







## 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.

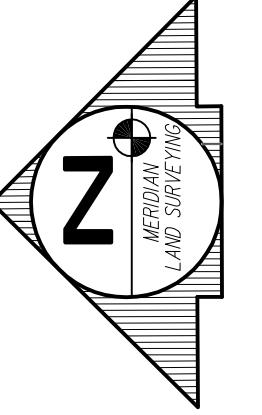
PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN FIELD. DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND/OR BURIED UTILITIES. |||



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

## LEGEND

NOT FOR CONSTRUCTION, FINAL ENGINEERING DESIGN FOR PERMITS REQUIRED



24" X 36"  
GRAPHIC SCALE

0 15 30

( IN FEET )

1 inch = 30 ft

Call before you dig.

REMOVE EXISTING FENCE;  
VERIFY WITH OWNER EXTENTS

SAWCUT 55 L.F.; AREA OF ±11,200 S.F.  
ASPHALT PAVEMENT REMOVAL OR  
PULVERIZE, STOCKPILE & RE-USE  
PARKING LOT AGGREGATE BASE

SAWCUT 25 L.F.; AREA OF ±15,900 S.F.  
ASPHALT PAVEMENT REMOVAL OR PULVERIZE  
OR MILL TO RESURFACE OR STOCKPILE &  
RE-USE AS PARKING LOT AGGREGATE BASE

380.00'

1677.12'

## GCDC-WWS DEMOLITION NOTES

a. 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.

b. 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.

c. 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.

d. 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.

e. 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.

f. Backfill excavated areas with clean granular fill compacted to 95% of the material unit weight by modified proctor.

g. 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.

Discharge Permit. For more information call the Anthony Ragnone Treatment Plant at (610) 232-7002.

**d. 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.

**e. 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.

**f. 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.

**g. 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.

**h. GENESEE COUNTY ROAD COMMISSION 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.

**i. 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.

**j. 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 STANDARD SITE PLAN NOTES

- a. **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.
- b. **WATERMAIN LOOPING:** All public watermains shall be looped whenever possible. The pipe size requirements shall be approved by GCDC-WWS.
- c. **INDUSTRIAL PRETREATMENT PROGRAM (IPP):** This permit is required for all commercial (non-residential) and industrial discharges. The OWNER shall obtain an Industrial Pretreatment 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 Ragnone Treatment Plant at (810) 232-7662.
- d. **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.
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- j. **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

- a. 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.
- b. 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.
- c. Sanitary service leads shall be encased in 6AA crushed limestone (A1) in accordance with GCDC-WWS Standard Details and Specifications.
- d. Water service connection and curb box shall be installed in accordance with GCDC-WWS Standard Details and Specifications.
- e. All water service leads shall be "K" copper. The minimum size shall be  $\frac{3}{4}$ ".
- f. 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.
- g. 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.
- h. 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.
- i. For any demolition work, please see demolition notes attached herewith.
- j. Verify exact location of underground utilities prior to beginning construction.
- k. 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.
- l. 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.
- m. All on site water service shall meet the requirements of GCDC-WWS Standard Details and Specifications.
- n. The CONTRACTOR shall notify MISS DIG (811) three (3) working days prior to starting any excavation with power equipment.
- o. The CONTRACTOR shall comply with all local, county, state, and local regulations for all work that takes place on the site.
- p. 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.
- q. 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.
- r. 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.
- s. 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.
- t. 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.
- u. All sanitary sewer leads/laterals shall be SDR-26 PVC with cleanouts spaced every 90 feet.
- v. Each parcel of land shall have individual leads/laterals.

## BLANK DISTRIBUTION

CONTACTING AGENCY	CONTACT PERSON	DATE SUBMITTED	DATE APPROVED
GENESEE COUNTY DRAIN COMMISSION DIVISION OF WATER & WASTE SERVICES	WWS - LYNNETTE MEINZ IPP - THAD DOMICK SESC - CLIFF WEBSTER	JAN 2026	
STORM WATER MANAGEMENT DIVISION	SWM - V. MYLONAS	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	

<p>DEMOLITION PLAN (WITH GCDC-WWS NOTES)</p> <p><b>RETAIL STORE &amp; WAREHOUSE</b></p> <p>GOODWILL INDUSTRIES OF MID-MICHIGAN</p>		<p><i>Meridian Land Surveying, Inc.</i></p>	
<p>Drawn by: R.J.V.</p> <p>Designed by: R.J.V.</p> <p>Date: 01/21/26</p>		<p>Field: D.S., B.S.</p> <p>Checked by: R.J.V.</p> <p>Date Revised:</p>	
<p>***</p>		<p>CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN</p> <p>SITE TAX ID: 18-16-400-029</p>	
<p>PROJECT LOCATION:</p> <p>4112 W VIENNA RD, CLIO, MI 48420</p> <p>SECTION 16, T9N-R6E, VIENNA TWP, GENESEE COUNTY, MI</p>			

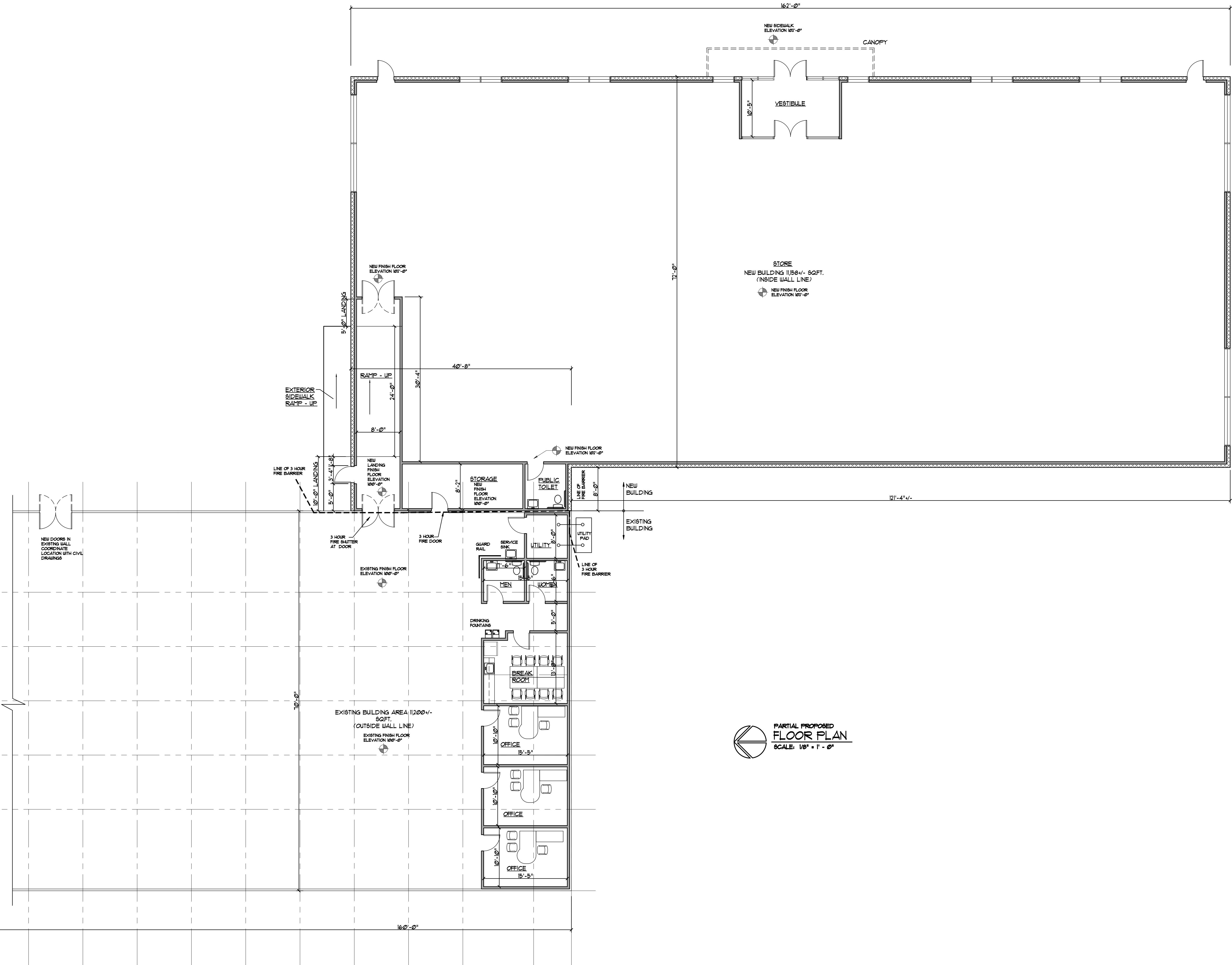
2025195  
SHEET NO.  
4/4

# meridian

LAND SURVEYING



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



# GOODWILL INDUSTRIES

## ADDITIONS AND RENOVATIONS

GAZALL, LEWIS & ASSOCIATES A  
MOTT FOUNDATION BUILDING  
503 SOUTH SAGINAW STREET SUITE 100  
FLINT, MICHIGAN 48502

# GAZALL, LEWIS & ASSOCIATES ARCHITECTS, INC.

• PHONE (810) 239-4691  
• FAX (810) 239-5191  
• [WWW.GAZALI-LEWIS.COM](http://WWW.GAZALI-LEWIS.COM)

