



REVISION 7 - 10/30/2025

MASSACHUSETTS EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
 - a) SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
 - b) APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-0 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).
 - c) FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN. QUALITY SOIL MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1. SOIL ON SLOPES STEEPER THAN 3:1 SHOULD BE PEGGED.
 - d) STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
12. WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED.

LOCATION PROTECTED AREA	MULCH STRAW	MULCH RATE (1000 SF) 100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)*	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

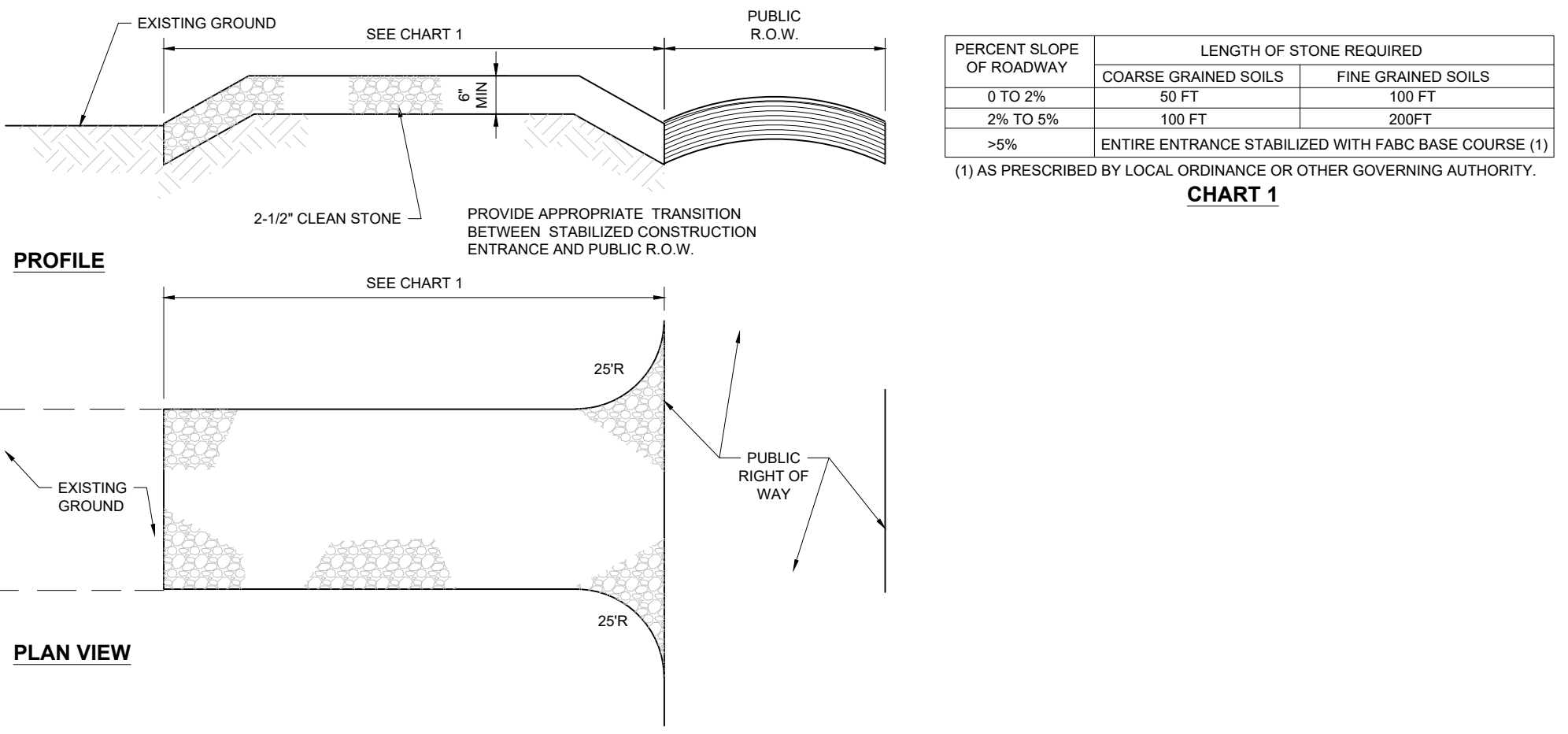
- * A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.
- * MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.
15. PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
 - a) TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AREAS" AND PROVIDE A MINIMUM OF 1,000 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES, MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT. UPON SITE STABILIZATION, ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA SHALL THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION, AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
 16. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
 17. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
 18. THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
 19. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.
 20. EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
 21. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
 22. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.
 23. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
 24. AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
 25. FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
 26. MULCHING REQUIREMENTS:
 - a) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
 - b) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
 - c) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
 27. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
 28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

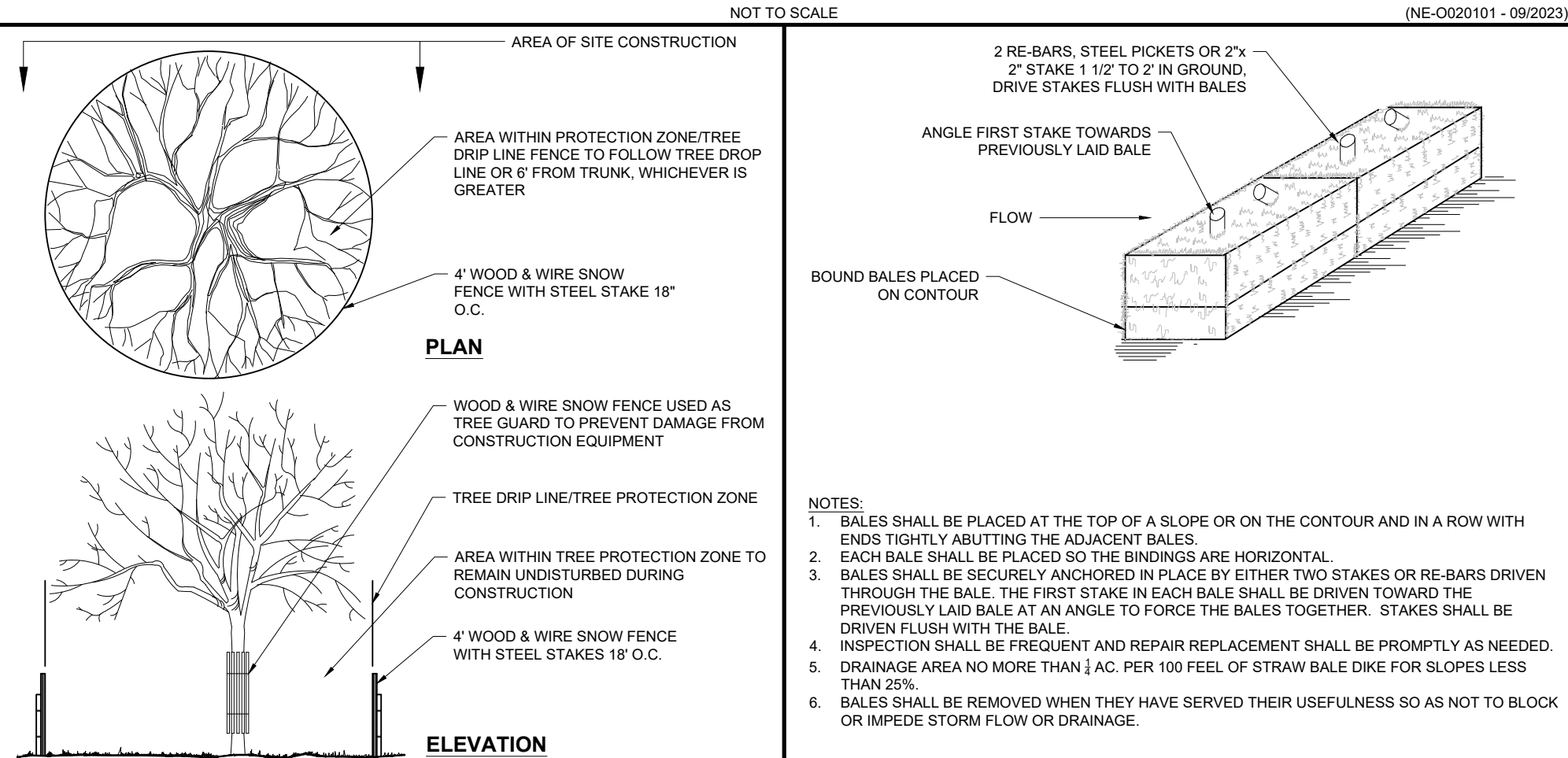
1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL, UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY XXX.XX ACRES.
4. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
 - a) STABILIZED CONSTRUCTION ENTRANCE/EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
 - b) SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
 - c) INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
 - d) INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
 - e) THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6 INCHES OR HALF THE EROSION CONTROL BARRIER'S HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
 - f) THE CONTRACTOR MUST MAINTAIN THE SILT FENCE(S) AND/OR SILT SOCK BARRIERS AT ALL TIMES THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS, WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
 - g) THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
 - h) THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
 - i) THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
 - j) THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.
12. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
14. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
15. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
16. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
17. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
- CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
- CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
- INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
- DEMOLITION OF EXISTING BUILDINGS
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS
- PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED AS REQUIRED.
- REMOVAL OF THE TEMPORARY SEDIMENT BASINS
- PAVE PARKING LOT
- LANDSCAPING PER LANDSCAPING PLAN
- REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER

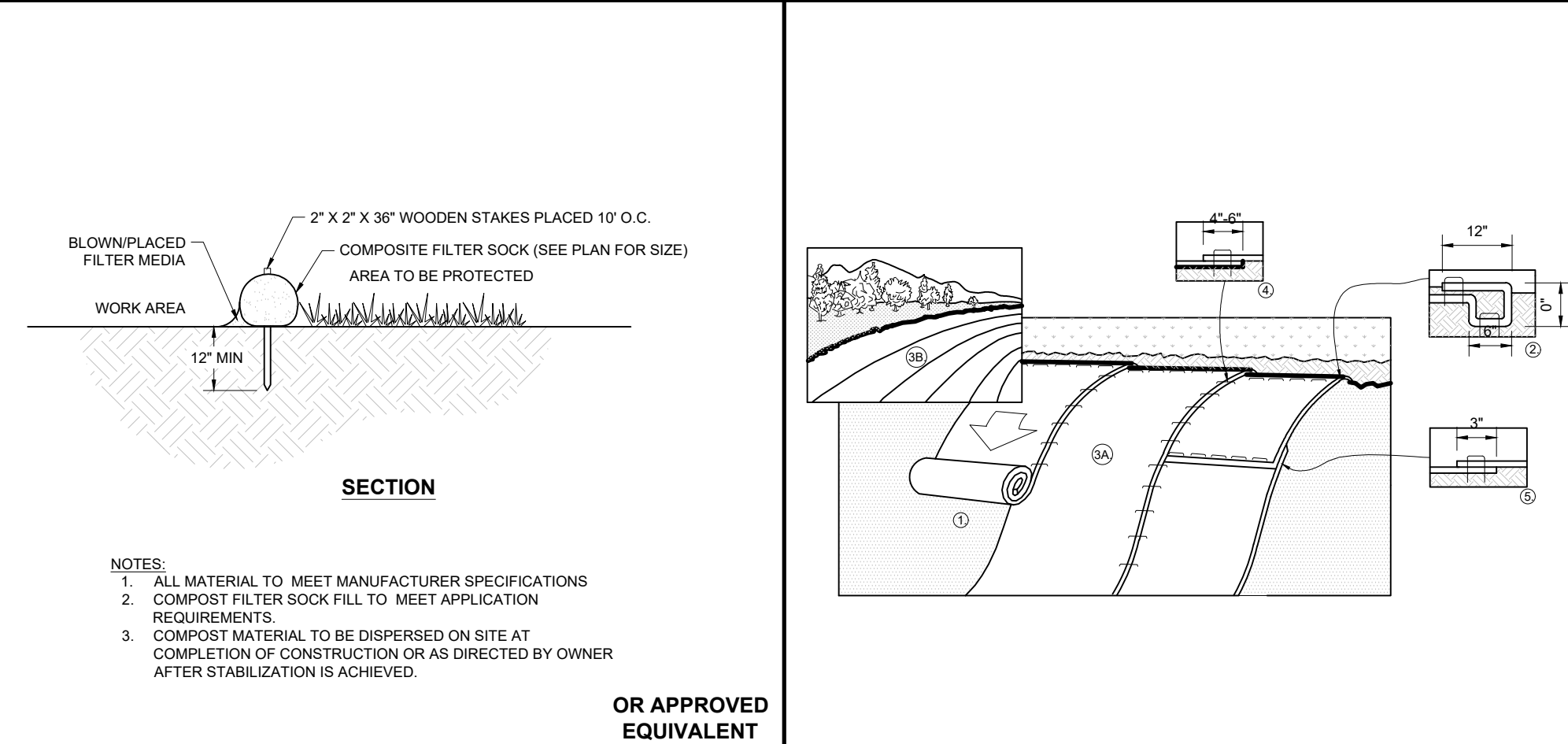


STABILIZED CONSTRUCTION ENTRANCE



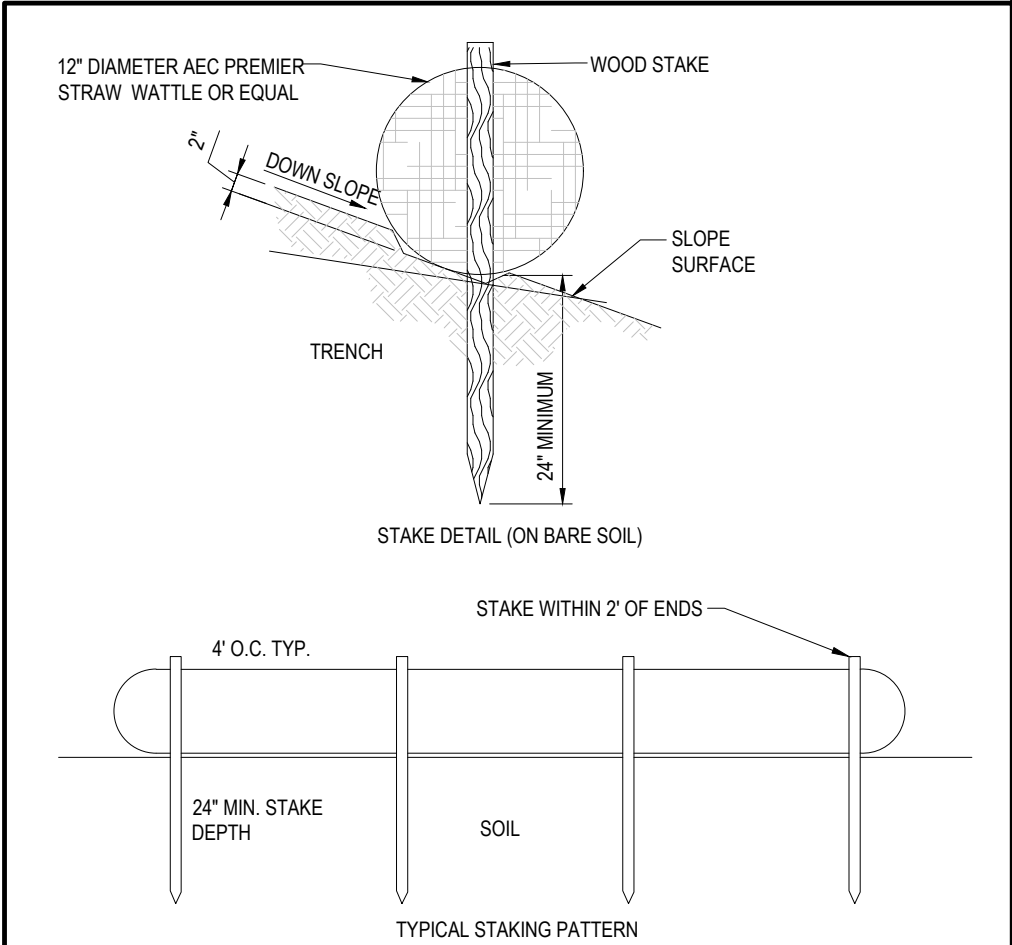
TREE PROTECTION DURING SITE CONSTRUCTION

