

# PRELIMINARY SITE PLANS

# 3420 ROCHESTER ROAD

## 3420 ROCHESTER ROAD

### ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL

**GENERAL NOTES:**

FOR ALL CONDITIONAL USES, A "CONDITIONAL USE PROPOSED SIGN" SHALL BE PLACED ON-SITE NO LESS THAN FIFTEEN (15) DAYS PRIOR TO THE PUBLIC HEARING DATE. SUCH SIGN SHALL BE IN COMPLIANCE WITH SECTION 138-1.203 OF CITY ORDINANCES.

**MAINTENANCE:**  
THE OWNER, TENANT, OCCUPANT OR PERSON RESPONSIBLE FOR ANY PROPERTY WHICH WAS THE SUBJECT OF AN APPROVED SITE PLAN SHALL MAINTAIN THE PROPERTY AND THE IMPROVEMENTS THEREON IN ACCORDANCE WITH THE APPROVED SITE PLAN OR AN APPROVED AMENDMENT THEREOF. THIS RESPONSIBILITY SHALL INCLUDE THE DUTY TO MAINTAIN IN A CONDITION SUBSTANTIALLY SIMILAR AS APPROVED, INCLUDING THE DUTY TO REPLACE, IF NECESSARY, ALL IMPROVEMENTS SUCH AS, BUT NOT BY WAY OF LIMITATION, ALL GREENBELTS, PLANTING WALLS, FENCES, PAVING, TRASH RECEPTACLES, DISABLED PARKING AREAS, ETC.

Maintenance. The owner, tenant, occupant or person responsible for any property which was the subject of an approved site plan shall maintain the property and the improvements thereon in accordance with the approved site plan or an approved amendment thereof. This responsibility shall include the duty to maintain in a condition substantially similar as approved, including the duty to replace, if necessary, all improvements such as, but not by way of limitation, all greenbelts, planting, walls, fences, paving, trash receptacles, handicapped parking areas, etc.

**JNRNB2022-0009**  
**PSP2022-0020**  
**Revision #5**  
**Received 2/4/25**

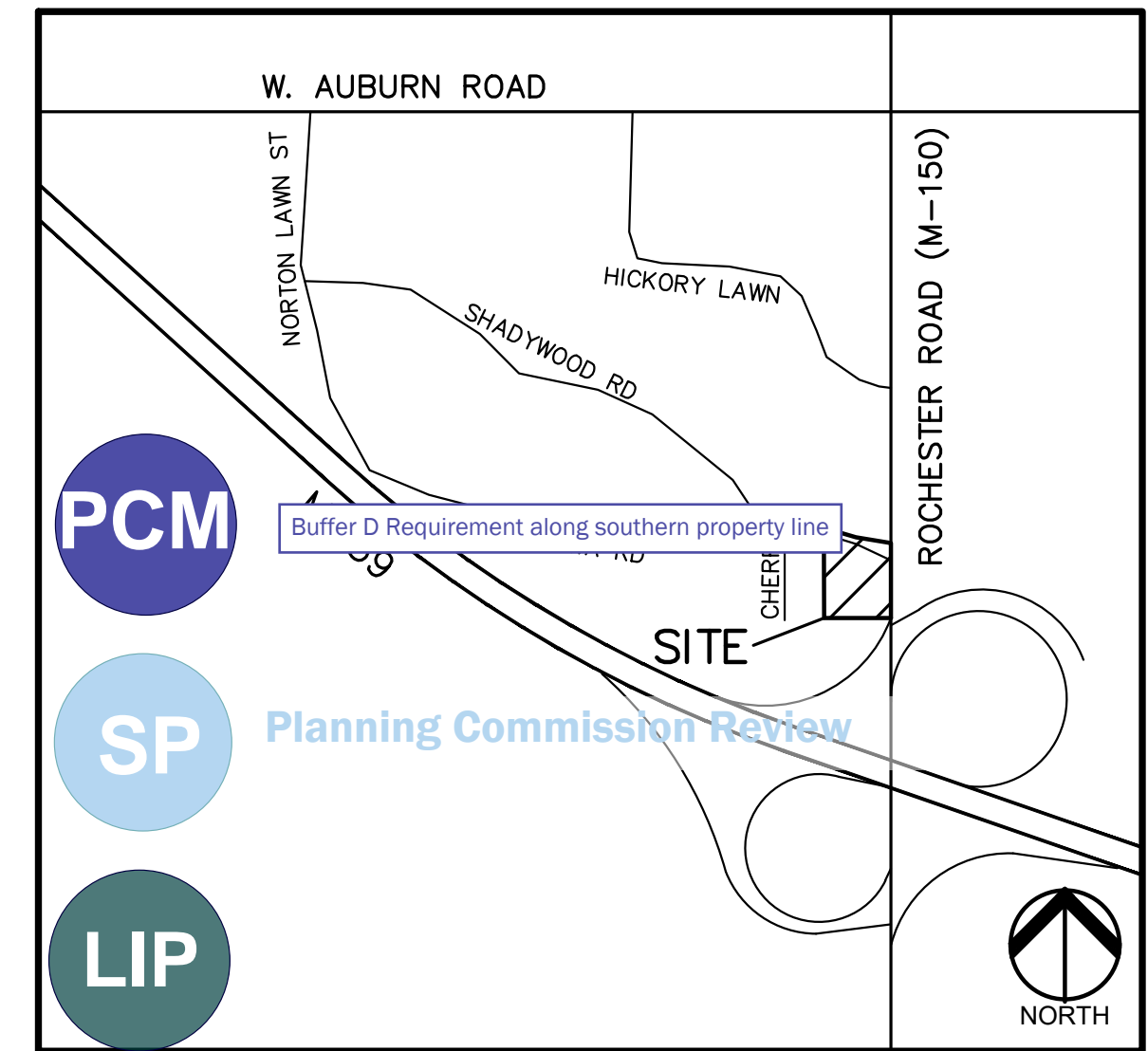
**City of Rochester Hills Planning & Economic Development**

**Site Plan Review**

Reviewed for compliance with City Ordinance, Building and Fire Codes  
Conditions and mark-ups noted throughout plan set must be addressed prior to final approval

Department	Reviewer	Approved
Assessing	Assessing	Yes
Building	Jason Rhoades 248-841-2435 RhoadesJa@RochesterHills.org	Yes with conditions
Engineering - Utilities	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Engineering Legal	Seth Bucholz 248-841-2491 bucholz@rochesterhills.org	Yes
Fire	Lt. Jon Mills 248-841-2708 MillsJ@RochesterHills.org	Yes
Natural Resources	Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org	Yes
Planning	Chris McLeod 248-841-2572 mcleodc@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	Yes

**Next Steps:** Plans will be forwarded to the next available Planning Commission agenda. ADM



- PCM
- SP Planning Commission Review
- LIP
- TRP Tree Fund = \$4,008
- BP Tree Fund = \$6,012 for modification of Buffer D (if granted)
- CU



DESIGN TEAM	
<b>OWNER/APPLICANT/DEVELOPER</b>	<b>CIVIL ENGINEER</b>
3420 ROCHESTER ROAD, LLC 29200 NORTHWESTERN HWY, SUITE 450 FARMINGTON HILLS, MI 48334 CONTACT: KENNY KOZA PHONE: 248.770.0204 EMAIL: KENNY@AZOKGROUP.COM	PEA GROUP 2430 ROCHESTER COURT, STE. 100 TROY, MI 48063-1872 CONTACT: JAMES P. BUTLER, PE PHONE: 844.813.2949 EMAIL: JBUTLER@PEAGROUP.COM
<b>ARCHITECT</b>	<b>LANDSCAPE ARCHITECT</b>
GAV & ASSOCIATES INC. 24001 ORCHARD LAKE RD #180a FARMINGTON, MI 48336 CONTACT: MEL BEBA PHONE: 248.985.9101 EMAIL: MEL@GAVASSOCIATES.COM	PEA GROUP 7927 MEMCO WAY, STE. 115 BRIGHTON, MI 48116 CONTACT: JANET EVANS, PLA PHONE: 844.813.2949 EMAIL: JEVANS@PEAGROUP.COM

LB Landscape bond = \$94,480

INDEX OF DRAWINGS	
NUMBER	TITLE
	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-3.1	PRELIMINARY SITE PLAN
C-3.2	M.D.O.T. DRIVE-THRU STACKING PLAN
C-3.3	FIRE TRUCK TURNING PLAN
C-4.0	PRELIMINARY GRADING PLAN
C-6.0	PRELIMINARY UTILITY PLAN
C-7.1	STORM SEWER PROFILES
C-7.2	STORM SEWER PROFILES
C-7.3	STORM SEWER PROFILES
C-8.0	DRAINAGE AREA MAP
C-9.1	NOTES AND DETAILS
C-9.2	NOTES AND DETAILS
C-9.3	DETAILS
C-9.4	M.D.O.T. DETAILS
L-1.0	LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PLAN
SP.101	SITE LIGHTING PHOTOMETRIC PLAN
SP.102	SITE LIGHTING CUT SHEET
A.101	FLOOR PLAN
A.102	MEZZ FLOOR PLAN
A.201	EXTERIOR ELEVATIONS
A.202	EXTERIOR RENDERINGS

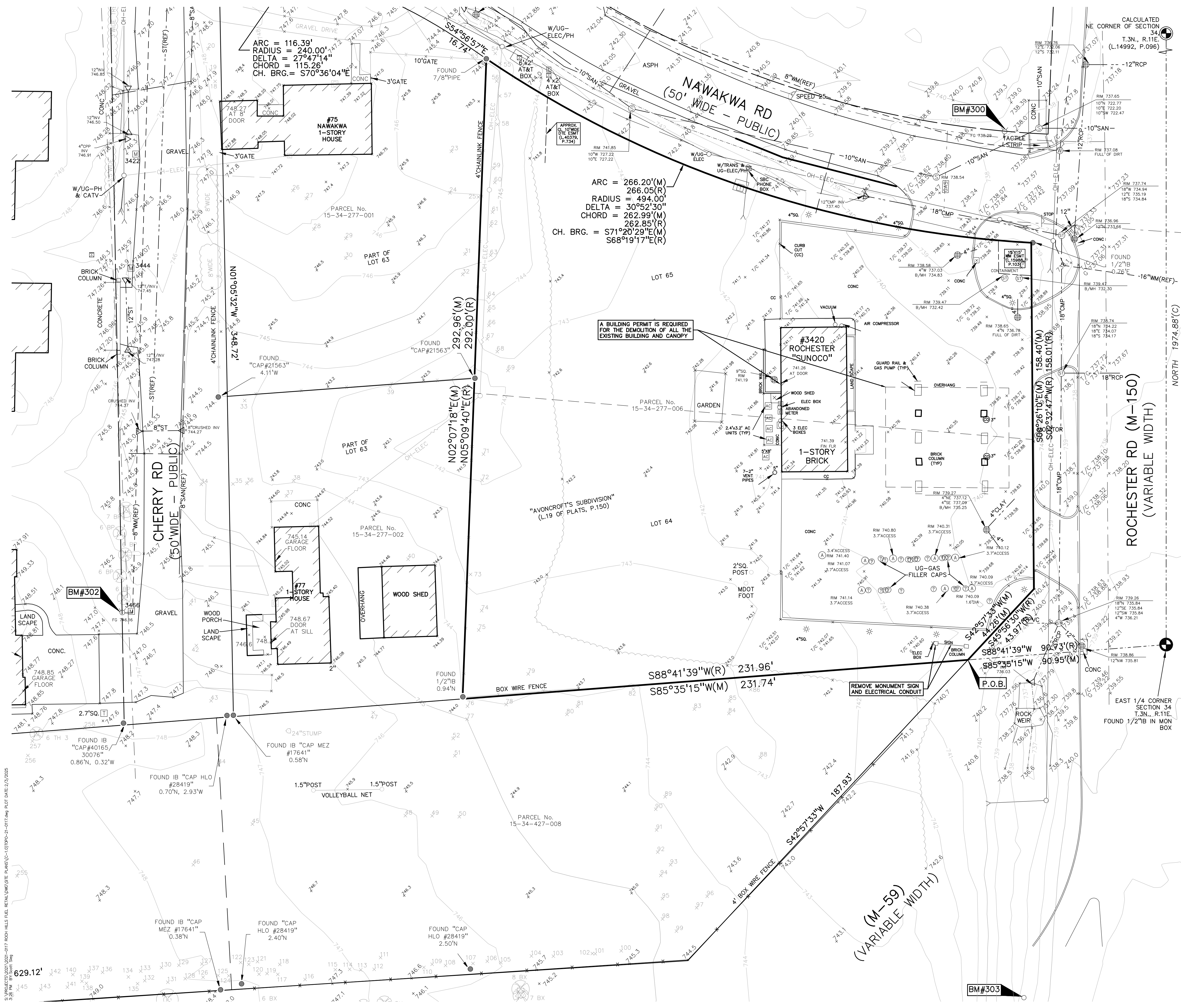
REVISIONS	
DESCRIPTION	DATE
ORIGINAL ISSUE DATE	8/15/2022
SITE/UTILITY LAYOUT	12/20/2023
SITE/UTILITY LAYOUT	4/17/2024
PER CITY COMMENTS	6/14/2024
PER MDOT COMMENTS	9/23/2024
PER CITY COMMENTS	10/9/2024
PER CITY COMMENTS	11/15/2024
PER CITY COMMENTS	1/8/2025
PER CITY COMMENTS	2/3/2025



The applicant will need to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process.

**NOT FOR CONSTRUCTION**  
**CITY FILE #22-029 SECTION #34**





ARC = 116.39'  
 RADIUS = 240.00'  
 DELTA = 27°47'14"  
 CHORD = 115.26'  
 CH. BRG. = S70°36'04"E

ARC = 266.20'(M)  
 RADIUS = 494.00'  
 DELTA = 30°52'30"  
 CHORD = 262.99'(M)  
 262.85'(R)  
 CH. BRG. = S71°20'29"E(M)  
 S68°19'17"E(R)

A BUILDING PERMIT IS REQUIRED FOR THE DEMOLITION OF ALL THE EXISTING BUILDING AND CANOPY

- LEGEND:**
- OH-ELEC-W-O EX. OH. ELEC. POLE & GUY WIRE
  - UG-CATV EX. U.G. CABLE TV & PEDESTAL
  - UG-COMM EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
  - UG-ELEC-EX EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
  - EX GAS LINE
  - EX GAS VALVE & GAS LINE MARKER
  - EX TRANSFORMER & IRRIGATION VALVE
  - EX WATER MAIN
  - EX HYDRANT, GATE VALVE & POST INDICATOR VALVE
  - EX WATER VALVE BOX & SHUTOFF
  - EX SANITARY SEWER
  - EX SANITARY CLEANOUT & MANHOLE
  - EX COMBINED SEWER MANHOLE
  - EX STORM SEWER
  - EX CLEANOUT & MANHOLE
  - EX SQUARE, ROUND, & BEEHIVE CATCH BASIN
  - EX YARD DRAIN & ROOF DRAIN
  - EX UNIDENTIFIED STRUCTURE
  - EX MAILBOX, SIGN & LIGHTPOLE
  - EX FENCE
  - EX GUARD RAIL
  - EX SPOT ELEVATION
  - EX CONTOUR
  - EX WETLAND
  - IRON FOUND / SET
  - NAIL FOUND / NAIL & CAP SET
  - BRASS PLUG SET
  - MONUMENT FOUND / SET
  - SECTION CORNER FOUND
  - R M C RECORDED / MEASURED / CALCULATED

**REFERENCE DRAWINGS**

WATER MAIN "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15  
 SANITARY SEWER "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15  
 STORM SEWER "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15  
 ELECTRIC "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15  
 TELEPHONE "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15  
 CATV "SKETCH OF UTILITIES" PER CITY OF ROCHESTER HILLS RECEIVED 10-21-15

**BENCHMARKS (GPS DERIVED - NAVD83 DATUM)**

BM#300  
 ARROW ON HYDRANT AT THE NORTHWEST CORNER OF ROCHESTER ROAD AND NAWAKWA ROAD.  
 ELEV. - 740.28

BM#301  
 SET BENCHMARK IN SOUTH FACE OF UTILITY POLE AT THE NORTHWEST CORNER OF NAWAKWA ROAD AND CHERRY ROAD.  
 ELEV. - 749.41

BM#302  
 ARROW ON HYDRANT EAST OF HOUSE #3466 CHERRY ROAD.  
 ELEV. - 748.12

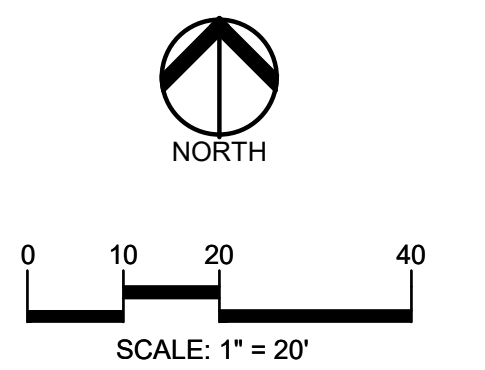
BM#303  
 DIMPLE ON NORTHWEST BOLT OF STRAIN POLE JUST NORTH OF THE M-59 WEST RAMP.  
 ELEV. - 738.60

**FLOODPLAIN NOTE:**  
 BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE "X". AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER NON-PRINTED PANEL FLOOD INSURANCE RATE MAP NUMBER 26125-0394F, DATED JANUARY 16, 2009.

**LEGAL DESCRIPTION:**  
 (TAX PARCEL 15-34-277-006)  
 (PER FIRST AMERICAN TITLE INSURANCE COMPANY, POLICY NO. OP 405833, DATED JAN. 19, 2010)

Real property in the City of Rochester Hills, County of Oakland, State of Michigan, described as follows:

Part of Lots 64 and 65 of Avoncroft's Subdivision, as recorded in Liber 19 of Plats, Page 15, Oakland County Records, being more particularly described as follows: Beginning at a point on the South line of Lot 64 of said Avoncroft's Subdivision, said line being also the East and West 1/4 line of Section 34, Township 3 North, Range 11 East, Avon Township, Oakland County, Michigan, said point being S88°41'39"W as measured along said 1/4 Section line, a distance of 90.73 feet from the East 1/4 corner of said Section 34, proceeding thence from said point of beginning, S88°41'39"W along the East and West 1/4 line of said Section 34, said line being also the South line of said Lot 64, a distance of 231.96 feet to the Southwest corner of said Lot 64; thence N05°09'40"E along the West line of Lots 64 and 65 of said Subdivision, a distance of 262.00 feet to the Northwest corner of said Lot 65; thence along the Northerly line of Lot 65, said line being also the Southerly line of Nawakwa Road (50 feet wide), along the arc of a curve, concave to the North, Radius 494.00 feet, an arc distance of 266.05 feet (chord bears S68°19'17"E 262.85 feet) to the Southwesterly corner of Nawakwa Road and Rochester Road (M-150) as widened; thence S02°32'47"W along the Westerly line of said Rochester Road (width varies), thru the interior of Lot 65 and into Lot 64, a distance of 158.01 feet to a point; thence S45°56'30"W along a limited access right of way line of the proposed M-59 Freeway, a distance of 43.97 feet to the point of beginning.



**CAUTION!!**  
 THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

**CLIENT**  
**3420 ROCHESTER ROAD, LLC**  
 2920 NORTHWESTERN HIGHWAY, SUITE 450  
 FARMINGTON HILLS, MICHIGAN 48334

**PROJECT TITLE**  
**3420 ROCHESTER ROAD**  
 3420 ROCHESTER ROAD  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER CITY COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
 AUGUST 15, 2022

DRAWING TITLE  
**TOPOGRAPHIC SURVEY**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS
DRAWING NUMBER:	

**NOT FOR CONSTRUCTION**  
**CITY FILE #22-029 SECTION #34**

**C-1.0**





SCALE: 1" = 20'



**CAUTION!!**  
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
2920 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	DATE
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDOT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**PRELIMINARY SITE PLAN**

PEA JOB NO. 2021-0117  
P.M. LAA  
DN. MT  
DES. SWS  
DRAWING NUMBER:

**LEGEND:**

[Symbol]	CONCRETE PAVEMENT
[Symbol]	ASPHALT PAVEMENT
[Symbol]	GRAVEL
[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	REVERSE GUTTER PAN
[Symbol]	SETBACK LINE
[Symbol]	SIGN
[Symbol]	LIGHTPOLE
[Symbol]	FENCE

**SIGN LEGEND:**

NO PARKING-FIRE LANE'S SIGN	1
'STOP' SIGN	2
'BARRIER FREE' SIGN	3
'VAN ACCESSIBLE' SIGN	4
'DO NOT ENTER' SIGN	5
'SIDEWALK ENDS' SIGN	6
'DRIVE THRU' SIGN	7
'RIGHT LANE MUST TURN RIGHT' SIGN	8
'ELECTRIC VEHICLE' SIGN	9

REFER TO DETAIL SHEET FOR SIGN DETAILS

**SIDEWALK RAMP LEGEND:**

SIDEWALK RAMP TYPE R	(R)
SIDEWALK RAMP TYPE P	(P)
SIDEWALK RAMP TYPE X	(X)

REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

**SITE DATA TABLE:**

SITE AREA: 1.33 ACRES (57,985 SF.) NET AND GROSS  
ZONING: NB - NEIGHBORHOOD BUSINESS  
PROPOSED USE: RETAIL (7,154 SF.) / DRIVE THRU (1,194 SF.) / CANOPY (2,392 SF.)

**BUILDING INFORMATION:**  
MAXIMUM ALLOWABLE BUILDING HEIGHT = 30 FT. (2 STORIES)  
PROPOSED BUILDING HEIGHT = 1 STORY  
TOTAL BUILDING FOOTPRINT AREA = 10,740 SF.  
BUILDING LOT COVERAGE = 18.52%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (EAST)	50'	50' (CANOPY)
SIDE (NORTH)	25'	50.04'
SIDE (SOUTH)	25'	50.97'
REAR (WEST)	50'	53.33'

**PARKING CALCULATIONS:**  
RESTAURANT = 1 SPACE PER 2 PERSONS PERMITTED AT MAXIMUM OCCUPANCY  
RETAIL PARKING REQUIRED = 60 PERSONS / 2 = 30 SPACES  
TOTAL PARKING PROVIDED = 30 SPACES

**DRIVE-THRU STACKING:**  
• CITY - REQUIRED = 10  
• CITY - PROVIDED = 16  
• MDOT - REQUIRED = 400' DRIVE-THRU STACKING DISTANCE  
• MDOT - PROVIDED = 400' STACKING DISTANCE (16)

**LOADING CALCULATIONS:**  
• REQUIRED = 1 - 10'x40' LOADING SPACE  
• PROVIDED = 500 SF. (10'x50' SPACE) AT SOUTH SIDE OF PARCEL

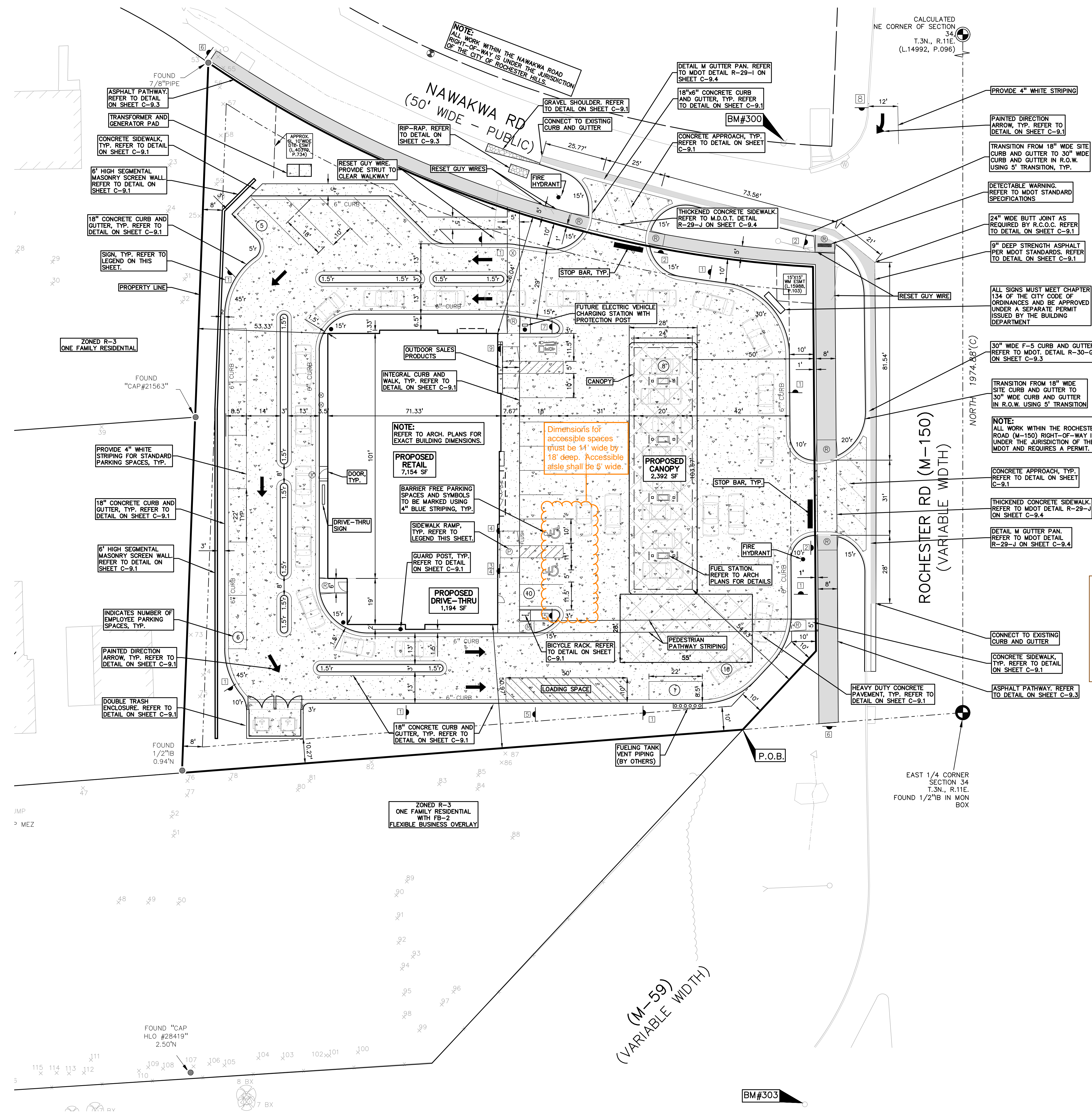
**SITE SOILS INFORMATION:**  
ACCORDING TO THE USDA WEB SOIL SURVEY OF OAKLAND COUNTY, THE SITE GENERALLY CONSISTS OF THE FOLLOWING SOIL TYPES:  
40A - UDORTHENTS, LOAMY, NEARLY LEVEL  
ShibaB - SHEBEON-URBAN LAND COMPLEX, 0 TO 4 PERCENT SLOPES

- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
  - NO PARKING-FIRE LANE'S SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
  - REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
  - REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS.

- MICHIGAN DEPARTMENT OF TRANSPORTATION (M.D.O.T.) NOTES:**
- MDOT WILL REQUIRE A PERMIT APPLICATION BEFORE WE PARTICIPATE IN ANY TRAFFIC IMPACT STUDY (TIS) DISCUSSION. WE WILL STILL PERFORM CONCEPTUAL REVIEWS FOR SMALLER PROJECTS WITH A WELL DEFINED SITE PLAN. NON-BINDING. EMAIL RESPONSE - LISTING POTENTIAL MDOT CONCERNS. BEYOND THAT ALL REVIEWS WILL BE OFFICIAL PERMIT REVIEWS. PLEASE NOTE THAT THE PERMIT APPLICANT SHALL BE THE PROPERTY OWNER.
  - CITY OF ROCHESTER HILLS TRAFFIC IMPACT STUDY WILL BE PERFORMED CONCURRENT WITH MDOT. MDOT PERMIT REQUIRED PRIOR TO SITE PLAN APPROVAL.

City requirements of 10 stacking spaces. Stacking based on City requirement does not appear to conflict with onsite traffic. Stacking based on MDOT stacking requirement appears to cause potential conflict with traffic entering and exiting site, however, since City requirement is met, any additional comment is left for MDOT review.

MDOT permit required prior to construction plan approval. Clarify permit requirements are met regarding MDOT's stacking requirement prior to site plan approval.

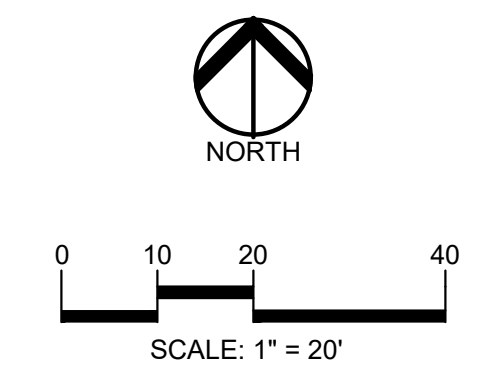


**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-3.1**

S:\PROJECTS\2021-2022-0117 ROCHESTER HILLS FUEL RETAIL\DWG\SITE PLANS\C-3-1 SITE-21-0117.dwg, PLOT DATE: 2/2/2025 2:52 PM, 01/20/2025





**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE AS TO ACCURACY OR COMPLETENESS IS MADE AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**M.D.O.T. DRIVE-THRU STACKING PLAN**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS
DRAWING NUMBER:	

**SITE DATA TABLE:**

SITE AREA: 1.33 ACRES (57,985 SF.) NET AND GROSS  
ZONING: NB - NEIGHBORHOOD BUSINESS  
PROPOSED USE: RETAIL (7,154 SF.) / DRIVE THRU (1,194 SF.) / CANOPY (2,392 SF.)

**BUILDING INFORMATION:**  
MAXIMUM ALLOWABLE BUILDING HEIGHT = 30 FT. (2 STORIES)  
PROPOSED BUILDING HEIGHT = 1 STORY  
TOTAL BUILDING FOOTPRINT AREA = 10,740 SF.  
BUILDING LOT COVERAGE = 18.52%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (EAST)	50'	50' (CANOPY)
SIDE (NORTH)	25'	50.04'
SIDE (SOUTH)	25'	50.97'
REAR (WEST)	50'	53.33'

**PARKING CALCULATIONS:**  
RESTAURANT = 1 SPACE PER 2 PERSONS PERMITTED AT MAXIMUM OCCUPANCY  
RETAIL PARKING REQUIRED = 60 PERSONS / 2 = 30 SPACES  
TOTAL PARKING PROVIDED = 30 SPACES

**DRIVE-THRU STACKING:**

- CITY - REQUIRED = 10
- CITY - PROVIDED = 16
- MDOT - REQUIRED = 400' DRIVE-THRU STACKING DISTANCE
- MDOT - PROVIDED = 400' STACKING DISTANCE (16)

**LOADING CALCULATIONS:**

- REQUIRED = 1 - 10'x40' LOADING SPACE
- PROVIDED = 500 SF. (10'x50' SPACE) AT SOUTH SIDE OF PARCEL

**SITE SOILS INFORMATION:**  
ACCORDING TO THE USDA WEB SOIL SURVEY OF OAKLAND COUNTY, THE SITE GENERALLY CONSISTS OF THE FOLLOWING SOIL TYPES:  
40A - UDORTHENTS, LOAMY, NEARLY LEVEL  
Shrubub - SHEBON-URBAN LAND COMPLEX, 0 TO 4 PERCENT SLOPES

**LEGEND:**

[Symbol]	CONCRETE PAVEMENT
[Symbol]	ASPHALT PAVEMENT
[Symbol]	GRAVEL
[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	REVERSE GUTTER PAN
[Symbol]	SETBACK LINE
[Symbol]	SIGN
[Symbol]	LIGHTPOLE
[Symbol]	FENCE

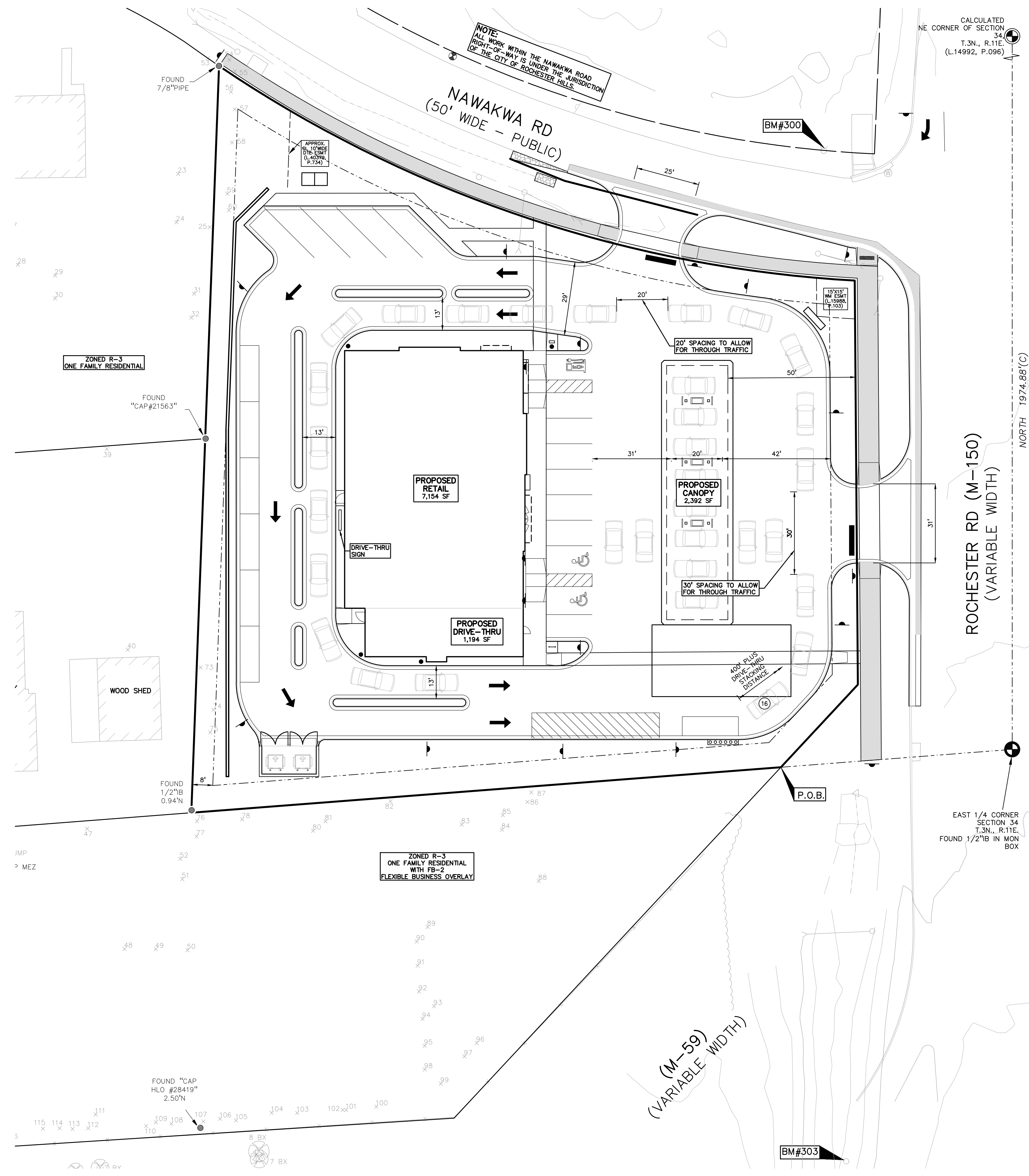
NE CORNER OF SECTION 34  
T.3N., R.11E.  
(L.14992, P.096)

NORTH 1974.68'(C)

ROCHESTER RD (M-150)  
(VARIABLE WIDTH)

EAST 1/4 CORNER SECTION 34  
T.3N., R.11E.  
FOUND 1/2" B IN MON BOX

(M-59)  
(VARIABLE WIDTH)

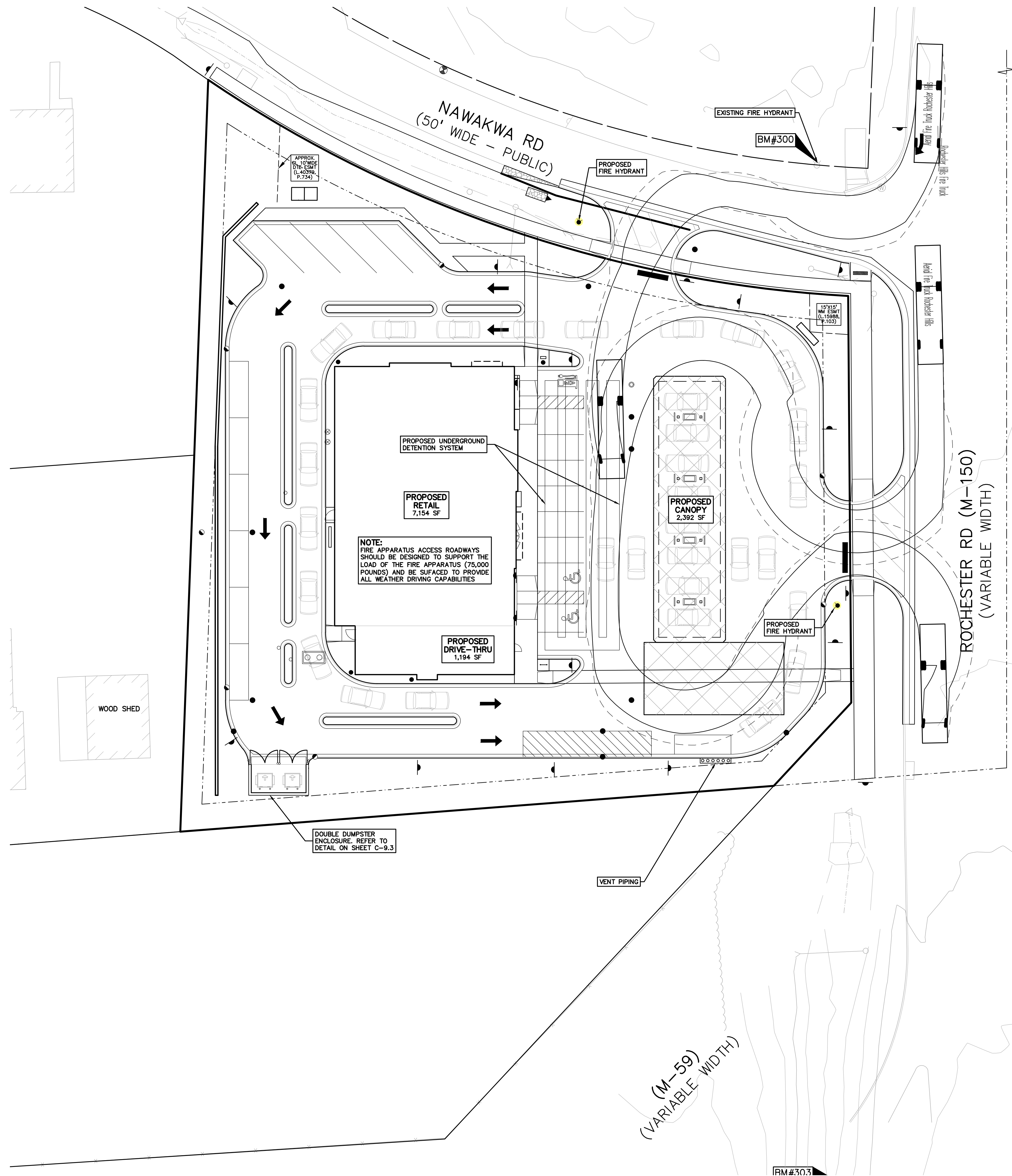


**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

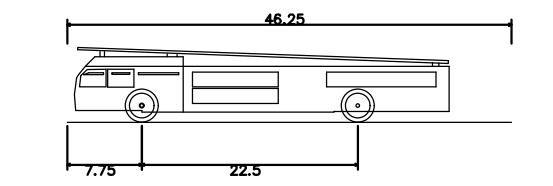
**C-3.2**

S:\PROJECTS\2021-2022-0117 ROCHESTER HILLS FUEL RETAIL\DWG\SITE PLANS\10-3125\10-31-23\10-31-23-01.dwg PLOT DATE: 8/2/2025 2:25 PM 10/25/2025





- ROCHESTER HILLS FIRE DEPARTMENT NOTES:**
1. A KNOX KEY SYSTEM SHALL BE INSTALLED, IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE KNOX COMPANY AT [www.knoxbox.com](http://www.knoxbox.com) (3200 SERIES BOX).
  2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
  3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE (IFC) 2006 CHAPTER 14.
  4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES.
  5. UNDERGROUND DETENTION SYSTEM IS PROPOSED ON-SITE.
  6. FIRE APPARATUS ROADWAYS SHOULD BE DESIGNED TO SUPPORT THE LOAD OF A FIRE APPARATUS (75,000 LBS) AND BE SURFACED TO PROVIDE ALL WEATHER DRIVING CAPABILITIES.



Aerial Fire Truck Rochester Hills

Overall Length	46.250ft
Overall Width	9.810ft
Overall Body Height	7.785ft
Min Body Ground Clearance	0.565ft
Track Width	9.810ft
Lock-to-lock time	3.00s
Max Wheel Angle	45.00°

**Pierce Turning Performance Analysis** 03/30/2017

Bid Number: 581  
Department: City of Rochester Hills

Chassis: Arrow XT Chassis, P/AMidmount  
Body: Aerial, Platform, 95', Mid Mount, Alum Body

Parameters:	
Inside Cramp Angle:	40°
Axis Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.4 in.
Chassis Overhang:	68.92 in.
Additional Bumper Depth:	7 in.
Front Overhang:	75.90 in.
Wheelbase:	270 in.
Overall Length:	46.25'
Calculated Turning Radii:	
Inside Turn:	21 ft. 5 in.
Curb to curb:	38 ft. 2 in.
Wall to wall:	41 ft. 0 in.

Comments:  
30' P/AM - City of Rochester Hills  
Rear Overhang - 16 feet

Category	Option	Description
Axle, Front, Custom	054048	Asie, Front, Oakleaf TAX-4, Non Drive, 24,000 lb, QM/AXT/DCP (425 Tires)
Wheels, Front	0019511	Wheels, Front, Alcoa, 22.50" x 12.25" Aluminum, Hub Pilot
Tires, Front	007792	Tires, Front, Goodyear, G296 MGA, 425/95R22.5, 20 ply, Fire Service Load Rating
Bumpers	0080710	Bumper, Non Extended, Steel, Painted, Arrow XT
Aerial Devices	0092511	Aerial, 95' Pierce P/AM, Mid Mount

Notes:  
Actual inside cramp angle may be less due to highly specialized options.  
Curb to curb turning radius calculated for 9.00 inch curbs.

