



**Special City Council Meeting
6:00 PM, MONDAY, NOVEMBER 2, 2015
Conference Room
Farmington City Hall
23600 Liberty St
Farmington, MI 48335**

SPECIAL MEETING AGENDA

1. CALL TO ORDER

Roll Call

2. APPROVAL OF REGULAR AGENDA

3. PUBLIC COMMENT

4. BOARDS AND COMMISSIONS

A. Consideration to Approve the Historical Commission Members' Resignations

5. PUBLIC SERVICES

A. Consideration to Accept Bids for Twin Valley Pump Station Improvements

6. ORCHARD LAKE - TEN MILE PLACEPLANS PROJECT

A. Consideration to Accept the Orchard Lake-Ten Mile Roads PlacePlans Project

7. REDEVELOPMENT READY COMMUNITY

A. Consideration to Adopt Redevelopment Ready Community Resolution

8. PUD AMENDMENTS

A. Grand River-Halsted Plaza PUD Amendment

B. Riverwalk of Farmington PUD Amendment

9. ECONOMIC AND COMMUNITY DEVELOPMENT PROJECT STATUS

1. Economic and Community Development Project Status Update

10. RECREATION MASTER PLAN UPDATE

A. Recreation Master Plan Committee Appointments

11. COUNCIL COMMENT

12. CLOSED SESSION - LAND ACQUISITION

13. ADJOURNMENT

Motion To Adjourn

**Farmington City Council
Staff Report**

Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2048)**

Submitted by: David Murphy, City Manager

Description: Consideration to Approve the Historical Commission Members' Resignations

Requested Action:

Move to accept the resignations of Jena Stacey, Marilyn Weimar, Maria Taylor and Jim Atkinson from the Farmington Historical Commission.

Background:

<<Enter Background or None>>

Agenda Review

Review:

David M. Murphy Completed 10/28/2015 1:39 PM

City Manager Completed 10/28/2015 1:39 PM

City Council Pending 11/02/2015 6:00 PM

From: Jena <jlstacey@shoglobal.net>
To: Bill Galvin <bgalvin@farmgov.com>, David Murphy <DMurphy@farmgov.com>
CC: Marilyn Weimar <marilyn33320@att.net>, Maria Taylor <2highlandsolcs@gmail...>
Date: 10/22/2015 10:34 PM
Subject: Resignation

Dear Bill and David,

Please accept my formal resignation from the Historical Commission. I no longer believe that I can effectively contribute to the city of Farmington through this appointment. I believe that I can better serve my community in other capacities.

Regards,

Jena Stacey

Sent from my iPhone

David Murphy - Resignation

From: marilyn weimar <marilyn33620@att.net>
To: Bill Galvin <bgalvin@farmgov.com>, "DMurphy@farmgov.com" <DMurphy@farmgov.com>
Date: 10/22/2015 10:54 PM
Subject: Resignation
Cc: Jena Stacey <jlstacey@sbcglobal.net>, Janie Gundlach <janiegundlach@gmail.com>

To Bill Galvin and David Murphy,

Please accept my resignation from the Farmington Historical Commission.

Sincerely,

Marilyn Weimar
 33620 Hillcrest
 Farmington, Michigan 48335

David Murphy - Resignation

From: Maria Taylor <2highlandsales@gmail.com>
To: Marilyn Weimar <marilyn.33620@att.net>, Jenna Stacey <jlstacey@sbcglobal.net>
Date: 10/22/2015 11:09 PM
Subject: Resignation

To Bill Galvin, David Murphy, and the members of the Farmington Historical Commission:

Please accept my resignation from the Historical Commission. I remain appreciative of the opportunity to participate with the group; however, I feel that I am no longer able to simultaneously serve both the City of Farmington and the cause of historic preservation in our town.

Maria Taylor

--

Maria Taylor
Assistant Editor, Michigan History Magazine
Publicity Coordinator, Governor Warner Mansion

2highlandsales@gmail.com

(248) 996-5871

David Murphy - FW: Resignation from Farmington Historical Commission

From: "Atkinson, Jim" <Jim.Atkinson@CookMedical.com>
To: "Jmurphy@farmgov.com" <jmurphy@farmgov.com>
Date: 10/23/2015 8:08 AM
Subject: FW: Resignation from Farmington Historical Commission

From: Atkinson, Jim
Sent: Friday, October 23, 2015 8:02 AM
To: 'Bgalvin@farmgov.com'; 'dmurphy@farmgov.org'
Cc: Janie Gundlach (rgundlach@sbcglobal.net); Jena Stacey (jlstacey@sbcglobal.net); sbcmath@sbcglobal.net; keithgrattan@yahoo.com; Maria Taylor (2highlandscles@gmail.com); Laura Myers (LMyers@locfederal.com); marilyn weinar (marilyn33620@att.net); Atkinson, Jim
Subject: Resignation from Farmington Historical Commission

Effectively immediately, I am resigning from this City Commission
 Jim Atkinson

**Farmington City Council
Staff Report**
Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2049)**
Submitted by: Chuck Eudy,

Description: Consideration to Accept Bids for Twin Valley Pump Station Improvements

Requested Action:

Motion to accept bids, and award bid to Bidigare Contractors Inc. located 7820 Chubb Road, Northville, MI. 48167 in the amount of \$739,869.00 for the Twin Valley Pump Station Improvements, and the motion to include a \$70,000.00 contingency budget (approximately 10%) for a total construction budget of \$809,856.00.

Background:

In conjunction with the city's consulting engineers Orchard Hiltz & McCliment (OHM), bids were solicited for the Twin Valley Pump Station Improvements.

OHM has conducted sewer flow studies at the current Twin Valley Pump Station. The existing Pump Station will not allow for the anticipated growth of the community in the area it services. OHM has recommended to replace the existing station with a larger Pump Station that will allow growth in its service district.

The bids were opened on Wednesday, October 28, 2015. A total of five (5) bids were received, they are listed below. OHM has reviewed the bid tabulations along with contractor work history and references. A recommendation to award will be presented at the November 2, 2015 meeting. If approved, work would begin late fall/early winter of 2015.

Bidigare Contractors	\$739,869.00
Z Contractors	\$811,223.00
Lawrence M. Clark, Inc.	\$808,627.00
F & V Construction	\$1,172,127.00
RCL Construction	\$925,950.00

Agenda Review
Review:
Chuck Eudy Pending
City Manager Pending
City Council Pending 11/02/2015 6:00 PM



ARCHITECTS. ENGINEERS. PLANNERS.

October 29, 2015

David Murphy
City Manager
City of Farmington
23600 Liberty Street
Farmington, MI 48335

RE: Twin Valley Pump Station Improvements
Recommendation of Award
OHM Job No. 0111-13-0030

Dear Mr. Murphy:

Sealed bids for the Twin Valley Pump Station Improvements were received and publicly read aloud at 1:00 p.m. on Wednesday, October 28, 2015 at the City of Farmington offices. Nine (9) prospective bidders obtained plans and specifications for the project. Proposals were received from five (5) bidders. Bids with as-checked results ranged from \$739,869.00 to \$1,179,806.00. The engineer's estimate for the project was approximately \$830,000.

We evaluated all five bidders, having familiarity with all five. In reviewing the bids, all information, including bond surety, statement of qualifications, and subcontractors listing, was provided. The lowest bid was received by Bidigare Contractors, Inc., located at 7820 Chubb Road, Northville, MI 48170 in the amount of \$739,869.00

It is felt that Bidigare Contractors, Inc. and their subcontractors are capable of performing the work based on past experience, referenced projects, and information provided with the statement of qualifications in the bid package. They have worked for the City in the past and performed well. **Based on the submitted information, it is recommended that the City of Farmington Twin Valley Pumps Station Improvements contract be awarded to Bidigare Contractors, Inc. of Northville, MI in the amount of \$739,869.00 and the motion include a \$70,000.00 contingency budget (approximately 10%) for a total construction budget of \$809,856.00.**

Should there be any questions, please contact this office at (734) 522-6711.

Sincerely,
OHM Advisors

A handwritten signature in dark ink, appearing to read "Matthew D. Parks", is written over a horizontal line.

Matthew D. Parks, P.E.

cc: Chuck Eudy, Public Works Superintendent
Jon Kramer, P.E., OHM Advisors
File

P:\0101_0125\0111130031_Twin_Valley_Metering_CONST\Correspondance\Recommendation of Award_10-30-15.docx

Item No.	Description	Estimated Quantity	Phone: 248-735-1113		Phone: 734-481-1565		Phone: 586-625-8899		Phone: 989-687-7319		Phone: 616-977-4400	
			Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1)	Mobilization, Max. 5%	1 LS	\$30,000.00	\$30,000.00	\$35,000.00	\$35,000.00	\$37,000.00	\$37,000.00	\$45,000.00	\$45,000.00	\$55,000.00	\$55,000.00
2)	Traffic Control	1 LS	\$4,000.00	\$4,000.00	\$5,000.00	\$5,000.00	\$2,500.00	\$2,500.00	\$5,500.00	\$5,500.00	\$10,625.00	\$10,625.00
3)	Erosion Sediment Control	1 LS	\$2,000.00	\$2,000.00	\$6,000.00	\$6,000.00	\$1,250.00	\$1,250.00	\$1,800.00	\$1,800.00	\$3,125.00	\$3,125.00
4)	Pulverize Drive	1260 SYD	\$4.00	\$5,040.00	\$9.00	\$11,340.00	\$2.50	\$3,150.00	\$3.45	\$4,347.00	\$7.00	\$8,820.00
5)	Sidewalk Removal	35 SYD	\$20.00	\$700.00	\$15.00	\$525.00	\$30.00	\$1,050.00	\$29.00	\$1,015.00	\$100.00	\$3,500.00
6)	Tree Removal	7 EA	\$700.00	\$4,900.00	\$900.00	\$6,300.00	\$300.00	\$2,100.00	\$690.00	\$4,830.00	\$800.00	\$5,600.00
7)	Clearing and Grubbing	1 LS	\$2,000.00	\$2,000.00	\$16,000.00	\$16,000.00	\$5,000.00	\$5,000.00	\$4,000.00	\$4,000.00	\$10,000.00	\$10,000.00
8)	Metal Object Removal	1 LS	\$5,000.00	\$5,000.00	\$9,000.00	\$9,000.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$900.00	\$900.00
9)	Abandon 4" Force Main with Flowable Fill	160 FT	\$20.00	\$3,200.00	\$20.00	\$3,200.00	\$11.00	\$1,760.00	\$50.00	\$8,000.00	\$26.00	\$4,160.00
10)	Bulkhead 4" Force Main	3 EA	\$2,500.00	\$7,500.00	\$600.00	\$1,800.00	\$150.00	\$450.00	\$3,800.00	\$11,400.00	\$1,800.00	\$5,400.00
11)	Electrical Demolition	1 LS	\$10,000.00	\$10,000.00	\$6,000.00	\$6,000.00	\$1,000.00	\$1,000.00	\$1,800.00	\$1,800.00	\$19,800.00	\$19,800.00
12)	Station Grading, Access Drive	7 STA	\$1,000.00	\$7,000.00	\$1,200.00	\$8,400.00	\$1,500.00	\$10,500.00	\$2,900.00	\$20,300.00	\$900.00	\$6,300.00
13)	Station Grading, Site	1 LS	\$10,000.00	\$10,000.00	\$20,000.00	\$20,000.00	\$9,000.00	\$9,000.00	\$9,900.00	\$9,900.00	\$6,000.00	\$6,000.00
14)	1x3 Crushed Stone	1260 SYD	\$4.00	\$5,040.00	\$21.00	\$26,460.00	\$2.00	\$2,520.00	\$29.00	\$36,540.00	\$7.00	\$8,820.00
15)	8" Thick Concrete Apron	60 SYD	\$100.00	\$6,000.00	\$100.00	\$6,000.00	\$65.00	\$3,900.00	\$100.00	\$6,000.00	\$200.00	\$12,000.00
16)	4" Concrete Sidewalk	307 SFT	\$8.00	\$2,456.00	\$12.00	\$3,684.00	\$4.00	\$1,228.00	\$9.00	\$2,763.00	\$11.00	\$3,377.00
17)	6" Concrete Sidewalk	187 SFT	\$9.00	\$1,683.00	\$14.00	\$2,618.00	\$6.00	\$1,122.00	\$10.00	\$1,870.00	\$15.00	\$2,805.00
18)	6" IPS DR11 HDPE FM, Directional Drill	147 FT	\$175.00	\$25,725.00	\$150.00	\$22,050.00	\$169.00	\$24,843.00	\$308.00	\$45,276.00	\$200.00	\$29,400.00
19)	6" IPS DR11 HDPE FM, Open Cut	35 FT	\$175.00	\$6,125.00	\$100.00	\$3,500.00	\$175.00	\$6,125.00	\$140.00	\$4,900.00	\$190.00	\$6,650.00
20)	12" PVC Sanitary Sewer	55 FT	\$300.00	\$16,500.00	\$200.00	\$11,000.00	\$195.00	\$10,725.00	\$300.00	\$16,500.00	\$175.00	\$9,625.00
21)	Standard 4' Manhole	1 EA	\$5,000.00	\$5,000.00	\$6,000.00	\$6,000.00	\$10,000.00	\$10,000.00	\$6,600.00	\$6,600.00	\$9,500.00	\$9,500.00
22)	Manhole Bench Repair	2 EA	\$5,000.00	\$10,000.00	\$3,000.00	\$6,000.00	\$2,000.00	\$4,000.00	\$5,800.00	\$11,600.00	\$7,750.00	\$15,500.00
23)	Bypass Pumping	1 LS	\$5,000.00	\$5,000.00	\$30,000.00	\$30,000.00	\$15,000.00	\$15,000.00	\$60,000.00	\$60,000.00	\$36,000.00	\$36,000.00
24)	Topsoil, Seed and Mulch	250 SYD	\$15.00	\$3,750.00	\$6.00	\$1,500.00	\$7.00	\$1,750.00	\$8.00	\$2,000.00	\$20.00	\$5,000.00
25)	Mulch Blanket	250 SYD	\$5.00	\$1,250.00	\$5.00	\$1,250.00	\$7.00	\$1,750.00	\$7.00	\$1,750.00	\$10.00	\$2,500.00
26)	Pump Station	1 LS	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$542,000.00	\$542,000.00	\$500,759.00	\$500,759.00	\$789,399.00	\$789,399.00
27)	Allowance No. 1 – DTE Allowance	1 LS	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
28)	Allowance No. 2 – SCADA Allowance	1 LS	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00
TOTAL BID AMOUNT				\$739,869.00		\$808,627.00		\$811,223.00		\$925,950.00		\$1,179,806.00

CORRECTIONS

- ¹ Bidder's multiplication error was corrected.
- ² Bidder's summation error was corrected.

**Farmington City Council
Staff Report**

Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2046)**

Submitted by: Kevin Christiansen, Economic Community Development Director

Description: Consideration to Accept the Orchard Lake-Ten Mile Roads PlacePlans Project

Requested Action:

Move to accept the Orchard Lake-Ten Mile Roads PlacePlans Project as part of the City of Farmington Master Plan and Comprehensive Planning Program.

Background:

At the June 17, 2015 Orchard Lake and Ten Mile Roads PlacePlans Meeting, the final report and design proposal for the future redevelopment and enhancement of the Orchard Lake/Ten Mile Roads intersection area was presented to the cities of Farmington and Farmington Hills. The purpose of this item is to review the Plan and to accept it as part of the City of Farmington Master Plan and Comprehensive Planning Program. The Planning Commission reviewed and accepted the report at its October 12th meeting.

Attachment

Agenda Review

Review:

Kevin Christiansen Pending
City Manager Pending
City Council Pending 11/02/2015 6:00 PM

Orchard Lake Road and Ten Mile Intersection Redesign Analysis Report and Design Proposal for PlacePlans

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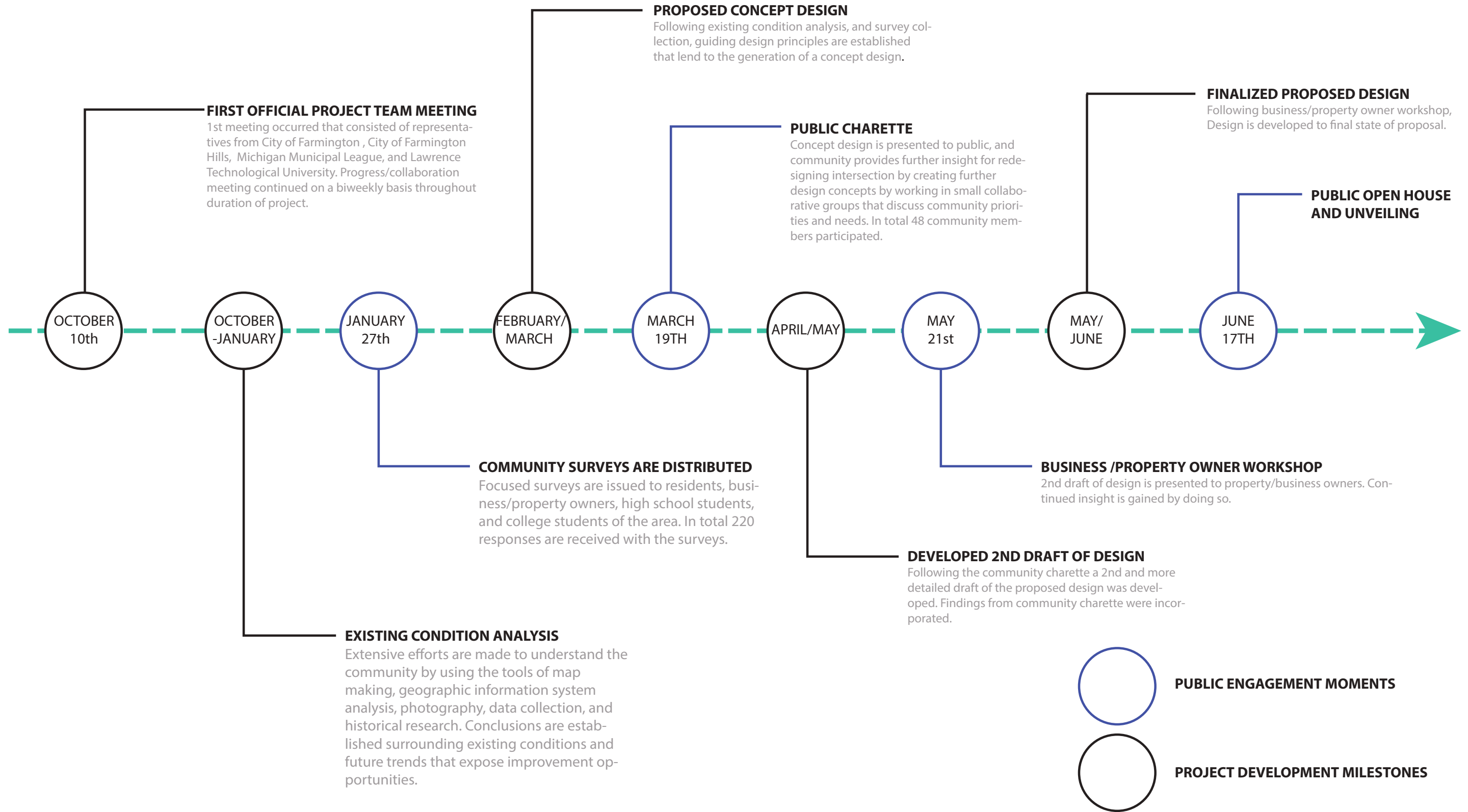
Project Introduction

National data and anecdotal evidence in Michigan is showing that people of all ages are looking for a style of living that includes quality physical design, walkability, transit options, arts and culture, diversity and a healthy natural environment. This style of living is often summed up as “quality of place.” People, young and old alike, are choosing place first when deciding where to live and work. Now, more than ever, strategically investing in communities that are committed to creating quality places is a critical element of any economic development policy, and is central to the long-term success of Michigan.

PlacePlans is a statewide program sponsored by the Michigan State Housing Development Authority, Michigan State University and the Michigan Municipal League (MML) and supports local projects focused on creating a community-driven vision for selected neighborhoods.

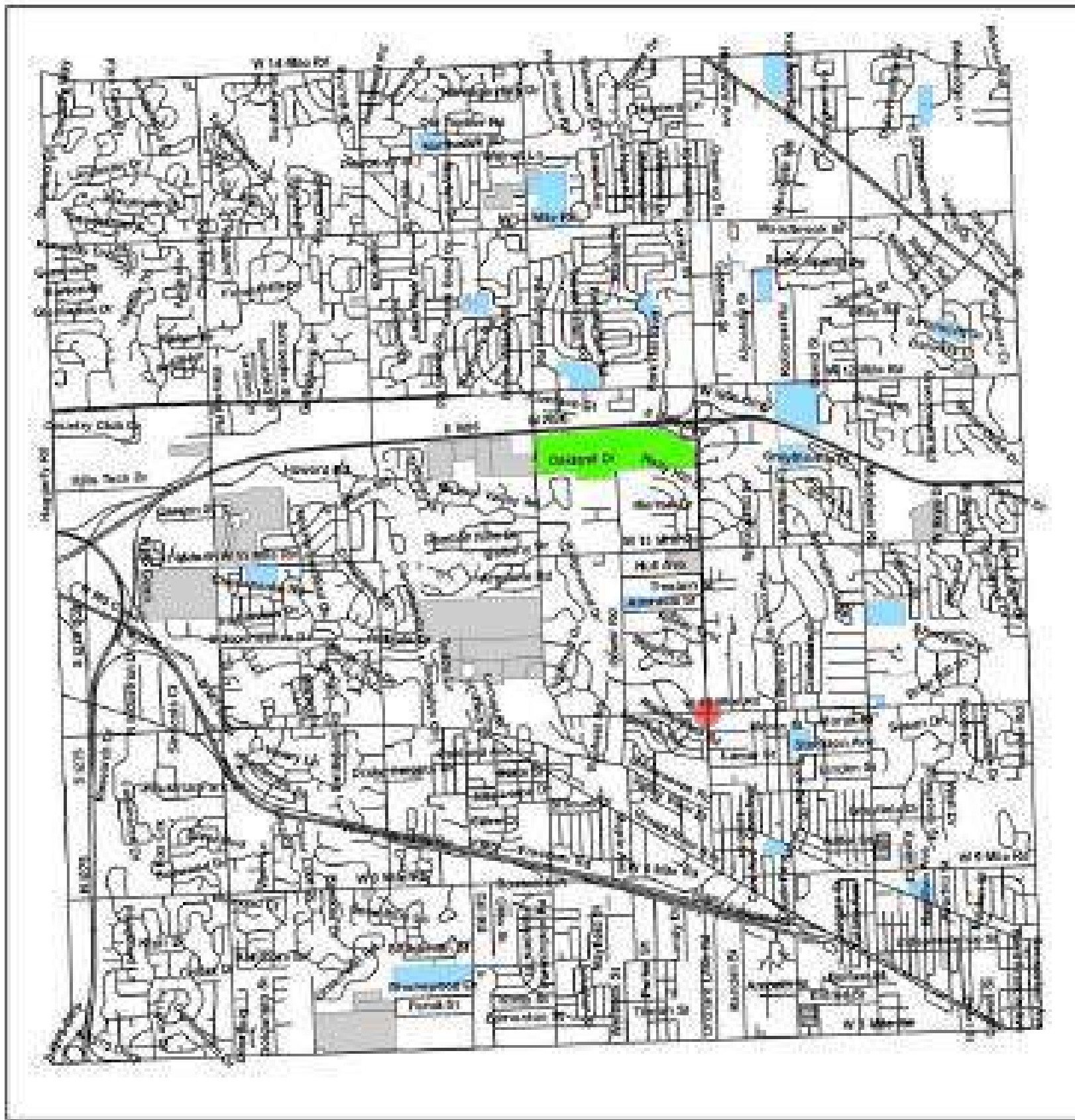
The Cities of Farmington Hills and Farmington submitted a PlacePlans application for the Orchard Lake and Ten Mile Road intersection. The Cities’ project was selected and have been working in partnership with MML, Lawrence Technology University’s Master of Urban Design program faculty and graduate students, and the Detroit Studio Community Outreach Program on this study.

This report is a documented account of both the research and design efforts that have been made in reimagining a transformation of the Ten Mile and Orchard Lake Road intersection into a ‘sense of place’.



PROJECT TIME LINE

LAND MANAGEMENT ANALYSIS



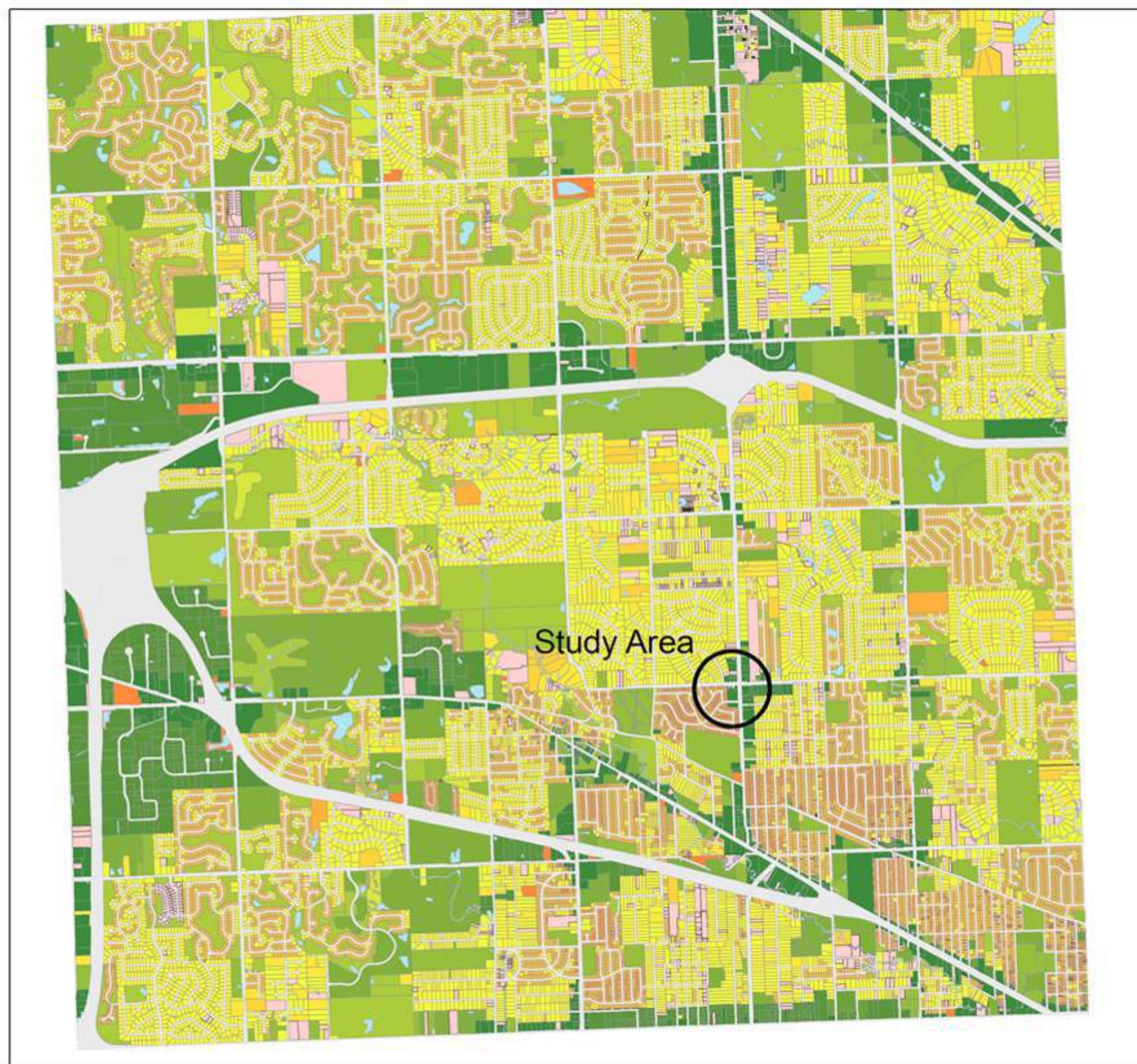
PUBLIC/GOVERNMENT LAND OWNERSHIP

- STUDY INTERSECTION
- OWNER_NAME1
 - OAKLAND COUNTY COMMUNITY COLLEGE
 - FARMINGTON PUBLIC SCHOOLS
 - CITY OF FARMINGTON HILLS



REGIONAL LAND OWNERSHIP

Of particular note is the quantity of land owned and operated by local educational institutes.



Legend

OCLandUse2013

LANDUSE

- Commercial/Office
- Industrial
- Mobile Home Park
- Multiple Family
- Public/Institutional
- Recreation/Conservation
- Road Right-of-Way
- S.F. More than one unit per parcel
- Single Family, 1 to 2.5 Acres
- Single Family, 14,000 to 43,559 sq. ft.
- Single Family, 2.5 to 5 acres
- Single Family, 5 to 10 acres
- Single Family, 8,000 to 13,999 sq. ft.
- Single Family, Greater than 10 acres
- Single Family, Less than 8,000 sq. ft.
- Transportation/Utility/Communication
- Vacant
- Water

REGIONAL LAND USE

Investigating regional land use connections, it becomes apparent the study intersection is not a primary commercial hub of the city. If anything it is a heavy residential area, with some commercial use in the neighborhood.



OCLandUse2013

LANDUSE

-  Commercial/Office
-  Industrial
-  Mobile Home Park
-  Multiple Family
-  Public/Institutional
-  Recreation/Conservation
-  Road Right-of-Way
-  S.F. More than one unit per parcel
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-  Single Family, 5 to 10 acres
-  Single Family, 8,000 to 13,999 sq. ft.
-  Single Family, Greater than 10 acres
-  Single Family, Less than 8,000 sq. ft.
-  Transportation/Utility/Communication
-  Vacant
-  Water



LOCAL LAND USE

The focus area intersection is surrounded by residential land use. It is essential that proposed urban design plans strengthen interactions with these areas. Infill of vacant lots adjacent to 10 Mile and Orchard Lake Road could support proposal development of intersection.

BUILDING FABRIC ANALYSIS

Urban design efforts should integrate with the preexisting built context. For this reason analysis was conducted that resulted in observing typical building patterns for the area.



FIGURE-GROUND MAP

It appears majority of land property parcels express a relatively low land use density.



BUILDING HEIGHT MAPPING

No buildings within focus area exceed twenty six feet. Building lining streets fluctuate fall between eleven and twenty four feet in height.



BUILDING STORY MAPPING

Nearly all buildings in focus area are only one story.

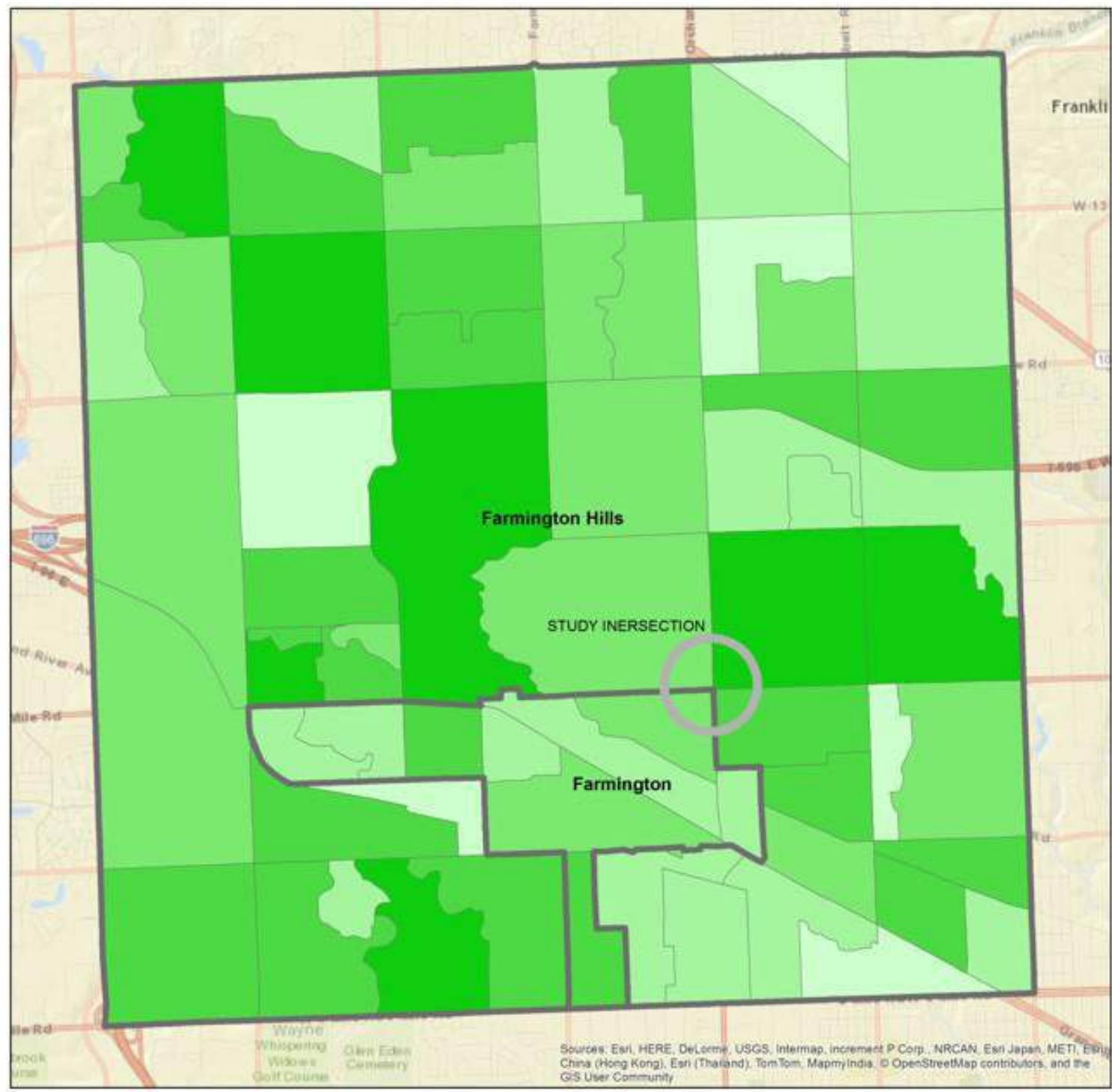
CIRCULATION ANALYSIS

For this analysis there was interest in investigating what causes people to circulate, and what is the quality of existing motor, public, and pedestrian systems for doing so.

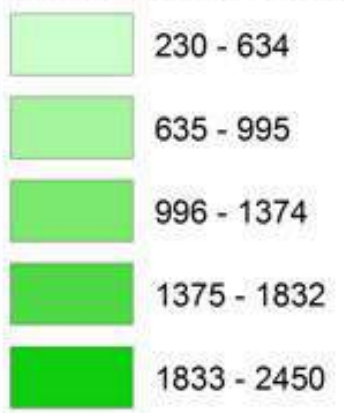
CIRCULATION: WORK PATTERNS

A fair portion of Farmington/ Farmington Hills residents commute less than twenty minutes to work. While also a majority of residents commute from Farmington Hills to Farmington Hills for work. Although while doing so their primary mode of transportation is driving individual automobiles.

There is a significant opportunity to convert more residents to take alternate modes of transportation to work, by providing accessibility to alternate, and more sustainable, modes of travel.



NUMBER OF RESIDENTS WHO COMMUTE LESS THEN 20 MIN TO WORK



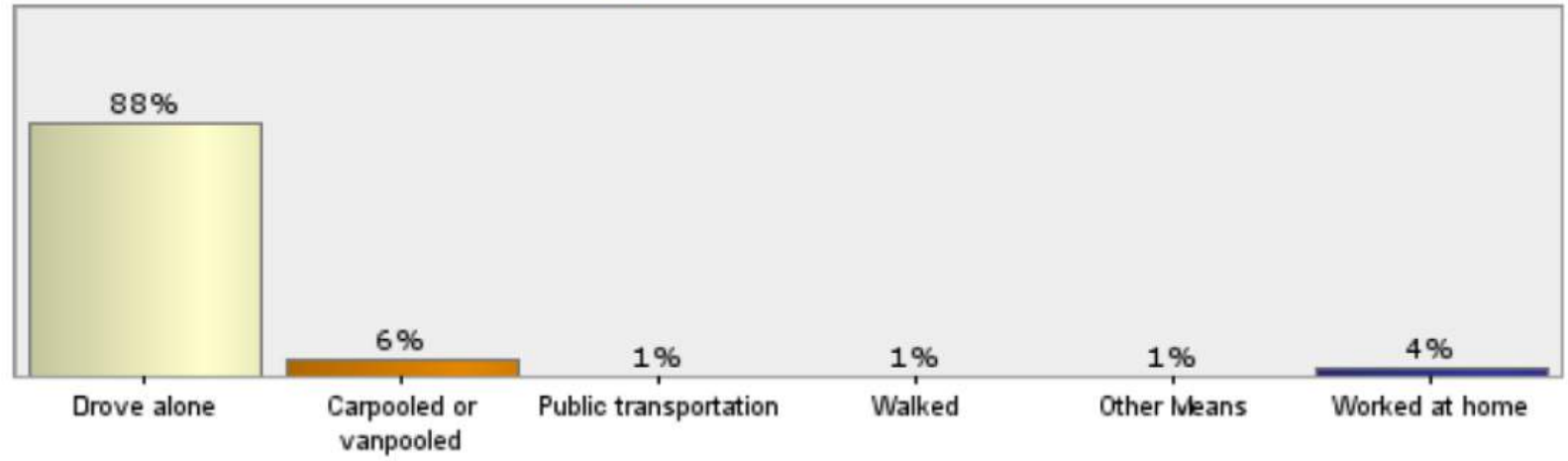
Where Workers Commute From *			5-Yr ACS 2010	
	Workers	Percent		
1	Farmington Hills	8,135	15.2%	
2	Detroit	3,315	6.2%	
3	Livonia	3,955	5.5%	
4	West Bloomfield Township	2,785	5.2%	
5	Novi	2,615	4.9%	
6	Southfield	1,620	3.0%	
7	Commerce Township or Wolverine Lake	1,440	2.7%	
8	Canton Township	1,375	2.6%	
9	Redford Township	1,300	2.5%	
10	Westland	1,145	2.1%	
-	Elsewhere	26,739	50.0%	
* Workers, age 16 and over, employed in Farmington Hills		53,484	100.0%	

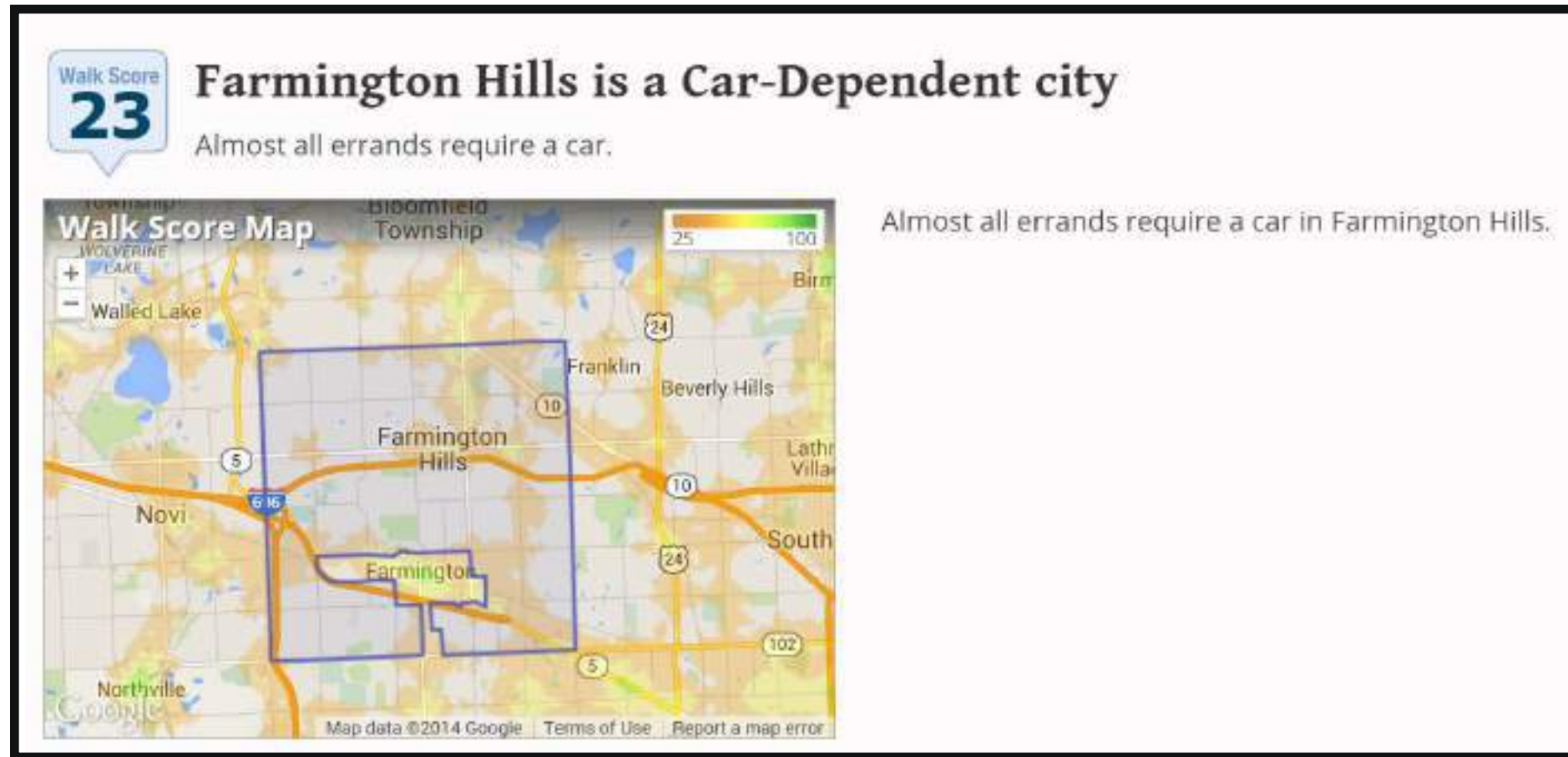
Where Residents Work *			5-Yr ACS 2010	
	Workers	Percent		
1	Farmington Hills	685	13.7%	
2	Farmington	610	12.2%	
3	Livonia	510	10.2%	
4	Southfield	425	8.5%	
5	Dearborn	305	6.1%	
6	Detroit	300	6.0%	
7	Troy	265	5.3%	
8	Novi	220	4.4%	
9	Auburn Hills	140	2.8%	
10	Warren	105	2.1%	
-	Elsewhere	1,439	28.8%	
* Workers, age 16 and over, residing in Farmington		5,004	100.0%	

References:
 American Fact Finder, Census 2010 data, <http://factfinder.census.gov/faces/nav/jspx/pages/index.xhtml>

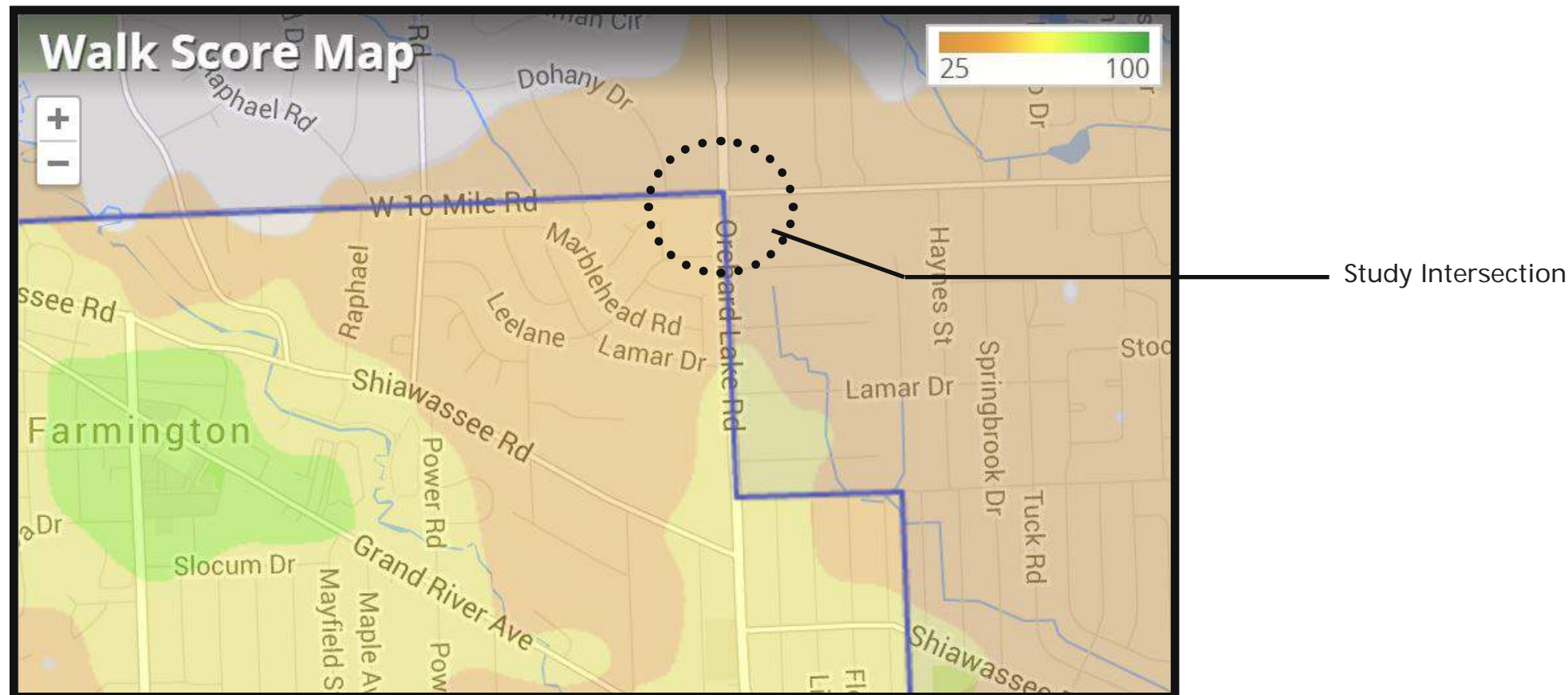
SEMCOG Community Profiles, <http://www.semco.org/data/bycommunity.c>

Transportation to Work, 2010 *





REGIONAL WALKSCORE MAP



INTERSECTION WALKSCORE MAP

Regionally Farmington Hills/Farmington are not considered walkable, or at least is not composed of a community that embraces walking as a primary mode of traversing the city.

This is evident by the fact that Walkscore rates Farmington Hills with an average low walkscore of 23. Walkscore also proclaims errands must be completed by car.

Data trends indicate that citizens of growing communities are seeking neighborhoods that are walkable. Additionally, walkable neighborhoods tend to command greater property values.

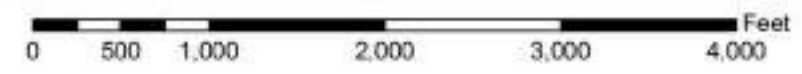
At the study intersection there is an increased walkscore. Furthermore this improved walkscore seems to generate from the center of Farmington that receives a near ideal score of 100. This evidence presents the opportunity for the study intersection to increase walkability Farmington, ideally improving the city's walkscore, while supporting apparent walkability growth generating from Farmington.

References:
https://www.walkscore.com/MI/Farmington_Hills,

CIRCULATION: SIDEWALK NETWORK



Legend
 — Sidewalks



The existing sidewalk network is fragmented in many areas. There is an opportunity to create a more continuous physical connection of sidewalks, improving the walking experience.

Of particular interest is establishing a walkable association between the residential and business areas.

References:
Farmington Hills, Sidewalks GIS data
Farmington, Paths GIS data

1

2012 Traffic Count: 20,573 (Current Year Estimate)
2008 Traffic Count: 23,835 (Average Daily Traffic)
2004 Traffic Count: 24,275 (Average Daily Traffic)

Site Information

Nearest cross street to the count:
W 10 Mile Rd
Direction from the count to the cross street:
South
Distance to the nearest cross street:
0.04 miles

2

2012 Traffic Count: 23,640 (Current Year Estimate)
2008 Traffic Count: 24,552 (Average Daily Traffic)
2004 Traffic Count: 23,633 (Average Daily Traffic)

Site Information

Nearest cross street to the count:
W 10 Mile Rd
Direction from the count to the cross street:
North
Distance to the nearest cross street:
0.04 miles



3

2012 Traffic Count: 20,573 (Current Year Estimate)
2008 Traffic Count: 23,835 (Average Daily Traffic)
2004 Traffic Count: 24,275 (Average Daily Traffic)

Site Information

Nearest cross street to the count:
W 10 Mile Rd
Direction from the count to the cross street:
South
Distance to the nearest cross street:
0.04 miles

4

2012 Traffic Count: 13,921 (Current Year Estimate)
2008 Traffic Count: 11,706 (Average Daily Traffic)
2004 Traffic Count: 11,997 (Average Daily Traffic)

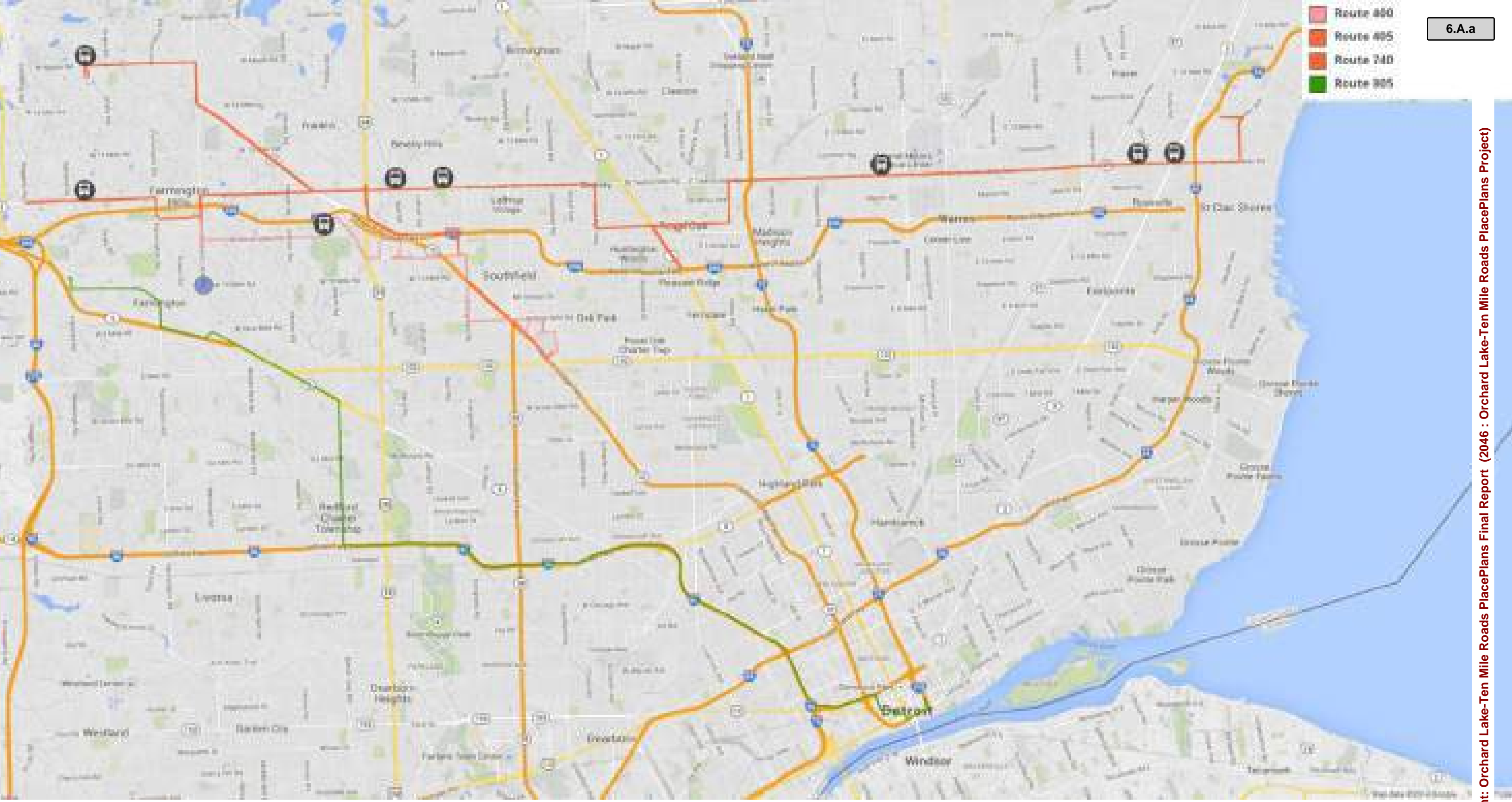
Site Information

Nearest cross street to the count:
Orchard Lake Rd
Direction from the count to the cross street:
West
Distance to the nearest cross street:
0.04 miles

VEHICULAR TRANSPORTATION DEMANDS

Data evidence indicates that traffic counts North, West, and South of the study intersection are on the decline. To the East they are on the increase. Reduction of space allocated to automobile circulation should be considered.

References:
GOOGLE EARTH PRO/KSS FUELS



REGIONAL BUS MAP

There are substantial public bus routes that offer access to the East and South portions of the Detroit using public transportation. However, there does not appear to be a direct connection between the two. Orchard could serve as a pedestrian connection point for East-West and South-North bus routing.

SMART **405 WESTBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014**

Route	NORTHLAND MALL	10 MILE RD & EVERGREEN	EVERGREEN & CIVIC CENTER	11 MILE RD & LAHSER	12 MILE RD & TELEGRAPH	12 MILE RD & NORTHWESTERN	ORCHARD LAKE & 14 MILE ROAD	ORCHARD LAKE & 15 MILE ROAD	HENRY FORD MEDICAL CTR
405	5:45AM	5:52AM	5:54AM	5:59AM	6:05AM	6:08AM	6:15AM	6:21AM	6:25AM
405	6:45AM	6:52AM	6:54AM	6:59AM	7:05AM	7:08AM	7:15AM	7:21AM	7:25AM
405	7:45AM	7:52AM	7:54AM	7:59AM	8:05AM	8:08AM	8:15AM	8:21AM	8:25AM
405	8:45AM	8:52AM	8:54AM	8:59AM	9:05AM	9:08AM	9:15AM	9:21AM	9:25AM
405	9:45AM	9:52AM	9:54AM	9:59AM	10:05AM	10:08AM	10:15AM	10:21AM	10:25AM
405	10:45AM	10:52AM	10:54AM	10:59AM	11:05AM	11:08AM	11:15AM	11:21AM	11:25AM
405	11:45AM	11:52AM	11:54AM	11:59AM	12:05PM	12:08PM	12:15PM	12:21PM	12:25PM
405	12:00PM	12:07PM	12:09PM	12:14PM	12:20PM	12:23PM	12:30PM	12:36PM	12:40PM
405	1:00PM	1:07PM	1:09PM	1:14PM	1:20PM	1:23PM	1:30PM	1:36PM	1:40PM
405	2:00PM	2:07PM	2:09PM	2:14PM	2:20PM	2:23PM	2:30PM	2:36PM	2:40PM
405	2:55PM	3:02PM	3:04PM	3:09PM	3:15PM	3:18PM	3:25PM	3:31PM	3:35PM
405	3:55PM	4:02PM	4:04PM	4:09PM	4:15PM	4:18PM	4:25PM	4:31PM	4:35PM
405	4:55PM	5:02PM	5:04PM	5:09PM	5:15PM	5:18PM	5:25PM	5:31PM	5:35PM
405	5:55PM	6:02PM	6:04PM	6:09PM	6:15PM	6:18PM	6:25PM	6:31PM	6:35PM

SMART **405 EASTBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014**

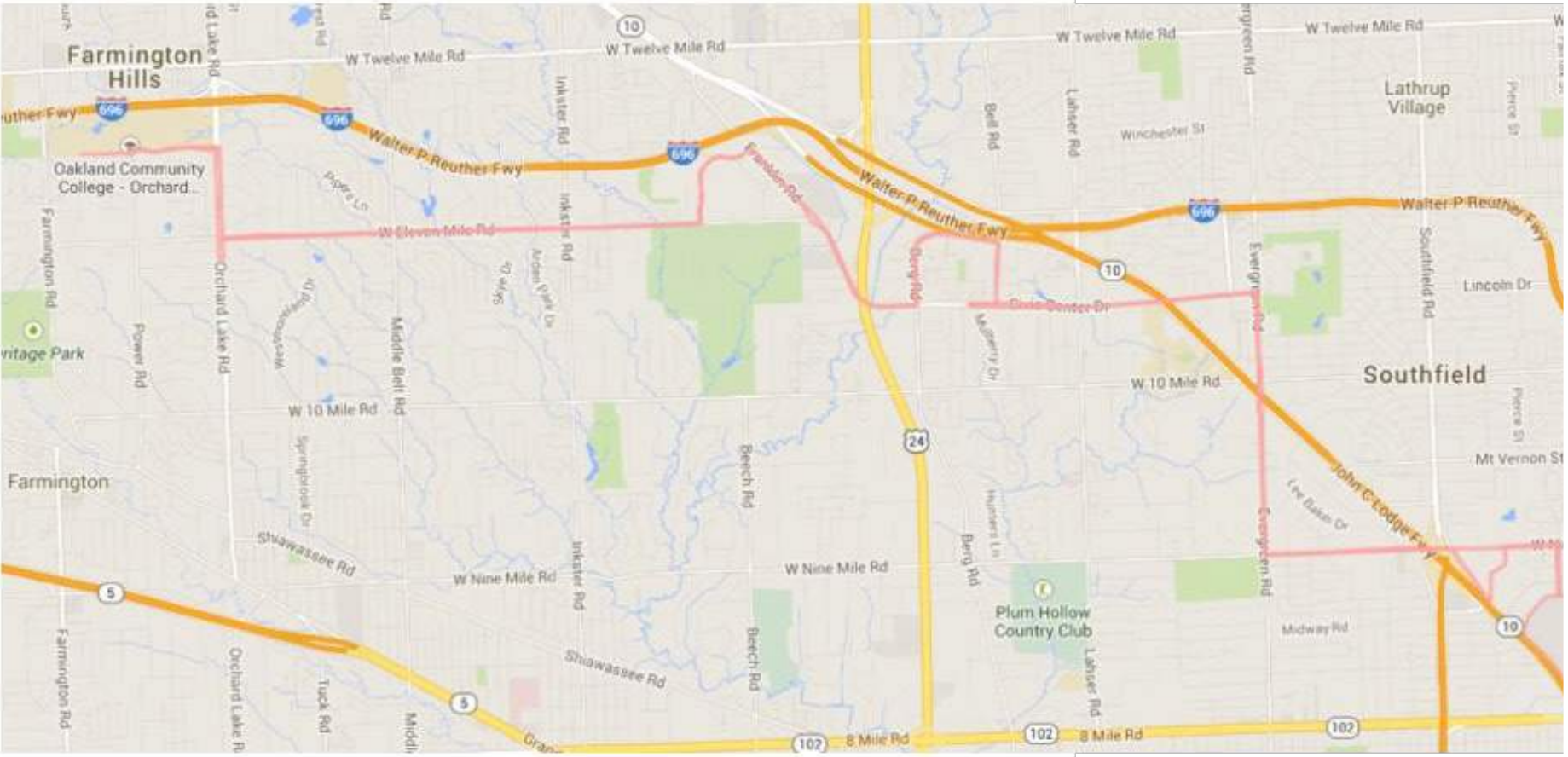
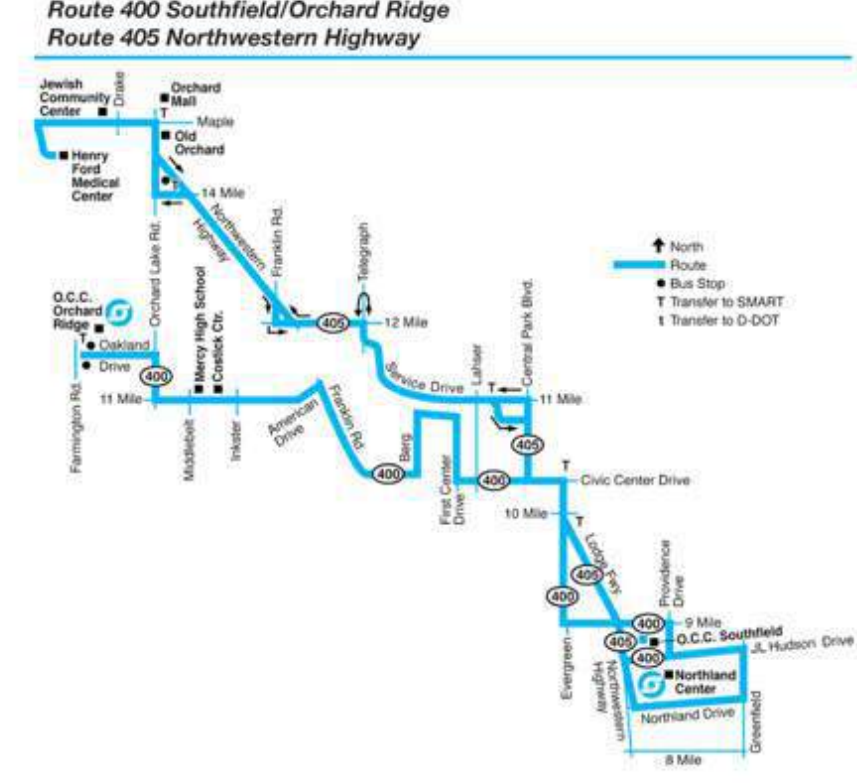
Route	HENRY FORD MEDICAL CTR	ORCHARD LAKE & 15 MILE ROAD	ORCHARD LAKE & 14 MILE ROAD	12 MILE RD & NORTHWESTERN	12 MILE RD & TELEGRAPH	11 MILE RD & LAHSER	EVERGREEN & CIVIC CENTER	10 MILE RD & EVERGREEN	NORTHLAND MALL
405	6:36AM	6:43AM	6:46AM	6:50AM	7:02AM	7:07AM	7:11AM	7:13AM	7:25AM
405	7:36AM	7:43AM	7:46AM	7:50AM	8:02AM	8:07AM	8:11AM	8:13AM	8:25AM
405	8:36AM	8:43AM	8:46AM	8:50AM	9:02AM	9:07AM	9:11AM	9:13AM	9:25AM
405	9:36AM	9:43AM	9:46AM	9:50AM	10:02AM	10:07AM	10:11AM	10:13AM	10:25AM
405	10:36AM	10:43AM	10:46AM	10:50AM	11:02AM	11:07AM	11:11AM	11:13AM	11:25AM
405	11:36AM	11:43AM	11:46AM	11:50AM	12:02PM	12:07PM	12:11PM	12:13PM	12:25PM
405	12:02PM	12:09PM	12:11PM	12:16PM	12:22PM	12:25PM	12:30PM	12:32PM	12:44PM
405	1:02PM	1:09PM	1:11PM	1:16PM	1:22PM	1:25PM	1:30PM	1:32PM	1:44PM
405	2:02PM	2:09PM	2:11PM	2:16PM	2:22PM	2:25PM	2:30PM	2:32PM	2:44PM
405	2:57PM	3:04PM	3:06PM	3:11PM	3:17PM	3:20PM	3:25PM	3:27PM	3:39PM
405	3:57PM	4:04PM	4:06PM	4:11PM	4:17PM	4:20PM	4:25PM	4:27PM	4:39PM
405	4:57PM	5:04PM	5:06PM	5:11PM	5:17PM	5:20PM	5:25PM	5:27PM	5:39PM
405	5:57PM	6:04PM	6:06PM	6:11PM	6:17PM	6:20PM	6:25PM	6:27PM	6:39PM

SMART **405 EASTBOUND FOR SATURDAY : EFFECTIVE: 09/01/2014**

Route	HENRY FORD MEDICAL CTR	ORCHARD LAKE & 15 MILE ROAD	ORCHARD LAKE & 14 MILE ROAD	12 MILE RD & NORTHWESTERN	12 MILE RD & TELEGRAPH	11 MILE RD & LAHSER	EVERGREEN & CIVIC CENTER	10 MILE RD & EVERGREEN	NORTHLAND MALL
405	8:42AM	8:50AM	8:53AM	8:58AM	9:07AM	9:12AM	9:16AM	9:18AM	9:29AM
405	9:42AM	9:50AM	9:53AM	9:58AM	10:07AM	10:12AM	10:16AM	10:18AM	10:29AM
405	10:42AM	10:50AM	10:53AM	10:58AM	11:07AM	11:12AM	11:16AM	11:18AM	11:29AM
405	11:42AM	11:50AM	11:53AM	11:58AM	12:07PM	12:12PM	12:16PM	12:18PM	12:29PM
405	12:32PM	12:39PM	12:42PM	12:47PM	12:56PM	13:01PM	13:05PM	13:07PM	13:18PM
405	1:32PM	1:39PM	1:42PM	1:47PM	1:56PM	2:01PM	2:05PM	2:07PM	2:18PM
405	2:22PM	2:29PM	2:32PM	2:37PM	2:46PM	2:51PM	2:55PM	2:57PM	3:08PM
405	3:22PM	3:29PM	3:32PM	3:37PM	3:46PM	3:51PM	3:55PM	3:57PM	4:08PM
405	4:22PM	4:29PM	4:32PM	4:37PM	4:46PM	4:51PM	4:55PM	4:57PM	5:08PM
405	5:22PM	5:29PM	5:32PM	5:37PM	5:46PM	5:51PM	5:55PM	5:57PM	6:08PM
405	6:22PM	6:29PM	6:32PM	6:37PM	6:46PM	6:51PM	6:55PM	6:57PM	7:08PM
405	7:22PM	7:29PM	7:32PM	7:37PM	7:46PM	7:51PM	7:55PM	7:57PM	8:08PM

SMART **405 WESTBOUND FOR SATURDAY : EFFECTIVE: 09/01/2014**

Route	NORTHLAND MALL	10 MILE RD & EVERGREEN	EVERGREEN & CIVIC CENTER	11 MILE RD & LAHSER	12 MILE RD & TELEGRAPH	12 MILE RD & NORTHWESTERN	ORCHARD LAKE & 14 MILE ROAD	ORCHARD LAKE & 15 MILE ROAD	HENRY FORD MEDICAL CTR
405	7:45AM	7:51AM	7:53AM	7:57AM	8:05AM	8:06AM	8:14AM	8:20AM	8:25AM
405	8:45AM	8:51AM	8:53AM	8:57AM	9:05AM	9:06AM	9:14AM	9:20AM	9:25AM
405	9:45AM	9:51AM	9:53AM	9:57AM	10:05AM	10:06AM	10:14AM	10:20AM	10:25AM
405	10:45AM	10:51AM	10:53AM	10:57AM	11:05AM	11:06AM	11:14AM	11:20AM	11:25AM
405	11:45AM	11:51AM	11:53AM	11:57AM	12:05PM	12:06PM	12:14PM	12:20PM	12:25PM
405	12:20PM	12:26PM	12:28PM	12:32PM	12:39PM	12:40PM	12:48PM	12:54PM	1:00PM
405	1:20PM	1:26PM	1:28PM	1:32PM	1:39PM	1:40PM	1:48PM	1:54PM	2:00PM
405	2:20PM	2:26PM	2:28PM	2:32PM	2:39PM	2:40PM	2:48PM	2:54PM	3:00PM
405	3:15PM	3:21PM	3:23PM	3:27PM	3:34PM	3:35PM	3:43PM	3:49PM	3:55PM
405	4:15PM	4:21PM	4:23PM	4:27PM	4:34PM	4:35PM	4:43PM	4:49PM	4:55PM
405	5:05PM	5:11PM	5:13PM	5:17PM	5:24PM	5:25PM	5:33PM	5:39PM	5:45PM
405	6:05PM	6:11PM	6:13PM	6:17PM	6:24PM	6:25PM	6:33PM	6:39PM	6:45PM
405	6:55PM	7:01PM	7:03PM	7:07PM	7:14PM	7:15PM	7:23PM	7:29PM	7:35PM



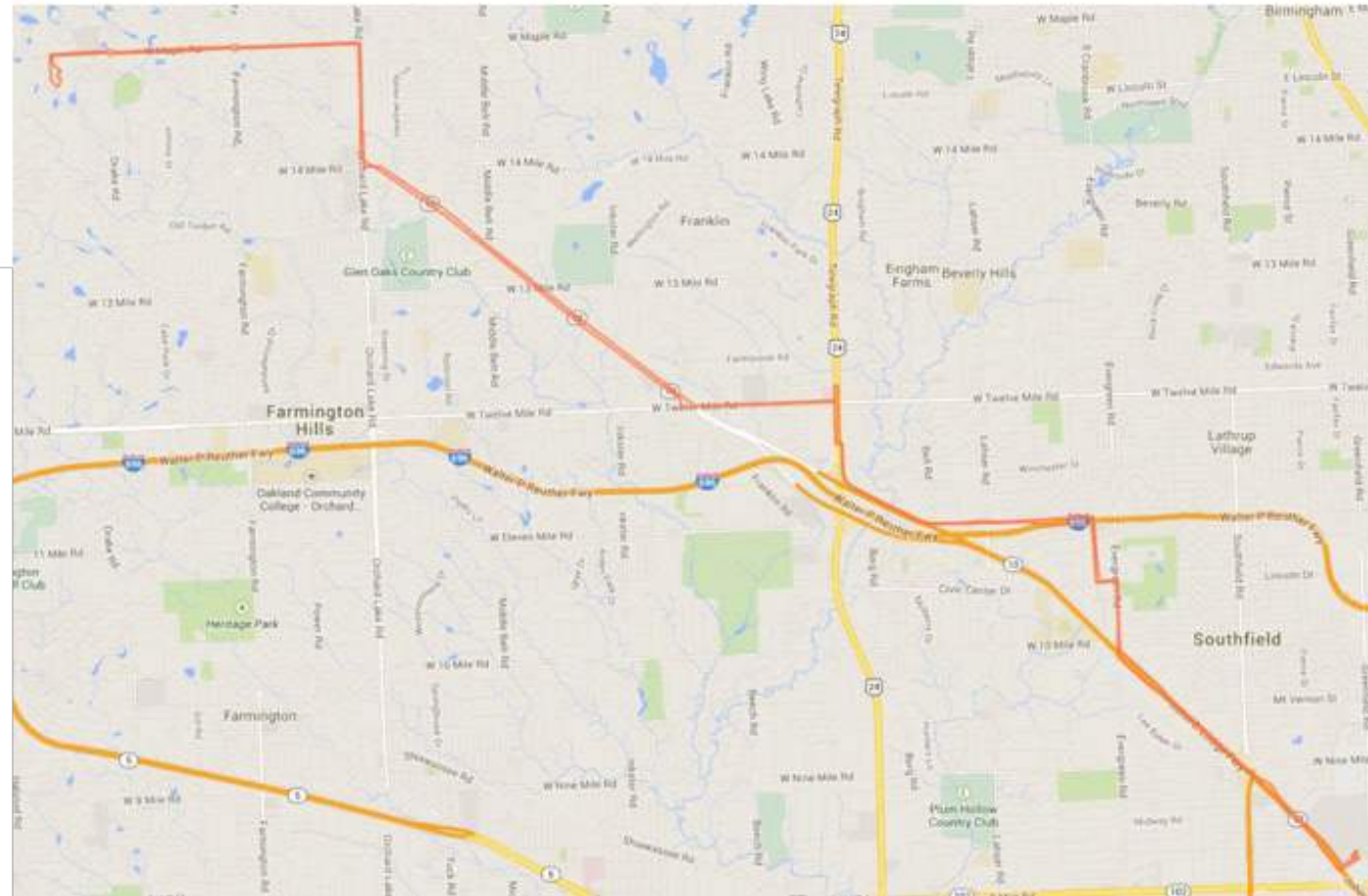
400 PUBLIC BUS ROUTING + TIME TABLES

SMART **400 NORTHBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014**

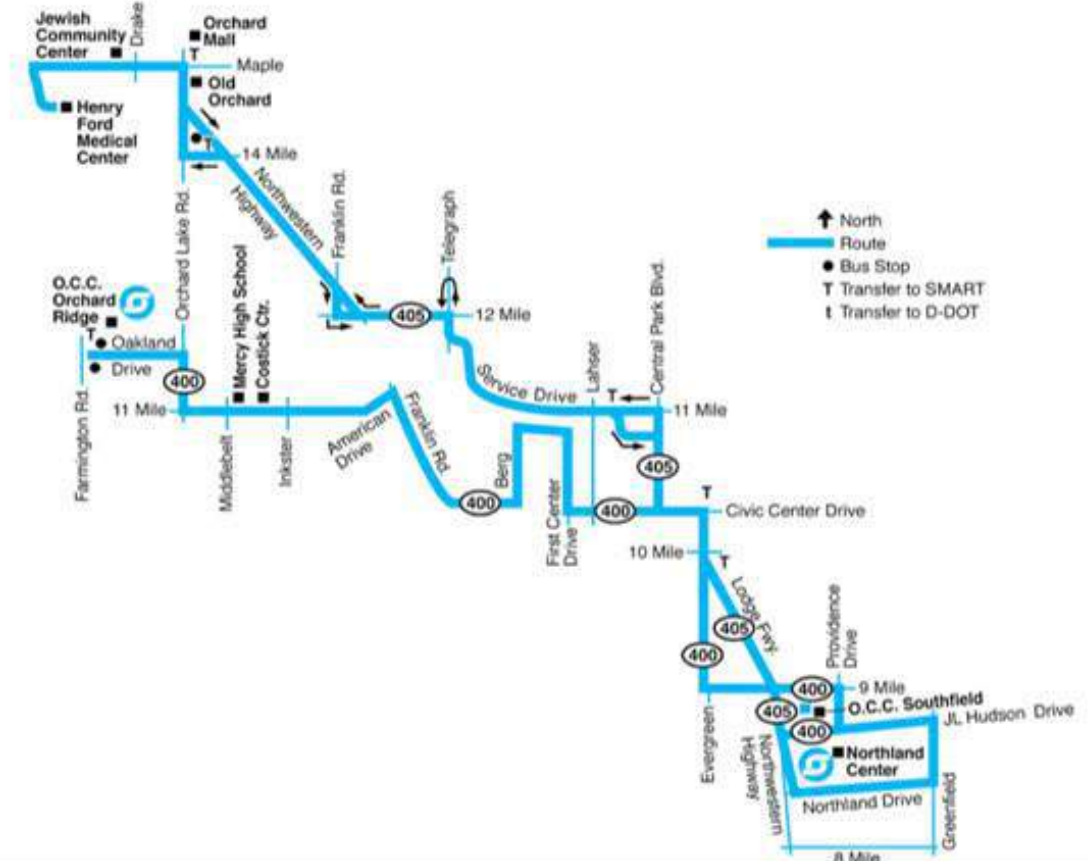
Route	NORTHLAND MALL	9 MILE RD. & PROVIDENCE	OCC SOUTHFIELD	9 MILE RD. & EVERGREEN	EVERGREEN & CIVIC CENTER	FRANKLIN & TELEGRAPH	FRANKLIN & AMERICAN DR	11 MILE RD. & MIDDLEBELT	OCC ORCH RDG CAMPUS
400	8:20AM	8:24AM	8:28AM	8:30AM	8:34AM	8:42AM	8:45AM	8:52AM	8:57AM
400	7:00AM	7:04AM	7:08AM	7:11AM	7:16AM	7:25AM	7:26AM	7:36AM	7:42AM
400	7:30AM	7:34AM	7:38AM	7:41AM	7:46AM	7:55AM	7:56AM	8:06AM	8:12AM
400	8:00AM	8:04AM	8:08AM	8:11AM	8:16AM	8:25AM	8:26AM	8:36AM	8:42AM
400	8:42AM	8:46AM	8:50AM	8:53AM	8:58AM	9:07AM	9:10AM	9:17AM	9:23AM
400	9:45AM	9:49AM	9:53AM	9:56AM	10:01AM	10:10AM	10:11AM	10:21AM	10:27AM
400	11:17AM	11:21AM	11:25AM	11:28AM	11:33AM	11:42AM	11:43AM	11:53AM	11:59AM
400	12:42PM	12:46PM	12:50PM	12:53PM	12:58PM	1:07PM	1:08PM	1:18PM	1:24PM
400	2:10PM	2:14PM	2:18PM	2:21PM	2:26PM	2:35PM	2:36PM	2:46PM	2:52PM
400	3:00PM	3:04PM	3:08PM	3:11PM	3:16PM	3:25PM	3:26PM	3:36PM	3:42PM
400	3:50PM	3:54PM	3:58PM	4:01PM	4:06PM	4:15PM	4:16PM	4:26PM	4:32PM
400	4:41PM	4:45PM	4:49PM	4:52PM	4:57PM	5:06PM	5:07PM	5:17PM	5:23PM
400	6:23PM	6:27PM	6:31PM	6:34PM	6:39PM	6:48PM	6:49PM	6:59PM	7:05PM

SMART **400 SOUTHBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014**

Route	OCC ORCH RDG CAMPUS	11 MILE RD. & MIDDLEBELT	FRANKLIN & AMERICAN DR	FRANKLIN & TELEGRAPH	EVERGREEN & CIVIC CENTER	9 MILE RD. & EVERGREEN	OCC SOUTHFIELD	9 MILE RD. & PROVIDENCE	NORTHLAND MALL
400	8:40AM	8:46AM	8:52AM	8:56AM	9:07AM	9:11AM	9:15AM	9:18AM	9:23AM
400	7:44AM	7:50AM	7:56AM	8:00AM	8:11AM	8:15AM	8:19AM	8:22AM	8:27AM
400	8:44AM	8:50AM	8:56AM	8:59AM	9:09AM	9:13AM	9:17AM	9:20AM	9:25AM
400	9:25AM	9:31AM	9:37AM	9:40AM	9:51AM	9:55AM	9:59AM	10:02AM	10:07AM
400	10:25AM	10:31AM	10:37AM	10:40AM	10:51AM	10:55AM	10:59AM	11:02AM	11:07AM
400	11:57AM	12:03PM	12:09PM	12:12PM	12:23PM	12:27PM	12:31PM	12:34PM	12:39PM
400	1:33PM	1:40PM	1:46PM	1:50PM	2:01PM	2:05PM	2:09PM	2:12PM	2:17PM
400	2:55PM	3:02PM	3:08PM	3:12PM	3:23PM	3:27PM	3:31PM	3:34PM	3:39PM
400	3:45PM	3:52PM	3:58PM	4:02PM	4:13PM	4:17PM	4:21PM	4:24PM	4:29PM
400	4:45PM	4:52PM	4:58PM	5:02PM	5:13PM	5:17PM	5:21PM	5:24PM	5:29PM
400	6:20PM	6:27PM	6:33PM	6:37PM	6:48PM	6:52PM	6:56PM	6:59PM	7:04PM
400	7:10PM	7:17PM	7:23PM	7:27PM	7:38PM	7:42PM	7:46PM	7:49PM	7:54PM



