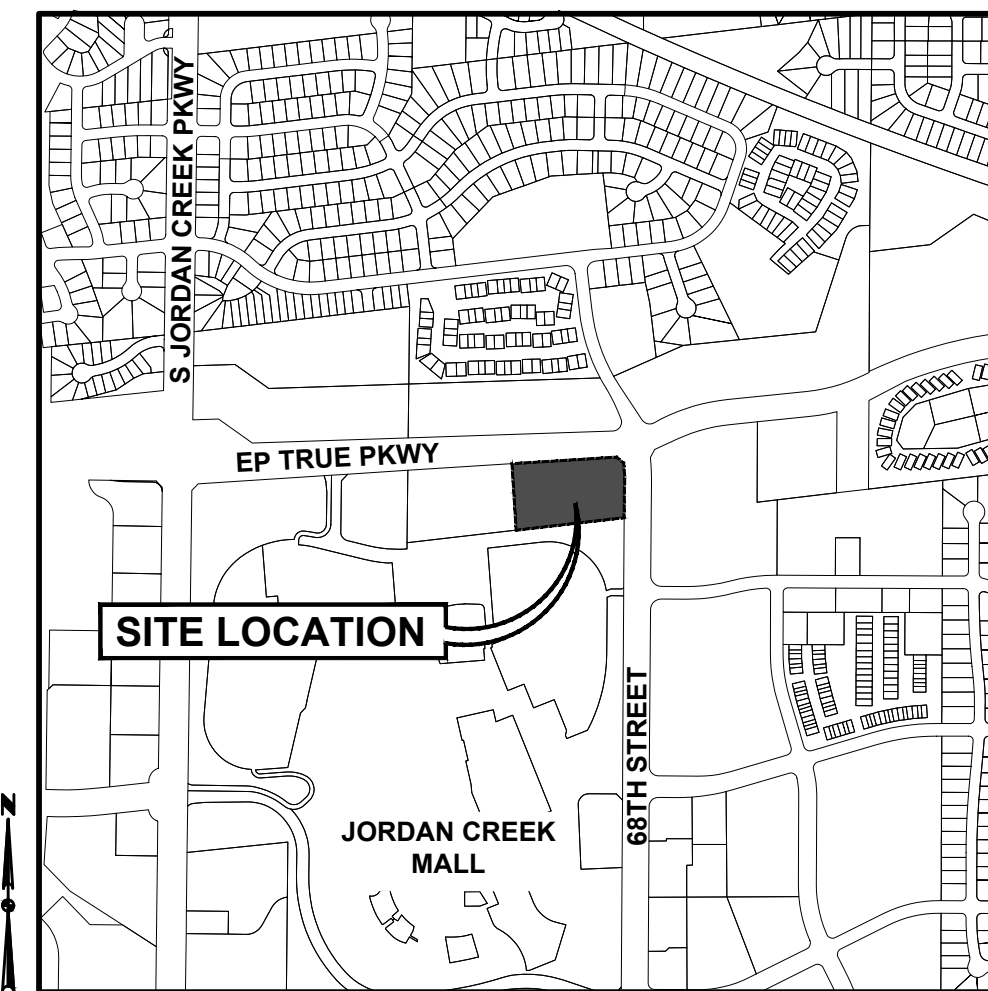


# SITE PLAN FOR: JORDAN CREEK POINT - LOT 2

## WEST DES MOINES, IOWA

### VICINITY MAP

NOT TO SCALE



### OWNER/ APPLICANT

JORDAN CREEK POINT, LLC  
9500 UNIVERSITY AVE, UNIT 2112  
WEST DES MOINES, IA 50266

### ENGINEER/ SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC  
3405 SE CROSSROADS DRIVE, SUITE K  
GRIMES, IOWA 50111  
PH. (515) 369-4400  
FX. (515) 369-4410  
CONTACT: JOSH TRYGSTAD  
EMAIL: JOSHT@CDA-ENG.COM

### ARCHITECT

### SUBMITTAL DATES

FIRST SUBMITTAL: 02/24/2023

### LEGAL DESCRIPTION

LOT 2, JORDAN CREEK POINT PLAT 1, WEST DES MOINES,  
DALLAS COUNTY IOWA,  
CONTAINING 5.43 ACRES (236,727 SF).  
SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.)

### ZONING

REED'S CROSSING PUD, PARCEL G

### EXISTING/ PROPOSED USE

EXISTING: UNDEVELOPED

PROPOSED: COMMERCIAL

### DEVELOPMENT SUMMARY

#### LOT 2:

#### BUILDING AREA

RETAIL/RESTAURANT: 34,692 SF (2 BUILDINGS TOTAL)

#### VEHICLE PARKING

COMMERCIAL (1 SPACE/225 SF): 155 SPACES

#### PROVIDED:

STANDARD: 263 SPACES

ACCESSIBLE: 8 SPACES

#### BICYCLE PARKING

1 BICYCLE PARKING SPACE / 500 SF OF GROSS LEASABLE AREA

BICYCLE PARKING REQUIRED: 70

BICYCLE PARKING PROVIDED: --

#### OPEN SPACE CALCULATION:

TOTAL LOT AREA = 236,727 SF (5.43 AC.)  
BUILDING = 34,692 SF  
PAVED AREAS = 93,776 SF  
SIDEWALK = 9,729 SF  
PATIO = 2,809 SF  
OTHER = 0 SF  
TOTAL IMPERVIOUS = 141,006 SF

OPEN SPACE REQUIRED: = 59,182 SF (25%)  
OPEN SPACE PROVIDED: = 95,721 SF (40.4%)

ALL PARKING AREAS SHALL INCLUDE LANDSCAPE AREAS, ISLANDS,  
SCREENS, ETC., EQUAL TO NOT LESS THAN TEN PERCENT (10%)  
OF THE TOTAL PAVED AREA AND ASSOCIATED DRIVES. SUCH  
LANDSCAPED AREA SHALL BE IN ADDITION TO THE OPEN SPACE  
REQUIREMENTS FOR THE PROJECT AREA. LANDSCAPED ISLANDS  
WITHIN THE PARKING AREA SHALL HAVE GROUND COVER OF GRASS  
(I.E., SOD), SHRUBS OR OTHER ACCEPTABLE LIVING PLANT LIFE,  
UNLESS AN ALTERNATE GROUND COVER IS SPECIFICALLY  
APPROVED AS PART OF THE SITE PLAN REVIEW BY THE CITY.

PARKING AREA OPEN SPACE REQUIRED = 9,377 SF  
PARKING AREA OPEN SPACE PROVIDED = 12,594 SF

#### REED'S CROSSING PUD SETBACKS

EP TRUE: 30 FT PARKING/ 70 FT BUILDING  
SETBACK  
68TH ST: 30 FT PARKING/ 50 FT BUILDING  
SETBACK  
WEST SIDE YARD: 0 FT SETBACKS  
SOUTH: 15 FT PARKING SETBACK/ 50 FT  
BUILDING SETBACK

### DATE OF SURVEY

MAY 6, 2021

### BENCHMARKS

STANDARD BENCHMARK #124 @ MEDIAN ON EAST  
SIDE OF INTERSECTION OF JORDAN CREEK  
PARKWAY AND MILLS CIVIC PARKWAY  
ELEVATION=977.66

STANDARD BENCHMARK #128 @ NORTHWEST  
CORNER OF E.P. TRUE PARKWAY AND PRAIRIE  
VIEW DRIVE.  
ELEVATION=910.23

### CONSTRUCTION SCHEDULE

ANTICIPATED START DATE = SPRING 2023  
ANTICIPATED FINISH DATE = SPRING 2024

### PROJECT SITE ADDRESS

BUILDING #1  
E.P. TRUE PKWY  
WEST DES MOINES, IOWA 50266

BUILDING #2  
E.P. TRUE PKWY  
WEST DES MOINES, IOWA 50266

### INDEX OF SHEETS

NO.	DESCRIPTION
C0.0	COVER SHEET
C1.1-1.2	DIMENSION PLAN
C2.1-2.2	GRADING PLAN
C3.1-3.2	UTILITY PLAN
C5.1	EROSION AND SEDIMENT CONTROL PLAN
C5.2-C5.9	DETAILS
L1.1-L1.2	LANDSCAPE PLAN

### GENERAL LEGEND

#### PROPOSED

PROJECT BOUNDARY	---
LOT LINE	---
SECTION LINE	---
CENTER LINE	---
RIGHT OF WAY	--- R/W ---
PERMANENT EASEMENT	--- P/E ---
TEMPORARY EASEMENT	--- T/E ---
TYPE SW-501 STORM INTAKE	[Symbol]
TYPE SW-503 STORM INTAKE	[Symbol]
TYPE SW-505 STORM INTAKE	[Symbol]
TYPE SW-506 STORM INTAKE	[Symbol]
TYPE SW-513 STORM INTAKE	[Symbol]
TYPE SW-401 STORM MANHOLE	[Symbol]
TYPE SW-402 STORM MANHOLE	[Symbol]
TYPE SW-301 SANITARY MANHOLE	[Symbol]
STORM/SANITARY CLEANOUT	[Symbol]
WATER VALVE	[Symbol]
FIRE HYDRANT ASSEMBLY	[Symbol]
SIGN	[Symbol]
DETECTABLE WARNING PANEL	[Symbol]
STORM SEWER STRUCTURE NO.	[Symbol]
STORM SEWER PIPE NO.	[Symbol]
SANITARY SEWER STRUCTURE NO.	[Symbol]
SANITARY SEWER PIPE NO.	[Symbol]
SANITARY SEWER WITH SIZE	[Symbol]
SANITARY SERVICE	[Symbol]
STORM SEWER	[Symbol]
STORM SERVICE	[Symbol]
WATERMAIN WITH SIZE	[Symbol]
WATER SERVICE	[Symbol]
SAWCUT (FULL DEPTH)	[Symbol]
SILT FENCE	[Symbol]

#### EXISTING

SANITARY MANHOLE	[Symbol]
WATER VALVE BOX	[Symbol]
FIRE HYDRANT	[Symbol]
WATER CURB STOP	[Symbol]
WELL	[Symbol]
STORM SEWER MANHOLE	[Symbol]
STORM SEWER SINGLE INTAKE	[Symbol]
STORM SEWER DOUBLE INTAKE	[Symbol]
FLARED END SECTION	[Symbol]
ROOF DRAIN/ DOWNSPOUT	[Symbol]
DECIDUOUS TREE	[Symbol]
CONIFEROUS TREE	[Symbol]
DECIDUOUS SHRUB	[Symbol]
CONIFEROUS SHRUB	[Symbol]
ELECTRIC POWER POLE	[Symbol]
GUY ANCHOR	[Symbol]
STREET LIGHT	[Symbol]
POWER POLE W/ TRANSFORMER	[Symbol]
UTILITY POLE W/ LIGHT	[Symbol]
ELECTRIC BOX	[Symbol]
ELECTRIC TRANSFORMER	[Symbol]
ELECTRIC MANHOLE OR VAULT	[Symbol]
TRAFFIC SIGN	[Symbol]
TELEPHONE JUNCTION BOX	[Symbol]
TELEPHONE MANHOLE/VAULT	[Symbol]
TELEPHONE POLE	[Symbol]
GAS VALVE BOX	[Symbol]
CABLE TV JUNCTION BOX	[Symbol]
CABLE TV MANHOLE/VAULT	[Symbol]
MAIL BOX	[Symbol]
BENCHMARK	[Symbol]
SOIL BORING	[Symbol]
UNDERGROUND TV CABLE	[Symbol]
GAS MAIN	[Symbol]
FIBER OPTIC	[Symbol]
UNDERGROUND TELEPHONE	[Symbol]
OVERHEAD ELECTRIC	[Symbol]
UNDERGROUND ELECTRIC	[Symbol]
FIELD TILE	[Symbol]
SANITARY SEWER W/ SIZE	[Symbol]
STORM SEWER W/ SIZE	[Symbol]
WATER MAIN W/ SIZE	[Symbol]



1-800-292-8989  
www.iowaonecall.com

### UTILITY WARNING

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD  
SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE  
SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES  
SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER  
IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER  
DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN  
THE EXACT LOCATION SHOWN.



CIVIL DESIGN ADVANTAGE

4121 NW URBANDALE DRIVE, URBANDALE, IA 50322

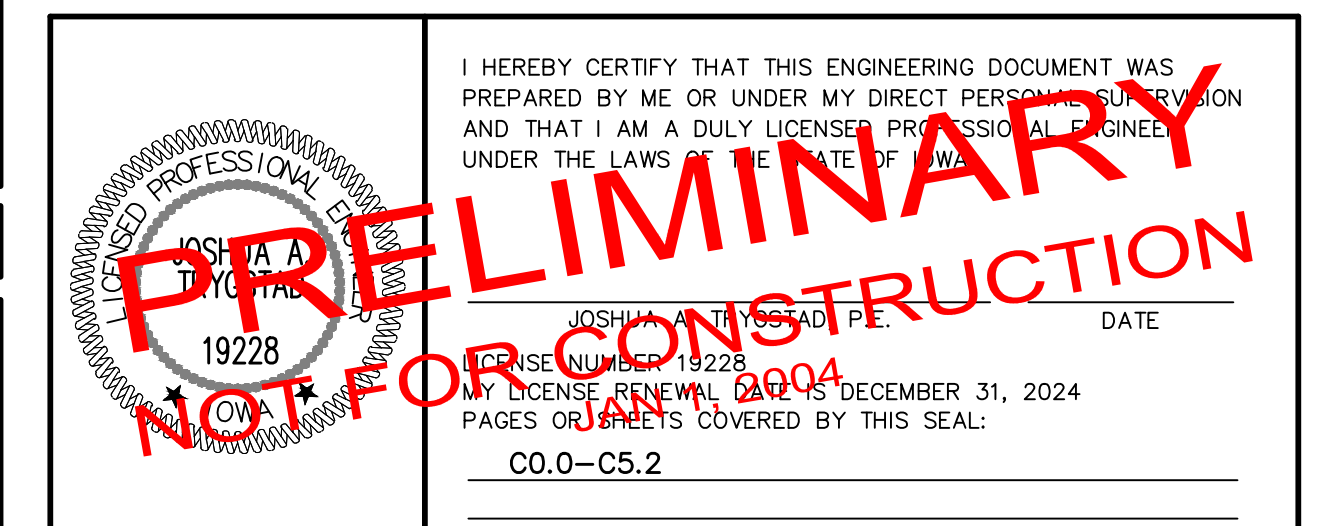
PH: (515) 369-4400 Fax: (515) 369-4410

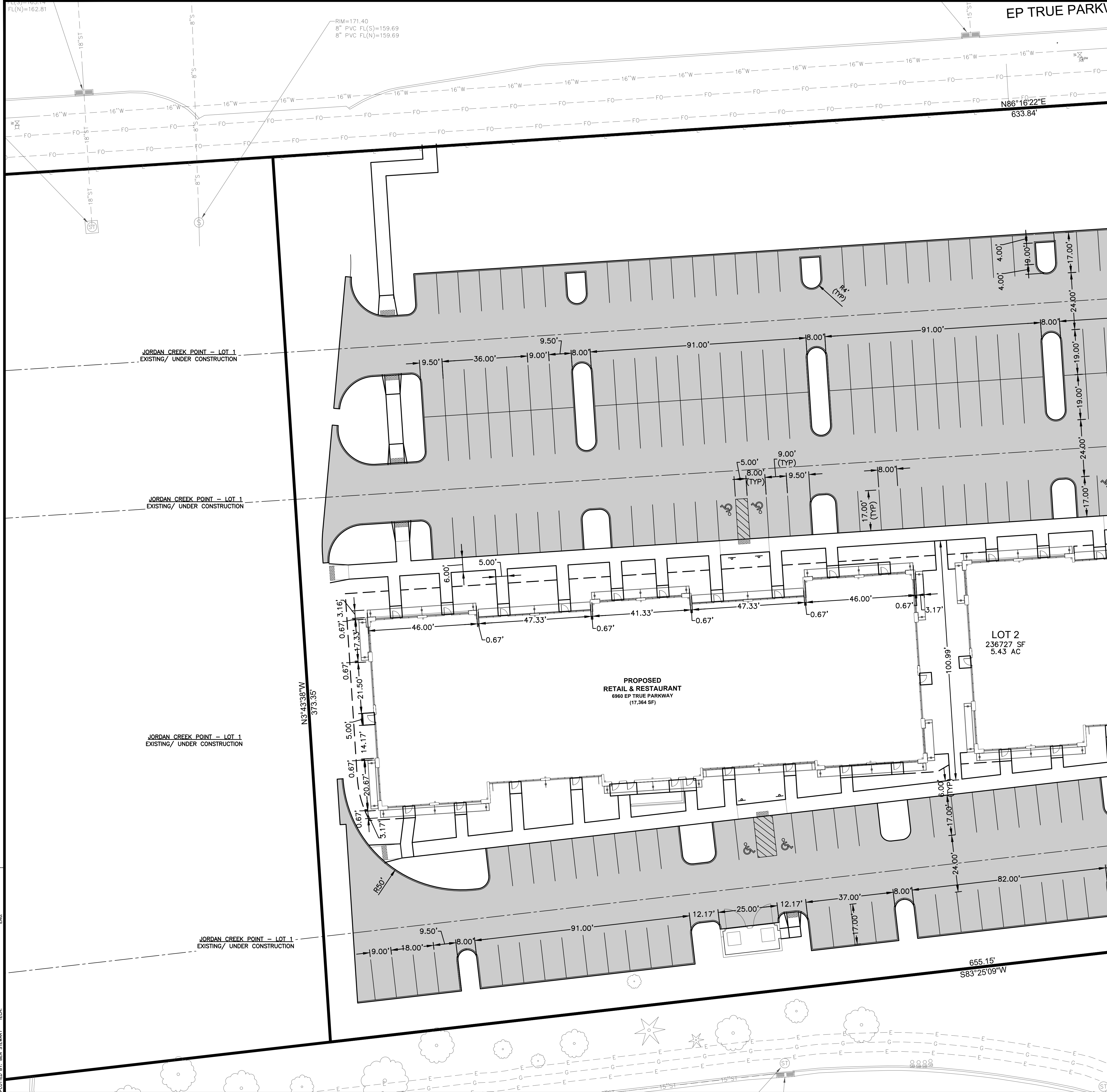
PROJECT NO. 2212.853

THE PROJECT REQUIRES AN IOWA NPDES PERMIT #2 AND CITY OF WEST DES  
MOINES GRADING PERMIT. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE  
PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN  
(SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE  
CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP  
THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL  
REQUIREMENTS.

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR  
ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE MOST RECENT EDITION OF WEST DES MOINES STANDARD CONSTRUCTION  
SPECIFICATIONS FOR SUBDIVISIONS, THE 1993 DES MOINES METRO DESIGN  
STANDARDS WITH THE WEST DES MOINES ADDENDA, THE WEST DES MOINES  
WATER WORKS GENERAL SUPPLEMENTAL SPECIFICATIONS FOR WATER  
INFRASTRUCTURE, THE PUBLIC RIGHTS-OF WAY ACCESSIBILITY GUIDELINES  
(PROWAG), AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO  
ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.





**GENERAL NOTES**

1. THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS AND THE WEST DES MOINES WATER WORKS STANDARD SPECIFICATIONS FOR SUBDIVISIONS SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
4. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
5. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE WDM CONSTRUCTION DIVISION 'CLINT CARPENTER' (222-3480) TO OBTAIN APPLICABLE CITY PERMITS THAT MAY BE NECESSARY.
6. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
7. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS, DSM METRO DESIGN STANDARDS AND WDM ADDENDUMS.
8. CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
9. PLACE 3/4 INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2 INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT.
10. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
11. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
12. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
13. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
15. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
17. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.
18. NO OUTDOOR DUMPSTERS ARE PROPOSED AT THIS TIME.
19. TEMPORARY TURNAROUNDS SHALL BE ABLE TO HANDLE A MINIMUM VEHICLE OF 75,000 POUNDS.
20. SIDEWALK DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE PUBLIC ROW ACCESSIBILITY GUIDELINES (PROWAG).
21. CHAPTER 12 OF THE 2013 EDITION OF THE STATEWIDE URBAN DESIGN STANDARDS (SUDAS) IS THE MOST CURRENT DESIGN REFERENCE MATERIAL AVAILABLE FOR CONSTRUCTION OF PUBLIC SIDEWALKS IN IOWA.
22. ALL EASEMENTS ARE EXISTING UNLESS OTHERWISE NOTED.

**DEMOLITION NOTES**

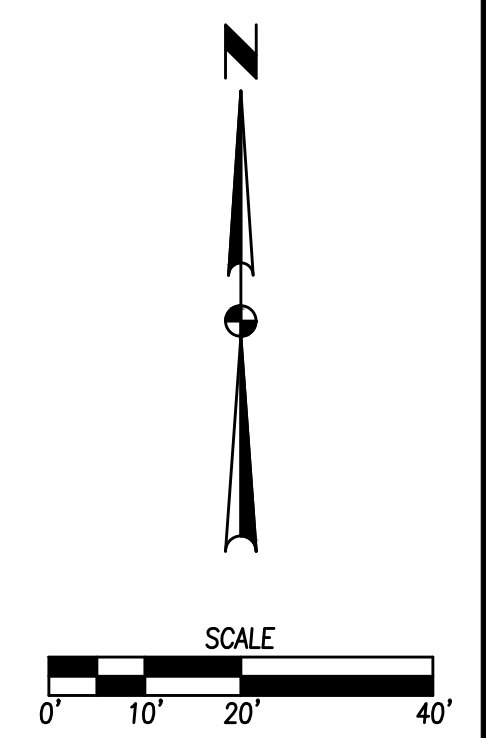
1. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. PRIOR TO DEMOLITION, CONTRACTOR SHALL NOTIFY IN WRITING (48 HRS NOTICE) THE FOLLOWING:
  - A. CITY
  - B. APPROPRIATE UTILITY COMPANIES
  - C. OWNER
  - D. CIVIL DESIGN ADVANTAGE
  - E. ARCHITECT
3. DO NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE NOTED. COORDINATE REMOVAL OR ABANDONMENT OF ALL UTILITIES WITH THE APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES. PROTECT EXISTING UTILITIES THAT ARE TO REMAIN. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
4. BACKFILL ALL EXCAVATIONS WITH COHESIVE MATERIAL COMPACTED TO 95% MAXIMUM STANDARD PROCTOR DRY DENSITY AND MOISTURE RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE. TESTING OF BACKFILL TO BE BY A GEOTECHNICAL ENGINEER EMPLOYED BY THE OWNER. IN THE EVENT OF A TEST FAILURE, ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR.
5. FIELD VERIFY EXISTING GRADES AND LOCATION OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE FEATURES PRIOR TO DEMOLITION AND IMMEDIATELY INFORM THE ENGINEER AND/OR OWNER OF ANY DISCREPANCIES.
6. DEMOLITION NOTES AS SHOWN ON THE PLAN ARE NOT ALL INCLUSIVE. CONTRACTOR TO ABANDON IN PLACE OR REMOVE AND DISPOSE OF ALL EXISTING SITE IMPROVEMENTS ABOVE AND BELOW GROUND TO COMPLY WITH THE GENERAL INTENT OF THIS DOCUMENT.
7. ALL CONSTRUCTION/DEMOLITION DEBRIS SHALL BE DISPOSED OF OFFSITE IN FULL COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
8. CONSTRUCTION LIMITS SHALL BE CONFINED TO THE SITE BOUNDARY AS NOTED. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.

**TRAFFIC CONTROL NOTES**

1. ALL APPLICABLE CITY PERMITS, INCLUDING BUT NOT LIMITED TO CLOSURE PERMITS, SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION WITHIN CITY R.O.W. OR LANE CLOSURES.
2. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
4. THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
5. SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES.
6. THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. ALL SIGNING AND LANE STRIPING WILL NEED TO COMPLY WITH MUTCD. MAINTENANCE AND REPLACEMENT OF THE SIGNING AND STRIPING WILL BE THE RESPONSIBILITY OF THE APPLICANT.

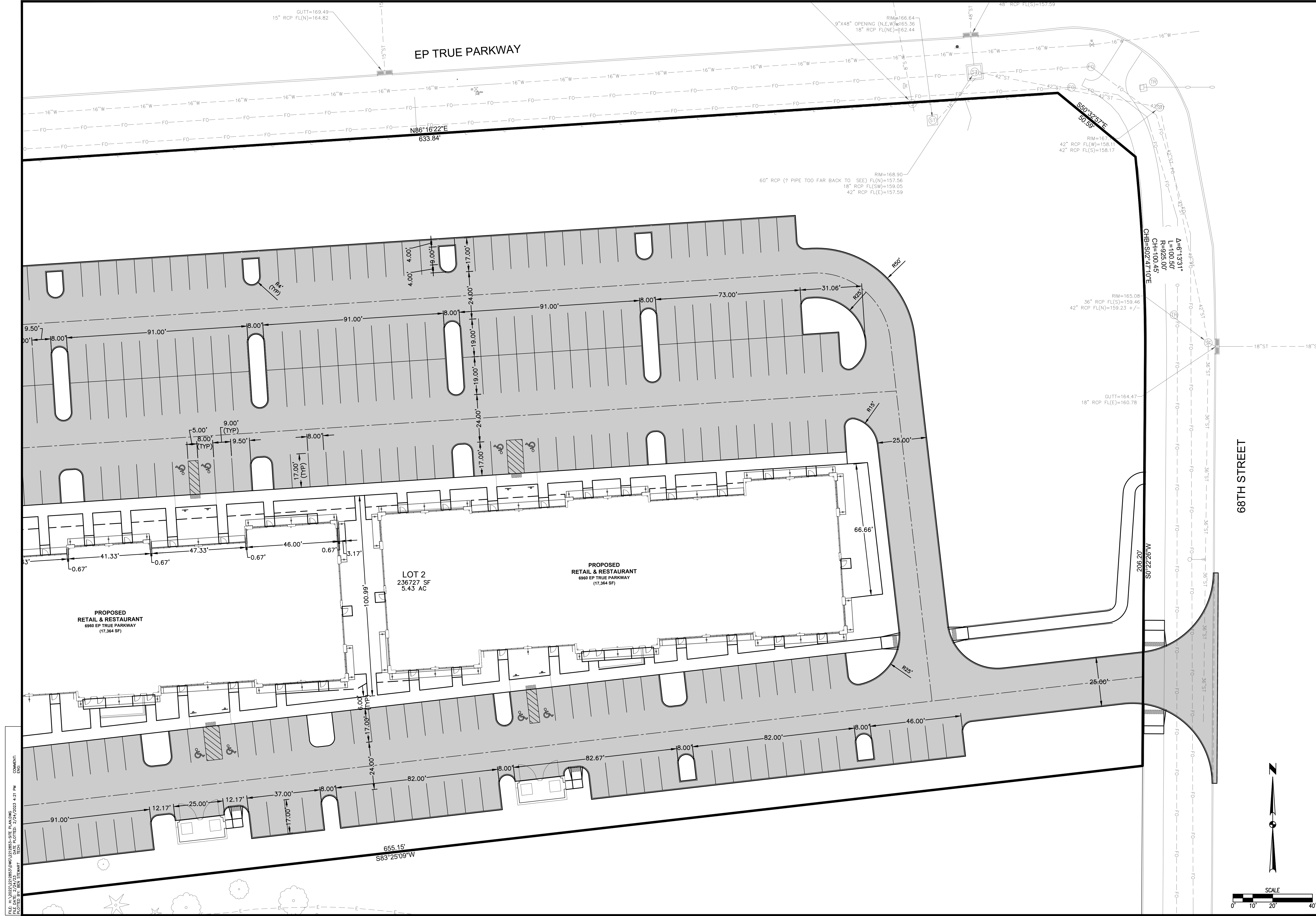
**PAVEMENT THICKNESS**

- |                                 |           |
|---------------------------------|-----------|
| 1. SIDEWALKS (PUBLIC / PRIVATE) | 4" P.C.C. |
| 2. LIGHT-DUTY PAVEMENT          | 6" P.C.C. |
| 3. HEAVY-DUTY PAVEMENT          | 7" P.C.C. |
| 4. SIDEWALKS IN DRIVEWAYS       | 7" P.C.C. |
| 5. DUMPSTER PADS                | 8" P.C.C. |
| 6. TIE-IN PAVING WITHIN R.O.W.  | 9" P.C.C. |



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 FILE DATE: 2/24/23  
 PLOTTED BY: BEN STEWART  
 COMMENT: ENG.  
 DATE: 2/24/23 4:21 PM

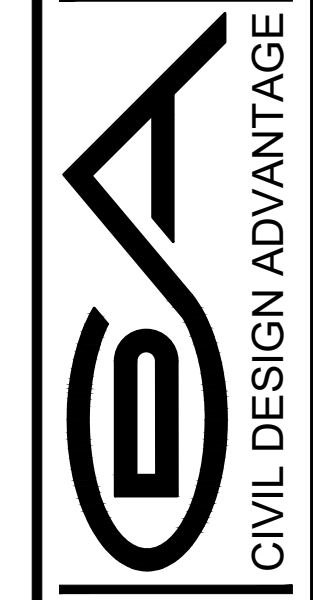
**JORDAN CREEK POINT - LOT 2**  
**DIMENSION PLAN**  
 WEST DES MOINES, IOWA  
 CIVIL DESIGN ADVANTAGE  
 ENGINEER  
 TECH:  
 4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400  
 REVISIONS  
 DATE  
 02/24/2023  
 FIRST SUBMITTAL  
**C1.1**  
 2212.853



FILE IN: S:\CADD\2023\JORDAN CREEK POINT - LOT 2  
 FILE DATE: 2/24/23  
 PLOTTED BY: BEN STEWART  
 COMMENT: ENG  
 DATE PLOTTED: 2/24/2023 4:21 PM  
 TECH:

DATE	REVISIONS
02/24/2023 <td>FIRST SUBMITTAL</td>	FIRST SUBMITTAL

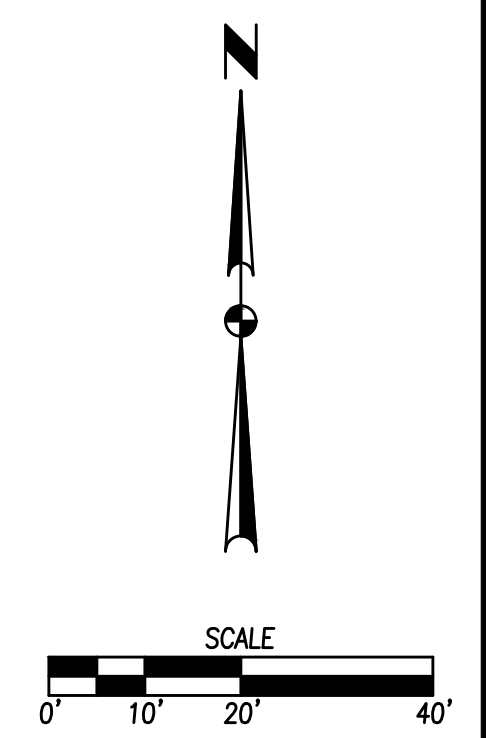
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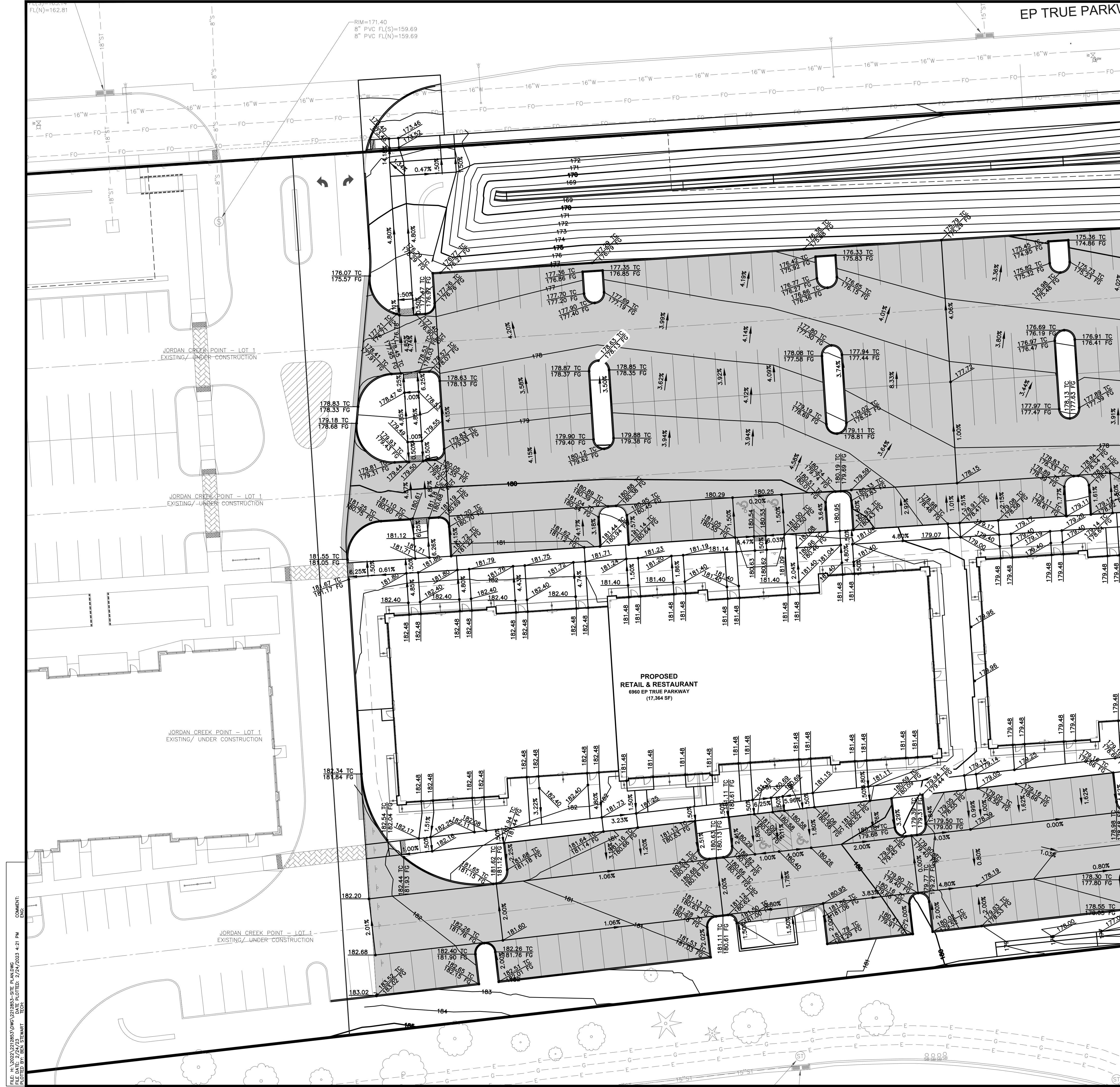
**JORDAN CREEK POINT - LOT 2**  
 DIMENSION PLAN  
 WEST DES MOINES, IOWA  
 CIVIL DESIGN ADVANTAGE ENGINEER

**C1.2**  
 2212.853

68TH STREET



TECH: ENGINEER:



EP TRUE PARKWAY

**GRADING NOTES**

1. PRIOR TO ANY GRADING ON SITE TAKES PLACE, A COPY OF THE NPDES PERMIT, AUTHORIZED BY THE IOWA DNR, SHALL BE PROVIDED TO THE CITY CHIEF BUILDING INSPECTOR. RVANGENDEREN@WDM-IA.COM OR FAX 515-273-0602.
2. CONTACT PERSON RESPONSIBLE FOR ENSURING MUD AND ROCK ARE CLEANED OFF THE STREETS AND FOR INSTALLATION, PERIODIC CHECKING, AND REINSTALLATION OF EROSION CONTROL MEASURES IS: NICK NEWBURY, SITE INSPECTIONS LLC. PHONE: (515) 608-3296.
3. ELEVATIONS AND CONTOURS ARE CITY OF WEST DES MOINES DATUM.
4. CONTRACTOR SHALL STRIP ALL DELETERIOUS MATERIAL. THE TOP 6" OF TOPSOIL IS TO BE STOCKPILED AND RESPREAD AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
5. IN ORDER TO ATTAIN FINAL CERTIFICATE OF OCCUPANCY APPROVAL, DOCUMENTATION WILL BE REQUIRED FROM THE GENERAL CONTRACTOR VIA THE GRADING CONTRACTOR/SOIL EROSION CONTROL CONTRACTOR/OR THE PROJECT CIVIL ENGINEER THAT THE PROJECT MEETS THE CURRENT TOPSOIL PRESERVATION REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR).
6. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
7. ALL SPOT ELEVATIONS ARE FORM GRADE (FG) OR TOP-OF-SLAB (TS) UNLESS OTHERWISE NOTED.
8. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
9. ALL SIDEWALK SLOPES SHALL BE A MAXIMUM OF 2.00% CONSTRUCTED.
10. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
11. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
13. SEE SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
14. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
15. SIDEWALKS:
  - MAINTAIN A 4.75% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 1.5% TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE. DEPTH: LONGITUDINAL 1/3, TRANSVERSE 1/4.
16. PRIVATE STREETS AND UTILITIES SHALL BE MAINTAINED BY THE OWNER. TO INCLUDE:
  - A. DETENTION POND AND APPURTENANCES
  - B. PRIVATE STORM SEWER
  - C. ALL INTERNAL CIRCULATION ROADS
17. ANY PIPING AND GRADING INTO/ADJACENT TO THE GREENWAY WILL NEED TO BE FULLY STABILIZED PRIOR TO COMPLETION OF THIS PROJECT. THESE SLOPES WILL NEED TO BE IN A CONDITION AS TO NOT CREATE ANY FUTURE MAINTENANCE ISSUES FOR THE RESIDENTS OF THESE DEVELOPMENTS, OR FOR THE CITY WITHIN THE ADJACENT GREENWAYS.
18. THE PROPOSED SLOPE ON THE DOWNSIDE OF THE DETENTION BASIN AND ITS ADJACENT STREAMBANK SHALL BE CONSIDERED PART OF THE DETENTION FACILITY, AND AS SUCH SHALL BE MAINTAINED BY THE DEVELOPER AND OR/ITS ASSIGNEES.

