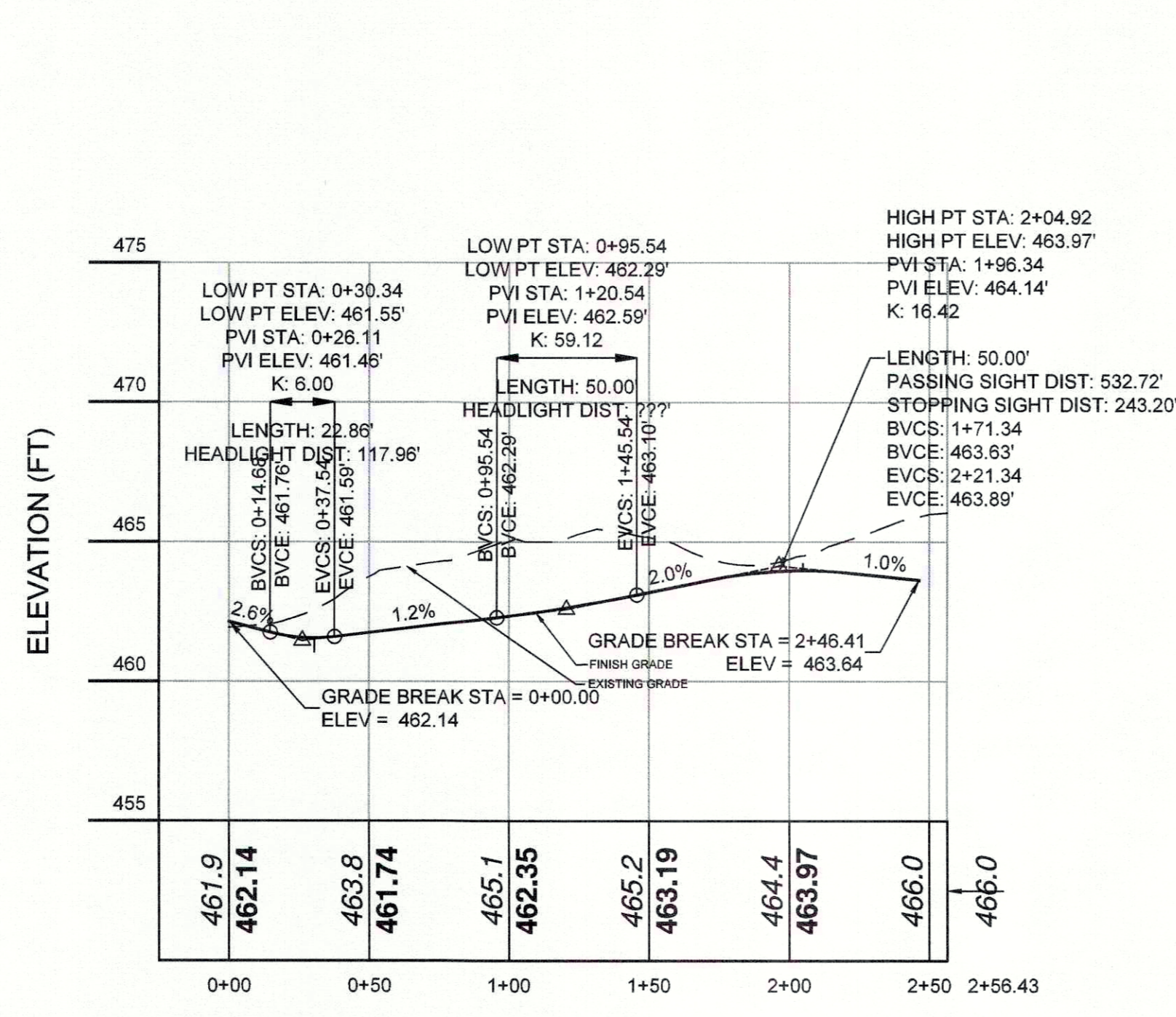
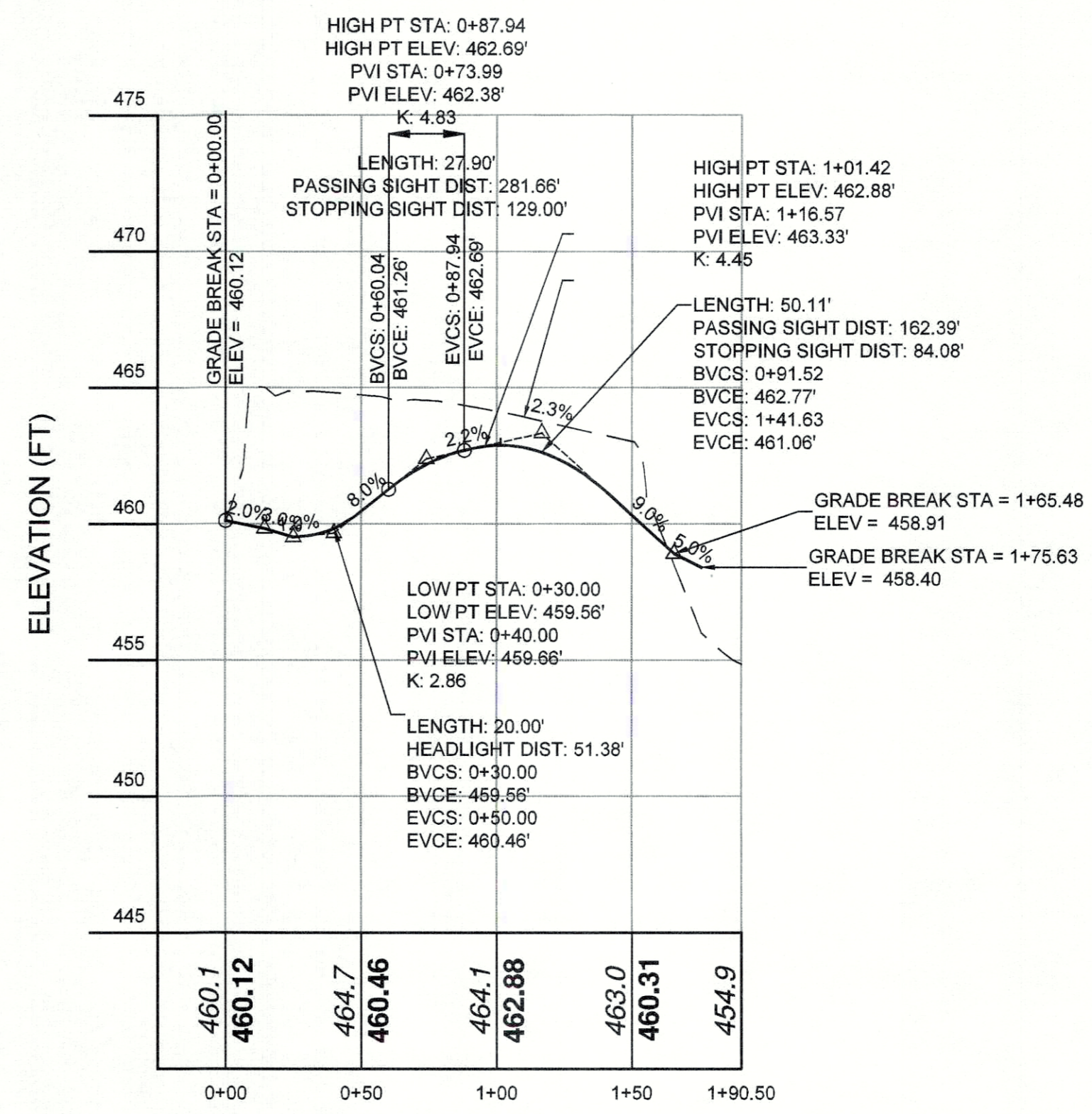


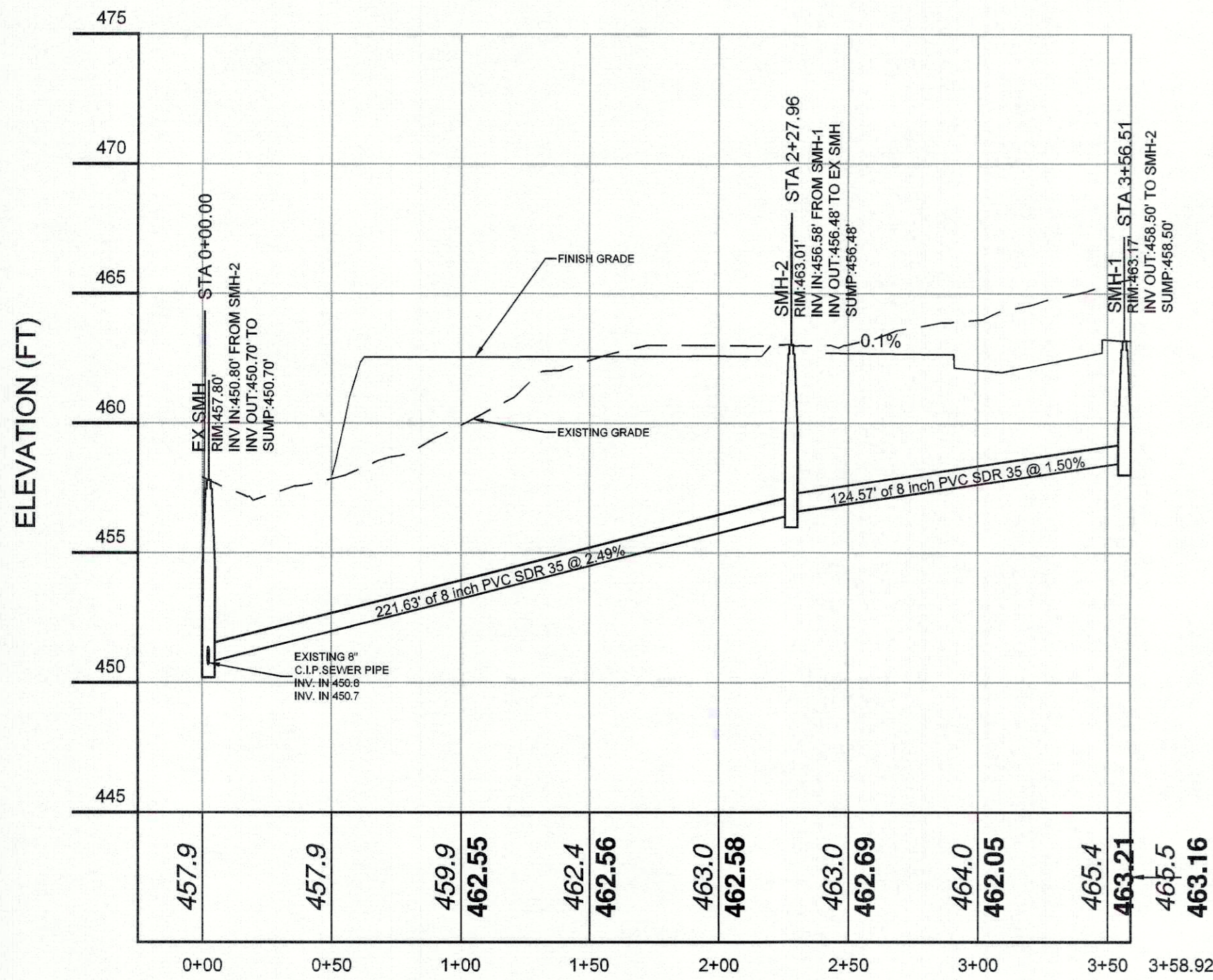
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 HORIZ. SCALE: 1" = 50



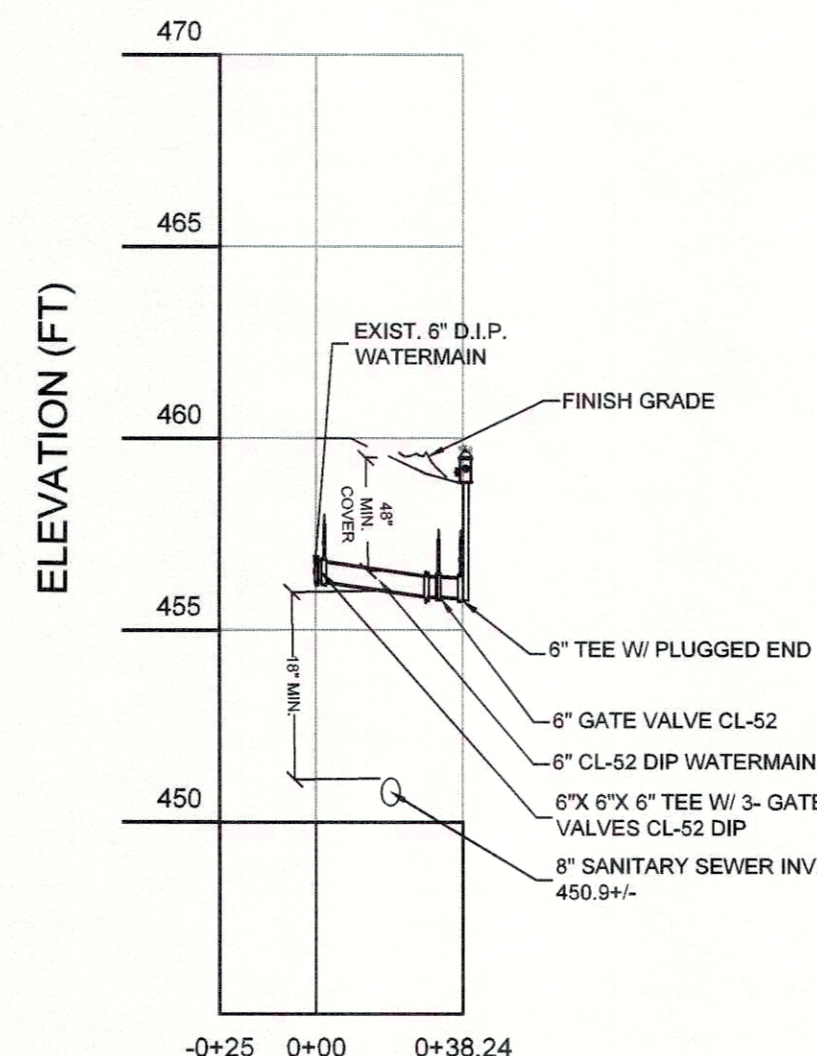
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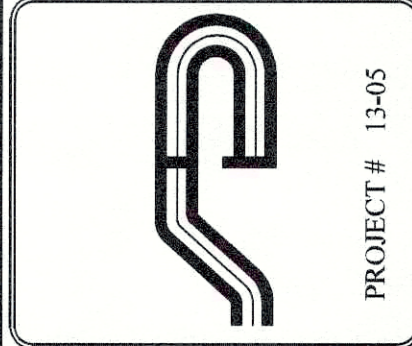
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SEWER MAIN
 VERT. SCALE: 1" = 5
 HORIZ. SCALE: 1" = 50



Watermain
 VERT. SCALE: 1" = 5
 HORIZ. SCALE: 1" = 50



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No.	Date	Comments
1.	4/29/19	Plan Desk Comm
2.	5/29/19	I.E. Comments
3.	10/1/19	DEP Comments
4.	11/19/19	DEP Comments
5.	7/27/20	DEP Comments
6.	12/22/20	DEP Comments
7.	12/22/20	DEP Comments
8.	3/18/21	DEP Comments
9.	4/8/21	DEP Comments
10.	5/24/21	CHD Comments
11.	7/21/21	WCHD Comments

SCALE: NTS	DRAWN BY: JR	DATE: 10-26-18
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PROFILES

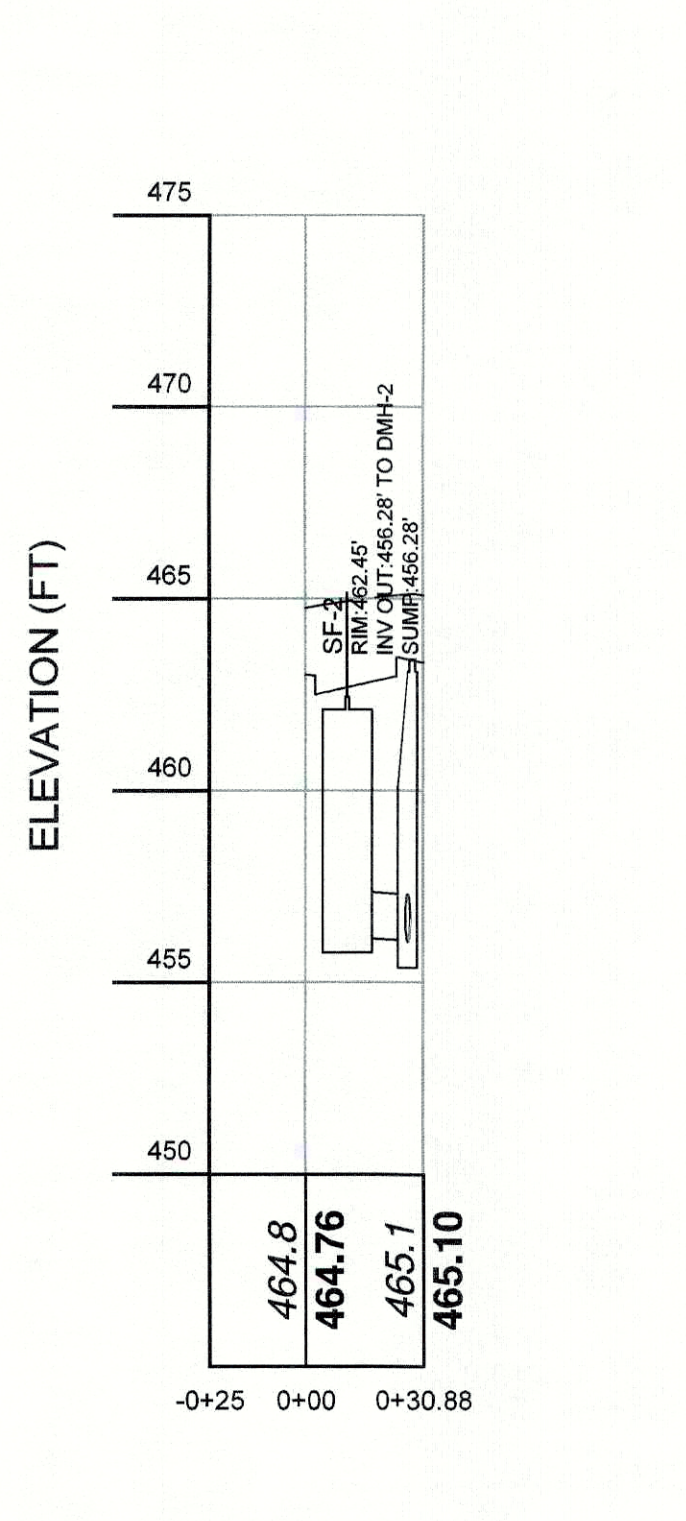
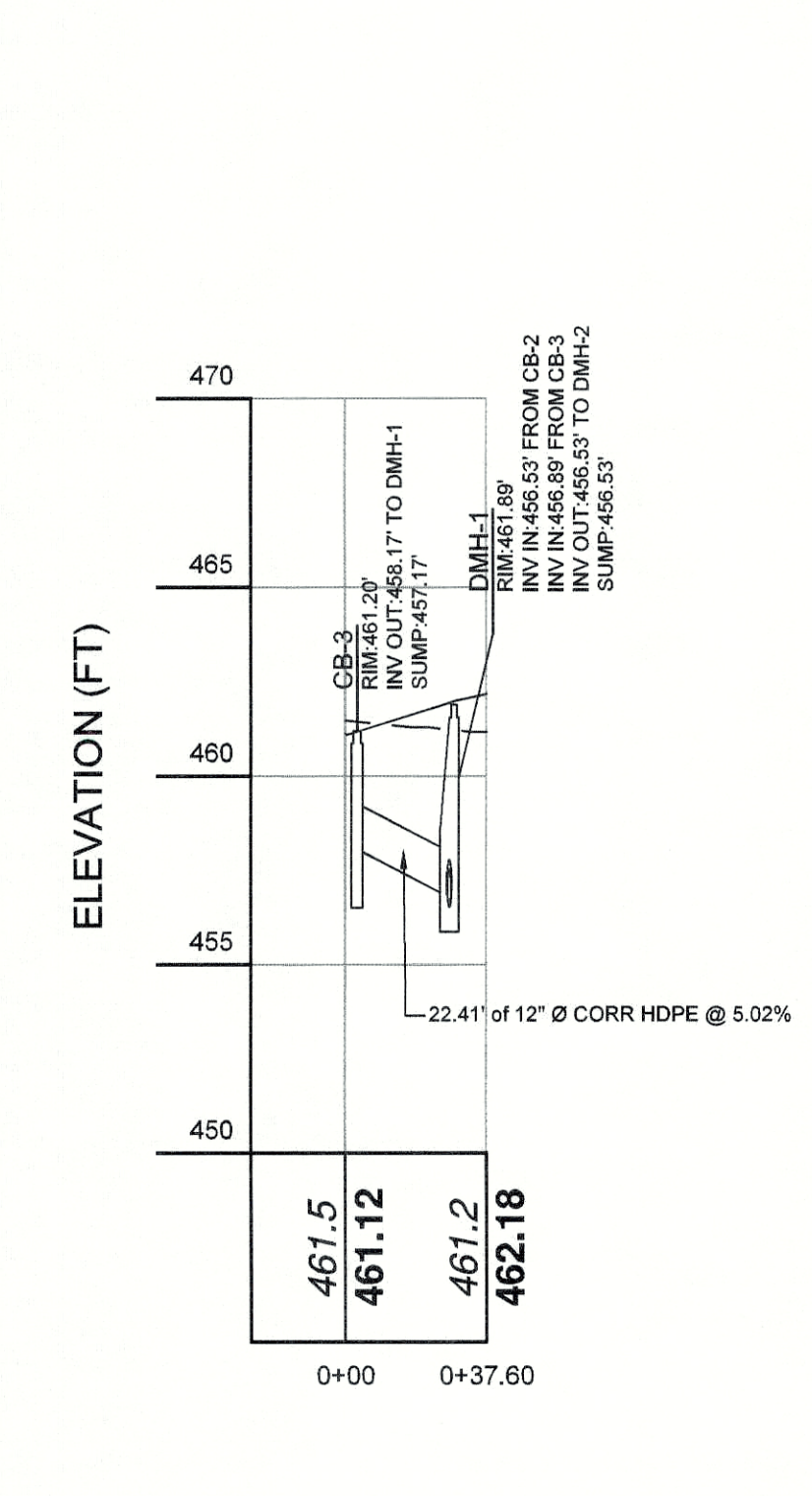
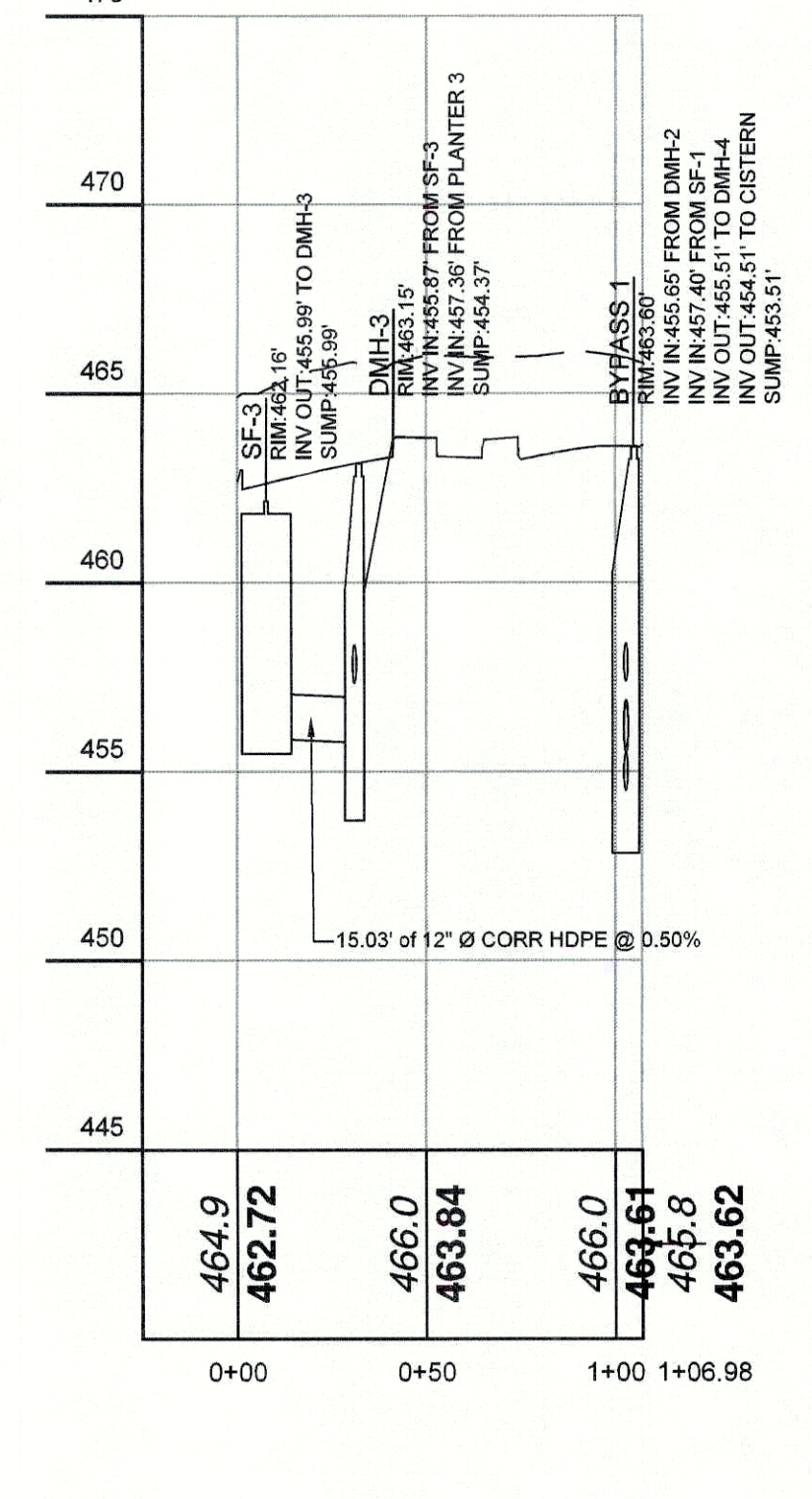
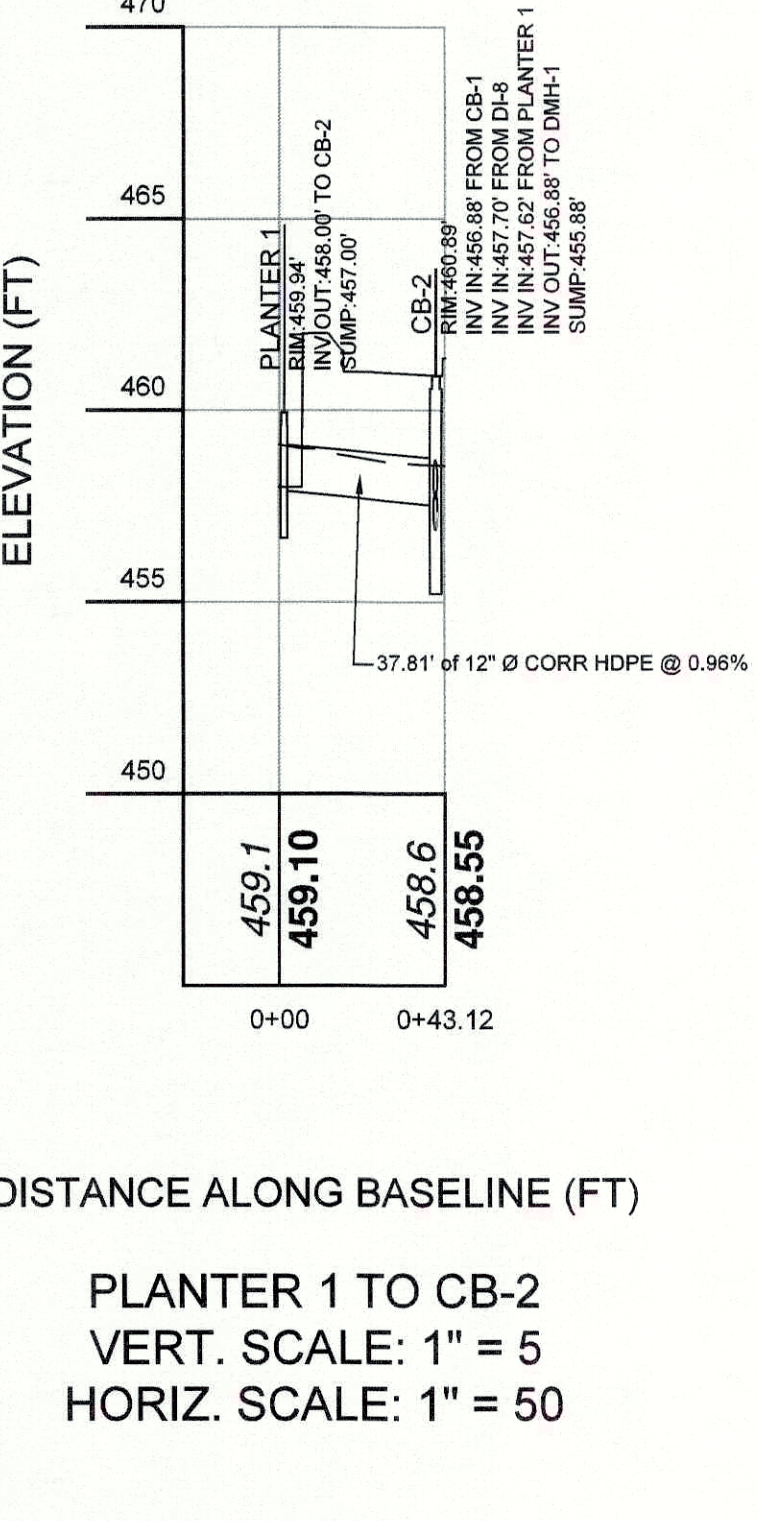
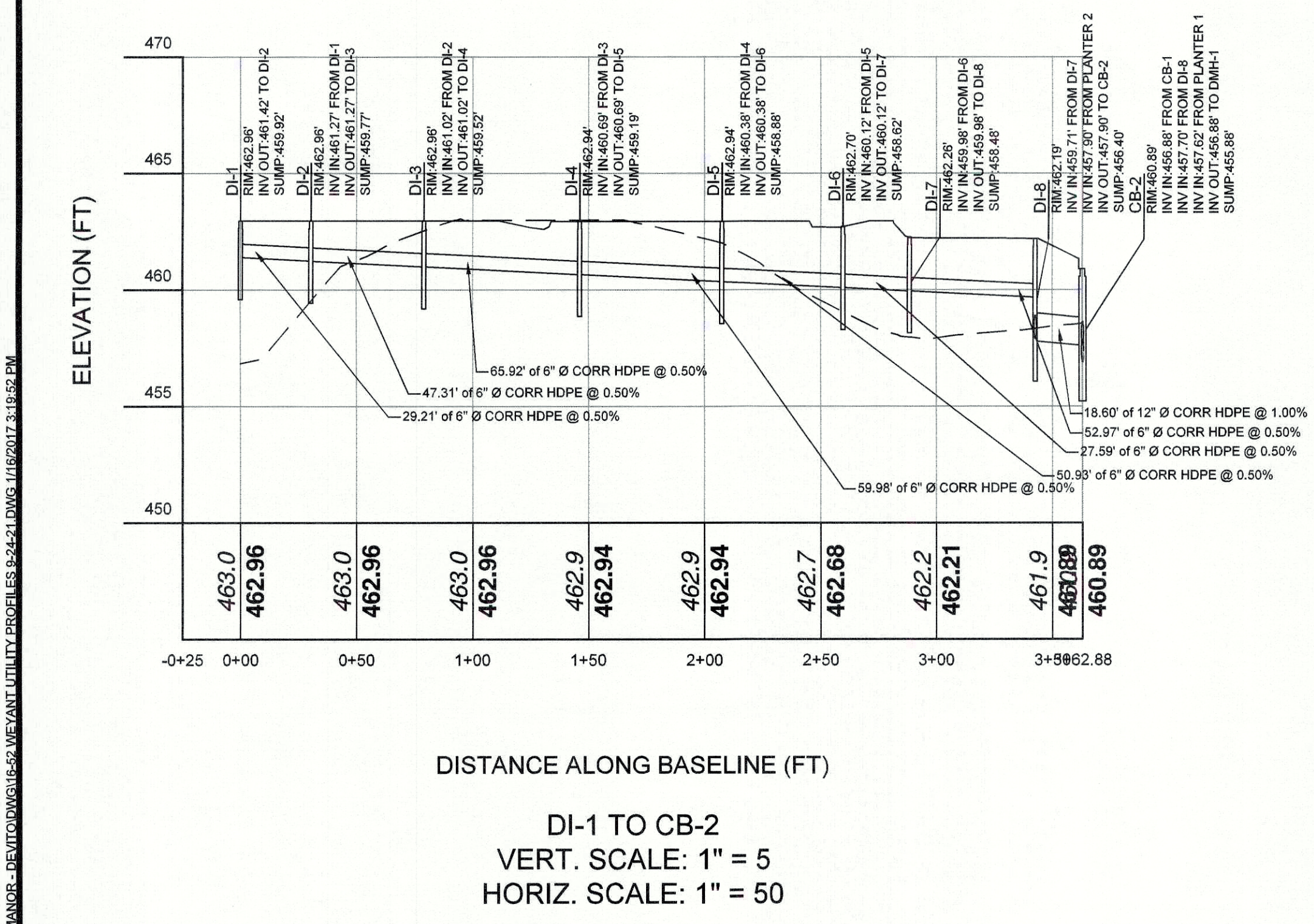
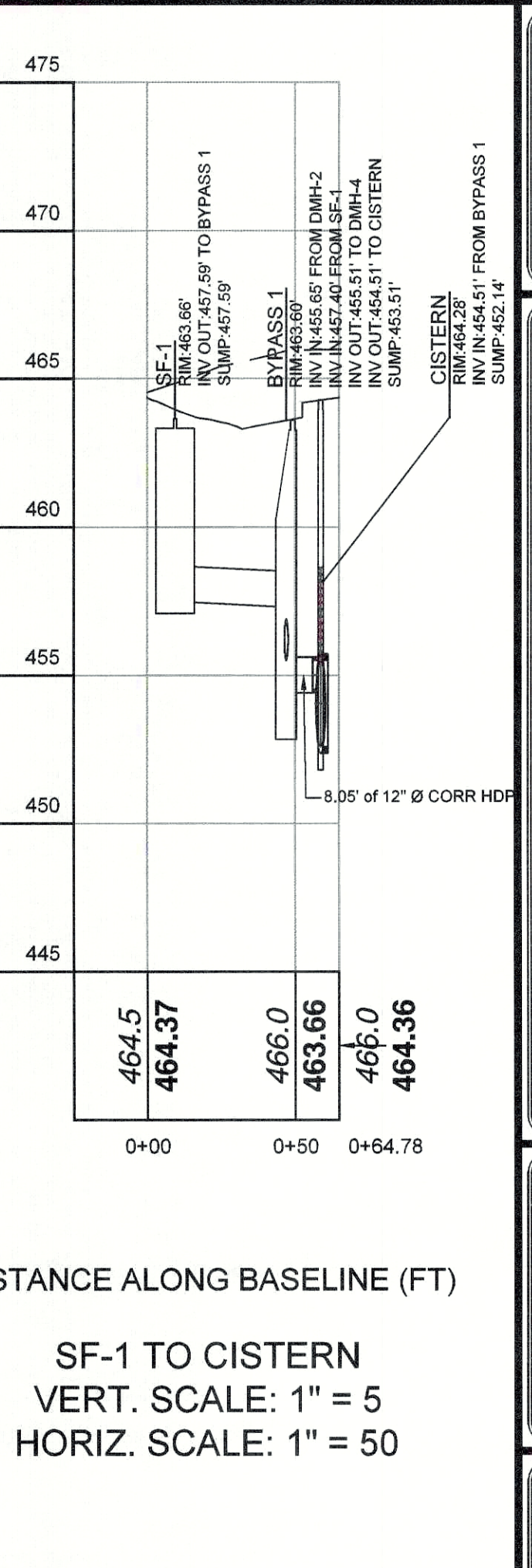
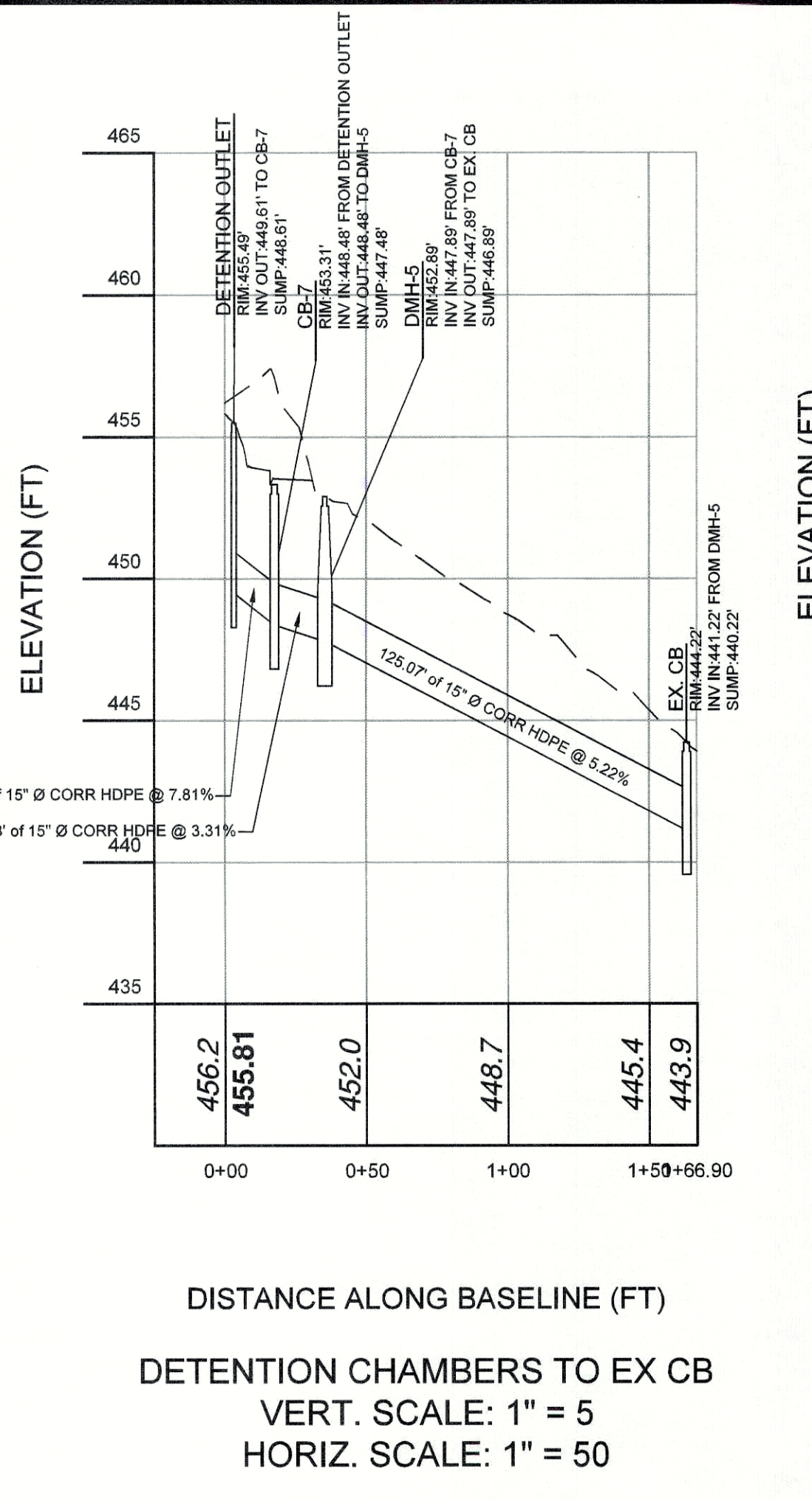
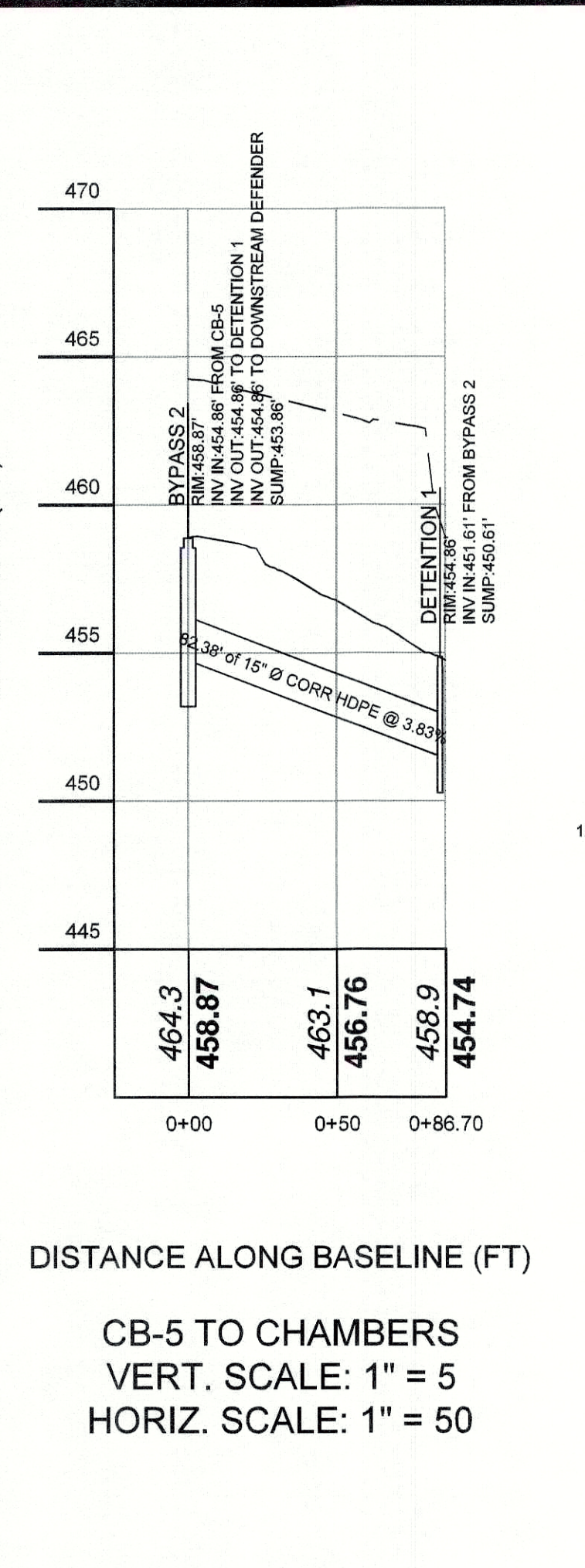
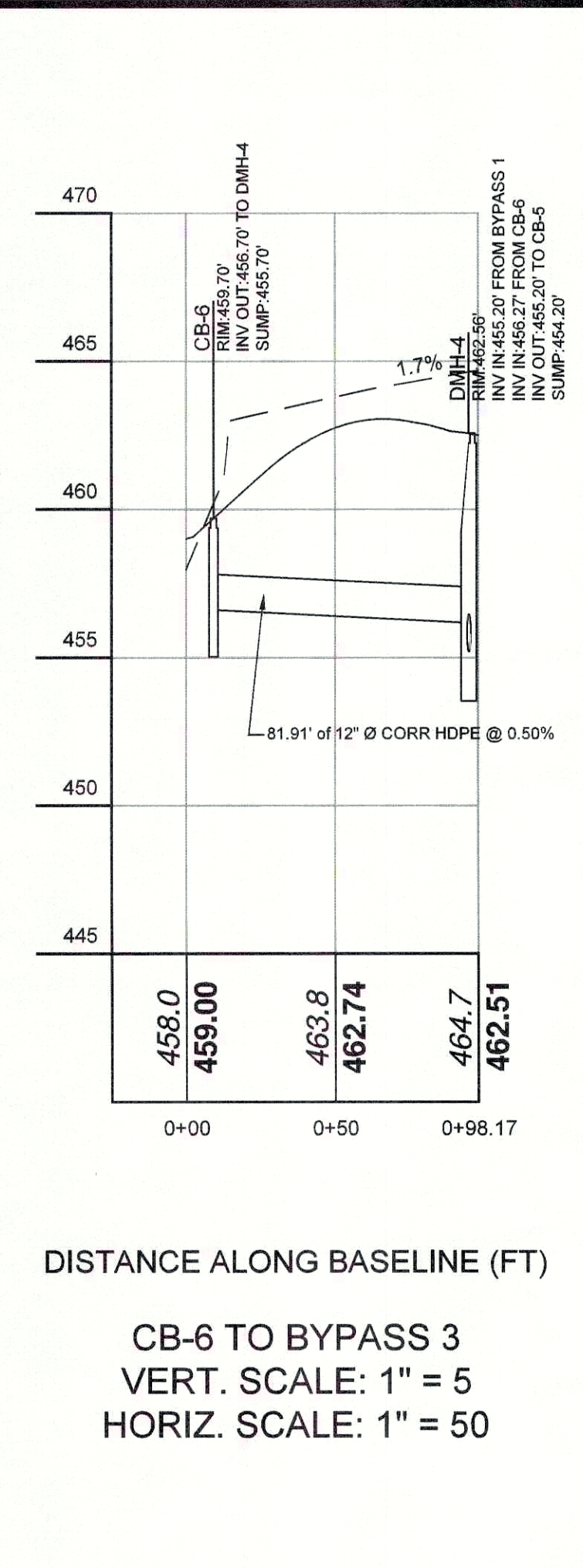
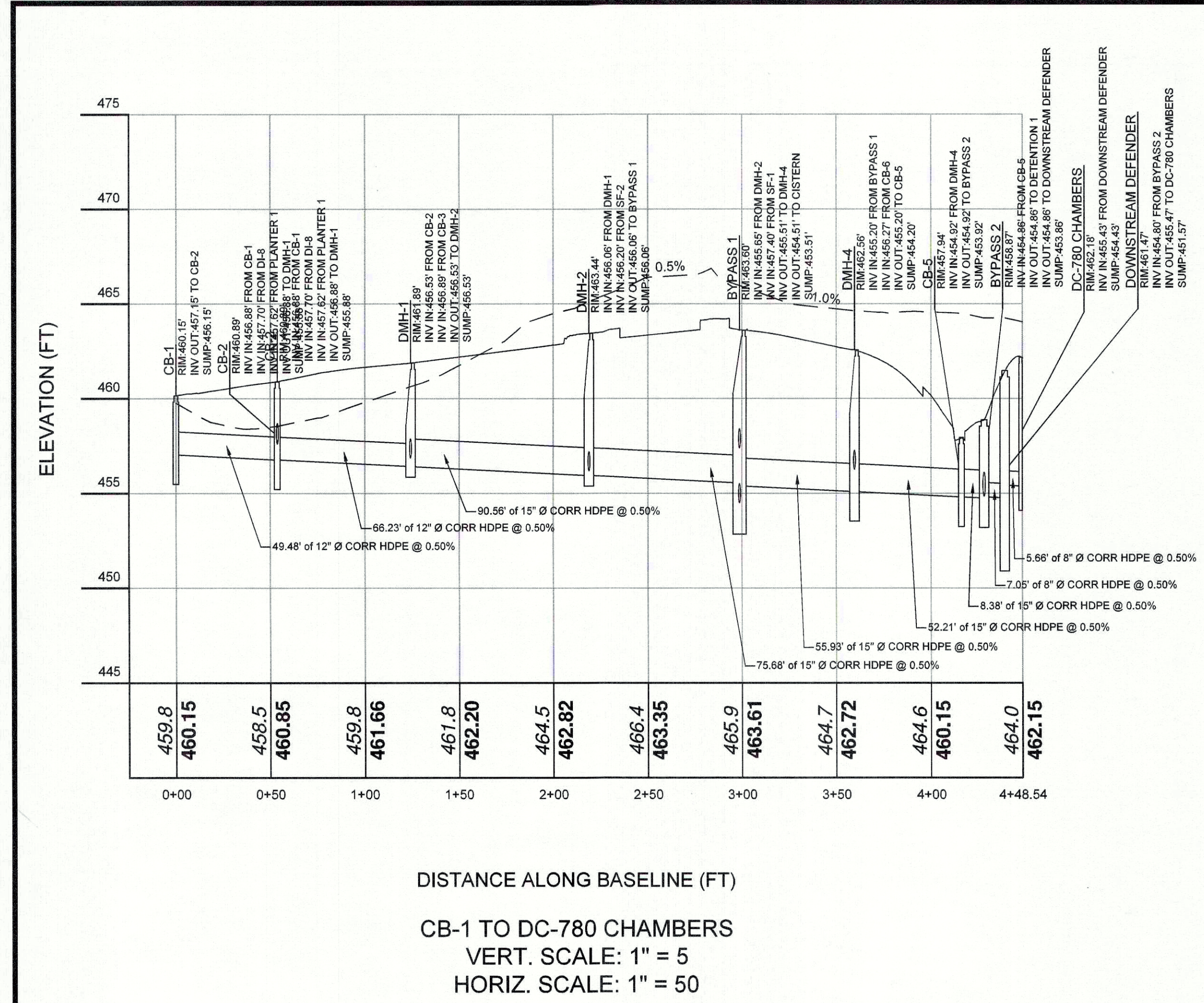
SITE PLAN PREPARED FOR
THE WEYANT
 2040 CROMPOND ROAD
 Yorktown, Westchester County, New York

