

REPAIRS TO STORM WATER COMPONENTS

TIPTON CORRECTIONAL CENTER

TIPTON, MISSOURI



OWNER: STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR
DEPARTMENT OF CORRECTIONS

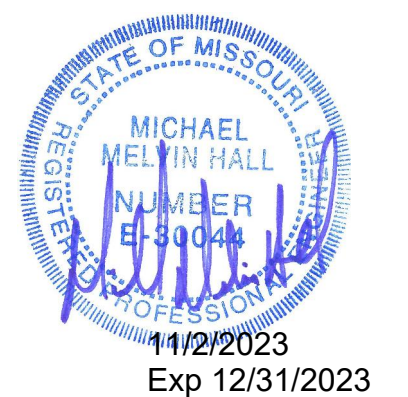
PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DESIGNER: McCLURE ENGINEERING COMPANY
MICHAEL M. HALL, P.E.
MHALL@MCCLUREVISION.COM

PROJECT NUMBER: C2306-03

SITE NUMBER: 7004

ASSET NUMBER: 9327004045





SYMBOL LEGEND

EXISTING / PROPOSED

- ⊙ SANITARY SEWER MANHOLE
- ⊙ SANITARY SEWER CLEANOUT
- ⊙ AIR RELEASE MANHOLE/DRAIN MANHOLE
- ⊙ STORM SEWER MANHOLE
- ⊙ STORM SEWER CLEANOUT
- ⊙ STORM SEWER INTAKE
- ⊙ STORM SEWER BEEHIVE INTAKE
- ⊙ FLARED END SECTION
- ⊙ FIRE HYDRANT
- ⊙ WATER VALVE
- ⊙ WATER VALVE MANHOLE
- ⊙ WATER METER MANHOLE
- ⊙ YARD HYDRANT
- ⊙ ELECTRIC MANHOLE / VAULT
- ⊙ ELECTRIC PEDESTAL / TRANSFORMER
- ⊙ OUTDOOR ELECTRIC POWER OUTLET
- ⊙ POWER POLE
- ⊙ POWER POLE w/ STREET LIGHT
- ⊙ STREET LIGHT POLE
- ⊙ GUY WIRE
- ⊙ TRAFFIC SIGNAL
- ⊙ TRAFFIC SIGNAL BOX
- ⊙ TRAFFIC SIGNAL MANHOLE / VAULT
- ⊙ RAILROAD CROSSING SIGNAL
- ⊙ TELEPHONE MANHOLE / VAULT
- ⊙ TELEPHONE PEDESTAL
- ⊙ CABLE TV MANHOLE / VAULT
- ⊙ CABLE TV PEDESTAL
- ⊙ GAS VALVE
- ⊙ IRON PIN FOUND/PROPERTY PIN
- ⊙ BOLLARD (BUMPER POST)
- ⊙ MISCELLANEOUS SIGN
- ⊙ MAILBOX
- ⊙ WELL
- ⊙ DECIDUOUS TREE
- ⊙ EVERGREEN TREE
- ⊙ SHRUB OR BUSH
- ⊙ TREE OR SHRUB LINE
- ⊙ STUMP
- ⊙ SANITARY SERVICE
- ⊙ SOIL BORINGS
- ⊙ FLAG POLE
- ⊙ SLOPE INDICATORS
- ⊙ CONTROL POINT
- ⊙ BENCH MARK
- ⊙ IRON PIN SET
- ⊙ PROPERTY PIN
- ⊙ CURB STOP
- ⊙ HOUSE NUMBER SIGN
- ⊙ SATELLITE DISH
- ⊙ SECTION CORNER

LINETYPE LEGEND

EXISTING / PROPOSED

- 8"SS SANITARY SEWER MAIN
- SS SANITARY SEWER SERVICE
- FM SANITARY SEWER FORCE MAIN
- 8"ST STORM SEWER MAIN OR CULVERT
- STORM SEWER MAIN
- 8"W WATER MAIN
- W WATER SERVICE
- UE UNDERGROUND ELECTRIC
- OHE OVERHEAD ELECTRIC
- T UNDERGROUND TELEPHONE
- FO UNDERGROUND FIBER OPTIC
- TV UNDERGROUND CABLE TV
- G GAS MAIN OR SERVICE
- CONTOUR LINES INTERMEDIATE
- CONTOUR LINES INDEX
- PROPERTY LINE / LOT LINE
- SECTION LINE
- EASEMENT
- GUARD RAIL
- FIELD FENCE
- CHAIN LINK FENCE
- WOODEN FENCE
- ROAD CENTERLINE
- CONSTRUCTION LIMITS
- WATERWAY FLOWLINE
- TOP OF SLOPE
- BOTTOM OF SLOPE
- SILT FENCE
- UTILITY TO BE ABANDONED

GENERAL NOTES:

STATE OFFICE OF ADMINISTRATION DESIGN SPECIFICATIONS AND THE PROJECT SPECIFICATIONS SHALL GOVERN.

THE CONTRACTOR SHALL LOCATE ALL UTILITIES AROUND THE PROJECT LOCATION PRIOR TO EXCAVATION OR CONSTRUCTION.

ALL MISSOURI DEPARTMENT OF CORRECTIONS PROTOCOLS FOR SAFETY AND SECURITY MUST BE MAINTAINED AT ALL TIMES, NO EXCEPTIONS.

SITE NOTES:

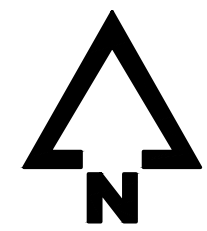
- THESE PLANS WERE GENERATED FROM AVAILABLE RECORDS OF EXISTING DESIGN DOCUMENTS AND FIELD SURVEYS CONDUCTED FOR THIS PROJECT. FIELD VERIFICATION OF ALL ELEVATIONS AND EXISTING CONDITIONS SHOWN ON THE PLANS SHOULD BE MADE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. MCCLURE ENGINEERING COMPANY DOES NOT IMPLY OR GUARANTEE ACCURACY OF THE EXISTING INFORMATION REPRESENTED ON THE PLANS.
- NOTIFY ALL UTILITY COMPANIES KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT CRITICAL LOCATIONS TO VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION.
- MISSOURI UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION STATUTE (RSMO CHAPTER 319) REQUIRES NOTICE TO MISSOURI ONE CALL 1-800-DIG-RITE (OR 811) NOT LESS THAN 72 HOURS OR MORE THAN 10 WORKING DAYS PRIOR TO BEGINNING EXCAVATION, EXCLUDING WEEKENDS AND HOLIDAYS. SEE WWW.MO1CALL.COM FOR ADDITIONAL DETAILS.
- THE MEANS AND METHODS OF SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
- PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
- MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
- SITE CLEAN-UP SHALL BE PERFORMED ON AN DAILY BASIS. SIDEWALKS, PARKING LOTS, ROADWAYS, ETC. SHALL BE KEPT CLEAN AT ALL TIMES.
- ALL OPEN EXCAVATIONS SHALL BE PROTECTED. ORANGE CONSTRUCTION FENCE AS A MINIMUM.
- REPLACE ANY PROPERTY MONUMENTS REMOVED, DISTURBED OR DESTROYED DURING CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF MISSOURI.
- CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS PER SPECIFICATION 024113.
- ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
- REPAIR OR REPLACE EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) TO REMAIN, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- WORK THAT DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY MCCLURE ENGINEERING COMPANY AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE DIRECTION OF MCCLURE ENGINEERING COMPANY, WORK DONE BEYOND THE PROJECT LIMITS OR ANY EXTRA WORK DONE WITHOUT AUTHORIZATION WILL NOT BE PAID FOR.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

LAND DISTURBANCE NOTE:

- THIS PROJECT DISTURBS MORE THAN ONE ACRE - SEE STATE OF MISSOURI PERMIT INCLUDED WITH THE PROJECT MANUAL.

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SITE LOCATION

CIVIL ABBREVIATIONS

- A.C.C. ASPHALT CEMENT CONCRETE
- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- ASTM AMERICAN SOCIETY FOR TESTING & MATERIALS
- ASSY ASSEMBLY
- AWWA AMERICAN WATER WORKS ASSOCIATION
- BC BACK OF CURB
- BM BENCH MARK
- BOT BOTTOM OF SLOPE
- C CUT
- CP CONTROL POINT
- CL CENTERLINE
- DIP DUCTILE IRON PIPE
- EP EDGE OF PAVEMENT
- F FILL
- FES FLARED END SECTION
- FL FLOWLINE
- HMA HOT MIX ASPHALT
- MAX. MAXIMUM
- MIN. MINIMUM
- OFFSET
- P.C.C. PORTLAND CEMENT CONCRETE
- PSI. PRESSURE PER SQUARE INCH
- R.O.W. RIGHT OF WAY
- RCP REINFORCED CONCRETE PIPE
- R/R RAILROAD
- SQ.FT. SQUARE FEET
- SY SQUARE YARD
- TC TOP OF CURB
- T/S TOP OF SLAB
- TOS TOP OF SLOPE
- Typ. TYPICAL
- UPRR UNION PACIFIC RAILROAD

ROCK BLANKET:

ROCK BLANKET SHALL BE PROVIDED AND PLACED AT EACH LOCATION NOTED ON THE PLANS AND SHALL MATCH EXISTING GROUNDLINE AS CLOSE AS POSSIBLE. EXCAVATION REQUIRED TO PLACE ROCK BLANKET SHALL BE CONSIDERED INCIDENTAL.

MATERIAL FOR ROCK BLANKET SHALL BE DURABLE STONE CONTAINING A COMBINED TOTAL OF NO MORE THAN 10 PERCENT OF SOIL, SAND, SHALE OR NON-DURABLE ROCK.

MATERIAL SHALL CONTAIN A LARGE PERCENTAGE OF PIECES AS LARGE AS THE THICKNESS OF BLANKET WILL PERMIT, WITH ENOUGH SMALLER PIECES OF VARIOUS SIZES TO FILL THE LARGER VOIDS. FOR TYPE 2 ROCK BLANKET AT LEAST 60 PERCENT OF THE MASS SHALL BE PIECES HAVING A VOLUME OF 1 CUBIC FOOT OR MORE. ACCEPTANCE OF QUALITY AND SIZE OF MATERIAL WILL BE MADE BY VISUAL INSPECTION AT THE JOB SITE BY THE ENGINEER.

A TRENCH AT TOE OF ROCK SLOPE SHALL BE EXCAVATED TO A DEPTH OF 4 FEET. ROCK SHALL BE PLACED ON SLOPE TO SPECIFIED THICKNESS AND MANIPULATED SUCH THAT MOST FLAT SIDES ARE IN CONTACT WITH SUB-GRADE. THEREBY ELIMINATING LARGE VOIDS. FINISHED SURFACE OF BLANKET SHALL BE SET TO AN APPEARANCE FREE FROM SEGREGATION AND WITH A PROPORTIONATE QUANTITY OF LARGER PIECES SHOWING.

GEOTEXTILE/FILTER FABRIC:

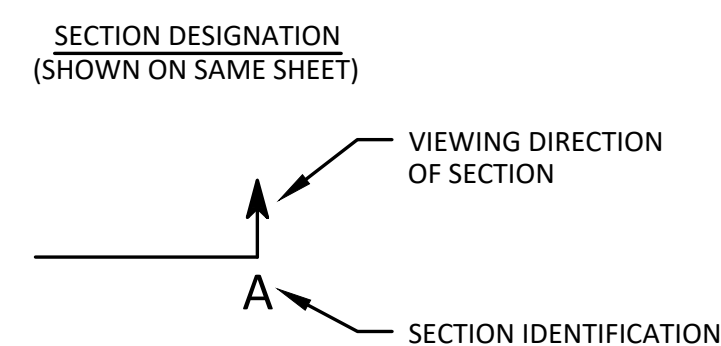
GEOTEXTILE FOR FILTER FABRIC SHALL BE IN ACCORDANCE WITH PHYSICAL AND CHEMICAL REQUIREMENTS OF AASHTO M 288.

PERMANENT EROSION CONTROL GEOTEXTILE SHALL BE USED UNDER THE ROCK BLANKET. THE MINIMUM PERMEABILITY SHALL BE 1.0 SEC-1. THE MATERIAL SHALL BE EITHER AASHTO CLASS 1 OR CLASS 2.

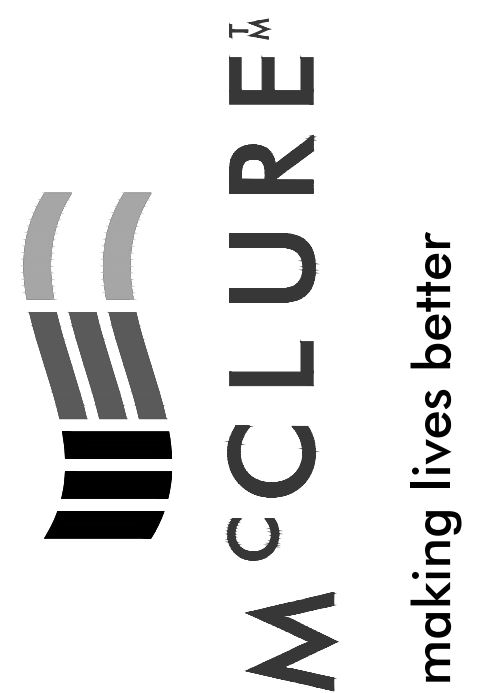
SUBSURFACE DRAINAGE GEOTEXTILE SHALL BE USED AS IN SUBSURFACE DRAINAGE AS A FILTER TO PROTECT DRAINAGE MEDIA FROM CLOGGING WITH FINES FROM ADJACENT SOIL SUCH AS WRAPPING OF DRAIN PIPES. MINIMUM PERMEABILITY SHALL BE 1.0 SEC-1. THE MATERIAL SHALL AASHTO CLASS 2.

SEPARATION GEOTEXTILE SHALL BE USED AS A SEPARATION MATERIAL TO PREVENT MIXING OF DISSIMILAR MATERIAL AND TO CONTROL MIGRATION OF BACKFILL MATERIAL. THE MINIMUM PERMEABILITY SHALL BE 1.0 SEC-1. THE MATERIAL SHALL AASHTO CLASS 01.

CIVIL LEGENDS



1901 Pennsylvania Dr.
Columbia, MO 65202
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www.mclurevision.com
MO CERTIFICATE OF
AUTHORITY
E-2006023253
S-2012009395
EXPIRES DEC. 31, 2024



OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN & CONSTRUCTION

DEPARTMENT OF
CORRECTIONS

REPAIRS TO
STORM WATER
COMPONENTS

TIPTON CORR. CENTER
619 N. OSAGE AVE., TIPTON,
MO 65081

PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 11/02/23

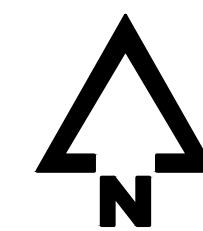
CAD DWG FILE: C2306-01-TP-G-GNL-02
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
**LOCATION MAP,
LEGEND &
GENERAL NOTES**

SHEET NUMBER:

G-002

2 OF 14 SHEETS
NOVEMBER 02, 2023



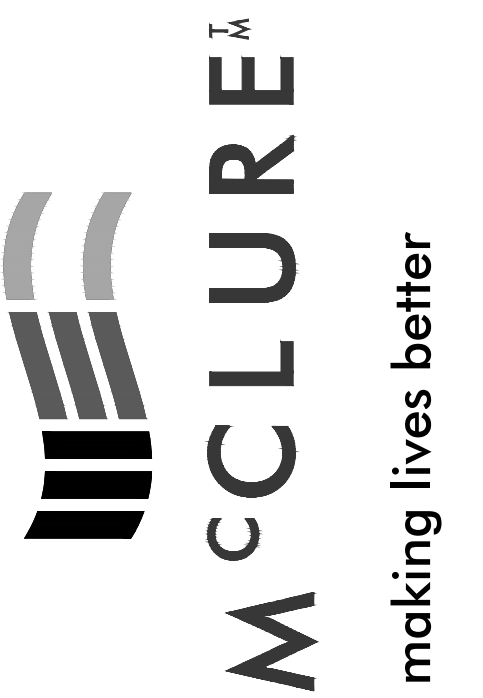
ACCESS CONTROL PLAN

ACCESS NOTES:

- ① STATE OFFICE OF ADMINISTRATION DESIGN SPECIFICATIONS AND THE PROJECT SPECIFICATIONS SHALL GOVERN.
- ② ALL MISSOURI DEPARTMENT OF CORRECTIONS PROTOCOLS FOR SAFETY AND SECURITY MUST BE MAINTAINED AT ALL TIMES, NO EXCEPTIONS.
- ③ WORK IS WITHIN THE SECURED AREA OF THE CORRECTIONAL CENTER. NO WORK CAN BE PERFORMED WITHOUT DEPARTMENT OF CORRECTIONS PERSONNEL PRESENT.
- ④ SCHEDULE OF ACCESS MUST BE PROVIDED IN ADVANCE TO THE DESIGNATED DEPARTMENT OF CORRECTIONS POINT OF CONTACT. VARIATIONS IN SCHEDULE MUST BE PROVIDED IN ADVANCE.



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619 N. OSAGE AVE., TIPTON,
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ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-TP-G-GNL-03
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

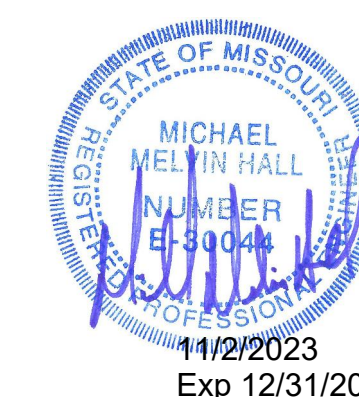
SHEET TITLE:

**CONSTRUCTION
STAGING &
ACCESS CONTROL**

SHEET NUMBER:

G-003

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NOVEMBER 02, 2023



11/2/2023
Exp 12/31/2023

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TIPTON CORR. CENTER
619 N. OSAGE AVE., TIPTON,
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SITE NO. 7004
ASSET NO. 9327004045

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DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-TP-G-GNL-04
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:

SWPPP NOTES

SHEET NUMBER:

G-004

4 OF 14 SHEETS
NOVEMBER 02, 2023

STORM WATER POLLUTION PREVENTION PLAN

CERTIFICATION STATEMENTS

This plan and certifications are a part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. MO-R10A000 as issued by the Missouri Department of Natural Resources for storm water discharges from Construction Site Activities.

PROJECT INFORMATION:

Site: Forest Lake Trail Phase II Location: Thousand Hills State Park, 20431 State Highway 157
City: Kirksville, Missouri County: Adair

PERMITTEE (OWNER) CERTIFICATION: CONTRACTOR CERTIFICATION STATEMENT certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

OWNER (PERMITTEE): _____ CONTRACTOR: _____

SIGNATURE: _____ SIGNATURE: _____

PRINT NAME: _____ PRINT NAME: _____

STREET ADDRESS: _____ STREET ADDRESS: _____

City _____ State _____ Zip _____ City _____ State _____ Zip _____

TELEPHONE NUMBER: _____ TELEPHONE NUMBER: _____

FAX NUMBER: _____ FAX NUMBER: _____

DATE: _____ DATE: _____

STORM WATER POLLUTION PLAN

The following plan is established and incorporated in the project to aid the contractor in the placement of temporary erosion control systems and to provide a storm sewer water pollution prevention plan for compliance under NPDES.

The purpose of this plan is to minimize erosion within the construction site and to limit sediments from leaving the construction site by utilizing proper temporary erosion control systems and providing ground cover within a reasonable amount of time.

Certain erosion control facilities shall be installed by the contractor at the beginning of construction. Other items shall be installed by the contractor as deemed necessary, on a case-by-case situation, depending on the contractor's sequence of activities, time of year and expected weather conditions.

The contractor shall install permanent erosion control systems and seeding within a time frame specified herein. Therefore minimizing the amount of area susceptible to erosion and reducing the amount of temporary seeding. Contractor shall further determine if any temporary erosion control systems shown in the plan can be deleted and if any additional temporary erosion control systems which are not included in this plan shall be added.

SITE DESCRIPTION.

- The project consists of construction of approximately 3,380 linear feet of 10-foot wide concrete trail with associated drainage, retaining walls and improvements.
- Construction includes tree removal, earth excavation, embankment, storm sewer, retaining walls, various pavement items, and other miscellaneous items of construction.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES, WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE.

- Placement, maintenance, removal and proper clean-up of temporary erosion control, such as perimeter erosion control barriers; temporary ditch checks; siltation basins, temporary seeding, etc.
- Tree removal as shown on the plans. Trees to remain will be protected against damage.
- Topsoil removal and stockpiling.
- Excavation and embankment at the job site to achieve the proposed site contours.
- Pavement work.
- Final grading, seeding, and other miscellaneous items.

Placement of permanent erosion control such as rippapped ditches, erosion control blanket, seeding, etc.

AREA OF CONSTRUCTION SITE:

- The total area of the construction is estimated to be 2.2 acres of which approximately 2.1 acres will be disturbed by excavation, grading, and other activities.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

- Project plan documents, specifications, hydraulic reports, and plan drawings indicate drainage patterns and approximate slopes anticipated after grading activities were utilized for the proposed placement of the temporary erosion control systems.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

- The names of receiving water(s) is an unnamed tributary to Forest Lake.
- Location of any sensitive areas (i.e. wetlands, habitats)

CONTROLS-EROSION CONTROLS AND SEDIMENT CONTROL:

1. DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION

The drawings and specifications should ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices include temporary seeding, permanent seeding, mulching, protection of trees, preservation of mature vegetation, and other appropriate measures. Stabilization measures shall be initiated immediately in portions of the site where construction activities have temporarily or permanently ceased, and completed in no more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased. Allowances to the seven (7) day completion period for temporary and permanent stabilization may be made due to weather and equipment malfunctions. The allowances shall be documented in the SWPPP.

- Areas of existing vegetation; wood and grasslands; outside the proposed construction limits shall be identified for preserving and shall be protected from construction activities.
- Dead, diseased, or unsuitable vegetation within the site shall be removed, along with required tree removal.
- As soon as reasonable access is available to all locations where water drains away from the project, temporary ditch checks, inlet and pipe protection, and perimeter erosion barrier shall be installed as called out in this plan.
- Bare and sparsely vegetated ground in high erodible areas shall be temporarily seeded at the beginning of construction where not construction activities are expected within seven days.
- Immediately after tree removal or stripping is completed, areas which are highly erodible shall be temporarily seeded

when no construction activities are expected within seven days.

- At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), temporary ditch checks or silt fencing will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the site.

Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and overseeding can be completed.

2. DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION

During construction, areas outside the construction limits as outlined previously herein shall be protected. The contractor shall not use this area for staging (except as described on the plans) and parking of vehicles or construction equipment, storage of materials, or other construction related activities.

- Within the construction limits, areas which may be susceptible to erosion, shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
- Earth stockpiles shall be temporarily seeded immediately if they are to remain unused for more than fourteen (14) days.
- As construction proceeds, the contractor shall institute the following:
 - Place temporary erosion control facilities at locations shown on the plans.
 - Temporarily seed erodible bare earth on a weekly basis to minimize the amount of erodible surface area within the contract limits.
 - Construct ditches and provide temporary erosion control systems including ditch lining and ditch stops.
 - Temporarily divert water around culvert locations.
 - Build necessary embankments at culvert locations and then excavate and place culvert.
 - Continue building up the embankment to the proposed grade while at the same time, placing permanent erosion control such as riprap ditch lining and conducting final shaping to the slopes.
 - Excavated areas and embankment shall be permanently seeded immediately after final grading. If not, they shall be temporarily seeded immediately if no construction activity in the area is planned for 7 days.
 - Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.
 - The contractor shall inspect the project daily during construction activities. Inspection shall also be done weekly and after heavy rains.
 - Sediment collected during construction of the various temporary erosion control systems shall be disposed of on the site on a regular basis.
 - The temporary erosion control systems shall be removed after use is no longer or no longer functioning.

3. DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING

- Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established.
- Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded.

MAINTENANCE AFTER CONSTRUCTION

- Construction is complete after acceptance by the Owner. Maintenance up to this date will be by the Contractor.

MISCELLANEOUS

- Temporary ditch checks shall be located at every 1.5 ft. fall/rise in ditch grade.
- Temporary erosion control seeding shall be applied at a rate of 100 lbs/acres.
- Straw bales, hay bales, perimeter erosion barrier and silt fences will not be permitted for permanent ditch checks. Ditch checks shall be composed of aggregate, silt panels, rolled excelsior, geotextile web grids and/or other equal materials.
- Sediment collected during construction by the various temporary erosion control systems shall be disposed on the site on a regular basis.

INSPECTIONS

The Permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once every seven calendar days. These inspections shall be conducted by a qualified personnel, one who is responsible for environmental matters at the site, or a person directly supervised by the person responsible for environmental matters. For disturbed areas that have not been finally stabilized, all installed BMP's and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected within seven calendar days of the inspection. All BMP's must be inspected in accordance with one of the two schedules listed below, and any changes to the frequency of inspections, including switching between the options listed below, must be documented in the SWPPP:

- At least once every seven calendar days and within 48 hours after any storm event equal to or greater than the 2-year, 24-hour storm has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday.
- Once every 14 calendar days and within 48 hours of the occurrence of a storm event of 0.25 inches of precipitation or greater, or the occurrence of runoff from snow melt. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on site, or obtain the storm event information from a weather station for your location

ON SITE INSPECTOR NAME: _____

COMPANY NAME: _____

STREET ADDRESS: _____

City _____ State _____ Zip _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

DATE: _____

- Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in

preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

- Based on the results of the inspection, the description of potential pollutant sources identified herein and pollution prevention measures identified herein shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.
- A report summarizing the scope of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken shall be made and retained as part of the plan for at least three (3) years after the date of the Letter of Termination. The report shall be signed in accordance with Requirements and Guidelines of the general permit.
- If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - a description of discharge and cause of noncompliance, and
 - the period of noncompliance, including exact dates and times or, if not corrected, the anticipated the noncompliance is expected to continue m and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or environment. Any information shall be provided orally with in 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

The report of noncompliance shall be mailed to the following address:

Missouri Department of Natural Resources
St. Louis Regional Office
7545 S. Lindbergh, Suite 210
St. Louis, Missouri 63125
(314) 416-2960
(314) 416-2960 fax

**Special Provision For
National Pollutant Discharge Elimination System**

This project will result in a disturbance of one (1) or more acres of total land area and will require compliance with the National Pollutant Discharge Elimination System (NPDES) Storm Water Permit.

The Owner is the PERMITTEE and the Contractors and Subcontractors will be required to certify that they understand and will comply with all requirements of the permit.

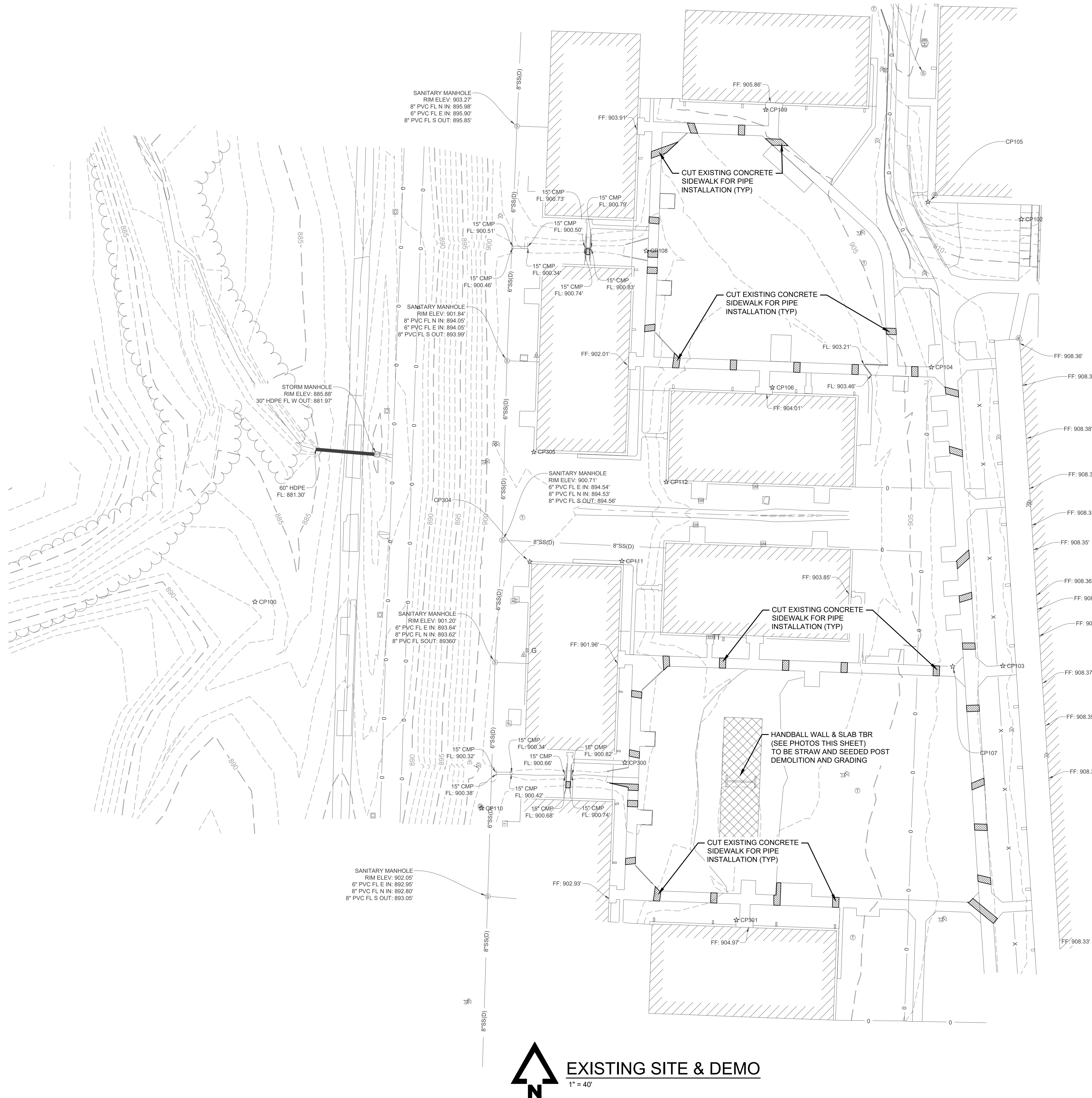
A storm water pollution plan shall be cooperatively developed by the PERMITTEE and contractor for this project using good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges. In addition, the plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with this project and assure compliance with the terms and conditions of the Storm Water Permit.

The EPERMITTING process on the Missouri Department of Natural Resource (MoDNR) website shall be completed in order to receive the Land Disturbance Permit. At the completion of the project stabilization the following form shall be completed and submitted to the MoDNR:

FORM H - REQUEST FOR TERMINATION OF A GENERAL PERMIT

The Contractor shall prepare a stormwater management plan which is certified by both the Owner and Contractor. The Contractor shall be responsible for obtaining the NPDES permit including but not limited to the permitting application for Land Disturbance Permit, Posting a copy of the public notification sign on the site and Request for Termination as well as maintaining the Stormwater Management Plan and maintenance records on-site.

f.



EXISTING SITE & DEMO
1" = 40'

PROJECT BENCHMARK TABLE			
BM#	NORTHING	EASTING	DESCRIPTION
102	1032150.32'	1560552.81'	913.82' CROSS CUT

PROJECT CONTROL POINTS TABLE			
CP#	NORTHING	EASTING	DESCRIPTION
100	1031849.10'	1559949.46'	888.40' 1/2 REBAR WBC
103	1031796.75'	1560538.29'	907.74' CROSS CUT
104	1032033.80'	1560481.98'	906.22' CROSS CUT
105	1032163.88'	1560479.37'	914.72' CROSS CUT
106	1032017.85'	1560356.85'	903.80' CROSS CUT
107	1031796.20'	1560498.82'	906.46' CROSS CUT
108	1032125.50'	1560257.51'	901.24' CROSS CUT

PROJECT CONTROL POINTS TABLE			
CP#	NORTHING	EASTING	DESCRIPTION
109	1032236.57'	1560351.59'	905.62' CROSS CUT
111	1031881.18'	1560238.36'	901.71' CROSS CUT
112	1031943.52'	1560273.31'	903.75' CROSS CUT
300	1031722.54'	1560240.68'	901.36' CROSS CUT
301	1031598.69'	1560328.48'	904.75' CROSS CUT
304	1031880.71'	1560165.83'	901.70' CROSS CUT
305	1031967.12'	1560168.99'	901.71' CROSS CUT

HORIZONTAL DATUM: MISSOURI STATE PLANE - CENTRAL ZONE - US FOOT
SCALED ABOUT CP#100 WITH A GROUND SCALE FACTOR OF 1.0000965544
VERTICAL DATUM: NAVD88, GEOID18

UTILITY WARNING:

THE UTILITIES DEPICTED ON THIS DOCUMENT HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

UTILITY QUALITY LEVELS:

UTILITY QUALITY LEVELS ARE BASED ON THE C/ASCE 38-02 STANDARD.

UTILITY QUALITY LEVEL A:
PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES

UTILITY QUALITY LEVEL B:
INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

UTILITY QUALITY LEVEL C:
INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D:
INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

ADDITIONALLY IN THE CASE OF MULTIPLE OWNERS OF THE SAME UTILITY TYPE SAID UTILITIES WILL BE ABBREVIATED WITH AN OWNER NUMBER (1, 2, 3, ETC) AND REFERENCED IN THE MISSOURI ONE CALL UTILITY INFORMATION SECTION.

EXAMPLES:

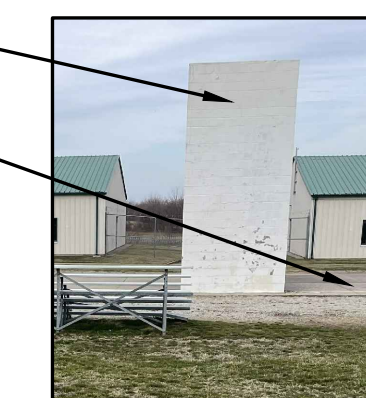
C1(B) UNDERGROUND COMMUNICATIONS - OWNER 1
C2(B) UNDERGROUND COMMUNICATIONS - OWNER 2

DEMOLITION NOTES:

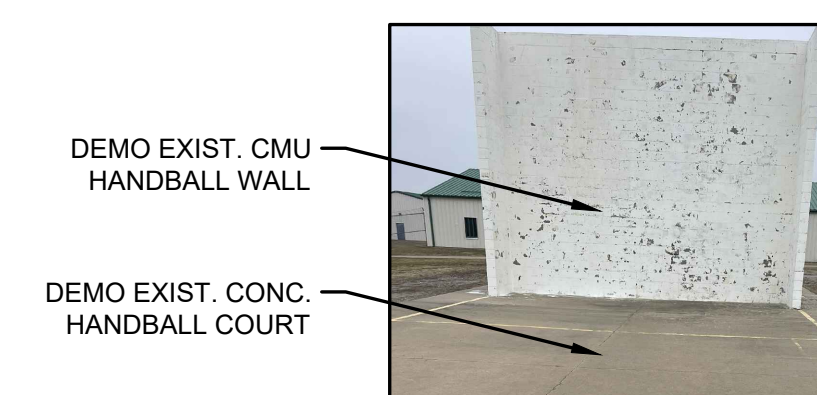
- CONTRACTOR TO REMOVE WALL, SLAB, & FOUNDATIONS IN ENTIRETY.
- CONTRACTOR SHALL IMPORT FILL TO BRING DEMO'D AREA UP TO GRADE.
- THERE ARE NO INSTALLATION DRAWINGS AVAILABLE FOR WALL & SLAB FOR REFERENCE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF DEMO'D MATERIAL OFF OF SITE.



WALL TBR - LOOKING EAST



WALL TBR - LOOKING WEST

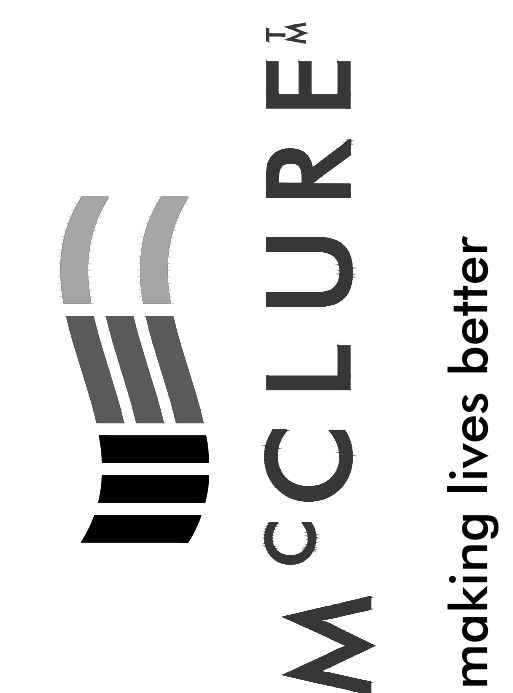


WALL TBR - LOOKING SOUTH



11/2/2023
Exp 12/31/2023

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DEPARTMENT OF
CORRECTIONS

REPAIRS TO
STORM WATER
COMPONENTS

TIPTON CORR. CENTER
619 N. OSAGE AVE., TIPTON,
MO 65081

PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

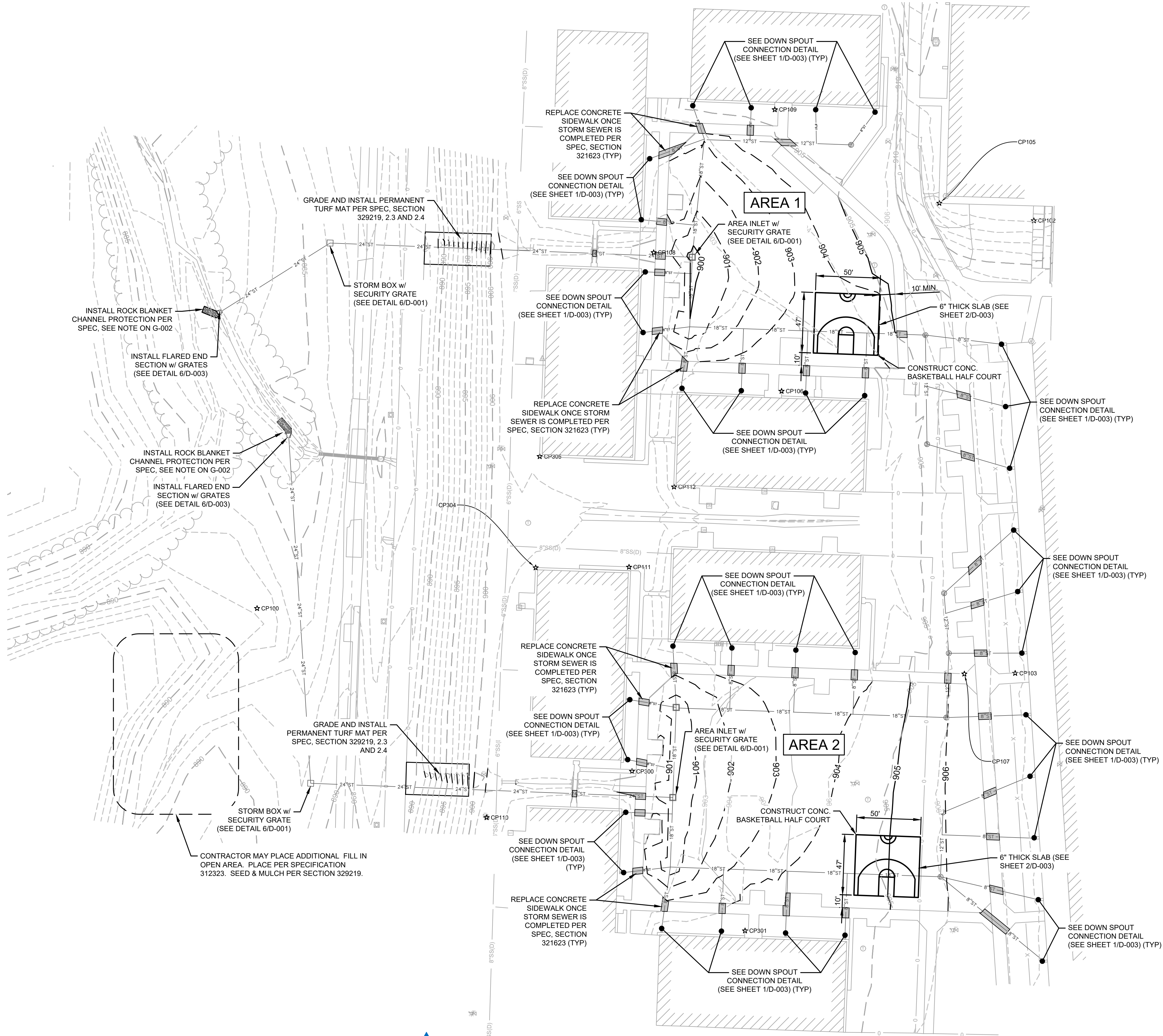
CAD DWG FILE: C2306-01-TP-CD-SITE-01
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
**EXISTING SITE &
DEMO PLAN**

SHEET NUMBER:

CD-001

5 OF 14 SHEETS
NOVEMBER 02, 2023



1 PROPOSED STORMWATER & DRAINAGE IMPROVEMENTS
SCALE: 1" = 40'-0"

GRADING SUMMARY:
QUANTITIES ARE FOR REFERENCE ONLY. PAYMENT ADJUSTMENT WILL BE MADE FOR ACTUAL QUANTITIES INSTALLED.

- SLAB DETAIL:**
- NOTE SLAB DETAIL (2/D-003)
 - GOAL (OWNER PROVIDE COORDINATE FOUNDATION)
 - STRIPPING (PER OWNER)

PROJECT BENCHMARK TABLE

BM#	NORTHING	EASTING	ELEV.	DESCRIPTION
102	1032150.32'	1560552.81'	913.82'	CROSS CUT

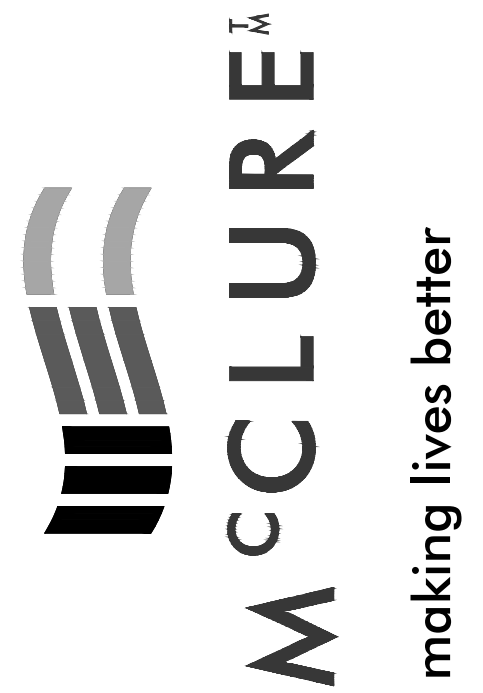
PROJECT CONTROL POINTS TABLE

CP#	NORTHING	EASTING	ELEV.	DESCRIPTION
100	1031849.10'	1559949.46'	888.40'	1/2 REBAR W/BC
103	1031798.75'	1560538.29'	907.74'	CROSS CUT
104	1032033.80'	1560481.98'	906.22'	CROSS CUT
105	1032163.88'	1560479.37'	914.72'	CROSS CUT
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304	1031880.71'	1560165.83'	901.70'	CROSS CUT
305	1031967.12'	1560168.99'	901.71'	CROSS CUT

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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TIPTON CORR. CENTER
619 N. OSAGE AVE.,
TIPTON, MO 65081

PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO.