**CITY OF ROCHESTER HILLS HYDRANT FLOW TEST**

Date: August 21, 2024 Time: 1:45 PM Test Performed By: W. R. Jones, S. Zell, M. Grossman

Location: 3420 Rochester Contribution Performed By: Wesley R. Jones

Number of Hydraulic Flanges: 1

Number of Outside Openings: 1

Size of Outside D (Inches): 3.74

Pressure Loss Coefficient, K<sub>L</sub>: 1

Static Pressure, P<sub>s</sub> (psi): 65

Residual Pressure, P<sub>r</sub> (psi): 50

Flow Pressure, P<sub>f</sub> (psi): 35

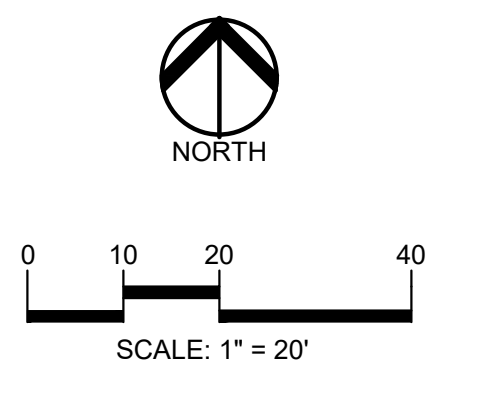
Residual Flow, Q<sub>r</sub> (GPM): 2324/1854 C<sub>d</sub> = 0.8822 / P<sub>r</sub> = 1.18

Flow Pressure at 200 psi, Q<sub>200</sub> (GPM): 3701/3074 C<sub>d</sub> = 0.873 / P<sub>r</sub> = 1.18

Supply Main Size (Inches): 8"

Supply Main Size (Inches): 8"

Drawing of Flow Test Site (Indicate location of flow & test hydrant):



**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
2920 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**FIRE TRUCK TURNING PLAN**

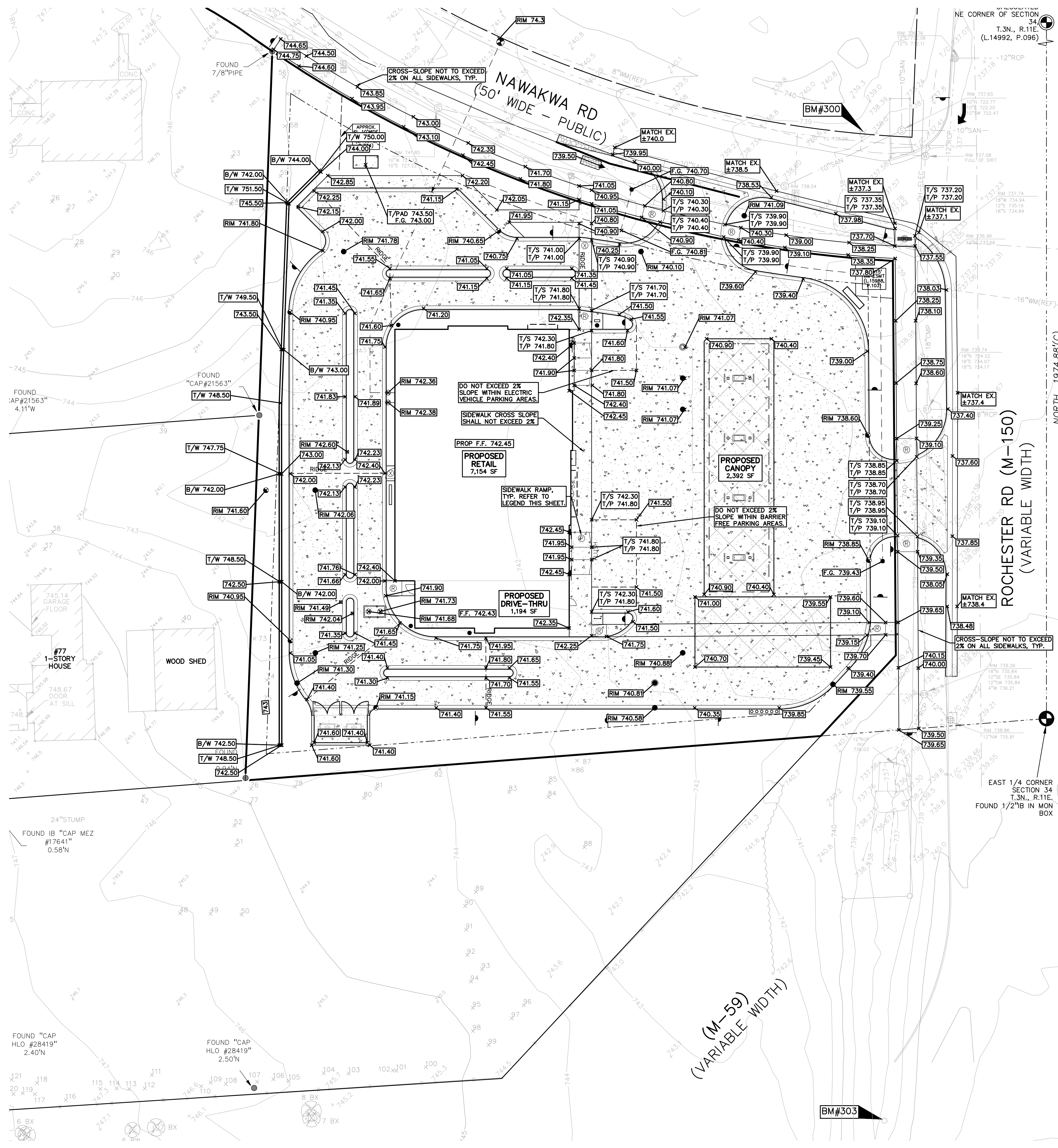
PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS

DRAWING NUMBER:  
**C-3.3**

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

S:\PROJECTS\2021-2022-0117 ROCH HILLS FUEL METAL\DWG\SITE PLANS\C-3-3\FIRE-21-0117.dwg PLOT DATE: 2/2/2025 2:10 PM 10/25/2025





**GRADING LEGEND:**

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION: TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED REVERSE GUTTER PAN
- PROPOSED RIDGE LINE
- PROPOSED SWALE/DITCH

**ABBREVIATIONS**

- T/C = TOP OF CURB
- T/P = TOP OF PAVEMENT
- T/S = TOP OF SIDEWALK
- T/W = TOP OF WALL
- G = GUTTER GRADE
- F.G. = FINISH GRADE
- F.F. = FINISHED FLOOR
- B/W = BOTTOM OF WALL

**RETAINING WALL NOTE:**

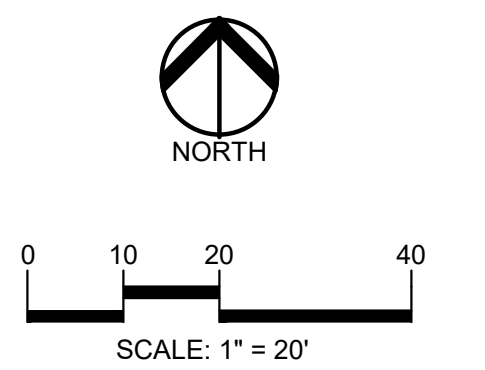
TOP OF WALL (T/W) AND BOTTOM OF WALL (B/W) GRADES ARE THE FINISH GRADE AT THE TOP AND BOTTOM OF THE RETAINING WALL, NOT ACTUAL TOP AND BOTTOM OF THE WALL STRUCTURE.

**EARTHWORK BALANCING NOTE:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

- BENCHMARKS**  
(GPS DERIVED - NAVD88 DATUM)
- BM #300  
ARROW ON HYDRANT AT THE NORTHWEST CORNER OF ROCHESTER ROAD AND NAWAKWA ROAD.  
ELEV. - 740.28
  - BM #301  
SET BENCHMARK IN SOUTH FACE OF UTILITY POLE AT THE NORTHWEST CORNER OF NAWAKWA ROAD AND CHERRY ROAD.  
ELEV. - 749.41
  - BM #302  
ARROW ON HYDRANT EAST OF HOUSE #3466 CHERRY ROAD.  
ELEV. - 748.12
  - BM #303  
DIMPLE ON NORTHWEST BOLT OF STRAIN POLE JUST NORTH OF THE M-59 WEST RAMP.  
ELEV. - 739.80

- SIDEWALK RAMP LEGEND:**
- SIDEWALK RAMP TYPE 'R'
  - SIDEWALK RAMP TYPE 'P'
  - SIDEWALK RAMP TYPE 'X'
- REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS



**CAUTION!!**

THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
2920 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDOT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**PRELIMINARY GRADING PLAN**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS
DRAWING NUMBER:	

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-4.0**

S:\PROJECTS\2022\2022-0117 ROCH HILLS FUEL METAL/DMS/SITE PLANS\C-4\GRADE-2-0117.dwg PLOT DATE: 8/2/2025 3:31 PM 1012501.dwg





0 10 20 40  
SCALE: 1" = 20'



**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

**UTILITY LEGEND:**

- OH-ELEC-V-O- EX. OH. ELEC. POLE & GUY WIRE
- UG-CATV- EX. U.G. CABLE TV & PEDESTAL
- UG-COMM- EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
- UG-ELEC-C- EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
- EX- EX. GAS LINE
- EX. GAS VALVE & GAS LINE MARKER
- EX. TRANSFORMER & IRRIGATION VALVE
- EX. WATER MAIN
- EX. HYDRANT, GATE VALVE & POST INDICATOR VALVE
- EX. WATER VALVE BOX & SHUTOFF
- EX. SANITARY SEWER
- EX. SANITARY CLEANOUT & MANHOLE
- EX. COMBINED SEWER MANHOLE
- EX. STORM SEWER
- EX. CLEANOUT & MANHOLE
- EX. SQUARE, ROUND, & BEEHIVE CATCH BASIN
- EX. YARD DRAIN & ROOF DRAIN
- EX. UNIDENTIFIED STRUCTURE
- - - - - PROPOSED WATER MAIN
- PROPOSED HYDRANT AND GATE VALVE
- PROPOSED TAPPING SLEEVE, VALVE & WELL
- PROPOSED POST INDICATOR VALVE
- - - - - PROPOSED SANITARY SEWER
- PROPOSED SANITARY CLEANOUT & MANHOLE
- - - - - PROPOSED STORM SEWER
- PROPOSED STORM SEWER CLEANOUT & MANHOLE
- PROPOSED CATCH BASIN, INLET & YARD DRAIN

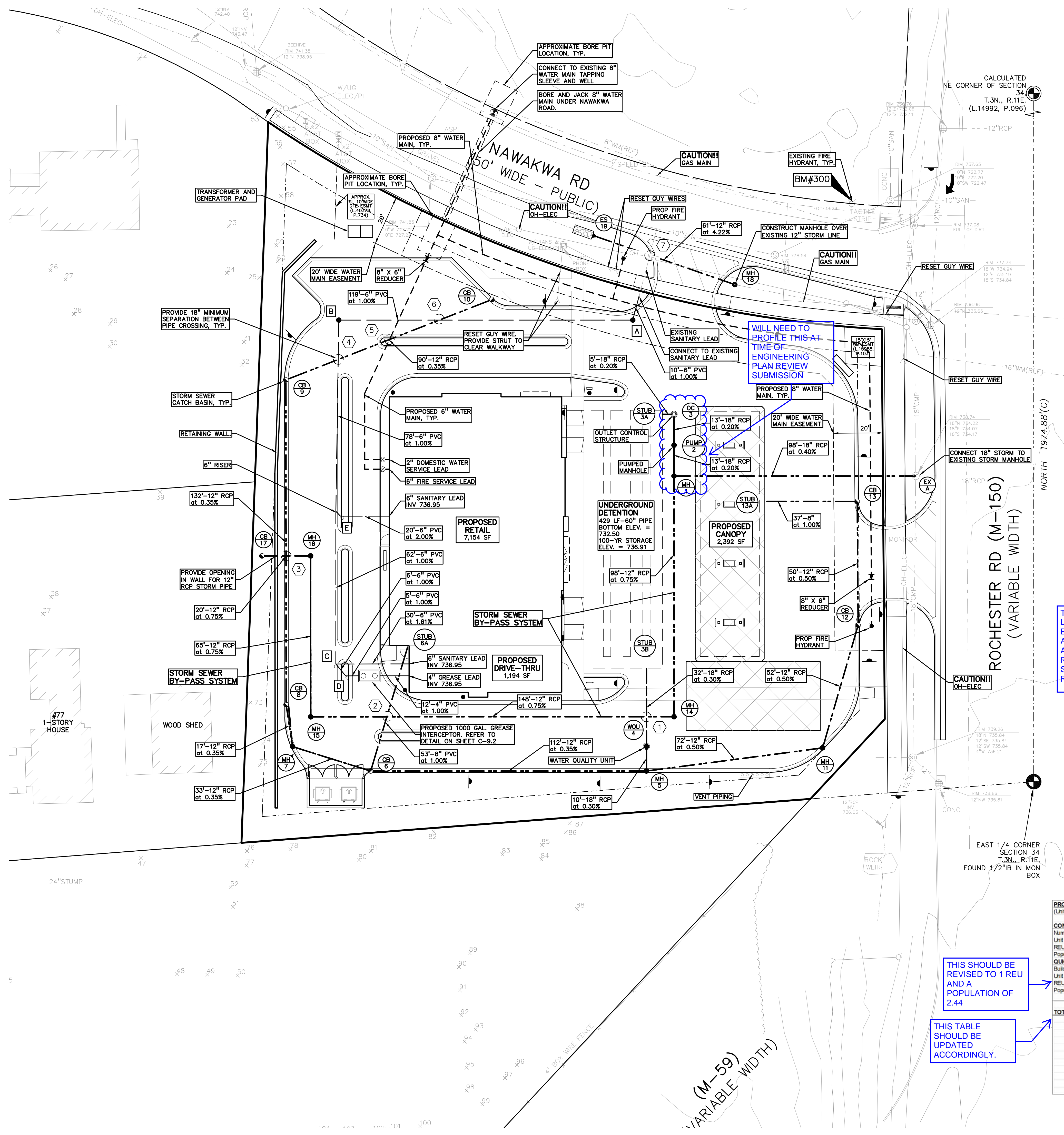
**CITY OF ROCHESTER HILLS  
STORM SEWER FRAME & COVER NOTES**

- MANHOLE  
EJ 1040 TYPE "A" COVER
- CATCH BASIN IN CURB  
EJ 7045 WITH TYPE M1 GRATE AND 7050 T1 BACK OR EQUIVALENT
- CATCH BASIN IN PAVED AREA  
EJ FRAME 5105 WITH TYPE M1 SINUSOIDAL GRATE OR EQUIVALENT
- CATCH BASIN IN GRASS AREA  
EJ 1040 TYPE N

**PREMIUM TRENCH BACKFILL NOTE:**  
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

**UTILITY CROSSING TABLE:**

CROSSING	CROSSING PIPE 1	CROSSING PIPE 2	CLEARANCE
#1	B/P 12" ST=736.78	T/P 18" ST=734.05	1.73'
#2	B/P 12" ST=736.57	T/P 8" ST=734.82	1.75'
#3	B/P 12" ST=737.36	T/P 12" ST=735.30	2.06'
#4	B/P 12" ST=736.18	T/P 6" SAN=733.62	2.56'
#5	B/P 12" ST=736.23	T/P 6" WATER=734.70	1.53'
#6	B/P 12" ST=736.28	T/P 6" SAN=733.65	3.23'
#7	B/P 12" ST=737.93	T/P 6" SAN=727.55	10.38'



WILL NEED TO PROFILE THIS AT TIME OF ENGINEERING PLAN REVIEW SUBMISSION

THERE IS A RESTRICTIVE COVENANT FROM 2002 ON THIS PROPERTY RECORDED AS LIBER 27086 PAGE 385 AS A RESULT OF A UST LEAK. UNLESS DOCUMENTATION CAN BE PROVIDED THAT INDICATES A FULL REMEDIATION OF THE SITE HAS OCCURRED IN ACCORDANCE WITH AN APPROVED CORRECTIVE ACTION PLAN, AND EGLE HAS ALLOWED FOR THE MONITORING WELLS TO BE REMOVED, THE LAND USE AND RESOURCE LIMITATIONS OUTLINED IN THE RESTRICTIVE COVENANT WILL APPLY AND SHALL BE ADHERED TO DURING CONSTRUCTION. A DUE CARE PLAN MAY BE REQUIRED AT TIME OF CONSTRUCTION PLAN REVIEW.

SAME COMMENTS FROM SANITARY BOD APPLY HERE

THIS SHOULD BE REVISED TO 1 REU AND A POPULATION OF 2.44

THIS TABLE SHOULD BE UPDATED ACCORDINGLY.

**PROPOSED SANITARY SEWER BASIS OF DESIGN:**  
(Unit Factors Based on Oakland County Unit Assignment Factors)

CONVENIENCE STATION	REU	POPULATION
Number of pumps	8	
Unit Factor	0.21	per unit
REU	1,680	
Population (P) (2.44 PEOPLE/EDU)	4,059	People
QUICK SERVICE RESTAURANTS W/O DINING AND RESTROOM		
Buildings	1	per restaurant
Unit Factor	0.0010	
REU	0.00350	People
Population (P) (3.5 PEOPLE/EDU)		
<b>TOTAL</b>	<b>REU 1,6810</b>	<b>4 People</b>
Average Flow (100 GPCPD)	400 G.P.D.	0.000619 C.F.S.
P (1000g)	0.0040	0.000660 M.G.D.
Peaking Factor (PF)	4.45	
PF = (18+sqrt(P))/(4+sqrt(P))		
Peak Flow (G.P.D.)	1,778.21 G.P.D.	0.001857 C.F.S.
Peak Flow (C.F.S.)	0.00275 C.F.S.	
6" Pipe Capacity Provided	0.665 C.F.S.	

**WATER MAIN BASIS OF DESIGN:**  
(Unit Factors Based on Oakland County Unit Assignment Factors)

CONVENIENCE STATION	REU	POPULATION
Number of pumps	8	
Unit Factor	0.21	per unit
REU	1,680	
Population (P) (2.44 PEOPLE/EDU)	4,059	People
QUICK SERVICE RESTAURANTS W/O DINING AND RESTROOM		
Buildings	1	per restaurant
Unit Factor	0.0010	
REU	0.00350	People
Population (P) (3.5 PEOPLE/EDU)		
<b>TOTAL</b>	<b>REU 1,6810</b>	<b>4 People</b>
Average Flow (150 GPCPD)	600 G.P.D.	0.000928 C.F.S.
Design Max. Flow = (2" ag)	1200.00 G.P.D.	0.001857 C.F.S.
		0.00125 M.G.D.
Building Type =		
Required Fire Flow =	2000 gpm for 2 hours	

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
2920 NORTHWESTERN HIGHWAY, SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

DATE	DESCRIPTION
12/20/23	SITE/UTILITY LAYOUT
04/17/24	SITE/UTILITY LAYOUT
06/14/24	PER CITY COMMENTS
09/23/24	PER MDOT COMMENTS
10/09/24	PER CITY COMMENTS
11/15/24	PER CITY COMMENTS
01/08/25	PER CITY COMMENTS
02/03/25	PER CITY COMMENTS

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**PRELIMINARY UTILITY PLAN**

PEA JOB NO. 2021-0117  
P.M. LAA  
D.N. MT  
DES. SWS  
DRAWING NUMBER:

**NOT FOR CONSTRUCTION  
CITY FILE #22-029 SECTION #34**

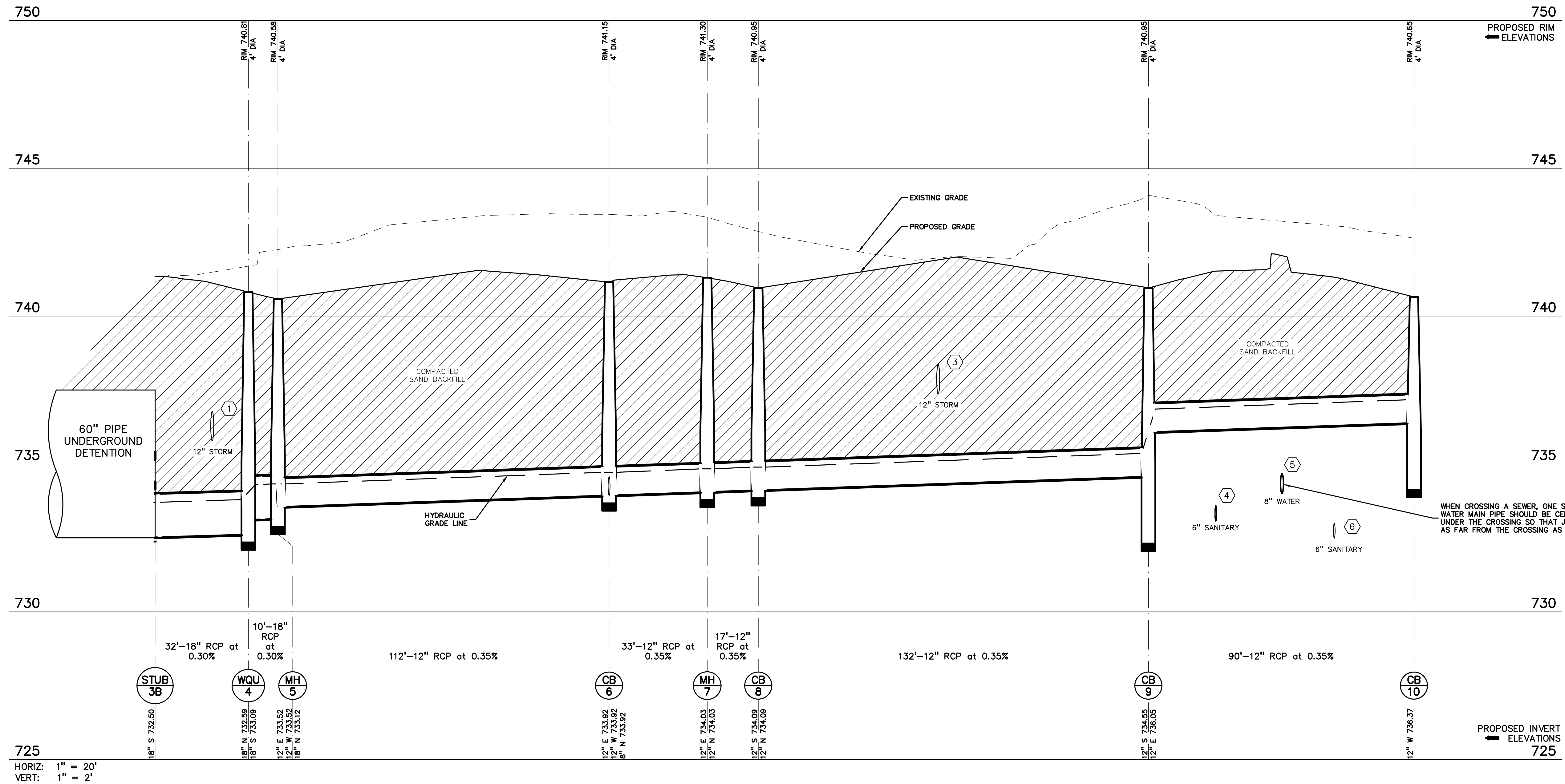
**C-6.0**

S:\PROJECTS\2022\022-029-017 ROCHESTER HILLS FUEL METAL DMS\SITE PLANS\C-6.0\UTIL-21-0117.dwg PLOT DATE: 2/2/2025 2:51 PM 10/25/2025





**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



HORIZ: 1" = 20'  
VERT: 1" = 2'

UTILITY CROSSING TABLE:			
CROSSING	CROSSING PIPE 1	CROSSING PIPE 2	CLEARANCE
#1	B/P 12" ST=735.78	T/P 18" ST=734.05	1.73'
#3	B/P 12" ST=737.96	T/P 12" ST=735.30	2.06'
#4	B/P 12" ST=736.18	T/P 6" SAN=733.62	2.56'
#5	B/P 12" ST=736.23	T/P 6" WATER=734.70	1.53'
#6	B/P 12" ST=736.28	T/P 6" SAN=733.05	3.23'

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**STORM SEWER PROFILES**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS

DRAWING NUMBER:

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-7.1**





**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE OR OTHER RESPONSIBILITY IS ASSUMED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

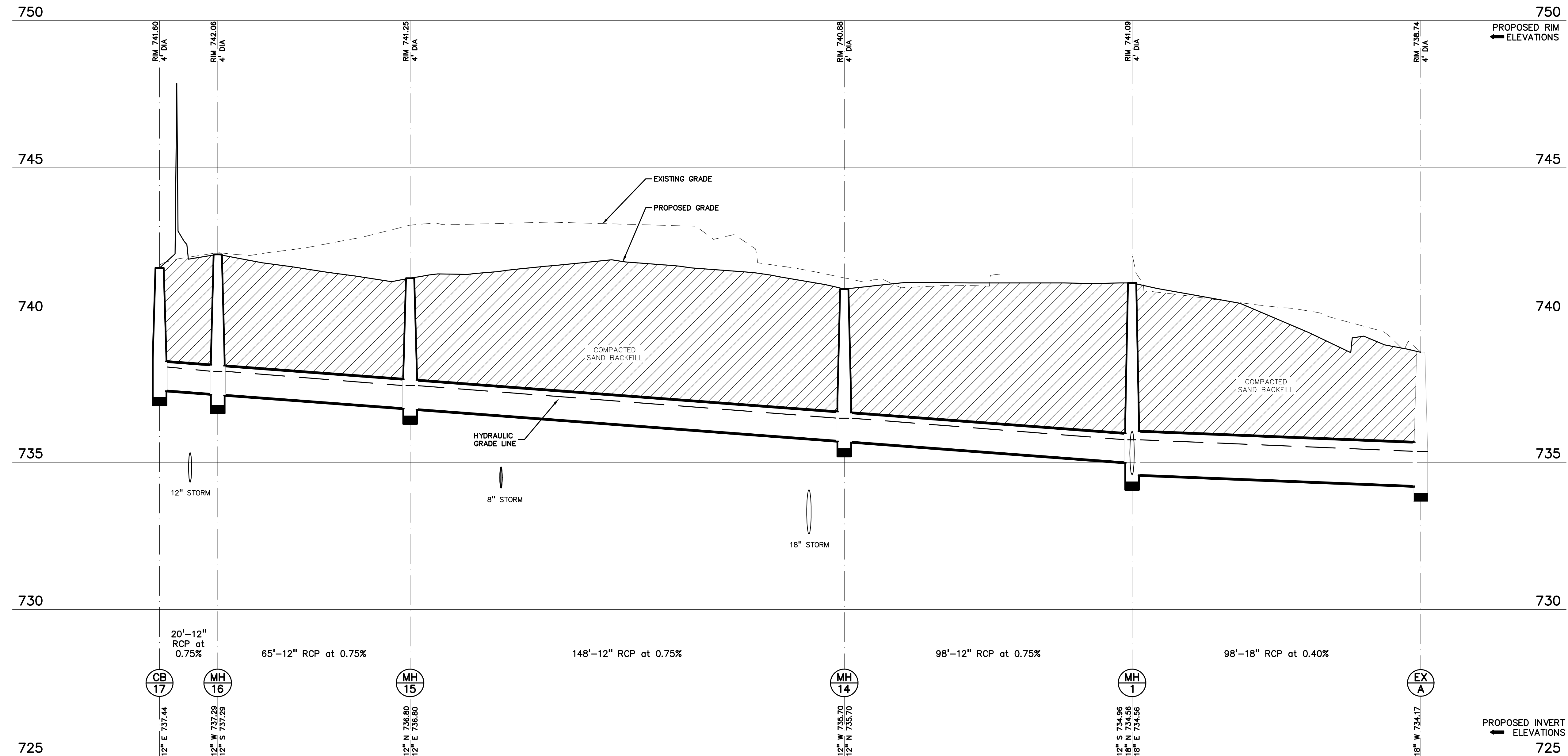
PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**STORM SEWER PROFILES**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS
DRAWING NUMBER:	



HORIZ: 1" = 20'  
VERT: 1" = 2'

UTILITY CROSSING TABLE:			
CROSSING	CROSSING PIPE 1	CROSSING PIPE 2	CLEARANCE
#1	B/P 12" ST=735.78	T/P 16" ST=734.05	1.73'
#3	B/P 12" ST=737.36	T/P 12" ST=735.30	2.06'
#4	B/P 12" ST=736.18	T/P 6" SAN=733.62	2.56'
#5	B/P 12" ST=736.23	T/P 6" WATER=734.70	1.53'
#6	B/P 12" ST=736.28	T/P 6" SAN=733.05	3.23'

NOT FOR CONSTRUCTION  
CITY FILE #22-029 SECTION #34

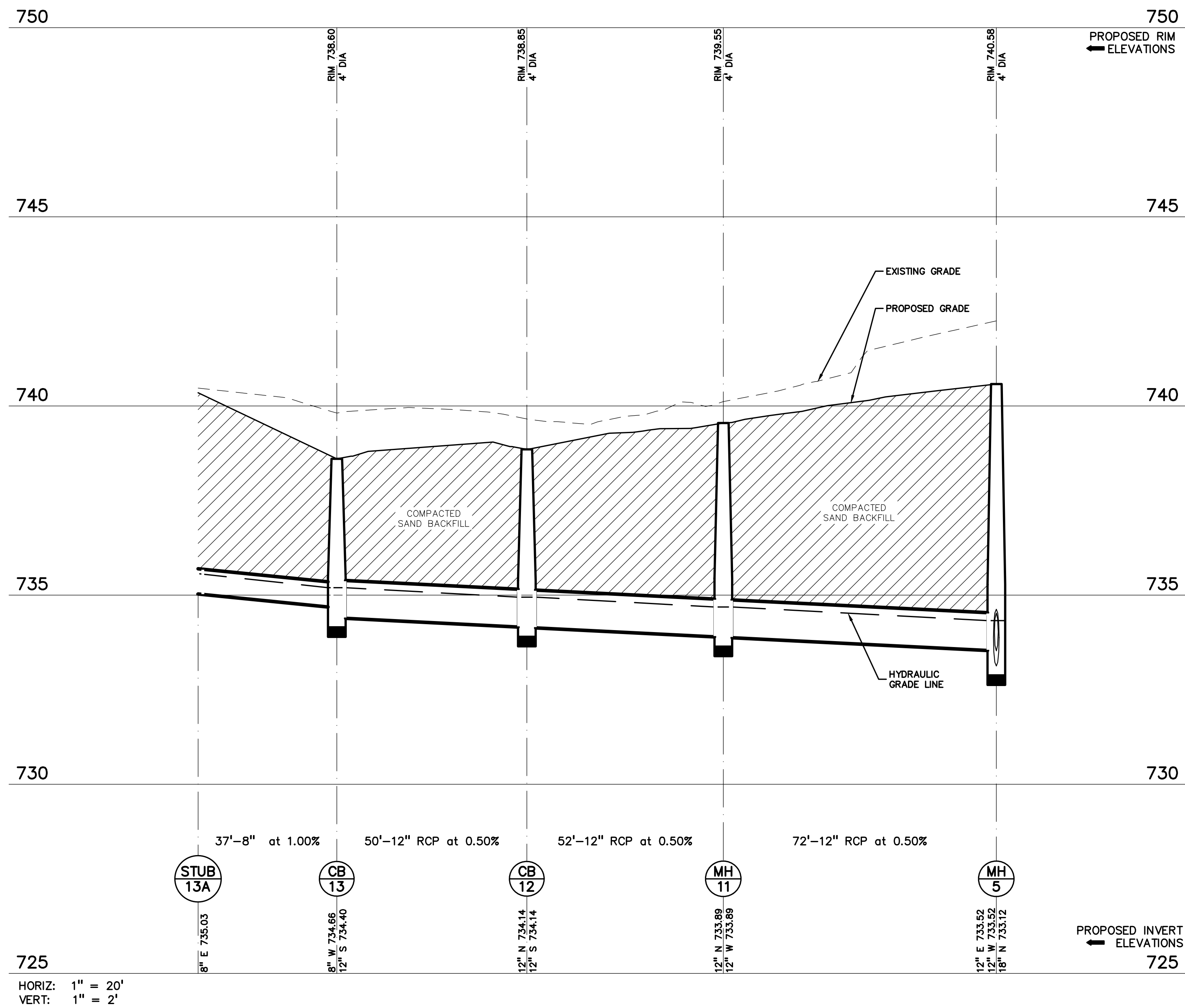
C-7.2

S:\PROJECTS\2021-2022-0117 ROCHESTER HILLS FUEL METAL\DWG\SITE PLANS\C-7-0117.dwg PLOT DATE: 2/3/2025 2:52 PM 01/20/25





**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE OR WARRANTY IS MADE AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDOT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**STORM SEWER PROFILES**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	MT
DES.	SWS
DRAWING NUMBER:	

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-7.3**

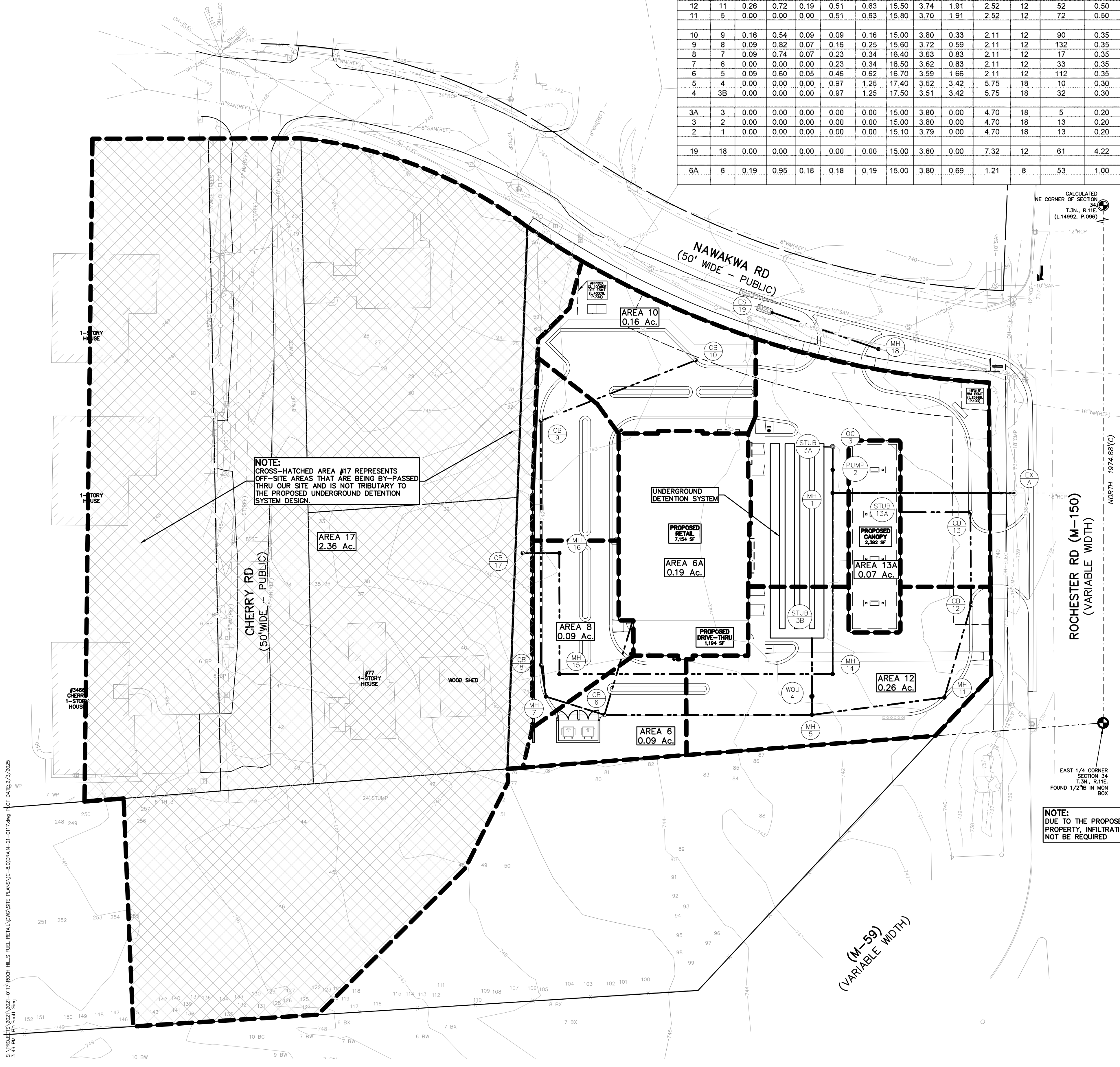


STORM SEWER SYSTEM DESIGN

Region Michigan  
Location: Oakland County

$I = B/(T+D)^E$      $B = 50.12$      $D = 9.17$      $E = 0.81$   
 $C = \text{varies}$   
 $T = 15$  (min.)    Pipe "n" Value = 0.013

FROM STR	TO STR	AREA (A) (Acres)	COEF. C	A x C	TOTAL AREA (Ax C)	TOTAL AREA (Acres)	TIME t (min.)	INT. I (in/hr)	FLOW Q (cfs)	PIPE CAP. (cfs)	PIPE DIA. (in.)	PIPE LENGTH (ft.)	PIPE SLOPE (%)	MIN HG PER "Q"	VEL. FULL (ft./sec)	TIME FLOW (min.)	H.G.L. ELEV.		RIM ELEV.		INVERT ELEV.		PIPE COVER		HGL COVER	
																	UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM
17	16	2.36	0.34	0.80	0.80	2.36	15.00	3.80	3.05	3.08	12	20	0.75	0.73%	3.9	0.1	738.24	735.09	741.60	742.06	737.44	737.29	3.00	3.60	3.36	3.97
16	15	0.00	0.00	0.00	0.00	2.36	15.10	3.79	3.05	3.08	12	65	0.75	0.73%	3.9	0.3	737.29	737.60	741.24	737.29	738.60	738.60	3.00	3.27	3.97	3.64
15	14	0.00	0.00	0.00	0.00	2.36	15.40	3.75	3.05	3.09	12	148	0.75	0.73%	3.9	0.6	737.60	736.50	741.24	740.88	736.80	735.70	3.27	4.02	3.64	4.38
14	1	0.00	0.00	0.00	0.00	2.36	16.00	3.68	3.05	3.09	12	98	0.75	0.73%	3.9	0.4	736.50	735.76	740.88	741.07	735.70	734.56	4.02	4.94	4.38	5.31
1	A	0.00	0.00	0.00	0.00	2.36	16.40	3.63	3.05	6.64	18	98	0.40	0.08%	3.8	0.4	735.76	735.37	741.07	738.74	734.56	734.17	4.80	2.86	5.31	3.37
13A	13	0.07	0.95	0.06	0.06	0.07	15.00	3.80	0.24	1.21	8	37	1.00	0.04%	3.5	0.2	735.56	735.20	740.40	738.60	735.03	734.66	4.57	3.13	4.84	3.41
13	12	0.30	0.85	0.26	0.32	0.37	15.20	3.77	1.21	2.52	12	50	0.50	0.12%	3.2	0.3	735.20	734.94	738.60	738.85	734.40	734.14	3.04	3.54	3.41	3.91
12	11	0.26	0.72	0.19	0.51	0.63	15.50	3.74	1.91	2.52	12	52	0.50	0.29%	3.2	0.3	734.94	734.69	738.85	739.55	734.14	733.89	3.54	4.50	3.91	4.86
11	5	0.00	0.00	0.00	0.00	0.51	0.63	3.70	1.91	2.52	12	72	0.50	0.29%	3.2	0.4	734.69	734.32	739.55	740.58	733.89	733.52	4.50	5.89	4.86	6.26
10	9	0.16	0.54	0.09	0.09	0.16	15.00	3.80	0.33	2.11	12	90	0.35	0.01%	2.7	0.6	737.17	736.85	740.65	740.95	736.37	736.05	3.11	3.73	3.48	4.10
9	8	0.09	0.82	0.07	0.16	0.25	15.80	3.72	0.59	2.11	12	132	0.35	0.03%	2.7	0.8	735.35	734.89	740.95	740.95	734.55	734.09	5.23	5.69	5.60	6.06
8	7	0.09	0.74	0.07	0.23	0.34	16.40	3.63	0.83	2.11	12	17	0.35	0.05%	2.7	0.1	734.89	734.83	740.95	741.30	734.09	734.03	5.69	6.10	6.06	6.47
7	6	0.00	0.00	0.00	0.23	0.34	16.50	3.62	0.83	2.11	12	33	0.35	0.05%	2.7	0.2	734.83	734.72	741.30	741.15	734.03	733.92	6.10	6.07	6.47	6.43
6	5	0.09	0.60	0.05	0.46	0.62	16.70	3.59	1.66	2.11	12	112	0.35	0.22%	2.7	0.7	734.72	734.32	741.15	740.58	733.92	733.52	6.07	5.89	6.43	6.26
5	4	0.00	0.00	0.00	0.97	1.25	17.40	3.52	3.42	5.75	18	10	0.30	0.11%	3.3	0.1	734.32	734.29	740.58	740.81	733.12	733.09	5.75	6.01	6.26	6.52
4	3B	0.00	0.00	0.00	0.97	1.25	17.50	3.51	3.42	5.75	18	32	0.30	0.11%	3.3	0.2	733.79	733.70	740.81	741.00	732.59	732.50	6.51	6.79	7.02	7.30
3A	3	0.00	0.00	0.00	0.00	0.00	15.00	3.80	0.00	4.70	18	5	0.20	0.00%	2.7	0.0	735.81	735.81	741.00	741.10	732.50	732.45	6.79	6.94	5.19	5.29
3	2	0.00	0.00	0.00	0.00	0.00	15.00	3.80	0.00	4.70	18	13	0.20	0.00%	2.7	0.1	735.81	735.79	741.10	741.09	734.61	734.59	4.78	4.80	5.29	5.30
2	1	0.00	0.00	0.00	0.00	0.00	15.10	3.79	0.00	4.70	18	13	0.20	0.00%	2.7	0.1	735.79	735.76	741.09	741.07	734.59	734.56	4.80	4.80	5.30	5.31
19	18	0.00	0.00	0.00	0.00	0.00	15.00	3.80	0.00	7.32	12	61	4.22	0.00%	9.3	0.1	740.30	737.72	741.28	741.09	739.50	736.92	0.61	3.00	0.98	3.37
6A	6	0.19	0.95	0.18	0.18	0.19	15.00	3.80	0.69	1.21	8	53	1.00	0.33%	3.5	0.3	735.24	734.72	742.45	741.15	734.71	734.18	6.94	6.16	7.21	6.43



NOTE: CROSS-HATCHED AREA #17 REPRESENTS OFF-SITE AREAS THAT ARE BEING BY-PASSED THRU OUR SITE AND IS NOT TRIBUTARY TO THE PROPOSED UNDERGROUND DETENTION SYSTEM DESIGN.