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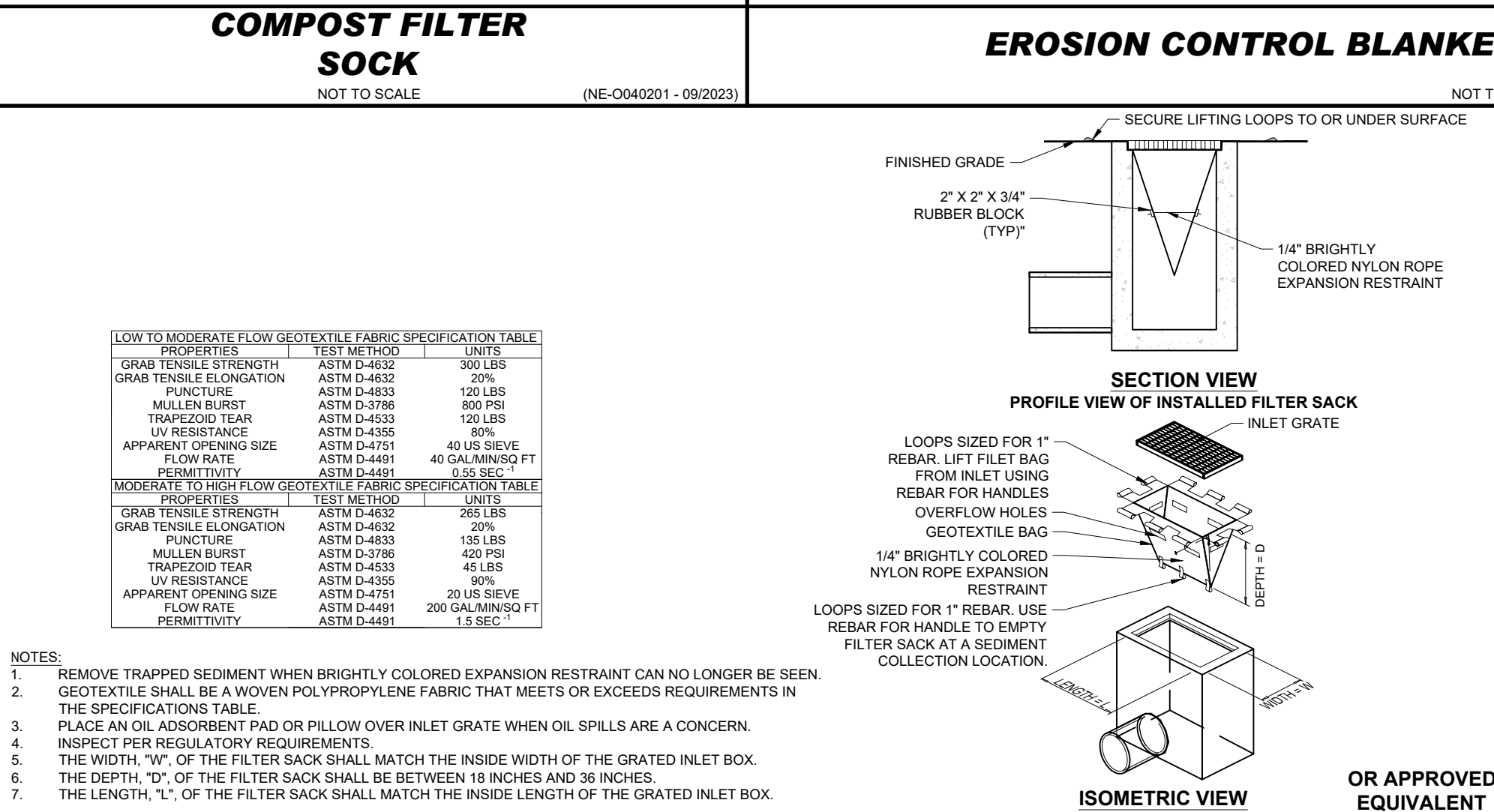
COMPOST FILTER SOCK

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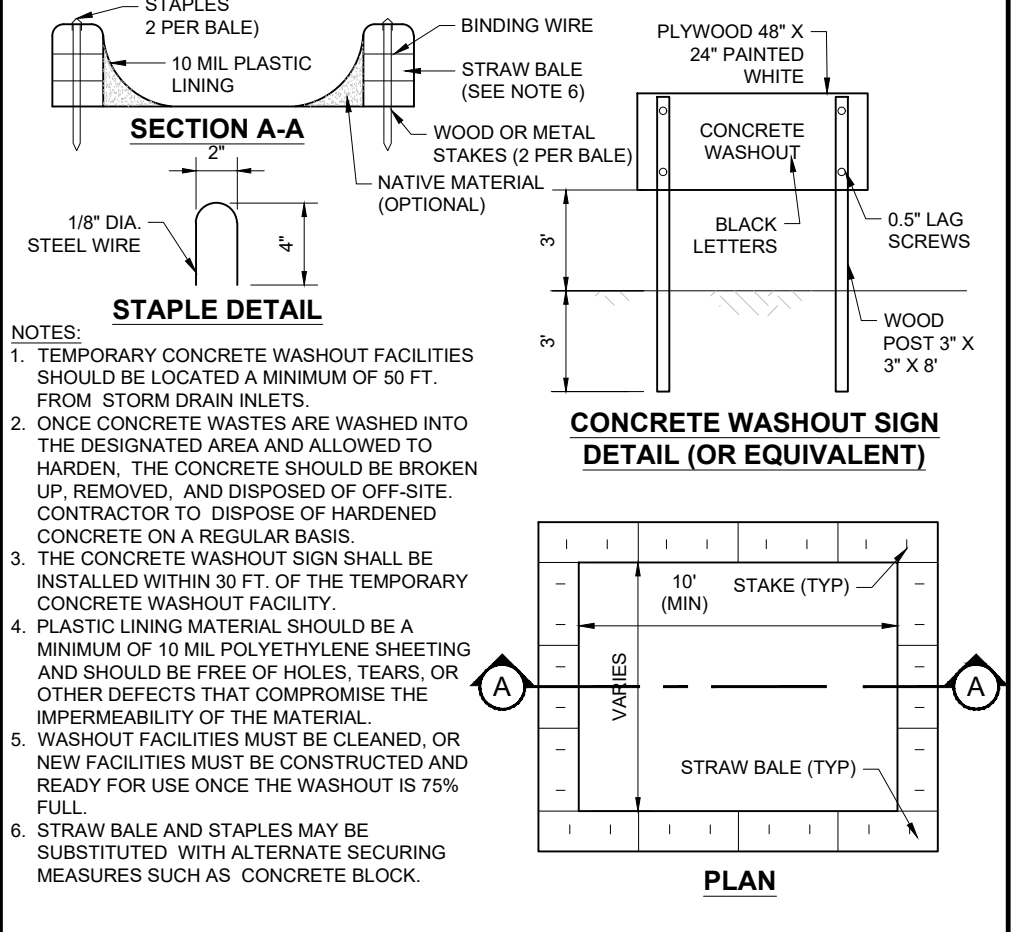
STRAW WATTLE BARRIER

NOT TO SCALE



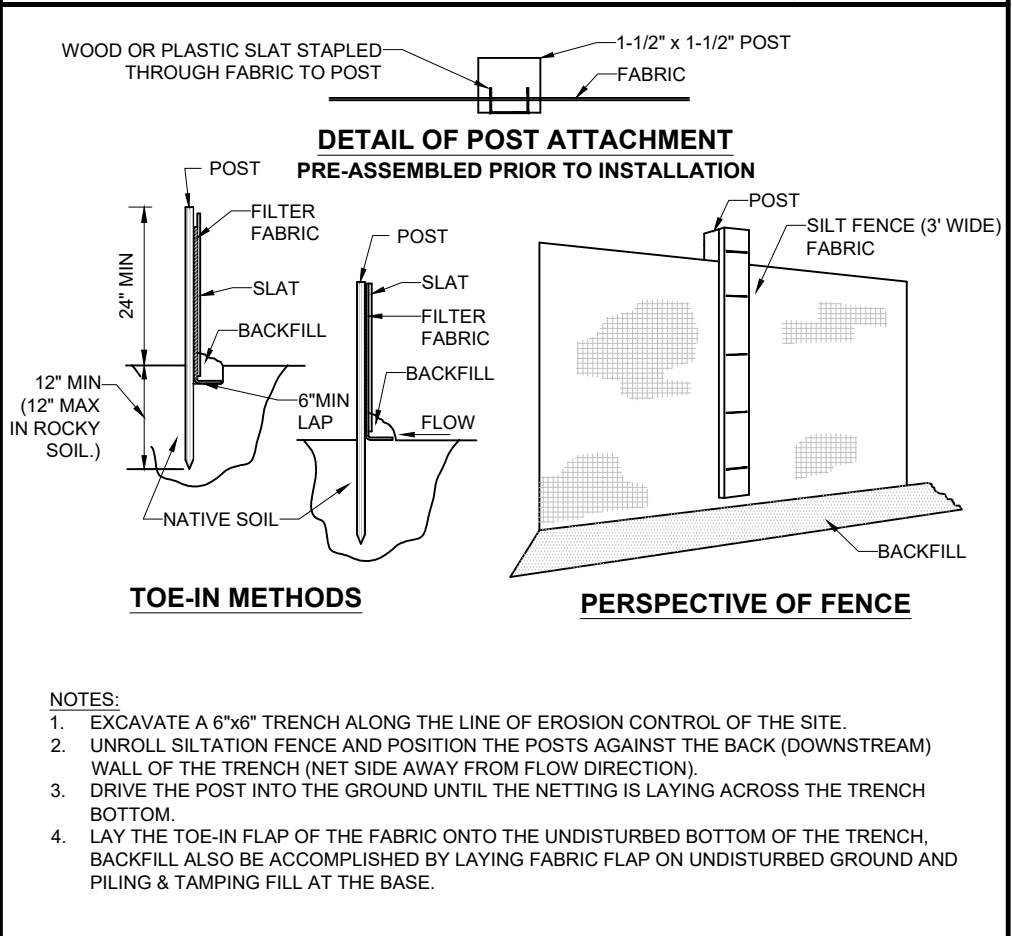
INLET PROTECTION WITH MANUFACTURED INSERT

NOT TO SCALE



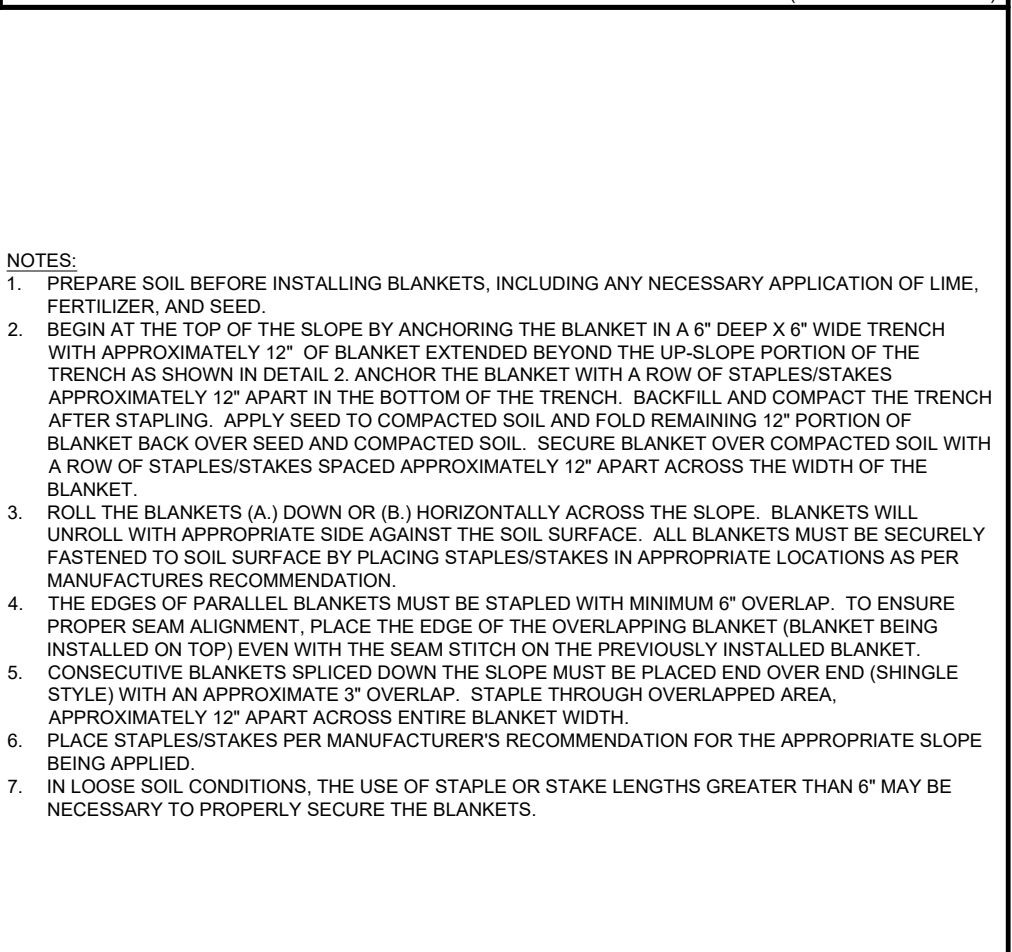
CONCRETE WASTE MANAGEMENT AREA

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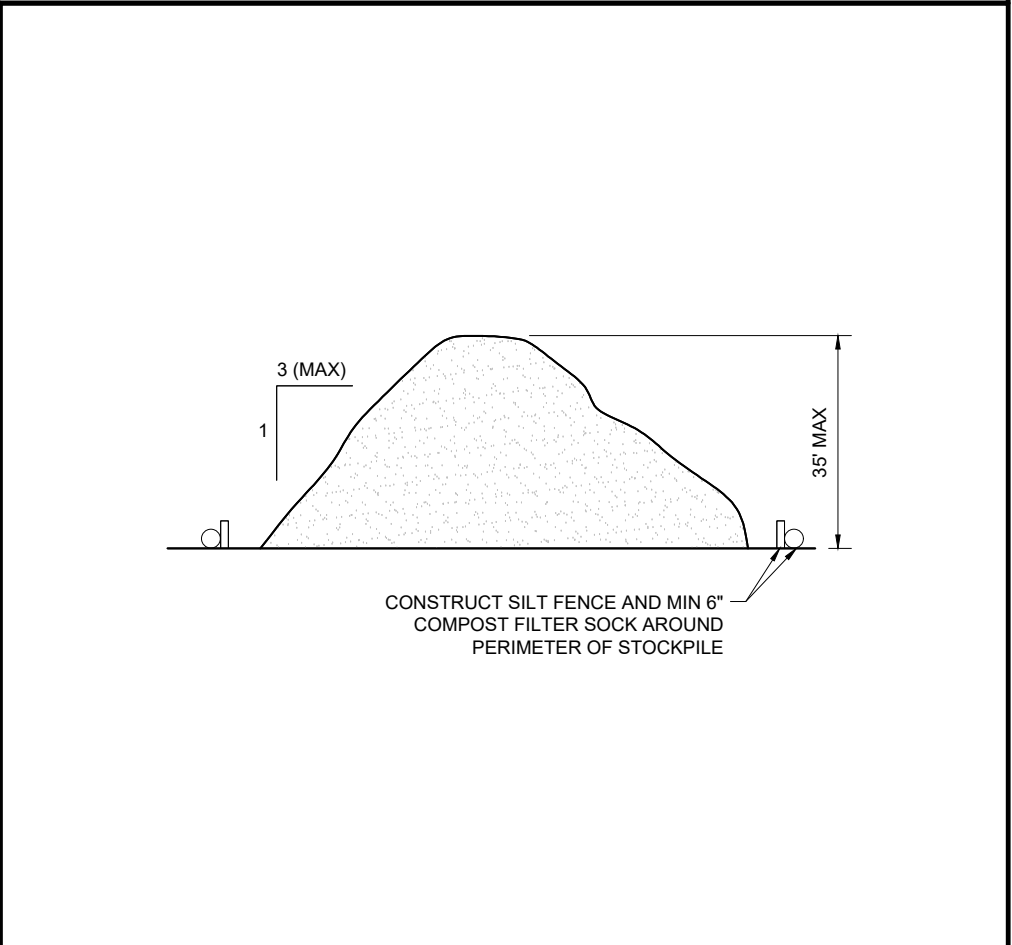
SILT FENCE

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EROSION CONTROL BLANKET STEEP SLOPE PROTECTION

NOT TO SCALE



TEMPORARY STOCK PILE WITH SILT FENCE AND FILTER SOCK

NOT TO SCALE (NE-0060102 - 09/2023)

BOHLER logo and contact information. The logo features the name 'BOHLER' in large, bold letters. To the right of the logo, the text reads: 'SIT CIVIL AND CONSULTING ENGINEERING', 'PROGRAM MANAGEMENT', 'LANDSCAPE ARCHITECTURE', 'SUSTAINABLE DESIGN', 'PERMITTING SERVICES', and 'TRANSPORTATION SERVICES'. Below the logo, the text reads: '50 WASHINGTON ST., SUITE 2000', 'WESTBOROUGH, MA 01581', 'Phone: (508) 480-9900', and 'www.BohlerEngineering.com'.

REVISIONS				
REV	DATE	COMMENT	BY	CHK
1	10/30/2025	PER PEER REVIEW A PLANNING BOARD COMMENTS	OEH	
2	08/04/2025	PER PEER & CITY REVIEW COMMENTS	OEH	
3	09/02/2025	PER PLANNING & CON COM REVIEW	MKB	
4	09/29/2025	PER PLANNING & CON COM REVIEW	JAK	
5	10/09/2025	PER OFF-SITE WETLAND AREA	MKB	
6	10/13/2025	PER PEER REVIEW COMMENTS	JAK	
7	10/30/2025	PER PLANNING COMMENTS	EKR	

811 logo and text. The logo features the number '811' in large, bold letters. To the right of the logo, the text reads: 'Know what's below. Call before you dig. ALWAYS CALL 811. It's fast. It's free. It's the law.'

PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	MAA240279-00-0D
DRAWN BY:	OEH
CHECKED BY:	MKB
DATE:	09/10/2025
CAD ID:	P-CIVIL-CNDS

PROJECT:

SITE DEVELOPMENT PLANS FOR WP EAST ACQUISITIONS LLC. The text reads: 'PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT', 'MAP: 386 | BLK: 4 | LOT: 1C', '86 ORCHARD HILL PARK DRIVE', 'WORCESTER COUNTY', 'LEOMINSTER, MASSACHUSETTS'.

BOHLER logo and contact information. The logo features the name 'BOHLER' in large, bold letters. To the right of the logo, the text reads: 'SIT CIVIL AND CONSULTING ENGINEERING', 'PROGRAM MANAGEMENT', 'LANDSCAPE ARCHITECTURE', 'SUSTAINABLE DESIGN', 'PERMITTING SERVICES', and 'TRANSPORTATION SERVICES'. Below the logo, the text reads: '50 WASHINGTON ST., SUITE 2000', 'WESTBOROUGH, MA 01581', 'Phone: (508) 480-9900', and 'www.BohlerEngineering.com'.

J.A. KUCICH logo and text. The logo features the name 'J.A. KUCICH' in large, bold letters. To the right of the logo, the text reads: 'PROFESSIONAL ENGINEER', 'MASSACHUSETTS LICENSE No. 15130', 'NEW YORK LICENSE No. 15476', 'CONTRACT LICENSE No. 15476', 'RHODE ISLAND LICENSE No. 9616', and 'MAINE LICENSE No. 12553'.

