

**LEGAL DESCRIPTION**

SEE ALTA/NSPS SURVEY ATTACHED  
(OVERALL SITE ±25.49 ACRES GROSS & NET)

PROJECT INFORMATION		
ITEM	REQUIRED	PROVIDED
ZONING & USE *	C2 - GENERAL COMMERCIAL (RETAIL & WAREHOUSE)	
SITE ACREAGE	NONE PROVIDED	±25.49 AC. (GROSS & NET)
FRONT YARD OPEN SPACE **	50% = 4,350 SF	5080/8700 = 58.4%
BUILDING HEIGHT	MAX 80'	18' (SEE ARCH)
FRONT BLDG SETBACK	60'	115'
SIDE BLDG SETBACK	14' EACH	SEE PLAN EXCEEDS 14'
REAR BLDG SETBACK	42'	±1,733'
MAX FLOOR AREA RATIO	NONE	N/A
LANDSCAPE AREA	7.5%	SEE LScape PLAN
PARKING SPACES ***	84	84 (69 + 15 BANKED)

\* USE = RETAIL SALES W/ACCESSORY ATTACHED STRUCTURE FOR MERCHANDISE STORAGE  
\*\* REQUIRED 60' x 145' = 8700 x 50% = 4350 SF; PROVIDED GREEN SPACE 5080 SF

\*\*\* REQUIRED PARKING CALCULATIONS

1) RETAIL STORES = 1.0 SPACE PER 150 SF OF USEABLE FLOOR AREA.

2) WAREHOUSING = FIVE PLUS ONE FOR EVERY ONE EMPLOYEE IN THE LARGEST WORKING SHIFT, OR ONE FOR EVERY 1,700 SF OF USABLE FLOOR AREA, WHICHEVER IS GREATER.

**NEW RETAIL (GOODWILL STORE)**  
BUILDING ±11,500 SF/150 = 76.7 = 77 SPACES

**ATTACHED WAREHOUSING STORAGE**  
BUILDING ±11,200 SF/1700 = 6.6 = 7 SPACES

NOTE, GOODWILL HAS INDICATED THAT 60 SPACES ARE SUFFICIENT FOR THEIR NEEDS BASED ON SIMILAR STORES.

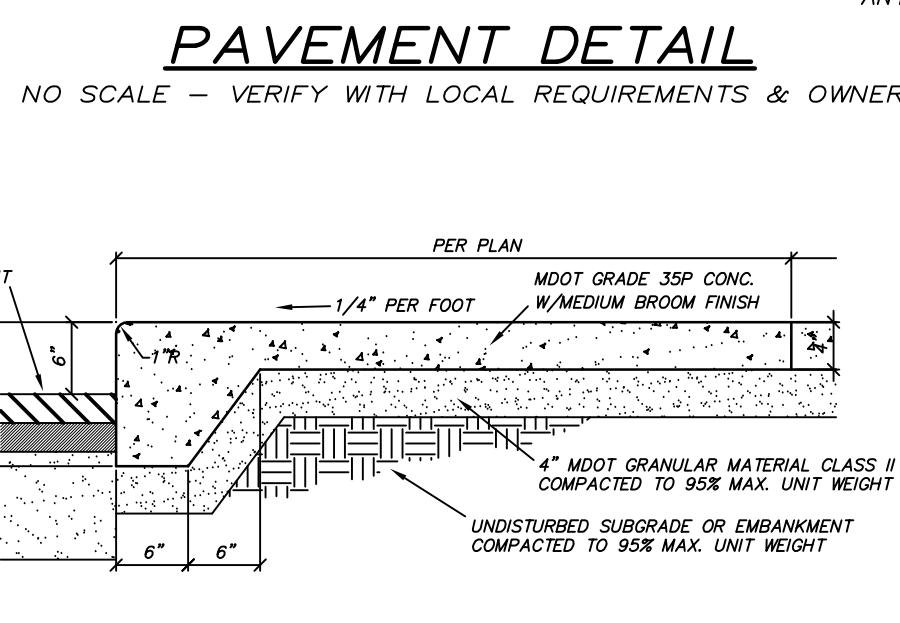
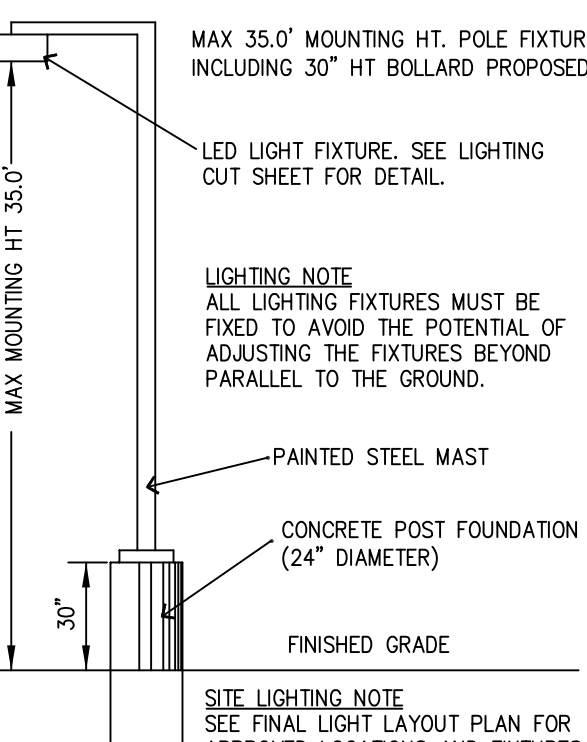
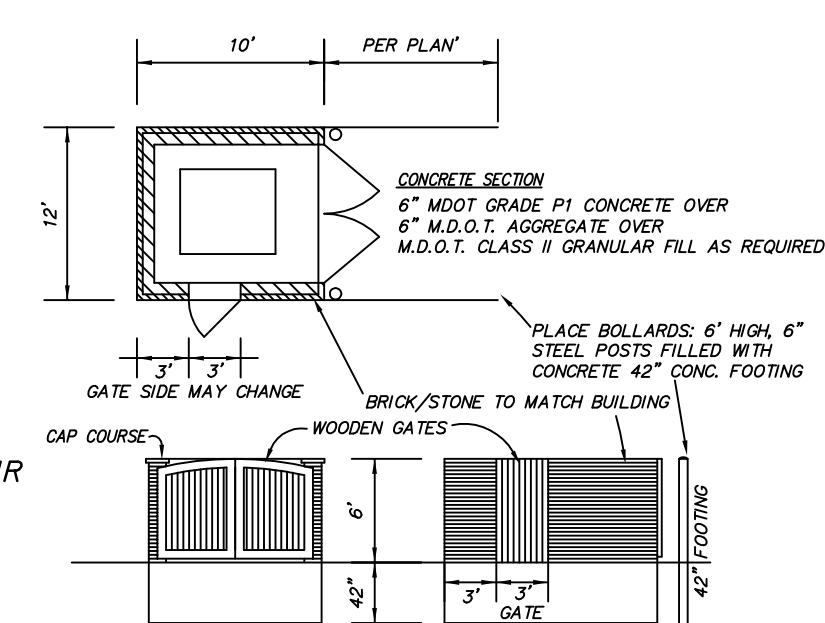
TOTAL PARKING SPACES REQUIRED = 84

TOTAL SPACES PROPOSED = 69 (INCLUDES 4 BARRIER FREE)

PLUS 15 BANKED SPACES = 84 AVAILABLE (INCLUDES 4 BARRIER FREE)

## OWNER

**GOODWILL INDUSTRIES OF MID-MICHIGAN**  
501 S AVERILL AVE.  
FLINT, MI 48506  
TEL: (810) 600-6362



## INTEGRAL WALK & CURB DETAIL

## MDOT F-2 CURB DETAIL

## SHEET INDEX - SITE PLAN

1. ENLARGED SITE PLAN SCHEMATIC
2. PRELIMINARY UTILITY & GRADING PLAN
3. SURROUNDING AERIAL IMAGERY (GIS) OVERLAY
4. DEMOLITION PLAN (WITH GCDC-WWS NOTES)
- A-1.0. PRELIMINARY FLOOR PLAN (BY OTHERS)
- A-1.1. PRELIMINARY ELEVATIONS (BY OTHERS)

## SUPPLEMENTAL SHEETS - SITE PLAN ONLY

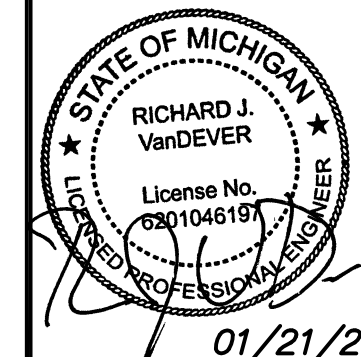
- 1 OF 1. TOPOGRAPHIC SURVEY (DEVELOPMENT AREA)
- ALTA-1. ALTA/NSPS SURVEY (OVERALL PARCEL)
- GB. LIGHTING PHOTOMETRIC SITE PLAN (BY OTHERS)
- LS1. LANDSCAPE PLAN (PRELIMINARY)
- WWS-D1. GENESEE CO. STANDARD CONST. NOTES (8TH ED.)
- WWS-D2. GENESEE CO. STANDARD SANITARY SEWER DETAILS (8TH ED.)
- WWS-D3. GENESEE CO. STANDARD PRESSURE PIPE DETAILS (8TH ED.)

## NOT INCLUDED - ENGINEERING PERMITS SUBMITTAL ONLY

5. STORM SEWER PROFILES WITH DRAINAGE PLAN & CALCULATIONS
- D4. STORM SEWER DETAILS
- SE1. SOIL EROSION PLAN
- SE2. SOIL EROSION DETAILS



## REVISIONS



**Meridian Land Surveying, Inc.**

Drawn by: R.J.V. Field: D.S., B.S.  
Designed by: R.J.V. Checked by: R.J.V.  
Date: 01/21/26 Date Revised:  
CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN  
SITE TAX ID: 18-16-400-029

**ENLARGED SITE PLAN SCHEMATIC**

**RETAIL STORE & WAREHOUSE**

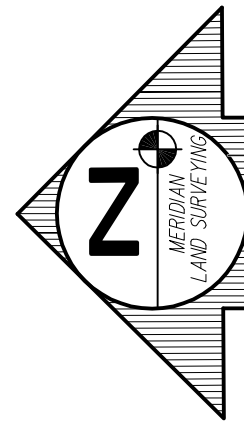
GOODWILL INDUSTRIES OF MID-MICHIGAN

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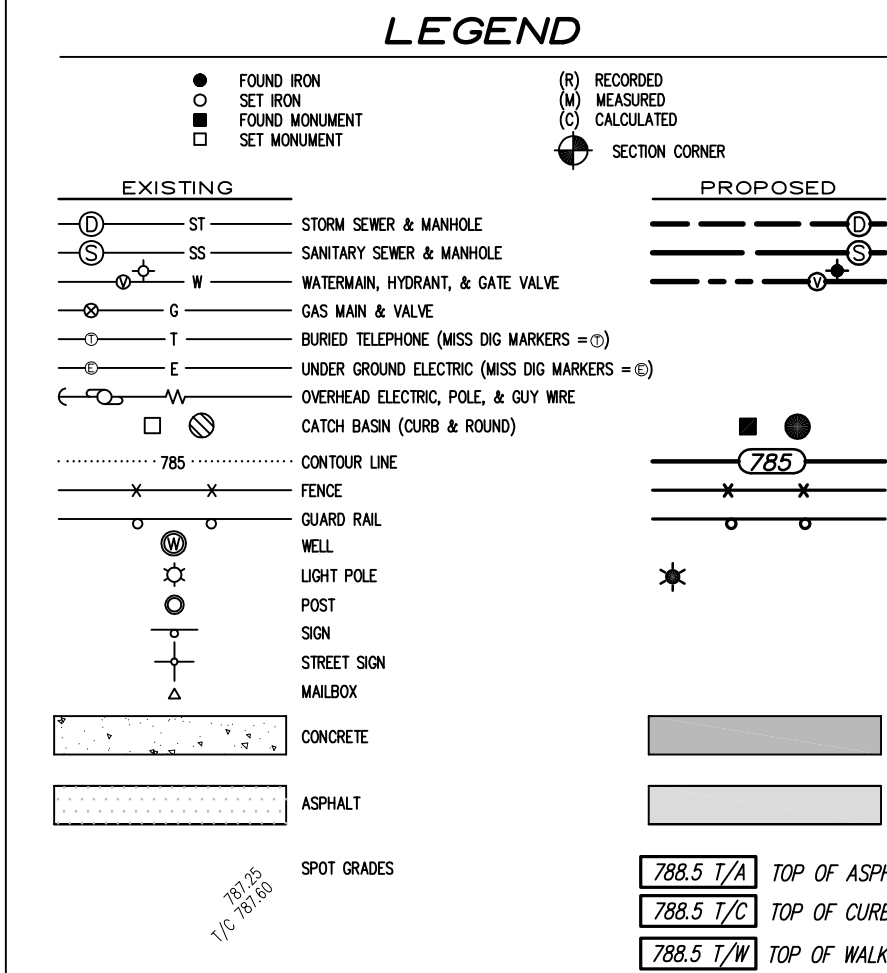
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NOTE, SEE TOPOGRAPHIC SURVEY WITH EXISTING CONDITIONS INFORMATION FOR COMPLETE EXISTING SURVEY INFORMATION.



**NOTE**  
FOLLOW GEOTECHNICAL  
RECOMMENDATION FOR  
UNDERCUTS OF BUILDING PAD  
AND PARKING LOT AS WELL AS  
FOR ANY EMBANKMENT (FILL)  
SECTIONS OF PARKING AND  
BUILDING FOUNDATIONS.


**NOTE**  
PROPER COMPACTION AND/OR  
REMOVAL OF UN-SUITABLE SOILS  
SHALL OCCUR FOR THE BUILDING  
PAD AND PARKING AREAS;  
CONTRACTOR SHALL PROVIDE ALL  
REQUIRED TESTS TO OWNER.

**NOTE**  
USE PROPOSED SPOT GRADE  
ELEVATIONS FOR SITE GRADING; USE  
PROPOSED CONTOURS AND FLOW  
ARROWS AS A GUIDE TO COMPLETE  
OVERALL DRAINAGE CONCEPT.

**TRENCH BACKFILL NOTE**  
COMPACTED GRANULAR BACKFILL FOR ROADWAYS, DRIVES, ETC.  
ALL TRENCH EXCAVATION WITHIN A ONE-ON-ONE INFLUENCE  
OF A ROADWAY, DRIVEWAY CROSSINGS, PARKING LOTS, OR AS  
OTHERWISE NOTED ON THE PLANS, SHALL BE BACKFILLED WITH  
COMPACTED SAND MDOT CLASS II (A5) PER THE SCHEDULE OF  
BACKFILLING, FOUND IN THE SPECIFICATIONS. IN ADDITION,  
SEE THE SPECIFICATIONS FOR THE REQUIREMENTS FOR THE  
COMPACTION PLAN. THIS STANDARD ALSO INCLUDES SERVICE  
LEADS UNLESS BORED.



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



(810) 339-6605  
940 S. GRAND TRAVERSE ST  
CITY OF FLINT • MICHIGAN • 48502  
[www.meridianls.com](http://www.meridianls.com)

[illegible]

***Meridian Land Surveying, Inc.***

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Designed by: R.J.V.	Checked by: R.J.V.

Date: 01/21/26	Date Revised:
CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN	
SITE TAX ID: 18-16-400-029	

**JOB No. 2025195**

PRELIMINARY UTILITY & GRADING PLAN  
**RETAIL STORE & WAREHOUSE**  
GOODWILL INDUSTRIES OF MID-MICHIGAN

PROJECT LOCATION:  
4112 W VIENNA RD, CLIO, MI 48420  
SECTION 16 T9N-R6E VIENNA TWP GENESSEE COUNTY MI

2025195

SHEET NO.  
2/4

ALL TOPSOIL IS TO BE REMOVED FROM ALL AREAS BENEATH THE PROPOSED CONSTRUCTION PRIOR TO PLACING EMBANKMENT.

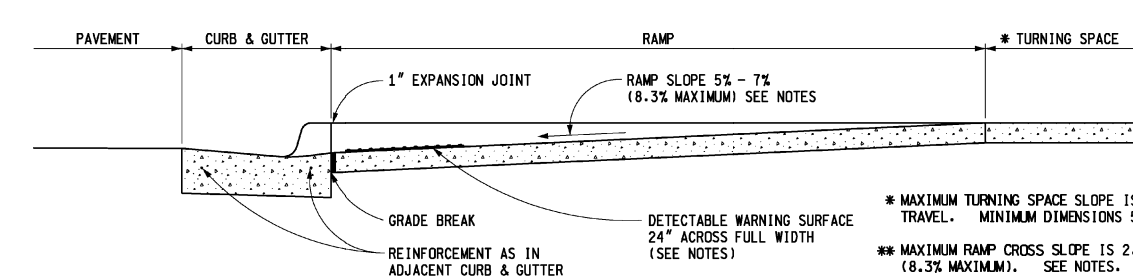
EMBANKMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT M.D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION. EMBANKMENT MATERIAL SHALL CONSIST OF SOUND EARTH AND STONES. NO CONCRETE, ASPHALT, OR ORGANIC MATERIAL OR STONES LARGER THAN 6" DIAMETER SHALL BE USED FOR OR INCLUDED IN THE EMBANKMENT. ALL EMBANKMENT IS TO BE COMPACTED TO A MINIMUM OF 95% OF ITS MAXIMUM UNIT WEIGHT (MODIFIED PROCTOR).

TOPSOIL, 4" MINIMUM, SHALL BE PLACED ON ALL DITCH SLOPES AND BOTTOMS, ROADSIDE SLOPES AND SHOULDERS, AND ALL OTHER DISTURBED AREAS.

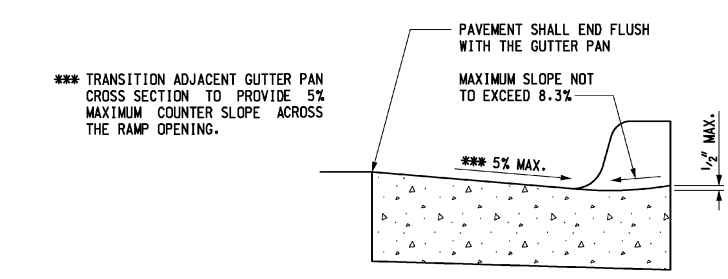
ALL DITCH SLOPES AND BOTTOMS, ROADSIDE SLOPES AND SHOULDERS, AND ALL OTHER DISTURBED AREAS SHALL BE SEEDED & MULCHED; OR IF UNABLE TO STABILIZE (AND DIRECTED BY OWNER AS ADDITIONAL PAY ITEM) FERTILIZED AND COVERED WITH A MULCH BLANKET IN ACCORDANCE WITH THE CURRENT M.D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION.

ALL WORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE COUNTY, STATE OR LOCAL STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY(S) FOR PERMITS FEES AND INSPECTION PRIOR TO STARTING CONSTRUCTION.

THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO STARTING CONSTRUCTION.

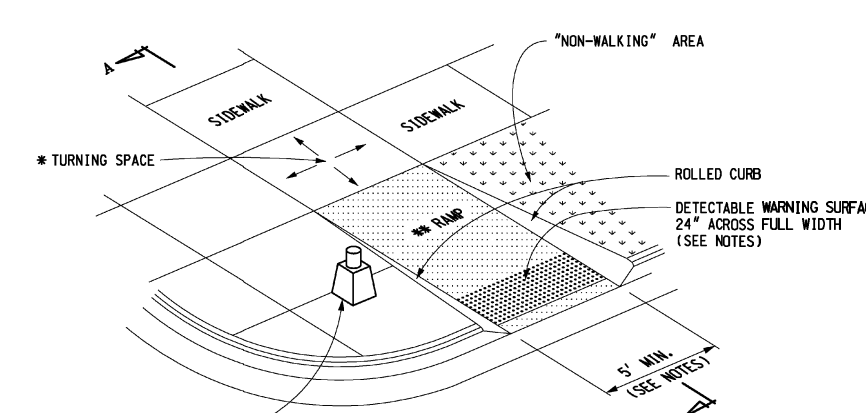


SECTION A-



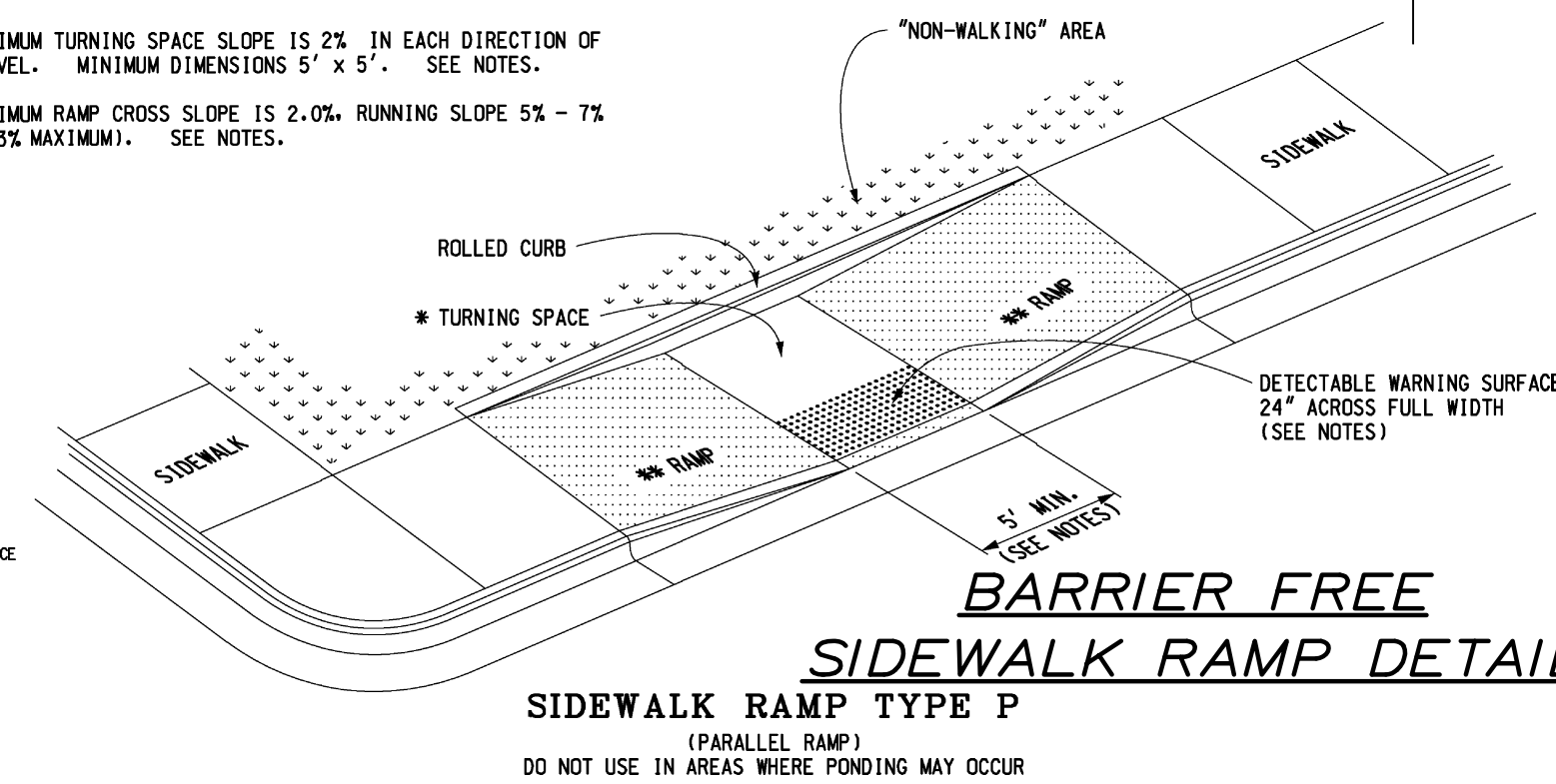
SECTION THROUGH CURB CUT

NO SCALE (SEE LATEST EQUIVALENT MDOT DETAIL)



\* MAXIMUM TURNING SPACE SLOPE IS 2% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

\*\* MAXIMUM RAMP CROSS SLOPE IS 2.0%, RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



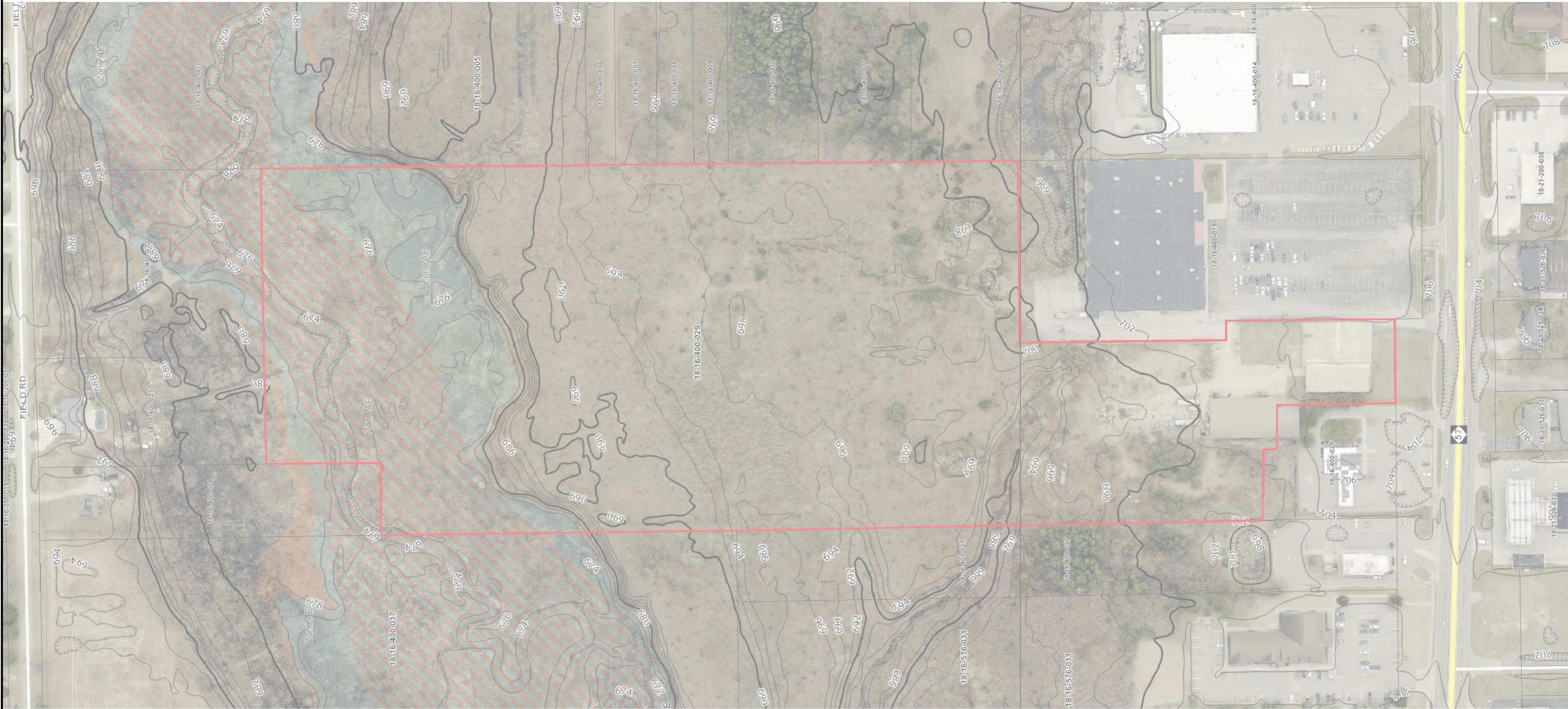
BARRIER FREE  
WALK RAMP DETAIL





ENLARGED AERIAL OVERLAY

FOR REFERENCE ONLY  
SCALE ±1" = 60'



SURROUNDING AREA FROM GIS AERIAL

FOR REFERENCE ONLY (NOTE, "RED" PARCEL LINE IS NOT CORRECT IN THE COUNTY SYSTEM)  
SCALE ±1" = 100'

SURROUNDING AERIAL IMAGERY (GIS) OVERLAY  
**RETAIL STORE & WAREHOUSE**  
GOODWILL INDUSTRIES OF MID-MICHIGAN  
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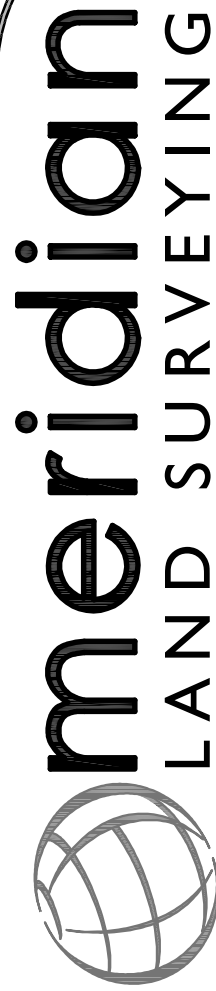
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4112 W VIENNA RD, CLIO, MI 48420  
SECTION 16, T9N-R6E, VIENNA TWP, GENESEE COUNTY, MI

Meridian Land Surveying, Inc.

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Date: 01/21/26 Date Revised:  
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**JOB No. 2025195**

REVISIONS		
No.	Description	Date



(810) 339-6605  
www.meridianls.com  
540 S. GRAND TRAVERSE ST.  
CITY OF FLINT, MICHIGAN 48602



## UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLANS WERE OBTAINED FROM UTILITY OWNERS, AND WERE NOT FIELD LOCATED. A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY "MISS DIG" (811) AND HAVE ALL UNDERGROUND UTILITIES STAKED BEFORE ANY WORK MAY BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION. THREE (3) WORKING DAYS BEFORE YOU DIG - CALL MISS DIG (811).

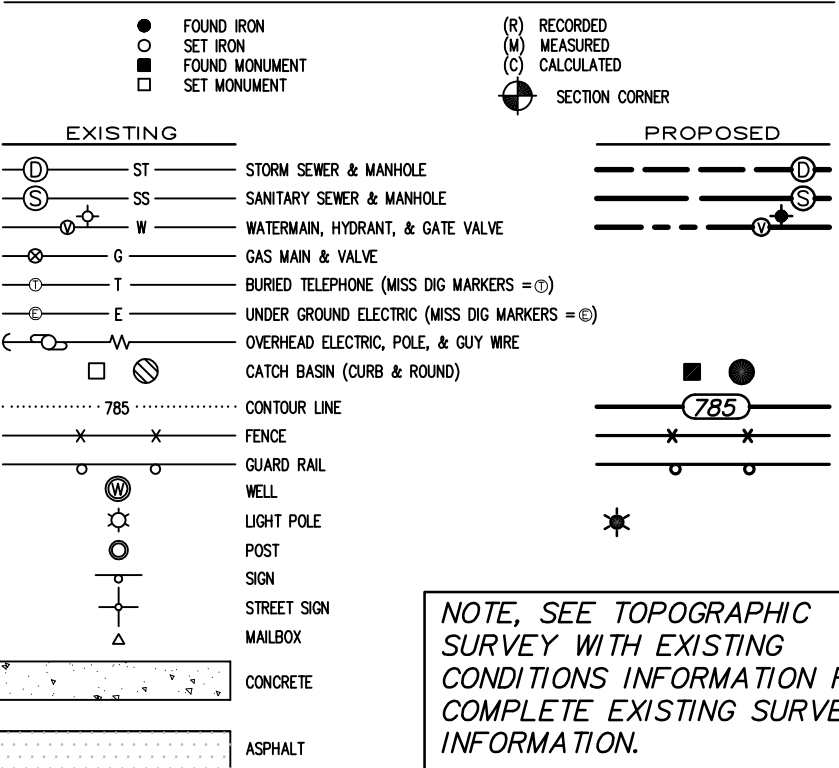
UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN FIELD. DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND/OR BURIED UTILITIES.