Route 400 Southfield/Orchard Ridge
Route 405 Northwestern Highway



405 PUBLIC BUS ROUTING + TIME TABLES



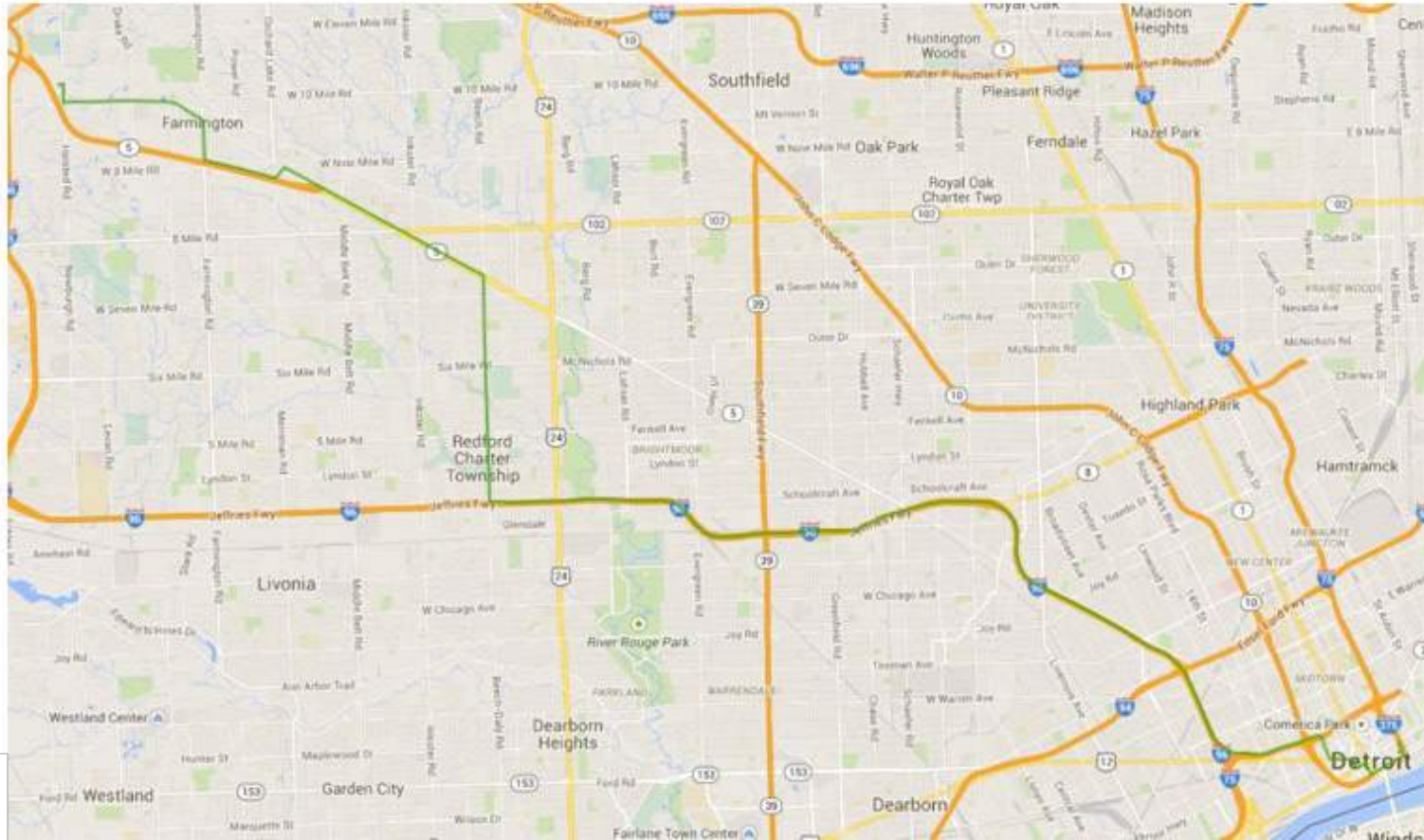
805 WESTBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014

Route	BLUE CROSS/BLUE	JEFFERSON & BEAUBIEN	MICHIGAN & CASS	THIRD & PLAZA DR	FENTON & SCHOOLCRAFT	WESTERN GRAHAM FIELDS	GRAND RIVER & BEECH-DALY	FARMINGTON & FREEDOM	GRAND RIVER & FARMINGTON	BOONAVENTURE SKATING
805	3:34PM	3:36PM	3:43PM	3:45PM	4:10PM	4:14PM	4:21PM	4:31PM	4:33PM	4:40PM
805	4:04PM	4:06PM	4:15PM	4:17PM	4:43PM	4:47PM	4:54PM	5:04PM	5:06PM	5:13PM
805	4:33PM	4:35PM	4:44PM	4:46PM	5:12PM	5:16PM	5:23PM	5:33PM	5:35PM	5:42PM
805	4:38PM	4:40PM	4:49PM	4:51PM	-	5:16PM	5:23PM	5:33PM	5:35PM	5:42PM
805	4:48PM	4:51PM	5:00PM	5:02PM	5:28PM	5:32PM	5:39PM	5:49PM	5:51PM	5:58PM
805	5:08PM	5:10PM	5:19PM	5:21PM	5:45PM	5:49PM	5:56PM	6:06PM	6:08PM	6:15PM
805	5:34PM	5:36PM	5:43PM	5:45PM	6:09PM	6:13PM	6:20PM	6:30PM	6:32PM	6:39PM



805 EASTBOUND FOR WEEKDAY : EFFECTIVE: 09/01/2014

Route	BOONAVENTURE SKATING	GRAND RIVER & FARMINGTON	FARMINGTON & FREEDOM	GRAND RIVER & BEECH-DALY	WESTERN GRAHAM FIELDS	FENTON & SCHOOLCRAFT	THIRD & PLAZA DR	MICHIGAN & CASS	JEFFERSON & BEAUBIEN	BLUE CROSS/BLUE
805	5:36AM	5:41AM	5:43AM	5:51AM	5:58AM	6:02AM	6:29AM	6:30AM	6:37AM	6:40AM
805	5:47AM	5:52AM	5:54AM	6:02AM	6:09AM	6:13AM	6:40AM	6:41AM	6:48AM	6:51AM
805	6:15AM	6:21AM	6:23AM	6:32AM	6:39AM	6:43AM	7:10AM	7:11AM	7:18AM	7:21AM
805	6:30AM	6:36AM	6:38AM	6:47AM	6:54AM	6:58AM	7:25AM	7:26AM	7:33AM	7:36AM
805	6:45AM	6:51AM	6:53AM	7:02AM	7:09AM	7:13AM	7:40AM	7:41AM	7:48AM	7:51AM
805	6:50AM	6:56AM	6:58AM	7:07AM	7:14AM	7:18AM	7:45AM	7:46AM	7:53AM	7:56AM
805	7:10AM	7:16AM	7:18AM	7:27AM	7:34AM	7:38AM	8:05AM	8:06AM	8:13AM	8:16AM
805	7:28AM	7:34AM	7:36AM	7:45AM	7:52AM	7:56AM	8:23AM	8:24AM	8:31AM	8:34AM
805	7:36AM	7:42AM	7:44AM	7:53AM	8:00AM	8:04AM	8:30AM	8:31AM	8:38AM	8:41AM
805	7:48AM	7:52AM	7:54AM	8:03AM	8:10AM	8:14AM	8:40AM	8:41AM	8:48AM	8:51AM

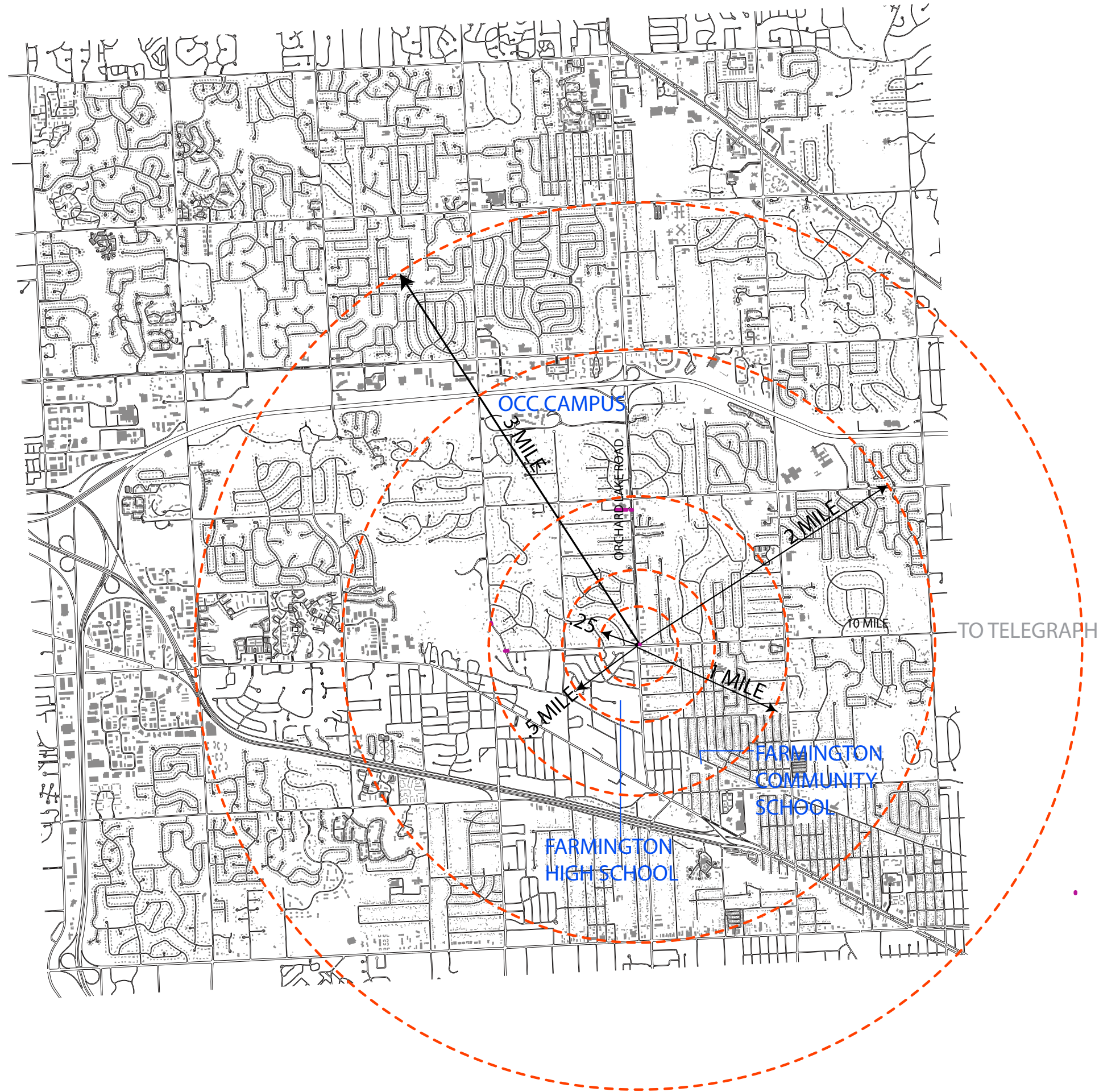


806 PUBLIC BUS ROUTING + TIME TABLES

CIRCULATION: EDUCATIONAL ADJACENCIES

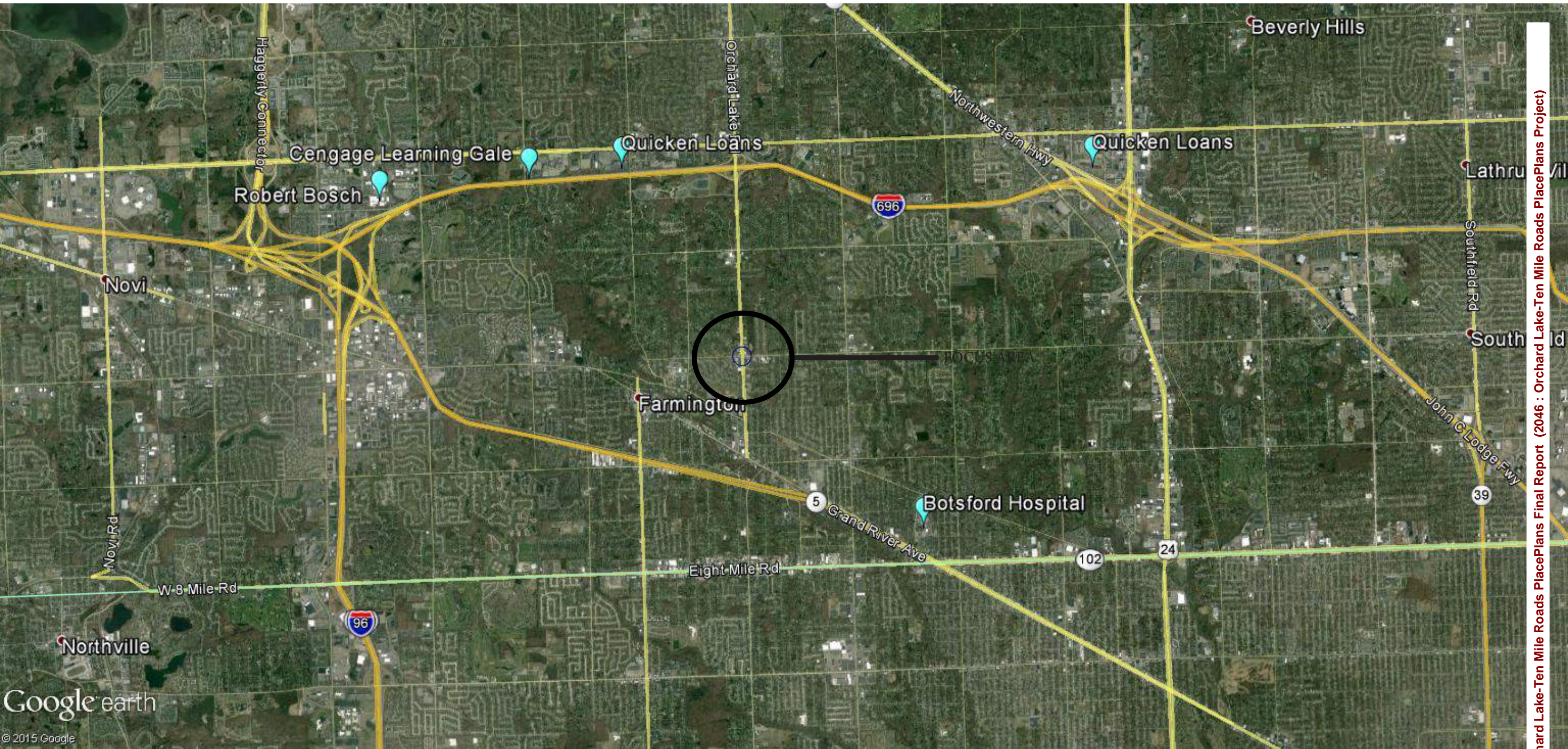
The intersection of 10 Mile and Orchard can function as a circulation node for local educational institutes.

All major local educational institutes fall within a 3 mile range, which is considered a comfortable biking range for nearly anyone.



COMMUNITY ANALYSIS

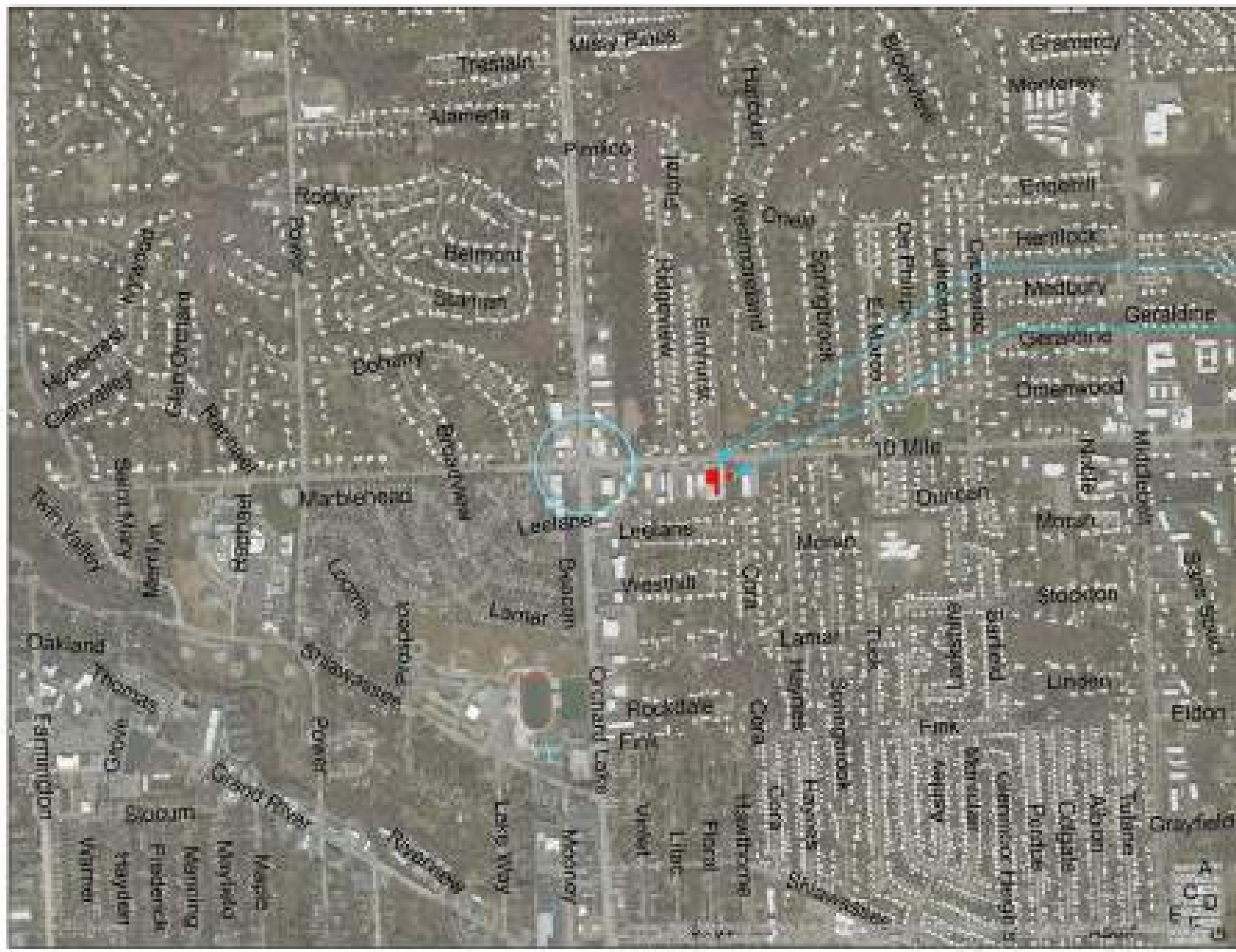
It is most paramount to comprehend the community that is being designed for. To do so building uses, local attractions, and community stakeholders have been studied.



LARGEST REGIONAL EMPLOYERS



COMMUNITY BUILDING USES: COMMERCIAL AND RESIDENTIAL



Legend
 [Red Square] Business Owners

— Ron Harwood of Illuminating Concepts
 — Adrian Tonon of Café Cortina



COMMUNITY BUSINESS STAKEHOLDERS/COMMUNITY INFLUENCERS



Legend

- E** Auto Supply
- C** Bar
- P** Dentist
- K** Discount Savings Store
- M** Dry Cleaner
- O** Eye Vision Care
- B** Foot Doctor
- H** Gas Station
- J** Grocery Store
- D** Home Remodeling
- F** Lighting Design
- L** Liquor Store
- N** Martial Arts
- I** Pharmacy/Convenience Store
- A** Physician
- G** Restaurant

COMMUNITY AMENITIES AND BUSINESSES

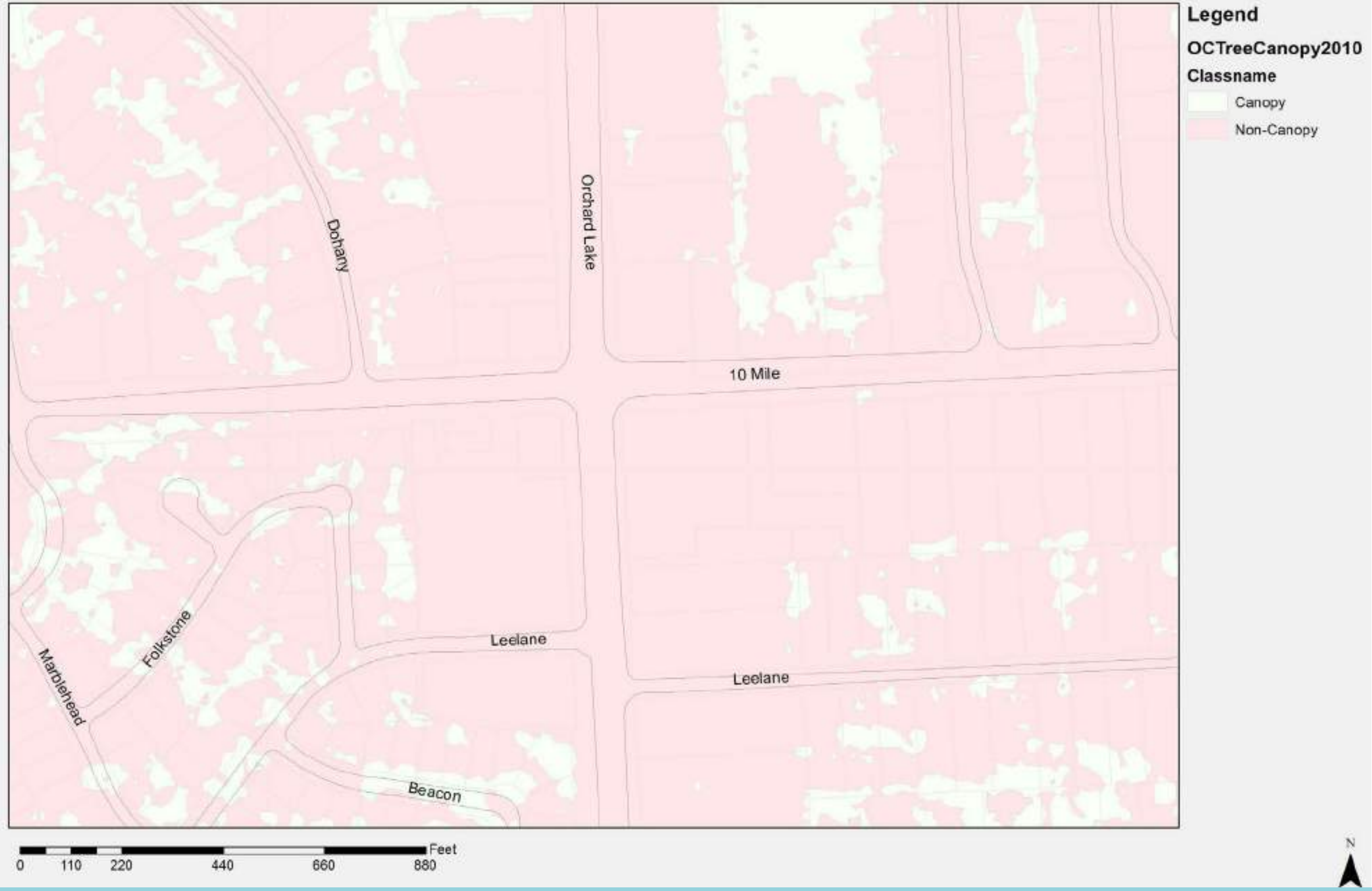
NATURAL SYSTEM ANALYSIS

The preexisting urban tree canopy was analyzed using GIS data to understand the preexisting conditions of tree vegetation, and how tree canopy can be improved. A strong tree canopy can improve air quality, reduce solar heat gain, and make pedestrians more comfortable in urban areas.



MAPPED TREE CANOPY OF REGION

There are noticeable “bald” spots throughout the cities. This presents a challenge to create continuous networks of tree canopies that increase pedestrian comfort, and reduce heat island effect.



MAPPED TREE CANOPY OF FOCUS AREA

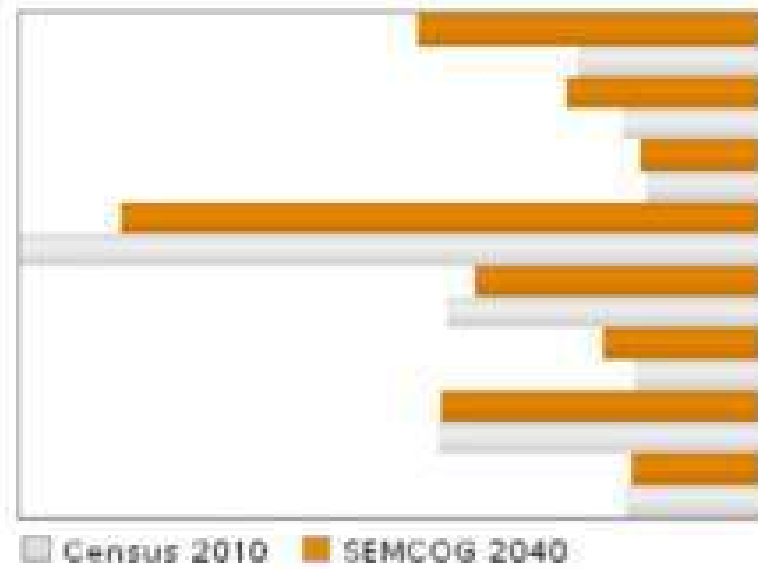
At the intersection of 10 Mile of Orchard there is ample opportunity to improve upon the almost nonexistent tree canopy.

DEMOGRAPHIC ANALYSIS

In order to understand demographic influences of the area, age and income were analyzed. Both of which were studies for current conditions, and long term/short term projections. Understanding these sort of demographics assures that proposed urban design resonate both with current and future use patterns of an area.

FARMINGTON

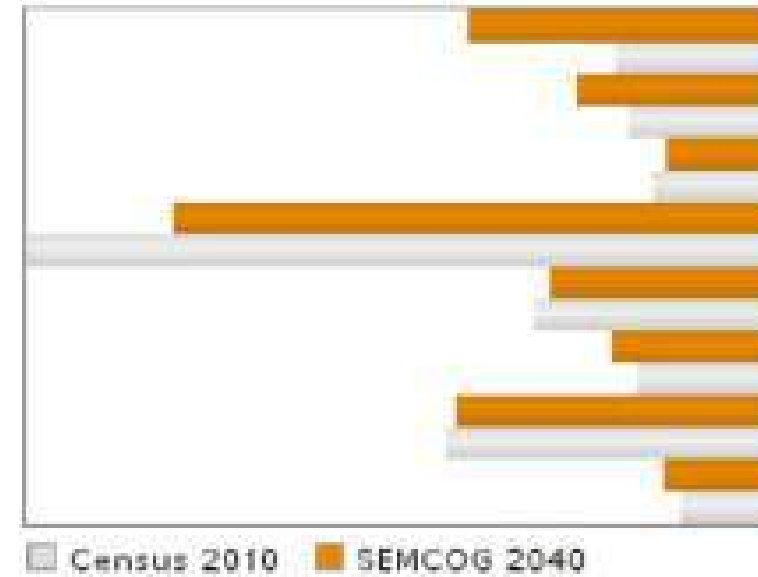
Forecasted Population by Age, 2010-2040



Age Group	Census 2010	SEMCOG 2040	Change 2010-2040
75+	922	1,720	798
65-74	689	980	291
60-64	570	610	40
35-59	3,699	3,191	-508
25-34	1,572	1,434	-138
18-24	638	790	152
5-17	1,608	1,607	-1
Under 5	674	647	-27
Total	10,372	10,979	607

FARMINGTON HILLS

Forecasted Population by Age, 2010-2040



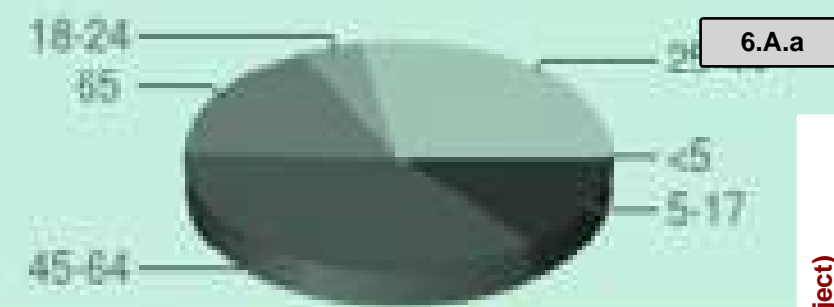
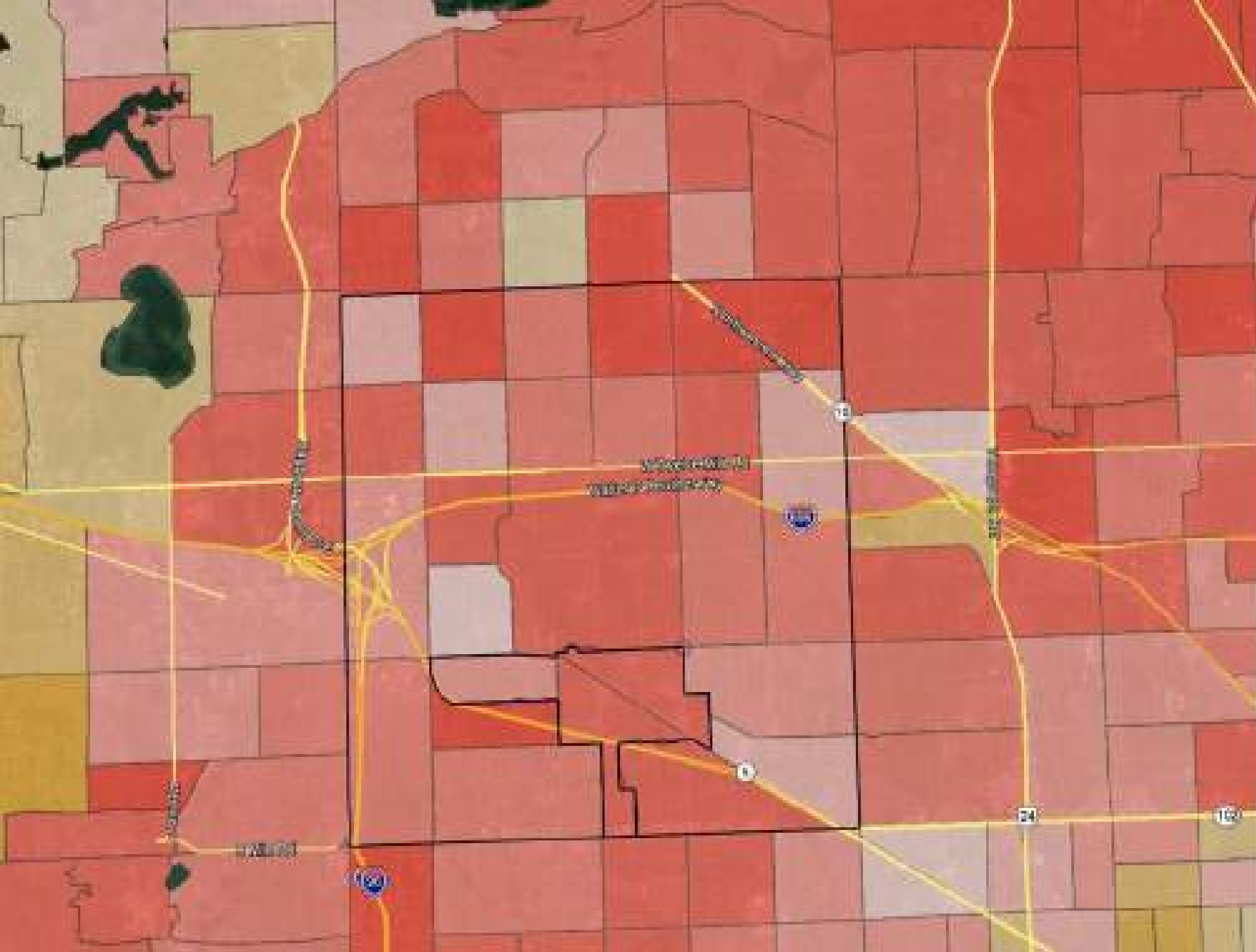
Age Group	Census 2010	SEMCOG 2040	Change 2010-2040
75+	6,651	12,250	5,599
65-74	6,061	8,087	2,026
60-64	5,112	4,615	-497
35-59	29,404	23,730	-5,674
25-34	9,645	9,086	-559
18-24	5,695	6,689	994
5-17	13,134	12,704	-430
Under 5	4,038	4,730	692
Total	79,740	81,897	2,157

Current 2010 conditions indicate there is a real mix of age groups. 35-59 is prominently the majority. But there is a near second place tie amongst children/teenagers and the elderly. Meaning that urban plans really need to appeal to all three age demographics.

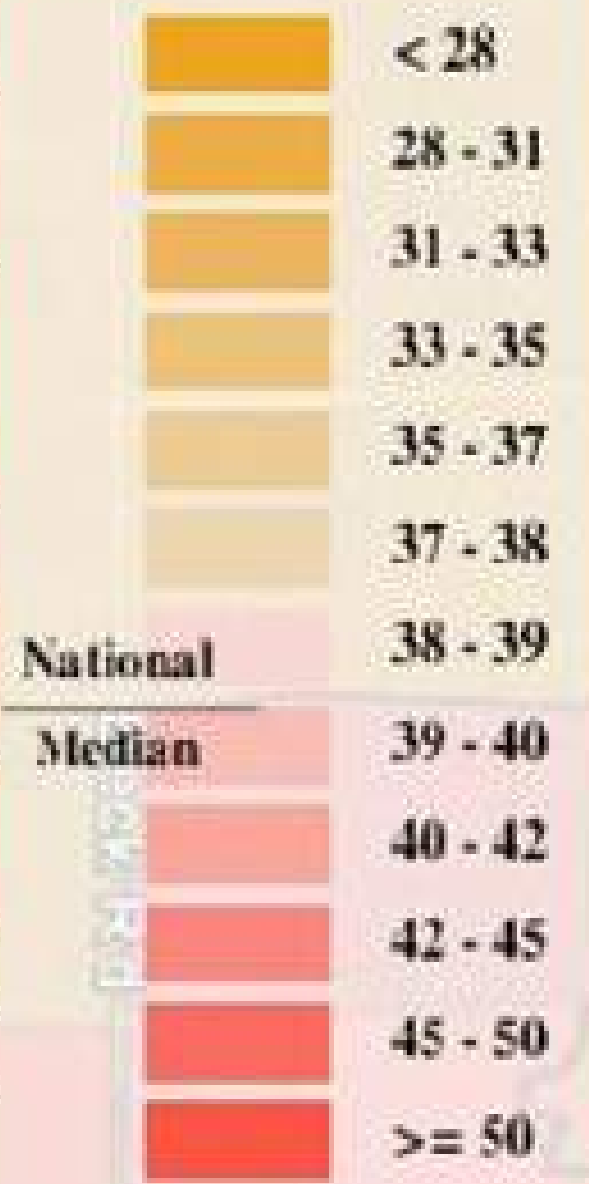
Progressed in time, younger age groups decrease while more advanced age groups are predicted to increase in 2040. This fluctuation is caused by the assumption that majority of current residents plan to remain in the Farmington/Farmington Hills area while aging. Pleasing current residents with improve urban designs can also help maintain resident retention.

CURRENT AND FORTY YEAR AGE PREDICTIONS

References:
SEMCOG Community Profiles

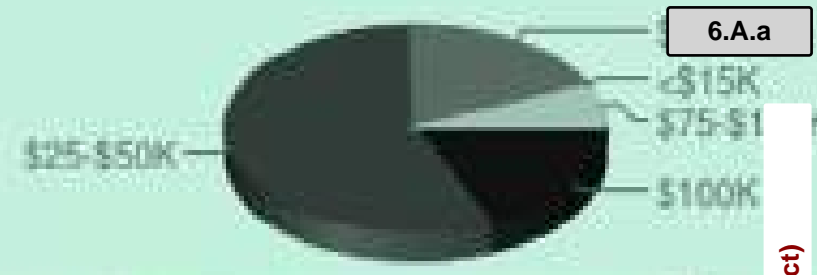


Median Age 2016 Projected

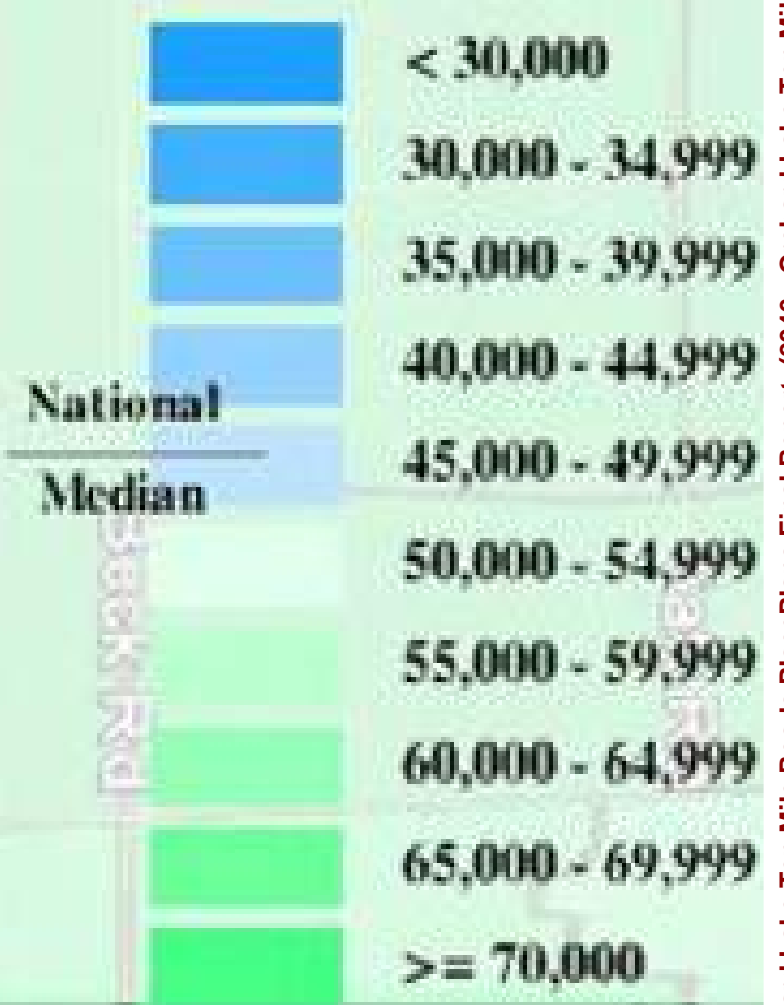


2016 MAPPED AGE PREDICATIONS

References:
GOOGLE EARTH PRO/THE NIELSON COMPANY



Median Household Income 2016 Projected



2016 MAPPED HOUSEHOLD INCOMES

References:
GOOGLE EARTH PRO/THE NIELSON COMPANY

PHOTO ANALYSIS

A photo analysis was performed to visually document existing conditions of the urban environment. It was completed by walking the study area for 2.5 hours and taking pictures along the way. Observations were made that relate to conditions of pedestrian routes, urban fabric, vegetation, pedestrian experience, land use adjacencies, and urban amenities.



LOCATION KEY

Preexisting trees can provide shade to pedestrians utilizing the sidewalks. It also seems there is some natural vegetative systems that are already established. It is also good that tree root structures are not bounded by planters.

10 MILE WEST OF ORCHARD, LOOKING NORTH

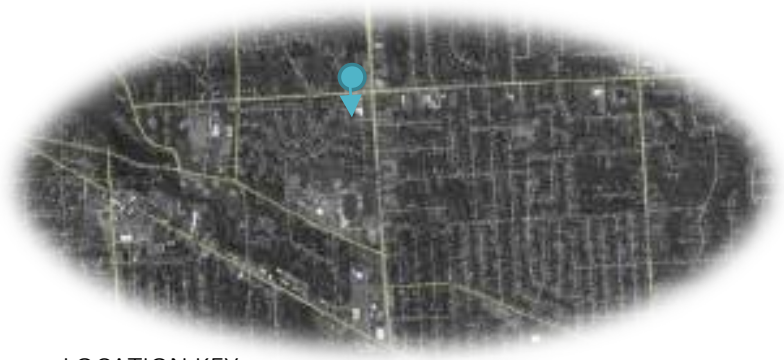


LOCATION KEY

There are underutilized opportunistic to improve the pedestrian urban experience in at the intersection. For example the green area in front of the widely popular Greenes Hamburgers.

All of the black asphalt parking asphalts presents environmental issues of increased heat island effect, and storm water runoff.

ORCHARD SOUTH OF 10 MILE LOOKING WEST



LOCATION KEY

Some businesses in the area already support direction connection to the pedestrian. As seen here with these storefronts that feel connected to pedestrian circulation, opposed to hidden behind a sea of disjointed asphalt.

10 MILE, WEST OF ORCHARD LOOKING NORTH



Existing buildings are quite human scale (low rise, smallish buildings footprint). This is good for placemaking because buildings of these proportions are intended to relate to the pedestrian better.

LOCATION KEY

10 MILE, EAST OF ORCHARD LOOKING NORTH



Continuation of buildings that have an integrated relationship with pedestrian circulation (the sidewalk). 6.A.a

The more businesses in the area that allow for easy transition from sidewalk to business interior are simply better for promoting walkability in the area.



LOCATION KEY

10 MILE, EAST OF ORCHARD LOOKING SOUTH



LOCATION KEY

Intersection simply is not welcoming to pedestrians because there is no prominently defined pedestrian realm, and streets are not 'complete streets'.

10 MILE, WEST OF ORCHARD LOOKING SOUTH



LOCATION KEY

The sheer number of businesses in the strip center must function as an attractor to the intersection area. However, no bike racks were observed in front of any business around the study intersection.

ORCHARD, SOUTH OF 10 MILE LOOKING WEST



Intersection of two primary roads does little to emphasize and give prominence to the pedestrian.

Faded paint used as the only mechanism for delineating pedestrian urban realm, communicates pedestrians are unimportant.

Recommend new material palette for pedestrian networks.



LOCATION KEY

INTERSECTION OF 10 MILE AND ORCHARD



TYPICAL SIDEWALK

While majority of sidewalks are the typical 4'-width, in some locations there is a greater width being used.

Generally 4'-0" is too small of a width to create a prominent walking path that supports a pleasant pedestrian experience. It becomes difficult to pass people, people do not feel comfortable double walking, and the mixing of bikers and walkers can not be supported.

It is refreshing to see larger sidewalk widths already being implemented throughout the city.

ORCHARD, NORTH OF 10 MILE, WEST SIDE OF STREET, WITH WIDER SIDEWALK

Some pedestrian activity is already present at the intersection area.

In a two hour period three people walking, and two people biking were observed.



LOCATION KEY

ORCHARD, SOUTH OF 10 MILE LOOKING EAST



6.A.a
In areas such as this, where there is a lot of fast moving traffic and little vegetation, it is uncomfortably noisy.

Notably Orchard appears to be much louder than 10 Mile.



LOCATION KEY

ORCHARD, SOUTH OF 10 MILE LOOKING EAST



6.A.a
North of Orchard, vegetative boulevard appears to replace dedicated turn lane. Vegetated buffer could be continued down, and extend to grand.

Could also serve as sound dampening, space for dedicated bike lane, and green storm water management infrastructure.



LOCATION KEY

ORCHARD, NORTH OF 10 MILE LOOKING WEST



6.A.a

This is a typical residential street in adjacent residential areas. The narrow tree lined streets are a sharp contrast to the experience of walking through the intersection.

It is more rewarding to walk through the neighborhoods, then the primary roads because it is significantly more pleasant for the pedestrian.



LOCATION KEY

TYPICAL NEIGHBORHOOD



LOCATION KEY

A number of the residences take on a “rural” character with more naturally landscaped yards, and gravel drives. This architectural language seems out of sync with current intersection design elements and qualities. Efforts should be made to create a better experiential linkage between rural and developed.

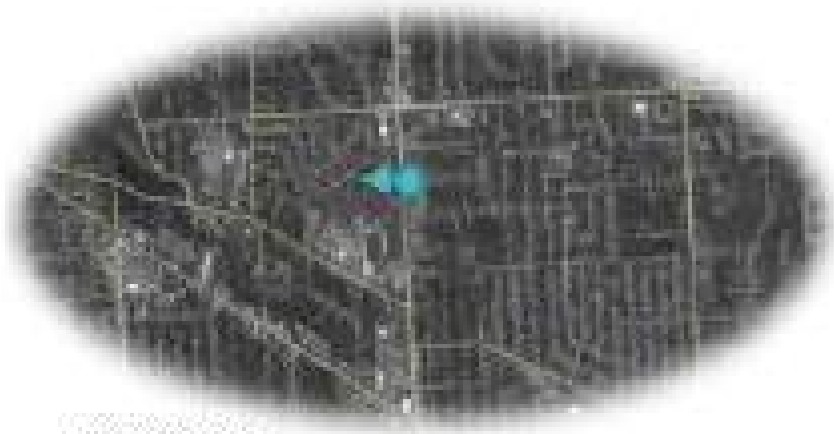
RURAL/NATURAL URBAN FABRIC



Nearly all residential areas transition from a calm slow moving street, to a busy road abruptly.

Not does this quickly deteriorate the quality of the pedestrian experience. There is safety issues/concerns when dense residential areas are joined to busy roads in this fashion.

The busy wide roads of Orchard and 10 Mile are also functioning as community segregators. Which are forcing the neighborhoods to be considered discretely, and not in terms of a continuous urban fabric of a singular community.

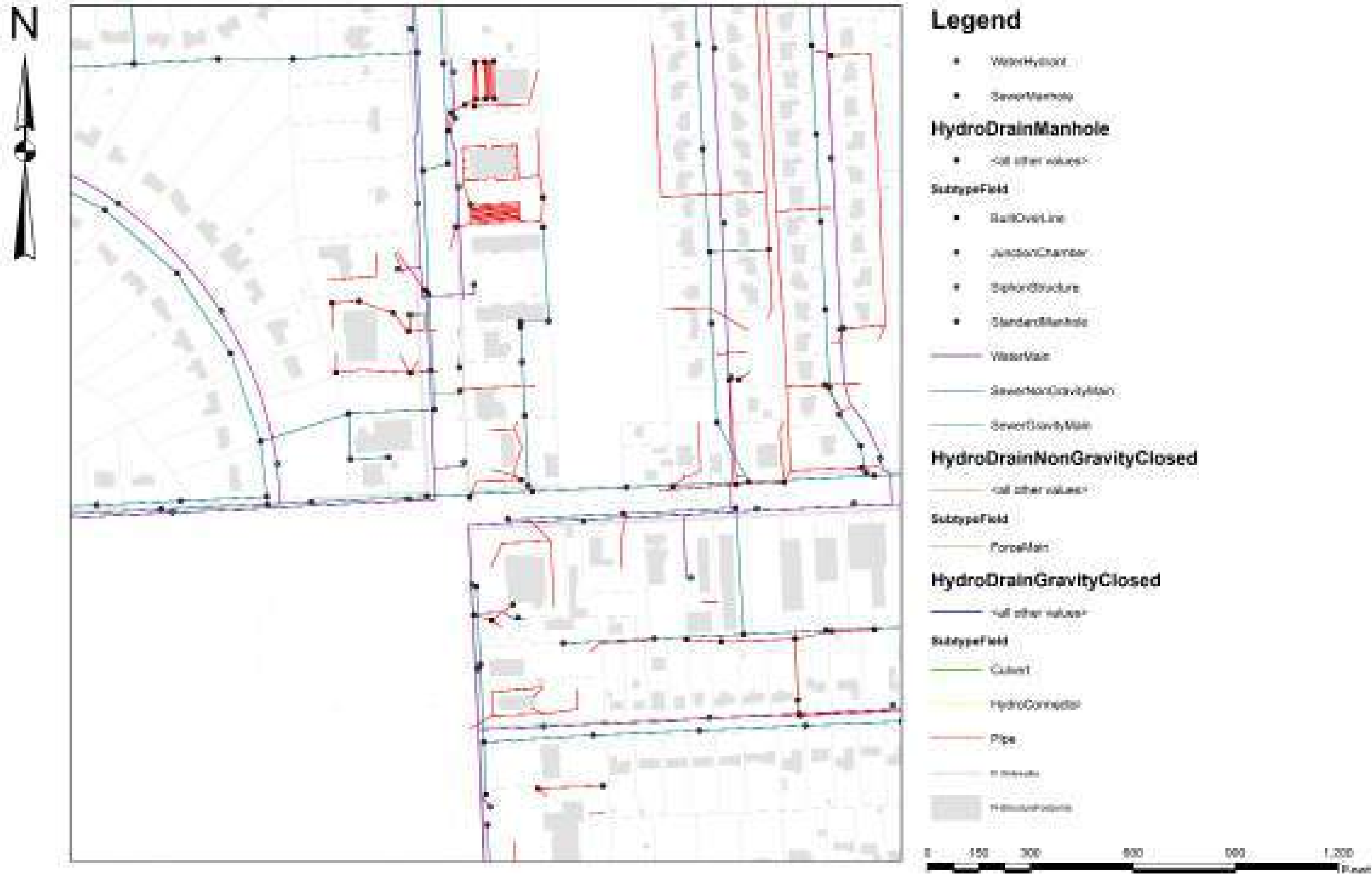


LOCATION KEY

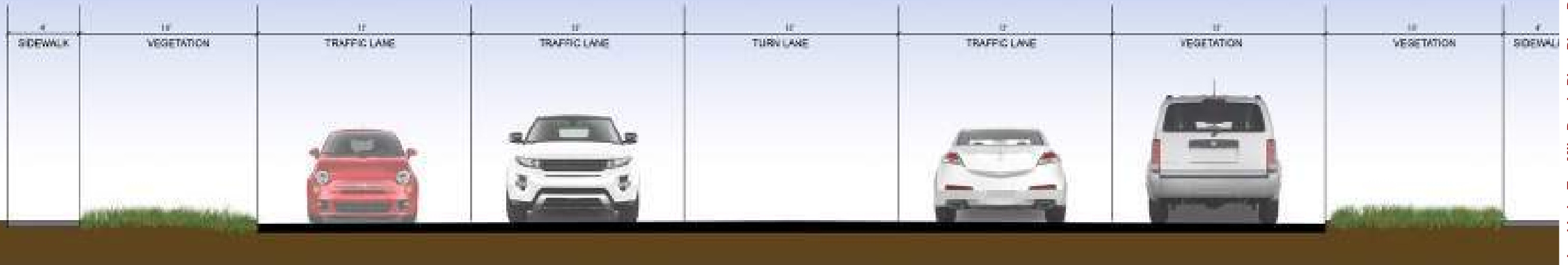
TYPICAL INTERSECTION AT RESIDENTIAL NEIGHBORHOODS AND ORCHARD

EXISTING INFRASTRUCTURE ANALYSIS

A photo analysis was performed to visually document existing conditions of the urban environment. It was completed by walking the study area for 2.5 hours and taking pictures along the way. Observations were made that relate to conditions of pedestrian routes, urban fabric, vegetation, pedestrian experience, land use adjacencies, and urban amenities.



MAP OF EXISTING INFRASTRUCTURE AT FOCUS AREA
 Infrastructure routing appears to fall to the sides of streets, and below sidewalks.

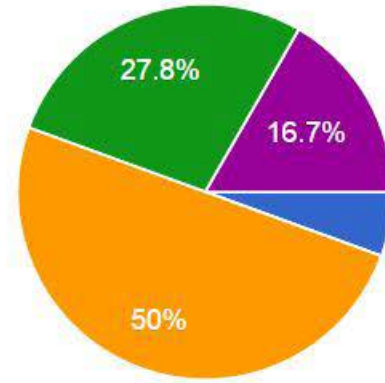


Majority of existing streets in study are incomplete auto dominated systems. They should be more inclusive to pedestrian, biking , and mass transit to support a more sustainable experience.

TYPICAL STREET SECTION

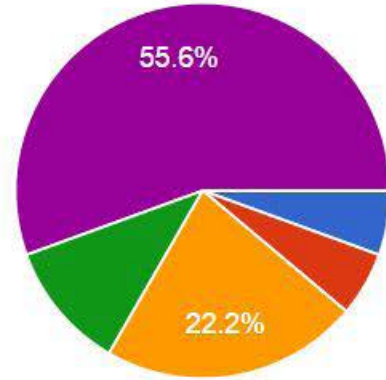
COMMUNITY ENGAGEMENT

Approximately, how many of your employees are residents of Farmington or Farmington Hills?



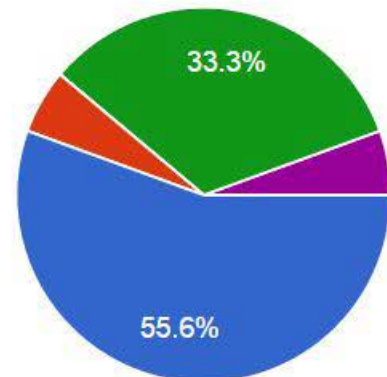
All	1	5.6%
Three quarters	0	0%
Half	9	50%
One quarter	5	27.8%
None	3	16.7%

Which of the following would help you increase business?



On street parking	1	5.6%
Improved sidewalks and bike paths	1	5.6%
Improved public transportation	4	22.2%
Improved public spaces	2	11.1%
Other	10	55.6%

What is the nearest street intersection your business is located by?



Orchard Lake Road and Ten Mile	10	55.6%
Orchard Lake Road and Shiawassee	1	5.6%
Orchard Lake Road and Grand River Ave	0	0%
Orchard Lake Road and Eleven Mile	6	33.3%
Ten Mile and Power Road	1	5.6%
Ten Mile and Middlebelt	0	0%

NUMBER OF EMPLOYEES

solo
 about 20
 3
 2
 7
 6
 5
 9
 6-10
 blank
 10
 None
 This location 6, company wide 3,500
 3-4

DESIRABLE IMPROVEMENTS

We could use more nice restaurants, and retail stores and maybe a little better landscaping in some areas. And a few of the roads need fixing badly this would stimulate more of a draw. Parking needs a lot of help downtown!!

Continue to improve appearance, and downtown.

None related to the business

I travel about 16 miles from home to work and was shocked to find that Orchard Lake Rd had not been plowed yet by 9 a.m. Monday, February 2nd following that huge snow storm. Every other road/freeway taken that morning had been cleared and for such a major road like Orchard Lake not to be plowed north or southbound was shocking. Also, some areas of 10 Mile & Orchard Lake only have sidewalks on 1 side of the road, so you have to cross a major road if you want to walk on a sidewalk - like 10 Mile east of Orchard Lake only has sidewalks on the south side to Middlebelt. It would be more convenient if sidewalks were on both sides of the 10 Mile.

green space, walking/jogging/biking paths

More trees and landscape, nice natural appearance of surrounding area.

I would like to see smooth road surfaces

Improved Public Transportation

Improved traffic flow, roadway improvements

Roads

Better traffic control

I would like to see the public sector change to 401k type retirement plans and eliminate all health insurance for retirees. I am tired of having municipalities waste 30% of my tax dollars for "legacy costs".

I think Farmington/Farmington Hills is a lovely community and the improvements made to the downtown area are wonderful. sidewalks integrated with coordinated landscaping and decorative street lighting

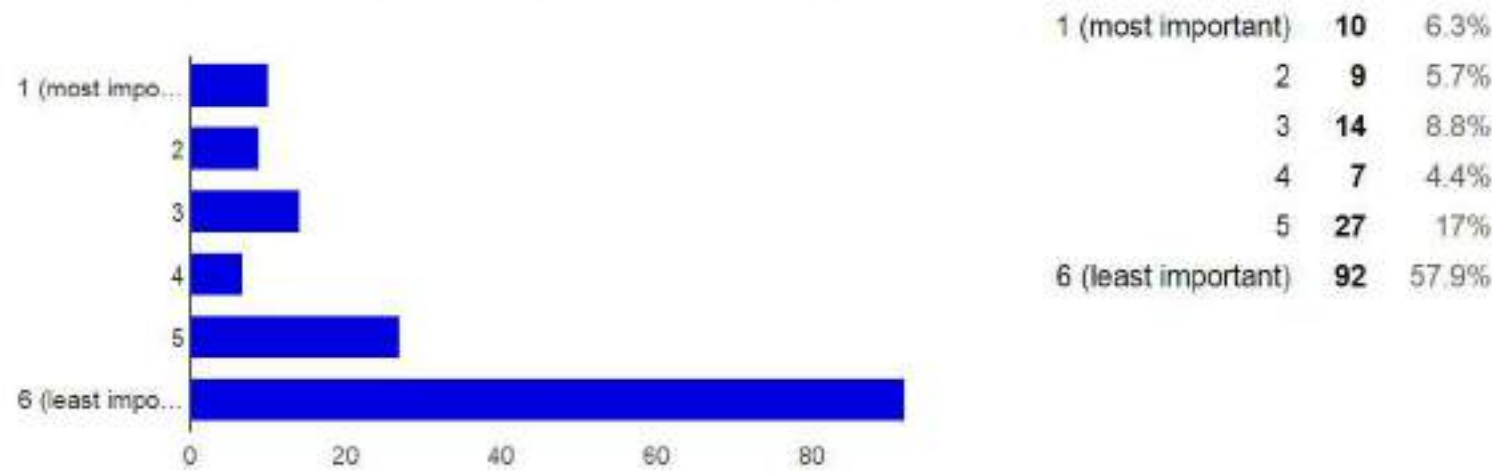
Transportation needs to be improved greatly. Hospitals connecting with senior living communities to provide transportation to all necessary medical appointments.

ADDITIONAL COMMENTS

Doing a good job at this point (in partnership with city).

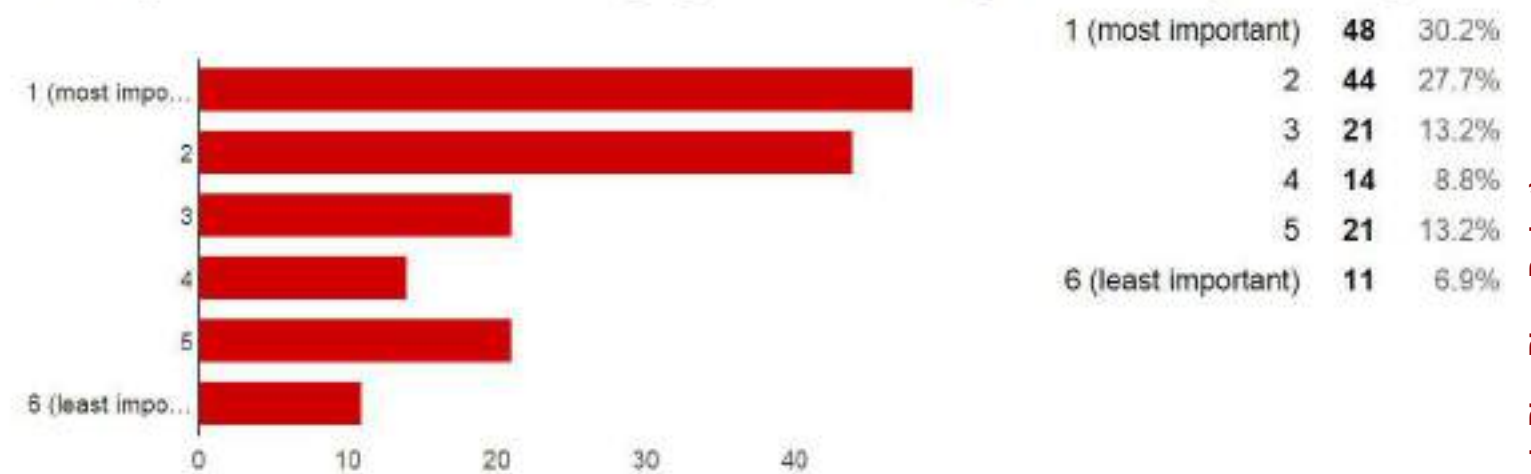
Farming on and F. Hills are great places to live and work. Employees and clients would like to see continued improvements in landscape, sidewalks, and natural aspects of surrounding area.

Access to public transportation [Rate the following in order of importance?]

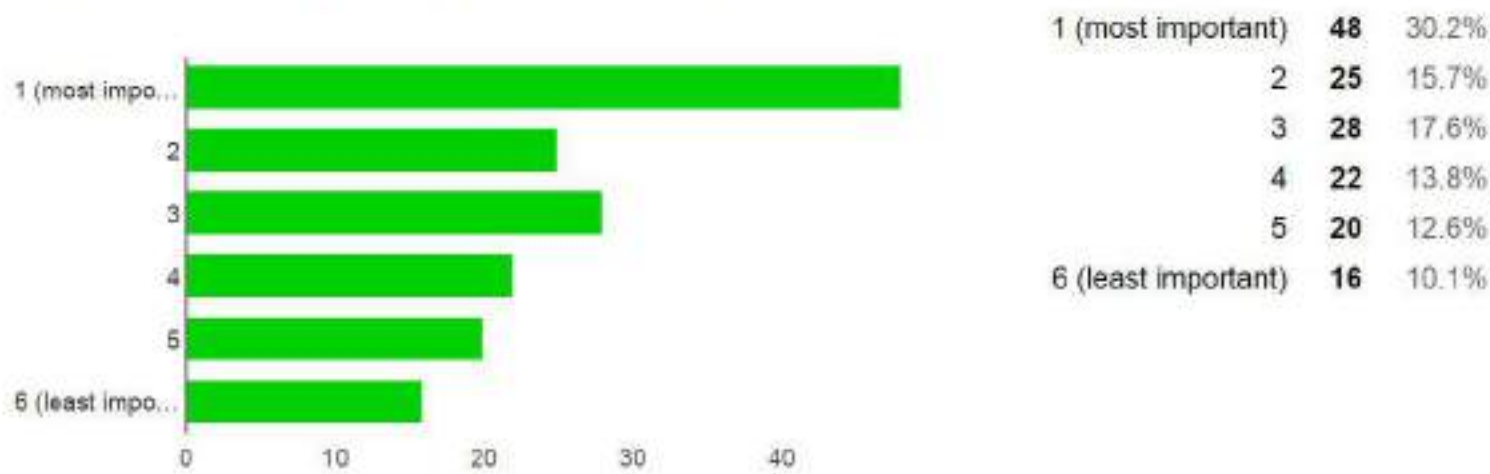


Diversity of local restaurants and shops [Rate the following in order of importance?]

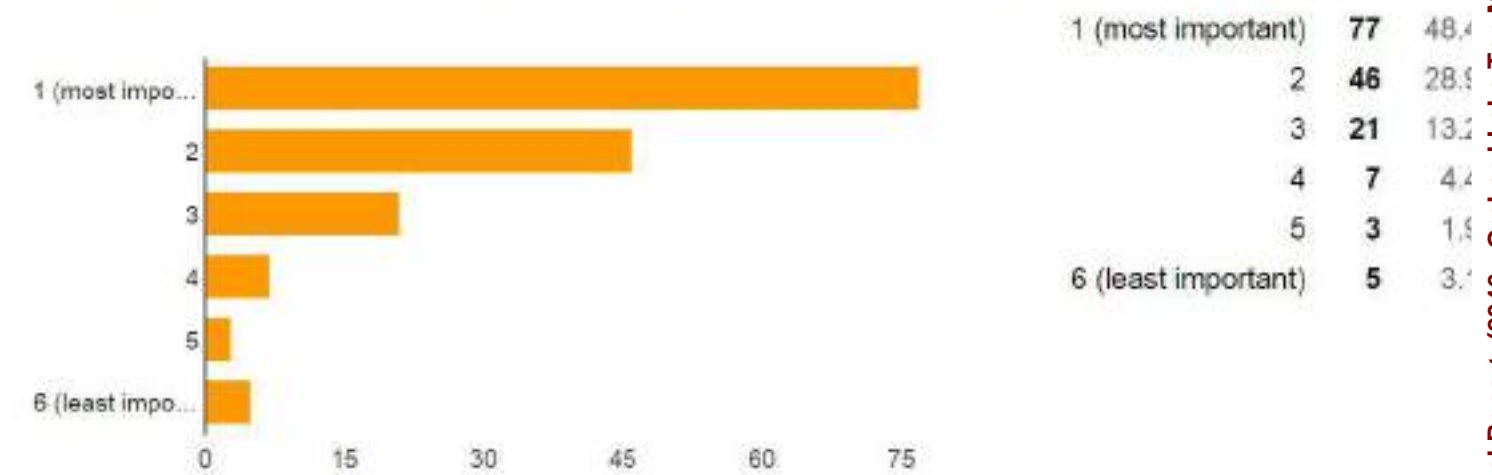
6.A.a



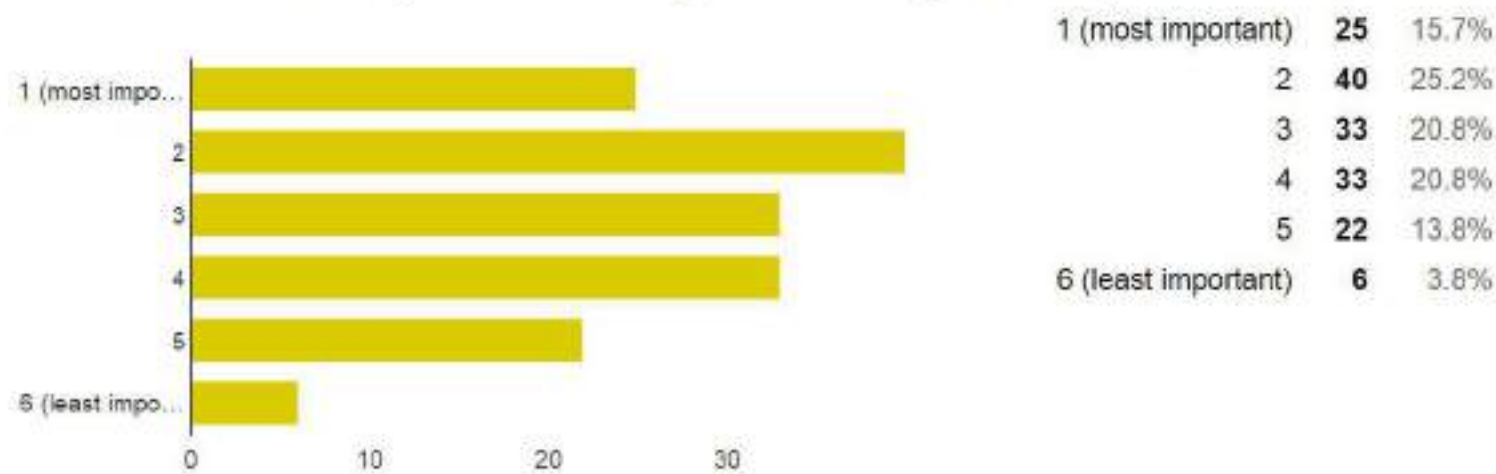
Safe and accessible bike routes [Rate the following in order of importance?]



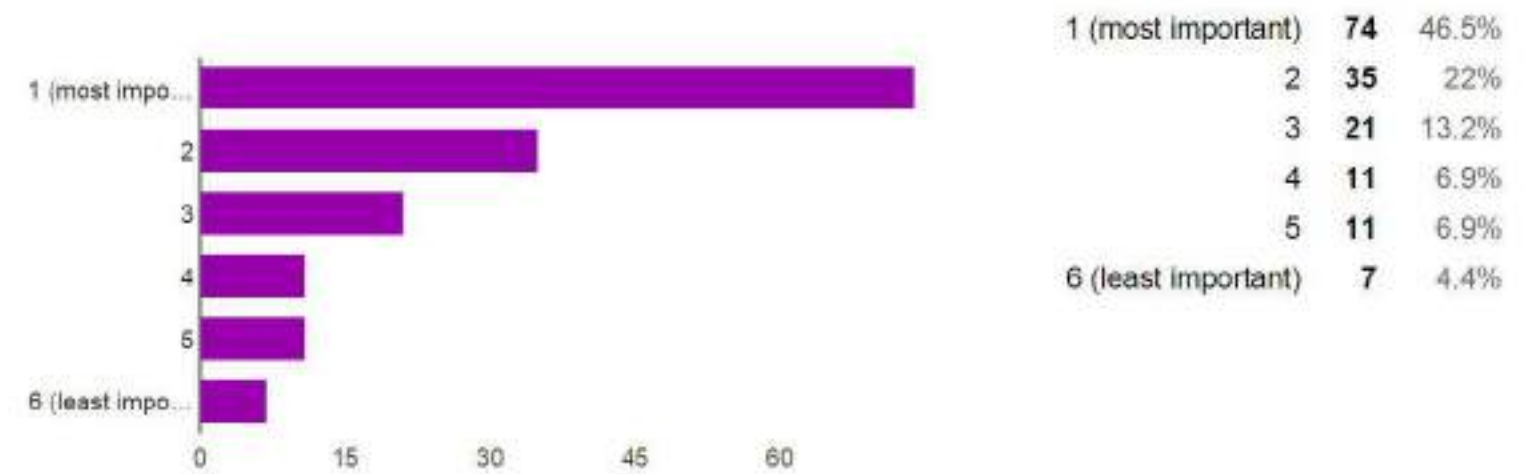
Walkability throughout the neighborhood [Rate the following in order of importance?]



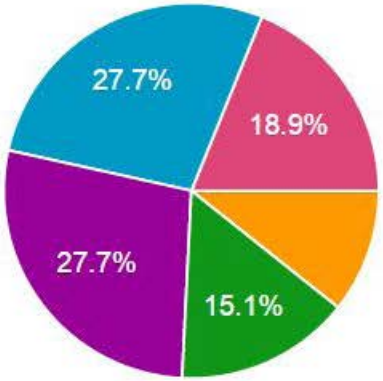
Local recreation areas [Rate the following in order of importance?]



Pedestrian safety [Rate the following in order of importance?]

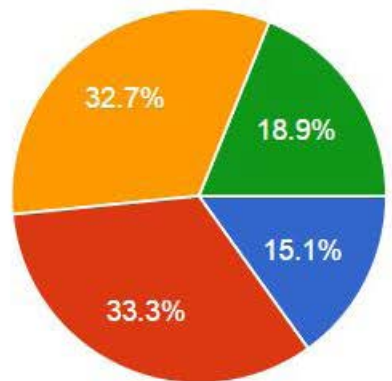


What is your age



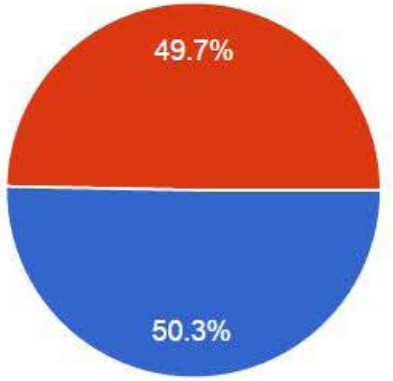
Age Group	Count	Percentage
Under 18	0	0%
18 – 25	0	0%
26 – 35	17	10.7%
36 – 45	24	15.1%
46 – 55	44	27.7%
56 – 65	44	27.7%
66 and over	30	18.9%

How long do you plan to be a resident in the area?



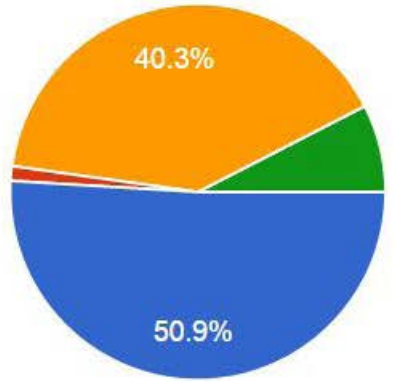
Duration	Count	Percentage
0-5 years	24	15.1%
5-15 years	53	33.3%
15-30 years	52	32.7%
30 + years	30	18.9%

Would you prefer to bike or walk to work as opposed to driving?



Response	Count	Percentage
Yes	80	50.3%
No	79	49.7%

How often do you walk to destinations during the week?



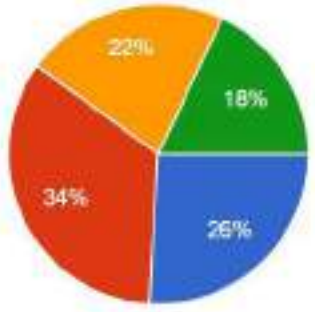
Frequency	Count	Percentage
Never	81	50.9%
Always	2	1.3%
1-3 times a week	64	40.3%
4-7 times a week	12	7.5%

Better side walks on Powers Rd. between 11mile and 10 mile.
 Better roads
 Curb appeal. Pleasant walking conditions. Produce Market.
 All of the empty buildings to be filled. Starting to look like a ghost town in places. Would love to see school bond proposal pass...
 bike lanes on all streets
 Safe long continuous walking trails for exercise and leisure walks
 Social activities
 Paved streets
 Designated bike paths would be great. I think some nice landscaping would also improve the corner of the 10 & Orchard Lake area. On another topic, other cities ticket residents who don't take in their trash cans in a timely manner. I think Farmington/Farmington Hills should join that tradition.
 Safer crossings at major intersections.
 Although I do not use public transport, I feel badly for employees who need it to get to jobs in this area. They need buses and sheltered bus stops. I very much want another grocery store at 10 & Orchard Lake. I would never, never, ride a bike along either Orchard Lake Rd or 10 Mile even with a dedicated bike lane.
 More shops, restaurants, bars, bike trails. More recreation areas for the community to gather.
 Paved streets that are not a patchwork
 Walkable shopping
 Safe bike paths and pedestrian crossings
 More curb appeal at various intersections at the outskirts of downtown proper. 10 mile/Orchard Lk, Grand River/Halstead seem to be the most in need. I'm glad to see improvement going on at the grand river/halstead (former Kmart) location. Wondering about the status of the abandoned gas station at Gr river and Halstead. It will quickly fall into disrepair and become an eye sore if something isn't done soon. Not a fan of the ice rink downtown. Doesn't seem to get much use for what it probably costs the city and therefore the taxpayers.
 Better and more relevant shopping within walking distance. Better grocery store, a Trader Joe's type store, a good fruit market, a hardware type store such as a Home Depot.
 People drive too fast down our street and there are no sidewalks so children, runners, walkers and bikers have to use the street. Biker and runner paths.
 Less services and lower taxes.
 Walkable neighborhoods, shops, restaurants almost like a downtown district. Some sort of better access to public transportation that reliably connects the whole metro area, including downtown Detroit. Revitalizing of some areas that look decaying or rundown, such as the southern part of Grand River in Farmington Hills.
 general sidewalk maintenance for all business and residences on mail roads such as ten mil and orchard lake... such as sidewalk clearing of snow with no restrictions such as snow plw hills blocking them, etc...
 Improved bike paths More urban feel to the dining/shopping/recreation
 To see vacant buildings filled with good businesses. The strip malls need continual work. A large indoor sports complex (Baseball/softball/soccer)...for the Farmington community - not Total Sports. Improved stairs to Downtown from Shiawassee Park. Concessions Stand and better bathrooms at Shiawassee

Park.
 More restaurants, bars, and entertainment for single people ages 25-35.
 good zoning keeping area residential (no ugly old strip malls, require strip malls to be visually updated) good traffic congestion methods continued good maintenance of Orchard Lake median (the seasonal perennials - like and very much appreciate) planting of more median trees, annual flowers, decorative lamp posts with hanging flower baskets at intersection, etc. (I am a supporter of Greening of Detroit) quality control automatic median sprinklers so that they are not wasting water by not being accurately adjusted i.e. watering road vs grounds, watering during/after rain, etc.
 I live in Staman Acres- We need a gradual turn off Orchard Lake to avoid an accident- (Rocky Crest turn-in street). Also better lighting in our sub (safety). Diversity of local shopping, business and entertainment. Connecting different areas of community with walking, biking accessibility and public transport. Integrated multiple public plaza space throughout the community. Not necessarily large spaces but more available outdoor places to meet, sit, eat lunch, read, study etc around the community. Public transportation is the future.
 Less sandwich shops + more
 Streets with ditches in front of homes should have side walks for the safety of kids to ride their bikes, for parents safety to walk their child in a stroller and children and adults should have a safe place to walk down the street; ex. Lamar Street
 Designated walking areas along Power Road; we're within walking distance to downtown area but would need to walk in the street to get there. For vacant business to be filled (Grand River and Drake) (Grand River and Orchard Lake)
 Use some dynamite on that mess on Moody and Grand River. Try to get a good supermarket at Ten and Orchard Lake. Keep Ten and Orchard Lake free of any more building projects. There are enough "see-throughs" in the area.
 More green areas and bike routes
 NA
 Definitely need better American restaurants in the area
 More neighborhood businesses.
 More restaurants
 Better maintenance of the sidewalks, especially in the winter.
 More bike lanes, bike safety training for bikers and motorists.
 more bike paths (or wide, paved shoulders) on most roads.
 Fix up the 10 Mile and Orchard Lake Rd area, some of it seems rundown. The gas station on the northwest corner needs to be updated or closed. The strip mall on the north side of Grand River across from the old winery needs to be fixed up or torn down. There needs to be more parking in downtown Farmington, especially with all of the weekend events.
 I am happy with everything as it is.
 Consistently friendly shops downtown. Don't feel welcome shopping there.
 raised pedestrian walkway over Orchard Lake Rd, increasing accessibility
 A few more destination type businesses, like a coffee shop. Sidewalks and a bike lane along Ten Mile. General improvement to the appearance of the infrastructure in the area. Easier walking access to downtown, and bike access in and out of the neighborhoods on each side of the intersection.
 Roads (pot hole repair)

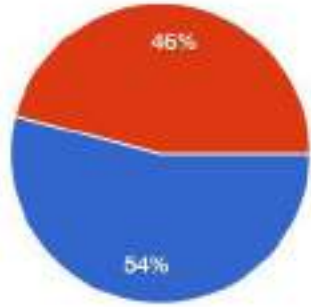
Cleaning up of the neighborhood and of the strip malls in the Area. The strip malls seem to be falling apart along with parking lots.
 Better timing of the traffic lights at Orchard Lake & 10 mile - Opposing signals are not synchronized the same, which deceives people trying to determine when it's safe to turn right on a red, or safe to turn left. Also, the left turn signal has a very short yellow, causing people to complete left turns on a red, or get stuck in the intersection. Some people speed up to catch the yellow, which instantly puts them into a left turn on red.
 More parking in downtown Farmington. New businesses in the vacant stores
 Safety for walking and biking
 1) Space such as that on Mooney and Grand River occupied - not vacant. 2) An enforced restriction on fireworks over July 4. It has become a week long annoyance that disturbs the sleep of people on shift work, scares children and pets, and leaves debris in the streets and on others' lawns.
 Sidewalks are not shoveled by property owners in the winter months. Vegetation that encroaches on sidewalks is not maintained by property owners in summer months. Vehicles are commonly parked in ways that partially or completely block the sidewalks. If you are serious about improvement projects, please focus on the basics first and ensure that the sidewalks/bike paths we already have in the city are periodically reviewed and maintained. Please advise property owners of their obligations regarding sidewalks/bike paths that are on their property.
 Sidewalks! Bike lanes. A grocery store and more restaurants. MORE TREES!
 More grass.
 More areas for walking or running or biking cleared in the winter.
 I think Farmington should take a cue from the work that has been done in Northville and Plymouth. People frequent those areas because of there is a combination of family friendly restaurants (not necessarily chain restaurants) and shops that carry unique items. This also could be implemented in the uptown area of Farmington, especially on Mooney Street between Shiawassee and Grand River. The stripe mall that formerly housed a hardware store (that was a great addition to the community) has become an eyesore. Aside from Art on the Grand, Farmington doesn't have an attractive summer festival. The Farmington Founders Festival used to be a great attraction, but in recent years it has deteriorated into an embarrassment of cheap crafts and carnival rides.
 More local shops and eateries including local Michigan breweries, coffee shops and arts & crafts.
 I live in the Bel Air subdivision and actually walk quite often to Walgreens. I don't see many other residents do this; fortunately there are nice sidewalks in the sub. When repairs were made to the intersection at 10 mile and Orchard Lake last year, they did a very nice job with the pedestrian walkway features across Orchard Lake. I don't think safety can be improved on that, it is just a fairly big road to cross. I would like to see the strip mall repaired and some green infrastructure features installed, bioswales to capture parking lot runoff. Just overall softening the look of it would be good. Tree plantings would help make the neighborhood look a little more sophisticated. You may also want to consider seating areas around Greene's hamburgers, that is probably a place that would be used most in regards to a park commons area. The businesses that are currently at the intersection make sense and what the demographic will support. I would make sure to ask them what they want. An event like a

How close do you live to school?