COMMENTS:  
 ENG.  
 FILE DATE: 2/22/23  
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 PLOTTED BY: BEN STEWART, TECH

**JORDAN CREEK POINT - LOT 2**  
**GRADING PLAN**

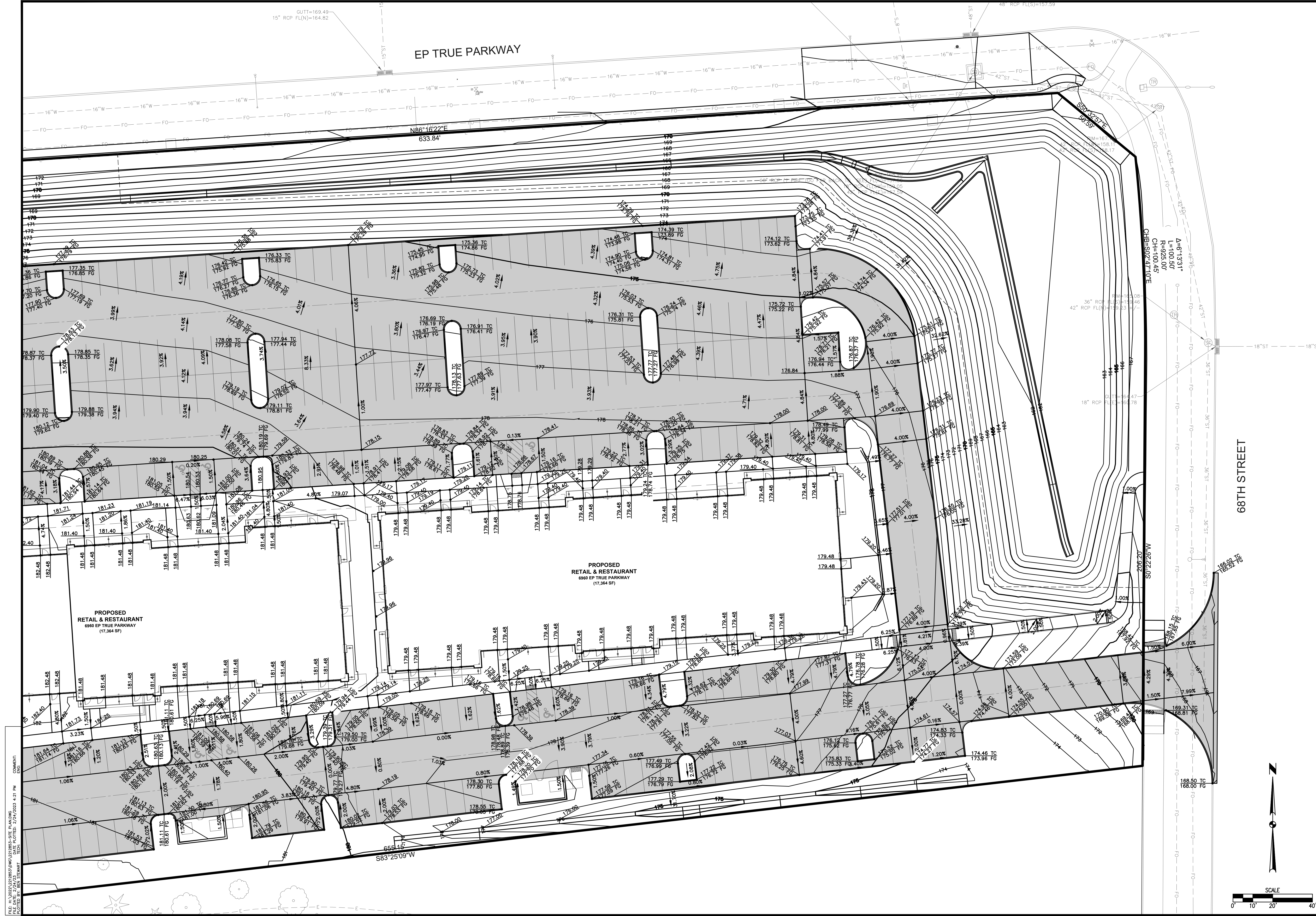
WEST DES MOINES, IOWA

**C2.1**  
 2212.853

4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400

TECH: ENGINEER: FIRST SUBMITTAL

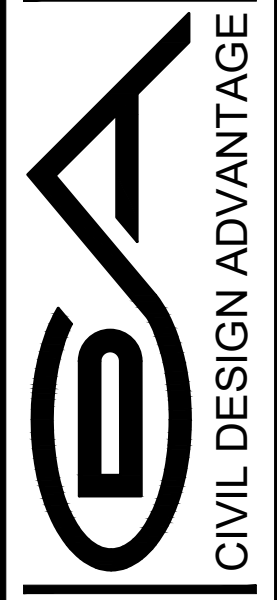
DATE: 02/24/2023



COMMENTS:  
 1. ALL NOTES AND DIMENSIONS SHALL BE IN INCHES.  
 2. DATE: 2/24/23  
 3. DATE PLOTTED: 2/24/2023 4:21 PM  
 4. PLOTTED BY: BEN STEWART

DATE	REVISIONS
02/24/2023 <td>FIRST SUBMITTAL</td>	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400



**JORDAN CREEK POINT - LOT 2**  
 GRADING PLAN

**C2.2**  
 2212.853

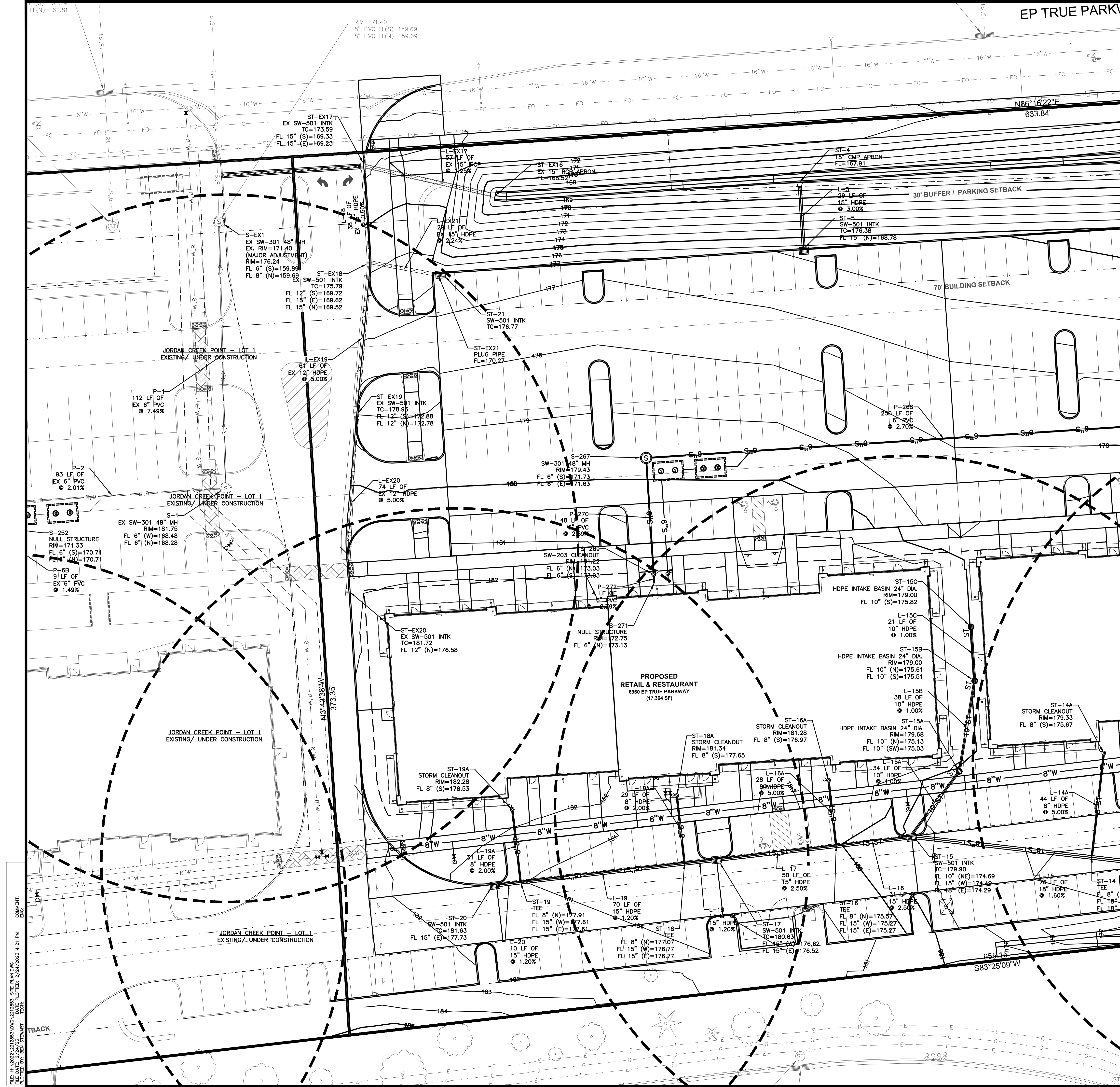
TECH: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

WEST DES MOINES, IOWA

CIVIL DESIGN ADVANTAGE





EP TRUE PARKWAY

UTILITY NOTES

- REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
- FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
- ALL UTILITIES SHALL BE STUBBED TO 5 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
- ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES.
- ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WEST DES MOINES PLUMBING CODE.
- 12" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN. 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND WATER MAIN AND CONSTRUCT SEWER WITH GASKETED JOINTS SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN.
- MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
- PRIVATE UTILITIES TO BE INSTALLED PER THE CITY OF WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2012 UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS.
- OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE UTILITIES.
- CONTRACTOR SHALL PREVENT ENTRY OF MUD, DIRT, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SILT FENCE AT ALL PERMANENT STORM SEWER INLETS.
- ALL SANITARY SEWER SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE WDM STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS.
- ALL SANITARY SEWER MH'S WITHIN PAVING SHALL HAVE A 3 PIECE CASTING. IF AN EXISTING PUBLIC SANITARY SEWER MH IS REPLACED WITH A 3 PIECE CASTING PUBLIC WORKS WILL NEED TO BE CONTACTED TO PICK UP THE OLD CASTING. CONTACT JASON SCHLICHERND ENGINEERING SERVICES 222-3620.
- COORDINATE IRRIGATION METER AND BACKFLOW PREVENTION DEVICE LOCATIONS WITH WDMWW AND CITY OF WDM PLANNING DEPARTMENT BEFORE INSTALLATION IF IRRIGATION IS DESIRED. THE PIT AND/OR BACKFLOW PREVENTION DEVICE MAY REQUIRE SCREENING.

COMMENTS:  
 ENG.  
 FILE DATE: 2/2/23  
 PLOTTED BY: BEN STEWART, TECH.  
 DATE PLOTTED: 2/24/2023 4:21 PM

DATE	02/24/2023
REVISIONS	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400

TECH: [Blank]

ENGINEER: [Blank]

CIVIL DESIGN ADVANTAGE

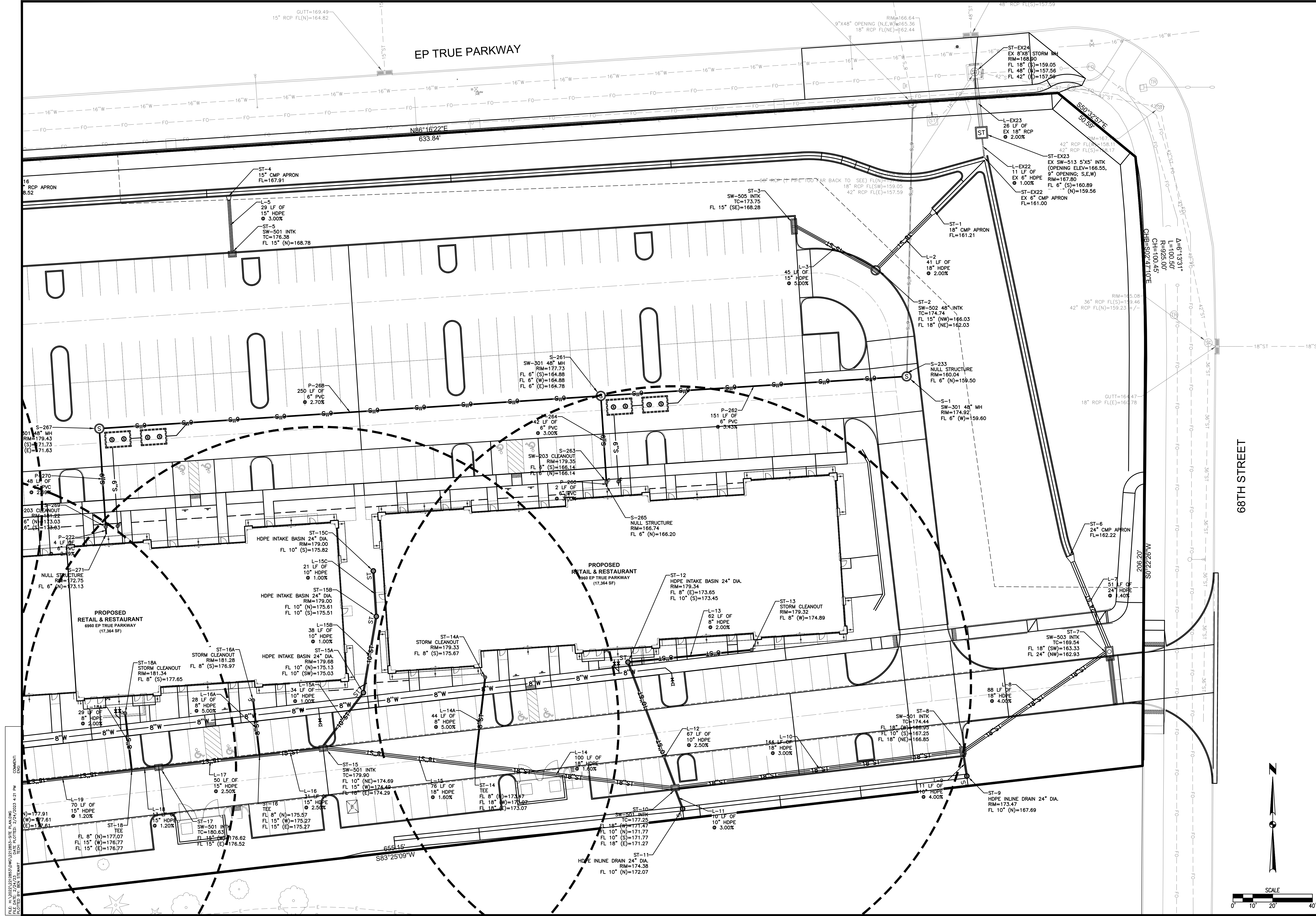
WEST DES MOINES, IOWA

**JORDAN CREEK POINT - LOT 2**

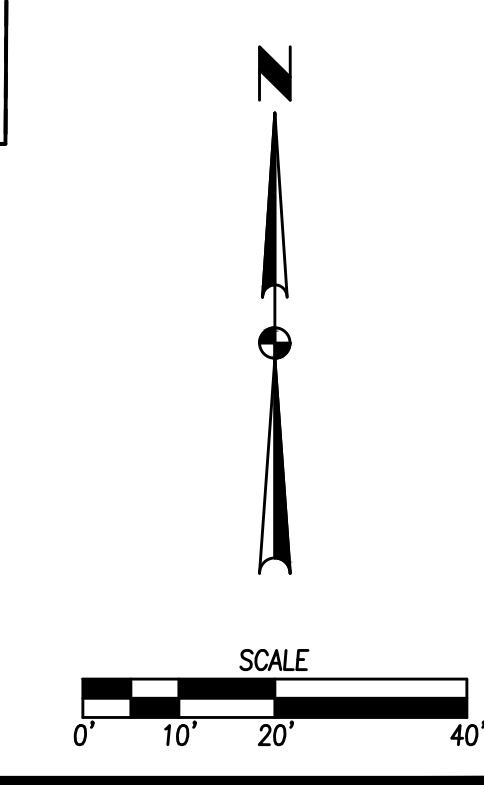
UTILITY PLAN

**C4.1**

2212.853



COMMENT: SEE PLAN SHEETS FOR DIMENSIONS AND NOTES.  
 FILE DATE: 2/24/23. DATE PLOTTED: 2/24/23 4:21 PM  
 PLOTTED BY: BEN STEWART, TECH



DATE	REVISIONS
02/24/2023 <td>FIRST SUBMITTAL</td>	FIRST SUBMITTAL

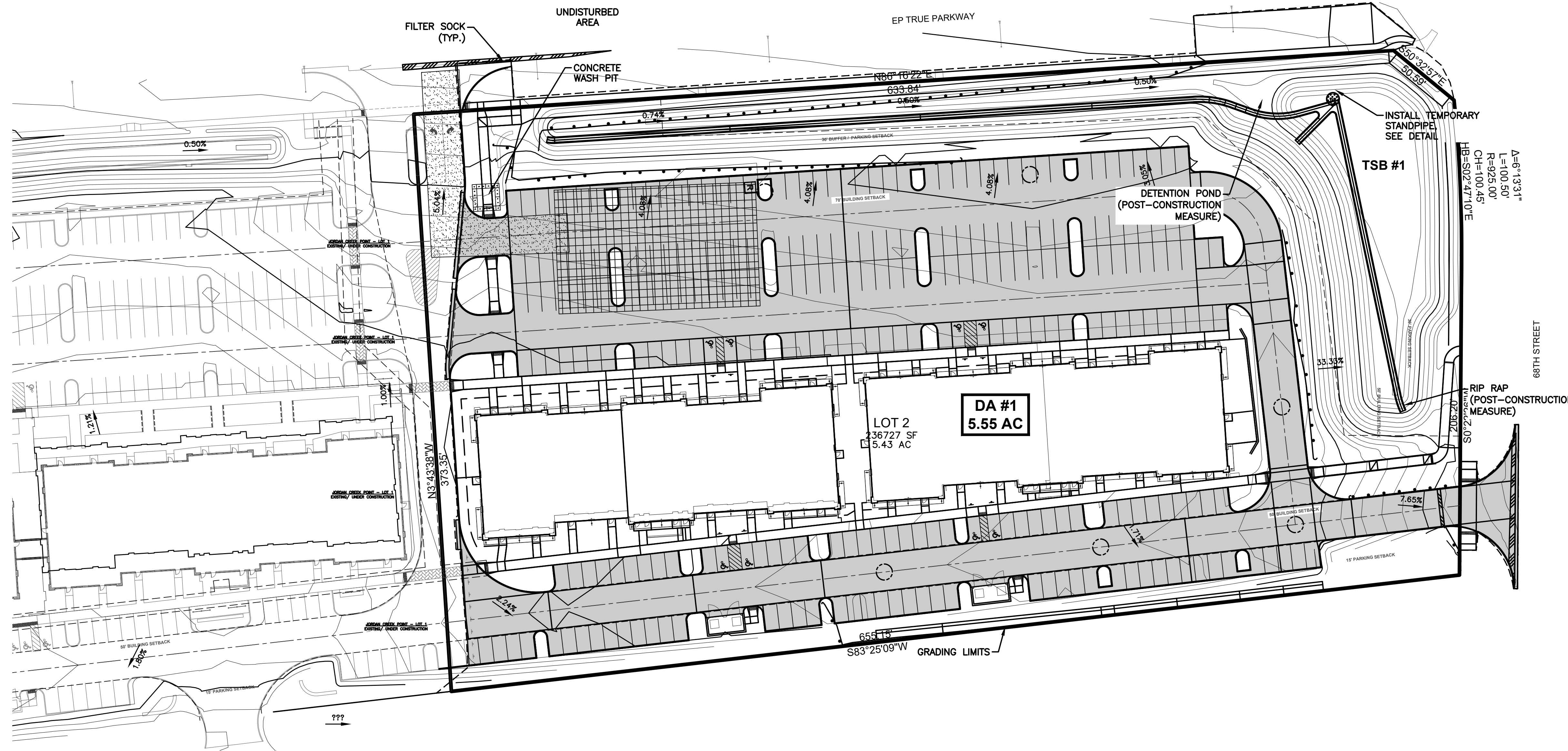
4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400



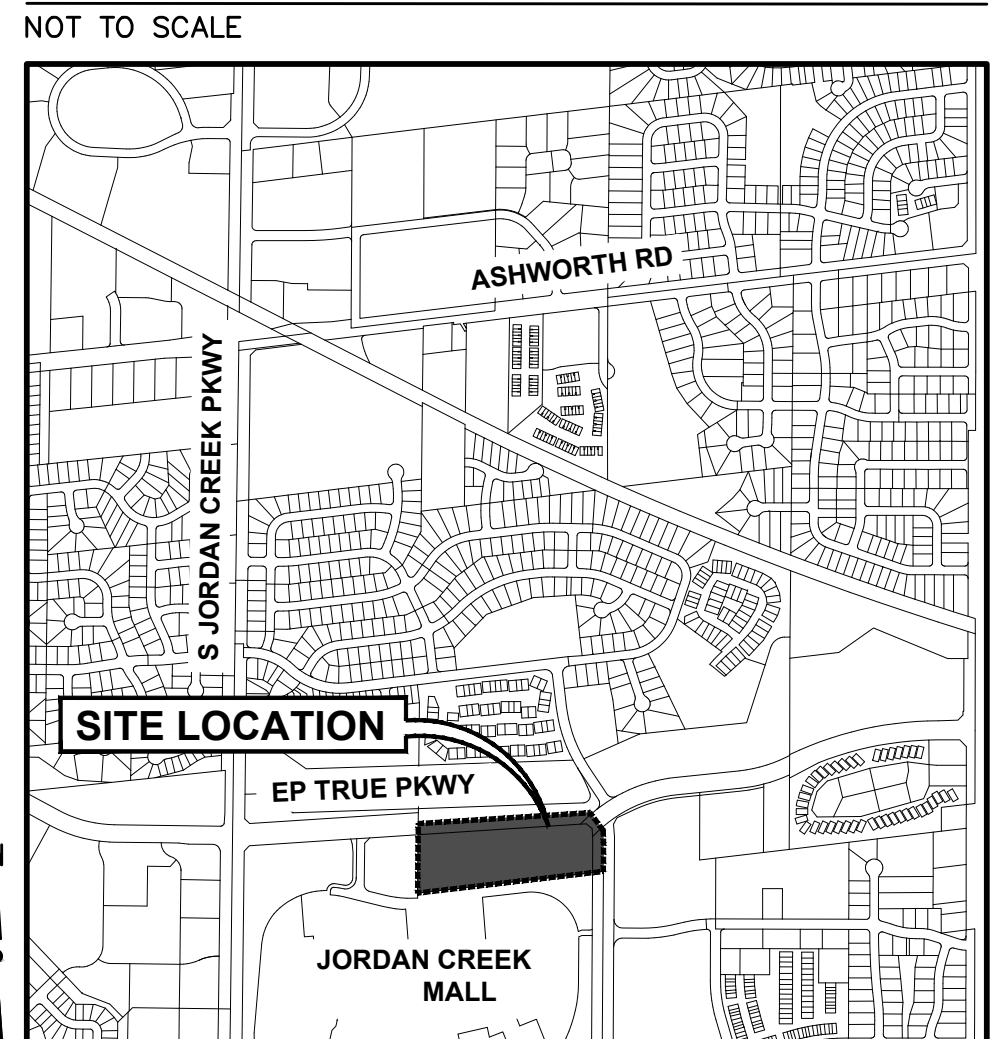
**JORDAN CREEK POINT - LOT 2**  
 UTILITY PLAN

**C4.2**  
 2212.853

WEST DES MOINES, IOWA  
 ENGINEER: [Signature]  
 TECH: [Signature]

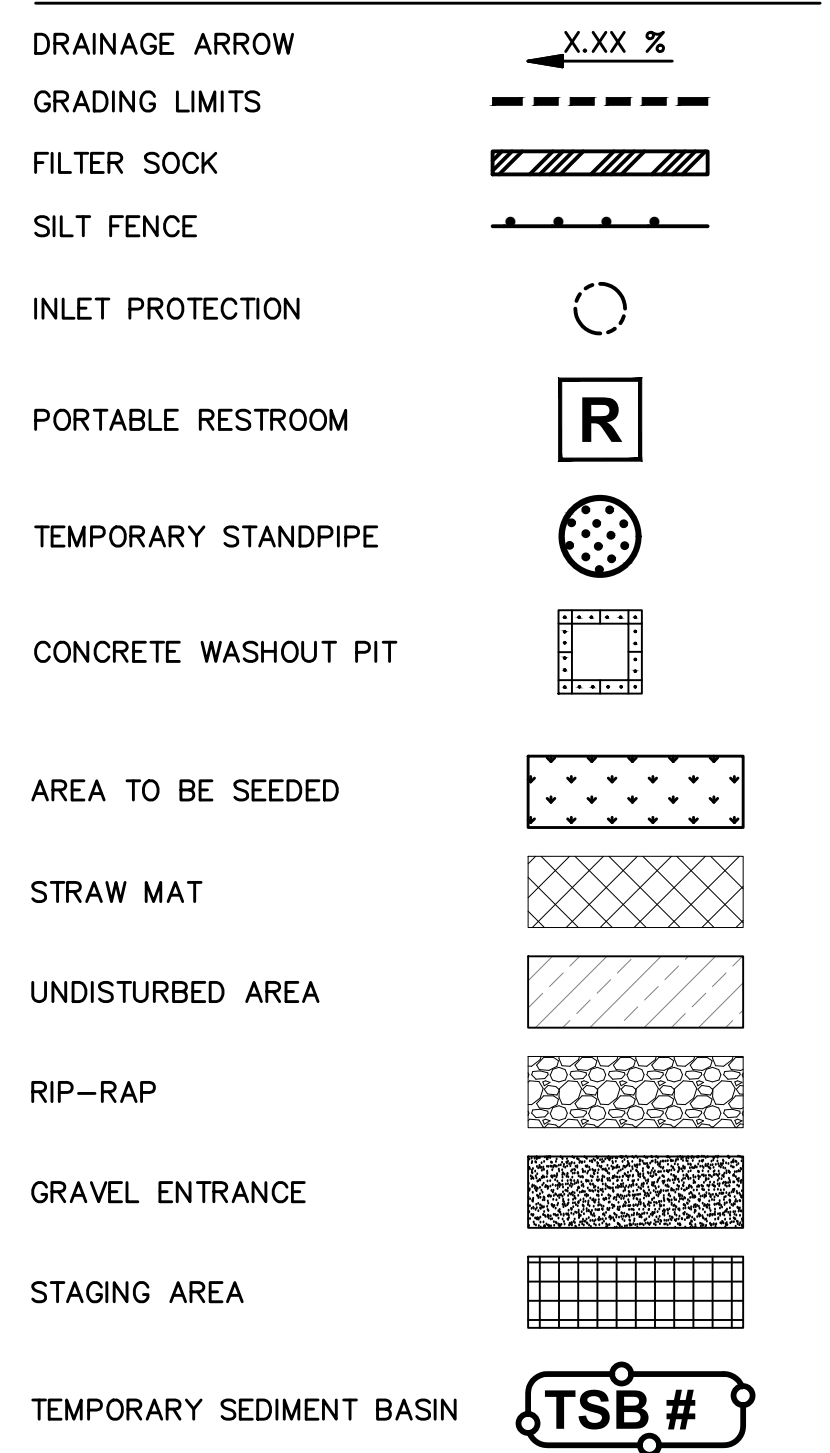


**VICINITY MAP**



- NOTES:**
- IF DEWATERING IS NEEDED FOR ANY REASON, DISCHARGE OF WATER OFFSITE IS TO CONFORM WITH THE GENERAL PERMIT #2 REQUIREMENT.
  - DISTURBED AREAS SHALL BE TEMPORARILY SEEDED OR MULCHED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
  - STORM SEWERS AND DRAINAGE WAYS SHALL BE PROTECTED FROM CONCRETE SLURRY PRODUCED BY SAWCUTTING AND CONCRETE GRINDING.