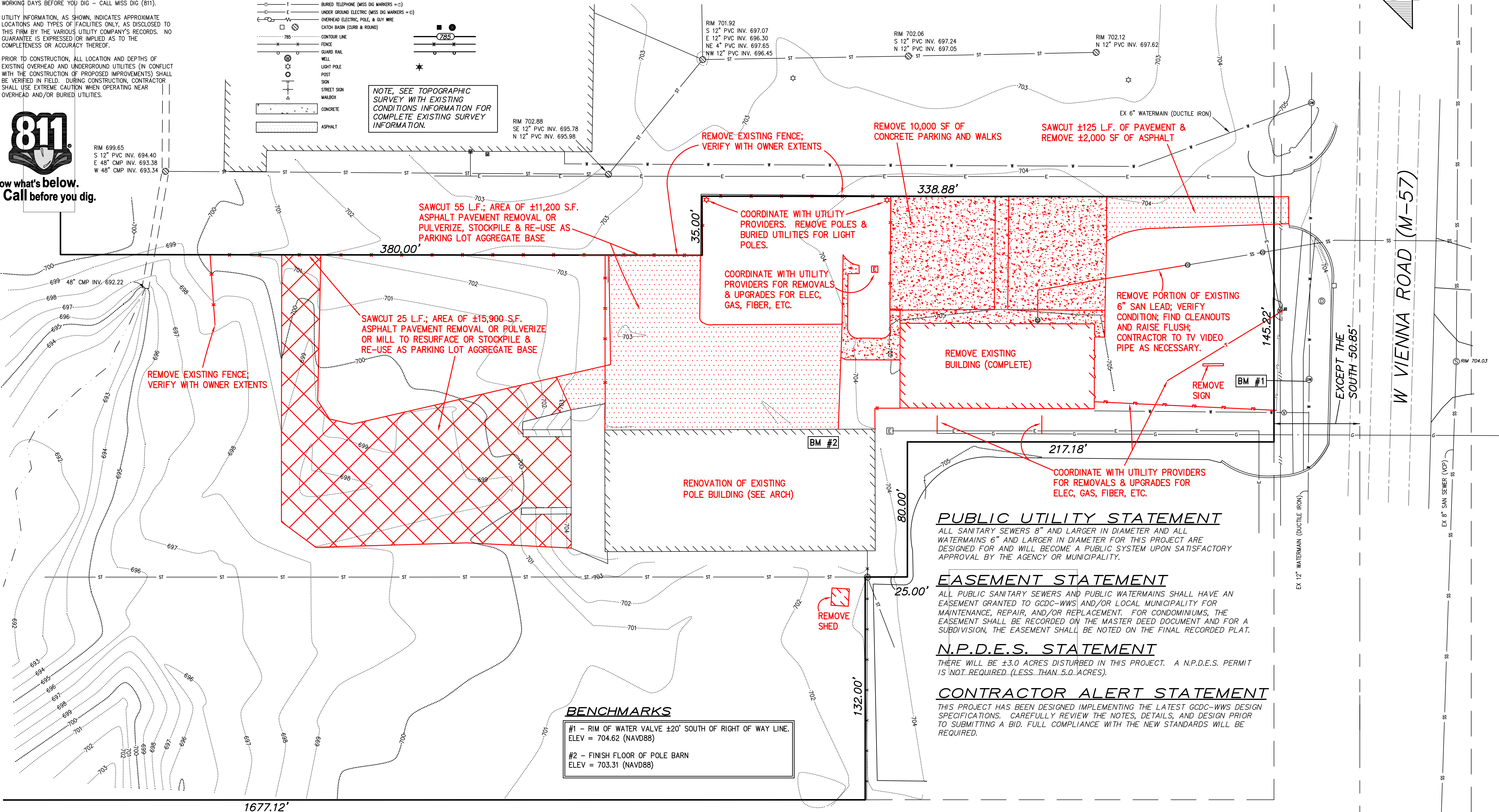
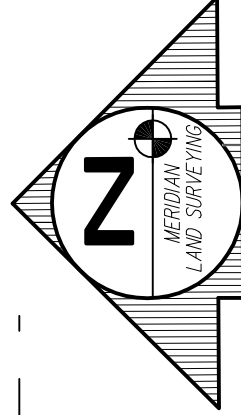
Know what's below.  
Call before you dig.

## LEGEND



## NOT FOR CONSTRUCTION, FINAL ENGINEERING DESIGN FOR PERMITS REQUIRED

24" X 36"  
GRAPHIC SCALE  
( IN FEET )  
1 inch = 30 ft.



## GCDC-WWS DEMOLITION NOTES

- Prior to beginning any of this work, the contractor shall notify GCDC-WWS at (810) 732-7870 and fill out the necessary forms or permits. The contractor shall cut and seal the existing sanitary lead at the property line and shall disconnect the existing water service lead at the curb box shut-off valve on the house side of the valve.
- All demolition work shall conform to all local codes and ordinances. All demolition operations shall comply with MIOSHA regulations insofar as they apply to the required work. A Soil Erosion and Sedimentation Control Permit will be required prior to demolition.
- The contractor shall remove and clear all trees, brush, fences, buildings, curb, and asphalt as shown on the plans or as directed by the Engineer.
- All demolition material shall be properly removed from the site and disposed of in a legally designated disposal area. No on-site burning will be allowed without proper permission. Permits and fees for disposal of demolition material shall be obtained and paid for by the contractor.
- The contractor shall demolish and remove any items remaining from the existing building, in its entirety, including walls, foundations and footings. All building drains and utility leads shall be located and properly plugged. Utility lead work shall be coordinated with the appropriate utility company.
- Backfill excavated areas with clean granular fill compacted to 95% of the material unit weight by modified proctor.
- At the conclusion of the demolition operations, the entire work area shall be left in a clean condition. All protective devices and barriers shall be removed.

## GCDC-WWS STANDARD SITE PLAN NOTES

- EXTENSION OF PUBLIC UTILITIES:** All public sanitary sewer and/or watermain SHALL be extended to the furthest limits of the property, including corner lots, with the pipe size and material approved by GCDC-WWS. This is necessary for plan approval. For water service of 1" or less or a building on a corner lot, the requirements to extend the public watermain and/or sanitary sewer along both property lines will be reviewed. Final determination shall be made by GCDC-WWS.
- WATERMAIN LOOPING:** All public watermain shall be looped whenever possible. The pipe size requirements shall be approved by GCDC-WWS.
- INDUSTRIAL PRETREATMENT PROGRAM (IPP):** This permit is required for all commercial (non-residential) and industrial discharges. The OWNER shall obtain an Industrial Discharge Permit prior to the issuance of a Sewer Connection Permit. Industrial Discharge Permits are non-transferable. Changes in facility use will require a new Industrial Discharge Permit. For more information call the Anthony Diagne Treatment Plant at (810) 232-7662.
- SOIL EROSION:** The DEVELOPER and/or OWNER shall submit a detailed Soil Erosion and Sedimentation Control plan and obtain an Act 451 Part 91, Soil Erosion and Sedimentation Control permit. This includes the payment of fees and the providing of necessary bonds. No earth changes or excavation shall be started prior to the issuance of this permit. The DEVELOPER and/or OWNER shall protect all existing and proposed storm sewer facilities on and adjacent to the site during excavation and construction. All sediment shall be contained on site. Any silt in county drains, storm sewer, culverts, etc. as a result of this project, shall be removed by the DEVELOPER and/or OWNER at the cost of the DEVELOPER and/or OWNER.
- FLOOD PLAIN OR WETLAND CONSTRUCTION:** The DEVELOPER and/or OWNER shall apply to EGLE for a permit for the alteration and/or occupation of a flood plain or floodway, as required under PA 451. Evidence of this permit may be required prior to plan approval by GCDC-WWS.
- NPDES STORM WATER DISCHARGE PERMIT:** The owner of the property shall obtain a NPDES Storm Water Discharge permit for construction activities from EGLE as required under Public Act 451. The notice of coverage form shall be submitted through GCDC-WWS with the Soil Erosion Control permit application. All EGLE fees shall accompany the Notice of Coverage. Evidence of this permit may be required prior to plan approval by GCDC-WWS.
- GENESEE COUNTY PERMIT TO CONSTRUCT A PUBLIC UTILITY:** After the approval of this preliminary plat or site plan, the DEVELOPER shall submit a detailed plan for construction of all public sanitary sewer and watermain. The plans must have GCDC-WWS approval, a S-permit issued, and approval from the EGLE prior to beginning construction.
- GENESEE COUNTY ROAD MAINTENANCE PERMIT:** The DEVELOPER shall obtain a permit from the Genesee County Road Commission to perform work within the Genesee County Road Commission Right-of-Way. All fees for the permit, bonds and insurances are the responsibility of the developer.
- MUNICIPALITY SANITARY SEWER AND WATER PERMIT:** Prior to the issuance of a building permit by the local municipality, the developer shall be required to obtain a sanitary sewer and/or water tap-in permit from the local municipality, if authorized, or GCDC-WWS.
- STATE CONSTRUCTION PERMITS:** The sanitary sewer and watermain construction permits from the Michigan Department of Energy, Great Lakes and Environment shall be submitted to the EGLE after approval of GCDC-WWS. Construction shall not begin until these state permits are issued.

## GCDC-WWS ADDITIONAL SITE PLAN NOTES

- Sanitary sewer saddle taps shall be made by GCDC-WWS personnel. The developer shall obtain the required municipality sanitary sewer permit or the S construction permit, and pay GCDC-WWS the required fee for a saddle tap.
- The CONTRACTOR shall verify the sanitary sewer depth and be responsible for providing adequate slope of sewer toward the mainline sewer in strict accordance with GCDC-WWS Standard Details and Specifications.
- Sanitary service leads shall be encased in 6AA crushed limestone (A1) in accordance with GCDC-WWS Standard Details and Specifications.
- Water service connection and curb box shall be installed in accordance with GCDC-WWS Standard Details and Specifications.
- All water service leads shall be "K" copper. The minimum size shall be 1/2".
- All watermain pressure taps and cut in valves 4" and larger shall be constructed with cast iron tapping sleeves and within a manhole structure per GCDC-WWS Standard Details and Specifications.
- Sand fill under any floor slab, walks, paved areas, etc. shall be minimum MDOT Class II sand backfill (A5). Fill sand shall not have moisture content greater than 15%. The sand shall be compacted to 95% of material the unit weight by modified proctor.
- All existing utilities serving the property shall be properly terminated in compliance with local and/or county regulations. Remove all trees, including root structures, except those specifically noted to remain, and those on property lines. Do not clear site prior to coordinating with the OWNER and the landscaping plan to determine all trees to remain.
- For any demolition work, please see demolition notes attached herewith.
- Verify exact location of underground utilities prior to beginning construction.
- CONTRACTOR is to adjust any utility element meant to be flush with grade (clean out, valve boxes, manholes, catch basins, inlets, etc.) that is affected by site work or grade changes, whether specifically noted on plans or not. The CONTRACTOR shall obtain any necessary permits for adjustment at the CONTRACTOR'S expense.
- The water supply for all commercial and industrial buildings shall be equipped with a backflow prevention device in accordance with building codes. An approval of methods must be acquired from GCDC-WWS.
- All on site water service shall meet the requirements of GCDC-WWS Standard Details and Specifications.
- The CONTRACTOR shall notify MISS DIG (811) three (3) working days prior to starting any excavation with power equipment.
- The CONTRACTOR shall comply with all local, county, state, and local regulations for all work that takes place on the site.
- The CONTRACTOR/DEVELOPER shall pay for and obtain all permits required by federal, state, local, or private agencies and pay all charges for inspection and testing.
- The CONTRACTOR shall be responsible for cleaning up the premises, and upon completion of the project, leave the site in an acceptable condition as determined by the ENGINEER or OWNER.
- Commercial buildings shall use a 6" sanitary riser from the main to the structure. The service riser shall connect to the mainline and not at a manhole.
- For commercial establishments that generate grit or grease, an external grease interceptor shall be provided. Show the detail on the plans with appropriate notes. The domestic sewage shall be designed to bypass the grease/grit trap.
- The minimum slope for a commercial lead is 1' of fall per 100 feet of pipe. Show the invert at the structure and the slope to the property line.
- All sanitary sewer leads laterals shall be SDR-26 PVC with cleanouts spaced every 90 feet.
- Each parcel of land shall have individual leads laterals.

## PLAN DISTRIBUTION

CONTACTING AGENCY	CONTACT PERSON	DATE SUBMITTED	DATE APPROVED
GENESEE COUNTY DRAIN COMMISSION DIVISION OF WATER & WASTE SERVICES	WWS - LYNNETTE MEINZ IPP - THAD DOMICK SSC - CLIFF WEBSTER SWM - V. MYLONAS	JAN 2026	
STORM WATER MANAGEMENT DIVISION		JAN 2026	
GENESEE COUNTY ROAD COMMISSION	N/A	N/A	
VIENNA TOWNSHIP	JOE RIZK	JAN 2026	
GAS & ELECTRIC COMPANY (CONSUMERS ENERGY)	TBD	TBD	
TELEPHONE COMPANY	TBD	TBD	
CABLE COMPANY	TBD	TBD	
EGLE - WATER RESOURCES DIVISION (FLOODPLAIN, WETLANDS, INLAND LAKES & STREAMS, ETC.)	N/A	N/A	
MDOT (IF RIGHT OF WAY WORK REQUIRED)	DAVISON TSC	TBD	

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Designed by: R.L.V. Checked by: R.L.V.  
Date: 01/21/26 Date Revised:

CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN  
SITE TAX ID: 18-16-400-029

JOB No. 2025195

DEMOLITION PLAN (WITH GCDC-WWS NOTES)

RETAIL STORE & WAREHOUSE

GOODWILL INDUSTRIES OF MID-MICHIGAN

PROJECT LOCATION:

4112 W VIENNA RD, CLIO, MI 48420  
SECTION 16, T9N-R6E, VIENNA TWP, GENESEE COUNTY, MI

2025195

SHEET NO.

4/4

## REVISIONS

No.	Description	Date	By

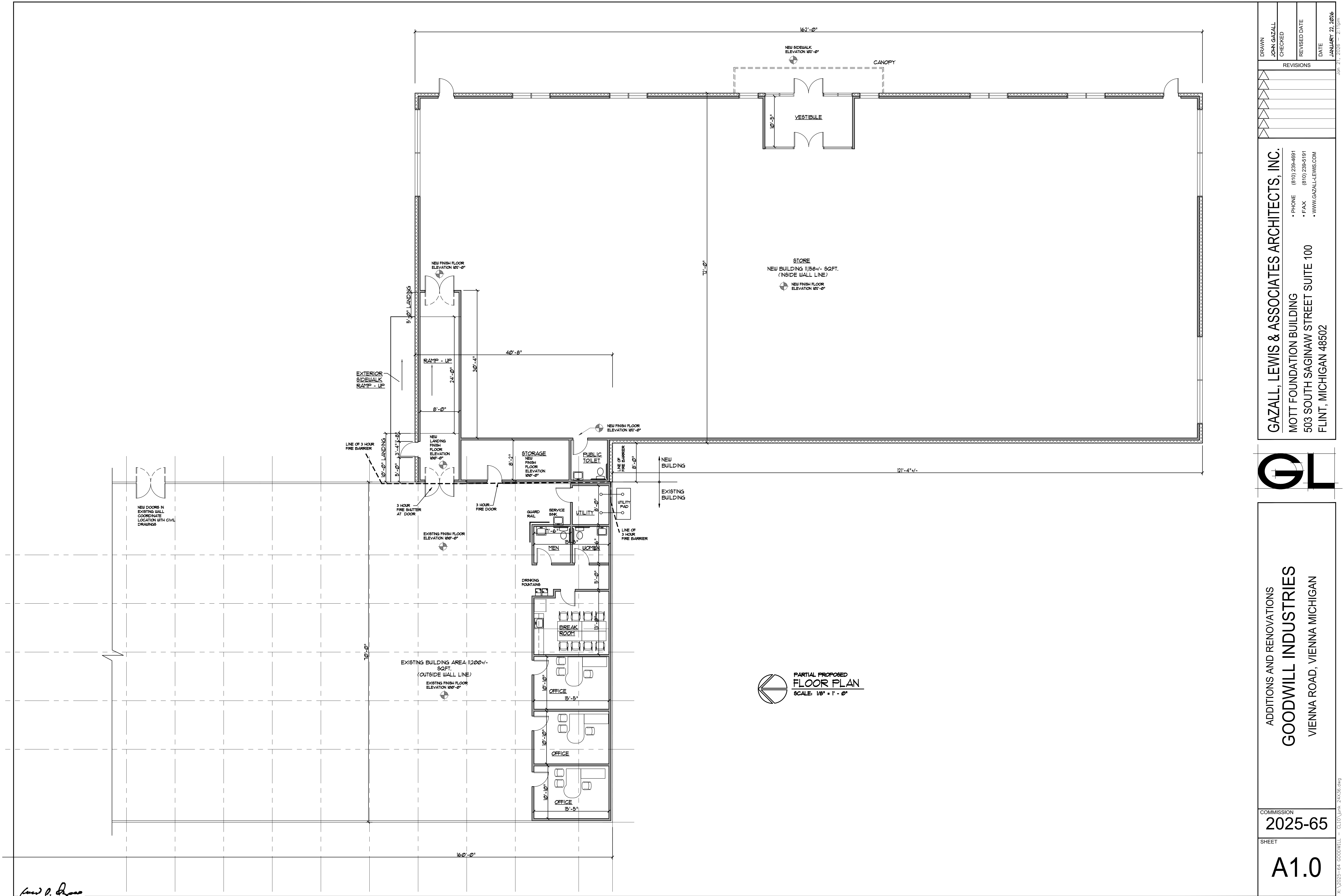
meridian  
LAND SURVEYING

www.meridiansurvey.com

(810) 399-6605

940 ST GRAND TRAVERSE ST  
CITY OF FLINT MICHIGAN 48602





Handwritten signature/initials.

DRAWN  
JOHN GAZALL

CHECKED

REVISED DATE

DATE  
JANUARY 22, 2016

REVISIONS

GAZALL, LEWIS & ASSOCIATES ARCHITECTS, INC.

MOTT FOUNDATION BUILDING

503 SOUTH SAGINAW STREET SUITE 100

FLINT, MICHIGAN 48502

• PHONE (810) 239-4881

• FAX (810) 239-5191

• WWW.GAZALL-LEWIS.COM

ADDITIONS AND RENOVATIONS

GOODWILL INDUSTRIES

VIENNA ROAD, VIENNA MICHIGAN

COMMISSION

2025-65

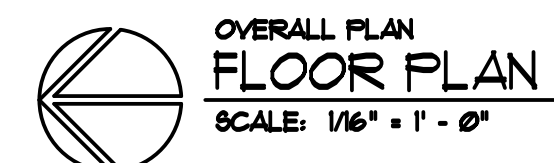
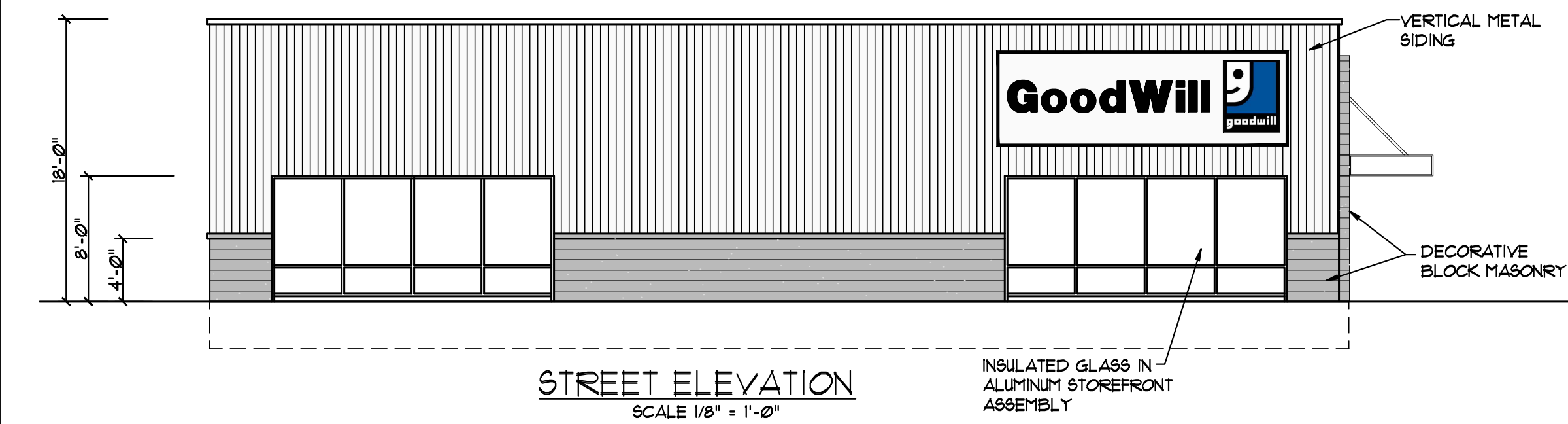
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Jan 21, 2016 - 2:11pm

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**GAZALL, LEWIS & ASSOCIATES ARCHITECTS, INC.**

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**MOTT FOUNDATION BUILDING**

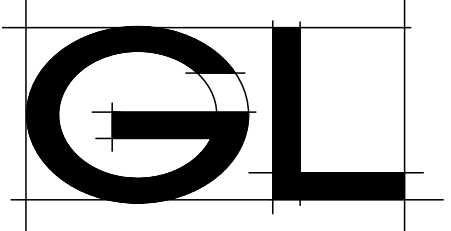
**503 SOUTH SAGINAW STREET SUITE 100**

**FLINT, MICHIGAN 48502**

• PHONE (810) 238-4691

• FAX (810) 238-5191

• WWW.GAZALL-LEWIS.COM



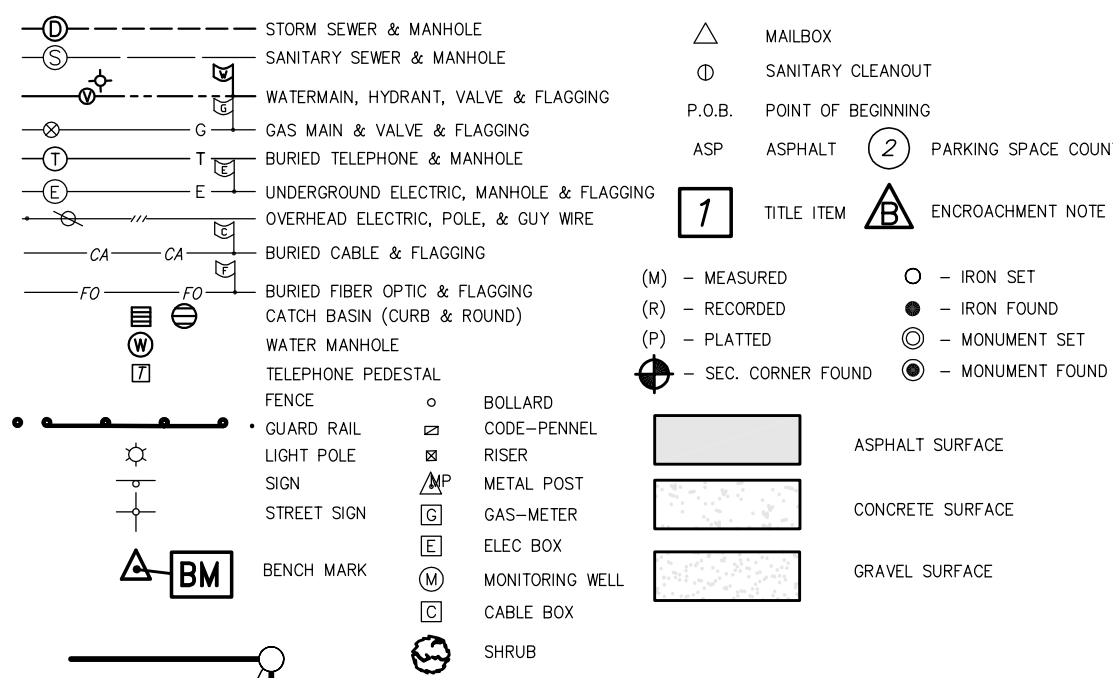
COMMISSION	X:\2025-64 GOODWILL - CLIO\junk
2025-65	
SHEET	
A1.1	

James P. Dyson

X:\2025-64 GOODWILL - CLIO\junk 24X36.dwg

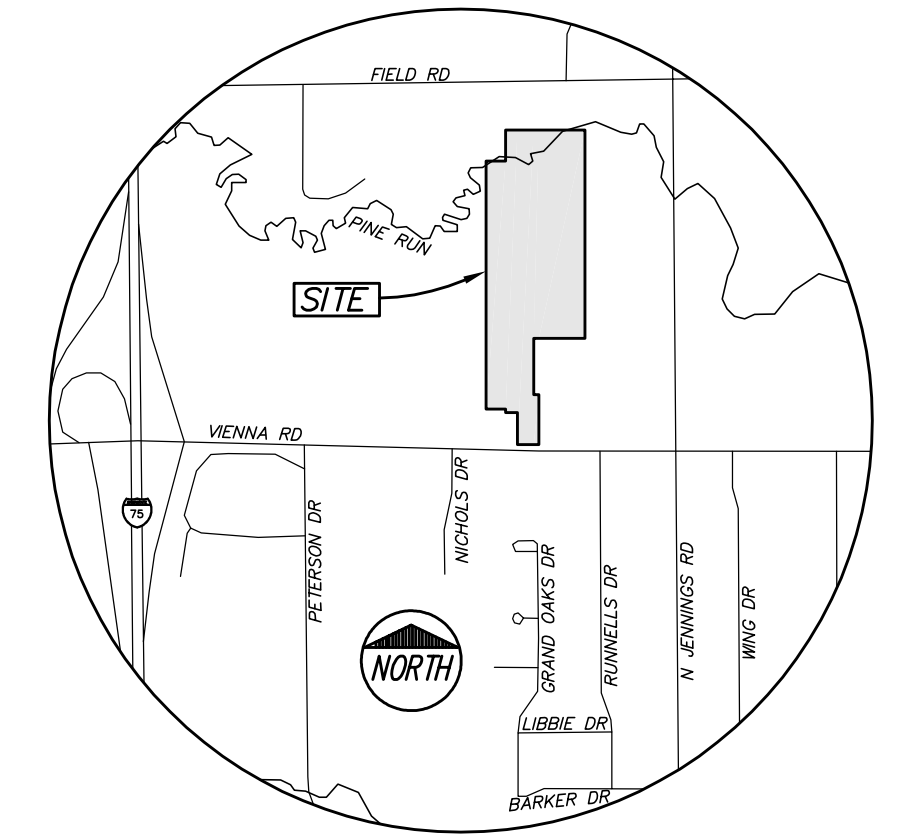


# LEGEND

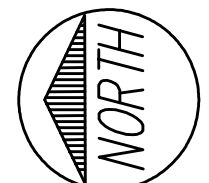
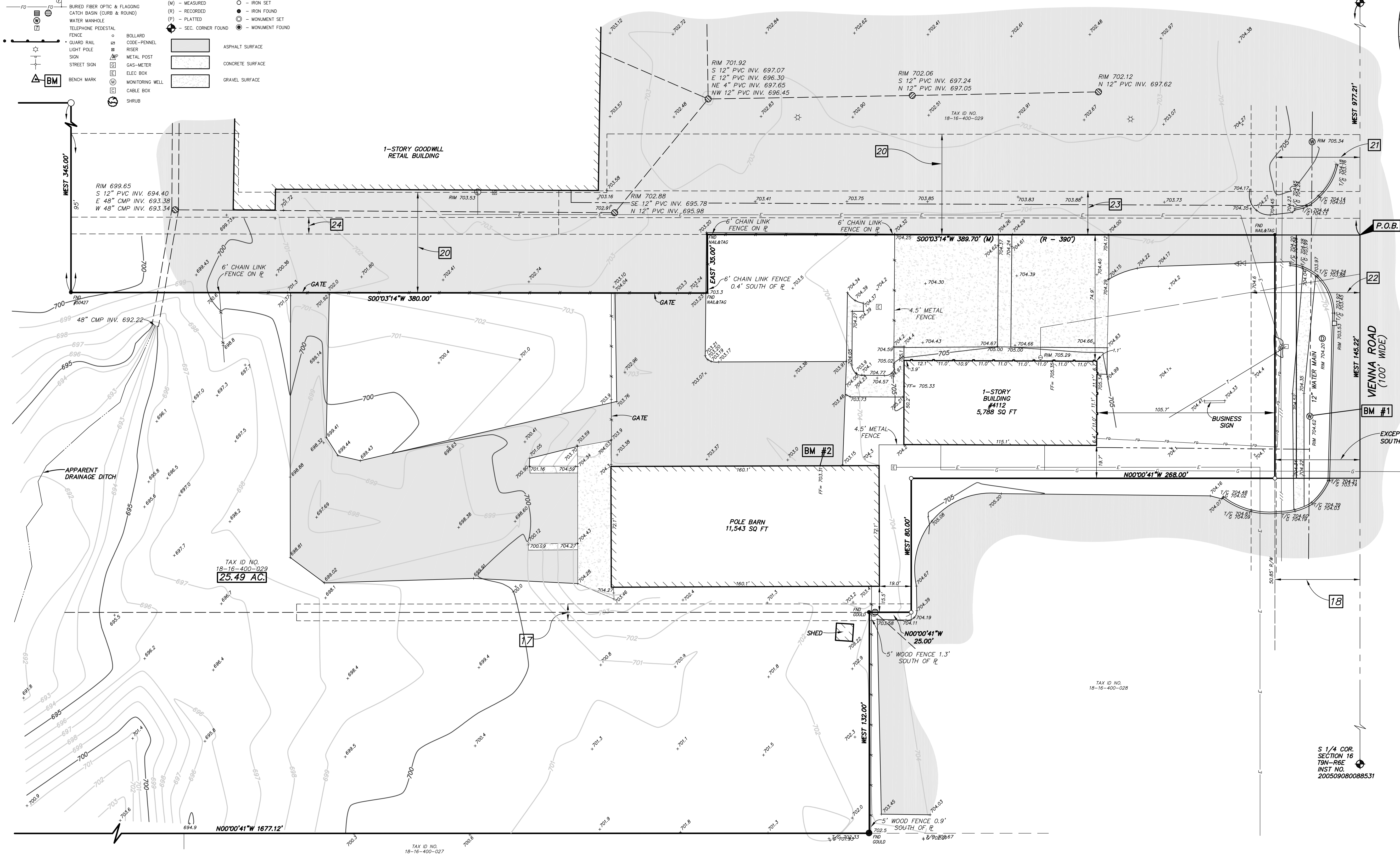


# TOPOGRAPHIC SURVEY FOR:

PART OF THE SOUTHEAST 1/4 OF SECTION 16, T9N-R6E  
VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN  
ADDRESS: 4112 W VIENNA ROAD, CLIO, MI 48420



LOCATION MAP:  
N.T.S.



SCALE: 1" = 50'



Know what's below.  
Call before you dig.

Surveyor does not guarantee that all utilities are shown or their locations. It is the responsibility of the contractor and developer to contact Miss Dig and any other involved agencies to locate all utilities prior to construction. Removal, relocation and/or replacement is the responsibility of the contractor.

## SURVEY NOTE:

SEE ALTA SURVEY REVISED DATE 1-5-2026 ATTACHED FOR COMPLETE BOUNDARY SURVEY INFORMATION.

## BENCHMARK:

BM #1 Rim of water valve ±20' South of right of way line.