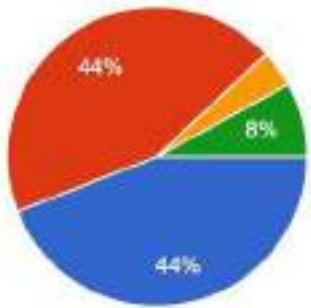
Could walk to school easily	13	26%
Could bike to school easily	17	34%
Long bike ride to school	11	22%
Really far	9	18%

Would you prefer to walk and or bike to school?



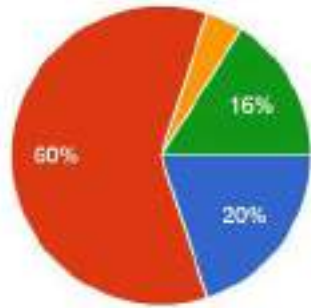
Yes	27	54%
No	23	46%

What do you typically do after the school day?



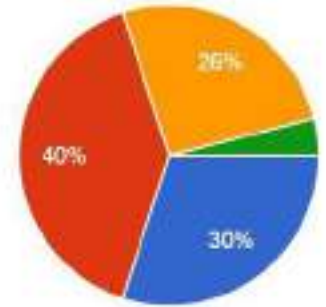
Go home	22	44%
Extracurricular activities at school	22	44%
Patron local businesses	2	4%
Other (please be specific)	4	8%

How do you get to school?



Bus	10	20%
Personal automobile	30	60%
Bike	2	4%
Walk	8	16%

What would cause you to bike or walk to and from school?



Nothing	15	30%
Safe bike lanes and walking paths	20	40%
Group of friends to bike/walk with	13	26%
Secure bike storage	2	4%

TEAM 6

Step 1 - Team roles
Establish a team leader (they will serve as a spokesperson for the group) and a scribe (they will make sure all ideas get recorded).

Step 2 - Be Creative and Daring
We are collecting ideas that will inform future design concepts. Therefore we are interested in all ideas big and small.

Step 3 - Design
Using the provided trace paper, markers, and tape make sketch ideas, discuss ideas, and make notes. Any medium of conveying ideas is welcome. What is important is that ideas are captured somewhere and somehow.

6:30-8:50: How do we improve non-motorized transportation?

Where are additional bike lanes needed?
Do not continue
Where should bike lanes be located?
What makes people feel safe when riding/bicycling?
Less traffic
More landscaping
More lighting
More seating
More green space
More trees
More benches
More water features
More art
More public art
More community events
More social spaces
More seating
More lighting
More landscaping
More green space
More trees
More benches
More water features
More art
More public art
More community events
More social spaces

8:50-7:30: How does the intersection become a focus or destination?
- Pizza house
- Ice cream
- Fast-casual dining
- Mini-downtown
- More seating
- More landscaping
- More green space
- More trees
- More benches
- More water features
- More art
- More public art
- More community events
- More social spaces

What recreational activities could be facilitated with some design modifications to the intersection and the area adjacent?

Art park in green undeveloped land
Paintball, color run, mixed-use zoning

Table 2-

Step 1 - Team roles
Establish a team leader (they will serve as a spokesperson for the group) and a scribe (they will make sure all ideas get recorded).

Step 2 - Be Creative and Daring
We are collecting ideas that will inform future design concepts. Therefore we are interested in all ideas big and small.

Step 3 - Design
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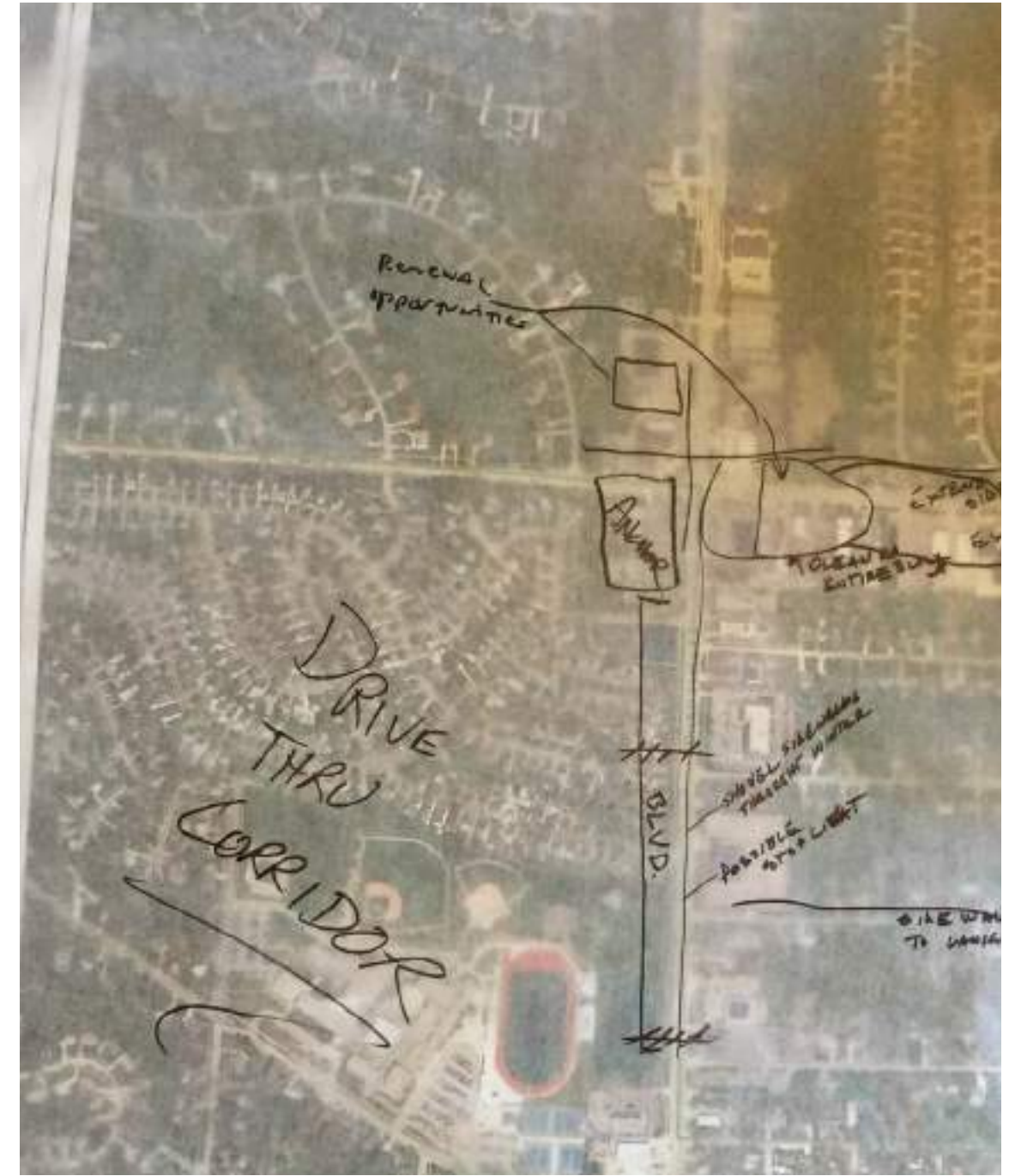
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- More water features
- More art
- More public art
- More community events
- More social spaces

What recreational activities could be facilitated with some design modifications to the intersection and the area adjacent?

Art park in green undeveloped land
Paintball, color run, mixed-use zoning



PUBLIC CHARETTE



7:10-7:30: What is the community identity of the area?

What is the desired aesthetics of buildings, streets, and sidewalks?

Better lighting - attractive not vapor lights

What types of materials should be embraced in future designs? - Similar to the Dressbarn/TJ Maxx remodel in downtown Farmington on Green Street

Natural stone

How can the community values of Farmington/Farmington Hills be showcased?

7:30: Report Out and Wrap Up

- Or -

1950s diner (Green's) incorporate theme into updates

Bike Shop that opens on the weekend.

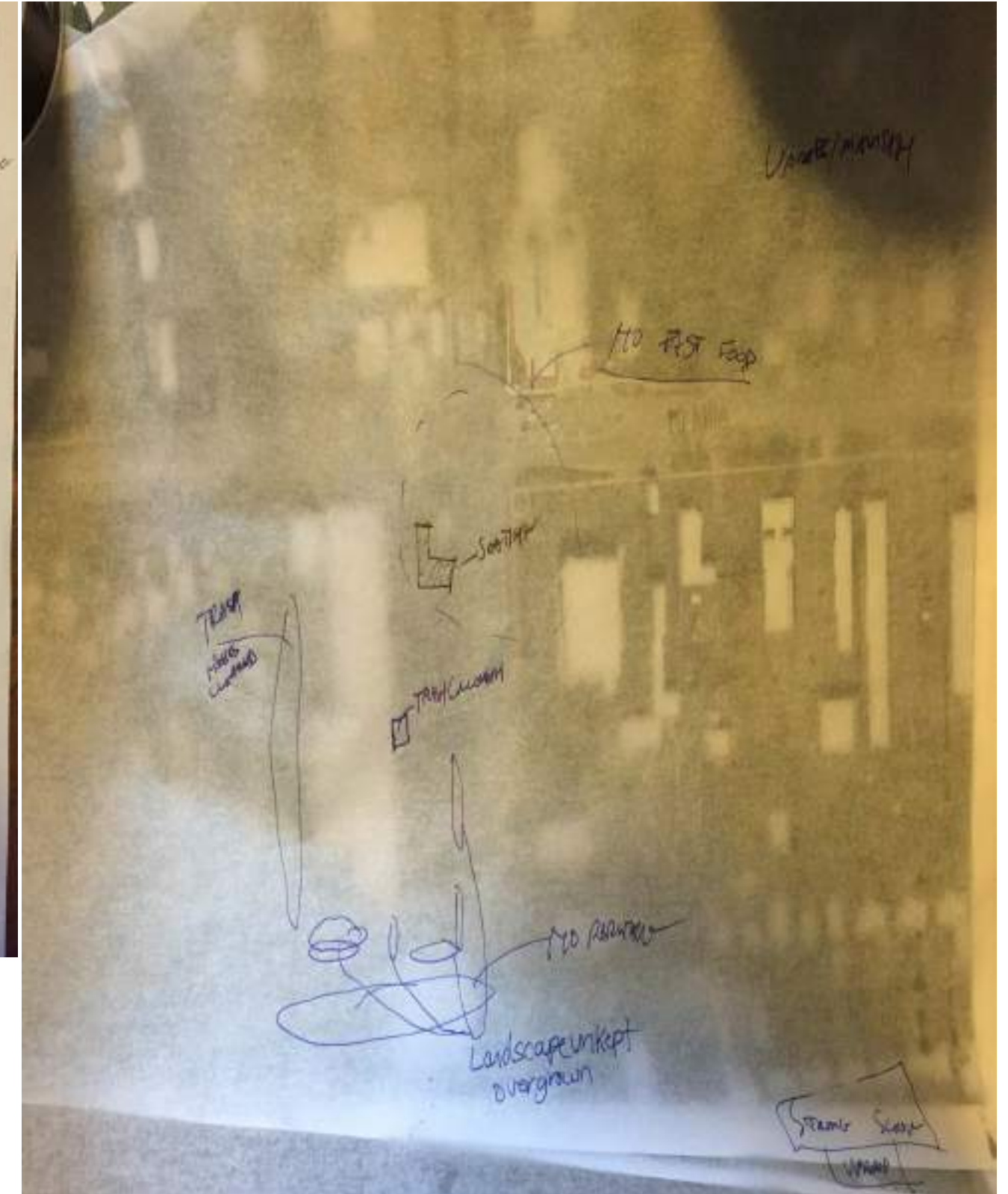
Bike Racks @ Green's

Would like to see the lot, next to the liquor store, have a permanent provision for the Saxton's Power Sales (seasonal)

What are the zoning ordinances for that intersection? Do they require upkeep?

Any incentive for the strip mall owner to improve property?

Illuminating Concepts - in neighborhood - contact for street lights



PUBLIC CHARETTE

ANALYSIS HYPOTHESIS

Working form information obtained through public engagement, and research, visioning principles were established to guide the design process.

REIMAGINED URBAN FABRIC

- Surrounding commercial and residential areas seem to be in disharmony, we want to explore how they can be more supportive of one another. Particularly in terms of making the diverse building and land use typologies feel cohesive:
- Currently the intersection serves as a formal divider of neighbors in each cardinal direction, this makes the community feel divided. But should really feel like a monolithic urban experience.

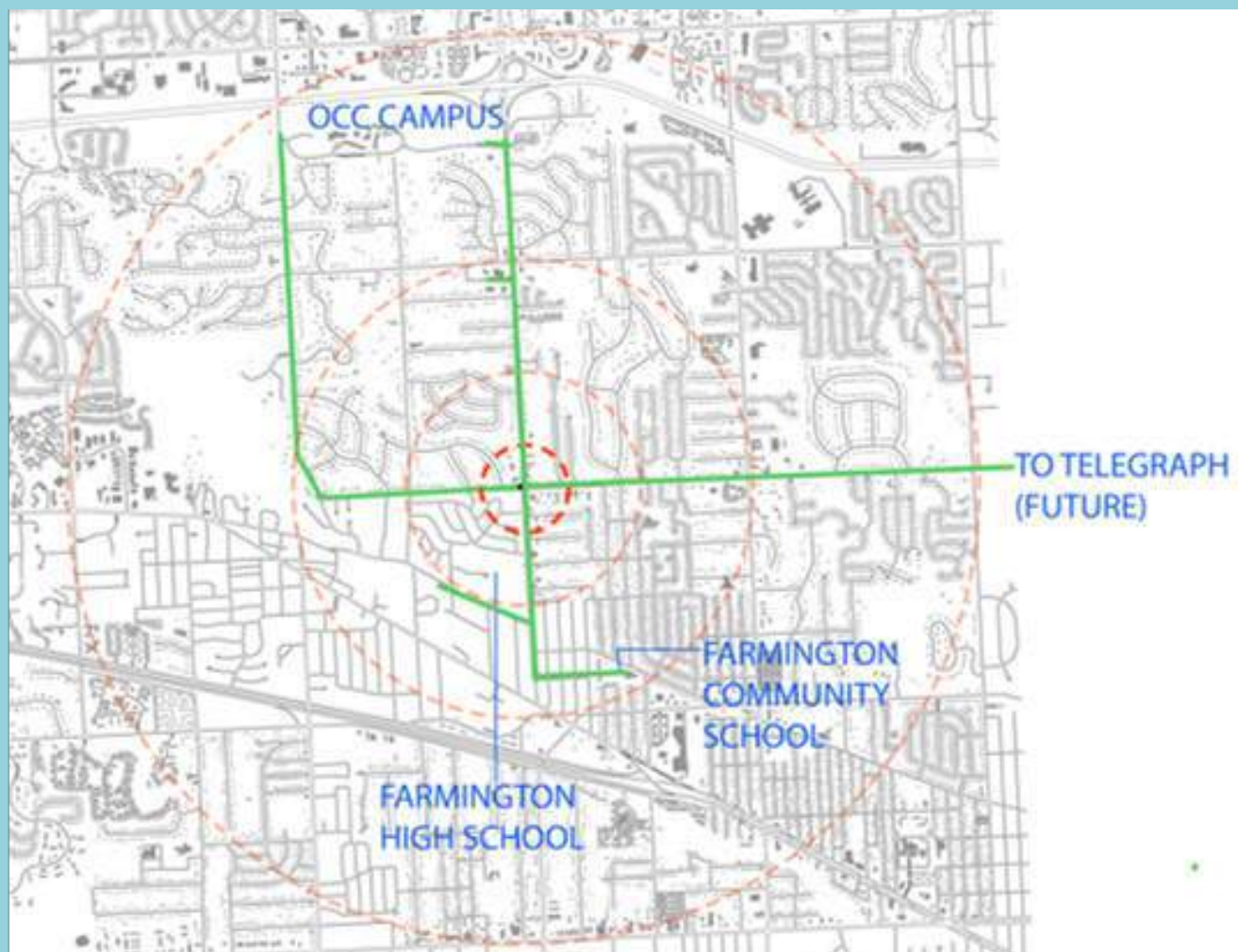
IMPROVED PEDESTRIAN EXPERIENCE

- Existing conditions are not accommodating/supporting pedestrian activities.
- Function as mechanism for prompting people to walk.
- Considering the study area is more residential than commercial, it is recommended that the stretch between Ten Mile and Grand become a pedestrian corridor connection.
 - Serves as a connection for buses 805 and 704
 - Prominent and enjoyable walking paths
 - Pleasing natural landscapes
- Make the pedestrian feel safe at all times of day.



REVISED CIRCULATION SYSTEMS

- Provide transit that connects bus lines better.
- Recommend integrating bike paths to begin to develop bike network throughout city.
- Consider narrowing streets and perhaps slowing cars to reduce sound and pedestrian danger.



POTENTIAL BIKE PATH NETWORK

CONNECT COMMUNITY

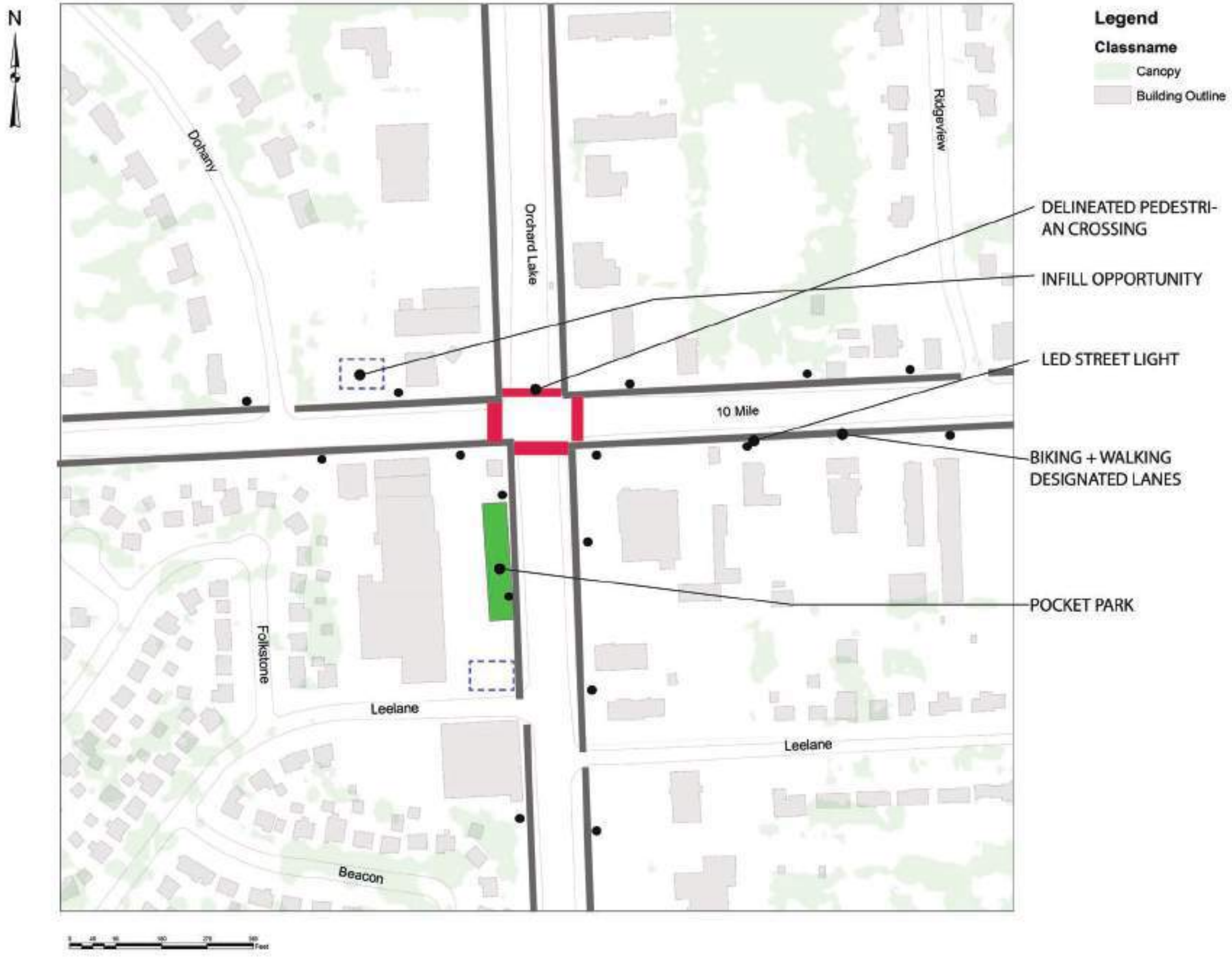
- Intersection can serve as community connection of amenities, educational institutes, and public transportation.
- The intersection is actually rather symbolic of the societal exchanges between Farmington and Farmington Hills; this should be expressed in future design.
- Create public realm opportunities for people to engage with one another, and build community, building off of the precedent of Greene's.
- Create benefit for all surrounding subdivision.

DESIGN FOR FUTURE DEMOGRAPHICS

- Future predications indicate that over the next 20 plus years the age demographic of local residents will change dramatically.
- The area should be attractive to people primarily within the age range of 35-59.
- Consider how focus area can also be of value to children and teens. This age range is the nearly the second highest projected age demographic. And is important if the intersection is to be a central node for the schools in the area.
- The design proposal must also accommodate the elderly and retired.
- More people are actively seeking out walkable and sustainable communities to live in.

PROPOSED DESIGN

CONCEPT DESIGN



Legend
 Classname
 Canopy
 Building Outline

RECREATION/AMENITY DESTINATION HUB
 THE TENMILE AND ORCHARD LAKE ROAD ARE POSITIONED TO BECOME A HUB OF ACTIVITY

DELINEATED PEDESTRIAN CROSSING
 BENEFITS: Increased pedestrian safety, adds visual value to environment, improves overall walking experience.

**INFILL OPPORTUNITY
 POCKET PARK**
 BENEFITS: Increases pedestrian activity, promotes walkability, builds community through social interactions.

**INFILL OPPORTUNITY
 PEDESTRIAN ISLAND**

PEDESTRIAN CORRIDOR

VEGETATED TREE-LINED BUFFERS
 BENEFITS: Increases pedestrian comfort (for shade during summer), aids with solar radiation reduction and storm water management, creates a more enjoyable pedestrian experience.

STREET LIGHTS
 BENEFITS: Increases pedestrian safety and activity during evening hours.

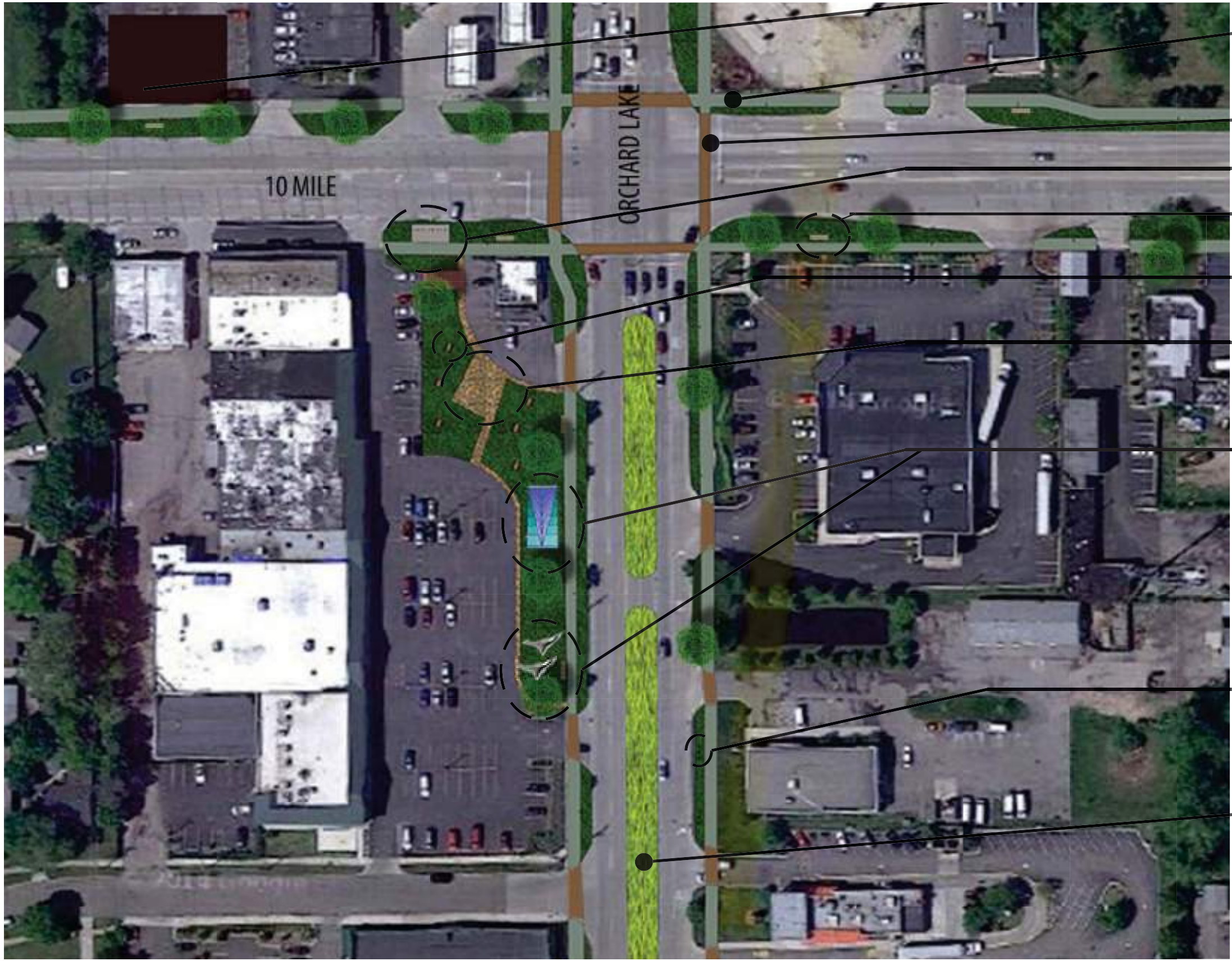
BIKING + WALKING DESIGNATED LANES
 BENEFITS: Encourages more pedestrian activity, makes walking and biking safer, creates pedestrian linkages amongst local destinations.



VEGETATED BOULEVARD

BENEFITS: Noise reduction, storm water runoff mitigation, solar heat reduction, improved air quality.





10'-0" SHARED WALKING/BIKING PATH

PAVED CROSSWALKS

BIKE PARKING

SITTING BENCHES

PICNIC BENCHES

PUBLIC GATHERING/OUTDOOR EVENT SPACE

PUBLIC ART INSTALLATIONS THAT CAPTURE AND REFLECT THE CULTURAL/SOCIAL IMAGE OF THE COMMUNITY

STREET LIGHTS AT REGULAR AND CONTINUOUS INTERVALS

BIOSWALE THAT USES LOW RISE VEGETATION TO MAINTAIN BUSINESS STREET VISIBILITY, WHILE MITIGATING STORM WATER RUNOFF



PROPOSED SUB-AREA PLAN

The proposed subarea plan seeks to increase pedestrian connectivity with enlarged shared biking/walking paths, pedestrian comfort is enhanced with more trees for shading and night time street lighting. and bike storage is accounted for. The intersection becomes a destination with a shared public park space that encourages social interactions and increased patronage of local businesses. Environmental sustainability is prevalent by reducing negative solar heat gains by reducing pavement with vegetation, and introducing a bioswale for stormwater management. The intersection also becomes a celebration of the boundaries of the two cities with art that is reflective of the local culture.



1st Phase



2nd Phase

REVISED INTERSECTION WITH PARK

10'0" SIDEWALKS FOR MUTLI-MODE WALKING AND BIKING

PROPOSED PHASING

To begin the project it is recommended sidewalks are increased in width, and the intersection adapts suggested design revision to functions as a viisoning for an eventual re-design of the entirety of Orchard Lake Road to serves as a pedestrian corridor



PEDESTRIAN
CROSSING
ISLANDS

3rd Phase



BIO-SWALE
BOULEVARD

4th Phase

PROPOSED PHASING

Next it is recommended to install temporary pedestrian islands that would instantly increase pedestrian mobility and safety to cross Orchard Lake Road. The last phase suggests continuing a bioswale down the entire length of Orchard Lake Road between Ten Mile and Grand River.

APPENDIXES

APPENDIX A PLACE PLAN PRECEDENTS



Dearborn – population 98,153
Transit-oriented Development
 The site would serve as a focal point in the community, designed to support local and regional commuter needs, establish connectivity between attractions and locations of interest within Dearborn, and complement the redevelopment of a vibrant downtown space.



Detroit – population 713,777
Brownfield Redevelopment
 The Southwest Detroit project engaged neighborhood residents, businesses, and community organizations in developing concepts for the reuse of a vacant, city-owned brownfield at the intersection of Vernor and Livernois.

Placemaking is a dynamic, strategic approach to community development and economic revitalization based on an individual community's strengths within core "quality of life" areas. PlacePlans promotes a comprehensive understanding of a community's place-based assets, and provides the tools and strategies to best leverage them.

The PlacePlans process is customized to each project and community, but each involves an intensive community engagement strategy, including a public visioning session, several public meetings to provide specific input and feedback, and direct work with key community stakeholders along the way. PlacePlans projects will positively impact each community's ability to leverage their place-based assets as economic drivers, and will provide lessons large and small for communities across Michigan.



Flint – population 102,434

Multi-modal Greenway

The Grand Traverse Greenway is a 3-mile-long former CSX railroad line that the City of Flint has been working to acquire and convert to a bike/walk trail with support from MDNR and MDOT



Alpena – population 10,483

Public Plaza

The city of Alpena is focusing on development of a plaza in the heart of downtown Alpena. The plaza would serve as a focal point in the community, designed to accommodate events and public gatherings

APPENDIX E RESIDENT SURVEY COMMENTS

There are a great many senior citizen residents in this area who don't walk or ride bikes or work. Questions about public transport are better asked of non-residents who seek jobs in our area and small business owners who need them to staff their businesses. I can't stress enough how much I miss the grocery store at 10 Mile & Orchard Lake Rd. It would be good if the city could provide an incentive to a small grocer to take over the space.

I expected to be in my house for 5 years. It's been 15 now. I don't want to give up the convenience of being able to walk downtown and having the other services so close. Being able to walk across the street to get groceries has been one of the best things I didn't know was essential to a home.

If taxes remain so high, we may need to move. We'd like fewer services and lower taxes.

Thank you for taking our input into consideration! I love the idea of biking and walking to more places with my family.

Quality of life issues: 1. Excessive dog barking and leash enforcement throughout the city. 2. Speeding cars, trucks and even school buses must slow down. 3. Encourage residents to take better care of homes and businesses. 4. A full traffic control light at Power and Shiawassee Roads and a flashing light crosswalk sign for the park with speed bumps in both directions. 5. Outdoor Drinking Fountains for people and pets located throughout the city green ways, bike trails, residential areas and any place where there is a thirsty crowd. 6. More public waste receptacles throughout the city not just downtown. 7. Security cameras throughout downtown. 8. Disallow door to door solicitation except for schools and scouts. 9. Aggressive enforcement of noise ordinances.

Lamar needs to be paved, there is no sidewalks. How can my grandchild walk to school? No transportation by bus provided.

currently not feasible to bike/walk to work with 20 mile commute we recreational bike during seasonal months around area in the evenings, to go to casual restaurants, city events downtown Farmington, etc. may have elderly parents come live with us that might use public transportation ** more/better/improved senior services I think the area already has good bike/foot paths I like living south of 696 because traffic is less - easy access to 696, quick to get thru intersections/traffic lights s of 696 the Orchard Lake Rd median is more visual pleasant than n of 696 lived in several Oakland County areas with same good amenities i.e. Rochester Hills, Berkley, Huntington Woods (I appreciate the reduce traffic volumes in our immediate area!) - I am a 7th generation Detroiter from mid 1800s

Yes, It would be most helpful if you could inform the residents that this survey is coming to what a PlacePlan is. I've never heard of this and I don't understand what this means

for the intersection on 10 mile and Orchard Lake. Is there a plan to change this area?

Don't actually work. But I walk my 2 dogs 1/2 mile everyday. Could snow not tear up the edge of my lawn next to street. (Dohany)

Who is going to pay for all these potential changes? Bond proposals-like everything else?!

Unable to access website

I work 40 minutes away, and my spouse works 25 minutes away. The ability to ride bikes or take public transit would require a MAJOR change for the Detroit metro area. Having a train system like Chicago might work, but would be economically prohibitive, I'm guessing, as well as being a civil engineering nightmare.

Farmington remains a great community.

The City of Farmington has tremendous potential because it is a place where people can walk, run, bike etc....the more we can build up this infrastructure the more desirable this place will be. I'm 100% behind this initiative for Farmington.

Where is the focus on the 10 Mile and Orchard Lake intersection? This seems like a very poorly constructed questionnaire for the stated subject. As for walking or biking to work, we all might want to but distance and best use of one's time often precludes it. The howling winter winds outside my window also remind me that Michigan's weather is not always conducive to traveling unprotected. Personally, I make customer calls throughout the Metro Detroit area and the only way to do that is by car.

I look forward to your results in the Spring.

No able to walk

Thank you for taking an interest.

ORCHARD LAKE AND 10 MILE JUNCTION NEEDS RESURFACING. TRAFFIC IS NOT THE PROBLEM. 10 MILE ALSO NEEDS SERIOUS RESURFACING BETWEEN MIDDLE BELT AND ORCHARD LAKE ROAD.

Do not want to see sidewalks in our subdivisions.

I'm excited that Farmington/Farmington Hills is pursuing this funding and this direction. It will only help maintain the area as a destination to live, work and play in.

There has been great progress with projects like the repaving of 10 Mile west of Orchard Lake, and the downtown beautification work; hope to see continued progress!

The city has done an excellent job with downtown Farmington. Continue with that direction. Modest improvements spread widely will have less impact and drawing power than targeted efforts.

None

DO NOT pull the same kind of configuration on Farmington Rd between GR and S'wassee for the south of GR on Farmington Rd project. Whoever designed and approved

that project north of GR was out of their mind. Just because the fed's offer up some money (and the cities need to fill the remaining funds does not make it right. Spend the matching money elsewhere.

Maintain our roads with the money that was designated for the roads the gas tax. NO NEW TAXES! No roundabouts they cause minor accidents at a high rate.

Bike paths or lanes in this area would be a complete waste of taxpayer money.

with winter, it is frustrating not to be able to use sidewalk at length... some are cleared but in-between not so much and plows put the hills right on them...

No

Please don't do something stupid like putting in a roundabout & ruining the neighbor!

I have lived here my whole life.

This should be an inretesting exercise. Before I heard of the program for the area, my wife and I often commented that none of the existing businesses or architecture suggested a coherent plan - all haphazard. No real appeal as a destination. There have been numerous failed businesses in the area. The demise (long ago) of Pizza Hut, the old Wendy's, Big Boy, Bellaire Lanes, and others rendered the intersection area way less family friendly. I'd like to ride my bike to the 12-Mile PO, but that would take quite a bit of planning to do so safely.

My feeling and disappointment with "planning" is that it's done to suit a "vision" of someone who won't make this area their home. This is a smaller-home, family & neighbors area, not another strip mall mocha-chino land waiting to happen for tax dollars and a newspaper feature story. A few questions will not do, just to say you asked for input from the community. Perhaps I should be on the committee so it doesn't get screwed up for everyone! I know this sounds harsh, but I truly fear just this kind of survey and my area becoming another messed up pseudo downtown. It should be kept a quite community - we are, after all, the "gateway to da hood" , being up Grand River, so we don't want to attract attention for criminals (I read the paper).

Although beauty is important, so is budget. I'm concerned about the future of Farmington Hills. I saw Detroit go bankrupt. I don't want to see more of that. I would also like to keep our property taxes from rising. Improvements cost money.

I wish the sidewalk all the way around the block (10-mile to Middlebelt to 11-mile to Orchard Lake) was plowed in the winter. I run that path a LOT and now not so much because there are large sections not shoveled.

Ram currently in the process of fixing it up to move in. Until now I have lived for ten years in Detroit's Corktown neigh-

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Reduce taxes, on a fixed retirement income, school vouchers. am currently in the process of fixing it up to move in. Until now I have lived for ten years in Detroit's Corktown neighborhood. I chose this house specifically for its proximity to downtown Farmington, and this house was the closest to downtown that I could afford. I am very much looking forward to biking downtown in the summer, and I was very glad to see this survey in the mail and Farmington's acknowledgement of the importance of quality of place! Thank you for heading in the right direction!

We're disappointed in those who have occupied the strip mall's main store, the grocery. It's more of a foreign type store, not what we want. Really don't know why they've moved in there. Observations show this store, such as the previous owners don't get that many steady customers. So we shop elsewhere. We don't work, retired. We may not live here much longer. Been here over 40 years and may seek retirement elsewhere. We're surprised nothing's been done to this intersection earlier. Why? Basically, it looks old, and it is! The problem is there are major grocery stores not far from this area. You need to find something that would lure shoppers not just the occasional person coming in for a few items now and then. The intersection needs more trees and flowers or some kind of a garden arrangements to spruce up what we feel has been a drab spot to look at to say the very least. But may come a bit too late for us, if nothing's done within the next few years.

Farmington just isn't as appealing as it used to be!!! I moved here in 1948, and it just isn't as friendly as it used to be. What you have done to downtown is unforgivable!!!! It is not senior friendly. Everyone who works there takes the best parking places.

1. The police are doing a really great job as are the Parks & Rec. staff. 2. I would like to see police walking/biking throughout the city. 3. Encourage businesses and apartment complexes to install video cameras around their property to discourage car jacking and other crimes. 4. Continue planting trees, bushes and flowers in the downtown area and parks and including milkweed and butterfly bushes to encourage Monarchs. 5. Co-op with Disney Studios to host an annual children film festival at the Civic Theater that would boost our family friendly persona and raise money for school programs.

Keep the burger joint on the corner-people love it-but a grocer that is not ZimZam or whatever it is called would be great. And more trees!

Since I have moved to Farmington because shopping + eating was close, we have lost Sam's Club, Hallmark, Franks Nursery, Big Lots, Steak Ale, grocery store, Kohl's, two hardware stores, Tuesday Morning -which thankfully came back,

Ponderosa (went there at least 3 times a month). So I eat out in Noki + do all my shopping at my boyfriends neighborhood in Utica/Rochester, when at this house.

Build a "district"!!!! I have to assume that would bring F. Hills attention and increase the popularity of the city as a desired destination to live.

I've lived in Haynes 35yrs. I am anxious to move mainly due to our deteriorating roads. How did 10 mile west of Orchard get resurfaced before our roads which are in worse conditions?

At our age, smooth sidewalks and roads are very important. Our street is so bumpy and hazardous we can't safely walk on it. Totally disgraceful.

City of Farmington does a bang-up job with snow removal! Keep it up . . . and thank you!

Please renew the zoning board and the other departments with younger people , more opened minded ! Don't make a white racist club out of Farmington Hills!!!

Not only is there a lack of relevant shopping within walking distance, such as the type of stores noted above, but the facade and parking lots of the shopping areas need to be upgraded. Additionally, the quality of some of the store already in the area need to be upgraded. For example, a fruit market recently opened at 10 Mile and Orchard Lake however it is sparsely stocked, the stock is of poor quality, and the stock is little of what an average shopper would be looking for.

Half built buildings in the community look pitiful. The mosque at 8 and Merriman has been half built for years. There are unlicensed vehicles that never move in driveways all over the community. Young people have forgotten or never been told "do not litter". Everyday I pick up their candy wrappers after they walk home from school. They are too busy saving the earth to be concerned about their own street. General litter everywhere is really looking bad in Farmington Hills. The Orchard Lake exit on 696 looks straight out of the inner city with gravel, trash, car parts and junk everywhere. It even has 3 foot weeds growing out of the concrete. Restore the beauty of Farmington Hills!

When I drive thru Orchard Lake and Ten Mile I see a lot of parking spaces at the office buildings and storefronts. Further North on Orchard Lake there are small businesses in those parking lot areas near the road. Places to get coffee or Specialty Businesses.

I would only walk to places if they were close <1 mile. If more people walked or biked I would probably follow. Right now it just doesn't fit in and don't know if it ever could. Provide opportunities for seniors to exercise on a daily basis. If there is not a public restroom downtown, I suggest that one be established.

The most important aspect of this area is the ability to drive

easily though the area. Please do not make any changes that would slow down traffic in the area. There are plenty of sidewalks and I have no difficulty walking from my home to Walgreen's, the eye doctor, or any of the other businesses In the area.

I'm not sure if a public transportation stop is planned for Orchard Lake Road, but from my home, particularly in the winter, it would be a snowy, slippery walk to get to it. If there were a place to park/ride e.g. 10 Mile and Orchard Lake parking lot, or even the parking lot on Mooney, I would gladly park and ride.

The first part of survey is misleading. Several items are of equal importance even though they don't look like it. I think the new sidewalks are great for walking dogs. Would be nice for more-Power Rd. Also trash barrels maintained by the city at bus stops. Corners, along sidewalks. Need good sidewalks going East from Orchard Lake along Eleven Mile Rd.

Parking has become very difficult in the downtown area. Find private source of money for any changes- not more taxation.

Even though I myself am not physically able to walk to most destinations, I think it is essential for this community to be safe for pedestrians, and have safe reliable public transportation. It binds the community, promotes better health, and encourages development of local small businesses. Also, continue to maintain a variety of parks!

Thank you for the survey. I would appreciate more walkability in the immediate neighborhood.

Think long and hard before making any changes. Everything is fine now, don't mess it up.

Love that you did a survey. Asking the people who live in the community seems obvious, but is often overlooked. Good luck and I look forward to any improvements that will be made to the community!

We need better grocery store options, closer to the area. Zam Zam is not cutting it.

Downtown Farmington is a comfortable area but lacks diversity. Of course, there is a fine line between allowing big restaurant chains in the area and keeping the small town ambiance vs. attracting elements that are not conducive to the small town charms. Having meaningful but careful change can be attractive to locals as well as increasing the tax base. How about doing something with the old K-Mart property at Halstead = Grand River??? A Trader Joes, Meijer, Various restaurants, Etc..Would be very nice, + frequented. Or, A Farmington Recreation Center , similar to Linvonia's.

I don't walk when it is too cold and icy out, so a couple months of the year. If I could walk to a bus stop I may be more motivated. Thanks for doing this project! I would

I don't walk when it is too cold and icy out, so a couple months of the year. If I could walk to a bus stop I may be more motivated. Thanks for doing this project! I would love to see a more walkable, and better designed neighborhood intersection. Also, The strip mall at Grand River and Orchard Lake really needs some help too (think Big Lots). Someone needs to force that strip mall owner to do some repairs, it is bringing the area down. Half that strip mall parking lot could be turned into green infrastructure.

Pedestrian safety awareness program or signage would be nice. We have nearly been run down in the crosswalk at 10 and Orchard Lake several times.

Maintenance of sidewalks. Must ensure snow is cleared in winter and vegetation is cleared in summer. Many areas have vegetation that partially or completely blocks visibility of pedestrians/bikers to vehicles and vice versa in the area of orchard lake between 10 mile and 11 mile. There are areas where sidewalks/bike paths just disappear or are non-existent. Church on 12 mile between orchard lake and middlebelt - there is sidewalk on either side, but you must go through a parking lot while on church property.

The strip at 10 mile should be further developed to be more community oriented with more local shops.

I don't see what this has to do with the 10 Mile-Orchard Lake intersection. The bus that had a route to my place of work was discontinued prior to 2005. I did catch it at that corner. I think it's safe to assume that most people who live in Farmington don't work on Farmington. Riding a bike outside the subdivisions is treacherous at best. Anyone biking to work would need to use the main thoroughfares and necessarily navigate through heavily congested, extremely dangerous-for-bikers, areas at all points of the compass. To wit: 12 Mile-Orchard Lake (unsafe for cars!), 10 MILE-ORCHARD LAKE (what's with those new traffic lights, anyway? Sometimes I don't know what's going on in my car), Halstead-Grand River (scary), Eight Mile-Grand River (multiple opportunities to die on a bike), Eight Mile-Middlebelt, and many similar intersections in between (IMO, it's just a question of time until someone is taken out on that ill-conceived yet scenic bike path on Power between Shiawassee and Grand River...). Farmington city planning, like most of suburban America, began with and evolved to accommodate vehicle traffic. Whatever you do at 10 and Orchard, while it might be prettier I can't imagine we'll see hoards of Farmington folk flocking to work on their bicycles. Good luck with that.

We have a great city, and it could be even better. Very much appreciate all your efforts! Please consider redoing the garish Christmas lights at city hall. The blue and purple are particularly offensive. People that visit us comment on how unat-

tractive they are. Compared to the lovely high class look of other area downtowns, it is a bit embarrassing. thank you for the opportunity to share my thoughts. Incentive for local businesses to have curb appeal, nice landscaping. Attention to crumbling roads.

**Farmington City Council
Staff Report**
Council Meeting Date:
November 2, 2015

**Reference
Number**
Submitted by: Kevin Christiansen, Economic Community Development Director

Description: Redevelopment Ready Communities Resolution

Requested Action:

Move to adopt the resolution as presented to implement the recommendations necessary to receive Redevelopment Ready Communities certification from the Michigan Economic Development Corporation (MEDC).

Background:

Joseph Meyers of the Michigan Economic Development Corporation (MEDC) presented the City of Farmington's Report of Findings for the Redevelopment Ready Communities (RRC) Program at the October 19th Regular City Council Meeting. City Council must adopt a resolution of support to proceed with the program and, ultimately, obtain RRC certification.

Agenda Review
Review:

Kevin Christiansen	Pending
City Manager	Pending
City Council Pending	11/02/2015 6:00 PM

RESOLUTION NO. (ID # 2045)**RESOLUTION NO. 11-15-****CITY OF FARMINGTON****OAKLAND COUNTY, MICHIGAN****A RESOLUTION OF THE FARMINGTON CITY COUNCIL ADOPTING THE IMPLEMENTATION OF RECOMMENDATIONS NECESSARY TO RECEIVE REDEVELOPMENT READY COMMUNITIES CERTIFICATION FROM THE MICHIGAN ECONOMIC DEVELOPMENT CORPORATION (MEDC).**

At a meeting of the City Council of the City of Farmington, Oakland County, Michigan, held on the 2nd day of November, 2015, at the City Hall, 23600 Liberty Street, Farmington, Michigan, 48335.

The following resolution was offered by _____ and supported by _____.

WHEREAS, the City of Farmington has engaged in the MEDC Redevelopment Ready Communities Program, including entering into a Memorandum of Understanding with the MEDC and undergoing an evaluation of the City's redevelopment practices as reported in the Redevelopment Ready Communities Report of Findings dated September 2015; and

WHEREAS, the MEDC has developed a program for certifying Redevelopment Ready Communities and the City of Farmington desires to achieve that certification by implementing best practices and recommended strategies for redevelopment; and

WHEREAS, the City of Farmington is currently updating its Master Plan and will utilize recommendations and technical assistance to ensure that development readiness is appropriately addressed in that document; and

WHEREAS, the program includes evaluating the strong partnerships with City boards and commissions related to development including the City Council, Planning Commission, Board of Zoning Appeals, and Downtown Development Authority; and

WHEREAS, after review of the Redevelopment Ready Communities Report of Findings, the City of Farmington is willing to proceed with the Redevelopment Ready Communities Program, to continue to implement actions toward certification, and to submit quarterly progress reports in order to obtain Redevelopment Ready Communities certification.

NOW, THEREFORE, BE IT RESOLVED that the City of Farmington, through its City Council, authorizes the implementation of recommendations necessary to receive Redevelopment Ready Communities certification from the Michigan Economic Development Corporation (MEDC).

AYES:

NAYS:

ABSTENTIONS:

STATE OF MICHIGAN)

Resolution (ID # 2045)

Meeting of November 2, 2015

)ss
COUNTY OF OAKLAND)

I, SUE HALBERSTADT, the duly-qualified Clerk of the City of Farmington, Oakland County, Michigan, do hereby certify that the foregoing is a true and complete copy of a Resolution adopted by the City Council of the City of Farmington at a duly-called meeting held on the 2nd day of November, 2015, the original of which is on file in my office.

IN WITNESS WHEREOF, I have hereunto affixed by official signature this _____ day of _____, 2015.

SUSAN HALBERSTADT
Clerk, City of Farmington

**Farmington City Council
Staff Report**

Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2042)**

Submitted by: Kevin Christiansen, Economic Community Development Director

Description: Grand River-Halsted Plaza PUD Amendment

Requested Action:

Approve

Background:

This item is review and consideration to amend the Grand River-Halsted Plaza PUD in order to modify the required/approved screening wall along the east side of the site behind The Tile Shop. Proposed plans are attached for your review and consideration.

Agenda Review

Review:

Kevin Christiansen Pending
City Manager Pending
City Council Pending 11/02/2015 6:00 PM

Tile Shop Renovation

37025 Grand River Ave. Farmington, MI



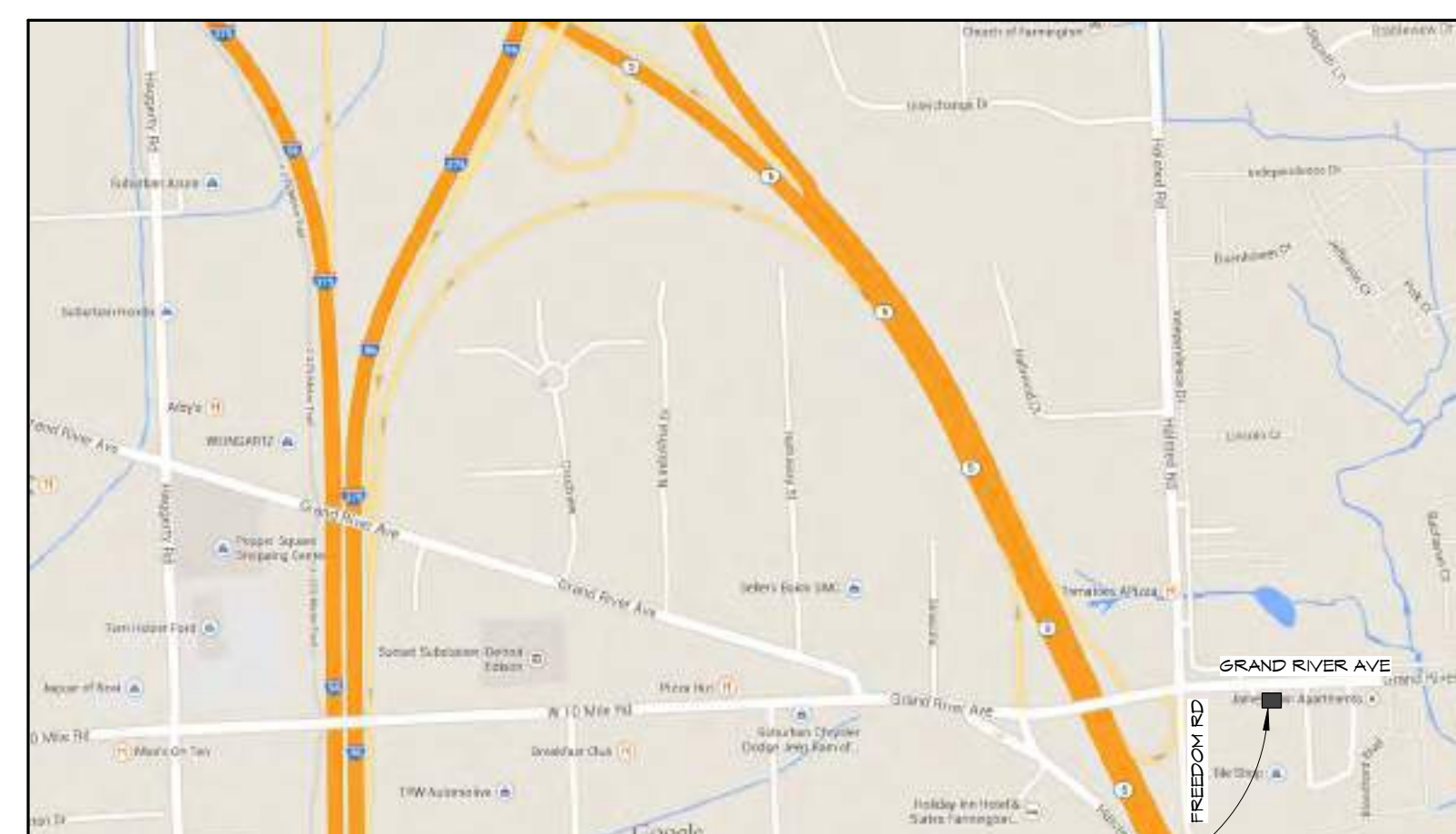
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Site Location



Location Map

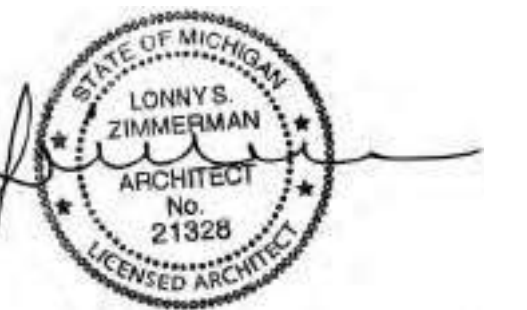
Index of Drawings

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A4	Elevations
A5	Building Sections
A6	Details
A7	Structural Details
A8	Structural Framing Plan and Truss Diagrams
A9	Specifications
A10	Site Screen Wall Plan/ Elevation (issued With Bulletin 2 Rev.)
A11	Site Screen Wall Details (issued With Bulletin 2 Rev.)

Civil	
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C3	Site Plan
C3A	Overall PUD Plan
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C8	Landscape Plan
C8A	Common Area Landscape Plan
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C13	Traffic Plan
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project name:
Tile Shop Renovation

project location:
37025 Grand River
Ave. Farmington, MI



date/ revision:
 ■ May 29, 2015 Bids
 ■ July 23, 2015
 ■ Aug. 03, 2015 Bulletin 2 (Revised)
 ■ Sept. 08, 2015 (Revised per OHM)

sheet title:
Cover Sheet

project number:
2075

sheet number:
A0

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project name:
Tile Shop Renovation

project location:
**37025 Grand River Ave.
Farmington, MI**



date/ revision:

- May 29, 2015 Bids
- Aug. 03, 2015 Bulletin 2 (Revised)

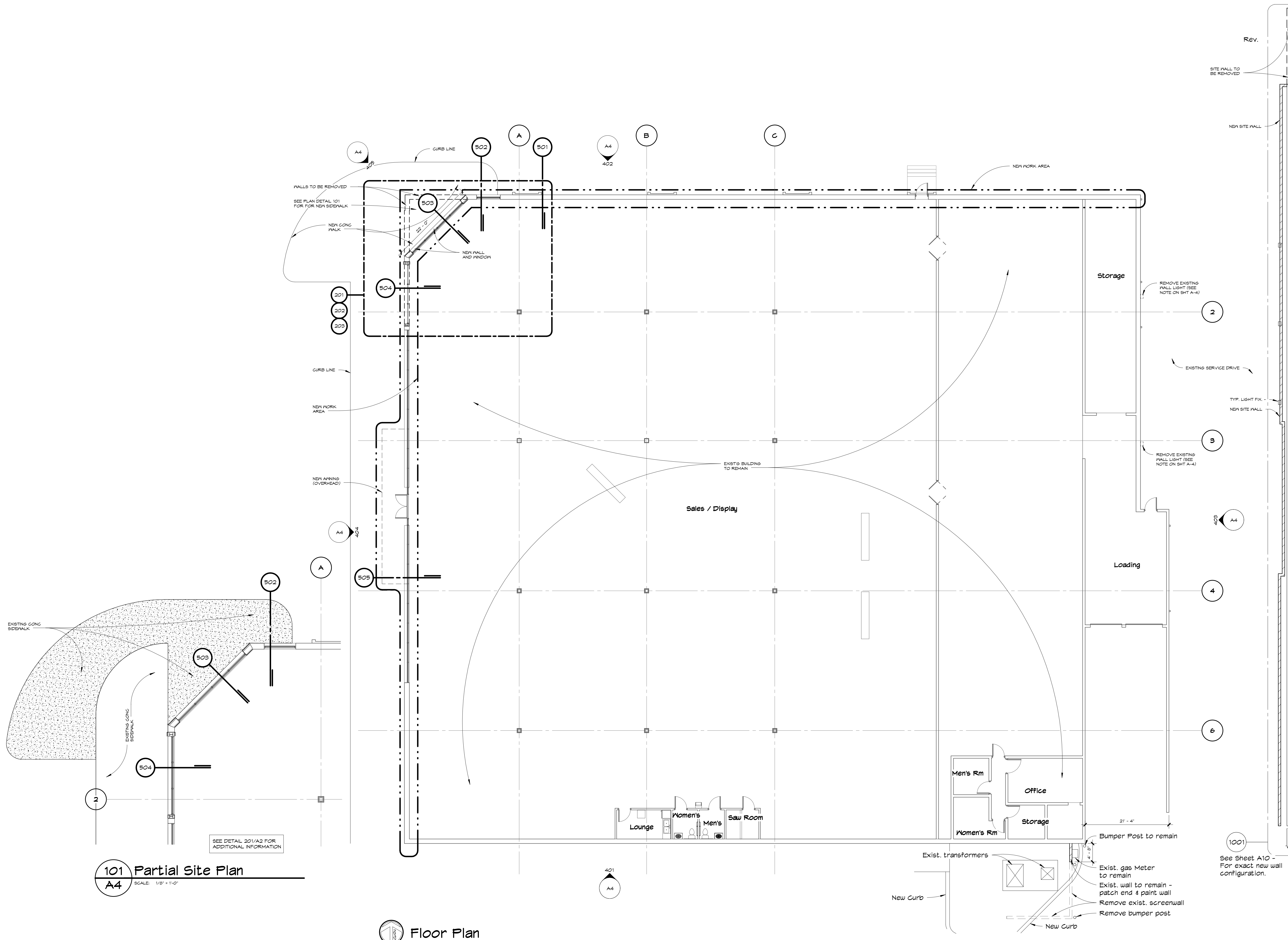
sheet title:
Floor Plan

project number:
2075

sheet number:

A1

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101 Partial Site Plan

A4 SCALE: 1/8" = 1'-0"

SEE DETAIL 201/A2 FOR ADDITIONAL INFORMATION

Floor Plan

project name:
Tile Shop
Renovation

project location:
37025 Grand
River Ave.
Farmington, MI



date/ revision:

- May 29, 2015 Bids
- June 12, 2015 Bulletin 1

sheet title:
Enlarged
Plans

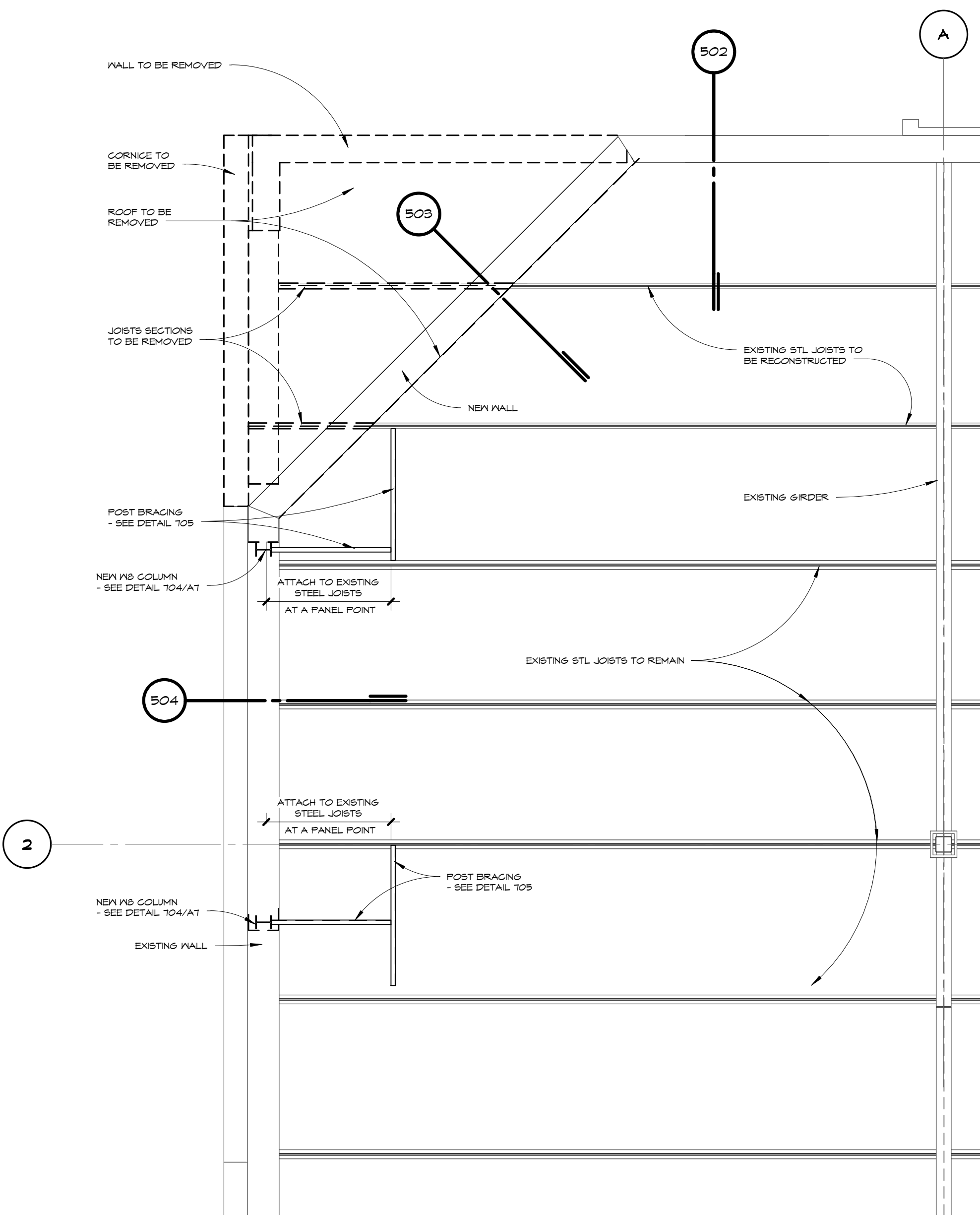
project number:

2075

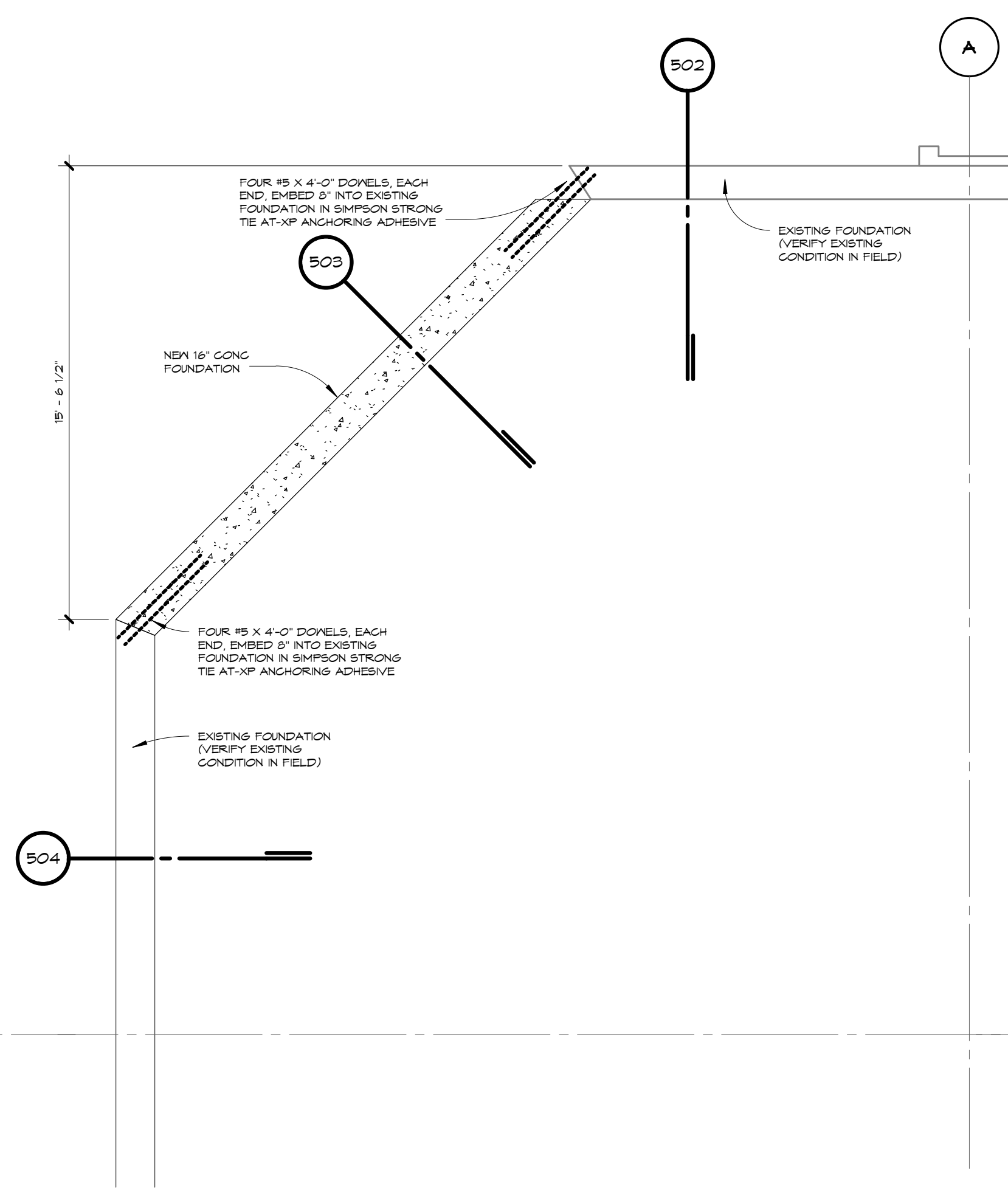
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A2

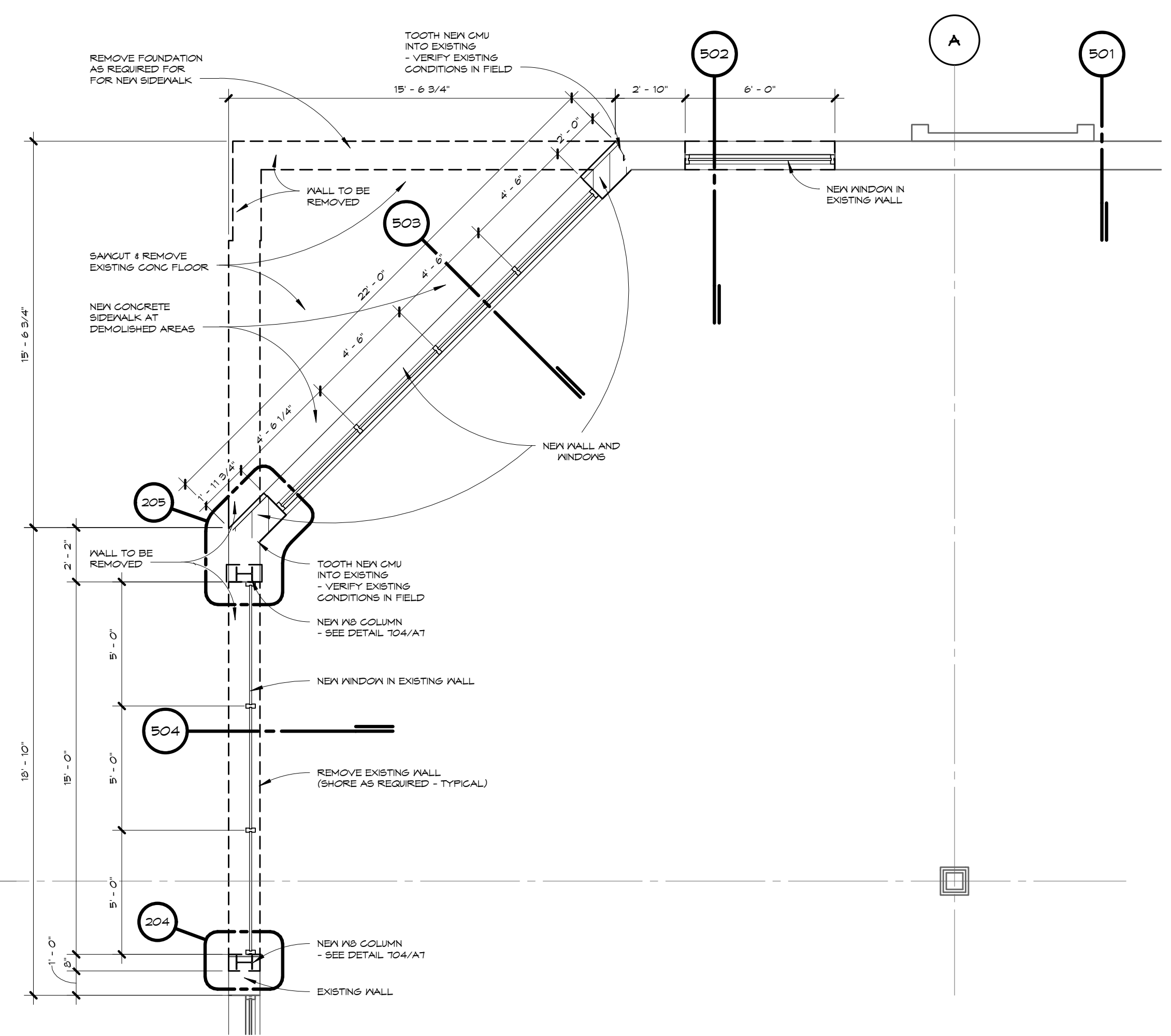
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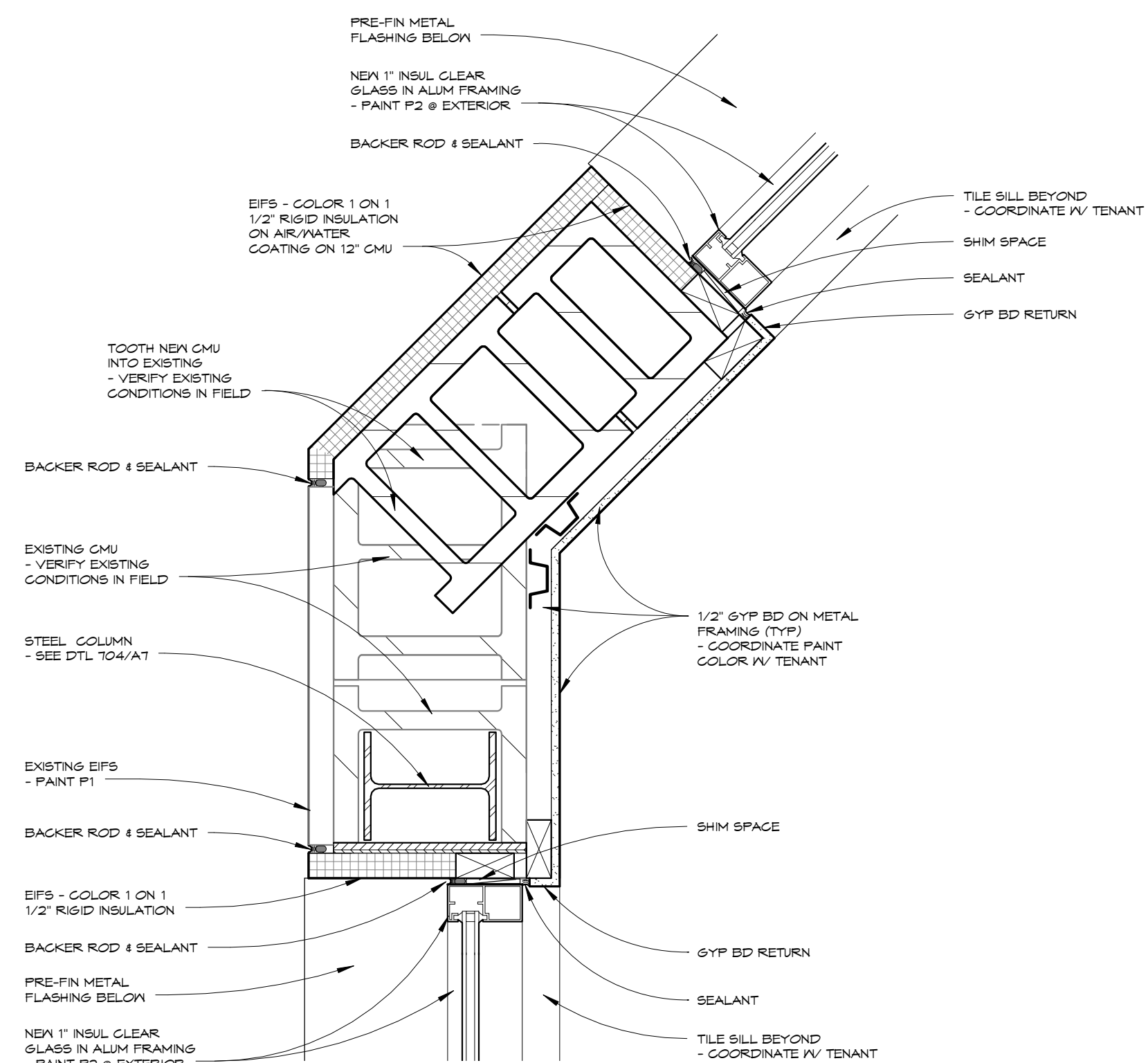
203 Exist'g Fram'g (Partial), Demolition, & New Fram'g Plan
A4 SCALE: 1/4" = 1'-0"



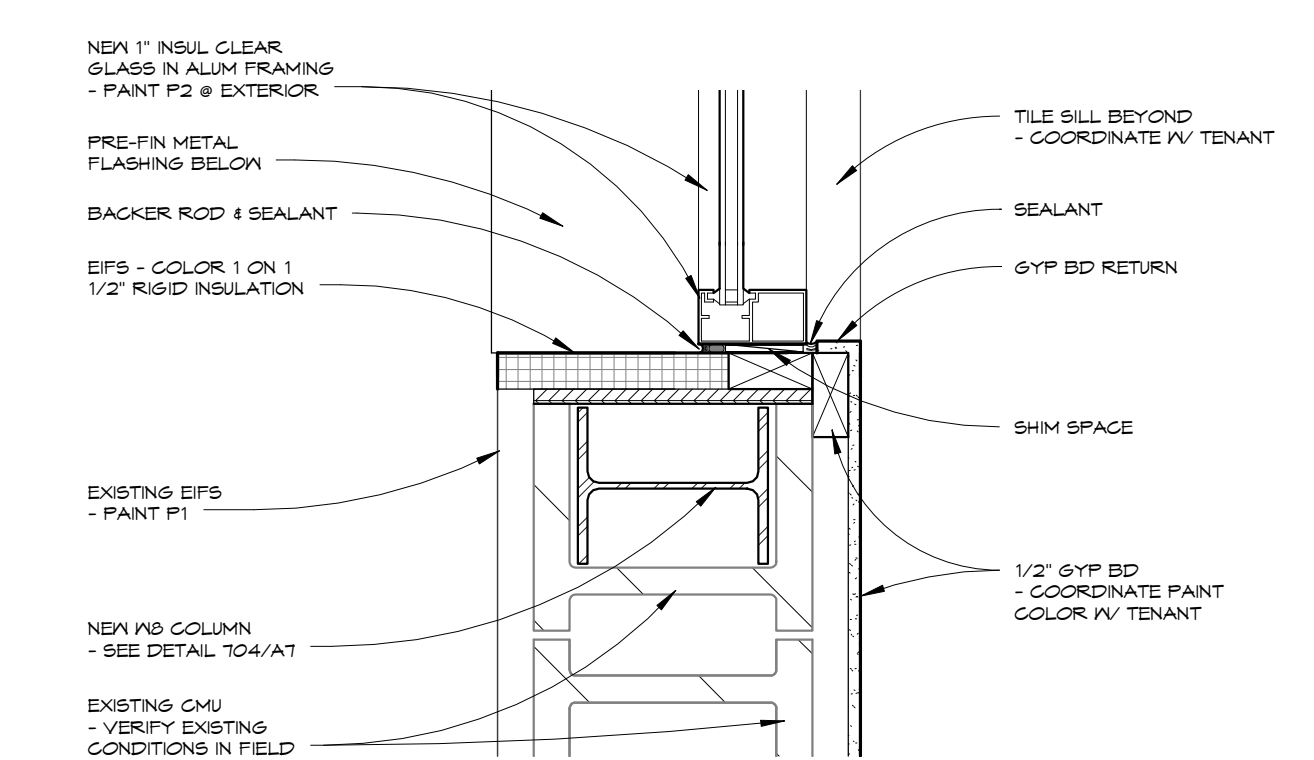
202 Foundation Plan
SCALE: 1/4" = 1'-0"



201 Enlarged Floor Plan
A1 SCALE: 1/4" = 1'-0"



205 Plan Detail
A2 SCALE: 1 1/2" = 1'-0"



204 Plan Detail
A2 SCALE: 1 1/2" = 1'-0"



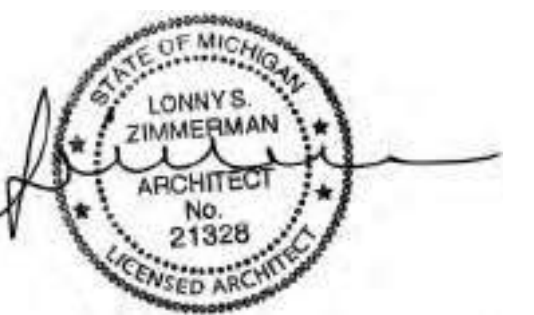
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project name: Tile Shop Renovation

project location: 37025 Grand River Ave. Farmington, MI



date/ revision:

- May 29, 2015 Bids
- June 12, 2015 Bulletin 1

sheet title:

Roof Plan

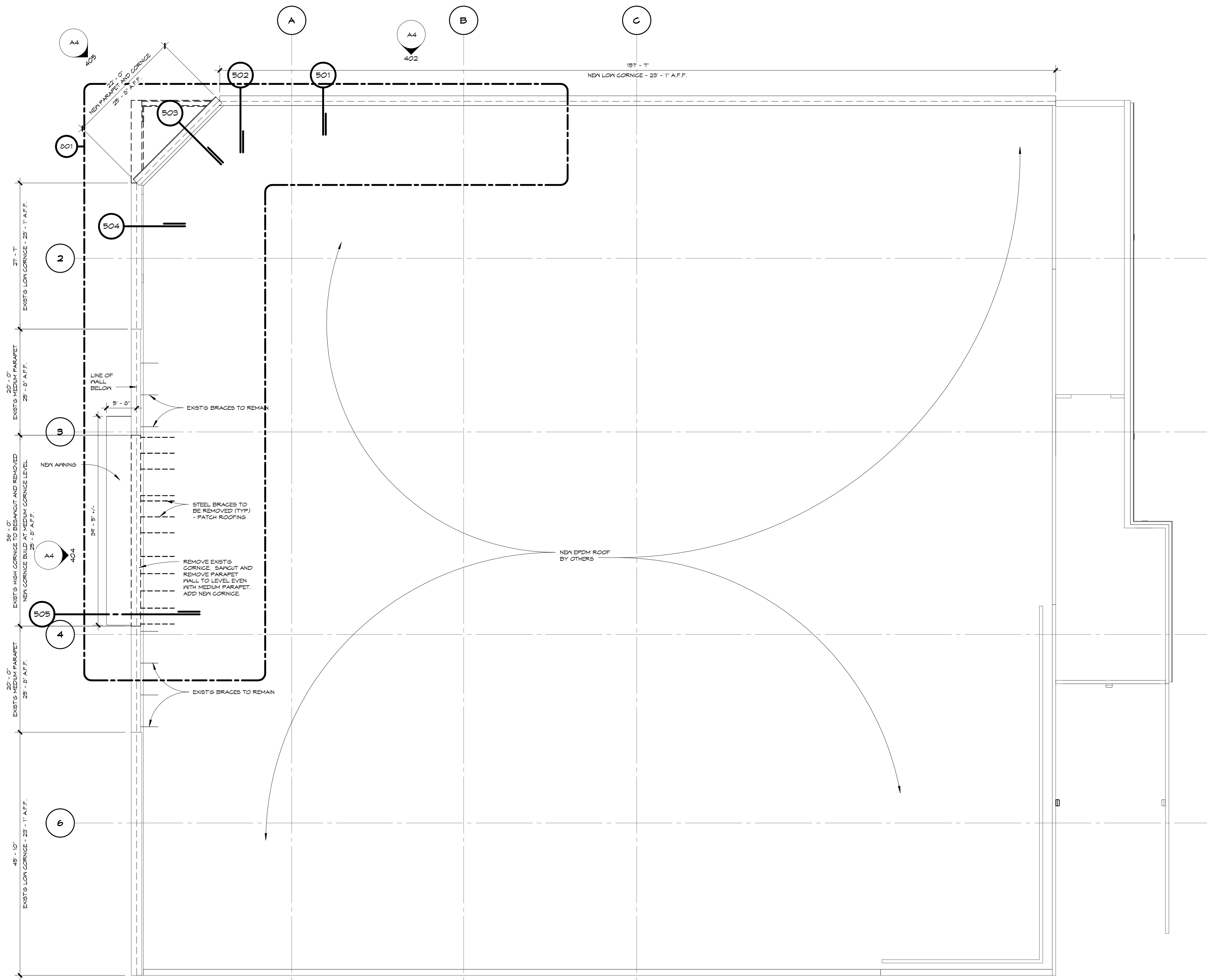
project number:

2075

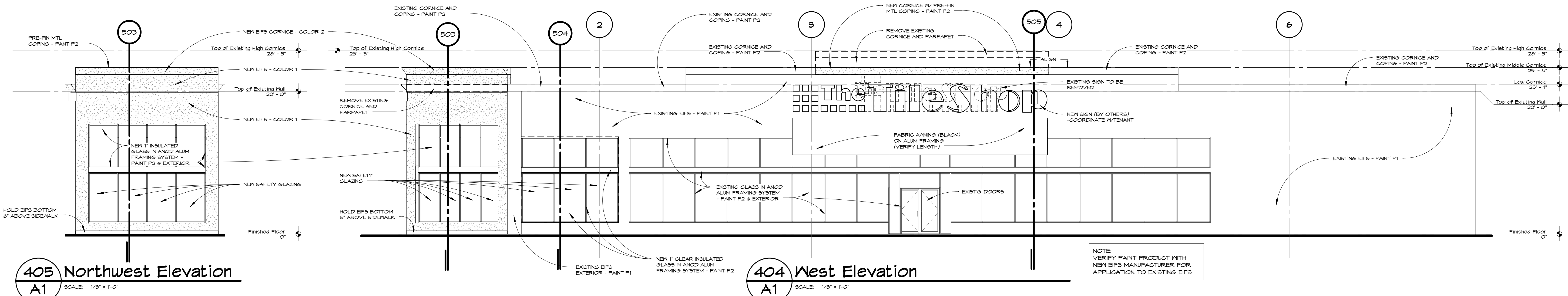
sheet number:

A3

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301 Roof Plan A4 SCALE: 3/32" = 1'-0"



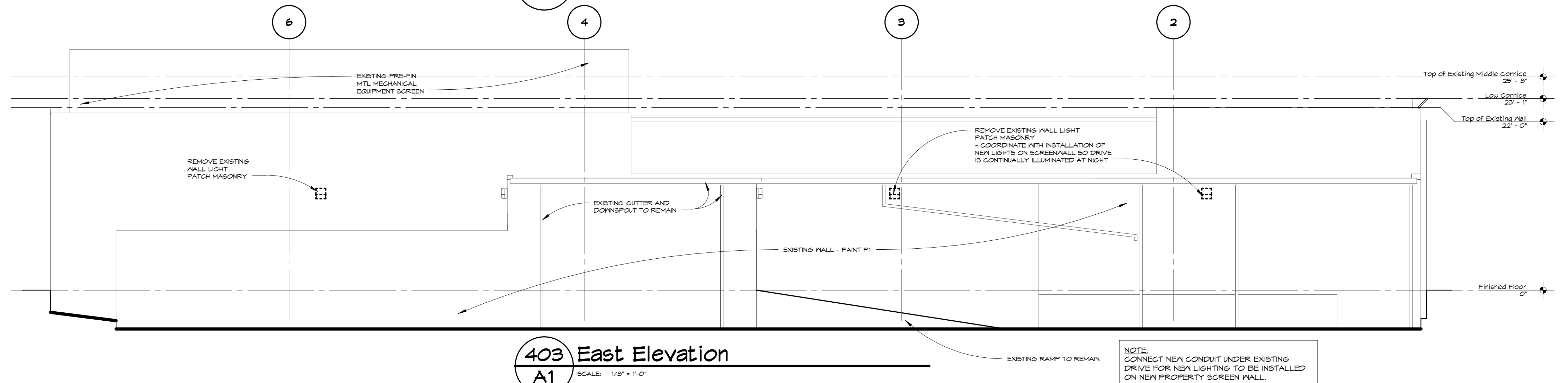
405 Northwest Elevation
A1 SCALE: 1/8" = 1'-0"

404 West Elevation
A1 SCALE: 1/8" = 1'-0"

NOTE:
VERIFY PAINT PRODUCT WITH
NEW EIFS MANUFACTURER FOR
APPLICATION TO EXISTING EIFS

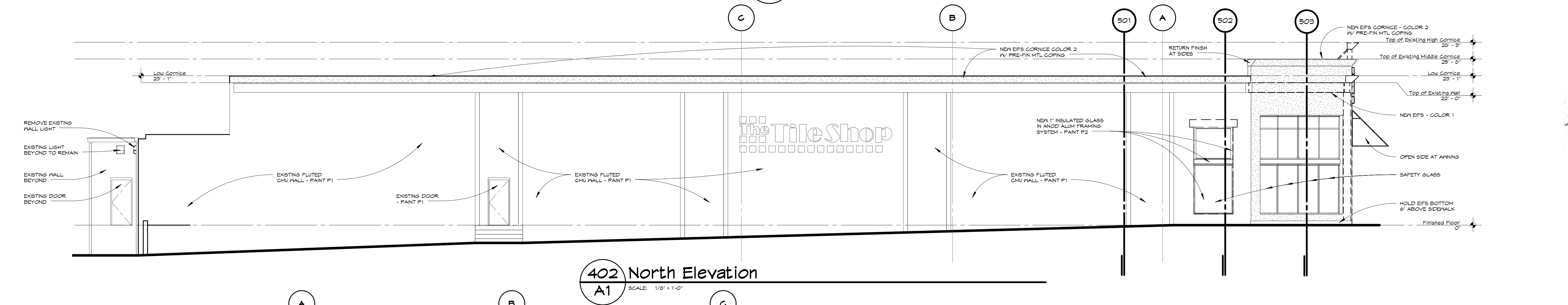
Notes

- SEE SPECIFICATIONS FOR EIFS, PAINT, ALUMINUM FRAMING, GLAZING, AND AWNING INFORMATION.
- PAINT NEW AND EXISTING ALUMINUM FRAMING ON EXTERIOR OF BUILDING ONLY.