MOTT FOUNDATION BUILDING  
503 SOUTH SAGINAW STREET SUITE 100  
FLINT, MICHIGAN 48502

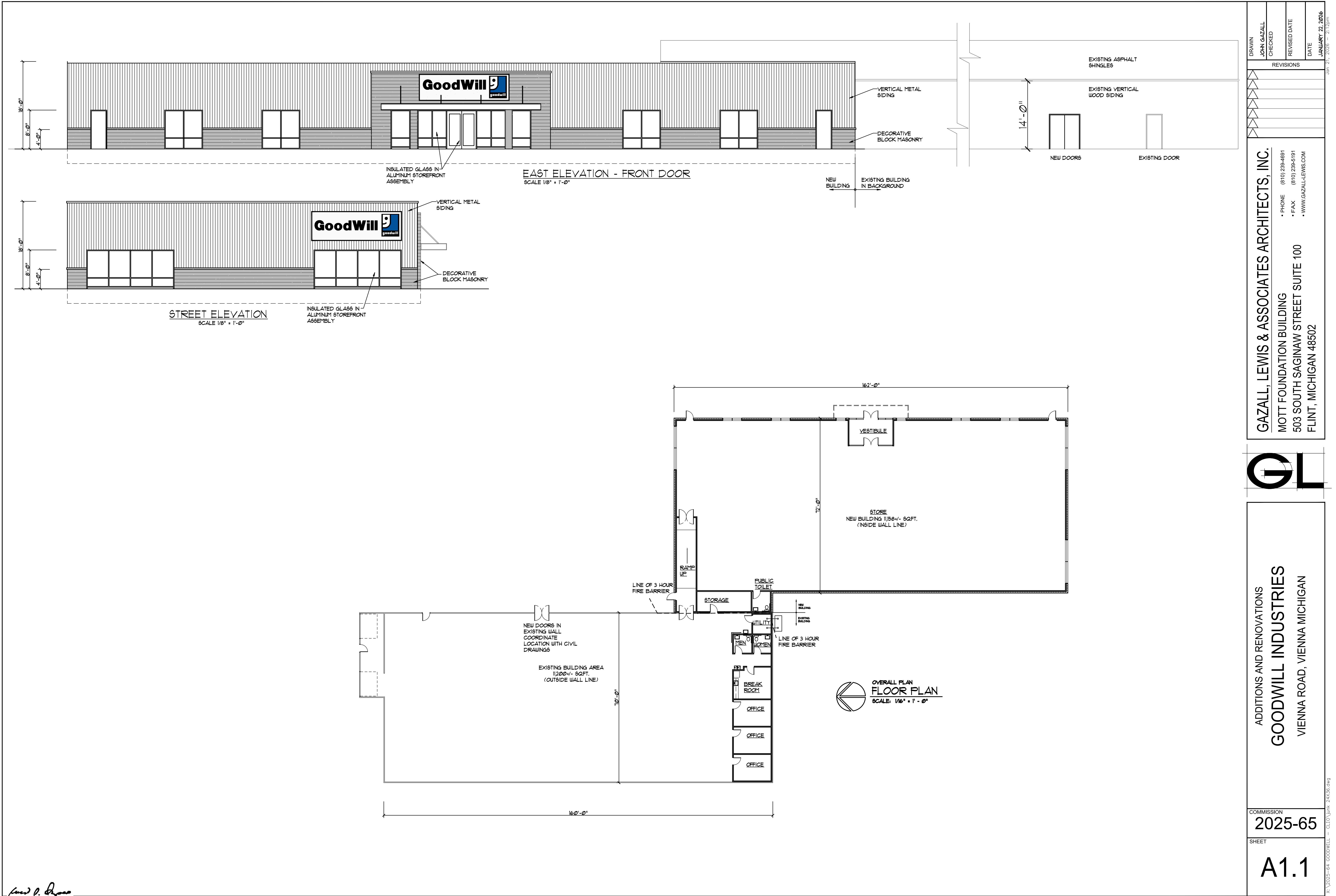
COMMISSION  
**2025-65**  
SHEET

## SHEET

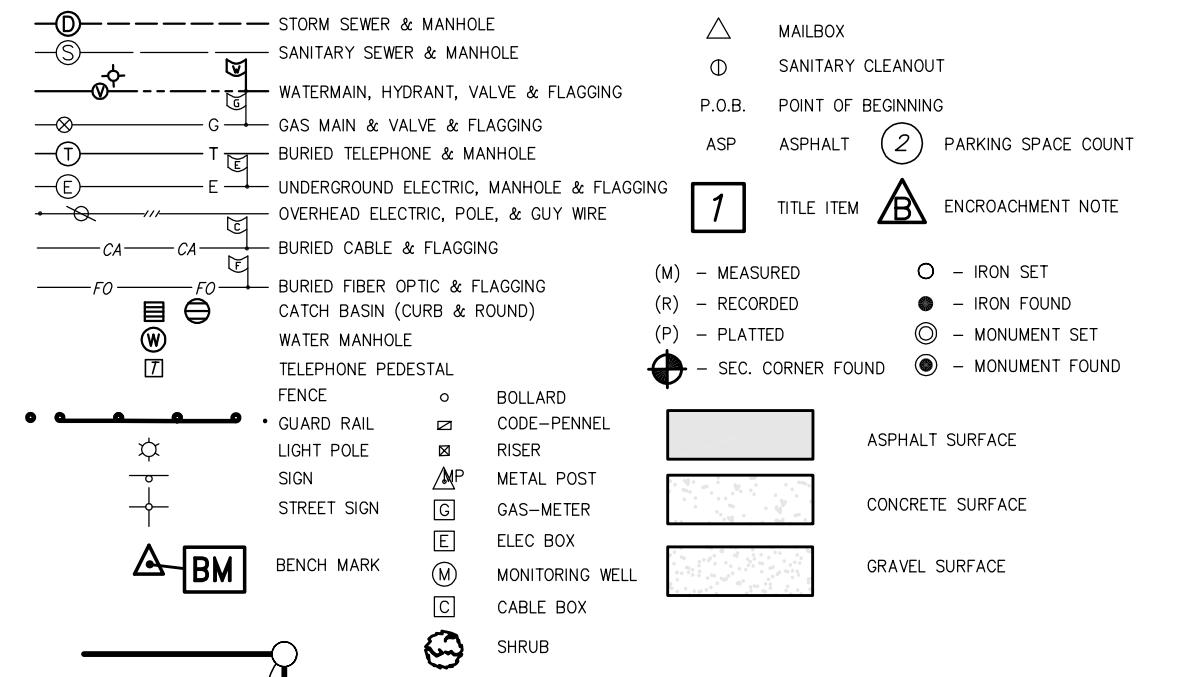
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X:\2025-64 GOODWILL - CLIO\junk 24X36.dwg



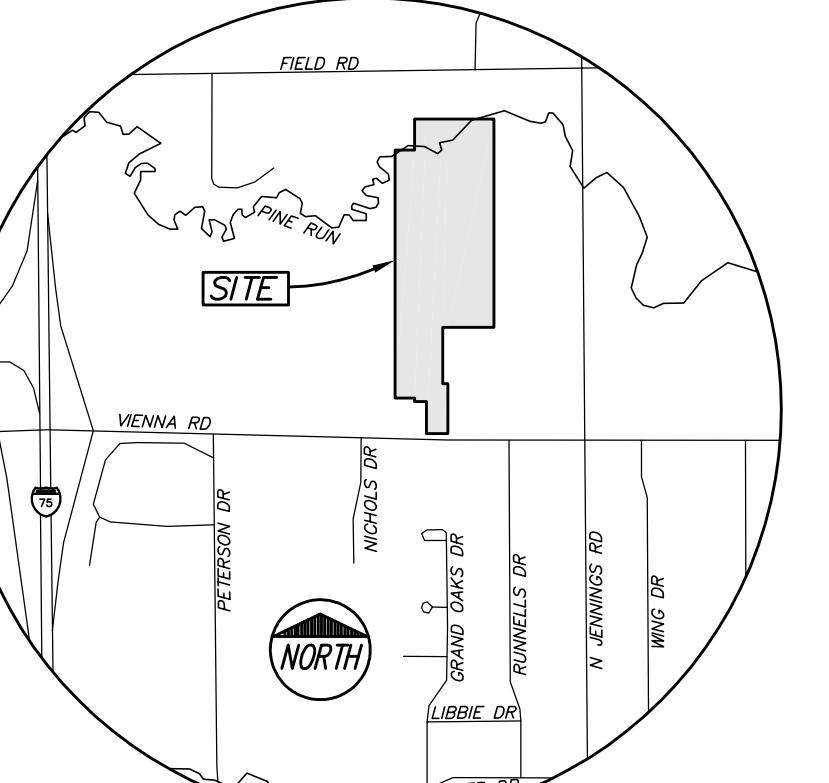
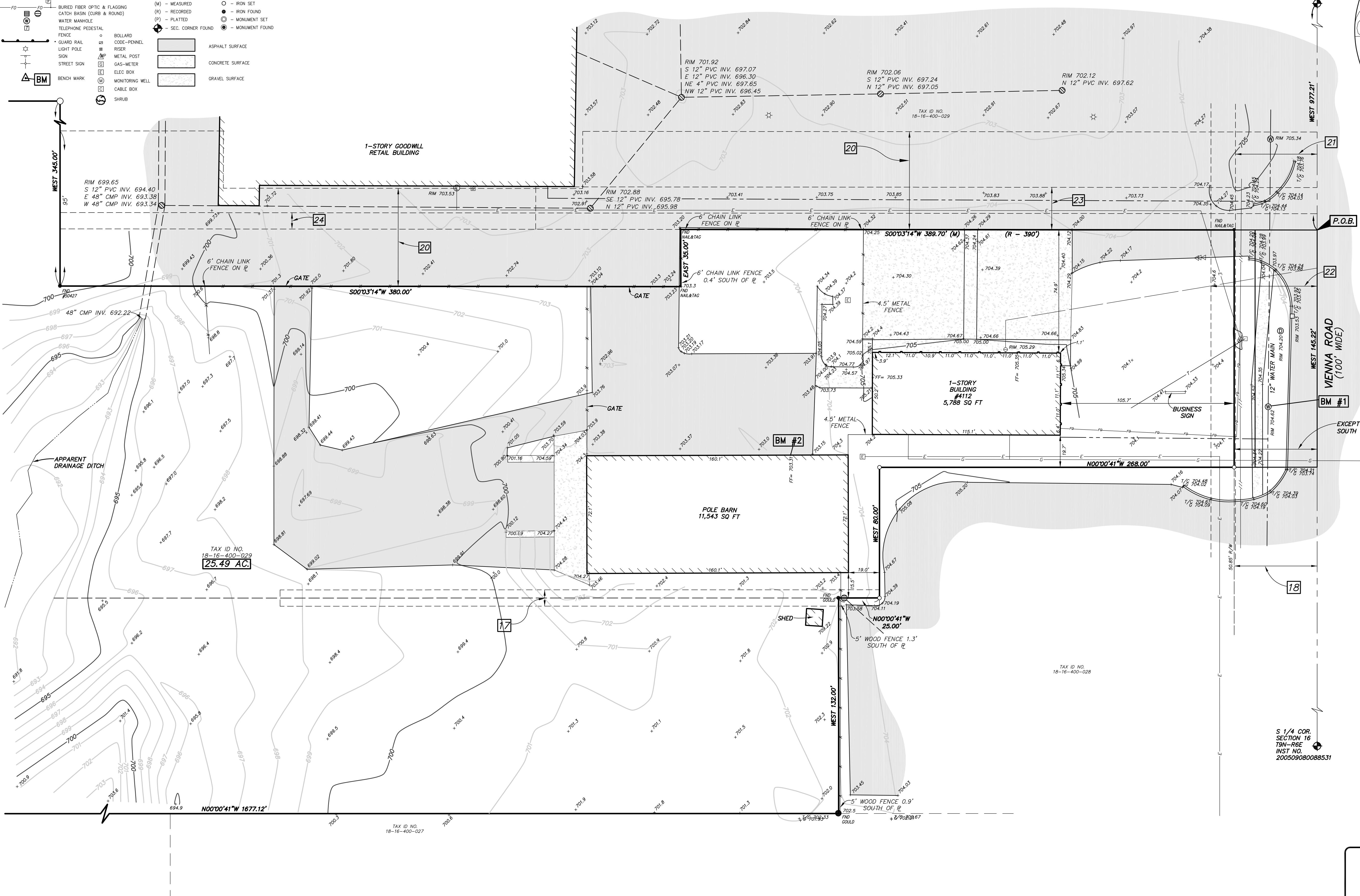
## LEGEND



## 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

SE COR  
SECTION 16  
T9N-R6E  
INST NO.  
200509080088533



LOCATION MAP:  
N.T.S.

RIM 706.46

6" GAS MAIN  
PER PLAN

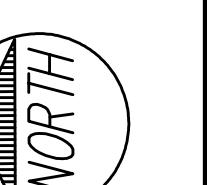
RIM 704.03

8" SANITARY MAIN

RIM 704.46

RIM 703.54

RIM 703.51



0 25 50

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  $\pm 20'$  South of right of way line.

ELEV. = 704.62' (NAVD88)

BM #2 Finish Floor of Pole Barn

ELEV. = 703.31' (NAVD88)

**meridian**  
LAND SURVEYING

(810) 339-6605  
940 S. GRAND TRAVERSE ST.  
CITY OF FLINT \* MICHIGAN \* 48502

TOPOGRAPHIC SURVEY  
4112 W VIENNA ROAD

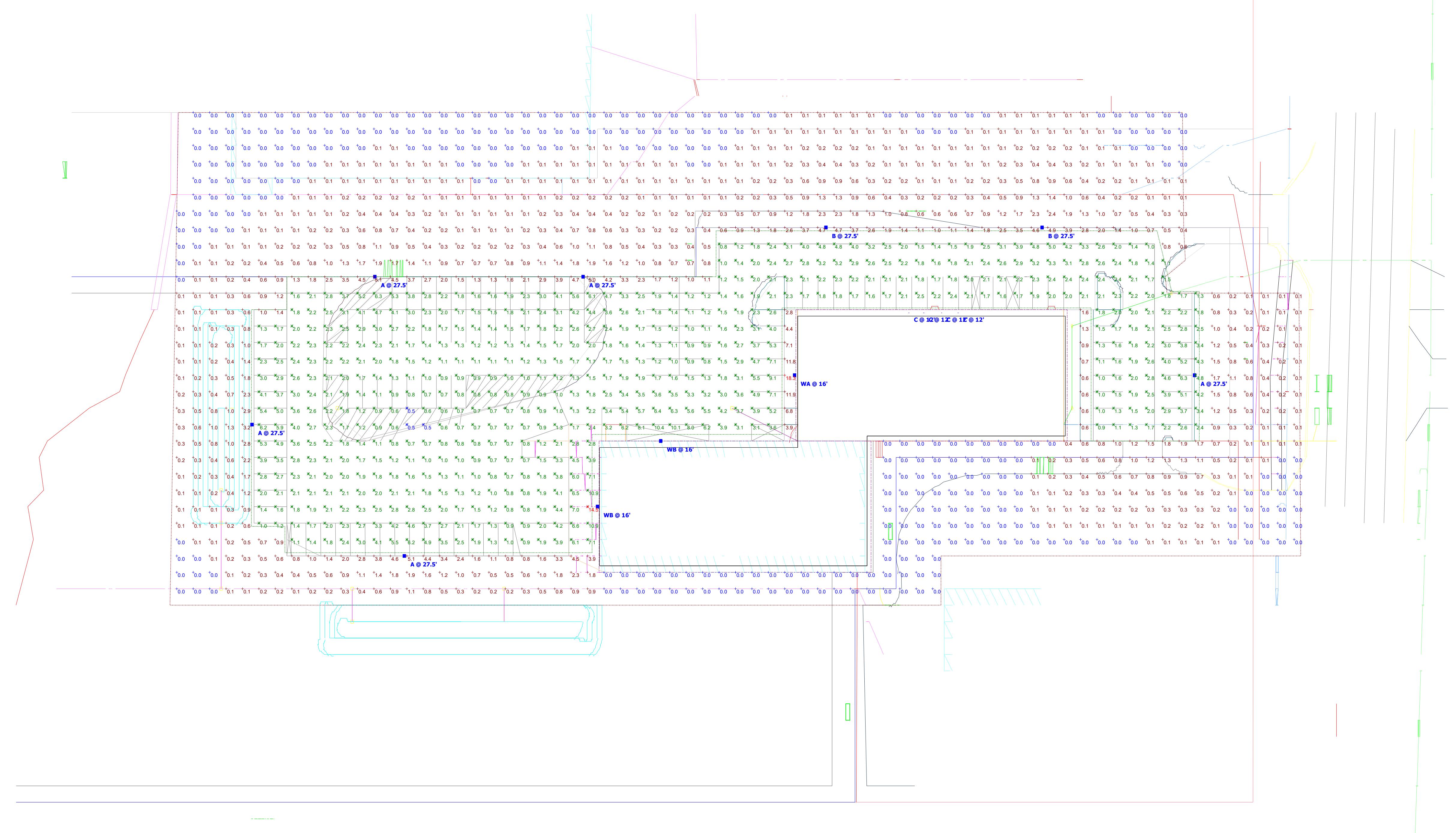
PART OF THE SOUTHEAST 1/4 OF SECTION 16, T9N-R6E  
VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN

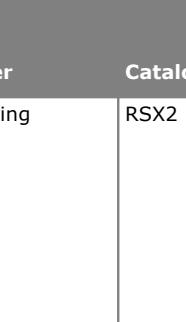
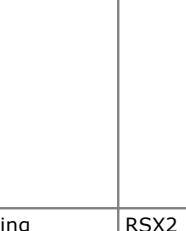
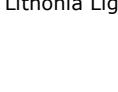
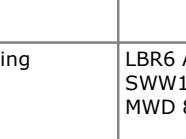
DATE: 1-06-26 DRAWN BY: MA JOB NO: 2025195

