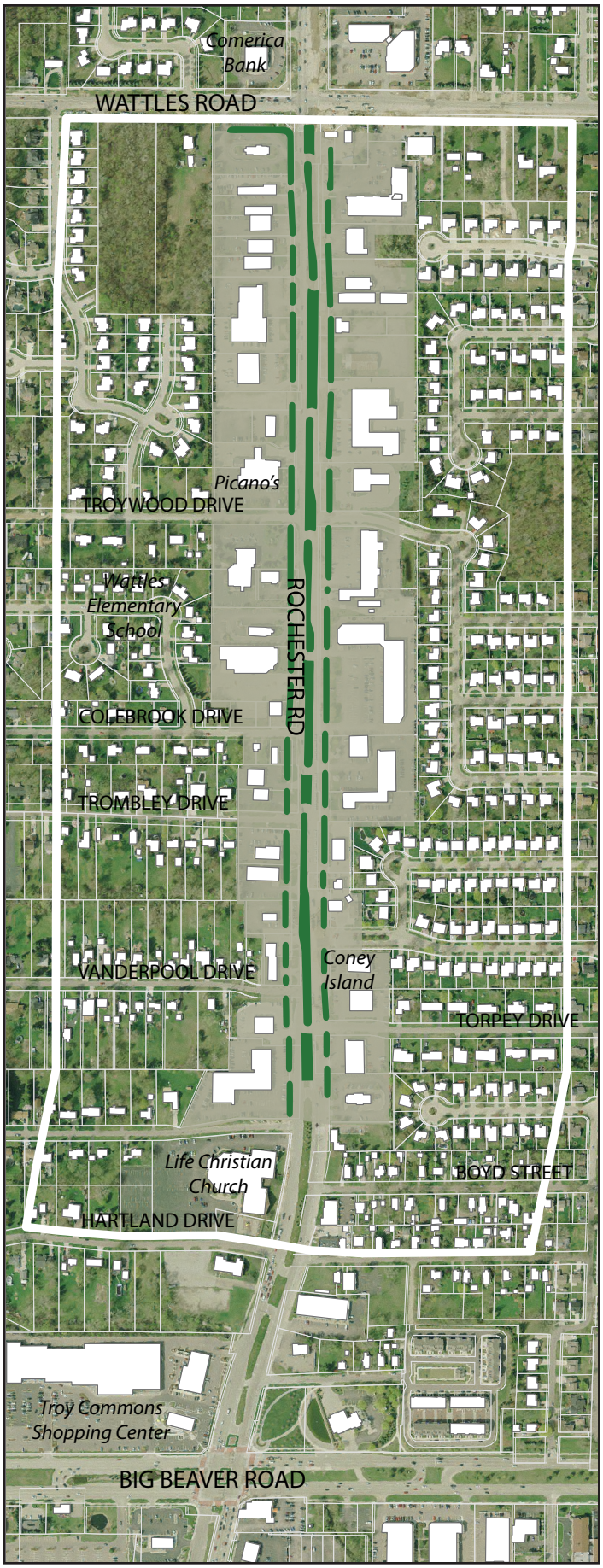
Cross Access	*Buffering between Land Uses*
Provides vehicular access between adjacent sites in order to create a safer pedestrian and automobile environment by reducing the need for multiple site curb cuts.	Development edges should provide a transition to adjacent parcels.



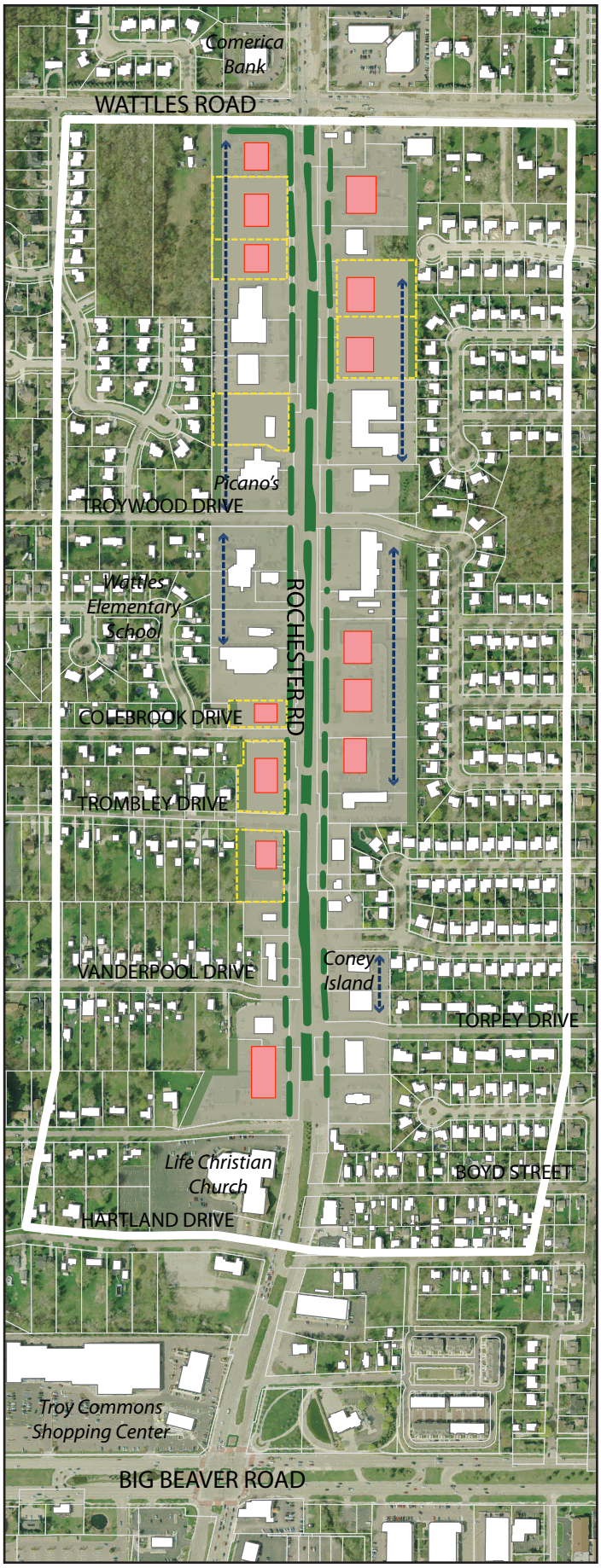
Pedestrian Connections	*Building Form*	*Streetscape*	*Stormwater Management*	*Parking Lot Landscaping*
Properly designed sidewalks and crosswalks that provide internal and external site connections to adjacent parcels and the Rochester Road public sidewalk.	Building form and design should result in an integrated and high quality development. The building massing and material should be complementary of context and enrich the corridor environment.	Streetscape amenities such as decorative lighting, special pavers, bollards, trash cans, and benches can enhance an area's pedestrian environment and commercial viability.	New development should incorporate stormwater management best practices, including Low Impact Development (LID).	Parking should be conveniently provided but located behind buildings and screened with necessary landscape and design elements.

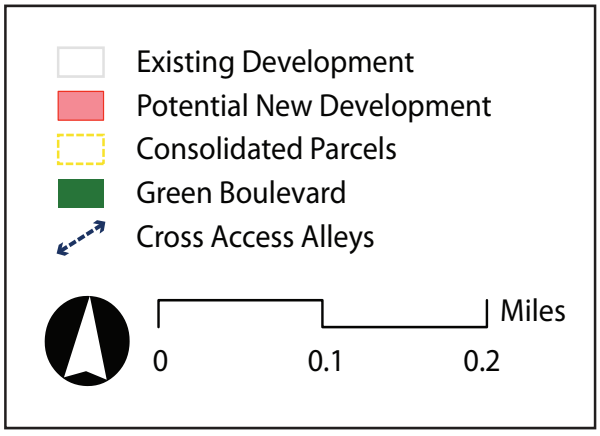
Priority 2: Improve site access and building orientation

Drivers often experience difficultly entering and exiting sites along Rochester Road. Curb cuts and inconsistent setbacks also deter pedestrian and non-motorized traffic. Access management along Rochester Road is necessary to ensure roadway safety and efficient operations while providing reasonable access to the adjacent land uses. Eliminating driveway redundancy and establishing consistent building placement and parking locations actually increase business access and visibility, and also create a safer, more inviting automobile and pedestrian environment.



Existing Conditions


Comerica Bank
WATTLES ROAD
Picano's
TROYWOOD DRIVE
Wattles Elementary School
ROCHESTER RD
COLEBROOK DRIVE
TROMBLEY DRIVE
VANDERPOOL DRIVE
Coney Island
TORPEY DRIVE
Life Christian Church
BOYD STREET
HARTLAND DRIVE
Troy Commons Shopping Center
BIG BEAVER ROAD


Existing Development
Potential New Development
Consolidated Parcels
Green Boulevard
Cross Access Alleys
Miles
0
0.1
0.2

Proposed

Priority 2: Improve site access and building orientation

Building oriented to Rochester Road

Access management is a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways, increase the capacity of these roads, manage congestion, and reduce crashes.
Source: Federal Highway Administration

Benefits of Access Management:

- ***Safety – reduces crashes***
- ***Capacity – improves traffic flow***
- ***Walkability/Transit - reduces conflicts***
- ***Aesthetics– increases landscaped areas***
- ***Business Vitality – improves customer ingress/egress***
- ***Preserve Investment – very cost effective***

Source: Rochester Road Access Management Plan, 2011

Strategy: Implement Rochester Road Access Management Plan between Big Beaver and Wattles Road

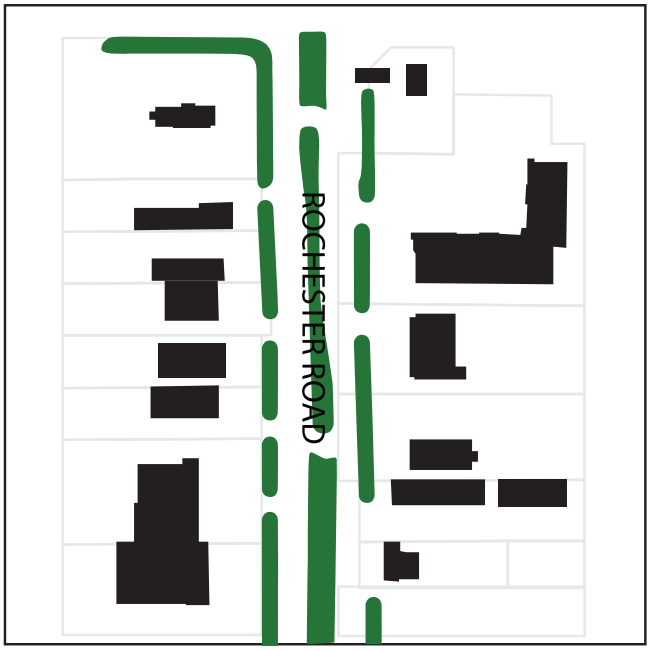
In 2011, the City of Troy participated in the creation of the Rochester Road Access Management Plan along with four other communities, Southeast Michigan Council of Governments (SEMCOG), Michigan Department of Transportation (MDOT), and Road Commission of Oakland County (RCOC). Based on MDOT's Access Management Guidebook, the Plan recommends improved road design, modified access, increased walking and biking, and coordinated low impact development along the entire corridor. In addition to these overarching principles, the following corridor segment specific recommendations should be implemented for the portion of Rochester Road between Big Beaver and Wattles Road:

- Reduce driveway density by removing 11 of the 38 total existing access points
- Increase visibility of the un-marked bike route crossing at Bishop/Troywood
- Connect properties at the rear with parking lot connections, access easements, or an alley

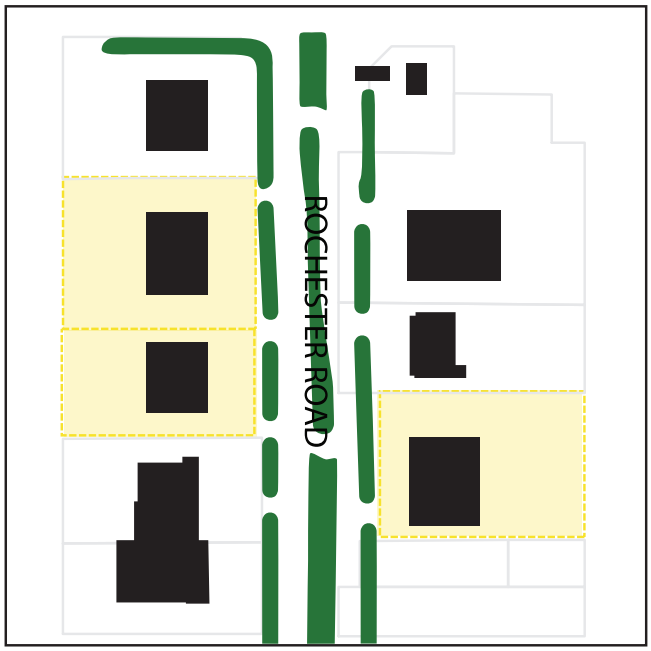
The City has recently made significant roadway improvements, introducing a boulevard. Recommendations from the Access Management Plan should be implemented as development occurs. The City should also coordinate implementation with other local initiatives, capital improvements, and road construction projects.

Strategy: Support lot consolidation

Lot consolidation provides two significant benefits. First, lot consolidation permits the elimination of curb cuts. Reducing curb cuts increases safety for motorists, cyclists, and pedestrians reducing points of vehicular conflict. Secondly, lot consolidation creates larger lots, which permit greater design flexibility and are easier to develop. Contiguous parcels on Rochester Road create challenges for coordinated development and design continuity. Land assembly can work to the advantage of both a developer and property owners. Property owners benefit from increased property values, and developers get a large enough parcel to build on for today's markets.



Existing Conditions



After Lot Consolidation

Strategy: Require a consistent building placement and parking location

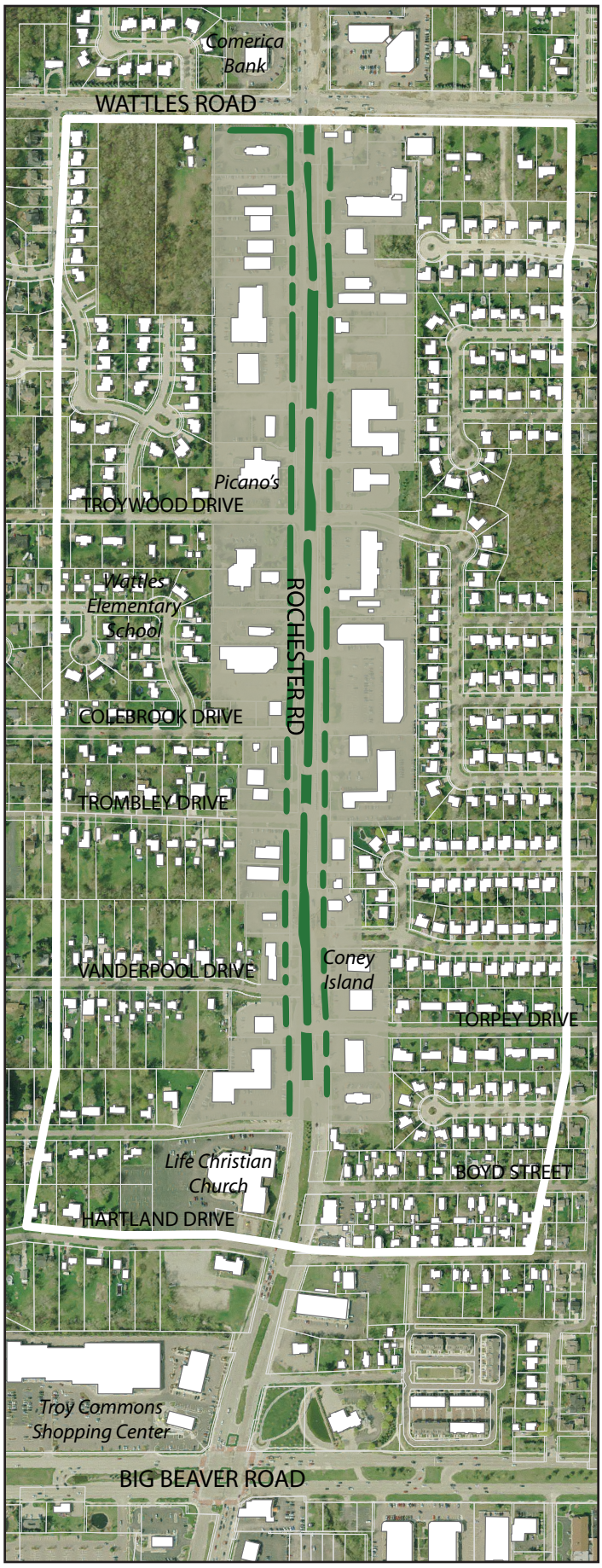
A consistent building placement and parking location will help improve access management and establish a defined street wall. As noted in the Rochester Road Access Management Plan, some of the buildings are set too close to the right-of-way to allow cross access between properties. On the other hand, the strip retail centers are set back to accommodate parking, providing limited pedestrian connections and little to no landscaping in the parking area. Orientation should avoid overcrowding and allow for functional use of the space between buildings and in the front and rear yards. Parking should not be the dominant visual element on the site; instead the building should provide a welcoming entrance – preferably covered – that provides convenient access to all users.

A street wall is formed when buildings front onto a street with consistent setbacks. The placement, scale and design quality of the building's street wall determine the character of the streetscape and reinforce pedestrian objectives.

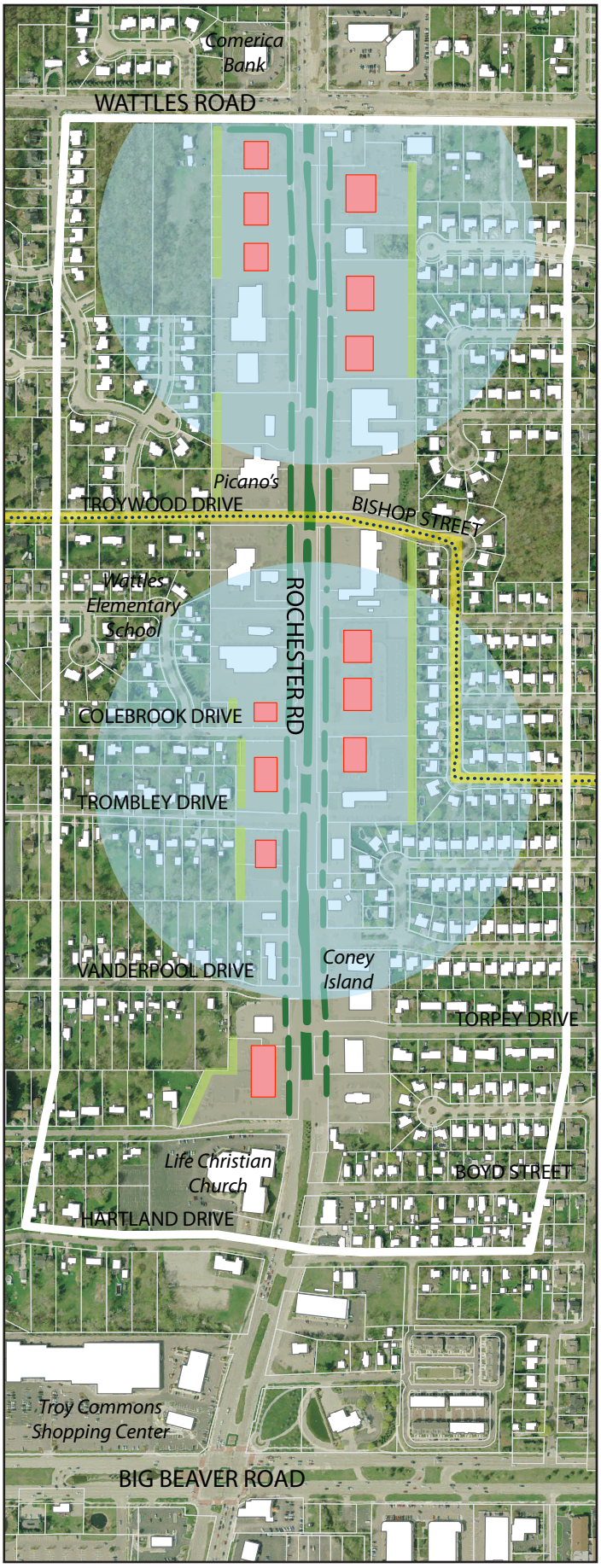
Priority 3: Preserve adjacent residential character and encourage compatible development

Rochester Road functions as a link, connecting the single family neighborhoods to the larger commercial corridors and regional highways. This function presents both an opportunity and a challenge for the corridor. Redevelopment along Rochester Road must respond to a range of land use patterns and existing conditions.

A tenet of both the Master Plan and Zoning Ordinance is the protection of residential properties. Balancing development priorities and surrounding neighborhood character will be vital to the success and health of the corridor. Senior housing, casual dining, professional office, and neighborhood services are some of the desirable uses for this community. Mixing uses, horizontally and vertically, will also provide for a more walkable and vibrant area. Too much flexibility can appear inconsistent at times, so establishing clear regulations on building form and use is essential. Many of the commercial properties are outdated, particularly the strip retail stores. These larger sites and, through lot consolidation, the properties near the Wattles intersection offer great potential for redevelopment.



Existing Conditions


Comerica Bank
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Life Christian Church
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HARTLAND DRIVE
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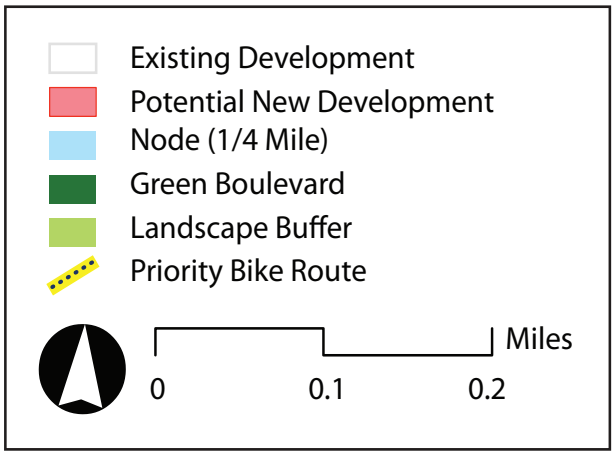

Existing Development
Potential New Development
Node (1/4 Mile)
Green Boulevard
Landscape Buffer
Priority Bike Route
Miles
0
0.1
0.2

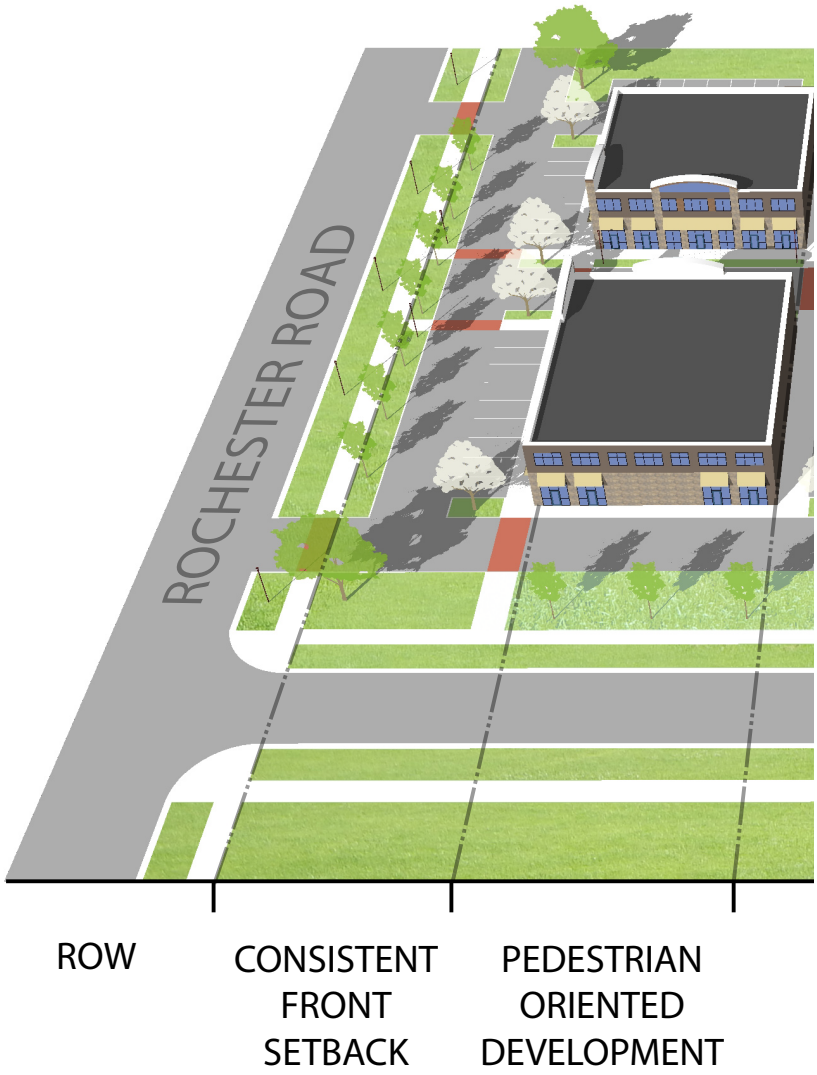
Proposed

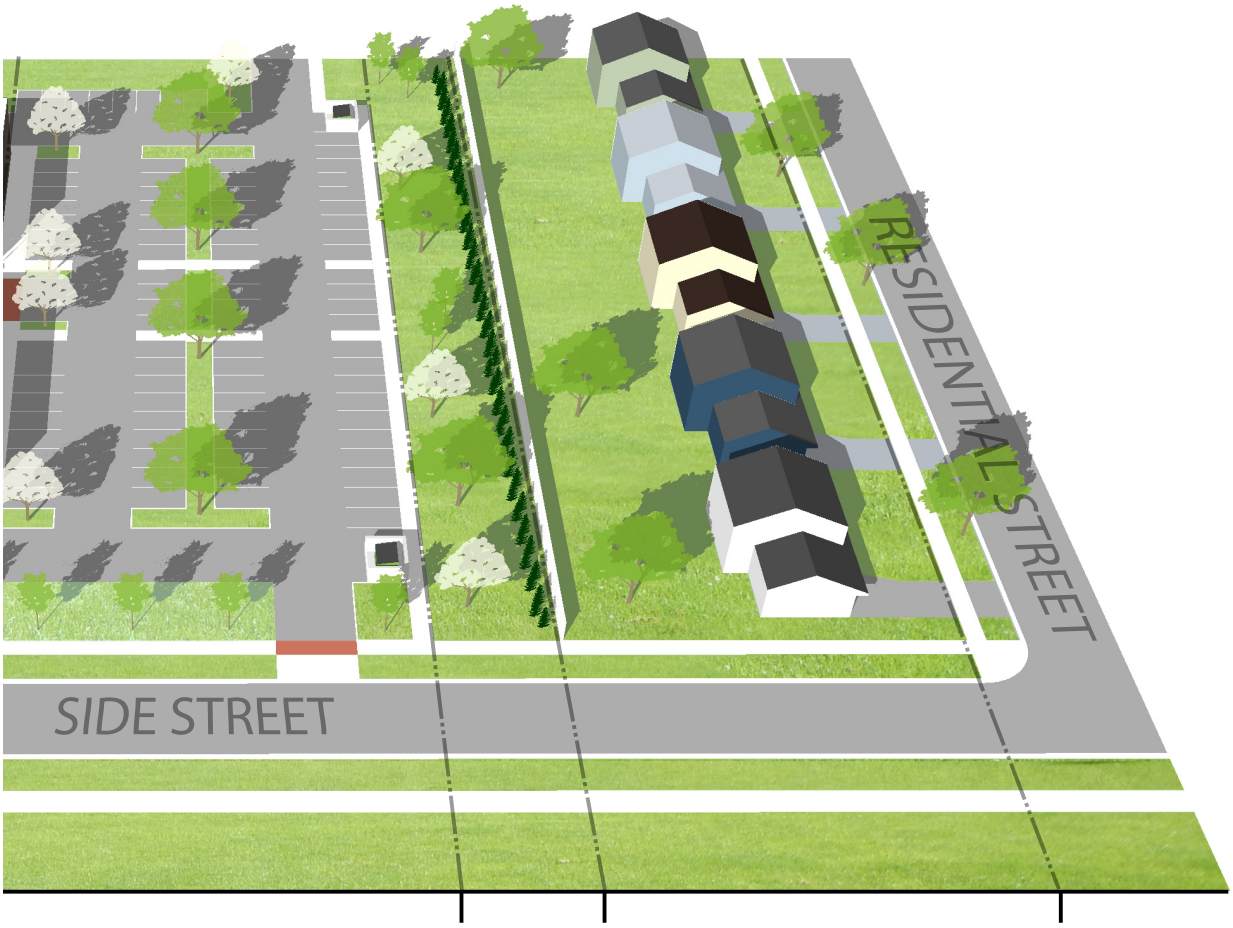
Priority 3: Preserve adjacent residential character and encourage compatible development

Strategy: Provide buffer and landscape between Rochester Road frontage parcel and adjacent residential properties.

Shallow parcel depth along Rochester Road is a constraint on site design. Parcels range in size from 90 to 300 feet deep, with frontages ranging from 60 to 460 feet. In order to protect residential properties, additional buffers and transitions should be applied for commercial and industrial developments adjacent to residential uses. The buffers can be in the form of setbacks, greenbelts, and increased landscape requirements.

Transition between Commercial Uses and Residential Uses




RESIDENTIAL STREET
SIDE STREET
REAR SETBACK BASED ON BUILDING HEIGHT
LANDSCAPE BUFFER
ADJACENT RESIDENT
ROW

Action Plan and Implementation

The Rochester Road Plan is organized into multiple projects so the vision can be refined and implemented in phases over time in a flexible manner. Priority transformative projects like the streetscape projects and facade improvement programs entail multiple phases given their scale and ambition and serve as economic catalysts enhancing the image of the corridor. The timeframe to implement the Plan will depend on many factors, including market conditions, financing, approvals, and other city initiatives.

	Strategy
Priority 1 ***Enhance the image and identity through private investment and public/private partnerships***	Design Guidelines
	Establish building improvement program
	Coordinate streetscape improvements
	Encourage innovative stormwater management

	Strategy
Priority 2 ***Improve access management***	Implement Rochester Road Access Management Plan between Big Beaver and Wattles Road
	Support lot consolidation
	Require a consistent building placement and parking location

	Strategy
Priority 3 ***Protect adjacent residential***	Provide buffer and landscape between Rochester Road frontage parcel and adjacent residential properties

Phasing
Near 1-2 years
Mid 3-5 years
Long 6-10 years

Actions	*Phasing*	*Responsibility*
Develop and adopt Design Guidelines	Near	City
Incorporate Design Guidelines into Zoning Ordinance	Near	City
Implement Design Guidelines as development occurs	Near/Mid	City, Private entities
Research building improvement programs and best practices	Mid	City
Determine managing body and identify program resources and funding	Mid	City
Adopt criteria from Design Guidelines/Standards	Mid	City
Develop and implement Building Improvement Program	Mid	City
Develop Rochester Road Streetscape Plan	Near	City
Implement Streetscape Plan comprehensively or as development occurs	Near/Mid	City, Private entities
Develop Rochester Road Stormwater Plan	Near	City
Implement Stormwater Plan comprehensively or as development occurs	Mid	City, Private entities

Actions	*Phasing*	*Responsibility*
Eliminate identified access points as development occurs	Near	City, Private entities
Create parking connections as development occurs	Near	City
Improve crossing safety for bicycles at Troywood/Bishop	Near	City
Create Rochester Road Overlay or amend Community Business (CB) and General Business (GB) District zoning regulations	Near	City
Encourage/require lot consolidation as development occurs	Near	City
Create Rochester Road Overlay or amend CB and GB zoning regulations	Near	City

Actions	*Phasing*	*Responsibility*
Create Rochester Road Overlay or amend CB and GB zoning regulations	Near	City

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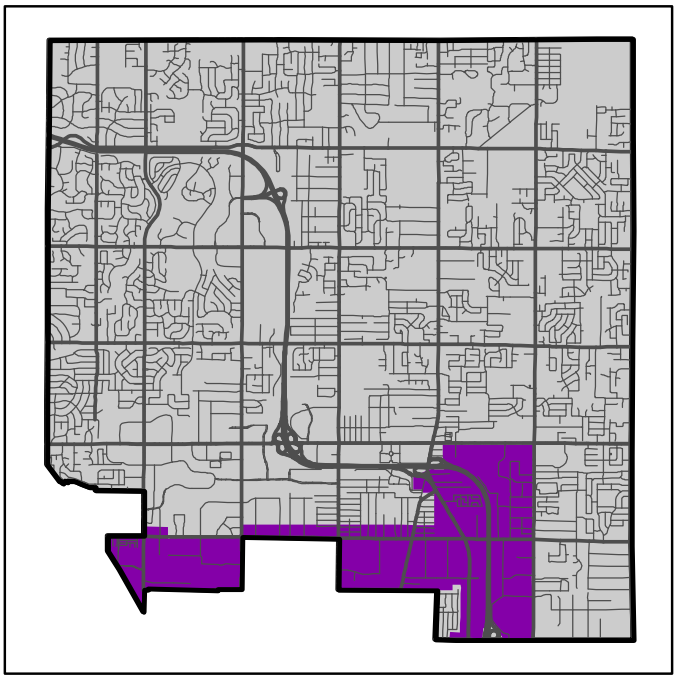
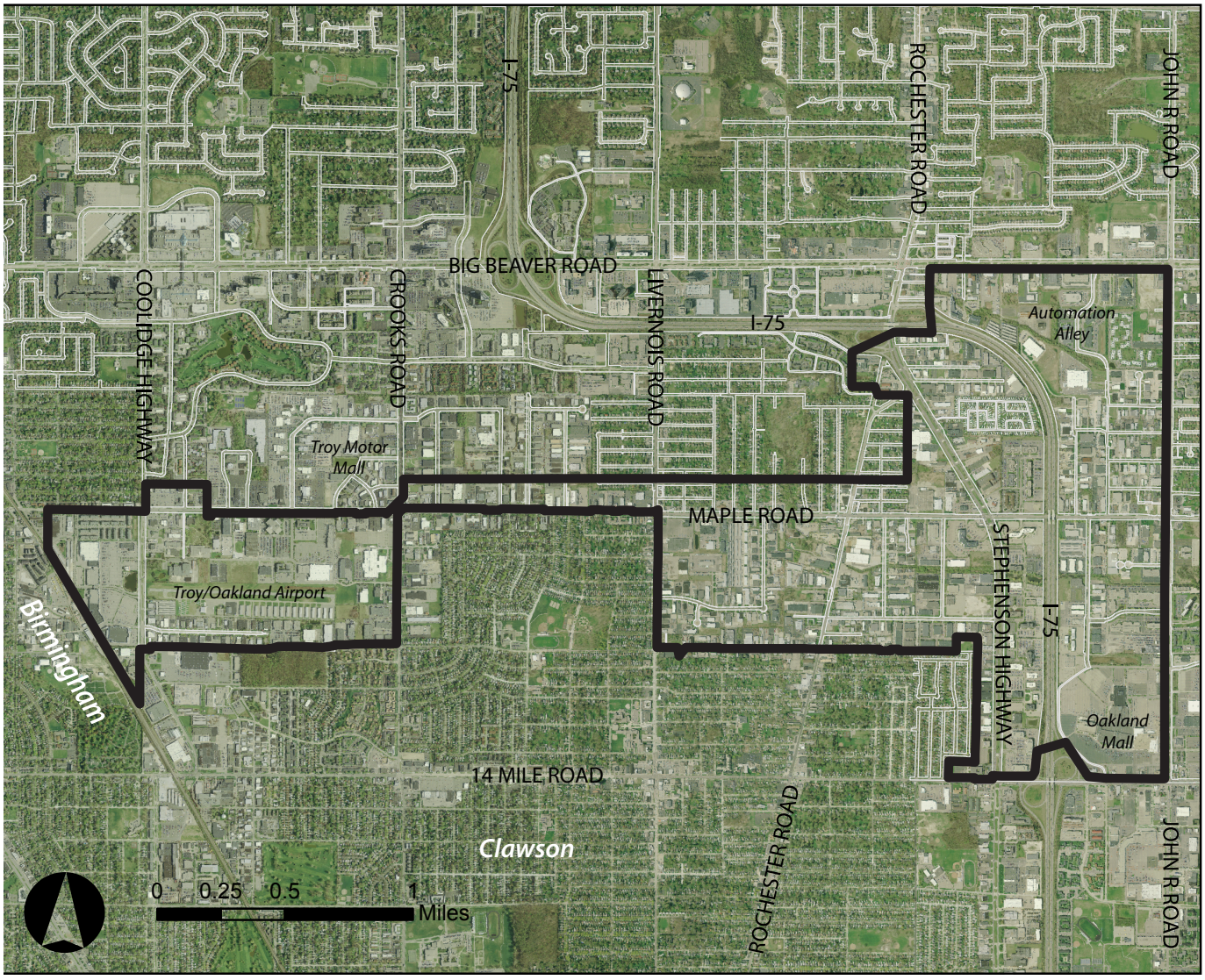
Maple Road
Special Area Plan



Right: Locator map
Below: Target Area map



Introduction

The six (6) mile stretch of Maple Road serves as a primary regional east-west roadway connecting Troy with the surrounding communities of Birmingham and Bloomfield to the west, and Sterling Heights to the east. Historically, the Maple Road and Stephenson Highway corridors have been home to Troy's industrial and technology development base. The Maple Road area also includes the Troy Smart Zone Campus and is home to the Automation Alley headquarters. Industries along the corridor provide essential services including business-to-business (B2B) and business-to-consumer (B2C) transactions, and help diversify Troy's economy. It is vital to Troy's long-term economic standing to maintain a viable industrial base. Over the past 30 years of growth and development, Maple Road has evolved incrementally. It is now comprised of an eclectic mix of uses including industrial, research and development, automobile dealerships, big box retail, smaller neighborhood retail, office, and both single-family and multiple-family residential. Due to a diversification of land uses, mixed parcel sizes, and abutting municipal boundaries the pattern and character of Maple Road is difficult to classify. To ensure that future development is intentional and high quality, Troy recognized that a new focus for Maple Road needs to be considered.

Evolving to Meet New Challenges

Maple Road exemplifies the car-dominated environment that is typical of the modern American landscape. Recent redevelopment interest along Maple Road and the success of the Big Beaver corridor to the north provides an opportunity to change the rules for new development so that the corridor will be more economically viable and people-oriented. Maple Road is a corridor of contrast in terms of land use, building placement, and investment. Comprehensive corridor redevelopment requires careful attention to both sides of the corridor's right-of-way line. While Maple Road has experienced recent reinvestment, there are pockets of disinvestment, resulting in vacant, abandoned, and underused properties. Nevertheless, Maple Road presents an opportunity to build on the existing diversity of land uses, transportation options, and proximity to residential. For properties lining the corridor, revitalization requires a restructuring of development patterns, with less emphasis on land use and more focus on quality, accessibility, and innovative redevelopment. For those parcels in the industrial areas located off the corridor, a focus on protection and reinvestment of the industrial and technology development base should be emphasized. The repurposing of Maple Road offers three key priorities based on the following land patterns: the development nodes at major mile intersections, the linear segments of the corridor between the major mile intersections, and the industrial and employment areas located off the corridor.

Vision Statement

There are moments in the development of a city where an opportunity presents itself, and where entrepreneurs are rewarded. With less focus on land use, and more focus on quality development, businesses incubation, creation of anchors, and reinvestment through entrepreneurship, Maple Road can become a choice location.

Existing Conditions

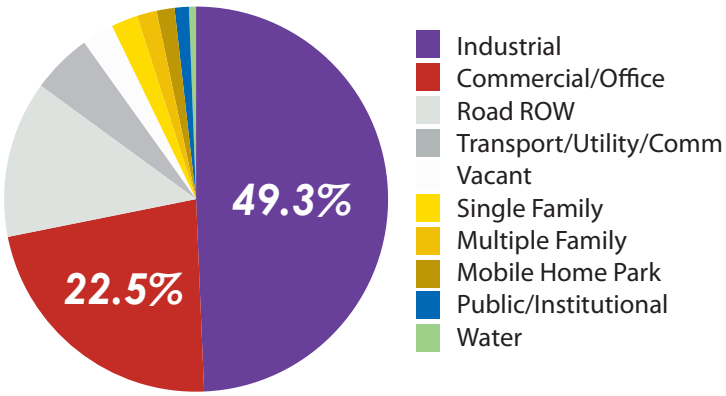
2013 Target area statistics

Total taxable value	$341,823,442
Total area (acres)	1,828
Total businesses	1,625
Total employees	24,576

2010 Market area statistics [1]

Population	10,677
Households	4,681
Percent owner occupied	58.5%
Median household income	$52,475
Per capita income	$28,402

Land Use



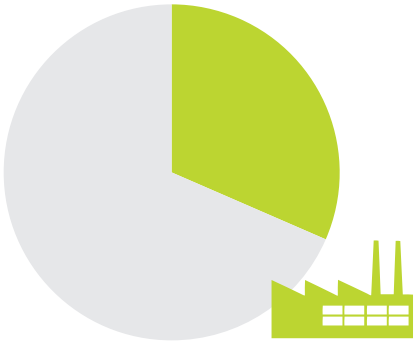
Source: Esri 2013 Estimates Business Summary from Oakland County EDCA, Census 2010, City of Troy GIS data 2013
Note: 1. Market Area includes households within 1 mile of Target Area. 2. Employee and Business data use NAICS codes.

Property Data

	Target Area	Commercial	Industrial	Residential
Total Parcels	392	57	1	334
Total Structures	376	53	1	322
Total Acres	164	50	1	113
Median Year Structure Built		1982	NA	1976
Total Floor Area (SF)		379,321	NA	601,131
Median Floor Area (SF)		4,800	NA	1,709
Total Taxable Value	$ 43,612,770	$ 14,911,860	NA	$ 28,700,910

Source: City of Troy GIS data 2013

Top Industries in Target Area by Employment [2]

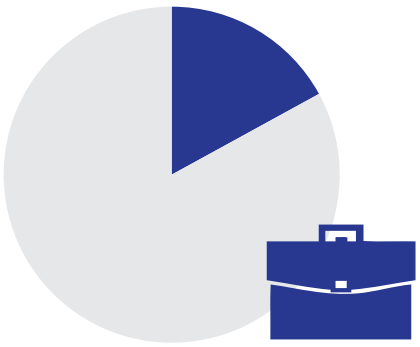


31.5% *Manufacturing*

	Employees	Percent (%)
Manufacturing	7,745	31.5
Professional, Scientific & Tech Services	3,723	15.1
Retail Trade	2,918	11.9
Wholesale Trade	2,199	8.9
Health Care & Social Assistance	1,675	6.8

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

Top Industries in Target Area by Number of Businesses



17.0% *Professional, Scientific & Tech Services*

	Businesses	Percent (%)
Professional, Scientific & Tech Services	277	17.0
Wholesale Trade	211	13.0
Manufacturing	205	12.6
Retail Trade	204	12.6
Administrative & Support & Waste Management & Remediation	130	8.0

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

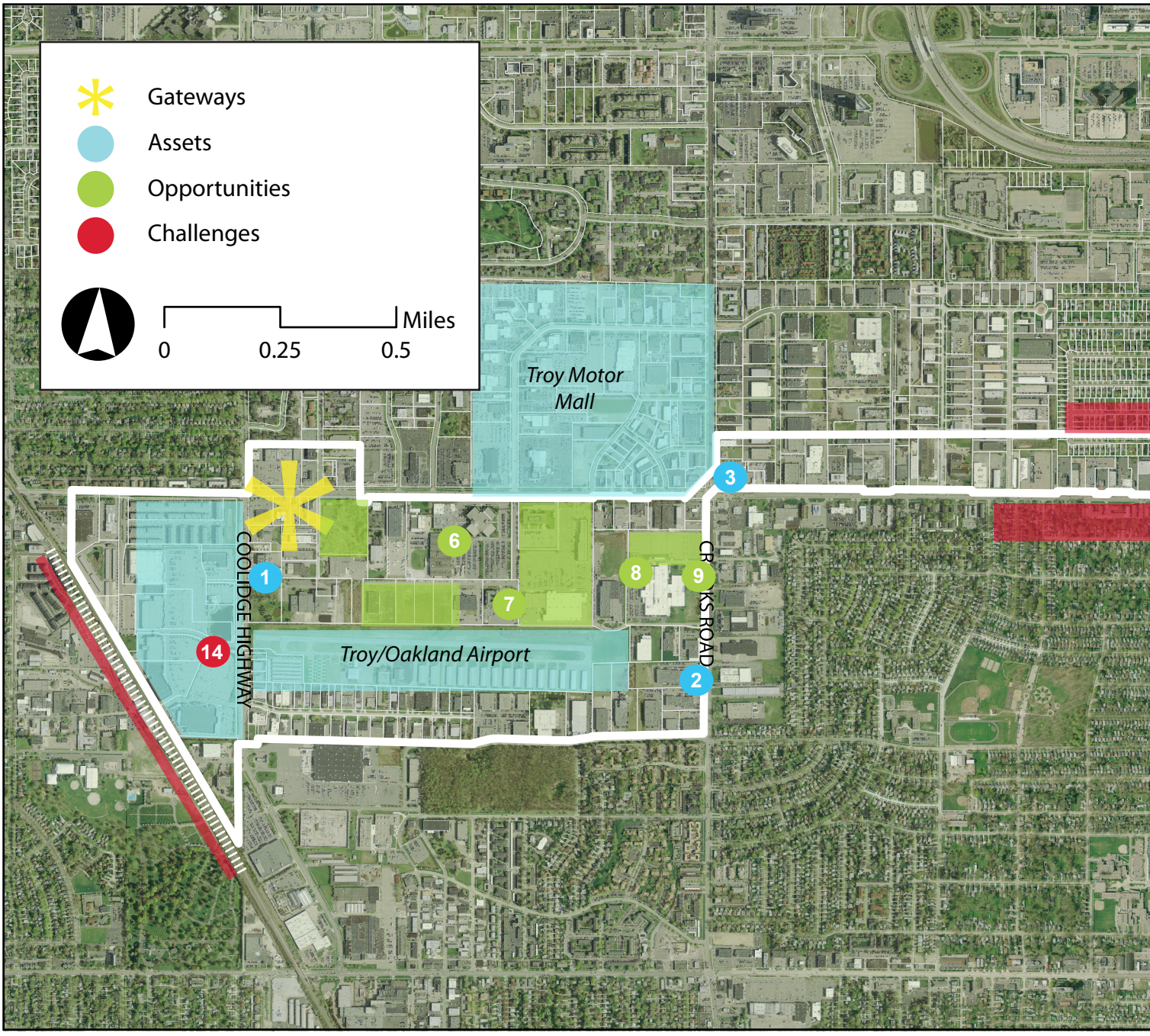
Existing Conditions

Gateways

- Coolidge Highway and Maple Road
- Stephenson Highway and 14 Mile Road
- Big Beaver Road and John R Road

Assets

1. Midtown Square
2. Troy/Oakland Airport
3. Troy Motor Mall
4. Automation Alley/SmartZone
5. MJR Theater

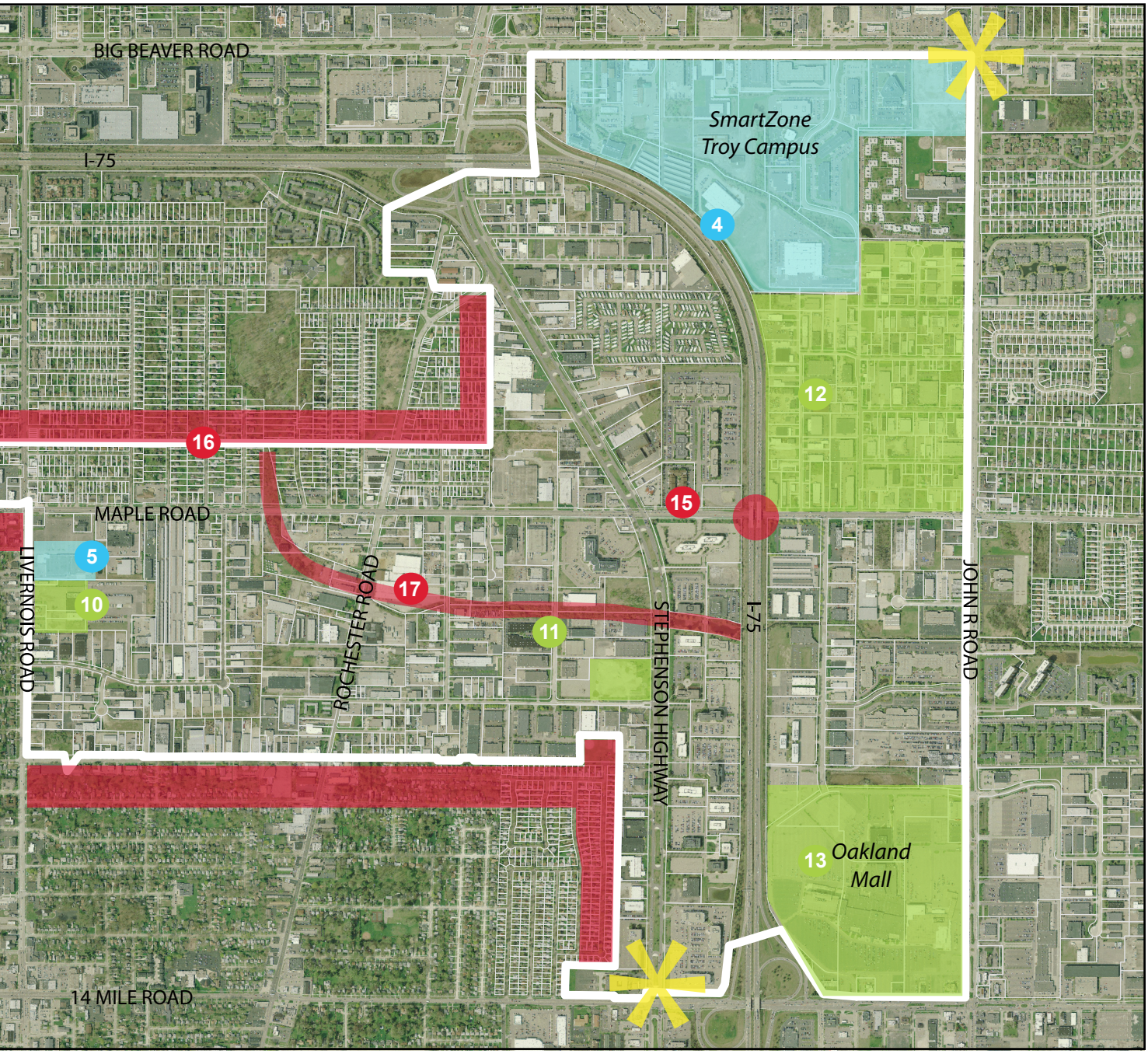


Opportunities

6. South of Maple Road at Axtell Drive
7. Adjacent to airport along Equity Drive
8. Cambridge Crossing outlot development
9. South of Maple, west of Crooks Road
10. South of Maple, east of Livernois Road
11. Rankin Drive and Stephenson Highway
12. Light industrial reuse/repurpose
13. Oakland Mall infill development

Challenges

14. Railroad acts as a barrier to Eton Road
15. No access to or from I-75
16. Boundary/transition to single family
17. Spencer Drain



Maple Road Public Engagement Findings

Maple Road provides a great central location with a well-established traffic flow and close proximity to residential areas. Midtown Square, Automation Alley, and the new MJR theater can serve as anchors for the corridor and should be reinforced by complementary uses including retail, dining, and multifamily residential. Industrial and office spaces offer architecturally unique redevelopment opportunities and could foster a live/work culture if marketed to local startups, small tech companies, or creative design firms with a need for light manufacturing facilities or collaborative work spaces.

Access, connectivity, and convenient parking are major challenges for sites along Maple Road. Strip development and industrial uses are segregated and offer limited connection to the surrounding residential communities and current business sector. While the zoning ordinance provides site design flexibility through the Sustainable Development Project (SDP) option, the city staff may need to educate potential investors on how to take advantage of this development tool and communicate the overall vision for Maple Road.

Considerations

- Think creatively about attracting companies and investment
- Encourage circulation planning that integrates public transit stops and connects pedestrian nodes to greenway trails and residential sidewalks
- Cluster pedestrian activities through redevelopment of underutilized properties
- Support mixed-use development with strong ties to the Transit Center and transit-oriented development
- Expand SmartZone and establish an overall vision for Maple Road
- Consider transit impact study for I-75 access onto Maple Road

Priorities and Strategies

This plan recommends three priorities for establishing Maple Road as a safe, active, and vibrant district with opportunities for investment, entrepreneurship, and innovation. These priorities and strategies include:

1. Generate investment at development nodes

Strategies:

- Encourage high-quality commercial /mixed-use development at major mile intersections
- Engage surrounding residential neighborhoods through linkage
- Incentivize development through zoning

2. Encourage entrepreneurism and redevelopment

Strategies:

- Preserve and enhance traditional-innovative-entrepreneurial industrial areas
- Promote creation of districts and encourage compatible industries

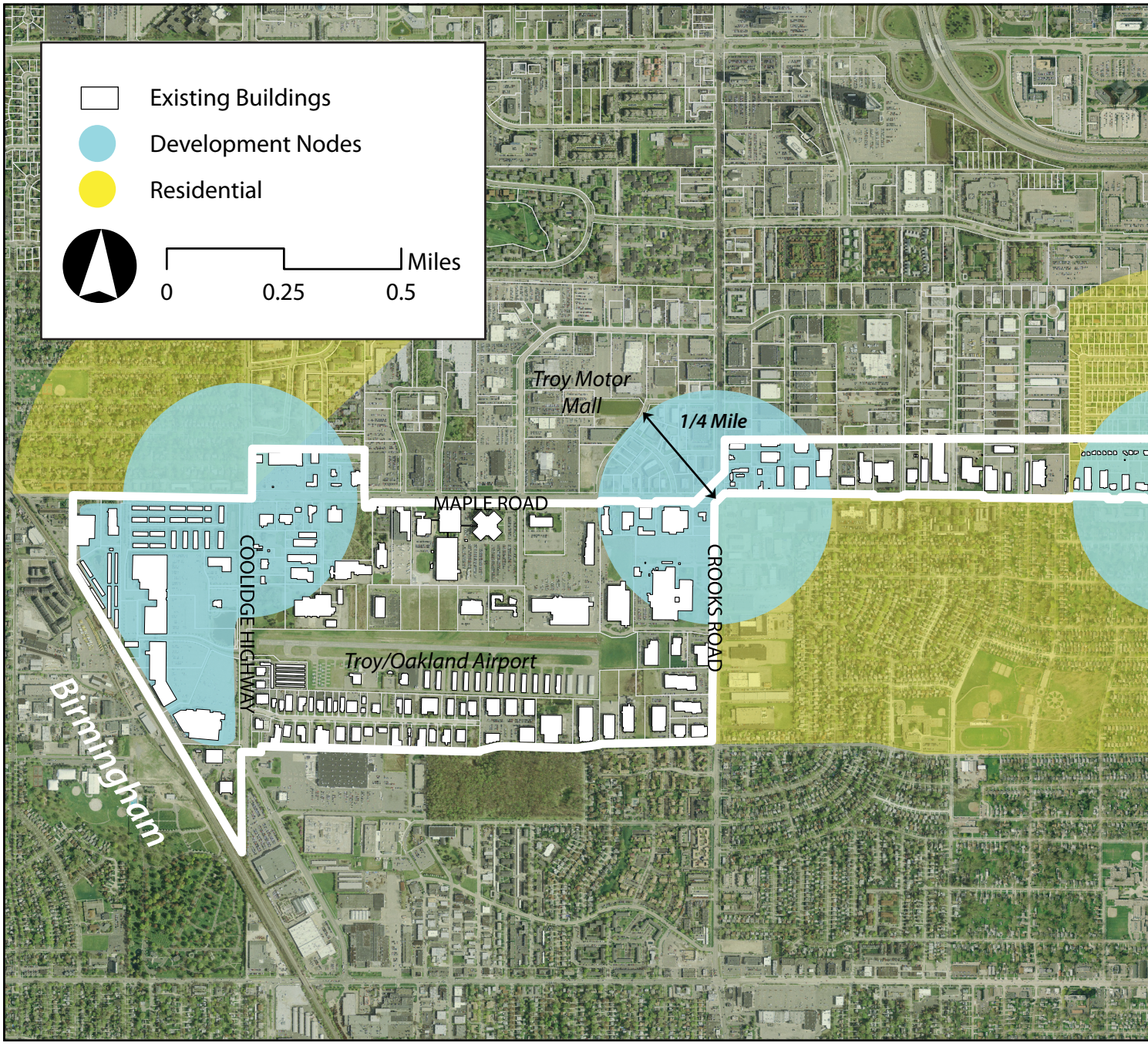
3. Enhance and strengthen segments between major mile intersections

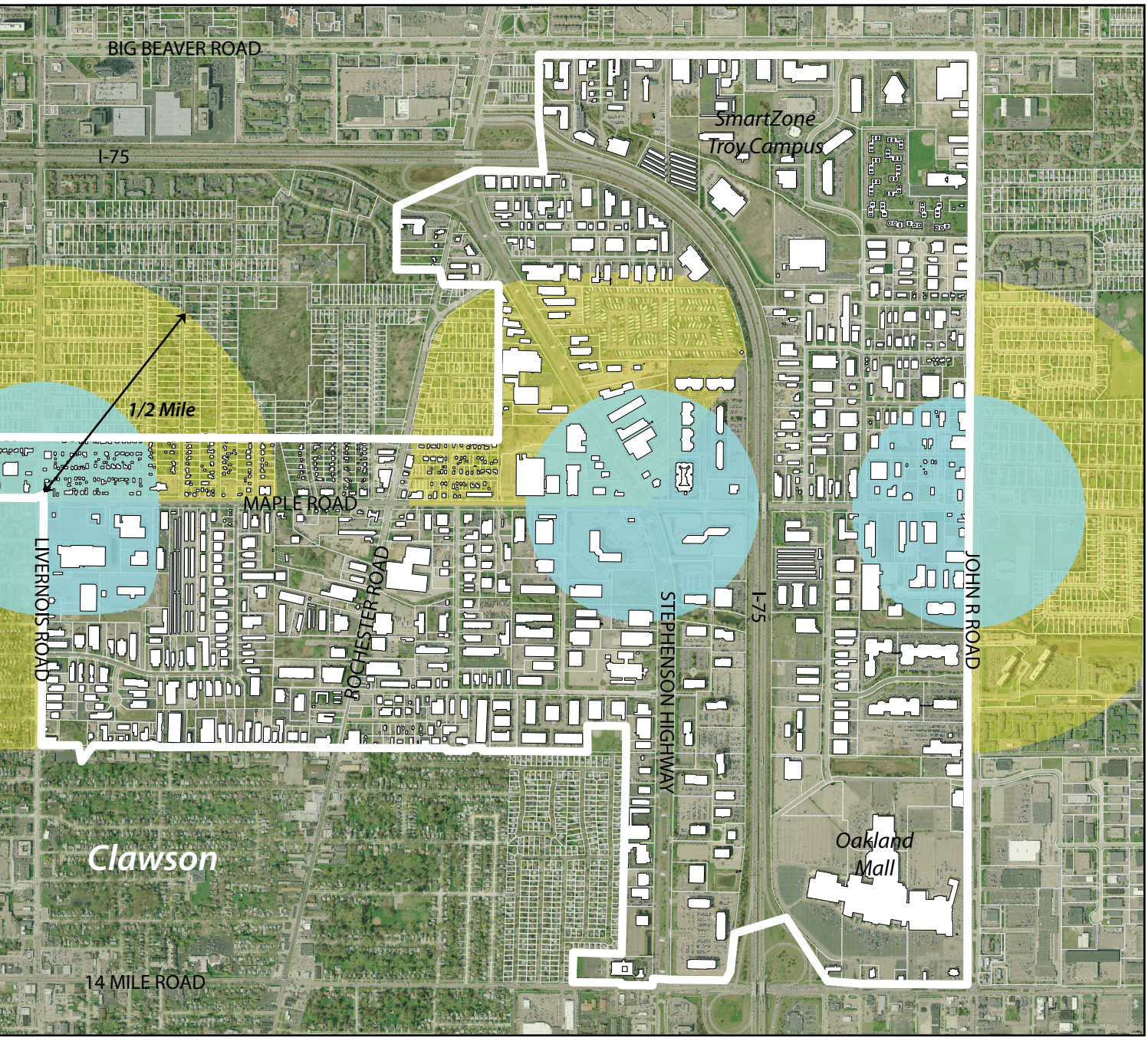
Strategies:

- Identify alternative value for challenging sites
- Implement zoning amendments to permit flexibility
- Improve pedestrian access
- Improve pedestrian crossing

Priority and Strategy Interconnection: *These priorities and their strategies are not mutually exclusive; rather they reinforce each other and together they have the ability to attract users and spark investment, and ultimately achieve these aims of vibrancy, identity, and economic resiliency.*

Priority 1: Generate investment at development nodes




BIG BEAVER ROAD
I-75
SmartZone
Troy Campus
1/2 Mile
MAPLE ROAD
LIVERNOIS ROAD
ROCHESTER ROAD
STEPHENSON HIGHWAY
I-75
JOHN R ROAD
Clawson
Oakland
Mall
14 MILE ROAD

Existing Conditions

Coolidge Highway

Coolidge Highway

Crooks Road

Livernois Road

Stephenson Highway

John R Road

Priority 1: Generate investment at development nodes

The age, scale, and condition of structures along Maple Road vary considerably. This incremental and inconsistent development pattern has also resulted in incompatibilities between land uses. Mixing land uses can be effective and prosperous when implemented in conjunction with standards and policies. Maple Road is a major east-west thoroughfare bordered by residential neighborhoods that depend on services and convenience retail within walking distance. Maple Road serves many important functions as a commercial and industrial corridor, but its lack of identity, cohesion, and consistency are very apparent to residents, employees, and investors.

In response to increasing traffic and aging infrastructure conditions, changing patterns of retail development that favor newer sites in outlying areas, and the evolving needs of the industrial sector, many properties along Maple Road are suffering from ongoing disinvestment. Although Maple Road has pockets of investment, there are many underperforming areas with high vacancy rates, lower sales per square foot, and a lack of money to reinvest in aging structures.

In order to realign the Maple Road corridor to be consistent with the forces of market demand, portions of the corridor should be significantly and deliberately restructured into a form which property owners, developers, and communities will once again invest. Since market-driven forces in the retail industry are cause for the change along commercial corridors, Maple Road planning should start with a reevaluation of commercial, particularly retail, development patterns along the corridor.

To compete, the Maple Road corridor will need to evolve beyond its aging commercial center reality to better appeal to prospective customers, residents, and businesses. The strategy for the corridor's future should focus on improved aesthetics and creation of exciting new mixed-use clusters at major mile intersection nodes.

Eight Principles of Good Urban Design

1. Imageability: *Quality of a place that makes it distinct, recognizable, and memorable.*

2. Enclosure: *Degree to which streets and other public spaces are visually defined by buildings, walls, trees, and other vertical elements.*

3. Human Scale: *Size, texture, and articulation of physical elements that match the size and proportions of humans, and equally important, correspond to the speed at which humans walk.*

4. Transparency: *Degree to which people can see or perceive what lies beyond a building façade*

5. Complexity: *Visual richness of a place including number and kinds of buildings, architectural diversity, landscape elements, street furniture, signage and human activity.*

6. Coherence: *Sense of visual order including scale, character and arrangement of buildings, landscaping, street furniture, and other physical elements.*

7. Legibility: *Ease with which the spatial structure of a place can be understood and navigated as a whole.*

8. Linkage: *Physical and visual connections-from building to street, building to building, space to space, or one side of the street to the other-that tend to unify disparate elements.*

Source: Pedestrian & Transit-Oriented Design (2013)

Priority 1: Generate investment at development nodes

Strategy: Encourage high-quality commercial / mixed-use development at major mile intersections

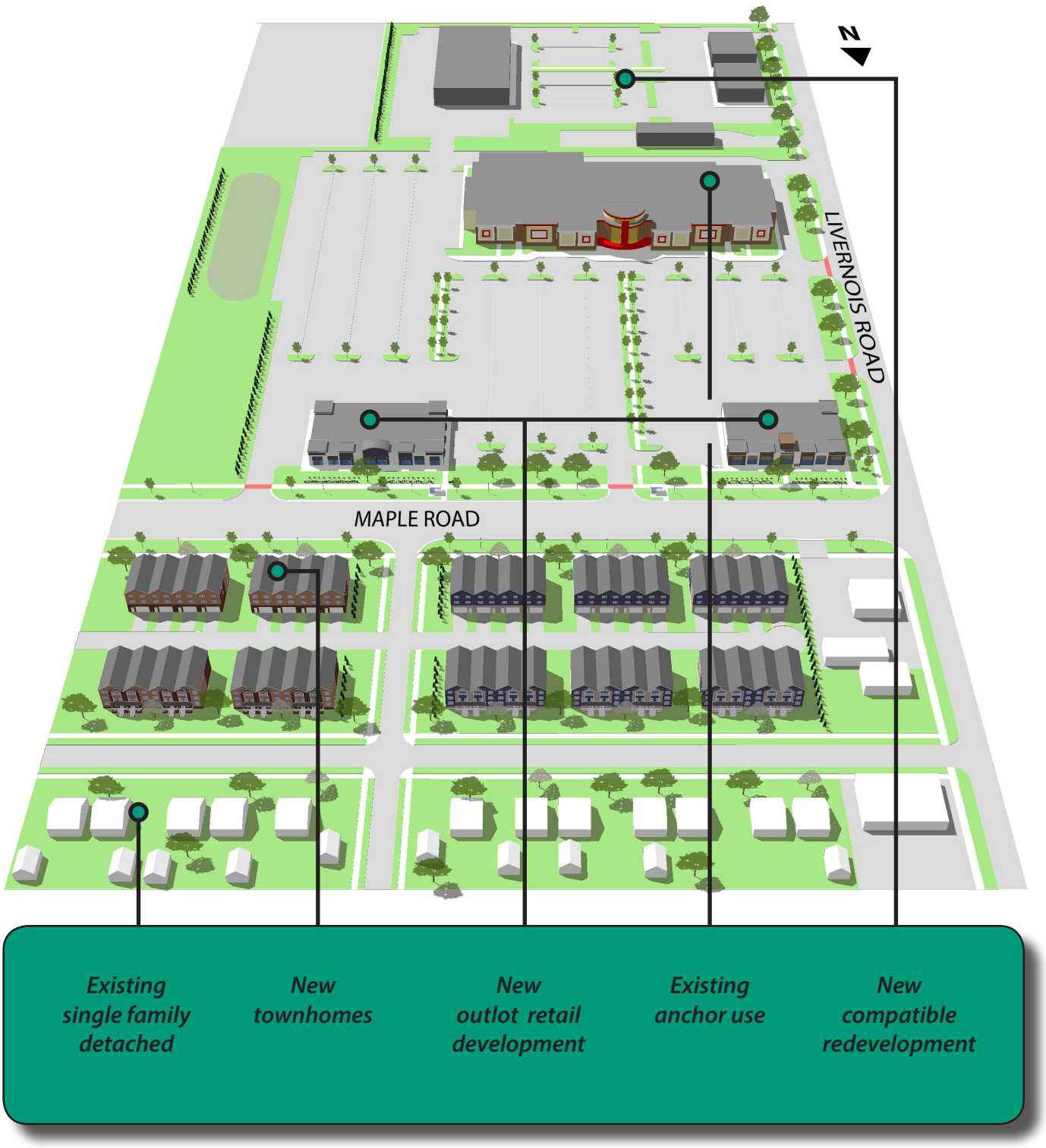
Maple Road has a scattered mix of retail development along the corridor; however many of the parcels along the corridor are not ideal for intense retail or mixed use development. Some of the parcels between nodes lack depth and size, which are essential elements for retail development. They also have limited access, limited visibility, and lower traffic counts, and adjacent to residential, which are hindrances to retail development. Alternatively many of the parcels located at major mile intersections have the significant size and depth, and offer greater access options, visibility, and higher traffic counts.

The 6-mile study section of Maple Road includes six (6) major mile intersections including Coolidge, Crooks, Livernois, Rochester/Stephenson, John R, and Dequindre. The restructuring along Maple Road should encourage and accommodate the transformation from a linear strip retail corridor to one with clustered retail at the major mile intersections. These intersections can become successful economic nodes that concentrate activity by virtue of the intensity of development and the density of their mix of uses. The greater development intensity of nodes makes them easy to distinguish and areas of economic activity that distinguish from other parts of the corridor.

These nodal intersections should be visibly taller, denser, and busier than other sections of the corridor. The key characteristics of successful economic nodes are activity, demand, and mix. Retail, food service, and entertainment venues are primary activity-generating uses, the key ingredients for street life and urban vitality.

Key Principles:

- Encourage and incentivize lot consolidation
- Consider internal pedestrian connectivity to create walkable developments
- Require shared parking facilities and cross access easements
- Ensure every hard corner has a building rather than parking
- Ground-level retail should be a focus of buildings in activity zones
- Build off existing anchors such as the MJR theater at Livernois and Maple
- Encourage a variety in design yet overall consistency
- Ensure a balanced and compatible mix of uses to create more reasons for people to frequent the district over the course of a day.
- Ensure that outlot development is compatible and connected with anchor development
- Require good design including consistent signage, pedestrian lighting, and increased landscaping along roadways and in parking lots.



Potential redevelopment strategy at Maple and Livernois

Priority 1: Generate investment at development nodes

Strategy: Engage surrounding residential neighborhoods through linkages

As traffic congestion rises, there is increasing attention devoted to the role of infrastructure investments in affecting travel behavior. Bringing trip origins and destinations closer together is a necessary step to reduce overall travel distances and promote use of "active transportation" modes such as walking and bicycling.

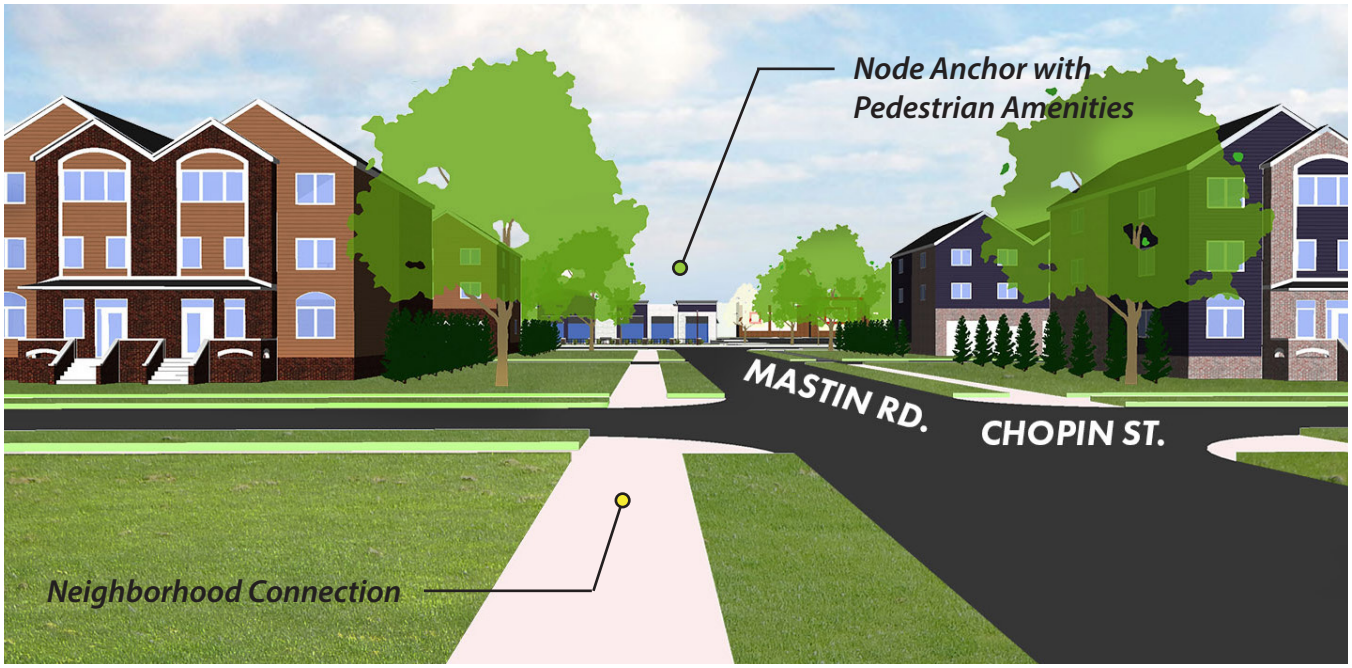
Within a ½ mile walking distance of the Maple Road major mile intersections, there are thousands of residents from the communities of Troy, Clawson, Sterling Heights, and Birmingham. One-half (½) mile is the typical maximum distance people without mobility limitations are willing to walk. These residents are a captive market who desire shopping areas and service uses that can serve their daily needs within walking distance.

Future development at the Maple Road nodes should provide a link between the Maple Road and adjacent neighborhoods. Linkages can be defined as features that promote the interconnections of different places and provide convenient access between them. Linkages may be in the form of physical or visual connections.

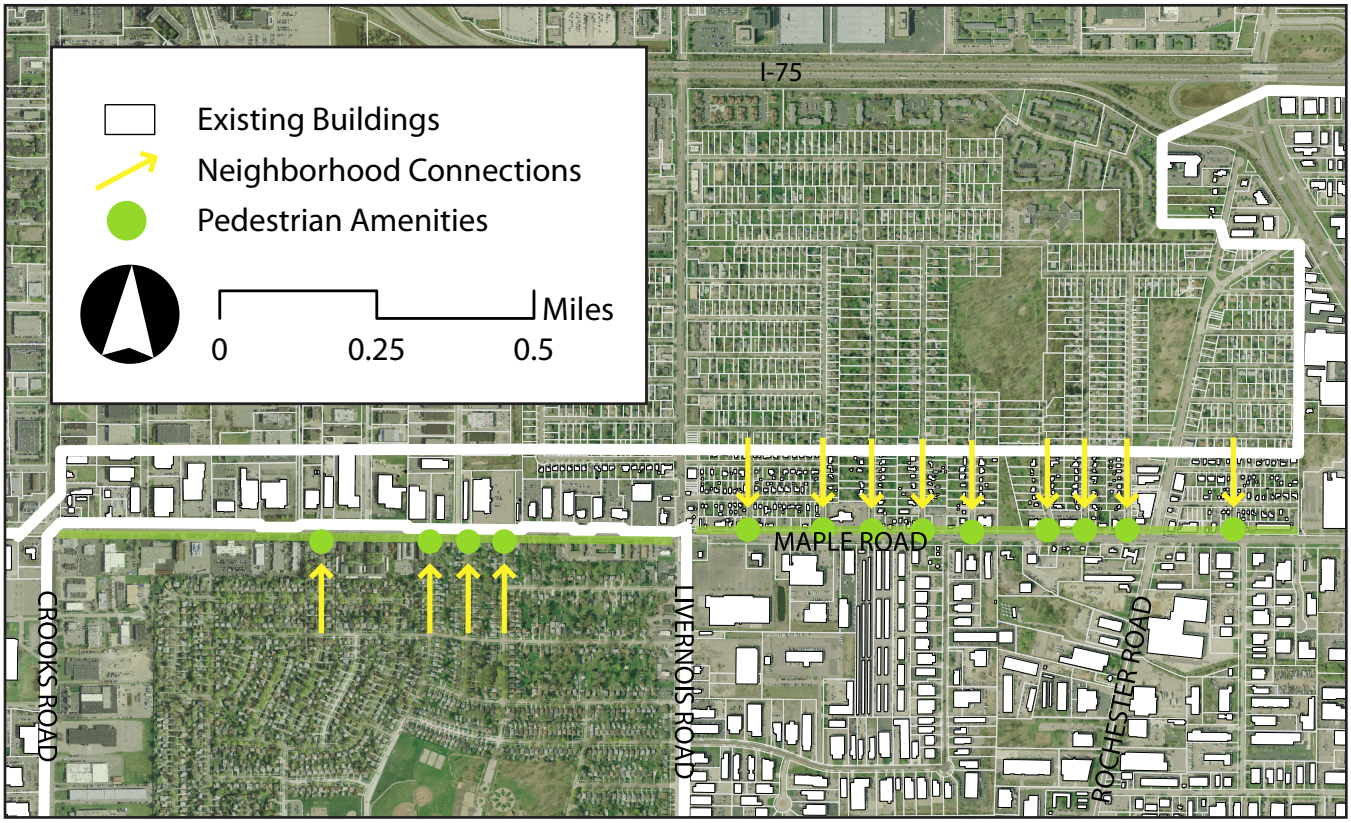
Additional improvements to engage the surrounding residential neighborhood is to improve public transportation and improve the linkage to the new Troy Transit Center. The City should work with SMART to improve bus service along the corridor and upgrade the SMART bus stops to shelters.

Key Recommendations:

- Focus on the ½ mile radius of the major mile nodes
- Uses should provide everyday services and evening/weekend amenities including restaurants, retail, service, open space, and entertainment appropriate for the market
- Provide convenient neighborhood access to sites
- Utilize the appropriate landscape buffering/screening
- Improve public transportation and linkages to the new Troy Transit Center.



Maple Road and Livernois Road Node



Neighborhood Connections

Priority 1: Generate investment at development nodes

Strategy: Incentivize development through zoning

Current zoning permits the type of development envisioned: taller, denser, and busier; however current Maple Road market realities may not be reflective of the development density and intensity permitted by zoning. While zoning cannot create a market, it can be used to incentivize the type of development desired.

To promote redevelopment and stimulate reinvestment along the corridor, the Maple Road form-based zoning can be amended to provide flexibility to create a system of development incentives that entice transformative development. The development flexibility must provide a benefit to the developer and the community.

Potential flexibility incentives may include:

- Drive-through use;
- Build-to-line flexibility;
- Increase in building height;
- Site Reclassification;
- Increased signage; and/or
- Parking in front of the building.

As a trade-off for providing flexibility incentives the applicant must provide a benefit. Potential benefits may include:

- Lot consolidation;
- Mixed use development;
- Transit amenity;
- Sustainable design and development;
- Pedestrian facility and/or amenity; or
- Public art.

Providing greater site design flexibility will encourage investment in challenging sites. In return, the applicant can provide certain amenities or benefits to the community. The chart to the right shows the relationship between potential flexibility incentives and community benefits.

Mixed Use Development

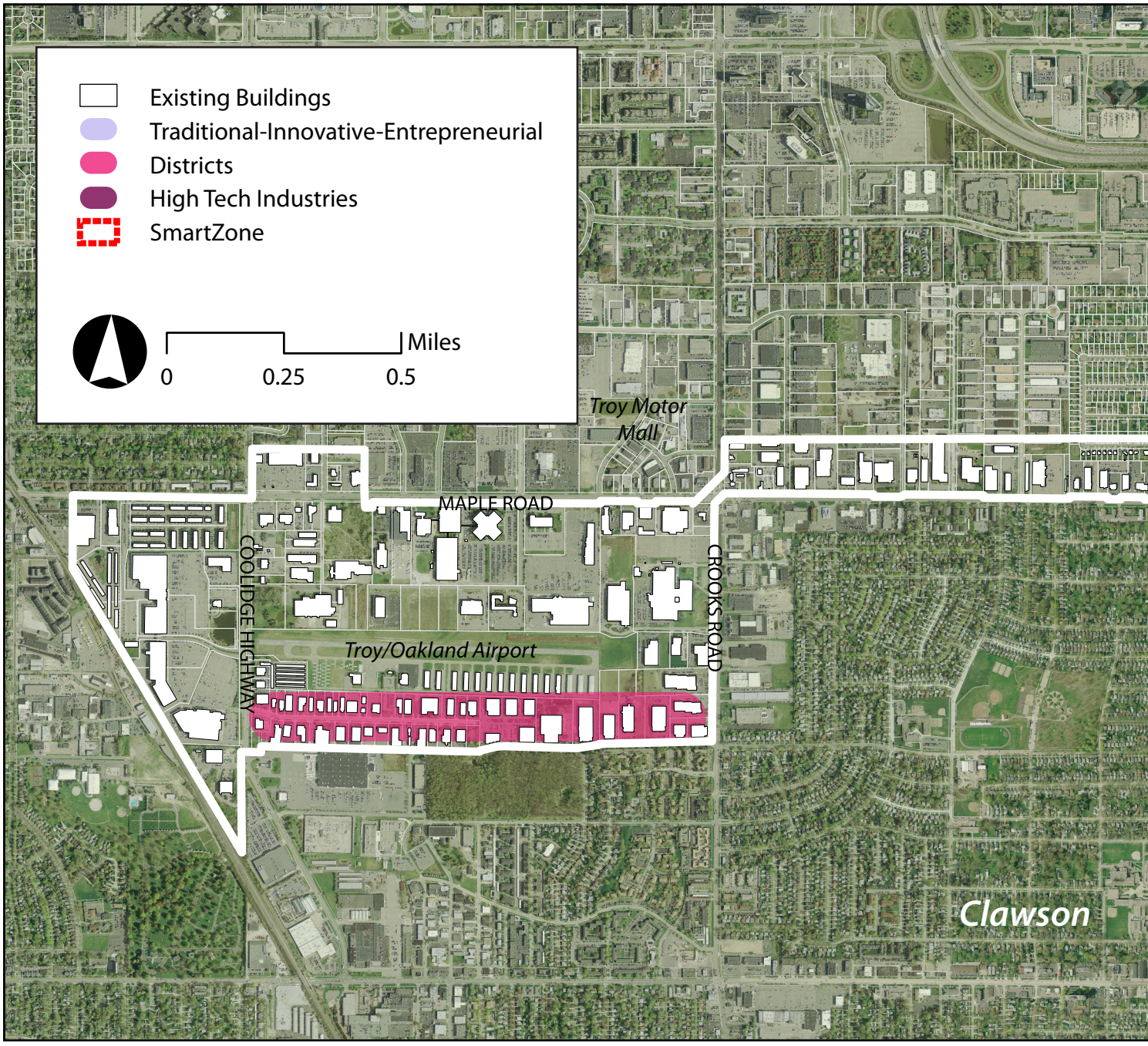
	Recognized Benefit
(a) Lot Consolidation	
(b) Mixed Use Development	
(c) Inclusion of Transit Amenity	
(d) Sustainable Design and Development	
(e) Pedestrian Facilities and/or Amenity	
(f) Public Art	

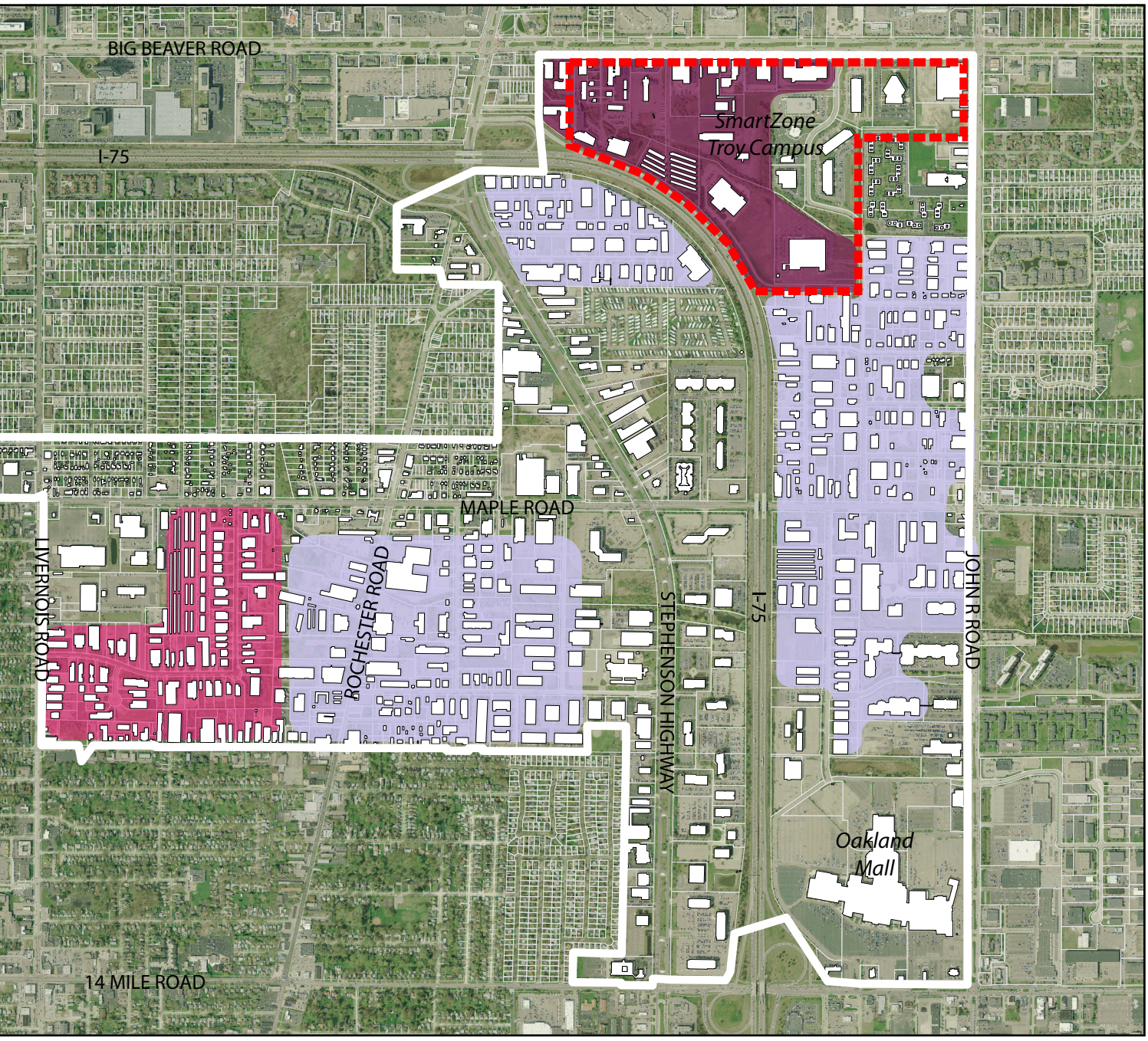
Potential Flexibility Incentives and Recognized Benefits

Transit Amenity - Troy Transit Center

Pedestrian Amenity in Orland Park, IL

	Flexibility in Application of Zoning Standards				
	(1) Drive-thru	(2) Build-to-Line Flexibility	(3) Increased Building Height	(4) Site Reclassification	(5) Increased Signage
				x	
	x	x	x		x
		x	x		x
	x	x	x		x
			x		x
					x


Existing Buildings
Traditional-Innovative-Entrepreneurial
Districts
High Tech Industries
SmartZone
Miles
0
0.25
0.5
Troy Motor Mall
MAPLE ROAD
COOLIDGE HIGHWAY
CROOKS ROAD
Troy/Oakland Airport
Clawson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Troy Campus
MAPLE ROAD
LIVERNOIS ROAD
ROCHESTER ROAD
STEPHENSON HIGHWAY
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JOHN R ROAD
Oakland
Mall
14 MILE ROAD

Existing Conditions

Rochester-Rankin

Chicago-Bellingham

Industrial Row

Park-Combermere

Bellingham

Automation Alley

Priority 2: Encourage entrepreneurism and redevelopment

The character and land use pattern of Maple Road, also known regionally as 15 Mile Road, changes dramatically between the City of Walled Lake to the west and Clinton Township to the east. For example, it has a distinctly residential character through West Bloomfield Township and Bloomfield Township to the west, while it is one of the main roads in Birmingham's downtown. In Troy, the Maple Road corridor is known for its commercial and industrial uses. To many residents and visitors, this segment of Maple Road - between Eton Street and John R Road - presents an assortment of uses and building typologies. Revitalizing the properties along Maple Road and reinvesting at the major nodes is critical for the long-term success and sustainability of this corridor, but the Plan must also address the areas to the north and south of Maple Road.

These areas consist primarily of industrial buildings and warehouses. The structures range in age and square footage, although many share similar architectural qualities including few windows, large warehouse doors, and brick or masonry block construction. Generally, these areas lack walkability, curb appeal, and a vibrant pedestrian realm but they serve a very important function for the City of Troy.

These industrial areas are home to a variety of uses including manufacturing and equipment repair, construction trades and material suppliers, staff and business services, event rentals and beverage suppliers, marketing and communications, as well as professional design services. In short, these areas offer diversity within Troy's economy.

The significance of a Special Area Plan is to recognize the intricacies of these target areas and to redefine that which was once considered a shortcoming when viewed out of context. The businesses located in the industrial areas north and south of Maple Road can be classified into three categories: traditional, innovative, and entrepreneurial.

***Traditional**: The traditional businesses are characterized as long-standing companies and traditional industrial and manufacturing uses.*

***Innovative**: The innovative businesses have a good reputation and highly-rated services. Due to lower land costs these companies have been able to focus on product innovation rather than overhead costs.*

***Entrepreneurial**: Finally, the entrepreneurial businesses are comprised of lifestyle businesses and startup companies, including cross fit gyms, pet daycare facilities, and several photography studios.*

If one were to view the City metaphorically as machine, one might consider that Maple Road keeps the community and its economy in motion. Improving public services and infrastructure and expanding business development and financial support are strategies to support existing and future businesses. Changing the perception of Maple Road's industrial core is not just about the physical environment, it also requires marketing and rebranding. There are clusters of entrepreneurial energy and complimentary industries within this industrial fabric that should be identified and reinforced.

Priority 2: Encourage entrepreneurism and redevelopment

Strategy: Preserve and enhance traditional-innovative-entrepreneurial industrial areas

There are three distinct industrial areas that fit into the traditional-innovative-entrepreneurial industry classification: Rochester and Rankin, Naughton-Wheaton-Piedmont, and Bellingham-Chicago. Home to a wide range of manufacturing and equipment repair facilities from automotive, marine, and aviation to HVAC and computer technology, these areas form the backbone of Troy's industrial and technology base. They also provide for the health, safety, and welfare of the community and support important regional economic sectors.

These areas allow companies big and small to focus on product and service innovation rather than overhead costs, and also afford opportunities for startup companies. Preservation of this industrial fabric is desirable for the overall sustainability of Troy's economy. Public infrastructure improvements related to the construction of sidewalks, installation of street lights at intersections, and stormwater management improvements are essential to maintain these areas as viable Industrial areas. Again, this strategy is not just about physical improvement, traditional-innovative-entrepreneurial businesses may also benefit from local incentives and targeted use of state and federal funds.

Construction Business

Tree Service Business

Priority 2: Encourage entrepreneurism and redevelopment

Eton Road Corridor in Birmingham, MI

Container City in Las Vegas, NV

Strategy: Promote creation of districts and encourage compatible industries

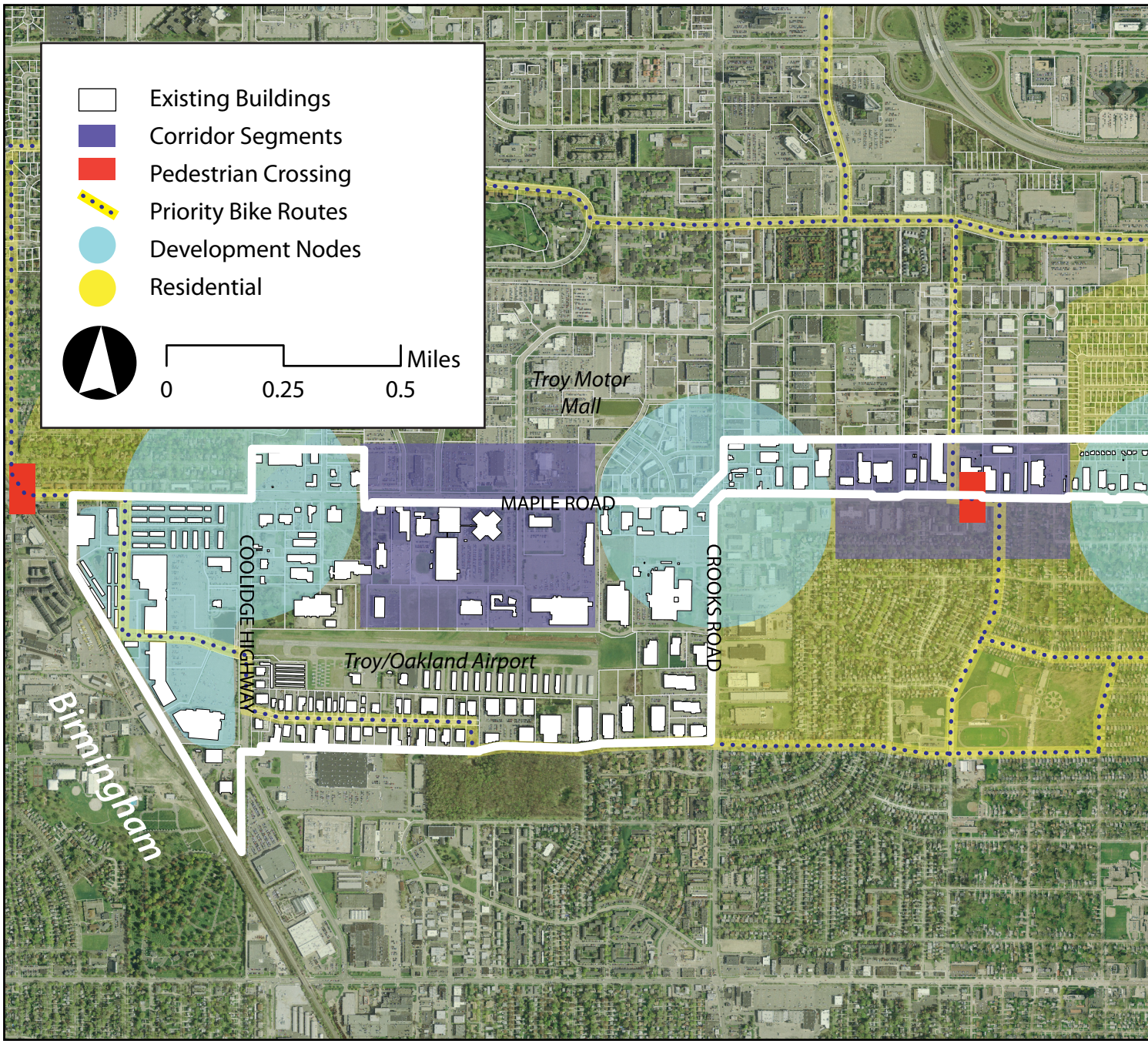
Similar to original land use pattern of Birmingham's Eton Road Corridor, Industrial Row and Parks-Combermere provide ideal locations for the creation of "districts." Industrial Row and Parks-Combermere have notable concentrations of similar industries including construction trades and material suppliers, creative and marketing services, landscaping, and professional design firms. These existing businesses provide the foundation for an industry specific rebranding. Districts are not limited to a certain use but they tend to have an overarching theme.

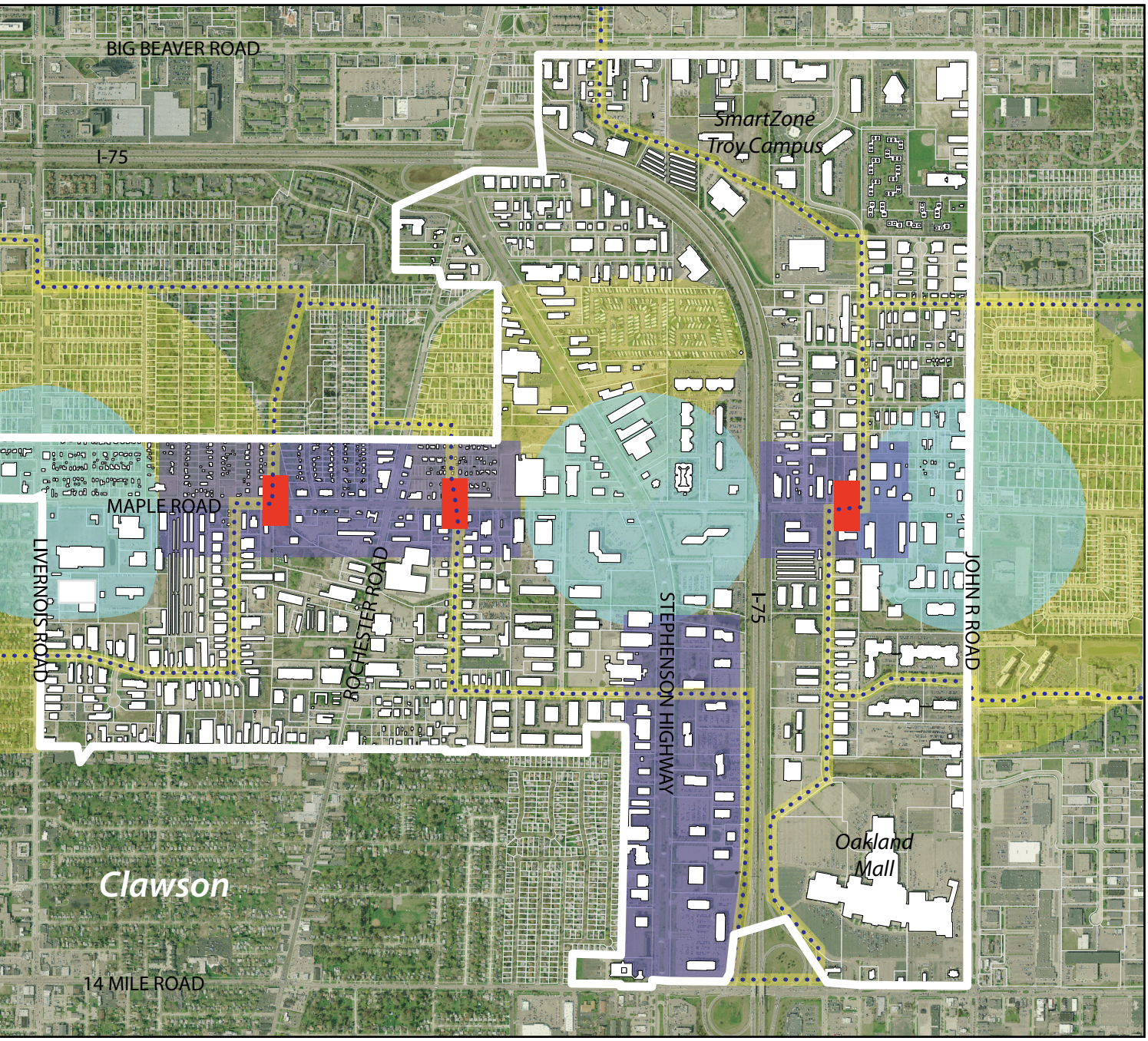
- **Design-Creative:** construction trades, design, interior furnishings, landscaping
- **Technology:** Engineering, software, research
- **Entertainment:** microbrewery, distillery, music hall, comedy club
- **Health and Wellness:** personal training, nutrition, indoor sports, gymnastics

Industrial Row and Parks-Combermere are located adjacent to the proposed development nodes at Coolidge Highway and Livernois Road respectively. The curation of a mixed-use environment with a dynamic edge focused on related enterprises can be an important component of placemaking.

These districts have the potential to become catalysts for collaboration and engagement between businesses, residents, and the community. This will be the place to encourage adaptive reuse and sustainable technology, social networking, and strategic placemaking through public/private partnerships. Bridging the space between development nodes and residential neighborhoods, the districts will ultimately foster a richer work-live environment.

Priority 3: Enhance and strengthen segments between major mile intersections

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Priority 3: Enhance and strengthen segments between major mile intersections

By focusing retail development into major mile intersections, the interior corridor segments—the long portions of corridor between centers—need consideration. These segments, one-half (1/2) mile long, include hundreds of separately owned parcels. While, the character and uniqueness of these parcels vary, many of them currently lack the necessary size and depth for redevelopment for commercial purpose. The Plan must consider strategies to enhance and strengthen the interior corridor segments between major mile intersections.

Strategy: Identify Alternative Value

The extensive and effective retail trade competition offered by major mile road intersection development nodes, Big Beaver, and Oakland Mall reduce the potential for new retail development along the interior corridor segments of Maple Road. Development nodes, Big Beaver, and Oakland Mall sites offer either existing cluster shopping locations or offer the potential to combine parcels to create cluster shopping locations. The parcels in the segments between the major mile intersections are often too shallow or too narrow to support cluster retail uses. As such, the segments between major mile intersections should be planned for alternatives to strip retail and shopping centers.

The corridor's future opportunities along these segments should be focused on entrepreneurial development and growth. This strategy focuses on eliminating barriers and creating a sense of entrepreneurism to identify and promote new uses and development types that can restore values. The Plan intent is to accommodate the widest possible spectrum of uses to ensure flexibility and provide for entrepreneurism.

Shopping Center

Family Business

Entrepreneurial Business

Priority 3: Enhance and strengthen segments between major mile intersections

Reinforce and build on value already in place

If a corridor segment is doing well, leave well enough alone. For example, the interior corridor segment between Coolidge and Crooks is an automobile dealership, supply, and service cluster. The plan supports these stable assets and supports the extension of their market draw by promoting investment in similar or complementary uses on nearby property.

Residential-Missing Middle Housing

Residential

Permit alternative land uses including residential and usable open space

For segments without a strong existing market, alternative uses including residential and usable open space may be a market driven solution. Troy has started to experience a demand for alternative housing options. Segments along Maple Road supply vast areas of underused land that is available to meet the demand for alternative housing types. Because many sections of Maple Road are bordered by residential neighborhoods, it is much easier for these segments to attract reinvestment by integrating with the surrounding neighborhoods rather than compete with larger, developable parcels at major mile intersections. Furthermore, since many established residential neighborhoods are only one parcel off of Maple Road, converting some segments to residential replaces the conflicting land use with a compatible land use that completes the neighborhood along the Maple Road boundary. Re-making sections of the corridor by putting some residential on the frontage is an opportunity to complete the residential neighborhood and provide an appropriate transition.

The usable open space of parks and squares are the civic glue that binds an area. These are the places that create community culture and pride; they are the gathering areas for planned and chance meetings; they serve as the front door to development; and make both the motorized and non-motorized experience more enjoyable. A network of usable open space comprises both the distinct parks and plazas, but also the linkages – streets and trails - that connect them.

Additional housing, particularly the missing middle, and usable open space along the corridor would enhance the retail development nodes at the intersections.

Priority 3: Enhance and strengthen segments between major mile intersections

Strategy: Implement zoning amendments to permit flexibility

While it is recognized that zoning cannot create a market, it can surely stifle one. Acknowledging that the interior corridor segments have less of a market demand and that some parcels along the corridor do not have the necessary parcel size, the Plan recommends that targeted zoning amendments should be considered.

Build-to-line Flexibility

Redevelopment in the interior corridor segments should focus less on building placement and rather emphasize quality architecture and design. By relaxing the build-to-line requirements, zoning in these segments become less of a hindrance to site redevelopment. The recommendation of build-to-line flexibility is intended for the interior segments of Maple Road, but not at the nodes (intersections of major mile roads).

Extend Maple Road Form Base District North to Chopin Road

The north side of Maple Road between Livernois and Rochester has very limited depth, as little as 100 feet. A 100-foot parcel depth is not sufficient to accommodate any reasonable commercial or office development without significantly encroaching on the single family residential it abuts. Alternatively, extending the Maple Road Form Based District north to Chopin Road would permit greater land assemblage which would allow for the redevelopment of those parcels. The target land use for this section would be multiple-family residential, which would provide an alternative housing option. The change in zoning would permit these single family homes to remain in perpetuity but increase their property values with increased redevelopment opportunities.

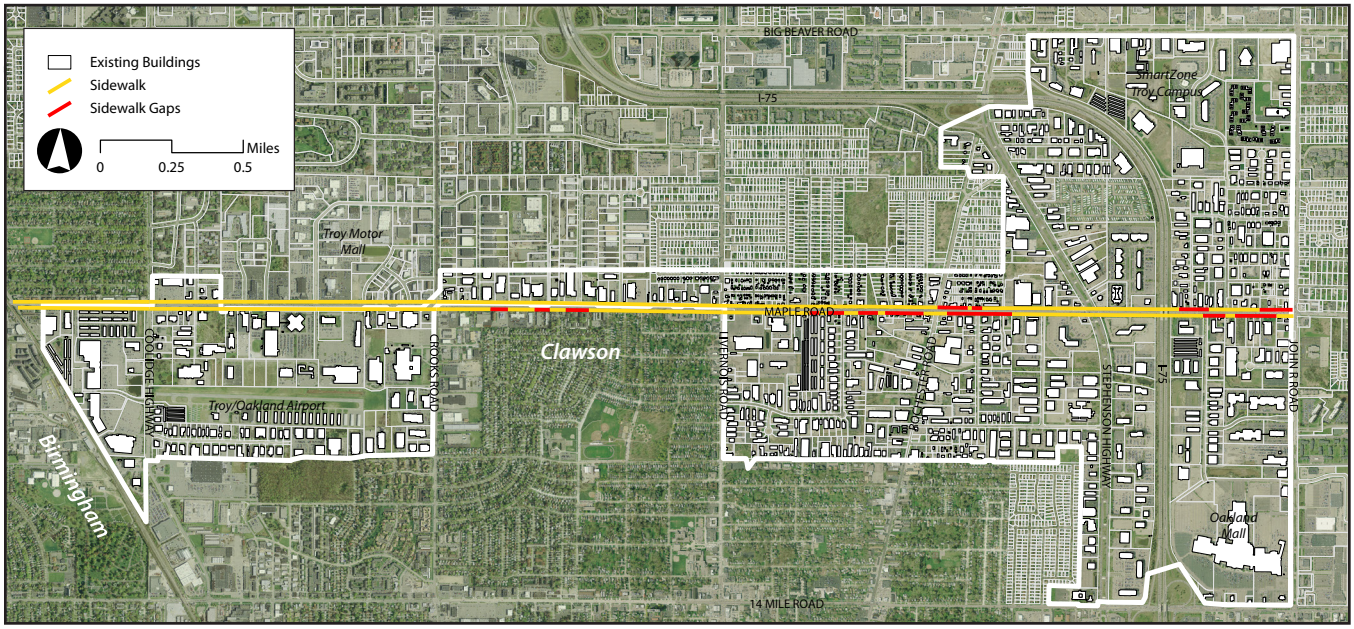
Strategy: Improve pedestrian access

The street is the largest public open space along the Maple Road and should be considered part of the public realm. The corridor segments between the nodes are a tremendous untapped resource that provides a link between the adjacent residential neighborhoods and the commercial nodes at the major mile intersections. In order to provide for a pedestrian friendly corridor, pedestrian amenities must be improved. Maple Road should be made more a comfortable place to walk by providing continuous, wide sidewalks and recognizing the importance of the public realm in "place" creation through the inclusion of elements such as trees, landscaping, lighting, public art, special pavement treatments, and bus shelters, etc.

Sidewalk connections and cross-access easements

Additional pedestrian amenities should be considered along the corridor. The City should consider coordinated streetscape improvements along Maple Road. Streetscape elements can identify an area as a special and distinct place for residents, shoppers, visitors, and employees. The City should establish a conceptual Streetscape Plan that sets recommended standards for landscaping, signage, lighting, sidewalks, intersections, and access.

In addition, there are existing gaps in the sidewalk along the Maple Road. Most of the gaps are along the south side, including some in the City of Clawson; however there are some gaps on the north side. Even if redevelopment does not occur, the City of Troy should work with property owners to fill in these sidewalk gaps and should encourage the City of Clawson to do the same.



Existing Sidewalk Gaps

The Maple Road streetscape should provide:

- A defined edge between the pedestrian and automobile areas
- A unified relationship between the public/pedestrian realm and private domain
- The use of street trees and landscaping, furniture, paving, lighting, and other streetscape elements
- Attractive street lighting that reinforces the corridor image and minimizes extraneous light

Streetscape may occur corridor wide or occur as redevelopment does.

Streetscape Improvements:

- Street trees and landscaping
- Transit amenity
- Decorative fencing
- Furniture
- Pedestrian style lighting

Priority 3: Enhance and strengthen segments between major mile intersections

Strategy: Improve pedestrian crossings

Due to the auto-centric nature of Maple Road, including multiple travel lanes and long blocks, employees and residents who venture out on foot to destinations have difficulty crossing. Providing safe crossings for pedestrians and cyclists is an integral strategy for walkability. Maple Road crossing improvements should take place both at major mile intersections and mid-block. Improvements at major mile intersections may include better marked crosswalks and improvements to pedestrian signals.

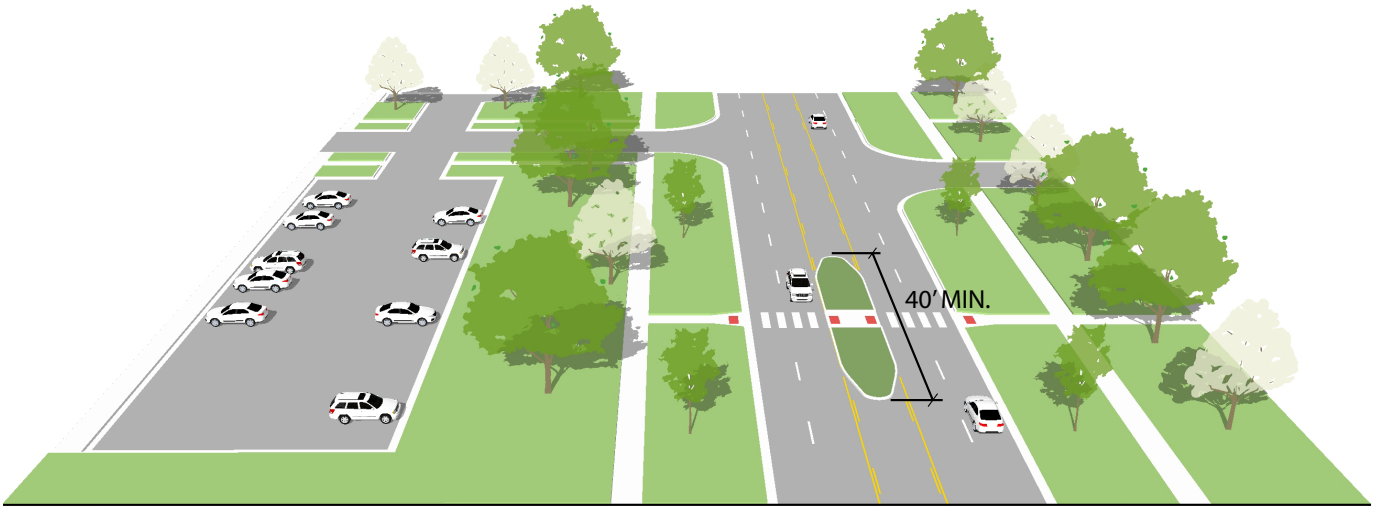
Mid-block crossings for Maple Road will further integrate and strengthen the connection with the adjacent residential neighborhood. Pedestrian refuge islands and signalized crossings are some of the techniques for providing mid-block crossing. Applicability should be determined based on site context and budget.

Priority pedestrian crossing improvements should be considered:

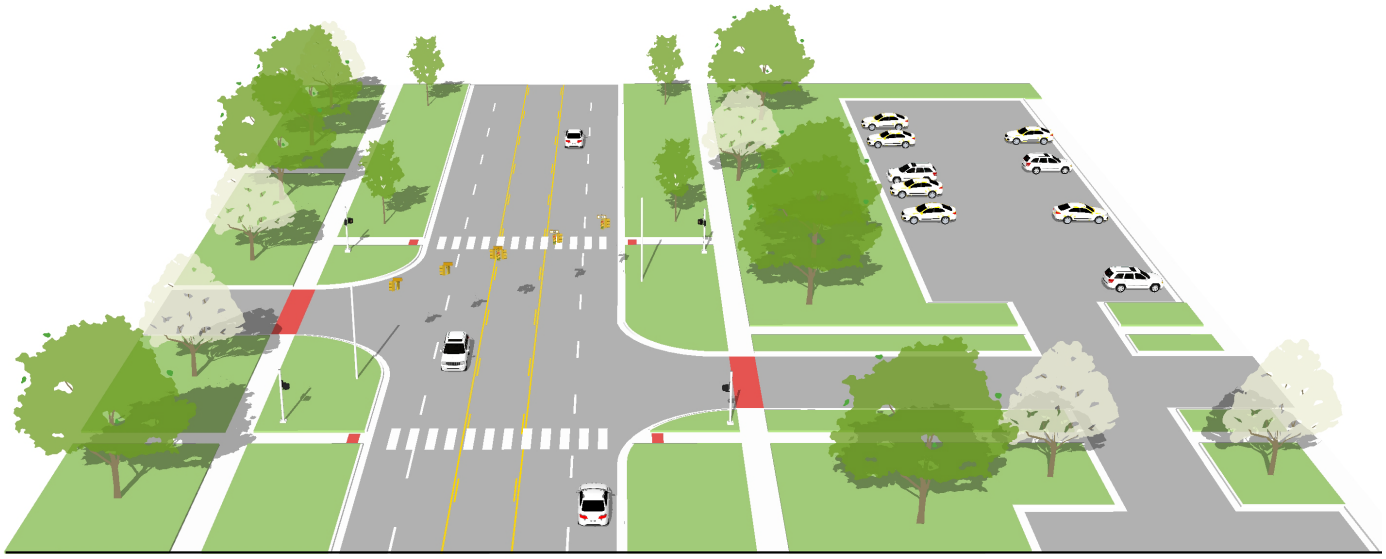
- At all major mile road intersections
- Improvements to existing crossing at Edenborough Road (Birmingham)/Doyle Drive
- Crosswalk at light at Maplelawn
- Mid-block crossing near Heide Drive/Bywood Avenue (Clawson)
- Improvements to existing crossing at Combermere Drive
- Mid-block crossing near Bellingham Drive/ Chicago Road

Provide Pedestrian Crossing near SMART Bus Stops

Improve Striping at Intersection Crosswalks

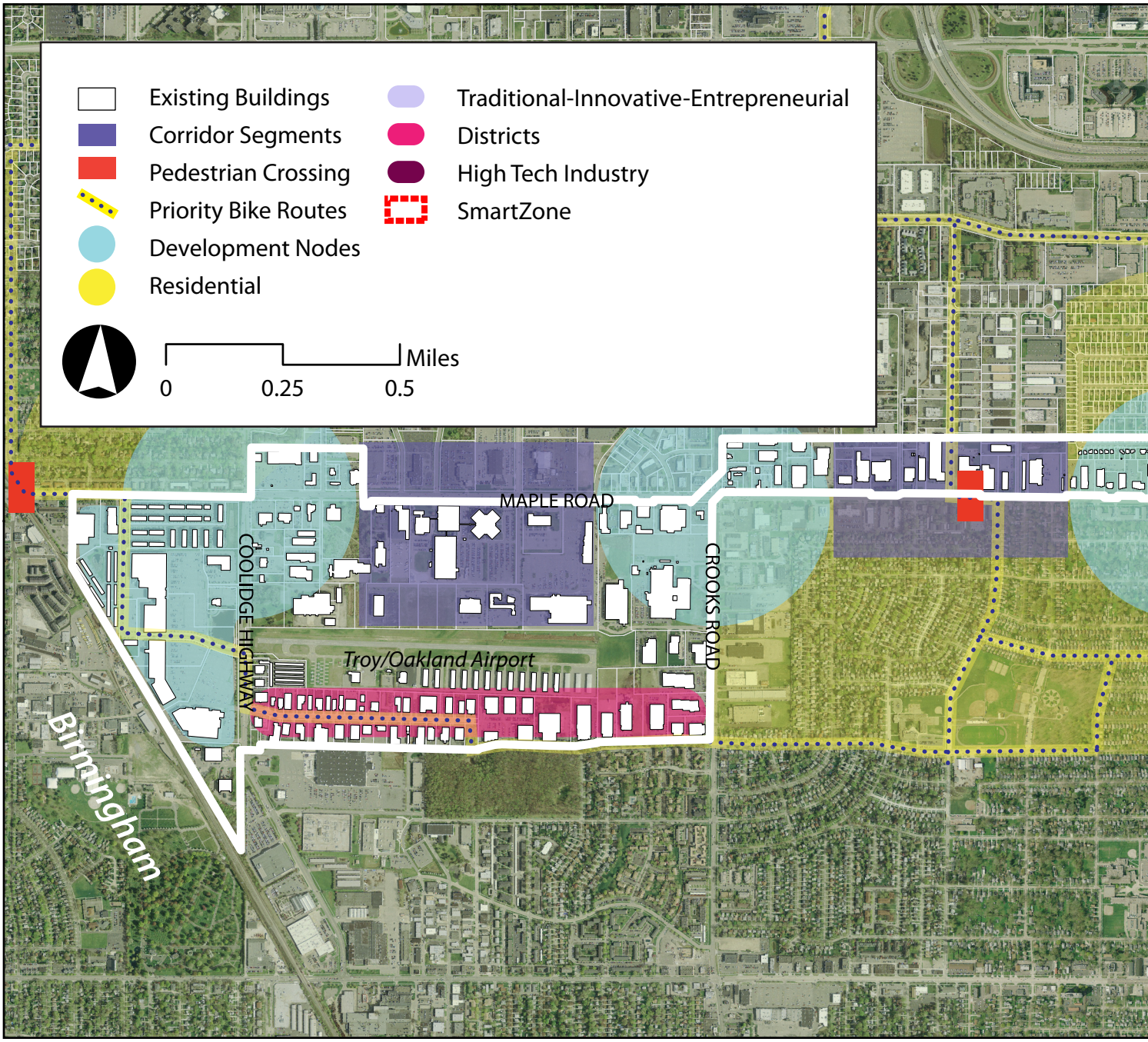


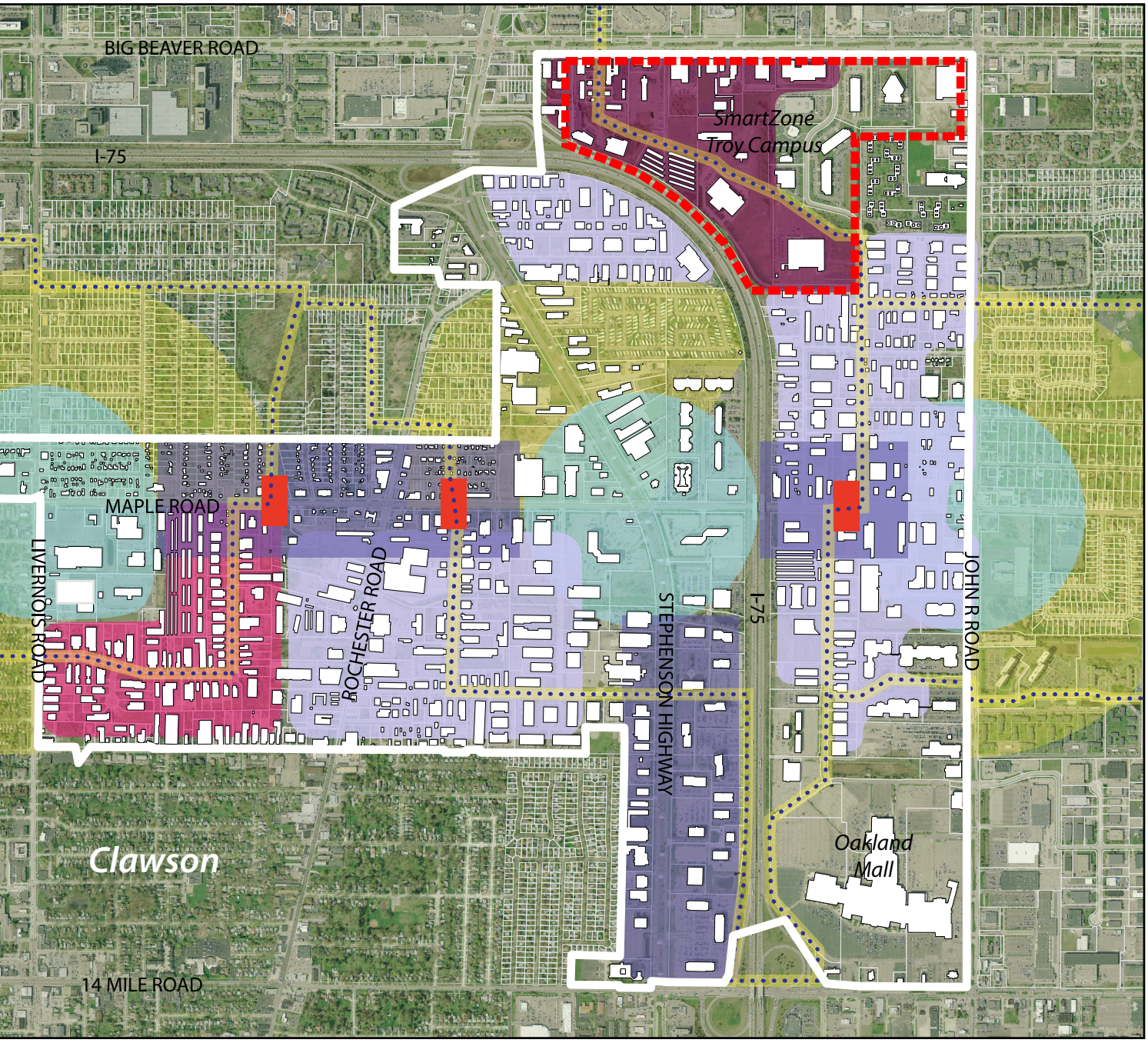
Unsignalized Pedestrian Mid-Block Crossing



Signalized Pedestrian Mid-Block Crossing

Maple Road Strategic Plan Map

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Action Plan and Implementation

The Maple Road Plan is organized into multiple projects so the vision can be refined and implemented in phases over time in a flexible manner. Priority transformative projects like the streetscape projects and facade improvement programs entail multiple phases given their scale and ambition and serve as economic catalysts enhancing the image of the corridor. The timeframe to implement the Plan will depend on many factors, including market conditions, financing, approvals, and other city initiatives.

	Strategy
Priority 1 **Generate investment at development nodes**	Encourage high-quality commercial /mixed-use development at major mile intersections
	Engage surrounding residential neighborhoods through linkages
	Incentivize development through zoning

Phasing

Near 1-2 years
Mid 3-5 years
Long 6-10 years

Actions	*Phasing*	*Responsibility*
Evaluate all tools to encourage and incentivize lot consolidation	Near	City
When evaluating new developments: • Review cross-access easements and pedestrian access to create walkable developments • Require shared parking facilities where appropriate • Ensure a balanced and compatible mix of uses to that provide everyday services and evening/weekend amenities including restaurants, retail, service, open space, and entertainment appropriate for the market • Ensure that outlot development is compatible with anchor development • Require good design including consistent signage, pedestrian lighting, and increased landscaping along roadways and in parking lots	Near	
Ensure redevelopment of corners of major mile intersections are redeveloped with buildings at the hard corner	Mid/Long	City, Private Entities
Evaluate pedestrian infrastructure improvements within ½ mile radius of the major mile nodes	Long	City
Evaluate zoning to require appropriate landscape buffering / screening	Near	City
Work with SMART to improve public transportation along the corridor and link to the new Troy Transit Center	Mid	City, SMART
Interview developers, brokers, and real estate professionals, and market economists to determine market driven incentives	Near	City, Private Entities
Develop appropriate zoning flexibility incentives and development benefits based on market input	Near	City
Implement zoning flexibility and development benefits into zoning ordinance	Near	City

	Strategy
Priority 2 ***Encourage entrepreneurism and redevelopment***	Preserve and enhance tradition-innovation-entrepreneurship industrial areas
	Promote creation of districts and encourage compatible industries

	Strategy
Priority 3 ***Enhance and strengthen segments between major mile intersections***	Identify alternative value
	Implement zoning amendments to permit flexibility
	Improve pedestrian access
	Improve pedestrian crossings

Actions	Phasing	Responsibility
Evaluate public infrastructure needs in industrial areas	Mid	City
Work with existing firms in industrial areas to provide city resources and assist in obtaining regional, state, and federal resources	Near	City
Evaluate city codes and policies to remove any barriers to adaptive reuse	Near	City

Actions	Phasing	Responsibility
Evaluate interior corridor segments for areas of stable assets and encourage entrepreneurial development and growth	Mid	City
Permit alternative land uses including residential and useable open space	Mid	City
Find opportunities along corridor to install public spaces	Mid	City, Private Entities
Evaluate the existing zoning for interior corridor segments and amend zoning as necessary	Near	City
Reach out to property owners regarding rezoning Chopin Road to Maple Road Form Base District	Mid	City
Rezone Chopin Road area to Maple Road Form Base District	Mid	City, Property Owners
Develop Maple Road Streetscape Plan	Mid	City
Infill sidewalk gaps and implement Streetscape Plan comprehensively or as development occurs	Mid	City
Evaluate new developments for cross-access easements and pedestrian access	Mid	City, Private Entities
Evaluate and improve pedestrian crossings at all major mile road intersections	Near	City
Improve existing pedestrian crossings at Edenborough Road (Birmingham) / Doyle Drive and Combermere Drive	Near	City
Install crosswalk and crosswalk light at Maplelawn Road	Mid	City
Evaluate and install new midblock crossing near Heide Drive/Bywood Avenue (Clawson) and near Bellingham Drive/ Chicago Road	Long	City

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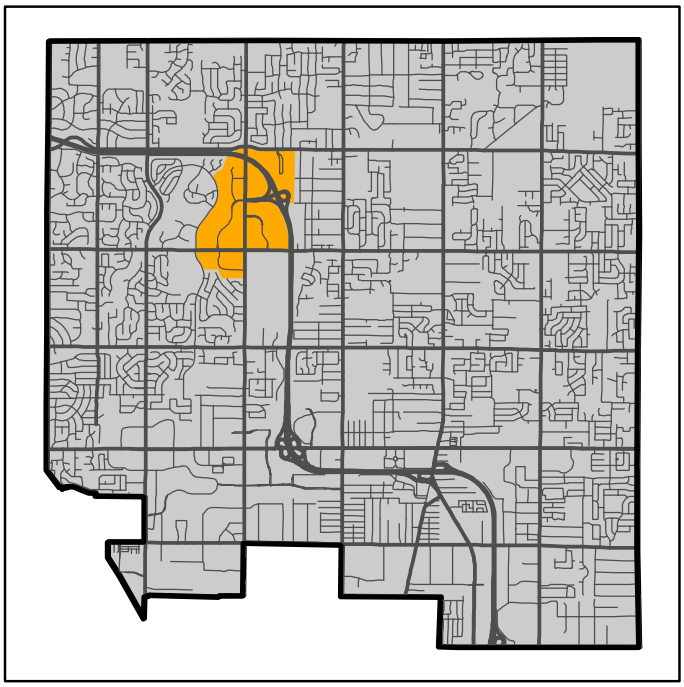
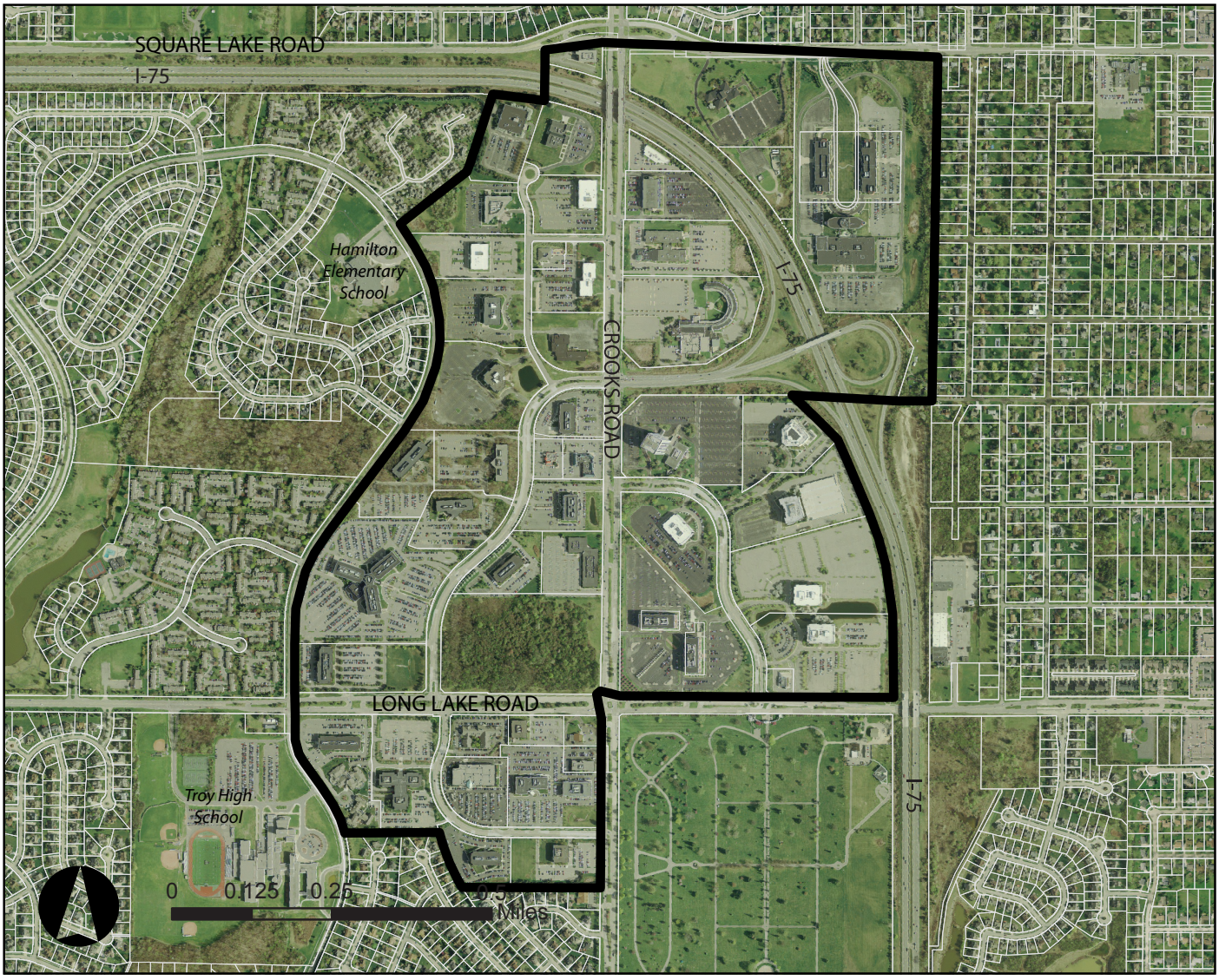
North Troy
Special Area Plan



Right: Locator map
Below: Target Area map



Introduction

North Troy serves as the business and employment hub for the north side of the city. The area is dominated by office use, specifically mid-rise buildings and towers with large footprints built primarily in the mid-1980s to early 1990s. These buildings provide Class A and B space with ample parking, convenient highway access, fiber optic connections, and well manicured grounds. They have been marketed as ideal for corporate headquarters facilities. However, in order to maintain this position as a business and employment hub for the future, the area must evolve to serve the future office worker. Providing a compatible mix of uses, increasing amenities, and creating unique identity will help attract new tenants and keep employees and residents in the area beyond the work hour.

Evolving to Meet New Challenges

In today's world, many of the qualities that made North Troy so successful in the 20th Century run counter to current market trends. Whereas earlier generations of American workers fled urban areas for newly constructed suburban campuses and car-accessible employment centers, today's innovation workers seek the greater connectivity, convenient amenities, and vitality that comes from a denser mix of uses, as well as a firmer commitment to sustainability.

North Troy faces a turning point. Its original development pattern should evolve to meet new challenges in the marketplace. Both employers and employees must be flexible and nimble to respond to demands in competition. As such, their facilities must adapt to fulfill evolving, diverse requirements in the workplace. Many of today's knowledge workers expect entertainment and service amenities nearby as well as opportunities and spaces to connect and share ideas. The isolated buildings in North Troy do not reflect this trend. There is no central, defining place that represents the heart and vision of North Troy. Creating this balanced mix of uses and a sense of place will create a symbiotic relationship with the adjacent neighborhoods, where employment, service, and residential uses are interconnected. Fortunately, North Troy has ample opportunities to evolve and create a modern, preferred employment hub. The challenge and opportunity is determining how and where the potential can be unlocked.

Vision Statement

North Troy will be a dynamic, high-amenity employment district with where the business and office core contributes to the health and welfare of the employees. The area will include a balanced mix of uses that supports the needs of the community and businesses by providing services and amenities for all individuals, from employer to employee to resident. The physical environment will promote an active lifestyle, while the new uses and creative programming encourage healthy choices and work together to build social capital.

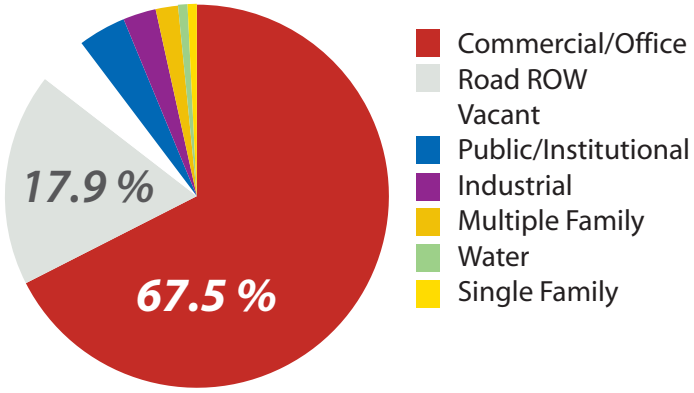
2013 Target area statistics

Total taxable value	$119,423,759
Total area (acres)	461
Total businesses	282
Total employees	5,042

2010 Market area statistics [1]

Population	5,908
Households	2,370
Percent owner occupied	86.6 %
Median household income	$86,217
Per capita income	$44,887

Land Use



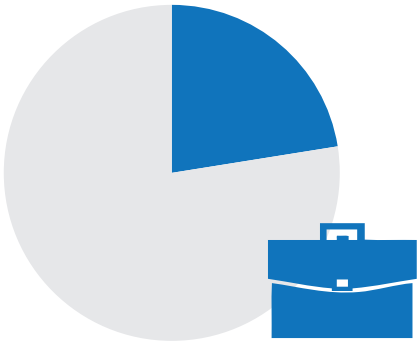
Source: Esri 2013 Estimates Business Summary from Oakland County EDCA, Census 2010, City of Troy GIS data 2013
Note: 1. Market Area includes households within 1 mile of Target Area. 2. Employee and Business data use NAICS codes.

Property Data

	Target Area	Commercial	Industrial	Residential
Total Parcels	61	55	3	3
Total Structures	48	45	3	NA
Total Acres	461	415	17	29
Median Year Structure Built		1988	1998	NA
Total Floor Area (SF)		95,916	44,457	NA
Median Floor Area (SF)		5,232,280	143,213	NA
Total Taxable Value	$ 119,423,759	$ 114,897,329	$ 4,370,860	NA

Source: City of Troy GIS data 2013

Top Industries in Target Area by Employment [2]

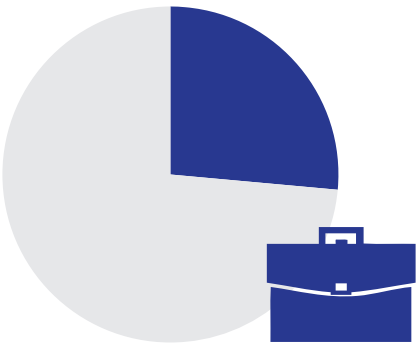


21.5 % *Professional, Scientific & Tech Services*

	Employees	Percent (%)
Professional, Scientific & Tech Services	1,084	21.5
Manufacturing	1,035	20.5
Finance & Insurance	683	13.5
Administrative & Support & Waste Management	521	10.3
Real Estate	408	8.1

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

Top Industries in Target Area by Number of Businesses



27.0 % *Professional, Scientific & Tech Services*

	Businesses	Percent (%)
Professional, Scientific & Tech Services	76	27.0
Administrative & Support & Waste Management	43	15.2
Finance & Insurance	37	13.1
Manufacturing	17	6.0
Real Estate	17	6.0
Other Services (except Public Administration)	17	6.0

Source: Esri 2013 Estimates Business Summary from Oakland County EDCA

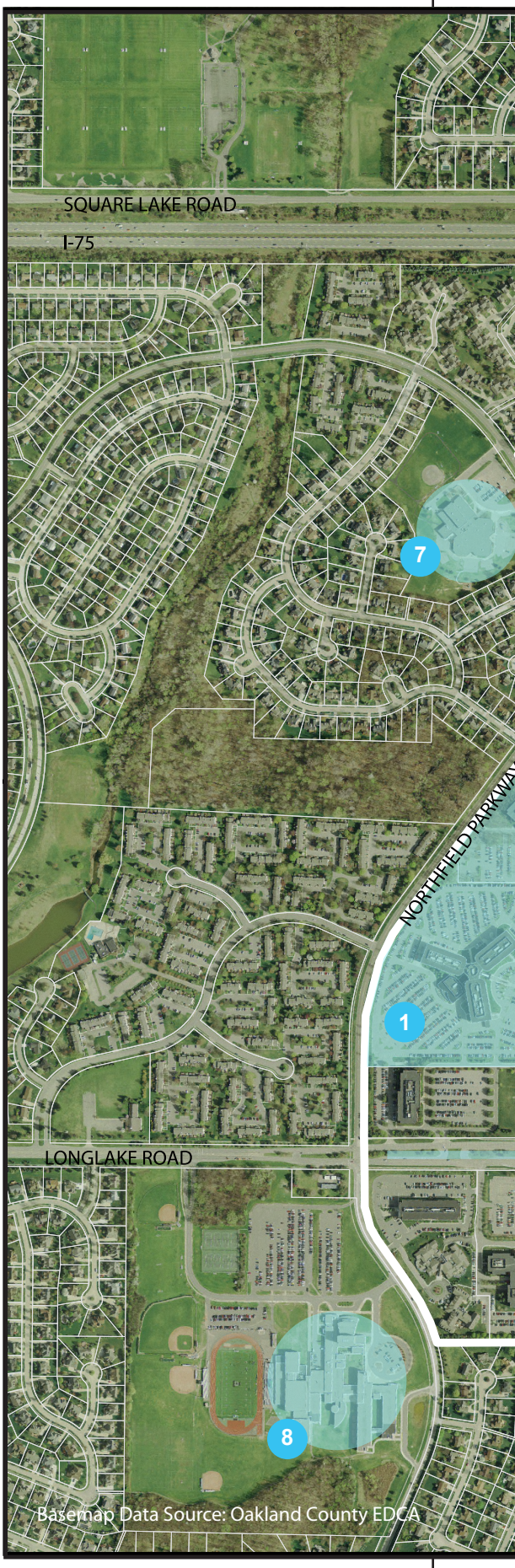
Existing Conditions

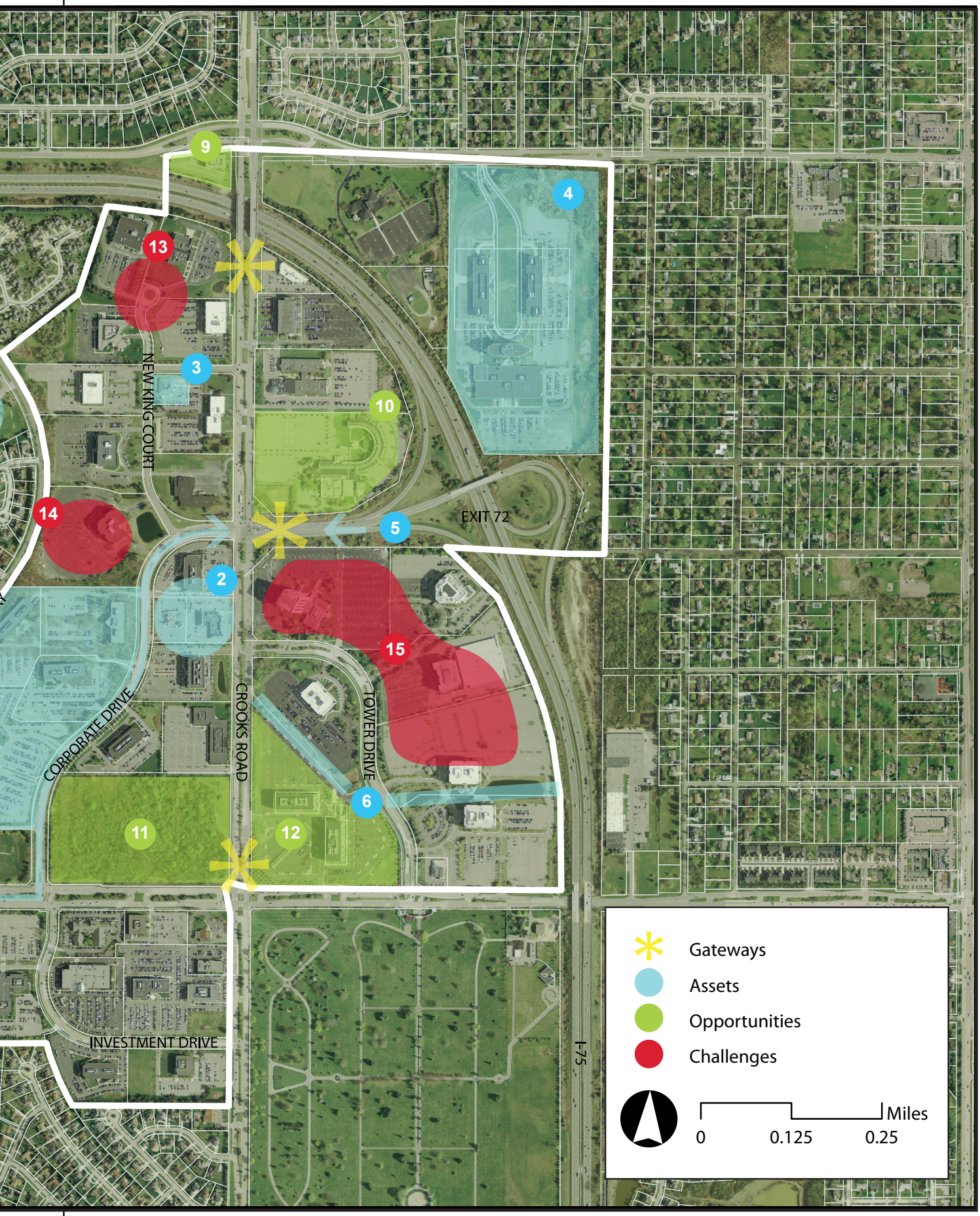
Gateways
- Square Lake Road
- Corporate Drive
- Long Lake Road

Assets
1. Flagstar Bank Headquarters
2. Northfield Point Marketplace
3. The Learning Experience childcare facility
4. Delphi Headquarters
5. Direct access to and from I-75
6. Quality stormwater management design
7. Hamilton Elementary School
8. Troy High School

Opportunities
9. SW corner Crooks Road and Square Lake Road
10. Infill at MET Hotel
11. NW corner Crooks Road and Long Lake Road
12. NE corner Crooks Road and Long Lake Road

Challenges
13. Access management along New King Court
14. Lack of pedestrian connection to New King Court and Corporate Drive development
15. Large surface parking lots surrounding Tower Drive properties




9
4
13
3
10
NEW KING COURT
14
EXIT 72
5
2
15
CROOKS ROAD
TOWER DRIVE
CORPORATE DRIVE
6
11
12
INVESTMENT DRIVE
I-75
Gateways
Assets
Opportunities
Challenges
Miles
0
0.125
0.25

North Troy Public Engagement Findings

North Troy consists primarily of office use with excellent freeway access to I-75 and close proximity to a large employee base. Large setbacks and wooded areas provide a desirable campus setting for certain sites. Natural features provide amenities and may help attract mixed-use and multi-family development, if desired by the community. Existing corporate companies may look to build or expand in under-utilized areas. Looking at the area as a whole, North Troy lacks identity and character. Office space has been slow to fill resulting in high vacancy. Regional access is good but internal connectivity and pedestrian access is not optimal. The area is dominated by cars with few alternative mobility options or usable green space. It also lacks entertainment for younger families. Road repair around the area needs to be addressed.

Downtown Detroit has been experimenting with pop-ups and initiating corporate programs to get employees out of the office. High quality food trucks provide indirect competition to brick and mortar establishments. Ultimately it's about options and getting people exposed to business. Right now North Troy is just an employment center. It needs uses and amenities to complement the office uses and to keep people around after 5 pm.

Considerations

- Establish more convenience uses such as restaurants, retail, and daycare
- Experiment with tactical placemaking, such as food trucks and pedestrian improvements, to provide more amenities to workforce
- Increase flexibility of current zoning to widen development of potential uses
- Encourage more parking structures
- Encourage quality stormwater management for improved drainage and connected green space

Priorities and Strategies

This plan recommends three priorities for establishing North Troy as a safe, active, and walkable district with premiere office space and generous amenities for employees and residents. These priorities and strategies include:

1. Provide a Compatible and Vibrant Mix of Use

Strategies:

- Promote service infill through property repurposing
- Promote residential infill through property repurposing
- Develop and strengthen core
- Create a community gathering space

2. Improve Multi-modal Circulation and Safety

Strategies:

- Study and implement road diets
- Introduce pedestrian mid-block crossings
- Establish consistent landscape buffer and setbacks

3. Inspire Tactical Placemaking to Create a Lively Place

Strategies:

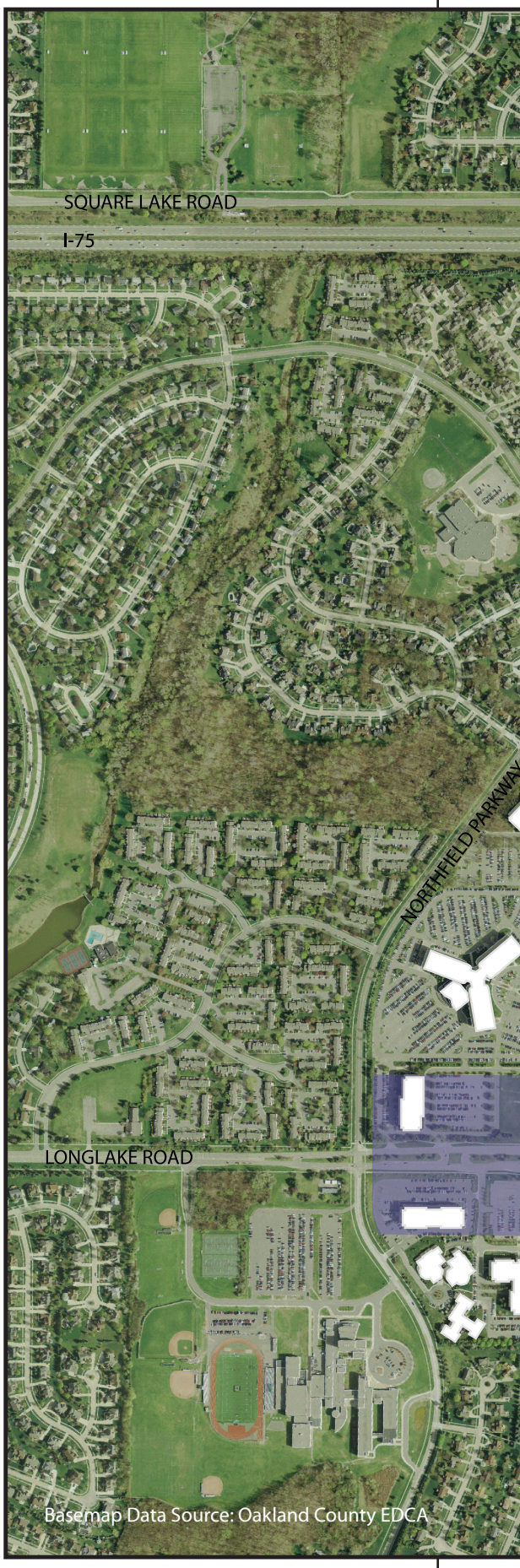
- Create an identity through gateways and wayfinding
- Facilitate health and wellness initiatives
- Encourage creative programming

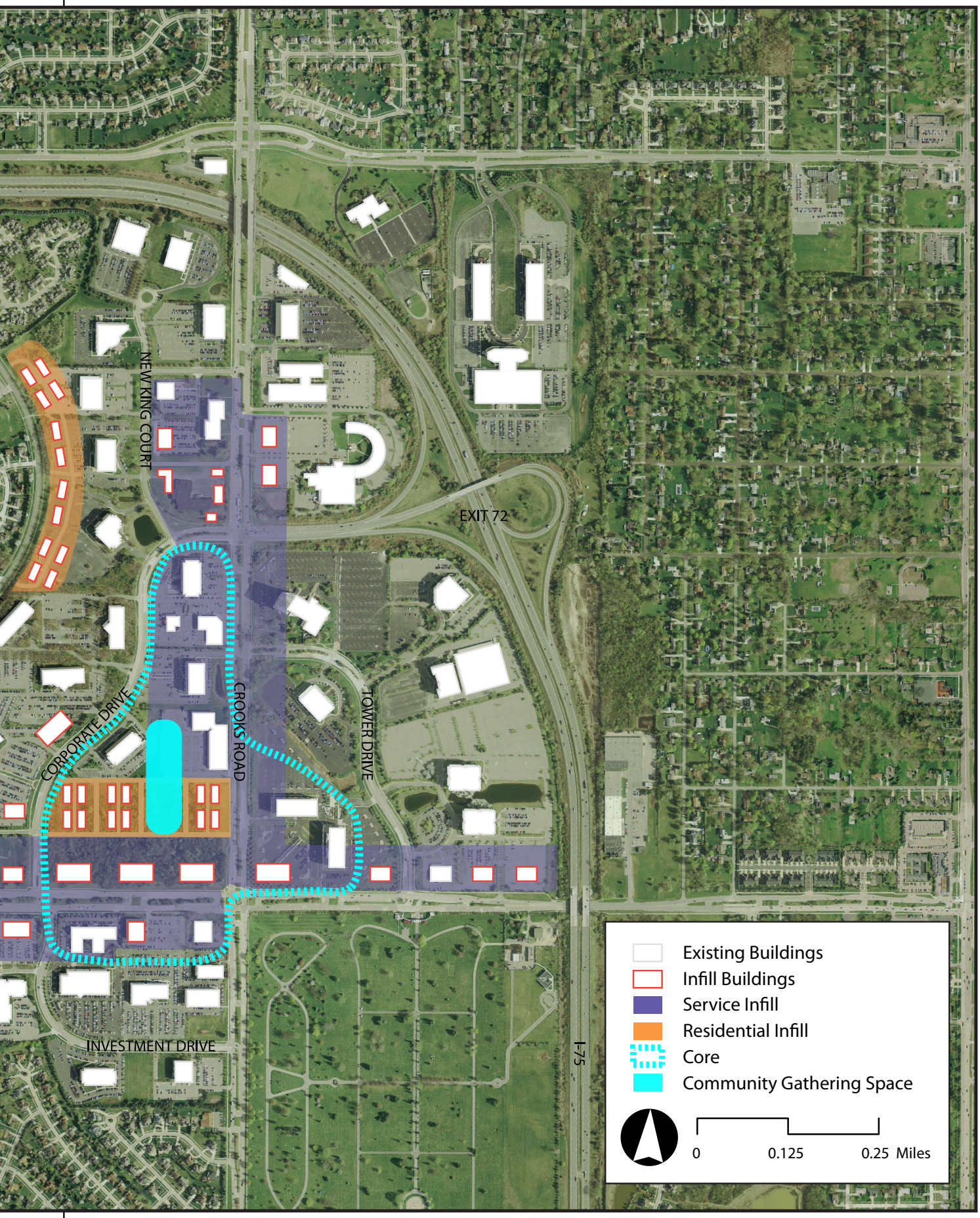
Priority and Strategy Interconnection: *These priorities and their strategies are not mutually exclusive; rather they reinforce each other and together they have the ability to attract users and spark investment, and ultimately achieve these aims of vibrancy, identity, and walkability.*

Priority 1: Provide a Compatible and Vibrant Mix of Uses

Located at the intersection of two main arterial roads with a direct access ramp to I-75, North Troy is strategically located to serve as a major employment hub for Oakland County. North Troy currently is home to over 5,000 primarily daytime employees; in addition, there are over 2,000 households within one mile of the area. However, the area is dominated by single-use office buildings with limited interconnections, and few amenities for these workers and nearby residents.

Preparing North Troy for the next generation of growth will require a broader and more creative real estate strategy that will tap into regional trends and market opportunities in order to create a more vibrant, attractive, and flexible work environment. A compatible and vibrant mix of uses will create a life and vibrancy, provide interconnections and a relationship with the adjacent neighborhoods, reduce automobile trips, and enhance walkability by providing destinations.




NEW KING COURT
EXIT 72
CORPORATE DRIVE
CROOKS ROAD
TOWER DRIVE
INVESTMENT DRIVE
I-75
Existing Buildings
Infill Buildings
Service Infill
Residential Infill
Core
Community Gathering Space
0
0.125
0.25 Miles

Priority 1 : Provide a Compatible and Vibrant Mix of Uses

Big Beaver retail development in Troy, MI

Grocery store in Kansas City, MO

Strategy: Promote service infill through property repurposing

The land use pattern of North Troy is primarily single use office space. Given the existing market conditions, many of these buildings are over-served by parking. As a means to attract new business to North Troy, these under-utilized parking areas may be repurposed for service infill development. Infill development is increasingly recognized as an effective way to achieve a variety of goals, including making better use of existing infrastructure; locating community services, jobs, and shopping in close proximity to neighborhoods; and reducing auto trips by supporting walking, biking, and transit.

Location

Service infill should be focused on Crooks Road, Long Lake Road, and the area around Northfield Market Place.

Uses

Mixed use, casual and family dining, personal services, dry cleaning services, health and wellness, grocery, pharmacy, and childcare.

Characteristics

Mixed use buildings, placed closed to the street, use of high quality materials, naturalized stormwater treatment, and woodland protection. Specific design features can promote this interconnections including the layout and orientation of buildings, the network of sidewalks and pathways, the location of parking relative to structures and walkways, and the amount and placement of green space, landscaping, benches, and other amenities.

Strategy: Promote residential infill through property repurposing

North Troy has the opportunity to re-envision the underutilized land adjacent to Northfield Parkway and the vacant lot on the northwest corner of Crooks Road and Long Lake Road as single-family attached residential. Single-family attached residential will provide residents with convenient access to work, schools, and the new infill service amenities. It will also provide an appropriate transition between the more intense multiple story office use and the less intense single family neighborhoods.

Rezoning transitional areas between the service core and surrounding social neighborhoods as mixed use would also enable property owners to repurpose the upper stories of underutilized office buildings as residential use. Introducing housing to North Troy will provide attractive housing options for rising professionals as well as active seniors.

Location

East side of Northfield Parkway and vacant lot on corner of Crooks Road and Long Lake Road.

Uses

Single-family attached residential, live-work lofts

Characteristics

Two-to-three story urban style residential development set close to the street with appropriate landscaping buffer, use of high quality materials, and alleys or rear loading garages. Vehicular access should be limited off Northfield Parkway.

Rochester Commons PUD in Troy, MI

Townhomes in Victoria, BC

Priority 1 : Provide a Compatible and Vibrant Mix of Uses

Strategy: Develop and strengthen the core

The Master Plan addresses the need for concentrated investment, activity, and services within the Target Areas.

Within each Target Area, the Plan identifies specific sites and nodes that can be utilized to build this physical fabric and social atmosphere, and support economic development. Building off the surrounding employment base and the highly trafficked Northfield Point Marketplace, the vacant parcel on the northwest corner of Long Lake and Crooks Road offers an opportunity to establish a core for North Troy. This core will provide a compatible mix of uses and should be the starting place of other strategies in the Plan, including pedestrian circulation improvements, landscaping, wayfinding, and creative programming. At the heart of the core is the community gathering space.

Town Center in Novi, MI

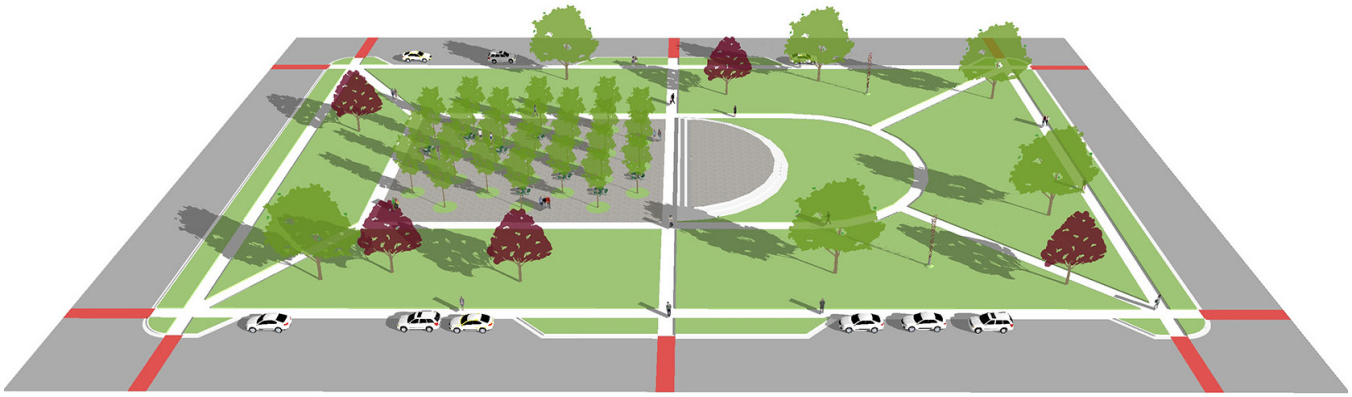
Strategy: Create a community gathering space

The community gathering space will serve as the heart of North Troy, providing physical amenities and social programming for employees and residents. Given that the area is known primarily as an office campus, North Troy is fairly green. Many of the corporate sites offer attractive landscaping, mature trees, and even water features, but most of these facilities are designed for aesthetics not for use.

Creating a community gathering space in the vacant land and underutilized parking area will enhance North Troy's sense of place. This area should combine landscaping and hardscape, and include amenities such as cafe seating, movable chairs, bike racks, water features, permanent and seasonal shaded areas, public art, and performance space. This combination of plaza and green space will provide a space for corporate programming and neighborhood recreation, supporting the adjacent office, service, and residential uses.

Conceptual design for North Troy community gathering space

Shopping Center in Orland Park, IL

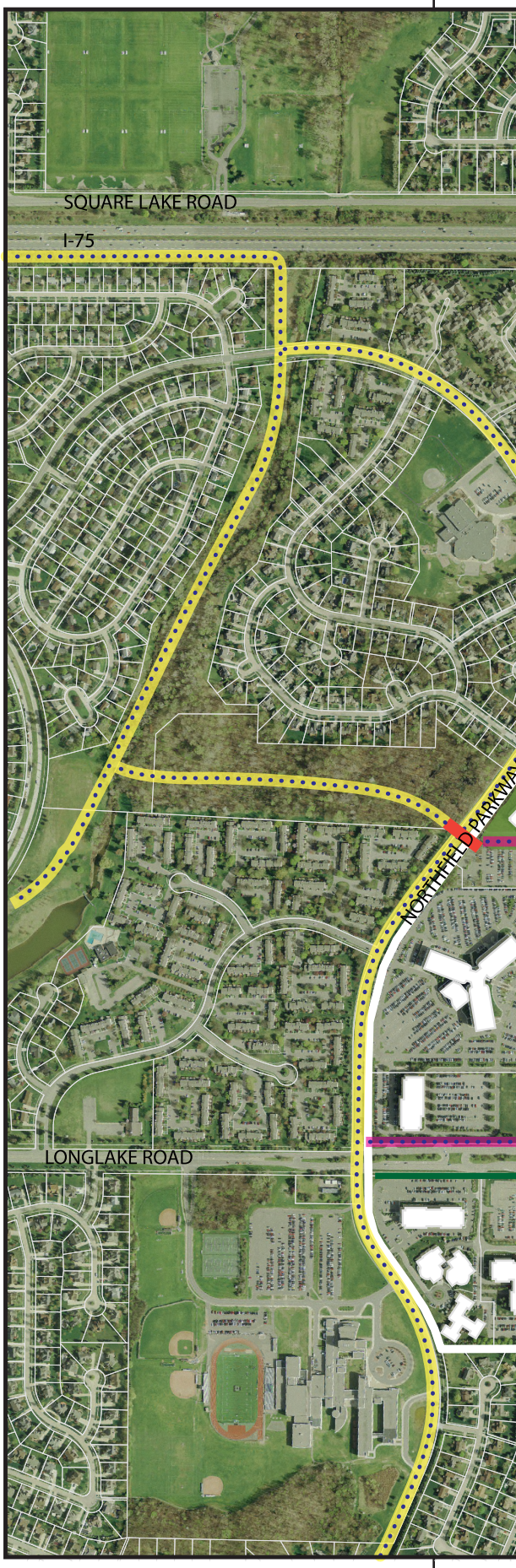


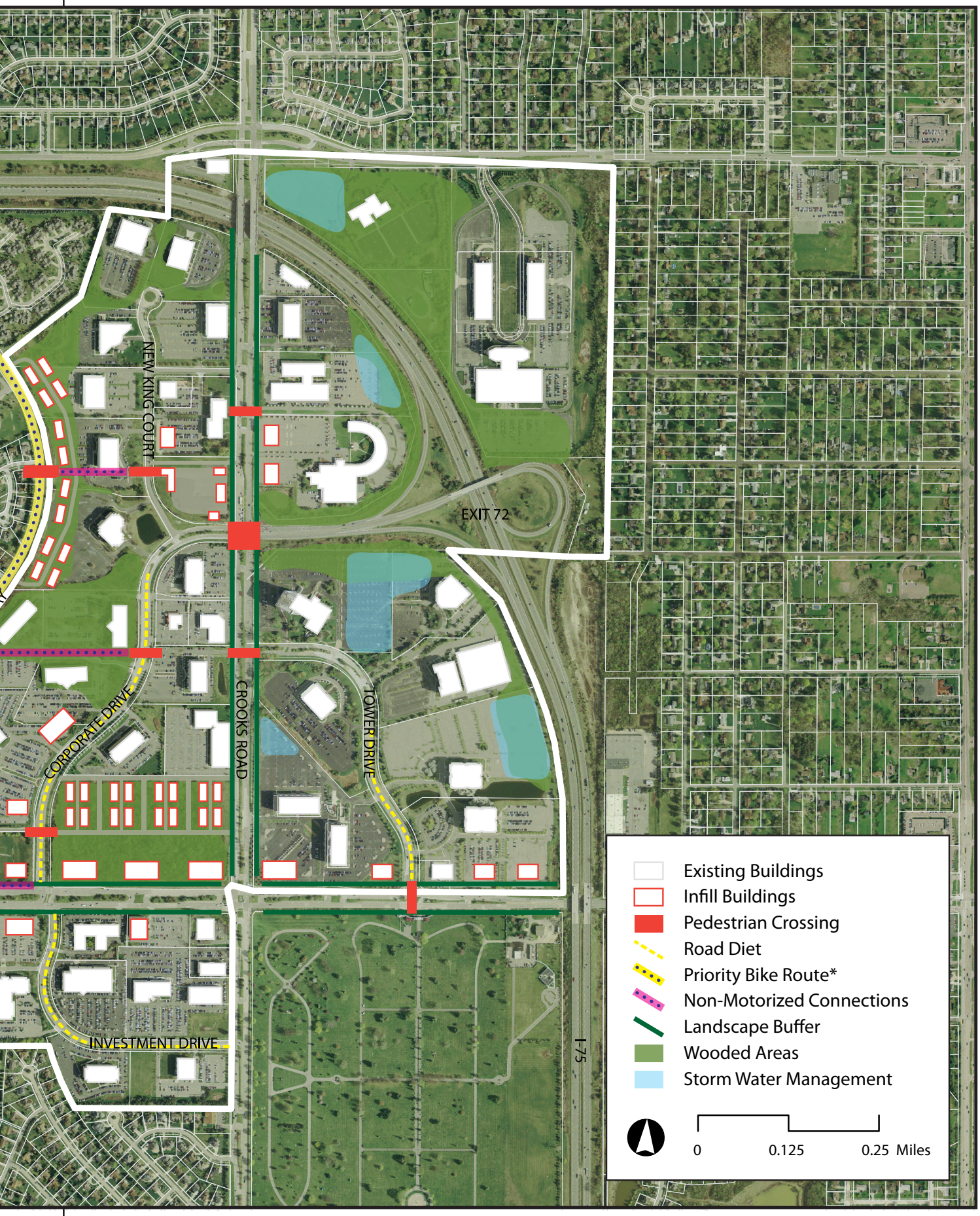
Conceptual design for North Troy community gathering space

Priority 2: Improve Multi-modal Circulation and Safety

At some point during our commute to work or school, everyone becomes a pedestrian. North Troy provides a beautiful campus setting with large lawns, water features, and woodland areas, but it is auto-oriented and lacks walkability. There are sidewalks but they don't really function for pedestrians and cyclists, they don't lead to desired destinations, and they often follow indirect routes. Changes to landscaping and transportation infrastructure within the right-of-way, coupled with strategic infill, will improve safety and encourage walkability.