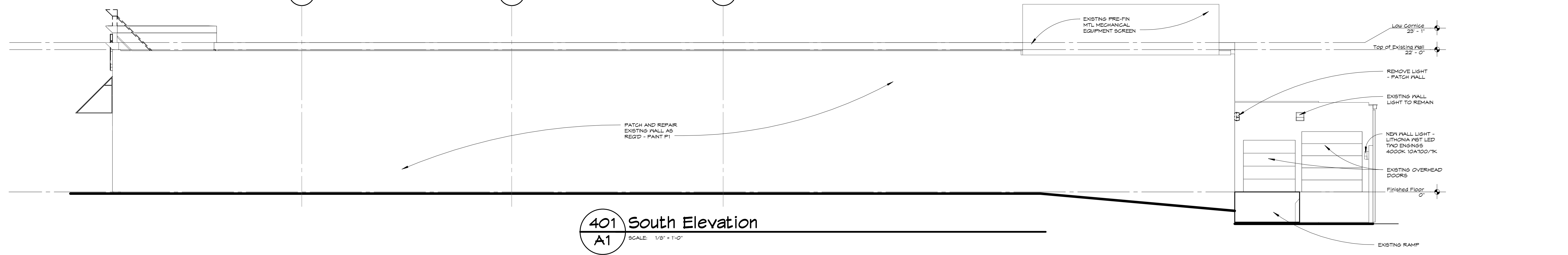


403 East Elevation
A1 SCALE: 1/8" = 1'-0"

NOTE:
CONNECT NEW CONDUIT UNDER EXISTING
DRIVE FOR NEW LIGHTING TO BE INSTALLED
ON NEW PROPERTY SCREEN WALL.



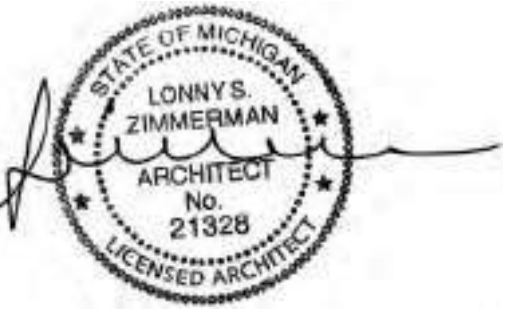
402 North Elevation
A1 SCALE: 1/8" = 1'-0"



401 South Elevation
A1 SCALE: 1/8" = 1'-0"

project name:
**Tile Shop
Renovation**

project location:
**37025 Grand
River Ave.
Farmington, MI**



date/ revision:

- May 29, 2015 Bids

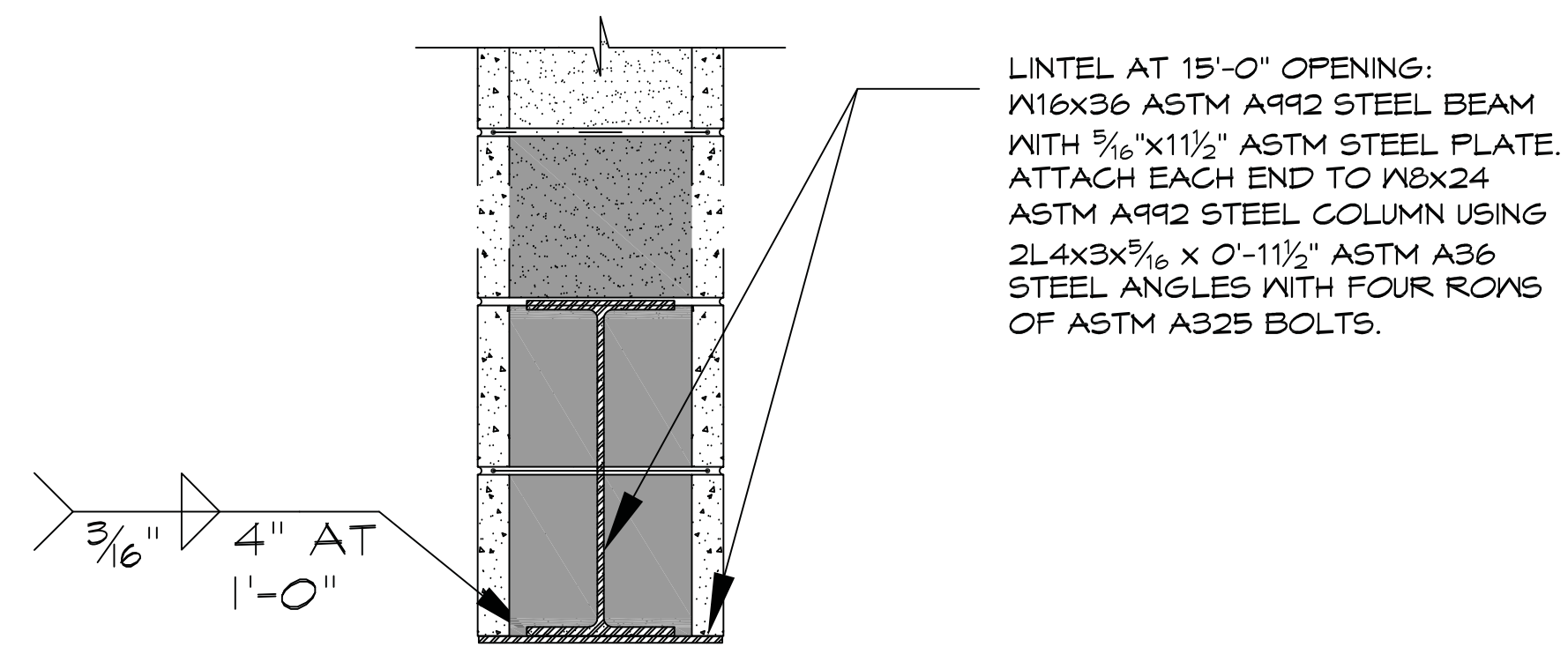
sheet title:
Elevations

project number:
2075

sheet number:

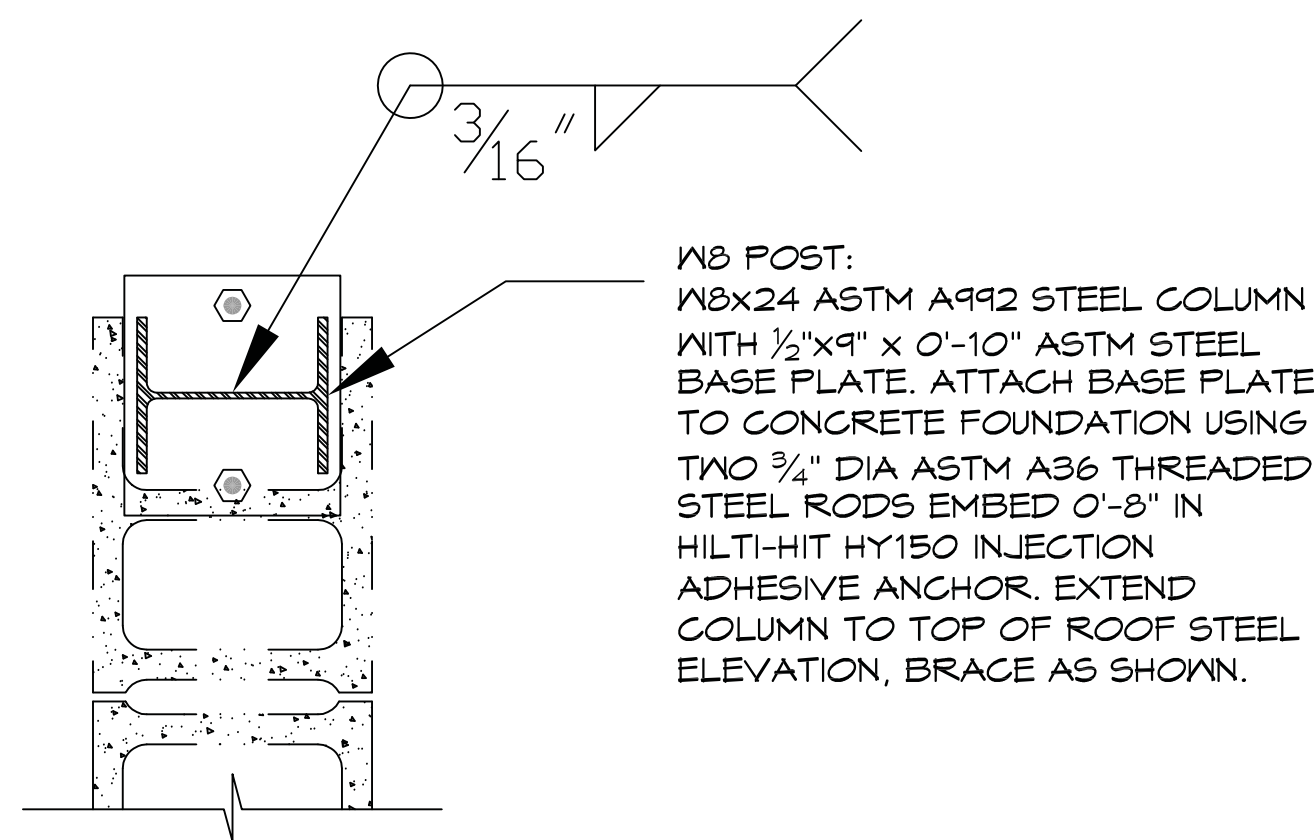
A4

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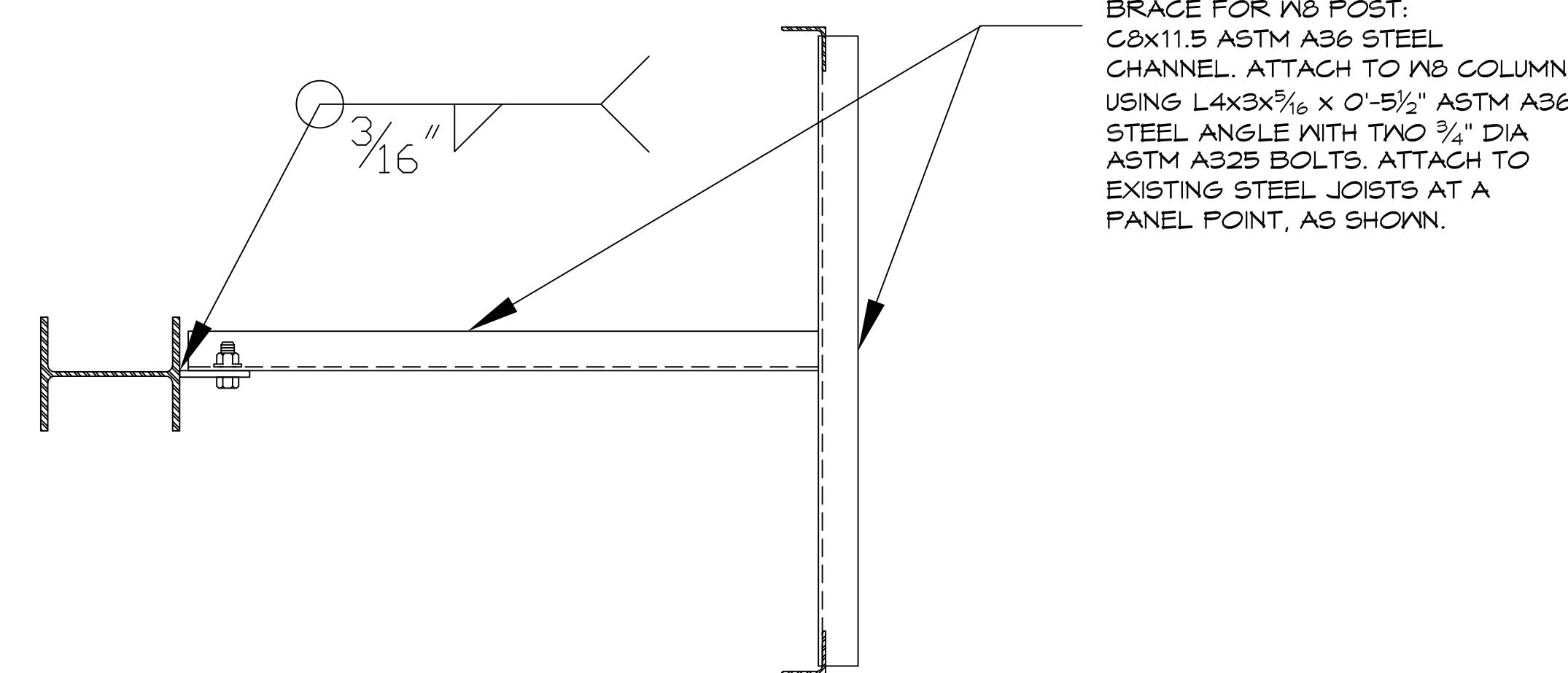
LINTEL AT 15'-0" OPENING:
W16x36 ASTM A992 STEEL BEAM WITH 5/16"x1 1/2" ASTM STEEL PLATE. ATTACH EACH END TO W8x24 ASTM A992 STEEL COLUMN USING 2L4x3x5/16 x 0'-11 1/2" ASTM A36 STEEL ANGLES WITH FOUR ROWS OF ASTM A325 BOLTS.

703 Lintel L2
A5 SCALE: 1 1/2" = 1'-0"



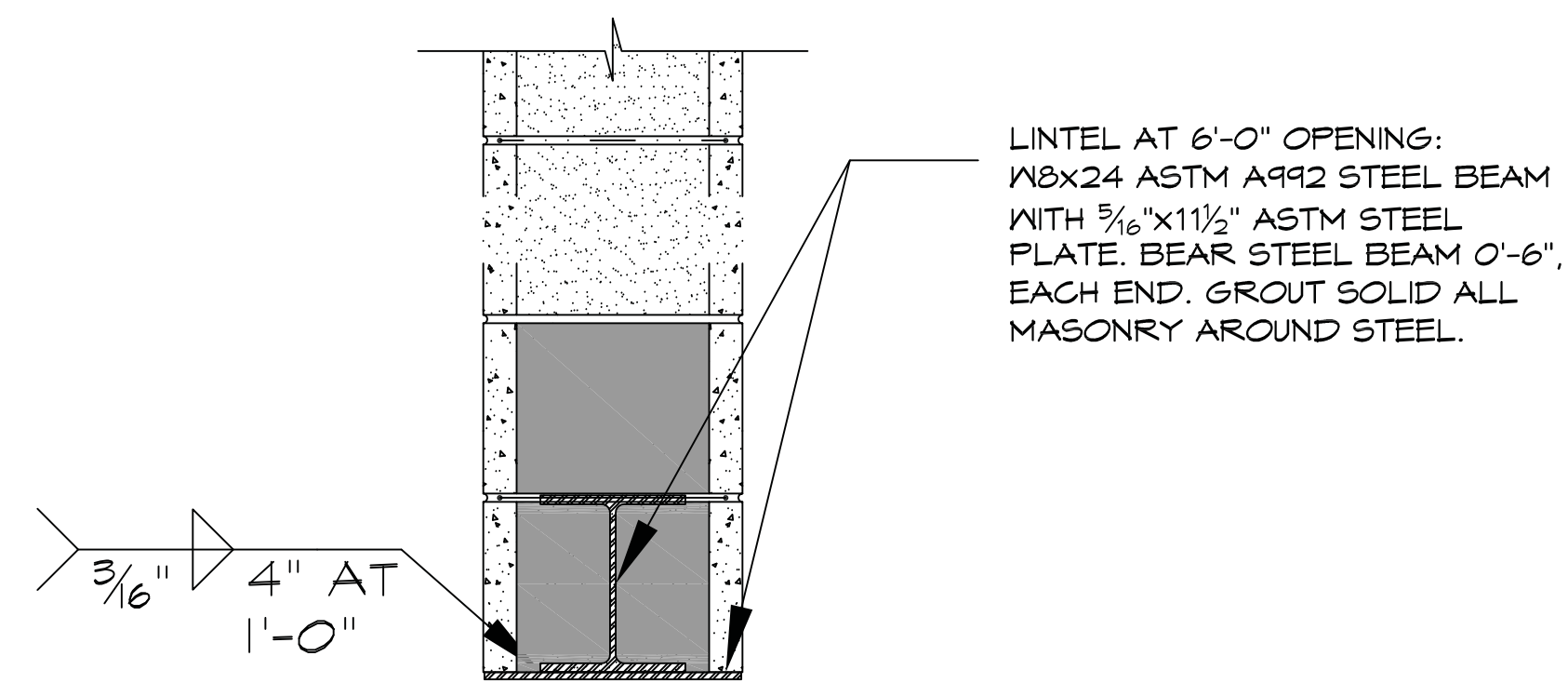
W8 POST:
W8x24 ASTM A992 STEEL COLUMN WITH 1/2"x9" x 0'-10" ASTM STEEL BASE PLATE. ATTACH BASE PLATE TO CONCRETE FOUNDATION USING TWO 3/4" DIA ASTM A36 THREADED STEEL RODS EMBED 0'-8" IN HILTI-HIT HY150 INJECTION ADHESIVE ANCHOR. EXTEND COLUMN TO TOP OF ROOF STEEL ELEVATION, BRACE AS SHOWN.

704 W8 Post
A2 SCALE: 1 1/2" = 1'-0"



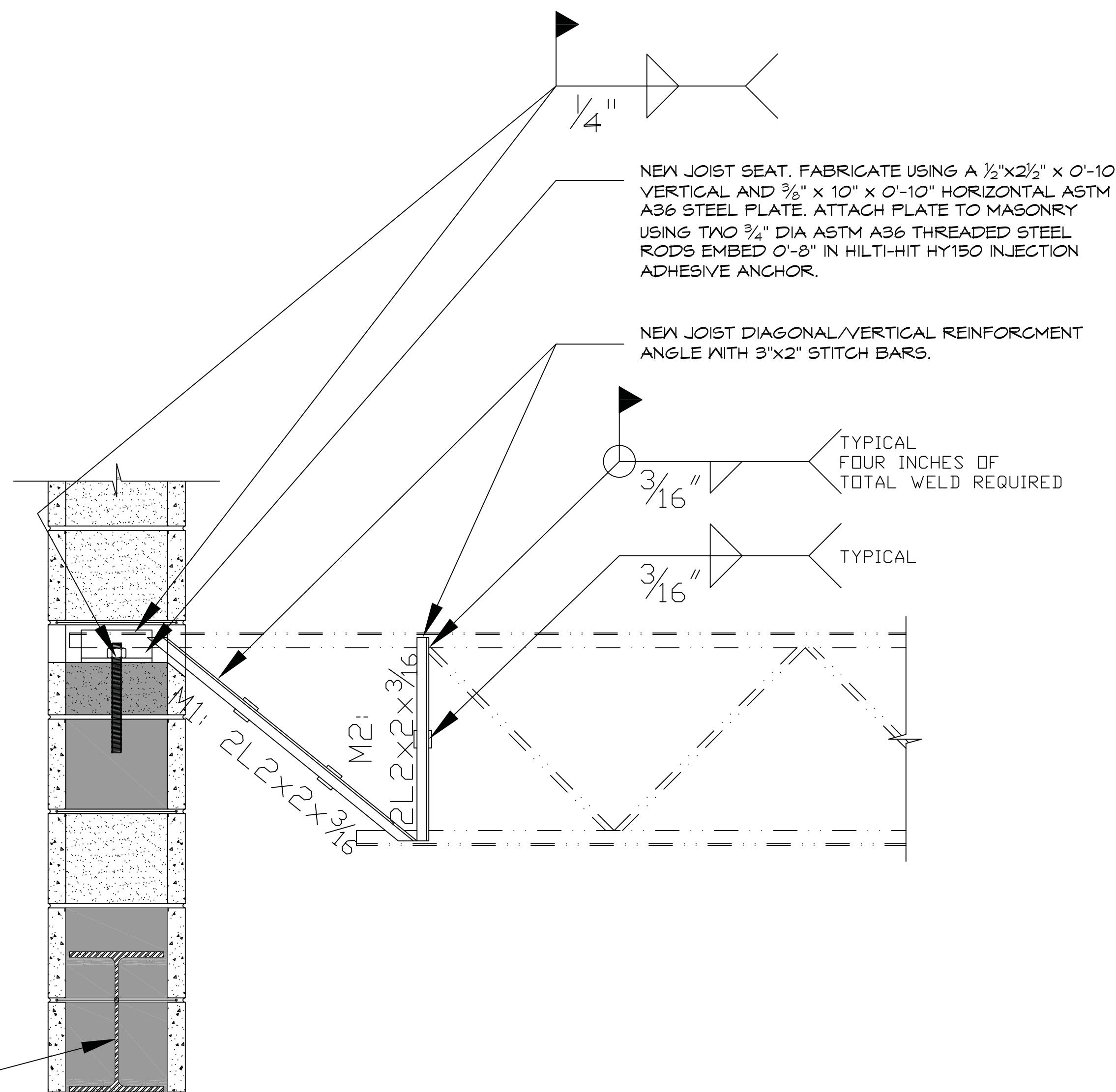
BRACE FOR W8 POST:
C8x11.5 ASTM A36 STEEL CHANNEL. ATTACH TO W8 COLUMN USING L4x3x5/16 x 0'-5 1/2" ASTM A36 STEEL ANGLE WITH TWO 3/4" DIA ASTM A325 BOLTS. ATTACH TO EXISTING STEEL JOISTS AT A PANEL POINT, AS SHOWN.

705 Brace for W8 Post
A2 SCALE: 1/2" = 1'-0"



LINTEL AT 6'-0" OPENING:
W8x24 ASTM A992 STEEL BEAM WITH 5/16"x1 1/2" ASTM STEEL PLATE. BEAR STEEL BEAM 0'-6", EACH END. GROUT SOLID ALL MASONRY AROUND STEEL.

702 Lintel L1
A5 SCALE: 1 1/2" = 1'-0"



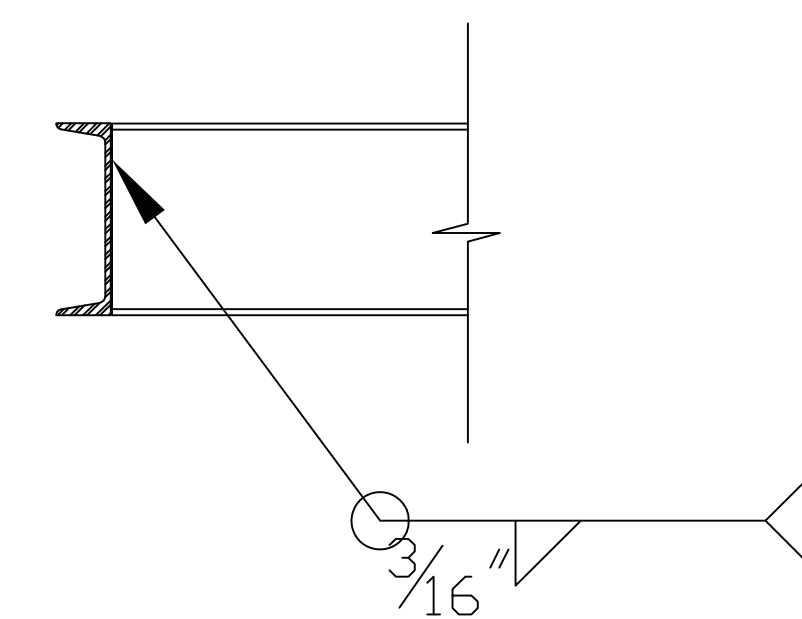
NEW JOIST SEAT. FABRICATE USING A 1/2"x2 1/2" x 0'-10" VERTICAL AND 3/8" x 10" x 0'-10" HORIZONTAL ASTM A36 STEEL PLATE. ATTACH PLATE TO MASONRY USING TWO 3/4" DIA ASTM A36 THREADED STEEL RODS EMBED 0'-8" IN HILTI-HIT HY150 INJECTION ADHESIVE ANCHOR.

NEW JOIST DIAGONAL/VERTICAL REINFORCEMENT ANGLE WITH 3"x2" STITCH BARS.

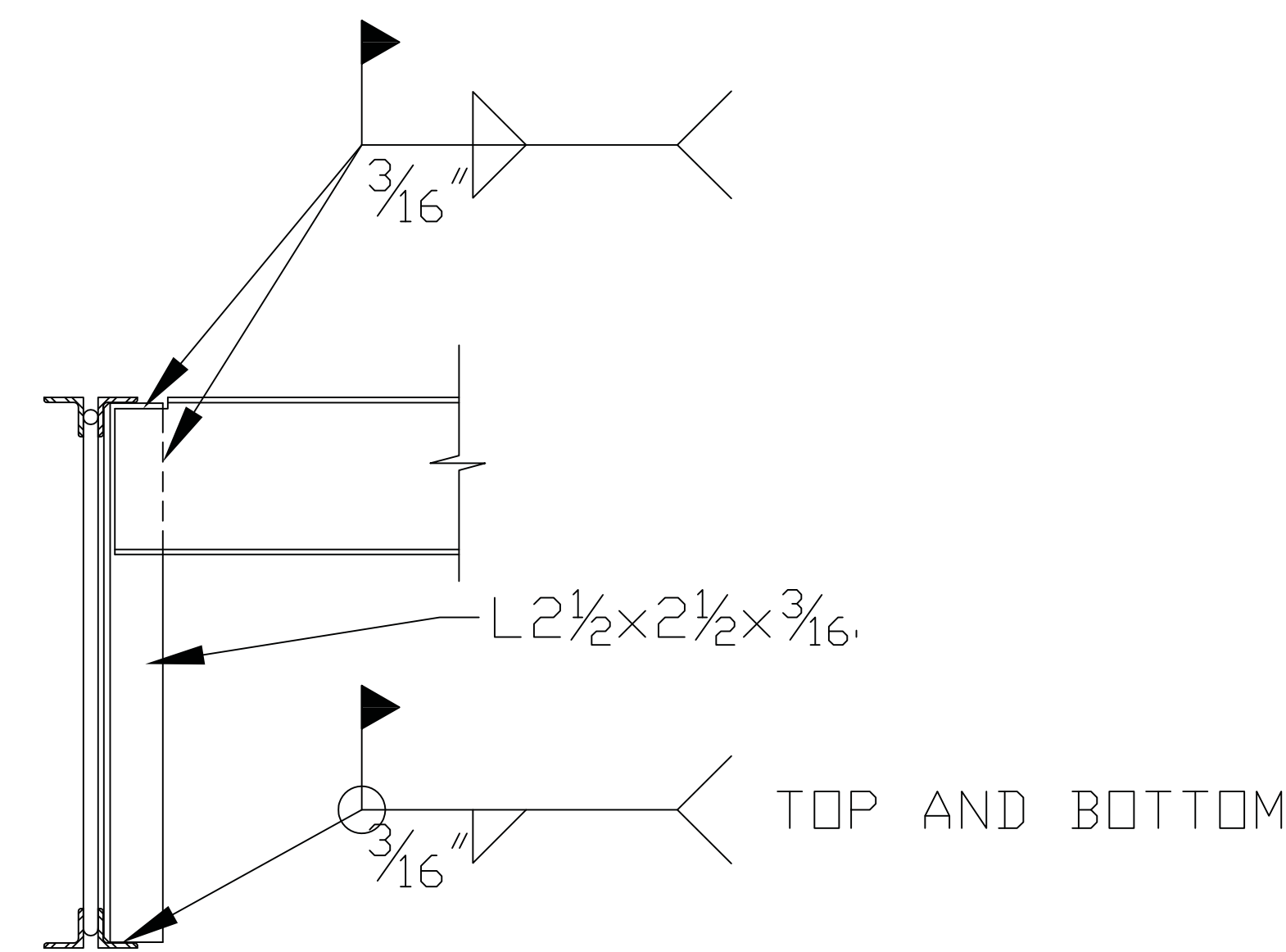
TYPICAL FOUR INCHES OF TOTAL WELD REQUIRED

TYPICAL

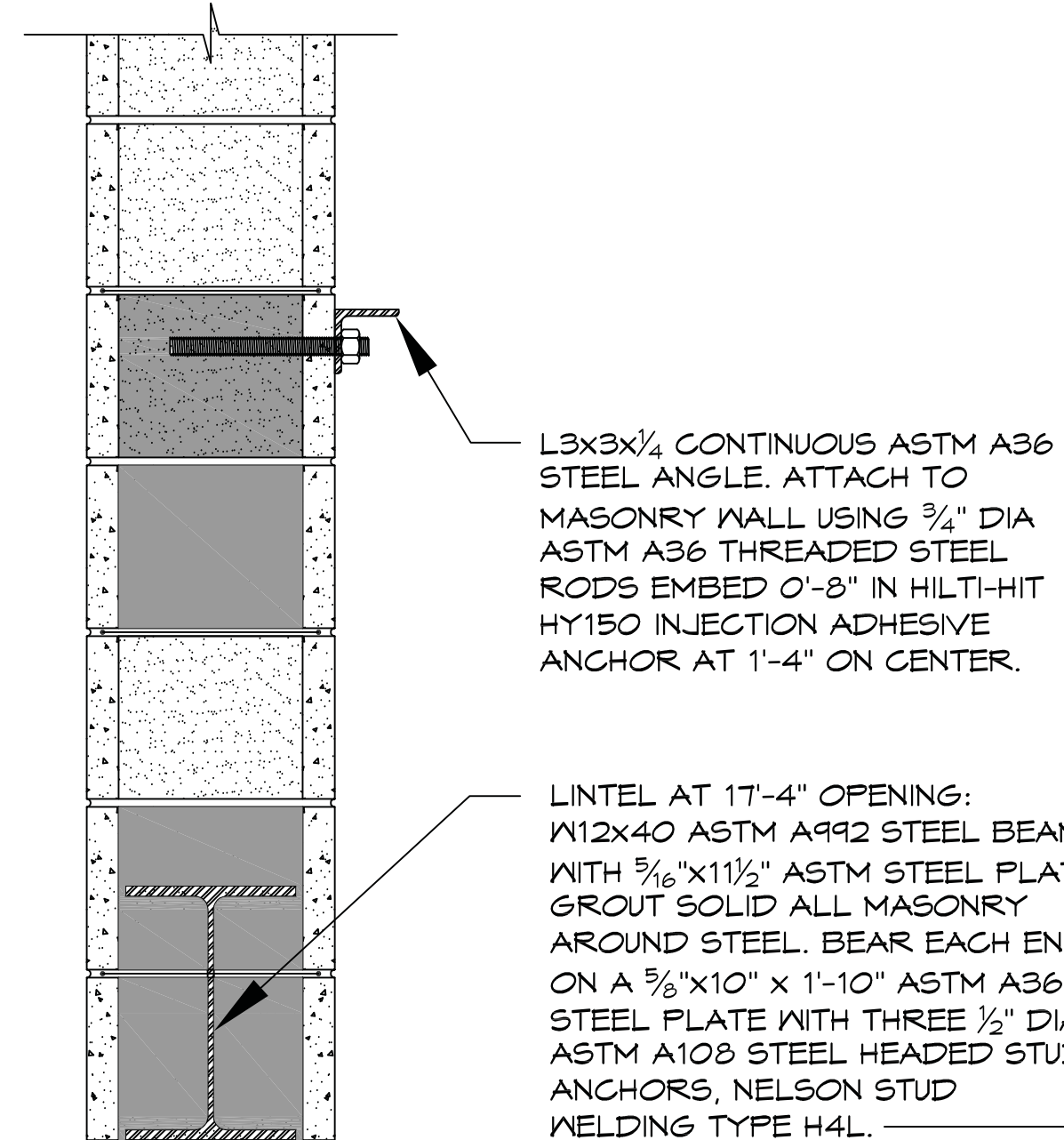
701A Reconstructed Joist at New Wall Support
A5 SCALE: 1 1/2" = 1'-0"



706 Typical Attachment of C8 to C8
A7 SCALE: 1/2" = 1'-0"



707 Typical Attachment of C8 to Joist
A7 SCALE: NOT TO SCALE



L3x3x1/4 CONTINUOUS ASTM A36 STEEL ANGLE. ATTACH TO MASONRY WALL USING 3/4" DIA ASTM A36 THREADED STEEL RODS EMBED 0'-8" IN HILTI-HIT HY150 INJECTION ADHESIVE ANCHOR AT 1'-4" ON CENTER.

LINTEL AT 17'-4" OPENING:
W12x40 ASTM A992 STEEL BEAM WITH 5/16"x1 1/2" ASTM STEEL PLATE. GROUT SOLID ALL MASONRY AROUND STEEL. BEAR EACH END ON A 5/8"x10" x 1'-10" ASTM A36 STEEL PLATE WITH THREE 1/2" DIA ASTM A108 STEEL HEADED STUD ANCHORS, NELSON STUD WELDING TYPE H4L.

701 New Wall Lintel
A5 SCALE: 1 1/2" = 1'-0"



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project name:
Tile Shop Renovation

project location:
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Farmington, MI



date/ revision:

May 29, 2015 Bids

sheet title:
Details

project number:
2075

sheet number:

A7

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River Ave.
Farmington, MI



date/ revision:

- May 29, 2015 Bids
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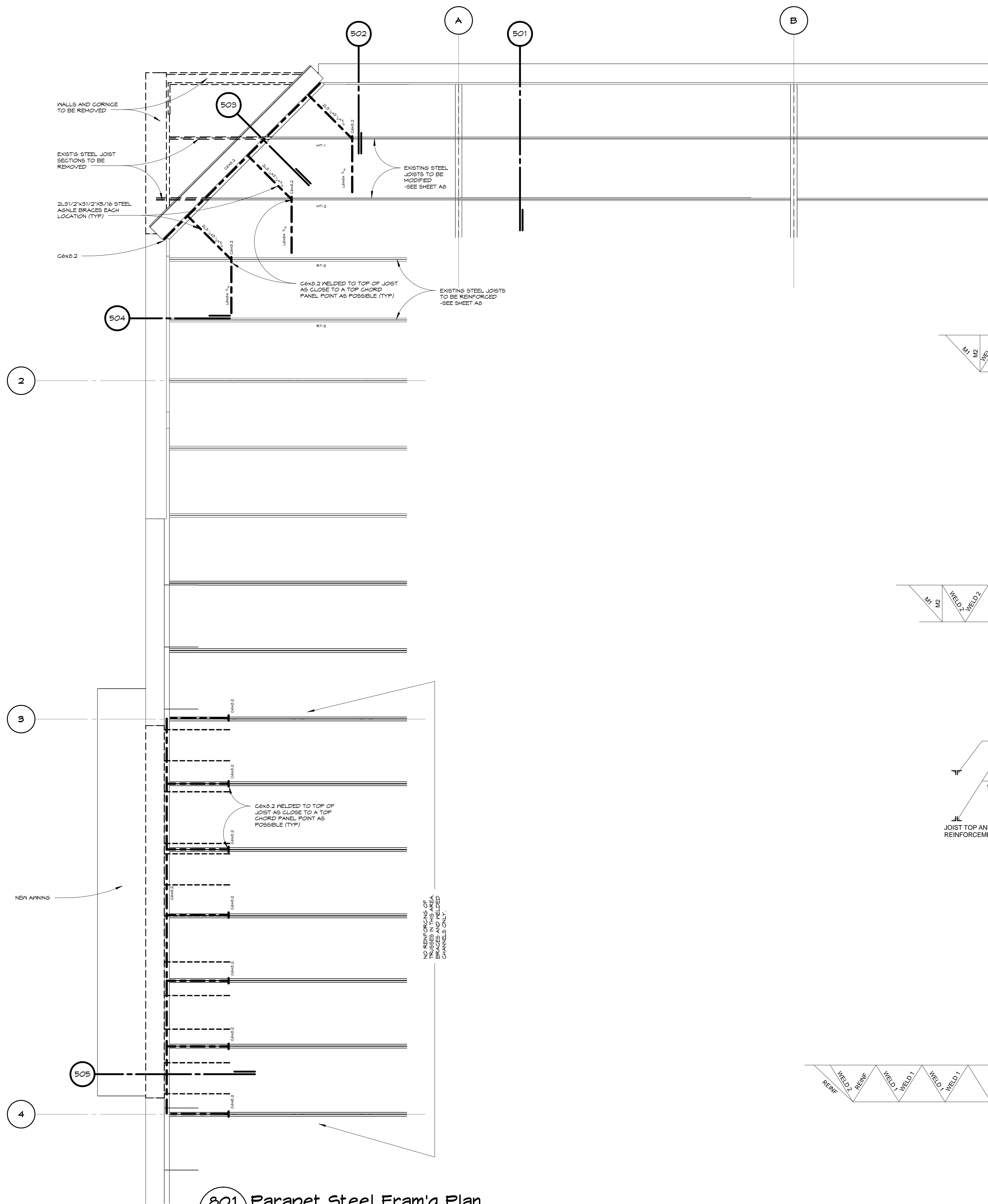
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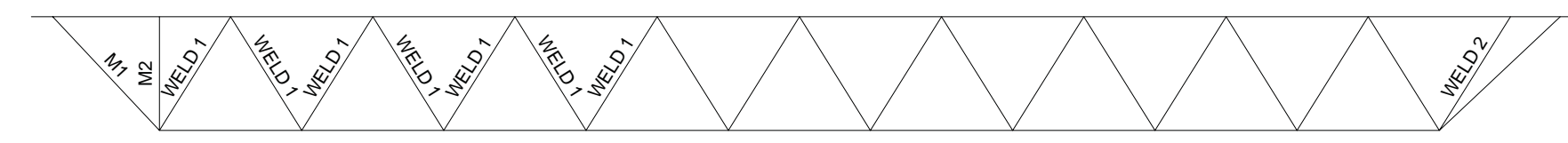
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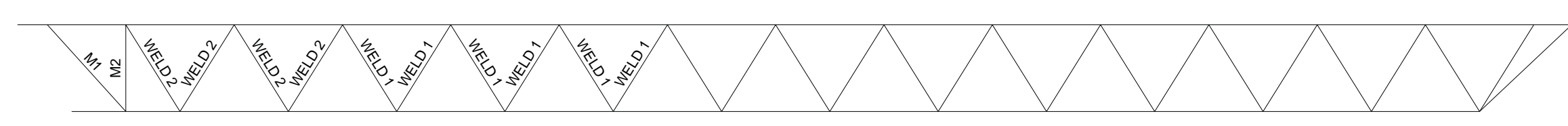
801 Parapet Steel Fram'g Plan
A3 SCALE: 3/16" = 1'-0"

JOIST WEB REINFORCEMENT.
WELD 1: VERIFY THERE IS A TOTAL OF FOUR INCHES OF 1/2" WELD ATTACHING WEB MEMBERS TO CHORDS.
WELD 2: VERIFY THERE IS A TOTAL OF TWO INCHES OF 1/2" WELD ATTACHING THE WEB MEMBER TO THE TOP CHORD AND VERIFY THERE IS A TOTAL OF SIX INCHES OF 1/2" WELD ATTACHING THE WEB MEMBER TO THE BOTTOM CHORD.

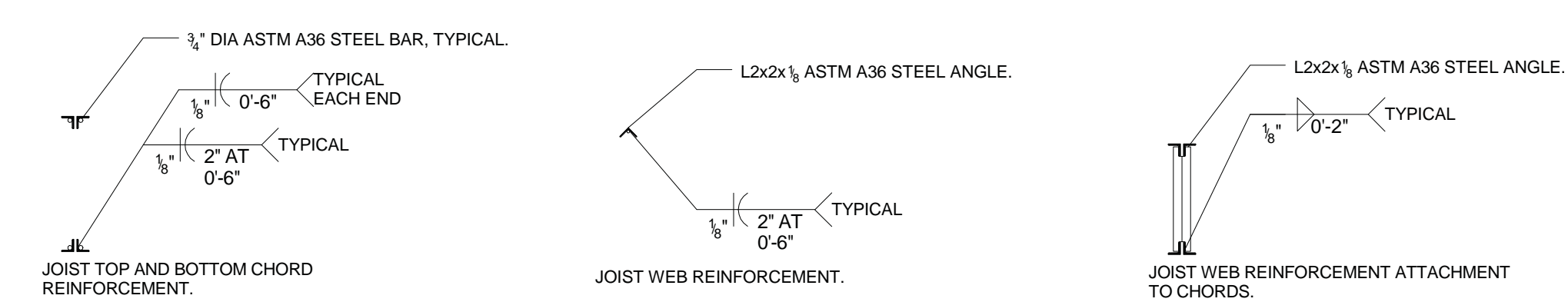


MT-1

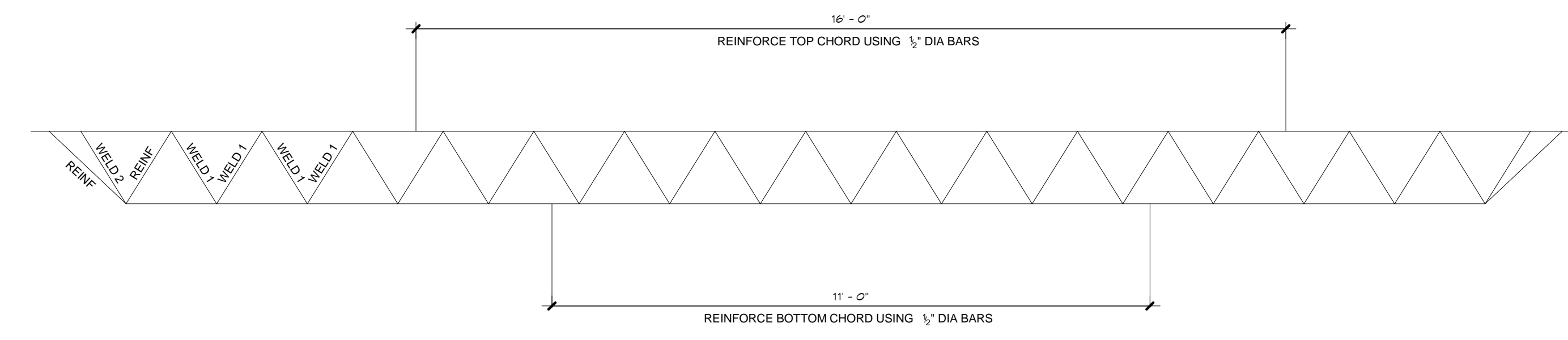
JOIST WEB REINFORCEMENT.
WELD 1: VERIFY THERE IS A TOTAL OF FOUR INCHES OF 1/2" WELD ATTACHING WEB MEMBERS TO CHORDS.
WELD 2: VERIFY THERE IS A TOTAL OF EIGHT INCHES OF 1/2" WELD ATTACHING THE WEB MEMBER TO THE CHORDS.



MT-2



JOIST WEB REINFORCEMENT.
WELD 1: VERIFY THERE IS A TOTAL OF EIGHT INCHES OF 1/2" WELD ATTACHING WEB MEMBERS TO CHORDS.
WELD 2: VERIFY THERE IS A TOTAL OF TWO INCHES OF 1/2" WELD ATTACHING THE WEB MEMBER TO THE TOP CHORD AND VERIFY THERE IS A TOTAL OF SIX INCHES OF 1/2" WELD ATTACHING THE WEB MEMBER TO THE BOTTOM CHORD.
ADD WELD TO PROVIDE MINIMUM WELD TO BE VERIFIED WHERE EVER EXISGING AMOUNT OF WELD IS INSUFFICIENT.



RT-3

ARCHITECTURAL SPECIFICATIONS:

1.0 GENERAL REQUIREMENTS:

A. AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A-201-2001 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION FORMS A PART OF THIS SPECIFICATION AND IS AVAILABLE FOR INSPECTION AT THE OFFICE OF THE ARCHITECT.

B. THE CHARACTER & SCOPE OF WORK ARE ILLUSTRATED BY THE WORKING DRAWINGS. THE CONTRACTOR SHALL CAREFULLY STUDY THE PROVISIONS AND REQUIREMENTS OF HIS WORK. DO NOT PLACE DUCTS, FITTINGS, CONDUIT OR ANY OTHER OBSTRUCTION SO AS TO IMPAIR REQUIRED CEILING HIGHT AND CLEARANCES FOR LIGHTING FIXTURES, ETC. THE CONTRACTOR SHALL PROTECT EXISTING ADJACENT FACILITIES TO REMAIN FROM DAMAGE.

C. PRIOR TO WORK, CONTRACTORS SHALL LOCATE AND VERIFY ALL EXISTING UTILITIES AND SITE CONDITION IN AND AROUND THE CONSTRUCTION AREA.

D. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, AS WELL AS ALL DIMENSIONS & CONDITIONS INDICATED IN THE DRAWINGS, PRIOR TO ACTUAL VARIATION FROM LISTED STANDARD, OR BETWEEN LISTED STANDARDS. THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING WORK.

E. THE CONTRACTOR SHALL HAVE RESPONSIBILITY FOR A MEANS AND METHODS OF THE CONSTRUCTION.

F. SECURE AND PROXY FOR THE SERVICES OF AN INDEPENDENT TESTING ENGINEER LICENSED BY THE STATE OF MICHIGAN TO MAKE PERIODIC SITE VISITS DURING CONSTRUCTION TO MAKE INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE 2003 MICHIGAN BUILDING CODE AND THE LOCAL MUNICIPALITY BEYOND THE BUILDING PERMIT. A WRITTEN RECORD OF ALL INSPECTIONS SHALL BE MADE BY THE INSPECTING ENGINEER AND FURNISHED TO THE ARCHITECT. CORRECT ALL WORK INDICATED IN THE INSPECTION REPORTS THAT IS NOT AS INDICATED IN THE CONSTRUCTION DOCUMENTS. IF REQUIRED BY THE MUNICIPALITY, A FINAL INSPECTING ENGINEER'S REPORT, AS WELL AS ALL INTERIM REPORTS SHALL BE SUBMITTED TO THE MUNICIPALITY.

G. MATERIALS AND CONSTRUCTION PROCEDURES SHALL CONFORM WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, RULES AND REGULATIONS. IN CASES OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

H. MANUFACTURER'S DIRECTIONS: ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED, PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

I. EACH SPECIFICATION SECTION CONSISTS OF FURNISHING AND INSTALLING THE DESCRIBED WORK, (UNLESS SPECIFICALLY NOTED OTHERWISE) INCLUDING ALL INCIDENTALS AND RELATED ITEMS NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

J. IF ANY INCONSISTENCY OR CONFLICT SHALL BE DISCOVERED IN EITHER SPECIFICATIONS OR DRAWINGS, OR IF IN ANY PLACE THE MEANING OF EITHER OR BOTH SHALL BE UNCLEAR, THE ARCHITECT SHALL BE NOTIFIED AS TO THE TRUE INTENT OF THE DOCUMENTS. EACH CONTRACTOR, OR SUB CONTRACTOR IS DEEMED TO HAVE ACCEPTED THE MORE EXPENSIVE WAY OF DOING THE WORK, UNLESS HE SHOWS BY WRITING FROM THE CONTRACTOR OR ARCHITECT, A DESIGN BEFORE SUBMISSION OF THE BID PROPOSAL.

K. ANY PROCEDURE, MATERIAL OR OPERATION SPECIFIED BY REFERENCE TO THE AMERICAN SOCIETY OF TESTING AND MATERIALS (A.S.T.M.) OR OTHER RECOGNIZED STANDARD, SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT ISSUE OF THE REFERENCED STANDARD. IN CONFLICTS BETWEEN THIS SPECIFICATION AND LISTED STANDARD, OR BETWEEN LISTED STANDARDS, THE MORE STRINGENT SHALL GOVERN. ANY WORK NOT SPECIFICALLY COVERED IN THE DRAWINGS OR SPECIFICATIONS SHALL BE PERFORMED IN A MANNER DEEMED GOOD PRACTICE OF THE TRADE INVOLVED, AND PER PART H.

L. MEASUREMENTS AND DIMENSIONS: DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. ALL CONTRACTORS SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.

M. EACH TRADE SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE BUILDING AND/OR EXISTING STRUCTURES THAT IS CAUSED BY HIS WORK. REPAIR OR REPLACEMENT OF SUCH DAMAGED WORK SHALL BE PAID FOR BY THE CONTRACTOR CAUSING THE DAMAGE.

N. ALL WORK, EQUIPMENT, ASSEMBLIES, COMPONENTS, ETC., SHALL BE GUARANTEED FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM OWNER'S FORMAL ACCEPTANCE OF THE WORK, OR THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY, WHICHEVER OCCURS FIRST. LONGER WARRANTIES SHALL BE REQUIRED WHERE INDICATED.

O. THIS STORE WILL REMAIN OPERATIONAL DURING CONSTRUCTION. COORDINATE WITH STORE MANAGEMENT TO NOT BLOCK CUSTOMERS FLOW INTO THE STORE.

P. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK ALL LADDERS, OR NECESSARY BARRETTAGES, FENCES AND RAILINGS, LIGHTS, WARNING SIGNS AND SIGNALS AND TAKE ALL OTHER NECESSARY PRECAUTIONS AS MAY BE REQUIRED TO SAFEGUARD PERSONS, THE SITE AND ADJOINING PROPERTY. INCLUDING IMPROVEMENTS THEREIN, AND ALL DAMAGES OF EVERY NATURE AND KINDS, PUBLIC RIGHT OF RIGHTS, SIGNALLS, CORROSION, ETC. EFFECTED BY CONSTRUCTION MUST BE KEPT FREE OF ACCUMULATED WASTE MATERIALS INCLUDING SOIL, DEBRIS, TRASH, ETC. ON A DAILY BASIS. A CLEAR PATH OF EGRESS SHALL BE MAINTAINED AT ALL TIMES.

Q. AT THE COMPLETION OF WORK THE PROJECT SITE HARD SURFACES SHALL BE LEFT BROOM CLEAN. ALL FINISHED AREAS INCLUDING GLAZING, SHALL BE LEFT DUST AND SPOT FREE AND READY FOR FULL USE.

R. ALL SUBCONTRACTORS SHALL COORDINATE WITH THE CONTRACTOR FOR THE SUB CONTRACTOR'S MINIMUM INSURANCE REQUIREMENTS.

S. SUBMIT COMPLETE SHOP DRAWINGS TO THE ARCHITECT FOR EACH MATERIAL INDICATED. SUBMIT COMPLETE LIST OF SHOP DRAWINGS TO BE SUBMITTED TO ARCHITECT WITH ANTICIPATED DATE OF EACH SUBMITTED PACKAGE. THE SHOP DRAWINGS LIST SHOULD BE SUBMITTED NO LATER THAN 10 DAYS AFTER SIGNING OF CONSTRUCTION CONTRACT WITH OWNER.

DEMOLITION:

A. THE EXTENT OF BUILDING DEMOLITION SHALL BE AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS AND AS REQUIRED FOR CONSTRUCTION OF NEW WORK. WORK INCLUDES THE FOLLOWING:

- DEMOLITION OF ALL ITEMS INDICATED IN CONTRACT DOCUMENTS
- REMOVE AND DISPOSE OF ALL ITEMS IN AREAS INDICATED IN THE SCOPE OF WORK, DRAWINGS AND SPECIFICATIONS.

B. EXCEPT FOR SPECIFIC ITEMS HEREINAFTER SPECIFIED, THE METHODS USED IN DEMOLITION, AND REMOVAL, NORMAL, SHALL BE AS FOLLOWS: DO NOT USE A FLAME CUTTING TORCH. REMOVE AND DISPOSE OF ALL DEBRIS, DIRT, DUST, AND NOISE AS POSSIBLE. EXPLOSIONS SHALL NOT BE USED.

C. THIS TRADE SHALL PROVIDE TEMPORARY WEATHERTIGHT PARTITIONS OR ENCLOSURES TO PREVENT THE ENTRY OF WEATHER INTO THE EXISTING BUILDINGS WHEN ANY WALLS OR ROOFS ARE REMOVED OR HOLES CUT THROUGH EXISTING STRUCTURES. ALL TEMPORARY PARTITIONS SHALL BE CONSTRUCTED OF MATERIALS APPROVED BY THE FIRE MARSHALL. ALL EXPOSED WOOD SHALL BE PAINTED WITH AN APPROVED FIRE RETARDANT PAINT. PROVIDE DOORS IN ALL PARTITIONS AS REQUIRED FOR ACCESS TO THE EXISTING BUILDINGS, AND FOR CONSTRUCTION ACTIVITIES. ALL TEMPORARY ENCLOSURES SHALL BE REMOVED WHEN NO LONGER REQUIRED OR AT THE COMPLETION OF THE BUILDING CONSTRUCTION.

D. MECHANICAL AND ELECTRICAL UTILITIES THAT ARE TO REMAIN IN SERVICE WILL EITHER BE LEFT IN PLACE OR RE-MOVED BY THE RESPECTIVE MECHANICAL AND ELECTRICAL CONTRACTORS. UTILITIES, FIXTURES, ETC. TO BE REMOVED BY THE CONTRACTOR SHALL BE CUTTING AND CAPPING OF LINES AT THE AREAS OF REMOVAL, AND DEACTIVATION OF SERVICE WILL BE PROVIDED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS.

E. IN ALL REMOVAL WORK, REMOVE ALL BOLTS, SCREWS, NAILS, CLIPS AND OTHER ANCHORS AND FASTENERS PROJECTING FROM THE EXISTING CONSTRUCTION. DO NOT USE A FLAME CUTTING TORCH.

F. REMOVE ALL MATERIALS NOT REUSED, AND NOT RETAINED BY THE OWNER, FROM THE SITE AS THE WORK PROGRESSES, AND DISPOSE OF OFF-SITE, LEGALLY. DO NOT ACCUMULATE RUBBISH ON SITE.

G. THIS TRADE SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXISTING BUILDING AND THE PROTECTION OF LIFE AND PROPERTY DURING THE DEMOLITION AND REMOVAL OPERATIONS. PROVIDE TEMPORARY SHORINGS AND BRACINGS AS REQUIRED TO SUPPORT REMAINING CONSTRUCTION. REQUIREMENTS BY THE REMOVAL WORK, PROVIDE TEMPORARY BARRIERS, WARNING SIGNS, WARNING LIGHTS AND OTHER SAFETY MEASURES TO PREVENT ACCIDENTS. REMOVE AND DISPOSE OF ALL TEMPORARY MEASURES WHEN NO LONGER REQUIRED.

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M. MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT WITH RECENT HISTORICAL DATA (DATA FROM THE PAST NINE MONTHS) OR WITH THE RESULTS FROM THE TWENTY-EIGHT DAY TRIAL MIXTURES RUN FOR THE PROJECT. THESE ARE THE MINIMUM REQUIREMENTS SET FORTH BY THE AMERICAN CONCRETE INSTITUTE. DUE TO THE FACT THAT THE CONCRETE CONTRACTOR AND THEIR CHOSEN CONCRETE SUPPLIER ARE THE SOLE PARTIES RESPONSIBLE FOR CONCRETE STRENGTH AND DURABILITY, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, BEFORE THE CONTRACTOR AND CONCRETE SUPPLIER MAY CHOOSE TO SUBMIT TYPICAL MIX PROPORTIONS FOR REVIEW BY SUBMITTING MIX PROPORTIONS, THE CONTRACTOR AND CONCRETE SUPPLIER ACCEPT THE FACT THAT THIS NOTE PROVIDES THE MINIMUM REQUIRED SPECIAL PERFECTION TO PROCEED WITHOUT THE AS REQUIRED MIX DESIGN.

N. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE CONCRETE. THE ARCHITECT SHALL REVIEW THE PROPORTIONS AGAINST HISTORICAL DATA (AVAILABLE TO US) AND OTHER INDUSTRY STANDARDS, GUIDELINES, AND ENGINEERING JUDGEMENT. THE ADEQUACY OF THE CONCRETE MIXTURE DESIGN IS VERIFIED BY THE COMPRESSION TEST RESULTS. (PLEASE NOTE THAT THE ACCEPTANCE OF ANY CONCRETE, SUBMITTED WITH MIX DESIGN OR MIX PROPORTIONS, OCCURS ONLY AFTER THE INDEPENDENT TESTING AND INSPECTION AGENCIES HAVE VERIFIED THE ADEQUACY OF THE CONCRETE THROUGH TESTING.) MINIMUM CONCRETE COVER SHALL BE (UNLESS OTHERWISE NOTED):

- UNFORMED SURFACES IN CONTACT WITH GROUND (FOOTING BOTTOMS): THREE INCHES.
- SLABS ON GRADE: ONE INCH.
- FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER (PIERS, WALLS, PILTS, ETC.): TWO INCHES.
- BEAMS AND COLUMNS (AND PERS) MAIN REINFORCING OR STIRRUPS AND TIES: ONE AND ONE-HALF INCHES.
- IN ALL CASES, CLEARANCE NOT LESS THAN THE DIAMETER OF THE BARS.
- NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE PLUS ONE QUARTER INCH FOR SECTIONS TEN INCHES OR LESS AND PLUS ONE-HALF INCH FOR SECTIONS OVER TEN INCHES THICK.

O. SIZES OF CONCRETE PLACEMENTS SHALL NOT EXCEED THE FOLLOWING UNLESS OTHERWISE INDICATED ON THE PLANS:

- WALLS AND CONTINUOUS WALL FOOTINGS - ONE HUNDRED FEET MAXIMUM LENGTH.
- SLABS ON GRADE - PLACE IN ALTERNATING STRIP STRIP CONSTRUCTION JOINTS ARE SHOWN ON PLANS. MAXIMUM WIDTH APPROXIMATELY THIRTY-SIX TIMES THE SLAB THICKNESS. MAXIMUM LENGTH TWO HUNDRED FEET.

P. MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.

Q. WALLS, PIERS, AND COLUMNS SHALL BE CURED TO FOOTINGS. WALL FOOTINGS AND CONCRETE COLUMN PANELS SHALL BE CURED AS WALLS AND COLUMNS VERTICALLY.

R. CONTINUOUS WALL FOOTINGS, BEAMS, SLABS AND COLUMNS SHALL BE PLACED MONOLITHICALLY EXCEPT WHERE OTHERWISE SHOWN. NO HORIZONTAL CONSTRUCTION JOINTS ARE TO BE MADE UNLESS SHOWN OR OTHERWISE NOTED.

S. PROVIDE A SHEAR KEY ONE-THIRD OF THE DEPTH OF STRUCTURAL MEMBER AT CONSTRUCTION JOINTS. SEE REINFORCEMENT SCHEDULE FOR ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS. PROVIDE BENTONITE WATER STOP IN ALL BELOW GRADE CONSTRUCTION JOINTS.

T. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, AND HOOKED TO FORM U-BARS AT DISCONTINUOUS ENDS. THESE SUPPLEMENTARY BARS SHALL MATCH THE SIZE AND SPACING OR QUANTITY OF THE TYPICAL, CONTINUOUS BARS.