GREG M. MCAROLE  
PROFESSIONAL SURVEYOR NO. 46678

SCALE: 1" = 50' CHECKED BY: GMM SHEET: 1 OF 1



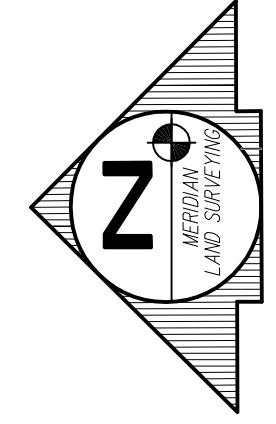


Schedule						
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description
	A		5	Lithonia Lighting	RSX2 LED P4 40K R4	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R4 Distribution
	B		2	Lithonia Lighting	RSX2 LED P4 40K R3	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R3 Distribution
	WA		1	Lithonia Lighting	RSX2 LED P4 40K R4 WALL MOUNT	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R4 Distribution
	WB		2	Lithonia Lighting	RSX2 LED P4 40K R3 WALL MOUNT	RSX Area Fixture Size 2 P4 Lumen Package 4000K CCT Type R3 Distribution
	C		4	Lithonia Lighting	LBR6 ALO2 (2000LM) SWW1 (4000K) AR LSS MWD 80CRI	6IN LBR Retrofit 2000LM 4000K Clear Semi-Specular Medium Wide 80CRI

 Plan View  
 Scale: 1" = 35ft

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

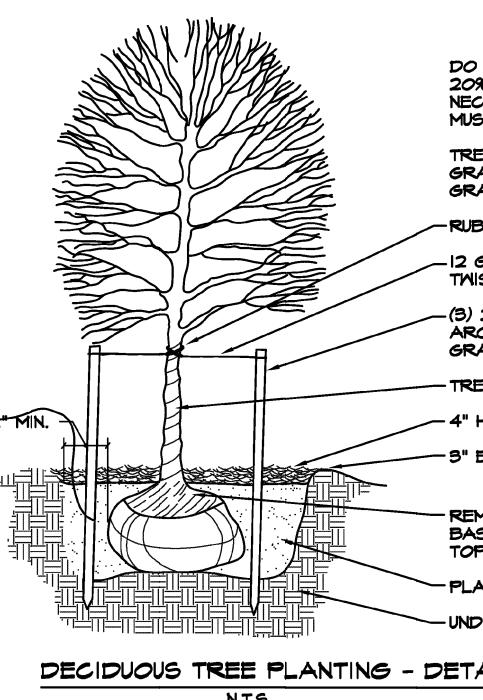
**Note**  
 THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIACTION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMP, AND OTHER VARIOUS 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



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



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



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

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

PLANTING HOLE

12" MIN  
12" MAX  
12" DEEP

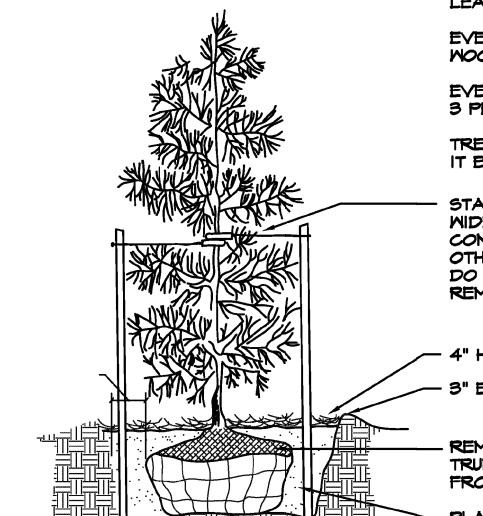
REMOVAL OF TRUNK NYLON ROPE FROM  
TOP OF BURLAP FROM FOOTBALL

TOP 1/3 OF BURLAP

PLANTING MIX AS SPECIFIED

UNDISTURBED SOIL

DECIDUOUS TREE PLANTING - DETAIL



REMOVAL OF ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER  
MATERIAL WHICH MAY CAUSE GIRDLING.

PRUNE ALL DAMAGED, BROKEN, OR DEAD BRANCHES.

LEADER SHOULD NOT BE CUT OR DAMAGED.

EVERGREEN TREES 6" AND UNDER STAKE IN 2"X2"

WOOD STAKES, 2 PER TREE

EVERGREEN TREES 6" STAKE IN METAL FENCE POSTS,

3 PER TREE

TREES SHALL REACH SAME RELATION TO FINISH GRADE AS  
IT BORE TO PREVIOUSLY EXISTING GRADE

STAKE TREES JUST BELOW FIRST BRANCH WITH 2"X3"

PEW BELT-LIKE NYLON OR PLASTIC STRAPS.

OTHER AND ALLOW FOR SOME TILTING.

DO NOT USE NYLON OR ROPE THROUGH A HOSE.

REMOVE AFTER 1 YEAR.

4" HARDWOOD MULCH AS SPECIFIED

2" EARTH SAUCER

REMOVAL OF NYLON AND NYLON ROPE FROM BASE OF  
TRUNK, PEEL BACK AND REMOVE TOP 1/3 OF BURLAP

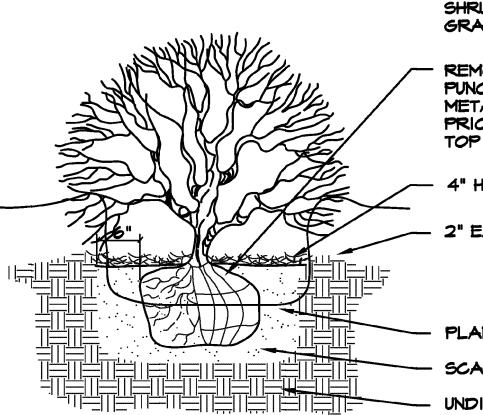
FROM ROOT BALL

PLANTING MIX AS SPECIFIED

UNDISTURBED SOIL

STAKES TO BE 18" BELOW TREE PIT IN UNDISTURBED SOIL

EVERGREEN TREE PLANTING - DETAIL



PRUNE ALL DEAD, DAMAGED, OR BROKEN  
LEAVES AND MAINTAIN SHAPE OF THE PLANT  
MUST BE RETAINED.

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

REMOVE COLLAR FROM PAPER CONTAINER &  
PUNCTURE TO ALLOW ROOT GROWTH. ALL  
WRAP, PLASTIC, AND NYLON MUST BE REMOVED  
PRIOR TO PLANTING. PEEL BACK AND REMOVE  
TOP 1/3 OF BURLAP FROM ALL BBL PLANTS.

4" HARDWOOD MULCH AS SPECIFIED

2" EARTH SAUCER

PLANTING MIX AS SPECIFIED

SCARIFY BOTTOM OF PLANTING PIT TO 5" DEPTH

UNDISTURBED SOIL

SHRUB PLANTING DETAIL

#### 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 PIT BEFORE BEING  
BACKFILLED.

ALL PLANTS 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 PLANTS 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 NEED CONTROL AGENT, "PREN" OR EQUAL, SHALL BE APPLIED UNIFORMLY  
TO ALL PLANTING BEDS PRIOR TO MULCHING.

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

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



KEY #101



KEY #102



KEY #103



KEY #104

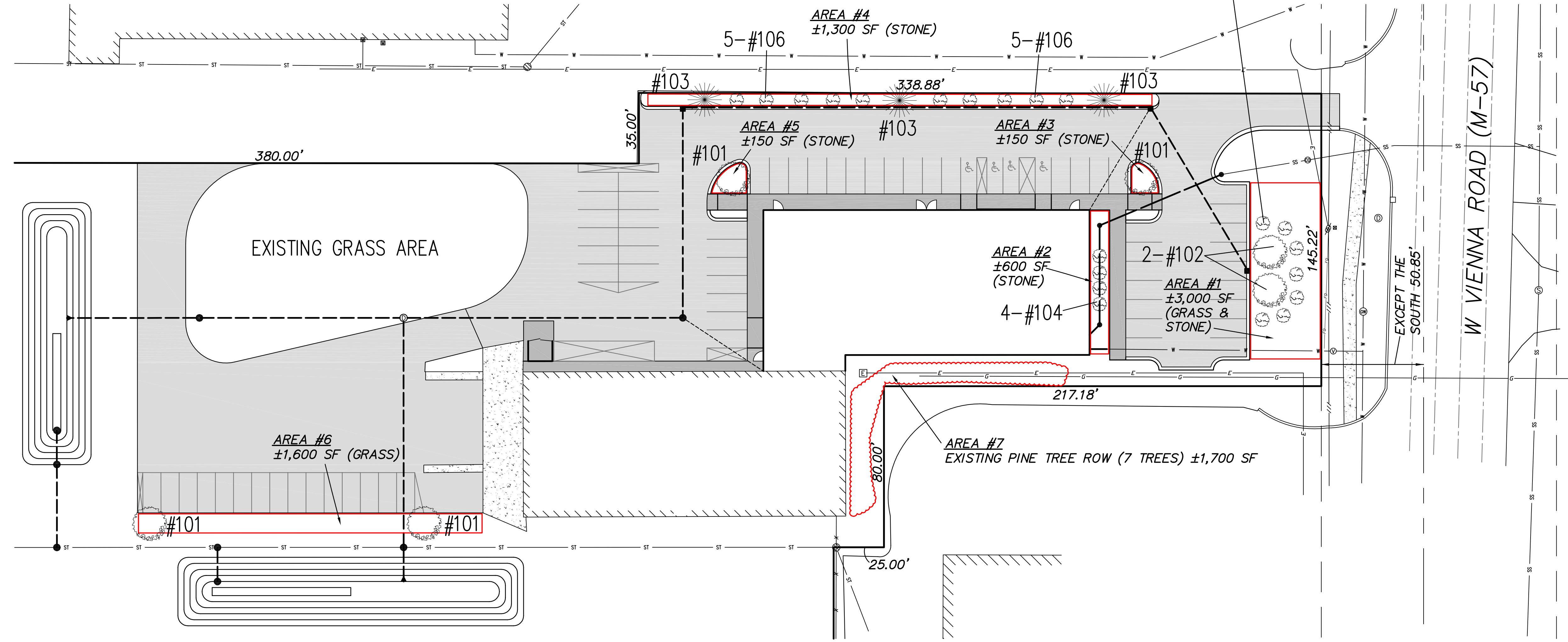


KEY #105



KEY #106

## 7-#105 STONE SEMI-CIRCLE (FIELD ADJUST & DETERMINE)



## REVISIONS

No.	Description	Date	By

## LANDSCAPE PLAN (PRELIMINARY)

Meridian Land Surveying, Inc.	Field: D.S., B.S.
	Checked by: R.U.V.
	Date Revised:
CLIENT: GOODWILL INDUSTRIES OF MID-MICHIGAN	
PROJECT LOCATION: 41112 W. VIENNA RD., Clio, MI 48420	
SECTION 16, T1N-R2E, GENESEE COUNTY, MI	
SITE TAX ID: 18-16-400-029	
JOB No. 2025195	

2025195

SHEET NO.  
LS1

## LANDSCAPE CALCULATIONS

1. DEVELOPMENT AREA = ±2.5 ACRES X 43,560 SF/AC = 108,900 SF
2. LANDSCAPE AREAS REQUIRED = 108,900 X 7.5% = 8,167.5 SF REQUIRED
3. PROVIDED = 8,500 SF (SEE LANDSCAPE PLAN AREAS 1 TO 7)
4. TREES REQUIRED = 1 PER 3000 SF OF PAVED DRIVEWAY & PARKING LOT = 47,916 SF/3000 = 15.9 = 16 TREES
5. 16 TREES LESS 7 EXISTING TREES = 9 TREES REQUIRED
6. GREENBELT BUFFER = NONE REQUIRED NOT ADJACENT TO RESIDENTIAL

FUTURE NOT INCLUDED WITHIN 1.1 AC.

LANDSCAPED DEVELOPED SITE OUTLINE = ±2.5AC

INTERIOR DRIVES & PARKING = ±1.1AC

## OVERALL LANDSCAPE AREA SCHEMATIC



SCALE: 1 inch = 60 ft.

LANDSTORE & WAREHOUSE  
GOODWILL INDUSTRIES OF MID-MICHIGAN  
SECTION 16, T1N-R2E, GENESEE COUNTY, MI

## GENERAL CONSTRUCTION NOTES

1. STANDARD SPECIFICATIONS & DETAILS  
ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GENESEE COUNTY STANDARDS AND SPECIFICATIONS FOR SANITARY SEWER, PRESSURE PIPE, AND PUMP STATION CONSTRUCTION. IF ANY DEVIATIONS FROM THE GCDC-WWS APPROVED PLANS WILL NOT BE PERMITTED, IF IT BECOMES NECESSARY TO REVISE THE PLAN, THEY SHALL BE RESUBMITTED TO GCDC-WWS FOR APPROVAL.

2. PRE-CONSTRUCTION MEETING  
A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE GCDC-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. GCDC-WWS, GCDC-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.

3. MISS DIG 811 UTILITY ALERT  
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.

4. FIELD LOCATION OF UTILITIES  
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. UTILITIES UNCOVERED DURING EXCAVATION SHALL BE CONSIDERED INCLUDED IN THE LINEAL FEET OF DRAVEY 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.

5. SUBSURFACE SOIL CONDITIONS  
ALL BIDDING CONTRACTOR AND SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF THE SITE AND EXISTING SURFACE AND SUBSURFACE CONDITIONS. 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.