**SWPPP LEGEND**



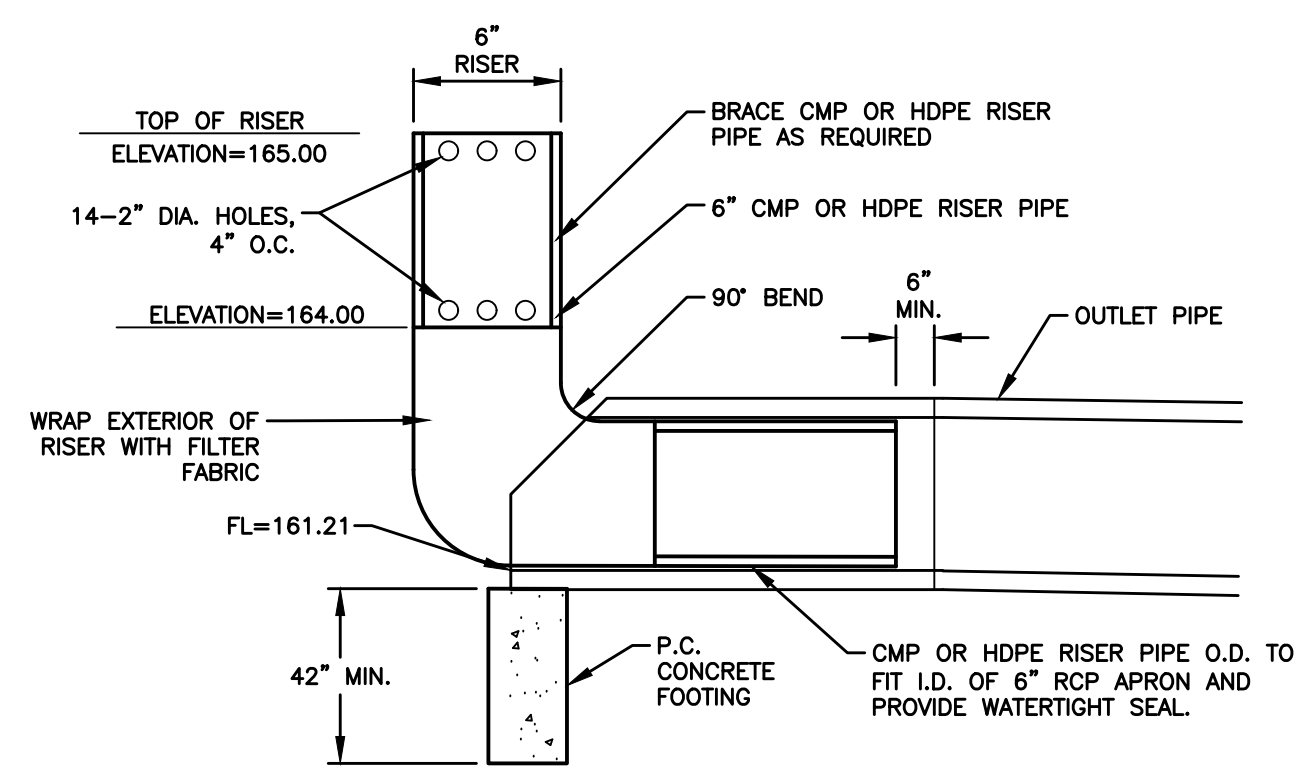
**DISCHARGE POINT SUMMARY**

DISCHARGE POINT #2 TO UNNAMED TRIBUTARY OF JORDAN CREEK ±200 FT

TOTAL AREA DISTURBED TO DISCHARGE POINT	5.55 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	19,980 CU FT
VOLUME PROVIDED IN FILTER SOCK (665 LF @ 2.0 CU FT/LF OF SOCK)	1330 CU FT
VOLUME PROVIDED IN SILT FENCE (1,072 LF @ 4.5 CU FT/LF OF FENCE)	4,824 CU FT
VOLUME PROVIDED IN TSB #1	40,399 CU FT
TOTAL VOLUME PROVIDED	46,553 CU FT

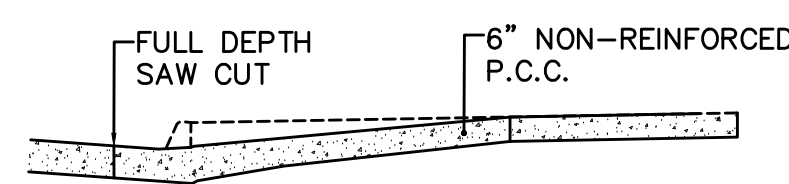
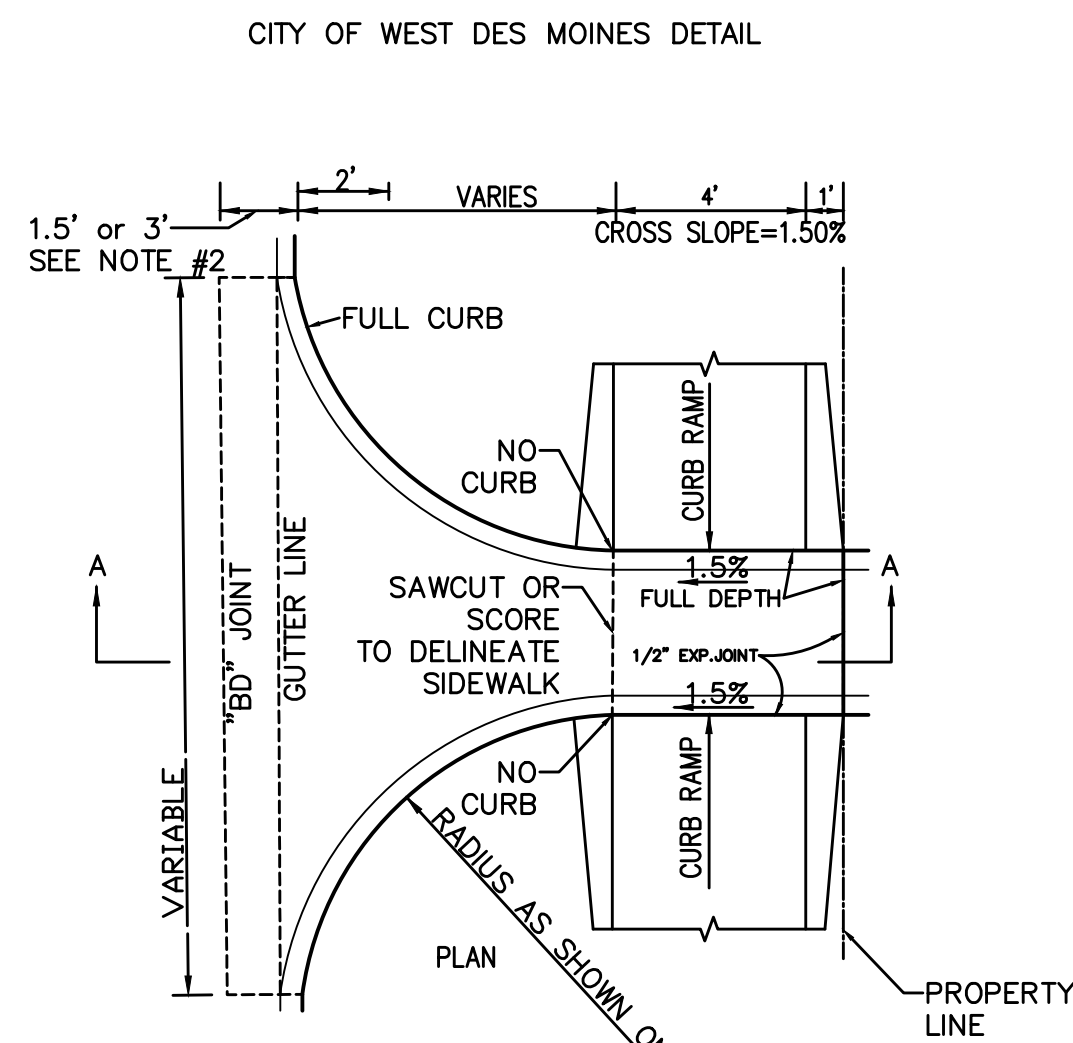
**STABILIZATION QUANTITIES**

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	4,824
2	FILTER SOCK	LF	1330
3	SEEDING, FERTILIZING, AND MULCHING	AC	2.01
4	INLET PROTECTION DEVICES	EA	6
5	CONCRETE WASHOUT PIT	EA	1



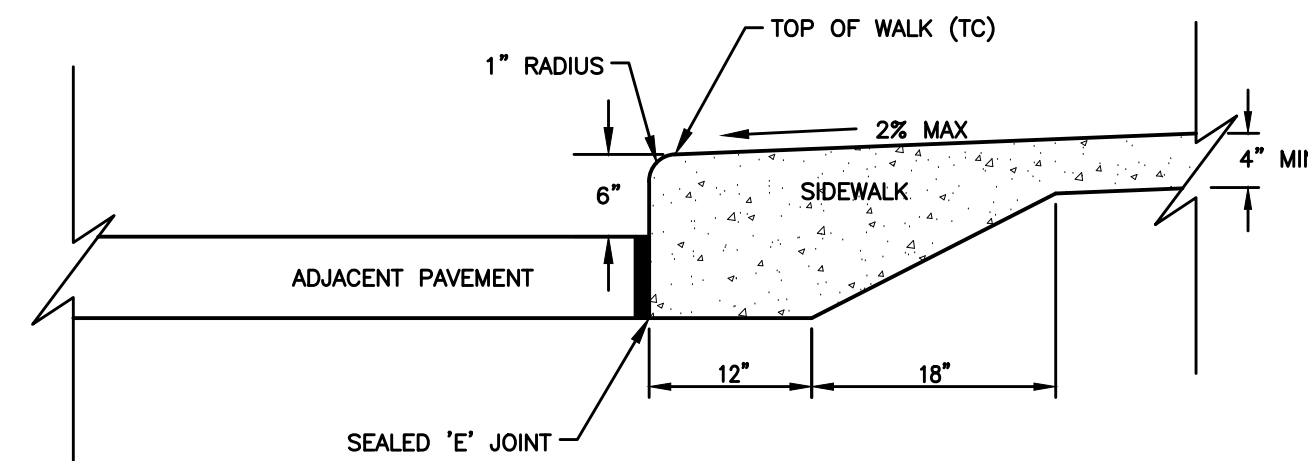
**TEMPORARY STAND PIPE TSB #1**



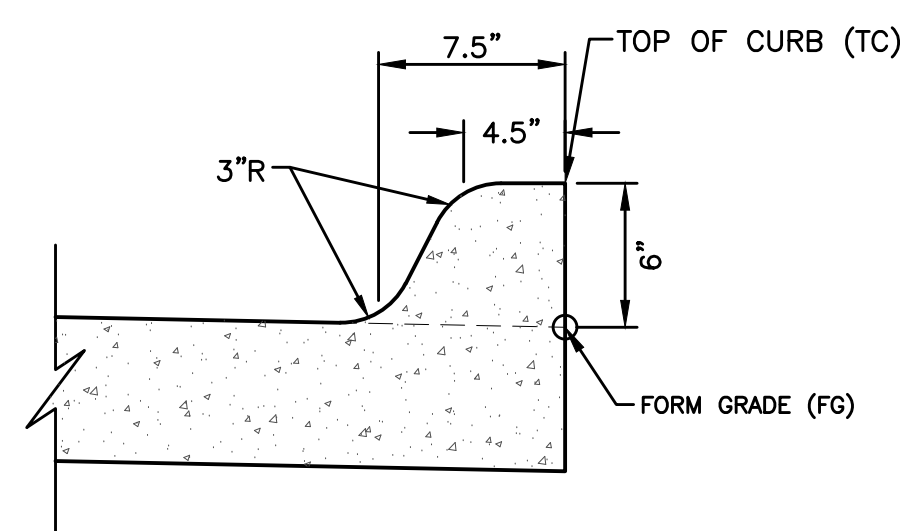


- NOTES:
- BEFORE THE CONCRETE IS PLACED, THE SAW CUT JOINTS SHALL BE COMPLETELY CLEANED OF ALL LOOSE CONCRETE OR FOREIGN MATERIAL.
  - SAW CUT AND REMOVE EXISTING CONCRETE PAVEMENT A WIDTH OF 3' WHEN EXISTING JOINT IS 3' FROM BACK OF CURB.
  - SAW CUT PAVEMENT JOINTS IN GENERAL CONFORMANCE WITH PORTLAND CEMENT CONCRETE INTERSECTION DETAILS.

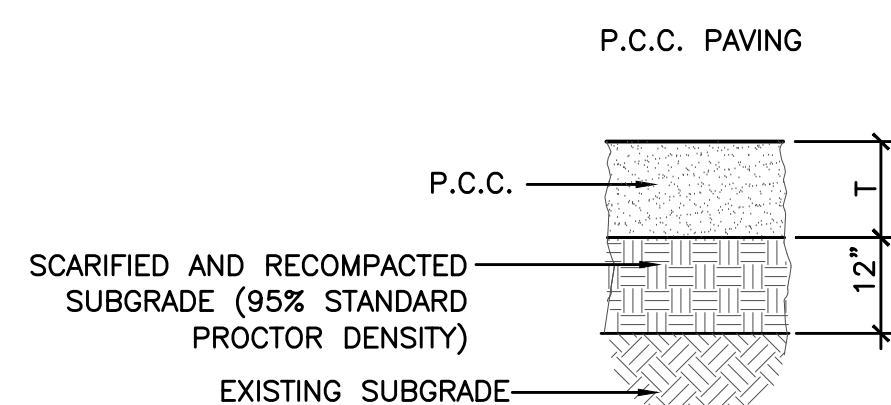
**8 DRIVEWAY DETAIL**  
NOT TO SCALE



**4 CLASS \"A\" INTEGRAL CURB AND SIDEWALK W/ SPOT ELEVATION REFERENCE**  
NOT TO SCALE



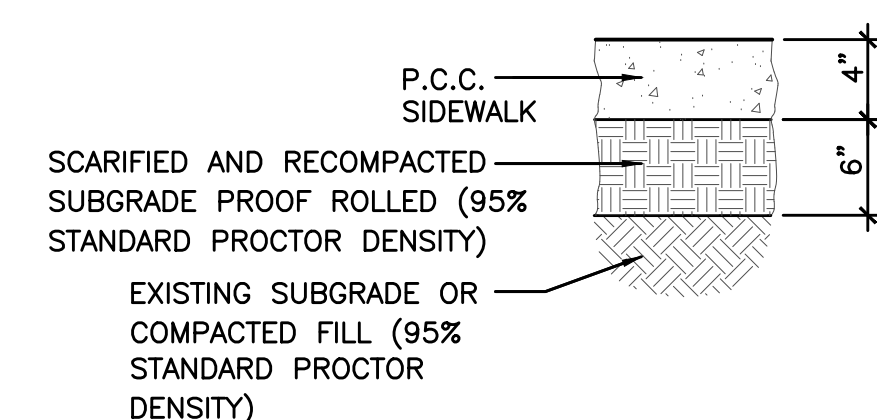
**5 6\"/>**



THICKNESS 'T'	P.C.C.
PAVING TYPE	P.C.C.
LIGHT DUTY	6"
HEAVY DUTY	7"
PUBLIC	9"

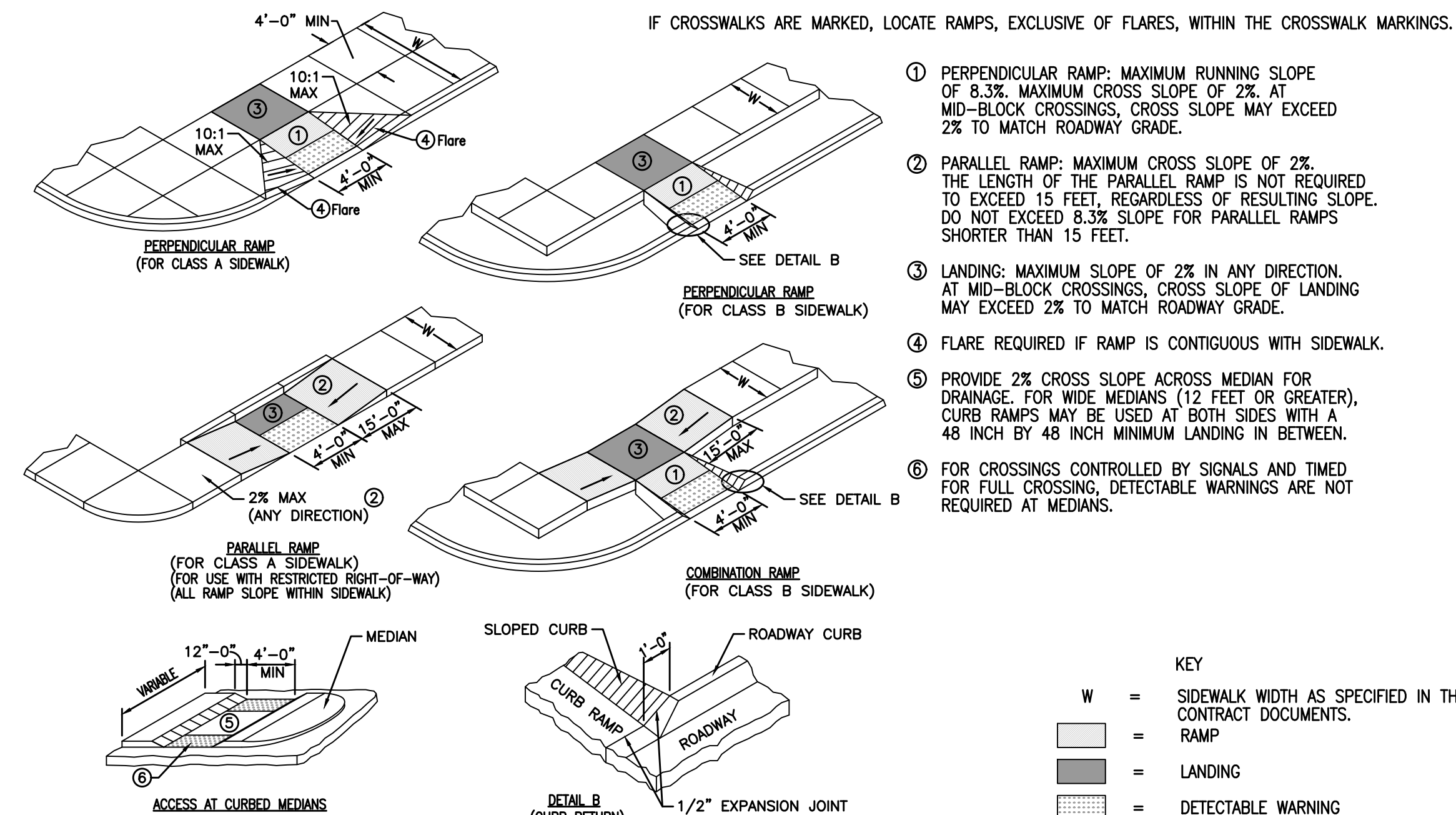
- NOTE:
- SUBGRADE PREPARATION SHALL EXTEND 24" BEYOND EDGE OF PAVING OR BACK OF CURB.

**6 P.C.C. PAVING**  
NOT TO SCALE



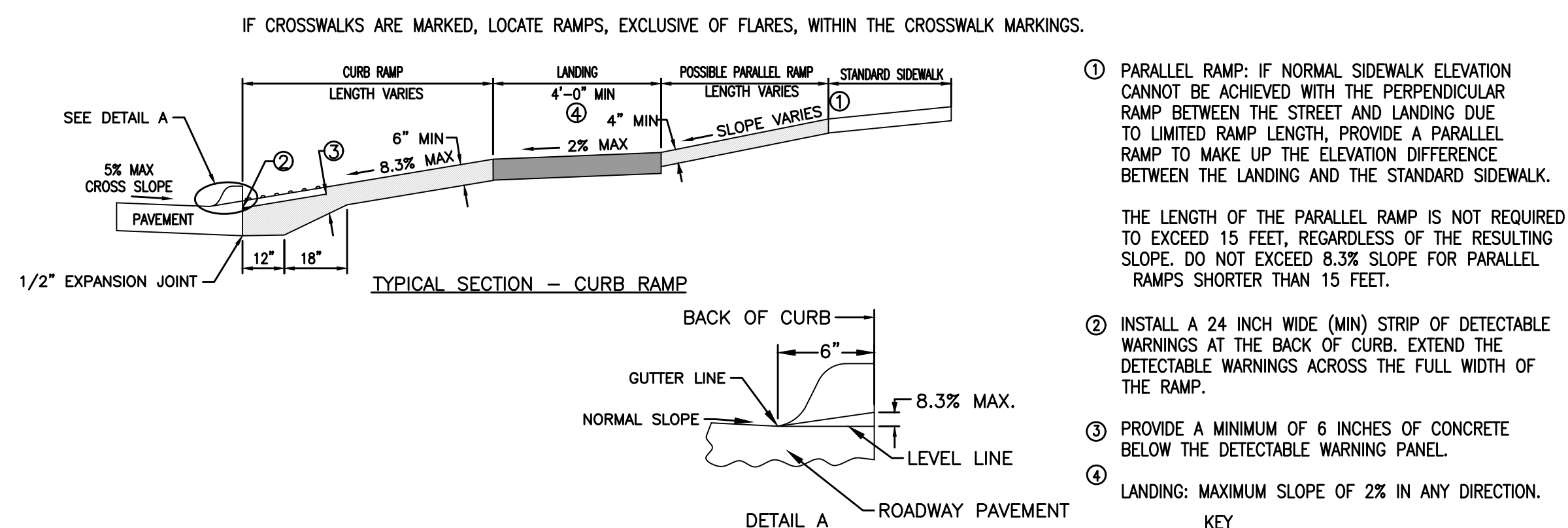
- NOTE:
- SUBGRADE PREPARATION SHALL EXTEND 24" BEYOND EDGE OF PAVING.

**7 P.C.C. SIDEWALK**  
NOT TO SCALE



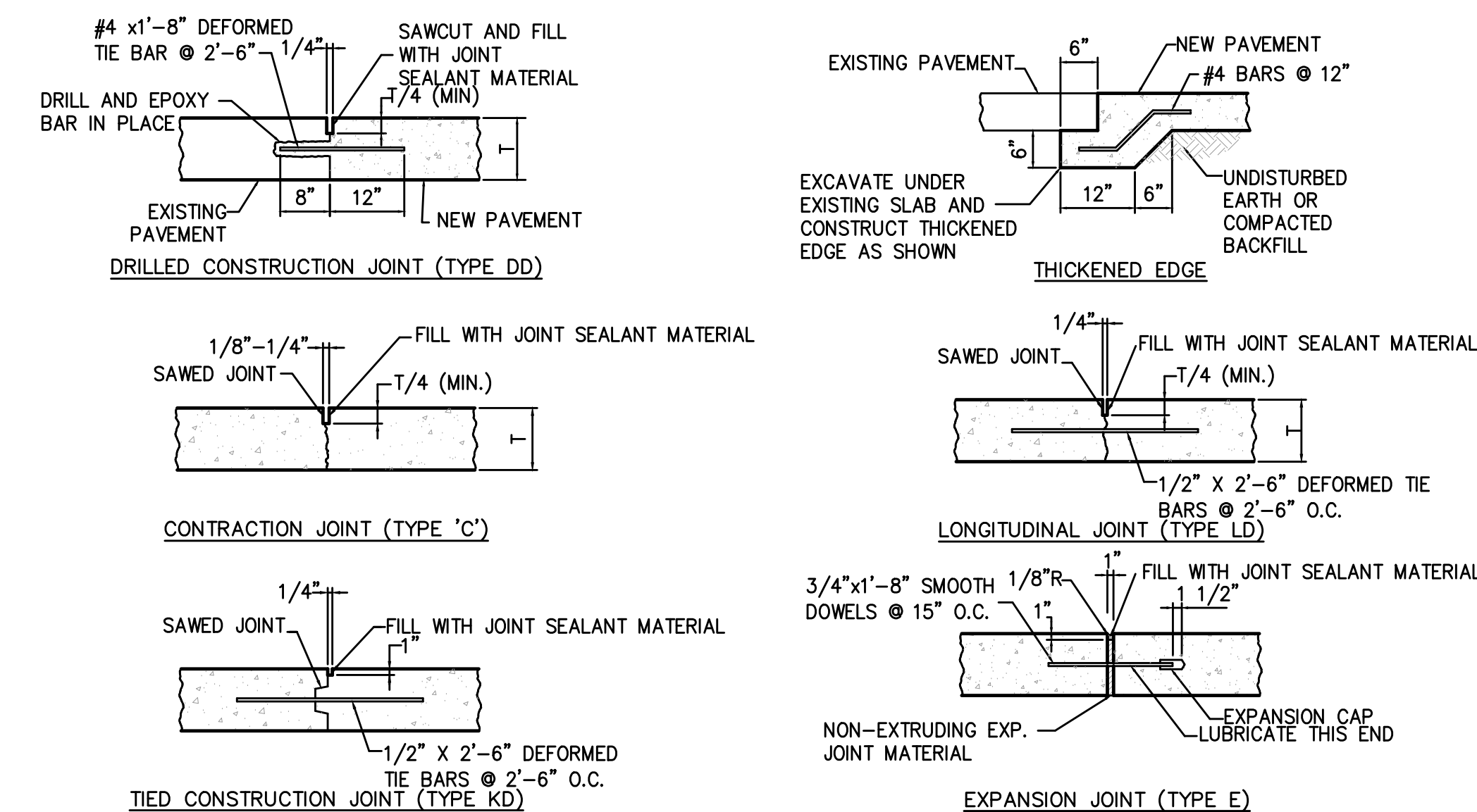
**CURB RAMPS OUTSIDE OF INTERSECTION RADIUS**

**1 CURB RAMPS OUTSIDE OF INTERSECTION**  
NOT TO SCALE

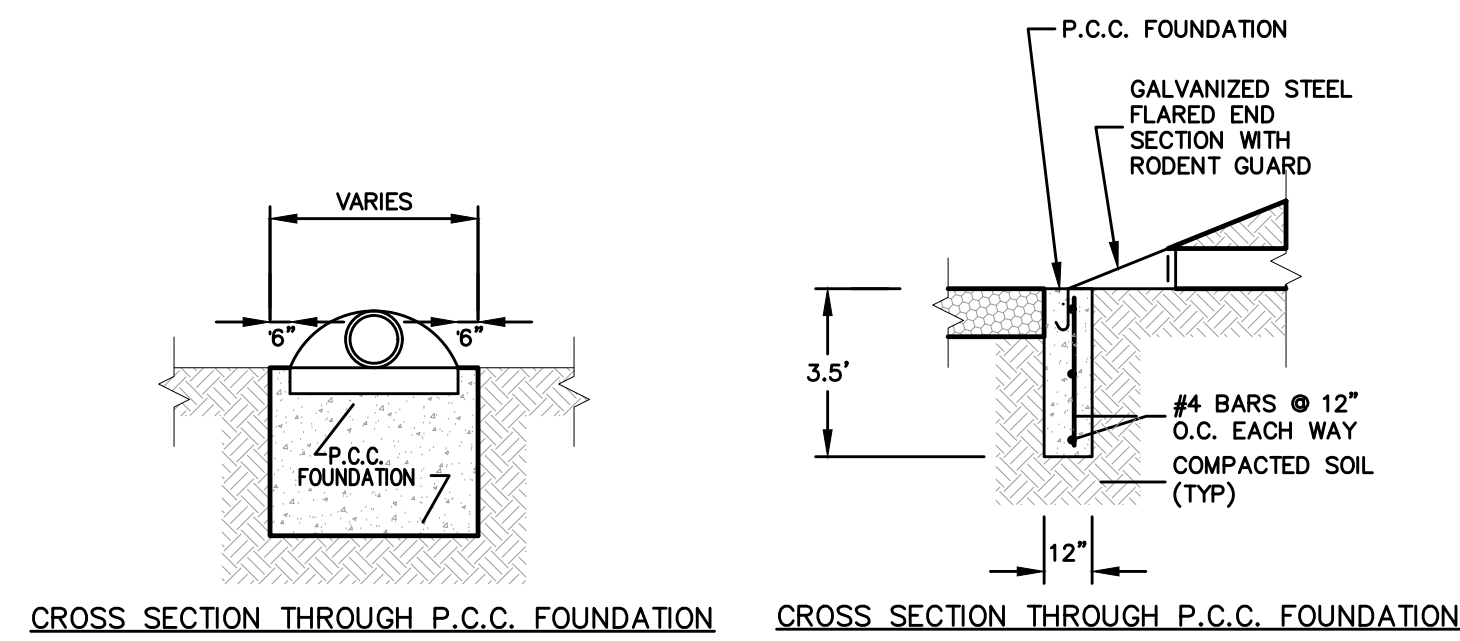


**CURB RAMPS - GENERAL SECTION**

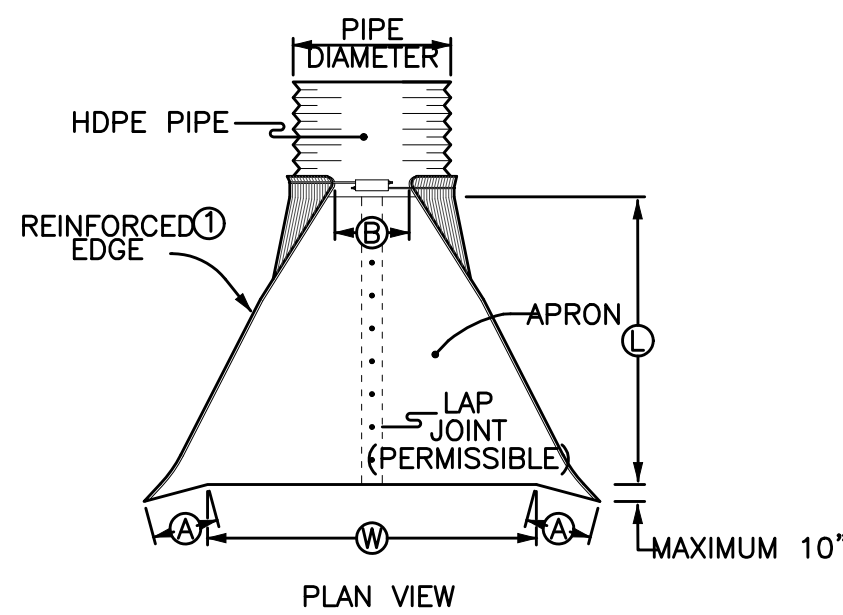
**2 CURB RAMPS - GENERAL SECTION**  
NOT TO SCALE



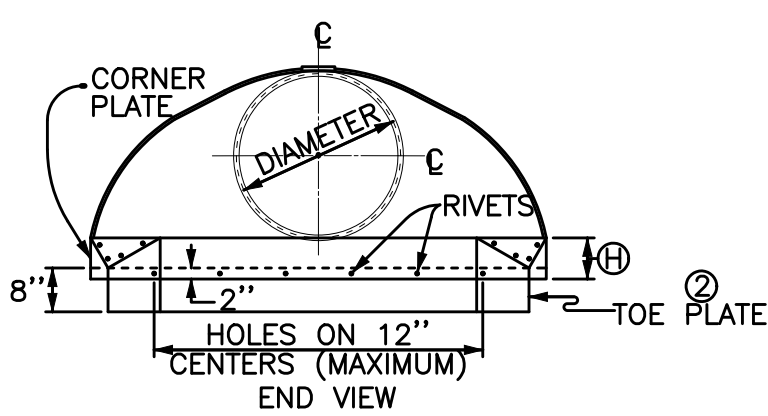
**3 PAVEMENT JOINTING**  
NOT TO SCALE



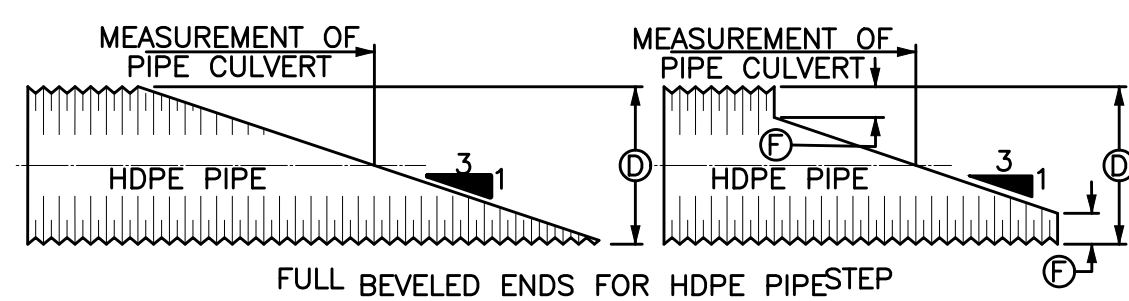
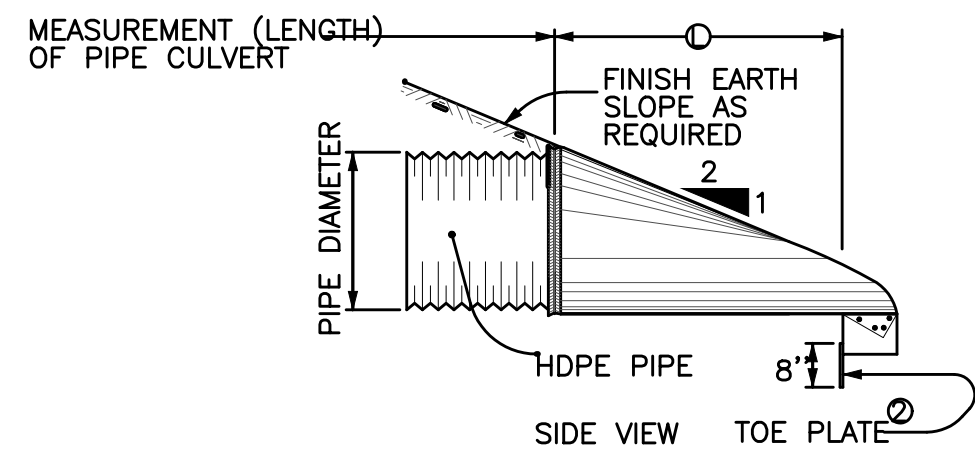
**4 METAL FLARED END SECTION FOOTING**  
NOT TO SCALE



PIPE DIAM.	A	B	H	L	W
15"	6"	8"	6"	26"	30"
18"	7"	9"	6"	31"	36"
21"	8"	11"	6"	36"	42"
24"	9"	12"	6"	42"	48"
30"	12"	15"	7"	52"	60"
36"	14"	18"	9"	63"	72"
42"	16"	21"	10"	73"	84"
48"	18"	27"	12"	84"	90"
54"	18"	30"	12"	84"	102"
60"	18"	33"	12"	87"	114"
66"	18"	36"	12"	87"	120"
72"	18"	39"	12"	87"	126"
78"	18"	42"	12"	87"	132"
84"	18"	45"	12"	87"	138"
90"	24"	37"	11"	87"	144"
96"	25"	35"	12"	87"	150"

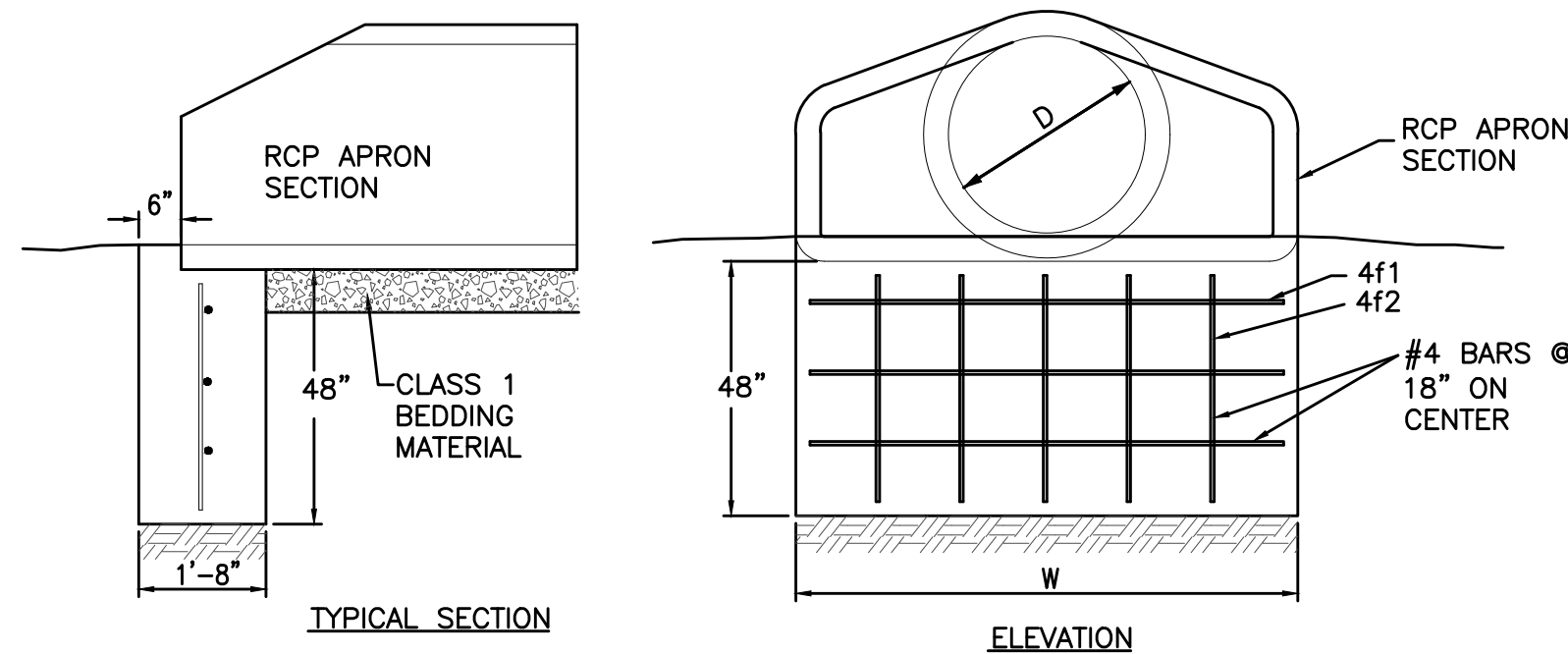


BEVEL 3:1	(D)	(P)
54"	3"	
60"	6"	
66"	9"	
72"	12"	
78"	15"	
84"	18"	
90"	21"	
96"	24"	



**5 CORRUGATED METAL PIPE APRON**  
NOT TO SCALE

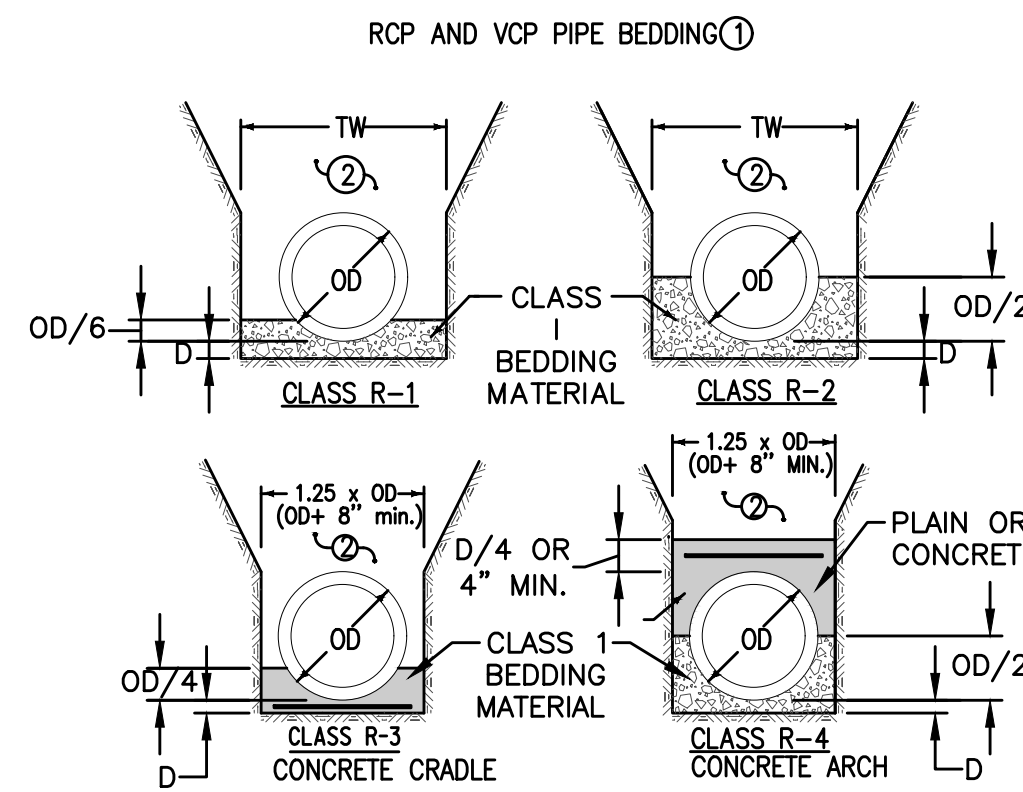
NOTE:  
WHEN SPECIFICALLY REQUIRED AS PART OF  
DETAIL PROJECT PLANS, ENDS OF PIPE  
CULVERT MAY BE PROVIDED WITH BEVELED  
ENDS AS SHOWN. EITHER FULL BEVEL OR  
STEP BEVEL MAY BE USED UNLESS ONE  
TYPE IS SPECIFIED. UNLESS SPECIFIED  
OTHERWISE, THE SLOPE OF THE BEVEL  
SHALL BE 3:1.  
  