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NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.

PROJECT # 18-05
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FROM: WYANT - DRAINAGE ENGINEERING, INC. - 300 W. MAIN STREET, WESTCHESTER COUNTY, NY 10598 - 10/2012 - 21.19.52.DWG
 DRAWN BY: JR
 DATE: 10-26-18



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 251-F Underhill Avenue, Yorktown Heights, NY 10598
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PROJECT # 13-05

SITE PLAN
 PREPARED FOR
THE WEYANT
 2040 CROMPOD ROAD
 Town of Yorktown Westchester County, New York

SCALE: NTS
 DRAWN BY: JR
 DATE: 10-26-18

DRAINAGE PROFILES

Sheet
C-302

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GENERAL NOTES:

- 1. THE ENGINEER WHOSE SEAL APPEARS HEREON HAS NOT BEEN RETAINED FOR SUPERVISION OF CONSTRUCTION... 2. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE INTEGRITY OF ANY STRUCTURES... 3. THE TOWN ENGINEER'S OFFICE AND WATER DISTRICT OFFICE IS TO BE NOTIFIED 24 HOURS BEFORE COMMENCING SITE CONSTRUCTION OR WATER MAIN CONNECTION... 4. ALL WORK IS TO BE IN ACCORDANCE WITH THE TOWN CODE OF PRACTICE AND SPECIFICATIONS... 5. ALL CONDITIONS, LOCATIONS, AND DIMENSIONS SHALL BE FIELD VERIFIED AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES... 6. ALL CHANGES MADE TO THE PLANS SHALL BE APPROVED BY THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS... 7. ALL WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER ANY SCALED DIMENSIONS... 8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL IN A "CODE 53" PRIOR TO CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS... 9. SUBSTRUCTURES AND THEIR ENCROACHMENTS BELOW GRADE, IF ANY, ARE NOT SHOWN... 10. ANY PROPOSED ELECTRIC AND/OR TELEPHONE SERVICE LINES ARE TO BE PLACED UNDERGROUND... 11. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING OF ANY DISCREPANCIES...

CONTRACTOR RESPONSIBILITIES:

- 1. ALL WORK ON THE PROJECT SHALL BE PERFORMED IN A WORKMAN LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE INDUSTRY... 2. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT HIS WORK AND WILL BE HELD RESPONSIBLE FOR CONSEQUENTIAL DAMAGES... 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY SHORE EXISTING UTILITIES IF REQUIRED BY CONSTRUCTION... 4. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING... 5. ALL CHANGES MADE TO THIS PLAN SHALL BE APPROVED BY THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS... 6. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING HIS BEST SKILL AND ATTENTION... 7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES... 8. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND OMISSIONS OF HIS EMPLOYEES... 9. THE CONTRACTOR SHALL VERIFY ALL SUBSTRUCTURES ENCOUNTERED DURING CONSTRUCTION... 10. THE CONTRACTOR SHALL SECURE & PAY FOR A BUILDERS RISK POLICY TO COVER THE PERIOD OF CONSTRUCTION...

GENERAL CONSTRUCTION NOTES:

- 1. BENCH MARKS USING U.S.G.S. DATUM SHALL BE OF SUCH ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS... 2. CONSTRUCTION ACTIVITY SHALL BE LIMITED FROM 8:00 A.M. TO 6 P.M., AND NO CONSTRUCTION ACTIVITY SHALL OCCUR ON SUNDAYS OR LEGAL NEW YORK STATE HOLIDAYS... 3. ANY SOIL THAT IS UNSUITABLE FOR DEVELOPMENT OF BUILDINGS OR ROADWAYS SHALL BE REMOVED FROM AREAS TO BE DEVELOPED... 4. NO TOPSOIL SHALL BE REMOVED FROM THE SITE... 5. ROCK CUT STABILITY IS TO BE FIELD VERIFIED BY GEOTECHNICAL ENGINEER... 6. NO CRUSHING/PROCESSING IS PERMITTED ON THE SITE WITHOUT PRIOR APPROVAL BY THE TOWN OF YORKTOWN PLANNING BOARD...

GENERAL STORM DRAINAGE & UTILITY NOTES

- 1. ALL UTILITIES, INCLUDING ELECTRIC LINES, TELEPHONE, WATER, SANITARY SEWER LINES, AND STORM SEWER LINES SHALL BE LOCATED UNDERGROUND... 2. LOCATION OF GAS AND WATER VALVES, ELECTRIC AND TELEPHONE POLES ARE TO BE DETERMINED BY PROPER AUTHORITIES... 3. EACH BUILDING CONSTRUCTED HEREON SHALL BE OF SUCH AN ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS... 4. ROOF LEADERS AND FOOTING DRAINS SHALL EMPTY INTO THE STORM DRAINAGE SYSTEM OR DISCHARGE DIRECTLY TO STORMWATER MANAGEMENT SYSTEMS... 5. ANY REVISIONS AND/OR ADDITIONS TO THE ROAD STORM DRAINAGE SYSTEMS CURRENTLY SHOWN ON THE PLANS... 6. STORM DRAIN PIPING TO BE HIGH DENSITY POLYETHYLENE AS SHOWN ON THE CONSTRUCTION DRAWINGS... 7. INTERCEPTOR DRAINS ARE TO BE INSTALLED WHERE REQUIRED BY THE TOWN OR PROJECT ENGINEER... 8. ALL EXISTING UNDERGROUND DRAINS ENCOUNTERED DURING CONSTRUCTION OF PROPOSED ROADS... 9. PRIOR TO FINAL APPROVAL AND OPERATION OF DRAINAGE SYSTEM, CONTRACTOR SHALL CLEAR ALL ACCUMULATED SEDIMENT AND OTHER DEBRIS FROM DRAINAGE STRUCTURES... 10. ALL STRUCTURES SHALL BE SET ONE INCH BELOW PAVEMENT... 11. STREET OPENING PERMIT FROM THE TOWN OF YORKTOWN D.P.W. MAY BE REQUIRED FOR INSTALLATIONS IN PUBLIC ROADS...

WALL NOTES:

- 1. EXCAVATION IN GENERAL SHALL CONFORM TO THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS... 2. THE ENGINEER SHALL BE NOTIFIED OF UNSUITABLE SUB-GRADE SOILS PRIOR TO PLACEMENT OF WALL... 3. WALLS TO BE CONSTRUCTED ON VIRGIN IN-SITU SOIL SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2 TSF... 4. TO INSURE A PROPER BEARING SURFACE, THE WALL SHALL BE CONSTRUCTED ON NATURAL IN-SITU SOIL... 5. WALLS SHALL NOT BE CONSTRUCTED ON WET OR FROZEN GROUND... 6. SOILS USED AS BACKFILL SHALL CONSIST OF CLEAN DRY SOIL... 7. BACKFILL SHALL BE PLACED AND COMPACTED IN A MAXIMUM 12" LIFTS... 8. ALL BOULDER RETAINING WALLS SHALL HAVE A GEOTEXTILE FABRIC BACKING... 9. IF GROUNDWATER IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO DETERMINE IF THE ADDITION OF AN UNDERDRAIN MAY BE REQUIRED... 10. THE CONTRACTOR SHALL NOT USE LARGE OR HEAVY CONSTRUCTION EQUIPMENT WITHIN 5' OF THE RETAINING WALLS... 11. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER... 12. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER...

WATERMAIN NOTES

I. DISTRIBUTION SYSTEM - WATERMAIN

- A. GENERAL: THE CONTRACTOR SHALL PERFORM THE NECESSARY EXCAVATION, BACKFILLING, CLEARING, ORUBBING, SHIELDING, SHIELDING, DO ALL SHAPING OF TRENCHES, PUMPING AND BAILING, LAYING AND JOINING OF ALL PIPES... B. SITE AND ACCESS CLEARING (WITHIN EASEMENTS): THE CONTRACTOR SHALL CONFINE ALL CLEARING OPERATIONS TO WITHIN THE IMMEDIATE AREAS THAT ARE ESSENTIAL FOR CONSTRUCTION... C. STOCKPIILING OF SUITABLE BACKFILL MATERIAL: THE CONTRACTOR SHALL BE PREPARED WHEN EXCAVATING THE TRENCH TO SEPARATE SUITABLE BACKFILL MATERIAL FROM UNSUITABLE MATERIAL... D. PROTECTION OF EXISTING STRUCTURES AND UTILITIES: SPECIAL PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT OVERHEAD POWER LINES, WATERMANS, GAS MAINS, ELECTRIC AND TELEPHONE CONDUITS...

GUTTERS, SEWERS, DRAINS AND DITCHES SHALL BE KEPT OPEN AT ALL TIMES FOR SURFACE DRAINAGE... NO DAMMING OR PONDING OF WATER IN GUTTERS OR OTHER WATERWAYS WILL BE PERMITTED EXCEPT WHERE STREAM CROSSINGS ARE NECESSARY AND THEN ONLY TO AN EXTENT WHICH THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE SHALL CONSIDER NECESSARY...

THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER OF THE RESPECTIVE UTILITY PRIOR TO RELOCATION OR INTERRUPTION OF SERVICE... THE CONTRACTOR SHALL COOPERATE IN RESTORING SERVICE PROMPTLY. ALL CHARGES FOR DAMAGES DONE TO UTILITIES SHALL BE PAID BY THE CONTRACTOR.

THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER OF THE RESPECTIVE UTILITY PRIOR TO RELOCATION OR INTERRUPTION OF SERVICE... SHOULD THE POSITION OF ANY PIPE, CONDUIT, POLE OR OTHER STRUCTURES, ABOVE OR BELOW THE GROUND, BE SUCH AS TO REQUIRE ITS REMOVAL, REALIGNMENT, OR CHANGE DUE TO WORK TO BE DONE, REALIGNMENT OR CHANGE WILL BE DONE BY OR UNDER SUPERVISION OF THE OWNER OF THE OBSTRUCTIONS...

CONSTRUCTION IN THE ROAD RIGHT-OF-WAY SHALL AT ALL TIMES BE PERFORMED WITH MINIMUM DISTURBANCE TO TRAFFIC WITH SUFFICIENT BARRICADES AND DIRECTION... CONSTRUCTION IN THE ROAD RIGHT-OF-WAY SHALL AT ALL TIMES BE PERFORMED WITH MINIMUM DISTURBANCE TO TRAFFIC WITH SUFFICIENT BARRICADES AND DIRECTION. DETOURS CAN BE INSTITUTED WITH APPROVAL OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE OR STATE, COUNTY, OR LOCAL AUTHORITIES...

F. EXCAVATION AND PREPARATION OF TRENCH

THE CONTRACTOR SHALL PROCEED WITH CAUTION IN THE EXCAVATION AND PREPARATION OF THE TRENCH SO THAT THE EXACT LOCATION OF UNDERGROUND STRUCTURES, BOTH KNOWN AND UNKNOWN, MAY BE DETERMINED... THE TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND DEPTH REQUIRED...

THE WIDTH OF THE TRENCH SHALL BE OF ADEQUATE SIZE TO PERMIT THE PIPE TO BE LAID AND JOINED PROPERLY, BUT SHALL NOT EXCEED THE SUM OF TWENTY-FOUR INCHES(24" PLUS THE PIPE OUTSIDE DIAMETER, AND THE BACKFILL TO BE PLACED AND COMPACTED AS SPECIFIED.

LEDGE ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST SIX INCHES (6") BELOW AND ON EACH SIDE OF ALL PIPES AND FITTINGS.

THE TRENCH SHALL BE EXCAVATED TO THE DEPTH REQUIRED SO AS TO PROVIDE A UNIFORM AND CONTINUOUS BEARING AND SUPPORT FOR THE PIPE ON SOLID AND UNDISTURBED GROUND AT EVERY POINT... THE CONTRACTOR SHALL REMOVED SUCH UNSUITABLE MATERIAL TO THE WIDTH AND DEPTH ORDERED BY THE TOWN ENGINEER...

ANY PART OF THE BOTTOM OF THE TRENCH EXCAVATED BELOW THE SPECIFIED GRADE SHALL BE CORRECTED WITH APPROVED BEDDING MATERIAL, SUCH AS THOROUGHLY COMPACTED CRUSHED STONE, GRAVEL, OR CONCRETE AS DIRECTED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE...

GENERAL WATER MAIN NOTES:

- 1. ALL PROPOSED WATERMAIN MATERIALS, CONSTRUCTION AND INSTALLATION SHALL CONFORM TO ALL APPLICABLE RULES AND REGULATIONS OF THE TOWN OF YORKTOWN WATER DEPARTMENT AND THE WESTCHESTER COUNTY HEALTH DEPARTMENT... 2. THE RECORDS OF THE TOWN OF YORKTOWN INDICATE THAT THERE IS ADEQUATE WATER PRESSURE AND CAPACITY AS REQUIRED TO SERVE THIS PROJECT... 3. ALL BACKFLOW PREVENTION DEVICES ASSOCIATED WITH THE FIRE AND DOMESTIC SERVICES FOR EACH OF THE PROPOSED OFFICE SPACES IN THE TYPE "B" UNITS SHALL BE LOCATED INTERNAL TO THE BUILDING... 4. ALL FIRE AND DOMESTIC SERVICE CONNECTIONS FROM THE PROPOSED WATER MAIN SHALL BE INSTALLED WITH WET TAPS AFTER THE CONTRACTOR HAS INSTALLED THE MAIN... 5. THE CONTRACTOR IS ADVISED THAT BEFORE HE CONNECTS TO THE EXISTING WATER SYSTEM, HE MUST ADVISE AND COORDINATE HIS OPERATIONS WITH THE TOWN OF YORKTOWN WATER DEPARTMENT'S SUPERINTENDENT... 6. THE CONTRACTOR IS TO MAINTAIN CONSTANT FLOW AND PRESSURE IN ALL WATER MAINS AT ALL TIMES... 7. WATER MAINS CROSSING HOUSE SEWERS, STORM SEWERS OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION OF A MINIMUM OF 18" BETWEEN THE BOTTOM OF WATER MAIN AND TOP OF SEWER... 8. WATER MAINS PASSING UNDER HOUSE SEWERS, IN ADDITION, SHALL BE PROTECTED BY PROVIDING A VERTICAL SEPARATION OF 18" MINIMUM FROM THE BOTTOM OF THE SEWER TO THE TOP OF THE WATER MAIN... 9. THE COVER OVER THE TOP OF THE WATER MAIN SHALL BE A MINIMUM OF 4 FEET TO A MAXIMUM OF 5.5 FEET OF WATER PIPE IS TO BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER... 10. WATER MAINS SHALL BE CLASS 52 DUCTILE IRON PIPES (DIP) TYTON JOINT TYPE AND FITTINGS SHALL BE FACTORY CEMENT LINED CLASS 52... 11. ALL GATE VALVES SHALL BE MUELLER RESILIENT WEDGE (TURN LEFT OPEN) TYPE... 12. ALL SERVICE CONNECTIONS AND SMALL DIAMETER EXTENSIONS SHALL CONFORM TO AWWA C-151... 13. RETAINER GLANDS AND CONCRETE THRUST BLOCKS OR RODS SHALL BE USED AT ALL LOCATIONS WHERE RESTRAINTS EXIST... 14. INSTALLATION AND TESTING OF THE WATER MAIN SHALL BE INSPECTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH... 15. AS-BUILT DRAWINGS SHALL SHOW DIMENSIONS BETWEEN ALL VALVE TURNING NUTS AND FINISH GRADE... 16. INSTALLATION, DISINFECTION AND TESTING TO BE WITNESSED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR TOWN OF YORKTOWN ENGINEER... 17. ALL HYDRANTS AND VALVES SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY... 18. THE FINAL LOCATIONS OF FIRE HYDRANTS AND SIAMISE CONNECTIONS SHALL BE DETERMINED BY AND COORDINATED WITH THE TOWN OF YORKTOWN FIRE DEPARTMENT... 19. IF, DURING CONSTRUCTION, IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS, AND BUILDING SEWERS CANNOT BE MET... 20. ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-600... 21. ALL NEW, CLEANED OR REPAIRED WATER MAINS SHALL BE DISINFECTED AND BACTERIOLOGICAL TESTING PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-651-05... 22. ROAD OPENINGS SHALL BE DONE IN ACCORDANCE WITH CONDITIONS OF PERMIT, AND COORDINATED WITH THE TOWN OF YORKTOWN... 23. UPON COMPLETION AND PRIOR TO USE, TWO (2) SETS OF AS-BUILT PLANS AND ACCEPTABLE BACTERIOLOGICAL SAMPLE AND WATER MAIN HYDROSTATIC TEST RESULTS MUST BE SUBMITTED ALONG WITH THE DESIGN PROFESSIONAL'S CERTIFICATION OF CONSTRUCTION...

SANITARY SEWER TESTING

PROCEDURE AND METHOD OF TESTING - THE TEST LENGTH INTERVALS AND TYPE OF LEAKAGE TEST SHALL BE APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND SITE ENGINEER... THE FOLLOWING TESTS FOR LEAKAGE MAY BE EMPLOYED:

- 1. HYDROSTATIC TEST: THE TEST PERIOD, WHEREIN THE MEASUREMENTS ARE TAKEN SHALL NOT BE LESS THAN FOUR (4) HOURS... (i) INFILTRATION TEST - THIS TEST MAY BE USED ONLY WHEN GROUND WATER LEVELS ARE AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE... (ii) EXFILTRATION TEST - THIS TEST CONSISTS OF FILLING THE PIPE WITH WATER TO PROVIDE A HEAD OF AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE... 2. VACUUM TESTING OF MANHOLES - TESTED AS PER ASTM STANDARD C-1244... 3. LOW-PRESSURE AIR TEST OF PIPE LINES - TESTED PER ASTM STANDARD F-1417... WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE THE STARTING TEST PRESSURE OF 3.5 PSI, START THE TEST... 4. DEFLECTION TESTING OF PIPES - IN ACCORDANCE WITH THE TEN STATES "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES - SECTION 33.4" LATEST EDITION... A. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE... B. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT... C. THE RIGID BALL OR MANREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE...

Table with 3 columns: SIZE (INCHES), TIME (MIN /100 FT.), and values for different pipe sizes.