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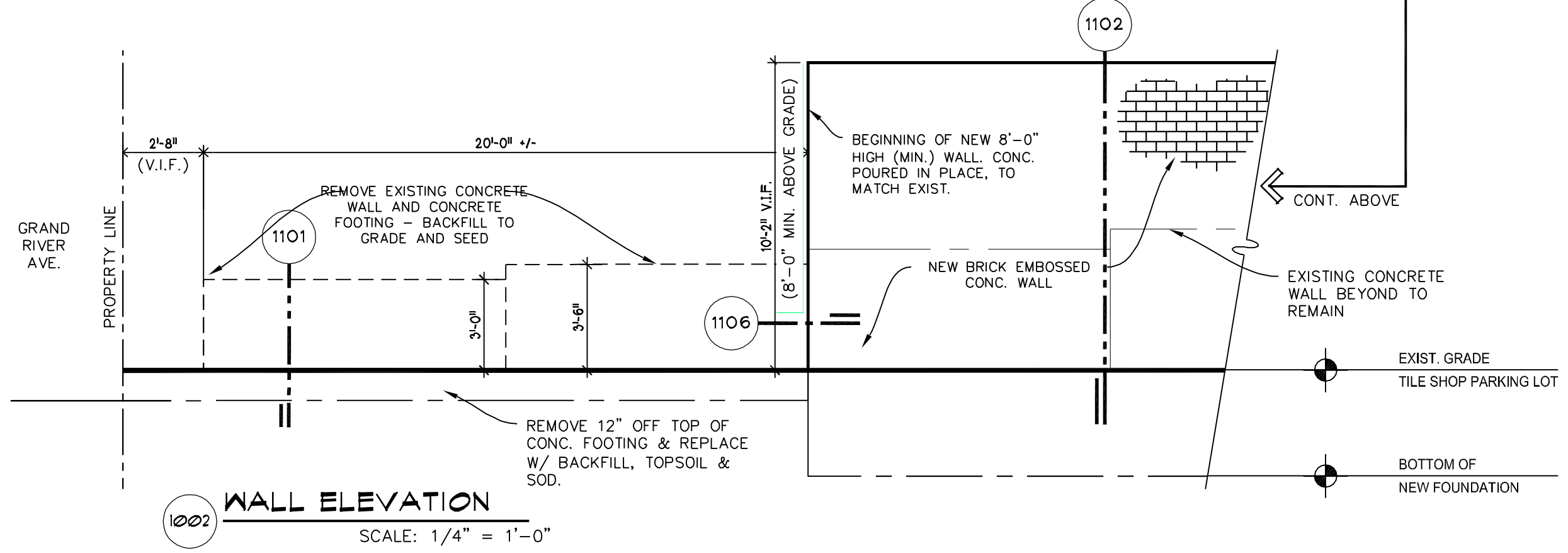
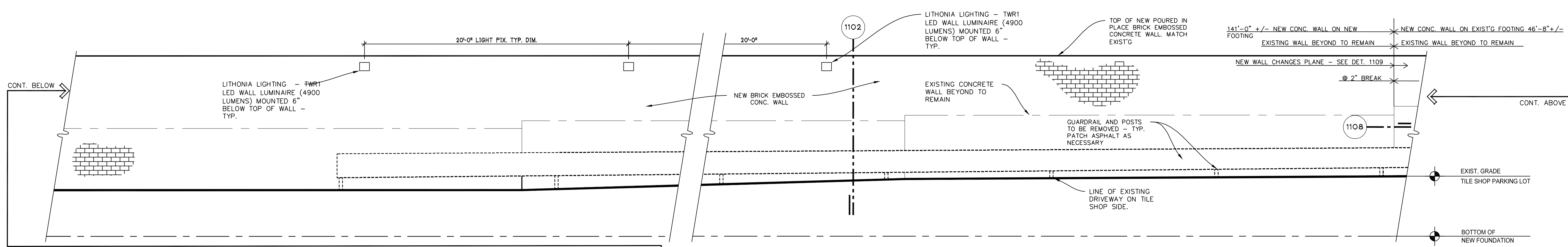
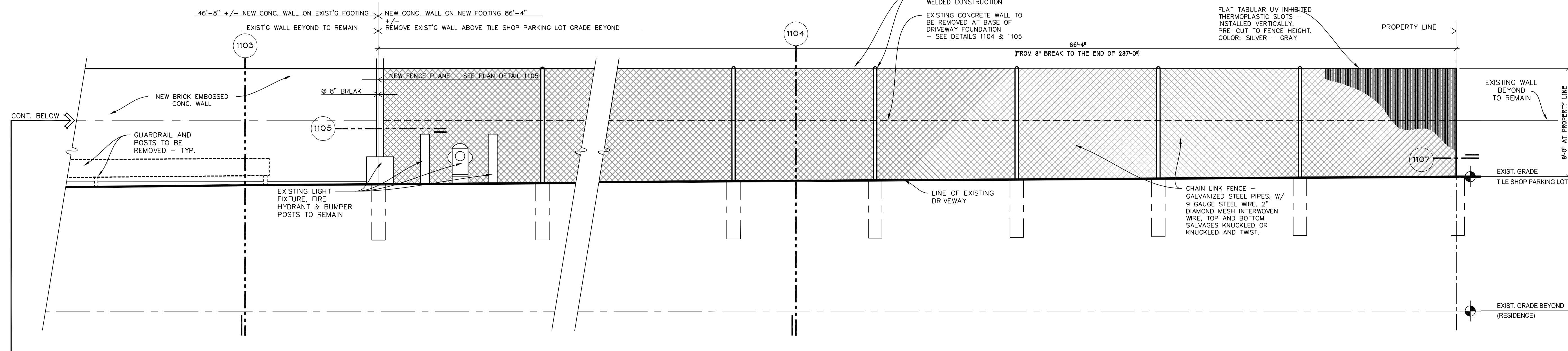
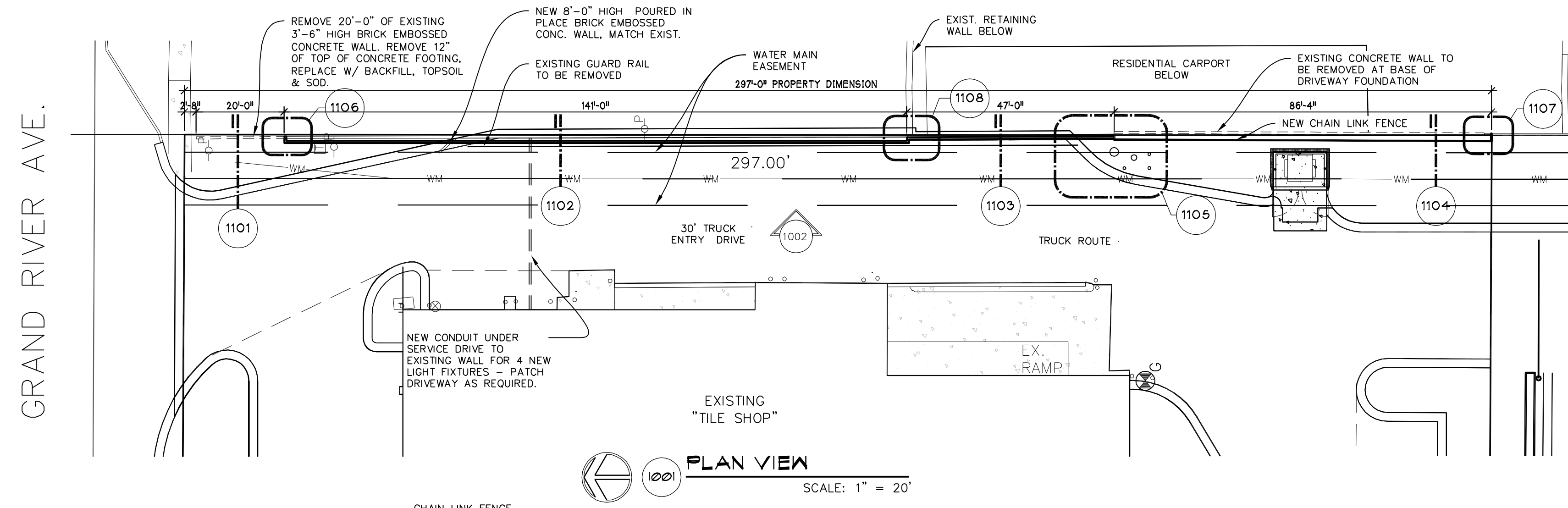
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NOTE:
 1. BRICK EMBOSSED CONCRETE WALL PATTERN TO MATCH EXISTING
 2. CONTRACTOR SHALL CAREFULLY EXCAVATE IN AREA ALONG WALL SO AS NOT TO INTERFERE WITH BURIED UTILITIES.

project name:
Tile Shop Renovation
 project location:
37025 Grand River Ave. Farmington, MI

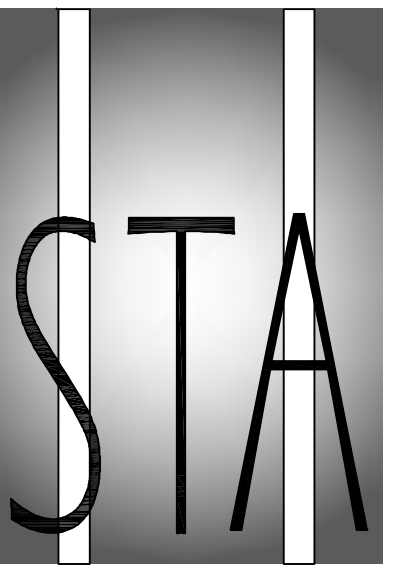


date/revision:
 ■ Aug 03, 2015 Bulletin 2 (Revised)
 ■ Sept. 08, 2015 Revised

sheet title:
Site Screen-Wall Plan/Elevation

project number:
2075
 sheet number:

A10



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29200 northwestern hwy suite 160 southfield, mi 48034

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project name: Tile Shop Renovation

project location: 37025 Grand River Ave. Farmington, MI

date/revision:

- Aug 03, 2015 Bulletin 2 (Revised)
Sept. 08, 2015 Revised

sheet title: Site Screen-Wall Details

project number:

2075

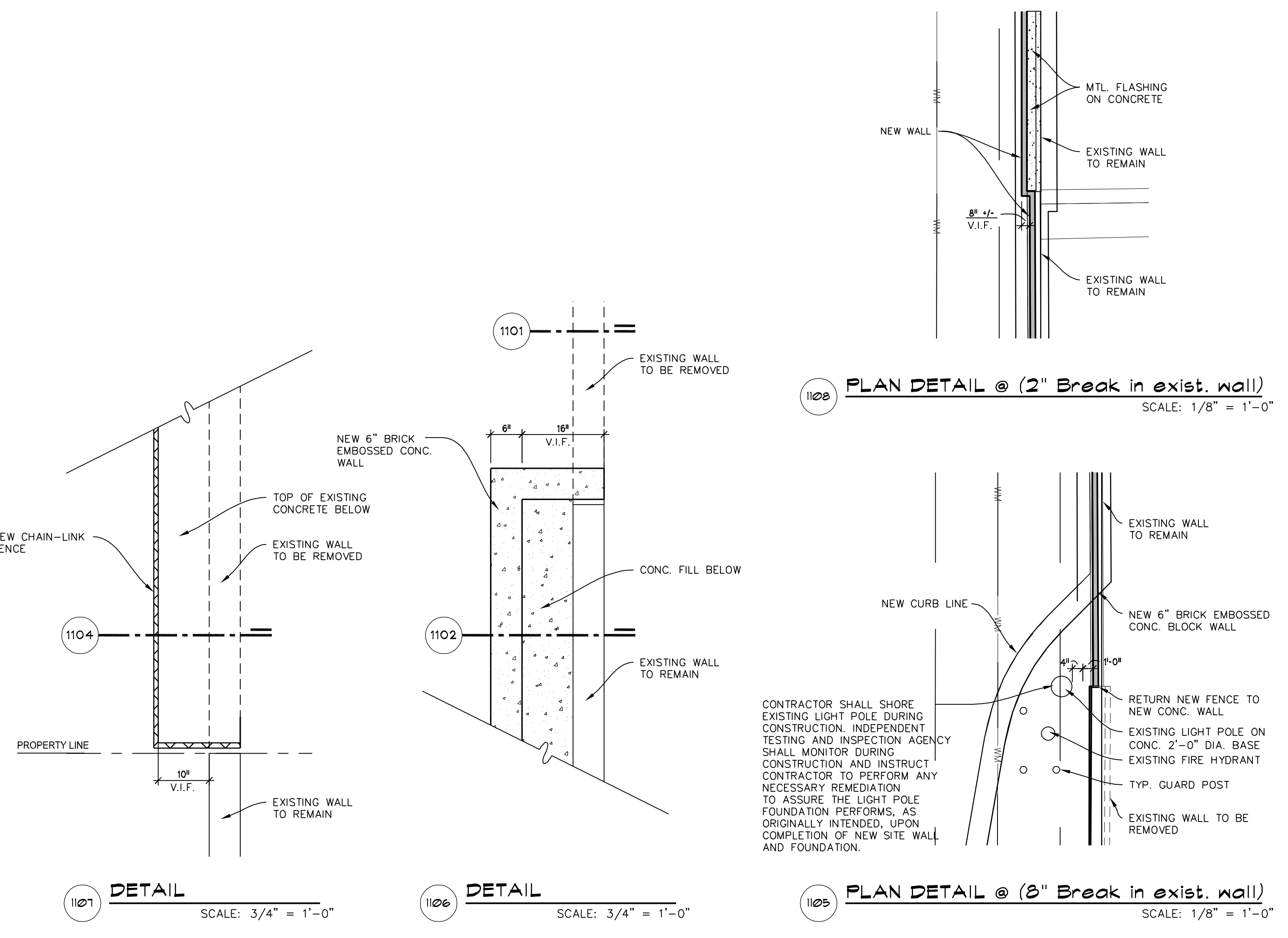
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A11

CONCRETE:

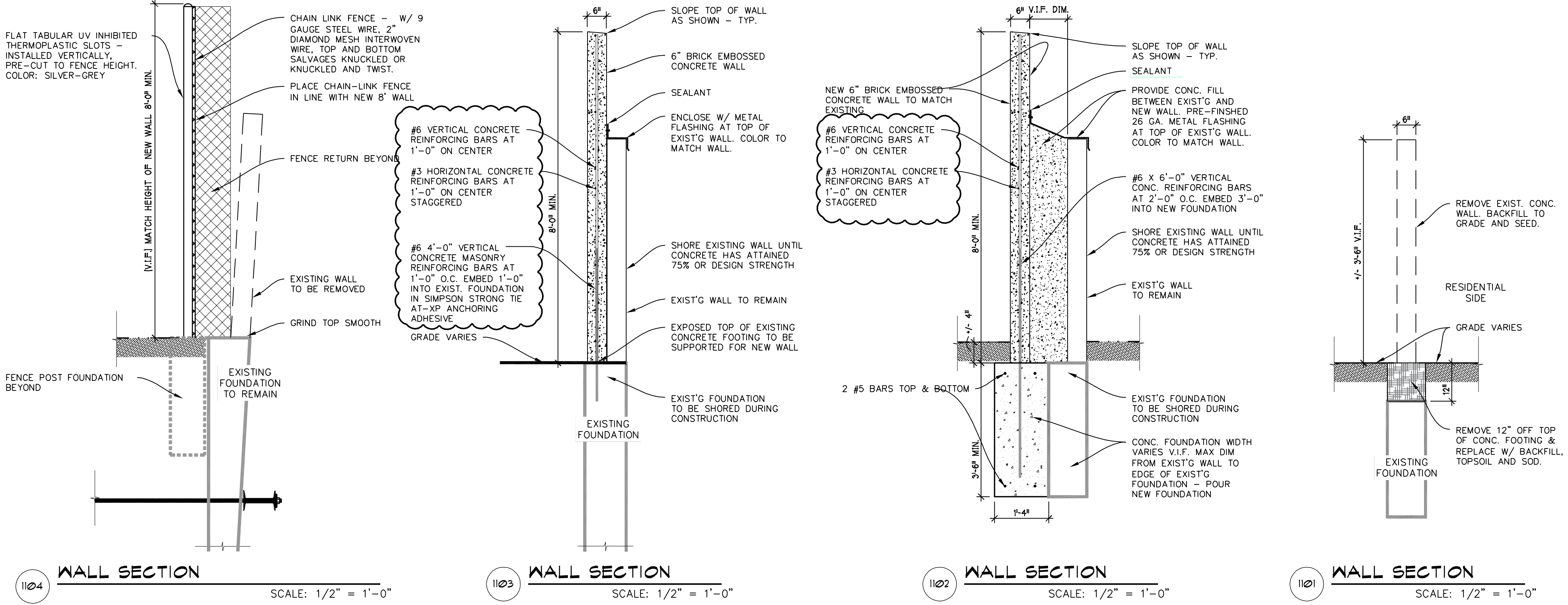
CONC1. CONCRETE (NORMAL WEIGHT), UNLESS OTHERWISE NOTED ON DRAWING, SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
CONC2. CONCRETE SHALL BE PLACED WITH SIX PERCENT (PLUS OR MINUS ONE PERCENT) AIR ENTRAINED WITHIN THE CONCRETE. CONCRETE PLACED DURING "WINTER" MUST BE PROTECTED FROM FREEZING.
CONC3. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 (60,000 PSI YIELD). WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, AND SHALL BE FURNISHED AND PLACED IN FLAT SHEETS. CONCRETE BAR REINFORCEMENT FOR WELDED REINFORCEMENT CONNECTIONS SHALL CONFORM TO ASTM A706. ALL ASTM STANDARDS SHALL BE LATEST EDITION.
CONC4. UNLESS OTHERWISE NOTED, CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS, AMERICAN STANDARDS FOR TESTING AND MATERIALS (ASTM) STANDARDS, AMERICAN WELDING SOCIETY (AWS) STANDARDS, AND CONCRETE REINFORCING STEEL INSTITUTE (CRSI) STANDARDS:
ACI 121 - "QUALITY ASSURANCE SYSTEMS FOR CONCRETE CONSTRUCTION"
ACI 211 - "STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE"
ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS"
ACI 302 - "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
ACI 304.2 - "PLACING CONCRETE BY PUMPING METHODS"
ACI 305 - "HOT WEATHER CONCRETING"
ACI 306 - "COLD WEATHER CONCRETING"
ACI 309 - "GUIDE FOR CONSOLIDATING CONCRETE"
ACI 315 - "DETAILS AND DETAILING OF CONCRETE REINFORCING"
ACI 318 - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
ACI 347 - "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
ACI 503.2 - "STANDARD SPECIFICATION FOR BONDING PLASTIC CONCRETE TO HARDENED CONCRETE WITH A MULTI-COMPONENT EPOXY ADHESIVE"
ACI SP-15 - "FIELD REFERENCE MANUAL" WHICH INCLUDES ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
ACI SP-66 - "ACI DETAILING MANUAL"
ACI SP-67 - "TEST METHOD FOR POTENTIAL ALKALI REACTIVITY OF CEMENT-AGGREGATE COMBINATIONS"
AWS D1.4 - "STRUCTURAL WELDING CODE REINFORCING"
CRSI (DA4) - "MANUAL OF STANDARD PRACTICE"
CRSI (P1) - "PLACING REINFORCING BARS"
CONC5. POZZOLANIC MATERIAL, SUCH AS FLY ASH AND GROUND, GRANULATED BLAST FURNACE SLAG (GGFS), MAY NOT BE ADDED TO ANY CONCRETE THAT MAY BE EXPOSED TO VIEW WITHOUT THE APPROVAL OF THE ARCHITECT. THIS APPROVAL MAY REQUIRE MIX-CUR FLY ASH AND GGFS, WHILE NOT IS NOT REQUIRED, IF IT IS DESIRED TO BE USED IN CONCRETE FOR THE PROJECT, THE FOLLOWING REQUIREMENTS APPLY:
CONC5.1. PROVIDE FLY ASH PER ASTM C618, TYPE C OR F. VERIFY THERE IS NO POTENTIAL ALKALI INTERACTION WITH PROPOSED AGGREGATES. IF POTENTIAL EXISTS, DO NOT USE FLY ASH OR USE A NON-REACTIVE AGGREGATE.
CONC5.2. PROVIDE GROUND, GRANULATED BLAST FURNACE SLAG PER ASTM C989, GRADE 100 OR BETTER.
CONC5.3. CONCRETE SHALL NOT CONTAIN MORE THAN TWENTY-FIVE PERCENT FLY ASH, BY WEIGHT, FOR TOTAL CEMENT AND POZZOLANIC MATERIAL.
CONC5.4. CONCRETE SHALL NOT CONTAIN MORE THAN THIRTY PERCENT GGFS, BY WEIGHT, FOR TOTAL CEMENT AND POZZOLANIC MATERIAL.
CONC5.5. THE COMBINED AMOUNT OF FLY ASH AND GGFS MAY NOT EXCEED FORTY PERCENT.
CONC6. MINIMUM CONCRETE COVER SHALL BE (UNLESS OTHERWISE NOTED):
CONC6.1. UNFORMED SURFACES IN CONTACT WITH GROUND (FOOTING BOTTOMS): THREE INCHES.
CONC6.2. SLABS ON GRADE: ONE INCH FROM TOP.
CONC6.3. FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER (PIERS, WALLS, PITS, ETC.): TWO INCHES.
CONC6.4. NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE PLUS ONE-QUARTER INCH FOR SECTIONS TEN INCHES OR LESS AND PLUS ONE-HALF INCH FOR SECTIONS OVER TEN INCHES THICK.
CONC7. SIZES OF CONCRETE PLACEMENTS SHALL NOT EXCEED THE FOLLOWING UNLESS OTHERWISE INDICATED ON THE PLANS:
CONC7.1. WALLS AND CONTINUOUS WALL FOOTINGS - ONE HUNDRED FEET MAXIMUM LENGTH.
CONC7.2. SLABS ON GRADE - PLACE IN ALTERNATING STRIP FASHION (CONSTRUCTION JOINTS ARE SHOWN ON PLAN.
CONC8. MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE AS REQUIRED TO ALLOW FOR FORM REMOVAL AND/OR THE ADEQUACY OF THE ADJACENT CONCRETE TO ACCEPT NEW WORK OR CONSTRUCTION ACTIVITY.
CONC9. WALLS, PIERS, AND COLUMNS SHALL BE DOWELED TO FOOTINGS. WALL FOOTINGS AND CONCRETE COLUMN DOWELS SHALL BE SAME SIZE AS WALL AND COLUMN VERTICALS.
CONC10. CONTINUOUS WALL FOOTINGS AND STEM WALLS SHALL BE PLACED MONOLITHICALLY EXCEPT WHERE OTHERWISE SHOWN. NO HORIZONTAL CONSTRUCTION JOINTS ARE TO BE MADE, UNLESS SHOWN OR OTHERWISE NOTED.
CONC11. PROVIDE A SHEAR KEY ONE-THIRD OF THE DEPTH OF STRUCTURAL MEMBER AT CONSTRUCTION JOINTS. SEE TYPICAL DETAILS FOR ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS. PROVIDE BENTONITE WATER STOP IN ALL BELOW GRADE CONSTRUCTION JOINTS.
CONC12. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS (OR CORNER BARS PROVIDED) AND LAPPED AT NECESSARY SPLICES. THESE SUPPLEMENTARY BARS SHALL MATCH THE SIZE AND SPACING OR QUANTITY OF THE TYPICAL, CONTINUOUS BARS.
CONC13. TESTING OF CONCRETE SHALL BE DONE FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF, AND SHALL INCLUDE BUT IS NOT LIMITED TO SLUMP, AIR CONTENT, CONCRETE TEMPERATURE, UNIT WEIGHT, AND COMPRESSIVE STRENGTH. ALL TESTING SHALL FOLLOW ASTM STANDARDS.

CONC14. ADMIXTURES SHALL CONTAIN NO MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE.
CONC14.1. WATER-REDUCING ADMIXTURE: ASTM C494, TYPE A.
CONC14.2. HIGH-RANGE, WATER-REDUCING ADMIXTURE: ASTM C494, TYPE F.
CONC14.3. WATER-REDUCING AND ACCELERATING ADMIXTURE: ASTM C494, TYPE E.
CONC14.4. WATER-REDUCING AND RETARDING ADMIXTURE: ASTM C494, TYPE D.
CONC14.5. AIR-ENTRAINING ADMIXTURE: ASTM C260.
CONC15. REPAIR AND PATCH DEFECTIVE AREAS AS DIRECTED BY ARCHITECT.
CONC16. COORDINATE FINISH OF ALL FOUNDATION WORK, INCLUDING SLABS ON GRADE, WITH ARCHITECTURAL AND FLOORING SUPPLIER'S REQUIREMENTS.
CONC17. LAP ALL REINFORCING AS INDICATED IN DETAILS OR A MINIMUM OF 2'-0", PROVIDE CORNER BARS FOR ALL HORIZONTAL REINFORCING. PROVIDE DOWELS FROM FOOTING EQUAL IN SIZE AND NUMBER TO VERTICAL WALL OR PIER REINFORCING (UNO).
CONC18. ALL EXPOSED EDGES OF CONCRETE PIERS, BEAMS, AND WALLS SHALL BE CHAMFERED 1/2" X 45 DEGREES.
CONCRETE MIX GUIDELINES
FOUNDATIONS AND WALLS
f'c 4,000 PSI (MIN)
SLUMP 4 INCH ; 1 INCH
LARGE AGGREGATE 1 INCH
AIR (WHEN EXPOSED) 6% +/- 1%
MISCELLANEOUS
MISC1. ALL WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL CODES.
MISC3. THE FULLY COMPLETED STRUCTURE HAS BEEN DESIGNED TO BE STABLE. THE CONTRACTOR REMAINS RESPONSIBLE FOR ALL MEANS AND METHODS ISSUES SUCH AS:
MISC3.1. TO DETERMINE THE ERECTION AND PLACING PROCEDURES AND SEQUENCES.
MISC3.2. TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENTS DURING ERECTION BY PROVIDING TEMPORARY SUPPORTS, SUCH AS TEMPORARY BRACING, SHORING, GUYS AND TIE DOWNS.
MISC3.3. TO PROVIDE TEMPORARY SUPPORTS AND THEY SHALL REMAIN UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE, COMPLETED, AND HAVE REACHED THEIR REQUIRED DESIGN STRENGTH.
MISC4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AT THE SITE, INCLUDING TOPOGRAPHY, UTILITIES, SERVICES, ETC., AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE HE CAUSES TO THE PROPERTY, EXISTING AND NEW CONSTRUCTION, AND FOR ANY UNAUTHORIZED DISRUPTIONS TO THE OWNER'S NORMAL USE OF UTILITIES, SERVICES AND THE SURROUNDING FACILITIES.

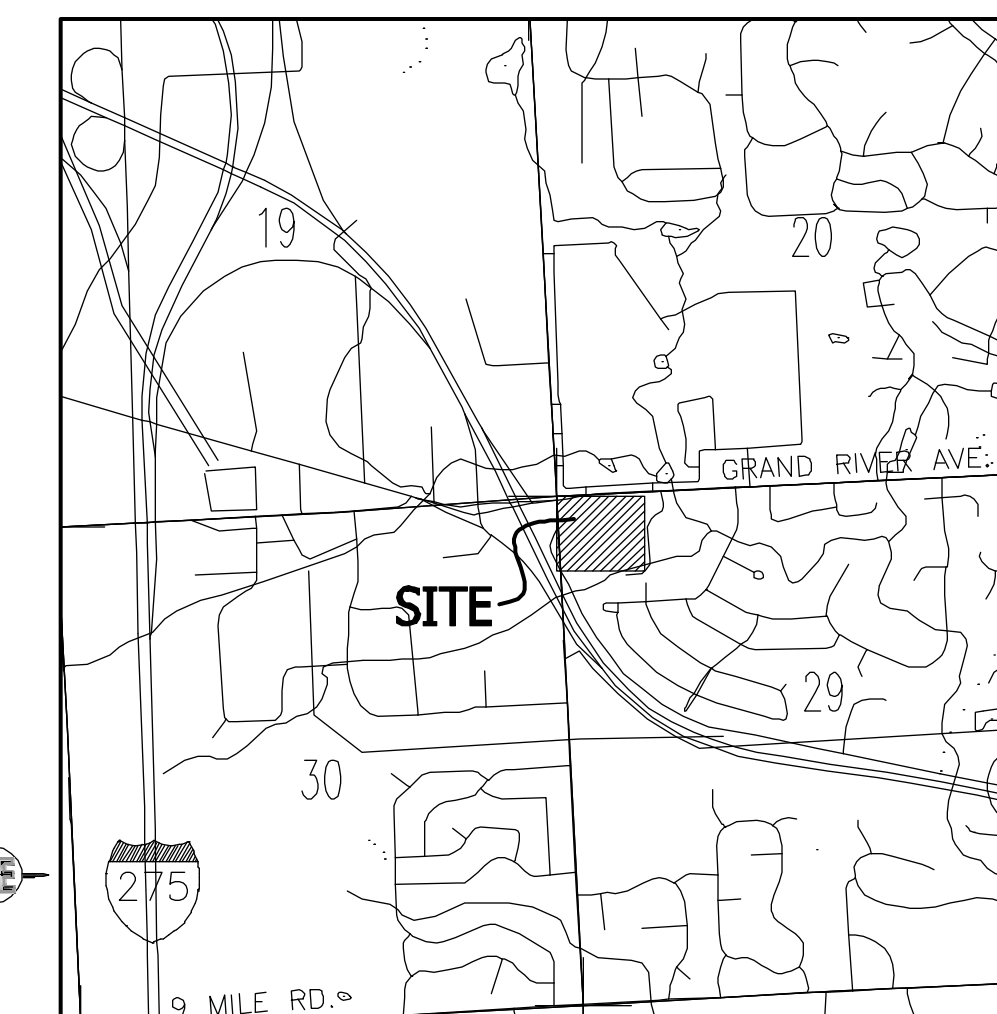


CHAIN-LINK FENCE:
1. TYPE 1: ASTM F 1083 SCHEDULE 40, STANDARD WEIGHT GALVANIZED STEEL PIPE, WELDED CONSTRUCTION, MINIMUM YIELD STRENGTH OF 25 KSI; COATING CONFORMING TO ASTM F 1043 GROUP 1A ON PIPE EXTERIOR AND INTERIOR.
2. FABRIC: ASTM A 392; [CLASS 1: 1.2 OUNCE ZINC] 9 GAUGE (0.148 INCH DIAMETER) GALVANIZED STEEL WIRE, 2 INCH DIAMOND MESH INTERWOVEN WIRE, TOP AND BOTTOM SALVAGES KNUCKLED OR KNUCKLED AND TWIST.
3. MIXES:
A. FOOTING CONCRETE: 3000 PSI PORTLAND CEMENT CONCRETE.
B. GROUT: PREMIXED, FACTORY PACKAGED, NON STAINING, NON CORROSIVE GROUT. PROVIDE TYPE FORMULATED FOR EXTERIOR APPLICATION.
4. COMPONENTS:
A. END, CORNER, AND PULL POSTS:
- TYPE 1 POSTS: 2.875 INCH OUTSIDE DIAMETER PIPE, 5.78 POUNDS PER LINEAL FOOT.
- TYPE 2 POSTS: 2.375 INCH OUTSIDE DIAMETER PIPE, 3.65 POUNDS PER LINEAL FOOT.
B. LINE (INTERMEDIATE) POSTS:
- TYPE 1 POSTS ROUND; 2.375 INCH OUTSIDE DIAMETER PIPE, 3.65 POUNDS PER LINEAL FOOT.
VERTICAL SLATS:
FLAT TABULAR UV INHIBITED THERMOPLASTIC SLATS - INSTALLED VERTICALLY, PRE-CUT TO FENCE HEIGHT. COLOR: SILVER-GRAY

NOTE: BRICK EMBOSSED CONCRETE WALL PATTERN TO MATCH EXISTING



CONSTRUCTION PLANS FOR TILE SHOP RENOVATION PART OF NE 1/4 CORNER, SECTION 29 CITY OF FARMINGTON, OAKLAND COUNTY, MICHIGAN



PROPERTY DESCRIPTION:

PROPOSED PARCEL 3:
Part of the Northwest 1/4 of Section 29, T14N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet, to the POINT OF BEGINNING of the Parcel to be described; thence continuing S 00°01'50" W, 297.00 feet; thence S 89°41'40" E, 326.00 feet; thence N 00°01'50" E, 297.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 326.00 feet, to the POINT OF BEGINNING, containing 2.22 acres, more or less, and including the use of existing Grand River Avenue. Also subject to and including the use of a 32 foot wide Ingress/Egress Easement #2, as described below. Also subject to and including the use of a Variable Width Ingress/Egress Easement, as described below. Also subject to an existing 20 foot wide Consumers Power Company Gas Easement, as recorded in Liber 6309, Page 205, Oakland County Records. Also subject to an existing 12 foot wide Water Main Easement, as recorded in Liber 6309, Page 844, Oakland County Records. Also subject to an existing 12 foot wide Sanitary Sewer Easement, as recorded in Liber 6309, Page 845, Oakland County Records. Also subject to an existing 20 foot wide Sanitary Sewer Easement, as recorded in Liber 4417, Page 116, Oakland County Records. Also subject to any other easements or restrictions of record.

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #1
Part of the Northwest 1/4 of Section 29, T14N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 674.91 feet; thence due South, 180.00 feet; thence N 89°41'40" W, 180.00 feet; thence along the easterly Right of Way line of Freedom Road, due South, 117.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement to be described; thence along the centerline of said 32 foot wide Easement, S 00°01'50" W, 297.00 feet, to the POINT OF TERMINUS.

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #2
Part of the Northwest 1/4 of Section 29, T14N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 326.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement to be described; thence along the centerline of said 32 foot wide Easement, S 00°01'50" W, 297.00 feet, to the POINT OF TERMINUS.

PROPOSED VARIABLE WIDTH INGRESS/EGRESS EASEMENT
Part of the Northwest 1/4 of Section 29, T14N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet, to the POINT OF BEGINNING of the Easement to be described; thence continuing S 00°01'50" W, 297.00 feet; thence S 89°41'40" E, 52.00 feet; thence northeasterly along an arc right, having a length of 57.60 feet, a radius of 150.00 feet, a central angle of 22°04'44", and a long chord which bears N 11°04'12" E, 57.45 feet; thence northeasterly along an arc left, having a length of 57.60 feet, a central angle of 22°04'44", and a long chord which bears N 11°04'12" E, 57.45 feet; thence N 00°01'50" E, 135.13 feet; thence N 89°41'40" W, 35.00 feet; thence S 00°01'50" E, 49.00 feet; thence along the South Right of Way line of Grand River Avenue, S 89°41'40" E, 65.00 feet, to the POINT OF BEGINNING.

Bearings were established from Land Contract as recorded in Liber 45433, Page 747, Oakland County Records.

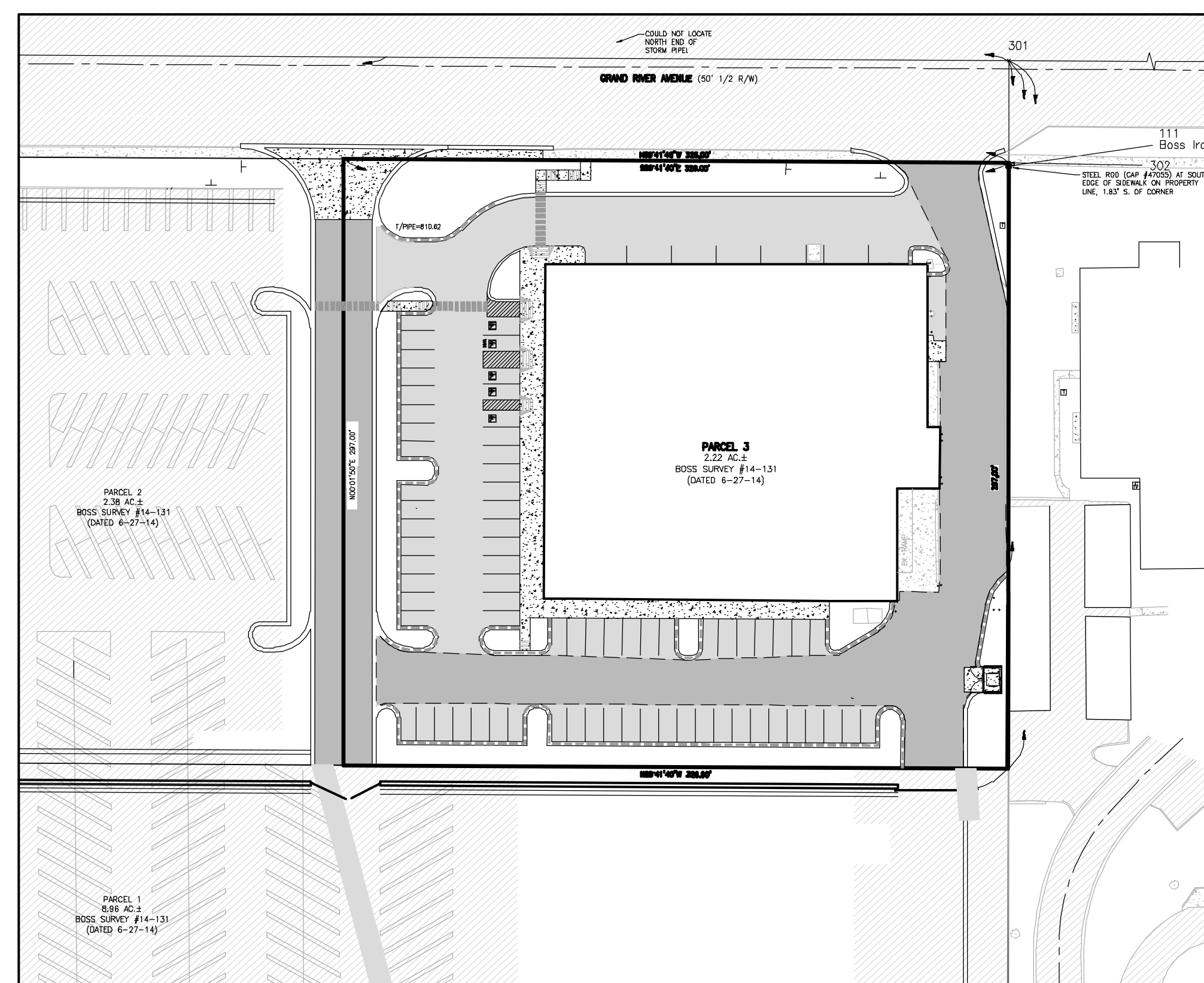
CONSTRUCTION NOTES

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

- THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
- DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
- IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CITY, COUNTY, AND STATE OF MICHIGAN PERMITS.
- PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
- ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
- ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
- THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
- THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II).
- ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
- NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
- DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
- IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
- NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
- ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
- ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
- TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE CITY. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
- ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
- ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
- NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
- ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
- ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

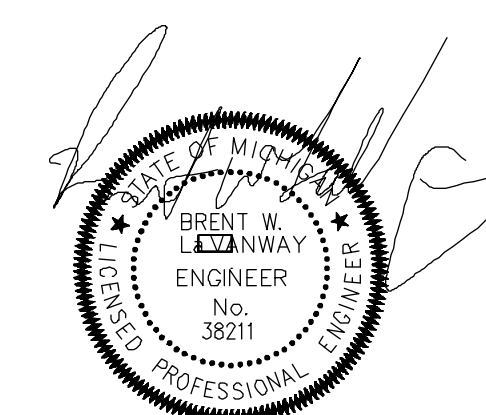


OVERALL SITE MAP
NO SCALE
(SEE SHEET 8A FOR OVERALL LANDSCAPE PLAN)

WATERMAIN QUANTITIES	
BENDS 45°	4
SANITARY QUANTITIES	
NONE	

STORM QUANTITIES	
18" RCP C-76 CL. IV	390 LF
15" RCP C-76 CL. IV	71 LF
12" RCP C-76 CL. IV	295 LF
8" PVC SCH 40	116 LF
4" DIA STRUCTURES	7
2" DIA STRUCTURES	3
COVER 'K'	5
COVER 'D'	5

SHEET INDEX	
SHEET NO.	DESCRIPTION
C1	COVER SHEET
C2	EXISTING CONDITIONS & DEMOLITION PLAN
C3	SITE PLAN
C3A	OVERALL PUD PLAN
C4	GRADING PLAN
C5	DRAINAGE PLAN
C6	UTILITY PLAN
C7	SOIL EROSION CONTROL PLAN
C8	LANDSCAPE PLAN
C8A	OVERALL PUD LANDSCAPE PLAN
C9	LIGHTING PLAN
C10	CONSTRUCTION DETAILS
C11	CONSTRUCTION DETAILS
C12	STORM PLAN & PROFILE
C13	OAKLAND COUNTY SESC DETAILS
C14	TRAFFIC PLAN



TILE SHOP RENOVATION

PREPARED FOR:

GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVE, SUITE 360
FARMINGTON HILLS, MI 48335
CONTACT: MR. TOM DUKE
PHONE: (248) 476-3700

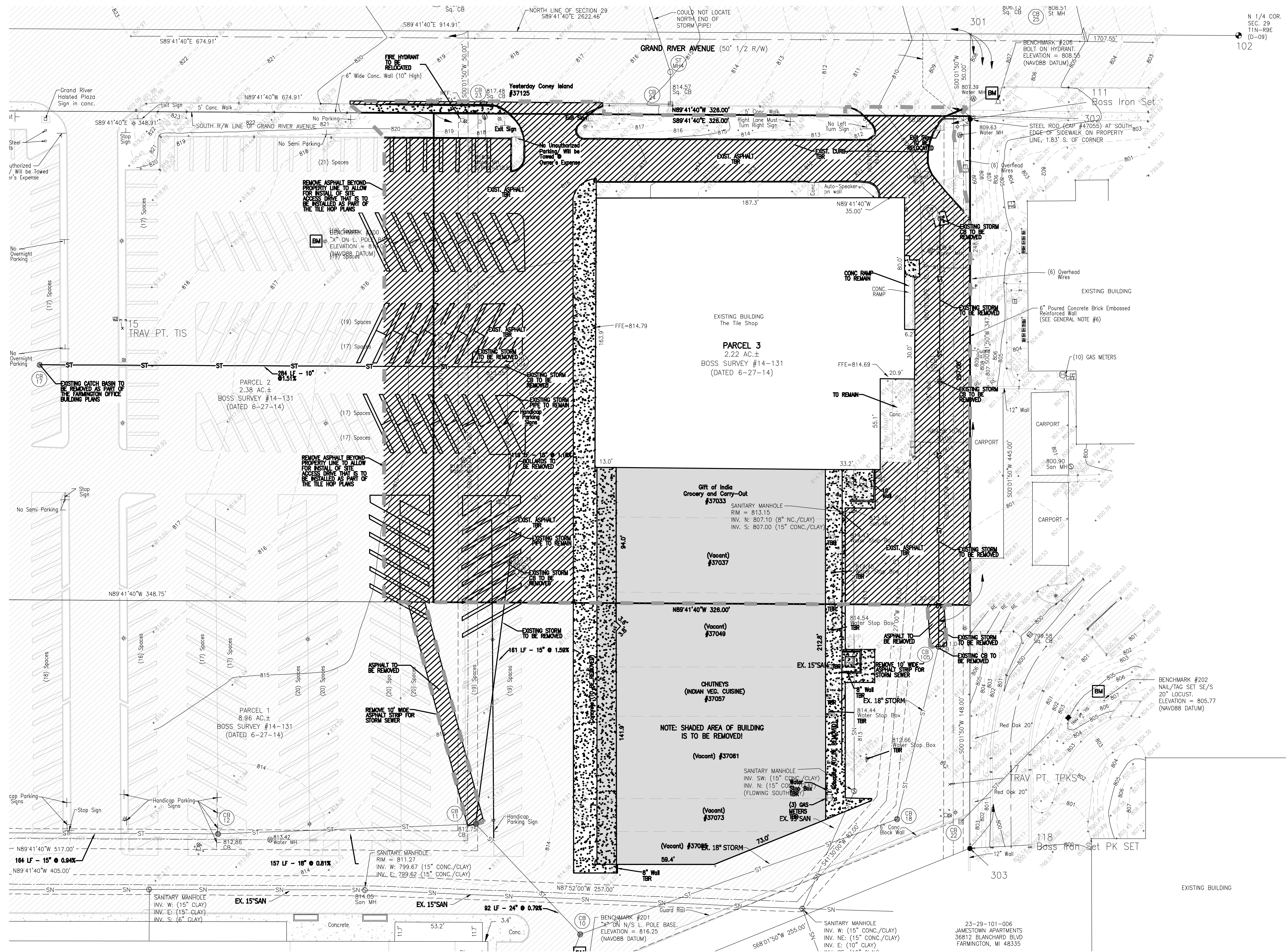
PREPARED BY:

BEBOSS
Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

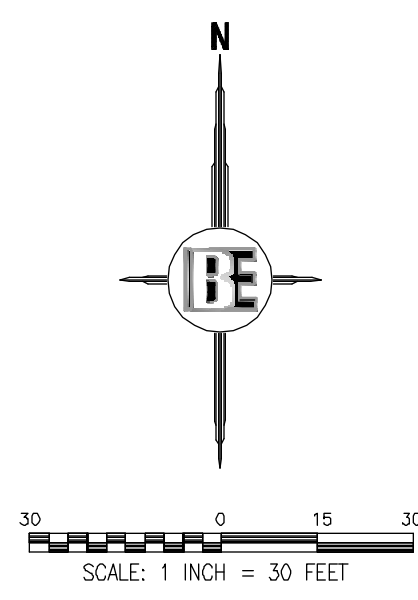
ARCHITECT

SIEGAL/TUOMAALA ASSOCIATES
29200 NORTHWESTERN HIGHWAY, SUITE 160
SOUTHFIELD, MI 48034
CONTACT: MR. LONNY ZIMMERMAN
PHONE: (248) 352-0099

NO	BY	REVISION	DATE	JOB NO.
4	RD	PER OHM REVIEW	09/08/15	C1
3	ST	PER CITY REVIEW	08/10/15	
2	ST	PER CITY REVIEW	04/08/15	
1	ST	PER PC & CITY REVIEW	03/06/15	
NO	BY	REVISION	DATE	



N 1/4 COR.
SEC. 29
T1N-09E
(D-09)
102



GENERAL SURVEY NOTES:

- CURRENT ZONING: C3 (GENERAL BUSINESS DISTRICT)
- MINIMUM SETBACK REQUIREMENTS:
FRONT = 25 FEET
SIDES = 10 FEET; (20 FEET SIDE SETBACK WHEN ABUTTING A SINGLE-FAMILY USE OR DISTRICT)
REAR = 20 FEET; (25 FEET SIDE SETBACK WHEN ABUTTING A SINGLE-FAMILY USE OR DISTRICT)
- BEARINGS WERE ESTABLISHED FROM LAND CONTRACT, DATED JANUARY 10, 2013, AS RECORDED IN LIBER 45433, PAGE 747, OKLAHOMA COUNTY RECORDS.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- OWNER OF SUBJECT PROPERTY: GRAND RIVER PROJECT, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY.
- THE CONCRETE WALLS SURROUNDING THE PROPERTY ARE WITHIN OR ON THE BOUNDARY LINES AND DO NOT ENCROACH ONTO ADJACENT PARCELS.
- ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS (NAVD88 DATUM)

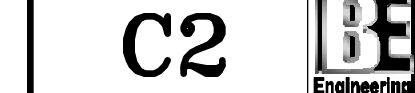
LEGEND

- 900 EXISTING CONTOUR
- 922.00 EXISTING SPOT ELEVATION
- STORM DRAINAGE FLOW
- POWER POLE
- GUY WIRE
- HYDRANT
- GATE VALVE
- WATER MANHOLE
- MANHOLE
- STORM CATCH BASIN (BEEHIVE)
- STORM CATCH BASIN (SQUARE)
- STORM INVERT
- ELECTRICAL RISER
- TRANSFORMER PAD
- GAS METER
- LIGHT POLE
- ORNAMENTAL LIGHT
- SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- IRON SET
- IRON FOUND
- MONUMENT
- SECTION CORNER
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD WIRES
- FENCE
- CONC.
- CONCRETE
- SAN MH
- SANITARY MANHOLE
- ST MH
- STORM MANHOLE
- C
- CENTERLINE
- L
- LIBER
- P
- PAGE
- L.C.R.
- LIVINGSTON COUNTY RECORDS
- (R&M)
- RECORD AND MEASURED
- P.O.B.
- POINT OF BEGINNING
- Handicap Symbol
- HUB
- WOOD LATH SET
- EXISTING ASPHALT
- ASPHALT TO BE REMOVED

TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

NO.	BY	DATE
4	RD	PER OHM REVIEW 09/08/15
3	ST	PER CITY REVIEW 08/10/15
1	ST	PER P.C. & CITY REVIEW 03/06/15
	NO	REVISION PER
	NO	DATE

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
SCALE 1" = 30'
JOB NO. 14-131
DATE 1/9/15
SHEET NO.

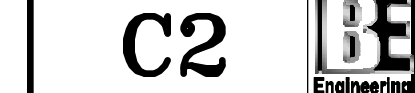


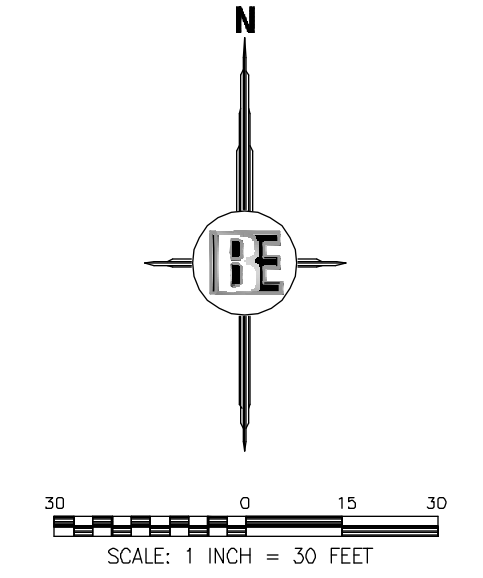
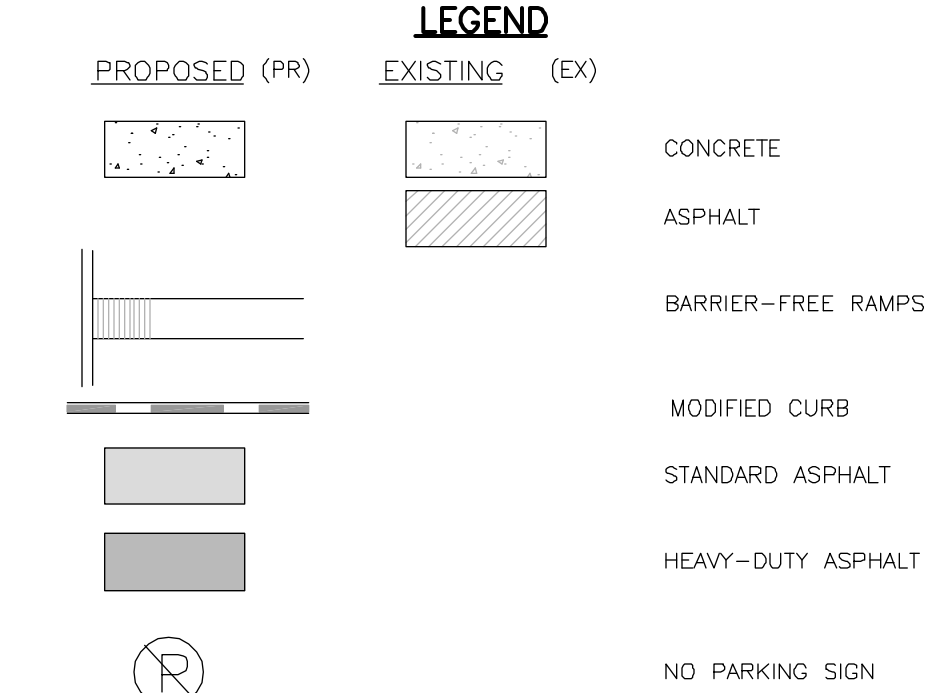
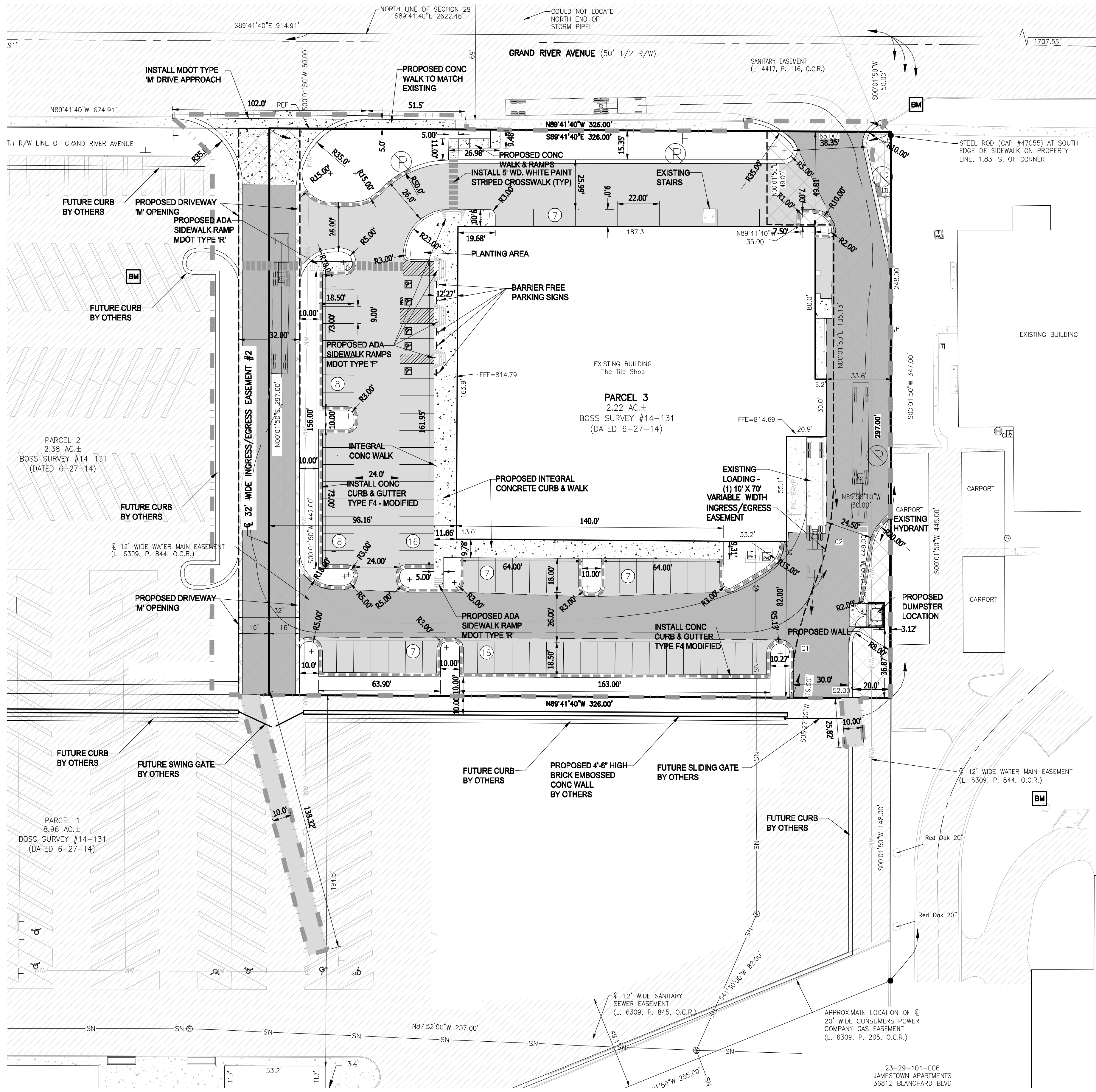
BEBOSS
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Engineers Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

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FARMINGTON HILLS, MI 48335
(248) 476-3700

NO.	BY	DATE
4	RD	PER OHM REVIEW 09/08/15
3	ST	PER CITY REVIEW 08/10/15
1	ST	PER P.C. & CITY REVIEW 03/06/15
	NO	REVISION PER
	NO	DATE

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
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SHEET NO.





SITE DATA

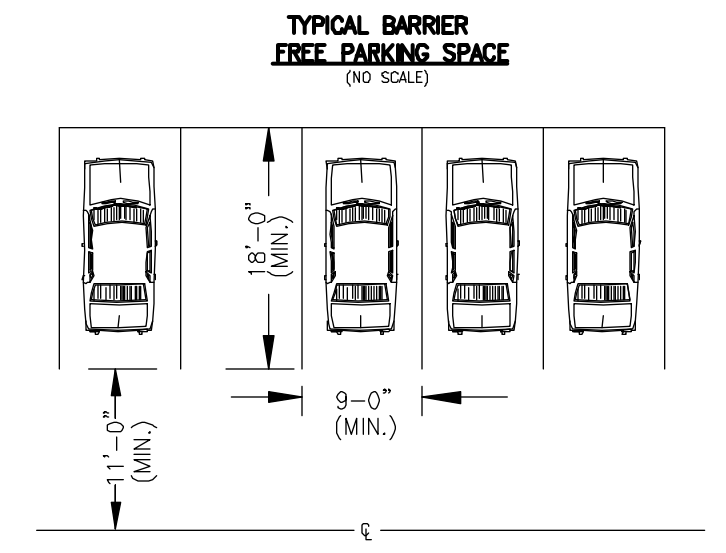
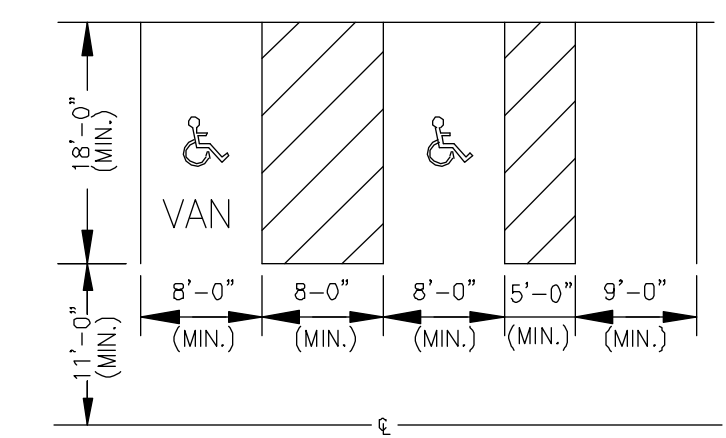
- PARKING CALCULATIONS:**
 EX 1-STORY RETAIL BUILDING = 29,851 S.F.
 REQUIRED: 4.5 SPACES PER 1,000 S.F. GLA
 29,851 S.F. / 1,000 S.F. X 4.5 SPACES = 134 SPACES
 PROPOSED: 78 SPACES
 133 SPACES - 78 SPACES = 55 SPACES (SEE NOTE 2)
 REQUIRED BARRIER-FREE SPACES: 4 SPACES (FOR 75-100 SPACES)
 PROPOSED BARRIER-FREE SPACES: 4 SPACES
- SHARED PARKING WITH PARCEL 2 & 4**
 SHARED PARKING EASEMENT WITH PARCEL 2 & 4 TO CONTAIN 62 SPACES
- LOT SETBACKS**
 FRONT YARD REQUIRED: 25 FEET
 FRONT YARD PROVIDED: 49.81 FEET
 SIDE YARD REQUIRED: 10 FEET (25 FEET MIN. TOTAL)
 SIDE YARD PROVIDED: 33.50 FEET & 98.16 FEET
 REAR YARD REQUIRED: 20 FEET
 REAR YARD PROVIDED: 82.00 FEET
- LOT COVERAGE**
 MAXIMUM LOT COVERAGE - NONE
- EXISTING IMPERVIOUS AREA: 2.67AC**
 PROPOSED IMPERVIOUS AREA: 2.41AC
 IMPERVIOUS AREA REDUCED BY 9.74%

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #1
 Part of the Northwest 1/4 of Section 29, T1N-R6E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 674.91 feet; thence due South, 180.00 feet; thence N 89°41'40" W, 180.00 feet; thence along the eastern Right of Way line of Freedom Road, due South, 117.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement to be described; thence along the centerline of said 32 foot wide Easement, S 89°41'40" E, 220.00 feet, to the POINT OF TERMINUS.

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #2
 Part of the Northwest 1/4 of Section 29, T1N-R6E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 326.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement, S 00°01'50" W, 297.00 feet, to the POINT OF TERMINUS.

PROPOSED VARIABLE WIDTH INGRESS/EGRESS EASEMENT
 Part of the Northwest 1/4 of Section 29, T1N-R6E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 29; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 29, S 89°41'40" E, 914.91 feet; thence S 00°01'50" W, 50.00 feet, to the POINT OF BEGINNING of the Easement to be described; thence continuing S 00°01'50" W, 297.00 feet; thence S 89°41'40" E, 52.00 feet; thence northeasterly along an arc right, having a length of 57.80 feet, a radius of 150.00 feet, a central angle of 22°04'44"; and a long chord which bears N 11°04'12" E, 57.45 feet; thence northeasterly along an arc left, having a length of 57.80 feet, a radius of 150.00 feet, a central angle of 22°04'44"; and a long chord which bears N 11°04'12" E, 57.45 feet; thence N 00°01'50" E, 135.13 feet; thence N 89°41'40" W, 35.00 feet; thence N 00°01'50" E, 49.00 feet; thence along the South Right of Way line of Grand River Avenue, S 89°41'40" E, 65.00 feet, to the POINT OF BEGINNING.

Bearings were established from Land Contract as recorded in Liber 45433, Page 747, Oakland County Records.



THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND PROVIDING UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. APPROVED OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

REGISTERED PROFESSIONAL ENGINEER
 STATE OF MICHIGAN
 EX-1000
 1-800-487-7171



BEBOSS
Engineering
 Engineers Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 800.246.6735 FAX 517.548.1670

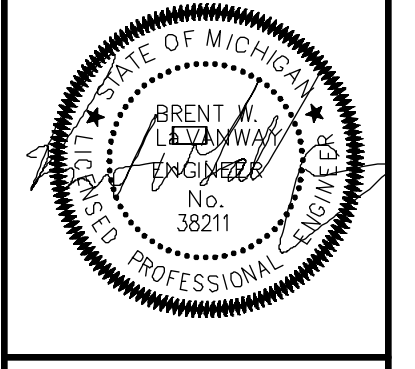
TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
 37000 GRAND RIVER AVENUE SUITE 300
 FARMINGTON HILLS, MI 48335
 (248) 476-3700

NO.	BY	REVISION PER	DATE
1	ST	PER P.C. & CITY REVIEW	03/05/15
2	ST	PER P.C. & CITY REVIEW	08/10/15
3	ST	PER CITY REVIEW	09/05/15
4	RD	PER OHW REVIEW	09/05/15

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE 1" = 30'
 JOB NO. 14-131
 DATE 1/9/16
 SHEET NO. C3

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONTACTS ARE MADE WITH UTILITIES. IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

3 WORKING DAYS BEFORE YOU DIG
800-487-7171
www.michigan.gov/dnr

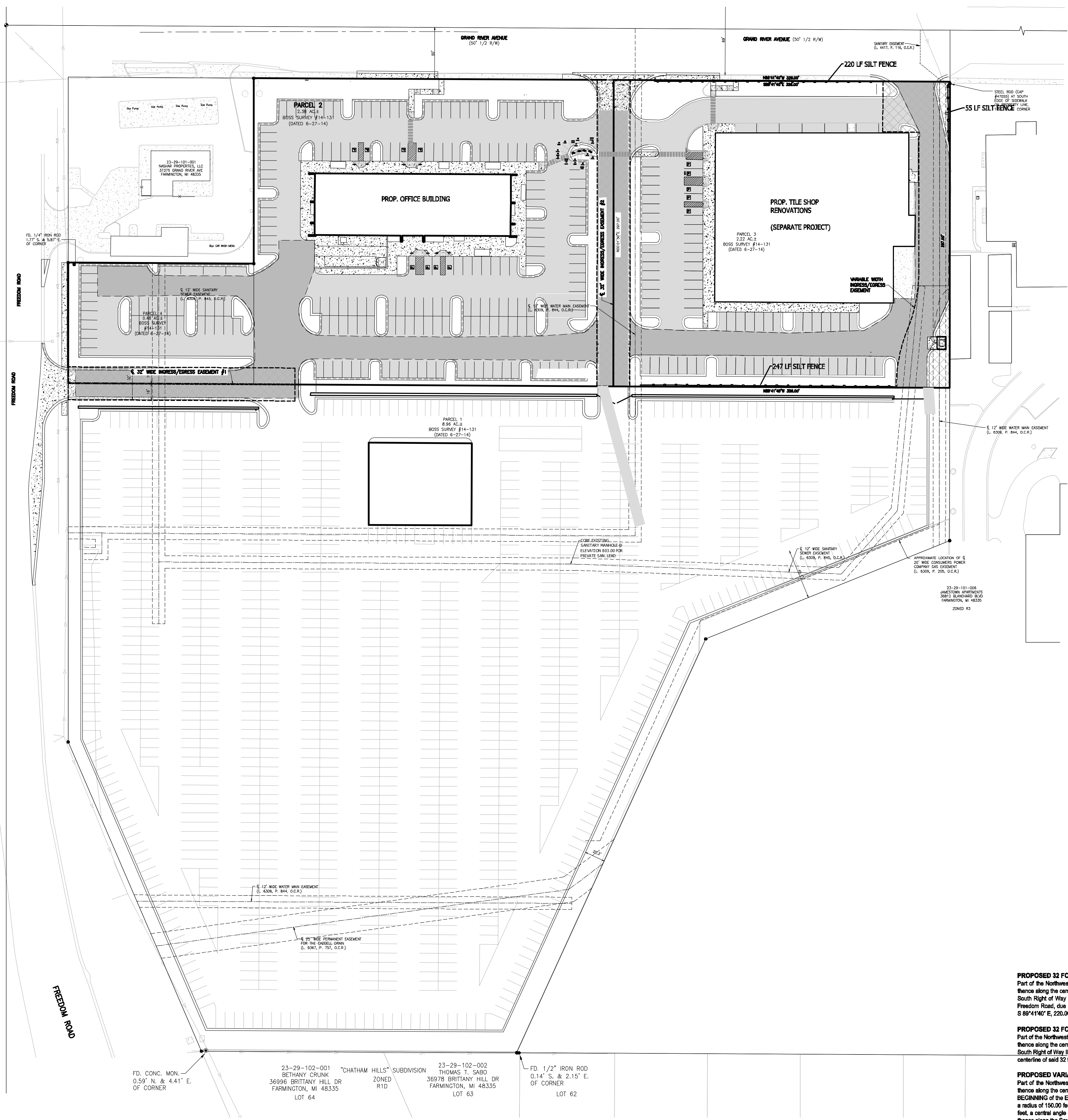


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TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 492-3700

OVERALL PUD PLAN

PROJECT	TILE SHOP RENOVATION
PREPARED FOR	GRAND RIVER PROJECT, LLC
TITLE	OVERALL PUD PLAN
DESIGNED BY	ST
DRAWN BY	ST
CHECKED BY	
SCALE	1" = 50'
JOB NO.	14-131
DATE	1/9/15
SHEET NO.	C3A



Development Narrative:

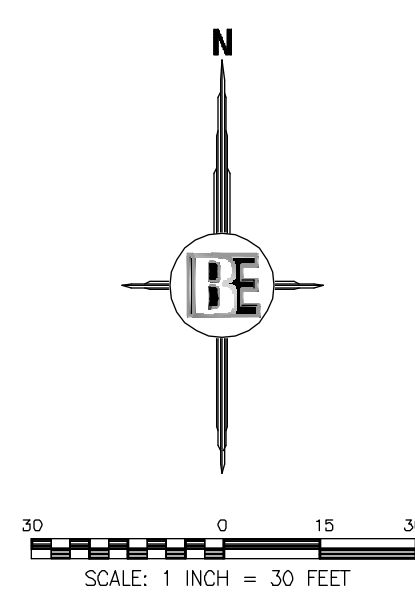
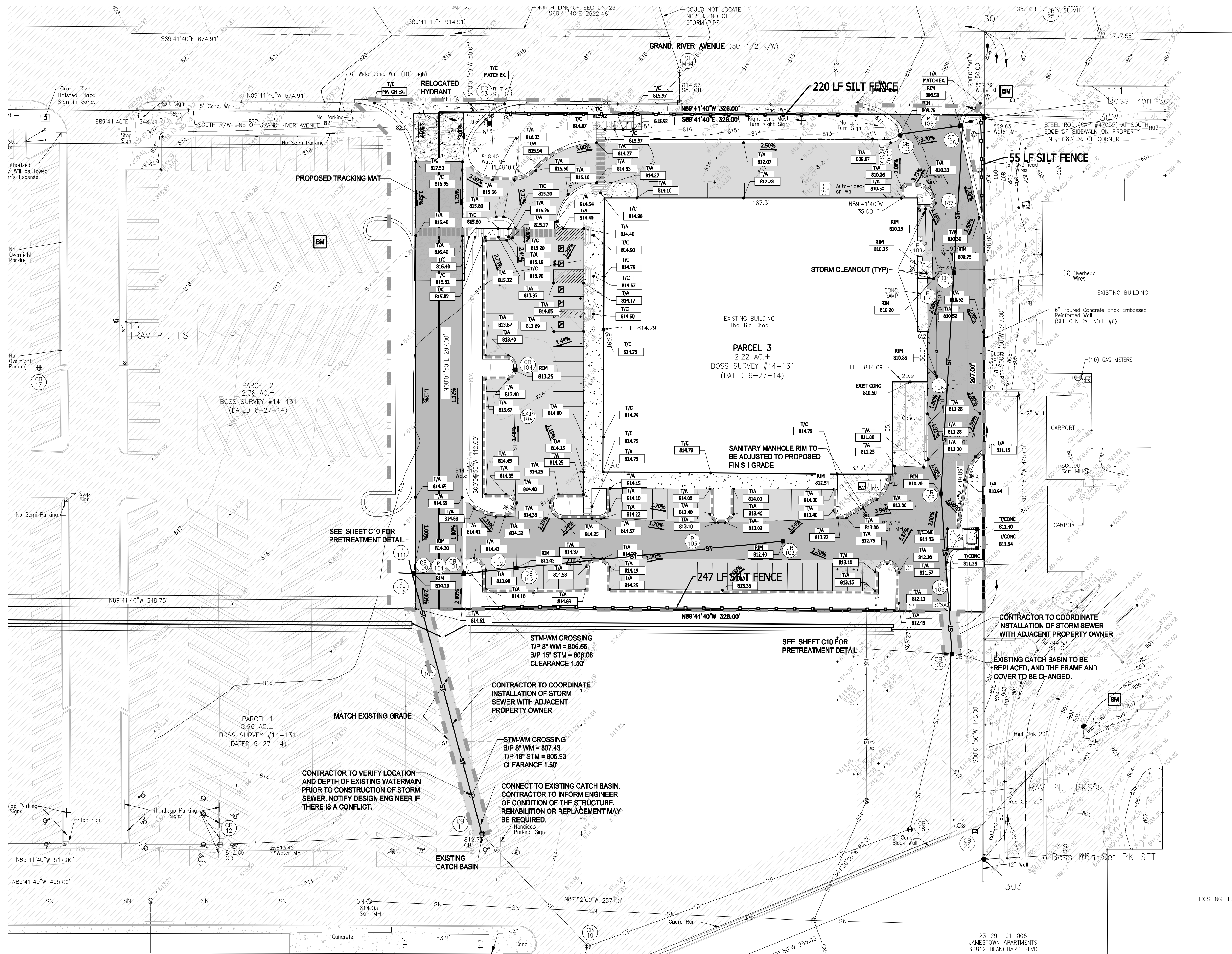
THE EXISTING STRIP MALL WILL BE DEMOLISHED KEEPING ONLY THE TILE SHOP BUSINESS. THE EXISTING DRIVES FROM GRAND RIVER WILL BE REMOVED AS WELL AS THE DRIVE FROM FREEDOM ROAD. THE PROPOSED DRIVES INCLUDE 2 ALONG GRAND RIVER AND ONE ON FREEDOM ROAD. THE PARKING LOT WILL BE DEMOLISHED AND THE NEW PARKING LOT WILL INCLUDE LANDSCAPED ISLANDS. THE CENTER MAIN DRIVE OFF OF GRAND RIVER WILL BE CONSTRUCTED AS PART OF THE TILE SHOP PROJECT AND WILL PROVIDE ACCESS TO BOTH THE TILE SHOP AND THE PROPOSED OFFICE BUILDING. THE PROPOSED STORM STRUCTURES IN THE MAIN ACCESS DRIVE (CB100 & CB101) ALONG WITH THE PIPE RUN SOUTH TO EXISTING CATCH BASIN 11 WILL BE CONSTRUCTED AS PART OF THE TILE SHOP PROJECT.

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #1
Part of the Northwest 1/4 of Section 28, T1N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 28; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 28, S 89°41'40" E, 914.81 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 674.91 feet; thence due South, 180.00 feet; thence N 89°41'40" W, 180.00 feet; thence along the easterly Right of Way line of Freedom Road, due South, 117.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement to be described; thence along the centerline of said 32 foot wide Easement, S 88°41'40" E, 220.00 feet, to the POINT OF TERMINUS.

PROPOSED 32 FOOT WIDE INGRESS/EGRESS EASEMENT #2
Part of the Northwest 1/4 of Section 28, T1N-R9E, City of Farmington, Oakland County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 28; thence along the centerline of Grand River Avenue (50 foot wide 1/2 Right of Way) and the North line of Section 28, S 89°41'40" E, 914.81 feet; thence S 00°01'50" W, 50.00 feet; thence along the South Right of Way line of Grand River Avenue, N 89°41'40" W, 328.00 feet, to the POINT OF BEGINNING of the centerline of the 32 foot wide Easement to be described; thence along the centerline of said 32 foot wide Easement, S 00°01'50" W, 297.00 feet, to the POINT OF TERMINUS.

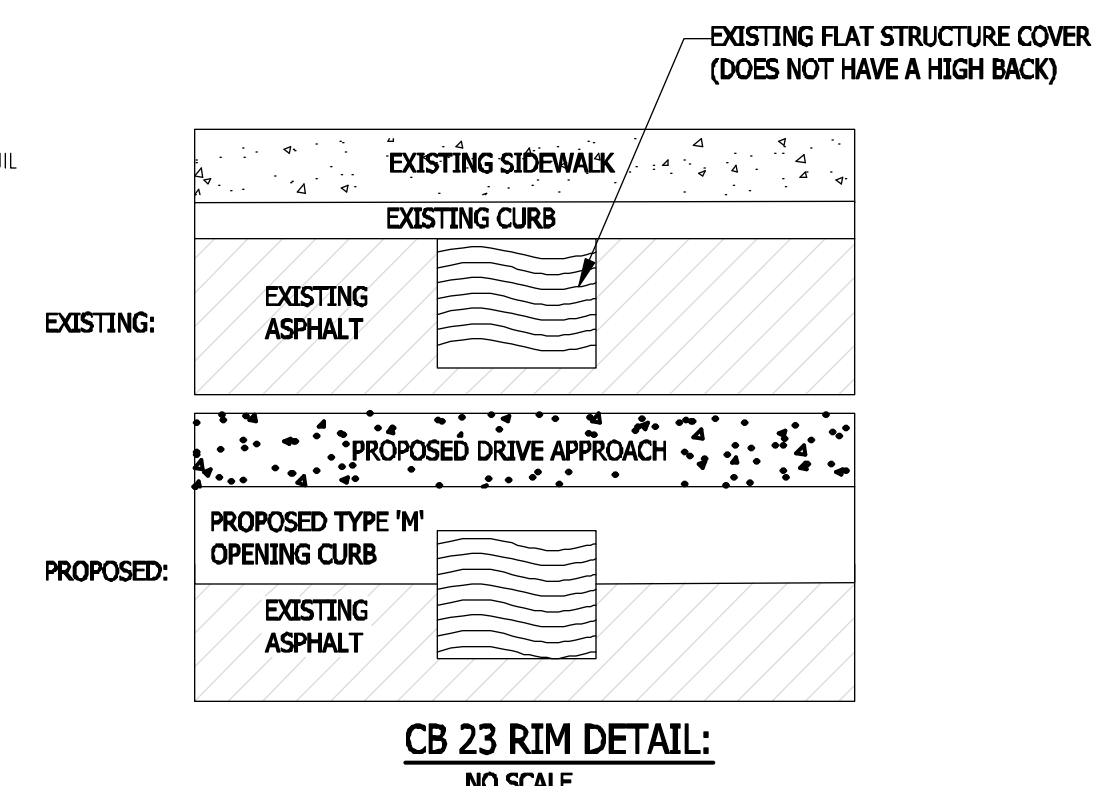
PROPOSED VARIABLE WIDTH INGRESS/EGRESS EASEMENT
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Bearings were established from Land Contract as recorded in Liber 45433, Page 747, Oakland County Records.



LEGEND

PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
900	900	CONTOUR
T/C	XXX.XX	STORM DRAINAGE FLOW
FF	+922.08	SPOT ELEVATION
FG		FINISHED FLOOR ELEVATION
T/A		FINISHED GRADE ELEVATION
T/C		TOP OF ASPHALT
T/W		TOP OF WALK / CONCRETE
F/L		TOP OF WALK
T/P		FLOW LINE
B/P		TOP OF PIPE
RIM		BOTTOM OF PIPE
INV		RIM ELEVATION
WH		INVERT ELEVATION
IN		MANHOLE STRUCTURE
CB		CATCHBASIN STRUCTURE
RY		REARWARD STRUCTURE
ES		END-SECTION
OV		GATEVALVE STRUCTURE
HY		HYDRANT
UP		UTILITY POLE
SN		SANITARY SEWER
SL		SANITARY LEAD
FM		FORCE MAIN
PS		PRESSURE SEWER
ST		STORM SEWER
WM		WATER MAIN
WL		WATER LEAD
FO		FIBER OPTIC
OH		OVERHEAD WIRE
C		CABLE
E		ELECTRIC
G		GAS
T		TELEPHONE
M		MANHOLE
I		INLET / CATCHBASIN
F		FLARED END-SECTION
G		GATE VALVE
H		HYDRANT
U		UTILITY POLE
S		FENCE
N		SIGN
RF		NOT FIELD VERIFIED
RM		TO BE REMOVED
CB		COMPACTED SAND BACKFILL
SS		SANITARY SEWER LABEL
SS		STORM SEWER LABEL
WM		WATER MAIN LABEL
SE		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)



CB 23 RIM DETAIL:
NO SCALE

NOTE: THE EXISTING CATCH BASIN COVER IS A FLAT GRATE THAT IS LOCATED IN FRONT OF THE HIGH BACK PORTION OF THE EXISTING CURB. THE PROPOSED CURB AT STRUCTURE 23 IS PART OF THE DRIVE APPROACH AND DOES NOT HAVE A HIGH BACK PORTION. THE COVER WILL CONTINUE TO BE POSITIONED IN THE GUTTER AND NOT IN THE BACK PORTION OF THE 'M' OPENING. NO STRUCTURE ADJUSTMENTS OR COVER REPLACEMENTS ARE NECESSARY.

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND ELEVATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. APPROVED BY THE ENGINEER AS SHOWN ON THESE PLANS.



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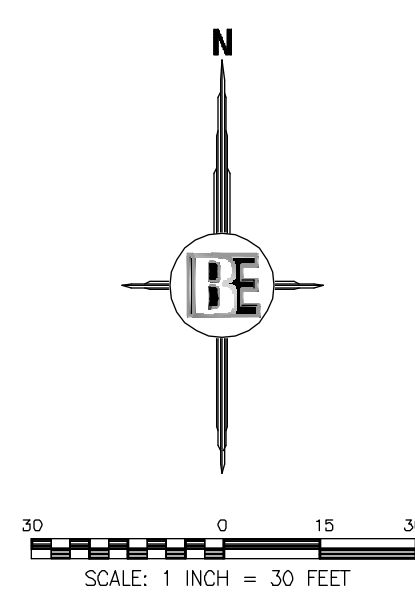
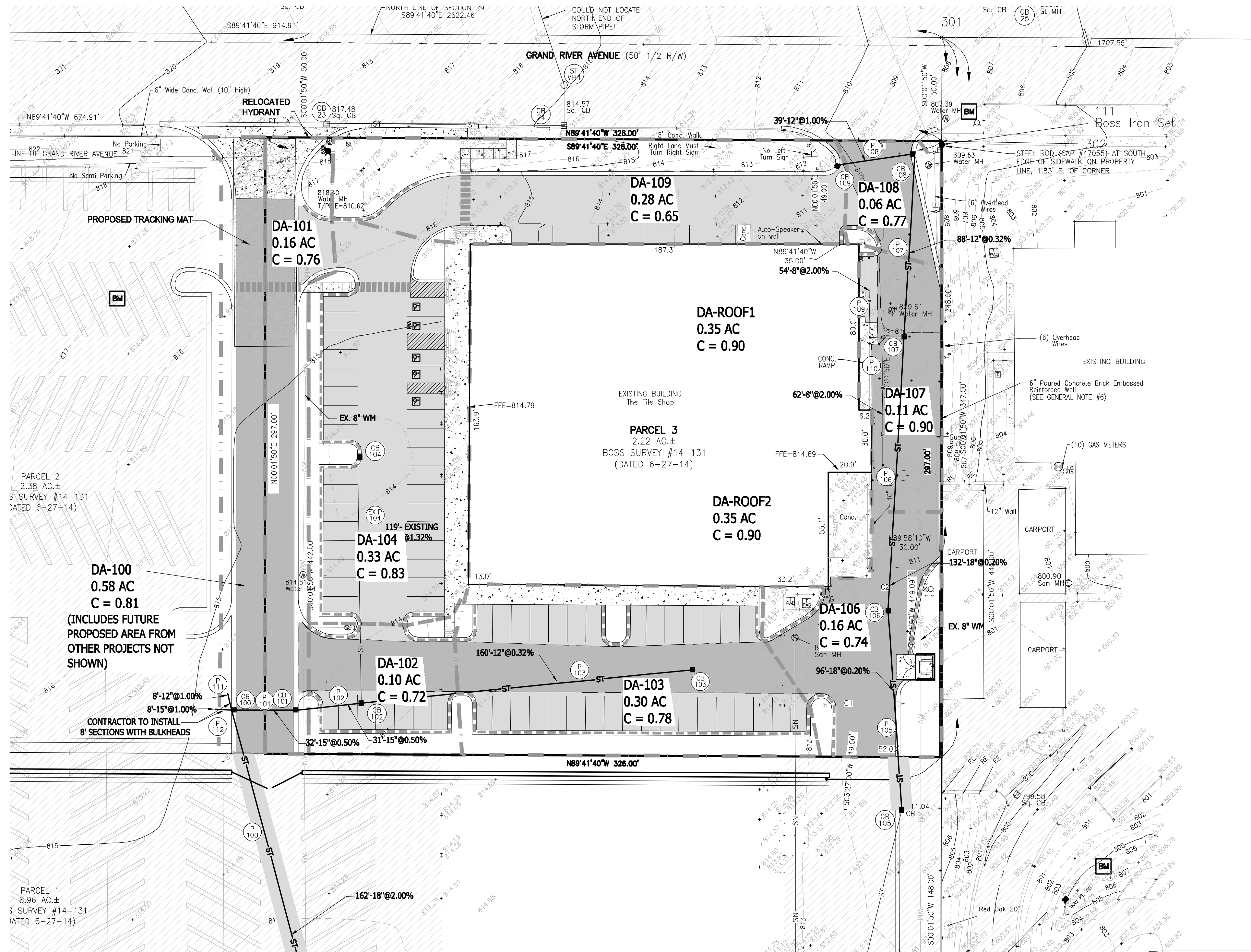
TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

PROJECT: TILE SHOP RENOVATION
PREPARED FOR: GRAND RIVER PROJECT, LLC

NO.	BY	DATE	REVISION PER
4	RD	09/08/15	PER OHM REVIEW
3	ST	08/10/15	PER CITY REVIEW
1	ST	03/06/15	PER P.C. & CITY REVIEW

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:

SCALE: 1" = 30'
JOB NO. 14-131
DATE: 1/9/15
SHEET NO. C4



LEGEND

PROPOSED (PR)	EXISTING (EX)	
900	900	CONTOUR
T/C	XXX.XX	STORM DRAINAGE FLOW
FF	+ 922.08	SPOT ELEVATION
FG		FINISHED FLOOR ELEVATION
T/A		TOP OF ASPHALT
T/C		TOP OF CURB / CONCRETE
T/W		TOP OF WALK
F/L		FLOW LINE
T/P		TOP OF PIPE
B/P		BOTTOM OF PIPE
RIM		RIM ELEVATION
INV		INVERT ELEVATION
WH		MANHOLE STRUCTURE
IN		INLET STRUCTURE
CB		CATCHBASIN STRUCTURE
RY		REARWARD STRUCTURE
ES		END-SECTION
OV		GATEVALVE STRUCTURE
HY		HYDRANT
UP		UTILITY POLE
SN		SANITARY SEWER
SL		SANITARY LEAD
FM		FORCE MAIN
PS		PRESSURE SEWER
ST		STORM SEWER
WM		WATER MAIN
WL		WATER LEAD
FO		FIBER OPTIC
OH		OVERHEAD WIRE
C		CABLE
G		GAS
T		TELEPHONE
O		INLET / CATCHBASIN
FL		FLARED END-SECTION
GV		GATE VALVE
HP		HYDRANT
UP		UTILITY POLE
F		FENCE
NOT		NOT FIELD VERIFIED
TO		TO BE REMOVED
CSB		COMPACTED SAND BACKFILL
SS		SANITARY SEWER LABEL
SS		STORM SEWER LABEL
WM		WATER MAIN LABEL
SE		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)

SEE SHEET C11 FOR STORM SEWER PROFILES

DRAINAGE AREAS & "C" VALUE CALCULATIONS

FROM	TO	DRAIN AREA	ACRES A	AREA IMPERV 0.9	AREA PERV 0.2	RUNOFF COEFF C	EQUIV. AREA A * C	INTEN-SITY I	TIME OF CONC. Tc	ADD'L RUNOFF Q	RUNOFF (CFS) Q	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FLOWING FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	INVERT UPPER END	INVERT LOWER END	DROP DISTANCE (FT)	RIM-INV >1	PIPE COVER >2.667	FLOW THRU COVER	
103	102	103	0.30	0.25	0.0508	0.78	0.2382	4.38	15.00		1.04	180	12	2.25	0.24%	0.32%	2.02	2.57	1.04	809.72	809.32	812.40	808.92	808.40		3.48	2.68	2.48	1.04
102	101	102	0.10	0.08	0.0259	0.72	0.0749	4.26	16.04	1.18	2.54	31	15	3.32	0.40%	0.50%	4.58	3.73	0.14	809.32	809.20	813.43	808.20	808.04		5.23	4.11	3.98	0.32
101	100	101	0.16	0.13	0.0311	0.76	0.1235	4.25	16.18		3.07	32	15	3.45	0.43%	0.50%	4.58	3.73	0.14	809.20	809.06	814.20	808.04	807.88		6.16	5.00	4.91	0.52
100	11	100	0.58	0.51	0.0712	0.81	0.4762	4.24	16.32	7.47	12.56	162	18	9.27	2.42%	2.00%	14.90	8.43	0.32	809.06	805.14	814.20	807.18	803.94		7.02	5.14	5.07	2.02
PROPOSED FUTURE FLOW FROM PROPOSED OFFICE BUILDING PROJECT																													
104	102	104	0.33	0.29	0.035	0.83	0.2694	4.38	15.00		1.18	119	15	3.63	0.47%	1.32%	7.43	6.05	0.33	810.85	809.32	813.25	809.85	808.29		3.40	2.40	2.15	1.18
109	108	108	0.28	0.18	0.1011	0.65	0.1793	4.38	15.00		0.78	39	12	3.03	0.44%	1.00%	3.57	4.55	0.14	806.35	805.96	809.75	805.55	805.16		4.20	3.40	3.20	0.78
108	107	107	0.08	0.05	0.0109	0.77	0.0435	4.36	15.14		0.97	88	12	2.25	0.24%	0.32%	2.02	2.57	0.57	805.96	805.67	808.50	805.16	804.87		3.34	2.54	2.34	0.19
107	106	106	0.11	0.11	0.0005	0.90	0.0947	4.30	15.71	1.37	2.75	132	18	2.43	0.17%	0.20%	4.71	2.67	0.83	805.67	805.40	809.75	804.47	804.20		5.28	4.08	3.78	0.41
106	105	105	0.16	0.13	0.0382	0.74	0.1212	4.21	16.54		3.26	96	18	2.53	0.18%	0.20%	4.71	2.67	0.60	805.40	804.80	810.70	804.20	804.00		6.50	5.30	5.00	0.51
ROOF 1	106	ROOF 1	0.35	0.35	0	0.90	0.3125	4.38	15.00		1.37	54	8	4.86	1.96%	2.00%	1.71	4.91	0.18	807.48	806.40	810.50	806.95	805.87	1.00	3.55	3.02	2.88	1.37
ROOF 2	106	ROOF 2	0.35	0.35	0	0.90	0.3125	4.38	15.00		1.37	62	8	4.86	1.96%	2.00%	1.71	4.91	0.21	807.82	806.58	810.50	807.29	806.05		3.21	2.68	2.54	1.37

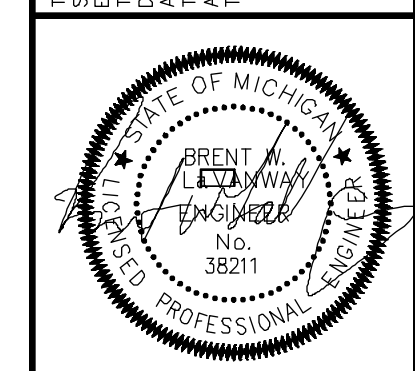
PROPOSED DRAINAGE AREA AFTER COMPLETION OF BOTH THE FARMINGTON OFFICE BUILDING AND TILE SHOP PROJECTS

NAME	AREA (FT2)	PERVIOUS AREA (FT2)	IMPERVIOUS AREA (FT2)	AREA (ACRES)	PERVIOUS AREA (ACRES)	IMPERVIOUS AREA (ACRES)	COMPOSITE C VALUE
CB 100	25460.27	3103.5	22356.77	0.58	0.07	0.51	0.81
CB 101	7032.57	1356.67	5675.9	0.16	0.03	0.13	0.76
CB 102	4503.41	1126.85	3376.56	0.10	0.03	0.08	0.72
CB 103	13250.1	2213.23	11036.87	0.30	0.05	0.25	0.78
CB 104	14222.71	1522.67	12700.04	0.33	0.03	0.29	0.83
CB 106	7158.36	1664.54	5493.82	0.16	0.04	0.13	0.74
CB 107	4601.96	23.2	4578.76	0.11	0.00	0.11	0.90
CB 108	2474.52	475.67	1998.85	0.06	0.01	0.05	0.77
CB 109	12103.56	4403.5	7700.06	0.28	0.10	0.18	0.65
ROOF 1	15123.18	0	15123.18	0.35	0.00	0.35	0.90
ROOF 2	15123.18	0	15123.18	0.35	0.00	0.35	0.90
TOTAL	121053.8	15889.83	105163.99	2.78	0.36	2.41	0.81

TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
 37000 GRAND RIVER AVENUE, SUITE 360
 FARMINGTON HILLS, MI 48335
 (248) 476-3700

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY: ST
 SCALE: 1" = 30'
 JOB NO. 14-131
 DATE 1/9/15
 SHEET NO. C5

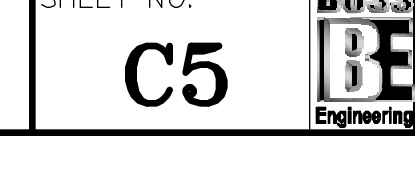
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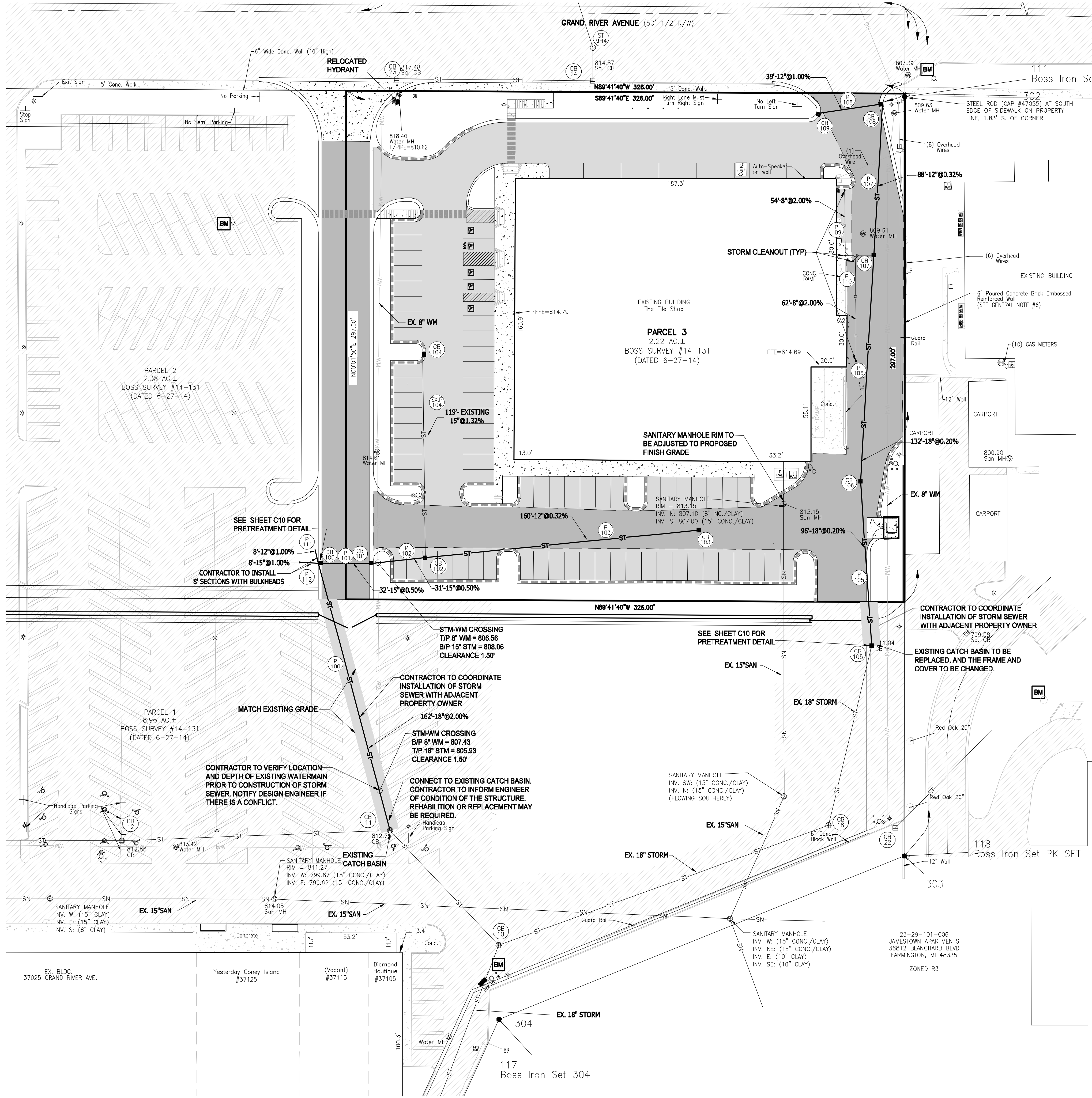


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 800.246.6735 FAX 517.548.1670

DRAINAGE PLAN

NO.	DATE	REVISION PER
1	09/08/15	PER OHM REVIEW
2	08/10/15	PER CITY REVIEW
3	03/17/15	PER P.C. & CITY REVIEW
4	03/06/15	REVISION PER





LEGEND

PROPOSED (PR) EXISTING (EX)

900 900

T/C XXXXX

FF FF
 FC FC
 T/A T/A
 T/C T/C
 T/W T/W
 F/L F/L
 T/P T/P
 B/P B/P
 RIM RIM
 INV INV
 MH MH
 IN IN
 CB CB
 RY RY
 ES ES
 GV GV
 HY HY
 UP UP
 SN SN
 SL SL
 ST ST
 WM WM
 WL WL
 OH OH
 O O
 □ □
 -X- -X-
 - -
 L L

CONTOUR
 STORM DRAINAGE FLOW
 SPOT ELEVATION
 FINISHED FLOOR ELEVATION
 FINISHED GRADE ELEVATION
 TOP OF ASPHALT
 TOP OF CURB / CONCRETE
 TOP OF WALK
 FLOW LINE
 TOP OF PIPE
 BOTTOM OF PIPE
 RIM ELEVATION
 INVERT ELEVATION
 MANHOLE STRUCTURE
 INLET STRUCTURE
 CATCHBASIN STRUCTURE
 REARWARD STRUCTURE
 END-SECTION
 GATEVALVE STRUCTURE
 HYDRANT
 UTILITY POLE
 SANITARY SEWER
 SANITARY LEAD
 STORM SEWER
 WATER MAIN
 WATER LEAD
 OVERHEAD WIRE
 MANHOLE
 INLET / CATCHBASIN
 HYDRANT
 UTILITY POLE
 SIGN
 STORM SEWER LABEL

SCALE: 1 INCH = 30 FEET

- UTILITY NOTES**
- EXISTING SANITARY AND WATER LEADS TO BE UTILIZED.
 - EXISTING UTILITIES THAT ARE REMAINING ARE TO BE ADJUSTED TO PROPOSED GRADE.
 - EXISTING CB19 TO BE RECONSTRUCTED, AND THE FRAME AND COVER TO BE CHANGED.