It will be important to link new circulation paths across North Troy to the non-motorized facilities along Northfield Parkway. Northfield Parkway is highlighted as a Priority Bike Route on the Priority Bike Routes Neighborhood Greenways Map* in the 2009 City of Troy Trails and Pathways Master Plan. In the short term, Long Lake Road will serve as the primary connection to the parkway and as development occurs there will be more opportunities to create non-motorized connections using public easements. In addition to perimeter sidewalks, private developers should be encouraged to improve internal pedestrian circulation, creating convenient, logical, and attractive walkways.




NEW KING COURT
EXIT 72
CROOKS ROAD
TOWER DRIVE
CORPORATE DRIVE
INVESTMENT DRIVE
I-75
Existing Buildings
Infill Buildings
Pedestrian Crossing
Road Diet
Priority Bike Route*
Non-Motorized Connections
Landscape Buffer
Wooded Areas
Storm Water Management
0
0.125
0.25 Miles

Priority 2: Improve Multi-modal Circulation and Safety

Strategy: Study and implement road diets

North Troy was designed for the automobile in the mid-1980s and cars remain the dominant transportation choice. In order to provide for multi-model transportation options, the City should look to integrate principles of complete streets and best management practices (BMP) into capital projects. Road diets offer a strategy for reconfiguring travel lanes to better accommodate non-motorized transportation such as walking, biking, and transit, while also incorporating landscaping and green infrastructure. As secondary connector streets with large right-of-way (ROW) widths and less than 1,000 vehicles per hour (vph) at peak times, Investment Drive (86 foot ROW), Corporate Drive (120 foot ROW), and Tower Drive (105-120 ROW) provide appropriate locations to implement 4-to-3 lane conversions with striped bike lanes or a protected multi-use pathway.

Complete Streets

"**Complete streets** means roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle."

Together Michigan Public Act 134 and Public Act 135 of 2010 form the Complete Streets legislation. These laws effect project planning and coordination between government and state transportation agencies, and ensure that complete streets policies consider the local context, functional road classification, project costs, and most importantly, the mobility of all legal users.

FIGURE A.1: Corporate Drive Existing Conditions (120 foot ROW)

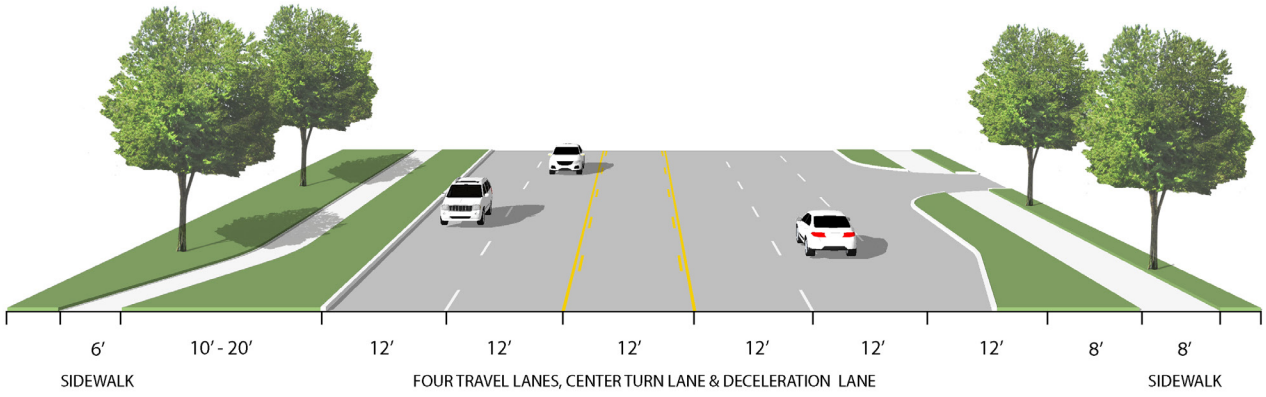


FIGURE A.2: Corporate Drive Proposed Conversion (120 foot ROW)

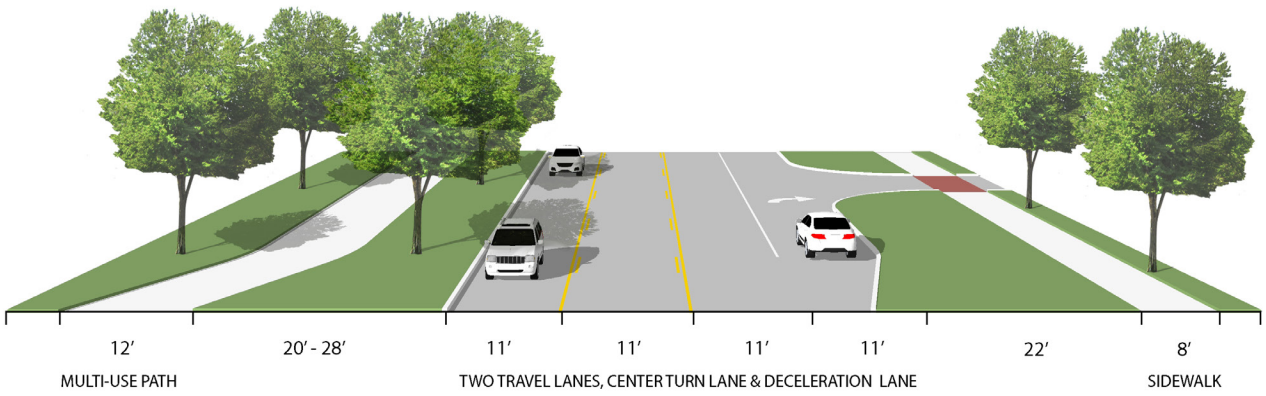


FIGURE A.3: Investment Drive Existing Conditions (86 foot ROW)

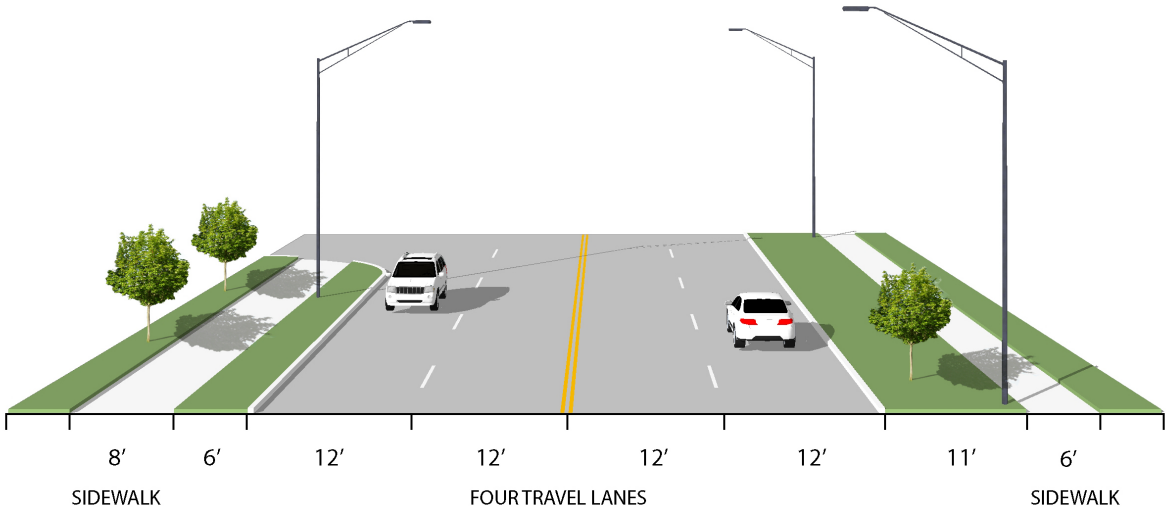


FIGURE A.4: Investment Drive Proposed Conversion 1 (86 foot ROW)

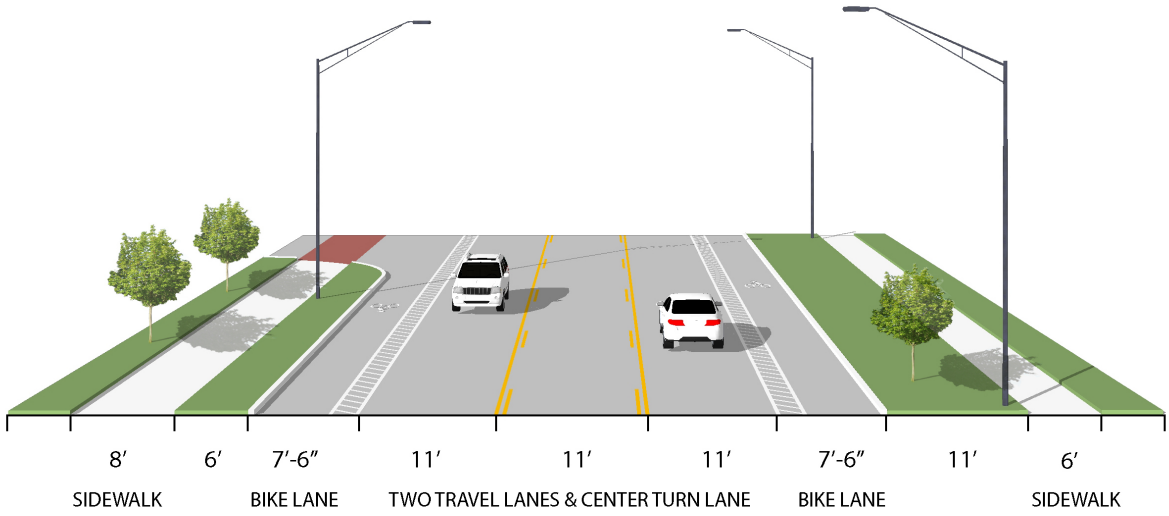
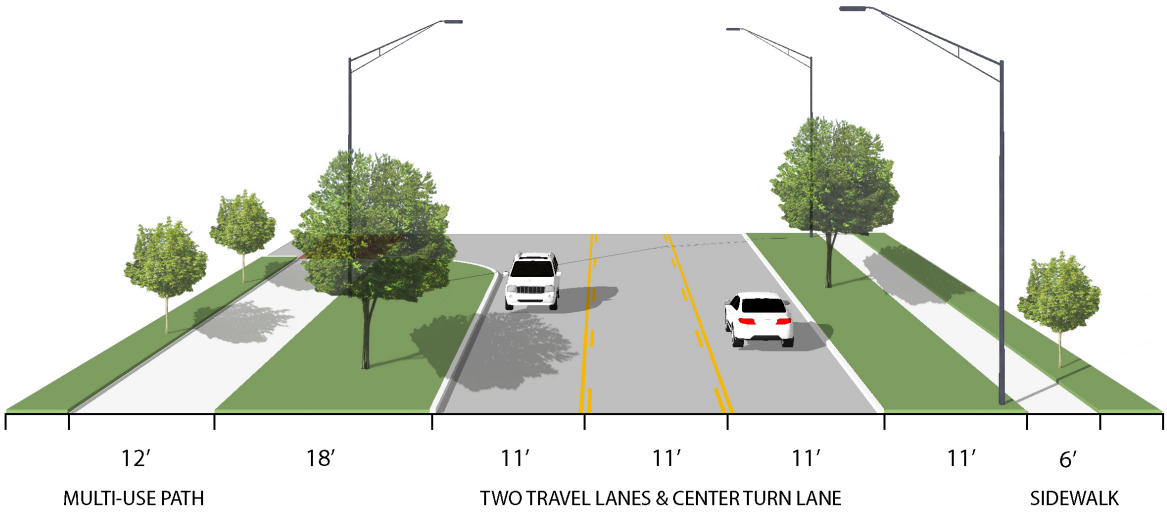


FIGURE A.5: Investment Drive Proposed Conversion 2 (86 foot ROW)



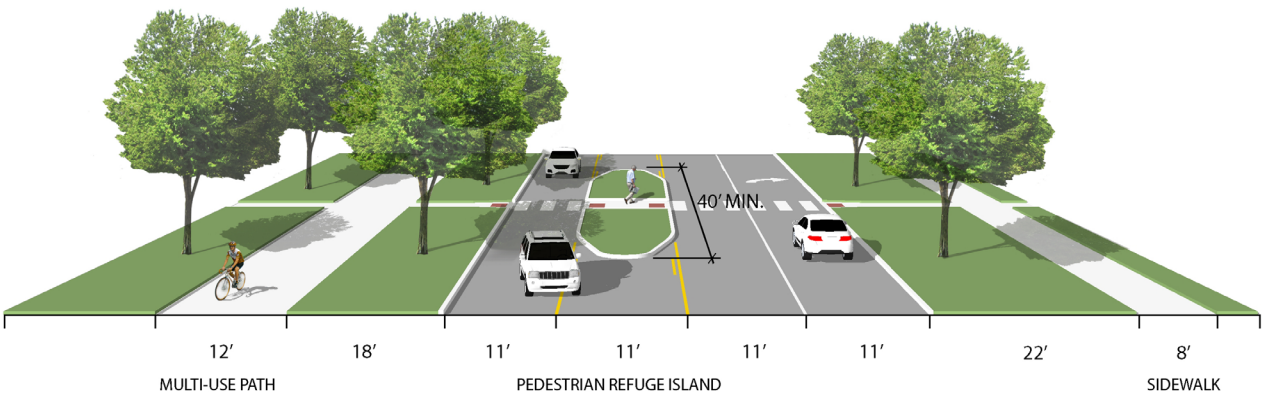
Cyclist at Corporate Drive and Crooks Road

Crosswalk in Chicago, IL

Strategy: Introduce pedestrian mid-block crossing

Due to the auto-centric nature of North Troy, including multiple travel lanes, curving roads with reduced visibility, and long blocks, employees and residents who venture out on foot to destinations such as the Northfield Pointe Marketplace have difficulty crossing Corporate Drive and Crook Road. Providing safe mid-block crossings for pedestrians and cyclists is an integral strategy for walkability. Mid-block crossings for Northfield Parkway will further integrate and strengthen the connection with the adjacent residential neighborhood. Pedestrian refuge islands and signalized crossings are some of the techniques for providing mid-block crossing. Applicability should be determined based on site context and budget. Priority pedestrian routes will develop based on new infill development.

FIGURE A.6: Corporate Drive Pedestrian Mid-Block Crossing

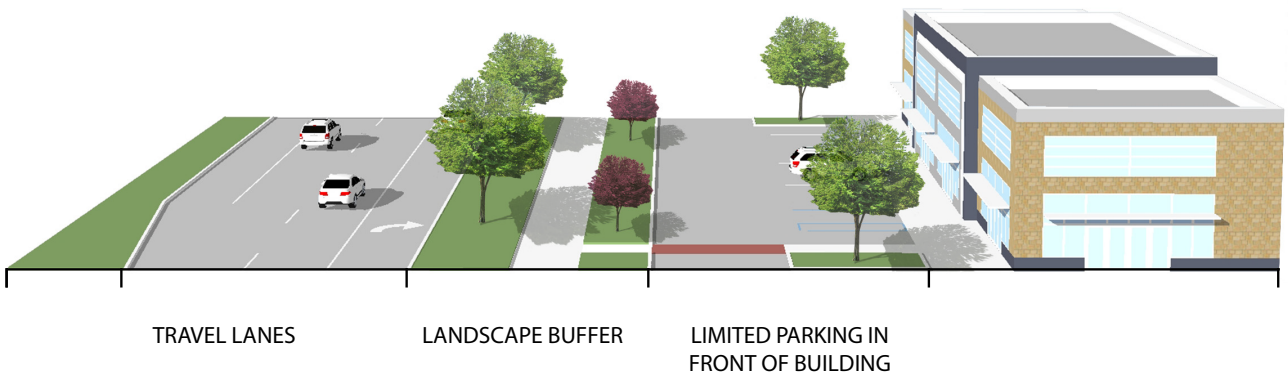


New Development along Big Beaver in Troy, MI

Strategy: Establish consistent landscape buffer and setbacks

The office uses in North Troy have large setbacks and landscaping designed to produce a dramatic approach via car. Pedestrians are walled off by vegetation, forced to walk through parking lots, or left on sidewalks that lead to nowhere. New residential and service development should front the street, creating a more consistent street wall. Sidewalks along Crooks Road and Long Lake Road should be pushed back away from the edge of pavement to accommodate vertical elements such as street lights and street trees in the landscape buffer. These elements provide real and perceived protection to pedestrians on the sidewalk. Low shrubs also offer a separation between the flow of traffic and the pedestrian realm.

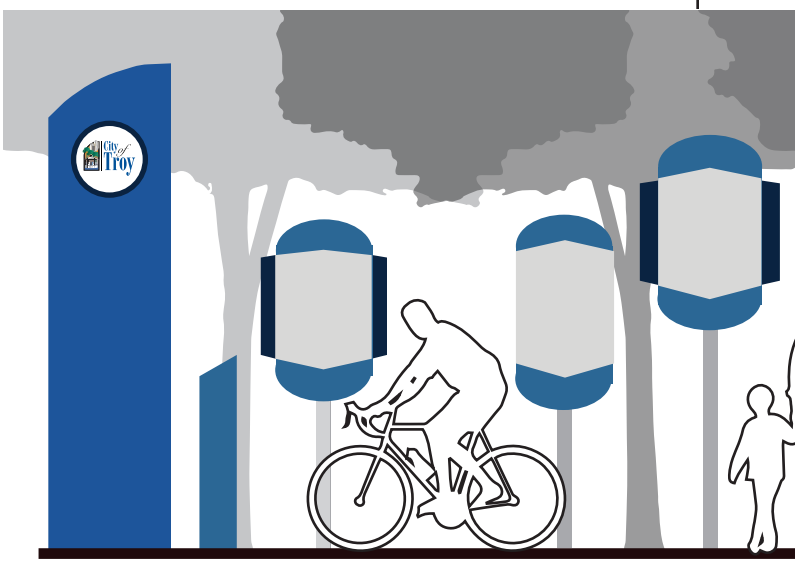
FIGURE A.7: Long Lake Road and Crooks Road Improved Landscape Buffer



Priority 3: Tactical Placemaking

Tactical placemaking will allow the City and private partners to experiment with physical interventions and social programs using a lighter, quicker, cheaper approach to transforming the image and identity of North Troy. Placemaking is as much about the process of engagement as it is about improving the physical environment. Through community education and public-private partnerships, there are things the City can start work on today to get employees and residents interacting with the place and each other. Tactical placemaking feeds into the North Troy's overall strategy of strategic placemaking, which has recently become Michigan's statewide approach to economic development. The MI Place Initiative includes business and talent attraction and retention.

North Troy Corporate Park signage



Wayfinding signage

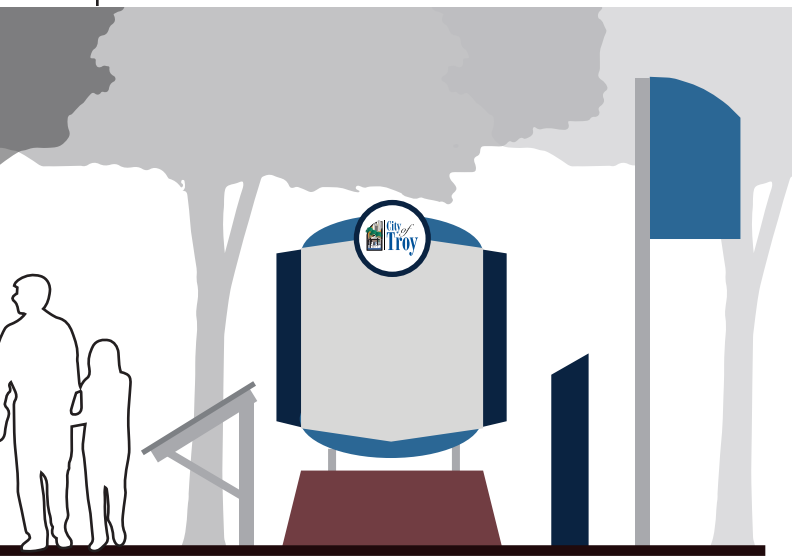
Eleven Principles for Creating Great Community Places

1. Recognize the community as the expert
2. Create a place, not a design
3. Look for partners
4. Observe existing spaces
5. Establish a vision
6. Use *Lighter, Quicker, Cheaper* approach
7. Triangulate by linking streetscape elements, amenities, and activity
8. Build on small projects
9. Allow form to support function
10. Remember that money is not the issue
11. Embrace Placemaking as a process rather than a product

Projects for Public Spaces

Mark's Carts in Ann Arbor, MI

Flagstar Bank Headquarters driveway



Clinton River Trail in Rochester, MI

Strategy: Create an identity through gateways and wayfinding

North Troy currently lacks an identity. Public wayfinding and site identification and directional signs are important elements of a project. North Troy's location offers a prime opportunity to capitalize upon the entrance into the City of Troy along I-75. In addition, several smaller gateways will provide project identification for the business park development. Directional and information signs, as well as street signs, will help users navigate the area.

Strategy: Facilitate health and wellness initiatives

Many North Troy employees already walk during the lunch hour. Establishing a walking and biking loop with wayfinding and mile markers will encourage this culture. These non-motorized pathways should be connected to the priority bike route along Northfield Parkway. Public-private programming, similar to Oakland County's Count Your Steps Initiative or the University of Michigan's BlueBike rental program, can encourage employees to utilize non-motorized facilities.

Strategy: Encourage creative programming

North Troy would benefit from the City's "Lunch in Troy" program which brings in mobile food vendors, or food trucks to sites with few brick and mortar dining options for workers. The City can expand this program by working with member vendors of the Michigan Mobile Food Vendors Association (MMFVA). Introducing movable chairs and tables will help create an atmosphere for socializing. Other corporate sponsored programming will expand vibrancy to the area.

Action Plan and Implementation

The North Troy Plan is organized into multiple projects so the vision can be refined and implemented in phases over time in a flexible manner. Priority transformative projects like the road diet projects entail multiple phases given their scale and ambition and serve as economic catalysts for tapping the development potential of the area for years to come. The timeframe to implement the Plan will depend on many factors, including market conditions, financing, approvals, and other city initiatives.

Priority 1 **Provide a Compatible and Vibrant Mix of Use**	***Strategy***
	Promote service infill through property repurposing
	Promote residential infill through property repurposing
	Develop and strengthen core
	Create a community gathering space

Priority 2 **Improve Multi-modal Circulation and Safety**	***Strategy***
	Study and implement road diets
	Introduce pedestrian mid-block crossing
	Establish consistent landscape buffer and setbacks

Priority 3 **Inspire Tactical Placemaking to Create a Lively Place**	***Strategy***
	Create an identity through gateways and wayfinding
	Facilitate health and wellness initiatives
	Encourage creative programming

Phasing
Near 1-2 years
Mid 3-5 years
Long 6-10 years

	Actions	***Phasing***	***Responsibility***
	Identify sites for infill and meet with property owners	Near	City, Private entities
	Amend zoning if necessary	Near	City
	Identify sites for infill and meet with property owners	Mid/Long	City, Private entities
	Amend zoning if necessary	Mid/Long	City
	Implement infrastructure improvements	Mid/Long	City, Private entities
	Encourage development of the core	Mid/Long	City, Private entities
	Design and construct public space	Mid/Long	City, Private entities

	Actions	***Phasing***	***Responsibility***
	Implement Road Diet for Investment Drive	Mid	City, Private entities
	Implement Road Diet for Corporate Drive	Long	City, Private entities
	Implement Road Diet for Tower Drive	Long	City, Private entities
	Identify location(s) for mid-block crossing	Near	City, Private entities
	Identify type of crossing based on location and funding source	Near	City, Private entities
	Implement crossing	Near	City
	Amend zoning if necessary and implement appropriately scaled landscape buffers and setbacks when new development occurs	Near	City, Private entities
	Implement new streetscape along Crooks and Long Lake Road	Long	City, Private entities

	Actions	***Phasing***	***Responsibility***
	Create and install gateway and wayfinding program	Mid	City, private entities
	Work with existing corporations to establish common identification signage	Mid	Private entities
	In cooperation with gateway and wayfinding program, identify North Troy walking and biking loop	Mid	Private entities
	City to establish initial programming efforts such as City's "Lunch in Troy" program	Near	City
	Work with existing corporations to establish long-term programming	Mid	City, Private entities

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Big Beaver Pedestrian

Special Area Plan

EVERYBODY WALKS.

Walking is the most basic form of transportation; however we more often view ourselves as drivers, passengers, and even cyclists, and overlook the walking part of the journey. As a result walking is often disregarded in the quest to build more sophisticated transportation systems.

It's time to pay attention to the pedestrian. As Troy, and more specifically Big Beaver Road evolves, the desire to walk along and across Big Beaver Road has increased. The City realizes that walking along and across Big Beaver is difficult. That is why we need your help.

Big Beaver Corridor Study adopted in 2006

Vision established for transforming Big Beaver into a World Class Boulevard

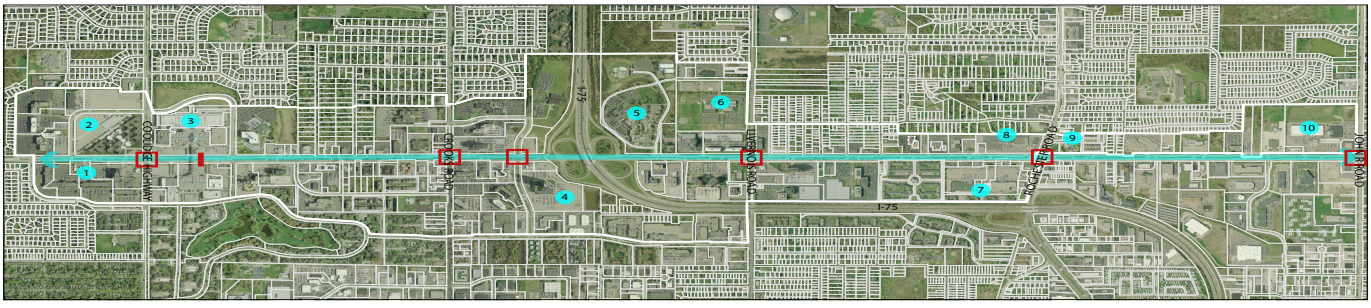
Key Concepts:
1. Gateways, Districts and Transitions
2. Trees and Landscape as "Ceilings and Walls"
3. Walking Becomes Entertainment
4. Mixing the Uses Turns on the Lights
5. The Automobile and Parking are no Longer #1
6. Civic Art as the Wise Sage of the Boulevard

Recent Investment on/near Big Beaver Road

- Big Beaver is attracting new users/businesses
- New users/businesses are generating more pedestrian activity
- Limited options available to cross Big Beaver
- I-75 acts as physical and mental barrier
- Big Beaver employment and commercial centers are not aligned with existing crossings

Big Beaver Challenges

- Granite City Food and Brewery - Restaurant
- Galleria of Troy – Retail and hotels
- Big Beaver Center - Retail and single family residential
- Troy Shoppes - Retail
- Fifth Third Bank – Bank branch
- DMC Children's Hospital – Hospital
- Amber Town Center Townhomes and Lofts – Loft apartments



0 0.25 0.5 1 Miles

TRAFFIC COUNTS	EB	WB
Adams to Coolidge	12,950	12,790
Coolidge to Crooks	14,980	20,970
Crooks to I-75	28,800	27,670
I-75 to Livernois	21,010	20,120
Livernois to Rochester	20,590	20,360
Rochester to John R	24,110	18,700

Source: AADT SEMCOG, 2011

MAP LEGEND

- Big Beaver Road
- 1 Landmark
- Intersection Crossing
- Mid-Block Crossing

1. Kresge Foundation
2. Vacant Kmart Headquarters
3. Somerset Collection
4. PNC Tower
5. Troy City Hall Campus
6. Troy Community Center
7. Troy Market Place shopping center
8. Troy Commons shopping center
9. Gateway Park
10. Troy Sports Center

Introduction

The Big Beaver corridor represents one of the most important components to economic development in Southeast Michigan. Home to the Somerset Collection, numerous corporations, foundations, and other thriving businesses, the corridor draws tens of thousands of people to Troy on a daily basis. Additionally, the roadway itself has always functioned as a critical vehicular arterial, carrying 50,000 vehicles per day, many of which use it to access Interstate 75, Interstate 94 or travel east-west across the region. Because of this vehicular demand and connection, the corridor was designed and constructed to move vehicles as efficiently as possible.

One of the most dramatic changes that has recently occurred along the corridor is the increased amount of pedestrian activity. Reflecting a trend that is occurring both regionally and nationally, more people are walking on Big Beaver Road. Whether it's to grab a coffee in the morning, get lunch, or socialize after work, these "pedestrian pioneers" are taking advantage of the existing infrastructure for pedestrians. Pedestrians along the corridor enjoy continuous sidewalks and retail frontage along both sides of Big Beaver. These are examples of the many benefits of form-based code which requires new businesses to have their front door adjacent to the sidewalk. However, there exist many challenges that pedestrians need to overcome to reach their destination. Simply crossing Big Beaver can be difficult for many people, particularly those with limited mobility. Both big barriers, for instance crossing the interchanges to I-75, and small, such as the large turning radii at key intersections, impact the walkability of the corridor as a whole. Additionally, the overall length of the corridor makes it unlikely that a person will walk long distances during their lunch hour.

The opportunity exists to create a transportation corridor along Big Beaver Road that is not only unique in Michigan, but in the United States – a corridor that not only carries a high volume of vehicles, but is walkable, hosts continuous pedestrian activity, and provides a variety of transportation options. Recognizing that the majority of people will still likely drive to their place of work along the corridor, the guiding philosophy of this plan is "Park Once". Employees and visitors will park once when they arrive to their initial destination, then will be able to walk, bike, or take transit along the corridor to reach other destinations throughout the day.

Accomplishing this goal will require considerable change ranging from how the existing infrastructure operates, to the design of future developments, to the overall culture of all users of the corridor. This is a big task that will require a number of large infrastructure projects such as pedestrian bridges, new transit options, and the elimination of infrastructure barriers. But, there are a number of projects that can immediately improve conditions for Big Beaver's pedestrian pioneers and build more pedestrian activity. These now-term projects are the first step toward building momentum and support for catalytic infrastructure projects.

Sam Schwartz Engineering and Carlisle/Wortman Associates were retained by the City of Troy to develop this plan. The project included a workshop with key stakeholders and an open house that brought out a considerable number of residents, business owners, and employees. The recommendations in this report reflect the feedback received during these meetings.

Sam
Schwartz
Engineering
D.P.C.

Existing Conditions

Big Beaver Road is a six-mile long, six-lane boulevard with a 50-55 ft landscaped median separating eastbound and westbound traffic along much of the corridor. Traffic signals are provided with major mile roads, Interstate 75 ramps, and a number of other intersections. Between Coolidge Highway and John R Road, there are 22 left-turn opportunities for eastbound vehicles and 23 left-turn opportunities for westbound vehicles. Big Beaver Road is under the jurisdiction of the Road Commission for Oakland County.

The average daily traffic volumes (and the year they were collected) at different locations along the corridor are listed below:

- Coolidge Highway – 41,153 vehicles (2011)
- Butterfield Road – 35,976 vehicles (2011)
- Crooks Road – 54,987 vehicles (2012)
- Wilshire Drive – 56,599 vehicles (2011)
- Civic Center Drive – 41,153 vehicles (2011)
- Livernois Road – 50,280 vehicles (2010)
- Charter Drive – 32,890 vehicles (2014)
- Rochester Road – 53,629 vehicles (2012)

The corridor's geometrics were designed to accommodate these large traffic volumes during the weekday morning and evening peak hours. However, this leaves a considerable amount of capacity during the day and on weekends. This sometimes encourages vehicles to travel above the posted speed limit.

There is a considerable amount of pedestrian infrastructure along the Big Beaver corridor. Wide sidewalks are provided on both sides of the street for the entire corridor. Continental style crosswalks are located at most signalized intersections. Refuge islands are provided in the landscaped median at midblock crossing locations. Pedestrian signal heads are provided at all signalized locations, with countdown timers informing pedestrians how much time is left to cross the street at most locations. Pedestrian push buttons are also at all signalized intersections to allow pedestrians to call a walk signal.

Additionally, recent developments along the corridor have been planned and constructed to make it much easier for pedestrians to access. Instead of the typical commercial building that is set far back from the sidewalk—which forces pedestrians to walk through a surface parking lot—recent developments, including the Starbucks and Carrabba's Italian Grill have been built adjacent to the sidewalk. This orientation encourages pedestrian access. This is a result of the progressive form based code that the City of Troy recently developed and implemented.

There still remain a number of challenges for pedestrians that want to walk along the corridor to their destination, including:

- High speeds of vehicular traffic, particularly during hours outside of the normal morning and evening commuting hours.
- There are only seven pedestrian crossings across Big Beaver along the entire corridor. The spacing between the crossings in some locations exceeds one mile.
- There are only three signalized midblock crossings along the entire length of the corridor.
- The width of Big Beaver Road, particularly at major intersections, requires pedestrian crossings at some locations to exceed 150'. For some pedestrians, this equates to 50 seconds to cross the entire street.
- Interstate 75 essentially divides the corridor for pedestrians. The pedestrian underpass is narrow, dark, and feels unsafe and unpleasant and the ramp designs encourage vehicles to speed on to the ramps and not stop for pedestrians.

- The radii at most intersections are designed for large trucks, further increasing the distance pedestrians have to cross and encouraging higher speed turns for vehicles.
- Surface parking lots are the most common land use next to the sidewalk.
- There exists a lack of pedestrian crossings on the minor streets and access drives intersecting Big Beaver Road.
- There exists a lack of places to sit along the entire corridor.

The Suburban Mobility Authority for Regional Transportation (SMART) runs a fixed route bus service along the Big Beaver Corridor. However, it only operates during the morning and afternoon/evening commuting hours and has 30 minute headways. They also run a Somerset Collection Shuttle that provides point to point service in the area, but requires a phone call within 60 minutes of your desired pick-up time.

Case Studies

The following case studies provide real examples of how other communities in the United States and across the globe have addressed pedestrian connectivity.

Canyon Boulevard

Boulder, Colorado

Canyon Blvd has two vehicle lanes in each direction and a wide, contiguous sidewalk along its north side. Canyon (between 9th and 14th) has several examples of midblock, and side-street connection crossings through planted medians using pedestrian actuated Rapid Flash Beacons. This stretch of roadway utilizes raised curbs and landscaping in the central median for aesthetic appeal; this has the added benefit of discouraging jaywalking outside of designated crossings.

Mandela Parkway

Oakland, California

Mandela Parkway is a median divided street with an on-street bike lane in each direction. The street is designed with a linear park occupying an extremely wide center median, complete with a wide walking path, landscaped and grassy lawns. This spatial configuration makes sense for safe pedestrian passage; Mandela Parkway is lined with industrial land use with many truck loading docks breaking up the sidewalks on either side of the street. A center running pedestrian walkway allows for safe, uninterrupted walking or biking along the corridor, and adds much needed green space to the immediate area.

West Side Highway

New York City, New York

New York's West Side Highway (reconstruction completed 2001) is a 6- to 8-lane urban boulevard. Alongside the highway roughly between Battery Park and the Washington Bridge there is a barrier protected two-way bike lane, called the Hudson River Greenway, alongside a walking path. The active transportation is separated from vehicular traffic in most places by a planted median. The large central median splitting the two directions of vehicular traffic provides a refuge island for pedestrians crossing this busy street.

Da Praia Street

Rio de Janeiro, Brazil

This beach-side highway has 2-3 lanes of vehicular traffic in each direction, and a two-way bike facility at street level, separated from vehicular traffic by a 2 ft curb. At intersections, the bike lane is raised to sidewalk level, giving pedestrians the priority as they cross the bike lane. A large central median provides a pedestrian refuge island for those crossing the street. The central median and sidewalk use decorative pavers to highlight the wide pedestrian boardwalk lined with small kiosks and shops. The patterns of these pavers vary by neighborhood.

Highway 7

Toronto, Canada

Highway 7 in Toronto integrates Bus Rapid Transit into a multi lane roadway, complete with pedestrian crossing safety measures, and bike facilities. Textured pavers add visual interest to the continental marked crossing paint. Due to the width of the roadway, pedestrians must cross using two pedestrian countdown cycles, after waiting in the pedestrian refuge islands in the center medians. Highway 7 illustrates the importance of clear signage for all modes.

The Toolbox

Both the speed of cars along Big Beaver and the overall roadway width pose challenges for pedestrians attempting to cross the street safely. Visibility and consistent physical treatment of crossings is key to ensuring that motorists recognize a pedestrian crossing far enough in advance of the crosswalk to stop safely, without encroaching on the pedestrian's space. By repeating the elements of crossing treatments at many nodes along the Big Beaver corridor, a predictable relationship will be built between cars and pedestrians at intersections.

The following treatments are best practices and should be installed consistently along the corridor.

Marked crosswalks

Fundamentally, marked crosswalks designate paths where pedestrians may safely cross the street, and where drivers can expect them to cross. Continental style crosswalks provide the highest visibility to pedestrians. At a higher cost, material options such as bricks or decorative pavers are often used as an alternative to white paint designating a pedestrian crossing for their aesthetic benefit to the pedestrian environment. At signalized intersections, the vehicular stop bar should be placed at least 10 ft before the pedestrian crossing to ensure cars do not encroach on the crosswalk. Use decorative patterns or color to make pedestrian crossings exciting and unique. Decorative crossing patterns such as those in Pasadena, CA can be created using basic paint and stencil methods.

Pasadena, CA

Application

Marked crosswalks are already located at a number of locations along the corridor. Marked crosswalks should be installed at all crossing locations. Faded or otherwise deteriorating crosswalks should be improved.

Pedestrian Countdown Timers

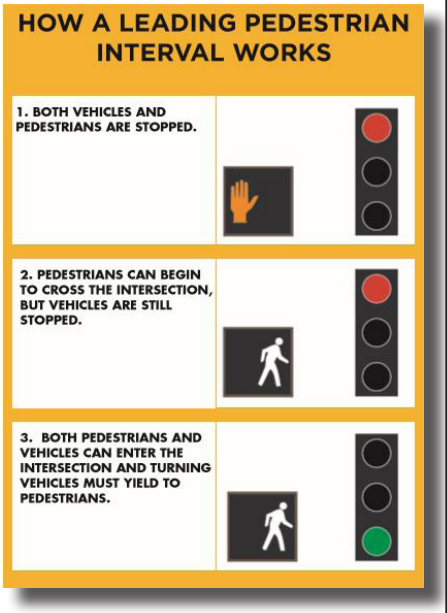
A pedestrian countdown timer is an alternative to the typical pedestrian crossing signals, with the addition of numbers counting down the time remaining for pedestrians to clear the crosswalk. The pedestrian countdown timer begins in conjunction with the flashing "DON'T WALK" signal interval.

Application

The majority of crossings along the corridor already have pedestrian countdown timers. All new or modernized traffic signals should include countdown timers. Existing signalized intersections can be retrofitted with this type of signal. All countdown timers should be programmed to allow pedestrians to cross the street at a maximum walking speed of 3.5 ft per second. Walking speeds slower than 3.5 ft per second should be considered at all locations, particularly at crossings typically used by children, seniors, and people with disabilities.

Leading Pedestrian Intervals

A leading pedestrian interval (LPI) gives pedestrians a head start into an intersection before vehicles by changing the signal timing of the intersection.



Application

LPIs should be installed at intersections with high pedestrian crossing volumes, and are installed by re-timing an existing traffic signal. Typically, the 'WALK' signal is turned on approximately three seconds before vehicles are given a green signal.

Pedestrian Refuge Islands

A pedestrian refuge island is a protected area in the center of a multi lane crossing which gives pedestrians a space to pause safely between traffic lanes in each direction. Pedestrian refuge islands should be at least 6 ft wide and should be protected by a curbed median on both sides. Detectable warnings, using truncated dome surface areas, must also be installed to allow pedestrians who are visually impaired to detect the refuge island.

Application

Pedestrian refuge islands located within the existing median should be considered at all crossing locations on Big Beaver.

Corner Radius Design

Reducing corner radii can be achieved by reconstructing curbs at the corners of an intersection or simply using paint. Smaller corner radii effectively slow turning vehicles, resulting in a shorter pedestrian crossing distance and better pedestrian ramp alignment. The size of the corner radius relates directly to the length of the crosswalk. Larger turning radius requires pedestrians to walk a longer distance in the roadway to reach the opposite sidewalk.

Application

Smaller corner radii should be considered at all intersections and side-street connections along Big Beaver. Where it is not possible to reconstruct a curb immediately, a new radius can be a delineated using interim material such as paint, planters, and bollards. The actual radius should be designed to accommodate delivery vehicles with a turning speed of 15 mph or less.

Crossing Ramps & Truncated Domes

All pedestrian crossings should be designed to the Americans with Disabilities Act (ADA), specifications which outline the slope, rise, width, and landing requirements. Ideally there should be a separate curb ramp for each crosswalk; ramps installed diagonally toward the center of an intersection serving two crosswalks are not preferred. All new crossing treatments should be outfitted with truncated dome textured ground surface indicators which advises the visually impaired of a change from pedestrian path to vehicular path.

Application

Truncated domes should be installed in consistent design and color to new and existing crossings. The color must provide contrast from the path/ramp.

Speed Tables and Raised Crosswalks

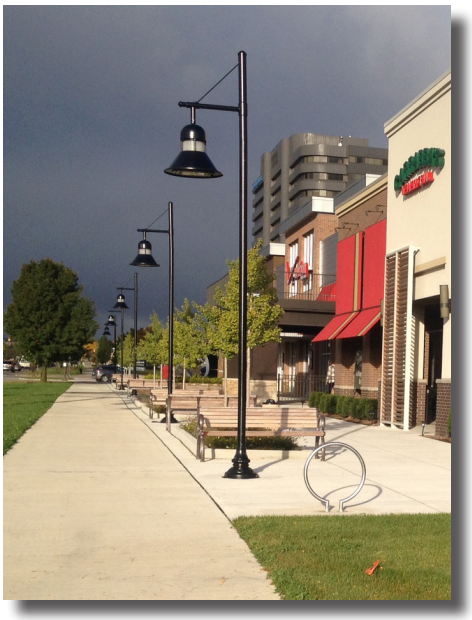
A speed table and a raised intersection are essentially longer speed humps used to raise the crosswalk or intersection and reduce vehicle speeds. This type of intersection treatment gives priority to the pedestrian by making a seamless, sidewalk level connection across vehicle lanes.

Application

Speed tables or raised crosswalks can be installed at channelized right-turn lanes or minor side-street connections to Big Beaver to alert drivers to the sidewalks continuing across these small streets.

Lighting

Sidewalks and intersections should have lighting installed at a pedestrian scale, and directed onto pedestrian paths. Lighting installed along a major roadway is positioned such that the roadway is washed with as much even lighting for vehicle lanes as possible. Sidewalks adjacent to such roadway do not have direct lighting at an appropriate height to serve pedestrians.



Application

A secondary system of pedestrian scale lighting should be installed adjacent to all sidewalks and crossings, similar to the existing segment on the north side of Big Beaver, west of I-75. The lights should be installed more frequently approaching each intersection. Many lighting designs offer the opportunity to incorporate banners or signage. These types of additional aesthetic enhancements should also consistently appear more frequently around designated central crossing nodes.

Planted curbs and edges

Consistent landscaping and edge treatments can also be used to make the pedestrian environment safer and more predictable for drivers. Planting trees between sidewalks and the roadway provide physical barriers, improved aesthetic environment, and sound absorption. A contiguous buffer of low plants along the sidewalk edge approaching a pedestrian crossing discourages pedestrians from jaywalking, or crossing outside the crosswalk itself. Snow mounds resulting from street snow removal must be shoveled out of pedestrian ramps and sidewalk connections at intersections. In addition, efforts should be made to identify native or salt-tolerant plants for these areas.

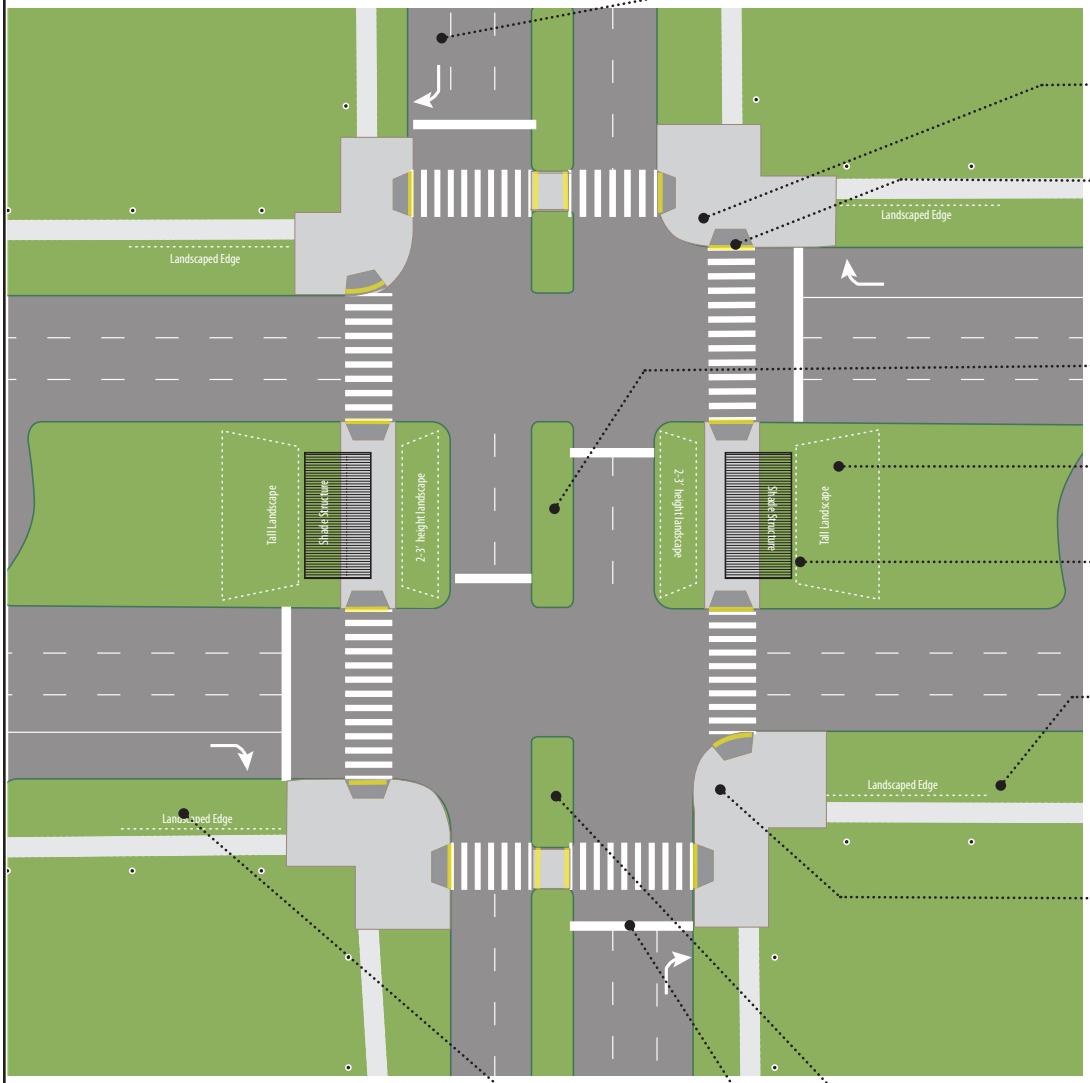
Application

Landscaping around intersections should be low so as not to block views of pedestrians approaching a crosswalk. Trees and tall landscaping should not be planted within a 25 ft view triangle at intersections or side street connections. Most lengths of sidewalk along Big Beaver are offset 10-15 ft from the shoulder. Locating a small trench along the shoulder will help chemicals and salt water runoff drain away from plants lining the sidewalk.

Multi-Use Path

A multi-use pathway is a facility built for combined bicycle and pedestrian traffic, and is physically separated from motor vehicle traffic. Multi-use trails intended to accommodate both pedestrians and cyclists need to be wide enough and have clear sight-lines to accommodate users moving at different speeds, and should be clearly marked. The minimum width for such pathways is 10 ft to accommodate both pedestrians and bicyclists. Where possible, a minimum 5 ft buffer should exist between the multi-use path and the roadway; vertical separation is preferred.

Toolbox: Typical Intersection



Dedicated turning lanes with 'No Turn On Red' restrictions

Generous waiting space at each corner

ADA compliant ramps to street level with detectable warning strips

Planted central median island

Landscaping, art installations, and shade structures on center median, provided they do not obstruct sight distance

Pedestrian scale lighting positioned frequently along path approaching intersection

Reduced curb radius to slow turning vehicles and reduce pedestrian crossing distances

Build curb out to edge of vehicle through lanes creating pedestrian refuge islands

Pull stop bar away from crosswalk

Landscape street-side of sidewalk to discourage jay-walking

Recommendations

The Basics:

Continuity - Pedestrians should have a continuous path from the sidewalk along Big Beaver Road, across intersections, and to the front entrance of adjacent businesses along the corridor.

Consistency - Use intentional and consistent physical treatments of intersections and pathways ensure predictable movement of pedestrians, cyclists, and cars to minimize conflicts.

Ease - Make it easy, safe, interesting, and fun to walk around the Big Beaver corridor nodes to encourage more people to walk to nearby destinations.

Start Now

1. Establish 'Nodes' Along Big Beaver Road

   Due to the overall size of the corridor, it is recommended that improvements be focused in specific areas, or nodes, instead of a scattershot approach. This method will not only provide the maximum benefit to the area, but will also allow for trial and error to determine if changes should be made before moving on to the next node.

   Within each node, establish a high-priority crossing (or crossings) which will receive the full set of intersection treatments described in the Toolbox. Focus first on the crossing at Automation Alley Smart Zone. Identify future crossing locations so crossings are within 600 ft of each other.

   Recommended nodes and key intersections are included in the Short-term and Long-term Recommendations.

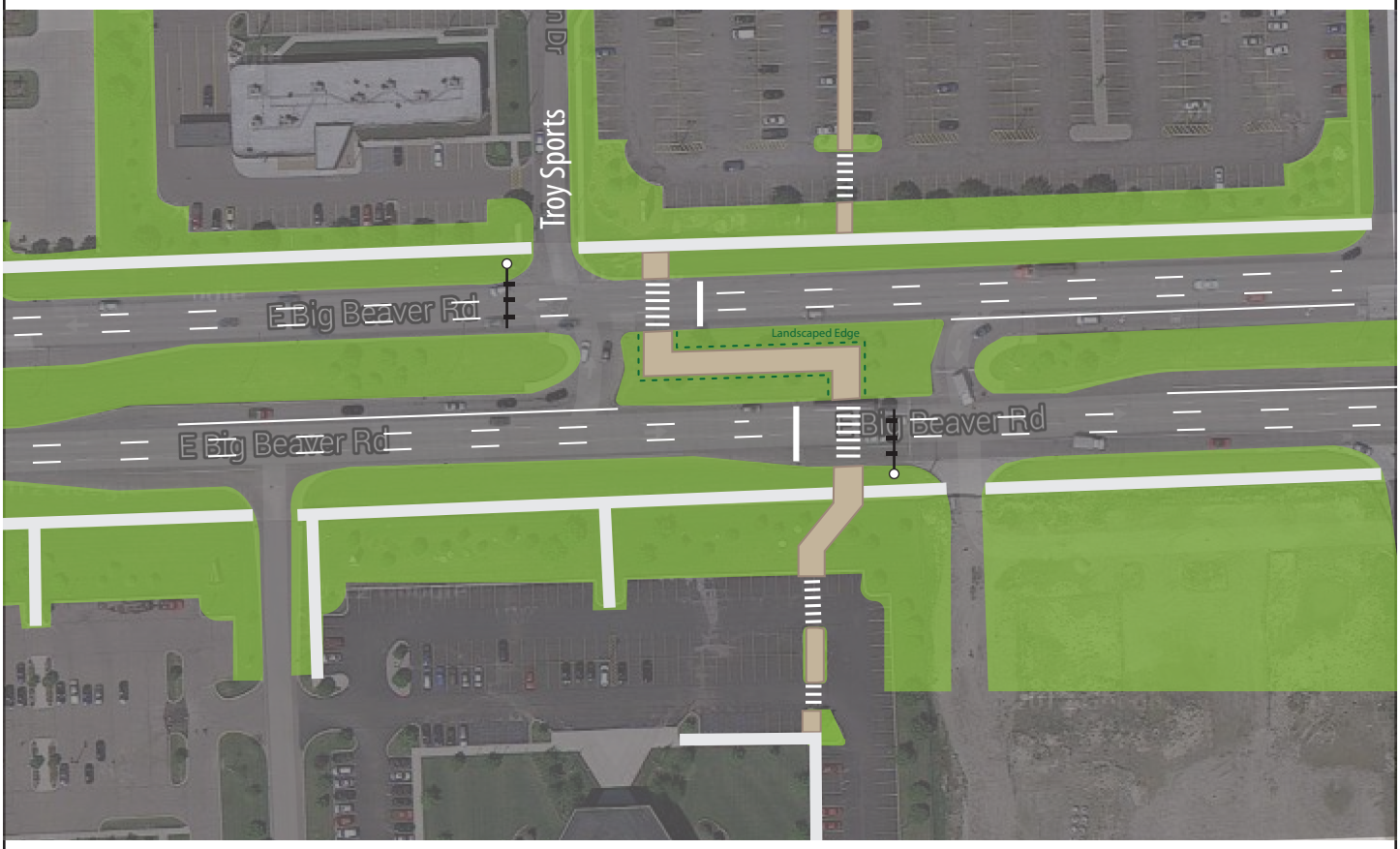
2. Focus Initial Efforts at Automation Alley Smart Zone Crossing

   A new mid-block crossing should be installed, approximately 850 ft west of John Road, to allow employees of Automation Alley Smart Zone to easily access Starbucks and the numerous restaurant and retail options on the north side of the street. The crossing should include the following:

   - A new traffic signal.
   - Continental crossings using thermoplastic or paint at all legs of the intersections within the node. Work with Automation Alley Smart Zone to incorporate their branding into one of the crossings.
   - Directional and distance signs for dining and/or shopping destinations in all four directions consistent with larger wayfinding system along the corridor.
   - Signage to make pedestrians aware of the new crossing.
   - New pedestrian walkways through the parking lots of both Altair Engineering and the shopping center of the north side of the street.

3. Outreach
   - Focus immediately on establishing website and basic graphics and marketing materials -- such as maps and pamphlets --for use in future outreach and awareness events.
   - Set a goal for the number of outreach events to occur in the following year.

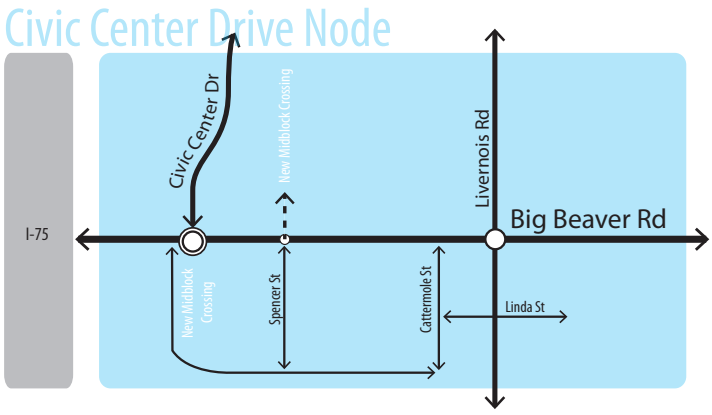
John R Road Node - Automation Alley Smart Zone Midblock Crossing



Short Term

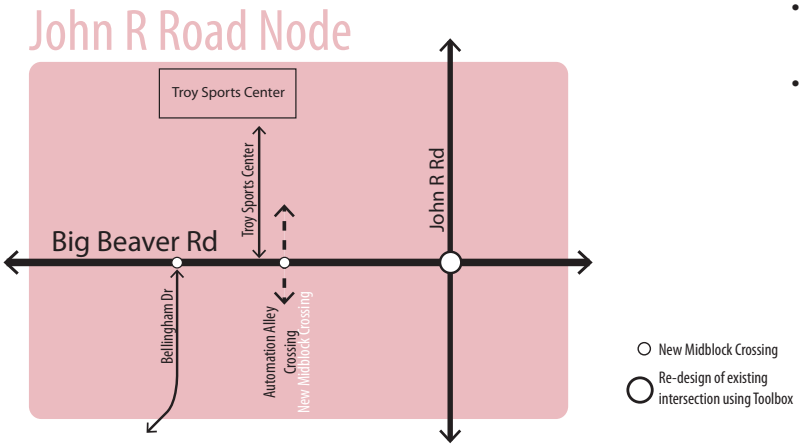
1. Establish Nodes Along Big Beaver Road

   The node diagrams included here provide general guidance on the location of new midblock crossings, and high priority crossings to be considered for full install of intersection treatments described in the Toolbox. All new midblock crossings should have a full traffic signage for vehicles.



Civic Center Drive Node*

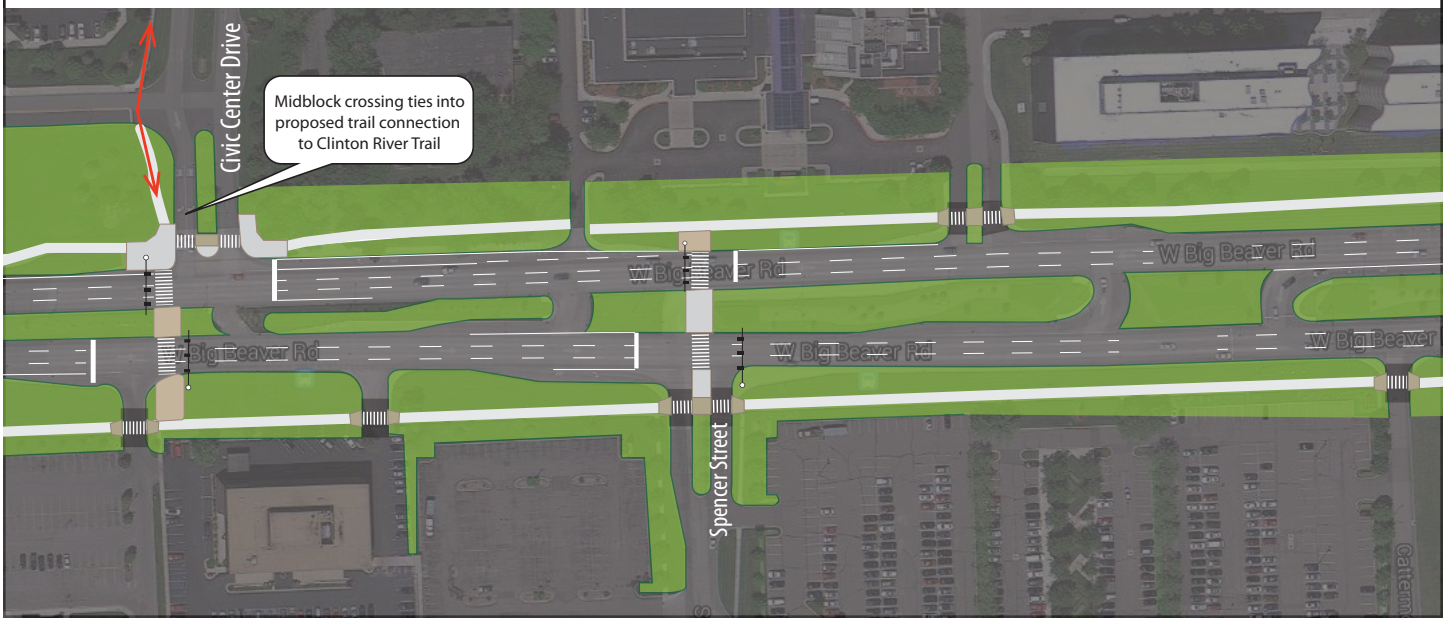
- Install new intersection at Civic Center Drive with signalized pedestrian crossing.
- Explore midblock crossing at Spencer Street connecting Columbia Center and Liberty Center across the center median
- Update Livernois Road intersection with Toolbox treatments



John R Road Node

- Explore additional midblock crossing connecting at Bellingham Drive
- Update John R Road intersection with Toolbox treatments
- Consider a pedestrian overpass to connect Automation Alley Smart Zone with the development on the north side of the street

Civic Center Drive Node Reconfiguration



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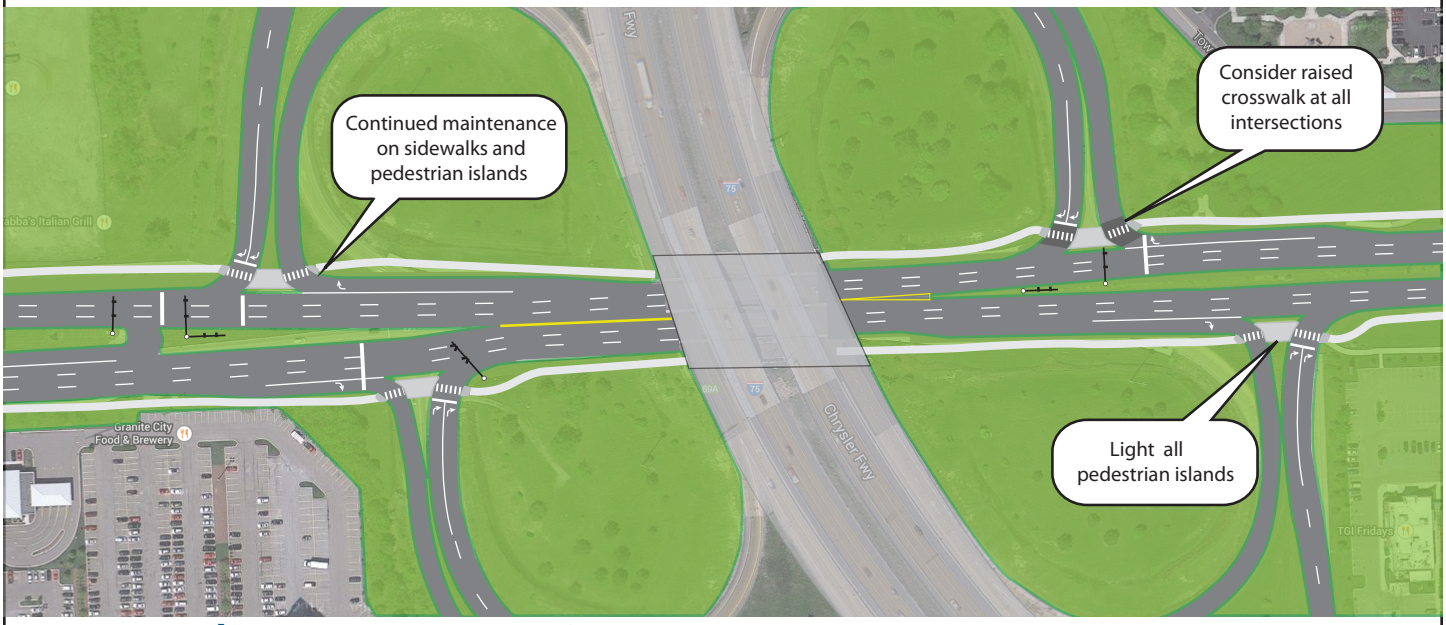
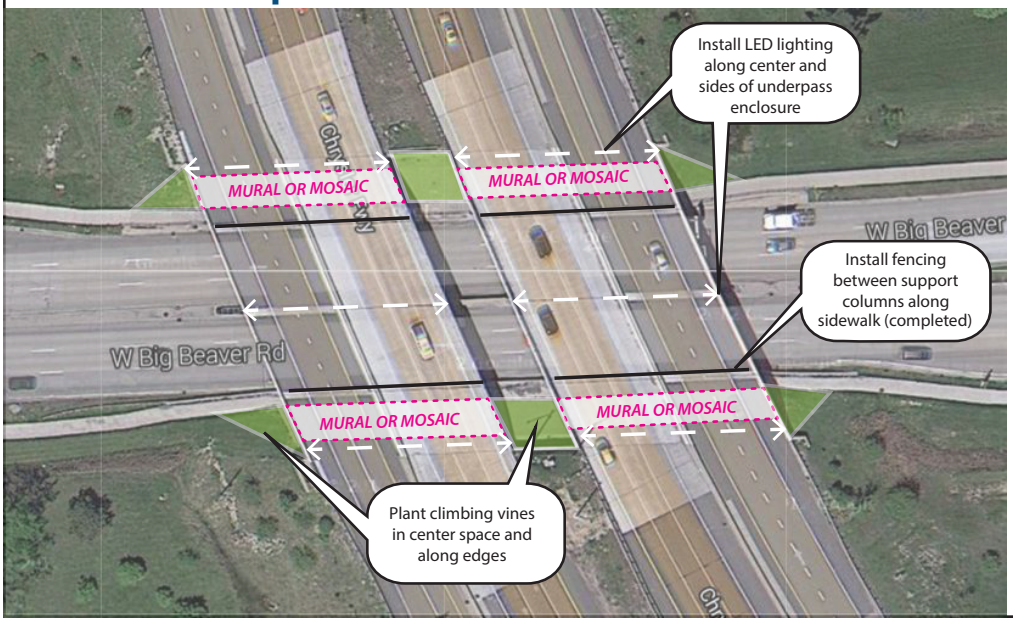
2. Interstate 75

   The I-75 highway underpass is a barrier that separates the two sides of Big Beaver for pedestrians. The many challenges it poses include diminished light, narrow sidewalks positioned much closer to vehicle right-of-way, amplified vehicle noise, in addition to generally unpleasant aesthetic conditions. Additionally, the on-ramps to I-75 are one of the most dangerous places for pedestrians because vehicles do not have to stop and are accelerating to get up to the speed of vehicles on I-75. Because reconfiguring these underpasses can be prohibitively expensive and time intensive, instead focus on cosmetic changes which can effectively alleviate some of these harsh conditions for pedestrians.

I-75 Interchange Reconfiguration



I-75 Underpass Interventions



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   Create standard 90 degree intersections

   - Relocate ramp entrances and exits so they create 90 degree intersections with Big Beaver Road.

   Soften the concrete edges of the underpass

   - Plant climbing plants at the edges of the underpass, as well as in the open space between the two-highway directions. This will soften the concrete edges in the space, and bring greenery in from the outside toward the enclosed sidewalk. Building a trellis in the center gap space and along the sides of the underpass will encourage growth in these areas. These types of plants must be maintained to avoid their creeping onto the roadways above and below. Plants will also help to dampen echoes in the space by absorbing bouncing vehicle noise.
   - Engage the community in the design or installation of a large mural or mosaic installed along the angled concrete faces underneath the overpass. If a

mosaic is selected, integrate reflective materials to bounce light further into the space. Explore three-dimensional artwork and sculpture to break up the concrete faces. This texture and visual interest will significantly improve the pedestrian experience.

Increase lighting and separation

- Install bright LED lighting along all sidewalks. In addition, direct light down the angled concrete faces illuminating the art installation at night. Differentiate -- through light color or lighting style variation-- between pedestrian space and vehicular space.
- Install segments of fencing between support columns separating the sidewalk and vehicle right of way. Position the fencing as close to the vehicular edge of the support structure as possible.

3. All Intersection Treatments:

   All intersection treatments described in the Toolbox should be considered at high priority and midblock crossings. In addition to those baseline treatments, implement the following at high priority and midblock crossings:

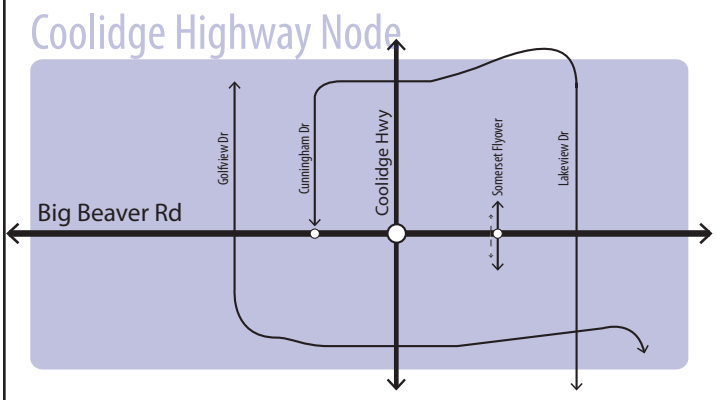
   - Install MUTCD compliant signage on the approach to and at all pedestrian crossings along the corridor.
   - Document and evaluate intersection geometry pilot projects installed with paint and bollards.
   - Install speed tables at high volume access drives along Big Beaver Road .
   - Install "Sharrow" symbols on all possible low-/mid-volume streets intersecting Big Beaver. Begin building a bicycle network to support need for multi-use trail conversion (Long term).
   - Increase the supply of highly visible bicycle parking at all establishments along Big Beaver to encourage active transportation along the corridor. This lays the groundwork for the long-term goal of expanding the sidewalks along Big Beaver Road into a multi-use trail.

4. Lighting and Landscaping improvements:
   - Install pedestrian scale sidewalk lighting along full length of Big Beaver per Toolbox guidance. Begin with higher frequency clustering around major intersections and midblock crossings. Follow with infill between nodes.
   - Establish landscaping guidelines for the Big Beaver corridor. Include a selection of native or salt-tolerant plants. Focus first on landscaping sidewalk segments approaching midblock and major crossings with trees and shrubs per Toolbox guidance. Follow with tree infill between nodes.
   - Encourage businesses along the corridor to participate in City placemaking and outreach initiatives.

5. Transit
   - Pilot a trolley system on the corridor for one summer, a few days a week. Consider partnering with another municipality to share costs.
   - Install shelters, benches, and bike racks at all bus stop locations with real-time bus arrival data.

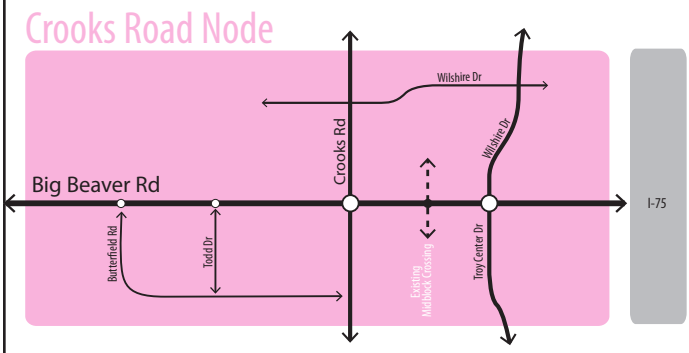
6. Legal/Ordinance:
   - Consider pursuing a "shared parking lot" development ordinance.

Long Term



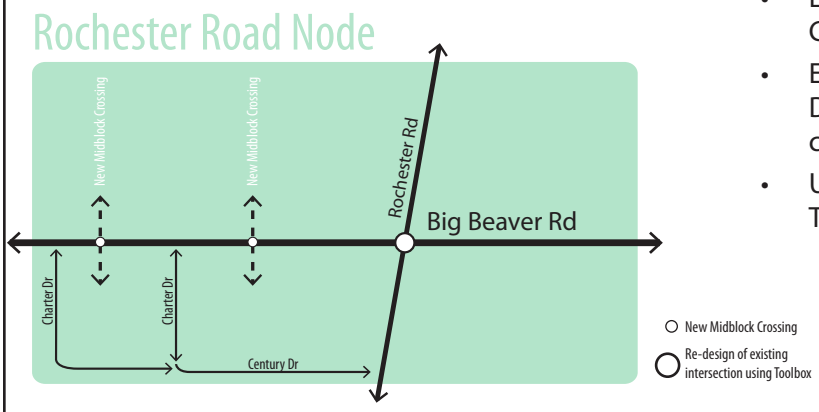
Coolidge Highway Node

- Update Coolidge Highway intersection with Toolbox treatments
- Update midblock crossing at Somerset Flyover with Toolbox treatments
- Explore midblock crossing at Cunningham Drive



Crooks Road Node

- Update Crooks Road intersection and Troy Center Drive/Wilshire Drive with Toolbox treatments
- Explore midblock crossing at Butterfield Road or Todd Drive
- Existing midblock crossing at Troy Center Drive/ Wilshire Drive connecting to the City Center building entrance



Rochester Road Node

- Explore midblock crossing location between Charter Drive(west) and Charter Drive(east)
- Explore midblock crossing near Pei Wei Asian Diner. Extend sidewalk connections to shopping center(s) across parking lots
- Update Rochester Road intersection with Toolbox treatments

Additional Recommendations

- Determine feasibility of streetcar, bike share, or other high capacity pedestrian accelerator. Conduct feasibility study for the corridor.
- Expand sidewalk along one side of Big Beaver into a multi-use trail. Connect pathway to all housing adjacent to the Big Beaver corridor.
- Build pedestrian bridges at major intersection crossing locations, both signalized and mid-block.
- At all high-priority intersections with wide medians, install shade structures. Installing high-profile features such as artistic or colorful shade/weather protection structures for pedestrians crossing the street will signal to drivers that pedestrians are likely to be present in the space.
- Infill development of retail businesses within established nodes. Incentivize shared parking lots and buildings positioned facing Big Beaver; make direct connections with Big Beaver multi-use trail.
- Continue to expand bicycle infrastructure throughout the area providing direct connections to the Big Beaver multi-use trail.

Placemaking, Outreach and Events

For the City: Initiatives

Simply building infrastructure does not ensure that people will use it. An encouragement effort, led by the City, will have a tremendous impact on increasing the amount of pedestrian activity along the corridor.

1. Create a Move Across Troy website:
   - This should be a one-stop shop with updates on new multi-modal infrastructure, safety tips, event information, and "Node-Maps" listing destinations and businesses within walking distance.
   - Post a list of "walking facts," information about the economic benefits of driving less, and the numerous health benefits of walking.
2. Create and distribute a Big Beaver corridor "Node-Maps" or "Lunch-Maps" to large business centers/towers informing workers of the walkable food, personal services and shopping destinations nearby. These maps should show the contiguous sidewalks and highlight new intersection designs. This could be part of a business promotion campaign highlighting lunch-time specials at individual establishments.
3. Install wayfinding and directional signage along the corridor. At all major intersections, post similar sign posts with nearby businesses and amenities. By creating a cohesive signage system, pedestrians navigating the corridor know they can depend on consistent information along the way.
4. Produce an eye-catching pamphlet with information on walking and biking connections along the corridor, and destinations to provide to hotel reception desks, and post at business entrances, message boards, and coffee shops.
5. Use the sidewalk as a canvas. Post distance and directional queues to nearby businesses or destinations, and "walking facts" on the pavement in temporary paint or decals. Informing pedestrians how far they are from the next safe crossing will encourage the use of the crossing instead of jaywalking. Parking lots and sidewalks also serve as great canvases for temporary community artwork. Many washable, or chalk based paints exist for such purposes.

For the City: Events

Hold 2-3 outdoor events in the community during fair-weather months to raise awareness and encourage outdoor activity. Also, consider locating events on the lawn in front of the Civic Center complex after the Civic Center Drive improvements are complete.

Events to consider might include:

- Ciclovia: A number of cities, large and small, have had great success with closing major corridors on an annual basis and using the day to encourage walking and biking. The City should work with Somerset Collection and other businesses to ensure an event like this helps businesses and doesn't harm them.
- Sidewalk or parking lot game days: Create oversized game boards on unused parking lot or sidewalk space.
- Restaurant Walk Weeks: Raise awareness for walkable dining destinations by featuring one restaurant per week of the summer; offer prizes to those who walked or biked to reach them.
- Celebrate Big Beaver's food options: Host food truck or local food markets in business center parking lots.
- Bike/Walk-to-Work Week or Pedometer Challenge: Kick off a week-long bike or walk to work competition. Participating businesses log miles traveled on foot or bike into the event website. Host a kickoff celebration, daily prizes or smaller events, and offer prizes to the company and individual who log the most miles.
- Walk-a-thon or Fun-Run: Host a charity walk-a-thon or Fun-Run utilizing sidewalks along the length of Big Beaver.
- Parking Day: Work with local businesses to install temporary mini-parks in parking spaces. Consider making successful projects permanent.

Help Start-up Running, Walking, or Stroller Clubs:

Contact local businesses and residents to start running, walking, or stroller clubs around the area. Promote and encourage the use of paths with pedestrian infrastructure improvements.

Create an Outdoor Beautification Campaign:

Encourage all businesses to improve their sidewalks and outdoor space to help give the Big Beaver corridor a more comfortable outdoor environment. Encourage the businesses to install signage drawing attention to the larger area-wide effort.

Find Opportunities for Community Driven Murals and Artwork:

Wall murals and sidewalk/pavement art adds life and personality to the built environment. There are many ways to garner community involvement in creating a public art piece. For instance, artwork options could be posted as a web-vote, artwork could be created by local schools, or an artist could be selected in a public competition.

Focus first on the Interstate 75 Underpass. Install a mural or mosaic using vegetation, reflective materials, and lots of color to increase light and comfort walking through the space.

Celebrate New Pedestrian Infrastructure:

Install large eye-catching temporary installations on the central median to celebrate the new pedestrian improvements at major intersections or midblock crossings. Median awareness should also be included, such as ribbon cuttings, press releases, and email announcements.

Pop-Up Events:

Look for opportunities to create a display of information at non-City sponsored events planned in the area. Contact schools, churches, and businesses along the corridor to find out when they have scheduled large events. Use these opportunities to spread the word about the City's new walking amenities, events, and opportunities.

Adopt-a-Sidewalk along Big Beaver Road:

Encourage businesses to 'adopt' the stretch of Big Beaver adjacent to their building or parking lot. Provide support

for additional landscaping, maintenance, connections, or sidewalk expansion along their adopted segment.

For Law Enforcement:

Bolster law enforcement to support physical changes along Big Beaver.

- Issue warnings and ticket drivers who fail to stop behind the white stop bar at intersections.
- Issue warnings and ticket drivers who fail to yield to pedestrians while turning right.
- Feature local police officers and firemen in a short video describing pedestrian and bike safety best practices, and post it on the City's information website.
- Install radar speed signs along the corridor to alert drivers to the Big Beaver corridor speed limit.

For Drivers:

Add signage for drivers clarifying vehicle movements approaching intersections with pedestrian crossings. Refer to the Manual on Uniform Traffic Control Devices (MUTCD) for clarification on sign selection and legal signage placement.

- To supplement traffic signal control, 'STOP HERE ON RED' signs (MUTCD: R10-6 or R10-6a) can be considered to keep vehicles away from crosswalks. Along the Big Beaver corridor, these signs should be paired with moving the stop bar at least 10 ft away from the pedestrian crosswalk at all intersections.
- A 'Pedestrian Crossing' (MUTCD: W11-2) warning sign may be placed overhead or may be post-mounted with a diagonal downward pointing arrow (W16-7P) plaque at the crosswalk location where 'Yield Here To ('Stop Here For') Pedestrians' signs have been installed in advance of the crosswalk.
- 'Yield Here To (Stop Here For) Pedestrians' (MUTCD: R1-5 series) signs can be used if yield (stop) lines are used in advance of a marked crosswalk that crosses an uncontrolled multi-lane approach. This sign may be used even if a stop bar is not present to indicate where a driver may stop.
- 'In-Street Pedestrian Crossing' (MUTCD: R1-6 or R1-6a) signs or the 'Overhead Pedestrian Crossing' (MUTCD: R1-9 or R1-9a) signs may be used to remind drivers of laws regarding right-of-way at an unsignalized pedestrian crosswalk.

For Families:

- Focus on youth and families to begin to change the culture of transportation on Big Beaver.
- Distribute information to all day-care, pre-school, and elementary school locations.
- Encourage community leaders and educators to visit and share facts and information from the Move Across Troy website.
- Host pop-up tables during school pick-up times and community events with information about new pedestrian infrastructure and walkability.

For Businesses:

- Encourage businesses to not only advertise their proximity to walkable destinations, but to participate in events and educational campaigns run by the City.
- Encourage all businesses to create and update their profiles on social media with key words like "walk-up""outdoor seating" or information with distances from the nearest major intersection and connections to sidewalks on Big Beaver. Include a link to the 'Node-Map' on website with walking directions.
- Encourage businesses to engage the sidewalk. Encourage the use of temporary sidewalk chalk paint or decals to direct people to destinations. Also, encourage businesses to provide outdoor shade structures, lighting, and seating to patrons.
- Distribute destination "Node-maps" or "Lunch-Maps" to large business centers/towers informing workers of the walkable destinations nearby.

APPENDIX

To engage the civic entrepreneurs of Troy, on June 21, 2007, the City conducted a Master Plan workshop which involved a selected participant list of over 150 invitees. Those invited to participate on the workshop process represented a wide cross section of Troy's population, and included residents, business owners, City officials , volunteers, and other participants.

In this workshop, the participants were engaged to employ the "Smart Growth Readiness Assessment Tool," (SGRAT) a new program designed by the Michigan Land Policy Institute at Michigan State University. The tool is designed to help communities learn how to incorporate "Smart Growth" principles into their land use management practices. "Smart Growth" is a term conceived in 1996, when the Environmental Protection Agency lead a group of organizations to form the Smart Growth Network. The Smart Growth Network is a group dedicated to creating new land development practices which "...boost the economy, protect the environment, and enhance community vitality," as stated by the Smart Growth Network.

The Tool is intended to assess how well a community is prepared to develop according to the Ten Tenets, to allow communities to measure progress over time, and to supply resources for communities interested in growing smart. The SGRAT is the most comprehensive such tool in the nation.

Though produced 8 years ago, the results of the SGRAT greatly influenced the creation of the 2008 Master Plan. Recognizing their importance, this appendix includes the detailed results of the SGRAT survey.

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What can the City of Troy do to continue to attract world-class businesses?

- *Steamline the start up process. Be proactive in soliciting business – domestic and worldwide. Help business to find locations and reasons to locate in Troy (incentives). Accelerate development of the transit center. Improve road conditions and traffic movement.*

What steps would you take to make Troy a more vibrant and engaging place to live and work?

- *Provide mass transit options to access entertainment in metro Detroit.*

What is the most important improvement that Troy can make to ensure that all residents have access to safe and efficient transportation?

- *Lobby and work towards a high density regional transit system with a City component connected to the system.*
- *Create regional public transportation that is efficient, safe and inexpensive.*
- *Make it affordable and convenient not just within the City.*
- *Keep the roads nice – for all transportation.*
- *Promote multi model transportation options in City.*
- *Transit – regional transportation initiative.*

Should Troy play a role in the development of improved regional transportation?

- *Yes, we should work on developing the proposed Transit Center and expand from there.*
- *Yes. We need a method for our residents to get to their place of employment without using single occupant vehicles. We need a method of transportation for youth and seniors. Lastly, we need a method to bring employees to the businesses located in Troy. Continue to develop walkability.*
- *Mass transit will be critical to future vitality of all communities. The leader regionally in mass transit will create financial stability for all. Troy should be the leader in Oakland County.*

Should the City be a model for responsible care of the natural environment?

- *Yes. The City needs to promote green growth in new developments and within its own buildings. City owned property does not need to be all developed into parks, it can be just left in its natural state. Encourage and educate about mass transit and walkability.*
- *Yes, we only have a natural environment once. The trees, parks and water resources must be protected. The City of Troy is the steward of the resources in the community.*

Do you feel it is important for the City of Troy to promote the advancement of or mandate the practice of sustainable development, such as, but not limited to, the construction of certified "green buildings" and Low Impact Development techniques for stormwater management?

- *I believe promotion is desired for construction of certified "green buildings". Low impact Development techniques for stormwater management are a practice that should be mandated. Economics will determine the practical nature of these areas of development.*
- *Absolutely – we are doing that now with planning.*

What does the Smart Growth Readiness Assessment Tell Us?

Throughout this Master Plan, each Chapter will contain a brief summary of those SGRAT results which most directly inform the topics covered by that Chapter. The SGRAT responses will also play a critical role in the development of implementation policies.

Tenets 3 and 5 contained a series of questions addressing cooperation and collaboration, public outreach, and the practices and procedures which regulate land development in the City. The following summaries provide a short description of the City's score in these areas .

Tenet 3: Encourage community and stakeholder collaboration in development decisions.

Troy was awarded approximately 40 percent of the available points for Tenet 3. While the participants perceived the City of Troy to be very good about collaboration in formal settings, such as the development of new Zoning Ordinance amendments or Master Plan revisions, the perception of collaboration outside of those programs was poor. In other words, respondents felt that the City has room to improve when it comes to general encouragement of an open, collaborative environment with special interest groups, adjoining communities, and the general public, especially as it relates to smart growth principles.

Another area where the City could improve its score in this area is to develop stronger community outreach programs with regard to planning and growth issues. While collaboration with schools scored well, education and collaboration with the general public, especially when initiated by the City itself, was not perceived well.

Tenet 5: Make development decisions predictable, fair, and cost-effective.

The City scored very well with regard to Tenet 5. The City received nearly 75 percent of the available points in this area, thanks to a strong perception that the City diligently maintains its Zoning Ordinance, Master Plan, and other community planning documents, its consistency between its zoning and planning, and perception of fairness to the development community. Respondents felt that developers are given a fair chance to innovate in Troy, and that most new development makes a strong contribution to the City as a whole.

The City could score even higher in this area were it to permit additional density for developers who propose more smart-growth oriented developments. Also, participants felt that more attention to long-range planning could be paid, although there was a positive recognition that current practices for ongoing development were strong and fair.

The City received extra points for supporting participation in elected and appointed official training programs, such as the Michigan State University Extension Citizen Planner Program, and continuing education in the area of planning.

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What kind of image do you want people to think of when they are asked about Troy?

- *Excellent schools, nice residential, strong City government and services, shopping.*
- *A well maintained City with excellent schools, neighborhoods, corporations, and good services.*
- *Home to Walsh College, branches for the University of Phoenix, Central Michigan University, Spring Arbor University, ITT Technical Institute and Michigan State University Management Center.*

What can the City of Troy do to continue to attract world-class businesses?

- *In cooperation with Troy School district (plus other educational facilities) continue to promote education, diversity of ethnic groups which constitute the vibrant Troy community.*
- *Offer reasonable incentives. Maintain quality infrastructure. Continue to offer quality City services & A ++ rated schools. Make it attractive for the business community to also want to live here in Troy.*

What steps would you take to make Troy a more vibrant and engaging place to live and work?

- *A need exists for the young teenagers to meet, and hang out in a secure environment. The young adults (18-22 years old) also need a place to meet and congregate. These activities need to be available to these groups year around.*
- *Add paths and trail system in City; increase property maintenance standards; increase art in public places; create synergy.*

What is the most important improvement that Troy can make to ensure that all residents have access to safe and efficient transportation?

- *Create a comprehensive pedestrian pathway system (walking, biking, rollerblading, etc.) that system would help to reduce short trip car drives that add to roadway congestion.*

How can the City better accommodate non-motorized transportation?

- *Emphasize bike paths. Develop specific requirements for safe walk & bike access.*
- *Increase the numbers of walkable/bikeable areas….more trails and information letting people know where the trails and sidewalks are.*
- *Plan the City in small village components that can service the daily needs of nearby residents by sufficient shopping areas central to each village.*

What steps would you take to make Troy a more vibrant and engaging place to live and work?

- *Build an arts center or better venues for music, stand-up comedy, performing arts, night life, etc…, utilize more mixed use development, and connect these elements with pedestrian pathways.*
- *Develop the Civic Center that becomes a focal point for residents to interact and learn.*

Many land use issues result between single-family residential areas adjacent properties proposed for higher density. How can these conflicts be reduced?

- *Include some "entertainment" areas or common areas for use of both groups.*

What does the Smart Growth Readiness Assessment Tell Us?

The SGRAT did not include any questions directly related to the care and management of educational facilities, nor did it specifically address cultural facilities. As a tool primarily directed towards the examination of the Smart Growth Tenets, which are mostly related to physical development and infrastructure, the areas where the SGRAT may most readily apply for this Chapter are related to access to such facilities.

The City scored 33 percent of the available SGRAT points for Tenet 8, "Provide a variety of transportation options." The assessment demonstrated that the City can improve its transportation score in a variety of areas, especially by providing stronger access to public transit, rail service, or a multi-modal method of access to a regional airport. Troy could also gain points by encouraging better infrastructure for cycling as a viable option, and the provision of park-and-ride areas for bus service. Further, the City does not make extensive use of traffic calming devices, which can restrict automobile traffic, but encourage safer non-motorized transportation in certain circumstances.

These results were drawn in part from the City's response to these questions:

Does your community provide infrastructure to promote bicycling as a viable, healthy transportation option by any of the following? (Check all that apply, if any).

A. Providing well-maintained bike lanes, five feet in width along or between local transportation corridors.
B. Providing non-motorized paths that connect recreation facilities and other community destinations.
C. Implementing access management strategies that improve safety and efficiency of both bicycle and vehicular travel.
D. Providing appropriate signage and bike racks in common community destinations such as schools, public buildings, work places and shopping centers.

Best Answer: A, B, C, D
Troy's Response: None

Does your community encourage bicycling through any of the following?

A. Inventorying existing conditions and developing a strategy or plan to improve biking conditions.
B. Programs that promote bicycling to work, school or for recreational purposes.
C. Accommodating advanced or experienced riders, basic or less confident riders and children.

Best Answer: A, B, C
Troy's Response: A

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What kind of image do you want people to think of when they are asked about Troy?

- *A commerce metropolis, clean and modern.*
- *A strong business presence; thriving neighborhoods, a balanced mix of residential and business tax base; the cutting edge of environmental sensitivity and walkability.*
- *A center of knowledge; an economy based on information technology.*

What can the City of Troy do to continue to attract world-class businesses?

- *Offer reasonable incentives. Maintain quality infrastructure. Continue to offer quality City services & A ++ rated schools. Make it attractive for the business community to also want to live here in Troy.*
- *Promote Troy as a high-tech corridor and streamline the process of establishing and maintaining a Troy business. Make guidelines for developers very clear, concise, fair and predicable.*
- *Start by realizing that Troy needs the business community. Not long ago, businesses paid more than 50 percent of the taxes, making Troy a very desirable place to live; it has shifted the other way. Work with the Chamber of Commerce and diversify the business base.*

What is the role of the City of Troy in the region? What role should the region play in the future of Troy?

- *Cooperative neighbor that shares ideas and challenges in open communication with neighboring communities, taking on a leadership role when it is in the best interest for all.*
- *Troy should provide an example of how a city can balance between successful business and a qualified residential base. Recent economic trouble for the state and region has tarnished that image. Troy can provide an example of leadership in how a community can excel as it matures.*
- *A leader and model of an environmentally friendly community.*
- *Troy is perceived as a strong entity and therefore we can be a leader in moving the region to think, govern, buy, and plan regional. The image of the entire region will affect the ability of Troy to attract and retain jobs and the creative class. We need to work together to solve issues of blight, economy, education and mass transit.*
- *Troy should be a role model city of how a community can balance commercial and residential needs so each complements each other. The City should lead in being flexible to accommodate future needs of the residents.*

What is the future of traditional industrial land uses, such as manufacturing or fabrication, in the City of Troy?

- *We need to be creative as these traditional uses become obsolete. Our PUDs are a positive start for the future of these areas.*
- *Manufacturing is not coming back. Those buildings need to be used for other things. Allow residential use.*
- *Allow some to be developed as described in the Maple Road study. Especially, the work/home development for entrepreneurs. It is important that these work/home developments are visually pleasing.*
- *Information about how industrial parcels could be converted to alternative uses should be made available. Selectively purchase vacant industrial properties that can be used as parking lots to other nearby buildings and allow those buildings to have alternative commercial uses.*

What does the Smart Growth Readiness Assessment Tell Us?

Many of the questions asked in the SGRAT have some bearing on the local economy, either directly or indirectly. Those questions which asked about the current trends in the City with regard to redevelopment of existing properties and the ability to develop mixed-use properties relate to the City's strategy for transitioning to the 21st century marketplace. Questions which relate to live-work units and brownfield redevelopment show how the City can improve its ability to accept new development types and encourage manufacturing era properties to redevelop as knowledge-economy facilities.

Are developers actively redeveloping vacant, under-utilized, and/or brownfield properties?

A. Yes
B. No

Best Answer: A
Troy's Response: A

Does your Zoning Ordinance and Master Plan provide strategies and incentives for redeveloping existing urban areas?

A. Yes
B. No

Best Answer: A
Troy's Response: B

In which of the following zoning districts is mixed-use permitted? (Check all that apply, if any).

A. Central business district
B. Neighborhood commercial districts
C. Special mixed-use overlay district
D. Planned Unit Development Districts
E. Other

Best Answer: A, B, C, D, E
Troy's Response: D

Has your local government adopted zoning codes that give as much opportunity for a mixed-use development as for a typical single-use project (e.g., a medium density housing subdivision, strip mall or office park)?

A. Yes
B. No

Best Answer: A
Troy's Response: B

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What can the City of Troy do to continue to attract world-class businesses?

- *Strategic parking plans to make businesses easy to find and convenient and safe for customers and employees to use.*
- *Improve our roads and pedestrian pathways, maintain high standards in architecture, rigorously enforce zoning violations, retain residential character of our neighborhoods in spite of the majority of City Council pushing to commercialize them with large commercial vehicles and large group child care homes, start the customer solutions department, and more.*
- *Provide good roads that are well maintained and well operated.*

What steps would you take to make Troy a more vibrant and engaging place to live and work?

- *Mass transit options to access entertainment in metro Detroit.*
- *Add paths and trail system in City; increase property maintenance standards; increase art in public places; create synergy.*

Should Troy play a role in the development of improved regional transportation?

- *Yes, we should work on developing the proposed Transit Center and expand from there.*
- *Absolutely, we need a creative connector (trolley to Big Beaver Corridor from Maple/Eton Station. More Bike, walking paths from subs to parks. Destination emphasis planning.*
- *Yes, Troy should play an important role in improving regional transportation. Mass regional transportation will enable people to move from "here to work" economically and efficiently. We can't build wide enough roads to move traffic; we need to economically and efficiently move people during the course of the day.*
- *It would help make the City more family friendly. We would be sharing transportation options. It would also help attract world – class business. It is a good selling point.*
- *Yes. If we are to be the hub of business and fun activities (family, night life, etc) we must make it easy for people in nearby communities to visit Troy without getting into a traffic jam.*
- *Yes. We need a method for our residents to get to their place of employment without using single occupant vehicles. We need a method of transportation for youth and seniors. Lastly, we need a method to bring employees to the businesses located in Troy. Continue to develop walkability.*

(continued)

What is the most important improvement that Troy can make to ensure that all residents have access to safe and efficient transportation?

- *Affordable regional mass public transportation.*
- *Create a comprehensive pedestrian pathway system (walking, biking, rollerblading, etc.) that system would help to reduce short trip car drives that add to roadway congestion.*
- *Provide a means within the City to get the residents to the collection points for the regions/ transportation system.*
- *Create regional public transportation that is efficient, safe and inexpensive.*
- *Make it affordable and convenient not just within the City.*
- *Keep the roads nice for all modes of transportation.*
- *Promote the transit center and the transit services to be housed in it. Then make sure adequate walking and bike paths are connected throughout the whole City.*

How can the City better accommodate non-motorized transportation?

- *Emphasize bike paths. Include in all developments specific requirements for safe walk & bike access.*
- *Follow ADA guidelines. Create refugee islands on highways, increase the "walk" time on traffic lights, make bike paths to get bikers off pedestrian sidewalks, and provide adequate lighting.*
- *Better cross town connected bike routes that also have destinations, i.e. mall or civic center. Have a dedicated 4 foot lane for bicycles.*
- *Complete the trailways initiative with a completed infrastructure as recommended by Vision 2020.*
- *The development of pathways and trails is a start. We need an alternate mode of transportation that is cost affective and reliable.*
- *Promote mixed-use development.*
- *Plan the City in small village components that can service the daily needs of nearby residents by sufficient shopping areas central to each village.*

What does the Smart Growth Readiness Assessment Tell Us?

The SGRAT included a section dedicated to the provision of transportation options. Tenet 8 of the Smart Growth Tenets, "Provide a variety of transportation options" was covered by 15 questions ranging from topics like mass transit to air travel. The assessment granted 33 percent of the available points to Troy for Tenet 8. The City received many points for its strong capital improvements planning, access management standards, well-developed subdivision regulations, provision of transportation options for the mobility impaired (either by income restrictions or physical limitations), and the mitigation of the negative impacts of parking on surrounding areas.

The assessment demonstrated that the City can improve its transportation score in a variety of areas, especially by providing stronger access to public transit, rail service, or a multi-modal method of access to a regional airport. Troy could also gain points by encouraging better infrastructure for cycling as a viable option, and the provision of park-and-ride areas for bus service. Further, the City does not make extensive use of traffic calming devices, which can restrict automobile traffic, but encourage safer non-motorized transportation in certain circumstances. Specific questions from this section included:

Does your community have a Transportation Plan (or a transportation element within your Master Plan) that does any of the following? (Check all that apply, if any).

A. Establishes consistent policies that reflect and support the Master Plan, Zoning Ordinance, capital improvement program, access management plan and new development on a regional basis?
B. Coordinates and supports multi-jurisdictional land use and transportation planning along regional transportation corridors?
C. Provides goals, objectives and strategies to enhance an interconnected pedestrian network which serves the entire community?
D. Provides goals, objectives and strategies to implement infrastructure and initiatives to promote bicycling and other non-motorized transportation options?
E. Provides goals, objectives and strategies to implement public transit systems that are appropriate to the size, scale and need of your community?
F. Provides goals, policies and objectives that prioritize improvements and maintenance of existing roads rather than the construction of new roads?
G. Identifies where and when public funding will be necessary to implement context sensitive solutions to transportation issues?
Best Answer: A, B, C, D, E, F, G
Troy's Response: A, B, D, E

(continued)

Does your transportation plan support and your Zoning Ordinance allow different street widths, depending on the functional classification of the roadway, character of the area, the projected volume of traffic, and/or the desired speed of traffic?

A. Yes
B. No
Best Answer: A
Troy's Response: A

Does your community provide infrastructure to promote bicycling as a viable, healthy transportation option by any of the following? (Check all that apply, if any).

A. Providing well-maintained bike lanes, five feet in width along or between local transportation corridors.
B. Providing non-motorized paths that connect recreation facilities and other community destinations.
C. Implementing access management strategies that improve safety and efficiency of both bicycle and vehicular travel.
D. Providing appropriate signage and bike racks in common community destinations such as schools, public buildings, work places and shopping centers.
Best Answer: A, B, C, D
Troy's Response: None

Does your community have transportation policies or programs that increase mobility options for residents who face financial or physical impediments to driving an automobile?

A. Yes
B. No
Best Answer: A
Troy's Response: A

Does your region provide an airport that is supported by efficient multi-modal access to your community, regional distribution centers, public transit, highways and emergency response?

A. Yes
B. No
Best Answer: A
Troy's Response: B

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What kind of image do you want people to think of when they are asked about Troy? (i.e., an office building? A shopping center? A fine restaurant or an evening at a show? A residential neighborhood? Something else?)?

- *Efficient, low cost government (low cost – not cheap). I want Troy to continue to be know as the one place you can drive after (or during) a snow storm; a good place to shop, work and live, a place with helpful people in City hall.*
- *A well maintained City with excellent schools, neighborhoods, corporate residents and good city services.*

Do you feel it is important for the City of Troy to promote the advancement of or mandate the practice of sustainable development, such as, but not limited to, the construction of certified "green buildings" and Low Impact Development techniques for stormwater management?

- *I believe promotion is desired for construction of certified "green buildings". Low impact Development techniques for stormwater management are a practice that should be mandated. Economics will determine the practical nature of these areas of development.*
- *The City should promote such efforts thru various incentives and demonstration but should not mandate.*
- *Yes – storm water will only become a bigger problem as the years progress. We need to promote sustainable development at the very least and perhaps it should be required or mandated. However, we should be prepared to address the arguments that these activities are cost prohibitive.*

What can the City of Troy do to continue to attract world-class businesses?

- *Clean and well-maintained infrastructure.*
- *Offer reasonable incentives. Maintain quality infrastructure. Continue to offer quality City services & A ++ rated schools. Make it attractive for the business community to also want to live here in Troy.*
- *Provide good services, good infrastructure, low tax rate, good debt ratings, and a solid residential community.*

What does the Smart Growth Readiness Assessment Tell Us?

The provision of excellent municipal services is clearly a critical element to the future growth and development (or redevelopment) of the City. However, the Ten Tenets of Smart Growth do not specifically speak to infrastructure in and of itself. Consequently, none of the Sections of the SGRAT are directed exclusively towards infrastructure. There were individual questions, though, designed to bring attention to the issue of utilities and City services. The following questions, taken from Section 9, "Strengthen and direct development towards existing communities," address infrastructure issues:

Does your community know the capacity of its infrastructure and natural environment to accept new development, by location, type and amount of new development?

A. Yes
B. No

Best Answer: A
Troy's Response: A

If your community provides public sewer and/or water (or is included in a public sewer/water district), does the public sewer and water service area include:

A. Only developed areas with streets or areas immediately adjacent to the developed areas planned for urban growth?
B. Undeveloped areas outside the urban service area not immediately adjacent to the developed area and not planned for urban growth?

Best Answer: A
Troy's Response: A

Has your community adopted a "fix-it-first" policy as part of the Capital Improvement Program process that sets priorities for upgrading existing facilities and infrastructure before new facilities or infrastructure are built?

A. Yes
B. No
C. No, the community is all built out with no opportunity for new facilities in new locations

Best Answer: A, C
Troy's Response: A

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What is the role of the City of Troy in the region? What role should the region play in the future of Troy? Are there any other additional thoughts or input with regard to community character or image not reflected in the questions of this Section?

- *A leader and model of an environmentally friendly community.*
- *Preserve as much open and park land as possible.*

Should the City be a model for responsible care of the natural environment?

- *Oh yes! Lead the way! Look at Chicago's efforts! Bring others on board, garden groups, retailers, community organizations.*
- *Yes, we only have a natural environment once. The trees, parks and water resources must be protected. The City of Troy is the steward of the resources in the community.*
- *Yes, but they aren't. They are not "totally" neglected, but many opportunities have arisen over the years where they looked the other way or they have not acted to become more responsible for the natural environment.*
- *Yes. The City needs to promote green growth in new developments and within its own buildings. City owned property does not need to be all developed into parks, it can be just left in its natural state. Encourage and educate about mass transit and walkability.*
- *Yes, we are doing good things but we can always do better. Don't develop every inch because someone can make a profit, do things for the good of the community.*
- *It would be very difficult for a City the size of Troy to be such a model in all its various parts. Responsible stewardship and promotion of sustainable building can be done. Troy needs to keep growing its tax base to maintain its level of services, thus redevelopment is needed and that cannot always be done in an environmentally friendly way.*

Do you feel it is important for the City of Troy to promote the advancement of or mandate the practice of sustainable development, such as, but not limited to, the construction of certified "green buildings" and Low Impact Development techniques for stormwater management?

- *I believe promotion is desired for construction of certified "green buildings." Low Impact Development techniques for stormwater management are a practice that should be mandated. Economics will determine the practical nature of these areas of development.*
- *If it helps our environment and future generations – yes.*
- *Sure, if we can afford it. Who pays?*
- *The City should promote such efforts thru various incentives and demonstration but should not mandate.*

What do you consider to be natural features worth preserving in the City of Troy?

- *Our lakes within neighborhoods, the rivers, park system, Nature Center/Troy Farm, trees and landscaping within our rights-of-way.*
- *The rookery area, wetlands preservation, the parks, and lakes in the City. The streams need to be safe guarded.*
- *The few remaining wetland and lake prairie areas left (situated in the northern part of the City in the Square Lake Road area) and head waters of the River Rouge.*

What does the Smart Growth Readiness Assessment Tell Us?

The implementation of Smart Growth principles over time can have a positive and meaningful impact on the preservation of natural features. Compact development, leading to fewer, shorter vehicle trips and a reduction in impervious surface complemented by other benefits of Smart Growth techniques help preserve areas that could have otherwise been threatened by conventional development. Tenet 7, in fact, is directly related to the preservation of natural features, open space, and farmland. A selection of SGRAT questions which relate to natural features preservation directly or indirectly are included here.

Does your community Master Plan establish goals, policies and strategies to preserve forest lands (e.g. exclusive forestry district, purchase of development rights program, quarter-quarter zoning, TDR, etc.).

A. Yes
B. No

Best Answer: A
Troy's Response: B

Does your community have provisions within the Site Plan Review standards of the Zoning Ordinance to identify and protect renewable resource lands such as farmland and forest land?

A. Yes
B. No

Best Answer: A
Troy's Response: B

Are developers implementing projects which contain public open spaces (such as parks or natural areas) that connect to adjacent open spaces and/or preserve sensitive natural features?

A. Yes
B. No

Best Answer: A
Troy's Response: B

In public and private meetings, do community leaders and elected officials:

A. Promote cluster housing development as an approach to preserve open space in the community?
B. Oppose the development of cluster housing development?

Best Answer: A
Troy's Response: A

Survey Responses

A primary source from which many of the ideas in this Plan have been derived is the supplemental survey given to SGRAT Workshop participants, City department heads, and the Planning Commission. The following are a selection of questions and responses which helped inform this Chapter.

What steps would you take to make Troy a more vibrant and engaging place to live and work?

- *We need to start redeveloping our community to fit into the requirements of a global economy. The ways in which we lived in 1957 is not how we live today or will live in 2020. Areas where we can redevelop should be mixed use of housing, retail and business. They should incorporate the latest technology and be green.*

What new and innovative approaches should be encouraged in the City of Troy to provide a better housing stock for the aging population?

- *Facilitate loans for home repair and improvement to keep aging populations in their older homes and to prevent blight. Keep housing affordable. Canvas the aging population to determine what they are looking for and what they would buy*
- *Allow some more assisted – living facilities/nursing homes. More single story condos.*
- *Mixed use developments with independent and assisted living components, with barrier free walkability.*
- *High end options are needed. Currently there is no where in Troy to appeal to seniors selling their $400,00+ houses. Multi family units on city golf course? Seniors want activities.*
- *Smaller single family homes on one floor.*
- *Variety of housing stock. Site condo that look like ranch style homes, condos, assisted living, nursing care. Location needs to provide proximity to shopping, health care, transportation, necessary services and recreation.*
- *Keep prices reasonable! Many are so expensive only the really well to do can afford to stay in Troy. Ask all the seniors what they want, you may be surprised.*
- *The City should encourage any type of residential use that will attract economically desirable residents. The current interest in mixed uses should be encouraged as well as all new future types that will attract solid citizens*

Is the available housing stock in Troy sufficient to serve the City's needs?

- *No, fewer children and many older residents wanting to stay without upkeep require creative building ideas and economy and green spaces.*
- *We don't have residential units that also serve as business. Troy's ordinances work against having both a residence and a business in the same building. Changes should be made to allow for that. Some residential areas could serve in that function and zoning (a new zoning class) should be made.*
- *Number of units is sufficient, but more condos should be available for those not choosing to cut grass and shovel snow.*

Do you have any additional thoughts or input with regard to housing?

- *Starter homes. Young families with lower income don't have much opportunity to buy in Troy.*
- *We need a development of mixed use housing for seniors that included individual small residents, assisted living, senior apartments, nursing home so that a person can remain at one development. Incorporate recreation, transportation and other amenities for seniors.*
- *We need more affordable housing for younger population. Not everyone can afford million dollar homes. Get them young and keep them to move up.*

What does the Smart Growth Readiness Assessment Tell Us?

The SGRAT includes a section dedicated to Tenet 1: "Create a range of housing opportunities and choices." The results of this portion of the analysis in Troy revealed that while Troy has made some steps towards smart growth as it relates to affordability of a wide variety of housing types, it has room for improvement. For instance, while the City has funded training for City staff for housing affordability programs, it has not actively promoted housing affordability. Further, while there are a variety of housing types in the City that may allow for an array of people to become homeowners, the City has not proactively pursued funding assistance or renovation assistance for the lowest ends of the economic spectrum. Specific questions contributing to these results include:

Are homes or apartments readily available in your community that people of all income levels can buy or rent (from service industry workers, to teachers, police and small business owners, to the elderly, young marrieds, professionals and executives)?

A. Yes
B. No

Best Answer: A
Troy's Response: A

Do community leaders and elected officials actively promote a wide range of housing types to meet the full spectrum of household incomes and preferences?

A. Yes
B. No

Best Answer: A
Troy's Response: B

Do many of the people who work in your community live in another community because they cannot afford housing in your community?

A. Yes, most workers, especially those earning low/moderate incomes, live outside the community.
B. No, most of the people who work in our community, including low to moderate income workers, live in our community.

Best Answer: B
Troy's Response: A

Does the Zoning Ordinance provide for areas zoned multi-family residential or for mobile home parks that are close to job centers and transit or other access opportunities? In order to answer yes, areas must be zoned and not fully developed in order to count.

A. Yes
B. No

Best Answer: A
Troy's Response: B

City of Southfield

26000 Evergreen Rd. • P.O. Box 2055 • Southfield, MI 48037-2055 • www.cityofsouthfield.com

March 4, 2016

City of Royal Oak City Clerk
Attn: Ms. Melanie Halas, City Clerk
211 S. Williams St
Royal Oak, MI 48067-2619

Re: Draft *Sustainable Southfield* Master Plan, City of Southfield, MI

Dear Ms. Halas:

Pursuant to the requirements of the Michigan Planning Enabling Act (Act 33 of 2008, as amended), please find a copy of the Draft *Sustainable Southfield* Master Plan Update enclosed via CD. Pursuant to the requirements of the Act, we are requesting your review and comment in advance of the City of Southfield's Planning Commission Public Hearing (tentatively scheduled for 6:30 pm, Wednesday, May 25, 2016).

The Act provides contiguous communities and other required entities with 63 days to submit comments on the proposed Plan. Thus, your comments must be submitted no later than ***5:00 pm, Monday, May 9, 2016***. If you wish to receive a copy of this plan via DropBox or hard copy, please request via email at tcroad@cityofsouthfield.com. In addition, you may find a .PDF version on our website at:

https://www.cityofsouthfield.com/CityDepartments/LZ/Planning/Services/ComprehensiveMasterPlan/tabid/843/Default.aspx (the draft document and separate appendices appear at the top of the page)

Please submit comments to:

City of Southfield Planning Commission
Attn: Terry Croad, AICP, ASLA, Director of Planning
26000 Evergreen Road
Southfield, MI 48076

or tcroad@cityofsouthfield.com

Thank you in advance for your cooperation and timely response in reviewing our draft Master Plan update. Comments offered during this review process will be taken in account while we

Mayor Kenson J. Siver | Council President Myron A. Frasier | City Clerk Nancy L. M. Banks | City Treasurer Irv M. Lowenberg

City Council

Daniel Brightwell | Lloyd Crews | Donald F. Fracassi | Michael Ari Mandelbaum | Tawnya Morris | Joan Seymour

work towards refining the plan. Please feel free to contact me at (248) 796-4150 or the aforementioned email address if you have any questions. We look forward to your input as we prepare this update to Southfield's Master Plan.

Sincerely,

Terry Croad

Terry Croad, AICP, ASLA
Director of Planning

TC/sm

Enclosure

OAKLAND COUNTY MICHIGAN

Economic Development & Community Affairs

March 18, 2016

Ms. Melanie Halas, Clerk
City of Royal Oak
211 Williams
Royal Oak MI 48068

Dear Ms. Halas:

According to the City of Southfield, they sent you a copy of the draft **Sustainable Southfield Master Plan (County Code Master Plan No. 16-03)** for review and comment. Under the Michigan Planning Enabling Act, neighboring communities, utilities, and Oakland County have 63 days to submit comments on draft plans.

The Oakland County Coordinating Zoning Committee (CZC) will consider the draft plan at a meeting on Tuesday, **April 26, 2016** scheduled to begin at **9:00 a.m.** It will be held in the Board of Commissioners' Auditorium, Committee Room A, 1200 N. Telegraph Road, Pontiac. This meeting falls within the 63-day comment period.

Under state law, our review shall include a statement indicating whether the proposed master plan is "inconsistent with the plan of any city, village, or township" that received notice of the draft plan. Therefore, you are encouraged to comment if you have any concerns. If you have comments on the plan, send them directly to the City of Southfield and we request that you send a copy to Oakland County as well. Please direct the County's copy to my attention. I would appreciate receiving your comments by **April 14, 2016,** if possible.

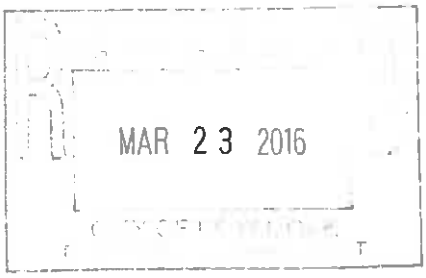
You are welcome to attend the Coordinating Zoning Committee meeting. If you have questions, please feel free to call me at (248) 858-7935 or email me at kapelanskik@oakgov.com.

Sincerely,

Kristen Kapelanski

Kristen Kapelanski, AICP
Senior Planner

Cc: Clyde Esbri, Royal Oak Plng Comm Chair
Timothy Thwing, Royal Oak Plng Dir
O.C. Commissioner Gary McGillivray
O.C. Commissioner Wade Fleming
O.C. Commissioner David Woodward

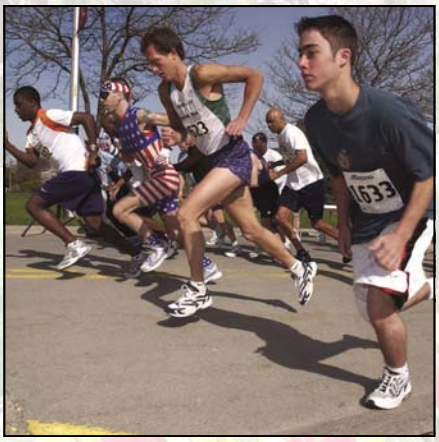


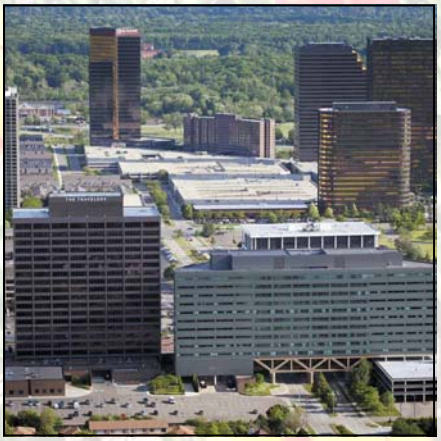
L. Brooks Patterson, Oakland County Executive
2100 Pontiac Lake Rd., Bldg. 41W | Waterford, MI 48328-0414
(248) 858-0721 | www.oakgov.com

Sustainable Southfield

A Comprehensive Plan for Now and the Future

SOCIAL ⊗ ENVIRONMENTAL ⊗ ECONOMIC





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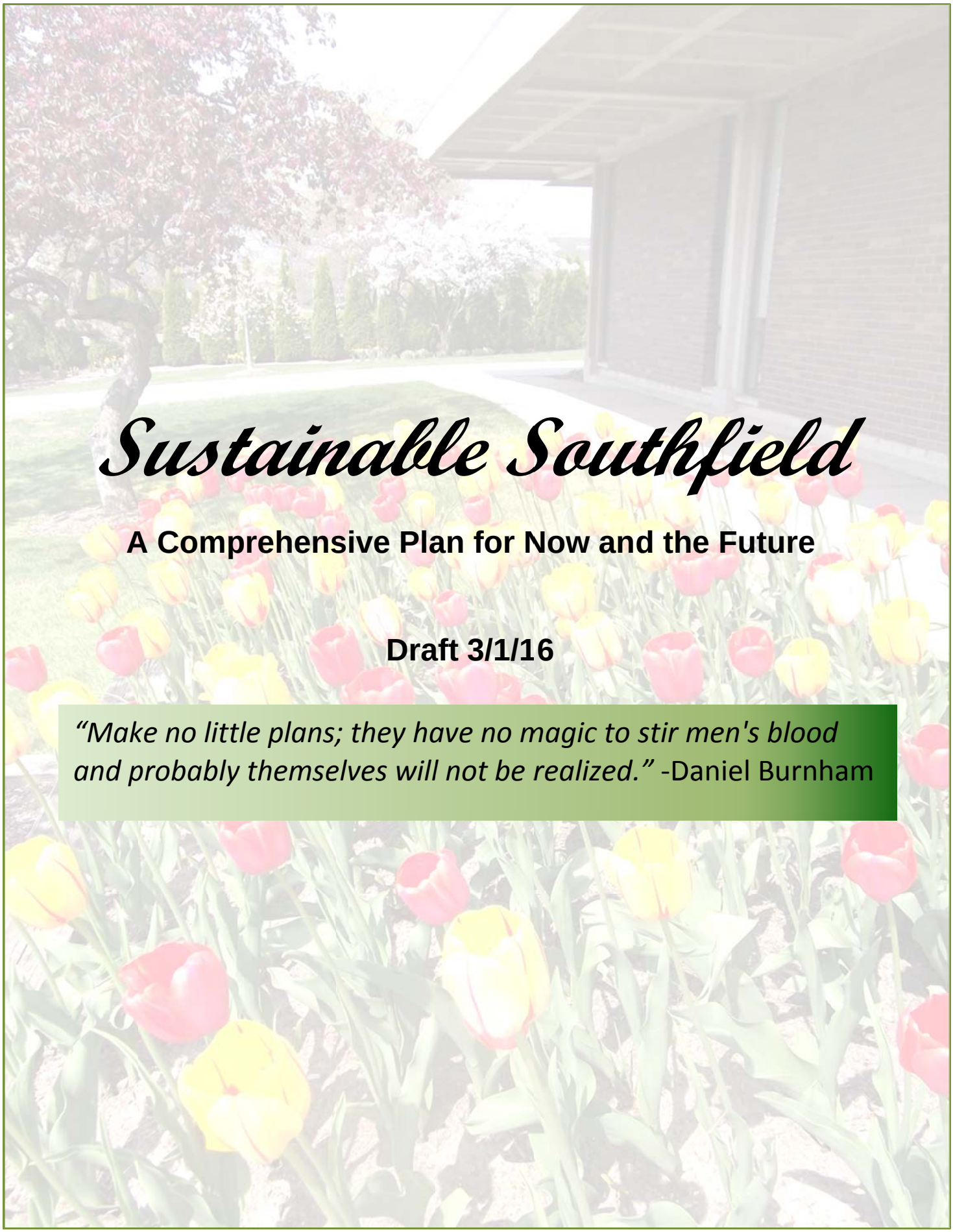
the center of it all™

Draft 3/1/16



Sustainable Southfield

A Comprehensive Plan for Now and the Future

Draft 3/1/16

"Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized." -Daniel Burnham

ACKNOWLEDGMENTS

The Honorable Kenson J. Siver, Mayor
Myron A. Frasier, Council President
Lloyd C. Crews, Council President Pro Tem
Daniel Brightwell, Councilman
Donald F. Fracassi, Councilman
Michael A. Mandelbaum, Councilman
Tawnya Morris, Councilwoman
Joan Seymour, Councilwoman
Nancy L. M. Banks, City Clerk
Irv M. Lowenberg, City Treasurer

City Administration

Frederick E. Zorn, CEcD, City Administrator
John Michrina, Deputy City Administrator
Sue Ward-Witkowski, City Attorney

Planning Commission

Linnie M. Taylor, Chairwoman
Donald Culpepper, Vice Chairman
Robert L. Willis, Secretary
Jeremy Griffis, Planning Commissioner
Steve Huntington, Planning Commissioner
Tim Nichols, Planning Commissioner
Carol Peoples-Foster, Planning Commissioner

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Rochelle Freeman, Business Development
Steve Gogola, Engineering (GIS)
Chief Eric Hawkins, Police Department
Bill Johns, Emergency Management
Michael Manion, Community Relations
Sally Price, Engineering (GIS)
Mike Racklyeft, Assessing
Leigh Schultz, Engineering
Brandy Siedlaczek, Stormwater Management
Larry Sirls, Public Works
LaVern Walker, Technology Services
Chief Barry White, Fire Department

The Center of It All™

The City of Southfield is comprised of over 26 square miles of abundant natural beauty, well-maintained homes and neighborhoods and majestic skyscrapers. Southfield offers a complete living community, featuring a nationally recognized public school system, numerous private and parochial schools and 10 colleges and universities. Conveniently located just minutes from almost anywhere in metro Detroit, Southfield is not only The Center of It All™ geographically, but also the business center of southeast Michigan as well. With a daytime population nearing 175,000, and over 27 million square feet of office space, Southfield is truly Michigan's premier business address. Approximately 10,000 businesses call Southfield home, including over 100 "Fortune 500" companies. Residents, businesses and visitors alike come to Southfield for its central location, great recreational opportunities and easy access to all of southeast Michigan.

The City of Southfield offers both a cosmopolitan and culturally diverse community of more than 73,000 residents that is modern and centrally located. With over 780 acres of parkland, two public golf courses and miles of nature and fitness trails, Southfield truly has something for everyone. Come see today all that Southfield has to offer your family or business!

For more information, visit www.cityofsouthfield.com or call (248) 796-5000.

Sustainable Southfield

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CHAPTER 1: INTRODUCTION

Sustainable Communities

> *Sustainable communities are places that balance their economic assets, natural resources, and social priorities so that residents' diverse needs can be met now and in the future. These communities prosper by attracting and retaining businesses and people and offering individuals of all incomes, races, and ethnicities access to the opportunities, services, and amenities they need to thrive. To become more environmentally and economically sustainable, many communities use smart growth approaches—a range of strategies that cities, suburbs, towns, and rural areas can use to protect the environment and public health, support economic development, create strong neighborhoods with diverse housing and transportation options, and improve residents' quality of life. (Source: Enhancing Sustainable Communities with Green Infrastructure).*

There is growing concern for the issue of sustainability — whether the Earth's resources will be able to meet the demands of a growing human population that has rising aspirations for consumption and quality of life, while maintaining the rich diversity of the natural environment or biosphere.

Patterns of human development — physical, social, and economic — affect sustainability at the local and the global level. City and regional planning is integrally related to defining how, where, and when human development occurs, which affects resource use. The Master Plan can therefore play a crucial role in improving the sustainability of Southfield and the resources that support them.

"Look and listen for the welfare of the whole people and have always in view not only the present but also the coming generations, even those whose faces are yet beneath the surface of the ground-the unborn of the future Nation" – The Constitution of the Iroquois Nation, The Great Binding Law, -GAYANASHAGOWA

There are several dimensions to the "sustainability" issue:

1. *We want to sustain communities as good places to live, and that offer economic and other opportunities to their inhabitants.*
2. *We want to sustain the values of our society — things like individual liberty and democracy.*

3. *We want to sustain the biodiversity of the natural environment, both for the contribution that it makes to the quality of human life and for its own inherent value.*
4. *We want to sustain the ability of natural systems to provide the life-supporting "services" that are rarely counted by economists, but which have recently been estimated to be worth nearly as much as total gross human economic product.*

A sustainable community is one that is consistent with all of these dimensions of sustainability. (Source: *Policy Guide on Planning for Sustainability*, American Planning association, (APA))

Sustainable Southfield is a comprehensive master plan that will establish a holistic guide for the City's future land use as well as balancing the City's social, environmental and economic needs for now and the future.

Planning for sustainability promotes responsible development — not anti-development. It requires a democratic process of planning to achieve the greatest common good for all segments of our population, protect the health of the environment and assure future generations of the resources they will need to survive and progress. Specifically, planning for sustainability includes the following *processes, practices* and *outcomes.*

Planning processes include:

- *Making planning decisions in a holistic and fully-informed manner that involves all segments of the community and the public and private sectors.*
- *Educating all age groups to raise public understanding of and regard for the future consequences of current planning decisions and ultimately change human behavior.*

Planning practices include:

- *Developing a future-oriented vision, which look beyond current needs and recognizes environmental limits to human development.*
- *Fostering projects/activities that promote economic development by: efficiently and equitably distributing resources and goods; minimizing, reusing and recycling waste; and protecting natural ecosystems.*
- *Upholding a widely held ethic of stewardship that strongly encourages individuals and organizations to take full responsibility for the economic, environmental, and social consequences of their actions, balancing individual needs and wants with nature and the public good.*
- *Taking leadership in the drafting and implementation of local, regional and state policies that support sustainability, such as American Planning Association's (APA's) Growing Smart statutes.*

Planning outcomes include:

Local and regional development patterns that expand choice and opportunity for all persons, recognizing a special responsibility to address the needs of those that are disadvantaged.

- *Resilient, diverse, and self-sufficient local economies that meet the needs of residents and build on the unique characteristics of the community to the greatest extent possible.*
- *Communities with a healthy economy, environment and social climate that function in harmony with natural ecosystems and other species and allow people to lead healthy, productive and enjoyable lives.*

(Source: *Policy Guide on Planning for Sustainability*, American Planning Association, (APA))

Sustainable Southfield will strive to incorporate the following six principles compiled from a review of leading comprehensive plans by the APA Sustaining Places Task Force. As outlined in *Sustaining Places: The Role of the Comprehensive Plan* (Godschalk and Anderson 2012), the principles include:

1. **Livable Built Environment**
2. **Harmony with Nature**
3. **Resilient Economy**
4. **Interwoven Equity**
5. **Healthy Community**
6. **Responsible Regionalism**

The six principles listed above will help guide Southfield towards a more sustainable community. These fundamental principles are further outlined in the following table:

1. Livable Built Environment

Ensure that all elements of the built environment, including land use, transportation, housing, energy, and infrastructure, work together to provide sustainable, green places for living, working, and recreation, with a high quality of life.

Best practices in support of the Livable Built Environment principle include the following:

1.1 Plan for multimodal transportation.
1.2 Plan for transit-oriented development.
1.3 Coordinate regional transportation investments with job clusters.
1.4 Provide complete streets serving multiple functions.
1.5 Plan for mixed land-use patterns that are walkable and bikeable.
1.6 Plan for infill development.

1.7 Encourage design standards appropriate to the community context.
1.8 Provide accessible public facilities and spaces.
1.9 Conserve and reuse historic resources.
1.10 Implement green building design and energy conservation.
1.11 Discourage development in hazard zones.

2. Harmony with Nature

Ensure that the contributions of natural resources to human well-being are explicitly recognized and valued and that maintaining their health is a primary objective.

Best practices in support of the Harmony with Nature principle include the following:

2.1 Restore, connect, and protect natural habitats and sensitive lands.
2.2 Plan for the provision and protection of green infrastructure.
2.3 Encourage development that respects natural topography.
2.4 Enact policies to reduce carbon footprints.
2.5 Comply with state and local air quality standards.
2.6 Encourage climate change adaptation.
2.7 Provide for renewable energy use.
2.8 Provide for solid waste reduction.
2.9 Encourage water conservation and plan for a lasting water supply.
2.10 Protect and manage streams, watersheds, and floodplains.

3. Resilient Economy

Ensure that the community is prepared to deal with both positive and negative changes in its economic health and to initiate sustainable urban development and redevelopment strategies that foster green business growth and build reliance on local assets.

Best practices in support of the Resilient Economy principle include the following:

3.1 Provide the physical capacity for economic growth.
3.2 Plan for a balanced land-use mix for fiscal sustainability.
3.3 Plan for transportation access to employment centers.
3.4 Promote green businesses and jobs.
3.5 Encourage community-based economic development and revitalization.
3.6 Provide and maintain infrastructure capacity in line with growth or decline demands.
3.7 Plan for post-disaster economic recovery.

4. Interwoven Equity

Ensure fairness and equity in providing for the housing, services, health, safety, and livelihood needs of all citizens and groups.

Best practices in support of the Interwoven Equity principle include the following:

4.1 Provide a range of housing types.
4.2 Plan for a jobs/housing balance.
4.3 Plan for the physical, environmental, and economic improvement of at-risk, distressed, and disadvantaged neighborhoods.
4.4 Plan for improved health and safety for at-risk populations.
4.5 Provide accessible, quality public services, facilities, and health care to minority and low-income populations.
4.6 Upgrade infrastructure and facilities in older and substandard areas.
4.7 Plan for workforce diversity and development.
4.8 Protect vulnerable populations from natural hazards.
4.9 Promote environmental justice.

5. Healthy Community

Ensure that public health needs are recognized and addressed through provisions for healthy foods, physical activity, access to recreation, health care, environmental justice, and safe neighborhoods.

Best practices in support of the Healthy Community principle include the following:

5.1 Reduce exposure to toxins and pollutants in the natural and built environments.
5.2 Plan for increased public safety through reduction of crime and injuries.
5.3 Plan for the mitigation and redevelopment of brownfields for productive uses.
5.4 Plan for physical activity and healthy lifestyles.
5.5 Provide accessible parks, recreation facilities, greenways, and open space near all neighborhoods.
5.6 Plan for access to healthy, locally grown foods for all neighborhoods.
5.7 Plan for equitable access to health care providers, schools, public safety facilities, and arts and cultural facilities.

6. Responsible Regionalism

Ensure that all local proposals account for, connect with, and support the plans of adjacent jurisdictions and the surrounding region.

Best practices in support of the Responsible Regionalism principle include the following:

6.1 Coordinate local land-use plans with regional transportation investments.
6.2 Coordinate local and regional housing plan goals.
6.3 Coordinate local open space plans with regional green infrastructure plans.
6.4 Delineate designated growth areas that are served by transit.

6.5 Promote regional cooperation and sharing of resources.
6.6 Enhance connections between local activity centers and regional destinations.
6.7 Coordinate local and regional population and economic projections.
6.8 Include regional development visions and plans in local planning scenarios.
6.9 Encourage consistency between local capital improvement programs and regional infrastructure priorities.

(Source: PAS Report 578, *Sustaining Places: Best Practices for Comprehensive Plans,* American Planning Association (APA))

CHAPTER 2: HEALTHY LIVING

"Active living environments are places where all people are able and inspired to use their feet to get them places. They are places where people of all ages, incomes and abilities can walk and bike-both for recreation and for transportation." – Michigan Governor's Council on Physical Fitness, Health and Sports

Healthy Community

Health starts where you live, learn, work and play

The physical design of our City affects our health every time we step out our front doors. Sometimes making healthy choices is not easy. Being physically active is hard if you do not have access to sidewalks or parks, and eating right is hard if healthy foods are not available.

In November 2015, the Centers for Disease Control and Prevention released a report that stated:

> *Obesity is still rising among American adults, despite more than a decade of public-awareness campaigns and other efforts to get people to watch their weight . . . the obesity rate has climbed to nearly 38% of adults, up from 32% about a decade ago.*

Obesity, which means not merely overweight, but seriously overweight, is considered one of the nation's leading public health problems. Installing more accessible, convenient and pedestrian-friendly walking and biking paths can encourage Southfield residents to a more active lifestyle, which will help combat many of today's health concerns including obesity.

However, we can work together to make the healthy choice the easy choice in land use and development. *Sustainable Southfield* can help to:

- Reverse adult and childhood obesity
- Reduce the risk of heart disease, high blood pressure, and diabetes
- Lower air pollution
- Reduce traffic injuries
- Make the community stronger and more enjoyable for everyone; and,
- Increase safety and reduce crime.

(Healthy Community Source: National Center for Environmental Health)

Healthy Community Design

> *Researchers found that people living in [communities] marked by sprawling development were less likely to walk, weighed more, and were more likely to have high blood pressure. (Relationship between Urban Sprawl and Physical Activity, Obesity, and Morbidity Ewing et al., 2003)*

Every time we step out our doors, our health is affected by the physical design of our community. This following narrative discusses how planning and designing communities with health in mind can lead to improved community health, wellness, and quality of life.

In June 2011, the U.S. Surgeon General released the *National Prevention Strategy: America's Plan for Health and Wellness*. The report states that a part of achieving health and wellness is Building Healthy and Safe Community Environments and Empowering People to Make Healthy Choices. Healthy community design can help achieve that and more.

A popular definition of health comes from the World Health Organization. They define health as the state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity. This means that health is more than being free of disease or not feeling sick; it is also a *state* of physical, mental, and social well-being. This state can bring about such feelings as happiness, contentment, and security. (Source: World Health Organization).

Major factors that determine our health are:

> **Family Health History**: Many people have a family health history of some chronic diseases (like cancer, coronary heart disease, and diabetes) and health conditions (like high blood pressure). People who have a close family member with a chronic disease may have a higher risk for developing that disease than those without such a family member.
>
> **Behaviors/Lifestyles**: We all make choices that affect our health. Some people choose to eat healthy, get regular physical activity and maintain a healthy weight; they don't smoke or put themselves at risk for injury or catching a disease.
>
> **Environment:** The environment can directly influence our health, such as when we are exposed to pollution or injured due to environmental hazards, and it also influences our

> behavior and lifestyle. Behaviors and lifestyle choices are in part, shaped by environment where people are born, grow, live, work, worship, and age; and the health systems available to them. The term "environment" can include the social, cultural, political, natural, and built environments. These environments can affect physical and mental health. For this chapter of *Sustainable Southfield*, we will concentrate on the built environment and how it can be a factor in your health.

The built environment is the manmade items that form the physical characteristics of a community.

The built environment can include schools, workplaces, parks and recreation areas, greenways, business areas, and transportation systems. It extends overhead in the form of electric transmission lines, underground in the form of waste disposal sites, water systems, subway trains, and across the country in the form of highways.

> *"If you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places." (Fred Kent, founder and president of Project for Public Spaces)*

The way we arrange all elements of the built environment make up Southfield's physical design. Community design is usually decided by the planning processes and policy decisions of elected and appointed officials.

Healthy community design is planning and designing communities that make it easier for people to live healthy lives. Healthy community design links destinations that promote health, such as schools, parks, grocery stores, and work places, via a transportation network that facilitates safe travel for pedestrians, bicyclists, public transportation users, and automobile occupants. Healthy community design can influence the overall health of a community by making healthy lifestyle choices easily available and accessible to all community members. Healthy community design links the traditional concepts of planning (such as land use, transportation, community facilities, parks, and open space) with health themes (such as physical activity, public safety, healthy food access, mental health, air and water quality, and social equity issues).

Community Design can affect our health in a variety of ways.

People who live in communities that make it safer to walk or bike to daily activities like shopping, work, school, and recreation are generally more physically active. Incorporating physical activity into our daily routines helps reduce our risk from leading chronic disease killers like stroke, cardiovascular disease, and some types of cancer such as colon and breast cancer.

One study looked at people who live in counties marked by sprawl-style development similar to the early development pattern of Southfield in the 1960's and 1970's. These are spread-out areas where homes are far from any other destination; where driving is the most convenient way to get everything done, and people are less likely to have easy opportunities to walk, bicycle, or take transit as part of their daily routine. The study found that people living in counties marked by sprawling development are likely to walk less and weigh more than people who live in less sprawling counties. In addition, people in more sprawling counties are more likely to suffer from high blood pressure.

It is a well-established fact that physical activity prolongs life. On the other hand, the health risk of low physical fitness is comparable to, and in some studies greater than, the risk for hypertension, high cholesterol, diabetes, and even smoking.

> *Active living is a way of life that integrates physical activity into daily routines. The goal is to accumulate at least 30 minutes of [heart healthy] activity each day. Individuals may achieve this by walking or biking for transportation, exercise or pleasure; playing in the park; working in the yard; taking the stairs; and using recreation facilities. (A Primer on Active Living by Design, Robert Wood Johnson Foundation, 2004)*

An example of how poor community design can affect children's daily physical activity is walking to and from school. A Centers for Disease Control and Prevention (CDC) study found that distance and traffic danger were the main reasons parents did not let their children walk to school. Also, when new schools are built a long distance from where families live, children are driven to school, depriving them of an opportunity for physical activity, socializing with other students, and contributing to air pollution and risk for automobile crashes. On the other hand, if safe routes to school are provided, and if schools are located within walking or biking distance

of where people live, then children can make walking or biking a part of their daily lives, establishing healthy habits that can last a lifetime.

> *School-Aged children and adolescents should get at least 60 minutes of moderately to vigorously intense physical activity every day (CDC, 2006)*

Communities that do not offer easy and accessible options for routine physical activity, such as walking to and from school, may be contributing to increased obesity rates in the United States. Today, more than 1/3 of U.S. adults (38%) and 17% of U.S. children are obese (CDC). Since 1980, obesity rates for adults have doubled and rates for children have tripled. Children and adolescents are developing obesity-related diseases, such as type 2 diabetes, that were once seen only in adults. Obese children are more likely to have risk factors for cardiovascular disease, including high cholesterol levels, high blood pressure, and abnormal glucose tolerance. One study of 5- to 17-year-olds found that 70% of obese children had at least one risk factor for cardiovascular disease and 39% of obese children had at least two risk factors.

Transportation-related pollutants are one of the largest contributors to unhealthy air quality; exposure to traffic emissions has been linked to many negative health effects including: Exacerbation of asthma symptoms, diminished lung function, heart attacks, adverse birth outcomes such as low birth weight, and increase risk for childhood cancer. But changes in the built environment, such as offering alternatives to driving --such as public transit, biking, and walking – can help reduce transportation-related pollutants and improve air quality and health outcomes.

So, communities that make it easier to walk, bike, or take public transit rather than drive can help reduce the number of cars on the road. This can reduce air pollution from cars which can improve the respiratory health and air quality of a community.

Community design can also have several effects on drinking water supplies, recreation, fisheries and wildlife. Water-resistant surfaces such as roads, sidewalks, driveways, parking lots, and rooftops can keep precipitation events, such as rainwater and snowmelt, from soaking into the ground. The result is runoff. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters. This runoff may contain potentially dangerous materials, such as fecal material from septic systems or pet/animal wastes, agricultural runoff, and pollutants from manmade sources such as oil, salt, soil, from roadways. Runoff water can contaminate private wells and community water systems, and local rivers and streams.

Healthy community design applies the Low-Impact Development (LID) (see Chapter 9, Public Infrastructure) approach by incorporating wetlands into watershed planning; applying techniques such as soil amendments and bio-retention; harvesting rooftop rainwater, and using permeable pavement to better deal with stormwater runoff, and restore ecologic water balances. Filtering water naturally through the soil, trees, green roofs, or rain gardens improves the quality of our drinking water, and our lakes, rivers and streams.

Communities that make it easier and safer to walk, bike or take public transit help reduce the number of cars on the road.

The combination of fewer cars on the road and how cars, bicycles, and pedestrians share space are all important in reducing traffic-related deaths and injuries in the U.S. More than 30,000 people die each year from car crashes. Car crashes are one of the leading causes of non-disease related deaths in the U.S. and the leading cause of death among those ages 5-34. Moreover, U.S. car crashes account for more than 2 million nonfatal injuries annually. The Center for Disease Control indicates that in 2012, the economic burden (medical care and productivity losses) of motor vehicle-related injuries exceeded $80 billion in the U.S. Roadways that are designed to slow down the speed of moving vehicles and buffer bicyclists and pedestrians from automobile traffic can help reduce the probability of deaths and injuries from traffic crashes.

Healthy Foods & Good Nutrition

Communities where healthy foods are not accessible and affordable may also be a contributor to the obesity epidemic in the United States. A healthy diet may be more difficult for some because healthy food options are not readily available, easily accessible, or affordable in their communities. In fact, scientific studies have found that low-income and underserved communities often have limited access to stores that sell healthy food, especially high-quality fruits and vegetables. The U.S. Department of Agriculture's Food Desert Locator gives a spatial overview of low-income neighborhoods with high concentrations of people who are far from a grocery store.

Good nutrition is vital to good health and disease prevention. But it's hard for people to eat their fruits and vegetables (and to stay away from too much junk food) if they don't have access to fruits and vegetables! In one study of 50,000 neighborhood blocks in Detroit, researchers found that 92% of food retailers were comprised of "fringe food outlets" such as liquor stores and fast-food restaurants, while only 8% were grocery stores of any size. Access to affordable and healthy food is a part of healthy community design.

Climate Change

Trends:

- *More asthma, allergies, heat strokes and flooding are expected due to climate change. Food and utility prices are rising. Cataclysmic storms are wiping out sprawling neighborhoods. Rising concentrations of carbon emissions in the atmosphere. Climate change puts the U.S. government at "high risk" of financial exposure. (Why you should sweat Climate Change by Wendy Koch, published March 1, 2013, USA Today Weekend)*

- *We can expect more extreme storm events and greater periods of drought, downpours, wildfires and heat waves. Average temperatures are rising. Heat related deaths are expected to increase. More freeze-thaw events, which will lead to more road repairs. Sea levels are rising and will effect coastal cities (e.g. Super-storm Sandy)*

How we design our communities may also determine how well we cope with climate change in the future. People are exposed to climate change through changing weather patterns (for example, more intense and frequent extreme events) and indirectly through changes in water, air, food quality and quantity, ecosystems, agriculture, and economy. At this early stage the effects of climate change are small but are expected to steadily increase in all countries and regions.

Because automobile emissions account for 26% of U.S. greenhouse gas emissions (a contributor to climate change), healthy community design elements may help slow down the effects of climate change by providing alternatives to driving cars such as walking, biking and public transit.

As cities grow larger, they may experience stronger and longer heat waves because of the urban heat island effect. Two factors create the urban heat island effect: fewer trees and vegetative cover to cool cities by deflecting solar radiation and transpiring water back to the atmosphere; and the construction of dark surfaces that absorb heat and re-radiate that heat. Community design elements that may help lessen the urban heat island effect include:

- *Creating parks, green rooftop parks, gardens and green spaces,*
- *Making building energy-efficient, and*
- *Minimizing the use of dark surfaces that absorb heat and re-radiate that heat during the evenings, when the cities would otherwise cool down.*

In May 2015, the City adopted revised parking standards, which in part reduced the required amount of parking lot paving thereby reducing dark surfaces and the amount of storm water retention needed.

For more information on climate change assessment refer to Appendix C.

Social Capital

***Mindmixer Highlight**: Encouraging communication between residents and encouraging participation in community events (and bringing more community events to the City in general) were common themes indicated by participants over the 20-week period.*

The fabric of a community and the community pool of human resources available to it are often called "social capital." This term refers to the individual and communal time and energy available for such things as community improvement, social networking, civic engagement, personal recreation, and other activities that create social bonds between individuals and groups. Such activities and bonds can have an effect on mental and physical health.

Numerous writers have observed a loss of social capital in recent years, and some authors have attributed this decline, in part, to suburbanization and sprawl. Healthy community design aims to increase social capital by creating:

Parks, green spaces and public places for leisure and social activities and Communities that are mixed-use which means a mix of housing, civic uses, and commercial uses, including retail, restaurants, and offices. Mixed use allows a community member to work closer to where they live, thus reducing their amount of commuting time and increasing their time for leisure and social activities.

In recent years, the City has installed new and wider multi-use pathways, especially in the City Centre District to encourage community interaction, creative collision and social networking.

Finding a good home in a safe neighborhood, that's convenient to jobs, good schools, and other daily needs, can be difficult; usually neighborhoods with lots of amenities are more expensive because more people want to live there. People who work in these neighborhoods, but can't afford to live there, may have to live far away in areas that are not safe. Workers like police officers, firefighters, teachers who contribute so much to a community may have to sacrifice safety and convenience for affordability.

Healthy community design principles support social equity by promoting:

- *Communities where people of all abilities and ages can move about their community for all their needs, and, should they choose, remain in their community all their lives.*
- *Diverse housing options and price levels so that all persons regardless of income can live in the same community where they work, play and worship.*
- *Neighborhoods clustered around one or more well-defined neighborhood centers that support jobs of all types and skills, commercial activity, and a range of amenities.*

Social equity means that every community member, regardless of age, income, ability or cultural custom should have:

- *Fair access to livelihood, education, and resources*
- *Full participation in the political and cultural life of the community*
- *Self-determination in meeting fundamental needs*

Below are some healthy community design principles for the City of Southfield to promote or implement. Many of these principles that make communities healthier also make them more attractive and affordable places, too. They are:

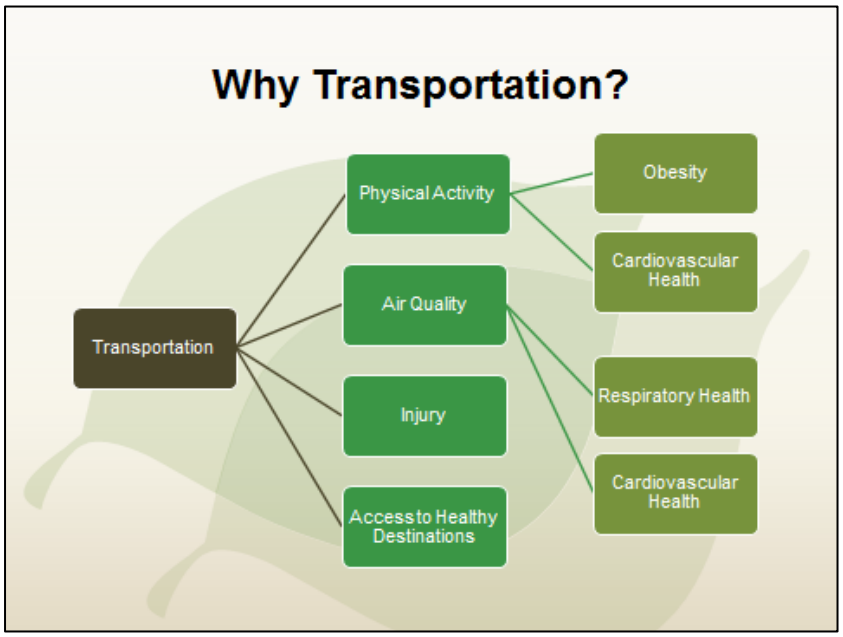
- *Mixed land use and land use density that supports short distances between homes, workplaces, schools, and recreation so people can walk or bike more easily to them.*
- *Public transit to reduce the dependence on automobiles.*
- *Pedestrian and bicycle infrastructure, including sidewalks and bike paths that are safely removed from automobile traffic, as well as good right-of-way laws and clear, easy-to-follow signage.*
- *A community that is accessible and socially equitable to all residents regardless of age, ability, income and cultural custom.*
- *Housing for different incomes and stages of life.*
- *Green space and parks that are accessible.*
- *Community centers where people can gather and mingle as part of their daily activities.*
- *Land development and storm water management using the Low Impact Development (or LID) approach. LID uses manmade and natural landscape features to handle storm water as a resource rather than a waste product.*

The good news is that the City of Southfield already implements many of the design principles listed above.

When a community implements healthy community design principles, the health benefits are many, such as:

- *Creating safe and comfortable streets and sidewalks that encourage community members to incorporate physical activity into their daily routine by biking and walking.*
- *Increasing access to healthy foods.*
- *Providing transportation options--like public transit, biking, and walking– that help reduce traffic and air pollution.*
- *Protecting water quality and making communities more attractive by preserving wetlands and undeveloped land. This valued land may also give people a place to play, relax and connect with nature (which is good for physical and mental health).*

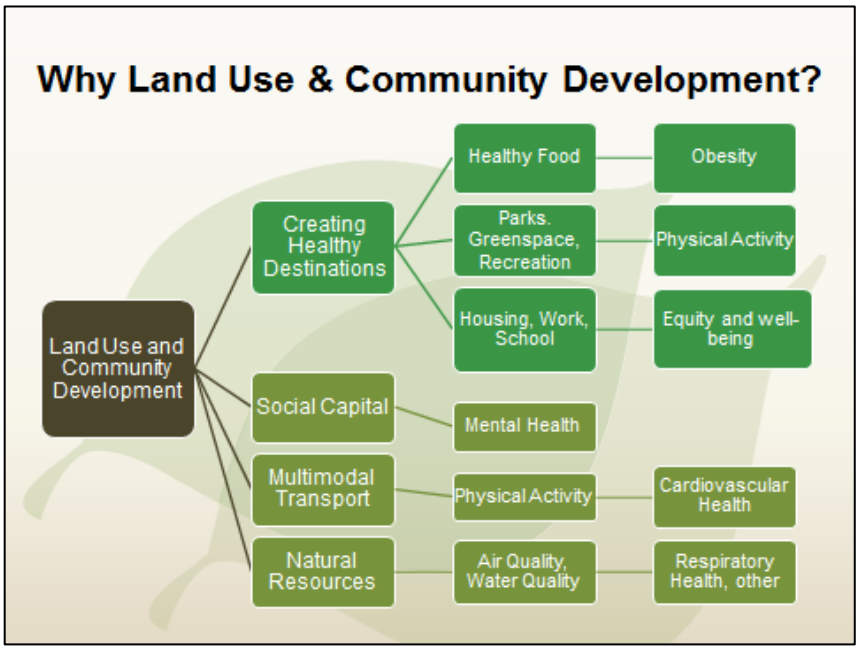
Transportation Systems



As discussed above, transportation systems impact health several ways – especially some of our nation's biggest health issues, like obesity, physical activity, respiratory health, and vehicle-related injury and deaths. According to the Centers for Disease Control Prevention's Transportation Recommendations:

"*Expanding the availability of, safety for, and access to a variety of transportation options and integrating health-enhancing choices into transportation policy has the potential to save lives by preventing chronic diseases, reducing and preventing motor-vehicle-related injury and deaths, improving environmental health, while stimulating economic development, and ensuring access for all people*."

Land Use and Community Development



Land use and community development also impact many aspects of our lives including our health. Land-use decisions can affect whether we have access to healthy food choices, parks and green-space, good homes, jobs, and schools within our community. Land-use decisions affect our freedom to choose how we get to the grocery store, a park, or even work or school. A community that ensures freedom of choice supports bike lanes and paths, sidewalks, and transit stations and stops.

Mixed-Use Development

A community that supports mixed-use development allows homes and shops offering the necessities of life within walking distance of each other. Land use and community development decisions can affect a community's social capital, a necessary component in a community's livability, health, and well-being. Mixed-Use community centers, such as the Southfield City Center District, or public squares are examples of land-use decisions that allow people to gather, interact, and strengthen a community's social bonds. How we use our land can affect our natural resources like wetlands, woodlands, rivers and streams, and ground water, which might be a part of the community's source for drinking water.

The health of our natural resources directly influences our own health and well-being. Supporting the compactness of development and maximizing the use of the existing infrastructure (also known as infill development) instead of building on previously undeveloped land helps protect natural resources.

Policies and Programs

Implementation of healthy community design principles in the Zoning Ordinance can lead to smarter land-use practice. Furthermore, creating community programs that promote healthy

active living are also important. Policies and programs have the power to promote and encourage such healthy choices as:

- *Safe Routes-to-School programs;*
- *Farmers Markets in areas that have limited access to fruits and vegetables; and*
- *Mixed-use neighborhoods where homes, shops, community services, public transit stops, and schools are within walking or biking distance of one another.*

The most important questions for elected officials and decision-makers are:

- *Are you considering the health impact of your decisions by seeking advice from public health professionals on the potential health effects of a project or policy before it is built or implemented?*
- *Do your decisions offer the healthy community design benefits mentioned in this chapter?*
- *Are you making the healthy choice the easy choice for all community members regardless of age, income, ability, or cultural custom?*

Ultimately, it is up to City Administration, the Planning Commission, Zoning Board of Appeals, Parks & Recreation Commission, and City Council to implement healthy community design principles

Several tools and processes exist that can help decision-makers determine the health impact of community design:

- Health Impact Assessment (HIA), is a step-by-step process that brings potential public health impacts and considerations to the decision-making process for plans, projects, and policies that fall outside of traditional public health arenas, such as transportation and land use. The process can be useful in focusing on potential health outcomes such as obesity, physical inactivity, asthma, and injuries before a project or policy is built or implemented.
- PACE EH: Protocol for Assessing Community Excellence in Environmental Health (PACE EH) is a tool for assessing the health of a neighborhood. PACE EH takes local health officials and community members through a series of steps to collect necessary and relevant information pertaining to community environmental health concerns, rank issues, and set local priorities for action. For example, the process was used in the community of Wabasso by the Florida Department of Public Health. The community identified its top “health” issues which included street lighting to safely walk at night, accessible areas for safe physical activity and recreation, and access to safe drinking

water. As a result of the process, streetlights and sidewalks were installed, and other improvements that affect health were made. The community also felt that after using PACE EH, government was better able to respond to issues in the community.

- The Acting Living Research Web site, a national program of the Robert Wood Johnson Foundation, has a variety of tools for auditing the health of a community's social and built environments.
- The Centers for Disease Control and Prevention's National Environmental Public Health Tracking Network Community Design landing page has maps, tables, and charts about transportation to work, air quality, and motor vehicle-related fatalities in your community.

Together, we can help transform Southfield to a community that embraces healthy active living for people of all ages, incomes and abilities, and provides a variety of transportation options.

Every time we step out our doors, our health is affected by the physical design of our community.

Healthy community design can lead to community health and wellness; and improve the quality of life for every person living in it, giving everyone a variety of healthy, available, accessible, and affordable options.

For more information on healthy community design, visit the Healthy Community Design Initiative Web site at www.cdc.gov/healthyplaces, The Centers for Disease Control and Prevention.

(Healthy Community Design Sources: Centers for Disease Control and Prevention, National Institutes of Health, Design for Health, Environmental Protection Agency: Low-Impact Development (LID) & World Health Organization).

LOCAL HEALTH PROFESSIONALS PARTNERS

Providence-Providence Park Hospital, Southfield Campus

Providence Park Hospital, Southfield, is part of the St. John Providence Health System (SJPHS),

A Passion for Healing is at the heart of Providence Hospital, where our primary objective is to achieve our Vision: "Together, we deliver the highest quality patient care experience, every day, everywhere, for everyone."

Providence has more than 3,400 staff members, 1,500 physicians and approximately 300 active volunteers dedicated to healing the bodies and touching the souls of thousands each year.

For 100 years, Providence Hospital has been a premier provider of compassionate and leading-edge health care in southeastern Michigan. Our patients, residents of the surrounding communities, and local businesses all know that they can rely on Providence Hospital for excellence in patient care provided by dedicated, expert physicians and other health care professionals. Our caregivers demonstrate their passion for healing in every encounter with patients and visitors.

Providence Hospital is renowned for offering patients the most advanced treatments.

Providence Park Hospital has been a loyal partner to the City of Southfield for many years. FY 2014 statistics include:

- 1,600 physicians
- 2,800 nurses & associates
- 416 beds
- 19,900 admissions
- 1,900 births
- 192 open hearts
- 10,714 surgeries
- 68,000 ER visits
- $373 million in revenues
- $85,992,293 St. John Providence charity care, community benefit & advocacy

In FY13/14 and FY 14/15, Providence Park Hospital has invested over $43 million in upgrades and renovations with an anticipated additional investment of $28 million in the near future.

Identified Health Needs and Concerns

SJPHS prepared the 2012 Community Health Needs Assessment (CHNA) and Implementation plan, which is required to be performed every three years.

A Steering Committee was convened to provide guidance and oversight in the development of the CHNA and included individuals from a variety of health professions in disciplines such as physicians, nurses, finance, health planning, social work, discharge planners, etc. Extensive local, national, state and hospital utilization data and statistics were obtained from internal as well as external sources to identify health specific trends. These sources as well as information collected through a survey, other key informants, and focus groups enabled the Steering Committee to gain further insight into the needs and gaps in the hospital service area (metro Detroit).

The Community Health Needs Assessment (CHNA) Steering Committee's analysis resulted in the identification of the following health concerns/needs (in no particular order):

- Cardiovascular Disease – This is the leading cause of death in all parts of the hospital service area and is widely addressed through St. John Providence Health System and its Cardiovascular Centers of Excellence; the American Heart Association; and other programs such as the *Project Healthy Living* multi-county screening program.

- Cancer – St. John Providence health system has four cancer centers with two located in the service area. Additionally the American Cancer Society, primary care standards of practice, and other cancer centers in the area provide screening and community-based education. Further, the state of Michigan with its BCCCP *(Breast and Cervical Cancer Control Program)* provides for routine mammograms for low-income and uninsured women.

- Asthma – Asthma is predominately a condition of children and youth in the service area. Through the SJPHS school-based health centers and other school-based health centers in the area this is being addressed. Asthma education, asthma screening, and summer asthma camps are provided along with the handling of acute episodes in the school

clinics with parental consent. There is a local Asthma Coalition of health providers addressing this problem.

- Diabetes – The number of cases of type II diabetes has been steadily increasing in the service area. Many diabetics also experience other co-morbid conditions and need to be hospitalized. The complications of diabetes are also a major risk factor for preventable hospitalizations. The American Diabetes Association is active in this region.

- Obesity – The service area is experiencing a significant upward trend in the number of obese children and adults. It is well-known that obesity is a precursor to the development of type II diabetes. There are several model programs in the service area that address childhood obesity in addition to what is available for adults.

- Behavioral health/substance abuse/mental illness – Behavioral health issues present a significant risk factor for other causes of premature death and disability. Medicaid and other state funding for behavioral health largely comes through the state to the county-based community mental health agencies and local health departments. These agencies continue to provide the lead on addressing these issues.

- Infant mortality / inadequate prenatal care – This continues to be a significant problem in the service area. While the rates have experienced a decline over the last 10 years, it appears to have leveled off. Further, the rate of infant mortality in African-Americans is 2 to 3 times higher than that of other racial/ethnic groups. In parts of the service area where the IMR is comparable to the State rate there is still a significant problem with inadequate prenatal care. Infant death due to unsafe sleep practices is a growing concern.

- Access to primary care – The service area continues to experience a significant number of uninsured and underinsured individuals. Estimates for the city of Detroit alone are that 200,000 individuals are uninsured. Even with the implementation of the Affordable Care Act, there is still need to address this issue in the service area.

After a prioritization process that included assessing: 1) the magnitude of the problems identified, 2) the seriousness of and potential burden to the community, 3) the feasibility of addressing or correcting the problem, and 4) the potential yield of measurable data toward outcome improvement, three priorities were selected. The priorities are Diabetes Prevention, Infant Mortality Reduction and Access to Care. Although other health needs were identified, it

was determined that the health system will work with other organizations as needed to address health needs not selected. Subsequently, an overall strategy for each priority was identified as follows:

Diabetes Prevention

a) Increase opportunities for healthy lifestyle activities
b) Increase education for diabetes prevention, early identification, and disease management.

Infant Mortality Reduction

a) Increase connectivity to and resources for pregnant women and their families
b) Provide enhanced nutrition information and services that support the health of high-risk infants.
c) Increase education to enhance access to primary care for mothers after the delivery of the infant and post-partum visit.

Access to Care

a) Reduce barriers to access the full continuum of health care for low income, uninsured and/or under insured residents of the service area.
b) Increase/support safety net capacity in the service area

(Note: For specific tactics and measures, see Implementation Plan Section of the 2012 Community Health Needs Assessment (CHNA) and Implementation plan).

St. John Providence Community Health Programs Oakland County Focus

Health Care for the Uninsured – primary care services for those19 to 64 years of age, up to 200 % of poverty and without insurance are provided at St. Vincent de Paul Health Center in Southfield. Primary care, diagnostic services, pharmacy assistance, chronic disease management and specialty referrals are provided. There were: 948 patient visits last year, 2163 pharmacy assistance applications taken, with $785,800 in medication received

Physicians Who Care Project – credentialed specialty physicians who volunteer their time to provide health care services to uninsured adults receiving primary care at our partner sites

Ryan White Program – provides services to uninsured HIV patients who need early intervention, diagnosis and treatment. Pontiac hosts a site for primary care, with 139 patients served last year.