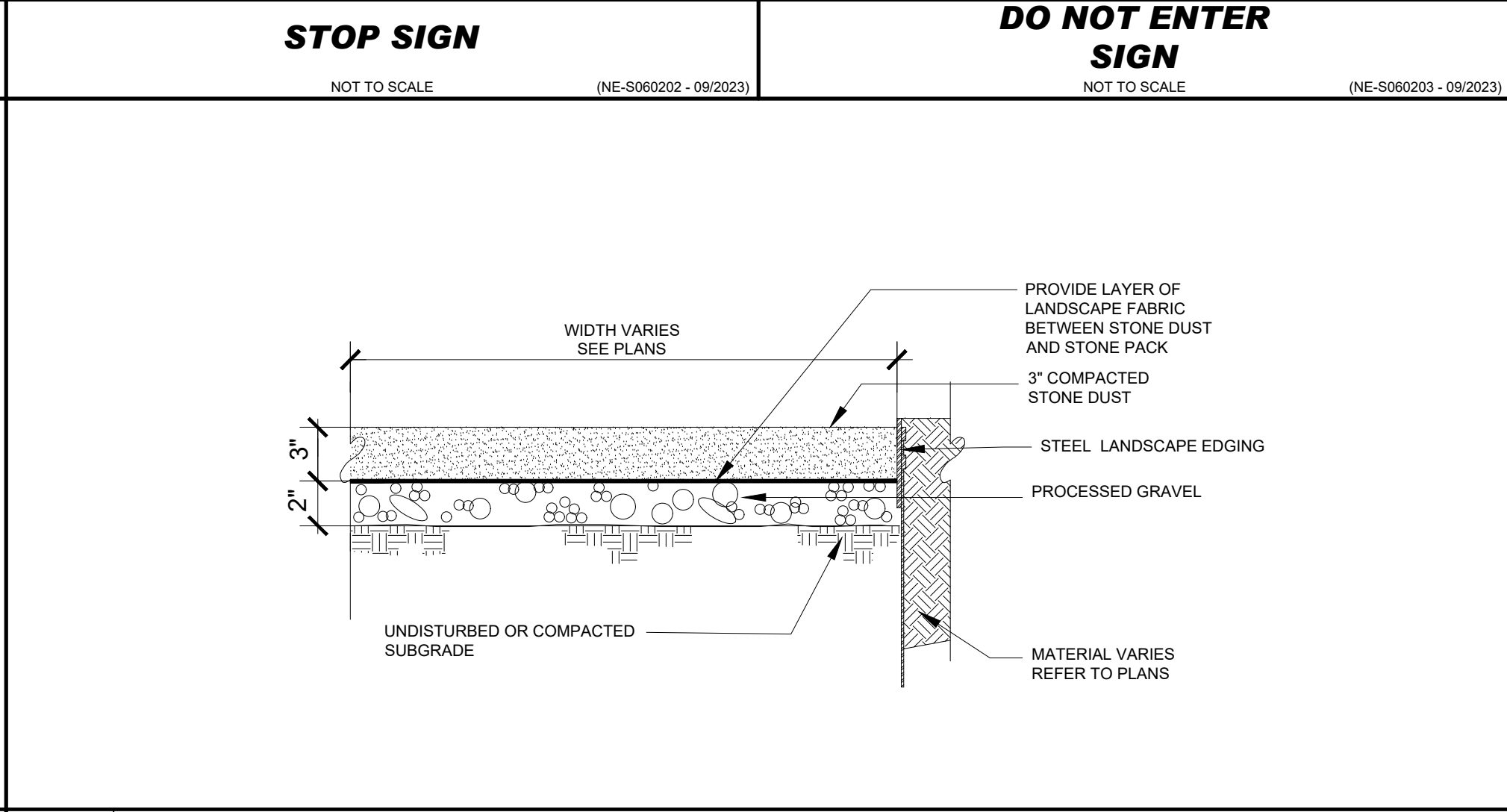
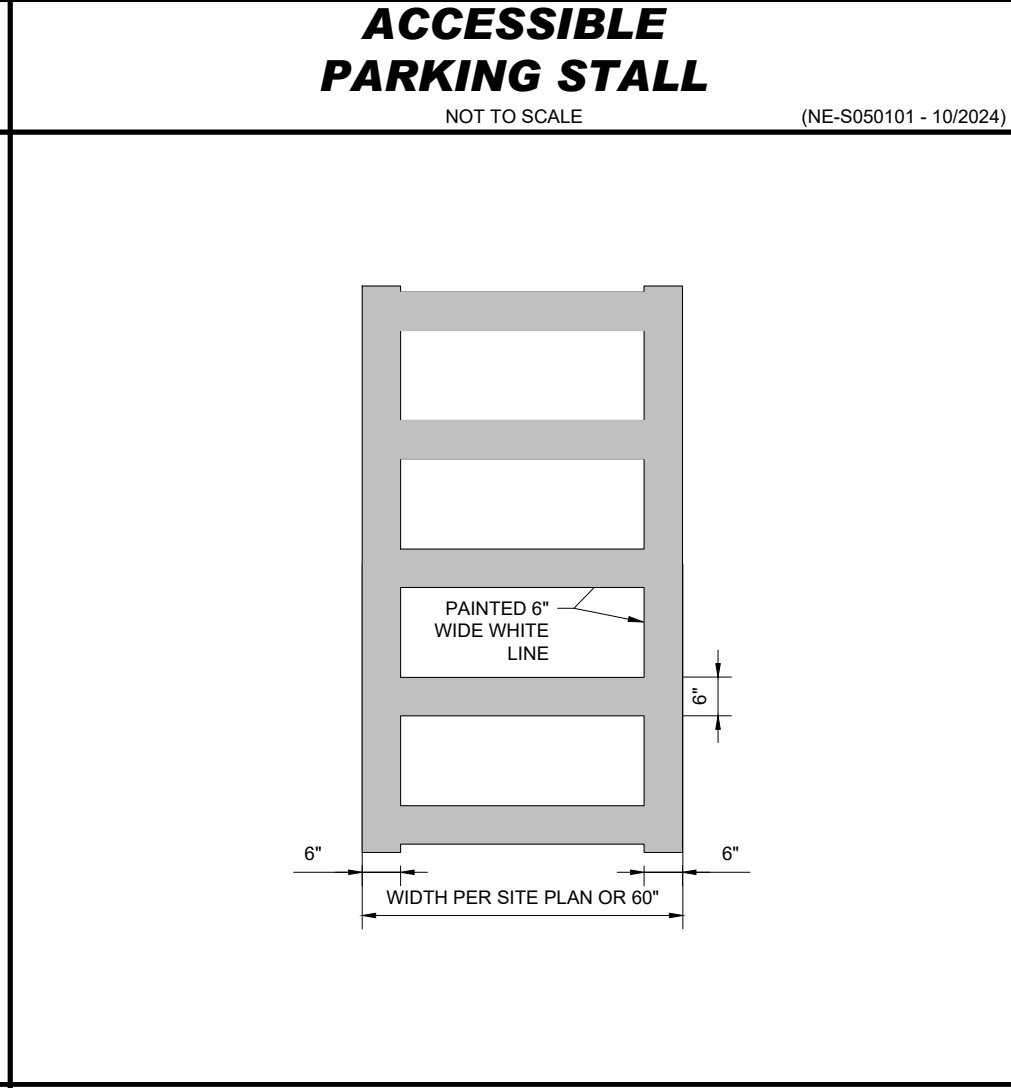
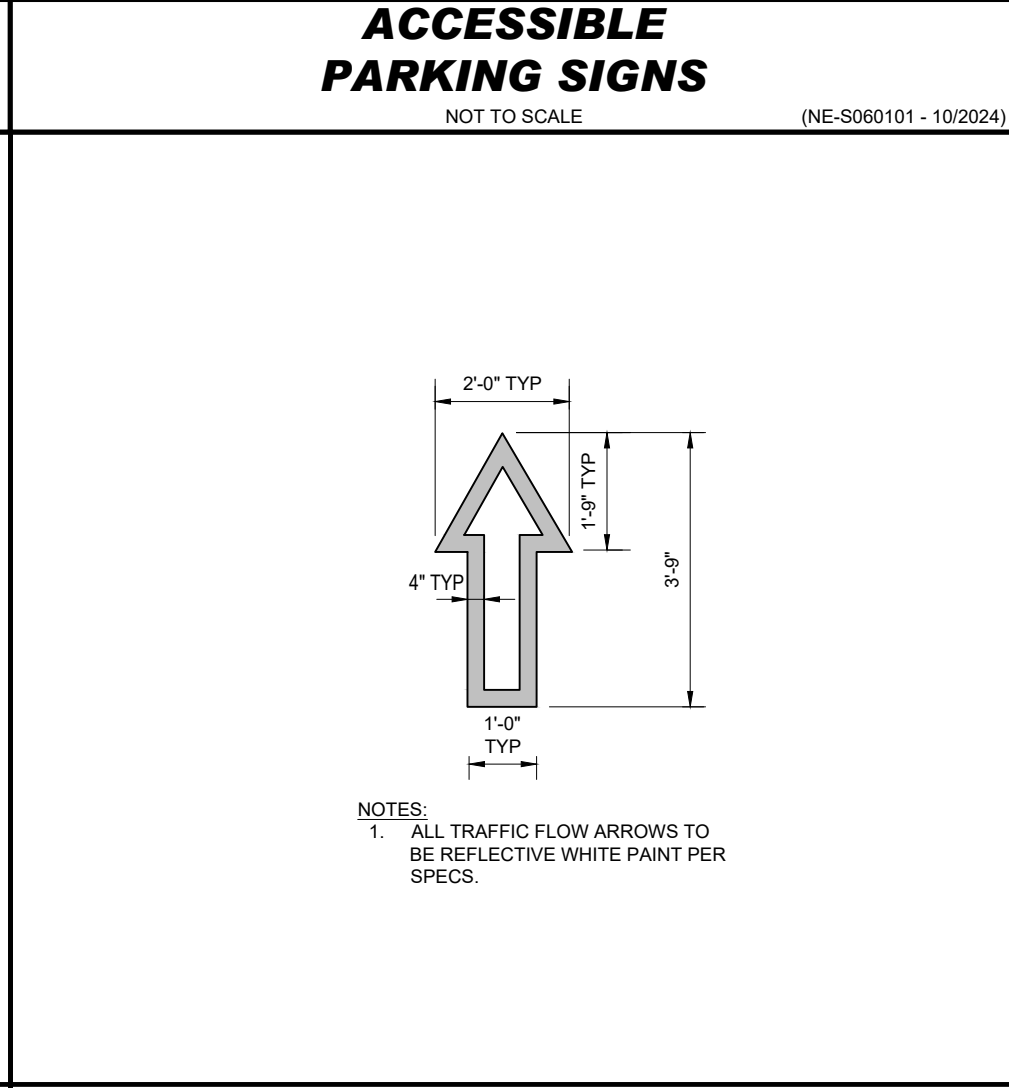
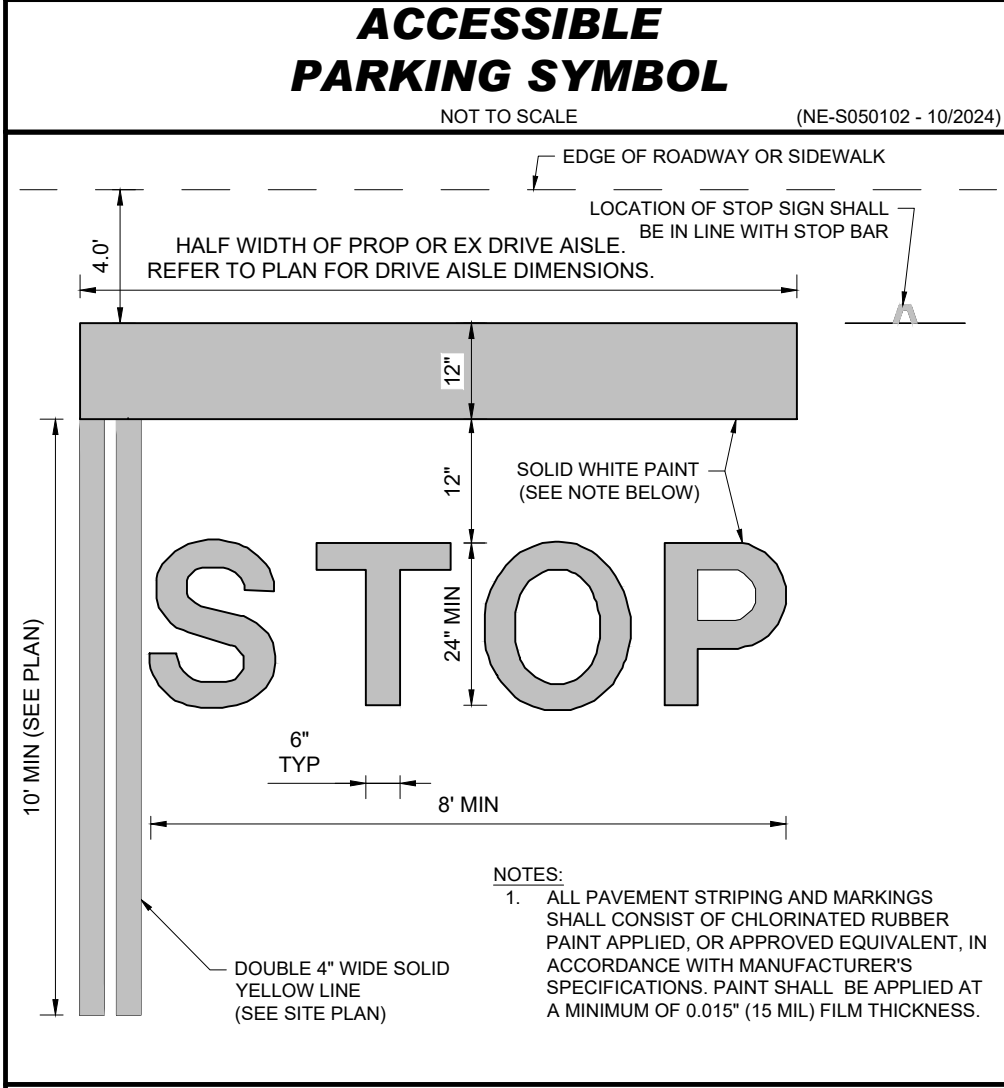
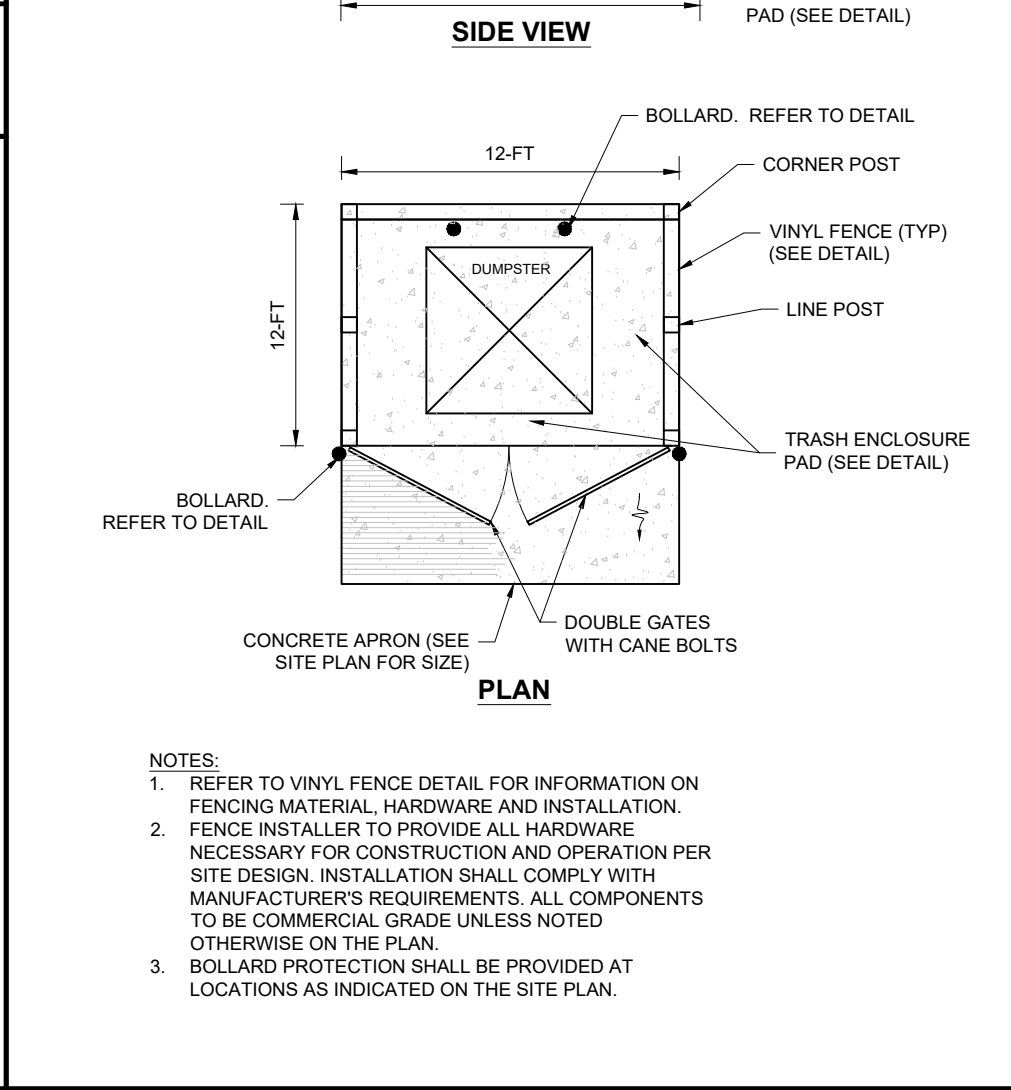
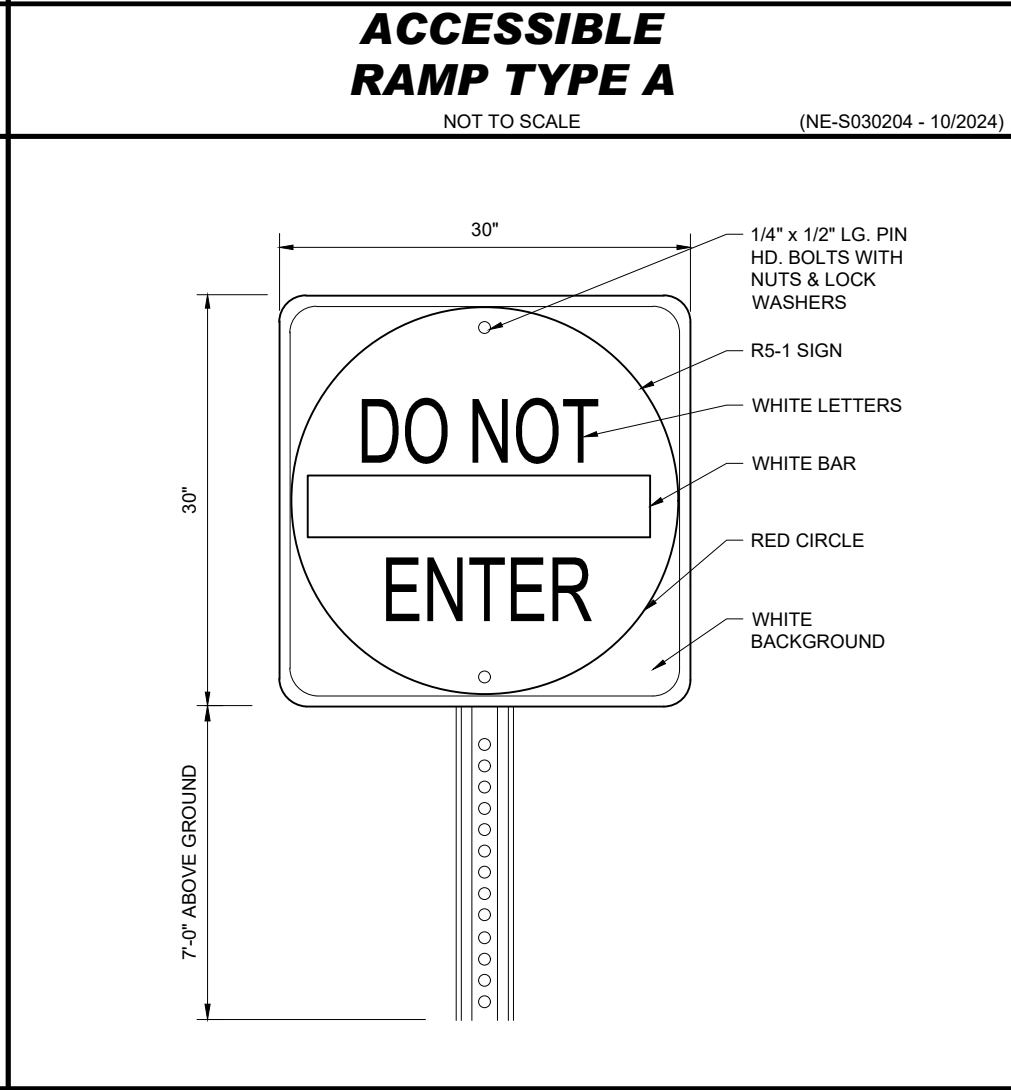