ELEV. = 704.62' (NAVD88)

BM #2 Finish Floor of Pole Barn

ELEV. = 703.31' (NAVD88)

**meridian**  
LAND SURVEYING

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940 S GRAND TRAVERSE ST  
CITY OF FLINT \* MICHIGAN \* 48502

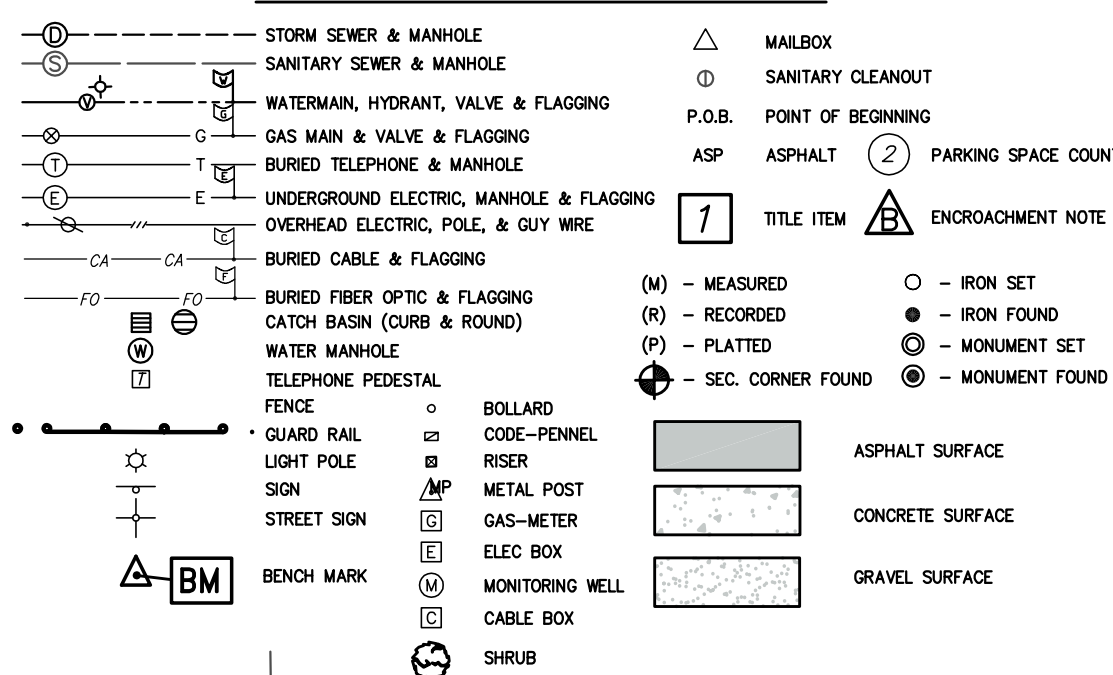
TOPOGRAPHIC SURVEY  
4112 W VIENNA ROAD  
PART OF THE SOUTHEAST 1/4 OF SECTION 16, T9N-R6E  
VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN

DATE: 1-06-26 DRAWN BY: MA JOB NO: 2025195  
SCALE: 1" = 50' CHECKED BY: GMM SHEET: 1 OF 1

GREG M. MCARDLE  
PROFESSIONAL SURVEYOR NO. 46678



## LEGEND



## ALTA/NSPS LAND TITLE SURVEY FOR:

PART OF THE SOUTHEAST 1/4 OF SECTION 16, T9N-R6E  
VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN  
ADDRESS: 4112 W VIENNA ROAD, CLIO, MI 48420

## LEGAL DESCRIPTION:

TRANSNATION TITLE INSURANCE AGENCY OF MI MASON BURGESS DIVISION, LLC  
COMMITMENT NO. 473229FLTS REVISION NO. 1  
EFFECTIVE DATE: DECEMBER 03, 2025 AT 08:00 AM

A parcel of land beginning 977.21 feet West of the Southeast corner of Section 16, Town 9 North, Range 6 East, Vienna Township, Genesee County, Michigan; thence West 145.22 feet; thence North 0 degrees 00 minutes 41 seconds West 268 feet; thence West 80 feet; thence North 0 degrees 00 minutes 41 seconds West 25 feet; thence West 132 feet; thence North 0 degrees 00 minutes 41 seconds West 1677.12 feet; thence North 89 degrees 58 minutes 32 seconds East 537.71 feet; thence South 0 degrees 03 minutes 14 seconds West 1410.71 feet; thence West 345 feet; thence South 0 degrees 03 minutes 14 seconds West 380 feet; thence East 35 feet; thence South 0 degrees 03 minutes 14 seconds West 390 feet to the Place of Beginning, except the South 50.85 feet.

Together with an easement for ingress and egress as set forth in Liber 2301, Page 1, as amended in Liber 2313, Page 602.

\* Typographical error 143 seconds should be 14 seconds.

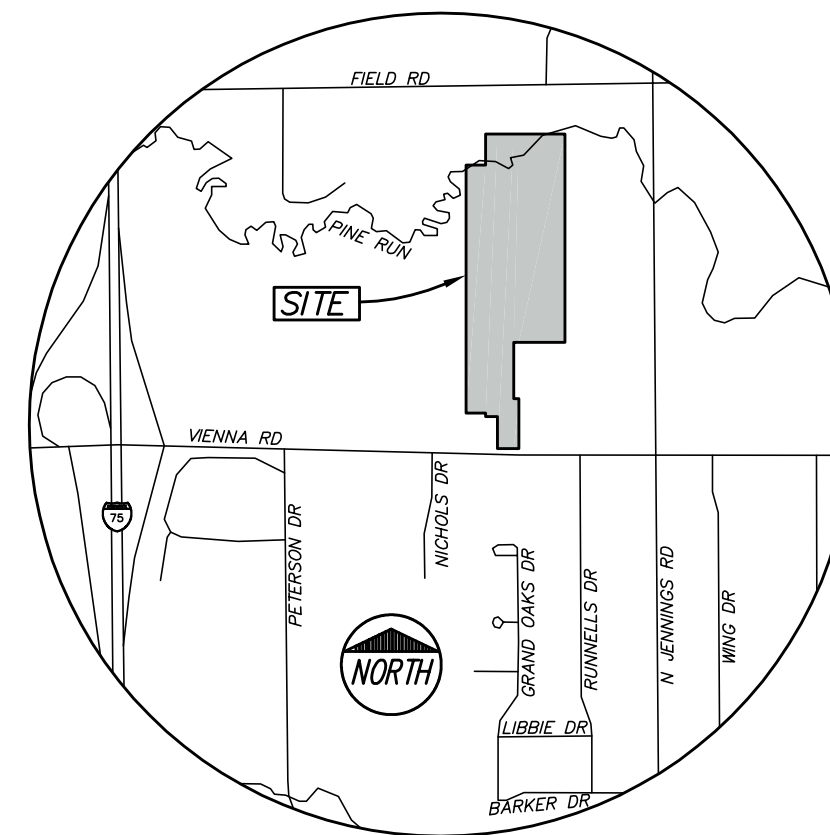
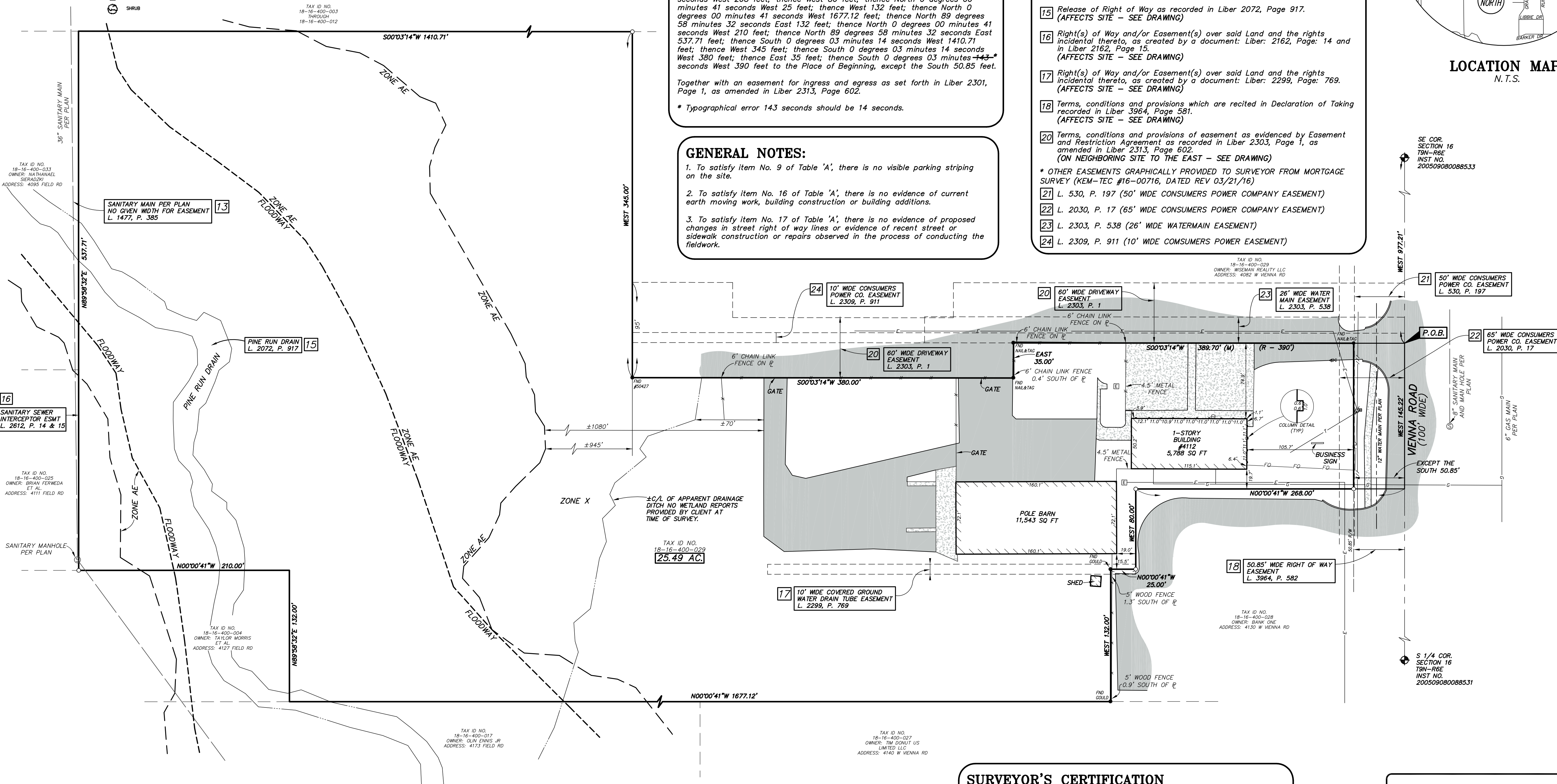
## GENERAL NOTES:

- To satisfy item No. 9 of Table 'A', there is no visible parking striping on the site.
- To satisfy item No. 16 of Table 'A', there is no evidence of current earth moving work, building construction or building additions.
- To satisfy item No. 17 of Table 'A', there is no evidence of proposed changes in street right of way lines or evidence of recent street or sidewalk construction or repairs observed in the process of conducting the fieldwork.

SCHEDULE B - SECTION II  
EXCEPTIONS:

TRANSNATION TITLE INSURANCE AGENCY OF MI MASON BURGESS DIVISION, LLC  
COMMITMENT NO. 473229FLTS REVISION NO. 1  
EFFECTIVE DATE: DECEMBER 03, 2025 AT 08:00 AM

- Right(s) of Way and/or Easement(s) over said Land and the rights incidental thereto, as created by a document: Liber: 1477, Page: 385. (AFFECTS SITE - SEE DRAWING)
- Notice to the Public as recorded in Liber 2018, Page 40. (CANNOT BE GRAPHICALLY SHOWN)
- Release of Right of Way as recorded in Liber 2072, Page 917. (AFFECTS SITE - SEE DRAWING)
- Right(s) of Way and/or Easement(s) over said Land and the rights incidental thereto, as created by a document: Liber: 2162, Page: 14 and in Liber 2162, Page 15. (AFFECTS SITE - SEE DRAWING)
- Right(s) of Way and/or Easement(s) over said Land and the rights incidental thereto, as created by a document: Liber: 2299, Page: 769. (AFFECTS SITE - SEE DRAWING)
- Terms, conditions and provisions which are recited in Declaration of Taking recorded in Liber 3964, Page 581. (AFFECTS SITE - SEE DRAWING)
- Terms, conditions and provisions of easement as evidenced by Easement and Restriction Agreement as recorded in Liber 2303, Page 1, as amended in Liber 2313, Page 602. (ON NEIGHBORING SITE TO THE EAST - SEE DRAWING)
- OTHER EASEMENTS GRAPHICALLY PROVIDED TO SURVEYOR FROM MORTGAGE SURVEY (KEM-TEC #16-00716, DATED REV 03/21/16)
- L. 530, P. 197 (50' WIDE CONSUMERS POWER COMPANY EASEMENT)
- L. 2030, P. 17 (65' WIDE CONSUMERS POWER COMPANY EASEMENT)
- L. 2303, P. 538 (26' WIDE WATERMAIN EASEMENT)
- L. 2309, P. 911 (10' WIDE CONSUMERS POWER EASEMENT)

LOCATION MAP:  
N.T.S.

## ZONING:

PARCEL IS ZONED G-2 "GENERAL COMMERCIAL"

Maximum Building Height -	45 Ft./3 Stories
Minimum Lot Width -	100 Ft.
Minimum Lot Area -	10,00' Sq. Ft.
Minimum Front Yard Setback -	40 Ft.
Minimum Side Yard Setback -	None
Minimum Rear Yard Setback -	40 Ft.

See Zoning information from Article 3, Section 307, Page 19 of the Charter Township of Vienna Zoning Ordinance, Effective date is September 24, 2025.

## FLOOD NOTE:

The subject property lies within flood Unshaded Zone "X", Shaded Zone "AE" and Regulatory Floodway as plotted on the Flood Insurance Rate Map, Community Panel No. 26049C00420, which bears an effective date of September 25, 2009. Flood Unshaded Zone "X" is designated as an area determined to be outside the 0.2% annual chance floodplain. Flood Zone "AE" is designated as an area with a 1% annual chance flood.

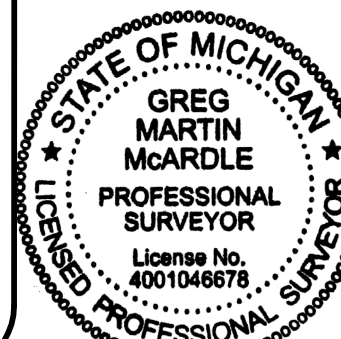
## SURVEYOR'S CERTIFICATION

To:  
TRANSNATION TITLE INSURANCE AGENCY OF MI MASON BURGESS DIVISION, LLC; OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY; GOODWILL INDUSTRIES OF MID-MICHIGAN, INC., A MICHIGAN NONPROFIT CORPORATION; KEYES & CARTER ASSOCIATES, INC., A MICHIGAN CORPORATION

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 6, 7a, 7b, 8, 9, 13, 14, 15, 16 and 17 of Table A thereof. The field work was completed on November 19, 2025.

Greg M. McArdle  
GREG M. MCARDLE  
Michigan Professional Land Surveyor No. 46678

PREVIOUSLY DATED: 12-17-2025  
JANUARY 05, 2026  
DATE



meridian  
LAND SURVEYING

(810) 339-8605 www.meridianls.com  
940 S GRAND TRAVERSE ST  
CITY OF FLINT - MICHIGAN 48502

ALTA/NSPS LAND TITLE SURVEY  
4112 W VIENNA ROAD

PART OF THE SOUTHEAST 1/4 OF SECTION 16, T9N-R6E  
VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN

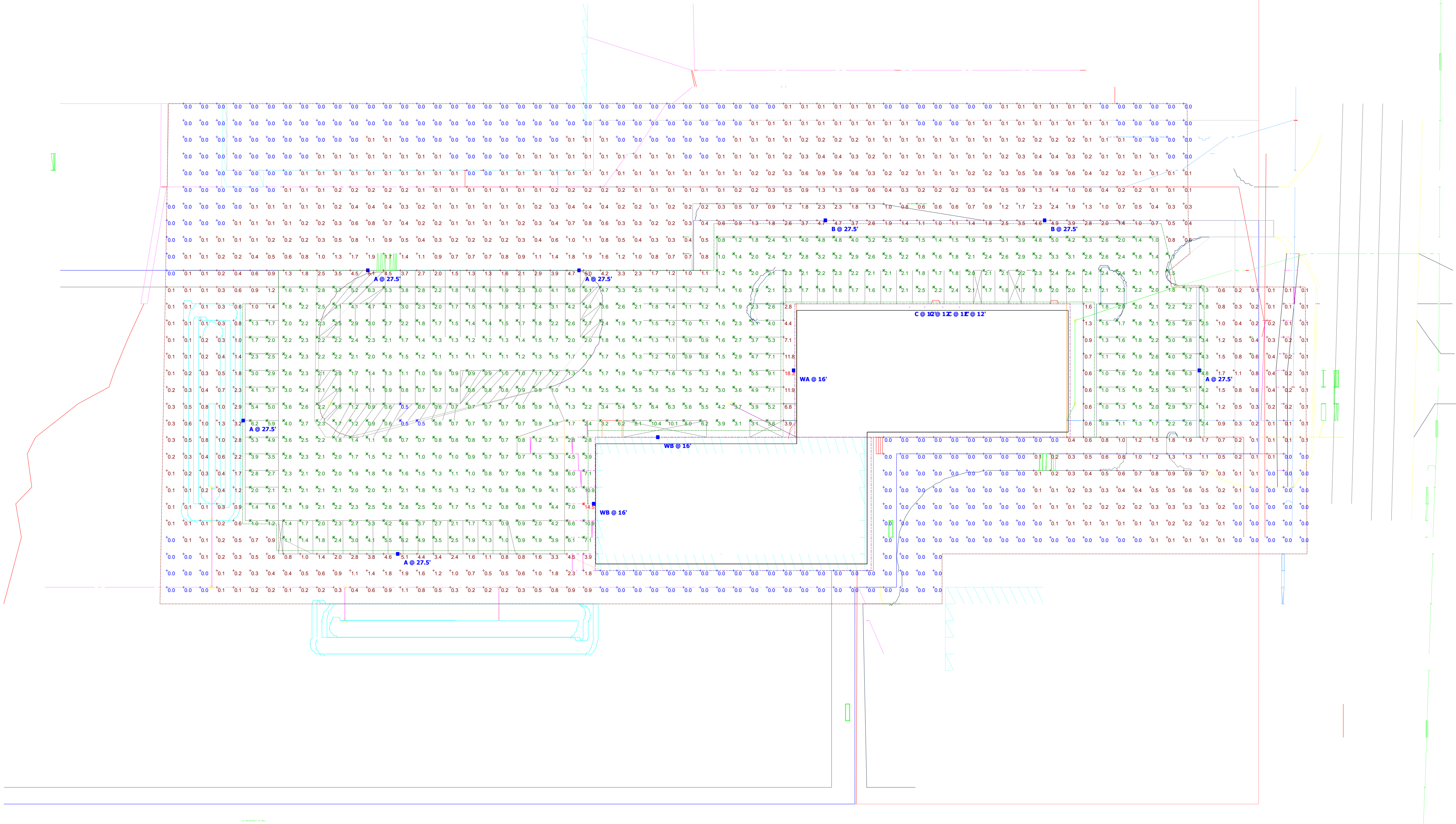
DATE: 1-05-26	DRAWN BY: MA	JOB NO: 2025195
SCALE: 1" = 50'	CHECKED BY: GMM	SHEET: 1 OF 1



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Plan View  
Scale - 1" = 35ft

Schedule											
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		5	Lithonia Lighting	RSX2 LED P4 40K R4	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R4 Distribution	1	25328	0.9	189.54	 Max: 14938cd
	B		2	Lithonia Lighting	RSX2 LED P4 40K R3	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R3 Distribution	1	25000	0.9	189.54	 Max: 18023cd
	WA		1	Lithonia Lighting	RSX2 LED P4 40K R4 WALL MOUNT	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R4 Distribution	1	25328	0.9	189.54	 Max: 14938cd
	WB		2	Lithonia Lighting	RSX2 LED P4 40K R3 WALL MOUNT	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R3 Distribution	1	25000	0.9	189.54	 Max: 18023cd
	C		4	Lithonia Lighting	LBR6 ALO2 (2000LM) SWW1 (4000K) AR LSS MWD 80CRI	6IN LBR Retrofit 2000LM 4000K Clear Semi-Specular Medium Wide 80CRI	1	2541	0.9	25.15	 Max: 2602cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PARKING AND DRIVES		2.4 fc	14.5 fc	0.5 fc	29.0:1	4.8:1
Calc Zone #1		1.2 fc	18.3 fc	0.0 fc	N/A	N/A

Note

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP. THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE. UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705

Designer

Date

01/23/2026

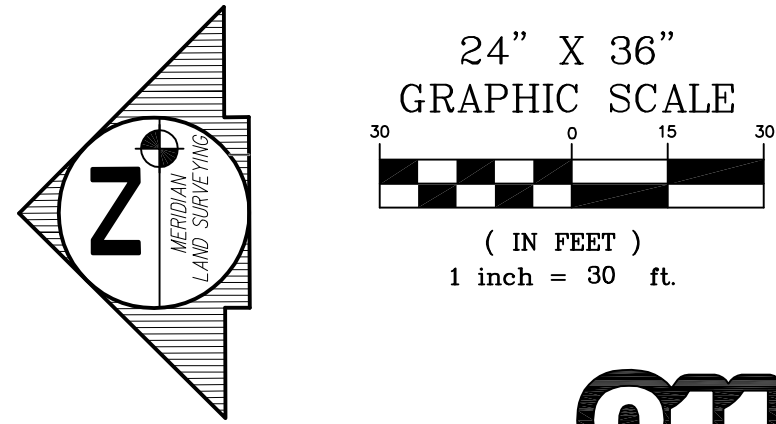
Scale

Not to Scale

Drawing No.

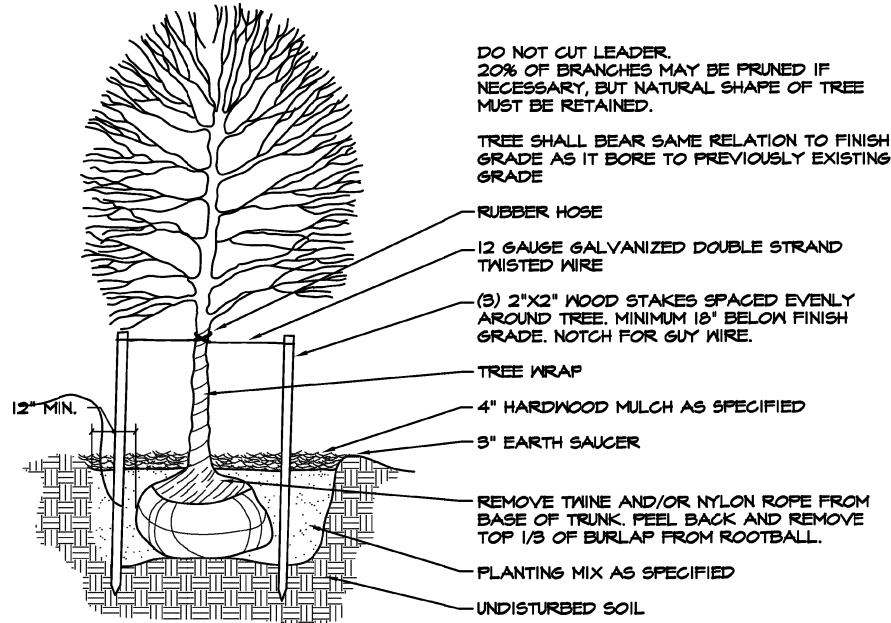
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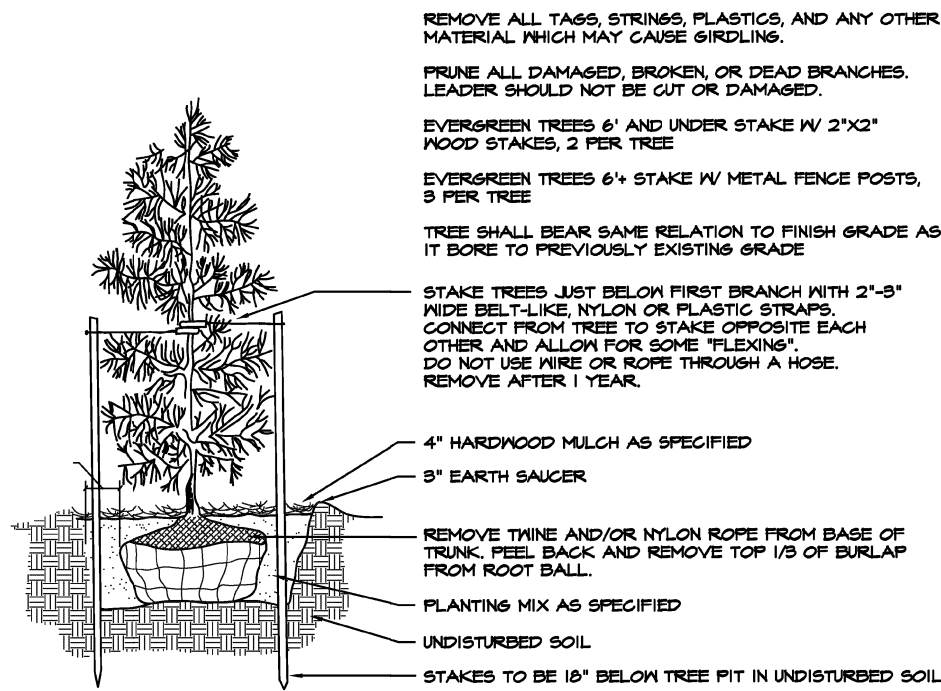


Know what's below.  
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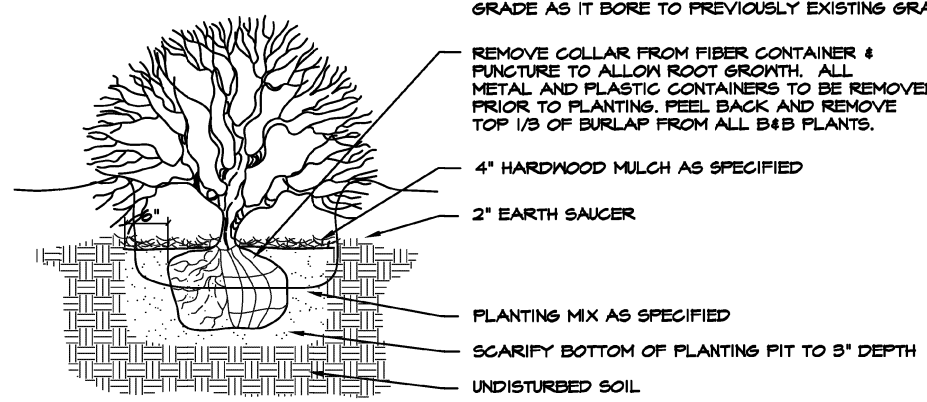
NOTE, SEE TOPOGRAPHIC  
SURVEY WITH EXISTING  
CONDITIONS INFORMATION FOR  
COMPLETE EXISTING SURVEY  
INFORMATION.



DECIDUOUS TREE PLANTING - DETAIL  
N.T.S.



EVERGREEN TREE PLANTING - DETAIL  
N.T.S.



SHRUB PLANTING DETAIL  
N.T.S.

#### LANDSCAPE NOTES

ALL PLANT MATERIAL SHALL BE TRUE TO NAME, FREE FROM PHYSICAL DAMAGE AND WIND BURN. PLANTS SHALL BE FULL, WELL-BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.

PLANTS SHALL BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE.

ALL TREES MUST BE STAKED, FERTILIZED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST ONE (1) FULL YEAR FOLLOWING PLANTING.

ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

PROVIDE CLEAN BACK FILL SOIL, USING MATERIAL STOCKPILED ON SITE. SOIL SHALL BE SCREENED AND FREE OF ANY DEBRIS, FOREIGN MATERIAL, AND STONE. "AGRIFORM" TABS OR SIMILAR SLOW-RELEASE FERTILIZER SHALL BE ADDED TO THE PLANTING PITS BEFORE BEING BACKFILLED.

ALL PLANTINGS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A MINIMUM DEPTH OF 4". MULCH IS TO BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND SHALL CONTAIN NO PIECES OF INCONSISTENT SIZE.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON THE LANDSCAPE DRAWINGS AND SPECIFICATIONS.

NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPES SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS PRIOR TO INSTALLATION.

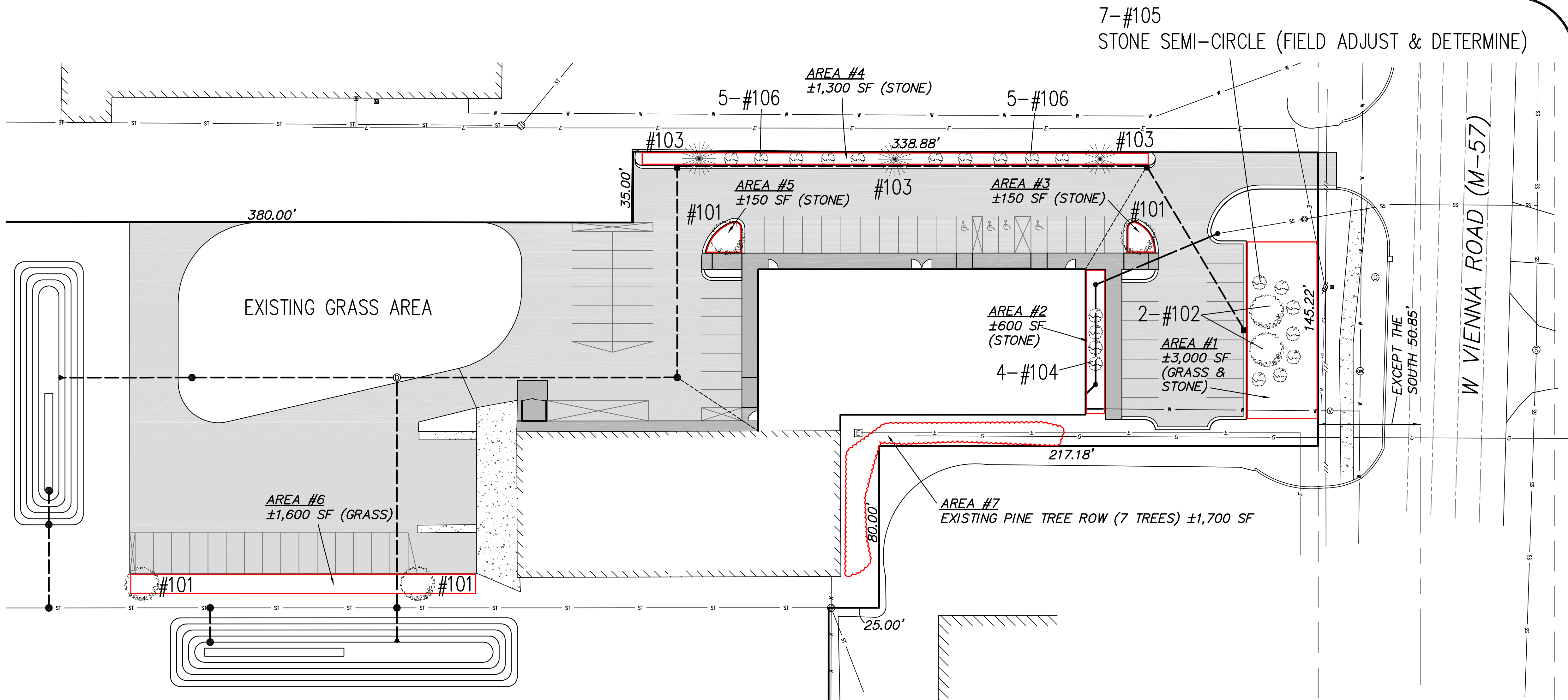
THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A VERTICAL CONDITION THROUGHOUT THE GUARANTEED PERIOD.