EXISTING STORM STRUCTURE INVENTORY:

STORM CATCH BASIN #10 (ROUND)
 RIM = 813.18
 INV. SW: 801.39 (28" CONC.)
 INV. NE: 802.15 (18" CONC.)
 INV. NW: 802.66 (24" CONC.)

STORM CATCH BASIN #11 (ROUND)
 RIM = 812.75
 INV. SE: 803.39 (24" CONC.)
 INV. N: 805.73 (15" CONC.) TBR
 INV. W: 804.92 (18" CONC.)

STORM CATCH BASIN #12 (ROUND)
 RIM = 812.92
 INV. E: 806.20 (18" CONC.)
 INV. W: 806.27 (15" CONC.)

STORM CATCH BASIN #18 (ROUND)
 RIM = 811.30
 INV. SW: 802.10 (18" CONC.)
 INV. N: 802.15 (18" CONC.)

STORM CATCH BASIN #19 (ROUND)
 RIM = 811.04
 INV. S: 803.18 (18" CONC.)
 INV. W: 803.87 (12" CONC.)

STORM CATCH BASIN #22
 RIM = 811.07
 INV. NE: 793.42 (24" CONC.)
 (FLOWING NORTHEAST)

STORM CATCH BASIN #23
 RIM = 817.48
 INV. E: 812.28 (12" CONC.)

STORM CATCH BASIN #24
 RIM = 814.57
 INV. W: 810.57 (12" CONC.)
 INV. N: 810.37 (12" CONC.)
 (FULL OF WATER)

STORM MANHOLE #4
 RIM = 815.09
 INV. S: 807.29 (12" CONC.)
 INV. NW: 807.29 (12" CONC.)

EXISTING STRUCTURE TO BE REPLACED W/ CB105

STORM CATCH BASIN #22
 RIM = 811.07
 INV. NE: 793.42 (24" CONC.)
 (FLOWING NORTHEAST)

STORM CATCH BASIN #23
 RIM = 817.48
 INV. E: 812.28 (12" CONC.)

STORM CATCH BASIN #24
 RIM = 814.57
 INV. W: 810.57 (12" CONC.)
 INV. N: 810.37 (12" CONC.)
 (FULL OF WATER)

STORM MANHOLE #4
 RIM = 815.09
 INV. S: 807.29 (12" CONC.)
 INV. NW: 807.29 (12" CONC.)

STORM SEWER PIPE SCHEDULE

PIPE	LENGTH	SIZE	TYPE	SLOPE
P100	162 FT.	18 IN.	RCP C-76 CL IV	2.00%
P101	32 FT.	15 IN.	RCP C-76 CL IV	0.50%
P102	31 FT.	15 IN.	RCP C-76 CL IV	0.50%
P103	160 FT.	12 IN.	RCP C-76 CL IV	0.32%
EX. P104	119 FT.	15 IN.	RCP C-76 CL IV	1.32%
P105	96 FT.	18 IN.	RCP C-76 CL IV	0.20%
P106	132 FT.	18 IN.	RCP C-76 CL IV	0.20%
P107	88 FT.	12 IN.	RCP C-76 CL IV	0.32%
P108	39 FT.	12 IN.	RCP C-76 CL IV	1.00%
P109	54 FT.	8 IN.	PVC ROOF DRAIN	2.00%
P110	62 FT.	8 IN.	PVC ROOF DRAIN	2.00%
P111	8 FT.	12 IN.	RCP C-76 CL IV	1.00%
P112	8 FT.	15 IN.	RCP C-76 CL IV	1.00%

STORM STRUCTURE SCHEDULE

CB 100		CB 106	
4' DIA CATCH BASIN, COVER "K"	RIM 814.20	4' DIA CATCH BASIN, COVER "D"	RIM 810.70
INV. SE 18	807.18	INV. S 18	804.20
INV. W 15	809.85	INV. N 18	804.20
INV. E 15	807.88	2' SUMP	
INV. NW 12	810.25		
2' SUMP			
CB 101		CB 107	
4' DIA CATCH BASIN, COVER "K"	RIM 814.20	4' DIA CATCH BASIN, COVER "D"	RIM 809.75
INV. W 15	808.04	INV. S 18	804.47
INV. NE 15	808.04	INV. W 8	806.05
2' SUMP		INV. N 12	804.87
		2' SUMP	
CB 102		CB 108	
4' DIA CATCH BASIN, COVER "D"	RIM 813.43	4' DIA CATCH BASIN, COVER "K"	RIM 808.50
INV. SW 15	808.20	INV. S 12	805.16
INV. N 15	808.29	INV. SW 12	805.16
INV. NE 12	808.40	2' SUMP	
2' SUMP			
CB 103		CB 109	
2' DIA CATCH BASIN, COVER "D"	RIM 812.40	2' DIA CATCH BASIN, COVER "K"	RIM 809.75
INV. W 12	808.92	INV. NE 12	805.55
2' SUMP		2' SUMP	
CB 104		EXISTING CB 11	
2' DIA CATCH BASIN, COVER "K"	RIM 813.25	EXISTING CATCH BASIN	RIM 812.75
INV. S 15	809.85	EX. INV. SE 24	803.39
2' SUMP		EX. INV. W 18	804.92
		INV. N 18	803.94
		2' SUMP	
CB 105			
4' DIA CATCH BASIN, COVER "D"	RIM 811.04		
EX. INV. S 18	803.78		
INV. N 18	804.00		
2' SUMP			

BEBOSS Engineering
 Engineers, Surveyors, Planners, Landscape Architects

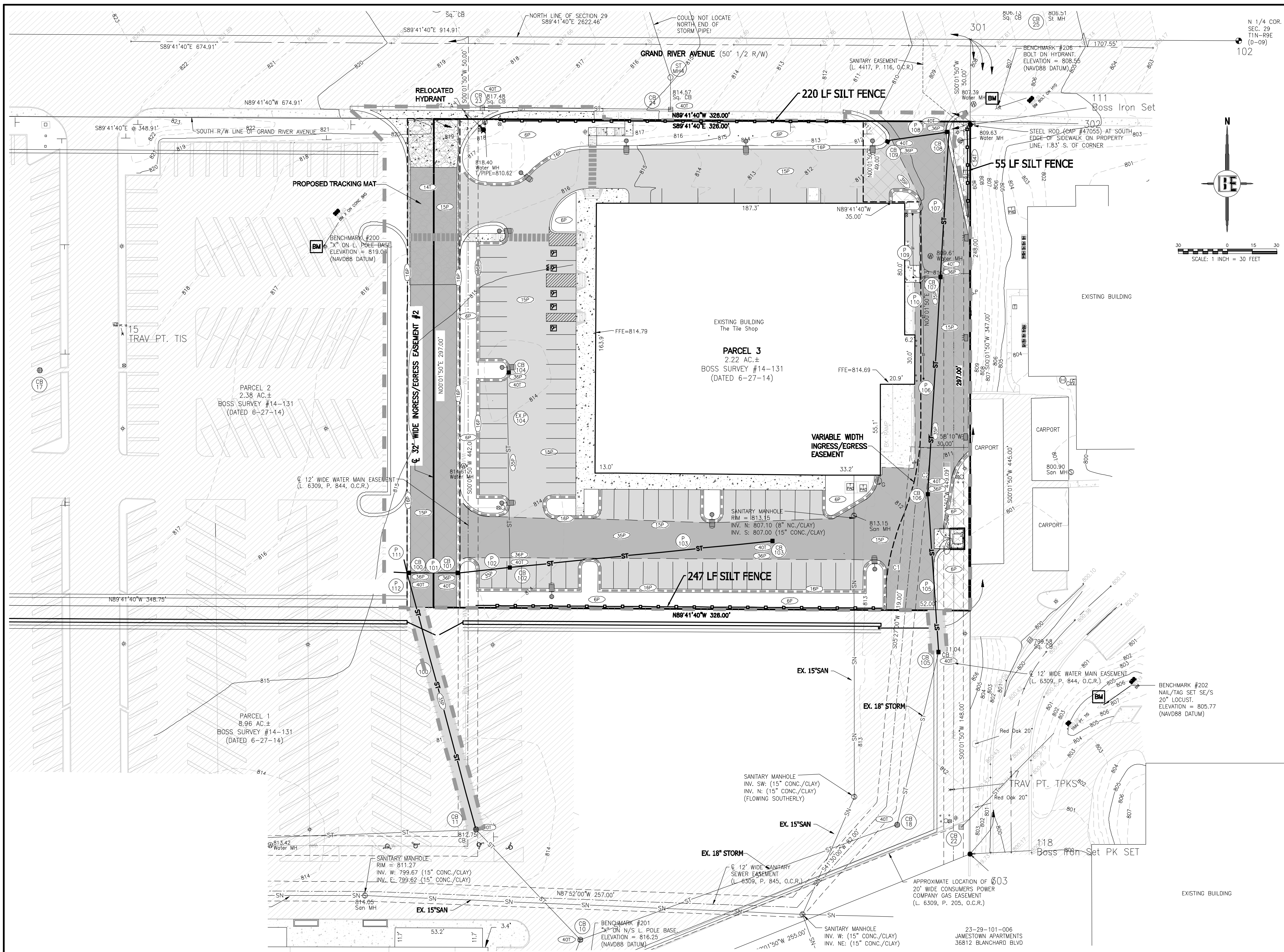
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TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
 37000 GRAND RIVER AVENUE, SUITE 360
 FARMINGTON HILLS, MI 48335
 (248) 449-3700

UTILITY PLAN

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:

SCALE 1" = 30'
 JOB NO. 14-131
 DATE 1/9/15
 SHEET NO. C6



LEGEND

PROPOSED (PR)	EXISTING (EX)	CONTOUR
900	900	STORM DRAINAGE FLOW
T/C	XXX.XX	SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FO	FO	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARWARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
OH	OH	OVERHEAD WIRE
O	O	MANHOLE
□	□	INLET / CATCHBASIN
⊥	⊥	FLARED END-SECTION
⊥	⊥	GATE VALVE
⊥	⊥	HYDRANT
⊥	⊥	UTILITY POLE
⊥	⊥	FENCE
⊥	⊥	SIGN
⊥	⊥	NOT FIELD VERIFIED
⊥	⊥	TO BE REMOVED
⊥	⊥	STORM SEWER LABEL
⊥	⊥	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
⊥	⊥	SILT FENCE
⊥	⊥	LIMITS OF GRADING/CLEARING

CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

1 DAYS	1. INSTALL SILT FENCE AS SHOWN ON PLANS.
28 DAYS	2. SITE DEMO
14 DAYS	3. ROUGH GRADE AND INSTALL STORM DRAINAGE
1 DAY	4. INSTALL INLET PROTECTION ON STORM INLETS.
14 DAY	5. BLDG. MODIFICATIONS
21 DAYS	6. INSTALL PAVEMENT, CURB & CUTTER, AND SIDEWALK
4 DAYS	7. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOO AS APPLICABLE.
1 DAY	8. REMOVE ALL EROSION CONTROL STRUCTURES.
1 DAY	9. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.

CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X		X
SWEEP PARKING LOT		X	X

CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS; DISPOSE IN APPROVED CONTAINER; REPLACE DEAD SOO, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS; DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE, AND OIL WITH PERIODIC SWEEPING.
DUST CONTROL	SPRINKLE WATER AS NEEDED.

SOIL EROSION CONTROL MEASURES

6	SEDIMENT BARRIERS	FACTORIES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGES WITH LOW VELOCITY. ONLY PLANT IN SMALL QUANTITIES BY UNPROTECTED PERSONNEL.
14	AGGREGATE COVER	STABILIZES SOIL SURFACE; THIS VEGETATIVE EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT SOIL CONSTRUCTION OF PAVED AREAS.
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.
16	CURB & CUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE. COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY.
35	STORM SAND	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN KEEP USE CONCENTRATIONS OF RUNOFF. CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION. USE CATCH BASINS TO COLLECT SEDIMENT.
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER INLET.
40	INLET SEDIMENT FILTER	EASY TO SHAPE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.
54	SEDIMENT BARRIERS	USES DEGRADABLE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOOKS AS NECESSARY. (SEE DETAIL THIS SHEET)

P=PERMANENT T=TEMPORARY
TOTAL DISTURBED AREA = 1.80 AC (78,358 S.F.)

SEE OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL DETAILS ON SHEET C13

BEBOSS Engineering
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TILE SHOP RENOVATION
PREPARED FOR: **GRAND RIVER PROJECT, LLC**
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-9760

SOIL EROSION CONTROL PLAN

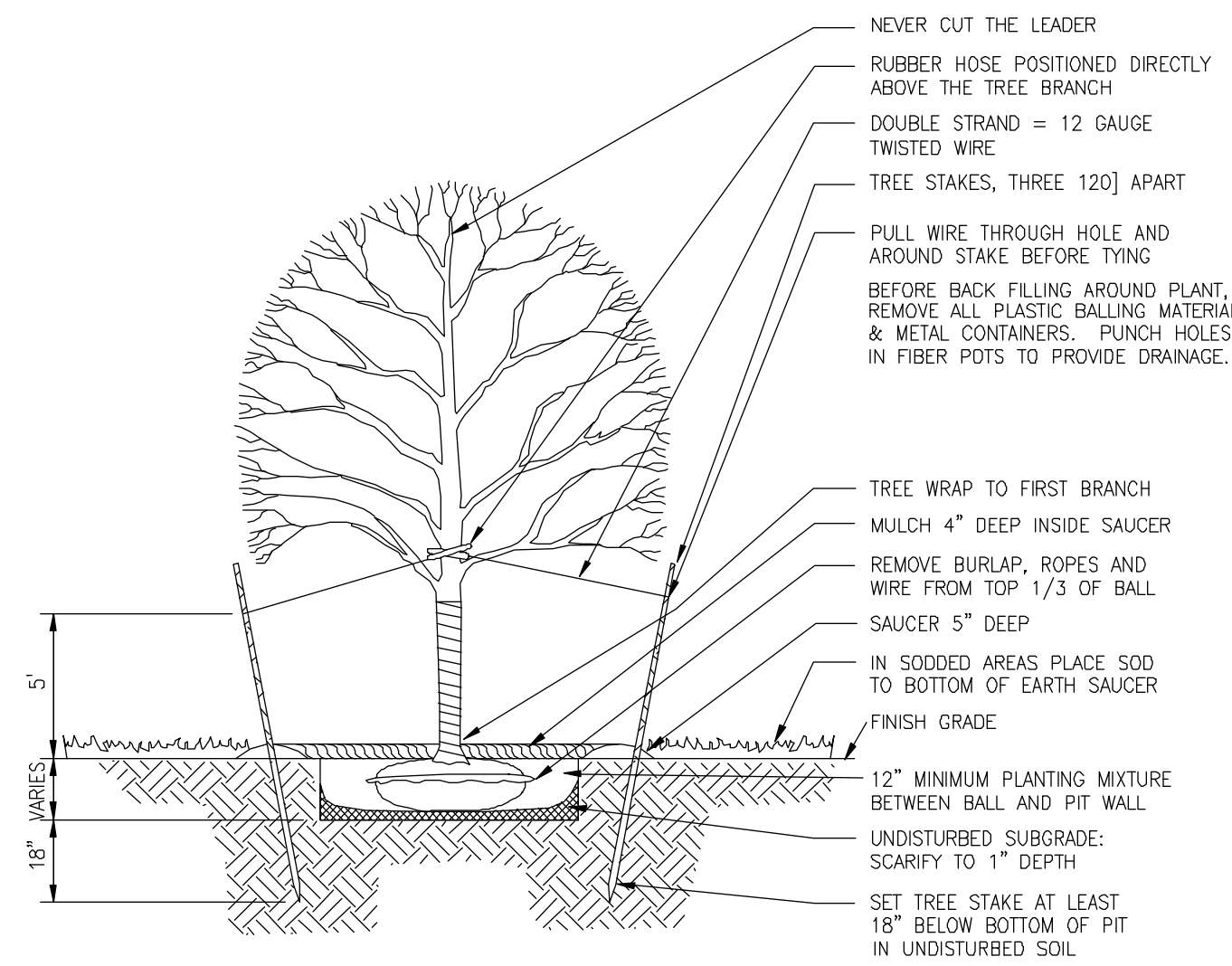
NO.	DATE	REVISION PER
1	09/08/15	
2	09/10/15	
3	09/10/15	
4	09/10/15	
5	03/06/15	

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
SCALE 1" = 30'
JOB NO. 14-131
DATE 1/9/15
SHEET NO. C7

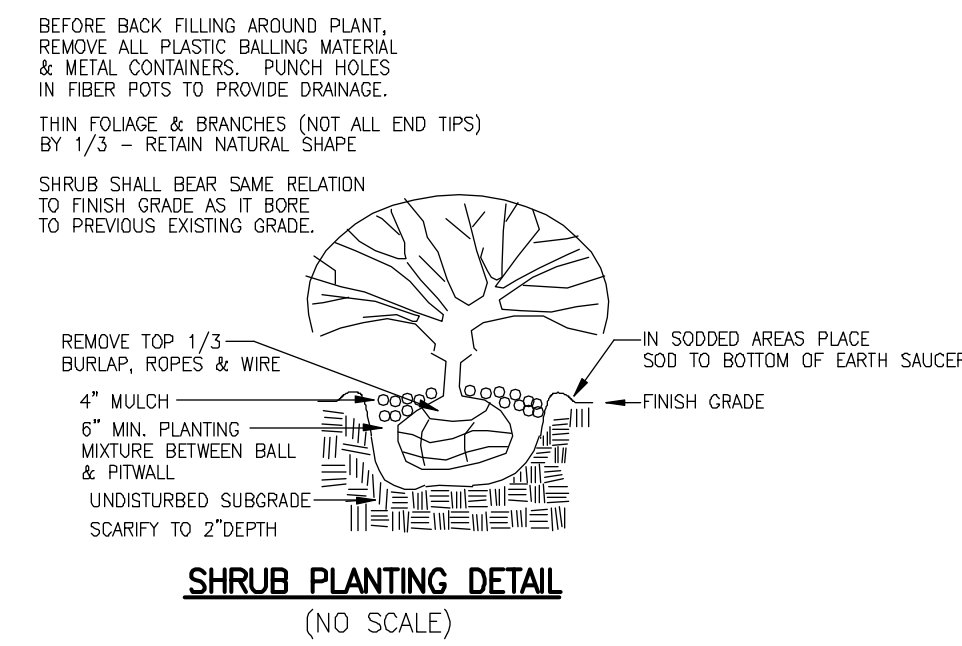
GENERAL LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY AND SHALL BE NURSERY GROWN. ALL SIZES AND MEASUREMENTS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIAL SHALL BE OF SELECTED SPECIMEN QUALITY AND HAVE A NORMAL HABIT OF GROWTH. ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED STOCK OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT AND SECURELY WRAPPED AND BOUND.
- ALL PLANT BEDS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND OTHER EXTRANEOUS OBJECTS AND POOR SOILS TO A MINIMUM DEPTH OF 12 INCHES AND BACKFILLED TO GRADE WITH PLANTING MIX (SEE BELOW).
- PLANTING MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL FROM ON SITE, 1 PART PEAT, AND 5 POUNDS OF SUPERPHOSPHATE PER CUBIC YARD OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED TO A UNIFORM CONSISTENCY.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE MULCHED WITH A 4 INCH LAYER OF SHREDDED BARK MULCH.
- ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL REQUIREMENTS.
- EDGING, WHERE NOTED ON THE PLANS, SHALL BE BLACK ALUMINUM EDGING, 3/16" X 4". INSTALL PER MANUFACTURER'S INSTRUCTIONS. ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
- SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUEGRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4 INCH, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10 INCHES BY 18 INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36 HOURS AFTER CUTTING.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF ONE MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDED AND MULCHED. SEED MIXTURE SHALL BE AS FOLLOWS:
 KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES):
 ADELPHI, RUGBY, GLADE OR PARADE) 30%
 RUBY RED OR DAWSON RED FINE FESCUE 30%
 ATLANTA RED FESCUE 20%
 PENNFINE PERENNIAL RYE 20%
 THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 POUNDS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL LAYER SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:
 10% NITROGEN: A MINIMUM OF 25% FROM A UREA-FORMALDEHYDE SOURCE
 0% PHOSPHATE
 10% POTASH: SOURCE TO BE POTASSIUM SULFATE OR POTASSIUM NITRATE.
 THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 POUNDS OF BULK FERTILIZER PER 1000 SQUARE FEET.
 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RESEEDED AND SUCH RESEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
 - ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 4 INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THIS SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
 - ALL PLANT MATERIALS SHALL BE FREE OF WEEDS, INSECTS AND DISEASE.

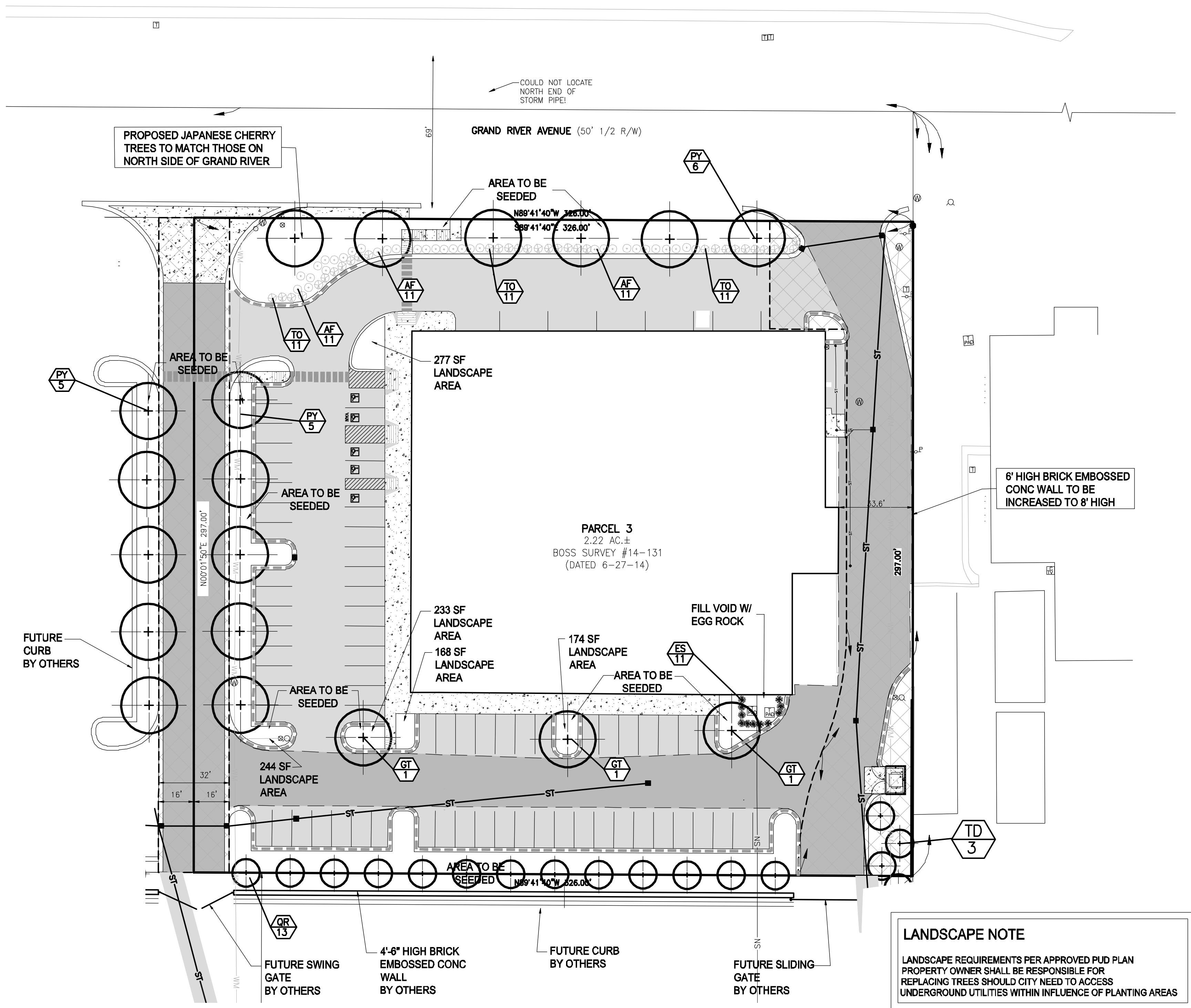


DECIDUOUS TREE PLANTING DETAIL
(NO SCALE)



SHRUB PLANTING DETAIL
(NO SCALE)

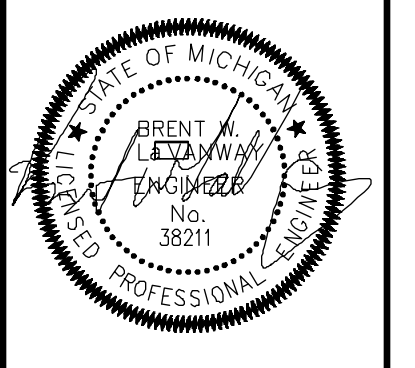
KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
GT	3	Cleditria Triacanthos	Shademaster Locust	2 1/2" cal	B&B
QR	13	Quercus robur 'Fastigiata'	Fastigate Red Oak	2 1/2" cal	B&B
PY	16	Prunus x Yedoensis	Yoshino Cherry	2" cal	B&B
TD	3	Thuja Occ. Degroot	Degroot Spire Arborvitae	7-8"	B&B
SHRUBS					
AF	33	Cornus stolonifera 'Arctic Fire'	Arctic Fire Dogwood	No. 2	CONT
TO	33	Thuja occidentalis 'Mr. Bowling Ball'	Mr. Bowling Ball Arborvitae	No. 2	CONT
GRASSES					
ES	11	Eragrostis spectabilis	Purple Love Grass	No. 2	CONT



LANDSCAPE NOTE
 LANDSCAPE REQUIREMENTS PER APPROVED PUD PLAN
 PROPERTY OWNER SHALL BE RESPONSIBLE FOR
 REPLACING TREES SHOULD CITY NEED TO ACCESS
 UNDERGROUND UTILITIES WITHIN INFLUENCE OF PLANTING AREAS

LANDSCAPE NOTE
 ALL LANDSCAPE ON THIS SHEET ARE PART OF THE TILE SHOP PROJECT

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE CITY OF GRAND RIVER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE STATE OF MICHIGAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE CITY OF GRAND RIVER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE CITY OF GRAND RIVER.



BEBOSS
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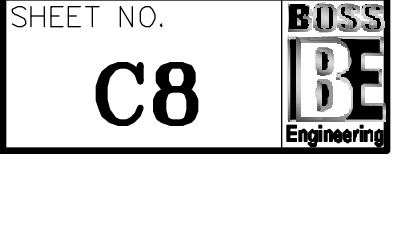
TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
 37000 GRAND RIVER AVE. SUITE 300
 FARMINGTON HILLS, MI. 48335
 (248) 478-3700

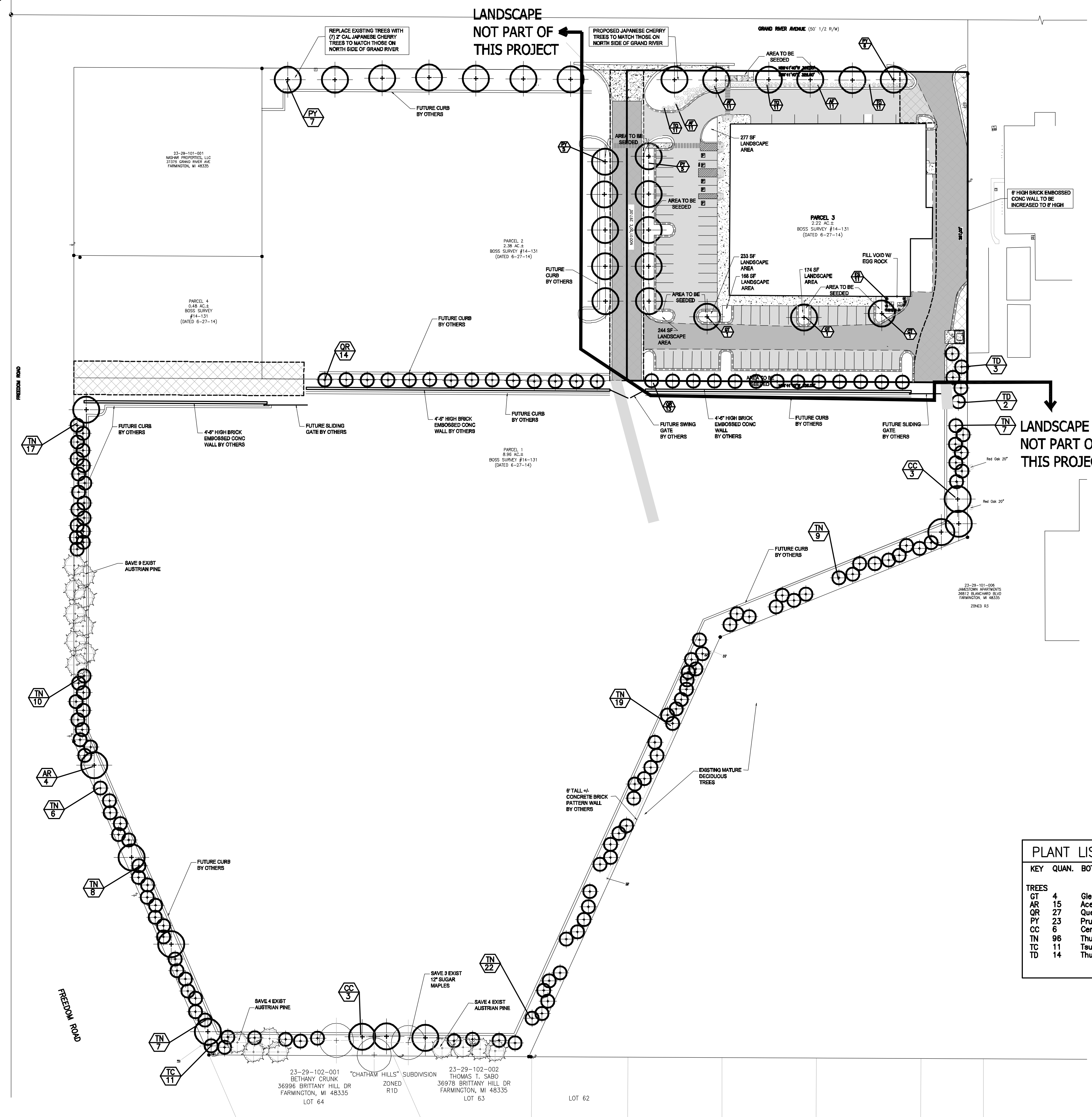
PROJECT PREPARED FOR: GRAND RIVER PROJECT, LLC
 TITLE: LANDSCAPE PLAN

NO.	DATE	REVISION	BY	PER
1	09/08/15	PER OHM REVIEW	KB	
2	08/10/15	PER CITY REVIEW	KB	
3		REVISION PER	KB	
4		NO BY		

DESIGNED BY: KB
 DRAWN BY: KB
 CHECKED BY:

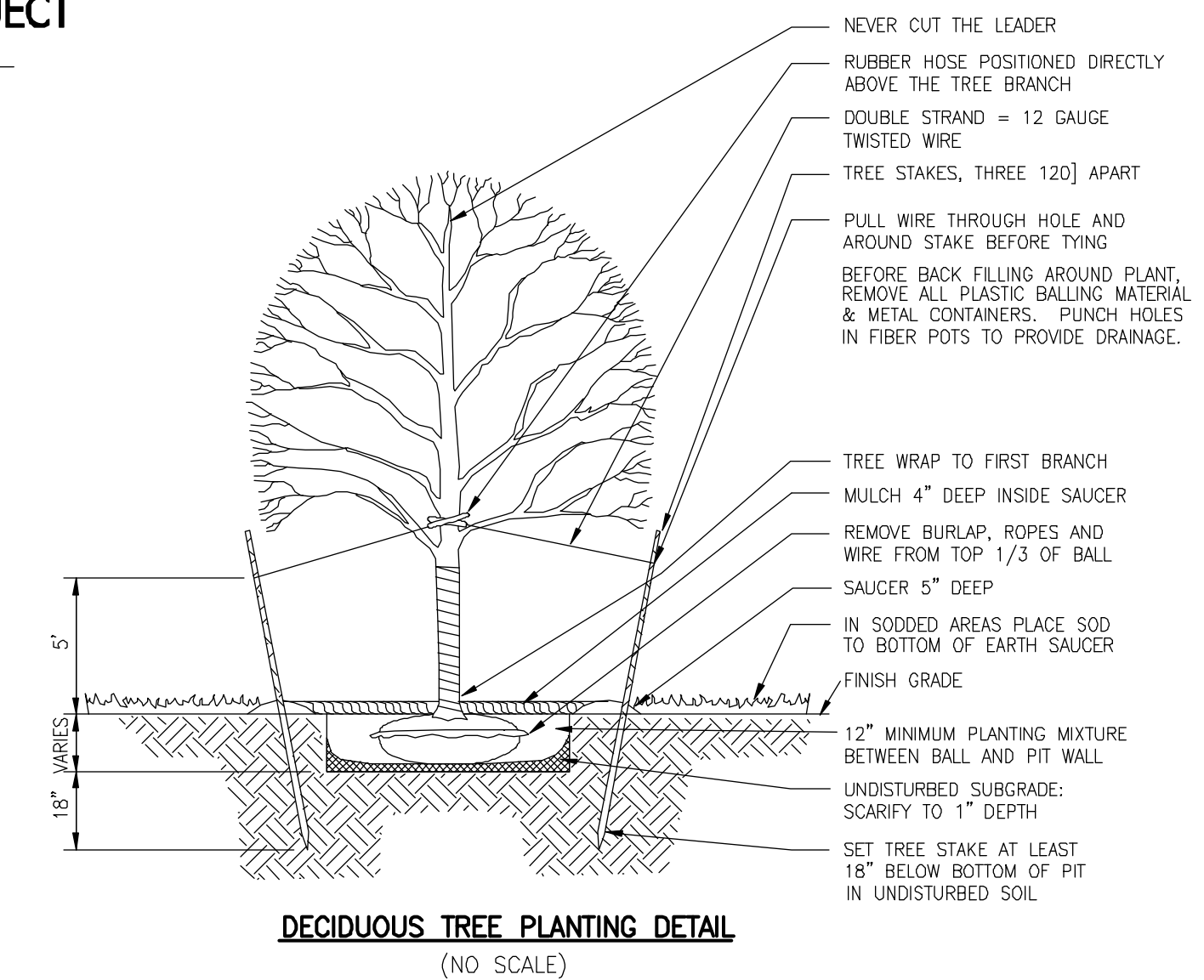
SCALE: 1" = 30'
 JOB NO. 14-131
 DATE: 1/9/15
 SHEET NO. C8





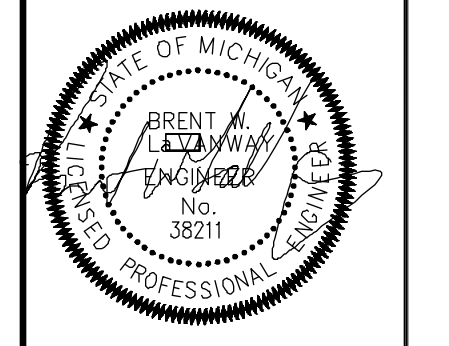
NOTES:

1. THE OWNER WILL BE RESPONSIBLE FOR REPLACING TREES SHOULD THE CITY NEED TO REPAIR OR ACCESS THE WATERMAIN
2. THE PROPOSED PLANTINGS ARE PER THE APPROVED PUD AGREEMENT
3. ONLY TREES ON THE TILE SHOP LANDSCAPE PLAN (SHEET C8) ARE PROPOSED WITH THE TILE SHOP PROJECT. THE PURPOSE OF THIS PUD LANDSCAPE PLAN IS TO SHOW THE OVERALL LANDSCAPING ON THE MULTIPLE PARCELS THAT WAS AGREED UPON IN THE PUD AGREEMENT.



PLANT LIST					
KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
GT	4	Gleditsia Triacanthos	Shademaster Locust	2 1/2" cal	B&B
AR	15	Acer rubrum 'Armstrong'	Armstrong Red Maple	2 1/2" cal	B&B
QR	27	Quercus robur 'Fastigiata'	Fastigate Red Oak	2 1/2" cal	B&B
PY	23	Prunus x Yedoensis	Yoshino Cherry	2" cal	B&B
CC	6	Cercis Canadensis	Red Bud	2" cal	B&B
TN	96	Thuja Occ. Nigra	Nigra Eastern Arborvitae	10-12'	B&B
TC	11	Tsuga Canadensis	Canadian Hemlock	7-8'	B&B
TD	14	Thuja Occ. Degroot	Degroot Spire Arborvitae	7-8'	B&B

THE DESIGN AND CONSTRUCTION OF THIS PROJECT HAS BEEN REVIEWED BY THE CITY OF FARMINGTON, MINNESOTA. THE CITY ENGINEER HAS REVIEWED THE PLAN AND HAS FOUND IT TO BE IN ACCORDANCE WITH THE CITY ORDINANCES AND REGULATIONS. THE CITY ENGINEER'S REVIEW IS LIMITED TO THE TECHNICAL ASPECTS OF THE PLAN AND DOES NOT CONSTITUTE A GUARANTEE OR WARRANTY OF ANY KIND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF FARMINGTON, MINNESOTA. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES IN THE PLAN. THE ENGINEER'S REVIEW DOES NOT CONSTITUTE A GUARANTEE OR WARRANTY OF ANY KIND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF FARMINGTON, MINNESOTA. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES IN THE PLAN.



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 37000 GRAND RIVER AVENUE, SUITE 360
 FARMINGTON HILLS, MI 48335
 (248) 476-3700

PROJECT: _____ PREPARED FOR: _____ TITLE: **COMMON AREA LANDSCAPE PLAN**

DESIGNED BY:	KB
DRAWN BY:	KB
CHECKED BY:	
SCALE:	1" = 50'
JOB NO.:	14-131
DATE:	1/9/15
SHEET NO.:	C8A

**OAKLAND COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE**

1. Notify Oakland County Drain Commissioner's Office 24 hours prior to start of grade work.
 2. In accordance with Public Act No. 53, of 1974 the permit holder shall call Miss Dig for staking and locating of utilities, at least 72 hours in advance of the start of any work.
- PERMITTING STANDARDS**
- (IMPORTANT NOTICE) Retention/detention ponds shall be excavated, topsoiled, seeded, mulched and tacked prior to the start of massive earth disruption. Ingress/egress must have large crushed rock to reduce the tracking of soil onto the public traffic areas. See detail items below.
 3. Silt fabric fence as shown on plans shall be placed along perimeter on all low lying areas of the construction site to filter runoff before leaving project site.
 4. All temporary erosion control devices shall be installed prior to the start of massive earth disruption.
 5. All temporary erosion control devices as noted on plans shall be installed prior to the start of massive earth disruption.
 6. Plan does denote a detailed erosion control device to restrict tracking of material onto the highway. Stone diapers shall be installed at all ingress/egress areas of the site prior to the start of massive earth disruption. Diapers shall be of crushed stone and shall have a minimum length of 75' lineal feet.

DETENTION PONDS

7. Retention/detention ponds shall be excavated, topsoiled, seeded, mulched and tacked prior to the start of massive earth disruption.
8. Detention pond outlets shall be of the standpipe and stone filter system, with trash screen. Outlet flow shall not exceed 0.20 cubic feet of water per second/acre. Pond dikes shall have a minimum of one (1) foot of freeboard. An emergency spillway shall be constructed within the freeboard level.
9. The emergency spillway from the detention pond shall be sodded and pegged, or rip rapped, 15 feet past the toe of the slope of the berm.
10. Dikes and berms shall be free of all organic matter.
11. All unimproved disturbed areas shall be stripped of topsoil which will be stored onsite during the excavating stage. Topsoil piles shall be seeded and mulched, or matted with straw in the non growing season, immediately after the stripping process is completed, to prevent wind and water erosion.
12. Soil erosion controls shall be monitored daily by the on-site engineer, or contractor, whichever case applies.

SLOPES AND DITCHES

13. On site ditches shall be of the flat bottom type minimum width of 2' with a minimum of 3 horizontal to 1 vertical side slopes, 3:1.
14. Ditches with steep slopes will need flow checks to prevent scouring of the ditch bottom. These shall be installed as directed by the engineer or inspector.
15. Slopes in excess of 3 horizontal to 1 vertical shall not be used except with a mechanical device such as a retaining wall, terracing, or other prior approved device.

STORM DRAINS

16. All storm water structures, catch basins and/or manholes, if block, shall be plastered on both the inside and outside of the structures. Grouting and pointing will be necessary at the casting and structure joint to prevent leakage and the resulting soil movement, around the structure.
17. Storm water inlets shall have as a temporary control a straw bale barrier and stone filter installed around the inlet during construction. As an alternative to the straw bale barrier, a silt sack may be installed the control shall be installed as soon as the structure is built and inspected daily.
18. Silt sacks will need to be inspected after each rainfall each rainfall.

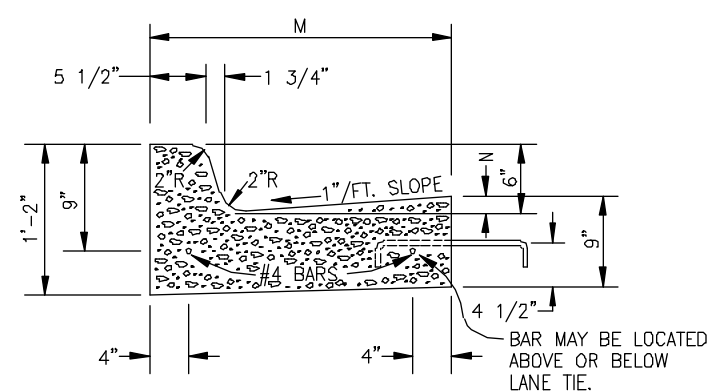
19. All storm drain outlets that do not empty into the retention/detention pond shall have a temporary 5'x10'x3' sump installed at the termination of the storm sewer. Upon completion of the stabilization work the sump area shall be filled and rip rapped with cobble stone. Silt traps shall be inspected after each storm.
20. Storm water outlets denote rip rap. All outlets shall be rip rapped over kyleed filter fabric with a minimum of 15 sq. yards of 6" or larger cobble stone.
21. Rip rap as noted on the plan shall be of a funnel shape construction, with shell increase as distance from the outlet point increases at a 3:1 ratio.
22. Rip-rap shall be of cobble stone, 6" in diameter or larger. Grouting may be necessary, and shall be a minimum of 6" in depth with the cobble set in the cement slurry.
23. Storm water outlet is in need of a splash block which is not noted on the plan. Install splash block.
24. It will be necessary for the developer to have the storm drainage lines cleaned prior to final inspection, if required, this work shall be done by a professional sewer cleaning firm and certified in writing by the project engineer. All surps and temporary silt traps shall also be cleaned at this time.

STABILIZATION

25. All unimproved disturbed areas shall be re-top soiled, with a minimum of 3" of material, seeded, mulched and tacked within 15 days of the completion of the massive earth disruption. In the non-growing season straw matting will suffice. Hydrosedding will be an acceptable alternate for mulching. Extreme care should be exercised in spring and fall periods as a frost will break the bind of the hydrosedding, which will affect the effectiveness of this procedure.
26. In the non-growing season, temporary stabilization of massively exposed areas for winter stabilization shall be done with straw matting.
27. Permit fees during the winter period of non-construction, (December 1 through March 31), shall not be imposed if the permit holder temporarily stabilizes the exposed areas with straw matting, and other approved controls, and obtains a winter stabilization certificate from this office.
28. Periodic inspections will be made throughout the course of the project. It will be the responsibility of the managers of the project to contact The Oakland County Drain Commissioner for the final inspection at the end of the project.
29. This Commercial Permit is valid for the mass earth movement, the installation of roads, drains, and utilities and is not for any single family residence.
30. The issuing building department shall not issue the Certificate of Occupancy until the final inspection letter has been obtained.

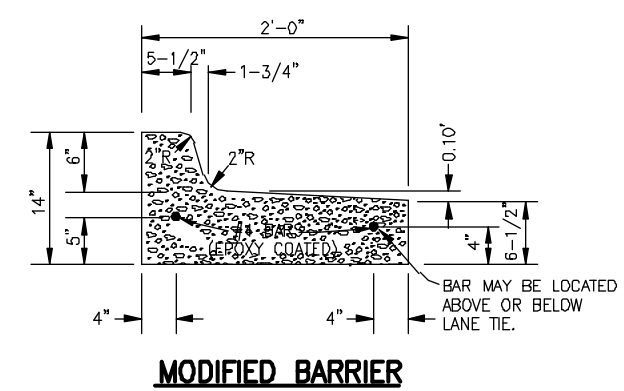
MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS

1. Silt fence shall be inspected weekly and after each major storm event. Maintenance shall include removal of accumulated silt and replacement of torn sections. Silt fence shall be removed when all contributing areas have been stabilized.
2. Tracking pad shall be inspected monthly for accumulated dirt. Tracking pad shall be replaced when the stones are choked with dirt. Tracking pad shall be removed immediately prior to the first course of asphalt being laid.
3. Detention Pond shall be inspected quarterly on a permanent basis. Maintenance shall include sediment removal, embankment stabilization and maintaining the outlet structure in good condition.
4. Catch basins shall be inspected annually for accumulation of sediment. All sediment must be removed and disposed of properly when the sump is full.

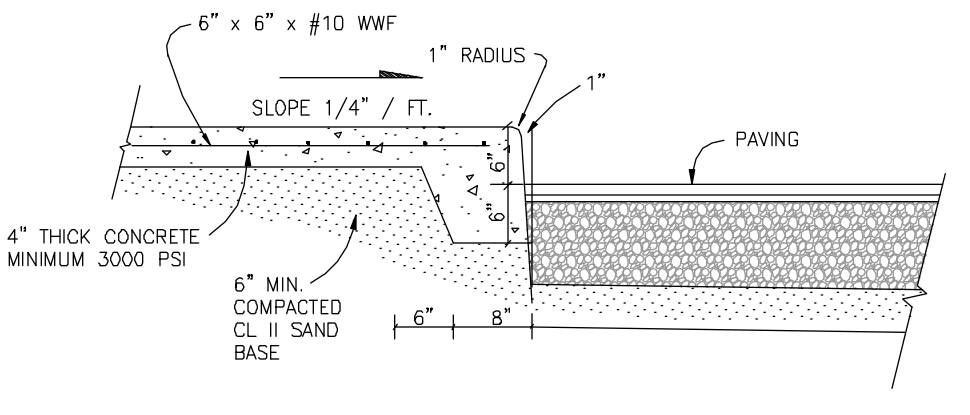


DETAIL	DIMENSIONS	LANE TIES	CONCRETE CU.YD./LN.FT.
F1	5'-0"	1'-0"	0.040
F2	1'-0"	2'-0"	0.040
F3	2'-0"	1'-0"	0.040
F4	2'-0"	1'-0"	0.040
F5	2'-0"	1'-0"	0.040
F6	2'-0"	1'-0"	0.040

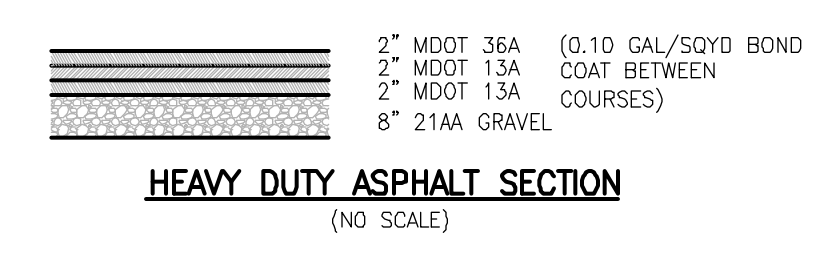
**CONCRETE CURB & GUTTER
TYPE F
(NO SCALE)**



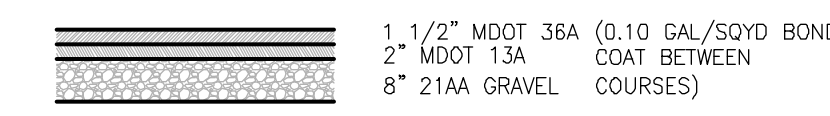
**MODIFIED BARRIER
(M.D.O.T. TYPE F4) (FOR ISLANDS ONLY)
(NO SCALE)**



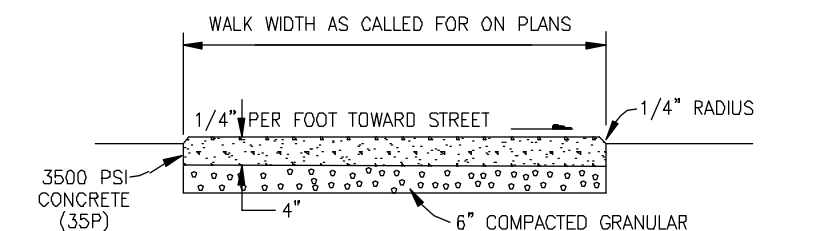
**INTEGRAL CONCRETE WALK / CURB DETAIL
(NO SCALE)**



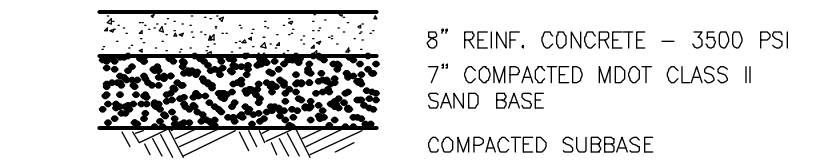
**HEAVY DUTY ASPHALT SECTION
(NO SCALE)**



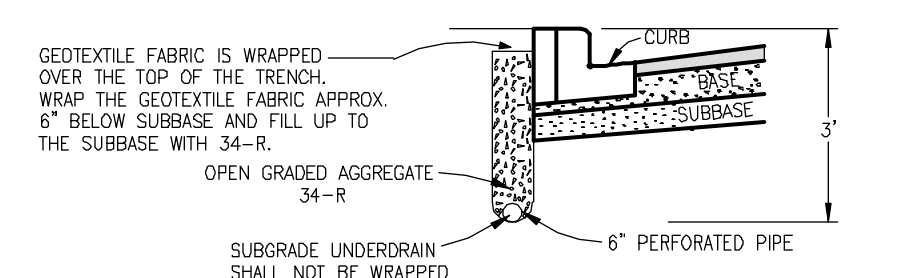
**ASPHALT SECTION
(NO SCALE)**



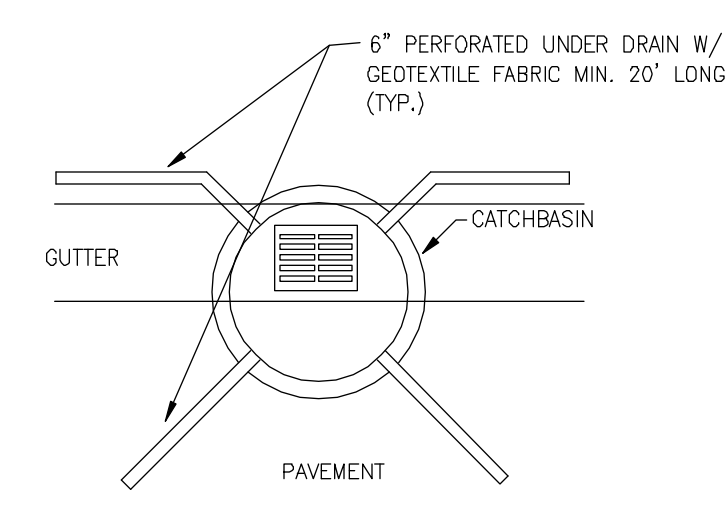
**4" CONCRETE SIDEWALK
(NO SCALE)**



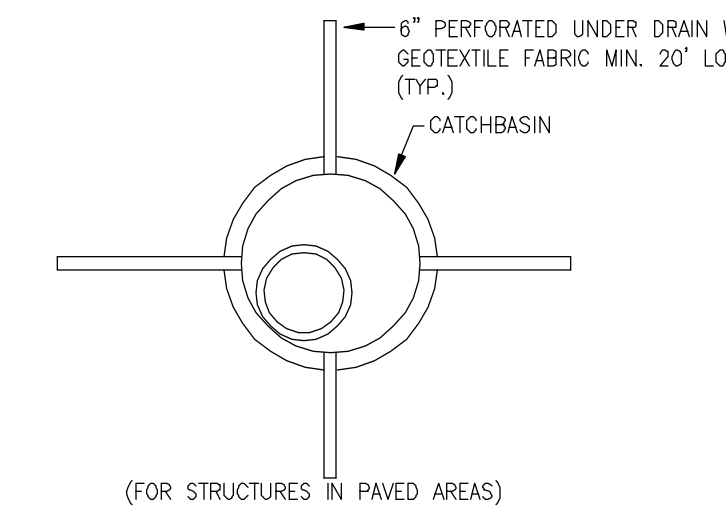
**CONCRETE PAVEMENT CROSS SECTION
(NO SCALE)**



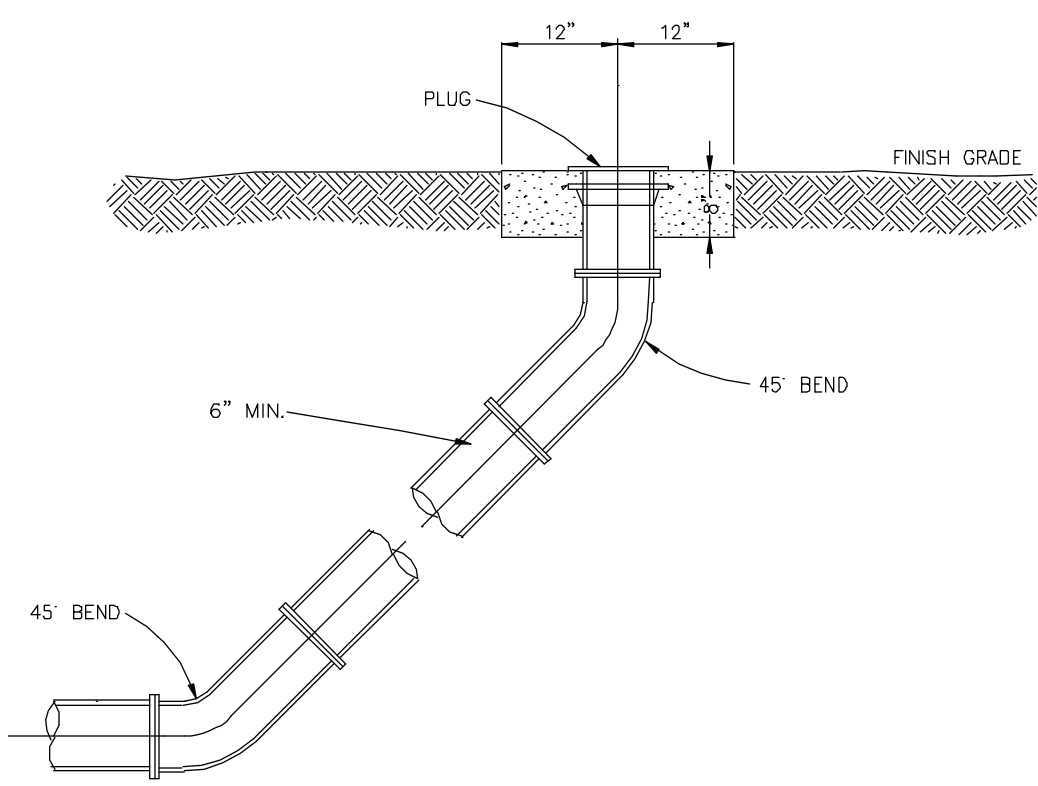
**EDGE DRAIN DETAIL
(NO SCALE)**



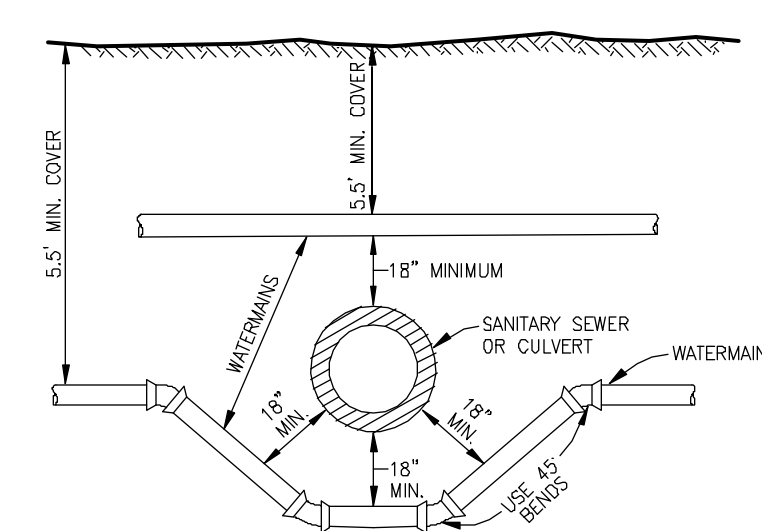
**STORM STRUCTURE UNDER DRAIN DETAIL
(FOR STRUCTURES IN CURBS)
(NO SCALE)**



**STORM STRUCTURE UNDER DRAIN DETAIL
(FOR STRUCTURES IN PAVED AREAS)
(NO SCALE)**



**STORM SEWER CLEANOUT
(NO SCALE)**

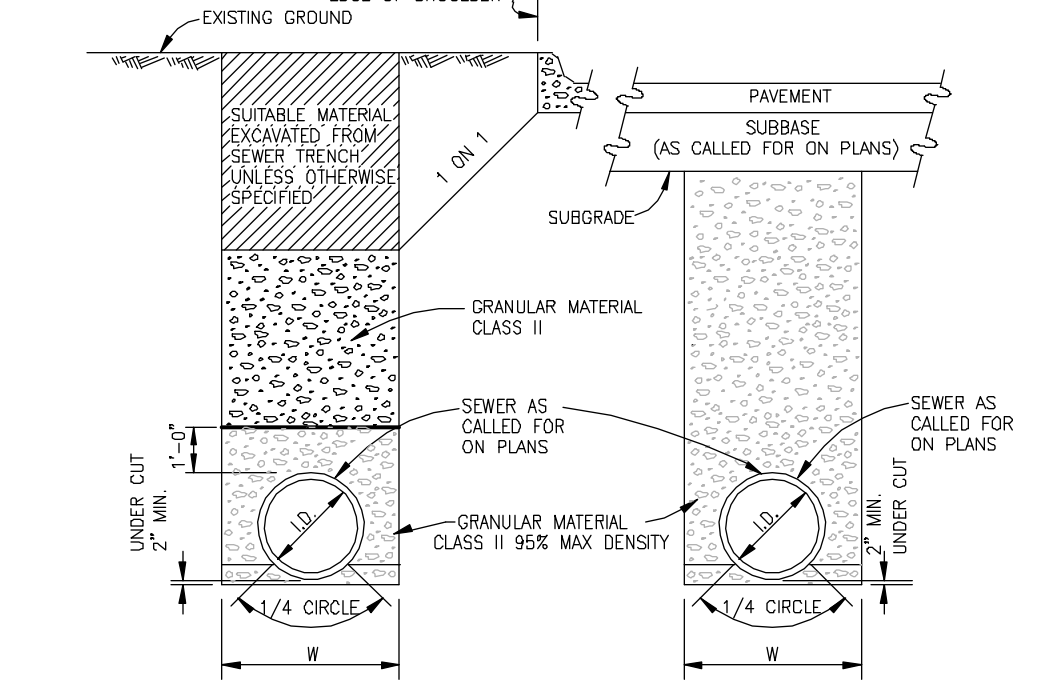


**WATERMAIN RELOCATION
SEWER OR CULVERT CROSSING
(NO SCALE)**

PIPE DIAMETER	GROUND BURIED PRESSURE PIPE - DUCTILE IRON AND PVC PIPE				REDUCERS (ONE SIZE REDUCTION) *	REDUCERS (TWO SIZE REDUCTION) *
	TEES, 90 BENDS	45 BENDS	22-1/2 BENDS	11-1/4 BENDS		
4	13	5	3	1	40	---
6	19	8	4	2	58	31
8	24	10	5	2	75	30
12	34	14	7	3	107	57
16	43	18	9	4	139	59
20	52	22	10	5	169	59
24	61	25	12	6	199	60
30	73	30	15	7	242	85
36	84	35	17	8	291	84

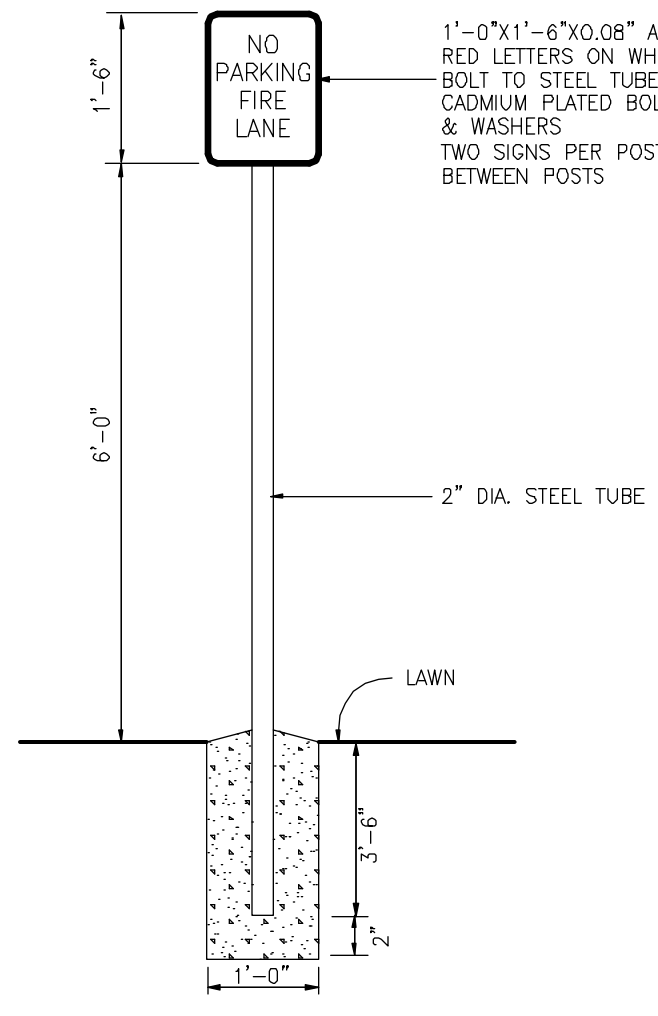
LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
THE VALUE PROVIDED FOR RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IS IN THE DIRECTION OF THE STEM.
IF TEES ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.
* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.