BEVELED ENDS WILL NOT BE PAID FOR  
SEPARATELY BUT, WHEN REQUIRED, SHALL  
BE CONSIDERED INCIDENTAL TO THE PRICE  
BID OF THE CULVERT.



REINFORCING BAR LIST					REINFORCING BAR LIST				
D	W	Mark	Size	Length Count	D	W	Mark	Size	Length Count
12"	2'-4"	4f2	4	3'-8" 2	48"	7'-10"	4f1	4	7'-6" 3
15"	2'-10"	4f1	4	2'-6 1/2" 3	54"	8'-5"	4f1	4	8'-1" 3
18"	3'-5"	4f2	4	3'-8" 2	60"	8'-11"	4f2	4	3'-8" 6
24"	4'-6"	4f1	4	4'-2" 3	66"	8'-11"	4f1	4	8'-7" 3
30"	5'-7"	4f2	4	3'-8" 2	72"	10'-0"	4f2	4	3'-8" 6
36"	6'-8"	4f1	4	6'-4" 3	78"	10'-7"	4f1	4	9'-8" 3
42"	7'-3"	4f2	4	3'-8" 5	84"	10'-7"	4f2	4	3'-8" 7

**6 RCP APRON SECTION FOOTING**  
NOT TO SCALE

**KEY**  
OD = OUTSIDE DIAMETER OF PIPE  
OS = OUTSIDE SPAN OF PIPE  
TW = TRENCH WIDTH AT TOP OF PIPE:  
MIN. = OD+18 INCHES  
MAX. = 1.25XOD+12 INCHES OR  
54 INCHES (WHICHEVER IS GREATER)  
D = DEPTH OF BEDDING MATERIAL BELOW PIPE:  
OD/8 OR OS/8 OR 4 INCHES  
(WHICHEVER IS GREATER)



CLASS III RCP					
Pipe Diameter (inches)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding No Steel	As=0.4%	As=1.0%
12	7'	10'	15'	19'	27'
15	8'	10'	16'	19'	27'
18	8'	11'	16'	20'	40'
21	8'	11'	18'	26'	40'
24	8'	12'	23'	36'	40'
27	10'	15'	30'	40'	40'
30	11'	15'	29'	40'	40'
33	11'	15'	28'	40'	40'
36	11'	15'	27'	40'	40'
42	11'	15'	26'	38'	40'
48	11'	15'	26'	36'	40'
54	11'	15'	25'	34'	40'
60	11'	15'	25'	33'	40'
66	11'	15'	24'	32'	40'
72	11'	15'	24'	32'	40'

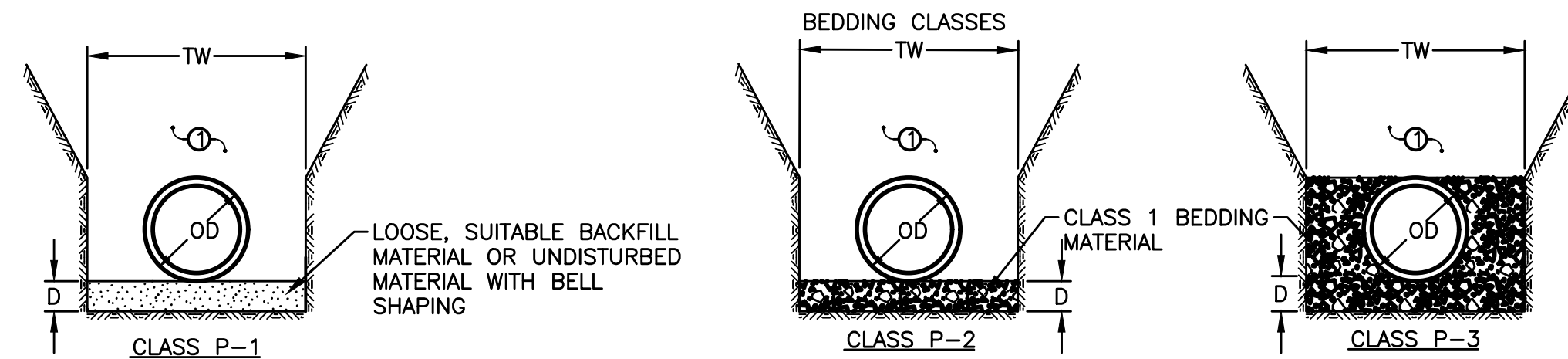
ALLOWABLE BURY DEPTH CLASS IV RCP					
Pipe Diameter (inches)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding No Steel	As=0.4%	As=1.0%
12	12'	15'	23'	28'	40'
15	12'	16'	23'	30'	40'
18	13'	16'	29'	40'	40'
21	13'	18'	40'	40'	40'
24	16'	23'	40'	40'	40'
27	19'	30'	40'	40'	40'
30	19'	29'	40'	40'	40'
33	19'	28'	40'	40'	40'
36	19'	28'	40'	40'	40'
42	18'	27'	40'	40'	40'
48	18'	26'	40'	40'	40'
54	18'	25'	40'	40'	40'
60	18'	25'	40'	40'	40'
66	18'	25'	40'	40'	40'
72	18'	24'	40'	40'	40'

EXTRA STRENGTH VCP					
Pipe Diameter (inches)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding No Steel	As=0.4%	As=1.0%
6	25'	30'	30'	30'	30'
8	20'	26'	30'	30'	30'
10	18'	23'	30'	30'	30'
12	16'	20'	30'	30'	30'
15	15'	19'	28'	30'	30'
18	14'	18'	30'	30'	30'
21	15'	22'	30'	30'	30'
24	18'	28'	30'	30'	30'
27	20'	30'	30'	30'	30'
30	19'	29'	30'	30'	30'
33	20'	30'	30'	30'	30'
36	20'	30'	30'	30'	30'
39	19'	29'	30'	30'	30'
42	18'	26'	30'	30'	30'

CLASS V RCP					
Pipe Diameter (inches)	Class R-1 Bedding	Class R-2 Bedding	Class R-3 & R-4 Bedding No Steel	As=0.4%	As=1.0%
12	18'	23'	35'	40'	40'
15	19'	24'	40'	40'	40'
18	19'	30'	40'	40'	40'
21	25'	40'	40'	40'	40'
24	34'	40'	40'	40'	40'
27	40'	40'	40'	40'	40'
30	40'	40'	40'	40'	40'
33	40'	40'	40'	40'	40'
36	40'	40'	40'	40'	40'
42	37'	40'	40'	40'	40'
48	35'	40'	40'	40'	40'
54	33'	40'	40'	40'	40'
60	32'	40'	40'	40'	40'
66	31'	40'	40'	40'	40'
72	31'	40'	40'	40'	40'

- 1 USE BEDDING CLASS R-1 OR R-2 UNLESS SPECIFIED OTHERWISE.
- 2 PLACE REMAINDER OF BEDDING AND BACKFILL MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

**1 RIGID GRAVITY PIPE TRENCH BEDDING**  
NOT TO SCALE

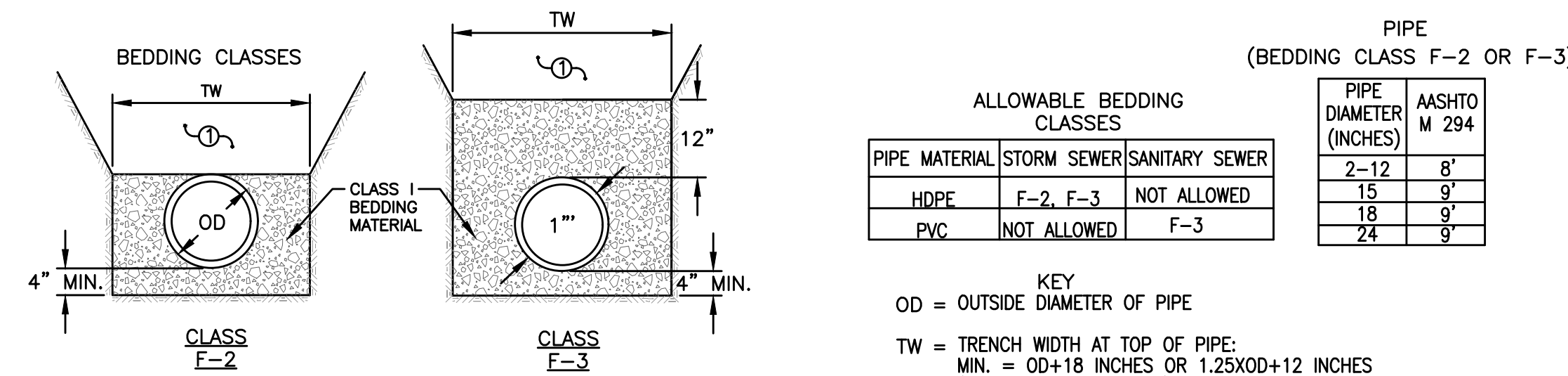


ALLOWABLE BURY DEPTH DUCTILE IRON, AWWA C151, CLASS 52				PVC, AWWA C900 & C905, DR18			
PIPE DIAMETER	CLASS P-1 BEDDING	CLASS P-2 BEDDING	CLASS P-3 BEDDING	PIPE DIAMETER	CLASS P-1 BEDDING	CLASS P-2 BEDDING	CLASS P-3 BEDDING
4"	40"	40"	40"	4"	19"	23"	40"
6"	40"	40"	40"	6"	19"	23"	40"
8"	40"	40"	40"	8"	19"	23"	40"
10"	36"	40"	40"	10"	19"	23"	40"
12"	31"	40"	40"	12"	19"	23"	40"
14"	26"	40"	40"	14"	19"	23"	40"
16"	23"	37"	40"	16"	19"	23"	40"
18"	20"	34"	40"	18"	19"	23"	40"
20"	18"	32"	40"	20"	19"	23"	40"
24"	16"	29"	36"	24"	19"	23"	40"
30"	13"	23"	31"	36"	13"	23"	30"
42"	13"	21"	29"	42"	13"	21"	29"
48"	13"	19"	27"	48"	13"	19"	27"
54"	13"	19"	27"	54"	13"	19"	27"

- 1 PLACE REMAINDER OF BEDDING AND BACKFILL MATERIAL AS SPECIFIED IN THE CONTRACT DOCUMENTS

**KEY**  
OD = OUTSIDE DIAMETER OF PIPE  
TW = TRENCH WIDTH AT TOP OF PIPE:  
MIN. = OD+18 INCHES OR 1.25XOD+12 INCHES  
(WHICHEVER IS GREATER)  
D = DEPTH OF BEDDING MATERIAL BELOW PIPE:  
MIN. = OD/8 OR 4 INCHES  
(WHICHEVER IS GREATER)

**2 PRESSURE PIPE BEDDING**  
NOT TO SCALE



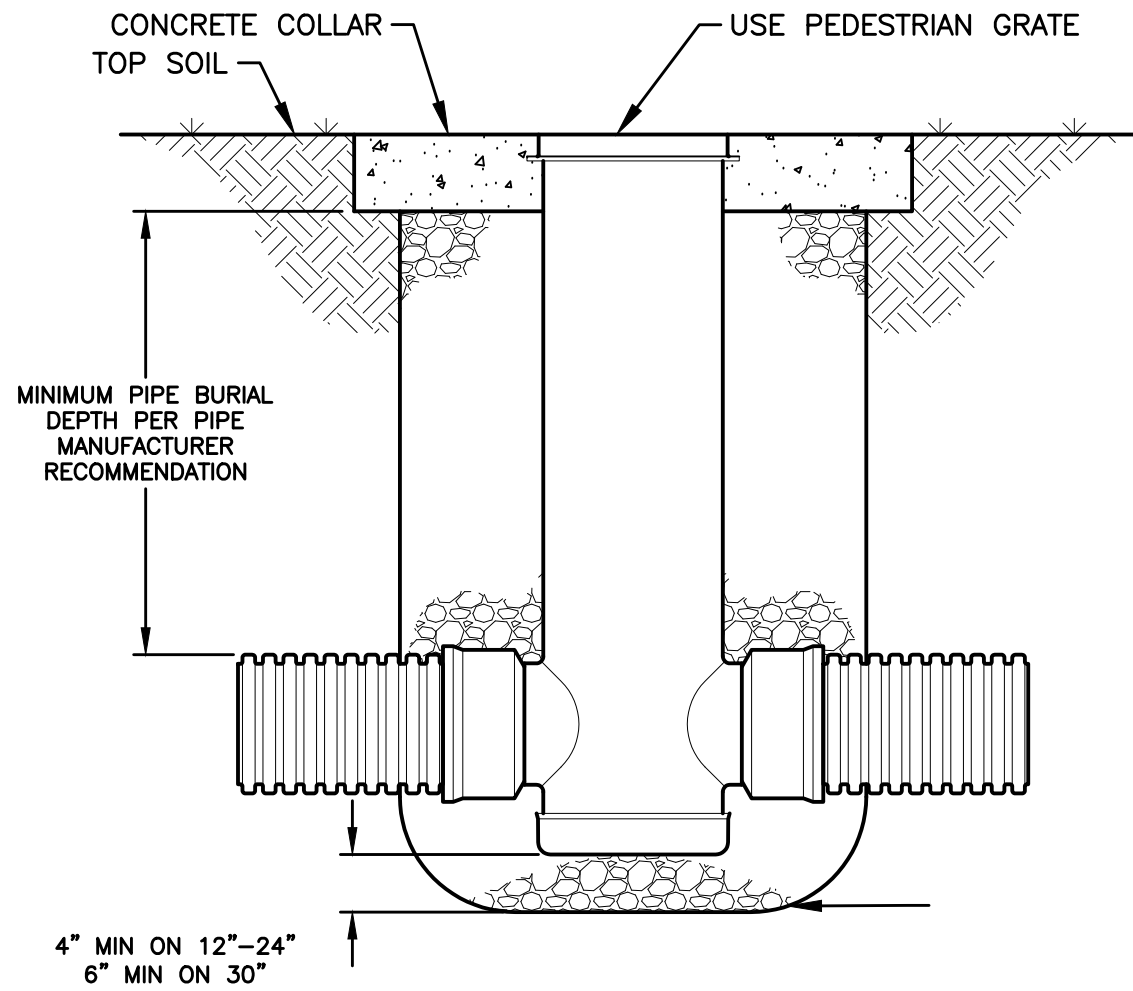
ALLOWABLE BEDDING CLASSES		
PIPE MATERIAL	STORM SEWER	SANITARY SEWER
HDPE	F-2, F-3	NOT ALLOWED
PVC	NOT ALLOWED	F-3

PIPE (BEDDING CLASS F-2 OR F-3)	
PIPE DIAMETER (INCHES)	ASHTO M 294
2-12	8'
15	9'
18	9'
24	9'

**KEY**  
OD = OUTSIDE DIAMETER OF PIPE  
TW = TRENCH WIDTH AT TOP OF PIPE:  
MIN. = OD+18 INCHES OR 1.25XOD+12 INCHES  
(WHICHEVER IS GREATER)

**3 FLEXIBLE GRAVITY PIPE TRENCH BEDDING**  
NOT TO SCALE

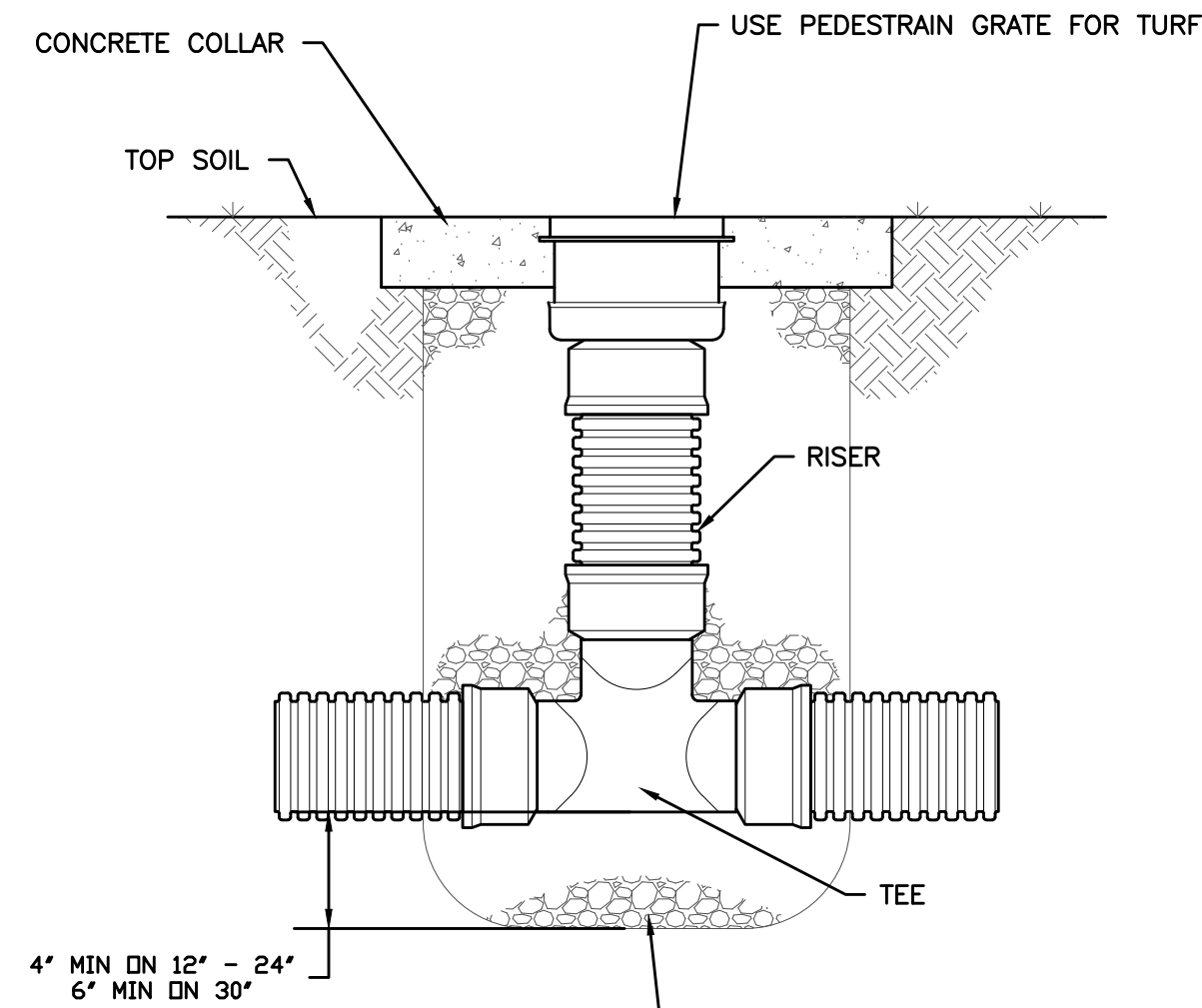
- 1 PLACE REMAINDER OF BEDDING AND BACKFILL MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.



1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, OR AS DETERMINED BY LOCAL STANDARDS & SITE ENGINEER. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

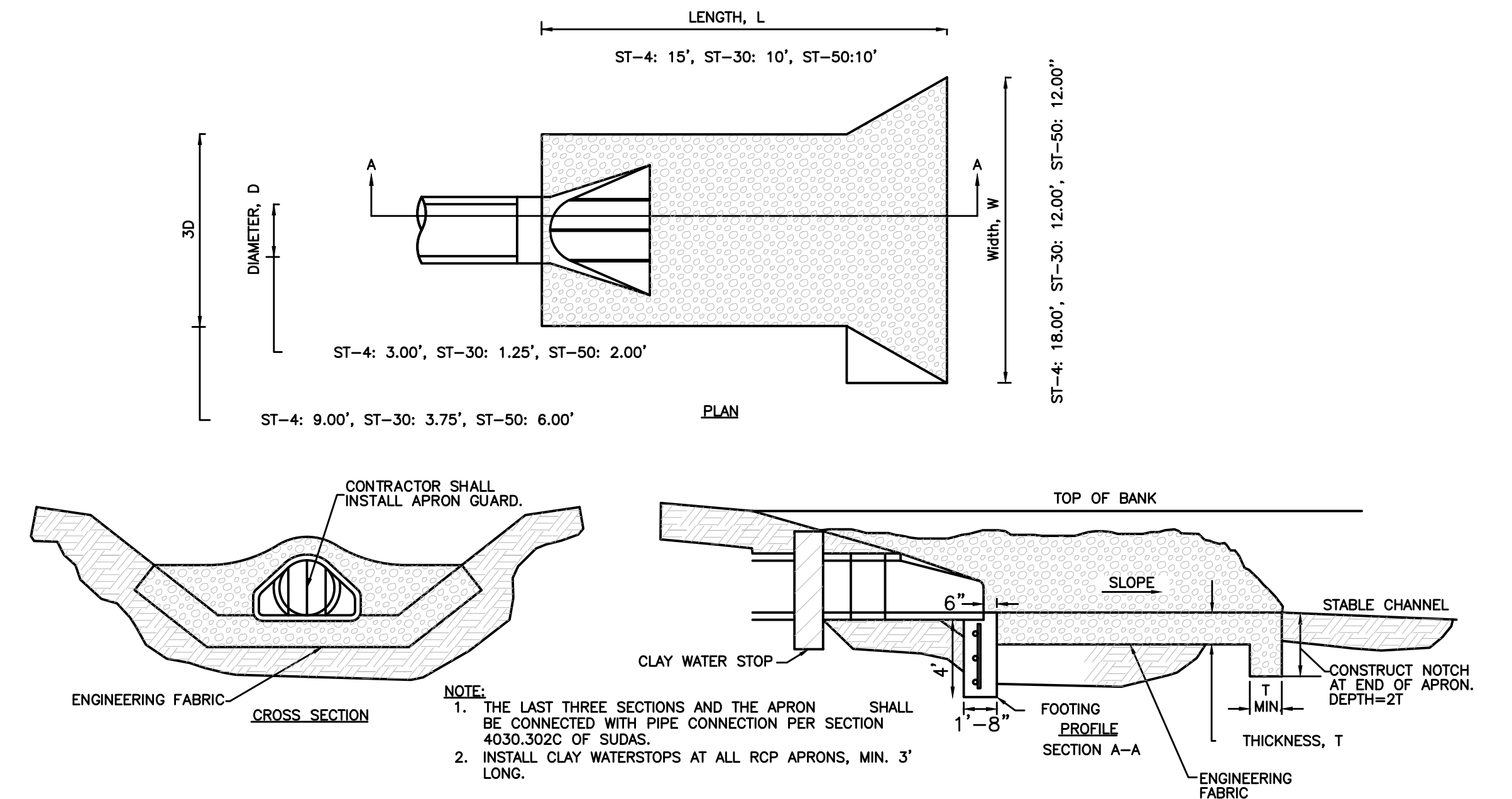
4 HDPE DRAIN BASIN  
NOT TO SCALE



1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID.

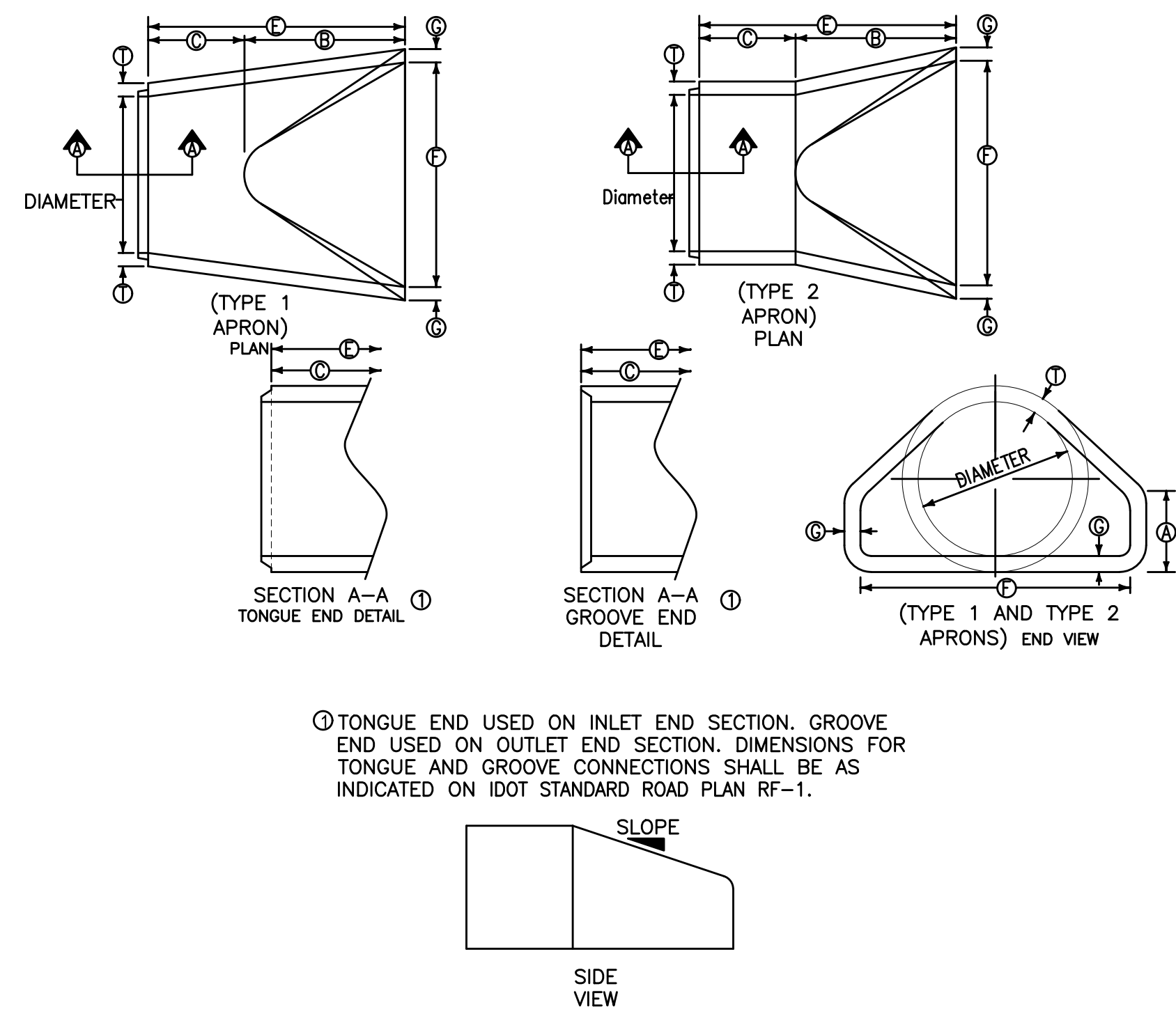
THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, OR AS DETERMINED BY LOCAL DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

3 HDPE INLINE DRAIN  
NOT TO SCALE



NOTE:  
1. THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTION PER SECTION 4030.302C OF SUDAS.  
2. INSTALL CLAY WATERSTOPS AT ALL RCP APRONS, MIN. 3' LONG.

1 RIP RAP  
NOT TO SCALE



① TONGUE END USED ON INLET END SECTION. GROOVE END USED ON OUTLET END SECTION. DIMENSIONS FOR TONGUE AND GROOVE CONNECTIONS SHALL BE AS INDICATED ON IDOT STANDARD ROAD PLAN RF-1.