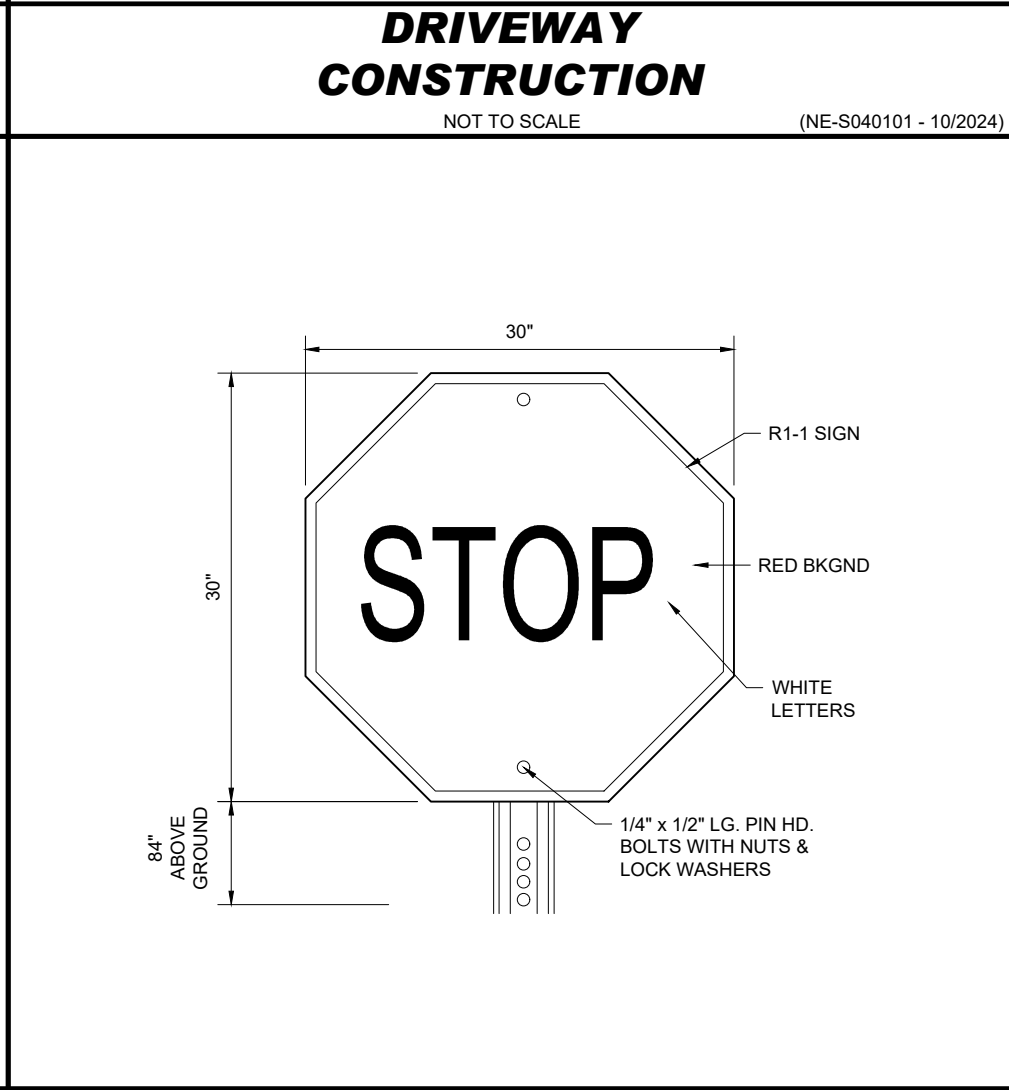
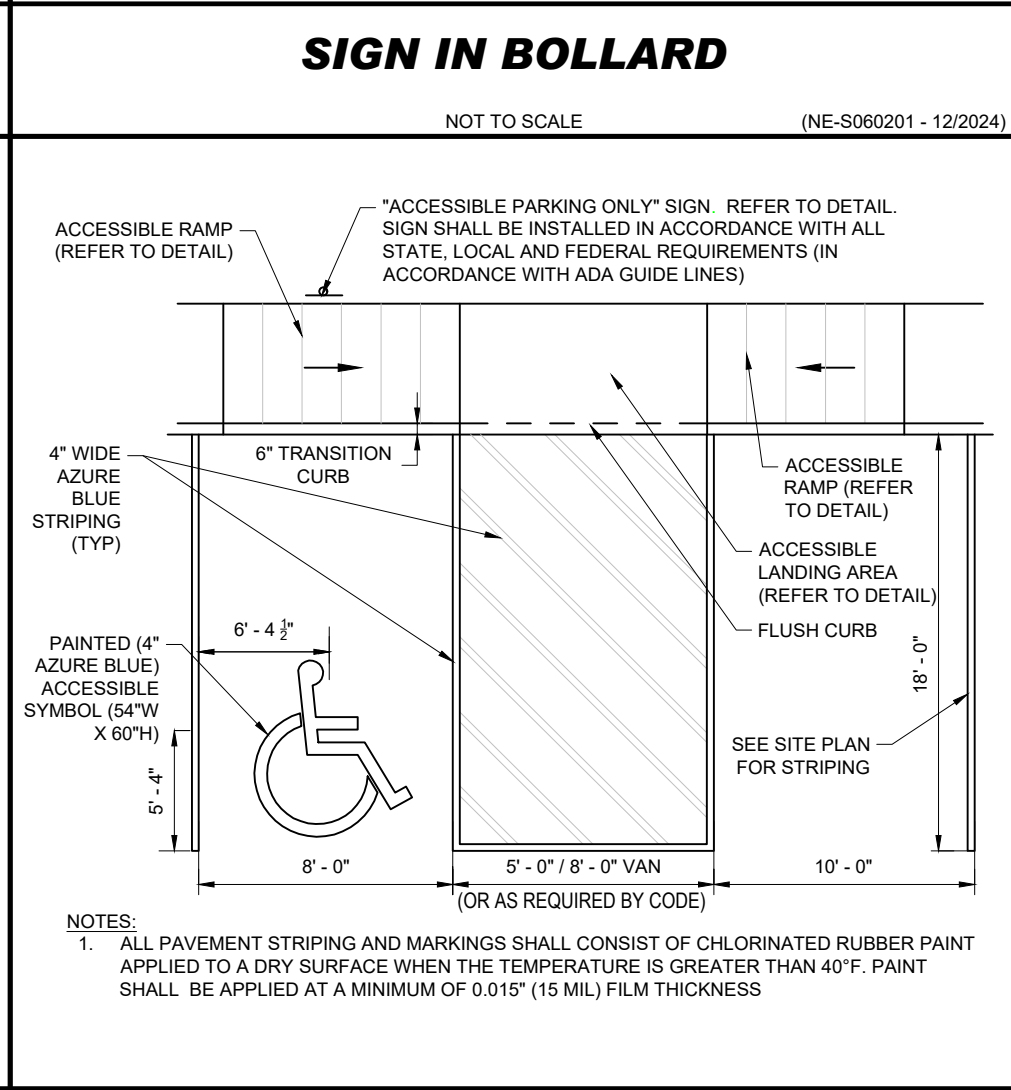
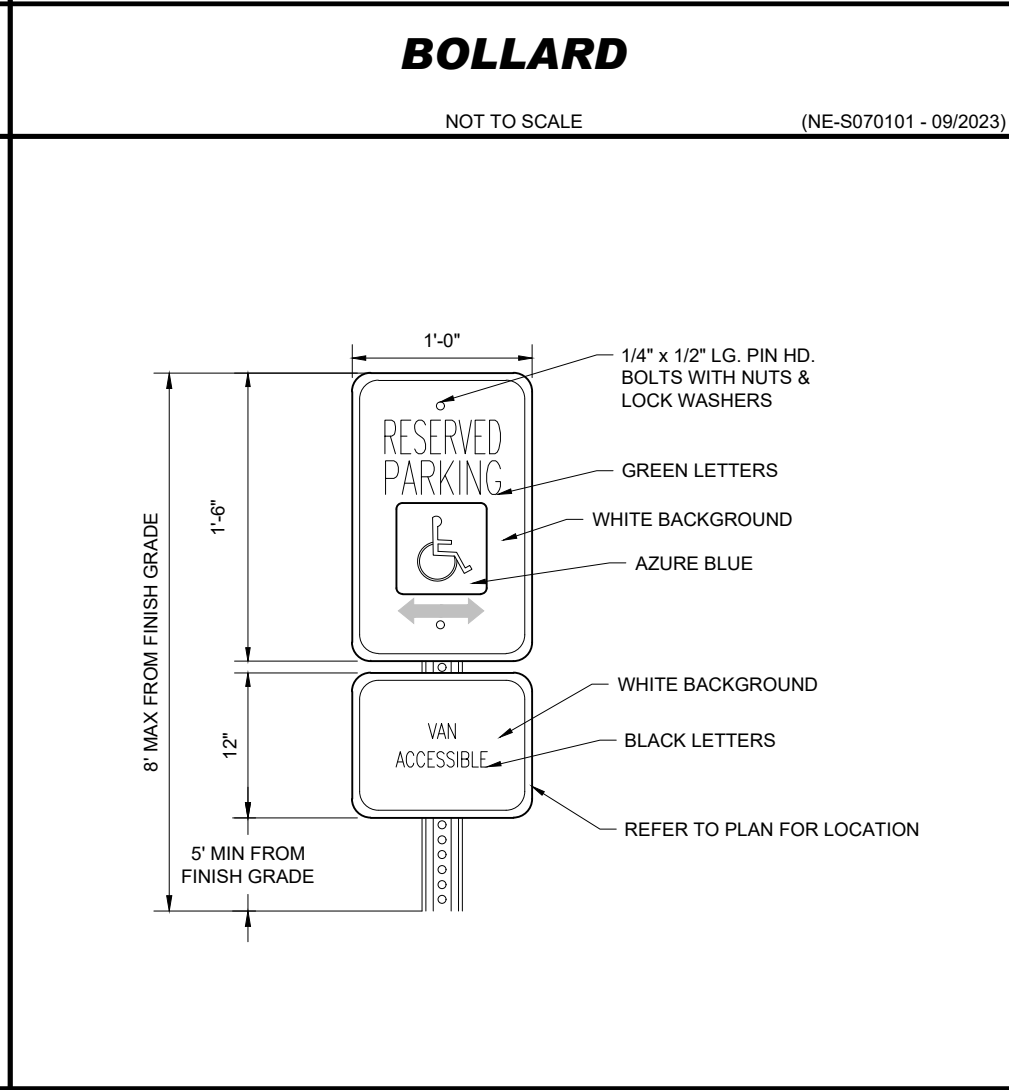
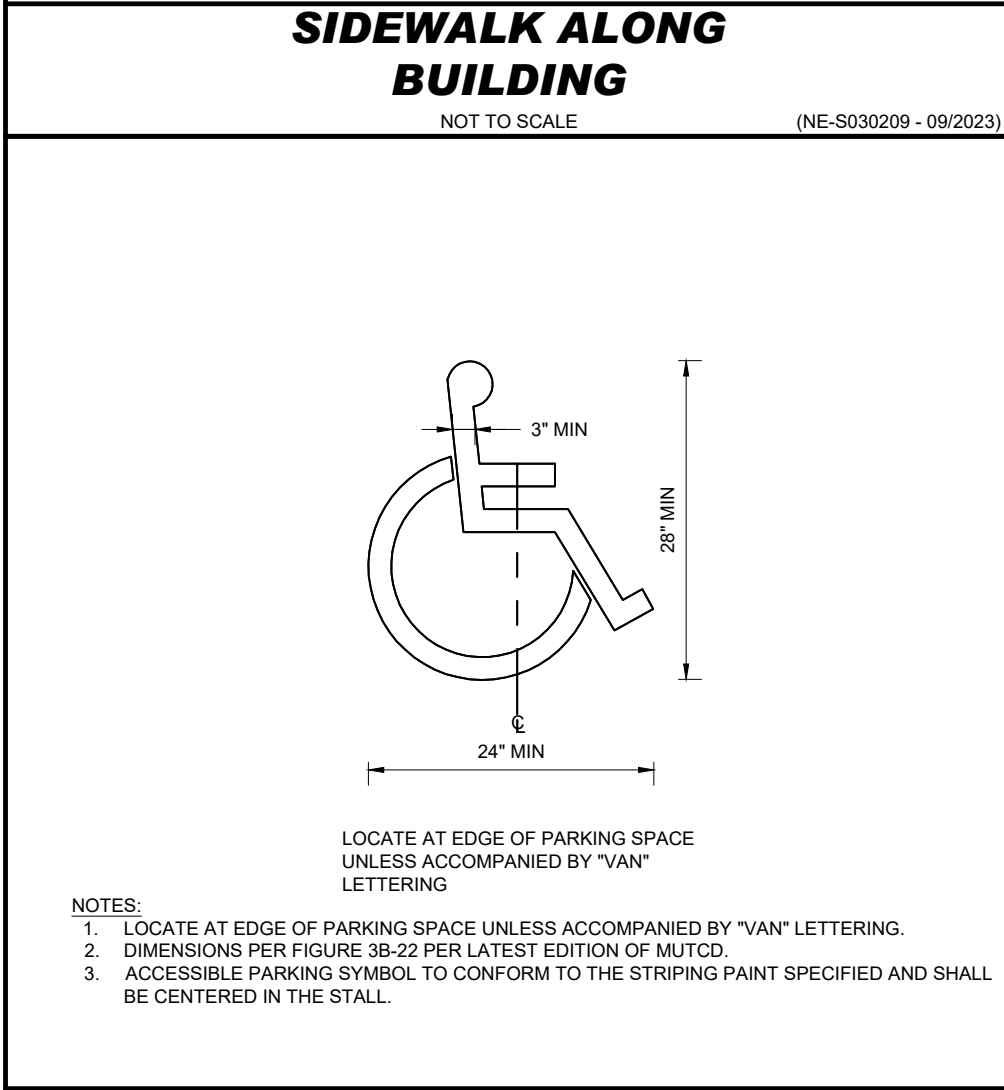
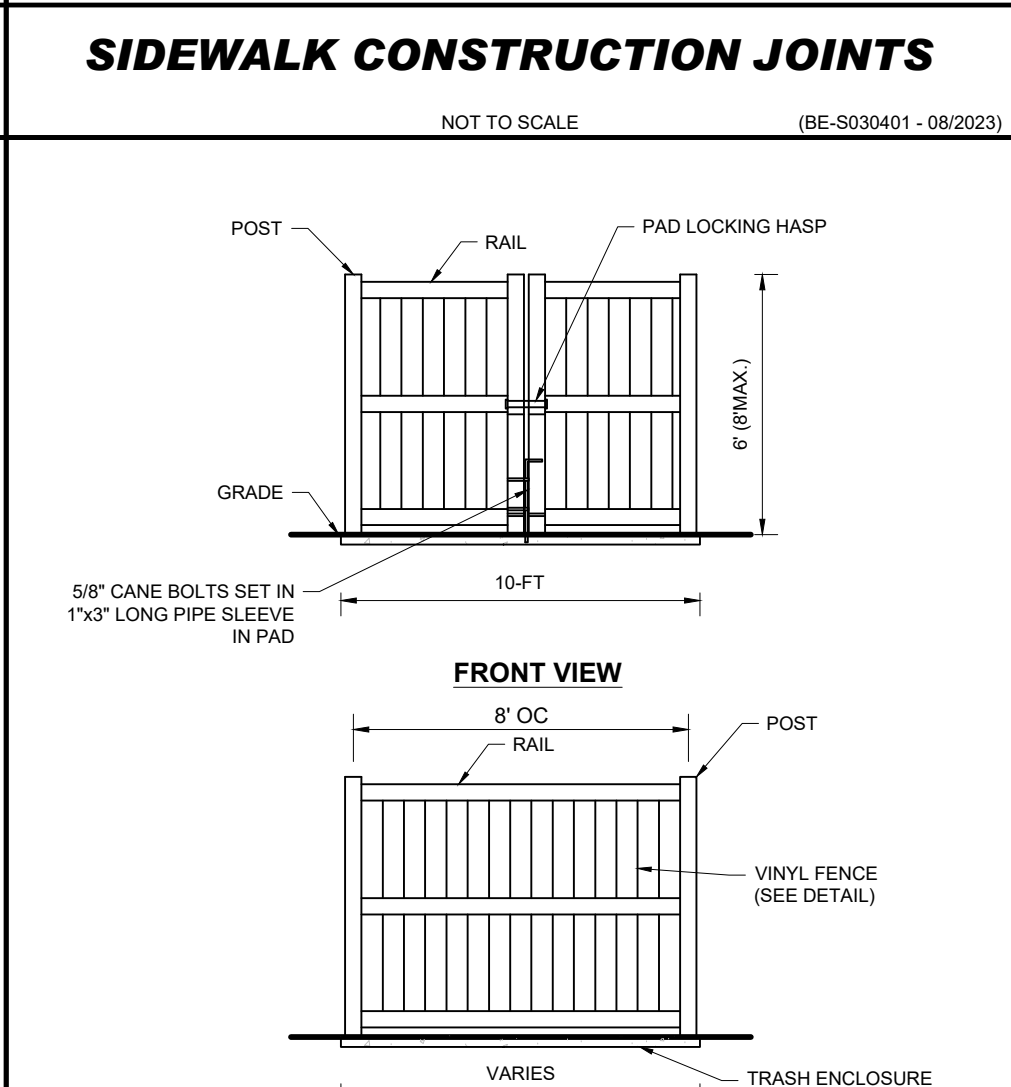