Faith Community Partnerships – Assesses and addresses the spiritual, physical and emotional needs of individuals and families within the context of a faith community. There are 18 formal partnerships with Oakland county churches

Community Outreach and Education – offering prevention, encouraging healthy lifestyles and helping individuals cope with illness. Various health fairs, community events are held in the Oakland County area.

- Northland Mall walking program support - monthly blood pressure screenings offered, monthly health newsletter available, and quarterly events with a SJPHS speaker (average of 65 members in attendance). *Note: This program has now relocated to the Southfield Pavilion.*
- Southfield Wellness Center – provides exercise, chronic disease management and diabetes programs for our community.

CareLink – a free membership program for those 55 or older providing resources, health information and education through community partnerships and collaboration with our SJPHS sites. Currently the program has over 89,000 members. Education programs are held at Providence Hospital, Providence Park Hospital, Southfield Wellness Center, St. John Macomb Oakland Hospital – Oakland Center.

Infant Mortality Project – empowers families to help themselves by making a connection with mothers, fathers and other family members to help build and sustain families, reverse the high infant mortality rate, promote literacy and increase access to health care. This programs works in conjunction with the Maternal Child programs at Providence and Providence Park Hospital.

Healthy Initiatives Partnerships

The City of Southfield partners with Providence Hospital (PH), American Cancer Society (ACS), American Heart Association (AHA), Lawrence Technological University (LTU), the City Centre Advisory Board (CCAB) and other health agencies and local businesses to promote and support annual Healthy Initiatives, including but not limited to:

- AHA Heart Health & *Go Red for Women Campaign* (February)
- AHA Workplace Wellness Forums (March)
- Bike Safety & Helmet Give Away (Summer)
- Summer Soulstice Run (June)
- LTU & CCAB "5K" runs (Summer/Fall)
- ACS Corporate Relay for Life & PH Prostate Cancer Awareness Month (September)
- Breast Cancer Awareness/Pink Door Campaign (October)
- *Movember* Men's Health Awareness (November)
- City of Southfield's Employee bi-annual *Weight Loss Challenge*
- *Walk for Health Campaigns:* Southfield Pavilion Indoor Walkers, Front Lawn Loop, "Take the Stairs", and Mayor's Walks
- Health Screening Events

Other Healthy Initiatives that should be considered:

- Promote healthy and active lifestyle challenges at the City's parks and recreational facilities.
- AHA "Fit-Friendly" Worksite- creating a healthy work environment (see sidebar)

Part of the problem is that the rate of obesity among adults continues to grow. This could be a result of how much time Americans spend at work-an average of 47 hours per week, which is 164 hours more per year than a generation ago. The number of sedentary jobs among Americans has accelerated, too, rising 83 percent since 1950.

Fit-Friendly Worksite

The American Heart Association's goal by the year 2020 is to not only reduce the rate of death from cardiovascular diseases and stroke by 20 percent, but also to improve the heart health of all Americans by 20 percent.

That's why the American Heart Association places such an importance on creating a healthy work environment, and why employees are encouraged to become recognized as a Fit-Friendly Worksite.

Studies suggest that by starting a worksite physical activity program and promoting a culture of activity, employers can:

- Increase productivity
- Reduce absenteeism
- Lower turnover

- Reduce healthcare costs

There's no better benefit to offer your employees than helping them have healthier, longer lives, whether your workplace is a school, corporation, hospital or any other type of worksite.

Advantages of the program include:

- *Employee access to program resources, including the free Walking Program, Activity Tracker, walking and exercise programs, and healthy eating solutions and resources.*
- *Materials to help promote company wellness programs to employees*
- *Newsletter templates for internal distribution to employees*
- *Consultation on CRP/AED (automated external defibrillator) programs*
- *A free, quarterly worksite-wellness e-newsletter*

For more information, please use: http://ffc.heart.org (Source AHA)

Straith Hospital for Special Surgery (Straith)

Straith Hospital for Special Surgery (Straith) is a 34-bed acute care facility licensed by the State of Michigan and accredited by The Joint Commission. Straith is an unaffiliated, not-for-profit Hospital Corporation under IRC 501 (c) (3) governed by a Board of Trustees, who volunteer their services on behalf of the community. Their facility is located at 23901 Lahser Road, Southfield Michigan, 48033. The mission of Straith Hospital is to improve the health status of our patients and provide high levels of satisfaction to our physicians. Our high quality services and

competitive pricing are a result of our focus on a narrow band of services and will always be important considerations to the community we serve.

Surgeries performed at Straith Hospital address medical concerns with a safe, caring staff of talented professionals both educated and experienced in a variety of medical specialties. Currently, Cataract, Cornea, and Retina procedures are their primary areas of expertise which are successfully accomplished by gifted surgeons and support staff. Their facility has five operating rooms constructed with laminar flow circulation, ventilation, and air exchange systems. Three of the operating rooms are 400 square feet, and two of the operating rooms are 600 square feet. Their future looks toward expanding their surgical services to include an orthopedic and spine program, interventional cardiology procedures, and gastrointestinal surgical services on an inpatient and outpatient basis.

On an inpatient basis Straith Hospital performs comprehensive rehabilitation to primarily a geriatric population after an illness, injury, exacerbation, or surgery that causes the patient to have reduced functional skills requiring rehabilitation. All patients in their inpatient rehabilitation program receive an acute care level of physical and occupational therapy as well as additional services based on individualized needs. The goal of their rehabilitation program is to promote and maintain the independence of an aging population by improving their functional status. In addition, they are committed to provide the appropriate education, medication reconciliation, and discharge plan for each patient they serve. Their outcomes support a reduction in overall health care costs and help reduce hospital readmissions.

Public Health Checklist

The City of Southfield should integrate a public health checklist into their site plan review process to promote and encourage a healthy and active lifestyle.

Best Practices

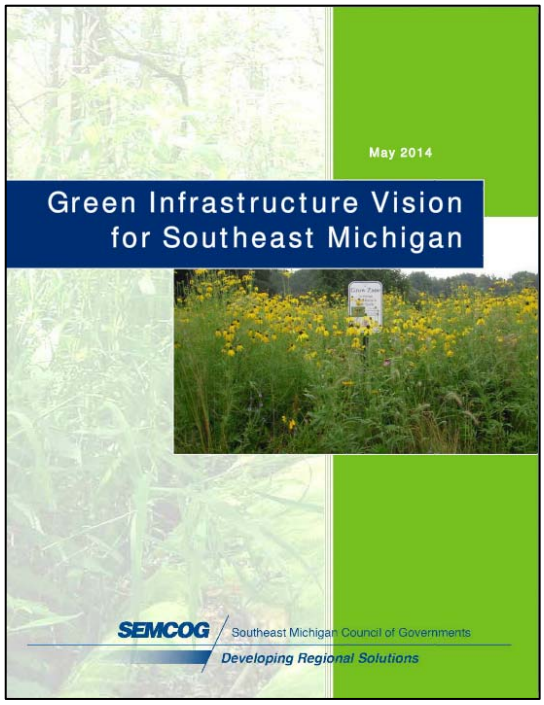
The Delaware Office of State Planning Coordination (OSPC), the Delaware Division of Public Health (DPH), and the Delaware Healthy Eating and Active Living Coalition (DE HEAL) Environment and Policy Committee

To coordinate large projects (50+ residential units & 50,000 square feet of non-residential building space) in the state, the three state agencies have developed a public health checklist to review three categories that reflect some essential components in the built environment that can affect public health: active transportation; active recreation; and access to food choice.

Distances from the proposed project to other land uses, and the availability of sidewalks and bike paths to connect it to those uses, is a key component in determining the extent that future residents will be able to take advantage of active transportation, active recreation and access to food choice.

For more information, please see: http://stateplanning.delaware.gov/plus/

Green Infrastructure



The Green Infrastructure Vision for Southeast Michigan is a framework that guides preservation and future implementation of green infrastructure in Southeast Michigan. The vision benchmarks the amount of green infrastructure in the region, visions future green infrastructure opportunities and recommends strategic implementation approaches. The vision details the various benefits of green infrastructure, including economic value, water quality, air quality and recreation. The Green Infrastructure Vision for Southeast Michigan can be viewed online at www.semcog.org. (Source: *The Green Infrastructure Vision for Southeast Michigan,* SEMCOG, the Southeast Michigan Council of Governments)

Green infrastructure is defined in two broad categories in Southeast Michigan. First, it includes ecosystems that are present in the natural, undisturbed environment such as wetlands, woodlands, prairies, and parks. The second category includes constructed or built green infrastructure such as rain gardens, bioswales, community gardens, and agricultural lands. Table 2-1 highlights and defines various green infrastructure elements in Green Southeast Michigan.

What are the benefits of Green Infrastructure?

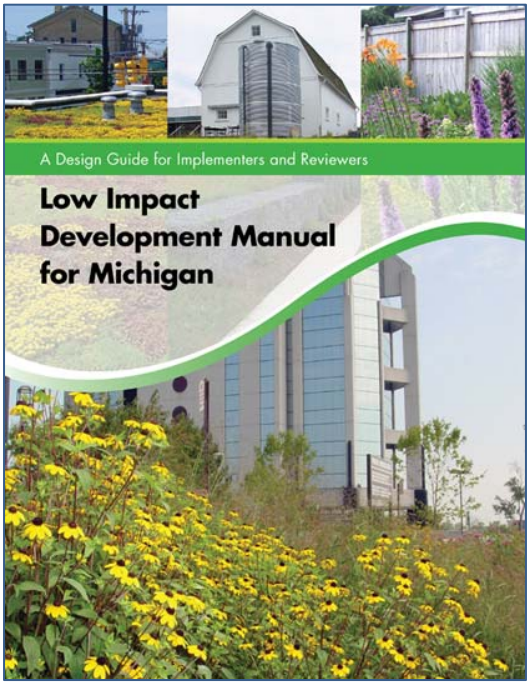
Table 2-1: Green Infrastructure Terminology

Green Infrastructure Element Definition	Green Infrastructure Element Definition
Community gardens	Community gardens Urban and/or residential land used to grow food, but can also provide ecological services. Example: Mary Thompson Farm
Conservation easements	Conservation easements Public and private land designated for conservation in perpetuity.
Critical habitats/Regionally significant features	Areas unique to Southeast Michigan that are critical to protect and enhance, such as the Detroit River International Wildlife Refuge and the Rouge River corridor.
Public access sites	Sites that allow access to our region's rivers and lakes.
Rain gardens, bioswales, green roofs	Techniques that follow the natural water cycle. Manages rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.
Recreational land	Public and private land designated for recreation such as parks, forests, hunting preserves, etc.
Riparian corridors	Land that exists between water bodies (lakes, rivers, streams, and wetlands) and higher dry upland areas (forests, fields, cities and suburban property). Example: Rouge River corridor
Trails (land and water trails)	Designated trails designed for walking, hiking, biking, cross-country skiing, snowmobiling, canoeing, kayaking ,and other recreational activities.
Wetlands, floodplains	Floodplains, Michigan-designated wetlands, and constructed wetlands or other natural features that provide similar functions.
Woodlands, trees, street trees, urban forests	Areas of tree canopy cover that exist in multiple forms such as woodlots, private landscapes, street trees, urban forests.

Green infrastructure provides social, environmental, and economic benefits to Southeast Michigan:

- **Water quality**: Green infrastructure reduces the amount of polluted stormwater runoff entering our rivers and lakes. In cities with combined sewer systems, green infrastructure is being used to reduce flows into the sanitary sewer as a mechanism to impact system overflows.

- **Flooding**: Green infrastructure can reduce flood risk by slowing and reducing stormwater runoff into waterways.
- **Water supply**: Harvesting rainwater is good for outdoor irrigation and some indoor uses. Water infiltrated into the soil recharges groundwater and increases flow into rivers.
- **Quality of life**: Green infrastructure provides aesthetic benefits to the area by increasing the amount of a community's green space.
- **Recreation**: Green infrastructure can provide recreational and tourism opportunities including increased access to hiking, hunting, fishing, and bird watching.
- **Economic**: Green infrastructure can increase residential property values located near trails, parks, and waterways. In addition, green infrastructure is one way to attract and retain the knowledge-based workforce in our region.
- **Traffic calming**: Green infrastructure techniques along roads not only reduce stormwater pollution, but can also be used to slow traffic and provide a buffer between the roadway and pedestrians.
- **Habitat improvements and linkages**: Green infrastructure can provide needed links in habitat corridors to strengthen and support rare and important areas in the community.
- **Air quality**: Increased vegetation positively impacts air quality through carbon sequestration, the capture of fugitive dust, and removal of air pollutants.
- **Health**: Green infrastructure encourages outdoor physical activity, which can have a positive impact in fighting obesity and chronic diseases.
- **Save money**: Green infrastructure can reduce a community's infrastructure costs by using natural systems rather than built systems.
- **Energy and climate**: Implementing techniques such as green roofs, increased tree plantings around buildings, converting turfgrass to no-mow areas, and reclaiming stormwater for use onsite can reduce energy consumption and save money.



For further information also reference: The Low Impact Development Manual for the State of Michigan, which is a helpful guide to those wanting technical information on implementing rain gardens, bioswales, pervious pavement, and other LID techniques. (Green Infrastructure Source: *The Green Infrastructure Vision for Southeast Michigan,*

SEMCOG, the Southeast Michigan Council of Governments)

Constructed Green Infrastructure

Within the integrated network of green infrastructure are constructed green infrastructure techniques, sometimes referred to as low impact development techniques. This category of green infrastructure includes constructed practices such as rain gardens, bioswales, native plant grow zones, permeable pavement, green roofs and even community gardens.

These constructed practices play an important role within the green infrastructure network providing ecological, environmental, economic, and social benefits. For example, these techniques primarily work to improve water quality by reducing stormwater runoff entering our water resources; however, their characteristics and designs also lead to greater economic value of adjacent properties and improved recreational opportunities with demonstrated habitat enhancements.

The recommended quantity of green infrastructure techniques is linked to the percentage of impervious surfaces in urban areas and sub-watersheds. High impervious areas result in increased quantities of stormwater runoff pollutants, volume, and flow rates. Regional priorities for constructing these types of green infrastructure techniques include areas with impervious cover greater than 10 percent.

The connection between constructed green infrastructure techniques to improved water quality, higher economic value, reduced infrastructure costs, enhanced recreational opportunities, and advanced social benefits is demonstrated through numerous comparisons. The overarching theme for achieving these benefits starts with incrementally implementing green infrastructure in highly impervious areas.

Priority areas for constructed green infrastructure techniques include:

- Roadways
- Institutional properties
- Public and private parking lots
- Riparian corridors and
- High density business districts.

(Constructed Green Infrastructure Source: *The Green Infrastructure Vision for Southeast Michigan,* SEMCOG, the Southeast Michigan Council of Governments)

Using Green Infrastructure to Manage Stormwater Runoff

This Green Infrastructure Vision is intended to focus on solutions to addressing water quality challenges in the river systems. While the solutions include the entire network of green infrastructure, focusing on urban areas and the extent of impervious cover is a priority. Constructed green infrastructure techniques, such as bioswales, bioretention, tree planting, grow zones, porous pavement, and other unique features, can significantly reduce stormwater runoff and improve water quality. With a focus on major areas of impervious surfaces and publicly owned properties, the following land use types rise to the top:

- **Institutional properties** include publicly-owned property such as municipal facilities and complexes, libraries, parks, schools, and universities. The focus within these properties is to further assess opportunities to manage roof runoff and runoff from paved surfaces. Additionally, large open space areas managed as turf may present options for constructing native plant grow zones in areas not generally accessed by the public.
- **Major roadways** are identified by their respective functional classification, but are generally represented by the major arterial roadways, including local, county, and state. Local residential streets are not defined as a primary area of opportunity. Within major roadways, constructing green infrastructure within the rights-of-way, either in existing open space or, where traffic data supports it, implementing road diets with green infrastructure are some of the opportunities. The Green Infrastructure and Transportation chapter describes these opportunities in more detail.
- **Parking lots**, both publicly-owned and privately-owned, represent a major category of green infrastructure implementation opportunities. Publicly-owned parking lots are included as part of the impervious cover within the institutional properties. Privately-owned parking lots represent the larger commercial areas in the region. Constructing bioretention areas, bioswales, and porous pavement are techniques that can significantly reduce stormwater runoff. From a planning perspective, inverted parking lot islands can double as bioretention areas when coordinated with engineering design.
- **Riparian corridors** are a consistent focus of opportunity throughout this vision. Expanding the forest and vegetated buffer adjacent to local streams improves the local stream corridor, leading to higher quality stream habitat and aquatic diversity.

(Using Green Infrastructure to Manage Stormwater Runoff Source: *The Green Infrastructure Vision for Southeast Michigan,* SEMCOG, the Southeast Michigan Council of Governments)

Environmental Protection

The City of Southfield strives to maintain the quality of the natural resources and environment, in addition to its cultural resources, found within its boundaries for the long-term benefit of its residents and visitors. The City will work to maintain and improve the quality of the air, water, land and sensitive resources for the long term. Recognizing the migratory nature of some environmental pollutants and shared community interest in environmental quality, the City of Southfield will also strive to work with neighboring jurisdictions to protect the environment.

Such a commitment to environmental protection includes understanding the risks and undertaking measures to protect residents from pollution and potentially polluting industries and land uses, including but not limited to the exploration and development of hydrocarbon resources including oil, natural gas and the handling and use of associated wastes and inputs.

Smart Growth

> *While many Americans have benefited from decades of post–World War II suburbanization, many have not. It is also a development pattern has led to some negative consequences for the community as a whole. Our nation is now experiencing heightened concern over the social, environmental, and fiscal quality of our communities arising from development practices that aggravate the decline of many urban communities and older suburbs, congest streets and highways, demand higher levels of energy consumption, accelerate the loss of natural resources and deteriorate the natural environment, and limit opportunities for the retention and creation of affordable housing. Often these problems are simply and collectively labeled, "sprawl." In response, the Smart Growth movement emerged. (Source: Policy Guide on Smart Growth, American Planning Association (APA))*

Smart Growth is not a single tool, but a set of cohesive urban and regional planning principles that can be blended together and melded with unique local and regional conditions to achieve a better development pattern. Smart Growth is an approach to achieving communities that are socially, economically, and environmentally sustainable. Smart Growth provides choices — in housing, in transportation, in jobs, and in amenities (including cultural, social services, recreational, educational, among others) — using comprehensive planning to guide, design, develop, manage, revitalize, and build inclusive communities and regions to:

- *Have a unique sense of community and place;*
- *Preserve and enhance valuable natural and cultural resources;*

- *Equitably distribute the costs and benefits of land development, considering both participants and the short- and long-term time scale;*
- *Create and/or enhance economic value;*
- *Expand the range of transportation, employment, and housing choices in a fiscally responsible manner;*
- *Balance long-range, regional considerations of sustainability with short-term incremental geographically isolated actions;*
- *Promote public health and healthy communities;*
- *Apply up-to-date local and regional performance measures of successful urban and regional growth;*
- *Encourage compact, transit-accessible (where available), pedestrian-oriented, mixed-use development patterns and land reuse; and,*
- *Increase collaboration and partnerships to advance place-based and regional goals and objectives, while respecting local land-use preferences and priorities.*

Core principles of Smart Growth include:

A. *Efficient use of land and infrastructure*
B. *Creation and/or enhancement of economic value*
C. *A greater mix of uses and housing choices*
D. *Neighborhoods and communities focused around human-scale, mixed-use centers*
E. *A balanced, multi-modal transportation system providing increased transportation choice*
F. *Conservation and enhancement of environmental and cultural resources*
G. *Preservation or creation of a sense of place*
H. *Increased citizen participation in all aspects of the planning process and at every level of government*
I. *Vibrant center city life*
J. *Vital small towns and rural areas*
K. *A multi-disciplinary and inclusionary process to accomplish smart growth*
L. *Planning processes and regulations at multiple levels that promote diversity and equity*
M. *Regional view of community, economy and ecological sustainability*
N. *Recognition that institutions, governments, businesses and individuals require a concept of cooperation to support smart growth*
O. *Local, state, and federal policies and programs that support urban investment, compact development and land conservation*
P. *Well defined community edges, such as agricultural greenbelts, wildlife corridors or greenways permanently preserved as farmland or open space.*

(Source: Policy Guide on Smart Growth, American Planning Association (APA))

Infill development and redevelopment, increased density, and the adaptive re-use of existing buildings can result in efficient utilization of land resources, more compact mixed-uses, and more efficient delivery of quality public services. Planning for Smart Growth in the future will take the cooperation of elected officials, City administration & department heads and developers to make Southfield more walkable, efficient, and inviting.

URBAN AGRICULTURE

> *Urban agriculture has grown from a grassroots movement, consisting of local farmers and gardeners, to become a new institution in forward-thinking communities around the globe. Scores of cities in the U.S. have amended their zoning codes to better regulate and accommodate this emerging trend and city-led initiatives to promote urban food production are increasingly common. (Brian Barth, Urban Agriculture, Inc.)*

The motives of the urban agriculture movement and the benefits associated with it fall into three broad categories:

Public Health Attributes

The health value of fresh versus processed food is well documented by nutritionists and public health advocates. However, in many disinvested urban neighborhoods, there is little access to fresh food for those who want it. In these "food deserts" full-service grocers have disappeared, leaving corner stores and "quickie" marts as the primary source of food. Making more fresh food available by creating incentives for urban farms and farmer's markets is not a silver bullet — other social and economic barriers also need to be addressed — but it has certainly sparked meaningful conversation on the subject within the communities where this has been attempted.

An Economic Development Tool

As with the benefits of urban agriculture to public health, there is room for debate on the question of urban agriculture as an economic development tool. Unfortunately there is a dearth of conclusive data on this point, but the idea has merit based on the anecdotal evidence thus far. New urban farms are unlikely to have the direct economic impacts of opening a large manufacturing center, for example, but there are other, less tangible economic benefits. At a minimum, urban agriculture fosters a healthy sense of

place, which is of great importance in blighted areas where small farms and gardens can make productive use of vacant land, even if it is only a temporary use. There is no doubt that they stimulate the growth of the local and organic food sectors and provide "green collar" jobs — the question is to what degree in comparison with the public investment in the industry.

Enhancing Urban Greenspace

Parks and other open spaces have made well-quantified contributions to public health and real estate values in urban areas; where they are accessible to the public, farms and gardens have the potential to do the same. A key difference is the degree of engagement that these productive landscapes foster in the surrounding community. Every city has its cherished parks, yet a tiny community garden can galvanize neighborhood pride in a similar way without the need for procuring a large tract of land and spending large sums of taxpayer money to develop it. Gardening is a recreational activity that fits neatly within the broad purposes of parkland, and a network of productive landscapes on publicly accessible land is like a municipal library system for outdoor education and community enrichment. (Source: Institutionalizing Urban Agriculture: Process, Progress, and Innovation, *By Brian Barth*)

Michigan has the essential building blocks of a strong and resilient food system including: land and rich soil, clean water, skilled farmers, and a climate that supports diverse agriculture. Yet, many of these resources are under threat. The attributes of our current dominant food system also have unintended damaging impacts on our environment, our health and our communities. (Michigan Association of Planning MAP)

The Michigan Association of Planning (MAP) Food System Policy has four components, including Urban Agricultural activities. For the purposes of *Sustainable Southfield*, we will focus on Urban Agricultural activities only, as applicable.

Summary and Background

Urban agricultural activities– the growing or producing of plants and animals within cities is increasing across Michigan. The Southfield Master Plan can have an important role in supporting these activities to ensure various forms of agriculture are appropriately integrated into the urban environment.

Currently, the City of Southfield permits "Farms and buildings" in Single Family Residential districts if they meet the following required conditions:

- Animals, including fowl, other than pets shall be housed in accessory buildings. No building or buildings shall be used or built for the housing of animals or fowl, other than pets, on the front half of any lot nor nearer than one hundred and seventy-five feet (175') to any adjoining dwelling nor nearer than fifty feet (50') to the dwelling of the owner thereof and, provided further, that no animals which are or shall be in any way noisy, obnoxious, unwholesome, destructive, dangerous, or offensive shall be kept, harbored or housed in any section of the City.

- The owner shall not permit any animal or fowl owned by him in his possession or control, to run at large in any street, alley or public place, or upon the premises of another without express permission of the owner or occupant thereof.

- It shall be the duty of the owner or person in possession or control or any animal or fowl, other than such animals or fowl as are commonly housed in a human dwelling as household pets, to provide, construct and maintain fencing devices reasonably designed or adapted to effectively exclude such animal or fowl from the area within five feet (5') of the property line of the owner of the animal or fowl.

- Goats and swine are currently prohibited in the City.

Most often, urban growers raise fruit and vegetable crops in relatively small home or community gardens. However, activities may also include tree orchard cultivation, grain production, bee-keeping, raising hens for eggs, raising goats, aquaculture, aquaponics, ornamental plant cultivation, hydroponic production, rainwater catchment and compost production. Structures such as passive solar hoop houses or heated green houses are also used to produce food through the winter months. Other forms include vertical farming (the use of planters which attach to wall facades and allow plants to grow vertically) or rooftop gardens (the use of raised beds or containers on flat roofs).

Urban agriculture can occur at many different scales and settings, which include:

- **Home gardens** are relatively small areas located on a parcel along with a primary residence.
- **Community gardens** are the primary land use on a vacant residential lot or park, school, church or other public/institutional property (i.e. Mary Thompson Farm).

- **Market gardens and commercial urban farms** are business oriented and are the primary land use on multiple lots and possible several acres in urban areas.

Both home and community gardens typically produce food for personal consumption, as a hobby or for educational purposes. Individuals, block clubs or school groups responsible for these gardens may choose to sell excess garden products either on-site or through nearby farmers markets. In contrast, market gardens and commercial urban farms produce food for consumption by those not engaged in agricultural activities on the property and sell garden products on site, at local farmers markets, and/or through local retailers.

Urban agriculture offers many benefits to residents, neighborhoods and communities.

- **Access to fresh food**, in areas not in close proximity to large grocery stores may inspire neighborhood residents, especially children to eat fresh produce.
- **Reclamation of underutilized land, possibly as a temporary use** on vacant, tax-reverted lots, and public property at recreation centers, senior centers, churches, schools, parks, public easements and right-of-ways.
- **As a community classroom***,* gardens can be a tool for teaching about science, math and the environment as well as job training venues and accessible entrepreneurship opportunities.
- **As green spaces**, urban agriculture helps reduce the heat island effect, mitigates storm water runoff and provides habitat for birds, bees, and butterflies. (Note: Plum Hollow Country Club has installed a bee hive for cultivating honey for its food services)
- **As social spaces**, urban agriculture offers recreational and therapeutic opportunities, enable immigrant communities to connect to their heritage, promote inter-generational interactions, and can even reduce neighborhood crime by encouraging street-level activity.

Michigan communities have an array of different urban agriculture programs, including selling garden kits for small raised beds (Growing Hope), facilitating a cooperative for gardeners to sell

at local markets ("Grown in Detroit") or to restaurants (Our Kitchen Table) and managing lot adoption processes to enable residents, churches, neighborhood associations and other groups to cultivate as gardens.

The following programs, processes and policies are available to help Southfield officials assess, plan for and regulate urban agriculture:

- **Community input**. Engage residents, home-owner groups & associations, growers and organizational stakeholders directly to help identify which of the many forms and scales of urban agriculture are best suited to which neighborhoods or zones.

- **Land inventories**. Survey community-owned land to identify and categorize potential sites for urban agriculture activities.
- **Ordinance reviews**. Review ordinances to assess whether home, community and commercial gardening activities, including keeping of animals, may present conflicts.

- **Zoning for urban agriculture**. Amend the Zoning Ordinance to expand urban agriculture where appropriate, consistent with *Sustainable Southfield* and the Future Land Use Plan. Many options are available and an appropriate approach should be identified based on Section and neighborhood characteristics. For example, urban agricultural uses may be permitted either by-right or by special land use permit in appropriate zoning districts, or Southfield may create new urban garden zoning districts. Overlay districts can also be used to explicitly permit urban agriculture activities in specific areas of the City that are appropriate.
- **Allowance for urban agricultural structure**. Explore if and where structures associated with urban agriculture, including tool sheds, hoop houses and barns, may be allowed

even without a primary residential or commercial building on site and designate them as permanent, temporary or accessory in ways that are supportive of farm and garden activities. These structures should be regulated in the same manner as other structures under existing ordinances and codes and must be appropriate for their location within the urban setting.

- **Access to municipal services**. Ensure municipal services, such as sewer, water and trash pick-up are available to market gardens and commercial urban farms in the same way that such services would be made available to other commercial or industrial uses. Similar services may be necessary for community gardens as well and, if possible, provided at a reduced cost.
- **Direct support**. Provide direct municipal support for urban agriculture through community departments, or community-run programs.
- **Compost**. Support composting programs that offer compost to urban agriculture sites or permit household and commercial composting to occur while also ensuring nuisances are not created as a consequence.
- **Long-term access to land**. Review leases, easements, trusts or other conveyances of community-owned land to promote the long-term and secure practice of urban agriculture where such a use is consistent with the community master plan and does not place an undue burden on cities to maintain under-utilized urban infrastructure (e.g., roads, water, and sewer constructed to serve more intense residential, commercial, or industrial uses).

The Michigan Association of Planning supports the following Urban Agriculture Policy Statements:

Urban Agriculture Policy Statements

1. planning strategies for urban agriculture through an inclusive planning process.
2. MAP supports conducting fiscal impact analysis of urban agriculture to evaluate its impact on the ability of communities to support existing infrastructure
3. MAP supports conducting land inventories to determine appropriate sites for urban agricultural uses according to soil quality and type, prior uses, lot size, slope, drainage and tree cover.
4. MAP supports developing appropriate regulations for urban agriculture that maximize the community benefits of local food production while minimizing the potential negative impacts in an urban setting.
5. MAP supports including designated garden space in affordable housing developments.

6. MAP supports establishing and expanding programs that support existing community gardens and encourage the creation of new community gardens.
7. MAP supports programs tailored to encourage community gardens that maintain traditional food cultures for immigrant and minority groups within cities.
8. MAP supports allowing sales or long-term leases of land identified as appropriate in local master plans for the purposes of urban agriculture
9. MAP supports establishing land use policies that promote secure community garden and/or market garden/urban farm tenure on land deemed appropriate by the local master plan and determined to be suitable based on fiscal impact analysis.
10. *Local Actions*
11. MAP supports accommodating urban agricultural activities in land use regulations for example, urban agriculture overlays and garden districts in keeping with community desires as determined through a public engagement process and where specific criteria are set forth to protect the public health, welfare and safety.
12. MAP supports regulations on the scale and size of urban agricultural activities as well as appropriate measures to control noise, odor and safety in keeping with community desires as determined through a public engagement process.
13. MAP supports local ordinances to allow residents to keep small numbers of chickens, goats and bees with appropriate measures to control odor and noise and maintain public health, safety and welfare in keeping with community desires as determined through a public engagement process.

(Urban Agriculture Source: Michigan Association of Planning)

Principles of a Healthy, Sustainable Food System

Adopted jointly by: Academy of Nutrition and Dietetics, American Nurses Association, American Planning Association, and American Public Health Association.

A healthy, sustainable food system is:

- Health-promoting
- Sustainable
- Resilient
- Diverse
- Fair
- Transparent
- Economically-balanced

Food Systems

Food is an essential human need. Easy access to healthy food is good for human health. Sustainable food systems are essential for healthy, sustainable communities.
Source: Regional Food Systems: Overview and Opportunities, by Laura Goddeeris, Kathryn Colasanti, & Liz Gensler, Planning and Zoning News, January 2013.

Michigan Good Food is a statewide comprehensive policy initiative that envisions "a thriving economy, equity and sustainability for all of Michigan and its people through a food system rooted in local communities and centered on good food…" Food should be healthy, natural, affordable, and accessible. Table 2-2 highlights the Michigan Good Food Charter Agenda Priorities for local governments:

Table 2-2: Michigan Good Food Charter Agenda Priorities

TYPE	AGENDA PRIORITY
Community-based	*Expand and increase innovative methods to bring healthy foods to underserved areas as well as strategies to encourage their consumption.*
	Improve school food environments and reduce school sales of low-nutrient, high-sugar, high-fat and calorie-dense foods through snack and vending machines or competitive food sales.
	Maximize use of current public benefit programs for vulnerable populations, especially children and seniors, and link them with strategies for healthy food access.
	Provide outreach, training and technical assistance to launch new grocery stores and improve existing stores to better serve underserved people in urban and rural areas.
Land-Based	*Establish food business districts to encourage food businesses to locate in the same area and to support their collaboration.*
	Use policy and planning strategies to increase access to healthy food in underserved areas.
Land-Based	*Review and seek appropriate revisions to state and local land use policies to preserve farmland and blend protection with farm viability.*
Market-Based	*Encourage institutions-including schools, hospitals, colleges and universities-to use their collective purchasing power to influence the food supply chain to provide healthier food and more foods grown, raised and processed in Michigan.*

Source: Regional Food Systems: Overview and Opportunities, by Laura Goddeeris, Kathryn Colasanti, & Liz Gensler, Planning and Zoning News, January 2013.

For more information, visit: www.michiganfood.org

To provide greater access to healthy foods, Southfield should encourage and permit the following land uses and activities:

- Community Gardens
- Farmer's Markets
- Mobile Vending of healthy food
- Residential gardens and small residential farms

Active Living

> *Active living is a way of life that integrates physical activity into daily routines. The goal is to accumulate at least 30 minutes of [heart healthy] activity each day. Individuals may achieve this by walking or biking for transportation, exercise or pleasure; playing in the park; working in the yard; taking the stairs; and using recreation facilities. (A Primer on Active Living by Design, Robert Wood Johnson Foundation, 2004)*

Active living communities make it easy for people to include physical activity in their daily lives. Walking to work, school, the store, or just for fun is safe and convenient. Bicyclists are respected, and roads are built for all forms of transportation, not just cars. Recreation opportunities are accessible—parks, playgrounds, and all kinds of sports facilities are located near people's homes and are open to all residents. (Source: *Design Guidelines for Active Michigan Communities*, 2006)

Table 2-3 provides a summary of guiding principles that may encourage Southfield residents to adopt an active living lifestyle:

Table 2-3: Principles to Encourage Adoption of an Active Living Lifestyle

Guiding Principles	Comments
Transportation Begins and Ends with Walking	For virtually every trip—from home to the store, from the car to the office, from the office to a lunch date—at least part of the trip is on foot. For those who are able, walking is common to all forms of travel.
Plan for Your Most Vulnerable Populations	Regular physical activity should be a lifelong goal for everyone, but many cities and towns have hurdles that limit activity for some people. When planning for facilities and infrastructure, keep in mind the needs of children as well as elderly and disabled residents.
Complete Your Streets	Make sure that streets work for all users, not just for those in vehicles. A *complete street* fully accommodates pedestrians by providing safe and accessible sidewalks, well-marked crosswalks, street lighting for safety, and tree shade for comfort. The street should employ design elements or traffic calming techniques that slow cars. For bicyclists, a complete street provides marked bike lanes or wide curb lanes, marked bicycle routes, and signs advising motorists of the presence of bicyclists.
Create a Transportation Network with Many Connections	A robust transportation network links valued destinations through a variety of means and routes. More connections mean shorter distances between the places you want to go and thus less time to get to your destination. A network offering multiple modes of transportation also can make it easier to get places.
Ensure Equitable Access to Opportunities for Activity	Active living design provides people of all means with close and easy access to areas that enhance physical activity, such as parks and trails.
Build with Safety and Security in Mind	Physical activity has two precursors: safety and security. Good design and maintenance are essential to feeling safe and secure.
Embrace Downtowns, Density, and Mixed Use	Density is the critical ingredient of an exciting built environment. Density means there are enough people and attractive destinations close enough together to encourage enjoyable life on a street. Mixing land use encourages active living by bringing people's homes and work closer to the other places they want to go, then making it easier to walk or bike.
Remember That Aesthetics Matter	Physical activity is positively associated with pleasing environments. Quality buildings, streets, and landscaping—trees, shrubs, flowers, and other plantings— make a community a more appealing place to be active (Kaplan and Kaplan, 1989; Kaplan et al., 1998).

***Mindmixer Highlight**: Improving bike and pedestrian connectivity was a top response on Community Priorities (Week 1, Question 1). It was the idea that most frequently and consistently appeared over a range of topics including Trails/Walkability, Urban Design, Parks & Open Space, Placemaking, and Infrastructure.*

The guiding principles above should be incorporated into public projects and site plan review of private developments. More specifically, Southfield should promote and adopt the following actions to shape the built environment to encourage more physical activity:

- *Make arterial roads more walkable by installing sidewalks on both sides of the road and crosswalks every 600 feet (or about the length of a downtown city block). Build median refuge islands in very wide roads, and plant street trees to slow motor vehicle traffic.*
- *Implement "road diets" to accommodate bicyclists. Road diets narrow the width of motor vehicle traffic lanes by restriping roads and adding designated bike lanes.*
- *Develop higher-density business centers or centralized shopping areas by encouraging in-fill development (such as building a mixed-use retail/residential center on a vacant lot, parking area, or failing shopping center) or increasing the density of existing structures (through additional stories).*
- *Use public art, banners, landscaping, and distinctive street lighting to brand these village centers as desirable destinations.*
- *Allow and encourage mixed uses, in particular the development of areas that mix residential, commercial, and non-industrial employment uses. This can be done with both new and redevelopment projects.*
- *Enhance connectivity by building walking paths between subdivisions and through neighborhoods with cul-de-sacs.*
- *Establish funding mechanisms to further develop common open spaces, such as parks, greenways and trails.*
- *Collaborate with neighboring local government units to plan shared-use trail systems and greenways.*

(Source: *Design Guidelines for Active Michigan Communities*, 2006)

AGING IN COMMUNITY POLICY

> *America is aging — rapidly. Older adults — 65 and over — represent 13 percent of the population today. By 2030, one in every five people living in the US will be over the age of 65. This aging of America is fueled by 72 million baby boomers aging through the life cycle in combination with a profound increase in longevity. Average life expectancy doubled from the mid-thirties in the 19th century to age 78 today. Currently there are more than 70,000 centenarians in the United States, roughly four times the number from just ten years ago. And according to the U.S. Census, that number will likely exceed 1 million by 2050. (Source: Policy Guide on Aging in Community (Adopted July 18, 2014, American Planning Association (APA))*

The City of Southfield's population of older adults (65+) represents 18.6% of its population (2015 SEMCOG Forecast), which is higher than the national average, and is expected to grow. We want to provide our seniors with the ability to live as independently as possible. For some, this means growing older in a long-time home; for others, it means transitioning to a more appropriate and supportive setting but still in the City. During a lifetime, people develop connections to place and form important social relationships within their neighborhoods and communities. Sustaining these relationships plays an important role in aging well.

Southfield's aging population presents both a challenge and opportunity to transform and improve our community. It will bring profound challenges to health care and social services, housing and transportation, the workforce and retirement safety net and every aspect of life. It is also an extraordinary opportunity to create healthy environments that encourage active lifestyles so all residents may thrive.

Thus, the City of Southfield should incorporate APA's guiding policies wherever possible:

APA's GUIDING POLICIES for Aging in Community

A. **Actively Involve Older Adults and Engage the Aging Perspective in the Planning Process.** Older adults are the experts on their own lives, so effective planning in all dimensions—physical design, social and community supports—must involve older adult participation on an ongoing basis. Older adults are producers, consumers, leaders, community and family members, and when their potential is maximized, people of all ages benefit. Planners also must take a lead role in bringing together leaders across sectors to assess and plan for the needs of older adults living in their jurisdictions.

B. **Ensure a Range of Affordable Housing Options are Available for Older Adults.** The promise of aging in community can be challenging to deliver. Communities should make provisions for ensuring a continuum of housing options to support older adults ranging from those who are fully independent to those requiring progressively more assistance in daily life. Policies and programs should promote affordability, safety and accessibility, incorporate enabling design-based home and energy efficiency modifications, and foster upkeep and sustainability of the housing stock. The design of homes should be adaptable and allow different generations or household types to live in a single home, as well as allow for technologies, devices and in-home management systems that optimize active aging. In addition, planners will need to work diligently to ensure access to fair housing, and address the disparate impacts of housing location and availability for elders of all races and incomes. There may also be an exit of older adults from homeownership as they seek to relocate, downsize, or withdraw from the housing market. [City officials] need to anticipate and prepare for this transition.

C. **Ensure Access to Quality Transportation Options for Older Adults**. A range of transportation choices, including grassroots services such as shared autos, is critical for older adults to be able to maintain their independence. Transforming transportation systems to maximize connections with land-uses critical to older adults, particularly housing, health care, and human services will enhance the livability of our communities. Viable transportation options can directly benefit older adults, their caregivers, and health care workers, and emergency responders. Funding mechanisms should support new and improved transportation options. Funding and appropriate design of transportation components such as benches, bus shelters, good lighting, cross walks that are well marked, and crossing signals with adequate time to cross for persons of all abilities is essential. The cross- disciplinary education of planners, transportation engineers, and the people who use transportation systems in support of increasing these choices is imperative. When transportation systems are properly designed and implemented, they can help individuals maintain their independence and mobility by ensuring accessibility to destinations important to older adults. This includes the maintenance of sidewalks and lights for safe and walkable neighborhoods.
D. **Use Land-Use and Zoning Tools to Create Welcoming Communities for Older Adults.** In many communities, planning for an aging population often has been limited to concerns over providing space for nursing homes and age-restricted housing. As planners, we recognize that the location of where we develop or re-develop housing is equally as important as what type of housing we build, as is proximity to essential goods and services. Policies, investments, and new tools such as form-based codes should help create a built environment that intentionally provides opportunities for older people to

easily participate in community life and activities. This allows them to age in community and not in isolated age specific enclaves. Because mobility limitations may increase with age, it is important to facilitate quality of life for older adults by creating mixed-use, well connected neighborhoods with access to health centers, pharmacies, grocery stores, parks and cultural activities. This includes the maintenance of sidewalks and lights for safe environments, walkable neighborhoods, and natural areas to recreate. Redevelopment should occur in areas with an existing network of community supports and services.

E. **Support the Economic Well-Being of Older Adults and their Caregivers.** Local economic development policies and planning should address the needs of community members of all ages and income levels. When economic development policies and local businesses recognize the needs and assets of older adults as consumers, workers, mentors, and entrepreneurs, resilient economies are built. Additionally, formal and informal caregivers represent a large and largely invisible and undercounted component of local economies. Caregivers should be recognized and considered in planning, land-use, and economic policy development. Home care workers, in particular, need access to efficient transportation and affordable housing options.

F. **Strengthen the Community Assets of and Supports for Older Adults.** Planners need to design policy and planning responses that address the needs of older adults—particularly, those at-risk of homelessness—and also take advantage of the contributions of older adults in all community contexts. Inadequate physical design must be recognized as a barrier and addressed to ensure segments of our society are not excluded. Community services and the assets that older adults and their social networks represent are key complements to physical design. Older adults have the skills, connections, and time to put toward helping their communities and are looking to keep active and remain engaged in civic life. Communities that incorporate opportunities and services for older adults in all aspects of zoning and economic, land-use, and transportation planning will allow older adults and their families to engage more fully in community and economic activities, reducing the individual and societal costs of institutionalizing older adults who could be better cared for in community settings. Moreover, community inclusion of older adults will reduce both individual and societal costs associated with institutionalization. Greener buildings may also improve the health of their occupants. (For additional APA policy references see: http://planning.org/policy/guides/).

Now is the time to start to ensure that our older adults can live as independently as possible in Southfield and that they have options for housing and “continuum of care” close to their long time homes, family and friends.

Hazard Mitigation

The following narrative is taken from the American Planning Association's Hazard Mitigation Policy to help guide the City of Southfield to improve the City's preparedness, resilience and sustainability in the face of both natural and human-caused hazards:

Hazard Mitigation vs. Adaptation vs. Response/Recovery

Community resilience is a three-legged stool comprised of Mitigation, Adaptation and Response/Recovery. Hazard Mitigation comprises a series of actions that lessen the severity or intensity of the hazard when it strikes. Adaptation entails modifying the environment or structure to make it more suited to changed or changing conditions and situations. Response/Recovery is the response after an event to return to or restore to the previous condition and in many cases to produce a better state. All of these are necessary components of resilience and a plan that focuses on one to the exclusion of the others will not support true resiliency.

Most hazards planning have, heretofore, focused on mitigation and emergency response. By ignoring adaptation strategies and failing to plan for response and recovery, such a strategy leaves communities vulnerable to even greater risk and costs, and thus less resilient. The Gulf Coast has learned this lesson repeatedly in recent decades; rebuilding coastal communities following hurricane events only to be forced to rebuild them again following subsequent storms. Hurricanes Katrina in 2005 and Sandy in 2012 crystallize this lesson. In most cases, evacuation, emergency response, mitigation and recovery plans were either not in place or were inadequate. The affected communities may have thought they were prepared; however, that preparation could not overcome the force of these storms. Decades of land-use and infrastructure construction decisions that often focused on being able to bounce back successfully from a disaster could not cope with the wind and water these storms brought with them. This failure to prepare has led the communities affected by these storms to begin thinking about adaptation in the face of threats, rather than just mitigating their impact. While it is good that the thought process has begun, for the most part the mindset continues to be to rebuild in place.

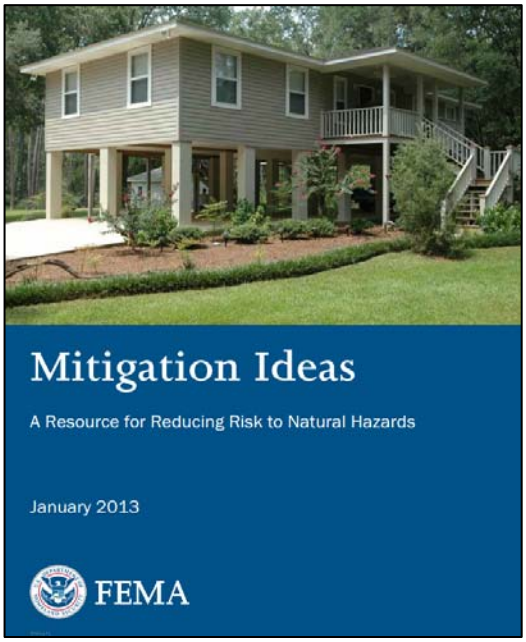
Certain events tend to have similar and predictable impacts from each occurrence. Coastal flooding for example usually recurs in much the same location and those areas are fairly predictable. Another example is widespread power outages that have occurred

most frequently in the Northeast and across the upper Midwest for reasons easily understood by analyzing the power supply grid. Other hazard events are far less predictable though in some cases the ability to provide at least some warning is improving—tornados, earthquakes and tsunamis are examples—but geography and past experience allow us to recognize that certain locations and times of the year are more prone to hazards than other times or locations. And thus, it is no longer acceptable to simply deal with the situation when it occurs.

Appropriate "all hazards" planning and preparedness demands that we ask and answer two additional questions:

- *How do we adapt to reoccurring events?*
- *How do we recover better, stronger and more resilient from events so that the next and subsequent events are less disruptive and damaging?*

Continuing to do things the same way as the past is no longer acceptable. Appropriate change in land-uses, densities, development techniques, building codes, utility locations and installation methods, infrastructure investments, and similar considerations need to be brought to the forefront of the City's discussions about how to prepare for and respond to changing conditions. Moreover, discussions of resilience too often focus on the physical aspects of a community – roads, bridges, homes, businesses, community buildings, hospitals, water and wastewater plants, and the like. However, social and economic resilience is perhaps more important and, as such, social and economic vulnerability identification should be a part of mitigation planning.



FEMA Mitigation

In January 2013, FEMA *released Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards.* The purpose of this document is to provide a resource that communities can use to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters. The focus of the report is mitigation, which is action taken to reduce or eliminate long-term risk to hazards. Mitigation is different from preparedness, which is action taken to improve emergency response or operational preparedness.

Mitigation actions in the report are summarized into four types:

1) Local Planning and Regulations;
2) Structure and Infrastructure Projects;
3) Natural Systems Protection; and,
4) Education and Awareness Programs.

The report is intended to be a starting point for gathering ideas and as an initial source for identifying actions. Communities should seek innovative and different ideas for reducing risk that meet their unique needs. It is recommended that the City of Southfield review this resource and develop an Action Plan to address mitigation to reduce natural hazards and disasters. For more information see Appendix C.

Parks and Recreation

The mission of the Southfield Parks and Recreation Department is to provide excellence and equal opportunity in leisure, cultural and recreational services to all of the residents of Southfield. Their purpose is to provide safe, educationally enriching, convenient leisure opportunities, utilizing public open space and quality leisure facilities to enhance the quality of life for Southfield's total population that might not otherwise be available.

The City is responsible for the management of 775 acres of parkland and historic & cultural sites throughout the City. Of the total, 407 acres (53%) represent developed park or historic sites and 344 acres (44%) include open space and nature preserves. The remaining 3% contain undeveloped sites. The 126 acre Valley Woods Nature Preserve, the City's flood plain property along the Rouge River corridor, accounts for 37% of all nature preserve properties and 16% of all park properties.

The City further classifies its parklands into five categories:

Community Parks and Recreation Facilities (25 acres or greater)

Community parks and recreation facilities are intended to provide all residents with special leisure opportunities. Community parks may contain a wide variety of recreational facilities to meet the diverse needs of all residents throughout the community. Such parks may contain parking lots, and areas for both active and passive recreation.

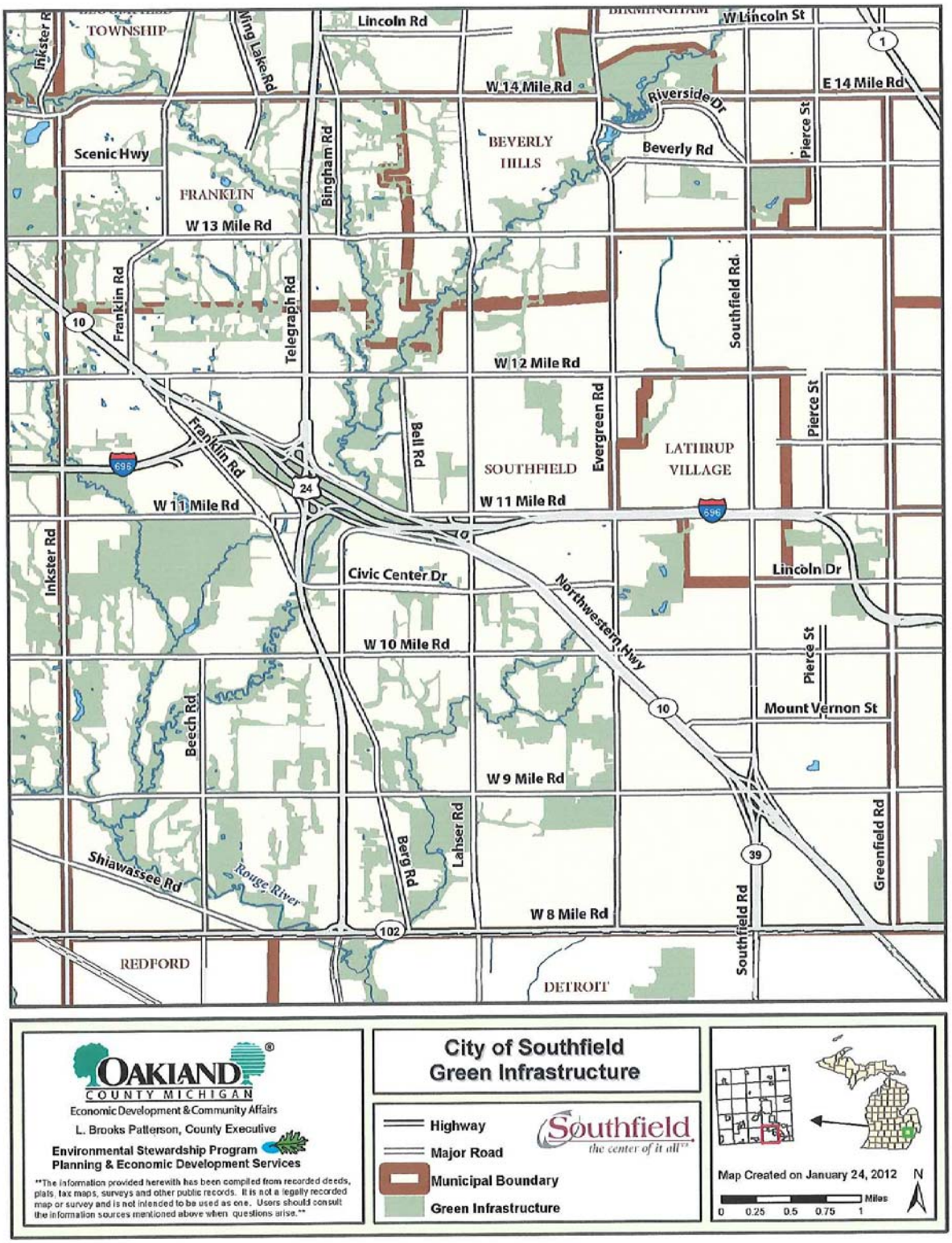
Neighborhood Parks and Community Centers (3-24 acres)

Neighborhood parks are typically multi-purpose facilities that serve as the focus of recreation activity for the more immediate neighborhood around the park; typically a one-mile square township section, bounded on four sides by major roadways. Facilities may or may not include a small parking lot, playlot, seating, picnic facilities and some athletic facilities such as ballfields or basketball courts.

Small Parks (less than 3 acres)

Small parks are three acres or less in size and may represent only a single lot. Their purpose is dependent on their location, size and the needs of the immediate area. They may be developed as urban parks, neighborhood play areas, community gardens or as passive green space.

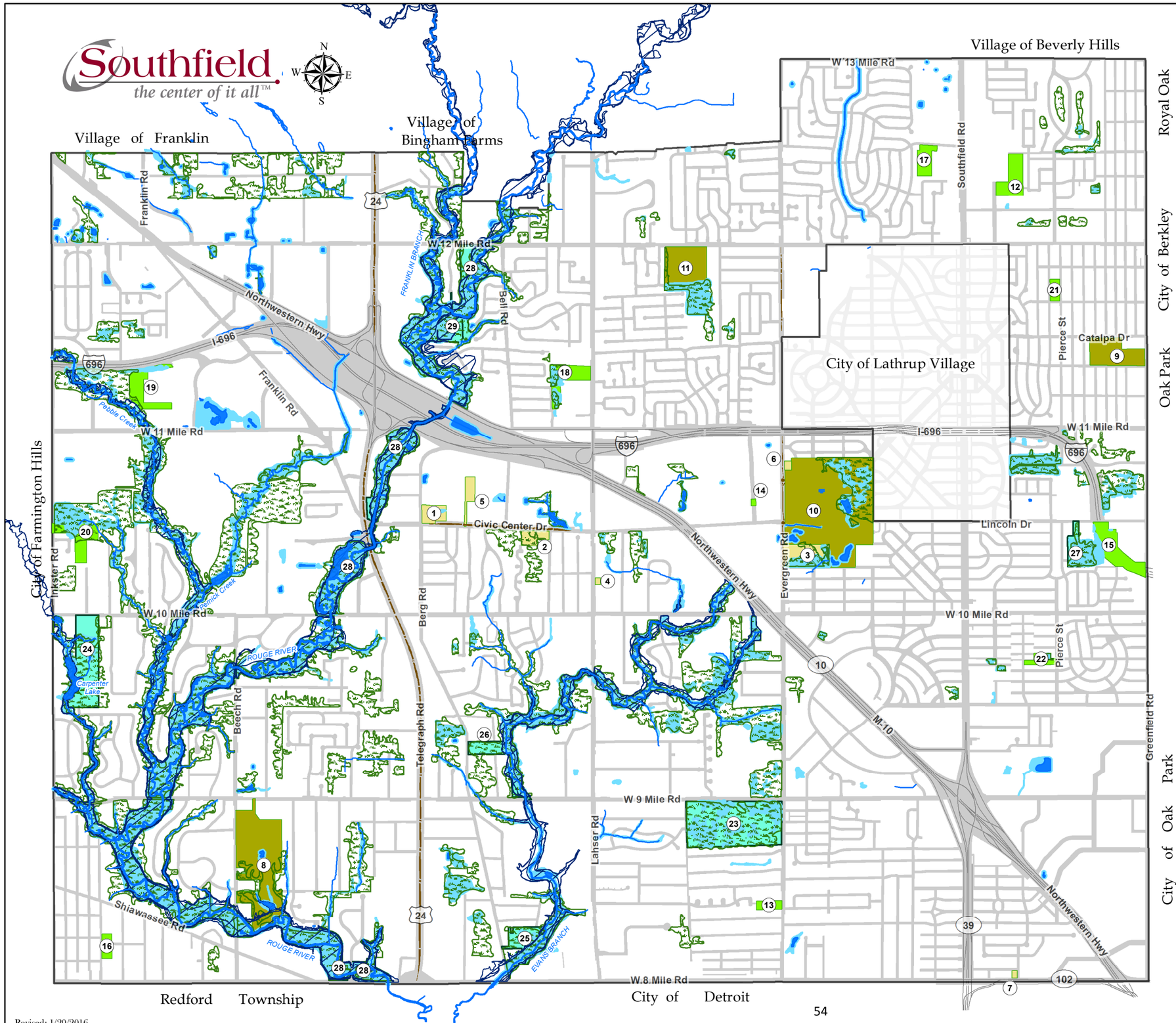
Map 2-1: City of Southfield Green Infrastructure



Southfield
the center of it all™

Sustainable Southfield

Map 2-2: Natural Features, Parks & Open Space



Label	Name
1	Burgh Historical Park
2	Code House
3	Mary Thompson House & Farm
4	Pioneer Cemetery
5	Southfield Cemetery
6	Southfield Reformed Presbyterian Church
7	Baseline Plaza
8	Beech Woods Park
9	Catalpa Oaks, Oakland Co. Park
10	Civic Center Park, Sfld Municipal Campus
11	Inglenook Park
12	Bedford Woods Park
13	Brace Park
14	City Centre Plaza
15	Freeway Park
16	John Grace Park & Community Center
17	John R. Miller Park
18	Lahser Woods Park
19	Pebble Creek Park
20	Robbie Gage Memorial Park
21	Simms Park
22	Stratford Woods Commons
23	Bauervic Woods Park
24	Carpenter Lake Nature Preserve
25	Horsetail Woods Nature Preserve
26	Hunter's Lane Woods Nature Preserve
27	Lincoln Woods
28	Valley Woods Nature Preserve (VWNP)
29	Berberian Woods in VWNP

Waterbodies
FEMA Flood Hazard Areas
Woodlands
Large Medians
Wetlands
Historical & Cultural Sites
Community Parks
Neighborhood Parks & Recreation Centers
Nature Preserves

Miles
0 0.5 1 2

Draft 3/1/16

1 inch = 2,858 feet

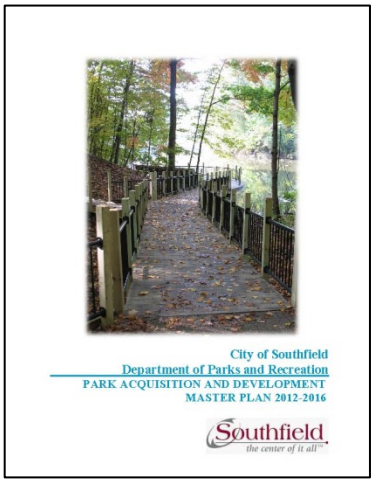
Revised: 1/20/2016

Nature Preserves and Open Space

Nature preserves (e.g. Carpenter Lake) may be of a variety of sizes, and have a primary focus of preserving and protecting natural areas in the City while still providing access to nature by the public. Other recreational facilities may exist on a nature preserve properties if they do not conflict with the parks primary purpose including parking areas, trails, nature centers, wildlife observation areas, fishing piers, picnic areas, rest room facilities, and small play areas. Some natural areas may be left undeveloped and held as open space only for green buffers, wildlife and floodplain recharge areas.

Historical and Cultural Sites

Southfield historic and cultural sites are primarily utilized for passive areas and specialized recreation such as the gazebo concert series and senior gardens.



For more information on the City of Southfield Department of Parks and Recreation, please see Park Acquisition and Development Master Plan 2012-2016 (Adopted March 28, 2011).

The Park Acquisition and Development Master Plan 2012-2016 is valid with the Michigan Dept. of Natural Resources through Dec. 31, 2016.

Arts Commission

There is greater public awareness of the importance of public space, and the role of public art in creating great places. The end result should be a space that's flexible enough to make room for many different communities, and encourage connections between them. (Placemaking: Share Focus on Place Builds Vibrant Destinations, Project for Public Spaces, published March 5, 2013, Sustainable Cities Collective)

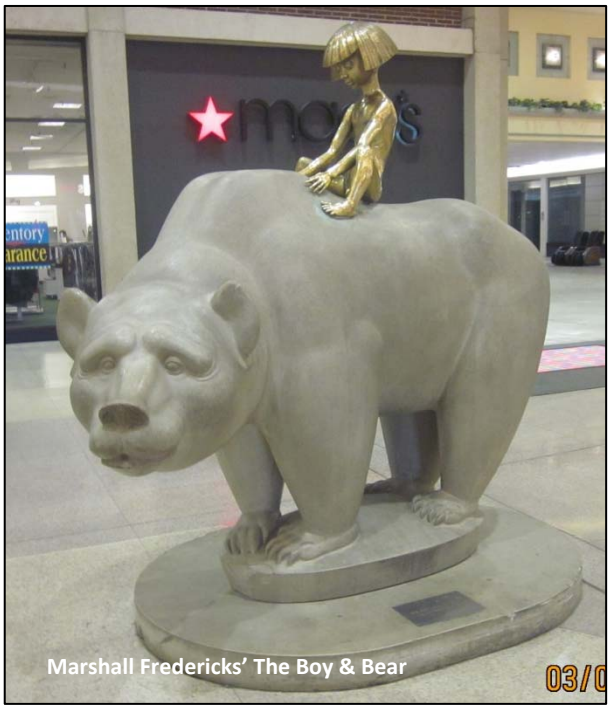
In October 2014, the City Council re-established an Arts Commission.

It is the purpose of the Arts Commission to promote the public welfare and to serve the public interest, convenience, and enjoyment through the promotion of the arts in the City of Southfield, by establishing physical works of art in public places throughout the City. It is further determined that the promotion of public art can help to build the economy of the City through promotion of tourism and economic development, enhance the City's character and identity, promote the cultural heritage and artistic development of the City, expand the opportunities for residents to experience public art, and improve the lives of its citizens through the humanization and individualization of public spaces and structures. In furtherance of these goals, the City Council has determined the need to form a public arts commission to advocate for, promote and participate in the establishment, selection and installation of public artwork in the City.

Specifically, the Commission shall:

(1) Encourage and stimulate citizens, developers, landowners, contractors and architects to provide and support displays of works of art for public enjoyment;

(2) Develop and promulgate a comprehensive public art plan for the City. The plan will list long term objectives of the Commission in carrying out its purpose as established herein; establish criteria for the selection of artists and works of art; create a list of potential locations throughout the city for the placement of works of art and develop standards for the placement thereof; develop a list of priorities for the funding of various public art projects throughout the City; identify the existing inventory of public works of art; and create standards and guidelines for public accessibility and safety. Upon completion of the plan, the Commission shall present same to the City Council for review and approval;


Marshall Fredericks' The Boy & Bear

(3) Reinforce the City's place-making goals by commissioning works of art

that are distinctive, yet particularly reflect and promote the City's identity or the identity of individual neighborhoods or business districts within the City;

(4) Ensure that public works of art are compatible in scale, material, form and content with their intended surroundings;

(5) Assure that within the overall public art program reasonable diversity is attained in style, scale, media, and materials represented;

(6) Establish guidelines for site selection, maintenance programs for ensuring the structural integrity and aesthetic quality of the site and any work of art, including the removal of any work of art;

(7) Raise funds for the acquisition and installation of public works of art through the application of grants, private sponsorships, donations, and other fund-raising strategies; explore the establishment of a subcommittee whose primary focus will be to undertake and promote a capital fund-raising campaign in support of the Commission's purposes hereunder. All funds raised will be held by and in the name of the City, but will be held in a trust account entitled "public art fund".

(8) Identify opportunities for acquisition of public works of art to be situated within the City;

(9) Develop a process for the solicitation, acceptance and placement of public works of art by the City;

(10) Develop relationships with artists, galleries, museums, art professionals, architects, community members, other governmental entities, businesses and the City Planning Department to establish public works of art priorities in the City;

(11) Create and implement a community education and outreach program regarding public art;

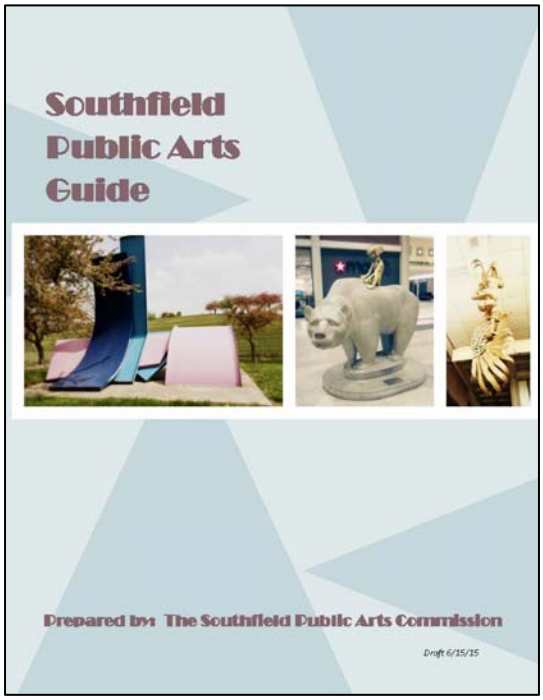
(12) Collaborate with City staff through the City Planner and private project development within the City to promote and enhance the inclusion of public works of art within the development, where appropriate;

(13) Promote community identity through public works of art within neighborhood and business districts.

(14) Promote the economic vitality of the City through a broad range of public art projects;

(15) Submit to the City Council on a least a quarterly basis a written report detailing the activities, accomplishments, and a description of how such activities have achieved the objectives of the Commission.

To these ends, the Public Arts Commission has prepared the Southfield Public Arts Guide (draft 9/30/15), which was presented to City Council in October 2015. The Guide includes an inventory of existing public and private art; recommendations for placement of new art (including art acquired from Northland Mall); guidelines for maintenance and restoration; and an artist donation form & art educator registration form.

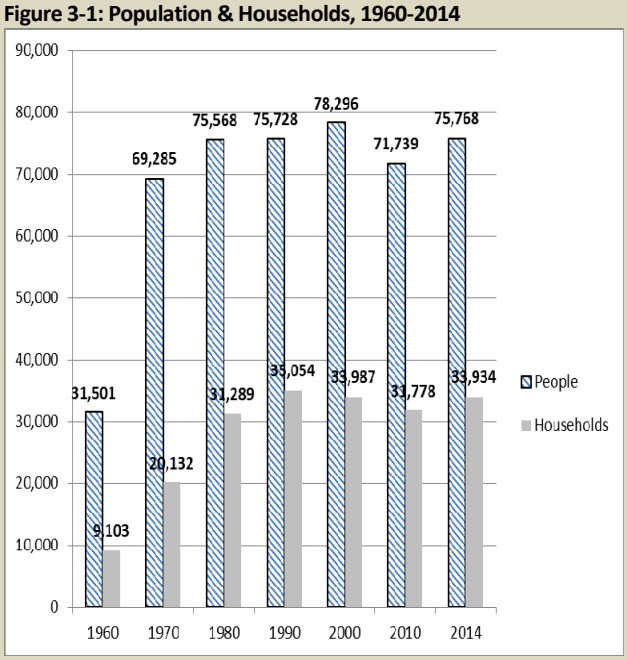


CHAPTER 3: POPULATION TRENDS

GOALS

- *Prepare to meet the needs of the future population in specific age groups.*
- *Acknowledge the diversity of Southfield's population through sponsored acknowledgments or festivities.*
- *Support area educational organizations to exceed the County's average education attainment level.*

Figure 3-1: Population & Households, 1960-2014



Source: U.S. Census Bureau, SEMCOG Regional Forecast

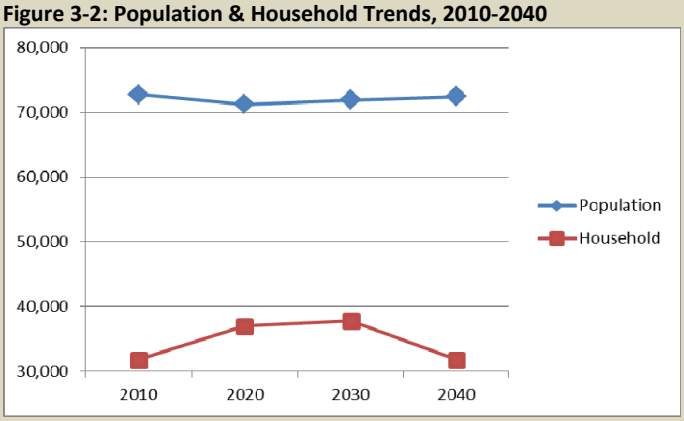
Current Conditions

Understanding demographic changes over time helps provide a better picture of what the future may hold for a community. Analyzing past and present demographic, social and economic data may help Southfield anticipate future land use patterns and community needs. This Comprehensive Plan uses a wide range of community data as a foundation to provide guidance for both land use and development decisions. This Plan uses the most current information available, including the 2010 US Census of Population and Housing, 2014 Population Estimates, and local and regional information (from SEMCOG) to more accurately reflect current conditions and trends in Southfield.

Population Trends

In 1950, Southfield Township had approximately 18,500 residents and comprised 36 square miles, containing land that is now the Cities of Southfield and Lathrup Village and the Villages of Bingham Hills, Franklin, and Beverly Hills. Between 1950 and 1960, the cities and villages in the township began incorporating during a period of rapid growth. In 1958, at the time of Southfield's incorporation, the City had approximately 29,000 citizens.

Figure 3-2: Population & Household Trends, 2010-2040

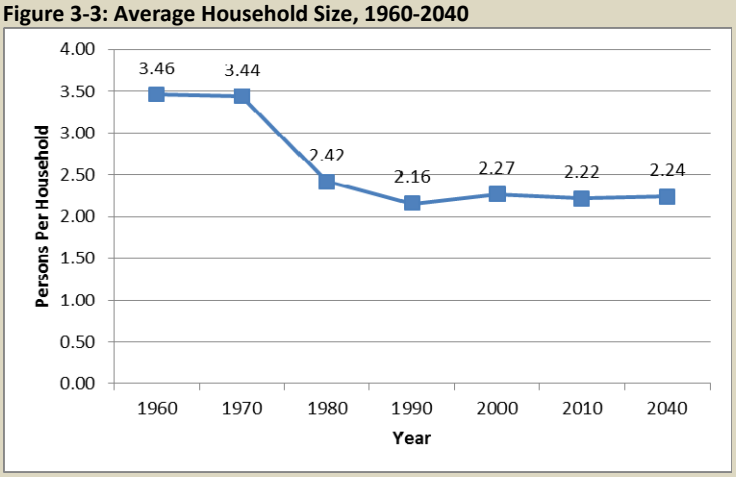


Source: SEMCOG Regional Forecast

As a first ring suburb of Detroit, he City of Southfield experienced major growth during the auto-dominated 1960's. As a matter of fact, Southfield was the fastest growing community in Michigan during this period. By 1970 the City had grown to nearly 70,000. Southfield's population reached more than 75,000 by 1980, but growth was already slowing considerably. The population growth of Southfield can be seen in Figure 3-1, which depicts the growth spurt between the time of the City's incorporation and 2000 with the first decrease in overall population in over 50 years being reported in 2010 and a significant increase between 2010-2014.

As of December 2014, the City of Southfield had an estimated 75,768 residents, according to the Southeastern Michigan Council of Governments (SEMCOG). This figure is up 5.6% from the population reported by the US Census Bureau for the year 2010 (71,739); the recently released 2040 Forecast for Southeast Michigan by SEMCOG predicts that the population will decrease only slightly over the next 30 years. As depicted in Figure 3-2, SEMCOG forecasts that the population will decrease to approximately 72,418 by 2040, an overall decrease of 4.4% from the 2014 population estimate.

Figure 3-3: Average Household Size, 1960-2040

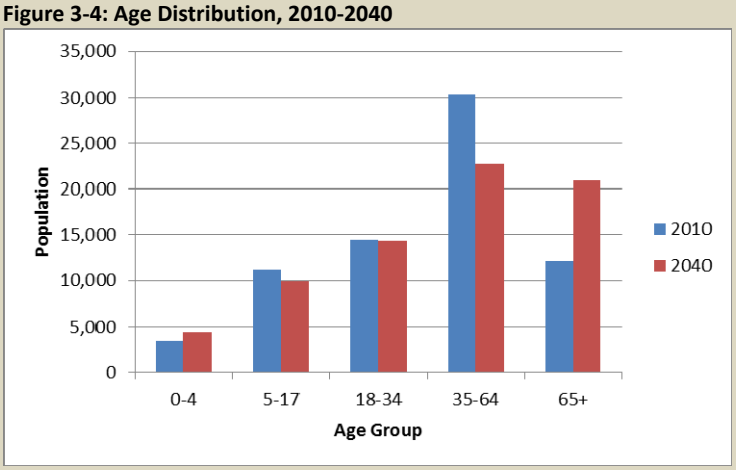


Source: SEMCOG Regional Forecast

Household Trends

The US Census Bureau defines a household as all persons inhabiting a housing unit. Households can include one or more families or one or more unrelated persons who share living quarters. The greatest change to average household size occurred between 1970 & 1980. Southfield's number of households is forecasted to remain mostly unchanged which is consistent with its population pattern. Between 2010 and 2040, the average household size is forecasted to increase from 2.22 to 2.24 persons per household, as seen in Figure 3-3.

Figure 3-4: Age Distribution, 2010-2040



Source: US Census Bureau (2010) & SEMCOG Regional Forecast (2040)

Age

Table 3-5: Retirement Population, 2015 (ages 65+)

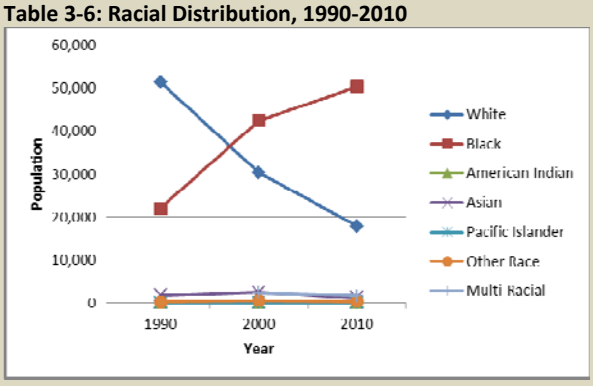
Community	%
Southfield	18.6%
Oakland County	15.3%
Metro Detroit	15.3%

Source: US Census Bureau (2010) & SEMCOG Regional Forecast (2040)

The age distribution of the City's residents has been slowly changing (see Figure 3-4). The aging of the baby-boomer generation greatly impacts the community's age distribution over time. This effect is seen by the increases in the 35-64 age bracket. The share of residents in the 35-64 age group is forecasted to decline significantly as the baby boomer generation advances into the 65+ group. The result of this expected shift is a population that will be more equally distributed across the age categories. Southfield already has a higher proportion of residents in the 65+ age group than Oakland County, metro Detroit, and the State of Michigan, as seen in Table 3-5. This number will only increase with time, and this must be noted as this age bracket generally requires costly public services. As this growth occurs, the City must adapt by providing services to meet their changing needs.

Race

Table 3-6: Racial Distribution, 1990-2010



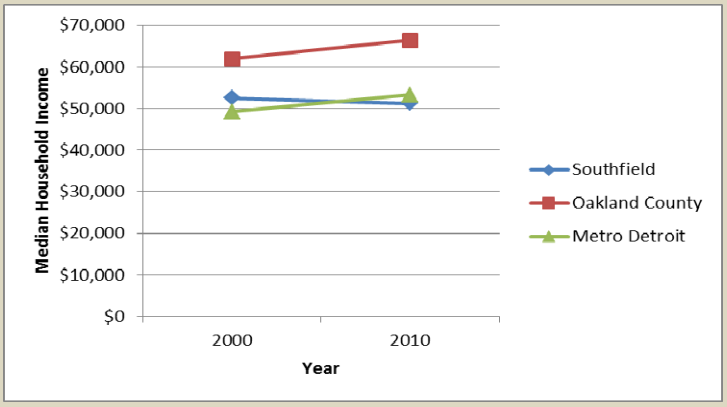
Source: US Census Bureau

In 2000, Southfield had a racial mix consisting of over ½ of the total population being black, just less than ½ being white, and the remainder being made up of other ethnicities. Between 2000 and 2010, the number of white residents declined by 12,555 or 41%, according to the US Census Bureau, as shown in Table 3-6. During the same period, the black population increased by about 8,000. This shift, which was a continuation of the trend from the 1990 Census, has resulted in the City's once minority black population now comprising more than 70% of all Southfield residents. This trend is consistent with other communities across the Detroit metro area, as the suburbs of Detroit gained nearly twice as many black residents between 1990 and 2010 than any other racial or ethnic group. Southfield continues to have one of the highest concentrations of black residents in the metro area.

Income

Southfield's residents are primarily middle-class. In constant dollars, the median household income fell approximately 25.4% over ten years to $51,201, as seen in Figure 3-7 & Table 3-8. Southfield has a lower median household income than the Detroit metro area (4% lower) as a whole for the first time in recent years. Incomes in Southfield are approximately 23% lower than in Oakland County on the whole ($66,390). One explanation for the drop could be explained by the City's higher proportion of older residents which tends to suppress median income because retirees generally have less income than working households.

Figure 3-7: Median Household Income, 2000-2010



Source: US Census Bureau

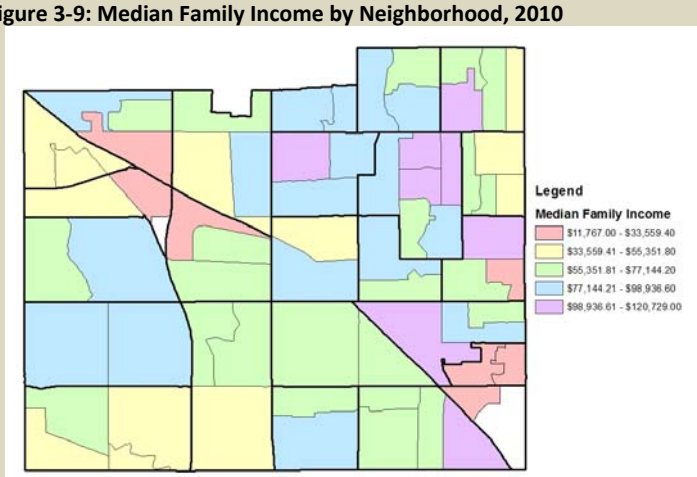
Table 3-8: Median Household Income, 2000-2010

Community	2000	2010
Southfield	$52,468	$51,201
Oakland County	$61,907	$66,390
Metro Detroit	$49,175	$53,242

Source: US Census Bureau

Income varies across neighborhoods. Residents with higher incomes have more choice on where to live. Neighborhoods with high numbers of upper-income residents tend to be more stable. Conversely, those with high concentrations of lower-income residents tend to be less stable and can lead to declining home values and increasing safety concerns. Figure 3-9 shows the variation in median income across the various neighborhoods in Southfield. Most neighborhoods fall in the middle income categories, but several have high concentrations of lower-income or upper-income residents. These areas are generally dispersed throughout the City and no large concentrations of high or low income neighborhoods are found. The neighborhoods in the lowest income bracket contain the high concentrations of multiple-family units in Southfield which includes some of the most affordable housing in the City.

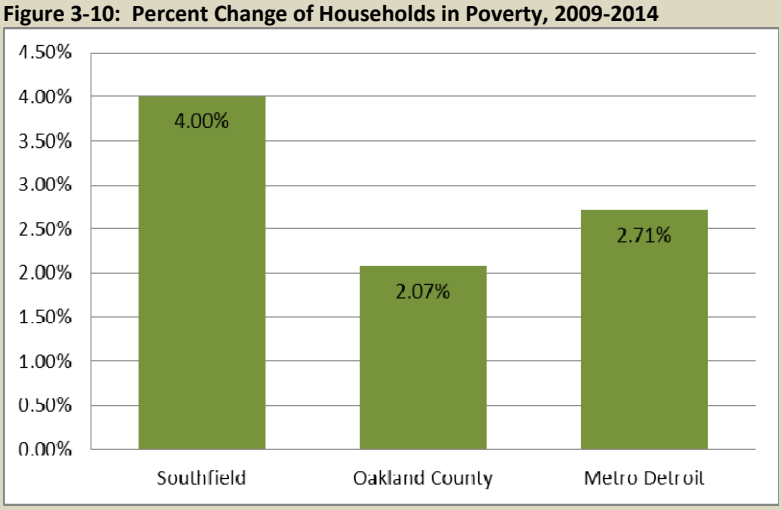
Figure 3-9: Median Family Income by Neighborhood, 2010



Source: US Census Bureau

Recent poverty figures indicate that more than a third of Metro Detroit communities have declined further into poverty. Four-year averages were calculated in 2005-2009 and again in 2010-2014. As reflected in Figure 3-10, four percent more of Southfield households slipped under the poverty line in the 2010-2014 time frame than in 2005-2009, which is higher than both Oakland County and metro Detroit figures. This could be attributed to people moving out of Detroit into the inner ring suburbs (Southfield figures are consistent with the average % change of all inner ring suburbs of 4.02%). In Southfield's case, the increase in retiree population (resulting in lower income level) could again be a significant contributing factor.

Figure 3-10: Percent Change of Households in Poverty, 2009-2014



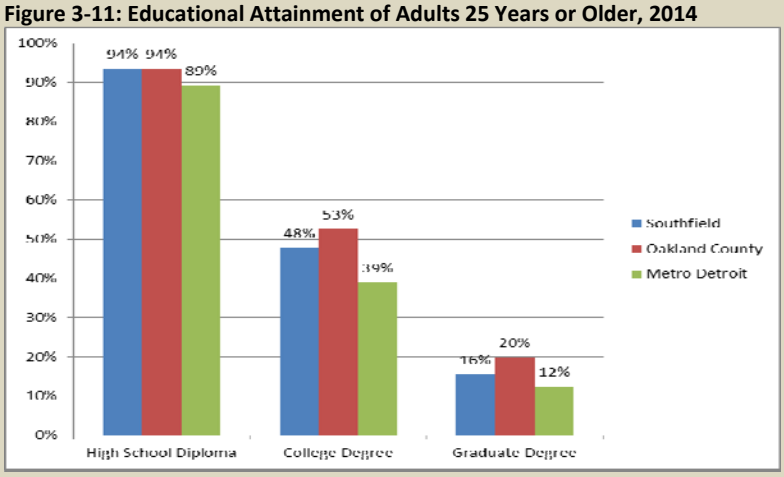
Source: US Census Bureau, "Poverty Up in Third of Area Communities"

For more information, visit the Detroit News article found here: http://www.detroitnews.com/story/news/local/michigan/2015/12/03/poverty-third-detroit-area-communities/76701670/

Education

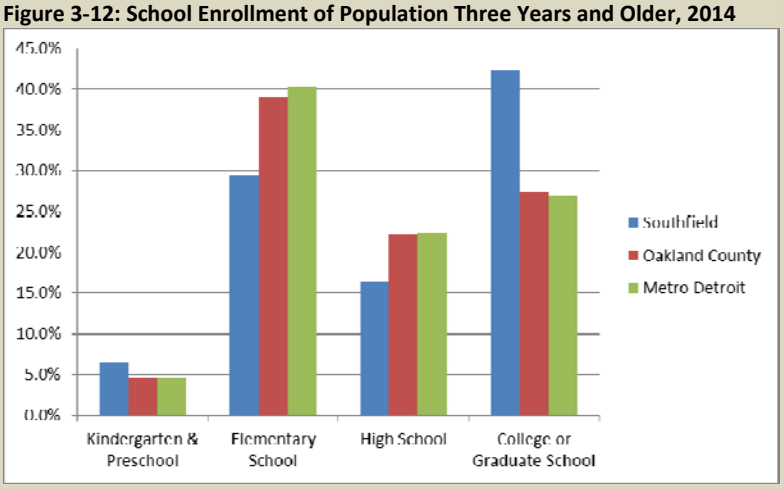
A snapshot of the educational characteristics of a community is important because education levels are strongly related to economic success, particularly as Michigan and metropolitan Detroit transition from a manufacturing economy to one that is largely knowledge-based. Concentrations of educated citizens attract and sustain jobs and tend to provide governments with a higher tax base. Based on 2014 data, the educational attainment of Southfield's adults is slightly higher than that of the metro area and the same as that of Oakland County, as seen in Figure 3-11. Ninety-four percent of Southfield adults 25 years old or older have at least a high school diploma, compared to 94% in the County and 89% in the metro area. Forty-eight percent of residents have a college degree, compared to 39% in the metro area and 53% in the County.

Figure 3-11: Educational Attainment of Adults 25 Years or Older, 2014



Source: US Census Bureau

Figure 3-12: School Enrollment of Population Three Years and Older, 2014



Source: US Census Bureau

School enrollment data give a slightly different picture of the educational characteristics of the community. Based on 2014 data, a significantly higher proportion (42.3%) of Southfield's population is enrolled in college or graduate school than in the County or metro area, as seen in Figure 3-12. The relatively high number of colleges and universities in Southfield accounts for the high post-high school enrollment. The high proportion of these students has likely created the environment which Southfield employers find attractive and has made Southfield a major employment center in metro Detroit.

If Southfield can be proactive in enticing students with college degrees to remain in the City after graduation, it will see its share of high school- and college-educated residents rise, ultimately helping to preserve and strengthen its healthy economy.

CHAPTER 4: HOUSING & RESIDENTIAL CHARACTER

GOALS

- *Continue to preserve, protect and enhance the integrity, economic viability and livability of Southfield's neighborhoods.*
- *Provide a diverse and stable housing stock providing for a range of housing opportunities for all income groups and a quality living environment for all persons.*
- *Create an identity for all Southfield neighborhoods.*

Today a majority of households are people, young or old, living alone; couples or sets of unrelated individuals of various ethnicities, ages and tastes; growing numbers of elderly requiring less dwelling space but more living assistance, and single low-income parents struggling to support dependent children or perhaps a dependent adult. (Shaping the City: Seeking a new template for truly smart growth. By Roger K. Lewis, published April 22, 2011, The Washington Post)

Introduction

As a first ring suburb of Detroit, the City of Southfield has an overabundance of big single family homes on large lots and luxury apartments (Single family detached: 17,838 units; multi-family: 19,383 units) that do not fit changing demographic needs and desires. (2010 Am. Community Survey)

Southfield's proximity to Detroit is hurting property values and market potential: Detroit has a dysfunctional public educational system, above average crime rates and poverty rates, shrinking employment opportunities, leadership challenges, and crushing governmental debt.

According to the Southfield City Assessor, housing values in the City of Southfield have declined 54.69% from 2008. Moreover, total taxable values in Southfield have decreased 36.32% since 2008-2009 (SFD City Assessor actual and projected values) and Southfield had 189 property tax appeals as of Dec. 9, 2013.

Southfield had one foreclosure for every 32 houses in 2011. The City of Southfield was #1 in foreclosures (2008-2011) and was second only to the City of Pontiac for the preceding 7 years (Oakland County Equalization). These grim numbers prompted the City Administrator to exclaim: "No community in Oakland County has been hit harder by recent economic conditions than the City of Southfield".

The City will also be challenged with national demographic shifts. Aging Baby Boomers were at their peak family size and peak income between 1990-2010. 77 % of demand for new housing construction was driven by this trend (*The Great Senior Sell-Off Could Cause the Next Housing Crises*, by Emily Badger, published Mar. 5, 2013, The Atlantic Cities Place Matters).

The traditional family unit (e.g. married husband & wife with 2-3 kids) is now a minority in America. About 25% of new households prefer condos and urban townhomes (*Shaping the City: Seeking a new template for truly smart growth*. By Roger K. Lewis, published April 22, 2011, The Washington Post). Moreover, the majority of young adults and seniors prefer living in walkable neighborhoods and sustainably designed communities characterized by diverse land uses and a broad array of civic amenities (*Shaping the City: Seeking a new template for truly smart growth*. By Roger K. Lewis, published April 22, 2011, The Washington Post).

By 2020, there will be around 35 million over 65 households in the U.S. Many seniors who would like to become renters will be trying to sell about 200,000 more owner-occupied homes than there will be new households entering the market to buy them. By 2030 that number could rise to 500 million. It is predicted that many of those seniors will simply give up the house and walk away (*Shaping the City: Seeking a new template for truly smart growth*. By Roger K. Lewis, published April 22, 2011, The Washington Post).

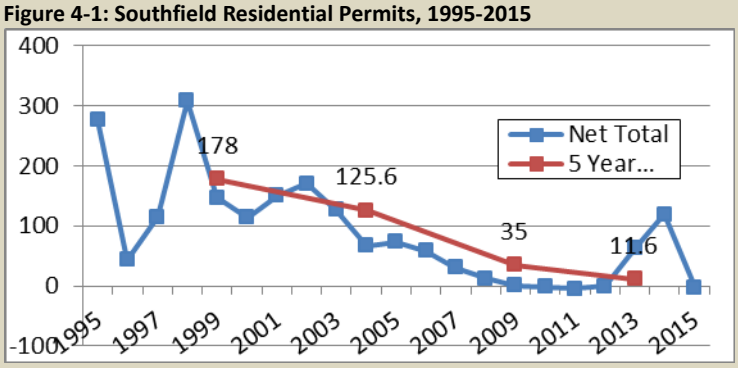
Current Conditions

This chapter provides background information on housing in Southfield and some comparisons with historical data and the region. The evaluation serves as a basis for the future land use plan and plan strategies regarding housing and public improvements to support the needs of residents.

Planning for housing is critical because nearly 60% of land in the city is devoted to residential uses. Also, people seeking a place to live or deciding whether to stay in a community base their decisions in part on the community's housing characteristics such as home values and affordability.

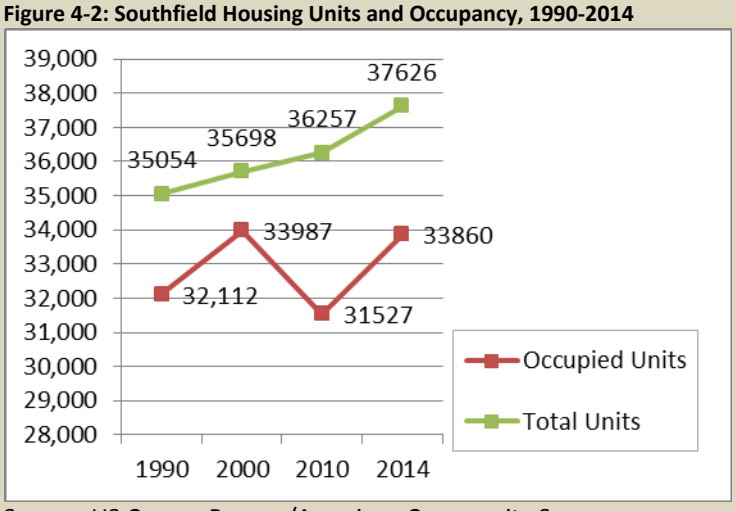
Housing Units

Figure 4-1: Southfield Residential Permits, 1995-2015



Source: SEMCOG Regional Forecast

Figure 4-2: Southfield Housing Units and Occupancy, 1990-2014



Source: US Census Bureau/American Community Survey

According to the Census Bureau, a housing unit may be a house, an apartment, a mobile home, a group of rooms or a single room that is intended for occupancy by families or individuals who live separately from other families or individuals in the building and have direct access from outside the building or through a common hall.

The number of new construction housing units in Southfield has been drastically decreasing while population and household growth have decreased only slightly. (*Chapter 3 Population Trends* has a detailed discussion of population characteristics.) Figure 4-1 shows the annual number of net building permits from 1995 to 2015 decreased by about 276 units. Figure 4-2 shows the total number of housing units in Southfield between 1990-2014 according to the US Census Bureau. SEMCOG notes a decrease in residential permits issued while Census information and American Community Survey information indicates an overall increase in the number of housing units. This is indicative of increased multi-unit development (less single family).

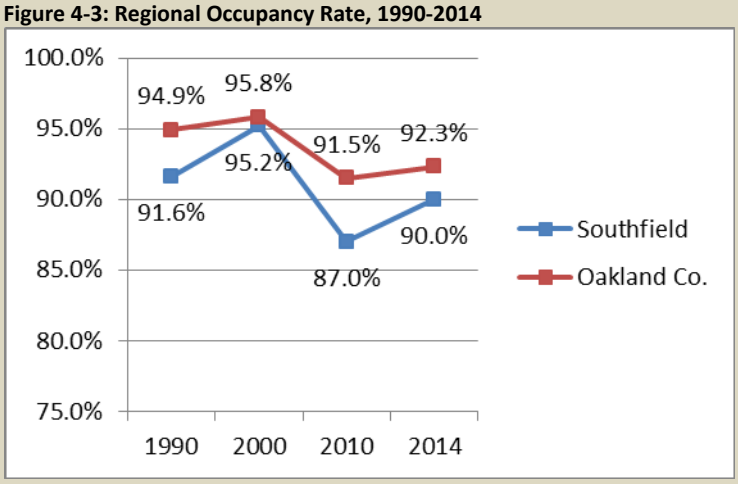
Occupancy

Today, the majority of young adults and seniors prefer living in walkable neighborhoods and sustainably designed communities characterized by diverse land uses and a broad array of civic amenities. (Shaping the City: Seeking a new template for truly smart growth. By Roger K. Lewis, published April 22, 2011, The Washington Post)

Housing occupancy is the percentage of total housing units that are occupied at any given time. The figure can be an indicator of housing stability, with a high percentage generally indicating a stable or growing residential housing market. With little change in population or households

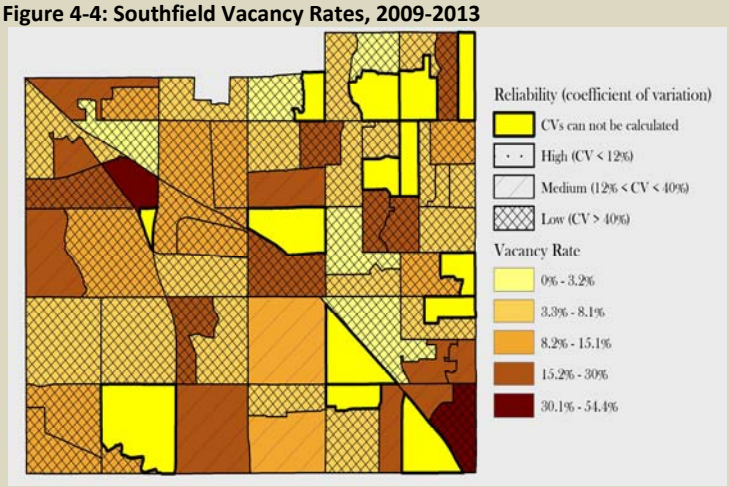
and a shrinking average household size, demand for housing can be expected to decline. However, Figure 4-3 depicts a slight uptick in occupied housing units since 1990. It is, however, reflected in the occupancy rate, which declined from 95.2% in 2000 to 90% in 2014, as shown in Figure 4-3. Over the same period, Oakland County also experienced a similar decline in occupancy from 95.8% to 92.3%. Residential construction has been fairly responsive to recent population trends. The net number of residential building permits issued in Southfield peaked in 1998 and has generally been declining since, mirroring the City's population change. Due to the housing crisis in the Metro Detroit area after 2008, and the observation of an upturn in recent commercial development, there was a sharp upturn in residential permits issued in 2013 & 2014 (64 & 121 respectively) which decreased to 4 (net total of -2) in 2015..

Figure 4-3: Regional Occupancy Rate, 1990-2014



Source: US Census Bureau

Figure 4-4: Southfield Vacancy Rates, 2009-2013



Source: US Census Bureau

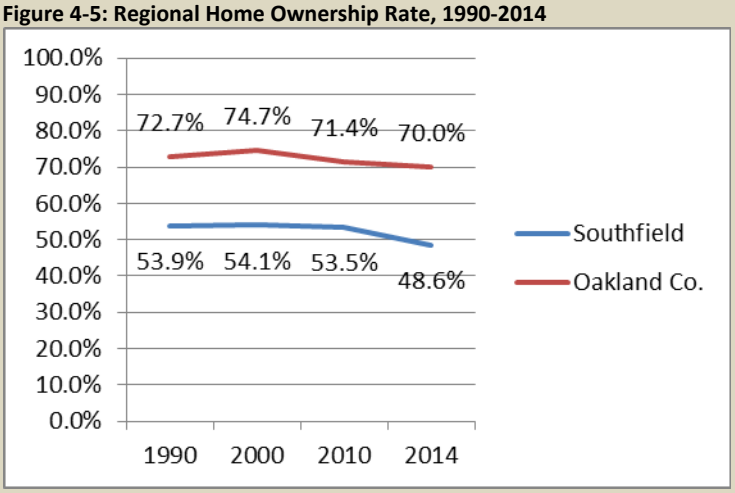
Certain neighborhoods have more vacant housing units than others. These neighborhoods may face challenges like a housing stock in various state of repairs and low interest in homes relative to home prices. Identifying the location of those neighborhoods helps in addressing their issues and reducing vacancies. The areas with highest vacancies can be seen in Figure 4-4. These areas are generally within the Regal Towers Apartment complex near Franklin & Eleven Mile Roads, in Section 34 bounded by Eight Mile, Lahser, Evergreen, and Nine Mile Roads, just east of Inkster Road between Ten & Eleven Mile Roads, the south half of Section 15, and around the Southfield DDA district.

By 2020, there will be around 35 million over 65 households in the U.S. Many seniors who would like to become renters will be trying to sell about 200,000 more owner-occupied homes than there will be new households entering the market to buy them. By 2030 that number could rise to 500 million. It is predicted that many of those seniors will simply give up the house and walk away. (Shaping the City: Seeking a new template for truly smart growth. By Roger K. Lewis, published April 22, 2011, The Washington Post)

Home Ownership

Even with occasional drops in housing value, home ownership is the single largest factor in the generation of wealth for individuals and families. Like occupancy rates, the percentage of owner-occupied housing units can be an indicator of housing stability.

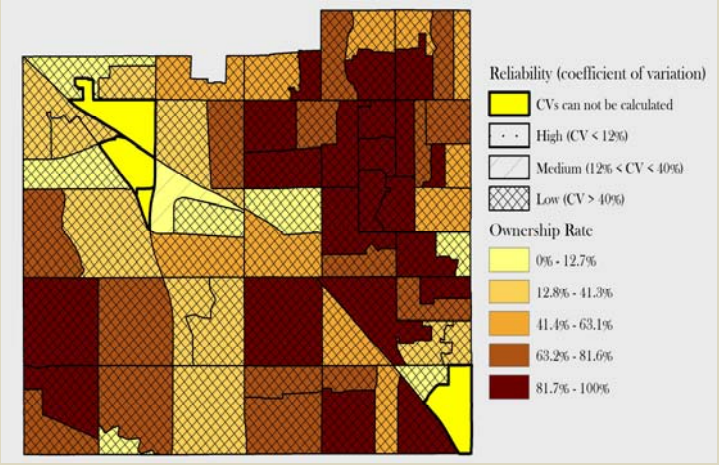
Figure 4-5: Regional Home Ownership Rate, 1990-2014



Source: US Census Bureau

In 2014, approximately 49% of Southfield residents owned their residence while 51% rented. The home ownership rate is down slightly from approximately 54% in 1990 and 2000. As Figure 4-5 shows, home ownership rates are significantly lower in Southfield than in Oakland County. This can be expected given the large portion of multiple-family residential units, particularly apartments, in Southfield. Home ownership is declining most likely due to rising housing costs (noted below) and decreasing median household incomes (noted above in *Chapter 3 Population Trends*).

Figure 4-6: Homeownership Rates by Neighborhood, 2009-2013



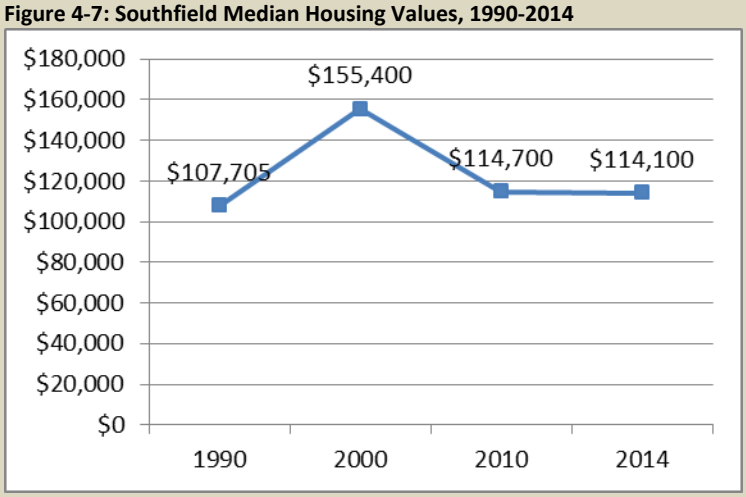
Source: US Census Bureau

Certain neighborhoods in Southfield are experiencing lower homeownership rates than others. These areas are generally less stable because the residents can more easily move out of the

neighborhood. Many of these neighborhoods have high numbers of multiple-family units. These areas are highlighted in Figure 4-6 and include the areas around Northland, northeast of the Telegraph/I-696 interchange; along Shiawassee east of Beech; between Telegraph and Lahser; the City Centre; and along I-696 on the City's eastern edge.

Housing Costs

Figure 4-7: Southfield Median Housing Values, 1990-2014



Sources: US Census Bureau, SEMCOG

The cost of housing combined with income determines housing affordability, and housing has been getting more expensive in Southfield. According to the US Census Bureau, the median value of owner-occupied homes in Southfield was $114,700 in 2010, just up slightly from $107,705 in 1990. Data from SEMCOG indicate that average housing costs have stayed relatively level at $114,100 in 2014. The overall rising cost of housing, depicted in Figure 4-7, makes it difficult for potential home buyers to enter the housing market. The recent decline in occupancy rates since 2000 noted above may hint that the rise in housing prices have been outpacing demand for housing. As of 2014 , this decline in occupancy did yet not appear to have slowed the rising cost of housing as might be expected.

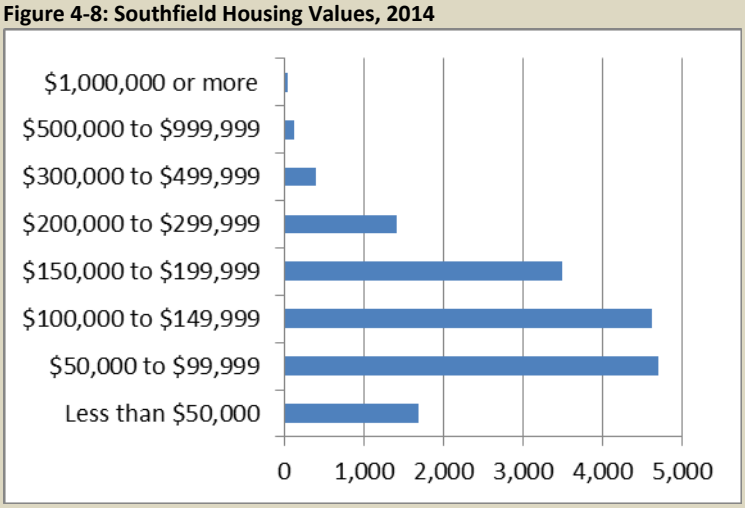
The most recent housing statistics (September 2015) from the Michigan Association of Realtors® indicate that the rising housing values are not coming to an end in the foreseeable future. The number of housing sales in 2015 was 9% higher than in 2014 in Oakland County, and the average sale price increased by about 6%. Although northerly communities within Oakland County may be skewing these figures, it is possible that it is being mirrored on a smaller scale in Southfield. Statistics from the National Association of Realtors® indicate existing home prices in metro Detroit experienced the worst decline of US urban areas in the 3rd quarter of 2006. However, that did not affect the median housing values.

As housing costs have remained relatively the same from 2010-2014, homeownership has decreased. However, while stable or increased housing price can generate wealth for those who already own a home, they can increase property taxes and make it more expensive to buy a home. Figure 4-8 portrays the distribution of housing values in Southfield in 2014. Housing values ran the gamut, with the great majority of homes valued between $50,000 to $99,999. Since 2010, this is a notable change in distribution when values were much more evenly distributed.

Southfield has a large supply of rental housing, particularly when compared with the region as a whole. Figure 4-9 shows that in 2014, rental housing comprised 51% of Southfield's occupied housing units, compared to just 30% in Oakland County and 30% in the metro area. Further, the share of rental housing in Southfield increased from 2010 while only minimally increasing in the County and metro area.

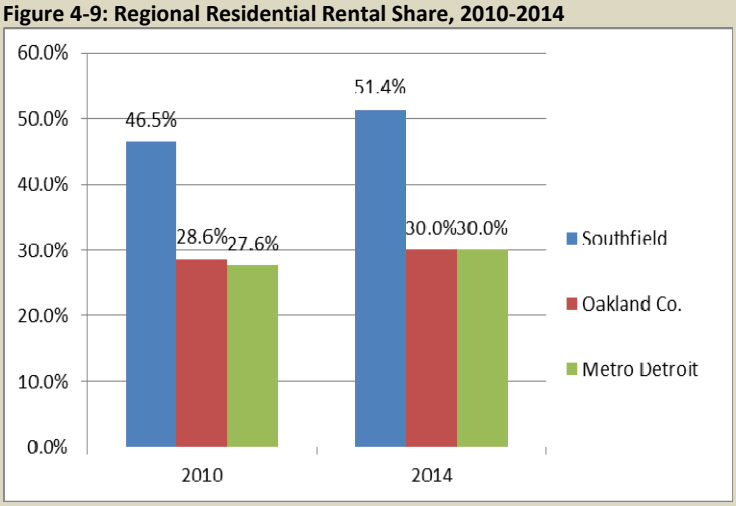
As the share of rental units increases, a higher percentage of households are impacted by rental rates. In 2014, median

Figure 4-8: Southfield Housing Values, 2014



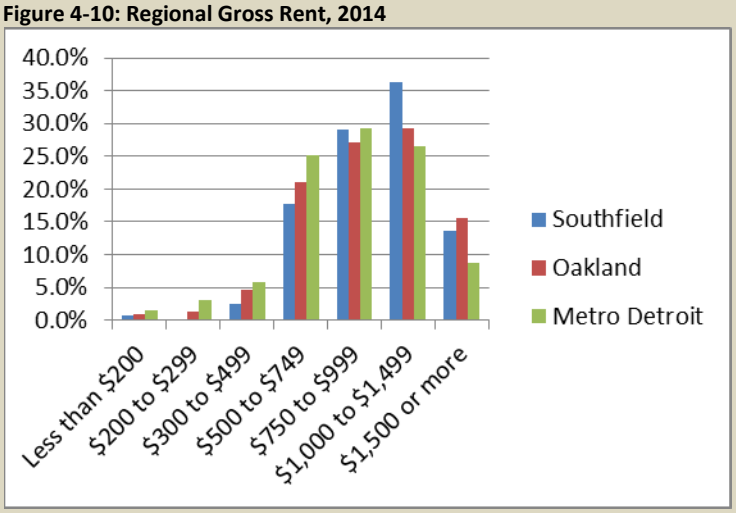
Source: US Census Bureau ACS

Figure 4-9: Regional Residential Rental Share, 2010-2014



Source: US Census Bureau

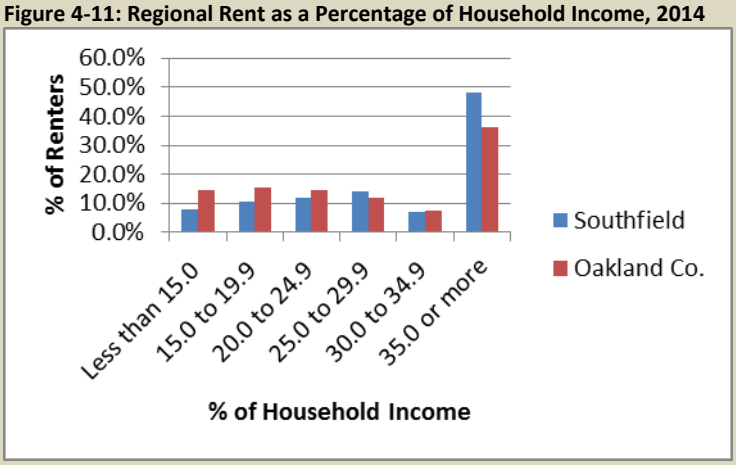
Figure 4-10: Regional Gross Rent, 2014



Source: US Census Bureau

gross rents for Southfield residents were significantly higher than for residents in Oakland County and also higher for residents of metropolitan Detroit. The median gross rent Southfield residents paid in 2014 was $1000, compared to only $597 in the County and $753 in the metro area. Figure 4-10 shows the distribution of gross rent paid by residents of Southfield compared to those of Oakland County and the metro area. A higher share of Southfield households pay higher rents than in the County and metro area, especially in the $1,000 to $1,499 category.

Figure 4-11: Regional Rent as a Percentage of Household Income, 2014



Source: US Census Bureau

As noted in *Chapter 3 Population Trends*, the median household income declined slightly between 2000 and 2010 and was lower than that of Oakland County for the entire period. When combined with increasing rents, Southfield renters should be spending a higher portion of their income on rent which is reflected accordingly. As Figure 4-11 shows, the portion of income spent on rent is generally comparable in Southfield and in the County. However, the largest discrepancy occurs in the 35% or more category, where a larger relative portion of Southfield renters are paying a larger share of their income as rent. This may be related to the poverty rate in Southfield, which is higher than in the rest of the County.

Housing Types

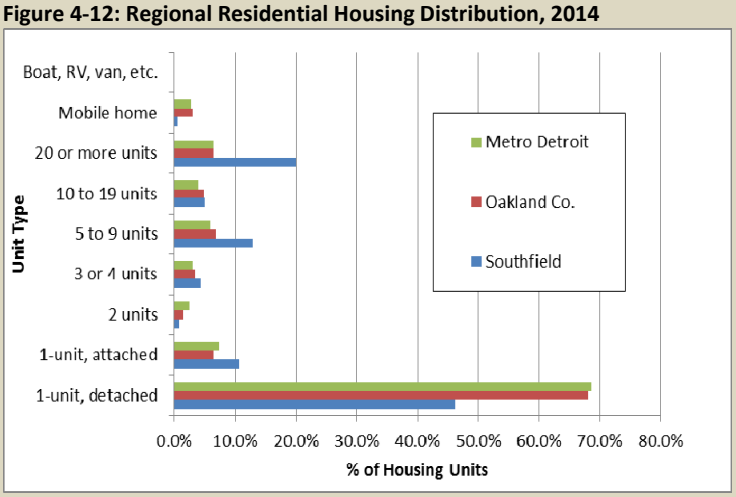
About 25% of new households prefer condos and urban townhomes. (Shaping the City: Seeking a new template for truly smart growth. By Roger K. Lewis, published April 22, 2011, The Washington Post)

Southfield has an overabundance of big single family homes on large lots and luxury apartments that do not fit changing demographic needs and desires. Single family detached: 17,838 units; multi-family: 19,383 units; (2010 Am. Community Survey)

Single-family detached residences comprise the largest share of residential housing. In 2014, these types of housing structures comprised nearly 50% of all residences. Nearly half of the remaining housing units were in multiple-family structures with 20 or more units. Relative to the surrounding area, detached single-family residential homes comprised a low portion and multiple-family residences a high portion of Southfield's total

housing units, as seen in Figure 4-12. According to the 2014 census, Southfield has an approximate 22% lower share of single-family residential units and a much larger share of multiple-family residential units compared to Oakland County and metro Detroit. In particular, the share of large (i.e. containing 20 or more units) multi-family structures in Southfield is about 4 times that of the County or metro area.

Figure 4-12: Regional Residential Housing Distribution, 2014



Source: US Census Bureau

Many of these structures are apartment and condominium towers. The presence of apartment buildings helps explain the high residential rental share noted above and reemphasizes the impact that higher rents have on Southfield's large rental population. The acres of land devoted to multiple-family residences can be a deceiving statistic. Residential densities can vary widely within the multiple-family designation.

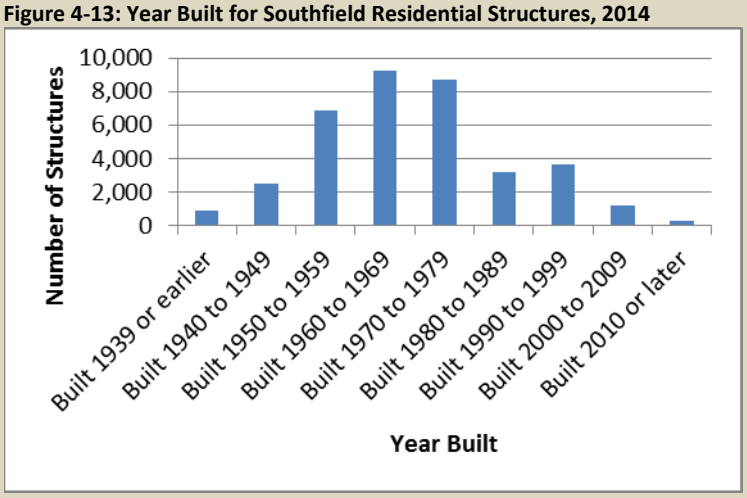
Age of Existing Housing

Southfield has a diverse mix of housing that has been developed over the course of its history and the City's residential architecture reflects the historical growth of the community. In the early 1950s, prior to the City's incorporation, the Township of Southfield was home to approximately 19,000 residents. By the end of the 1970s, the City had more than 75,000 residents.

This explosive growth is reflected in the age of Southfield's housing stock. As Figure 4-13 shows, the greatest share of existing housing units were constructed from 1960-1979. Afterward, as the population growth flattened, the share of new structures decreased. Only about 14% of Southfield homes were built since 1990. Because Southfield is largely built out, the annual number of new structures can be expected to remain low as new development will primarily consist of redevelopment of existing land. Over time, as newer structures replace older ones and as residential densities increase, the share of newer housing units will begin to increase. As the housing stock continues to age, efforts to preserve and rehabilitate existing

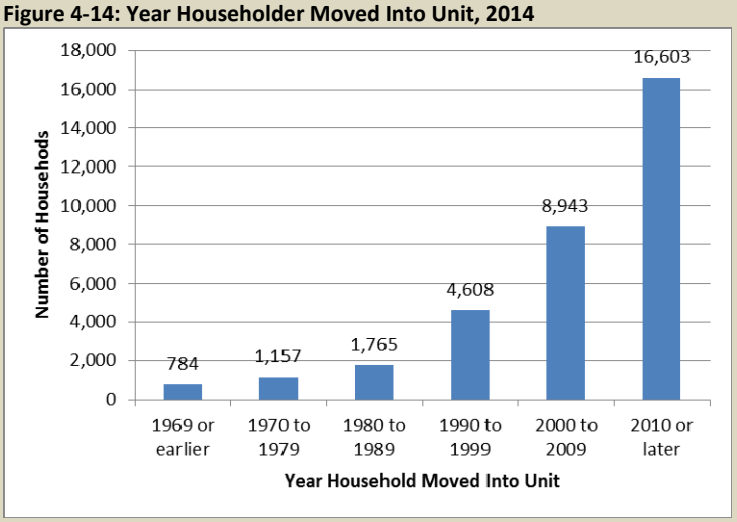
units will be critical in preserving property values and maintaining a high quality of life for Southfield's residents.

Figure 4-13: Year Built for Southfield Residential Structures, 2014



Source: US Census Bureau

Figure 4-14: Year Householder Moved Into Unit, 2014



Source: US Census Bureau

Residential Longevity

The length of time a household lives in its home is a measure of a community's stability. In 2014, 75% of Southfield residents had moved into their home in 2000 or later. This statistic can be seen in Figure 4-14. While this figure may seem high, it is in line with US households on the whole. In Southfield, as noted in Chapter 3, the City's racial makeup changed significantly sometime after 1990, indicating a large number of residents moved out of the City and an equally large number moved in. Additionally, renters can be expected to move more frequently than homeowners. These conditions help explain the high frequency of households that moved after 2000. As the housing market slows, as the most recent data suggests is already happening, relocation options may be limited and households can be expected to remain in their homes for longer durations, as was the case in the 1990s, before the housing boom.

Recommendations

Southfield's neighborhoods are diverse in nature, ranging from more suburban neighborhoods characterized by unpaved roads and larger lot sizes to more urban development with curb and gutter streets and narrow lots. This mixture of housing options allows families to grow into larger homes without having to move out of the community. As developments are planned, they should be designed so as to complement and enhance the existing character of the

surrounding neighborhoods. The recommendations of this Chapter seek to retain neighborhood character while improving the quality of homes, public facilities and infrastructure.

Housing Preservation and Maintenance

The importance of day-to-day maintenance of housing units cannot be overemphasized. To ensure the preservation and maintenance of existing housing by property owners, Southfield should use a variety of basic strategies/programs to improve the appearance and value of existing neighborhoods, as described below.

- **Neighborhood and Information Center (NIC).** As part of the Community Relations Department the City's Neighborhood and Information Center (NIC) provides a link between City government and Southfield residents. For visitors, home seekers and homeowners, the NIC is a valuable source of information about the City. The Center provides relocation information, welcome packets, school information, as well as information about City services and programs. More than just an information source, the NIC serves as a liaison to City government for residents and neighborhood associations, refers complaints to City departments and monitors their resolution, strengthens existing neighborhood associations and reactivates dormant ones, arranges for neighborhood association block parties, meeting rooms and mailings, and arranges yearly training and workshops for neighborhood leaders. NIC should maintain consistent coordination with the Housing Department and administration of many of the programs and recommendations of this Plan.

Neighborhood Enterprise Zone (NEZ)

The Neighborhood Enterprise Zone (NEZ) Program was established by Public Act 147 of 1992, as amended. The program provides a tax incentive for the development and rehabilitation of residential housing. A qualified local unit of government may designate one or more areas as a NEZ within that local unit of government. The program was established to spur the development and rehabilitation of residential housing in communities where it may not otherwise occur. The program also encourages owner occupied housing and new investment in communities.

Southfield may designate 1 or more neighborhood enterprise zones. A neighborhood enterprise zone shall contain not less than 10 platted parcels of land, unless in accordance with Act 147. Typically, the total acreage of the neighborhood enterprise zones containing only new facilities or rehabilitated facilities or any combination of new facilities or rehabilitated facilities designated under this Act (147) shall not exceed 15% of the total acreage contained within the boundaries of Southfield.

- **Housing Programs.** The City's Housing Department currently administers a variety of home repair, ownership encouragement and affordability programs as described below:

  - **Section 8**: The U.S. Department of Housing and Urban Development (HUD) provides funding for its Housing Choice Voucher (HCV) Program, formerly known as Section 8. The HCV Program subsidizes rent for income-qualified individuals through the Southfield Housing Commission. As a tenant-based program, the Voucher holder is subsidized - not the rental unit. The Program is often referred to as "Finders Keepers" because the family must locate a unit that meets Housing Quality Standards (HQS) established by HUD.

  - **Community Development Block Grant (CDBG):** The City of Southfield receives CDBG funds annually from the U.S. Department of Housing and Urban Development (HUD). Fund allocations are based on development of viable urban communities by providing proper housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate income. The CDBG program allows the City of Southfield to develop and implement activities and projects that are uniquely suited and beneficial to Southfield residents within the framework of federal guidelines.

  - **The Southfield Home Improvement Program (SHIP):** SHIP is a low-interest loan program for income qualified homeowners. The focus of the program concentrates on maintenance of the existing structure as it relates to health and safety issues and minimum housing standards. The City of Southfield participates in the efforts to reduce lead-based paint hazards. It does not get involved with remodeling or updating for cosmetic purposes, additions or new construction projects. Typical types of improvements include roofs, windows, doors, siding, insulation, heating, electrical, and plumbing repairs. The program is funded by the Department of Housing and Urban Development (HUD) through the Community Development Block Grant (CDBG) Program.
  - **CHORE:** The City of Southfield's CHORE program has been helping senior adults maintain their homes since its inception in 1983. Funded through the Community Development Block Grant (CDBG), CHORE provides an annual spending account for each income qualified senior adult household to be used for labor associated with lawn care, snow removal, window and gutter cleaning, minor plumbing, furnace and electrical repairs.
  - **MSHDA:** The Michigan State Housing and Development Authority (MSHDA) offers low-interest loan programs that give lower income people an opportunity to buy their first home.

Housing Programs Continued:

- Other housing programs the City should consider include those for larger-scale housing rehabilitation, housing façade improvements, emergency repair grants and tax abatements.

As demand for these programs increases, the City may have an opportunity to conditionally approve financing for those that follow more extensive guidelines or for those willing to participate in desired community programs. These conditions could include implementing enhanced design improvements (i.e. development of an attractive second floor addition over a simple dormer addition), use of high quality building materials (i.e. use of cement fiberboard siding over vinyl), participation in desired special assessment districts or spearheading development of active community or homeowner's associations.

- **Community/Neighborhood Reinvestment Programs:** Continue to work in coordination with local lending institutions and realtors and explore the availability and application of neighborhood investment/reinvestment programs.
- **Neighborhood Associations:** The City encourages the creation of and coordination with neighborhood associations and organizations, including condominium associations. Such organizations can coordinate with the City and develop improvement and organizational strategies that apply to their neighborhood, such as a neighborhood watch program. Neighborhood organizations can also work with the City to set up Special Assessment Districts (SAD) for infrastructure and streetscape improvements, such as road and sidewalk maintenance and decorative street lighting. The City, through the Southfield Parks and Garden Club, currently issues "Community Pride Awards." Awards are granted to reward individuals, condominium associations, apartment complexes and neighborhoods in their efforts to maintain, improve or beautify their neighborhood or development. The City could also offer to meet annually with condominium associations to provide guidance on how to manage legal and maintenance issues.
- **Annual Neighborhood Beautification Programs (Clean-up Programs):** The City currently hosts annual clean up days, which allows residents to dispose of unwanted items. A spring clean up offers residents options to dispose of household items, and a fall hazardous waste clean up day provides opportunities for disposal of products that cannot be sent to the landfill. To build on these services, the City should consider curbside pick-up of large-scale trash, debris, and appliances. and possibly expanding their hazardous waste services to include collection sites for the regular disposal of household products such as paints, vehicular fluids, and the like.

- **Education Programs:** Community awareness programs should be conducted on topics such as neighborhood blight, annual refuse collection, and comprehensive code enforcement efforts in and around residential neighborhoods. The City's newsletter and web site should continue to provide information on existing codes and ordinances, clean-up efforts, rehabilitation and other housing assistance programs.
- **Enforcement Practices:** In the event sufficient regulations exist, the City should review its enforcement policies and procedures to identify ways in which to improve regulatory enforcement of and compliance with existing laws. This review should include an analysis of the City's violation management procedures and penalty (fine) structure.
- **Infrastructure Maintenance:** A well-maintained infrastructure is very important to perceived neighborhood quality. Broken sidewalks, streets with potholes and broken curbing all portray images of neighborhood instability, declining property values, and negatively reflect on the community as a whole. It is therefore imperative that "surface infrastructure" be regularly inspected and improved as necessary. Sidewalk repairs should be included in the City budget and Capital Improvements Plan.
- **Traffic Calming:** The perception of "neighborhood livability" is strongly influenced by such factors as traffic volumes and speeds. A traffic calming program could be instituted in neighborhoods that have problems with cut-through traffic, as described in the Transportation chapter.
- **Neighborhood Safety:** Proper planning of neighborhoods can prevent future crime. Traffic calming, street layout and architectural requirements can all enhance safety in a neighborhood. More specifically, roads should be designed to prevent cut-through traffic and encourage lower speeds, and the layout of homes can provide a more pedestrian environment, encourage neighbor interaction and overall awareness of the street.

Redevelopment of Outdated Housing

There are a number of neighborhoods with small houses, typically less than 1,000 square feet and on smaller lots. These homes are outdated and do not offer many of the amenities desired by today's home buyers. In many areas of the City, homes can be expanded as described in the previous section. In those neighborhoods where the housing costs are lower, such as neighborhoods with small aluminum/vinyl siding homes and homes on slabs, gradual redevelopment of the neighborhoods should be encouraged. Any redevelopment should be initiated by property owners and driven by the market, with the City's role as facilitating or assisting the homeowners.

Neighborhood Stabilization Program

The Neighborhood Stabilization Program (NSP) was established for the purpose of stabilizing communities that have suffered from foreclosures and abandonment through the purchase and redevelopment of foreclosed and abandoned homes and residential properties.
NSP is a component of the Community Development Block Grant (CDBG) program. The CDBG regulatory structure is the platform used to implement NSP and the HOME program provides a safe harbor for NSP affordability requirements. NSP funds are to be used for activities that include, but are not limited to:

- Establishing financing mechanisms for purchase and redevelopment of foreclosed homes and residential properties;
- Purchasing and rehabilitating homes and residential properties abandoned or foreclosed;
- Establishing land banks for foreclosed homes;
- Demolishing blighted structures; and
- Redeveloping demolished or vacant properties

NSP grantees can use their discretion to develop their own programs and funding priorities. However, at least 25 percent of their NSP funds shall be appropriated for the purchase and redevelopment of abandoned or foreclosed homes or residential properties that will be used to house individuals or families whose income do not exceed 50 percent of the area median income. In addition, all activities funded by NSP must benefit low and moderate income persons whose income does not exceed 120 percent of area median income. (Source: HUD)

Southfield Growth Corporation (SGC)

The City Council authorized the incorporation of the Southfield Growth Corporation in 2009. The SGC was authorized to be the administrative entity responsible for the day-to-day management of the City of Southfield Neighborhood Stabilization Program and in particular the delivery of the following activities in the City of Southfield's Neighborhood Stabilization Plan:

Activity #1: Acquisition, Rehabilitation, Construction of rental and/or lease to own units for households with income at or below 50% of the area median income;
Activity #2: Acquisition, Rehabilitation, Construction of rental and/or lease to own units for households with income at or less than 120% of the area median income;
Activity #3: Administration (10% of the grant award);

Activity #4: Clearance, Demolition, & Open Space preservation-facilitate the demolition of properties which are foreclosed, vacant structures and/or adjacent to public park lands or located in a floodplain; and,

Activity #5: Direct Home Ownership Assistance-facilitate assistance for down payments and/or closing costs. This assistance may come in the form of a grant, deferred loan, or reduced interest rate.

Board of Directors: The number of directors which shall constitute the whole board shall be five: Deputy City Administrator (alt: City Administrator); City Attorney (Deputy City Attorney); Director of Planning (Building Official); Purchasing Agent (Records Coordinator) and Housing Program Specialist (Housing Services Assistant).

Multiple-Family Housing

Multiple-family housing is provided throughout the City, in a variety of forms. The most commonly found are apartment-style housing, characterized by larger parking lots and buildings with few entrances. Some complexes include a grouping of smaller multiple-family homes, some with individual entrances. More modern approaches to multiple-family housing include townhomes and single-family attached and low-rise condominiums. These are becoming more desirable to those looking for high-quality housing with low maintenance requirements, particularly younger residents, retirees, or those whose families are reducing in size.

Senior Housing

Providing appropriate senior housing options is increasingly important as the general population ages. Fewer financial resources are available to older residents, and so they need affordable options that are safe, attractive and stimulating. Many seniors live in established neighborhoods, and some find their financial resources strained over time, leaving them to struggle to maintain their homes, or even worse, to heat them or pay their mortgage at all. While others live in multiple-unit complexes or in assisted living facilities. The City of Southfield should ensure local ordinances provide for the retention and development of a variety of housing options, including:

- Independent living options include ranch-style, single-family detached or attached units that are small in size and low in purchase price and maintenance costs. Often these developments offer community amenities, such as walking trails or fitness centers, which support the active lifestyle of early retirees.

- Apartment style units are also desired for the independence they offer, but are even more affordable. In this setting, residents are often closer to local shopping and services, which can be especially helpful to residents with mobility issues or those who no longer drive.
- Assisted living is similar to apartment style units, but they maintain on-site services for residents, including medical assistance, food service, housekeeping, recreation and sometimes even limited retail or bank services. In many ways, these developments provide a community within itself where residents are active, but prefer some assistance due to health reasons or when family members live far away.
- Institutional options are also important in the later stages of life. Most residents needing full-time care prefer not to move far distances, as this can cause mental stress and trauma. Allowing residents to stay in their home community is important when the decision is made to move to an institutional facility.

For a more in-depth study on senior housing, refer to the Valley Woods Senior Campus Community Revitalization Plan (adopted 5/19/14) and Chapter 8: Sub Area Plans.

Buffering between Residential and Non-Residential Uses

Limited commercial uses in neighborhoods can provide conveniently located services and enhance neighborhood quality of life. It can negatively impact neighborhoods when not properly screened or when allowed to encroach into the neighborhood area. Commercial and industrial activity tends to infiltrate residential neighborhoods in maturing communities. This can be seen along some of Southfield's main road corridors. Some areas, including residential areas adjacent to commercial properties, may become ripe for conversion to non-residential use. In some cases, this is a reasonable change to provide greater lot size or depth needed for certain types of modern non-residential uses. When this type of land use change is determined to be appropriate, the City requires site design to limit conflicts with the adjacent neighbors such as:

- Screening with brick walls supplemented by landscaping.
- Lighting with downward directed cut-off fixtures to prevent light from spilling onto residential properties.
- Locating and screening waste receptacles and loading areas to minimize noise impacts and protect views from adjoining residential properties.
- Ensuring building design incorporates architecture that enhances the quality of the neighborhood, with mechanical equipment properly screened and setback to not create noise issues with nearby residential. In some cases, the non-residential use should be

designed to have a residential appearance in terms of scale, height, materials and overall design.

- Providing accessible pedestrian connections.

Neighborhood Re-imagined

As part of an academic study of adapting our neighborhoods to meet the housing needs of the near and long term future, see Chapter 8: Sub Area Plans, Southfield City Centre, sub-section "**A Vision for Evershire & Lower Evergreen"**

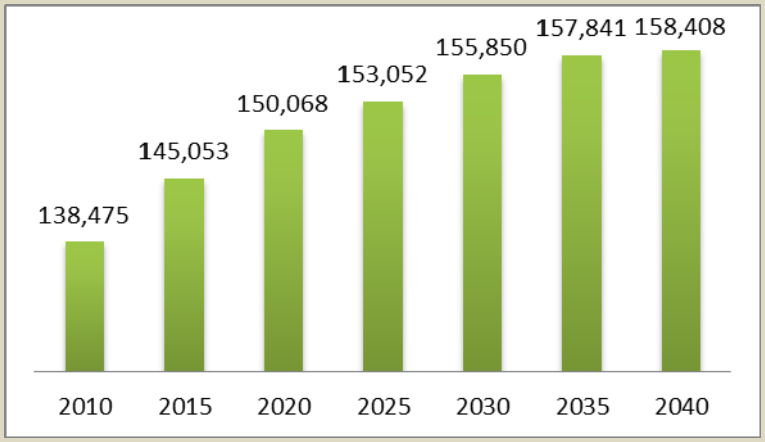
Repurpose and adaptively use closed and vacant school buildings and sites.

Work with Southfield Public School administration to come up with appropriate and context sensitive redevelopment plans, including housing options, for closed and vacant school buildings and sites.

CHAPTER 5: ECONOMIC DEVELOPMENT

The City of Southfield has faced unprecedented economic challenges over the past 15 years. Steady loss of tax base, declining personal income & jobs, and diminishing population contributed to increased vacancy rates within commercial and office buildings and stagnant development patterns. In the last few years, Southfield has seen an uptick in development and reinvestment/redevelopment in older properties, which seems to be signifying a positive economic shift.

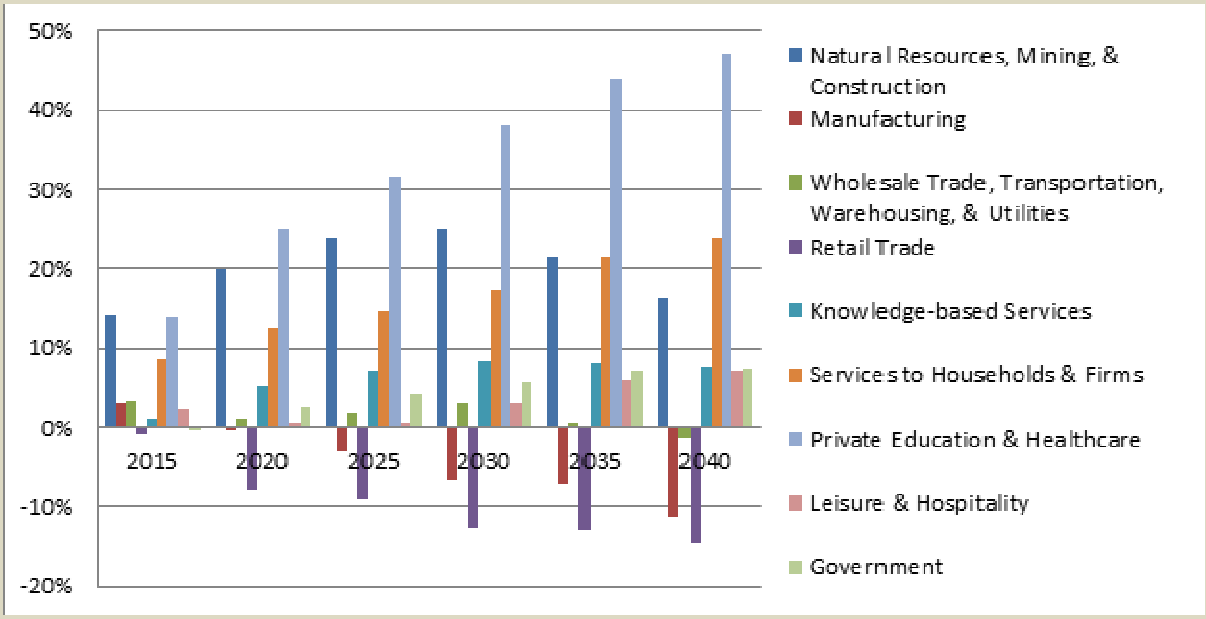
Figure 5-1: Forecasted Jobs in Southfield 2010-2040



Source: SEMCOG 2040 Forecast, 2012

Moreover, the total number of jobs in Southfield is expected to increase by 15% between 2010-2040 (see Figure 5-1). The job sector with the largest projected increase from 2015-2040 is Private Education & Healthcare which represents a 47% increase from 2010. Other sectors with a significant forecasted upsurge include Services to Households & Firms

Figure 5-2: Percent Change in Number of Jobs by Sector, 2015-2040



Source: SEMCOG 2040 Forecast, 2012

(24% increase) and Knowledge-based Services (17% increase) as indicated in Figure 5-2. The predicted uptick in these three fields parallel the national trend from manufacturing to service- and technology-driven fields dominated by high-growth industries occurring nationally over the past 30 years, a change generally branded as the **New Economy**.

New Economy

In the old economy, industry located where major resources where located or near major transportation networks, including rivers or railroads. Workers migrated from rural areas to cities and industrial centers for jobs. Today, young professionals choose where they want to live first, and then find a job.

- In the new economy or the "knowledge economy", knowledge workers or the creative class contribute disproportionately to wealth creation. (*Bicycles and Economic Development*, by James A. Bacon, posted March 1, 2013, Bacon's Rebellion, Reinventing Virginia for the 21st Century)
- A region's ability to compete depends as much upon its ability to attract these young, educated and often-entrepreneurial workers as it does upon recruiting corporate investment. Indeed, corporations [e.g. Google's $1.9B purchase in NYC] increasingly tend to locate in regions where they can access workers with valuable skill sets. (*Bicycles and Economic Development*, by James A. Bacon, posted March 1, 2013, Bacon's Rebellion, Reinventing Virginia for the 21st Century)
- Far fewer young professionals own cars, preferring to rely for mobility upon walking, biking and mass transit. Many won't consider living anywhere but a walkable, bikable community. (*Bicycles and Economic Development*, by James A. Bacon, posted March 1, 2013, Bacon's Rebellion, Reinventing Virginia for the 21st Century)
- Attracting these young professionals requires "creating an image of a city and community that young people are attracted to." (*Bicycles and Economic Development*, by James A. Bacon, posted March 1, 2013, Bacon's Rebellion, Reinventing Virginia for the 21st Century)
- Many cities see sustainability as key to New Economy success. (*Resilient Infrastructures in Cities,* by Peter Newman, 2010 in Developing Living Cities: From Analysis to Action)

OVERVIEW KEY ECONOMIC DEVELOPMENT PRINCIPLES

The Southfield Business Development Department is focused on creating jobs and growing the city's revenue base. The Southfield's economic development focus continues to evolve and adapt to the rapid changes in the marketplace.

The City's efforts moving forward will be guided by **key principles**, as follows:

- Retain, expand, and attract businesses Citywide, emphasizing **Innovation**;
- Cultivate **Entrepreneurship** in Southfield;

- Create **jobs** and Workforce Training opportunities for Southfield residents in diversified business sectors; and
- **Promote** Southfield, locally, regionally, nationally and globally, as an innovative and advanced place by reinforcing the strengths of our diverse residential, educational, cultural, and business communities.

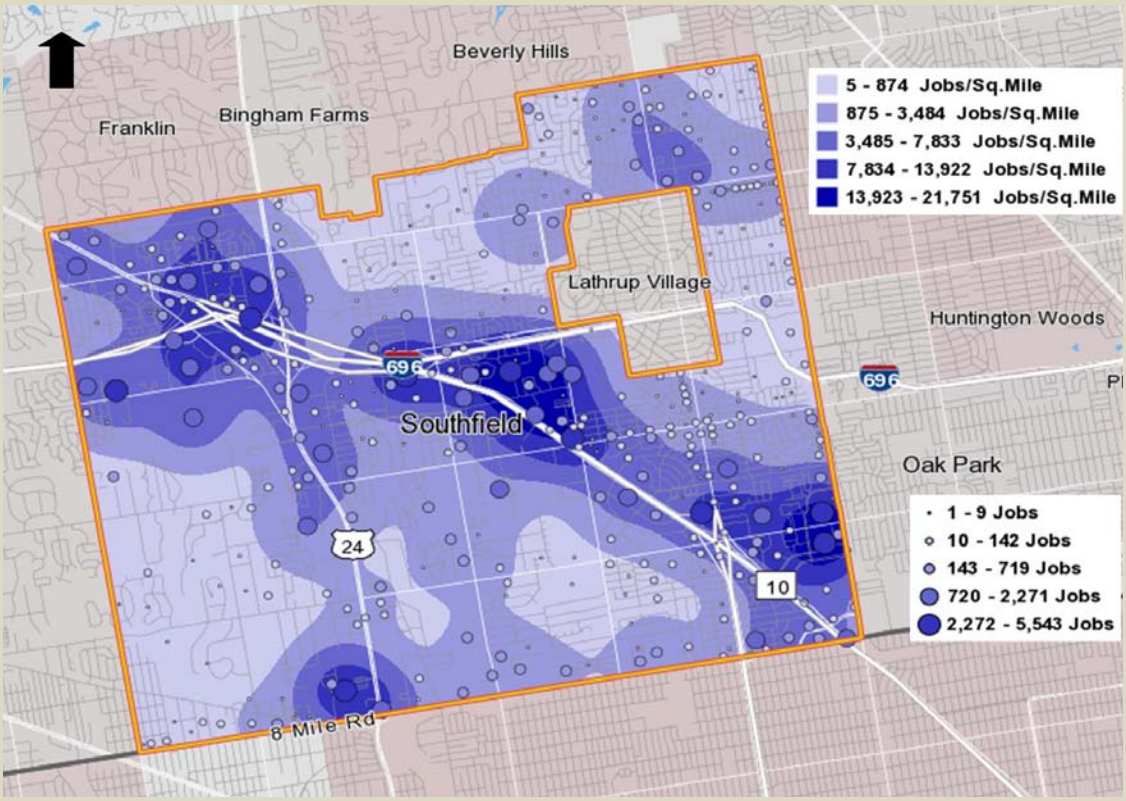
> *Placemaking is a vital part of economic development. (Placemaking: Share Focus on Place Builds Vibrant Destinations, Project for Public Spaces, published March 5, 2013, Sustainable Cities Collective)*

Promoting Southfield's economic prosperity and quality of life depends on a proactive approach to diversifying the economy. The department will support the strengths of our existing companies and growth industries (including retail, office and manufacturing) and to target three industries that will drive diverse job creation, compliment the strengths of our community, and promote a climate for growth.

The Three Targeted Industries are:

1. Technology-Based Businesses
2. Health Care and Wellness Industries
3. Automotive - Research & Development

Map 5-1: Counts & Density of Primary Jobs in Southfield, 2013



Source: U.S. Census

Map 5-1 shows a concentration of primary jobs along the Northwestern Highway corridor, North Southfield Road, and lower Telegraph Road near Eight Mile Road.

This effort will succeed only with the collaboration of our partners – such as City Centre Advisory Board, Downtown Development Authority, Southfield Chamber of Commerce and Providence Hospital; key private sector leaders; and local and regional educational institutions – particularly Lawrence Technological University, Oakland Community College, and Southfield Public Schools.

KEY ECONOMIC DEVELOPMENT PRINCIPLES

> *Great places, which locals cherish and out-of-towners come to visit, have many common elements, including a mix of residential, commercial and retail uses, walkable streets, cool public areas, and increasingly, bicycle access. (Bicycles and Economic Development, by James A. Bacon, posted March 1, 2013, Bacon's Rebellion, Reinventing Virginia for the 21st Century)*

Business Development has two main goals: tax (revenue) growth and job creation, with the hope that positions can be filled by Southfield residents. These goals include several overarching principles that go beyond all aspects of business retention, expansion and attraction and targeted redevelopment and revitalization of commercial areas.

These principles will help the City promote longer term sustainability of our businesses, foster more diversified economic revenue base, and create more job opportunities for Southfield residents and are essential to advancing Southfield's Economic Development Vision Statement.

- *Innovation* – The support and encouragement of innovation is an overarching goal for the targeted industries as well as the traditional businesses sectors. Innovation is essential for our existing businesses to continue to thrive – as consumer needs and demands are ever changing, our existing businesses must be innovative in ways they adapt to these changes. Innovation is also essential to those businesses looking to expand, as they need to not only respond to current economic trends but also consider how quickly they can adapt their growth plan to accommodate future trends. In addition to promoting innovation with existing businesses, the City will pursue new businesses with innovative business models to try to ensure their long-term existence in Southfield.

- *Entrepreneurship* – Often associated with technology or internet start-up businesses, entrepreneurship can transcend all business sectors and often includes small, independent

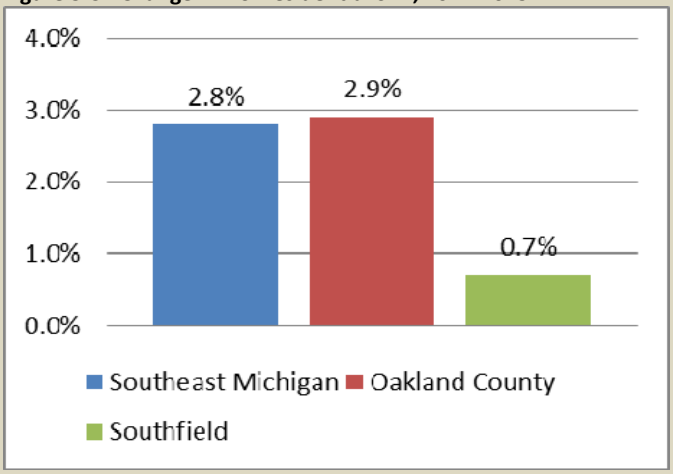
businesses. These sole proprietor entrepreneurs are typically initially home-based, located within coffee shops, or housed in lower cost co-work office spaces. Southfield has a long history of attracting entrepreneurs to the City and given the trends away from larger conglomerate companies, the City recognizes the need to support our diverse entrepreneur community. In helping to nurture and sustain an entrepreneurial culture, the City will seek to not only retain and expand our existing small, local businesses, but also to attract complementary ones – resulting in job creation. Not only through employees hired, but also in the form of the "new" jobs for the new business owners, themselves.

- *Workforce Training* – While one of the key objectives of economic development is job creation, the City recognizes that the best way to maximize the benefit to Southfield is to work with our public and private partners to establish workforce training programs for our residents. Some existing programs include: Southfield Career Center, Michigan Talent Bank & OCC. Southfield job seekers should strive to bridge the gap between their existing skills and those demanded by the City's stable, growth industry employers. Such workforce training efforts should cover all sectors of our diverse business community – from construction/building trades to manufacturing/production to health care to technology. In order to develop such training programs, the City will work with Southfield Public Schools, Oakland Community College, and Lawrence Technological University to promote educational programs geared toward our stable job sectors.

- *Private Sector Partners* - In addition, the City will work with our *private sector partners* to create hands-on training and internship opportunities in both vocational and professional fields.

- *Promoting Southfield* – In order to sustain, grow and recruit businesses, the City will need to build a stronger marketing campaign to showcase the amenities of the City, provide a resource for local businesses and acknowledge the successes of our economic development efforts. Efforts should continue outreach to traditional news outlets and press releases, as well as focused marketing through website, increasing the use of social media, and participation at targeted conferences and trade shows.

Figure 5-3: Change in Nonresidential SEV, 2014-2015



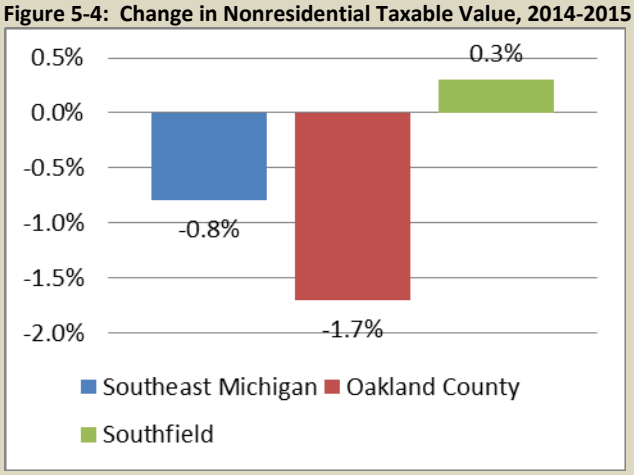
Source: SEMCOG

TAXABLE VALUE FORECAST (NONRESIDENTIAL PROPERTIES)

Southeast Michigan's taxable value and state equalized value (SEV) continue to grow, albeit slowly. As indicated in Figure 5-3, between 2014-2015, real SEV rose 2.8% for

nonresidential property in SE Michigan with Southfield seeing an increase of .7% (Oakland County real SEV increased by 2.9%). As shown in Figure 5-4, taxable value for nonresidential *decreased* by .8% percent in the region, and Southfield's figures *increased* by .3% (Oakland County decreased by 1.7%). In general, most communities in the Southeastern Michigan area remain below their pre-Great Recession peak taxable value, however Southfield experienced a severe loss (negative 38.5% change from 2008), not unlike Detroit and many of its inner ring suburbs.

Figure 5-4: Change in Nonresidential Taxable Value, 2014-2015



Source: SEMCOG

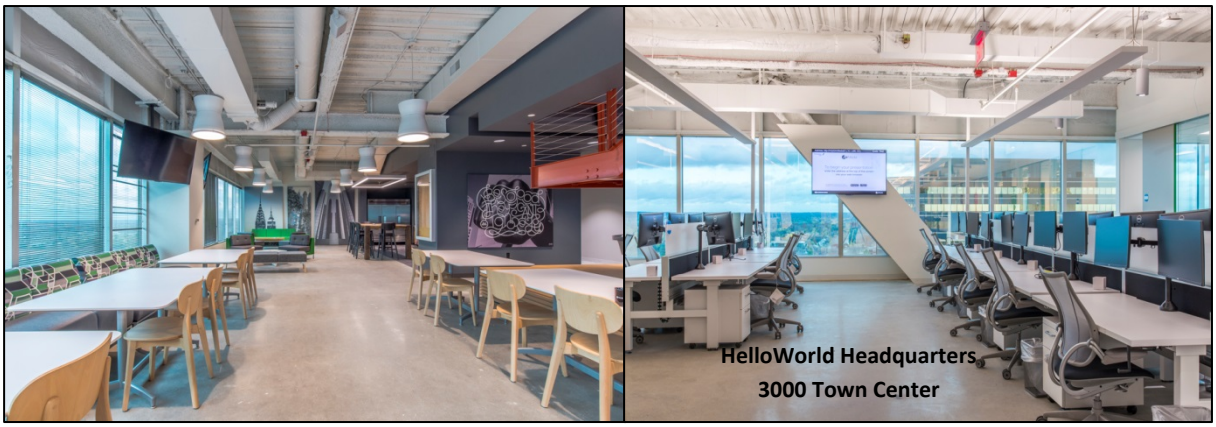
Both SEV and taxable value are expected to continue to increase over the next three years; however the increase will be gradual. The Southeast Michigan Council of Governments (SEMCOG) is optimistic stating, "This is a healthy outlook for the region and its communities". Ultimately, it's not strictly income levels that determine an area's relative wealth—property values primarily contribute to a community's financial prosperity and are the key to attracting profitable industries and businesses into the area.

TARGETED INDUSTRIES

The City is focusing on three targeted industries, which have high potential for growth. These industries will drive diverse job creation, compliment the strengths of our community, and promote a climate for growth. While this document identifies key targeted industries, the City will continue to support our manufacturing firms, and seek to retain, grow and attract retail and general office uses throughout the City. This approach of focusing on targeted industries and traditional business sectors ensures a diversified tax base and provides for a full-spectrum of job opportunities for Southfield residents.

- *Technology-Based Businesses* – Capitalizing on Southfield's reputation as a center for innovation, the City will work with private-sector and institutional partners to help galvanize Southfield's entrepreneur base to create an innovation hub that will support and promote investment in technology and technology-enabled businesses. With our partners, the City will support the creation and promotion of both physical and virtual spaces devoted to collaboration and networking, mentoring, educational programs, and events, aimed at fostering the transition of Southfield-based startups to the growth stages and providing a focal point for seed and venture capital investors.

HelloWorld, formerly ePrize, is a digital marketing company that has recently relocated from Pleasant Ridge to occupy 43,000 square feet of office space within the Southfield Town Center. The new headquarters will accommodate the company's 300 employees with room for growth over time. The hiring of fifty additional staffers is imminent. The firm is investing $6.5 million into their space, approximately $6 million of which will be information technology upgrades. The move is a boon to the City as the ideal home for high-growth industries and solidifies Southfield's status as a solid business hub in the Metro Detroit area.



According to the Centers for Disease Control and Prevention, in 2009 approximately 18% of the employed workforce in the U.S. worked in the health care industry; by 2018 this percentage is expected to grow to 22%, adding over 3 million new jobs.

- *Health Care and Wellness Industry* - Southfield is poised to take advantage of this job growth through the presence of two local Hospitals, St John Providence Hospital and Oakland Regional Hospital and numerous medical offices located throughout the community. The City will explore opportunities to attract businesses that supply and manufacture medical equipment/devices to our hospitals, businesses that provide ancillary health care services, and additional medical offices. In conjunction with identifying complementary and submarket businesses, the City will assess the existing available space and recruit development partners to provide additional opportunities to meet the space needs of new or expanded health care related businesses

  Recently, Great Expressions Dental & Orthodontics has solidified plans for the consolidation and relocation of 200 jobs into a new location on Telegraph Road. They will be investing over $2.5 million on the lease and improvement of their new space located just north of the Telegraph and Twelve Mile Road intersection.

- *Automotive Sector (Research & Development)* – Oakland County is considered the brains of the automotive industry in Michigan and a global leader in engineering and research and development. The county has the third-highest number of technical workers in the nation and more than 70 percent of Southeast Michigan's top original equipment manufacturers

are headquartered in Oakland County. Our skilled work force engineering and R&D work force is increasing to meet the demands of the comeback of the auto industry. Such global automotive leaders as Lear, DENSO, COMAU and Federal Mogul have their headquarters in Oakland County.

Additionally, German automotive companies Durr Systems and ErlingKlinger are making major investments in the City of Southfield by consolidating their offices into the City. These two businesses alone account for $53.7 million of reinvestment and 600 new employees with plans for 20% additional employees.

Key Development Districts

The **Southfield SmartZone** is a 384-acre certified technology park bordered by Telegraph Road to the east, Inkster Road to the west, and adjacent to I-696 at the northwest corner of the City of Southfield. It is home to 413 businesses employing over 4,000 total employees.

The **Southfield City Centre** is Metro Detroit's newest premier district for retail and young professionals and has approximately 13,000 (45,000 within a 5-minute drive) employees working in the finance, insurance, real estate, health care, IT, and software industries. Studies have indicated that this area has a potential for 645,000 square feet of retail capacity projected to generate up to $252 million in gross sales revenue by 2016.

The **Southfield DDA** aims to create an environment that is attractive, comfortable, and secure for businesses, residents, and employees. Its successes include Fortune 500 companies, healthcare facilities, educational institutions, and historic retail development projects.

For further information on these districts, refer to Chapter 8: Sub Area Plans.

Redevelopment Ready

The Michigan Economic Development Corporation (MEDC) administers the statewide Redevelopment Ready Communities® (RRC) program. RRC is a certification program promoting effective redevelopment strategies through a set of best practices. The program measures and then certifies communities that integrate transparency, predictability and efficiency into their daily development practices. RRC certification sends the message to developers, investors, and other stakeholders that a community has a vision for the future and the fundamental practices in place to get there.

To be vibrant and competitive, Southfield must be ready for development. This involves planning for new investment and re-investment, identifying assets and opportunities, and focusing limited resources. Priorities of the program encourage business attraction and retention, emphasizes superior customer service, and promotes a streamlined development approval process making pertinent information readily available.

The program was initially developed under the Michigan Suburbs Alliance in 2006. Southfield was one of the first five communities to obtain its certification. Currently, Southfield is undergoing re-evaluation under the RRC program and is in the final phases of the re-certification process.

Mindmixer Highlight: *The third highest response on Community Priorities (Week 1, Question 1) indicated the importance of enhancing and redeveloping the City's older commercial and office areas. In addition, various other responses on an array of topics indicated the importance of continuing to bring vibrant retail and restaurants into Southfield.*

Southfield Master Plan

Five economic development challenges grew from the analysis of the City's economic profile and opportunities. Because of their importance, a goal and recommendations/strategies have been identified for each challenge. Southfield's top economic development challenges are:

1. Strengthen the competitiveness of the City's existing major business areas (office, industrial/technology and commercial) to bring about new development in these areas.
2. Help existing Southfield business employers become more competitive, enabling them to expand and grow in the City.
3. Encourage and assist with the future diversification of the City's economic base in new growing and innovative industries and occupations.
4. Help Southfield residents gain a greater competitive edge for higher skilled and higher wage employment opportunities in the future.
5. Leverage greater leadership involvement, private and public sector investment and increased access to high quality business and job development opportunities for the City in the future.

At present, Southfield still has a chance to give shape to a better economic future for the community and its businesses and residents, but time is running out. The City and its public and private sector economic development partners must work harder and smarter in retaining and expanding existing businesses and jobs, recruiting new job-creating businesses to the City, and accelerating entrepreneurship in new and diverse industry sectors.

Examples of these sectors are advanced automation, nanotechnology, advanced medical services, information technology services aimed at established and emerging industries, professional and technical services, and specialty retail trade.

Goal 1: *Business Area Competitiveness: Increase the competitiveness of Southfield's major business areas (corporate office, technology sector, retail/service centers) for high quality business and job development.*

Recommendations/Strategies

a. Strengthen public transit service to the City's major business areas, helping workers access their jobs.
b. Continue to work with City Centre's private sector leaders to implement the new master plan recommendations strengthening the City Centre area as the "business hub" of Southfield.
c. Create a new Tax Increment Financing (TIF) district or Corridor Improvement Authority (CIA) in the City Centre area.
d. Work with private sector leaders in the City's other business areas to implement the Comprehensive Master Plan's recommendations relating to these areas.
e. Advance marketing efforts with property owners and realtors in the City's major business areas to attract new businesses and jobs to these locations.
f. Remain consistent in identifying the top priority development and redevelopment sites in each business area where development review and approvals can be accelerated as a result of pre-approved uses consistent with the City's new Comprehensive Master Plan.
g. Continue to work with businesses and other stakeholders to increase shopping, green space and other desired amenities supporting employers and employees in the City's business areas.
h. Work with LTU to enhance the City's image as a center for technology businesses and jobs through a technology marketing initiative.
i. Examine the feasibility of creating a Corridor Improvement District (CID) for the Telegraph Road corridor encouraging technology business development.
j. Where appropriate, involve faith-based institutions and organizations in promoting and facilitating neighborhood economic development, with a special focus on helping residents find quality jobs.

Goal 2: *Existing Business Competitiveness: Increase the competitiveness of existing Southfield businesses to grow locally.*

Recommendations/Strategies

a. Consider implementing a business needs assessment database using software such as Salesforce, to enhance identification and response to Southfield employer needs.
b. Continue to strengthen a more intensive public-private sector existing business retention and expansion program, helping Southfield companies to resolve problems and grow locally.
c. Continue to expand local businesses' awareness of available city, county and state business incentive and assistance programs.
d. Expand services and incentives to entrepreneurs to start successful new businesses in the City. Work with LTU and key regional entrepreneurial development organizations to accomplish this strategy.
e. Create an improved Business Assistance portal on the City's Web site to provide more detailed and user specific information and data to support existing business expansion and new business attraction efforts.

Goal 3: *Economic Diversification: Diversify and grow Southfield's economic base in line with new global and technology business realities.*

Recommendations/Strategies

a. Develop and implement a marketing strategy with two key components: Overall business image improvement, and target industry and business area marketing. The first component builds the general image of the City as a place for business, and the second markets specific locations within the City for specific industry and business uses and development.
b. Step up outreach to Southfield's large corporate employers to identify new business opportunities.
c. Keep preparing marketing-oriented development packages, including site identification, incentives, workforce skills, and other information needed by companies in key industry sectors to be encouraged to grow in the City.

Goal: *Residential Workforce Competitiveness: Increase educational attainment and raise skills levels of Southfield residents to compete for high quality jobs of the future.*

Recommendations/Strategies

a. Focus all future economic development efforts on increasing the number of high skilled and high wage jobs in Southfield.
b. Continue to develop a program to retain existing young talent and attract new young professionals to the City. Work with local employers and LTU to undertake this initiative.
c. Further expand awareness of county and state workforce training and development services by Southfield employers.
d. Advance the relationship with LTU and other local higher education institutions to increase the use of local continuing education and academic credit courses and market these programs to Southfield's employers and businesses.

Goal: *Economic Development Partnerships: Grow current and develop new partnerships fostering and accelerating economic development in the City.*

Recommendations/Strategies

a. Encourage the Southfield Community Foundation to increase its financial assets and designate Economic and Community Development as its top future financial investment priority.
b. Strengthen the City of Southfield's services and support to economic development by implementing the economic development recommendations of the City's new Comprehensive Master Plan.
c. Keep encouraging the Southfield Economic Leadership Team to strengthen the collaboration among the City, Chamber, LTU, Community Foundation, Cornerstone Development Authority and other groups to get stronger economic development results for Southfield.
d. Remain working with the Southfield Area Chamber to strengthen its services in a more defined way to support local economic development.
e. Continue to foster partnerships with key outside development groups, such as Oakland County and the state of Michigan.

INNOVATIVE TOOLS

Overlay Development District (ODD)

The Overlay Development District (ODD) was established by Council on March 18, 2013 (ORD. # 1603) as a flexible too to encourage reinvestment in the City, including the original three districts: the City Centre district, Southfield Downtown Development district and Southfield Technology Corridor. In March 2015 several additional districts were added to eligible areas, including: Southfield Smart Zone; north Southfield Road and the Northwestern Highway corridor.

The purpose of the Overlay Development District (ODD) is to encourage development of those parcels of land which, because of their size; their location being uniquely situated with regard to (higher density) adjoining uses; or their unique environmental features, a more flexible development scheme could foster creative development design, or preserve desirable natural features, significant historical landmarks and architectural features located within the ODD. Therefore, the ODD modifies the traditional form of zoning and permits variety in design, site configuration, setbacks, layout, use, and encourages efficiency in use of land and natural resources, while ensuring compatibility with surrounding land uses.

In return for greater flexibility in site design requirements, ODD's are expected to deliver exceptional quality community designs that provide above-average pedestrian amenities, incorporate creative design in the layout of buildings, focus on pedestrian space and circulation; incorporate public art; assure compatibility with surrounding land uses and neighborhood character; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure.

Finally, ODDs authorized under this ordinance shall provide a better and more desirable living and physical environment than what would be possible under the zoning regulations that apply to the development or traditional zoning district, while implementing the policies and objectives of the Comprehensive Master Plan, as amended.

To date, there have been five ODD's approved within the City: 1) Civic Centre II; 2) Arbor Lofts; 3) Traveler's Tower; 4) ElringKlinger (Automotive Manufacturing) and 5) EZ Storage Mixed-Use.

Property Assessed Clean Energy (PACE)

On June 25, 2012, the City of Southfield became the first jurisdiction to join Lean & Green Michigan™, one of America's first statewide Property Assessed Clean Energy (PACE) initiatives – and Michigan's marketplace for energy efficiency and renewable energy financing.
As the premier business address in Michigan, the City of Southfield continues to create new and better ways to provide opportunities for our community. The partnership with Lean & Green Michigan to establish a virtual energy office is a positive step for Southfield. The Lean & Green Michigan™ PACE plan will bring new economic development tools to entice reinvestment and redevelopment in our city while helping to green the community.