6. PERMITS AND FEES  
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.

7. GCDC-WWS INSPECTION FEES  
THE DEVELOPER SHALL PAY FOR ALL SANITARY SEWER AND PRESSURE PIPE INSPECTION FEES AND WATER USAGE FEES PRIOR TO THE PRE-CONSTRUCTION MEETING.

8. SOIL EROSION CONTROL, PART 91 OF P.A. 451 OF 1994  
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 REQUIRED FOR ALL MAINTENANCE UNTIL THE FINAL ACCEPTANCE OF THE PERMANENT CONTROL MEASURES BY GCDC-WWS. THE CONTRACTOR/DEVELOPER IS REQUIRED BY GCDC-WWS TO PREPARE ANY 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.

9. STATE CONSTRUCTIONS PERMITS  
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 GCDC-WWS.

10. ROADWAY PERMITS  
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 THEREWITH.

11. WORK OBSERVATION  
ALL WORK SHALL BE PERFORMED UNDER THE OBSERVATION OF A CONSTRUCTION OBSERVER FROM GCDC-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 CONSTRUCTION. CUT SHEETS PROVIDED TO THE GCDC-WWS CONSTRUCTION OPERATION'S SUPERVISOR A MINIMUM OF 24 HOURS PRIOR TO STARTING THE WORK, WITH RESPECT TO THAT UTILITY. GCDC-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION SHALL BE NOTIFIED FOR A FINAL INSPECTION.

12. CONTRACTOR'S MINIMUM WAGE & USE OF IN-COUNTY LABOR  
THE CONTRACTOR SHALL EMPLOY COMPETENT AND SKILLED WORKERS THROUGHOUT THE COURSE OF THE PROJECT. THE CONTRACTOR SHALL STRIVE TO USE GENESEE 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 GENESEE. THESE RATES CAN BE OBTAINED BY CONTACTING THE MICHIGAN DEPARTMENT OF CONSUMER AND INDUSTRIAL SERVICES.

13. MISHA SAFETY REQUIREMENTS  
ALL WORK, PRACTICE, AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL SAFETY GUIDELINES, OCCUPATIONAL 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 GCDC-WWS AND ONE COPY ON SITE AT ALL TIMES.

14. ROADWAY REQUIREMENTS FOR UTILITY CONSTRUCTION  
THE CONTRACTOR SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THE GCDC OR LOCAL MUNICIPALITY REGARDING THE CONSTRUCTION OF PRESSURE PIPE AND SEWER MAINS, MAINTAINING TRAFFIC, BARRICAADING, BORING, BACKFILLING AND RESTORATION WITHIN THE ROAD RIGHT-OF-WAY.

15. OPEN CUTTING OF COUNTY/LOCAL ROADS  
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 GCDC-WWS.

16. GRAVEL ROAD CONTAMINATION BY THE WORK  
IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL ROAD HAS BEEN CONTAMINATED DURING THE WORK, THE ROAD SHALL 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.

17. RESTORATION OF GRAVEL SHOULDER  
IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL SHOULDER HAVE BEEN CONTAMINATED BY THE WORK, THE CONTRACTOR SHALL RE-GRATE 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.

18. 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.

19. SURFACE RESTORATION  
ALL DISTURBED AREAS SHALL BE COMPLETELY RESTORED IN STRICT COMPLIANCE WITH THE SOIL EROSION AND SEDIMENTATION SPECIFICATIONS AND TO THE SATISFACTION OF GCDC-WWS, GCDC-SWM, GRC, 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 SIGNAGE, STREET SWEEPING, AND MAINTAINING EXISTING UTILITIES, SHALL BE CONSIDERED INCLUSIVE AND AT NO ADDITIONAL COST TO GCDC-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.

20. TRAFFIC CONTROL  
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.

21. SIGNING AND BARRICAADING  
SIGNING AND BARRICAADING 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.

22. PROTECTION OF HAZARDOUS AREAS  
EXCAVATION AND HAZARDOUS AREAS SHALL BE PROTECTED BY BARRICADES, SNOW FENCE, OR OTHER APPROPRIATE MEANS. BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED.

23. STORM WATER DRAINAGE DURING THE WORK  
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 DRAINAGE DURING CONSTRUCTION AND SHALL NOT OBSTRUCT STUMP 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.

24. UTILITY INFORMATION  
UTILITY INFORMATION IS INDICATED 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 GCDC-WWS.

25. EXISTING UTILITIES  
THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SANITARY SEWER, PRESSURE PIPE, OR STONE SEWER CONNECTIONS TO SERVICES THROUGHOUT THE WORK. THE CONTRACTOR SHALL PROVIDE AND ARRANGE FOR THE IMPROVEMENT, REPAIR, OR 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 UNDERRUNED BY THE EXCAVATION SHALL HAVE COMPACTED SAND BACKFILL PLACED UNDER THEM, UNLESS MDOT 6AA 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 CONTRACTOR'S SOLE EXPENSE.

26. SHOP DRAWINGS  
PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GCDC-WWS SHOP DRAWINGS AND/OR CATALOG CUTS FOR ALL MATERIALS AND EQUIPMENT ITEMS PER THE STANDARD SPECIFICATIONS.

27. MATERIAL CERTIFICATIONS  
PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GCDC-WWS MATERIALS CERTIFICATES FOR ALL MATERIALS USED DURING THE WORK.

28. NON-STOPPAGE CLAUSE  
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 GCDC-WWS.

29. DISPOSAL OF EXCESS EXCAVATED MATERIAL  
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 GCDC-WWS.

30. CONSTRUCTION STAKING  
THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, PROVIDE A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF MICHIGAN, TO PROVIDE ALIGNED 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.

31. FINAL ELEVATIONS OF SURFACE UTILITIES  
ALL FINAL ELEVATIONS OF MANHOLE CASTINGS, HYDRANTS, VALVES, AND VALVE BOXES SHALL BE APPROVED BY THE GCDC-WWS REPRESENTATIVE IN THE FIELD. ANY ADJUSTMENTS THAT ARE MADE SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.

32. PROJECT RECORD DOCUMENTS  
UPON COMPLETION OF THE WORK AND PRIOR TO FINAL APPROVAL FROM GCDC-WWS, THE OWNER/DEVELOPER SHALL FURNISH GCDC-WWS WITH ONE COMPLETE SET OF PROJECT RECORD DOCUMENTS. THESE PROJECT RECORD DOCUMENTS ARE COMPRISED OF DRAWINGS ON MYLAR AND AN ELECTRONIC DATA SET.

33. THE MYLAR PROJECT RECORD DOCUMENTS SHALL BE SUBMITTED TO GCDC-WWS ON 4 MIL MYLAR FOR THE REVIEW AND APPROVAL OF GCDC-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 CURE 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 GCDC-WWS OR MUNICIPAL CONSTRUCTION OBSERVER.

## SANITARY CONSTRUCTION NOTES

1. ALL MATERIAL AND WORK SHALL COMPLY WITH THE LATEST GCDC-WWS SPECIFICATIONS AND STANDARD DETAILS.

2. NO CONNECTION TO AN EXISTING SANITARY SEWER SHALL BE MADE WITHOUT THE PRIOR APPROVAL OF GCDC-WWS. GCDC-WWS SHALL HAVE FINAL INSPECTION AUTHORITY AND APPROVAL FOR UNDERGROUND SANITARY SEWER FACILITIES.

3. THE MATERIAL FOR THE SANITARY SEWER SHALL BE SPECIFIED ON THE CONSTRUCTION DRAWINGS. THE FOLLOWING MATERIALS ARE ACCEPTABLE TO GCDC-WWS:

A. 8" TO 15". PVC WITH A MINIMUM SDR OF 26 CONFORMING TO ASTM D-3034-00

B. GASKETED SDR-21 PVC.

C. LARGER THAN 15", REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76-03.

D. Joints shall be modified tongue & 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.

E. 4. ALL SANITARY SEWER SERVICE RISERS SHALL BE 6" INTERNAL DIAMETER SDR-26 PVC OR PVC CONFORMING TO ASTM D-3034-00. JOINTS SHALL BE RUBBER GASKET JOINTS OR SDR-21 REINFORCED JOINTS. RISERS SHALL BE PLACED AT LEAST 10' FROM THE RIGHT-OF-WAY OR EASEMENT LINE, OR AS DEEP AS 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.

F. 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 GCDC-WWS. MANHOLE FRAMES AND COVERS SHALL BE BOLT-DOWN, WATERTIGHT EAST JORDAN 1040 ZPT, NEENAH FOUNDRY COMPANY R-1916F, OR GCDC-WWS APPROVED ALTERNATE. STEPS SHALL BE M.A. INDUSTRIES PS-1-PP, AMERICAN STEP CO. ML-10, OR A GCDC-WWS APPROVED ALTERNATE.

G. 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.

H. 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 WITH SD-5 OF THE SANITARY SEWER DETAILS.

I. 8" SANITARY SEWERS 8" THROUGH 21" DIAMETER, INCLUDING SERVICE LEADS CONSTRUCTED AS PART OF THE WORK, SHALL BE UNDERGROUNDED, AND AN INFILTRATION TEST IN CONFORMANCE WITH ASTM C-924-02 OR C-969-02, 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.

J. 9. ALL PUBLIC SANITARY SEWERS 8" OR LARGER SHALL BE INTERNALLY TELEVISIONED (PAN/TILT) BY THE CONTRACTOR. THE TELEVISION REPORT, INCLUDING THE DVD, SHALL BE GIVEN TO GCDC-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 TELEVISION. PRIOR TO TELEVISION THE LINE, WATER SHALL BE PLACED IN THE MAIN FROM THE UPSTREAM MANHOLE UNTIL IT COMES OUT OF THE DOWNSTREAM MANHOLE. THE TELEVISION SHALL BE PLACED AT THE DOWNTREAM MANHOLE AND ASSEMBLED THROUGH THE DOWNTREAM. THE CONTRACTOR SHALL REPAIR ANY BREAKS IN THE MAIN OR SERVICE LEADS, ALL LONGITUDINAL CRACKS, BROKEN PIPE, DIPS, OR HIGH POINTS IN THE MAIN, 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. GCDC-WWS SHALL BE NOTIFIED WHEN THE LINE IS TO BE TELEVISIONED AND SHALL BE PRESENT TO INSPECT REPAIRS.

K. 10. SANITARY MANHOLES SHALL BE PLACED CLOSEST TO PROPERTY CORNERS WHEN FEASIBLE.

L. 11. PRIOR TO PERFORMING ANY TESTING, THE CONTRACTOR SHALL BE REQUIRED TO DO THE FOLLOWING:

A. CONDUCT PRELIMINARY TESTS ON THE SYSTEM.

B. PROVIDE THE RESULTS FROM THE PRELIMINARY TESTS ON THE SYSTEM.

C. PROVIDE RESULTS OF DENSITY CHECKS ON COMPACTED SAND BACKFILL FROM A CERTIFIED TESTING AGENCY.

D. FURNISH A COMPLETED TWO-YEAR MAINTENANCE & GUARANTEE BOND.

E. COMPLETE FINAL ADJUSTMENTS ON ANY SANITARY SEWER STRUCTURES.

F. 12. PRIOR TO FINAL APPROVAL, THE FOLLOWING ITEMS MUST BE COMPLETED BY THE CONTRACTOR:

A. THE FINAL TESTING SHALL CONSIST OF VISUAL INSPECTION OF MANHOLES, TELEVISION 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 SIZE MANDREL 30 DAYS AFTER THE MAIN HAS BEEN INSTALLED.