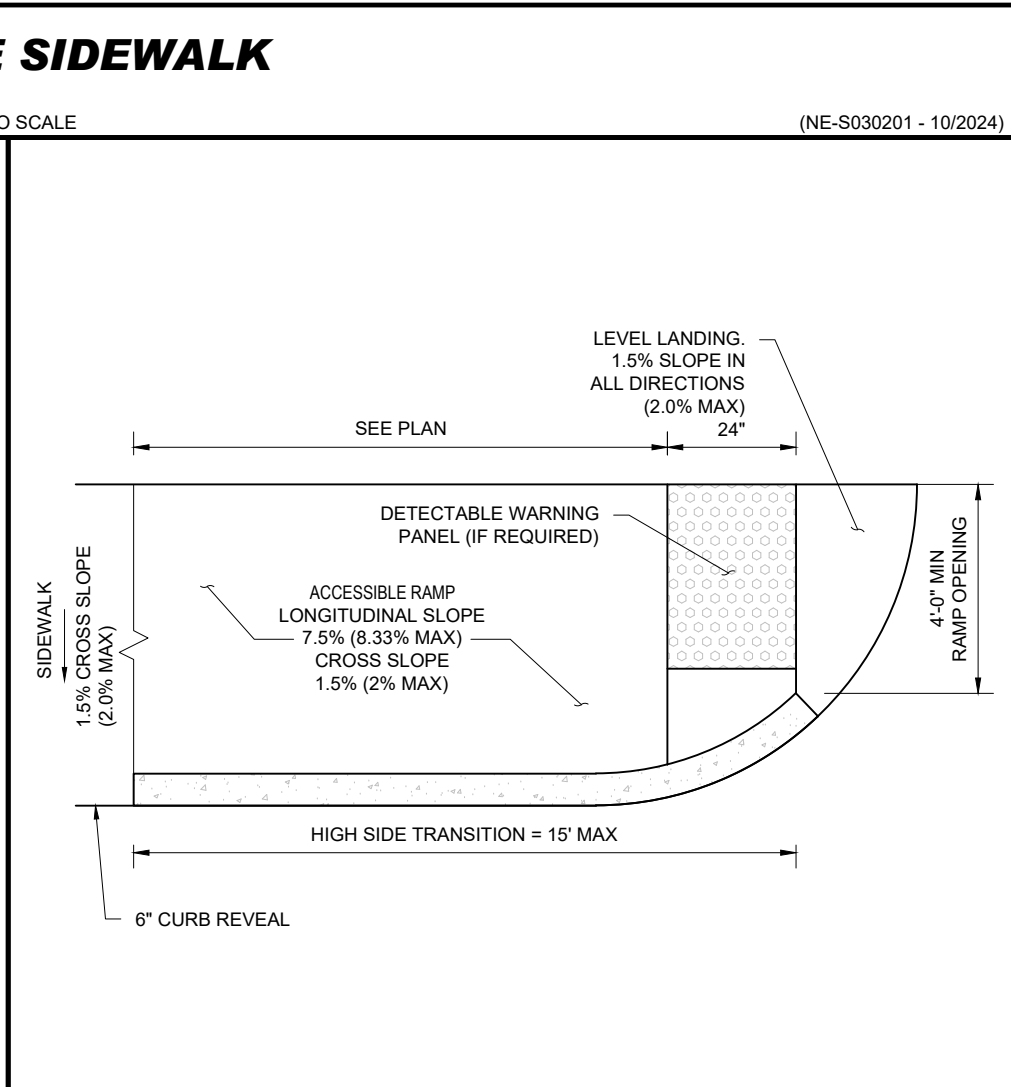
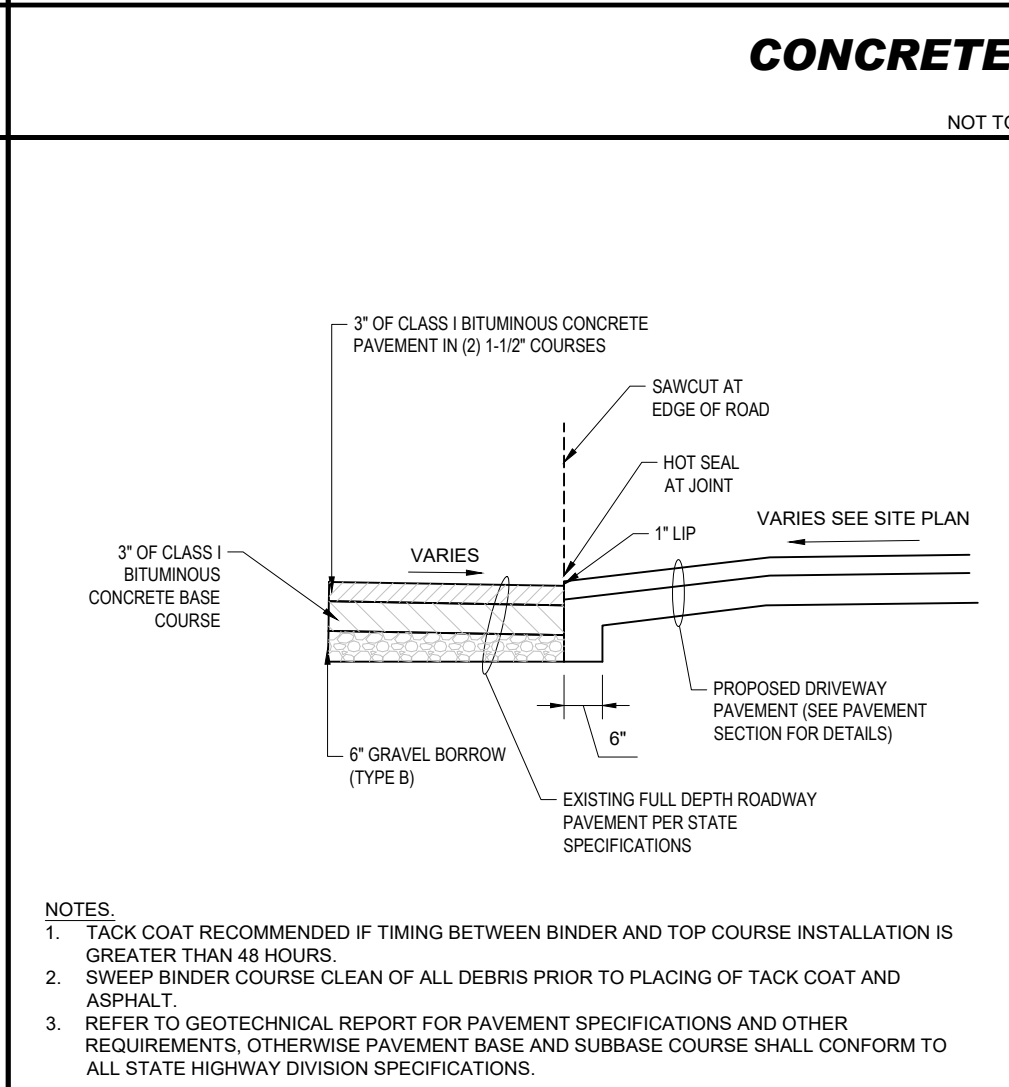
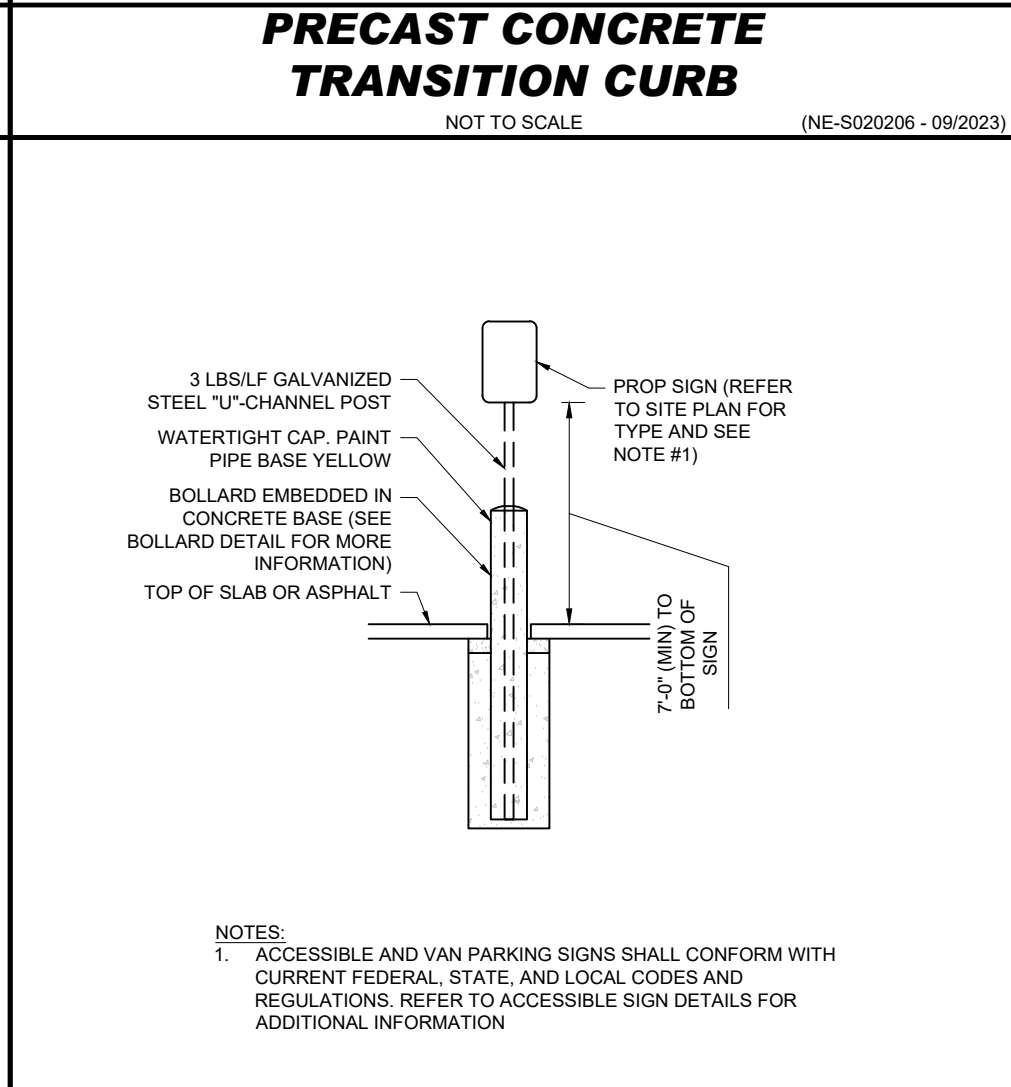
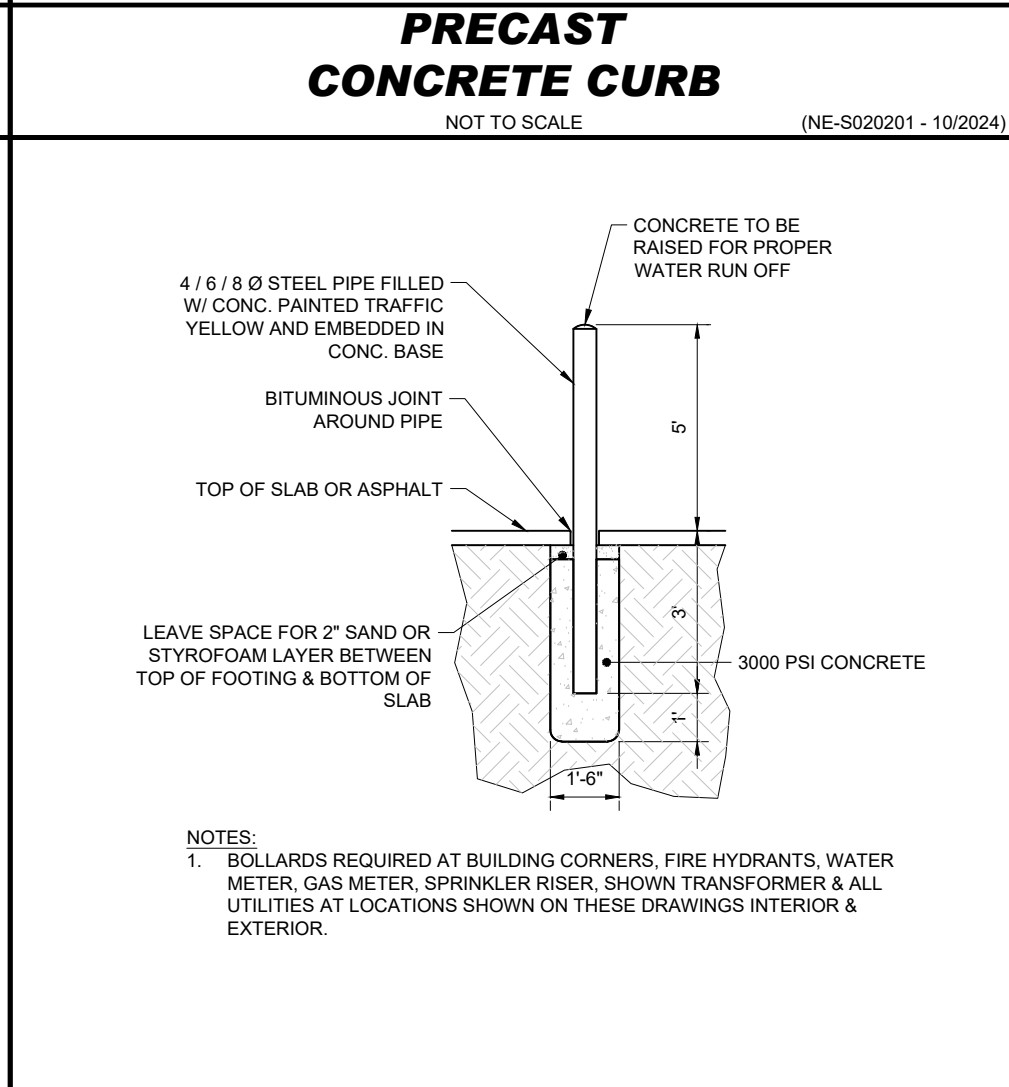
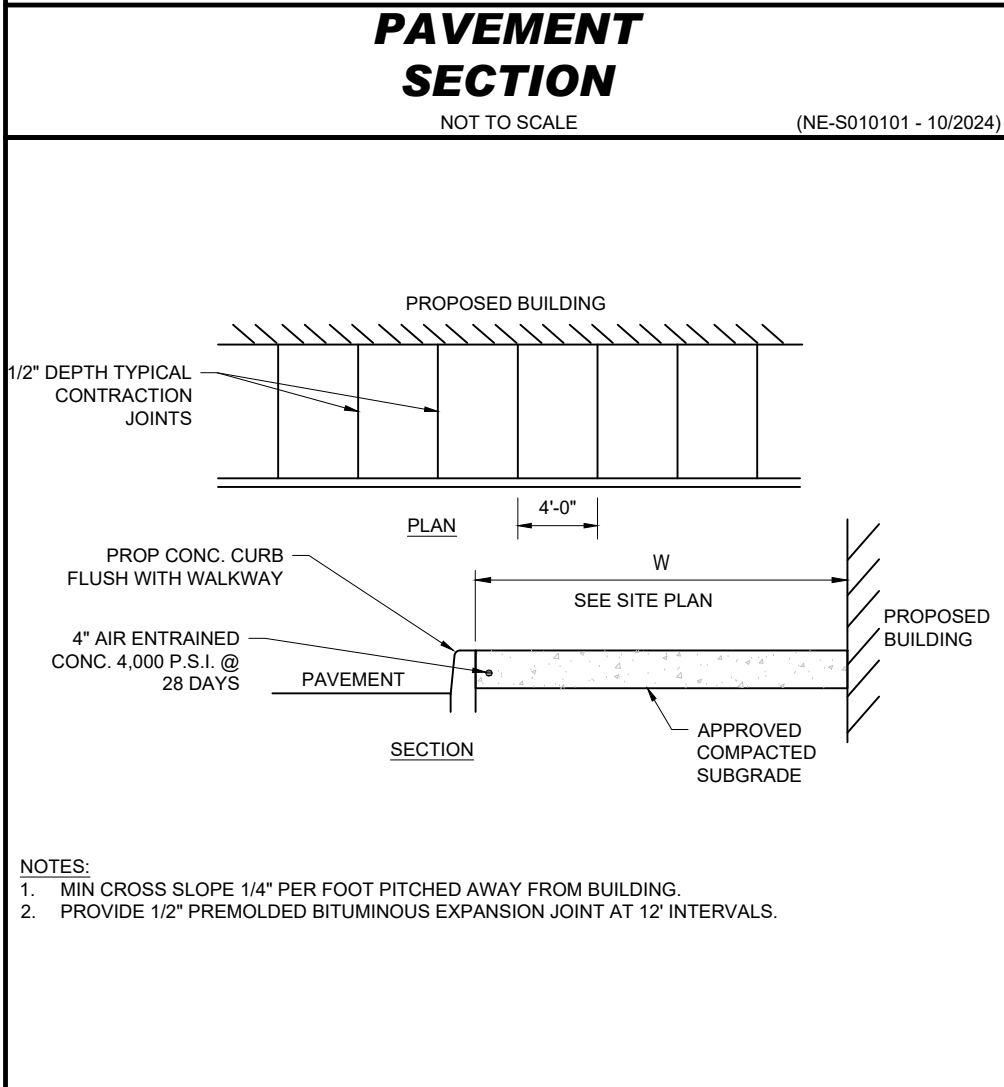
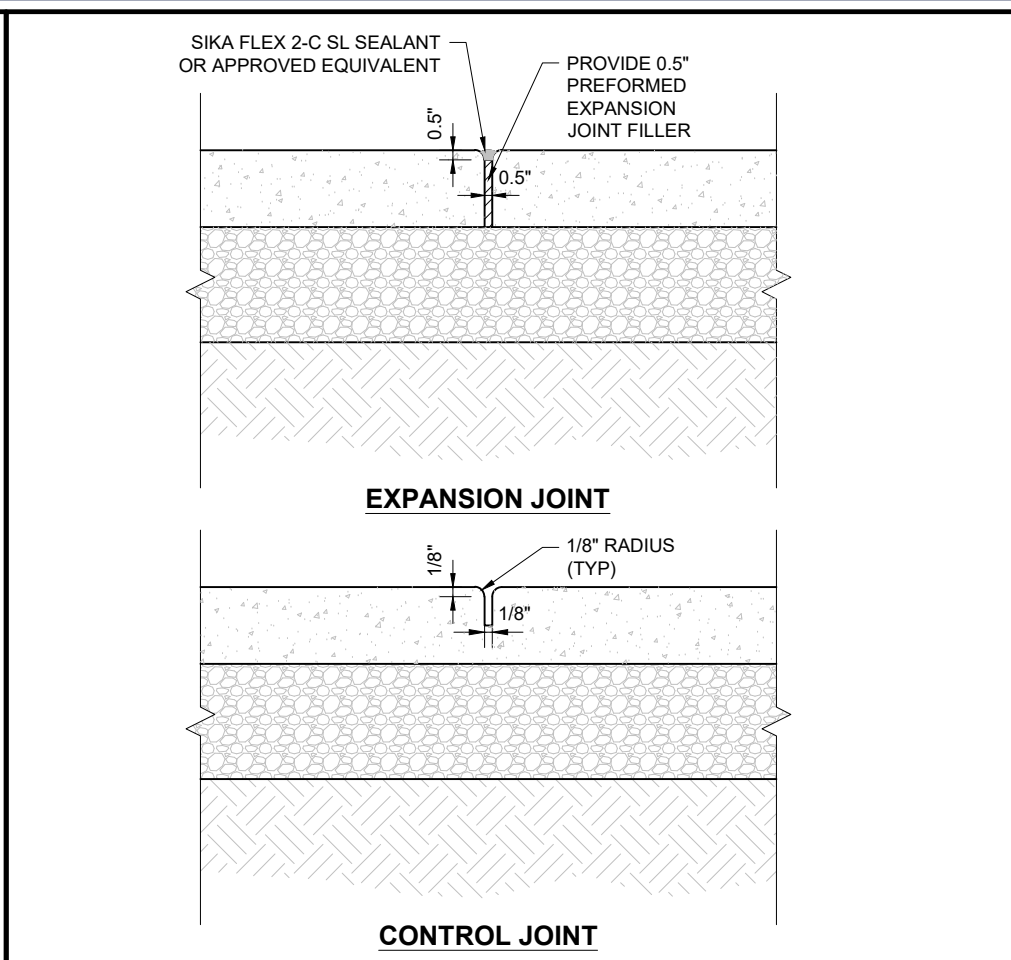