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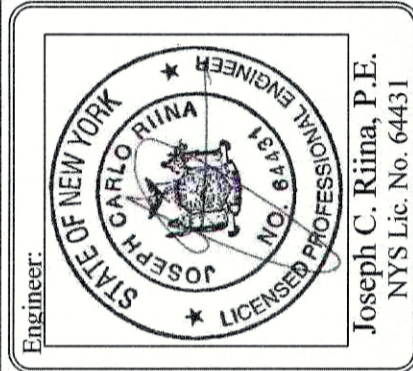


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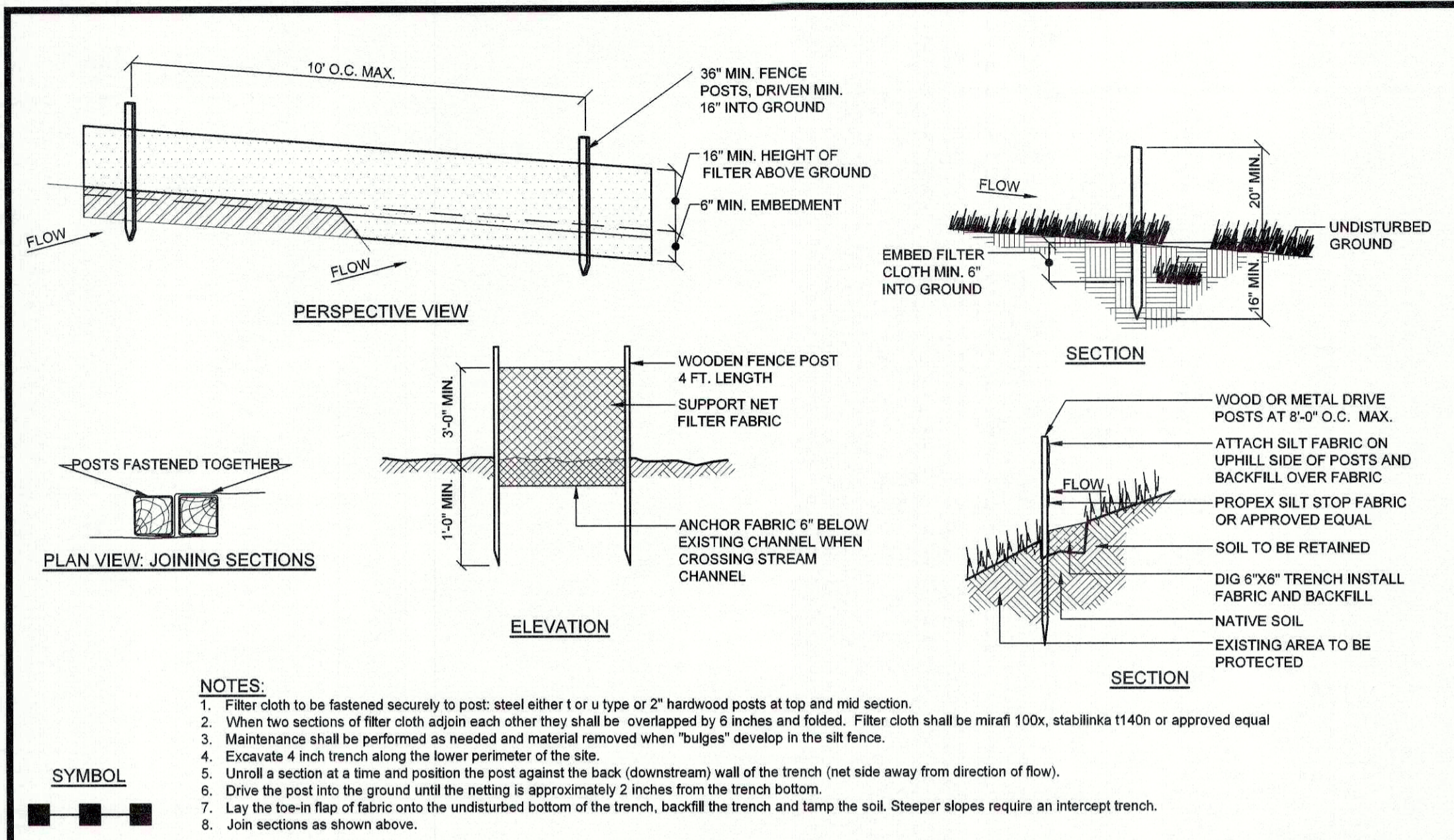
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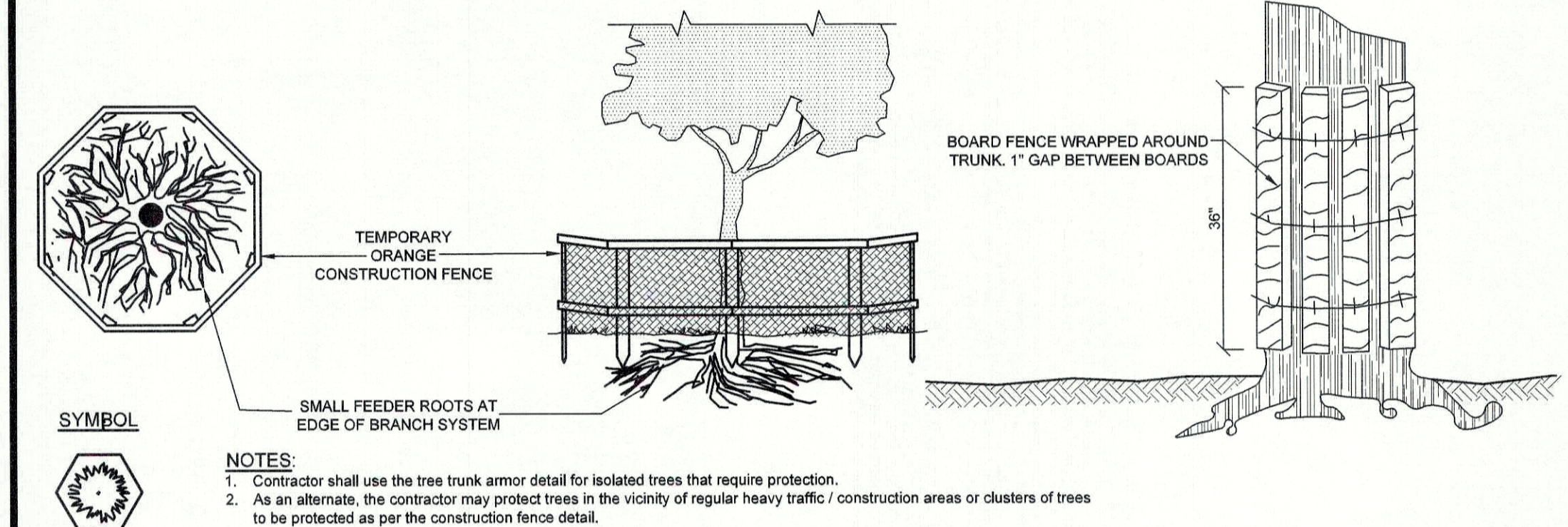
- 1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE CODE OF THE TOWN OF YORKTOWN AND THE REGULATIONS OF THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH... 2. SANITARY MANHOLES/CLEANOUT MANHOLES SHALL BE PRECAST CONCRETE... 3. ALL WORK SHALL BE MANUFACTURED IN ACCORDANCE WITH APPROVED STANDARDS... 4. ALL BIDDING CONTRACTORS SHALL BE LICENSED BY THE ENGINEERS, LICENSED IN THE TOWN OF YORKTOWN... 5. SANITARY SEWER CONSTRUCTION SHALL MEET ALL SEWER CONSTRUCTION SPECIFICATIONS FOR THE TOWN OF YORKTOWN... 6. THE TOWN ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF ANY WORK... 7. A CODE 53 SHALL BE CALLED BEFORE THE START OF ANY EXCAVATION WORK... 8. A STREET OPENING PERMIT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY WORK BEING STARTED IN PUBLIC ROADS... 9. ALL SEWERS SHALL BE LAID AT LEAST 10 FT HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN... 10. MANHOLE STEPS SHALL BE CAST IRON NEENAH NO. R-1981-0 OR CAMPBELL FOUNDRY NO. 288-1 OR POLYPROPYLENE COATED STEEL... 11. UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE THE LETTERS "SEWER" CAST ON THE COVER... 12. MANHOLE COVERS AND STRUCTURES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS... 13. ALL SANITARY STRUCTURES SHALL RECEIVE 2 MIL COATS OF BITUMINOUS MATERIAL... 14. G-RING JOINTS TO CONFORM TO A.S.T.M. DESIGNATION C-443 LATEST REVISION... 15. PRE-CAST MANHOLE SECTIONS TO BE IN ACCORDANCE WITH "PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS" A.S.T.M. DESIGNATION C-478... 16. WHEN SEWER IS TO BE INSTALLED IN FILL MATERIAL... 17. WATER MAINS CROSSING HOUSE SEWERS, STORM SEWERS OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION OF 18" MINIMUM FROM THE BOTTOM OF THE SEWER TO THE TOP OF SEWER... 20. ALL INSTALLATIONS AND TESTING SHALL BE IN ACCORDANCE WITH ASTM STANDARDS F-1417, C-1244 AND THE TEN STATES STANDARDS, LATEST VERSION.

THE WEYANT 2040 CROMPOND ROAD Westchester County, New York

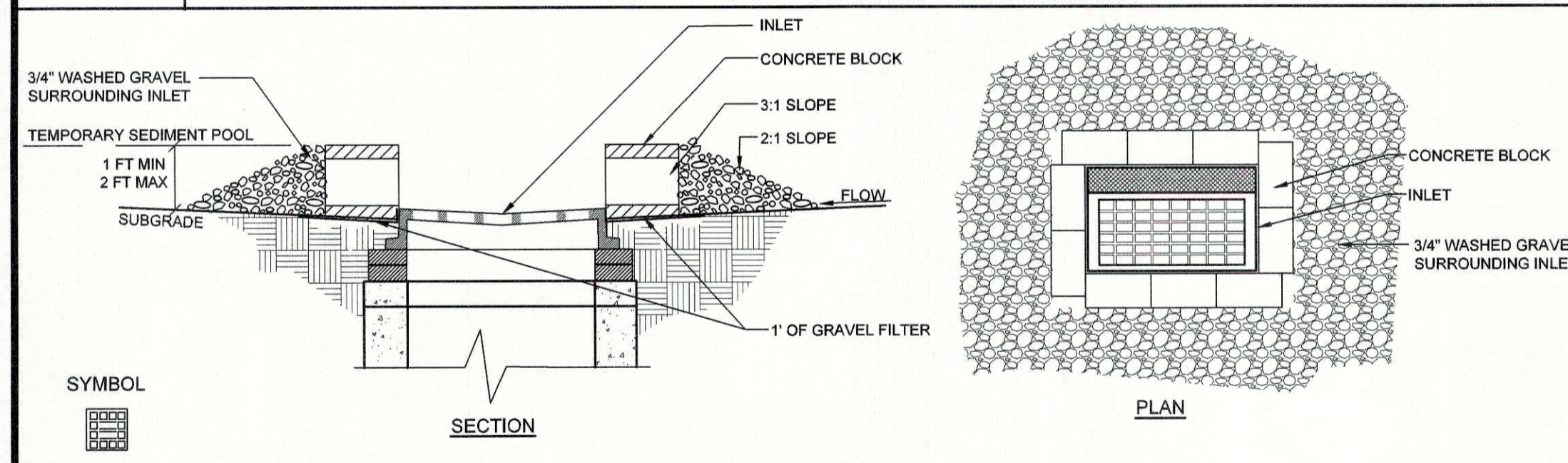
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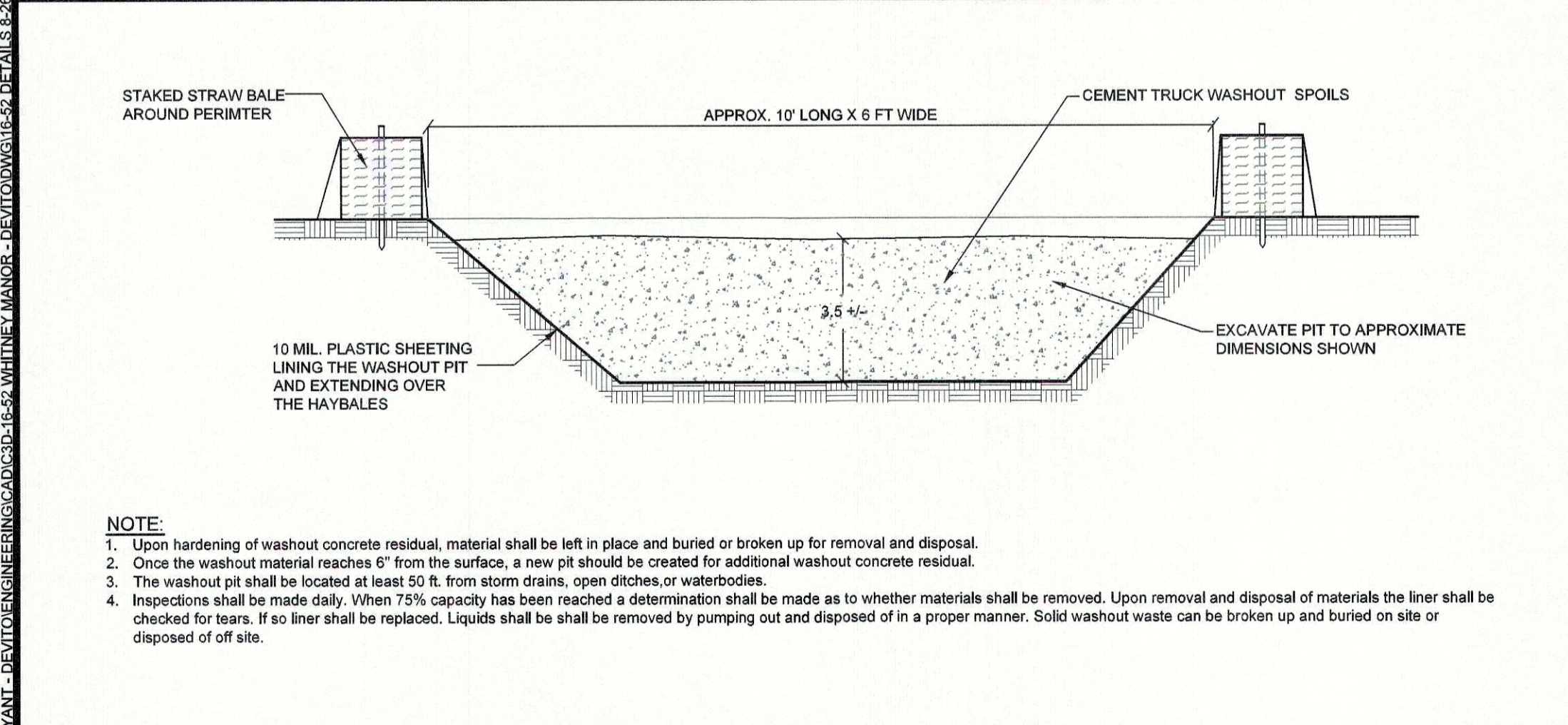
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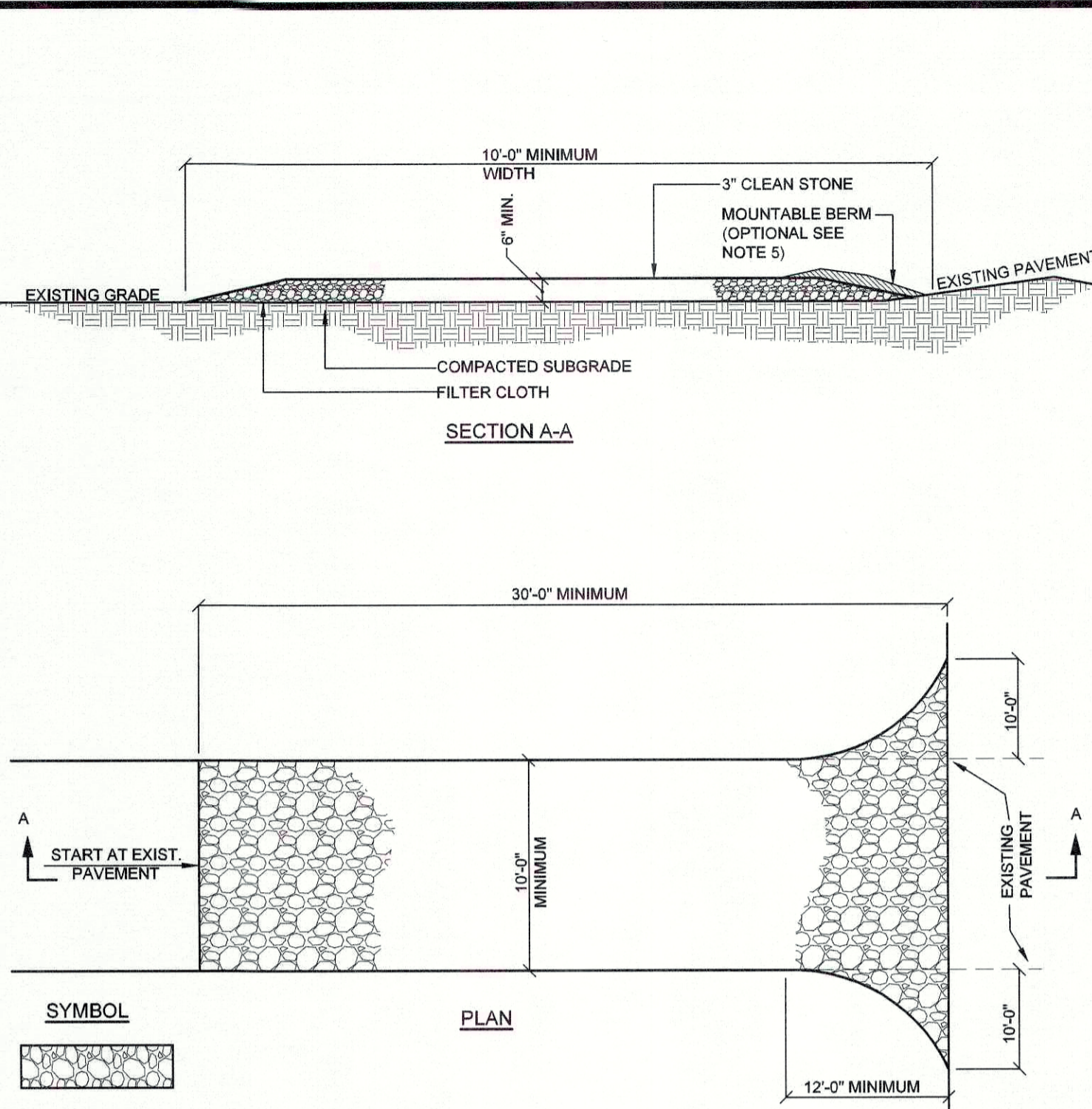
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E-3 STONE & BLOCK INLET PROTECTION DETAIL
NOT TO SCALE

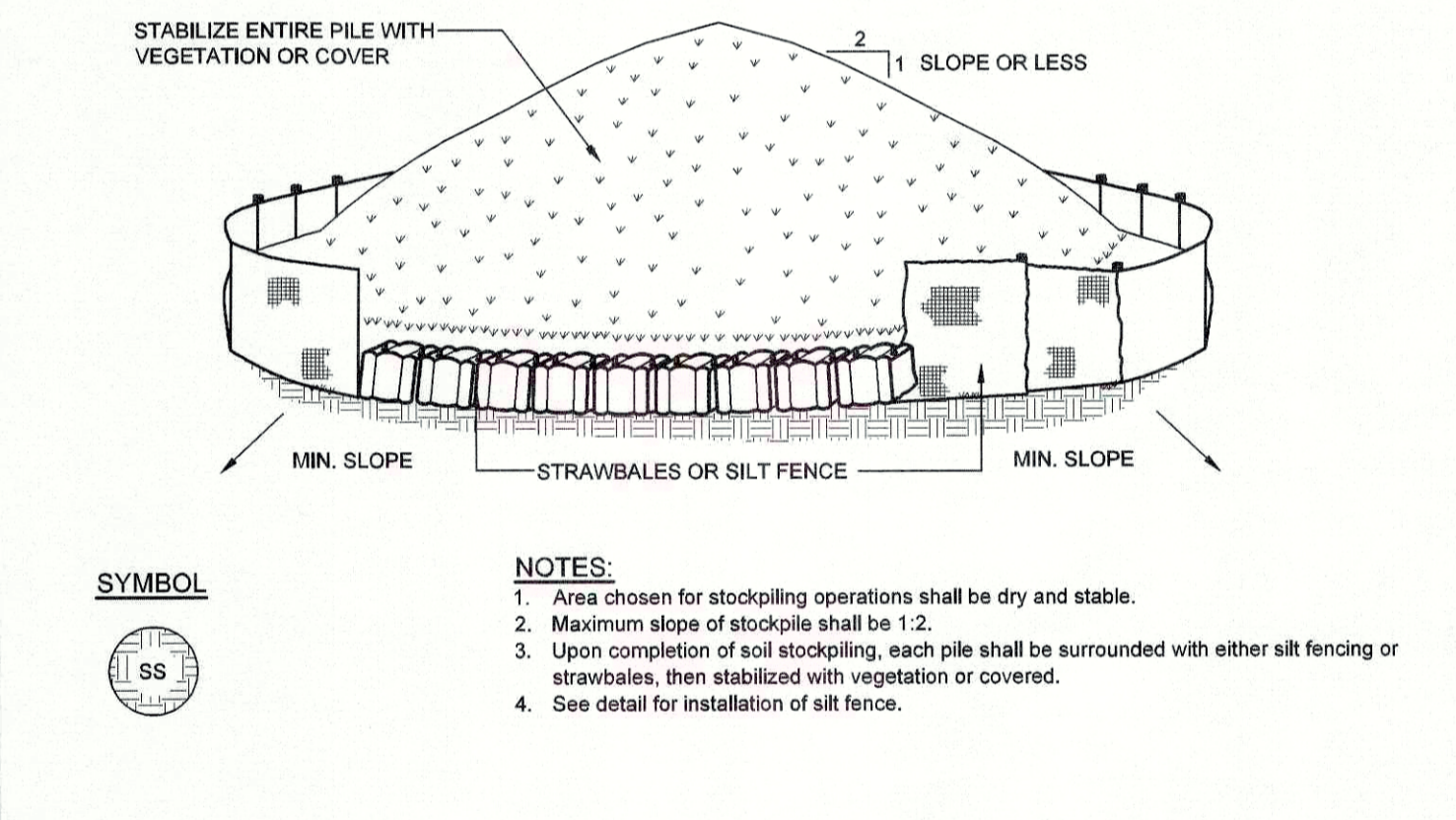


E-4 CEMENT TRUCK WASHOUT PIT DETAIL
NOT TO SCALE

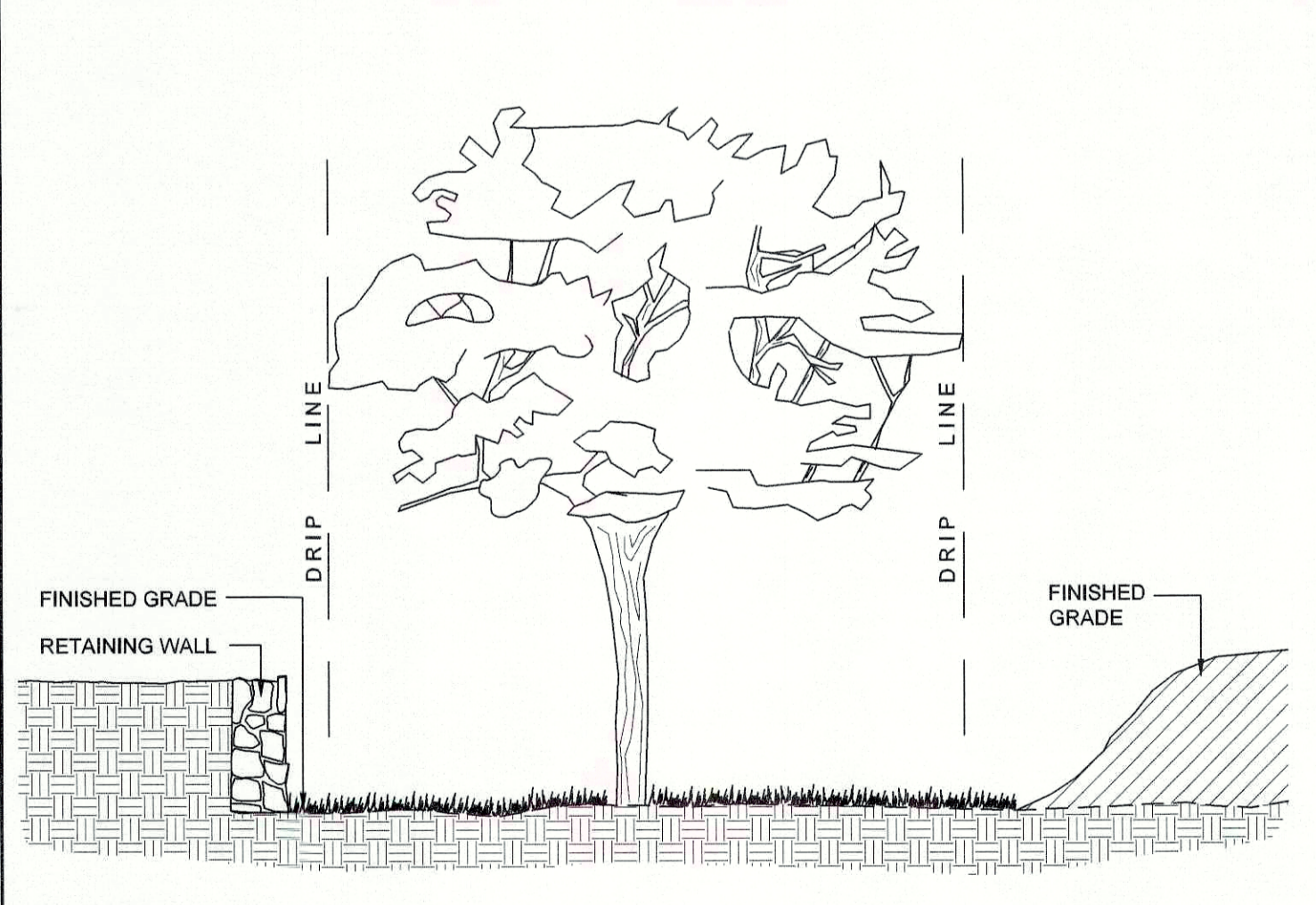


INSTALLATION NOTES:
 1. Stone size - use 3" min. Stone, or reclaimed or recycled concrete equivalent.
 2. Length - as required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - not less than six (6) inches.
 4. Width - 10 foot minimum, but not less than the full width at points where ingress or egress occur. 24 ft. if single entrance to site.
 5. Surface water - all surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 6. Maintenance - the entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right of way this may require periodic top dressing with additional stone as conditions demand and repair and/or cleanouts of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right of way must be removed immediately.
 7. Washing - wheels shall be cleaned to remove sediment prior to entrance onto public right of way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 8. Periodic inspection and needed maintenance shall be provided after each rain

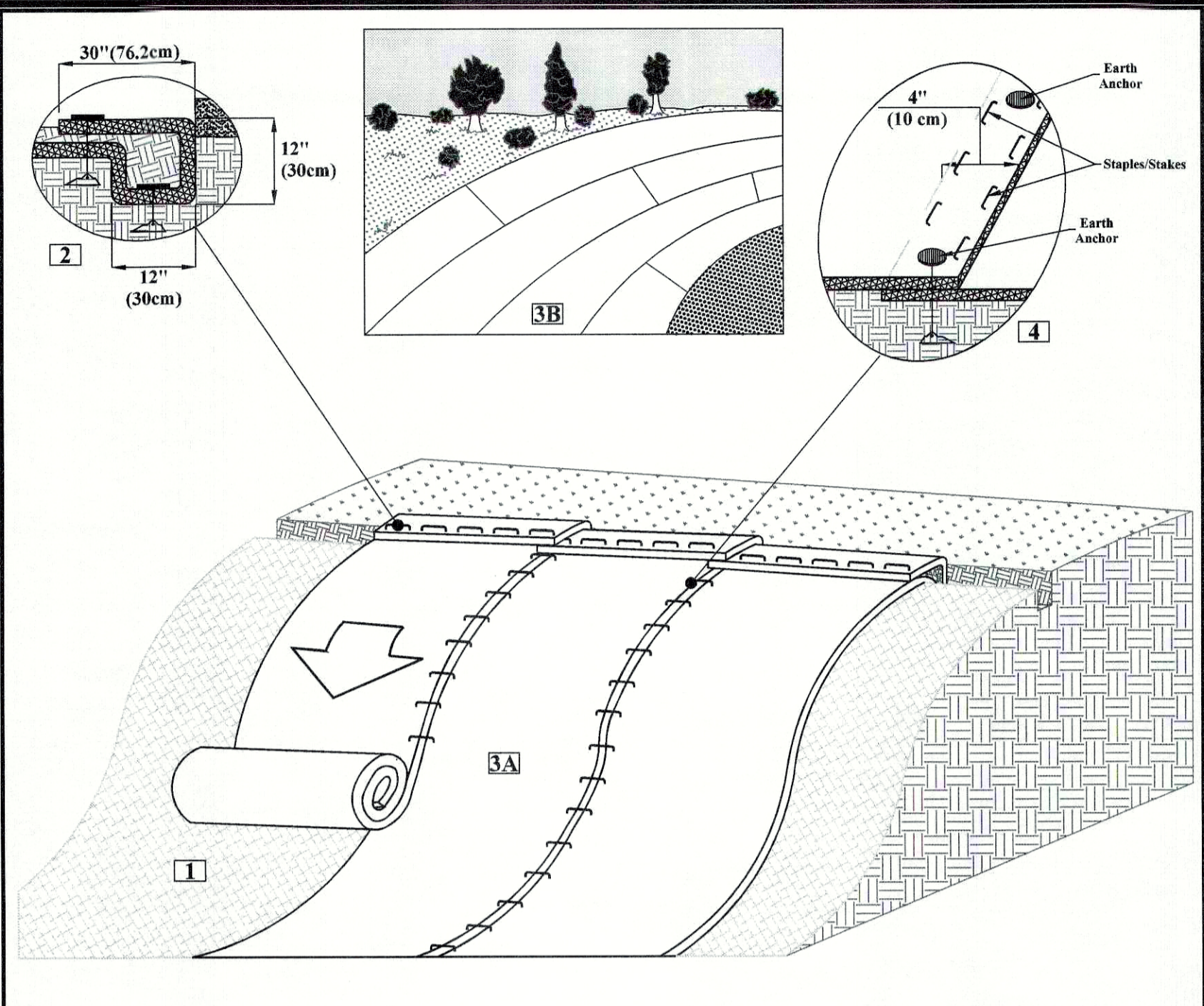
E-5 STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