THE LANDSCAPE ARCHITECT SHALL HAVE THE RIGHT, AT ANY STAGE OF THE INSTALLATION, TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS, IF REQUESTED BY OWNER.

CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING PLANT QUANTITIES TO ENSURE QUANTITIES ON DRAWINGS AND PLANT LIST ARE THE SAME. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES ON THE PLANS SHALL PREVAIL.

THE LANDSCAPE CONTRACTOR SHALL SEED AND MULCH ALL AREAS DISTURBED DURING CONSTRUCTION, THROUGHOUT THE DEVELOPMENT.

A PRE-EMERGENT NEEED CONTROL AGENT, "PREEN" OR EQUAL, SHALL BE APPLIED UNIFORMLY TO ALL PLANTING BEDS PRIOR TO MULCHING.



KEY #	Qty	Botanical Name	Common Name	Size/Condition
Trees				
101	4	Acer rubrum 'Red Sunset'	RED SUNSET RED MAPLE	25-3"
102	2	Amelanchier canadensis	SHADEBLOW SERVICEBERRY	7-8'
103	3	Pinus nigra	AUSTRIAN PINE	6-7'
Shrubs				
104	4	spirea bumalda 'Goldflame'	GOLDFLAME SPIREA	15-18"
Ornamental Grasses				
105	7	Pennisetum 'RED HEAD'	RED HEAD GRASS	2 GAL.
106	10	Pennisetum alopecuroides 'Hameln'	HAMELIN DWARF FOUNTAIN GRASS	2 GAL.

NOTE, INSTALLATION OF PLANTINGS TO OCCUR DURING THE RECOMMENDED SPRING OR FALL PLANTING WINDOWS



RED SUNSET MAPLE

KEY #101



SHADEBLOW SERVICE BERRY

KEY #102



AUSTRIAN PINE

KEY #103



GOLDFLAME SPIREA

KEY #104



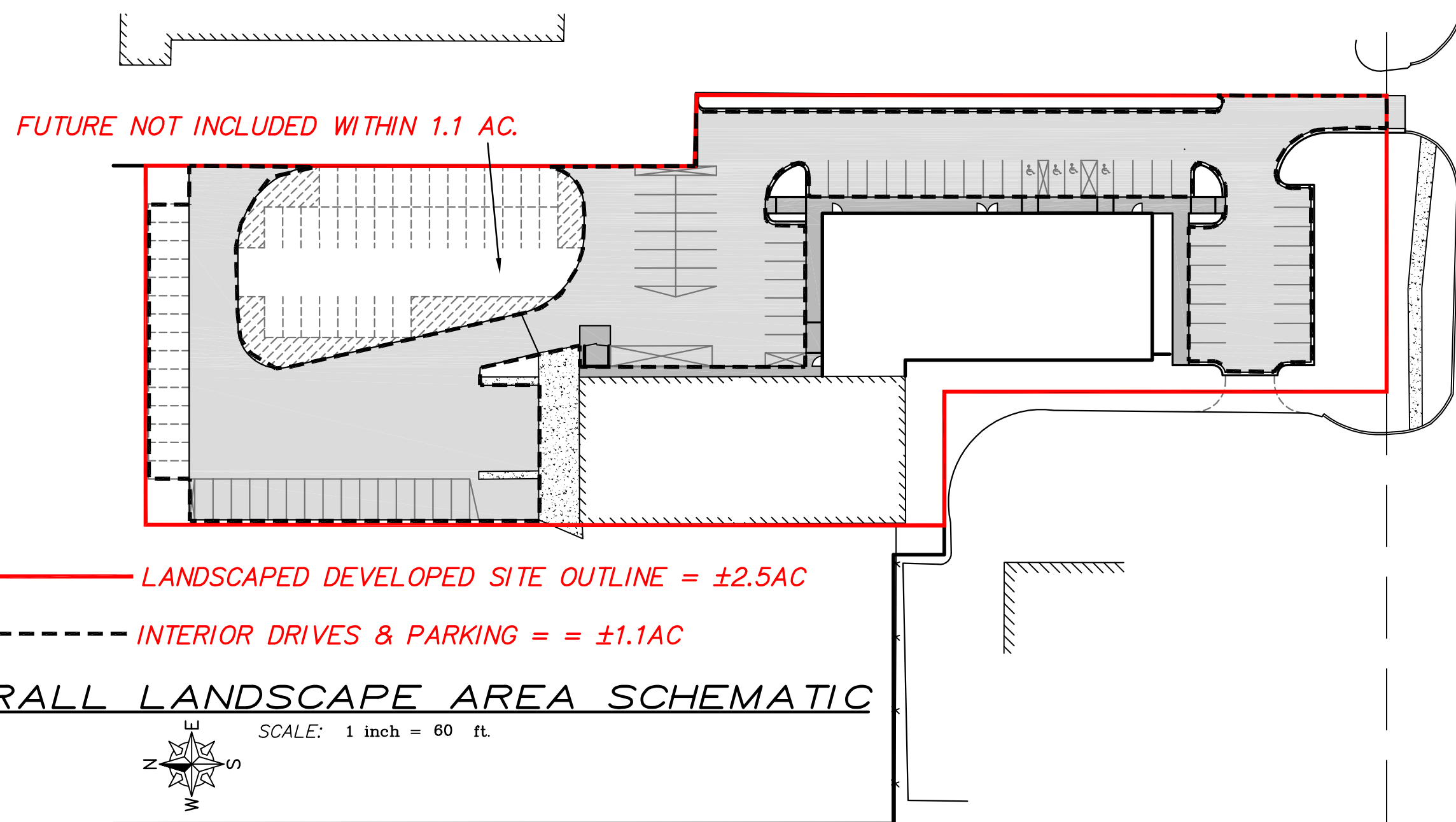
REDHEAD GRASS

KEY #105



'HAMELIN' DWARF FOUNTAIN GRASS

KEY #106



#### LANDSCAPE CALCULATIONS

- DEVELOPMENT AREA =  $\pm 2.5 \text{ ACRES} \times 43,560 \text{ SF/AC} = 108,900 \text{ SF}$
- LANDSCAPE AREAS REQUIRED =  $108,900 \times 7.5\% = 8,167.5 \text{ SF REQUIRED}$
- PROVIDED = 8,500 SF (SEE LANDSCAPE PLAN AREAS 1 TO 7)
- TREES REQUIRED = 1 PER 3000 SF OF PAVED DRIVEWAY & PARKING LOT =  $47,916 \text{ SF} / 3000 = 15.9 = 16 \text{ TREES}$
- 16 TREES LESS 7 EXISTING TREES = 9 TREES REQUIRED
- GREENBELT BUFFER = NONE REQUIRED NOT ADJACENT TO RESIDENTIAL

#### REVISIONS

No.	Description	Date	By

#### Meridian Land Surveying, Inc.

Drawn by: R.L.V.	Field: D.S., B.S.
Designed by: R.L.V.	Checked by: R.L.V.
Date: 01/21/26	Date Revised:
CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN	SITE TAX ID: 18-16-400-029
PROJECT LOCATION:	JOB No. 2025195

#### LANDSCAPE PLAN (PRELIMINARY)

RETAIL STORE & WAREHOUSE  
GOODWILL INDUSTRIES OF MID-MICHIGAN  
4112 W VIENNA RD, CLIO, MI 48420  
SECTION 16, T9N-R6E, VIENNA TWP, GENESEE COUNTY, MI