NOTE: DUE TO THE PROPOSED USE OF THE PROPERTY, INFILTRATION/CPVC WILL NOT BE REQUIRED

**Site Drainage Data**

Select County: **Oakland**

Proposed

Impervious Area: 0.96 acre    C = 0.95  
 Greenbelt Area: 0.16 acre    C = 0.20  
 Total Area (A): 1.12 acre  
 Weighted Coefficient of Runoff (C): 0.84

Rainfall Intensity  
 Flood Control Time of Concentration, Tc = 17.50 minutes

**Rainfall Intensity**    12/19/2021 Detroit V2.02

Time of Concentration (Tc)    17.50 min

Since 15<Tc<60, use intensity equation  
 $I = 30.2 / [(T + 9.17)^{0.81}]$     2.11 in/hr  
 $I_{10} = 50.12 / [(T + 9.17)^{0.81}]$     3.51 in/hr  
 $I_{100} = 83.3 / [(T + 9.17)^{0.81}]$     5.83 in/hr

CPVC: Channel Protection Volume Control Volume  
 Note:  $V_{cpvc} = 3630 \cdot 1.2^2 \cdot CA = (4356)CA$   
 $V_{cpvc} = (4719)CA$     4,440 cf

CPVC: Channel Protection Rate Control Volume: Extended Detention  
 Note:  $V_{ed} = 3630 \cdot 1.9^2 \cdot CA = 6897CA$   
 $V_{ed} = (6897)CA$     6,489 cf  
 $Q_{v_{ed}} = V_{ed} / (48 \cdot 60 \cdot 60)$     0.04 cfs

Note:  $V_{wq} = 15 \cdot 3630 \cdot 1^2 \cdot CA = (545)CA$  with no infiltration downstream  
 100-Year Allowable Outlet Rate  
 Since  $A < 2.0$  Ac,  $Q_{v_{100}} = 1.0$   
 $Q_{v_{100}} = 1.00$  cfs/ac

100-Year Peak Allowable Discharge  
 Area, A = 1.12 ac  
 $Q_{v_{100}} = Q_{v_{100}}(A)$     1.12 cfs

100-Year Runoff Volume  
 $C_{mod} = 1.3C$ . If  $C_{mod} > 1$ , set  $C_{mod}$  to 1. = 1.00  
 Note:  $V_{100R} = 3630 \cdot 5.2^2 \cdot C_{mod}A = 18,876C_{mod}A$   
 $V_{100R} = (18,985)CA$     17,861 cf

100-Year Peak Inflow  
 $Q_{100R} = C(100)A$     5.48 cfs

Storage Curve Factor (Vs/Vr)  
 $R = 0.206 - 0.15 \ln(Q_{100R}/Q_{100IN})$     0.444

100-Year Storage Volume  
 $V_s = R(V_{100R})$     7,930 cf

No infiltration will be provided, so no CPVC deduction is taken.  
 $V_{100D} = V_s$     7,930 cf

$V_{100D}$  must be larger or equal to  $V_{ed}$ :  
 Is  $V_{100D} \geq V_{ed}$ ?    Yes

$V_{100D} = 7,930$  cf

**Design Requirements for WQU 4**

Weighted Runoff Coefficient (C) = 0.84  
 WQU Tributary Area (A) = 1.12  
 WQU Time of Concentration (Tc) = 17.40 min  
 (from Storm Sewer Calculations)

**Mechanical Separator Sizing**  
 $I = 30.2 / [(T + 9.17)^{0.81}]$     2.12 in/hr  
 $I_{10} = 60 / [(T + 9.17)^{0.81}]$     4.21 in/hr

**Treatment Flow Rate**  
 $Q_{v_{100}} = C(100)A$     1.99 cfs

**Bypass Flow Rate**  
 10 Year Peak Inflow:  $Q_{100IN} = 3.96$  cfs

Select Unit: CS-5  
 Selected Unit Treatment Flow Rate: 2.81 cfs  
 Selected Unit Bypass Flow Rate: call Contech cfs

**Design Requirements**

CPVC Extended Detention:  $V_{ed} = 6,489$  cf  
 CPVC Allowable Outlet Rate:  $Q_{v_{ed}} = 0.04$  cfs  
 100-Year Storage Volume:  $V_{100D} = 7,930$  cf  
 100-Year Allowable Outlet Rate:  $Q_{v_{100}} = 1.12$  cfs

**Underground Detention Storage**

Required Storage Volume: 7,930 cf  
 Pipe Diameter: 60 in  
 Pipe Volume per Linear Foot: 19.63 cf/ft  
 Total Pipe Length, L: 429 ft  
 Pipe Storage Volume: 8,423 cf  
 Storage in Stone Backfill? N  
 Porosity: 0 %  
 Stone Storage Volume: 0 cf  
 Stone Storage Volume per Linear Foot: 0.00 cf/ft  
 Provided System Volume: 8,423 cf  
 Lowest Grade over system: 741  
 Required Cover over system: 2.00 ft  
 Invert of Detention System: 732.50  
 Invert of OCS: 732.45

**Storage in Circular Pipe Detention System**

Effective End Area of Pipe: 19.63 sf  
 Effective Diameter of Pipe: 5.00 ft  
 Invert of System: 732.45

**CPVC Volume**

Fill Area of CPVC Storage Volume (CPR/L): 15.13 sf  
 $\phi = 232.10$  degrees  
 $\phi = 4.05$  radians  
 Fill Area: 15.12 sf  
 Effective Fill Depth (per method above): 3.60 ft  
 $V_{ed}$  Storage Elevation: 738.05  
 Fill Depth: 3.60 ft

**Orifice Design**

$Q_{v_{ed}}$  Outlet Rate: 0.04 cfs  
 Avg. Head over Orifice (Hw): h=0.5y  
 Area of Orifice (A): 0.0056 sf  
 $A = Q_v / (0.62 \cdot \sqrt{2g} \cdot Hw)$

Enter Outlet Hole Diameter: 1 in  
 Restriction Hole Area: 0.0055 sf  
 Enter Number of Restriction Holes: 1  
 Set orifice elevation at: 732.45  
 Total Restriction Hole Area: 0.0055 sf  
 Actual Discharge (Q): 0.036 cfs  
 $Q = 0.62 \cdot A \cdot (2 \cdot g \cdot Hw)^{0.5}$

Must be detained for at least 48 hours:  
 Drain Time: 49.55 hrs

**100-Year Volume**

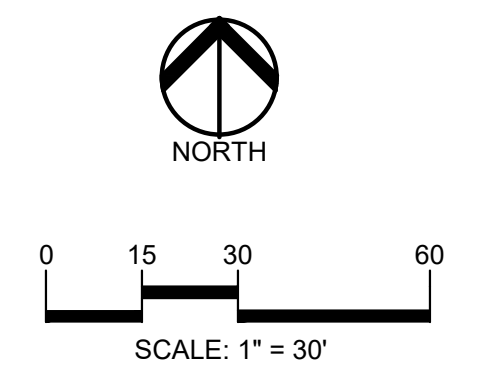
Fill Area of 100-Year Volume: 18.49 sf  
 $\phi = 283.13$  degrees  
 $\phi = 4.94$  radians  
 Fill Area: 18.49 sf  
 Effective Fill Depth (per method above): 4.46 ft  
 $V_{100D}$  Storage Elevation: 738.91  
 Fill Depth: 4.46 ft

**Orifice Design**

$Q_{v_{100}}$  Outlet Rate: 1.12 cfs  
 Flow through  $Q_{v_{ed}}$  Orifice at this head: 0.057 cfs  
 $Q_{100}$  Allowed: 1.06 cfs  
 Residual Head over Orifice (Hres): 0.86 ft  
 Area of Orifice (A): 0.2303 sf  
 $A = Q_v / (0.62 \cdot \sqrt{2g} \cdot Hres)$

Outlet Hole Diameter: 6.25 in  
 Restriction Hole Area: 0.2129 sf  
 Number of Restriction Holes: 1  
 Set orifice elevation at: 736.05  
 Total Restriction Hole Area: 0.2129 sf  
 Actual Discharge (Q): 1.04 cfs  
 $A = Q_v / (0.62 \cdot \sqrt{2g} \cdot Hw)$

Is this less than the  $Q_{v_{100}}$  of 1.12 cfs?    Yes  
 Drain Time: 49.91 hrs



**CAUTION!!**  
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE OR WARRANTY IS MADE AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
 29200 NORTHWESTERN HIGHWAY, SUITE 450  
 FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
 3420 ROCHESTER ROAD  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDOT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
 AUGUST 15, 2022

DRAWING TITLE  
**DRAINAGE AREA MAP**

PEA JOB NO. 2021-0117  
 P.M. LAA  
 DN. MT  
 DES. SWS

DRAWING NUMBER:  
**C-8.0**

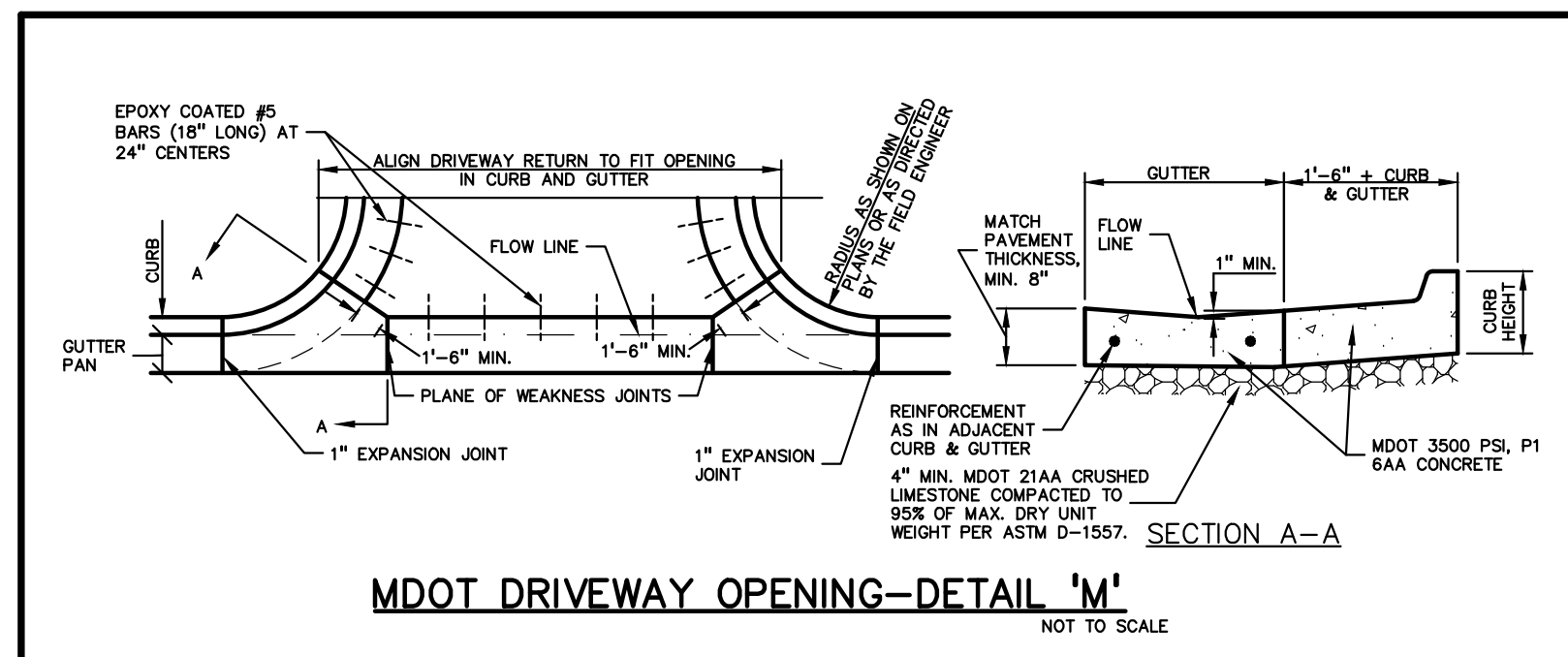
**NOT FOR CONSTRUCTION**  
 CITY FILE #22-029 SECTION #34



- GENERAL NOTES:**  
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT OSHA, MDOT AND MUNICIPALITY STANDARDS AND REGULATIONS.
  - THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
  - THE CONTRACTOR MUST CONTACT THE ENGINEER SHOULD THEY ENCOUNTER ANY DESIGN ISSUES DURING CONSTRUCTION. IF THE CONTRACTOR MAKES DESIGN MODIFICATIONS WITHOUT THE WRITTEN DIRECTION OF THE DESIGN ENGINEER, THE CONTRACTOR DOES SO AT HIS OWN RISK.
  - ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSPECTION FEES.
  - THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE 811/ONE CALL UTILITY LOCATING CENTER, THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. IF NO NOTIFICATION IS GIVEN AND DAMAGE RESULTS, SAID DAMAGE WILL BE REPAIRED AT SOLE EXPENSE OF THE CONTRACTOR. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
  - CONTRACTOR TO VERIFY THAT THE PLANS AND SPECIFICATIONS ARE THE VERY LATEST PLANS AND SPECIFICATIONS AND FURTHERMORE, VERIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED. ALL ITEMS CONSTRUCTED BY THE CONTRACTOR PRIOR TO RECEIVING FINAL APPROVAL, HAVING TO BE ADJUSTED OR RE-DONE, SHALL BE AT THE CONTRACTORS EXPENSE. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND/OR SPECIFICATIONS, THEY SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT SOLE EXPENSE OF THE CONTRACTOR.
  - ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
  - ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
  - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, SIGNAGE, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION). THE DESIGN ENGINEER, OWNER, CITY AND STATE SHALL NOT BE HELD LIABLE FOR ANY CLAIMS RESULTING FROM ACCIDENTS OR DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLY WITH TRAFFIC AND PUBLIC SAFETY REGULATIONS DURING THE CONSTRUCTION PERIOD.
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

- PAVING NOTES:**
- IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
  - PROVIDE EXPANSION JOINTS AND JOINT SEALANT AT TWO "END-OF-RADIUS" LOCATIONS (OPPOSITE SIDES AT EACH LONG END) OF CONCRETE CURB ISLANDS.
  - REFER TO ARCHITECTURAL PLANS FOR DETAILS OF FROST SLAB AT EXTERIOR BUILDING DOORS.
  - CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
  - CONCRETE PAVEMENT JOINTING - UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION:
    - WHERE PROPOSED CONCRETE ABUTS A STRUCTURE PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT, THE JOINT FILLER BOARD MUST BE AT LEAST THE FULL DEPTH OF THE CONCRETE AND HELD DOWN A 1/8" TO ALLOW FOR SEALING
    - WHERE PROPOSED CONCRETE ABUTS EXISTING CONCRETE OR IN BETWEEN POURS OF PROPOSED CONCRETE (CONSTRUCTION JOINT) PROVIDE 5/8" DOWELS EVERY 30" CENTER TO CENTER HALF WAY ALONG THE THICKNESS OF THE PROPOSED PAVEMENT. ALTERNATE DOWELS SIZES AND SPACING MUST BE APPROVED THE ENGINEER PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
    - WHERE PROPOSED CONCRETE ABUTS EXISTING OR PROPOSED SIDEWALK PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT.
    - WHERE PROPOSED CONCRETE ABUTS EXISTING OR PROPOSED CURBING PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT
    - CONTROL, LONGITUDINAL AND/OR TRANSVERSE JOINTS SHALL BE PLACED TO PROVIDE PANELS WITHIN THE PAVEMENT AS SQUARE AS POSSIBLE WITH THE FOLLOWING MAXIMUM SPACING PARAMETERS:
      - 6-INCH THICK CONCRETE PAVEMENT: 12' X 12'
      - 8-INCH THICK CONCRETE PAVEMENT: 15' X 15'
    - IRREGULAR-SHAPED PANELS MAY REQUIRE THE USE OF REINFORCING MESH OR FIBER MESH AS DETERMINED BY THE ENGINEER. THE USE OF MESH MUST BE APPROVED THE ENGINEER PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
    - IF A JOINT PLAN IS NOT PROVIDED IN THE PLANS, THE CONTRACTOR SHALL SUBMIT ONE TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
  - CONCRETE CURBING JOINTING - UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION:
    - WHERE PROPOSED CONCRETE CURBING ABUTS A STRUCTURE PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT
    - WHERE PROPOSED CONCRETE ABUTS EXISTING OR PROPOSED SIDEWALK PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT
    - WHERE PROPOSED CONCRETE ABUTS EXISTING CURBING PROVIDE A MINIMUM 1/2" EXPANSION JOINT WITH SEALANT
    - IN BETWEEN POURS OF PROPOSED CONCRETE CURBING (CONSTRUCTION JOINT)
      - CARRY THE REBAR CONTINUOUSLY BETWEEN POURS
      - IF THE REBAR IS NOT LONG ENOUGH TO CARRY CONTINUOUSLY THEN TIE TWO PIECES OF REBAR PER THE LATEST MDOT SPECIFICATIONS
    - CONTROL JOINTS SHALL BE PLACED A MAXIMUM 10' CENTER TO CENTER AND AT ALL RADIUS RETURNS

- GENERAL GRADING AND EARTHWORK NOTES:**  
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
  - ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
  - THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
  - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE AUTHORIZED PUBLIC AGENCY OF JURISDICTION. AN EROSION CONTROL PERMIT MUST BE SECURED FROM OAKLAND COUNTY PRIOR TO CONSTRUCTION.
  - ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT.
  - REFER TO SOIL EROSION CONTROL PLAN FOR ADDITIONAL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES (WILL BE PART OF FINAL SITE PLAN/ENGINEERING PLANS).
  - ALL SLOPES EXCEEDING 1:6 MUST BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
  - ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 4" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE THIRD PARTY TESTING COMPANY, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
  - ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
  - THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROOFROLLED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEOGRIDS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
  - SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL AREAS OR BELOW SUBGRADE IN CUT AREAS WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
  - SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED AS RECOMMENDED IN THE GEOTECHNICAL ENGINEERING REPORT FOR THE PROJECT.
  - ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.



form+ configurator

Twist Bike Rack

SKTWS

Quantity: 1

Weight: 34.00 lbs.

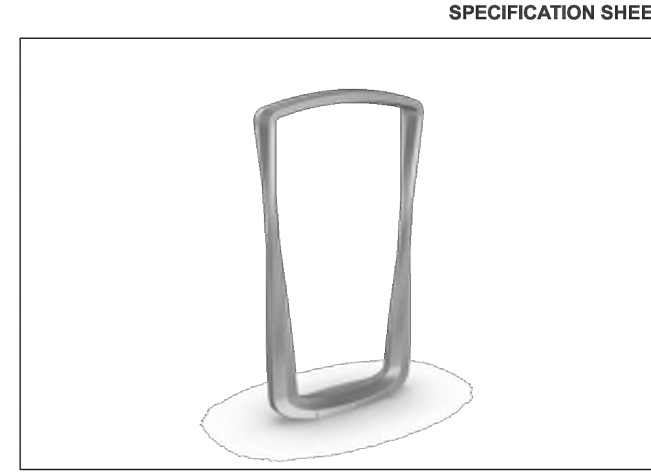
Dimension: 19.5\"/>

Body Material: Cast Aluminum

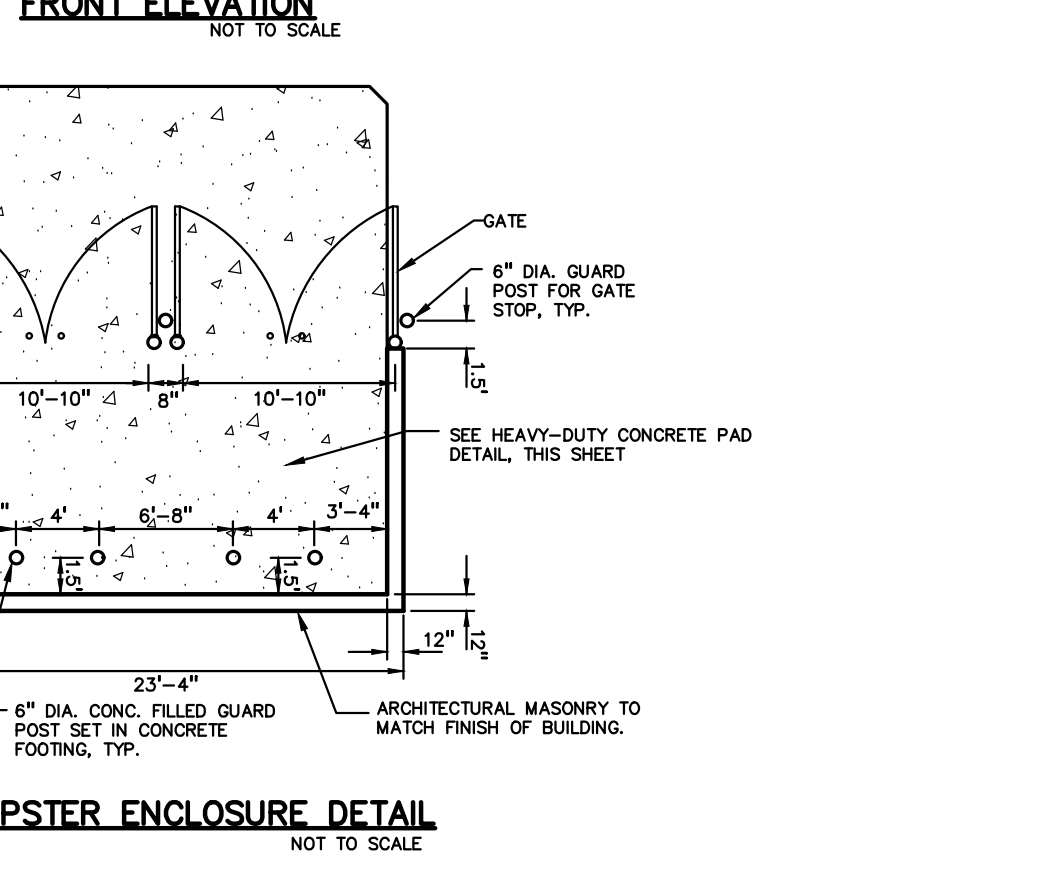
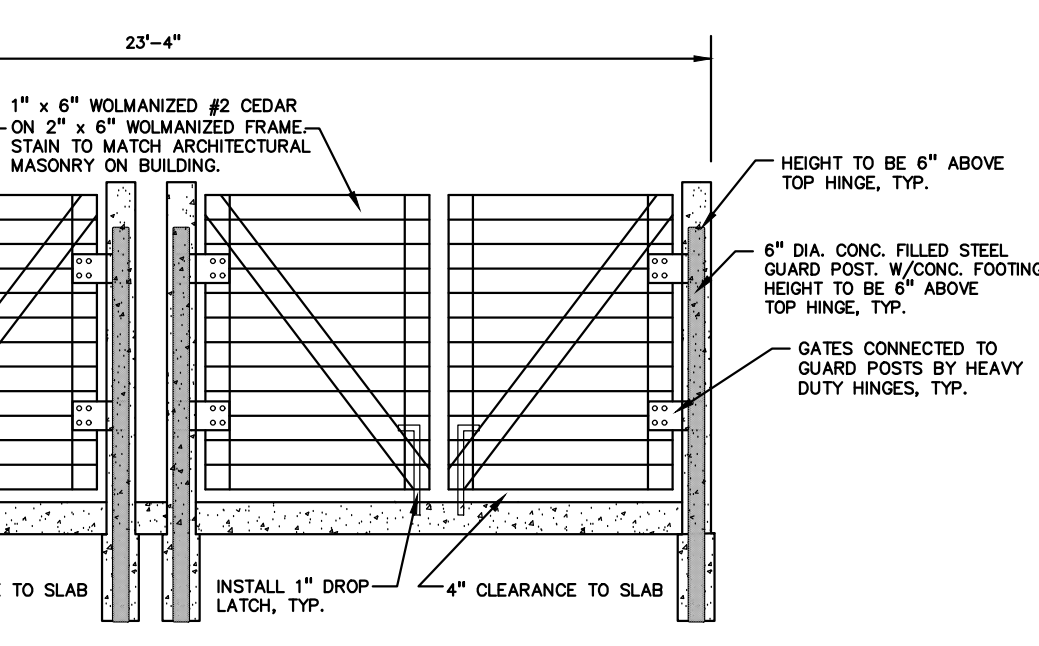
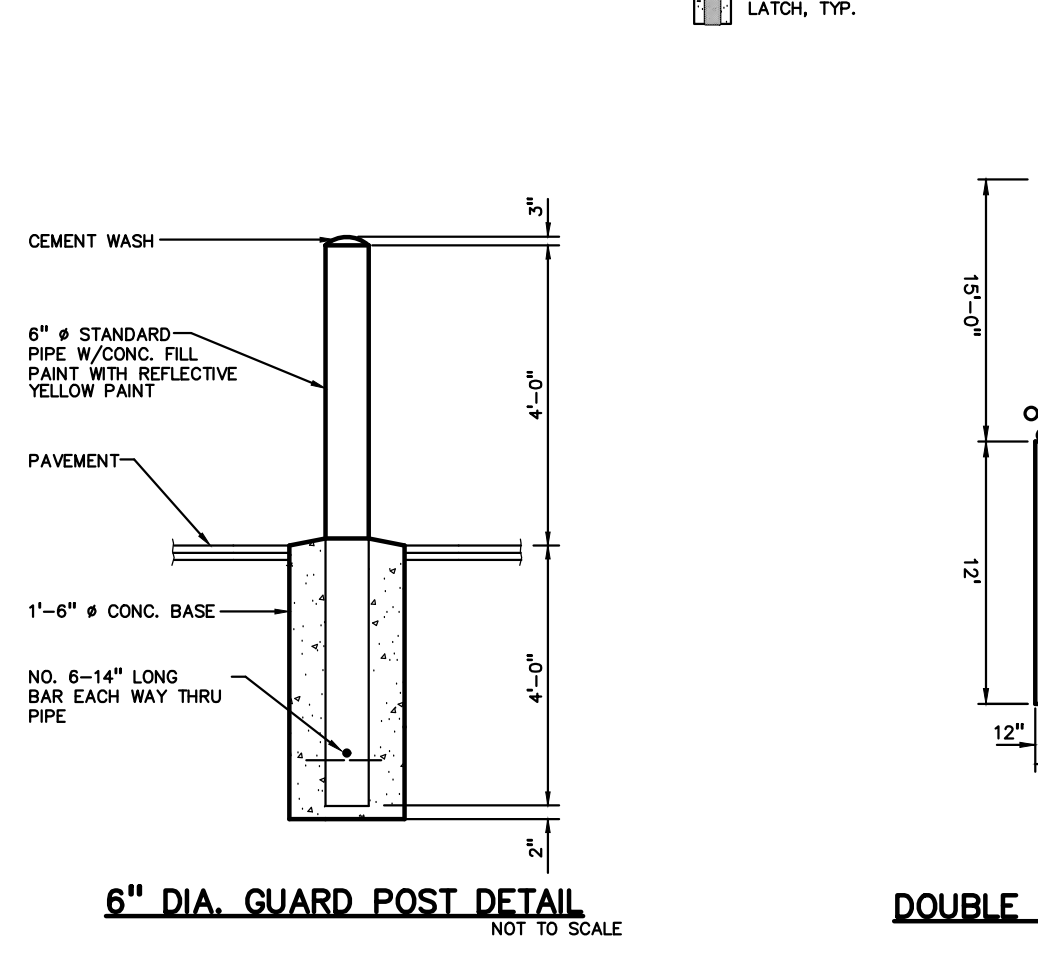
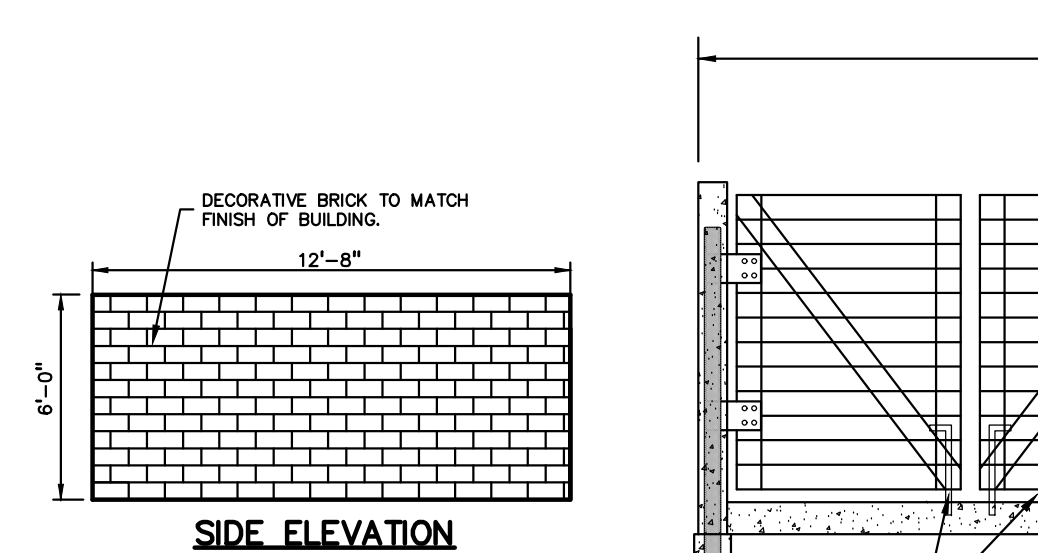
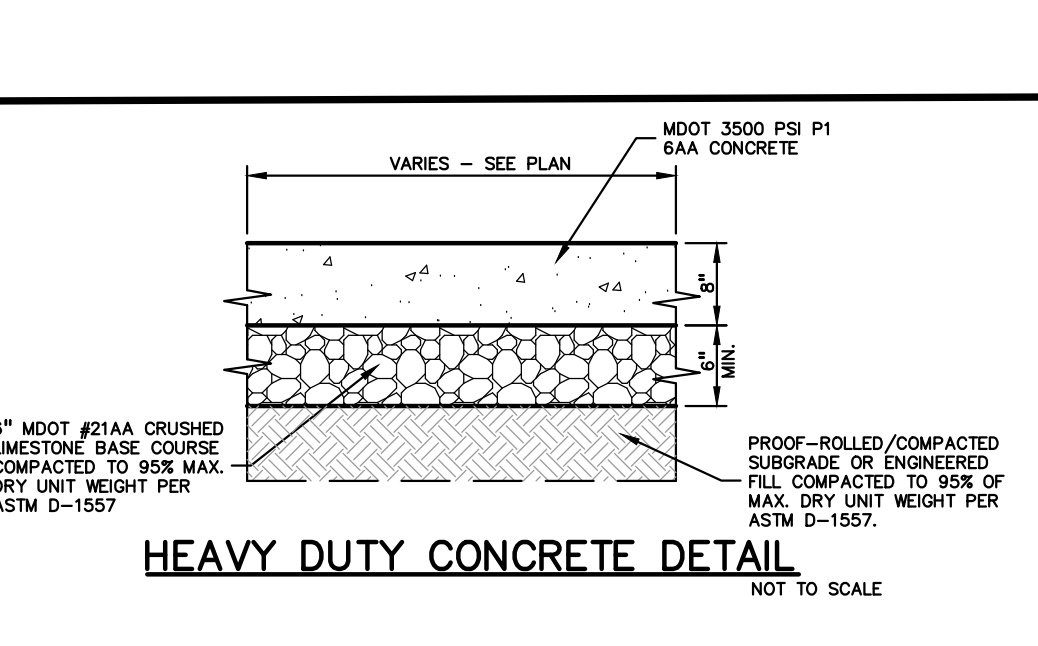
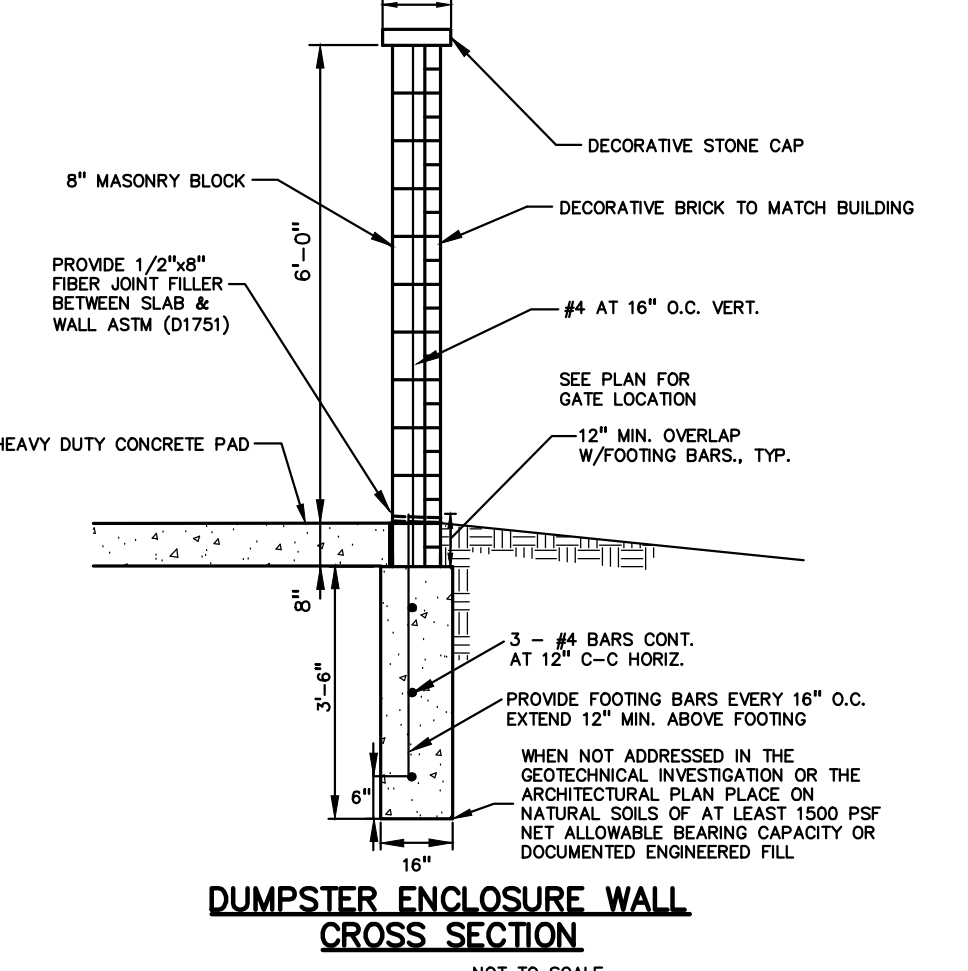
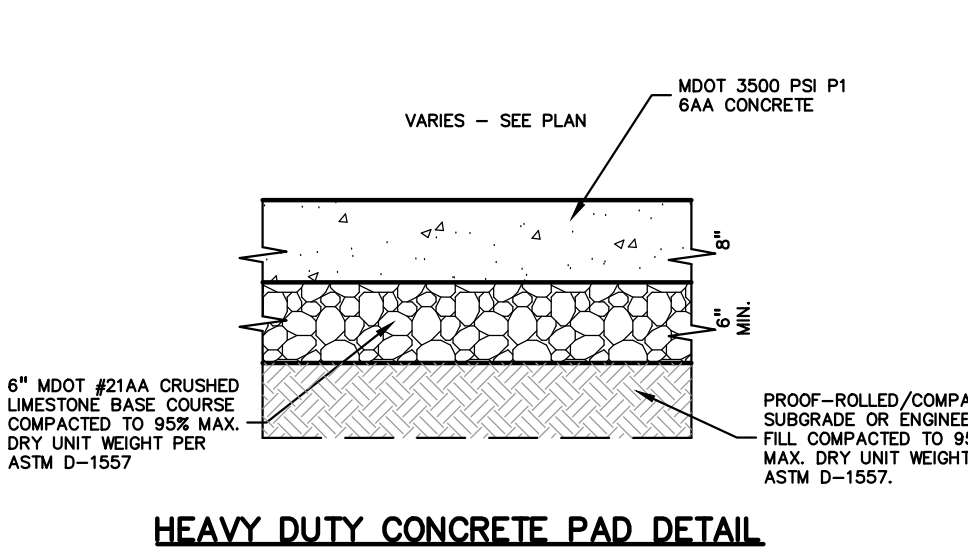
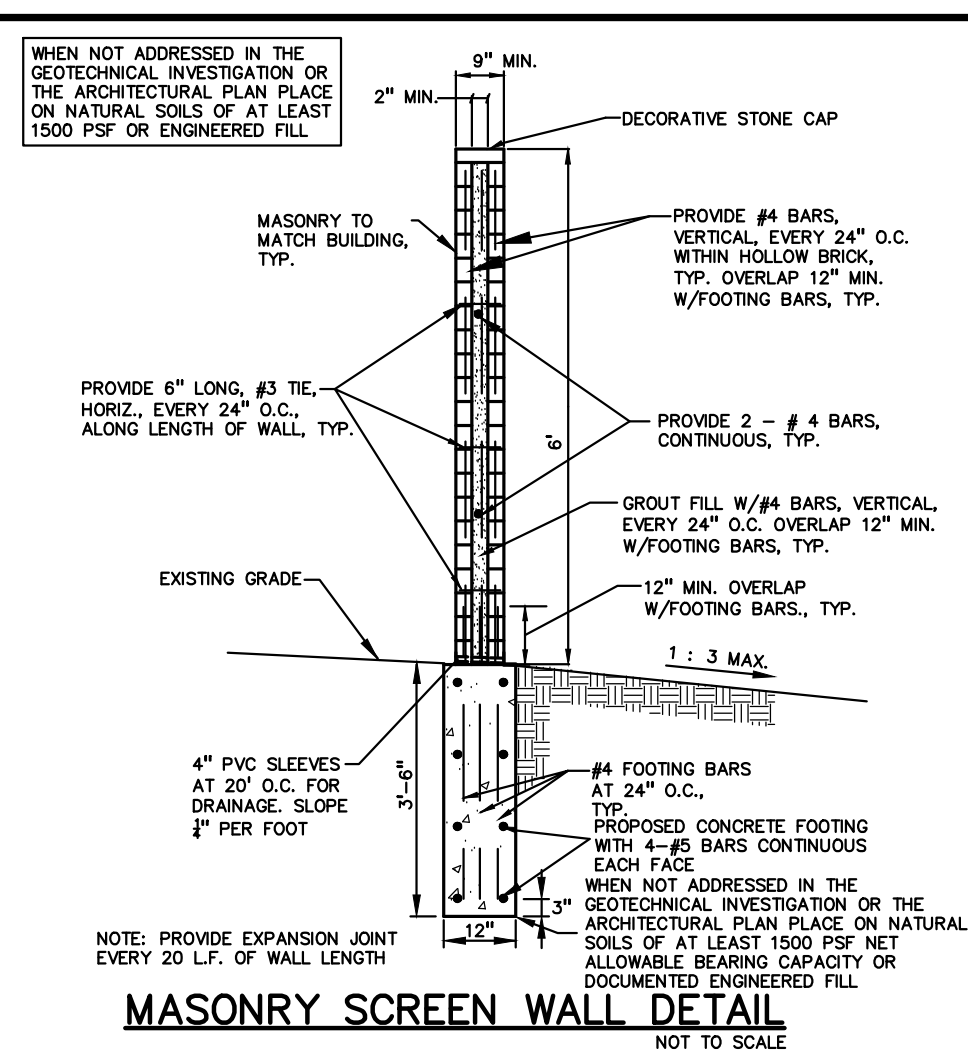
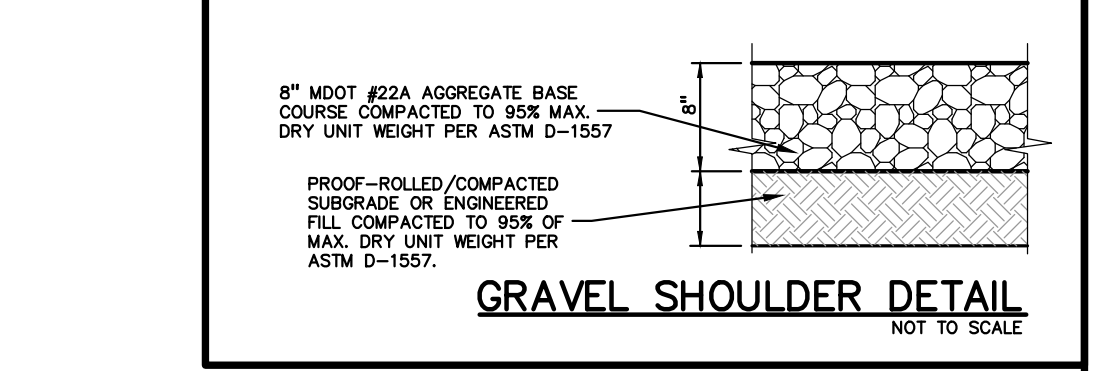
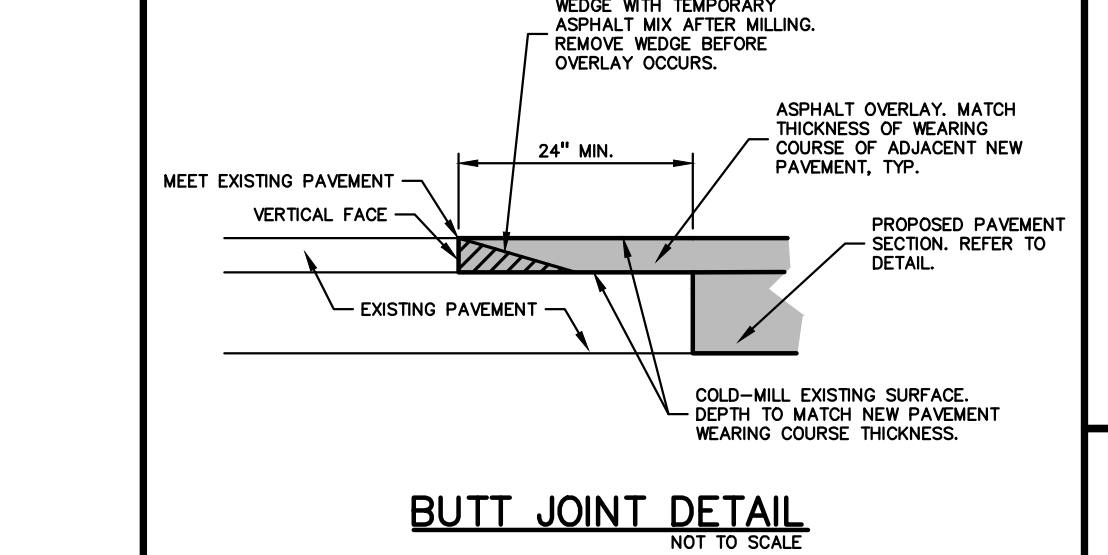
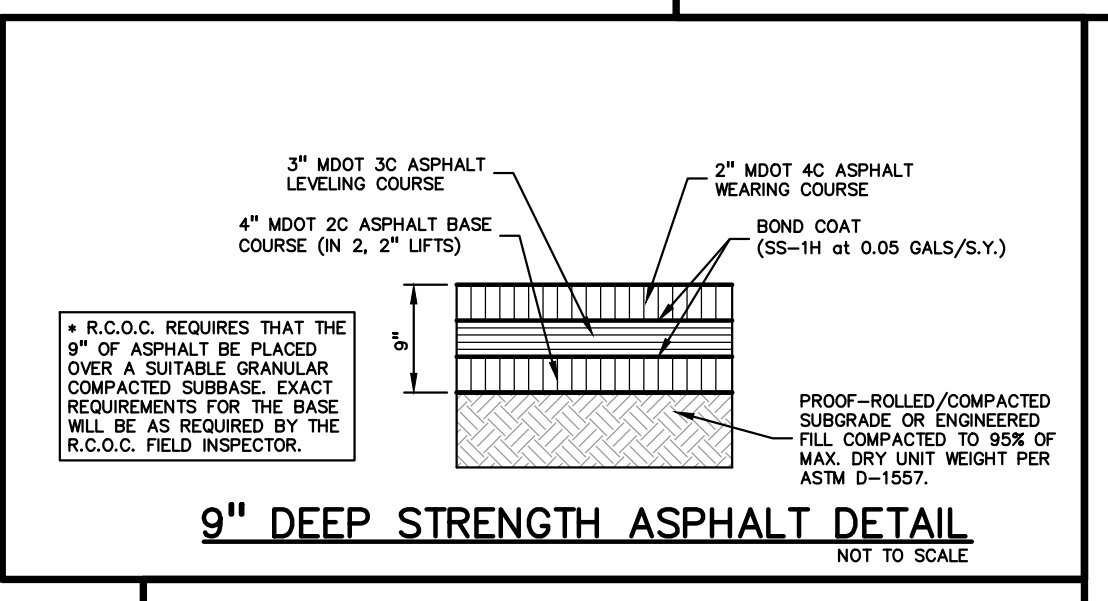
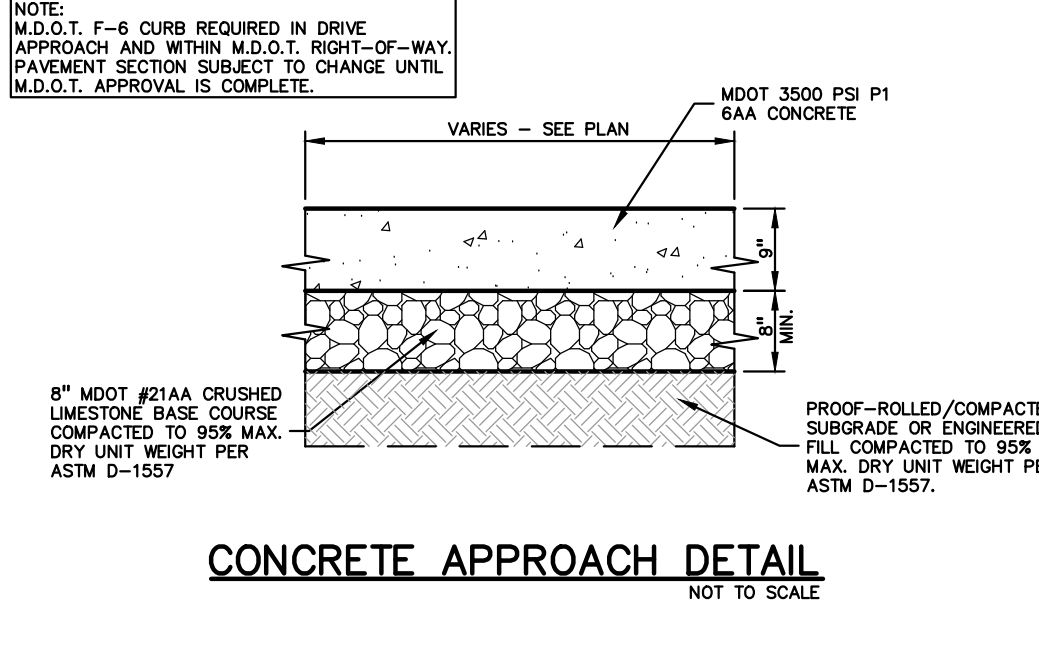
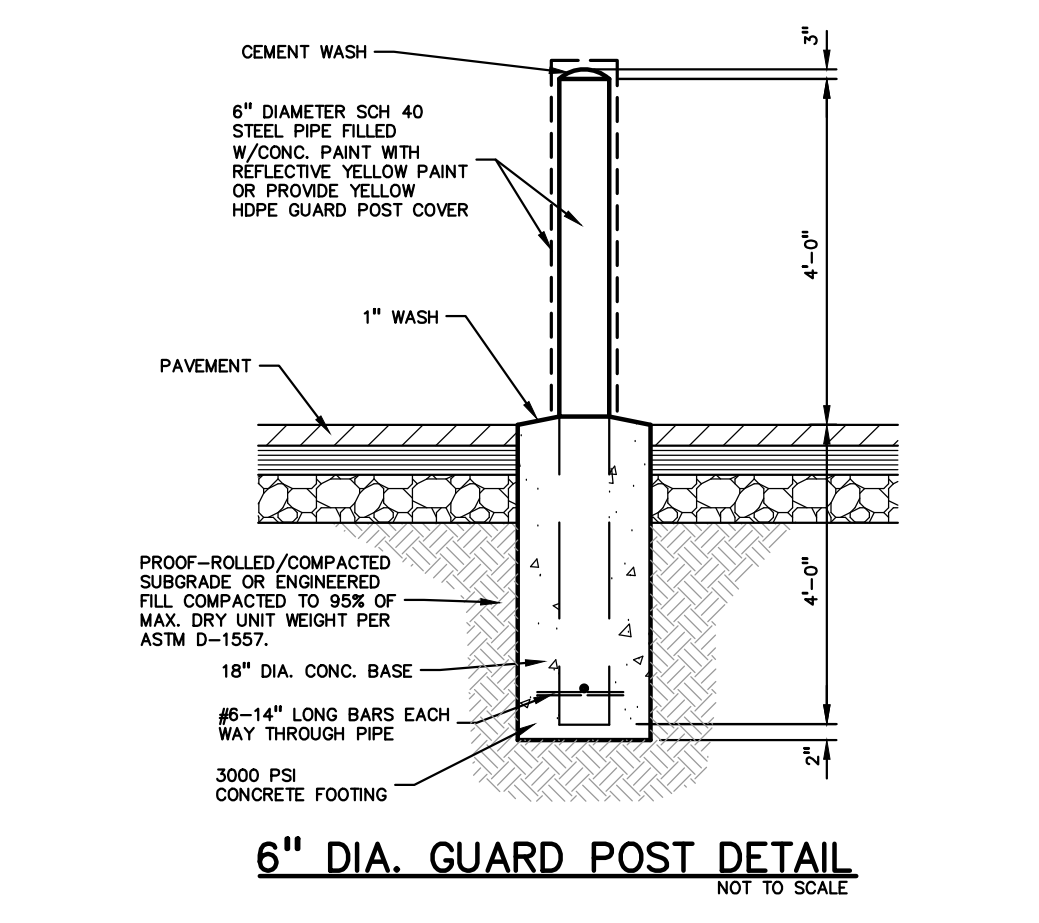
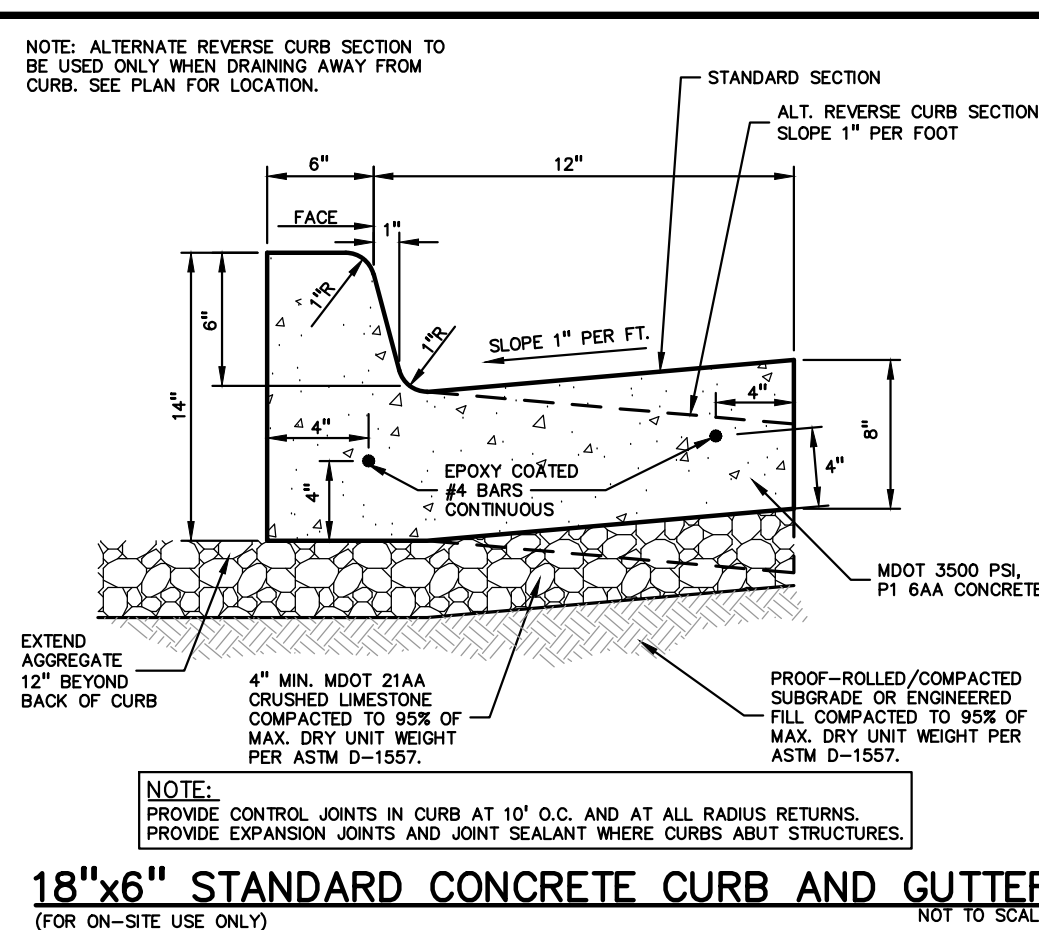
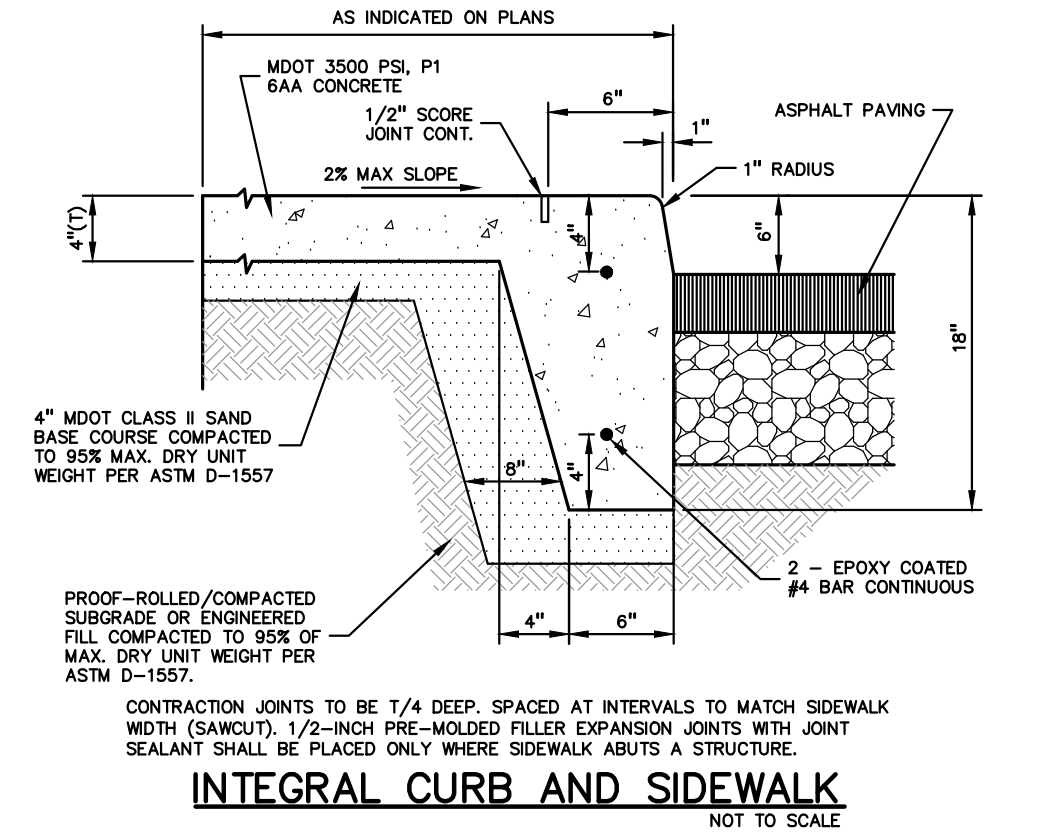
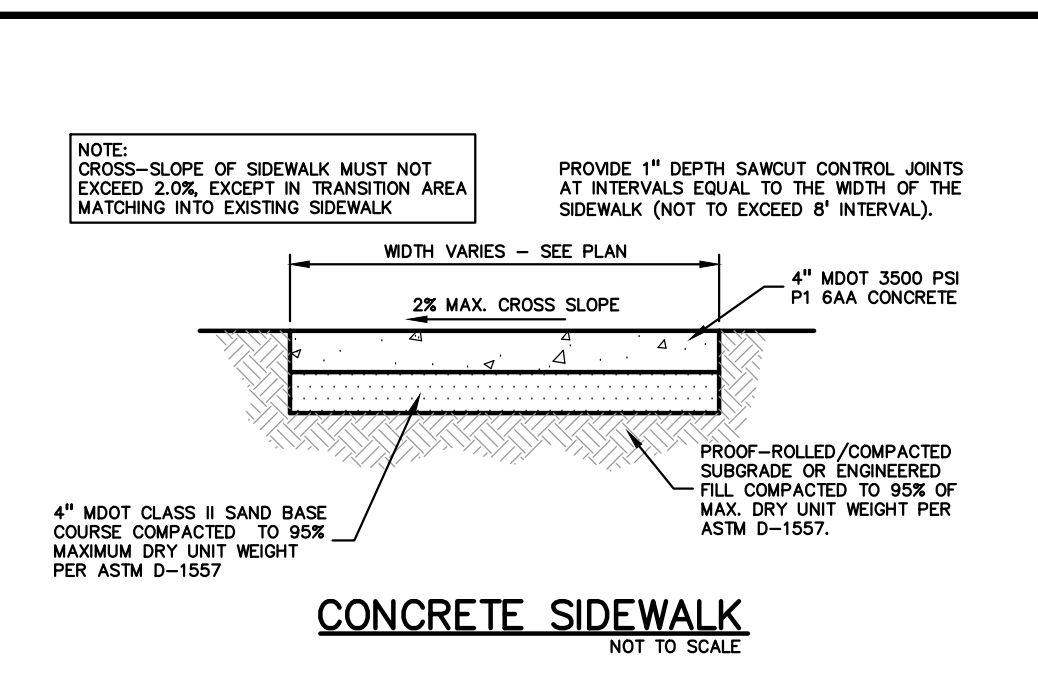
Cover Plate Material: Cast Aluminum