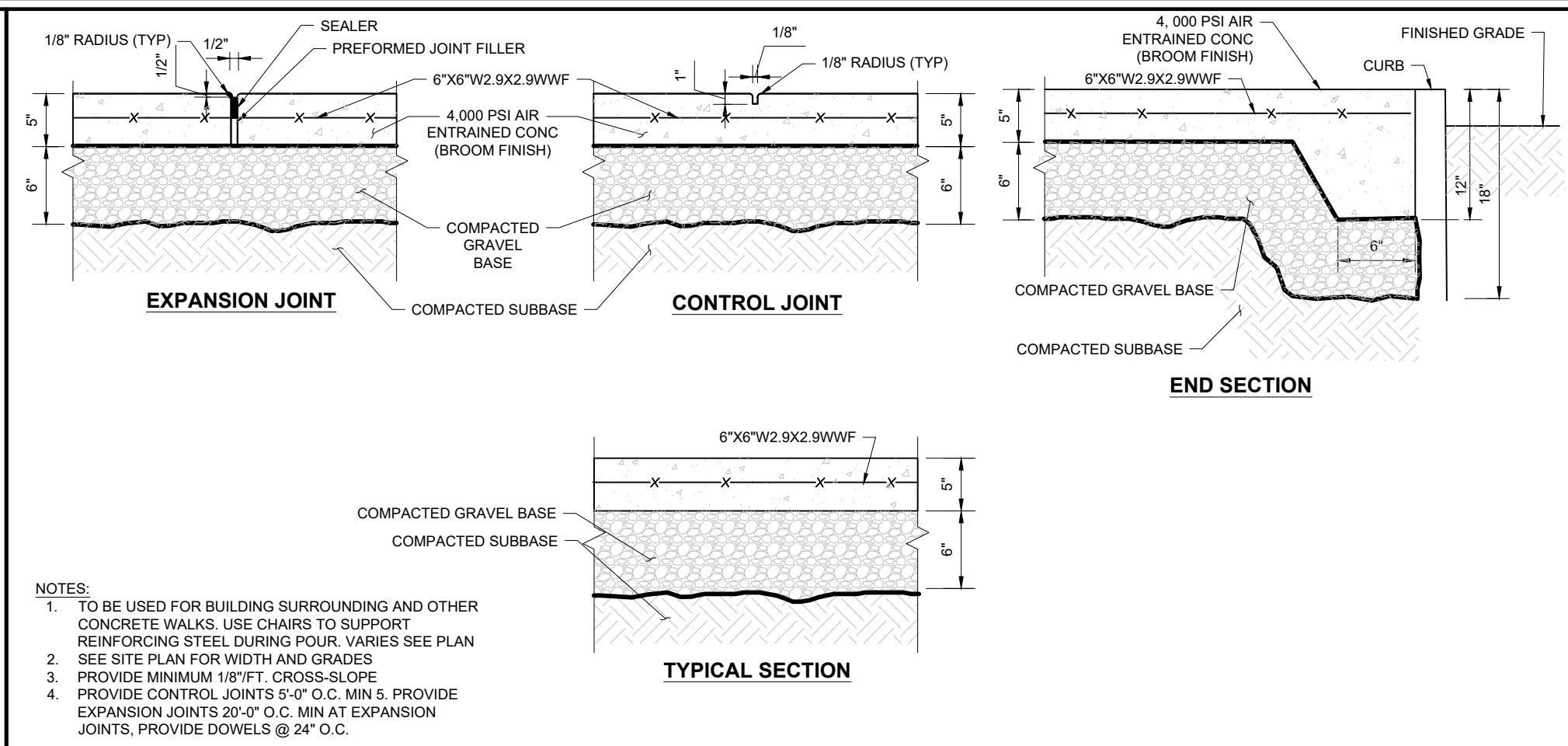
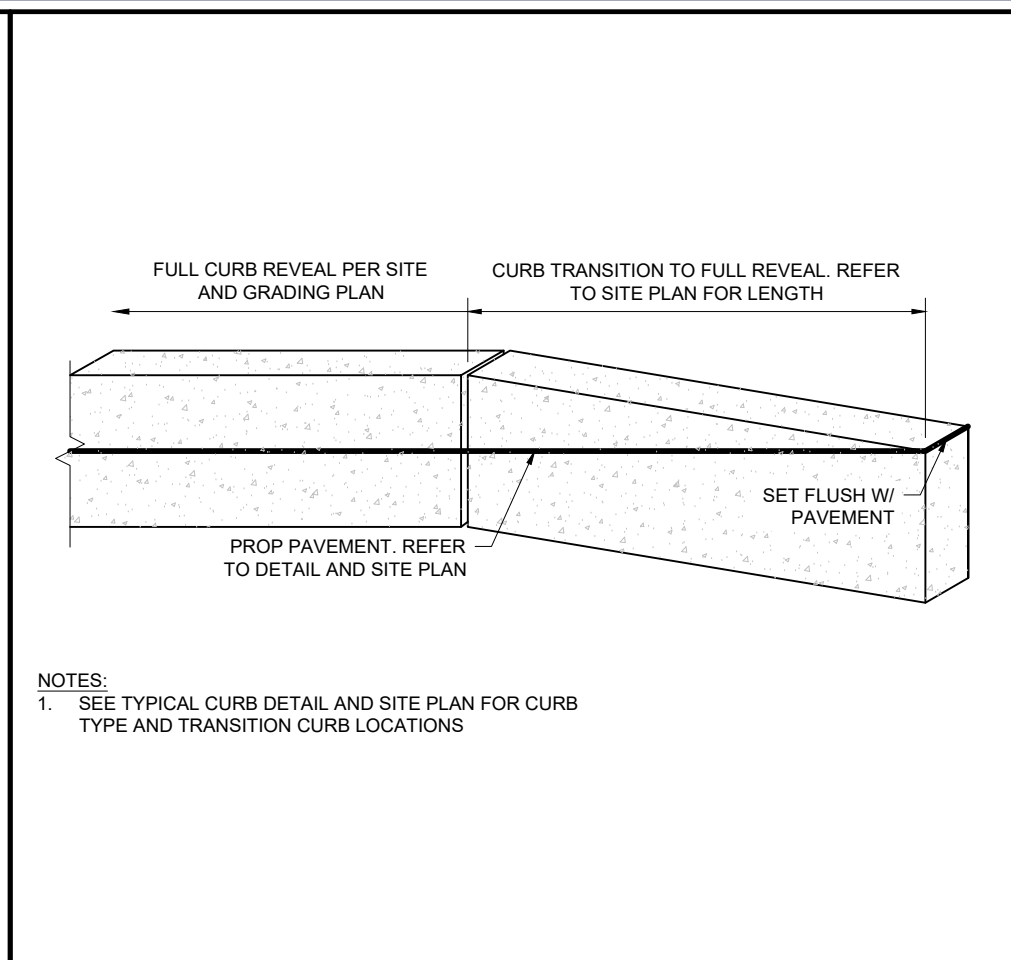
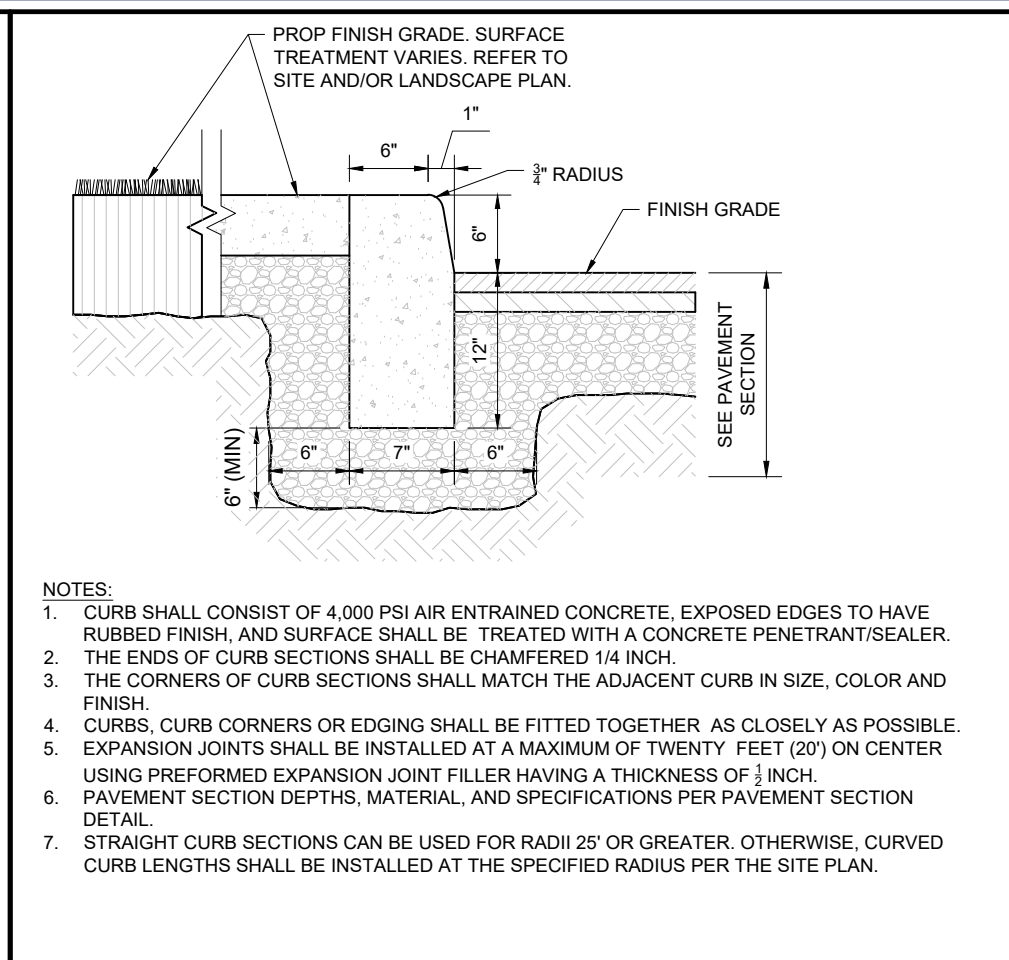
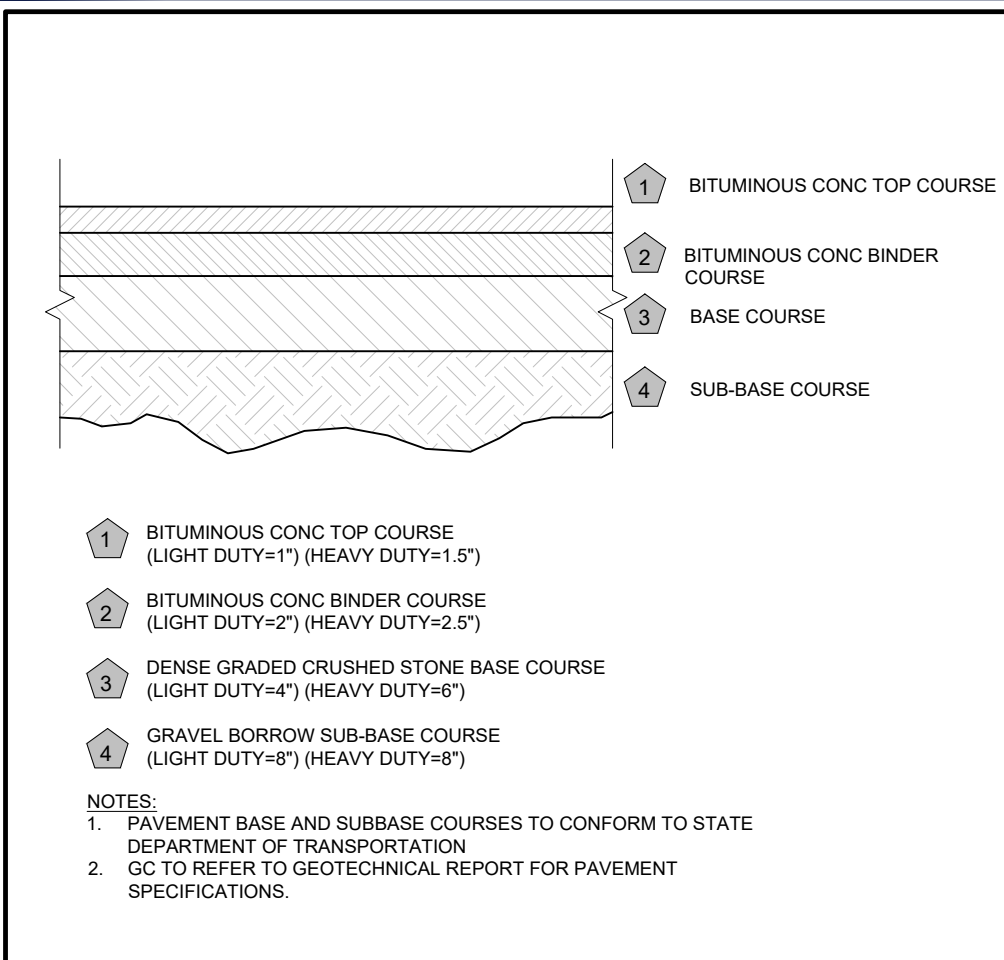
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:

C-805

REVISION 7 - 10/30/2025

P:\2024\MAA240271\00\CAD\DRAWINGS\PLAN SET\BTR\CIVIL SITE PLANS\B-CIVIL-CND5\MAA240271-00-00-.....LAYOUT: C-901 DETL



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SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	10/30/2025	PER PEER REVIEW & CITY BOARD COMMENTS	OEH	MKB
2	08/04/2025	PER PEER & CITY REVIEW COMMENTS	OEH	MKB
3	09/02/2025	PER PLANNING & CON COM REVIEW	MKB	JAK
4	09/29/2025	PER PLANNING & CON COM REVIEW	MKB	JAK
5	10/09/2025	PER OFF-SITE WETLAND AREA	MKB	JAK
6	10/13/2025	PER PEER REVIEW COMMENTS	MKB	JAK
7	10/30/2025	PER PLANNING COMMENTS	EKR	MKB

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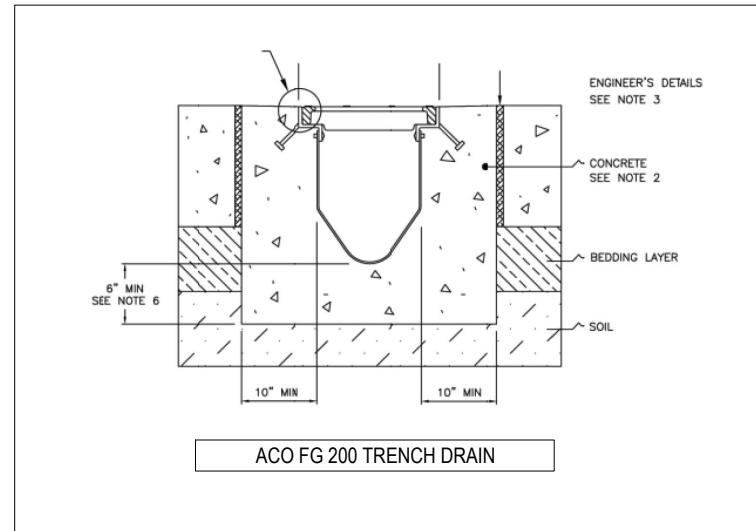
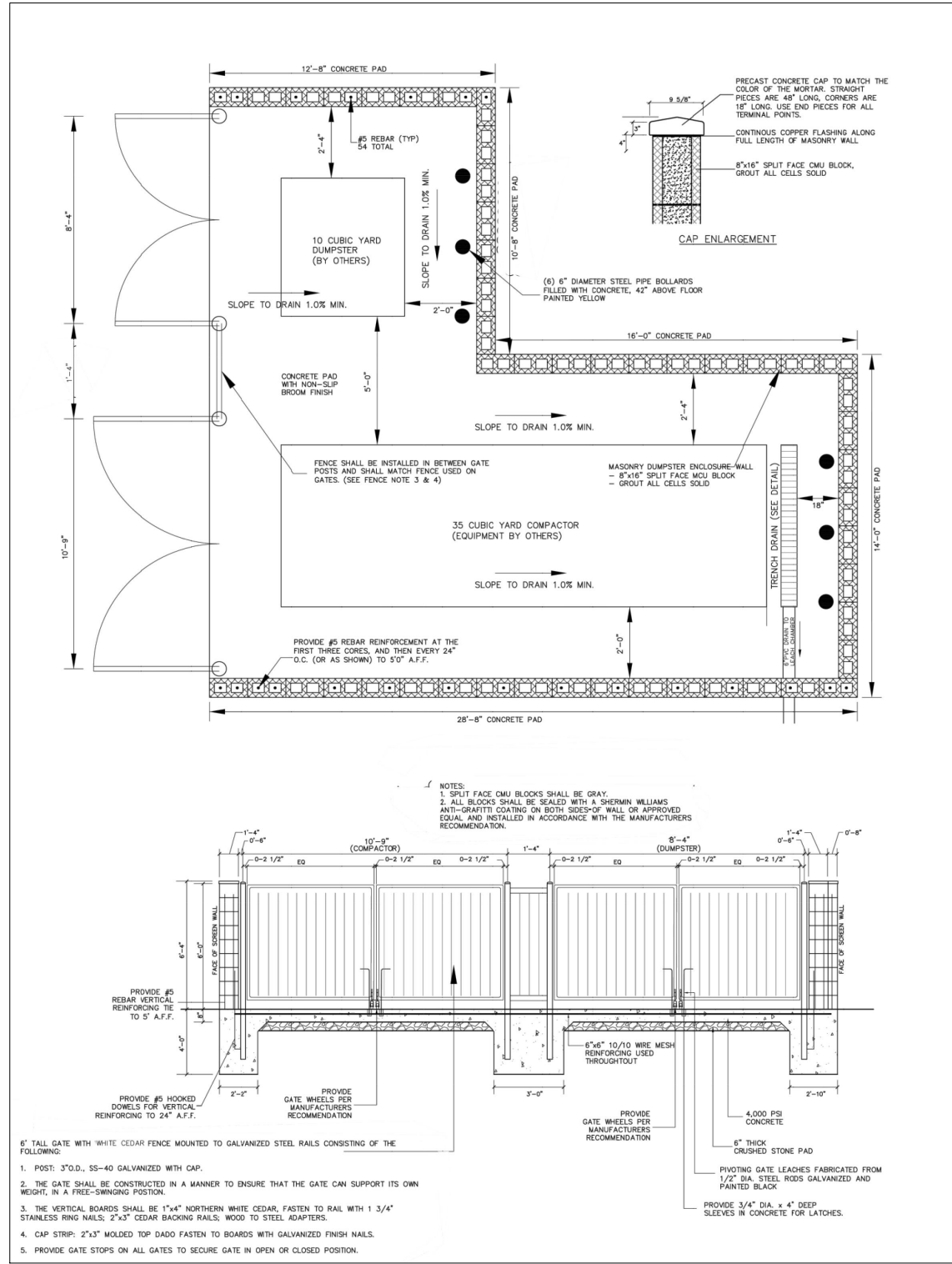
PROJECT No.: MAA240279-00-0D
DRAWN BY: OEH
CHECKED BY: MKB
DATE: 06/11/2025
CAD ID: P-CIVIL-CND5

SITE DEVELOPMENT PLANS
FOR
WP EAST ACQUISITIONS LLC
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
MAP: 386 | BLK: 4 | LOT: 1C
86 ORCHARD HILL PARK DRIVE
WORCESTER COUNTY
LEOMINSTER, MASSACHUSETTS

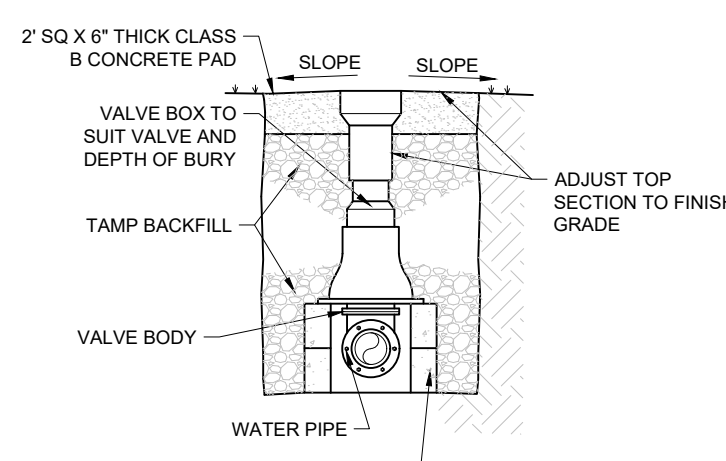
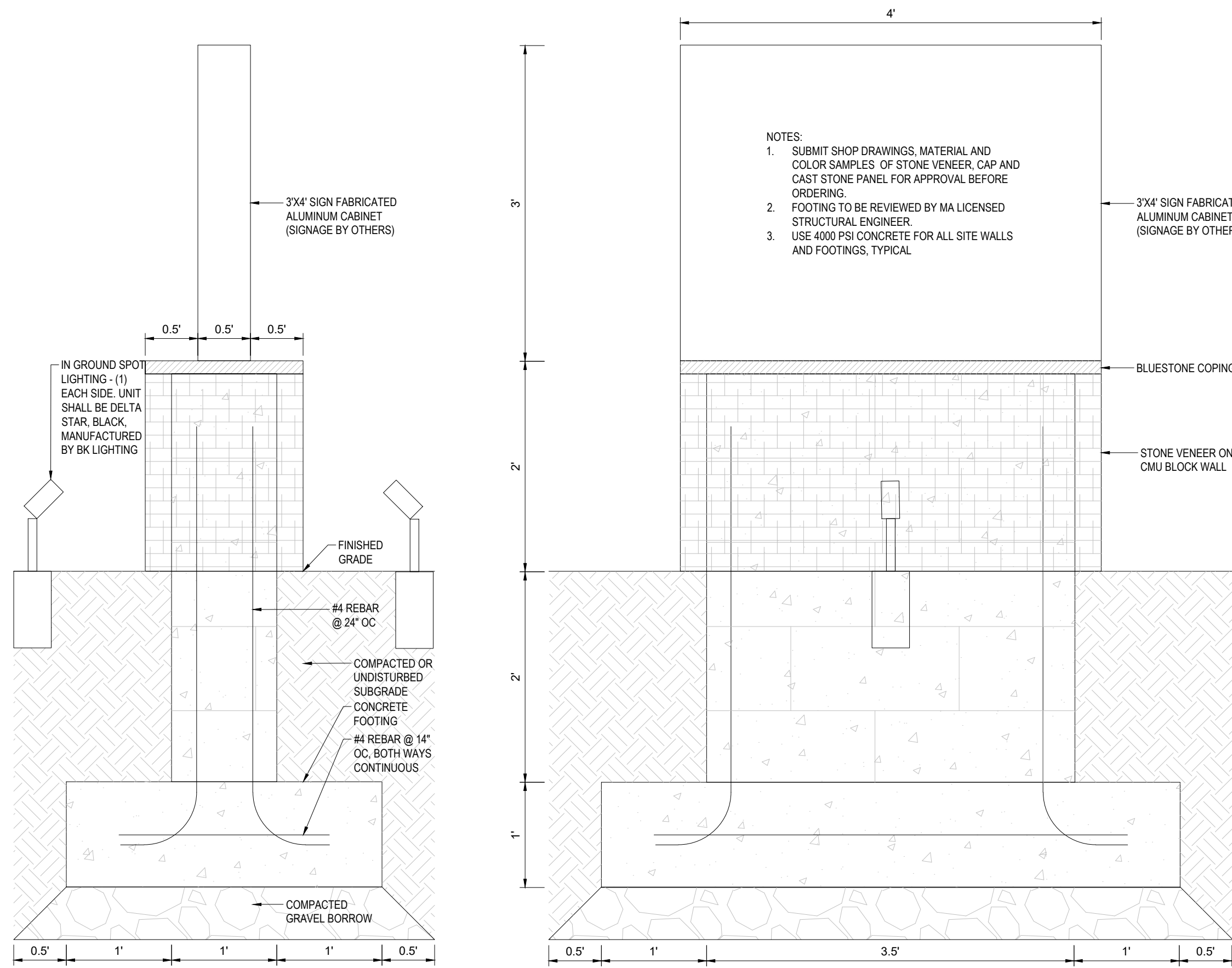
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50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
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J.A. KUCICH
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE NO. 15130
NEW HAMPSHIRE LICENSE NO. 15476
CONNECTIONS LICENSE NO. 158177
MAINE LICENSE NO. 12553

SHEET TITLE:
CONSTRUCTION DETAILS
SHEET NUMBER:
C-901
REVISION 7 - 10/30/2025

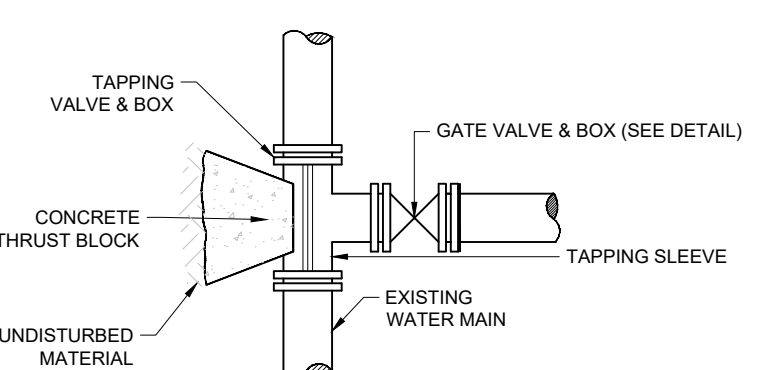


NOTES:
1. Necessary to ensure the minimum dimensions shown are suitable for the existing ground conditions. Engineering advice may be required.
2. The minimum concrete strength of 2000 PSI is recommended. The concrete should be placed in a single lift.
3. The trench drain system shall be installed in accordance with the manufacturer's instructions.
4. The trench drain system shall be installed in accordance with the manufacturer's instructions.
5. The trench drain system shall be installed in accordance with the manufacturer's instructions.



GATE VALVE

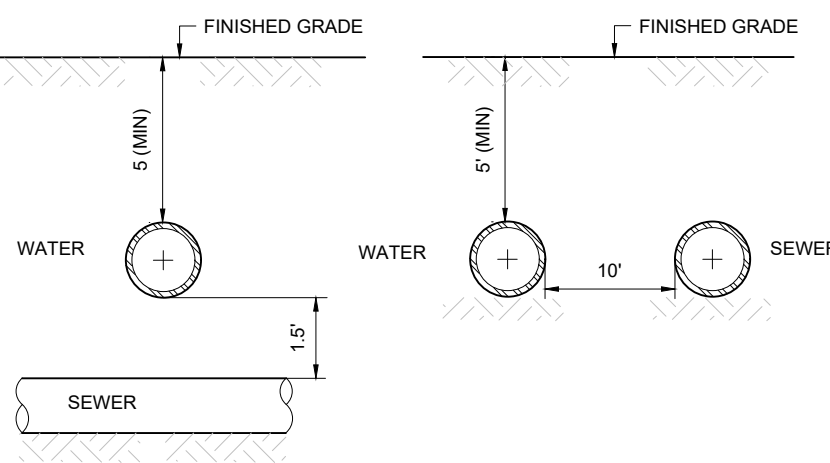
NOT TO SCALE (NE-U030201 - 09/2023)



NOTES:
1. DETAIL FOR GENERAL PURPOSES. GC TO COORDINATE CONNECTION WITH UTILITY COMPANY.