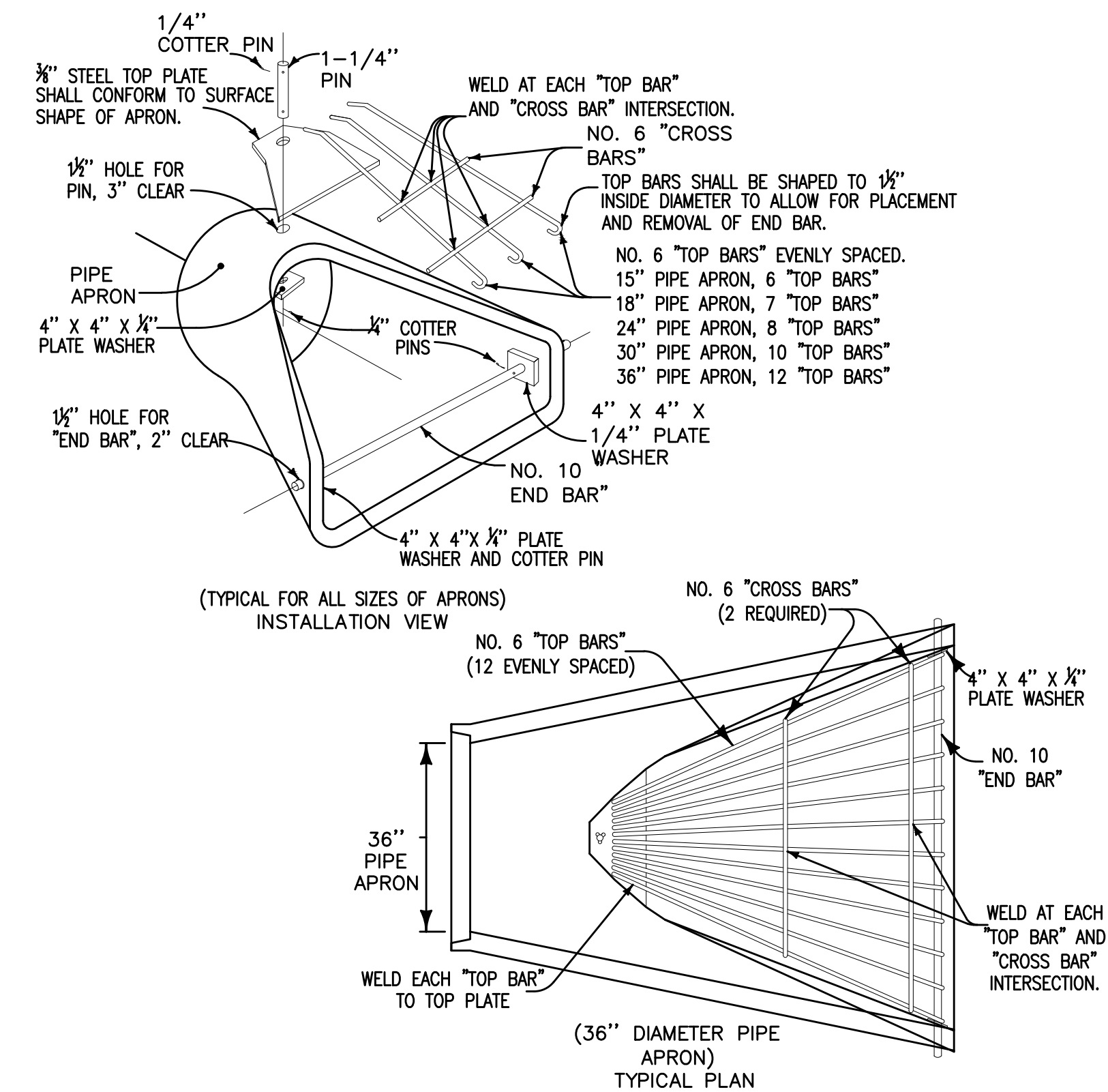
WHERE 1500D PIPE IS USED, THE BARREL PORTION OF THE APRON SHALL MEET OR EXCEED THE REQUIREMENTS FOR 1500D PIPE. WHERE 2000D PIPE IS USED, THE BARREL PORTION OF THE APRON SHALL MEET OR EXCEED THE REQUIREMENTS FOR 2000D PIPE.

REINFORCEMENT FOR THE BARREL PORTION OF THE APRON SHALL BE AS SHOWN ON IDOT STANDARD ROAD PLAN RF-1. DIMENSION E SHOWN IS MINIMUM AND SHALL BE CONSIDERED THE DESIGN LENGTH. ANY DIFFERENCE BETWEEN THE ACTUAL LENGTH OF CONCRETE APRON INSTALLED AND THE LENGTH INDICATED HEREON SHALL BE APPROPRIATELY ADJUSTED FOR IN THE LENGTH OF CONCRETE CULVERT PIPE FURNISHED.

WHEN SPECIFIED IN THE CONTRACT DOCUMENTS, PIPE APRON GUARDS SHALL BE INSTALLED AS SHOWN. PIPE APRON GUARDS WILL NOT BE MEASURED SEPARATELY FOR PAYMENT, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE APRONS.

TYPE 1 APRONS									
DIAM.	SLOPE	A	B	MINIMUM			F	G	T
				C	E	D			
12"	2.4:1	4"	2'-0"	4"	6"	2'-0"	2"	2"	
15"	2.4:1	6"	2'-3"	3'-10"	6'-11"	2'-6"	2 1/2"	2 1/2"	
18"	2.3:1	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	2 1/2"	
21"	2.4:1	9"	3'-0"	3'-1 1/2"	6'-1 1/2"	3'-5"	3"	3"	
24"	2.5:1	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3"	3"	
27"	2.5:1	10 1/2"	4'-1"	2'-0"	6'-1 1/2"	4'-4"	3 1/2"	3 1/2"	
30"	2.5:1	12"	4'-6"	1'-7 1/2"	6'-1 1/2"	5'-0"	3 1/2"	3 1/2"	
36"	2.5:1	15"	5'-3"	2'-9"	8'-0"	6'-0"	4"	4"	
42"	2.5:1	21"	5'-3"	2'-9"	8'-0"	6'-6"	4 1/2"	4 1/2"	
48"	2.5:1	24"	6'-0"	2'-0"	8'-0"	7'-0"	5"	5"	
54"	1.8:1	27"	5'-0"	3'-0"	8'-0"	7'-6"	5 1/2"	5 1/2"	
60"	1.6:1	29 1/2"	5'-0"	3'-0"	8'-0"	8'-0"	5 1/2"	6"	
66"	1.7:1	30"	6'-0"	2'-3"	8'-3"	8'-0"	5 1/2"	6"	
72"	1.6:1	30"	6'-6"	1'-9"	8'-3"	9'-0"	6"	7"	
78"	1.8:1	36"	7'-6"	1'-9"	9'-6"	9'-6"	6 1/2"	7 1/2"	
84"	1.3:1	29 1/2"	6'-9"	2'-6 1/2"	9'-3 1/2"	11'-0"	6 1/2"	8"	

TYPE 2 APRONS									
DIAM.	SLOPE	A	B	MINIMUM			F	G	T
				C	E	D			
12"	2.4:1	4"	2'-0"	4"	6"	2'-0"	2"	2"	
15"	2.4:1	6"	2'-3"	3'-10"	6'-11"	2'-6"	2 1/2"	2 1/2"	
18"	2.3:1	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	2 1/2"	
21"	2.4:1	9"	3'-0"	3'-1 1/2"	6'-1 1/2"	3'-5"	3"	3"	
24"	2.5:1	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3"	3"	
27"	2.5:1	10 1/2"	4'-1"	2'-0"	6'-1 1/2"	4'-4"	3 1/2"	3 1/2"	
30"	2.5:1	12"	4'-6"	1'-7 1/2"	6'-1 1/2"	5'-0"	3 1/2"	3 1/2"	
36"	2.5:1	15"	5'-3"	2'-9"	8'-0"	6'-0"	4"	4"	
42"	2.5:1	21"	5'-3"	2'-9"	8'-0"	6'-6"	4 1/2"	4 1/2"	
48"	2.5:1	24"	6'-0"	2'-0"	8'-0"	7'-0"	5"	5"	
54"	1.9:1	24 1/2"	5'-5"	3'-0"	8'-0"	7'-6"	5 1/2"	5 1/2"	
60"	1.4:1	24 1/2"	5'-0"	3'-0"	8'-0"	8'-0"	5 1/2"	6"	
66"	1.7:1	30"	6'-0"	2'-3"	8'-3"	8'-0"	5 1/2"	6"	
72"	1.4:1	24"	6'-6"	1'-9"	8'-3"	9'-0"	6"	7"	
78"	1.8:1	36"	7'-6"	1'-9"	9'-6"	9'-6"	6 1/2"	7 1/2"	
84"	1.5:1	23 1/2"	7'-6 1/2"	2'-6 1/2"	9'-3 1/2"	11'-0"	6 1/2"	8"	



GENERAL NOTES:  
THE INTENT OF THE PIPE APRON GUARD DETAILED HEREON IS TO PROVIDE A TREATMENT FOR THE EXPOSED END OF A PIPE CULVERT, SUCH THAT AN OUT-OF-CONTROL VEHICLE COULD PASS OVER THE END OF THE CULVERT WITHOUT UNDUE LOSS OF CONTROL OR DAMAGE TO THE VEHICLE.  
STEEL BARS USED IN CONSTRUCTION OF THE GUARD SHALL BE ASTM A 615, GRADE 40, OR MERCHANT QUALITY, SMOOTH OR DEFORMED STEEL CONFORMING TO THE FABRICATION REQUIREMENTS OF SECTION 2404 OF THE CURRENT STANDARD SPECIFICATIONS.

WELDING OF STEEL PARTS SHALL BE AS SHOWN AND SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COMPLETED APRON GUARD SHALL BE HOTDIP GALVANIZED IN ACCORDANCE WITH CURRENT ASTM A 123 SPECIFICATIONS.

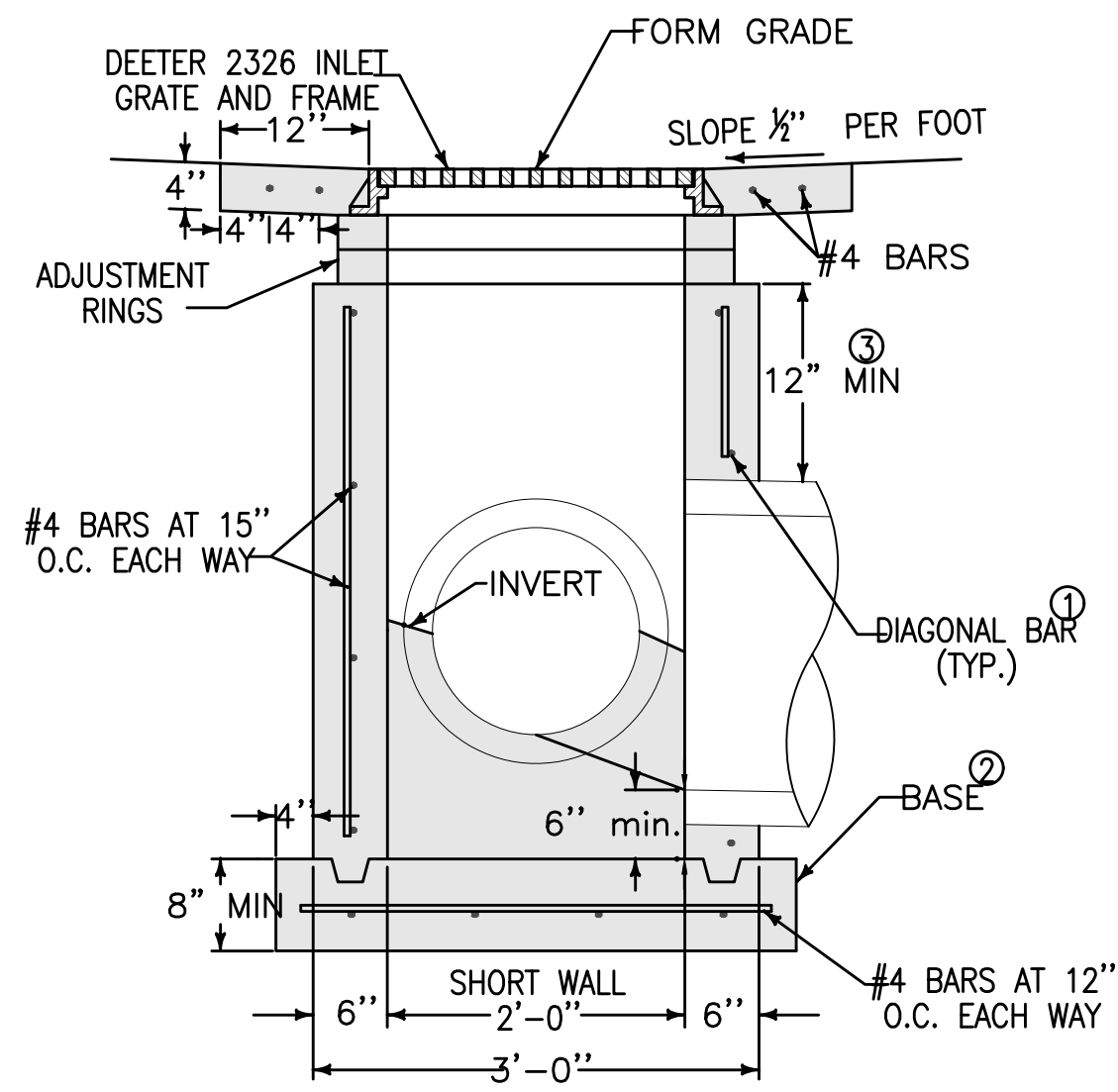
DETAILS INDICATED ARE FOR A TYPE 1 APRON AS SHOWN ON STANDARD ROAD PLAN RF-3. APPROPRIATE MODIFICATION OF APRON GUARD SHOWN MAY BE MADE FOR A TYPE 2 APRON.

ALTERNATE DETAILS FOR DESIGN OF APRON GUARD MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

SPECIAL NOTE:  
WHEN DETAIL PROJECT PLANS REQUIRE PIPE APRON GUARDS OF SIZES OTHER THAN THOSE SHOWN HEREON, THE DESIGN FOR SUCH APRON GUARDS SHALL BE SIMILAR TO THOSE INDICATED, CONFORMING TO MINIMUM BAR SIZE AND SPACING, AND OTHER GENERAL REQUIREMENTS SHOWN.

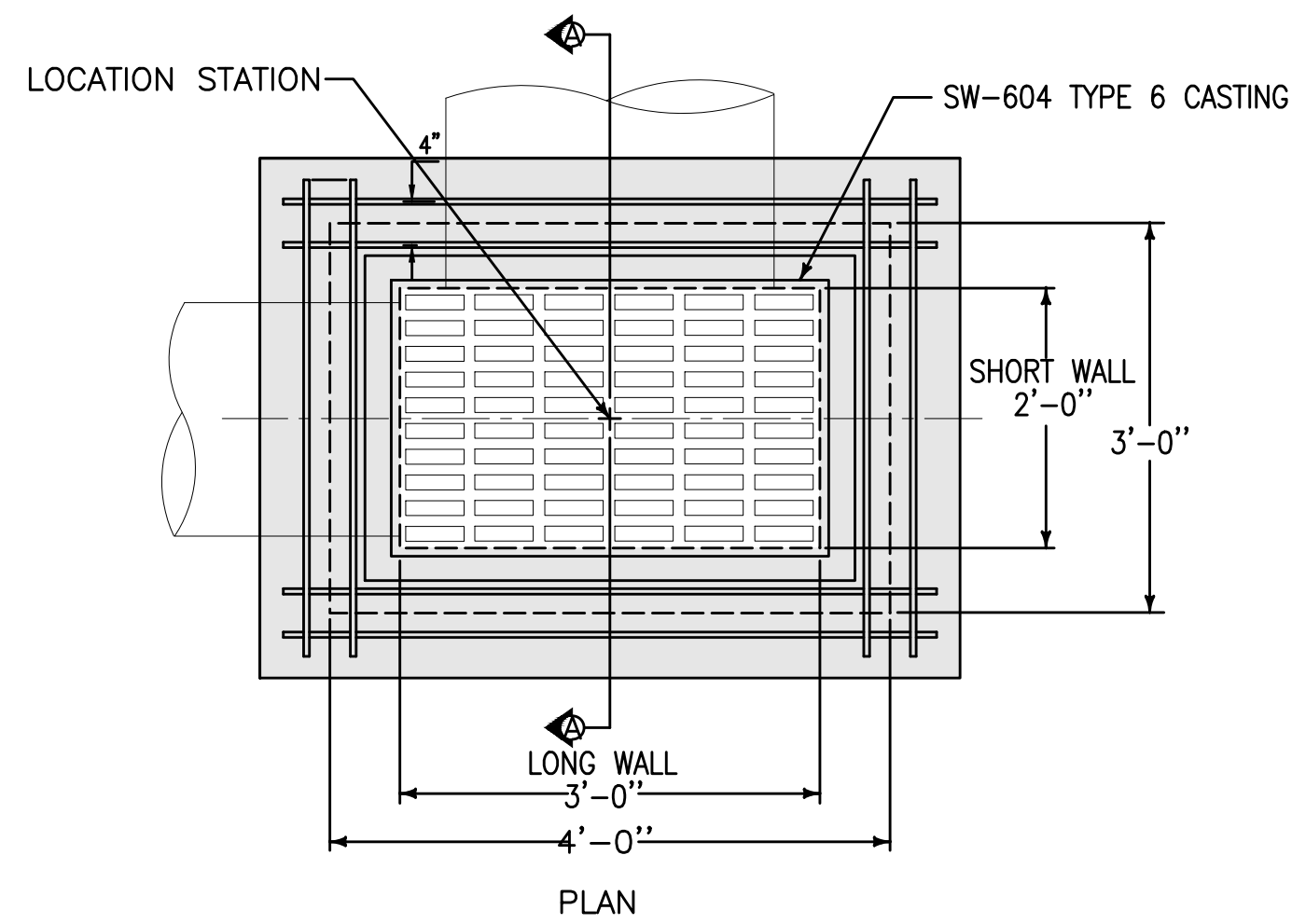
2 RCP APRON AND APRON GUARD  
NOT TO SCALE

FILE IN: C:\WORK\2023\JORDAN CREEK POINT - LOT 2\DWG\2023-03-21 4:21 PM  
FILE DATE: 2/24/23  
PLOT DATE: 2/24/23 4:21 PM  
PLOT BY: BEN STEWART  
TECH:   
ENGINEER:   
FIRST SUBMITTAL: 02/24/2023



SECTION A-A

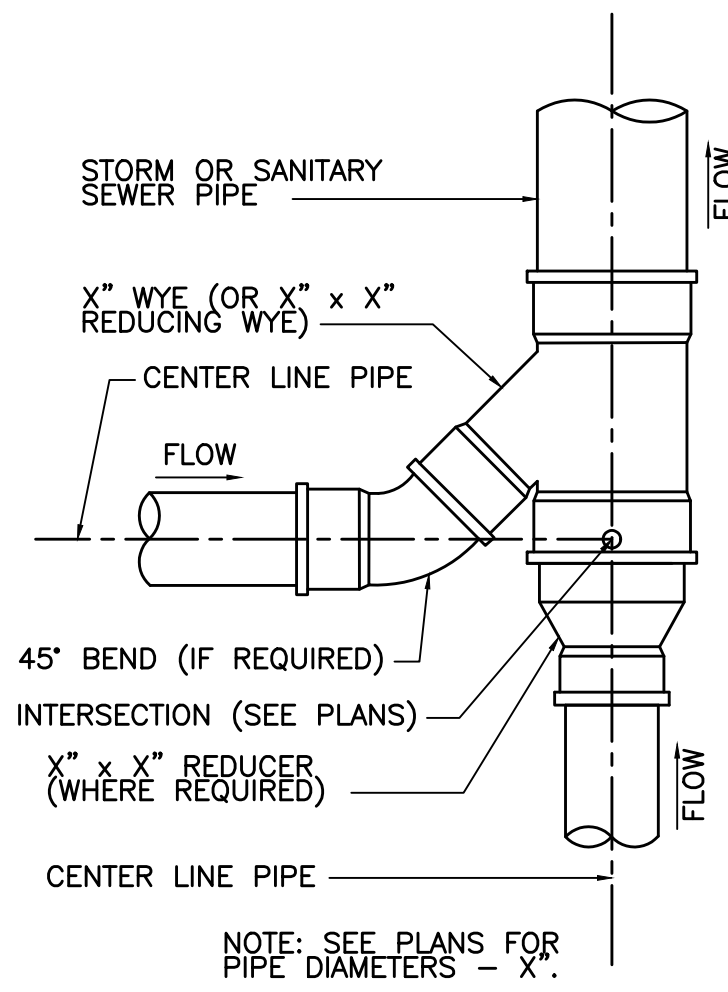
- INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
- CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
- 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.



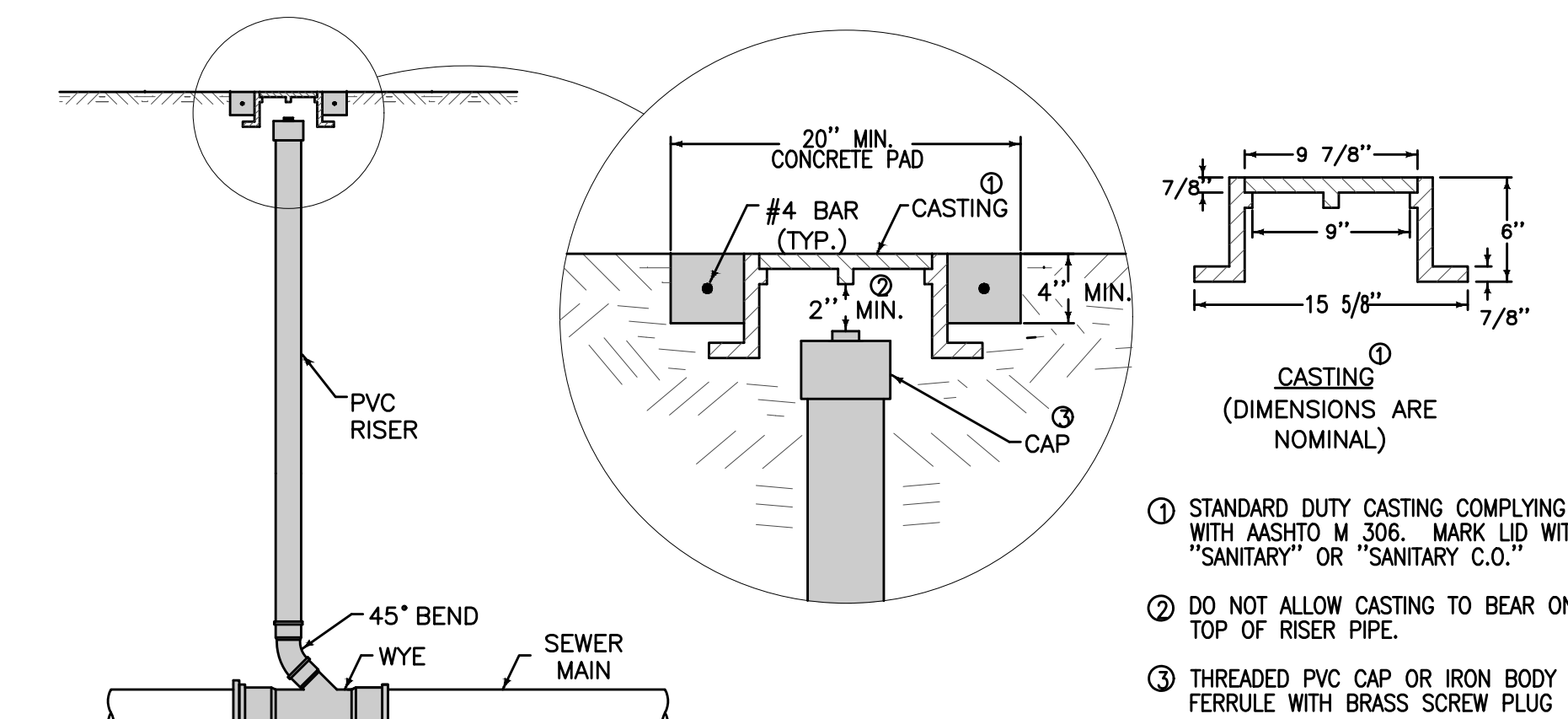
PIPE LOCATION	MAXIMUM PIPE DIAMETERS	
	PRECAST STRUCTURE	CAST-IN-PLACE STRUCTURE
SHORT WALL	15"	18"
LONG WALL	24"	30"

SW-511 RECTANGULAR AREA INTAKE  
NOT TO SCALE

WYE CONNECTION  
NOT TO SCALE

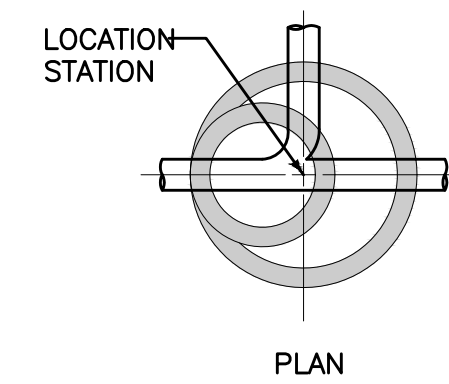


WYE CONNECTION  
NOT TO SCALE

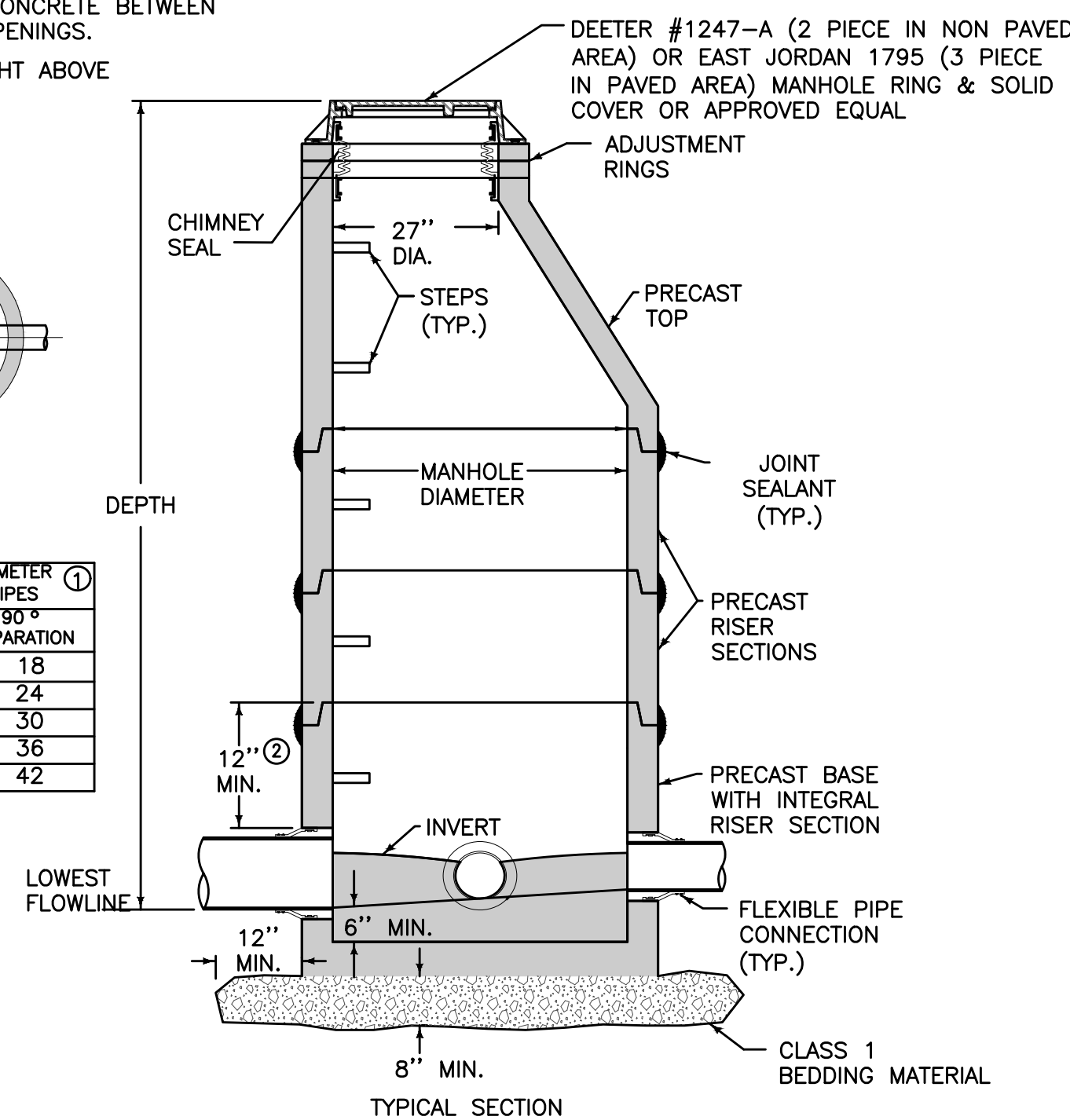


SW-203 SANITARY CLEANOUT  
NOT TO SCALE

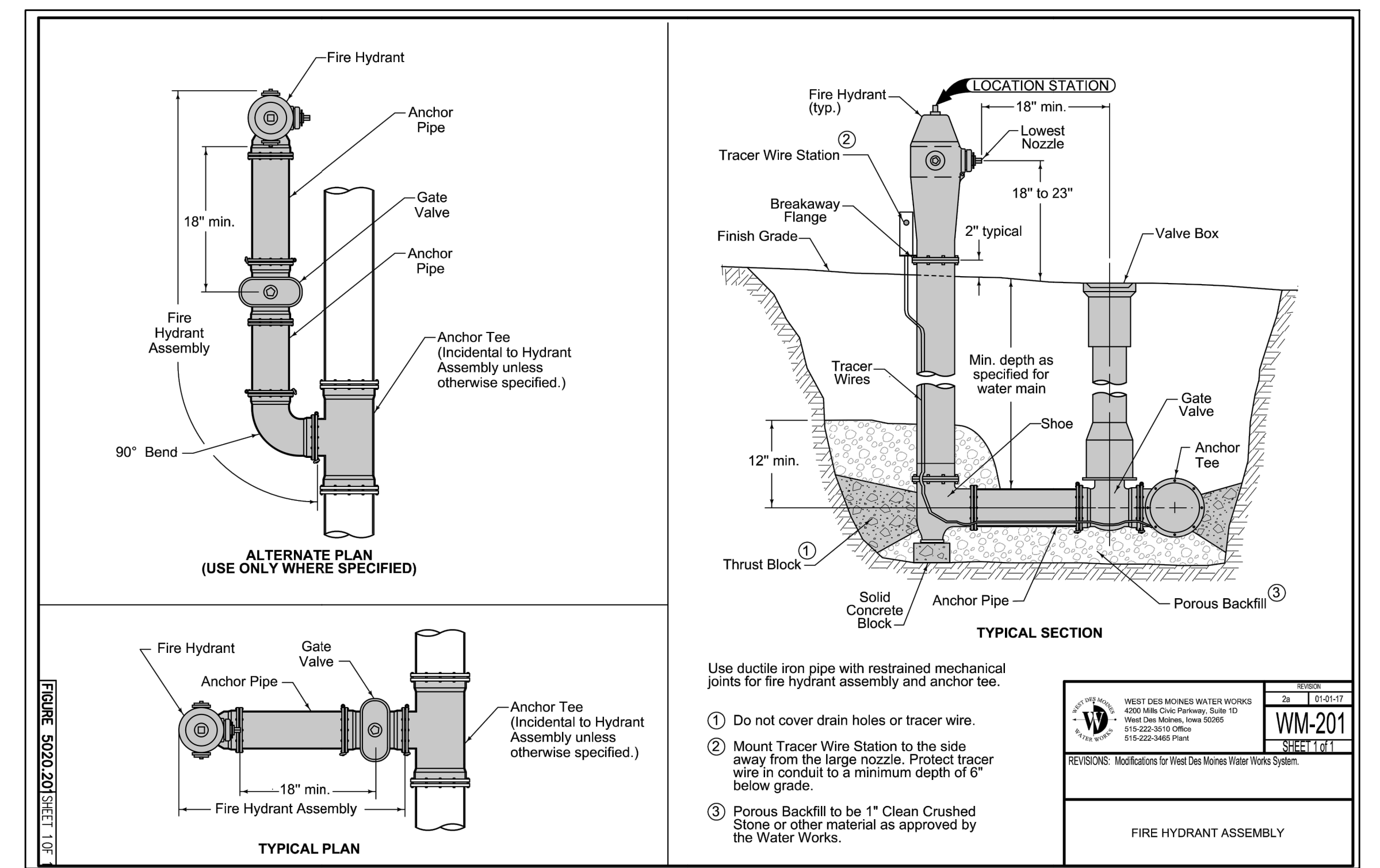
- FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES OF CONCRETE BETWEEN VERTICAL EDGES OF PIPE OPENINGS.
- 12 INCH MINIMUM RISER HEIGHT ABOVE ALL PIPE OPENINGS.



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



SW-301 CIRCULAR SANITARY SEWER MANHOLE  
NOT TO SCALE



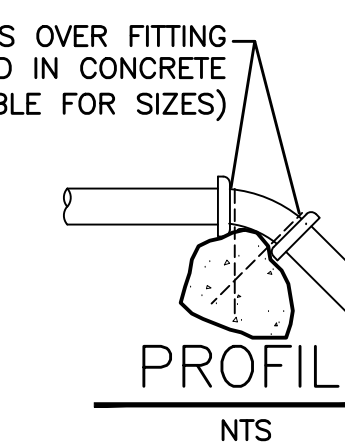
WDMWW FIRE HYDRANT ASSEMBLY  
NOT TO SCALE

FITTING SIZE	BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)							
	TEE, WYE, PLUG, OR CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		BEND ANGLE			11 1/4"
			A1	A2	45°	22 1/2"	11 1/4"	
4	1.4	1.9	2.5	1.9	1.4	—	—	—
6	2.8	4.0	5.7	4.0	2.1	1.4	—	—
8	5.1	7.1	10.1	7.2	3.9	2.0	1.4	—
10	7.9	11.2	15.7	11.2	6.1	3.2	1.6	—
12	11.3	16.0	22.7	16.0	8.8	4.5	2.3	—
14	15.3	21.7	30.7	21.2	11.9	6.1	3.1	—
16	20.0	28.4	40.0	28.4	15.5	8.0	4.0	—
18	25.3	36.0	50.7	36.0	19.5	10.1	5.1	—
20	31.3	44.4	62.7	44.4	24.1	12.5	6.3	—
24	45.3	64.0	90.1	64.0	34.9	18.1	9.1	—

FITTING SIZE	VOLUME OF THRUST BLOCK IN CU. YDS. (VERTICAL BENDS)		
	BEND ANGLE		
	45°	22 1/2"	11 1/4"
4	1.5	0.6	0.3
6	3.6	1.4	0.6
8	5.3	2.0	0.8
10	8.0	3.1	1.2
12	11.3	4.3	1.7
14	15.3	5.7	2.4
16	19.7	7.5	3.1

FITTING SIZE	ROD SIZE	EMBEDMENT
14" - 16"	#8	36"

GALVANIZED RODS OVER FITTING AND EMBEDDED IN CONCRETE (SEE TABLE FOR SIZES)



THRUST BLOCKING  
NOT TO SCALE

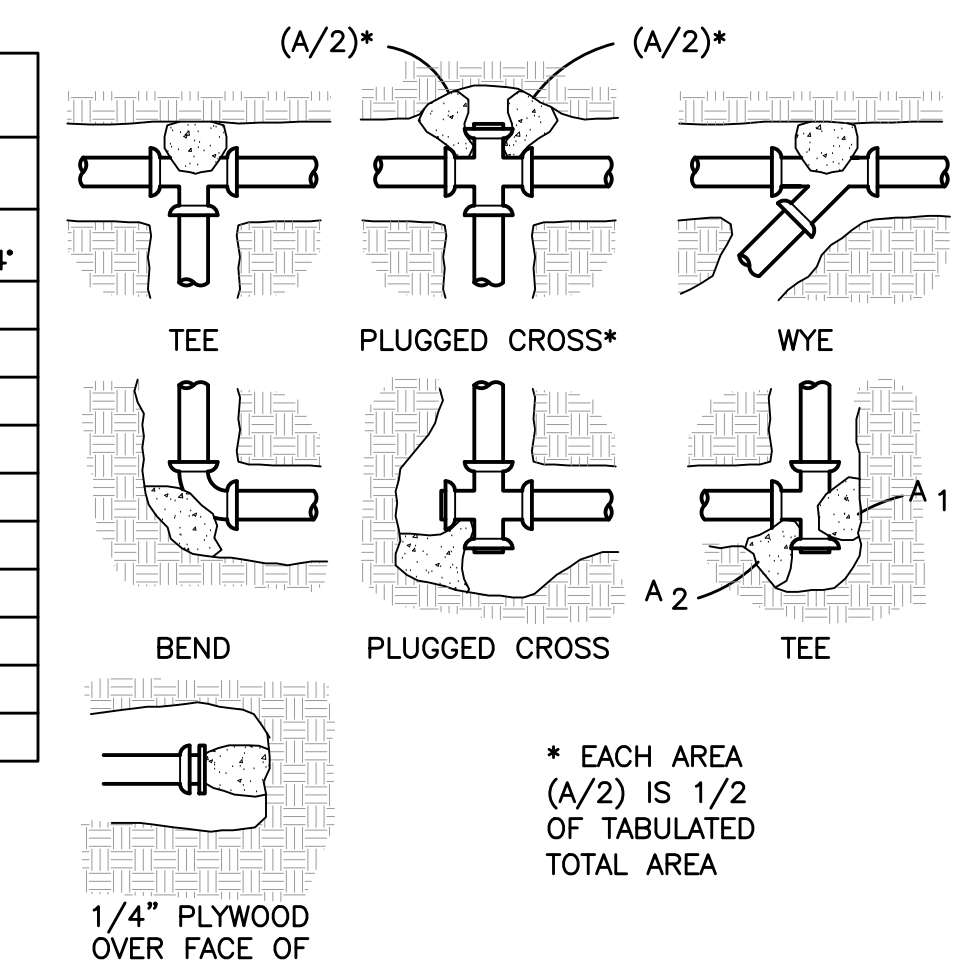
- Do not cover drain holes or tracer wire.
- Mount Tracer Wire Station to the side away from the large nozzle. Protect tracer wire in conduit to a minimum depth of 6" below grade.
- Porous Backfill to be 1" Clean Crushed Stone or other material as approved by the Water Works.