B. PROVIDE MATERIAL CERTIFICATES.

C. PROVIDE RECORDED COPIES OF ALL EASEMENTS FOR THE MASTER DEED.

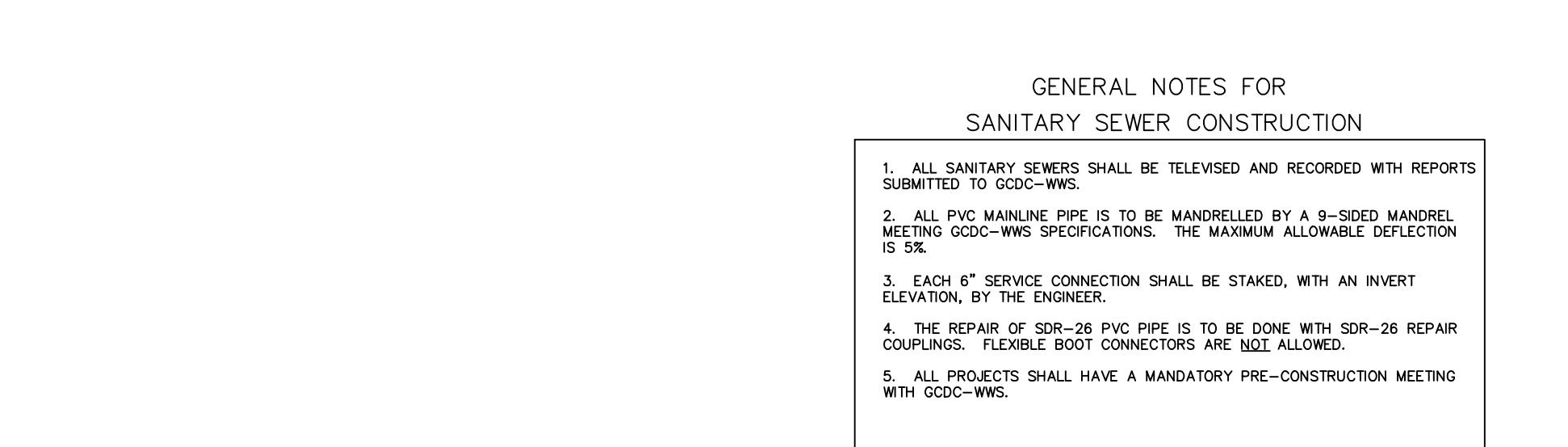
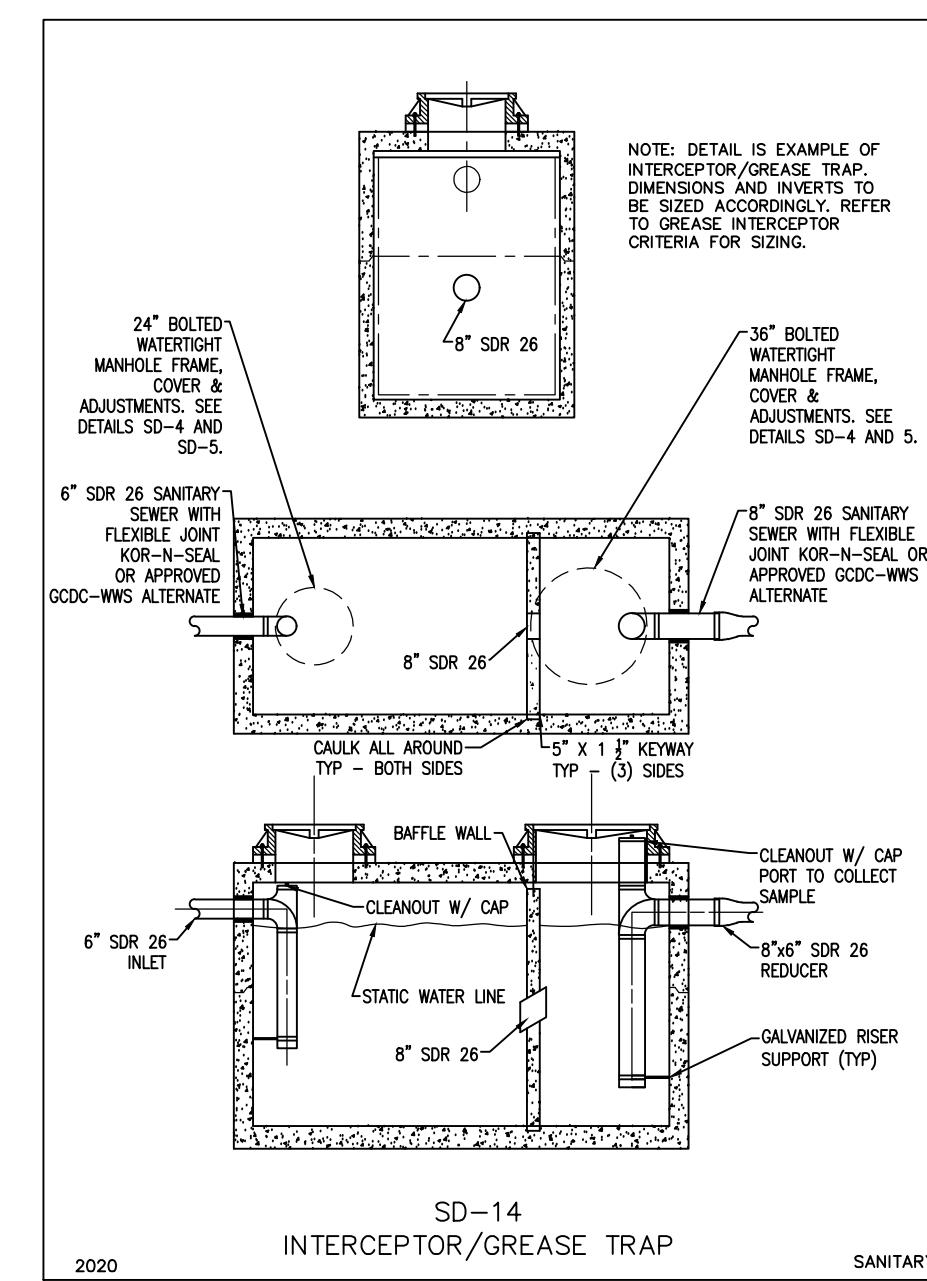
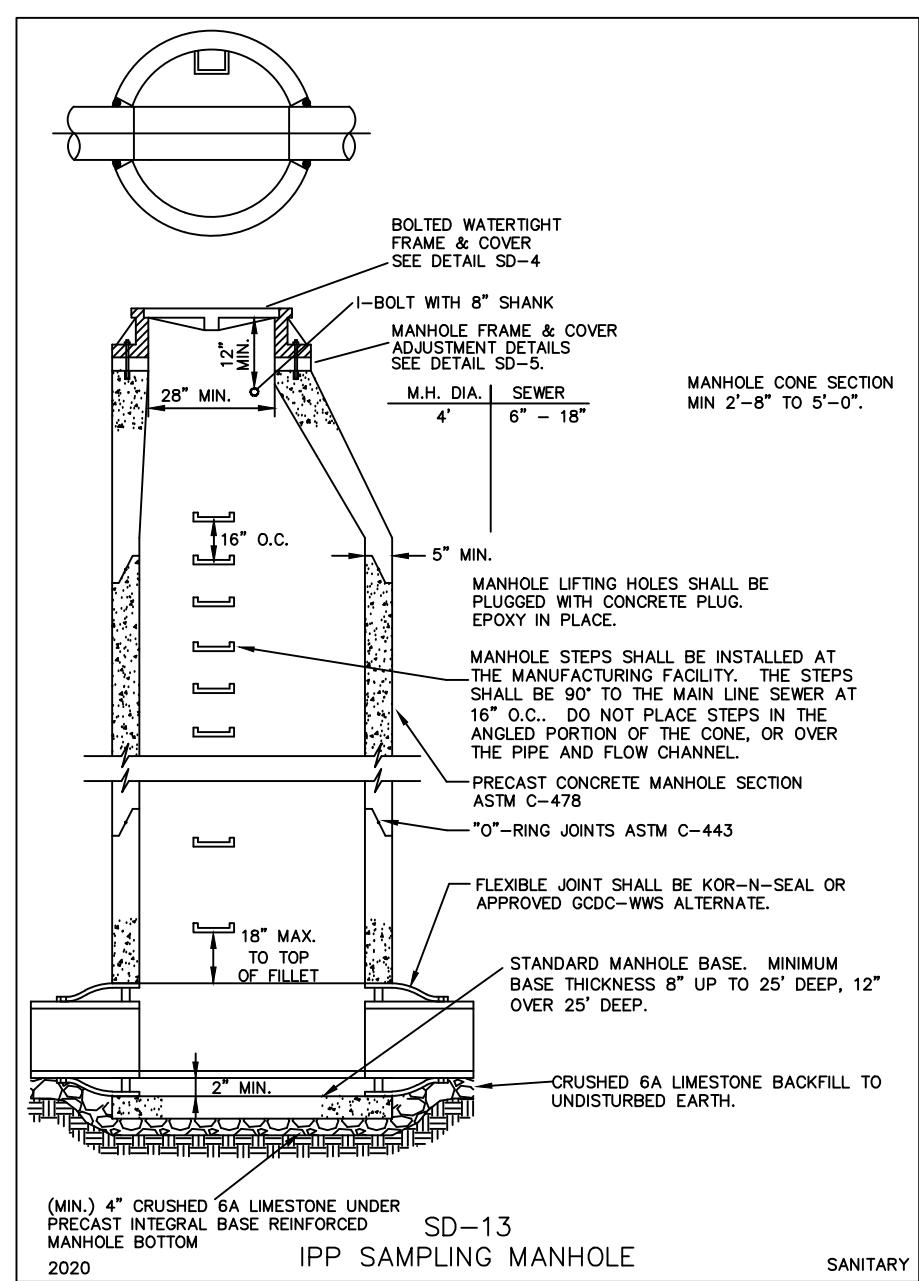
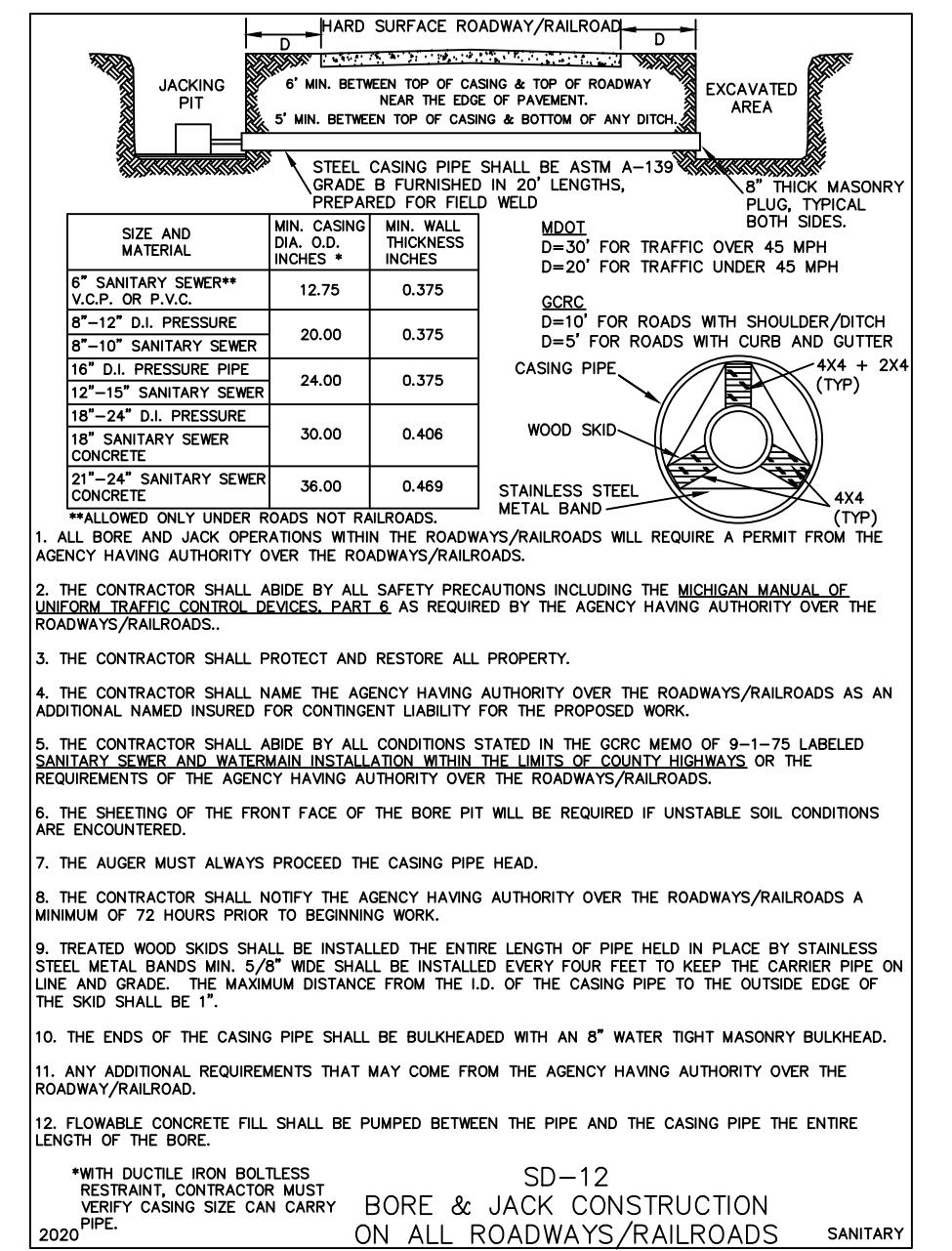