TRASH ENCLOSURE

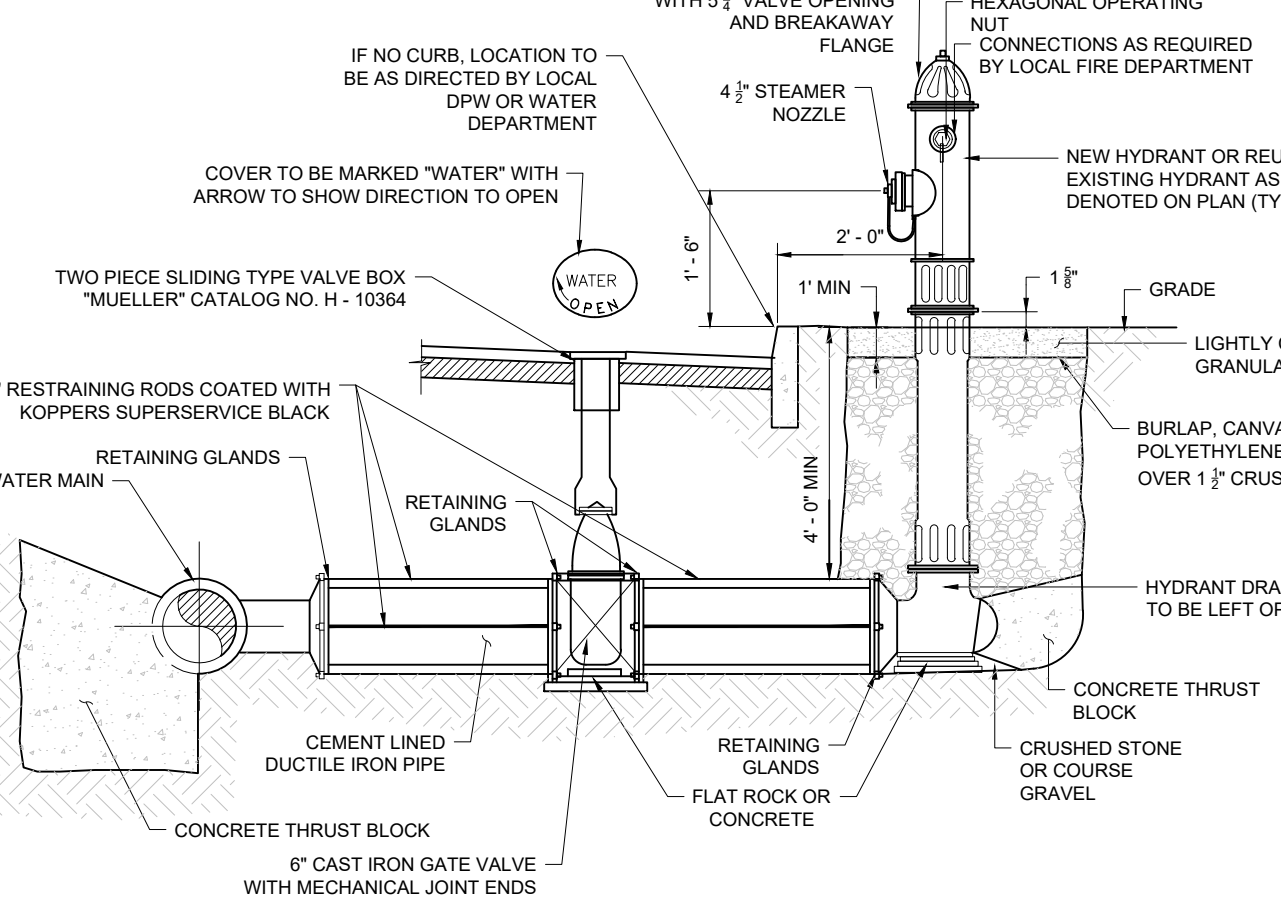
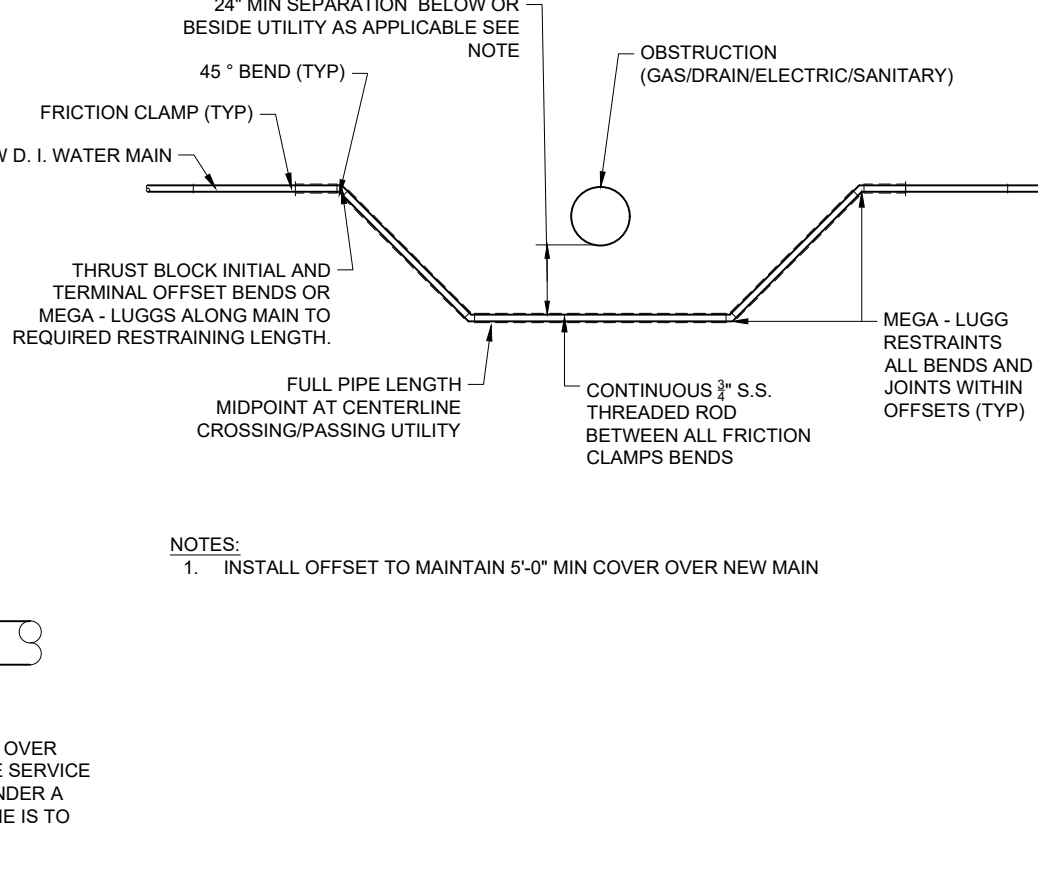
NOT TO SCALE



NOTES:
1. 10" HORIZONTAL SEPARATION AND 1.5" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER AND SEWER. AS DEPICTED IN THIS DETAIL, OR SEWER SHALL BE ENCASED IN CONCRETE (SEE CONCRETE ENCASUREMENT DETAIL). IN SECTIONS WHERE SEPARATIONS SHALL NOT BE ACHIEVED.

MONUMENT SIGN FOOTING

NOT TO SCALE

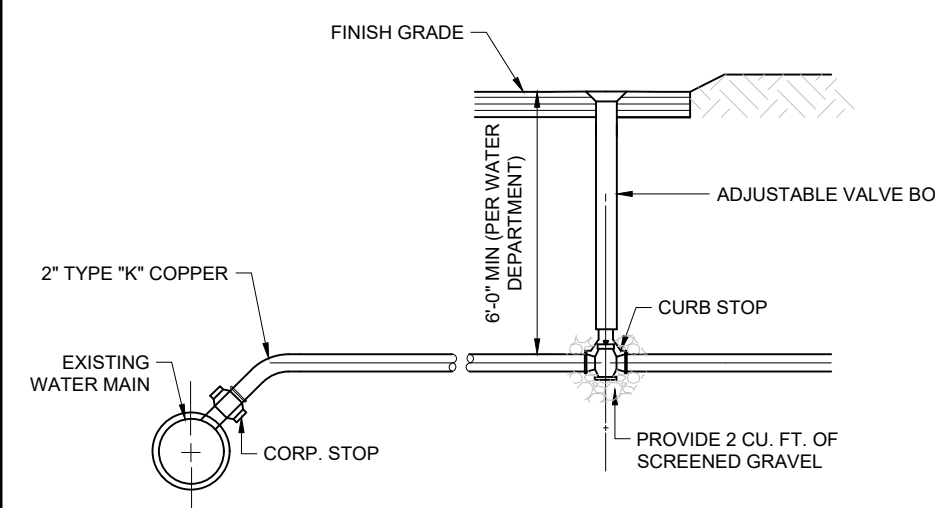


HYDRANT AND VALVE INSTALLATION

NOT TO SCALE (NE-U030101 - 11/2024)

TAPPING SLEEVE AND GATE VALVE

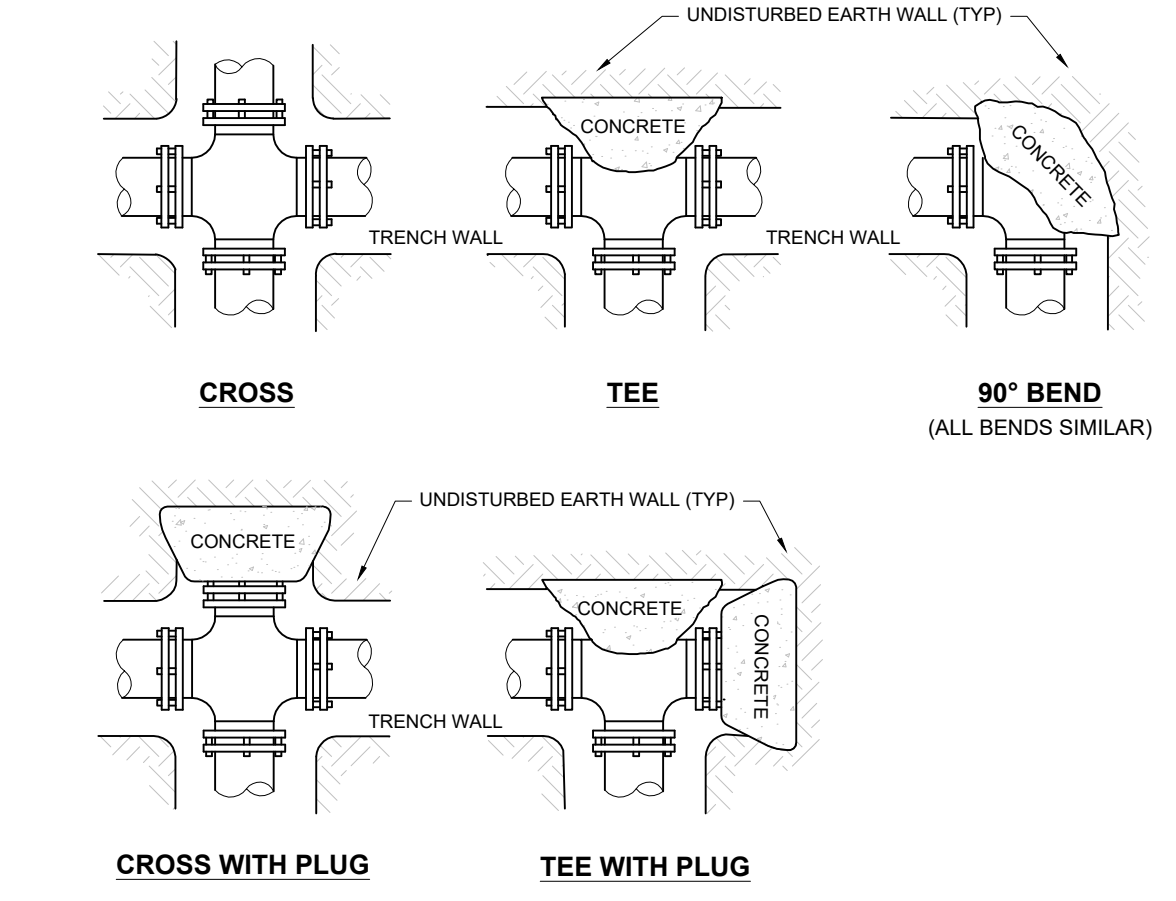
NOT TO SCALE (NE-U030401 - 11/2024)



NOTES:
1. DETAIL FOR GENERAL PURPOSES. GC TO COORDINATE CONNECTION WITH UTILITY PROVIDER.

WATER AND SEWER UTILITY CROSSING

NOT TO SCALE (NE-U050101 - 09/2023)

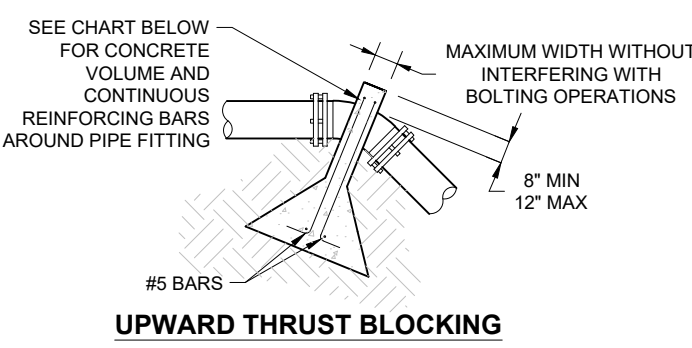


HORIZONTAL THRUST BLOCKING

NOT TO SCALE (NE-U030501 - 11/2024)

HORIZONTAL THRUST BLOCKING		(BLOCKING HEIGHT GREATER THAN PIPE OD)		(BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)	
REQUIRED SF OF UNDISTURBED EARTH WALL FOR REACTION BACKING		TYPE OF FITTINGS		BENDS	
PIPE SIZE	TEE & PLUG	90°	45°	22 1/2°	11 1/4°
3"	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0
6"	1.5	2.0	1.0	1.0	1.0
8"	2.5	3.5	1.8	1.0	1.0
10"	4.0	5.5	2.8	1.5	1.0
12"	6.0	8.0	4.0	2.0	1.5

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI.
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.



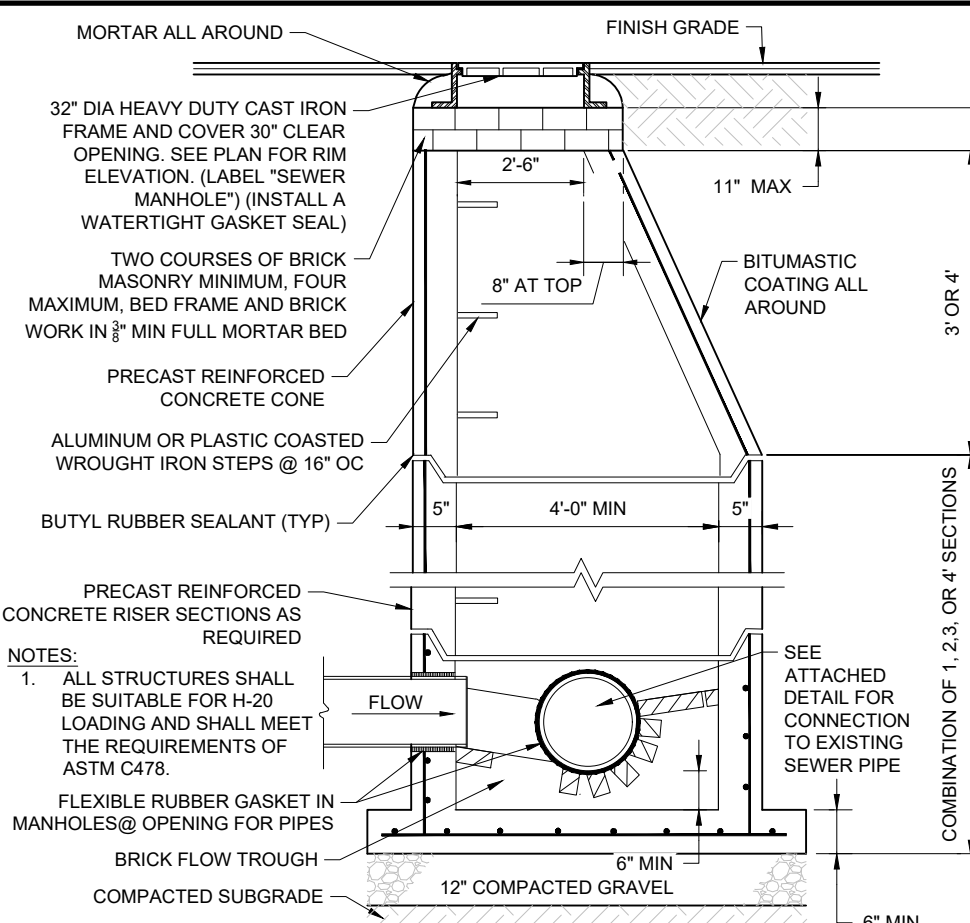
DOWNWARD THRUST BLOCKING (SEE HORIZONTAL BLOCKING DETAIL) (ALL BENDS SIMILAR)

VERTICAL THRUST BLOCKING

NOT TO SCALE (NE-U030502 - 11/2024)

UPWARD THRUST BLOCKING															
(REQUIRED REINFORCING BARS & CUBIC YARDS OF P.C. CONCRETE)															
90° BEND				45° BEND				22 1/2° BEND				11 1/4° BEND			
PIPE SIZE	CONC CY	REINF QTY	SIZE	CONC CY	REINF QTY	SIZE	CONC CY	REINF QTY	SIZE	CONC CY	REINF QTY	SIZE	CONC CY	REINF QTY	SIZE
6"	1.5	3	5	1.5	3	5	1.25	2	5	1.25	2	5	1.25	2	5
8"	2	3	5	2	3	5	1.5	2	5	1.5	2	5	2	3	5
10"	2.5	3	5	2.5	3	5	2	3	5	2	3	5	2	3	5
12"	3	3	5	3	3	5	2.5	3	5	2.5	3	5	2.5	3	5

NOTES:
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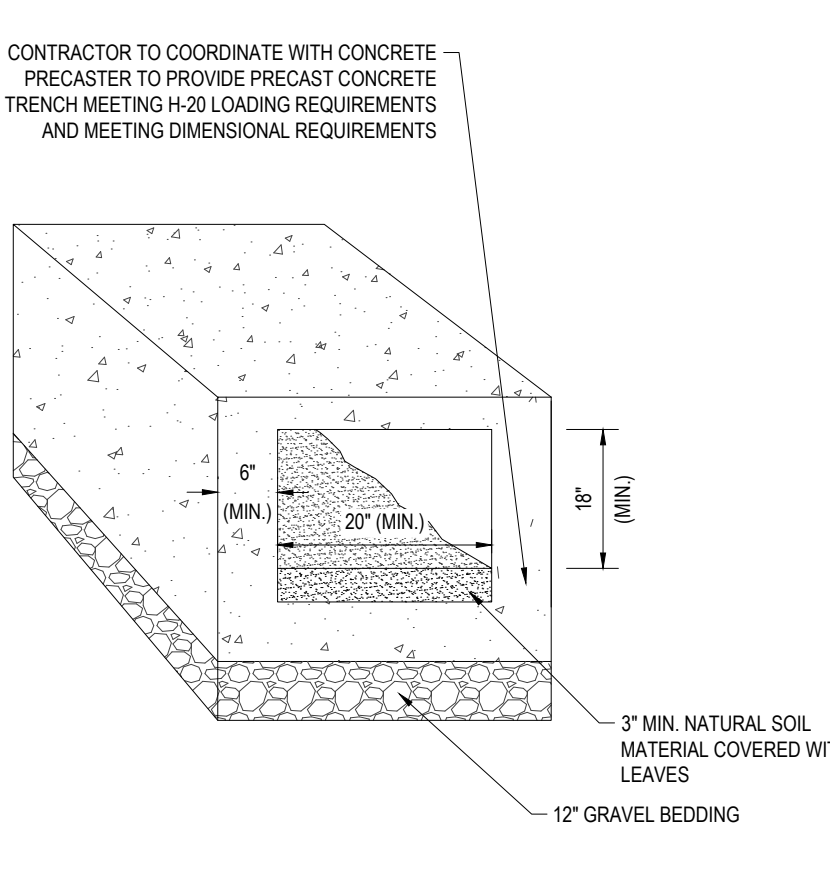


PRECAST CONCRETE SANITARY MANHOLE

NOT TO SCALE (NE-U020101 - 11/2024)

TYPE K COPPER WATER SERVICE CONNECTION

NOT TO SCALE (NE-U030402 - 09/2023)



AMPHIBIAN TUNNEL DETAIL

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PROJECT No.: MAA240279-00-0D
DRAWN BY: OEH
CHECKED BY: MKB
DATE: 06/11/2025
CAD ID: P-CIVL-CNDS

SITE DEVELOPMENT PLANS
FOR
WP EAST ACQUISITIONS LLC
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
MAP: 386 | BLK: 4 | LOT: 1C
86 ORCHARD HILL PARK DRIVE
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SHEET TITLE:
CONSTRUCTION DETAILS
SHEET NUMBER:
C-902
REVISION 7 - 10/30/2025