WEST DES MOINES WATER WORKS  
2025 West Des Moines, Iowa 50325  
515-222-3110 (Office)  
515-222-3465 (Plant)

WDM-201  
SHEET 17/17

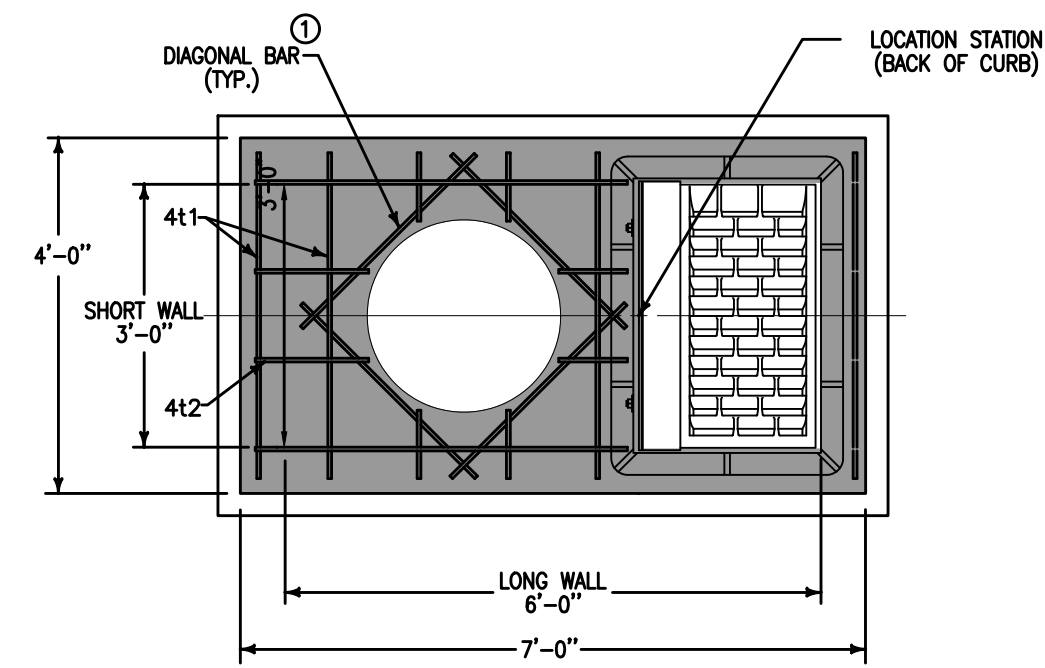
REVISIONS: Modifications for West Des Moines Water Works System

FIRE HYDRANT ASSEMBLY



- NOTES:
- KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.
  - CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
  - REQUIRED VOLUMES OR BEARING AREAS AT FITTINGS SHALL BE AS SPECIFIED, AND ADJUSTED AS NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING PRESSURE(S).
  - THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 200 PSIG AND THE WEIGHT OF CONCRETE = 4050 LBS/CU YD. TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION: VOLUME = (TEST PRESS./200) x (TABLE VALUE)
  - BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 200 PSIG AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS/SQ FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING PRESSURE, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESS./200) x (2000/SOIL BEARING PRESSURE) x (TABLE VALUE).
  - THRUST BLOCKS FOR VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUSTS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.
  - BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD.
  - BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQ FT.
  - VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING. SEE PLANS.

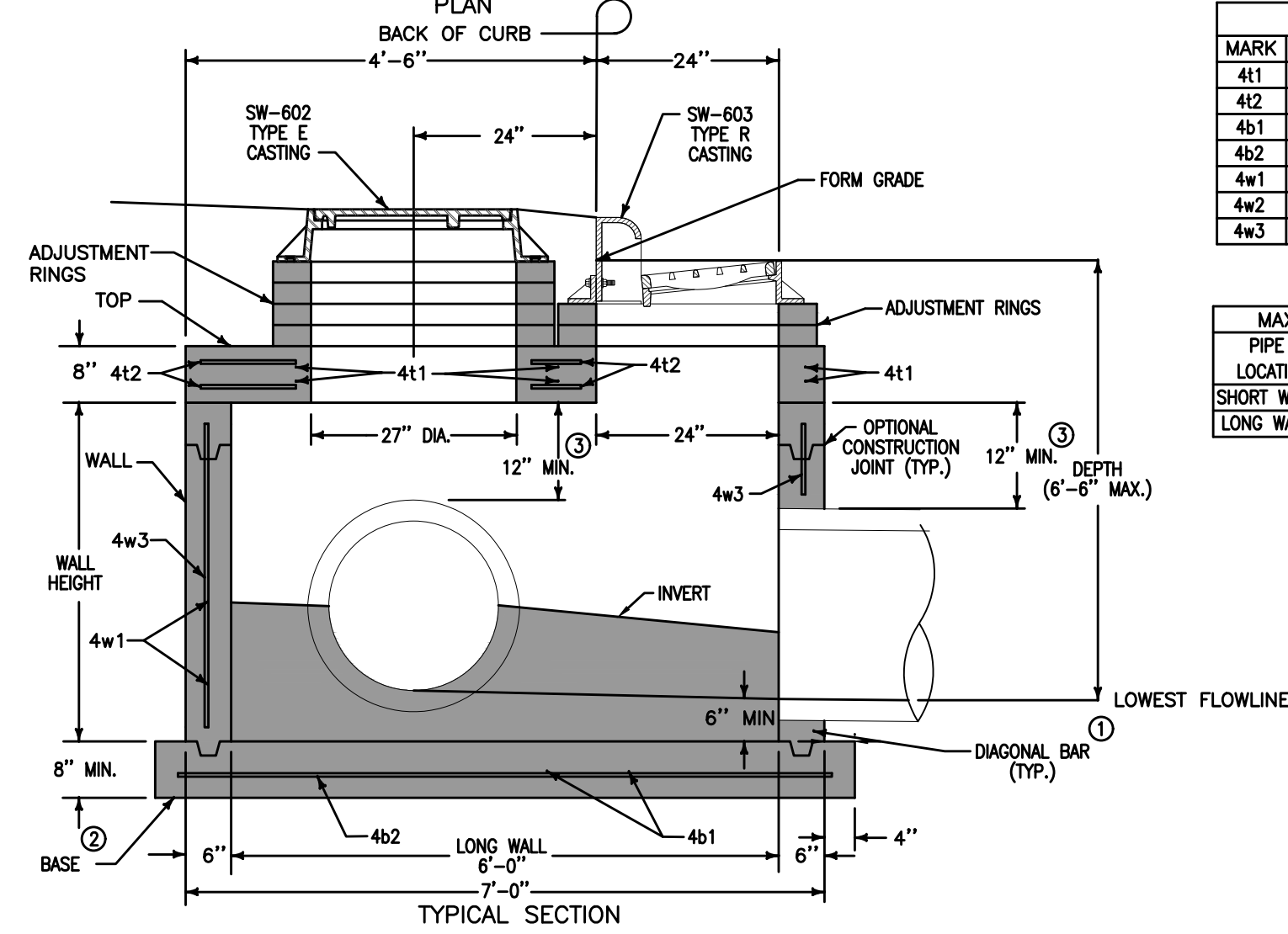
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 PLOTTED DATE: 2/24/23 4:21 PM  
 PLOTTED BY: BEN STEWART, TECH



- INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS. REFER TO SW-514 FOR BOXOUT DETAILS.
- INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.
- CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
- 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.

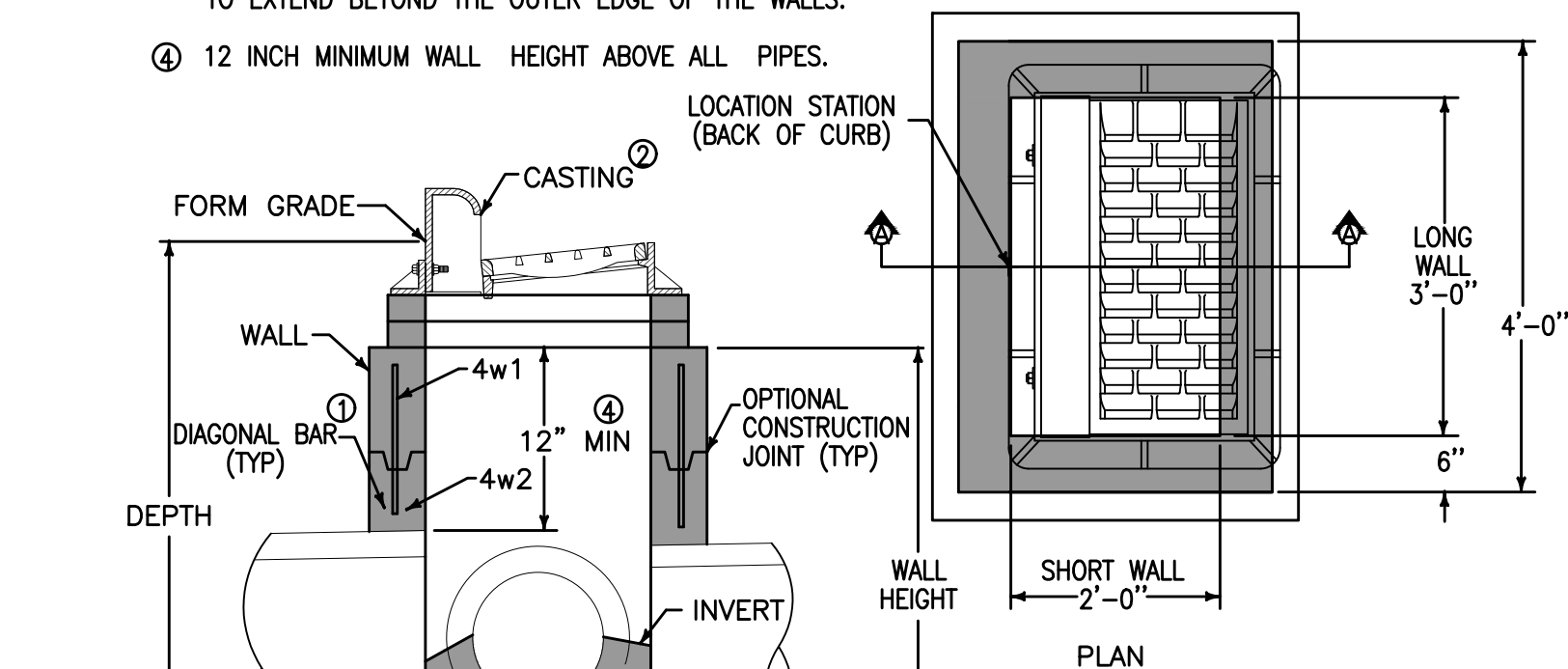
REINFORCING BAR LIST						
MARK	SIZE	LOCATION	SHAPE	COUNT	LENGTH	SPACING
4t1	4	TOP	---	12	3'-8"	12"
4t2	4	TOP	---	8	4'-2"	12"
4b1	4	BASE	---	7	4'-2"	13"
4b2	4	BASE	---	5	7'-2"	10"
4w1	4	SHORT WALLS	---	VARIES	3'-8"	12"
4w2	4	LONG WALLS	---	VARIES	6'-8"	12"
4w3	4	WALLS	---	18	WALL HEIGHT MINUS 4"	13"

MAXIMUM PIPE DIAMETERS			
PIPE LOCATION	PRECAST STRUCTURE	CAST-IN-PLACE STRUCTURE	
SHORT WALL	24"	30"	
LONG WALL	30"	36"	



**3 SW-503 SINGLE GRATE INTAKE WITH MANHOLE**  
NOT TO SCALE

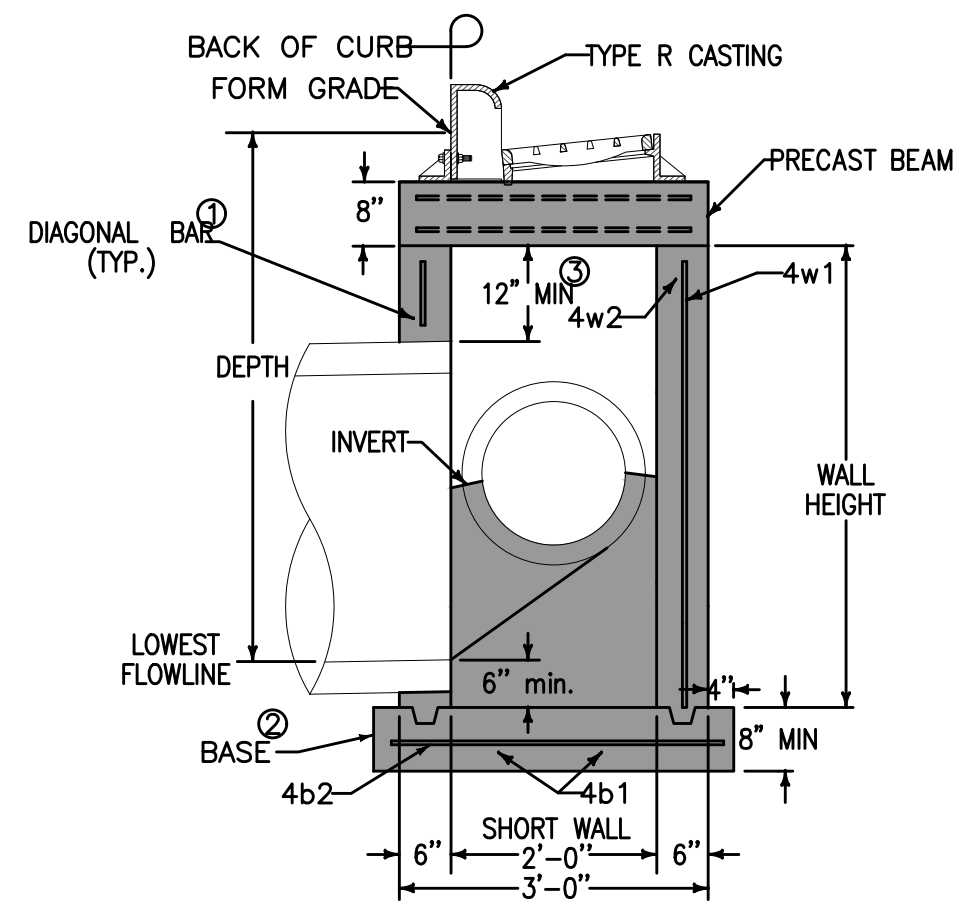
- REFER TO SW-514 FOR BOXOUT DETAILS
- INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
  - SW-603 TYPE R UNLESS TYPE Q IS SPECIFIED IN THE CONTRACT DOCUMENTS.
  - CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
  - 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.



MAXIMUM PIPE DIAMETERS			
PIPE LOCATION	PRECAST STRUCTURE	CAST-IN-PLACE STRUCTURE	
SHORT WALL	15"	18"	
LONG WALL	24"	30"	

REINFORCING BAR LIST						
MARK	SIZE	LOCATION	SHAPE	LENGTH	COUNT	SPACING
4w1	4	WALLS	---	WALL HEIGHT MINUS 4"	14	12"
4w2	4	LONG WALLS	---	3'-8"	VARIES	12"
4w3	4	SHORT WALLS	---	2'-8"	VARIES	12"
4b1	4	BASE	---	4'-2"	4	10"
4b2	4	BASE	---	3'-2"	5	10"

**1 SW-501 SINGLE GRATE INTAKE**  
NOT TO SCALE



- INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
- CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
- 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.

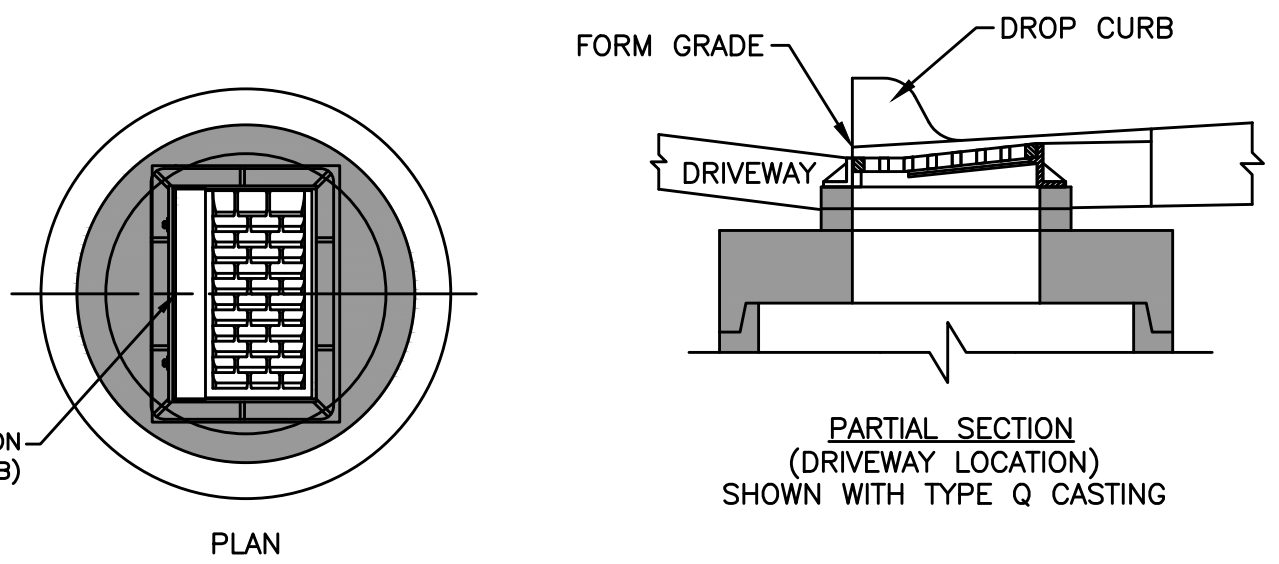
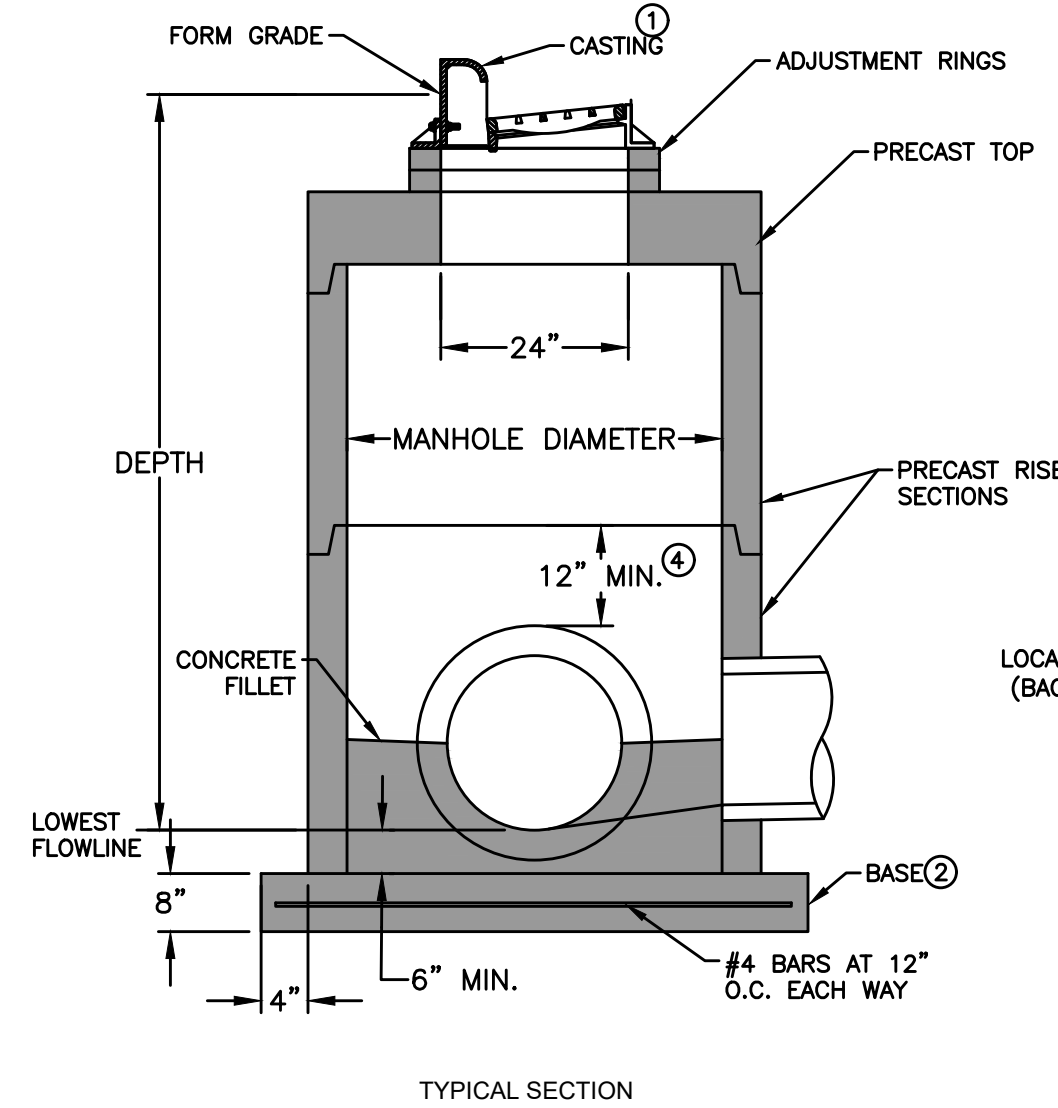
REINFORCING BAR LIST						
MARK	SIZE	LOCATION	SHAPE	COUNT	LENGTH	SPACING
4t1	4	BEAM	---	4	2'-8"	4"
4b1	4	BASE	---	4	7'-10"	10"
4b2	4	BASE	---	8	3'-2"	12"
4w1	4	WALLS	---	20	WALL HEIGHT MINUS 4"	12"
4w2	4	LONG WALLS	---	VARIES	7'-4"	12"
4w3	4	SHORT WALLS	---	VARIES	2'-8"	12"

MAXIMUM PIPE DIAMETERS		
PIPE LOCATION	PRECAST STRUCTURE	CAST-IN-PLACE STRUCTURE
SHORT WALL	15"	18"
LONG WALL	60"	66"

**4 SW-505 DOUBLE GRATE INTAKE**  
NOT TO SCALE

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

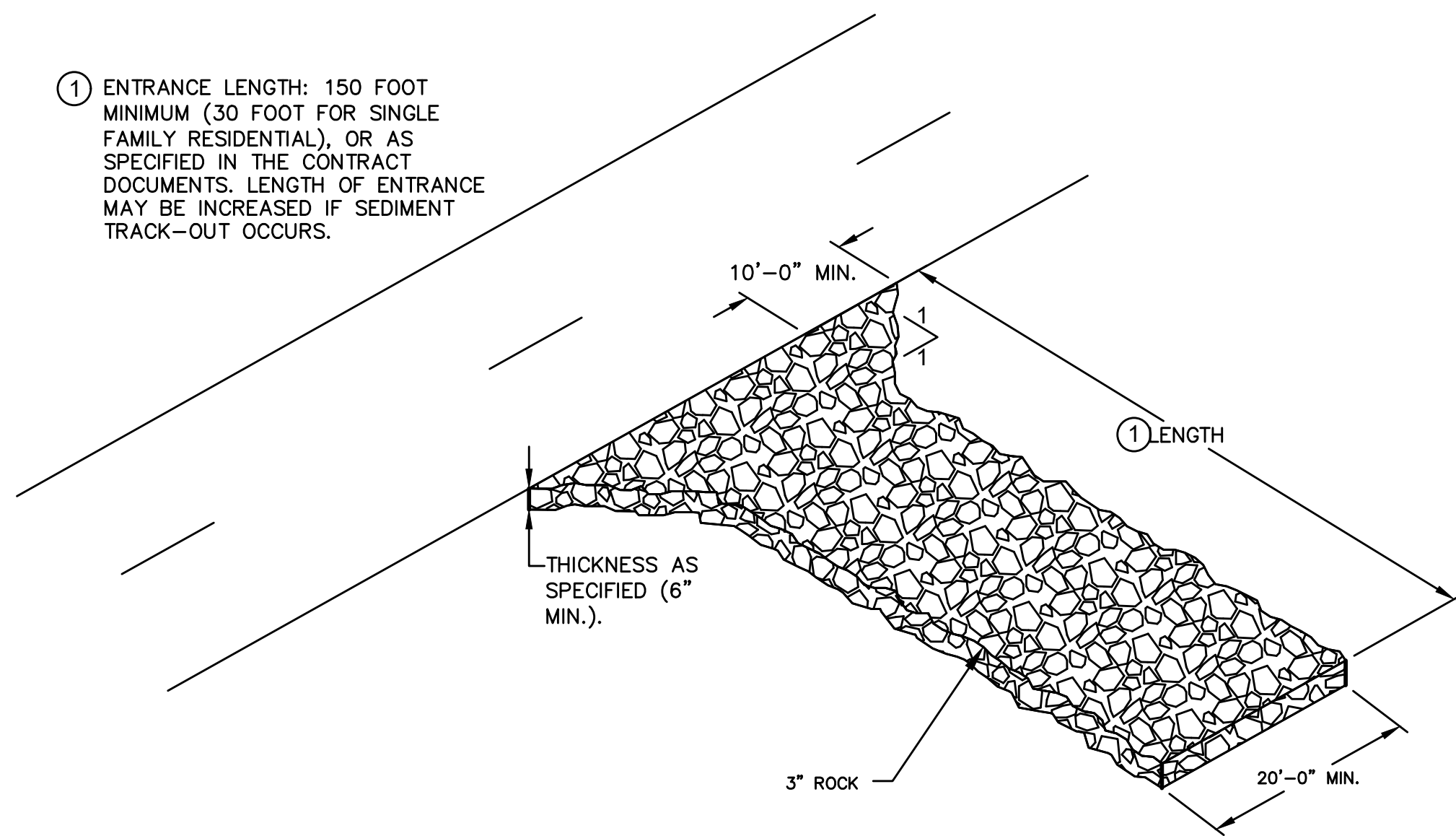
- REFER TO SW-514 FOR BOXOUT DETAILS.
- SW-603 TYPE R UNLESS TYPE Q IS SPECIFIED IN THE CONTRACT DOCUMENTS.
  - CAST-IN-PLACE BASE SHOWN. BASE MAY BE SQUARE. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
  - FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES OF CONCRETE BETWEEN VERTICAL EDGES OF PIPE OPENINGS.
  - 12 INCH MINIMUM RISER HEIGHT ABOVE ALL PIPES.



**2 SW-502 CIRCULAR SINGLE GRATE INTAKE**  
NOT TO SCALE

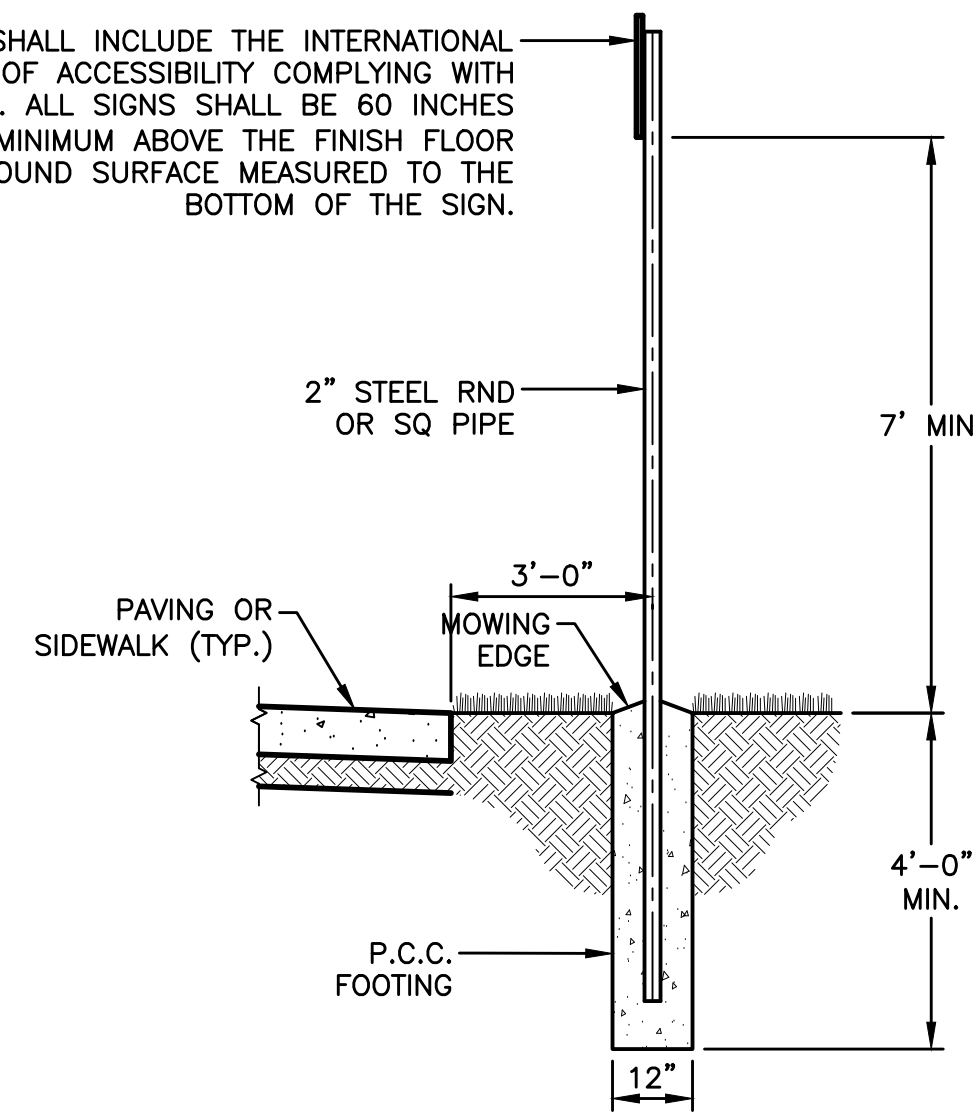
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 PLOTTED BY: BEN STEWART  
 DATE PLOTTED: 2/24/2023 4:21 PM

① ENTRANCE LENGTH: 150 FOOT MINIMUM (30 FOOT FOR SINGLE FAMILY RESIDENTIAL), OR AS SPECIFIED IN THE CONTRACT DOCUMENTS. LENGTH OF ENTRANCE MAY BE INCREASED IF SEDIMENT TRACK-OUT OCCURS.