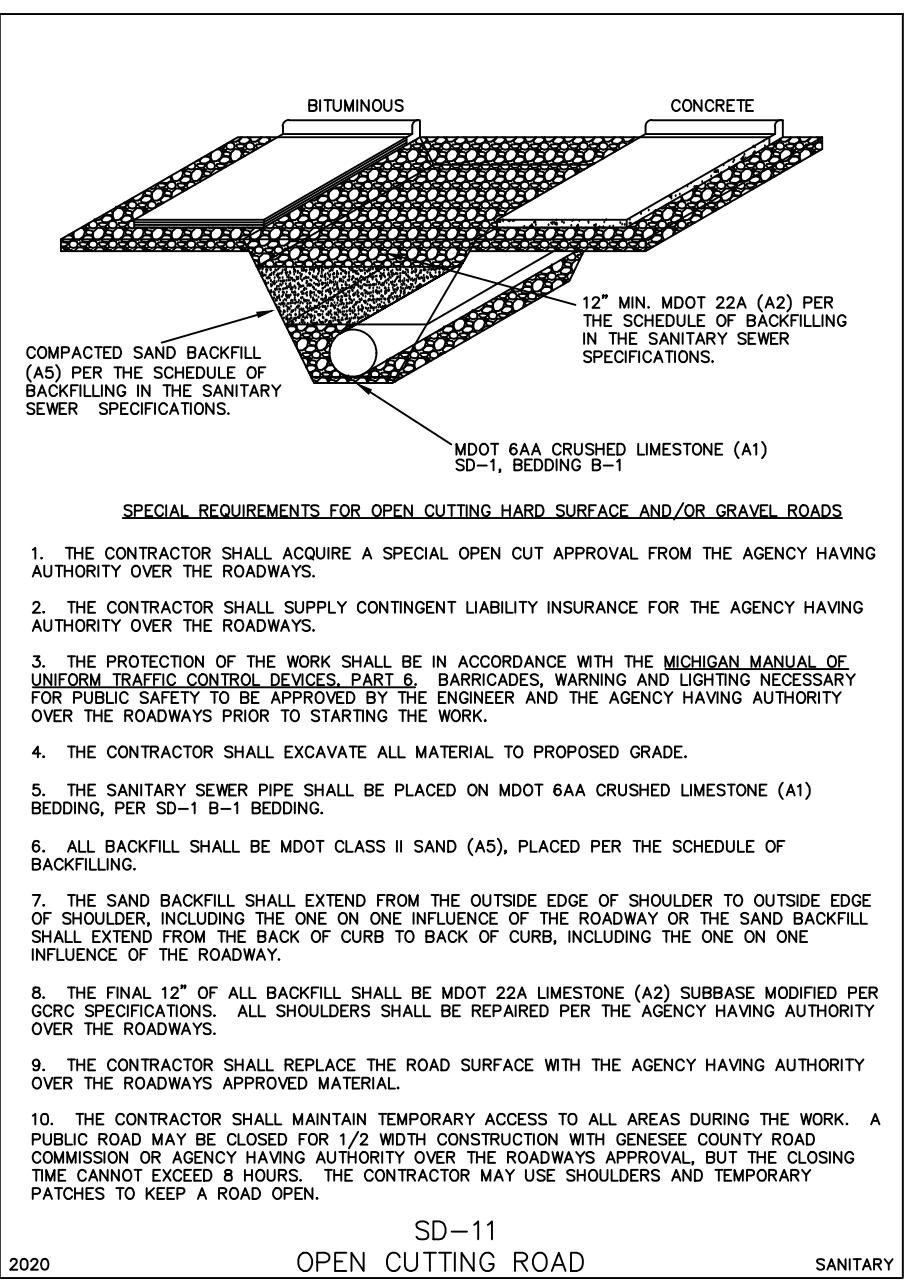
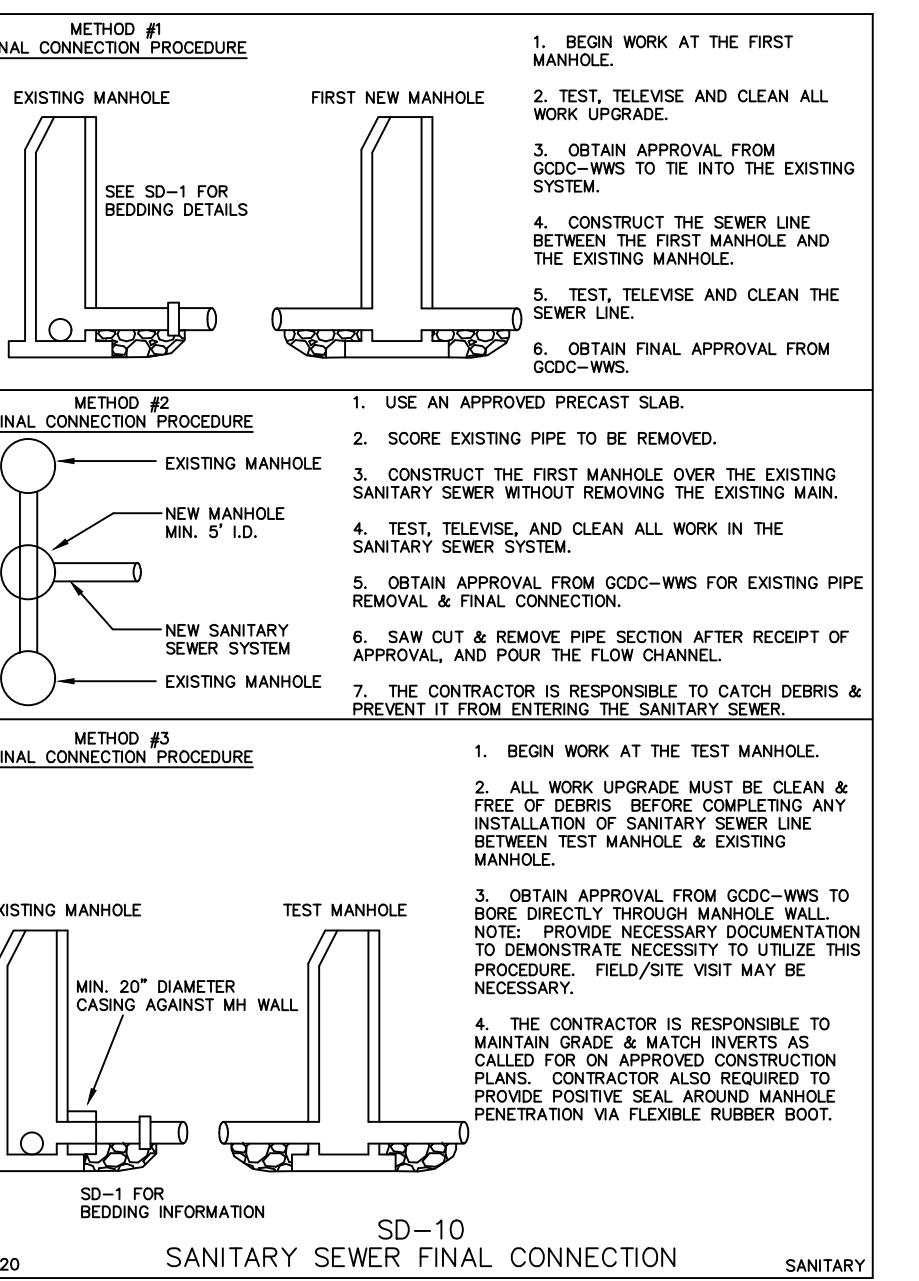
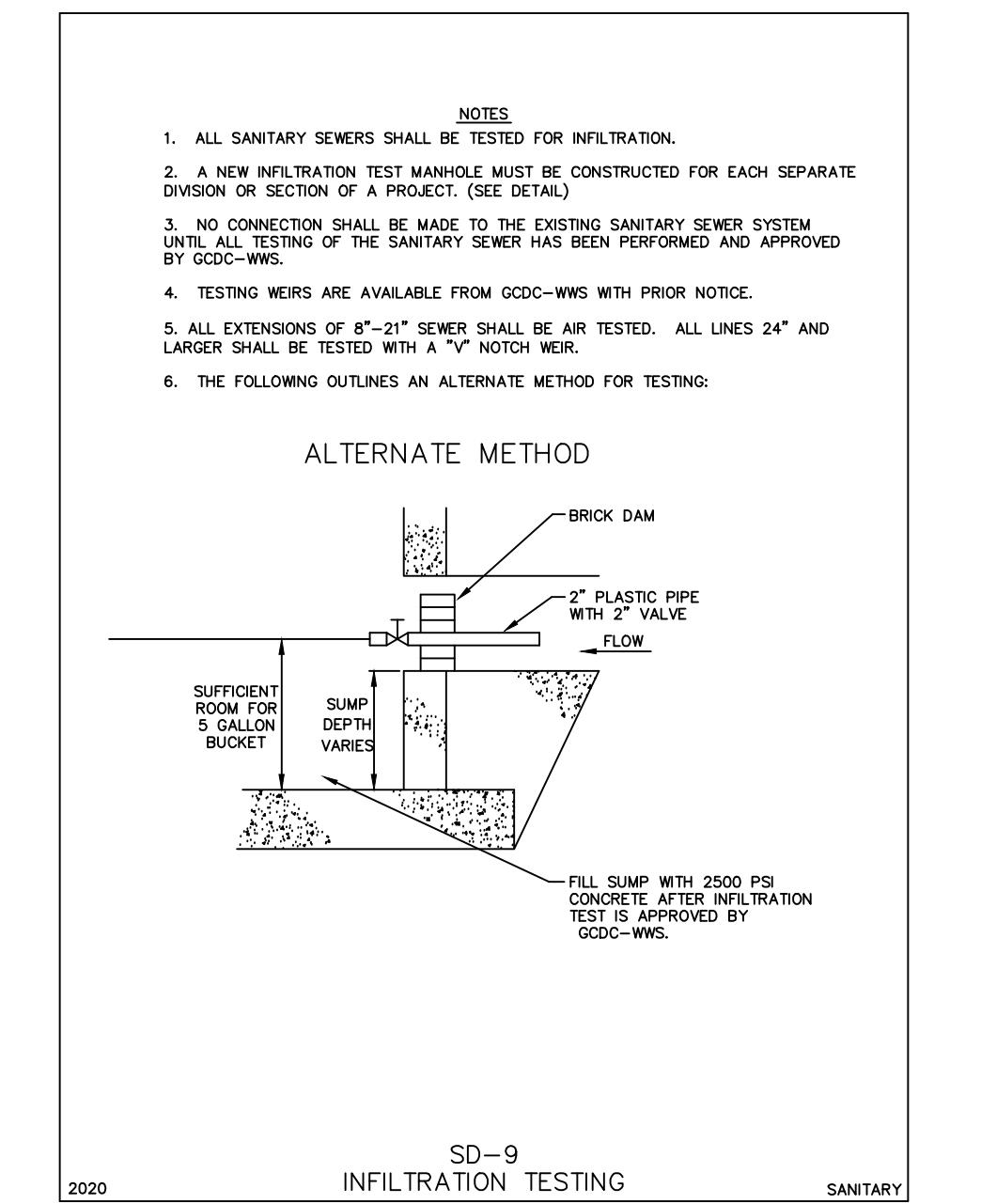
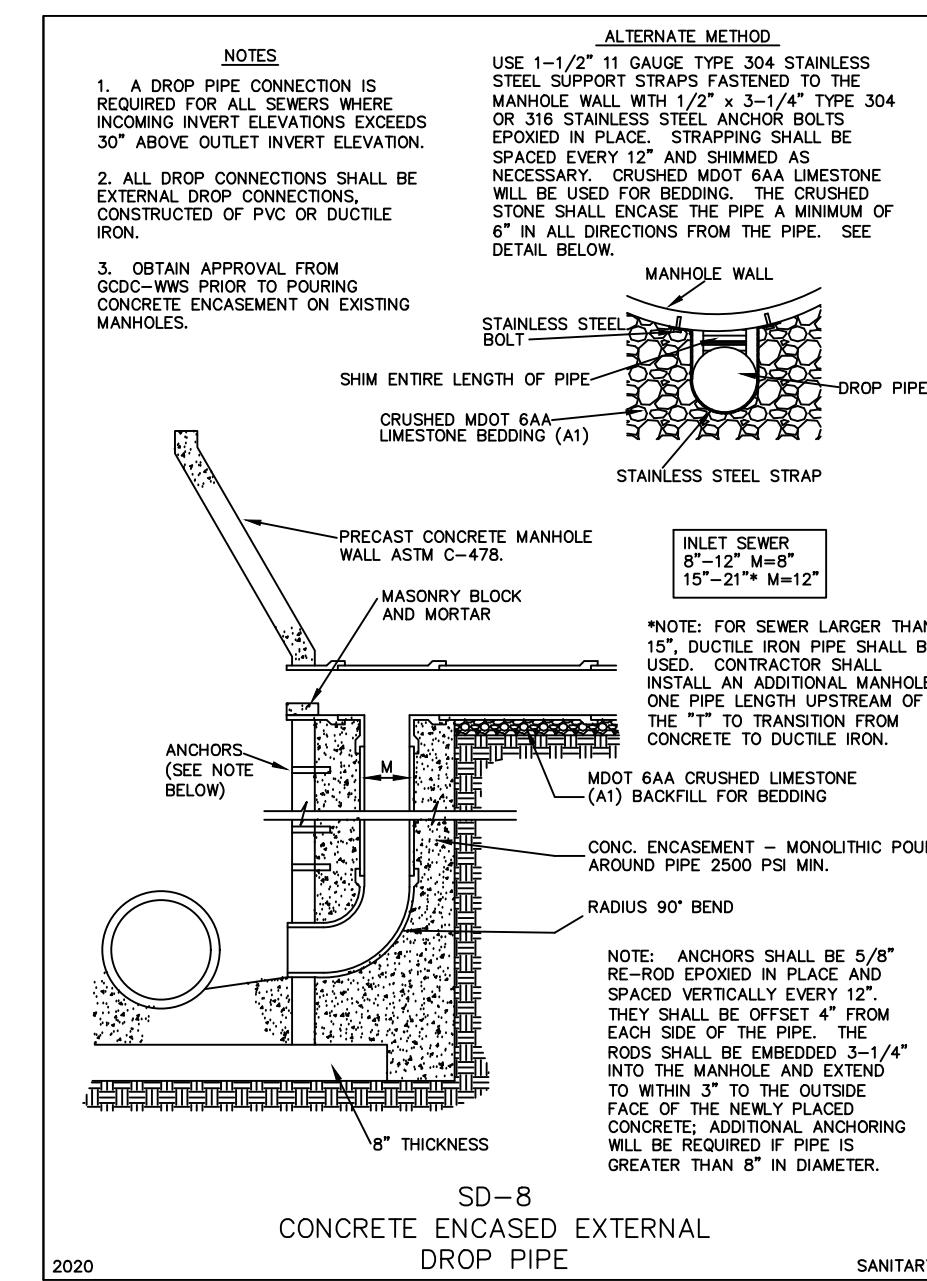
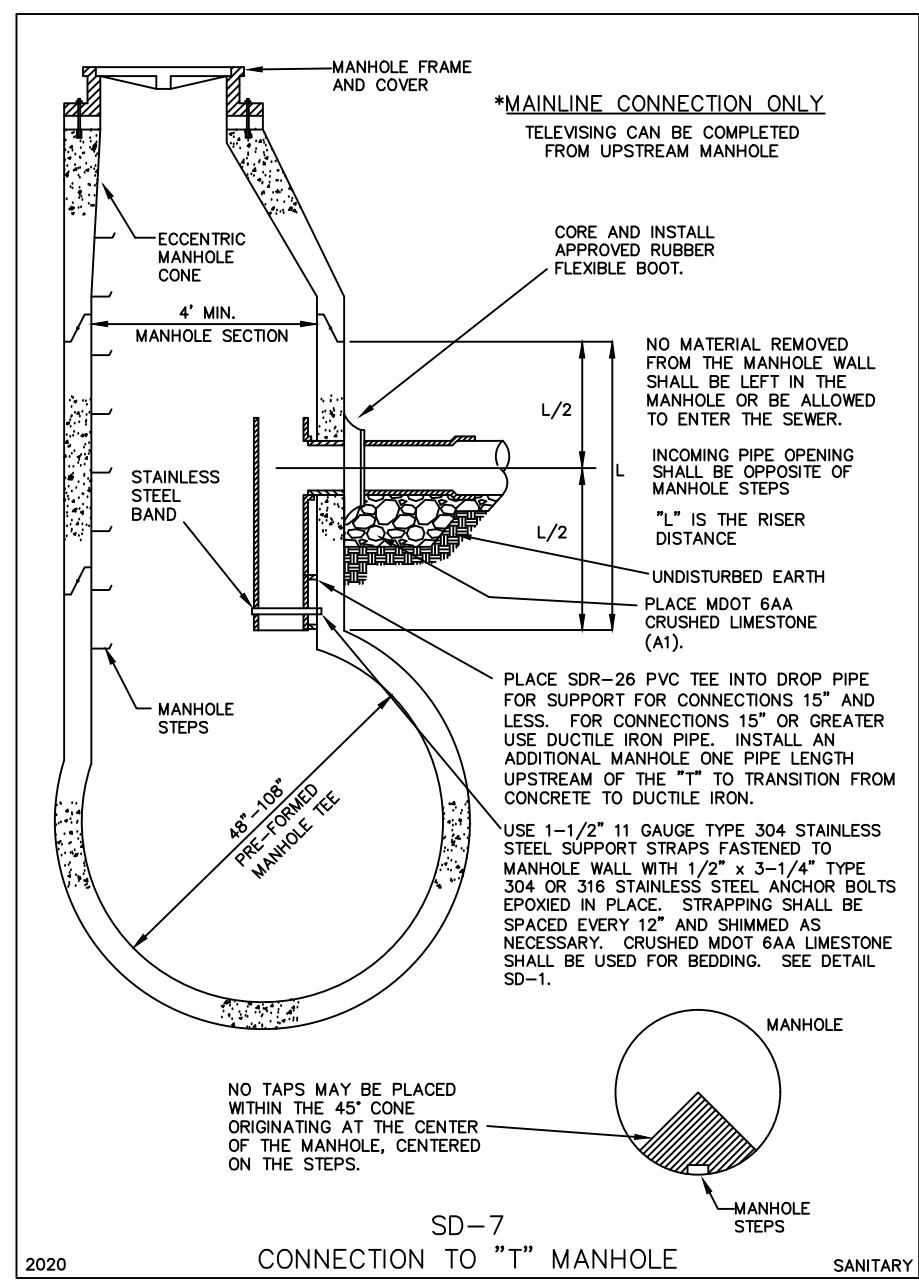
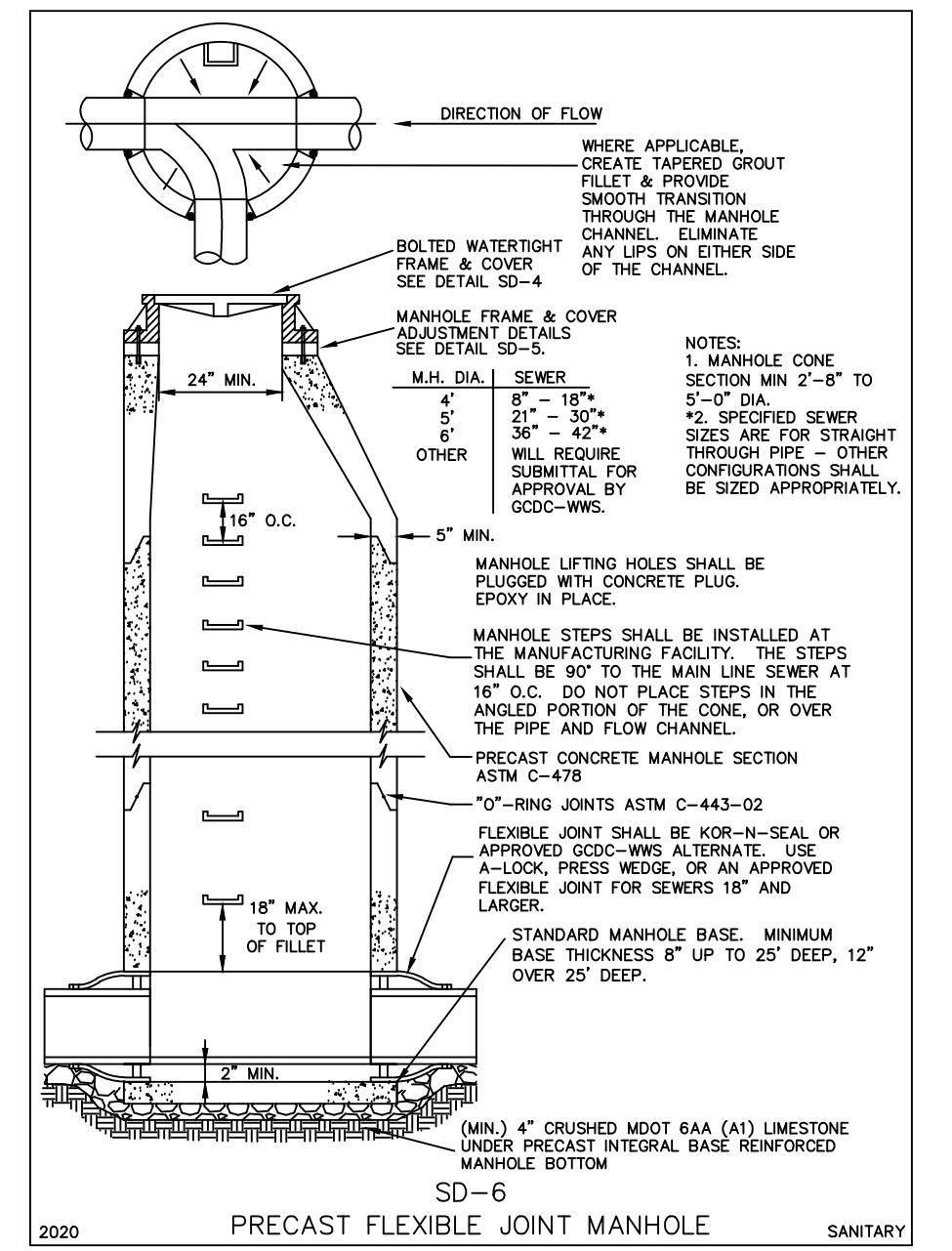