2025195

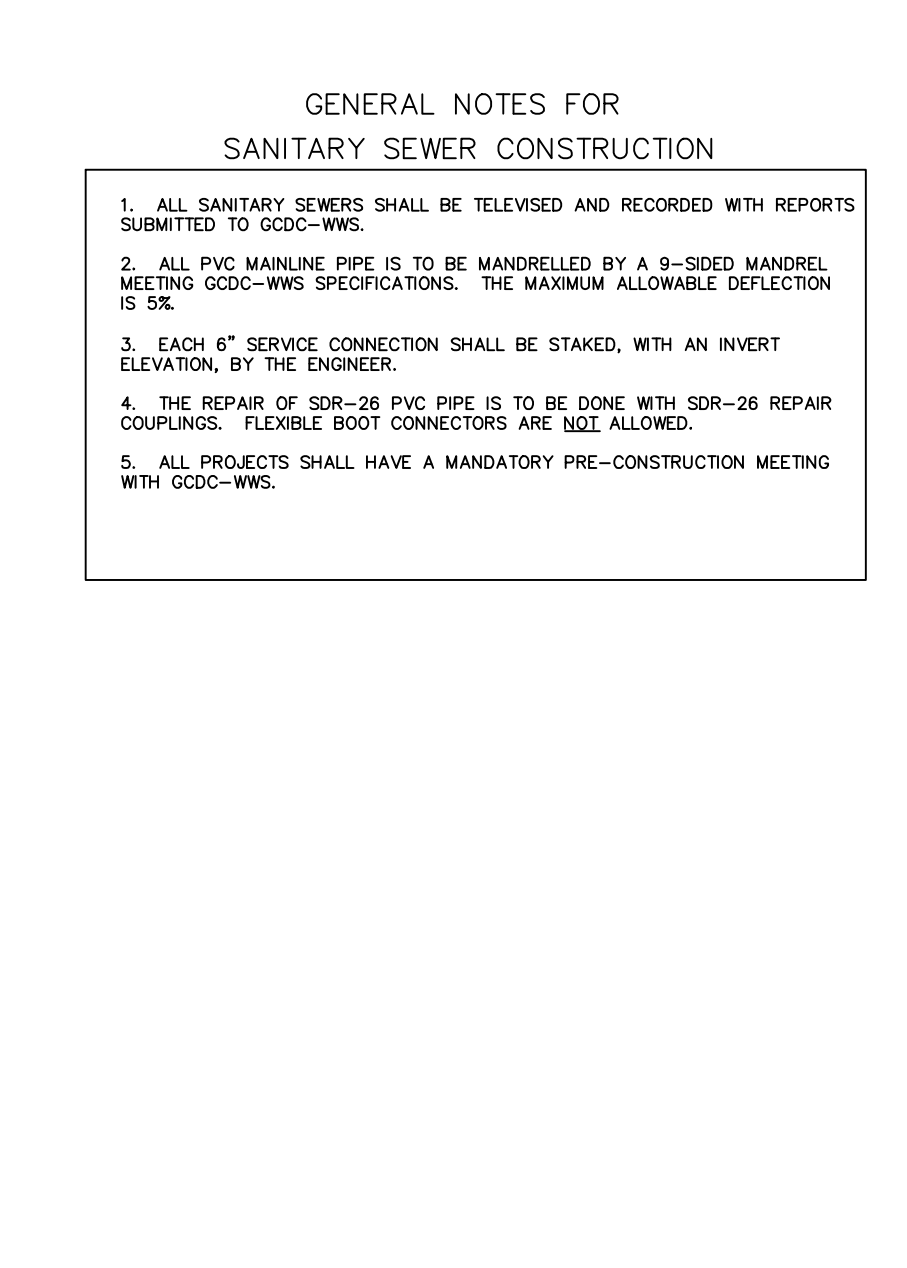
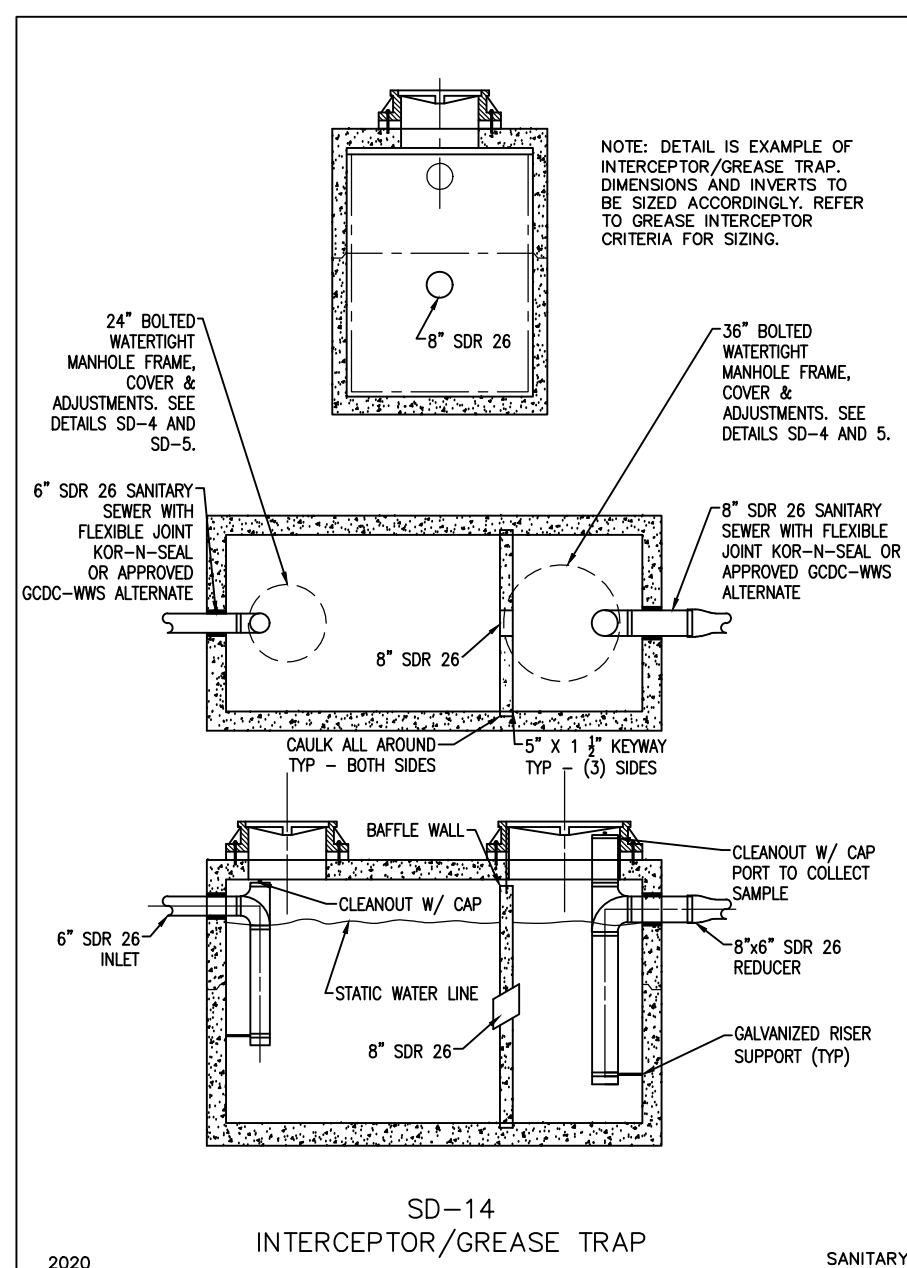
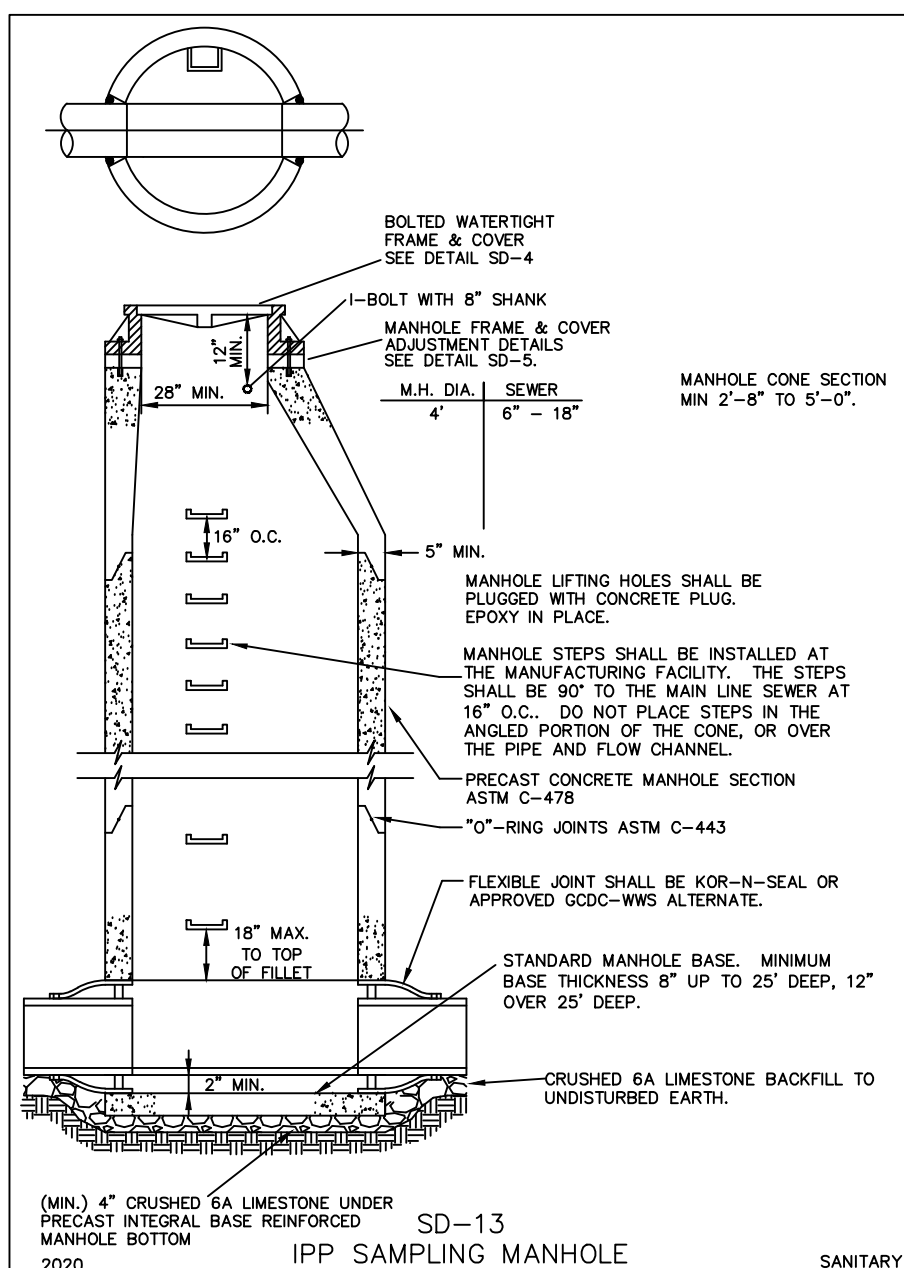
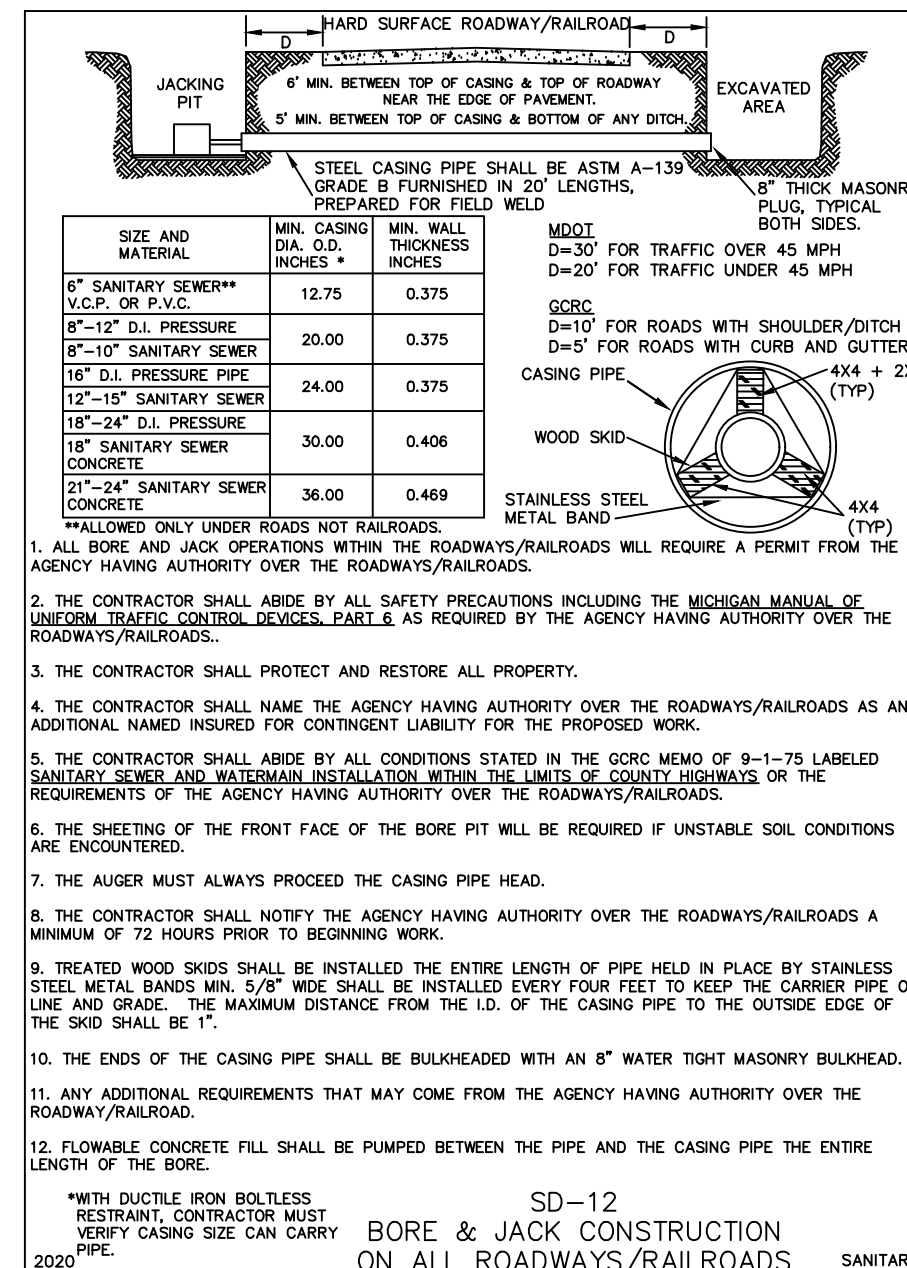
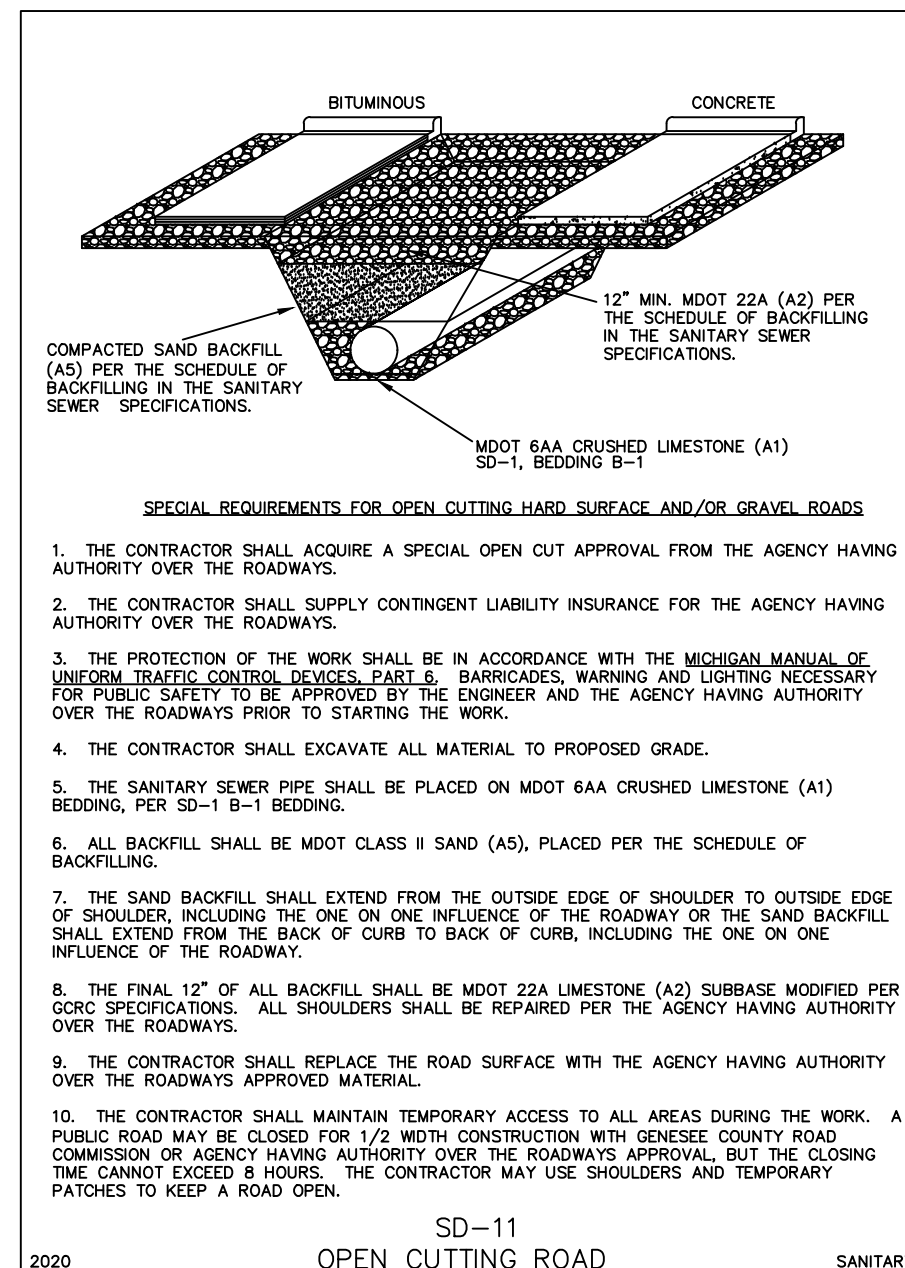
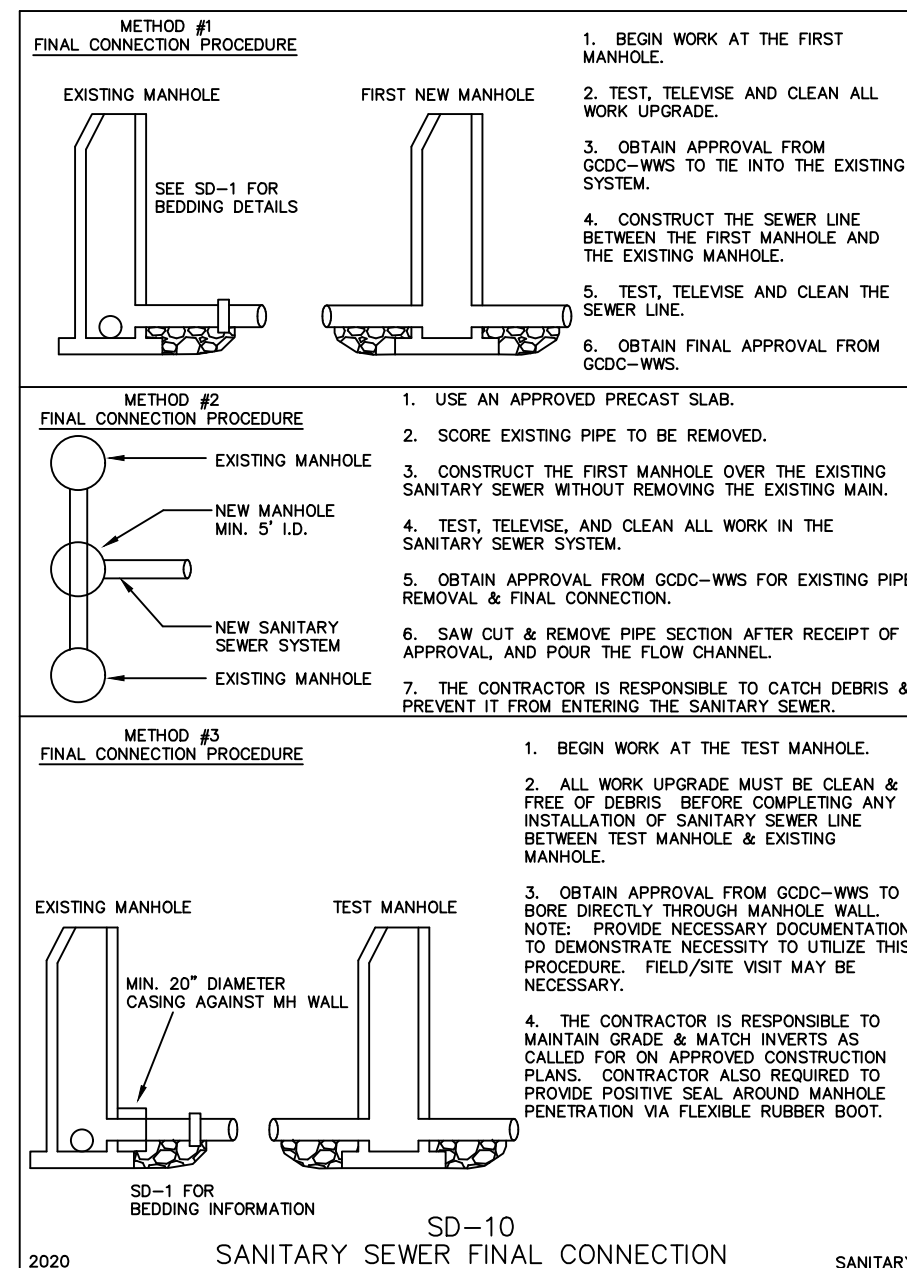
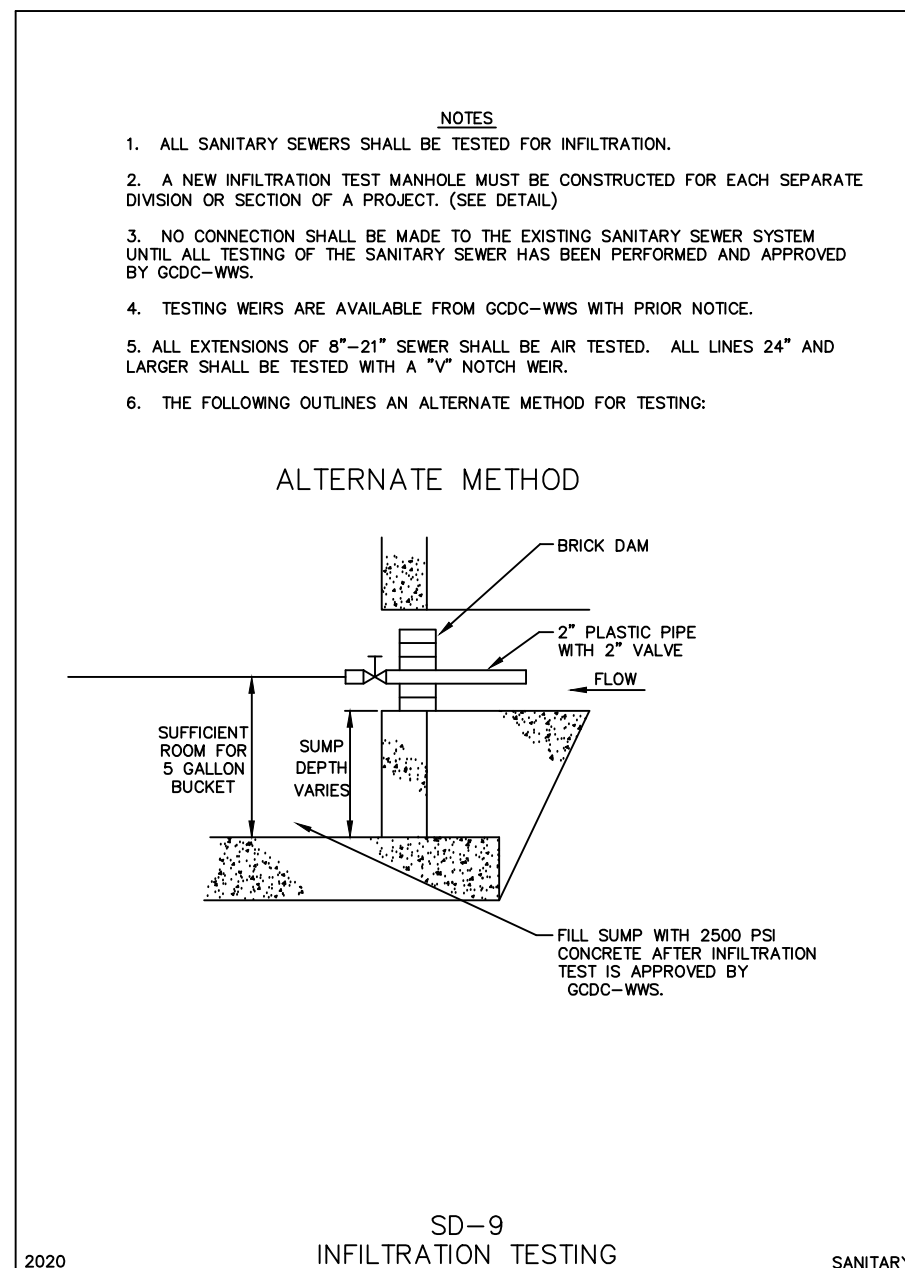
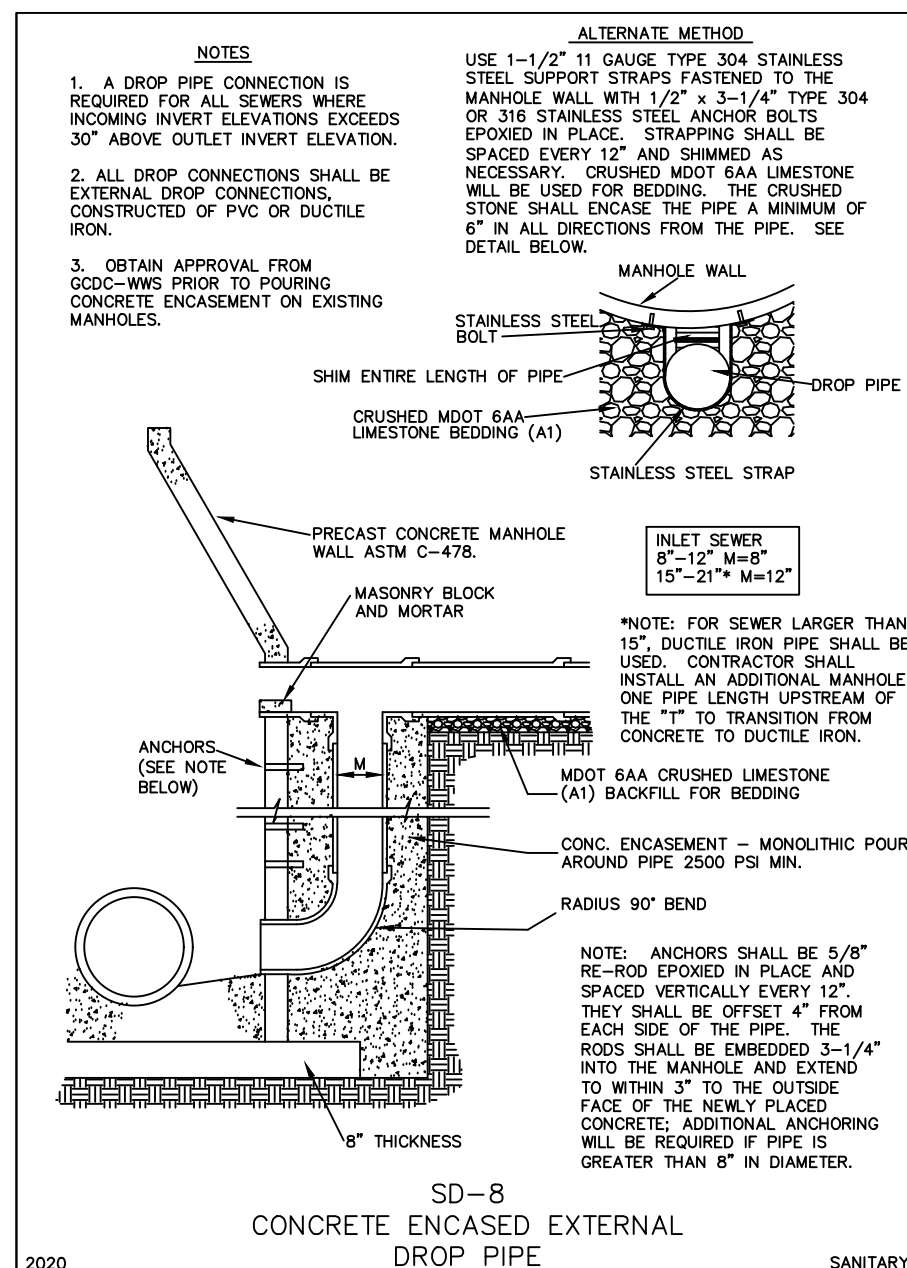
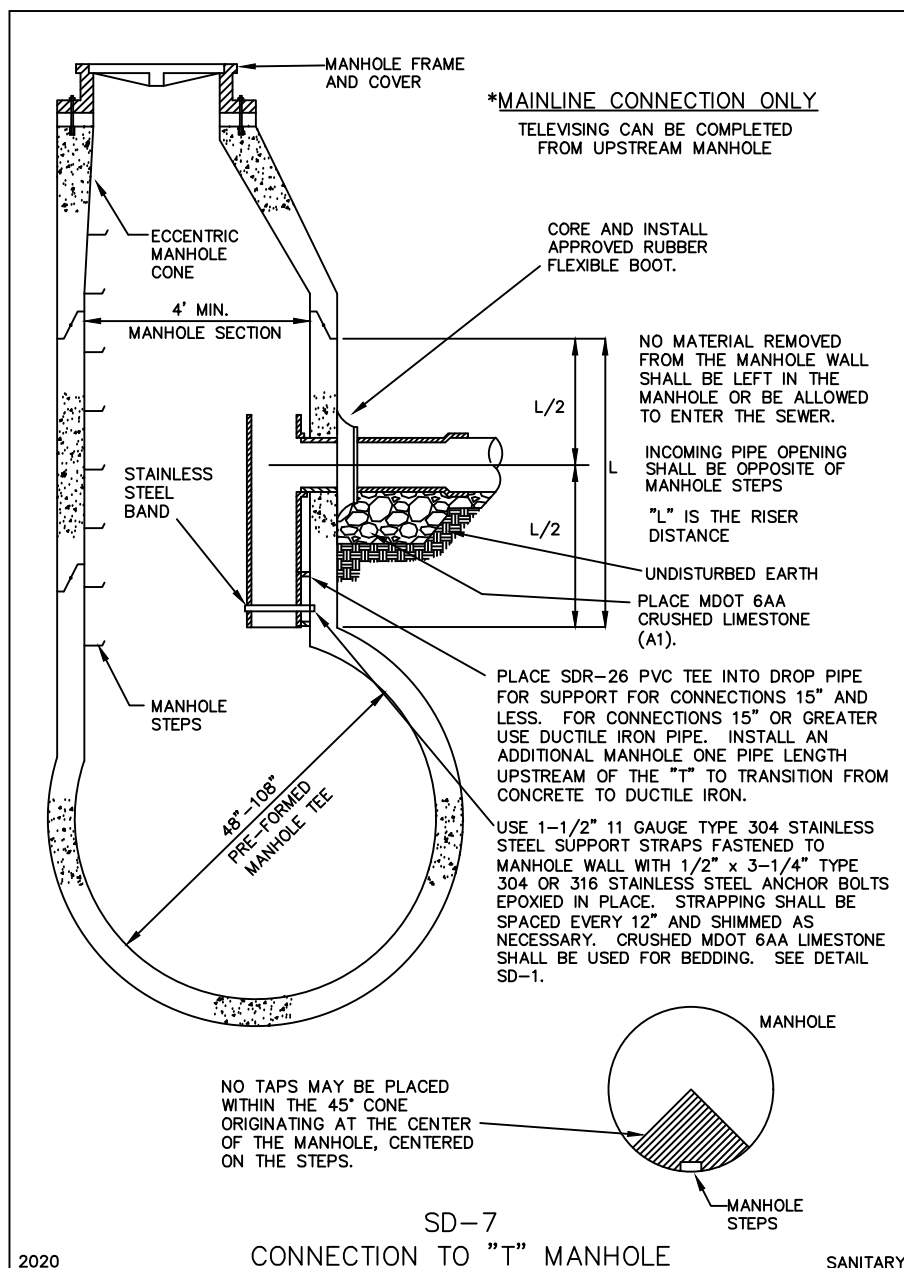
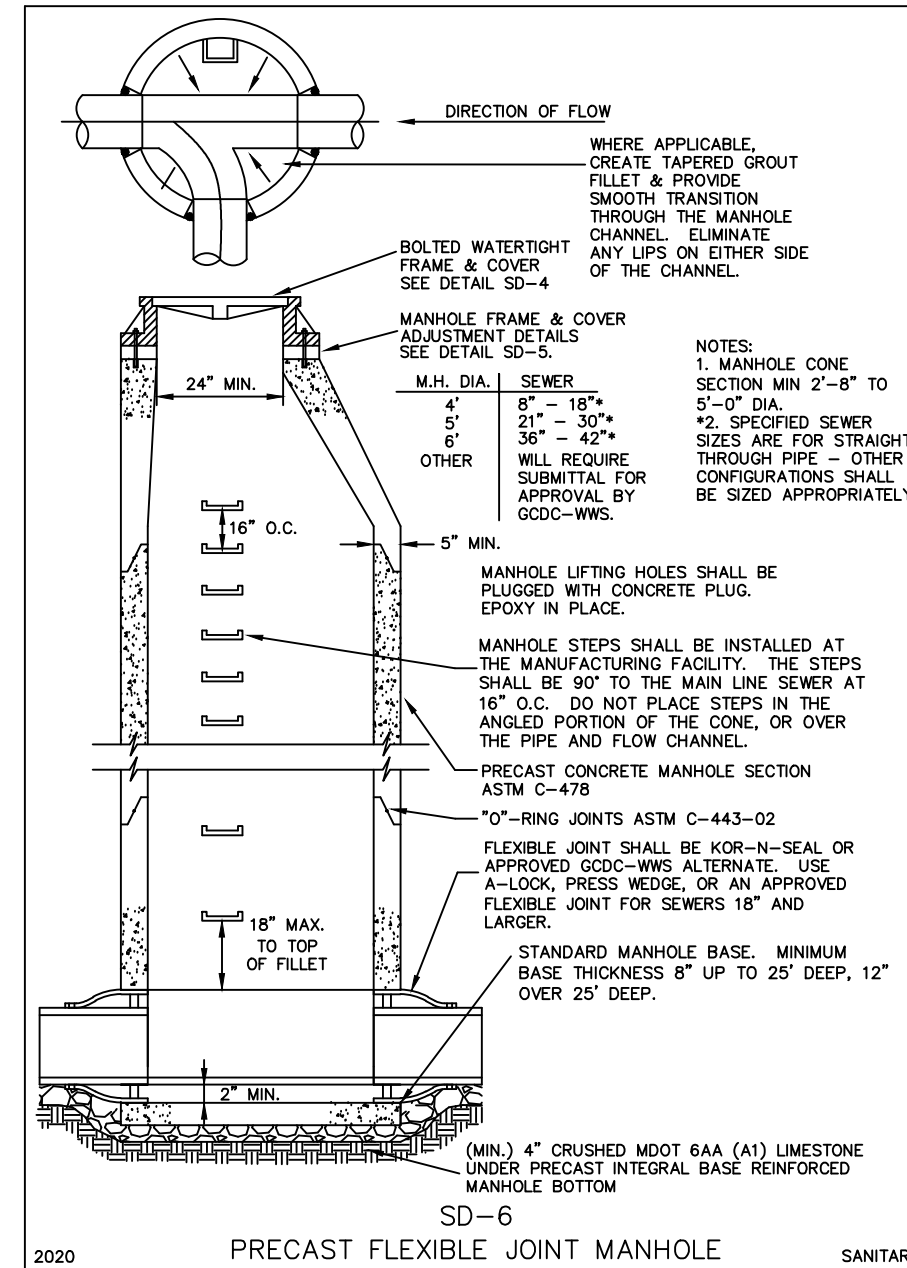
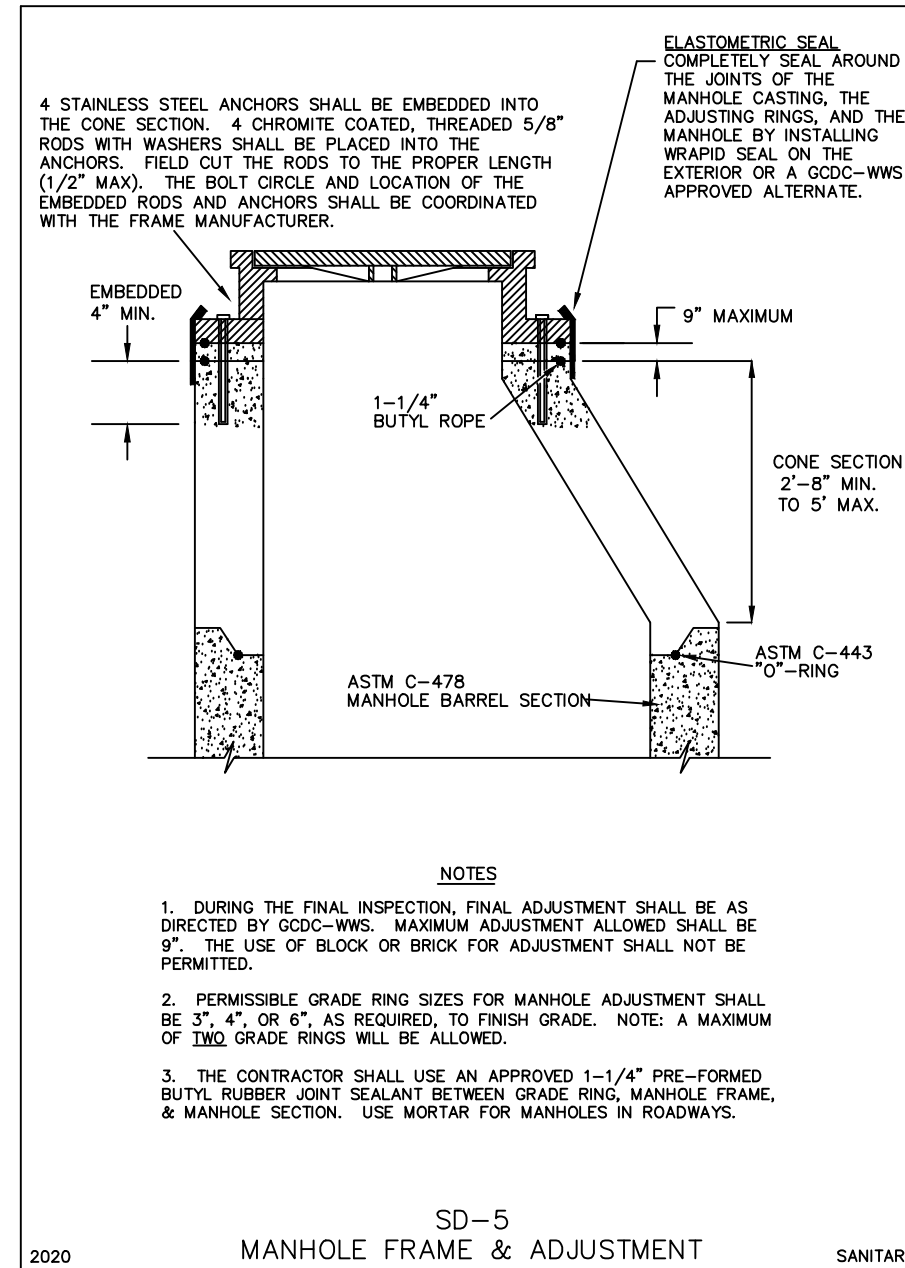
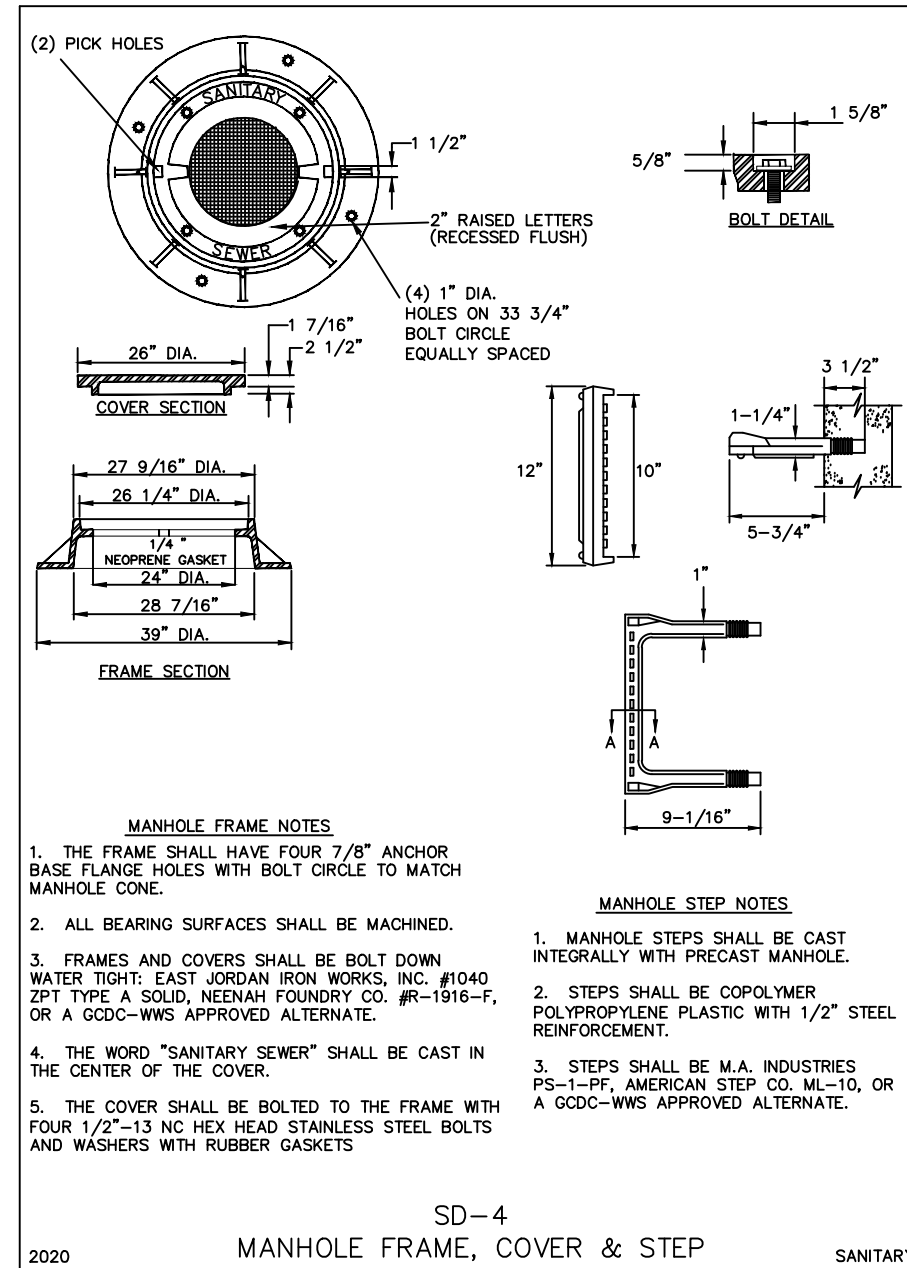
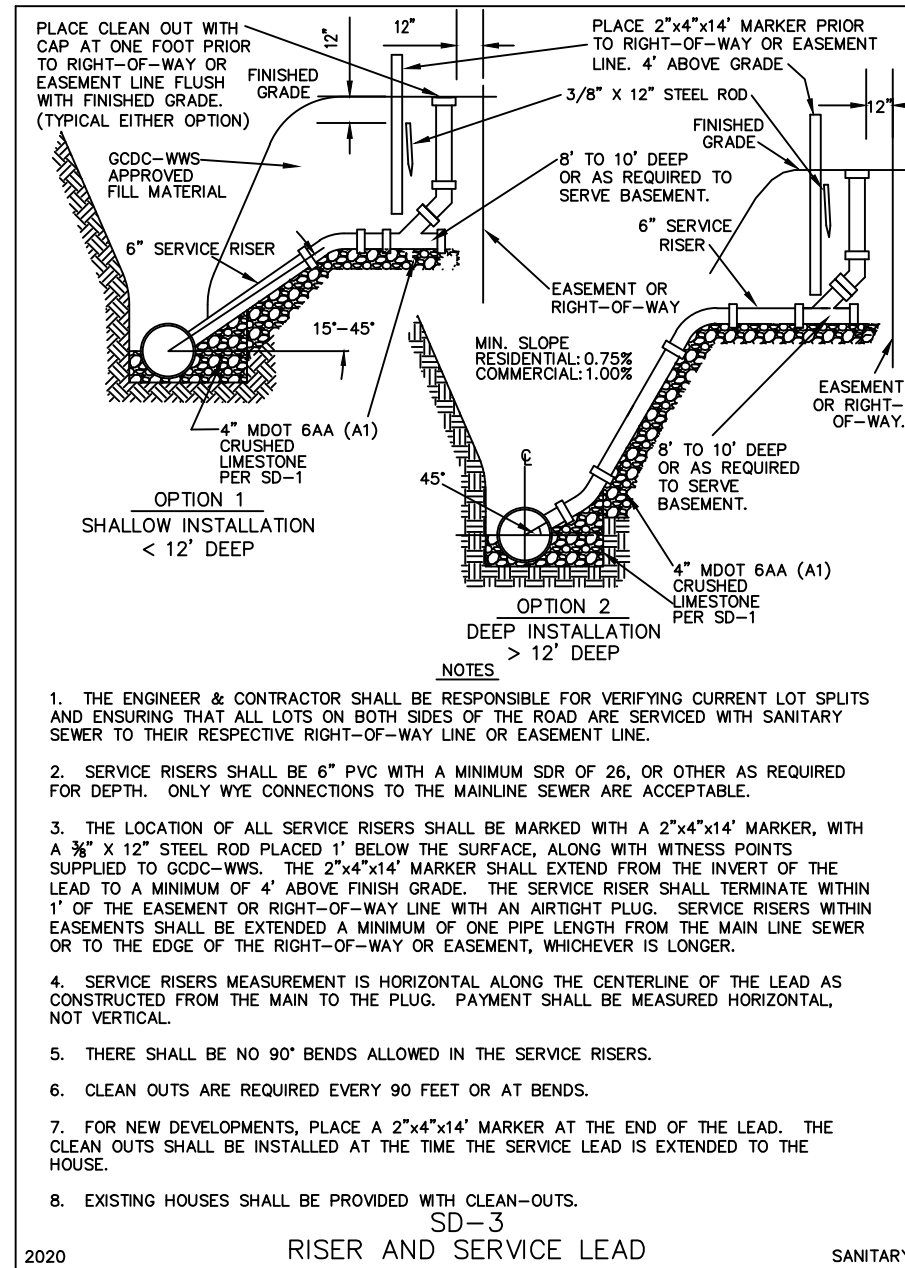
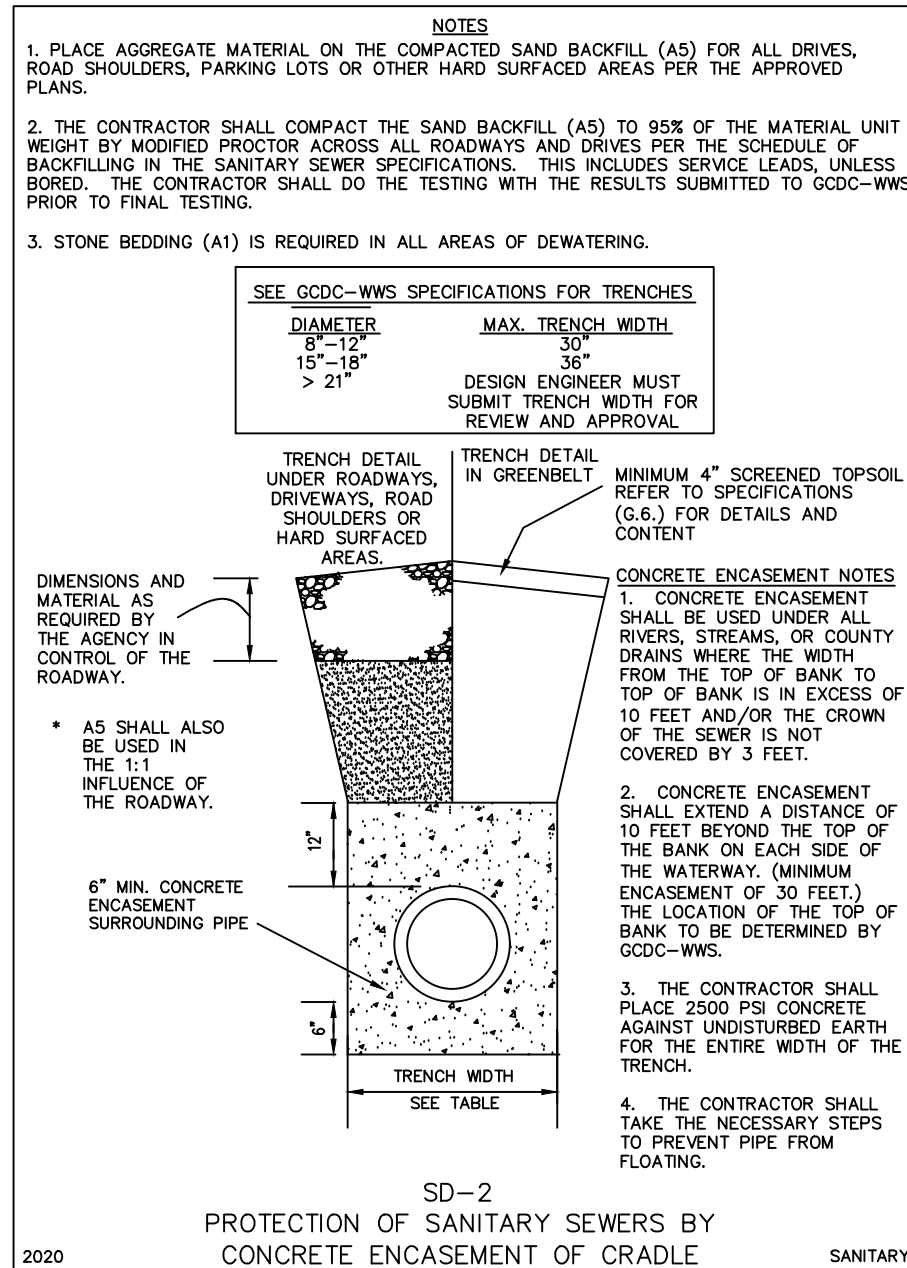
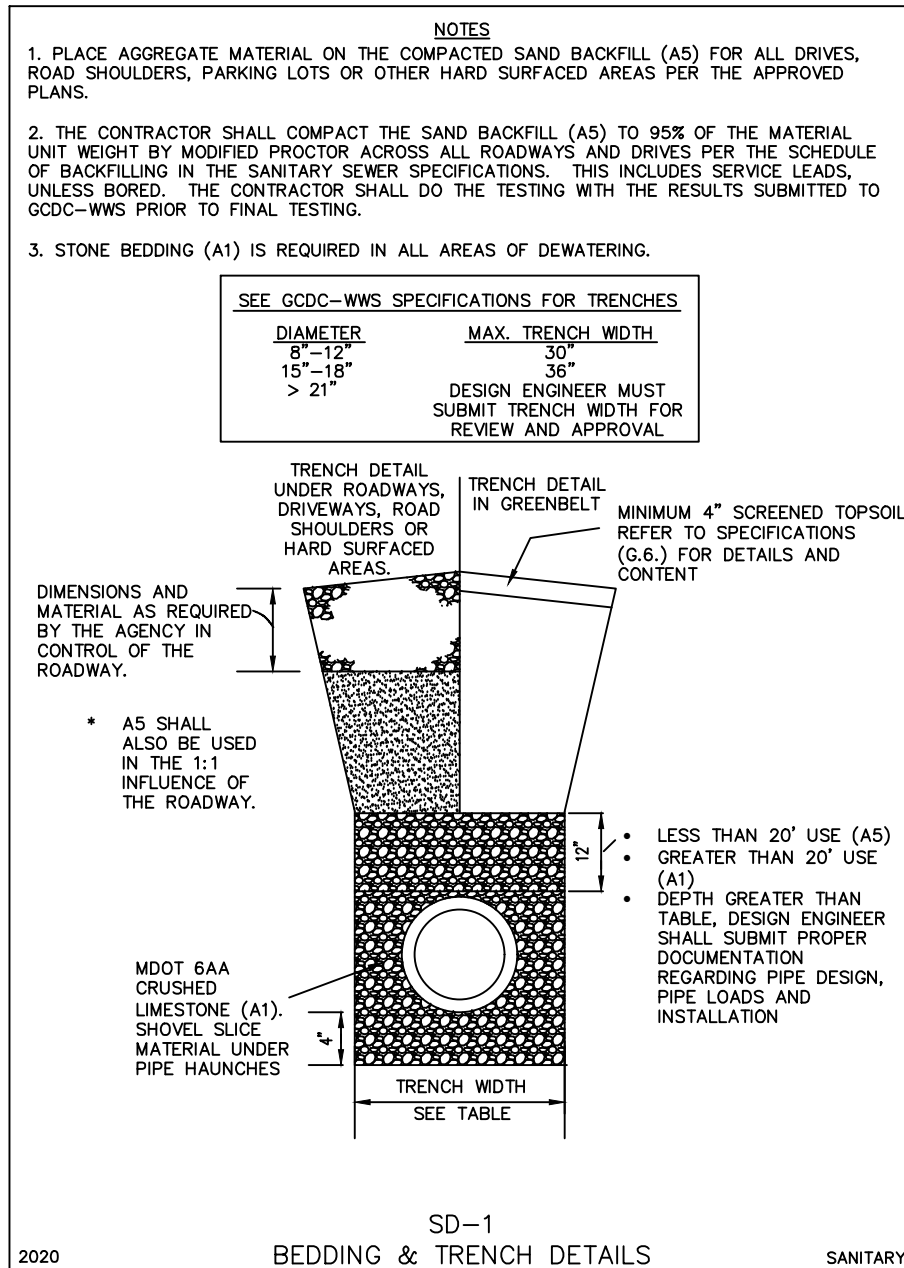
SHEET NO.