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

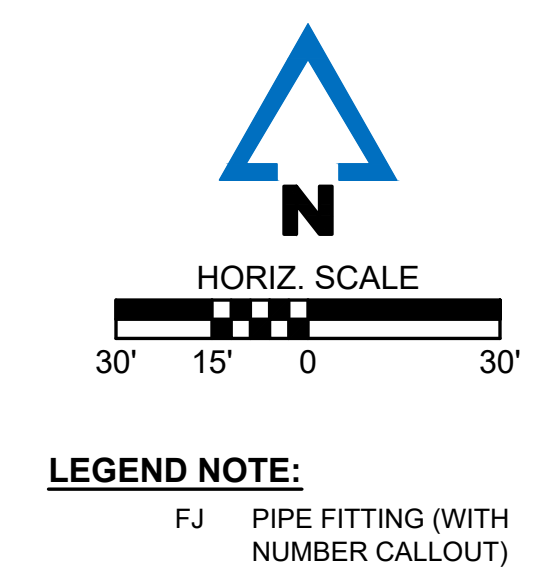
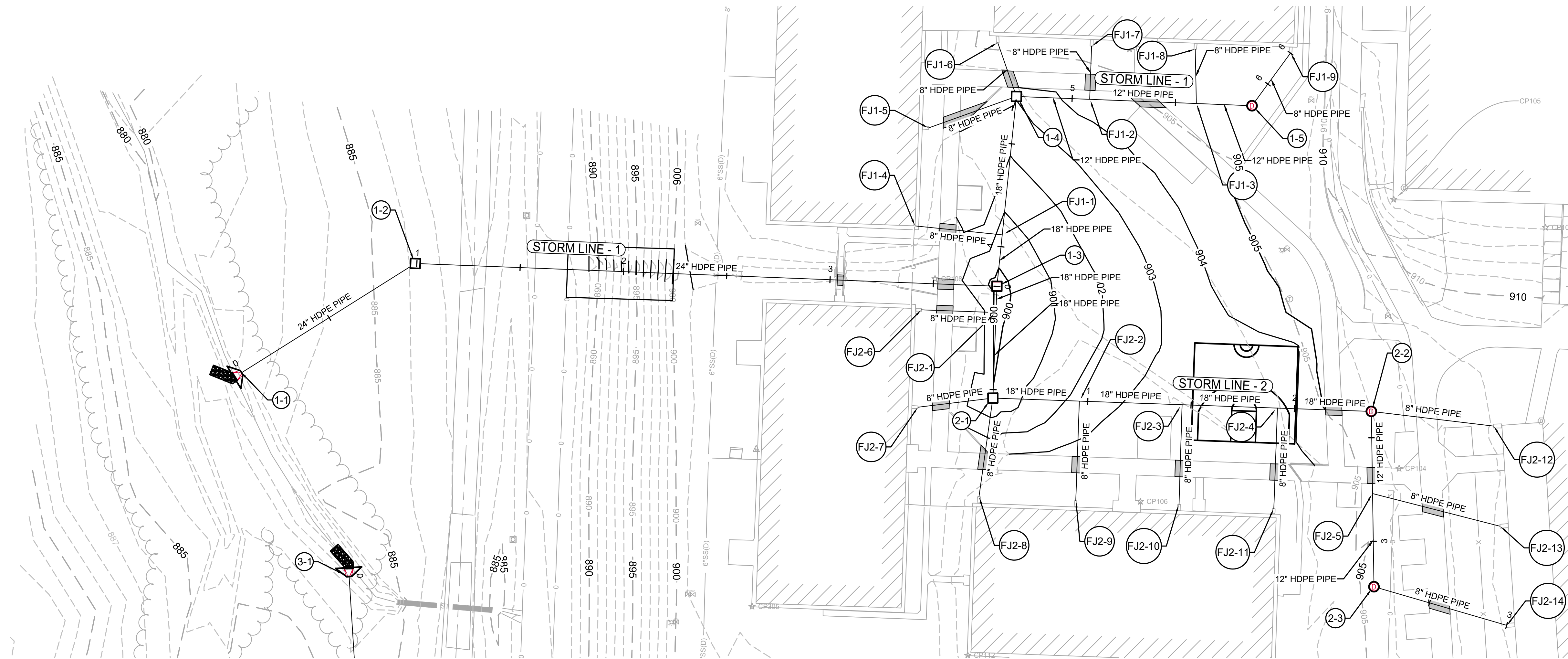
CAD DWG FILE: C2306-01-TP-C-SITE-01
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
PROPOSED SITE
PLAN

SHEET NUMBER:

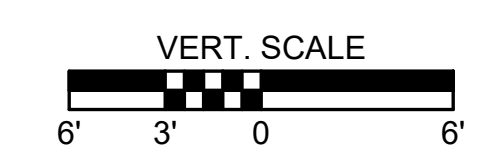
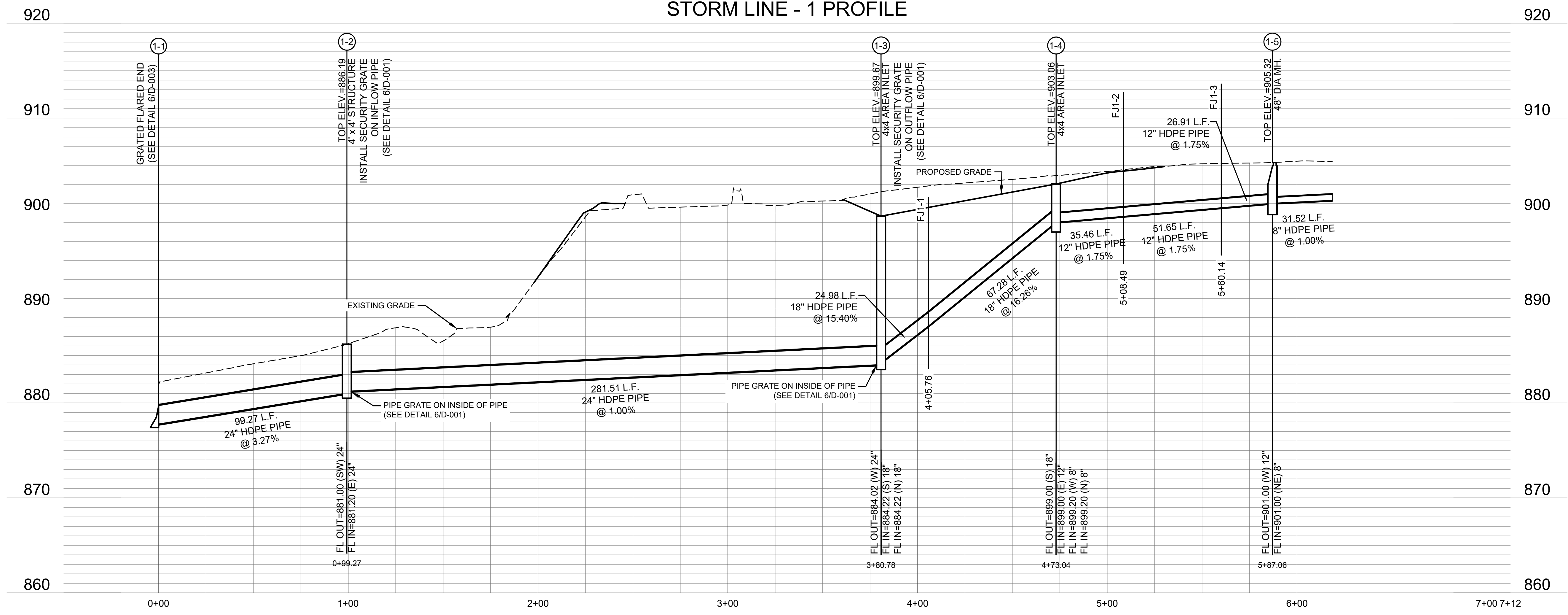
C-001

6 OF 14 SHEETS
NOVEMBER 02, 2023



1 RECREATION AREA NO. 1
SCALE: 1" = 30'-0"

STORM LINE - 1 PROFILE



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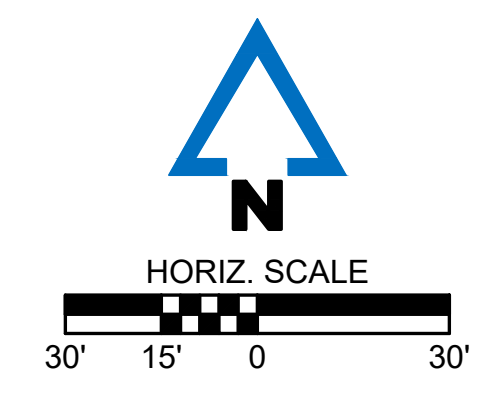
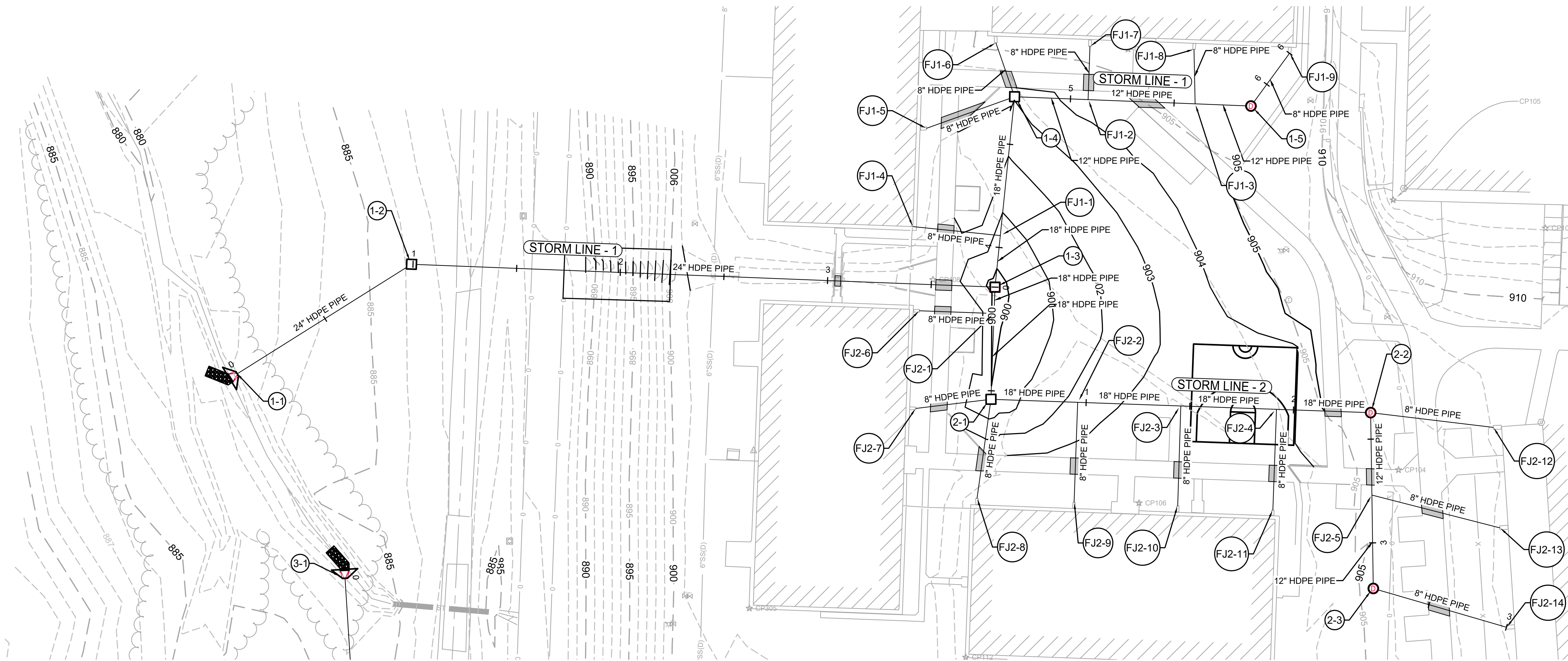
PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-TP-C-P&P-01
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
RECREATION
AREA NO. 1,
STORM LINE NO. 1,
PLAN & PROFILE
SHEET NUMBER:

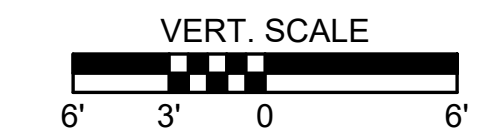
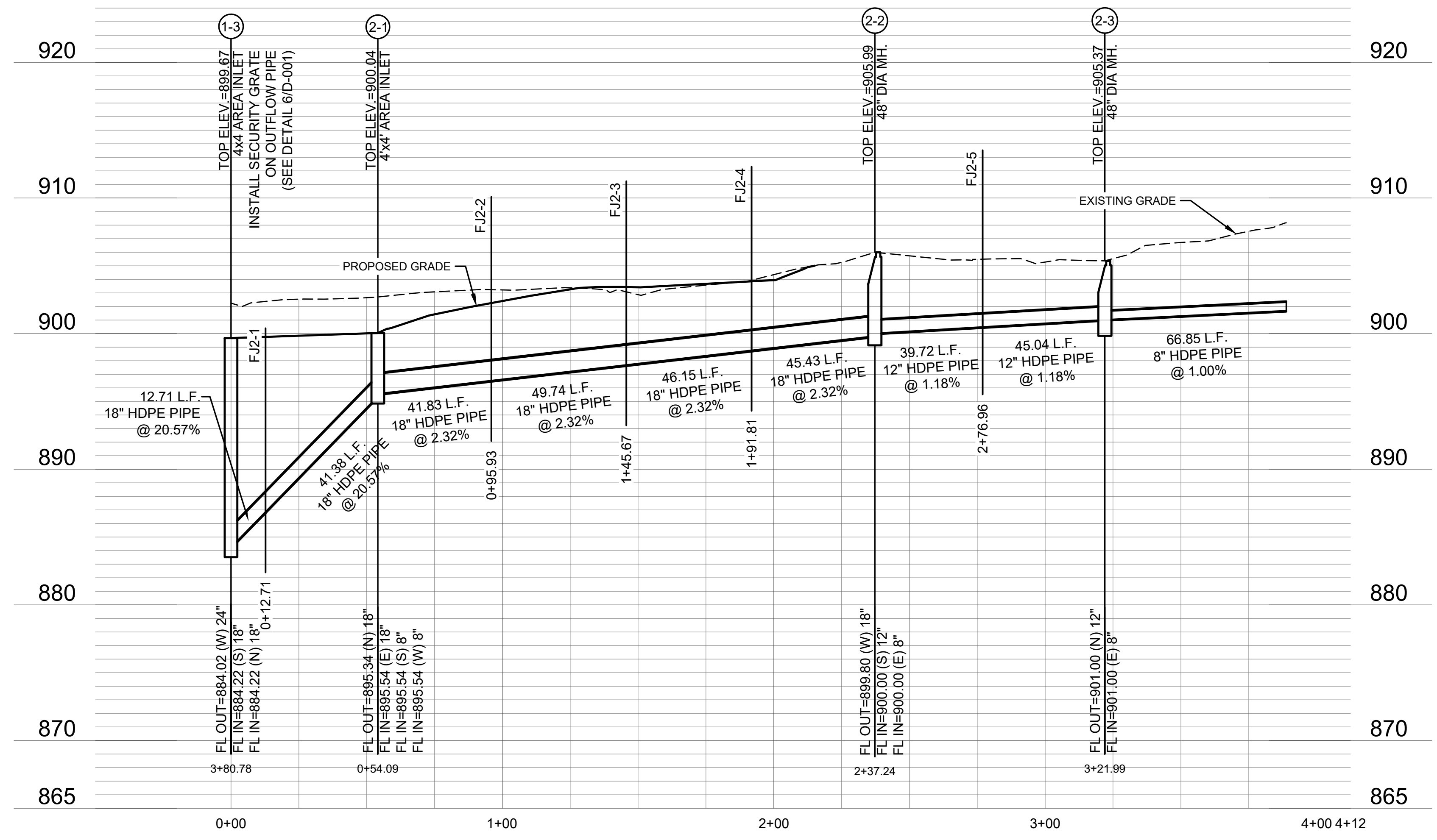
C-002



LEGEND NOTE:
FJ PIPE FITTING (WITH NUMBER CALLOUT)

1 RECREATION AREA NO. 1
SCALE: 1" = 30'-0"

STORM LINE - 2 PROFILE



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TIPTON CORR. CENTER
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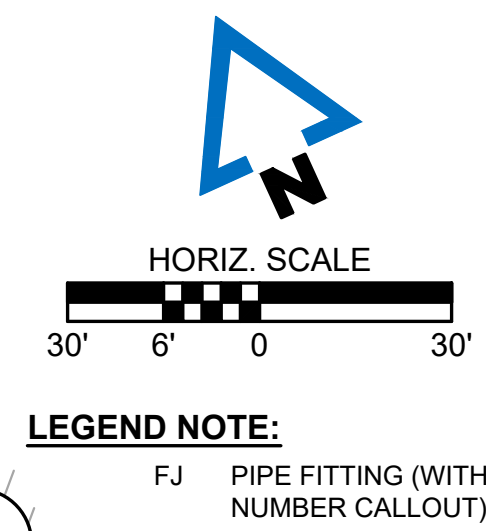
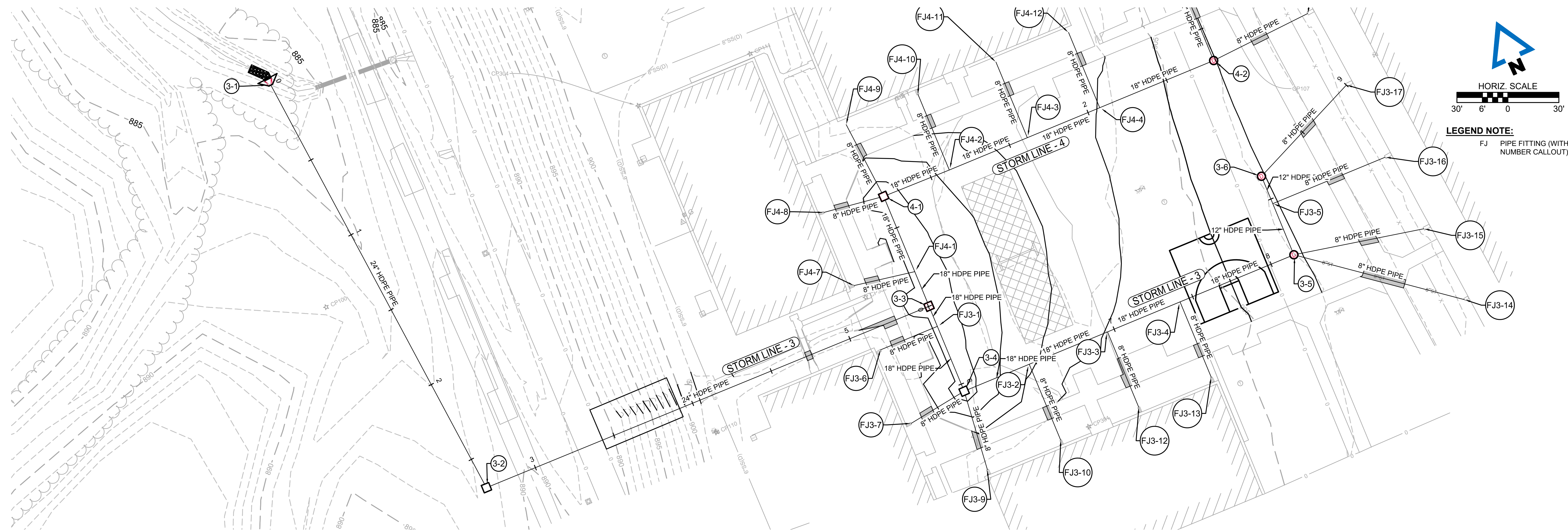
PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-TP-C-P&P-02
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

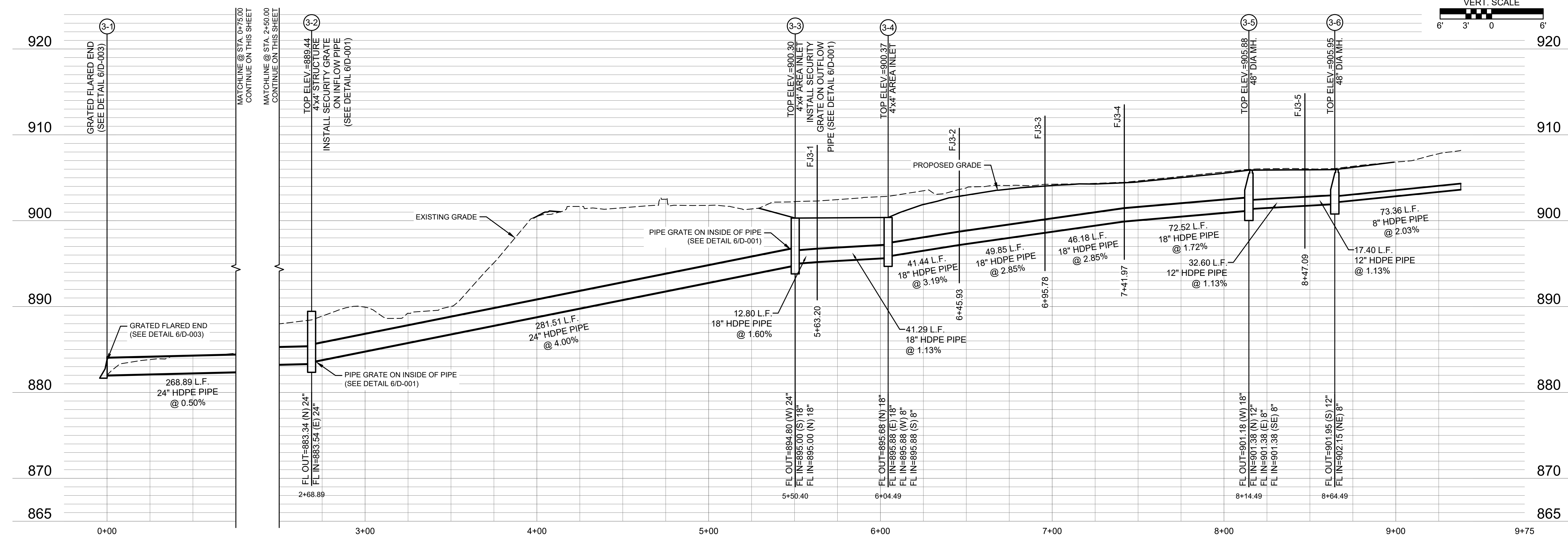
SHEET TITLE:
**RECREATION
AREA NO. 1,
STORM LINE NO. 2,
PLAN & PROFILE**
SHEET NUMBER:

C-003



1 RECREATION AREA NO. 2
SCALE: 1" = 30'-0"

STORM LINE - 3 PROFILE



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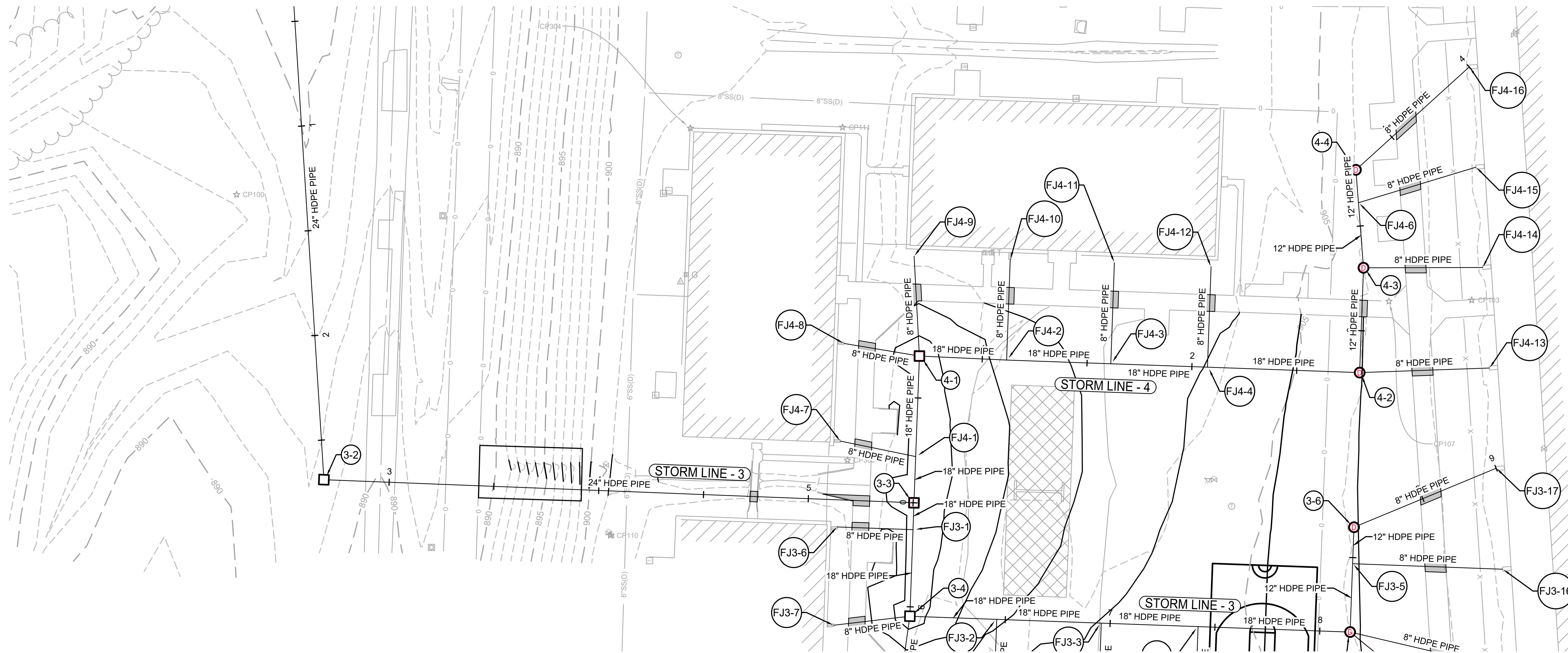
PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

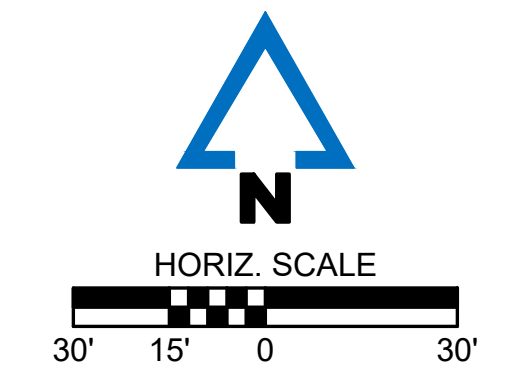
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DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
**RECREATION
AREA NO. 2,
STORM LINE NO. 3,
PLAN & PROFILE**
SHEET NUMBER:

C-004
9 OF 14 SHEETS
NOVEMBER 02, 2023



1 RECREATION AREA NO. 2
SCALE: 1" = 30'-0"



LEGEND NOTE:
FJ PIPE FITTING (WITH NUMBER CALLOUT)

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PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

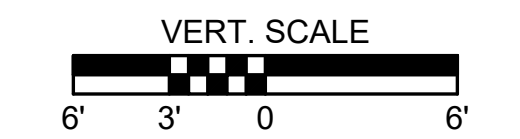
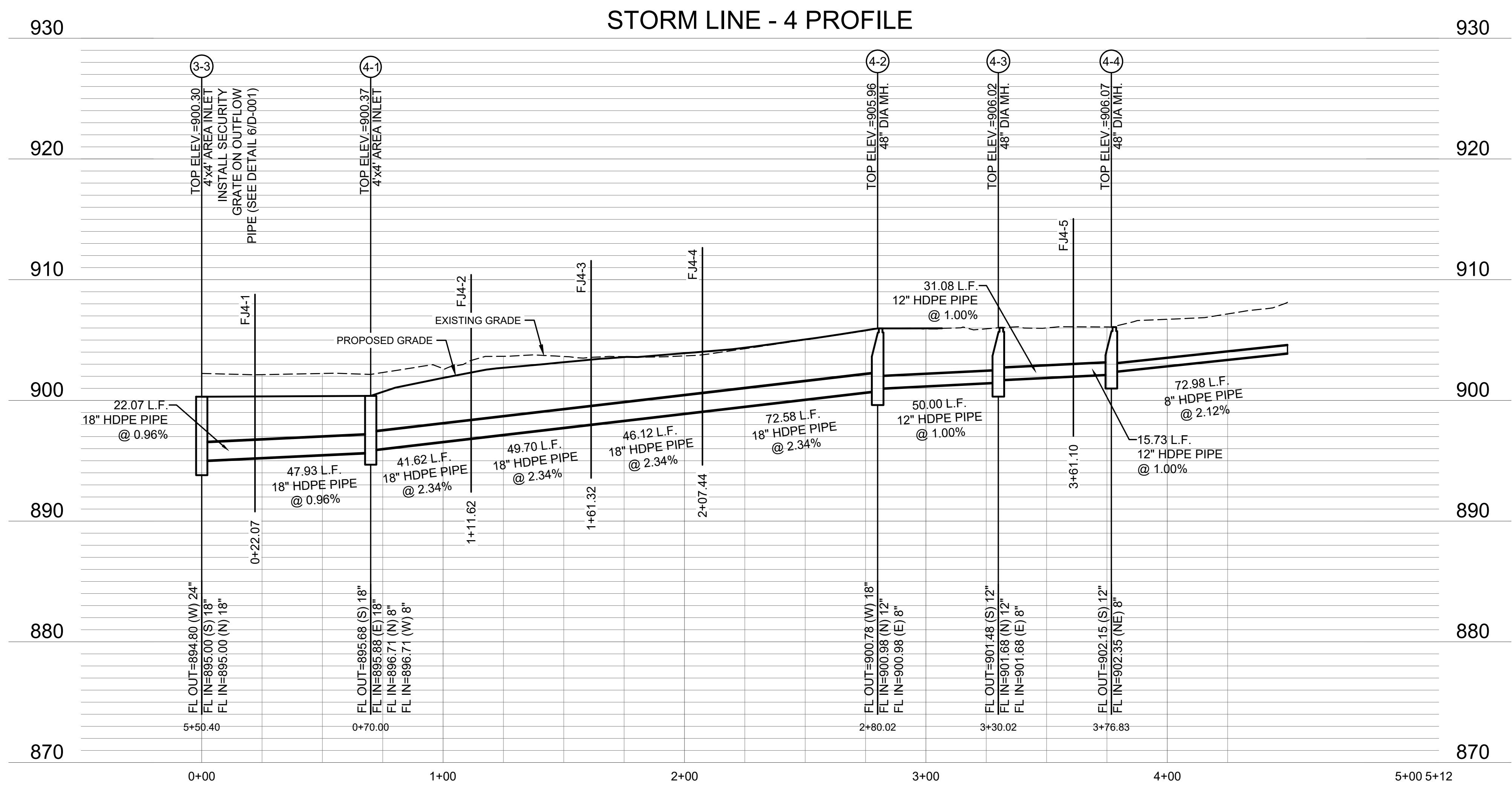
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REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-TP-C-P&P-04
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
RECREATION
AREA NO. 2,
STORM LINE NO. 4,
PLAN & PROFILE
SHEET NUMBER:

C-005

10 OF 14 SHEETS
NOVEMBER 02, 2023





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PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

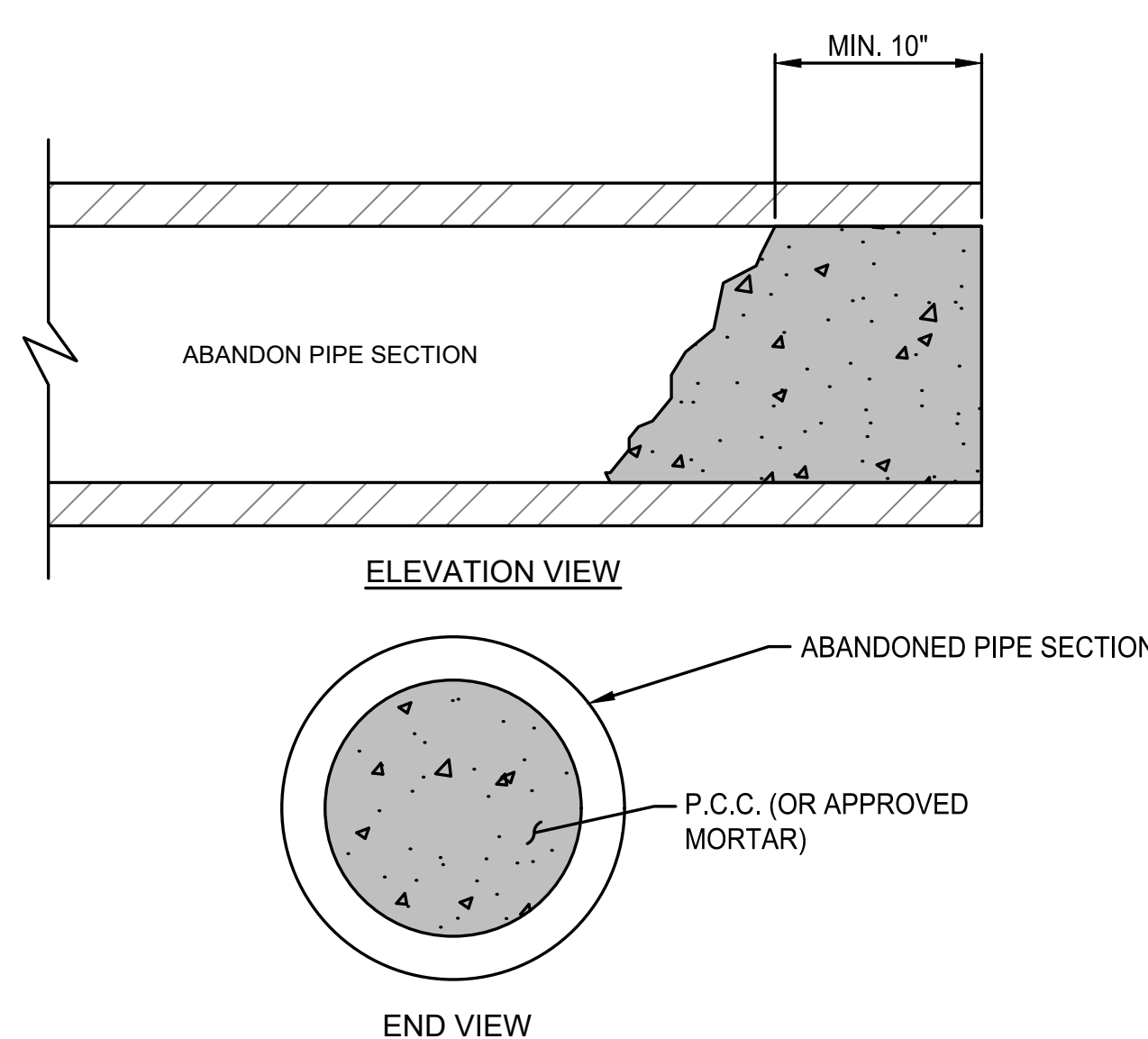
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DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
TRENCH DETAILS

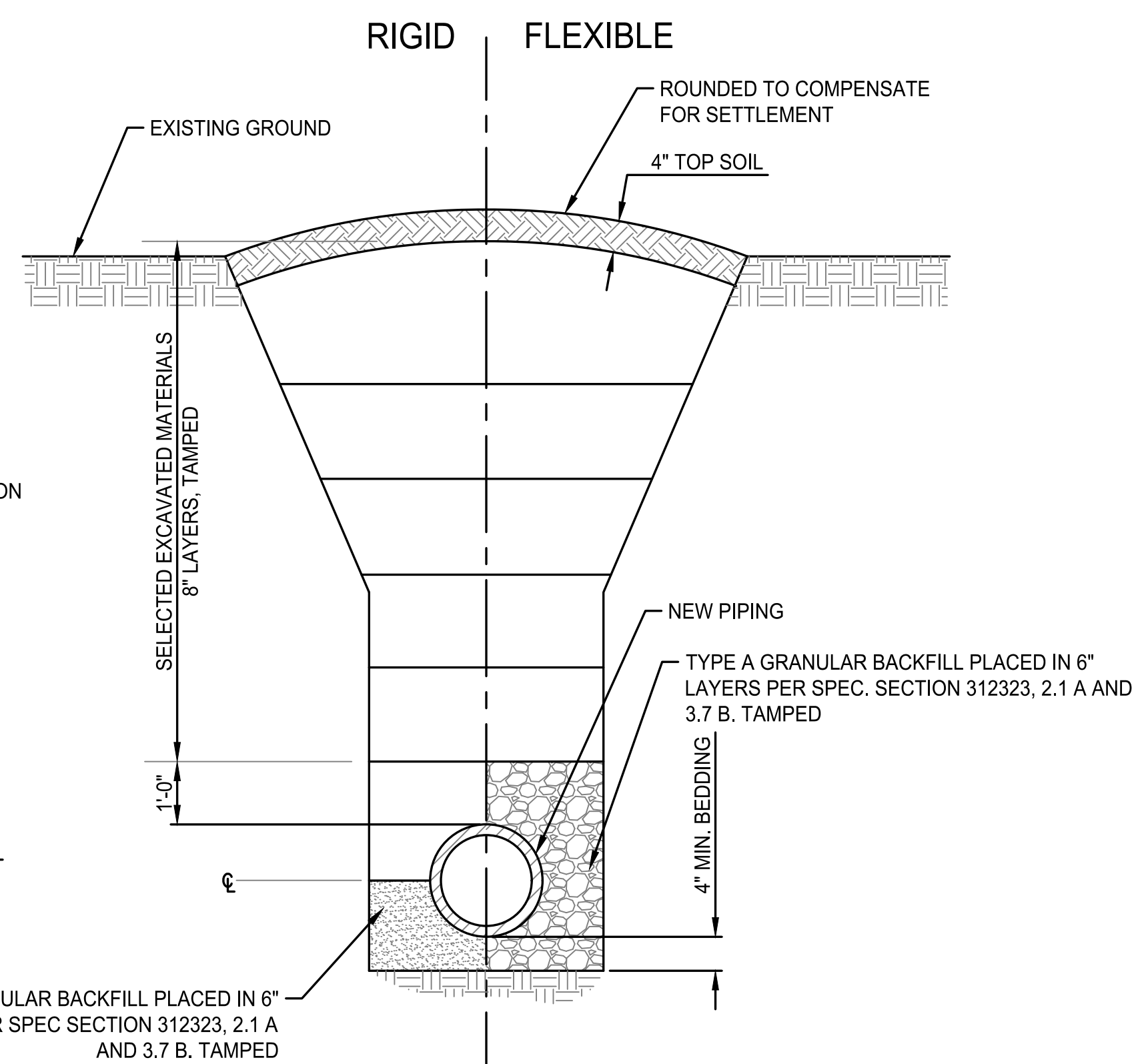
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D-001

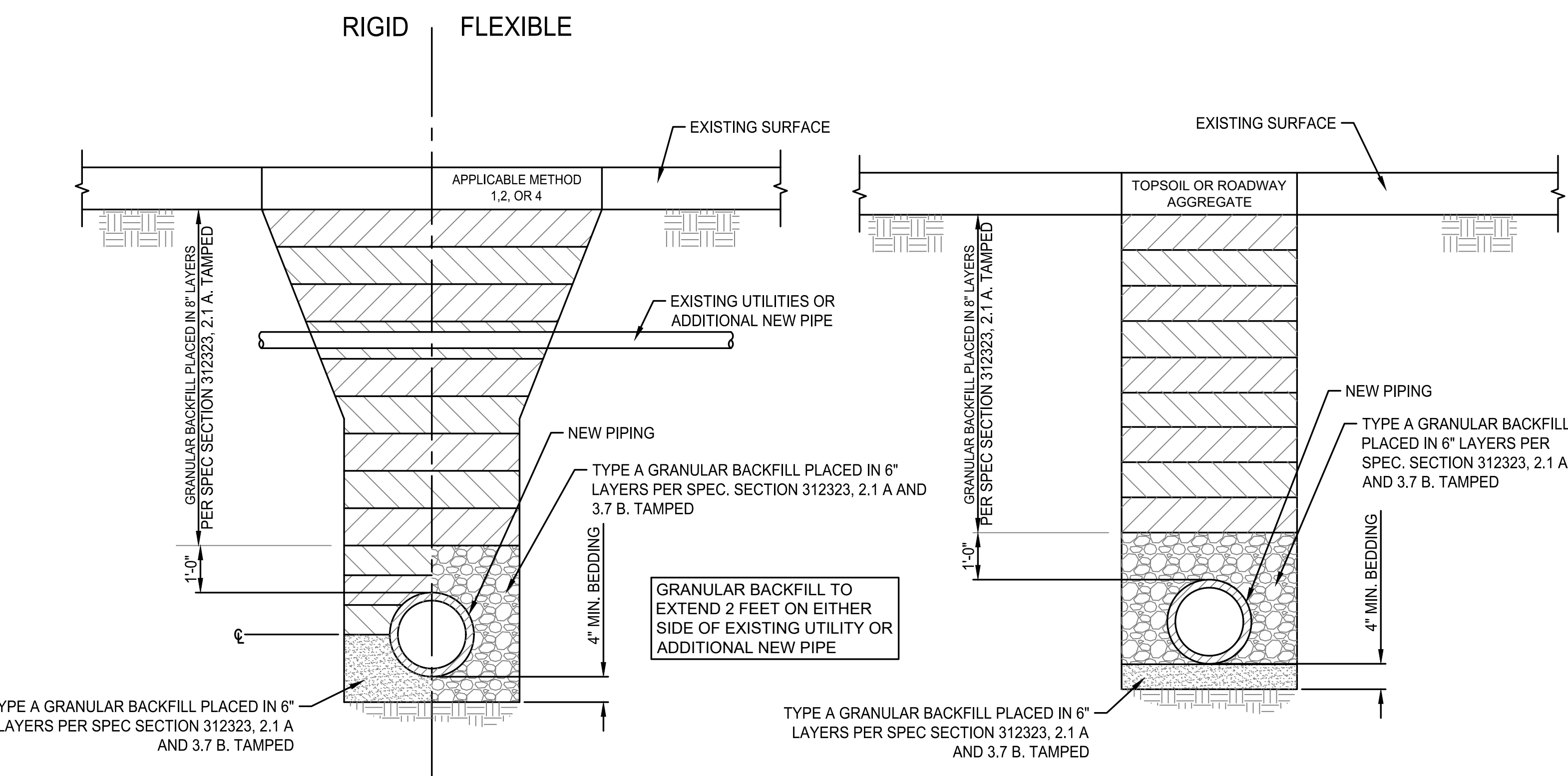
11 OF 14 SHEETS
NOVEMBER 02, 2023



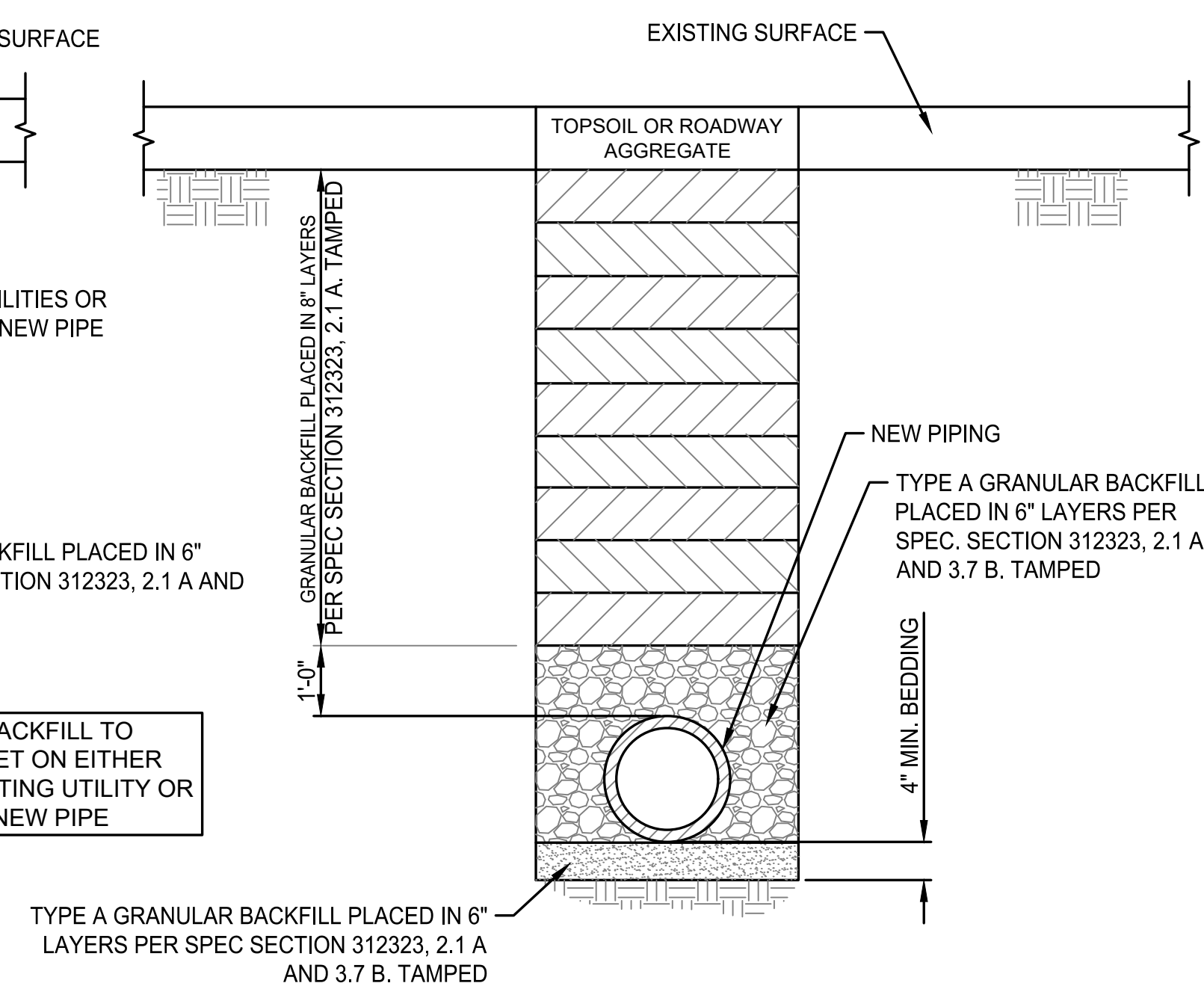
1 STANDARD PIPE PLUG FOR ABANDONED PIPE
NOT TO SCALE