Body & Cover Plate Finish: Powdercoat, Aluminum Texture

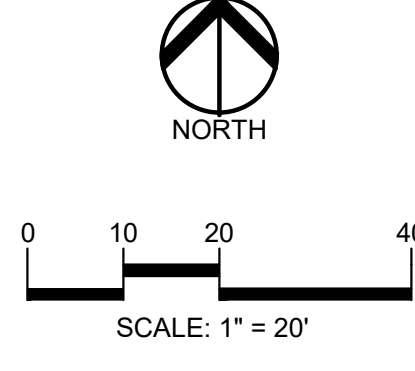
Mounting: Surface Mounted With Embedded Anchors



SPECIFICATION SHEET



**PEA GROUP**  
t: 844.813.2949  
www.peagroup.com



**811** Know what's below. Call before you dig.

**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY, SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

REVISIONS	
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDOT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**NOTES AND DETAILS**

PEA JOB NO. 2021-0117  
P.M. LAA  
DN. MT  
DES. SWS

DRAWING NUMBER:

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-9.1**

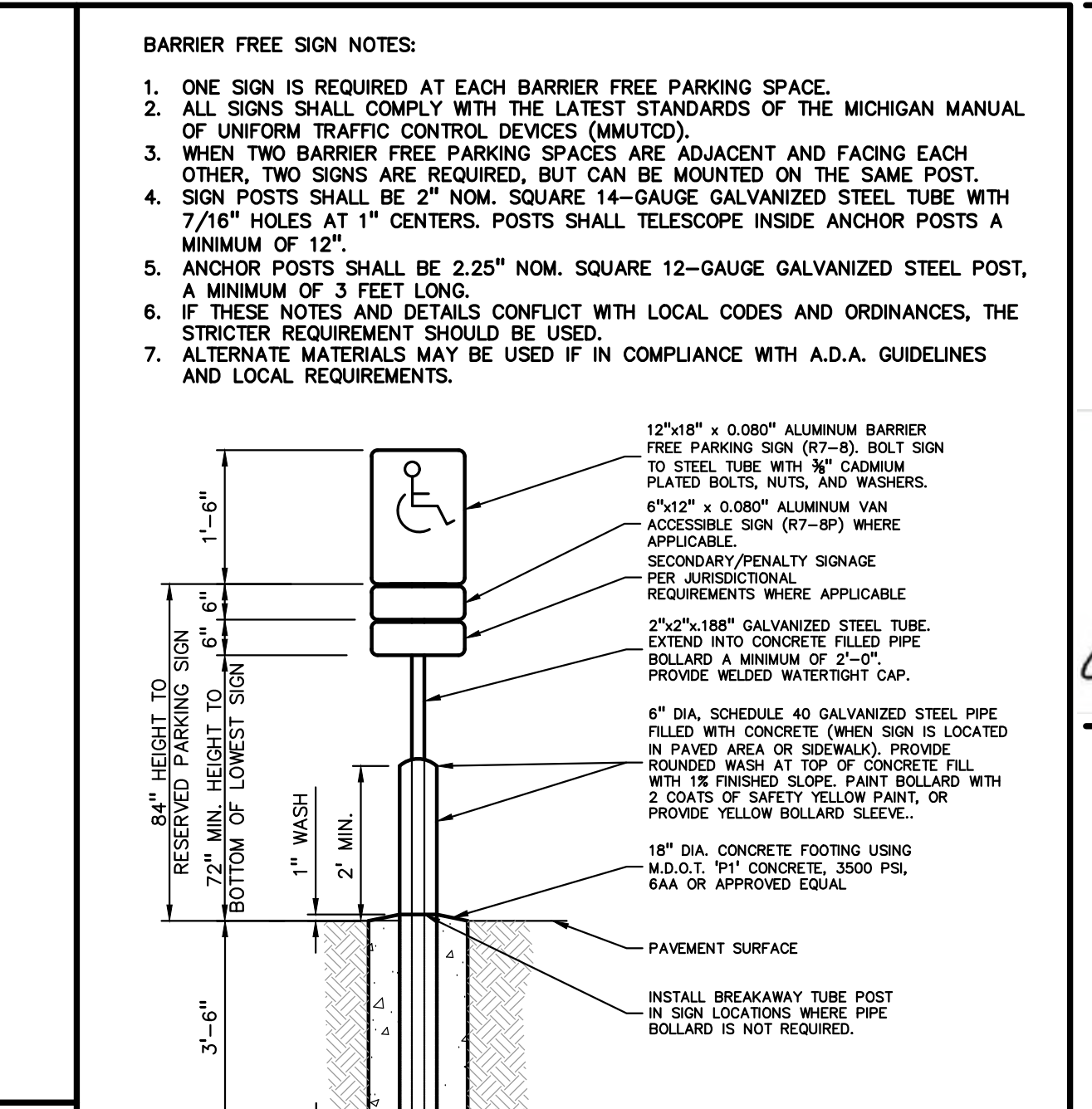
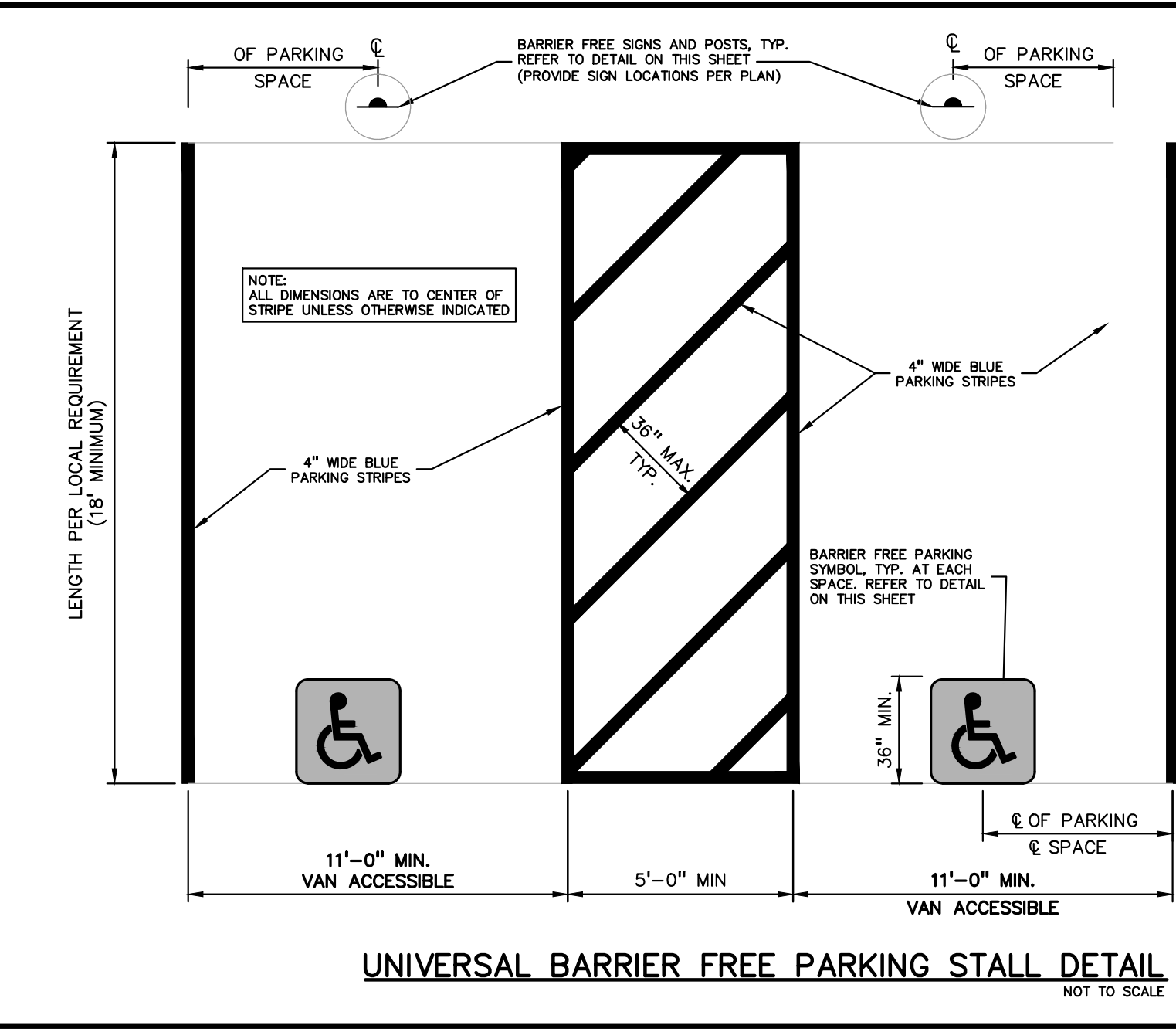
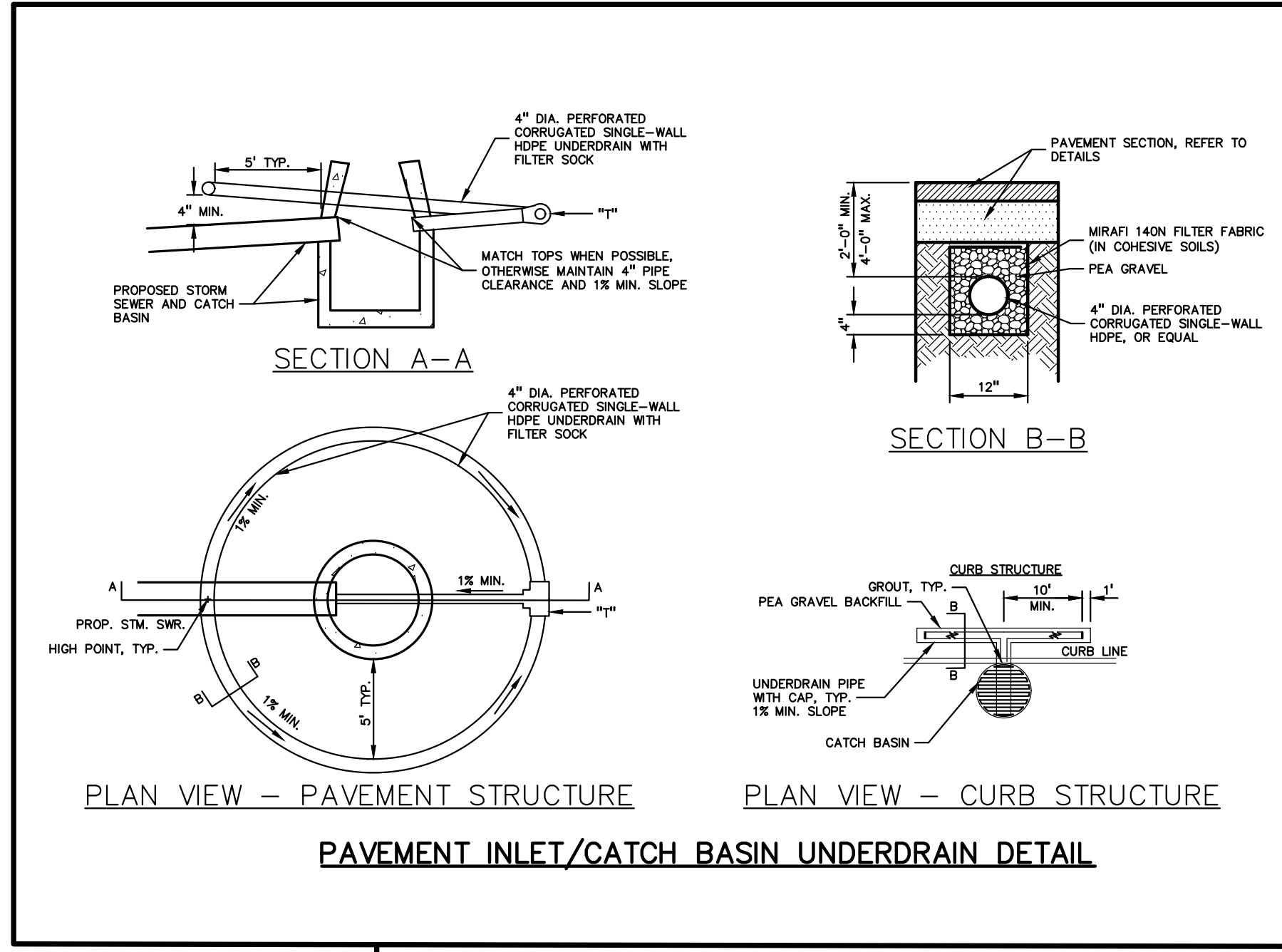
S:\PROJECTS\2024\2024-0117 ROCHESTER HILLS METAL UNDERCUT PLANS\CG-3002\FINALS-21-0117.dwg PLOT DATE: 8/27/2025 3:24 PM 10:00 AM



**GENERAL BARRIER FREE NOTES:**

THE FOLLOWING NOTES PROVIDE AN OUTLINE OF SOME OF THE REQUIREMENTS CONTAINED WITHIN THE "STANDARDS FOR ACCESSIBLE DESIGN - AMERICANS WITH DISABILITIES ACT 2010", AND "ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES", ICC/ANSI A117.1-2009. THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE REQUIREMENTS PRESENTED WITHIN THESE DOCUMENTS, WHICH ARE AVAILABLE IN FULL UPON REQUEST.

- AN ACCESSIBLE ROUTE CONSISTS OF WALK SURFACES, CURB RAMP AND RAMPS. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES, ACCESSIBLE PASSENGER LOADING ZONES, PUBLIC STREETS AND SIDEWALKS, AND PUBLIC TRANSPORTATION STOPS TO THE BUILDING OR FACILITY ENTRANCE THEY SERVE.
- THE RUNNING SLOPE OF ALL WALKING SURFACES SHALL NOT EXCEED 5% (1:20) AND THE CROSS-SLOPE SHALL NOT EXCEED 2% (1:48).
- WALKING SURFACES MUST BE LEVEL WITH PERMITTED VERTICAL CHANGES IN LEVEL NOT TO EXCEED 1/4", OR BEVELED CHANGES IN LEVEL NOT TO EXCEED 1/2". REFER TO DETAIL ON THIS SHEET. ANY CHANGE IN LEVEL GREATER THAN 1/2" MUST BE RAMPED.
- TURNING SPACES ALONG ACCESSIBLE ROUTES MUST BE AT LEAST 5 FEET WIDE IN ALL DIRECTIONS AND NOT EXCEED 2% SLOPE (1:48) IN ANY DIRECTION.
- ACCESSIBLE ROUTES WILL BE DESIGNED TO BE A MINIMUM OF 5 FEET WIDE. THE MINIMUM CLEAR WIDTH IS 3 FEET.
- RAMPS ALONG ACCESSIBLE ROUTES WILL HAVE A RUNNING SLOPE GREATER THAN 5% (1:20) AND LESS THAN 8.3% (1:12).
- THE CROSS-SLOPE OF RAMP RUNS SHALL NOT EXCEED 2% (1:48).
- THE MINIMUM CLEAR WIDTH OF ANY RAMP IS 36 INCHES.
- THE MAXIMUM RISE FOR ANY RAMP (NOT INCLUDING CURB RAMPS) SHALL NOT EXCEED 30 INCHES. LANDINGS ARE REQUIRED AT THE TOP AND BOTTOM OF EACH RAMP. LANDINGS SHALL HAVE A CROSS-SLOPE NOT EXCEEDING 2% (1:48). SHALL BE 5 FEET LONG AND AT LEAST AS WIDE AS THE RAMP CLEAR WIDTH. IF THERE IS A CHANGE OF DIRECTION AT A LANDING, THEN THE LANDING MUST BE AT LEAST 5 FEET WIDE AND 5 FEET LONG.
- HANDRAILS ARE REQUIRED FOR ANY RAMP (NOT INCLUDING CURB RAMPS) WITH A RISE GREATER THAN 6 INCHES. ALL HANDRAILS ARE REQUIRED TO HAVE EDGE PROTECTION UNLESS ADJOINING ANOTHER ACCESS POINT OR IF THE VERTICAL DROP-OFF AT THE EDGE OF THE RAMP DOES NOT EXCEED 1/2" IN 10 FEET. EDGE PROTECTION CAN BE PROVIDED BY MEANS OF A 4" MIN. CURB OR BARRIER.
- CURB RAMPS ALONG ACCESSIBLE ROUTES SHALL NOT BE STEEPER THAN 8.3% (1:12). APPROACHING SLOPES TO THE RAMP CANNOT EXCEED 5%, WHICH INCLUDES SIDEWALKS, PAVEMENT, GUTTERS ETC.
- IF CURB RAMP SIDES ARE FLARED, THE FLARES SHALL NOT BE STEEPER THAN 10% (1:10).
- CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.
- HANDRAILS ARE NOT REQUIRED ON CURB RAMPS.
- WHERE DETECTABLE WARNING IS REQUIRED AT CURB RAMPS, THE DETECTABLE WARNING SHALL BE 24" MINIMUM IN DEPTH AND SHALL EXTEND THE FULL WIDTH OF THE RAMP, THE DETECTABLE WARNING SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE.
- FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, ONE VAN ACCESSIBLE SPACE SHALL BE PROVIDED.
- ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE FROM PARKING TO A BUILDING ENTRANCE.
- BARRIER FREE CAR PARKING SPACES SHALL BE A MINIMUM OF 11 FEET WIDE WITH AN ACCESS AISLE 5 FEET WIDE MINIMUM.
- SURFACE SLOPES WITHIN THE PARKING SPACES AND AISLES SHALL NOT EXCEED 2% (1:48).
- VERTICAL AREAS INCLUDING PARKING SPACES, AISLES AND PATHWAYS, REQUIRE A MINIMUM VERTICAL CLEARANCE OF 98 INCHES.
- ACCESSIBLE PARKING SPACES ARE REQUIRED TO BE IDENTIFIED BY SIGNS. THE SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. VAN PARKING SPACES ARE REQUIRED TO BE DESIGNATED AS "VAN ACCESSIBLE". REFER TO DETAILS ON THIS SHEET.



**PEA GROUP**  
www.peagroup.com  
t: 844.813.2949

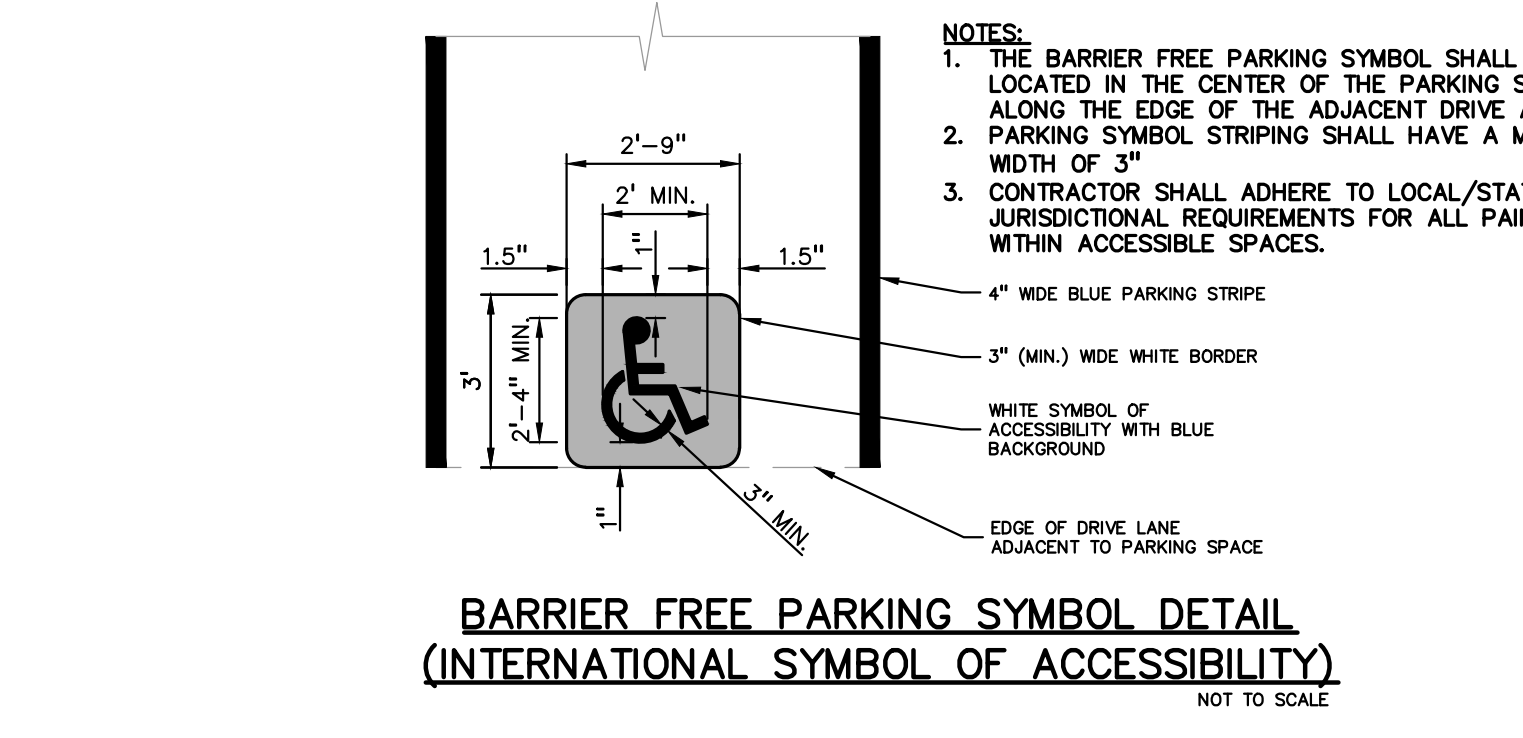
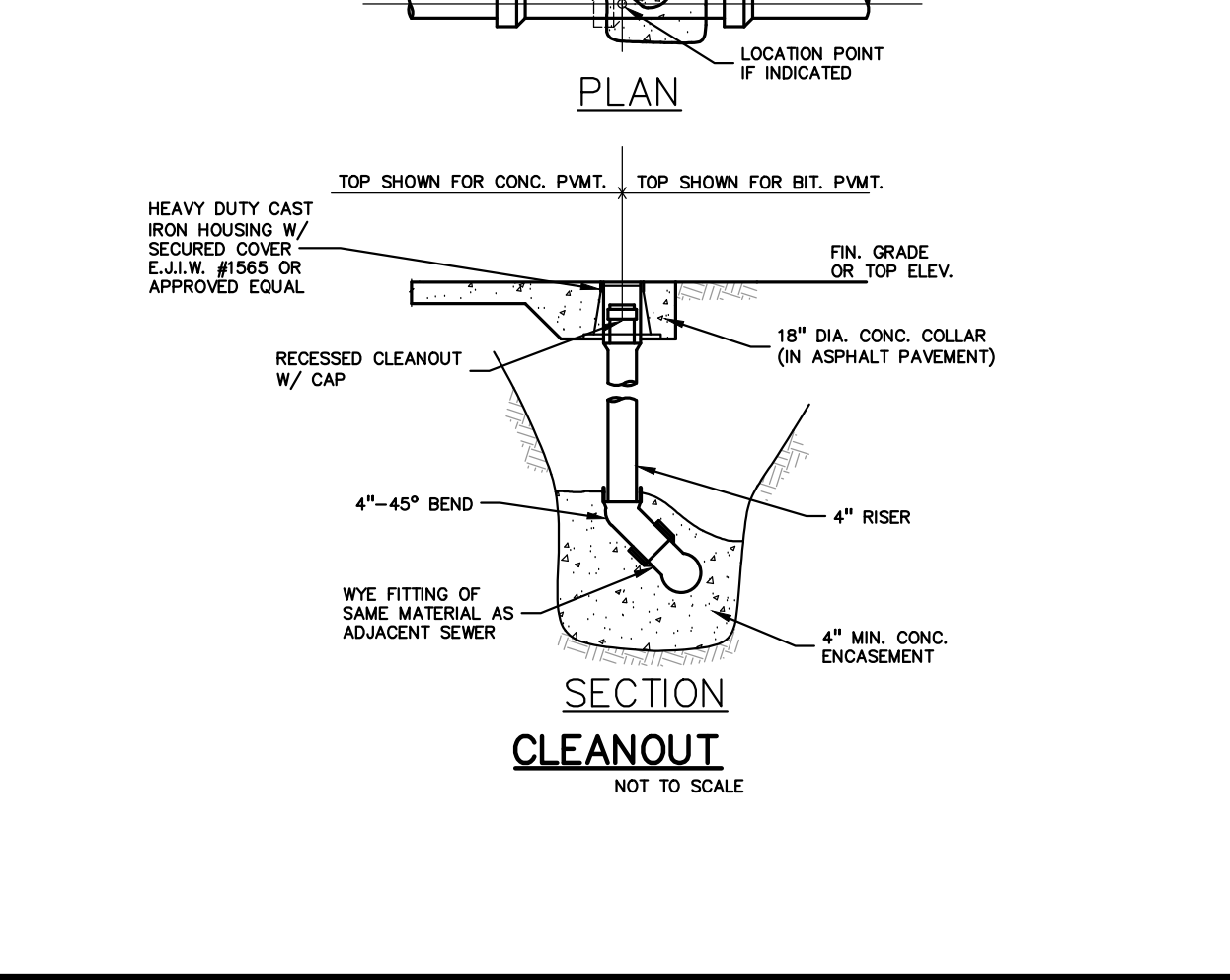
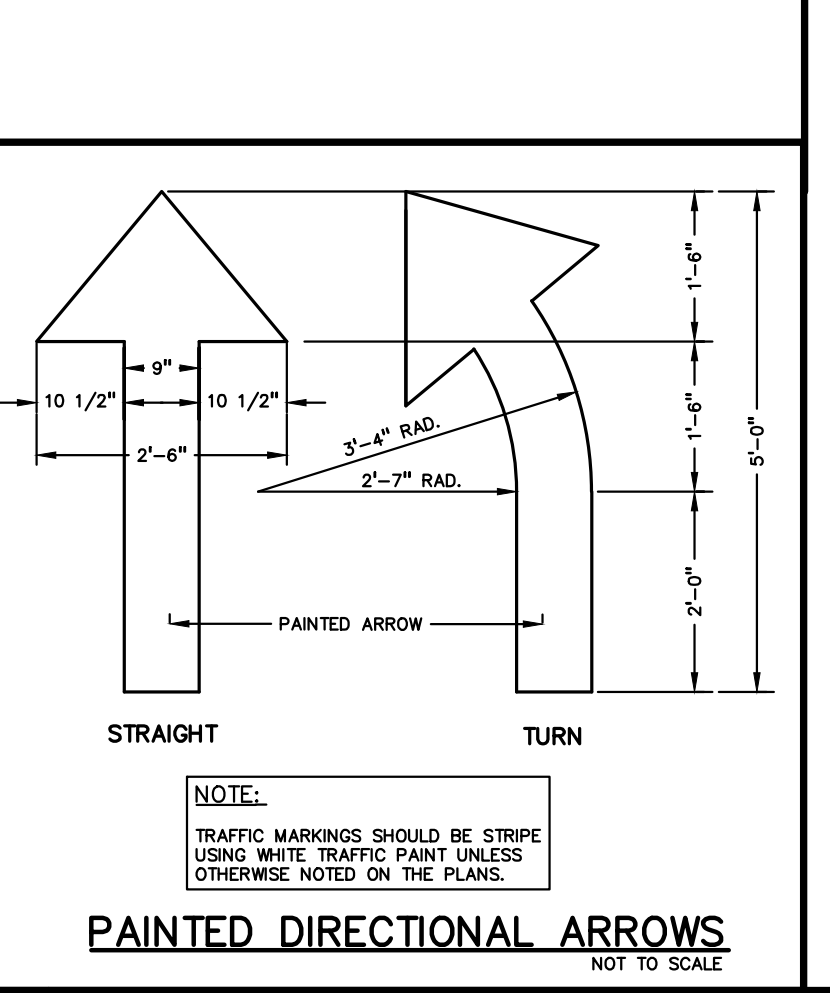
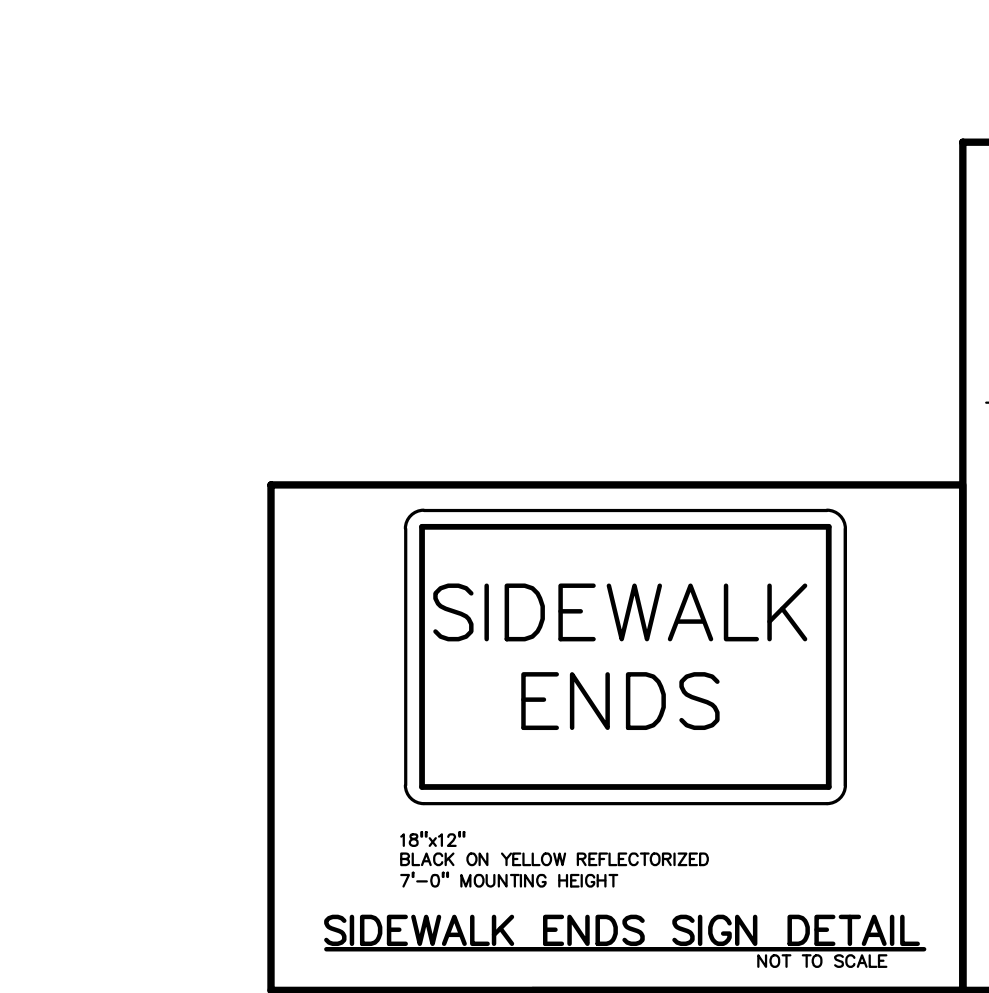
STATE OF MICHIGAN  
JAMES J. ...  
PROFESSIONAL ENGINEER

NORTH

0 10 20 40  
SCALE: 1" = 20'