- Each $1M represents roughly 10 person years of work in Southfield

- PACE financing will increase value of each property involved, raising property tax revenue over time
- By saving companies money, PACE improves the business climate
- By helping companies go green, city gains potent economic development tool
- All of this makes Southfield a more attractive place to do business

Overview of PACE

Public Act 270 of 2010 ("Act 270") authorizes local units of government to adopt Property Assessed Clean Energy ("PACE") programs to promote the installation of energy efficiency improvements and renewable energy systems by owners of commercial or industrial property within a district designated by the local government. Act 270 provides for repayment to local governments through a voluntary property assessment. The property assessment remains with the property and has the same priority as other property tax and assessment liens in the event of foreclosure.

How PACE Works

Lean & Green Michigan™ enables commercial, industrial and multi-family property owners in Southfield to take on a voluntary special assessment with the city in order to achieve favorable terms and longer amortizations in financing energy efficiency, water efficiency and renewable energy projects. Property owners can eliminate waste and save money while greening the community and creating a more comfortable environment for their employees or tenants. Financing is available for virtually all types of commercial and industrial property for all private for-profit and private non-profit property owners.

Lean & Green Michigan™ is a public-private partnership that uses Michigan's new PACE statue to develop a market-based approach to energy finance and economic development. In essence, the City of Southfield leverages the PACE statute to maximum effect by bringing private capital to bear to solve companies' energy problems, to create work for contractors and jobs for workers, and to green our communities.

Property owners, contractors and financial institutions get a free market in which to arrange energy deals that pencil out for all concerned, using the PACE financing mechanism to lower the cost of capital and create positive cash flow from day one.

To find out more, visit www.leanandgreenmi.com today! You may also contact Lean & Green Michigan™ President Andy Levin at andy@levinenergypartners.com or Southfield Business Development Manager Rochelle Freeman at rfreeman@cityofsouthfield.com.

Southfield Brownfield Authority

Under the Brownfield Redevelopment Act PA 381 of 1996, the Southfield Brownfield Redevelopment Authority was established to develop and implement Brownfield projects. A BRA is a resource that may use Tax Increment Financing (TIF) as a tool for property redevelopment.

The Brownfield Redevelopment Authority (BRA) reviews proposals for the redevelopment of eligible properties and determines necessary financial incentives (if any) to assist redevelopment. A Brownfield plan is prepared for a property outlining details on the property, eligible activities, and the TIF approach to be taken. The BRA makes a recommendation to the City Council who holds a public hearing on the plan and votes to approve or deny the plan.

Approval and adoption of a Brownfield plan for a property slated for redevelopment helps to level the playing field to offset costs associated primarily with contaminated sites or sites that are functionally obsolete.

Tax Abatements

There are various State Acts which encourage the rehabilitation of commercial property by abating or freezing personal and/or real property taxes generated from new investment. The new investment of any subject property slated for reinvestment must result in improvements aggregating more than a certain percentage of the true cash value of the property at commencement of the rehabilitation of the qualified property.

Property owners planning to make renovations to their properties should contact the Southfield Business Development Department for assistance. All requests will be evaluated to determine if the investment will overall benefit the City of Southfield. The Business Development Department coordinates the tax abatement process with the City Assessor to formulate a recommendation which is then taken to City Council for approval or denial.

Tax Abatement Programs include **PA 198 - Industrial Property Abatement** which provides a tax incentive to manufacturers to enable renovation and expansion of aging facilities, assist in the building of new facilities, and to promote the establishment of high tech facilities. An eligible owner may request an abatement of 50% of their real and 50% of their new personal property to be abated for up to 12 years. **PA 328 - New Personal Property Abatement** affords a 100% property tax exemption for specific businesses located within eligible distressed communities. Public Act 210 of 2005 encourages the rehabilitation of commercial property by abating the property taxes generated from new investment for a period up to 10 years. Eligible properties

must be at least 15 years old, of which the primary purpose is the operation of a commercial business enterprise or multifamily residential use.

CHAPTER 6: PUBLIC INPUT

ONLINE ENGAGEMENT

Public participation is the backbone of any Master Plan. However, in the 21st century, it has become increasingly difficult to stress the importance of participation. Equally important is to provide avenues by which the public can feel encouraged to contribute in a meaningful way and which does not impose on their busy schedules. Online engagement is the perfect platform to accomplish these goals. To encourage greater public participation and engagement during the Sustainable Southfield Master Plan process, the City of Southfield utilized the social media platform *MindMixer*.

MindMixer is a website which allowed participants to get engaged and interact in a variety of ways. Community members, including residents, employees, students and visitors were invited to engage in a two-way dialogue with City leaders, vote in polls and earn rewards. Contrary to the traditional public meeting, participants could choose the day and time *they* wanted to participate.

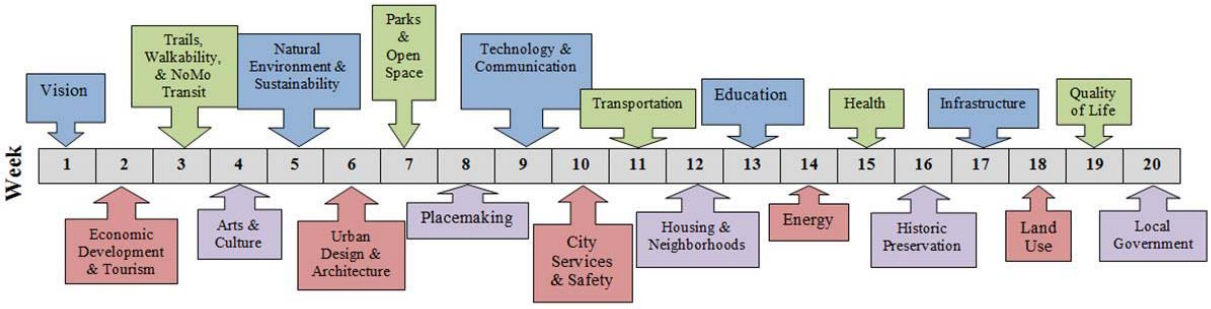
Preparation for Engagement

In preparation of the *Sustainable Southfield* MindMixer social media platform launched on January 22, 2015, a team of City Adand Community Relations.

In the fall of 2014, the team 1) reviewed questions previously asked in the 2009 Comprehensive Master Plan; 2) selected questions from a vast library of questions from MindMixer; and 3) created specific questions focusing on current issues facing Southfield. The team was able to craft community questions, schedule topics to optimize engagement and keep participants up-to-date on the progress of their ideas.

Prior to the launch, presentations were made to the Planning Commission, the Southfield City Centre Board, City Managers and City Council to get feedback on the draft design of the website.

A list of 20 topics were reviewed and selected to be rolled out during a 5 month community engagement period. Two general visioning questions were selected to be open during the entire process and 3-5 questions were designated for each topic. The first topic on Visioning launched on January 22, 2015 and was open for 2 weeks. Each topic thereafter was open for comment on a weekly basis.



There were many ways to engage the public on the website:

- **Photo Share**: Created a visual of the community by asking participants to submit their own photos, or interact on the City's posted photos in a visual preference survey.
- **Instant Poll:** Allowed participants to select from a list of choices determined and controlled by the City's site administrators.
- **Idea Submissions** Invited participants to submit their own, unique ideas, or support other ideas and leave feedback in the comments field.
- **Survey:** Offered a comprehensive list of open-or closed-ended questions that participants could answer quickly on a specific subject.
- **Challenge:** Collected citizen solutions to a challenge Southfield is facing, then took direct action based upon participants, votes.

The following engagement features and benefits were available to make the "Sustainable Southfield" social media website experience more user-friendly:

- **Seamlessly Map Innovative Ideas:** MindMixer is an engagement platform that integrated dynamic mapping within the participation suite. Participants had the ability to tie their ideas to any location on a map.
- **Join the Conversation:** One of the most valuable aspects of the MindMixer site was the ability to engage in a two-way conversation with Southfield's community members. Administrators and stakeholders could leave feedback and updates on ideas submitted by participants, helping keep the conversation going and ensuring participants that their voices were being heard.
- **Who's Listening:** Let participants know who was taking their feedback into account and responding to their ideas in order to humanize online dialogue. Department directors and other recognizable public leaders were invited to take ownership of the site in order to legitimize the project and show City residents that their comments did not go unheard.

- **Incentivize Engagement:** Participants earned virtual points every time they engaged – points they could use to redeem rewards provided by the City. Recognition was an effective way to thank participants and encouraged them to continue the conversation.
- **Share with Social Sites:** MindMixer had deep integration with the most popular social media sites such as Facebook, Twitter, LinkedIn, and Google+, allowing participants to share their contributions with their social following and helped expand the City's audience. In addition, the MindMixer platform was integrated with Southfield's existing website.
- **Mobile Integration is Easy:** MindMixer had seamless SMS (text) participation. SFD could provide feedback on-the-go through this integrated functionality. Notifications of new topics and other site updates were also provided via email and SMS.
- **Language is Not a Barrier:** The MindMixer platform could be viewed in more than 90+languages. This allowed for participants of about any language to feel comfortable submitting, commenting, and sharing with friends.
- **Site Guidelines and Policing:** MindMixer did not allow for anonymous participation; sign up was required. Extensive experience has shown that verified participation yields high quality input and less negativity. For participants, we provided an online FAQ, participation guidelines, and terms and conditions.

Promotion

Posters were created and 2,000 post cards were printed to be placed in all main lobbies and counters of Southfield municipal facilities to engage walk-in customers. A press release was issued by the City and several articles were published in local newspapers.

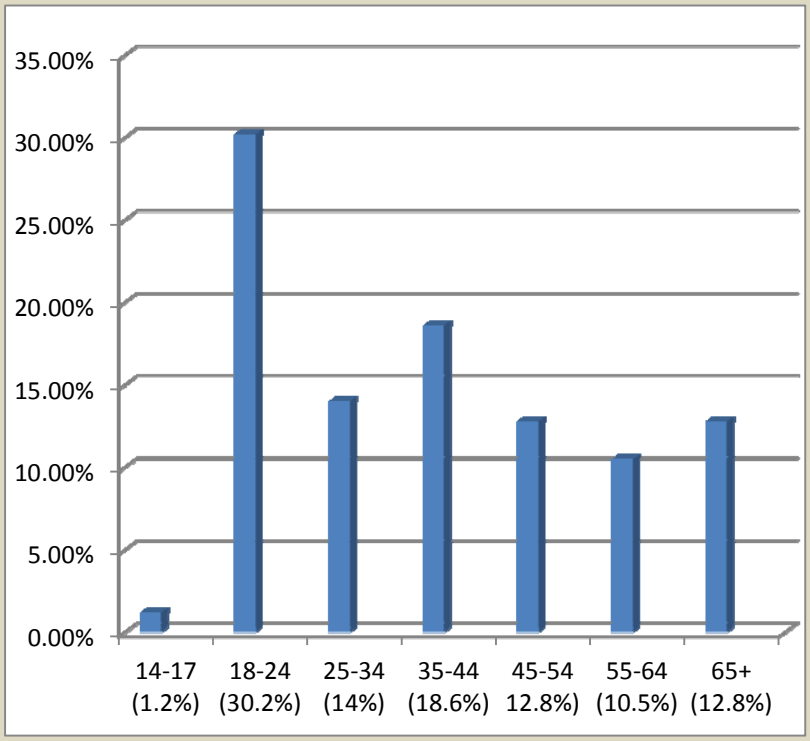
Over one-hundred (130) letters were mailed to registered home owners groups and condominium associations to encourage participation. In addition, 20,000 flyers were printed and distributed by mail inserted with the City's water bills. Several presentations were made to various civic groups and organizations, including the Southfield School Board, Southfield-Lathrup High School, Southfield High School and LTU. Notices went out via e-mail, e-newsletters, Facebook, Linked-In, Twitter, websites and other social media platforms, including Cable 15.

Participation Results

During the 20 week topic period, the *Sustainable Southfield* Mindmixer web site generated 5,534 unique visitors, had 20,250 page views and engaged 486 total participants. That is the equivalent of having over 5,500 people attend a public meeting and having close to 500 people come up to the microphone and make at least one comment.

The average participant was a 37 year old female residing in postal codes: 48075 (33.4%), 48076 (24.8%) and 48033 (13.2%) which were all Southfield zip codes. The gender breakdown of participants was 42% Male and 58% Female. The age breakdown of total participants is shown in the chart below.

Figure 6-x: Percentage of Mindmixer Participation by Age Group



One of the goals of utilizing the social media platform site was to get a broader participation from all age groups, especially the younger generations that do not typically attend static public meetings. The results of the chart above show that almost half (45.4%) of participants were under 35 years old! In addition, we also had good participation from the 55-64 (10.5%) age cohort and from those aged 65 and older (12.8%).

The *Sustainable Southfield* site was also shared a number of times on other social media sites: Facebook (99); E-Mail (81); LinkedIn (15); Twitter (13); and Google+ (5).

A total of 650 unique ideas and 175 of photos were posted and shared on the site as well.

Table 6-x: Sample Open-Ended Mindmixer Questions

How can we create a more connected Southfield?		
Improve bike, sidewalk, and walking path connectivity	Encourage communication between City government & residents	Provide more community events and gathering places
What can we do to highlight and promote the theaters and art galleries to support our local artists?		
Offer additional City-sponsored art events/competitions/shows	Increase marketing & promotion	Consider hosting a large art event/festival (e.g. Art Prize)
What additional actions would you recommend to enhance trails and walkability?		
Maintain existing trails	Provide pedestrian amenities along trails	Install distance markers and wayfinding signage along trails
What should the Public Arts Commission be focusing on?		
Establish partnership with the Detroit Institute of Art (DIA)	Seek public/private partnerships	Add art to the City Hall property
What are your feelings towards or suggestions to encourage alternative energy solutions?		
Incentivize implementation	Require alternative energy solutions for new development	Provide more affordable residential alternative energy solutions
How can Southfield grow and expand while protecting the character of each of our neighborhoods?		
Continued emphasis on Code Enforcement and resident input	Continue to provide home improvement loans	Spotlight the history of various neighborhoods
Where are some congestion hot spots and where do you feel unsafe on the road, sidewalk, bike trails?		
Twelve Mile Rd & Evergreen Rd intersection	Twelve Mile Rd & Southfield Rd intersection	Twelve Mile Rd and Telegraph Rd intersection

Top Ideas & Common Themes

The top three ideas that became consistent throughout the 20-week process were:

1. **Walkability & connectivity throughout the City** (i.e. sidewalks, bike paths, increased pedestrian amenities, etc.)
2. **Street and road repair**
3. **Redevelopment and/or renovation of older commercial properties**

Reports which included participants' ideas and comments on each of the twenty topics were compiled and relayed to the various City departments primarily responsible for the ideas mentioned. Based on the above, Public Works/Engineering and Business Development received frequent summaries and reports.

Complete results of the Mindmixer public participation engagement period can be found in Appendix A: Mindmixer Results.

Public Input

The following additional meetings were conducted by Planning Department staff with the following focus groups and neighborhood organizations:

- Southfield Arts Commission
- Southfield City Centre Advisory Board
- Southfield Downtown Development Association
- Southfield Historic Commission/Society
- Southfield School District

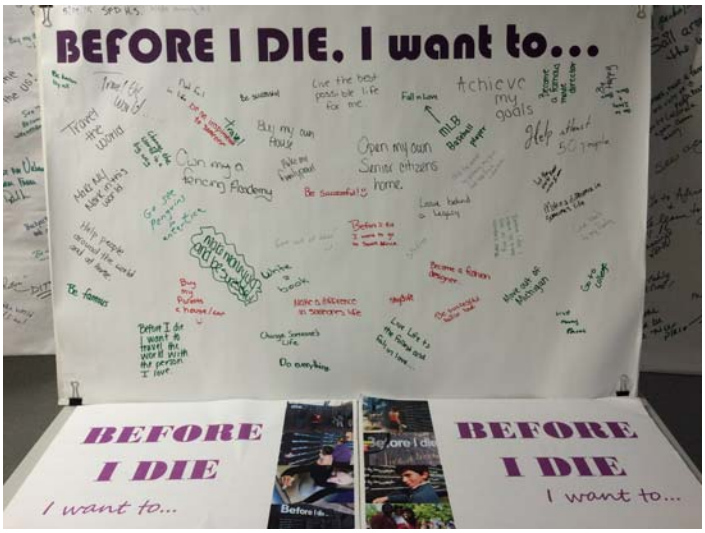
Public Workshops:

- Southfield Road Workshop: Wednesday, March 20, 2013 at 6:30 p.m.
- Valley Woods Workshop: Wednesday, April 16, 2014 at 6:30 pm
- Valley Woods Public Hearing: Wednesday, April 23, 2014 at 6:30 pm
- Valley Woods Public Hearing #2: Monday, May 19, 2014 at 7:00 pm
- General Master Plan Workshop/Open House: Wednesday, January 20, 2016 at 6:30 pm

Informational Meetings:

- Southfield Public Schools Administrators Retreat - Wednesday, August 7, 2014
- Southfield Public Schools Administrators Retreat – Saturday, January 17, 2015
- LTU Student Council: February 3, 2015
- Southfield Historic Society: March 3, 2015
- Southfield Homeowner's Coalition - Wednesday, March 11, 2015 at 6:30 pm

- Cranbrook Village Homeowners Association - Wednesday, April 22, 2015 at 7:00 pm
- Magnolia Subdivision Association - Wednesday, April 29, 2015 at 7:00 pm
- Southfield Lathrup High School - Tuesday, May 12, 2015 at 8:30 am
- Southfield Clergy Roundtable- May 18, 2015
- Greentrees North Homeowners Association - Monday, May 18, 2015 at 6:30 pm
- Southfield High School - Tuesday, May 19, 2015 at 8:30 am
- Southfield Public School District *Imagine 2020* presentation- Sept. 24, 2015
- Southfield University High School - Thursday, October 22, 2015 at 2:00 pm



As part of the public input portion, the Planning Department replicated a public engagement project developed by an artist named Candy Chang. In 2011, Ms. Chang painted the side of an abandoned home in New Orleans with the words, "Before I die, I want to…" with multiple lines for responses. Individuals used chalk to fill in the blanks. The January 20 Public Workshop marked the third time that the Planning Department has displayed the "Before I Die" boards. Reponses collected during the two prior displays ranged from, "Start an urban worm farm" to "Solve global climate change". Traveling and taking care of family were other common themes.

Public Workshop(s)

The Planning Commission held several study sessions & workshops on the Master Plan throughout the process.

At the Planning Commission's January 20, 2016 workshop, a short presentation was made by staff with the remainder of the evening conducted as an open house. Various maps from the Master Plan placed were placed around the room for public review and comment. Approximately 60 residents and the 7-member Planning Commission were in attendance.

The following questions were asked and responses given:

What do you like about Southfield?

- Diversity
- The people
- The Ravines
- The Library
- Housing
- Location

What are some goals Southfield could focus on?

- Investment in homes without additional taxation
- Restore Library hours of operation
- More sidewalks & bike paths
- Encourage renovation of aging structures
- Housing redevelopment potential in Almira/Garner area
- Daylight the Rummell Drain near Civic Center & Northwestern Hwy
- Redevelopment of the vacant property at Evergreen/Civic Center
- Better promotion of The Burgh and Mary Thompson Farm
- Redevelopment of Northland Mall property and inclusion of residents throughout planning for redevelopment
- Develop a park promotional tour
- Update technology/infrastructure for autonomous vehicles
- Repurpose vacant or closed schools (possibly for housing)
- Attract more family style restaurants (ie Applebee's)
- More entertainment and activities on nights and weekends

<u>Council Visioning Session</u>

On December 4, 2015, the Mayor, City Council, Clerk, Treasurer and key City staff (City Administrator, Deputy City Administrator, City Attorney and City Planner) held a day-long visioning session at the Southfield Public Library.

Mayor Siver shared his vision of 2016 and beyond. The vision involves five main target areas; **roads and infrastructure, redevelopment, housing renewal, code enforcement and leveraging staff and energy**. Common words from all Southfield residents throughout campaigning were to "*please fix the roads*".

Roads and Infrastructure:
This past season a great deal of road work was done. There is still much more to do and the City should anticipate a busy construction season for years ahead. The size of the road issue in Southfield is larger than the road bond. There are 246 miles of roads in the City costing at least a million dollars a lane – this is a huge proposition. The Mayor suggests hiring five more people in the Streets and Highways department. Before the economic crash the department consisted of 28 employees, today there are 15. The sewer system also is a concern on the east side of Southfield after the flooding in August 2014. FEMA has proposed a grant of 1.7 million dollars but the anticipated cost will be much higher to fix the sewer systems.

Redevelopment:
Redevelopment was the second target discussed by the Mayor. The future of the City depends on redevelopment. Pressing areas in the City are Northland and the City Center. There has been a long vision for a walkable City Center and the City is now closer than ever before. A key component to redevelopment has to be housing, in order to have vibrancy. The City needs mixed use and multistory housing options. It was suggested the City should move away from auto dominated landscapes and move into streetscapes which cater more to pedestrians. Northland is a great challenge, but also a great opportunity with 114 acres of land ready to be redone.

Housing Renewal:
Housing renewal was the third target discussed by the Mayor. Creation of a multipoint plan to address aging homes was discussed. Allowing neighborhoods to decline will cause the City to lose neighbors. It will also hinder schools and the City as a whole. Encouraging reinvestment and a neighborhood stabilization program would help rehabilitate foreclosed properties and sell them to families. Home ownership has declined. In 2009, 69% of all homes were owned or occupied. Today that has dropped to 64% and will continue to decline. Rental inspection programs contain gaps and need to improve. The City needs to tighten procedures and pursue landlords for bearing costs of inspections. There is hope to have an increased sale of rental properties to permanent residents.

Code Enforcement:
The next target was code enforcement in the City. Residents have voiced concern over the lack of code enforcement. The Mayor recommends hiring more officers and shrinking the amount of territory in the City that each code enforcement officer manages. A potential concern of higher enforcement is receiving pushback from residents, but this is important for the appearance and viability of the City. Southfield has an aging population. Many elders are longtime residents, which is great but these homeowners have difficulty with home repairs. The Mayor suggested expanding the CHORE program to help those residents maintain properties. The City should encourage as much curb appeal as possible, including business properties.

Leveraging Staff and Energy:
The last target area involved leveraging staff and energy. Mayor Siver emphasized the importance of in house communication and proposed reinstating a staff newsletter to assist in communication improvement. The newsletter could be electronic, low cost and emailed to all City employees. Staff recognition programs also need to be conducted. All people like to be heard, appreciated and valued. Contracts with employee groups must be settled in parameters within what the City can afford; give and take on both sides. The City has to be mindful of legacy costs; contract settlements have to reflect reality.

The participants of the visioning session then broke into small groups to brainstorm on action items for each of the Mayor's vision points. The following list was produced:

Roads and Infrastructure:
- Prepare a master plan report on roads and Infrastructure
- Address east side storm water & sanitary sewer issues
- Investigate street lighting in neighborhoods

Redevelopment:
- Implement Public Arts Commissioners' recommendations, including:
    - public art requirement,
    - art installations,
    - fund raising,
    - form non-profit art fund, and
    - create Southfield photo-pride competition
- Expand City marketing efforts
- Develop Northland Mall site master plan & marketing strategy
- Expand community marketing
- Create City Centre mixed-use vision for parcel at Evergreen & Civic Center Dr.

Housing Renewal:
- Develop a pilot NEZ program
- Create a Southfield Neighborhood Stabilization Program
- Develop a historic preservation program for homes & neighborhoods

- Implement Rental Properties programs:
    - Enforcement of registration program
    - Develop rental inspection program, which is cost neutral, for single family & multi-family
    - Expand CHORE program
    - Conduct housing study/market analysis

Code Enforcement:

- Hold a Code summit
- Increase staff, reduce size of territories for code enforcement officers
- Enforce perpetual maintenance agreements
- Expand community pride
- Recognize well maintained business properties

Leveraging Staff and Energy:

- Collect organization charts from each department and create master chart
- Prepare job descriptions for each department for critical positions
- Conduct yearly staff evaluations
- Settle union contracts
- Evaluate Council appointments: City Administrator, City Attorney & City Planner to develop a common vision
- Prepare a bi-weekly newsletter.

Misc. Items:

- Adopt regulations on mineral exploration and ban fracking
- Expand small business development
- Encourage minority contracting and monitoring system:
    - Step up efforts to award contracts to minority owned businesses
    - Encourage contractors to increase percentage of minority workers

The visioning session concluded with everyone sharing their feelings about the meeting and towards the vision of 2016 and beyond.

Southfield Arts Commission

At the Southfield Arts Commission meeting held on January 19, 2016, the Commission set aside some time to brainstorm and discuss master planning items. Below is a summary of their comments:

- Expand pedestrian & bike pathway network throughout the City Centre and City.
- Tie-in residential living to LTU as a “college town”
- Redevelop large vacant parcel in the City Centre as a mixed-use development
- Create Southfield as a destination for the Arts
- Develop the Evergreen Road boulevard as a focal point for art

- Implement art on all levels thru-out the City
- Establish Art as a great presence in the Southfield
- Create an Art Gallery in the City for showcasing art
- Find a curator to promote art in the community
- Establish a display unit in a central location for student art exhibits
- Make the former Northland Mall site an exciting destination
- Work towards including performing arts in the future

CHAPTER 7: EXISTING & FUTURE LAND USE PLAN

Goals

- *Create a diversified and balanced mixture of land uses that will support the economic vitality, tax base, and livability of the City.*
- *Offer unified, well-organized residential neighborhoods that provide a variety of housing options in a livable environment for the City's residents.*
- *Provide for an appropriate amount of mixed-use commercial, office, and industrial uses, located for convenience and safety, resulting in aesthetic business areas in the City.*
- *Conduct a target market housing analysis to determine housing needs.*

Existing Land Use

The collection and analysis of existing land use and natural features information represents one of the most important steps in the Comprehensive Plan update process. The analysis of such information not only identifies what and where particular uses exist, but also provides insight as to where future development might occur, as well as where land use conflicts exist or may develop.

Land use planning is the primary tool communities use to correct or avoid land use conflicts and to create sustainable and supportive land use arrangements.

Land Use Characteristics

Southfield is a relatively urban City that is predominantly developed. In 2015, approximately 4% of land in Southfield was undeveloped. Therefore, new development can be expected to occur slowly, with most new development expected to be in the form of redevelopment and infill. Between 2005 and 2015, the City's residential density has decreased only very slightly (by only 1%).

As seen in Table 7-1, single-family residential homes comprised the largest portion of land uses in

Table 7-1: Southfield Land Use, 2015

Land Use	Southfield		Oakland Co.	
	Acres	% of Total	Acres	% of Total
Agricultural	0.0	0.0%	26,119.1	4.5%
Single Family Residential	6,561.8	39.0%	226,838.4	39.1%
Multiple Family	1,375.6	8.2%	13,559.4	2.3%
Mobile Home Park	0.0	0.0%	3,358.6	0.6%
Commercial/Office	2,110.1	12.5%	18,120.1	3.1%
Industrial	415.1	2.5%	18,468.8	3.2%
Public/Institutional	1,437.3	8.5%	21,330.8	3.7%
Recreation/Conservation	813.4	4.8%	83,087.5	14.3%
Transp/Utility/Comm	240.1	1.4%	6,305.7	1.1%
Extractive	0.0	0.0%	6,199.8	1.1%
Vacant	741.6	4.4%	61,772.8	10.6%
Water	106.4	0.6%	35,247.8	6.1%
Railroad ROW	0.0	0.0%	1,023.6	0.2%
Road ROW	3,017.6	17.9%	59,116.8	10.2%
Total	16,819.0	100.0%	580,549.2	100.0%

Source: Oakland County Land Use Program, 2015

Southfield in 2015 (39%), followed by rights-of-way (18%), commercial and office uses (13%), public/institutional uses (9%), and multiple-family uses (8%). By comparison, Oakland County was approximately 15% undeveloped when considering vacant and agricultural lands. In the County, single-family residences comprised approximately 39% of the land area, followed by recreation and conservation lands (14%), vacant lands (11%), and rights-of-way (10%). Among the most significant differences in land uses between Southfield and Oakland County are the higher concentration of commercial and office uses, transportation rights-of-way, and multiple-family residences and the lower concentration of recreation and conservation lands in Southfield. Map 7-1 shows the distribution of land uses in Southfield in 2015. Table 7-2 provides definitions of the land use categories used in the map and throughout this Chapter.

Land Based Classification Standards (LBCS)

> Land-Based Classification Standards provide a consistent model for classifying land uses based on their characteristics. The model extends the notion of classifying land uses by refining traditional categories into multiple dimensions, such as activities, functions, building types, site development character, and ownership constraints. Each dimension has its own set of categories and subcategories for classifying land uses. By classifying every land-use across multiple dimensions, users can have precise control of land-use classifications. (Source APA)

A windshield survey was conducted in 2014 by the Planning Department of all parcels located in the City of Southfield and cross reference with Oakland County and City GIS data sources to determine land uses. This initial survey has been updated throughout the process to reflect changes in land use based upon development activity. For the purpose of compiling existing land uses into a useful reference map, we have chosen to classify existing land uses by "**activity**" only for the *Sustainable Southfield* master plan (see Map 7-1 Existing Land Uses).

> <u>Activity</u>
>
> Activity refers to the actual use of land based on its observable characteristics. It describes what actually takes place in physical or observable terms (e.g., farming, shopping, manufacturing, vehicular movement, etc.). An office activity, for example, refers only to the physical activity on the premises, which could apply equally to a law firm, a nonprofit institution, a court house, a corporate office, or any other office use. Similarly, residential uses in single-family dwellings, multifamily structures, manufactured houses, or any other type of building, would all be classified as residential activity. *(Source: APA, April 1, 2001)*

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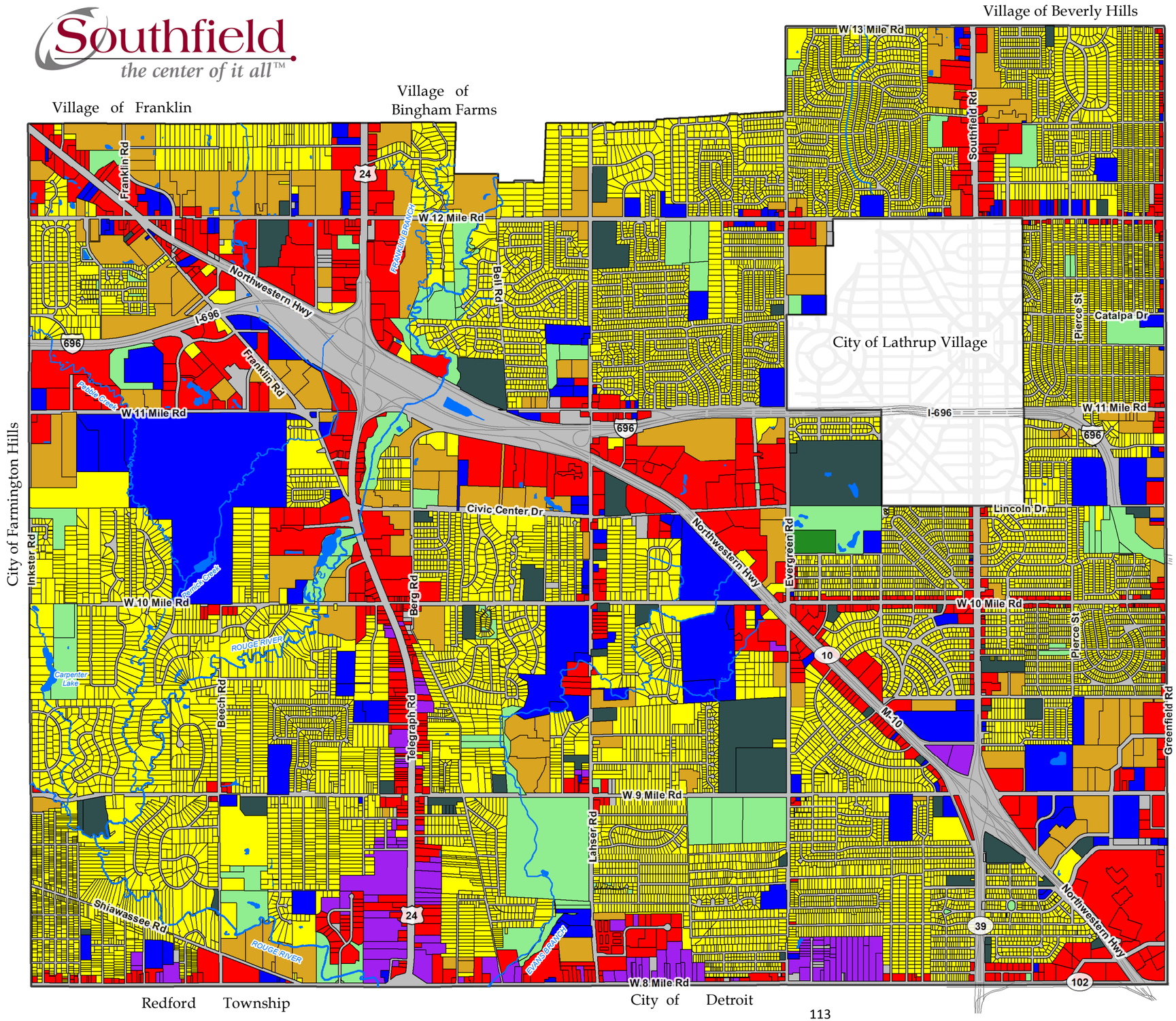
Map 7-1: Existing Land Use



Water

Land Based Classification Standards

LBCS Activity 2015

- 1000, Residential
- 1001, Multi-Family Residential
- 2000, Business
- 3000, Industrial
- 4000, Institutional
- 5000, Travel/Movement
- 6000, Assembly
- 7000, Leisure
- 8000, Natural Resources

N
W E
S

Miles

0 0.5 1 2

1 inch = 2,850 feet

Draft 3/1/16

Revised: 1/20/2016

Future research will be conducted by the Planning Department et al to add the following multiple dimensions to the existing land use inventory: **function, structure type, site development character, and ownership**.

Table 7- 2 indicates the LBCS Color Codes for 1-Digit Level Coding used for Activities, Existing Land Uses:

Table 7-2: LBCS Color Codes for 1-Digit Level Coding, Activities

Red, Green, Blue Values	Color	LBCS Code	Activity	Examples of Land Uses
RGB(255,255,0) RGBHex(FFFF00)	Yellow	1000	**Residential activities**: Includes activities that occur in all types of residential uses, structures, ownership characteristics, or the character of the development.	Single family, multi-family, town homes, & manufactured homes; hotels, tourist homes & B & B's; dormitories, group homes, etc.
RGB(255,0,0) RGBHex(FF0000)	Red	2000	**Shopping, business, or trade activities:** This category captures all uses that are business related. Used as a catch-all category for all retail, office, commercial, and industrial activities.	Retail shops, stores, goods & services; restaurants; offices, banks, etc.
RGB(160,32,240) RGBHex(A020F0)	Purple	3000	**Industrial, manufacturing, and waste related Activities:** All manufacturing, assembly, warehouse, and waste management activities.	Assembly plants, manufacturing facilities, industrial; warehouses, trucking, self-storage, solid waste, landfills, recycling facilities, etc.
RGB(0,0,255) RGBHex(0000FF)	Blue	4000	**Social, institutional, or infrastructure related Activities:** Includes all institutional activities	Educational, schools, instructional, including administrative functions; & public safety; utilities; health care facilities; military complexes.

Red, Green, Blue Values	Color	LBCS Code	Activity	Examples of Land Uses
RGB(190,190,190) RGBHex(BEBEBE)	Gray	5000	**Travel or movement activities:** This category encompasses activities associated with all modes of transportation. It includes rights-of-way and such linear features associated with transportation, including free standing parking lots.	Pedestrian-only roads, open mall areas in ROW. Roads, parking areas, storage of vehicles. Car washes. Public transit, trains, railroads, etc.
RGB(47,79,79) RGBHex(2F4F4F)	Dark Slate Gray	6000	**Mass assembly of people:** This is a catch-all category for activities associated with mass assembly of people for either transportation, spectator sports, entertainment, or other social and institutional reasons.	Bus terminals; spectator sports stadiums and venues; movies, concert and entertainment venues; City Hall, religious institutions, museums, libraries, and galleries.
RGB(144,238,144) RGBHex(90EE90)	Light Green	7000	**Leisure activities:** This is a catch-all category for classifying all forms of leisure activities. It includes the customary active and passive kinds of leisure activities although such distinctions are difficult to define.	Bike paths, pathways, athletic tracks, playgrounds, trials, health clubs, gymnasiums, indoor & outdoor recreational facilities; ice rinks, golf, tennis, team sports, etc. Parks, pools and other recreational venues.
RGB(34,139,34) RGBHex(228B22)	Forest Green	8000	**Natural resources-related activities:** Agricultural activities, such as farming, plowing, tilling, cropping, seeding, cultivating, and harvesting for the production of food and	Farming, cultivating and harvesting; feeding and raising of livestock. Forestry activities. Mining, quarrying, drilling and dredging.

Red, Green, Blue Values	Color	LBCS Code	Activity	Examples of Land Uses
			fiber products. Also includes sod production, nurseries, orchards, and Christmas tree plantations. Excludes forest logging and timber-harvesting operations.	
RGB(255,255,255) RGBHex(FFFFFF)	White	9000	**No human activity or unclassifiable activity:** May also be used as a placeholder for areas of no habitation (desert areas, for example).	TBD activities

Source: APA, April 1, 2001

Land Use Comparison

Distribution of land uses in Southfield can be understood further by comparison to the distribution in similar sized cities in the area. The Oakland County cities of Farmington Hills, Troy, Novi, and Pontiac, were selected for comparison based on the similarity of their population and land area. Table 7-3 shows the population, total acreage, and distribution of land uses for Southfield and each of the comparison cities.

Southfield stands out most significantly from its neighbors in the share of its land in multiple-family and office/commercial use. It has the highest share in both land uses. This is consistent with the view of Southfield as an employment and population center. Southfield has the smallest share of water, recreation/conservation land and industrial uses.

Table 7-3: Land Use Comparison,2015

Population	Southfield	Farmington Hills	Troy	Novi	Pontiac
	72,840	80,682	82,106	56,887	59,658
Acreage	16,819	21,309	21,521	20,019	12,984
Agriculture	0.0%	0.0%	0.0%	0.8%	23.9%
Single Family	39.0%	43.6%	42.4%	27.0%	4.1%
Multi Family	8.2%	7.2%	3.8%	6.1%	0.5%
Mobile Home	0.0%	0.2%	0.2%	1.5%	6.9%
Office/Commercial	12.5%	6.0%	10.1%	7.0%	12.8%
Industrial/Light Ind	2.5%	4.1%	7.2%	5.4%	9.3%
Public/Institutional	8.5%	5.9%	6.8%	5.0%	5.6%
Recreation/Conservation	4.8%	10.2%	6.0%	14.1%	2.9%
Transp/Util/Comm	1.4%	0.4%	1.6%	1.7%	0.0%
Extractive	0.0%	0.0%	0.0%	0.4%	14.4%
Vacant	4.4%	3.6%	3.4%	11.4%	2.5%
Water	0.6%	1.2%	1.4%	5.9%	0.8%
Rights of Way	17.9%	17.6%	17.3%	13.6%	17.1%

Sources: US Census Bureau ACS 2014, Oakland County Land Use Program 2015

Determining Factors

Southfield has a number of opportunities and limitations that will influence future development. Positive influences on growth include excellent access from I-696, M-10 and Telegraph Road, as well as abundant employment opportunities. While the accessibility and high traffic volumes are a draw for commercial uses, other areas need to maintain a quiet residential setting.

The future land use plan should guide the future development pattern of the community into a logical arrangement which maintains the character of Southfield, provides for economic development and ensures adequate services and land for all types of lawful land uses where there is a public need and a suitable location(s) in the City. The factors involved in determining future land use include:

- Consistency with existing land use patterns.
- Relationship to uses in surrounding communities to ensure compatibility at city boundaries.
- Reduction in incompatible land use relationships.

- Creation of suitable land use transitions through intermediary uses like office between single-family and larger scale commercial uses.
- Suitability of the site for different land uses in terms of site size, features and adjacent uses.
- Maintenance of aesthetic qualities that contribute to the community character and quality of life.
- Existing planning policies and zoning regulations.
- Availability of infrastructure including utilities, roads and community facilities.
- Average daily traffic volumes on adjacent streets.
- Preservation of natural features and consideration of the effects of development on the environment.
- Market conditions for various land uses.
- Goals of the Plan that express the community character desired by residents.

Future Land Use Plan

Southfield's future land use plan establishes land use categories, illustrates the location of planned land uses and provides strategies for implementation. This section also provides a rationale for the placement of preferred land uses and the intensity of those uses. The plan serves as the primary policy guide for future land use decisions, investment in public improvements and coordination of public improvements and private development.

The plan presents an idealized future indicated by the growth patterns in the City. The plan, however, also provides practical guidance for local decision-makers regarding current issues. It is the intent of the plan to assist in the orderly development and redevelopment of the City, and to assist the community in enhancing its vision for the future.

A listing of the future land use categories as illustrated on Map 7-2: Future Land Use and a brief summary of each category is listed below, followed by a more detailed description of the location, objective, land uses, and general character description for each category. Descriptions of three more specific subareas, identified as areas needed greater study, follows the land use category descriptions. These include areas identified during the process that warrant a greater level of flexibility in future land uses and a higher level of guidelines detailing the desired design and access.

- **Low Density Single-Family Residential.** Single-family homes on lots 20,000 sq. ft. or larger, permits complimentary small scale institutional uses.

- **Moderate Density Single-Family Residential**. Single-family homes on lots less than 20,000 sq. ft., permits complimentary small scale institutional uses.
- **Low Density Multiple-Family Residential.** Townhouses and multiple-family units, generally under 2 stories.
- **Moderate Density Multiple-Family Residential.** Multiple-family units over 2 stories.
- **Local Mixed-Use.** Primarily business in nature, mixture of neighborhood commercial, service and office with accessory multiple-family uses.
- **Regional Mixed-Use.** Primarily business in nature, mixture of large scale commercial, service and office with accessory multiple-family uses.
- **Office/Research.** Corporate and medical offices, research facilities, TV stations.
- **Educational/Medical Institutions.** Regional college or hospital campuses.
- **Light Industrial.** Wholesale, warehouse and industrial operations with minimal external impacts.
- **Industrial.** Wholesale, warehouse and industrial operations.
- **Public Parks and Recreation.** City owned or operated recreation facilities and open space.
- **Private Parks and Recreation/Cemeteries.** Privately owned or operated recreation facilities and open space. Large private cemeteries and open space.

Mixed-Use Sub Areas:

- **City Centre District Subarea.** Pedestrian focused, mixed-use area that serves as the community meeting place or heart of Southfield for students, businesses, residents and visitors.
- **Downtown Development District Subarea.** Medical office node with Oakland Community College and regional shopping. Focus on mixed-use redevelopment of the Northland Mall site.
- **North Southfield Road Subarea.** Unique area that contains a mixture of retail and services.
- **Northwestern Highway Corridor:** Office, service and retail corridor.
- **SmartZone:** Technology based and mixed-use business.
- **Technology Corridor Subarea**. Concentrated corridor along lower Telegraph Road consisting of high-tech office and research.

Special Study Areas:

- **Eight Mile Road Corridor:** Overlay design standards as part of the Eight Mile Blvd. Association

- **Valley Woods Senior Campus Community Revitalization Plan:** Senior housing and active living community.

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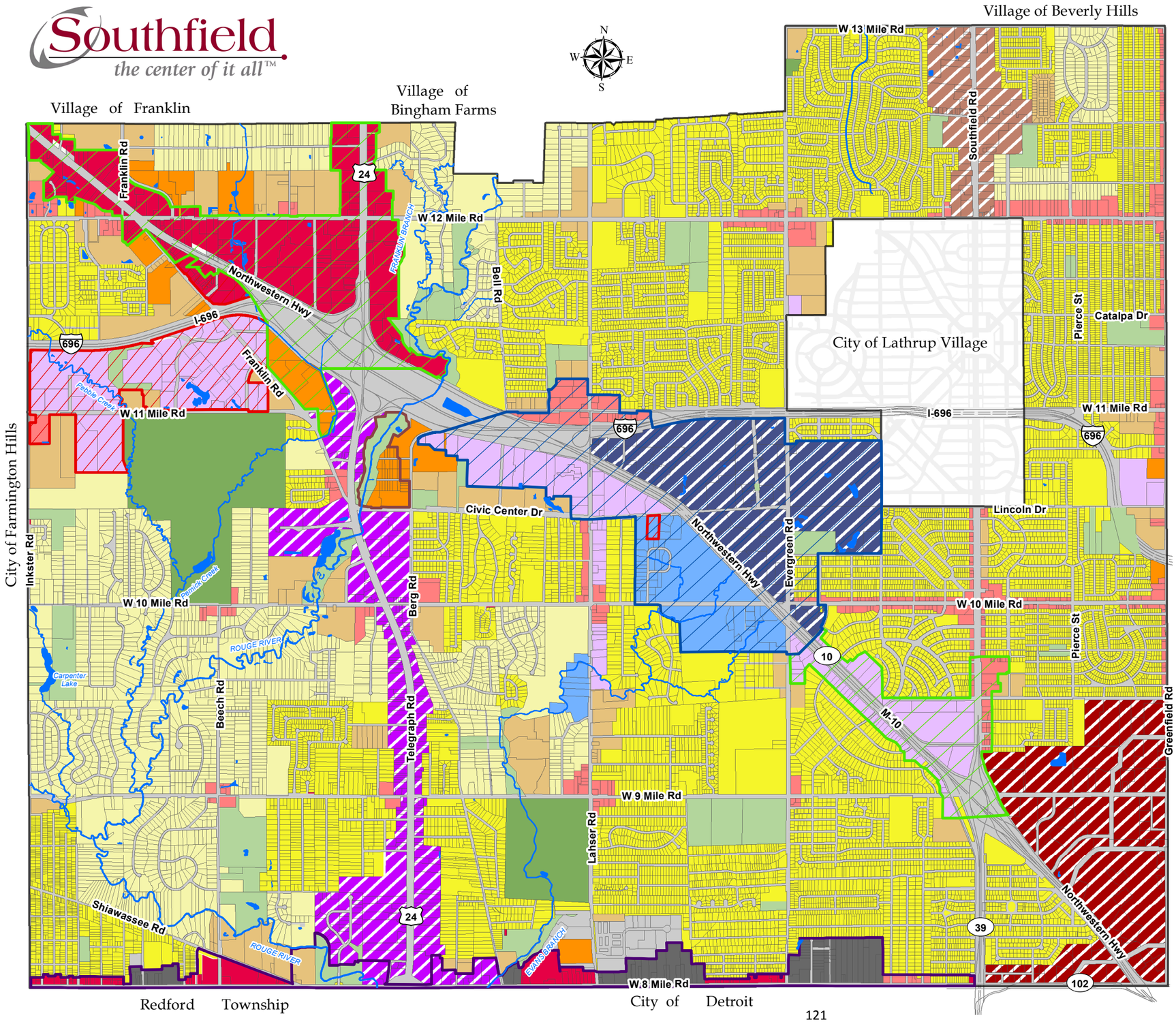
Map 7-2: Future Land Use



Water

Low-Density Single Family
Single-family homes on lots 20,000 sq. ft. or larger, permits complimentary small scale institutional uses.

Moderate-Density Single Family
Single-family homes on lots less than 20,000 sq. ft., permits complimentary small scale institutional uses.

Low-Density Multiple Family
Townhouses & multiple-family units, generally under 2 stories.

Moderate-Density Multiple Family
Multiple-family units over two stories.

Local Mixed-Use
Primarily business in nature, mixture of neighborhood commercial, service and office with accessory multiple-family uses.

Regional Mixed-Use
Primarily business in nature, mixture of large scale commercial, service and office with accessory multiple-family uses.

Office/Research
Corporate and medical offices, research facilities, television stations.

Medical/Educational Institutions
Hospital and college campuses.

Light Industrial
Wholesale, warehouse and industrial operations with minimal external impacts.

Industrial
Wholesale, warehouse and industrial operations.

Public Park
City owned or operated recreation facilities and open space.

Private Parks and Recreation/Cemeteries
Privately owned or operated recreation facilities and open space.

SUB-AREAS (Mixed-Use)

Southfield Technology Corridor
Concentrated corridor consisting of high-tech office and research, with some support commercial interspersed.

City Centre District
Mixed-use area, including universities and colleges, that serves as the community meeting place or heart of Southfield.

North Southfield Road Corridor
Unique area that contains a mixture of multi-cultural retail and services.

Downtown Development Authority District
Regional node for shopping, office, and healthcare services.

Proposed City Centre District

Northwestern Highway Corridor

Smart Zone District

SPECIAL STUDY AREAS

Eight Mile Blvd Corridor

Valley Woods Senior Campus Community Revitalization Plan

Miles
0 0.5 1 2

Draft 3/1/16

1 inch = 2,850 feet

Revised: 1/20/2016

Low Density Single-Family Residential

Single-family homes on lots 20,000 sq. ft. or larger

Location

Primarily located in the southwest portion of the City, west of Telegraph Road, south of 11 Mile Road. Pockets also exist between 9 Mile and 10 Mile just east of Telegraph, south of 13 Mile Road between Southfield and Greenfield Roads, and in the neighborhoods surrounding the 12 Mile and Telegraph intersection.

Objective

Low Density Single-Family Residential in Southfield should protect the vitality of existing, high-quality neighborhoods. Areas located on naturally constrained lands should promote use of an open space clustered design to allow a reasonable number of homes while preserving the area's natural resources and creating high-quality neighborhoods.

Land Use

This designation is intended to accommodate single-family homes on lots that are half an acre or larger and roughly corresponds with the R-E zoning district. Where natural features constrain the buildable area of a development, clustered development with permanently dedicated open space should be encouraged to preserve Southfield's natural resources.

Accessory and support uses such as small to moderate sized churches, parks and schools may be considered, provided they do not disrupt the character of the neighborhoods. Such uses should be considered special land uses within the single-family districts to ensure compatibility.

Home occupations in neighborhoods have been an item of discussion in the City. Southfield currently does not allow home occupations (with the exception of Group Child Care homes), a profession carried on by an occupant of a dwelling as a secondary use which is subservient to the main residential use. Today's business climate lends itself to people working out of their homes, and most communities accommodate it, with some parameters to ensure the residential nature of the neighborhood is protected. Regulations should be developed that permit small scale home occupations provided they do not physically alter the appearance of the dwelling, do not increase traffic volumes and do not require additional parking.

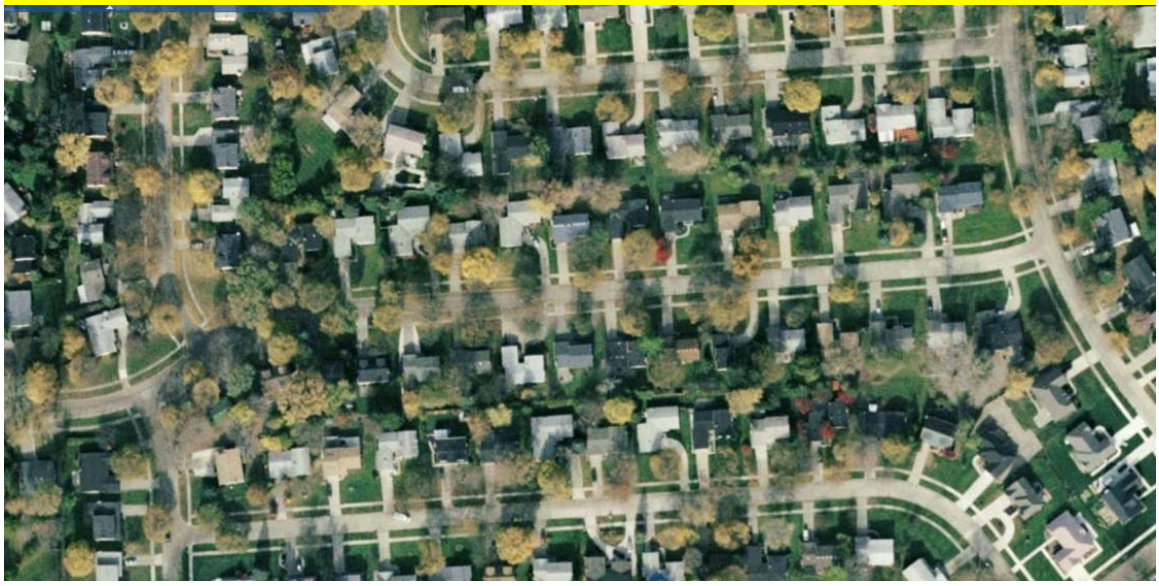
General Character Description

To protect the vitality and character of the existing Low Density Single-family Residential neighborhoods in the City, development in these areas should continue to follow the traditional neighborhood design principles that currently prevail in these areas. Infill and redevelopment in existing neighborhoods must be compatible with the surrounding environment, including massing, size, spacing and architectural styles that are compatible with the surrounding established residential neighborhoods. Street design in new developments should include an interconnected street system, sidewalks, street trees and adequate lighting.

A unique low density single-family area is found on Farmbrook Road, north of 12 Mile Road between Franklin and Telegraph Roads. This area has a distinct rural character and potential geological issues that need to be considered during any potential redevelopment. While the density may be increased slightly, homes in this area should still fall within the low density category and shall take advantage of the unique water features. The design of Farmbrook Road shall retain its open and rural character.

Moderate Density Single-Family Residential

Single-family homes on lots less than 20,000 sq. ft.



Location

The majority of the residential neighborhoods within Southfield fall into this category.

Objective

Moderate Density Single-family Residential development contributes to the goal of providing a larger variety of single-family housing types and price ranges to accommodate residents in all stages of life. This variety should include residential development designed to attract young professionals from other areas to begin and grow their careers. Furthermore, the higher density single-family residential development allows for increased walkability and pedestrian connections to nearby commercial, institutional, and civic uses.

Land Use

This designation is intended to accommodate single-family residential development on lots that are smaller than half an acre. Lot sizes can range from 7,500 sq. ft. up to 20,000 sq. ft and corresponds generally with the R-A and R-1 through R-4 zoning districts. Accessory and support uses such as small to moderate sized churches, parks and schools may be considered, provided they do not disrupt the character of established neighborhoods. Such uses should be

considered special land uses to ensure compatibility. Home occupations should also be explored, as discussed in the Low Density Single-Family Residential category discussed on the previous page.

General Character Description

To protect the vitality of the existing Moderate Density Single-family Residential neighborhoods in the City, development in these areas should continue to follow the traditional neighborhood design principles that currently prevail in these neighborhoods. Infill and redevelopment must be compatible with the surrounding environment, including the massing, size, spacing and architectural styles that are compatible with the surrounding established residential neighborhoods. Street design in new developments should include an interconnected street system, sidewalks, street trees and adequate lighting.

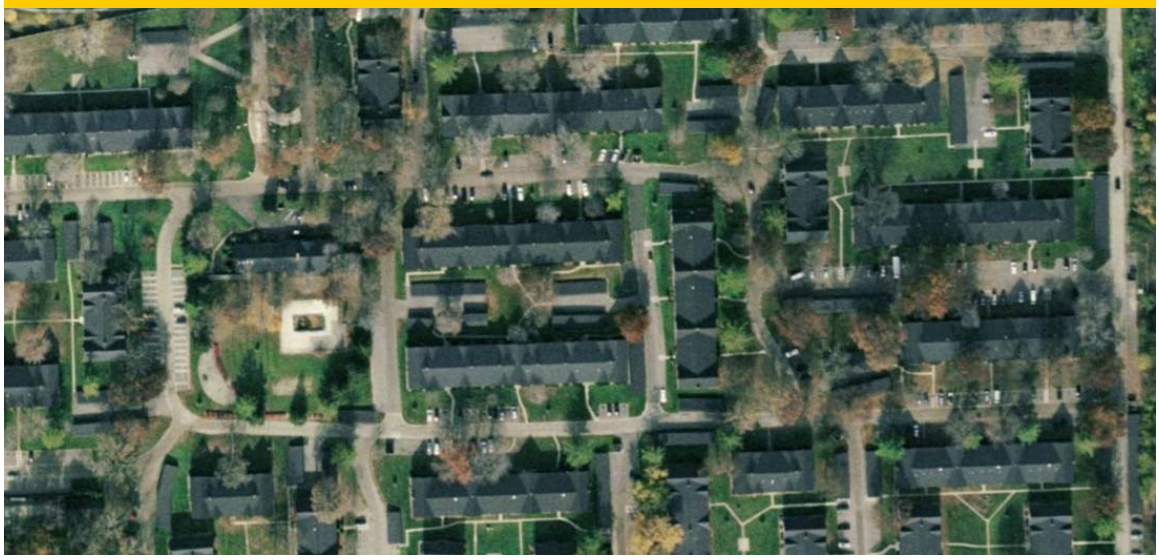
These neighborhoods face many challenges as the lots are often smaller than desired for modern home expansions or new development. Future reinvestment in these neighborhoods will need to provide spacing between homes adequate for emergency service, while maintaining the traditional neighborhood design principles that currently prevail.

One unique area shown for moderate density single-family is along 9 Mile Road, just west of Telegraph Road. In the midst of this residential area are several farm markets. Through the years, these markets have become part of the neighborhood ambiance. A special study for this area by the city suggested the existing markets should be encouraged to remain, and that minor expansions to the uses would be considered with corresponding improvements to the site to improve appearance and access. However, the markets are non-conforming, meaning the land is zoned residential so no other business use is permitted. If the current uses cease, any redevelopment should be residential.

Another area that requires additional discussion is the eastern frontage on Evergreen Road between 9 Mile and 10 Mile Roads. Located across the street from the Word of Faith Christian Center and accessed off of a busy north-south aerial in the City, uses other than single-family residential uses may be appropriate if well designed. Small scale office and multiple-family uses may be considered along this stretch if the buildings are designed with a residential appearance and are well buffered form the established neighborhood to the east.

Low Density Multiple-Family Residential

Townhouses and multiple-family units, generally under two stories



Location

Scattered throughout Southfield, Low Density Multiple-family Residential uses are usually found on major roads and abutting non-residential areas.

Objective

Low Density Multiple-family Residential is intended for residential land uses at a higher intensity, or density, than the single-family areas, with the objective to promote a mixture of housing opportunities throughout the City. Multiple-family residential development allows for increased walkability and pedestrian connections to nearby commercial, institutional, and civic uses. The Low Density Multiple-family Residential designation offers home ownership possibilities not typical of higher density multiple-family areas. This designation also works well as a transitional use by buffering lower intensity single-family uses from higher intensity commercial uses and roadways with higher traffic volumes.

Land Use

Intended land uses within Low Density Multiple-family Residential areas include attached single-family buildings, duplexes or low density multiple-family developments. This includes townhouses, attached condominiums, apartments and senior housing developments under two

stories. The expected density range of this classification is up to 30 units per acre and corresponds with the R-T and R-M zoning districts.

General Character Description

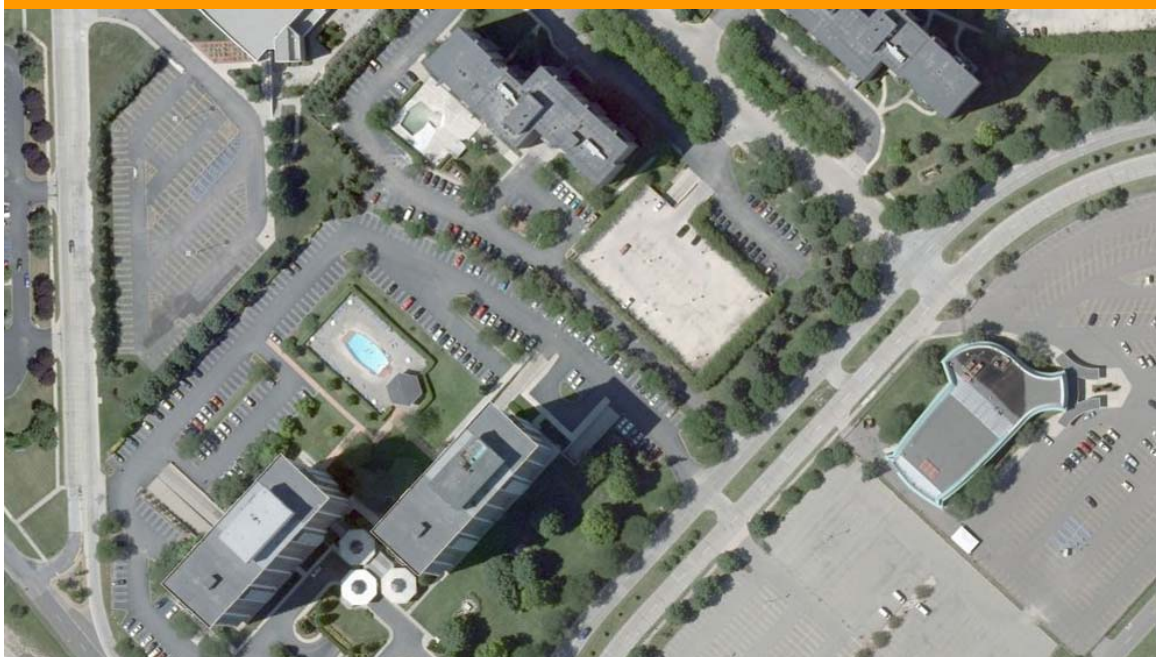
Low Density Multiple-family Residential development should include high-quality design that emphasizes pedestrian connections with surrounding uses, provides alternative housing options, and act as a buffer between single-family neighborhoods and higher intensity uses.

Future development under this designation should be designed to maintain a neighborhood scale and character so as to limit potential adverse impacts to adjacent single-family areas. New development should possess innovative design elements that are consistent with the residential character of the City such as ranch-style units or stacked condominiums with individual entrances that are more common in owner-occupied units.

Some areas will be appropriate for cluster development in order to protect open space and preserve key natural features while still permitting adequate density. The area on the east side of Berg Road north of 8 Mile Road is an example of a site that is suggested for cluster development.

Moderate Density Multiple-Family Residential

Multiple-family units over two stories



Location

Moderate Density Multiple-family Residential areas are generally located on major roads such as along Telegraph and Greenfield Roads, Northwestern Highway, or near activity nodes such as Northland Mall and Providence Hospital.

Objective

Moderate Density Multiple-family Residential development in Southfield contributes to the goal of providing a wide variety of housing types and price ranges to accommodate residents of all lifestyles. Multiple-family development provides living options with pedestrian connections to nearby commercial, institutional, and civic uses. They provide both affordable housing in the City and homes for those seeking low and no maintenance ownership opportunities. These developments may also cater to the growing older age segments of the population.

Land Use

Permitted land uses within Moderate Density Multiple-family Residential areas include a variety of multiple-family developments, with a focus on apartment or loft complexes, and senior

housing over two stories in height. The expected density range of this classification is from 30 to 60 units per acre and corresponds with the RMM and RMU zoning districts.

Residential Market Analysis

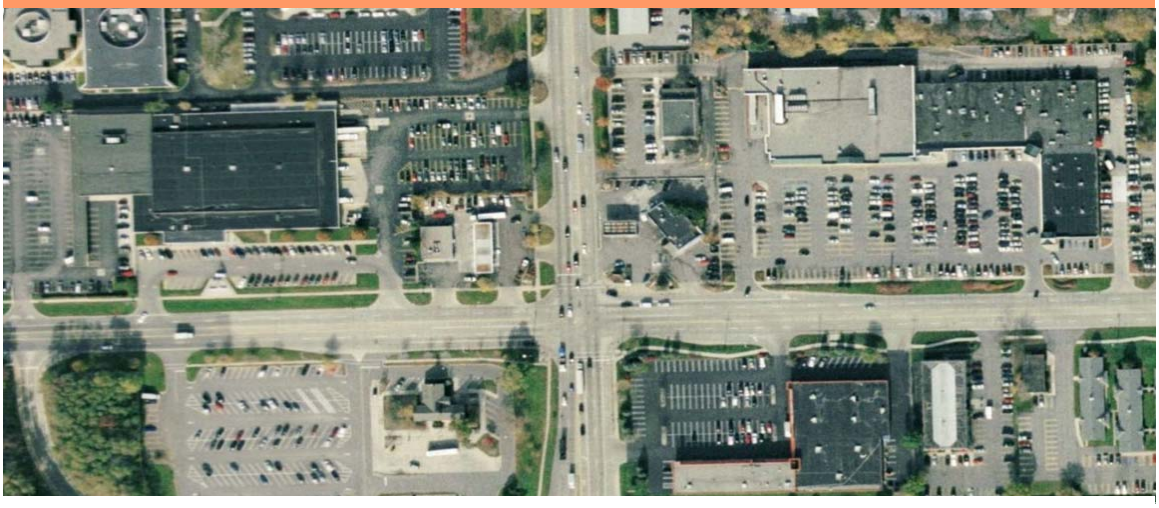
A residential market analysis is recommended to determine the type and quantity of various housing options needed and underserved in Southfield.

General Character Description

Moderate Density Multiple-family Residential development should possess innovative design elements that are consistent with the character of the City. The design of the multiple-family buildings should complement adjacent single-family neighborhoods but may feature buildings with first-floor communal entrances that emphasize pedestrian connections with nearby shopping and transportation opportunities. Careful site and building design is needed for these uses to ensure resident safety. Use of Crime Prevention through Environmental Design (CPED) techniques are recommended for sites within this designation.

Local Mixed-Use

Primarily business in nature, mixture of neighborhood commercial, service and office with accessory multiple-family uses



Location

Local Mixed-Use nodes are found strategically throughout the City. Primarily located at intersections of Mile Roads and corresponding north/south arterials, Local Mixed-Use areas are also found along many of the Mile Roads, Greenfield, Southfield, and Lahser Roads.

Objective

Local Mixed-Use areas provide convenient and easily accessible businesses and services, along with alternative housing options in a concentrated area. These nodes of activity are intended to include uses that support nearby residential neighborhoods without adversely impacting the residents. The localized, neighborhood configuration of these nodes promotes local trips and walkability.

Land Use

Uses within Local Mixed-Use areas include a mixture of residential and non-residential uses, both vertically and horizontally. This includes live/work units, upper story residential units, attached townhouses, multiple-family buildings, small-scale retail establishments of less than 20,000 square feet, personal service businesses, restaurants and offices. Businesses considered appropriate should conveniently serve the immediate neighborhoods, within a one and a half mile radius.

General Character Description

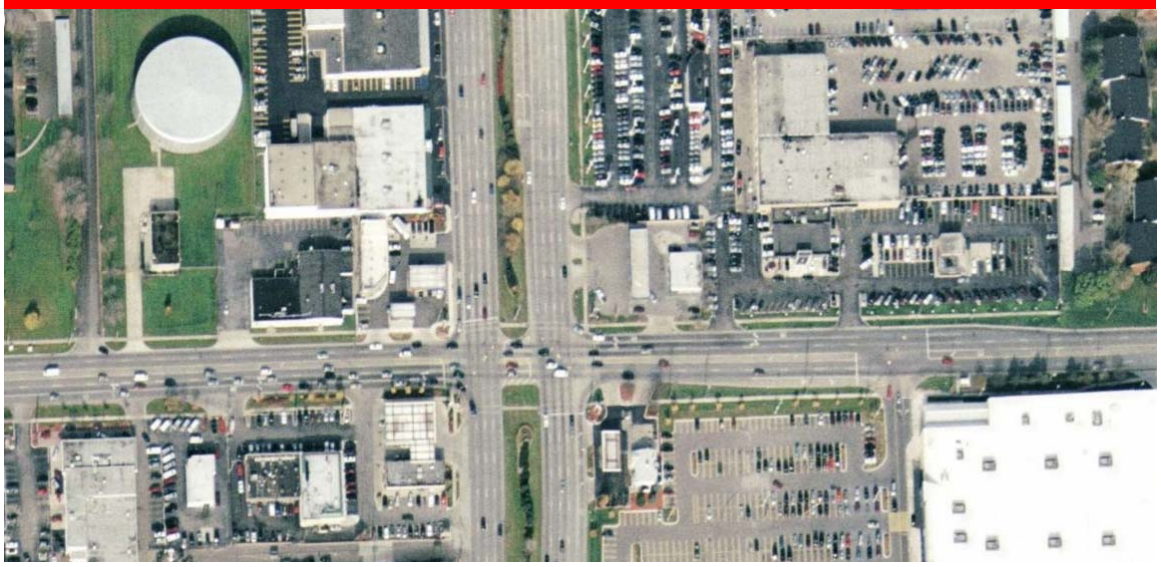
With a stronger focus on building form rather than land use, sites within the Local Mixed-Use designation should be integrated into surrounding neighborhoods. This can be accomplished through traditional design elements that replicate the character of adjacent neighborhoods, promote walkability within the area, and provide shared access whenever possible.

Redevelopment should focus on requiring consistent site upgrades as development occurs, including improved site design, access management, building facades, streetscape elements, pedestrian access, public transit access and landscaping. Generally, parking areas should be in the rear or side rather than in the front of the building. The scale and size of the developments in these areas should be limited to promote a pedestrian scale environment, minimize traffic impacts and be compatible with adjacent neighborhoods. In addition, adequate buffering shall be provided to minimize noise and light impacts on the residential neighborhoods.

A couple of sites exist on Franklin Road, just north of Telegraph that are currently used as single-family homes. Redevelopment of this area should consist of low intensity mixed sue residential and office, with potential some limited commercial uses. Any redevelopment of these sites will require deep buffers and residential design to be consistent with the neighborhood to its west.

Regional Mixed-Use

Primarily business in nature, mixture of large scale commercial, service and office with accessory multiple-family uses



Location

Regional Mixed-Use centers are located around existing nodes of activity at Northland Mall, certain sections of 8 Mile Road, along Northwestern Highway and Telegraph north of I-696. Many of these areas are eligible for the Overlay Development District (ODD) tool. See Chapter 5: Economic Development for more detail on ODD's.

Objective

Regional Mixed-Use uses tend to cater to automobile traffic from a broader market area and provide a wide variety of businesses and services to residents, employees and visitors to the metro Detroit region. These regional nodes of activity are intended to include uses that support residential neighborhoods without adversely impacting the residents.

Land Use

Uses within Regional Mixed-Use areas promote a mixture of residential and non-residential uses, both vertically and horizontally. This includes live/work units, apartment complexes, adaptive reuse of antiquated office buildings into loft apartments, senior housing, a variety of large and small scale retail establishments, personal service businesses, restaurants and offices. These areas may contain hotels, movie theaters, drive-through restaurants and dealerships as

well. The larger scale of these areas will require a large amount of floor space and parking, as they cater to a regional market.

General Character Description

Similar to the Local Mixed-Use designation, the focus in the Regional Mixed-Use designation is not particularly on use but on form and layout of the site. Since much of these areas are already developed, the challenge will be in encouraging redevelopment and consistently requiring site upgrades as development occurs. These upgrades include improved site design, access management strategies to improve traffic circulation both in the roadway and between businesses, pedestrian access, higher quality and diversified building facades, low impact design, storm water management, sustainable landscaping, etc. New development should be of a unique design and architecture, with a mixture of uses to strengthen these existing regional nodes.

An existing single-family residential node exists on the north side of 12 Mile Road just east of Inkster Road. While the lots fronting onto 12 Mile should remain, this is an area that has been identified for expansion of the multiple-family condos to the west or for the office and retail uses along Northwestern.

Office/Research

Corporate and medical offices, research facilities, TV stations

Location

Office/Research uses are focused along the service drives to I-696 and M-10 and within the American Commerce Center on 11 Mile Road.

Objective

Office/Research uses are important to the City as they diversify the tax base, balance traffic flow associated with residential/commercial uses, and provide employment opportunities.

Land Use

Representative uses include corporate headquarters, research facilities and centers, technology or pilot testing facilities, micro-electronic and biotechnology uses, and certain industrial research operations that are compatible with others uses envisioned within the designation along with a limited amount of commercial uses.

General Character Description

While the definition of Office/Research is somewhat broad, the intent is to concentrate certain compatible uses in a planned, campus-like setting with more extensive landscaping, higher quality architecture and more site amenities than typically found in general industrial areas. Outdoor storage of materials and equipment is limited, with screening required where it is to occur. Ancillary commercial uses should only be permitted if the following criteria could be met:

- The amount of commercial will not materially erode or diminish the property available for the Office/Research uses.
- The commercial uses would include those to serve both nearby residents and employees and visitors to the Office/Research uses.
- Traffic impacts could be addressed, as commercial uses tend to generate more traffic than Office/Research uses.

Medical/Educational Institutions

Regional college or hospital campuses

Location

Educational/Medical Institutions include the existing facilities and planned expansion areas around larger medical institutions such as Straith Hospital for Special Surgery, located on Lahser.

Objective

These institutions provide local choices for high quality medical and educational opportunities located within the City of Southfield. In addition, they serve as a regional draw for people to come to the City, thereby enhancing the City's local economy.

Land Use

This category includes regional college and hospital campuses with a complementary mixture of uses. Included in this category are Straith Hospital and related offices, residences, and other ancillary uses.

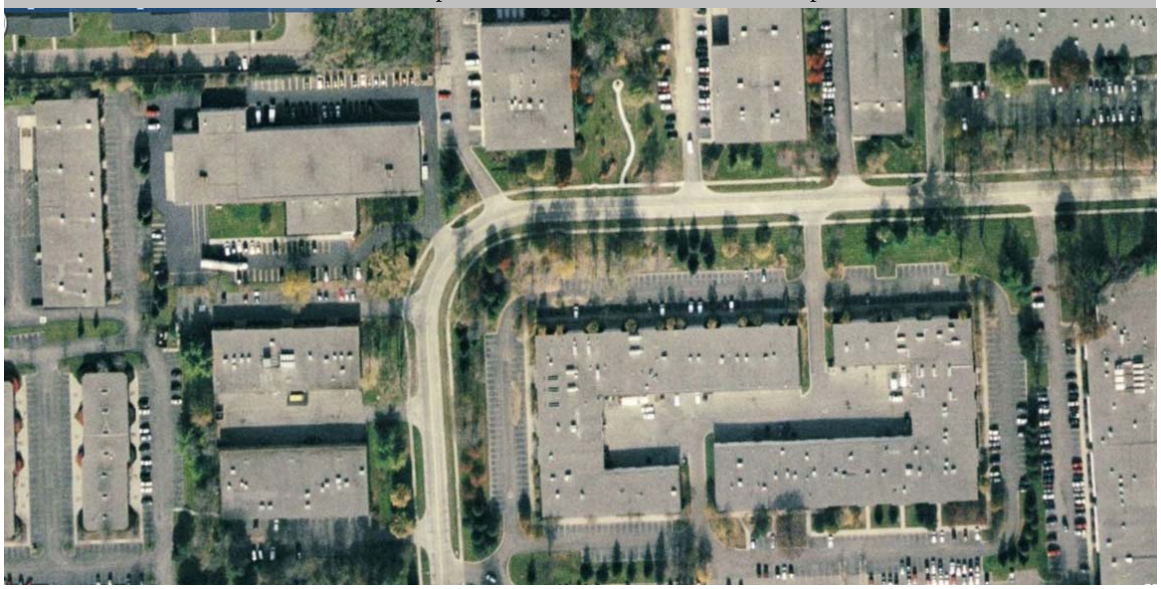
General Character Description

These campuses are park-like settings with integrated site design and access. Future expansion of these facilities should be consistent with the existing campus, respect surrounding land uses, and provide a balanced mixture of uses that minimizes off-site impacts.

LTU, OCC & Providence Hospital campuses are now part of the City's mixed-use sub area plans (see Chapter 8).

Light Industrial

Wholesale, warehouse and industrial operations with minimal external impacts



Location

Light Industrial areas are primarily focused in the southern portion of the City, off of 8 Mile Road (Bridge Industrial Park), off Lahser Road (Southfield Business Park), and pockets on East Street, Keefer/Hazelhurst area, and Mapleridge Ave.

Objective

Light Industrial is intended for a variety of lower intensity industrial operations, such as light manufacturing, and assembly, research, and technology and industrial offices. Light Industrial developments are an important source of employment and tax base, and have significantly less impact on surrounding areas than Industrial uses.

Land Use

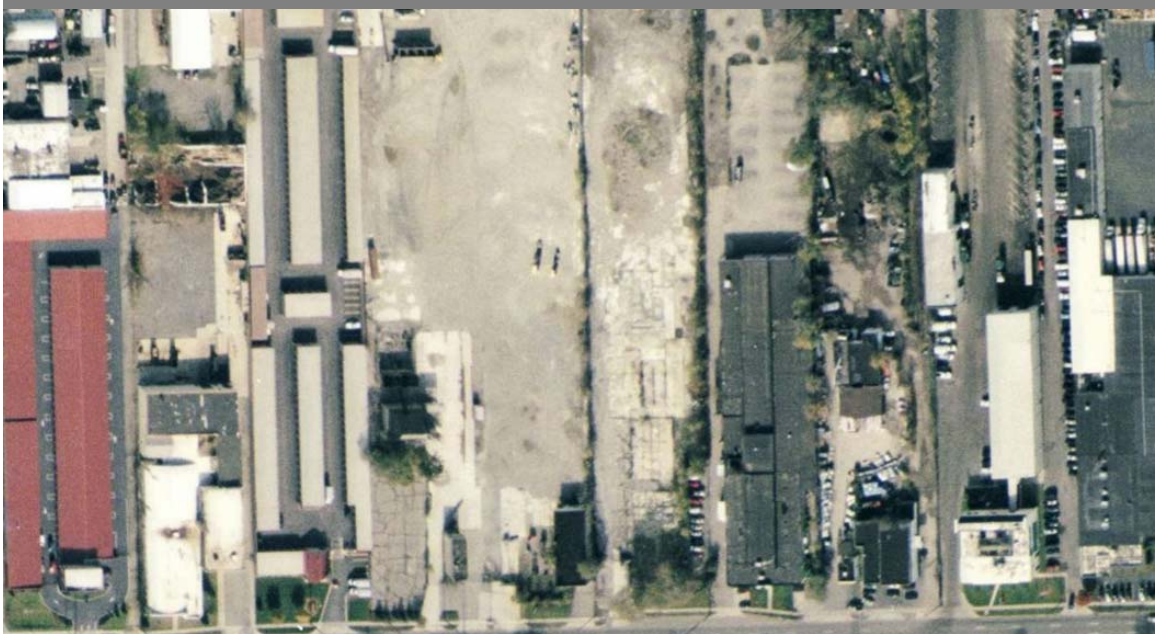
Appropriate uses for the Light Industrial district include high-tech industries, research laboratories, light assembly operations and corporate offices. Commercial uses that support industrial activities are encouraged in these areas. Heavy, smokestack industries and large warehouse operations dependent on heavy trucking or rail are not intended for this district.

General Character Description

Redevelopment of Light Industrial areas should include improved site design, access management tools, attractive building facades and significant landscaping to establish a park-like setting. Similarly, new development should take the form of a design-controlled, industrial/ research park, with integrated site planning. The planned industrial centers provide an environment for a mix of office, commercial, light industrial, and research uses within a controlled environment. External nuisances, such as noise and odors, should be minimized through design and activity restrictions.

Industrial

Wholesale, warehouse and industrial operations



Location

Industrial areas are limited to three distinct areas located off of 8 Mile Road.

Objective

Due to the City's access to major transportation routes, industrial uses are anticipated to play an important role in the economy of the City. While such uses are desirable in terms of tax base and job creation, they must be located appropriately so as to limit adverse impacts to lower intensity uses.

Land Use

This category is intended to accommodate higher intensity industrial uses, such as manufacturing, major assembly of products, primary metal industries, fuel or hazardous materials handling, truck terminals, distribution facilities, and other similar uses, including auto-related recycling facilities. Areas with facilities involved in chemical production, heavy assembly, large warehousing and trucking are intended for this designation.

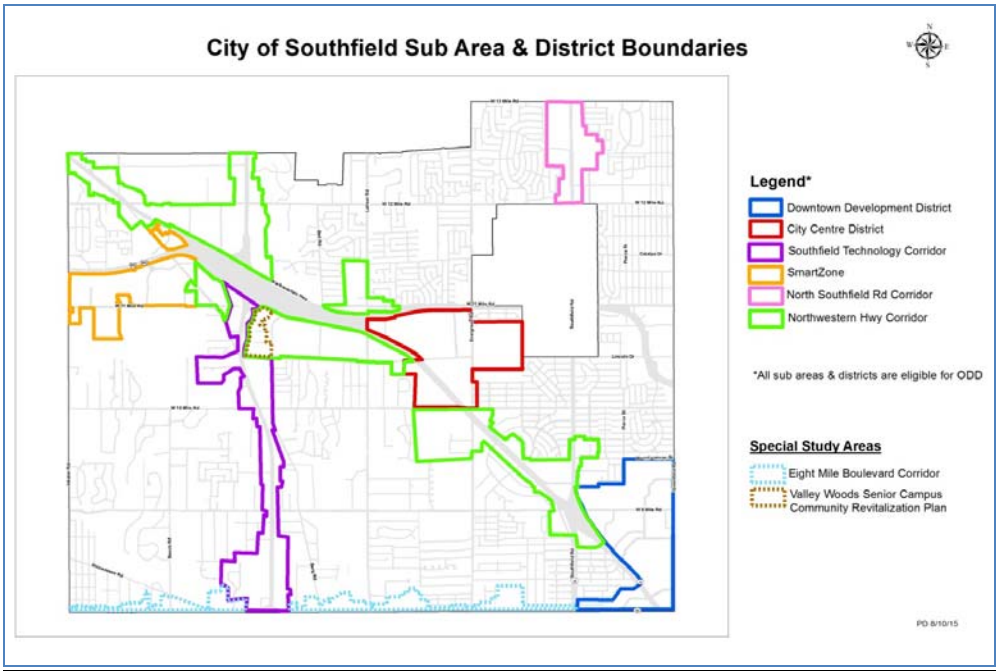
General Character Description

Areas with Industrial designations require special planning and site design. The operation of these uses may involve heavy truck traffic, outdoor storage, rail access, odors and noise. As with the Light Industrial designation, site design, appearance and buffering are important to ensure that such impacts are limited, especially where they abut residential land uses. Development and redevelopment of these areas should concentrate on minimizing impacts by screening outdoor storage areas and facing overhead doors away from the street or neighboring residential areas so that loading and unloading activities are not visible.

MIXED-USE SUB AREAS

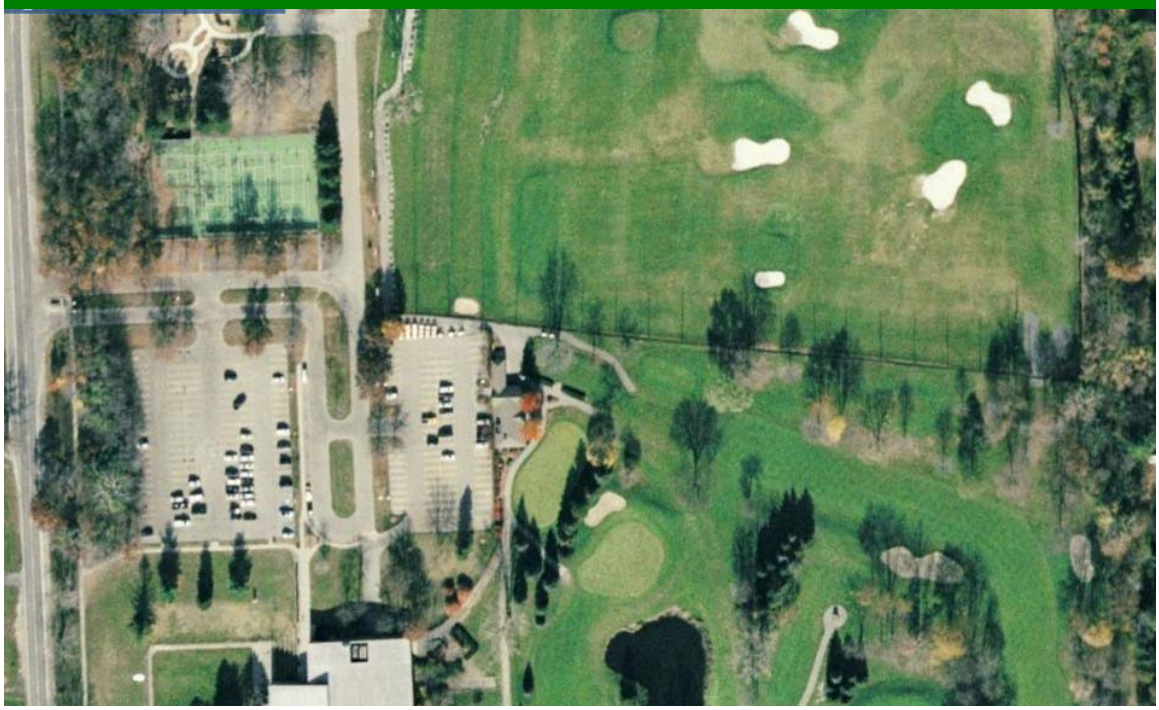
- **Eight Mile Road Corridor**
- **Infill Housing Studies: Garner Street Residential**
- **North Southfield Road Corridor**
- **Northwestern Highway Corridor**
- **Southfield City Centre District**
- **Southfield Downtown Development Area**
- **Southfield SmartZone**
- **Southfield Technology Corridor**
- **Valley Woods Senior Campus Community Revitalization Plan**

For detailed information on the City's sub-area plans, see Chapter 8.



Public Parks and Recreation

City-owned or operated recreation facilities and open space



Location

Public Parks and Recreation uses are located throughout Southfield, strategically located to best serve City residents.

Objective

Public Parks and Recreation facilities in the City are intended to provide a wide variety of high quality passive & active park facilities in locations that are convenient for residents and visitors alike. The City has a separate Parks and Recreation Plan, which more specifically discusses the existing and planned facilities and outlines goals and objectives for maintaining the City's Parks system.

Land Use

Land uses included in the Public Parks and Recreation category are City-owned or operated recreation facilities such as sports fields, golf courses playgrounds, pathways and nature trails, picnic areas, and open space areas. A mixture of passive and active recreation is encouraged.

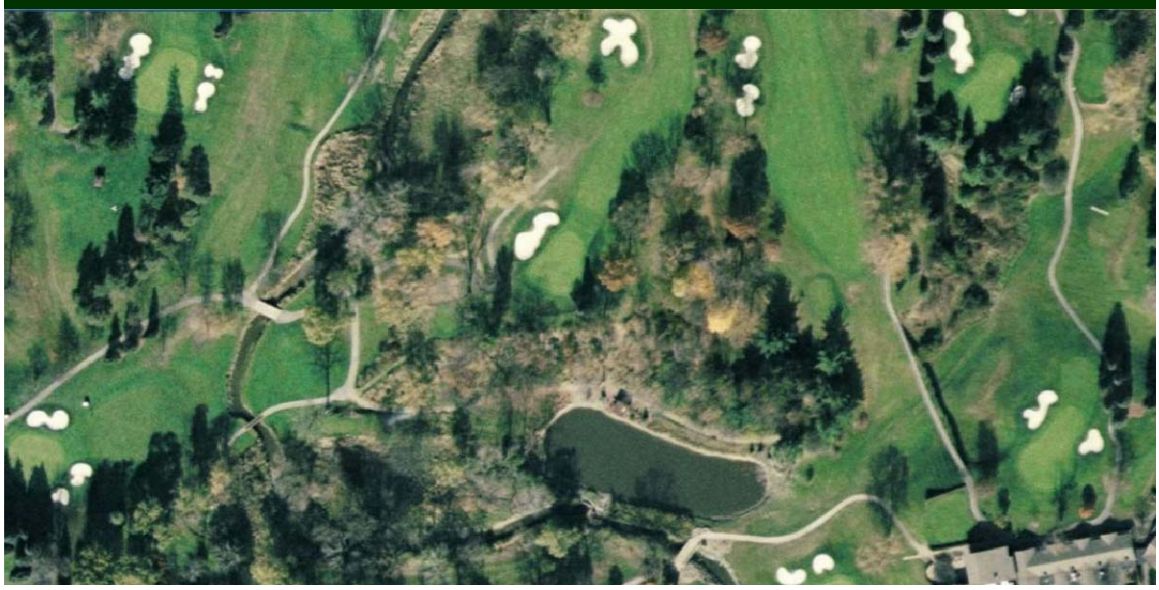
General Character Description

Preservation of open space and the availability of recreation facilities are extremely important to City residents. This promotes a higher quality of life and increases the desirability of the City. Parks should continue to be integrated into the City's neighborhoods to create a unified system. The sizes of the spaces should vary depending on their function. Neighborhood parks and open space areas should be less than two acres in size and areas serving the community should be upwards of five acres in size. Parks and open spaces should offer opportunities for recreation, picnicking and relaxing. Pedestrian accessibility should be accomplished through sidewalk connections to the neighborhoods and pathways throughout the sites.

Vacant or underutilized sites and sites with significant natural features that are located next to existing parks should be explored by the City for opportunities for park expansion and to develop a cohesive open space system.

Private Parks and Recreation/Cemeteries

Privately owned or operated recreation facilities and open space



Location

Private Parks and Recreation uses include existing privately owned facilities including the Plum Hollow Golf Club on the corner of 9 Mile and Lahser Road and the Cranbrook Swim Club on Evergreen Road south of 13 Mile Road. Holy Sepulchre Cemetery, located on 10 Mile Road, west of Telegraph is an example of a large private cemetery with significant open space.

Objective

Private Parks and Recreation facilities in the City provide recreation opportunities that complement those provided by the Parks and Recreation Department and provide residents with greater choices to meet their recreation needs. Large cemeteries also provide wild life corridors and may contain large woodlots, wetlands and water features, which should be protected and preserved.

Land Use

Land uses included in the Private Parks and Recreational category are private recreation facilities such as golf courses, private clubs, athletic fields, and indoor sports facilities.

General Character Description

New privately owned recreation facilities should be located so as to be easily accessible to residents and visitors alike, without negative impacts to residential neighborhoods including increased traffic and sound and light pollution. Pedestrian accessibility should be included in the design through sidewalk connections and pathways throughout the sites.

If redevelopment of the existing facilities were to occur, the City should evaluate the most desirable re-use of the land that would create the least disturbance to surrounding residential neighborhoods.

Zoning Plan

Per the Michigan Planning Enabling Act (Act 33 of 2008), see below "a zoning plan for various zoning districts controlling the height, area, bulk, location, and use of buildings and premises. The zoning plans shall include an explanation of how the land use categories on the future land use map relate to the districts on the zoning map."

Table 7-4: Zoning Plan

Future Land Use (FLU) Category	Compatible Zoning Districts
Low-Density Single Family	R-E
Moderate-Density Single Family	R-A, R-1, R-2, R-3, R-4, R-T
Low-Density Multiple Family	RM, RC, R-T
Moderate-Density Multiple Family	RMM, RMU, RC
Local Mixed-Use	RM, RMM, RMU, O-S, ERO, ERO-M, NS, B-1, B-2, B-3
Regional Mixed-Use	RM, RMM, RMU, O-S, ERO, ERO-M, NS, B-1, B-2, B-3, RS, RC
Office/Research	O-S, ERO, ERO-M, I-L, TV-R
Medical/Educational Institutions	ERO, RC
Light Industrial	I-L
Industrial	I-1
Public Park	R-A, R-1, R-2, R-3, R-4, R-E
Private Parks and Recreation/Cemetaries	R-A, R-1, R-2, R-3, R-4, R-E
Sub Area Plans (ODD Eligible)	R-1, R-2,R-3, R-4, R-E, R-T, RM, RMM, RMU, O-S, ERO, ERO-M, B-1, B-2, B-3, TV-R, NS, RS, RC, P,I-L, I-1

Table 7-5: Residential Schedule of Regulations

ZONING DISTRICT	REQUIRED LOT AREA		AREA REQUIRED FOR DEVELOPMENT PURPOSES	MIN. LOT WIDTH	MAXIMUM HEIGHT (w)		MINIMUM YARD SETBACK IN FEET				MIN. FLOOR AREA	MAX. LOT COVERAGE
	Sq. ft./ Dwelling Unit	Sq. ft./room of 80 sq. ft. or more	Acres	Feet	Feet	Stories	Front	Least Side	Total Sides	Rear	Sq. Ft.	Percent
R A	7,500			65	25	2	30	(r) 8	(r) 20	35	1,000	25
R 1	9,000			70	25	2	40	8	20	35	1,000	25
R 2	9,000			70	25	2	40	8	20	35	1,000	25
R 3	9,000			70	25	2	40	8	20	35	1,200	25
R 4	9,000			70	25	2	40	10	25	35	1,400	25
R E	20,000			90	25	2	40	10	25	35	1,400	25
R-T		2,000			25	2	30	(a) 30		30	(t)	
RM Multiple		1,500	2 acres		30	2	(a) 50	(a) 50		(a) 50	(t)	
RMM		(u)	3 acres		70	6	(v) 75	(v) 50		(v) 50	(t)	
RMU		(u)	5 acres		(b)	(b)	(v) 75	(v) 50		(v) 50	(t)	

Table 7-6: Non-Residential Schedule of Regulations

ZONING DISTRICT	REQUIRED LOT AREA		AREA REQUIRED FOR DEVELOPMENT PURPOSES	MIN. LOT WIDTH	MAXIMUM HEIGHT (w)		MINIMUM YARD SETBACK IN FEET				MIN. FLOOR AREA	MAX LOT COVERAGE
	Sq. ft./ Dwelling Unit	Sq. ft./room of 80 sq. ft. or more	Acres	Feet	Feet	Stories	Front	Least Side	Total Sides	Rear	Sq. Ft.	Percent
O-S					25		(s) 15	(c) 15		(c) 15		
ERO-M				(Ord. 1044-C 12/22/80)	55	4	(v) 75	(v) 30		(v) 75		30
ERO					(b)		(v) 75	(v) 30		(v) 75		40
TR			(h)		30		150	(i)	(i)			
NS			*				60	60		60	1,000	
RS			25 acres		(g)		75	75		75	750	
RC		(u)	10 acres		(b)		(v) 75	(v) 50		(v) 75	(t)	
B-1					25		(s) 15	(c) 15		(c) 15		
B-2			*		(b)		(c) 50	(c) 50		(c) 50		
B-3					(b)		(e) 25	(j)		(e) 15	750	
I-L					(n) 30		(o) 60	(p)		(q) 50		
I-1					60		60	(l)			750	
P							(m)	(m)		(m)		

SCHEDULE OF REGULATIONS' NOTES

(a) Side yards need not refer to spacing between buildings for a planned development for two (2) or more buildings on the same parcel; in such instance, the distance between buildings is regulated by the Building Distance Formula as found in Section 5.96 and where, because of building arrangement, the formula is not applicable, the minimum distance shall be twenty (20') feet (6.1 meters).

(b) Unlimited, provided yard requirements are satisfied.

(c) Yard(s) shall be not less than the height of the building, except that where a lot line abuts a street, one-half (1/2) the width of the right-of-way of said street may be considered as yard setback; but in no instance, above included, shall any yard setback be less than the figure indicated.

(d) No building shall be closer than seventy-five (75') feet (22.875 meters) to a major thoroughfare and not closer than forty (40') feet (12.2 meters) from any other street right-of-way.

(e) For buildings over twenty-five (25') feet (7.625 meters) in height, footnote (v) shall apply; however, in no instance shall the yard be less than the figure indicated.

(f) See Article 9, Section 5.102, Site Plan Review, but in no instance shall any front or side yard be less than fifteen (15') feet (4.575 meters) nor any rear yard be less than ten (10') feet (3.05 meters).

(g) Buildings shall not exceed a height of sixty (60') feet (18.3 meters) except when not nearer than two hundred (200') feet (61 meters) from any adjoining residential district.

(h) The site plan shall be subject to the review and approval of the City Council. (Amended - Ordinance 1271 - 2/27/89)

Said finding shall determine that:

(1) The site plan does show that a proper relationship exists between the major thoroughfare and any proposed service roads, driveways and parking areas to encourage pedestrian and vehicular traffic safety.

(2) All the development features, including the principal building and any accessory buildings, open spaces, and any service roads, driveways and parking areas are so located and related to minimize the possibility of any adverse effects upon adjacent properties.

(i) There shall be a minimum side yard and rear yard of one hundred and fifty (150') feet (45.75 meters) where such use abuts upon the side yard or rear yard of a residential district. In all other instances, there shall be a minimum side yard and rear yard equal to five (5) times the height of the tallest point of the building and not less than eighty (80') feet (24.4 meters).

(j) Side yards are not required along the interior side lot lines when the building does not exceed twenty-five (25') feet (7.625 meters) in height. When the height exceeds twenty-five (25') feet (7.625 meters), the minimum yard shall be determined by footnote (v). Where a side lot line abuts a street, a landscaped side yard of not less than fifteen (15') feet (4.575 meters) shall be provided. (Amended - Ordinance 1276 - 5/22/89)

(k) There shall be on each lot a rear yard of not less than ten (10) square feet (.93 square meters) for each front foot to provide space for loading and unloading and shall be computed separately from the off-street parking requirements.

(*l*) Side yards are not required along the interior side lot lines; where a side lot line abuts a street, a landscaped side yard of not less than twenty (20') feet (6.1 meters) shall be provided.

(m) Where the parking lot lies across the street and opposite a residentially zoned district wherein the lots front or side on such street, the required setback in feet shall be twenty (20) (6.1 meters).

Where the parking lot lies across the street and opposite or contiguous to and in the same block with residentially zoned property which has only side lot lines on the street, there shall be established a setback line ten (10') feet (3.05 meters) from the front lot line.

Wherever a screen planting is not practical or reasonable, a continuous unpierced masonry wall of specified height and materials may be substituted for buffer strip, if approved by the Board of Appeals.

(n) Except that any structure not less than two hundred (200') feet (61 meters) from a residential zoning district may be increased in height by one (1') foot (.305 meters) for each two (2') feet (.61 meters) of additional front, side and rear yard provided in addition to the minimum yard requirements.

(o) Which shall not be used for parking.

(p) Not less than the height of the building which may be used for parking and where a side yard abuts a street, a landscaped side yard of not less than ten (10') feet (3.05 meters) shall be provided.

(q) Which may be used for parking.

(r) A minimum side yard on the garage side shall be five (5') feet (1.525 meters) and minimum total sides fifteen (15') feet (4.575 meters) where an attached garage having no habitable living area above the garage is located at the side of a dwelling unit and any portion of the house behind the garage is only one (1) story in height.

(s) Sixty (60') feet (18.3 meters); except where the lot is less than four hundred (400') feet (122 meters) deep, the setback may be reduced to equal fifteen (15%) percent of the depth of the lot; but in no case shall the setback be less than fifteen (15') feet (4.575 meters).

(t) Minimum floor area shall be determined by the following schedule:

1 bedroom	800 square feet	(74.4 square meters)

2 bedroom	1,000 square feet	(93.0 square meters)
3 bedroom	1,100 square feet	(102.3 square meters)
4 bedroom	1,300 square feet	(120.9 square meters)

Minimum floor area is the area of the unit measured from the outside faces of exterior walls to the center of interior walls of the unit. Included within the minimum floor area computation may be private balconies or private patios having a minimum dimension of five (5') feet (1.525 meters) and a minimum area of forty (40) square feet (3.72 square meters) with a maximum allowable area for computing minimum floor area not to exceed ten (10%) percent of the unit size.

(u) Required land area per room for multiple family developments shall be determined in accordance with the following schedule:

No. of Residential Stories		Required Sq. Ft. of Land Area/Room
10 or more		400 (37.2 square meters)
	9	500 (46.5 square meters)
	8	600 (55.8 square meters)
	7	700 (65.1 square meters)
RMM	6	800 (74.4 square meters)
Maximum	5	900 (83.7 square meters)
Limit	4	1,000 (93.0 square meters)
	3	1,100 (102.3 square meters)

(v) Along those property lines which abut a single family residential district or which are seventy-five (75') feet (22.875 meters) or less from property zoned in a single family residential district classification, as measured along a line which is drawn at right angles to any point along the property line, the minimum required yard shall be determined by the following formula:

$$Y = \frac{L + 2H}{3}$$

Along those property lines which do not have the above described relationship to property zoned in a single family residential district classification, the minimum required yard shall be determined by the following formula:

$$Y = \frac{L + 2H}{6}$$

The symbols used above shall be defined as follows:

Y = required yard.

L = the total length of that portion of a lot line from which, when viewed directly from above, lines drawn perpendicular from the lot line will intersect any part of the building other than permitted yard encroachments.

H = height of building as defined in Article 2, Section 5.3 (11).

In all zoning districts which are regulated by this footnote, not more than fifty (50%) percent of any required yard abutting a street shall be used for vehicular parking or driveways. Adjacent to any lot line abutting a street, there shall be a continuous landscaped area not less than fifteen (15') feet (4.575 meters) wide except at points of approved vehicular access to the street.

(w) Exceptions to Height Standards (Amended – Ordinance 1613 – 8/4/13)

Exceptions. The height limitation of this Ordinance shall not apply to chimneys, cooling towers, elevators, bulkheads, fire towers, penthouses, stacks, stage towers, scenery lofts, tanks, water towers, pumping towers, monuments, steeples, cupolas, and mechanical appurtenance accessory to and necessary for the permitted use in the district in which they are located.

Height of Public and Semi Public Buildings. The height of public and semi public buildings such as churches, cathedrals, temples, hospitals, sanitariums, or schools shall not exceed fifty-five (55) feet, provided that if any such building exceeds the height limitation for the district in which is is located, then, in addition to the required setback, the building shall be set back an additional one (1) foot for each foot by which the building exceeds the height standard.

Height of Parapet Walls. Parapet walls may extend up to five (5) feet above the permitted height in the district in which the building is located.

See Chapter 11 for Implementation Strategies.

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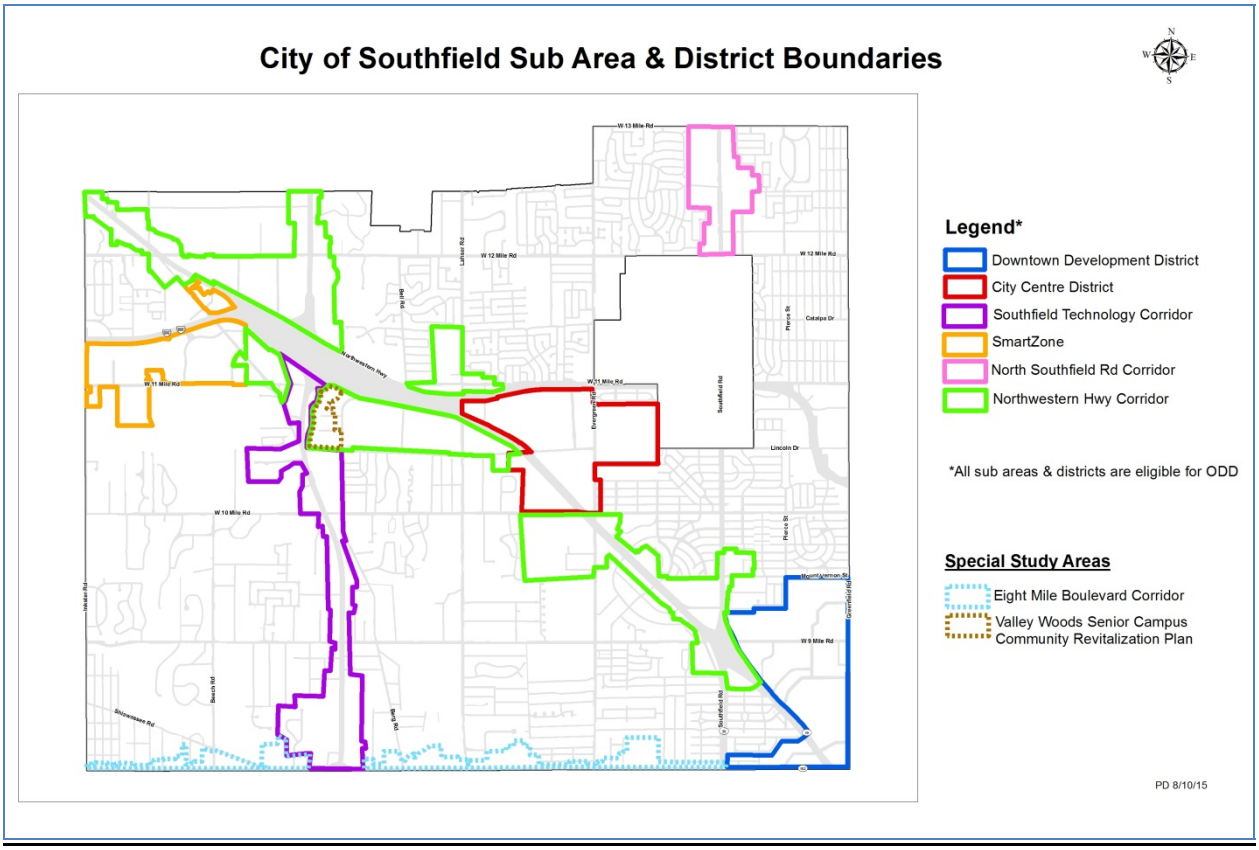
CHAPTER 8: SUB AREA PLANS

The City of Southfield has several sub-area planning districts and corridors that warranted detailed study by the Planning Department, Planning Commission and City Council because of their uniqueness or changes in market conditions and land use. These sub areas (See Figure x-1) include, but are not limited to the following:

- **Eight Mile Road Corridor**
- **Infill Housing Studies: Garner Street Residential**
- **North Southfield Road Corridor**
- **Northwestern Highway Corridor**
- **Southfield City Centre District**
- **Southfield Downtown Development Area**
- **Southfield SmartZone**
- **Southfield Technology Corridor**
- **Valley Woods Senior Campus Community Revitalization Plan**



EIGHT MILE ROAD CORRIDOR

Location: Eight Mile Road is the southernmost boundary of Southfield, is six miles in length (from Inkster Road to Greenfield Road) and shares its border with the Cities of Detroit and Redford Township. The Eight Mile corridor also overlaps with the **Southfield Technology Corridor** at Telegraph Road and the **Southfield Downtown Development Area** in the southeast corner (Section 36) of the City.

Land Use: The corridor can generally be described as containing: industrial & light industrial, office, retail and auto related uses:

Figure 8-1: Land Based Classification Standards (LBCS) Activity on Eight Mile Rd Corridor, 2014

LBCS Activity 2014		
	Use	% in Corridor
	1000 Residential	11.8%
	2000 Business	41.4%
	3000 Industrial	27.0%
	4000 Institutional	3.3%
	5000 Travel/Movement	3.3%
	6000 Assembly	0.0%
	7000 Leisure	0.0%
	8000 Natural Resources	0.0%
	9000 Vacant	13.1%

Source: Southfield Existing Land Use Map, 2014

8MBA

The City of Southfield is part of twelve member communities and three counties (Macomb, Oakland and Wayne) that make up the 8 Mile Boulevard Association (8MBA), established in 1993 (see also www.eightmile.org).

8MBA is a 501(c)(3) non-profit organization that has existed since 1993 to revitalize and promote the Eight Mile transportation, business and residential corridor by linking the efforts of the public sectors. 8MBA works in collaboration with its Member Communities to accomplish this shared mission.

Eight Mile Boulevard Design Guidelines

On July 17, 2013, the 8MBA adopted the *Eight Mile Boulevard Design Guidelines* to provide a sound frame of reference for consistency in encouraging a higher aesthetic standard for development along the Eight Mile corridor. This document also provides design guidance and a reference point for planning commissions, zoning boards of appeal, community groups, business associations, real estate professionals, developers and anyone else who wishes to develop, improve or revitalize the Eight Mile corridor. Further, this document is intended to guide planning and pre-design for new development, rehabilitation, renovation, along with maintenance of existing buildings, including historic and architecturally significant structures along and adjacent to Eight Mile Road.

Finally, the *Design Guidelines* is meant to serve as another resource to advance the corridor-wide mission laid out in *A Vision for Eight Mile Boulevard*, the cornerstone document, published in 1992, which effectively launched regional collaboration on Eight Mile.

Goals of the Eight Mile Boulevard Design Guidelines

Immediate/Short-Term:
• Review of corridor-wide design guidelines among all 8MBA Board Members
• Formal adoption of corridor-wide design guidelines by 8MBA Board of Directors
Medium-Term:

• Adoption of corridor-wide design guidelines by all 8MBA Member Communities
Long-Term/Ongoing:
• Implementation and oversight by private sector 8MBA Board Members over time to ensure their Eight Mile assets exemplify the guidelines
• Review, assessment and revision (as needed) of guidelines to ensure they continue to facilitate positive development outcomes for Eight Mile Road.
• Leverage the Eight Mile Boulevard Association (8MBA) as a partner in encouraging the application of the *Design Guidelines;* provide 8MBA staff with notice of all site plan submittals and municipal review hearing for proposed development projects on Eight Mile Road and encourage developer/owner to apply for 8MBA Façade Improvement funds to potentially acquire incentives for application of guideline principals.

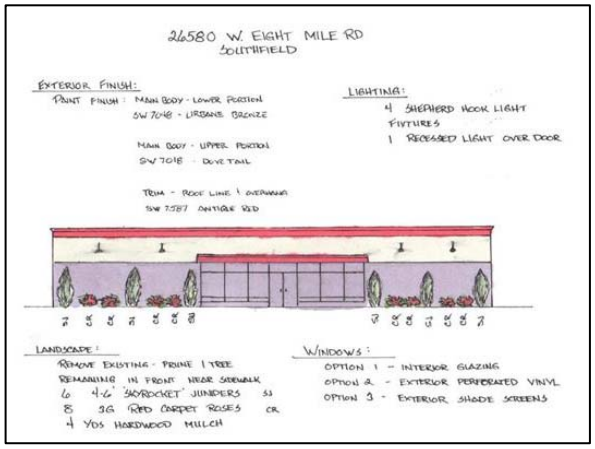
OBJECTIVES OF THE EIGHT MILE BOULEVARD DESIGN GUIDELINES

- *Underscore prohibited uses along the corridor and present better alternative uses*
- *Establish viable and vibrant, high-quality commercial districts and promote transit-friendly development to connect those districts with each other and the surrounding community*
- *Encourage, guide and instill confidence in investment along Eight Mile Road*
- *Improve the public realm through creation of a context-sensitive built environment*

- *Promote development strategies for rehabilitation of existing structures, conservation, sustainable/green building design*
- *Encourage retail developments to attain LEED (Leadership in Energy & Environmental Design)-Refer to the U.S. Green Building Council (USGBC) for information on the LEED rating system http://www.usgbc.org/leed#rating*
- *Provide municipalities, planning commissions, zoning boards of appeal, community groups, business associations, real estate professionals, developers and anyone else who wishes to develop, improve or revitalize the Eight Mile corridor with reference guidelines for improving their development projects on Eight Mile Road, for sponsoring façade improvement programs or for articulating a common vision for design on Eight Mile Road.*

8MBA Façade Improvement/Beautification Program

The Eight Mile Boulevard Association Facade Improvement Program (FIP) was established in 2008 as a means to encourage aesthetic enhancement and visually unify the corridor by providing financial assistance to businesses and/or property owners located on Eight Mile Road. FIP leverages financial assistance and design expertise to fuel transformative investment and promote a higher standard of property design and maintenance throughout the corridor. 8MBA strives to serve as a model for other corridors, communities and districts in the region.



3 Point Machine
26580 W Eight Mile Rd

As part of the program, the Eight Mile Boulevard Association act as a grant administrating body and works directly with successful applicants to achieve a more unified and pleasing environment throughout the corridor.

USA Perfect Imaging
21270 W Eight Mile Rd

Recommendations

The City of Southfield has focused on redeveloping older, outdated, and underdeveloped sites along Eight Mile Road in recent years. The focus has been on integrating new construction, upgrading facades, increasing street appearance, parking lot screening & landscape enhancements, and pedestrian connectivity.

Circulation

- Assess existing traffic patterns and pursue improvements that will increase facility carrying capacity and traveling convenience.
- Encourage access management policies that limit the number of driveways, or consolidate drives into a few strategically placed entrances.
- Create a safe, appealing and efficient pedestrian walkways linking activity nodes, business entrances and parking areas to the public sidewalk system.
- Encourage the development of a complete pedestrian and bicycle system through the corridor.

Aesthetic Enhancements

- Adopt design standards for streetscape improvements and parking lot screening along the corridor.
- Provide street trees, landscaping and plantings to provide continuous visual connections and proper pedestrian comfort along the entire corridor.
- Replace tired and overgrown landscaping with newer streetscape design that balances the needs of the businesses with appropriate aesthetic improvements.
- Provide special paving, decorative walkways, pedestrian lighting and other physical elements that provide the corridor with aesthetic improvements and a means of creating a consistent brand/image.
- Build gateways and a unified wayfinding/sign system to enhance the identity of the corridor.
- Encourage a high degree of continued site

Grand-8 Plaza
27000-27220 W Eight Mile Rd

and landscape maintenance.

- Place utility lines underground where feasible to improve visual qualities.

Economic Development

Brownfield Project – Demolition of a Functionally Obsolete Building & Construction of a Multi-Tenant Retail Building on Eight Mile Rd between Evergreen & Lahser Roads

- Expand the economic base of the corridor by retaining existing jobs while creating new diverse employment opportunities.
- Create investment strategies that will increase tax base, and generate additional revenues to finance actions.
- Encourage partnerships among property owners and private and public sector groups, including 8MBA, in order to implement proposed redevelopment projects.
- Provide creative incentives (i.e. Brownfield Redevelopment tools, Commercial Rehabilitation District, etc.) to private sector participants in redevelopment projects and programs.

Marketing

- Promote the corridor as it relates to the County and region's unique transportation corridor and market its assets.
- Work with adjacent communities and individuals with vested interest in the commercial success of the Eight Mile Boulevard corridor to ensure sufficient funding for marketing.
- Project the image/brand of the corridor as a safe and exciting place for business.

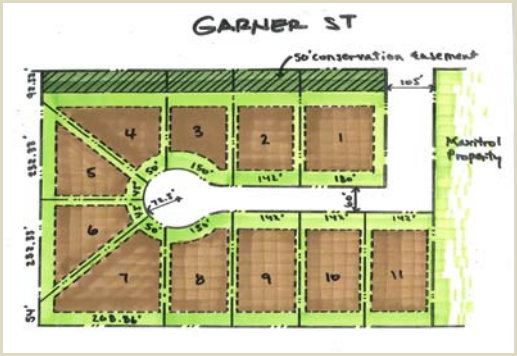
Implementation

- Develop reasonable site design standards and sign regulations for new development and redevelopment within the corridor.
- Continue to work with 8MBA on the redevelopment of the Eight Mile Road Corridor.

INFILL HOUSING STUDIES

Garner Street

Figure 8-2: Concept A (11 units)

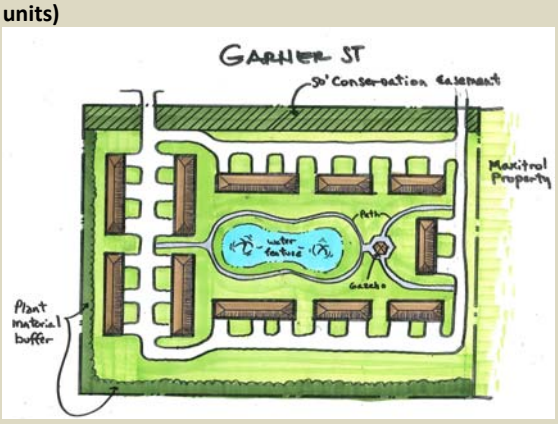


Concept A: The six (6) existing lots of 11.97 acres are divided into eleven (11) lots (approximately 1 lot per acre) with a central road meeting the minimum 60' Right-of-Way and a cul-de-sac. The current R-1 Single Family Residential zoning district minimum yard setbacks of 40' front yard, 8' least side yard (20' total side yards) and 35' rear yards are applied. A 50' wide conservation easement along Garner Street provides separation from Garner Street, the school to the north, and the proposed homes (see Figure 8-2).

Figure 8-3: Concept B (27 units)

Concept B: The six (6) existing lots of 11.97 acres are divided into twenty-seven (27) lots (approximately 2.3 lots per acre) adjacent to a 60' Right-of-Way. Lots meet the minimum lot width of 70' for the R-1 Single Family Residential zoning district, minimum yard setbacks of 40' front yard, 8' least side (20' total sides) and 35' rear yard. A 100' conservation easement along Garner Street provides separation between Garner Street, the school to the north, and the proposed homes (see Figure 8-3).

Figure 8-4: Concept C (112 units)

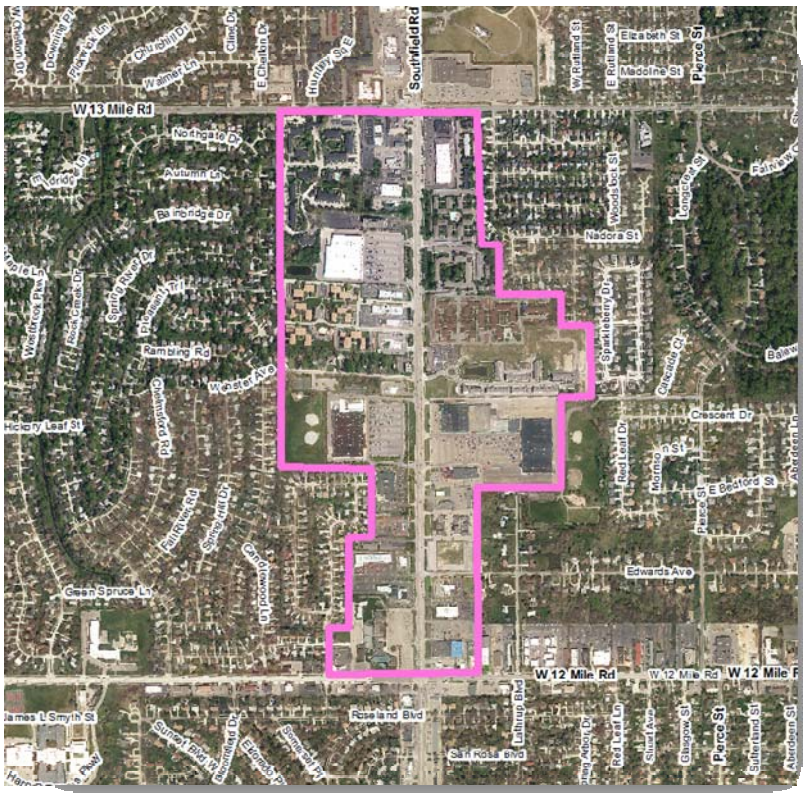


Concept C: The six (6) existing lots are combined into one 11.97-acre site and developed for RM, Multiple Family (Low Rise) development, with one hundred twelve (112) two bedroom units or approximately 9.3 units per acre. The minimum setbacks of 50' on all sides will be used along with a 50' wide conservation easement along Garner Street to provide separation between Garner Street, the school to the north, and the proposed buildings. A buffer of plant material on the west, south and east side of the property will be incorporated along with a detention basin for storm water needs and an internal walking path (see Figure 8-4).

NORTH SOUTHFIELD ROAD CORRIDOR

Location: Southfield Road frontage between 12 Mile and 13 Mile Roads.

Regional Context: Southfield Road is one of the major north/south arterials within metro Detroit, connecting I-94, I-696 and I-75. Spanning from Dearborn to Birmingham, Southfield Road travels through nine communities and varies from a divided eight lane highway to a two lane residential street. Within the City of Southfield, Southfield Freeway ends north of 9 Mile Road and maintains a five lane design through Southfield and Lathrup Village. While most of the frontage on Southfield is primarily developed, there has been significant reinvestment within the northern corridor, between 12 and 13 Mile Roads including: a new mixed-use retail development at 12 Mile and Southfield Roads, new medical office building, and new retail development.



Objectives

- *Establish a land use pattern that characterizes the North Southfield Road Corridor as a unique destination consisting of compatible yet diversified uses.*
- *Plan for a safe, efficient circulation system that provides sufficient access by all modes of transportation between nodes of activity within the corridor and the adjacent residential neighborhoods.*
- *Establish open space and beautification efforts to create an identifiable character for the subarea, which will reflect a pleasant, appealing atmosphere for working, shopping and residing in the North Southfield Road area.*
- *Develop a specific Corridor Overlay Zoning District and consolidate regulations into one concise set of reasonable and consistent standards for new development and redevelopment.*

- *Maintain the diverse, identifiable character of the corridor, while promoting vitality through private sector investment.*
- *Encourage the acquisition, demolition and reuse of those properties that, by virtue of their location, condition, or value, no longer function at their highest economic potential.*
- *Enhance the visual and aesthetic qualities of the corridor through streetscape, landscape, roadway improvements and portals.*
- *Reduce impervious surfaces and promote Low Impact Design (See Chapter 9: Public Infrastructure)*
- *Establish the mechanisms necessary to achieve the recommendations for the North Southfield Road Corridor Subarea.*

Land Use

The corridor will consist of concentrated nodes of activity, primarily commercial and office, compact enough to create critical mass of business activity, with ancillary multiple-family residential uses, similar to the Local Mixed-Use designation. Southfield is known as a culturally diverse community in the region; however, it lacks a true multi-cultural destination. The North Southfield Road Subarea has the potential to be that multi-cultural retail, service, office and cultural community center that celebrates the diversity of the City's residents and its neighborhoods. To encourage multiple destination tips, new development and redevelopment will be designed to enhance accessibility of both vehicles and pedestrians.

Market conditions, the mix of uses and the expected level of activity would determine the size and focus of each use. In general, the maximum size of retail uses should be limited to 125,000 square feet, or mid box uses such as grocers, electronics, office, and clothing stores. Big box uses should not be permitted, except as described below, due to the small lot depths, proximity to residential uses and the need to create a synergy of uses.

In 2012, Wal-Mart proposed to demolish the existing St. Bede's church and adjacent shopping center to construct a new 130,124 gross square foot Walmart Supercenter with 921 parking spaces, located at the northwest corner of Twelve Mile and Southfield Roads. The proposed site contained three parcels on 11.9 acres of land with 600' of frontage on West Twelve Mile Road and a depth of 864' along

Southfield Road. The rezoning request for this project was denied by City Council in January 2013 due to the size and scale of the proposed development.

As a result of the public outcry over the proposed Wal-Mart, which was denied by City Council as too intense of development for the site, the Planning Commission held a public workshop in March 2013, to get feedback from the community, including adjacent residences and business on how they would like to see the vacant St. Bede church site redeveloped. Later in the year, a new mixed-use project was proposed.

In December 2013, the Southfield City Council unanimously approved the "Southfield Village" mixed-use redevelopment for the 9.34 acres former St. Bede site at the northwest corner of 12 Mile and Southfield Road.

- Southfield Village: A.F. Jonna Development Company began construction of 114 luxury residential units in three-story buildings as well as a freestanding, 5,430-square-foot Applebee's restaurant and two multi-tenant retail buildings totaling 32,324-square-foot in 2015. The redevelopment also included a small memorial plaza recognizing the former St. Bede Church.

The "Southfield Village" mixed-use has fostered a positive redevelopment trend along the corridor, including additional developments in 2015:

- Henry Ford Optimeyes, located at the northeast corner of Southfield Road and Edwards Ave., which includes approx. 20,500 sq. ft. medical office building; and,
- ODD #5 (ZR:1327), Great Northern/EZ Storage: A new three-story mixed-use building (114,862 sq. ft.) with 600-700 storage units, 2,684 sq. ft. of retail and 1,800 sq. ft. of office/manager's apartment on approx. 2 acres at 30215 Southfield Road (approved Sept. 2015); and
- Butler Properties: The redevelopment of an existing bank building into retail use with possible medical office. The site landscaping will be upgraded and ornamental fencing along Southfield Road will be added as part of this project; and
- Enhanced streetscape elements, including brick piers, ornamental fencing, pedestrian amenities, bus stop improvements, etc.

EZ Mini Storage
30215 Southfield Rd
SIGNAGE
SIGNAGE
STORAGE

Butler Properties
29600 Southfield Rd

Decorative fencing with brick piers

Pedestrian plaza in homage to former St. Bede's Church

Road Commission for Oakland County (RCOC) Environmental Assessment for Southfield Road

The Environmental Assessment study process kicked-off in 2012, under the direction of RCOC, for the approximately 3.6 mile Southfield Road corridor (Mt. Vernon to 13 Mile Road), which includes the communities of Southfield, Lathrup Village, Beverly Hills and Southfield Township.

SCOPE OF STUDY

- *Identify existing/future problems:*
  - *Traffic Congestion*
  - *Safety*
  - *Non-motorized facilities*
  - *Consistency with local plans*
- *Develop options to address problems*
- *Select option that best meets project goals*
- *Conduct Environmental Assessment and comply with all requirements of Federal Aid process (NEPA process)*

Project Goals:

- *Improve current and future traffic operations*
- *Accommodate all users with the template of Complete Streets, which accommodates bicyclists, pedestrians, automobiles and transit*
- *Provide Context Sensitive Solutions to support local community plans*

Scope of Study Continued:

- *Improve Safety*
- *Minimize impacts to surrounding property owners.*

Problems addressed by the Project:

- *Existing traffic congestions-long delays and backups*
- *Future traffic delays and backups predicted to increase*
- *Safety concerns-crashes at intersections and road segments*
- *Lack of continuous non-motorized facilities and bus access*
- *Reconstruction provides opportunity to design corridor to support local vision/plans*

RECOMMENDATIONS

Circulation

- Assess existing traffic patterns and pursue improvements that will increase facility carrying capacity and traveling convenience, such as the planned median along Southfield Road.
- Encourage access management policies that limit the number of driveways, or consolidate drives into a few strategically placed entrances from Southfield Road. Note: MDOT recommends 30 access points along this mile stretch, whereas today there are 51 access points.
- Coordinate with SMART to improve access and add quality bus stops & shelters along the Southfield Road Corridor in strategic locations.
- Minimize or calm the impacts of increased traffic and activity levels on residential streets that feed into Southfield Road.
- Create a safe, appealing and efficient pedestrian walkways linking activity nodes, business entrances and parking areas to the public sidewalk system.
- Encourage the development of a complete pedestrian and bicycle system through the corridor.
- Coordinate work efforts with MDOT and Road Commission for Oakland County to obtain grants for roadway-and median related improvements.
- Encourage roadway projects by private developers through coordination with MDOT and Road Commission for Oakland County.
- Incorporate safety/security design techniques for all public places and for proposed public/private redevelopment projects.

Aesthetic Enhancements

- Adopt design standards for streetscape improvements and parking lot screening along the corridor.
- Provide street trees, landscaping and plantings to provide continuous visual connections and proper pedestrian comfort along the entire corridor.
- Replace tired and overgrown landscaping with newer streetscape design that balances the needs of the businesses with appropriate aesthetic improvements.
- Provide special paving, decorative walkways, pedestrian lighting and other physical elements that provide the corridor with aesthetic improvements and a means of creating a consistent brand/image.
- Build gateways and a unified Wayfinding/sign system to enhance the identity of the corridor.
- Encourage a high degree of continued site and landscape maintenance.
- Place utility lines underground where feasible to improve visual qualities.

Economic Development

- Establish partnerships between the public sector and private sector for the purpose of understanding the mutual benefits of proposed redevelopment projects.
- Expand the economic base of the corridor by retaining existing jobs while creating new diverse employment opportunities.
- Advance traffic safety and efficiency, pedestrian access, and the character of the area through best practices.
- Create investment strategies that will increase tax base, and generate additional revenues to finance actions, which support the Plan's goals.
- Encourage partnerships among property owners and private and public sector groups in order to implement proposed redevelopment projects, which will achieve the Plan's goals.
- Provide creative incentives (i.e. Brownfield Redevelopment tools) to private sector participants in redevelopment projects and programs.
- Utilize the ODD tool to encourage redevelopment.

Marketing

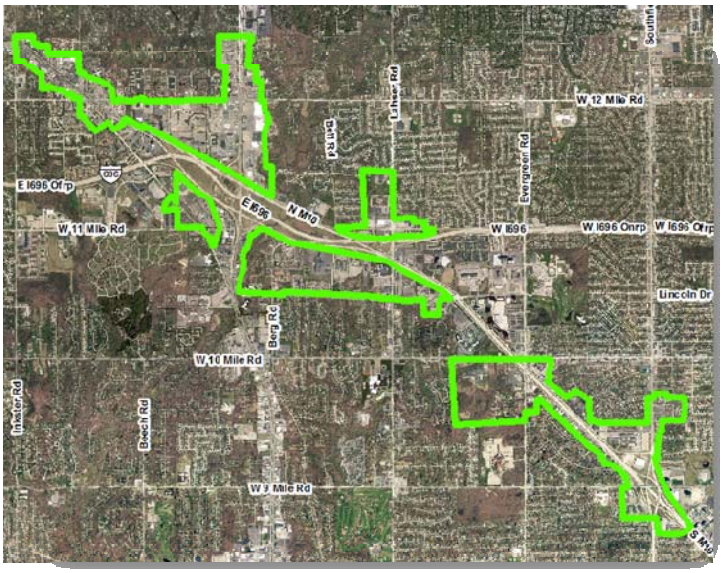
- Promote the corridor as it relates to the County and region's unique multi-cultural economic activities and market its assets.
- Work with adjacent communities (i.e. Lathrup Village and Beverly Hills), Oakland County and individuals with vested interest in the commercial success of the Southfield Road corridor to ensure sufficient funding for marketing.
- Project the image/brand of the corridor as a safe and exciting place for business and family oriented patronage.

- Promote the corridor as a unique center of activities that include a full range of multi-cultural mixed-use commercial, office, community and residential and neighborhood facilities as well as entertainment.

Implementation

- Develop reasonable site design standards and sign regulations for new development and redevelopment within the corridor.
- Investigate the creation of a Corridor Improvement Authority, Public Act 280 of 2005, in conjunction with Lathrup Village, Beverly Hills, and Birmingham to establish an Authority along this multi-jurisdictional corridor. The Authority could reserve tax increment revenues for funding capital improvements and other programs identified in the Sub-Area Plan. Tax increment revenues could be leveraged through grants, bonds or other financial mechanisms to expedite implementation.
- Promote effective communication and a cohesive, cooperative spirit among various public and private leaders in the three communities and County, using the venues and talents of existing civic organizations and committee.
- Continue to work with RCOC on the redevelopment of the Southfield Road Corridor.

NORTHWESTERN HIGHWAY CORRIDOR



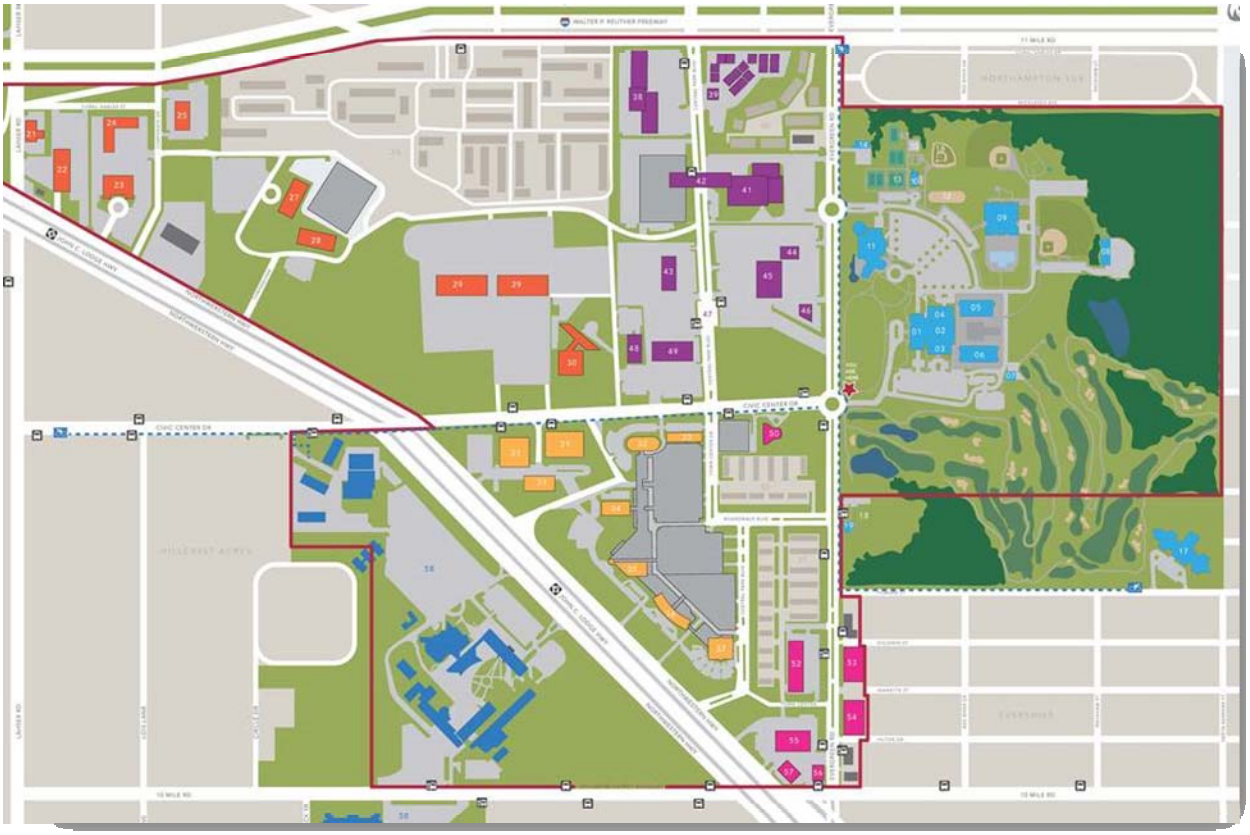
Location: Northwestern Highway bisects the City of Southfield along a northwestern axis. Northwestern Highway (M-10, Lodge Freeway) is primarily a freeway east of Telegraph Road and a principal arterial (west of Telegraph Road). It also contains the Northwestern Highway service drive, east of Lahser.

Recommendations

- Improve access management (M-10, Inkster to 12 Mile).
- Provide multi-use pathways along the Northwestern Service drives between the Southfield City Centre District and the Southfield Downtown Development District.
- Strengthen wildlife corridors along the River Rouge.
- Encourage native plantings and Low Impact Design in the mixing bowl area where M-10, I-696 and Telegraph Road converge.
- Enhance the appearance of gateways and portals at strategic locations along the corridor to include streetscape elements: landscaping, signage, way-finding and art installations.
- Encourage the preservation of significant “Mid-Century Modern” buildings along the corridor (see images below).

Former Federal Mogul Headquarters
26555 Northwestern Hwy

Sphinx Petroleum
24472 Northwestern Hwy



SOUTHFIELD CITY CENTRE (SCC) DISTRICT
SCC District

The Southfield City Centre District includes properties (approximately 575 acres) within the triangular area roughly bounded by Evergreen Road, Northwestern Highway Service Drive, and Eleven Mile Road/I-696 Service Drive, plus the Southfield Municipal Complex, the nonresidential properties on the east side of Evergreen Road between Filmore Street and Ten Mile Road, and the nonresidential Lawrence Technological University (LTU) properties.

Governance

The City Centre Advisory Board (CCAB) is comprised of nine members who shall be appointed by the Mayor with the concurrence of the City Council. At least five of the board shall be nominees of the businesses located within the boundaries of the City Centre. One member of the board shall be a resident from a residential area in or adjacent to the City Centre and one member shall be an officer, official, or other representative of the City of Southfield.

The CCAB shall manage programs initiated by the City to promote economic activity and to provide maintenance, security and operation of the City Centre.

DEMOGRAPHICS

Business and Employment

A recently completed (January 2012) *Retail & Hotel Market Analysis* finds that daytime employment plays a large role in supporting local retail. The City Centre District, an area of less than one square mile in size, is estimated to have over 13,000 employees. Furthermore, 45,000 employees work within a five-minute drive time from the District. The mix of employees in the District is heavily weighted toward the professional, scientific and technical services and FIRE (Finance, Insurance & Real Estate) sectors, specifically in the areas of legal and insurance services. Together, the two sectors comprise slightly more than half of total District employment. The employment concentration in these sectors within the District is made more apparent when viewed relative to their concentration in the trade area as a whole, in which they comprise less than one quarter of total employment. The healthcare and administrative support categories each comprise six percent of total employment in the District, reflecting a stratification of white-collar professions. Fewer than 1,000 employees currently work in the retail trade, hospitality and restaurant industries, while public administration accounts for four percent of total employment in the District.

The *Retail & Hotel Market Analysis* further finds that the City Centre District has a primary trade area population of nearly 500,000 persons, decreasing slightly to 483,000 persons by 2015. Southfield enjoys easy access from most of the surrounding Oakland and Wayne Counties. Oakland County, one of the wealthiest in the U.S., has average household incomes of $69,000 in the primary trade area, slightly higher than the state average and slightly lower than the national average. The area's per capita income ($27,000) is only slightly greater than the state and national levels. The primary trade area has a labor base of 187,000 employees, with 65 percent holding white-collar positions. (Source: *Retail & Hotel Market Analysis*, Gibbs Planning Group, January 2012)

Population and Housing

There are four residential developments within the City Centre offering a variety of housing options as reflected in Table 8-5.

Table 8-5: Residential Development Within the City Centre

Development Name	Type	Address	Units	Unit Types
*Arbor Lofts**	Loft style apartments	20300 Civic Center Dr.	54	171 beds: 1-4 bedrooms
5000 Town Center	High-rise (33 stories)	5000 Civic Center Dr.	216	850-2,000 sq. ft. condominiums
Knob in the Woods	Apartments	Various	588	1-3 bedrooms (1,040-2,200 sq. ft.)
Park Place at Town Center	Townhomes	Various	572	2 story attached condominiums

Based upon household size** and bedroom count, we estimate that the year round residential population within the City Centre is approximately 2,591 persons.

In addition, LTU has two existing dorms totaling 200 rooms (495 beds) with a future 152 room freshman dorm scheduled to open Fall 2015. Finally, four District hotels provide an additional 734 rooms for rent.

*****LTU has a short term lease agreement with Arbor Lofts for approximately 100 beds during the school year.
** Avg. Household Size 2.22 (2010 US Census)

Evershire Neighborhood

In early 2014, the Planning Department with the support of studio [Ci], Lawrence Technological University, conducted a study of the Evershire neighborhood to determine the feasibility of integrating medium density housing as a transition zone from the existing and planned commercial development on Evergreen Road and existing stable single family residential to the east. Further, the study was to look at eight other similarly sized neighborhoods or communities within walking distance of a university to determine precedents for these types of infill housing developments for graduate level, academic staff and young professional living communities.

The Evershire neighborhood is bounded by: Evergreen Road to the west; Ten Mile Road to the south; Filmore Street to the north; and Santa Barbara to the east. The study area had an overall size of 72 acres, approximately 180 households and a population density of 3,418 people per square mile. Households with children made up approximately ½ (50.28%) with a 5% turnover

rate; 57% who lived there 5+ years and a median residency of 3 years (data source: www.interorealestate.com).

The concept plans included mixed-use, infill single family, medium density multi-family and mixed-use high density residential.

Placemaking was also incorporated into the concept plans including: day lighting of the former streams; creating a greenway and walking/jogging paths, which connect to LTU campus; way-finding signage and pedestrian amenities.

For more information, please see Chapter 4: Housing.

Land Use

In June 2014, the City Assessor certified 6,821,704* (6,822,358) square feet of non-residential development within the district as indicated in Table 8-6.

Table 8-6: Non-Residential Development within the City Centre

Description	Sq. Ft.	Units/Rooms	Notes
Non-Residential:			
Bank	4,000		
Education	22,000		
Gas Station	1,050		
Hotel	485,145	734	
Medical	9,376		
Municipal	471,239		
Office	5,108,715		75% occupied
Restaurant	127,122		
Retail	52,262		
Storage	3,450		
University	533,993	200/495	
Utility	4,006		
Vacant Land			8.93 acres
Subtotal:	6,822,358		
Residential:	998,285	1,147	
Total:	**7,820,643**		

*****as of June 30, 2014

Parking: The City Centre provides a total of 22,642 parking spaces (as of Sept. 2014) including: 13,671 off-street and 8,971 parking garage spaces. Major parking garages include:

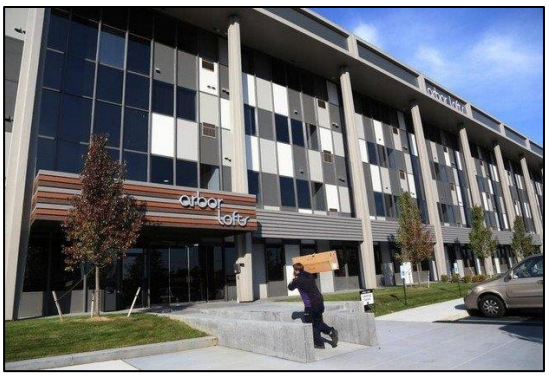
- City Municipal Complex: 216
- Maccabees: 1,128
- Oakland Town Square: 1,350
- 5000 Town Center: 514
- Town Center: 5,747
- Traveler's Tower: 1,597

Overlay Development District (ODD)

To date, there have been three ODD's approved within the City Centre: 1) City Centre II; 2) Arbor Lofts; and 3) Traveler's Tower.

- City Centre II: Located on the east side of Evergreen Road, between Hilton Dr. and Goldwin Street, the City Centre II project combined the existing two building City Centre Plaza retail complex (8,000 sq. ft.) with a partial closure of Jeannette Street and the new two-story mixed-use retail/restaurant/office complex measuring approximately 24,000 sq. feet for a total site area of 1.24 acres. This development includes many pedestrian amenities, including decorative cross walks, out-door seating and art.

- Arbor Lofts: In the Fall 2014, the Arbor Lofts ODD agreement was executed to allow a multi-phase development including:
    - Phase I: Adaptive reuse of an existing 114,356 sq. ft. 4-story office building for first floor mixed-use and 54-unit loft apartments (171 beds) on floors 2 thru 4.



- Phase II: Future 10,000 sq. ft. free standing retail mixed-use at the southeast corner of the site; and

- Phase III: Future 43,000 sq. ft. mixed-use 2 story building, with pedestrian streetscape on the north end of the property.

- Traveler's Tower: In Spring 2014, a 19,000 sq. ft. one-story outparcel retail development was approved along Evergreen Road with out-door seating and public art features.

Finance Mechanism

The City Centre Advisory Board (CCAB) was established August 24, 1992, by City Council (ORD. #1352), "to promote economic activity in the City Centre, and to provide for the maintenance, security, and operation of the City Centre . . ."
The City Centre Advisory Board was established pursuant to Act No. 146 of the Public Acts of 1992 (PRINCIPAL SHOPPING DISTRICTS, Act 120 of 1961, as amended).

The costs, in whole or in part, of projects may be financed by the City by one or more of the following: 1) grants and gifts to the City; 2) City funds; 3) the issuance of general obligation bonds of the City; 4) the issuance of revenue bonds by the City for public improvements; 5) the levying of special assessments against land or interests in land or both.

The first Special Assessment (Project P-1124) for the construction of the City Centre Plaza, located on Central Park Boulevard was passed in 1994 at $0.01 per square foot of gross building area generating approximately $58,000 per year for construction and operating expenses. In Fiscal Year (FY) 1999, the assessment was increased to $0.02 per square foot of gross building area. Fifteen years later, in FY 2014, the special assessment was increased to $0.03 for FY 2014-2015; $0.04 for FY 2015-2016 and $$0.05 for FY 2016-2017.

Examples of the use of these funds include the coordination and production of the monthly noontime summer concerts ("Eat-to-the-Beat") at the City Centre Plaza; co-sponsorship of community events (i.e. 5K runs; Food Truck Rally; art exhibits; etc.); annual flower plantings at City Centre Plaza; maintenance of the sprinkler system and existing landscaping along Central Park Boulevard; payment of water and electric utility bills; general maintenance of the City Centre Plaza and flag row; retention of professional planning, engineering and design services; retention of media and public relations services; pedestrian friendly installations such as benches, trash receptacles, bicycle racks and public bus shelters; gateway entrances into the District and decorative crosswalks within the District; and participation in costs associated with the Evergreen Road improvement project.

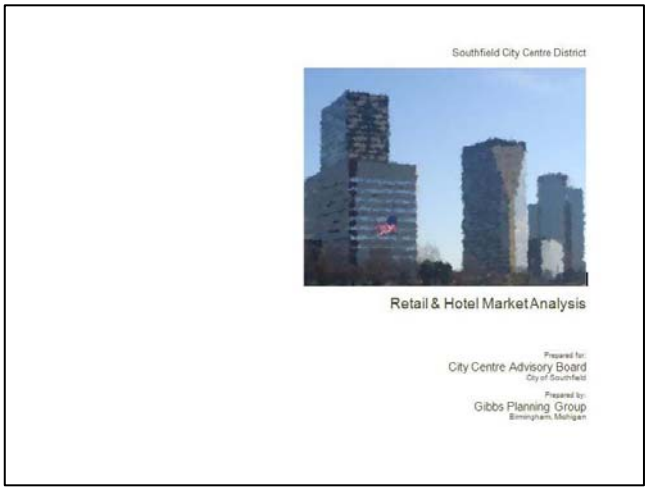
Focused Development Projects

- Promote and support special events, art installations and Placemaking.
- Promote business development.
- Support the attraction and retention of young professionals and business tenants.
- Partner with LTU and other local colleges' annexes in strengthening our "Town and Gown" environment.
- Enhance the District's walkability and pedestrian amenities.
- Support and enhance non-motorized and public transit facilities.
- Improve the District's public infrastructure and aesthetics.
- Encourage development and redevelopment on private vacant and underutilized properties.
- Provide on-going development, maintenance and support of public areas and rights-of-way.
- Conduct district wide marketing and support of District-wide public relations.

- Provide long term planning, vision, and research to support grant applications and other municipal projects.
- Promote mixed-use development.
- Encourage low impact design and sustainable development.
- Maintain and refresh website (www.southfieldcitycentre.com)

STRATEGIC PLANNING

Retail & Hotel Market Analysis



Completed in January 2012 by Gibbs Planning Group, this study finds that the Southfield City Centre District can presently support an additional 645,000 square feet (sf) of retail and restaurant development, generating up to $240.7 million in gross sales revenues, growing to $252 million by 2016. The demand could partially be absorbed by the expansion of existing businesses, and the development of neighborhood, community, lifestyle and/or regional centers that include two department stores and 60-85 new restaurants and retailers. This existing commercial void exists for non-market factors such as the lack of modern shopping centers and coordinated leasing and development activities.

While numerous shopping centers and downtowns ring the subject site, its considerable residential and daytime employment base is under-served with most retail categories including: apparel, department stores, home furnishings, groceries and restaurants. As a result, its consumer base must drive a considerable distance for many of the commercial businesses and brands that they need and desire. The area's market demand, employment base and adjacent civic center, combined with the lack of a walkable, mixed-use main street-type center such as the Village of Rochester Hills, creates a unique opportunity to develop a "town center" with a broad appeal to many leading retailers.

Consumer expenditure from daytime employment compliments that captured in the evenings and on weekends by households in the trade area. *Office Worker Spending Patterns*, published by the International Council of Shopping Centers in 2004, provides insight into the impact of local employment. Weekly office worker expenditure, adjusted for 2011 dollars, is estimated at $157. The study found that 62 percent of office workers shop either during the workday, over

the lunch hour (31 percent of those who shop) or after work (47 percent). Twenty percent of office workers reported shopping multiple times per day. On average, 23 sf of retail space and 7 sf of restaurant space can be supported by each office worker; for the City Centre District's estimated 7,700 office workers, this translates into over 230,000 sf of restaurant and retail space that can be supported solely by this employment base.

Weekly non-office worker expenditure, in 2011 dollars, is estimated at 37 percent of that of office workers. Non-office workers are estimated to have slightly less disposable income, to have multiple work locations including at home, and typically are on the road more during their workweek. Retail purchases (general merchandise, apparel, home furnishings, electronics, grocery, and convenience items) make up the majority of the office worker dollars, at $116 per week.

Restaurant expenditures (full service, limited service, and drinking places) account for the balance at $41 per week. Adjusted for 2011 dollars, the ICSC survey found that the average office worker spends $8.60 per lunch, eating outside of the office three out of five days each week. Forty-four percent of office workers purchased lunch outside of the office either four or five days of the week. Annualized, each office worker expends $8,164 before, during, and after work.

Much of this potential expenditure can be captured within the District through adjustments to parking policy, as well as ensuring that new retail and restaurants can be easily accessed by the majority of area office workers on foot. When consumption takes place during the limited time constraints of a lunch hour, those establishments located beyond the range of a five-minute walking time (about one quarter mile) will not be patronized. GPG noted that while the City Centre District is small, traversing the area on foot is often unpleasant due to its heavily auto-oriented design and scale.

The annual impact of the 13,300 workers in the City Centre District is:

- $10.1 million in Prepared Food and Beverage establishments,
- $ 3.5 million in Retail Goods sales,
- $2.2 million in Grocery purchases,
- $3.2 million in Convenience Items, totaling $19 million in captured consumer expenditure.

This study finds that the Southfield City Centre District can statistically support an additional 190 room 3.5 star hotel by 2016. Numerous independent hospitality groups as well as many national brands including Doubletree, Embassy Suites, Hilton Suites, Hyatt, Marriott, Radisson

and Sheraton are among the hotels that meet the industry's 3.5 star rating. (Source: *Retail & Hotel Market Analysis*, Gibbs Planning Group, January 2012)

Mission Statement

"To create and maintain a vibrant 24/7 pedestrian friendly mixed-use environment."

The Southfield City Centre is becoming a vibrant and friendly place to live, work and play. Its evolution is designed around people and how they live their lives, with restaurants, shops, offices, apartments, public spaces, cultural institutions and recreational activities all within convenient and comfortable walking distance. The reinvention of the district into a walkable, pedestrian-friendly environment allows office workers, residents, students and visitors in the community to spend their days in an environment designed around their interests and lifestyles.

Plan Goals & Objectives

Goal:

"Create a daytime, evening, and weekend activity center that is easily identifiable, pedestrian-oriented, and incorporates a mix of uses and activities."

Objectives

- *Provide an environment conducive to and support of living, working, shopping and entertainment*
- *Strengthen the physical and social connections between LTU campus and the City Centre*

- *Accommodate a variety of densities and scales of development that are sensitive to existing development and its context and the demands of the marketplace*
- *Encourage retail businesses and mixture of land uses that help to generate positive pedestrian activity in the area.*
- *Establish patterns of land use and circulation that promote the desired pedestrian character of the area.*
- *Support street level uses that are pedestrian-oriented and contribute to the vibrancy of the street (i.e., Evergreen Road and Civic Center Drive).Enhance roadways and pedestrian pathways, which improve visibility and accessibility*

- *Provide improved connections from Lawrence Technological University to the City Centre*
- *Make the City Centre a unique, high amenity destination for local and regional customers*
- *Utilize urban design in defining Southfield's City Centre*
- *Provide updated parking standards for new mixed-use development and visitors to the City Centre*
- *Improve pedestrian opportunities and create and attractive pedestrian environment within the City Centre*

- *Create safety buffers of street trees, planters and street furniture between walks and the street along both Evergreen Road and Civic Center Drive. Provide widened sidewalks with a special City Centre streetscape design*
- *Develop pedestrian courtyards and other outdoor spaces with planting and street furniture.*
- *Incorporate public art as an element of development and enhancements.*
- *Encourage the design of lighting that enhances the streetscape and facilities nighttime use of the City Centre by pedestrians.*
- *Reduce disruptive traffic movements and high traffic speeds in the City Centre.*
- *Establish patterns of land use and circulation that promote the desired pedestrian character of the area.*
- *Provide opportunities for shared parking facilities in the City Centre and develop parking regulations to assure that adequate and reasonable standards are provided.*
- *Parking areas should be located in the rear of properties, where service drive access is available.*
- *Encourage the formation of a Corridor Improvement Authority. The Authority could reserve tax increment revenues for funding capital improvements and economic development programs.*
- *Promote public and private cooperative efforts: providing ongoing aesthetic and infrastructure improvements for planned development/redevelopment projects.*
- *Give priority or incentives to developers that reflect a unique niche and/or development that is supportive of the City's Municipal Complex improvement and enhancements.*
- *Support and encourage a variety of housing options in the district.*

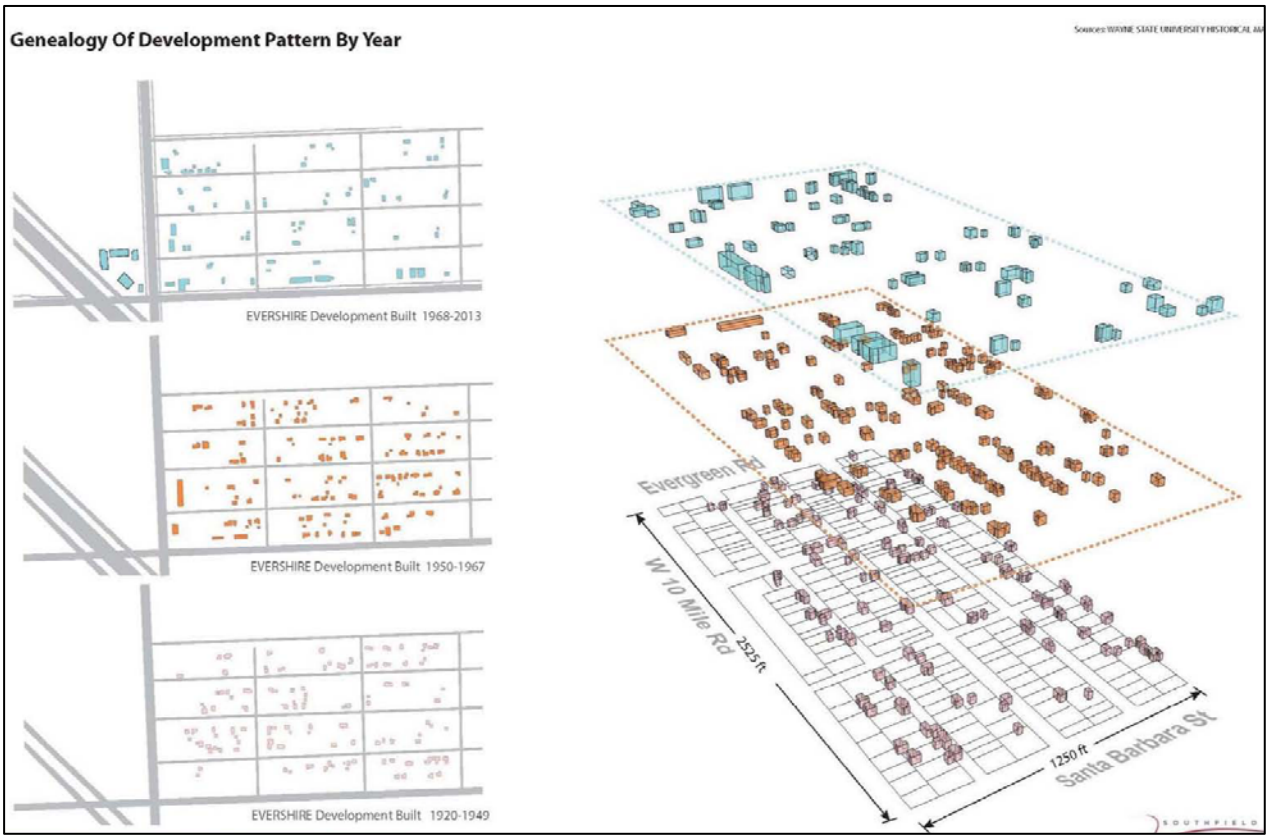
Proposed Pedestrian-Friendly Mixed Use Development

A Vision for Evershire & Lower Evergreen

In the winter and spring of 2014, the Southfield City Centre commissioned a conceptual plan from Studio [Ci]* to prepare a long term conceptual plan for medium density (8-15 DU/Acre) in-fill housing to support the un-met housing needs of LTU, the City Centre District and the City of Southfield.

The Evershire Neighborhood is bounded by Evergreen Road to the west, Filmore Street to the north, W Ten Mile to the south and Santa Barbara Drive to the east.

In 2013, the Planning Department conducted a windshield survey to inventory existing housing conditions within the Evershire Neighborhood, which were rated: Good, Fair or Poor. In addition, vacant land, vacant structures and poor building conditions were quantified to look at housing infill and redevelopment opportunities.



Evershire Community summary:

- Existing Zoning: RA, Single Family Residential (Min. Lot area: 7,500 sq. ft. = 5.8 DU/Acre)
- Total Size: 72 acres

- # of Households: 181
- Population Density: Est. 3,418 people/Sq. Mile
- Households w/Children: 50.28%
- Annual Residential Turnover: 5%
- 5+ Year Residency: 57%
- Median Year in Residency: 3 years
- ½ mile walking distance (10 Min.) between Santa Barbara Dr. and Evergreen Road
- Approx. 3,500 Lin. Ft. (15 min. walk) to LTU campus from the center of the neighborhood

Eagle Flats
Appleton, WI

A number of other similar sized college towns were investigate to review best practices as they relate to off-campus medium density housing for upper level students, faculty, staff and young professionals. Projects reviewed included: Hawthorne Eco Village, Minneapolis, MN (Pop. 4,487); Braddock Metro Plan, Alexandria, VA (Pop. 146,000); Eagle Flats, Appleton, WI (Pop. 78,806); Duluth Master Plan, Duluth, MN (Pop. 86,277) Emerson Square, Evanston, IL (Pop. 74,239); Bank at River Landing, Waterloo, IA (Pop. 68,406); Plaza-Central PED Plan, Charlotte, NC (Pop. 775,000); and Parkview Gardens Sustainable Development Plan, St. Louis, MO (Pop. 35,000).

Emerson Square
Evanston, IL

Recommendations:

- *Extend Evergreen Road Streetscape elements along Ten Mile Road*
- *Create strong pedestrian and bike network connections to the Evergreen Mixed-Use corridor and LTU*
- *Daylight former riparian ways to create a greenway amenity for existing and future residents.*
- *Create passive parks at strategic locations within the neighborhood*

Evershire Development Program

Type	Unit Size (Rough)	Density [DU/acre]	Units (Rough)	Height
Low Density Infill (Single Family)	850-1250	10-20 [low]	As needed	1-2s
Single Family Townhome	1000-1500	10-25 [low-med]	100-120	2-3s
Medium Density Condominiums	800-1200	30-40 [med]	60-80	3-4s
High Density Apartments	650-900	20-25 [high]	65-75	4-6s
Public Realm	-	-	-	-

Land Use Data

Land Use	Gross Floor Area (ft²)	Percentage of Plot Area
Proposed New Development	1,836,505	-
Medium Density Condominiums	581,679	28%
Mixed use High Density [Apartments]	1,050,517	53%
Mixed use High Density [Commercial]	204,309	9%
Parking Structure	79,712 (400 spaces)	3%
Public Realm	137,519	7%

- *Encourage renovation and rehabilitation of existing stable single family*
- *Develop land banking strategy for future in-fill housing*
- *Provide a variety of medium density (8-15 DU/Acre) housing options with common open space from the Evergreen Road commercial corridor to stable single family residential to the east*
- *Create higher density housing and mixed-use development along Ten Mile Road*
- *Encourage economic development along the western and southern edges*
- *Increase multi-model transit options where feasible*

See concept plans and vision illustrations on preceding pages

* Studio [Ci]: *Constance C. Bodurow, AICP, Assoc. AIA, Associate Professor & m.U.D. Coordinator; Haibin Tan; and Andrew Bradford*

Lower Evergreen/Evershire Neighborhood Concept Plans

Proposed Medium Density Multi-Family Development

Proposed Greenway and Daylighting of Watercourse

Evergreen Rd Looking Southeast

Non-Motorized Transit Planning

On April 9, 2013, the CCAB adopted the Southfield City Centre Non-Motorized and Transit Sub-Area Plan, which was created as a sub-area plan based upon recommendations from the City of Southfield's Non-Motorized Pathway & Public Transit Plan (adopted March 19, 2012). See Map 8-1 Non-Motorized Transit. In response to the interviews and surveys, the primary recommendations of the Southfield City Centre Sub-Area plan are as follows:

Pedestrian Connections:

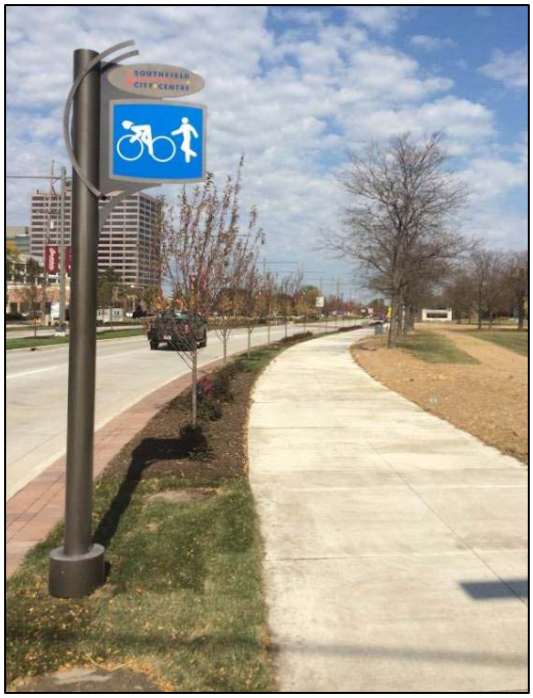
- Infill of sidewalk gaps within existing sidewalk network
- Additional walking trails
- ADA Compliance for intersection ramps
- Mid-block pedestrian crossings with refuge islands and pedestrian signals
- Aesthetics and amenity improvements, including lighting, landscaping, and benches.