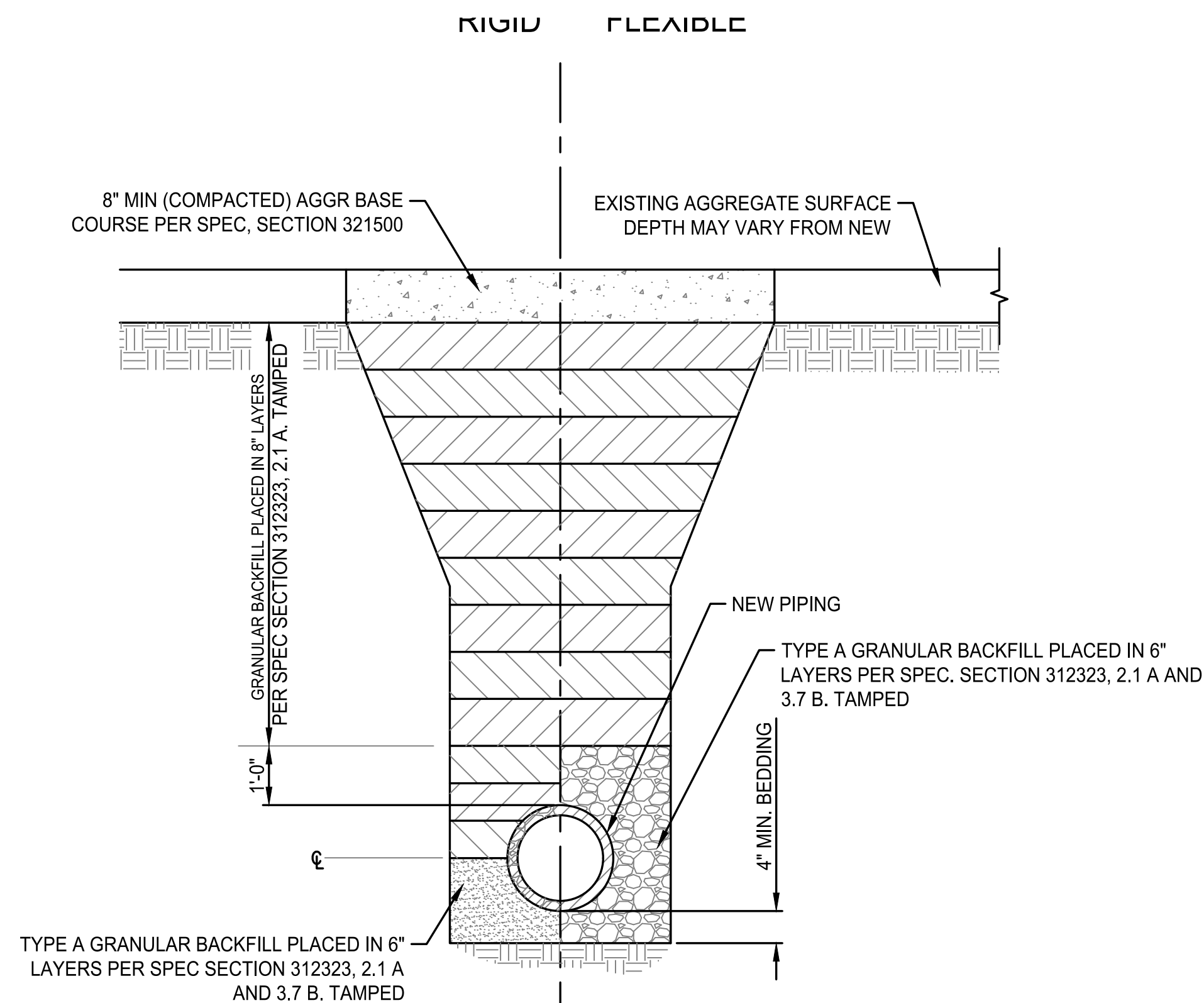
2 METHOD 1, TRENCH UNDER
YARDS AND UNIMPROVED AREAS
NOT TO SCALE



3 METHOD 3, TRENCH UNDER
EXISTING UTILITIES OR STRUCTURES
NOT TO SCALE



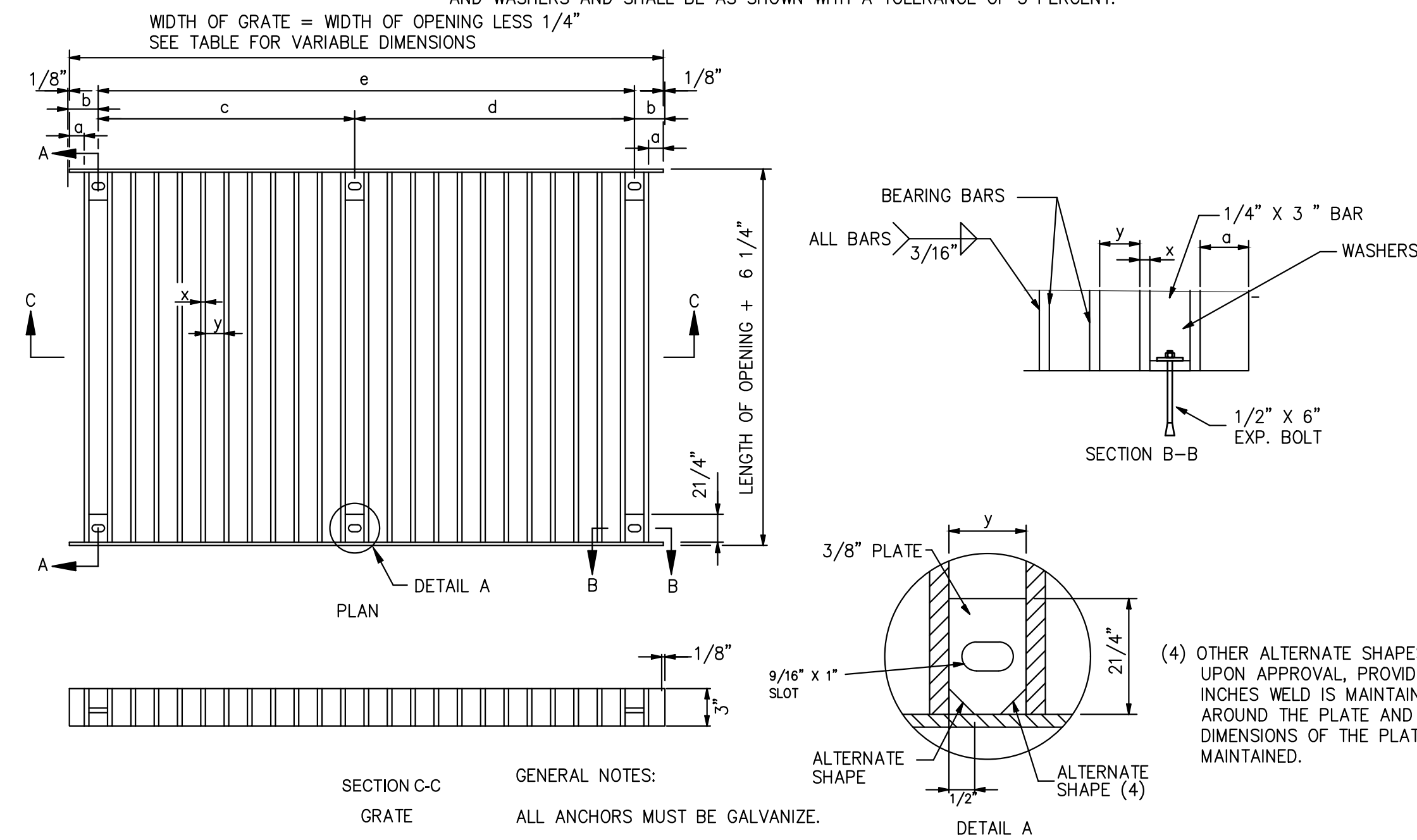
4 METHOD 4, TRENCH WITHIN EARTHEN DIKES
NOT TO SCALE



5 METHOD 2, TRENCH UNDER
PERMANENT ASPHALT OR CONCRETE SURFACES
NOT TO SCALE

WEIGHT AND DIMENSIONS DATA												
OPENING WIDTH	OPENING LENGTH	WEIGHT (1) LBS.	BEARING BARS		NUMBER	DIMENSIONS				REMARKS		
			x	y		a	b	c	d		e	
3'-0"	2'-0"	190	3/8"	6"	2'-53/4"	11	13/16"	213/16"			2'-63/8"	USE WITH TYPE S-1 INLETS AND TYPE S HEADWALLS
3'-0"	3'-0"	330	5/8"	6"	3'-53/4"	10	11/4"	31/2"			2'-5"	
5'-0"	2'-0"	300	3/8"	6"	2'-53/4"	18	1"	3"	2'-3"	2'-3"		
5'-0"	3'-0"	550	5/8"	6"	3'-53/4"	17	9/16"	213/16"	2'-13/8"	2'-5"		
3'-1"	2'-1"	200	3/8"	6"	2'-63/4"	11	15/16"	35/16"			2'-63/8"	USE WITH TYPE S-2 AND TYPE S-3 INLETS ONLY
3'-1"	3'-1"	340	5/8"	6"	3'-63/4"	10	13/4"	4"			2'-5"	
5'-1"	2'-1"	310	3/8"	6"	2'-63/4"	18	11/2"	31/2"	2'-3"	2'-3"		
5'-1"	3'-1"	560	5/8"	6"	3'-63/4"	17	11/16"	35/16"	2'-13/8"	2'-5"		

(1) THE WEIGHT OF THE GRATE AND BEARING PLATE INCLUDES THE BOLTS, NUTS, AND WASHERS AND SHALL BE AS SHOWN WITH A TOLERANCE OF 5 PERCENT.



GENERAL NOTES:

ALL ANCHORS MUST BE GALVANIZE.

WHEN BOLTS ARE CUT IN THE FIELD, THREADS MUST BE CLEANED TO PERMIT THE FINAL NUT TO RUN FREELY ON THE BOLT.

THE WELDING REQUIREMENTS SHOWN ON THIS DRAWING ARE FOR PAINTED GRATES AND BEARING PLATES. IF GALVANIZED, ALL TIGHTLY CONTACTING SURFACES SHALL BE COMPLETELY SEALED, ON ALL SIDES BY WELDING, PRIOR TO GALVANIZING.

6 SECURITY GRATE DETAIL
NOT TO SCALE



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REPAIRS TO
STORM WATER
COMPONENTS

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619 N. OSAGE AVE., TIPTON,
MO 65081

PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

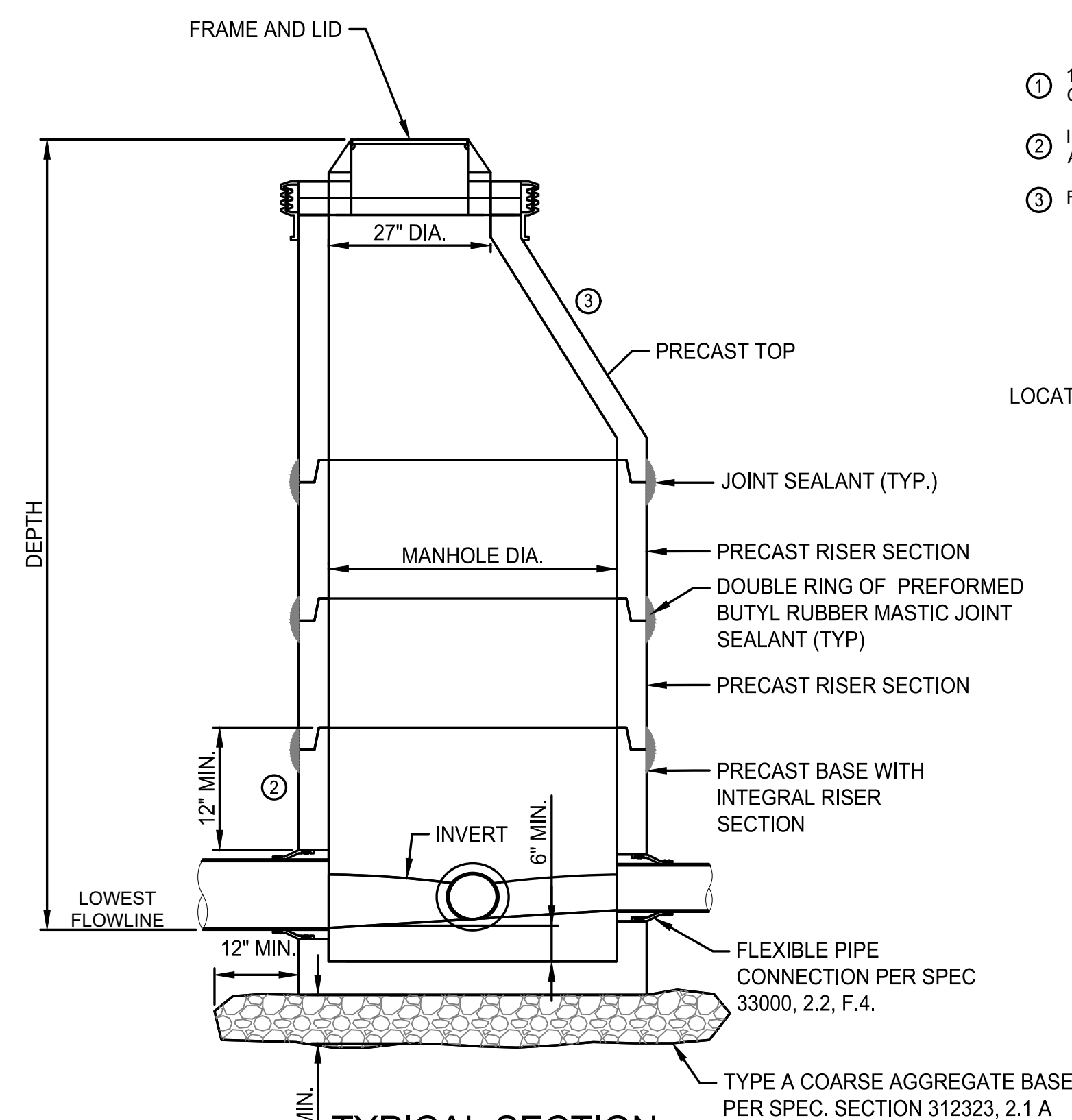
CAD DWG FILE: C2306-01-D-DTL-02
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

SHEET TITLE:
**MANHOLE
DETAILS**

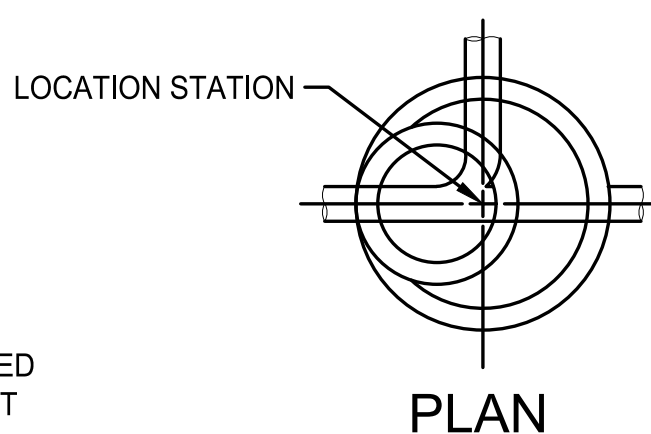
SHEET NUMBER:

D-002

12 OF 14 SHEETS
NOVEMBER 02, 2023



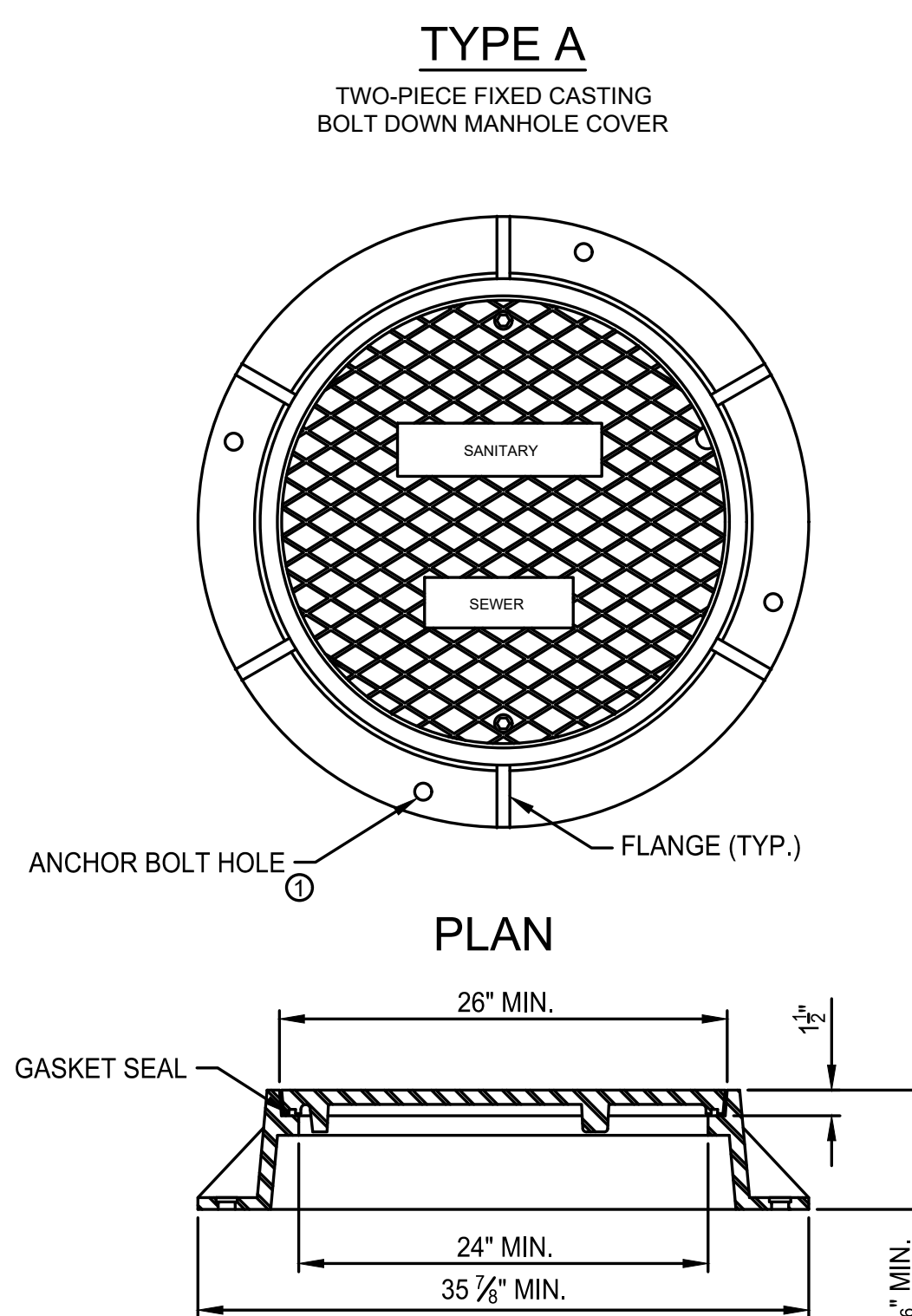
- 12 INCH MINIMUM RISER HEIGHT ABOVE ALL PIPE OPENINGS.
- INSTALL ANCHOR BOLTS TO SECURE MANHOLE FRAME AND ADJUSTING RINGS TO UPPER MANHOLE SECTION.
- REF. TO SPEC. SECTION PRECAST MANHOLES - 333000



MANHOLE DIAMETER (INCHES)	MAXIMUM PIPE DIAMETER (INCHES) FOR 2 PIPES	
	AT 180° SEPARATION	AT 90° SEPARATION
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

1 CIRCULAR MANHOLE
NOT TO SCALE (SEE SPEC. 333000)

NOTE:
1. EXTERNAL CHIMNEY SEALS REQUIRED AT ALL MANHOLES



2 CASTING FOR MANHOLE
NOT TO SCALE (SEE SPEC. 333000)

NOTE:
CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
1. DRILL TWO 1.0" DIAMETER HOLES OR SLOTS, EQUALLY SPACED AROUND FRAME TO ACCOMMODATE ANCHOR BOLTS. SECURE FRAME AND ADJUSTING RINGS TO UPPER MANHOLE SECTION WITH TWO STAINLESS STEEL 1/2" DIAMETER ANCHOR BOLTS TO PREVENT MOVEMENT OF FRAME OR ENTRY OF WATER. SEAL FRAME IN PLACE.