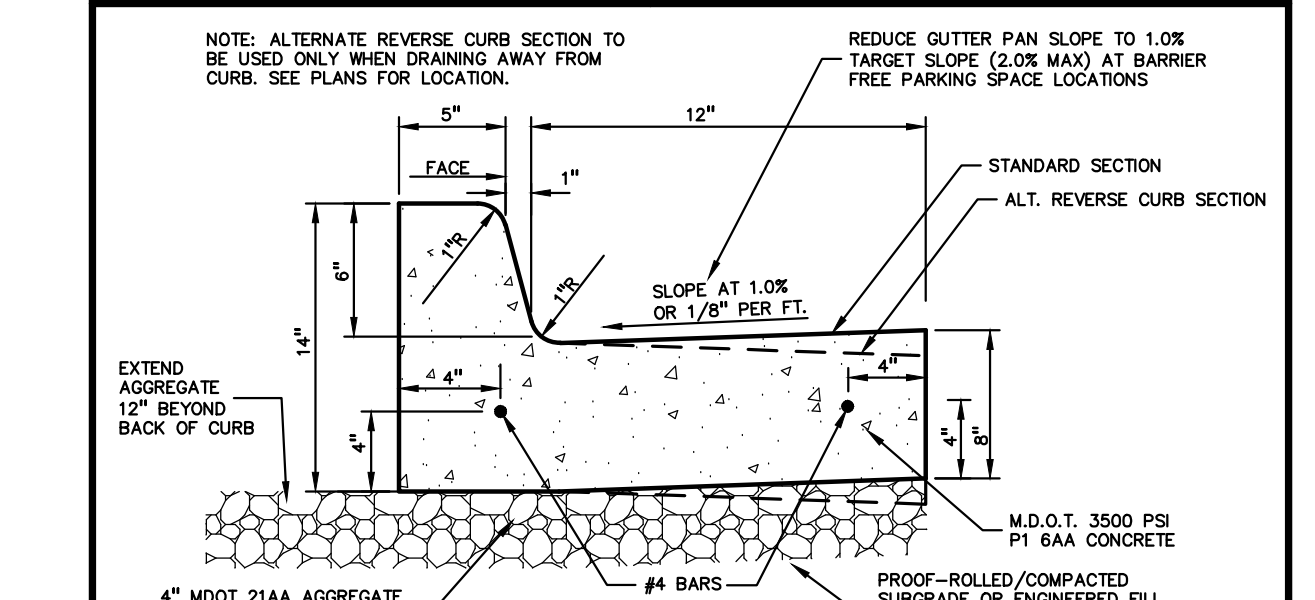
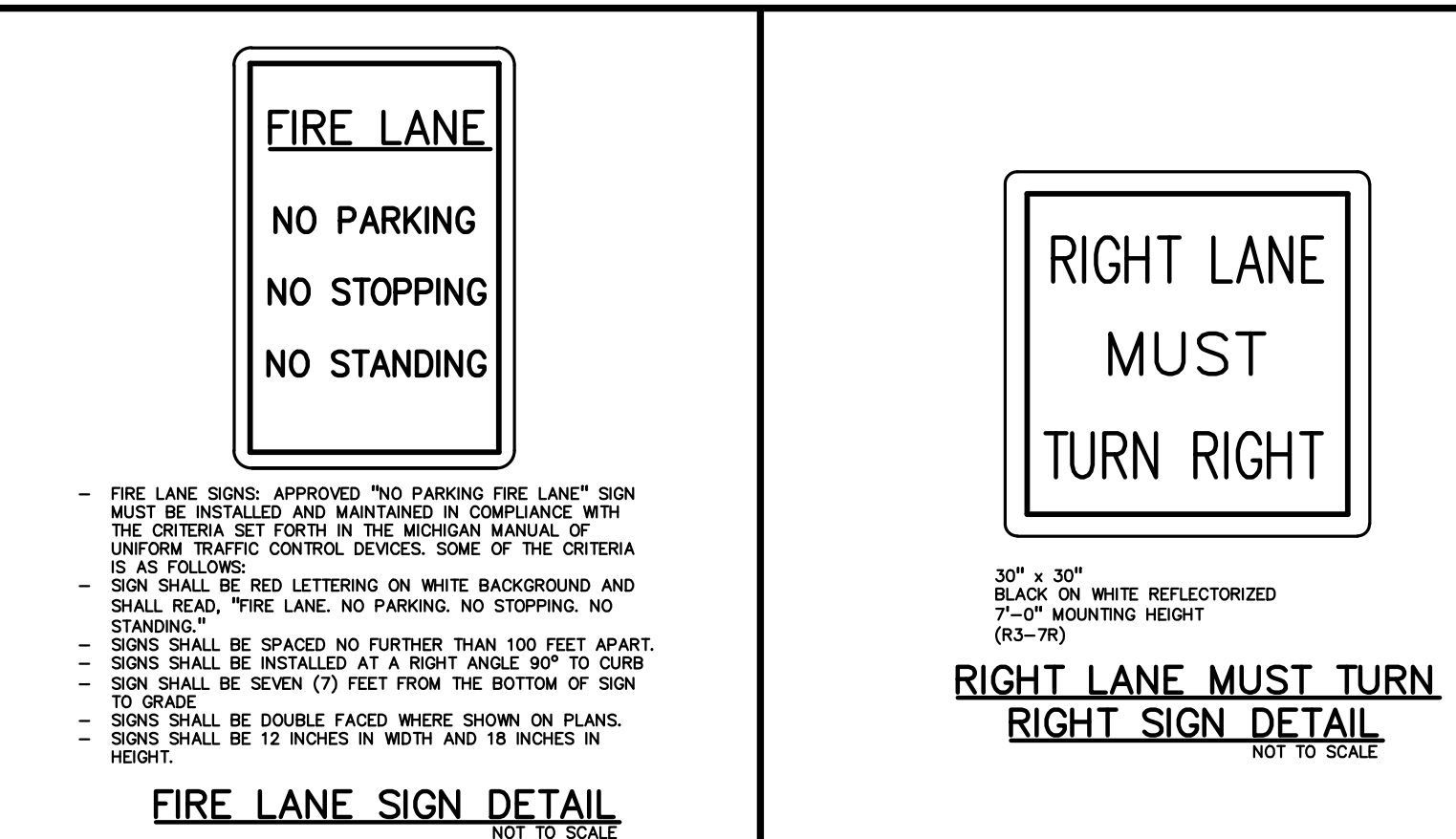
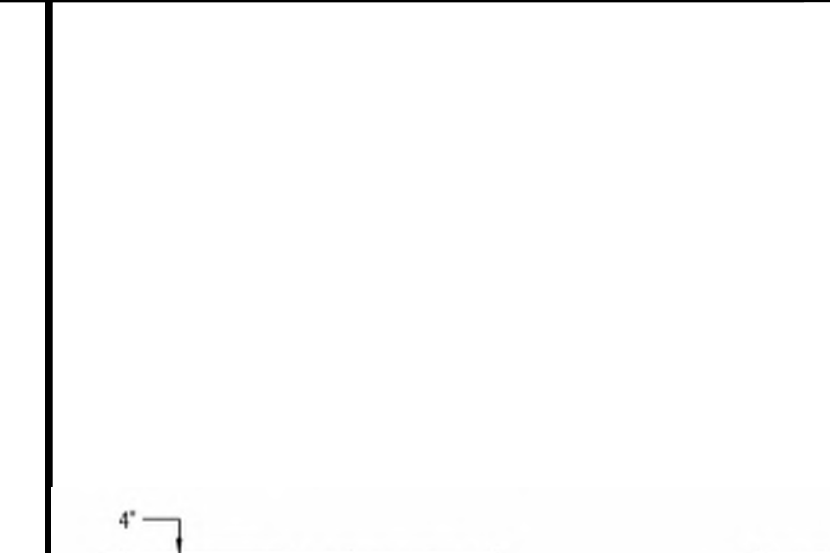
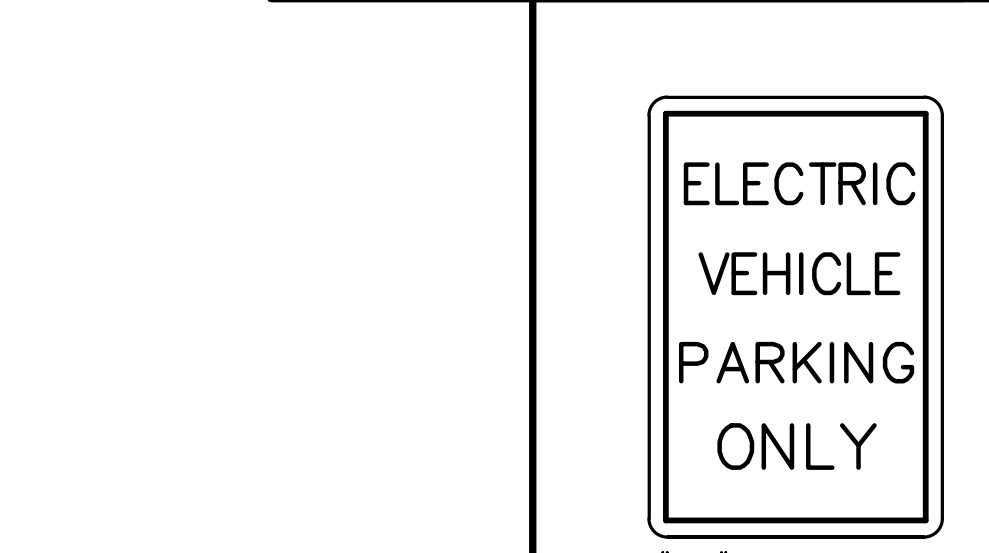
**811** Know what's below. Call before you dig.

CAUTION!! THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY FOR INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



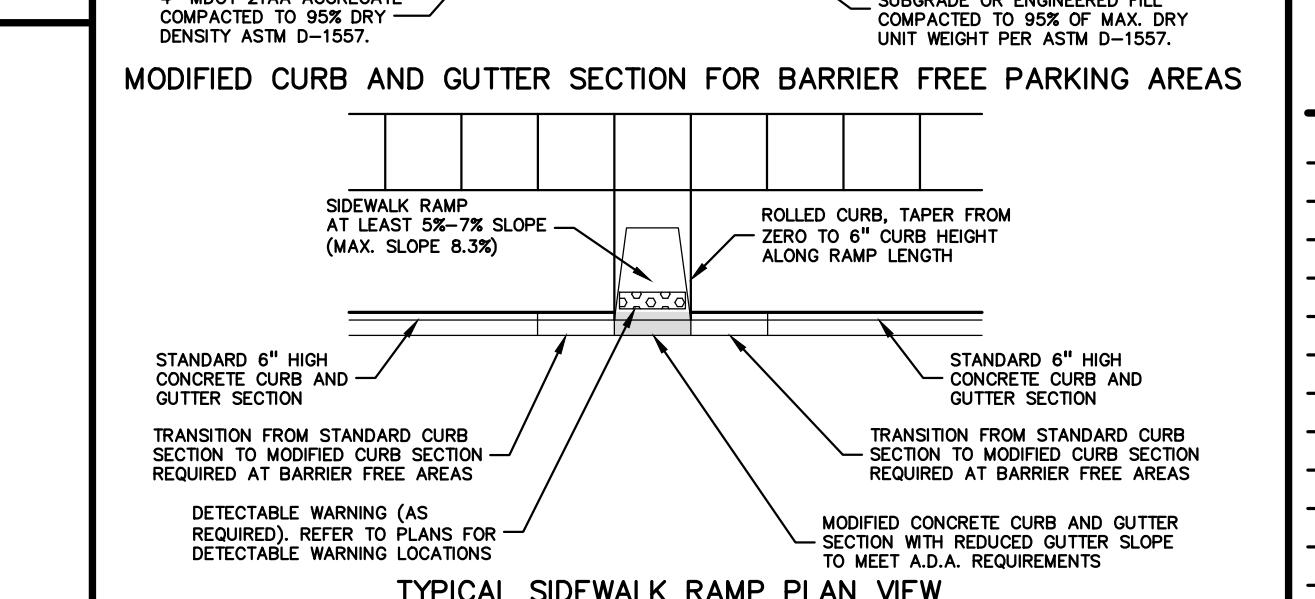
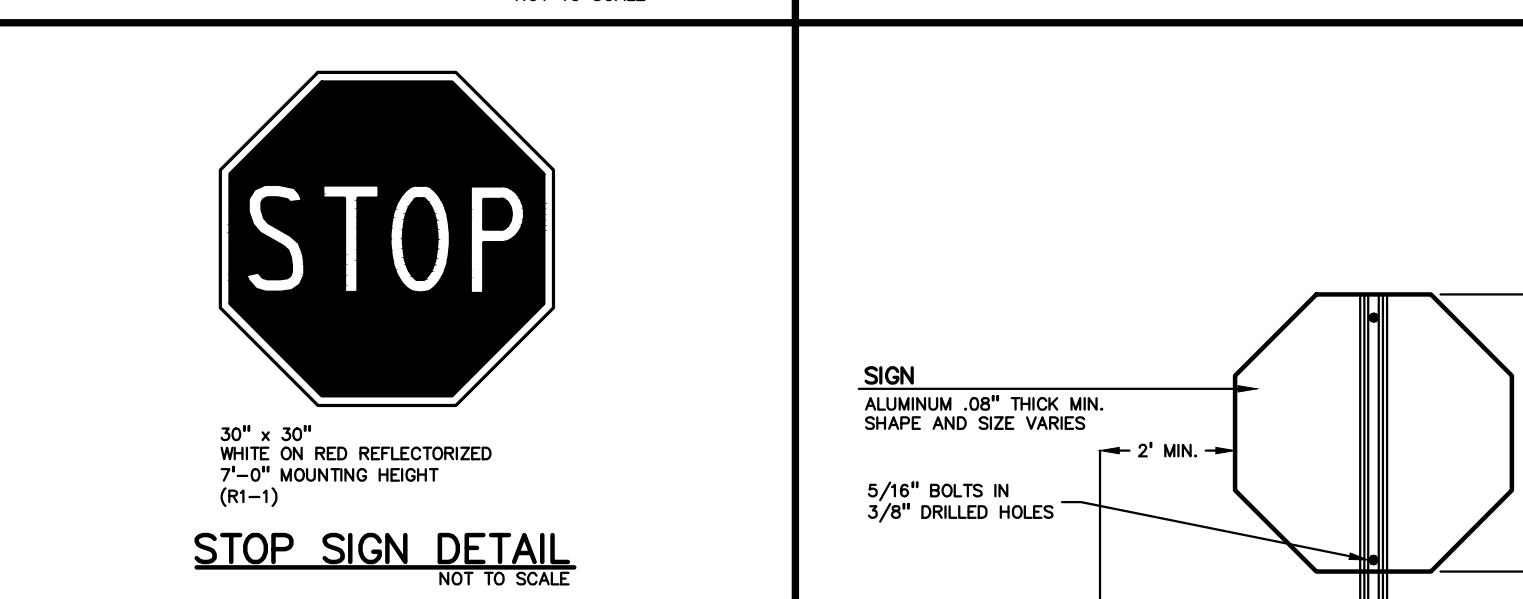
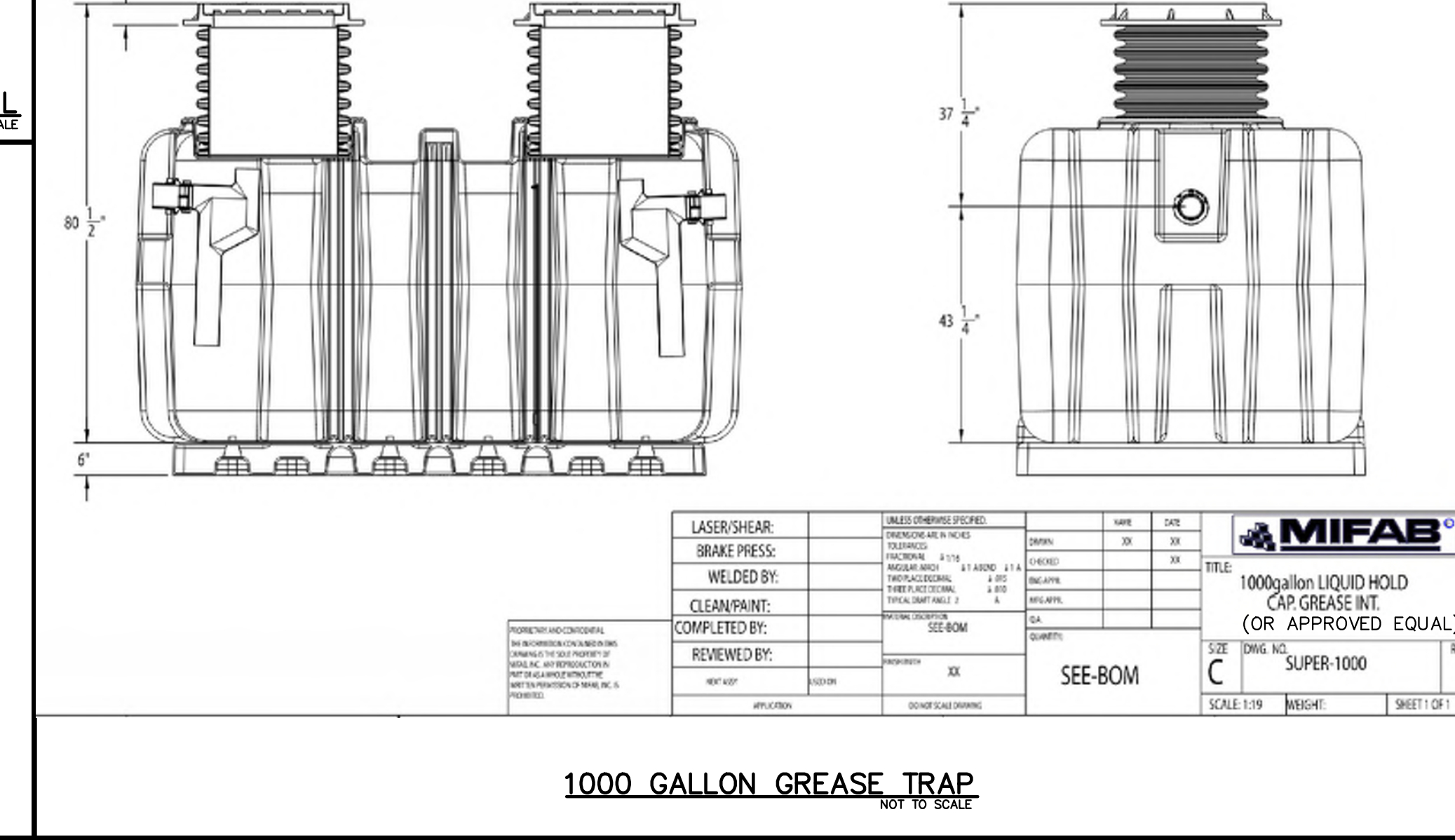
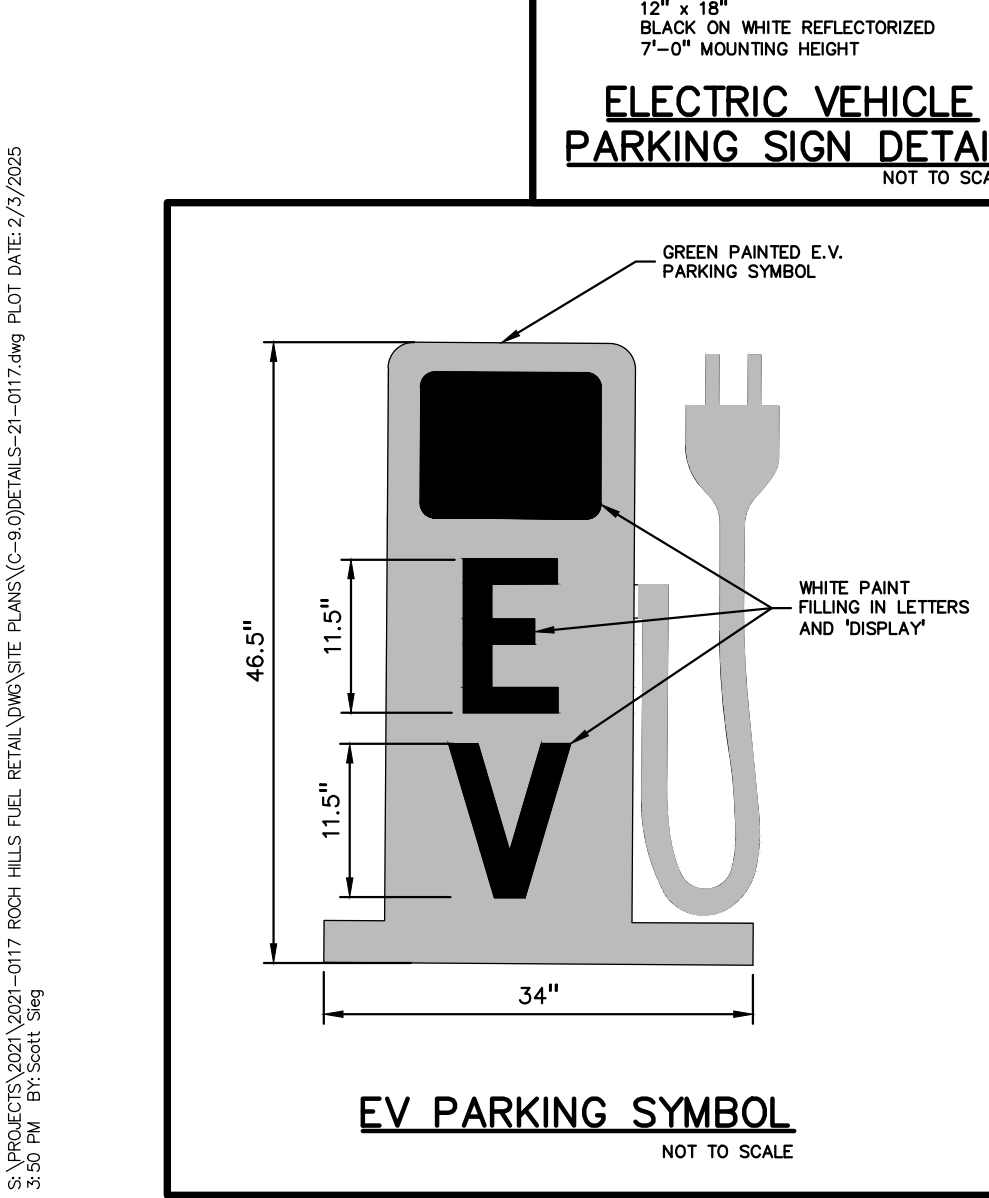
CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY, SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OKLAHOMA COUNTY, MICHIGAN



REVISIONS

SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

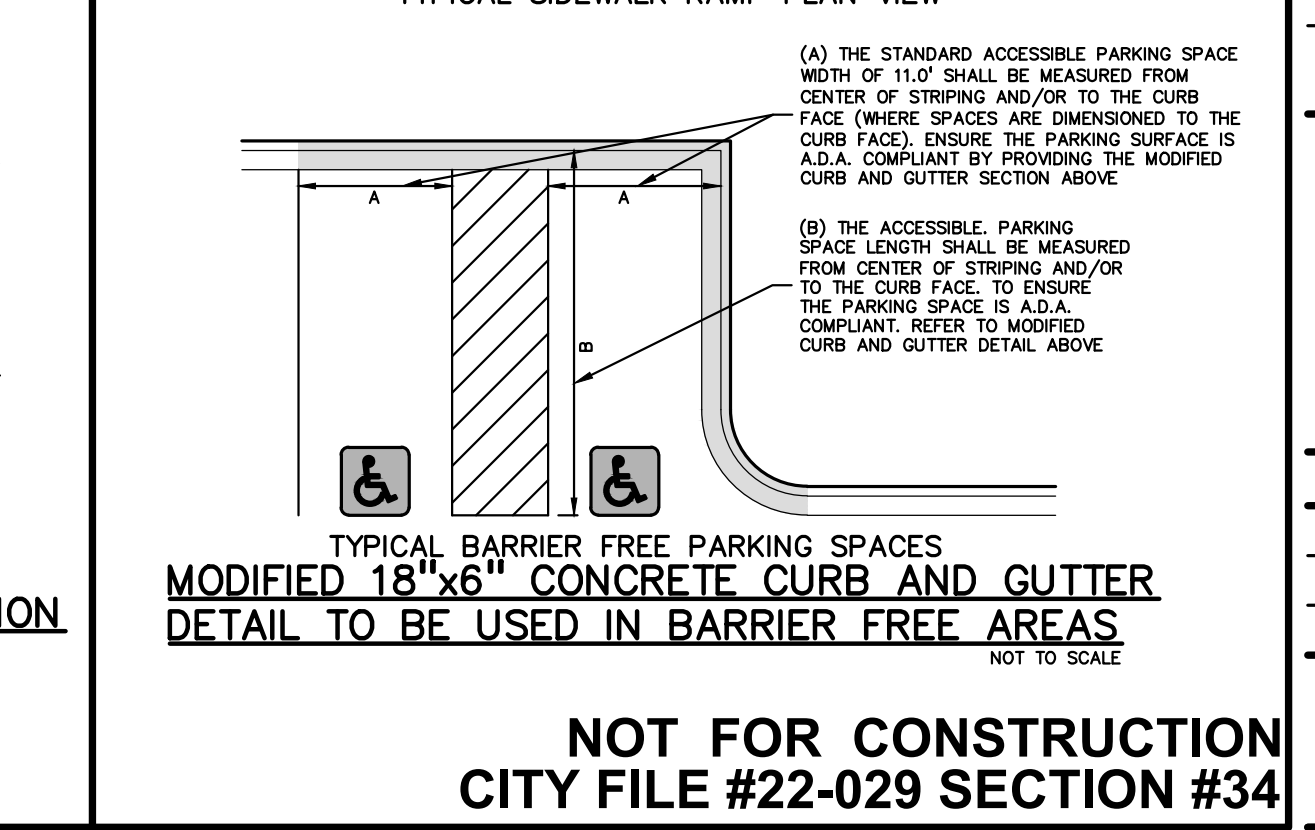
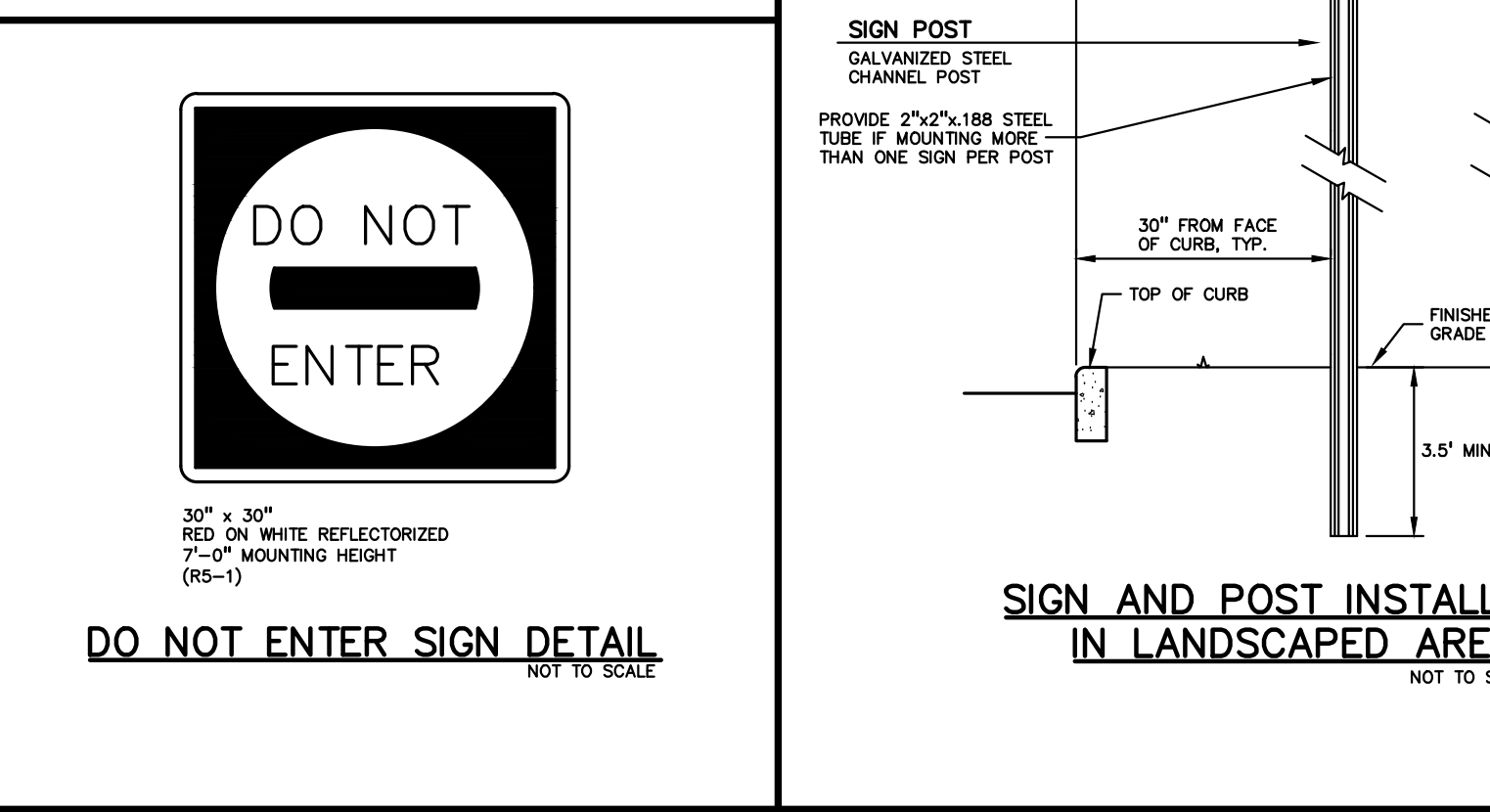


ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**NOTES AND DETAILS**

EV PARKING SYMBOL NOT TO SCALE

1000 GALLON GREASE TRAP NOT TO SCALE

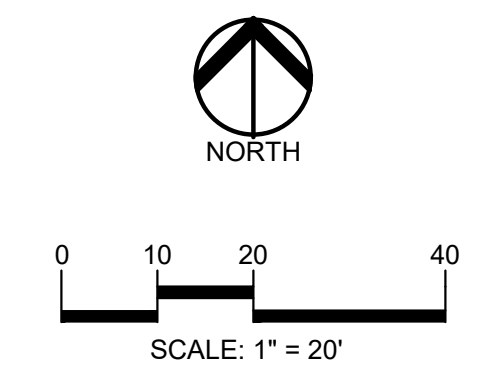


PEA JOB NO. 2021-0117  
P.M. LA  
DN. MT  
DES. SWS  
DRAWING NUMBER:  
**C-9.2**

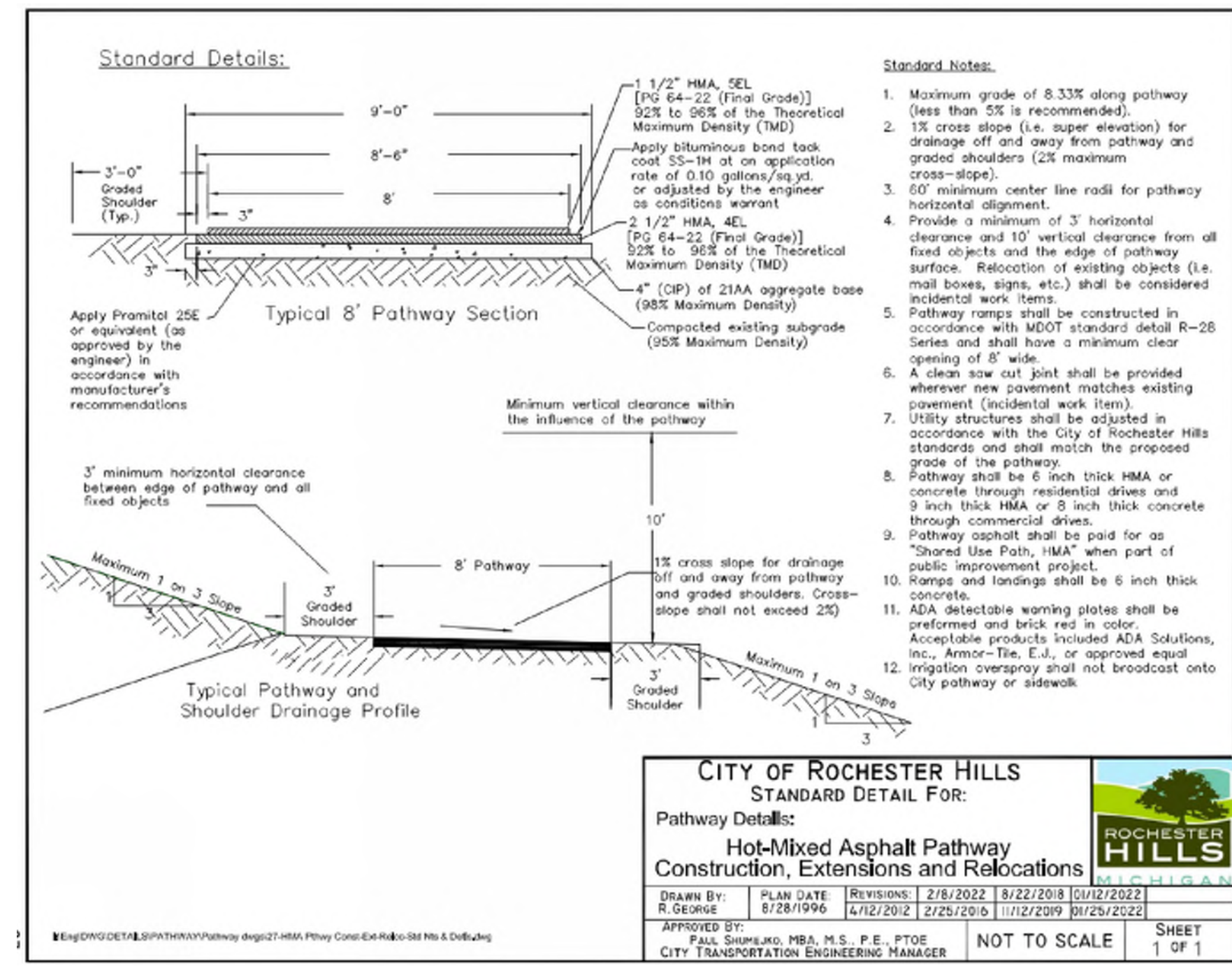
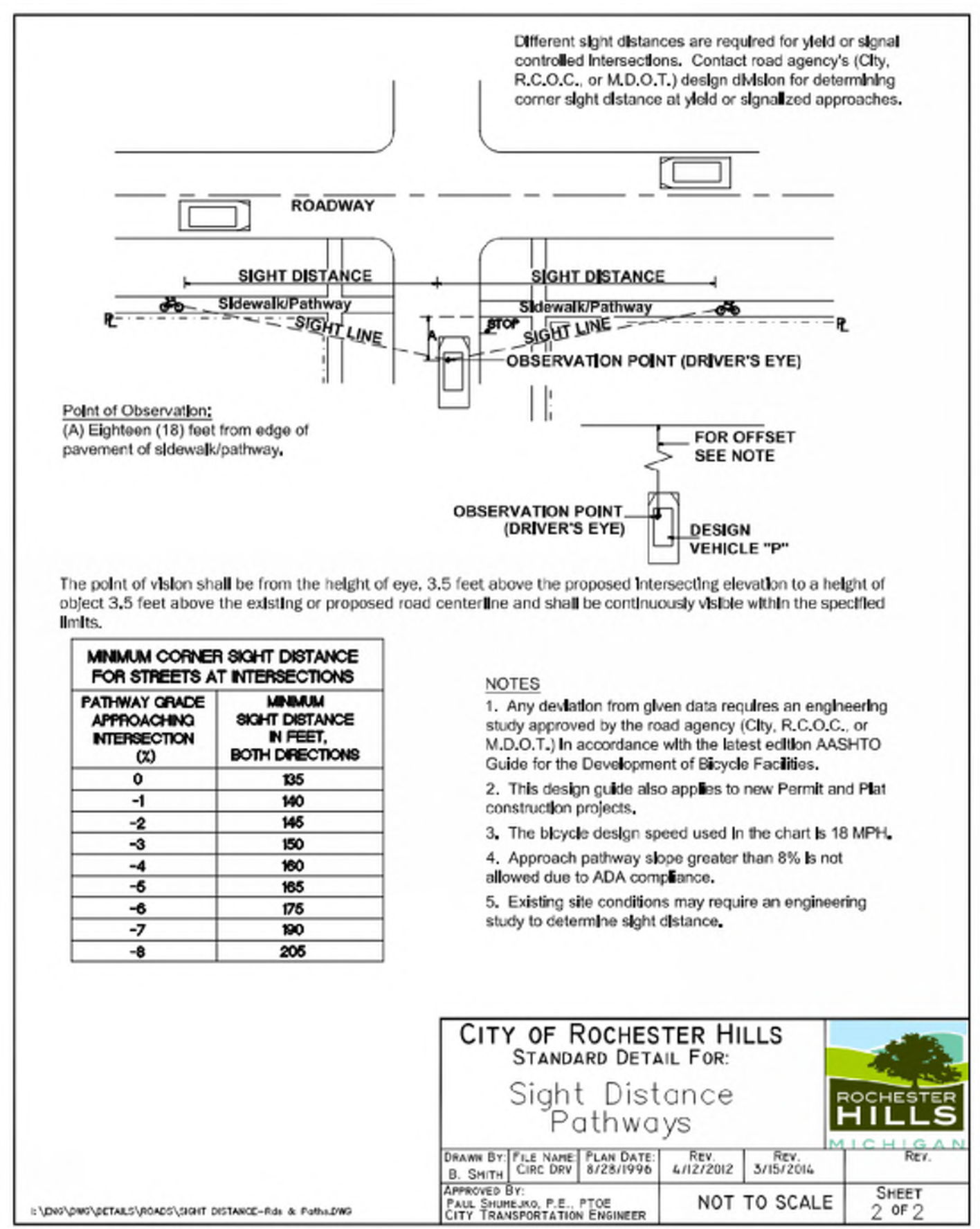
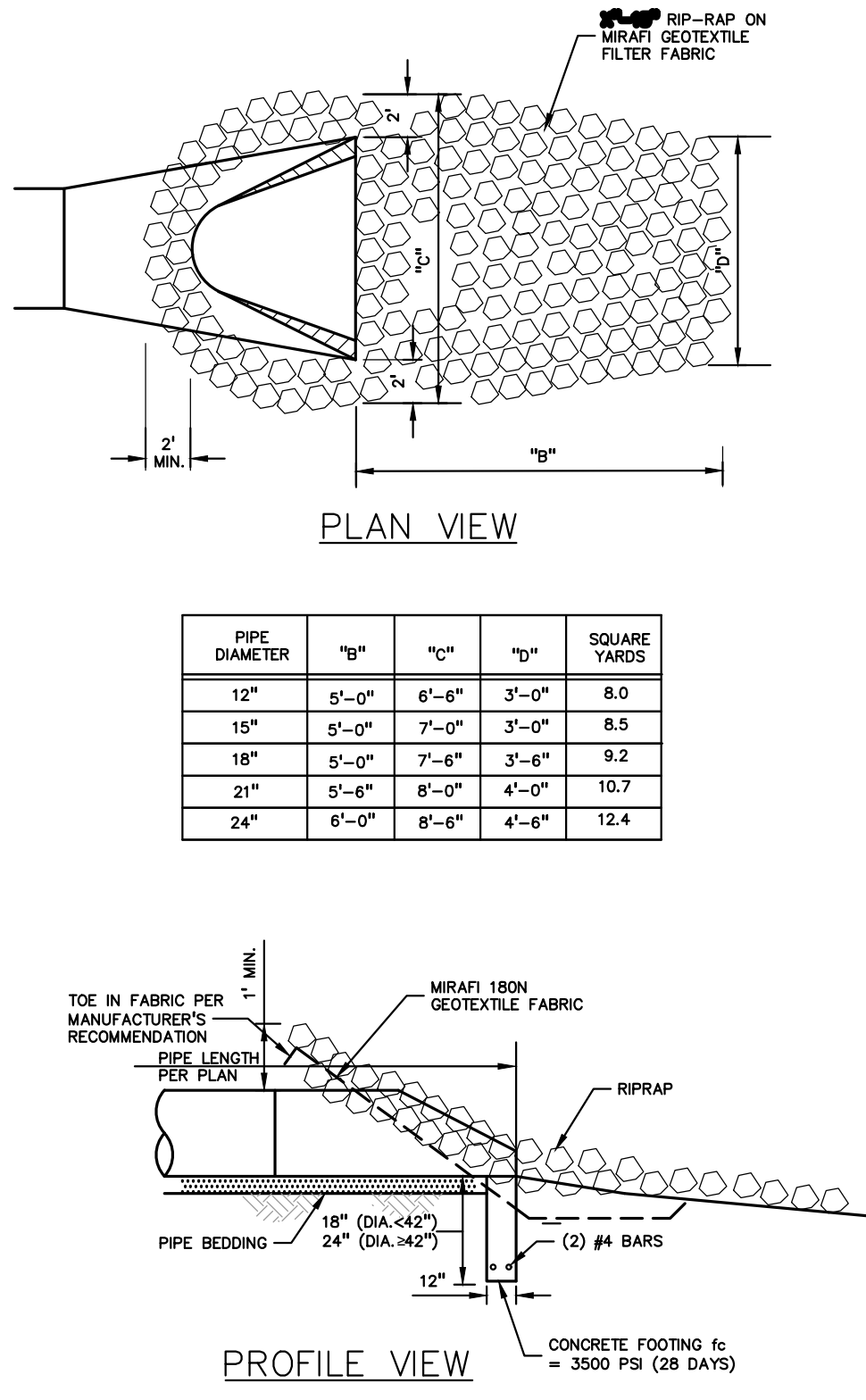
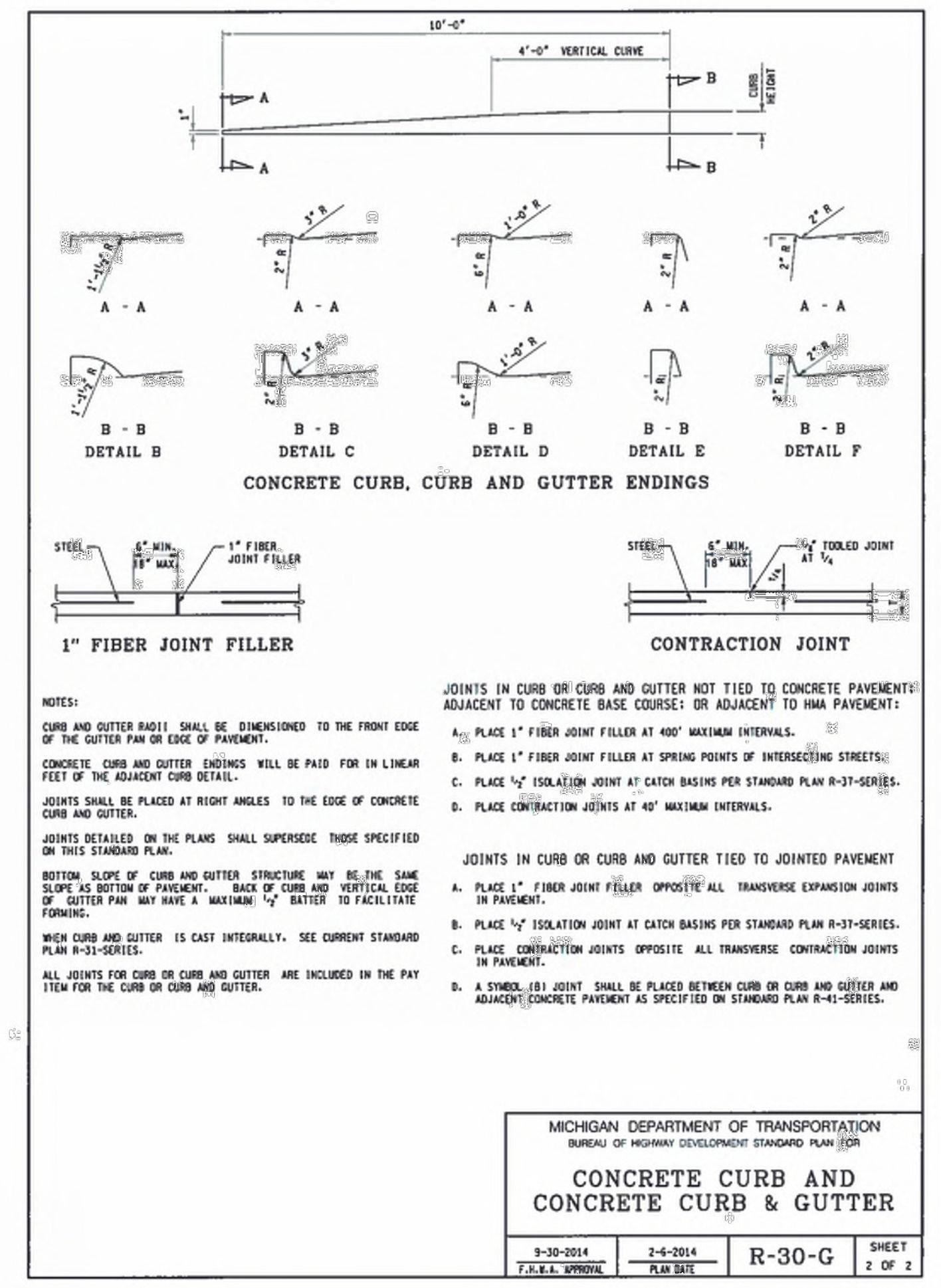
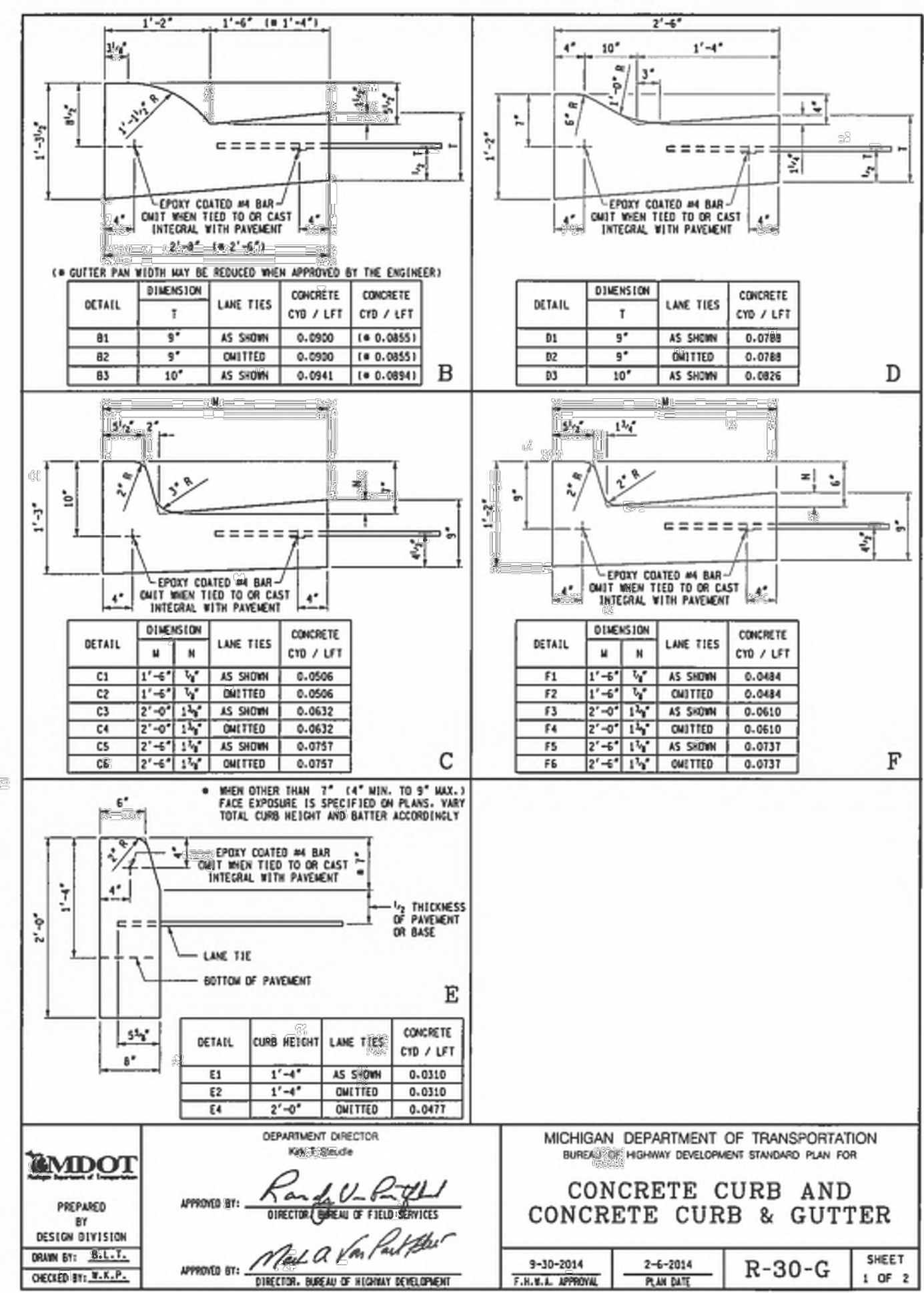
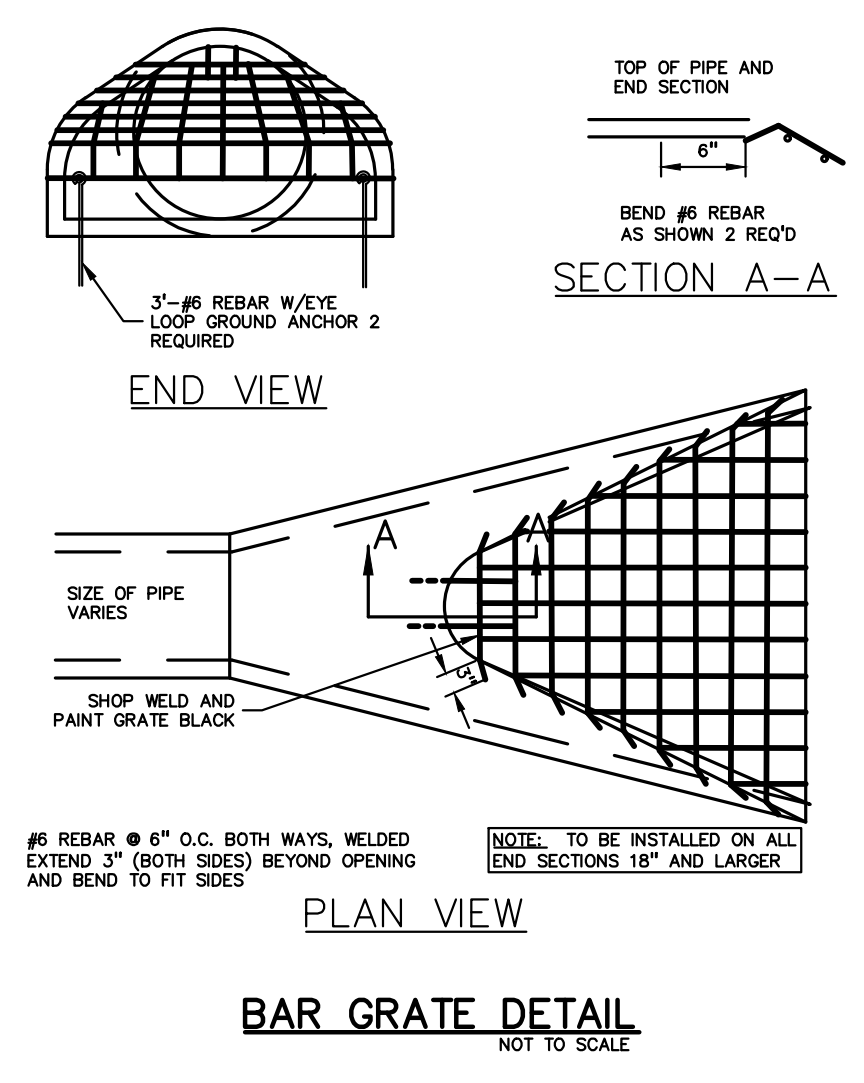
S:\PROJECTS\2021-2022-0117 ROCHESTER HILLS METALWORKS PLANT\CD-902\FINALS-21-0117.dwg PLOT DATE: 7/2/2025 2:53 PM 10:30:04 AM