Bicyclists:

- Northwestern connector to MDOT/Greyhound and the DDA district
- Bicycle parking as part of new developments
- Bike Share program at Lawrence Technological University
- Shared use pathways along Evergreen Road and Civic Center Drive

Transit:

- ADA compliance, including key-walk installations
- Additional installations of bus shelters, including benches, trash receptacles and bike racks, where appropriate.
- Wayfinding Signage: Multiple levels of signage to include:
    - Gateways to the district
    - Vehicular
    - Bicycle
    - Pedestrian



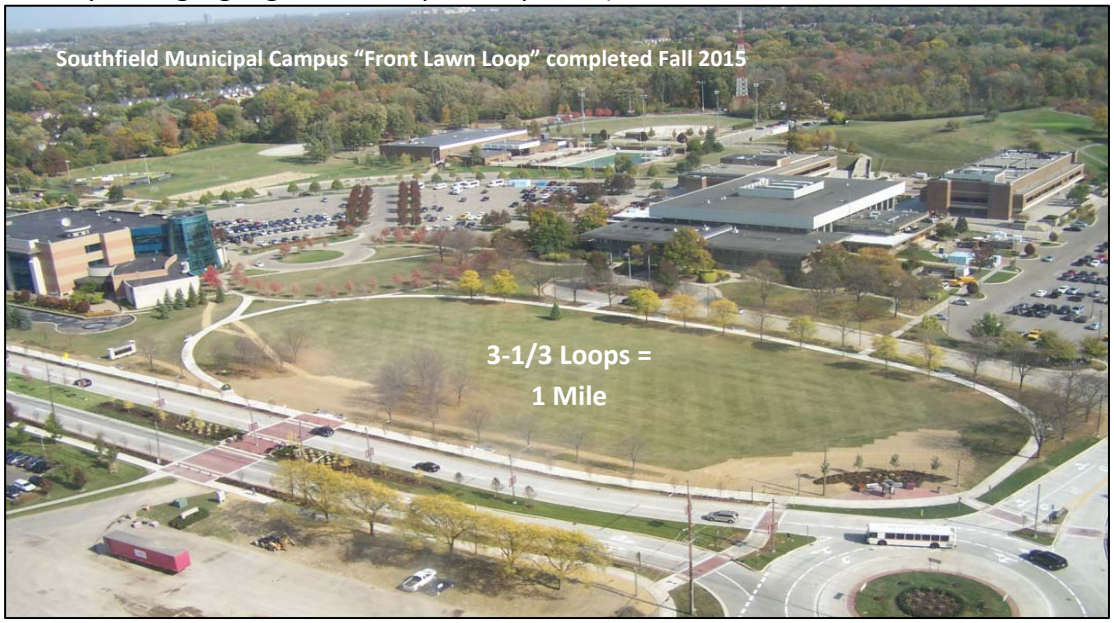
Note: Complete non-motorized plans can be found at:
https://www.cityofsouthfield.com/LZ/Planning/tabid/198/Default.aspx

FUTURE DEVELOPMENT

As of the summer of 2014, there were an estimated $120,000,000 of new improvements (development and redevelopment) scheduled for the City Centre District. These improvements include projects approved by the City Council, those under construction or recently completed and major projects announced in the news media.

Major projects to date include:

- $27 million at LTU (152 bed) Freshman Dorm to be completed for Fall 2015 semester and Phase I (42,000 sq. ft.) of the Taubman Bio-Medical Complex to be completed for Fall 2016
- $12.1 million Evergreen Road Reconstructions (from 10 Mile to I-696) including: major road reconstruction; storm water utilities; storm water mitigation through a rain garden and permeable materials; LED street lighting; 10 ft. wide multi-use path; two round-a-bouts; and pedestrian amenities (i.e. decorative cross walks, including mid-block cross walks; bus shelters; benches, trash receptacles, bike racks, and wayfinding signage and interpretive panels)



- $4 million City Centre II Mixed-Use center (two story, 24,000 sf)
  - $10 million renovations at Traveler's Towers (including 19,000 sf out-parcel retail center)
  - $30 million in renovations at Town Center
  - $10.3 million Arbor Lofts Mixed-Use development (Phase I: mixed-use residential (171 beds) in former 114,000 sq. ft. office building; Phase II: 10,000 sf. out-parcel retail; and Phase III: 43,000 sf. mixed-use residential

- $1 million energy upgrades at 1-800-Law-Firm

Lawrence Technological University (LTU)

"Lawrence Technological University's major focus at this time is the creation of additional space to accommodate emerging fields in engineering, the life and other sciences, and architecture. Looking ahead, it is likely that the University will continue to consider additional on-campus student housing and the building out of amenities that address needs for student recreation and athletics, conference and meeting spaces, campus beautification, applied research, and a host of other scholastic and academic needs." (Source: LTU)

Lloyd E. Reuss Hall

Lawrence Technological University has increased its on-campus housing by 25 percent with the opening of the Lloyd E. Reuss Residence Hall in time for the start of the 2015-16 academic year.

LTU's third residence hall, which is named in honor of Lloyd Reuss, the longtime chairman of the university's board of trustees and former president of General Motors, is now the home of 150 freshmen who moved in prior to the start of classes on Aug. 24, 2015.

Lawrence Tech's two older residence halls had a combined capacity of 600. Because of high demand, LTU also leases residential suites for 60 additional students at Arbor Lofts on nearby Civic Center Drive in Southfield.

The $11.6 million project includes: 47,545-square-foot, two-stories with five pods; 16 double-occupancy units and 80 rooms.

Each pod in Reuss Hall has its own common lounge and kitchenette space. Amenities include central laundry facilities on two floors, a bicycle repair shop, a multi-purpose room, a game room, and two conference-type spaces.

Taubman Complex

The A. Alfred Taubman Engineering, Life Sciences and Architecture Complex, affectionately called the Taubman Complex, began construction in the fall of 2014 and is on schedule and expected to be completed by the end of May 2016. Occupancy and installation of equipment and furnishings will occur throughout the summer in time for the start of classes in August of 2016.

Phase I includes a 36,719 square foot building and is essentially a 3-story building containing bio-medical engineering, robotics laboratories, an embedded software engineering laboratory, and studios for sophomore engineering student projects. The building draws upon the academic resources from both Engineering and from Arts & Sciences making the attachment to both the Engineering and Science Buildings both practical and necessary. Future phases may include additional classroom and collaborative space.

1-800-Law Firm

The 1-800-Law-Firm project is unique in that it is the first PACE financed project in the State of Michigan and also the first to combine multiple renewable energy technologies.

Solar Panels with Car Charging Station

The total project, completed in 2014, is a 150kW combined system which includes solar rooftop, a sun deck on the roof which will provide perfect views of the four (4), 1 kW Wind Turbines on the roof, solar carports in the parking lot which will include 2 Electric Vehicle (EV) charging stations. The project also includes energy optimization measures within the building itself and LED lighting in the parking lot.

The proposed system at the Law Firm will be installed with an energy monitoring system and roof top observation deck, which will enable employees, visitors *and the general public to view real time and historical energy generation output.*

The 1-800-Law Firm project includes approximately $1M in capital improvements (incl. $550,000 PACE financing) and has a 7-9 year payback period. It is estimated that this project will reduce approximately 50% in utility bills.

Wind Turbines & Solar Panels Mounted on the Roof

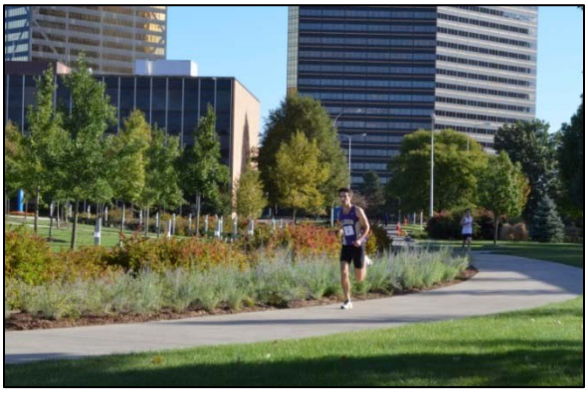
Special Events

- *Eat-to-the-Beat Lunch Time Concert Series*: The Southfield City Centre in partnership with Southfield's Parks & Recreation Department sponsors four summer concerts each year.

  The ***Eat to the Beat*** lunchtime concert series take place in the Southfield City Centre area, recently in the parking lot of the Arbor Lofts at 20300 Civic Center Drive (at the corner of Central Park Boulevard and Civic Center Drive).

  These free, outdoor concerts take place outdoors from 12-2 p.m. and are presented by the City Centre Advisory Board and the Southfield Parks & Recreation Department.

- Road Races: The City of Southfield has partnered with LTU to sponsor road races, including the Summer Soulstice and LTU Homecoming 5K, of varying lengths to promote healthy living and create annual events.



- Food Truck Rallies: The City of Southfield has sponsored two food truck rallies in recent years, which received rave reviews and were attended by all age groups.

JACQUES
WWW.JACQUESTAC
twitter
facebook

LTU Events: In an effort to promote a full university experience, LTU has continued to offer a number of annual events, including, but not limited to:

Welcome Week

- Business Welcome Back Campaign
- *RecFest* in collaboration with Parks & Rec and Yoga Shelter
- Party on the Yard
- Screen on the Green outdoor movie
- Volunteer & Voter Registration Fair
- Organization & Community Info Fair

Homecoming

- Disc Golf Tournament
- Best Pizza in Town
- Southfield Company Crawl
- Powder Puff Football Game
- Homecoming Concert
- 5K for Breast Cancer Research
- Homecoming Tailgate & Soccer Match

- Blue Devil Motorsport Grand Prix
- Policing and the African-American Experience in Metro Detroit

Cultural Celebrations

- Diwali
- Thanksgiving
- Chinese New Year
- LTU International Festival
- Halloween
- Holi

Winterfest

- Campus Martius Ice Skating
- Faculty vs. Staff Basketball Game
- Southfield Firefighters vs. Police Basketball Game (proposed 2016)
- Outdoor Broomball Tournament
- Winterfest Hockey Game
- Detroit Pistons Game

LTU Homecoming Activities Continued:

Trips

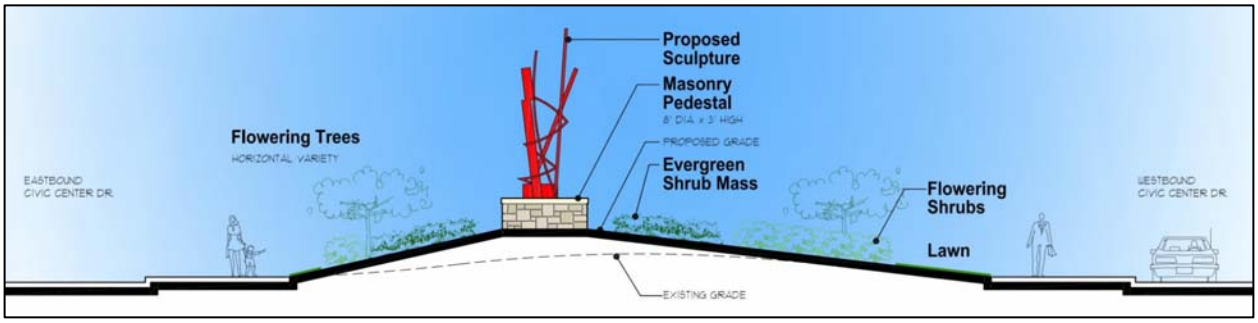
- Cedar Point
- Detroit Institute of Arts
- Twelve Oaks Mall
- Birch Run
- Tour de Troit
- Chicago
- North American International Auto Show

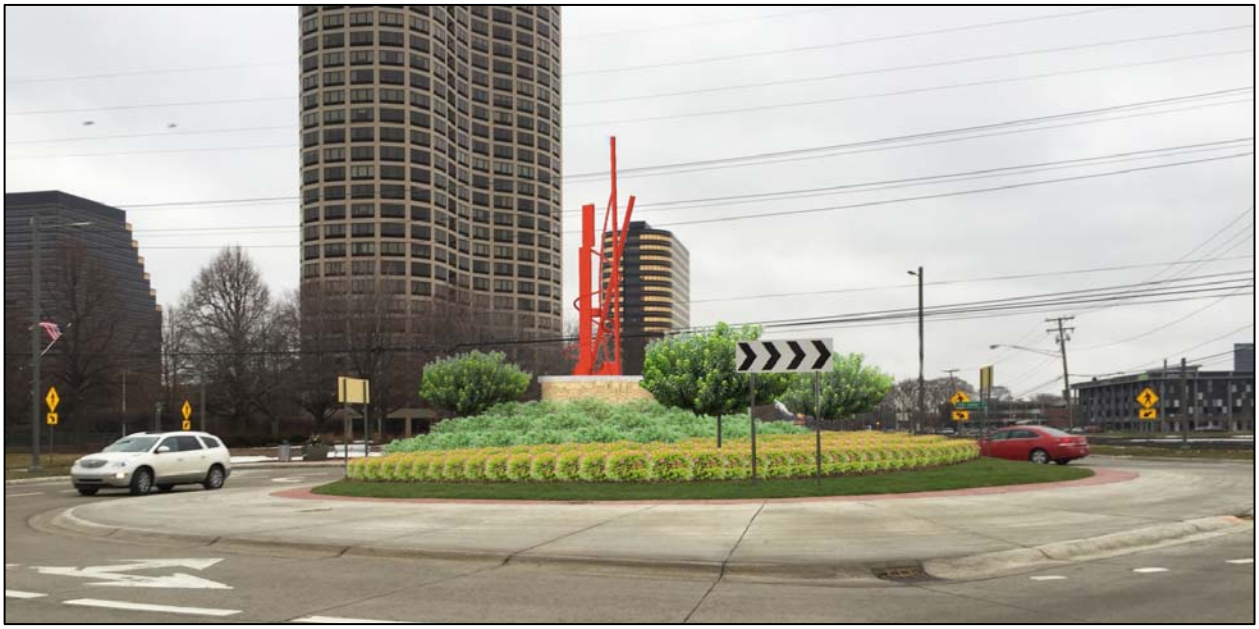
Misc. Events

- Pride Week for LGBT Students
- Kids & Sibs Weekend
- Presidential Ball
- Martin Luther King Jr. Peace Walk
- Miss Lawrence Tech Scholarship Pageant
- Blue Roll

Proposed Sculpture Art in Evergreen Road Roundabout

The city is working on installing a piece of art sculpture in the Civic Center Drive/Evergreen Road roundabout. The following are conceptual renderings of the proposed sculpture location and appearance.

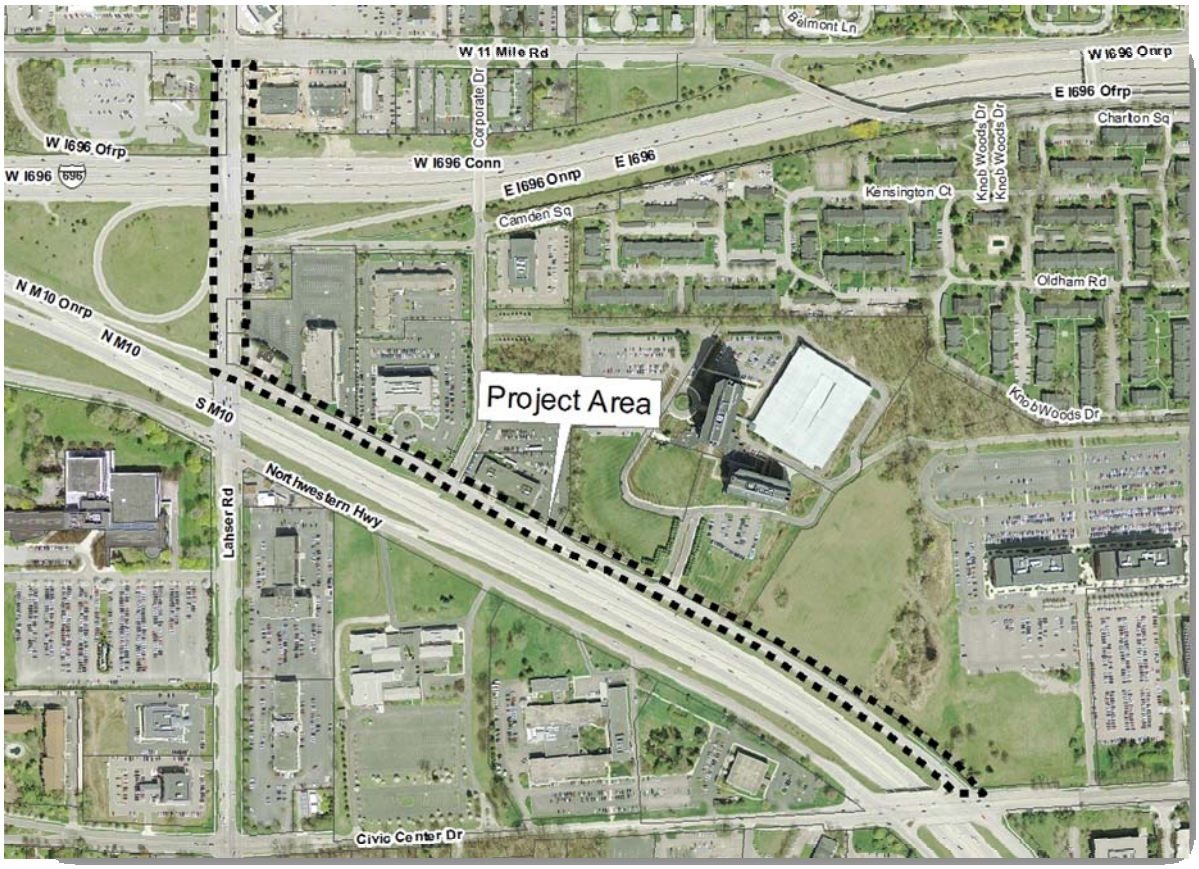

Proposed Sculpture
Masonry Pedestal
8' DIA. x 3' HIGH
PROPOSED GRADE
Evergreen Shrub Mass
Flowering Trees
HORIZONTAL VARIETY
Flowering Shrubs
Lawn
EASTBOUND CIVIC CENTER DR.
WESTBOUND CIVIC CENTER DR.
EXISTING GRADE



NORTHWESTERN HIGHWAY GREENWAY PLAN

Non-motorized transportation (sidewalks, bike lanes, pathways) not only help meet the overall goal of a healthy community but also provides an alternate mode of travel. Southfield maintains an extensive, if not complete, sidewalk system and a limited network of bicycle routes. Primarily located along major streets, the sidewalk system and bicycle route network are disjointed and do not encourage pedestrian use. Future improvements are needed to enhance and complete each non-motorized system, especially in one of the City's primary business districts: **Southfield City Centre**

Project Location: East side of the Northwestern Service Drive from Civic Center Drive north to Lahser and linkages to the Southfield Transportation Center (located at the southwest corner of Lahser & 11 Mile.)



Background

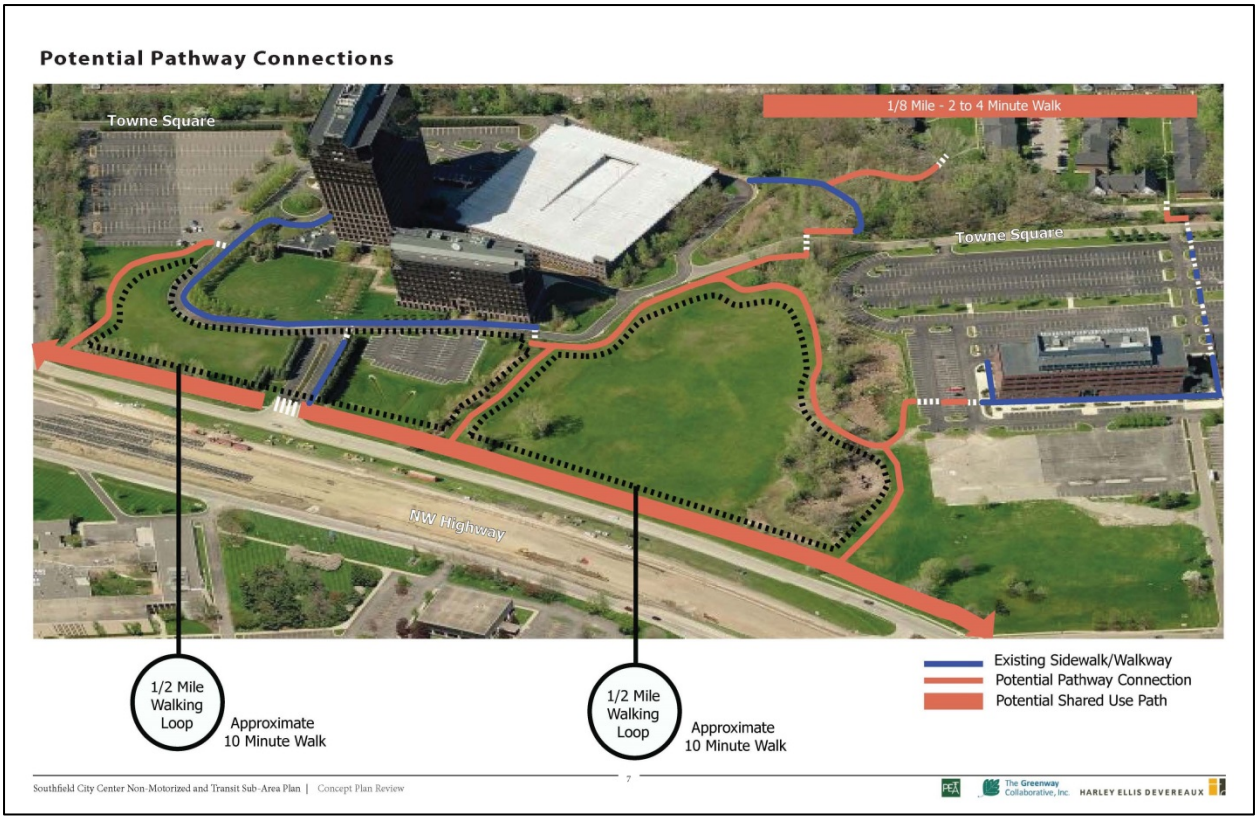
Completed in spring 2012, the City's Non-Motorized Pathway & Public Transit Plan, (adopted 3/19/12), is to be used as a guide to help further develop its sidewalks and pathways, with a larger goal of better connecting non-motorized transportation users with public transit and key destinations around the City.

The next phase of the City's Non-Motorized plan was to prepare the Southfield City Centre Non-Motorized and Transit Sub-Area Plan, (adopted 4/9/2013). The City Centre's focus is to make the district more pedestrian friendly for office workers, visitors, students and residents.
The results of a survey conducted during the study indicated that a majority of respondents claim to walk several days throughout the week, primarily to get breakfast or lunch and for recreational purposes. According to respondents, distance, pathway gaps and time concerns were the primary reasons preventing them from walking more often, stating that they would walk more if these concerns were addressed and a district pathway system was created with the Southfield City Centre.

In 2014/15, the Southfield City Centre commissioned Harley Ellis Devereaux and the Greenway Collaborative, Inc. to prepare a multi-use pathway and greenway plan for the eastern frontage of Northwestern Highway Service Drive, from Civic Center to Lahser and 11 Mile Roads.
The goal of the Northwestern Highway Greenway Plan (April 2015) is to provide a multi-use pathway connection from LTU campus (and Civic Center Drive) to the Southfield Transit Center located at 11 Mile Road and Lahser. The further goal is to extend the existing Southfield City Centre pedestrian network to the business community fronting the eastern side of the Northwestern Highway Service Drive.

Design Principles of the project included:

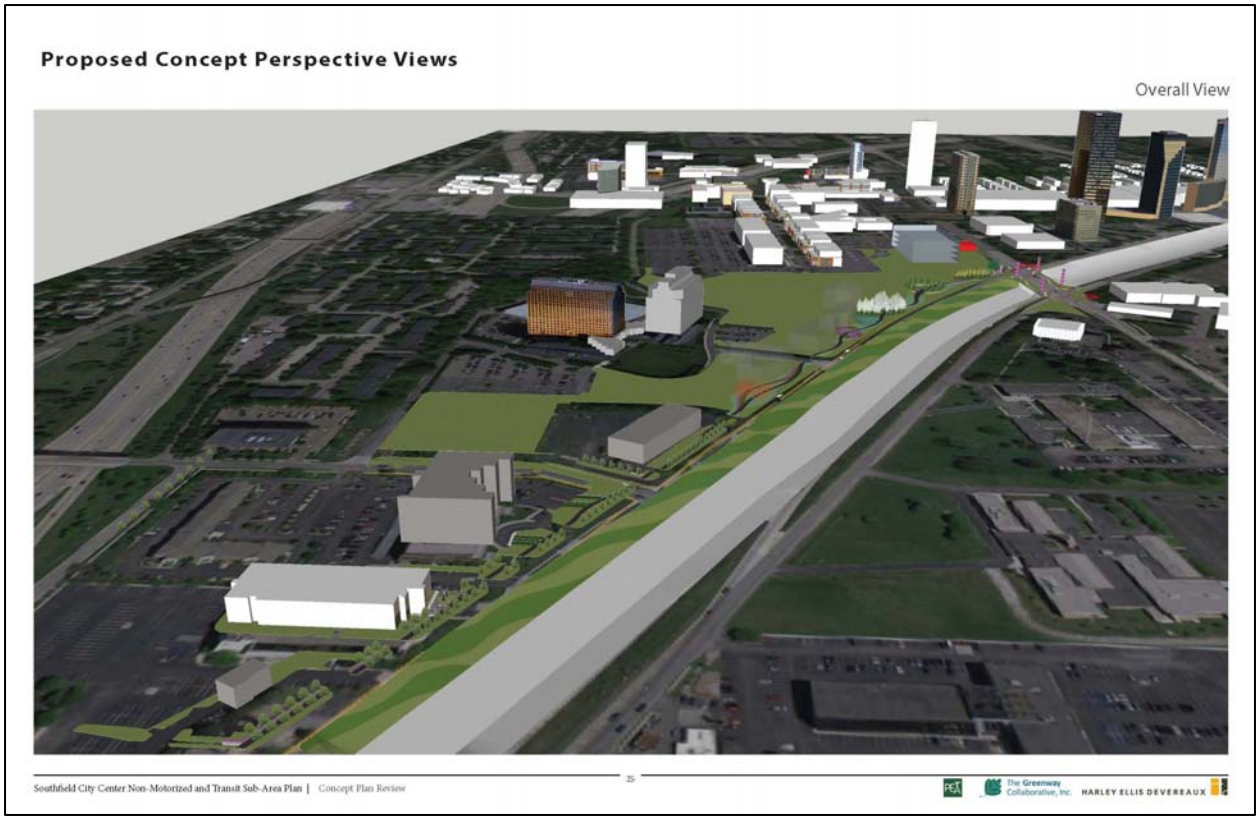
- Develop a multi-use pathway connection and greenway from the existing Civic Center Drive network to the Southfield Transit Center.
- Enhance safety for pedestrian and bicyclists.
- Enhance pedestrian connections using existing pavements and pathway interventions to create a series of walking circuits.



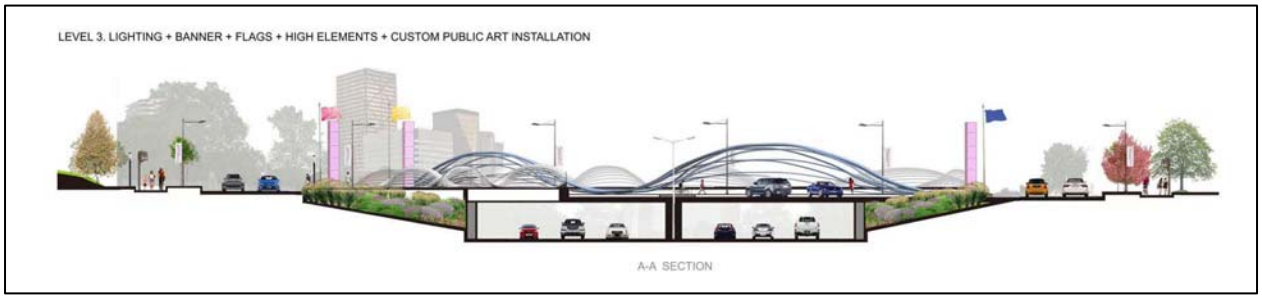
- Create a series of distinct spatial experiences ("outdoor –rooms") along the route that "read" at both the pedestrian and bicycle scale.

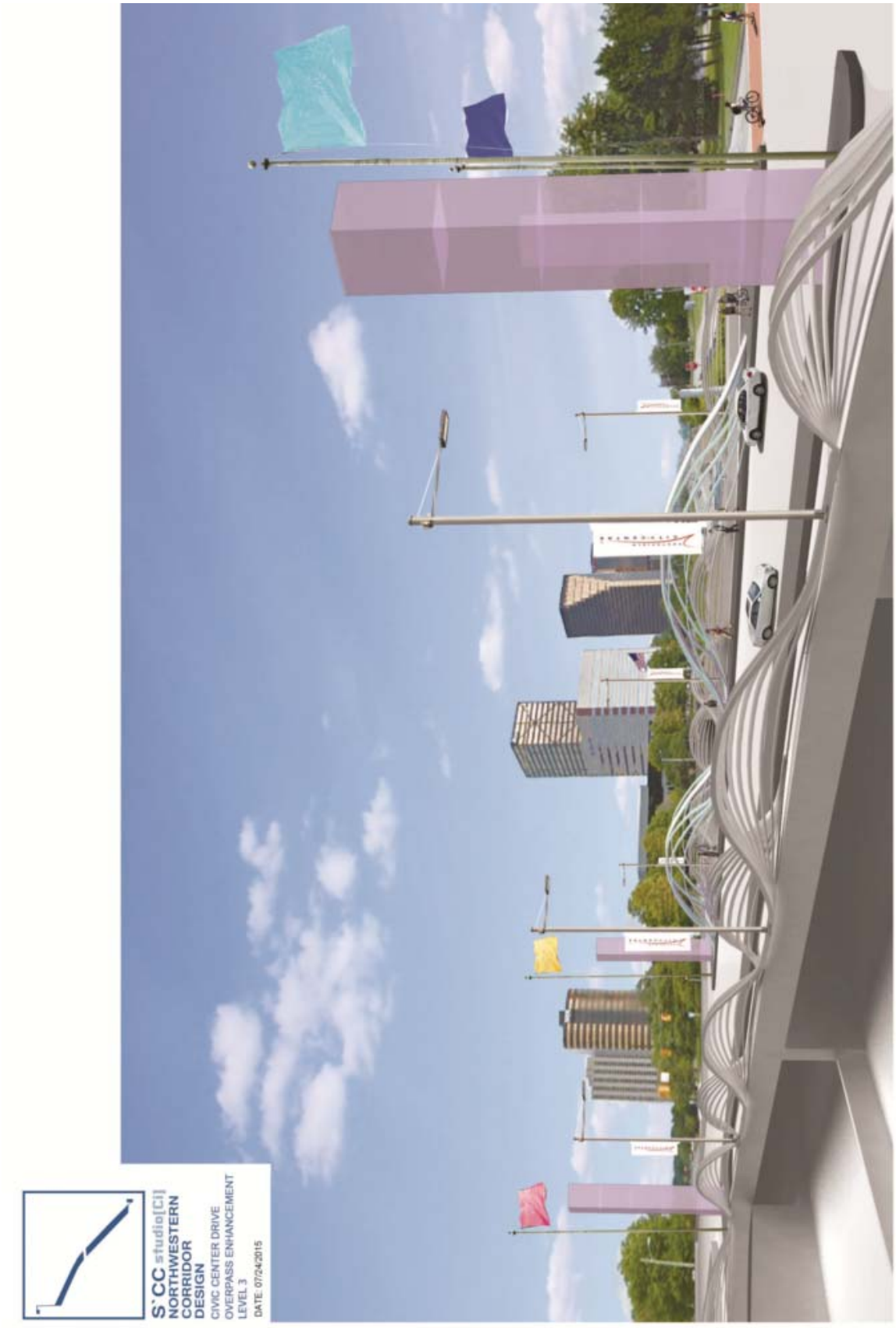
- Enlarge landscapes where feasible: at property corners and at natural drainage-ways
- Introduce opportunities for both permanent and temporary environmentally scaled art installations.
- Use native plants where reasonable.
- Minimize maintenance.

The final greenway plan incorporates a 10 foot wide multi-use pathway with a curvilinear form from Civic Center Drive to Corporate Drive. From Corporate Drive, infill a 5 foot wide pedestrian sidewalk and signage system to 11 Mile Road and Lahser, connecting a safe passage for pedestrians to the Southfield Transit Center. The route will be enhanced by the City Centre wayfinding signage system, pedestrian respite stations, art, landscaping and environmental features. Major adjacent property owners like Redico and Farbman can install pedestrian linkages to the main route for their employees, tenants and visitors.



A concurrent study was prepared for the Southfield City Centre by Studio Ci. The main objective of the study was to develop a design vision for the Civic Center Drive Bridge/Overpass. The design concept for the bridge/overpass enhancements are intended to make the bridge a signature gateway for the Southfield City Centre and improve pedestrian and bicycle access and safety.



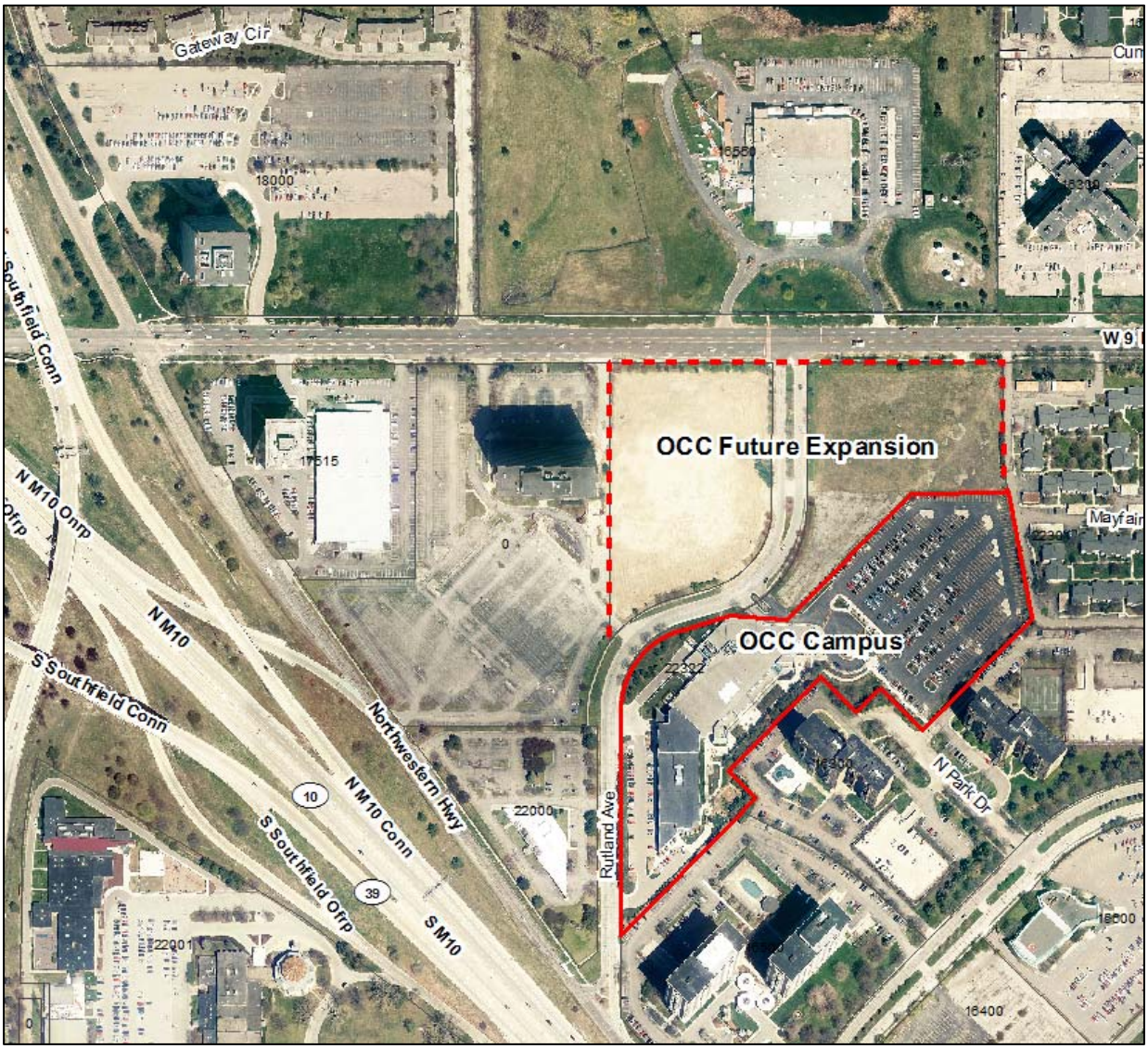

S`CC studio[CI]
NORTHWESTERN
CORRIDOR
DESIGN
CIVIC CENTER DRIVE
OVERPASS ENHANCEMENT
LEVEL 3
DATE: 07/24/2015

SOUTHFIELD DOWNTOWN DEVELOPMENT AREA

SDDA District

The SDDA District's location astride the Lodge Freeway (M-10) and adjacent to the cities of Detroit and Oak Park is an important gateway into the City of Southfield. The district is approximately one square mile, bounded by Mt. Vernon to the north, Greenfield Road to the east, 8 Mile Road to the south, and Southfield Road to the west. The SDDA's continued success and vitality are important to maintain Southfield's positive community image in the southeast Michigan region.

The largest land area in the District includes the former **Northland Shopping Center**. Built in the 1950's, Northland was one of America's first enclosed shopping centers. The District is also home to the **Health Alliance Plan, Oakland Community College (**Michigan's fastest growing junior college)**, St John Providence Hospital** (Southfield's largest employer), and **Oakland Regional Hospital** along with a concentration of health services type office and commercial uses. Since the inception of the SDDA, the District has seen more that $160 million in development and redevelopment construction. Some recent activities include: former Ramada Inn demolition and Oakland Community College campus expansion which includes the acquisition of the adjacent North Park Plaza property;



St John Providence expansion of its emergency center, cancer treatment facilities and other related improvements; Health Alliance Plan 5 year lease commitment and expansion; and the Phoenix Medical Group attraction. Additionally, the SDDA has partnered in public improvement projects: the Nine Mile Road reconstruction, Northland Transit Center reconstruction, and the Greenfield Road reconstruction. Also, the SDDA has constructed sidewalks, improved streetscape amenities along with bus stop improvements to enhance the walkability of the district. The SDDA provides maintenance of all of the public space and streetscape areas within the district.

Finance Mechanism

The Southfield Downtown Development Authority was created by City Council in 1988 to

stabilize the area known as the SDDA District. The development and finance plan are fully described in its ***Second Amended and Restated Development Plan and Tax Increment Financing Plan,*** adopted on February 28, 2011 and running to 2030.
The SDDA's operations are funded through a 1.8 mill tax levy along with Tax Increment Finance (TIF) revenues to achieve the objectives of the development plan. Using TIF revenues, the SDDA has contributed over $1 million in public improvements to the roads, streetscapes, gateway features and landscape improvements.

FOCUSED DEVELOPMENT PROJECTS

- *Enhance the District's physical layout.*
- *Improve the District's public infrastructure and aesthetics.*
- *Provide development and redevelopment assistance.*
- *Encourage improvements on private properties.*
- *Renovate and improve the District's facilities.*
- *Continue maintenance and District operations.*
- *Promote business development.*
- *Conduct District-wide marketing, on-going administration and planning.*

Today, the SDDA maintains focus on attracting retailers, restaurants and medical healthcare providers to the area and filling a demand by area residents and employees for goods and services close to home and work. In addition, the SDDA continues to improve the District through redevelopment and renovation, landscaping and infrastructure improvements, and strategic planning and design for the District.

Governance

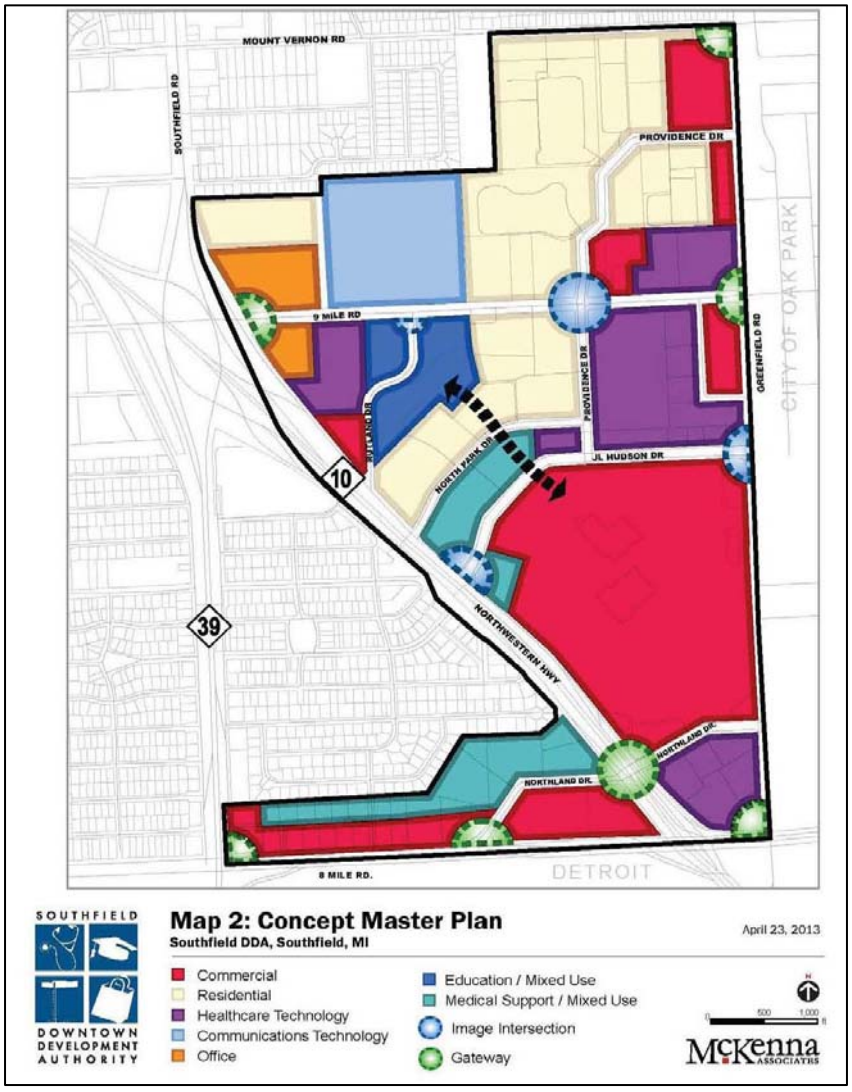
A twelve-member board, plus the Mayor, meet bi-monthly to carry out the activities of the organization. The SDDA uses committee structure to advise staff and review specific projects and finances.

STRATEGIC PLANNING

The purpose of the ***SDDA Strategic Plan 2013—2015*** is to reaffirm the overall direction for the SDDA District with input provided by the SDDA Board, the City of Southfield and other partners. Considering the effects of changes in the economy, population and housing trends is a vital piece to the continued growth of the area.
Mission Statement: ***"Ensure a safe and prosperous environment that advances technology, healthcare, retail, and higher education while supporting stakeholder values that care, share, and grow the Community."***

Plan Goals and Objectives

- ***Infrastructure & Aesthetics:*** *Enhance the District's streetlight infrastructure and increase safety for pedestrians; Enhance the District's road infrastructure; Improve the appearance of Eight Mile, the Service Drive and Greenfield Roads; Improve the District's walkability; Enhance the District's landscape and aesthetics; Transit Improvements.*
- ***Economic vitality of the SDDA****: Prepare and adopt a real estate property acquisition policy; Support streamlining of City's approval process; Pursue funding from non-TIF sources.*
- ***Marketing & Communications:*** *Improve the public's perception so that the SDDA is considered a safe place to live, work and visit; Strengthen code enforcement in the District; Improve communication between apartment owners in the District and the SDDA; Continue public relations and marketing program and work with media to broadcast success.*



SDDA Vision for Tomorrow

The SDDA's vision for the Southfield DDA District is reflected on the Concept Master Plan map depicted in the latter portion of this section. The Plan envisions the SDDA District of tomorrow as a safe, fully walkable, fine grain mixed-use place with retail, technology, services, health care, education, office, residential and other uses blended in a compatible and vital mix.

Demographics

Population and Households– The population of the SDDA area is 4,596 which is 6.4% of the City's population. Furthermore, it contains 7.6% of the City's households, and 92.4% of SDDA residents are black compared to 70.3% of residents citywide. Median household income in the SDDA District is $36,625, which is lower than the median household income of the State of Michigan ($48,669) and the City as a whole ($46,842).

Housing

The housing stock in the Southfield DDA is dominated by units in large buildings, as 48.6% of the District's housing units are in buildings containing 20 or more units. 70% of the SDDA's 2,834 housing units are rentals, which is substantially higher than the housing stock in the City as a whole. Interestingly, home values for owner-occupied units in the SDDA are slightly higher than in the City of Southfield as a whole, perhaps because of recent conversions of rental units into condominiums. However, rents in the SDDA are lower than the City's median value. Overall, this indicates that the SDDA is a viable and competitive choice for persons seeking housing in the City, a positive indicator for the future success of the SDDA District.

The total number of housing units dropped slightly between 2007 and 2010 for Southfield as a whole, from 37,398 units to 36,501 (a decrease of 0.02%). Specifically, the City experienced a decrease in owner occupied units and a rise in both renter occupied and vacant units. In contrast, the SDDA gained 12 household units during this time period, an increase of 0.007%. Owner occupied units and vacant units increased in the SDDA while renter occupied units substantially dropped.

Business and Employment

The SDDA is an important business and employment center within the city, as the home to retail, healthcare and education entities. The SDDA is home to roughly 11.05% of all businesses in the City, 8.02% of all employees in Southfield work in the SDDA. The health services sector makes up the highest concentration of employment at 37.4%; followed by the retail trade sector at 17.2% and professional, scientific & technical services sector at 8.8% in the SDDA district.

NON-MOTORIZED TRANSIT PLANNING

At the heart of the SDDA mission is "to halt property value deterioration, eliminate the causes of deterioration, and to promote economic growth." To assist in reaching the stated goal, the

Southfield DDA is in need of an improved non-motorized transportation network that connects key destinations and encourages pedestrian, bicycle, and transit and transportation alternatives to the car.

Begun in 2011, and adopted in 2013, the ***Southfield Non-Motorized Pathway and Public Transit Plan*** is the basis for pedestrian, bicycle and transit improvements on a city-wide scale. The master plan recommended performing sub-area plans for the City Centre and SDDA that would have specific projects and priorities for implementation. These sub-areas plans would create the needed connections at a pedestrian scale.
This sub-area plan began with a review of the previous planning efforts and on-going City sponsored projects. Public input included an on-line survey, and interviews with City & SDDA staff, SDDA businesses, and transit stakeholders. The primary recommendations of the SDDA Sub-Area plan are as follows:

1. **Pedestrian Connections:** Mid-block pedestrian crossings with refuge islands and pedestrian signals; Aesthetics and amenity improvements, including lighting, landscaping, and benches; Bridge improvements to facilitate pedestrian crossings of the Lodge Freeway (M-10).
2. **Bicyclists:** Northwestern connector to Lawrence Tech, MDOT/Greyhound and the City Centre district; On-street bike lanes on Mt Vernon; Bicycle parking as part of new developments; Bicycle routes connecting east and west of the Lodge Freeway.
3. **Transit:** Creation of a transit center along Nine Mile Road near the Oakland Community College Southfield campus; Staged improvements to the existing transit center at Northland Center; ADA compliance, including key-walk installations; Additional installations of bus shelters, including benches, trash receptacles and bike racks where appropriate.
4. **Wayfinding Signage- Multiple levels of signage to include:** Gateways to the district; Vehicular; Bicycle; Pedestrian and art installations.

Baseline Obelisk

The *Coasting the Baseline* Project is a series of commemorative markers located on Eight Mile or Baseline Road. Each marker is a ten foot tall obelisk that describes the significance of surveying in the settlement of Michigan and as the foundation for property ownership in the state. Michigan was the first state in the nation to be fully surveyed using modern surveying practices. Known as the Public Land Survey System (PLSS) or the rectangular survey system, it is a mathematically designed and based method of measuring land.

The baseline became known as Eight Mile Road and runs across Michigan from Wayne County on the east to Van Buren County on the west. The prime meridian was established at 84 degrees, 22 minutes, 24 seconds west longitude, a line drawn straight north from Defiance, Ohio. All subsequent land surveys in Michigan refer to these principal coordinates. The original Southfield Township was designated as "Town No. 1 North, Range 10 East".

Southfield's Commemorative Marker

The Southfield *Coasting the Baseline* Obelisk is the fourth obelisk installed to join those of other neighboring communities (Farmington Hills, Northville and Novi) along Eight Mile Road. It is envisioned that markers will stretch from Lake St. Clair to Lake Michigan along the baseline. The markers, designed by Michigan native and world-renowned sculptor David Barr (1939-2015), include engraved references to early surveying tools, land ownership in America and elements of each community's local history (including Southfield) and are made from alternating blocks of black and white granite. The obelisk shape was chosen because it was commonly used by early surveyors to mark significant geographical points. The site selected for Southfield's *Coasting the Baseline* marker is at Eight Mile and Rutland on city owned property, located in the SDDA district.

Community Support

The Southfield *Coasting the Baseline* Obelisk was erected in the fall of 2015 through private and corporate sponsors. The project includes a 24 ft. x 24 ft. concrete plaza, divided into 36 equal squares to replicate the original 36 square mile sections of Southfield Township. Each section contains a survey marker representing a numbered section 1-36. Additional features include:

benches, brick piers & ornamental fencing, landscaping, and a “donation” plaza.

Northland Mall Post Script

When the Northland Center first opened in 1954, it was the world’s largest shopping center. It was later enclosed in 1074. Northland led the way for Southfield to become a major commercial, business and residential center in metropolitan Detroit. In addition to being a catalyst to population growth in Southfield, the Center help foster enormous office expansion in the City.

Over time, Northland became a victim of the economy, competition from other lifestyle shopping centers, changing consumer tastes and a shift in retail shopping including on-line purchases via the internet.

Ashkenazy Acquisition, which bought the Mall in 2008, defaulted on a $31 million payment in 2014. In September 2014, Northland Mall entered into a court appointed receivership under the direction of Simon and Attorneys (“Simon”). Shortly after this both Target and Macy announced they would close their respective stores forcing the mall to close in its entirety April of 2015.

In December 2015, the City of Southfield purchased the former Northland Center and its 114-acre site for $2.4 million. The purchase does not include the closed Target store or the Triumph Church (former JC Penny Dept. store). The City estimates that it will spend approximately $8 -10 million in demolition and land clearance. The City of Southfield has identified two primary sources of funding: The Tax Base Initiative Fund (TBIF) and the Local Improvement Revolving Fund (LIRF). In addition, there are several grants and low interest/no interest loan opportunities to off-set part of the cost of the purchase, demolition and site clean-up.

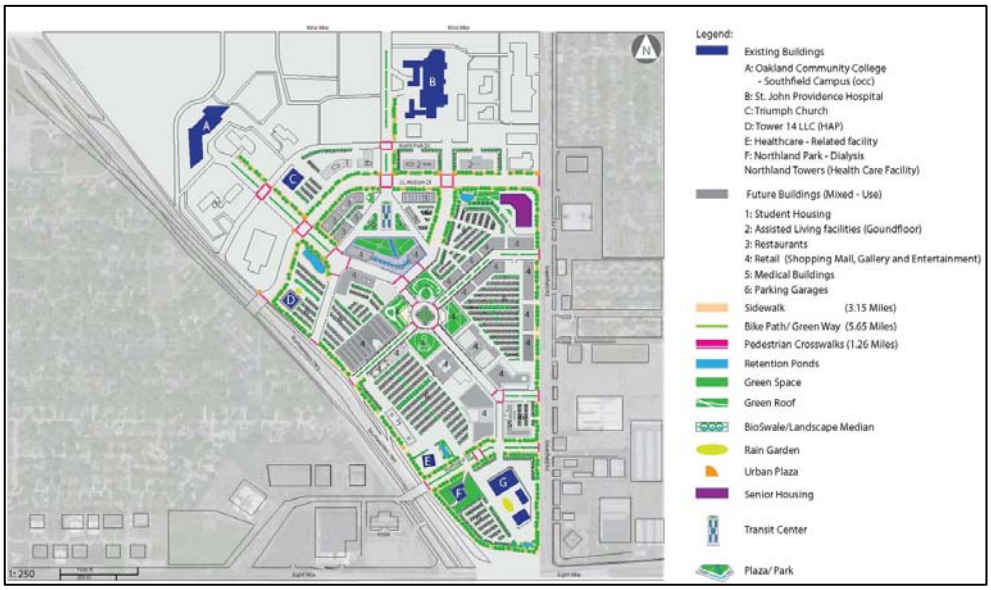
In the short term, the goal of the City is to remove the potential blight of a vacant shopping center by demolishing the structure and clearing the land. In the long term, the City will develop a mixed-use master plan to guide redevelopment and identify a developer or developers to purchase the property to implement the plan.

Reinventing Northland Mall Concept Plan

In the summer of 2013, the Planning Department and Southfield Downtown Development Authority teamed up with LTU's Master of Urban Design (m.U.D.) Program (**ARC 5912 – PRINCIPLES AND PRACTICES OF URBAN DESIGN [PRACTICUM])*** to prepare an urban design analysis and opportunities framework for reinventing Northland Mall.

Project objectives included: Existing conditions documentation and mapping; Analysis of development, public realm and Non-Motorized transportation precedents and initiatives; and Recommendations for sustainable Urban Design and re-development opportunities (i.e. people, planet, profit) to support economic development and diverse user groups (i.e. businesses, residents, regional and user groups). Further, the intern was to determine: How climate change, the "New Economy" and demographic trends would affect land use development?
Best Practice Comparisons looked at two existing "life-style" centers: Easton Town Center in Columbus, OH and The Greene Town Center in Beavercreek, OH.

The final concept plan integrated: sustainable development; Low Impact Design including reduction of storm-water run-off, bio-swales and a perimeter greenway; pedestrian friendly streetscape elements including multi-use pathways; and mixed-use development.



**Associate Professor Constance C. Bodurow, AICP, Assoc. AIA and Masters of Urban Design candidate Ziqian "Ben" Wang.*

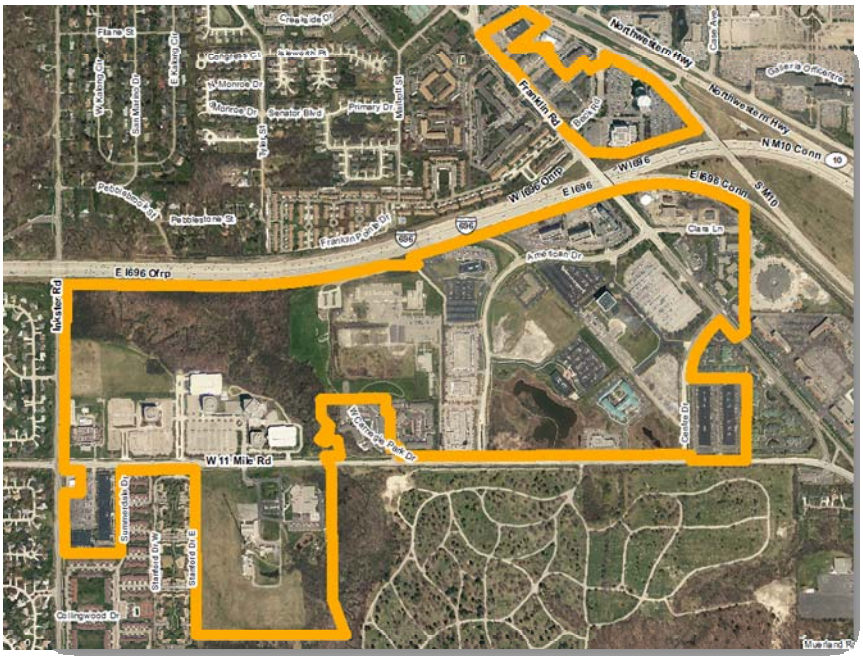
Northland Art Acquisition

In April 2015, the City of Southfield acquired several pieces of art from Northland Mall to save the collection from public auction and to keep an important part of the City's cultural heritage in Southfield. Ten (10) unique art pieces were acquired, including the iconic "Boy and Bear" by Marshall Fredericks and the "Crowd" by artist Gio Pomodoro. The City will be working with the Southfield Arts Commission to receive recommendations on placement and raise funds for installation and maintenance.

Additional information on the SDDA can be found on the SDDA's website: *http://www.SouthfieldDDA.com*

SOUTHFIELD SMARTZONE

What is a SmartZone?

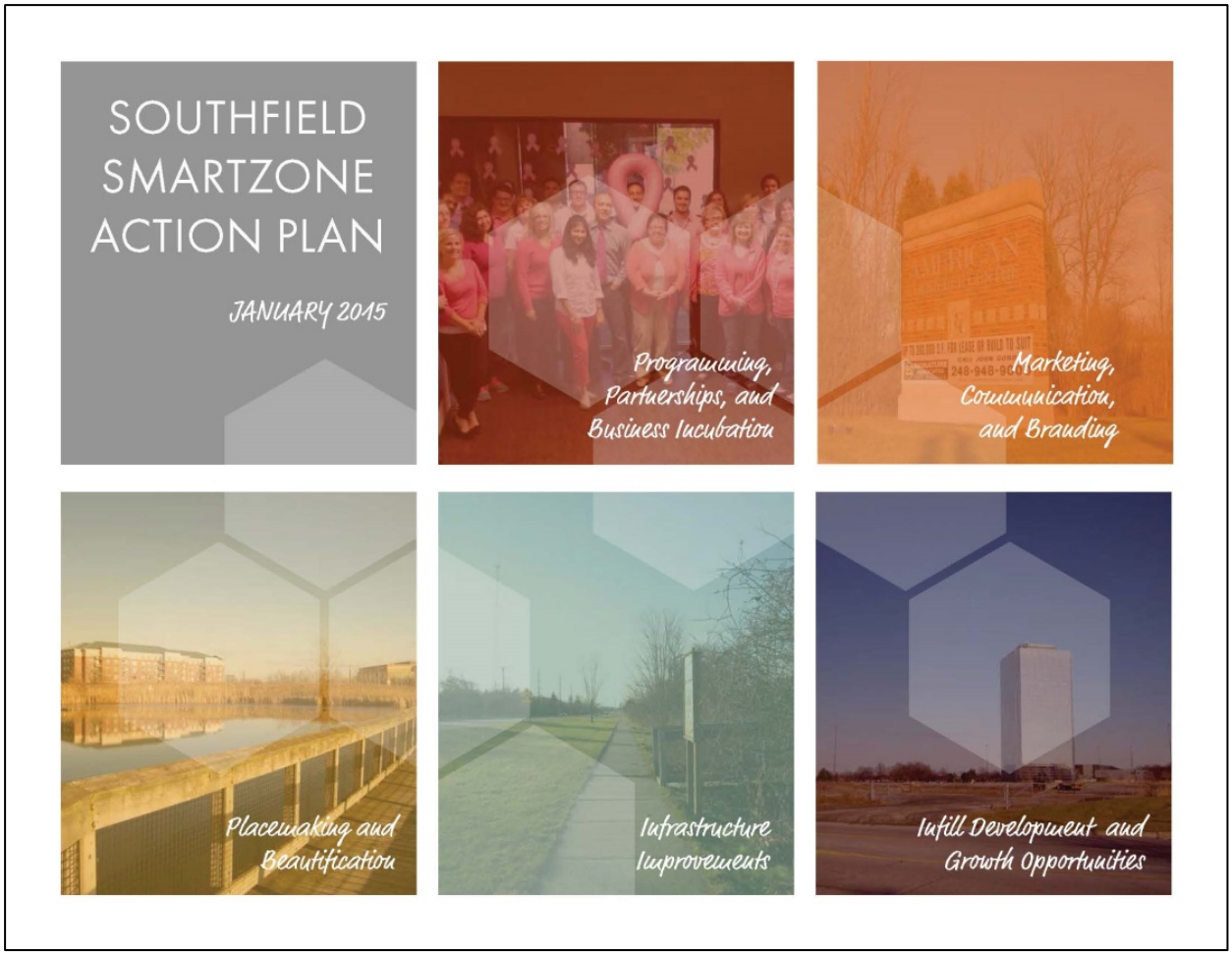


SmartZones are State designated areas target attraction of technology based businesses. SmartZones support high tech ventures such as biotech, information technology and advanced manufacturing. The Southfield SmartZone is developed as an integral component of Automation Alley by locating strategic employers, cooperative programs, and initiatives within the zone in order to design a center for jobs and wealth creation.

SmartZone Network

The Michigan SmartZone network connects universities, industry, research organizations, government, and other community institutions to stimulate the growth of technology-based businesses and jobs. In 2014, the Southfield SmartZone, along with Automation Alley regional partners, was one of three Local Development Financing Authorities (LDFAs) in the State of Michigan to receive a 15-year extension from the Michigan Economic Development Corporation (MEDC). In August 2015, the City of Southfield adopted the SmartZone sub-area Action Plan as part of their Comprehensive Master Plan.

SmartZone Action Plan



The success of the Southfield SmartZone is critical to the success of Southfield. Cities increasingly find that economic success depends on their ability to attract and retain innovative, educated workers and to promote the informal interaction and discovery that occurs. Flourishing technology districts around the country are the result of intersecting interests and investments dedicated to supporting and growing the local technology, entrepreneurial, and creative economy. To build on the home base for Southfield's technology and talent-rich area, new partnerships are needed to generate momentum and a critical mass of activity around the vision.

The SmartZone Plan provides a realistic road map of land use planning, redevelopment, infill development, and specialized areas of development focused on encouraging quality places, entrepreneurial networks, talent and creative business attraction, and positive branding narratives. These components are essential to realizing the goals of new development and local economic growth that supports the revitalization of the Southfield SmartZone.

SmartZone District

The Southfield SmartZone District is a 384 acre certified technology park located east of Telegraph Road, west of Inkster Road, and directly adjacent to I-696 in the northwest portion of the City (Sections #17 & 18) and a Business Incubator/Accelerator Program at the Business & Technology Center, Lawrence Technological University (LTU) located in the Mark Plaza, 21411 - 21415 Civic Center Dr., Southfield, MI 48076.

The Business and Technology Center is a 4,000 square foot space on the campus of LTU. The Center will be operated by LTU Economic Development to support campus and community-based business development and entrepreneurial initiatives. Oversight will be provided by a seasoned Advisory Board that includes business and economic developers, innovators, entrepreneurs, investors, and attorneys. Building on the strength of its affiliation with and resources of LTU, the focus of the Center will be to assist the creation of technology based businesses in software development, design engineering, aeronautics, and advanced manufacturing.

Governance

The Southfield SmartZone is administered under Act No. 281, Public Acts of Michigan, 1986 (Act 281), as amended, commonly known as the Local Development Financing Act (LDFA), to encourage local development, to prevent conditions of unemployment and to promote economic growth. The Act further provides that if an LDFA Board determines that it is necessary for the achievement of the purposes of Act 281, the Authority is required to prepare and submit a tax increment financing plan to the City Council. The Act further provides that a tax increment financing plan shall include a development plan.

Additional amendments to the LDFA Act provide that two or more municipalities may join with one or more other municipalities located within the same county (Oakland) to establish a joint authority. Pursuant to the provisions of the LDFA Act, on April 20, 2003, the City of Southfield and on May 12, 2003, the City of Troy, passed resolutions approving the creation of the Joint Southfield/Troy Local Development Finance Authority (JLDFA) and the extension of the Automation Alley Smart Zone designation into a portion of the City of Troy.

In 2015, the City of Southfield and the City of Troy applied for and were granted a 15-year extension for their JLDFA status.

EXISTING CONDITIONS

Demographics

Business and Employment

The SmartZone is home to more than 400 businesses and over 4,000 employees. Based on the number of businesses, the top industries include: Professional, Scientific, and Technological Services; Finance and Insurance; Administrative and Support; and Health Care. Information and Construction are also important industries in terms of SmartZone employment (see Table 8-7). Overall, there is a lack of dining establishments, retail stores, and other service uses.

Table 8-7: Industries Within the SmartZone

Top Industries by Employment	**#**	**%**
1. Professional, Scientific & Tech Services	968	23.9
2. Administrative & Support	649	16.0
3. Finance & Insurance	481	11.9
4. Information	478	11.8
5. Construction	404	10.0
Top Industries by Number of Businesses	**#**	**%**
1. Professional, Scientific & Tech Services	68	16.5
2. Other Businesses	68	16.0
3. Finance & Insurance	44	10.7
4. Administrative & Support	40	9.7
5. Health Care & Social Assistance	39	9.4

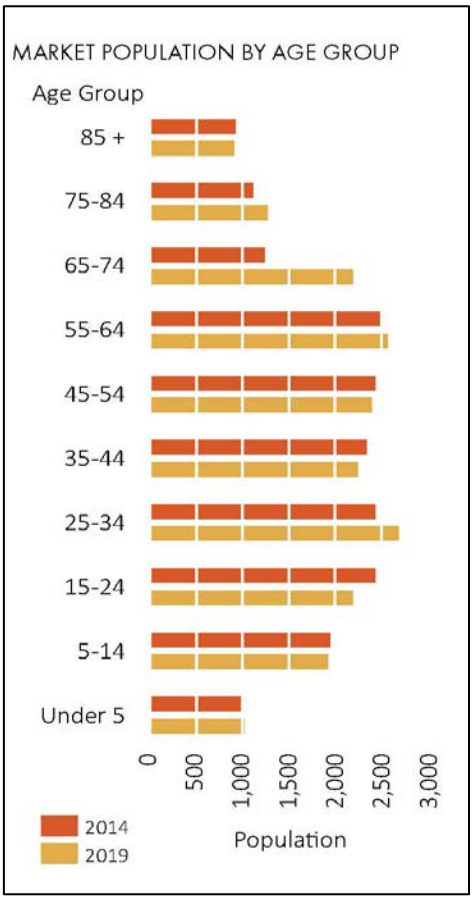
SmartZone Market Area*

A market area is a geographic zone containing the people who are likely to use recreational, service, and entertainment amenities located within the SmartZone due to proximity and convenience. The Southfield SmartZone Market Area is defined by a one (1) mile radius surround the SmartZone, and includes the Cities of Southfield, Franklin, and Farmington Hills.

By 2019, the Market Area working population (15 to 64 years) will be fairly evenly distributed across age groups. Professional, administrative, services, and management are some of the major employment tracts from Market Area residents.

Table 8-8: SmartZone Market Area Working Population

Market Population	
Total Population	18,707
Median Age	42.1
Per Capital Income	$44,029
Market Housing	
Households	9,230
Median Household Income	$44,029
Renter Occupied	53.1%
Owner Occupied	29.9%
Vacant	17.0%
Median home value	$194,006
Top Categories in Market Consumer Spending	
Retail Goods	$193,869,976
Housing	$137,775,044
Food at Home	$42,646,326
Health Care	$37,069,891
Dining Out	$26,843,047
Entertainment	$26,532,432



***** NOTES: Information based on 2014 estimates unless otherwise noted. Business and employee summaries use NAICS Codes. Demographic, housing, and consumer spending data identified as "Market" data includes population within 1 mile radius of the Southfield SmartZone. Employment data includes population 16 years and older. SOURCES: Oakland County EDCA, ESRI Business Profile and Market Summary Reports 2014 and 2019 forecasts, Census 2010 Summary file 1, Dun & Bradstreet, Inc.; City of Southfield GIS Existing Land Use 2009, 12/1/2014

Population and Housing

Table 8-9 reflects the two (2) residential developments within the SmartZone.

Table 8-9: Residential Developments in the SmartZone Area

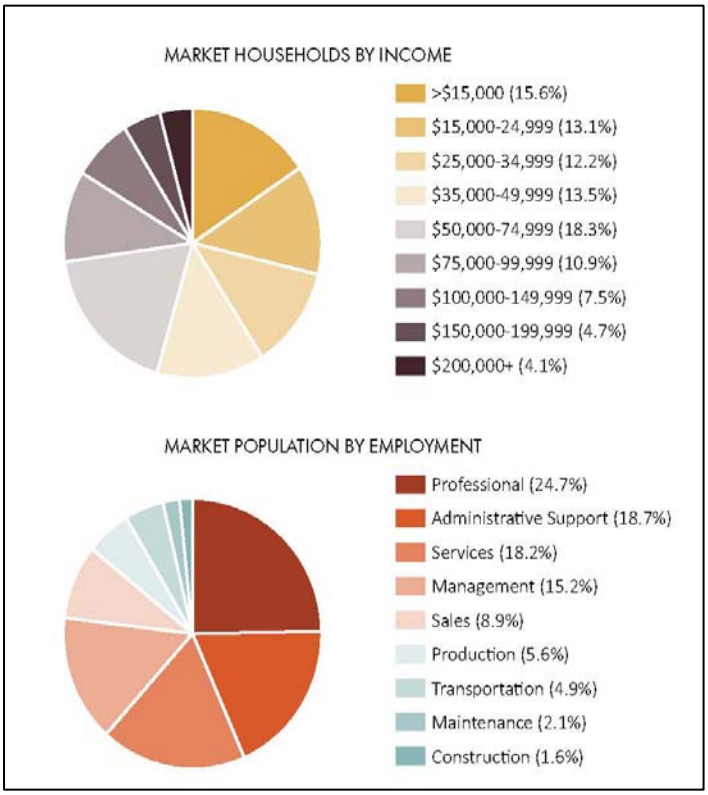
Development Name	Type	Address	# of Units	Unit Types
Carnegie Park Apts	Apartments	26602-26854 E Carnegie Park Dr.	125	1-2 Bedroom Apartments (1,003-1,241 sq ft)
Heritage of Southfield	Senior Living Apartments	25800 W Eleven Mile Rd	216	Studio, 1-2 Bedroom Apartments, Assisted & Independent Living

Based upon household size of renter-occupied units**, we estimate that the year round residential population within the SmartZone is approximately 668 persons.

** Avg. Household Size for Renter Occupied Units 1.96 (2010 US Census)

Land Use

As of 2014, the area is primarily zoned RC, Regional Center, with some B-2 Planned Business, B-3 General Business, TV-R Television-Radio Office-Studio, OS Office Service, NS Neighborhood Business, and ERO Education Research - Office. Office, Regional Commercial, and Transportation/Utilities/ Communication infrastructure are the major land uses in the SmartZone (see Table 8-10). The is also a substantial amount of Vacant land, some of which has great development potential, while other naturalized portions



contribute to the desirable, campus-like setting. There are opportunities to increase recreation, amenities, services, and potentially housing.

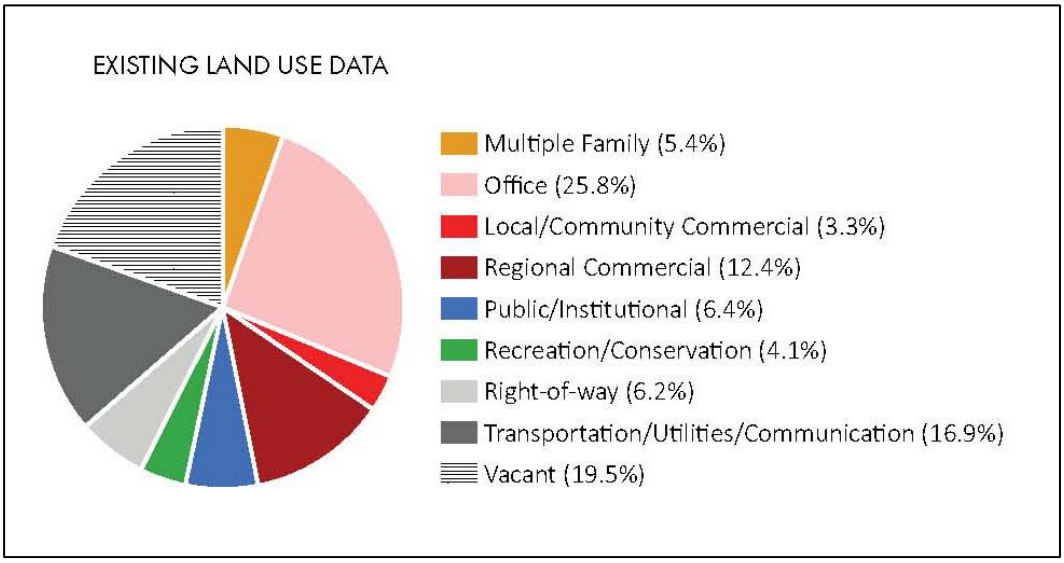


Table 8-10: Percentage of Land Uses within SmartZone

Description*	**%**
Residential:	
Multi-Family	5.4
Subtotal:	5.4
Non-Residential:	
Office	25.8
Local/Community Commercial	3.3
Regional Commercial	12.4
Public/Institutional	6.4
Recreation/Conservation	4.1
Rights-of-Way	6.2
Transportation/Utilities/Communication	16.9
Vacant	19.5
Subtotal:	94.6
Total:	**100**

***as of January 2015**

Overlay Development District (ODD)

The SmartZone District is eligible for the Overlay Development District (ODD) zoning tool, established by Council on March 18, 2013 (ORD. # 1603), to allow greater flexibility in site

design requirements as a trade-off to provide a better and more desirable living and physical environment than what would be possible under the current zoning districts.

Finance Mechanism

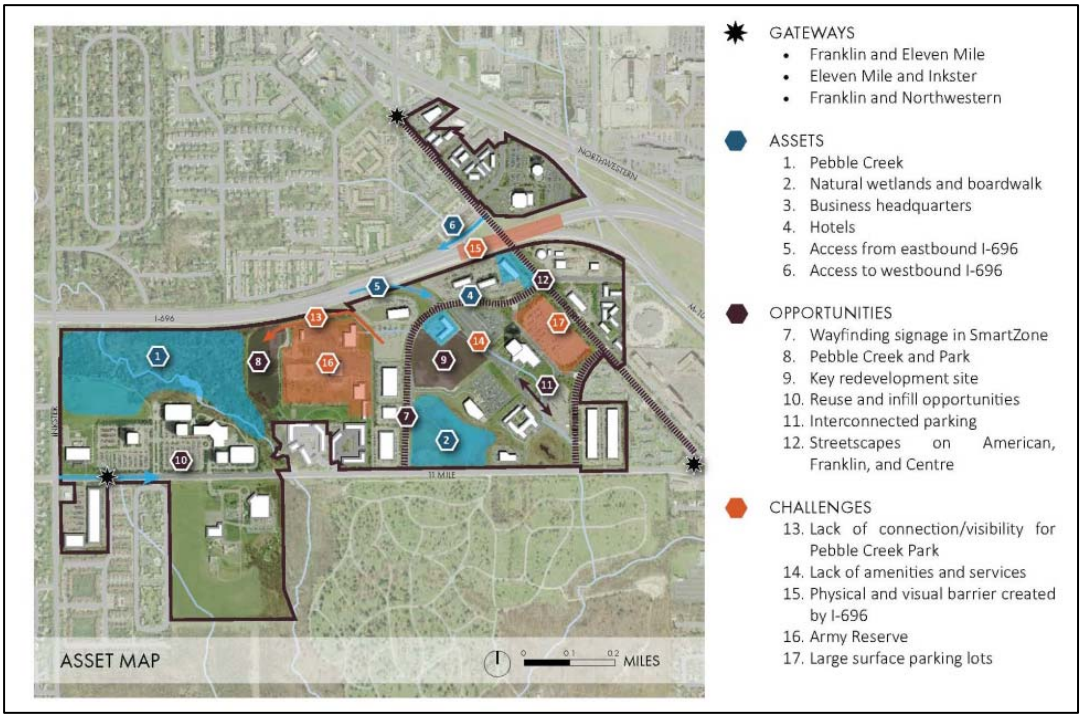
The Finance plan will provide for the capture of tax revenues from all property within the Certified Technology Park including the capture of City, County, Community College, and SMART taxes and ½ of the operating levies of State, K-12 school districts and Intermediate School Districts.

STRATEGIC PLANNING

Real Estate Forum

On December 3, 2014 a group of Southfield SmartZone stakeholders met with City staff and consultants to discuss opportunities for investment within the certified technology park. The Forum was designed to engage these local experts in real estate, redevelopment, human resources, management, business development, and finance for an interactive SWOT exercise and to provide observations on following:

- Current and future market
- Development constraints and opportunities
- Employer and employee needs and desires



Southfield SmartZone Action Plan

The Southfield SmartZone Action Plan was completed in January 2015 by Carlisle/Wortman Associates, Inc.

Mission Statement

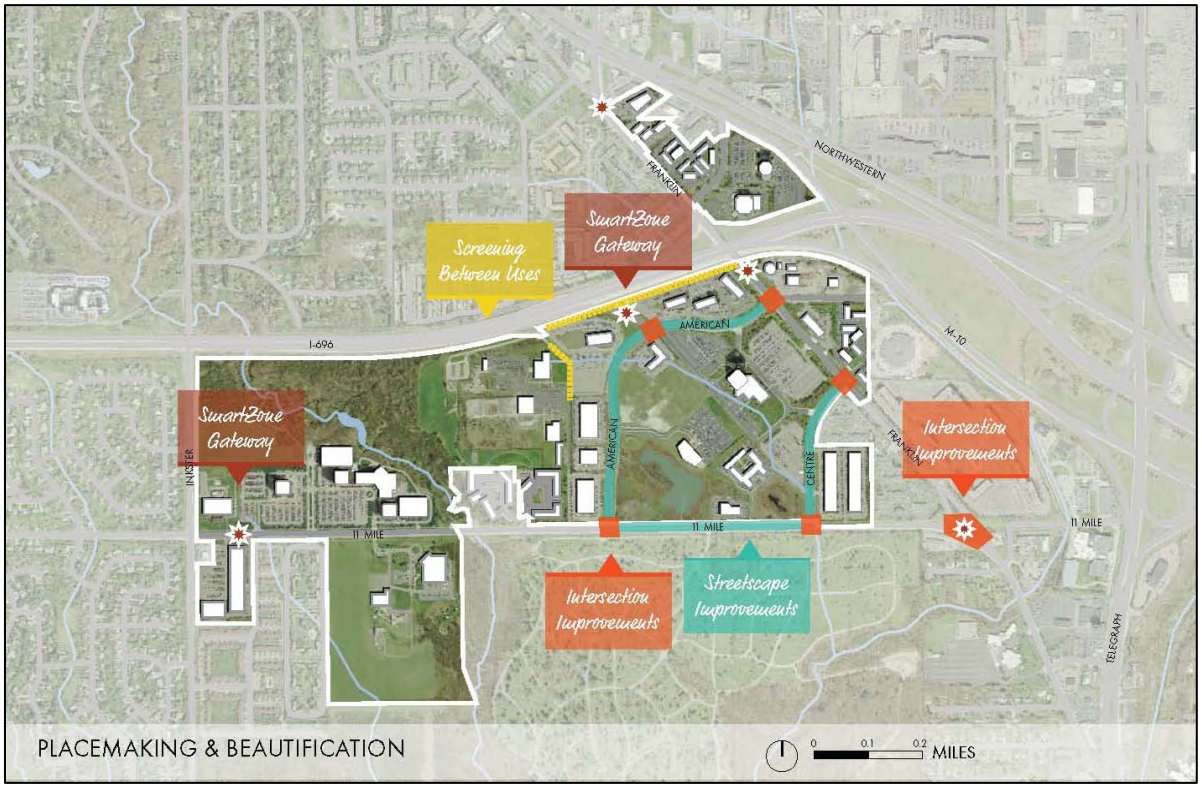
"*To establish a vibrant, technology park with flexible office space and generous amenities for employees and residents*."

Priorities

The Action Plan recommends five priorities for establishing the Southfield SmartZone as a vibrant, technology park with flexible office space and generous amenities for employees and residents:

- **Placemaking and Beautification**
  - *Strategy: Focus on public realm, gateways and streetscape*
- **Marketing and Communication**
  - *Strategy: Develop a communication branding and marketing strategy*
- **Programming, Partnerships and Business Incubation**
  - *Strategy: Promote and utilize the Lawrence Technological University (LTU) Businesses & Technology Center within the SmartZone for business incubation*.
- **Infrastructure Improvements**
  - *Strategy: Realign 11 Mile Road; increase existing sidewalks on 11 Mile Road to 10 foot wide safety path; and increase area wide storm water management system.*
- **Infill Development and Growth Opportunities**
  - *Strategy: Utilize the SmartZone Advancement to recruit retail and commercial tenants for infill; promote Pebble Creek Park and central naturalized area; implement zoning amendments as needed*

The Coffee Spot
The Coffee Spot
SmartZone Business Incubation
SZ


NORTHWESTERN
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SmartZone Gateway
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I-696
M-10
SmartZone Gateway
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Intersection Improvements
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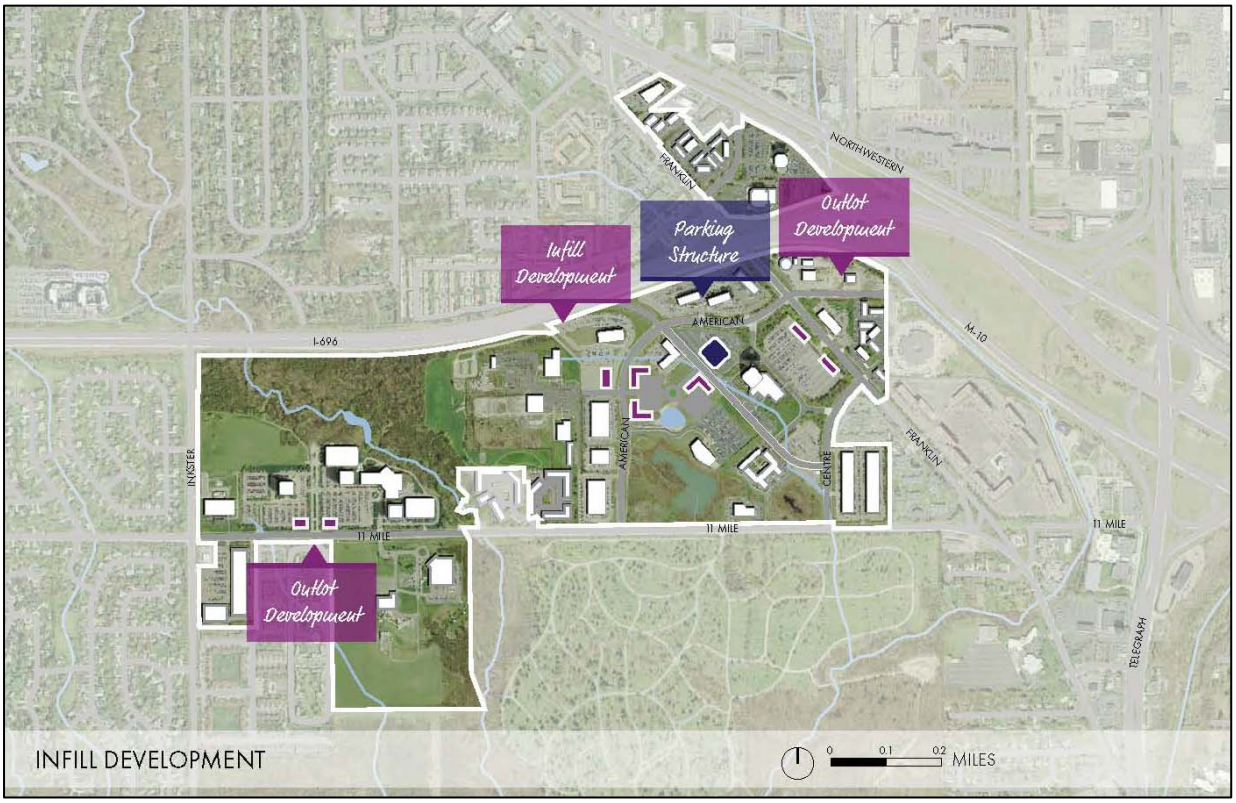


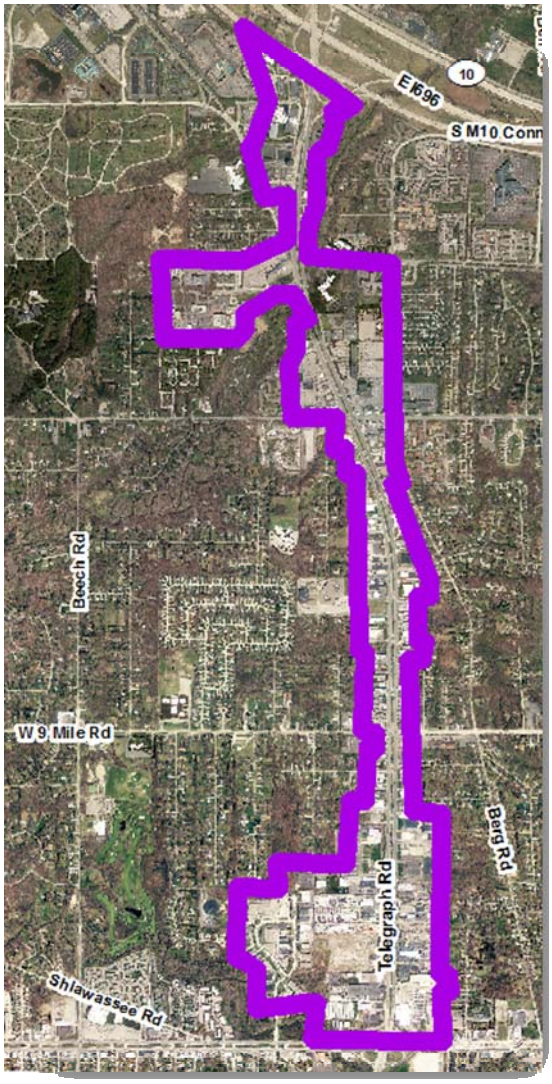
For more detail on the plan, refer to the ***Southfield SmartZone Action Plan*** (adopted August 24, 2015) via the Planning Departments home page:

https://www.cityofsouthfield.com/LZ/Planning/tabid/198/Default.aspx

SOUTHFIELD TECHNOLOGY CORRIDOR

Location: Telegraph Road frontage between 8 Mile Road and I-696, including some southern parcels near 8 Mile Road.

Regional Context: Telegraph Road (M-24) is one of the major north/south arterials within metropolitan Detroit, connecting I-94, I-696 and M-59. Spanning over 70 miles from Pontiac, Michigan to Toledo, Ohio, Telegraph Road travels through numerous, urban, suburban and rural communities and varies significantly in its from throughout its length. Within the City of Southfield itself, Telegraph Road is a six to eight lane road divided by a wide landscaped median. While much of the frontage on Telegraph is developed, potential exists for future redevelopment and intensification of uses along the corridor. As a result, this corridor was identified as a subarea to guide future investment, including office, innovative technology, research & development with supportive services in the corridor.



Objectives

- *Create a more clustered technology/research & development land use pattern in strategic locations to concentrate activity along this established corridor.*
- *Redevelop vacant and underutilized sites and buildings to uses that complement existing businesses.*
- *Use access management standards to reduce the number of access points, reduce crash potential and improve traffic flow.*
- *Work with the Michigan Department of Transportation to upgrade the aesthetic appearance and operation of Telegraph Road through median enhancements, art installations and streetscape improvements.*
- *Encourage more pedestrian activity amongst sites.*

- *Foster a healthy foundation of commerce, technology/research & development/light industrial businesses and link to higher education institutions found in Southfield (i.e. Lawrence Technological University along Civic Center Drive).*
- *Implement a Special Assessment District (SAD) to provide corridor-wide enhancements and promotion, with specific emphasis on the unique, innovative or cutting-edge users found in the area or a Corridor Improvement Authority to implement and manage private and public improvements/enhancements in the area.*
- *Utilize sustainable design practices when new, infill or redevelopment occurs.*
- *Continue to enhance the Rouge River corridor located in the north and south end of the Telegraph Road corridor with trail enhancements, way-finding signage and environmental sustainability.*

Land Use

The emphasis within this subarea is primarily Office/Research and Technology uses with secondary Regional Mixed-Use retail, services and residential that will attract residents, workers, and visitors from a large service area beyond the boundaries of the City. The intent is to create a concentrated employment center that will complement surrounding existing and planned land uses in this area of the City. The planned commercial area is intended to serve expressway travelers, workers, and neighborhoods. A diversity of commercial uses is imperative to ensure that this market area is properly served. Limits should be placed on the number of certain uses, including industrial, motels and automobile service uses, to maintain the necessary variety of businesses. The City should focus on redeveloping vacant, obsolete and underutilized parcels. Furthermore, existing "heavy" industrial land uses should be phased out in lieu of high tech and research facilities.

The former 190 room Holiday Inn hotel site, located at 26555 Telegraph Road, has been closed since 2009. The site contains 7.32 acres and three existing buildings, including the iconic round 16 story hotel and approximately 600 parking spaces. In the summer of 2015, the Southfield City Council approved a plan from Kiwi Hospitality to invest $12 million in the redevelopment of the former Holiday Inn

hotel site to include three separate hotels, banquet center and restaurant. The proposed redevelopment will take place over two phases and will include: three hotels with a total of 417 rooms comprising approximately 144,000 square feet. The hotels will feature event space of almost 12,700 square feet and 5,700 square feet of banquet rooms with four thousand square feet of restaurant space will be included in the ground floor.

RECOMMENDATIONS

Circulation

- Adopt access management policies to ensure appropriate spacing of driveways that front onto Telegraph Road. Where appropriate, shared access systems should be provided.
- Coordinate work efforts with MDOT and Road Commission for Oakland County to obtain grants for roadway-related improvements.
- Work with MDOT and Road Commission for Oakland County to coordinate and improve timing of traffic lights along Telegraph.
- Encourage roadway projects by private developers through coordination with MDOT and Road Commission for Oakland County.
- Incorporate safety/security design techniques for all public places, including pedestrian crossings, to ensure employees are provided with adequate open spaces. Eliminate barriers to pedestrians and bicyclists.
- Create a safe system of walkways linking buildings and parking areas to the public sidewalk system.

- Enhance existing pedestrian and bicycle systems along the Corridor by closing any gaps in the sidewalk system, or installing wider pathways at transit stops and where high pedestrian activity is expected.
- Coordinate with SMART to add quality bus stops and shelters along the Telegraph Road Corridor and to identify any regional connections needed to help move employees from home to work.

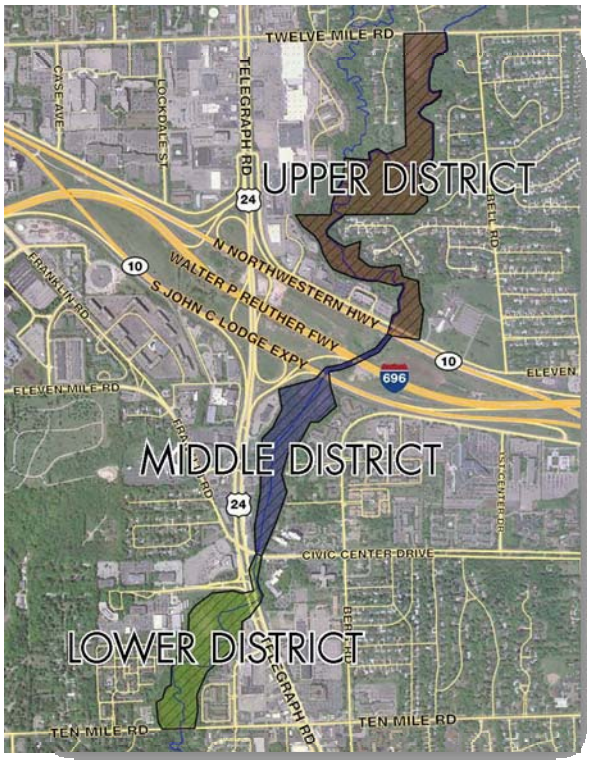
Aesthetic Enhancements

- Buildings should be oriented in a manner that enhances views of the Rouge River and other natural features such as wetlands and woodlands.
- Screen surface parking from view through the use of ornamental fencing, trees, shrubs, hedges, or combination thereof.
- Require overhead doors or loading areas to be located as to not be visible from Telegraph Road.
- Provide appropriate frontage landscaping and plantings to provide continuous visual connection along the corridor.
- Enhance the image of Telegraph Road through directional gateway enhancements, signage, City welcome signs, public art, lighting and landscaping at 8 Mile Road and north and south of I-696.
- Through consistent code enforcement efforts, encourage a high degree of continued site and landscape maintenance.
- Encourage Low Impact Design where feasible.
- Place utility lines underground or in rear yards to improve visual qualities.

Comau Robotic Arm Installed in Telegraph Rd Median 2015

Rouge River Corridor Study (RRCS)

In the Spring of 2012, the Planning Department teamed up with LTU's Master of Urban Design (m.U.D.) Program (**ARC 5912 – Principles and Practices of Urban Design [PRACTICUM])*** to prepare recommendations for improving environmental preservation, while increasing access and way-finding along the Rouge River Corridor.



The Rouge River Corridor Study (RRCS) (rev. Jan. 13, 2013) area spanned from Twelve Mile Road, just east of Telegraph Road, to Ten Mile Road, just west of Telegraph Road and includes the Valley Woods Nature Preserve. This project site is a subsection of the Rouge Green corridor that spans 12 mile sin Oakland County. The specific study area measured approximately 112 acres and 2.37 miles.

Examples of other successful river corridors and trails were studied including: the Rouge River Gateway (Dearborn), the Clinton River Trail, the Paint Creek Trail, & the West Bloomfield Tail in southeast Michigan; River Boardwalk (Portland, MI); Third Ward Riverwalk (Milwaukee, WI); Riverwalk (San Antonio, TX); and Waterplace Park (Providence, RI).

Concept Design for Rouge River Corridor Trail Enhancements

The goals and objectives of the RRCS were to research current conditions as well as establish recommendations for improvements. These recommendations were based on economic, social and environmental principals.
Recommendations from the study include:

- *Create a designated trail system throughout the entire Rouge River Corridor study area.*
- *Install a way-finding system with quarter mile markers and at trail heads.*
- *Preserve & restore the riparian ecosystem.*
- *Create a welcome center with trail head parking, bike & kayak rental and restrooms at strategic locations.*
- *Implement lighting and other pedestrian amenities at appropriate locations.*
- *Promote and market the Rouge River Corridor through special events and activities.*

** Constance C. Bodurow, AICP, Assoc. AIA, Assistant Professor & m.U.D. Coordinator*

Concept Design for Rouge River Corridor Trail Enhancements

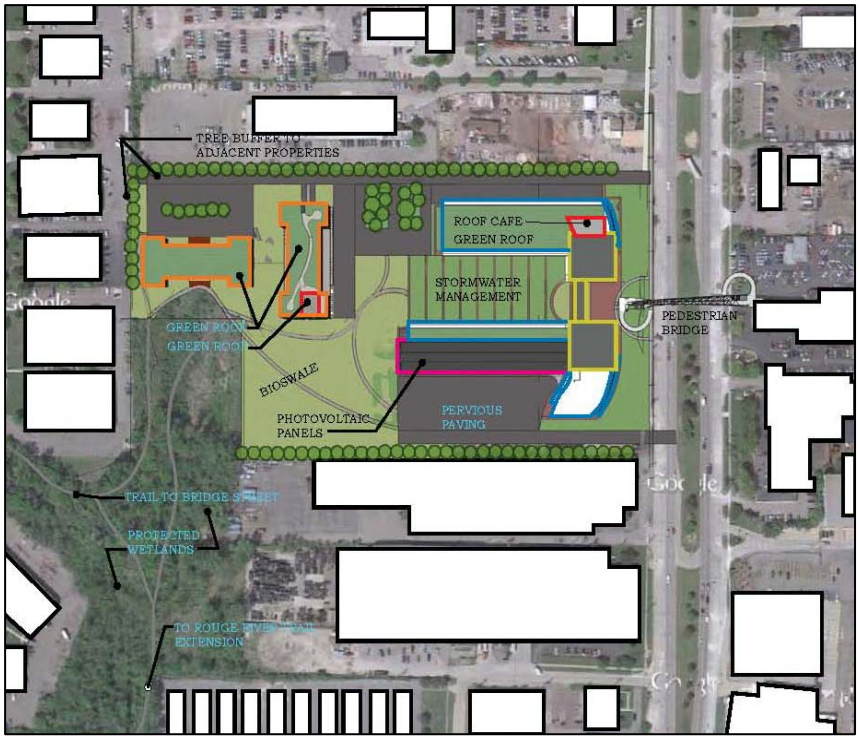
Economic Development

- Establish partnerships between the public and private sector to assess employment trends and determine educational and training needs that will help generate additional employment opportunities for the Southfield community.

- Identify and improve needed technological improvements including high-speed and wireless internet services.
- Create strategic investment opportunities that will increase tax base, and generate additional revenues to finance actions, which support the Plan's goals.
- Identify and coordinate with property owners within areas designated for potential redevelopment projects to assess their willingness to participate on those projects.

Southfield Technology Corridor (STC) Study

In the summer of 2014, the Planning Department teamed up with LTU's Master of Urban Design (m.U.D.) Program (**ARC 5912 – Principles and Practices of Urban Design [PRACTICUM])*** to prepare recommendations for a sustainable development land use framework and Urban Design Plan to support economic development for current and future diverse user groups along the STC. Specifically, the students were to prepare a schematic design for the 16 acre former mobile home park and look at concepts for gateway features.



The Southfield Technology Corridor is a 3.1 mile stretch of Telegraph Road that is home to over 10,000 technology and research related jobs in an area covering 628 acres fronting the corridor. The Southfield Technology Corridor was originally established in 2009 "to encourage efficiency of land development through densification while preserving natural features".

Technology & research corridor/parks' precedents that were studied included: Miami Valley Research Park (Dayton, OH); Cleveland Health-Tech Corridor (HTC) (Cleveland, OH); and LA Cleantech Incubator (Los Angeles, CA).

RECOMMENDATIONS

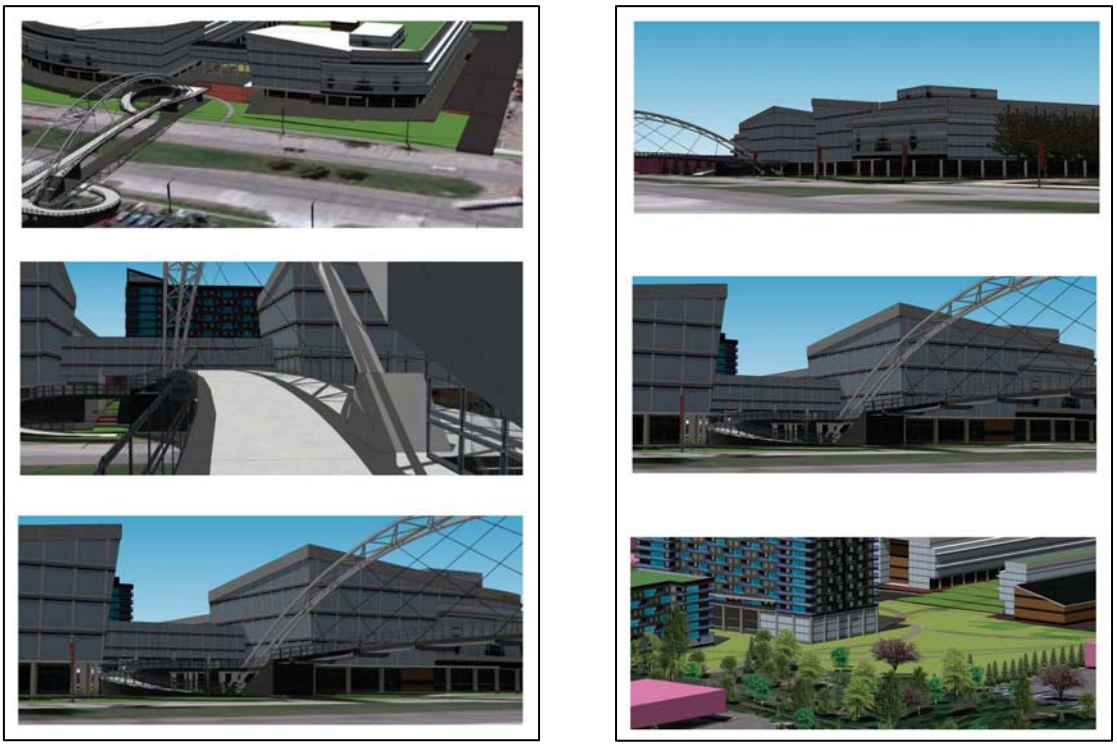
- Develop a website to promote STC
- Create continuous pedestrian/bike paths with minimal disruptions.
- Extent the Rouge River Trail.
- Create various opportunities to cross Telegraph Road.
- Add key retail and restaurant locations to minimize lunch time traffic.
- Create shared amenities to serve, improve and promote the STC.

Future development in the STC should aim to promote high tech uses that create jobs for a young, highly educated population, extend the existing non-motorized network, improve the multi-model network and apply low-impact design guidelines.

Schematic Design Plan

The schematic design plan for the 16 acre former mobile home park includes a mixed-use development with high-rise residential; research & development; technology center with exhibit, conference & banquet space; and retail. The site is planned to be developed with walking trails, storm water management features, bio-swales, green roof, photovoltaic panels, pervious paving and pedestrian bridge.

Concept Illustrations for Pedestrian Gateway Bridge & Technology Center



Constance C. Bodurow, AICP, Assoc. AIA, Associate Professor & m.U.D. Coordinator; Mohannad Mahdi, MUD candidate and Stephen Schell, Master of Architecture candidate

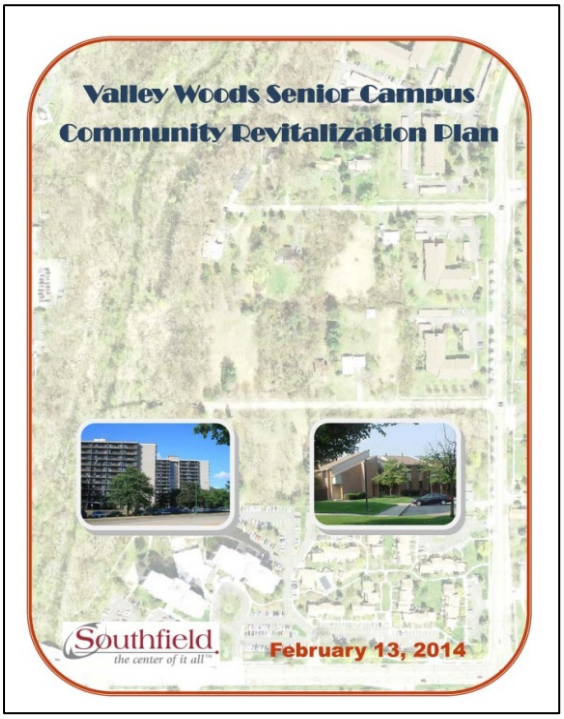
Marketing

- Promote the corridor as a regional employment center and target innovative or high-technology employers seeking a supporting environment.

Implementation

- Work with other communities, Oakland County and individuals with vested interest in the commercial success of the Telegraph Road corridor to ensure sufficient funding for marketing.
- Project the image/brand of the corridor as a safe and exciting place for business.
- Investigate the creation of a Special Assessment District (SAD), similar to the SAD in the area of north Telegraph Road and 12 Mile Road, to provide corridor-wide enhancements and promotion, with specific emphasis on the unique, innovative or cutting-edge users found in the area.
- Consider the establishment of a Corridor Improvement Authority to stimulate and support private investment to implement needed roadway, landscape and streetscape improvements

VALLEY WOODS SENIOR CAMPUS COMMUNITY REVITALIZATION PLAN



The Valley Woods Senior Campus Community Revitalization Plan (target area) is generally described as the area north of Civic Center Drive and east of Burgh Road with the addition of the Burgh Historic Park and parts of the River Rouge Corridor representing approximately 90 acres

The Valley Woods Senior Campus Community Revitalization Plan was unanimously adopted by City Council as a sub-area plan to the Comprehensive Master Plan on May 22, 2014.

PUBLIC INPUT

Public Workshop (4/16/14)

On April 16, 2014, the City of Southfield Planning Commission conducted a Long-Range Planning meeting pertaining to the Valley Woods Senior Campus Community Revitalization Plan with the primary intent of gathering input from area property owners and residents. The meeting/workshop was conducted in the McDonnell Towers Community room and garnered approximately 80 attendees.

The following comments were made by both residents of McDonnell Towers/River Park Place, nearby residents, & other Southfield seniors interested in future Valley Woods area development, the existing senior housing developments, the natural area abutting the existing development, and/or the construction of any future senior center or additional housing:

- *Would like to see additional senior housing and senior center on property to the north of McDonnell Towers and River Park Place.*
- *Exercise and activity area wanted with indoor and outdoor pool.*
- *Outdoor picnic area with gas BBQ (not charcoal) wanted.*

- *Concern with natural area being eliminated and hopes City will look at other areas in the city for the senior center.*

- *Wants centrally located senior center not necessarily adjacent to existing senior center/McDonnell Tower; is concerned that those in adjacent housing will feel more entitled to the senior center than those who are not adjacent residents.*
- *Wants flexible space and meeting rooms within the senior center.*
- *Whirlpool or hot tub with possible partnership with hospitals for therapy use.*
- *Wants adult daycare services.*
- *Concerned with the cost of maintaining a new senior center and wants to know where the funding will come from because taxes are already high.*
- *Would like existing pool at McDonnell Towers to be manned with lifeguards.*
- *Interested in more organized activities such as sewing, arts and crafts, jewelry, ceramics classes.*
- *Would like extended hours of use of the community room and fitness room and use of the billiards tables.*
- *Convenience store prices too high and not enough products or variety of products.*
- *Provide enough drivers for transportation and possibly provide a Dial-a-Ride type service.*
- *Re-open the McDonnell Towers Community Room.*
- *Concern if the Community Room has been closed because of those wanting to use it for religious services.*
- *Kitchen cabinets and flooring need to be upgraded in apartments.*
- *Driveways and potholes need to be repaired.*
- *Russian translator in office is needed (several people agreed).*
- *Need upgraded TV in River Park Place.*
- *Would like a movie night (movies to be shown in the community room to be viewed with other residents).*
- *Provide outside stationary workout area.*

- *Individual apartment renovations needed.*
- *Wi-fi service in the building wanted.*
- *Provide smoke-free living option.*
- *Revitalize the natural area to the north.*
- *Protect wildlife habitats.*
- *Provide bike trail.*

- *Provide more benches outside and possible congregating areas for wheelchair users outside as well.*
- *Repairs to individual units (i.e. 24400: apartment #909 air conditioner broken; 24300 gas oven broken).*
- *Post "No hunting signs" throughout Valley Woods Park.*
- *Provide computer room with classes.*
- *Provide drinking fountain outside.*

The meeting concluded with requests from the attendees to receive additional information regarding future meetings.

Public Hearing (4/23/14)

On April 23, 2014, the City of Southfield Planning Commission conducted a Public Hearing pertaining to the Valley Woods Senior Campus Community Revitalization Plan with the intent of gathering comments from area property owners and residents prior to the Commission making a recommendation to the City Council. The public had the following comments:

- *Access should be provided from Berg Road with a light.*
- *Provide adult daycare services.*
- *Plans are too big; won't be able to afford to maintain the facility.*
- *Welcome addition; COSA members want to be part of the process in determining needs of a senior center.*
- *Look at other options for location of a senior center; don't want to see the area torn up for new housing and buildings.*
- *Management can't take care of the current building, concern with how they will be able to manage a new one.*
- *Most seniors don't drive or take the bus so having a bus stop nearby doesn't matter.*
- *Management takes care of the seniors and they are pleased with them.*
- *Long range vision for seniors is good.*
- *Bus service is excellent.*

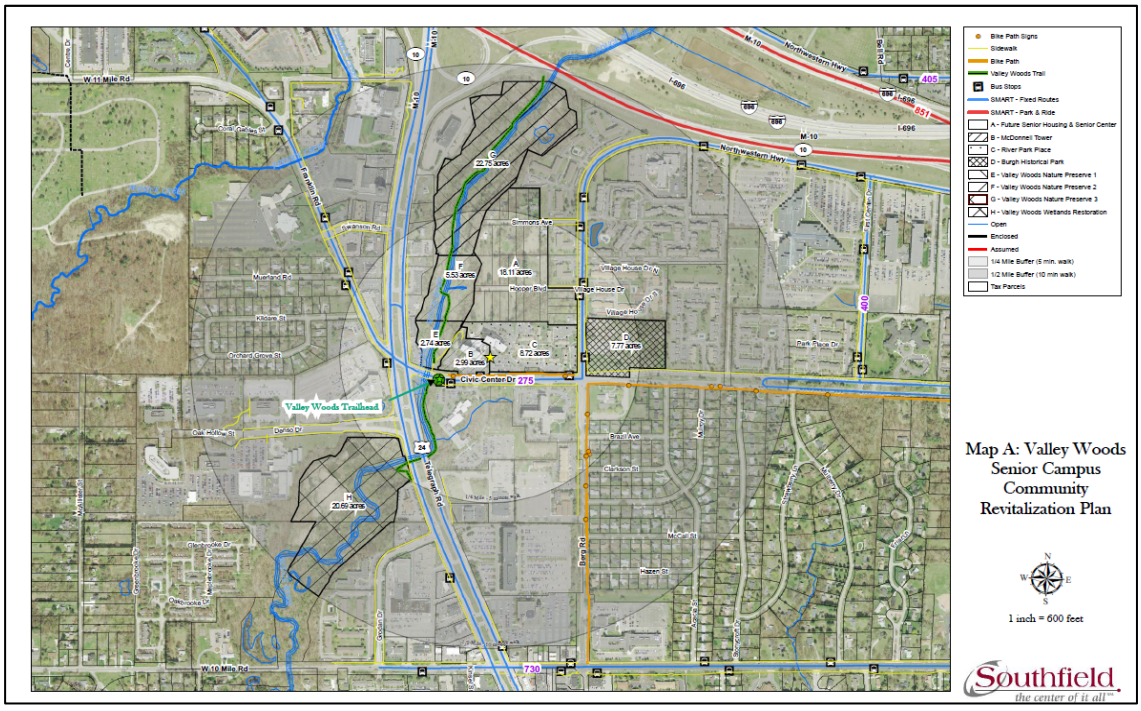
- *Beautiful wooded areas surrounding.*
- *Small gardens should be provided for senior to grow their own food.*
- *Additional landscaping should be installed to replace what has been removed to provide for more screening of Civic Center Drive and Telegraph Road.*

Description of the Significance of Proposed Project

The entire project area encompasses approximately 90 acres, including the following sub-areas:

A) Valley Woods Senior Campus (18.11 acres):

While the City has senior housing and services scattered throughout, there is a direct need for a specific neighborhood or campus for seniors of all ages and incomes to locate and "age in place". This plan provides for such a neighborhood – the Valley Woods Senior Campus.



Since 1988, the City of Southfield and the Southfield Nonprofit Housing Corporation have been buying parcels of land to the north of Civic Center Drive and west of Berg Road (immediately north of the McDonnell Tower and River Park Place Apartment complexes) for the purpose of establishing such a senior campus. The planned campus would cover a total of approximately 30 acres (exclusive of natural areas

and the Burgh), and include the existing senior developments to the south - McDonnell Tower and River Park Place - as well as planned development (see Map A).

The idea for the campus was born out of the more immediate need for a new Southfield Senior Center. The current – and only – senior center in Southfield is located within the McDonnell Tower apartment complex on Civic Center Road. The existing 10,000 square foot complex offers limited space for senior activities, and has long been criticized by seniors that they do not feel comfortable utilizing the current space since the perception is that it is private property being a part of McDonnell Tower. There have consistently been complaints of insufficient parking as well at the current site. (Note: The Senior Center was temporarily relocated to the Parks & Recreation facility, Southfield Municipal Campus, in December 2015).
The centerpiece of the campus will be the new Southfield Senior Center – a planned 30,000 square foot complex with primary access from Civic Center Drive via a boulevard running through the River Park Place apartment development. Secondary access will be via Berg Road. Residents of the campus will have access to walking paths, the Valley Woods Trail, the Burgh Historical Park as well as public transportation via the SMART bus stops (along Civic Center Drive and Berg Road) and the TOSS program.

The Valley Woods Senior Campus will offer a number of housing options including independent with no services, independent/congregate with services, assisted living, and assisted living memory care. The campus will also target a minimum of 40% of the total units to affordable housing for seniors earning less than 60% of area median income, and a minimum of 5% of the total units to barrier free to service seniors and persons with disabilities. Housing will be offered in the form of high-rise, midrise and quad senior developments in a peaceful and scenic setting immediately adjacent to the Valley Woods Nature Preserve. A small mixed use development is also planned to provide campus residents with basic services.
McDonnell Tower Apartments and River Park Place Apartments – comprising 344 units of affordable senior housing – will serve as the "anchor developments" for this campus.

B) **McDonnell Tower Apartments (5.73 acres)** is an existing 162-unit, senior

housing complex comprised of one 12-story building located on approximately 5.7 acres in the City of Southfield, and built in 1975. There are 154 one-bedroom units and eight two-bedroom units.

C) **River Park Place Apartments (8.72 acres)** is an existing 245-unit, combined senior and family housing complex comprised of one 12-story senior building and eight family townhouse buildings located on approximately 8.7 acres in the City of Southfield. River Park Place was built in 1978.

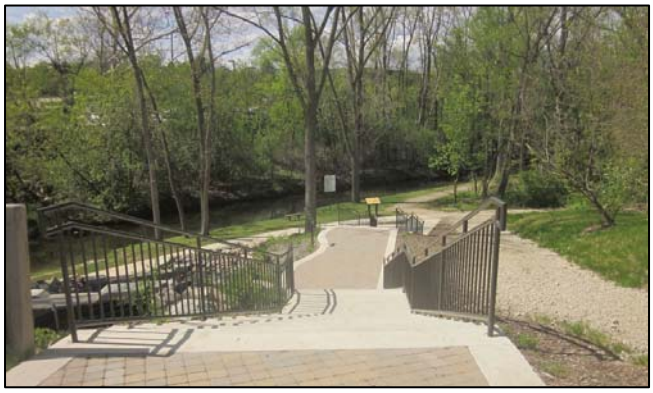
The senior building is comprised of 182 units including 170 one-bedroom units and 12 two two-bedroom units. The family townhouse buildings are comprised of 62 total units including 22 one-bedroom units, 32 two-bedroom units and 8 three-bedroom units.

D) Burgh Historical Park (7.75 acres):

The Burgh Historical Park is the original center of Southfield's Village Center and features a restored historical town hall, fire hall, 1854 Methodist Church, and other historic homes of Southfield, some of which have been relocated to the site. "The Burgh" remains popular for weddings, concerts, and special events. In the past 5 years many of the historical buildings, such as the Simmons House, have received needed maintenance and restoration. The Parks House remains empty and is in need of full restoration and re-purposing. Extensive wedding bookings on the site indicate that restoring the house for use to support weddings and corporate events could be supported. The site also is in need of outdoor covered pavilion for picnics and receptions. Finally, only about a third of the site is currently developed. The

master plan for the property extends the gardens, walks and site furnishings eastward, expanded parking and waste enclosure. This would increase the use of the site as a community destination and capacity for larger events.

E) Valley Woods Nature Preserve F & G (28.28 acres) & Valley Woods Trail:



Valley Woods Nature Preserve is one of Southfield's most significant properties, a 126-acre linear green way spanning two miles of the main branch of the Rouge River (one of Southfield's only water features). The preserve is located adjacent to the subject property along the length of its western boundary. A linear park, the first phase of trail development along the Rouge River was completed in 1995. Plans call for the extension of the trail system along the banks of the Rouge River from Ten mile to Twelve Mile. This would provide a unique setting for recreation and enjoyment of one of Southfield's only water courses. Trail improvements and an interpretive signage program would increase visitation to the park. A proposed canoe drop at Twelve Mile with pick-ups at Civic Center, Ten Mile and again at Eight Mile Roads would provide unique recreational opportunity in the City on a seasonal basis when water levels are high. Channel improvements for canoe and kayak navigation should be investigated along with improvements for fish habitat to improve water quality and fishing opportunities for Southfield residents. In 2011, a new trail head was installed on the north side of Civic Center Drive, east of Telegraph Road, which will improve pedestrian access to the corridor and remove an open storm water outfall into the river.

Acquisition of privately owned parcels within the floodplain and valley walls would help to preserve the river corridor, protecting natural resources and water quality. Future acquisition of flood plain and valley walls along the river corridor, including south of Ten Mile Road, would extend the corridor to protect and enhance critical natural resources. Other river corridor improvement projects, as identified in the Rouge Green Corridor Management Plan, for control of erosion and invasive species should be implemented when funds are available.

Summary of how the project contributes to and fits within the overall goals and strategies for redevelopment

The scope of the project includes an integrated senior community, which promotes healthy living in a "livable community". A livable community is a place where all residents can live and participate in their community, no matter what their age, health, or physical ability (Source: AARP, formerly the American Association of Retired Persons). According to AARP, for Americans 50+, a livable community has:

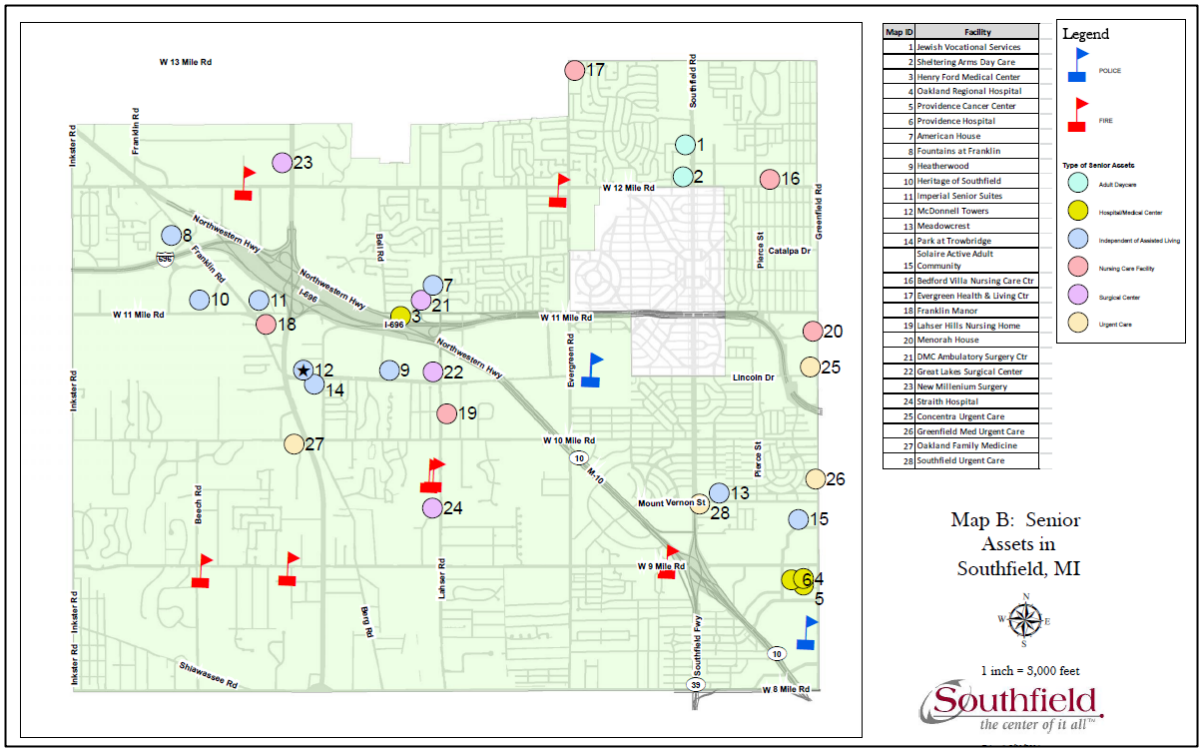
- Affordable and appropriate housing,
- A variety of transportation and mobility options, and
- Supportive community features and services.

Together, they make personal independence and continued participation in the community's civic and social life possible (See Maps B & C).

Description of Investments:

The City of Southfield's proposed timeline is to implement the following plan elements within the next ten years:

A) Future Senior Housing and Senior Center (18.11 Acres):
    - This will be undertaken via proposed public/private joint venture(s) for the senior housing, and via City and/or Southfield nonprofit corp. funding of the senior center.
    - Acquisition Strategy (See Map E): Since 1988, the City of Southfield and the Southfield non-profit Housing Corporation have acquired 20 separate parcels at an investment of approximately $2.1 million to date. There are an additional nine parcels under private ownership in the project sub-area, which the City/Non-Profit will continue to assemble as they become available on the market (2013 total cash value $525,000).
    - See Concepts A & B for long term planning discussions

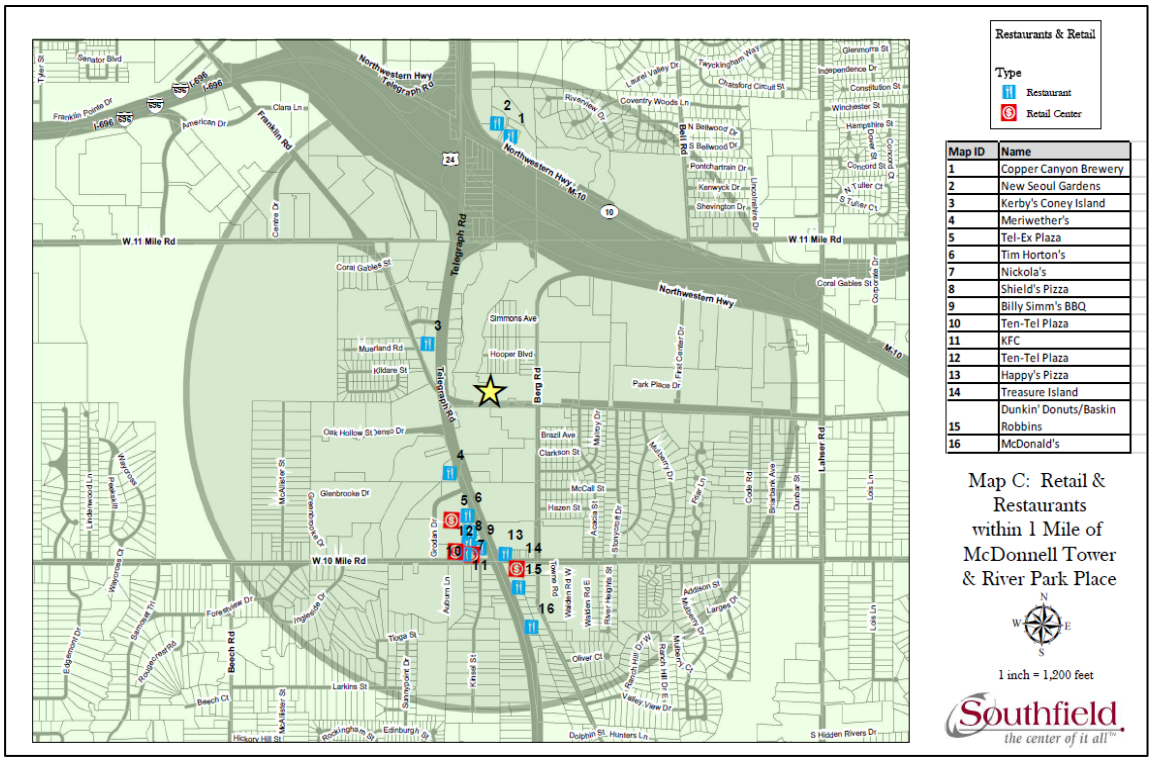


Map ID	Facility
1	Jewish Vocational Services
2	Sheltering Arms Day Care
3	Henry Ford Medical Center
4	Oakland Regional Hospital
5	Providence Cancer Center
6	Providence Hospital
7	American House
8	Fountains at Franklin
9	Heatherwood
10	Heritage of Southfield
11	Imperial Senior Suites
12	McDonnell Towers
13	Meadowcrest
14	Park at Trowbridge
15	Solaire Active Adult Community
16	Bedford Villa Nursing Care Ctr
17	Evergreen Health & Living Ctr
18	Franklin Manor
19	Lahser Hills Nursing Home
20	Menorah House
21	DMC Ambulatory Surgery Ctr
22	Great Lakes Surgical Center
23	New Millenium Surgery
24	Straith Hospital
25	Concentra Urgent Care
26	Greenfield Med Urgent Care
27	Oakland Family Medicine
28	Southfield Urgent Care

Map B: Senior Assets in Southfield, MI

1 inch = 3,000 feet

Southfield
the center of it all™

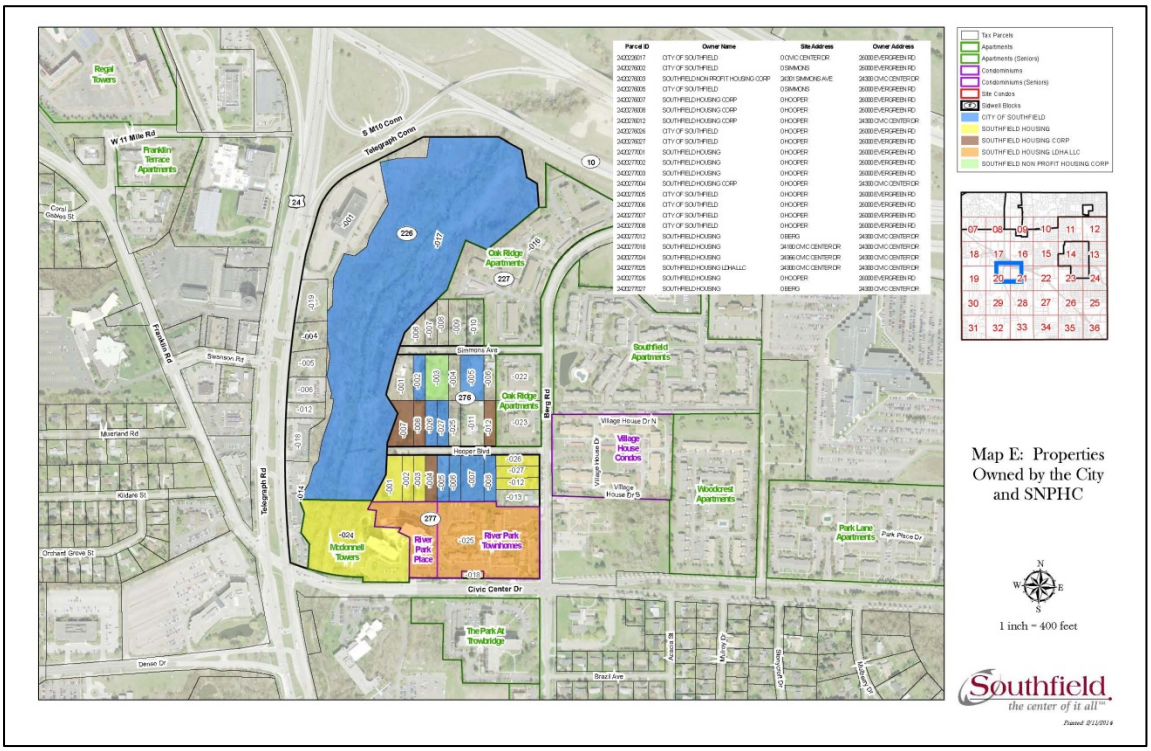


Map ID	Name
1	Copper Canyon Brewery
2	New Seoul Gardens
3	Kerby's Coney Island
4	Meriwether's
5	Tel-Ex Plaza
6	Tim Horton's
7	Nickola's
8	Shield's Pizza
9	Billy Simm's BBQ
10	Ten-Tel Plaza
11	KFC
12	Ten-Tel Plaza
13	Happy's Pizza
14	Treasure Island
15	Dunkin' Donuts/Baskin Robbins
16	McDonald's

Map C: Retail & Restaurants within 1 Mile of McDonnell Tower & River Park Place

1 inch = 1,200 feet

Southfield
the center of it all™



B) McDonnell Tower (5.73 acres) proposed joint venture with private developer.
   - Rehab of all 162 units estimated at $20,000/unit-totaling $3 million.

C) River Park Place (8.72 acres) proposed joint venture with private developer.
   a. Rehab of all 245 units estimated at $20,000/unit-totaling $5 million.

D) Burgh Historical Park (7.77): Proposed public investment with grant funding.
   a. Cost Estimate: $800,000-900,000 (as of 4/2014)
   b. Town Hall & Art Center Restoration
   c. Parking Lot Expansion
   d. Picnic Pavilion
   e. Site improvements around the Parks House
   f. Renovation of the Parks House
   g. Site signage program
   h. Enclose dumpster
   i. Education and interpretive programs & signage
   j. Development of the east side of site
   k. Carousel and related site work
   l. Flower gardens and Arbor

m. Secondary parking lot
n. Outdoor dining terrace

E) Valley Woods Nature Preserve F & G: Proposed public investment with grant funding.
   a. Cost Estimate: $850,000 (Acres 28.28)
   b. Interpretive Signage program
   c. Invasive species control program
   d. Water quality/fish habitat improvement projects
   e. Parking facilities at 12 Mile Road
   f. Stream bank erosion control projects
      - Kayak drop-off/pick-up
      g. Trail development between Ten and Twelve Mile

F) Pedestrian Improvements
   a. Crosswalks: install decorative crosswalks at the intersection of Berg Road and Civic Center Drive
   b. Respite stations: provide seating areas at strategic locations (Approx. $5,000 each)
   c. Pathways: infill gaps in system and make ADA accessible

G) Transit Improvements
   a. Bus Stop Facilities: provide bus shelters, benches, trash receptacles, etc. at strategic locations (Typical $10,000-15,000 each)

H) Art & Sculpture
   a. Install freestanding art & sculpture pieces throughout project area (Foundations & Private Funding)

Concept Plans

Concept A: Includes 154 housing units of 4-plex independent senior living in one level flats (840 sq. ft. each): 77 housing units of 2-level townhomes (1,680 sq. ft. each); a freestanding 30,000 sq. ft. senior center (see Appendix); additional shared parking (290 spaces); open space and trail network linking to the Burgh and the Valley Woods greenway. Opportunities exist for art, sculpture and pedestrian respite stations. (Preliminary Estimated cost $40-42M)

Concept B: Includes 66 independent senior housing units of 4-plex living in one level flats (840 sq. ft. each): 33 housing units of 2-level townhomes (1,680 sq. ft. each); 140 unit mid-rise six-story residential building; 185 unit twelve-story high-rise residential building; an 8,000 sq. ft. mixed-use retail building; a freestanding 30,000 sq. ft. senior center (see Appendix); additional shared parking (290 spaces); a future deck parking structure for 100 cars per level; open space and trail network linking to the Burgh and the Valley Woods greenway. Opportunities exist for art, sculpture and pedestrian respite stations. Concept B includes a significant storm-water feature by day-lighting the Hooper Drain and creating a cascading storm-water ponds with pedestrian bridge crossings, and potential kayak pond with livery. (Preliminary Estimated cost $96-100M)

Future Senior Center: A freestanding, 30,000 senior center may include the following facilities and amenities: kitchen & dining; indoor/outdoor pool; shared parking; fitness & activity rooms; flexible space & meeting rooms; whirlpool or hot tub for therapy use; adult daycare services; community room; restrooms; craft rooms (sewing, arts & crafts, jewelry, ceramics, etc.); media room (Wi-Fi, computer, TV, movies, music, etc.); outside fitness stations; library; class rooms; picnic & seating areas; gazebo; trail connection; & senior community gardens.

- Install Community Garden for seniors
- Install additional landscape screening around existing towers
- Provide additional outdoor: seating, picnic areas, workout stations, drinking fountains, and more accessible areas

Development Summary

- 154- 4-Plex Independent Senior Housing Units. 1 level flats @ 840 SF
- 77- 4-Plex Independent Senior Housing Units. 2 level townhomes @1680 SF
- 30,000 SF Senior Center

Concept A

Valley Woods Community Revitalization
Southfield, Michigan

Illustrative, for discussion purposes only

Draft 5/5/14

Development Summary

- 66- 4-Plex Independent Senior Housing Units. 1 level flats @ 840 SF
- 33- 4-Plex Independent Senior Housing Units. 2 level townhomes @1680 SF
- 140- Mid- Rise Residential Units, 6 levels, 240,000 SF
- 185- High Rise Residential Units, 12 levels, 144,000 SF
- 30,000 SF Senior Center
- 8,000 SF- Mixed Use Shops / Cafe / Restaurant

Concept B

Valley Woods Community Revitalization
Southfield, Michigan

Illustrative, for discussion purposes only

Draft 5/5/14

- Install Community Garden for seniors
- Install additional landscape screening around existing towers
- Provide additional outdoor: seating, picnic areas, workout stations, drinking fountains, and more accessible areas

CHAPTER 9: PUBLIC INFRASTRUCTURE

Public Works Group

The Public Works Group is comprised of six divisions (Engineering, Streets and Highways, Water and Sewer, Transportation/Communications, Motor Pool and Facilities Maintenance) dedicated to the development, maintenance and operation of the complex infrastructure and support services required for the community and the City facilities. The goal of the group is to develop and implement both short term and long term plans to maintain, complete and improve the City's infrastructure while developing and implementing recent advances in technology, such as Geographic Information System (GIS), which assists all planning, engineering, and maintenance operations.

The Public Works Group is responsible for the maintenance of City owned properties, equipment and vehicles. It is also responsible for the operation of the physical infrastructure of the City that directly serves the community. These include water mains, sanitary and storm sewers, roads and bridges, sidewalks and bike paths, traffic control systems and street lights.

Water, Sanitary and Storm Sewer Systems

The Water and Sewer Department is responsible for the delivery of a safe, dependable public supply of drinking (or potable) water to all properties in the City as well as ensuring sufficient water supply to hydrants for firefighting. The operation and maintenance of an adequate sewer system, which serves our properties and protects the environment, is also the responsibility of the Department.
The 439-mile water system with about 22,000 customers will consume an estimated 460,416,000 cubic feet of water in 2015-2016.

Two major sewage disposal districts provide for the sanitary waste removal needs of the community via 249 miles of sewers, 5,442 manholes and 11 sanitary pump stations. The Evergreen/Farmington Sewage Disposal District provides sanitary sewer service for 80% of the City. In addition, the George W. Kuhn District services the remainder of the community with combination storm and sanitary sewers. The past expansion of the Evergreen/Farmington

System has made sanitary sewer available for the western portion of the City, as well as providing relief to the system.

Storm Drains and Flood Plains

The Water and Sewer Department provides maintenance for over 291 miles of enclosed storm drains contributing flow to the waterway system of the City and participates in the annual Rouge River Cleanup.

Storm Drains

Storm drains prevent flooding of streets, highways, residential and commercial properties by quickly and efficiently transferring rain water into local creeks and rivers.
Importance of managing storm water correctly: Traditional stormwater management has focused on removing quantities of water from our streets and neighborhoods, with the primary goal being to prevent flooding. Again, this water previously went untreated and was discharged directly into area waterways. Today we try and treat storm water in a holistic manner treating both quantity and quality of runoff before it reaches our local rivers and streams.

Stormwater is water resulting from rain or snowmelt that runs off surfaces such as rooftops, streets, and parking lots. The water may pick up and transport contaminants including motor oils, gasoline, antifreeze, dust, fertilizers and pesticides. The water eventually flows into our local streams, rivers or lakes, or into the City's storm drain until it is released untreated into a local water body.

CITY OF SOUTHFIELD 2012

LOW IMPACT DEVELOPMENT (LID) GUIDELINES

The City of Southfield has always been a progressive, ecologically-friendly city that strives to protect the environment with its policies and programs.
Green cities experience a higher quality of life through clean air and water, beautiful parks and green spaces, clean and efficient energy use, local and organic food and green jobs. The City of Southfield hopes to promote building policies designed to improve the health of both the residents and the environment to ensure long term economic vitality. In keeping with this philosophy, the City has developed the following Low Impact Development (LID) Guidelines to encourage environmental stewardship.

GOALS OF LID
- Protect Water Quality
- Reduce Runoff
- Reduce Impervious Surfaces
- Encourage Open Spaces
- Protect Significant Vegetation
- Reduce Land Disturbance
- Decrease Infrastructure Costs

INSIDE THIS BROCHURE:

LID Benefits	1
Bioretention	2
Rain Gardens	2
Vegetated Swales	2
Native Plants	2
Vegetated Roofs	2
Stormwater	3
Pervious Pavement	3
Natural Features	3
Green Links	4

LID BENEFITS

LID uses a basic principle modeled after nature to:
- Manage rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source;
- Provide storm water benefits, such as groundwater recharge and cleaner streams;
- Increase the urban forest and reduce the urban heat islands;
- Improve air quality;
- Reduce thermal stream pollution; and
- Enhance communities by making water resources a focal point that residents value.

LID SITE PLANNING & DESIGN CONCEPTS

LID site planning & design concepts:
- Preserve open space & minimize land disturbance;
- Protect & incorporate natural systems (wetlands, streams, wildlife corridors, mature forests) as design elements;
- Utilize neo-traditional street & lot layouts and design; and,
- Decentralize & micro-manage storm water at its source using LID Storm Water Management Practices.

Source: Builders Guide to Low Impact Development

LID AND URBAN FOREST RESEARCH

Protection of trees and woodlands are important because:
- Trees work in combination with other storm water controls to produce a comprehensive solution to rainfall interception, runoff and landscape water use;
- Trees store more water during a one inch rainfall event that lasts two days versus one that lasts only two hours; and
- A healthy urban forest can reduce the amount of runoff and pollutant loading by receiving waters in four primary ways: 1) Evapotranspiration, drawing moisture from the soil; 2) Interception, through leaves, branch surfaces, and trunk bark; 3) root growth, increasing capacity and soil infiltration; and 4) tree canopy, reducing the impact of raindrops on barren surfaces.

Source: Center for Urban Forest Research

City of Southfield • Planning Dept. • 26000 Evergreen Road • Southfield, MI 48076 • (248) 796-4150
www.cityofsouthfield.com

Low Impact Development (LID) Guidelines

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- Enhance communities by making water resources a focal point that residents value.

LID Site Planning & Design Concepts

LID site planning & design concepts:

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- Protect & incorporate natural systems (wetlands, streams, wildlife corridors, mature forests) as design elements;
- Utilize neo-traditional street & lot layouts and design; and,
- Decentralize & micro-manage storm water at its source using LID Storm Water Management Practices.

(Source: Builders Guide to Low Impact Development)

LID and Urban Forest Research

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3) root growth, increasing capacity and soil infiltration; and 4) tree canopy, reducing the impact of raindrops on barren surfaces.
(Source: Center for Urban Forest Research)

Bioretention is the practice of using landscaped areas on parking lots and building sites to hold and infiltrate stormwater. Below are examples of Bioretention that the City of Southfield promotes:

Rain Gardens

- Planted with native vegetation, a rain garden soaks up about 30% more water than a conventional lawn.
- As part of the Evergreen Road reconstruction, the City installed a rain garden adjacent to the tennis courts to treat 32,000 cubic feet of runoff prior to the water being discharged into the Rouge River system.

Vegetated Bio-Swales

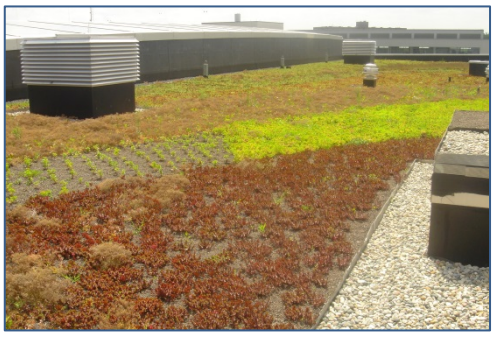
- A vegetated swale or bio-swale is an attractive landscape filter planted with native plants. Bio-swales are designed to absorb storm water run-off from impervious surfaces such as roofs and parking lots.
- Government studies have shown that up to 70% of the pollution in our streams, rivers, and lakes is carried there by untreated storm water. Keeping rain where it falls, by putting it into a beautiful swale or rain garden is a natural solution. (Source: www.raingardens.org)

Native Plants

- Native plants are plants that were historically growing in southeast Michigan. They need little or no fertilization or pesticides when grown in fertile soil with proper moisture.
- Native plants attract wildlife species such as songbirds and butterflies. They help

maintain our natural heritage and local community identity. Many help enrich the soil. Their root systems help rainfall percolate into the soil, reducing erosion and runoff.

Vegetated Roofs



- Vegetated Roofs or "Green roofs" essentially convert roofs from impervious to pervious surfaces. Green roofs provide a 50%-90% annual runoff reduction; reduce heat island affect; provide reduction of conventional storm water infrastructure and detention basins and reduce energy for heating and cooling. In addition, green roofs can improve air quality- up to 85% of dust particles can be filtered out of the air. (Source www.cdfinc.com)

Pervious Pavement

- Porous paving systems (e.g. pervious asphalt, concrete, gravel, or pavers) reduce surface run off and increase groundwater recharge. These flexible paving systems also increase infiltration and detention capacity. There may be limitations to porous pavement. Consult the City's Engineering Department for more information. (Source www.cdfinc.com)

Now, federal and state regulations require localities to better manage the quality of the stormwater that is entering our creeks, streams, rivers and bays. These regulations require much planning and educational effort to be effective, but the benefits include cleaner surface water and a healthier environment!

Floodplains

Floodplains are areas adjacent to rivers, ponds,

lakes, and oceans that are periodically flooded at different points in time. Floodplains are hydrologically important, environmentally sensitive, and ecologically productive areas that perform many natural functions. They contain both cultural and natural resources that are of great value to society. Flooding occurs naturally along every river. Floodplains are beneficial for wildlife by creating a variety of habitats for fish and other animals. In addition, floodplains are important because of storage and conveyance, protection of water quality, and recharge of groundwater.

Riparian Corridor

Riparian corridors are the land adjacent to rivers and lakes. Additionally, the floodplain is the area adjacent to waterways where floodwaters flow. When these areas are naturally vegetated, they function like sponges, taking up excess water and infiltrating it to the soil and groundwater. These areas provide important value to Southeast Michigan, including protecting local rivers and lakes, providing habitat corridors to animals, offering access to local waterways, and providing the potential for recreation such as walking and biking trails. (Source: SEMCOG, the Southeast Michigan Council of Governments)

The floodplain ordinance (Section 5.49 of the Zoning Ordinance) has the following purposes: to apply special regulations to land located in the City which is subject to predictable flooding and frequent intervals; to protect storage capacity, groundwater recharge, and water purification of floodplains; to maintain the proper ecological balance; to protect public health; and to reduce financial burdens. The ordinance tells where to find floodplain and drainage district boundaries, tells how to appeal to modify the floodplain, establishes the floodplain zones and states the uses permitted within a floodplain.

Table 9-1: SOCWA Meter Connections and Boundary Conditions

Meter Number	Meter Description	Condition	Current Pressure (psi)
SO-1	10 Mile & Greenfield	active/open	53
SO-2	11 Mile & Greenfield	active/open	44
SO-3	12 Mile & Greenfield	active/open	52
SO-6	Webster & Greenfield	active/open	52
SO-7	8 Mile & Telegraph	inactive/open	
SO-8	Lamb Station	active/open	54
SO-9	9 Mile & Greenfield	active/open	52
SO-10	12 Mile Station	active/open	67
SO-11	11 Mile & Franklin	active/open	82
SO-18	12 Mile & Telegraph	active/open	54
SO-19	12 Mile, west of Lahser	inactive/open	
SO-20	12 Mile & Evergreen	active/open	40
SO-21	13 Mile & Southfield	active/open	46

WATER MASTER PLAN

Existing System

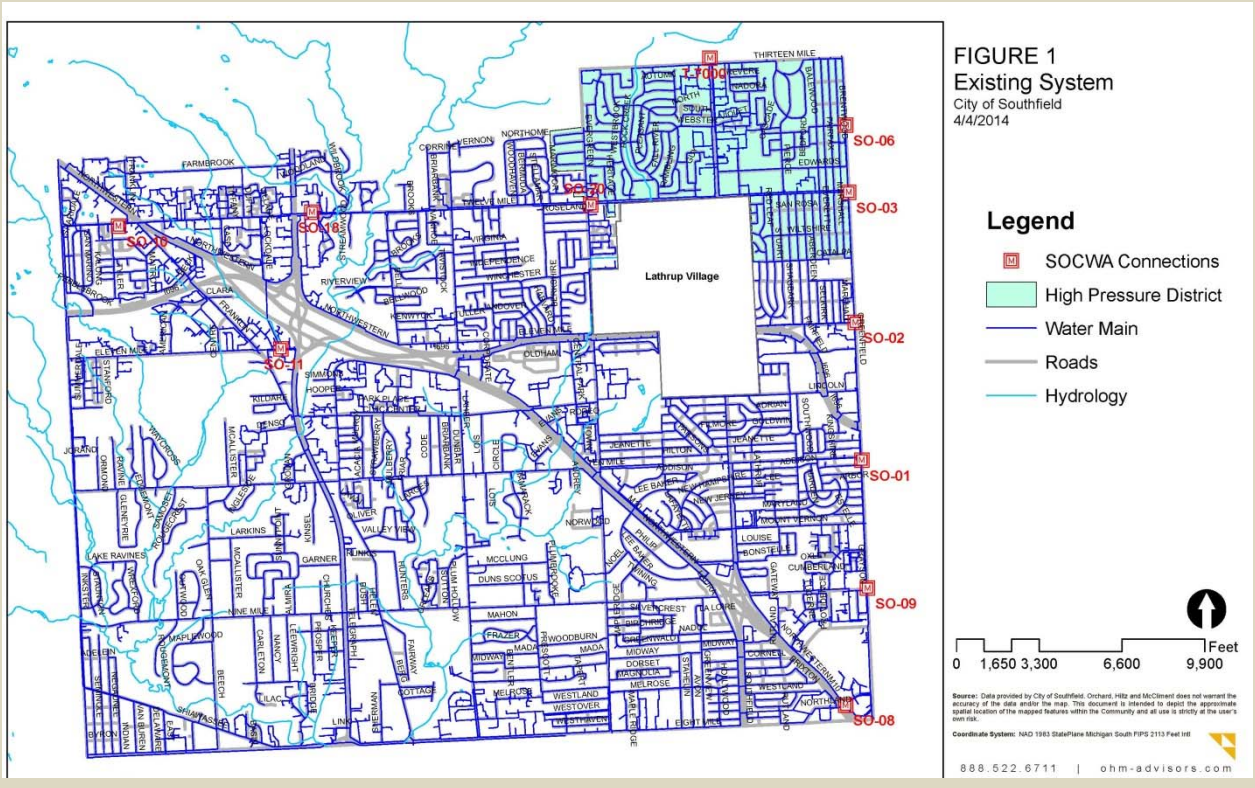
The City of Southfield existing water distribution system, as obtained by its most current GIS information, is shown in Map 9-1. The City's water needs are

satisfied by the Southeastern Oakland County Water Authority (SOCWA). The water is obtained through eleven flow meters throughout the City, see Table 9-1. Two pressure districts exist in the City. The high pressure district is located in the northeast corner of the City.

Transmission and Distribution Mains

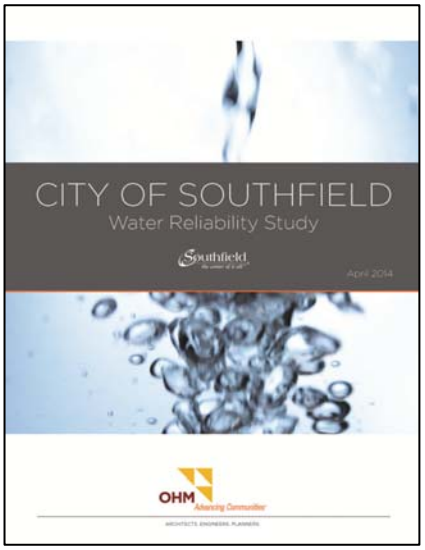
The existing distribution system is constructed of older cast iron or asbestos cement and newer ductile iron water mains. Water main sizes range from 2 to 36 inches in diameter. The transmission system that serves the City is owned and operated by SOCWA upstream of meter pits. Table x-1 lists the SOCWA meter connections and the boundary conditions used for the current analysis. For the purposes of this analysis, the infrastructure improvements planned for 2014 were included in the model.

Map 9-1: City of Southfield Existing Water Distribution System



Based upon historical records of water purchased: The current average demand in the City is approximately 9.8 MGD, which is about 26% lower than the 13.3 MGD average for 1995-2006. Using the estimated daytime population of 176,443 the demand per person per day was found to be approximately 56 gallons. The historical demand data referenced in the Master Plan showed a decreasing water use trend. The current data aligns with that trend.

In the spring of 2014, the City prepared a Water Reliability Study (April 2014) with assistance from Orchard, Hiltz & McCliment, Inc. (OHM).



The purpose of the reliability study was to evaluate the existing municipal water transmission and distribution system within the City of Southfield and to make recommendations for improvements to the system necessary to meet current and future needs of the community. In addition, the report was intended to partially satisfy the water reliability study and general plan requirements of the Michigan Department of Environmental Quality (MDEQ).

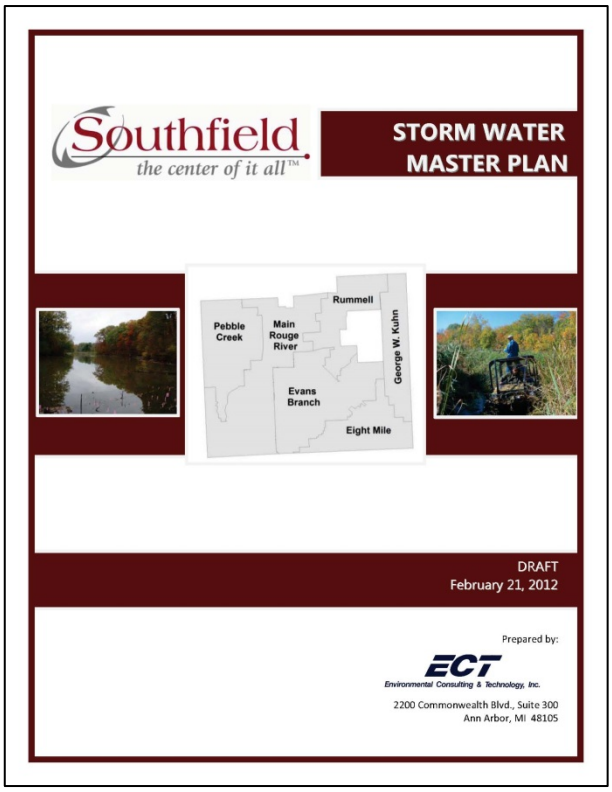
The scope of the study included the following specific tasks:

- Compilation and reporting of current population, number of service connections, and number of Equivalent Residential Units (ERUs).
- Compilation and reporting of water production and consumption data for present, 5-year, and 20-year planning periods including average and maximum daily demands, peak hour demands, and fire demands.
- Data collection and review using the current water model, system mapping, and hydrant flow tests.
- Updating the water model to include system improvements and water demand allocation to represent the existing system.
- Water model analysis for average day, maximum day, peak hour, and fire protection using present conditions and proposed conditions for 5-year and 20-year planning periods.
- Identification of recommended system improvements and provide cost opinions

ANALYSIS OF FUTURE CONDITIONS

Based on the SEMCOG projections, the City of Southfield is not expected to experience significant growth. As the system continues to age, it is recommended that the City replaces its infrastructure based on a Capital Improvement Plan. For more detailed information on the City's water system, consult the City of Southfield's Water Reliability Study, as amended.

Storm Water Master Plan



Roughly ninety percent of the land area of Southfield, approximately 15,240 acres is within the Rouge River Watershed. The central and western portions of the City drain to the Main Branch of the Rouge River, which flows through the City. The Rouge River carries storm water from communities as far north and west as West Bloomfield Township and Washtenaw County down to Detroit. The Rouge River flows into the Detroit River, which flows into Lake Erie. The remaining area of the City, approximately 1,784 acres, is located within the Clinton River Watershed. Specifically this area is located in the George W. Kuhn (GWK) Drainage District (formerly known as the Twelve Towns Drainage District). The GWK Drainage District is a combined sewerage area which eventually flows to the Clinton River. The Southfield sewers within the Rouge River floodplain are separate systems.

The Rouge River Watershed has seen substantial improvements over the past 45 years and members of the Alliance of Rouge Communities (ARC) strive for continued improvements. In the most recent update of the Rouge River Watershed Management Plan (2011), four primary pollutants were identified as currently affecting the river: pathogens, flow rate and volume, sediment and nutrients. The watershed management plan outlines six goals that address the four primary pollutants:

- *Reduce sources of pollution that threaten public health;*
- *Reduce runoff impacts through sustainable storm water management strategies and programs;*
- *Inform and educate the public to become watershed stewards;*
- *Protect, restore and/or enhance natural features to maintain/improve river and watershed ecosystems;*
- *Maximize community assets related to the watershed; and*
- *Support regional partnerships for the implementation of the watershed management plan.*

Many of these goals are relevant to storm water planning in the City of Southfield. Previous storm water design standards in the City were not so stringent with the requirements for flood control or water quality control. Prior to adoption of a 100-year design storm for detention, sites were required to detain the 10-year, 24-hour design storm event without any provisions for enhanced water quality. And prior to that, no detention was required. Therefore, many areas of the City lack storm water detention.

Today, the City's design standards for storm water management lay out the requirements for managing storm water from property during site development. A site is required to detain the runoff from a 100-year, 24-hour storm event such that the pre-developed runoff rate is not exceeded. All runoff must be accommodated and discharged in a controlled manner. Storm sewers generally must be designed to convey runoff from a 100-year, 24-hour design storm. The standards require that all upstream drainage must be accommodated onsite. Additionally, smaller storm events must be held on-site for a period of time to allow for sedimentation and reduced discharges during smaller storm events. Specifics for sites that cannot meet the detention requirements and re-development projects are considered on a case by case basis. The City prepared a Storm Water Master Plan update in 2012 with assistance from Environmental Consulting & Technology, Inc. (ECT).

The City of Southfield's Storm Water Master Plan exists to guide the management of storm water throughout the City. The first Storm Water Master Plan, developed in 1969, identified areas of the City that could be drained by a system of proposed storm drains. By the late 1990s, much of the original plan had been implemented or was no longer relevant. As storm water management priorities shifted from managing peak flows and controlling flooding, the City updated the Storm Water Master Plan in 2001 and committed to regular updates of the plan every ten years. Over the past ten years, the topic of storm water management has continued to evolve. The link between increased runoff volume (despite managing discharge rate and water quality) and degradation of downstream surface water bodies has become a key issue in managing storm water runoff. Low-impact practices (managing storm water at its source rather than on a site or regional-wide basis) have become a preferred method for managing storm water. Very similar in nature to low-impact development (LID) techniques, green infrastructure (GI) practices are gaining support from the U.S. Environmental Protection Agency (EPA) for managing wet weather. EPA defines GI as practices that infiltrate, evapotranspire, capture and reuse stormwater to maintain or restore natural hydrologies.

In development of the 2012 Storm Water Master Plan update, it is important to recognize what has been accomplished from the previous plan. The 2001 Storm Water Master Plan accomplished the following:

- *Developed updated drainage district maps.*
- *Developed a storm water model to identify flooding and conveyance problems.*
- *Developed a list of prioritized problems and recommendations.*
- *Established Engineering Standards and Policies.*
- *Identified funding sources.*

Since that time, the City and other entities (including Oakland County and MDOT) have implemented a number of the recommendations from the 2001 Storm Water Master Plan along with additional improvement projects that have helped to reduce flooding and improve storm water quality.

While identifying priorities for updating the Storm Water Master Plan in 2012, it was determined that updating the storm water model would not provide substantial new information. Rather, input from City staff could be used to more efficiently and effectively identify problem areas within the City. Additionally, it was important to create a document with components that could easily be updated as storm water management priorities and funding opportunities evolve.

The goals of the 2012 update of the Storm Water Master Plan are as follows:

- *To identify and prioritize stormwater problems and provide guidance and recommendations for how to resolve them.*
- *To encourage the use of LID and GI practices where practical.*
- *To improve overall watershed health and quality.*
- *To create a living document that can evolve as the topics of storm water management and watershed restoration and priorities of funding agencies continue to change.*

The overall purpose of the Storm Water Master Plan is to provide a long-range strategy for managing storm water runoff in the City and improving the overall health of the watershed. In support of the overall goals for the Storm Water Master Plan, specific objectives include:

- *Identify existing flooding, conveyance and erosion problems within the City and provide recommendations to resolve these problems.*
- *Protect Southfield and downstream communities from the detrimental effects of uncontrolled storm water flows.*
- *Work with upstream and downstream communities to reduce the impact of storm water runoff (pollution, volume and peak flows) within shared districts.*
- *Improve storm water quality, reduce storm water runoff volumes and reduce*

impacts of storm water flows through better storm water management policies, engineering design standards and operational practices.

- *Improve overall watershed health quality, including habitat restoration, monitoring and recreational opportunities.*
- *Prioritize projects to make efficient use of the City's financial resources.*
- *Identify mechanisms and opportunities and for funding storm water projects.*

While specific recommendations for increasing conveyance capacity of existing drains are provided, many of the recommendations focus on the need to reduce the volume of storm water runoff generated within the City as a whole. Any improvements made with the goal of restoring natural hydrology to the watershed will help to alleviate flooding, erosion and conveyance problems. Additional recommendations for inspection, maintenance and programmatic/policy improvements are also provided.

Some recent examples of improving Urban Ecosystems in Southfield include:

Carpenter Lake Restoration Project

The purpose of the Carpenter Lake Restoration Project was to restore Carpenter Lake, a five-acre impoundment in the City, located in the Rouge River watershed.

As one of Southfield's largest community parks, Carpenter Lake Nature Preserve is a critical piece of City owned open space. The project incorporated innovative storm water techniques and improved public recreation and wildlife habitat. The existing dam, which was undersized and breeched, was reconstructed to prevent failure. The lake and dam restoration vastly improved conditions by removing invasive fish and aquatic species and creating lake structural and ecological habitat to foster increase wildlife/fish populations.

Over 30,000 cubic yards of sediment was removed to reshape and provide depth to the lake. Wetland fringe areas and structural habitat were created to provide habitat for native fish and wildlife. An invasive fish removal program was conducted within the lake and upstream river portion to help establish a better native/sport fish population.

The lake's storm water controls will now also help control urban flood events, which in the past had severely damaged downstream ecology. Additionally, a new 42-acre nature preserve with a trail system and interpretive signage was developed around the restored lake.

This project was named "2009 Project of the Year Award-Environmental less than $5 million' by the American Public Works Association (APWA), Michigan Chapter.

Green Infrastructure (GI)

Many of the flooding, conveyance, erosion and water quality problems within the City of Southfield are a result of excessive runoff generated from developed spaces. Green infrastructure practices (GI) reduce the total volume of runoff through infiltration, evapotranspiration or capture and reuse. City owned property, including road Rights-Of-Way provide an opportunity to increase GI coverage and reduce storm water runoff. Examples of GI practices that could be incorporated into public Rights-Of-Way include:

- Native plantings or grow zones in lieu of maintained turf grass;
- Bio-swales in lieu of traditional ditches;
- Rain gardens;
- Street trees; and
- Porous pavements for sidewalks, shoulders and/or roads with light traffic

It is recommended that road improvement projects maximize the use of GI practices. Incorporation of these techniques could help to secure grant funding and would reduce the need to provide relief drainage in areas with restricted conveyance. Additionally, the City may look for retrofit opportunities. Conversion of maintained lawn space to a grow zone can reduce long term maintenance cost for the public Rights-Of-Way.

Grow Zones & Native Species Restoration

Installation of native plantings, often called grow zones, to replace maintained lawn space or impervious surfaces reduces the volume and peak flow rate of stormwater runoff and helps to restore natural hydrology. Native plants improve the infiltrative capacity of soil and further reduce runoff through evapotranspiration. Grow zones also improve habitat for wildlife. When installed adjacent to surface water courses, the grow zones create a riparian buffer and help to control stream bank erosion. The Rouge River Watershed Management Plan includes acreage goals for grow zone installation within each sub-watershed. In support of this goal and to improve water quality within the City of Southfield, grow zones should be installed where possible on City-owned property.

Areas previously identified by the City for restoration of native species and grow zones include: along Thirteen Mile Road, along Lahser Road, North Berberian Woods and the Preserve near Bridge Street. Opportunities for additional grow zone installation should be further explored. As noted above, the cost of long term maintenance of grow zones is lower than that of a manicured lawn.

Some recent examples of improving Storm Water in Southfield through Green Infrastructure include**:**

Valley Woods Wetland Restoration and Storm Water Improvement Project

The Valley Woods wetland is recognized for its State-significant plant community and has a floodplain plant community that is better than average undeveloped land within the State. Many pre-settlement species and plant communities are present. The wetland restoration project restored seven acres of wetland habitat.

Prior to implementation, Valley Woods wetland consisted of large areas of phragmites and reed canary grass. Additionally, three existing ditches had formed as a result of erosive storm water forces, which were affecting the wetland's hydrology, as well as discharging sediment into the Rouge River.

The phragmites and reed canary grass were chemically treated and a controlled burn was performed in the open wetland area to provide optimum conditions for the establishment and restoration of native wetland vegetation. This was the first controlled burn in Southfield! The manmade storm water ditches were filled in order to allow the wetland to function naturally. Afterwards, native plant species and wetland seeding and plugs were installed.

A second project at the 128 acre Valley Woods Nature Preserve, was to create an attractive and functional storm water structure as a component of a new park entrance to the Rouge River trail system.

The project improved storm water quality and conveyance from surface streets and provided a safe and aesthetic access point to the Valley Woods Nature Preserve. The existing open concrete channel adjacent to the Civic Center Drive overpass was inadequately sized and ran straight down the slope to a small culvert under a walkway, directly into the river. During frequent storm events the channel overflowed onto the adjacent steep slope, flooding the pedestrian walkway.

Trenches were excavated for the weir wall footings, and the new wall footings were formed and poured. Boulders and riprap were then placed at the pools. In addition, interpretative signage, a staircase and porous paver walkway and landing were installed. Finally, native plants for both the wet areas in the pools and the drier areas outside the pools were installed.

This project was named "2014 Project of the Year Award-Environmental less than $5 million' by the American Public Works Association (APWA), Michigan Chapter.