NOTE:
2. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
3. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
4. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
5. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
6. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
7. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
8. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
9. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
10. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
11. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
12. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
13. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
14. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
15. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
16. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
17. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

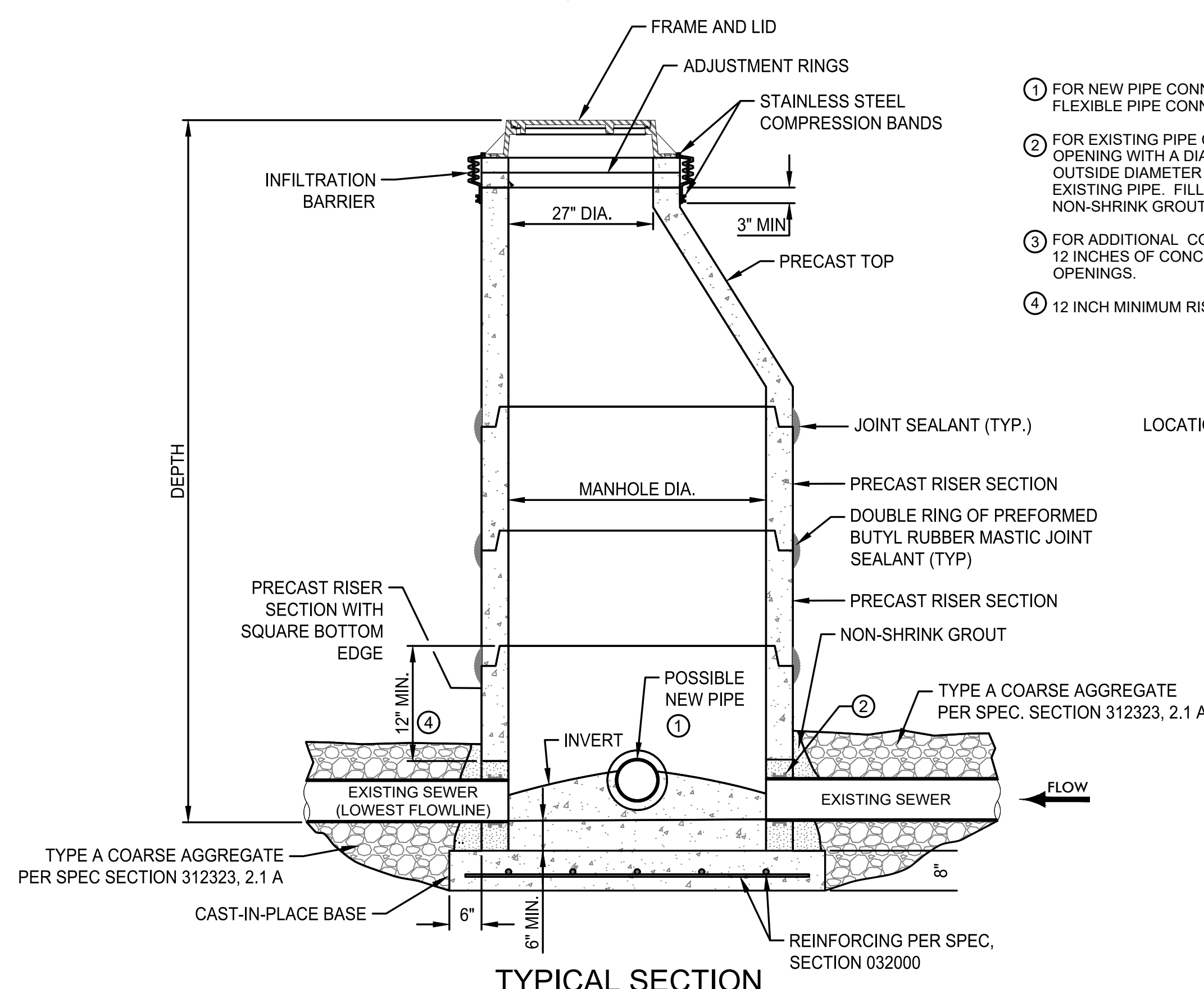
NOTE:
18. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
19. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

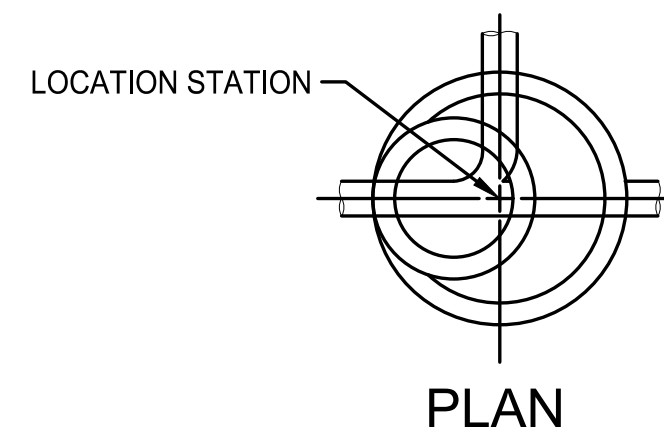
NOTE:
20. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
21. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
22. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.



- FOR NEW PIPE CONNECTIONS, PROVIDE CORED OPENING WITH FLEXIBLE PIPE CONNECTOR.
- FOR EXISTING PIPE CONNECTIONS, PROVIDE AN ARCHED OPENING WITH A DIAMETER UP TO 6 INCHES LARGER THAN OUTSIDE DIAMETER OF PIPE. INSTALL WATERSTOP AROUND EXISTING PIPE. FILL VOID BETWEEN PIPE AND OPENING WITH NON-SHRINK GROUT.
- FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES OF CONCRETE BETWEEN VERTICAL EDGES OF PIPE OPENINGS.
- 12 INCH MINIMUM RISER HEIGHT ABOVE ALL PIPE OPENINGS.



MANHOLE DIAMETER (INCHES)	MAXIMUM PIPE DIAMETER (INCHES) FOR 2 PIPES	
	AT 180° SEPARATION	AT 90° SEPARATION
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

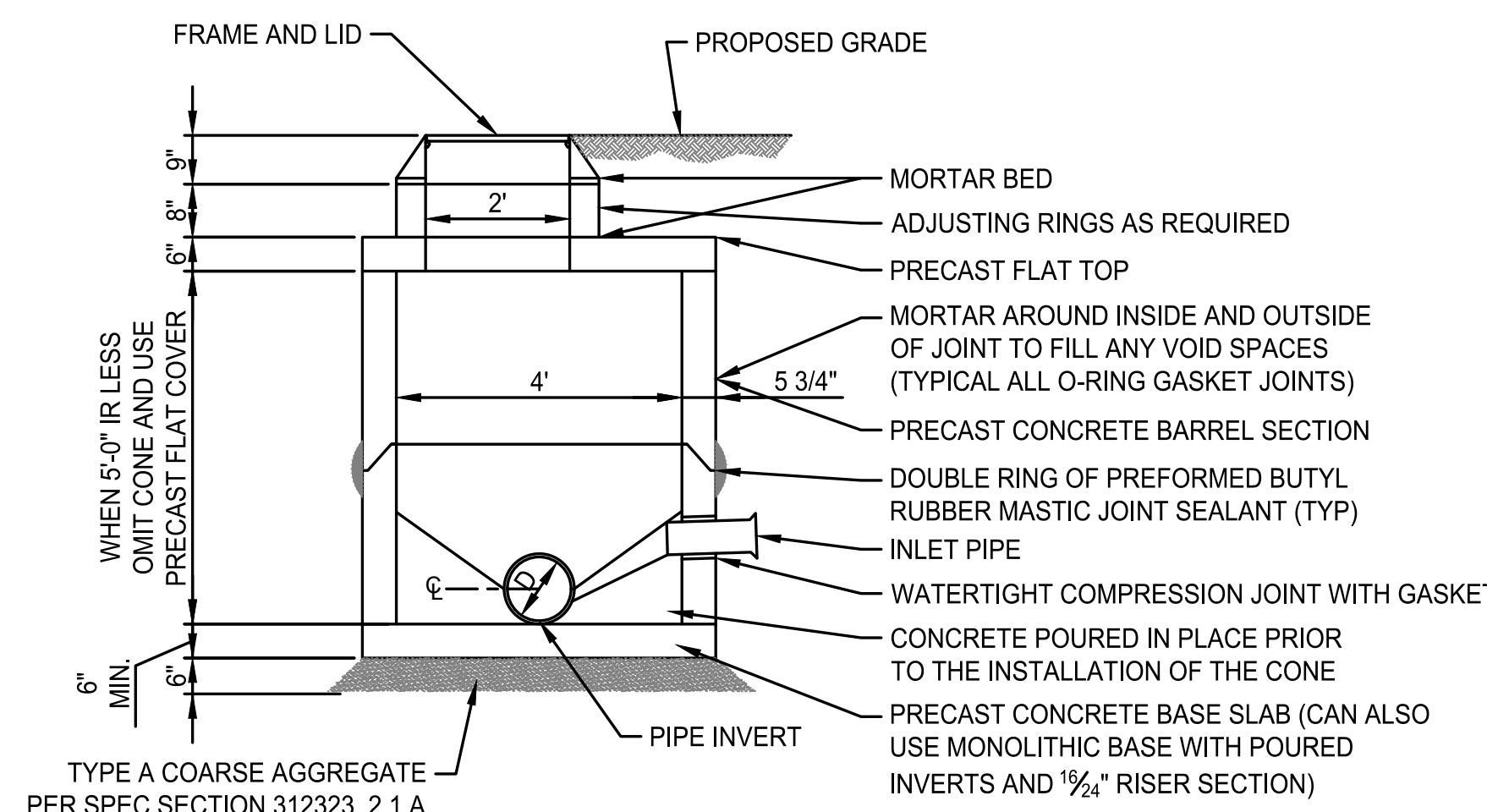
4 MANHOLE OVER EXISTING SEWER
NOT TO SCALE (SEE SPEC. 333000)

5 FLEXIBLE CONNECTION TO MANHOLES
NOT TO SCALE

NOTE:
1. DRILL TWO 1.0" DIAMETER HOLES OR SLOTS, EQUALLY SPACED AROUND FRAME TO ACCOMMODATE ANCHOR BOLTS. SECURE FRAME AND ADJUSTING RINGS TO UPPER MANHOLE SECTION WITH TWO STAINLESS STEEL 1/2" DIAMETER ANCHOR BOLTS TO PREVENT MOVEMENT OF FRAME OR ENTRY OF WATER. SEAL FRAME IN PLACE.

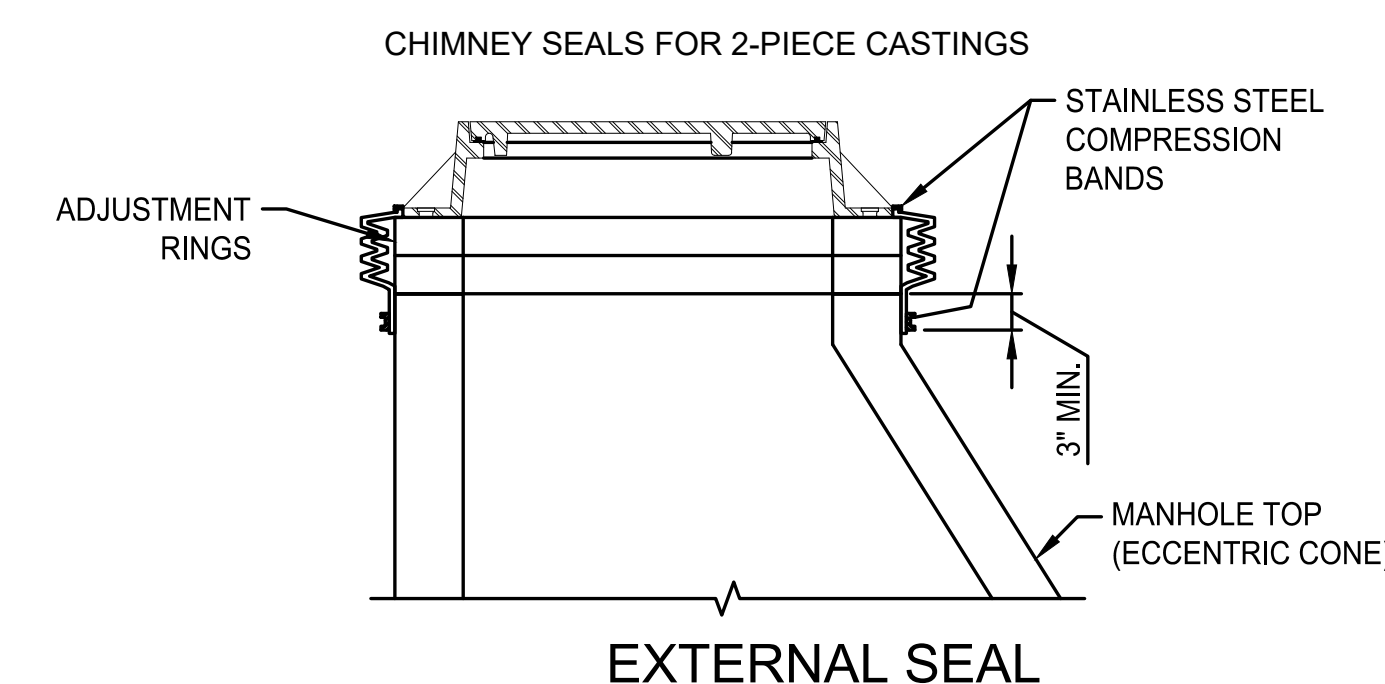
NOTE:
2. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

NOTE:
3. CASTING SHALL BE JORDAN IRON WORKS, NEENAH FOUNDRY, US FOUNDRY OR EQUAL.

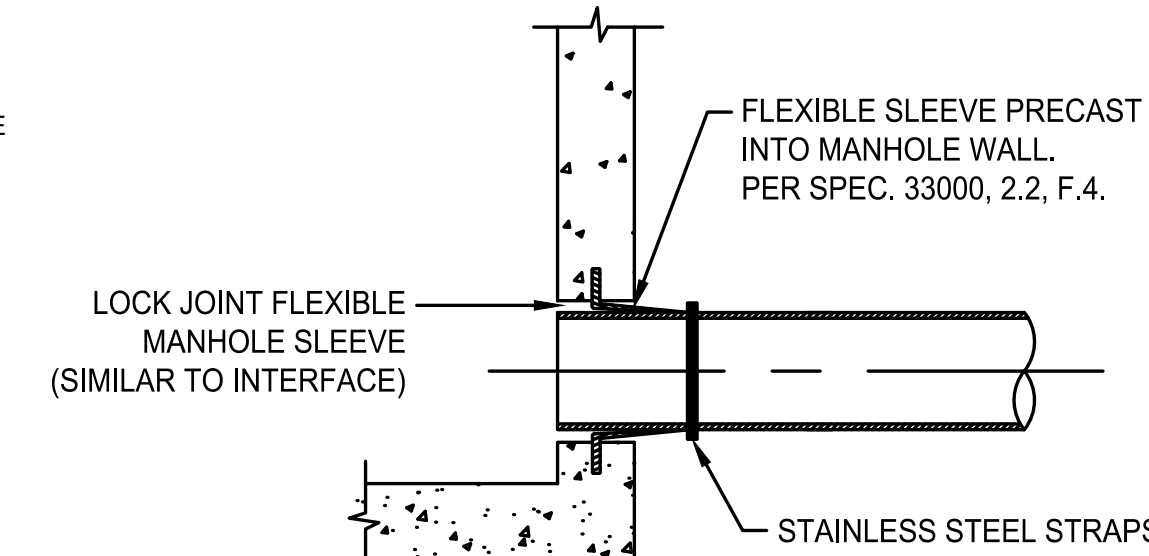


- ADD CHIMNEY SEAL WHERE DIRECTED BY ENGINEER
- PRECAST CONCRETE MANHOLE SECTIONS PER SPEC. SECTION 333000 CONFORMING TO ASTM C478

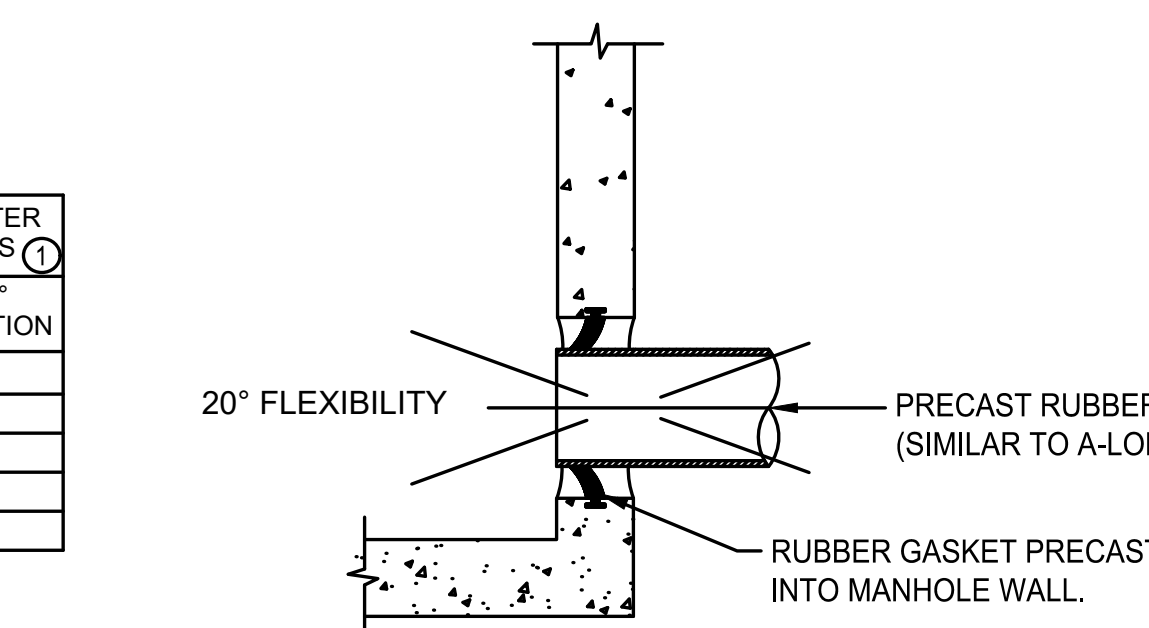
5 TYPICAL MANHOLE WITH FLAT TOP
NOT TO SCALE (SEE SPEC. 333000)



3 CHIMNEY SEALS FOR MANHOLES
NOT TO SCALE (SEE SPEC. 333000)

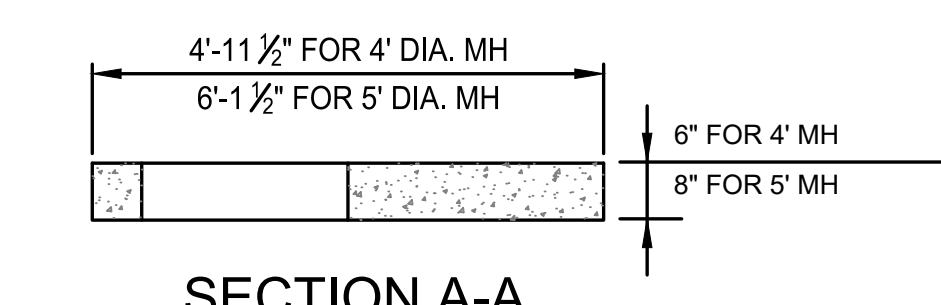


SECTION A-A

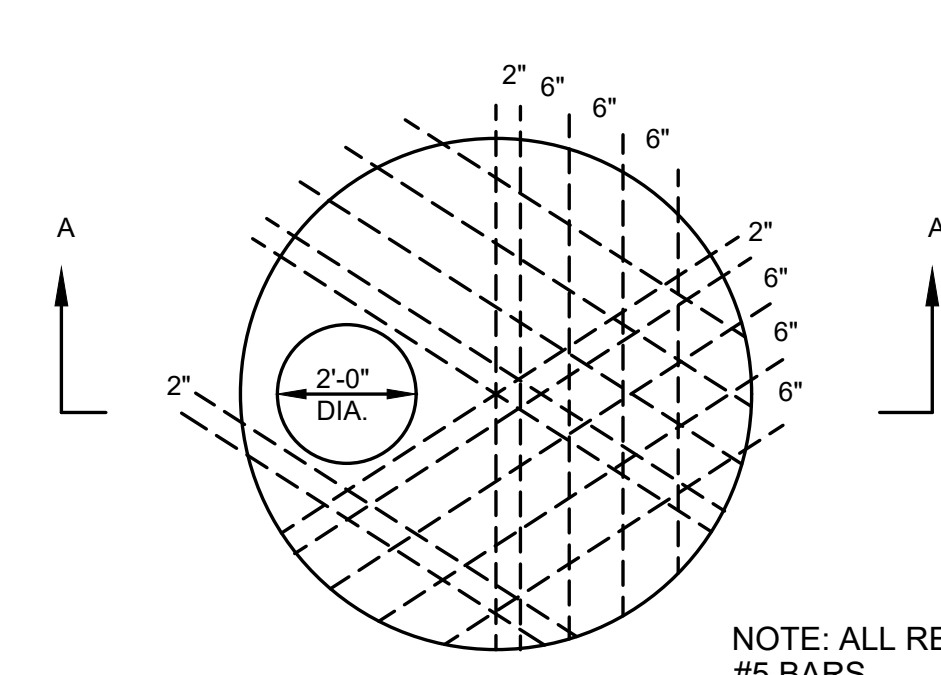


PLAN VIEW

NOTE: ALL REINFORCEMENT #5 BARS



SECTION A-A



PLAN VIEW

NOTE: ALL REINFORCEMENT #5 BARS

6 PRECAST CONCRETE FLAT TOP SECTION
NOT TO SCALE



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MO 65081

PROJECT NO. C2306-03
SITE NO. 7004
ASSET NO. 9327004045

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DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-D-DTL-03
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

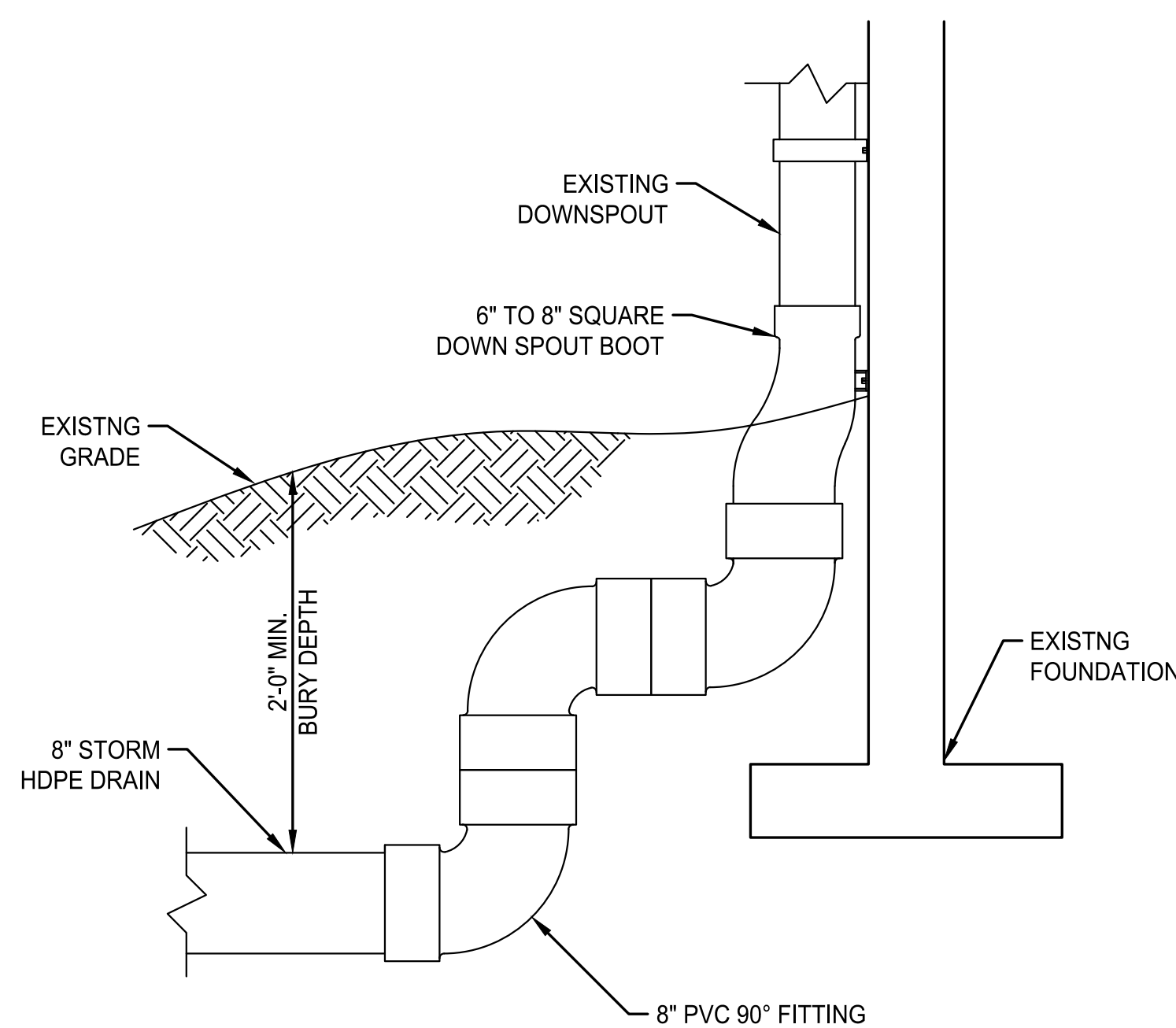
SHEET TITLE:

STORMWATER
DETAILS

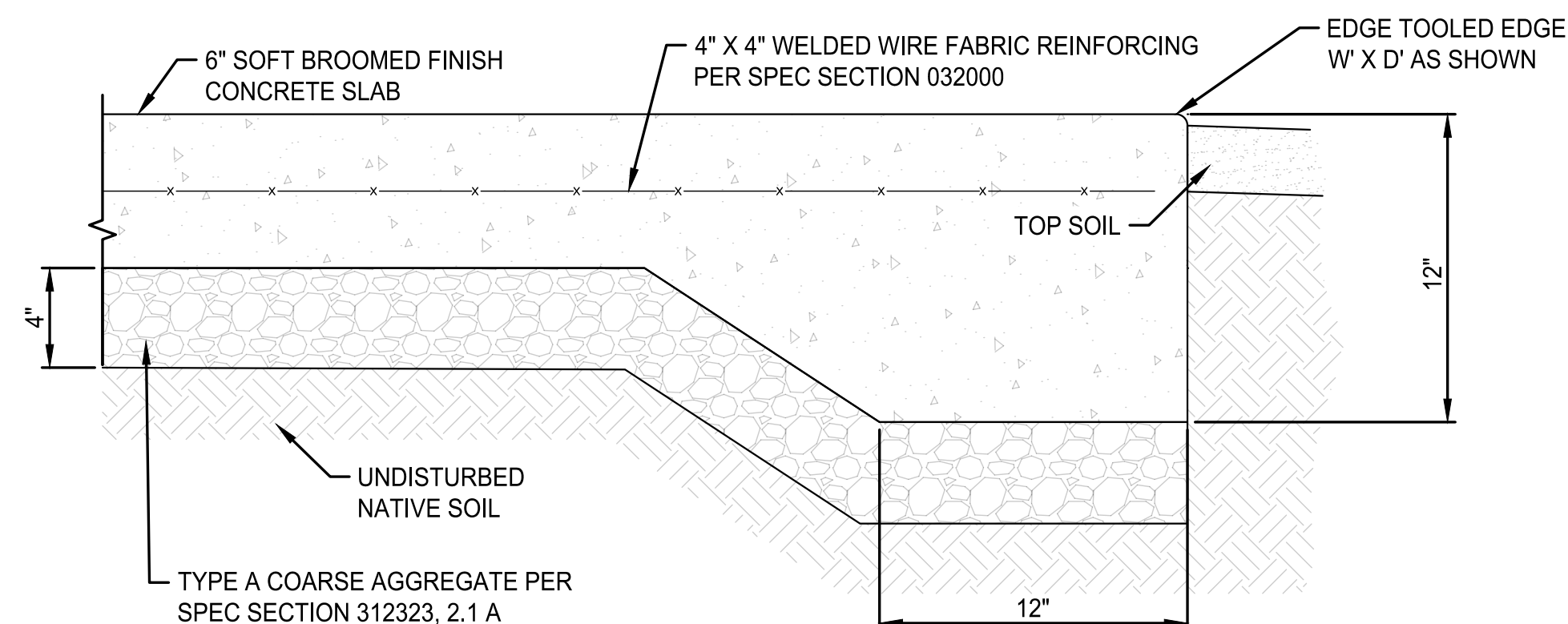
SHEET NUMBER:

D-003

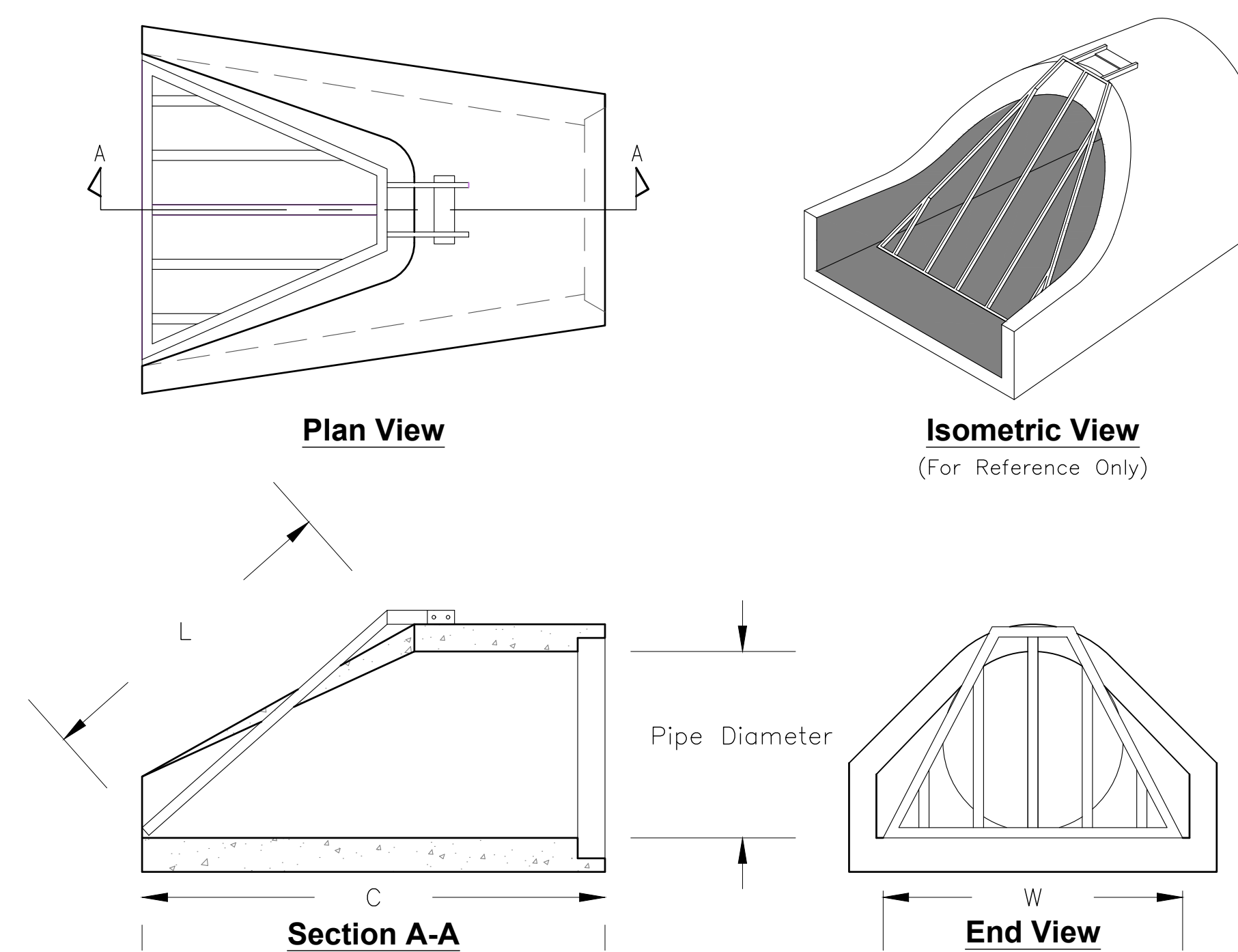
13 OF 14 SHEETS
NOVEMBER 02, 2023



1 DOWN SPOUT CONNECTION DETAIL
NOT TO SCALE



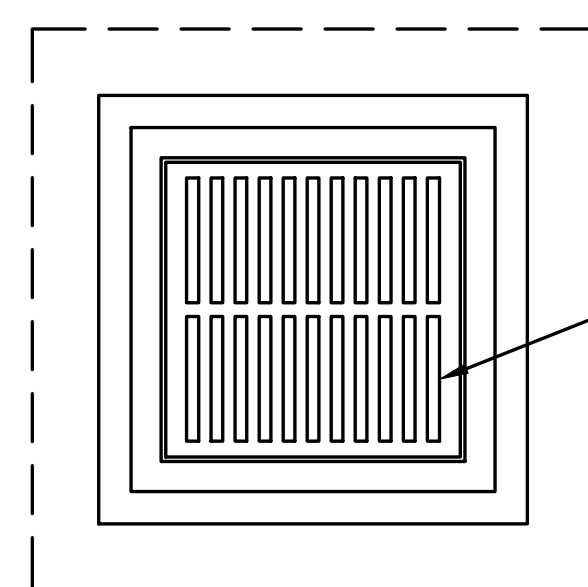
2 CONCRETE SLAB DETAIL
NOT TO SCALE



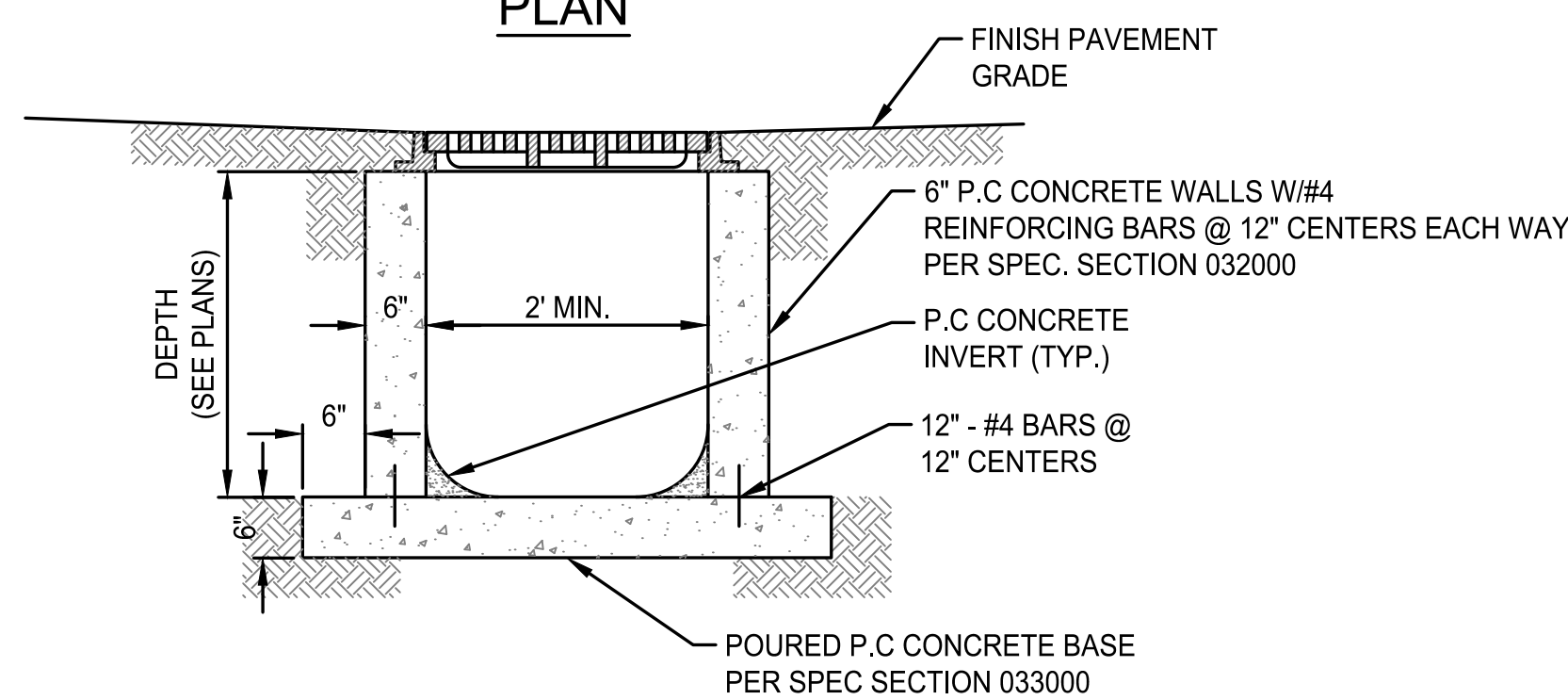
Pipe Diameter	Trash Rack Width W (in.)	Trash Rack Length L (in.)	Total # of Bars B	Bar Spacing S (in.)
24"	40.00"	47.50"	5	6.0"

6 GRATED FLARED END DETAIL
NOT TO SCALE

NOTE:
CASTING SHALL BE JORDAN IRON WORKS, NEENAH
FOUNDRY, US FOUNDRY OR EQUAL.



PLAN



PROFILE

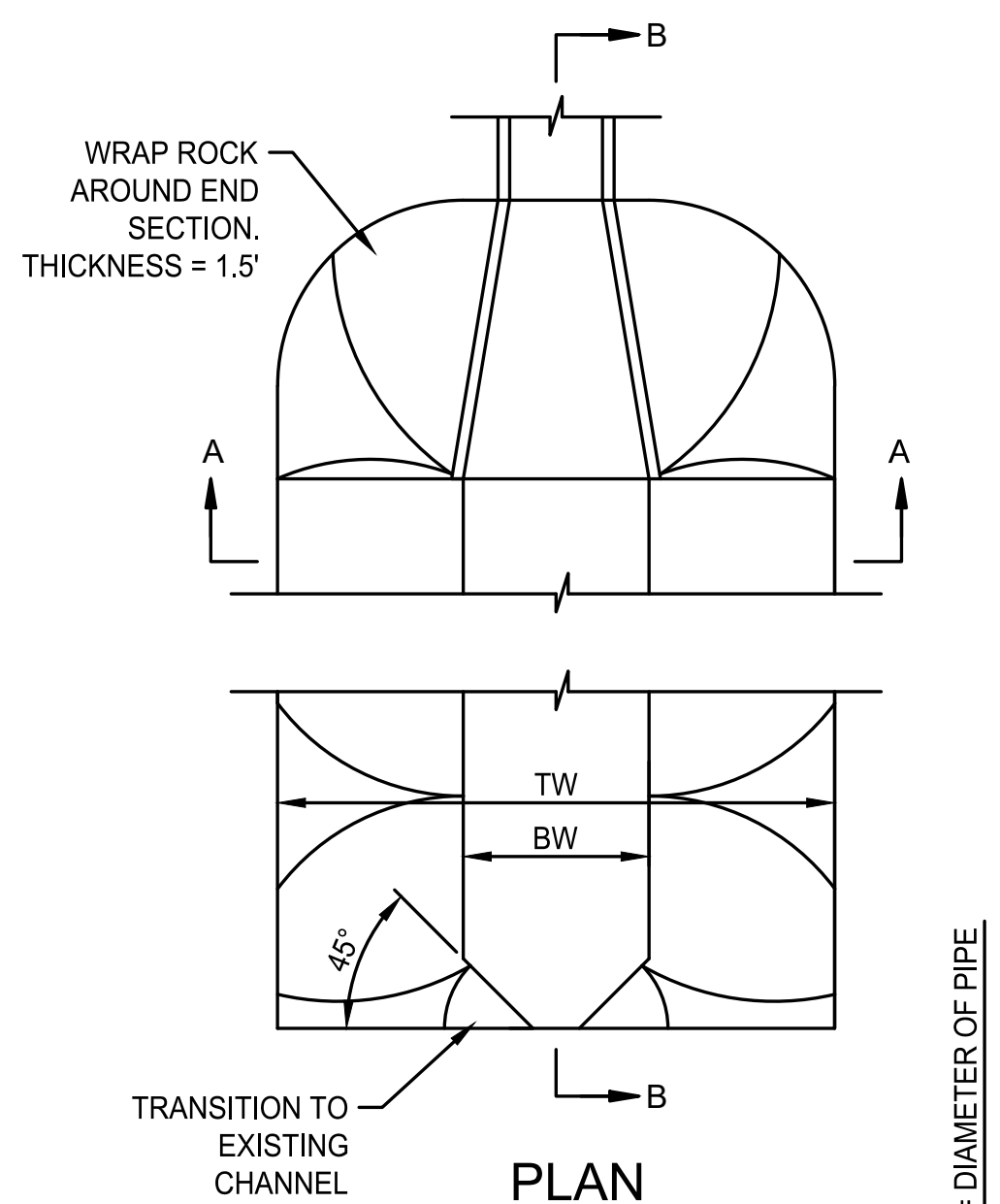
3 STORM DRAIN AREA INLET
NOT TO SCALE

Pipe Size (in)	Maximum Pipe Slope (%)	Length L (ft)	Bottom Width BW Minimum (ft)	Top Width TW Minimum (ft)	Thickness T Minimum (ft)
12	3.50	12	4	8	2
15	2.60	15	4	9	2
18	2.00	16	4	10	2
24	1.70	20	4	12	2
30	1.40	24	6	16	2
36	1.00	28	6	18	2
42	0.80	32	6	20	3
48	0.65	36	6	22	3
54	0.55	40	8	26	3
60	0.45	44	8	28	3
72	0.40	48	8	32	3

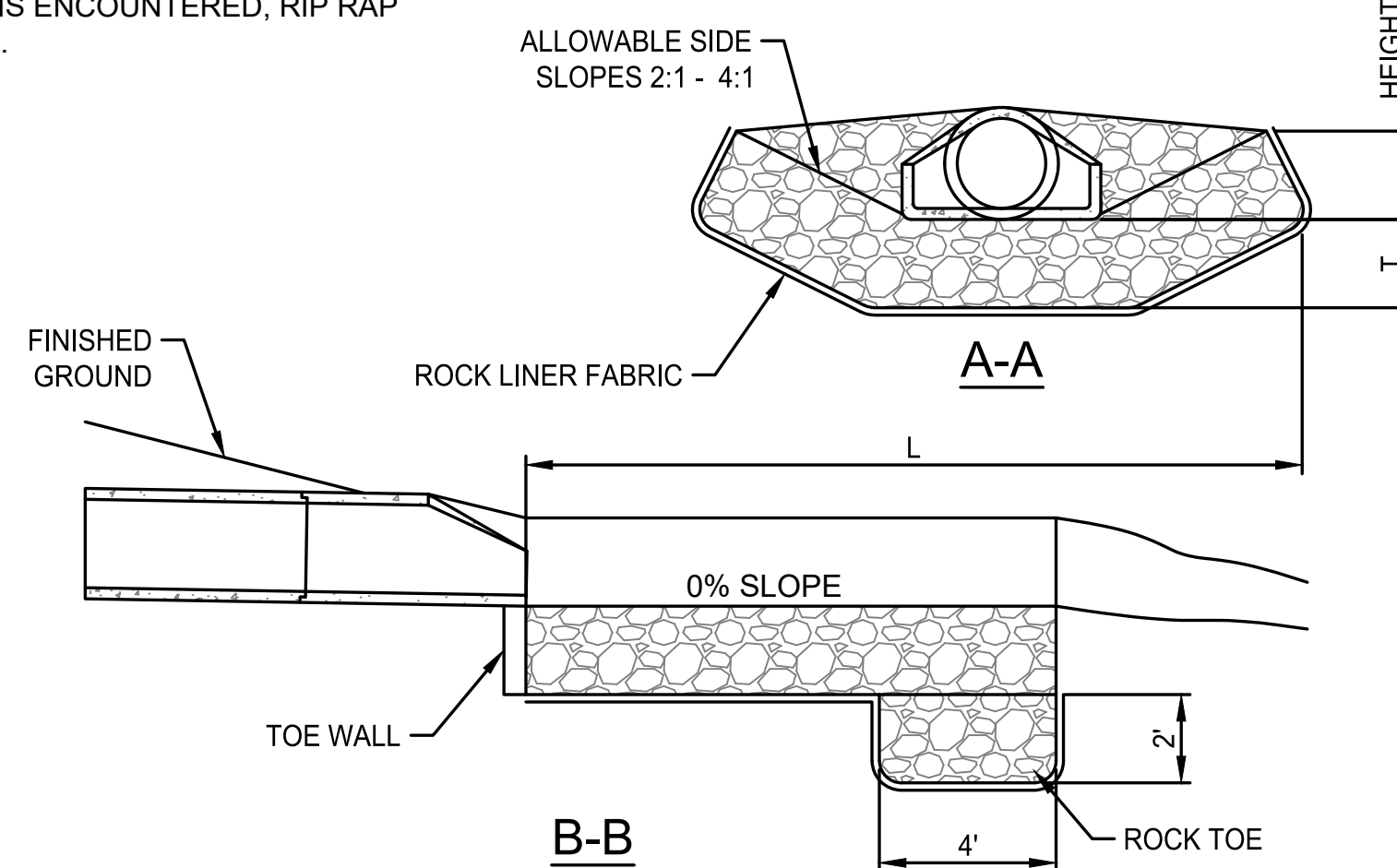
ROCK BLANKET SHALL BE TYPE 2, PER ROCK BLANKET NOTES LOCATED ON SHEET G-002.

ROCK LINER FABRIC SHALL BE PROPEX GEOTEX 801 CONTECH C80NW, OR MIRAFI 1160N OR APPROVED EQUAL. ALTERNATIVELY, AN 8 INCH BED OF WELL GRADED SAND AND GRAVEL WITH GRAVEL UP TO 3" IS ACCEPTABLE.

WHERE BEDROCK IS ENCOUNTERED, RIP RAP MAY BE OMITTED.