E-6 SOIL STOCKPILE DETAIL
NOT TO SCALE

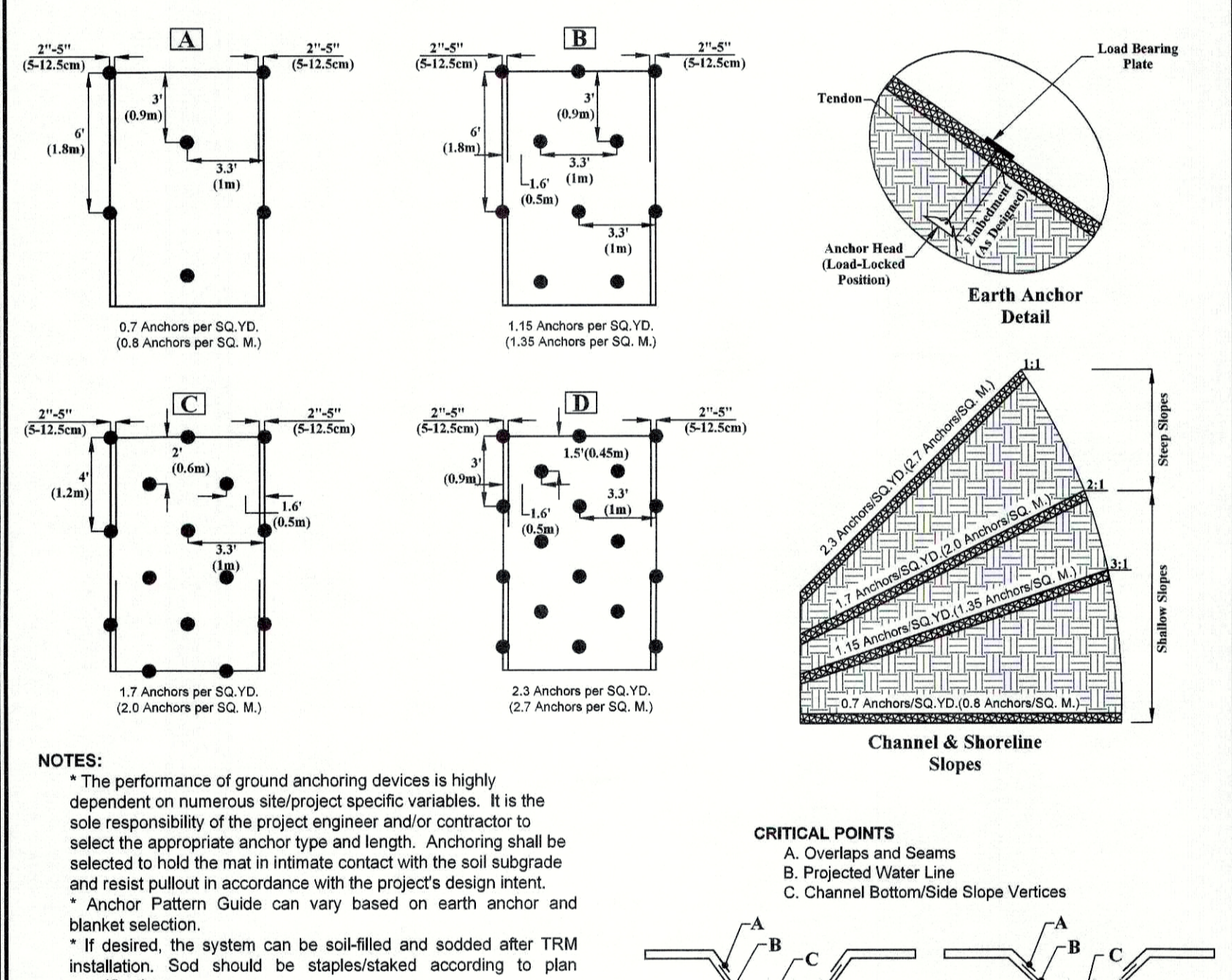


E-7 TREE PROTECTION PLAN FOR GRADE CHANGE DETAIL
NOT TO SCALE

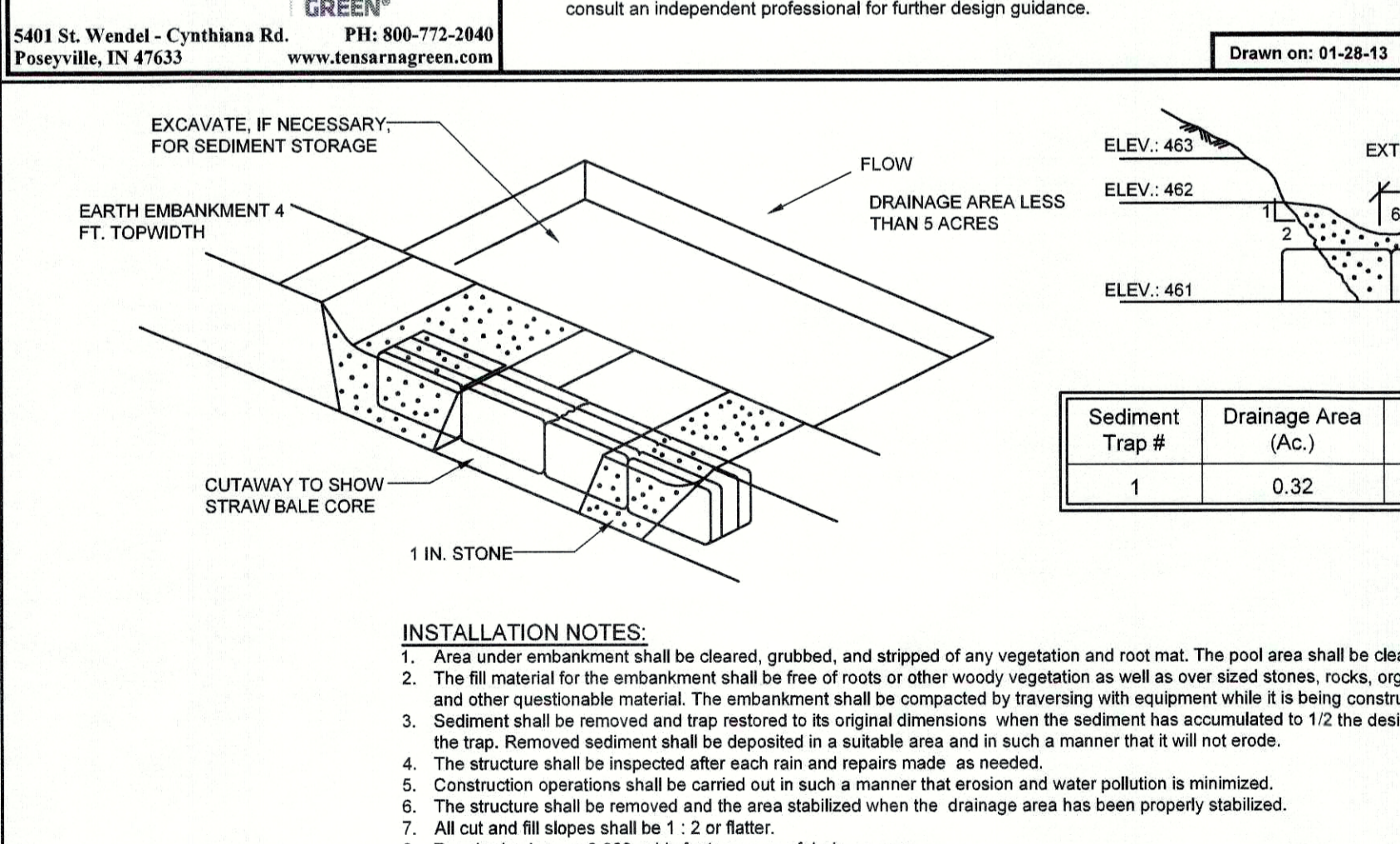


Tensor NORTH AMERICAN GREEN
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 Poseyville, IN 47633 www.tensorangreen.com

Drawn on: 01-28-13



E-8 SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL
NOT TO SCALE



E-8 STONE OUTLET SEDIMENT TRAP DETAIL
NOT TO SCALE

SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL

- Prepare soil before installing high-performance turf reinforcement mats (HP-TRMs), including any necessary application of lime, fertilizer, and seed.
- Begin at the top of the slope by anchoring the HP-TRMs in a 12" (30 cm) deep x 12" (30cm) wide trench with approximately 30" (76.2 cm) of HP-TRMs extended beyond the up-slope portion of the trench. Anchor the HP-TRMs with an alternating row of staples and anchors approximately 30" (76.2 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Fold remaining 30" (76.2 cm) portion of HP-TRMs back over seed and compacted soil. Secure HP-TRMs over compacted soil with an alternating row of staples/anchors spaced approximately 18" (45 cm) apart across the width of the HP-TRMs.
- Roll the HP-TRMs (A) down or (B) horizontally across the slope. HP-TRMs will unroll with appropriate side against the soil surface. All HP-TRMs must be securely fastened to soil surface by placing staples/anchors in appropriate locations as shown in the staple pattern guide.
- The edges of parallel HP-TRMs must be stapled between earth anchors with approximately 4" (10 cm) overlap depending on the HP-TRM type. For curved sections, adjust the overlap edges of parallel HP-TRMs accordingly with a minimum of 4" (10 cm) overlap to accommodate transitional segments.

NOTE:
 In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the HP-TRMs.

SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL

- Prepare soil before installing high-performance turf reinforcement mats (HP-TRMs), including any necessary application of lime, fertilizer, and seed.
- Begin at the top of the slope by anchoring the HP-TRMs in a 6" (15 cm) deep x 6" (15cm) wide trench with approximately 12" (30 cm) of HP-TRMs extended beyond the up-slope portion of the trench. Anchor the HP-TRMs with a row of staples and anchors approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to compacted soil and fold remaining 12" (30 cm) portion of HP-TRMs back over seed and compacted soil. Secure HP-TRMs over compacted soil with a row of staples/stakes spaced approximately 12" (30 cm) apart across the width of the HP-TRMs.
- Roll the HP-TRMs (A) down or (B) horizontally across the slope. HP-TRMs will unroll with appropriate side against the soil surface. All HP-TRMs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
- The edges of parallel HP-TRMs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the HP-TRM type.
- Consecutive HP-TRMs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire HP-TRM width.

NOTE:
 In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the HP-TRMs.

E&S C DETAILS

REVISIONS:

No.	Date	Comments
1	01/29/13	P.L.E. Comments
2	02/01/13	P.L.E. Comments
3	02/01/13	DEF Comments
4	02/01/13	DEF Comments
5	02/01/13	DEF Comments
6	02/01/13	DEF Comments
7	02/01/13	DEF Comments
8	02/01/13	DEF Comments
9	02/01/13	DEF Comments
10	02/01/13	WCHD Comments
11	02/01/13	WCHD Comments

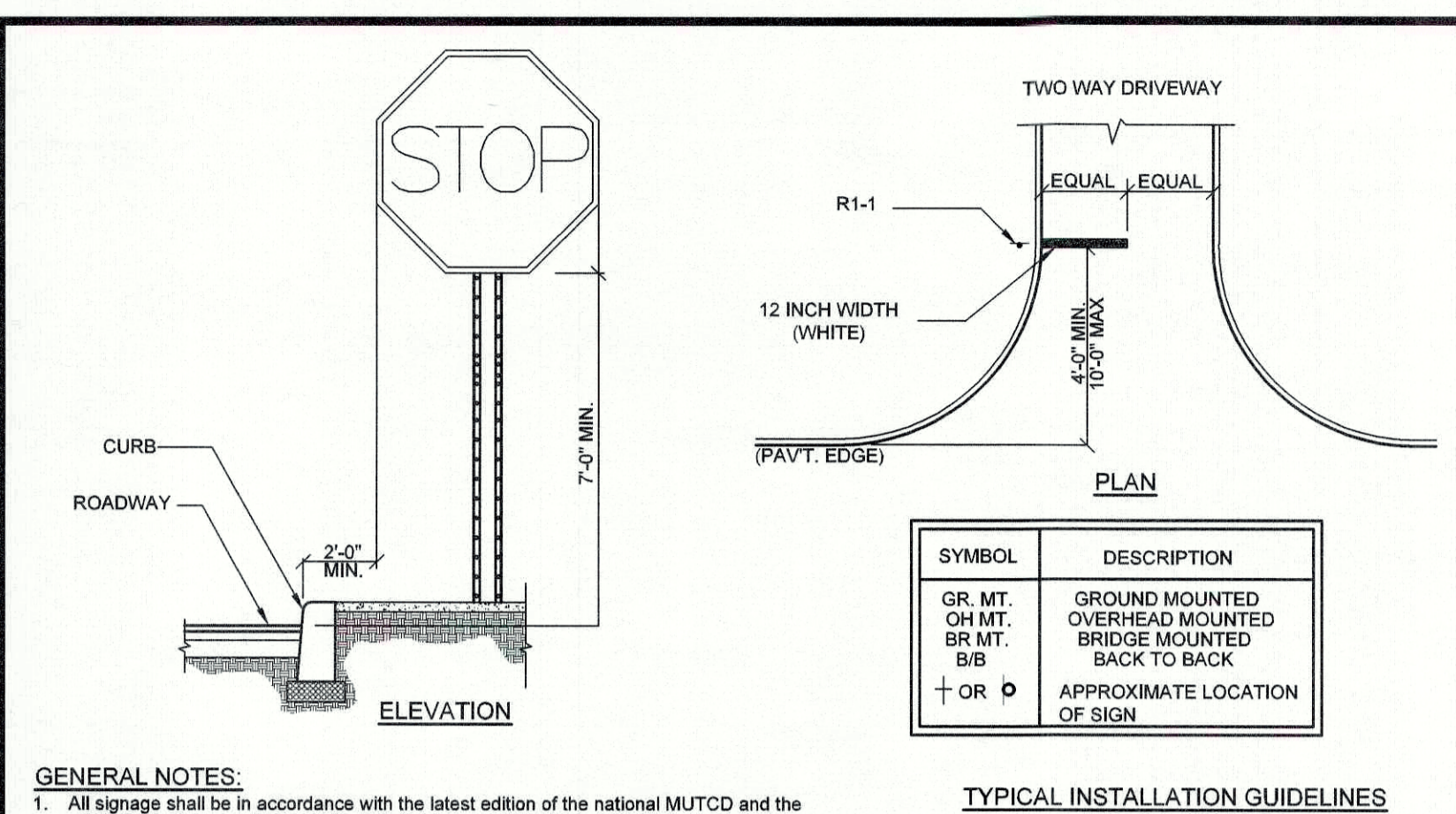
SCALE: NTS

DRAWN BY: JR

DATE: 10-26-18

THE WEYANT
 PREPARED FOR
 2040 CROMPOND ROAD
 Westchester County, New York

Sheet C-501



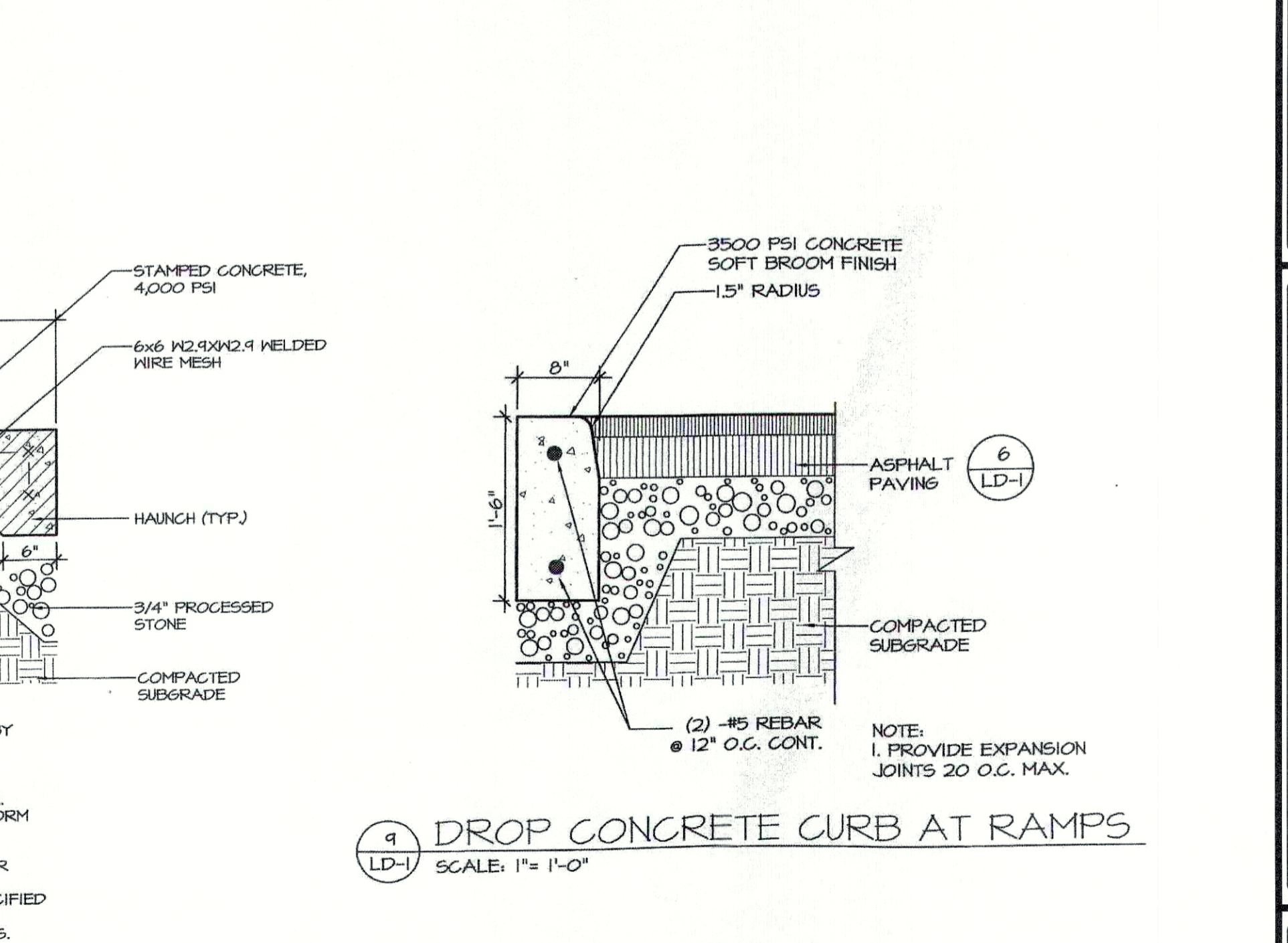
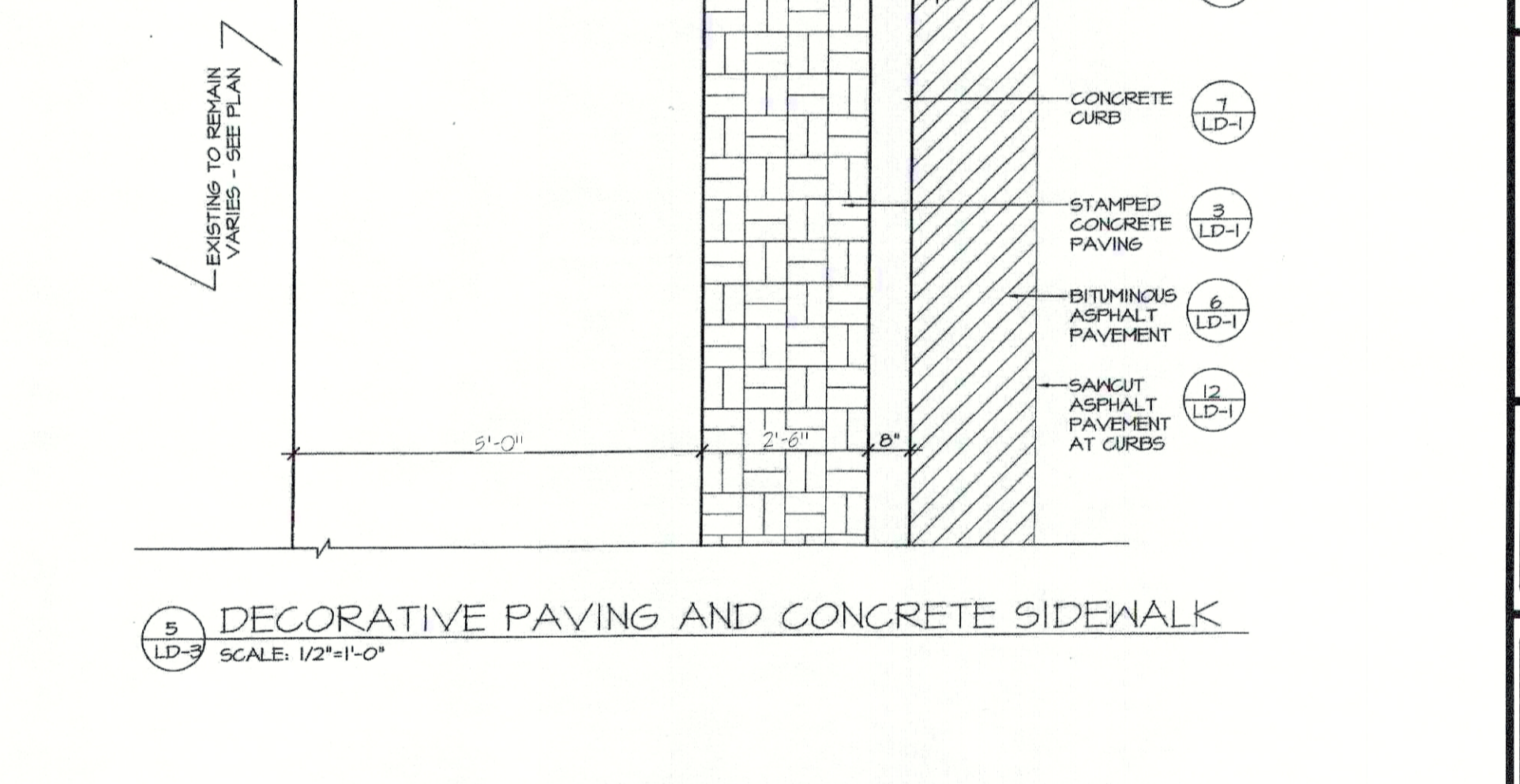
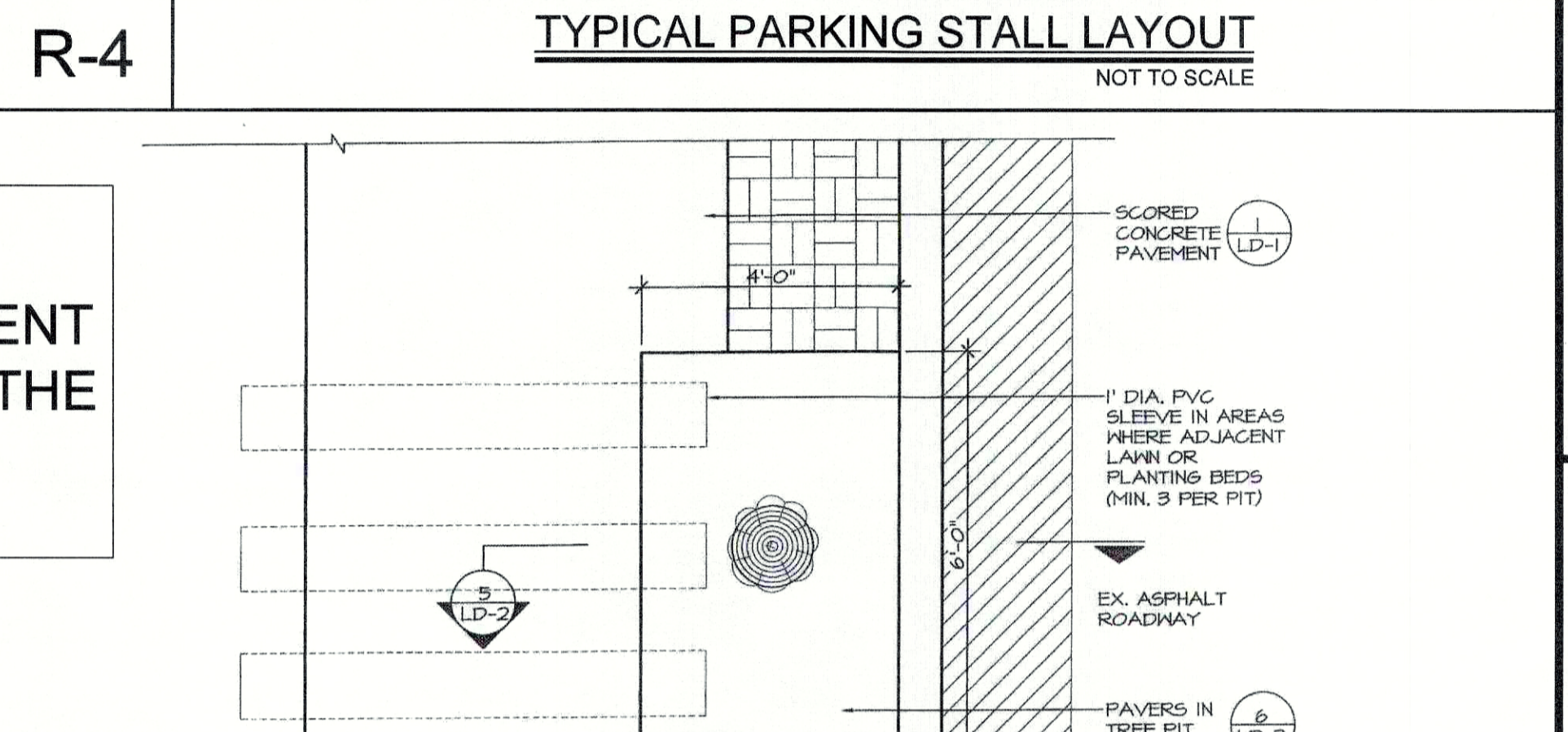
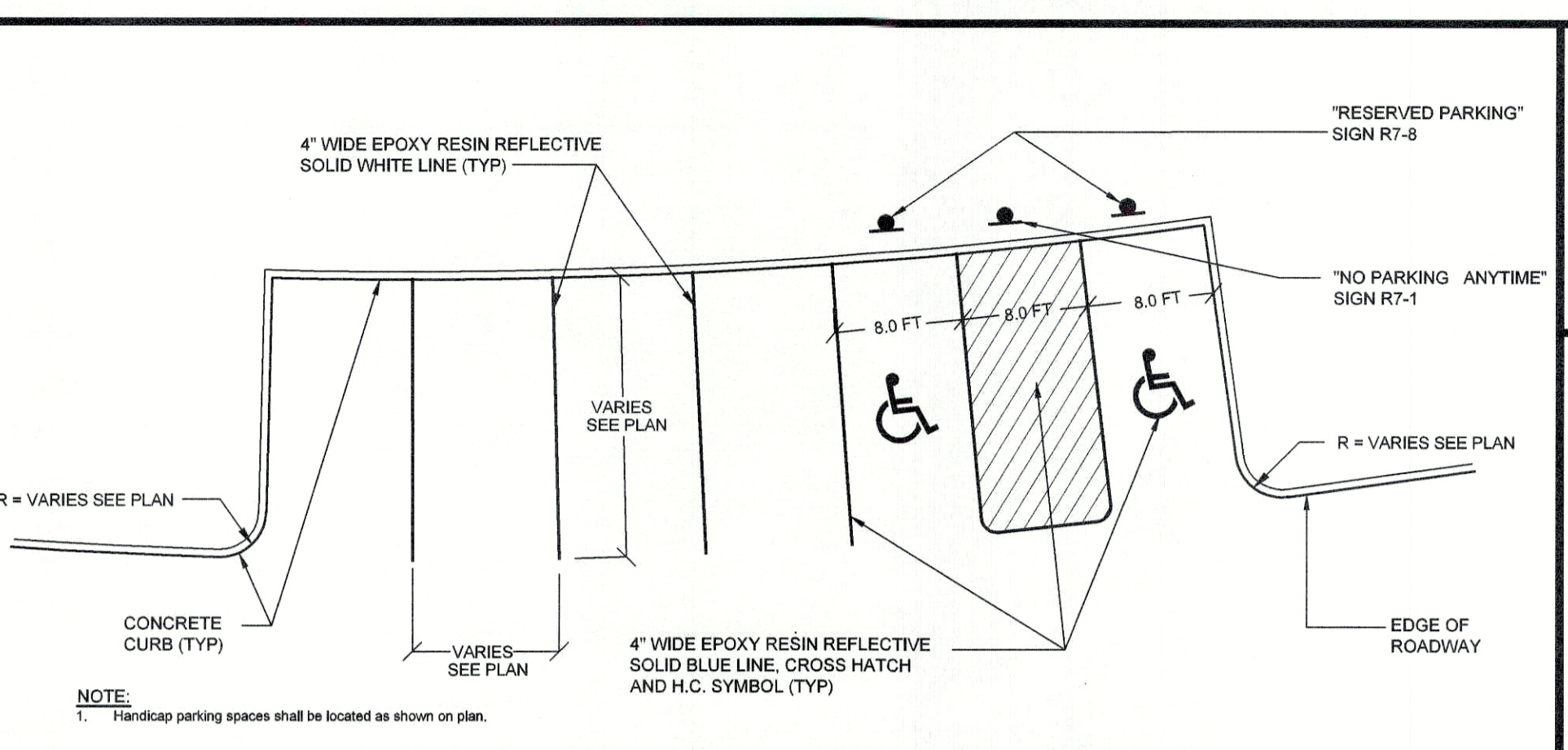
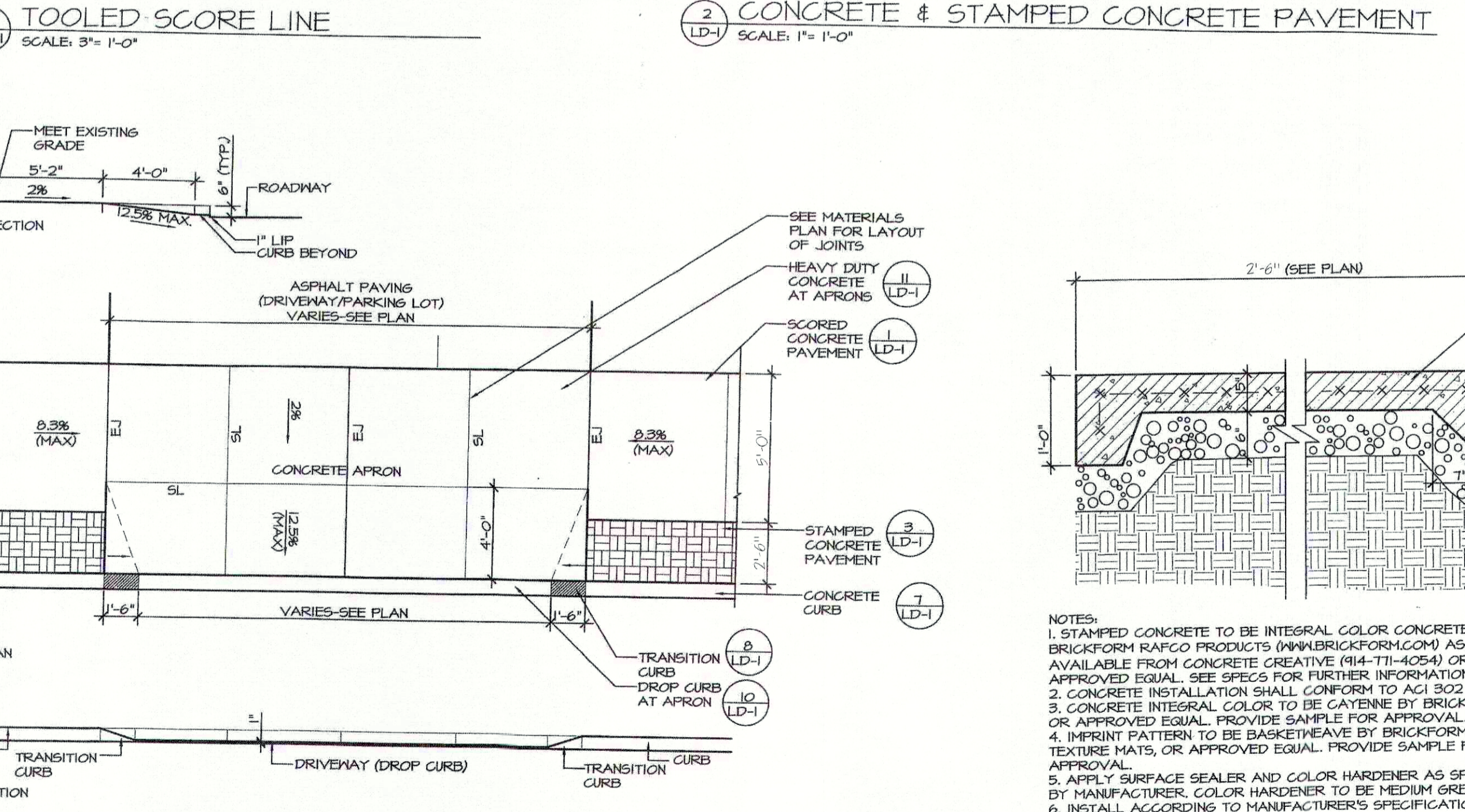
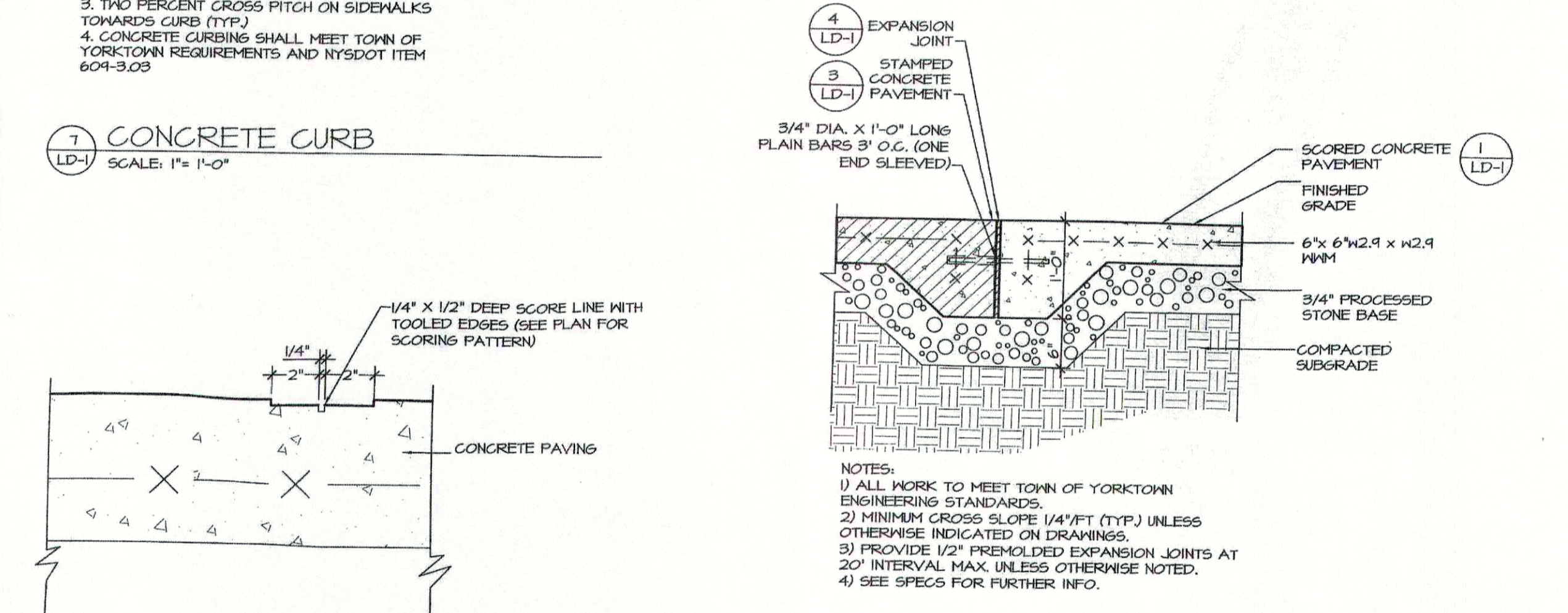
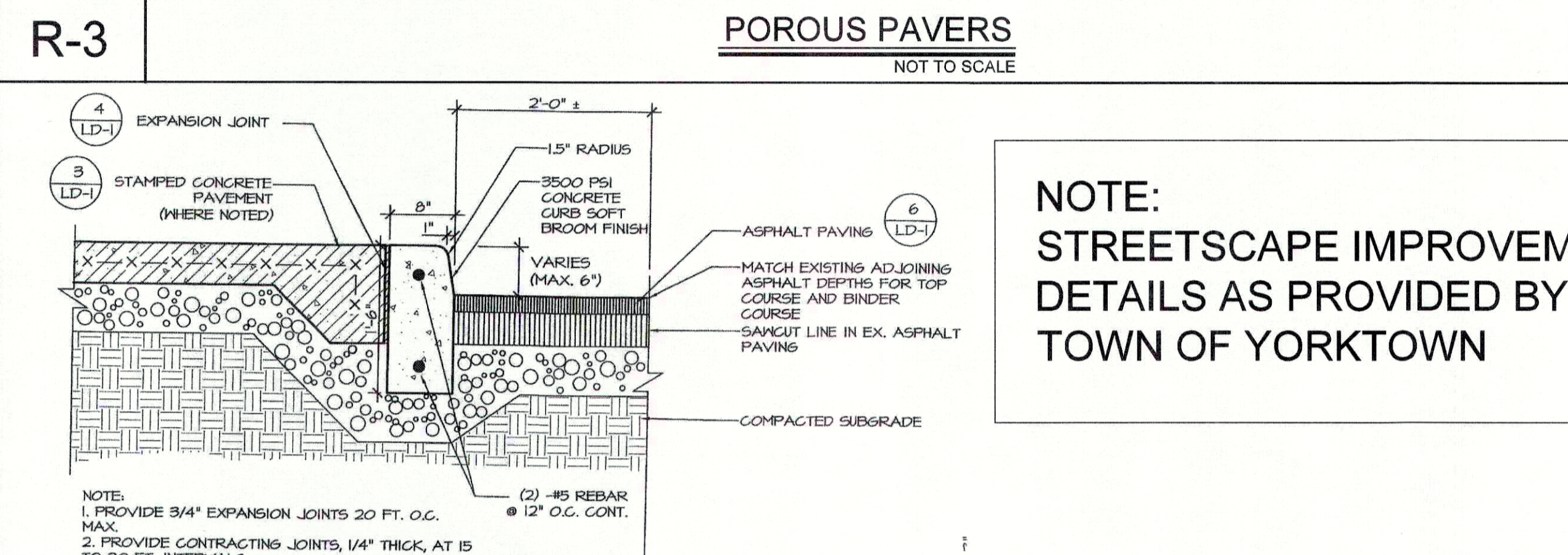
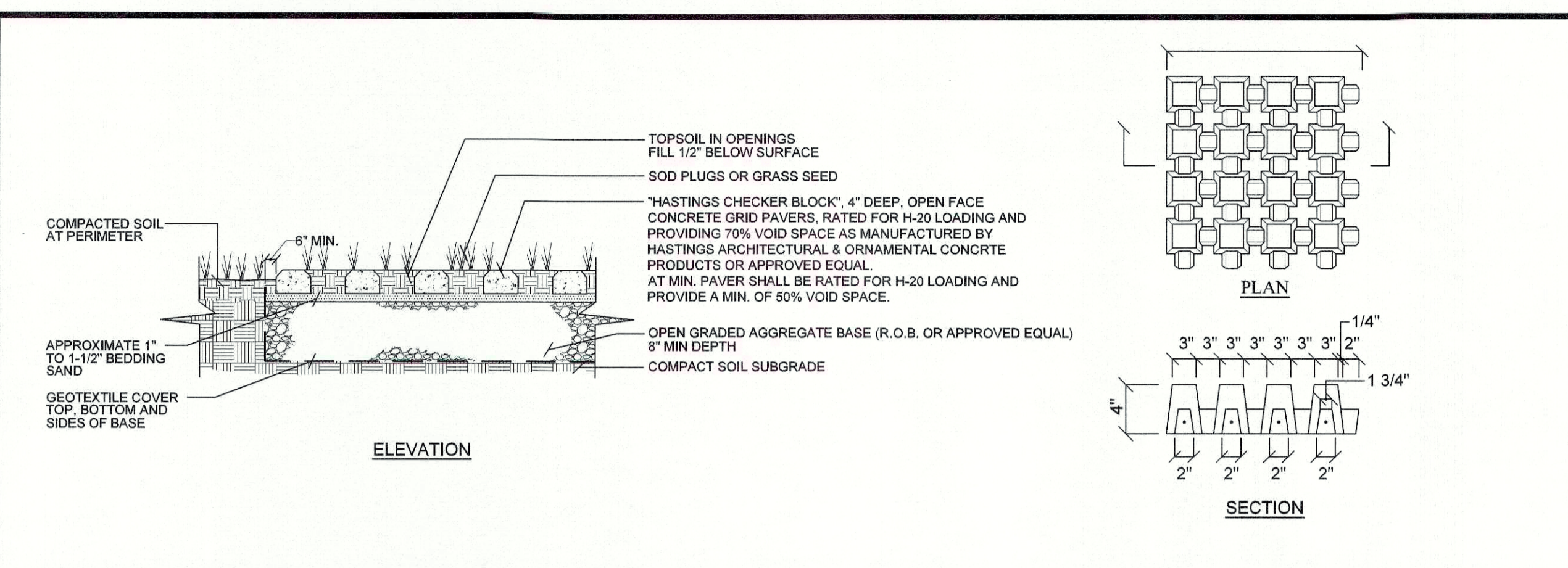
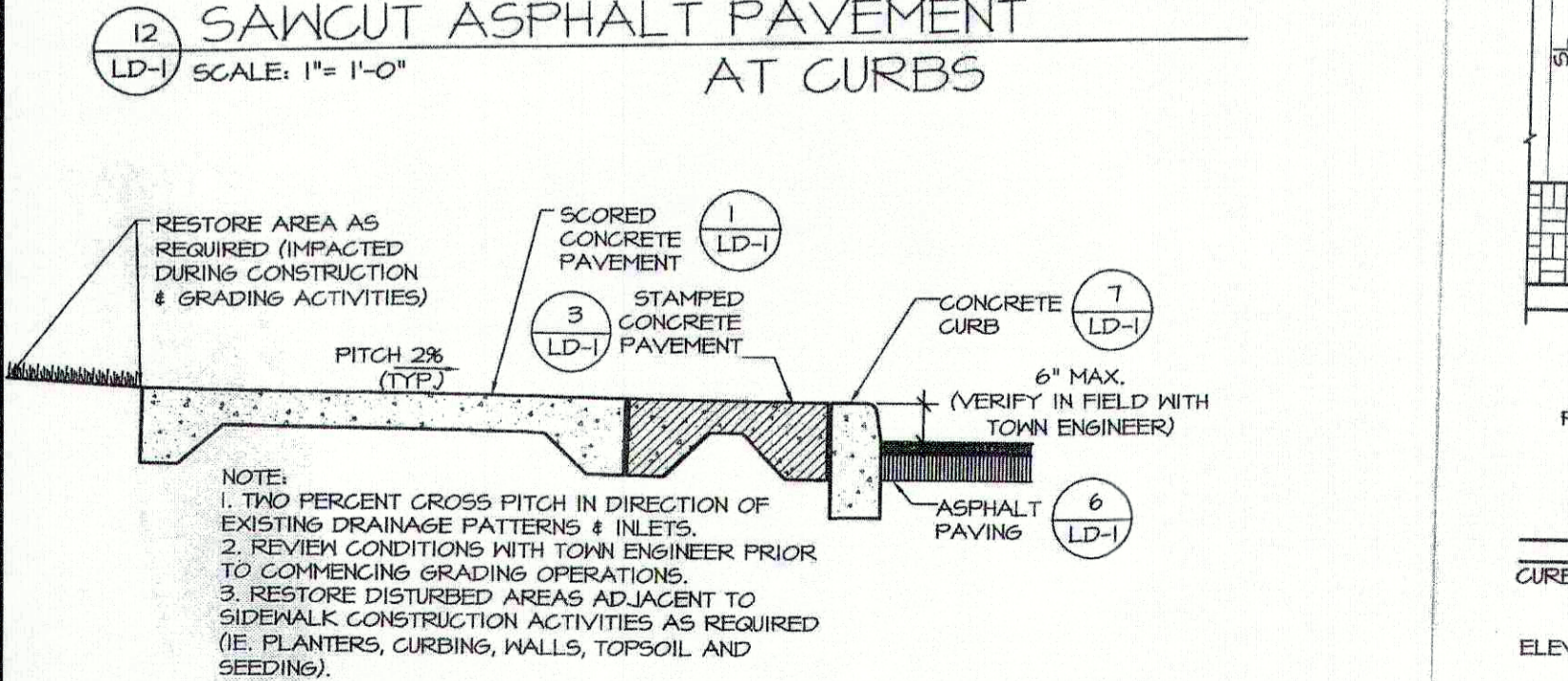
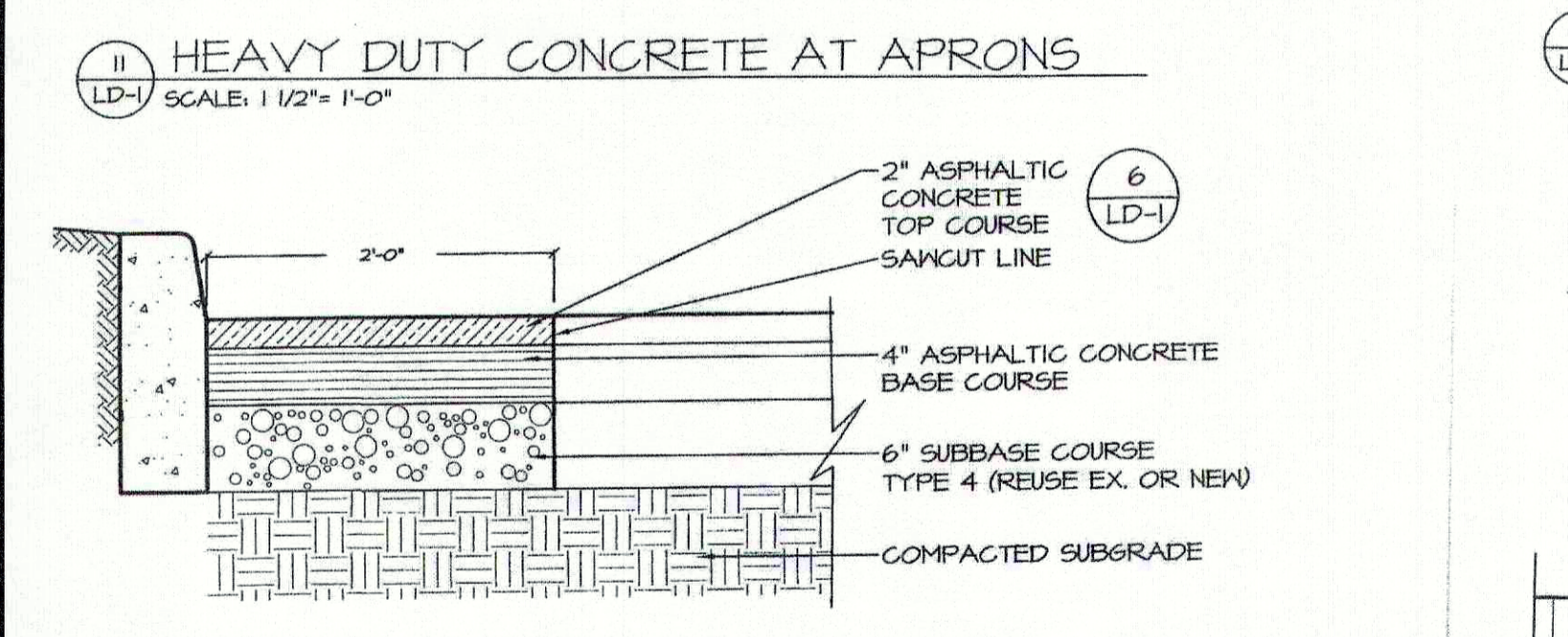
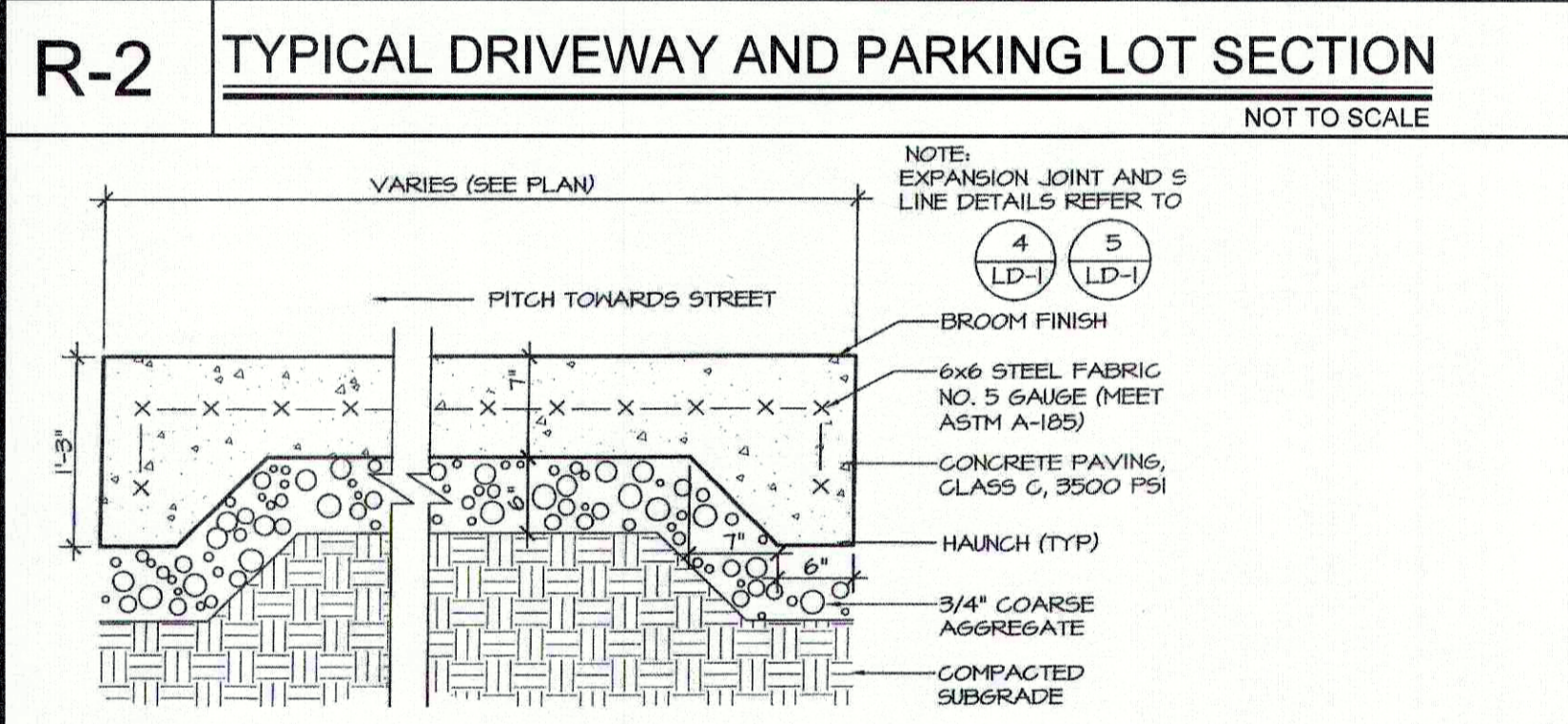
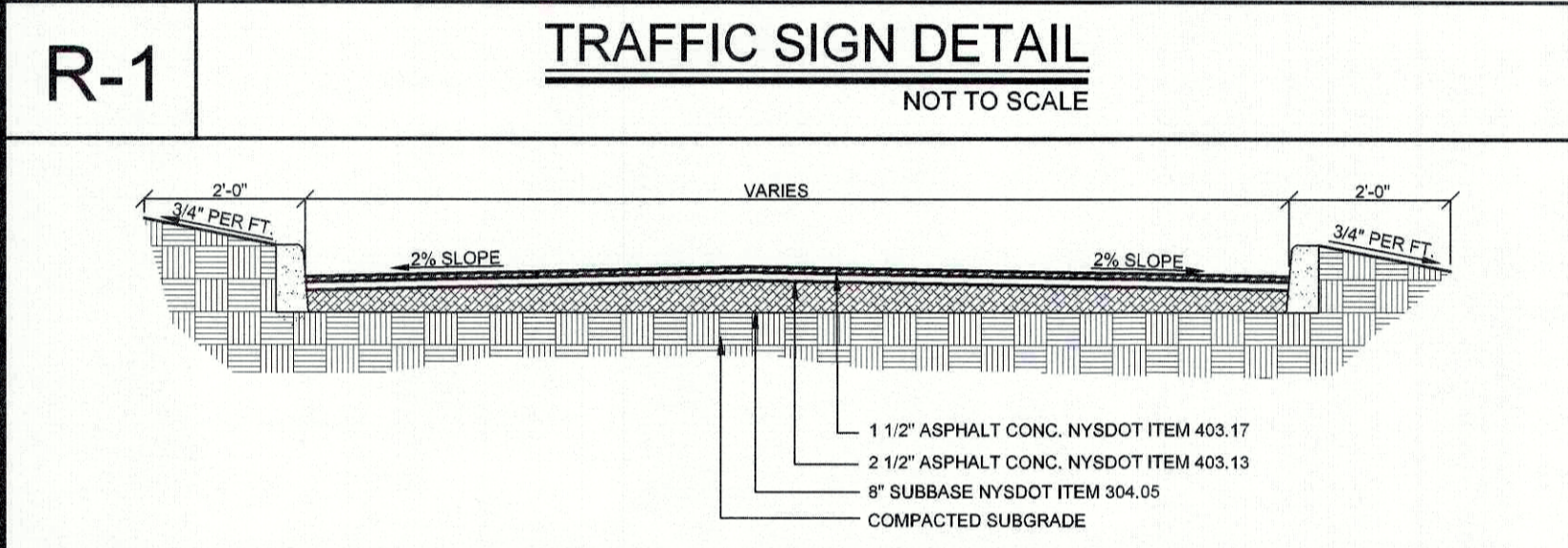
GENERAL NOTES:

- All signage shall be in accordance with the latest edition of the national MUTCD and the N.Y.S Supplement (MUTCD), September 2007, including the following:
 - A. Letter size and series
 - B. Legend and background color
 - C. Reflectivity
 - D. Size of sign
- The type of characters as specified in the standard specifications shall be as follows:

MUTCD CODE LETTER	TYPE OF CHARACTER
R, P, W, M	TYPE IV OR V
G, I	TYPE IV
R, P, W, M	TYPE IV OR V
- Sign locations as shown on plans are approximate. The Contractor shall relocate existing signs and install new signs in accordance with the MUTCD, latest edition. The Contractor shall contact the Town Engineer to discuss/resolve problem areas.
- Except where otherwise specified, parking signs shall be placed facing approaching traffic at an angle of between 30 and 45 degrees with the line of traffic flow. Parking signs shall be placed at each end of a regulation (single-headed arrows) and, within the regulation (double-headed arrows), at intervals not to exceed 200 ft.
- Where new signs are installed the Contractor shall affix a label to the back of the sign panel. This label will show the date of installation and identification numbers.
- Placement of W3-17 sign is prescribed in the General Municipal Law.

TYPICAL INSTALLATION GUIDELINES

SYMBOL	DESCRIPTION
GR. MT.	GROUND MOUNTED
OH MT.	OVERHEAD MOUNTED
BR MT.	BRIDGE MOUNTED
BB	BACK TO BACK
OR	APPROXIMATE LOCATION OF SIGN



NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 1209 (2) OF THE NEW YORK STATE EDUCATION LAW.

R-3 POROUS PAVERS
NOT TO SCALE

R-4 TYPICAL PARKING STALL LAYOUT
NOT TO SCALE

NOTE:
STREETSCAPE IMPROVEMENT
DETAILS AS PROVIDED BY THE
TOWN OF YORKTOWN

Site Design Consultants
Civil Engineers • Land Planners
251-L Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com

SEAL
JOSEPH C. KLIMA, P.E.
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
EXPIRES 12/31/2012
NYS Lic. No. 64411

Revisions:

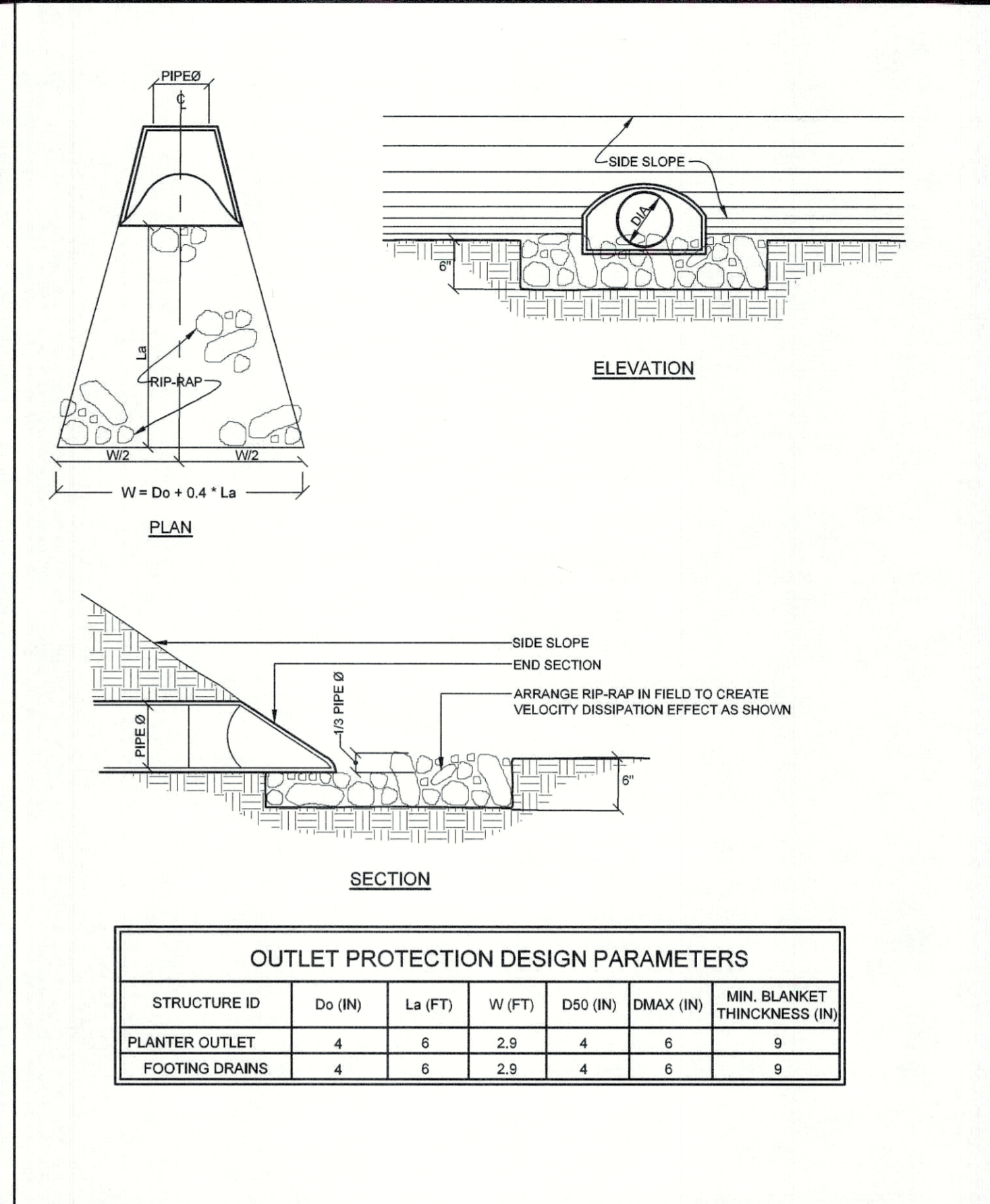
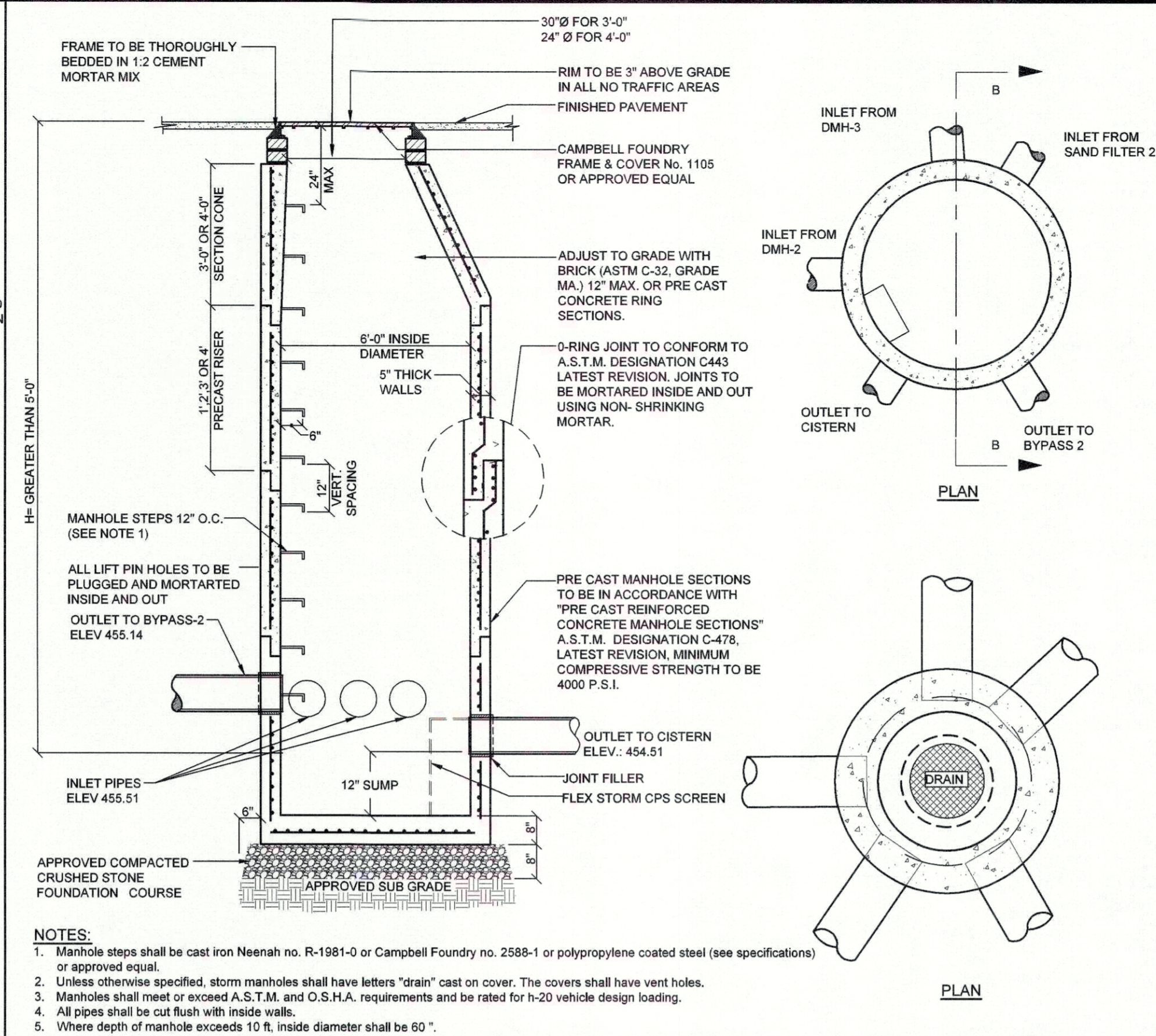
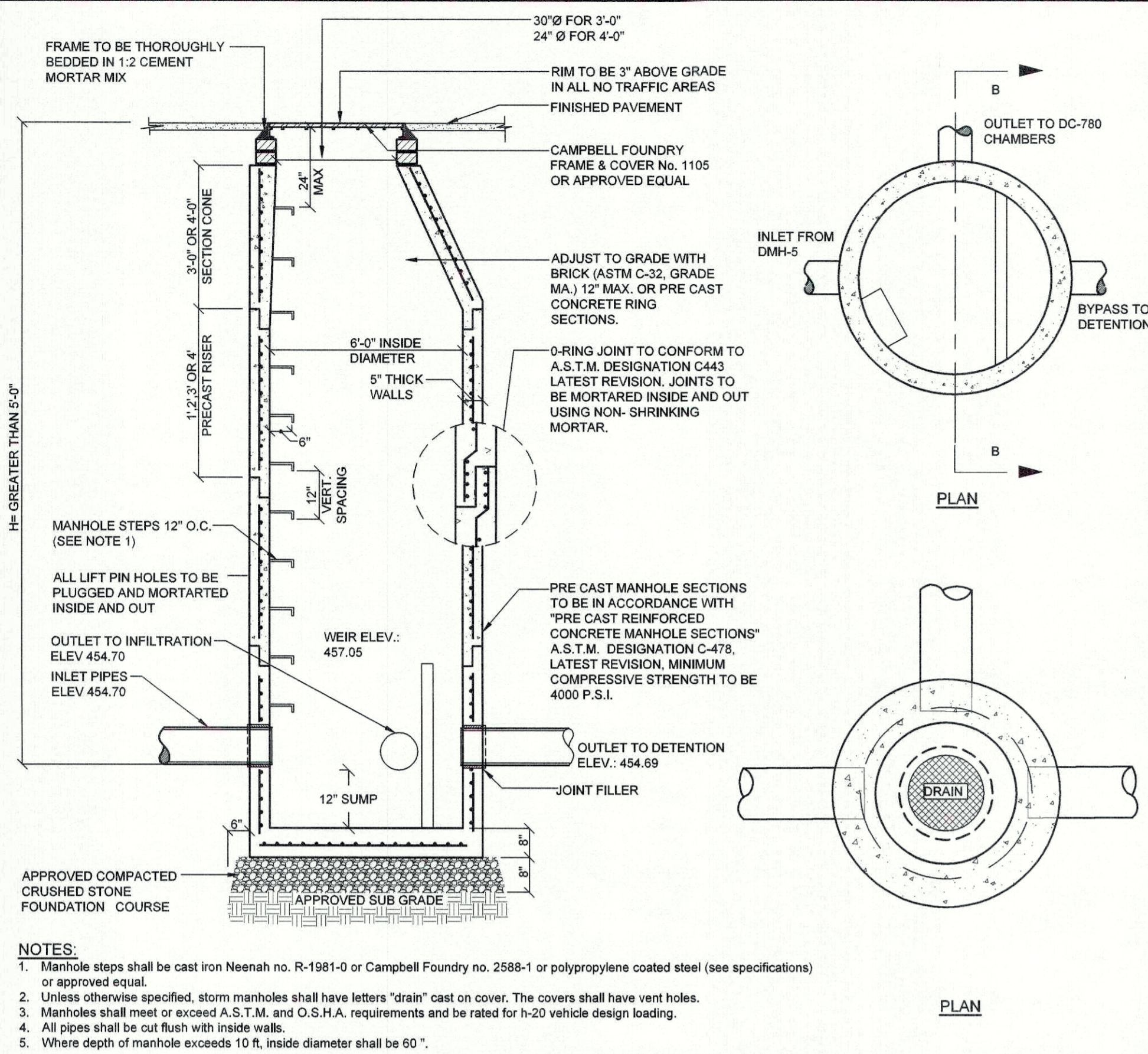
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2	5/29/19	T.E. Comments
3	10/17/19	D.E.P. Comments
4	11/19/19	D.E.P. Comments
5	4/22/20	D.E.P. Comments
6	7/22/20	D.E.P. Comments
7	12/22/20	D.E.P. Comments
8	3/18/21	D.E.P. Comments
9	9/24/21	W.C.H.D. Comments
10	9/24/21	W.C.H.D. Comments
11	3/21/22	W.C.H.D. Comments

SCALE: N.T.S.
DRAWN BY: JR
DATE: 10-26-18

SITE DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
2040 CROMPOUND ROAD
Westchester County, New York
Town of Yorktown