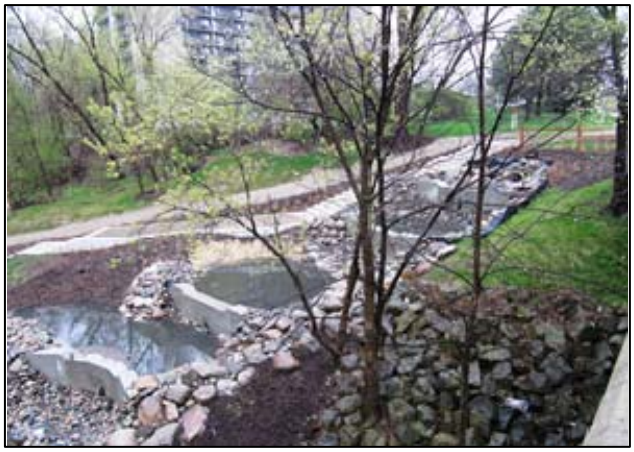
Inglenook Park Storm Water Improvement Project

The Inglenook Park storm water improvement project included the installation of pervious pavement parking lot and bio-swales. The project increased the parking capacity of the existing parking lot while providing capture and treatment of the storm water runoff generated for both the new and existing parking lots. The bio-swales capture polluted storm water runoff and treat and allow it to filter into the soil prior to discharging to the city storm drain system. This

project was named "2015 Project of the Year Award-Environmental less than $5 million" by the American Public Works Association (APWA), Michigan Chapter.

Educational Signage

City parks provide an opportunity for education and outreach to residents through passive signage. Signage and/or kiosks installed in the City Parks and Preserves can help to educate park users on habitat, the Rouge Watershed, the Rouge Green Corridor and other storm water and watershed management issues



Storm water management and watershed planning will likely continue to focus on the need to restore natural hydrology within urban watersheds for improving overall watershed health, reducing flooding and erosion and improving water quality. It is also expected that regulatory agencies will continue to increase expectations and specific requirements for communities to better manage their storm water in a way that works to restore natural hydrology and improve

the quality of surface waters. For more detailed information on storm water management, consult the City of Southfield's Storm Water Master Plan, as amended.

Roads and Bridges

> *Safe streets and neighborhoods was the most highly rated attribute when choosing a place to live. "Walkable streets", "affordable living" and "safe streets" appeared on the top ten list for all three types of cities (downtowns, suburbs, and small town/rural). (Cool Cities Initiative, MEDC, 2004)*

Mindmixer Highlight: *The number one response on Community Priorities (Week 1, Question 1) was the need for improved street construction and maintenance. Although respondents did confirm that the level of local services provided justifies the taxes paid, they also indicated that Road Maintenance was a City service that needed improvement.*

As of October 2015, the City of Southfield owned and maintained approximately 246 centerline miles (540 lane miles) of public roadway. This road network has a replacement value $540,000,000 (using average cost of $1 million per mile per lane). Current and future roads & bridges projects can be found in Table 9-2.

Managing an asset this large and complex requires a systematic approach of capital improvements and maintenance to maximize the network service life.

An organized and balanced approach to pavement maintenance is imperative to realizing the maximum service life of the road network. Often, a "worst-first" methodology is adopted, spending much of a road budget on full reconstruction of the pavements in the worst condition. However, the more balanced approach includes maintenance of pavements in "fair to good" condition. This maximizes the overall service life of the road network and protects the investment of past construction projects. A good rule of thumb is that for every dollar spent on maintenance procedures, six dollars of future reconstruction costs are saved.

Because the overall condition of the road network is dynamic, an effective maintenance program must be reviewed and revised on an annual basis. The entire road network should be surveyed annually and the maintenance program should be updated as required. A capital maintenance program that adjusts as needs are identified will be much more effective in maximizing the overall condition of the road network. (Source: *Pavement Maintenance Program*-February 2009)

$99 M Street Improvement Bond Approved in 2014

On November 4, 2014, the City of Southfield voters approved a $99 million road construction bond for up to 2.58 mills (two dollars and fifty-eight cents per $1,000 of taxable value) to be paid over eleven years. For example, a resident with a home worth $100,000 will pay around $11.35 per month, or $136.20 per year.

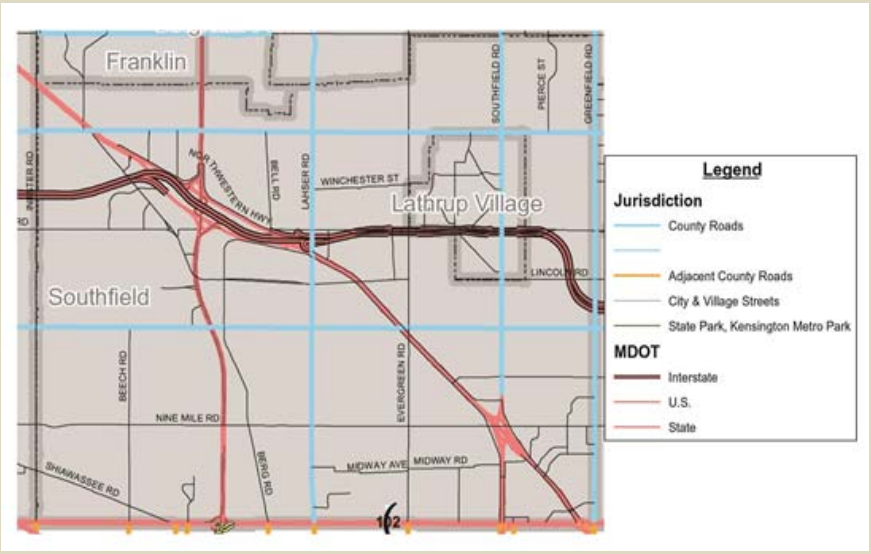
The proposal was overwhelmingly approved by 65% of the voters. The funding will be used for future road construction, maintenance or repair. At the time of the vote, 66 miles of the City's 246 miles were rated as being in poor condition requiring reconstruction. A portion of the funding will also be used to perform maintenance of roads that are not yet in poor condition. This will increase the remaining life of these roads and offset the need for more costly repairs.

Street Classification

The Michigan Department of Transportation (MDOT) classifies streets according to the National Functional Classification (NFC). Street classes are generally designated based on a number of factors such as daily and peak-hour traffic volume, capacity, location in relation to other streets, and the primary traffic served (through or local). The hierarchy recognizes that certain streets are intended to accommodate through traffic at higher speeds and volumes while others are intended to handle local traffic in smaller volumes and at lower speeds. Southfield's streets are classified by MDOT into five primary categories: Freeways, Principal Arterials, Minor Arterials, Collectors, and Local Streets. These classifications are summarized below and Map 9-2 illustrates the current street classification.

Freeways

Map 9-2: Road Jurisdictions



Source: Road Commission of Oakland County

Freeways or expressways are designed to carry very high volumes (70,000 – 183,000 vehicles average per day) of through traffic over long distances at high speeds. Freeways in Southfield include I-696, M-10 east of 12 Mile Road (Northwestern Highway & Lodge Freeway), and M-39 south of M-10 (Southfield Freeway).

Principal Arterials

Principal arterials are major through streets that carry high traffic volumes (20,000 –93,000 vehicles average per day) through the city and to major local destinations at relatively high speeds. These streets often link traffic to freeways, providing local access to the regional roadway system. Principal arterials typically have five or more lanes or a median, and because of their high traffic volumes often are fronted by commercial and office uses. The traffic movements for theses uses can conflict with the primary purpose of a principal arterial to move through traffic. The principal arterials in Southfield are:

- Telegraph Road (US-24)
- 8 Mile Road
- 12 Mile Road
- Greenfield Road
- Southfield Road (north of M-10)
- Northwestern Highway (M-10, west of Telegraph Road)

Minor Arterials

Compared to the streets classified above or below, minor arterials serve moderate traffic volumes (10,000 – 40,000 vehicles average per day) over moderate lengths and are designed to

accommodate slower speeds than major arterials but higher than local streets. Minor arterials often link the major arterials. Minor arterials in Southfield include:

- Inkster Road
- Lahser Road
- Evergreen Road
- 9 Mile Road
- 10 Mile Road
- 13 Mile Road
- Franklin Road
- Civic Center Drive
- 11 Mile Road (certain portions)

Collector Streets

Collectors are so defined because these are streets that "collect" traffic from a series of local streets and connect with the arterials. Collectors may resemble local streets in appearance but usually have a wider right-of-way, wider pavement, and higher speed limits than local streets. Southfield streets classified as collectors include:

- Berg Road
- Beck Road
- Shiawassee Avenue
- Central Park Drive
- Lincoln Avenue
- Mount Vernon Avenue

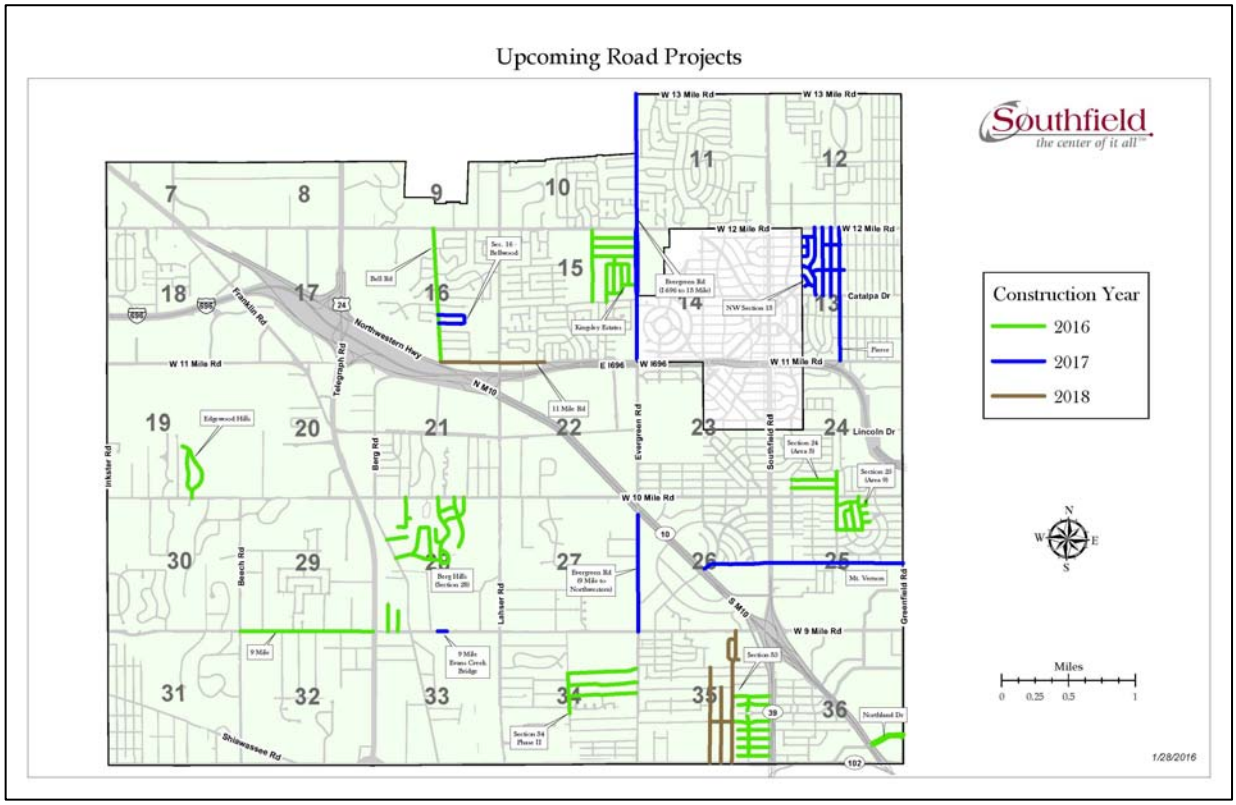
Local Streets

The majority of streets in Southfield are local streets. These streets connect individual properties and homes to the larger transportation system. Local streets are not intended to serve through traffic. These streets include typical public subdivision streets as well as certain private streets. Maintenance, upkeep, and the eventual reconstruction of the many private streets are the responsibility of the individual or homeowners groups.

Table 9-2: FY 2015/16-FY 2020-21 CIP Roads & Bridges Projects

City of Southfield									
Capital Improvement Program									
E. Roads & Bridges									
1. Southfield									
a. Southfield Maintenance									
i. Major Street Maintenance									
	Year	1	2	3	4	5	6	Total Projected Cost	Estimated City Share
Project Description		15-16	16-17	17-18	18-19	19-20	20-21		
Bridge Street Bridge Monitoring		$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$30,000	$30,000
Evergreen Rd (11 Mile to Winchester)		$0	$104,669	$0	$0	$0	$0	$104,669	$104,669
Evergreen Rd (9 to NW Hwy)		$0	$1,682,842	$0	$0	$0	$0	$1,682,842	$1,682,842
i. Major Street Maintenance Subtotal		**$5,000**	**$1,792,511**	**$5,000**	**$5,000**	**$5,000**	**$5,000**	**$1,817,511**	**$1,817,511**
ii. Local Street Maintenance									
	Year	1	2	3	4	5	6	Total Projected Cost	Estimated City Share
Project Description		15-16	16-17	17-18	18-19	19-20	20-21		
Local Street Concrete Repair (Slab Repair/Replace)		$300,000	$300,000	$300,000	$300,000	$300,000	$250,000	$1,750,000	$1,750,000
Section 11 Concrete Patching		$3,000,000	$0	$0	$0	$0	$0	$3,000,000	$3,000,000
ii. Local Street Maintenance SUBTOTAL		**$3,300,000**	**$300,000**	**$300,000**	**$300,000**	**$300,000**	**$250,000**	$4,750,000	**$4,750,000**
a. Southfield Maintenance SUBTOTAL		**$3,305,000**	**$2,092,511**	**$305,000**	**$305,000**	**$305,000**	**$255,000**	**$6,567,511**	**$6,567,511**
b. Southfield Capital Construction									
iii. Local Street Capital Construction									
	Year	1	2	3	4	5	6	Total Projected Cost	Estimated City Share
Project Description		15-16	16-17	17-18	18-19	19-20	20-21		
Greenfield Alley (San Rosa to north)		$0	$60,000	$0	$0	$0	$0	$60,000	$60,000
Resurf. Washington Heights Sub, NWD to Sfld Rd		$0	$1,280,000	$0	$0	$0	$0	$1,280,000	$1,280,000
Southfield Estates Safe Routes to School		$500,000	$400,000	$0	$0	$0	$0	$1,000,000	$500,000
SE Corner of Sec 35 Reconstruction		$0	$1,404,000	$0	$0	$0	$0	$1,404,000	$1,404,000
Section 12 Meadowvale Sub WM/Paving		$1,490,000	$0	$0	$0	$0	$0	$1,490,000	$1,490,000
Section 13 Cambridge Village WM /Paving		$0	$5,360,000	$0	$0	$0	$0	$5,360,000	$5,360,000
Section 34 (Phase II) Tapers Baseline Evergreen		$1,559,344	$0	$0	$0	$0	$0	$1,559,344	$1,559,344
Section 35 (Phase II) W Magnolia Sub Water Main/Pavi		$1,667,069	$0	$0	$0	$0	$0	$1,667,069	$1,667,069
Section 28 Improvements (Green Valley/Berg Hills)		$0	$1,835,894	$0	$0	$0	$0	$1,835,894	$1,835,894
Section 15 - Kingsley Estates		$0	$5,155,885	$0	$0	$0	$0	$5,155,885	$5,155,885
Section 35 (Phase III) "W" Streets		$0	$0	$1,284,000	$0	$0	$0	$1,284,000	$1,284,000
Section 19 - Peekskill & Waycross		$0	$400,000	$0	$0	$0	$0	$400,000	$400,000
Section 16 - Bell Road		$0	$675,264	$0	$0	$0	$0	$675,264	$675,264
iii. Local Street Capital Construction SUBTOTAL		**$5,216,413**	**$16,571,043**	**$1,284,000**	**$0**	**$0**	**$0**	$23,071,456	**$22,611,456**
iv. Major Street Capital Construction									
	Year	1	2	3	4	5	6	Total Projected Cost	Estimated City Share
Project Description		15-16	16-17	17-18	18-19	19-20	20-21		
Eleven Mi Rd. Inkster to 2200' East		$0	$925,000	$0	$0	$0	$0	$925,000	$925,000
Northland Drive Reconstruction		$2,149,125	$0	$0	$0	$0	$0	$2,149,125	$2,149,125
Thirteen Mi. Rd., Southfield to Evergreen, 4-5 L		$0	$1,500,000	$0	$0	$0	$0	$1,500,000	$1,500,000
Traffic Signal Modernization		$0	$85,000	$85,000	$85,000	$85,000	$85,000	$425,000	$425,000
Bridge/Hilltop (Industrial Park Sub)		$1,232,000	$568,000	$0	$0	$0	$0	$1,800,000	$300,000
Eleven Mile (Franklin to Cul-de-Sac)		$250,000	$610,000	$0	$0	$0	$0	$860,000	$288,000
NB Northwestern Hwy (8 to 9 Mile Rd)		$1,692,000	$1,918,000	$0	$0	$0	$0	$3,610,000	$2,192,000
Nine Mile Rd (Beech to Telegraph rd)		$0	$1,900,000	$0	$0	$0	$0	$1,900,000	$1,900,000
Providence Drive (JLH to Greenfield Rd)		$1,400,000	$300,000	$0	$0	$0	$0	$1,700,000	$1,050,000
SB Northwestern Hwy (Berg to Evergreen Rd)		$3,018,000	$0	$0	$0	$0	$0	$3,018,000	$1,456,000
Evergreen (12 to 13 Mile Rds)		$0	$560,000	$0	$0	$0	$0	$560,000	$560,000
Sec. 34 Plum Hollow Estates Road		$0	$0	$0	$0	$2,370,000	$0	$2,370,000	$2,370,000
Pierce Rd (11 Mile to Catalpa)		$0	$0	$1,000,000	$0	$0	$0	$1,000,000	$1,000,000
Mount Vernon (M10 Service Dr to Greenfield)		$0	$0	$4,500,000	$0	$0	$0	$4,500,000	$4,500,000
Sec. 35 Hyde Park/Roseland Road		$0	$0	$0	$0	$4,270,000	$0	$4,270,000	$4,270,000
Nine Mile Bridge over Evans Creek		$0	$0	$4,943,700	$0	$0	$0	$4,943,700	$1,106,840
iv. Major Street Capital Construction SUBTOTAL		**$9,741,125**	**$8,366,000**	**$10,528,700**	**$0**	**$0**	**$0**	$35,530,825	**$25,991,965**
b. Southfield Capital Construction SUBTOTAL		**$14,957,538**	**$24,937,043**	**$11,812,700**	**$0**	**$0**	**$0**	$58,602,281	**$48,603,421**
1. Southfield Roads SUBTOTAL		**$18,262,538**	**$27,029,554**	**$12,117,700**	**$0**	**$0**	**$0**	$65,169,792	**$55,170,932**

A complete inventory of the City's roads, road jurisdiction map and more detailed information can be accessed on the City Web site at www.cityofsouthfield.com.

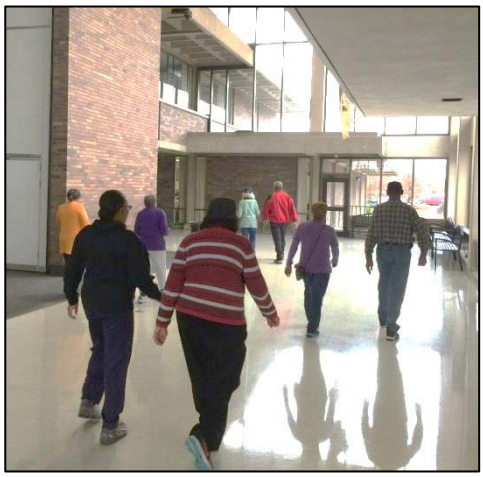


Sidewalks and Bike Paths (Non-Motorized Pathways)

The City of Southfield has an opportunity to create a unified non-motorized pathway system, which will encourage more pedestrian activity and support healthy living.

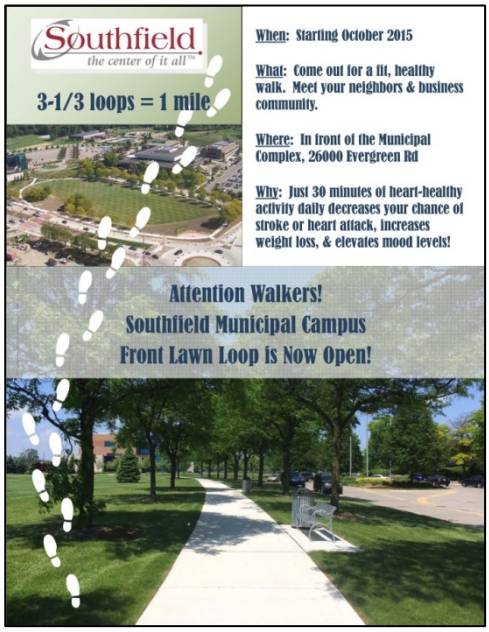
The American Heart Association promotes a movement that encourages all Americans and their employees to create a culture of physical activity and health to live longer, heart-healthy lives through walking. Just 30 minutes of walking a day will put our residential and corporate citizens on the road to better health. Walking paths encourage people to get outside, enjoy an affordable form of physical activity and interact with neighbors.

Physical activity impacts overall wellness including the entire body and mind. Being fit improves a person's appearance, which makes them feel better about themselves. Weight loss, toning, stress management, decreased depression/anxiety, improved sleep habits and relaxation are all benefits of active living. According to the American Heart Association, for every hour of regular, vigorous exercise we do, such as brisk walking, we can increase our life expectancy by two hours!



To promote walking and increase physical activity, the City encourages employees and visitors to take the stairs, walk indoors within the Pavilion (9 ½ times around = 1 mile) or walk around the front lawn loop (3 ½ times around = 1 mile). As a matter of fact, the former Northland Mall walkers have now relocated to the Southfield Pavilion for their morning walks!

In addition, creating a unified non-motorized pathway system improves the economic viability of the City by making it an attractive place to locate a business, while helping to reduce public and private health care costs associated with inactivity.



Non-motorized pathways, including sidewalks and bike-paths, are developed for one or more modes of recreation or transportation travel, such as walking, hiking, running, bicycling, of roller-blading. Safety paths or connector trails, including sidewalks, are multi-purpose pathways that

emphasize safe travel for pedestrians to and from parks, schools, public transit stops or stations, and to other destinations within the City. Park trails may be constructed as multi-purpose trails located within greenways, parks and natural resource areas. Focus is on recreational value and harmony with the natural environment. New pedestrian pathways implemented since 2011 can be found on Map 9-3.

Mindmixer Highlight: *Pedestrian and bike path connectivity was the suggestion most frequently mentioned overall. It ranked #3 for top priorities in the City (Week 1, Question 1), but it was mentioned in at least ten other questions as a significant issue that must continue to be improved upon and that is important to Southfield's viability.*

Bicycle travel has played an historic role in transportation. Increasingly, transportation officials throughout the U.S. are recognizing the bicycle as a viable transportation mode, especially with high gas prices in recent years. A number of people in Southfield, including residents, students and office workers currently rely on non-motorized modes of travel to commute to work, school, recreation amenities, retail establishments and other places. However, the current system is fragmented and incomplete. A multi-year capital improvement plan for the development of sidewalks and bike paths will encourage more pedestrian usage, create a safer environment, improve air and water quality, promote healthy living and add to the quality of life in Southfield.

Ultimately, the goal is to provide a more energy efficient and sustainable multi-model transportation system. To that goal, the City of Southfield adopted the Non-Motorized Pathway & Public Transit Plan (March 19, 2012).

One goal of the Non-Motorized Pathway & Public Transit Plan is to provide a high-quality system that provides safe and efficient access to all areas of the community for a wide variety of users, such as drivers, pedestrians, bicyclists and public transit riders. Developing an efficient transportation system that meets the needs of various users requires an evaluation of existing conditions, needs and opportunities.

The transit plan included a review of existing and proposed non-motorized pathways and public transportation. Developing a transit plan for the City was important for the following reasons:

Encourage an active and healthy lifestyle

- *Reduce fossil fuel energy consumption*
- *Provide a more pedestrian friendly and accessible environment*
- *Improve safety for pedestrians*
- *Link destinations through non-motorized pathways*
- *Foster economic development*
- *Increase the use of public transit facilities*
- *Increase the "Quality of Life" for residents, businesses and visitors of Southfield*
- *Leverage State and Federal funding sources*
- *Offer mobility options for seniors, persons with disabilities and low income families*
- *Create a "Sense of Community" by encouraging pedestrian interaction*

The following recommendations and next steps were part of the Non-Motorized Pathway & Public Transit Plan:

The following "next steps" are recommended for the City:

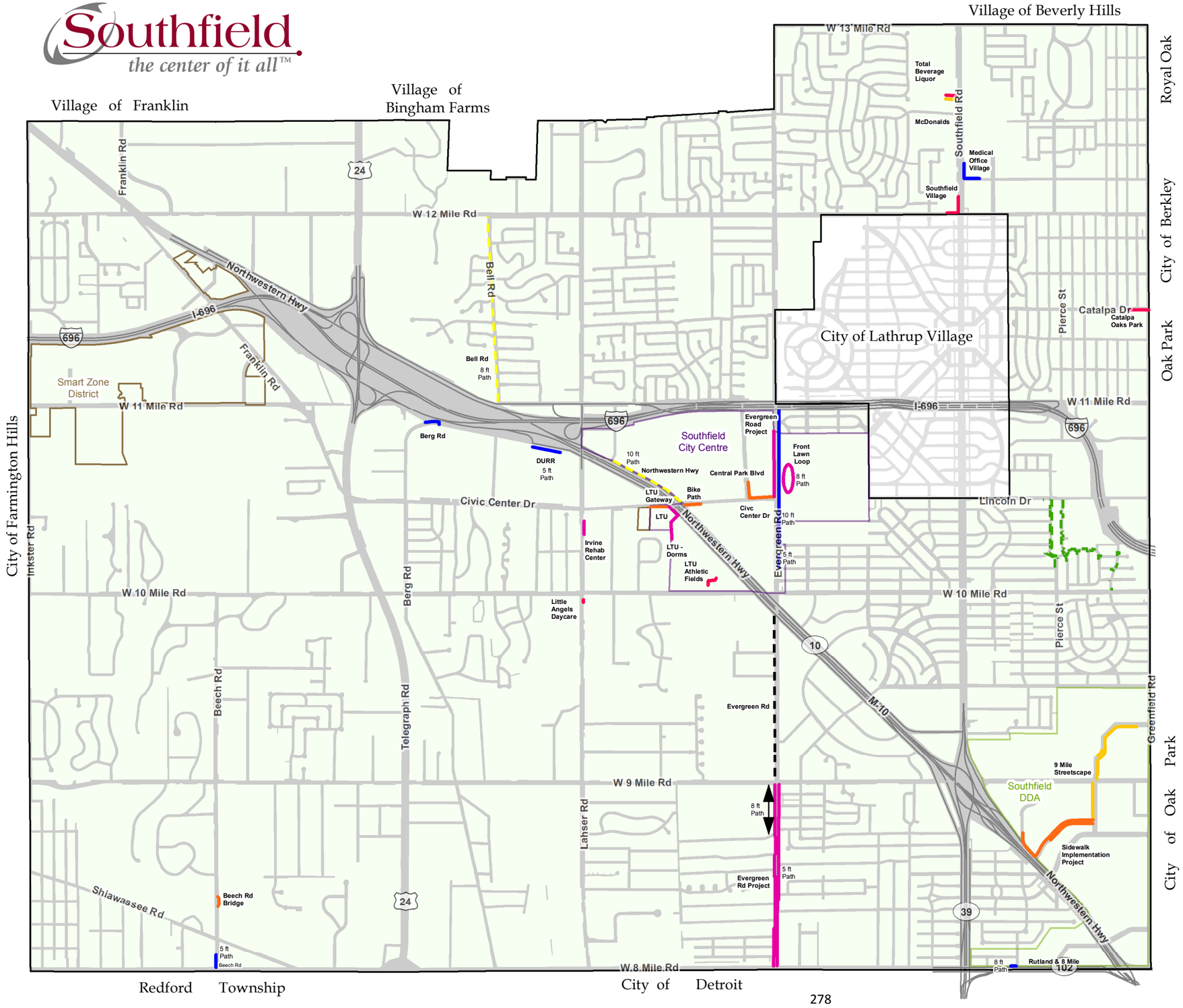
- *Evaluate bicycle and pedestrian focused corridors to determine what type of improvements are feasible in the near, mid and long-term*
- *Evaluate proposed trails for feasibility and environmental impacts*
- *Field check Neighborhood Connector Routes*
- *Identify ways to improve existing freeway crossings*
- *Determine most appropriate type of crossing improvements on the primary roads (taking into account the requirements of the Jewish Orthodox Community)*
- *Evaluate and make recommendations for policies and programs regarding:*
  - *Maintenance*
  - *ADA Compliance*
  - *School Transportation*
  - *Complete Streets*
  - *Safe Routes to School (SR2S)*
  - *Bike Safety*
  - *Pedestrian and Bicycle Advisory Committee*
  - *Transit Oriented Development (TOD)*
  - *Ordinance and code standards that ensure future sidewalks and pathways will not have conflicts*
  - *Infill Non-Motorized Pathway Plan*
- *Purchase energy efficient vehicles for the TOSS program*

- *Provide additional Q'Straint training for TOSS drivers*
- *Determine the most effective education and outreach efforts*
- *Create ways to make existing strip development more walkable, bikable and have a sense of place*
- *Develop detailed non-motorized pathway & public transit plans for the Southfield DDA and City Centre districts*
- *Update City's Taxi Ordinance to allow pick-up and drop-off to and from outside communities*
- *Develop a bike share program*
- *Continue to implement bike parking infrastructure*
- *Install pedestrian crossings at strategic locations along Telegraph Road for businesses*
- *Provide connections to Telegraph Rd. and Eight Mile Rd. (bus stops) by breaking up the large block of industrial development along these corridors*
- *Work with the Police and Fire Departments to provide bicycle safety training classes for both the motorist and bicyclist*
- *Review sidewalk and pathway conditions for necessary improvement or new installation with any future road resurfacing or rehabilitation project*
- *As bridges come up for repair or replacement, ensure that they are widened to accommodate pedestrian crossings*
- *Install pedestrian amenities (e.g. pathways, benches, trash receptacles, bike racks, bike lockers, bus shelters, signage, etc.) in strategic locations throughout the City*
- *Work with DDOT and SMART to evaluate existing and future bus routes to meet the needs of Southfield residents, businesses, and visitors*
- *Upgrade and install new signs (e.g. wayfinding, route identification, and interpretation) along bike routes*
- *Increase police enforcement of speeding in school zones and yielding to pedestrians at crosswalks*
- *Utilize the City's Cable 15 channel to educate and inform residents about the non-motorized pathway system and bike safety*
- *Prepare bike route brochure and map*
- *Establish a pedestrian/bicycle hotline-website to report problems and identify resources*
- *Prior to implementation, additional Public Hearings should be held to educate and gather feedback from the Planning Commission, City Council, and general public regarding future route implementation*

Southfield
the center of it all™

Sustainable Southfield

Map 9-3: New Pedestrian Pathways Since 2011



Completed (Feet/Miles)

- 2011 (3,676 ft. / 0.696 mi.)
- 2012 (6,661 ft. / 1.262 mi.)
- 2013 (2,057 ft. / 0.390 mi.)
- 2014 (15,306 ft. / 2.899 mi.)
- 2015 (7,151 ft. / 1.354 mi.)

Proposed

- 2016
- 2017
- 2018
- Southfield City Centre
- Southfield DDA
- Smart Zone District

N W E S

Miles

0 0.5 1 2

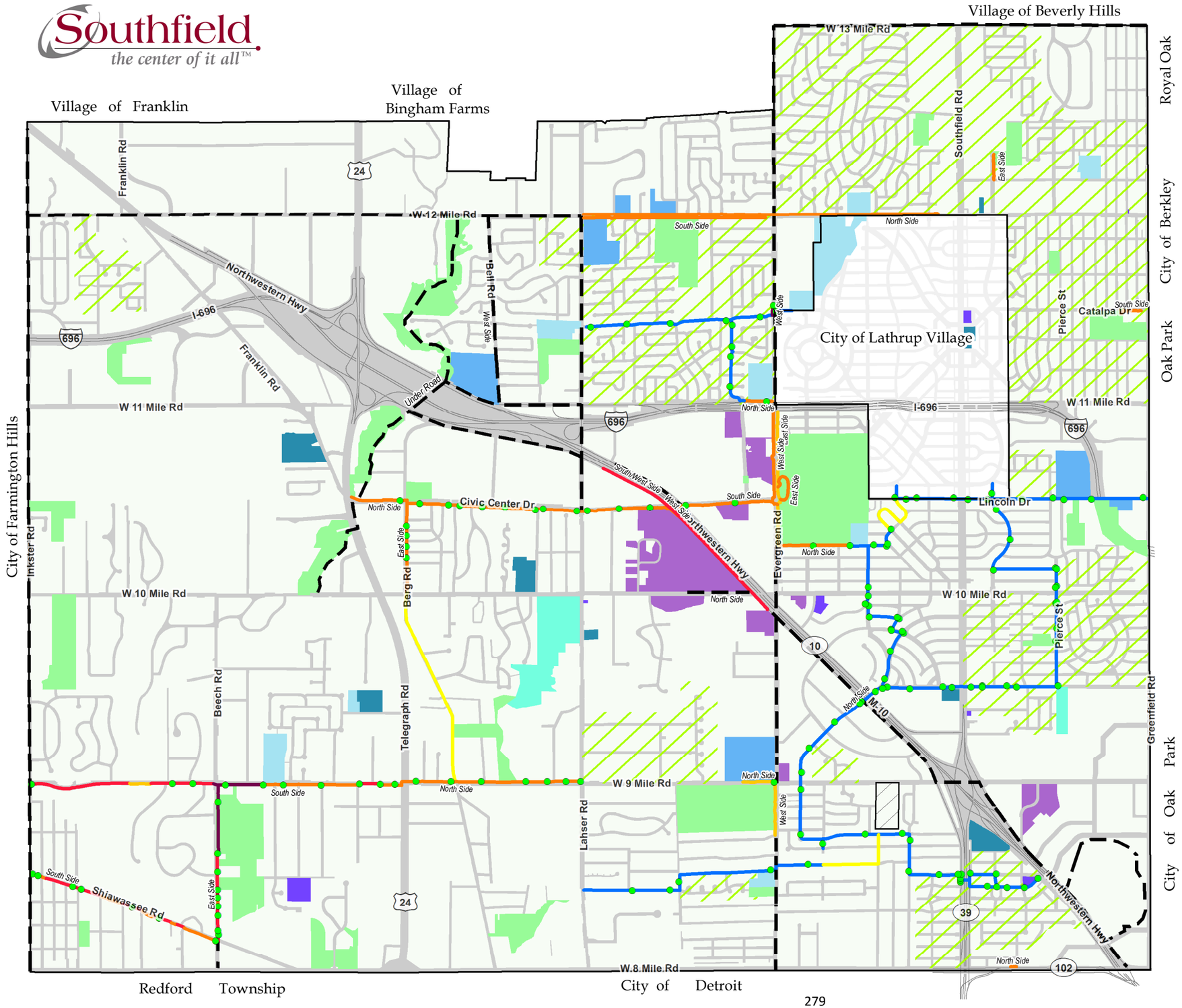
1 inch = 2,863 feet

Draft 3/1/16

Revised: 1/20/2016

Southfield
the center of it all™

Sustainable Southfield
Map 9-4: Non-Motorized Transit



- Bike Route Signs

Bike Routes

- Bike Path (10 ft wide)
- Multi-Use Path (5-10 ft wide)
- Paved Shoulder / Bike Lane
- Road Route
- Road Route (no signs)
- Sidewalk Route (5 ft wide)
- Proposed
- Parks

Education Facilities

- Southfield Public Schools Administrative Center
- Early Childhood Development
- College / University
- Private School
- Private School (Charter)
- Public School
- Closed
- Neighborhoods with Sidewalks

N W E S

Miles

0 0.5 1 2

1 inch = 2,863 feet

Draft 3/1/16

Revised: 1/20/2016

For more detailed information, consult the City of Southfield's Non-Motorized Pathway & Public Transit Plan, as amended. *https://www.cityofsouthfield.com/Portals/0/docs/Planning/Non-Motorized.pdf*

Safe Routes to School (SR2S)

The Safe Routes to School (SR2S) program, program administered in Michigan by the Michigan Department of Transportation (MDOT), provides funding to create safe routes to school, encourage children to ride, and to teach kids how to walk and bike to school. The City is currently working with The City of Southfield, in partnership with Thompson International Academy, Yeshiva Beth Yehudah School and Beth Jacob School (Oak Park) applied for funds through MDOT from the Safe Routes to School program to construct certain infrastructure projects in and adjacent to Section 24 in the City, including sidewalks, crosswalks, pedestrian traffic signals, ADA improvements, signage, etc. to enable and encourage children to safely walk and bike to school.

Traffic Control & Street Lights

In 2015, the City of Southfield installed its first two round-a-bouts and more energy efficient "Light-Emitting Diode" (LED) street lights as part of its $12.1 million major reconstruction of Evergreen Road, from 10 Mile to the I-696 Service Drive.

The incorporation of roundabouts will greatly improve traffic flow in the corridor while also reducing the number of serious accidents. The many benefits of roundabouts include improved safety resulting in a 90% reduction in fatalities; 76% reduction in injuries; and a 35% reduction in all crashes. Studies have also shown that accidents that do occur are typically less serious and that roundabouts are safer for pedestrians and bicyclists. Roundabouts have also been proven to greatly improve traffic flow by reducing congestion, decreasing traffic delays and increasing

traffic capacity. They are also more environmentally friendly — reducing pollution with fewer stops and hard accelerations — resulting in less vehicle emissions, fuel consumption and noise. Roundabouts are also generally considered to be more aesthetically pleasing than traditional intersections — enhancing and defining corridors and cities.

The City also had its first Speed Table installed in 2015 at the vacated portion of Jeanette Street near Evergreen Road as part of the Civic Centre II mixed-use development. The purpose of the speed table is: 1) to be used as a traffic calming measure; 2) allow pedestrian access to and from the neighborhood; and, 3)limit passenger vehicles access but allow access for public service and public safety vehicles.

Facilities Maintenance Department

The Facilities Maintenance Department is responsible for maintaining and upgrading all of the City of Southfield owed structures. The department is composed of three divisions: Custodial Maintenance which cleans and stocks all of the buildings; Building Maintenance which includes structural and finishing trades; and Physical Plant Maintenance which encompasses mechanical and electrical trades. In total the department maintains 52 structures located at 20 sites with a building area of over 831,000 square feet.

Management Systems

The Technology Services Department (TSD) is responsible for the acquisition, implementation and support of computing and other technology related resources necessary for the City's day-to-day business operations.

TSD manages a wide variety of technology related components and is consistently evaluating and analyzing new technology and services available in the marketplace while balancing these needs against the fiscal challenges facing the City.

In addition, the Technology Services Department is responsible for data and voice services for all city departments including Police, Fire, and Public Works. The department's core competencies include network security, application and hardware support, network infrastructure, voice services including Cisco Call Managers and E911 services. The Technology Services Department also assists City Departments in reengineering city processes and procedures to improve services provided to city residents.

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CHAPTER 10: PUBLIC FACILITIES & SERVICES

Introduction

The City of Southfield offers a range of public facilities to its residents and businesses. The quality, availability, and cost of these elements are among the factors influencing growth and redevelopment in the City. Residential, commercial, and especially industrial users, make location decisions based, in part, upon the ability of a municipality to meet their present and future needs in the most cost effective way possible. As competition for new development between communities grows and as technology advances, citizens and business owners will expect more from local governments. To keep pace with these demands, Southfield must continually upgrade and diversify its facilities and services.

Public facilities and services include educational and religious institutions, library facilities, public safety, parks (discussed in *Chapter 8 Open Space and Recreation*), sewer, water and refuse removal (discussed in *Chapter 11 Community Utilities*), all of which are provided to serve the needs of residents and businesses in Southfield. See following Map 10-1. These are all organized and operated on a daily basis by city departments. Citizens also influence these services through participation in commissions, boards and election to City Council.

City Government

The basic form of local government in Southfield is Council-Administrator. The Administrator is responsible for overseeing the everyday mechanics of

City government and reports directly to the seven-member City Council. City Council is the local legislative body which determines City policy, makes decisions on zoning, ordinances, and legislative matters. The Mayor, the ceremonial head of City government, makes recommendations to

Council and is the City's representative to all other legislative bodies.

City Departments

The City of Southfield Municipal Campus, including City Hall, is located at 26000 Evergreen Road in the Southfield City Centre district. The Campus (See Map 10-1) houses offices for most City Departments, including Parks & Recreation, Senior Center, Public Safety (Police), 46th District Court, Public Services, City Administration, Clerks and Treasurer, and boards and commissions. At the time this plan was prepared, the City had thirty-one departments under the Mayor, City Council and the City Administrator. Many of those departments will have a direct or support role in implementation of this plan.

Boards and Commissions

Southfield has an active citizen population that participates in a number of different boards and commissions. Citizens may become members of these groups either through appointment or by election. At the time the plan was prepared, these bodies included, but are not limited to:

- Arts Commission
- Board of Review
- Brownfield Redevelopment Authority
- Building Authority Commission
- Building Code Board
- Citizens Police Advisory Board
- City Centre Advisory Board
- City Council
- Civil Service Commission
- Commission on Senior Adults
- Downtown Development Authority (DDA)
- DDA Citizens Area Council
- Economic Development Corporation
- Electrical Code Board
- Fire & Police Retirement System Board
- Historic Designation Advisory Board
- Historic District Commission
- Housing Commission
- Library Board
- Library Building Authority
- Local Development Finance Authority
- Local Officers Compensation Commission
- Mechanical Code Board of Appeals
- Parks and Recreation Commission
- Planning Commission
- Plumbing Code Board of Appeals
- Retiree Health Care Benefits Plan and Trust Board
- Tax Increment Finance Authority
- SERS Board
- Total Living Commission
- Veterans Commission
- Zoning Board of Appeals

Other Agencies and Jurisdictions

Southfield includes a host of outside agencies that require on-going coordination and communication. Two key agencies are the Michigan Department of Transportation (MDOT) and Oakland County. The County interacts with the City in many facets including the drain and road commissions, parks and recreation and planning and economic development departments, and court system. *http://www.michigan.gov/mdot; https://www.oakgov.com*

PUBLIC SAFETY

The City of Southfield Public Safety Group includes the police and fire departments and is committed to providing the best possible service, protection and prevention by providing ongoing training for personnel and keeping current with community needs. As a result, Southfield's Public Safety response system is considered one of the best in Michigan.

Fire Department

The Southfield Fire Department was the first in Michigan to offer advanced life support (paramedic) when it initiated the service in 1972. Since then, it has continued to be a leader in emergency medical service, with the most modern training and equipment available. Southfield offers a full-service Fire Department which has the dual ability to fight fires and provide paramedic service. It also supplies technically trained special rescue teams such as hazardous materials, high-rise, confined space and trench rescue. The Department is among the busiest in the county and still manages to maintain an average response time of less than four minutes to any address.

Fire Station

A fire station supports the needs of the fire department and the community in which it is located. It must accommodate extremely diverse functions, including housing, recreation, administration, training, community education, equipment and vehicle storage, equipment and vehicle maintenance, and hazardous materials storage.

While it is usually only occupied by trained personnel, the facility may also need to accommodate the general public for community education or outreach.

Fire stations will vary somewhat in design depending on specific mission (e.g. the types of emergencies that will be responded to or the types of fires that will be fought). Usually, the facility differences relate to the size of the firefighting apparatus and facility location.

SOUTHFIELD FIRE DEPARTMENT MISSION

"..to provide the citizens and visitors of Southfield with the highest quality fire prevention, emergency medical care, and fire protection available. We accomplish this mission by intense training, thorough preparation, prompt professional response, and a positive, caring attitude toward those we are sworn to protect."

In 2015 there were five fire stations, two located on 9 Mile, two on 12 Mile, and one on Lahser Road as depicted on Map 10-1, Community Facilities.

Changing Direction

It is perceived by many fire service leaders that fire departments across the United States will see a shift from just emergency service response to a comprehensive community risk reduction and management focus. This statement is becoming more and more common as we sit and talk with other fire service leaders from across our nation. At the National Fire Academy Executive Fire Officer (EFO) Research Center, documents are being developed and presented on this very topic. It was recently a topic of discussion at the International Association of Fire Chief's (IAFC) strategic planning meeting. So why do we need to change directions?

The fire service already responds and reactively handles the majority of emergencies and crisis within the community. The Southfield Fire Department will be focusing on a proactive approach. With this being said, this would allow for a safer community which works towards improving the quality of life for our citizens. If we are able to prevent most incidents from occurring, then costs to individuals and the community will be significantly reduced, quality of life will be improved, and the potential for economic sustainability is increased. As government budgets continue to shrink, stress on the fire departments ability to provide service will continue. The impact of these cuts is witnessed almost daily in the fire service across our country, with browning out of fire stations, closing of fire stations, staff reduction through attrition, and yes even critical staffing reductions through layoffs.

The fire service has reached a new era in its history. As we enter this new era we must adapt our philosophies, strategies and even adjust our tactics. The builders and engineers that design

and construct disposable buildings will need to focus their efforts on fire codes that require automatic fire suppression systems as well as early detection systems in all properties including residential properties, these systems have to be mandatory. Builders who fail to embrace new technology set communities up for increased risk, which will force the fire service to employ new tactics and develop a new Risk Management Plan.

To keep pace with societal changes, the Southfield Fire Department must continually review our mission and determine if that mission will meet the community's demands into the future. The old mission of simply "saving lives and protecting property" may no longer have the depth or scope necessary to meet future challenges and the expectations of the public. If the mission must change, fire service leaders must take steps now to meet the challenge of this change. This will require innovation, courage, and the commitment of fire service leaders at all levels, both career and volunteer. In fact, embracing change may be the single greatest challenge facing the fire service in the next century.

The Southfield Fire Department has been and will continue to be a regional leader in areas of fire suppression, EMS, high-rise firefighting, technical rescue, hazmat, public education, and technology.

- Their major accomplishment is that there have been no life-threatening firefighter injuries or firefighter deaths in the City of Southfield, in an occupation that has on average 100 firefighter deaths and thousands of serious injuries annually.
- 2014 busiest year in the history of the Southfield Fire Department.
    - Total Incidents: 13,470
    - Medical Incidents: 11,284
    - Fire Incidents: 2,186
- The Southfield Fire Department continues to take advantage of Grant opportunities.
    - In 2013 the fire department applied for and was granted Assistance to Firefighter Grant (AFG) Received $ 39,000 to purchase new 60 fire helmets and physical fitness equipment
        - Implementation of Firefighter Physical Fitness Program
        - Six (6) new commercial treadmills
        - Five (5) new stair climbers

Emergency Medical Services (EMS) Patient Transporting Program continues to provide the highest quality service to our citizens. Since we began transporting in 2005, the fire department has brought in net revenues of $20,800,000.00 over the last ten (10) years

to assist in supporting services. SFD has received over $2.5 million dollars in grants over the last 5 years.

The Fire Departments involvement in MABAS, Oakway Technical Rescue, Hazmat and Training has worked toward meeting the City's objective of greater "regionalization":

> Membership and Divisional Leadership in the State of "Michigan Mutual Aid Box Alarm System" (MABAS) – MABAS is a user-driven system designed to streamline the requesting and providing of emergency and fire service resources across the State of Michigan, and the Great Lakes Region for events such as major fires, train derailments, tornadoes, hazardous materials incidents, wild land fires, domestic or foreign terrorism and other events that may overwhelm a local fire department.
>
> MABAS-MI is one of four states that are piloting the deployment of Mutual Aid Net, a software application that is designed to serve as a resource database and mutual aid deployment tool.
>
> The Southfield Fire Departments has exceptional expertise and experience in the area of **technical rescue** and continues to provide training to multiple fire departments and fire personnel across Southeastern Michigan.
> Increased Collaborative efforts within Region 2 (Oakland, Macomb, Washtenaw, Wayne and Livingston Counties). The Southfield Fire Department hosted multiple training exercises utilizing our technical rescue training field and other sites within the City of Southfield.

Innovations

The Medical field is continuously changing with innovative equipment and procedures always on the horizon. EMS is often the first step in the chain of patient care and the Southfield Fire Department's actions are a pivotal point in determining ultimate patient outcome. Hence, we are acutely aware of these changes and readily adapt as required. Southfield Fire Department EMS has always been on the forefront of adaptation.

Current examples include:

- Electronic EMS reporting (improves documentation and billing).
- Intra-osseous capability (enables vascular access through bone).
- CO monitoring (measures patient and FF Carbon Monoxide levels).
- Res-q-Pod (CPR airway adjunct, increases blood flow to brain).

- King Vision Laryngoscope (Increases successful ET intubations).
- CPAP (Continuous Positive Airway Pressure, used to treat severe DIB).

Table 10-1: Public Safety Training Figures

CPR/AED/ First Aid Training: (No Charge to City Residents and Employees)	
General Public	800
Police Department	100
Dispatch	15
S-L High (Medical Academy)	30
TOTAL Trained Annually	**945**

In 2013 the fire department implemented the **"Child Safety Seat Installation Program"** This program teaches community members how to install child safety seats according to the manufactures recommendations.

Mindmixer Highlight: *The top response on "Why do you choose to live in Southfield?" (Week 12, Question 2) was "Good City Services". Other responses throughout the 20 weeks indicated that providing good City services makes Southfield a sustainable and competitive community and that the Southfield Police and Fire Departments excel at what they do.*

Future Plans

- *Achieve and retain a diverse fire service workforce*
- *Continue to take advantage of State and Federal Grants to help reduce some of the financial strain on the community*
- *Increase community education in the areas of risk reduction, fire safety and emergency medical services (EMS). Technological advances in EMS have enabled enhancements in patient care that have improved outcomes and shorter hospital stays for our patients.*
- *Implement a "Citizens Fire Academy" that will focus on the day-to-day operation of the fire department.*
    - *Topics*
        - *Administration of the Fire Department*
        - *Tour of Facilities and Dispatch Center*
        - *Fire Behavior/Ladder Operations*
        - *Fire Engines / Ambulance Familiarization*
        - *Hazardous Materials Program*
        - *Vehicle Extrication*
        - *Fire Hose and Ventilation*
        - *Fire Prevention and Code Enforcement*

  - *Fire Safety Education and CPR Training*
  - *Portable Fire Extinguishers ABC Fires*
  - *Incident Command System*
  - *Ride Along*
- *2 Week Summer Fire Camp for High School Kids.*

Homeland Security and Emergency Preparedness

The Homeland Security and Emergency Preparedness Division have been in Southfield for many years. Formally termed Emergency Management, Homeland Security and Emergency Preparedness was designed to meet the current needs of the City with regard to Preparedness, Mitigation, Response and Recovery in the event of a man-made or natural disaster .While many communities rely upon County and State agencies, Southfield has an independent, State recognized program to serve its citizens directly.

The continued effort to safeguard the lives and property within Southfield requires a commitment of continual planning, training and exercising of the response capabilities for any type of threat or disaster that may occur. Paramount to how well we respond to such an event is how well we are prepared. Preparedness is a whole community approach; we have implemented a “Do 1 Thing” initiative that encourages families to take small steps each month toward becoming better prepared for emergencies and disasters. Every step individuals make to becoming prepared will help first responders, their loved ones and others in the community. The goal of the Homeland Security and Emergency Preparedness Division is to continue to partner with our residents, our business community as well as; County, State and Federal Agencies to ensure Southfield remains a disaster resilient community.

Closed Point of Dispensing (POD)

Whether caused by an accident, disease outbreak, or terrorist attack, an emergency could occur requiring the public to receive immediate, life-saving medication. CDC’s Public Health Emergency Preparedness (PHEP) cooperative agreement provides funding to state and local public health departments to support their effective response to a range of public health threats. One of the requirements of the cooperative agreement is for states and localities to develop plans for receiving, distributing, and dispensing medication from the Strategic National Stockpile, a national repository of critical medication and supplies that are available to supplement state and local resources during a public health emergency. The goal in a large-scale emergency is to get medication to the entire population in a short, clinically relevant

timeframe (e.g., the release of anthrax into a community would require the public receive medication within 48 hours).

The City of Southfield has partnered with the Oakland County Health Department to establish a Closed Point of Dispensing (POD). Operating a Closed POD in a public health emergency will provide our organization the assurance of timely distribution of medications to our employees and their family members. The establishment of this POD compliments our emergency preparedness plans, improves employee health and safety, helps the City maintain a continuity of operations and aids in becoming more resilient during and after an emergency.

Community Emergency Response Team (CERT)

> *The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community.(Source FEMA)*

The City of Southfield currently has 31 active CERT members. They assist the City in the following areas. Annually they volunteer approximately 1,200 hours at City events, training and exercising. In the event of an emergency, Southfield CERT is readily available to assist in multiple functions.

Police Department

The City of Southfield Police Department is an integral part of the Public Safety Group. The department, based out of the Municipal Campus, provides a full range of quality services which include marked and unmarked patrol units, investigative staff, and crime prevention services.

The Southfield Police Department is continually striving to maintain the highest level of commitment, dedication and service to the citizens of Southfield and its visitors. The Department takes great pride as a leader in law enforcement throughout the State. They strive

to ensure the Department remains exceptional and deserving of the trust and confidence of the community through community oriented policing, continual comprehensive training, and selection & retention of quality personnel who will best represent the police profession.

SOUTHFIELD POLICE MISSION

"We believe in the dignity and worth of all people. We stand for providing fair and equal enforcement of the law for all. We are committed to a professional approach to law enforcement and supporting the needs of our community. We shall strive to make our department exude the trust and confidence of the community through community-oriented policing, continual comprehensive training, and by selection and retention of quality personnel who will best represent the police profession."

Direction of the Police Department

Community Policing and customer service remain at the forefront of the Department's core philosophies in delivering services to the community. Emphasis is placed on police problem-solving by their personnel when their services are requested. This not only empowers their staff, thereby creating ownership of resolutions, but it demonstrates commitment to the Southfield community in resolving issues before they evolve into an enforcement matter. This partnership extends to other agencies, schools, businesses, homeowners, private security and other City departments, allowing for additional "eyes and ears", which ultimately assists the Department's goal of reducing criminal activity and continue to make the City of Southfield a preferred place to live, work, play and learn. Adaptation is necessary in today's society, due to the numerous and varied calls for service that our department is called upon to respond. Through their training and acquisition of the best equipment, they remain vigilant and confident in their ability to respond to any incident to serve, protect and safeguard lives.

A monthly review of the Department's policies and procedures are conducted in order to ensure services provided are what are needed. Maintaining a cutting edge approach to addressing the needs and wants of the community they proudly serve is paramount in building community partnerships and keeping with the community policing model. Additionally, the creation of the Citizens Police Advisory Board allows an even further collaboration in their customer service approach. This allows citizens to voice their concerns and issues as they relate to their neighborhoods and immediate area that they frequent, directly to the Chief of Police. This open line of communication enhances transparency and trustworthiness on the part of the community that their issues are important and will be addressed in a timely and proper manner. This proactive approach is a change in "how things use to be done", and allows for solving issues through channels other than enforcement. This, in turn, fosters the core

philosophies of customer service and community policing to the citizens of Southfield that they are committed to.

Police Department accomplishments (2014-15):

- *Completed the renovation of the police lobby. Building security was enhanced and the environment is now more customer-friendly for visitors.*
- *Four police officers were honored by Mothers Against Drunk Driving for their contributions in arresting individuals driving under the influence of drugs or alcohol.*
- *The police department joined a county-wide consortium in which agencies train together to learn best practices in addressing active shooter incidents.*
- *State of the art recording equipment was purchased for the Detective Bureau interview rooms.*
- *The police dispatch center was completely redesigned and updated radio console equipment was installed.*

Reduced Crime

The Southfield Police Department has seen part one crimes decrease significantly from 2006 (1,041 in 2006 to 230 in 2014). In 2006, Southfield had a violent crime rate per capita of 1,359 per 100,000 residents. In 2014, Southfield had the fourth lowest violent crime rate per capita in the Southeast Michigan metropolitan area of 314 per 100,000 residents. The most recent data shows violent crime dropped 12% between 2013 and 2014 (see Table 10-2).

This reduction in major crime was accomplished by the dedication of the men and women of the Southfield Police Department, who are committed to serving the citizens of Southfield. The direction and leadership of the executive staff and implementation of innovative programs and units proved instrumental in the overall reduction in part one crimes.

Table: 10-2 , Crime Statistics, 2012-2014

Type of Crime	2012	2013	2014
Violent Crime	357	262	230
Murder and non-negligent manslaughter	2	2	3
Rape (revised definition)	59	39	33
Robbery	141	121	85
Aggravated Assault	155	100	109
Non-violent Crime			
Property Crime	2,549	2,150	2,150
Burglary	545	443	321
Larceny-theft	289	1,393	1,471
Motor-vehicle theft	402	284	358

For up to date crime data within the City of Southfield and surrounding areas, refer to www.crimemapping.com

Library Facilities

The Southfield Public Library is located within the Municipal Center complex on Evergreen Road. The library has been a dependable community resource and center for information since 1960. The library has grown steadily ever since and now offers an unsurpassed collection of over 250,000 print and media resources; all easily accessed in a world class building constructed in 2003.

All residents of Southfield and Lathrup Village are eligible for a Southfield library card which includes access to the library's electronic offerings such as e-books, downloadable audiobooks and research databases. The library is part of TLN (The Library Network), a consortium of 65 communities which have formed reciprocal borrowing agreements to allow citizens access to each other's libraries.

The Southfield Public Library offers a full array of modern library services; including books, magazines, newspapers, DVDs, CDs, public computers, WI-FI, audiobooks and wonderful programming. Below is a sampling of the types of amenities available at the Southfield Public Library:

- Vibrant Children's Library
- Imaginarium Children's Garden
- Group Study Rooms
- Drive-Up Services
- Friends Book Sales
- Auditorium and Large Meeting Room
- Foreign Language Collections
- Literacy Collection
- Quiet Study Areas
- Small Business Start-Up Center

Southfield Human Services Department (SHSD)

The Department of Human Services offers short-term support services for Southfield residents who may be experiencing hardship. The program is a "hand-up" and not a "hand-out", as it provides temporary emergency resources and assistance while helping residents develop strategies to successfully resolve their hardships. The Department's goal is to help residents overcome personal hurdles to achieve a satisfying and productive quality of life.

SHS promotes advocacy and awareness of quality-of-life issues that affect seniors and the physically challenged. SHS utilizes numerous services to give a helping hand to those who experience hardship. SHS also provides programs or facilitates program assistance for a broad range of community-related, quality of life items.

SOUTHFIELD HUMAN SERVICES DEPARTMENT MISSION

"We strive to offer services and opportunities to promote personal growth, independence, dignity and respect for the citizens of Southfield. Helping people to help themselves, each other and the community."

Services

Southfield Human Services provides a number of programs and services all designed to meet the specialized needs of Southfield residents. These include Legal Aid, Social Work Outreach Services, Social Work Older Adult Services, Services for the Physically Challenged, & Educational Programs.

Location

The SHSD is located at 26080 Berg, Southfield, in the Simmons House within the Burgh Historical Park.

Hours of Operation: 8:00 AM-5:00 PM, M-F

Challenges:

- Affordable housing and addressing needs of homeless
- Increase percentage of senior population and low-income population
- Dependable, quality, public transportation – especially for seniors
- Increase of foreclosures and domino effect on surrounding property values
- Financial assistance for residents experiencing hardship circumstances
- Population with mental illness

VISION 5-10 YEARS

Goal:	*Diverse Community - Promote recognition and respect for multicultural differences and lifestyles; demonstrate care for all residents to promote a sense of inclusiveness*
Action:	Provide outreach to ethnic populations, assist in developing translations of city service materials; develop community care/wellness approach in identifying and responding to community social service needs
Goal:	*Choice of Quality Homes - Assist families in keeping and purchasing homes suited for their needs and financial ability*
Action:	Assist in development of community based budget and financial planning initiatives, explore resident's housing responsibilities regarding upkeep of properties if receiving housing related financial assistance, explore/expand opportunities for CHORE program to support /enhance city's curb appeal initiative
Goal:	*Opportunities for Lifelong Learning - Develop and promote educational opportunities and resources that will assist our residents in achieving a higher and healthier quality of life*
Action:	Develop opportunities to bridge/support educational needs of seniors consistent with their developmental stage; develop and/or support initiatives to assist

	seniors whose cognitive abilities are compromised; explore opportunities to educate the public and enhance maternal awareness of prenatal and neonatal concerns in order to optimize infant health and early learning capacity.
Goal:	*Increase collaborations /partnerships with other agencies to provide services through Human Services*
Action:	Provide workshops, seminars on finances/budgeting, foreclosure prevention, homebuyer education, legal consultations, e.g. Community Housing Network, Legal Aid and Defender Association, Lighthouse of Oakland County
Goal:	*Explore alternative funding sources to Human Services to assist low-income residents*
Action:	Coordinate services with various agencies and religious organizations to maximize the efficiency of all providers, e.g. churches, nonprofit organizations, Tone Up for Tune Ups, Southfield Goodfellows, Southfield Veterans Commission
Goal:	*Work with the Commission On Senior Adults (COSA) Committee*
Action:	Develop a more effective method of information distribution among Southfield's senior adult population; expand and support the efforts of the COSA's Homes for the Aged Subcommittee to inspect and evaluate Southfield's long-term care facilities.

Southfield Michigan Works

Southfield Michigan Works! Service Center of Oakland County is a Division of the City of Southfield Department of Human Services in cooperation with Southfield Public Schools. Funded by the Workforce Development Agency, State of Michigan (WDA, SOM) through the Oakland County Workforce Development Board to administer the following programs for job seekers and employers:

- Employment Services
- Workforce Investment Act (WIA)
- Trade Adjustment Assistance (TAA)*
- Partnership, Accountability, Training, Hope (PATH)*

Southfield Michigan Works! is one of eight Service Centers in Oakland County. As a One-Stop Center, they have designed their programs to fit local needs, working together with the Business Development Department, Southfield Area Chamber of Commerce and schools to fulfill the WDA, SOM Mission Statement "*to develop a system that produces a workforce with the required skills to maintain and enhance the Michigan Economy*."

Its major premise is that all major workforce development and economic development services should be available through a single point of entry. *Southfield Michigan Works!* focus is to help ensure that Michigan's employers hire better educated and better trained employees.

Location

21030 Indian, Southfield, MI 48034, located in the John Grace Community Center, between Beech and Inkster Roads, two blocks north of 8 Mile Road just minutes away from I-696, Grand River or I-75. Note: The Southfield Works office is scheduled to relocate into the SmartZone in October 2016.

Hours of Operation: 8:00 AM-5:00 PM, M-F

EDUCATIONAL FACILITIES

Public Schools

The Southfield Schools District is located in the suburban communities of Southfield and Lathrup Village. Situated 15 miles northwest of the Detroit Civic Center, the district comprises approximately 27 square miles in southeastern Oakland County, Michigan. The Southfield/Lathrup Village communities have a combined population of 79,787 (Source: SEMCOG Dec. 2014 estimate).

For more than 60 years, the community has supported public schools by approving nearly every millage and bond issue that has been put before the public for a vote. This support allows the district to spend approximately $10,800 per pupil.

The majority of Southfield residents, and all of Lathrup Village, are served by Southfield Public Schools. A small segment of the population in the northeast corner of the City attends Birmingham Public Schools, while some in the southeast corner attend Oak Park Schools (see Map 10-1, School District Boundaries).

In 1969, the Southfield Public School district had an enrollment of 16,350, which has dropped to 6,942 students in 2014. The estimated student population forecast for school year 2019-20 is 5,552-5,565 students.

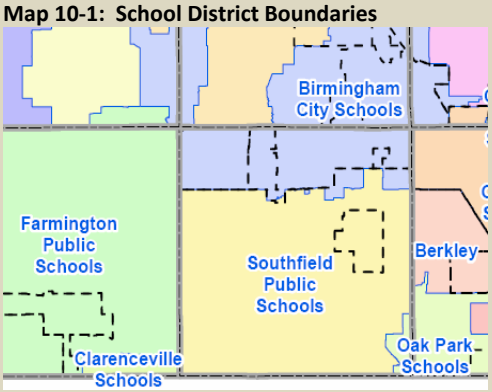
The reduction of student population can be attributed to many State and national trends:

- The ‘baby boomlet’ population bubble has graduated

- Michigan birth rates are down
- The number of school- aged children in Michigan continues to decline (1.75 million in 2002-03 to 1.56 million in 2013-14).
- Michigan is still recovering from the out-migration during the great recession/economic crises of 2008-2013.
- The overall population of Southfield has declined from a high of 78,322 in 2000.
- Fewer people are living in each household.
- Housing crises and falling property values, which result in residents remaining in their homes longer.
- A large inventory of vacant houses in the City of Southfield.
- Rise in Charter School enrollment.
- Oakland County Open Enrollment-more students opt-out than opt-in.
- Rise in homeless students.
- Increase in Orthodox Jewish residents who send their children to religious schools.

In 2015, the Southfield Public School district had fourteen school sites (reduced from 17 in 2009) located near and within the neighborhoods and accessible by school bus or walking and biking including:

Map 10-1: School District Boundaries



Source: Oakland County Planning and Economic Development Services

- [Morris] Adler Elementary School
- [Alice M.] Birney Middle School
- Brace-Lederle Elementary School
- Bussey Center for Early Childhood Education
- [John F.] Kennedy Elementary School
- [Glenn] Levey Middle School
- MacArthur Elementary School
- [Helen] McIntyre Elementary School
- Southfield High School
- Southfield-Lathrup High School
- [Adlai] Stevenson Elementary School
- [Mary] Thompson Middle School
- University High School
- [Arthur H.] Vandenberg Elementary School

A further reduction of school sites is expected in the 2016-17 school year.

Table 10-3: Southfield School District Statistics

2012-13 Student Enrollments	
Elementary	2,715
Middle School	1,819
High School	2,750
Total	7,284

2012-13 Millage Rate	
General Operating	16.9868 mills
Debt Retirement	3.5000 mills
Total	20.4868 mills

General Fund Budget (Expenditures)	
2011-12	Est. $98,599,470
2012-13	Est. $95,609,917

2011-12 Projected Pre-K Enrollment	6,908
2011-12 Drop Out Rate	8.04%
2011-12 Graduation Rate	88%
2012 SEV	$2,460,585,500

Cultivate the Genius in Your Child

Southfield Public Schools offers a robust college prep curriculum, integrated with exceptional programs to help cultivate each student's unique abilities.

- Three comprehensive high schools, with career academies that help prepare students for specific industries
- An alternative school (awarded by the Michigan Alternative Education Organization as the top alternative high school in 2011)
- An early childhood Head Start Program, which is nationally accredited
- AP preparation programs and enrichment activities starting in elementary school. The district offers more than 30 AP courses per year.
- An ELA school. Students at this school speak 32 languages from 27 countries around the world.
- International Baccalaureate Program for Kindergarten through 12th grade
- Saturday school enrichment and academics classes, covering mathematics, foreign languages, electives and more
- An examination school, University High, which offers a small private school setting and requires all students to take AP classes.
- A Dual enrollment program, through which 54 students earned high school and college credits for courses taken at U of M Dearborn, Wayne State and Oakland Community College campuses, with all costs covered by the district.
- Spanish, art, music & physical education classes in the elementary schools
- Mandarin Chinese language instruction
- Support services in speech pathology, social work & psychology
- Full high school athletics program and music programs

Teaching Staff

Southfield recognizes the importance of teacher preparedness. The district encourages teachers to earn advanced degrees and provides a myriad of opportunities for staff development. Collectively, the SPS teaching staff is enrolled in thousands of hours of professional development each year, with 85 percent holding a master's degree or higher.

Twenty-First Century Technology

All of Southfield's school facilities are modern and up-to-date, meeting all current fire, safety and barrier-free standards. A modern instructional and administrative technology system is in place. The district provides one computer for every three students. Additionally, all classrooms have access to lap tops, LCD Projectors and iPads for elementary students. Our technology focused classrooms also utilize the NEO, SMART Boards and USB microscopes.

The Curriculum

Their award winning curriculum is comprehensive and designed to thoroughly prepare students for the rigors of college and professional pursuits. It is tied to the Michigan Core Standards Curriculum and the Southfield Vision Statement, Mission Statement and Profile of a Graduate.

External Recognition

Over the years the Southfield Public Schools has received numerous recognitions for excellence, including:

- Exemplary School designations from the Dept. of Education for Southfield High School, Southfield-Lathrup High School, Brace-Lederle School, Levey Middle School, McIntyre Elementary, Stevenson Elementary School and Thompson Middle School.
- The District is one of only three districts in Oakland County to be accredited by the national accreditation agency Advanced¬Ed.

Other recent recognitions include:

- 2012 "Winners Circle Award" from the Michigan Association of School Administrators for the implementation of the IB program. (SPS Superintendent Dr. Wanda Cook-Robinson)
- 2012 American School Board Journal "Magna Award" for our Differentiated Instruction Curriculum

- 2012 American School Board Journals Magna Award for Differentiated Instruction. (Vandenberg Elementary)
- 2011 SRAC named Michigan Alternative School of the Year
- 2011 Michigan Assn. of School Boards Excellence in Education Award for Adler Community Garden Program and Southfield High Journalism Program
- 2011 McIntyre designated a Steven Covey "Leader in Me" School
- 2011 Southfield Lathrup designated as an International Baccalaureate School
- Michigan Interscholastic Press Assn. Spartan Award (Southfield High 2001-2010)

School & District Accreditation

In 2008, Southfield Public Schools became the sixth school district in Michigan to receive district accreditation from the AdvancED/North Central Assn. of Colleges & Schools. All regular K-12 schools in the Southfield School District are fully accredited by NCA. The Bussey Center is accredited by the National Association for the Education of Young Children. This means that Southfield schools meet nationally recognized standards for quality.

Class Size

The ratio of professional staff to students in the Southfield Public Schools is 1:15. Class sizes are relatively small. Maximum class sizes* are as follows – Kindergarten-grade 1, 27; grades 2-3, 28; grades 4-5, 29; grades 6-8, 30; and grades 9-12, 32 students.

(* Occasionally, a class will exceed the numbers stated above – a teacher assistant is assigned to classrooms above the stated maximums.)

Early Warning Legislation

In July 2015 "Early Warning" legislation was signed into law by Governor Snyder, which is a Michigan law (P.A. 109 of 2015) that requires schools to submit a balanced budget with a 5% fund balance for the two most recent years. This legislation requires the Southfield Public School district has to show a two-year balanced budget. If this threshold is not met, the state requires the school district to enter into an enhanced deficit elimination plan. If the district fails to submit or comply with this plan, the State may appoint an emergency manager and transfer control of the district's finances over to the Department of Treasury.

In 2015, the Southfield Public School District realized that their current model was unsustainable and needed to act proactively to restructure in order to stay solvent. The district

lost 38% of its revenue over the past 10 years due to declining enrollment. In fact, enrollment is down across the State due to reduced birth rates. In addition, revenue has been severely affected by the loss of State revenue and the expansion of charter schools.

Imagine 2020 is the restructuring of Southfield Public Schools to enhance academic quality, improve student performance and ensure the financial strength of the district. This initiative increases educational opportunities for students, implements a preschool program at all elementary schools, enhances the environment for English Language Learners and special education students, reduces district expenditures and consolidates resources.

Effective in the 2015-16 school year, the district froze new hires, vacancies, wage increases, purchases (not necessary for core instructional and operational maintenance), technology refreshes and non-grant travel (unless approved by the superintendent).

Restructuring

Restructuring of the district will occur in 2016-17 (see Map 10-2, Community Facilities). The proposed changes include:

- Closing Adler and Brace-Lederle schools. Adler and Brace-Lederle were selected to close based on how much of their buildings were being used for core instructional classes, a facilities usage report prepared by Plante Moran CRESA, and other factors. Students affected by these closures will be assigned a new home school according to revised boundaries (extended southward by approx. 1.5 miles). Parents will also have the option to select a school of choice based on availability. Note: Adler will be kept open through the 2016-17 school year and be re-evaluated on a year to year basis.
- Combining Southfield High and Southfield-Lathrup into one comprehensive high school serving the students of Southfield and Lathrup Village at the building Southfield High School currently occupies. The community will have input into the name, color and mascot selection for the new comprehensive high school. However, Southfield Public School students will be allowed to make the final selections.
- Launch the first cohort of students into the Accelerated College Experience (ACE) Early College program with Oakland Community College.
- Launch an ROTC program in partnership with the United States Air Force.

- Moving University High School Academy, UPREP and MacArthur (2nd -8th grades) to the building Southfield-Lathrup H.S. currently occupies.
- Moving MacArthur (K-1st grades) into the building Bussey Center currently occupies.
- Relocating the Bussey Center into the building MacArthur currently occupies.
- Create a secondary 6-12 English Language Learners (ELL) magnet at the new K-12 campus.
- Move the Next Step program at Levey to the Kennedy Learning Center.
- Expand focus on early childhood by placing one preschool class in all K-5 schools.
- Maintaining all current programs.
- Unifying the two athletic programs to expand opportunities for all students.
- Elementary and middle school students who live more than a mile from school and high school students who live more than a 1 ½ miles will receive transportation as usual. School of choice students will not receive transportation according to district policy.

Imagine 2020 is estimated to save the district approximately $8.3 million per year.

Finally, there may be opportunities to repurpose closed schools or redevelop closed school sites into single family, multi-family or mixed-use development.

Private and Charter Schools

In addition to the public schools, there are a number of other charter, private and parochial schools at all levels in the area. At the time this plan was prepared there were 15, not including early childhood centers.

Charter schools in Southfield enrolled over 5,000 Southfield students in the 2013-14 academic year, while nearly 1,300 Southfield students attended private schools both in the City of Southfield and across the Metro Detroit area.

Colleges and Universities

The City of Southfield is home to many institutions of higher learning, including these two notable higher educational institutions:

Lawrence Technological University (LTU)

"Lawrence Technological University's major focus at this time is the creation of additional space to accommodate emerging fields in engineering, the life and other sciences, and architecture. Looking ahead, it is likely that the University will continue to consider additional on-campus student housing and the building out of amenities that address needs for student recreation and athletics, conference and meeting spaces, campus beautification, applied research, and a host of other scholastic and academic needs."

Lawrence Technological University (LTU), www.ltu.edu, is a premier private university providing superior education through innovative programs, cutting-edge technology, small class sizes, and a commitment to its motto, "theory and practice." Lawrence Tech offers more than 100 undergraduate, master's, doctoral and professional certificate programs in Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management.

PayScale lists LTU among the nation's top 100 universities for return on undergraduate tuition investment, which is the highest in the Detroit metropolitan area. It is also listed in the top tier of Midwestern universities by *U.S. News and World Report* and the Princeton Review.

Lawrence Tech enrolls 4,500 students during the course of an academic year. Its three residential halls have a combined capacity of over 750 students.

The university was founded in 1932 with the support and encouragement of Henry Ford. A Lawrence Tech education strives to explain not only *why* something works, but *how* it works in real situations and applications. Established to meet the educational needs of business and commerce, LTU has continuously maintained close ties to industry in a multitude of projects in a wide variety of fields.

Many LTU academic programs require participation in professional projects that seek to solve real problems facing practicing architects, engineers, managers, scientists, and others. Students also gain hands-on experience through co-op jobs and internships. Professional organizations provide additional opportunities to network with industry leaders. Many students participate in applied research projects as early as their freshman year. Lawrence Tech students regularly earn top awards in international competition with other leading colleges and universities.

LTU graduates report, in numbers well above national norms that they arrive in the workplace feeling prepared and ready to do their jobs. Even in challenging economic times, 90 percent find career positions within six months of graduation.

Lawrence Tech's student body is diverse with more than 40 nations represented on campus. The University's Study Abroad program is open to all students, and various cultural events and celebrations focused on diversity are held annually on campus. Lawrence Tech also maintains relationships and partnerships with universities worldwide.

Lawrence Tech was Michigan's first wireless laptop computer campus and has been ranked among America's top 50 "unwired" universities. All undergraduates receive their own University-issued personal computer loaded with their field's industry-standard programs – valued up to $15,000. No other university in the nation offers 24/7 access to computing power like Lawrence Tech's LTuZone.

The A. Alfred Taubman Student Services Center consolidates all student support services – from admissions through career services – into a convenient one-stop center. This innovative 42,000-square-foot building, which utilizes many energy-efficient and environmentally friendly features and technologies, serves as a "living laboratory" and is part of a region-wide stormwater management effort. LTU's Center for Innovative Materials Research is a state-of-the-art laboratory for the research, development, and testing of materials for defense and infrastructure applications.

Lawrence Tech features a comprehensive Leadership Program, integrated into all bachelor's programs. At every level of their academic career, undergraduates are exposed to leadership experiences that nurture critical thinking, teamwork, communication skills, and measured risk taking.

Lawrence Tech offers an undergraduate honors program for highly motivated and qualified

students. The Quest Program in the College of Arts and Sciences encourages students to go above and beyond their studies and explore their interests on a deeper level. The Academic Achievement Center and the Scholars Program ease the transition from high school to college by providing support services.

In addition to exceptional educational opportunities, Lawrence Tech offers an exciting student life. A growing number of men's and women's varsity athletic programs are offered. Lawrence Tech is a member of the National Association of Intercollegiate Athletics and the American College Hockey Association. More than 60 student clubs and organizations, including student government, fraternities, sororities, honor societies, and student chapters of professional groups, sponsor a variety of activities during the year.

LTU has a "Town & Gown" relationship with the City of Southfield and works closely with the City to create a viable community for students, visitors, residents and businesses.
For more information on future plans of LTU, see Chapter 8, Southfield City Centre (SCC) District sub-area plan.

Oakland Community College (OCC)

With eight campuses in Southeast Michigan, OCC has an enrollment over 70,000. The Mission, Vision and Strategic Priorities of the College are as follows:

Mission

OCC is a student-centered institution that provides high-quality learning opportunities and services for individuals, communities and organizations in an accessible and affordable basis.

Southfield Campus

The Southfield Campus, located at 22322 Rutland Drive (west of Providence Hospital, south of Nine Mile Road), within the Southfield Downtown Development District.

The OCC Southfield Campus offers college readiness, degree and transfer programs, and serves as a major resource for the primary and continuing education of health professionals. State-of-the-art laboratories support an array of health professions programs, including:

- Diagnostic Medical Sonography

- Nuclear Medicine Technology
- Nursing
- Radiologic Technology
- Respiratory Therapy Technology
- Surgical Technology

Approximately 4,000 students attend the Southfield Campus each fall. Nearly half of Southfield students are pursuing an OCC degree or certificate, followed by approximately 42 percent of students seeking to transfer to a four-year institution. Programs with the largest enrollment at the Southfield Campus are nursing followed by business administration.

The campus, one of five in the OCC system, offers easy entry to the Lodge and Southfield Expressways, and is on public transportation routes to provide students convenient access. Its urban setting is central to Berkley, Beverly Hills, Oak Park, Southfield, and the border of Wayne County.

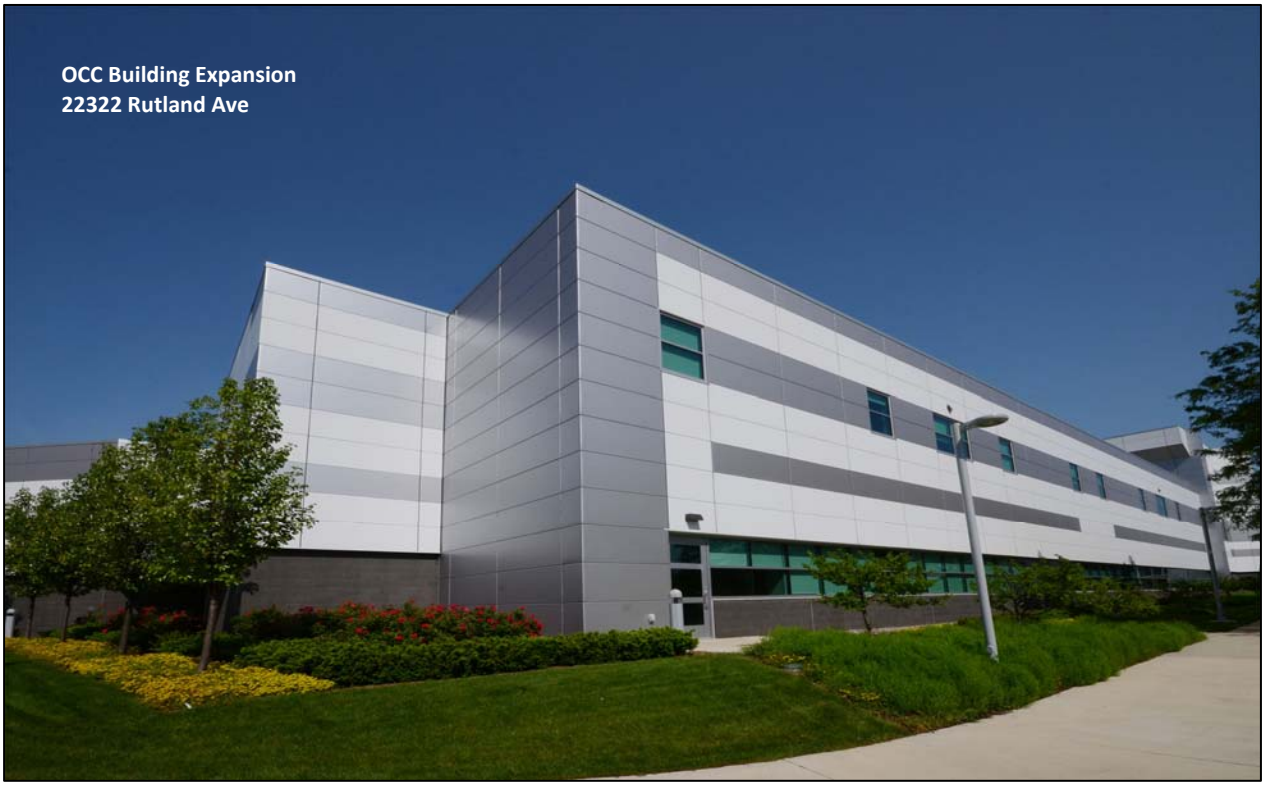
Strategic Priorities

Strategic priorities are performance areas where investments of resources will add the most value to advancing student success and achievement of our vision.

- College Readiness (Developmental Education)
- Employment Readiness (Career and Technical Programs)
- Transfer Readiness
- Financial Accountability

Vision

OCC is a comprehensive institution of higher learning that effectively meets community needs and student interest in a measureable manner, promoting student success.



Religious Institutions

Southfield has a diverse population with varied spiritual interests. As a result, the City contains over fifty religious institutions and places of worship.

RECOMMENDATIONS

City Government

The City currently offers a well-organized structure to handle the demanding daily issues of a mature community. The responsibility of implementing various recommendations will fall on different departments and include different jurisdictions. In the years following adoption of the plan it will be important that all of the departments coordinate on a regular basis regarding the implementation status of this plan. These efforts should be organized in a way so everyone is communicating efficiently and duplication of efforts is avoided. A Capital Improvements Plan (CIP) is a means of coordinating the long-term projects of each department with a priority level and funding source. CIPs typically cover six-year periods and are updated annually.

There will be occasions where strategies and recommendations are inconsistently defined or interpreted, therefore is it important that regular communication sessions are held between Department heads. These sessions will help to ensure consistent interpretation of goals, brainstorming implementation strategies and conflict resolution.

Public Safety

The fire and police departments are important resources in implementing this plan and building upon the assets and quality of life in the City. Both departments should continue to use their current programs and services to improve neighborhood and business safety and increase the feeling of safety throughout the community.

The Southfield Police Department has specific priorities for the future including:

- Continue implementation of non-traditional police management concepts, or the private sector approach to governmental management. That is, increase the level of service by viewing the public and police employees as customers and addressing their needs.
- Develop and encourage a leadership style that will support a high level of service by retaining a developing our personnel.
- Continue community policing programs, partnerships between police, business, schools, and citizens, designed not only to solve crime, but to help solve related problems.

For all public safety elements, it is important to remember that the more open and visible these departments and efforts are to the public, the more at ease citizens will feel. This will, in turn, garner long-term stability amongst residents and business owners and assist with residential

and economic growth.

Southfield Public Schools

Early Childhood is an essential time for children to learn as this is when the foundation of learning is cemented for the rest of their lives. Children benefit developmentally, socially, and academically from participating in high-quality early care and education (ECE) programs. A plethora of research studies have indicated that high quality early education promotes school readiness, literacy/numeracy skills, and other positive short and long term outcomes. (Source: "*The Short and Long Term Impacts of Large Public Early Care and Education Programs*")

There may be opportunities to repurpose closed schools or redevelop closed school sites into single family, multi-family or mixed-use development. A strong and solvent school system is important for a healthy and vibrant community.

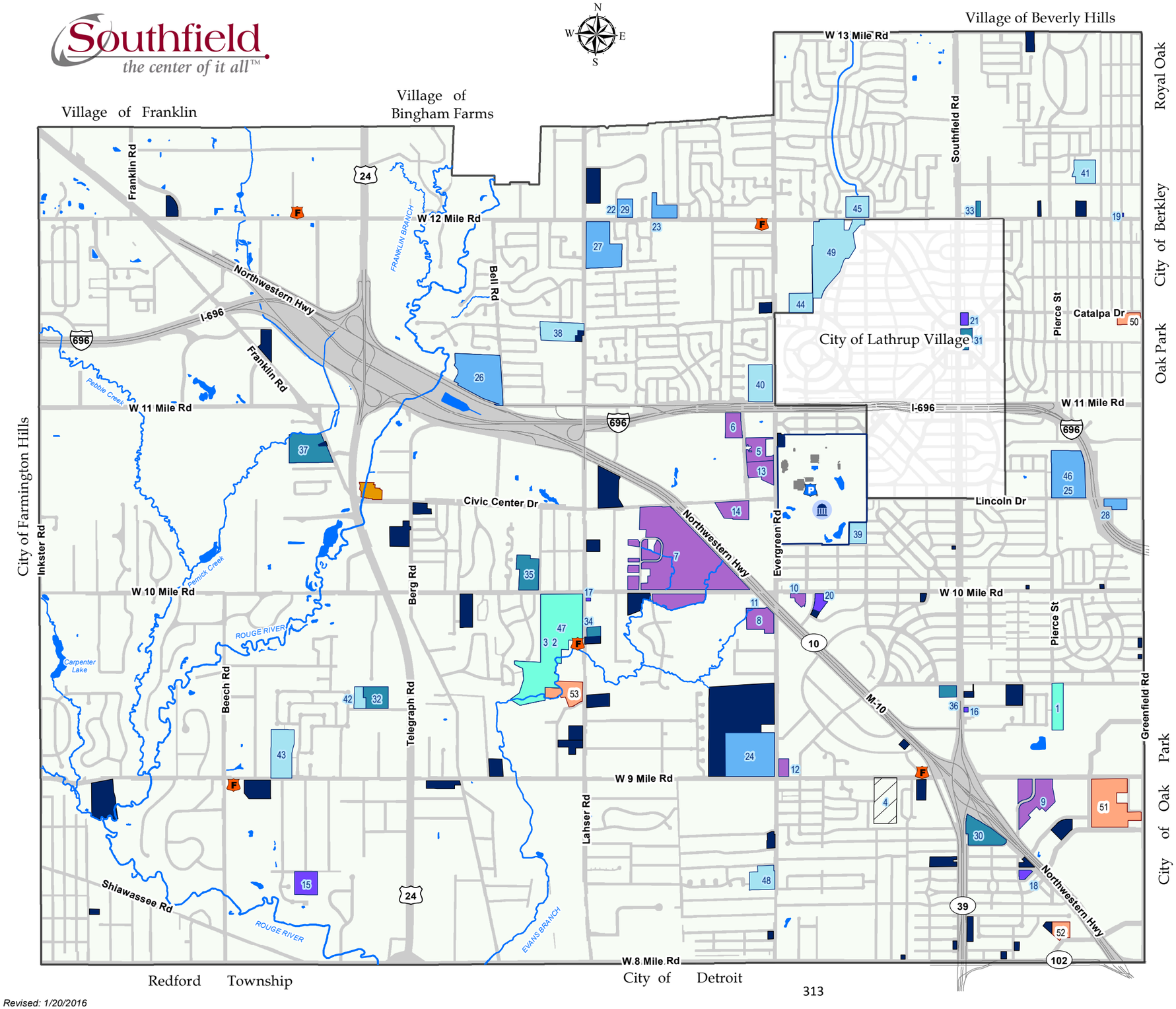
Library, Educational and Religious Institutions

Institutional resources such as libraries, schools and places of worship enrich the lives of citizens and are important in attracting new businesses and residents to the region.

Institutional resources should be showcased consistently as this plan is implemented. Most importantly, the City of Southfield should work to highlight these facilities in promotional materials to help market the City.

Southfield
the center of it all™

Sustainable Southfield
Map 10-2: Community Facilities



- Southfield Municipal Campus
- Fire Station
- Police
- Water
- Southfield Public Schools Administrative Center
- Early Childhood Development
- College / University
- Private School
- Private School (Charter)
- Public School
- Closed
- Religious Institutions
- Medical Facilities
- Public Senior Housing (McDonnell Towers)

LABEL	NAME	TYPE
1	John F. Kennedy Learning Center	Administrative Center
2	John W. English Administrative Center	Administrative Center
3	Technology Center (Southfield High Annex)	Administrative Center
4	Brace-Lederle K-8 School	Closed
5	Central Michigan University (Southfield Campus)	College / University
6	DeVry University (Southfield Campus)	College / University
7	Lawrence Technological University	College / University
8	Marygrove College (Southfield Center)	College / University
9	Oakland Community College (Southfield Campus)	College / University
10	Siena Heights University (Southfield Center)	College / University
11	Siena Heights University (Southfield Center)	College / University
12	Specs Howard School of Media Arts (Trade School)	College / University
13	University Of Phoenix (Southfield Learning Center)	College / University
14	University of Phoenix (Town Center Learning Center)	College / University
15	Bussey Center For Early Childhood	Early Childhood Development
16	Eagle's Nest Montessori	Early Childhood Development
17	Little Angels Child Care	Early Childhood Development
18	Magnolia Center	Early Childhood Development
19	Summer School	Early Childhood Development
20	Victory Learning Center	Early Childhood Development
21	Village Early Learning Center	Early Childhood Development
22	Agency for Jewish Education	Private School
23	Akiva Hebrew Day School	Private School
24	Faith Christian Academy	Private School
25	International Montessori Acadmey	Private School
26	Sharrey Zedek Hebrew School	Private School
27	Southfield Christian School	Private School
28	Yeshiva Beth Yehudah	Private School
29	Yeshivas Darchei Torah	Private School
30	A.G.B.U. Alex & Marie Manoogian School	Private School (Charter)
31	Academy Of Lathrup Village	Private School (Charter)
32	Bradford Academy	Private School (Charter)
33	Crescent Academy	Private School (Charter)
34	Laurus Academy	Private School (Charter)
35	Oak Montessori / Woodmont Academy	Private School (Charter)
36	PACE Academy	Private School (Charter)
37	Taylor International	Private School (Charter)
38	Adlai Stevenson Elementary School	Public School
39	Adler Elementary School/Planitarium	Public School
40	Alice M. Birney Middle School	Public School
41	Arthur H. Vandenberg Elementary School	Public School
42	Bradford Academy High School	Public School
43	Glenn Levey Middle School	Public School
44	Helen Mcintyre Elementary School	Public School
45	Macarthur K-8 University Academy	Public School
46	Mary Thompson Middle School	Public School
47	Southfield High School	Public School
48	Southfield Regional Academic Campus	Public School
49	University High School Academy	Public School
50	Oakland County Board of Health	Medical Facility
51	Providence Hospital	Medical Facility
52	Salvation Army	Medical Facility
53	Straith Hospital for Special Surgery	Medical Facility

Miles

0 0.5 1 2

1 inch = 2,850 feet

Draft 3/1/16

Revised: 1/20/2016

CHAPTER 11: IMPLEMENTATION

Each of the following master plan themes and goals has a list of action items towards achieving implementation.

1. **Livable Built Environment**

   Ensure that all elements of the built environment, including land use, transportation, housing, energy, and infrastructure, work together to provide sustainable, green places for living, working, and recreation, with a high quality of life.

   1.1 Plan for multimodal transportation. Provide transportation options--like public transit, biking, and walking– that help reduce traffic and air pollution.
   1.2 Plan for transit-oriented development.
   1.3 Coordinate regional transportation investments with job clusters.
   1.4 Provide complete streets serving multiple functions.
   1.5 Plan for mixed land-use patterns that are walkable and bikeable.
   1.6 Plan for infill development.
   1.7 Encourage design standards appropriate to the community context.
   1.8 Provide accessible public facilities and spaces.
   1.9 Conserve and reuse historic resources.
   1.10 Implement green building design and energy conservation.
   1.11 Discourage development in hazard zones.

2. **Harmony with Nature**

   Ensure that the contributions of natural resources to human well-being are explicitly recognized and valued and that maintaining their health is a primary objective.

   2.1 Restore, connect, and protect natural habitats and sensitive lands.
   2.2 Plan for the provision and protection of green infrastructure.
   2.3 Encourage development that respects natural topography.
   2.4 Enact policies to reduce carbon footprints.
   2.5 Comply with state and local air quality standards.
   2.6 Encourage climate change adaptation.
   2.7 Provide for renewable energy use.
   2.8 Provide for solid waste reduction.
   2.9 Encourage water conservation and plan for a lasting water supply.
   2.10 Protect and manage streams, watersheds, and floodplains.
   2.11 Maintain and improve the quality of the air, water, land and sensitive resources for the long term.
   2.12 Understand the risks and undertake measures to protect residents from pollution and potentially polluting industries and land uses, including but not

limited to the exploration and development of hydrocarbon resources including oil, natural gas and the handling and use of associated wastes and inputs.

3. Resilient Economy

Ensure that the community is prepared to deal with both positive and negative changes in its economic health and to initiate sustainable urban development and redevelopment strategies that foster green business growth and build reliance on local assets.

3.1 Provide the physical capacity for economic growth.
3.2 Plan for a balanced land-use mix for fiscal sustainability.
3.3 Plan for transportation access to employment centers.
3.4 Promote green businesses and jobs.
3.5 Encourage community-based economic development and revitalization.
3.6 Provide and maintain infrastructure capacity in line with growth or decline demands.
3.7 Plan for post-disaster economic recovery.
3.8 Use public art, banners, landscaping, and distinctive street lighting to brand these mixed use subareas as desirable destinations.

4. Interwoven Equity

Ensure fairness and equity in providing for the housing, services, health, safety, and livelihood needs of all citizens and groups.

4.1 Provide a range of housing types.
4.2 Plan for a jobs/housing balance.
4.3 Plan for the physical, environmental, and economic improvement of at-risk, distressed, and disadvantaged neighborhoods.
4.4 Plan for improved health and safety for at-risk populations.
4.5 Provide accessible, quality public services, facilities, and health care to minority and low-income populations.
4.6 Upgrade infrastructure and facilities in older and substandard areas.
4.7 Plan for workforce diversity and development.
4.8 Protect vulnerable populations from natural hazards.
4.9 Promote environmental justice.

5. Healthy Community

Ensure that public health needs are recognized and addressed through provisions for healthy foods, physical activity, access to recreation, health care, environmental justice, and safe neighborhoods.

5.1 Reduce exposure to toxins and pollutants in the natural and built environments.
5.2 Plan for increased public safety through reduction of crime and injuries.
5.3 Plan for the mitigation and redevelopment of brownfields for productive uses.
5.4 Plan for physical activity and healthy lifestyles.
5.5 Provide accessible parks, recreation facilities, greenways, and open space near all neighborhoods.
5.6 Plan for access to healthy, locally grown foods for all neighborhoods.
5.7 Plan for equitable access to health care providers, schools, public safety facilities, and arts and cultural facilities.
5.8 Promote mix land use and land use density that supports short distances between homes, workplaces, schools, and recreation so people can walk or bike more easily to them.
5.9 Expand pedestrian and bicycle infrastructure, including sidewalks and bike paths that are safely removed from automobile traffic, as well as good Rights-Of-Way (ROW) laws and clear, easy-to-follow signage.
5.10 Make the healthy choice the easy choice for all community members regardless of age, income, ability, or cultural custom.
5.11 Conduct a Health Impact Assessment (HIA) on a regular basis, which is a step-by-step process that brings potential public health impacts and considerations to the decision-making process for plans, projects, and policies that fall outside of traditional public health arenas, such as transportation and land use.
5.12 Continue to promote and support annual Healthy Initiatives with local health care professionals and organizations.
5.13 Promote healthy and active lifestyle challenges at the City's parks, recreational facilities, and civic buildings.
5.14 Support AHA "Fit-Friendly" Worksite- creating a healthy work environment in municipal facilities.
5.15 Integrate a public health checklist into the site plan review process to promote and encourage a healthy and active lifestyle.

6. Responsible Regionalism

Ensure that all local proposals account for, connect with, and support the plans of adjacent jurisdictions and the surrounding region.

6.1 Coordinate local land-use plans with regional transportation investments.
6.2 Coordinate local and regional housing plan goals.
6.3 Coordinate local open space plans with regional green infrastructure plans.
6.4 Delineate designated growth areas that are served by transit.
6.5 Promote regional cooperation and sharing of resources.

6.6 Enhance connections between local activity centers and regional destinations.
6.7 Coordinate local and regional population and economic projections.
6.8 Include regional development visions and plans in local planning scenarios.
6.9 Encourage consistency between local capital improvement programs and regional infrastructure priorities.
6.10 Strive to work with neighboring jurisdictions to protect the environment.
6.11 Collaborate with neighboring local government units to plan shared-use trail systems and greenways.

7. Active Living

Promote active living by making it safer to walk or bike to daily activities like shopping, work, school, and recreation.

7.1 Link destinations that promote health, such as schools, parks, grocery stores, and work places, via a transportation network that facilitates safe travel for pedestrians, bicyclists, public transportation users, and automobile occupants.
7.2 Adopt and promote Safe Routes To School (SR2S)Programs.
7.3 Promote easy and accessible options for routine physical activity, such as walking to and from schools, parks, recreational facilities, retail centers and religious facilities.
7.4 Require pedestrian pathways and connections from business entrances and parking lots to the public pathway system.
7.5 Adopt a complete streets policy.
7.6 Promote use of public transit systems by providing enhanced pedestrian amenities (such as key walks, benches, bus shelters, bus signs, etc.) and pathways.
7.7 Fill gaps in the pedestrian pathway and bike network in the higher density residential areas and non-residential destinations.
7.8 Continue to support and build bike facilities, including but not limited to: bike pathways, bike routes, bike lanes, bike parking & storage and bike maintenance facilities.
7.9 Consider the health impact of land use decisions by seeking advice from public health professionals on the potential health effects of a project or policy before it is built or implemented.
7.10 Keep in mind the needs of children as well as elderly and disabled residents when planning for facilities and infrastructure.
7.11 Develop trials and walking paths in our parks, nature preserves and along the Rouge River corridor to promote active living.
7.12 Make arterial roads more walkable by installing sidewalks on both sides of the road and crosswalks every 600 feet (or about the length of a downtown city block).

7.13 Build median refuge islands in roads where appropriate and plant street trees to slow motor vehicle traffic.
7.14 Implement "road diets" to accommodate bicyclists, where appropriate.
7.15 Establish funding mechanisms to further develop pathways, common open spaces, such as parks, greenways and trails.

8. Low Impact Design

Require Low Impact Design elements to be incorporated into all new development and major redevelopment sites.

8.1 Incorporate wetlands into watershed planning; apply techniques such as soil amendments and bio-retention; harvest rooftop rainwater, and use permeable pavement to better deal with stormwater runoff, and restore ecologic water balances.
8.2 Filter water naturally through the soil, trees, green roofs, or rain gardens to improve the quality of our drinking water, and our lakes, rivers and streams.
8.3 Reduce urban heat island effects by: creating more passive parks, green rooftop parks, gardens and green spaces; making building energy-efficient, and minimizing the use of dark surfaces that absorb heat and re-radiate that heat during the evenings, when the cities would otherwise cool down.
8.4 Require manmade and natural landscape features to handle storm water as a resource rather than a waste product.
8.5 Support and require Green Infrastructure (GI) techniques, including constructed practices such as rain gardens, bio-swales, native plant grow zones, permeable pavement, green roofs and even community gardens.

9. Social Capital

Promote and encourage individual and communal time and energy available for such things as community improvement, social networking, civic engagement, personal recreation, and other activities that create social bonds between individuals and groups.

9.1 Encourage more communication between residents and home owner groups, condo associations, neighborhood organizations and multi-family complexes.
9.2 Encourage more participation in community events (and bringing more community events to the City in general).
9.3 Support mixed use development, which allows a community member to work closer to where they live, thus reducing their amount of commuting time and increasing their time for leisure and social activities.
9.4 Promote diverse housing options and price levels so that all persons regardless of income can live in the same community where they work, play and worship.

9.4 Allow diverse housing options and price levels so that all persons regardless of income can live in the same community where they work, play and worship.
9.5 Promote fair access to livelihood, education, and resources for all community members.
9.6 Encourage full participation in the political and cultural life of the community.
9.7 Create a community that ensures freedom of choice and supports bike lanes and paths, sidewalks, and transit stations and stops.

10. Smart Growth

Adopt Smart Growth policies, which is an approach to achieving communities (i.e. Southfield) that are socially, economically, and environmentally sustainable.

10.1 Preserve and enhance valuable natural and cultural resources;
10.2 Equitably distribute the costs and benefits of land development, considering both participants and the short- and long-term time scale;
10.3 Create and/or enhance economic value;
10.4 Expand the range of transportation, employment, and housing choices in a fiscally responsible manner;
10.5 Balance long-range, regional considerations of sustainability with short-term incremental geographically isolated actions;
10.6 Promote public health and healthy communities;
10.7 Apply up-to-date local and regional performance measures of successful urban and regional growth;
10.8 Encourage compact, transit-accessible (where available), pedestrian-oriented, mixed-use development patterns and land reuse; and,
10.9 Increase collaboration and partnerships to advance place-based and regional goals and objectives, while respecting local land-use preferences and priorities.

11. Urban Agriculture

Adopt policies and regulations that promote and support urban agriculture activities to ensure various forms of agriculture are appropriately integrated into Southfield.

11.1 Engage residents, home-owner groups & associations, growers and organizational stakeholders directly to help identify which of the many forms and scales of urban agriculture are best suited to which neighborhoods or zones.
11.2 Survey community-owned land to identify and categorize potential sites for urban agriculture activities.
11.3 Review ordinances to assess whether home, community and commercial gardening activities, including keeping of animals, may present conflicts.

11.4 Amend the Zoning Ordinance to expand urban agriculture where appropriate, consistent with Sustainable Southfield and the Future Land Use Plan.
11.5 Explore if and where structures associated with urban agriculture, including tool sheds, hoop houses and barns, may be allowed even without a primary residential or commercial building on site and designate them as permanent, temporary or accessory in ways that are supportive of farm and garden activities.
11.6 Ensure municipal services, such as sewer, water and trash pick-up are available to market gardens and commercial urban farms in the same way that such services would be made available to other commercial or industrial uses.
11.7 Provide direct municipal support for urban agriculture through community departments, or community-run programs.
11.8. Support composting programs that offer compost to urban agriculture sites or permit household and commercial composting to occur while also ensuring nuisances are not created as a consequence.
11.9 Review leases, easements, trusts or other conveyances of community-owned land to promote the long-term and secure practice of urban agriculture where such a use is consistent with the master plan and does not place an undue burden on cities to maintain under-utilized urban infrastructure (e.g., roads, water, and sewer constructed to serve more intense residential, commercial, or industrial uses).

12. Food Systems

Promote easy access to healthy food, which is good for human health. Sustainable food systems are essential for healthy, sustainable communities.

12.1 Expand and increase innovative methods to bring healthy foods to underserved areas as well as strategies to encourage their consumption.
12.2 Improve school (& public facilities) food environments and reduce school sales of low-nutrient, high-sugar, high-fat and calorie-dense foods through snack and vending machines or competitive food sales.
12.3 Maximize use of current public benefit programs for vulnerable populations, especially children and seniors, and link them with strategies for healthy food access.
12.4 Provide outreach, training and technical assistance to launch new grocery stores and improve existing stores to better serve underserved people in Southfield.
12.5 Establish food business districts, if necessary, to encourage food businesses to locate in the same area and to support their collaboration.
12.6 Use policy and planning strategies to increase access to healthy food in underserved areas.
12.7 Encourage institutions-including schools, hospitals, colleges and universities-to use their collective purchasing power to influence the food supply

chain to provide healthier food and more foods grown, raised and processed in Michigan.

13. **Aging in Community Policy**

Promote and support policies to encourage aging in place with a continuum of care.

13.1 Actively Involve Older Adults and Engage the Aging Perspective in the Planning Process.
13.2 Ensure a Range of Affordable Housing Options is Available for Older Adults.
13.3 Ensure Access to Quality Transportation Options for Older Adults.
13.4 Use Land-Use and Zoning Tools to Create a Welcoming Southfield for Older Adults.
13.5 Support the Economic Well-Being of Older Adults and their Caregivers.
13.6 Strengthen the Community Assets of and Supports for Older Adults.
13.7 Review AARP's Livability Index to determine areas for improvement and develop an action plan towards implementation.
13.8 Develop a centrally located, modern and multi-purpose senior center.

14. **Hazard Mitigation**

Improve the City's preparedness, resilience and sustainability in the face of both natural and human-caused hazards.

14.1 Improve emergency response or operational preparedness.
14.2 Review FEMA's Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards and develop an Action Plan to address mitigation to reduce natural hazards and disasters.
14.3 Adopt policies to reduce storm water runoff. Incorporate Flood Mitigation in Local Planning.
14.4 Map and Assess Vulnerability to Erosion. Promote or Require Site and Building Design Standards to Minimize Erosion Risk.
14.5 Reduce Urban Heat Island Effect.
14.6 Improve Flood Risk Assessment.
14.7 Improve Stormwater Drainage System Capacity. Conduct Regular Maintenance for Drainage Systems and Flood Control Structures.
14.8 Protect Infrastructure and Critical public facilities from flood events.
14.9 Preserve Floodplains as Open Space.
14.10 Increase Awareness of Flood Risk & Safety and Educate Property Owners about Flood Mitigation Techniques.
14.11 Conduct Winter Weather Risk Awareness Activities.
14.12 Protect vulnerable populations from the impacts of severe storms.
14.13 Conduct A Self-Assessment to Address Climate Change Readiness in Southfield.

14.14 Review the 2012 Oakland County Hazard Mitigation Plan (HMP) Update (Plan) to better understand significant Oakland County hazards and their impacts and to identify ways to mitigate those hazards.
14.15 Provide continuing training for potential hazmat emergencies.
14.16 Provide funding to continue to upgrade emergency equipment to deal with all types of emergencies.

15. Public Art

Promote the public welfare and serve the public interest, convenience, and enjoyment through the promotion of the arts in the City of Southfield, by establishing physical works of art in public places throughout the City.

15.1 Encourage and stimulate citizens, developers, landowners, contractors and architects to provide and support displays of works of art for public enjoyment;
15.2 Develop and promulgate a comprehensive public art plan for the City.
15.3 Reinforce the City's place-making goals by commissioning works of art that are distinctive, yet particularly reflect and promote the City's identity or the identity of individual neighborhoods or business districts within the City;
15.4 Assure that within the overall public art program reasonable diversity is attained in style, scale, media, and materials represented;
15.5 Collaborate with the business community and private project development within the City to promote and enhance the inclusion of public works of art within the development, where appropriate;
15.6 Promote community identity through public works of art within neighborhood and business districts.
15.7 Promote the economic vitality of the City through a broad range of public art projects.

16. Economic Development

Focus on business attraction, business retention, creating jobs and growing the city's revenue base.

16.1 Retain, expand, and attract businesses Citywide, emphasizing **Innovation**;
16.2 Cultivate **Entrepreneurship** in Southfield;
16.3 **Create jobs** and Workforce Training opportunities for Southfield residents in diversified business sectors; and,
16.4 **Promote** Southfield, locally, regionally, nationally and globally, as an innovative and advanced place by reinforcing the strengths of our diverse residential, educational, cultural, and business communities.
16.5 Understand and implement "Placemaking" as a vital part of economic development.

16.6 Target three industries (Technology-Based Businesses; Health Care and Wellness Industries; and Automotive - Research & Development) that will drive diverse job creation, compliment the strengths of our community, and promote a climate for growth.
16.7 Help Southfield residents gain a greater competitive edge for higher skilled and higher wage employment opportunities in the future.
16.8 Leverage greater leadership involvement, private and public sector investment and increased access to high quality business and job development opportunities for the City in the future.
16.9 Help existing Southfield business employers become more competitive, enabling them to expand and grow in the City.
16.10 Encourage and assist with the future diversification of the City's economic base in new growing and innovative industries and occupations.
16.11 Leverage economic development tools to attract and retain business.

17. Housing

Provide a diverse and stable housing stock providing for a range of housing opportunities for all income groups and a quality living environment for all persons.

17.1 Conduct a residential target market analysis for housing to determine the types and quantities of housing needed in Southfield to be competitive now and in the future.
17.2 Continue to preserve, protect and enhance the integrity, economic viability and livability of Southfield's neighborhoods.
17.3 Provide greater housing choices and options to meet the changing residential needs of the market place.
17.3 Create a unique identity for all Southfield neighborhoods.
17.4 Southfield should use a variety of basic strategies/programs to improve the appearance and value of existing neighborhoods.
17.5 Continue to work in coordination with local lending institutions and realtors and explore the availability and application of neighborhood investment/reinvestment programs.
17.6 Meet annually with condominium associations to provide guidance on how to manage legal and maintenance issues.
17.7 Community awareness programs should be conducted on topics such as neighborhood blight, annual refuse collection, and comprehensive code enforcement efforts in and around residential neighborhoods.
17.8 Review the City's enforcement policies and procedures to identify ways in which to improve regulatory enforcement of and compliance with existing laws.
17.9 Implement a traffic calming program in neighborhoods that have problems with cut-through traffic.
17.10 Establish financing mechanisms for the purchase and redevelopment of foreclosed homes and residential properties.

17.11 Provide appropriate senior housing options with a continuum of care.
17.12 Plan for appropriate infill housing in areas of the City with vacant or closed schools, large lots with underdeveloped neighborhoods.
17.13 Work with Southfield Public School administration to come up with appropriate and context sensitive redevelopment plans, including housing options, for closed and vacant school buildings and sites.
17.14 Identify and designate one or more Neighborhood Enterprise Zones (NEZ), consistent with Public Act 147 of 1992, as amended.
17.15 Pass a housing inspection ordinance.
17.16 Adopt a statement of Southfield's goals, objectives, and policies relative to the maintenance, preservation, improvement, and development of housing for all persons regardless of income level living within the proposed NEZ.
17.17 Utilize CDBG funds to benefit low and moderate income persons, senior citizens, and projects which facilitate compliance with the American with Disabilities Act (ADA) and/or historic preservation.

18. Land Use

Create a diversified and balanced mixture of land uses that will support the economic vitality, tax base, and livability of the City.

18.1 Complete the Land Based Classification System Inventory (LBCS) to add the following multiple dimensions to the existing land use inventory: Function, Structural Type, Site Development and Ownership.
18.2 Establish a land use pattern that characterizes the City's sub areas as unique destinations consisting of compatible yet diversified uses.
18.3 Continue to develop the City's sub-areas as unique mixed-use employment centers and destinations.
18.4 Offer unified, well-organized residential neighborhoods that provide a variety of housing options in a livable environment for the City's residents.
18.5 Provide for an appropriate amount of mixed-use commercial, office, and industrial uses, located for convenience and safety, resulting in aesthetic business areas in the City.

Sub-Area Plans

18.6 Focus on redeveloping older, outdated, and underdeveloped sites while integrating new construction, upgrading facades, increasing street appearance, parking lot screening & landscape enhancements, and pedestrian connectivity.
18.6 Develop reasonable site design standards and sign regulations for new development and redevelopment within pertinent sub-areas within the City.
18.7 Identify areas ripe for infill housing development and develop future land-banking strategies.

18.8 Plan for a safe, efficient circulation system that provides sufficient access by all modes of transportation between nodes of activity within sub-areas and adjacent residential neighborhoods.
18.9 Establish partnerships between the public sector and private sector for the purpose of understanding the mutual benefits of proposed redevelopment projects.
18.10 Create investment strategies that will increase tax base, and generate additional revenues to finance actions, which support the Plan's goals.
18.11 Provide creative incentives (i.e. Brownfield Redevelopment tools) to private sector participants in redevelopment projects and programs.
18.12 Expand the economic base of the sub-areas by retaining existing jobs while creating new diverse employment opportunities.
18.13 Promote effective communication and a cohesive, cooperative spirit among various public and private leaders in the three communities and County, using the venues and talents of existing civic organizations and committee.
18.14 Enhance the appearance of gateways and portals at strategic locations within sub-areas to include streetscape elements: landscaping, signage, way-finding and art installations.
18.15 Encourage low impact design and sustainable development.
18.16 Support street level uses that are pedestrian-oriented and contribute to the vibrancy of the street
18.17 Establish patterns of land use and circulation that promote the desired pedestrian character of the area.
18.18 Maintain/modify roads and pedestrian walkways, or regulate vehicular traffic or parking.
18.19 Acquire, maintain, and operate properties, off-street parking lots, or contract for such operation by others, where appropriate.
18.20 Construct, maintain, and operate public spaces with bus stops, information centers, and other buildings that serve the public interest.
18.21 Acquire, maintain, and operate real or personal property necessary to implement (re)development.
18.22 Promote economic activity in the sub areas, specifically by initiating market research, public relations campaigns, institutional promotions, and sponsorship of special events and related activities.
18.23 Levy special assessments against land or interests in land, or both; and
18.24 Issue bonds to cover the capital costs of projects, where appropriate.
18.25 Acquire (through purchase, lease, or gift), construct, improve, or operate park and planting areas; and plant and maintain trees, shrubs, and flowers within the sub areas, where appropriate.
18.26 Acquire, construct, clean, improve, or relocate sidewalks, street curbing, street medians, fountains, and lighting within the sub areas, where appropriate.
18.27 Develop and propose lighting standards within the sub areas, where appropriate.

18.28 Provide or contract with public or private entities for security services or purchase security-related equipment or technology, where appropriate (I.e. former Northland Mall site).
18.29 Promote economic activity in the sub areas (i.e. City Centre) by sponsoring cultural or recreational activities; recruiting developers and businesses; promoting and marketing businesses, retail, or industrial development.
18.30 Engage in public relations and market research.
18.31 Acquire, maintain, and operate real or personal property as required.

19. Redevelopment Ready

To be vibrant and competitive, Southfield must be ready for redevelopment. This involves planning for new investment and re-investment, identifying assets and opportunities, and focusing limited resources.

19.1 At least every 5 years after adoption of the Master Plan, the Planning Commission and City Council shall review the master plan and determine whether to commence the procedure to amend the Master Plan or adopt a new master plan.
19.2 Update and formally adopt a 6-year CIP on an annual basis.
19.3 Align the Zoning Ordinance with the goals of the Master Plan.
19.4 Streamline the Site Plan Review process, where feasible.
19.5 Update the City's Economic Development Strategy on a regular basis.
19.6 Repurpose contaminated, blighted, or functionally obsolete properties
19.7 Develop Design Guidelines and standards for various sub areas in the City.
19.8 Investigate the establishment of Neighborhood Enterprise Zone (NEZ) areas designated by the City.
19.9 Work to streamline and modernize the City's regulatory documents and internal processes, making it easy and efficient to develop in Southfield.
19.10 Establish clear redevelopment goals and be proactive in reaching set goals. Engage community stakeholders for input, priority sites, and identify financial incentives.
19.11 Seek to continually advance the community by promoting "smart growth" principles, embracing cutting edge reinvestment tools, and making the redevelopment process more effective.
19.12 Advertise to developers that Southfield is committed to minimizing approval hurdles and willing to use financial incentives available.
19.13 Adopt a sidewalk improvement ordinance and/or program to install, repair, and/or upgrade sidewalk networks in a timely, orderly, and efficient manner.

20. Zoning Plan

After adoption of the Master Plan, Southfield will align the Zoning Ordinance with the goals of the master plan.

20.1 Conduct a technical review of the Zoning Ordinance text and maps to determine areas for update.
20.2 Review zoning district intent statements to reflect master plan land use recommendations.
20.3 Consider how form based zoning could help achieve community goals. Adopt design standards for appropriate sub-areas within the City.
20.4 Incorporate "Placemaking" elements in areas of concentrated development (sub areas), where appropriate.
20.5 Support the preservation of sensitive historic and environmental features.
20.6 Ensure that industrial districts allow for related compatible uses that serve new economy-type businesses.
20.7 Allow for a variety of housing types within Southfield, where appropriate.
20.8 Support transit oriented development, where appropriate.
20.9 Review flexible parking standards and make revisions where appropriate.
20.10 Update the City's landscape, screening and design regulations.
20.11 Incorporate sign standards into the Zoning Ordinance to streamline the approval process.
20.12 Review Zoning Board of Appeals (ZBA) cases in the last several years to determine possible areas for Zoning Ordinance text and map amendments.
20.13 Update illustrations and provide photo examples throughout the Ordinance where appropriate.
20.14 Amend the Zoning Ordinance to expand urban agriculture where appropriate, consistent with Sustainable Southfield and the Future Land Use Plan.

Sustainable Southfield

SOURCES:

- *A Self-Assessment to Address Climate Change Readiness in Your Community,* created by Diane Desotelle of Minnesota Sea Grant in 2012.
- Agriculture Marketing Service
- American Cancer Society (ACS)
- American Heart Association (AHA)
- American Planning Association (APA)
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- Builder's Guide to Low Impact Development
- Center for Disease Control and Prevention (CDC)
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- *Climate Change Readiness Index*
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- *The Constitution of the Iroquois Nation, The Great Binding Law, GAYANASHAGOWA*
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- U.S. Department of Health and Human Services
- U.S. Department of Housing and Urban Development
- U.S. Department of Transportation
- U.S. Election Assistance Commission
- U.S. Federal Bureau of Investigations
- U.S. Surgeon General
- West Michigan Environmental Action Council
- World Health Organization

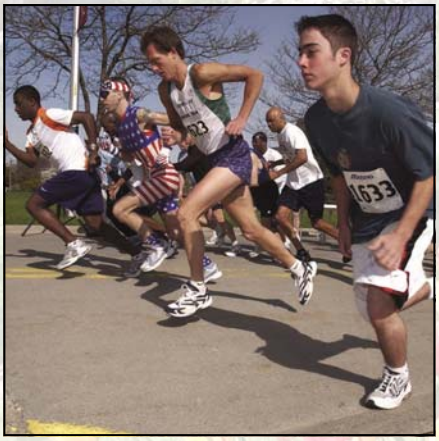
NOTES

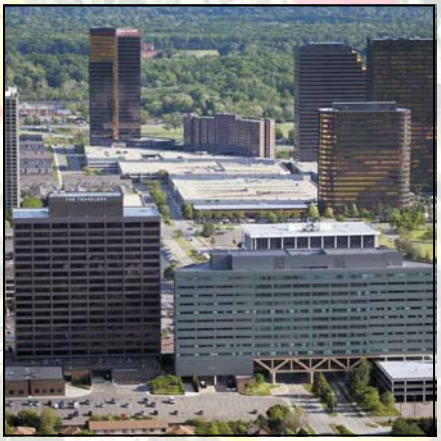
Sustainable Southfield

A Comprehensive Plan for Now and the Future

APPENDICES

SOCIAL ⊗ ENVIRONMENTAL ⊗ ECONOMIC





Southfield
the center of it all™

Draft 3/1/16

Sustainable Southfield

A Comprehensive Plan for Now and the Future

APPENDICES

Draft 3/1/16

"Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized." -Daniel Burnham

This is the Appendices to the Sustainable Southfield Comprehensive Master Plan which is contained in a separate document

Sustainable Southfield

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Note: The Sustainable Southfield Master Plan is bound in a separate report

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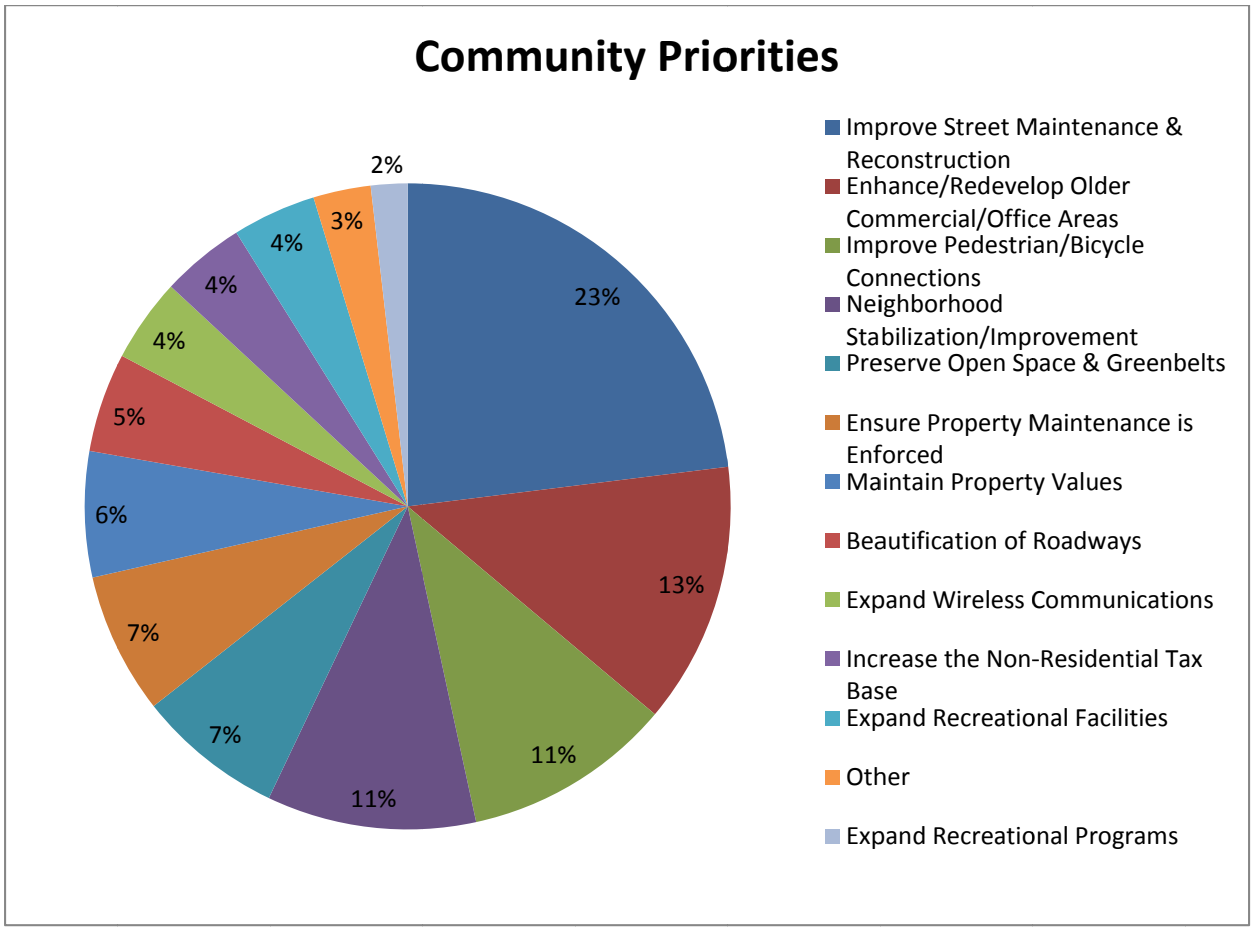
APPENDIX A: MINDMIXER RESULTS

Week 1 Vision
January 22, 2015 – February 5, 2015

1. Community Priorities

In the overall vision of Southfield, what are the most important issues facing our community?



Additional Comments:

1. Code enforcement/property maintenance (3)
2. Creating hangout places (2)
3. Limit garage sales on private roads
4. More landscaping/trees

5. Bicycle trails

2. Connecting Our Community

How can we create a more connected Southfield?

1. Bike, sidewalk, & walking path connectivity (6)
2. Encourage communication & involvement between City & all residents (5)
3. More community events (2)
4. After hours night life/musical venues (2)
5. Encourage Homeowner's Association participation (2)
6. Create an urban park/gathering space (2)
7. Implement environmentally sound practices (paving, recycling, solar power, public transportation)
8. Improve schools/focus on education
9. Code enforcement
10. Traffic calming/road diets
11. Encourage outdoor activity
12. Expand Valley Woods trail along Rouge River
13. Support entrepreneurs
14. Ethnic festival
15. Food trucks
16. Bring back the Farmer's Market
17. Improve intra-city transportation system
18. Promote citywide activities
19. Increased use of social media
20. Promote English speaking

3. Defining Sustainability

What does sustainability mean to you?

1. Improve schools/focus on education (4)
2. More green space (3)
3. Continued city services/support for all ages (2)
4. Code enforcement (2)
5. Implement environmentally sound practices (paving, recycling, solar power, public transportation) (2)
6. Low crime
7. Promote mixed land uses
8. Be progressive
9. Create volunteer opportunities
10. Provide variety of opportunities for all
11. New residential development
12. Stricter ordinances
13. Grow tax base (attract residential and commercial)
14. Community involvement
15. Bike, sidewalk, & walking path connectivity
16. Traffic calming/road diets
17. After hours restaurants
18. More community events

Week 2 Economic Development & Tourism
February 5, 2015 – February 12, 2015

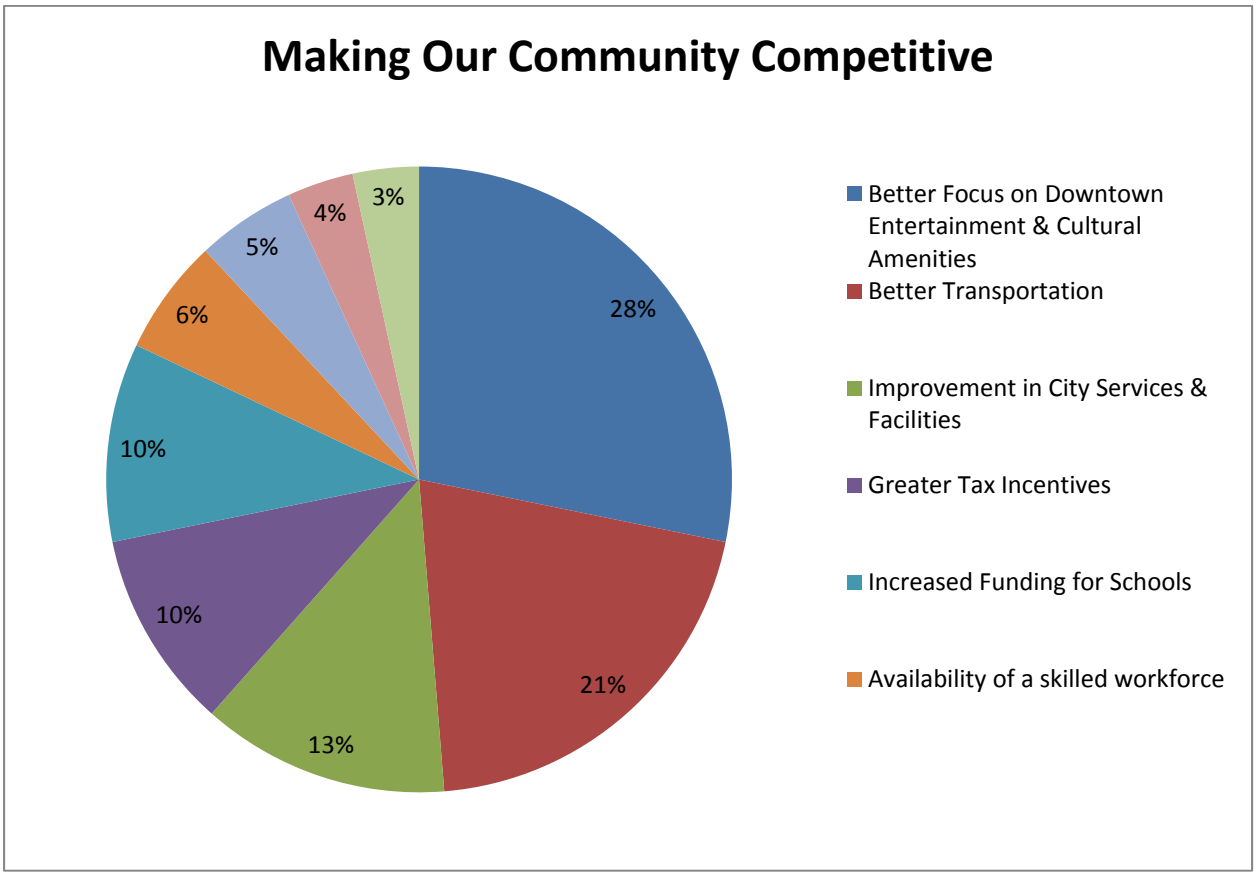
1. Northland Center Redevelopment

If you were a developer, how would you redevelop Northland Mall?

1. Mixed-use development (parks, restaurants, retail, housing, office, entertainment, walkable) (5)
2. Outlet mall (3)
3. Retail big box (3)
4. Indoor recreational facility (basketball, paintball, archery, soccer, swimming, climbing walls, track, water park) (3)
5. Entertainment center/district (music, museums) (3)
6. Mass transit or rail line hub (2)
7. Convention center
8. Low income housing with park
9. Minor league ballpark
10. Energy powerhouse
11. Co-op car repair
12. Co-op cooking facility
13. Dog care & boarding

2. Making Our Community Competitive

How can we make Southfield an economically and globally competitive place to work and live?



Other comments:

1. Tax relief/incentives (4)
2. Public transit/transportation (3)
3. Property maintenance (2)
4. Strengthen schools/focus on education
5. Decrease crime
6. Green infrastructure
7. Redevelop Northland Center
8. Support small businesses
9. Redevelop City Centre
10. Strengthen sign ordinance
11. Increased housing options
12. Create walkability

3. Bringing in Business

How can we improve the business environment in our community to help entrepreneurs?

1. Streamline city processes (2)
2. Create sense of place/belonging (2)
3. Attract young professionals
4. Increase marketing efforts
5. Increased Business Development efforts
6. Business incubators
7. Partner with universities
8. Establish multi-generational forum

4. The Changing Economy

How can Southfield continue to diversify our economy?

1. Increased internship opportunities (2)
2. Continue to work with local businesses (2)
3. Partner with universities & high schools
4. Job creation ii
5. Streamline city processes
6. Increased shopping options
7. IT education

5. Economic Development & the Arts

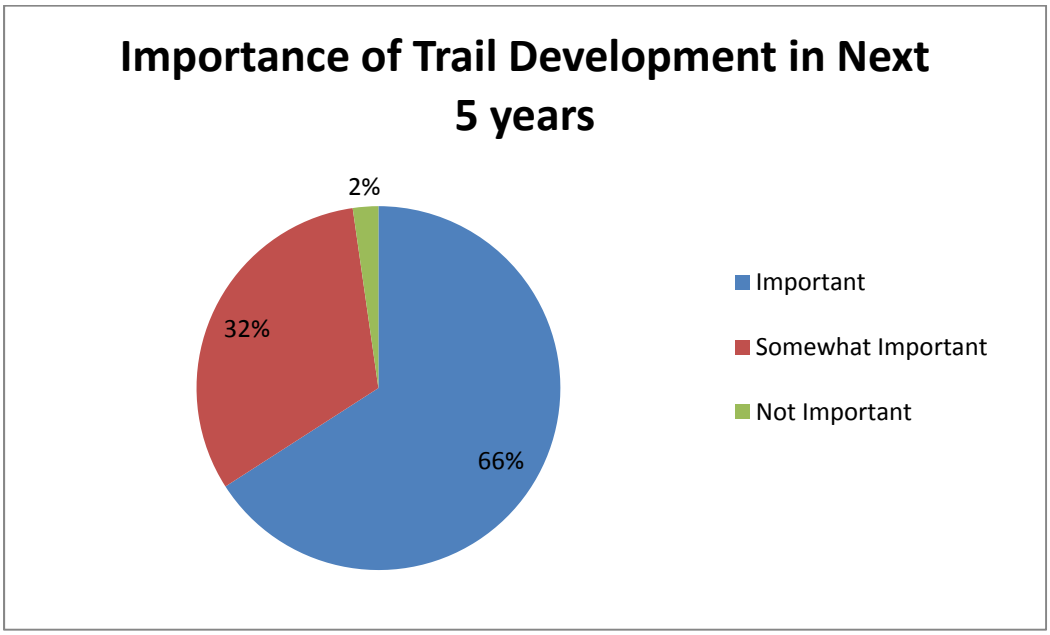
What can we do to highlight and promote the theaters and art galleries to support our local artists?

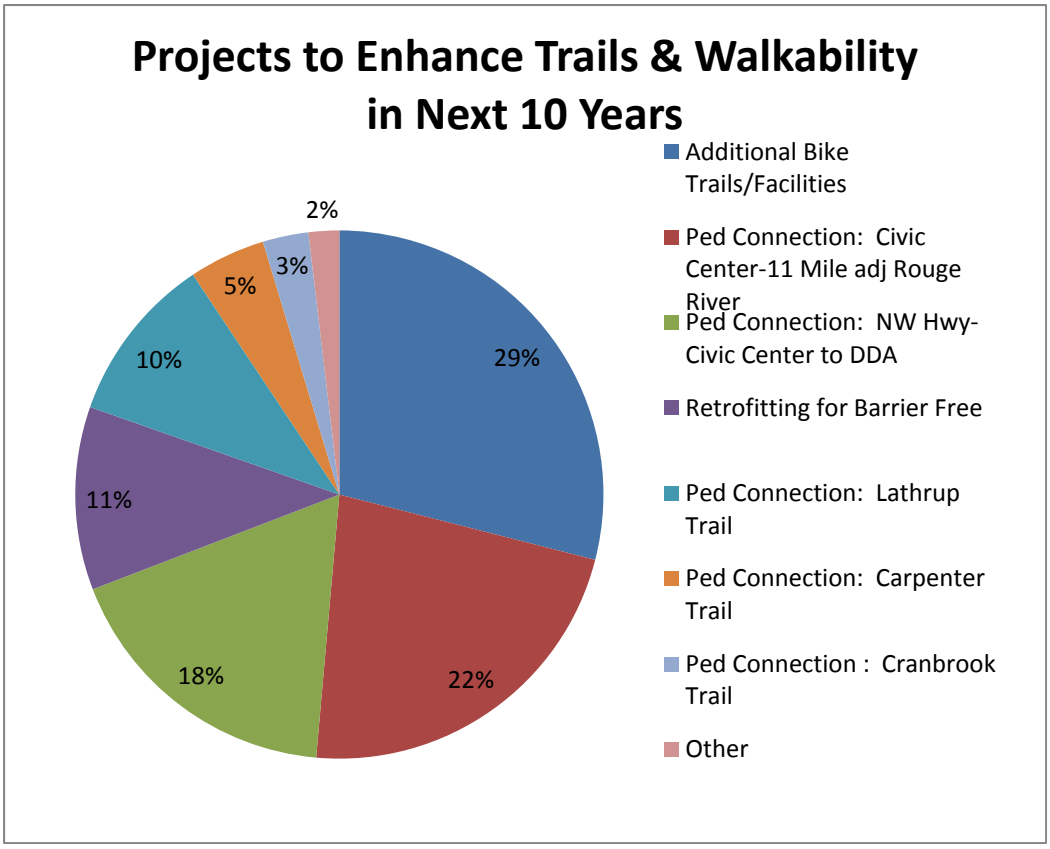
1. Additional City-sponsored art events/competitions/shows (4)
2. Marketing & promotion (4)
3. Large art event/festival (Art Prize) (3)
4. More music venues & performances (2)
5. Focus on indie craft scene/festival (2)
6. Gallery crawl
7. Plan for museums
8. Drop in galleries for traveling artists
9. Bring back art show at the Evergreen Hills

Week 3 Trails, Walkability, & Non-Motorized Transit
February 12, 2015 - February 19, 2015

1. Trails

How important is trail development to you in the next 5 years?





What other actions would you recommend to enhance trails and walkability?

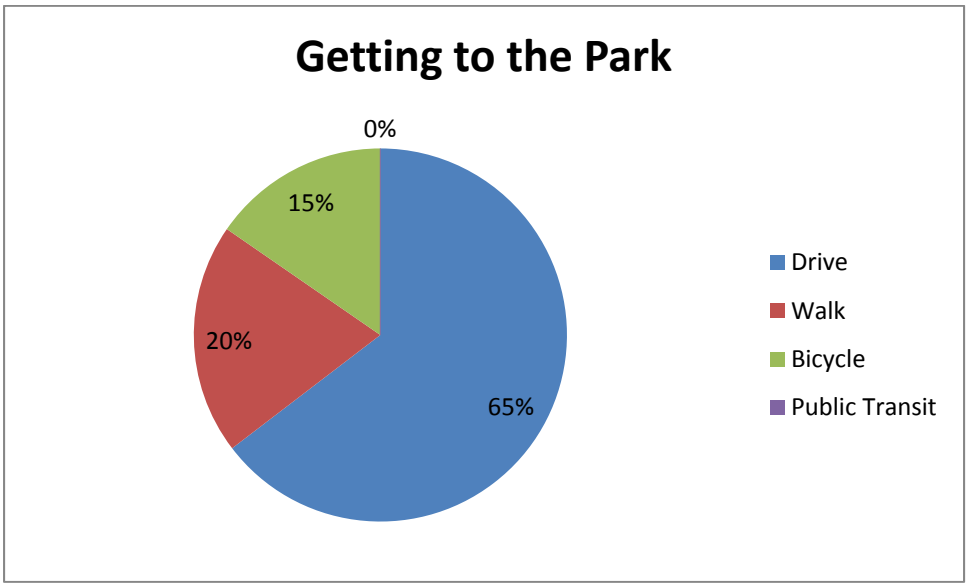
1. Maintenance of trails (4)
2. Pedestrian amenities along trails (benches, water fountains, stretching areas, trash bins) (3)
3. Distance markers/wayfinding signage along trails (3)
4. Bike facilities (racks, covered parking, lockers) (2)
5. Ensure safety of trails (2)
6. More community recreational activities
7. Pedestrian bridges over major roadways
8. Walking trails at all parks
9. Bike paths
10. Encourage bike business in Southfield
11. Spread out locations of paths
12. Pedestrian friendly crosswalks/lights
13. Ensure maintenance of public sidewalks

Please identify specific routes and locations within Southfield that you would choose for enhancements:

1. Northwestern Hwy from LTU to Evergreen (4)
2. Northwestern Service Drive from Civic Center to the transit center at 11/Lahser
3. Southfield Rd between 12 & 13 Mile Rd
4. Civic Center Drive between Telegraph to LTU
5. Telegraph to Carpenter Lake
6. LTU Campus ii
7. All major roads
8. Horse Tail Woods
9. Sidewalks
10. Lathrup Village

2. Getting to the Park

How do you and your family get to your favorite Southfield park from home?

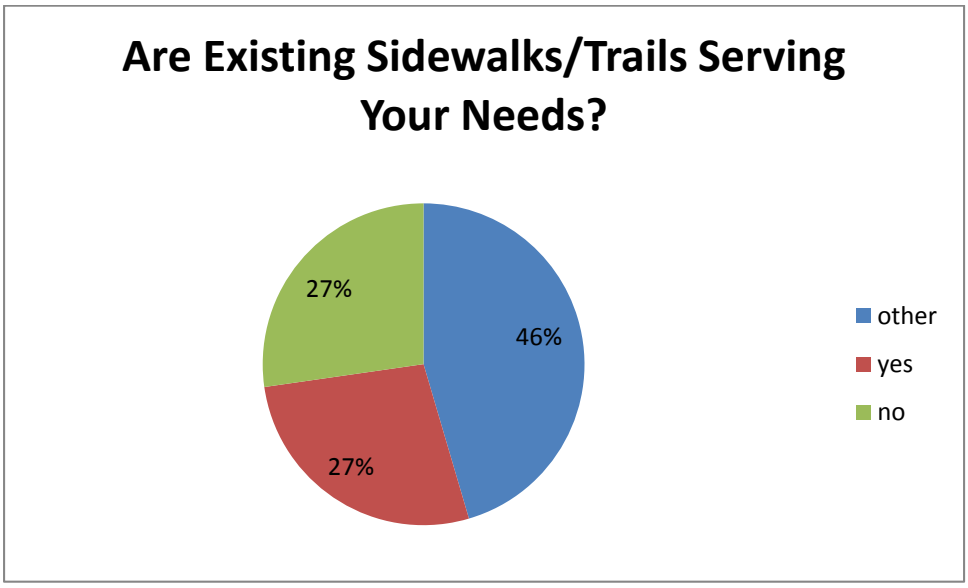


Other comments:

1. Not bike friendly (2)
2. Unreliable public transit (2)
3. Create walkable connections

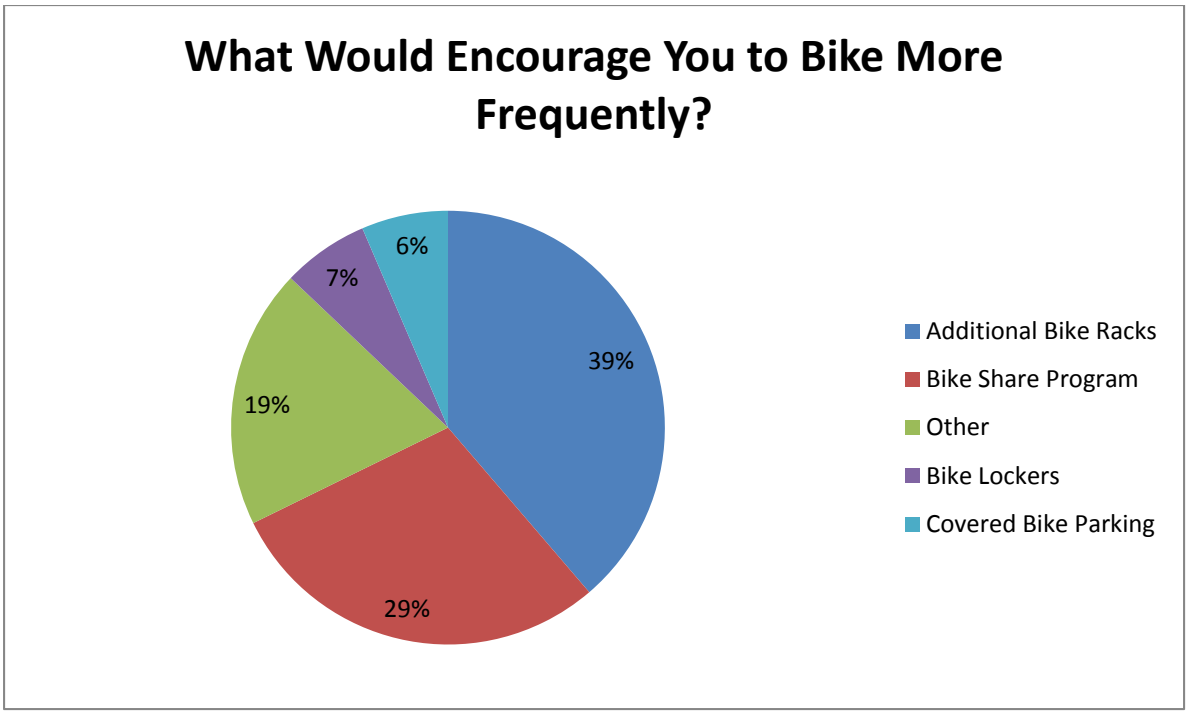
3. Walking and Biking in Southfield

Are existing sidewalks and bike paths adequately serving your needs? Why or why not?



Other Comments:

1. Improve biking conditions, routes & safety (8)
2. Gaps in sidewalk system (5)
3. Maintenance of sidewalks (3)
4. Sidewalks not shoveled (2)
5. Cannot walk to restaurants on Evergreen
6. Increased signage/wayfinding
7. Bike paths are good
8. Improve sidewalks/bike path on Lahser from Mahon to 8 Mile Rd
9. More sidewalks Ten Mile-Lincoln near Greenfield

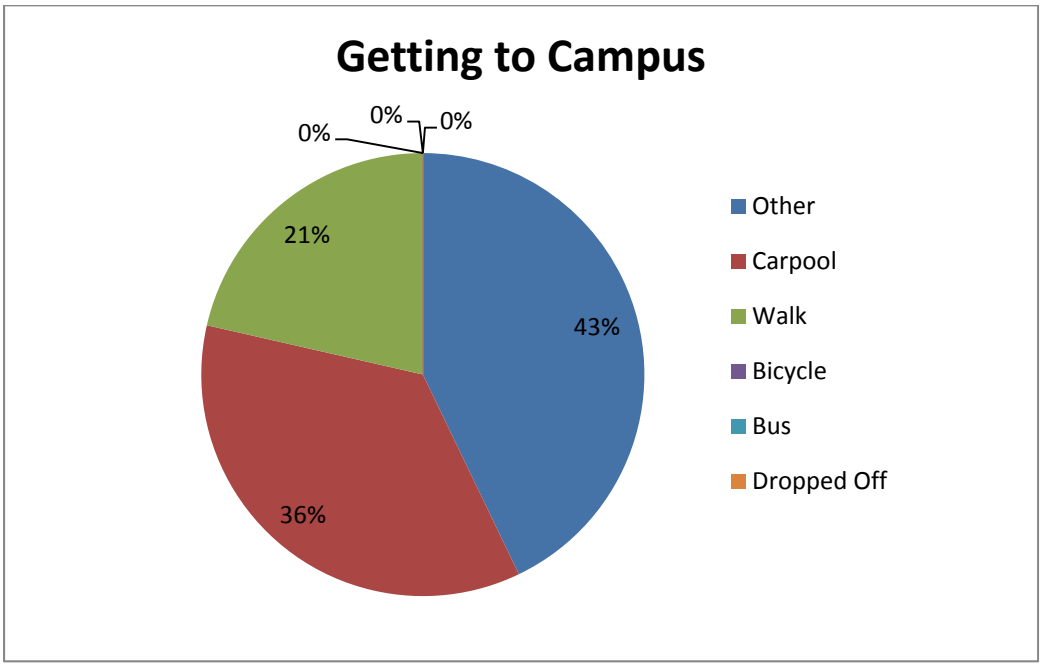


What can we do in Southfield to make it easier for pedestrians and bikers to get around? How would a more walkable/bikeable community help our residents now and in the future?

1. Create more and upgrade existing bike trails/paths (12)
2. Sidewalk maintenance (snow, cracks) (4)
3. Additional crosswalks and signals near major roads (3)
4. Connect and extend existing trails (3)
5. Sidewalk infill (3)
6. Additional bike racks (2)
7. Wider roads (2)
8. Bike amenities/trail between LTU and Civic Center with bike trail (2)
9. Maps of bike paths and trails
10. Wayfinding
11. Add sidewalk ramps
12. Bike shares

4. Getting to Campus

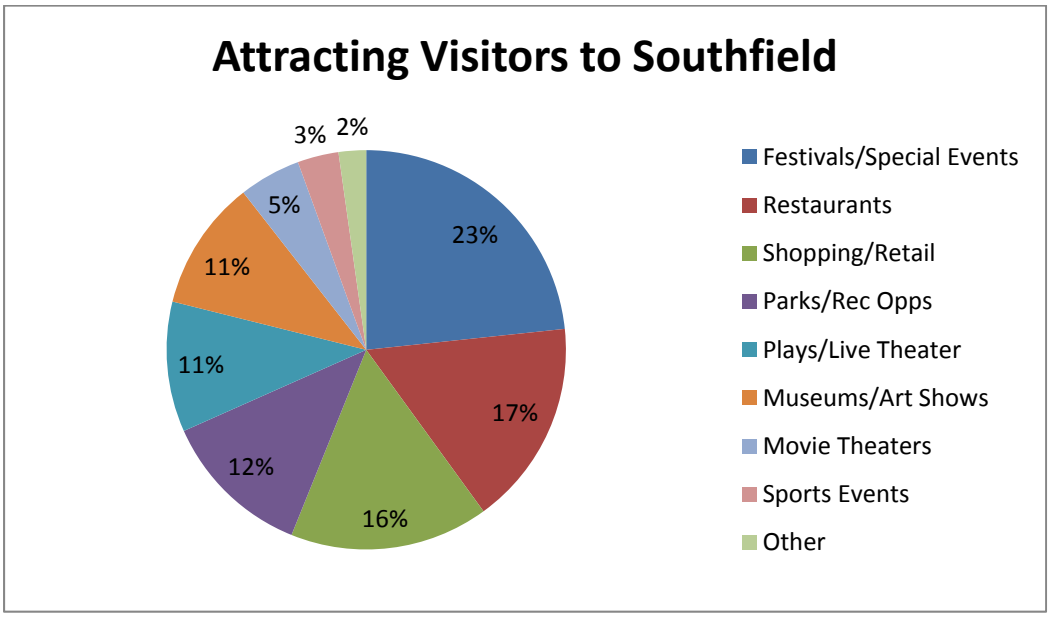
If you are a student, what mode of transportation do you typically take to get to and from school or campus?



Week 4 Arts & Culture
February 19, 2015 - February 26, 2015

1. Attracting Visitors to the City of Southfield

What features would attract more visitors to the City?



Other Comments

1. Entertainment venue (2)
2. Low housing costs
3. Walkability
4. Paintball
5. Nightlife (music, bar, restaurant)
6. Outdoor events
7. Big box retail

2. Promoting Our Cultural Gems

What three cultural gems within the City are your favorites? What's the best way to get word out? How do you find out about events in the City?

Favorite events

1. Relay for Life
2. Concerts
3. LTU events
4. SPL events
5. Large scale art display/event

Promotion

6. Flyers & Brochures (4)
7. Misc. Special Events
8. Social Media (2)
9. Emails
10. One central online Southfield event hub
11. Increased student involvement
12. Community member involvement

3. Photo Share

What location or place in Southfield illustrates Arts & Culture to you?

1. Southfield Library (3)
2. The Burgh (2)
3. Mary Thompson Farm
4. Town Hall Museum
5. Northland art statues
6. Gardens
7. Transform Northland Center into Mega Art Center

4. Public Arts Commission

What are your thoughts on public art in the City?

1. Partnership with the DIA (2)
2. Seek private funding/fundraising (2)
3. Add art to City Hall property (2)
4. Obtain Northland art
5. Art art to public parks
6. Add art to the Burgh
7. Art instills sense of pride
8. Add art to the library
9. Raise awareness of the benefits of public art
10. City should host more art events
11. Add ordinance requirements for public art
12. Ensure the safety of art (preventing theft, graffiti, etc.)

5. Favorite Cultural Gems

What are your favorite cultural gems in Southfield (event or location)?

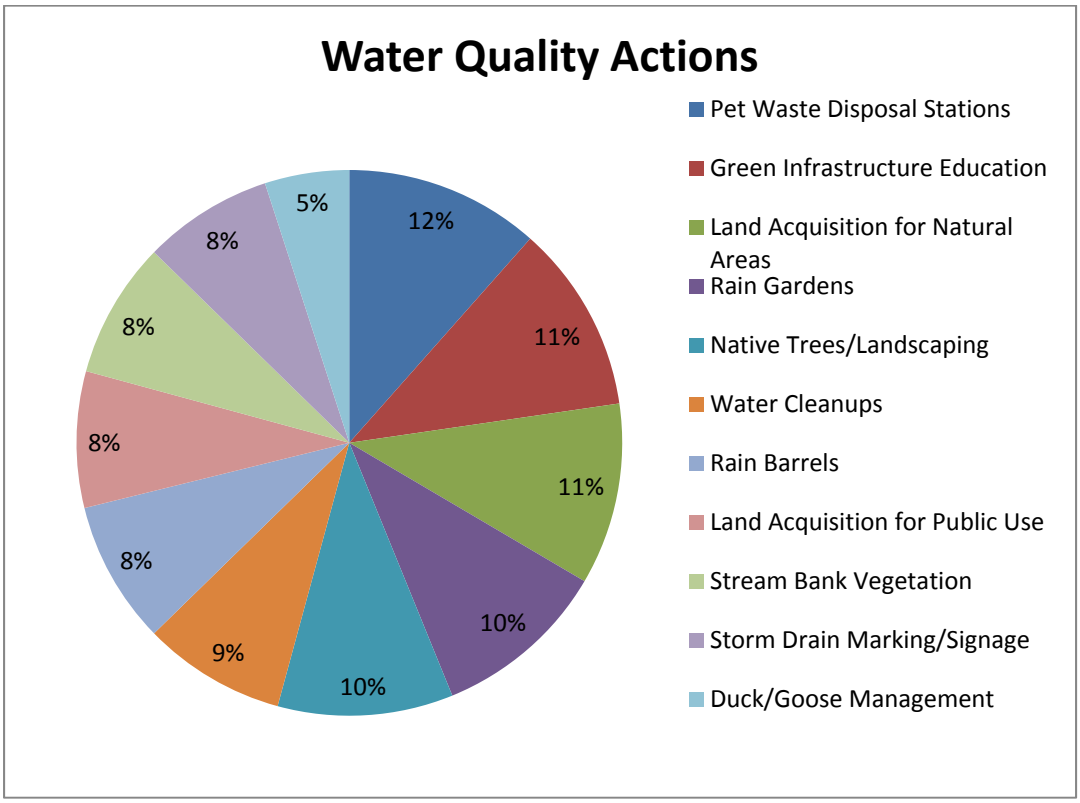
1. Miracle League Baseball Field

2. Code House
3. Mary Thompson Farm
4. The Burgh
5. Expand Rouge River Trail
6. Expand Trails at Carpenter Lake
7. Southfield Public Library
8. Vollbrecht Planetarium
9. Carpenter Lake Nature Preserve
10. Marshall Frederick's Boy & Bear Statue

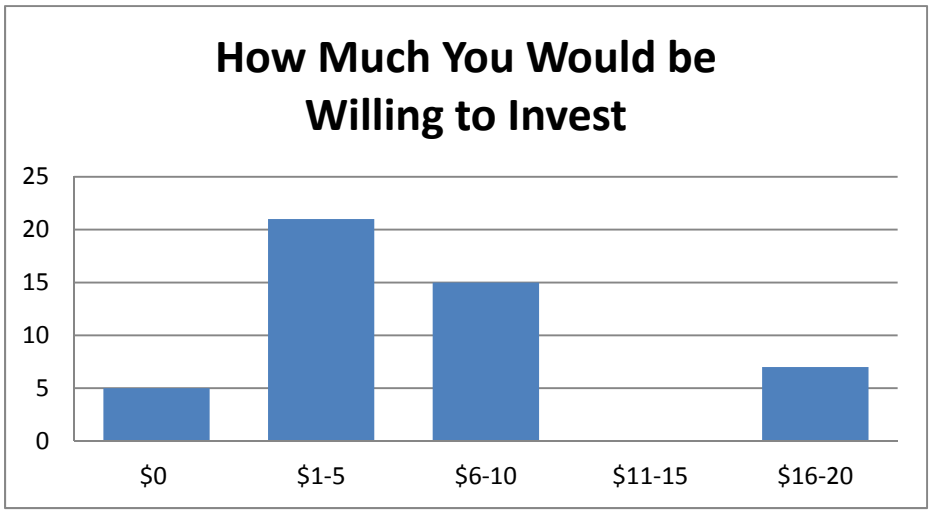
Week 5 Natural Environment & Sustainability
February 26 – March 5, 2015

1. Water Quality Actions

What water quality projects or actions would you want to see implemented in the City of Southfield?



How much would you be willing to invest per month through your water or sewer bill to see these projects/actions implemented?

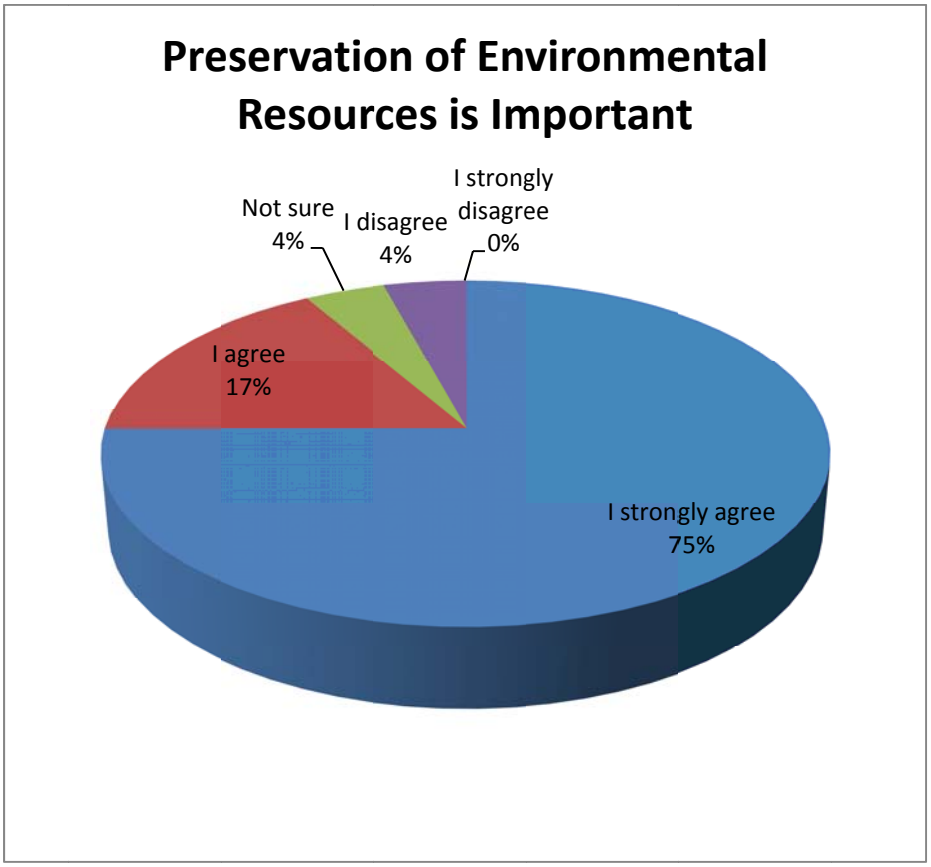


Additional Comments:

1. Permeable pavement
2. Road diets
3. Protect water sources

2. Preservation of Environmental Resources

It is important to preserve our environmental resources (floodplain, wetlands/woodlands, lake/river quality.



Additional comments:

1. Accessibility & connectivity (3)
2. Preservation of rivers/wetlands (3)
3. Native plantings
4. Education/museums
5. Balance
6. Partnerships
7. Earmarked dollars

3. Drawing Inspiration

From which community can we draw inspiration as we work to preserve the environment?

1. Low Impact Design (4)
2. NYC (2)
3. Birmingham (2)
4. Non-Motorized (2)
5. Ann Arbor MI (2)
6. Troy
7. West Bloomfield
8. Farmington Heritage Park
9. Trees
10. Water quality
11. Austin TX
12. Accessibility to parks
13. Belle Isle
14. Dequindre Cut
15. Connecting greenways
16. Plymouth
17. Incorporate green
18. Syracuse NY
19. Education
20. Seattle WA
21. Seoul Korea
22. Central gathering spaces
23. Preservation of water features
24. Rochester MI
25. Bike share
26. No mow zones
27. LEED development

4. Balancing Development

How can we strike a balance between residential and commercial development and the preservation of natural resources?

1. Implement small parks (2)
2. Roadway landscaping
3. More trees
4. Pedestrian amenities
5. Reduce impervious surfaces
6. Develop city green master plan
7. Incorporate outdoors into development
8. Incentivize low impact design

5. Going Green

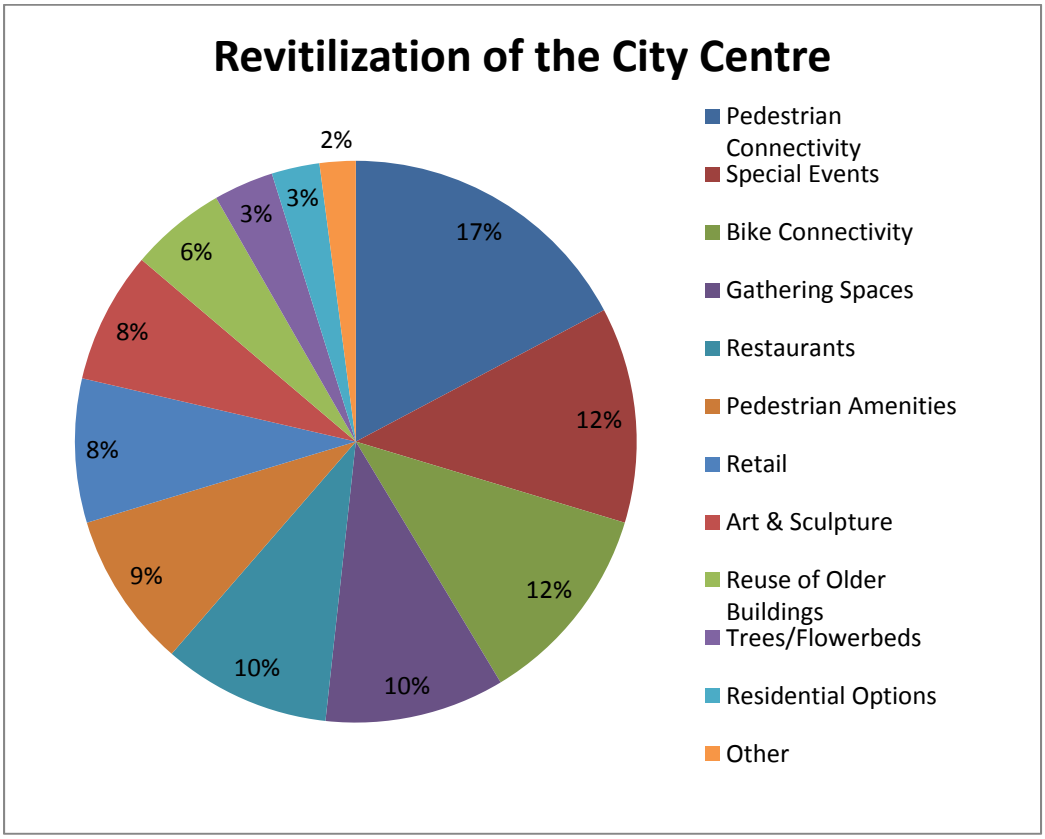
What is the simplest thing you can do to go green in your own life?