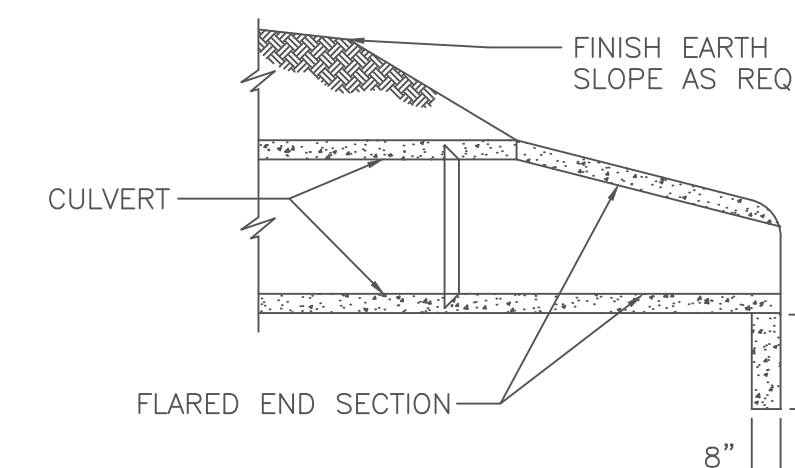
PLAN



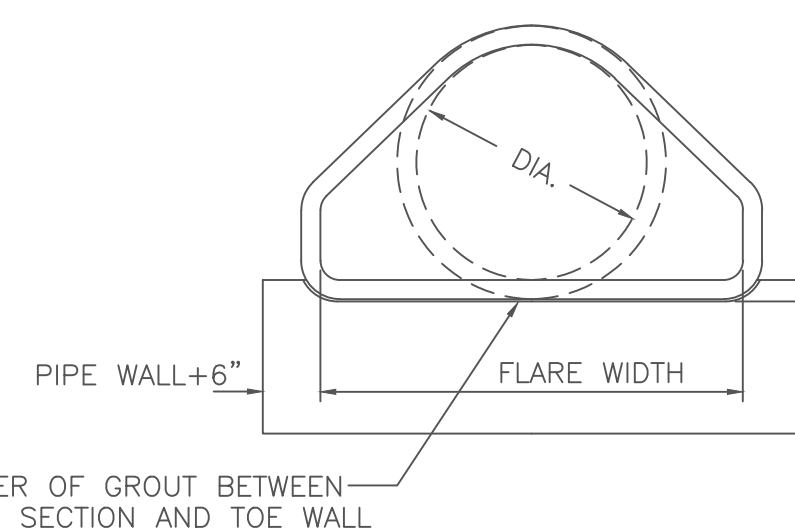
A-A

B-B

4 FLARED END ROCK BLANKET DETAIL
NOT TO SCALE



SECTION VIEW



END VIEW

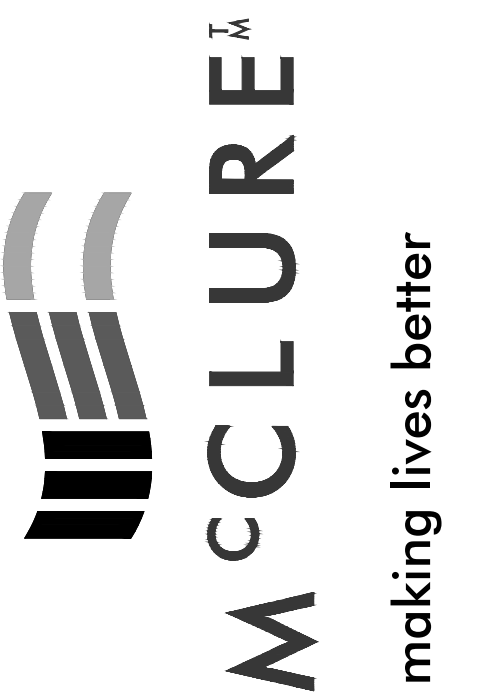
- NOTE:
- CONCRETE FOR TOE WALL SHALL BE CLASS E
 - D=18" FOR PIPES WITH INSIDE DIAMETER 21" OR LESS.
 - D=24" FOR PIPES WITH INSIDE DIAMETER FROM 24" TO 48".
 - D=36" FOR PIPES WITH INSIDE DIAMETER 54" OR MORE.

5 FLARED END DETAIL
NOT TO SCALE



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DATE: _____
ISSUE DATE: 11/02/23

CAD DWG FILE: C2306-01-D-DTL-05
DRAWN BY: JMB
CHECKED BY: MMH
DESIGNED BY: MMH

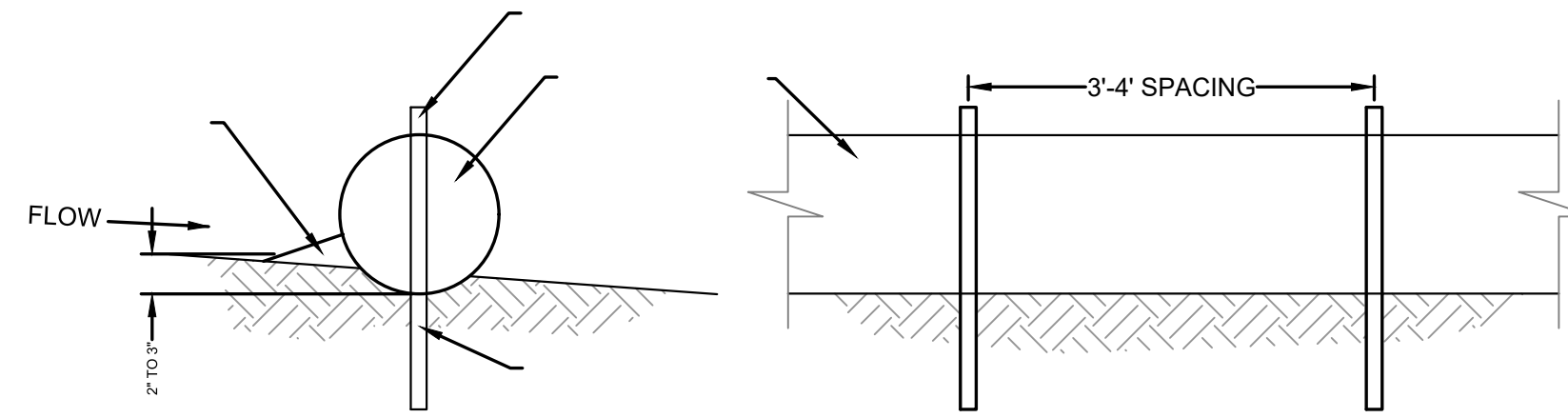
SHEET TITLE:

EROSION
CONTROL
DETAILS

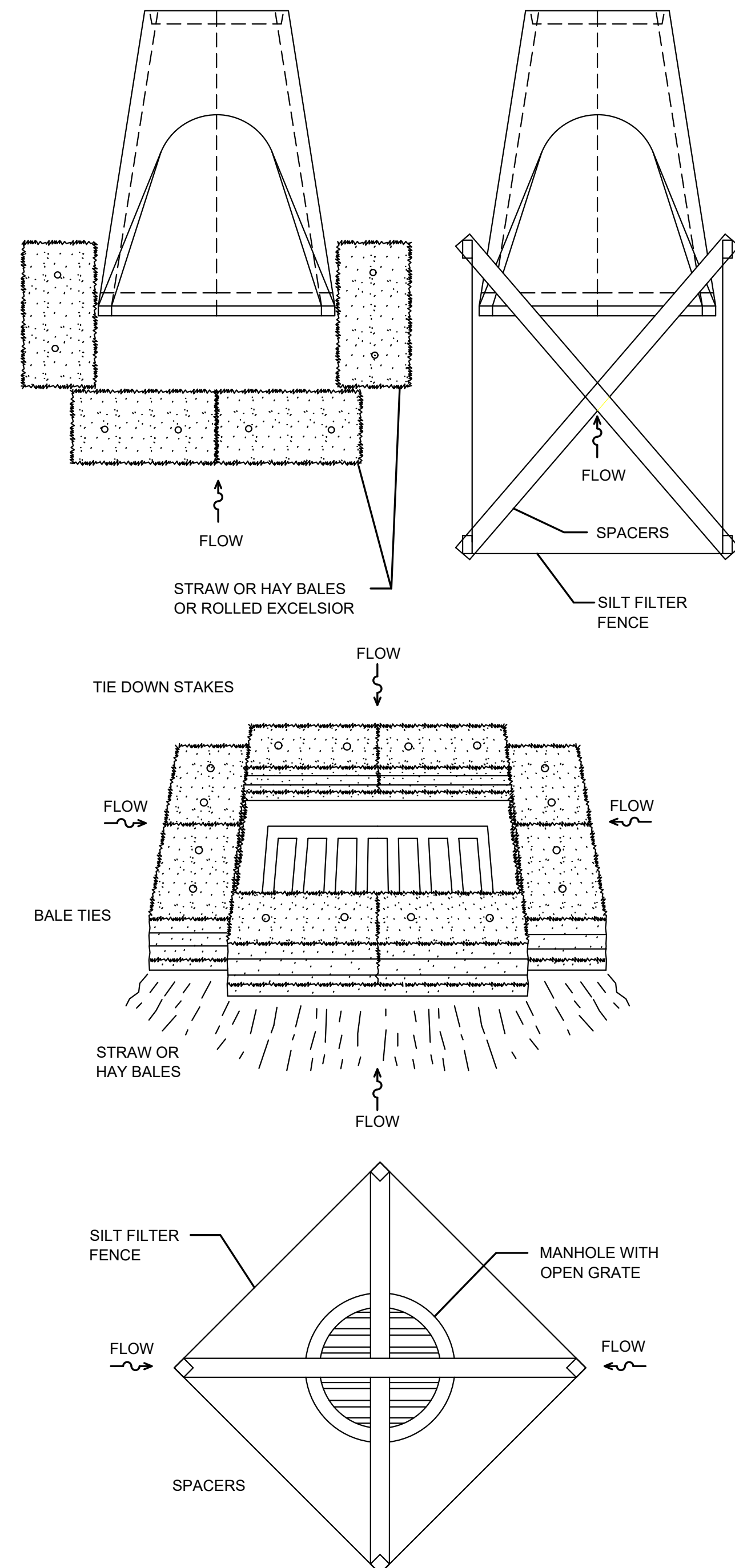
SHEET NUMBER:

D-004

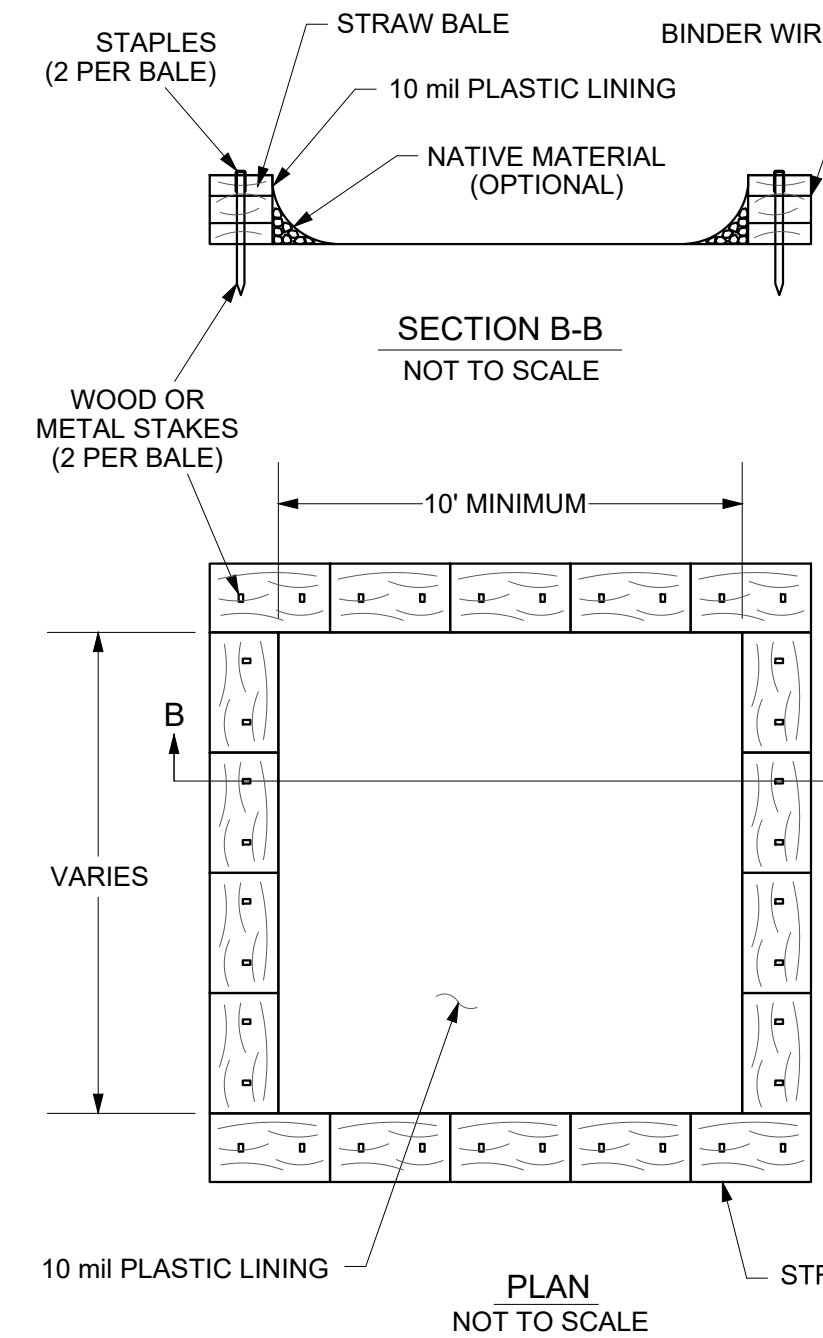
14 OF 14 SHEETS
NOVEMBER 02, 2023



1 EROSION CONTROL WATTLE CHECK
N.T.S.



2 INLET AND PIPE PROTECTION DETAILS
N.T.S.

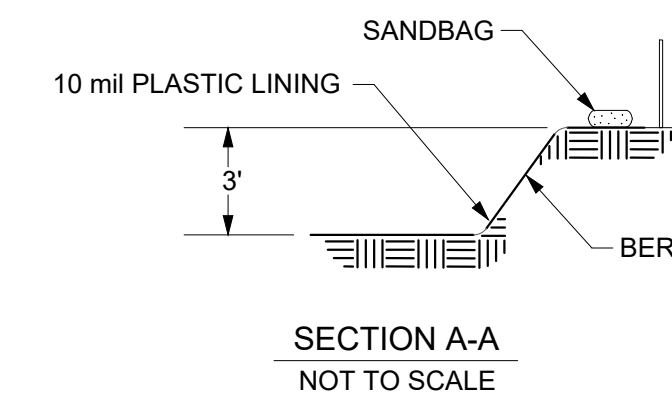


TYPE "ABOVE GRADE" WITH STRAW BALES

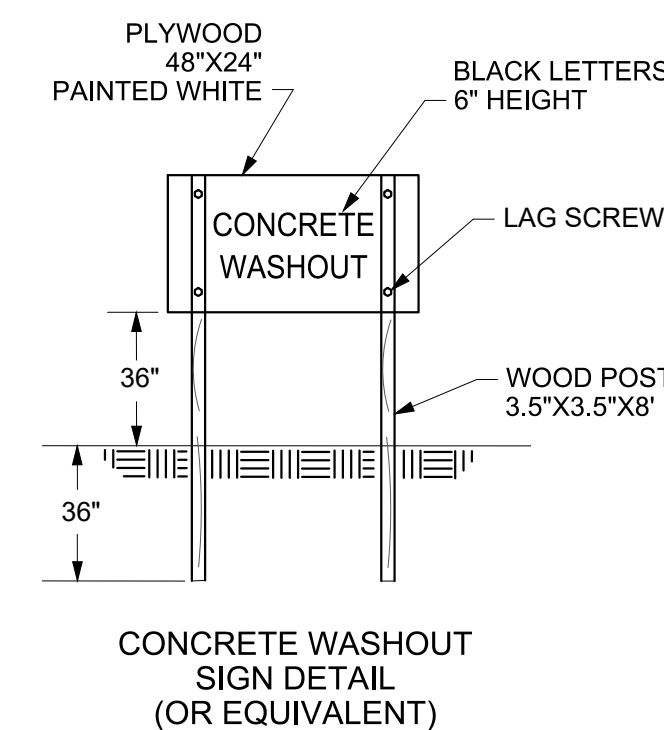
NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

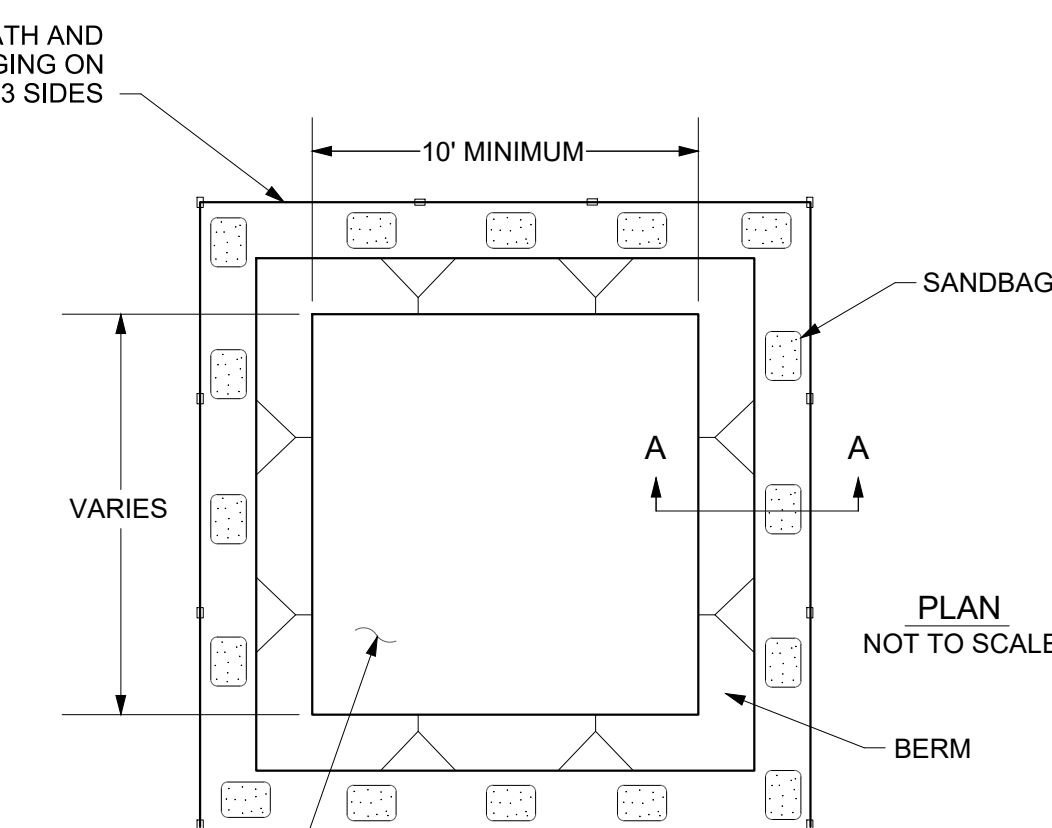
3 CONCRETE WASH OUT DETAIL
N.T.S.



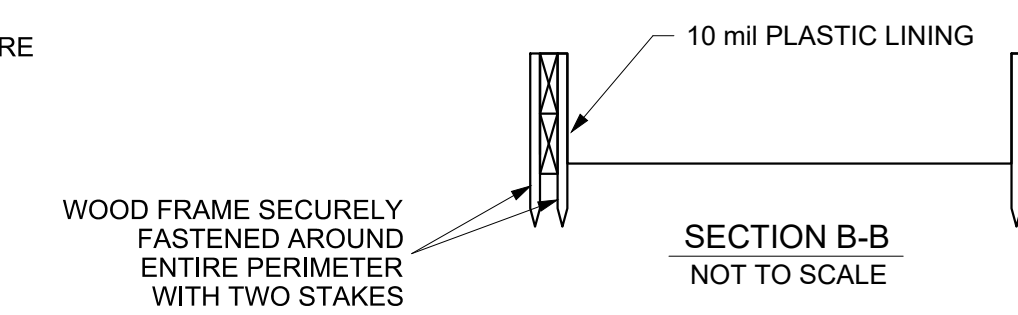
SECTION A-A
NOT TO SCALE



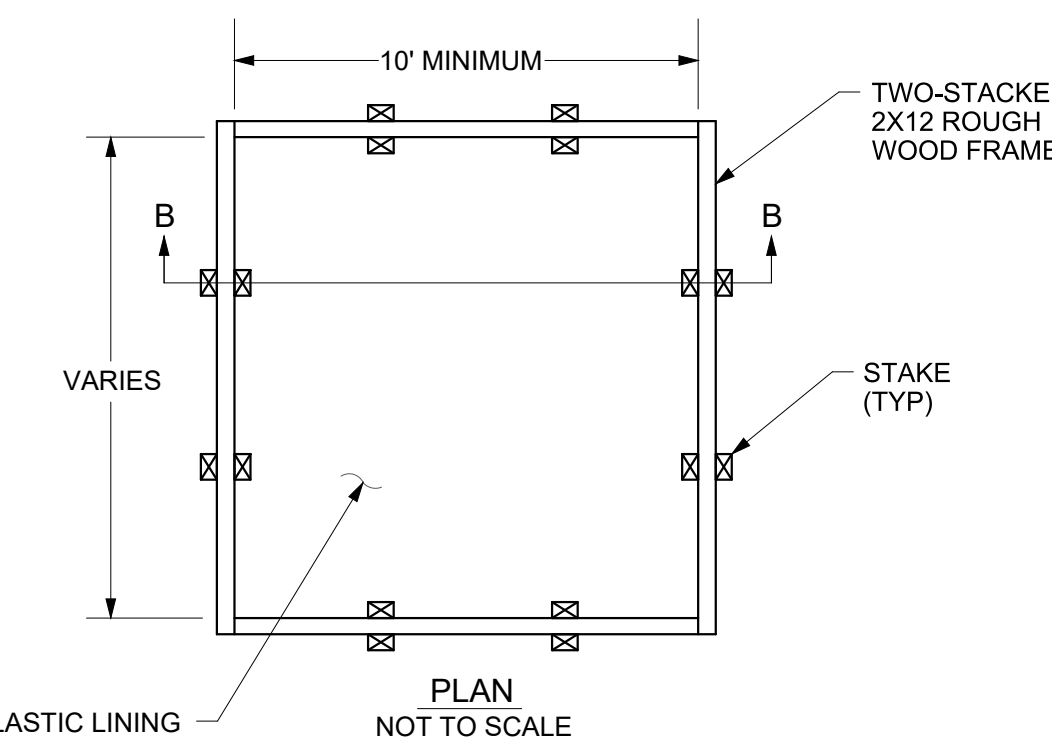
CONCRETE WASHOUT
SIGN DETAIL
(OR EQUIVALENT)



TYPE "BELOW GRADE"



SECTION B-B
NOT TO SCALE



TYPE "ABOVE GROUND"
WITH WOOD PLANKS