LS1



GENERAL CONSTRUCTION NOTES			SANITARY CONSTRUCTION NOTES			PRESSURE PIPE CONSTRUCTION NOTES		
<p>1. STANDARD SPECIFICATIONS &amp; DETAILS</p> <p>ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GENEESE COUNTY STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR SANITARY SEWER, PRESSURE PIPE, AND PUMP STATION CONSTRUCTION. ANY DEVIATIONS FROM THE GDCD-WWS APPROVED PLANS WILL NOT BE PERMITTED. IF IT BECOMES NECESSARY TO REVISE THE PLAN, THEY SHALL BE RESUBMITTED TO GDCD-WWS FOR APPROVAL.</p> <p>2. PRE-CONSTRUCTION MEETING</p> <p>A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE GDCD-WWS OFFICE PRIOR TO BEGINNING THE WORK. NO PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO OBTAINING THE STATE CONSTRUCTION PERMITS. THE MEETING'S TIME, PLACE, AND ATTENDEES SHALL BE ARRANGED BY THE ENGINEER FOR THE PROJECT. GDCD-WWS, GDCD-SWM, THE MUNICIPALITY, THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, PROJECT OWNER, CONTRACTOR, AND ANY AFFECTED UTILITIES SHALL BE INVITED, AS A MINIMUM, TO THE PRE-CONSTRUCTION MEETING.</p> <p>3. MISS DIG 811 UTILITY ALERT</p> <p>THREE (3) WORKING DAYS PRIOR TO BEGINNING THE WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISS DIG 811 UTILITY PROTECTION SERVICE (1-800-482-7171 OR 811) TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY REPAIRED IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS.</p> <p>4. FIELD LOCATION OF UTILITIES</p> <p>PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL BE REQUIRED TO EXPOSE ALL EXISTING UTILITIES THAT CROSS THE PROPOSED CONSTRUCTION, SO THE ENGINEER MAY DETERMINE IF A VERTICAL CONFLICT EXISTS BETWEEN AN EXISTING UTILITY AND THE PROPOSED WORK. ALL LABOR REQUIRED TO UNCOVER THE EXISTING UTILITY SHALL BE CONSIDERED INCLUDED IN THE LINEAL FEET OF PRESSURE PIPE OR SANITARY SEWER PIPE INSTALLED. THE CONTRACTOR SHALL VERIFY THE DEPTH AND HORIZONTAL LOCATIONS OF ALL UTILITIES IN SUFFICIENT TIME SUCH THAT ANY CONFLICTS CAN BE RESOLVED BEFORE WORK IS STARTED IN THAT PORTION OF THE PROJECT. THE CONTRACTOR SHALL ARRANGE FOR THE VARIOUS UTILITY OWNERS TO LOCATE, REMOVE, AND REPLACE, OR RELOCATE THEIR FACILITIES. ALL COSTS FOR THIS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.</p> <p>5. SUBSURFACE SOIL CONDITIONS</p> <p>PRIOR TO BIDDING, THE CONTRACTOR AND SUBCONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF THE SITE AND EXISTING SURFACE AND SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL ACQUAINT ITSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUBSURFACE SOIL AND GROUND WATER CONDITIONS. DEWATERING, IF DETERMINED NECESSARY BY THE CONTRACTOR AND IF NOT SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS, WILL BE INCIDENTAL TO THE COST OF INSTALLATION.</p> <p>6. PERMITS AND FEES</p> <p>THE CONTRACTOR/DEVELOPER SHALL OBTAIN ALL PERMITS, INCLUDING THE PAYMENT OF ANY FEES OR BONDS, REQUIRED BY ANY FEDERAL, STATE, COUNTY, LOCAL, OR PRIVATE ORGANIZATIONS PRIOR TO COMMENCING WORK.</p> <p>7. GDCD-WWS INSPECTION FEES</p> <p>THE DEVELOPER SHALL PAY FOR ALL SANITARY SEWER AND PRESSURE PIPE INSPECTION FEES AND WATER USAGE FEES PRIOR TO THE PRE-CONSTRUCTION MEETING.</p> <p>8. SOIL EROSION CONTROL, PART 91 OF P.A. 451 OF 1994</p> <p>THE CONTRACTOR/DEVELOPER SHALL COMPLY WITH ALL PROVISIONS OF PART 91, ACT 451 OF P.A. 1994 FOR SOIL EROSION AND SEDIMENTATION CONTROL AND WILL BE RESPONSIBLE FOR ALL MAINTENANCE UNTIL THE FINAL ACCEPTANCE OF THE PERMANENT CONTROL MEASURES BY GDCD-WWS. THE CONTRACTOR/DEVELOPER IS REQUIRED BY GDCD-WWS TO PREPARE AND SUBMIT A SOIL EROSION AND SEDIMENTATION CONTROL PLAN IN ORDER TO OBTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT AND TO PAY ANY APPLICATION FEES AND BOND FEES NECESSARY TO OBTAIN THE PERMIT.</p> <p>9. STATE CONSTRUCTIONS PERMITS</p> <p>THE CONSTRUCTION OF PUBLIC SANITARY SEWERS OR PRESSURE PIPES SHALL NOT BEGIN UNTIL THE REQUIRED STATE CONSTRUCTION PERMITS HAVE BEEN OBTAINED. NOTE: SOIL EROSION AND CONSTRUCTION PLAN APPROVAL ARE SEPARATE APPROVALS AT GDCD-WWS.</p> <p>10. ROADWAY PERMITS</p> <p>A PERMIT FROM THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS IS REQUIRED FOR ALL CONSTRUCTION WITHIN ANY ROAD RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL NECESSARY PERMITS, POST ALL NECESSARY BONDS, PAY ALL FEES, AND OBTAIN ANY REQUIRED INSURANCES IN CONNECTION THERE WITH.</p> <p>11. WORK OBSERVATION</p> <p>ALL WORK SHALL BE PERFORMED UNDER THE OBSERVATION OF A CONSTRUCTION OBSERVER FROM GDCD-WWS OR LOCAL MUNICIPALITY HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OBSERVING AGENCIES THREE (3) WORKING DAYS OR 72 HOURS PRIOR TO STARTING CONSTRUCTION TO ARRANGE FOR ON-SITE OBSERVATION AND TESTING. CUT SHEETS FOR ALL PIPE INSTALLATION AND REDITCHING SHALL BE PROVIDED TO THE GDCD-WWS CONSTRUCTION OPERATION'S SUPERVISOR A MINIMUM OF 24 HOURS PRIOR TO STARTING THE WORK WITH RESPECT TO THAT UTILITY. GDCD-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION SHALL BE NOTIFIED FOR A FINAL INSPECTION.</p> <p>12. CONTRACTOR'S MINIMUM WAGE &amp; USE OF IN-COUNTY LABOR</p> <p>THE CONTRACTOR SHALL EMPLOY COMPETENT AND SKILLED WORKERS THROUGHOUT THE COURSE OF THE PROJECT. THE CONTRACTOR SHALL STRIVE TO USE GENEESE COUNTY RESIDENTS WHEN FEASIBLE. THE CONTRACTOR SHALL BE REQUIRED TO PAY THE PREVAILING WAGE RATES AS ESTABLISHED BY THE BUILDING AND CONSTRUCTION TRADES DEPARTMENT OF THE AMERICAN FEDERATION OF LABOR WHICH APPLIES TO THE COUNTY OF GENEESE. THESE RATES CAN BE OBTAINED BY CONTACTING THE MICHIGAN DEPARTMENT OF CONSUMER AND INDUSTRIAL SERVICES.</p> <p>13. MIOSHA SAFETY REQUIREMENTS</p> <p>ALL WORK, WORK PRACTICE, AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL SAFETY GUIDELINES, OCCUPATION, HEALTH AND ENVIRONMENTAL REGULATIONS, AND ALSO NFPA AND ANSI CODES AS APPLICABLE. ALL WORK INSIDE A CONFINED SPACE, SUCH AS MANHOLES OR OTHER UNDERGROUND STRUCTURES, SHALL BE COORDINATED WITH THE UTILITY OWNER, AND ALL WORKER SAFETY REQUIREMENTS STRICTLY ENFORCED. THE CONTRACTOR SHALL HAVE ITS SAFETY PLAN ON FILE WITH GDCD-WWS AND ONE COPY ON SITE AT ALL TIMES.</p> <p>14. ROADWAY REQUIREMENTS FOR UTILITY CONSTRUCTION</p> <p>THE CONTRACTOR SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THE GCRD OR LOCAL MUNICIPALITY REGARDING THE CONSTRUCTION OF PRESSURE PIPE AND SEWER MAINS, MAINTAINING TRAFFIC, BARRICADING, BORING, BACKFILLING AND RESTORATION WITHIN THE ROAD RIGHT-OF-WAY.</p> <p>15. OPEN CUTTING OF COUNTY/LOCAL ROADS</p> <p>WHEN OPEN CUTTING OF GRAVEL OR HARD SURFACED ROADS ARE INCORPORATED INTO THE PROJECT, THE CONTRACTOR SHALL OBTAIN THE APPROVAL AND COMPLY WITH ALL OF THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, AND BY THE SPECIFICATIONS OF GDCD-WWS.</p> <p>16. GRAVEL ROAD CONTAMINATION BY THE WORK</p> <p>IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL ROADS HAVE BECOME CONTAMINATED DURING THE WORK, THE ROAD MUST BE REPAIRED PER THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. WHERE THE EXISTING ROAD GRAVEL IS REMOVED BECAUSE OF THE WORK, ALL WORK AND MATERIALS SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS.</p> <p>17. RESTORATION OF GRAVEL SHOULDERS</p> <p>IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL SHOULDERS HAVE BEEN CONTAMINATED BY THE WORK, THE CONTRACTOR SHALL RE-GRAVEL PER THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. ALL WORK AND MATERIALS SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS.</p> <p>18. COMPACTED GRANULAR BACKFILL FOR ROADWAYS, DRIVES, ETC.</p> <p>ALL TRENCH EXCAVATION WITHIN A ONE-ON-ONE INFLUENCE OF A ROADWAY, DRIVEWAY, CROSSINGS, PARKING LOTS, OR OTHERWISE SHOWN ON THE PLANS SHALL BE BACKFILLED WITH COMPACTED SAND MDOT CLASS II (A5) PER THE SCHEDULE OF BACKFILLING, FOUND IN THE SPECIFICATIONS. IN ADDITION, SEE THE SPECIFICATIONS FOR THE REQUIREMENTS FOR THE COMPACTION PLAN. THIS STANDARD ALSO INCLUDES SERVICE LEADS UNLESS BORED.</p> <p>19. SURFACE RESTORATION</p> <p>ALL DISTURBED AREAS SHALL BE COMPLETELY RESTORED IN STRICT COMPLIANCE WITH THE SOIL EROSION AND SEDIMENTATION SPECIFICATIONS AND TO THE SATISFACTION OF GDCD-WWS, GDCD-SWM, GCRD, MDOT, THE LOCAL MUNICIPALITY, AND THE PROPERTY OWNER. ALL COSTS FOR THE CLEANUP, RESTORATION WORK, AND OTHER INTERMEDIATE OPERATIONS INCLUDING BUT NOT LIMITED TO, CONSTRUCTION SIGNING, STREET SWEEPING, AND MAINTAINING EXISTING UTILITIES, SHALL BE CONSIDERED INCLUSIVE AND AT NO ADDITIONAL COST TO GDCD-WWS. AREAS DISTURBED DURING THE WORK SHALL RECEIVE A 4" APPLICATION OF SCREENED TOPSOIL, FERTILIZED AND SEEDED. ALL EXCESS MATERIALS, DEBRIS, AND SIMILAR ITEMS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH THE LAW. ALL GROUND SURFACES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER PRIOR TO FINAL APPROVAL.</p> <p>20. TRAFFIC CONTROL</p> <p>THE CONTRACTOR SHALL EXECUTE THE WORK IN A MANNER SUCH THAT TRAFFIC IS MAINTAINED AND ACCESS IS PROVIDED TO ALL RESIDENCES, BUSINESSES, AND COMMERCIAL ESTABLISHMENTS. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS AND THE LATEST EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 6, AND THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, OR AS DIRECTED BY THE ENGINEER.</p> <p>21. SIGNING AND BARRICADING</p> <p>SIGNING AND BARRICADING SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE DETAILS ON THE PLANS, THE LATEST EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 6, AND THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. SIGNS AND BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED.</p> <p>22. PROTECTION OF HAZARDOUS AREAS</p> <p>EXCAVATION AND HAZARDOUS AREAS SHALL BE PROTECTED BY BARRICADES, SNOW FENCE, OR OTHER APPROPRIATE MEANS. BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED.</p> <p>23. STORM WATER DRAINAGE DURING THE WORK</p> <p>THE CONTRACTOR/DEVELOPER SHALL OBTAIN THE SERVICES OF A CERTIFIED STORM WATER OPERATOR AND COMPLY WITH THE PROVISIONS OF THE NPDES AND SESC PERMITS. THE CONTRACTOR SHALL MAINTAIN DITCH DRAINAGE DURING CONSTRUCTION AND SHALL NOT OBSTRUCT SUMP PUMP LEADS DISCHARGING INTO THE DITCH. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL STORM SEWER FACILITIES, SUCH AS CATCH BASINS AND CULVERTS, DURING THE WORK. CULVERTS AND CATCH BASINS CONTAMINATED DURING THE WORK SHALL BE CLEANED.</p> <p>24. UTILITY INFORMATION</p> <p>UTILITY INFORMATION IS DELINEATED IN ACCORDANCE WITH THE LOCATIONS PROVIDED BY UTILITY OWNERS. THE ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION OR THE LOCATION AT WHICH THESE SERVICES EXIST. DIFFERING FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND GDCD-WWS.</p> <p>25. EXISTING UTILITIES</p> <p>THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SANITARY SEWER, PRESSURE PIPE, OR STORM SEWER CONNECTIONS IN SERVICE THROUGHOUT THE WORK. THE CONTRACTOR SHALL PROVIDE OR ARRANGE FOR THE TEMPORARY SUPPORT OF GAS MAIN, TELEPHONE, FIBER OPTIC, CABLE, PRESSURE PIPE, SANITARY SEWER, STORM SEWER, AND UTILITY POLES WHERE NEEDED. ALL STORM SEWERS DAMAGED OR REMOVED, OR RELOCATED BY THE CONTRACTOR, SHALL BE REPLACED WITH THE SAME SIZE AND QUALITY PIPE BY THE CONTRACTOR AT CONTRACTOR'S SOLE EXPENSE. ALL UTILITIES UNDERMINED BY THE EXCAVATION SHALL HAVE COMPACTED SAND BACKFILL PLACED UNDER THEM, UNLESS MDOT 6A CRUSHED Limestone (A1) OR MDOT 22A GRAVEL (A2) IS SHOWN ON THE CONSTRUCTION PLANS. ALL WORK, INCLUDING THE REBORING OF SANITARY SEWER SERVICE LEADS AND WATERMAIN LEADS TO ACCOMMODATE CONSTRUCTION TO CLEAR EXISTING SERVICES, SHALL BE INCLUSIVE TO THE PROJECT.</p> <p>26. SHOP DRAWINGS</p> <p>PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GDCD-WWS SHOP DRAWINGS AND/OR CATALOG CUTS FOR ALL MATERIALS AND EQUIPMENT ITEMS PER THE STANDARD SPECIFICATIONS.</p> <p>27. MATERIAL CERTIFICATIONS</p> <p>PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GDCD-WWS MATERIALS CERTIFICATES FOR ALL MATERIALS USED DURING THE WORK.</p> <p>28. NON-STOPPAGE CLAUSE</p> <p>THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP THE WORK FOR EXTENDED PERIODS ONCE THE WORK HAS BEGUN WITHOUT WRITTEN APPROVAL OF GDCD-WWS.</p> <p>29. DISPOSAL OF EXCESS EXCAVATED MATERIAL</p> <p>ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR, WITH ALL PERMITS, PERMISSIONS, AND LOCATIONS PROVIDED BY THE CONTRACTOR. ADJACENT PROPERTY OWNERS SHALL BE GIVEN PREFERENCE FOR DISPOSAL SITES. WRITTEN PERMISSION FOR DISPOSAL ON ADJACENT PROPERTY OWNERS SHALL BE PROVIDED TO GDCD-WWS.</p> <p>30. CONSTRUCTION STAKING</p> <p>THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, PROVIDE A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF MICHIGAN, TO PROVIDE ALIGNMENT AND GRADE STAKES, AND CUT SHEETS. THE SURVEYOR SHALL PROVIDE GRADE STAKES AND CUT SHEETS AT ALL STRUCTURES AND AT A MAXIMUM OF 50' INTERVALS BETWEEN STRUCTURES.</p> <p>31. FINAL ELEVATIONS OF SURFACE UTILITIES</p> <p>ALL FINAL ELEVATIONS OF MANHOLE CASTINGS, HYDRANTS, VALVES, AND VALVE BOXES SHALL BE APPROVED BY THE GDCD-WWS REPRESENTATIVE IN THE FIELD. ANY ADJUSTMENTS THAT ARE MADE SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.</p> <p>32. PROJECT RECORD DOCUMENTS</p> <p>UPON COMPLETION OF THE WORK AND PRIOR TO FINAL APPROVAL FROM GDCD-WWS, THE OWNER/DEVELOPER SHALL FURNISH GDCD-WWS WITH ONE COMPLETE SET OF PROJECT RECORD DOCUMENTS. THESE PROJECT RECORD DOCUMENTS ARE COMPRISED OF DRAWINGS ON MYLAR AND AN ELECTRONIC DATA SET.</p> <p>THE MYLAR PROJECT RECORD DOCUMENTS SHALL BE SUBMITTED TO GDCD-WWS ON 4 MIL MYLAR FOR THE REVIEW AND APPROVAL OF GDCD-WWS. THE MYLAR PROJECT RECORD DOCUMENTS SHALL INCLUDE BUT NOT BE LIMITED TO: INVERT OF PIPES, LOCATION OF MANHOLES, PIPE LENGTHS, SLOPES OF PIPE, LOCATION OF SERVICE LEADS, LOCATION OF MAINLINE VALVES, LOCATION OF BENDS, TEES CROSSES, AND LOCATION OF CURB BOXES. THIS INFORMATION SHALL BE GATHERED BY THE OWNER/DEVELOPER AT ITS SOLE EXPENSE. THESE PROJECT RECORD DOCUMENTS SHALL ALSO INCLUDE ANY ADDITIONAL INFORMATION COLLECTED BY THE GDCD-WWS OR MUNICIPAL CONSTRUCTION OBSERVER.</p> <p>IN ADDITION TO THE AS-BUILT MYLARS, THE OWNER/DEVELOPER SHALL PROVIDE TO GDCD-WWS AN ELECTRONIC DATA SET IN A MICROSOFT EXCEL SPREADSHEET DETAILING THE FOLLOWING ITEMS IN THEIR AS-BUILT LOCATIONS DEPICTED IN MICHIGAN STATE PLANE SOUTH COORDINATES (NAD83) AND ELEVATIONS (USGS/NGVD): ALL MANHOLES (WATER AND SANITARY), ALL HYDRANTS, ALL VALVES, AND ALL SERVICE RISERS (WATER AND SANITARY) AT THEIR TERMINUS, ALL METER PITS, AND ALL PUMP STATIONS.</p> <p>33. 2-YEAR MAINTENANCE AND GUARANTEE BOND</p> <p>UPON COMPLETION OF THE WORK AND PRIOR TO FINAL APPROVAL, THE CONTRACTOR SHALL FURNISH THE GDCD-WWS WITH A 2-YEAR MAINTENANCE AND GUARANTEE BOND.</p> <p>34. SOIL EROSION AND SEDIMENTATION CONTROL RELEASE</p> <p>PRIOR TO FINAL ACCEPTANCE BY GDCD-WWS, THE CONTRACTOR SHALL REQUEST A FINAL INSPECTION OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND RECEIVE WRITTEN APPROVAL FROM GDCD-WWS. THE SOIL EROSION AND SEDIMENTATION CONTROL BOND WILL BE RELEASED UPON GDCD-WWS FINAL APPROVAL.</p> <p>35. ORDER OF PRECEDENCE</p> <p>IN RESOLVING INCONSISTENCIES BETWEEN TWO OR MORE SECTIONS OF THE CONTRACT DOCUMENTS, PRECEDENCE SHALL BE GIVEN IN THE FOLLOWING ORDER FROM (A) THROUGH (G):</p> <p>A. AGREEMENT AND ANY CONTRACT MODIFICATIONS (WITH GDCD-WWS)</p> <p>B. BID</p> <p>C. SUPPLEMENTARY CONDITIONS</p> <p>D. INSTRUCTION TO BIDDERS</p> <p>E. GENERAL CONDITIONS OF THE CONTRACT</p> <p>F. SPECIFICATIONS</p> <p>G. DRAWINGS</p>			<p>1. ALL MATERIAL AND WORK SHALL COMPLY WITH THE LATEST GDCD-WWS SPECIFICATIONS AND STANDARD DETAILS.</p> <p>2. NO CONNECTION TO AN EXISTING SANITARY SEWER SHALL BE MADE WITHOUT THE PRIOR APPROVAL OF GDCD-WWS. GDCD-WWS SHALL HAVE FINAL INSPECTION AUTHORITY AND APPROVAL FOR UNDERGROUND SANITARY SEWER FACILITIES.</p> <p>3. THE MATERIAL FOR THE SANITARY SEWER SHALL BE SPECIFIED ON THE CONSTRUCTION DRAWINGS. THE FOLLOWING MATERIALS ARE ACCEPTABLE TO GDCD-WWS:</p> <p>A. 8" TO 15", PVC WITH A MINIMUM SDR OF 26 CONFORMING TO ASTM D-3034-00 GASKETED SEWER PIPE.</p> <p>B. LARGER THAN 15", REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76-03. JOINTS SHALL BE MODIFIED TONGUE &amp; GROOVE TYPE WITH SOLID RUBBER GASKETS CONFORMING TO ASTM C-443-02. MINIMUM SIZE SHALL BE CLASS III, WALL B AS RECOMMENDED BY THE ENGINEER.</p> <p>4. ALL SANITARY SEWER SERVICE RISERS SHALL BE 6" INTERNAL DIAMETER SDR-26 PVC OR LOWER CONFORMING TO ASTM D-3034-00. JOINTS SHALL BE RUBBER GASKET JOINTS OR SOLVENT WELD BELL JOINTS. RISERS SHALL BE LEFT AT 8-10' DEEP AT THE RIGHT-OF-WAY OR EASEMENT LINE, OR AS DEEP TO SERVICE BASEMENTS. SERVICE RISERS WITHIN EASEMENTS SHALL BE EXTENDED A MINIMUM OF ONE PIPE LENGTH FROM THE MAINLINE SEWER OR TO THE EDGE OF THE EASEMENT, WHICH EVER IS LONGER. WEEP TILE, PERIMETER DRAINS, DOWN SPOUTS, OR ANY OTHER SOURCE OF WATER, SHALL NOT BE CONNECTED TO THE SANITARY SEWER.</p> <p>5. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C-478-03 WITH RUBBER JOINTS CONFORMING TO ASTM C-443-02. ALL FINAL ELEVATIONS OF MANHOLE CASTINGS SHALL BE DETERMINED BY GDCD-WWS. MANHOLE FRAMES AND COVERS SHALL BE BOLT-DOWN, WATERTIGHT EAST JORDAN 1040 ZPT, NEEHAU FOUNDRY COMPANY R-1916F, OR GDCD-WWS APPROVED ALTERNATE. STEPS SHALL BE M.A. INDUSTRIES PS-1-PF, AMERICAN STEP CO. ML-10, OR A GDCD-WWS APPROVED ALTERNATE.</p> <p>6. ALL SANITARY SEWERS SHALL BE INSTALLED PURSUANT TO THE SANITARY SEWER STANDARD DETAILS. DEEPER SEWERS, EXCESSIVE TRENCH WIDTH, AND WHERE NOTED, THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SPECIFIED.</p> <p>7. WHERE MANHOLE ADJUSTMENT IS REQUIRED, THE MAXIMUM AMOUNT OF ADJUSTMENT BETWEEN THE CASTING AND THE CONE SHALL BE 9". A MAXIMUM OF TWO ADJUSTMENT RINGS ARE ALLOWED. ONLY 3", 4", OR 6" CONCRETE ADJUSTMENT RINGS SHALL BE USED. THE MANHOLE SHALL BE WRAPPED PER SD-5 OF THE SANITARY SEWER DETAILS.</p> <p>8. ALL SANITARY SEWERS 8" THROUGH 21" DIAMETER, INCLUDING SERVICE LEADS CONSTRUCTED AS PART OF WORK, SHALL UNDERGO A LOW PRESSURE AIR TEST AND AN INFILTRATION TEST, IN CONFORMANCE WITH ASTM C-924-02 OR C-989-02, PRIOR TO FINAL ACCEPTANCE. SANITARY SEWER SYSTEMS LARGER THAN 21" SHALL UNDERGO AN INFILTRATION TEST. THE MAXIMUM ALLOWABLE INFILTRATION FOR PVC SYSTEMS SHALL BE 0 GALLONS PER INCH DIAMETER, PER MILE, PER 24 HOURS, AND CONCRETE SYSTEMS SHALL BE 100 GALLONS PER INCH DIAMETER, PER MILE.</p> <p>9. ALL PUBLIC SANITARY SEWERS 8" OR LARGER SHALL BE INTERNALLY TELEVIEWED (PAN/TILT) BY THE CONTRACTOR. THE TELEVIEWED REPORT, INCLUDING THE DVD, SHALL BE GIVEN TO GDCD-WWS PRIOR TO A REQUEST FOR FINAL INSPECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING (JET/VAC) THE LINE AND ASSURING ALL DIRT AND DEBRIS HAS BEEN REMOVED PRIOR TO TELEVIEWING. PRIOR TO TELEVIEWING THE LINE, WATER SHALL BE PLACED IN THE MAIN FROM THE UPSTREAM MANHOLE UNTIL IT COMES OUT OF THE DOWNSTREAM MANHOLE. THE TELEVIEWED REPORT SHALL LIST THE DISTANCE A HOUSE LEAD IS LOCATED FROM A MANHOLE, ALL SHEAR BREAKS IN THE MAIN OR SERVICE LEADS, ALL LONGITUDINAL CRACKS, BROKEN PIPE, DIPS, OR HIGH POINTS IN THE LINE, ETC. THE CONTRACTOR SHALL REPAIR DAMAGED PIPE BY EXCAVATING THE PIPE AND REPLACING THE LENGTH OF PIPE IN AN APPROVED METHOD. LEAKING JOINTS SHALL BE REPAIRED BY THE CONTRACTOR BY GROUTING. A LEAKING JOINT IS DEFINED AS HAVING SUFFICIENT INFILTRATION TO WET THE INTERIOR OF THE JOINT. GDCD-WWS SHALL BE NOTIFIED WHEN THE LINE IS TO BE TELEVIEWED AND SHALL BE PRESENT TO INSPECT REPAIRS.</p> <p>10. SANITARY MANHOLES SHALL BE PLACED CLOSEST TO PROPERTY CORNERS WHEN FEASIBLE.</p> <p>11. PRIOR TO PERFORMING ANY TESTING, THE CONTRACTOR SHALL BE REQUIRED TO DO THE FOLLOWING:</p> <p>A. CONDUCT PRELIMINARY TESTS ON THE SYSTEM.</p> <p>B. PROVIDE THE RESULTS FROM THE PRELIMINARY TESTS ON THE SYSTEM.</p> <p>C. PROVIDE RESULTS OF DENSITY CHECKS ON COMPACTED SAND BACKFILL FROM A CERTIFIED TESTING AGENCY.</p> <p>D. FURNISH A COMPLETED TWO-YEAR MAINTENANCE &amp; GUARANTEE BOND.</p> <p>E. COMPLETE FINAL ADJUSTMENTS ON ANY SANITARY SEWER STRUCTURES.</p> <p>12. PRIOR TO FINAL APPROVAL, THE FOLLOWING ITEMS MUST BE COMPLETED BY THE CONTRACTOR:</p> <p>A. THE FINAL TESTING SHALL CONSIST OF VISUAL INSPECTION OF MANHOLES, TELEVIEWING OF SANITARY MAIN, LOW PRESSURE AIR TEST, AND/OR INFILTRATION TEST DEPENDENT ON THE SIZE OF THE SANITARY MAIN (SEE #8 ABOVE), AND PASSING AN APPROPRIATE SIZED MANDREL 30 DAYS AFTER THE MAIN HAS BEEN INSTALLED.</p> <p>B. PROVIDE MATERIAL CERTIFICATES.</p> <p>C. PROVIDE RECORDED COPIES OF ALL EASEMENTS FOR THE MASTER DEED REFLECTING FINAL PROJECT RECORD DOCUMENT LOCATIONS.</p>			<p>1. ALL MATERIAL AND WORK SHALL COMPLY WITH THE LATEST GDCD-WWS SPECIFICATIONS AND STANDARD DETAILS.</p> <p>2. ALL PUBLIC PRESSURE PIPE SHALL BE DUCTILE IRON. THE PIPE SHALL BE BELL AND SPIGOT OR RESTRAINED JOINT FITTINGS FITTED WITH A RUBBER GASKET. FITTINGS MAY BE GRAY IRON OR DUCTILE IRON MEETING CLASS 350 PSI RATING. FOR 3" OR SMALLER SANITARY SEWER FORCEMAIN, SDR-21 PVC MAY BE UTILIZED.</p> <p>3. ALL PIPES, VALVES, AND FITTINGS SHALL BE POLYWRAPPED, EXCEPT IN MANHOLES. CIRCUMFERENTIAL WRAPS OF MANUFACTURER RECOMMENDED TAPE SHALL BE PLACED AT NO GREATER THAN 4' INTERVALS ALONG THE BARRREL OF THE PIPE, WITH THE EXCESS FOLDED OVER THE TOP TO TAKE OUT EXCESS SLACK, HELPING TO MINIMIZE THE SPACE BETWEEN THE POLYETHYLENE AND THE PIPE. COMPLETE THE INSTALLATION BY OVERLAPPING THE POLYETHYLENE TUBE WRAP AT EACH END AND SEAL ENDS PER THE MOST CURRENT VERSION OF AWWA C105/A21.5 STANDARD. WRAPPING PVC PIPE IS NOT REQUIRED.</p> <p>4. WHERE SANITARY SERVICE LEADS OR OTHER UTILITIES ARE ENCOUNTERED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO PROVIDE CONTINUOUS SERVICE TO PROPERTIES ALONG THE ROUTE OF CONSTRUCTION. ALL WORK, INCLUDING THE REBORING OF SANITARY SEWER SERVICE RISERS TO ACCOMMODATE CONSTRUCTION, OR ADJUSTING PRESSURE PIPE INSTALLATION TO CLEAR EXISTING SERVICES, SHALL BE INCLUSIVE TO CONSTRUCTION.</p> <p>5. ALL PRESSURE PIPES SHALL HAVE A MINIMUM COVER OVER THE TOP OF THE PIPE OF 5' FROM FINISHED GRADE, 5' CLEARANCE UNDER DRAINS, 5' CLEARANCE BELOW EXISTING DITCHES, AND/OR A MINIMUM 5' BELOW THE EXISTING ROAD. THE STANDARD LAYING CONDITIONS FOR PRESSURE PIPE SHALL BE A 30" TRENCH WIDTH, OR PIPE DIAMETER PLUS 12". THE PIPE SHALL BE LAID ON MDOT CLASS II SAND (A5) A MINIMUM OF 4" WITH RECESSES TO ACCOMMODATE PIPE BELLS OR AS SHOWN ON THE PLANS.</p> <p>6. ALL TRENCH EXCAVATION, UNDER OR WITHIN THE ONE-ON-ONE INFLUENCE OF THE EXISTING OR PROPOSED PAVING, SHALL BE BACK FILLED WITH COMPACTED MDOT CLASS II SAND (A5).</p> <p>7. THE CONTRACTOR SHALL RESTRAIN ALL THRUST IN THE SYSTEM BY THE USE OF GDCD-WWS APPROVED RESTRAINED JOINTS AND THRUST BLOCKS. DURING THE INSTALLATION OF WATERMAIN, ALL HYDRANTS, TEES, VERTICAL OR HORIZONTAL BENDS AND FUTURE VALVE CONNECTIONS SHALL BE RESTRAINED. THE RESTRAINT SYSTEM AND LOCATION IN THE FIELD SHALL BE DESIGNATED ON THE PLANS.</p> <p>8. THE CONTRACTOR SHALL ENCASE THE PRESSURE PIPE IN CONCRETE WHERE THE VERTICAL SEPARATION BETWEEN THE SANITARY SEWER OR STORM SEWER AND THE WATERMAIN IS LESS THAN 18" INCHES.</p> <p>9. GATE VALVES SHALL BE RESILIENT SEATED CONFORMING TO THE MOST CURRENT VERSION OF AWWA C509 OR C515 STANDARDS. VALVES SHALL HAVE A VERTICAL, NON-RISING STEM, AND OPEN CLOCKWISE, OR AS SPECIFIED BY LOCAL MUNICIPALITY HAVING JURISDICTION.</p> <p>10. FIRE HYDRANTS SHALL CONFORM TO THE MOST CURRENT VERSION OF AWWA C502 STANDARD. ALL HYDRANTS SHALL BE TRAFFIC MODELS WITH BREAKAWAY FLANGES, AND SHALL HAVE THE DRAIN HOLES FACTORY PLUGGED. ALL THE FIRE HYDRANT ASSEMBLIES FROM THE TEE THROUGH THE HYDRANT, SHALL BE RESTRAINED BY A GDCD-WWS APPROVED METHOD. FIRE HYDRANTS SHALL BE PLACED AT PROPERTY CORNERS AND WITHIN THE RIGHT-OF-WAY WHEN POSSIBLE AND SHALL BE PAINTED YELLOW WITH THE CAP COLOR CODED IN ACCORDANCE WITH THE STANDARD DETAILS. FINAL ELEVATIONS AND ADJUSTMENTS TO GRADE, USING EXTENSION PIECES IF REQUIRED, SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE. FIRE HYDRANTS SHALL HAVE A 5 1/4" VALVE OPENING. FIRE HYDRANTS SHALL BE EAST JORDAN SDR 250, AMERICAN FLOW CONTROL WATEROUS PACER WB67-250, OR A GDCD-WWS APPROVED ALTERNATE.</p> <p>11. PRESSURE TAPS TO EXISTING WATERMAIN, AND CONNECTIONS TO EXISTING VALVES, SHALL BE MADE ONLY UNDER GDCD-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION. ALL VALVE OPENING AND CLOSING SHALL BE BY THE OPERATIONAL AUTHORITY. (ONLY A GDCD-WWS APPROVED TAPPING SLEEVE IS ALLOWED FOR ALL PRESSURE TAPS.) A CONCRETE MANHOLE SHALL BE REQUIRED AROUND ALL PRESSURE TAPS. SEE PRESSURE PIPE DETAILS.</p> <p>12. THE CONTRACTOR SHALL HAVE THE OPTION OF PRESSURE TESTING THE WATERMAIN AGAINST THE EXISTING VALVE AT THE POINT OF BEGINNING OF THE PROJECT OR PLACING A CAP WITHIN 10' OF THE EXISTING VALVE AND STUB. IF TESTING AGAINST THE EXISTING VALVE AND IT LEAKS, THE CONTRACTOR SHALL MAKE REPAIRS AND REPEAT THE PRESSURE TEST AGAINST THE EXISTING VALVE, AT THE CONTRACTOR'S SOLE EXPENSE. IF A CAP HAS BEEN PLACED, THEN THE CONTRACTOR SHALL PERFORM THE SYSTEM TEST, AND IF THE TESTS ARE SATISFACTORY TO GDCD-WWS, THEN THE FINAL CONNECTION SHALL BE MADE.</p> <p>13. WATERMAIN SHALL BE TESTED IN ACCORDANCE WITH MOST CURRENT VERSION OF AWWA C600 STANDARD, AND CHLORINATED IN ACCORDANCE WITH THE LATEST GENEESE COUNTY STANDARD SPECIFICATIONS. WATERMAIN SHALL BE TESTED TO 150 PSI AS MEASURED AT THE HIGH POINT IN THE WATER LINE. WATERMAIN CHLORINATION SHALL BE OBSERVED AND MONITORED BY GDCD-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION. CHLORINATION AND TESTING SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE. A LETTER OF APPROVAL FROM THE AGENCY HAVING AUTHORITY SHALL BE ISSUED PRIOR TO THE WATER BEING USED FOR HUMAN CONSUMPTION.</p> <p>14. WHEN SPECIFIED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SUPPLY ALL WATER SERVICE LEADS. THESE LEADS SHALL BE "K" COPPER AND SHALL BE A MINIMUM OF 3/4" IN DIAMETER. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE WATERMAIN STANDARD DETAIL. ALL CORPORATIONS SHALL BE BRONZE. ALL APPURTENANCES THAT COME IN CONTACT WITH PORTABLE WATER SHALL BE LEAD FREE ACCORDING TO NSF/ANSI STANDARD 372.</p> <p>15. THE CONTRACTOR SHALL INSTALL, AS A MINIMUM, 2" CORPORATIONS ON THE PRESSURE PIPE FOR PRESSURE TESTING, CHLORINE ADDITION, AND FOR BLOW-OFF PURPOSES. THE CORPORATIONS SHALL HAVE COPPER PIPE EXTENDING TO THE GROUND SURFACE. THE CONTRACTOR SHALL REMOVE THE CORPORATIONS AND COPPER LINES UPON A SATISFACTORY TEST AND INSTALL BRONZE PLUGS PRIOR TO FINAL ACCEPTANCE.</p> <p>16. PRIOR TO REQUESTING ANY FINAL PRESSURE TESTING AND GATHERING THE REQUIRED BACTERIA SAMPLES (FOR WATERMAIN ONLY), THE CONTRACTOR SHALL PERFORM THE FOLLOWING ITEMS:</p> <p>A. CONDUCT A PRELIMINARY PRESSURE TEST ON THE SYSTEM.</p> <p>B. PROVIDE THE RESULTS FROM THE PRELIMINARY TESTS ON THE SYSTEM.</p> <p>C. PROVIDE PROPER CAP COLOR ON THE FIRE HYDRANTS (FOR WATERMAIN ONLY).</p> <p>17. PRIOR TO FINAL APPROVAL, THE FOLLOWING ITEMS SHALL BE COMPLETED BY THE CONTRACTOR:</p> <p>A. FURNISH A COMPLETED TWO-YEAR MAINTENANCE &amp; GUARANTEE BOND.</p> <p>B. PROVIDE MATERIAL CERTIFICATES.</p> <p>C. COMPLETE FINAL ADJUSTMENTS OF FIRE HYDRANTS (FOR WATERMAIN ONLY), VALVES, AND MANHOLES.</p> <p>D. PROVIDE RESULTS OF DENSITY CHECKS ON COMPACTED SAND BACKFILL FROM A CERTIFIED TESTING AGENCY.</p> <p>E. PROVIDE RECORDED COPIES OF ALL EASEMENTS FOR THE MASTER DEED REFLECTING FINAL PROJECT RECORD DOCUMENT LOCATIONS.</p>		
NO.	DATE	DESCRIPTION	DIVISION OF WATER & WASTE SERVICES			STANDARD CONSTRUCTION NOTES		
1	2020	EIGHTH EDITION						
			STANDARD DETAILS			For the Construction of Sanitary Sewers & Watermain in Genesee County		
			GENEESE COUNTY WWS DRAIN COMMISSIONER					