1. Recycling (8)
2. Rain barrels (5)
3. Organic gardening (4)
4. Lower water use (4)
5. Lower energy consumption (3)
6. Changing to energy efficient lightbulbs (3)
7. Composting (2)
8. Buy local (2)
9. Education/awareness (2)
10. Native plantings
11. Vegetarianism
12. Rain gardens
13. Solar energy
14. Cultivate houseplants
15. Hybrid vehicle

Week 6 Urban Design & Architecture
March 5 – March 12, 2015

1. The Revitalization of the City Centre District

As we continue to focus on the revitalization of the City Centre District, where should efforts be concentrated?



Additional Comments:

1. Retail/restaurants
2. Increased security presence

2. Urban Design Inspiration

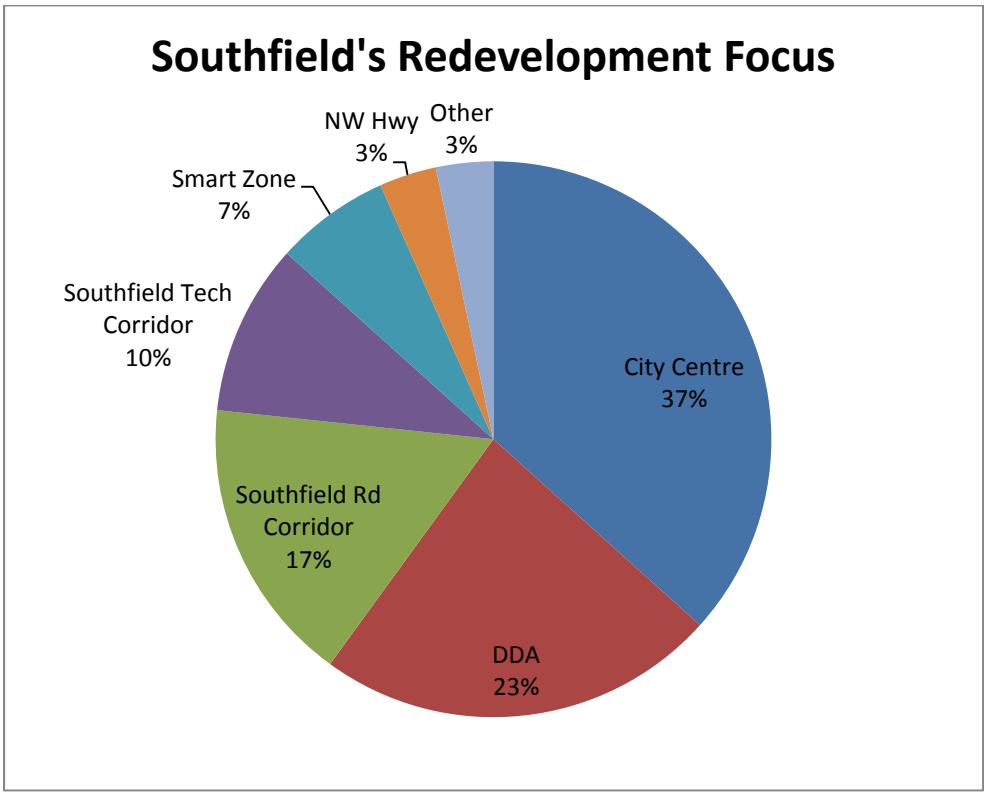
What other city or design element could be used in Southfield?

1. Walkability/connectivity (6)
2. Retail/restaurants (3)
3. Bikeable (2)
4. Green space (2)
5. Pasadena, CA
6. Integrate old with new
7. High Line Park, NYC

8. Tennis club
9. Gathering space
10. Special events
11. Naperville, IL
12. Evanston, IL
13. Urban style residential
14. Traditional downtown
15. Redevelop older uses
16. Kid-friendly
17. Portland, OR
18. Dog-friendly
19. Columbia, MD
20. Public transit (2)
21. Pedestrian amenities
22. Cherry Creek, CO

3. Southfield's Focus

What areas in Southfield should be focused on in terms of revitalization and redevelopment?



Additional Comments:

1. Spruce up City entrances

4. Distinctive Southfield

What do you think are the most distinctive physical characteristics of or architecture in Southfield?

1. Mid Century Modern Architecture (6)
2. Architecture (2)
3. Parks
4. Carpenter Lake
5. MCM Tours
6. Palm Springs Modernism Week
7. Balance of urban space + green space
8. Rouge River basin
9. Wildlife
10. MCM Waysigning
11. Skyscrapers
12. Shaarey Zedek
13. LTU
14. Library

5. Defining Landmarks

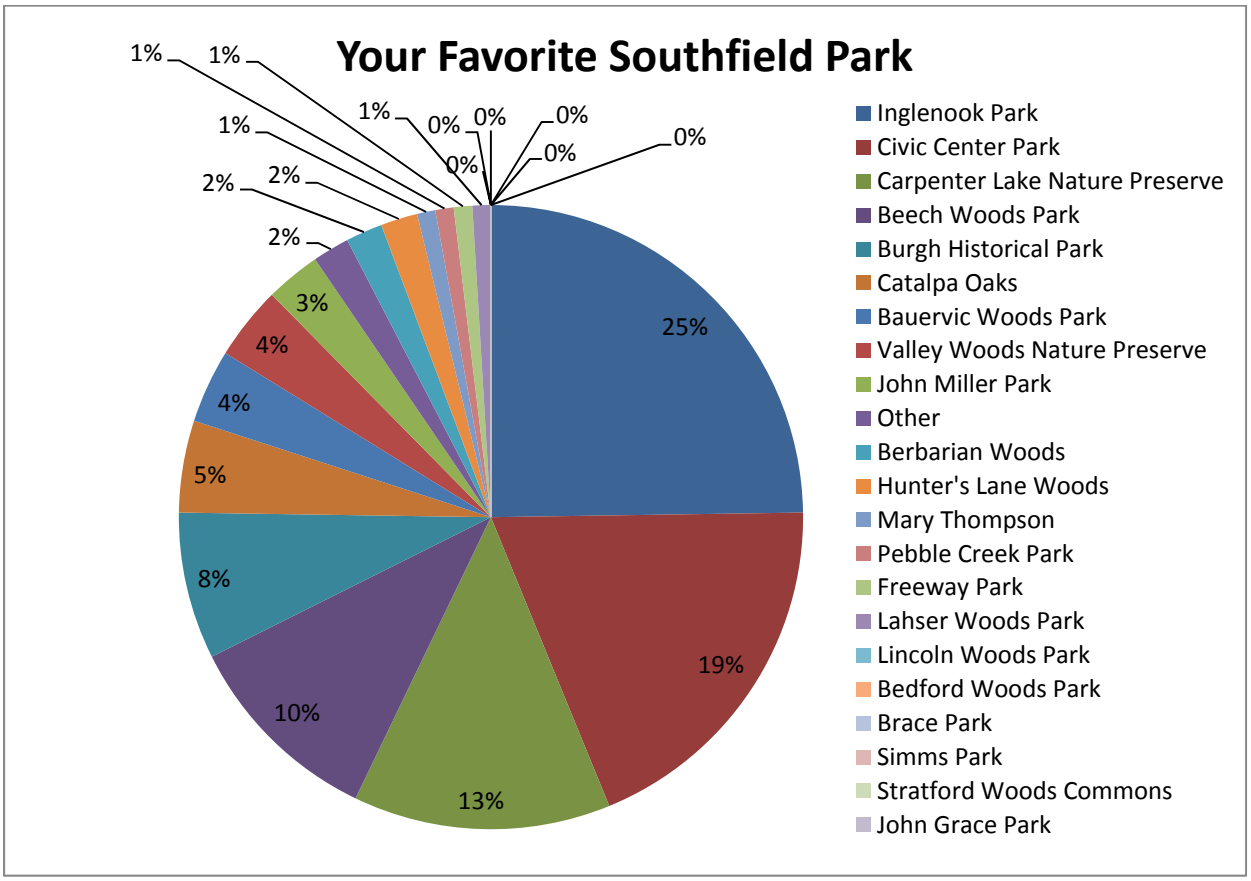
What city landmarks do you use when giving directions?

1. Southfield Public Library (3)
2. Main roads (2)
3. Highways (2)
4. Tel-12 (2)
5. Beech Woods
6. Shield's Pizza
7. Telegraph Road
8. Carpenter Lake
9. The Burgh
10. Word of Faith (Duns Scotus)
11. Providence Hospital
12. Town Center
13. Federal Mogul
14. Old Holiday Inn on Telegraph Rd

Week 7 Parks & Open Space
March 12 – March 19, 2015

1. Your Southfield Parks!

What are your favorite parks in Southfield?

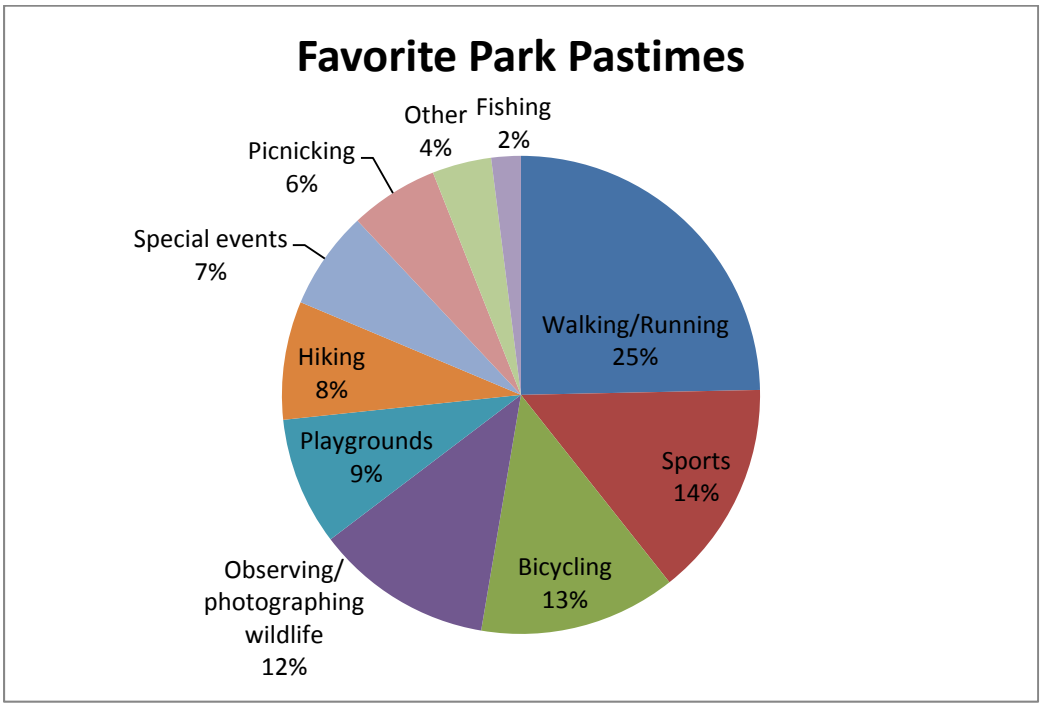


Additional Comments:

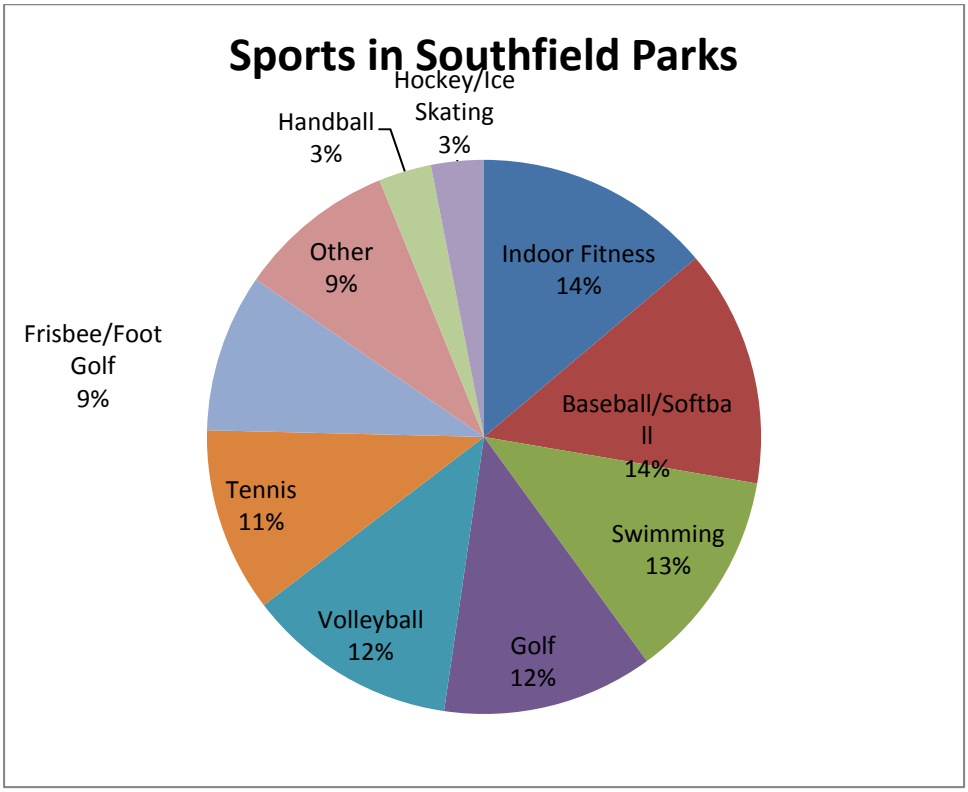
1. Carpenter Lake walking trails
2. Inglenook Park track
3. Re-install Inglenook fitness stations
4. Freeway Park is close to home
5. Carpenter Lake is a retreat not far from home
6. Inglenook Park is close to home
7. Install benches along Inglenook Park track

2. Favorite Park Activities

How do you enjoy our Southfield parks?

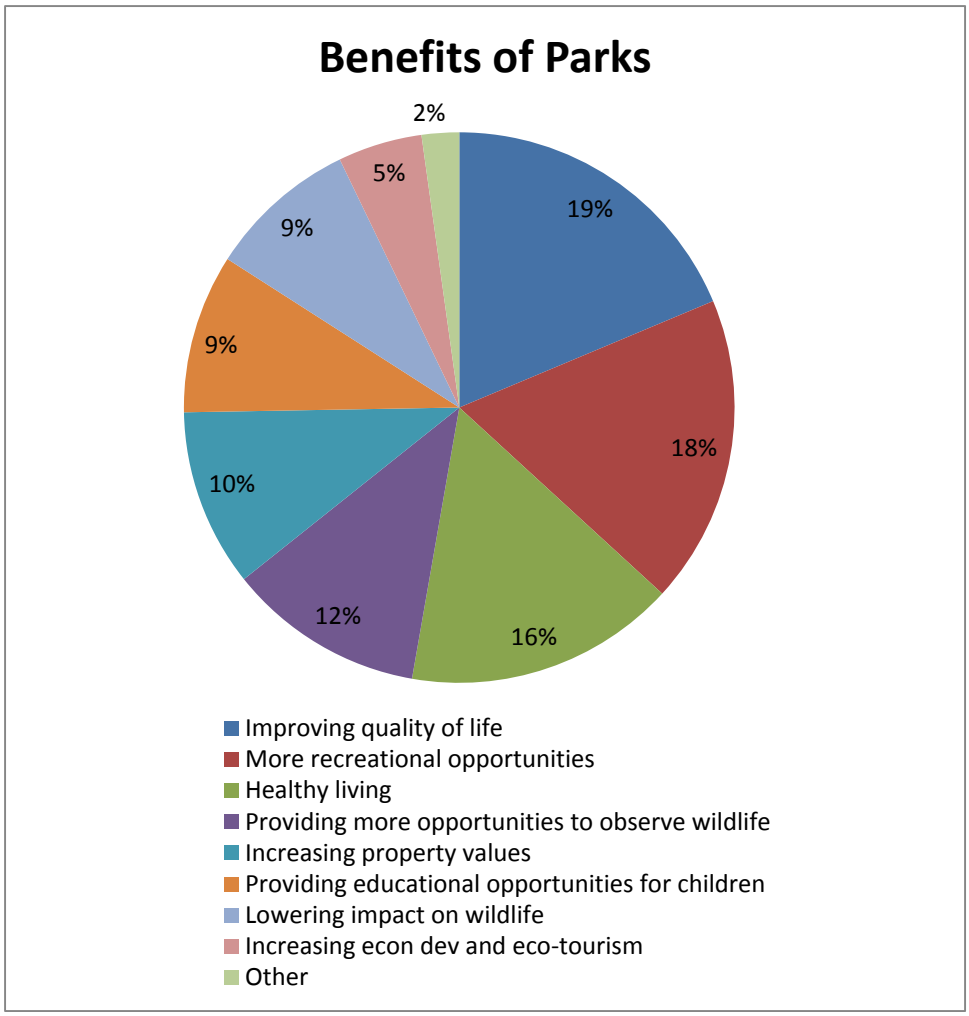


What specific sports do you engage in at our parks?



3. Getting the Most Out of Our Parks

What benefits do you think our parks bring to the people of Southfield?



4. Meeting Your Park Needs

What amenities would you like to see at our parks?

1. Amenities (restrooms, water fountains, trash receptacles, seating, shade) (11)
2. Dog park (6)
3. Longer/additional gravel walking/running/parkour/bicycling trails (6)
4. Green improvements (recycling bins, recycled rubber walkways, solar powered BBQs, charging stations, & water pumps) (4)
5. Disc golf (3)
6. Outdoor pavilion with stage (3)
7. Cross country skiing/snowshoeing trails/hills (2)
8. Exercise loops/stations (3))

9. Horseshoe pit (2)
10. Indoor tennis/soccer facility (2)
11. More food carts/ice cream carts (2)
12. More tennis/basketball courts (2)
13. Public art (2)
14. Technology improvements (phone chargers, wifi in parks) (2)
15. Water features/attractions (fountains, kayaking) (2)
16. Waterfront parks/camping (2)
17. Zip lines/ropes (2)
18. Activities for 20-30 year olds
19. Additional security
20. Batting cages
21. Chess tables
22. Equipment rental
23. Guided nature hike/photography workshop (Carpenter Lake)
24. Gun ranges
25. License free fishing day
26. Line the fields for football/soccer
27. More trees
28. Nature Center at Carpenter Lake
29. Observation towers
30. Outdoor skating rinks
31. Pine box derby hill
32. RC plane fields
33. Remove all basketball courts
34. Rental areas/pavilions (for parties)
35. Re-open Beechwoods pool
36. Rock climbing walls
37. Sauna at Beechwoods
38. Showers
39. Shuffleboard courts
40. Shuttles to parks
41. Trampolines
42. Urban farm space
43. Vandal proof tables
44. Vending machines
45. Volleyball pits
46. Wayfinding/regulatory signage
47. Yoga/Tai Chi

5. Balancing Preservation and Recreation

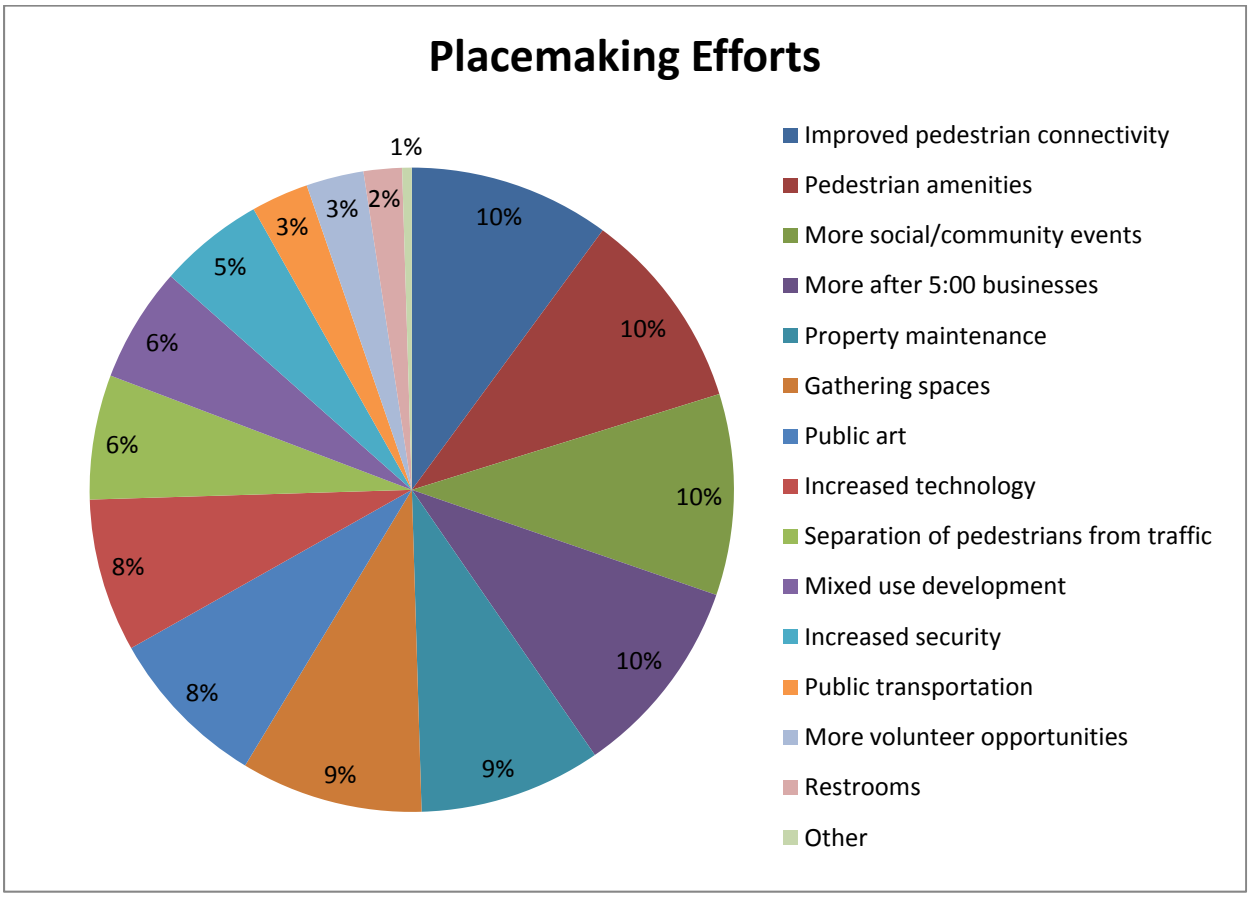
How can we balance environmental preservation and enhance rec opportunities when creating parks and open spaces?

1. Green improvements (Compost dropoff, use recycled materials, no fertilizer/weed killer, Recycling toilets, windmills, solar heated pools, composting toilets, sustainable energy, clover instead of lawn, biomass converters) (9)
2. Naturalized areas in lieu of lawn/wildflowers/native plants & trees (7)
3. Dedicated walking trails with educational panels (3)
4. More educational and environmental awareness programs/tours (3)
5. Bird/bat houses (2)
6. Butterfly/hummingbird gardens (2)
7. Fish/stocking habitat in Rouge (2)
8. Rouge River access & create rapids course (2)
9. Stormwater improvements (retention ponds, decrease runoff into river) (2)
10. Volunteering opportunities (2)
11. Wildlife sanctuary/nature preserves (2)
12. Arboretum mazes
13. Aviaries
14. Ban dogs at parks
15. Bike racks
16. BMX track
17. Flower exchanges
18. Gas wells
19. Less concrete
20. Manage deer population
21. Mushroom propagation
22. Natural history museum
23. No cars allowed in parks
24. No music or broadcasts
25. Reduce river flooding for marsh formation
26. Security & surveillance

Week 8 Placemaking
March 19 – March 26, 2015

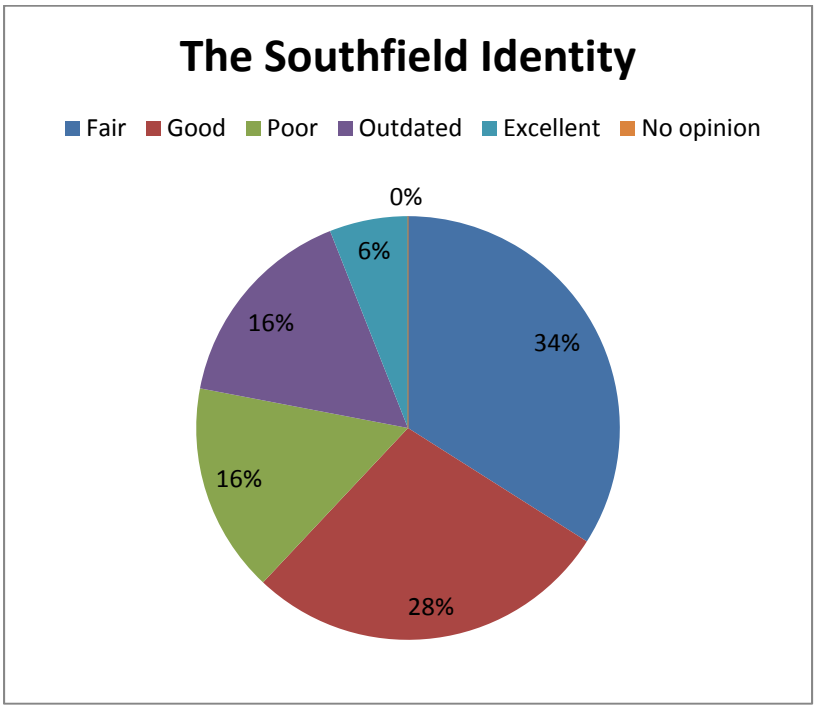
1. Placemaking Efforts

What aspects would make the biggest impact in the way of placemaking?



2. The Southfield Identity

How would you rate Southfield's image/identity?



Additional Comments:

1. Community pride/effort/property maintenance (3)
2. Improve community pride (2)
3. Emergency response
4. Improve relationship between land uses (ie churches)
5. Modern
6. Occupied homes
7. Office image only
8. Quiet/peaceful
9. Vacant storefronts

3. What does placemaking mean to you?

When someone uses the term "placemaking" what do you think of?

1. Streetscape/pedestrian amenities (5)
2. Concert/music/bandshell (3)
3. Public/green spaces (3)
4. Retail/restaurants (3)
5. Walkability/connectivity/accessibility (3)
6. More recreational opportunities/programming/events (2)
7. After 5:00 pm activity
8. Be a destination
9. Cider mill
10. Grow the population
11. No focus
12. Outdoor dining
13. Public art
14. Publicize activities better
15. Tax incentives

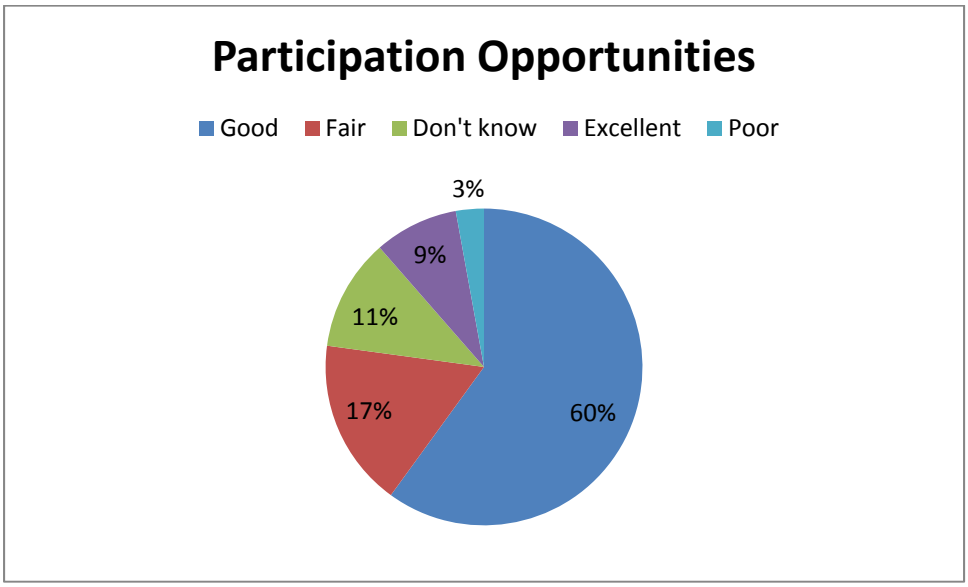
4. How would you redevelop the Evergreen/Civic Center Dr property?

1. Mixed use (9)
2. Plaza/park/green space (7)
3. Concert space/amphitheater (2)
4. Flea market
5. Kid friendly
6. Outlet mall
7. Public art
8. Retail/restaurants (2)
9. Walkability

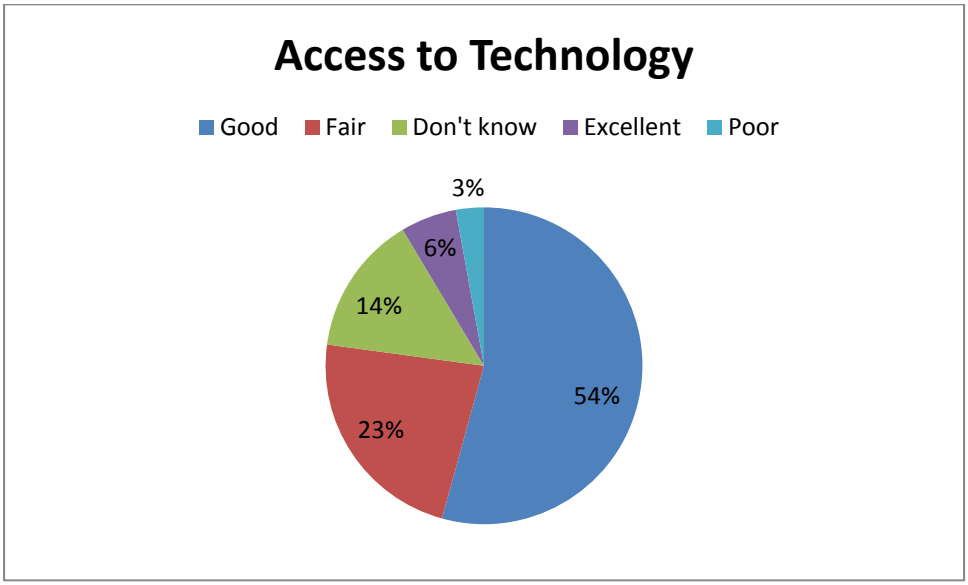
Week 9 Technology & Communication
March 26 – April 2, 2015

1. Your Technology Use

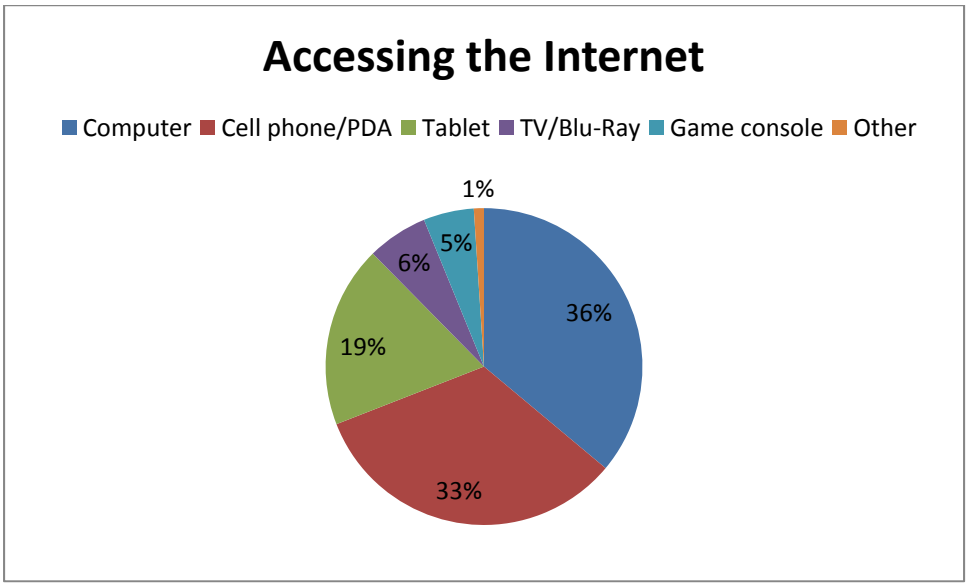
How do you rate opportunities to participate in community matters?



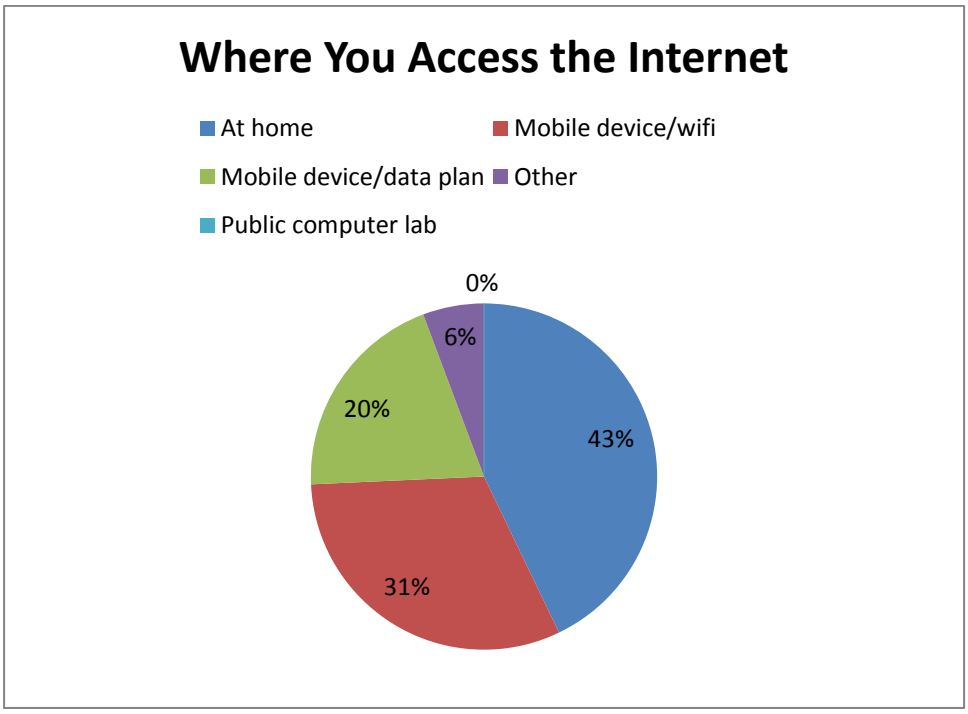
How do you rate access to technology within the City of Southfield?



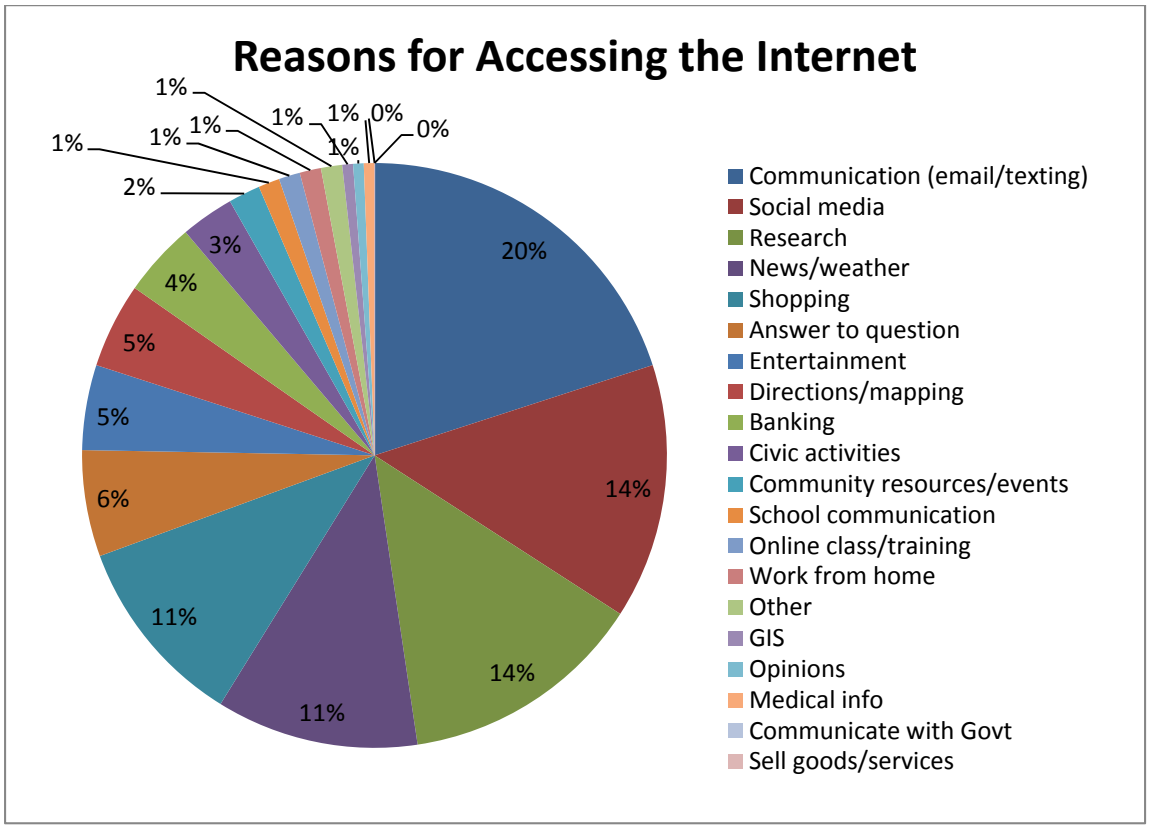
How do you access the Internet?



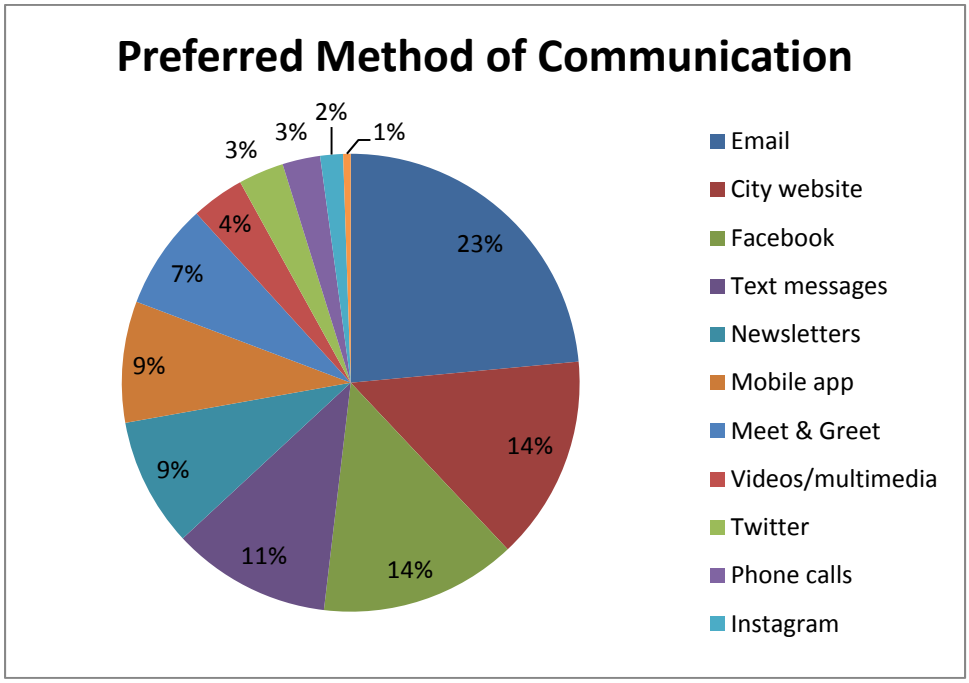
Where do you access the Internet?



What do you most often use the internet for?

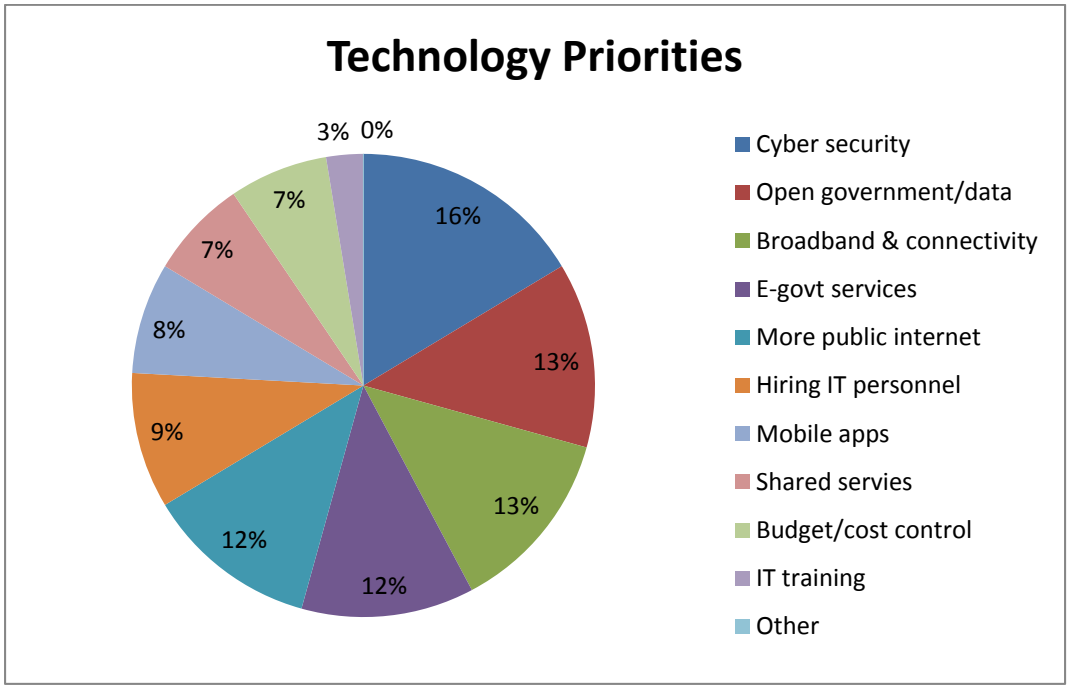


How would you like to receive information from Community leaders?



Additional comments:

1. Emergency texts (2)
2. Siren for emergencies (2)
3. Separate casual and emergency contact methods
4. Special events texts
5. Texting only if you sign up

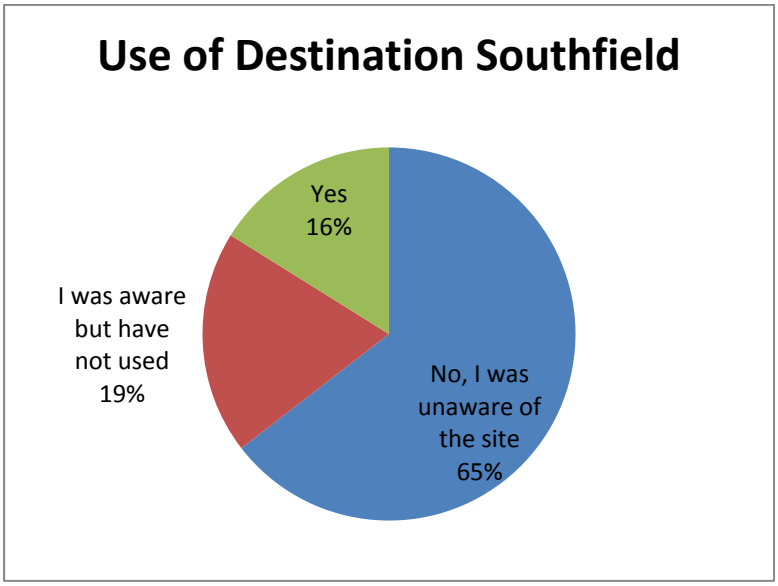


Additional comments:

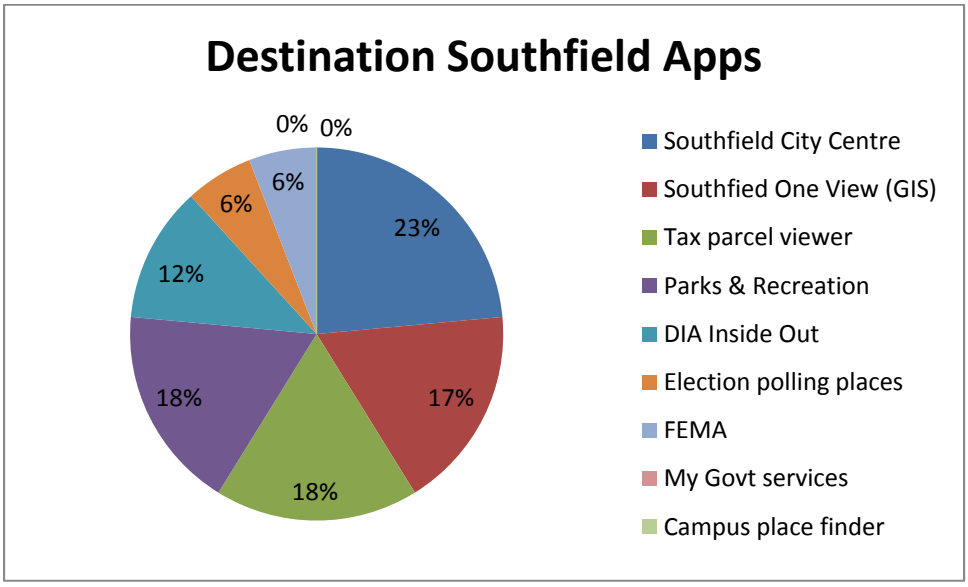
1. Municipal wi-fi (2)
2. Additional options for broadband service (besides Comcast)

2. Destination Southfield

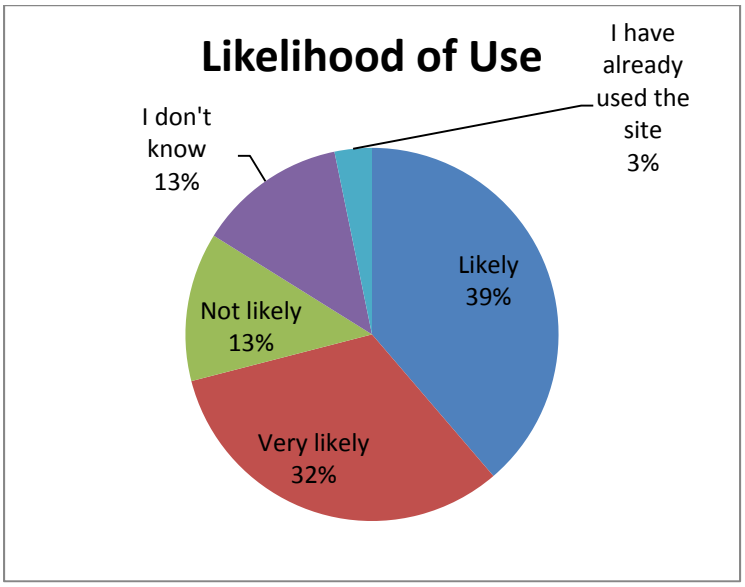
Have you used the Destination Southfield site maps.cityofsouthfield.com in the past?



If you answered yes to the question above, what apps/map have you used?



Now that you know about Destination Southfield, how likely are you to use this site?



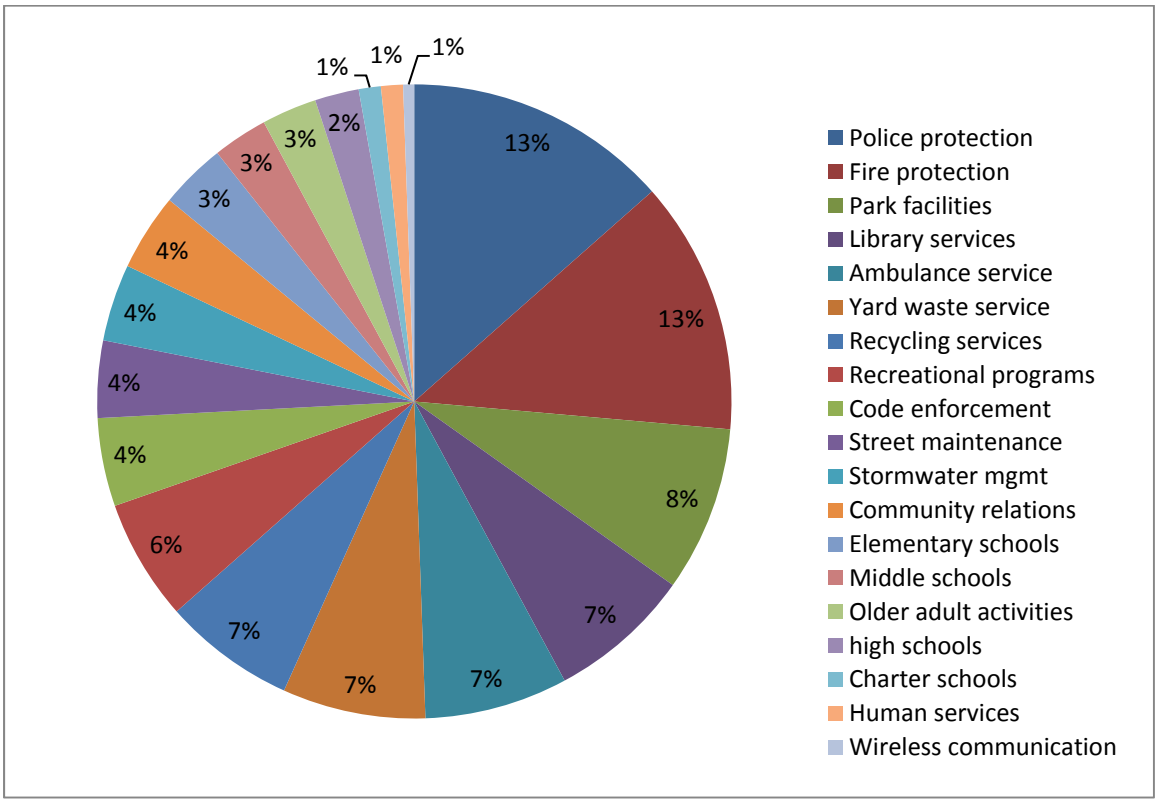
What additional geographic information would you be interested in accessing as part of the Destination Southfield site?

1. Government activities/construction projects (2)
2. New business information (2)
3. Condition of Rouge River
4. Eliminate sensitive tax/ownership information
5. Existing information adequate
6. Existing information to be easier to access
7. Information on existing landmarks
8. Subdivision information
9. Weather advisory

Week 10 City Services & Safety
April 2 – April 9, 2015

1. Southfield Facilities and Services

Which would you rate as excellent or good? Why?

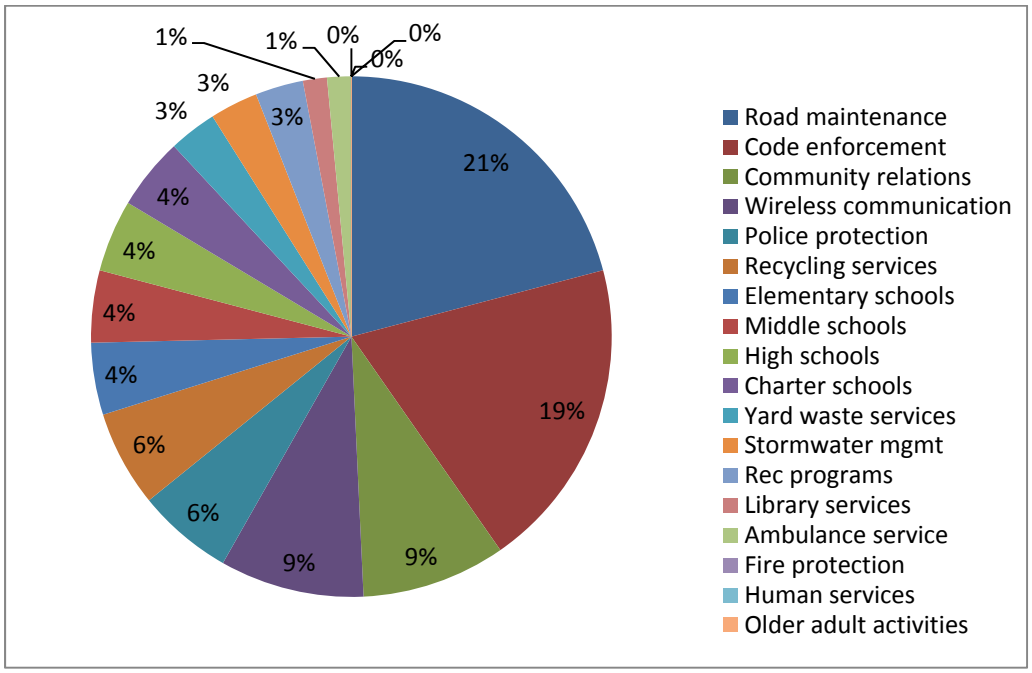


Additional comments:

1. *Police & fire excellent (3)*
2. *Good schools important*
3. *Parks & Rec opportunities important*
4. *Water & sewer excellent (no flooding)*

2. Improving Southfield Facilities and Services

Which would you rate poorly? Why?

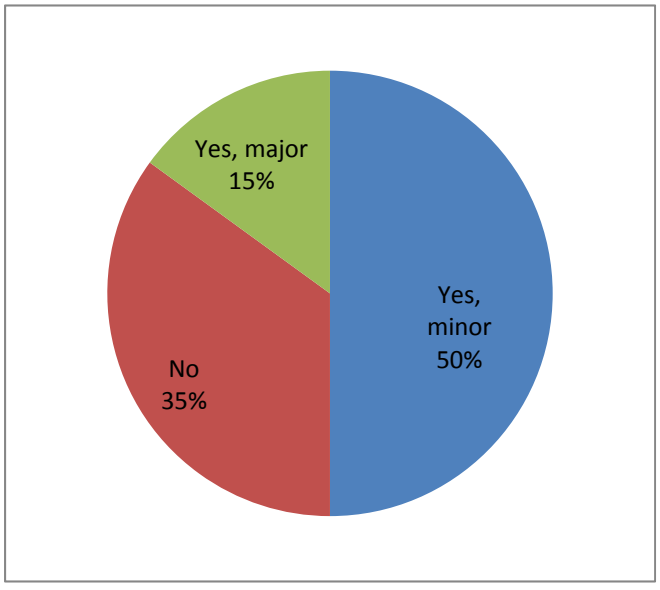


Additional comments:

1. Need improved Code Enforcement(3)
2. Need policing in neighborhoods

3. Avoiding Crime

Do you think crime is a problem? Where?

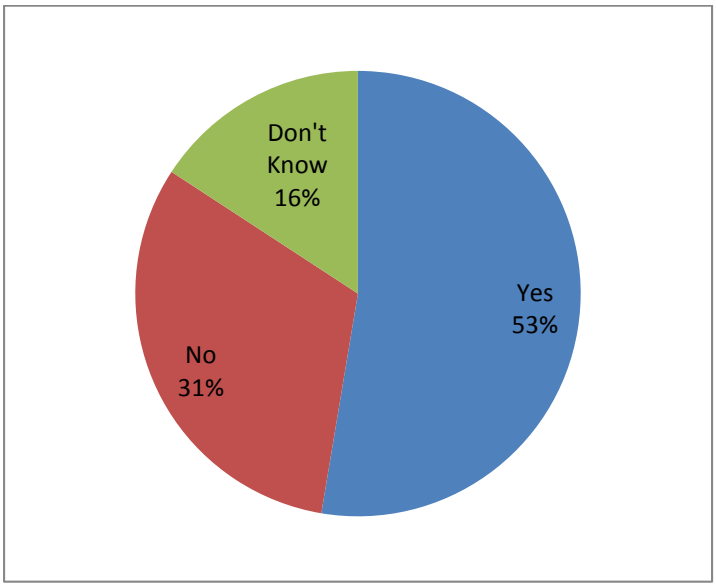


Additional Comments:

1. Northland area (4)
2. 8 Mile Rd

4. Justification of Taxes Paid

Do you think the level of local services justifies taxes paid?

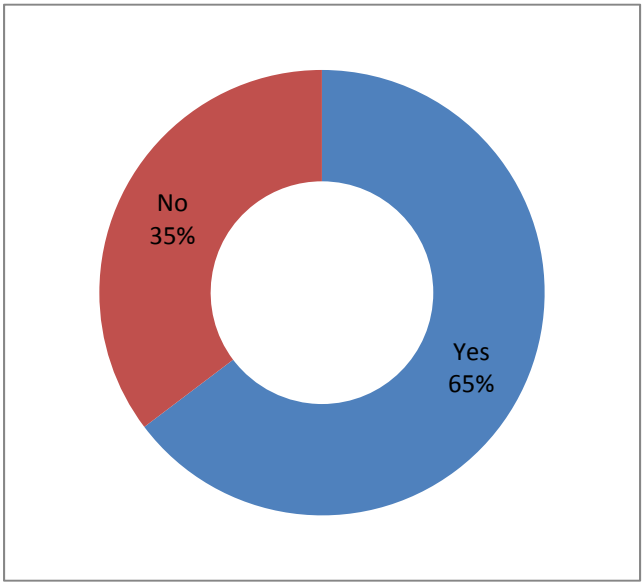


Additional comments:

1. School millage too high, schools are bad (2)
2. Renters should not be able to vote on tax matters
3. Receive prompt service

5. Reflecting the Interest of Southfield's Residents

Do you think Southfield's existing programs and facilities reflect the interest of current residents?



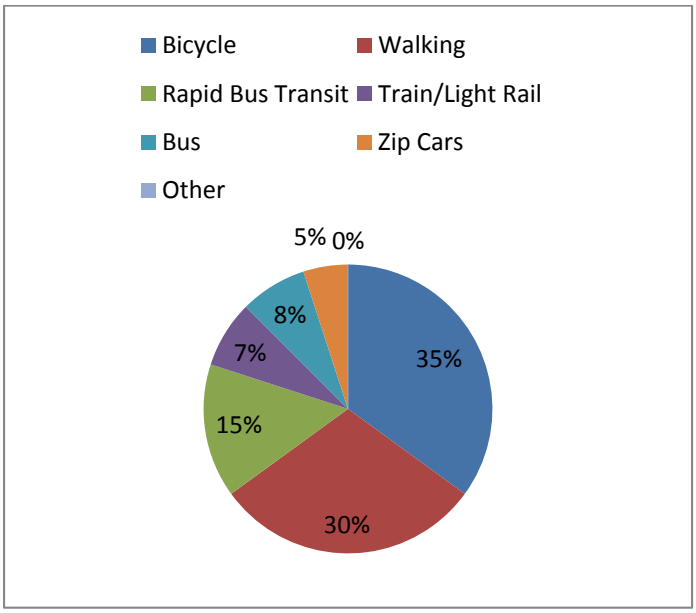
Additional Comments:

1. Beechwoods needs improvement
2. Variety of programs available
3. Don't know what is available

Week 11 Transportation
April 9 – April 16, 2015

1. Getting From Here to There

What transportation options do you think Southfield needs more of?

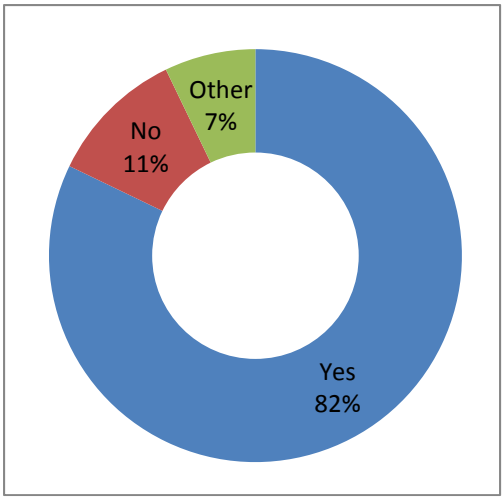


Additional comments:

1. Improved non-motorized transit (bike/ped connectivity) (5)
2. Regional transit (light rail, bus) (2)
3. Improve existing roads

2. Parking in Southfield

Do you think existing parking is adequate in Southfield?

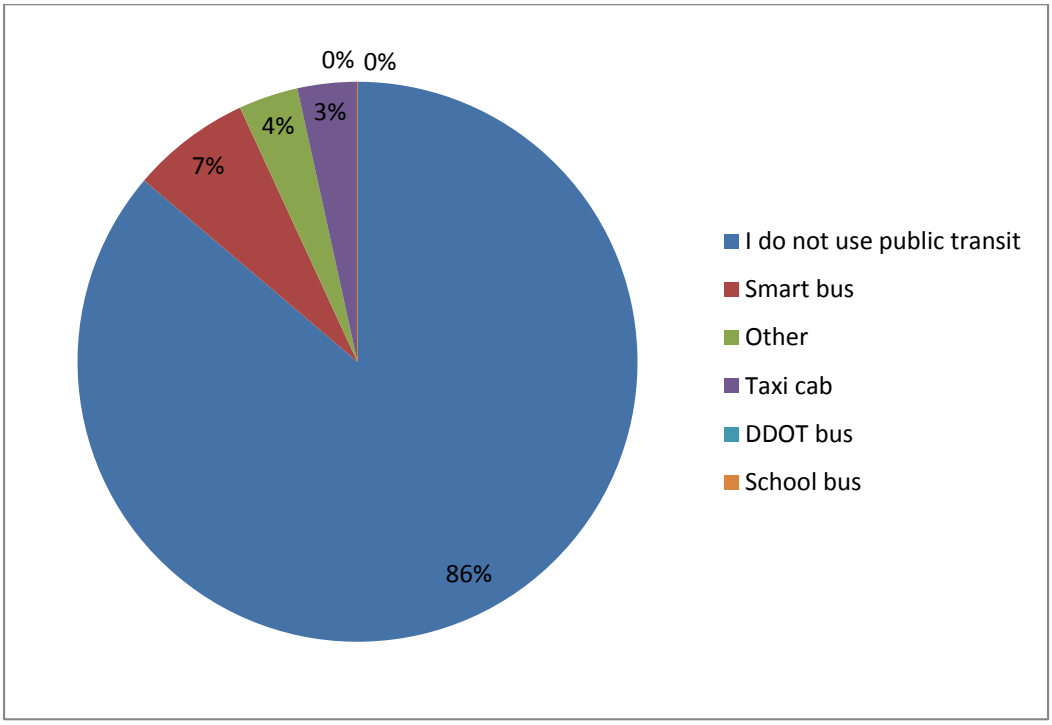


Additional comments:

1. Too much parking

3. Your Public Transportation Use

Do you utilize public transportation? Which modes?



4. Alleviating Traffic Issues

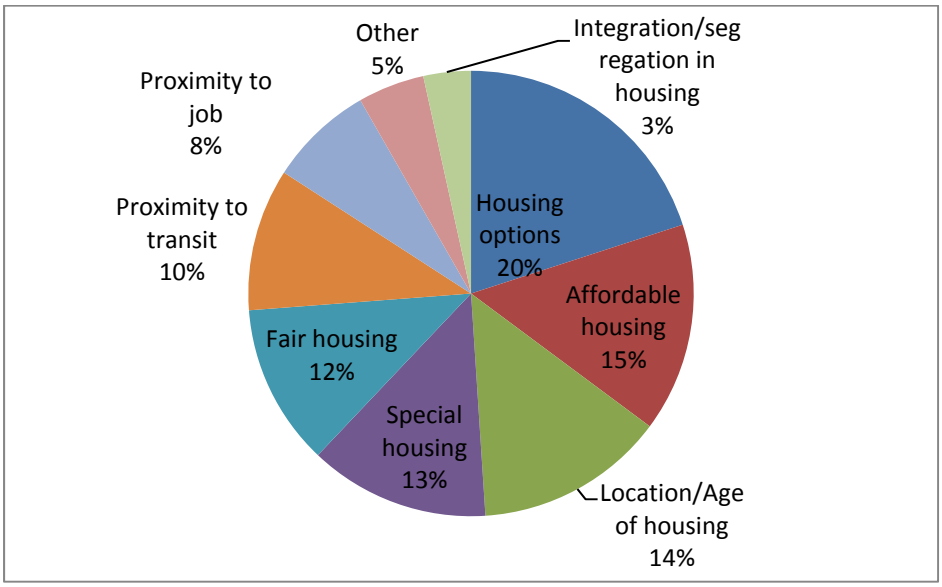
Do you think there are enough transportation options? What areas are underserved?

1. Need public regional transit (bus, light rail) (5)
2. City has no control over traffic issues (2)
3. Need more non-motorized (bike/pedestrian) (2)
4. Carpool lanes
5. Widen roads

Week 12 Housing & Neighborhoods
April 16 – April 23, 2015

1. Housing Issues and Concerns

What housing issues are you concerned with?

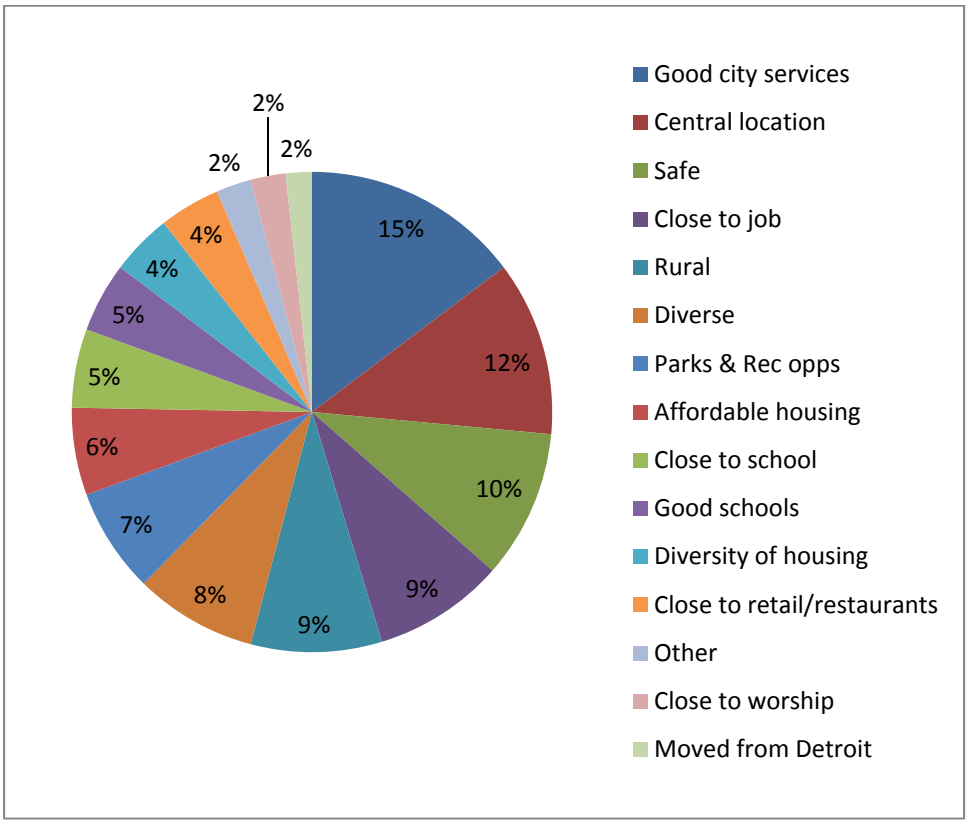


Additional comments:

1. Need increased code enforcement (7)
2. Too many group/institutional homes (2)
3. Need more mixed use options

2. Living in Southfield

Why do you choose to live in Southfield?



Additional comments:

1. Central & convenient location (7)
2. Many housing options (2)
3. Poor schools (2)
4. Community pride
5. Good public safety
6. Good schools

3. Quality Neighborhoods/Subdivisions in Southfield

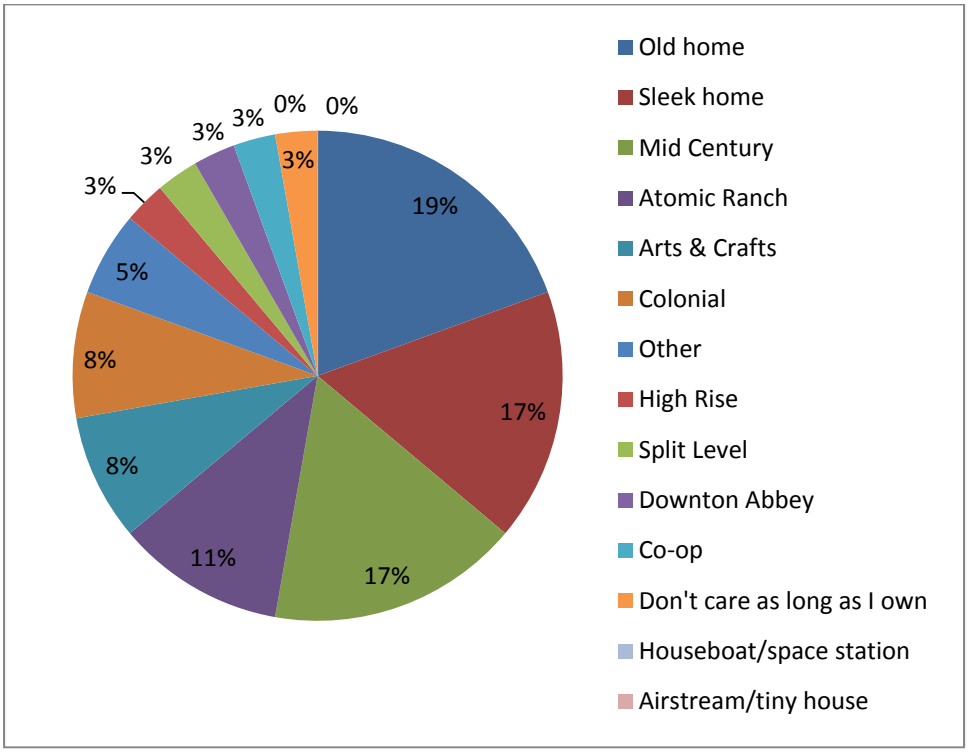
Which are the best in Southfield? Which need improvement?

Additional comments:

1. Historic/Midcentury (Magnolia, Ravines, Bell Rd, Cambridge Village) (4)
2. Renters are bad (3)
3. Rural feel (Ravines, Farm stands, Farmbrook) (3)
4. More Code Enforcement needed (Bonnie Acres, Shiawassee) (2)
5. Renters are good or potentially good (2)
6. City Centre momentum
7. Diverse (Ravines)
8. Safe (Ravines)
9. Unsafe (8 Mile Rd subs)

4. Your Dream House

What would you consider your dream house?

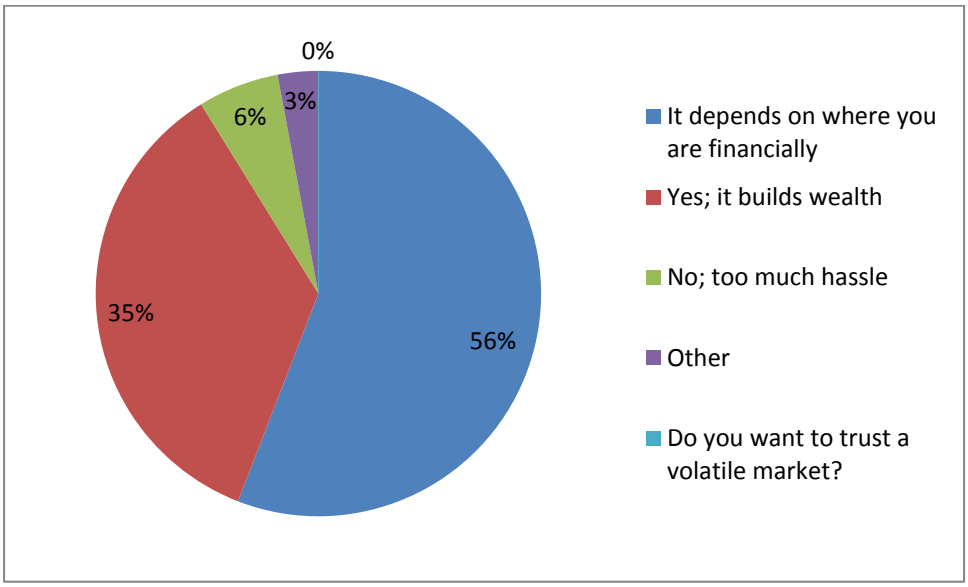


Additional Comments:

1. Re-use of unique building/structure (ie storage container) (2)
2. Detached condo
3. Mid Century/Colonial hybrid

5. The Cost of Homeownership

Do you think that owning a home is a smart financial move?



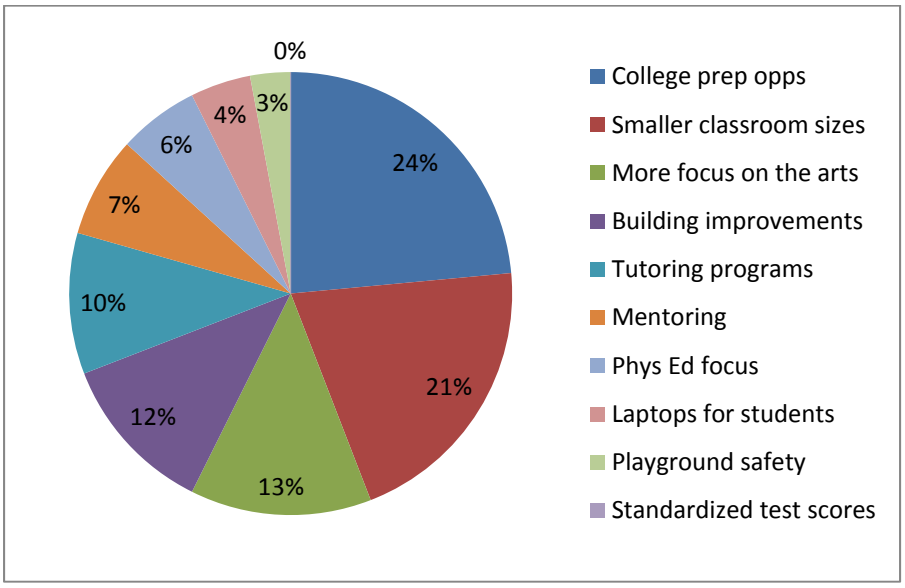
Additional Comments:

1. Home value appreciation is key (2)
2. It's a personal choice
3. Been burned by the market
   In an apartment & misses having their own home

Week 13 Education
April 23 – April 30, 2015

1. Prioritizing School Issues

What two improvements should Southfield schools tackle?

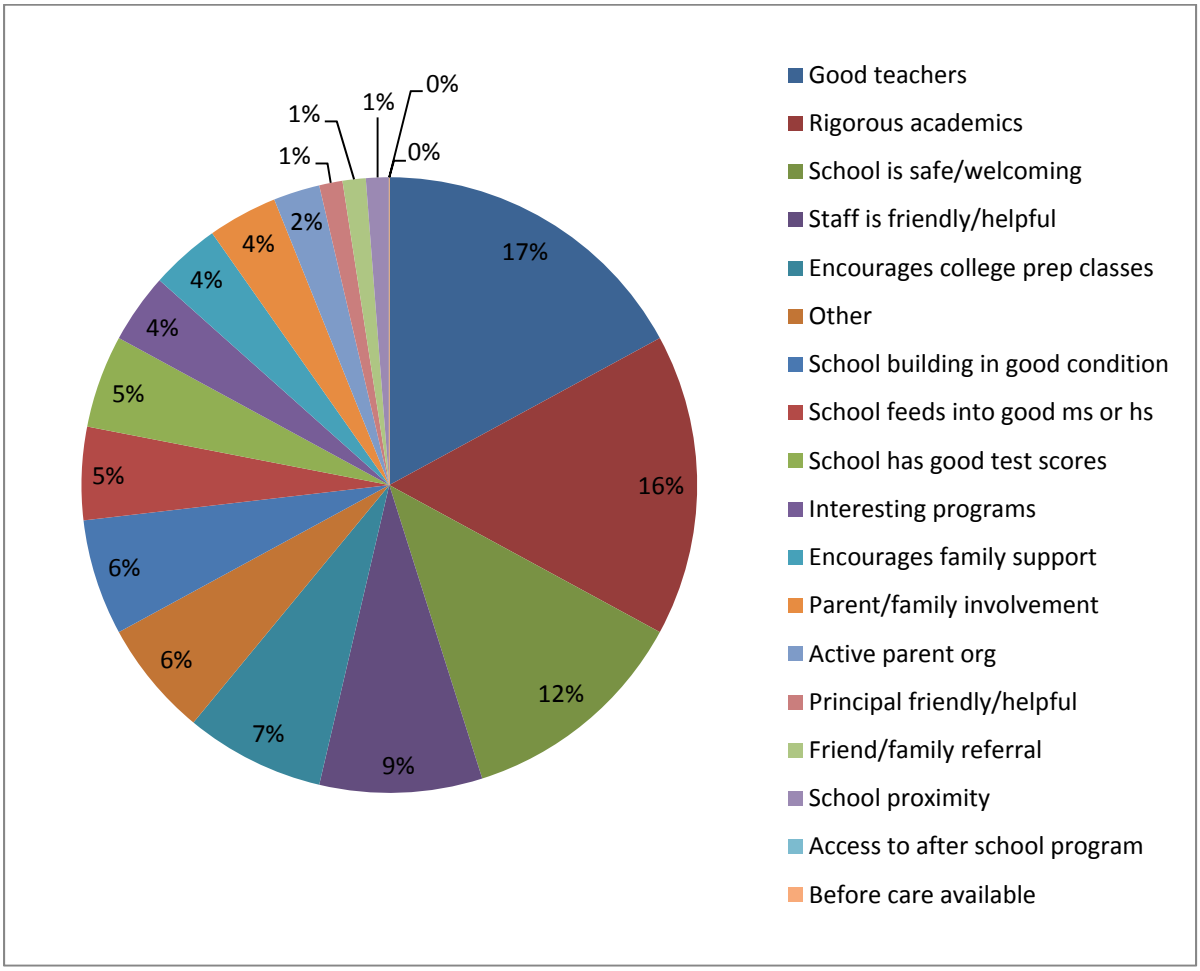


Additional comments:

1. College/employment preparedness (2)
2. Combining schools is a bad idea (2)
3. Add shop and home ec classes
4. Embrace technology
5. Improved budgetary planning
6. Encourage private donations towards Southfield Promise
7. Parent & student mentoring
8. Upgrading professionalism/skill level of school staff

2. Top Factors for Choosing Child's School

Why did you choose the school your child is attending?



3. Visioning Our Universities' Future

What is your vision for Southfield's Universities?

1. Emphasize city/student/private business relationships (3)
2. No more for-profit universities (2)
3. Place-based education (life skills)

4. Encouraging Student Involvement

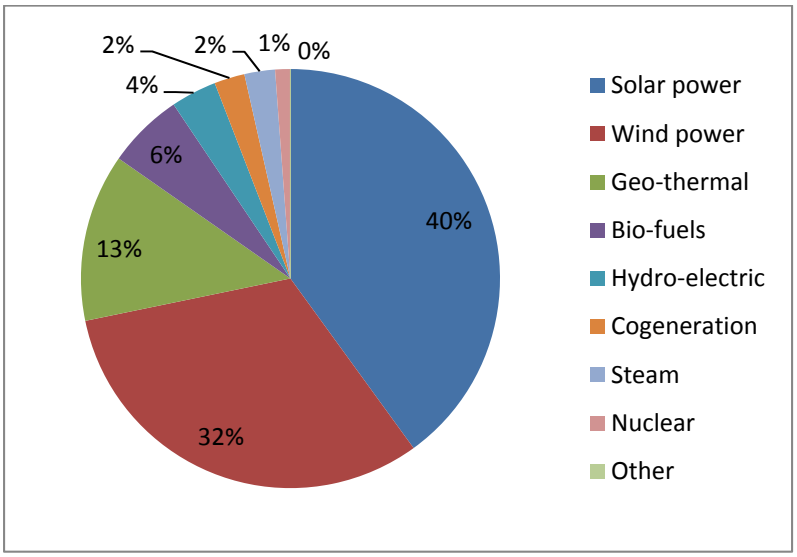
How do we encourage student engagement in our community?

1. Civic projects/additional volunteer opportunities (5)
2. Garden club/community garden
   Partner student groups (Girl/Boy Scouts, sports clubs) with City

Week 14 Energy
April 30 – May 7, 2015

1. Forms of Alternative Energy

What forms of alternative energy should Southfield prioritize?

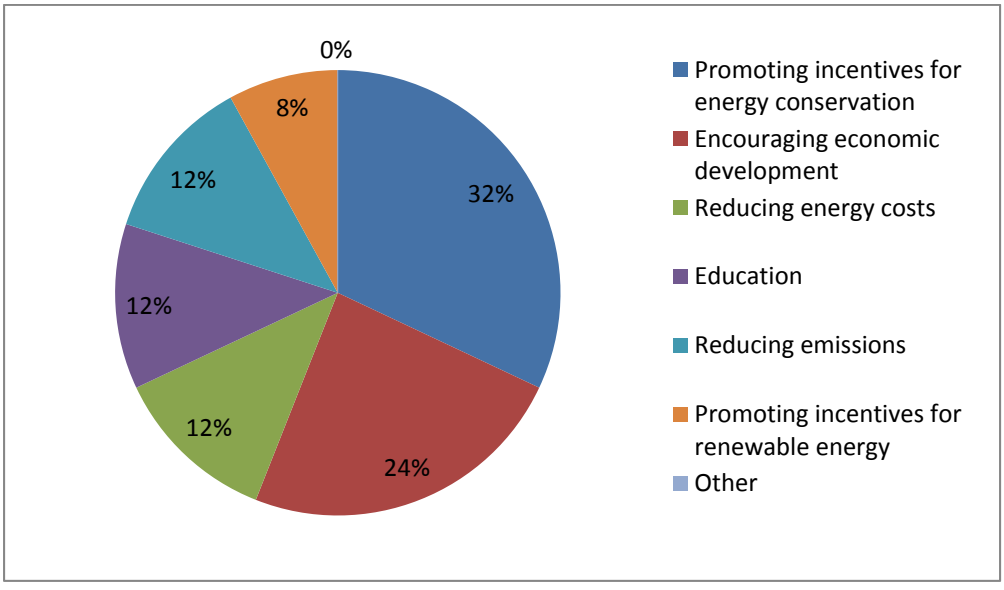


Additional comments:

1. Mainstream alternative energy (2)
2. Encourage schools to implement
3. Tax incentives

2. Energy-Based Goals

In which do you think the City should get involved?

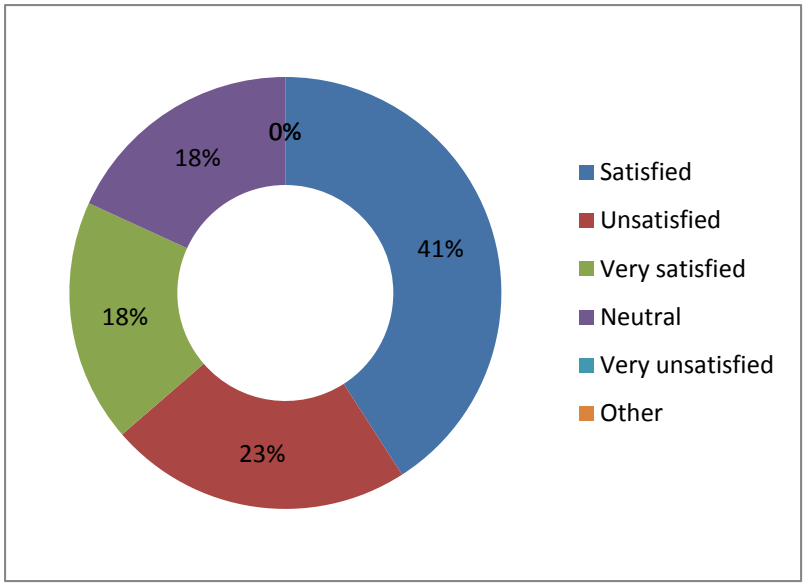


Additional Comments:

1. Promotion/education (4)
2. Reduce costs
3. Reduce emissions
4. Tax incentives

3. Level of Service from Your Energy Provider

Do you feel the amount of power offered by DTE Energy is adequate?



Additional Comments:

1. Outages are brief
2. Prices are too high

4. Alternative Energy Solutions

What are your feelings towards alternative energy solutions?

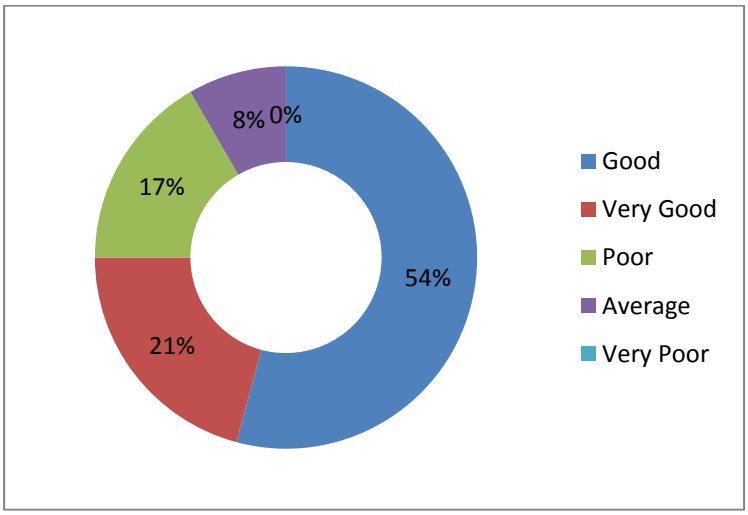
1. Incentivize (2)
2. Require for new developments (2)
3. Provide more affordable residential solutions (2)
4. Encourage lesser utilized methods
5. Incorporate into daily lives

   Require for redevelopments

Week 15 Health
May 7 – May 14, 2015

1. Health Care Options

How would you rate quality of health care options in Southfield?

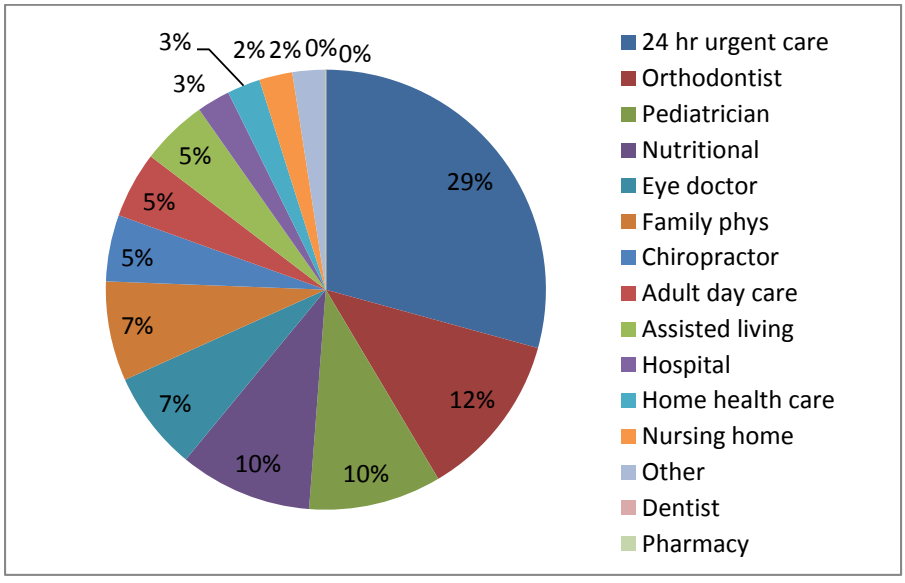


Additional comments:

1. Two good options (Beaumont, Providence) (2)
2. Close proximity
3. Good doctors

2. Providing Health Care in Southfield

Which types of health services do we need more of in Southfield?

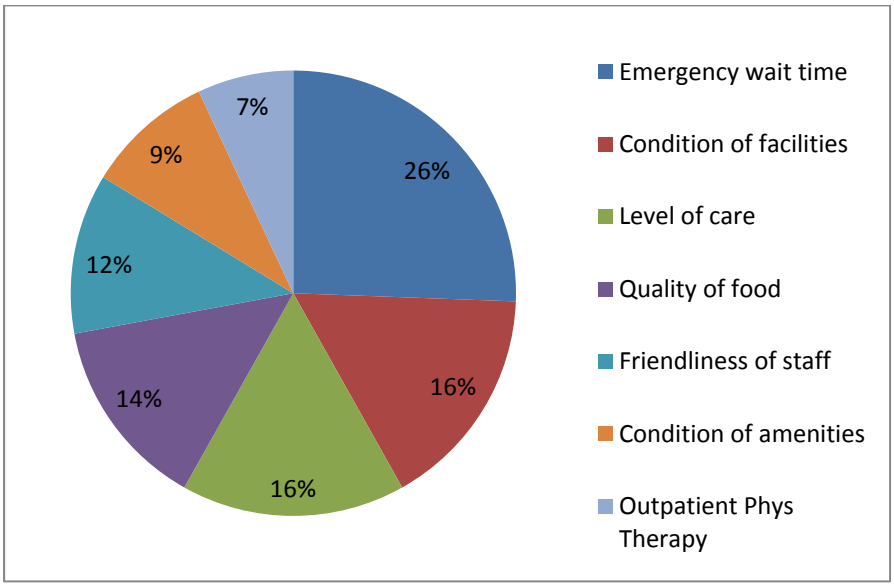


Additional comments:

1. Good variety (2)

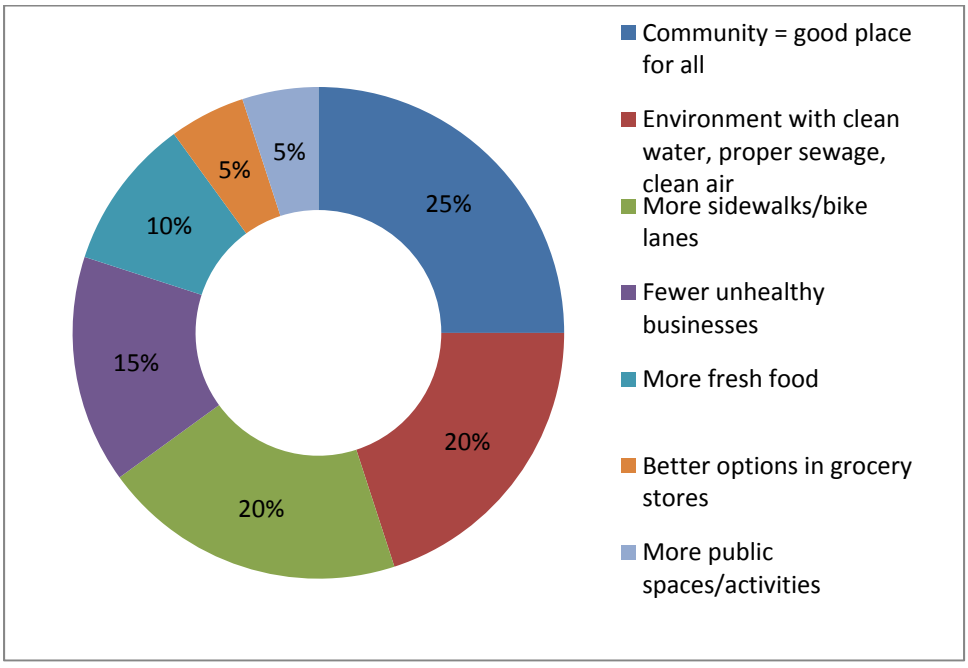
3. Improving Hospitals & Health Clinics

What areas in your hospital and/or health clinic need the most improvement?



4. Health Starts Where You Live, Learn, Work, and Play!

Which of these health-related statements resound with you?



Additional comments:

1. Cleanliness
2. More restaurants with fresh food options

5. A Healthier Southfield

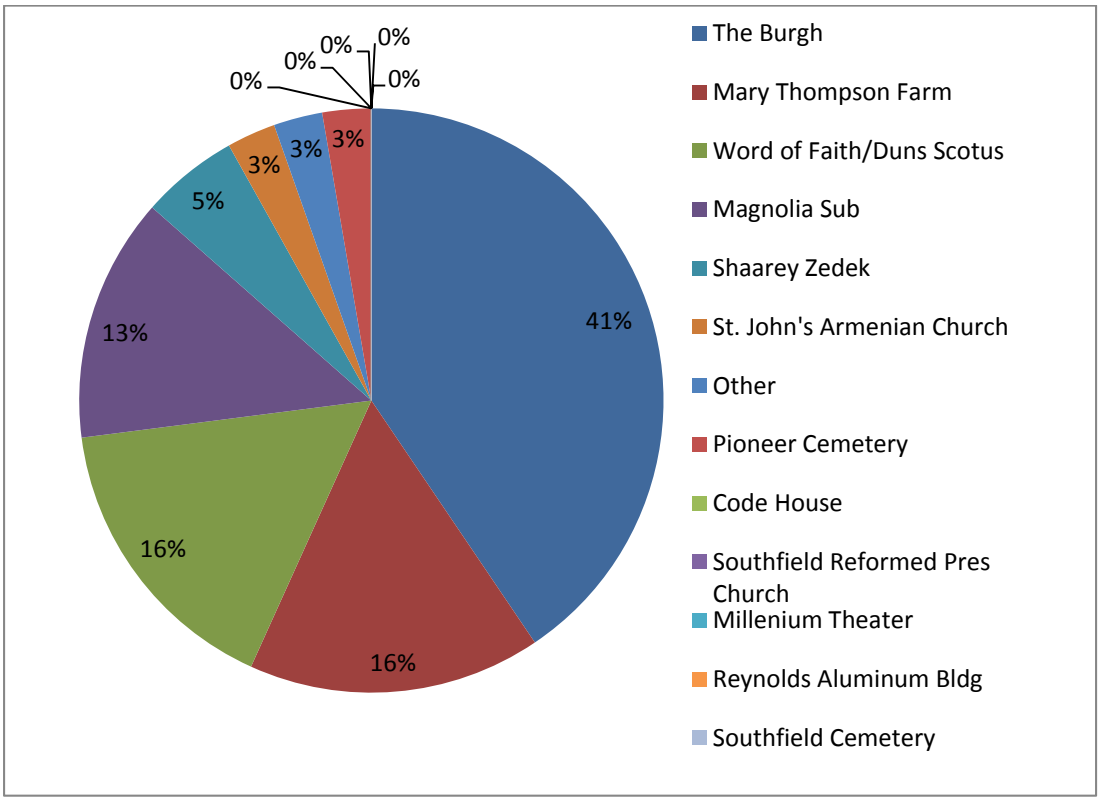
What could we do to make our community a healthy one?

1. Build an indoor recreational center with pool (3)
2. Group activities (3)
3. Facilitate bicycling/walking (2)
4. Dog park
5. Farmers market
6. Free activities
7. Take personal responsibility for health
8. Walking daily

Week 16 Historic Preservation
May 14 – May 21, 2015

1. Your Favorite Historic Landmark or Location

Which of these historic spots is your favorite in our community?



Additional comments:

1. The Burgh (2)
2. Entire Word of Faith area

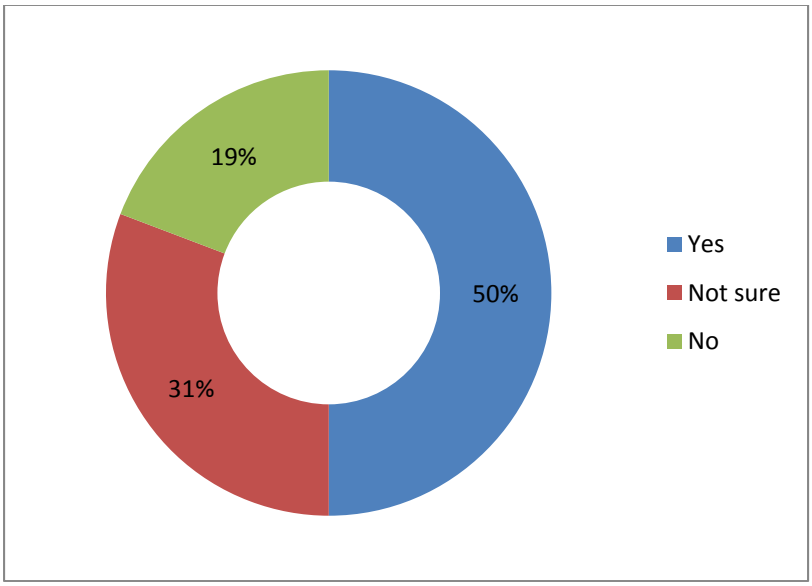
2. Favorite Historic Community

From what communities can we draw inspiration as we preserve our heritage?

1. Focus on history integrating with new (4)
2. NYC (2)
3. Boston
4. Detroit
5. Diversity
6. Franklin, MI
7. Hometown feel
8. Portland, ME
9. Washington DC

3. Regulating Redevelopment in Southfield

Would you be in favor of more strict regulations on redevelopment as a way to preserve historic buildings?



Additional comments:

1. Preserve traditions (2)
2. Attract visitors
3. Mix old and new

4. Preserving Our Character

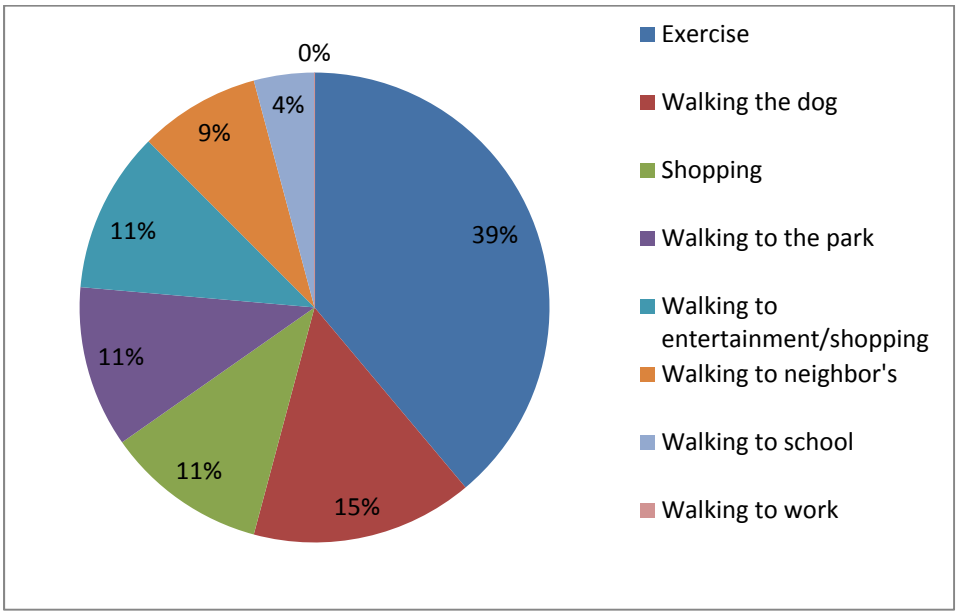
How can Southfield grow and expand while protecting the character of each of our neighborhoods?

1. More aggressive Code Enforcement (4)
2. Encourage more resident input
3. Home improvement loans
4. Spotlight history of neighborhoods

Week 17 Infrastructure
May 21 – May 28, 2015

1. Using Your Sidewalk

In what ways do you use the sidewalks in your community?

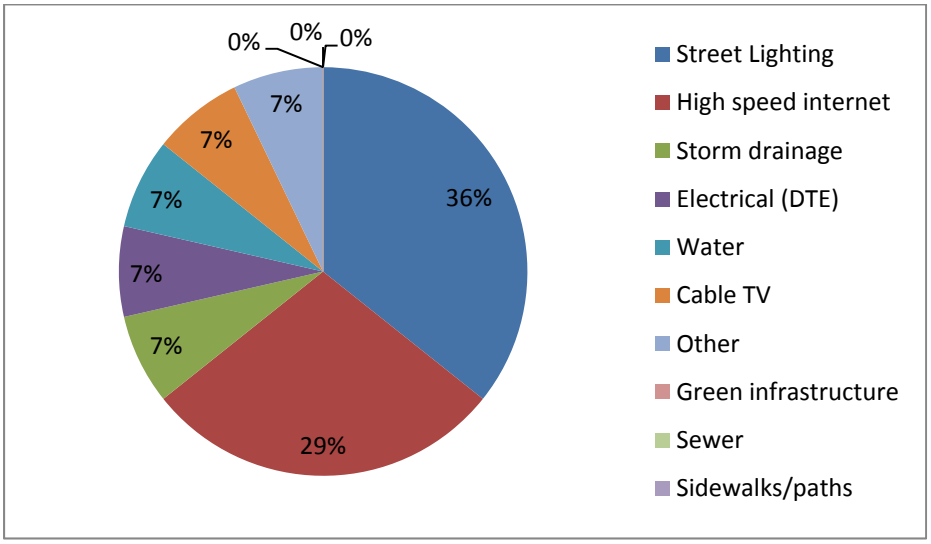


Additional comments:

1. Missing/incomplete walks (5)
2. Enjoy walking City Centre/Civic Center Dr (2)

2. Level of Satisfaction with Existing Infrastructure

Are you satisfied with the existing infrastructures listed?



Additional comments:

1. Need more options & lower prices for cable/internet (4)
2. Need additional and more efficient street lighting (3)
3. More green infrastructure (2)
4. Better traffic signal timing

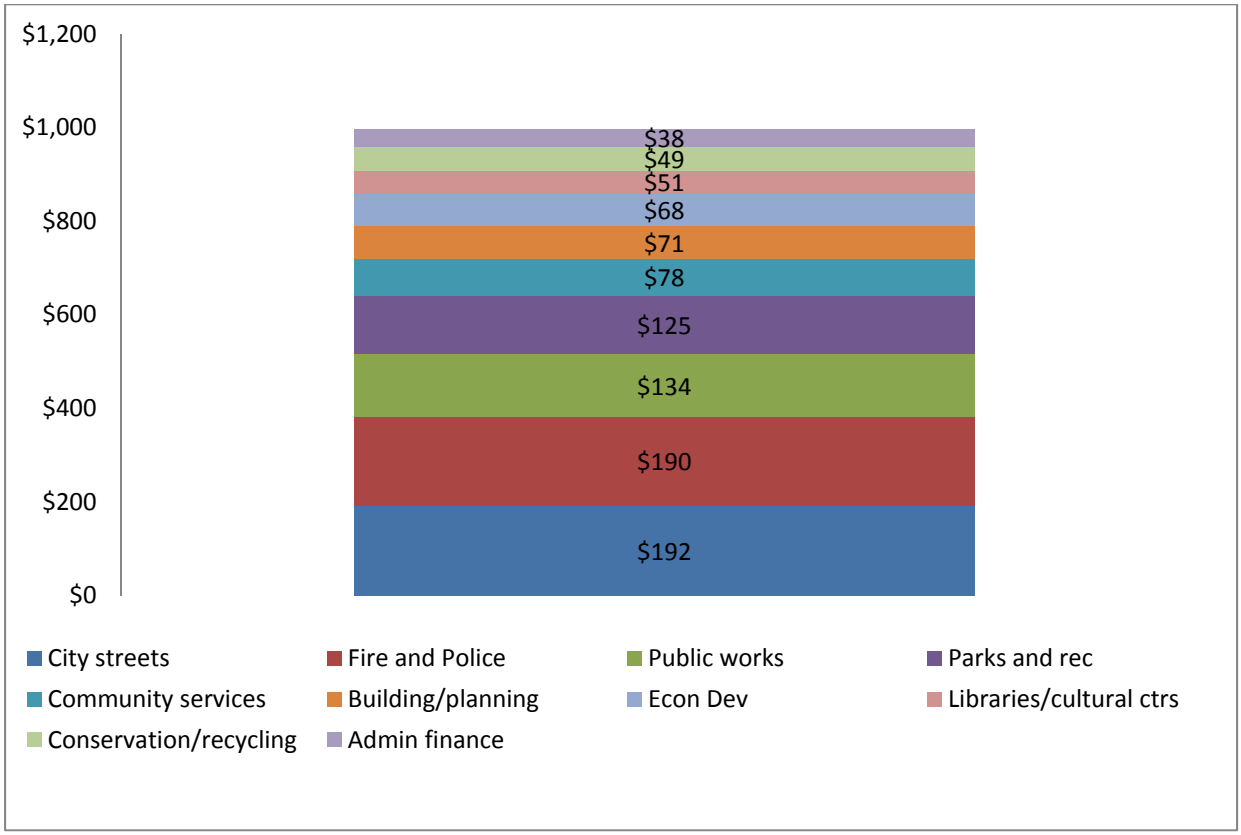
3. Congested Roads and Safety Concerns

Where are some congestion hot spots and where do you feel unsafe on the road, sidewalk, bike trails?

1. Reprogram traffic signals & pedestrian crosswalk signals (3)
2. 12/Evergreen dangerous (2)
3. 12/Southfield dangerous (2)
4. 12/Telegraph dangerous (2)
5. 10/Telegraph congested
6. Congested near charter schools
7. Need additional turn lanes (Greenfield/Providence)
8. Police enforcement for texting while driving

4. Budgeting Our Community Dollars

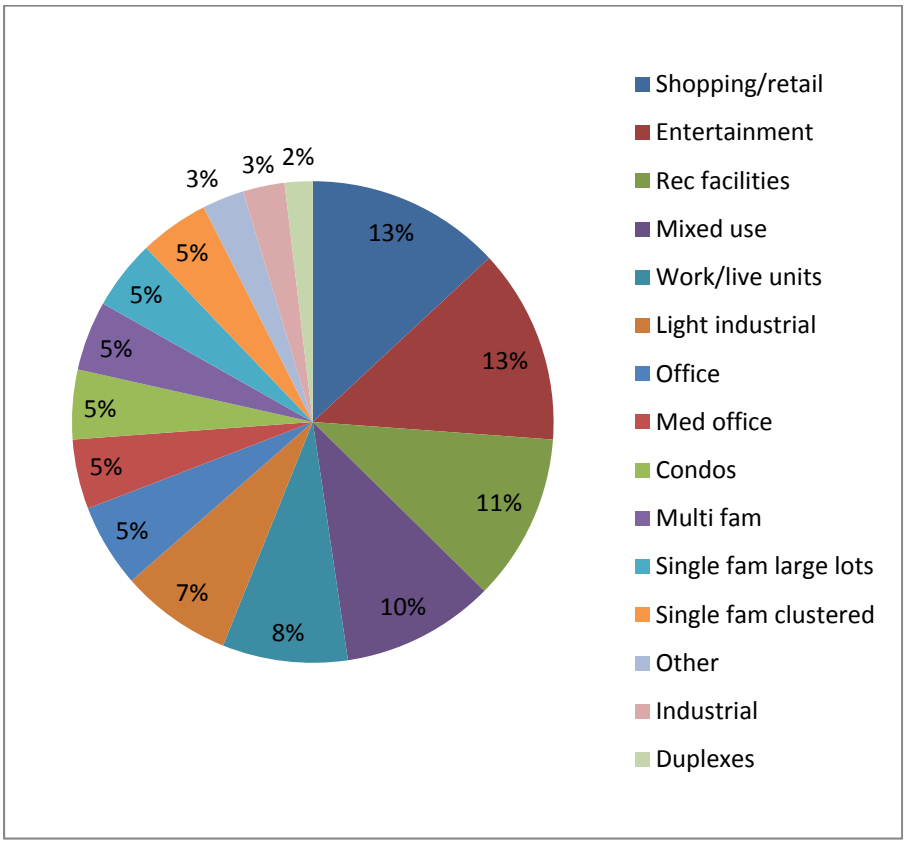
For every $1,000 of city funds, how would you allocate money?



Week 18 Land Use
May 28 – June 4, 2015

1. Encouraging Types of Development

Which types of development should Southfield be encouraging?

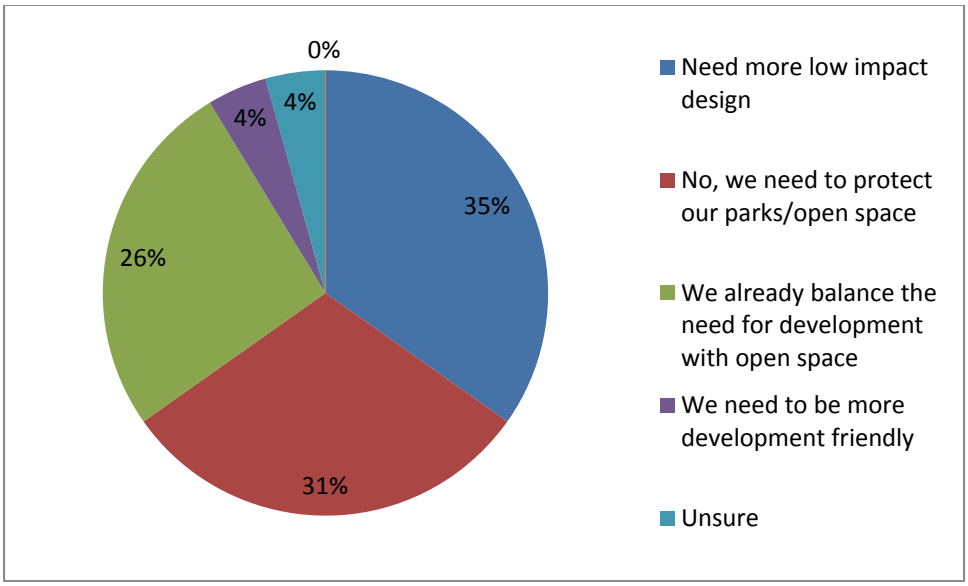


Additional comments:

1. No new strip retail (2)
2. Encourage long term businesses
3. Finish existing developments
4. Mixed use
5. Spacious ranch condos
6. Young adult oriented businesses

2. Balancing Growth and Sustainability

Do you think there is a good balance between residential/commercial development and preservation of open space?

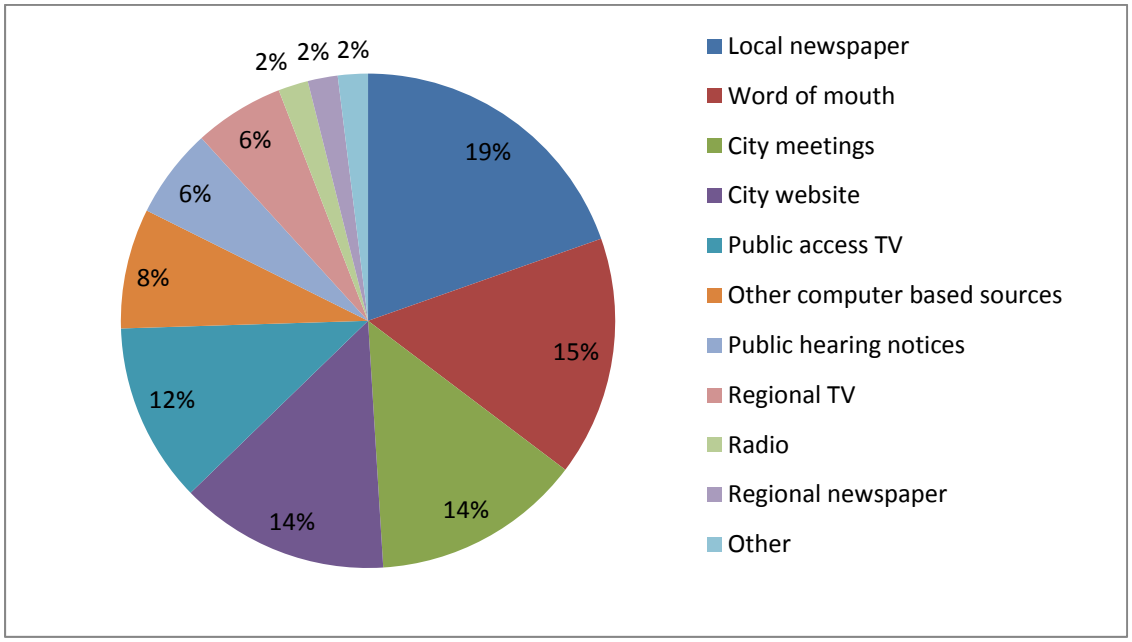


Additional comments:

1. Encourage redevelopment of older properties
2. Renovate existing parks

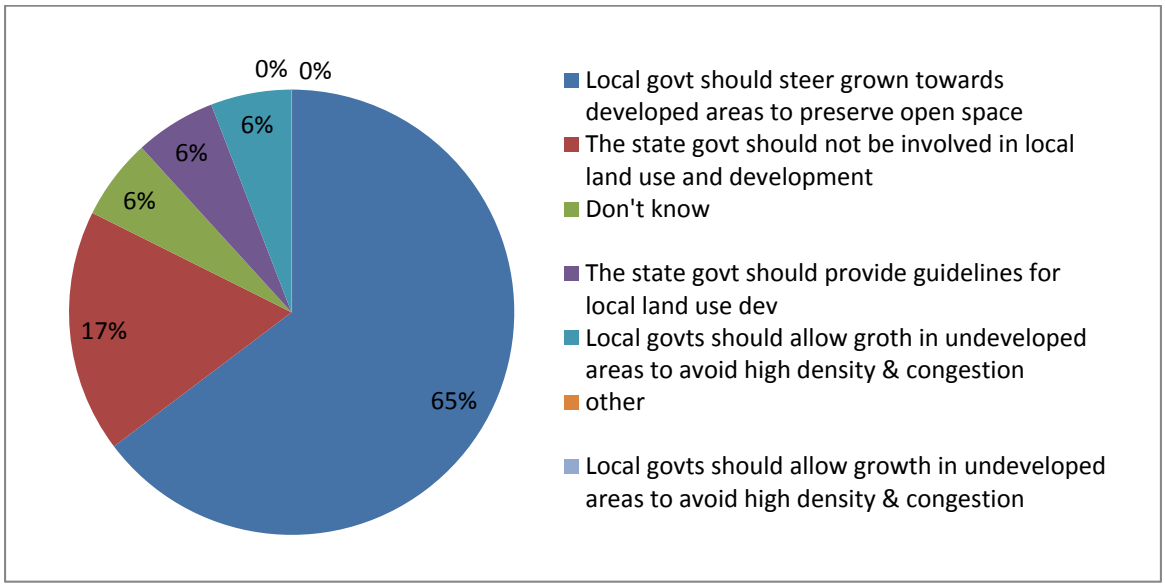
3. Communication of Land Use Issues

How do you learn about land use issues in the City of Southfield?



4. Your Views on Land Use

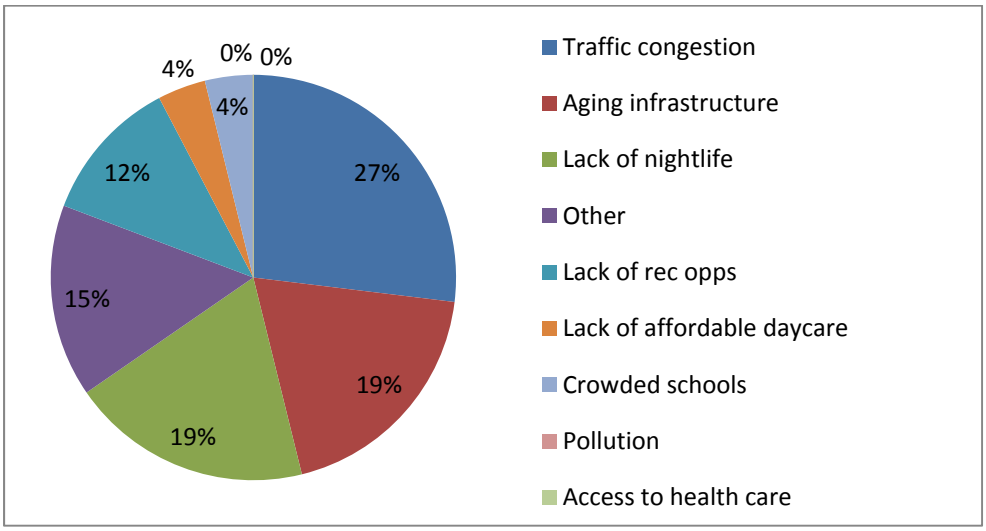
Which of these statements regarding land use comes closest to your personal views?



Week 19 – Quality of Life
June 4 – June 11, 2015

1. Creating a Better Southfield

What is the biggest obstacle to improving quality of life in Southfield?

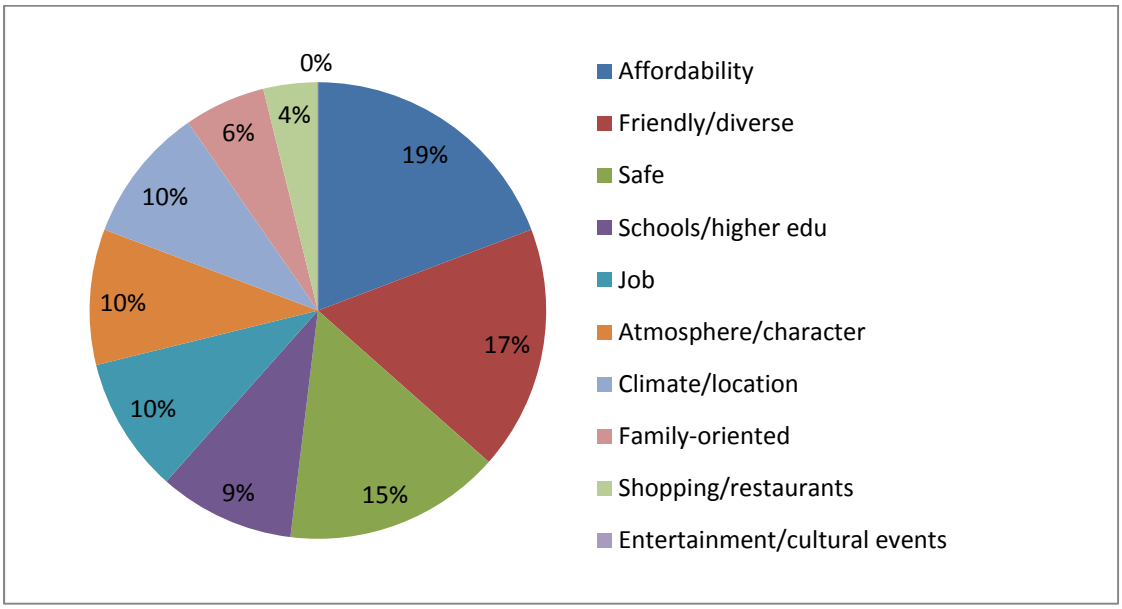


Additional comments:

1. Promoting diversity is key (2)
2. Schools are sub-par (2)
3. Perception

2. Living in Our Community

What are your top three reasons for living in our community



?

Additional comments:

1. Good location
2. Great neighborhood

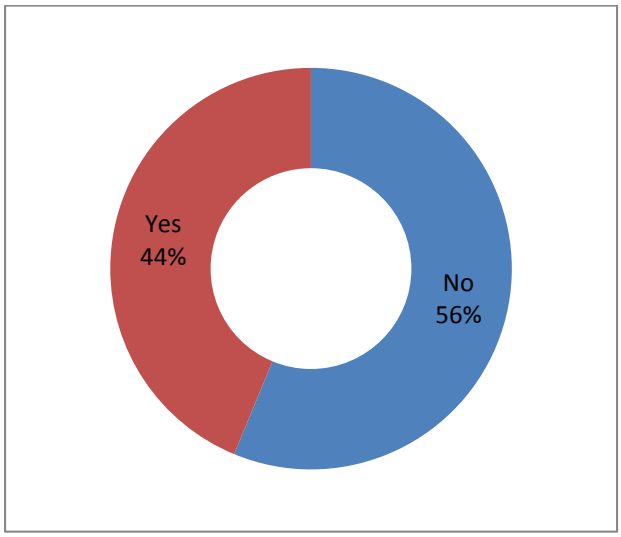
3. Best Day of the Year

What's the best day of the year in Southfield?

1. Spring (2)
2. Summer

4. Sidewalk Activities

Are the sidewalks in Southfield conducive for outdoor dining, shopping, walking/running, and seating?



Additional comments:

1. Evergreen Road will be big improvement
2. Missing sidewalks
3. More outdoor lunch options needed

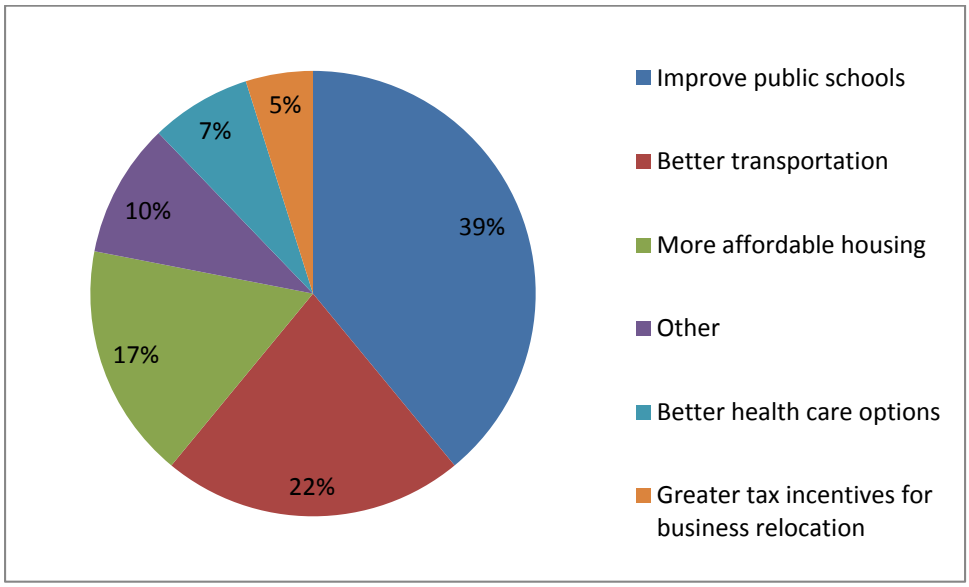
5. The Face of Southfield

Who would be the best celebrity spokesperson for Southfield?

1. Congresswoman Brenda Lawrence

6. Calling Our Community Home

How can we make Southfield a more permanent home for our residents?



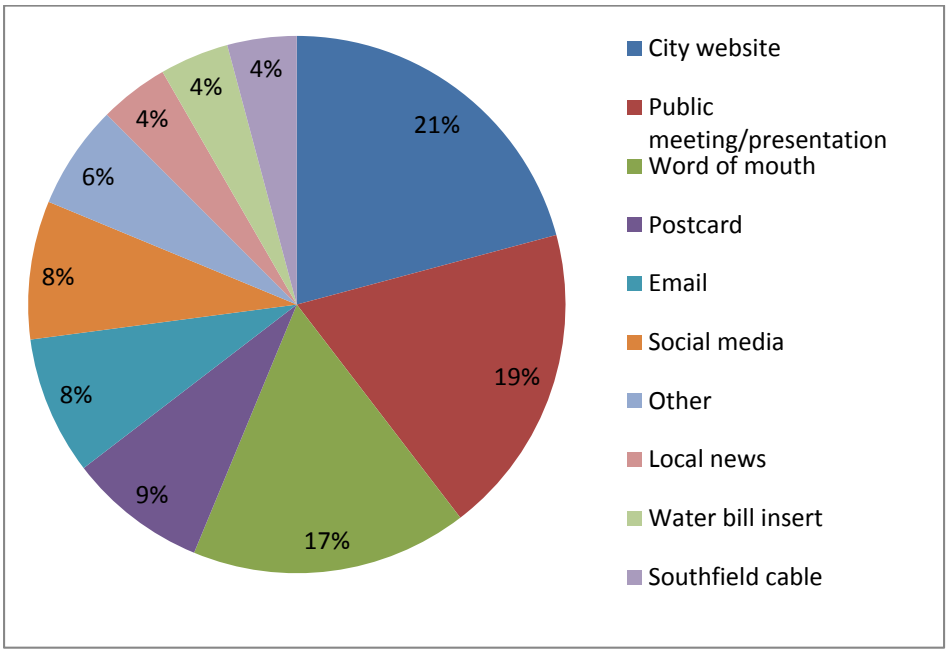
Additional comments:

1. Healthy living solutions (fresh food, indoor recreation, less fast food) (3)
2. Improve schools (3)
3. Code enforcement
4. Home improvement incentives
5. Improve roads
6. Maintain good public safety services
7. More residential development
8. Walkability/connectivity

Week 20 – Local Government
June 11 – June 17, 2015

1. Spreading the Word on Sustainable Southfield

How did you hear about this engagement website?

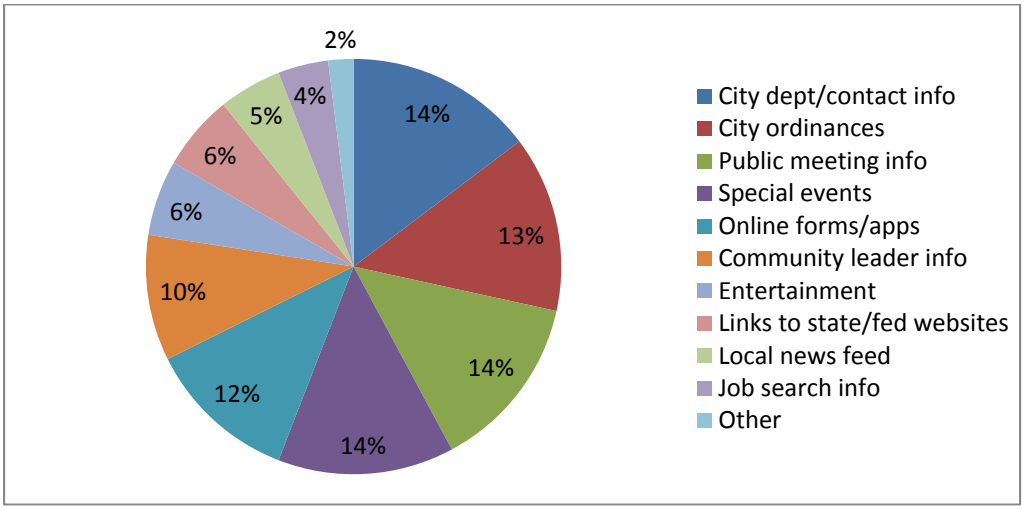


Additional comments:

1. Signs on easels at Municipal Complex (2)
2. City of Detroit Planning Dept

2. Southfield's Website

What information on Southfield's main website is most important to you?

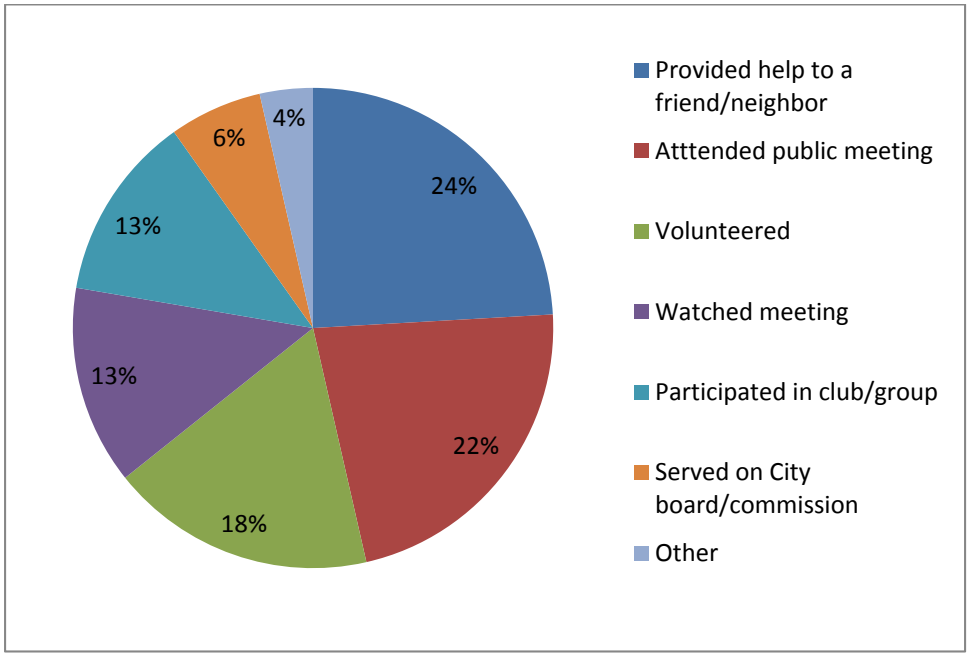


Additional comments:

1. Assessing data
2. Department contacts
3. GIS has become more difficult to use

3. Your Participation in Civic Engagement in Southfield

Which of the following have you done in the past 12 months?



Additional comments:

1. Citizen participation is important (3)

4. Southfield's Level of Service

How have you interacted with Southfield's city departments, and were you satisfied?

1. No problems (2)
2. Code Enforcement communication issues
3. Library staff helpful
4. Parks & Rec moved rec classes to basement – unsatisfied
5. Police Dept responsive
6. Water & Sewer responsive

5. A Transparent Southfield

Is there a need for more government transparency in Southfield?

1. Access to everything needed
2. Employee activity should be part of public record
3. Link agendas & be sure calendar has all meeting dates (website)
4. Post signs (laws & curfews)

5. Road project info more prominent
6. Site plans should be online

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APPENDIX B: AARP LIVABILITY INDEX

How do outsiders perceive Southfield?

Today, many people, especially the younger generations (Gen X and Millennials) and tech savvy individuals will utilize online tools to help them determine where to live, work, attend school and recreate. Below, is a sampling of popular indexes and websites that are used to determine livability. See how Southfield measures up:

Livability Index

In April 2015, the American Association of Retired Persons (AARP) launched their Livability index (aarp.org/livabilityindex), a new online tool designed to help communities' better serve the nation's aging population. To create the index, the AARP Public Policy Institute surveyed 4,500 Americans 50 and older to determine the aspects of community most important to them. AARP then developed several categories around those results: **housing, neighborhood, transportation, environment, health, engagement and opportunity;** taking into account 60 different factors to rate communities in those categories. (Source: *AARP Bulletin Real Possibilities,* Vol. 56 No. 4, May 2015*)*

Currently, the City of Southfield has a Livability score of **49**.

Livability Score

This score rates the overall livability of a selected neighborhood, city, county, or state on a scale from 0 to 100. It is based on the average score of seven livability categories—housing, neighborhood, transportation, environment, health, engagement, and opportunity—which also range from 0 to 100. We score communities by comparing them to one another, so the average community gets a score of 50, while above-average communities score higher and below-average communities score lower.
All scoring begins at the neighborhood level. Cities, counties, and states receive a score based on the average scores of neighborhoods within their boundaries. Most communities have a range of more- or less-livable neighborhoods, but for a community to get a high score, neighborhoods throughout it need to score well. This makes it even more challenging for a city, county, or state to get a high score: the more neighborhoods there are within a given boundary, the less likely it will be that all of them have high scores.

Creating a livable community is challenging, and so is getting a high livability score. To get a perfect score of 100, a neighborhood would have to be among the best in the country in each of the seven livability categories. Scoring highly across all categories is

difficult. For example, a transit-rich neighborhood has its benefits, but it can also drive up housing prices. To help that neighborhood score highly in both categories, community leaders would have to commit to ensuring affordable housing near public transit is available. (Source: AARP)

The average score of seven livability categories for the City of Southfield are detailed below:

Housing (50)
Affordability and access

They say home is where the heart is—and the same holds true for the Livability Index. Housing is a central component of livability. Deciding where to live influences many of the topics the Index covers. We spend more time in our homes than anywhere else, so housing costs, choices, and accessibility are critical. Great communities provide housing opportunities for people of all ages, incomes, and abilities, allowing everyone to live in a quality neighborhood regardless of their circumstances.

Housing Accessibility: Basic Passage

3.1% of units have basic passage (Median US neighborhood: 2.6%)
Percentage of housing units with extra-wide doors or hallways, floors with no steps between rooms, and an entry-level bedroom and bathroom: measured at the metro area scale, higher values are better

The majority of Americans want to stay in their homes as they age. Many will host guests or older family members with restricted mobility. It's desirable to have a home that's both accessible and aesthetically pleasing. Functional, tasteful designs that enable anyone to enter the home and move about—by foot, wheelchair, or walker—constitutes accessible housing. Here, the Index assesses the percentage of housing units in a metropolitan area with accessible features, such as extra-wide doors and hallways, floors with no steps between rooms, and at least one entry-level bathroom and bedroom. We don't include ramps because AARP encourages new homes to be built with more attractive zero-step options to avoid costly and unattractive retrofits down the road.

Source: U.S. Census Bureau, American Housing Survey

Housing Options Availability of Multi-Family Housing
44.5% of units are multi-family (Median US neighborhood: 18.8%)

Percentage of housing units that are not single-family, detached homes: measured at the neighborhood scale, higher values are better

The majority of U.S. homes are single-family, detached houses that are often well-suited for families with children. However, a growing number of people are choosing smaller, more space- and cost-efficient homes. Older adults whose children have moved out or whose spouses have passed away, single-parent families, childless couples, or people who choose to share housing with roommates may all prefer multi-family housing. Livable communities offer housing for any situation, which is why the Index measures the percentage of housing units in a community that are not single-family, detached homes.

Source: U.S. Census Bureau, American Community Survey

Housing Affordability: Housing Costs

$1,295 per month (Median US neighborhood: $999)

Monthly housing costs: measured at the neighborhood scale, lower values are better. Monthly costs are capped at $4,000.

Housing typically takes the biggest portion of our paycheck or pension, and when prices soar, quality of life suffers. Higher monthly rent or mortgage payments leave less money for food, transportation, and health care, and restrict housing options for households with fixed or low-to-moderate incomes. The Index accounts for housing costs (including taxes, rent, mortgage fees, and utilities) that existing residents pay to help users compare the costs of living in different neighborhoods. However, it does not reflect the market rate price to rent or buy in the current local housing market.
Source: U.S. Census Bureau, American Community Survey

Housing Affordability: Housing Cost Burden

24.1% of income spent on housing (Median US neighborhood: 18.4%)

Percentage of income devoted to monthly housing costs: measured at the neighborhood scale, lower values are better

Bigger cities offer more employment opportunities, but often have higher housing costs, as well. Ideally, big-city salaries are adequate to cover both housing and other living expenses. Here, the Index compares neighborhood housing costs to average incomes in the greater metropolitan area or county.

Source: Housing costs come from the U.S. Census Bureau, American Community Survey; and regional median incomes come from the U.S. Department of Housing and Urban Development, HUD Program Income Limits

Housing Affordability: Availability of Subsidized Housing

104 units per 10,000 people (Median US neighborhood: 124)

Number of subsidized housing units per 10,000 people in a county: measured at the county scale, higher values are better

Housing and other prices often are higher in more desirable communities. As communities become "hot," affordable options for low- and moderate-income residents may shrink. Lower-income residents are most likely to depend on the access to transit, stores, and jobs that popular communities offer. Subsidized housing helps such residents afford to live in higher-cost communities, and provides a safety net for people hit with unexpected financial challenges, such as job loss or divorce. The Index measures the number of subsidized housing units per 10,000 people in a county.

Source: Public and Affordable Housing Research Corporation and the National Low Income Housing Coalition's National Housing Preservation Database

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Neighborhood (54)

Access to Life, Work, and Play

What makes a neighborhood truly livable? Two important qualities are access and convenience. Compact neighborhoods make it easier for residents to reach the things they need most, from jobs to grocery stores to libraries. Nearby parks and places to buy healthy food help people make smart choices, and diverse, walkable neighborhoods with shops, restaurants, and movie theatres make local life interesting. Additionally, neighborhoods served by good access to more distant destinations via transit or automobile help residents connect to jobs, health care, and services throughout the greater community.

Proximity to Destinations: Access to Grocery Stores and Farmers' Markets

0.6 stores and markets (Median US neighborhood: 0.0)

Number of grocery stores and farmers' markets within a half-mile: measured at the neighborhood scale, higher values are better

It's hard to make healthy food choices if grocery stores and farmers' markets aren't nearby. People living in low-income households and individuals who don't drive are more likely to rely on nearby food sources—and may end up paying more if their only grocery option is a convenience store. Farmers' markets can also serve as important community gathering places. The Index gives higher scores to communities that provide a wide variety of healthy food options within walking distance.

Source: Grocery store locations come from Esri Business Analyst private data; farmers' market locations come from the U.S. Department of Agriculture, Agricultural Marketing Service

Proximity to Destinations: Access to Parks

0.6 parks (Median US neighborhood: 0.0)

Number of parks within a half-mile: measured at the neighborhood scale, higher values are better

Parks provide opportunities for people to exercise, gather with friends, or simply enjoy the outdoors. It's no wonder that most people surveyed by AARP value having a park within walking distance. Communities with multiple nearby parks may provide greater access to trails, athletic facilities, picnic tables, playgrounds, and more. Here, the Index counts the total number of city, county, state, and national parks that are within walking distance of a neighborhood.

Source: Esri Parks Shapefile private data

Proximity to Destinations: Access to Libraries

0.0 libraries (Median US neighborhood: 0.0)

Number of libraries located within a half-mile: measured at the neighborhood scale, higher values are better

Libraries promote literacy, provide Internet access and other services, and serve as community gathering spaces. They can be particularly important for low-income residents, who may lack the money to purchase books or Internet access at home. The Index measures the number of libraries within walking distance of a neighborhood, capping values at 1 since few neighborhoods have more than one library.
Source: Institute of Museum and Library Services, Public Library Outlet Data File

Proximity to Destinations: Access to Jobs by Transit

200 jobs (Median US neighborhood: 0)

Number of jobs accessible within a 45-minute transit commute: measured at the neighborhood scale, higher values are better

Thousands of commuters use buses, trains, and subways each day to get to work. For these workers, convenient and dependable transit isn't just a perk—it's a necessity.

Good public transportation generally costs less than driving and parking, encourages more walking, and reduces air pollution. Here, the Index measures the number of jobs accessible within a 45-minute commute by transit, giving more credit to nearby jobs than those farther away. Note: Data are available only for areas where transit agencies provide information to an online mapping database.
Source: U.S. Environmental Protection Agency, Smart Location Database

Proximity to Destinations: Access to Jobs by Auto

221,948 jobs (Median US neighborhood: 55,312)

Number of jobs accessible within a 45-minute automobile commute: measured at the neighborhood scale, higher values are better

Many of our metrics look at healthy, affordable transportation options like public transit, walking, and bicycling—but what about people who depend on their cars to get around? Most Americans drive to work, and most prefer a shorter commute. In this case, we examine how well neighborhoods allow people to access jobs. Better accessibility means less time sitting in the car, less money spent on gas and maintenance, and more time with friends and family. The Index measures the number of jobs that are accessible within a 45-minute drive.
Source: U.S. Environmental Protection Agency, Smart Location Database

Mixed-Use Neighborhoods: Diversity of Destinations

0.85 index from 0 to 1 (Median US neighborhood: 0.81)

Mix of jobs within a mile: measured at the neighborhood scale, higher values are better

The mix of jobs within a mile reflects the likelihood that a variety of destinations and services are available within the neighborhood. Livable neighborhoods make it easy for residents to walk to a diverse range of destinations and services, including shopping, entertainment, health care, and more. The Index measures how well a neighborhood offers convenient access to food and entertainment, health care, education, and personal services. Measured on a scale from 0 to 1, higher values are given to communities that offer better access.

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics data

Compact Neighborhoods: Activity Density

7,913 jobs and people per sq. mi.(Median US neighborhood: 3,567)

Combined number of jobs and people per square mile: measured at the neighborhood scale, higher values are better
Generally speaking, the more compact a neighborhood, the less distance between residents and nearby jobs, businesses, or services. Compact neighborhoods make it easier to accomplish errands by foot, and make it more likely that neighbors will have the type of chance encounters that build community. To capture both of these benefits, the Index measures the combined density of jobs and people in a neighborhood.

Sources: U.S. Census Bureau, American Community Survey and Longitudinal Employer-Household Dynamics data

Personal Safety: Crime Rate

227 crimes per 10,000 people (Median US neighborhood: 304)

Combined violent and property crimes per 10,000 people: measured at the county scale, lower values are better

High crime rates make people feel unsafe and isolated in their own communities. Crime-free streets and public areas are a fundamental component of vibrant neighborhoods. Everyone deserves to live in an environment where they feel safe and comfortable socializing, exercising, or just hanging out in public. The Index looks at the combined number of violent and property crimes per 10,000 people in a county.

Source: U.S. Federal Bureau of Investigation, Uniform Crime Reporting Program Data

Neighborhood Quality: Vacancy Rate

11.0% of units are vacant (Median US neighborhood: 8.8%)

Percentage of vacant housing units: measured at the neighborhood scale, lower values are better

Highly livable neighborhoods are vibrant places that nurture a strong sense of community. A neighborhood with many vacant homes can indicate substandard or poorly maintained housing. Here, the Index measures the percentage of vacant housing units in a neighborhood.

Source: U.S. Census Bureau, American Community Survey

Transportation (42)

Safe and Convenient Options

How easily and safely we're able to get from one place to another has a major effect on our quality of life. Livable communities provide their residents with transportation options that connect people to social activities, economic opportunities, and medical care, and offer convenient, healthy, accessible, and low-cost alternatives to driving.

Convenient Transportation Options: Frequency of Local Transit Service

5 buses and trains per hour (Median US neighborhood: 0)

Total number of buses and trains per hour in both directions for all stops within a quarter-mile: measured at the neighborhood scale, higher values are better

People are far more likely to hop on a bus or train if it's convenient to their home—and their schedule. Here, the Index assesses how many transit vehicles per hour stop within walking distance of a neighborhood. We use data from the evening rush hour, when extra buses and trains operate to accommodate commuters. Note: Data are available only for areas where transit agencies provide information to an online mapping database.

Source: U.S. Environmental Protection Agency, Smart Location Database

Convenient Transportation Options: Walk Trips

0.77 trips per household per day (Median US neighborhood: 0.73)

Estimated walk trips per household per day: measured at the neighborhood scale, higher values are better

Physical activity contributes to health and longevity. Making trips around the neighborhood by walking (called "walk trips") can be a safe form of exercise. Walk trips also contribute to more frequent social interaction with neighbors. The Index estimates the number of walk trips members of an average household take each day. It includes factors such as the number of destinations within a mile and how easy it is to navigate local streets. The goal is to measure how walkable the neighborhoods are.
Sources: Walk trips are modeled based on data from the Federal Highway Administration's National Household Travel Survey and other sources, including the U.S. Census Bureau, and the U.S. Environmental Protection Agency's Smart Location Database.

Convenient Transportation Options: Congestion
27.5 hours per person per year (Median US neighborhood: 17.4)

Estimated total hours that the average commuter spends in traffic each year: measured at the metro area scale, lower values are better

From a bustling economy to a vibrant culture, some communities have it all—but traffic congestion could make it hard for residents to enjoy these amenities. Not only do clogged roads wreck schedules and make appealing destinations hard to reach, they also increase air pollution. Here, the Index looks at the total amount of time per year that the average driver in an urban area spends sitting in traffic.

Source: The Texas A&M Transportation Institute, Urban Mobility Report. For urban areas not included in the report, we model congestion based on population and characteristics of the street network.

Transportation Costs: Household Transportation Costs

$9,410 per year (Median US neighborhood: $10,791)

Estimated household transportation costs: measured at the neighborhood scale, lower values are better

Second only to housing in U.S. household spending, transportation can be a significant financial burden, especially for households on a fixed income. Residents who purchase homes in cheaper neighborhoods can wind up paying more for gas and cars if their neighborhood lacks transit, isn't walkable, or is far from jobs and services. Here, the Index displays the estimated cost of transportation in different neighborhoods. These estimates are available for only metropolitan areas, so we assume that household transportation costs in rural areas are comparable to non-urbanized neighborhoods in metropolitan areas.

Source: U.S. Department of Housing and Urban Development, Location Affordability Index.

Safe Streets: Speed Limits

34.2 miles per hour (Median US neighborhood: 28.0)

Average speed limit on streets and highways: measured at the neighborhood scale, lower values are better

The odds that a pedestrian who gets hit by a vehicle will die increase drastically when the car is moving faster than 20 miles per hour. Lower, safer speed limits help residents feel confident walking and biking around their neighborhoods, resulting in healthier people and more vibrant communities. Here, we analyzed average speed limits for all

streets in a neighborhood, giving greater weight to streets with more lanes, since wide streets are riskier and more challenging to cross.

Source: Average speed limits in a neighborhood are calculated based on private data from NAVTEQ.

Safe Streets: Crash Rates

5.6 fatal crashes per 100,000 people per year (Median US neighborhood: 7.6)

Annual average number of fatal crashes per 100,000 people: measured at the neighborhood scale, lower values are better

Motor vehicle crashes are a leading cause of death in the United States. Crashes occur most often in areas with high speed limits, poorly designed streets, and in places where people must drive farther or more frequently to reach their destinations. Bicyclists and pedestrians are particularly vulnerable to crashes, as are children and older adults. Since people typically drive outside their neighborhood, the Index measures the number of fatal crashes within a 5-mile radius to assess safety on the surrounding streets. Fatal crashes are relatively rare in any given neighborhood, so we use a 5-year average to control for year-to-year changes.
Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System

Accessible System Design: ADA-Accessible Stations and Vehicles

62.5% of stations and vehicles are accessible (Median US neighborhood: 81.7%)

Percentage of transit stations and vehicles that are ADA-accessible: measured at the metro area scale, higher values are better

People with restricted mobility rely heavily on convenient public transit equipped with accessible features, such as buses with wheelchair lifts or stations with elevators. The Index examines the percentage of transit stations and vehicles in metropolitan areas that are accessible according to the standards of the Americans with Disabilities Act (ADA). Note: Transit data for rural areas aren't quite as detailed as in urban areas. We estimate accessibility for rural areas by calculating an average of accessibility data submitted by rural transit agencies across the United States.
Source: Federal Transit Administration, National Transit Database

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Environment (44)

Clean Air and Water

Good communities maintain a clean environment for their residents. Great communities enact policies to improve and protect the environment for generations to come. The Livability Index looks at air and water quality. It measures communities' actions to create resilience plans to prepare for emergencies and natural disasters, and it awards points to states that have policies promoting energy efficiency and that protect consumers from having their utilities cut off during extreme weather events.

Water Quality: Drinking Water Quality

0.78% of people are exposed to violations (Median US neighborhood: 0.50%)

Percentage of the population getting water from public water systems with at least one health-based violation during the past year: measured at the county scale, lower values are better

We need water to survive, so it's only natural that livable communities provide residents with clean drinking water. Contaminated drinking water can cause severe health issues; it also may reflect infrastructure that can't support future growth. More than 20 percent of the nation's water systems have violated health standards in recent years, which is why the Index investigates the percentage of people in a county who get water from public systems that fall below health standards.

Source: The Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps

Air Quality: Regional Air Quality

6.3 unhealthy air quality days per year (Median US neighborhood: 8.0)

Number of days per year when regional air quality is unhealthy for sensitive populations: measured at the county scale, lower values are better

Poor air quality not only makes day-to-day life less enjoyable, but also poses long-term health threats, especially for young people, older adults, and people who are at risk of developing asthma and other respiratory diseases. The Air Quality Index (AQI) measures the level of several different air pollutants on a scale of 0 to 500. An AQI of 101 or higher is considered unhealthy for sensitive populations. The Index measures the number of days per year when a county's AQI score is 101 or higher, using 3 years of data and controlling for year-to-year changes in the weather. For areas that don't report air quality data, we assume the national average.

Source: U.S. Environmental Protection Agency, Air Quality Index Report

Air Quality: Near-Roadway Pollution

17.22% of people are exposed (Median US neighborhood: 0.00%)

Percentage of the population living within 200 meters of a high-traffic road with more than 25,000 vehicles per day: measured at the neighborhood scale, lower values are better

A high-traffic road isn't just a nuisance to navigate; it can be a threat to public health, too. People who live near these roads are exposed to stressful noise pollution, not to mention exhaust and other emissions that can increase the risk of cancer and asthma. Busy roads also create barriers for pedestrians and bicyclists. The Index measures the percentage of people in a neighborhood who live close enough to high-traffic roads that they are regularly exposed to these negative impacts.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Atlas Database

Air Quality: Local Industrial Pollution

0.00 index from 0 to 311,000 (Median US neighborhood: 0.00)

Toxicity of airborne chemicals released from nearby industrial facilities: measured at the neighborhood scale from 0 to 311,000, lower values are better

Industrial facilities emit a wide range of pollutants that taint the local air and damage the health and quality of life for nearby residents—especially older adults, children, and those who have difficulty breathing. The Index assesses health impacts from all major industrial pollution sources within 1,000 feet of a neighborhood using a tool that measures relative health risks from different pollutants. More than 90 percent of U.S. neighborhoods have no local industrial pollution, so even communities with trace amounts of pollution score poorly on this metric. Any local pollution should be cause for concern.

Sources: The location of sources and type of pollution come from the U.S. Environmental Protection Agency's Toxic Release Inventory, and the toxicity of pollutants comes from EPA's Risk-Screening Environmental Indicators model.

Health (52)

Prevention, Access, and Quality

Community conditions influence health behaviors. Healthy communities have comprehensive smoke-free air laws, offer easy access to exercise opportunities, and have high-quality health care available. Because health is so deeply related to quality of life, many other categories of livability in this Index include metrics related to health. For example, access to healthy foods, jobs and education, number of walk trips, lower speed limits, social engagement measures, and air and water pollution are all related to health. Where you live matters.

Healthy Behaviors: Tobacco Use

18.4% of people smoke regularly (Median US neighborhood: 20.3%)

Estimated smoking rate: measured at the county scale, lower values are better
As the leading cause of preventable death in the United States, tobacco not only harms smokers—causing cancer, lung disease, heart disease, and numerous other ailments—but also puts others at risk through secondhand exposure. Here, the Index examines livability by measuring the percentage of people in a county who regularly smoke.
Source: Institute for Health Metrics and Evaluation

Healthy Behaviors: Obesity Prevalence

26.0% of people are obese (Median US neighborhood: 27.8%)

Estimated obesity rate: measured at the county scale, lower values are better
Second only to tobacco use as the leading cause of preventable death in the United States, obesity directly causes heart disease, diabetes, and high blood pressure. High obesity rates can indicate that a community lacks access to healthy food or exercise opportunities. The Livability Index measures the percentage of people in a county who are obese, adjusted for age.

Source: Centers for Disease Control and Prevention, Interactive Diabetes Atlas

Healthy Behaviors: Access to Exercise Opportunities

88.4% of people have access (Median US neighborhood: 83.2%)

Percentage of people who live within a half-mile of parks and within 1 mile of recreational facilities (3 miles for rural areas): measured at the county scale, higher values are better

Physical activity doesn't just help people get in shape, it also reduces the risk of medical conditions such as obesity, diabetes, cancer, and dementia. Easy access to parks and recreational facilities such as gyms and community centers not only makes residents more likely to exercise, but also creates a sense of community, since these locations often double as meeting places. Here, the Index measures the percentage of people in a

county who live reasonably close to both parks and recreational facilities, accounting for the fact that people in rural areas may be willing to travel farther to exercise.

Source: The Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps

Access to Health Care: Health Care Professional Shortage Areas

0 index from 0 to 25 (Median US neighborhood: 0)

Severity of clinician shortage: measured at the health professional shortage area scale from 0 to 25, lower values are better

People who live far away from medical facilities may avoid the preventive care that could reduce their risk of developing more serious health conditions. The impact may be most extreme for low-income people who cannot afford the cost it would take to travel for health care. Here, we rate community health care shortages, based on poverty levels, infant health, distance to nearest provider, and the ratio of primary care physicians to residents. The U.S. Department of Health and Human Services assigns communities a score from 0 to 25 to show how serious a shortage they face, with higher scores indicating more severe shortages.

Source: Health Resources and Services Administration, Health Professional Shortage Area Data Download

Quality of Health Care: Preventable Hospitalization Rate

73.9 preventable hospitalizations per 1,000 patients (Median US neighborhood: 62.1)
Number of hospital admissions for conditions that could be effectively treated through outpatient care per 1,000 patients: measured at the hospital service area scale, lower values are better

Some patients occasionally wind up hospitalized with serious conditions that could have been easily prevented with better primary care or patient education. To gauge the quality of a community's health care system outside its hospitals, the Index measures how frequently people are hospitalized for conditions that could be treated at a doctor's office or urgent care clinic. These conditions include asthma, high blood pressure, diabetes, and dehydration. Communities receive a value based on data from nearby hospitals.

Source: The Dartmouth Institute for Health Policy & Clinical Practice, The Dartmouth Atlas of Health Care

Quality of Health Care: Patient Satisfaction

52.0% of patients are satisfied (Median US neighborhood: 67.3%)

Percentage of patients who give area hospitals a rating of 9 or 10, with 10 indicating the highest level of satisfaction: measured at the hospital service area scale, higher values are better

High-quality care produces not only satisfied patients, but also healthier ones. People are less likely to postpone medically necessary hospital care if they were satisfied with their last experience. Obtaining necessary care results in a lower likelihood of developing serious conditions down the road. Patient satisfaction can reflect the overall quality of care people receive in the hospital. Poor-quality care can result in readmission, new illness, and other serious adverse outcomes. Here, the Index measures the percentage of patients who rate their local hospitals a 9 or 10, with 10 indicating the highest level of satisfaction.

Source: Centers for Medicare & Medicaid Services Hospital Compare database

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Engagement (49)

Civic and Social Involvement

A livable community fosters interaction among residents. From social engagement to civic action to Internet access, residents' individual opportunities to connect and feel welcomed help lessen social isolation and strengthen the greater community. The Index explores and examines the different ways in which residents engage with and support their communities, and how they impact livability as a whole.

Internet Access: Broadband Cost and Speed

9.7% of residents have high-speed, low-cost service (Median US neighborhood: 0.0%)

Percentage of residents who have access to three or more wireline Internet service providers, and two or more providers that offer maximum download speeds of 50 megabits per second: measured at the neighborhood scale, higher values are better

Nowadays, the Internet isn't just an option, it's a necessity. Internet service is crucial in helping a community stay informed and connected, and it opens up new channels for businesses to grow. The Livability Index measures the percentage of people in a neighborhood who have access to Internet service that meets our criteria for both cost and speed, because high-quality Internet service should be affordable and fast. In communities that have access to three or more wireline Internet service providers, competition keeps prices down; and where multiple providers offer maximum

advertised download speeds over 50 megabits per second, residents should have a variety of affordable options for high-speed service.

Source: National Telecommunications & Information Administration and the Federal Communications Commission, National Broadband Map

Civic Engagement: Opportunity for Civic Involvement

5.7 organizations per 10,000 people (Median US neighborhood: 7.3)

Number of civic, social, religious, political, and business organizations per 10,000 people: measured at the county scale, higher values are better

Strong communities give residents plenty of opportunities to work together and effect change. Whether it's a fundraiser, election, or volunteer event, nothing helps bring a neighborhood together like civic participation. These events, and the organizations that facilitate them, give like-minded people a chance to meet and make a difference. The Livability Index measures how well a county is served by civic organizations. Available data captures only cultural institutions with paid staff, not volunteer-run organizations.

Source: U.S. Census Bureau, County Business Patterns

Civic Engagement: Voting Rates

70.9% of people voted (Median US neighborhood: 55.6%)

Percentage of people ages 18 years or older who voted in the last presidential election: measured at the county scale, higher values are better. Voting rates are bounded at 30% and 85%.

Voting is one of the simplest—and strongest—ways we can show we care about our communities. People who vote in national elections are more likely to also be politically informed and active on a local level, participating in local elections that directly shape community life. Low participation may reflect voting barriers within a community. The Index uses data from the 2012 presidential election.

Source: U.S. Election Assistance Commission, Election Administration and Voting Survey

Social engagement Social involvement index
0.92 index from 0 to 2 (Median US neighborhood: 0.98)
Extent to which residents eat dinner with household members, see or hear from friends and family, talk with neighbors, and do favors for neighbors: measured at the metro area scale from 0 to 2, higher values are better

Being neighborly isn't just a matter of etiquette—it's what creates a community, often with lasting benefits for its residents. In fact, studies show that Americans who socialize regularly live longer. Here, using regional data for large metropolitan areas and state-level data for other places, we look at how often people interact with their friends and neighbors. Communities where people socialize more frequently than average receive values above 1; those with people who socialize less frequently receive values below 1.
Source: Corporation for National and Community Service, Export Data

Social Engagement: Cultural, Arts, and Entertainment Institutions

0.5 institutions per 10,000 people (Median US neighborhood: 0.6)

Total number of performing arts companies, museums, concert venues, sports stadiums, and movie theaters per 10,000 people: measured at the county scale, higher values are better

From sports fanatics to film buffs, a great community helps cultivate the interests of its residents through opportunities to learn, play, and interact with others. Here, the Livability Index measures how many cultural, arts, and entertainment institutions serve a county's residents. Our data capture only cultural institutions with paid staff, not volunteer-run organizations, such as community theater groups.

Source: U.S. Census Bureau, County Business Patterns

Opportunity (54)

Inclusion and Possibilities

America was built on opportunity—and our nation's many thriving communities are no different. The degree to which a community embraces diversity and offers opportunities to residents of all ages and backgrounds is important to overall livability. Backed by a strong regional economy and fiscally healthy local governments, welcoming communities provide residents an equal chance to earn a living wage and improve their well-being, from jobs to education.

Equal Opportunity: Income inequality
0.47 index from 0 to 1 (Median US neighborhood: 0.46)

Gini coefficient (the gap between rich and poor): measured at the county scale from 0 to 1, lower values are better

The gap between rich and poor is growing wider across the United States. Higher levels of inequality within a community mean fewer opportunities for low- and middle-income

residents to advance, which can lead to a shorter life and greater health problems in the long run. Using the Gini coefficient, where 0 represents complete equality (every household earns the same income) and 1 represents complete inequality (a single household earns all the income and other households earn nothing), the Index measures how well income is distributed within a county.

Source: U.S. Census Bureau, American Community Survey

Economic Opportunity: Jobs per Worker

0.75 jobs per person (Median US neighborhood: 0.75)

Number of jobs per person in the workforce: measured at the metro area scale, higher values are better. Jobs are capped at 1.0 job per person.

The more job options a city or county offers, the more selective residents can be in their search for employment. However, when that ratio reverses and citizens outnumber open positions, people are forced to consider jobs that are less fulfilling and possibly farther away. Because job opportunity so directly impacts livability, the Index examines the number of jobs per worker in metropolitan areas and rural counties. Communities that have at least one job per worker have a value of 1; places where there are fewer jobs than workers receive lower values.

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics data

Education: High School Graduation Rate

89.3% of students graduate (Median US neighborhood: 81.3%)

Adjusted 4-year high school cohort graduation rate: measured at the school district scale, higher values are better

In the face of today's hyper-competitive career and college landscape, it's crucial for youth to have access to high-quality education that keeps them supported and motivated from kindergarten through high school. By looking at a community's high school graduation rates, we can gauge the quality of the local educational system as a whole. The Index looks at how likely a student entering a local public high school is to graduate within 4 years.

Source: U.S. Department of Education, The EDFacts Initiative

Multi-Generational Communities: Age Diversity

0.84 index from 0 to 1 (Median US neighborhood: 0.87)

Age-group diversity of local population compared to the national population: measured at the neighborhood scale from 0 to 1, higher values are better

Multi-generational communities are ripe with opportunities for residents to learn from and support each other in meaningful ways, from formal interactions like tutoring or computer classes, to spontaneous encounters on the bus, at the grocery store, or at church. People at different phases of life contribute to the economy and well-being of the community in many different ways, including by working, paying taxes, supporting local businesses, and volunteering. A lack of age diversity may signify a community that is unaffordable or socially isolating. Here, we compare local age diversity to the national age distribution using three age groups: children (ages 0–14), working-age teenagers and adults (ages 15–54), and older adults who are preparing for or already in retirement (ages 55+). Values range from 0 to 1: communities that mirror the national age distribution receive a value of 1, while communities where all people are in one age group receive a value of 0. The typical neighborhood in the United States is less diverse than the nation as a whole, as reflected in the median U.S. neighborhood showing a value of .87.

Source: U.S. Census Bureau, American Community Survey

In conclusion, it is important to put these scores into context. The AARP Livability Index can be helpful to the City of Southfield in establishing a baseline for improvement in each category and sub-category. It may also be used as a yardstick to compare ourselves against other similar communities in Southeast Michigan. Further research and local data input in some categories may be helpful in raising the City's individual and composite scores.

WALK/TRANSIT/BIKE SCORE

Walk Score* measures the walkability of any address, Transit Score measures access to public transit, and Bike Score measures whether a location is good for biking.

*The Walk Score methodology was developed with the Walk Score advisory board and has been validated by leading academic researchers.

Walk Score

Walk Score measures the walkability of any address using a patented system. For each address, Walk Score analyzes hundreds of walking routes to nearby amenities. Points are awarded based on the distance to amenities in each category. Amenities within a 5 minute walk (.25 miles) are given maximum points. A decay function is used to give points to more distant amenities, with no points given after a 30 minute walk.

Walk Score also measures pedestrian friendliness by analyzing population density and road metrics such as block length and intersection density. Data sources include Google, Education.com, Open Street Map, the U.S. Census, Localeze, and places added by the Walk Score user community.

Walk Score®	Description
90–100	**Walker's Paradise** Daily errands do not require a car.
70–89	**Very Walkable** Most errands can be accomplished on foot.
50–69	**Somewhat Walkable** Some errands can be accomplished on foot.
25–49	**Car-Dependent** Most errands require a car.
0–24	**Car-Dependent** Almost all errands require a car.

35 Living in Southfield

Southfield has a Walk Score of 35, which classifies us as a Car-Dependent city: Most errands require a car. Leading cities include: New York City, which has a Walk Score of (88); Boston (80); Chicago (75); Washington, D. C. (70) and Detroit (52). Comparable cities to Southfield include: Phoenix (38); San Antonio (34); Memphis (33); Kansas City (32); Glendale, AZ (34); Reno (36); Birmingham, AL (33) and Boise City, ID (37).

Transit Score

Transit Score is a patented measure of how well a location is served by public transit. Transit Score is based on data released in a standard format by public transit agencies.
To calculate a Transit Score, we assign a "usefulness" value to nearby transit routes based on the frequency, type of route (rail, bus, etc.), and distance to the nearest stop on the route. The "usefulness" of all nearby routes is summed and normalized to a score between 0 - 100.

Transit Score®	Description
90–100	**Rider's Paradise** World-class public transportation.
70–89	**Excellent Transit** Transit is convenient for most trips.
50–69	**Good Transit** Many nearby public transportation options.