BASED UPON:
INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: 0000 SAND
SAFETY FACTOR: 2

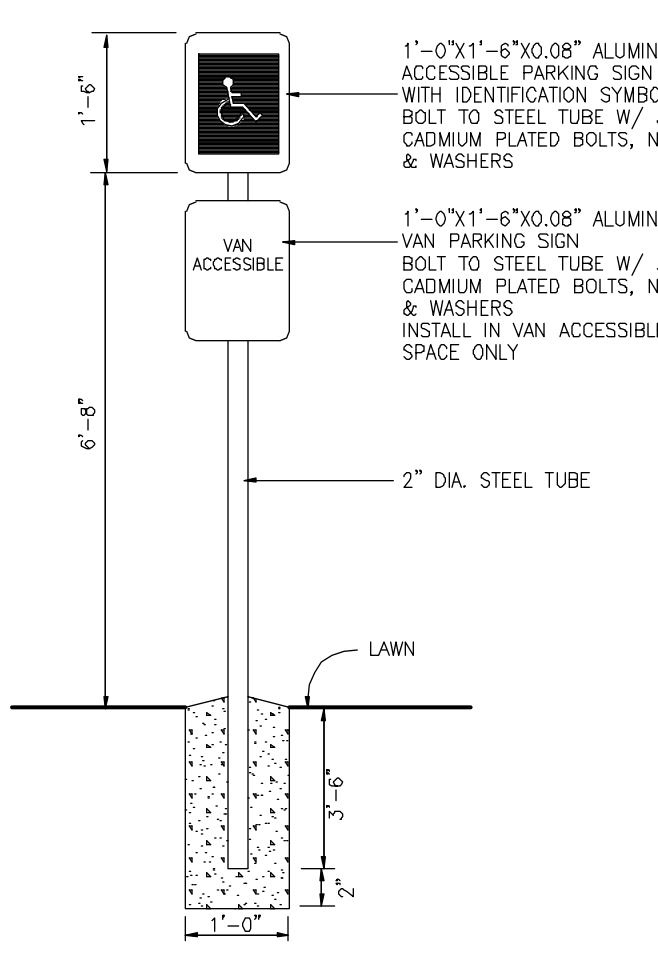


**SEWER UNDER ROADBED OR WITHIN
INFLUENCE OF ROADBED
(REF. MDOT DETAIL IV-830)
(NO SCALE)**

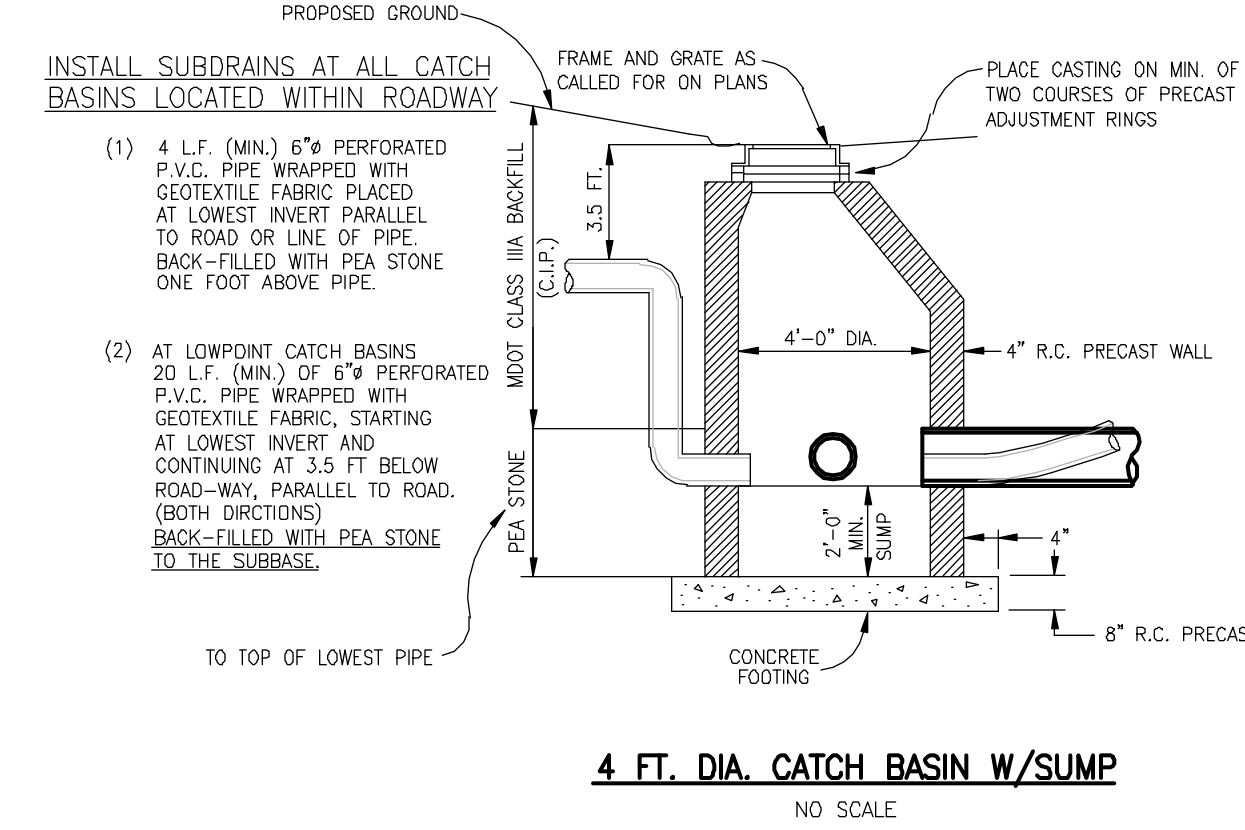
**CB100 AND CB105 DETAIL
(NO SCALE)
* SEE 4FT DIA. CATCH BASIN W/ SUMP
DETAIL FOR UNDERDRAIN DETAILS**



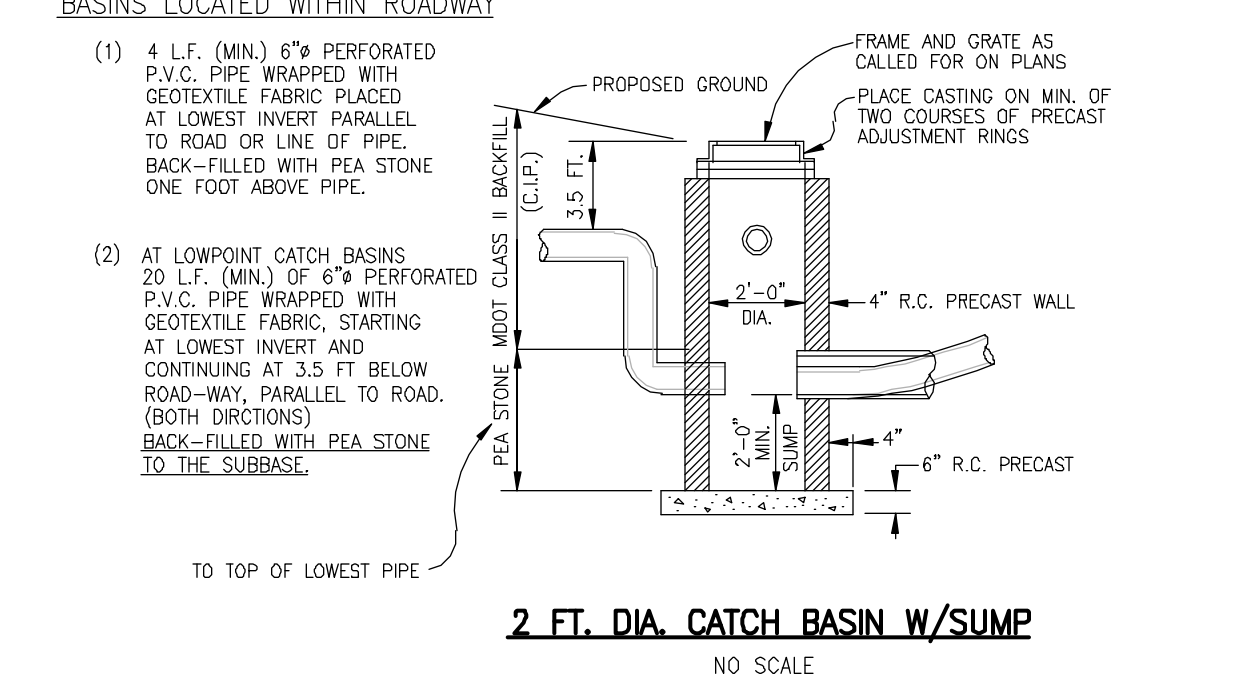
**NO PARKING SIGN DETAIL
(NO SCALE)**



**HANDICAP PARKING SIGN DETAIL
(NO SCALE)**



**4 FT. DIA. CATCH BASIN W/SUMP
(NO SCALE)**



**2 FT. DIA. CATCH BASIN W/SUMP
(NO SCALE)**

STRUCTURE FRAMES & COVERS					
COVER	TYPE	USE	MANUFACTURER OR EQUAL		TYPE OF COVER OR GRATE
			EAST JORDAN	NEEMHI	
A	MH	ALL	1120	R-1415	SANITARY-SELF SEALING STORM-VENTED
B	CB & INLET	TYPE BB CURB	7065	R-3626-A	
K	CB & INLET	TYPE C & F CURB	7045	R-3031-B	FLAT GRATE WITH VERT. 4\"/>
C	CB & INLET	VALLEY CURB	7065	R-3034-B	
D	CB & INLET	PARKING LOTS	1020-MI	R-2560-D	FLAT GRATE
E	CB & INLET	LAWN AREA OR DITCH	1020-01		BEEHIVE GRATE 4\"/>

**TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC**
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

PROJECT: GRAND RIVER PROJECT, LLC
PREPARED FOR: GRAND RIVER PROJECT, LLC

NO.	BY	DATE	REVISION PER
4	RD	08/08/15	
3	ST	08/10/15	
1	ST	07/29/15	

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY: NTS
JOB NO. 14-131
DATE 1/9/15

SHEET NO. **C10**



BEBOSS Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

**TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC**
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

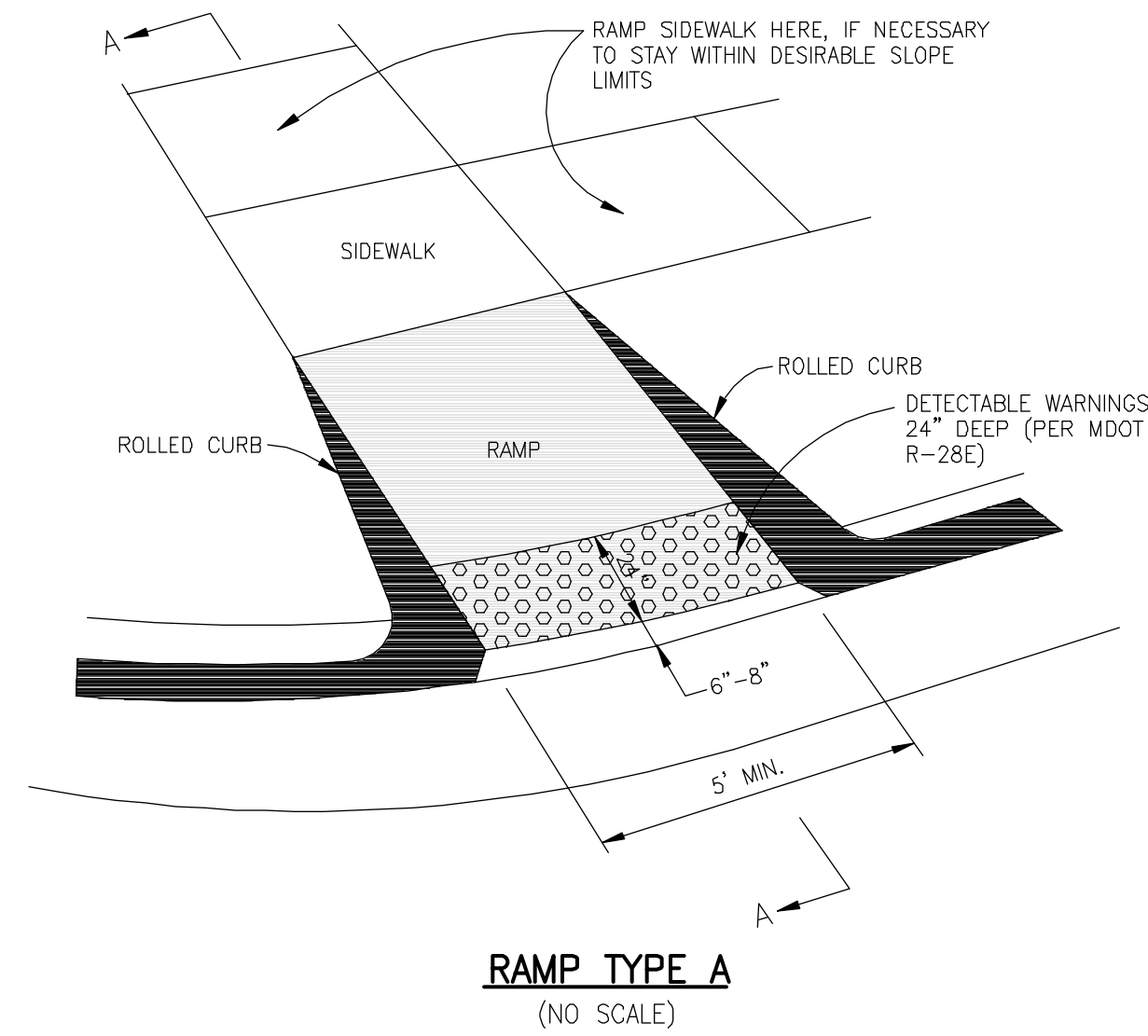
PROJECT: GRAND RIVER PROJECT, LLC
PREPARED FOR: GRAND RIVER PROJECT, LLC

NO.	BY	DATE	REVISION PER
4	RD	08/08/15	
3	ST	08/10/15	
1	ST	07/29/15	

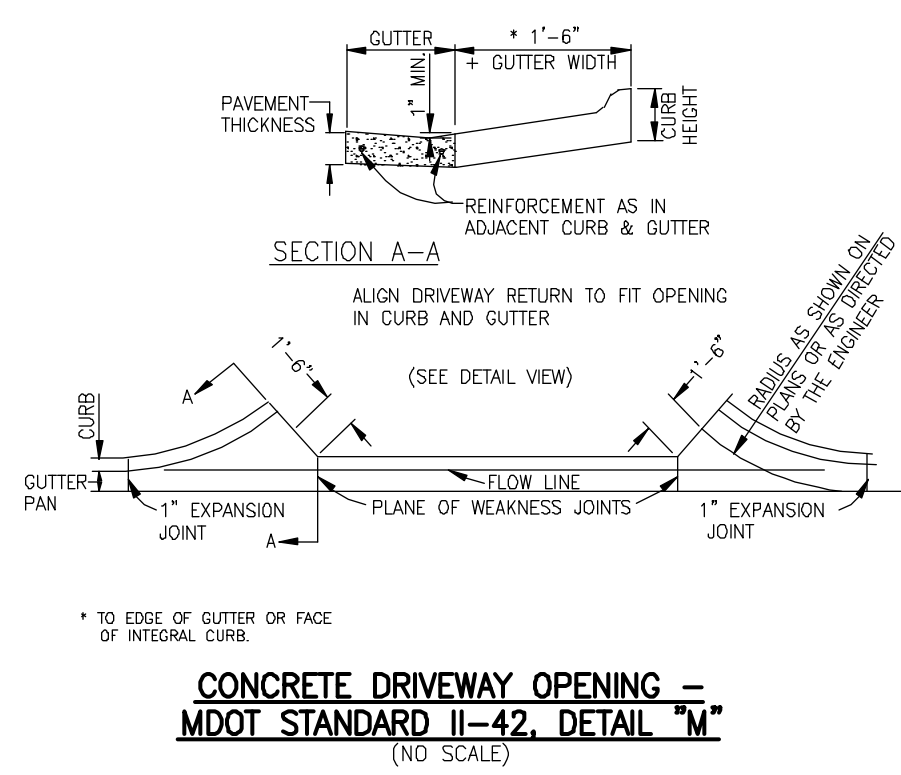
DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY: NTS
JOB NO. 14-131
DATE 1/9/15

SHEET NO. **C10**

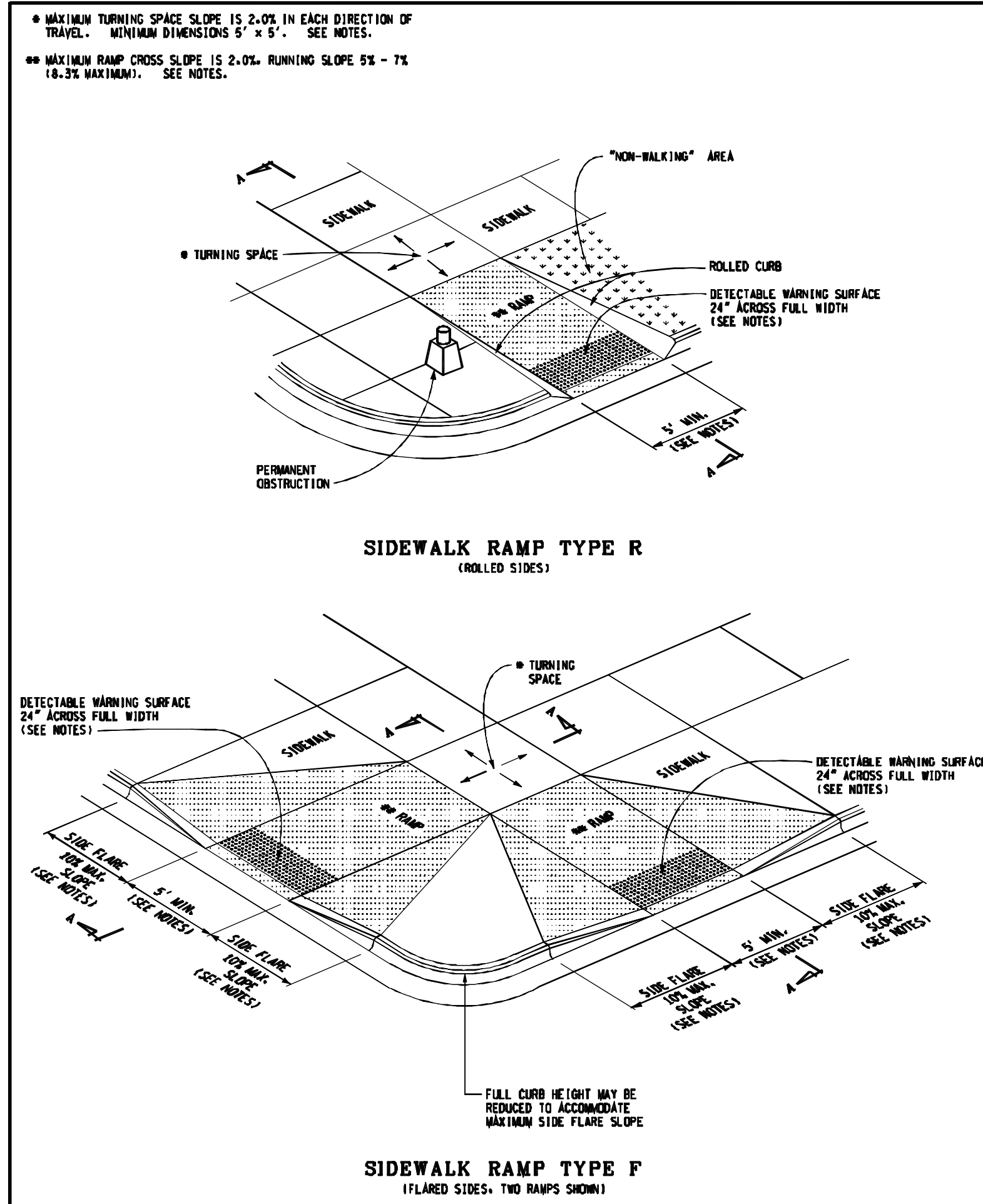




RAMP TYPE A
(NO SCALE)



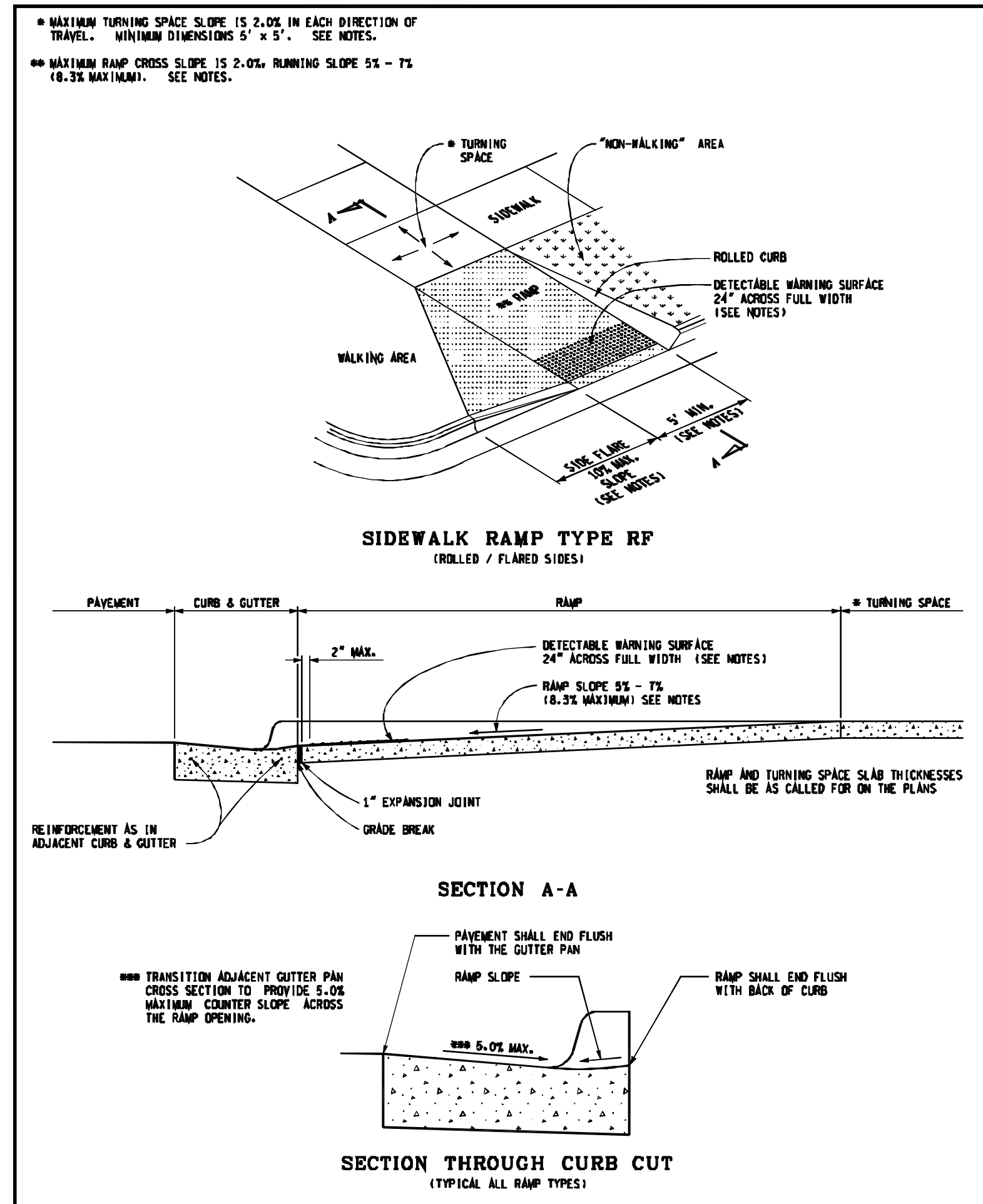
CONCRETE DRIVEWAY OPENING -
MDOT STANDARD II-42, DETAIL "M"
(NO SCALE)



SIDEWALK RAMP TYPE R
(ROLLED SIDES)

SIDEWALK RAMP TYPE F
(FLARED SIDES, TWO RAMPS SHOWN)

	DEPARTMENT DIRECTOR Kim T. Shodor	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR	
	APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS		9-30-2014 F.I.R.L. APPROVAL	7-1-2014 PLAN DATE
PREPARED BY: DESIGN DIVISION	APPROVED BY: DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT	9-30-2014 F.I.R.L. APPROVAL	7-1-2014 PLAN DATE	R-28-I	SHEET 1 OF 1

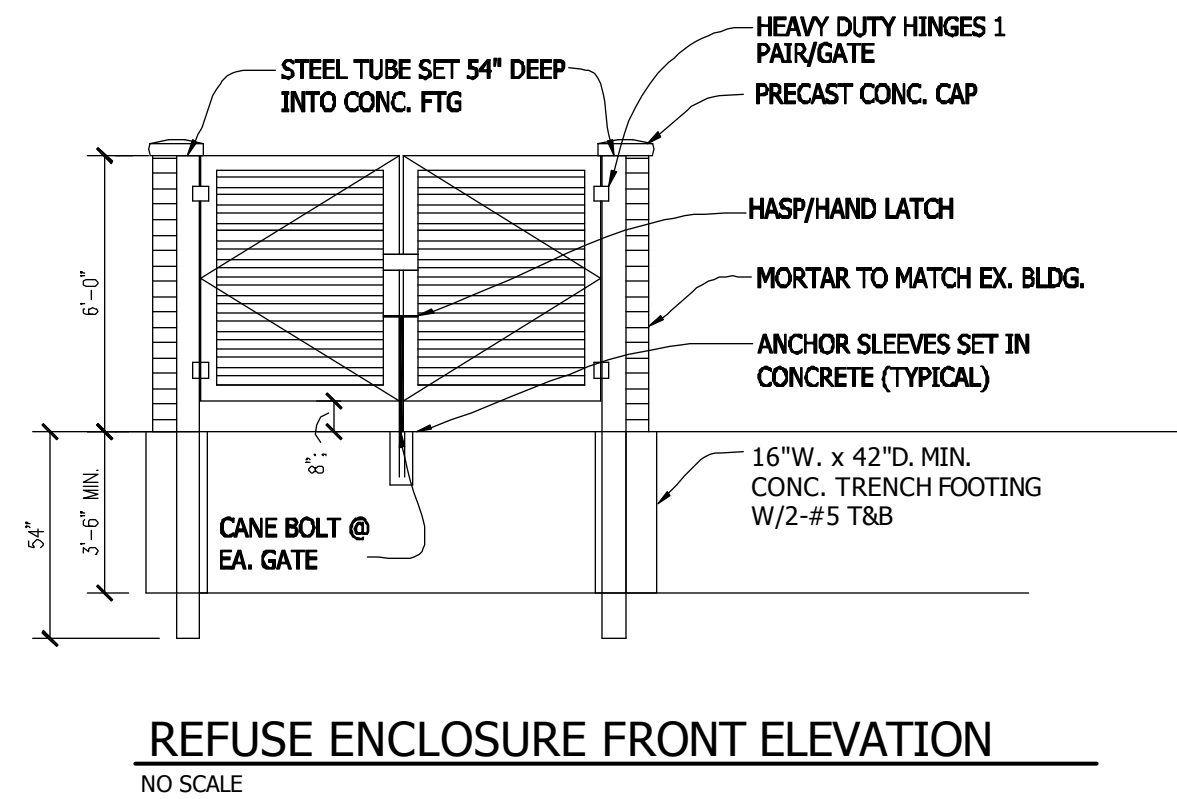


SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)

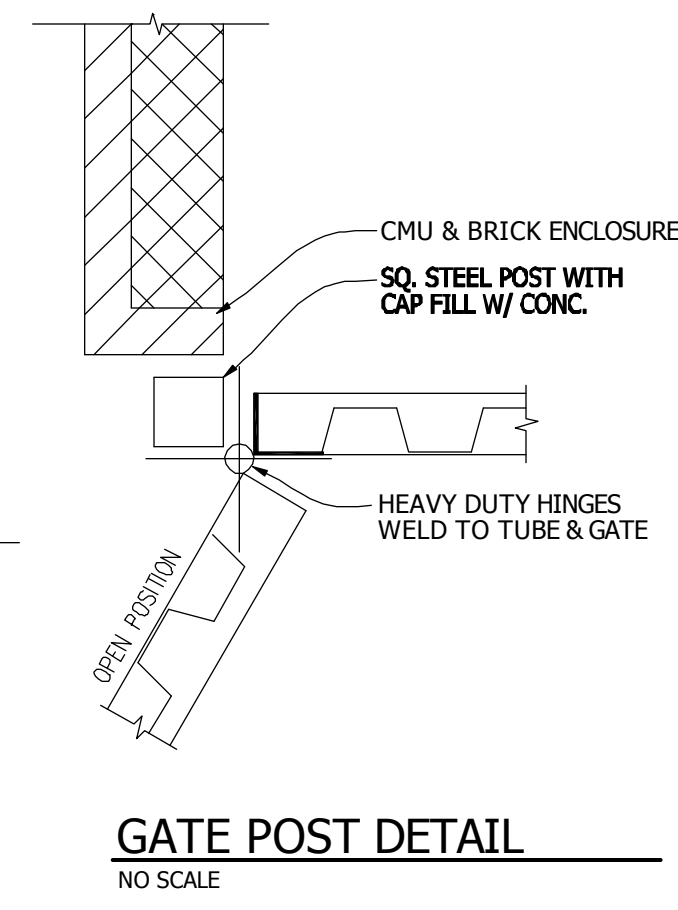
SECTION A-A

SECTION THROUGH CURB CUT
(TYPICAL ALL RAMP TYPES)

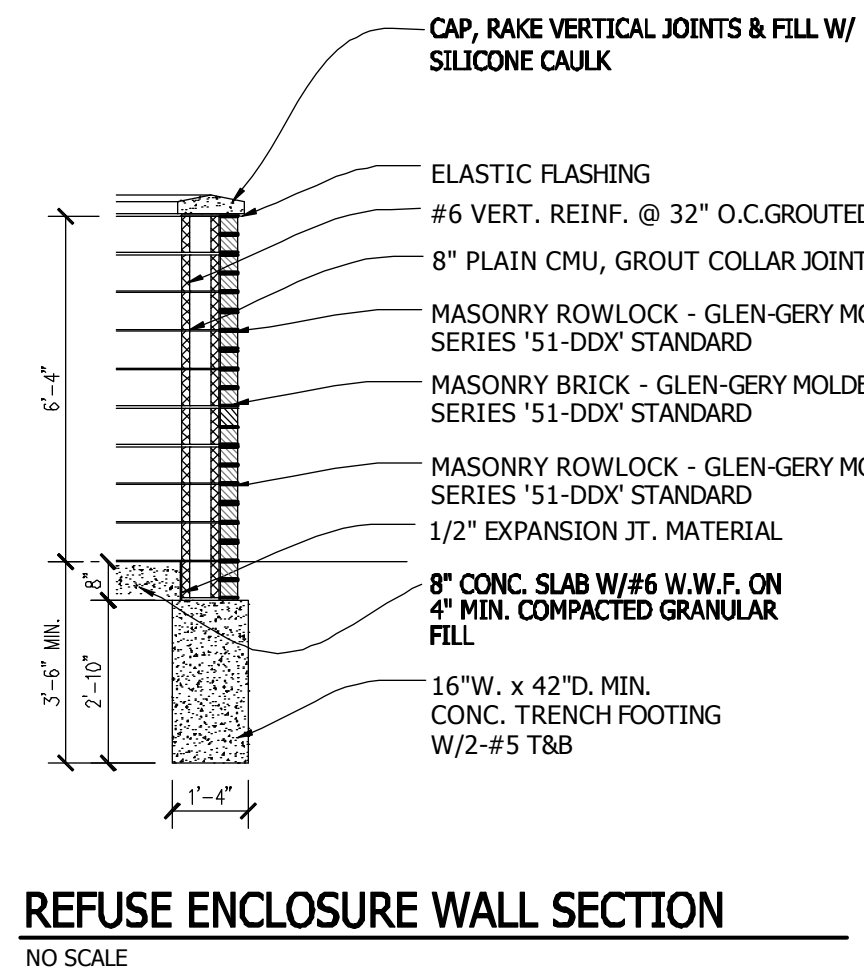
	DEPARTMENT DIRECTOR Kim T. Shodor	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR	
	APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS		9-30-2014 F.I.R.L. APPROVAL	7-1-2014 PLAN DATE
PREPARED BY: DESIGN DIVISION	APPROVED BY: DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT	9-30-2014 F.I.R.L. APPROVAL	7-1-2014 PLAN DATE	R-28-I	SHEET 2 OF 1



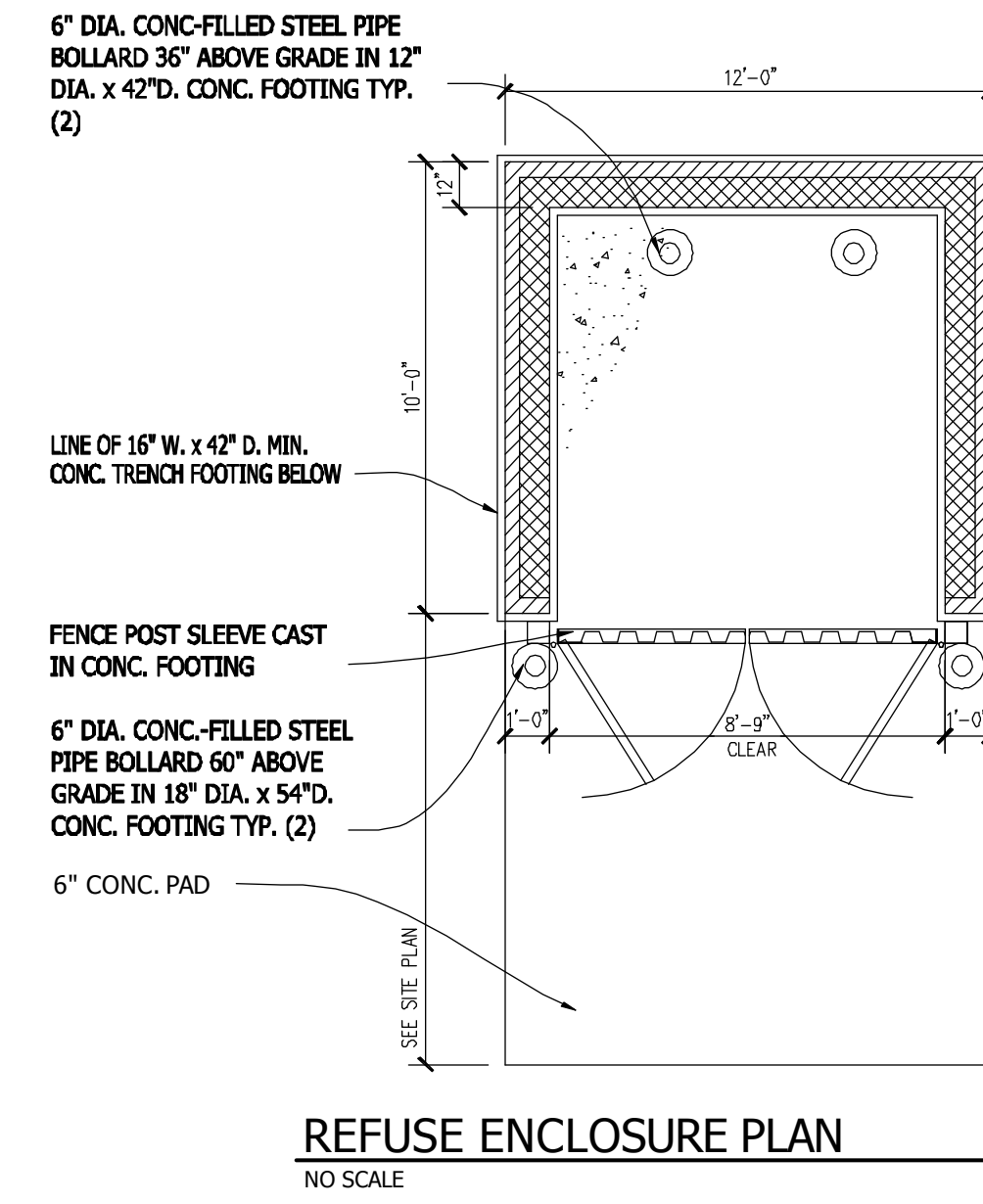
REFUSE ENCLOSURE FRONT ELEVATION
NO SCALE



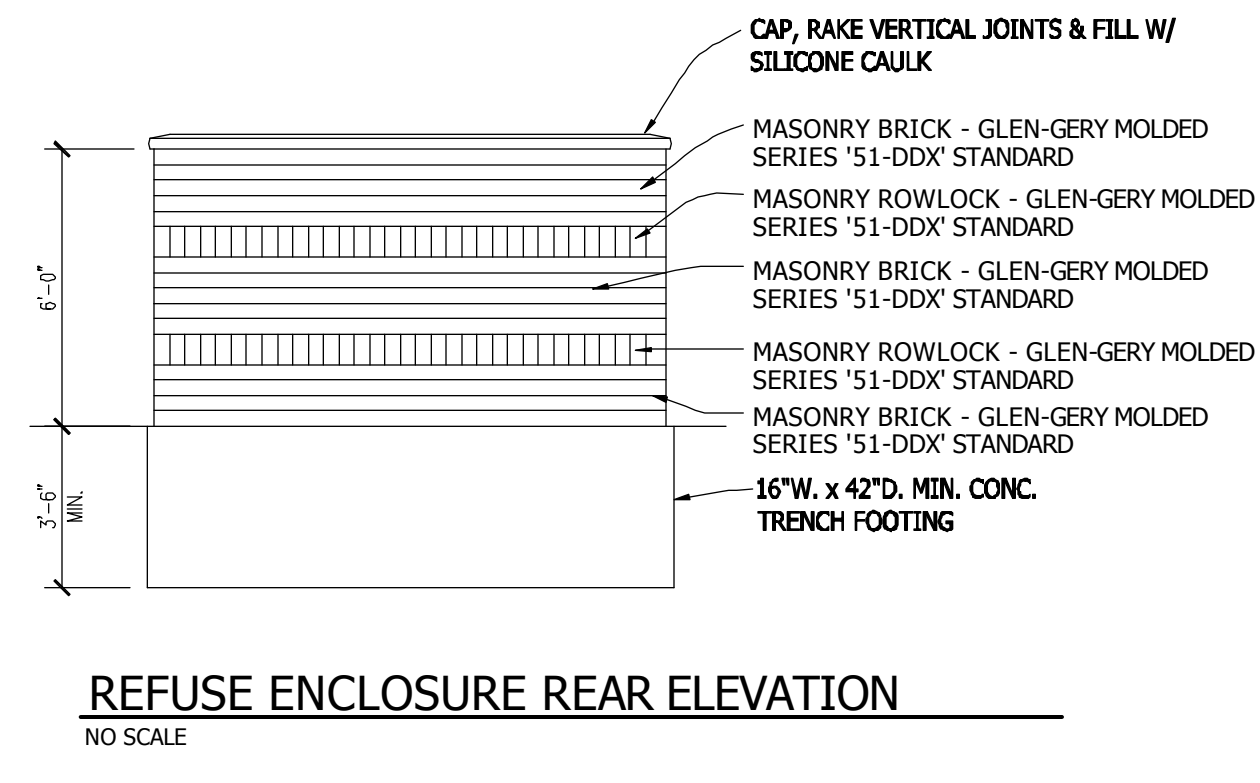
GATE POST DETAIL
NO SCALE



REFUSE ENCLOSURE WALL SECTION
NO SCALE



REFUSE ENCLOSURE PLAN
NO SCALE

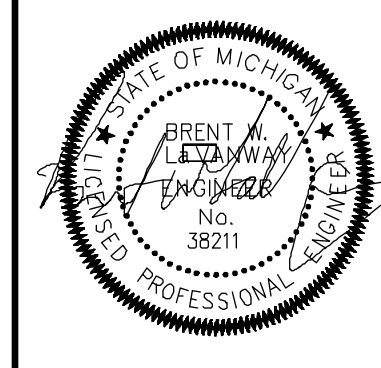


REFUSE ENCLOSURE REAR ELEVATION
NO SCALE

TILE SHOP RENOVATION
PROJECT
PREPARED FOR
GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 490-3700

DESIGNED BY:	ST
DRAWN BY:	ST
CHECKED BY:	
SCALE	NTS
JOB NO.	14-131
DATE	1/9/15
SHEET NO.	C11

BEBOSS
Engineering
Engineers, Surveyors, Planners, Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

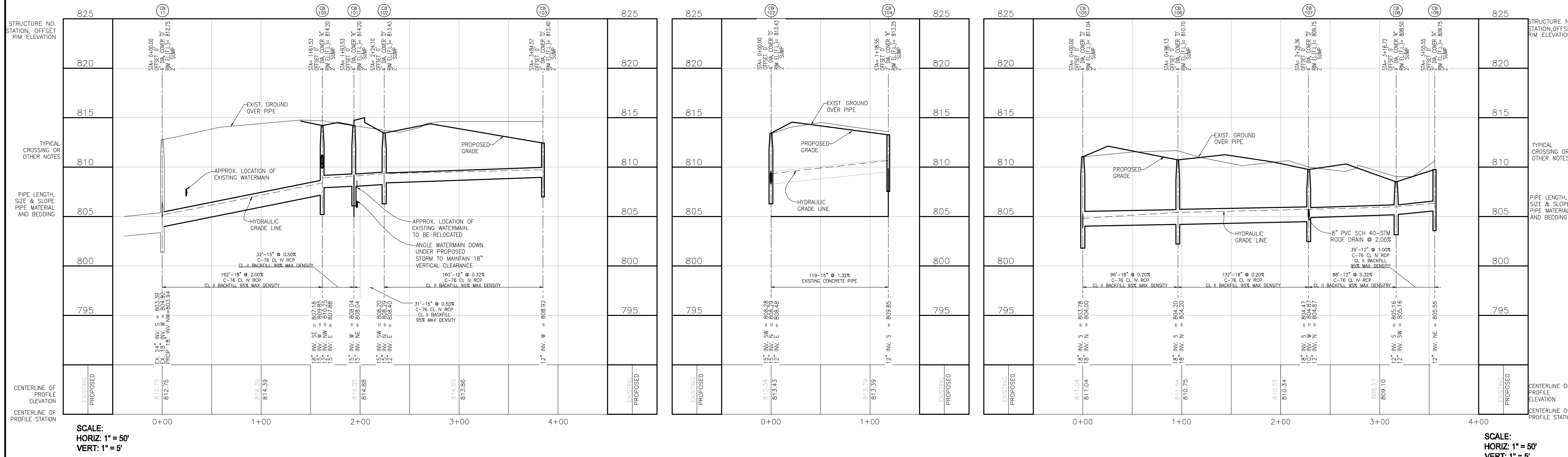
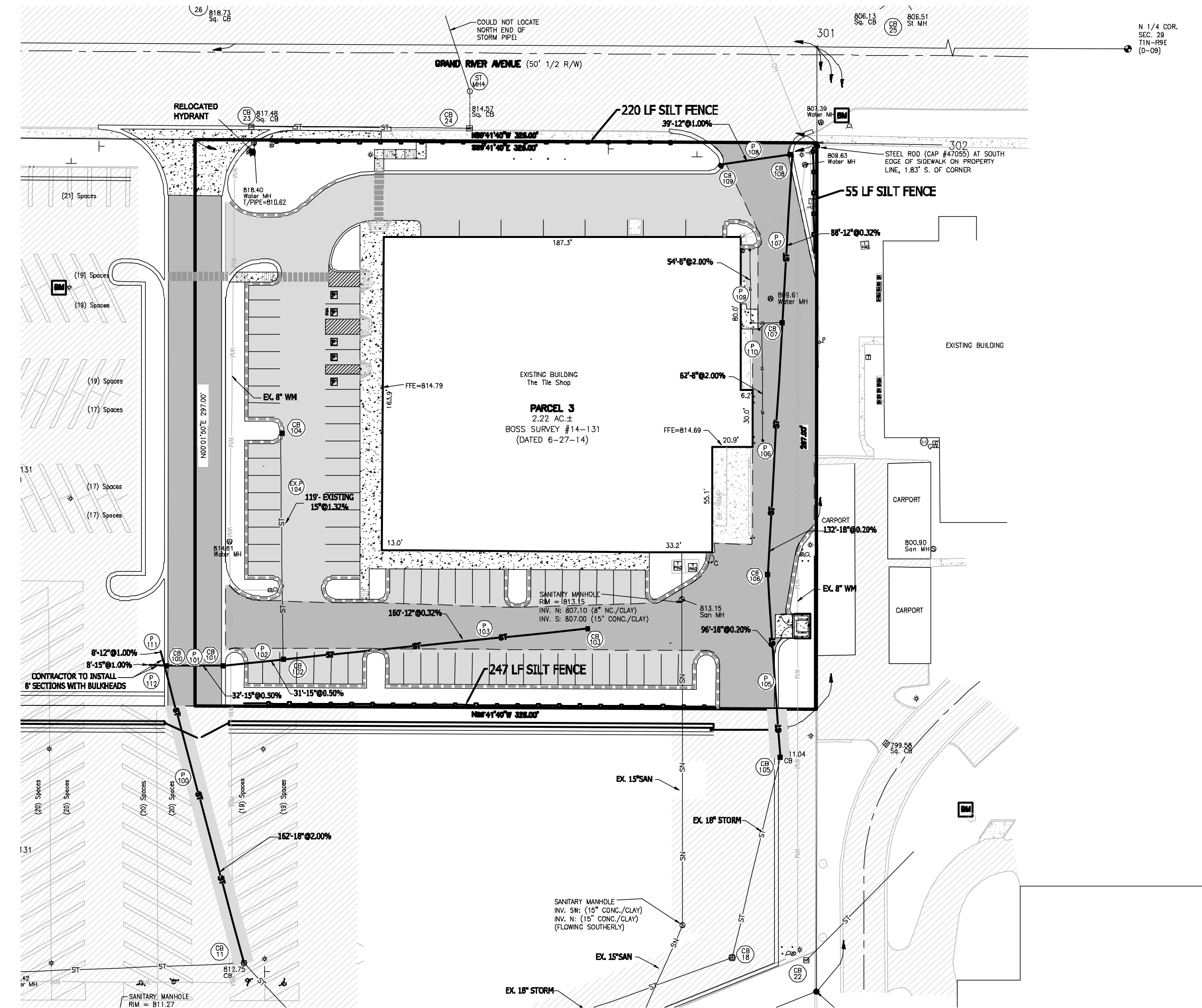


THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE UTILITIES. THEREFORE, THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONTACTS ARE MADE WITH UTILITIES. IF THE ENGINEER OR DEPTH OFFERS CONTRADICTORY FROM THE PLANS.

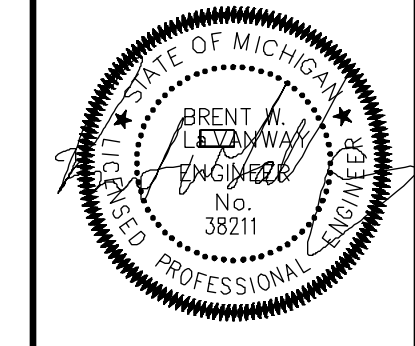
STORM SEWER NOTES

1. ALL PIPE LENGTHS SHOWN ARE FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
2. ALL STORM SEWER PIPE SHALL BE C-76, CL. IV REINFORCED CONCRETE PIPE WITH WATERTIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON PLAN.
3. APPROPRIATE SOIL EROSION CONTROL MEASURES SHALL BE ESTABLISHED PRIOR TO BEGINNING CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.

SEE SHEET C10 FOR STORM "STRUCTURE FRAMES & COVERS" INFORMATION



THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS, FIELD SURVEY, AND EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY OF THE INFORMATION PROVIDED. THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES DETERMINED BY FIELD SURVEY SHALL BE THE BASIS FOR CONSTRUCTION AND PROPOSED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHALL BE SHOWN ON THE PLANS.

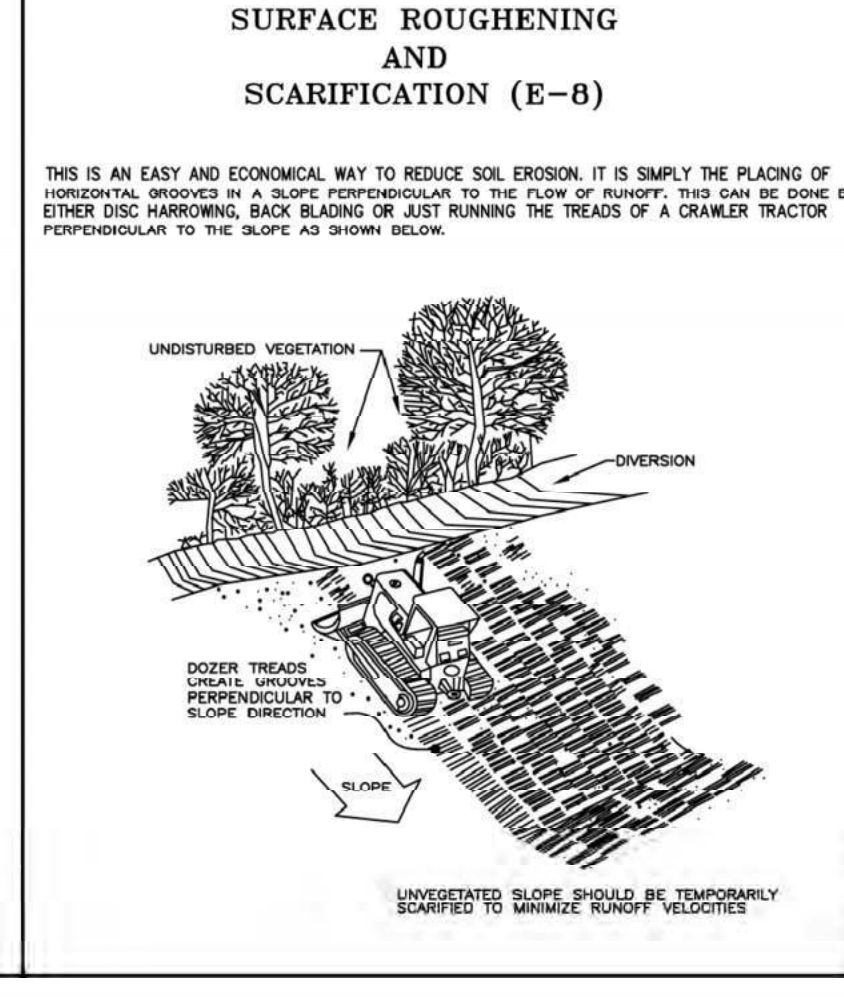
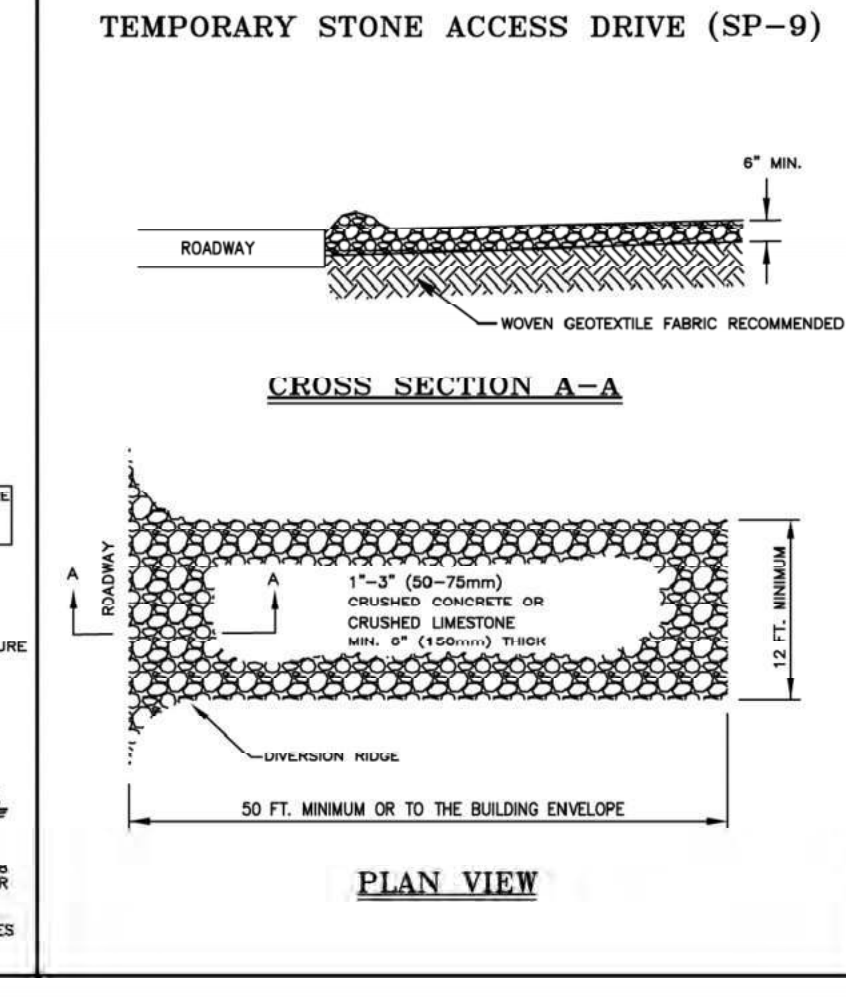
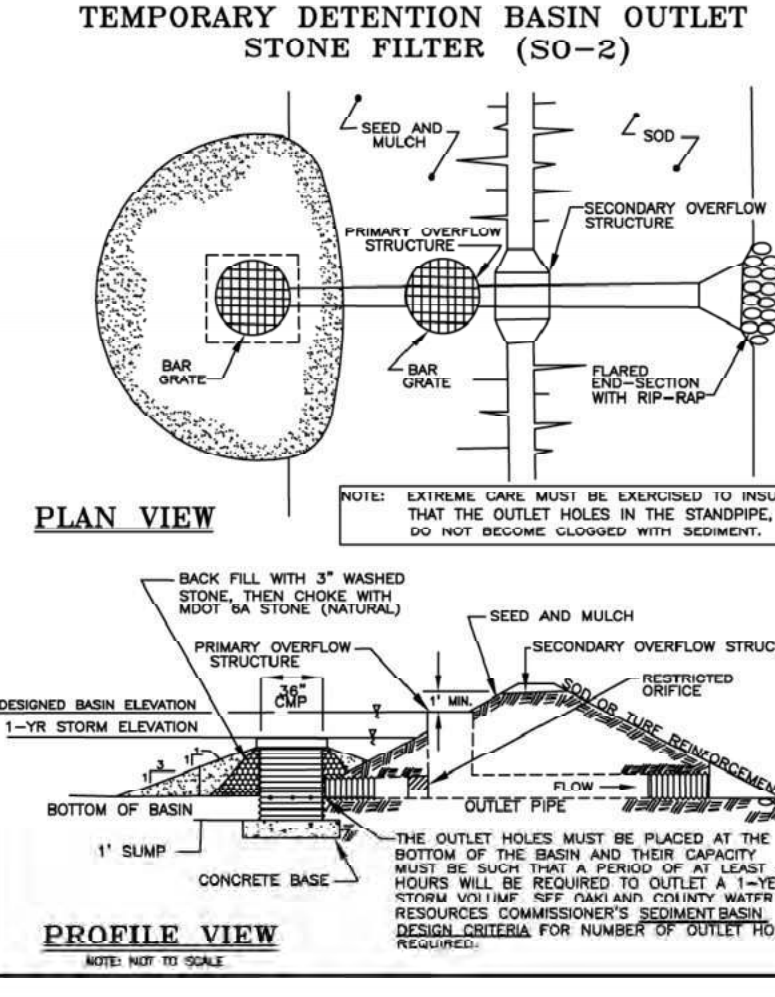
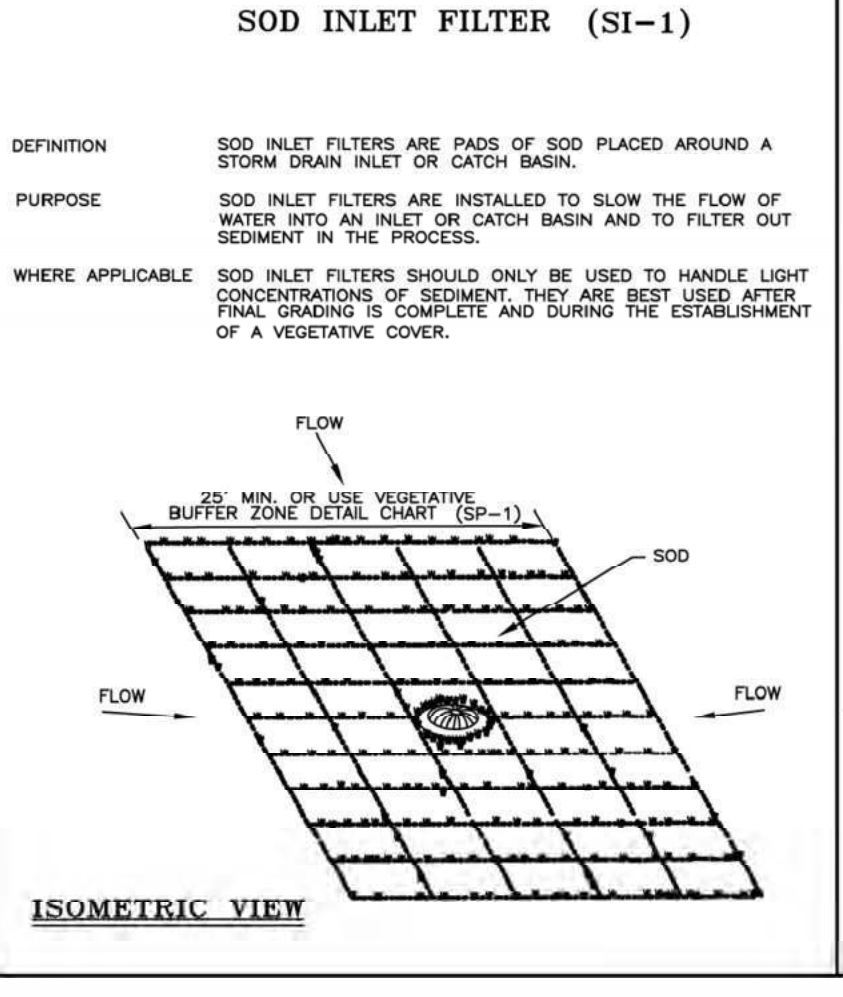
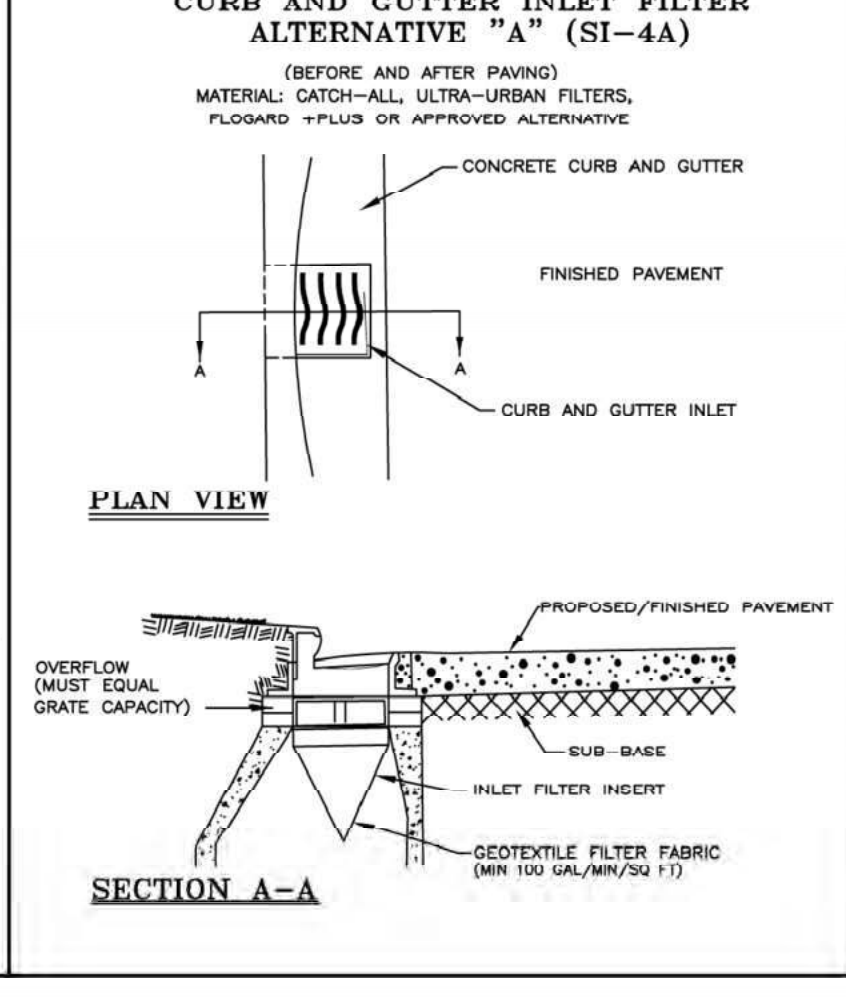
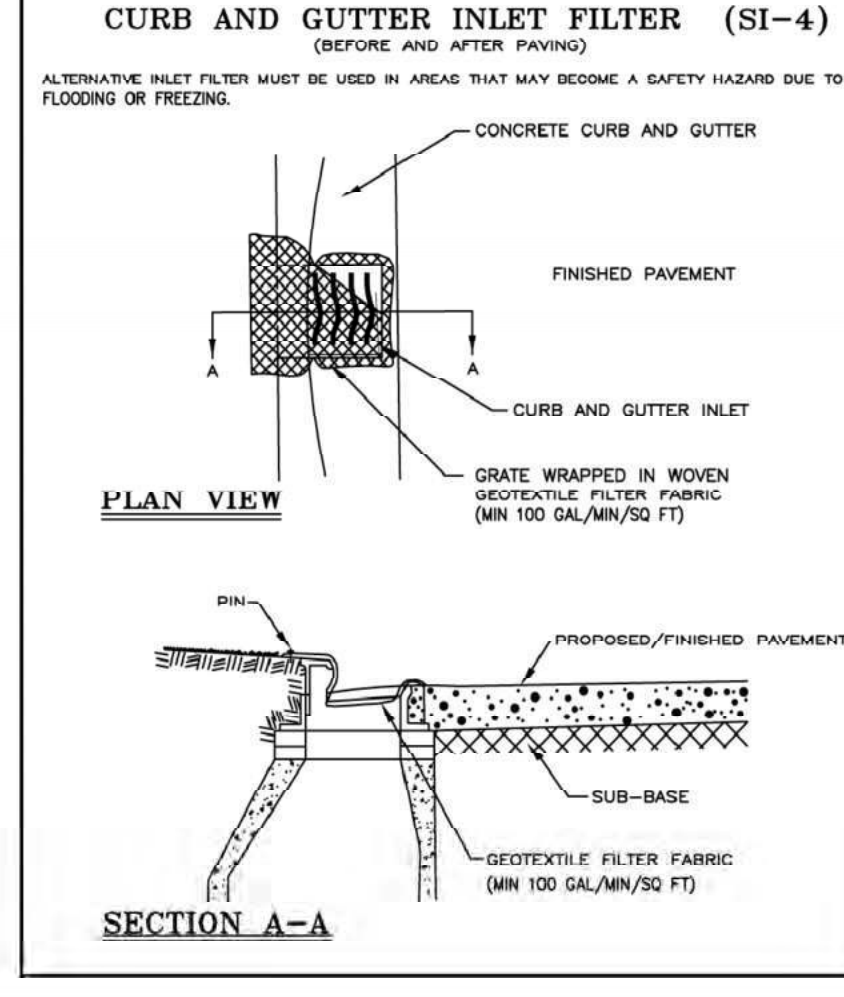
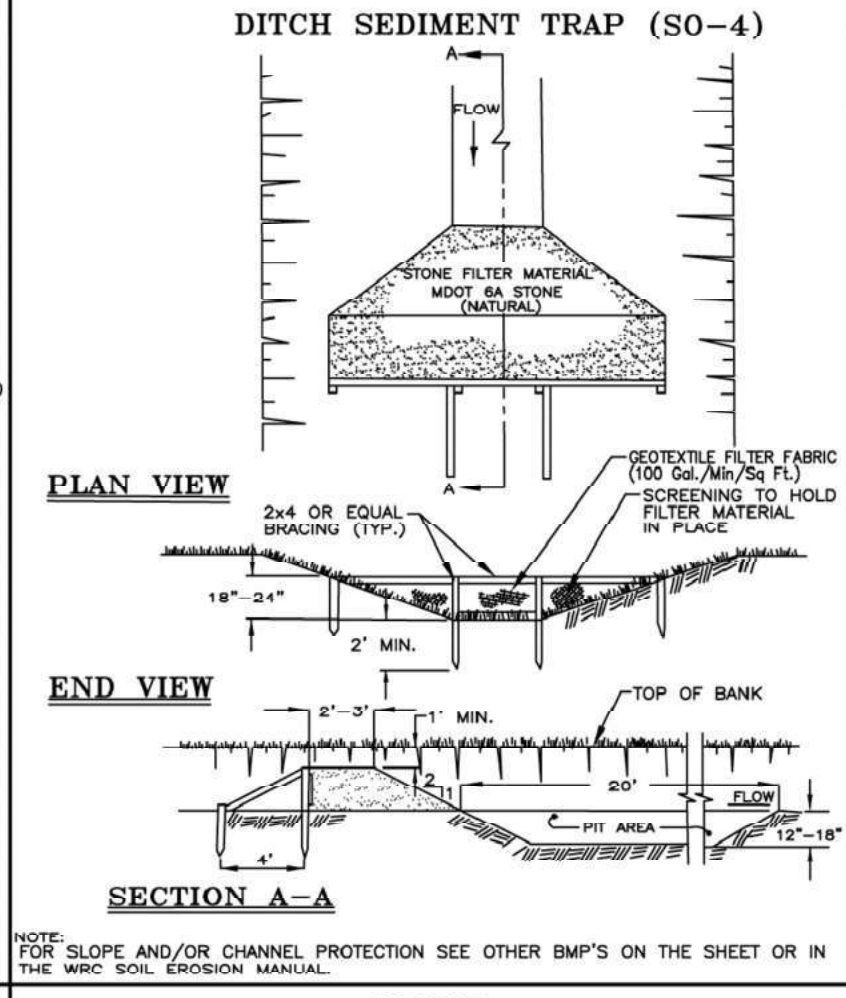
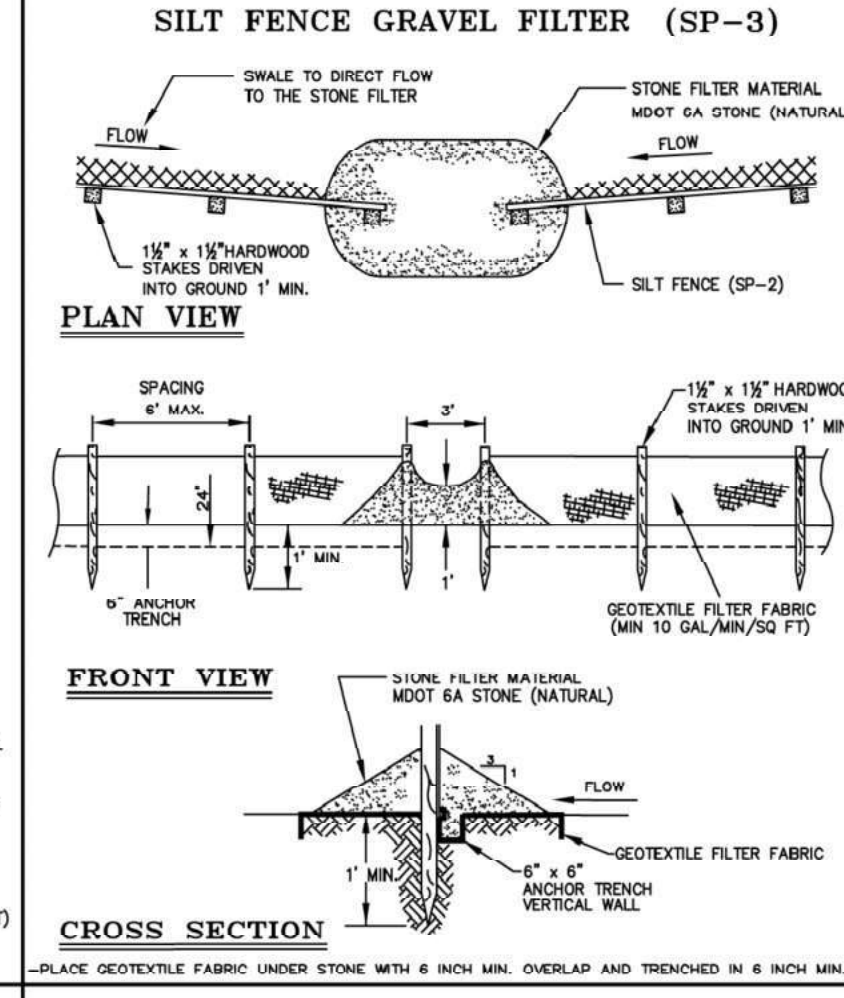
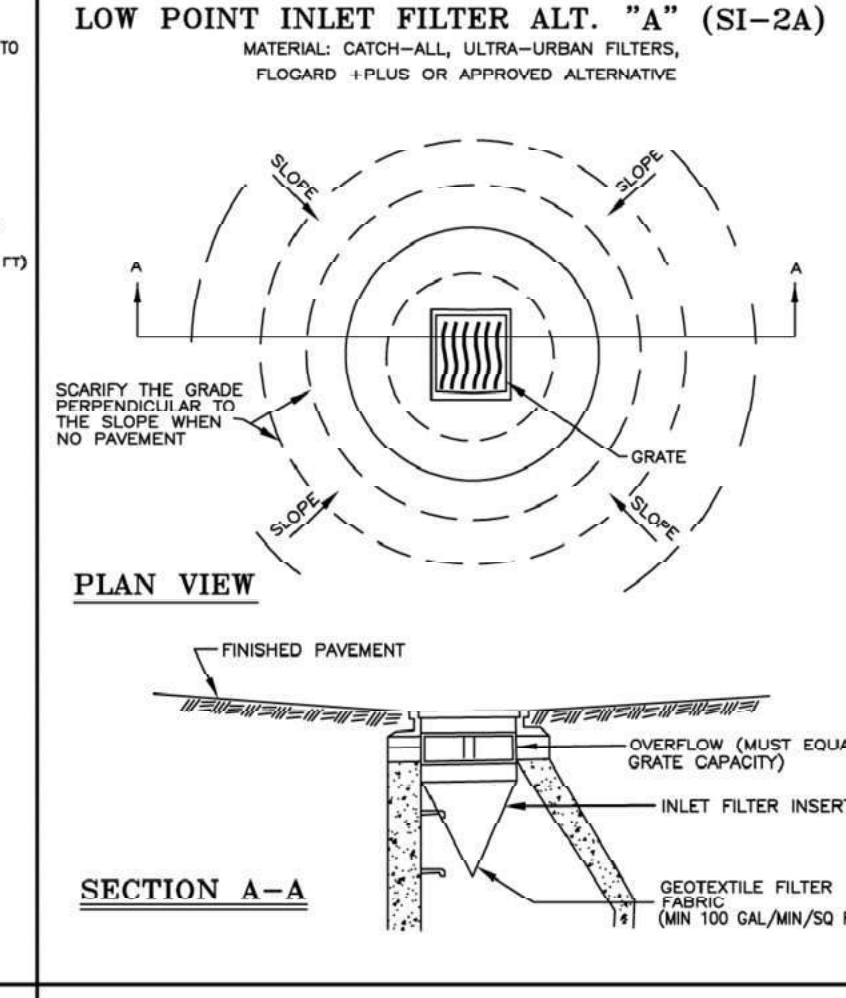
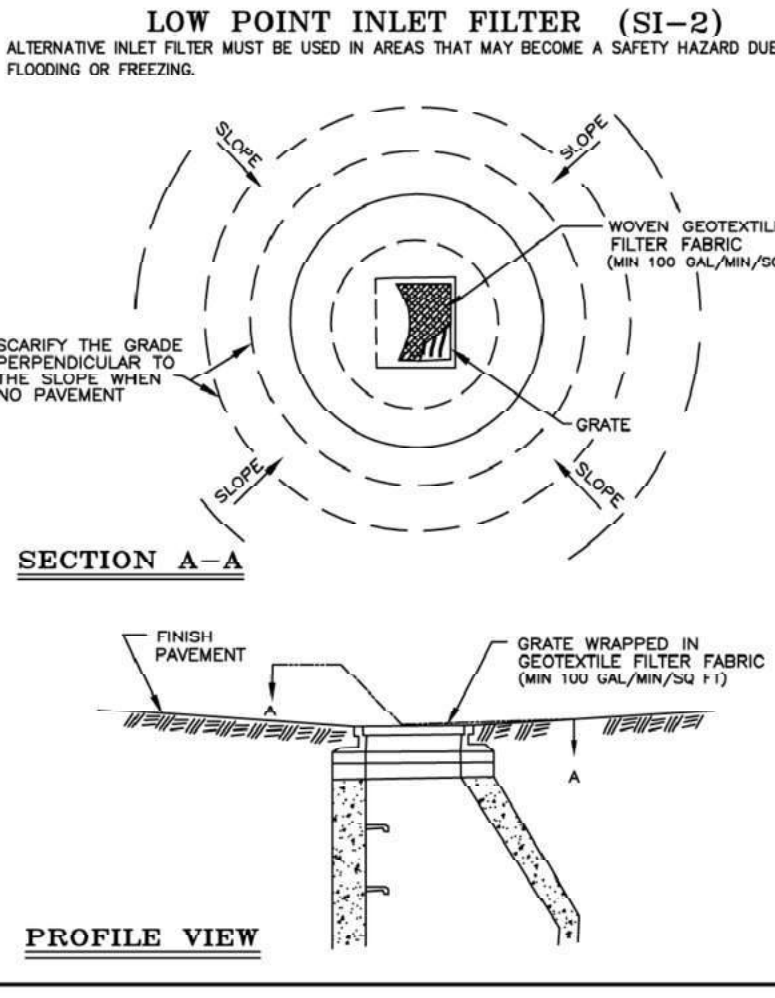
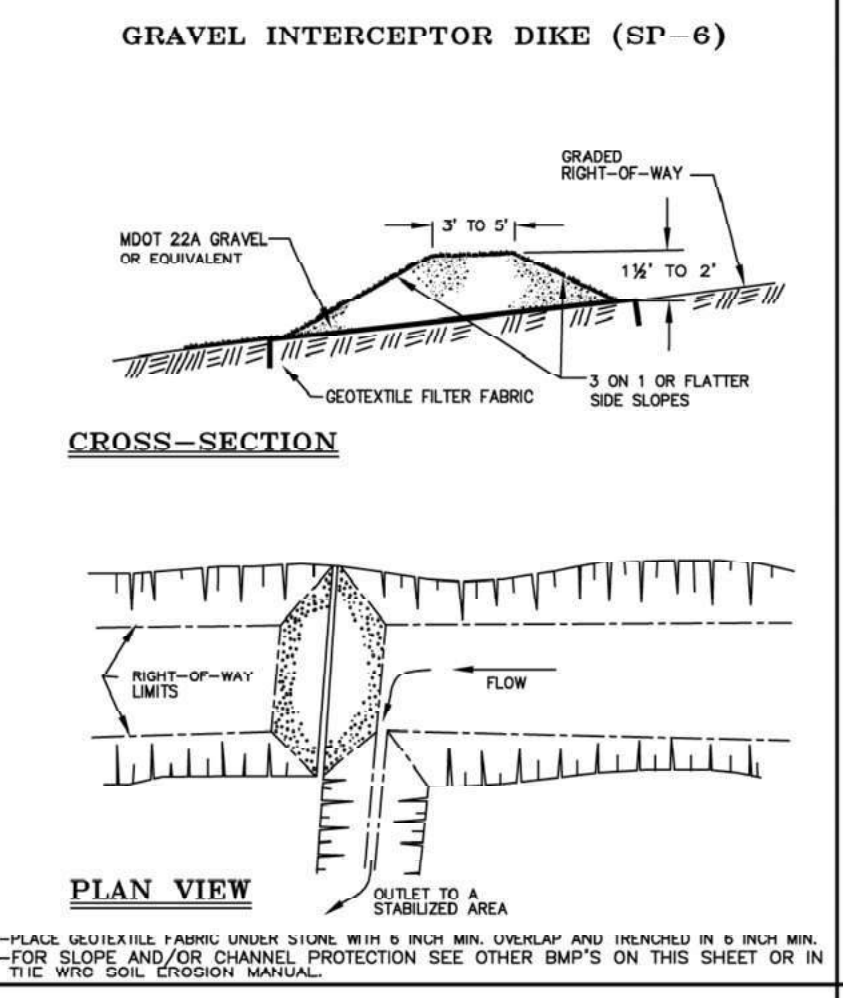
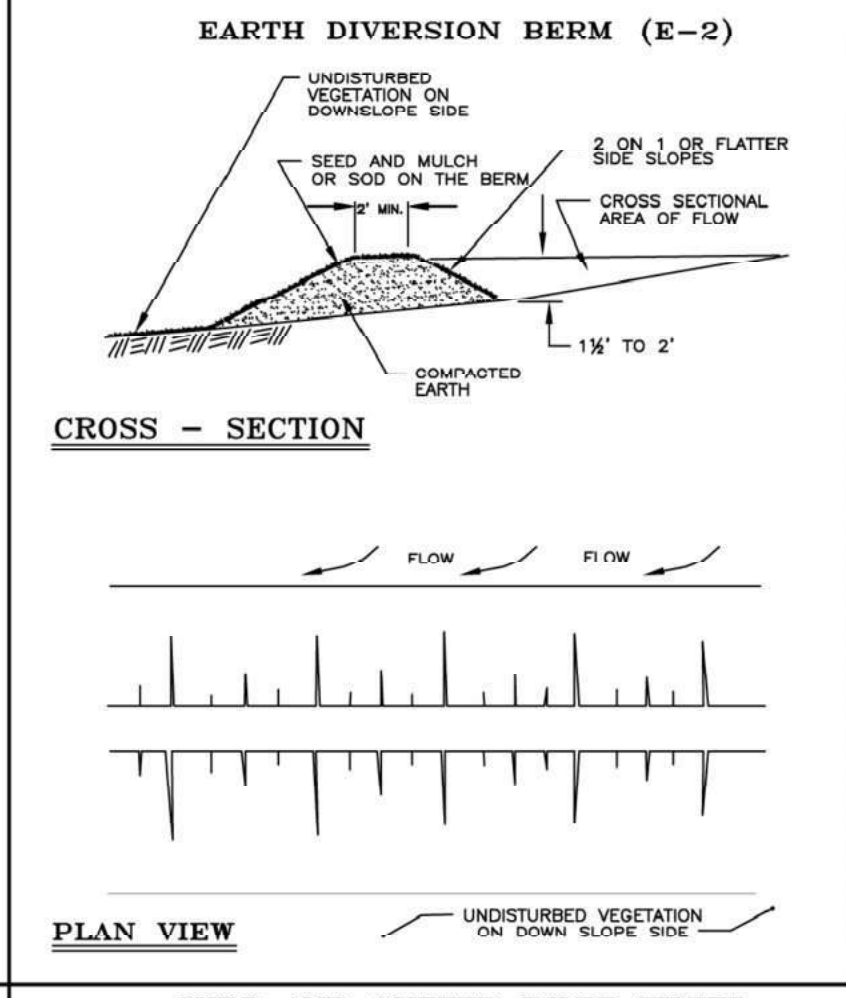
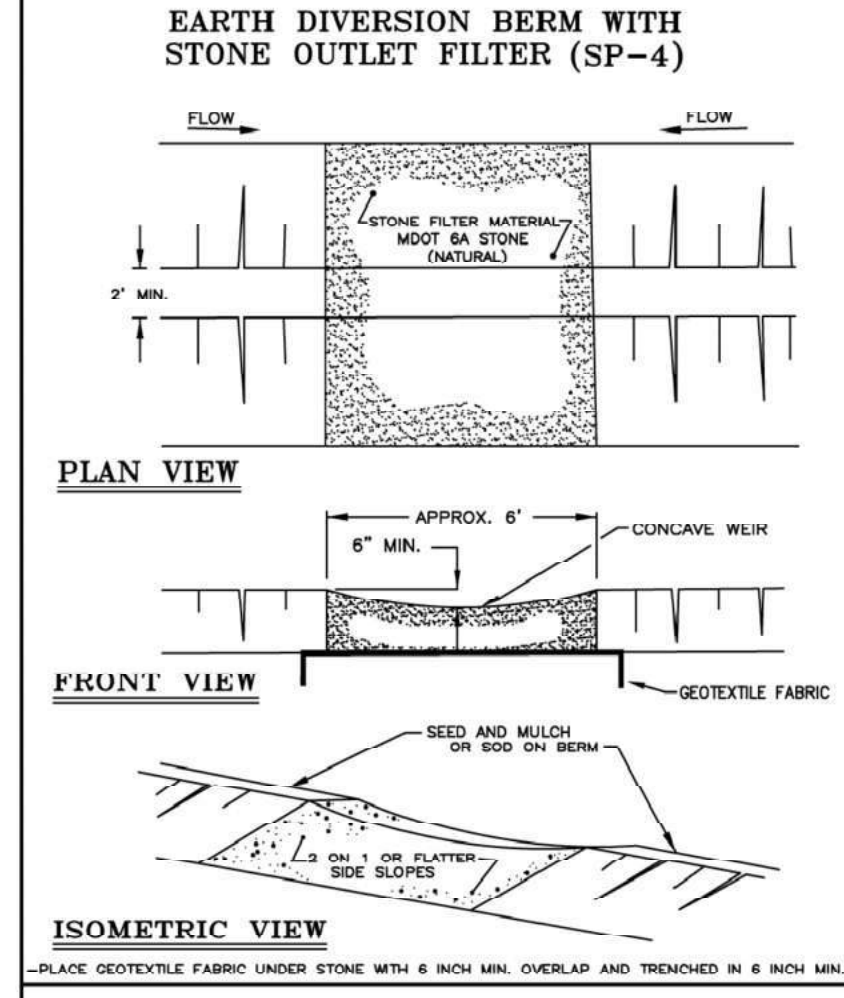
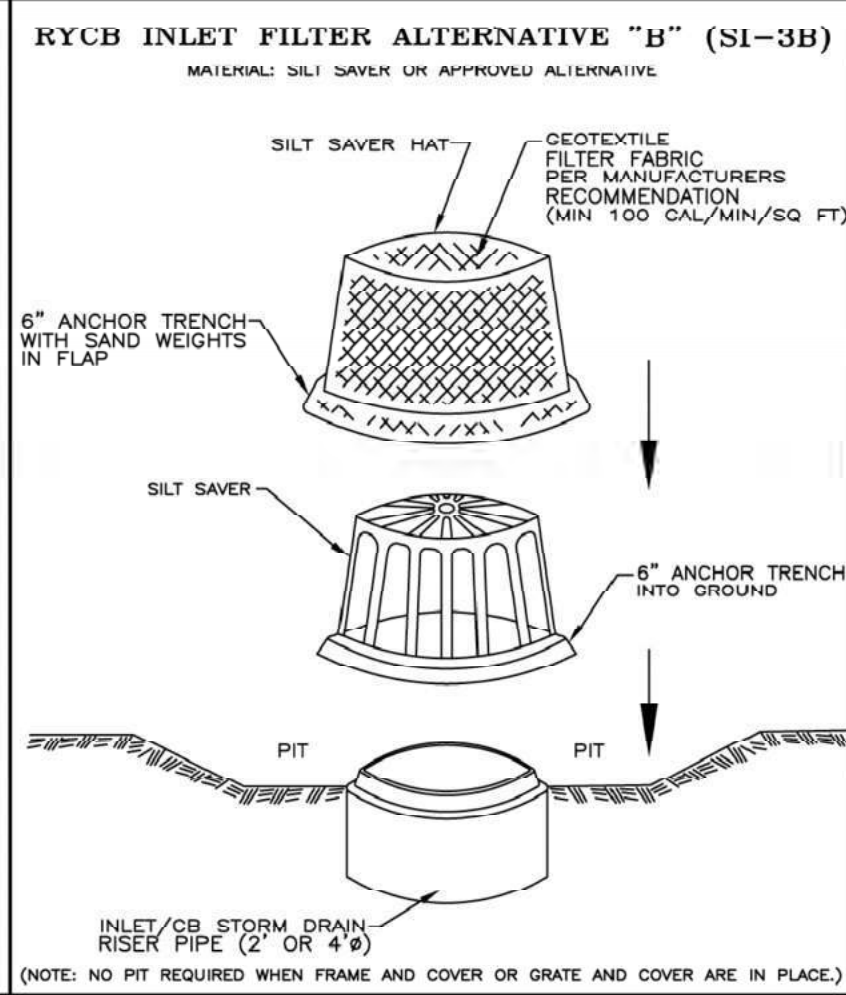
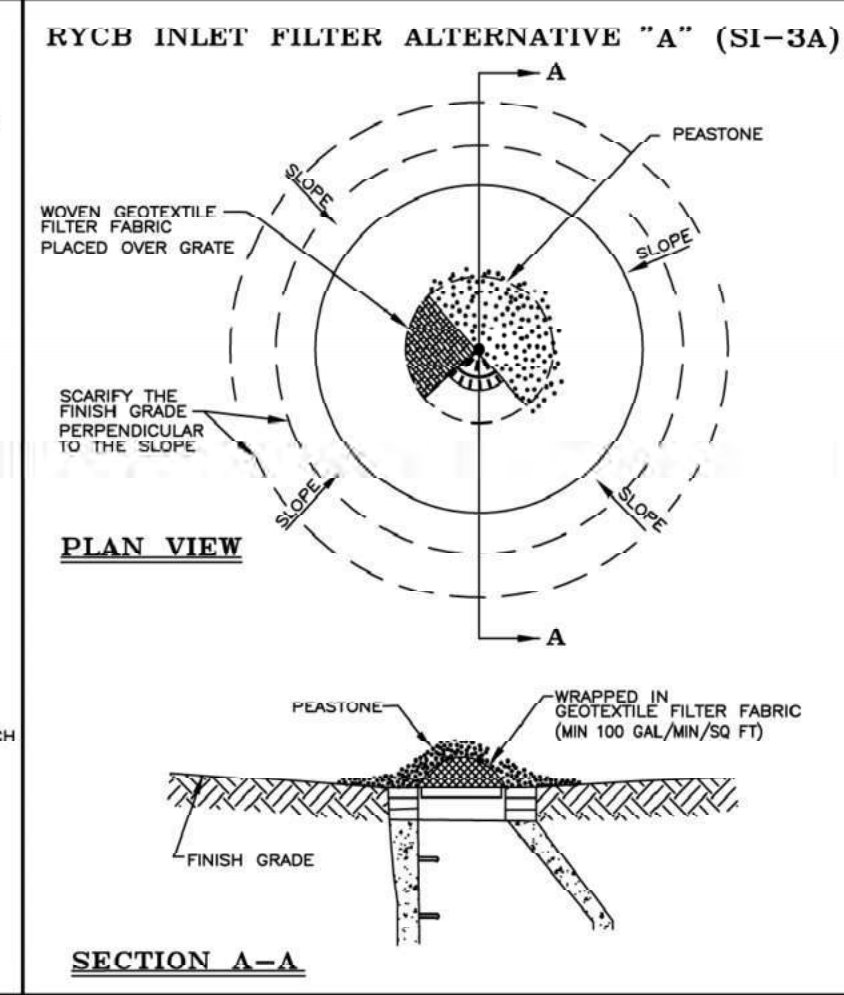
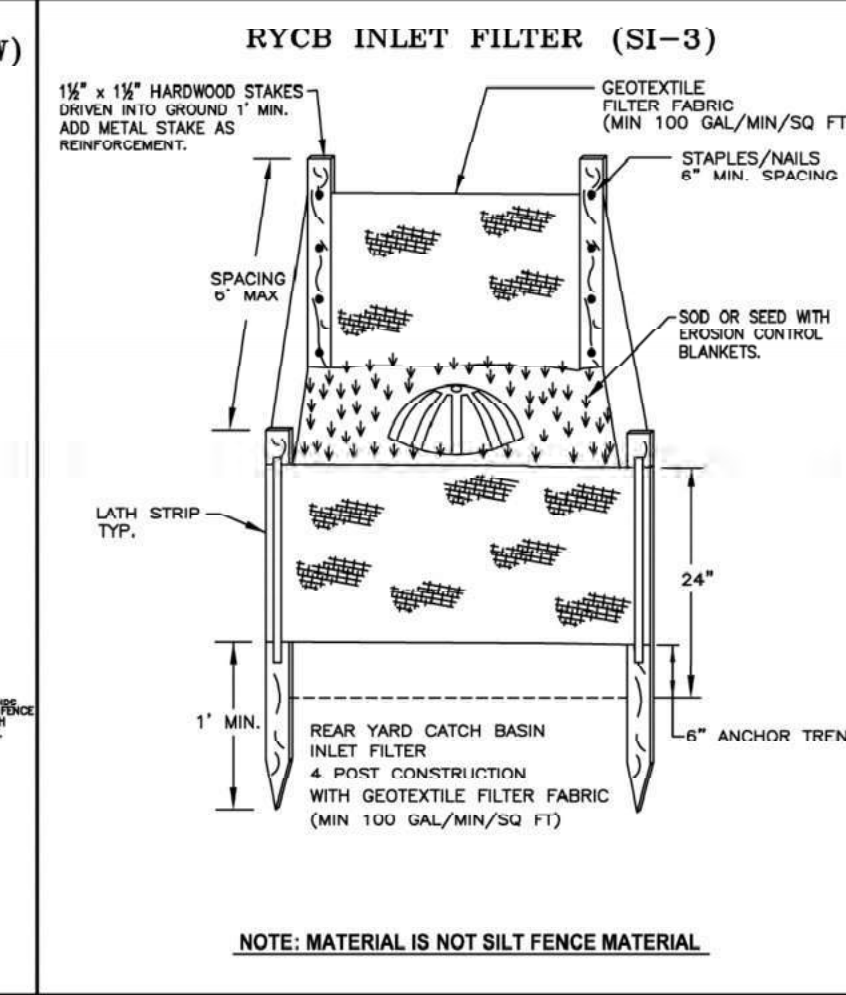
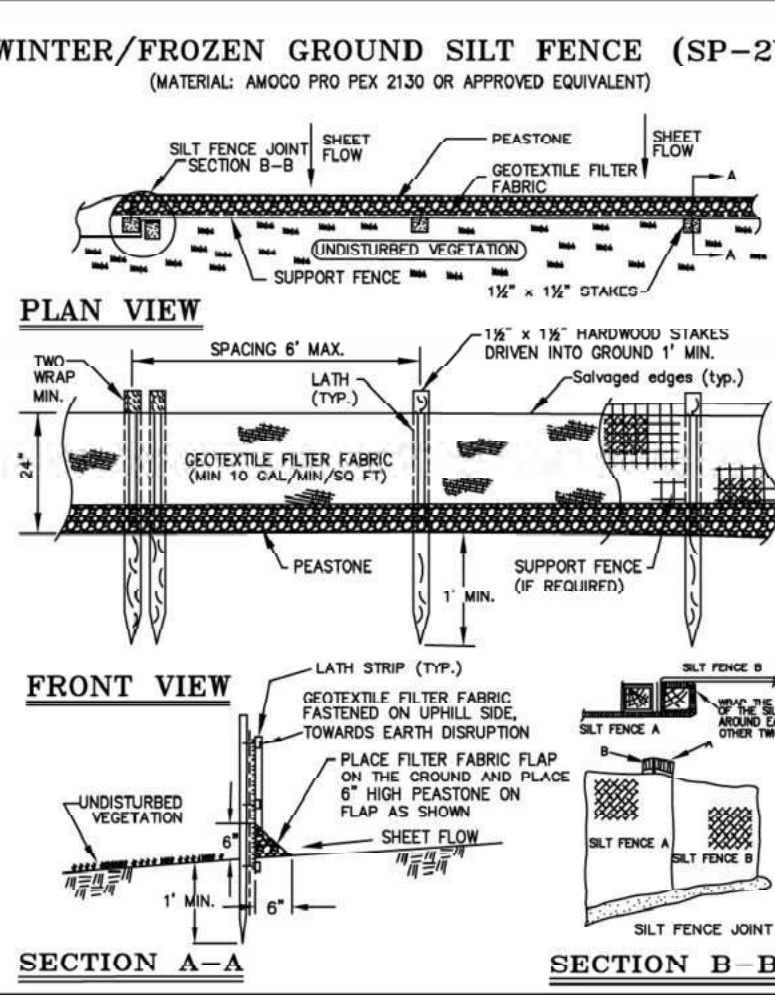
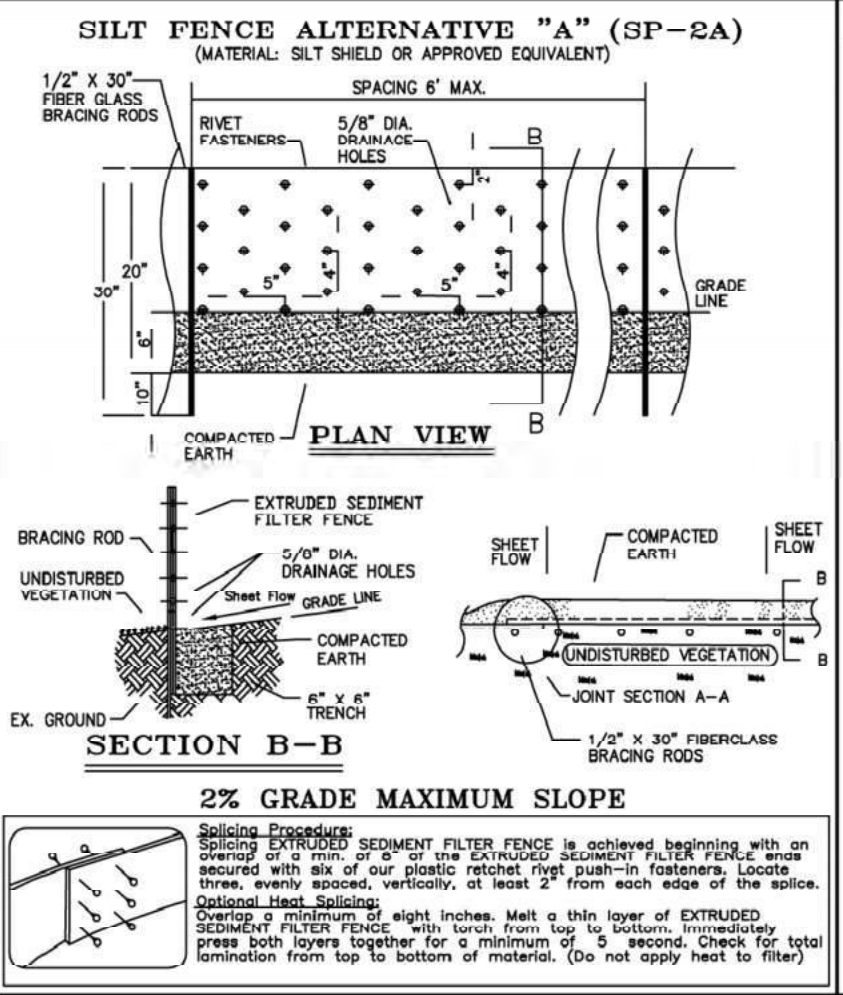
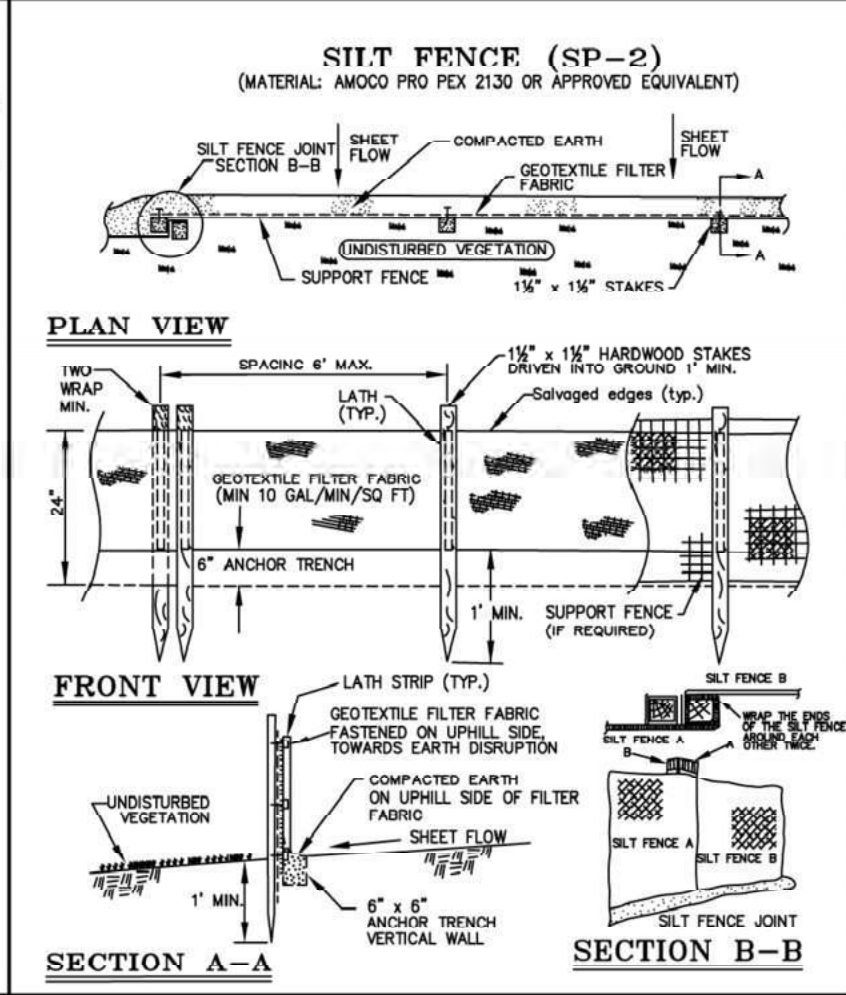
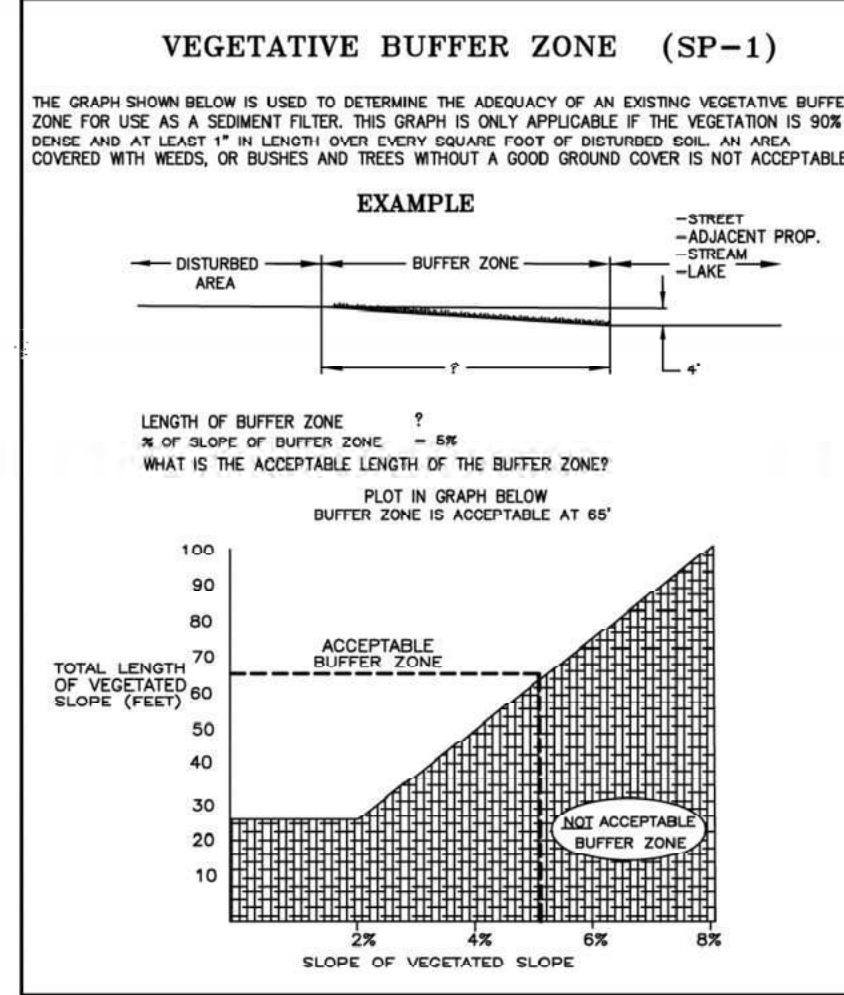
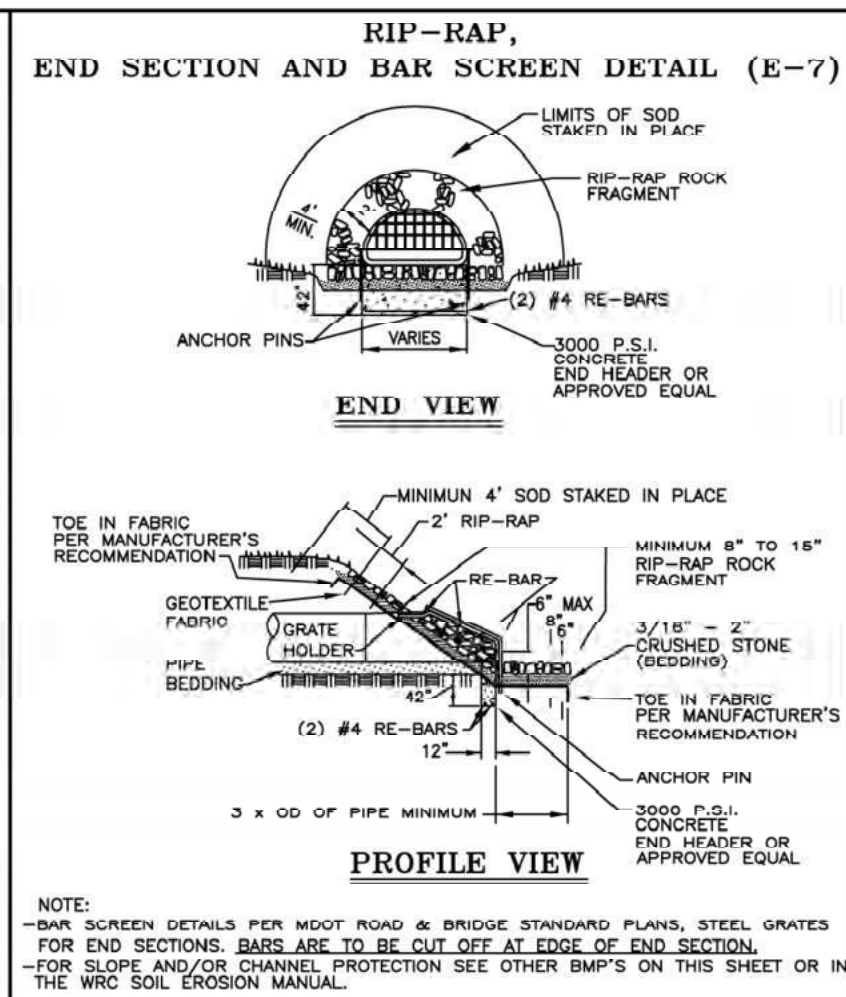
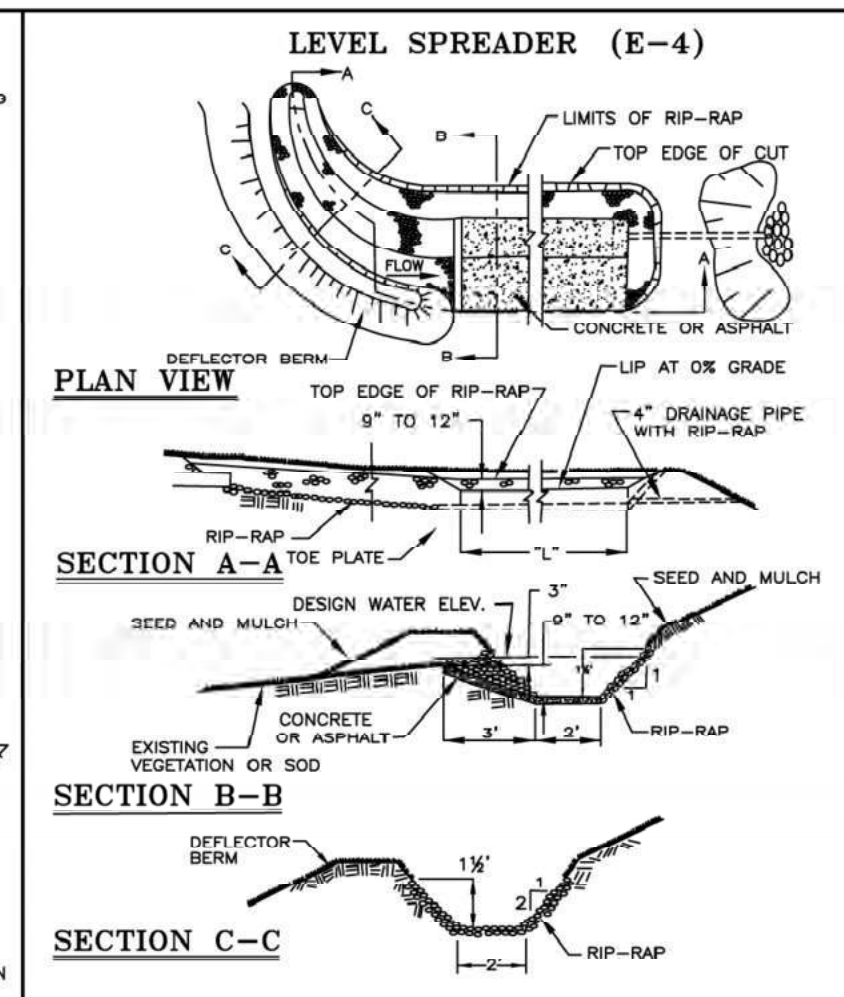
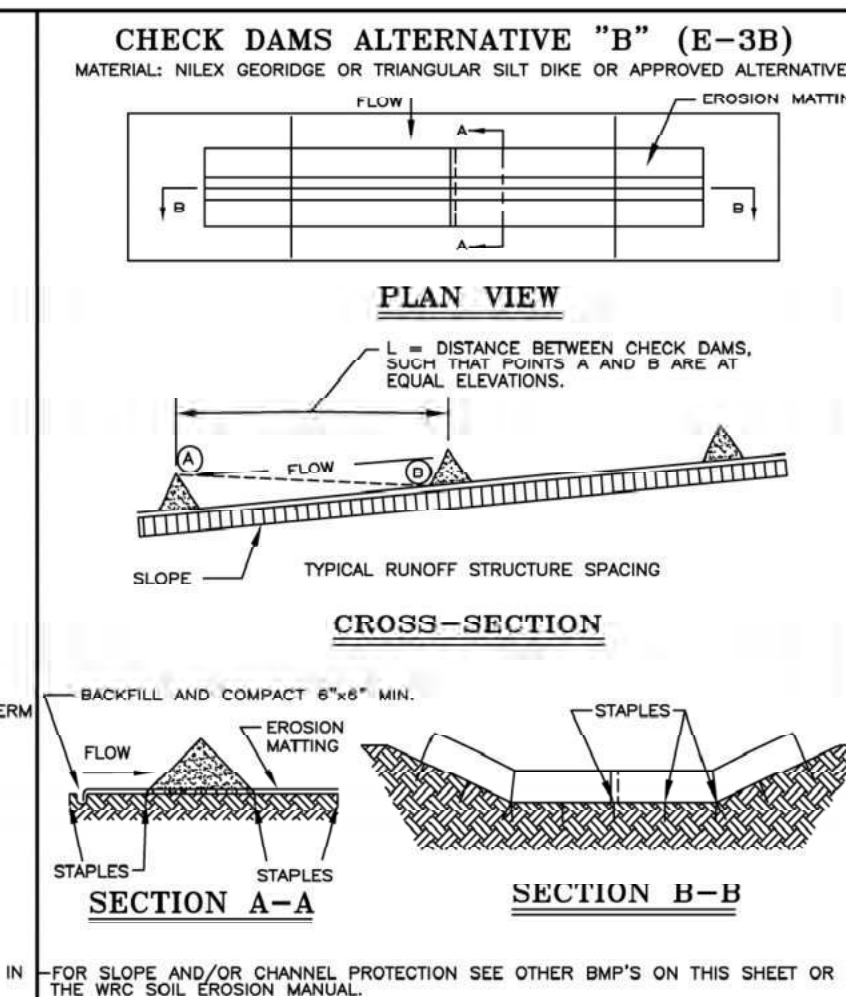
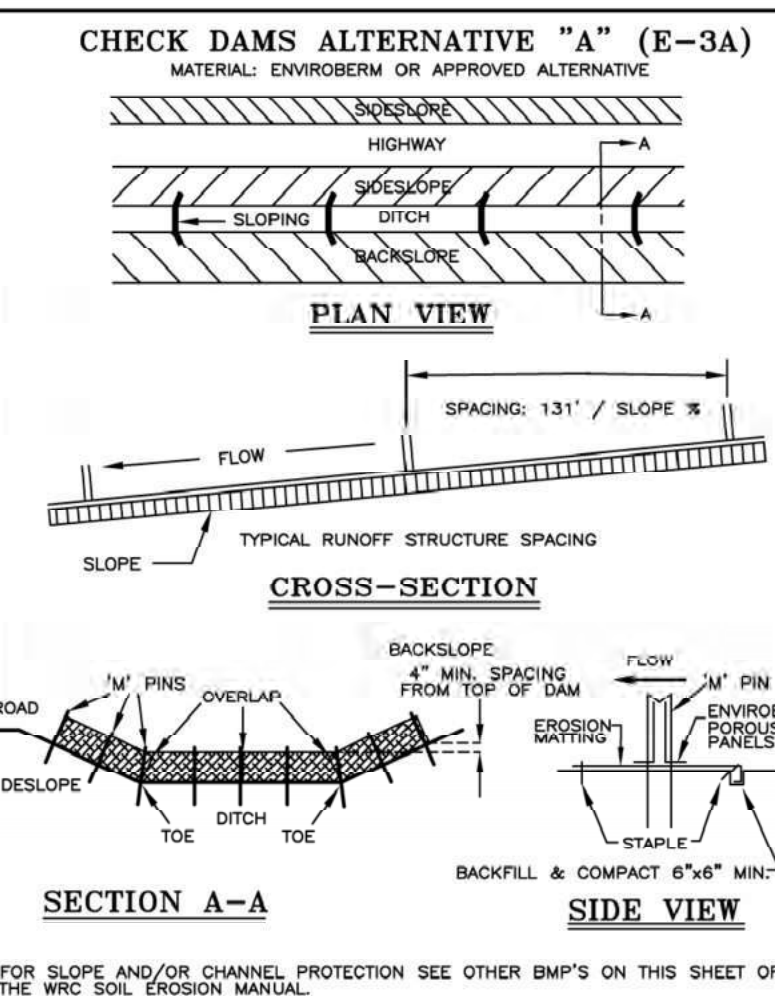
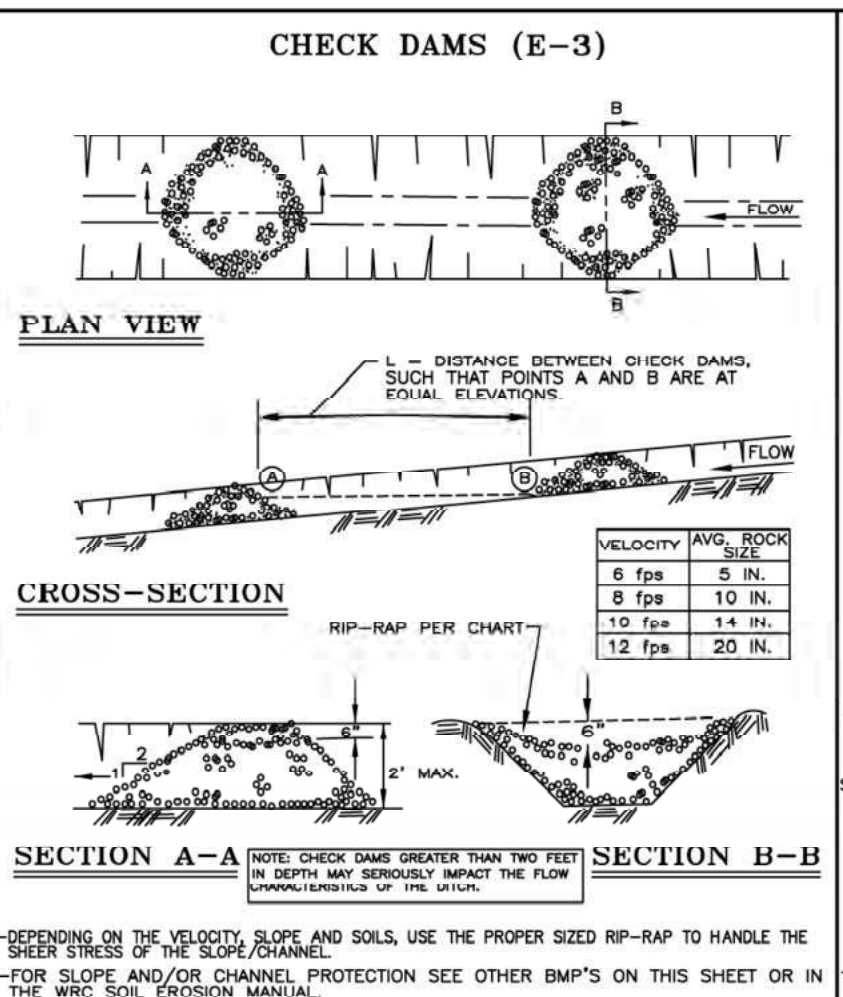
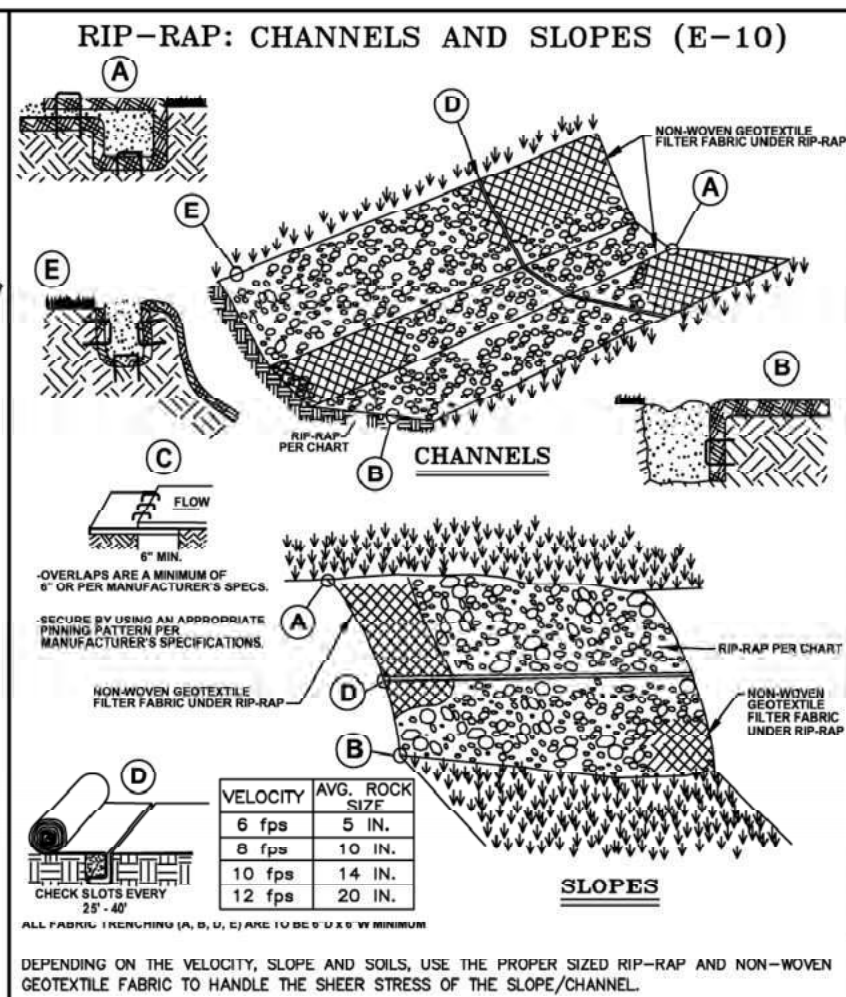
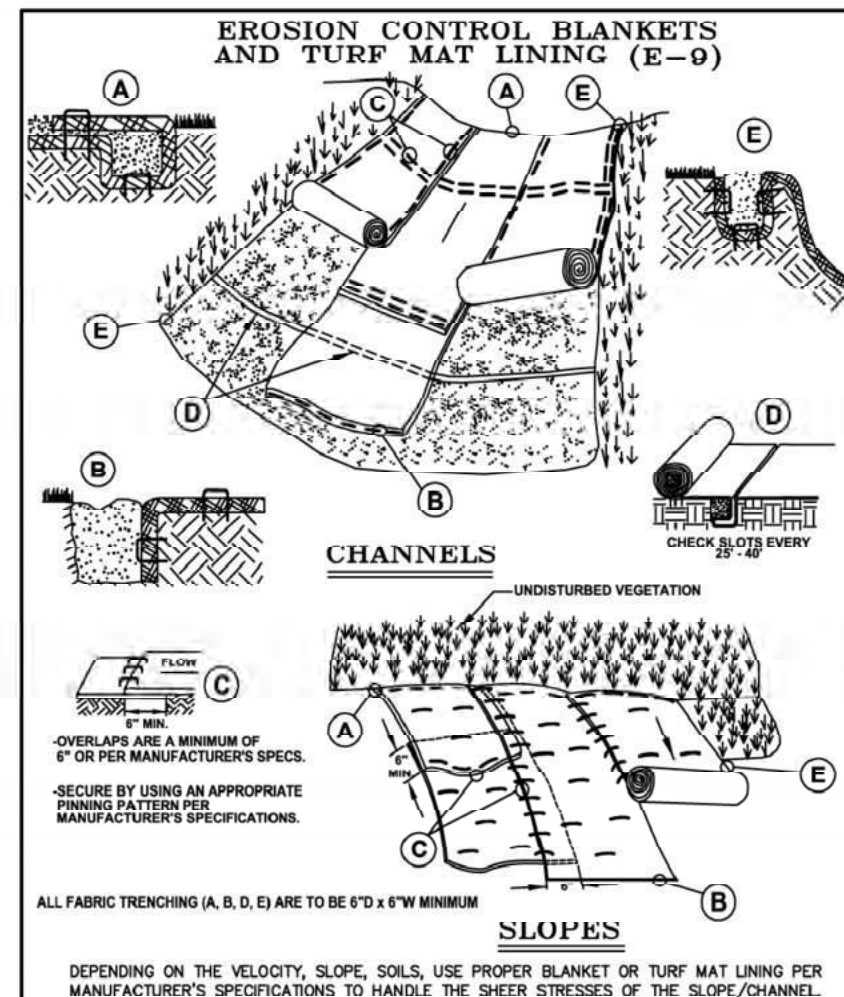