NO.	DATE	DESCRIPTION
1	2020	EIGHTH EDITION

## DIVISION OF WATER & WASTE SERVICES

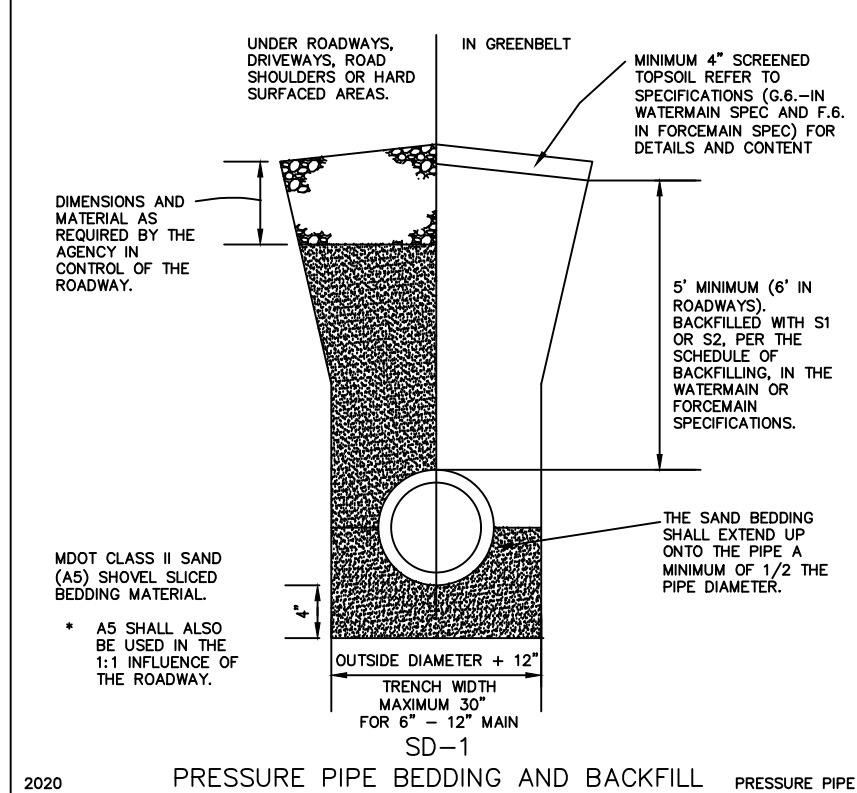
# SANITARY SEWER CONSTRUCTION

## STANDARD DETAILS

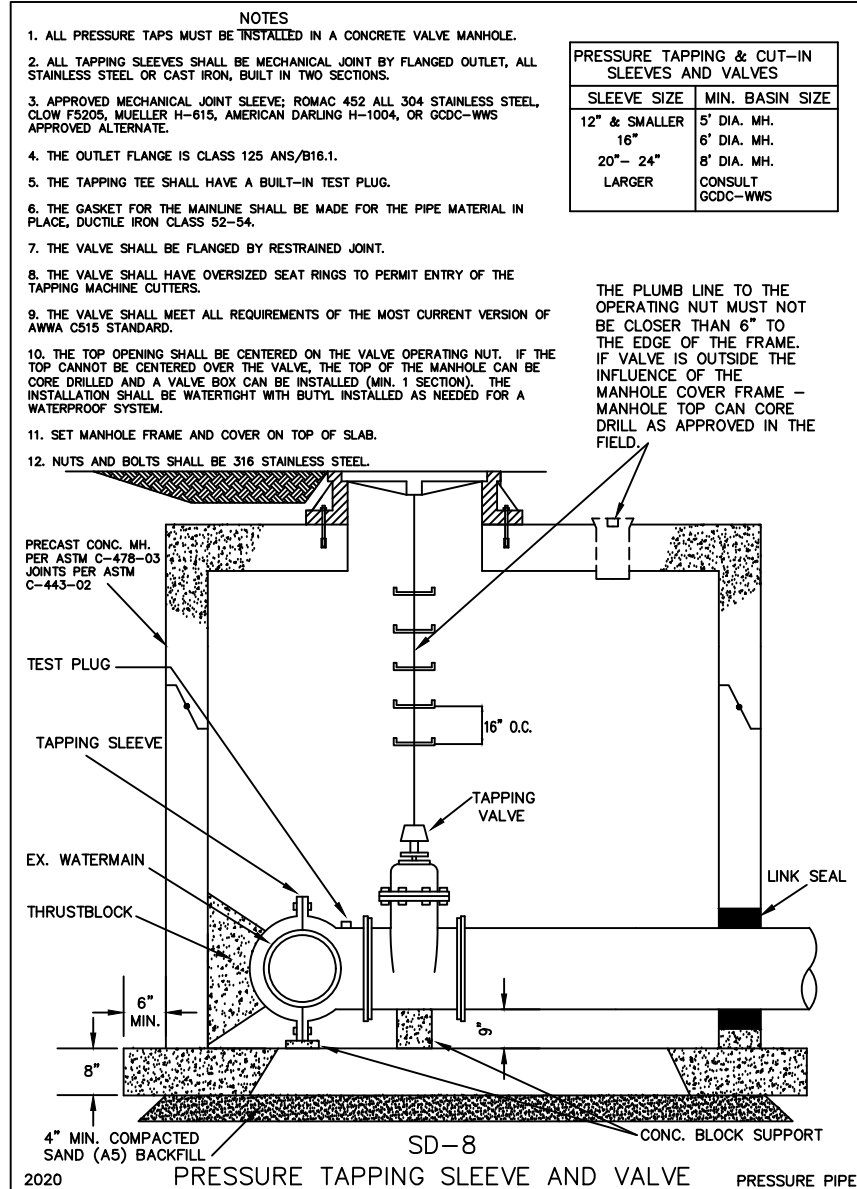
For the Construction of Sanitary Sewers & Watermain in Genesee County



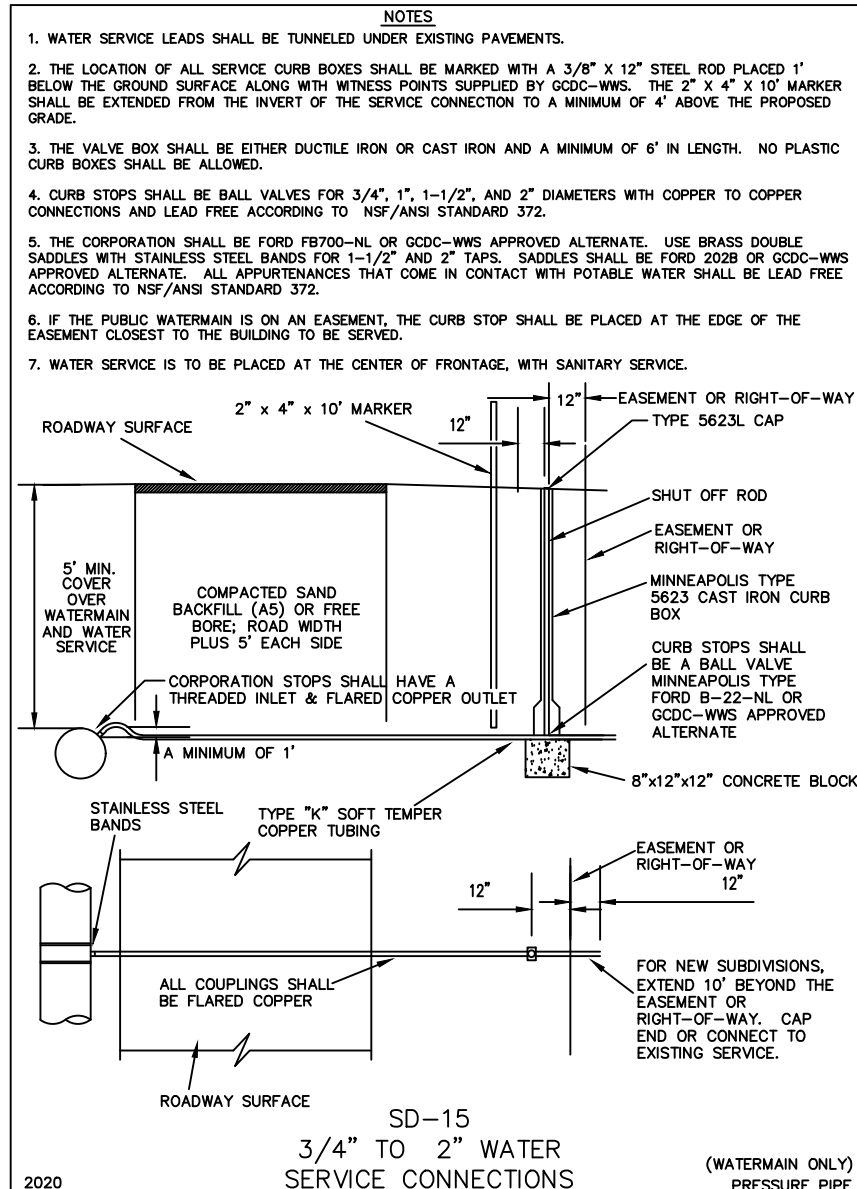
- NOTES**
1. PLACE AGGREGATE MATERIAL ON THE COMPACTED SAND BACKFILL (A5) FOR ALL DRIVES, ROAD SHOULDERS, PARKING LOTS OR OTHER HARD SURFACED AREAS FOR THE APPROVED PLAN.
  2. THE CONTRACTOR SHALL COMPACT THE SAND BACKFILL (A5) TO 90% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR METHOD ACROSS ALL ROADS AND DRIVES FOR THE SCHEDULE OF BACKFILLING IN THE WATERMAIN OR FORCEMAIN SPECIFICATIONS. THIS INCLUDES SERVICE LEADS UNLESS BORED. THE CONTRACTOR SHALL DO THE TESTING WITH THE RESULTS SUBMITTED TO G.C.C.O.-WMS PRIOR TO FINAL TESTING.
  3. WHERE THE GROUND ELEVATION AT THE TRENCH LINE IS ABOVE THE ELEVATION OF THE CENTERLINE OF THE ROAD, THE CONTRACTOR SHALL INSTALL THE PRESSURE PIPE 6" BELOW THE ELEVATION OF THE ROAD. THE EXTRA DEPTH SHALL BE NOTED ON THE AS-BUILT DRAWINGS.
  4. FOR ADDITIONAL CONSIDERATION OF PIPE ZONE EMBANKMENT CONDITIONS, SEE THE MOST CURRENT VERSION OF AWWA C600 STANDARD.
  5. THE ENGINEER SHALL REVIEW AND ADJUST PIPE THICKNESS DESIGN RECOMMENDATIONS IN THE MOST CURRENT VERSION OF AWWA C105/A21.5 STANDARD FOR ADDITIONAL DEPTHS OF COVER.
  6. STONE BEDDING (A1) IS REQUIRED IN ALL AREAS OF DOWNSLOPING.



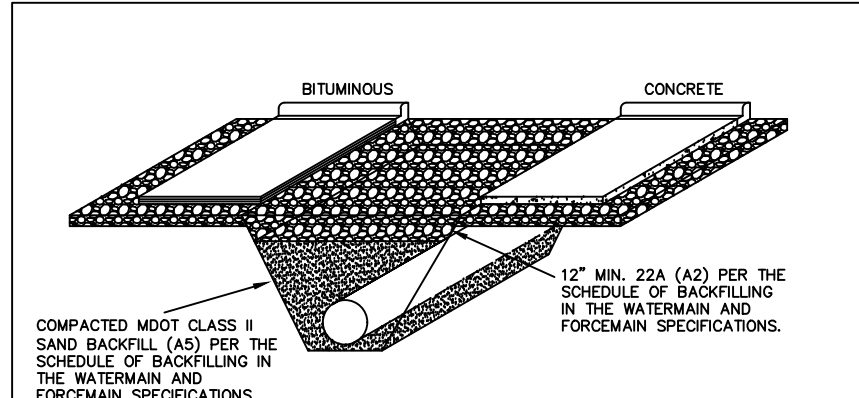
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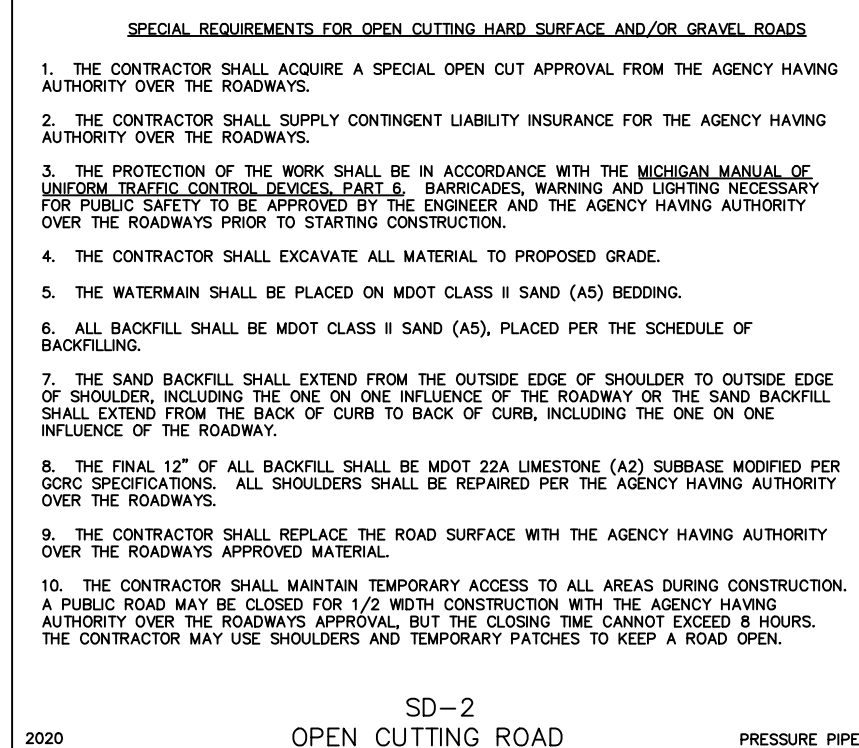
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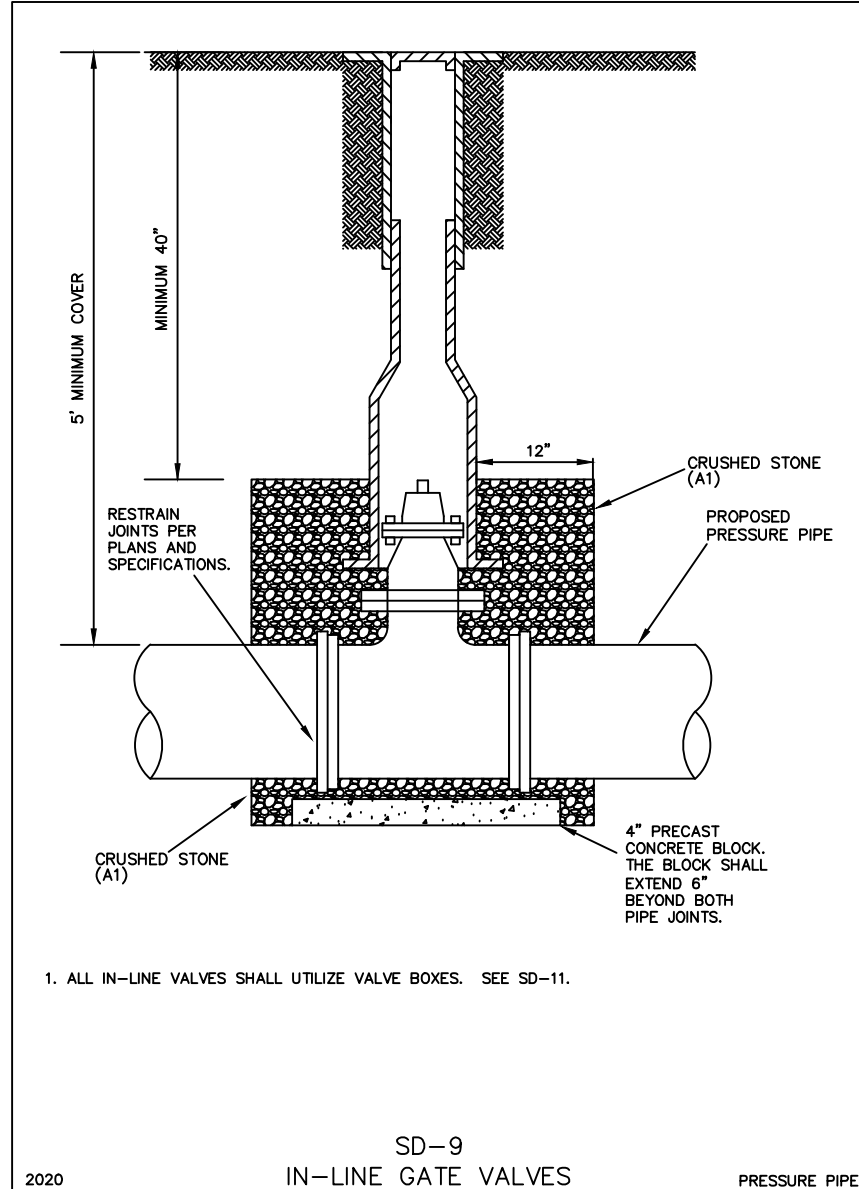
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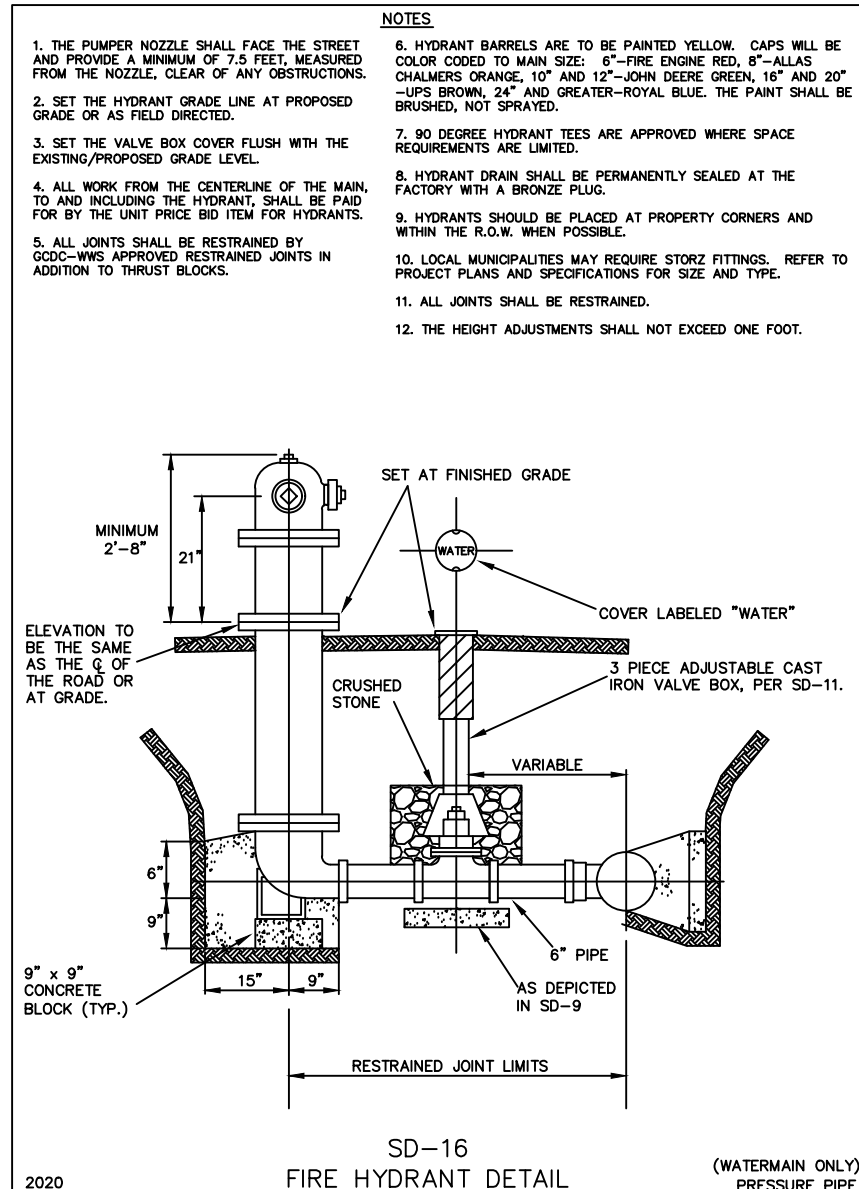
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2020 PRESSURE PIPE



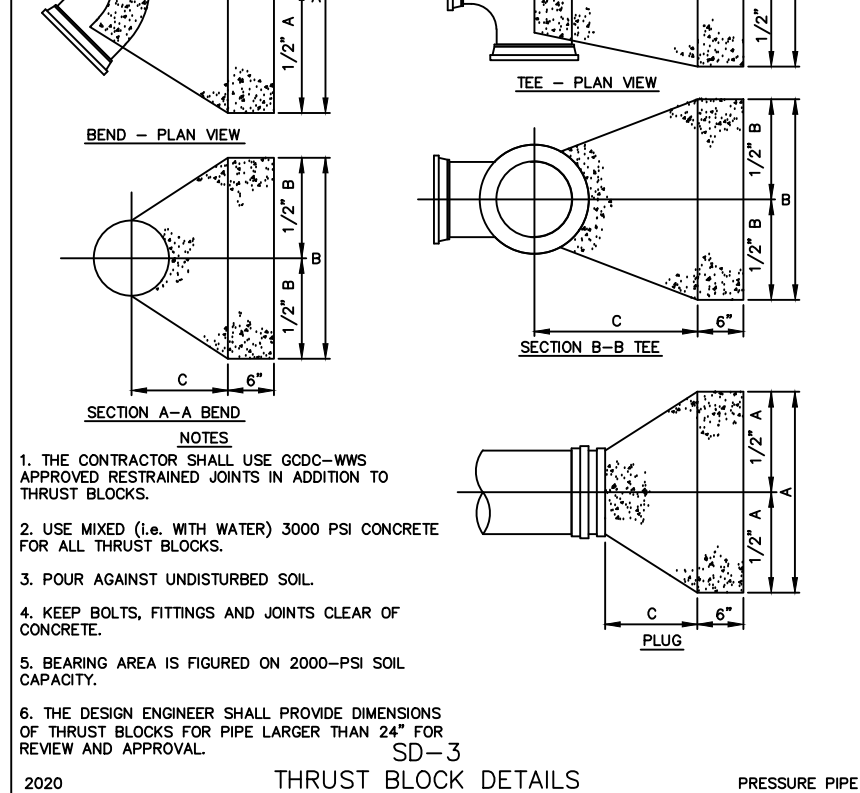
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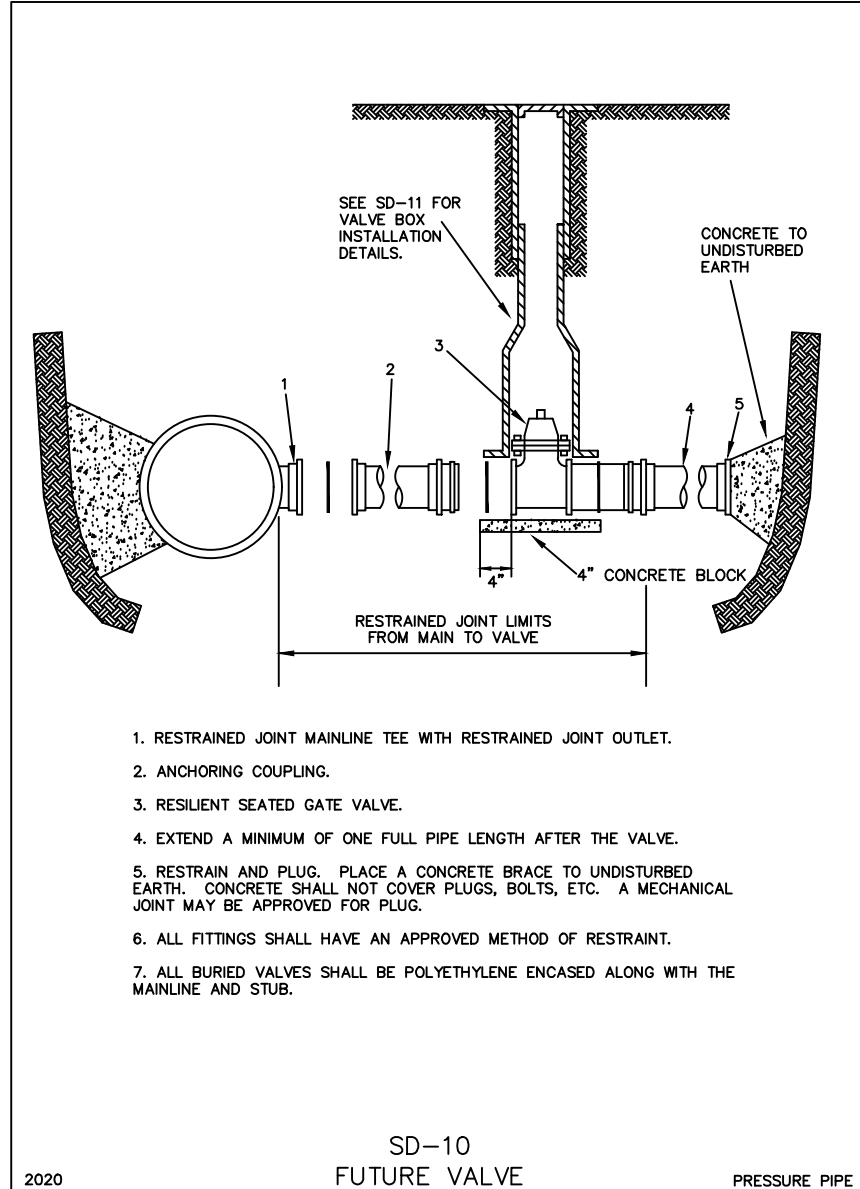
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**TABLE INDICATES MINIMUM BEARING**