25–49	**Some Transit** A few nearby public transportation options.
0–24	**Minimal Transit** It is possible to get on a bus.

Note: The City of Southfield does not currently have a Transit Score. Leading cities with high Transit Scores include: New York (81); San Francisco (81); Toronto (78); Boston (75); Washington, D. C. (70); and Chicago (65).

Bike Score

Bike Score measures whether an area is good for biking. For a given location, a Bike Score is calculated by measuring bike infrastructure (lanes, trails, etc.), hills, destinations and road connectivity, and the number of bike commuters.
These component scores are based on data from city governments, the USGS, OpenStreetMap, and the U.S. Census.

Bike Score	**Description**
90–100	**Biker's Paradise** Daily errands can be accomplished on a bike.
70–89	**Very Bikeable** Biking is convenient for most trips.
50–69	**Bikeable** Some bike infrastructure.
0–49	**Somewhat Bikeable** Minimal bike infrastructure.

Note: The City of Southfield does not currently have a Bike Score. Bike Friendly Cities include: Minneapolis (81); San Francisco (75); Portland (72); Denver (71); and Boston (70).

Crime Grade

The Crime Grade measures your personal (violent) crime risk and property crime risk near an address on an **A - D scale** using a patent-pending system. Our crime data is imported directly from police departments.

To compute the Crime Grade we aggregate crimes near an address and weight them by severity and distance. We calculate a per capita crime rate for an address based on the resident and worker population in the area. Crime rates are then compared against city-wide rates and converted into a letter grade.

Crime Grade	Description
A	**Lowest Crime Area** Safest 25% of neighborhoods.
B	**Lower Crime Area** Safer than average neighborhood.
C	**Average Crime Area** Talk to the neighbors to learn more.
D	**Higher Crime Area** Least safe 10% of neighborhoods.

City & Neighborhood Rankings

Walk Score Point Grid

To rank cities and neighborhoods, we calculate the Walk Score of approximately every city block (technically a grid of latitude and longitude points spaced roughly 500 feet apart). Each point is weighted by population density so that the rankings reflect where people live and so that neighborhoods and cities do not have lower scores because of parks, bodies of water, etc.

For our Walk Score ranking, we define "large cities" as the 50 largest U.S. cities. For our Transit Score and Bike Score ranking, we define "large cities" as cities with more than 500,000 people.
L/Planning/Master Plan/2014 MP Update/Livability Index

APPENDIX C: FEMA Mitigation Ideas: Reducing Risks to Natural Hazards

Drought

1. Assess Vulnerability to Drought Risk: To better understand and assess local vulnerability to drought consider actions such as:
    a. Gathering and analyzing water and climate data to gain a better understanding of local climate and drought history.
    b. Identifying factors that affect the severity of a drought.
    c. Identifying available water supplies.
    d. Determining how the community and its water sources have been impacted by droughts in the past.

2. Monitor Drought Conditions: Monitoring drought conditions can provide early warning for policymakers and planners to make decisions through actions including:
    a. Identifying local drought indicators, such as precipitation, temperature, surface water levels, soil moisture, etc.
    b. Establishing a regular schedule to monitor and report conditions on at least a monthly basis.

3. Monitor Water Supply: Monitoring the water supply and its functions can save water in the long run through actions such as:
    a. Regularly checking for leaks to minimize water supply losses.
    b. Improving water supply monitoring.

4. Plan for Drought Plan for future drought events in your area through actions such as:
    a. Developing a drought emergency plan.
    b. Developing criteria or triggers for drought-related actions.
    c. Developing a drought communication plan and early warning system to facilitate timely communication of relevant information to officials, decision makers, emergency managers, and the general public.
    d. Developing agreements for secondary water sources that may be used during drought conditions.
    e. Establishing an irrigation time/scheduling program or process so that all agricultural land gets the required amount of water. Through incremental timing, each area is irrigated at different times so that all water is not consumed at the same time. Spacing usage may also help with recharge of groundwater.

5. Require Water Conservation During Drought Conditions: Require mandatory water conservation measures during drought emergencies, including:
    a. Developing an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.

b. Adopting ordinances to prioritize or control water use, particularly for emergency situations like firefighting.

6. Retrofit Water Supply Systems: Improve water supply and delivery systems to save water through actions such as:
    a. Designing water delivery systems to accommodate drought events.
    b. Developing new or upgrading existing water delivery systems to eliminate breaks and leaks.

7. Enhance Landscaping and Design Measures: Encourage drought-tolerant landscape design through measures such as:
    a. Incorporating drought tolerant or xeriscape practices into landscape ordinances to reduce dependence on irrigation.
    b. Providing incentives for xeriscaping.
    c. Using permeable driveways and surfaces to reduce runoff and promote groundwater recharge.

8. Educate Residents on Water Saving Techniques: Encourage citizens to take water-saving measures, such as the following:

Erosion

1. Map and Assess Vulnerability to Erosion: Erosion risk can be better assessed and monitored with mapping techniques, including the following:
    a. Using GIS to identify and map erosion hazard areas.
    b. Developing and maintaining a database to track community vulnerability to erosion.
    c. Using GIS to identify concentrations of at-risk structures.
    d. Improving mapping of hazard areas to educate residents about unexpected risks.

2. Manage Development in Erosion Hazard Areas: Erosion damage can be mitigated by regulating how development occurs in hazard areas, such as the following:
    a. Adopting sediment and erosion control regulations.
    b. Adopting zoning and erosion overlay districts.
    c. Developing an erosion protection program for high hazard areas.
    d. Employing erosion control easements.
    e. Prohibiting development in high-hazard areas.
    f. Developing and implementing an erosion management plan.
    g. Requiring mandatory erosion surcharges on homes.
    h. Locating utilities and critical facilities outside of areas susceptible to erosion to decrease the risk of service disruption.

3. Promote or Require Site and Building Design Standards to Minimize Erosion Risk: Development can be designed to minimize damage due to erosion using the following techniques:

a. Constructing open foundation systems on buildings to minimize scour.
b. Constructing deep foundations in erosion hazard areas.
c. Clustering buildings during building and site design.
d. Designing and orienting infrastructure to deter erosion and accretion.

4. Remove Existing Buildings and Infrastructure from Erosion Hazard Areas: To prevent damage to buildings and infrastructure from erosion, consider acquiring and demolishing or relocating at-risk buildings and infrastructure and enforcing permanent restrictions on development after land and structure acquisition.

5. Stabilize Erosion Hazard Areas: To stabilize slopes susceptible to erosion, consider options such as:
    a. Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.
    b. Stabilizing cliffs with terracing or plantings of grasses or other plants to hold soil together.
    c. Prohibiting removal of natural vegetation from slopes.
    d. Using a hybrid of hard/soft engineering techniques (i.e., combine low-profile rock, rubble, oyster reefs, or wood structures with vegetative planting or other soft stabilization techniques).
    e. Implementing marine riparian habitat reinstatement or revegetation.
    f. Using a rock splash pad to direct runoff and minimize the potential for erosion.
    g. Using bioengineered bank stabilization techniques.

6. Increase Awareness of Erosion Hazards: Consider ways to help citizens become more aware of specific erosion risks in your area, such as:
    a. Notifying property owners located in high-risk areas.
    b. Disclosing the location of high-risk areas to buyers.
    c. Developing a brochure describing risk and potential mitigation techniques. Offering GIS hazard mapping online for residents and design professionals.

Extreme Temperatures

1. Reduce Urban Heat Island Effect: As urban areas develop and building and roads replace open land and vegetation, urban regions become warmer than their rural surroundings, forming an “island” of heat. Several methods for reducing heat island effects include:
    a. Increasing tree plantings around buildings to shade parking lots and along public rights-of-way.
    b. Encouraging installation of green roofs, which provide shade and remove heat from the roof surface and surrounding air.
    c. Using cool roofing products that reflect sunlight and heat away from a building.

2. Increase Awareness of Extreme Temperature Risk and Safety: The impacts of extreme temperatures on public health can be lessened if citizens know how to prepare and protect themselves. Ideas for increasing awareness include the following:
    a. Educating citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.

3. Assist Vulnerable Populations Measures should be taken to ensure vulnerable populations are adequately protected from the impacts of extreme temperatures, such as:
    a. Organizing outreach to vulnerable populations, including establishing and promoting accessible heating or cooling centers in the community.
    b. Requiring minimum temperatures in housing/landlord codes.
    c. Encouraging utility companies to offer special arrangements for paying heating bills, if not already required by state law.
    d. Creating a database to track those individuals at high risk of death, such as the elderly, homeless, etc.

Flood

1. Incorporate Flood Mitigation in Local Planning: Comprehensive planning and floodplain management can mitigate flooding by influencing development. Strategies include:
    a. Determining and enforcing acceptable land uses to alleviate the risk of damage by limiting exposure in flood hazard areas. Floodplain and coastal zone management can be included in comprehensive planning.
    b. Developing a floodplain management plan and updating it regularly.
    c. Mitigating hazards during infrastructure planning. For example, decisions to extend roads or utilities to an area may increase exposure to flood hazard.
    d. Adopting a post-disaster recovery ordinance based on a plan to regulate repair activity, generally depending on property location.
    e. Passing and enforcing an ordinance that regulates dumping in streams and ditches.
    f. Establishing a :green infrastructure" program to link, manage, and expand existing parks, preserves, greenways, etc.
    g. Obtaining easements for planned and regulated public use of privately-owned land for temporary water retention and drainage.

2. Form Partnerships to Support Floodplain Management: Partnerships between local, state, and regional entities help expand resources and improve coordination. Consider the following actions:
    a. Developing a stormwater committee that meets regularly to discuss issues and recommend projects.
    b. Forming a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation.
    c. Establishing watershed-based planning initiatives to address the flood hazard with neighboring jurisdictions.

   d. Forming a citizen plan implementation steering committee to monitor progress on local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government.

3. Limit or Restrict Development in Floodplain Areas: Flooding can be mitigated by limiting or restricting how development occurs in floodplain areas through actions such as:
   a. Prohibiting or limiting floodplain development through regulatory and/or incentive-based measures.
   b. Limiting the density of developments in the floodplain.
   c. Requiring that floodplains be kept as open space.
   d. Limiting the percentage of allowable impervious surface within developed parcels.
   e. Developing a stream buffer ordinance to protect water resources and limit flood impacts.
   f. Prohibiting any fill in floodplain areas.

4. Adopt and Enforce Building Codes and Development Standards: The use of building codes and development standards can ensure structures are able to withstand flooding. Potential actions include:
   a. Adopting the international Building Code (IBC) and international Residental Code (IRC)
   b. Adopting ASCE 24-05 *Flood Resistant Design and Construction*. ASCE 24 is a referenced standard in the IBC that specifies minimum requirements and expected performance for the design and construction of buildings and structures in the flood hazard areas to make them more resistant to flood loads and flood damage.
   c. Adding or increasing “freeboard” requirements (feet above base flood elevation) in the flood damage ordinance.
   d. Prohibiting all first floor enclosures below base flood elevation for all structures in flood hazard areas.
   e. Considering orientation of new development during design (e.g., subdivisions, buildings, infrastructure, etc.).
   f. Setting the design flood elevation at or above the historical high water mark if it is above the mapped base flood elevation.
   g. Using subdivision design standards to require elevation data collection during platting and to have buildable space on lots above the base flood elevation.
   h. Requiring standard tie-downs of propane tanks.

5. Improve Stormwater Management Planning: Rainwater and snowmelt can cause flooding and erosion in developed areas. Stormwater management practices to prevent this include:
   a. Completing a stormwater drainage study for known problem areas.
   b. Preparing and adopting a stormwater drainage plan and ordinance.

c. Preparing and adopting a community-wide stormwater management master plan.
d. Regulating development in upland areas in order to reduce stormwater run-off through a stormwater ordinance.
e. Linking flood hazard mitigation objectives with EPA Stormwater Phase II initiatives.
f. Developing engineering guidelines for drainage from new development.
g. Requiring a drainage study with new development.
h. Encouraging the use of Low Impact Development techniques

6. Adopt Polices to Reduce Stormwater Runoff: In addition to stormwater management, techniques to reduce rain runoff can prevent flooding and erosion, such as:
    a. Designing a "natural runoff" or "zero discharge" policy for stormwater in subdivision design.
    b. Requiring more trees be preserved and planted in landscape designs to reduce the amount of stormwater runoff.
    c. Requiring developers to plan for on-site sediment retention.
    d. Requiring developers to construct on-site retention basins for excessive stormwater and as a firefighting water source.
    e. Encouraging the use of porous pavement, vegetative buffers, and islands in large parking areas.
    f. Conforming pavement to land contours so as not to provide easier avenues for stormwater.
    g. Encouraging the use of permeable driveways and surfaces to reduce runoff and increase groundwater recharge.
    h. Adopting erosion and sedimentation control regulations for construction and farming.

7. Improve Flood Risk Assessment: Heighten awareness of flood risk with the following:
    a. incorporating the procedures for tracking high water marks following a flood into emergency response plans.
    b. Conducting cumulative impact analyses for multiple development projects within the same watershed.
    c. Conducting a verification study of FEMA's repetitive loss inventory and developing an associated tracking database.
    d. Regularly calculating and documenting the amount of flood-prone property preserved as open space.
    e. Requiring a thorough watershed analysis for all proposed dam or reservoir projects.
    f. Developing a dam failure study and emergency action plan.
    g. Using GIS to map areas that are at risk of flooding.
    h. Obtaining depth grid data and using it to illustrate flood risk to citizens.

i. Incorporating digital floodplain and topographic data into GIS systems, in conjunction with Hazus, to assess risk.
j. Developing and maintaining a database to track community exposure to flood risk.
k. Revising and updating regulatory floodplain maps.

8. Join or Improve Compliance with NFIP: The National Flood Insurance Program (NFIP) enables property owners in participating communities to purchase insurance protection against flood losses. Actions to achieve eligibility and maintain compliance include:
    a. Participating in NFIP.
    b. Adopting ordinances that meet minimum Federal and state requirements to comply with NFIP.
    c. Conducting NFIP community workshops to provide information and incentives for property owners to acquire flood insurance.
    d. Designating a local floodplain manager and/or CRS coordinator who achieves CFM certification.
    e. Completing and maintaining FEMA elevation certificates for pre-FIRM and/or post-FIRM buildings.
    f. Requiring and maintaining FEMA elevation certificates for all new and improved buildings located in floodplains.

9. Manage the Floodplain Beyond Minimum Requirements: In addition to participation in NFIP, implementing good floodplain management techniques that exceed minimum requirements can help minimize flood losses. Examples include:
    a. Incorporating the ASFPM's "No Adverse Impact" policy into local floodplain management programs.
    b. Revising the floodplain ordinance to incorporate cumulative substantial damage requirements.
    c. Adopting a "no-rise" in base flood elevation clause for the flood damage prevention ordinance.
    d. Extending the freeboard requirement past the mapped floodplain to include an equivalent land elevation.
    e. Including requirements in the local floodplain ordinance for homeowners to sign non-conversion agreements for areas below base flood elevation.
    f. Establishing and publicizing a user-friendly, publicly-accessible repository for inquirers to obtain Flood Insurance Rate Maps.
    g. Developing an educational flyer targeting NFIP policyholders on increased cost of compliance during post-flood damage assessments.
    h. Annually notifying the owners of repetitive loss properties of Flood Mitigation Assistance funding.
    i. Offering incentives for building above the required freeboard minimum (code plus).

10. Participate in the CRS: The Community Rating System (CRS) rewards communities that exceed the minimum NFIP requirements. Depending upon the level of participation, flood insurance premium rates are discounted for policyholders. Potential activities that are eligible to receive credit include:
    a. Advising the public about the local flood hazard, flood insurance, and flood protection measures.
    b. Enacting and enforcing regulations that exceed NFIP minimum standards so that more flood protection is provided for new development.
    c. Implementing damage reduction measures for existing buildings such as acquisition, relocation, retrofitting, and maintenance of drainage ways and retention basins.
    d. Taking action to minimize the effects of flooding on people, property, and building contents through measures including flood warning, emergency response, and evacuation planning.

11. Establish Local Funding Mechanisms for Flood Mitigation: Potential methods to develop local funding sources for flood mitigation include:
    a. Using taxes to support a regulatory system.
    b. Using impact fees to help fund public projects to mitigate impacts of land development (e.g., increased runoff).
    c. Levying taxes to finance maintenance of drainage systems and capital improvements.

12. Remove Existing Structures from Flood Hazard Areas: Communities may remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners and preserving lands subject to repetitive flooding.

13. Improve Stormwater Drainage System Capacity: Rainwater and snowmelt can cause flooding and erosion in developed areas. Structural stormwater management projects that prevent this include:
    a. Installing, re-routing, or increasing the capacity of a storm drainage system.
    b. Increasing drainage or absorption capacities with detention and retention basins, relief drains, spillways, drain widening/dredging or rerouting, logjam and debris removal, extra culverts, bridge modification, dike setbacks, flood gates and pumps, or channel redirection.
    c. Increasing capacity of stormwater detention and retention basins.
    d. Increasing dimensions of drainage culverts in flood-prone areas.
    e. Using stream restoration to ensure adequate drainage and diversion of stormwater.
    f. Requiring developers to construct on-site retention basins for excessive stormwater and as a firefighting water source.
    g. Providing grassy swales along roadsides.

14. Conduct Regular Maintenance for Drainage Systems and Flood Control Structures: Regular maintenance will help drainage systems and flood control structures continue to function properly. Potential activities include:
    a. Performing regular drainage system maintenance, such as sediment and debris clearance, as well as detection and prevention of discharges into stormwater and sewer systems from home footing drains, downspouts, or sewer pumps.
    b. Implementing an inspection, maintenance, and enforcement program to help ensure continued structural integrity of dams and levees.
    c. Routinely cleaning debris from support bracing underneath low-lying bridges.
    d. Routinely cleaning and repairing stormwater drains.
    e. Regularly clearing sediment build-up on riverbanks near aerial lines.
    f. Inspecting bridges and identifying if any repairs or retrofits are needed to prevent scour.
    g. Incorporating ice jam prevention techniques as appropriate.

15. Elevate or Retrofit Structures and Utilities: Structures and utilities can be elevated to reduce flood damage, including:
    a. Elevating structures so that the lowest floor, including the basement, is raised above the base flood elevation.
    b. Raising utilities or other mechanical devices above expected flood levels.
    c. Elevating and anchoring manufactured homes or, preferably keeping manufactured homes out of the floodplain.
    d. Relocating utilities and water heaters above base flood elevation and using tankless water heaters in limited spaces.

16. Floodproof Residential and Non-Residential Structures: Floodproofing techniques may protect certain structures from flood damage, including:
    a. Wet floodproofing in a basement, which may be preferable to attempting to keep water out completely because it allows for controlled flooding to balance exterior and interior wall forces and discourages structural collapse.
    b. Encouraging wet floodproofing of areas above base flood elevation.
    c. Using water resistant paints or other materials to allow for easy cleanup after floodwater exposure in accessory structures or in a garage area below an elevated residential structure.
    d. Dry floodproofing non-residential structures by strengthening walls, sealing openings, or using waterproof compounds or plastic sheeting on walls to keep water out.

17. Protect Infrastructure: Mitigation techniques can be implemented to help minimize losses to infrastructure from flood events, such as:
    a. Elevating roads and bridges above the base flood elevation to maintain dry access. In situations where flood waters tend to wash roads out, construction, reconstruction, or repair can include not only attention to drainage, but also stabilization or armoring of vulnerable shoulders or embankments.

b. Raising low-lying bridges.
c. Floodproofing wastewater treatment facilities located in flood hazard areas.
d. Floodproofing water treatment facilities located in flood hazard areas.
e. Depending on its infrastructure capabilities, using check valves, sump pumps, and backflow prevention devices in homes and buildings.
f. Using bioengineered bank stabilization techniques

18. Protect Critical Facilities: Techniques to protect critical facilities from flood events include:
    a. Requiring that all critical facilities including emergency operations centers (EOC), police stations, and fire department facilities be located outside of flood-prone areas.
    b. Requiring all critical facilities to meet requirements of Executive Order 11988 and be built 1 foot above the 500-year flood elevation.
    c. Installing/upgrading stormwater pumping stations.
    d. Raising electrical components of sewage lift stations above base flood elevation.
    e. Raising manhole openings using concrete pillars.
    f. Installing watertight covers or inflow guards on sewer manholes.
    g. Installing flood telemetry systems in sewage lift stations.
    h. Installing back-up generators for pumping and lift stations in sanitary sewer systems along with other measures (e.g., alarms, meters, remote controls, and switchgear upgrades).
    i. Building earthen dikes around flood-threatened critical facilities.
    j. Using bioengineered bank stabilization techniques.

19. Construct Flood Control Measures: Small flood control structures can be built to prevent flood damage. Examples include:
    a. Using minor structural projects that are smaller and more localized (e.g., floodwalls or small berms) in areas that cannot be mitigated through non-structural activities or where structural activities are not feasible due to low densities.
    b. Using revetments (hardened materials placed atop existing riverbanks or slopes) to protect against floods.
    c. Using bioengineered bank stabilization techniques.

20. Protect and Restore Natural Flood Mitigation Features: Natural resources provide floodplain protection, riparian buffers, and other ecosystem services that mitigate flooding. It is important to preserve such functionality with the following:
    a. Protecting and enhancing landforms that serve as natural mitigation features (i.e., riverbanks, wetlands, dunes, etc.).
    b. Using vegetative management, such as vegetative buffers, around streams and water sources.
    c. Protecting and preserving wetlands to help prevent flooding in other areas.
    d. Establishing and managing riparian buffers along rivers and streams.

e. Retaining natural vegetative beds in stormwater channels.
f. Retaining thick vegetative cover on public lands flanking rivers.

21. Preserve Floodplains as Open Space: Preserving natural areas and vegetation benefits natural resources while also mitigating potential flood losses. Techniques include:
    a. Developing an open space acquisition, reuse, and preservation plan targeting hazard areas.
    b. Developing a land banking program for the preservation of the natural and beneficial functions of flood hazard areas.
    c. Using transfer of development rights to allow a developer to increase densities on another parcel that is not at risk in return for keeping floodplain areas vacant.
    d. Compensating an owner for partial rights, such as easement or development rights, to prevent a property from being developed.

22. Increase Awareness of Flood Risk and Safety: Ideas for increasing flood risk awareness include the following:
    a. Encouraging homeowners to purchase flood insurance.
    b. Annually distributing flood protection safety pamphlets or brochures to the owners of flood-prone property.
    c. Educating citizens about safety during flood conditions, including the dangers of driving on flooded roads.
    d. Using outreach programs to advise homeowners of risks to life health, and safety.
    e. Offering GIS hazard mapping online for residents and design professionals.
    f. Establishing a Program for Public Information (PPI) with a PPI committee (as suggested by Activity 332 of the CRS Coordinator's Manual).

23. Educate Property Owners about Flood Mitigation Techniques: Educate property owners regarding options for mitigating their properties from flooding through outreach activities such as:
    a. Using outreach activities to facilitate technical assistance programs that address measures that citizens can take or facilitate funding for mitigation measures.
    b. Encouraging homeowners to install backflow valves to prevent reverse-flow flood damages.
    c. Encouraging residents in flood-prone areas to elevate homes.
    d. Educating the public about securing debris, propane tanks, yard items, or stored objects that may otherwise be swept away, damaged, or pose a hazard if picked up and washed away by floodwaters.
    e. Asking residents to help keep storm drains clear of debris during storms (not to rely solely on Public Works).

Severe winter weather

1. Adopt and Enforce Building Codes: Buildings and infrastructure can be protected from the impacts of winter storms with the following regulations:
    a. Adopting the International Building Code (IBC) and International Residential Code (IRC).
    b. Ensuring the development and enforcement of building codes for roof snow loads.
    c. Discouraging flat roofs in areas that experience heavy snows.

2. Protect Buildings and Infrastructure: Buildings and infrastructure can be protected from the impacts of winter storms with the following techniques:
    a. Adding building insulation to walls and attics.
    b. As buildings are modified, using new technology to create or increase structural stability.
    c. Retrofitting public buildings to withstand snow loads and prevent roof collapse.

3. Protect Power Lines: Power lines can be protected from the impacts of winter storms with the following techniques:
    a. Establishing standards for all utilities regarding tree pruning around lines.
    b. Burying overhead power lines.
    c. Using designed-failure mode for power line design to allow line to fall or fail in small sections rather than as a complete system to enable faster restoration.
    d. Installing redundancies and loopfeeds.
4. Reduce Impacts to Roadways: The leading cause of death during winter storms is from automobile or other transportation accidents, so it is important to consider ways to lessen roadway impacts. Potential strategies include:
    a. Planning for and maintaining adequate road and debris clearing capabilities.
    b. Using snow fences or “living snow fences” (e.g., rows of trees or other vegetation) to limit blowing and drifting of snow over critical roadway segments.
    c. Installing roadway heating technology to prevent ice/snow buildup.

5. Conduct Winter Weather Risk Awareness Activities: Public awareness of severe winter storms can be improved through the following efforts:
    a. Informing the public about severe winter weather impacts.
    b. Producing and distributing family and traveler emergency
    c. Preparedness information about severe winter weather hazards.
    d. Including safety strategies for severe weather in driver education classes and materials.
    e. Encouraging homeowners to install carbon monoxide monitors and alarms.
    f. Educating citizens that all fuel-burning equipment should be vented to the outside.

6. Assist Vulnerable Populations: Protect vulnerable populations from the impacts of severe winter storms through the following efforts:
    a. Identifying specific at-risk populations that may be exceptionally vulnerable in the event of long-term power outages.
    b. Organizing outreach to vulnerable populations, including establishing and promoting accessible heating centers in the community.

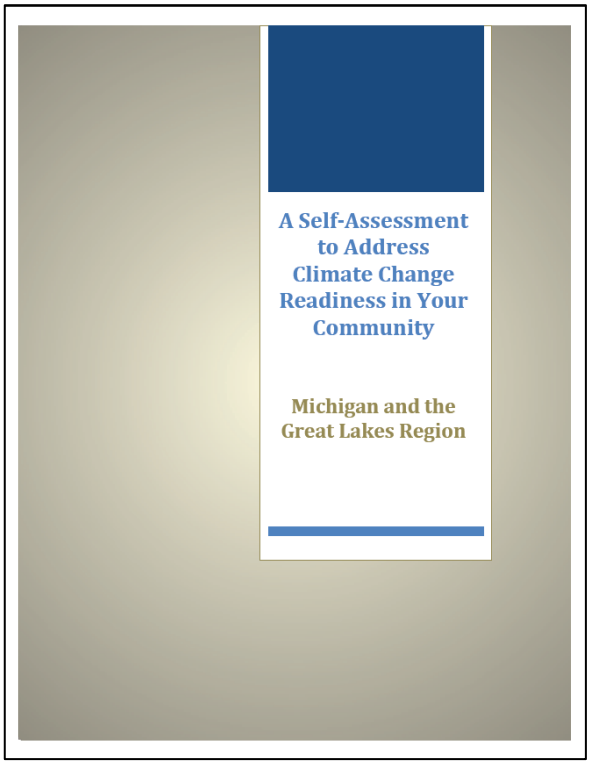
Sections not relevant to the City of Southfield:

- Landslide
- Hail
- Earthquake
- Lighting
- Wind
- Sea Level Rise
- Storm Surge
- Subsidence
- Tsunami
- Tornado
- Wildfire

A Self-Assessment to Address Climate Change Readiness in Your Community: Michigan and the Great Lakes Region

Communities within the Great Lakes region have been and always will be impacted by climate, whether it is an extreme rainfall event, drought, intense heat wave, or some other type of event. Climatologists have found that weather in the region is shifting. This shift may include more frequent extreme storm events in our communities, increasing temperatures, reduced ice cover, and greater wind speeds. What do these changes mean for our communities when for decades we have been planning, making decisions, and building infrastructure based on a stable climate?

This question led to the creation of this community climate change readiness self-assessment.

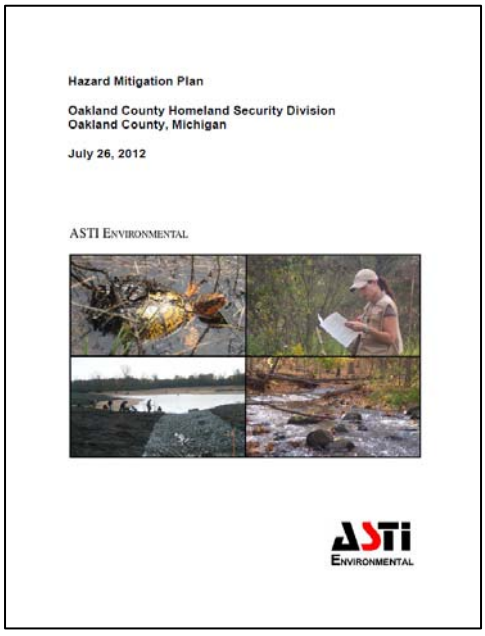


The purpose of this self-assessment is to provide community leaders, administrators, planners, engineers, public work directors, and/or natural resource managers with a simple and inexpensive method to review their community's potential vulnerabilities to climate trends and to begin the conversation of how and when to incorporate these trends into planning and projects within our communities. In order to cover all aspects of knowledge in each community, it is recommended that more than one department within the City complete the section(s) of the assessment that best fit their knowledge area. Another possibility is to have the various departments complete all sections to provide information on where staff may/may not agree on the various scenarios given. The goal of this assessment is to find ways to best help communities become more resilient to climate change through education and planning by reducing impacts and costs through climate change adaptation policies and procedures.

This self-assessment is a checklist tailored for the Great Lakes region. It is not designed to be a complete vulnerability assessment, but rather a tool used to identify key areas where communities are likely to be most at-risk, and a way to start the process of working with communities to determine where a more thorough review of vulnerability may be needed.

The Southfield team should complete the tables in the Self-Assessment to help better prepare the City's critical infrastructure before a major storm event happens. For additional information, consult the Michigan Sea Grant for consultation regarding climate change adaptation information, education, planning, and project implementation.

Source: A Self-Assessment to Address Climate Change Readiness in Your Community*, created by Diane Desotelle of Minnesota Sea Grant in 2012.*



Hazard Mitigation Plan, Oakland County Homeland Security Division, Oakland County, MI (July 26, 2012)

Oakland County is subject to natural and man-made hazards that may impact health, quality of life, property, the environment and/or infrastructure. Because of the location and land use of Oakland County, certain hazard events have historically been more significant than others. Future conditions may cause other hazards to increase in significance. Providing strategies that minimize the impact of these hazards requires a commitment to a multiple-step program, including defining the problem, identifying preventive measures, implementing mitigation strategies and incorporating hazard mitigation in County-wide planning efforts. Oakland County has prepared this multi-jurisdictional

2012 Oakland County Hazard Mitigation Plan (HMP) Update (Plan) to better understand significant Oakland County hazards and their impacts and to identify ways to mitigate those hazards. All 62 communities and 28 school districts in Oakland County participated in this process and are included in the Plan.

The goal of hazard mitigation is to eliminate or reduce loss of life and property from hazards that occur in the County by protecting the health, safety and economic interests of its residents.

Hazard Assessment

The City of Southfield listed the following hazards in the plan:

Tornadoes, severe thunderstorms and ice storms in the City of Southfield were identified as a primary hazard of concern.

Power outages due to high winds and falling trees are another major concern for residents.

Flooding of the tributaries of the Rouge River is a recurring problem for the City of Southfield. Erosion of the riverbanks and the loss of trees have been the result of flooding events. Areas that are most vulnerable include Tamarack Creek and the Evans Branch of the Rouge River, which are both located near Ten Mile Road between Evergreen and Lahser Roads. Many floods in these areas are the result of insufficient detention for storm water runoff. There are many heavily traveled roads in the City of Southfield. As a result, highway accidents are a frequent occurrence.

A large number of trucks carry hazardous material on many of the roads; therefore, there is a potential risk of a hazmat emergency. Roads that would be most vulnerable to this type of emergency include I-696, Northwestern Highway, Southfield Road, and Telegraph Road.

Criminal activities, especially in the area of Twelve Mile and Telegraph Roads, are of concern to the City of Southfield representatives.

Southfield Public Schools:

Southfield Schools identified their primary hazards as concerns related to protecting their student body during the school day and while transporting the students to and from home and athletic events.

Older buildings in the school district present a potential hazard for asbestos and lead-based paint.

The transmission of communicable diseases from student to student on buses and in classrooms was identified as a potential hazard. Southfield Public Schools have cleaning strategies in place to avoid the spreading of any infectious diseases.

The school district provides ongoing training to address tornadoes, heavy snow/ice storms, mass shootings, and public health issues.

Hazardous Mitigation

The City of Southfield identified the following potential mitigation strategies to address hazards within the community:

Mitigation Strategies 2005

1) Provide additional manpower and training to deal with potential hazmat emergencies.
   - Hazard(s) Addressed: Hazmat Incidents – Fixed Site, Hazmat Incidents – Transportation, Transportation Accidents – Highway, Transportation Accidents – Surface Roads
   - Progress: ONGOING

2) Provide means for detaining storm water to avoid area flooding.
   - Hazard(s) Addressed: Flooding -Riverine, Flooding -Urban
   - Progress: COMPLETED

Mitigation Strategies 2012

1) Provide continuing training for potential hazmat emergencies.
   - Hazard(s) Addressed: Hazmat Incidents – Fixed Site, Hazmat Incidents – Transportation, Transportation Accidents – Highway, Transportation Accidents – Surface Roads
2) Provide funding to continue to upgrade emergency equipment to deal with all types of emergencies.
   - Hazard(s) Addressed: All

Southfield Public Schools:

Hazard Mitigation Strategies:

1) Seek funding for security cameras at all schools to monitor grounds and for local law enforcement access in emergencies.
   - Hazard(s) Addressed: Civil Disobedience, Criminal Acts- Mass Shootings, Terrorism
2) Provide continuing education regarding tornadoes and health emergencies.
   - Hazard(s) Addressed: High Winds and Tornadoes, Public Health Emergencies – Pandemics and Epidemics
3) Obtain and install gating to confine public access for after-school activities.
   - Hazard(s) Addressed: Civil Disobedience, Criminal Acts- Mass Shootings, Terrorism
4) Seek funding to provide generators at all of school buildings in case of power outages.
   - Hazard(s) Addressed: Infrastructure Failure – Electrical System

For more detailed information, consult the Hazard Mitigation Plan, Oakland County as amended.

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APPENDIX D: MASTER PLAN PROCESS

MICHIGAN PLANNING ENABLING ACT (ACT 33 OF 2008, AS AMENDED)

In the preparation of a master plan, a planning commission shall do all of the following, as applicable:

- Make careful and comprehensive surveys and studies of present conditions and future growth within the planning jurisdiction with due regard to its relation to neighboring jurisdictions.
- Consult with representatives of adjacent local units of government in respect to their planning so that conflicts in master plans and zoning may be avoided.
- Cooperate with all departments of the state and federal governments, public transportation agencies, and other public agencies concerned with programs for economic, social, and physical development within the planning jurisdiction and seek the maximum coordination of the local unit of government's programs with these agencies.
- In the preparation of the master plan, the planning commission may meet with other governmental planning commissions or agency staff to deliberate.

Before preparing a master plan, a planning commission shall send to all of the following, by first-class mail or personal delivery, a notice explaining that the planning commission intends to prepare a master plan and requesting the recipient's cooperation and comment:

- The planning commission, or if there is no planning commission, the legislative body, of each municipality located within or contiguous to the local unit of government.
- The regional planning commission for the region in which the municipality is located, if there is no county planning commission for the county in which that municipality is located. If there is a county planning commission, the municipal planning commission may consult with the regional planning commission but is not required to do so.
- The county planning commission, or if there is no county planning commission, the county board of commissioners, for the county in which that municipality is located.
- Each public utility company, railroad company, and public transportation agency owning or operating a public utility, railroad, or public transportation system within the local unit of government, and any government entity that registers its name and mailing address for this purpose with the planning commission.
- If the master plan will include a master street plan, the county road commission and the state transportation department.

A submittal under to an entity described above may be made by personal or first-class mail delivery of a hard copy or by electronic mail. However, the planning commission preparing the plan shall not make such submittals by electronic mail unless, in the notice, the planning commission states that it intends to make such submittals by electronic mail and the entity

receiving that notice does not respond by objecting to the use of electronic mail***. Electronic mail may contain a link to a website on which the submittal is posted if the website is accessible to the public free of charge.***

After preparing a proposed master plan, a planning commission shall submit the proposed master plan to the legislative body for review and comment. The process of adopting a master plan shall not proceed further unless the legislative body approves the distribution of the proposed master plan.

If the legislative body approves the distribution of the proposed master plan (Feb. 29, 2016), it shall notify the secretary of the planning commission, and the secretary of the planning commission shall submit*, in the manner provided in the ACT, a copy of the proposed master plan, for review and comment, to all required entities listed above.

An entity described above may submit comments on the proposed master plan to the planning commission in the manner provided in the Act within 63 days after the proposed master plan was submitted to that entity.

Before approving a proposed master plan, a planning commission shall hold not less than 1 public hearing (tentatively scheduled for May 25, 2016) on the proposed master plan. The hearing shall be held after the expiration of the deadline for comment under the Act. The planning commission shall give notice of the time and place of the public hearing not less than 15 days before the hearing by publication in a newspaper of general circulation within the local unit of government. The planning commission shall also submit notice of the public hearing in the manner provided in section 39(3) to each entity described in section 39(2). This notice may accompany the proposed master plan submitted under section 41.

The approval of the proposed master plan shall be by resolution of the planning commission carried by the affirmative votes of not less than 2/3 of the members of Southfield.

The resolution shall refer expressly to the maps and descriptive and other matter intended by the planning commission to form the master plan. ***A statement recording the planning commission's approval of the master plan, signed by the chairperson or secretary of the planning commission, shall be included on the inside of the front or back cover of the master plan.***

After approval of the proposed master plan by the planning commission, the legislative body shall approve or reject the proposed master plan (tentatively scheduled for June 20, 2016). ***A statement recording the legislative body's approval of the master plan, signed by the clerk of the legislative body, shall be included on the inside of the front or back cover of the master plan.***

Upon final adoption of the master plan, the secretary of the planning commission shall submit, in the manner provided in the Act, copies of the adopted master plan to the same entities to which copies of the proposed master plan were required to be submitted.

*****The Act does not alter the authority of a planning department of a City created by charter to submit a proposed master plan, or a proposed extension, addition, revision, or other amendment to a master plan, to the planning commission, whether directly or indirectly as provided by charter.

At least every 5 years after adoption of a master plan, a planning commission shall review the master plan and determine whether to commence the procedure to amend the master plan or adopt a new master plan. The review and its findings shall be recorded in the minutes of the relevant meeting or meetings of the planning commission.

CITY OF SOUTHFIELD ZONING ORDINANCE COMPREHENSIVE MASTER PLAN PROCEDURE

Pursuant to Section 5.59, Article 4, Chapter 45 of the Southfield City Code (more commonly known as the Zoning Ordinance):

> In the event the City desires to adopt a Master Plan or amend an existing plan (collectively referred to as "Plan"), it shall be adopted, pursuant to the following procedure:
>
> 1. The Plan shall be prepared by the Planning Department ("Department"). The Department may develop the Plan with the assistance of a professional consultant if approved by the City Council ("Council"). The process used to obtain and review information for the Plan and for its final formulation shall be reviewed by the Council. Upon completion, the Plan shall be submitted to the Planning Commission ("Commission") for review.
> 2. The Commission shall hold a public hearing on the proposed Plan. The Commission shall give notice of the time and place of the public hearing, not less than fifteen (15) days before the hearing by publication in a newspaper of general circulation in the City. The Commission shall thereafter make a recommendation to the Council with regard to the Plan, but the Council may act on the Plan without the recommendation if it is not received within ninety (90) days after submission of the Plan to the Commission.
> 3. Upon receipt of the Commission's recommendation or in the absence of a recommendation after the expiration of ninety (90) days from the time the Plan was submitted to the Commission, the Council shall hold a public hearing on the proposed Plan. The Council shall give notice of the time and place of the public hearing, not less than fifteen (15) days before the hearing by publication in a newspaper of general circulation in the City. The Council shall thereafter approve, approve with modifications, or reject the Plan.

4. At least every five (5) years after adoption of a Plan, the Council shall review the Plan and determine whether to commence the procedure to amend the Plan or adopt a new Plan, pursuant to this section.

Milestones & Notable Dates

- Phase I: Inventory & analysis - 2014
- Phase II: Public input – January 2014 to June 2016
- Phase III: Draft plan review/public comment period – March 4 – May25, 2016
- Phase IV: Adoption by Council – June 20, 2016

- Presentation of Draft Plan to City Council (COW Meeting) – Monday, February 8, 2016
- Authorization by City Council to Release Draft Plan to the Public for Mandatory 63-Day Review Period – Monday, February 29, 2016
- Distribution to Adjacent Communities, Oakland County and Required Entities & Draft Plan Posted to Website – March 4, 2016
- Public Hearing & Recommendation by the Planning Commission – May 25, 2016
- Master Plan Adoption by City Council – June 20, 2016

Public Input Meetings & Workshops

- Southfield Road Workshop: Wednesday, March 20, 2013 at 6:30 p.m.
- Valley Woods Workshop: Wednesday, April 16, 2014 at 6:30 pm
- Valley Woods Public Hearing: Wednesday, April 23, 2014 at 6:30 pm
- Valley Woods Public Hearing #2: Monday, May 19, 2014 at 7:00 pm
- Southfield Public Schools Administrators Retreat - Wednesday, August 7, 2014
- Southfield Public Schools Administrators Retreat – Saturday, January 17, 2015
- LTU Student Council: February 3, 2015
- Southfield Historic Society: March 3, 2015
- Southfield Homeowner's Coalition - Wednesday, March 11, 2015 at 6:30 pm
- Cranbrook Village Homeowners Association - Wednesday, April 22, 2015 at 7:00 pm
- Magnolia Subdivision Association - Wednesday, April 29, 2015 at 7:00 pm
- Southfield Lathrup High School - Tuesday, May 12 at 8:30 am
- Southfield Clergy Roundtable- May 18, 2015
- Greentrees North Homeowners Association - Monday, May 18, 2015 at 6:30 pm
- Southfield High School - Tuesday, May 19, 2015 at 8:30 am
- Southfield Public School District *Imagine 2020* presentation- Sept. 24, 2015
- Southfield University High School - Thursday, October 22, 2015 at 2:00 pm
- Elected Officials & Administration Visioning Session – Friday, December 4, 2015 at 5:00 pm
- Planning Commission Public Input Workshop, Wednesday, January 20, 2016 at 6:30 pm

INSERT RESOLUTIONS-TC TO PROVIDE

BE IT FURTHER RESOLVED, that upon its passing this Resolution shall be expeditiously transmitted to: SEMCOG and its Member Communities; the Michigan Municipal League; Governor Rick Snyder, Senator Vincent Gregory, Representative Rudy Hobbs; Speaker of the House Jase Bolger; House Minority Leader Tim Griemel; Senate Majority Leader Randy Richardville; Senate Minority Leader Gretchen Whitmer; the Chair and Vice Chairs of the Senate Committee on Finance, the Senate Committee on Appropriations, the Senate Committee on Local Government and Elections, and the Senate Committee on Reforms, Restructuring and Reinventing; and the Chair and Vice Chairs of the House Committee on Appropriations, the House Committee on Local Government, and the House Committee on Financial Liability.

BE IT FINALLY RESOLVED, that the City of Southfield strongly urges the Legislature to fix Michigan's broken municipal finance system and restore funds to local governments.

Motion passed.

Consent Item D was the last consent item on the agenda. City Planner Terry Croad stated that the City of Southfield Comprehensive Master Plan was last adopted on April 13, 2009. According to the Michigan Planning Enabling Act (Act 33 of 2008, as amended):

> At least every 5 years after adoption of a master plan, a planning commission shall review the master plan and determine whether to commence the procedure to amend the master plan or adopt a new master plan.

Further, before preparing or amending a master plan, the planning commission shall send a notice to each municipality located within or contiguous to the local unit of government (and the regional planning commission; each public utility company and public transportation agency; and any government entity that registers its name for this purpose) explaining that the planning commission intends to prepare or amend the master plan and requesting the recipient's cooperation and comment.

The Comprehensive Master Plan Procedure is also subject to Sect. 5.59 of the City's Zoning Ordinance, which requires the process to be reviewed by the City Council.

2014.05 Motion by Frasier; seconded by Siver.

RESOLVED: That the City Council hereby authorizes the City Planner, on behalf of the Planning Commission, to send the required Notice of Intent to update the Comprehensive Master Plan in accordance with the Michigan Planning Enabling Act (Act 33 of 2008, as amended) and to initiate the Master Plan Procedure to update the Plan in accordance with Sect. 5.59 of the City Zoning Ordinance.

Motion passed.

SAMPLE

City of Southfield

26000 Evergreen Rd. • P.O. Box 2055 • Southfield, MI 48037-2055 • www.cityofsouthfield.com

February 20, 2014

City of Lathrup Vill. Clerk
Attn: Ms. Gloria Harris-Ford
27400 Southfield Road
Lathrup Village, MI 48076

RE: Notice of Intent to update the Comprehensive Master Plan
City of Southfield, Michigan

To Whom It May Concern:

Pursuant to the requirements of the Michigan Planning Enabling Act (Act 33 of 2008, as amended), this notification is to inform you of the City of Southfield's intent to update the City's Comprehensive Master Plan (adopted April 13, 2009). As required, a copy of the draft plan will be available to you for your review and comment in advance of the City's Public Hearing.

We encourage you to follow the progress of the plan update on the home page of the Planning Department at the City of Southfield's website: www.cityofsouthfield.com.

Further, if you would like to receive any future notices regarding the City of Southfield's Comprehensive Master Plan update electronically, please e-mail your request along with your e-mail address to: tcroad@cityofsouthfield.com or Terry Croad, Planning Director, 26000 evergreen Road, P.O. Box 2055, Southfield, MI 48037-2055.

In the meantime, please feel free to contact the planning department at 248-796-4150 if you have any questions. We look forward to your input.

Respectfully Submitted,

Terry Croad

Terry Croad, AICP, ASLA
Director of Planning
On Behalf of the City of Southfield Planning Commission

Mayor Brenda L. Lawrence | **Council President** Sylvia Jordan | **City Clerk** Nancy L. M. Banks | **City Treasurer** Irv M. Lowenberg

City Council
Donald F. Fracassi, Myron A. Frasier, Sidney Lantz, Jeremy Moss, Joan Seymour, Kenson J. Siver

Authorization to Release Draft *Sustainable Southfield* Master Plan
February 24, 2016

Planning Commission Members Present: Willis, Peoples-Foster, Nichols, Taylor, Huntington, Griffis, Culpepper

Motion by: Willis, Planning Commission Secretary

Supported by: Culpepper, Planning Commission Member

RECOMMENDED RESOLUTION

RESOLVED: The Planning Commission does hereby authorize the Planning Department, on behalf of the Planning Commission Secretary, to release the draft *Sustainable Southfield* Master Plan for the required 63 day public review period and the requirements of the Michigan Planning Enabling Act 33 of 2008 as amended, conditional upon authorization by the City Council on February 29, 2016.

YEAS: Willis, Peoples-Foster, Nichols, Taylor, Huntington, Griffis, Culpepper

NAYS: None

_____ _____

Robert Willis, PC Secretary **Date**

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Sustainable Southfield

SOURCES:

- *A Self-Assessment to Address Climate Change Readiness in Your Community,* created by Diane Desotelle of Minnesota Sea Grant in 2012.
- Agriculture Marketing Service
- American Cancer Society (ACS)
- American Heart Association (AHA)
- American Planning Association (APA)
- AARP
- Builder's Guide to Low Impact Development
- Center for Disease Control and Prevention (CDC)
- Center for Urban Forest Research
- Center for Medicare & Medicaid Services
- Centero Real Estate
- City of Southfield
- *Climate Change Readiness Index*
- Conservation Design Forum
- *The Constitution of the Iroquois Nation, The Great Binding Law, GAYANASHAGOWA*
- Corporation for National and Community Service
- Dartmouth Institute for Health Policy & Clinical Practice
- Design for Health
- *Design Guidelines for Active Michigan Communities*, 2006
- Dun & Bradstreet, Inc.
- *Enhancing Sustainable Communities with Green Infrastructure*
- Environmental Protection Agency
- ESRI
- Federal Communications Commission
- Federal Highway Administration
- Federal Transit Administration
- FEMA
- Health Resources & Service Administration
- Institute for Health Metrics & Evaluation
- Institute of Museum & Library Services
- *Institutionalizing Urban Agriculture: Process, Progress, & Innovation*, by Brian Barth
- Lawrence Technological University (LTU)
- Michigan Chapter of the American Planning Association
- Michigan Sea Grant
- National Center for Environmental Health

- National Highway Traffic Safety Commission
- National Institutes of Health
- National Telecommunications and Information Administration
- National Low Income Housing Coalition
- NAVTEQ
- Oakland County
- Oakland County Community College
- Pavement Maintenance Program
- Physicians for Social Responsibility
- *Planning & Zoning News*
- Project for Public Spaces
- Public & Affordable Housing Research Corporation
- RCOC
- *Retail & Hotel Market Analysis*, Gibbs Planning Group January 2012
- The Robert Wood Johnson Foundation
- SEMCOG
- Southfield School District
- St. John Providence Health System (SJPHS)
- State of Delaware
- State of Michigan
- Straith Hospital for Special Surgery (Straith)
- *Sustaining Places: The Role of the Comprehensive Plan* (Godschalk and Anderson 2012)
- The Texas A&M Transportation Institute
- The University of Wisconsin Population Health Institute
- *USA Today*
- U.S. Census Bureau
- U.S. Department of Agriculture
- U.S. Department of Education
- U.S. Department of Health and Human Services
- U.S. Department of Housing and Urban Development
- U.S. Department of Transportation
- U.S. Election Assistance Commission
- U.S. Federal Bureau of Investigations
- U.S. Surgeon General
- West Michigan Environmental Action Council
- World Health Organization

NOTES

City of Royal Oak
ADOPTED CAPITAL IMPROVEMENT PLAN

FY2016-2017 to FY2021-2022

Life Now Playing

Finance Department
211 South Williams Street
Royal Oak, MI 48067

March 16, 2016

Dear Planning Commission Members:

The enclosed capital improvement plan (CIP) serves as the city's multi-year planning instrument used to identify needs and potential financing sources for public infrastructure improvements. The purpose of a CIP is to facilitate the orderly planning of infrastructure improvements; to maintain, preserve, and protect the city's existing infrastructure system; and to provide for the acquisition or scheduled replacement of equipment to help to ensure the efficient delivery of services that the community desires. The goal is to use the CIP as a tool to implement the city's various master plans, goals, objectives, policies and to assist with the city's financial planning.

The CIP plays an important role by providing the link between planning and budgeting for capital and non-routine expenditures. The CIP process occurs prior to the budget process as the CIP will be used to develop the capital portion of the budget. Approval of the CIP by the planning commission does not signify final approval or funding of any project contained within the plan. Rather, by approving a CIP, the planning commission acknowledges that they agree that the projects present a reasonable interpretation of the upcoming needs / wants for the city. The projects contained in the first year of the plan will be requested in next year's department requested budget and potentially advance to the manager's recommended and/or city commission's approved budget.

The CIP document includes several areas of projects such as street improvements, water & sewer improvements, city parks / facilities improvements, information technology, and vehicles, equipment, large studies, and other. (A project location map follows each section) An aggregate spreadsheet listing the summary of projects with current cost projections (in today's dollars) is found in the document after the project description section. Near the end of document the project application forms are included to provide readers with a better understanding as to how a project is submitted and rated.

During the upcoming year, it is recommended that the administration and planning commission members work together to better define and develop Royal Oak's CIP process for next year. CIP topics to improve could include the following: a project raters group to improve the legitimacy of project scoring and improve upon the reporting of related operating costs / savings impact.

Preparation of the CIP is performed under the authority of the Michigan Planning Enabling Act (Act 33 of 2008) which repealed and replaced the Municipal Planning Commission Act (PA 285 of 1931). A public hearing on the draft capital improvement plan was conducted on March 15, 2016. The adopted CIP will assist the administration and city commission during the budget development process. The planning commission's assistance throughout this process is greatly appreciated.

Respectfully Submitted,

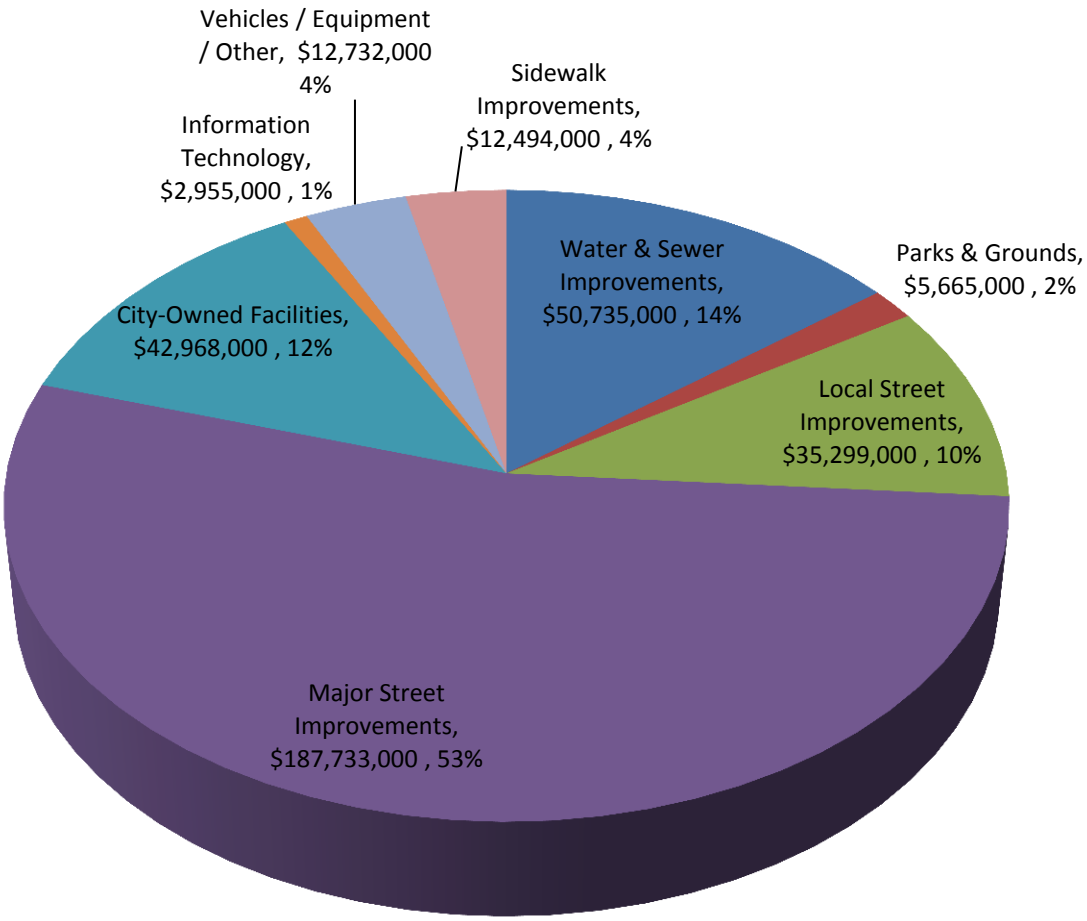
Julie Rudd
Director of Finance

Respectfully Submitted,

Timothy E. Thwing
Director of Community Development

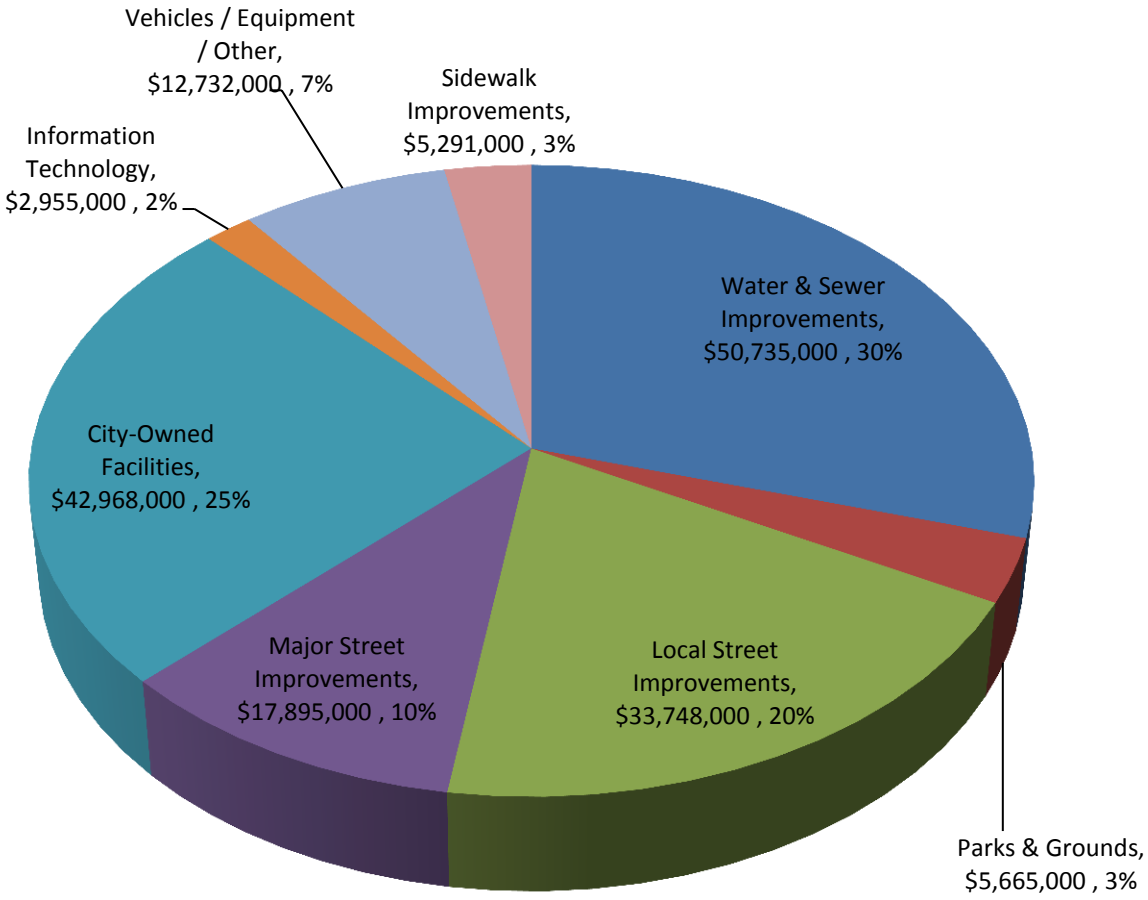
Total Project Costs and Percentage

2016/17-2021/22



Total City Project Costs and Percentage

2016/17-2021/22



WATER & SEWER IMPROVEMENTS

CAP1535	**Mohawk Avenue and Sherman Drive Water Main Replacements**

Project Length: 2016-2017
City Share: 100%
Estimated City Cost: $766,000
Funding Source: water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Mohawk Avenue (Harrison Avenue-Lincoln Avenue) and 8" water main in Sherman Drive (Josephine Avenue to east of Baker Street).

CAP1607	**Basset Road, Vinton Road, Greenleaf Drive, Woodsboro Drive, Elmhurst Avenue, Clawson Avenue, Linwood Avenue, Forestdale Court, Oliver Road and Glenwood Road Water Main Replacements**

Project Length: 2016-2017
City Share: 100%
Estimated City Cost: $2,318,000
Funding Source: water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8" water main in Basset Road, Vinton Road, Greenleaf Drive, Woodsboro Drive, Elmhurst Avenue, Clawson Avenue, Linwood Avenue, Forestdale Court and 12" water main in Oliver Road and Glenwood Road.

CAP1613	**Vinsetta Boulevard, Sycamore Avenue, Northwood Boulevard, Crooks Road Water Main Replacements**

Project Length: 2016-2017
City Share: 100%
Estimated City Cost: $1,992,000
Funding Source: water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8" water main in Vinsetta Boulevard, Northwood Boulevard, Sycamore Avenue and 12" water main in Crooks Road.

CAP1745	**14 Mile Road (Woodward Avenue-Tonawanda Avenue) & (Mankato Avenue-CN Railroad)**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $1,138,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main in 14 Mile Road from Woodward Avenue to Tonawanda Avenue and Mankato Avenue to CN Railroad.

CAP1710	**Rochester Road, Ferris Avenue, and Vermont Avenue Water Main Replacements**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $1,236,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water mains with a new 12" water main in Rochester Road (Donald Avenue -14 Mile Road) and an 8" water main along Ferris Avenue (Donald Avenue-14 Mile Road) and Vermont Avenue (Donald Avenue-14 Mile Road).

CAP1720	**Normandy Road Water Main Replacement**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $1,022,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12” water main along Normandy Road between Woodward Avenue and Normandy Court.

CAP1730	**Section 5 & 7 Water Main Replacements**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $1,186,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water wain in the east side of Woodward Avenue (Buckingham Road-Normandy Road), Woodward Avenue just north of Starr Road and 8" water mains in Judson Avenue (Elmwood Avenue-Cummings Avenue), Nakota Road (Hillcrest Avenue-Crooks Road), and Rosewold (Normandy Road-Massoit Road).

CAP1735	**Dallas Avenue Water Main Replacement**
Project Length: 2017-2019	**City Share:** 100%
Estimated City Cost: $843,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replacing existing water main with a new 8” water main along Dallas Avenue and Blair Avenue between Lincoln Avenue and 6th Street.

CAP1740	**Section 6 Water Main Replacement**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $1,032,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Chester Road (Hillside Drive-Dukeshire Highway) and 8" water mains along Dukeshire Highway (Chester Road-Normandy Road), Yorba Linda Boulevard (Dukeshire Highway-Kensington Drive), Rockingham (Kensington Drive-Woodward Avenue) and Ravena Avenue (Chester Road-Woodward Avenue).

CAP1750	**Section 3 Water Main Replacement**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $500,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8” water main along 14 Mile Road (Rochester Road-Campbell Road).

CAP1810	**Houstonia Avenue Water Main Replacement**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $938,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Houstonia Avenue (Beechwood Drive-Main Street) and 8" water main in Oakdale Street (11 Mile Road to 4th Street).

CAP1820	**Section 10 and 15 Water Main Replacements**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $1,090,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water mains with new 8" water mains along Forest Avenue (Main Street-Rosedale Avenue), Virginia Avenue (Pingree Boulevard-Dead End), Clifton Avenue (12 Mile Road-Beaver Avenue), Fern Street (12 Mile Road-Beaver Avenue) and Ardmore Avenue (12 Mile Road-Beaver Avenue).

CAP1830	**Section 3 and 4 Water Main Replacements**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $1,138,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Lexington Boulevard (Senior Center-Washington Avenue) and 8" water mains in Glendale Avenue (13 Mile Road-Englewood Avenue) and Alexander Avenue(13 Mile Road-Woodlawn Avenue).

CAP1840	**Section 3 and 10 Water Main Replacements**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $1,088,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8" water main along Blair Avenue (13 Mile Road-Woodlawn Avenue), Devillen Avenue (Ferris Avenue-Campbell Road), Girard Avenue (Red Run Park – Vermont Avenue), and Parkdale Avenue (Vermont Avenue-Wilson Avenue).

CAP1850	**Vermont Avenue Water Main Replacements**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $1,136,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8" water main along Vermont Avenue (12 Mile Road-Girard Avenue) and Houstonia Avenue (Vermont Avenue-Campbell Road).

CAP1910	**Stephenson Highway Water Main Replacement**
Project Length: 2019-2020	**City Share:** 100%
Estimated City Cost: $1,614,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Stephenson Highway (4th Street-Gardenia Avenue) and an 8" water main along Forest Avenue (Symes Avenue-Stephenson Highway).

CAP1920	**Section 14, 22, and 23 Water Main Replacements**
Project Length: 2019-2020	**City Share:** 100%
Estimated City Cost: $1,338,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 8" water main along 11 Mile Road (Dorchester Avenue-Kenwood Avenue), Farnum Avenue (Campbell Road-Kenwood Avenue), Helene Avenue (Barrett-Brockton), Vermont Avenue (Lincoln Avenue-5th Street), Longfellow Avenue (Harrison Avenue-Lincoln Avenue), and Rembrandt Avenue (Lincoln Avenue-6th Street).

CAP1930	**5th, 6th, and 7th Streets Water Main Replacements**
Project Length: 2019-2020	**City Share:** 100%
Estimated City Cost: $1,306,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along 5th Street (Knowles Street-Alexander Avenue) and 8" water mains along 6th Street (Knowles Street-Alexander Avenue), 7th Street (Troy Street-Knowles Street), and Altadena Avenue (Lincoln Avenue-6th Street).

CAP1935	**Harrison Avenue Water Main Replacement**
Project Length: 2019-2020	**City Share:** 100%
Estimated City Cost: $1,244,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace existing water main with a new 12" water main along Harrison Avenue (Main Street to Batavia Avenue) and an 8" water main in Houstonia Avenue (Northwood Boulevard-Evergreen Drive).

CAP2010	**Section 15 and 23 Joint Replacements**
Project Length: 2020-2021	**City Share:** 100%
Estimated City Cost: $1,332,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace universal joint water main with an 8" water main along St. Charles Court (Curry Avenue-Potter Avenue), Frederick Street (Curry Avenue-Potter Avenue), S. Dorchester Avenue (Lincoln Avenue-4th Street), and S. Kenwood Avenue (Lincoln Avenue-4th Street).

CAP2020	**Edgeworth Avenue and Minerva Avenue Joint Replacements**
Project Length: 2020-2021	**City Share:** 100%
Estimated City Cost: $1,582,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace universal joint water main with an 8" water main along S. Edgeworth Avenue (Lincoln Avenue-11 Mile Road) and Minerva Avenue (Lincoln Avenue-11 Mile Road).

CAP2030	**Section 23 Joint Replacement**
Project Length: 2020-2021	**City Share:** 100%
Estimated City Cost: $1,366,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace universal joint water main with an 8" water main along Helene Avenue (Lincoln Avenue-11 Mile Road), E. Hudson (dead end - Stephenson), Yale (Wellesley-Stephenson) and Brockton (Helene Avenue-Stephenson).

CAP2110	**Section 14 and 23 Joint Replacements**
Project Length: 2021-2022	**City Share:** 100%
Estimated City Cost: $1,096,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Replace universal joint water main with an 8" water main along N. Minerva Avenue (11 Mile Road-Farnum Avenue), Mace Avenue (Minerva Avenue-Stephenson Highway), and S. Edison Avenue (Lincoln Avenue-4th Street).

CAP2120	**Section 16, 21, and 23 Joint Replacements**
Project Length: 2021-2022	**City Share:** 100%
Estimated City Cost: $996,000	**Funding Source:** water and sewer fund
Impact on the Operating Budget: Lower system maintenance costs.	
Description: Replace universal joint water main with an 8" water main along N. Maple Avenue (Derby Avenue-12 Mile Road), Huntington Avenue (Hereford Drive-Woodward Avenue), and Tufts Avenue (Wellesley Avenue to Stephenson Highway).	

CAP2210, CAP2220, CAP2310, CAP2320	**Various Water Main Replacements**
Project Length: 2021-2022	**City Share:** 100%
Estimated City Cost: $9,042,000	**Funding Source:** water and sewer fund
Impact on the Operating Budget: Lower system maintenance costs.	
Description: Replace existing 6” water main with 8” water main in target area to be determined.	

CAP1614-CAP2214	**Sewer Televising and Root Control**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $3,030,000	**Funding Source:** water and sewer fund
Impact on the Operating Budget: Lower system maintenance costs and general liability costs.	
Description: Sewer televising, cleaning, and invasive root removal city wide.	

CAP1616-CAP2216	**Sewer Lining (City Wide)**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $4,113,000	**Funding Source:** water and sewer fund
Impact on the Operating Budget: Lower system maintenance costs.	
Description: Lining the sewers to prevent sewer pipe failure or collapse.	

CAP1617-CAP2217	**Spot Sewer Repairs (City Wide)**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $3,036,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Lower system maintenance costs.

Description: Spot sewer repair of broken sanitary sewer of different sizes in various locations city wide.

CAP1606	**2016 Sewer Improvements**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $2,066,000	**Funding Source:** water and sewer fund

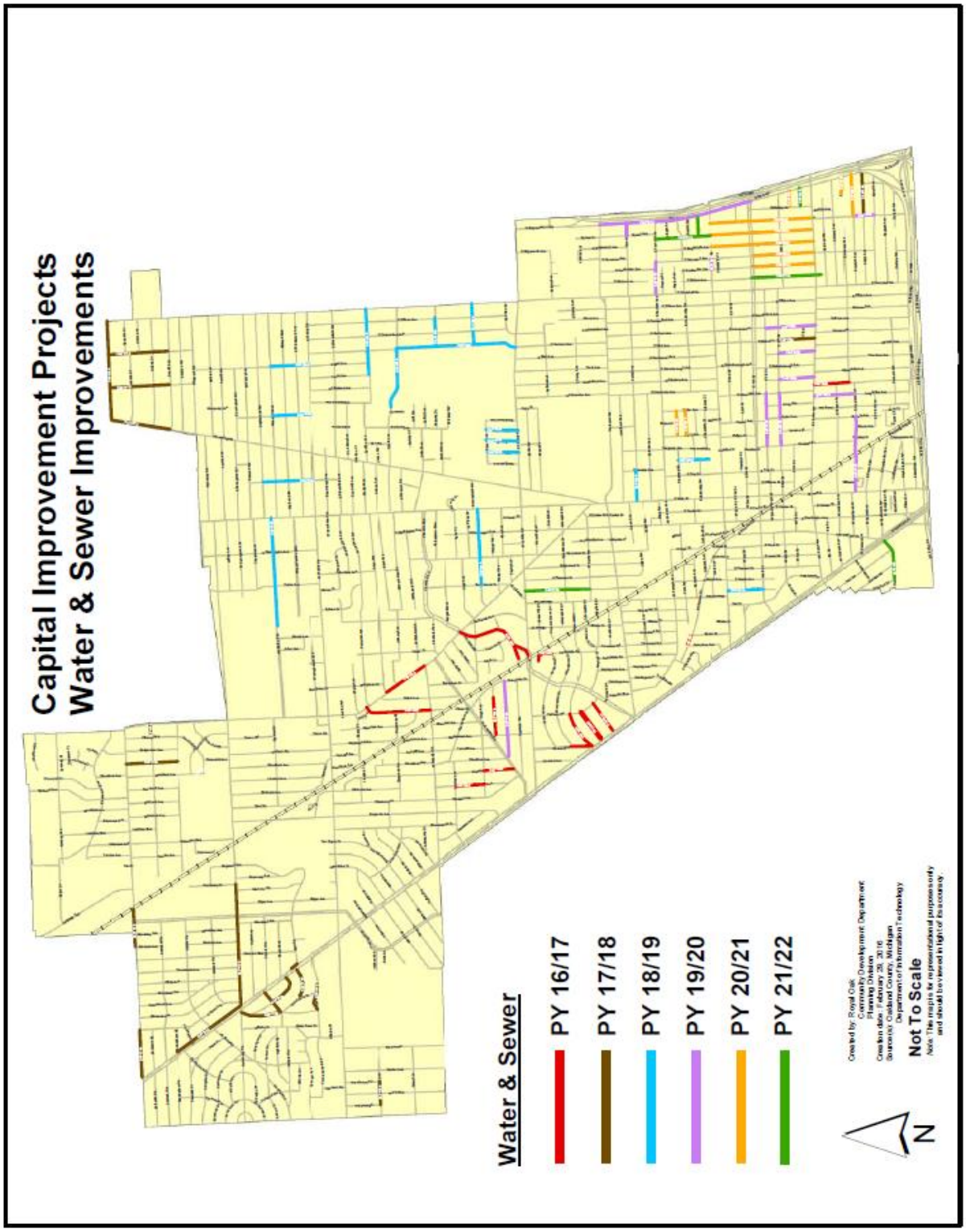
Impact on the Operating Budget: Lower system maintenance costs.

Description: Sewer replacements / installations for increased capacity at the following locations: Ravine Road (alley to Hampton Boulevard), Edgewood Drive (Crooks Road to Woodsboro Drive), Park Avenue (Maple Avenue to Maxwell Avenue), Durham Road (13 Mile Road to Normandy Road), Windemere Avenue (Blair Avenue to Campbell Road), Vinsetta Boulevard (Marywood Drive to Main Street).

CAP1736	**Green Infrastructure Feasibility Study**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $150,000	**Funding Source:** water and sewer fund

Impact on the Operating Budget: Will attempt to identify ways to reduce inflow into sewers with combinations of green and grey infrastructure.

Description: Consultant to identify generic concepts for green infrastructure including infiltration basins, bio-swales and bio-retention cells; permeable pavements, ect. Identify specific locations, develop generic costs, and develop a plan for specific locations where concepts can be installed with estimated costs. Estimate effectiveness and compare to existing city requirements for detention.


Capital Improvement Projects
Water & Sewer Improvements
Water & Sewer
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N
Not To Scale

SIDEWALK IMPROVEMENTS

CAP1601-CAP2201	**Concrete Pavement and Prepaid Sidewalk Program Improvements**
Project Length: 2015-2022 **Estimated City Cost:** $3,543,000	**City Share:** 100% **Funding Source:** water and sewer fund / direct billing

Impact on the Operating Budget: Improve safety thus reducing liability expenses due to fewer trip and fall claims.

Description: Repair of road/sidewalk concrete patches of the concrete roadway in a dedicated section of the city and based upon field inspections.

CAP1602, CAP1702	**Sidewalk Improvements Program**
Project Length: 2013-2018 **Estimated City Cost:** $281,000	**City Share:** 4% **Funding Source:** special assessment, direct bill

Impact on the Operating Budget: Improve safety thus reducing liability expenses due to fewer trip and fall claims.

Description: Replace damaged sidewalk in an established, target area, over the entire city over six years.

CAP1604	**2016 E. Fourth Street Streetscape Improvements (Main Street-Knowles Street DDA)**
Project Length: 2016-2017 **Estimated City Cost:** $1,100,000	**City Share:** 100% **Funding Source:** DDA

Impact on the Operating Budget: Improve safety thus reducing liability expenses due to fewer trip and fall claims.

Description: The work for this project includes new streetscape decorative concrete installation, concrete curb and gutter and asphalt street resurfacing, handicap ramp replacement, drainage improvements, installation of trees and tree grates, and removal of existing DTE wood poles and lights and installation of decorative street lights. This project extends along E. Fourth Street from S. Main Street to Knowles Street.

CAP1611	**2016 Main Street Streetscape (10 Mile Road-Lincoln Avenue)**
Project Length: 2016-2017 **Estimated City Cost:** $367,000	**City Share:** 44% **Funding Source:** DDA / major streets / special assessment

Impact on the Operating Budget: Improve safety thus reducing liability expenses due to fewer trip and fall claims.

Description: Improvements to streetscape along Main Street between 10 Mile Road and Lincoln Avenue.

LOCAL STREET IMPROVEMENTS

CAP1705-CAP2205	**Millage Concrete Street Repairs**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $8,203,000	**Funding Source:** local street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Removal and replacement of failed concrete slab sections within the local street network, as identified through the city's pavement management system and based upon field inspections. The slab replacement program will replace/patch deteriorated concrete on local streets.

CAP1715-CAP2215	**Millage Asphalt Street Resurfacing**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $14,303,000	**Funding Source:** local street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Resurfacing of local roads with an asphalt top layer. This program is meant to address locations where the road is deteriorating.

CAP1725-CAP2225	**Millage Street Joint Sealing**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $459,000	**Funding Source:** local street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Perform joint sealing maintenance on local streets for streets paved in previous year.

CAP1735-CAP2035	**Millage Street Reconstruction**
Project Length: 2017-2020	**City Share:** 100%
Estimated City Cost: $3,485,000	**Funding Source:** local street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Removal and replacement of failed concrete slab sections within the local street network, as identified through the city's pavement management system and based upon field inspections. The slab replacement program will replace/patch deteriorated concrete on local streets.

CAP1745-CAP2245	**2016 Sewer and Water Main Improvements**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $4,647,000	**Funding Source:** local street fund

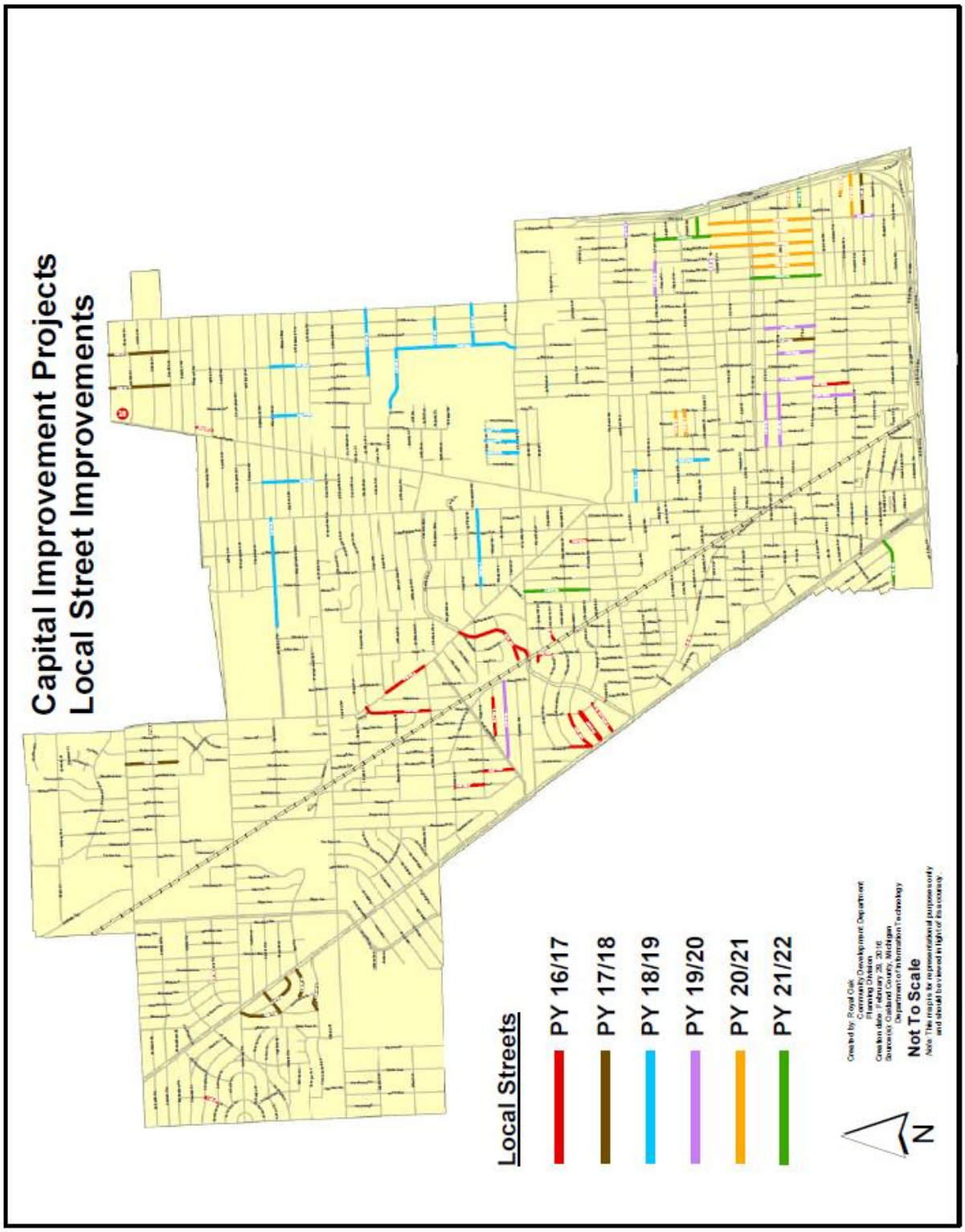
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Reconstruction of local roads in coordination with sewer and water main improvements.

CAP1755-CAP2255	**Special Assessment Paving**
Project Length: 2017-2022	**City Share:** 63%
Estimated City Cost: $2,651,000	**Funding Source:** local street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to local roads.

Description: Special assessment paving of local roads. The city is covering a portion of costs due to these roads going from gravel to paved.


Capital Improvement Projects
Local Street Improvements
Local Streets
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N
Not To Scale

MAJOR STREET IMPROVEMENTS

CAP1101	**Surveying Services**
Project Length: 2014-2020	**City Share:** 100%
Estimated City Cost: $80,000	**Funding Source:** major street fund / water and sewer fund

Impact on the Operating Budget: Improve efficiency and access to information.

Description: This program serves as a guide by providing surveying consulting services for preparing construction plans for street paving as well as water and sewer improvements.

CAP1401	**Traffic Signal Upgrade Project**
Project Length: 2015-2018	**City Share:** 100%
Estimated City Cost: $2,475,000	**Funding Source:** major street fund / grant

Impact on the Operating Budget: Reduce maintenance budget by $2,000 annually.

Description: Replace or upgrade existing traffic signals with countdown audible signals.

CAP1618	**Traffic Signal Survey and Optimization Plan**
Project Length: 2016-2017	**City Share:** 25%
Estimated City Cost: $100,000	**Funding Source:** major street fund / grant

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Consultant to inventory all traffic signals and create an asset management document. Develop an optimization plan, including prioritizing maintenance and construction projects and developing cost estimates.

CAP1619	**NB Stephenson Highway (Part A) Resurfacing**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $270,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurfacing north bound Stephenson Highway with asphalt as a part of the program between 11 Mile Road and Gardenia Avenue.

CAP1621	**NB Stephenson Highway (Part B) Resurfacing**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $270,000	**Funding Source:** major street fund
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: Resurfacing north bound Stephenson Highway with asphalt as a part of the program between East Lincoln Avenue and 11 Mile Road.	

CAP1604	**E. 4th Street Streetscape Improvements (Main-Knowles DDA)**
Project Length: 2015-2017	**City Share:** 100%
Estimated City Cost: $999,000	**Funding Source:** major street fund, DDA
Impact on the Operating Budget: Unknown	
Description: Perform topographic survey of E. 4th Street from Main Street to Knowles Street and contract for the design of paving and streetscape upgrades.	

CAP1626	**Crooks Road Resurfacing (14 Mile Road-Normandy Road and Webster Road-13 Mile Road)**
Project Length: 2016-2017	**City Share:** 75%
Estimated City Cost: $244,000	**Funding Source:** major street fund / City of Clawson
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: Resurface Crooks Road between 13 Mile Road and Webster Road and between 14 Mile Road and Normandy Road.	

CAP1635	**SA Paving Girard Avenue**
Project Length: 2016-2017	**City Share:** 56%
Estimated City Cost: $162,000	**Funding Source:** major street fund / special assessment
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: Special assessment paving of Girard Avenue from Rochester Road to Ardmore Avenue. The city is covering a portion of costs due to this road going from gravel to paved.	

CAP1703	**13 Mile Road Asphalt Resurfacing (Woodward Avenue to Crooks Road)**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $495,000	**Funding Source:** major street fund
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: Resurface 13 Mile Road between Woodward Avenue and Crooks Road.	

CAP1610	**Main Street Improvements (10 Mile Road-Lincoln Avenue)**
Project Length: 2016-2017	**City Share:** 48%
Estimated City Cost: $590,000	**Funding Source:** major street fund
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: 2016 MDOT S Main Street improvements between 10 Mile Road and Lincoln Avenue.	

CAP1622	**Ferndale Bike Route Loop Extension**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $50,000	**Funding Source:** major street fund
Impact on the Operating Budget: Unknown	
Description: Extension of the Ferndale bike route loop through the southwest corner of Royal Oak from the intersection of Woodward Avenue and Lincoln Avenue to the intersection of Mohawk Avenue and the I-696 service drive. From west to east, the route would travel along West Lincoln Avenue, Lafayette Avenue, West and East Harrison Avenue, Morse Avenue, East Parent Avenue, and Irving Avenue.	

CAP1704	**W. 4th Street, Lafayette Avenue and W. Lincoln Avenue Asphalt Resurfacing**
Project Length: 2018-2019	**City Share:** 100%
Estimated City Cost: $700,000	**Funding Source:** major street fund
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.	
Description: Resurface W. 4th Street (West Street to Washington Avenue), Lafayette Avenue (Woodward Avenue to Lincoln Avenue, 4th Street to 11 Mile Road), and W. Lincoln Avenue (Woodward Avenue to Washington Avenue).	

CAP1706	**Central Business District Street Resurfacing**
Project Length: 2017-2018	**City Share:** 100%
Estimated City Cost: $271,000	**Funding Source:** DDA

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Central Business District (CBD) resurfacing of 6th and 7th Streets between Washington Avenue and Lafayette Avenue. This program is intended to address the deteriorating surface condition and install new gutter and curb to match the streetscape layout. Construction is planned to begin in 2017.

CAP1707	**Gardenia Avenue Reconstruction (Main Street-Gainsborough Avenue)**
Project Length: 2018-2020	**City Share:** 100%
Estimated City Cost: $1,201,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Reconstruct Gardenia Avenue between Main Street and Gainsborough Avenue.

CAP1803	**Washington Avenue Resurfacing (Crooks Road-12 Mile Road)**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $326,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurfacing of N. Washington Avenue with an asphalt top layer as a part of the program between 12 Mile Road and Crooks Road. This program is intended to address location where the road surface condition is deteriorating.

CAP1765-CAP2265	**Annual Major Joint Seal Program**
Project Length: 2016-2022	**City Share:** 100%
Estimated City Cost: $610,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Perform joint sealing maintenance on major streets paved in previous year.

CAP1806	**Campbell Road (10 Mile Road-11 Mile Road)**
Project Length: 2018-2019	**City Share:** 37%
Estimated City Cost: $594,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurfacing of Campbell Road with asphalt as a part of the program between 10 Mile Road and 11 Mile Road. This program is intended to address deteriorating road surface conditions.

CAP2006	**11 Mile Road Resurfacing (CN RR to Campbell Road)**
Project Length: 2019-2021	**City Share:** 100%
Estimated City Cost: $1,252,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurface 11 Mile Road Between Troy Street and Campbell Road.

CAP2007	**Rochester Road Resurfacing (Main Street-14 Mile Road)**
Project Length: 2019-2021	**City Share:** 100%
Estimated City Cost: $1,049,000	**Funding Source:** major street fund / City of Clawson

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurface Rochester Road between Main Street and 14 Mile Road.

CAP2106	**N. Main Street Resurfacing (11 Mile Road-Crooks Road)**
Project Length: 2018-2020	**City Share:** 100%
Estimated City Cost: $850,000	**Funding Source:** major street fund

Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurface N. Main Street between 11 Mile Road and Catalpa Drive.

CAP2207	**Normandy Road (Coolidge Highway-Crooks Road)**
Project Length: 2019-2021	**City Share:** 100%
Estimated City Cost: $1,008,000	**Funding Source:** major street fund

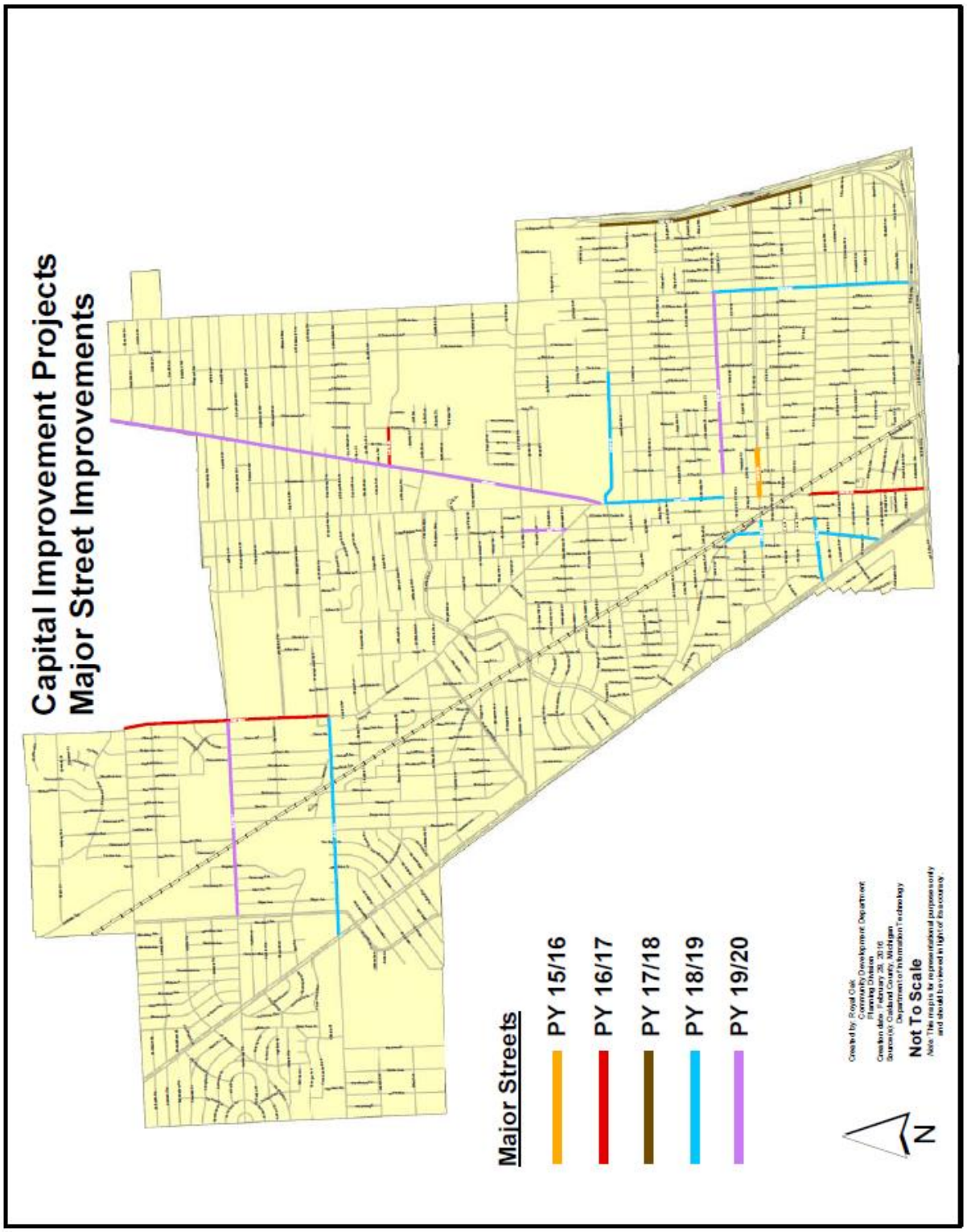
Impact on the Operating Budget: Will reduce road maintenance costs over time by making structural repairs to major roads.

Description: Resurface Normandy Road between Crooks Road and Coolidge Highway.

CAP1907	**I-75 Widening Project**
Project Length: 2018	**City Share:** 2.5%
Estimated City Cost: $4,299,000	**Funding Source:** major street fund

Impact on the Operating Budget: Unknown

Description: Local participation cost for the MDOT federally funded I-75 widening project. The project will add a fourth lane for carpooling between 8 Mile Road and M-59. The section north of I-696 and south of 12 Mile Road is scheduled to be done in 2018. The City of Royal Oak City Commission unanimously resolved that it opposes the highway capacity expansion project and will use all legal means at its disposal to prevent this expansion from taking place.


Capital Improvement Projects
Major Street Improvements
Major Streets
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PARKS AND FACILITIES

CAP1102	**Parking Meters**
Project Length: 2014-2020	**City Share:** 100%
Estimated City Cost: $700,000	**Funding Source:** parking fund / fees

Impact on the Operating Budget: Lower costs for coin collection and possibly increase costs for finance department.

Description: Replacement of the city parking meters with improved meter technology, as they are aging and becoming obsolete. Technology will provide additional methods of payment which will provide improved service to the visitors.

CAP1506	**Lindell Ice Arena Painting**
Project Length: 2018	**City Share:** 100%
Estimated City Cost: $115,000	**Funding Source:** ice arena fund / fees

Impact on the Operating Budget: Unknown

Description: Painting of the interior and exterior of the building.

CAP1731	**Farmer's Market Flooring**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $45,000	**Funding Source:** farmer's market fund / grants

Impact on the Operating Budget: Unknown

Description: Staining of the farmer's market floor to improve appearance and safety.

CAP1508	**Farmer's Market Roll-up Doors**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $38,000	**Funding Source:** farmer's market fund / grants

Impact on the Operating Budget: Reduce maintenance costs by $500 annually.

Description: Replace the remaining doors under the planned maintenance.

CAP1902	**Sherman Drive Parking Lot**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $125,000	**Funding Source:** parking fund

Impact on the Operating Budget: Reduce maintenance costs by $500 annually.

Description: Repave the parking lot surface to reduce maintenance and liability.

CAP1903	**Williams Street Parking Lot**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $55,000	**Funding Source:** parking fund

Impact on the Operating Budget: Reduce maintenance costs by $400 annually.

Description: Repave the parking lot surface to reduce maintenance and liability.

CAP1708	**Animal Shelter Access Road**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $45,000	**Funding Source:** unknown

Impact on the Operating Budget: Will reduce annual cold patch maintenance by $250.

Description: Pave the access road to the animal shelter and DPS off of Edgar Avenue.

CAP1709	**Second Street Parking Garage**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $8,000,000	**Funding Source:** n/a

Impact on the Operating Budget: Unknown

Description: Construction of a new 500 space parking garage at Second Street and Center Street.

CAP1812	**Center Street and Catalpa Drive Parking Lot Wall**
Project Length: 2018	**City Share:** 100%
Estimated City Cost: $45,000	**Funding Source:** parking fund

Impact on the Operating Budget: Unknown

Description: Repair of a wall at the Center Street and Catalpa Drive parking lot.

CAP1813	**Police Department Building**
Project Length: 2018	**City Share:** 100%
Estimated City Cost: $19,200,000	**Funding Source:** unknown
Impact on the Operating Budget: Unknown	
Description: Construction of a new police department building.	

CAP1814	**City Hall Building**
Project Length: 2018	**City Share:** 100%
Estimated City Cost: $7,000,000	**Funding Source:** unknown
Impact on the Operating Budget: Unknown	
Description: Construction of a new city hall building.	

CAP1908	**Downtown Park Development**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $4,500,000	**Funding Source:** unknown
Impact on the Operating Budget: Unknown	
Description: Construction of a new downtown park.	

CAP1909	**Library Improvements / Splash Pad / Radio Tower**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $3,100,000	**Funding Source:** unknown
Impact on the Operating Budget: Unknown	
Description: Improvements to the exterior of the library, construction of a splash pad and relocation of the radio tower in the event a downtown park is developed.	

CAP1301	**Tennis Court Surfacing**
Project Length: 2013-2017	**City Share:** 100%
Estimated City Cost: $52,000	**Funding Source:** parks capital improvement fund / CDBG fund
Impact on the Operating Budget: Extends life of tennis court structures in city.	
Description: Planned resurfacing of tennis courts at Waterworks, Meininger, Dickinson Park.	

CAP1402	**Park Pavilions**
Project Length: 2015-2018 **Estimated City Cost:** $300,000	**City Share:** 100% **Funding Source:** General Fund (Rental Fees)
Impact on the Operating Budget: Rentals will generate future revenue of $26,700 over the next 5 years. **Description:** Provide rental pavilions for family and group gatherings at four highly used parks Kenwood, Memorial, Exchange, and Red Run.	

CAP1906	**Worden Park Lighting Replacement**
Project Length: 2017 **Estimated City Cost:** $350,000	**City Share:** 100% **Funding Source:** parks capital improvement fund / grant
Impact on the Operating Budget: Reduction in number of light poles will reduce lighting costs and improve field use. **Description:** New lighting to replace the entire system, reducing the number of poles and increasing lighting efficiency.	

CAP1511	**Normandy Oaks Park**
Project Length: 2016-2018 **Estimated City Cost:** $3,000,000	**City Share:** 100% **Funding Source:** Normandy Oaks asset sales
Impact on the Operating Budget: $55,000 annual operating cost **Description:** Redevelopment of Normandy Oaks Golf Course into a city park with wide range of recreational activities. Details have not been determined.	

CAP1711	**Mark Twain and Elks Parks Parking Pavement**
Project Length: 2017 **Estimated City Cost:** $130,000	**City Share:** 100% **Funding Source:** parks capital improvement fund / CDBG fund
Impact on the Operating Budget: Reduce maintenance costs by $500 annually. **Description:** Pave two unimproved parking lots.	

CAP1712	**Memorial Park Parking Lot Repaving**
Project Length: 2017 **Estimated City Cost:** $125,000	**City Share:** 100% **Funding Source:** parks capital improvement fund / parking fund
Impact on the Operating Budget: Reduce maintenance costs due to ongoing maintenance. **Description:** Repaving of parking lot (performed last in the 1990's).	

CAP1713	**Fulton / Kenwood Play Equipment Upgrades**
Project Length: 2017 **Estimated City Cost:** $90,000	**City Share:** 100% **Funding Source:** parks capital improvement fund
Impact on the Operating Budget: Operating costs decrease $600 annually due to decreased maintenance costs. **Description:** Upgrade of play equipment at Fulton & Kenwood Parks.	

CAP1718	**Royal Oak Golf Course Improvements**
Project Length: 2017 **Estimated City Cost:** $421,000	**City Share:** 100% **Funding Source:** Normandy Oaks asset sales
Impact on the Operating Budget: Unknown **Description:** Install a golf cart path, clubhouse deck, and repave the parking lot at the Royal Oak golf course.	

CAP1719	**Wagner Park Upgrade of Play Equipment**
Project Length: 2018 **Estimated City Cost:** $45,000	**City Share:** 100% **Funding Source:** CDBG Fund
Impact on the Operating Budget: $300 annual savings **Description:** Upgrade of play equipment Wagner Park.	

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CAP1732	**Dondero Park Upgrades**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $150,000	**Funding Source:** CDBG Fund

Impact on the Operating Budget: Unknown

Description: Resurface sports courts, install additional playground equipment, and renovate baseball diamond.

CAP1733	**Tree Planting Program**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $100,000	**Funding Source:** CDBG Fund

Impact on the Operating Budget: Unknown

Description: CDBG funds will be utilized to purchase and plant trees within the city's right-of-way and parks.

CAP1734	**Barton South Gazebo**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $175,000	**Funding Source:** CDBG Fund

Impact on the Operating Budget: Unknown

Description: Install a gazebo to support small scale events.

CAP1808	**Westwood & Worden East Parks Play Equipment**
Project Length: 2019	**City Share:** 100%
Estimated City Cost: $90,000	**Funding Source:** CDBG fund

Impact on the Operating Budget: Annual maintenance will decrease by $300 per structure.

Description: Update play equipment at Westwood and Worden East Parks. Worden East Park heavily used by city preschool program.

CAP1809	**Whittier Park Parking Lot Paving**
Project Length: 2019 **Estimated City Cost:** $75,000	**City Share:** 100% **Funding Source:** parks capital improvement fund / parking fund / CDBG fund
Impact on the Operating Budget: Will require pavement repair in 5 to 10 years. **Description:** Pave a parking lot at Whittier Park due to increased use of park.	

CAP1904	**Upton Park Soccer Field Development**
Project Length: 2019 **Estimated City Cost:** $75,000	**City Share:** 100% **Funding Source:** parks capital improvement fund
Impact on the Operating Budget: Unknown **Description:** Improve open grass area at Upton Park to develop a soccer field.	

CAP1721	**Wendland Park Play Equipment**
Project Length: 2017 **Estimated City Cost:** $45,000	**City Share:** 100% **Funding Source:** parks capital improvement fund
Impact on the Operating Budget: Annual maintenance will decrease by $300 per structure. **Description:** Renovation of Wendland Park play equipment.	

CAP1626	**Park Signs**
Project Length: 2016-17 **Estimated City Cost:** $125,000	**City Share:** 100% **Funding Source:** parks capital improvement fund
Impact on the Operating Budget: Installation cost of $200 per sign for a total of $5,000. **Description:** Replace park signs within block grant areas. New signs are desired to move city branding forward.	

CAP1722	**Woodward Avenue Median Signs**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $35,000	**Funding Source:** general fund / major streets

Impact on the Operating Budget: Unknown

Description: Replace two median signs on Woodward Avenue, one of which was removed due to a vehicle accident.

CAP1609	**Smart Park Development**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $250,000	**Funding Source:** crowdfunding / MEDC

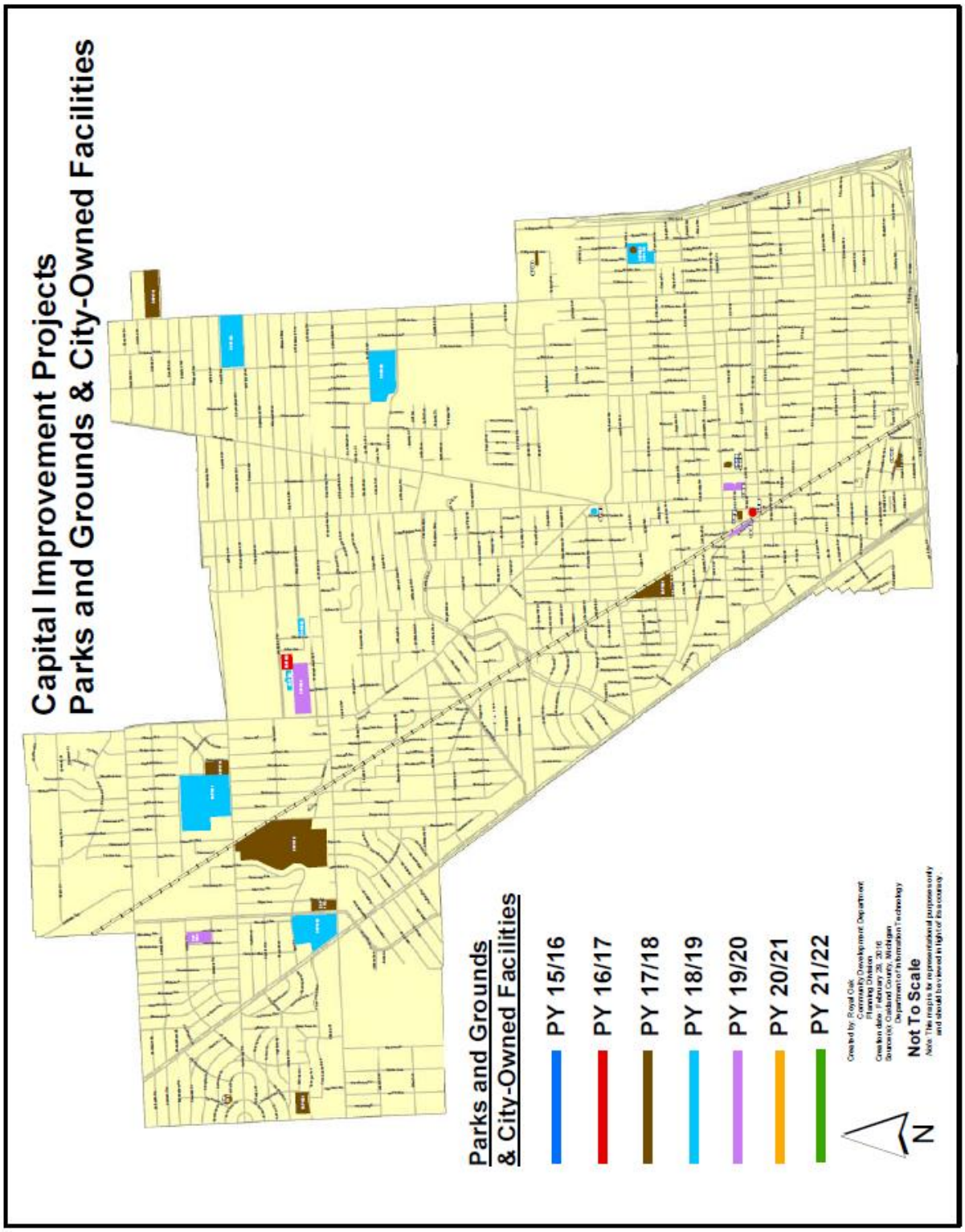
Impact on the Operating Budget: Unknown

Description: Development of a downtown smart park that incorporates technology, sustainable landscaping, and materials that have the lowest impact on the environment.

CAP1612	**Worden Park Parking Lot Resurfacing**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $132,000	**Funding Source:** CDBG fund

Impact on the Operating Budget: Reduce maintenance costs due to ongoing maintenance.

Description: Resurfacing of parking lot at Worden Park.


Capital Improvement Projects
Parks and Grounds & City-Owned Facilities
Parks and Grounds
& City-Owned Facilities
PY 15/16
PY 16/17
PY 17/18
PY 18/19
PY 19/20
PY 20/21
PY 21/22
N
Not To Scale

INFORMATION TECHNOLOGY

CAP1103	**Computer Replacement Program**
Project Length: 2016-2022 **Estimated City Cost:** $525,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Costs are anticipated to remain consistent for the proposed replacement, before more extensive service is required to keep older equipment operational.

Description: Scheduled replacement of desktop computers when they have reached the end of their useful service life. Useful service life is generally 5 years.

CAP1104	**Office Software and Training Program**
Project Length: 2016-2022 **Estimated City Cost:** $310,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Unknown

Description: New office software and training program to replace the Office 97 & 2003 versions. A stop gap conversion program is used to open Office 2007 & Office 2010 files from outside contacts and vendors. Uses of cloud based apps are also being reviewed as an additional application. This program is ongoing.

CAP1105	**Server-Network-Cabling Infrastructure**
Project Length: 2012-2022 **Estimated City Cost:** $474,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Unknown

Description: Upgrade and replace key areas of the City's network, cabling, server hardware, and intrusion protection improvements when appropriate. This program is ongoing.

CAP1302	**GIS Integration**
Project Length: 2013-2022 **Estimated City Cost:** $415,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Costs will increase due to license renewals. Reporting capabilities could potentially save time and assist with decision making processes.

Description: Consulting services to integrate geographical information systems (GIS) applications and development into planning, fire, clerk, and engineering and various departments and Oakland County CAMS. This program is ongoing.

CAP1403	**Mobile Workforce**
Project Length: 2014-2022 **Estimated City Cost:** $120,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Costs are anticipated to remain consistent, until more extensive service levels are required to keep older equipment operational.

Description: This project would address the aging laptop computers for remote and mobile workforce equipment. Consideration and utilization of other electronic devices similar to PDA/smart phones and iPads can be addressed. Accessibility of wireless access points to be implemented. This is an ongoing program.

CAP1618	**GIS Consulting Services**
Project Length: 2016-2017 **Estimated City Cost:** $100,000	**City Share:** 100% **Funding Source:** water and sewer fund

Impact on the Operating Budget: Will streamline multiple functions and improve efficiency.

Description: Development of GIS databases beginning with water and sewer and expanding to other areas.

CAP1723	**Desktop Virtualization**
Project Length: 2017-2022 **Estimated City Cost:** $400,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: Annual software licensing and maintenance costs will increase. Desktop replacement, maintenance, and labor requirements will decrease.

Description: Software technology that separates the desktop environment and associated application software from the principal client device that is used to access it will be used to create a virtual environment for city employee's computer desktops. This project will provide four benefits: cost savings, simplified management, enhanced security, and increased productivity.

CAP1726	**Disaster Recovery Solution**
Project Length: 2017-2022 **Estimated City Cost:** $575,000	**City Share:** 100% **Funding Source:** IT fund / retained earnings

Impact on the Operating Budget: There will be ongoing operating expenses to provide data and telephony redundancy as well as rental costs for an offsite recovery location.

Description: Implement a disaster recovery solution to ensure city technology and systems can be quickly recovered in case of a disaster. This could include rental costs for a recovery location, hardware, and cloud computing.

CAP1724	**Fire Department Computers**
Project Length: 2017 **Estimated City Cost:** $36,000	**City Share:** 100% **Funding Source:** IT fund / public safety fund

Impact on the Operating Budget: Unknown

Description: The fire department needs three desktop computers for each station for a total of nine, as well as three laptops. The computers will be utilized for training, continuing education, and city related communications.

VEHICLES, EQUIPMENT, LARGE STUDIES, AND OTHERS

CAP1623	**Motor Pool Vehicle Replacement Plan**
Project Length: 2017-2022	**City Share:** 100%
Estimated City Cost: $11,077,000	**Funding Source:** motor pool fund / user charges

Impact on the Operating Budget: Lower maintenance costs

Description: Vehicle replacement plan for fiscal years 2016-17 to 2021-22; Plan is modified due to operational review modifications and year 2022 is being added to maintain six year period. Detailed schedules begin on the next page.

CAP1729	**Lucas Chest Compression System**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $55,000	**Funding Source:** public safety fund

Impact on the Operating Budget: Unknown

Description: The Lucas Chest Compression System is a piece of equipment that aids responders during CPR. The device maintains continuous, uninterrupted compressions giving patients a better chance at survival.

CAP1727	**Fire Hoses**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $145,000	**Funding Source:** public safety fund

Impact on the Operating Budget: Unknown

Description: To replace approximately 460 lengths of existing fire hoses to conform to NFPA 1962 which states, “Hose manufactured prior to July 1987 to meet the requirements of the 1979 and previous editions of NFPA 1961, standard on fire hose, shall be removed from service.” The city currently has many hoses manufactured before 1987 that aren’t in compliance with regulations.

CAP1624	**Power Lift Stretcher**
Project Length: 2016-2017	**City Share:** 100%
Estimated City Cost: $160,000	**Funding Source:** public safety fund

Impact on the Operating Budget: Lower back strains / workers compensation costs

Description: This request will provide a power stretcher in each of the two remaining ambulances. The power lift stretchers are strong enough to lift the heaviest of patients and can potentially decrease the number of on duty back-related injuries. Two power stretchers were approved in fiscal year 15-16.

CAP1728	**Paratech Trench Systems**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $45,000	**Funding Source:** public safety fund

Impact on the Operating Budget: Unknown

Description: The fire department is requesting to purchase Paratech Trench Systems equipment for the technical rescue team. This equipment is for the safety of the team, DPS workers, residents and firefighters. There are dangerous incidents that require the proper equipment to perform rescues. The equipment has been utilized on the Grosse Point trench collapse and the Wayne furniture explosion.

CAP1737	**Recycling Carts**
Project Length: 2017	**City Share:** 100%
Estimated City Cost: $1,250,000	**Funding Source:** solid waste fund

Impact on the Operating Budget: Should increase credits provided to the city for recycled material.

Description: Conversion of recycling to single stream will require the use of new larger recycling carts for all residents.

VEHICLE REPLACEMENT
2016-2017

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		ASSESSING	
102	05	Pontiac G-6	$ 27,500
109	05	Pontiac G-6	$ 27,500
		BUILDING MAINTENANCE	
733	03	GMC Savana	$ 33,320
		ENGINEERING	
630	04	GMC Safari	$ 31,000
631	03	GMC Savana	$ 33,320
		FIRE	
908	09	Ford Escape	$ 32,700
909	96	GMC G-6 Van	$ 36,800
992	08	Freightliner Ambulance	$ 212,960
		HIGHWAY	
202	10	GMC Sierra	$ 30,780
246	01	Sterling L8513 - Single	$ 205,460
251	01	Sterling L8513 - Single	$ 205,460
285	07	Elgin Sweeper	$ 180,000
		INSPECTION	
187	09	Ford Escape	$ 29,700
		MOTOR POOL	
GM031	03	Torro Groundsmaster 345	$ 56,680
		PARKS & FORESTRY	
715	04	GMC Sierra	$ 36,780
718	05	GMC Sierra	$ 36,780
730	03	GMC Savana	$ 33,320
762	01	Intl Forestry Truck	$ 176,000
		POLICE	
801	10	Ford Crown Victoria	$ 35,920
809	09	Ford Crown Victoria	$ 35,920
825	05	GMC Savana	$ 38,800
841	08	GMC Envoy	$ 32,700
861	08	GMC Envoy	$ 32,700
		SEWER	
445	01	GMC Sierra	$ 57,000
		WATER MAINTENANCE	
401	09	GMC Sierra	$ 30,780
441	01	Sterling L/LT9513 - Tandem	$ 201,447
442	01	Sterling L/LT9513 - Tandem	$ 201,447
		Total	**$ 2,092,774**

VEHICLE REPLACEMENT
2017-2018

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		AUTO PARKING	
636	00	GMC Safari	$ 31,000
		ENGINEERING	
103	10	GMC Sierra	$ 28,500
		FIRE	
993	08	Freightliner Ambulance	$ 212,960
		HIGHWAY	
249	06	Sterling L8513 - Single	$ 205,460
258	02	Sterling L/LT9513 - Tandem	$ 205,460
286	08	Elgin Sweeper	$ 180,000
717	09	GMC Sierra	$ 36,780
1242	98	American Leaf Vacuum	$ 40,260
		MOTOR POOL/COMMUNICATIONS	
332	05	GMC Savana	$ 31,320
		MOTOR POOL	
GM061	06	Torro Groundsmaster 345	$ 56,680
		PARKS & FORESTRY	
713	02	GMC Sierra	$ 34,780
716	05	GMC Sierra	$ 34,780
719	05	GMC Sierra	$ 36,780
1761	98	Brush Bandit Chipper	$ 43,400
		POLICE	
803	13	Ford Taurus	$ 37,501
806	13	Ford Taurus	$ 35,613
810	13	Ford Taurus	$ 35,603
831	03	Chevy 3500 Van	$ 38,800
842	10	Ford Taurus	$ 30,500
		SEWER	
414	04	Ford F-450	$ 39,800
415	04	Ford F-450	$ 39,800
		WATER MAINTENANCE	
465	99	GMC/Crane	$ 174,800
		Total	**$ 1,610,577**

VEHICLE REPLACEMENT
2018-2019

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		ELECTRICAL	
362	05	Ford F-550 Aerial Truck	$ 120,000
		HIGHWAY	
232	03	GMC Sierra	$ 34,780
250	03	Sterling L8513 - Single	$ 205,460
254	03	Sterling L8513 - Single	$ 205,460
257	08	Ford F-450	$ 67,260
259	10	Sterling LT9500 - Tandem	$ 205,460
261	15	Ford F-250	$ 37,300
268	09	GMC Sierra	$ 34,780
1243	98	American Leaf Vacuum	$ 40,260
1264	01	Ingersoll Air Compressor	$ 19,200
		INSPECTION	
181	09	Ford Escape	$ 29,700
		MOTOR POOL	
682	98	Tennant Sweeper	$ 39,600
670	02	**Yale Forklift**	$ 58,500
GM051	05	Torro Groundsmaster 345	$ 56,680
		PARK & FORESTRY	
776	96	Ford 4630Ldr Tractor	$ 39,600
1762	03	Brush Bandit Chipper	$ 43,400
		POLICE	
816	13	Ford Explorer	$ 39,083
818	10	Chevy Tahoe	$ 35,700
819	13	BMW Motorcycle	$ 26,400
820	13	BMW Motorcycle	$ 26,400
821	13	BMW Motorcycle	$ 26,400
822	13	BMW Motorcycle	$ 26,400
823	13	Ford Taurus	$ 37,697
828	16	Chevy Tahoe	$ 34,620
862	13	Ford Taurus	$ 30,500
8901	97	Ford Cutaway Van	$ 36,800
		SEWER	
443	01	Sterling L8513 - Single	$ 201,447
474	98	Ford TLB	$ 124,150
		Total	**$ 1,883,037**

VEHICLE REPLACEMENT
2019-2020

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		FIRE	
907	14	Ford Explorer	$ 32,700
		HIGHWAY	
247	09	Sterling L8513 - Single	$ 205,460
267	02	GMC Sign Truck	$ 126,000
1241	98	American Leaf Vacuum	$ 40,260
1245	02	American Leaf Vacuum	$ 40,260
1469	00	Magnum Cement Saw	$ 18,600
		ICE ARENA	
791	05	Zamboni	$ 130,000
		MOTOR POOL	
GM071	07	Torro Groundsmaster 328D	$ 56,680
		PARKS & FORESTRY	
764	94	Ford Chipper Truck	$ 130,000
765	03	Sterling/Prentice Log Loader	$ 205,460
766	01	Sterling L8513 - Single	$ 205,460
774	01	NH TN-65 Tractor	$ 33,000
777	96	Ford 4630 Tractor	$ 33,000
		POLICE	
802	14	Ford Explorer	$ 39,755
807	14	Ford Explorer	$ 39,755
813	14	Ford Explorer	$ 36,675
817	13	Ford Explorer	$ 39,083
832	13	Ford Taurus	$ 38,702
843	13	Ford Edge	$ 30,106
858	13	Ford Taurus	$ 30,500
859	13	Ford Explorer	$ 30,571
863	13	Ford Edge	$ 31,341
		SEWER	
413	09	GMC Savana	$ 33,320
		WATER MAINTENANCE	
1460	97	Ingersoll Light Tower	$ 19,800
1466	01	Ingersoll Air Compressor	$ 19,200
		Total	**$ 1,645,688**

VEHICLE REPLACEMENT
2020-2021

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		ASSESSING	
104	15	Ford Escape	$ 29,700
		CABLE	
1055	01	Ford F-550 Van	$ 640,000
		FIRE	
906	14	Ford Explorer	$ 32,700
908	09	Ford Escape	$ 32,700
991	08	Freightliner Ambulance	$ 212,960
		HIGHWAY	
233	05	GMC Sierra	$ 34,780
235	05	GMC Sierra	$ 34,780
252	15	Freightliner 108SD	$ 205,460
295	93	Hypac Roller	$ 58,500
1247	02	American Leaf Vacuum	$ 40,260
1280	02	Target Arrow	$ 6,700
		INSPECTION	
163	14	Ford Escape	$ 29,700
182	14	Ford Escape	$ 29,700
		MOTOR POOL	
1601	92	Ajax Trailer	$ 21,000
1602	94	Special Events Trailer	$ 16,800
		PARKS & FORESTRY	
771	04	NH TN-60A2 Tractor	$ 33,000
778	96	Ford 4630 Tractor	$ 33,000
2716	92	Ajax Trailer	$ 16,800
2717	92	Ajax Trailer	$ 16,800
		POLICE	
804	15	Ford Explorer	$ 40,348
805	15	Ford Explorer	$ 39,562
824	16	Ford Explorer	$ 39,800
826	16	Ford Explorer	$ 39,800
829	10	Ford Escape	$ 35,700
830	13	Ford Taurus	$ 38,702
840	15	Ford Explorer	$ 34,800
851	15	Ford Taurus	$ 29,500
854	14	Ford F-150	$ 34,800
		SEWER	
1467	01	Ingersoll Air Compressor	$ 19,200
		WATER MAINTENANCE	
491	04	Arrow Hammer	$ 117,000
		Total	**$ 1,994,552**

VEHICLE REPLACEMENT
2021-2022

VEH #	YEAR	MAKE & MODEL	ESTIMATED REPLACEMENT COSTS
		BUILDING MAINTENANCE	
737	15	Ford F-250	$ 34,984
		FIRE	
911	08	E-1 Pumper (Evaluate)	$ 782,334
967	15	Ford F-350	$ 40,313
992	16	Ambulance	$ 212,960
		HIGHWAY	
416	03	GMC Sierra	$ 34,780
283	02	Bobcat L873	$ 78,000
1248	98	American Leaf Vacuum	$ 40,260
		INSPECTION	
164	14	Ford Escape	$ 29,700
165	15	Ford Escape	$ 29,700
184	15	Ford Escape	$ 29,700
185	15	Ford Escape	$ 29,700
		PARKS & FORESTRY	
775	01	NH D65C82 Tractor	$ 33,000
779	97	Ford 4630 Tractor	$ 33,000
1763	96	Altec Chipper	$ 43,400
1765	95	Altec Chipper	$ 43,400
1768	01	Bandit Tree Stumper	$ 32,500
		POLICE	
801	16	Ford Explorer	$ 35,920
808	15	Ford Explorer	$ 37,812
809	16	Ford Explorer	$ 35,920
811	15	Ford Explorer	$ 38,450
812	15	Chevy Tahoe	$ 44,040
814	16	Chevy Tahoe	$ 36,620
815	16	Ford Explorer	$ 39,800
841	16	Ford Explorer	$ 32,700
		SEWER	
1481	08	Target Arrow	$ 6,700
1482	89	Target Arrow	$ 6,700
		WATER MAINTENANCE	
1483	08	Target Arrow	$ 6,700
		Total	**$ 1,849,093**

PROJECTS UNDER REVIEW

Projects Under Review are projects that may be deemed as worthy and viable; however they are not included as part of the active 2017-2022 Capital Improvement Plan as additional research or review is ongoing. Projects under review may require additional information, studies or city commission policies to be in place before more accurate timelines and/or funding levels can be identified. It is possible that projects under review may not fall under the city's jurisdiction and will require other agencies to move the project forward; while some projects may not fall within the 2017-2022 timeframe.

	Fire Station #1 and #2 Construction/Strategic Relocation
Project Length: N/A **Estimated City Cost:** $12,000,000	**City Share:** 100% **Funding Source:** public safety fund / sale of stations
Impact on the Operating Budget: Unknown **Description:** Strategically relocate two fire stations, eliminating the three current stations. Position one fire station near Gardenia Avenue & Main Street and the other station near 13 Mile Road & Crooks Road.	

	Downtown Park Parking Structure
Project Length: N/A **Estimated City Cost:** $20,000,000	**City Share:** 100% **Funding Source:** n/a
Impact on the Operating Budget: Unknown **Description:** Construction of a city center public parking garage.	

	Swimming Pool
Project Length: N/A **Estimated City Cost:** $4,000,000	**City Share:** 100% **Funding Source:** parks capital improvement fund / CDBG fund / grants / special millage
Impact on the Operating Budget: Sanitizing, maintenance, and operation cost of $150,000 annually. **Description:** Construction of a city swimming pool.	

CIP #	PROJECT NAME	SUBMITTER RATING	PROJECT COORDINATION	PROJECT TYPE	POTENTIAL FUNDNG SOURCE(S)	ESTIMATED TOTAL PROJECT COST	% CITY SHARE	NON CITY COST	TOTAL CITY COST	PRIOR YRS CITY COST	FUTURE CITY COST (2017-2022)	2016-17 CITY COST	2017-18 CITY COST	2018-19 CITY COST	2019-20 CITY COST	2020-21 CITY COST	2021-22 CITY COST
	Water and Sewer Improvements																
CAP1535	Mohawk Ave. and Sherman Drive (8-inch)	132	Local St. Paving	Replacement	Water & Sewer Fund / Rates	766,000	100%		766,000	383,000	383,000	383,000					
CAP1607	Bassett, Vinton, Greenleaf, Woodsboro, Forestdale Ct., Linwood, Elmhurst, Oliver, Glenwood	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	2,318,000	100%		2,318,000	1,159,000	1,159,000	1,159,000					
CAP1613	Vinsetta, Sycamore, Northwood, Crooks	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,992,000	100%		1,992,000	996,000	996,000	996,000					
CAP1745	14 Mile Rd. 12" Water main Woodward to Tonawanda and Mankato to RR, 12" Water Main	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,138,000	100%		1,138,000	-	1,138,000	569,000	569,000				
CAP1710	Rochester Rd. 12" Water Main, Ferris & Vermont 8" Water Main (Donald-14 Mile)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,236,000	100%		1,236,000	-	1,236,000	618,000	618,000				
CAP1720	Normandy Rd. 12" Water Main (Woodward Ave. to Normandy Ct.)	145	Major St. Paving	Replacement	Water & Sewer Fund / Rates	1,022,000	100%		1,022,000	-	1,022,000	511,000	511,000				
CAP1730	Woodward Ave. 12" Water Main, Judson, Nakota & Rosewold 8" Water Main (Sec. 5&7)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,186,000	100%		1,186,000	-	1,186,000	593,000	593,000				
CAP1735	Dallas universal jt. replace (2017), Blair 8" WM (2018: Lincoln-6th)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	843,000	100%		843,000	-	843,000	406,000	309,000	128,000			
CAP1740	Chester Rd. 12" Water Main, Dukeshire, Yorba Linda, Rockingham, Ravena 8" Water Main (Sec	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,032,000	100%		1,032,000	-	1,032,000	516,000	516,000				
CAP1750	14 Mile Rd., Rochester to Campbell, 8" Water Main (Section 3)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	500,000	100%		500,000	-	500,000	250,000	250,000				
CAP1810	Houstonia Ave. 12" Water Main (Beechwood-Main), Oakdale St. 8" Water Main	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	938,000	100%		938,000	-	938,000		469,000	469,000			
CAP1820	Forest, Clifton, Fern, Ardmore, Virginia 8" Water Main (Sec. 10 & 15)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,090,000	100%		1,090,000	-	1,090,000		545,000	545,000			
CAP1830	Lexington 12" Water Main, Glendale & Alexander 8" Water Main (Sec. 3 & 4)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,138,000	100%		1,138,000	-	1,138,000		569,000	569,000			
CAP1840	Blair, DeVillen, Girard, Parkdale 8" Water Main (Sec. 3 & 10)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,088,000	100%		1,088,000	-	1,088,000		544,000	544,000			
CAP1850	Vermont Ave. (Girard-12 Mile) & Houstonia Ave. (Vermont-Campbell) 8" Water Main	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,136,000	100%		1,136,000	-	1,136,000		568,000	568,000			
CAP1910	Stephenson 12" Water Main (4th-Gardenia), Forest 8" Water Main (Symes-Stephenson)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,614,000	100%		1,614,000	-	1,614,000			807,000	807,000		
CAP1920	11 Mile, Farnum, Helene, Vermont, Longfellow, Rembrandt 8" Water Main (Sec.14, 22 & 23)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,338,000	100%		1,338,000	-	1,338,000			669,000	669,000		
CAP1930	5th St. 12" Water Main (Knowles-Alexander), 7th, 6th Street & Altadena 8" Water Main	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,306,000	100%		1,306,000	-	1,306,000			653,000	653,000		
CAP1935	Harrison 12" Water Main (Main-Batavia), Houstonia 8" Water Main (Northwood-Evergreen)	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,244,000	100%		1,244,000	-	1,244,000			622,000	622,000		
CAP2010	St. Charles, Frederick, S. Dorchester, S. Kenwood - 8" Universal Jt. Replace (Sec.15&23)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,332,000	100%		1,332,000	-	1,332,000				666,000	666,000	
CAP2020	S. Edgeworth & S. Minerva 8" Universal Jt. Replace (Lincoln - 11 Mile)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,582,000	100%		1,582,000	-	1,582,000				791,000	791,000	
CAP2030	Helene, E. Hudson, Yale, Brockton 8" Universal Jt. Replace (Section 23)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,366,000	100%		1,366,000	-	1,366,000				683,000	683,000	
CAP2110	N. Minerva, Mace & S. Edison 8" Universal Jt. Replace (Section 14 & 23)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,096,000	100%		1,096,000	-	1,096,000					548,000	548,000
CAP2120	N. Maple, Huntington & Tufts 8" Universal Jt. Replace (section16, 21, 23)	130	Local St. Paving	Replacement	Water & Sewer Fund / Rates	996,000	100%		996,000	-	996,000					498,000	498,000
CAP2210	Installation of 8" water main to replace existing 6" water main in target area	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	2,860,000	100%		2,860,000	-	2,860,000					1,690,000	1,170,000
CAP2220	Installation of 8" water main to replace existing 6" water main in target area	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	3,197,000	100%		3,197,000	-	3,197,000					1,381,000	1,816,000
CAP2310	Installation of 8" water main to replace existing 6" water main in target area	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,170,000	100%		1,170,000	-	1,170,000						1,170,000
CAP2320	Installation of 8" water main to replace existing 6" water main in target area	145	Local St. Paving	Replacement	Water & Sewer Fund / Rates	1,816,000	100%		1,816,000	-	1,816,000						1,816,000
CAPXX75	Sewer Televising & Root Control (City Wide) (CAP1775 - CAP2275)	126	Local St. Paving	Rehabilitation	Water & Sewer Fund / Rates	3,030,000	100%		3,030,000	-	3,030,000	440,000	462,000	485,000	509,000	534,000	600,000
CAPXX85	Sewer Lining (City Wide) (CAP1785-CAP2285)	126	N/A	Rehabilitation	Water & Sewer Fund / Rates	4,113,000	100%		4,113,000	-	4,113,000	600,000	630,000	662,000	695,000	750,000	776,000
CAP1617	Spot Sewer Repairs (City Wide)	126	Local St. Paving	Rehabilitation	Water & Sewer Fund / Rates	3,036,000	100%		3,036,000	-	3,036,000	441,000	463,000	486,000	510,000	536,000	600,000
CAP1606	2016 Sewer & Water Mn Impr. (Windemere, Vinsetta, Edgewood, Park, Ravena, Durham)	145	Local St. Paving	Rehab/Replace	Water & Sewer Fund / Rates	2,066,000	100%		2,066,000	1,033,000	1,033,000	1,033,000					
CAP1736	Green Infrastructure Feasibility Study	80	N/A	Study	Water & Sewer Fund / Rates	150,000	100%		150,000	10,000	140,000	140,000					
	Water & Sewer Improvements				**Subtotal**	**50,735,000**		**-**	**50,735,000**	**3,571,000**	**47,154,000**	**8,655,000**	**7,616,000**	**7,207,000**	**6,605,000**	**8,077,000**	**8,994,000**
	Sidewalk Improvements									-							
CAP1604	2016 E. Fourth Street Streetscape Improvements (Main Street-Knowles Street DDA)	105	Major St. - CAP1604	Replacement	DDA	1,100,000	100%		1,100,000	550,000	550,000	550,000					
CAPXX02	2016 Sidewalk Improvements Program (section 5,6,32) (CAP1602 - CAP1702)	139	N/A	Replacement	Special Assement Roll	7,026,000	4%	6,745,000	281,000	154,000	127,000	88,000	39,000				
CAPXX01	2016 Concrete Pavement And Prepaid Sidewalk Improv.(City Wide)(CAP1701 - CAP2201)	120	N/A	Replacement	Water & Sewer Funds / Rates	3,543,000	100%		3,543,000	978,000	2,565,000	410,000	435,000	470,000	470,000	380,000	400,000
CAP1611	2016 Main Street Streetscape (10 Mile Road to Lincoln Avenue)	105	Major St. - CAP1610	Replacement	DDA / Special Assessment	825,000	44%	458,000	367,000	45,000	322,000	322,000					
	Sidewalk Improvements				**Subtotal**	**12,494,000**			**5,291,000**	**2,095,000**	**3,564,000**	**1,370,000**	**474,000**	**470,000**	**470,000**	**380,000**	**400,000**
	Local Street Improvements									-	-						
CAPXX05	Millage Concrete Street Repairs (CAP1705 - CAP2205)	133	N/A	Replacement	Local Streets fund	8,203,000	100%		8,203,000	-	8,203,000	1,201,000	1,288,000	1,249,000	1,366,000	2,039,000	1,060,000
CAPXX15	Millage Asphalt Resurfacing (CAP1715 - CAP2215)	133	N/A	Replacement	Local Streets fund	14,303,000	100%		14,303,000	-	14,303,000	2,405,000	2,763,000	2,812,000	2,201,000	1,739,000	2,383,000
CAPXX25	Millage Joint Sealing (CAP1725 - CAP2225)	133	N/A	Replacement	Local Streets fund	459,000	100%		459,000	-	459,000	76,000	91,000	85,000	111,000	54,000	42,000
CAPXX35	Millage Road Remove and Reconstruct (CAP1735 - CAP2035	132	N/A	Replacement	Local Streets fund	3,485,000	100%		3,485,000	-	3,485,000	1,588,000	1,052,000	534,000	311,000		
CAPXX45	Road Work on Water / Sewer Projects (CAP1745 - CAP2245)	145	W & S Projects	Replacement	Local Streets fund	4,647,000	100%		4,647,000	-	4,647,000	1,252,000	626,000	903,000	1,019,000	488,000	359,000
CAPXX55	Special Assessments (CAP1755 - CAP2255)	133	N/A	Replacement	Local Streets fund	4,202,000	63%	1,551,000	2,651,000	-	2,651,000	676,000	395,000	395,000	395,000	395,000	395,000
	Local Street Improvements				**Subtotal**	**35,299,000**		**1,551,000**	**33,748,000**	**10,712,000**	**33,748,000**	**7,198,000**	**6,215,000**	**5,978,000**	**5,403,000**	**4,715,000**	**4,239,000**
	Major Street Improvements									-	-						
CAP1101	Surveying Services	125	N/A	New	Major / Local Streets Funds, W&S Fund	80,000	100%		80,000	40,000	40,000	10,000	10,000	10,000	10,000		
CAP1401	Traffic Signal Upgrade Project	143	N/A	Replacement	Major Streets Fund / Safety Grant	2,475,000	100%		2,475,000	1,239,000	1,236,000	618,000	618,000				
CAP1618	Traffic Signal Survey and Optimization Plan	102	N/A	Study	Major Streets Fund / Grant	400,000	25%	300,000	100,000	50,000	50,000	50,000					
CAP1619	NB Stephenson Highway (Part A) Resurfacing	128	Major St. - CAP1621	Replacement	Major Streets Fund	270,000	100%		270,000	-	270,000	15,000	255,000				
CAP1621	NB Stephenson Highway (Part B) Resurfacing	128	Major St. - CAP1619	Replacement	Major Streets Fund	270,000	100%		270,000	-	270,000	15,000	255,000				
CAP1604	2016 E. Fourth Street Streetscape Improvements (Main Streeet-Knowles Street DDA)	105	Sidewalk - CAP1604	Replacement	Major Streets Fund (17.5%) / DDA (82.5%)	999,000	100%		999,000	480,000	519,000	519,000					
CAP1626	Crooks Road Resurfacing (14 Mile Road-Normandy and Webster-13 Mile Road)	140	N/A	Replacement	Major Streets Fund / City of Clawson	326,000	75%	82,000	244,000	7,000	237,000	237,000					
CAP1635	SA Paving Girard Avenue (Rochester Road to Ardmore Avenue)	112	N/A	New	Major Streets Fund / Special Assessment	291,000	56%	129,000	162,000	81,000	81,000	81,000					
CAP1703	13 Mile Road Asphalt Resurfacing (Woodward Avenue to Crooks Road)	140	N/A	Replacement	Major Streets Fund	495,000	100%		495,000	-	495,000		15,000	480,000			
CAP1610	Main Street Improvements (10 Mile Road to Lincoln Avenue)	128	Sidewalk - CAP1611	Replacement	Major Streets Fund	1,240,000	48%	650,000	590,000	50,000	540,000	540,000					
CAP1622	Ferndale Bike Route Loop Extension (Irving, Harrison, Lafayette, Lincoln)	100	N/A	New	Major Streets Fund	50,000	100%		50,000	10,000	40,000	40,000					
CAP1704	W. 4th Street, Lafayette Avenue & W. Lincoln Avenue Asphalt Resurfacing	140	N/A	Replacement	Major Streets Fund	700,000	100%		700,000	-	700,000		20,000	680,000			
CAP1706	Central Business District Street Resurfacing (6th Street & 7th Street)	140	N/A	Replacement	DDA	271,000	100%		271,000	-	271,000	9,000	262,000				
CAP1707	Gardenia Avenue Reconstruction (Main Street to Gainsborough Avenue)	133	N/A	Replacement	Major Streets Fund	1,201,000	100%		1,201,000	-	1,201,000		35,000	301,000	865,000		
CAP1803	Washington Avenue Resurfacing (Crooks Road to 12 Mile Road)	128	N/A	Replacement	Major Streets Fund	326,000	100%		326,000	25,000	301,000			301,000			
CAPXX65	Annual Major Joint Seal Program (CAP1765 - CAP2265)	128	N/A	Rehabilitation	Major Streets Fund	610,000	100%		610,000	25,000	585,000	45,000	20,000	130,000	130,000	130,000	130,000
CAP1806	Campbell Road (10 Mile Road to 11 Mile Road)	140	N/A	Replacement	Major Streets Fund	1,594,000	37%	1,000,000	594,000	10,000	584,000		225,000	359,000			
CAP1907	I-75 Widening	47	N/A	New	Major Streets Fund	171,976,000	2.5%	167,677,000	4,299,000	-	4,299,000		4,299,000		9,000	21,000	
CAP2006	11 Mile Road Resurfacing (CN RR to Campbell Road)	128	N/A	Rehabilitation	Major Streets Fund	1,252,000	100%		1,252,000	-	1,252,000			20,000	367,000	865,000	
CAP2007	Rochester Road Resurfacing (Main Street to 14 Mile Road)	128	N/A	Rehabilitation	Major Streets Fund / City of Clawson	1,049,000	100%		1,049,000	-	1,049,000			20,000	365,000	664,000	
CAP2106	N. Main Street Resurfacing (11 Mile Road to Crooks Road)	128	N/A	Rehabilitation	Major Streets Fund	850,000	100%		850,000	-	850,000		20,000	261,000	569,000		
CAP2207	Normandy Road (Coolidge Highway to Crooks Road)	128	N/A	Rehabilitation	Major Streets Fund	1,008,000	100%		1,008,000	-	1,008,000			20,000	419,000	569,000	
	Major Street Improvements				**Subtotal**	**187,733,000**		**169,838,000**	**17,895,000**	**2,017,000**	**15,908,000**	**2,179,000**	**6,034,000**	**2,582,000**	**2,734,000**	**2,249,000**	**130,000**
	City-Owned Facilities									-	-						
CAP1102	Parking Meters	76	N/A	Replacement	Parking Fund / Fees	700,000	100%		700,000	300,000	400,000	100,000	50,000	50,000	50,000	50,000	50,000
CAP1506	Lindell Ice Arena Painting	65	N/A	New	Ice Arena Fund / Fees	115,000	100%	-	115,000	-	115,000	-	115,000				
CAP1731	Farmer's Market Stain Floor	98	N/A	New	Farmer's Market Fund / Grants	45,000	100%		45,000	-	45,000	45,000					
CAP1508	Farmer's Market Roll up Doors	81	N/A	New	Farmer's Market Fund / Grants	38,000	100%		38,000	23,000	15,000	15,000					
CAP1902	Sherman Drive Parking Lot Repaving	119	N/A	New	Parking Fund / Fees	125,000	100%		125,000	-	125,000			125,000			
CAP1903	Williams Street Parking Lot Repaving	119	N/A	New	Parking Fund / Fees	55,000	100%		55,000	-	55,000			55,000			
CAP1708	Animal Shelter Access Road Repaving	56	N/A	New	To be Determined	45,000	100%		45,000	-	45,000	45,000					
CAP1709	Second Street Parking Garage Development	100	N/A	New	Parking Fund / Fees	8,000,000	100%		8,000,000	-	8,000,000	8,000,000					
CAP1812	Center Street and Catalpa Drive Repair Parking Lot Wall	101	N/A	Replacement	Parking Fund / Fees	45,000	100%		45,000	-	45,000		45,000				
CAP1813	Police Department Building	79	CAP1814	Replacement	To be Determined	19,200,000	100%		19,200,000		19,200,000		19,200,000				
CAP1814	City Hall Building	79	CAP1813	Replacement	To be Determined	7,000,000	100%		7,000,000		7,000,000		7,000,000				
CAP1908	Downtown Park Development	79	CAP1909	New	To be Determined	4,500,000	100%		4,500,000		4,500,000			4,500,000			
CAP1909	Library Improvements / Splash Pad / Radio Tower Relocation	79	CAP1908	New	To be Determined	3,100,000	100%		3,100,000		3,100,000			3,100,000			
	City-Owned Facilities				**Subtotal**	**42,968,000**		**-**	**42,968,000**	**323,000**	**42,645,000**	**8,205,000**	**26,410,000**	**7,830,000**	**50,000**	**50,000**	**50,000**
	Parks and Grounds									-	-						
CAP1301	Tennis Court Surfacing at Waterworks, Meininger Park, and Dickson Parks	101	N/A	Replacement	Parks Capital Improve. Fund / CDBG Fund	52,000	100%		52,000	35,000	17,000	17,000					
CAP1402	Park Pavilions at Kenwood, Memorial, Exchange and RedRun Parks	87	N/A	New	General Fund (Rental Fees)	300,000	100%		300,000	150,000	150,000	75,000	75,000				
CAP1906	Worden Park Lighting Replacement	93	N/A	Replacement	Parks Capital Improvement Fund / Grant	250,000	100%		250,000	-	250,000				250,000		
CAP1511	Normandy Oaks Park Development	145	N/A	New	Sale of Normandy Oaks Assets	3,000,000	100%		3,000,000	200,000	2,800,000	2,000,000	800,000				
CAP1711	Mark Twain and Elks Parks Parking Lot Pavement	95	N/A	New	Parks Capital Improv. Fund (50%) / CDBG Fund (50%)	130,000	100%		130,000	-	130,000	130,000					
CAP1712	Memorial Park Parking Lot Repaving	101	N/A	Replacement	Parks Capital Improve. Fund / Parking Fund	125,000	100%		125,000	-	125,000	125,000					
CAP1713	Fulton / Kenwood Parks Play Equipment Upgrades	90	N/A	Replacement	Parks Capital Improvement Fund	90,000	100%		90,000	-	90,000	90,000					
CAP1718	Royal Oak Golf Course Improvements	99	N/A	New	Sale of Normandy Oaks Assets	421,000	100%		421,000	-	421,000	421,000					
CAP1719	Wagner Park Ugrade of Play Equipment	90	N/A	Replacement	CDBG Fund	45,000	100%		45,000	-	45,000		45,000				

CIP #	PROJECT NAME	SUBMITTER RATING	PROJECT COORDINATION	PROJECT TYPE	POTENTIAL FUNDNG SOURCE(S)	ESTIMATED TOTAL PROJECT COST	% CITY SHARE	NON CITY COST	TOTAL CITY COST	PRIOR YRS CITY COST	FUTURE CITY COST (2017-2022)	2016-17 CITY COST	2017-18 CITY COST	2018-19 CITY COST	2019-20 CITY COST	2020-21 CITY COST	2021-22 CITY COST
CAP1732	Dondero Park Upgrades	76	N/A	Replacement	CDBG Fund	150,000	100%		150,000	-	150,000	150,000					
CAP1733	Tree Planting Program	91	N/A	New	CDBG Fund	100,000	100%		100,000	-	100,000	100,000					
CAP1734	Barton South Gazebo	80	N/A	New	CDBG Fund	175,000	100%		175,000	-	175,000	175,000					
CAP1808	Westwood & Worden East Parks Play Equipment	97	N/A	Replacement	CDBG Fund	90,000	100%		90,000	-	90,000			90,000			
CAP1809	Whittier Park Parking Lot Paving	102	N/A	New	Parks Cap. Imp Fund / Parking Fund / CDBG	75,000	100%		75,000	-	75,000			75,000			
CAP1904	Upton Park Soccer Field Development	97	N/A	New	Parks Capital Improve. Fund	75,000	100%		75,000	-	75,000			75,000			
CAP1721	Wendland Park Play Equipment	118	N/A	Replacement	Parks Capital Improve. Fund	45,000	100%		45,000	-	45,000	45,000					
CAP1626	Park Signs	76	N/A	Replacement	Parks Capital Improve. Fund	125,000	100%		125,000	17,000	108,000	108,000					
CAP1722	Woodward Avenue Median Signs	83	N/A	New	General Fund / Major Streets	35,000	100%		35,000	-	35,000	35,000					
CAP1609	SMART Park Development	100	N/A	New	Crowdfunding, MEDC	250,000	100%		250,000	150,000	100,000	100,000					
CAP1612	2016 CDBG Worden Park Parking Lot Resurfacing	91	N/A	New	CDBG Fund	132,000	100%		132,000	66,000	66,000	66,000					
	Parks & Grounds				**Subtotal**	**5,665,000**		**-**	**5,665,000**	**618,000**	**5,047,000**	**3,637,000**	**920,000**	**240,000**	**250,000**	**-**	**-**
	Information Technology									-	-						
CAP1103	Computer Replacement Program	42	N/A	Replacement	IT Fund / User Charges	525,000	100%		525,000	75,000	450,000	75,000	75,000	75,000	75,000	75,000	75,000
CAP1104	Office Software and Training Program	37	N/A	Replacement	IT Fund / User Charges	310,000	100%		310,000	22,000	288,000	48,000	48,000	48,000	48,000	48,000	48,000
CAP1105	Server-Network-Cabling Infrastructure	43	N/A	Replacement	IT Fund / User Charges	474,000	100%		474,000	149,000	325,000	75,000	50,000	50,000	50,000	50,000	50,000
CAP1302	GIS Integration	39	CAP1618	New	IT Fund / User Charges	415,000	100%		415,000	40,000	375,000	75,000	60,000	60,000	60,000	60,000	60,000
CAP1403	Mobile Workforce	37	N/A	New	IT Fund / User Charges	120,000	100%		120,000	16,000	104,000	48,000	16,000	8,000	8,000	16,000	8,000
CAP1618	GIS Consulting Services	145	CAP1302	Study	Water & Sewer Fund / Rates	100,000	100%		100,000	50,000	50,000	50,000					
CAP1723	Desktop Virtualization	47	N/A	New	IT Fund / User Charges	400,000	100%		400,000	-	400,000	150,000	50,000	50,000	50,000	50,000	50,000
CAP1724	Fire Department Computers	125	N/A	New	IT Fund / User Charges / Public Safety Fund	36,000	100%		36,000	-	36,000	36,000					
CAP1726	Disaster Recovery Solution	106	N/A	New	IT Fund / User Charges	575,000	100%		575,000	-	575,000	200,000	75,000	75,000	75,000	75,000	75,000
	Information Technology				**Subtotal**	**2,955,000**		**-**	**2,955,000**	**352,000**	**2,603,000**	**757,000**	**374,000**	**366,000**	**366,000**	**374,000**	**366,000**
	Vehicles / Equipment / Large Studies / Other									-	-						
CAP1623	Motor Pool Vehicle Replacement Plan	125	N/A	Replacement	Motor Pool Fund / User Charges	11,077,000	100%		11,077,000	-	11,077,000	2,093,000	1,611,000	1,883,000	1,646,000	1,995,000	1,849,000
CAP1624	Power Stretchers (4)	104	N/A	New	Public Safety Fund	160,000	100%		160,000	80,000	80,000	80,000					
CAP1727	Fire Hoses	135	N/A	Replacement	Public Safety Fund	145,000	100%		145,000	-	145,000	145,000					
CAP1728	Paratech Trench Systems	125	N/A	New	Public Safety Fund	45,000	100%		45,000	-	45,000	45,000					
CAP1729	Lucas Chest Compression System	125	N/A	New	Public Safety Fund	55,000	100%		55,000	-	55,000	55,000					
CAP1737	Recycling Carts (25,000)	116	N/A	Replacement	Solid Waste Fund	1,250,000	100%		1,250,000	-	1,250,000	1,250,000					
	Vehicles / Equipment / Other				**Subtotal**	**12,732,000**		**-**	**12,732,000**	**80,000**	**11,402,000**	**3,668,000**	**1,611,000**	**1,883,000**	**1,646,000**	**1,995,000**	**1,849,000**
	GRAND TOTAL OF ALL CITY PROJECTS					**350,581,000**		**171,389,000**	**171,989,000**	**19,768,000**	**162,071,000**	**35,669,000**	**49,654,000**	**26,556,000**	**17,524,000**	**17,840,000**	**16,028,000**
	Projects Under Review									-	-						
	Fire Station #1 and #2 Construction/Strategic Relocation	N/A	N/A	Replacement	Public Safety Fund / Sale of Stations	12,000,000	100%		12,000,000	-	12,000,000						
	Downtown Park Parking Structure	79	N/A	New		20,000,000	100.0%		20,000,000	-	20,000,000						
	Swimming Pool	84	N/A	New	Parks Cap. Improve./CDBG/Grants/Special Millage	4,000,000	100%		4,000,000	-	4,000,000						
	I-75 Widening	47	N/A	New	Major Streets Fund	841,000	2.5%	820,000	21,000	-							

Peach = New Project
Green = Modified Project

Capital Improvement Project Instructions

A capital improvement plan (CIP) is a multi-year planning instrument used to identify needs and potentially the financing sources for public infrastructure improvements. The purpose of a CIP is to facilitate the orderly planning of infrastructure improvements; to maintain, preserve, and protect the city's existing infrastructure system; and to provide for the acquisition or scheduled replacement of equipment to ensure the efficient delivery of services that the community desires.

Preparation of CIP is done under the authority of the Michigan Planning Enabling Act (PA 33 of 2008). The goal is to use the CIP as a tool to implement the city's various master plans, goals, policies and to assist in the city's financial planning.

The CIP plays an important role by providing the link between planning and budgeting for capital expenditures. The CIP process occurs prior to the budget process as the CIP will be used to develop the capital and operating portions of the ***department requested*** budget.

Approval of the CIP document by the planning commission **does not** signify final legal appropriation of any project contained within the plan. Rather, by approving the CIP the planning commission acknowledges that they agree that the project presents a reasonable interpretation of the upcoming needs/wants for the city, with the projects contained in the first year of the plan ***potentially*** becoming the basis for the city's capital budget. It is important to note that the priority ranking on the "Assessment Form" does not necessarily correspond to funding sequence.

Instructions

- If you have a **NEW** capital *infrastructure* project request is equal to or in excess of $10,000 please complete the following forms:
  - Capital Improvement Plan – Project Application ***Form 1*** (2 pages)
  - Project Application – (cost breakdown) ***Form 3***
  - Capital Improvement Assessment ***Form 4***

- If you have a **NEW** equipment/vehicle/ study/professional Services /Technology/Other Project request is equal to or in excess of $10,000 please complete the following forms:
  - Capital Improvement Plan – Project Application ***Form 1*** (2 pages)
  - Capital Improvement Plan – Equipment/Vehicle/Study/Professional Service/ Technology/ Other Application ***Form 2***
  - Project Application – (cost breakdown)***Form 3***
  - Capital Improvement Assessment ***Form 4***

MODIFICATION FOR EXISTING PROJECT: If you have a modification to a CIP project that was submitted in a prior year, or wish to delete a prior year CIP project - please fill out the forms or highlight the change on the original form and resubmit. Changes such as the needs assessment rating, scope of the project, fiscal year of project or estimated change in cost are considered modifications.

PLEASE SUBMIT COMPLETED FORMS TO FINANCE BY MONDAY, JANUARY 4TH 2016. ANY PROJECTS THAT DEVELOP FROM THE CITY COMMISSION STRATEGIC BUDGET SESSION ARE DUE TO FINANCE BY JANUARY 26, 2016.

Form 1 FY2017 – 2022 Capital Improvement Plan – Project Application

Project Name/Title: _____

Program Area_____

Prepared By: _____Date Prepared: _____

CIP ID #: _____ (to be determined later)

☐ **New Project** ☐ **Modification of Existing Project** ☐ **Deletion of Existing Project**

Project Description: Provide a brief description of project:

Planning Context: Is the project part of an Adopted Program, Policy or Plan?

☐ Yes (Identify Program/policy/plan): _____

☐ No

List the adopted program or policy, and how this project directly or indirectly applies.

Planning Context: Is the City legally obligated to perform this project?

☐ Yes - Directly
☐ Yes -Indirectly
☐ No

Please describe City's legal requirement:

Schedule: Estimated project beginning and ending dates. Projects may take several years to complete, so please fill out the multi-year schedule (Form 3). If applicable, be sure to include any work performed in prior years, including studies or other planning by filling in the "cost before FY15/16" column.

Coordination: Please identify if this project is dependent upon or should coordinate with one or more other CIP projects and please describe the relationship:

Project Priority: Low, Medium, High

_____ Priority within Program Area

_____ Priority Citywide

Form 1 FY2017 – 2022 Capital Improvement Plan – Project Application (page 2)

Prior Approval: Is this project included the FY15/16 Adopted or any prior years' budget? Has this project already been approved by any Board or Commission? (Please check appropriate box(es) below)

☐ Yes ☐ No

☐ City Commission ☐ Planning Commission ☐ Other _____

☐ 15/16 Budget ☐ Prior Year Budget: _____

Total Estimated Project Cost: In present value (Amount shown here should agree with total on Form 3)

$_____

List all funding options available for this project

Recommended funding option(s) to be used (i.e.: Tax Revenue, Fee Revenue, and Bond Issuance, fund balance, etc…)

Basis of the Cost Estimate: Please check the following:

☐ Cost of comparable facility / equipment ☐ Cost estimate from engineer/architect

☐ Other _____ ☐ Ballpark "guesstimate"

Budget Impact (Costs): Any and all future operating costs this project will cause. Wages, benefits, utilities, maintenance; supplies etc… (Should agree with Form 3 worksheet)

Budget Impact (Savings): Any and all future operating savings this project will cause. Wages, benefits, utilities, maintenance, supplies etc… (Should agree with Form 3 worksheet)

If Cost Impact Exceeds Savings Impact: Please explain in detail the increased level of services that will be provided with the implementation of this project (or explain justification for project).

Form 2
FY2017 – 2022 Capital Improvement Plan – Equipment/Vehicle/Study/Technology/Other Application

Project Title: _____ Date Form Prepared: _____

Department: _____ CIP #: _____ (to be determined later)

Forms of Acquisition: Please check one of the following

☐ Purchase ☐ Rental / Lease ☐ Other

Number of Units Requested: _____

Estimated Service Life (Years): _____

Below costs should tie with Form 3

Direct Costs:	**Per Unit ($):**	**Total Cost ($):**
Purchase Price or Annual Rent / Lease	_____	_____
Plus: Installation or Related Charges	_____	_____
Plus: Annual Operational Costs	_____	_____
Less: Annual Operational Savings	_____	_____
Less: Trade-in, Salvage Value, Discount	_____	_____
Net Purchase Cost / Annual Rent	_____	_____

Are you requesting this project to be on a replacement schedule? (example: Fire Dept. needs to purchase 40 turn-out gear/suits every 7 years)

☐ YES ☐ NO

If yes, please describe the cycle

Form 3 - Project Application Financial Detail

	Project Title _____							CIP ID #: _____			
Project Construction	**Cost Before 2015/16**	**Budget 2015/16**	**Estimated 2016/17**	**Estimated 2017/18**	**Estimated 2018/19**	**Estimated 2019/20**	**Estimated 2020/21**	**Estimated 2021/22**	**Total Project Cost**	**% City Share**	**Total City Cost**
Preliminary Engneering									0		0
Right-of-Way Services									0		0
Land Acquisition (Row)									0		0
Geotechnical									0		0
Construction									0		0
Construction Engneering									0		0
Other Construction Costs									0		0
Equipment / Vehical Purchase									0		0
Other Cost or Purchase									0		0
Total Project Construction	0	0	0	0	0	0	0	0	0		0
Future Net Operating Costs / Savings*	**Cost Before 2015/16**	**Budget 2015/16**	**Estimated 2016/17**	**Estimated 2017/18**	**Estimated 2018/19**	**Estimated 2019/20**	**Estimated 2020/21**	**Estimated 2021/22**	**Total Project Cost**	**% City Share**	**Total City Cost**
Estimated Staffing Impact									0		0
Estimated Operational Impact									0		0
Estimated Maintenance Impact									0		0
Estimated Other Impact									0		0
Total Operating Impact	0	0	0	0	0	0	0	0	0		0
**please enter savings as a negative*											
Grand Total Project	0	0	0	0	0	0	0	0	0		0
Coordinates With Projects:											
Report Operating Impact beyond FY2021/22 Below:											

FORM 4 FY2016/17-2021/22 CAPTIAL IMPROVEMENT NEEDS ASSESSMENT

Project Name/Title:
CIP # (to be determined later)
Department:
Total Score:
Submitter's Name

	Score Range	Rater Score	Weight	Rate X Weight
1 Projects contribution to health, safety, and welfare				
Eliminates a known hazard (accident history)	**5**		**5**	
Eliminates a potential hazard	**4**			
Materially contributes	**3**			
Minimally contributes	**2**			
No Impact	**1**			
2 Project is needed to comply with Local, State or Federal Law				
Yes ☐ Indirectly ☐ Directly	**5**		**5**	
No	**0**			
3 Project conforms to Adopted Program, Policy or Plan				
Project is consistent with adopted City Council policy or plan	**5**		**4**	
Project is consistent with Administrative policy	**3**			
No policy / plan in place	**0**			
4 Project remedies an existing or projected deficiency				
Completely Remedy Problem	**5**		**3**	
Partially Remedy Problem	**3**			
No	**0**			
5 Contributes to long-term needs of community / (Projects useful life)				
More than 30 years	**5**			
21 - 30 years	**4**		**2**	
11 - 20 years	**3**			
4 -10 years	**2**			
3 years or less	**1**			
6 Impact Measures – Net Present Value & Internal Rate of Return (# of years to Recoup Costs)				
High / 0 – 3 years	**5**		**3**	
Medium-High / 4 – 7 years	**4**			
Medium / 8 – 11 years	**3**			
Medium-Low / 12 – 15 years	**2**			
Low / 16 – 20 years				
Never	**0**			
7 Service area of project				
Regional	**5**		**2**	
City-Wide	**4**			
Several neighborhoods	**3**			
Less than several neighborhoods	**1**			
8 Department priority				
High	**5**		**2**	
Medium	**3**			
Low	**1**			
9 Project delivers level of service desired by community				
High	**5**		**3**	
Medium	**3**			
Low	**1**			

Note: Assessment form is not intended to be scientific

M E M O R A N D U M

Community Development Department

City of Royal Oak, Michigan

Meeting Date: April 12, 2016
211 Williams St. / P.O. Box 64
Royal Oak, MI 48068-0064
Phone: (248) 246-3280
Fax: (248) 246-3005
romi.gov

DATE: April 1, 2016

TO: Planning Commission

FROM: Planning Division

SUBJECT: Administrative Site Plan Approvals

Below is a list of site plans that were approved administratively by the Planning Division during the first quarter of 2016.

Date	Address	Business	Description
January 4, 2016	29624 Woodward Ave.	n/a	Interior renovations to medical office.
January 8, 2016	30606 Woodward Ave.	Cornerstone Community Financial Credit Union	Interior and exterior renovations to existing financial institution.
January 11, 2016	1638 E. Lincoln Ave.	Complete Spine & Joint Center	Revised site plan (incl. floor plan and façade elevations) to convert carry-out restaurant into medical office.
January 11, 20116	718 W. Fourth St.	Cedarwood Assisted Living	Interior and exterior renovations to convert convalescent center into 33-unit assisted-living facility.
January 14, 2016	306 S. Washington Ave.	T Mobile	Replacement of antennae for rooftop wireless communication facility at Washington Square building.
January 14, 2016	931 N. Main St.	Bread (Crispelli's)	Corrected site plan for renovating veterinary clinic into bakery with outdoor café service.
January 19, 2016	617 S. Washington Ave.	Electric Soul Yoga	Interior renovations to ground floor for yoga studio.
January 21, 2016	323 S. Main St.	Project Pie	Revisions to previously-approved floor plan and façade elevations for new restaurant.
January 25, 2016	400 W. Fourth St.	Dassault Systems / 3DExcit	Interior renovations for fourth floor of office building.
January 25, 2016	3601 W. 13 Mile Rd.	Beaumont Health System	Interior renovations and new entrance canopy for Rose Cancer Center.
January 28, 2016	5150 Coolidge Hwy.	Meijer	Interior renovations to convenience store at automobile filling station.
January 28, 2016	5150 Coolidge Hwy.	Meijer	Interior and exterior renovations to large-scale retail store – new entrance canopies, modified floor plan, etc.

Date	Address	Business	Description
February 2, 2016	332 E. Lincoln Ave.	ROAK Brewery	Conversion of warehouse space into bottling line for microbrewery.
February 2, 2016	200 S. Stephenson Hwy.	Belle Tire	Interior renovations to showroom of automobile service center.
February 2, 2016	450 W. Fourth St. – 3rd floor	n/a	Interior renovations to west wing office space on third floor.
February 5, 2016	30274 Woodward Ave.	UBreakiFix	Interior renovations to vacant unit of shopping center for electronics repair shop.
February 9, 2016	514-518 E. Fourth St.	Dark Spark Media	Interior renovations to office space.
February 16, 2016	450 W. Fourth St. – 3rd floor	n/a	Interior renovations to west wing office space on third floor.
February 16, 2016	421 S. Williams St.	AT&T	Equipment replacement in basement.
February 23, 2016	600 S. Washington Ave.	Five 15 Media Mojo & More	Interior renovations for relocation of café and book store into former convenience store.
February 26, 2016	386 N. Main St.	Hamlin Corner / Strada	Corrections to errors in construction of mezzanine that violated Michigan Building Code.
February 29, 2016	4301 W. 13 Mile Rd.	Art Accents Picture Framing	Interior and exterior renovations to convert hair/nail salon into retail store.
March 3, 2016	29732 Woodward Ave.	Bra-vo Intimates	Interior renovations to retail store.
March 14, 2016	1221 E. Lincoln Ave.	Council Thrift Shop	Interior renovations to consignment clothier.
March 14, 2016	30371 Woodward Ave.	Bad Boy Gym	Flooring repairs.
March 14, 2016	4905 Crooks Rd.	Tower Court Condominiums	Installation and repairs to fence and railing for swimming pool.
March 18, 2016	2725 Samoset Rd.	AT&T	Replacement and upgrade of existing wireless communication equipment on water tower.
March 18, 2016	4420 Springer Ave.	Beverly Hills Apts.	Façade renovations.
March 21, 2016	211 Williams St.	AT&T	Replacement and upgrade of existing wireless communication equipment on tower behind Police Dept. building.

Date	Address	Business	Description
March 21, 2016	28834 Woodward Ave.	Lisa's Gift Wrapping	Conversion of retail floor space into office space.
March 22, 2016	751 Hendrie Blvd.	Common Ground Sanctuary	Replacement of barrier-free access ramp.
March 22, 2016	1230 Diamond Ct.	33 on Harrison	Construction of one building (#4) with 6 multiple-family dwelling units and detached garages.
March 22, 2016	3601 W. 13 Mile Rd.	Beaumont Health System	Interior renovations to surgical area of East Tower second floor.
March 24, 2016	4318 Rochester Rd.	Nicki's Nail Salon	Interior and HVAC system renovations to install air filter.

* Variances from the Zoning Board of Appeals were required.
# Approval of a plan of operation and/or license agreement by the City Commission was required.