BEBOSS
Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 800.246.6735 FAX 517.548.1670

TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
 37000 GRAND RIVER AVENUE, SUITE 360
 FARMINGTON HILLS, MI 48335
 (248) 476-3700

NO.	BY	DATE	REVISION
1	ST	03/06/15	PER P.C. & CITY REVIEW
2	ST	05/10/15	PER CITY REVIEW
3	ST	09/08/15	PER CHM REVIEW
4	RD	09/08/15	PER CHM REVIEW

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY: ST
 SCALE: 1" = 50'
 JOB NO. 14-131
 DATE: 1/9/15
 SHEET NO. **C12**



NOTE:

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPs), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMP'S SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

NO.	REVISION	DATE

ORG. DATE: 01/01/11
SCALE: NONE
DESIGNED BY: WRC
DRAWN BY: Mapping

ONE PUBLIC WORKS DRIVE, BLDG. 80 WEST WARREN, MICHIGAN 48306-1907
SHEET NO. 1 of 1

BEBOSS Engineering
Engineers Surveyors Planners Landscape Architects

3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

STATE OF MICHIGAN
BRENT A. BOSS
No. 38211
PROFESSIONAL ENGINEER

TILE SHOP RENOVATION

GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

OAKLAND COUNTY SESC DETAILS

PROJECT: _____ PREPARED FOR: _____

NO. BY: _____ DATE: _____

REVISION PER: _____

DESIGNED BY: _____
CHECKED BY: _____

SCALE: NTS
JOB NO. 14-131

DATE: 1/9/15
SHEET NO. _____

BOSS Engineering

C13



MDOT CONSTRUCTION NOTES:

1. ALL EXISTING PERMANENT MDOT SIGNS DAMAGED OR LOST BY THE CONTRACTOR MUST BE REPLACED IN KIND ON NEW SUPPORTS AT THE CONTRACTOR'S EXPENSE.
2. TEMPORARY WARNING, REGULATORY, AND GUIDE SIGNS NOT REQUIRED FOR A PARTICULAR LANE OR SHOULDER CLOSURE MUST BE REMOVED, COVERED OR LAID DOWN WITH THE LEGS REMOVED.
3. DURING THE SHOULDER CLOSURES ACCESS FOR EMERGENCY VEHICLES (FIRE, AMBULANCE, POLICE) MUST BE MAINTAINED TO ADJACENT HOMES, BUSINESSES AND SUBDIVISIONS AT ALL TIMES. IN ADDITION, ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVES SHALL BE MAINTAINED AT ALL TIMES.
4. ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE MUST CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION.
5. ACCESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVES MUST BE MAINTAINED AT ALL TIMES.
6. ALL SIGN MATERIALS AND SUPPORTS MUST MEET INCRP-350 CRASH WORTHY REQUIREMENTS.

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. APPROVED BY THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

BEFORE ANY WORK BEGINS
CALL MISS DIG
1-800-482-7171
MISS DIG

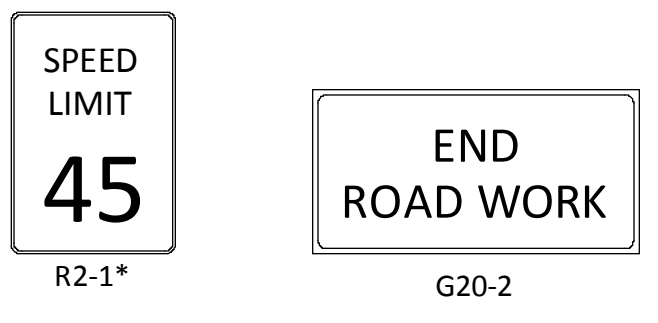
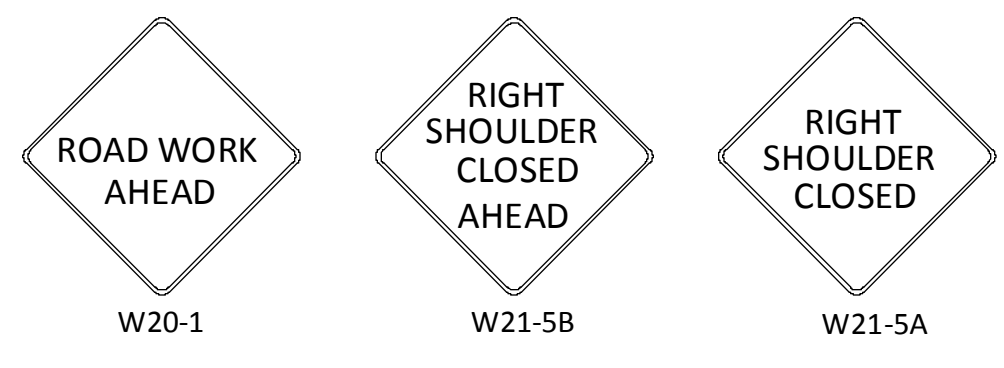
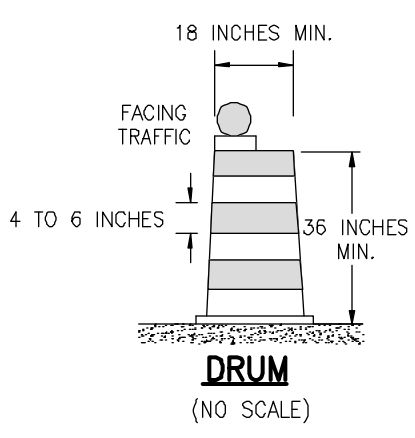


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HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

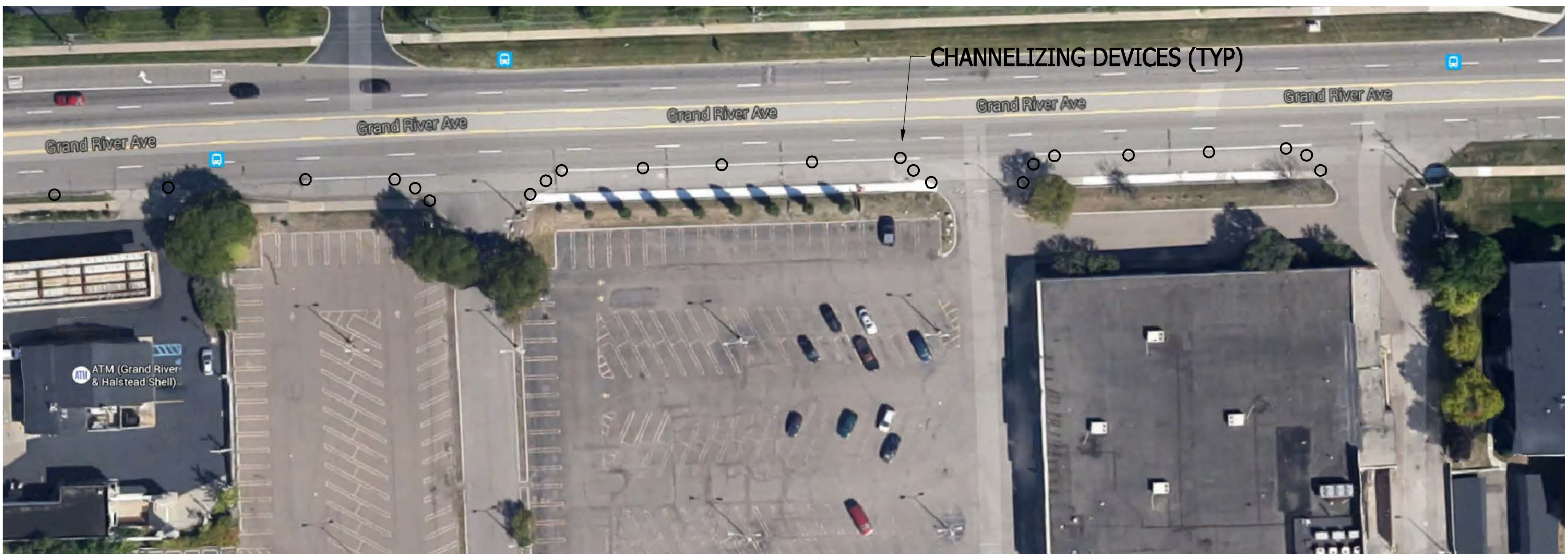
TRAFFIC NARRATIVE:

THE RIGHT SHOULDER/ TAPER FOR THE ENTRANCE INTO THE TILE SHOP WILL BE CLOSED OFF WITH BARRELS AND NO LANE CLOSURE WILL BE NEEDED ON GRAND RIVER. WORK WITHIN THE CLOSURE WILL INCLUDE THE DEMOLITION AND CONSTRUCTION OF TWO DRIVE APPROACHES. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH M.D.O.T STANDARDS.



SIGNS THIS SHEET BY CONTRACTOR		
ITEM	UNIT	QTY
Sign, Type B, Temp, Prismatic, Furn	SF	88
Sign, Type B, Temp, Prismatic, Oper	SF	88

MATERIAL REQUIRED	SFT
1 - W20-1	16
1 - W21-5B	16
1 - W21-5A	16
1 - R2-1* (SPEED LIMIT 45)	20
1 - G20-2	20



TILE SHOP RENOVATION
GRAND RIVER PROJECT, LLC
37000 GRAND RIVER AVENUE, SUITE 360
FARMINGTON HILLS, MI 48335
(248) 476-3700

NO.	BY	REVISION	PER	DATE

DESIGNED BY: RD
DRAWN BY: RD
CHECKED BY:
SCALE: NTS
JOB NO. 14-131
DATE: 9/8/15
SHEET NO.

C14
BOSS
Engineering

**Farmington City Council
Staff Report**

Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2043)**

Submitted by: Kevin Christiansen, Economic Community Development Director

Description: Riverwalk of Farmington PUD Amendment

Requested Action:

Approve

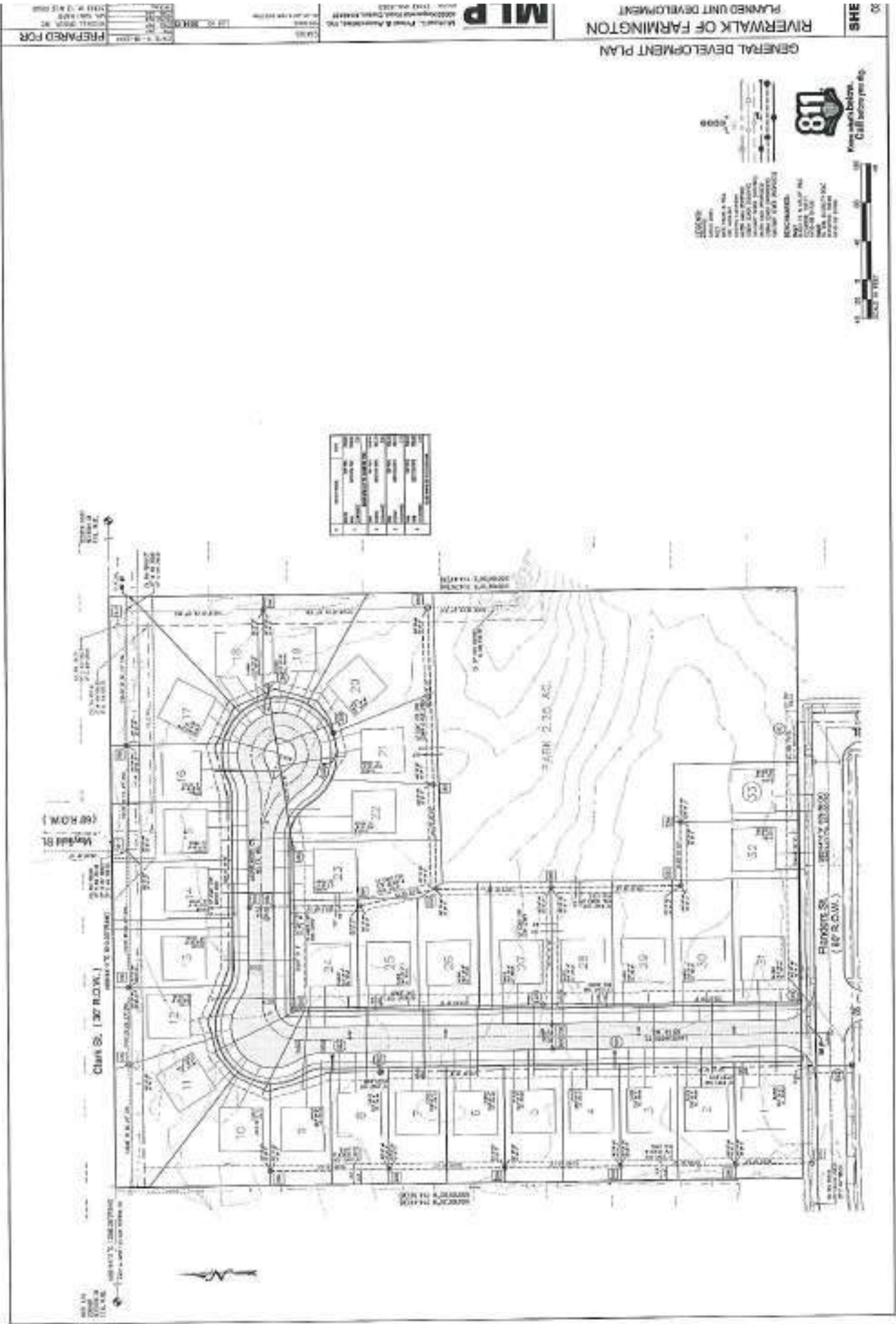
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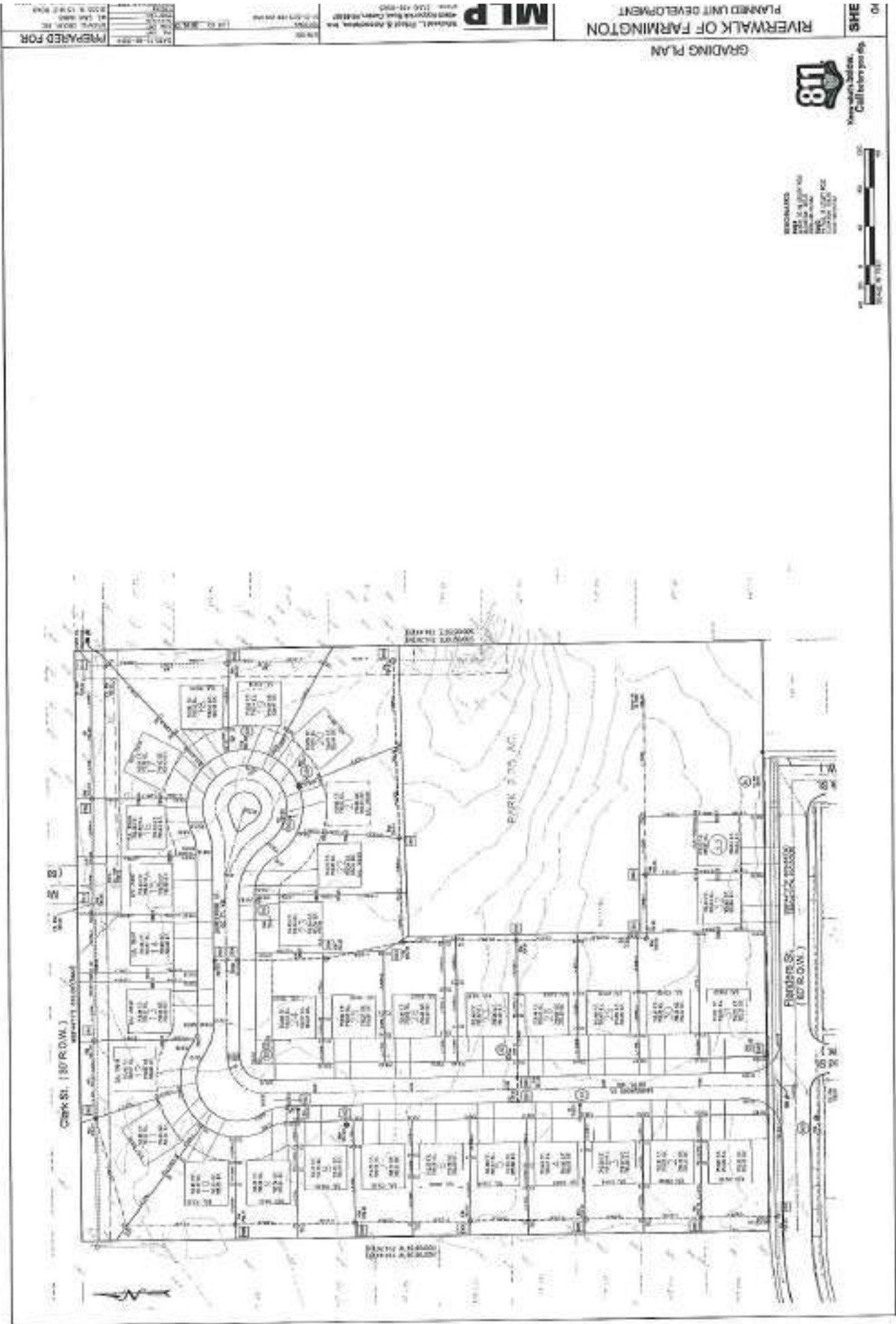
This item is review and consideration to amend the Riverwalk of Farmington PUD in order to modify/reduce the approved front yard setback for Lot 9. The approved final site plan and proposed modified plot plan for Lot 9 are attached for your review and consideration.

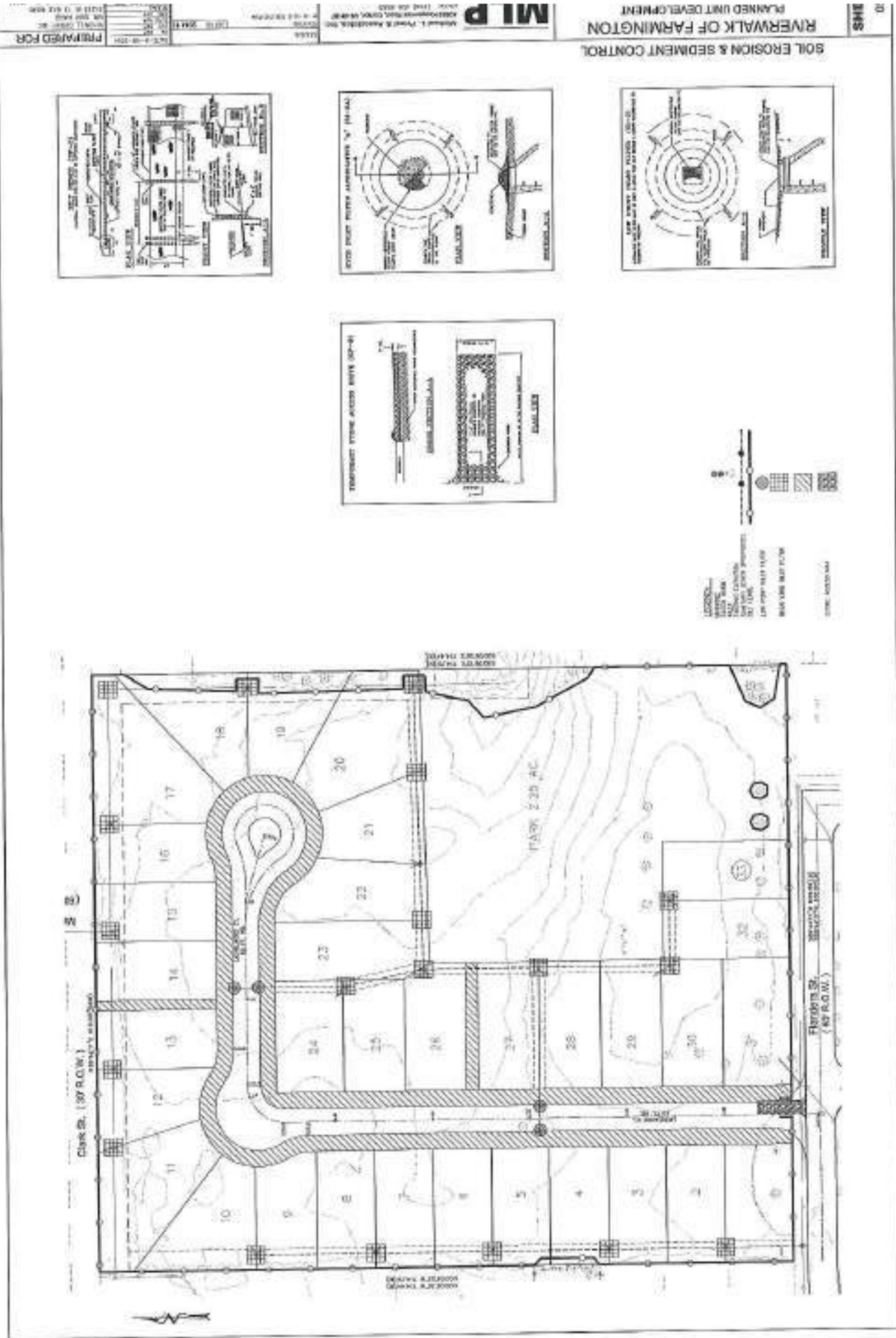
Agenda Review

Review:

Kevin Christiansen Pending
City Manager Pending
City Council Pending 11/02/2015 6:00 PM







DATE: 08/11/11

SOIL EROSION & SEDIMENT CONTROL
PLANNED UNIT DEVELOPMENT
RIVERWALK OF FARMINGTON

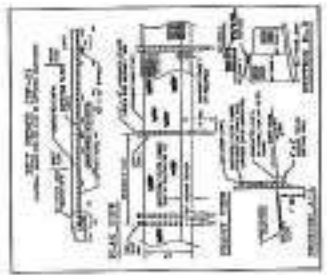
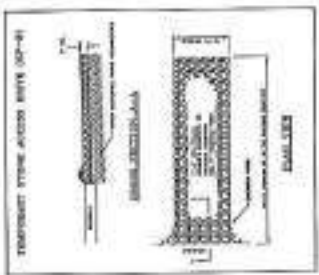
MIP

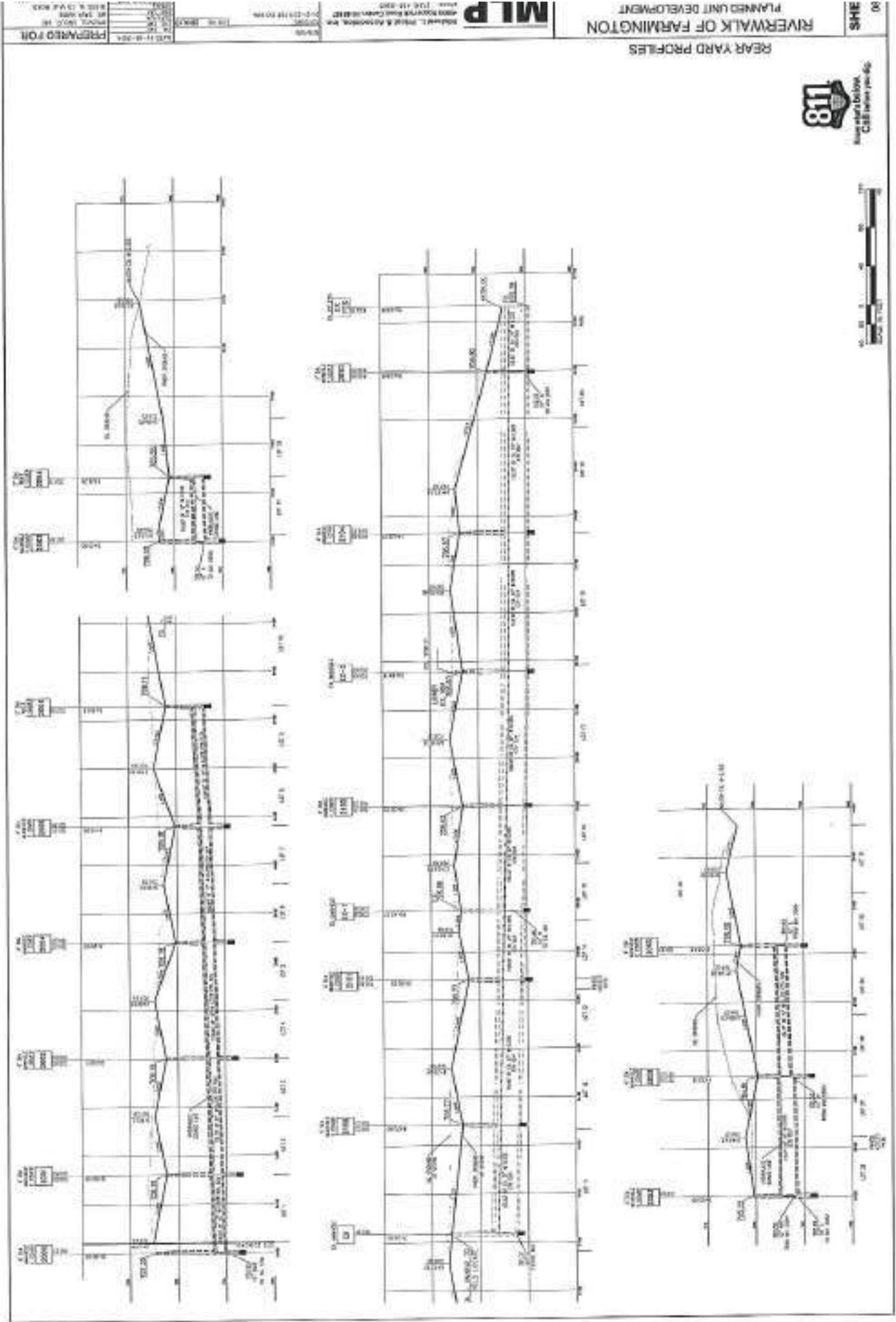
PREPARED FOR
DATE: 08/11/11

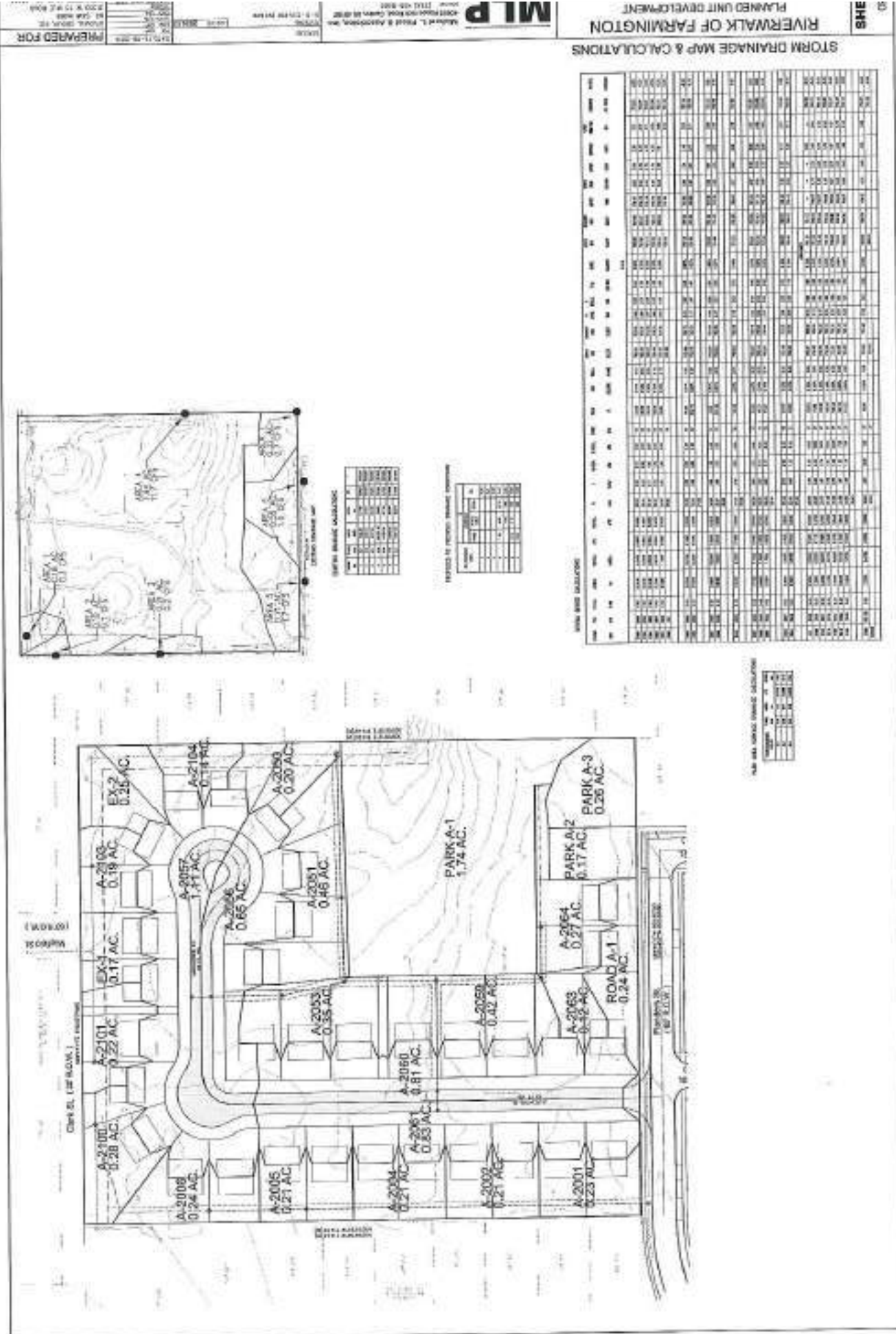
LEGEND

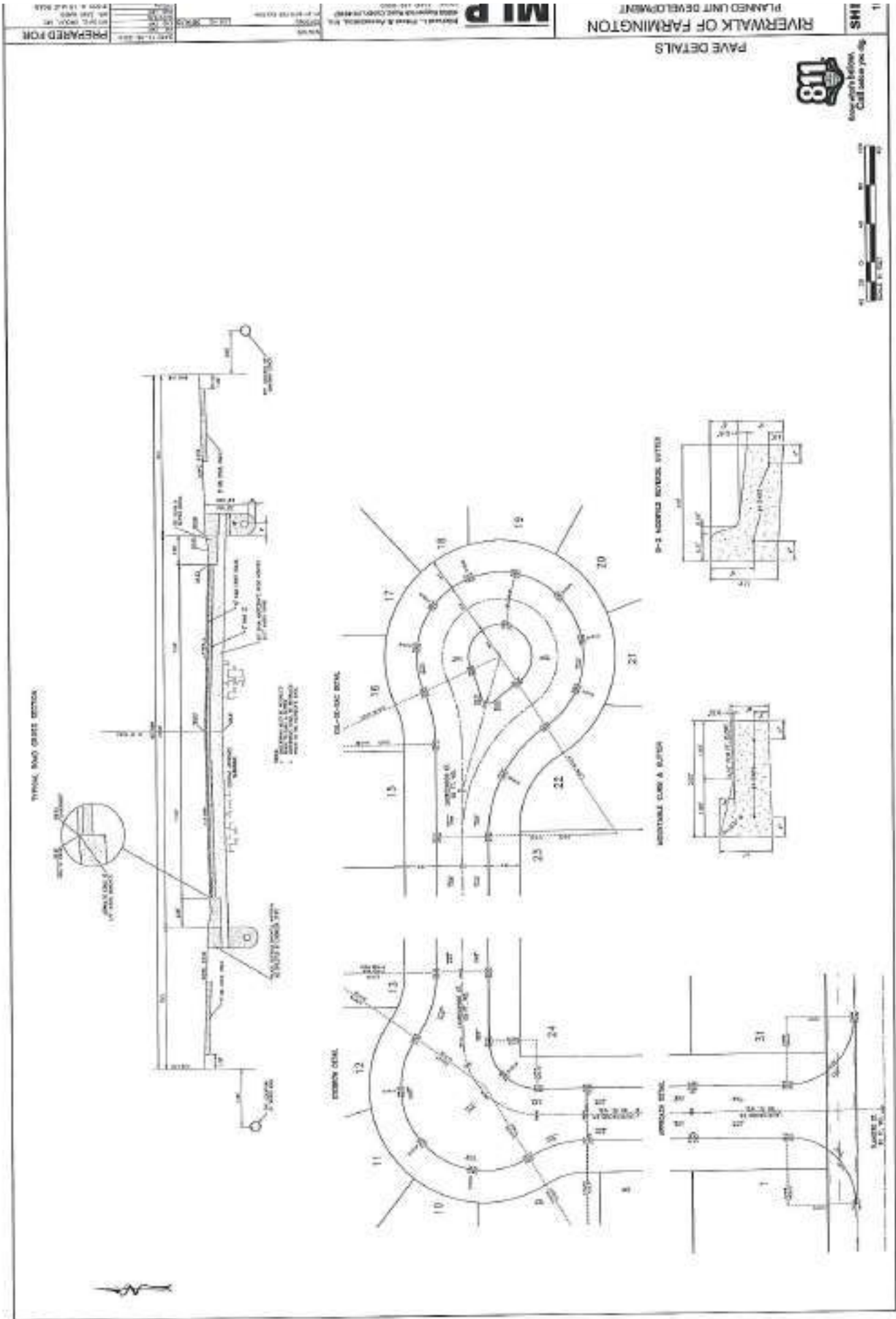
- EXISTING CONCRETE
- NEW CONCRETE
- EXISTING ASPHALT
- NEW ASPHALT
- EXISTING GRAVEL
- NEW GRAVEL
- EXISTING CURB
- NEW CURB
- EXISTING SIDEWALK
- NEW SIDEWALK
- EXISTING DRIVEWAY
- NEW DRIVEWAY
- EXISTING DRIVE
- NEW DRIVE
- EXISTING ROAD
- NEW ROAD
- EXISTING SIDEWALK
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- NEW ROAD

DATE: 08/11/11

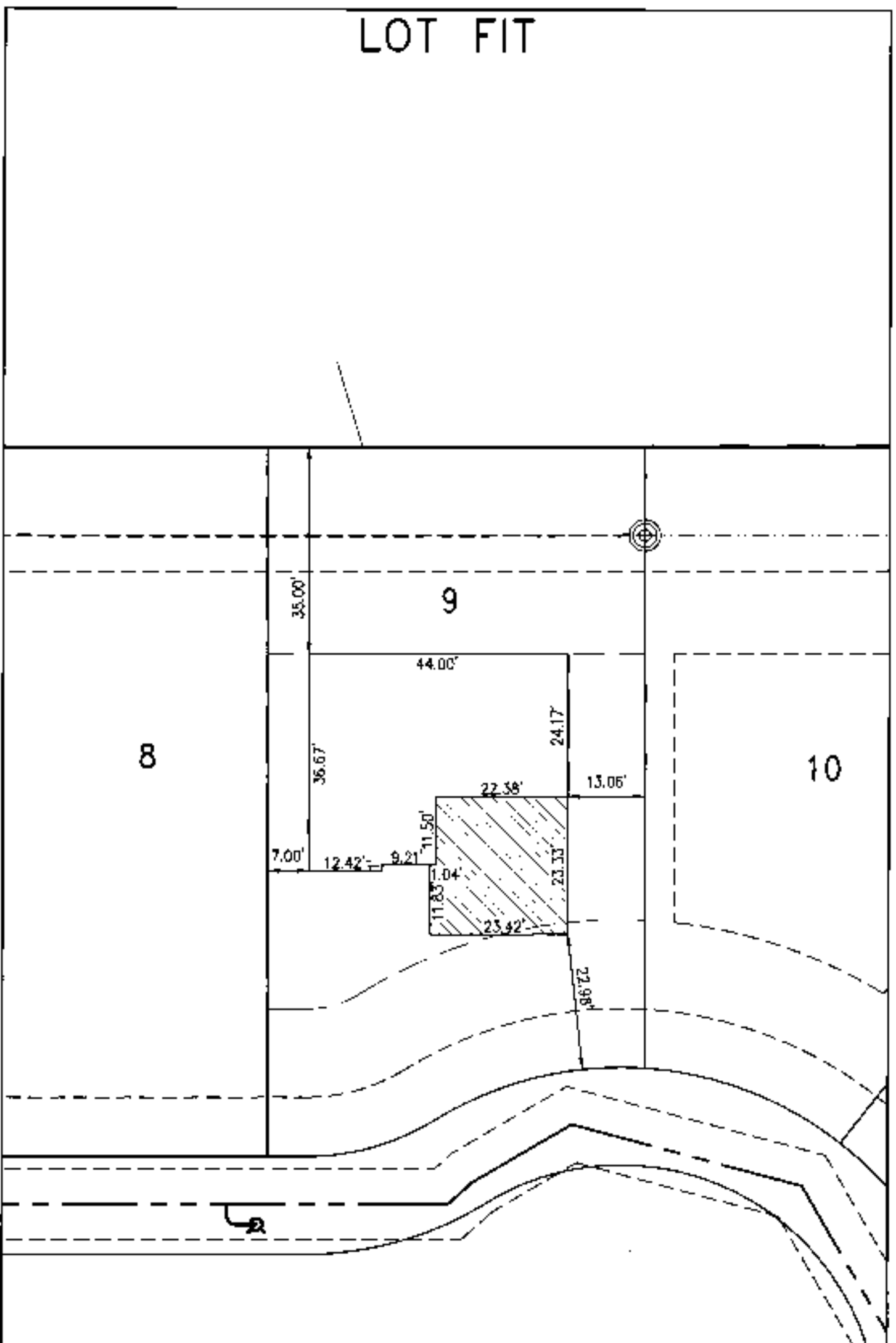








LOT FIT



P.P. DATE: 10-14-15

SCALE:

1" = 20'

SURVEY NO.:

2014.13

ADB

LODB

**Farmington City Council
Staff Report****Council Meeting Date:**
November 2, 2015**Reference
Number
(ID # 2044)****Submitted by:** Kevin Christiansen, Economic Community Development Director**Description:** Economic and Community Development Project Status Update**Requested Action:****Background:****Agenda Review****Review:**

Kevin Christiansen Pending

City Manager Pending

City Council Pending 11/02/2015 6:00 PM

**ECONOMIC AND COMMUNITY DEVELOPMENT
STATUS MEETING
OCTOBER 30, 2015**

PROJECT

1. Grand River/Halsted Plaza
 - a. Tile Shop
 - i. Construction plans **APPROVED**
 - ii. Permits **ISSUED FOR THE TILE SHOP BUILDING ONLY**
 - iii. Fees **DETERMINED**
 - b. PUD Agreement
 - i. Screening/retaining wall **REVISED PLANS RECEIVED 9/14/15**
 - ii. Waiting on OHM review and response **NEW REVIEW**
 - c. Digital Terrain
 - i. Construction plans **CONDITIONALLY APPROVED; WAITING ON OHM**
 - ii. Permits **TO BE DETERMINED**
 - iii. Fees **TO BE DETERMINED**

2. Shell Gas Station
 - a. District Court resolution on outstanding tickets **DONE/PAID**
 - b. Redevelopment/site plan **SLU/SP REVIEW BY PC 9/14/15**
 - c. Construction plans **IN PROGRESS**
 - d. Fees **DETERMINED**

3. Chatham Hills Apartments
 - a. Construction plans **WAITING**
 - b. Permits **WAITING**
 - c. Fees **WAITING**

4. Drakehire Plaza
 - a. New tenants/current status of potential businesses **NEW BROKER-DAN BLUGERMAN**
 - b. Status of SAD **ON-GOING**

5. Worldwide Center
 - a. Status of approved site plan **EXPIRED**
 - b. Code enforcement/site maintenance **ON-GOING**

6. Panera Bread
 - a. Drive thru? **NOTHING TO DATE**

7. White Pine Rehabilitation
 - a. Revised landscaping **INSTALLED**
 - b. Signage **WAITING ON PLANS**

8. Christian Science Reading Room
 - a. Property status **ON-GOING DISCUSSION**

9. Mansell Engineering Building
a. Property status **NEW OWNER; CURRENTLY REHABING SITE AND BUILDING**
10. Flanders/Riverwalk II
a. Model home site plans – Lots 32 and 33 **ON-GOING**
b. Master Deed and Bylaws/parcel identification numbers **DONE**
c. Permit fees **DONE**
d. Park status? **REVIEW WITH STAFF**
11. Dunkin Donuts
a. Construction plans **APPROVED; ON-GOING**
b. Permits **ISSUED; RE-BUILD/CONSTRUCTION**
c. Fees **PAID**
12. 9 Mile/Farmington Gas Station
a. Property status **REVIEWED WITH ATTORNEY; SENDING LETTER**
13. 8 Mile Industrial Building Addition
a. Site plan amendment **NO PROJECT; PARKING LOT DRAINAGE ISSUE**
14. Total Sports
a. Landscaping **MET ON SITE 9/10/15; CONTINUING/FINISHING WORK**
b. Dumpster enclosure **SAME AS ABOVE**
15. Orchards Phase II
a. Site plan review **PRELIMINARY PUD SITE PLAN APPROVED BY PC 9/14/15 AND BY CITY COUNCIL 9/21/15; FINAL PUD SITE PLAN APPROVAL BY PC SCHEDULED 11/9/15**
16. Fresh Thyme
a. Construction plans **APPROVED; ON-GOING CONSTRUCTION**
b. Permits **ISSUED**
c. Fees **PAID**
d. Final legal description **REVISED; OHM FINALIZING**
17. Groves Retail Center
a. Site sign **FINAL SIGN PLACARDS; LANDSCAPING; LIGHTING**
b. Awnings **NOT DONE!**
c. Rear catch basin **ADDRESSED; RESOLVED**
d. Façade finish on west side **NO PLANS SUBMITTED**
e. Great Lakes Ace? **WAITING FOR FINAL PLANS/DIRECTIONS**
18. Maxfield Training Center
a. Site redevelopment **WORKING ON RFP WITH FPS; HAVE DRAFT PA**
19. Exxon
a. Project completion **NO/LIMITED PROGRESS; TICKET ISSUED; FORMAL HEARING PENDING; ON-GOING CONSTRUCTION**

- 20. Dolphin Center
 - a. Construction plans **REVISED SITE PLAN APPROVED BY PC 9/14/15; CONSTRUCTION IN PROGRESS**
 - b. Permits **ISSUED**
 - c. Fees **PAID**

- 21. Farmington Plaza
 - a. Status of Complaint **WITHDRAWN**
 - b. New businesses **ON-GOING ITEMS (SIGNAGE/NEW OCCUPANTS)**

- 22. Courthouse Property
 - a. New purchase agreement/site plan **2 NEW PAs TO REVIEW/CONSIDER**

PLANS

- 1. Downtown Area Plan
 - a. Revisions/adoption **COMPLETE; ACCEPTED; NEED FINAL REVISIONS**

- 2. Ten Mile/Orchard Lake Plan
 - a. Adoption/acceptance **PC REVIEWED/ACCEPTED 10/12/15 AND NEEDS CITY COUNCIL REVIEW/ACCEPTANCE**

- 3. Parks & Recreation Master Plan
 - a. New RFP **LSL PROPOSAL APPROVED; ON-GOING**

- 4. DDA Master Plan
 - a. New RFP **ANNETTE COORDINATING WITH DDA**

- 5. Grand River Corridor Improvement Authority Plan
 - a. Revisions \
 - b. Cover page \
 - c. Executive Summary **ON-GOING WITH LSL AND OHM**
 - d. Legal description /
 - e. Parcel identification numbers /

ORDINANCE TEXT AMENDMENTS

- 1. Outdoor Seating **APPROVED BY CITY COUNCIL 9/21/15**

- 2. Single-Family Residential
 - a. Lot coverage \
 - b. Building height **APPROVED BY CITY COUNCIL 9/21/15**
 - c. Setbacks /

- 3. Muskegon Business Occupancy Ordinance? **NOTHING FURTHER TO DATE**

- 4. Grand River Overlay District
 - a. Second reading

APPROVED BY CITY COUNCIL 8/24/15

MISCELLANEOUS

- 1. Revise Fee Schedule
 - a. Coordinate with other chapters

ON-GOING

- 2. Outstanding Invoices
 - a. OHM
 - i. Flanders/Riverwalk II
 - ii. Farmington Plaza

**COMPLETE
COMPLETE**

- 3. MEDC
 - a. Redevelopment Ready Certification
 - i. Capital Improvement Plan
 - ii. Customer Service Policy
 - iii. Flowchart

**ON-GOING \
DONE FINAL REPORT CITY COUNCIL
DONE / REVIEW 10/19/15**

- 4. OHM Engineering Design Standards

SUBMITTED; NEED TO REVIEW

- 5. Complete Streets
 - a. Status?

NEED TO REVIEW; ON HOLD

- 6. Grand River Scoping
 - a. MDOT coordination
 - b. Pilot/test project

**FINAL REPORT ISSUED
COMPLETED 9/29/15; ON-GOING IMPLEMENTATION**

- 7. Parking Advisory Committee
 - a. 30/60/90 day plans

ON-GOING

- 8. Parking Lot Conditions

OHM REVIEWING; ON-GOING

- 9. Water and Sewer Tap-In/User Fees

COMPLETE; DONE ON CASE-BY-CASE BASIS

**Farmington City Council
Staff Report**
Council Meeting Date:
November 2, 2015

**Reference
Number
(ID # 2047)**
Submitted by: Kevin Christiansen, Economic Community Development Director

Description: Recreation Master Plan Committee Appointments

Requested Action:

Appoint

Background:

At the September 21st Special Meeting, the City Council agreed to move forward with the Farmington Parks and Recreation Master Plan update. Administration is now in the process of putting together a committee to spearhead this process. Three members of this five-member committee have been appointed: Jeff Scott (City Council), Paul Buyers (Planning Commission), and Agnes (Micki) Skrzycki (DDA). City Administration recommends the remaining two members be residents. Applications of interested persons will be handed out to the Council at the meeting.

Agenda Review
Review:

Kevin Christiansen	Pending
City Manager	Pending
City Council Pending	11/02/2015 6:00 PM