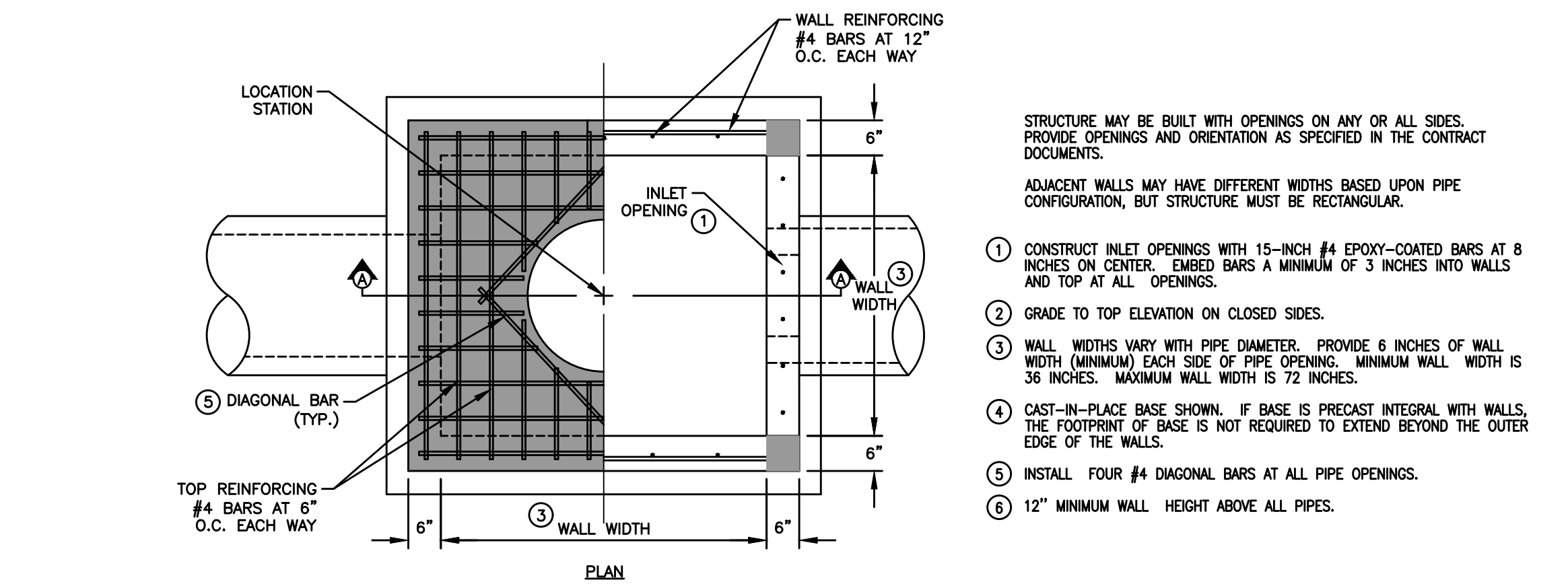


⑤ STABILIZED CONSTRUCTION ENTRANCE  
NOT TO SCALE

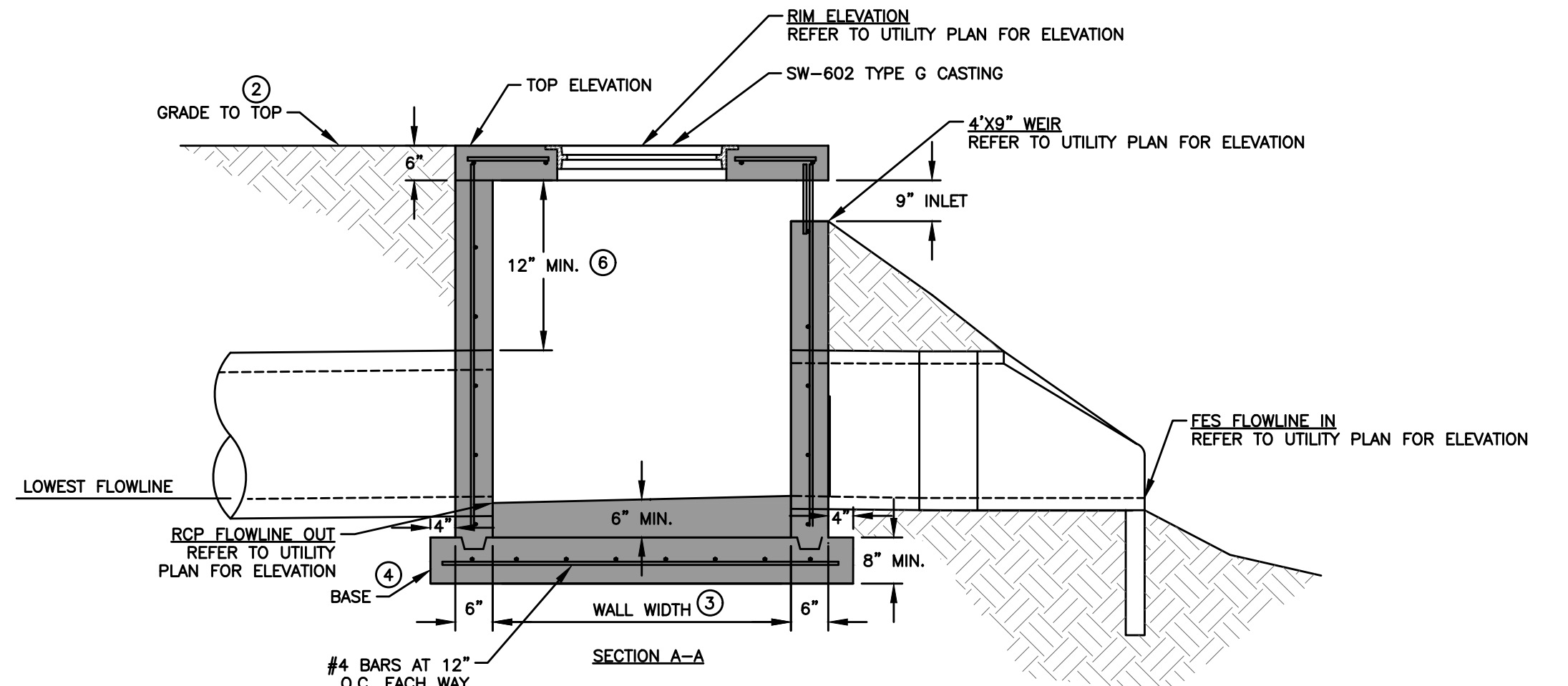
SIGN SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 703.7.2.1. ALL SIGNS SHALL BE 60 INCHES (1525 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED TO THE BOTTOM OF THE SIGN.



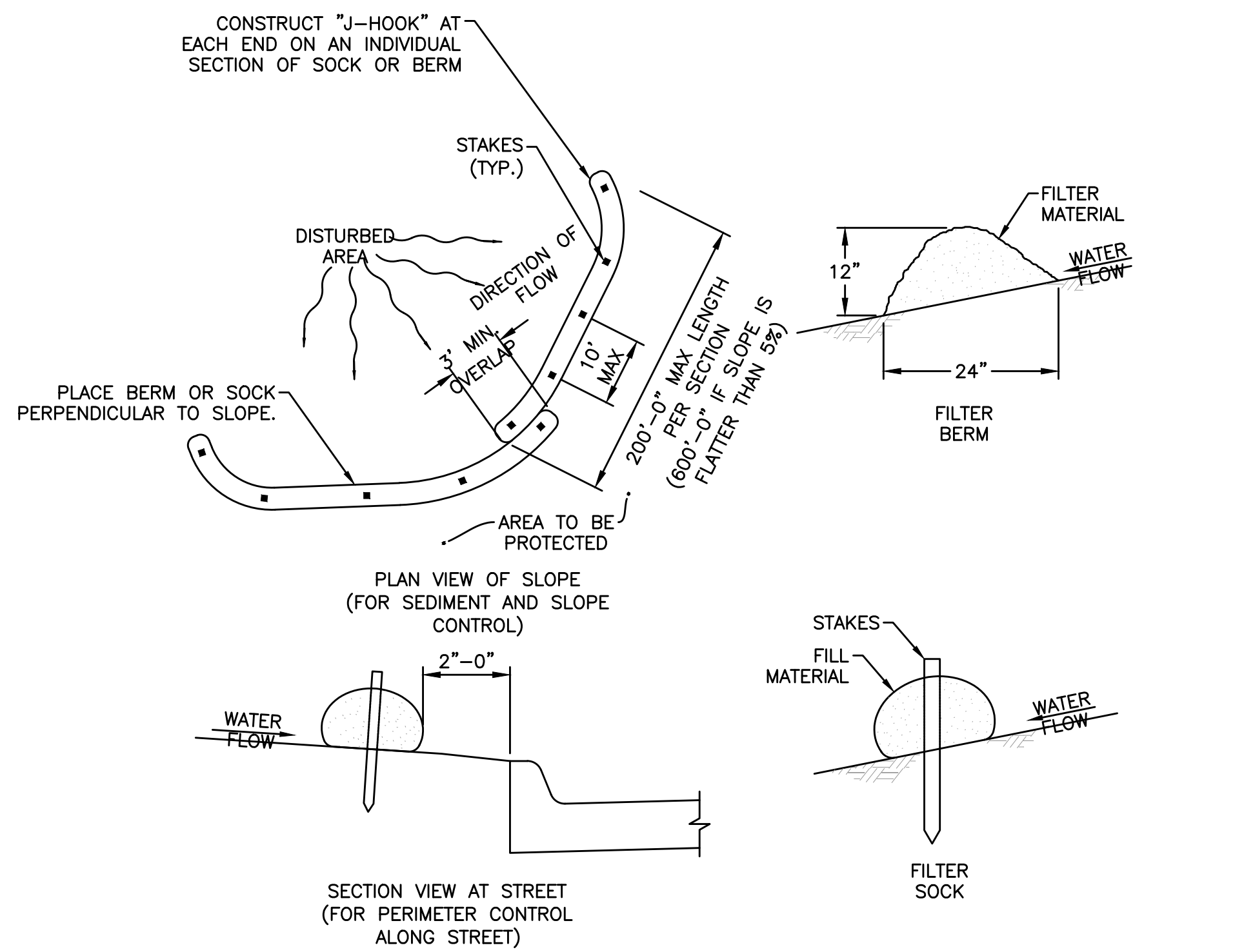
③ DIRECTIONAL SIGN  
NOT TO SCALE



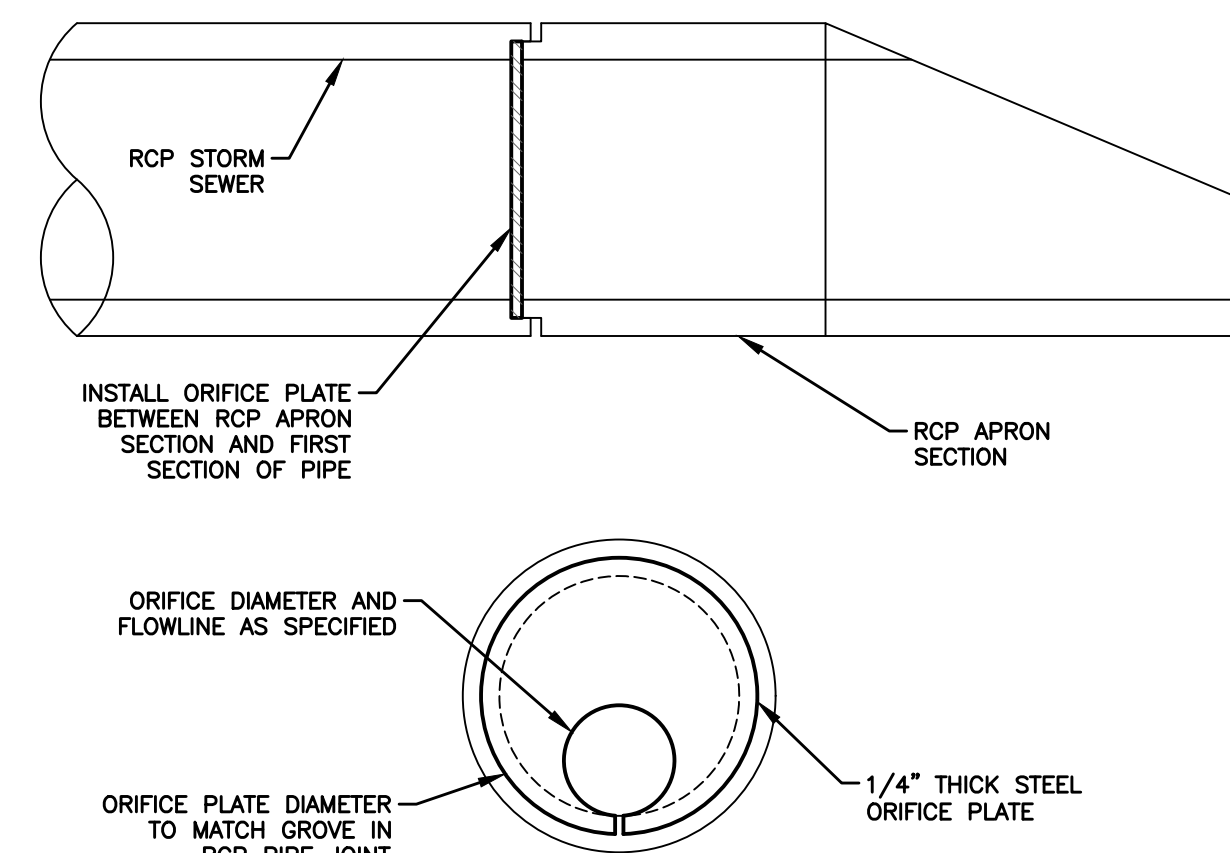
- STRUCTURE MAY BE BUILT WITH OPENINGS ON ANY OR ALL SIDES. PROVIDE OPENINGS AND ORIENTATION AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- ADJACENT WALLS MAY HAVE DIFFERENT WIDTHS BASED UPON PIPE CONFIGURATION, BUT STRUCTURE MUST BE RECTANGULAR.
- CONSTRUCT INLET OPENINGS WITH 15-INCH #4 EPOXY-COATED BARS AT 8 INCHES ON CENTER. EMBED BARS A MINIMUM OF 3 INCHES INTO WALLS AND TOP AT ALL OPENINGS.
  - GRADE TO TOP ELEVATION ON CLOSED SIDES.
  - WALL WIDTHS VARY WITH PIPE DIAMETER. PROVIDE 6 INCHES OF WALL WIDTH (MINIMUM) EACH SIDE OF PIPE OPENING. MINIMUM WALL WIDTH IS 36 INCHES. MAXIMUM WALL WIDTH IS 72 INCHES.
  - CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
  - INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
  - 12" MINIMUM WALL HEIGHT ABOVE ALL PIPES.



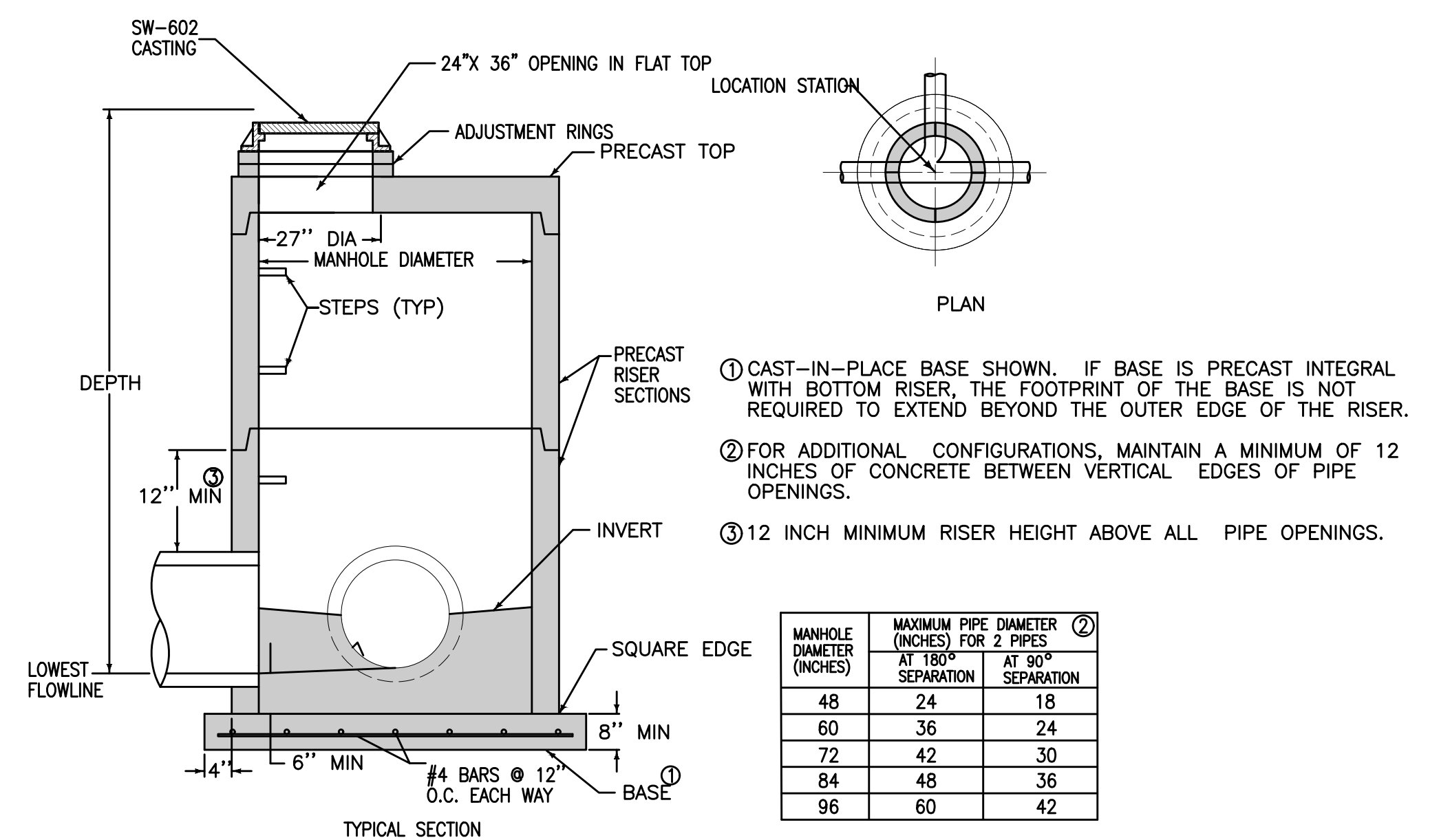
① SW-513 OPEN-SIDED AREA INTAKE  
NOT TO SCALE



⑥ TYPICAL PLACEMENT OF FILTER BERM OF SOCK  
NOT TO SCALE



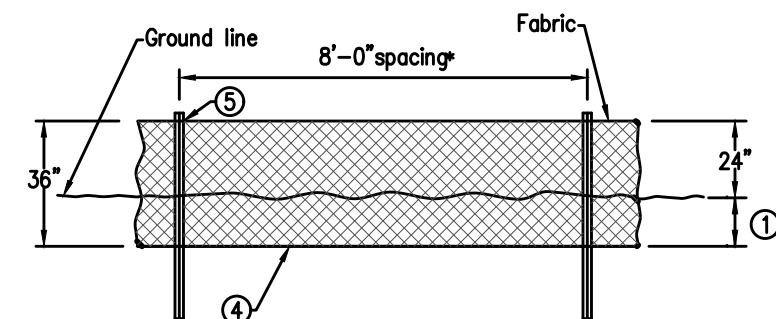
④ ORIFICE PLATE  
NOT TO SCALE



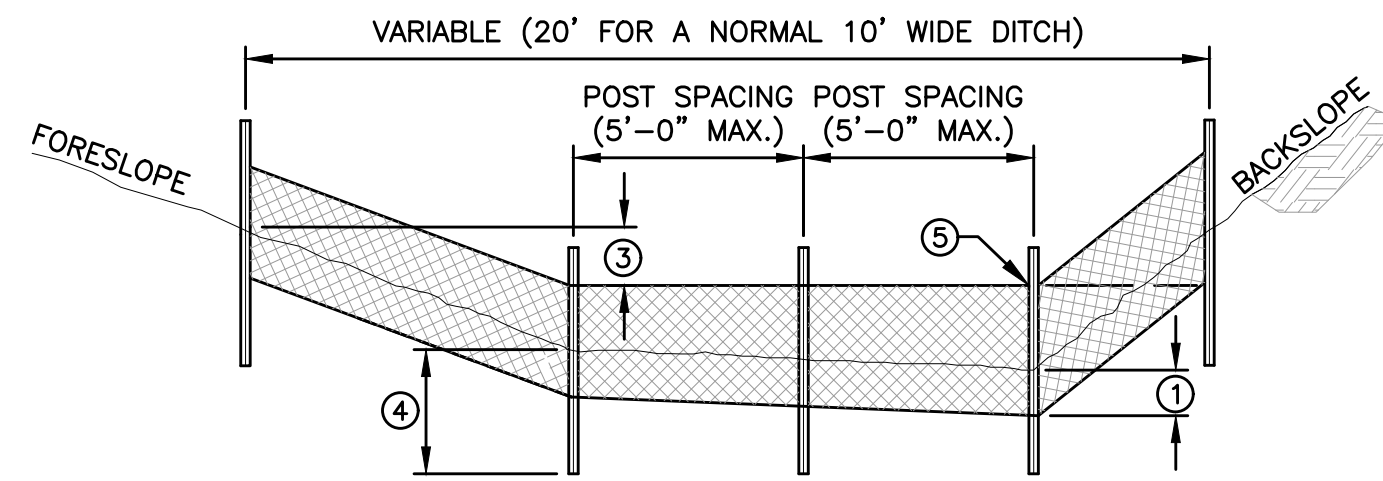
- CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH BOTTOM RISER, THE FOOTPRINT OF THE BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE RISER.
- FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES OF CONCRETE BETWEEN VERTICAL EDGES OF PIPE OPENINGS.
- 12 INCH MINIMUM RISER 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

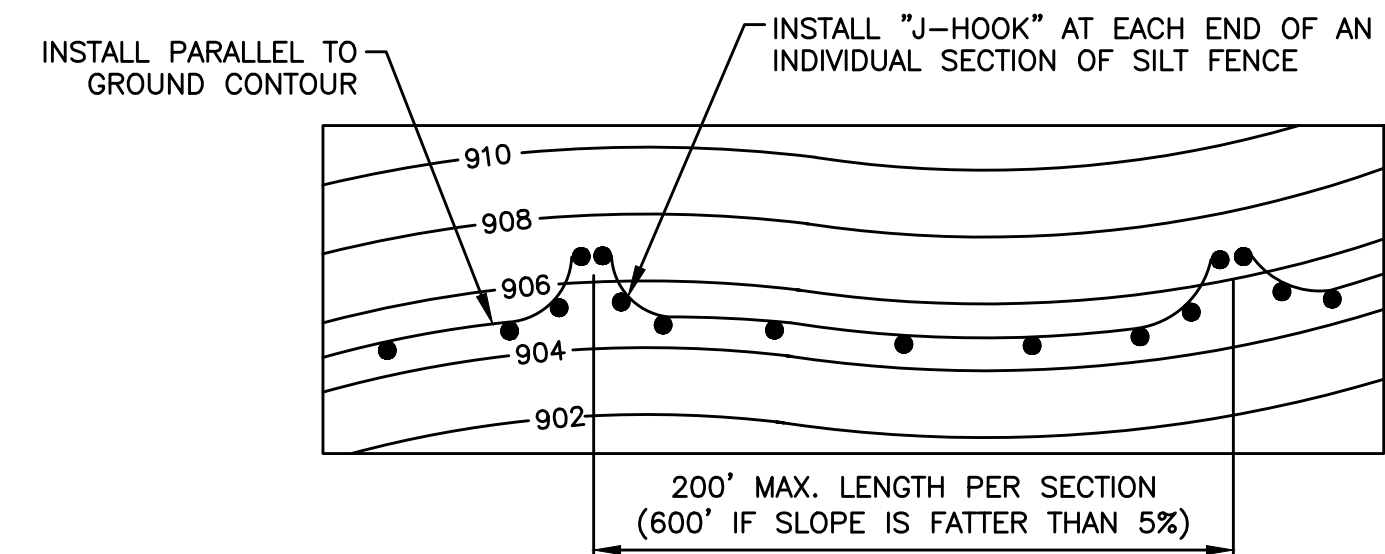
② SW-401 CIRCULAR STORM SEWER MANHOLE  
NOT TO SCALE



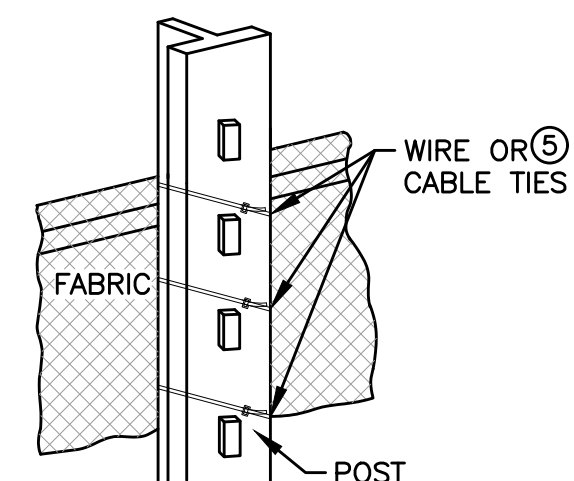
DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES  
\*Reduce post spacing to 5'-0" at water concentration areas, or as required to adequately support fence



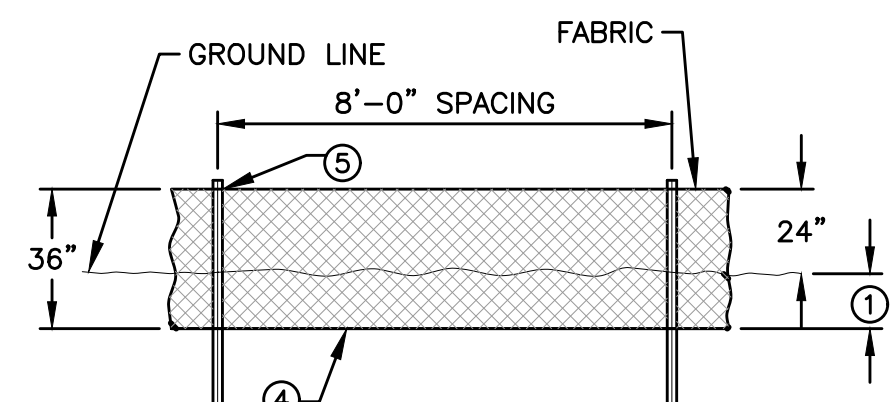
TYPICAL SILT FENCE DITCH CHECK



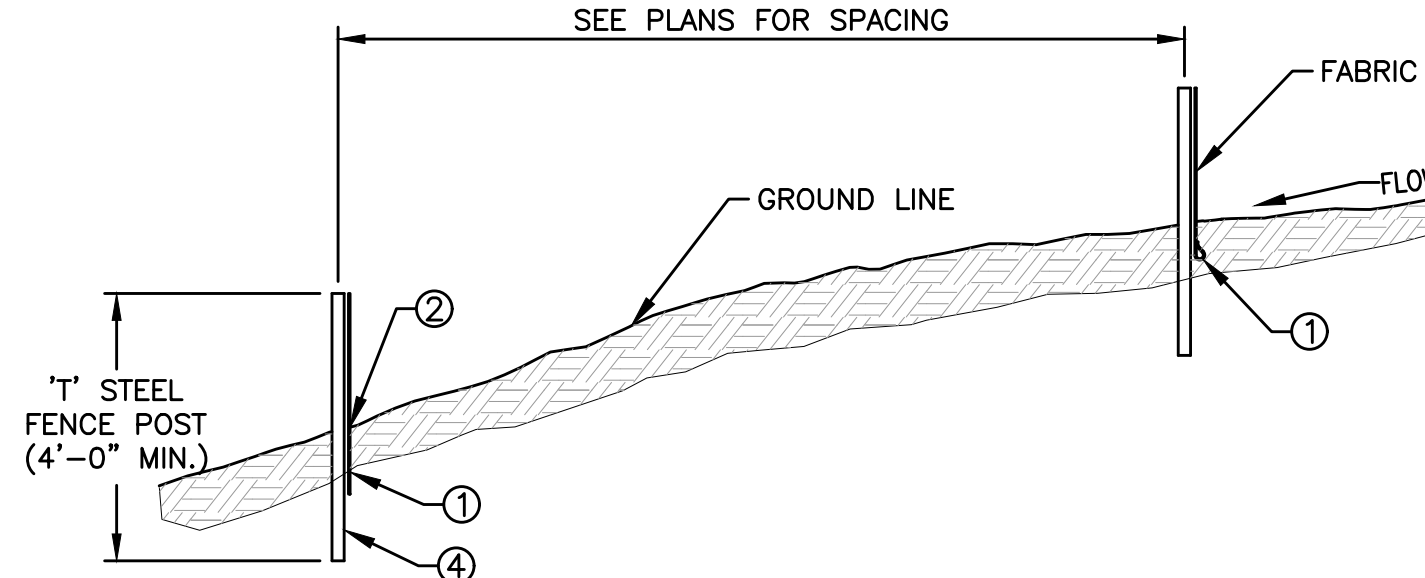
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES (PLAN VIEW)



ATTACHMENT TO POST



DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES  
\*REDUCE POST SPACING TO 5'-0" AT WATER CONCENTRATION AREAS, OR AS REQUIRED TO ADEQUATELY SUPPORT FENCE



TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES (PROFILE VIEW)

GENERAL NOTES:  
INSTALL SILT FENCE ACCORDING TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS AND AT LOCATIONS SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE JURISDICTIONAL ENGINEER.

- ① INSERT 12 IN. OF FABRIC A MINIMUM OF 6 IN. DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE)
- ② COMPACT GROUND BY DRIVING ALONG EACH SIDE OF THE SILT FENCE AS REQUIRED TO SUFFICIENTLY SECURE THE FABRIC IN THE TRENCH TO PREVENT PULLOUT AND FLOW UNDER THE FENCE.
- ③ IN DITCHES, EXTEND SILT FENCE UP SIDE SLOPE SO THE BOTTOM ELEVATION AT THE END OF THE FENCE IS A MINIMUM OF 2 IN. HIGHER THAN THE TOP OF THE FENCE IN THE LOW POINT OF THE DITCH.
- ④ STEEL POSTS TO BE EMBEDDED 20 IN. UNLESS OTHERWISE ALLOWED BY THE JURISDICTIONAL ENGINEER.
- ⑤ SECURE TOP OF ENGINEERING FABRIC TO STEEL POSTS USING WIRE OR PLASTIC TIES (50 LB. MIN.). SEE DETAILS OF "ATTACHMENT TO POSTS."

① SILT FENCE  
NOT TO SCALE



P.O. Box 22326  
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FX: 402/421-9479  
E-MAIL: info@sitescapesonline.com

WEBSITE: www.sitescapesonline.com  
E-MAIL: info@sitescapesonline.com

TITLE ECHO BIKE RACK  
PRODUCT NO. EC2-05-SM

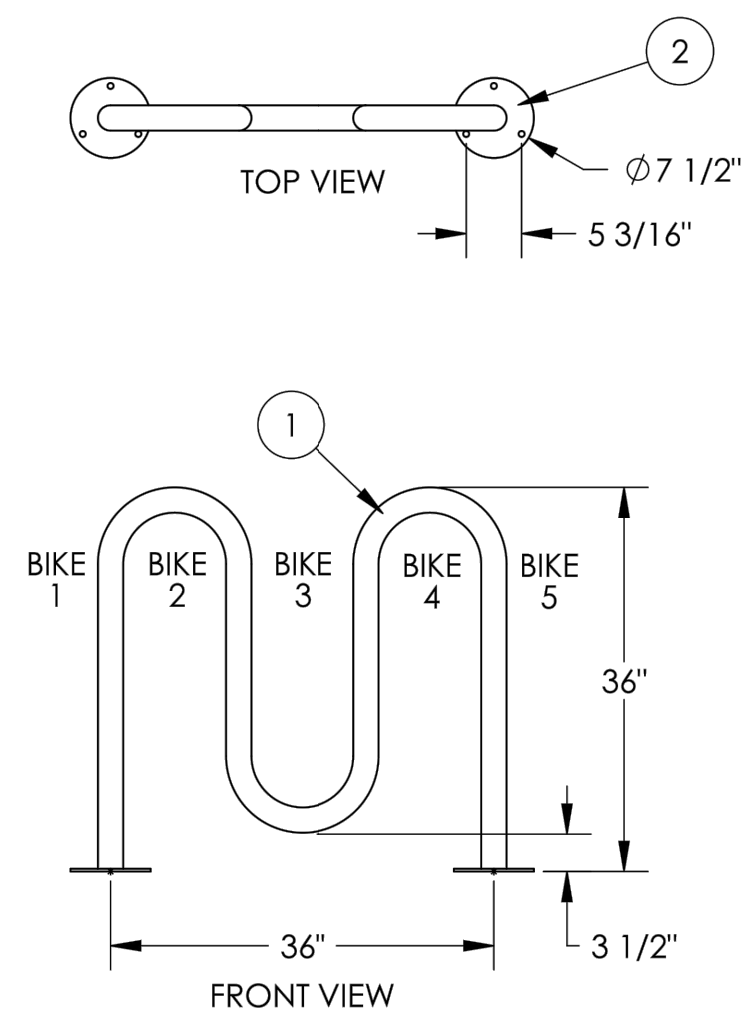
INCH TOLERANCES U.O.S.  
FRACTION--±1/16"  
ANG-----±1°

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SITESCAPES, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SITESCAPES, INC. IS PROHIBITED.