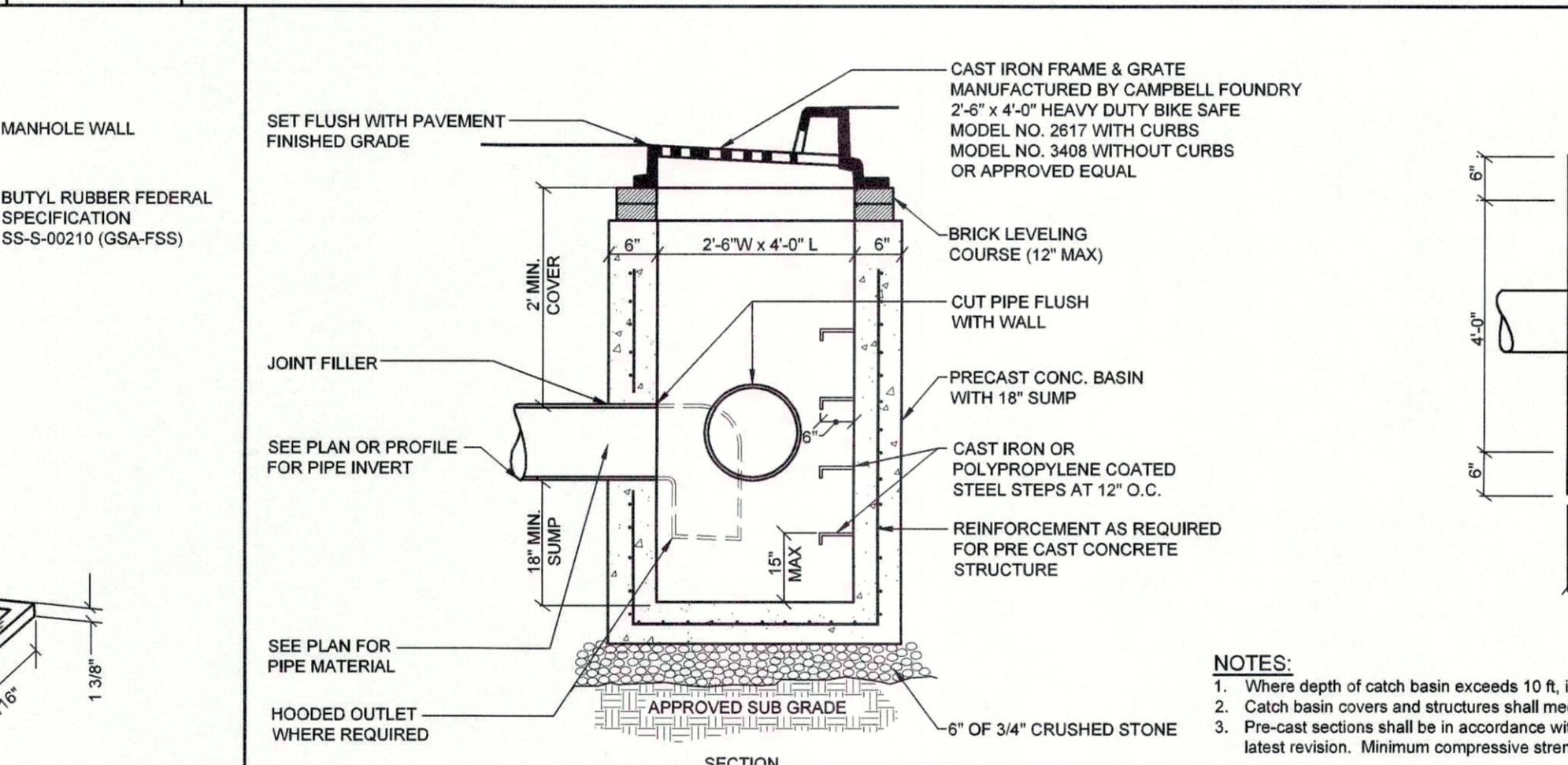
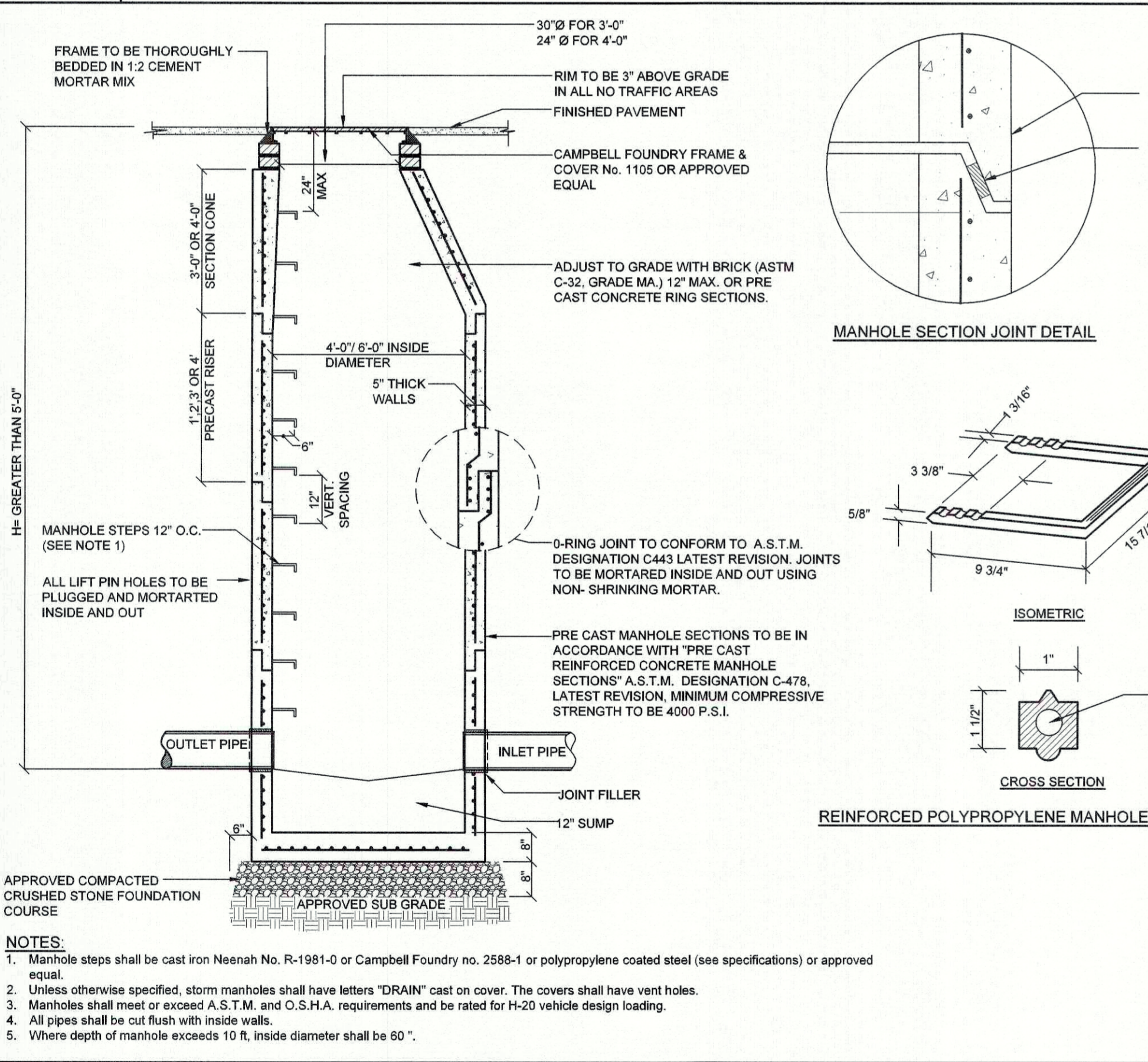
Sheet C-502



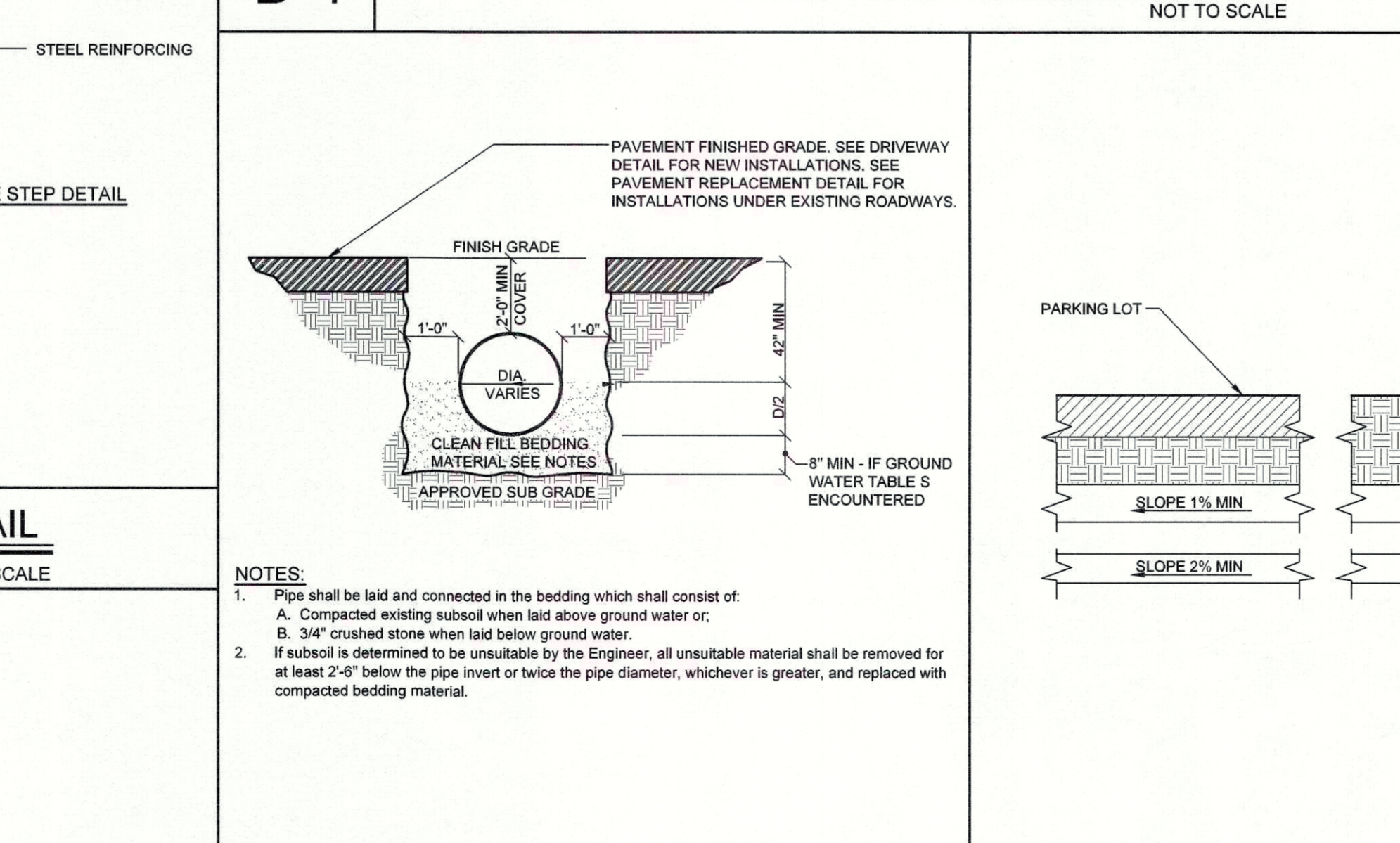
D-1 **STORM BYPASS 3 STRUCTURE DETAIL**
NOT TO SCALE

D-1 **STORM BYPASS 2 STRUCTURE DETAIL**
NOT TO SCALE

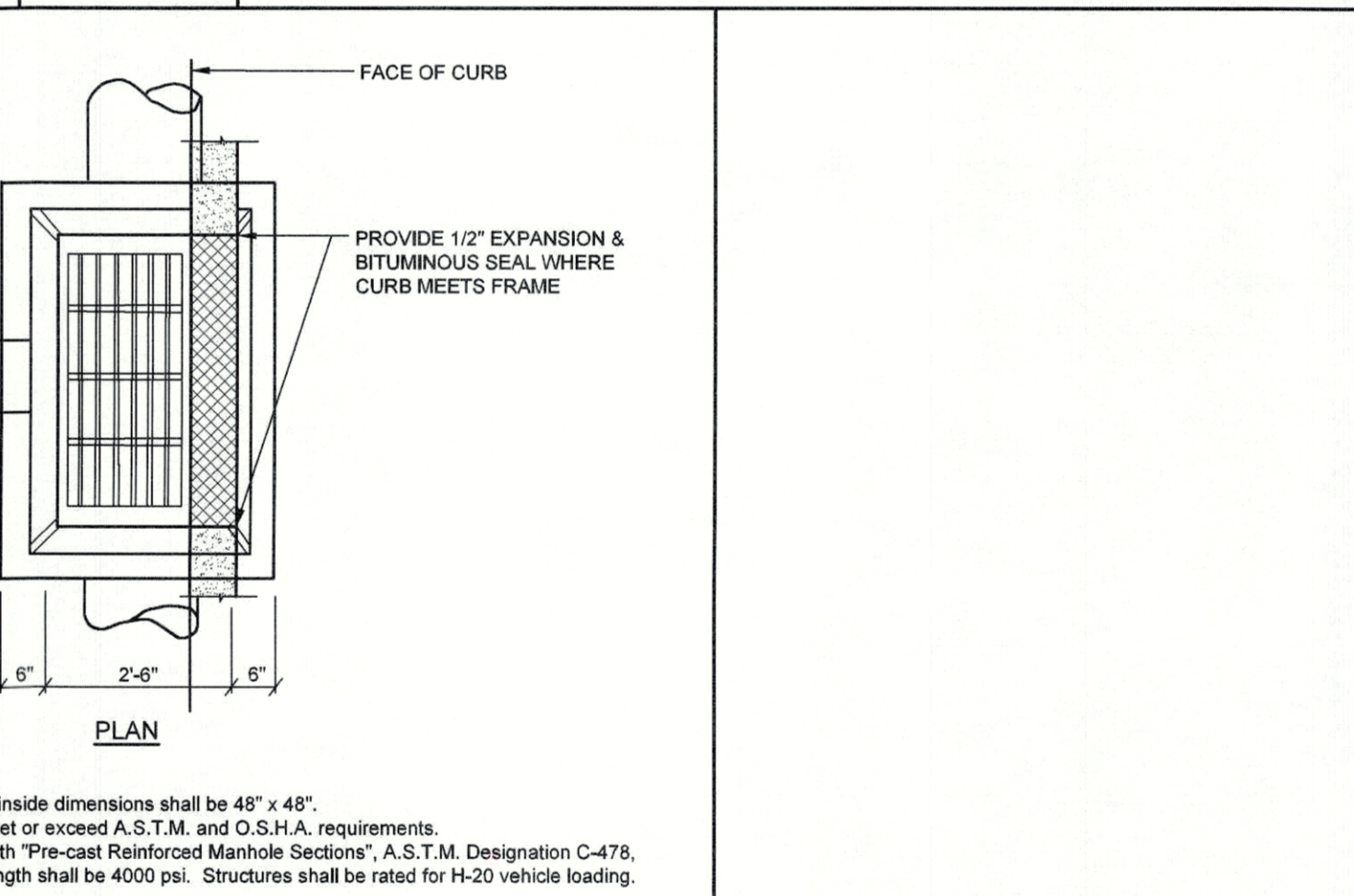
D-7 **RIP-RAP APRON/ENERGY DISSIPATOR DETAIL**
NOT TO SCALE



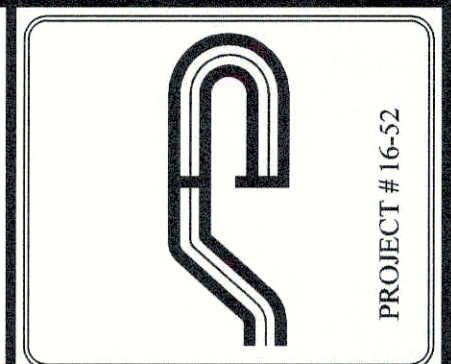
D-4 **TYPICAL CATCH BASIN DETAIL**
NOT TO SCALE



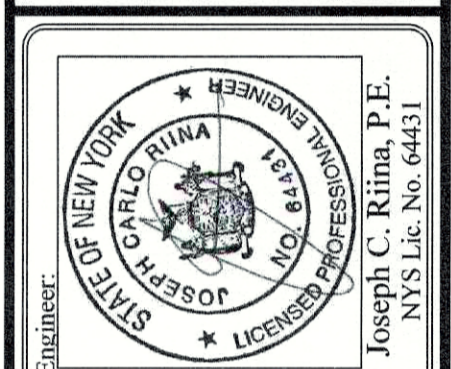
D-5 **STORM PIPE BEDDING DETAIL**
NOT TO SCALE



D-6 **ROOF & FOOTING DRAIN CONNECTION DETAIL**
NOT TO SCALE



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Revisions:

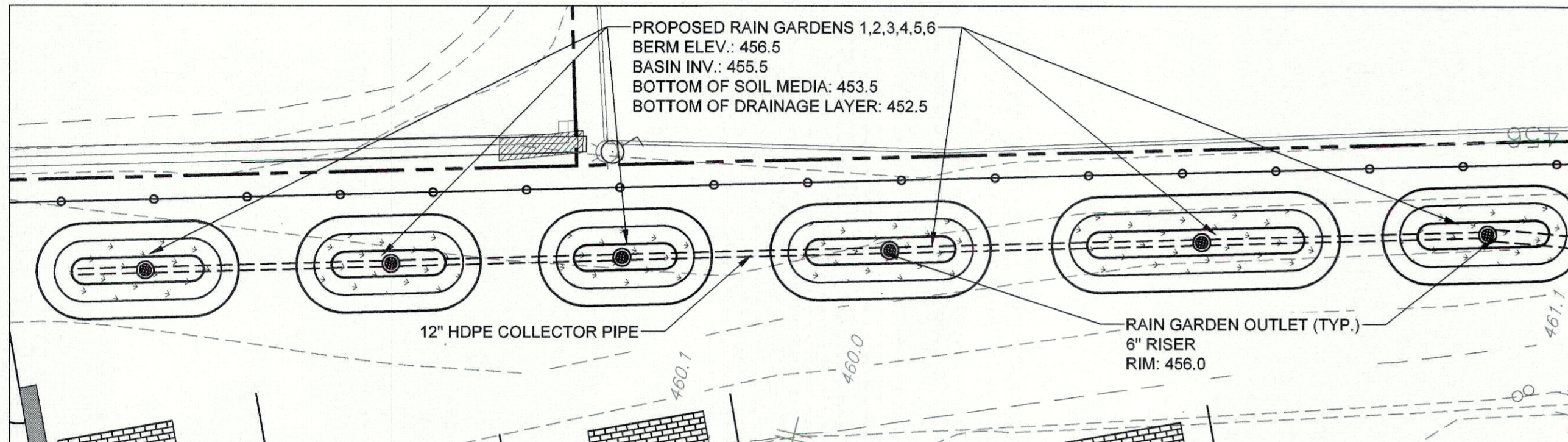
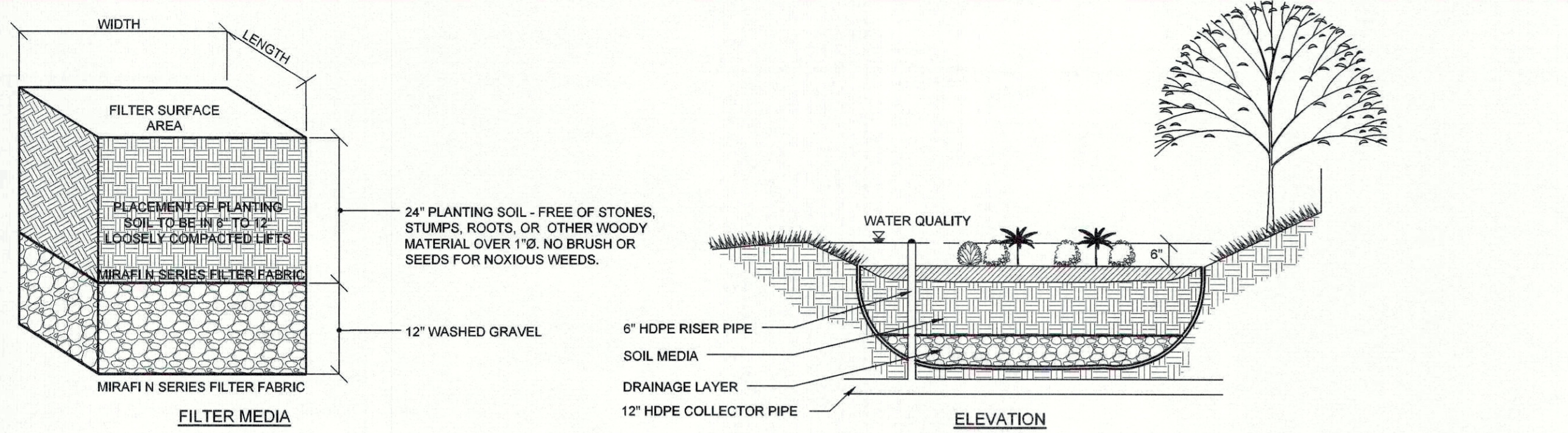
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5	4/2/20	DEP Comments
6	7/22/20	DEP Comments
7	11/18/20	DEP Comments
8	3/18/21	DEP Comments
9	4/8/21	DEP Comments
10	9/24/21	DEP Comments
11	5/21/22	DEP Comments

SCALE: NTS
DRAWN BY: JR
DATE: 10-26-18

DRAINAGE DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
2040 CROMPOD ROAD
Town of Yorktown
Westchester County, New York

E:\2018\18-50 WEYANT - DEVELOPER\ENGINEERING\CADD\18-50 WEYANT MANOR - DETAIL\DWG\18-50 WEYANT MANOR - DETAIL\18-50 WEYANT MANOR - DETAIL.DWG



PLANT SPECIFICATIONS:

- Suggested Shrubs List**
 WITCH HAZEL (*Hamelis virginiana*)
 WINTERBERRY (*Ilex verticillata*)
 ARROWWOOD (*Viburnum dentatum*)
 BROOK-SIDE ALDER (*Alnus serrulata*)
 RED-OISER DOGWOOD (*Cornus stolonifera*)
 SWEET PEPPERBUSH (*Clethra alnifolia*)

- Suggested Herbaceous Plant List**
 CINNAMON FERN (*Osmunda cinnamomea*)
 CUTLEAF CONEFLOWER (*Rudbeckia laciniata*)
 WOOLGRASS (*Scirpus cypripus*)
 NEW ENGLAND ASTER (*Aster nove-angliae*)
 FOX SEDGE (*Carex oshpinoidea*)
 SPOTTED JOE-PYE WEEB (*Eupatorium maculatum*)
 SWITCH GRASS (*Panicum virgatum*)
 GREAT BLUE LOBELIA (*Lobelia siphatica*)
 WILD BERGAMOT (*Monarda fistulosa*)
 RED MILKWEED (*Asclepias incarnata*)

SOIL MEDIA SPECIFICATIONS:

THE SOIL FOR RAIN GARDEN AREAS SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER OBJECTS LARGER THAN 50 MM IN DIAMETER. THE RAIN GARDEN SOIL SHALL BE VISIBLY FREE OF NOXIOUS WEEDS. RAIN GARDEN SOIL SHALL BE A WELL BLENDED MIXTURE OF THREE(3) PARTS SAND AND ONE(1) PART TOPSOIL BY VOLUME. SAND SHALL MEET THE REQUIREMENTS OF DOT §703-07 CONCRETE SAND. TOPSOIL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF §713-01 TOPSOIL FOR TOPSOIL TYPE A, EXCEPT AS FOLLOWS:

- ALL TOPSOIL SHALL BE SAMPLED AND TESTED, REGARDLESS OF THE SOURCE
 - SAMPLING OF TOPSOIL, AMENDED TOPSOIL, AND THE RAIN GARDEN SOIL SHALL BE DONE BY THE CONTRACTOR/ SUPPLIER. SAMPLING PROTOCOLS SHALL BE IN ACCORDANCE WITH §713-01 TOPSOIL.
- THE RAIN GARDEN SOIL SHALL HAVE A PH RANGE OF 5.2 TO 7.6, AND AN ORGANIC CONTENT OF 3-7%. SOIL AMENDMENTS TO INCREASE ORGANIC CONTENT SHALL BE PEAT MOSS IN ACCORDANCE WITH §713-15 ORGANIC MATTER.

DRAINAGE LAYER SPECIFICATIONS:

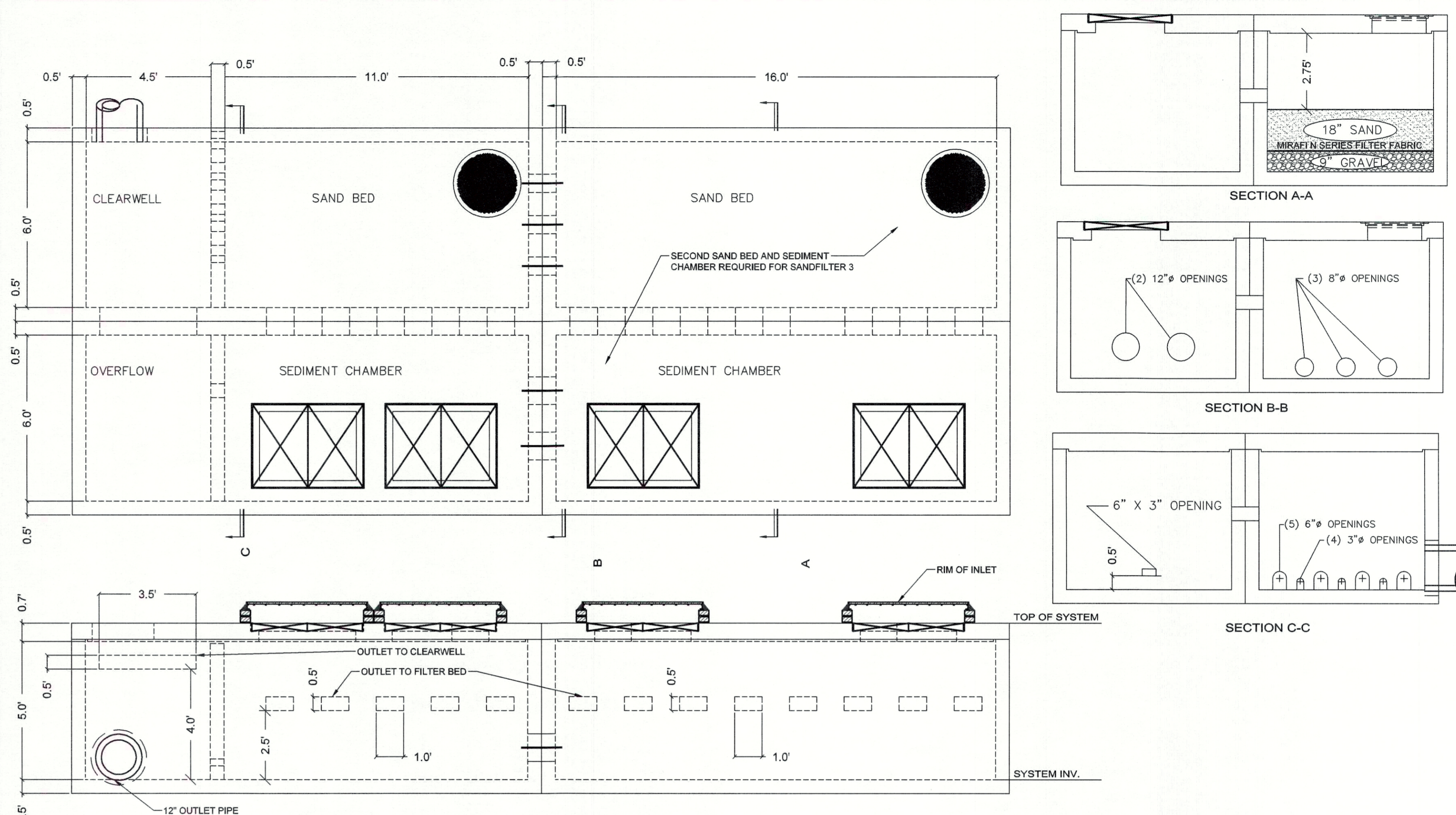
POROSITY - 0.40

NOTE:

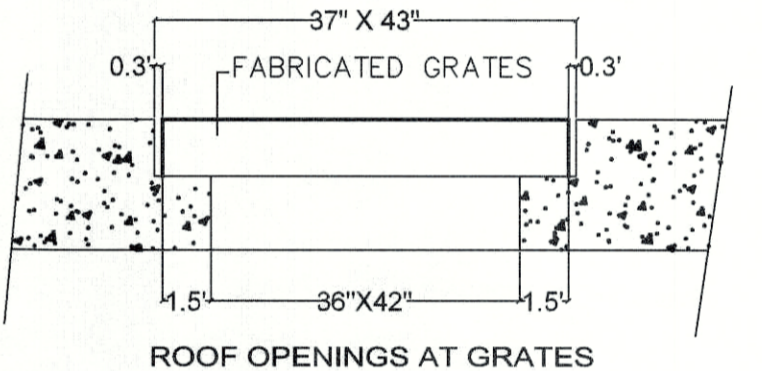
1. All shrubs shall be placed 5' O.C., and herbaceous plants shall be spaced 18" O.C.
2. The upland side of the rain garden shall be protected from upgradient subsurface conditions with the installation of either a 12" thick clay barrier or placement of 6 mil polyethylene sheeting along the excavated side-walls of the drainage layers.

PLANTING SOIL SPECIFICATIONS:

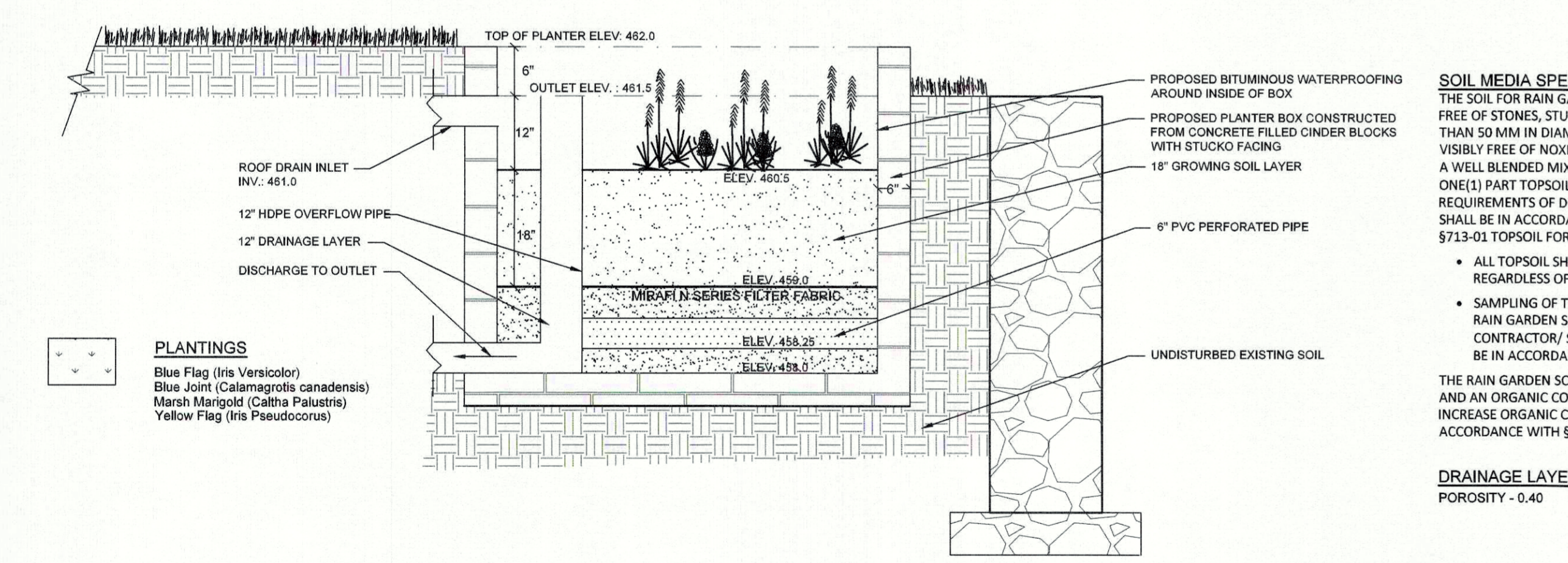
- CLASSIFICATION SM OR ML-UNIFIED SOIL CLASSIFICATION SYSTEM
- PERMEABILITY 1.0 FEET PER DAY OR 0.5 INCHES PER HOUR
- PH RANGE 5.2 TO 7.0%
- ORGANIC MATTER 1.5 TO 4.0%
- MAGNESIUM 35 LBS / ACRE PER MIN.
- PHOSPHORUS 75 LBS / ACRE PER MIN.
- POTASSIUM 85 LBS / ACRE PER MIN.
- SOLUBLE SALTS < 500 PPM
- CLAY UP TO 5%
- SILT UP TO 30%
- SAND UP TO 70%



DESIGN NOTES
 CONCRETE MINIMUM STRENGTH - 5000 PSI @ 28 DAYS
 STEEL REINFORCEMENT - ASTM A-615, GRADE 60
 DESIGN LOADING - AASHTO HS20-44
 SECTION JOINT - SEE JOINT DETAIL
 DESIGN SPECIFICATION - AASHTO LOAD FACTOR DESIGN METHOD
 EARTH COVER 0'-0" MIN. 0'-0" MAX.



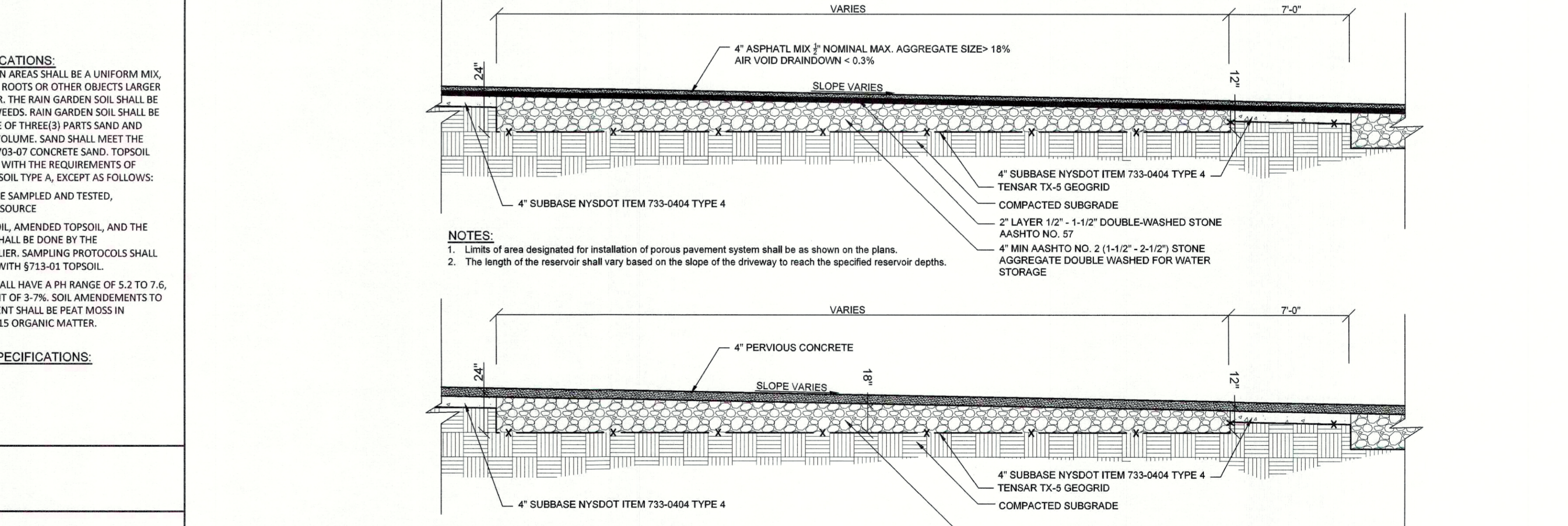
SW-5 RAIN GARDENS DETAIL
NOT TO SCALE



SW-8 STORMWATER PLANTER WITH DOWNSPOUT DETAIL
NOT TO SCALE

SYSTEM	System Inv.	TOP OF SYSTEM	OUTLET TYPE	OUTLET RIM	Pipe Out Size (in)	Inv. Out	WQ(ac-ft)	Peak Elevations		
								1 year Elev.	10 year Elev.	100 year Elev.
RAIN GARDEN 1	455.50	456.50	6" RISER	546.00	12	452.50	0.002	454.44	456.00	456.10
RAIN GARDEN 2	455.50	456.50	6" RISER	546.00	12	452.50	0.001	454.44	456.00	456.10
RAIN GARDEN 3	455.50	456.50	6" RISER	546.00	12	452.50	0.001	454.44	456.00	456.10
RAIN GARDEN 4	455.50	456.50	6" RISER	546.00	12	452.50	0.002	454.44	456.00	456.10
RAIN GARDEN 5	455.50	456.50	6" RISER	546.00	12	452.50	0.002	454.44	456.00	456.10
RAIN GARDEN 6	455.50	456.50	6" RISER	546.00	12	452.50	0.002	454.44	456.00	456.10
SAND FILTER 1	455.82	461.82	PIPE	N/A	12	455.82	0.012	457.72	457.94	459.42
SAND FILTER 2	455.22	461.22	PIPE	N/A	12	455.22	0.012	456.28	457.49	459.42
SAND FILTER 3	455.99	462.09	PIPE	N/A	12	455.99	0.018	456.53	457.43	459.42
STORMWATER PLANTER 1	460.5	462	12" RISER	461.5	12	458	0.009	458.83	460.51	461.51
STORMWATER PLANTER 2	460.5	462	12" RISER	461.5	12	458	0.011	458.72	460.32	461.5
STORMWATER PLANTER 3	460.5	462	12" RISER	461.5	12	458	0.031	458.78	460.51	461.52
O'STEEN	452.14	455.14	N/A	N/A	N/A	N/A	0.074	455.51	455.51	455.51
INFILTRATION CHAMBERS	453.8	457.05	N/A	N/A	N/A	N/A	0.168	454.84	456.7	457.05

SW-7 SAND FILTER DETAIL
NOT TO SCALE



NOTES:
 1. Limits of area designated for installation of porous pavement system shall be as shown on the plans.
 2. The length of the reservoir shall vary based on the slope of the driveway to reach the specified reservoir depths.
 3. Pervious concrete shall match the requirements established by the FHWA sheets included in the SWPPP.