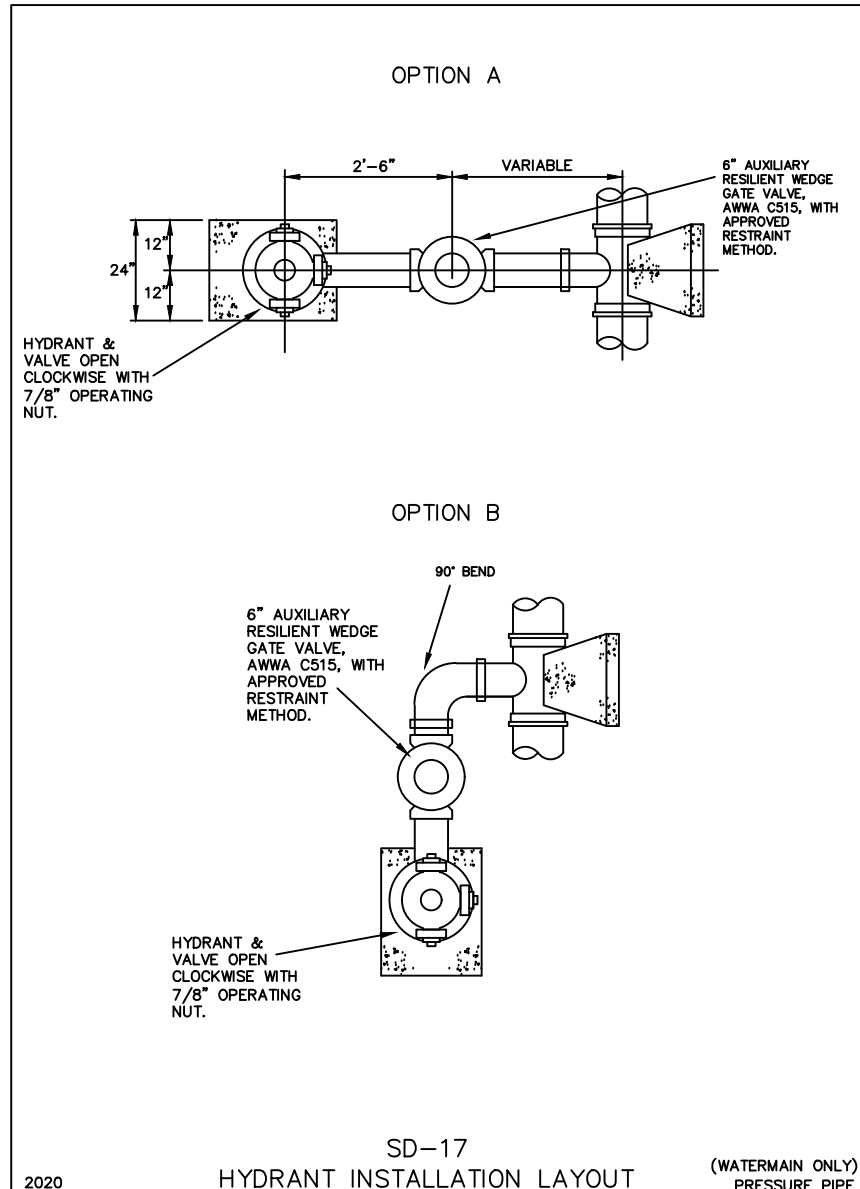
DIA. OF PIPE OR BRANCH OF TEE	90° BEND OR SMALLER			45° BEND			22 1/2° BEND			PLUGS, HYDRANTS AND TEES		
	A	B	C	A	B	C	A	B	C	A	B	C
6"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
8"	3'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
10"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
12"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
14"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
16"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
18"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
20"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
22"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"
24"	4'-0"	3'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"	2'-0"	2'-0"	1'-0"



2020 PRESSURE PIPE



2020 PRESSURE PIPE

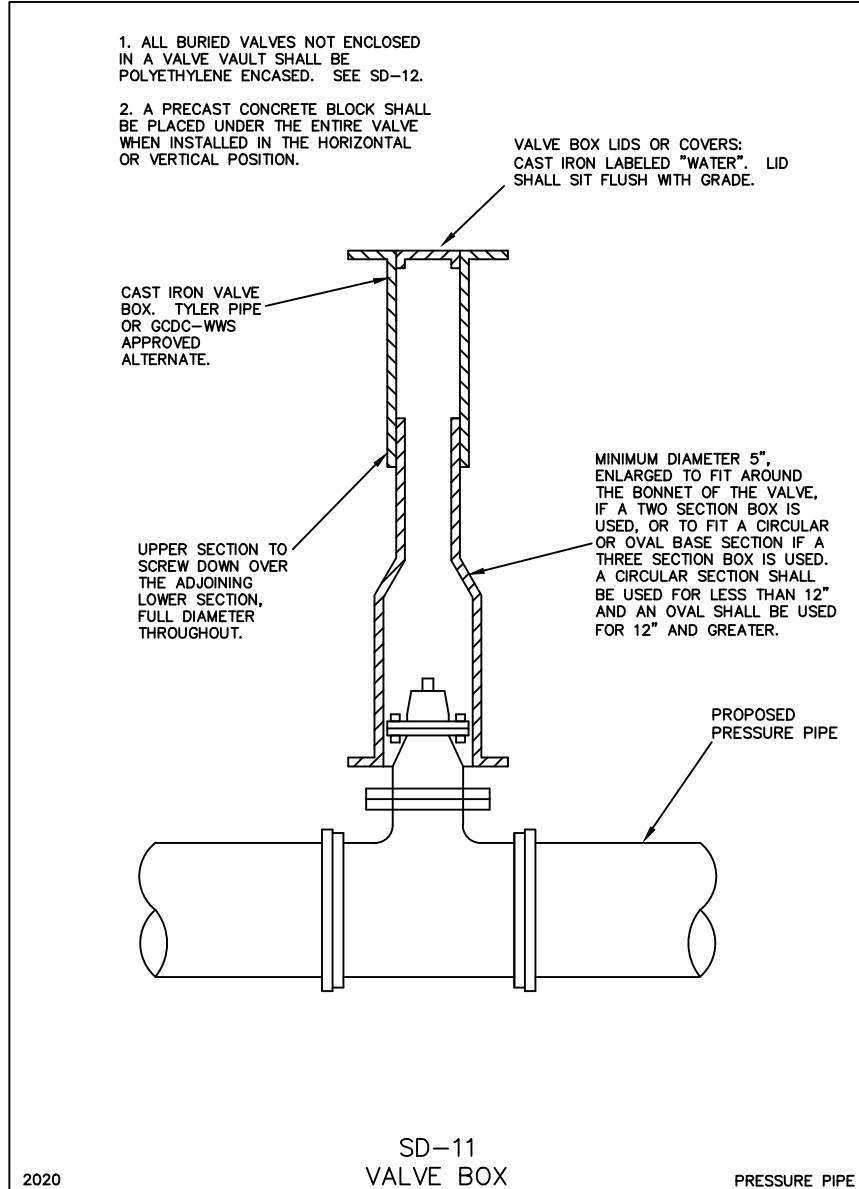


2020 (WATERMAIN ONLY) PRESSURE PIPE

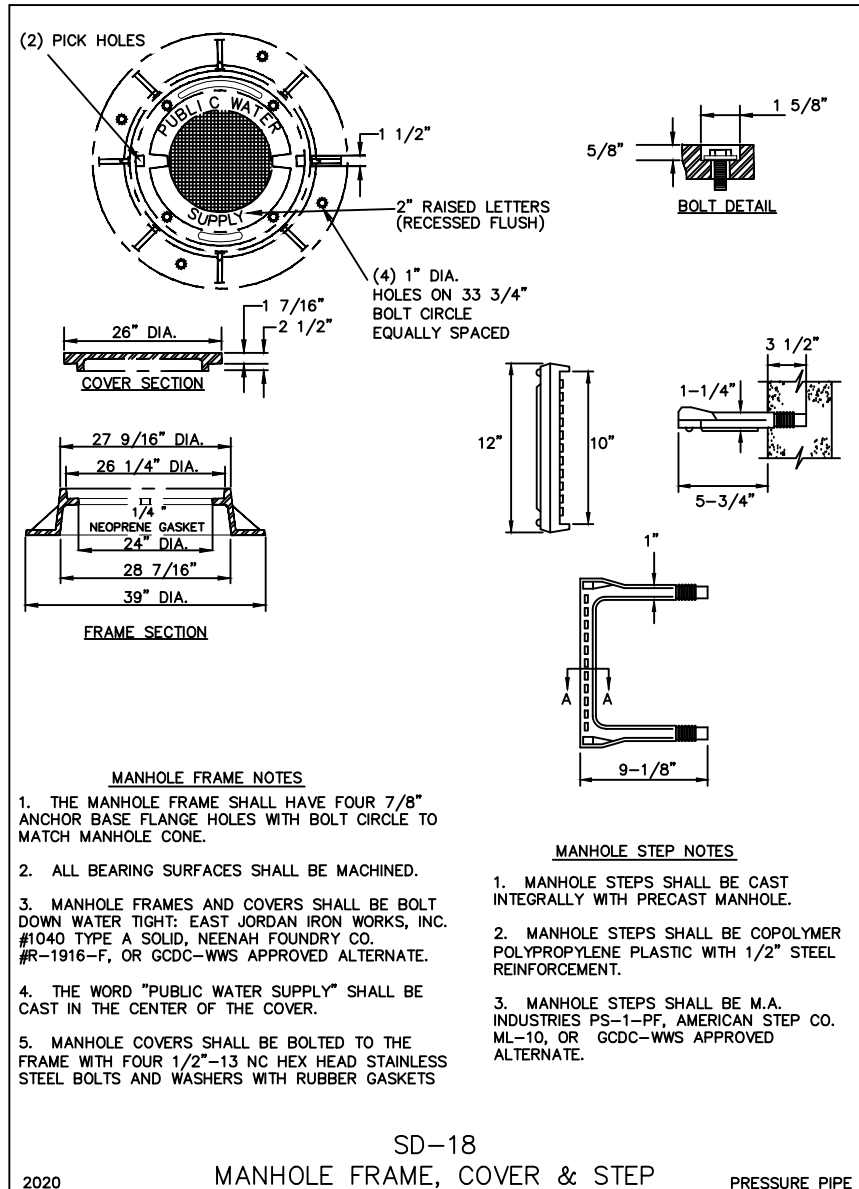
**MINIMUM PIPE RESTRAINT SCHEDULE FOR GROUND BURIED PRESSURE PIPES**

BEND TYPE	LENGTH (FT) OF RESTRAINT REQUIRED*									
	22"	33 3/4"	45"	56 1/4"	67 1/4"	78 3/4"	89 3/4"	90"	OR DEAD END	OR DEAD END
PIPE SIZE	3	6	11	16	23	29	37			
6"	3	6	11	16	23	29	37			
8"	4	8	15	22	31	41	50			
10"	5	11	18	28	38	49	61			
12"	6	13	22	33	45	59	73			
14"	7	14	25	37	52	68	84			
16"	8	16	28	42	59	77	95			
18"	9	18	31	47	66	86	107			
20"	10	20	35	53	73	95	118			
22"	11	23	40	61	85	111	138			
24"	12	25	43	65	91	118	146			
26"	13	28	47	70	100	130	160			
28"	14	31	50	75	105	136	168			
30"	15	34	54	80	110	142	175			
32"	16	37	58	85	115	148	182			
34"	17	39	61	90	120	154	190			
36"	18	42	64	95	125	160	200			

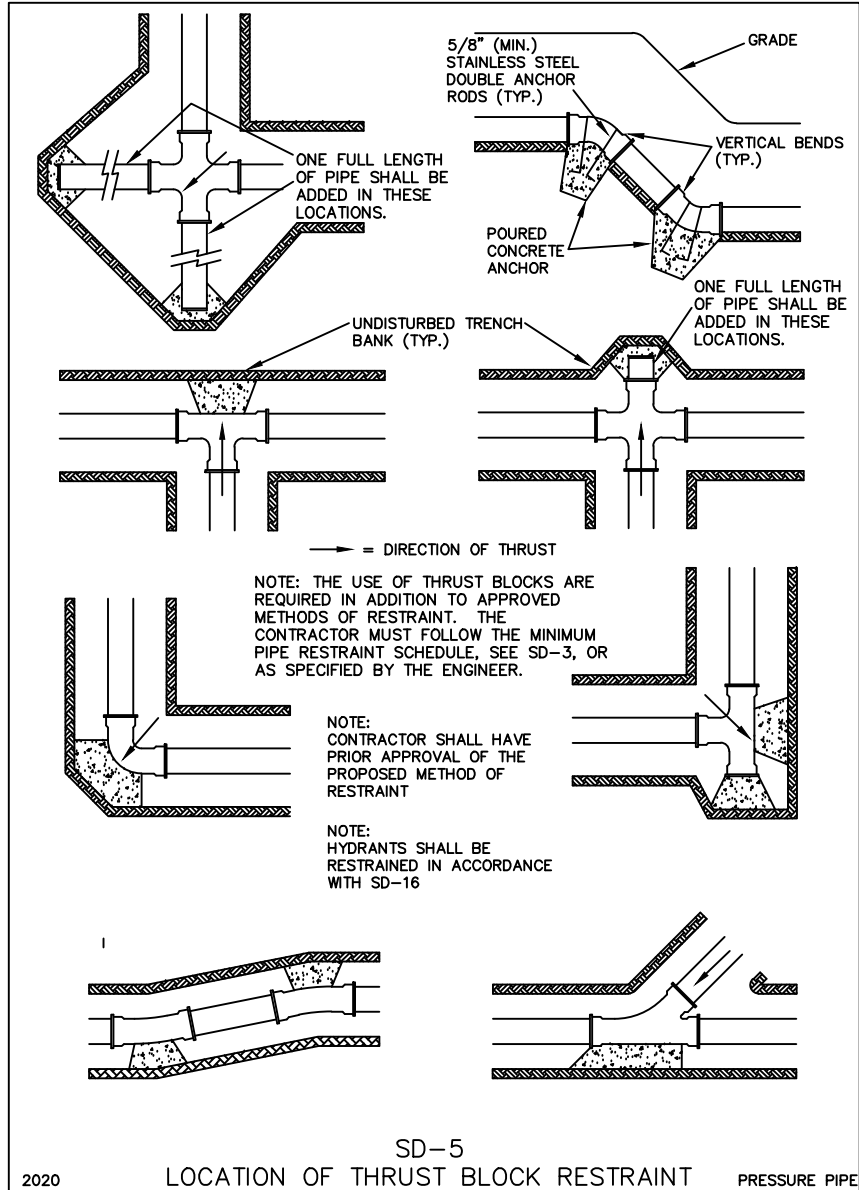
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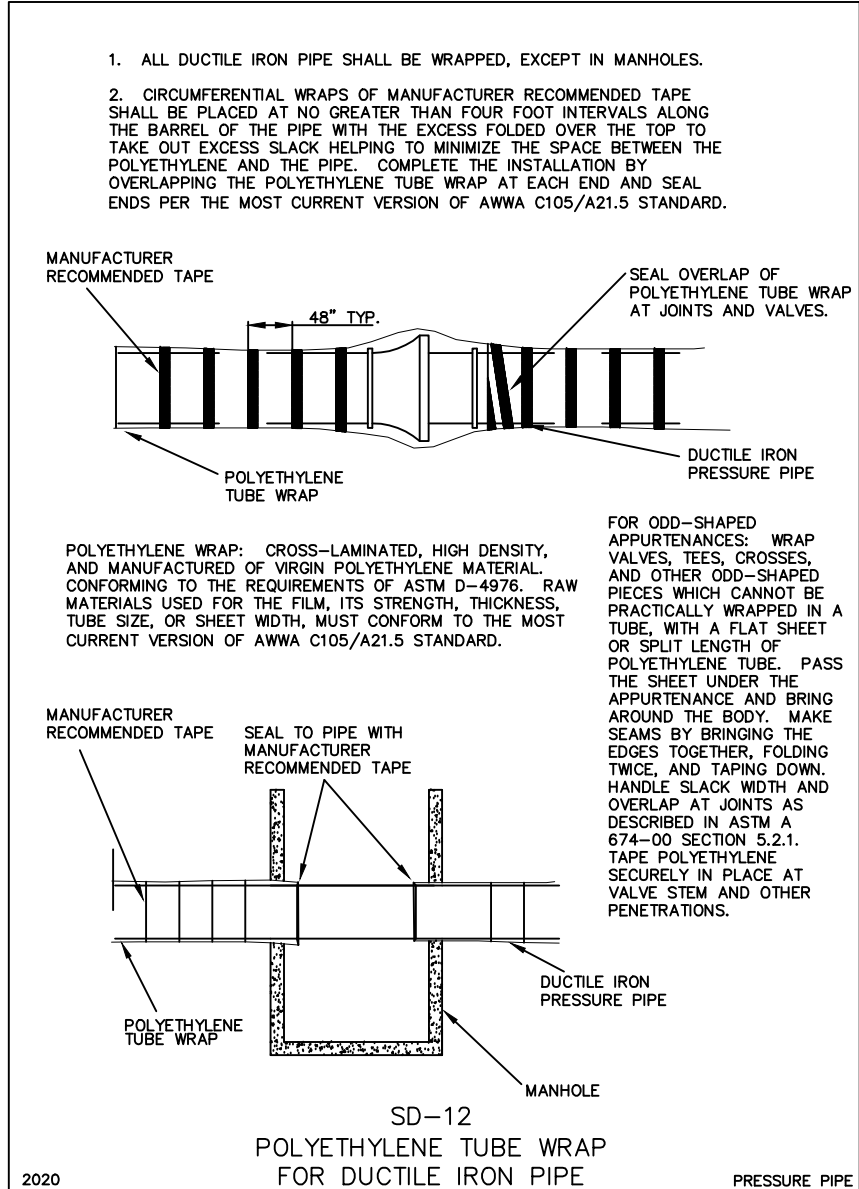
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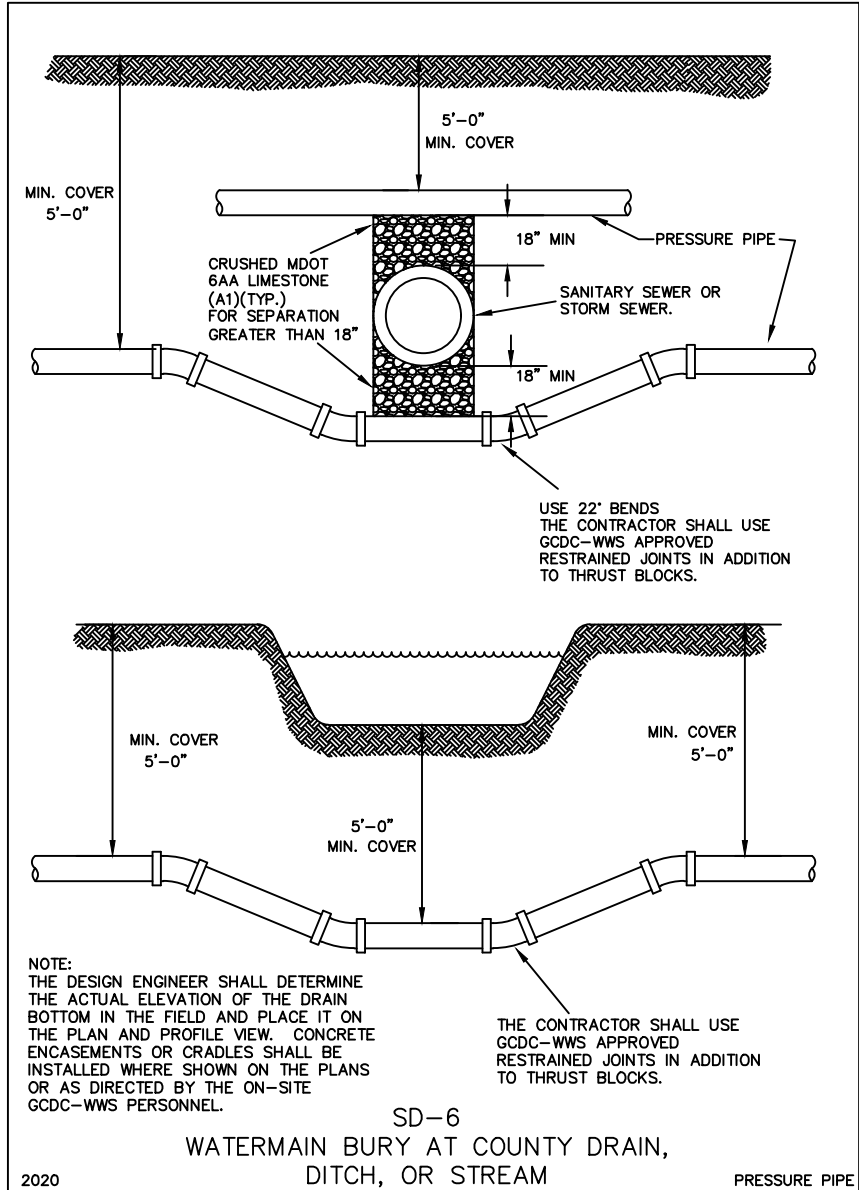
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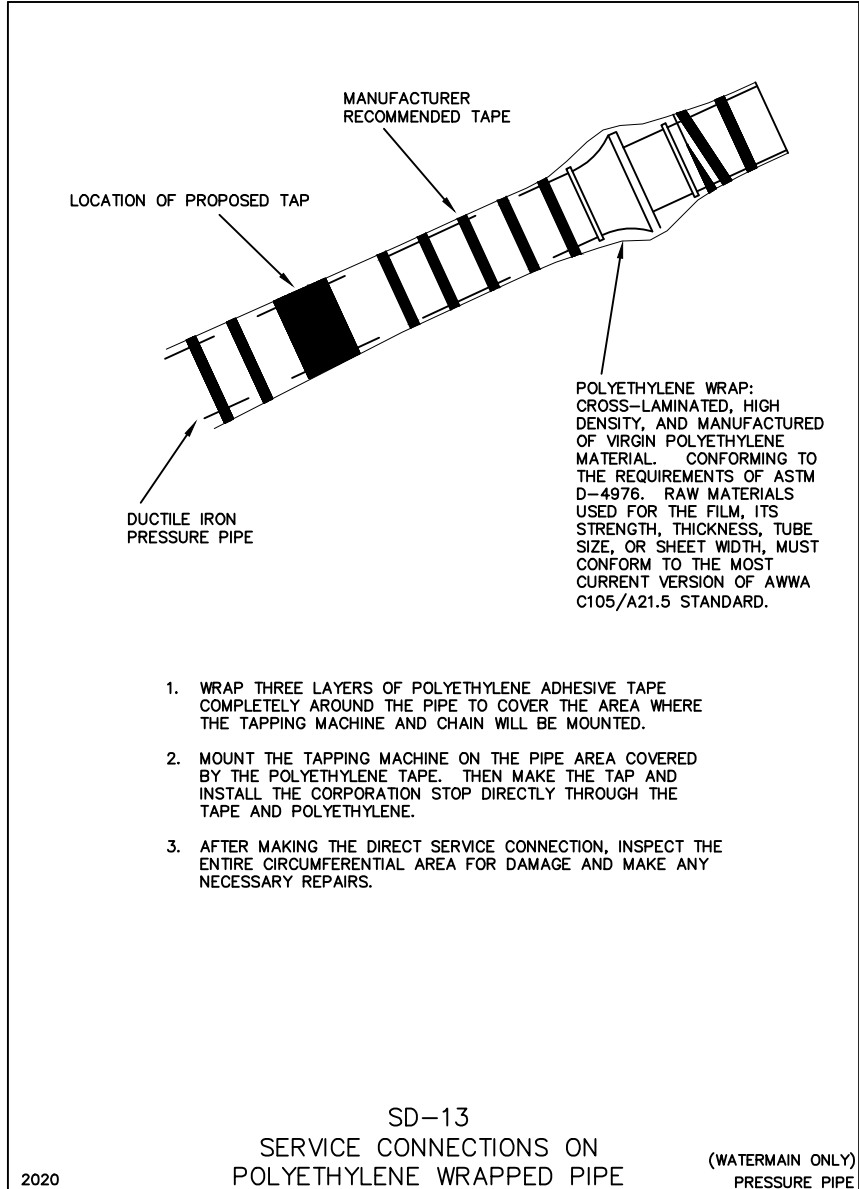
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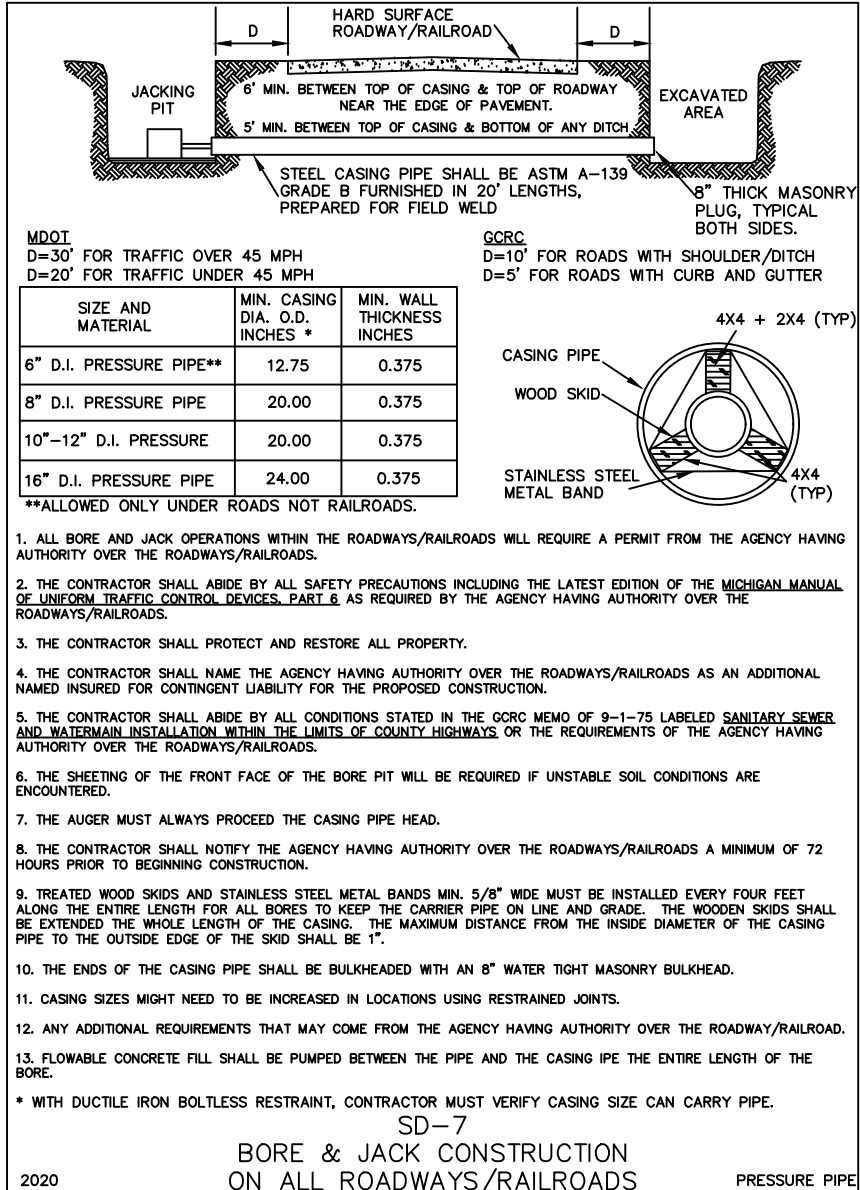
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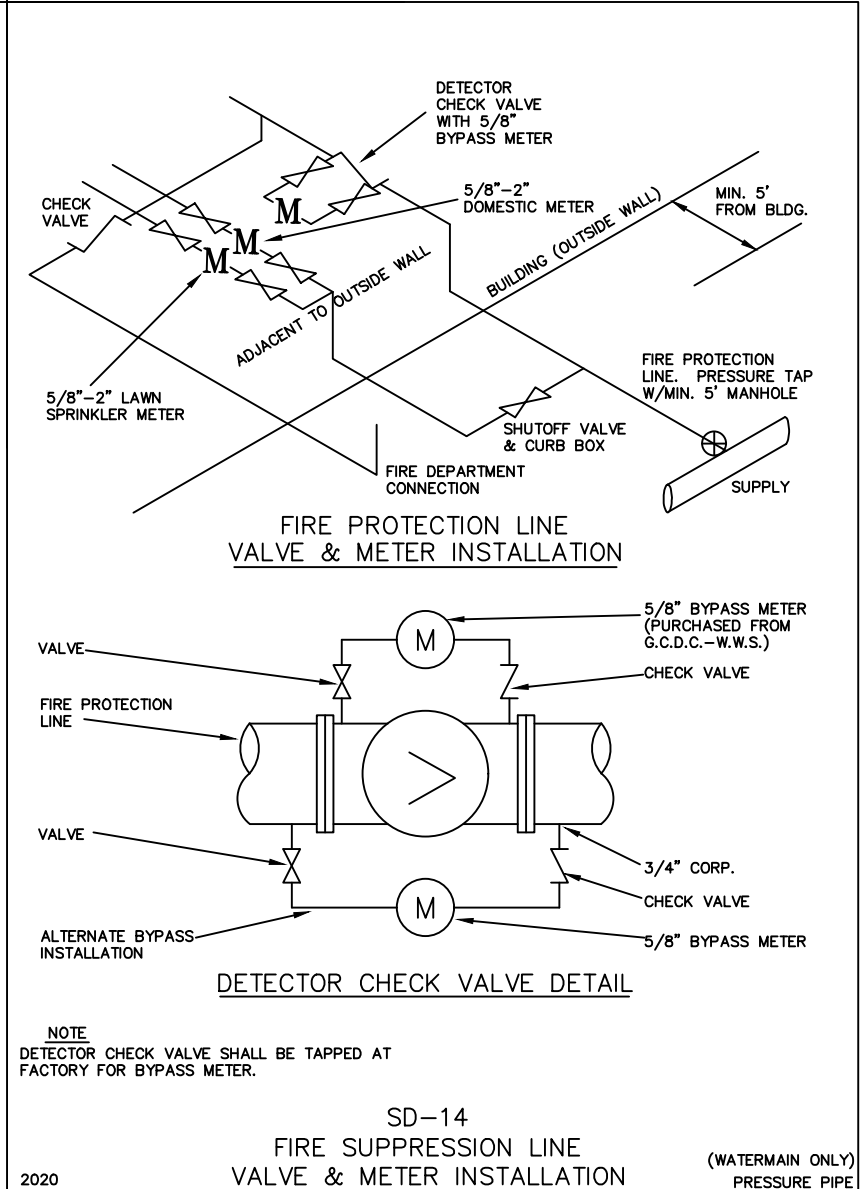
2020 PRESSURE PIPE



2020 (WATERMAIN ONLY) PRESSURE PIPE



2020 PRESSURE PIPE



2020 (WATERMAIN ONLY) PRESSURE PIPE

NO.	DATE	DESCRIPTION
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DIVISION OF  
WATER & WASTE SERVICES

PRESSURE PIPE CONSTRUCTION

STANDARD DETAILS  
For the Construction of Sanitary Sewers & Watermain in Genesee County