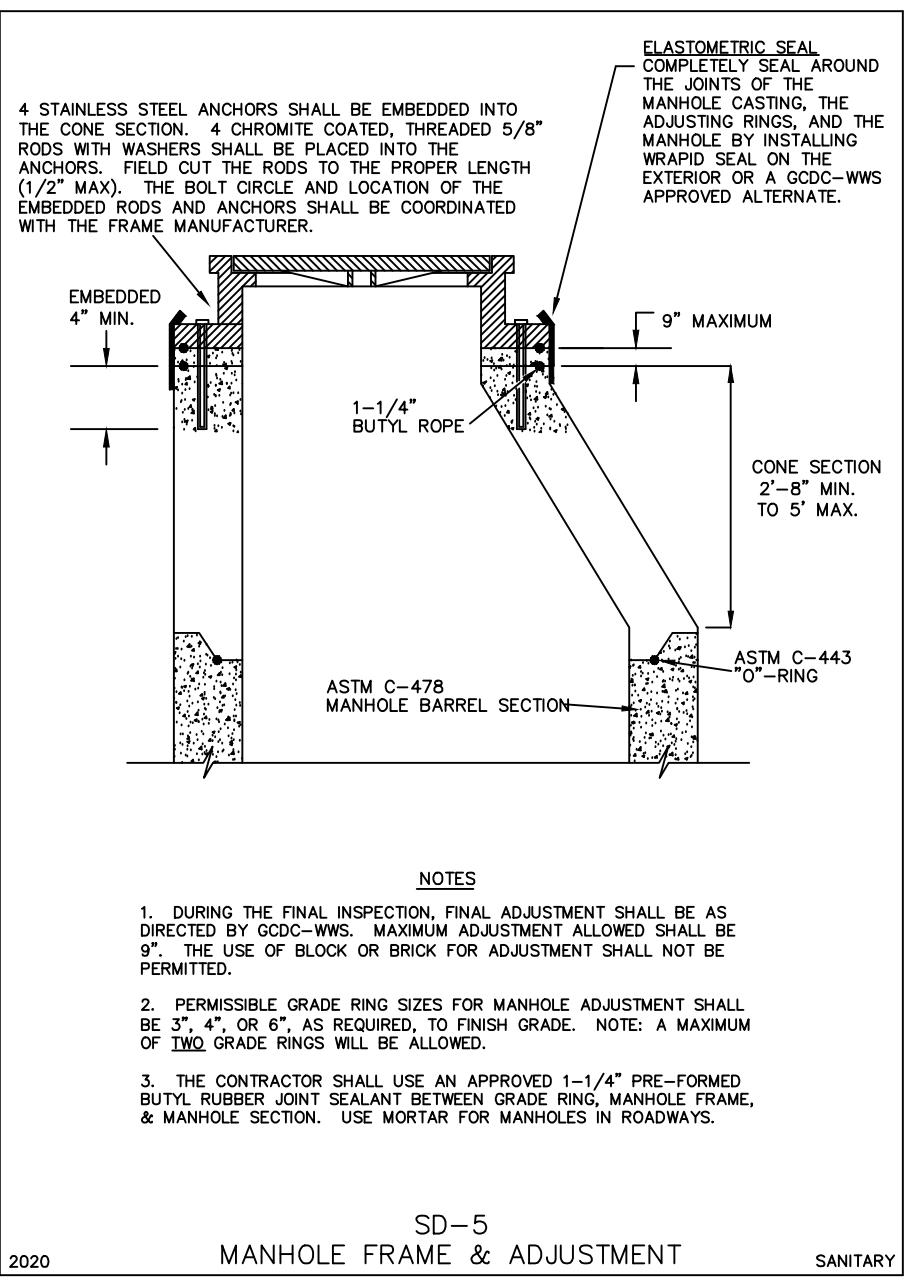
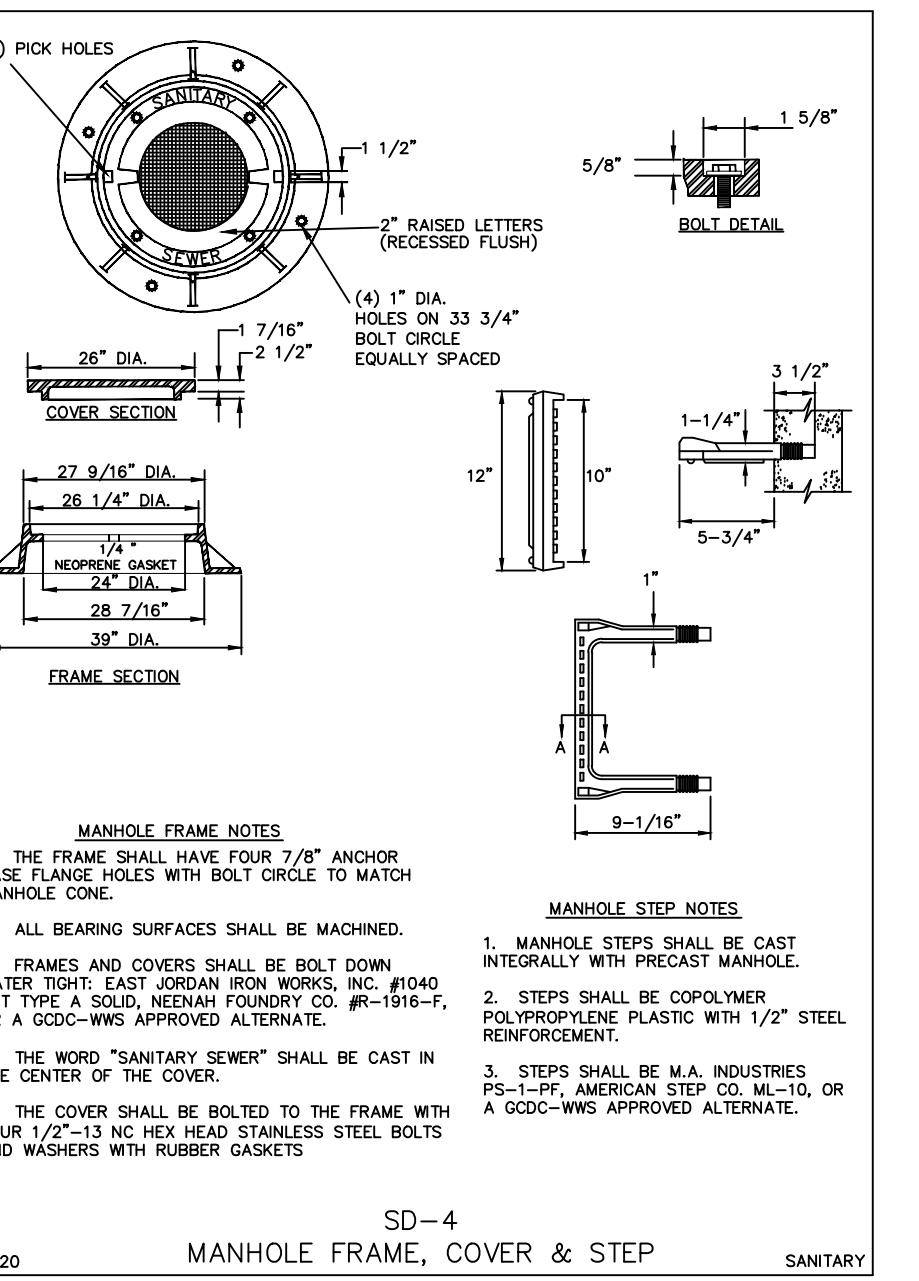
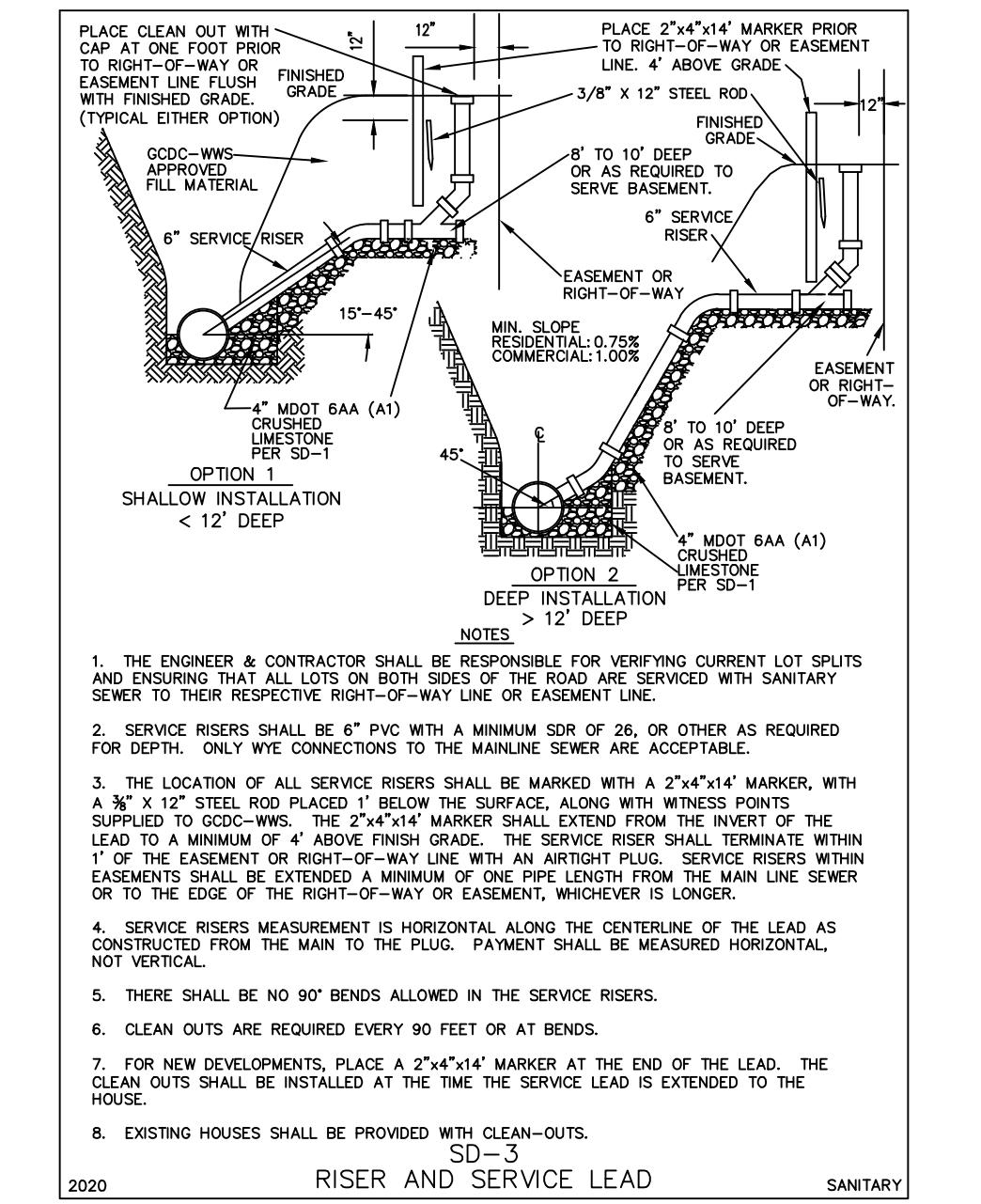
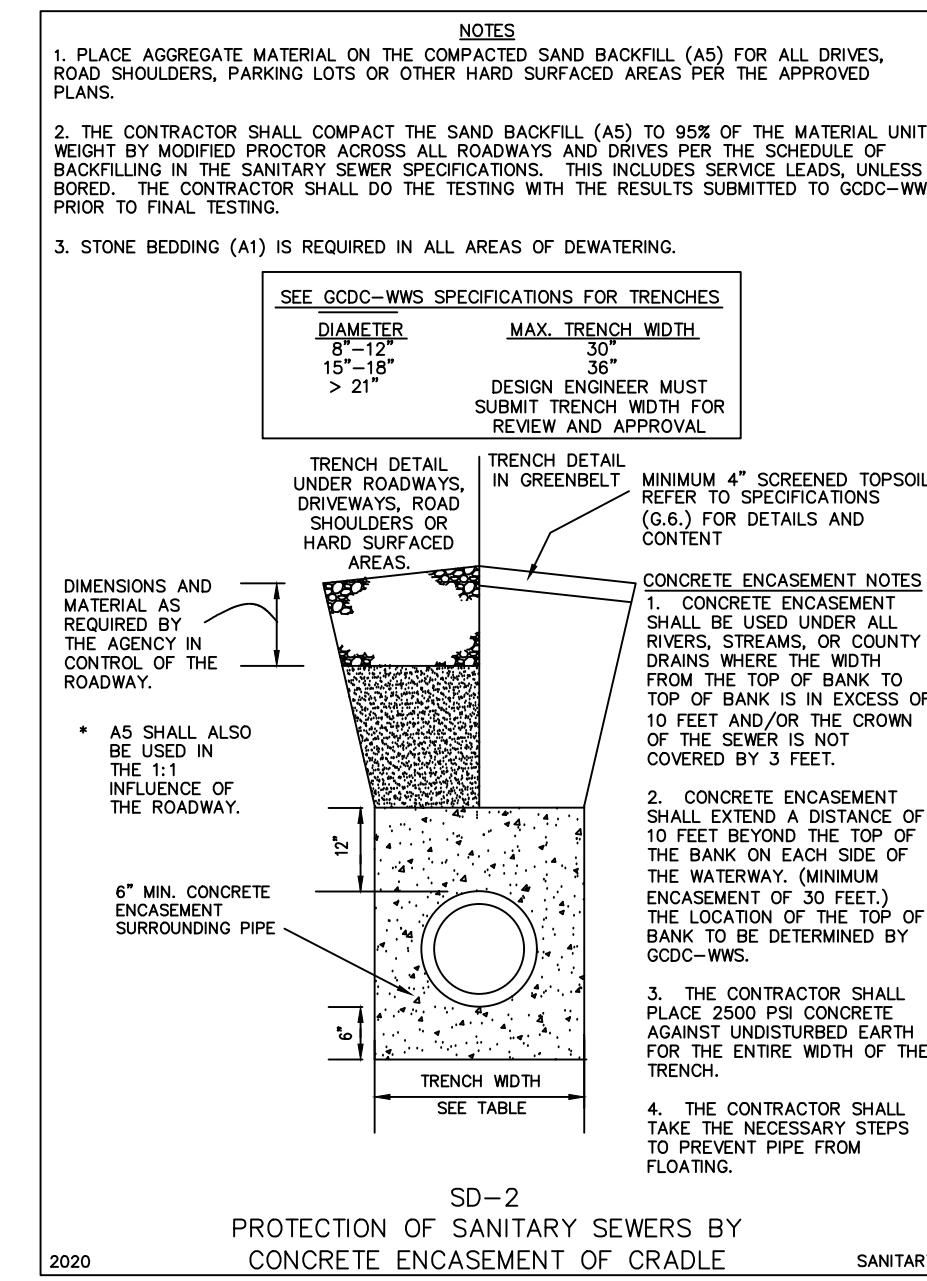
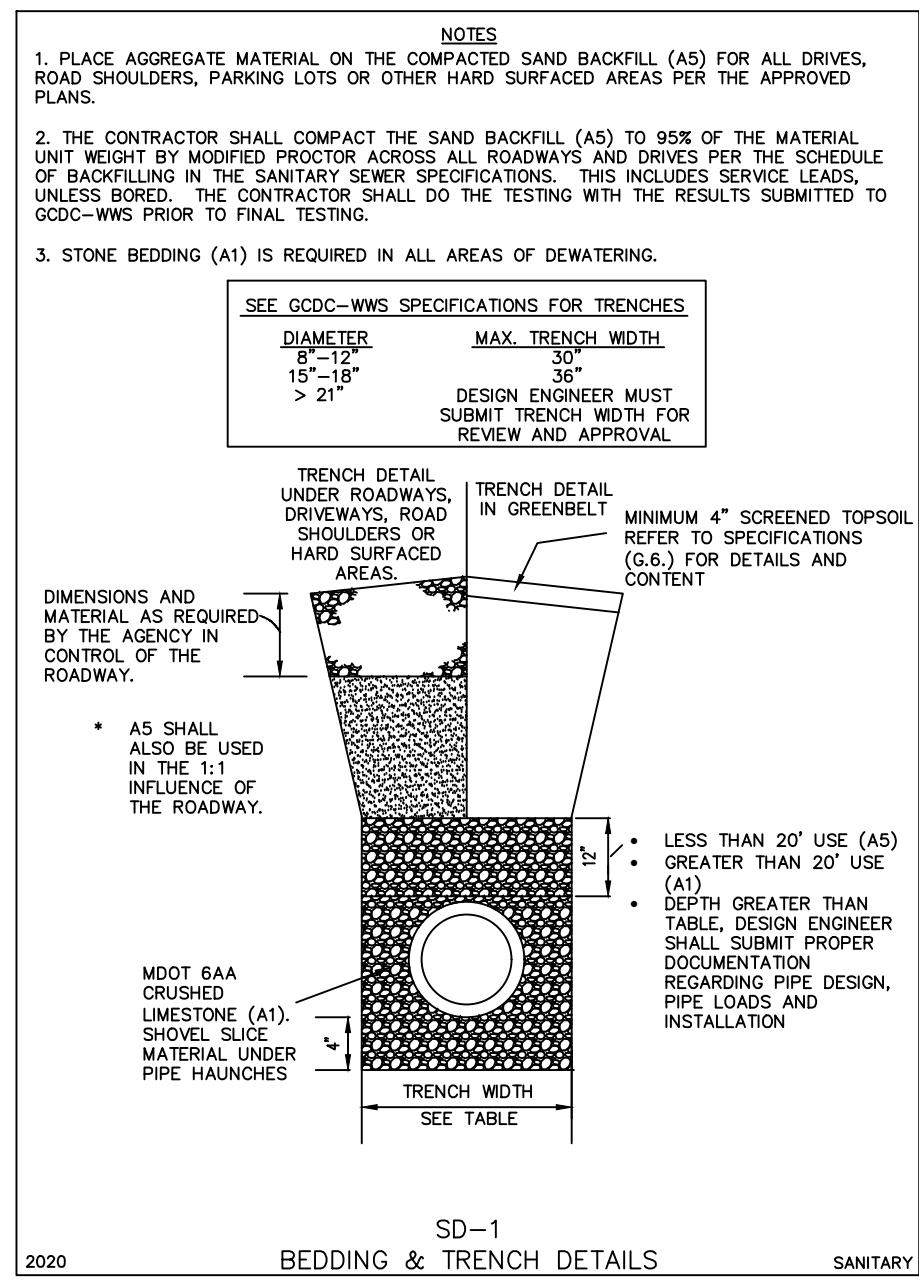
D. COMPLETE FINAL ADJUSTMENTS ON ANY SANITARY SEWER STRUCTURES.