NOT FOR CONSTRUCTION  
CITY FILE #22-029 SECTION #34





**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

NO.	DATE	DESCRIPTION
1	12/20/23	SITE/UTILITY LAYOUT
2	04/17/24	SITE/UTILITY LAYOUT
3	06/14/24	PER CITY COMMENTS
4	09/23/24	PER MDT COMMENTS
5	10/09/24	PER CITY COMMENTS
6	11/15/24	PER CITY COMMENTS
7	01/08/25	PER CITY COMMENTS
8	02/03/25	PER CITY COMMENTS

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022  
DRAWING TITLE

**DETAILS**

PEA JOB NO.	2021-0117
P.M.	LAA
DN	MT
DES.	SWS
DRAWING NUMBER:	

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-9.3**

S:\PROJECTS\2021\2022-0117 ROCHESTER HILLS METALWORKER PLANS\CS-930029A-21-0117.dwg PLOT DATE: 5/2/2025 2:21 PM 10/25/2025





0 10 20 40  
SCALE: 1" = 20'



**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

**CURB RAMP TYPE R**  
(ROLLED CURB)

**CURB RAMP TYPE F**  
(FLARED SIDES, TWO RAMPS SHOWN)

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS  
11/09/2023  
THRU APPROVAL  
R-28-K  
SHEET 1 OF 7

**CURB RAMP TYPE P**  
(PARALLEL RAMP)  
DO NOT USE IN AREAS WHERE POINING MAY OCCUR

**CURB RAMP TYPE M**  
(SLOPED ISLAND)

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS  
11/09/2023  
THRU APPROVAL  
R-28-K  
SHEET 3 OF 7

**LOCATION OF JOINTS IN CONCRETE SIDEWALK**

**TYPICAL SIDEWALK JOINT LAYOUTS**

**4" CONCRETE SIDEWALK**

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK  
11/09/2023  
THRU APPROVAL  
R-29-J  
SHEET 1 OF 4

**CONCRETE DRIVEWAY OPENING LAYOUT**

**CONCRETE DRIVEWAY OPENING, DETAIL L**

**CONCRETE DRIVEWAY OPENING, DETAIL M**

**INTERMEDIATE DRIVEWAY JOINT DETAILS**

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK  
11/09/2023  
THRU APPROVAL  
R-29-J  
SHEET 2 OF 4

**HMA DRIVEWAY APPROACH**  
(TO BE USED WITH DETAIL L)

**CONCRETE DRIVEWAY APPROACH**  
(TO BE USED WITH DETAIL L OR M)

**THICKENED CONCRETE SIDEWALK**

CONCRETE DRIVEWAY THICKNESS	MIN. SIZE (IF 4" MIN.)	AVERAGE WEIGHT (LB/FT <sup>3</sup> )
LESS THAN 4"	W54	21
4" OR GREATER	W58	42

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK  
11/09/2023  
THRU APPROVAL  
R-29-J  
SHEET 3 OF 4

**LOW VOLUME COMMERCIAL OR RESIDENTIAL DRIVEWAY SLOPES**

**COMMERCIAL DRIVEWAY PROFILE FOR MAJOR TRAFFIC GENERATORS**

APPROVED BY: DIRECTOR, BUREAU OF DESIGN  
APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT

**MDOT**  
Michigan Department of Transportation

STANDARD PLAN FOR DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK  
11/09/2023  
THRU APPROVAL  
R-29-J  
SHEET 4 OF 4

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY, SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
ROCHESTER HILLS, OKLAHOMA COUNTY, MICHIGAN

**REVISIONS**

REVISION	DATE
SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE

**M.D.O.T. DETAILS**

PEA JOB NO. 2021-0117  
P.M. LAA  
D.N. MT  
DES. SWS  
DRAWING NUMBER:

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**C-9.4**



**CITY OF ROCHESTER HILLS NOTES:**

**TREE PLANTING RESTRICTIONS:**  
PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB ON THE PUBLIC RIGHT-OF-WAY.  
ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD.  
SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY.  
EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY.  
NO TREES OR SHRUBS MUST BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION.  
TREES MUST BE 3' OFF ANY SIGHT LINE.  
ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT.  
SHADE AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE.  
TREES MUST BE PLANTED A MINIMUM OF 5' FROM AN UNDERGROUND UTILITY.  
PLANTINGS TO BE MIN. 4' OFF FENCE LINE AND/OR PROPERTY LINE UNLESS THE CITY'S LANDSCAPE ARCHITECT REQUIRES A GREATER DISTANCE. THESE REQUIREMENTS ARE INCORPORATED INTO THE PLAN.  
**CLOSING COMMENT:**  
PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS FORESTRY DIVISION NEEDS TO INSPECT ALL TREES, EXISTING OR PLANTED, TO DETERMINE ANY THAT POSE A HAZARD TO THE SAFE USE OF THE PUBLIC RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE AND POSSIBLY REPLACE ANY SUCH TREES.

**NOTE:**  
ALL GROUND MOUNTED UTILITIES SHALL BE FULLY SCREENED FROM VIEW  
**IRRIGATION NOTES:**  
ALL LANDSCAPE AREAS MUST BE IRRIGATED. WATERING WILL ONLY OCCUR BETWEEN THE HOURS OF 12AM-5AM.  
IRRIGATION OVERSPRAY SHALL NOT BROADCAST ONTO CITY PATHWAYS, TYP.  
SEE IRRIGATION PLANS TO BE PROVIDED BY OTHERS

**TREE NOTE PER CITY OF ROCHESTER HILLS:**  
ANY PLANT MATERIAL THAT IS DESIGNATED TO BE PRESERVED THAT DIES OR IS DAMAGED DURING OR AS A RESULT OF CONSTRUCTION SHALL BE REPLACED PURSUANT TO ORDINANCE REQUIREMENT

**PLANT REQUIREMENTS:**  
NO MORE THAN 20% OF A SINGLE PLANT SPECIES ON SITE. ALL DEC TREES SHOULD BE A MIN OF 3" CAL. ORN TREES SHOULD BE A MIN OF 2" CAL. EVG TREES A MIN OF 10' HT. OR 5' SPREAD. ALL SHRUBS SHOULD BE 30" MIN HEIGHT OR 24" IN SPREAD.  
NO PLANTINGS TO BE CLOSER THAN 4' FROM FENCE AND PROPERTY LINE.

**LANDSCAPE CALCULATIONS: AUTOMOTIVE**  
NB-NEIGHBORHOOD BUSINESS/ FB FLEX BUSINESS OVERLAY PER CITY OF ROCHESTER HILLS ZONING ORDINANCE

**PARKING LOT INTERIOR TREE = P**  
5% OF PARKING LOT TO BE LANDSCAPED AREA FOR PARKING OF 20 OR MORE CARS. 1 DECIDUOUS TREE PER 150 SF LANDSCAPED AREA  
REQUIRED: 29,985 SF \* 0.05 = 1,499 SF REQUIRED LANDSCAPE AREA  
1,499 SF / 150 = 10 TREES  
PROVIDED: 10 TREES AND 4,350 SF OF LANDSCAPED AREA EXCEEDED

**RIGHT OF WAY LANDSCAPE / TREE = R**  
1 DEC TREE PER 35 LF OF ROW  
1 ORN. TREE PER 35 LF OF ROW  
REQUIRED: NAWAKWA RD: 262 LF / 35 = 8 DEC AND 8 ORN.  
REQUIRED: ROCHESTER RD: 158 LF / 35 = 5 DEC AND 5 ORN.  
REQUIRED: M-59 NE: 44 LF / 35 = 2 DEC AND 2 ORN.  
PROVIDED: NAWAKWA RD: 3 EXISTING TREES, 5 DEC AND 8 ORN.  
PROVIDED: ROCHESTER RD: 5 DEC AND 5 ORN.  
PROVIDED: M-59: 2 DEC AND 2 ORN.

**PERIMETER PARKING LANDSCAPE = PP**  
REQUIRED: 1 DEC TREE/ 25LF AND 1 ORN TREE/ 35LF, ALONG EDGE OF PARKING LOT FACING AND WITHIN 100' OF PUBLIC ROW.  
ANY PARKING WITHIN 30' OF PUBLIC STREET OR R.O.W. REQUIRES A DEC. OR EVG. HEDGE FOR SCREENING (30" HT. MIN. HT. SHRUB AT 36" OC. MAX. SPACING)  
REQUIRED: NAWAKWA RD: 200 LF / 25 AND / 35 = 8 DEC AND 6 ORN.  
REQUIRED: ROCHESTER RD: 135 LF / 25 AND / 35 = 6 DEC AND 4 ORN.  
PROVIDED: NAWAKWA RD: 8 DEC AND 6 ORN. AND SHRUB HEDGE  
PROVIDED: ROCHESTER RD: 6 DEC, AND 4 ORN. LOCATED ON THE SOUTH SIDE OF SITE AND SHRUB HEDGE

**BUFFER TYPE D WITH A 6' HT. MASONRY WALL: WEST SIDE OF PROPERTY ADD. TO RETAIL PROPERTY = B**  
WHEN ZONE NB IS ADJACENT TO ZONE R, BUFFER TYPE D REQUIRED  
8' MIN. YARD WIDTH, 2.5 DEC TREES, 1.5 ORN. TREES, 5 EVG. TREES, 8 SHRUBS PER 100 LF REQUIRED  
X 2 SHRUBS EQUIV = 30 SHRUBS  
IN LIEU OF THE REQUIRED EVERGREEN TREES, 5 DEC TREES & 2 SHRUBS SHALL BE PROVIDED FOR EACH EVERGREEN TREE THAT WOULD HAVE BEEN REQUIRED WITHOUT A WALL.  
REQUIRED: 6' HT. MASONRY SCREEN WALL WEST SIDE OF SITE;  
292' / 100 = 2.92 X 2.5 = 8 DEC TREES; X 1.5 = 5 ORN TREES; X 8 = 24 SHRUBS AND 2.92 X 5 EVG = 14.6 EVG; X 5 DEC EQUIV = 8 DEC AND 24 SHRUBS EQUIV = 30 SHRUBS  
PROVIDED WEST SIDE: 6' HT MASONRY WALL,  
5 EXISTING TREES TO REMAIN WEST SIDE OF WALL, 11 DEC, 5 ORN TREES AND 54 SHRUBS

**BUFFER TYPE D WITHOUT A MASONRY WALL: SOUTH SIDE OF SITE = B**  
WHEN ZONE NB IS ADJACENT TO ZONE R, BUFFER TYPE D REQUIRED  
25' MIN. YARD WIDTH, 2.5 DEC TREES, 1.5 ORN. TREES, 5 EVG. TREES, 8 SHRUBS PER 100 LF REQUIRED  
231' / 100 = 2.31 X 2.5 = 6 DEC TREES; X 1.5 = 4 ORN TREES; X 8 = 20 SHRUBS AND X 5 EVG = 12 EVG TREES  
PROVIDED SOUTH SIDE: 4 ORN. TREES AND 20 SHRUBS.

**THE REMAINING 6 DEC. AND 12 EVG. UNABLE TO PLACE ON SITE. DUE TO SPACE LIMITATIONS SHALL BE PLACED INTO TREE FUND.**  
18 TREES AT RATE OF \$334.00 / TREE = \$ 6,012.00 INTO TREE FUND.

**TREE FUND SUMMARY:**  
BUFFER TYPE D WITHOUT MASONRY WALL, SOUTH SIDE OF SITE-B  
18 TREES AT THE RATE OF \$334/TREE = \$6,012.00  
TREE REPLACEMENT- REGULATED  
12 TREES AT THE OF \$334/TREE = \$4,008.00  
TOTAL TREE FUND = \$10,020.00

**REGULATED ON SITE TREES**

REGULATED TREES REMOVED:	12
SPECIMEN TREES REMOVED:	0
DBH OF SPECIMEN TREES REMOVED:	0 INCHES = 0 REPLACEMENT INCHES
SPECIMEN REPLACEMENT TREES:	0 TREES
SPECIMEN TREES TO REMAIN ON-SITE:	0 TREES
REPLACEMENT REQUIRED:	12+0=12 TREES (MIN. 2" DECIDUOUS OR 8' EVERGREEN)

TOTAL TREES ON SITE:	20	TREE REPLACEMENT REGULATED TREES TO BE REPLACED 1:1 RATIO REQUIRED TO LEAVE 40% OF REGULATED TREES OUTSIDE THE RLD'S ENVELOPE. SPECIMEN TREES TO BE REPLACED AT 50% DBH SEE SHEET T-1.0 FOR TREE PRESERVATION PLAN
EXEMPT TREES IN BUILDING:	0	
TREES TO REMAIN ON SITE:	8	
% TREES TO REMAIN:	(8)/(20-0) = 40.0%	PROVIDED: 40 % TREES PRESERVED 12 REPLACEMENT TREES PLACED INTO TREE FUND AT RATE OF \$334.00/TREE = \$ 4,008.00 INTO TREE FUND.

**PLANT SCHEDULE L-1.0**

CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	REMARKS
<b>DECIDUOUS TREES</b>						
ARB3	5	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE	3" CAL.	B&B		PER PLAN
CBF3	3	CARPINUS BETULUS 'FASTIGIATA' / PYRAMIDAL EUROPEAN HORNBEAN	3" CAL.	B&B		PER PLAN
GBP3	2	GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY GINKGO	3" CAL.	B&B		PER PLAN
LSS3	6	LIQUIDAMBAR STRYACIFLUA 'SLENDER SILHOUETTE' / SLENDER SILHOUETTE SWEET GUM	3" CAL.	B&B		PER PLAN
NS3	3	NYSSA SYLVATICA / TUPELO	3" CAL.	B&B		PER PLAN
QK3	5	QUERCUS ROBUR X ALBA 'JFS-KW20X' / SKINNY GENES OAK	3" CAL.	B&B		PER PLAN
QK3	11	QUERCUS ROBUR X BICOLOR 'NADLER' / KINDRED SPIRIT OAK	3" CAL.	B&B		PER PLAN
SR3	6	SYRINGA RETICULATA 'IVORY SILK' / IVORY SILK JAPANESE TREE LILAC	3" CAL.	B&B		PER PLAN
UF3	6	ULMUS X 'FRONTIER' / FRONTIER ELM	3" CAL.	B&B		PER PLAN
	47	SUBTOTAL:				
<b>ORNAMENTAL TREES</b>						
AG2	5	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE SERVICEBERRY	2" CAL.	B&B		PER PLAN
CCF2	3	CERCIS CANADENSIS 'FOREST PANSY' / FOREST PANSY EASTERN REDBUDB	2" CAL.	B&B		PER PLAN
HL8	5	HYDRANGEA PANICULATA 'LIMELIGHT' / LIMELIGHT PANICLE HYDRANGEA	8" HT.	B&B		PER PLAN
MJ2	6	MAGNOLIA X 'JANE' / JANE MAGNOLIA	2" CAL.	B&B		PER PLAN
MM2	10	MALUS X 'JARMINI' / MARILEE® CRABAPPLE	2" CAL.	B&B		PER PLAN
SM6	5	SYRINGA MEYERI 'PALIBIN' / DWARF KOREAN LILAC	6" HT.	B&B		PER PLAN
	34	SUBTOTAL:				
<b>SHRUBS</b>						
CS30	17	CORNUS SERICEA 'KELSEY' / KELSEY'S DWARF RED TWIG DOGWOOD	30" HT.	CONT.	36" O.C.	
DC30	8	DEUTZIA GRACILIS 'NIKKO' / NIKKO DEUTZIA	30" HT.	CONT.	30" O.C.	
DK30	8	DIERVILLA X 'G2X8544' / KODIAK® ORANGE DIERVILLA	30" HT.	CONT.	4" O.C.	
HPB30	3	HYDRANGEA PANICULATA 'BOBO' / BOBO HYDRANGEA	30" HT.	CONT.	4" O.C.	
IG30	29	ILEX GLABRA 'SHAMROCK' / SHAMROCK INK BERRY HOLLY	30" HT.	CONT.	30" O.C.	
JH6	17	JUNIPERUS CHINENSIS 'HETZU COLUMNARIS' / HETZU COLUMN JUNIPER	6" HT.	CONT.	36" O.C.	
PF30	29	POTENTILLA FRUTICOSA 'ABBOTSWOOD' / ABBOTSWOOD BUSH CINQUEFOIL	30" HT.	CONT.	36" O.C.	
RG24	2	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	24" SPRD	CONT.	4" O.C.	
SP30	20	SYRINGA PATULA 'MISS KIM' / MISS KIM KOREAN LILAC	30" HT.	CONT.	4" O.C.	
TM30	29	TAXUS X MEDIA 'DENSIFORMIS' / DENSE ANGLO-JAPANESE YEW	30" HT.	CONT.	36" O.C.	
VB30	30	VIBURNUM DENTATUM 'CHRISTOM' / BLUE MUFFIN VIBURNUM	30" HT.	CONT.	36" O.C.	
	192	SUBTOTAL:				
<b>PERENNIALS</b>						
CK2	40	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	1 GAL.	POT	30" O.C.	
NF	41	NEPAETA WALKERS LOW / WALKERS LOW CATMINT	1 GAL.	POT	30" O.C.	
PVS2	16	PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCH GRASS	1 GAL.	POT	30" O.C.	
	97	SUBTOTAL:				



**KEY:**

- Proposed Deciduous Trees (Symbol: Circle with cross)
- Proposed Shrubs/Perennials (Symbol: Cluster of small circles)
- P = Parking Lot Int. Trees
- R = Right of Way Trees
- PP = Perimeter Parking Trees
- B = Buffer Tree
- S = Stormwater Detention Tree
- Irrigated Seed Lawn (Symbol: Stippled area)
- Restore Disturbed Areas Seed Lawn (Symbol: Dotted area)
- River Rock Over Weed Fabric, See Sht. L-1.1 (Symbol: Dashed line)
- Potential Snow Storage Area (Symbol: Dashed line)
- Existing Trees to Remain with Tree Protection Fence (Symbol: Circle with cross and square)

SEE SHEET L-1.1 FOR GENERAL PLANTING NOTES, AND LANDSCAPE DETAILS  
SEE SHEET T-1.0 FOR TREE PLAN  
IRRIGATION PLANS TO BE PROVIDED BY OTHERS

**PEA GROUP**  
t: 844.813.2949  
www.peagroup.com

**JANET L. ERANE**  
LANDSCAPE ARCHITECT  
No. 1990  
STATE OF MICHIGAN

**811** Know what's below. Call before you dig.

**CLIENT**  
**3420 ROCHESTER ROAD, LLC**  
2920 NORTHWESTERN HIGHWAY, SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

**PROJECT TITLE**  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE

**LANDSCAPE PLAN**

PEA JOB NO.	2021-0117
P.N.	LAA
D.M.	JLE
DES.	JLE
DRAWING NUMBER:	





**CAUTION!**  
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
20200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

NO.	DESCRIPTION	DATE
1	SITE/UTILITY LAYOUT	12/20/23
2	SITE/UTILITY LAYOUT	04/17/24
3	PER CITY COMMENTS	06/14/24
4	PER MDOT COMMENTS	09/23/24
5	PER CITY COMMENTS	10/09/24
6	PER CITY COMMENTS	11/15/24
7	PER CITY COMMENTS	01/08/25
8	PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**LANDSCAPE DETAILS**

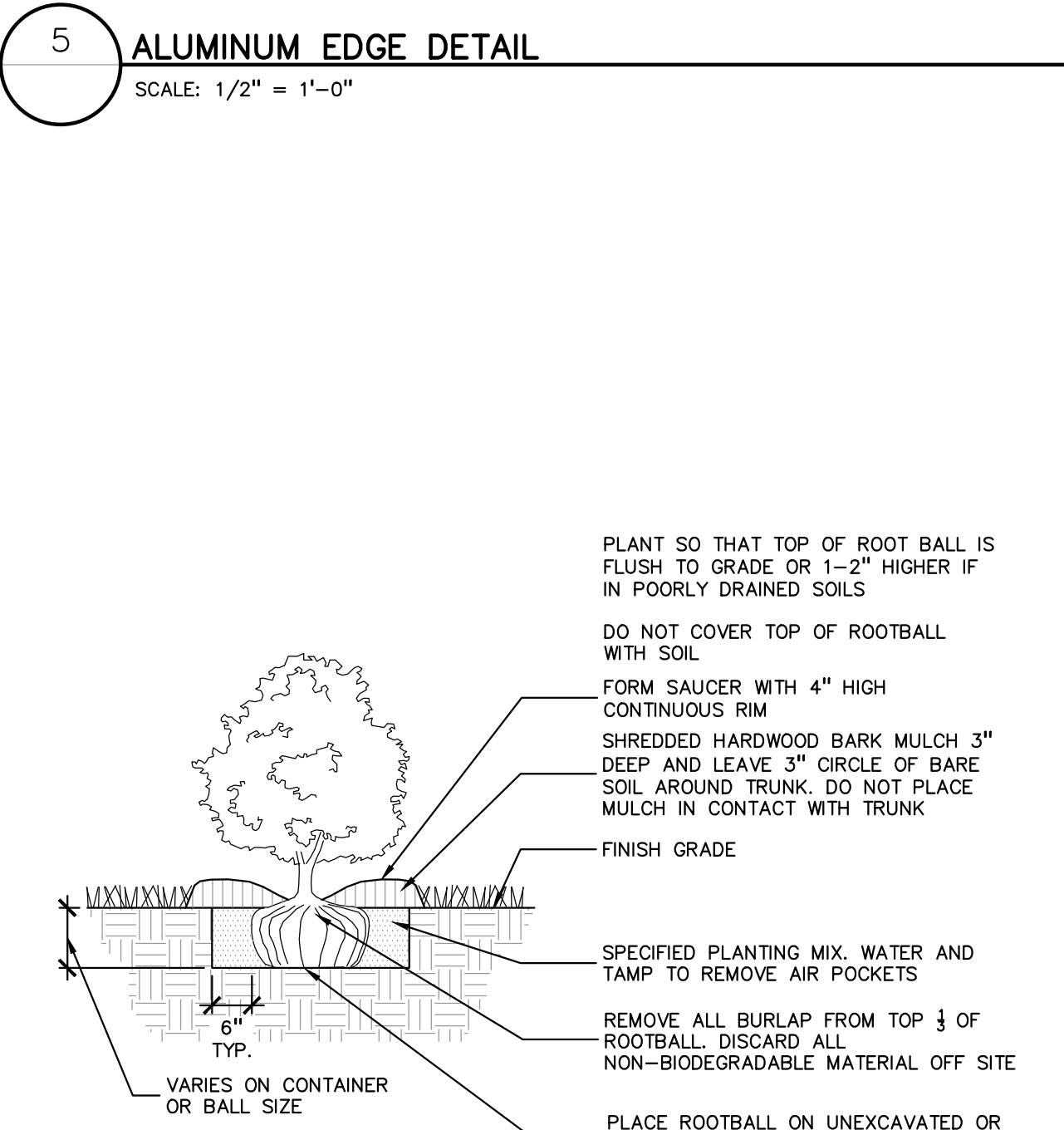
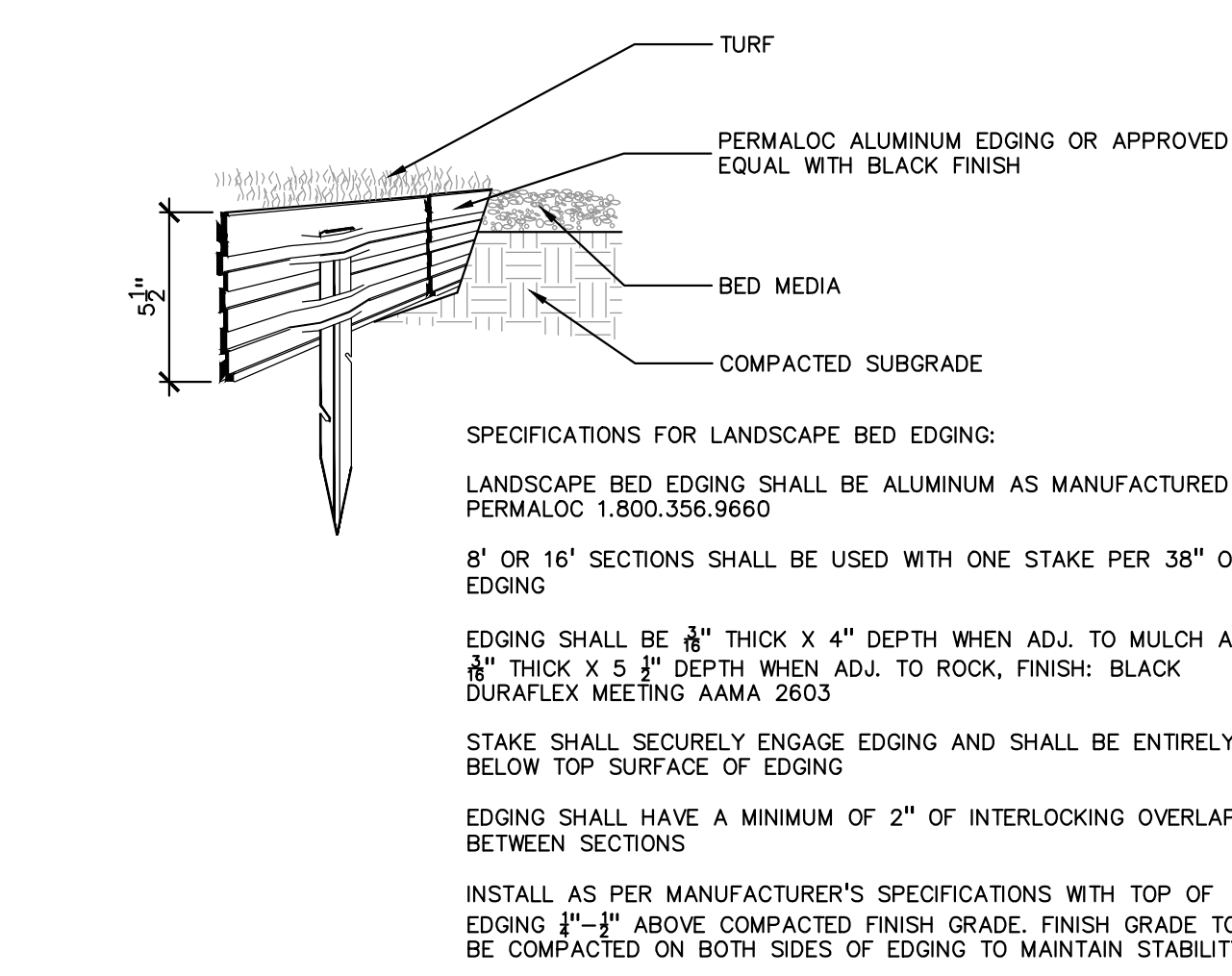
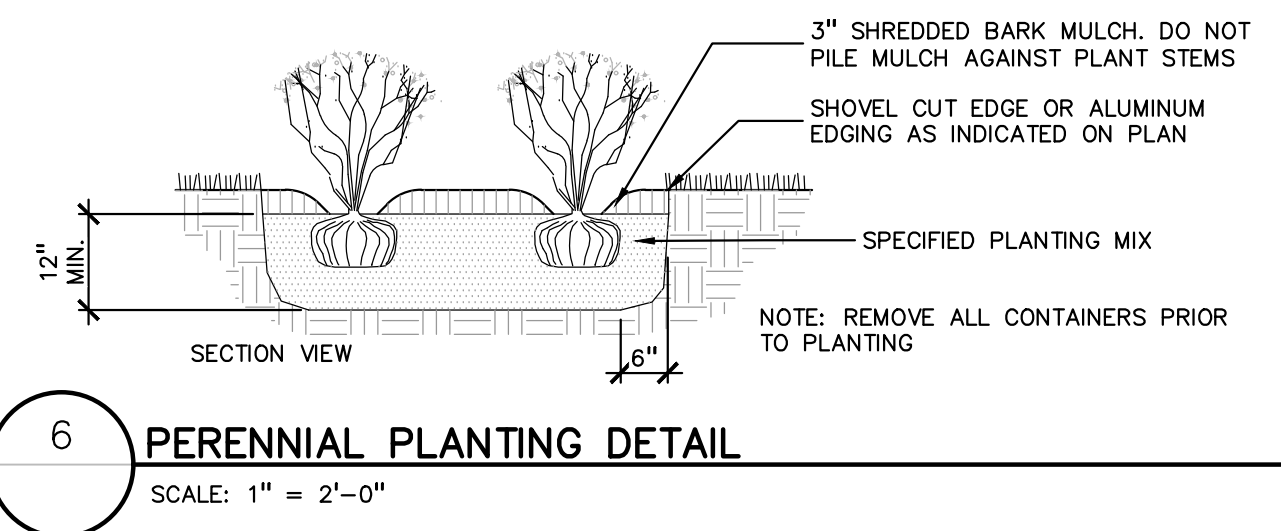
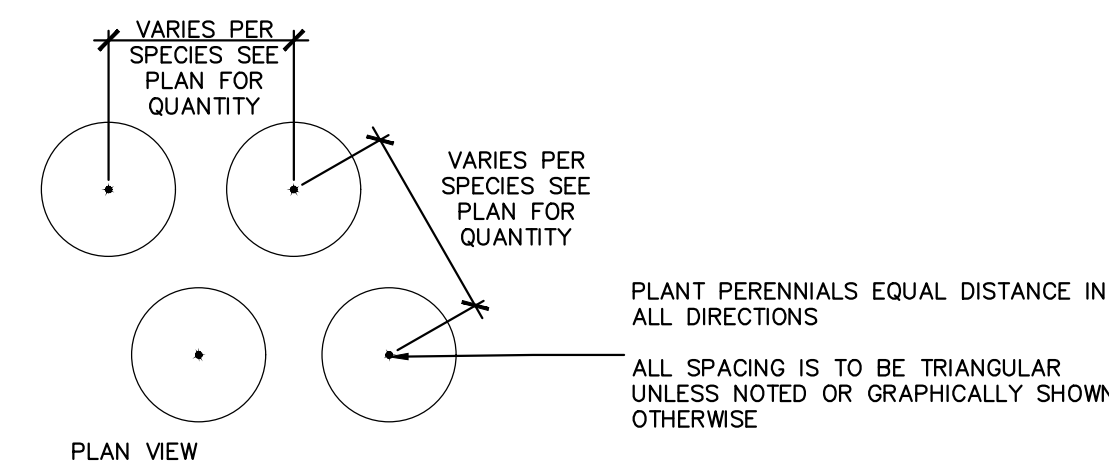
PEA JOB NO. 2021-0117  
P.M. LAA  
DN. JLE  
DES. JLE  
DRAWING NUMBER:

**CITY OF ROCHESTER HILLS MAINTENANCE AGREEMENT:**  
**PER SECTION 138-12.109 MAINTENANCE SCHEDULE.**  
THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR THE ONGOING MAINTENANCE OF THE SITE LANDSCAPE AS FOLLOWS:

- LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION FREE FROM DEBRIS AND REFUSE.
- PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
- ALL DEAD, DAMAGED OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN 6 MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1 AND FROM OCTOBER 1 UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREENS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED, OR DISEASED MATERIAL.
- THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN CONCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION 138-12.109 WILL PLACE THE PARCEL IN NON-COMPLIANCE WITH THE APPROVED LANDSCAPE PLAN AND BE A VIOLATION OF THIS ORDINANCE.
- IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

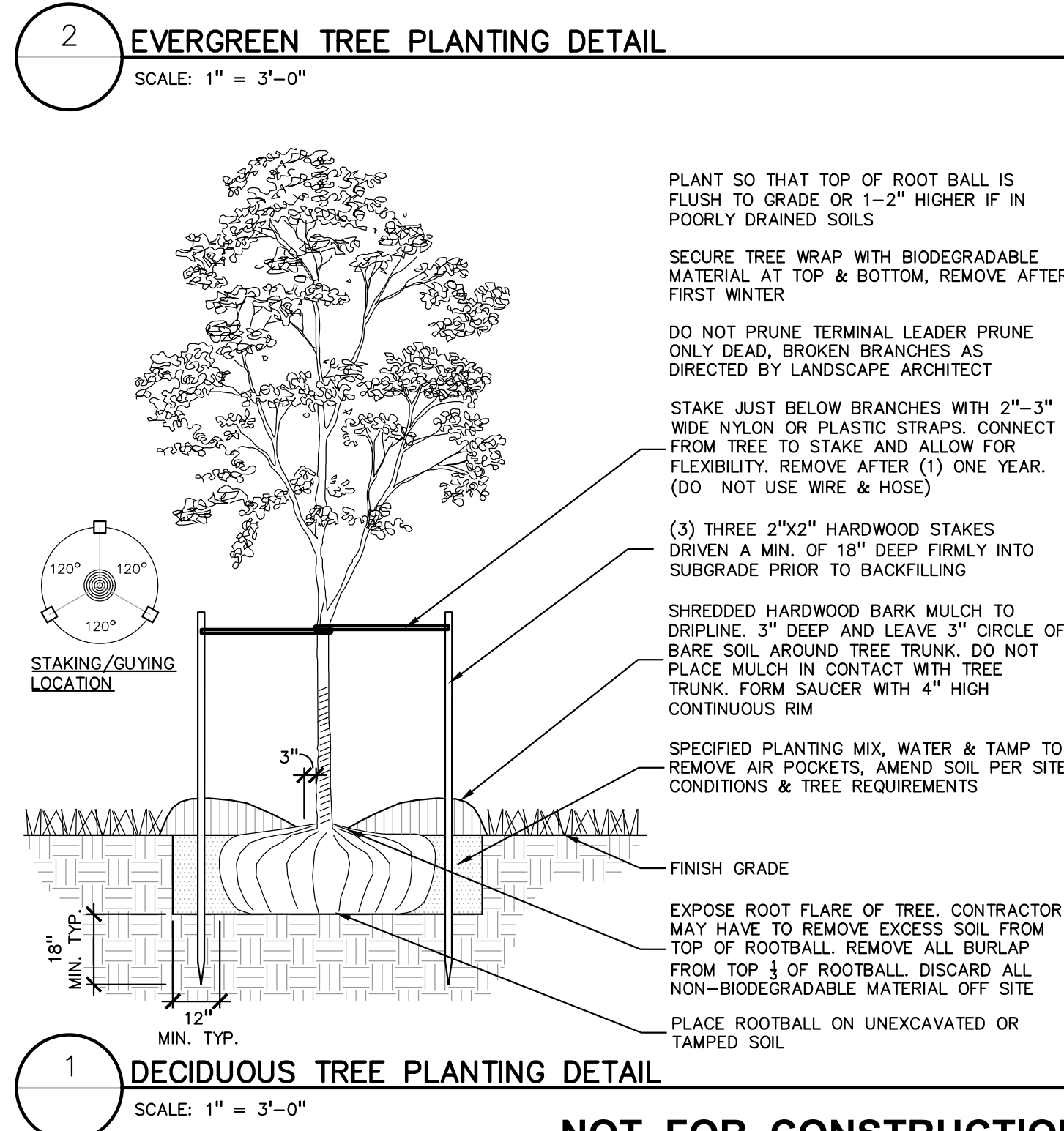
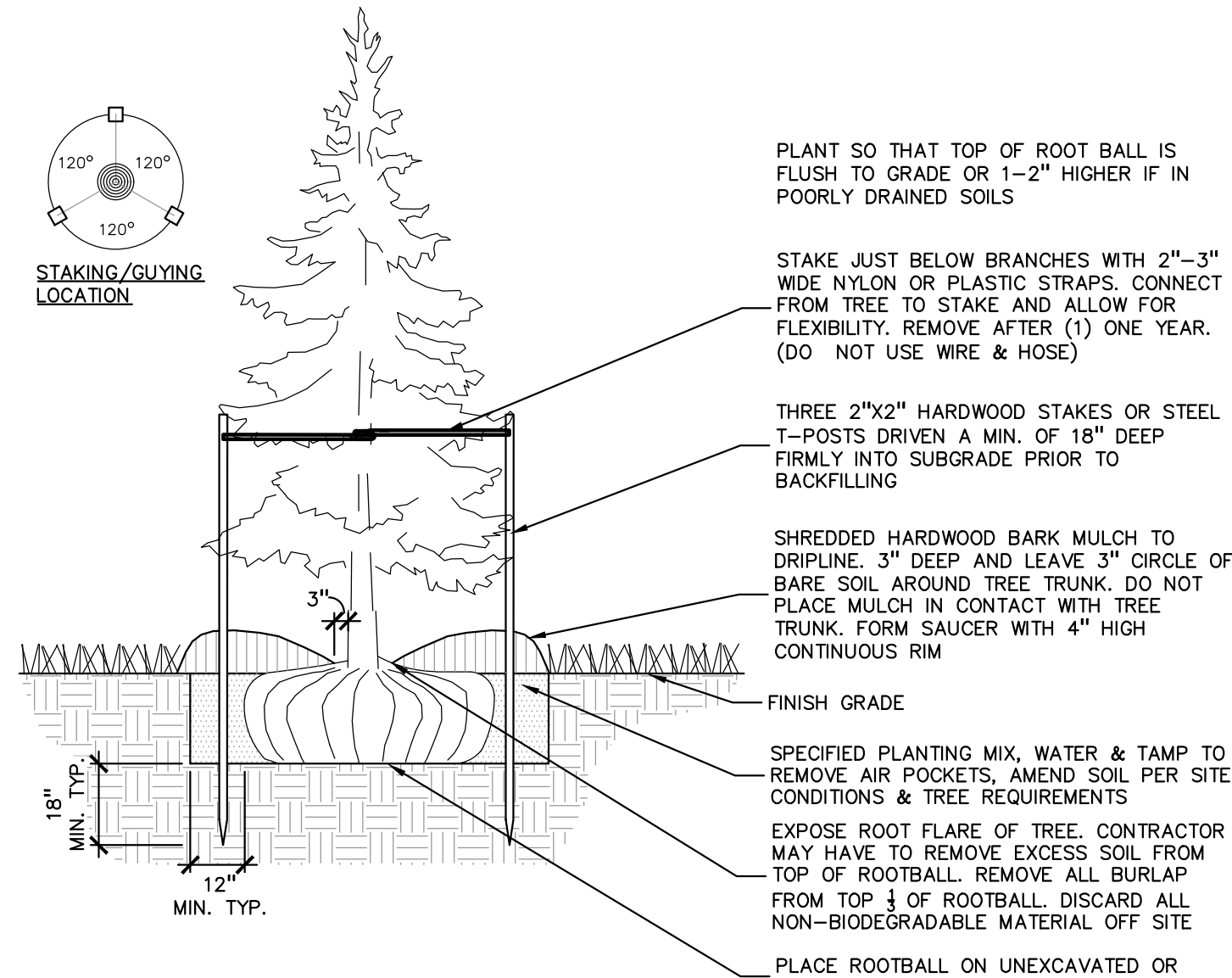
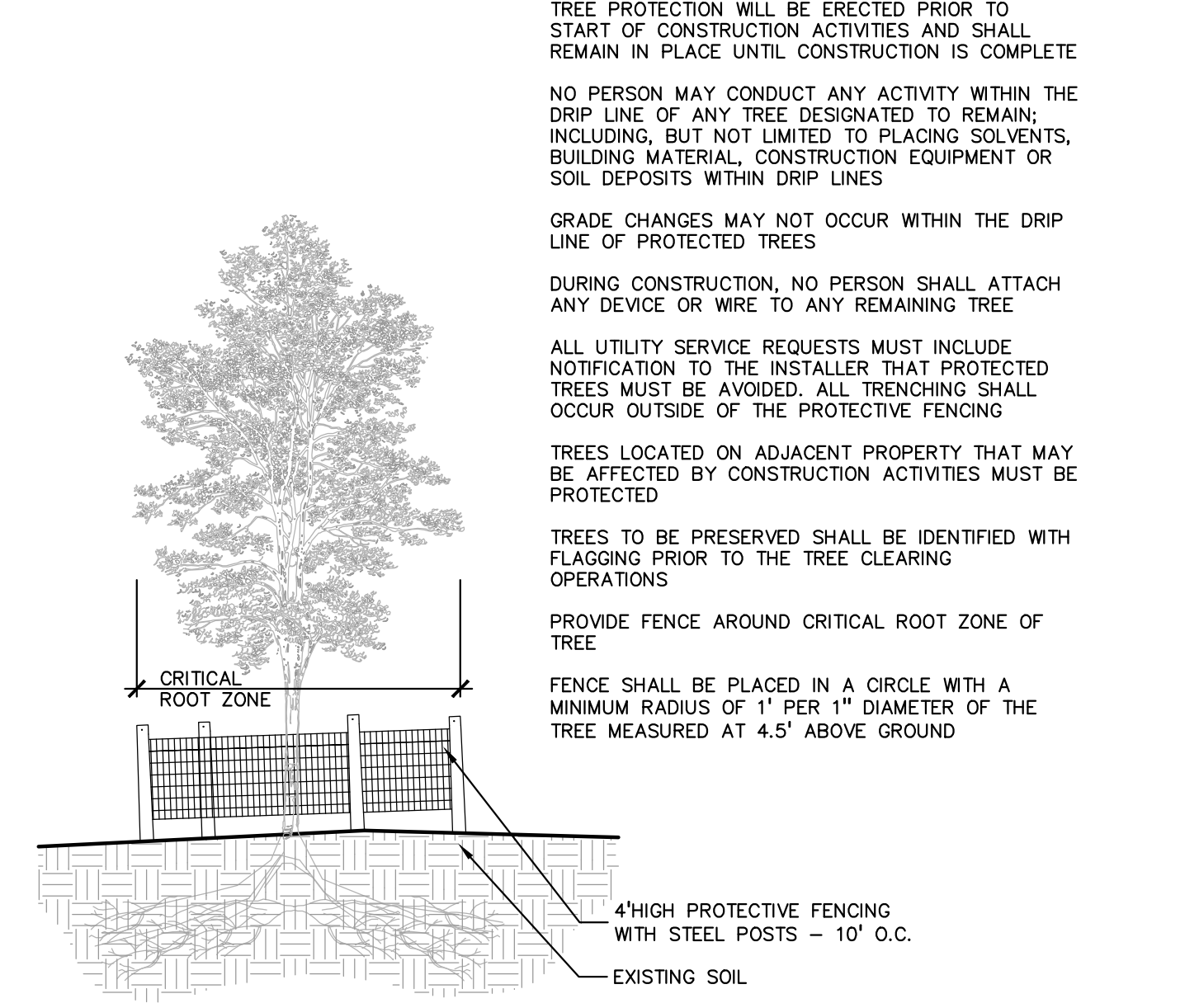
**GENERAL PLANTING NOTES:**

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 4" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.
- CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.
- TREES SHALL NOT CONFLICT/ BLOCK PROPOSED REGULATORY/ DIRECTION SIGNAGE, MONUMENT SIGNS, ADDRESS OR LIGHT POLES. SHIFT TREES AS NECESSARY TYP.