R-14 TYPICAL POROUS ASPHALT/CONCRETE SECTION
NOT TO SCALE

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 Civil Engineers • Land Planners
 251-F Underhill Avenue, Yorktown Heights, NY 10598
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PROJECT # 16-52

STATE OF NEW YORK
 JOSEPH C. RINA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 NYS Lic. No. 64431

Revisions:
 No. Date Comments
 1. 4/29/19 Plan, Dept. Comm
 2. 5/29/19 T.E. Comments
 3. 11/19/19 DEP Comments
 4. 12/20/19 DEP Comments
 5. 4/2/20 DEP Comments
 6. 7/22/20 DEP Comments
 7. 12/22/20 DEP Comments
 8. 4/8/21 DEP Comments
 9. 4/8/21 DEP Comments
 10. 9/24/21 WCHD Comments

SCALE: NTS
 DRAWN BY: JR
 DATE: 10-26-18

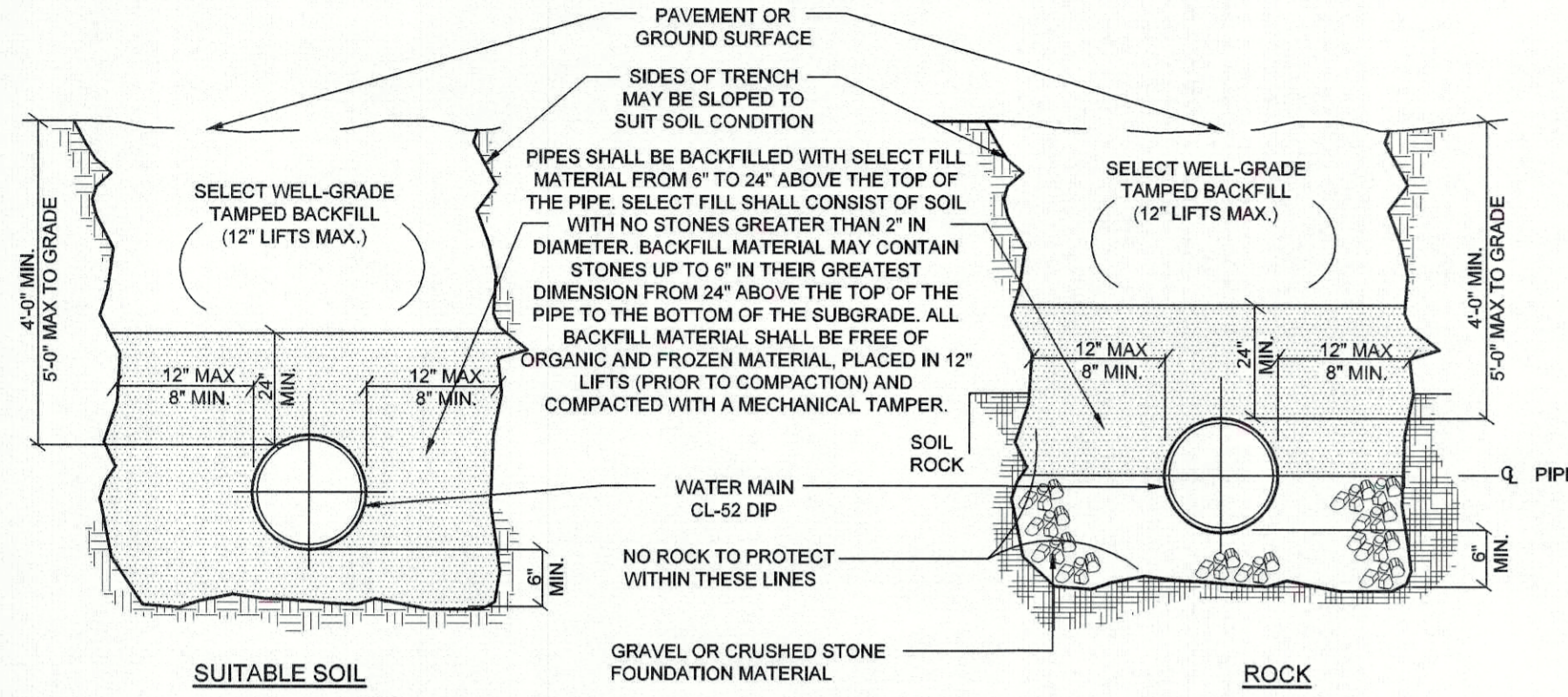
STORMWATER MANAGEMENT DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
 2040 CROMPOUND ROAD
 Town of Yorktown Westchester County, New York

Sheet **C-504**

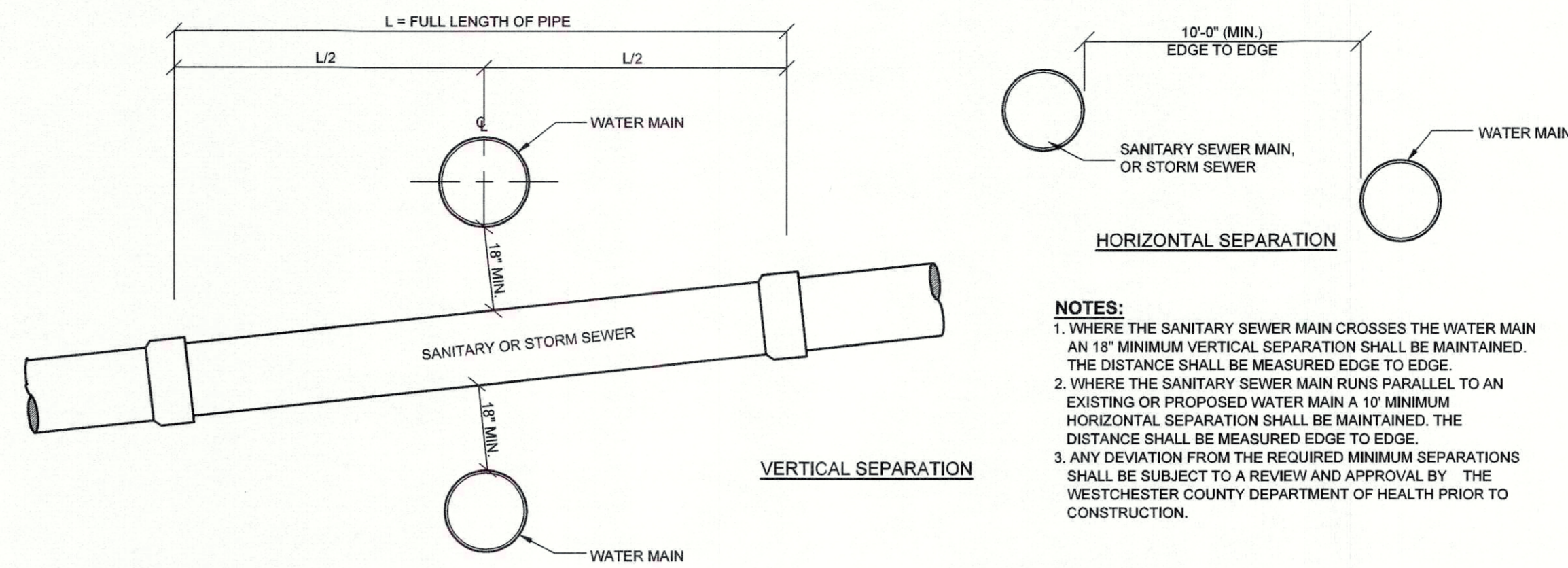
E:\001\SW-5\SW-5-DETAILS\SW-5-DETAILS.dwg
 DATE: 10/26/18
 DRAWN BY: JR
 CHECKED BY: JR
 PROJECT: SW-5

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



- NOTES:**
- In materials to be considered as unsuitable (i.e. Muck) material is to be replaced 24" below the pipe invert and replaced with item no. 4 bedding.
 - A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe.
 - See Pavement Replacement Detail for backfill specifications in local and main TOVIN roads.

W-1 WATER MAIN BEDDING DETAIL
NOT TO SCALE



- NOTES:**
- WHERE THE SANITARY SEWER MAIN CROSSES THE WATER MAIN AN 18" MINIMUM VERTICAL SEPARATION SHALL BE MAINTAINED. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
 - WHERE THE SANITARY SEWER MAIN RUNS PARALLEL TO AN EXISTING OR PROPOSED WATER MAIN A 10' MINIMUM HORIZONTAL SEPARATION SHALL BE MAINTAINED. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
 - ANY DEVIATION FROM THE REQUIRED MINIMUM SEPARATIONS SHALL BE SUBJECT TO A REVIEW AND APPROVAL BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH PRIOR TO CONSTRUCTION.

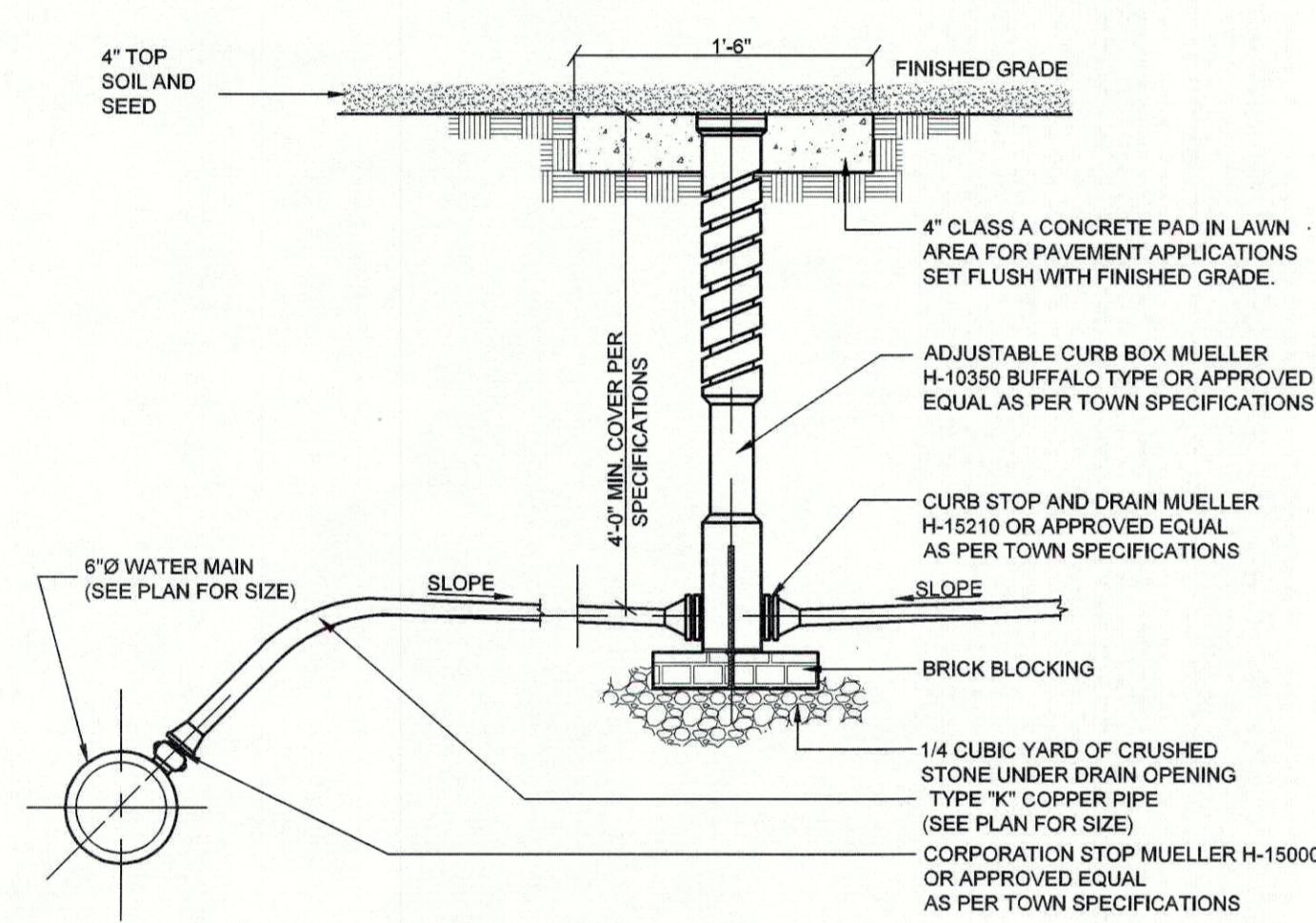
W-4 SEPARATION OF WATER MAINS, SANITARY SEWERS OR STORM SEWERS
NOT TO SCALE

PIPE DIA. IN.	BEND	BLOCK DIMENSIONS			CONCRETE VOLUME FT ³
		A IN.	B IN.	C IN.	
16	90	80	32	32	39.5
	45	48	28	30	19.7
	22.5	30	22	26	10.0
12	11.25	20	18	12	3.8
	90	56	28	20	15.0
	45	38	22	10	7.7
10	22.5	20	20	12	3.6
	11.25	18	18	12	3.0
	90	48	22	16	8.9
8	45	28	20	12	4.0
	22.5	18	18	12	2.7
	11.25	16	16	12	2.2
6	45	20	18	12	2.5
	22.5	14	14	12	1.6
	11.25	14	16	12	2.5
4	45	14	14	12	1.5
	22.5	12	12	12	1.2
	11.25	12	12	12	(3)

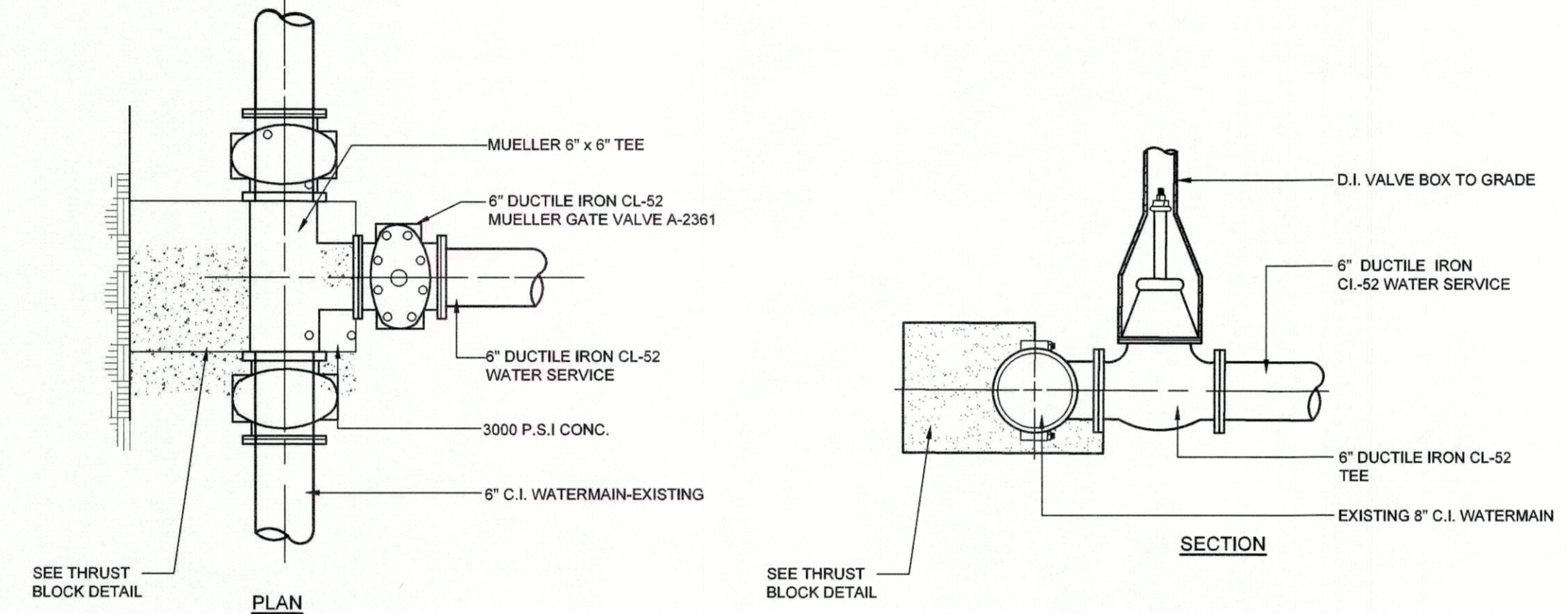
NOTES:

- Min. 2,500 psi concrete to be used.
- Block dimensions are minimum and are based upon soil bearing pressure of 2,000 psf and water pressure of 150 psi. Where soil bearing is less or water pressure is greater, a special design will be required.
- All bolts shall be covered with burlap before pouring concrete.
- Block to be set against undisturbed earth, backfill to be firmly tamped, or block to be furnished as directed by the engineer.

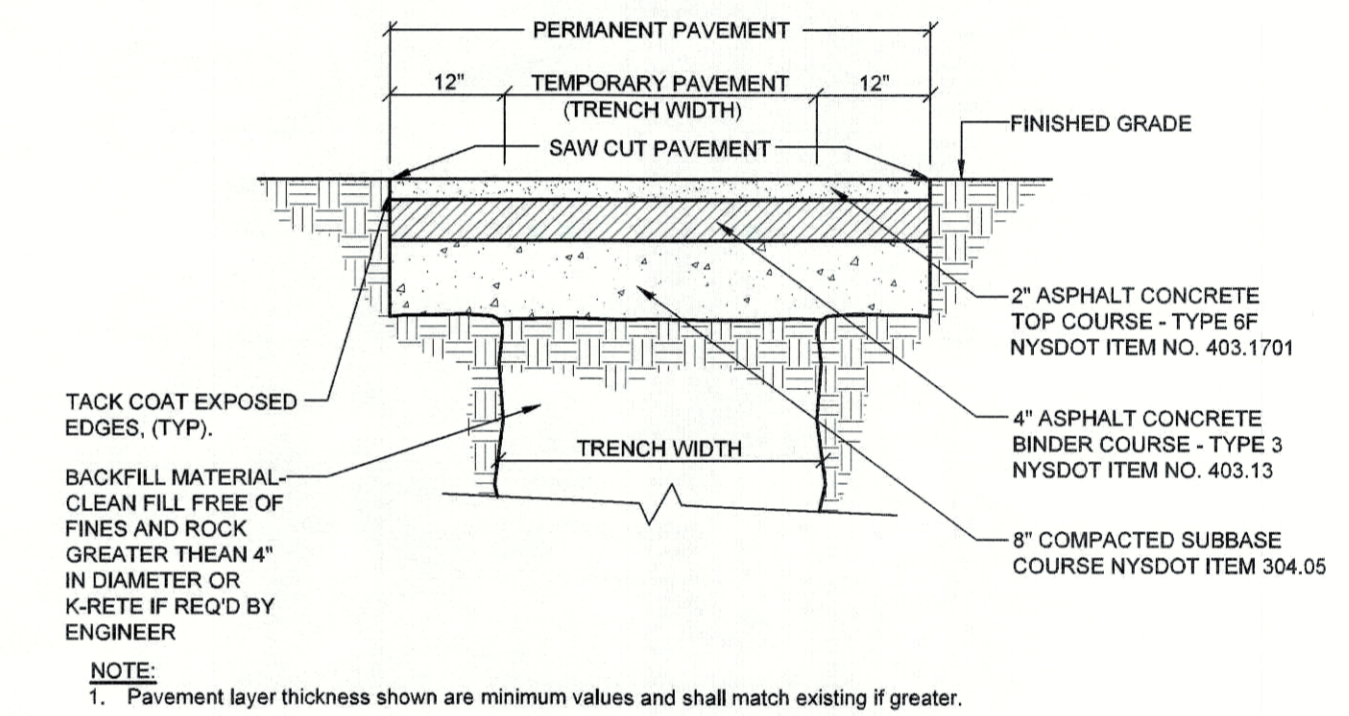
W-8 THRUST BLOCKING FOR HORIZONTAL BENDS
NOT TO SCALE



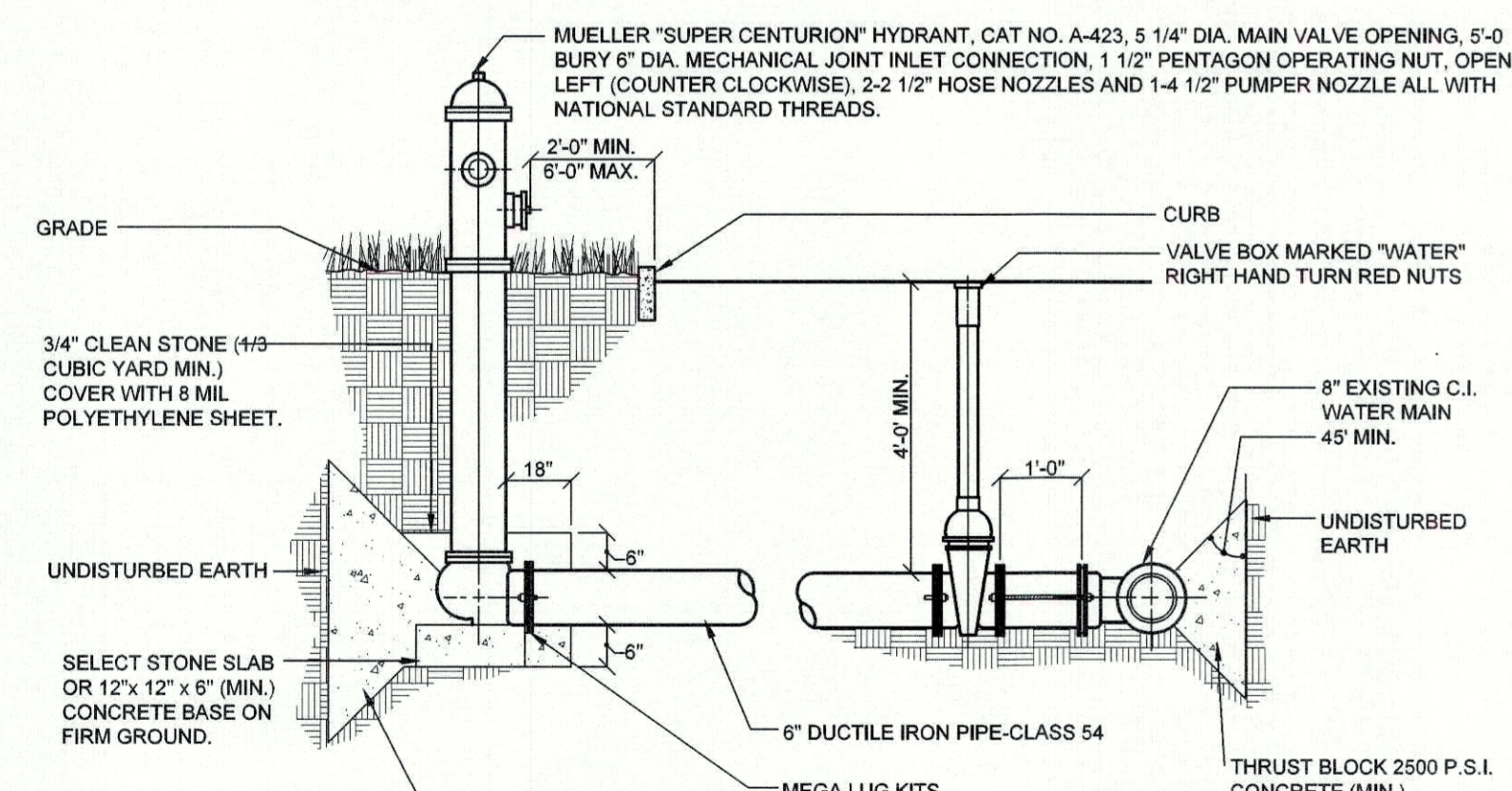
W-2 WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



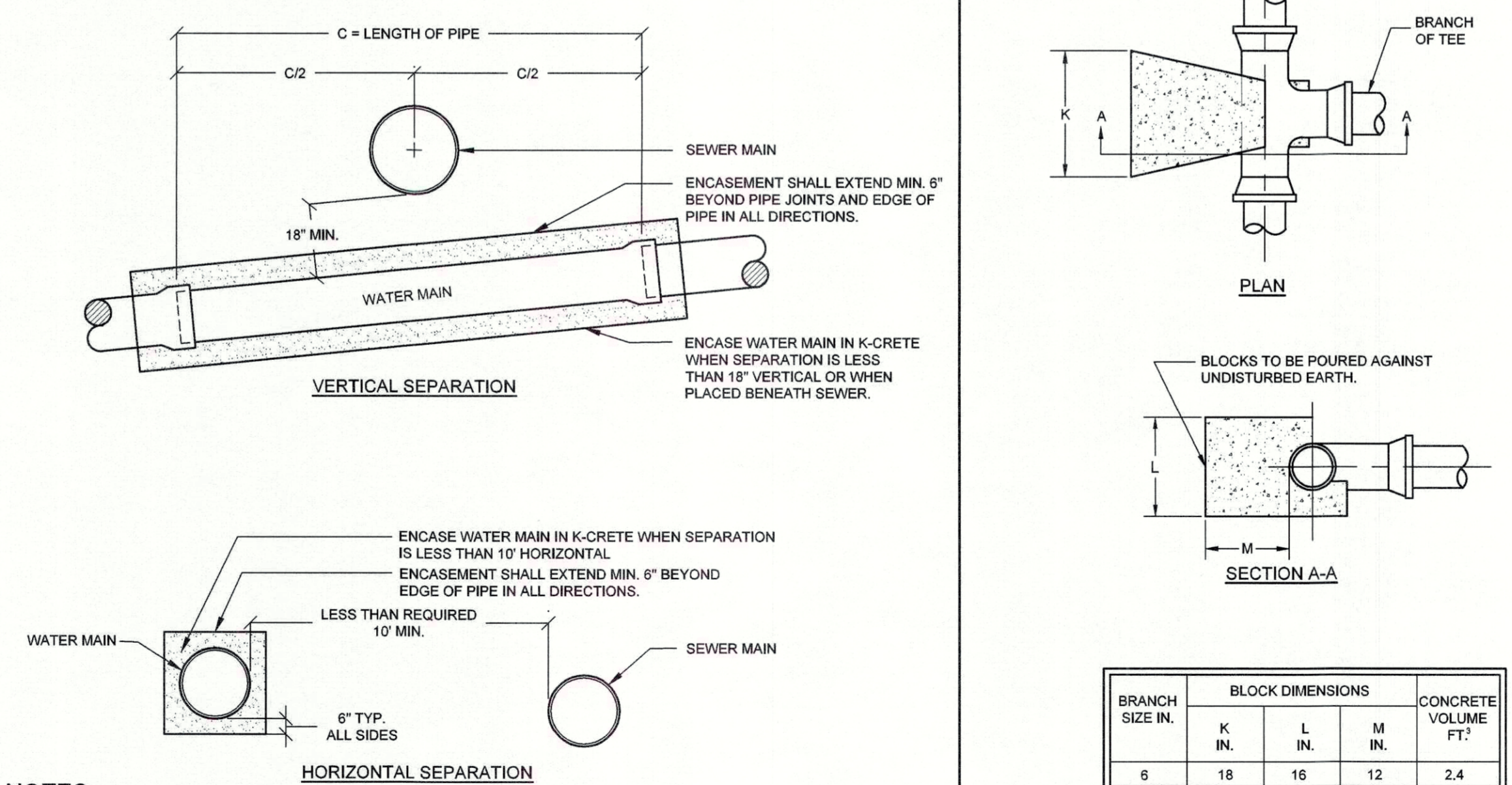
W-5 TEE AND GATE VALVE CONNECTION DETAIL
NOT TO SCALE



R-5 PAVEMENT REPLACEMENT DETAIL
NOT TO SCALE

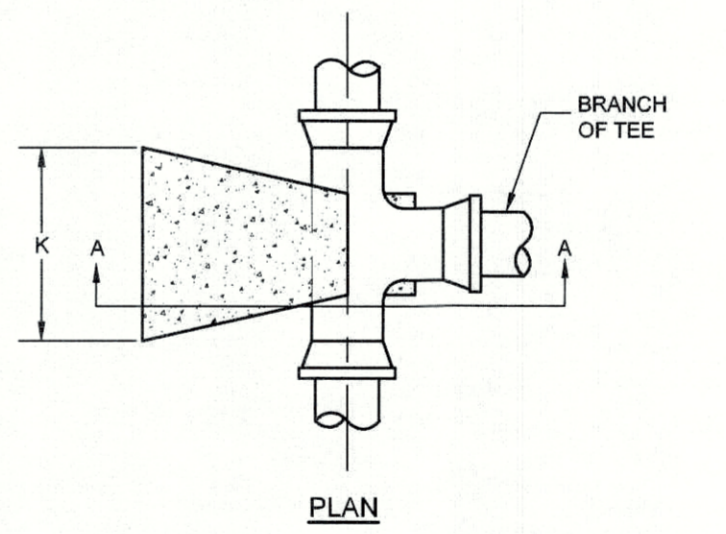


W-3 FIRE HYDRANT DETAIL
NOT TO SCALE



- NOTES:**
- In the event that there is a deviation from any of the separation requirements, said changes or use of encasement must be approved by the Westchester County Department of Health.
 - Encasement of the water main shall apply only at locations where the minimum required separation distances can not be maintained or whenever a water main crosses beneath a sewer main.
 - Encasement of the water main shall be limited to those locations indicated on the plans.
 - Encasement shall be completed with k-crete having a minimum compressive strength of 50 psi.
 - One full length of sewer pipe shall be laid so both joints will be as far from the water main as possible.
 - Where the sewer has already been installed, the water main shall be placed so that the joints on the water main are equidistant from the sewer. No water pipe shall pass through or come in contact with any sewer manhole.

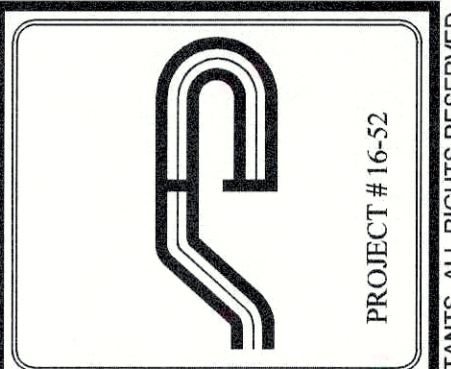
W-6 WATER MAIN ENCASUREMENT DETAIL
NOT TO SCALE



BRANCH SIZE IN.	BLOCK DIMENSIONS			CONCRETE VOLUME FT ³
	K IN.	L IN.	M IN.	
6	18	16	12	2.4
8	30	18	12	4.0
10	42	20	12	6.3
12	50	24	16	11.3
16	60	36	24	30.0

- NOTES:**
- Min. 2,500 psi concrete to be used.
 - Block dimensions are minimum and are based upon soil bearing pressure of 2,000 psf and water pressure of 150 psi. Where soil bearing is less or water pressure is greater, a special design will be required.
 - All bolts shall be covered with burlap before pouring concrete.