\*Available in powder coat and DuraCoat finishes

MATERIALS LIST

- (1) Tubing -  $\phi$  2 3/8" x .154" Wall Steel Tubing
- (2) Surface Plate -  $\phi$  7 1/2" x 1/4" Thick Steel Plate with Three  $\phi$  9/16" Mounting Holes
- (3) Mounted with Six  $\phi$  1/2" x 4-5" Stainless Steel Anchor Bolts (Customer Supplied)



④ BIKE RACK (5 BIKE CAPACITY)  
NOT TO SCALE



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WEBSITE: www.sitescapesonline.com  
E-MAIL: info@sitescapesonline.com

TITLE ECHO BIKE RACK  
PRODUCT NO. EC2-13-SM

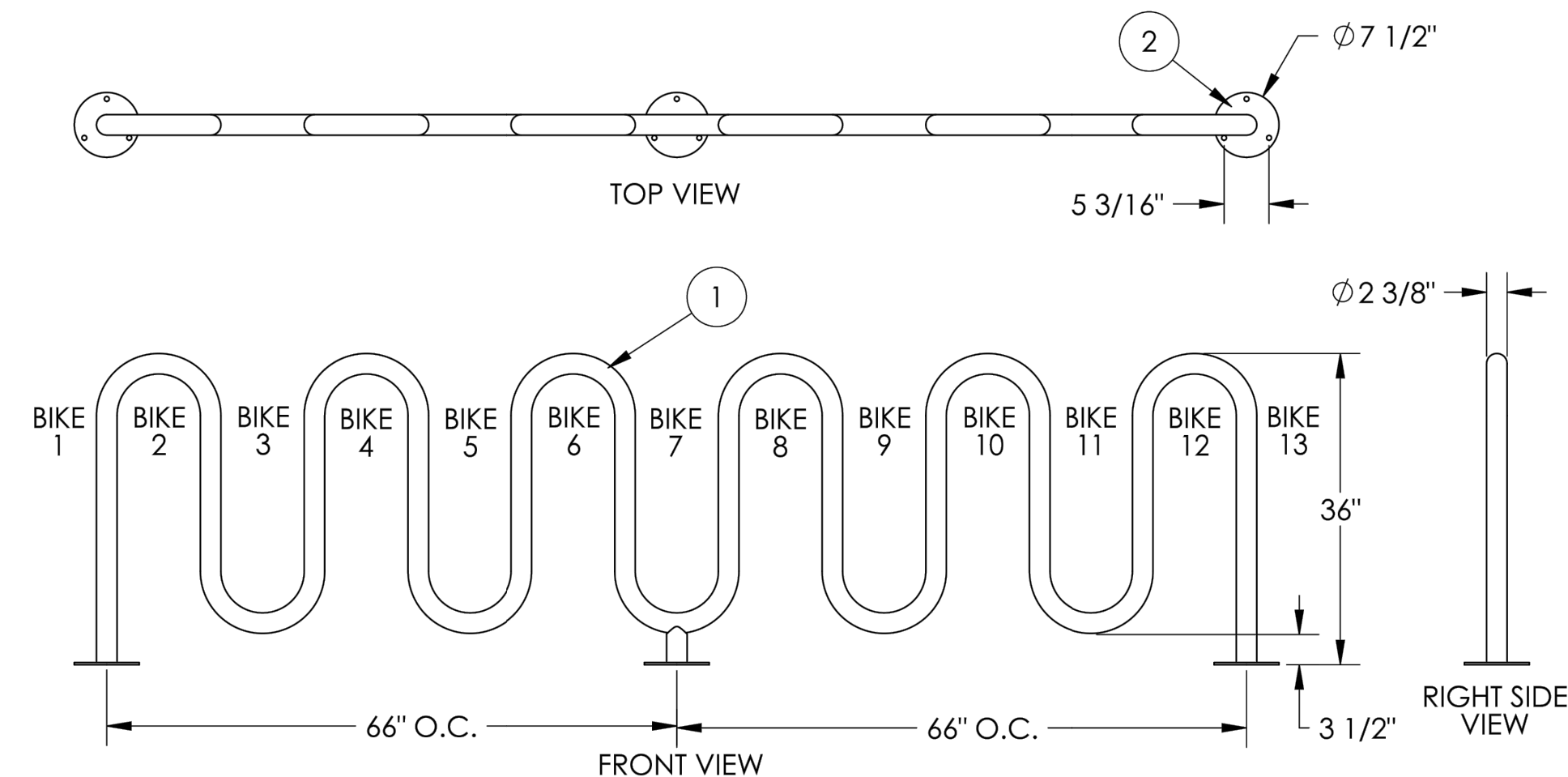
INCH TOLERANCES U.O.S.  
FRACTION--±1/16"  
ANG-----±1°

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SITESCAPES, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SITESCAPES, INC. IS PROHIBITED.

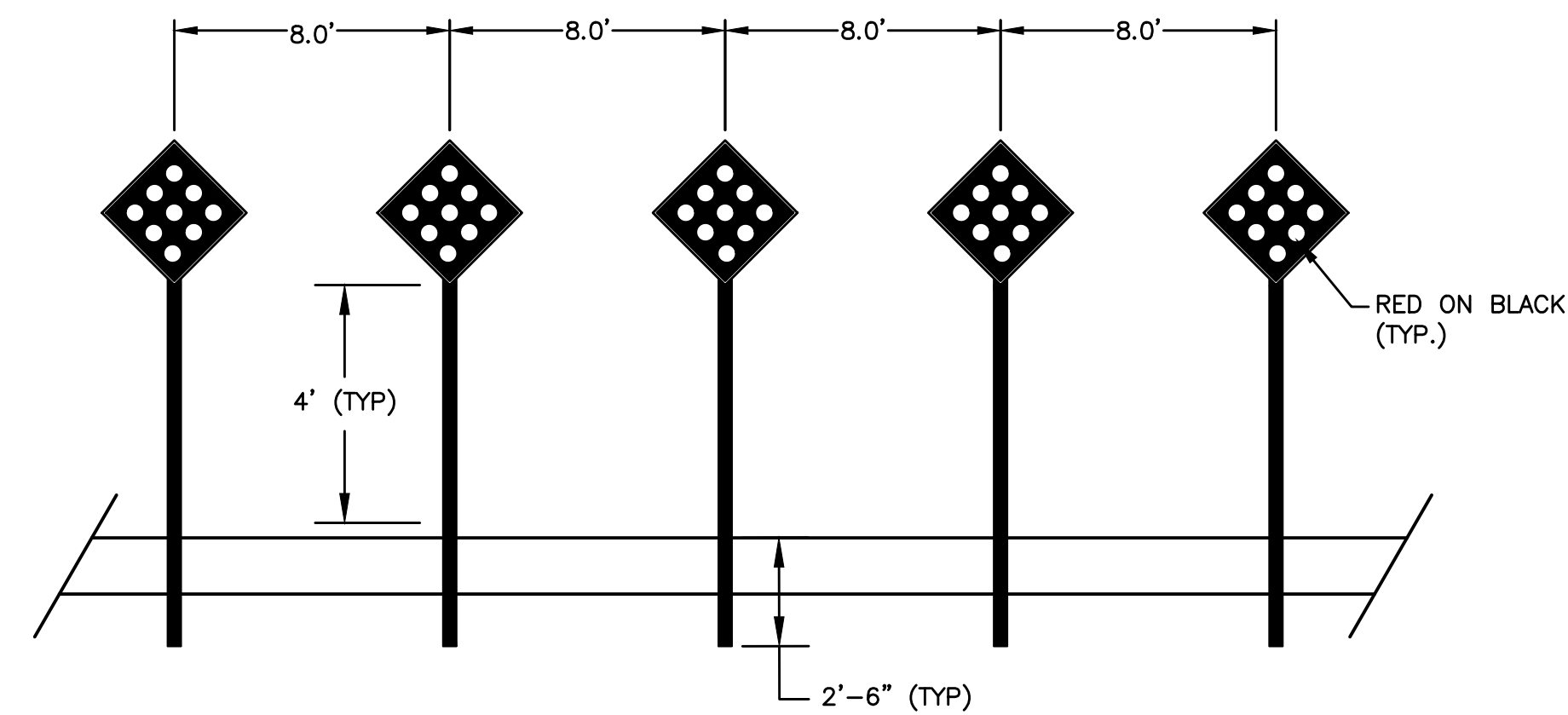
\*Available in powder coat and DuraCoat finishes

MATERIALS LIST

- (1) Tubing -  $\phi$  2 3/8" x .154" Wall Steel Tubing
- (2) Surface Plate -  $\phi$  7 1/2" x 1/4" Thick Steel Plate with Three  $\phi$  9/16" Mounting Holes
- (3) Mounted with Nine  $\phi$  1/2" x 4-5" Stainless Steel Anchor Bolts (Customer Supplied)



③ BIKE RACK (13 BIKE CAPACITY)  
NOT TO SCALE



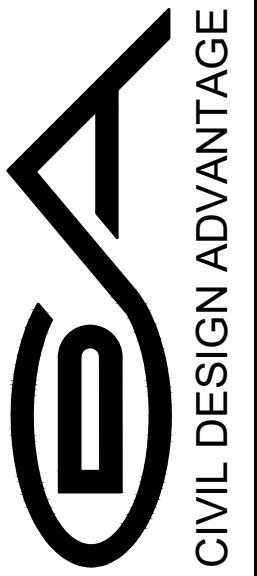
② PERMANENT ROAD CLOSURE SIGN (SI-182)  
NOT TO SCALE

DATE	REVISIONS
02/24/2023 <td>FIRST SUBMITTAL </td>	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE  
URBANDALE, IA 50322  
PHONE: (515) 369-4400

TECH:

ENGINEER:

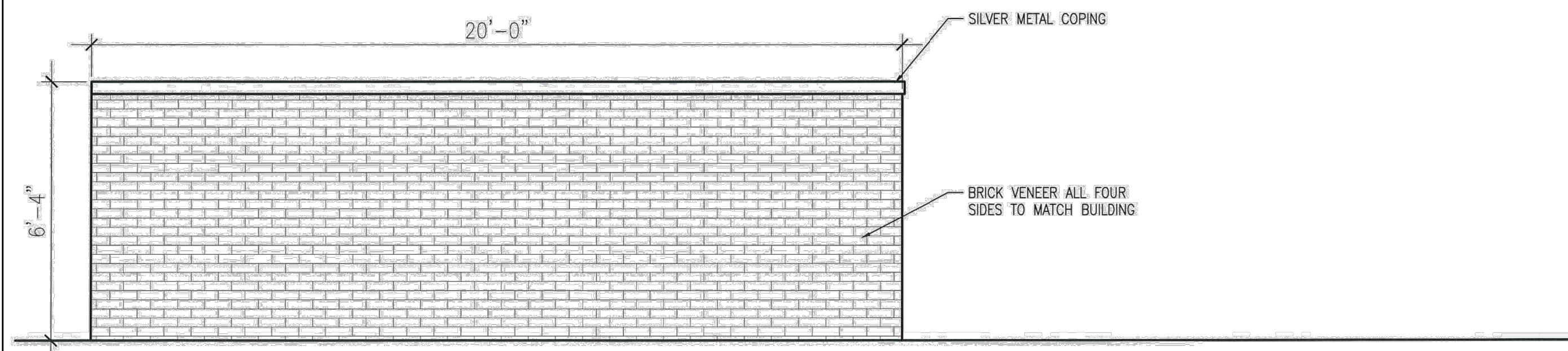
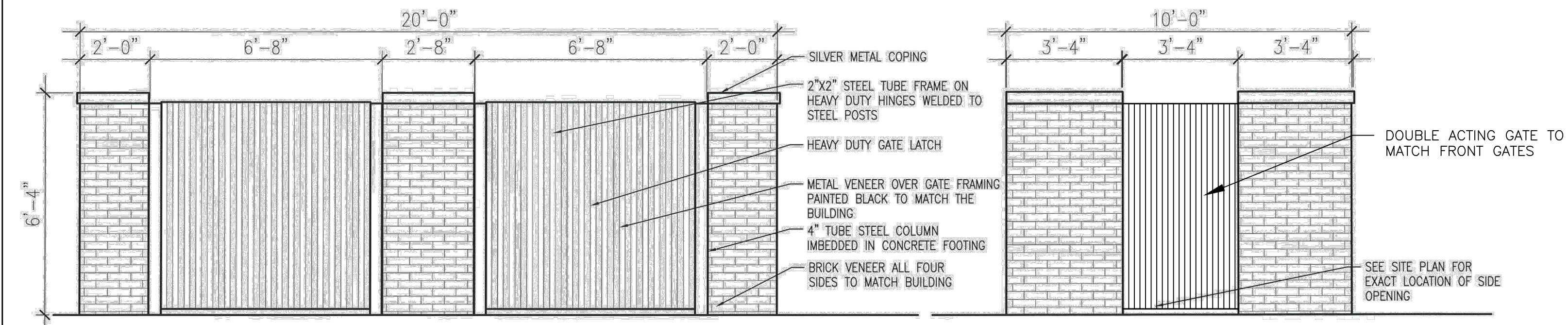


CIVIL DESIGN ADVANTAGE  
WEST DES MOINES, IOWA

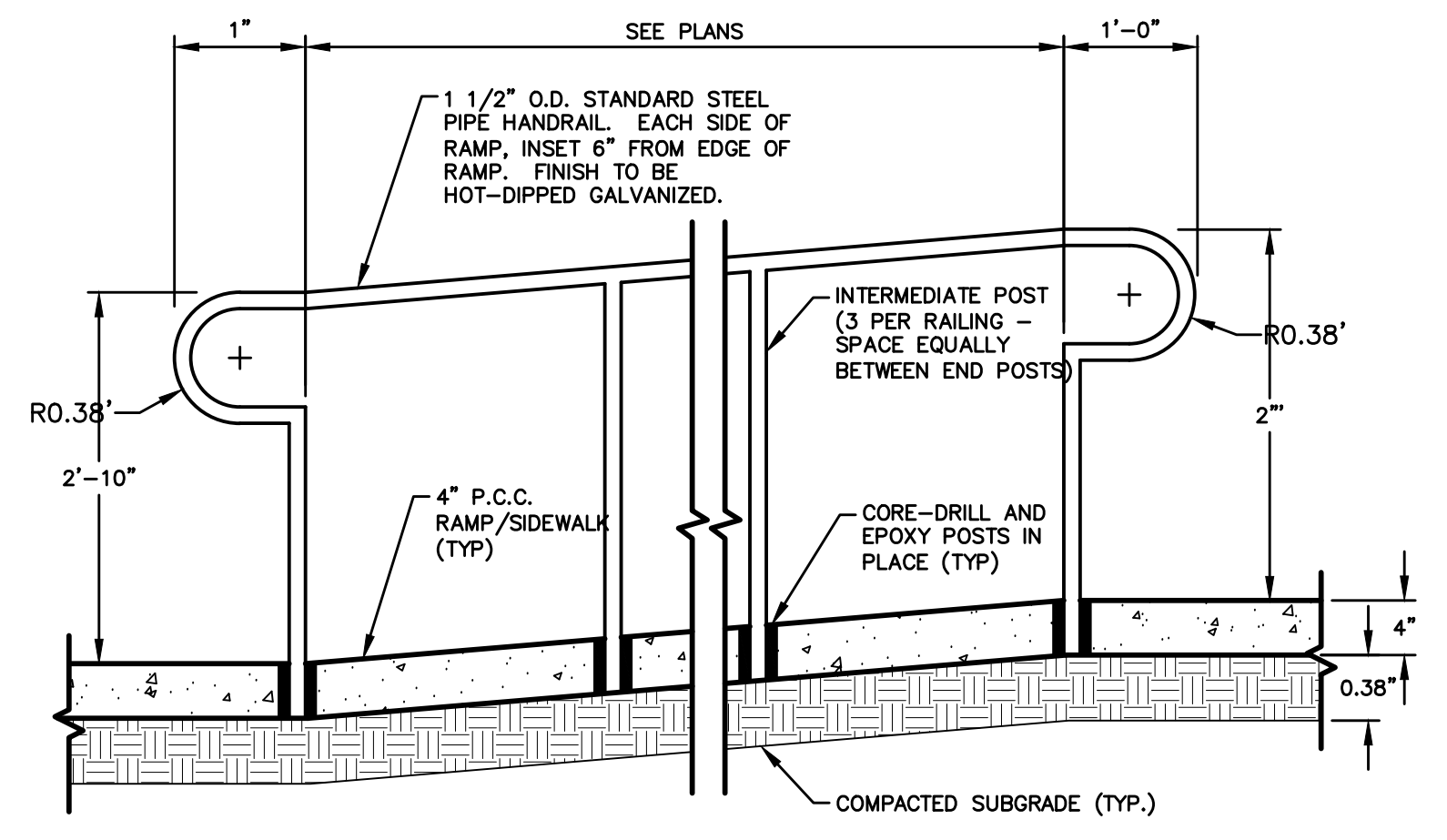
JORDAN CREEK POINT - LOT 2  
DETAILS

C5.8

2212.853

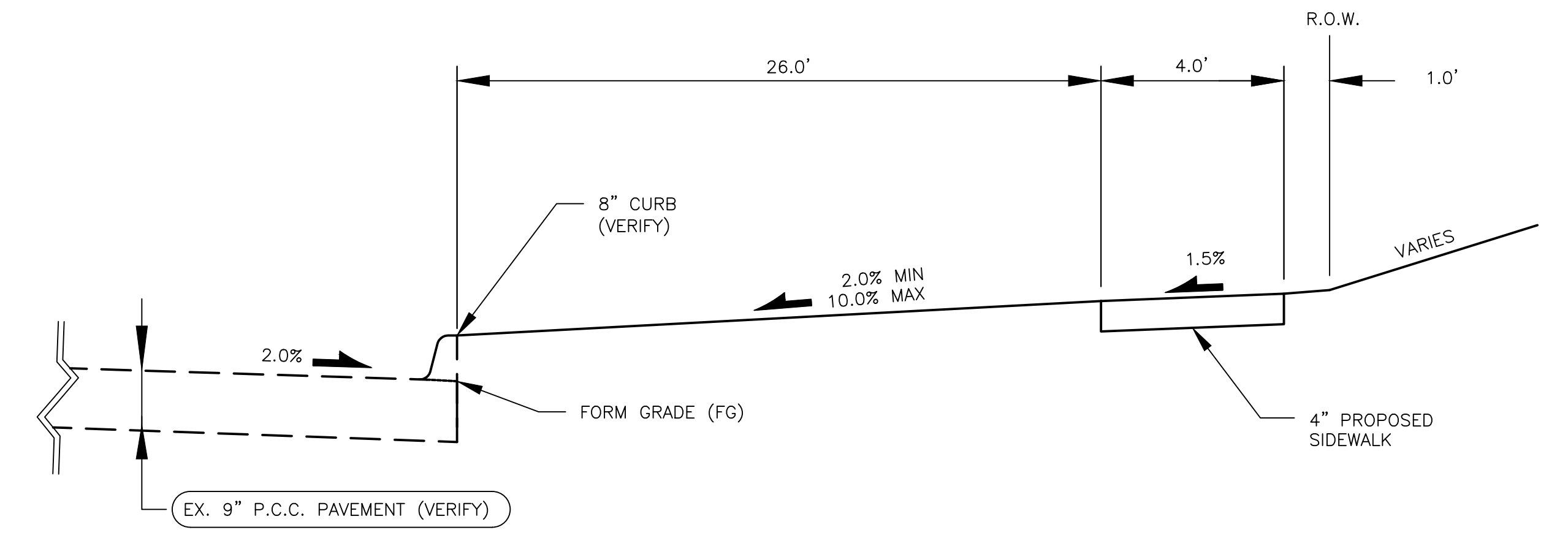


**3 TRASH ENCLOSURE**  
NOT TO SCALE

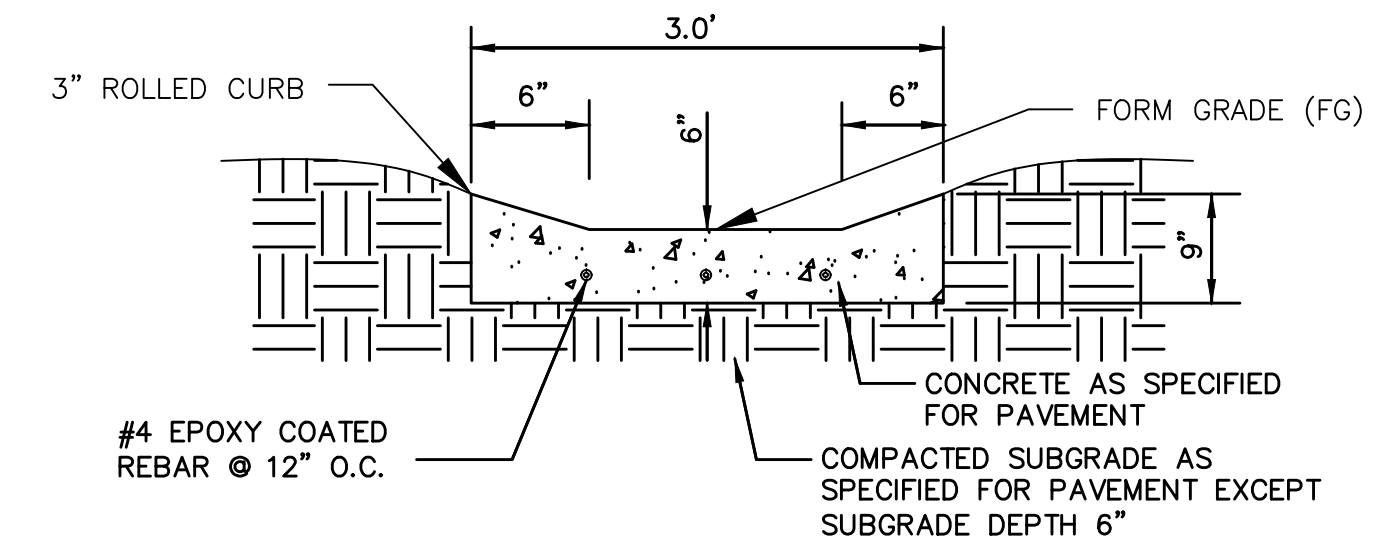


NOTE: THIS DETAIL IS FOR REFERENCE ONLY. INSTALL PER MANUFACTURER'S SPECIFICATIONS

**4 HANDRAILS**  
NOT TO SCALE



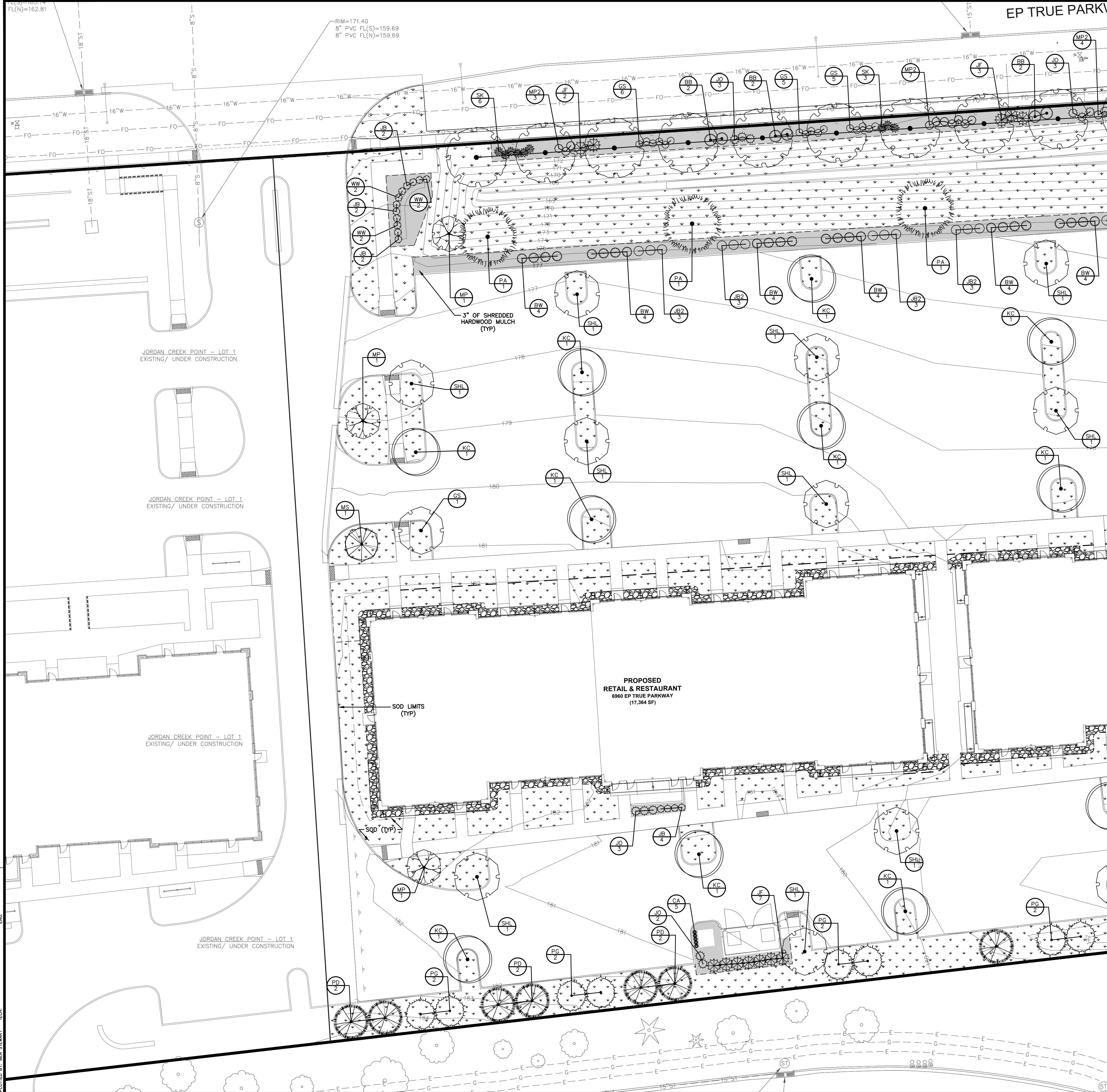
**1 TYPICAL SECTION - EP TRUE PARKWAY - PUBLIC SIDEWALK**  
NOT TO SCALE



**2 P.C.C. FLUME**  
NOT TO SCALE

FILE IN: C:\WORK\2023\JORDAN CREEK POINT - LOT 2\DWG  
FILE DATE: 2/24/23  
PLOTTED BY: BEN STEWART  
COMMENT: ENG  
DATE: 2/24/23  
DATE PLOTTED: 2/24/23 4:23 PM  
TECH:





EP TRUE PARKWAY

LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE 2023 SUDAS STANDARD SPECIFICATIONS AND ALL CITY OF WEST DES MOINES SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. SOD ALL DISTURBED AREAS AS DIRECTED BY OWNER.
6. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
7. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. MINERAL MULCH OVER WEED BARRIER SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS.
9. ALL EDGING SHALL BE STEEL.
10. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
11. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
12. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
13. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED, FOR APPROVAL.

LANDSCAPING REQUIREMENTS

**OPEN SPACE**  
 REQUIRED:  
 2 TREES, 3 SHRUBS / 3,000 SF REQ. OPEN SPACE W/ 50% OVERSTORY/EVERGREEN  
 59,182 SF REQ. OPEN SPACE / 3000 = 19.73 LANDSCAPE UNITS  
 X2 TREES = 40 TREES REQUIRED  
 X3 SHRUBS = 60 SHRUBS REQUIRED

**PROVIDED:**  
 40 TREES  
 73 SHRUBS

**PARKING LANDSCAPE**  
 REQUIRED:  
 PARKING LOT ADJ. LANDSCAPE AREAS, PARKING ISLANDS, AND SCREENS TO EQUAL 10% OF TOTAL PAVED AREA  
 93,776 SF TOTAL PAVED AREA x 10% = 9,377 SF

**PROVIDED:**  
 TOTAL ISLAND, SCREEN, AND ADJ. LANDSCAPE AREAS = 12,594 SF (13.3%)

TREES REQUIRED PER ISLANDS = 1  
 TREES PROVIDED = 36

**LANDSCAPE BUFFER**  
 REQUIRED:  
 640 LF ALONG EP TRUE PKWY / 35 = 18.3 LANDSCAPE UNITS  
 X6 = 110 SHRUBS  
 X1 = 19 OVERSTORY TREES

337 LF ALONG 68TH STREET / 35 = 9.6 LANDSCAPE UNITS  
 X6 = 58 SHRUBS  
 X1 = 10 OVERSTORY TREES

**PROVIDED:**  
 175 SHRUBS  
 29 OVERSTORY TREES

PLANT SCHEDULE

EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
PA	7	Norway Spruce	Picea abies	B&B	6' HEIG
PD	11	Douglas Fir	Pseudotsuga menziesii	B&B, 6' HEIGHT	
PG	11	Colorado Blue Spruce	Picea pungens 'Glauca'	B&B, 6' HEIGHT	
ORNAMENTAL TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
MP	6	Prairifire Crab Apple	Malus x 'Prairifire'	B&B, 1.5" CALIPER	
MS	3	Spring Snow Crab Apple	Malus x 'Spring Snow'	B&B, 1.5" CALIPER	
OVERSTORY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL
AA	29	Autumn Blaze Red Maple	Acer rubrum 'Autumn Blaze'	B&B, 2" CALIPER	
KC	18	Kentucky Coffeetree	Gymnocladus dioica	B&B	2"
SHL	17	Shademaster Honey Locust	Gleditsia triacanthos inermis 'Shademaster'	B&B, 2"	
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	
BB	14	Compact Burning Bush	Euonymus alatus 'Compactus'	3 GAL	
BW	36	Wintergreen Boxwood	Buxus microphylla 'Wintergreen'	15" HEIGHT	
GS	43	Gold Mound Spirea	Spiraea x bumalda 'Goldmound'	3 GAL	
JB	10	Crimson Pygmy Japanese Barberry	Berberis thunbergii 'Crimson Pygmy'	3 GAL	
JB2	20	Blue Star Juniper	Juniperus squamata 'Blue Star'	24" HEIGHT	
JF	30	Sea Green Juniper	Juniperus chinensis 'Sea Green'	24" HEIGHT	
JO	26	Old Gold Juniper	Juniperus chinensis 'Old Gold'	3 GAL	
MP2	32	Purple Eulalia Grass	Miscanthus sinensis 'Purpureascens'	3 GAL	
SK	43	Miss Kim Korean Lilac	Syringa pubescens 'Miss Kim'	36" HEIGHT	
WW	6	Spilled Wine® Weigela	Weigela florida 'Bokrosplwi'	3 GAL	
PERENNIALS	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	
CA	5	Feather Reed Grass	Calamagrostis x Acutiflora	1 QT.	

COMMENTS:  
 ENG  
 FILE DATE: 2/24/23  
 DATE PLOTTED: 2/24/2023 4:23 PM  
 PLOTTED BY: BEN STEWART, TECH

DATE: 02/24/2023

REVISIONS: FIRST SUBMITTAL

4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400

TECH: [Blank]

ENGINEER: [Blank]

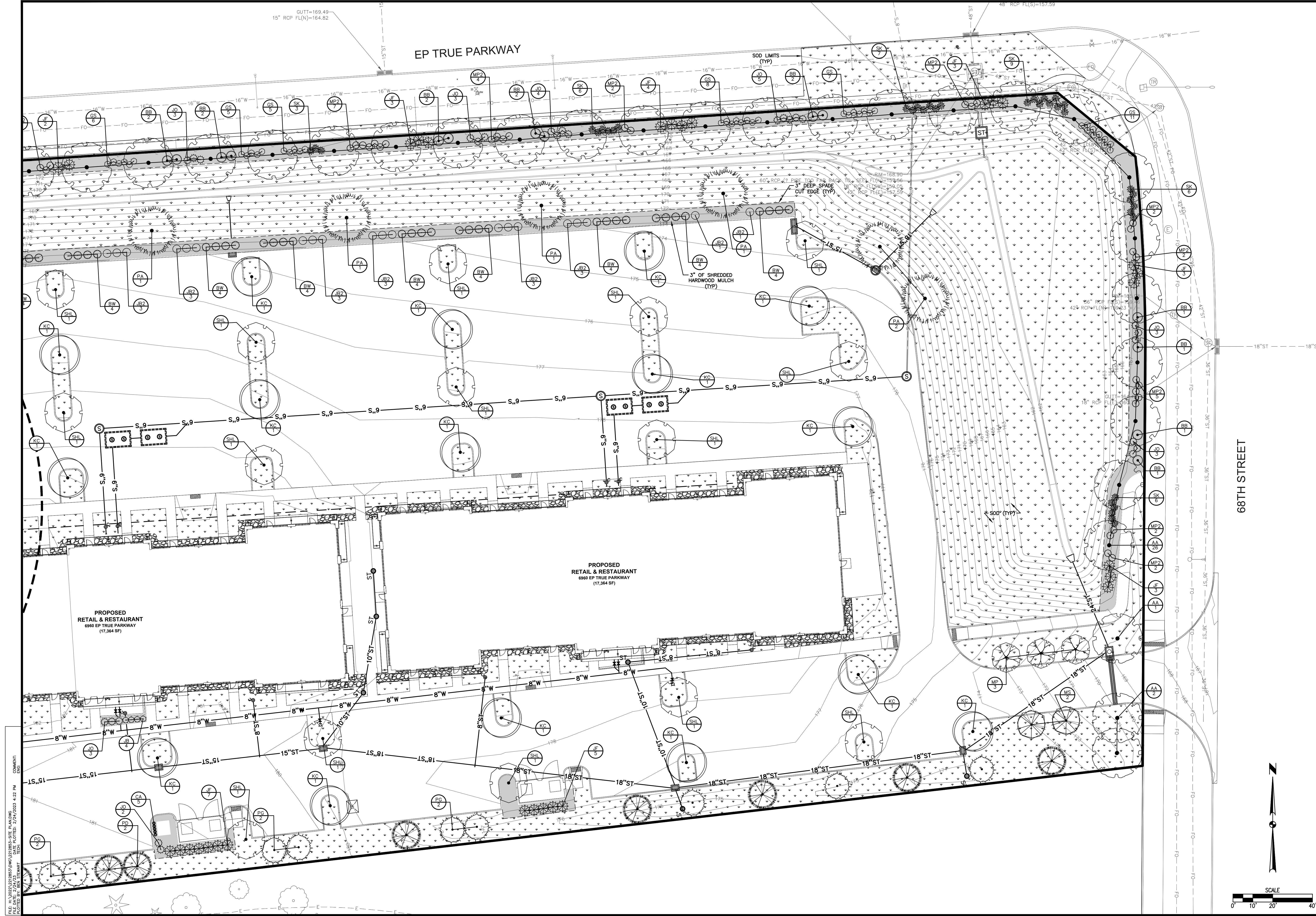
WEST DES MOINES, IOWA

**JORDAN CREEK POINT - LOT 2**

**LANDSCAPE PLAN**

**L1.1**

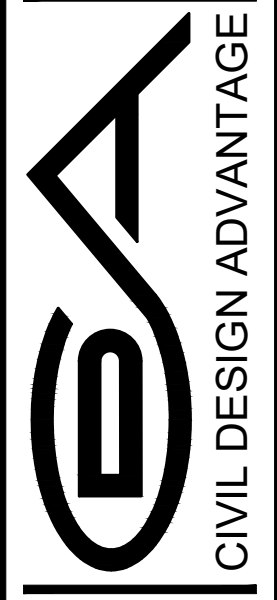
2212.853



COMMENTS:  
 ENG: [Name]  
 FILE DATE: 2/24/23  
 PLOTTED BY: BEN STEWART

DATE	REVISIONS
02/24/2023	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE  
 URBANDALE, IA 50322  
 PHONE: (515) 369-4400



**JORDAN CREEK POINT - LOT 2**  
**LANDSCAPE PLAN**

WEST DES MOINES, IOWA  
 ENGINEER: [Name]  
 TECH: [Name]  
**L1.2**  
 2212.853