E. 13. WATERMAIN SHALL BE TESTED IN ACCORDANCE WITH MOST CURRENT VERSION OF AWWA C600 STANDARD, AND CHLORINATED IN ACCORDANCE WITH THE LATEST GENESEE COUNTY STANDARD SPECIFICATIONS. WATERMAIN SHALL BE TESTED TO 100 PSI AS MEASURED AT THE HIGH POINT IN THE WATERMAIN. WATERMAIN CHLORINATION SHALL BE OBSERVED AND MONITORED BY GCDC-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.

F. 14. WHEN PROVIDED, THESE LEADS SHALL BE COPPER AND SHALL BE A MINIMUM OF 3/4" IN DIAMETER. ALL LEADS SHALL BE INSTALLED IN ACCORDANCE WITH THE WATERMAIN STANDARD DETAILS. ALL CORPORATION AND COPPER LINES UPON A SATISFACTORY TEST AND INSTALL BRONZE PLUGS PRIOR TO FINAL APPROVAL.

G. 15. THE CONTRACTOR SHALL INSTALL, AS A MINIMUM, 2" CORPORATION ON THE PRESSURE PIPE FOR PRESSURE TESTING, CHLORINE ADDITION, AND FOR BLOW-OFF PURPOSES. THE CORPORATIONS SHALL HAVE COUPLES, EXTINGUISHERS, AND SIGHT GLASS. THE CONTRACTOR SHALL REMOVE THE CORPORATION AND BRONZE PLUGS FOR WATERMAIN ONLY.

H.



NO.	DATE	DESCRIPTION
1	2020	EIGHTH EDITION