**4 SHRUB PLANTING DETAIL**  
SCALE: 1" = 2'-0"

**3 TREE PROTECTION DETAIL**  
SCALE: 1" = 3'-0"



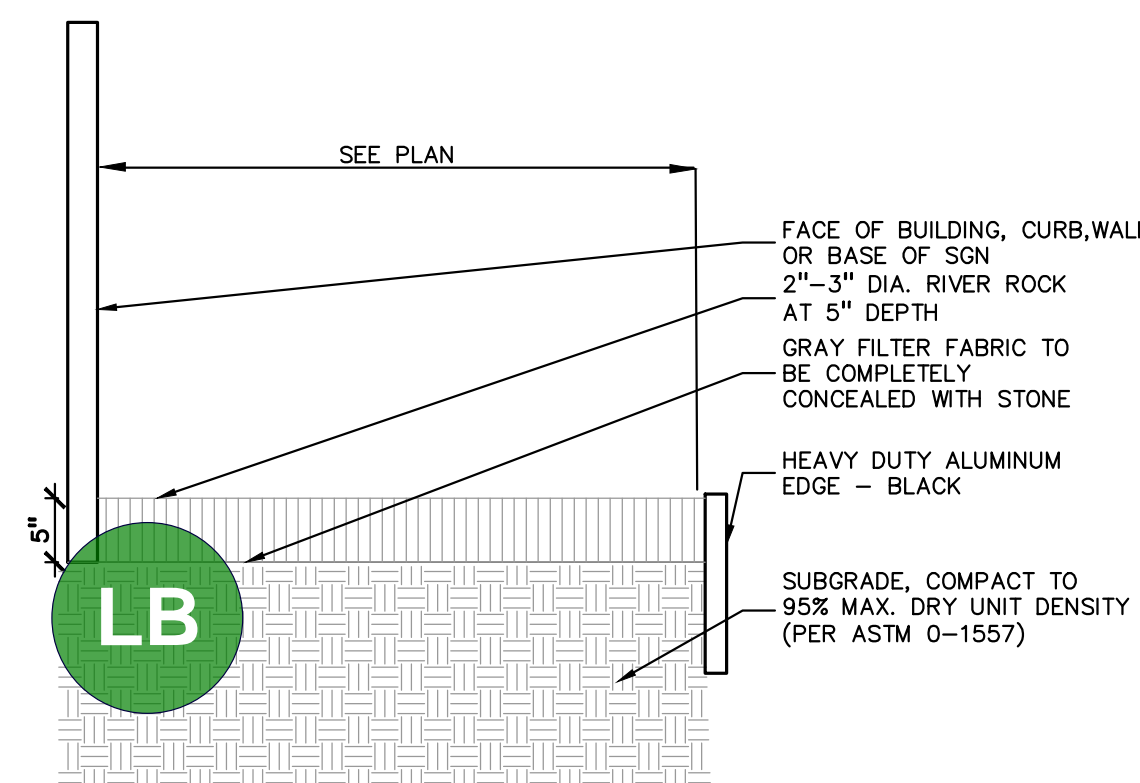
**1 DECIDUOUS TREE PLANTING DETAIL**  
SCALE: 1" = 3'-0"

**COST OPINION:**

**LANDSCAPING**

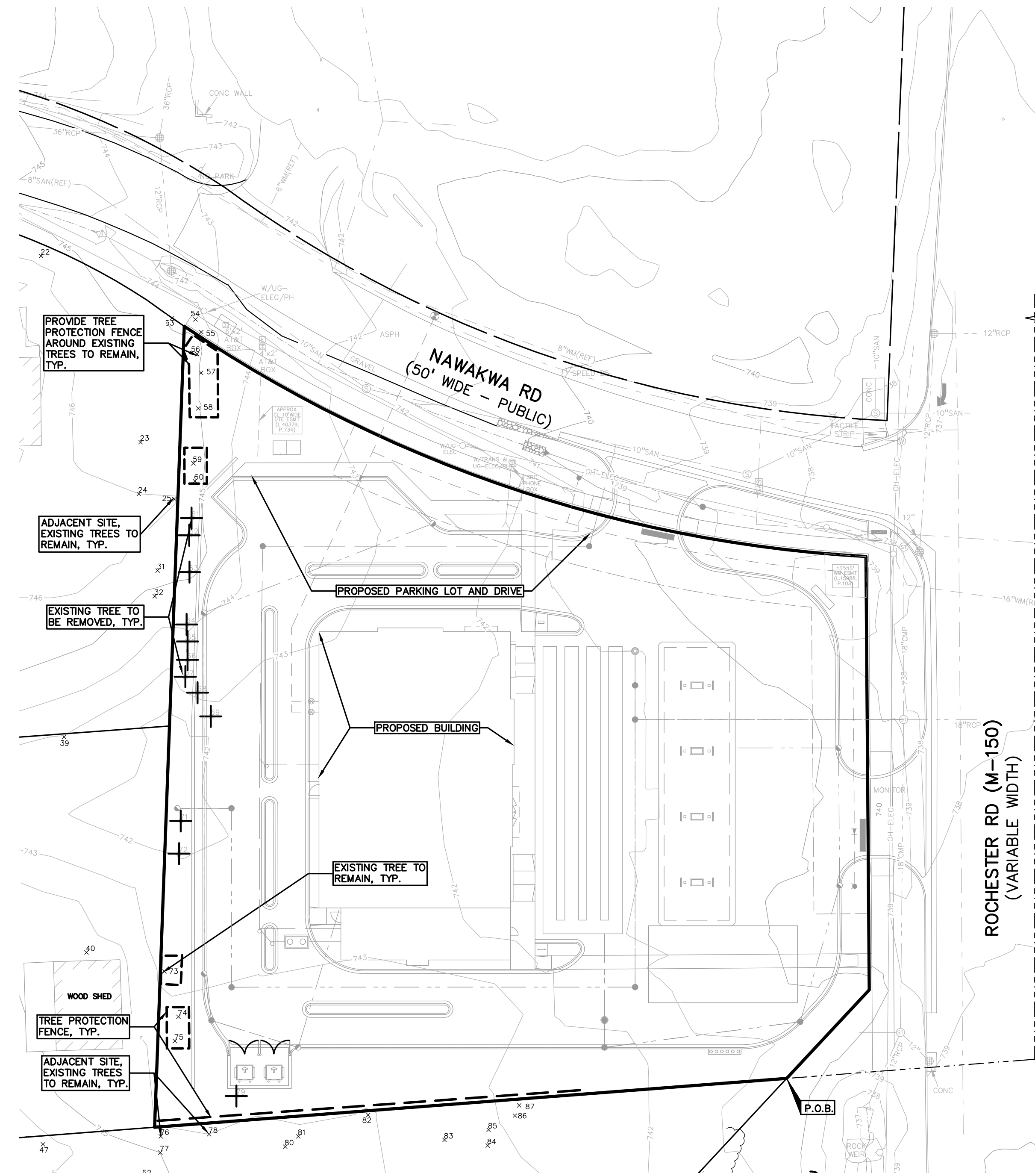
PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM PRICE
1,800	S.Y.	SEED LAWN	\$3.00	\$5,400.00
0	S.Y.	SPECIALITY SEED MIX	\$3.00	\$0.00
34	EA.	SUB CANOPY ORNAMENTAL TREES AT 2" CAL	\$350.00	\$11,900.00
47	EA.	DECIDUOUS TREES AT 3" CAL	\$550.00	\$25,850.00
0	EA.	EVERGREEN TREES AT 10" HT.	\$500.00	\$0.00
40	C.Y.	MULCH 3"	\$65.00	\$2,600.00
120	C.Y.	PLANT MIX FOR BEDS (6" DEPTH)	\$55.00	\$6,600.00
560	L.F.	ALUMINUM EDGING	\$6.00	\$3,360.00
15	C.Y.	RIVER ROCK	\$95.00	\$1,275.00
97	EA.	PERENNIALS	\$20.00	\$1,940.00
192	EA.	SHRUBS	\$65.00	\$12,480.00
1	LS.	IRRIGATION	\$10,000.00	\$10,000.00
TOTAL LANDSCAPING				\$94,480.00
LAWN RESTORATION NIC				

**TREE FUND SUMMARY:**  
BUFFER TYPE D WITHOUT MASONRY WALL, SOUTH SIDE OF SITE-B  
18 TREES AT THE RATE OF \$334/TREE = \$6,012.00  
TREE REPLACEMENT- REGULATED  
12 TREES AT THE OF \$334/TREE = \$4,008.00  
TOTAL TREE FUND = \$10,020.00



**7 RIVER ROCK EDGE DETAIL**  
SCALE: 1 1/2" = 1'-0"





KEY:

- = EXISTING TREES TO REMAIN
- = EXISTING TREES TO BE REMOVED
- = TREE PROTECTION FENCE  
SEE DETAIL SHEET L-1.1  
SEE SHEET L-1.0 FOR TREE REPLACEMENT INFO

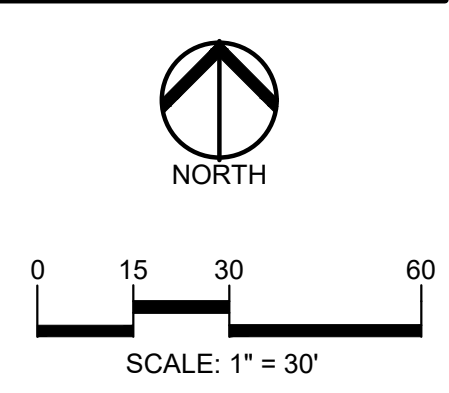
**REGULATED ON SITE TREES**

REGULATED TREES REMOVED:	12		
SPECIMEN TREES REMOVED:	0		
DBH OF SPECIMEN TREES REMOVED:	0	INCHES =	0 REPLACEMENT INCHES
SPECIMEN REPLACEMENT TREES:	0	TREES	
SPECIMEN TREES TO REMAIN ON-SITE:	0	TREES	
REPLACEMENT REQUIRED:	12+0-0= 12	TREES (MIN. 2" DECIDUOUS OR 8" EVERGREEN)	

TOTAL TREES ON SITE:	20
EXEMPT TREES IN BUILDING:	0
TREES TO REMAIN ON SITE:	8
<b>% TREES TO REMAIN:</b>	<b>(8)/(20-0) = 40.0%</b>

**EXISTING TREES WITHIN IN SITE BOUNDARY:**

NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT	EXEMPT?	SPECIMEN	SAVE / REMOVE	OFFSITE/ NIC	IN BUILDING
56	AU	11	Austrian Pine	Pinus nigra	FAIR			N	S	N	N
57	AU	12	Austrian Pine	Pinus nigra	FAIR			N	S	N	N
58	AU	12	Austrian Pine	Pinus nigra	FAIR			N	S	N	N
59	AU	12	Austrian Pine	Pinus nigra	FAIR			N	S	N	N
60	AU	7	Austrian Pine	Pinus nigra	FAIR			N	S	N	N
61	AU	11	Austrian Pine	Pinus nigra	POOR			N	R	N	N
62	AU	10	Austrian Pine	Pinus nigra	POOR			N	R	N	N
63	AU	11	Austrian Pine	Pinus nigra	FAIR			N	R	N	N
64	AU	11	Austrian Pine	Pinus nigra	FAIR			N	R	N	N
65	AU	12	Austrian Pine	Pinus nigra	FAIR			N	R	N	N
66	SC	7	Scotch Pine	Pinus sylvestris	POOR			N	R	N	N
67	SC	10	Scotch Pine	Pinus sylvestris	FAIR			N	R	N	N
68	BW	8	Black Walnut	Juglans nigra	GOOD			N	R	N	N
69	BX	2	Box elder	Acer negundo	FAIR			N	R	N	N
71	AU	10	Austrian Pine	Pinus nigra	POOR			N	R	N	N
72	AU	8	Austrian Pine	Pinus nigra	POOR			N	R	N	N
73	BX	15	Box elder	Acer negundo	POOR			N	S	N	N
74	SC	8	Scotch Pine	Pinus sylvestris	POOR			N	S	N	N
75	BW	8	Black Walnut	Juglans nigra	POOR			N	S	N	N
76	B	6	Basswood	Tilia americana	FAIR	X7		N	R	N	N



**CAUTION!!**  
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE AS TO ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT  
**3420 ROCHESTER ROAD, LLC**  
29200 NORTHWESTERN HIGHWAY,  
SUITE 450  
FARMINGTON HILLS, MICHIGAN 48334

PROJECT TITLE  
**3420 ROCHESTER ROAD**  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**REVISIONS**

SITE/UTILITY LAYOUT	12/20/23
SITE/UTILITY LAYOUT	04/17/24
PER CITY COMMENTS	06/14/24
PER MDT COMMENTS	09/23/24
PER CITY COMMENTS	10/09/24
PER CITY COMMENTS	11/15/24
PER CITY COMMENTS	01/08/25
PER CITY COMMENTS	02/03/25

ORIGINAL ISSUE DATE:  
AUGUST 15, 2022

DRAWING TITLE  
**TREE PLAN**

PEA JOB NO.	2021-0117
P.M.	LAA
DN.	JLE
DES.	JLE
DRAWING NUMBER:	

**NOT FOR CONSTRUCTION**  
CITY FILE #22-029 SECTION #34

**T-1.0**

S:\PROJECTS\2021\2021-0117 ROCHESTER HILLS FUEL METAL DMS\SITE PLANS\T-1.0 TREE PLAN-21-0117.dwg PLOT  
DATE: 17/08/2022 10:41 AM BY: JLE



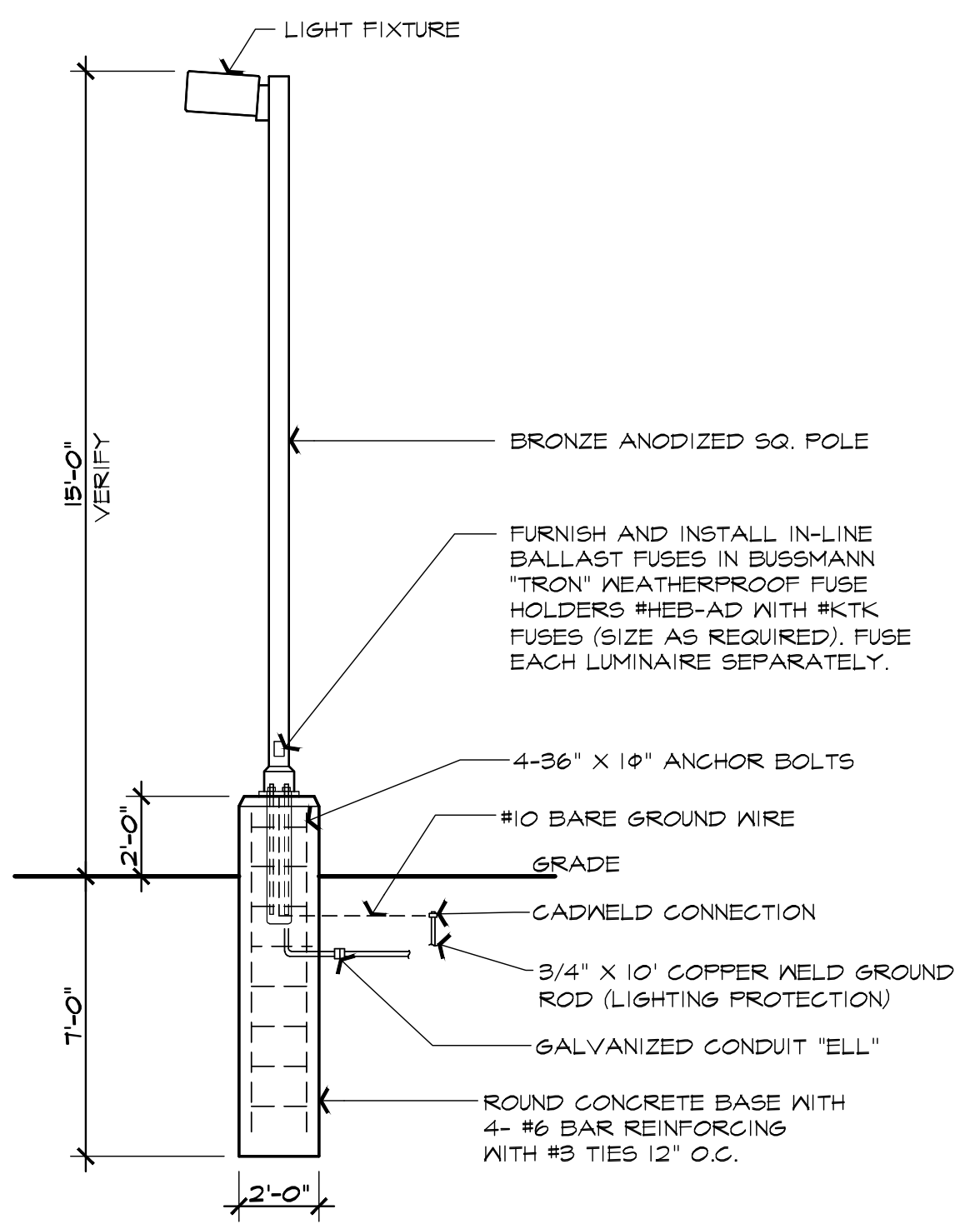
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	Lumen Multiplier	Light Loss Factor	Wattage	Efficiency	Distribution
□	BLC	8	Lithonia Lighting	D5X1 LED P2 30K 80CRI BLC4	D-Series Size 1 Area Luminaire P2 Performance Package 3000K CCT 80 CRI Type 4 Extreme Backlight Control		1	6384	1	0.9	61.78	100%	TYPE IV, SHORT, BUS RATING: 80 - U0 - 69
□	C	10	Gree Lighting	GPY250-C-8L-30K8-F-UL-xxxxxxx	CONFIGURED FROM GPY250 Canopy Luminaire, 1BL Lumen Package, T0 CRI, Flat Lens, 120-277V	556 STW1C12-EO	1	7675	1	0.9	53	100%	
□	M	12	6-LIGHTING/GR056 CHANDELIER - ST. LOUIS, MISSOURI	6L 0452-0-M-TBD-A-A	3-36LED 11"ARRAYS BEAM EXTERIOR 31" WALL SCONCE WHITE FLAT REFLECTOR w/WHITE ACRYLIC LENS ROAL STRATO #RSLD055 OIA		1	2514	1	0.9	48	100%	

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking Lot	□	0.7 fc	-	0.0 fc	N/A	N/A
Canopy	□	17.0 fc	14.4 fc	18.1 fc	19.1	19.1

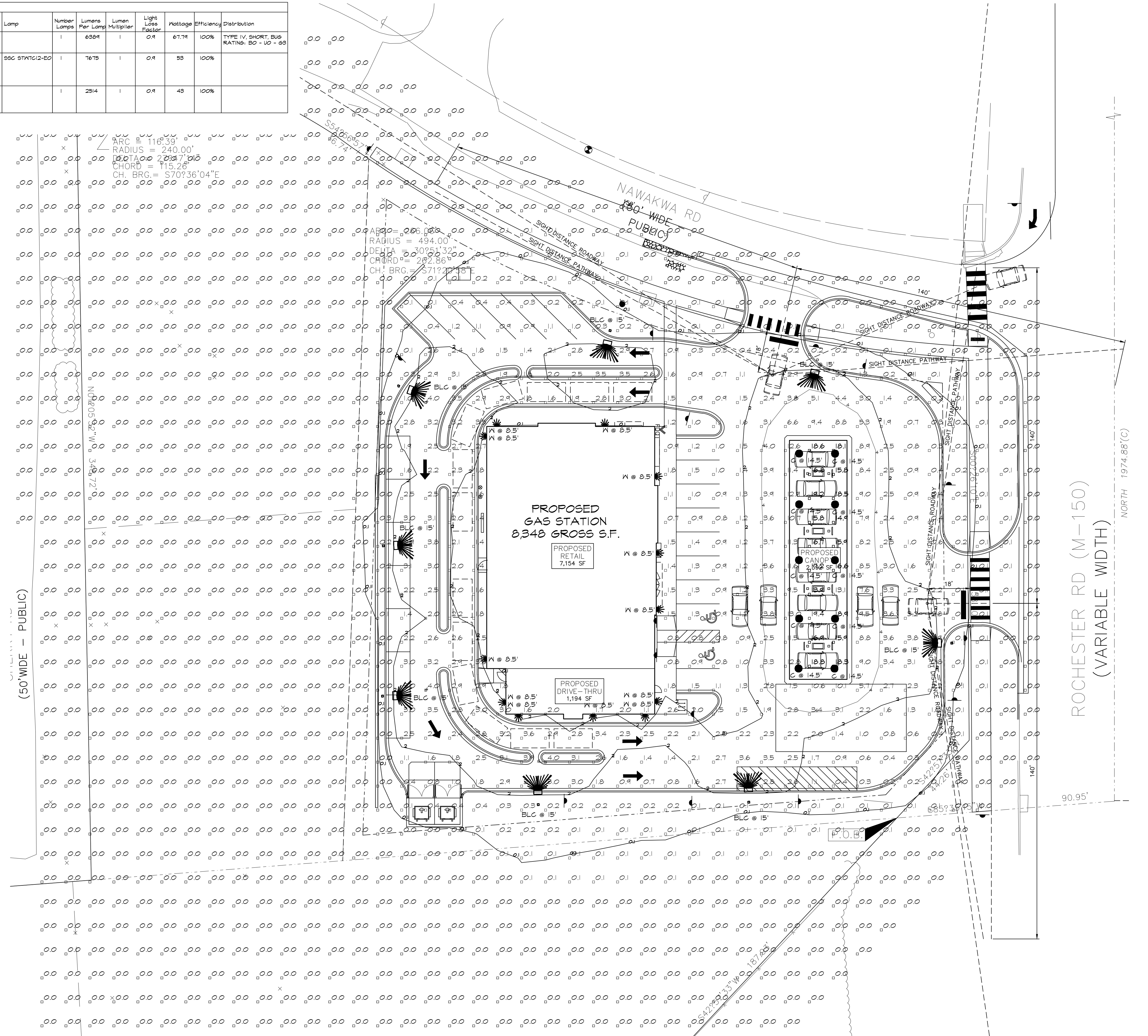
FOR MAX. AT PARKING LOT, REFER TO LAYOUT

- NOTE:**
- ALL LIGHTING FIXTURES SHALL NOT EXCEED THE HEIGHT OF THE DISTRICT THAT ARE LOCATED IN, MEASURED FROM THE GROUND LEVEL TO THE CENTERLINE OF THE LIGHT SOURCE. WALL SCONCES AND/OR LIGHT POLES SHALL BE NON-GLARE LIGHTING.
  - ALL LIGHTING ON THE SITE SHALL PREVENT THE ADVERSE EFFECTS OF INAPPROPRIATE LIGHTING, INCLUDING GLARE, LIGHT TRESPASS ONTO ADJOINING PROPERTIES, LIGHT POLLUTION AND SKY GLOW, AND ENERGY WASTE.
  - ALL THE EXTERIOR LIGHTING (INCLUDING WALL MOUNTED FIXTURES) SHALL BE FULLY SHIELDED AND DOWNWARD DIRECTED.
  - CANOPY STRUCTURE MUST HAVE RECESSED CANOPY FIXTURES WITH DIFFUSERS THAT DO NOT EXTEND BELOW THE CEILING SURFACE OF THE CANOPY.

- NOTE:**
- LED LIGHT SOURCES SHALL HAVE A CORRELATED COLOR TEMPERATURE THAT DOES NOT EXCEED 3,000K.
  - ALL THE EXTERIOR LIGHTING IN NON-RESIDENTIAL DISTRICTS SHALL INCORPORATE AUTOMATIC TIMERS AND SHALL BE TURNED OFF BETWEEN THE HOURS OF MIDNIGHT AND SUNRISE, EXCEPT FOR LIGHTING NECESSARY FOR SECURITY PURPOSES OR ACCESSORY TO A USE THAT CONTINUES AFTER MIDNIGHT.
  - EXTERIOR LIGHTING SHALL BE FULLY SHIELDED AND DIRECTED DOWNWARD AT A 90 DEGREE ANGLE.
  - ALL FIXTURES SHALL COMPLY WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA STANDARDS.



**POLE LIGHT DETAIL TYPE "BLC"**  
NTS

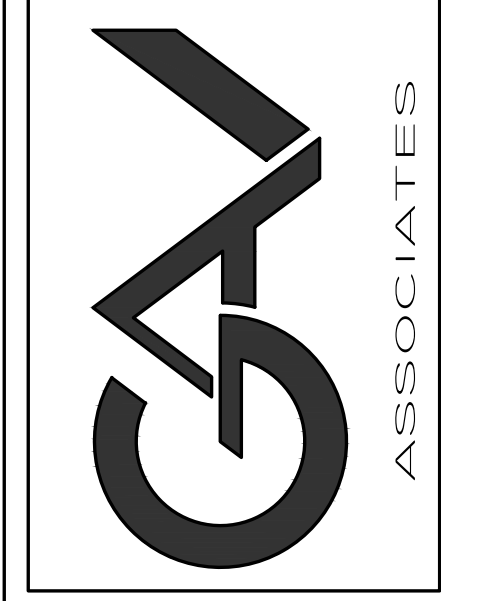


**SITE LIGHTING PHOTOMETRIC PLAN**

SCALE: 1" = 20'-0"

ISSUED FOR	DATE
GPA	8-22-2022
GPA REVISION	4-14-2024
GPA REVISION	10-1-2024

**ARCHITECTURAL DESIGN**  
RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL  
G.A.V. ASSOCIATES, INC  
2401 ORCHARD LAKE RD, STE. 180A  
FARMINGTON, MICHIGAN 48338  
PH: (248) 985-8101  
WEB: WWW.GAVASSOCIATES.COM



**PROPOSED DRAWINGS FOR:**  
GAS STATION  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
M.B.	G.A.	G.A.

SCALE: AS SHOWN  
FILE NAME:  
JOB #: 21091  
SHEET TITLE  
SITE LIGHTING  
PHOTOMETRIC  
PLAN  
SHEET #  
**SP.101**



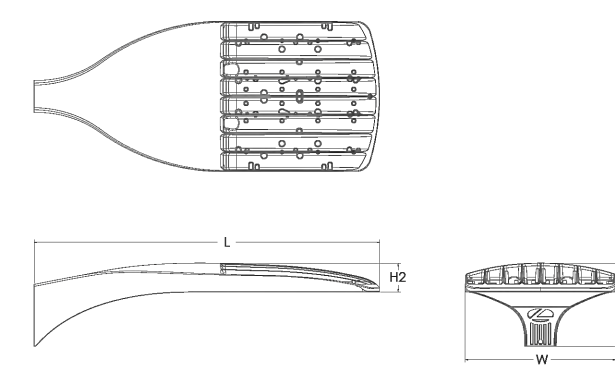


### D-Series Size 1 LED Area Luminaire



#### Specifications

**EPA:** 0.69 ft<sup>2</sup> (0.06 m<sup>2</sup>)  
**Length:** 32.71" (831.0mm)  
**Width:** 14.26" (362.0mm)  
**Height H1:** 7.88" (200.0mm)  
**Height H2:** 2.73" (69.0mm)  
**Weight:** 34 lbs (15.4kg)



**Introduction**  
 The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.  
 The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

#### Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DBBCK

Series	LEDs	Color Temperature	Color Rendering Index	Description	Voltage	Mounting
DSX1 LED	Forward optics	(this section 70CRI only)				
P1	P6	30K 3000K	70CRI	AFR Automotive front row type I short	120V/277V <sup>1</sup>	SPA Square pole mounting (Ø6 drilling)
P2	P7	40K 4000K	70CRI	T3M type II medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P3	P8	50K 5000K	70CRI	T3M type III medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P4	P9	(this section 80CRI only, extended lead times apply)	80CRI	T3M type III medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P5	P10	30K 3000K	80CRI	T4M type IV medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P6	P11	35K 3500K	80CRI	T4M type IV medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P7	P12	40K 4000K	80CRI	T4M type IV medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)
P8	P13	50K 5000K	80CRI	T4M type IV medium	120V/277V/480V <sup>1A</sup>	RPA Round pole mounting (Ø6 drilling)

Control options	Other options	Finish options
<b>Shipped installed</b> NLTAIR2 PIRHN All light AR gas 2 enabled with bi-level motion / ambient sensor, 8-47 mounting height, ambient sensor enabled at 26" <sup>1A, 1B, 1C</sup> PIR High low motion/ambient sensor, 8-47 mounting height, ambient sensor enabled at 26" <sup>1A, 1B, 1C</sup> PER NEMA twist lock receptacle only (controls ordered separately) <sup>1A</sup> PERS Five-pin receptacle only (controls ordered separately) <sup>1A, 1B</sup>	<b>Shipped installed</b> SP00XV 30KV surge protection HS Houside shield (black finish standard) <sup>1</sup> L90 Left rotated optics <sup>1</sup> R90 Right rotated optics <sup>1</sup> CE Casual Construction <sup>1A</sup> HA 50% ambient operation <sup>1A</sup> BAA Bay America(s) Act Compliant SF Single face (130, 277, 347V) <sup>1A</sup> DF Double face (208, 240, 480V) <sup>1A</sup> <b>Shipped separately</b> EGSR Egress Glass Shield (removable, field install required, matches housing finish) B5DB Bird Spikes (field install required)	D300 Dark Bronze D310 Black D320 Natural Aluminum D330 White D340 Textured dark bronze D350 Textured black D360 Textured natural aluminum D370 Textured white

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (378) • www.lithonia.com  
 © 2011-2023 Acuity Brands Lighting, Inc. All rights reserved.

### CPY Series - Version C

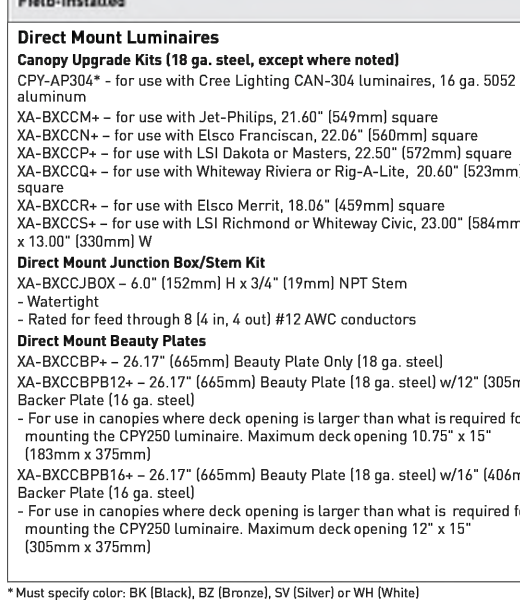
CPY250\* LED Canopy/Soft Luminaire

**Product Description**  
 The CPY250\* LED Canopy/Soft Luminaire has an extremely thin profile constructed of rugged cast aluminum. It can be surface mounted easily from below the canopy deck and can be pendant mounted. Direct imaging of the LEDs is eliminated with a highly efficient patterned flat or 0.91" (23mm) drop glass lens.  
**Applications:** Petroleum canopies, CNG fueling stations, soffits

**Performance Summary**  
 Assembled in the USA by Cree Lighting from US and imported parts  
**Initial Delivered Lumens:** Up to 21,000  
**Efficacy:** Up to 145 LPW  
**CRi:** Minimum 70 CRI (40K, 50K, 57K); 80 CRI (30K); 90 CRI (40K, 50K)  
**CCT:** 3000K, 4000K, 5000K, 5700K  
**Limited Warranty:** 10 years for luminaire/10 years for Colorfast DeltaGuard® finish/5 years for BML sensor/up to 5 years for Synapse® accessories/1 year for field-installed accessories

**Accessories**  
 Class I, Division 2 Hazardous Location for select models  
 \*See <http://www.cree.com/CPY250> for warranty terms. For Synapse accessories, consult Synapse spec sheets for details on warranty terms.

Field-Installed	Pendant Mount Luminaires
<b>Direct Mount Luminaires</b> Canopy Upgrade Kit (18 ga. steel, except where noted) CPY-UP250* - for use with Cree Lighting CAN-354 luminaires, 16 ga. 5052 XA-BCC2M - for use with Axi-Phlips, 21.62" (549mm) square XA-BCC2M - for use with Blue Franciscan, 22.81" (580mm) square XA-BCC2M - for use with LSI Dakota or Masters, 22.50" (572mm) square XA-BCC2M - for use with WhiteWay/White - RPA-A-Lite, 20.40" (518mm) square XA-BCC2M - for use with Edge Mount, 18.50" (469mm) square XA-BCC2M - for use with LSI Richmond or WhiteWay Civic, 23.00" (584mm) L x 13.00" (330mm) W <b>Direct Mount Junction Box/Kit</b> XA-BCCJ250* - 4" (102mm) H x 3/4" (19mm) NPT Shm - Replaces light fixture <b>Direct Mount Beauty Plates</b> XA-BCCBP18* - 24.17" (614mm) Beauty Plate (18 ga. steel) XA-BCCBP19* - 24.17" (614mm) Beauty Plate (18 ga. steel w/1" (25mm) Backer Plate (18 ga. steel) - For use in canopies where deck opening is larger than what is required for mounting the CPY250 luminaire. Maximum deck opening 12" x 13" (305mm x 330mm) XA-BCCBP18* - 24.17" (614mm) Beauty Plate (18 ga. steel w/1" (25mm) Backer Plate (18 ga. steel) - For use in canopies where deck opening is larger than what is required for mounting the CPY250 luminaire. Maximum deck opening 12" x 13" (305mm x 330mm)	<b>Pendant Mount Kits</b> XA-PS120T* - 3" (76mm) pendant XA-PS180T* - 1" (25mm) pendant XA-PS220T* - 1" (25mm) pendant - Includes steel conduit fittings and 3/4" NPT pipe threaded on two ends <b>Synapse® SimplySnap 10V Interface</b> DM10-225P - 120V-277V - Requires other Synapse components to complete system - Refer to DM10-225P spec sheet for details



\*Must specify color: BK (Black), BZ (Bronze), SW (Silver) or WH (White)  
 \*\*Must specify color: T (Black), Z (Bronze), S (Silver) or W (White)

#### Ordering Information

Example: CPY250-C-12L-570K-D-UL-DM-SV

Product	Version	Lumen Package <sup>1</sup>	CCT/CRi	Optic	Voltage	Housing	Color Options	Controls	Options
CPY250	C	21,000 Lumens	300K	0	UL	DM	BK	BLNK	10KV 100V/150A Surge Suppression
		4,000 Lumens	40K	0.91" (23mm)	UL	DM	BK	BLNK	- Replaces standard DM/PA surge suppression
		4,000 Lumens	40K	0.91" (23mm)	UL	DM	BK	BLNK	- Not for use with BML as BML option includes 100V/150A surge as standard
		8,000 Lumens	50K	0	UL	DM	BK	BLNK	<b>HZ Class I, Div. 2 Hazardous Location Certification</b>
		13,000 Lumens	57K	0	UL	DM	BK	BLNK	- Available with DM and PD mounts only
		21,000 Lumens	57K	0	UL	DM	BK	BLNK	- Luminaire includes NSF certification mark
									- Suitable for DM mount only
									- Not available with BML control or HZ option

<sup>1</sup>Lumen Package codes identify approximate light output only. Actual lumen output levels may vary depending on CCT and optic selection. Refer to Initial Delivered Lumens tables for specific lumen values.  
 UL Listed, ETL Listed, NSF, DLC Listed, IES, BAA



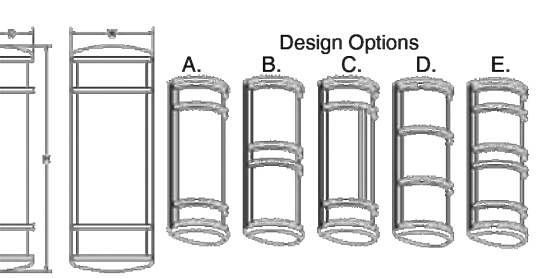
### BEAM

Exterior Sconce



9777 Reavis Park Drive  
 St. Louis, MO 63123  
 800.331.2425 or 314.631.6000  
 sales@glighting.com www.glighting.com

**GENERAL SPECIFICATION**  
**LED:** High efficiency mid-power LEDs are field serviceable.  
**LED Dimming:** 0-10V dimming standard.  
**Body:** Extruded aluminum wall plate and rails. Body hinges for easy serviceability.  
**Diffuser:** Extruded polycarbonate lens is UL-94 HB Flame Class rated.  
**Standard Finishes:** Highly durable oven cured no VOC premium powder coat.  
**Design:** Aluminum die cast end caps and decorative bars.  
**Modified:** Contact factory for modified lengths, lamping and decorative fronts.  
**Exterior Mounting:** Gasketed between wall and wall plate.



SAMPLE CATALOG NUMBER:	H-	S-	PA-	A-	A
MODEL NO.	LAMPING	DIFFUSER	FINISH	DESIGN	OPTION(S)
GL-5449	W in 7 1/4" mm 185 H in 12" mm 305 D in 3 7/8" mm 125	AK. 10LED30 AL. 10LED35 AM. 10LED40	Standard: S. Satin White Polycarbonate is UL-94 HB Flame Class rated.	Standard: Powder Coat BK-Black BL-Blue GR-Grey LG-Light Grey BE-Beige PB-Patina Bronze PA-Painted Aluminum PTC-Patina Copper WH-White BZ-Brushed Bronze NBN-New Satin Nickel NIN-Nickel RD-Rose CR-Champagne RG-Rose Green SG-Sage GM-Gun Metal PDR-DR Powder Coat Textured Powder TLV-Light Verdigris TWH-Textured White TBL-Textured Black TBR-Textured Bronze TBN-Textured Nickel TBZ-Textured Bronze Premium: SA-Satin Aluminum	A. No Options B. Emergency LED C. Dimmable D. Not available with GL-5449 E. Not available with GL-5450
GL-5450	W in 7 1/4" mm 185 H in 17" mm 430 D in 3 7/8" mm 125	A. 14LED30 B. 14LED35 C. 14LED40			
GL-5451	W in 7 1/4" mm 185 H in 25" mm 635 D in 3 7/8" mm 125	D. 14LED30 E. 14LED35 F. 14LED40 G. 28LED30 H. 28LED35 I. 28LED40			
GL-5452	W in 7 1/4" mm 185 H in 37" mm 940 D in 3 7/8" mm 125	K. 21LED30 L. 21LED35 M. 21LED40 N. 42LED30 O. 42LED35 P. 42LED40			
GL-5453	W in 7 1/4" mm 185 H in 49" mm 1245 D in 3 7/8" mm 125	R. 28LED30 S. 28LED35 T. 28LED40 U. 56LED30 V. 56LED35 W. 56LED40			

All dimensions are nominal. Light Source Definition

Lamp	LED	CRi	Rated Lumens	Delivered Lumens	Kelvin	Lamp	LED	CRi	Rated Lumens	Delivered Lumens	Kelvin
10LED30	10W	92	50000	478	3000	28LED30	28W	80	50000	1562	3000
10LED35	10W	92	50000	478	3500	28LED35	28W	80	50000	1562	3500
10LED40	10W	92	50000	478	4000	28LED40	28W	80	50000	1562	4000
14LED30	14W	80	50000	781	3000	42LED30	42W	80	50000	2527	3000
14LED35	14W	80	50000	781	3500	42LED35	42W	80	50000	2527	3500
14LED40	14W	80	50000	781	4000	42LED40	42W	80	50000	2527	4000
21LED30	21W	80	50000	1171	3000	56LED30	56W	80	50000	3124	3000
21LED35	21W	80	50000	1171	3500	56LED35	56W	80	50000	3124	3500
21LED40	21W	80	50000	1171	4000	56LED40	56W	80	50000	3124	4000

© Cross Chandelier Co. G Lighting reserves the right to modify existing designs to improve appearance or function.

### FIXTURE TYPE "BLC"

LIGHT POLE +/- 15' AFF (V/F)

### FIXTURE TYPE "C"

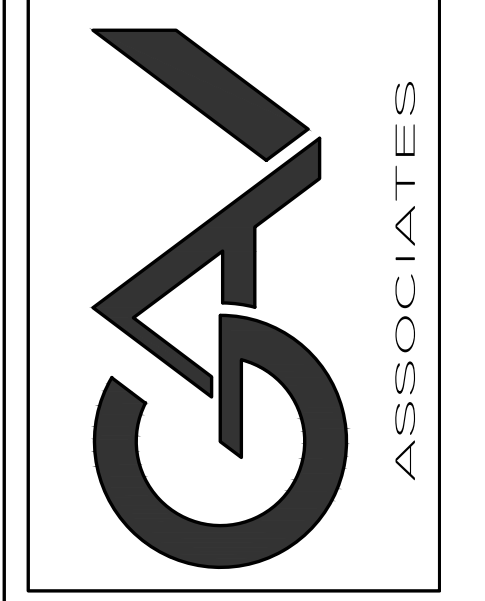
CANOPY +/- 14.5' AFF (V/F), SEE ELEVATIONS

### FIXTURE TYPE "W"

+/- 8.5' AFF, SEE ELEVATIONS

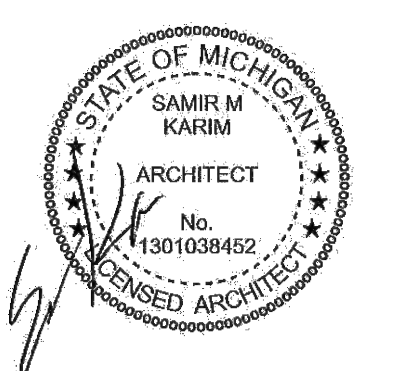
ISSUED FOR	DATE
GPA	8-22-2022
GPA REVISION	4-14-2024
GPA REVISION	10-1-2024

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL COMMERCIAL INDUSTRIAL  
 G.A.V. ASSOCIATES, INC.  
 24001 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM



PROPOSED DRAWINGS FOR:  
 GAS STATION  
 3420 ROCHESTER ROAD  
 ROCHESTER HILLS, MICHIGAN

DRAWN: M.B. DESIGNED: G.A. CHECKED: G.A.  
 SCALE: AS SHOWN  
 FILE NAME:  
 JOB #: 21091  
 SHEET TITLE: SITE LIGHTING CUT SHEET  
 SHEET #: SP.102





**PROJECT DESCRIPTION**

PROPOSED 1 STORY COMMERCIAL BUILDING, THE INTERIOR TO BE BUILT OUT INTO GAS STATION (CONVENIENCE/ RETAIL STORE) & TENANT.

**PROJECT DATA:**

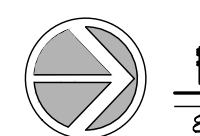
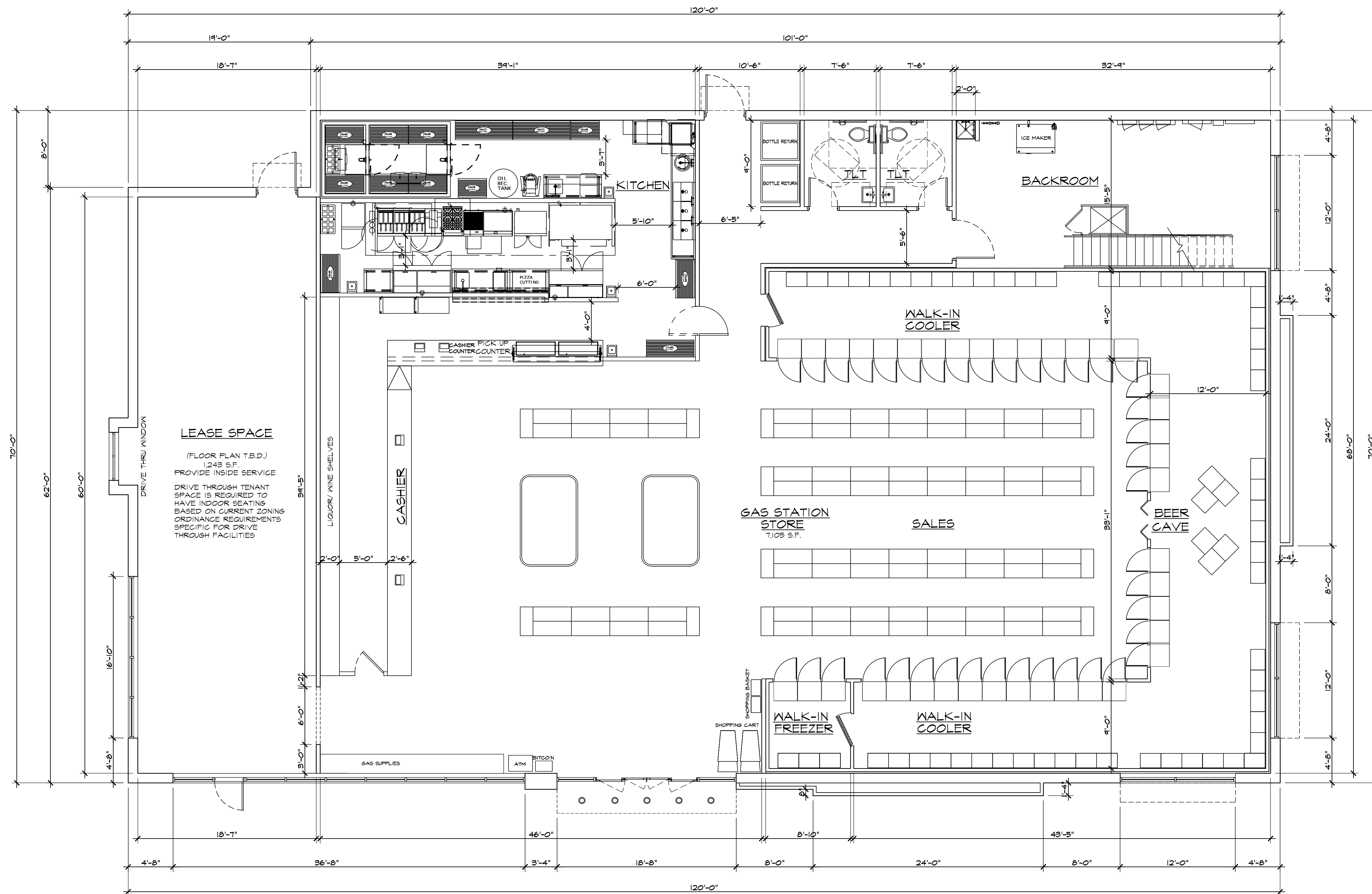
USE GROUP: M - MERCANTILE & B - BUSINESS  
 CONSTRUCTION TYPE: 2B - NOT SPRINKLED  
 GROSS FLOOR AREA: 8,348 SF (TOTAL BUILDING)  
 GAS STATION: 7,105 SF  
 LEASE SPACE: 1,243 SF  
 OUTDOOR GAS CANOPY: 2,342 SF  
 TOTAL BUILDING & CANOPY: 10,740 SF  
 MIXED USE NON SEPERATED

**ALLOWED BUILDING HEIGHT AND AREA SECTION 504 & 506:**  
 BASED ON USE GROUP M - MERCANTILE

PROVIDED:  
 • BASE AREAS:  
 NS 12,500 SF 8,348 SF (TOTAL)  
 S1 50,000 SF  
 • HEIGHT:  
 2 FLR, 55' 1 FLR, 29'-4" MAX.  
 2 FLR, 30' (PER ZONING REGULATIONS)

**CODES & STANDARDS REFERENCES:**

GENERAL CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE, CITY AND LOCAL CODES WHERE APPLICABLE. ALL NEW CONSTRUCTION SHALL COMPLY TO THE FOLLOWING:  
 • 2015 MICHIGAN BUILDING CODE (MBC).  
 • 2021 MICHIGAN MECHANICAL CODE (MMC).  
 • 2021 MICHIGAN PLUMBING CODE (MPC).  
 • 2023 NATIONAL ELECTRICAL CODE (NEC) PART 8 OF THE STATE CONSTRUCTION CODE  
 • 2009 ICC/ANSI A117.1 AND MICHIGAN BARRIER FREE DESIGN LAW P.A. 1 OF 1966 AS AMENDED.  
 • 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) WITH 2013 ASHRAE STANDARD 90.1 STANDARD INCLUDING AMENDMENTS.  
 • 2015 MICHIGAN UNIFORM ENERGY CODE, PART 10A



**FLOOR PLAN**

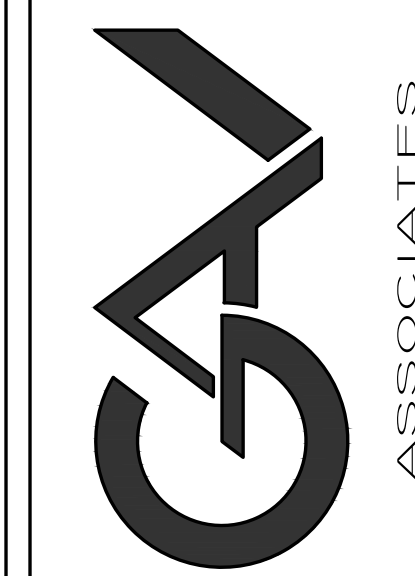
8,348 SF.

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

ISSUED FOR	DATE
REVIEW	10-1-2021
REVIEW	1-10-2022
REVIEW	1-24-2022
SPA REVISION	4-14-2024
SPA REVISION	10-7-2024
SPA REVISION	2-20-2024

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL

G.A.V. ASSOCIATES, INC  
 2401 ORCHARD LAKE RD. STE. 180A  
 FARMINGTON, MICHIGAN 48338  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM



PROPOSED DRAWINGS FOR:  
 GAS STATION  
 3420 ROCHESTER ROAD  
 ROCHESTER HILLS, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
M.E.	G.A.	G.A.

SCALE : AS SHOWN

FILE NAME :

JOB # 21091

SHEET TITLE  
 FLOOR PLAN

SHEET #  
 A.101



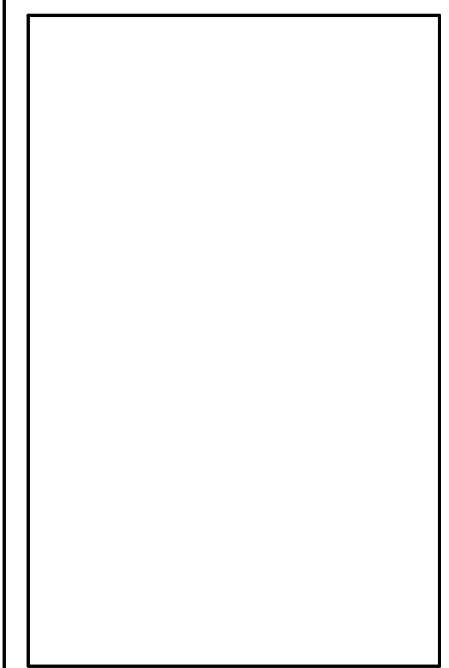


ISSUED FOR	DATE
REVIEW	1-24-2022
GPA REVISION	4-14-2024
GPA REVISION	10-1-2024

**ARCHITECTURAL DESIGN**

RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC  
24001 ORCHARD LAKE RD. STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 285-9101  
WEB: WWW.GAVASSOCIATES.COM

PROPOSED DRAWINGS FOR:  
GAS STATION  
3420 ROCHESTER ROAD  
ROCHESTER HILLS, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
M.B.	G.A.	G.A.

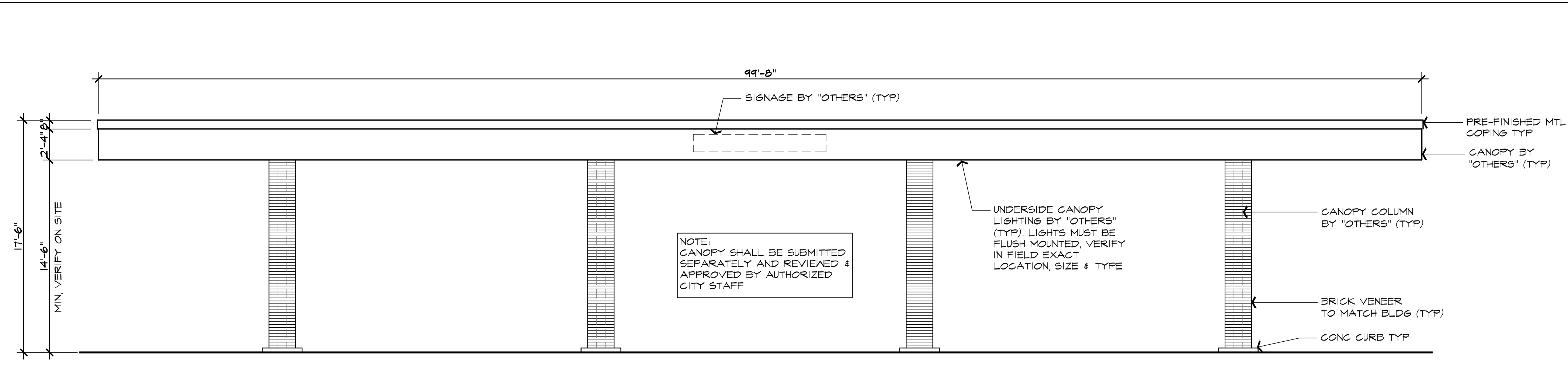
SCALE : AS SHOWN

FILE NAME :

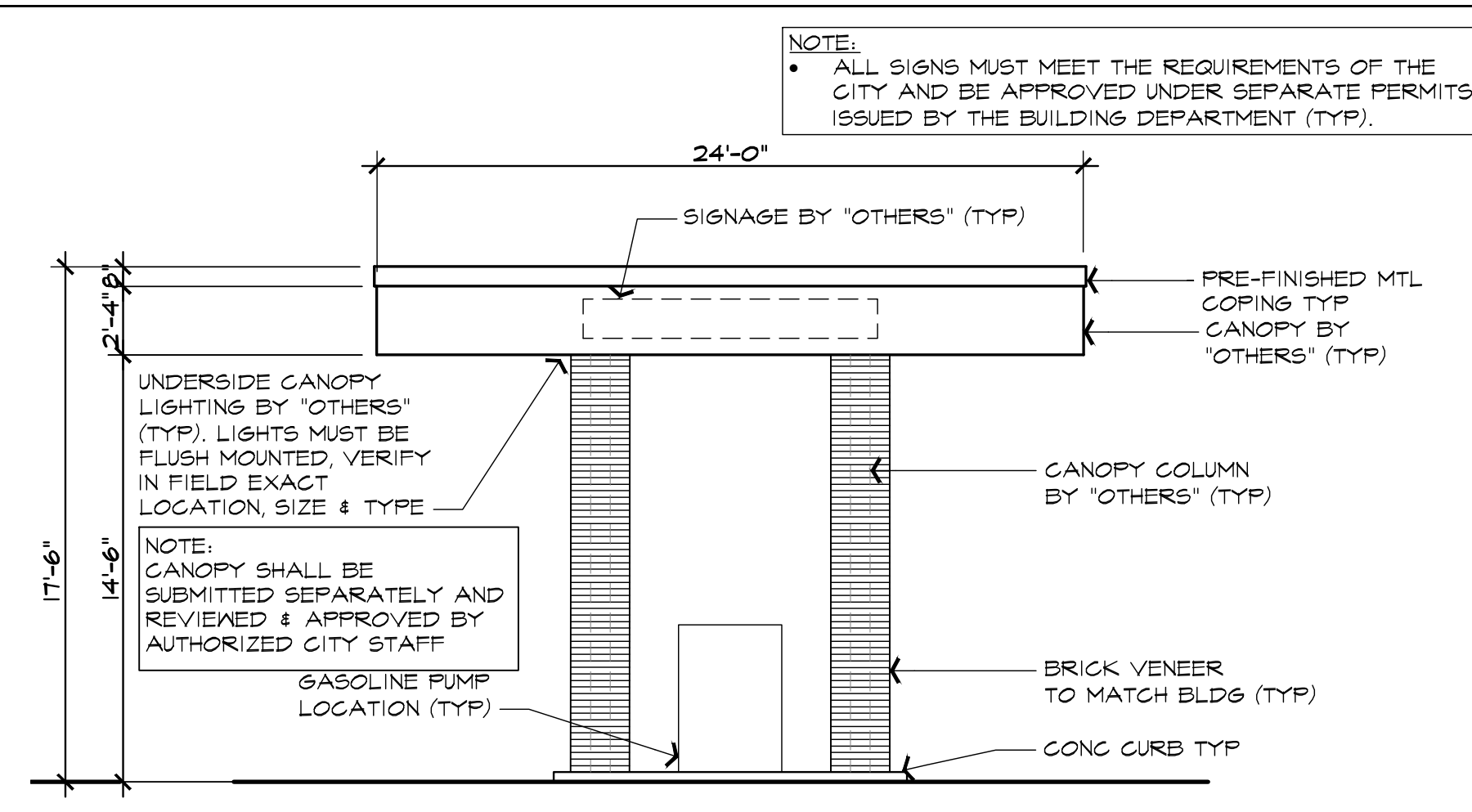
JOB # 21091

SHEET TITLE  
MEZZ FLOOR PLAN

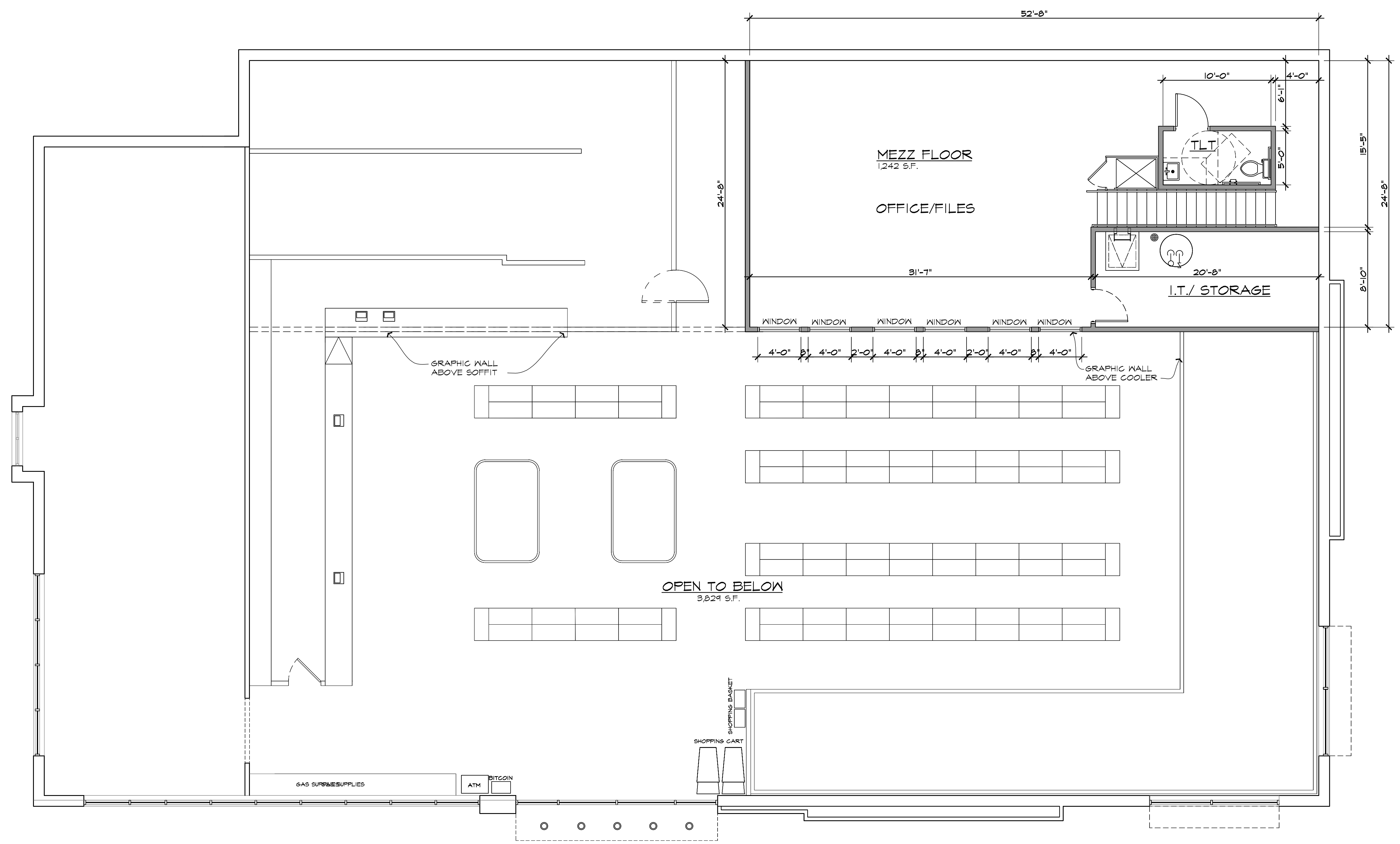
SHEET #  
**A.102**



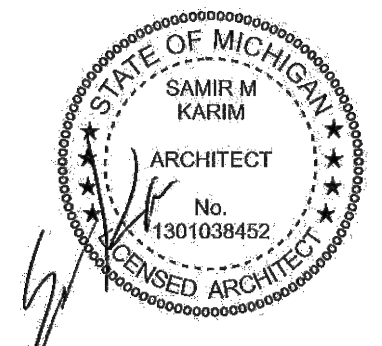
**FUELING STATION CANOPY EAST/ WEST ELEVATION**  
SCALE: 3/16" = 1'-0"



**FUELING STATION CANOPY SOUTH/ NORTH ELEVATION**  
SCALE: 3/16" = 1'-0"



**MEZZ FLOOR PLAN**  
SCALE: 3/16" = 1'-0"





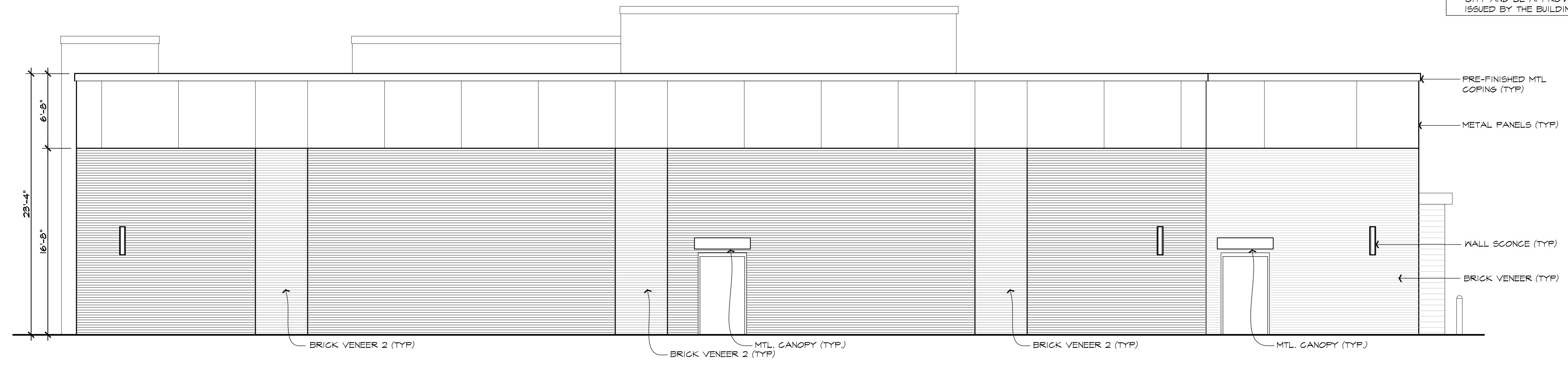
NOTE:  
 ALL SIGNS MUST MEET THE REQUIREMENTS OF THE CITY AND BE APPROVED UNDER SEPARATE PERMITS ISSUED BY THE BUILDING DEPARTMENT (TYP).

ISSUED FOR	DATE
REVIEW	1-24-2022
SPA REVISION	4-14-2024
SPA REVISION	10-1-2024

**ARCHITECTURAL DESIGN**

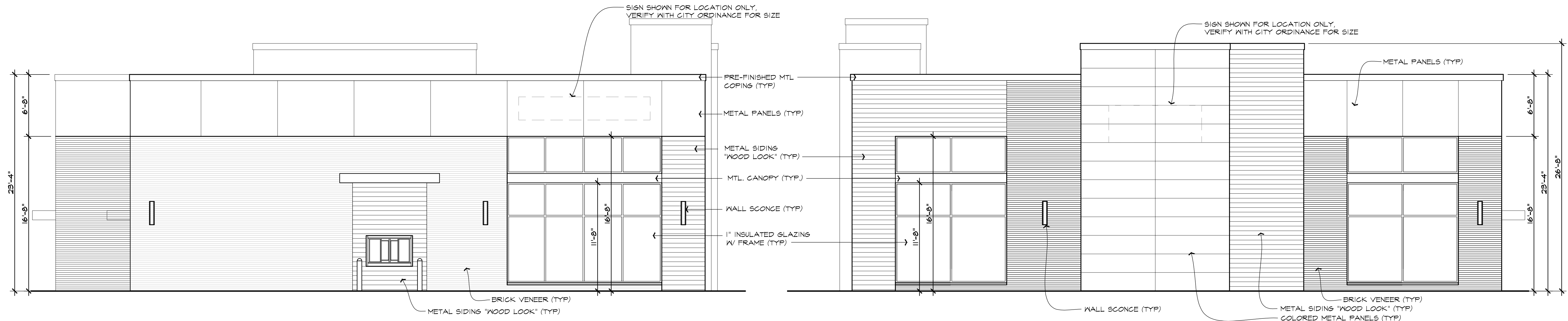
RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL

G.A.V. ASSOCIATES, INC  
 24001 ORCHARD LAKE RD. STE. 180A  
 FARMINGTON, MICHIGAN 48338  
 PH: (248) 285-8101  
 WEB: WWW.GAVASSOCIATES.COM

**WEST ELEVATION**

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

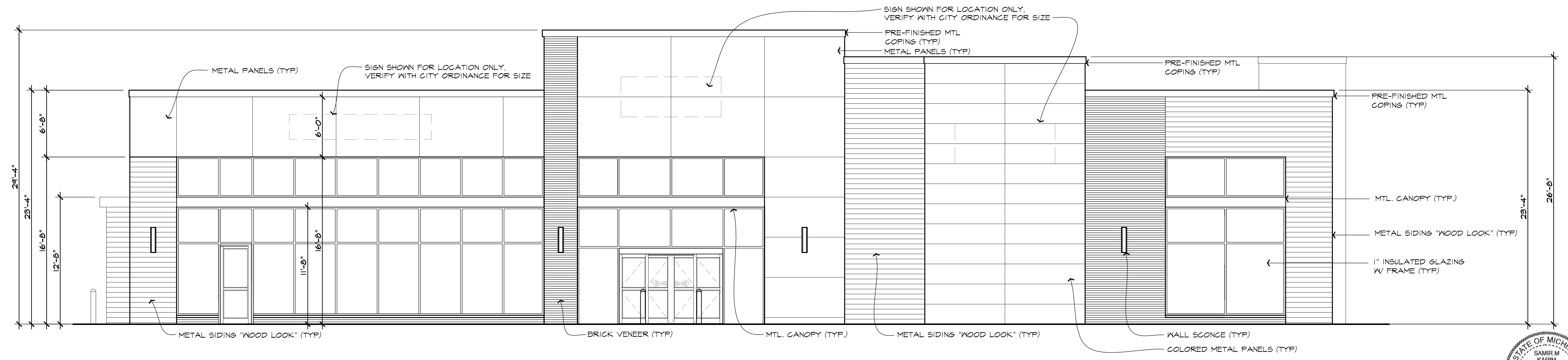


**SOUTH ELEVATION**

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

**NORTH ELEVATION**

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



**EAST ELEVATION**

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

PROPOSED DRAWINGS FOR:  
**GAS STATION**  
**3420 ROCHESTER ROAD**  
**ROCHESTER HILLS, MICHIGAN**

DRAWN:	DESIGNED:	CHECKED:
M.B.	G.A.	G.A.

SCALE : AS SHOWN

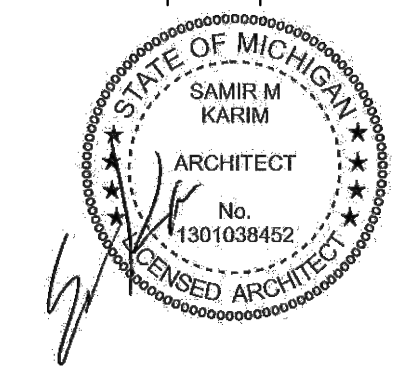
FILE NAME :

JOB # 21091

SHEET TITLE  
**EXTERIOR ELEVATIONS**

SHEET #

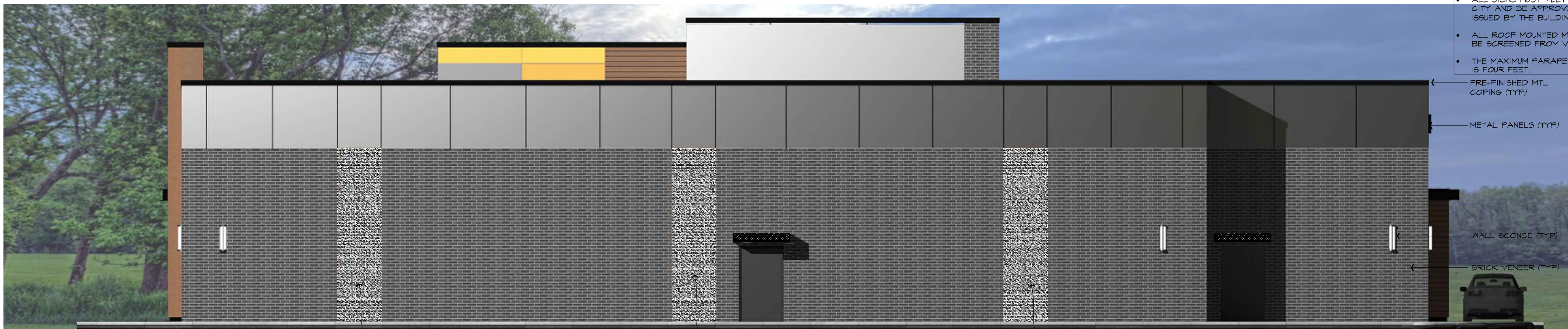
**A.201**





ISSUED FOR	DATE
REVIEW	8-24-2022
GPA REVISION	4-14-2024
GPA REVISION	10-1-2024

NOTE:  
 • ALL SIGNS MUST MEET THE REQUIREMENTS OF THE CITY AND BE APPROVED UNDER SEPARATE PERMITS ISSUED BY THE BUILDING DEPARTMENT (TYP).  
 • ALL ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW.  
 • THE MAXIMUM PARAPET HEIGHT OF ANY STRUCTURE IS FOUR FEET.



BRICK VENEER 2 (TYP)      BRICK VENEER 2 (TYP)      BRICK VENEER 2 (TYP)

PRE-FINISHED MTL COPING (TYP)  
 METAL PANELS (TYP)  
 WALL SCOSCE (TYP)  
 BRICK VENEER (TYP)

**WEST ELEVATION**

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



BRICK VENEER (TYP)  
 METAL SIDING "WOOD LOOK" (TYP)

**SOUTH ELEVATION**

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



WALL SCOSCE (TYP)  
 METAL SIDING "WOOD LOOK" (TYP)  
 COLORED METAL PANELS (TYP)  
 BRICK VENEER (TYP)

**NORTH ELEVATION**

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



METAL SIDING "WOOD LOOK" (TYP)

BRICK VENEER (TYP)

MTL. CANOPY (TYP)

METAL SIDING "WOOD LOOK" (TYP)

WALL SCOSCE (TYP)

COLORED METAL PANELS (TYP)

**EAST ELEVATION**

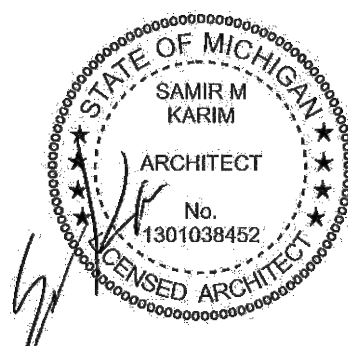
SCALE: 3/16" = 1'-0"

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL COMMERCIAL INDUSTRIAL

G.A.V. ASSOCIATES, INC  
 24001 ORCHARD LAKE RD. STE. 180A  
 FARMINGTON, MICHIGAN 48338  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM

PROPOSED DRAWINGS FOR:  
**GAS STATION**  
**3420 ROCHESTER ROAD**  
**ROCHESTER HILLS, MICHIGAN**

DRAWN:	DESIGNED:	CHECKED:
M.B.	G.A.	G.A.
SCALE : AS SHOWN		
FILE NAME :		
JOB # 21091		
SHEET TITLE		
EXTERIOR RENDERINGS		
SHEET #		
A.202		





# Reviewed plans.pdf Markup Summary

Assessing Yes (1)

Assessing Yes  
**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 3:01:11 PM  
**Status:**


BP (1)

 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:04:16 PM  
**Status:** BP

Buffer D Requirement along southern property line (1)

 **Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:57:25 PM  
**Status:** Buffer D Requirement along southern property line

City of Rochester Hills Planning & Economic Development (1)

 **Subject:** Group  
**Author:** macdonaldj  
**Date:** 2/5/2025 10:03:51 AM  
**Status:** City of Rochester Hills Planning & Economic Development

City requirements of 10 stacking spaces. Stacking based on City requirement does not appear to conflict with onsite traffic. Stacking

 **Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:36:45 PM  
**Status:** City requirements of 10 stacking spaces. Stacking based on City requirement does not appear to conflict with onsite traffic. Stacking based on MDOT stacking requirement appears to cause potential conflict with traffic entering and exiting site, however, since City requirement is met, any additional comment is left for MDOT review.

Dimensions for accessible spaces must be 11' wide by 18' deep. Accessible aisle shall be 5' wide. (1)

 **Subject:** Building Department  
**Author:** J Rhoades  
**Date:** 2/11/2025 10:32:17 AM  
**Status:** Dimensions for accessible spaces must be 11' wide by 18' deep. Accessible aisle shall be 5' wide.

Jason Rhoades 248-841-2435 RhoadesJa@RochesterHills.org (1)


 **Subject:** Building Department  
**Author:** J Rhoades  
**Date:** 2/11/2025 10:33:39 AM  
**Status:** Jason Rhoades 248-841-2435 RhoadesJa@RochesterHills.org

Landscape bond = \$94,480 (1)

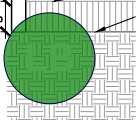
 **Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:35:50 PM  
**Status:** Landscape bond = \$94,480



LB (2)


 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:05:08 PM  
**Status:**

LB

 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:04:34 PM  
**Status:**


LB

LIP (1)

 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:04:00 PM  
**Status:**

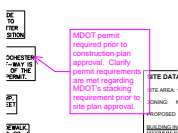
LIP

Maintenance. The owner, tenant, occupant or person responsible for any property which was the subject of an approved site plan s

 **Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:10:13 PM  
**Status:**

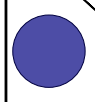
Maintenance. The owner, tenant, occupant or person responsible for any property which was the subject of an approved site plan shall maintain the property and the improvements thereon in accordance with the approved site plan or an approved amendment thereof. This responsibility shall include the duty to maintain in a condition substantially similar as approved, including the duty to replace, if necessary, all improvements such as, but not by way of limitation, all greenbelts, planting, walls, fences, paving, trash receptacles, handicapped parking areas, etc.

MDOT permit required prior to construction plan approval. Clarify permit requirements are met regarding MDOT's stacking require

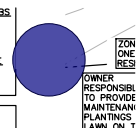
 **Subject:** Underground Utilities  
**Author:** Keith  
**Date:** 2/14/2025 8:43:44 AM  
**Status:**

MDOT permit required prior to construction plan approval. Clarify permit requirements are met regarding MDOT's stacking requirement prior to site plan approval.

PCM (2)


 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:55:57 PM  
**Status:**

PCM

 **Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:55:03 PM  
**Status:**

PCM

Planning Commission Review (1)

 **Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:07:20 PM  
**Status:**

Planning Commission Review



SAME COMMENTS FROM SANITARY BOD APPLY HERE (1)



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:05:01 PM  
**Status:**

SAME COMMENTS FROM SANITARY BOD APPLY HERE

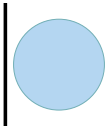
Seth Bucholz 248-841-2491 Yes bucholz@rochesterhills.org (1)



**Subject:** Text Box  
**Author:** macdonaldj  
**Date:** 2/18/2025 4:51:20 PM  
**Status:**

Seth Bucholz 248-841-2491 Yes bucholz@rochesterhills.org

SP (1)



**Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:03:56 PM  
**Status:**

SP

The applicant will need to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans



**Subject:** Engineering Department  
**Author:** Angie  
**Date:** 2/13/2025 12:08:02 PM  
**Status:**

The applicant will need to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process.

THERE IS A RESTRICTIVE COVENANT FROM 2002 ON THIS PROPERTY RECORDED AS LIBER 27086 PAGE 385 AS A RES



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:02:16 PM  
**Status:**

THERE IS A RESTRICTIVE COVENANT FROM 2002 ON THIS PROPERTY RECORDED AS LIBER 27086 PAGE 385 AS A RESULT OF A UST LEAK. UNLESS DOCUMENTATION CAN BE PROVIDED THAT INDICATES A FULL REMEDIATION OF THE SITE HAS OCCURED IN ACCORDANCE WITH AN APPROVED CORRECTIVE ACTION PLAN, AND EGLE HAS ALLOWED FOR THE MONITORING WELLS TO BE REMOVED, THE LAND USE AND RESOURCE LIMITATIONS OUTLINED IN THE RESTRICTIVE COVENANT WILL APPLY AND SHALL BE ADHERED TO DURING CONSTRUCTION. A DUE CARE PLAN MAY BE REQUIRED AT TIME OF CONSTRUCTION PLAN REVIEW.

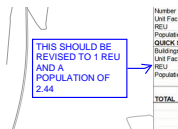
These trees need to be adequately protected throughout construction of masonry wall, etc. If damaged or removed; these will be t



**Subject:** Natural Resources  
**Author:** Matt Einheuser  
**Date:** 2/6/2025 10:37:05 AM  
**Status:**

These trees need to be adequately protected throughout construction of masonry wall, etc. If damaged or removed; these will be treated as violation subject to replacement at 100% dbh and a civil fine.

THIS SHOULD BE REVISED TO 1 REU AND A POPULATION OF 2.44 (1)



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:04:26 PM  
**Status:**

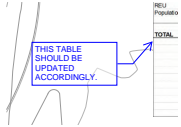
THIS SHOULD BE REVISED TO 1 REU AND A POPULATION OF 2.44



---

THIS TABLE SHOULD BE UPDATED ACCORDINGLY. (1)

---



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:03:33 PM  
**Status:**

THIS TABLE SHOULD BE UPDATED ACCORDINGLY.

---

Tree Fund = \$4,008 (1)

---

Tree Fund = \$4,008

**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:59:01 PM  
**Status:**

Tree Fund = \$4,008

---

Tree Fund = \$6,012 for modification of Buffer D (if granted) (1)

---



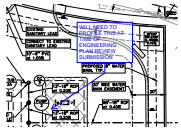
**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:58:57 PM  
**Status:**

Tree Fund = \$6,012 for modification of Buffer D (if granted)

---

WILL NEED TO PROFILE THIS AT TIME OF ENGINEERING PLAN REVIEW SUBMISSION (1)

---



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:06:37 PM  
**Status:**

WILL NEED TO PROFILE THIS AT TIME OF ENGINEERING PLAN REVIEW SUBMISSION

---

Yes with conditions (1)

---

Yes with conditions

**Subject:** Building Department  
**Author:** J Rhoades  
**Date:** 2/11/2025 10:34:00 AM  
**Status:**

Yes with conditions

---

(15)

---

LL Jon Mills 248-641-2708 Yes  
MillsJ@rochesterfhs.org

**Subject:** Fire Department  
**Author:** Jon Mills  
**Date:** 2/6/2025 7:13:18 AM  
**Status:**

Matt Einheuser 248-641-2851 Yes  
EinheuserM@rochesterfhs.org

**Subject:** Natural Resources  
**Author:** Matt Einheuser  
**Date:** 2/6/2025 10:37:31 AM  
**Status:**

Jason Boughton 248-641-2490 Yes  
BoughtonJ@rochesterfhs.org

**Subject:** Engineering Department  
**Author:** Jason Boughton  
**Date:** 2/13/2025 12:15:09 PM  
**Status:**



**Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:08:15 PM  
**Status:**





**Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:10:05 PM  
**Status:**



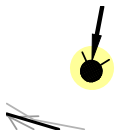
**Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:15:16 PM  
**Status:**

Chris McLeod 248-841-2072  
cmcleod@tch.com

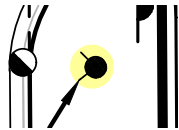
**Subject:** Planning Department  
**Author:** C.McLeod  
**Date:** 2/13/2025 3:00:24 PM  
**Status:**

Keith Dugg 248-841-2022  
kdugg@tch.com

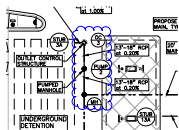
**Subject:** Traffic  
**Author:** Keith  
**Date:** 2/14/2025 8:49:04 AM  
**Status:**



**Subject:** Highlight  
**Author:** Jon Mills  
**Date:** 2/6/2025 7:10:36 AM  
**Status:**



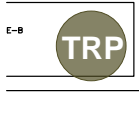
**Subject:** Highlight  
**Author:** Jon Mills  
**Date:** 2/6/2025 7:10:48 AM  
**Status:**



**Subject:** Underground Utilities  
**Author:** Angie  
**Date:** 2/13/2025 12:06:23 PM  
**Status:**



**Subject:** Contractor  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:10:55 PM  
**Status:**



**Subject:** Group  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:11:12 PM  
**Status:**



**Subject:** Contractor  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:55:11 PM  
**Status:**



\$12,480.00
\$10,000.00
\$94,480.00

-----  
**Subject:** Contractor  
**Author:** C.McLeod  
**Date:** 2/13/2025 2:04:41 PM  
**Status:**