W-7 THRUST BLOCKING FOR TEES
NOT TO SCALE



Site Design Consultants
Civil Engineers • Land Planners
Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com



Revisions:

No.	Date	Comments
1	4/29/19	Plan Desk Comm
2	5/29/19	T.E. Comments
3	10/1/19	DEP Comments
4	11/19/19	DEP Comments
5	7/22/20	DEP Comments
6	12/22/20	DEP Comments
7	3/18/21	DEP Comments
8	4/8/21	DEP Comments
9	4/8/21	DEP Comments
10	3/27/22	W.C.H.D. Comments
11	3/27/22	W.C.H.D. Comments

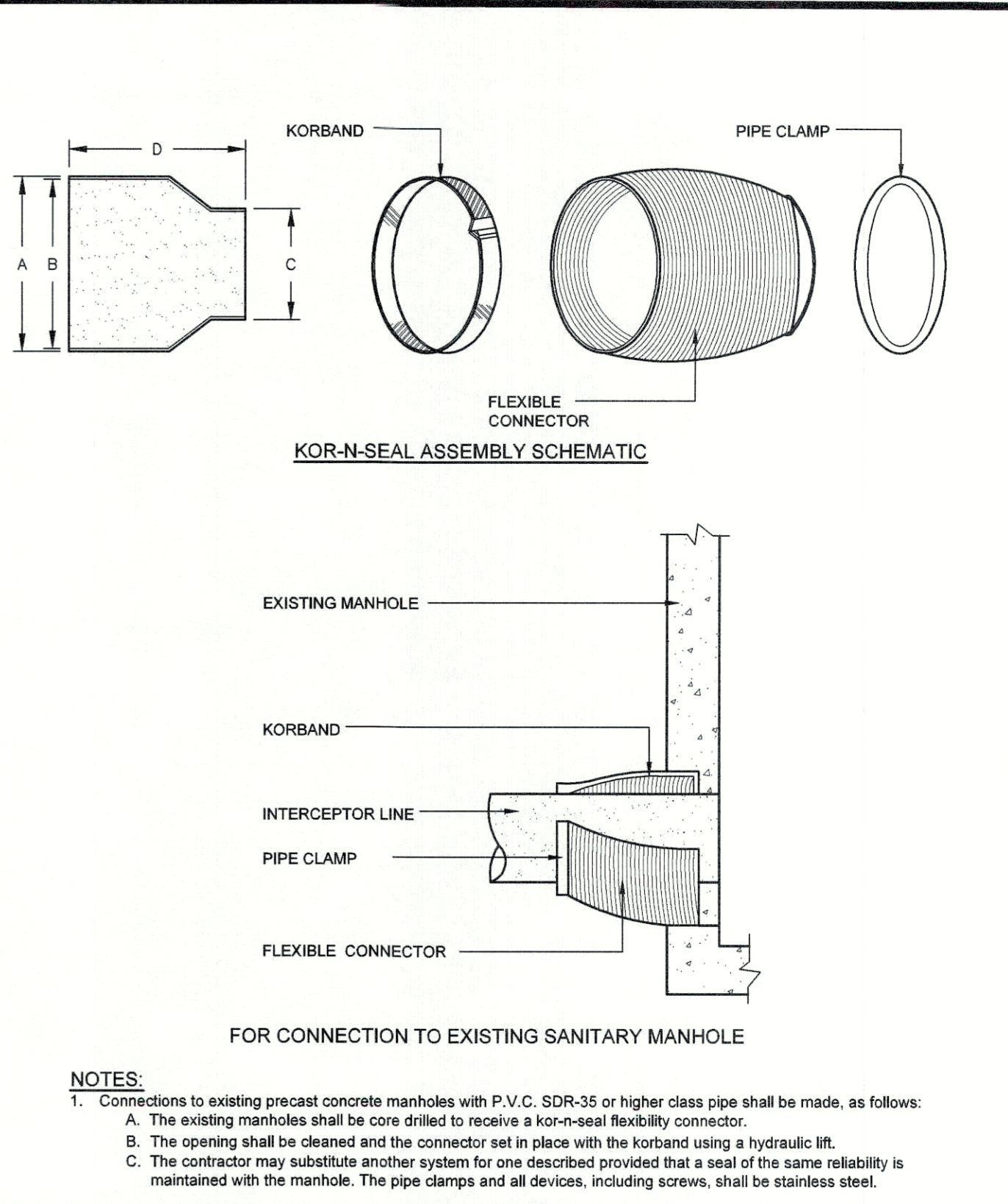
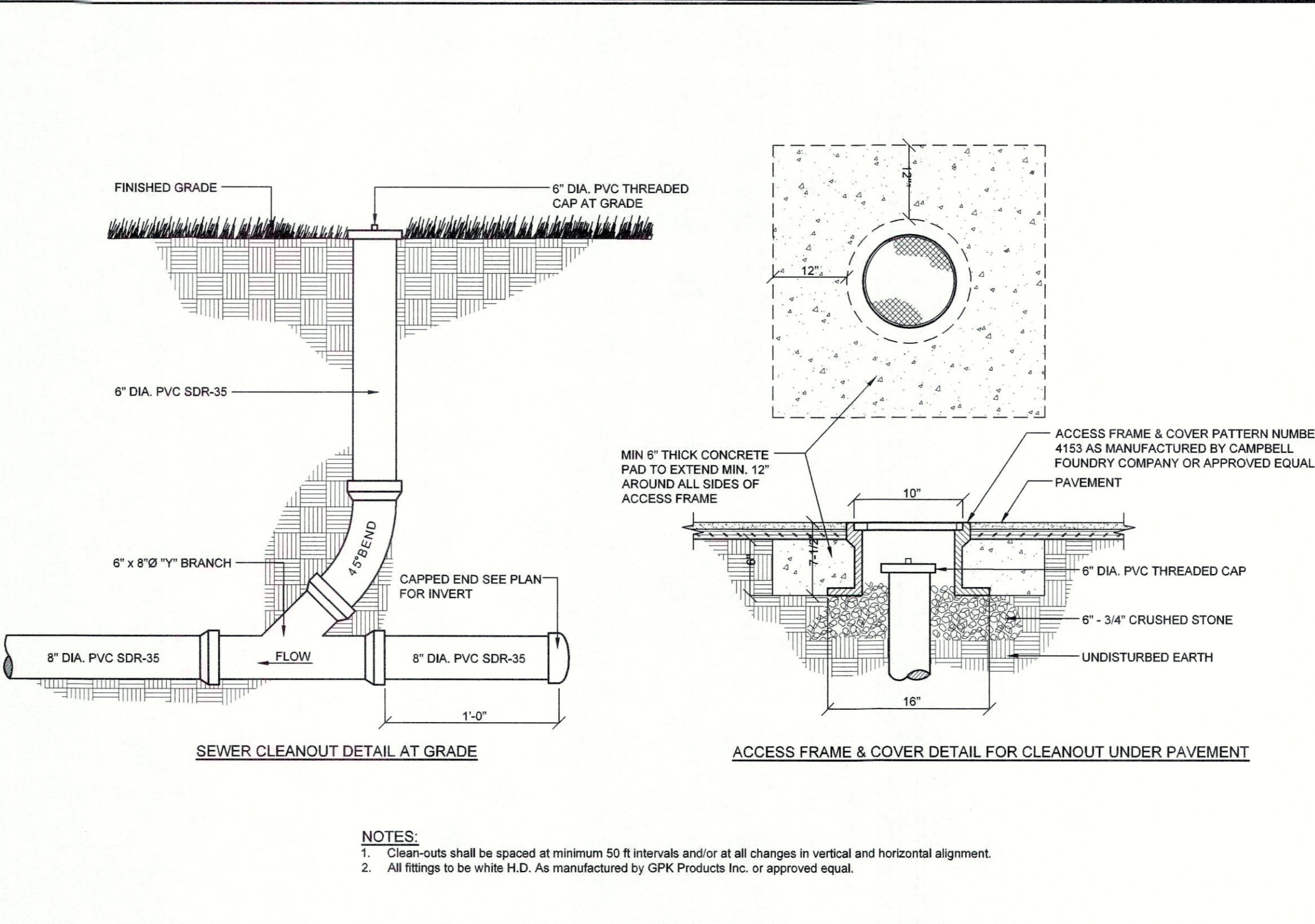
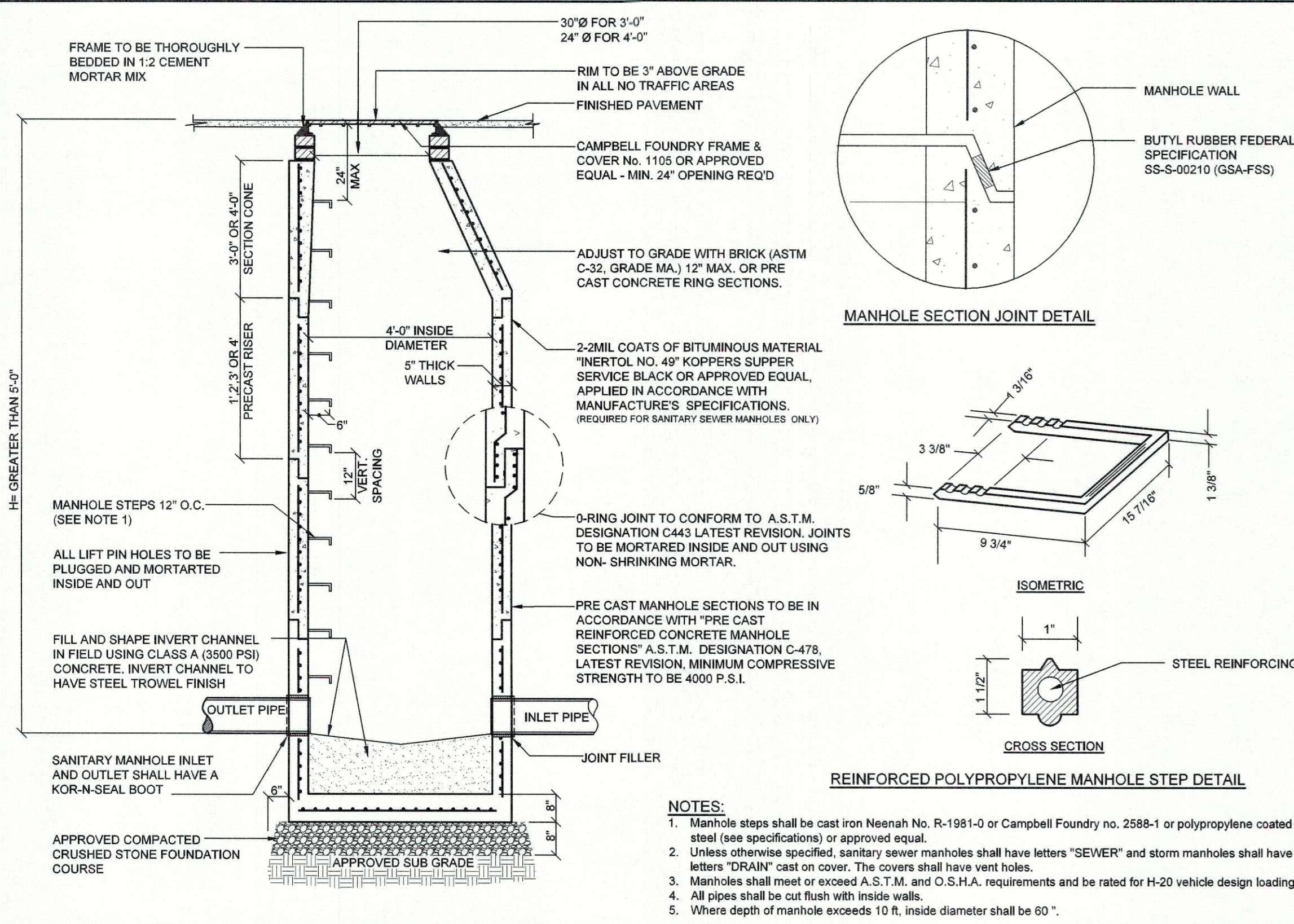
SCALE: NTS
DRAWN BY: JR
DATE: 10-26-18

WATER MAIN DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
2040 CROMPOD ROAD
Town of Yorktown
Westchester County, New York

Sheet **C-505**

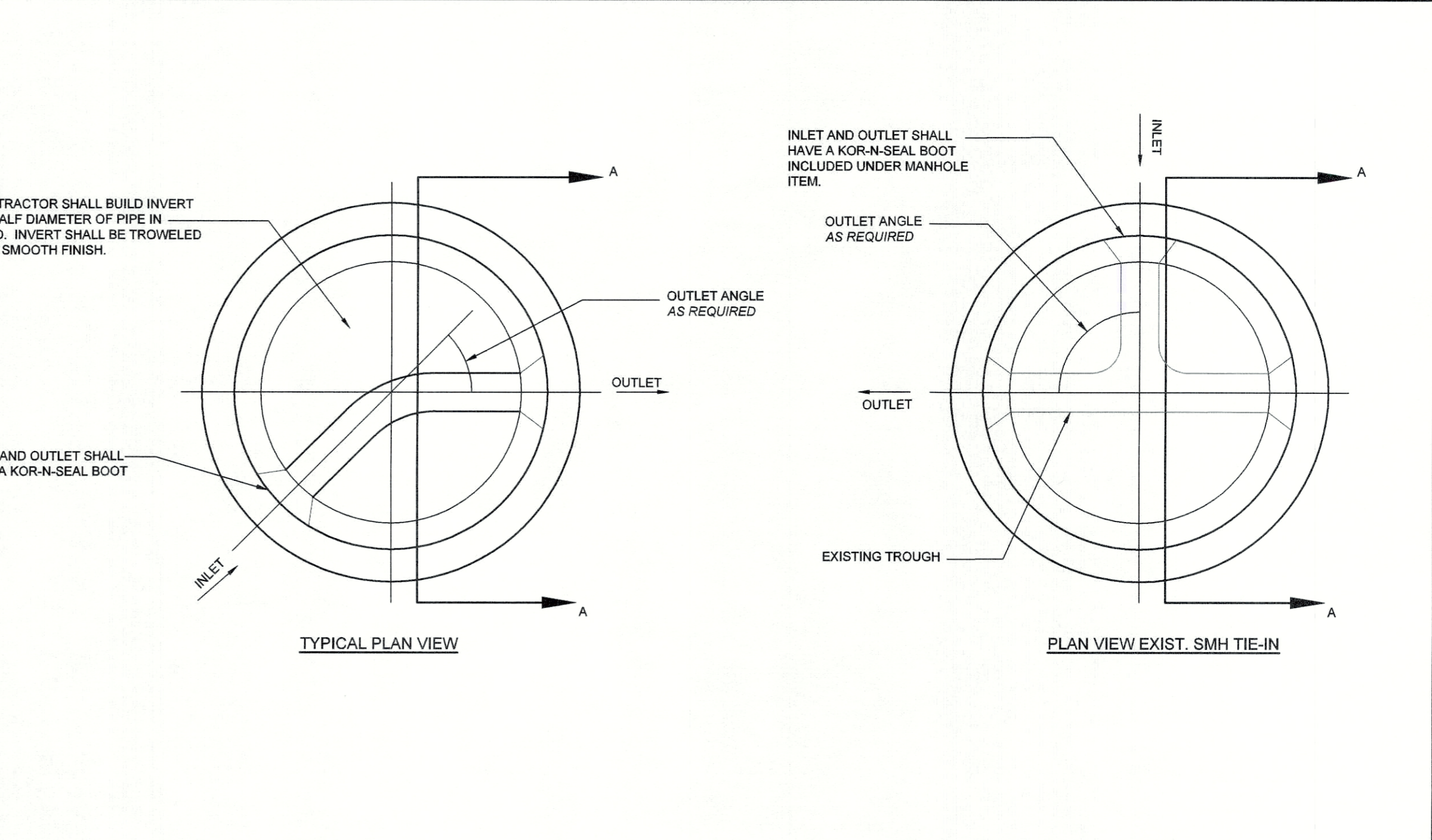
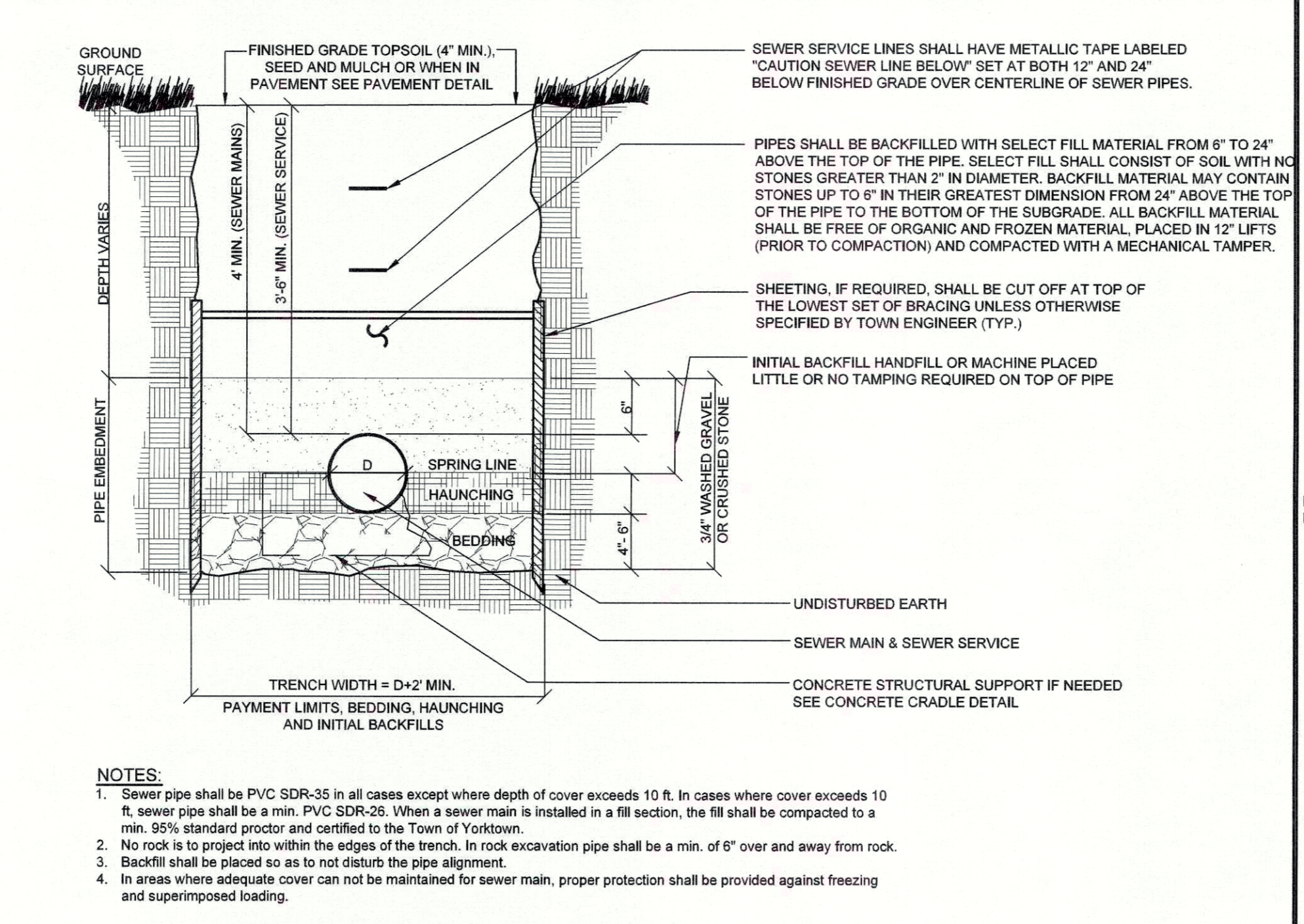
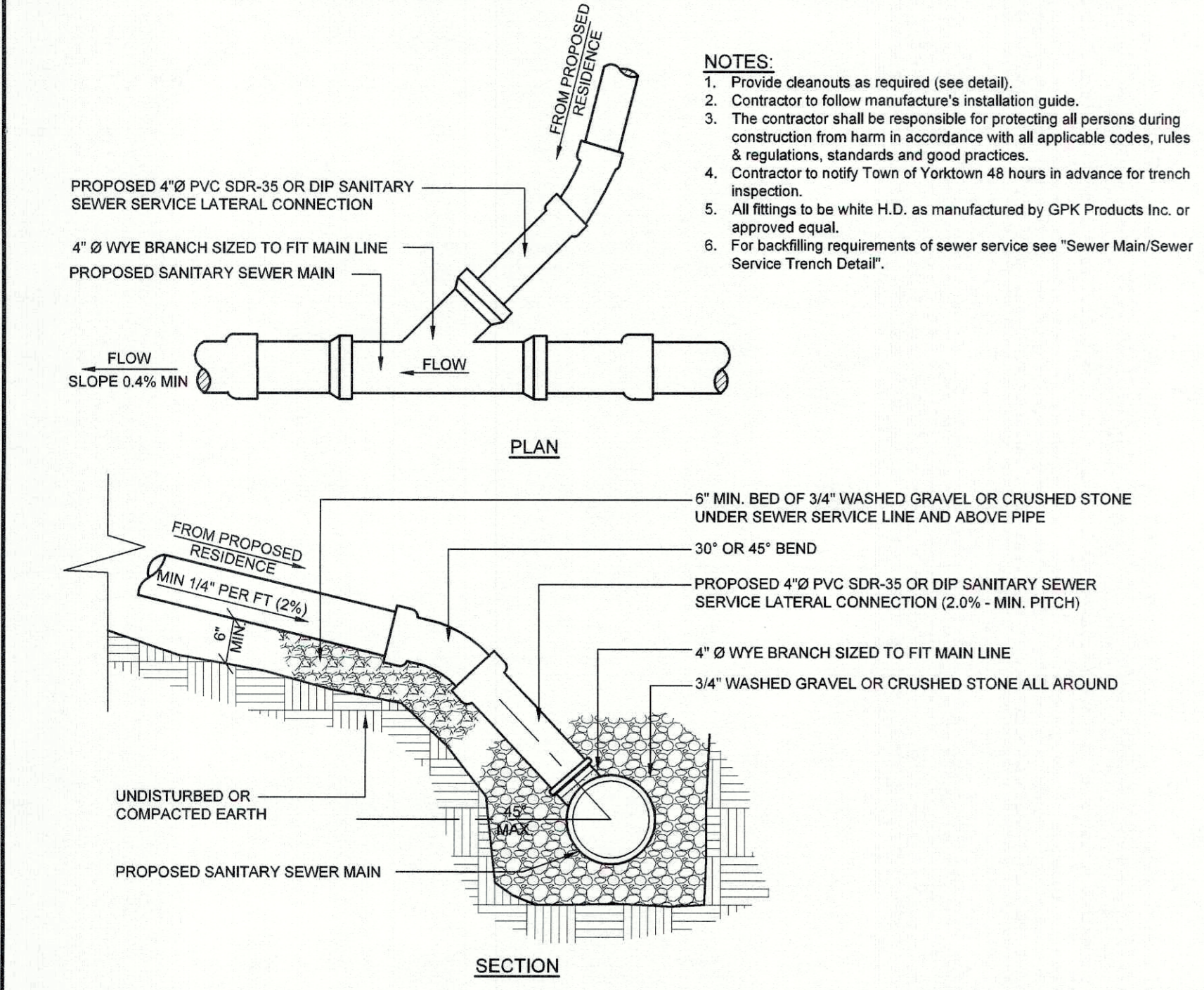
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S-1 PRECAST CONCRETE SEWER MANHOLE DETAIL
NOT TO SCALE

S-2 GRAVITY SEWER LATERAL CLEAN-OUT DETAIL
NOT TO SCALE

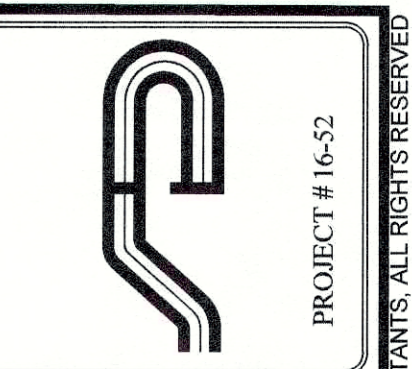
S-6 EXISTING SANITARY FLEXIBLE CONNECTION
NOT TO SCALE



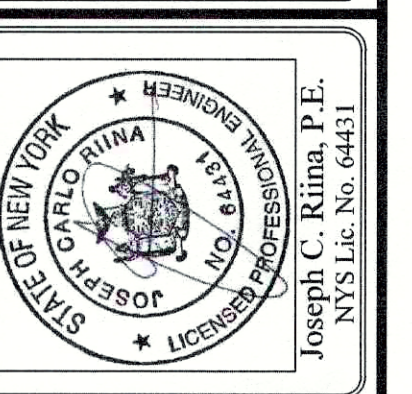
S-3 SEWER CONNECTION TO PROPOSED MAIN-LINE DETAIL
NOT TO SCALE

S-4 SEWER MAIN / SEWER SERVICE TRENCH DETAIL
NOT TO SCALE

S-5 TYPICAL DETAIL OF TIE-IN TO EXISTING SEWER MANHOLE
NOT TO SCALE



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Revisions:	No.	Date	Comments
	1.	4/25/19	Plan, Dept. Comm.
	2.	10/1/19	DEP Comments
	3.	11/19/19	DEP Comments
	4.	11/19/19	DEP Comments
	5.	4/2/20	DEP Comments
	6.	7/22/20	DEP Comments
	7.	11/18/20	DEP Comments
	8.	3/18/21	DEP Comments
	9.	4/8/21	DEP Comments
	10.	9/24/21	WCHD Comments
	11.	3/2/22	WCHD Comments

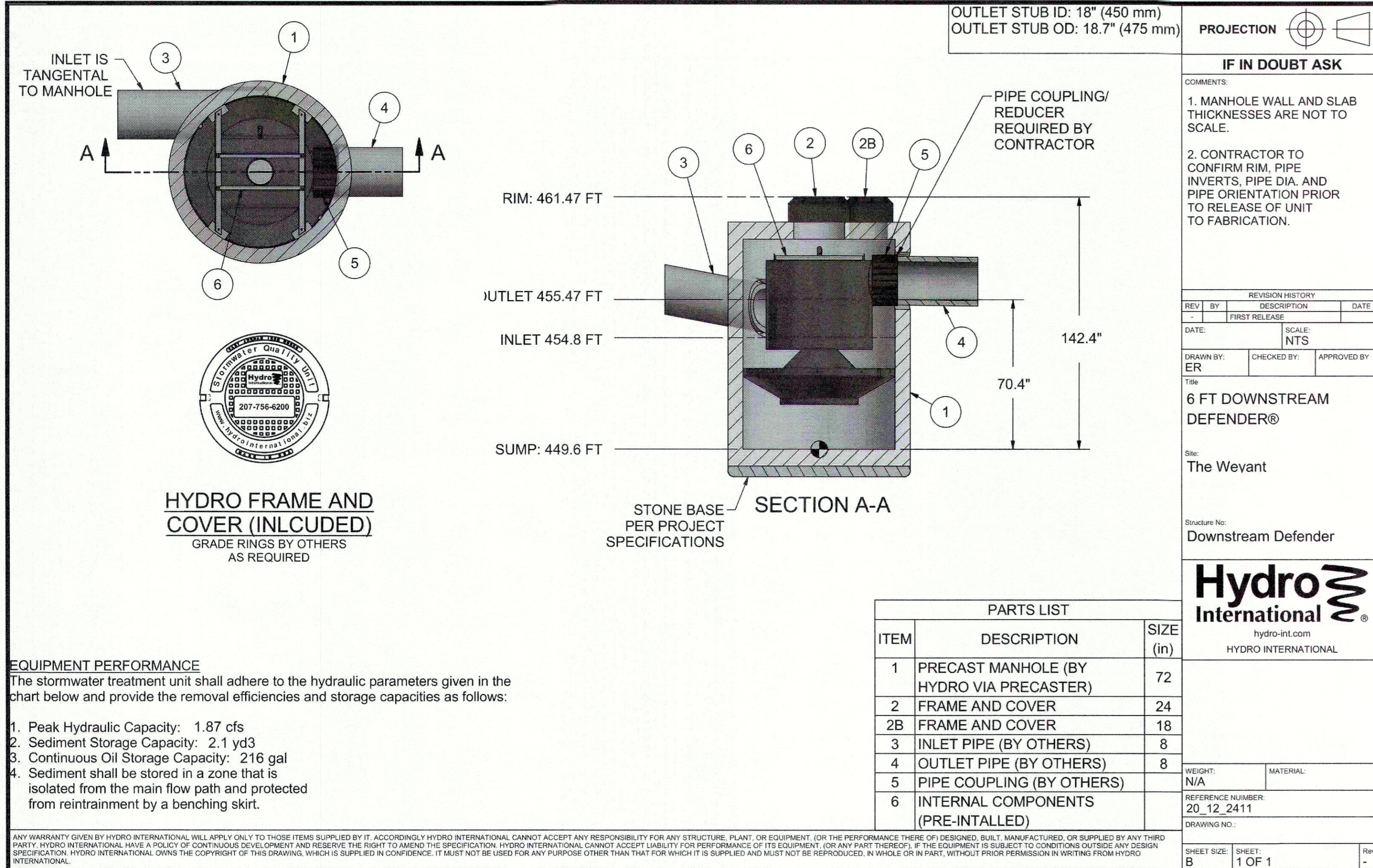
SCALE: NTS
DRAWN BY: JR
DATE: 10-26-18

SANITARY SEWER DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
2040 CROMPOD ROAD
Town of Yorktown Westchester County, New York

Sheet **C-506**

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OUTLET STUB ID: 18" (450 mm)
OUTLET STUB OD: 18.7" (475 mm)

PROJECTION

IF IN DOUBT ASK

COMMENTS

- MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
- CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA, AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

REVISION HISTORY

REV	BY	DESCRIPTION	DATE
1	ER	FIRST RELEASE	

DATE: SCALE: NTS

DRAWN BY: ER CHECKED BY: APPROVED BY:

Title: 6 FT DOWNSTREAM DEFENDER®

Site: The Weyant

Structure No: Downstream Defender

Hydro International
hydro-int.com
HYDRO INTERNATIONAL

PROJECT: N/A MATERIAL:

REFERENCE NUMBER: 20_12_2411

DRAWING NO:

SHEET SIZE: B SHEET: 1 OF 1

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

- Peak Hydraulic Capacity: 1.87 cfs
- Sediment Storage Capacity: 2.1 yd³
- Continuous Oil Storage Capacity: 216 gal
- Sediment shall be stored in a zone that is isolated from the main flow path and protected from reentrainment by a benching skirt.

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT. ACCORDINGLY HYDRO INTERNATIONAL CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT, OR THE PERFORMANCE THERE OF, DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY. HYDRO INTERNATIONAL HAS A POLICY OF CONTINUOUS DEVELOPMENT AND RESERVE THE RIGHT TO AMEND THE SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE OF ITS EQUIPMENT, OR ANY PART THEREOF, IF THE EQUIPMENT IS SUBJECT TO CONDITIONS OUTSIDE ANY DESIGN SPECIFICATION. HYDRO INTERNATIONAL OWNS THE COPYRIGHT OF THIS DRAWING, WHICH IS SUPPLIED IN CONFIDENCE. IT MUST NOT BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.

Operation

Introduction

The Downstream Defender® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is manufactured from durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The Downstream Defender® has been designed to allow for easy and safe access for inspection/monitoring and clean-out procedures. Entry into the unit or removal of the internal components is not necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

Pollutant Capture and Retention

The internal components of the Downstream Defender® have been designed to protect the oil/floatables and sediment storage volumes so that separator performance is not reduced as pollutants accumulate between clean-outs (Fig.2). The Downstream Defender® vessel remains wet between storm events. Oil and floatables are stored on the water surface in the outer annulus separate from the sediment storage volume in the sump of the unit providing the option for separate oil disposal, and accessories such as adsorbent pads. Since the oil/floatables and sediment storage volumes are isolated from the active separation region, the potential for re-suspension and washout of stored pollutants between clean-outs is minimized.

Wet Sump

The sump of the Downstream Defender® retains a standing water level between storm events. The water in the sump prevents stored sediment from solidifying in the base of the unit. (The clean-out procedure becomes more difficult and labor intensive if the system allows fine sediment to dry-out and consolidate. Dried sediment must be manually removed by maintenance crews. This is a labor intensive operation in a hazardous environment.)

Blockage Protection

The Downstream Defender® has large clear openings and no internal restrictions or weirs, minimizing the risk of blockage and hydraulic losses. In addition to increasing the system headloss, orifices and internal weirs can increase the risk of blockage within the unit.

Maintenance

Overview

The Downstream Defender® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the Downstream Defender®. The Downstream Defender® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the Downstream Defender® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

Hydro International recommends that maintenance crews watch the Downstream Defender® maintenance training video at www.hydro-int.com/us/products/downstream-defender. Maintenance providers are also encouraged to participate in Hydro International's Maintenance Contractor Certification Program (see page 12).

Fig 2 Pollutant storage volumes of the Downstream Defender®.

Fig 3 Watch the Downstream Defender® instructional maintenance video at www.hydro-int.com/us/products/downstream-defender.

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

The Downstream Defender® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole. On the 6-ft (1.8m), 8-ft (2.4m), 10-ft (3.0m) and 12-ft (3.7m) units, the floatables access port is above the outlet pipe between the concrete manhole wall and the dip plate. The sediment removal access ports for all Downstream Defender® models are located directly over the hollow center shaft.

Inspection Procedures

Inspection is a simple process that does not involve entry into the Downstream Defender®. Maintenance crews should be familiar with the Downstream Defender® and its components prior to inspection.

Scheduling

- It is important to inspect your Downstream Defender® every six months during the first year of operation to determine your site-specific rate of pollutant accumulation
- Typically, inspection may be conducted during any season of the year
- Sediment removal is not required unless sediment depths exceed 75% of maximum clean-out depths stated in Table 1

Recommended Equipment

- Safety Equipment and Personal Protective Equipment (traffic cones, work gloves, etc.)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net
- Sediment probe (such as a Sludge Judge®)
- Trash bag for removed floatables
- Downstream Defender® Maintenance Log

Determining Your Maintenance Schedule

The frequency of cleanout is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

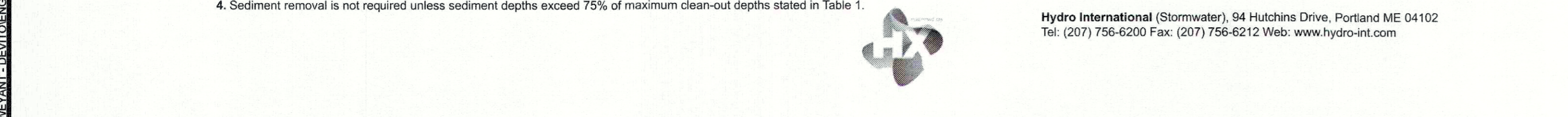
The vector procedure, including both sediment and oil/floatables removal, for a 6-ft (1.8m) Downstream Defender® typically takes less than 30 minutes and removes a combined water/oil volume of about 500 gallons (1900 liters).

Table 1. Downstream Defender® Pollutant Storage Capacities and Max. Cleanout Depths.

Unit Diameter	Total Oil Storage		Oil Clean-out Depth		Total Sediment Storage		Sediment Clean-out Depth		Max. Liquid Volume Removed		
	(ft)	(m)	(in)	(cm)	(yd ³)	(m ³)	(in)	(cm)	(gal)	(L)	
4	1.2	70	265	<16	<41	0.70	0.53	<18	<45	384	1,454
6	1.8	216	818	<23	<58	2.10	1.61	<24	<61	1,239	4,690
8	2.4	540	2,044	<33	<84	4.65	3.56	<30	<76	2,884	10,917
10	3.0	1,050	3,975	<42	<107	8.70	6.65	<36	<91	5,546	20,994
12	3.7	1,770	6,700	<49	<125	14.70	11.24	<42	<107	9,460	35,810

NOTES

- Refer to Downstream Defender® Clean-out Detail (Fig.2) for measurement of depths.
- Oil accumulation is typically less than sediment, however, removal of oil and sediment during the same service is recommended.
- Remove floatables first, then remove sediment storage volume.
- Sediment removal is not required unless sediment depths exceed 75% of maximum clean-out depths stated in Table 1.



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Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Inspection Procedures

- Set up any necessary safety equipment around the access port or grate of the Downstream Defender® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
- Remove the lids to the manhole (Fig. 4). NOTE: The 4-ft (1.2m) Downstream Defender® will only have one lid.
- Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. See Fig 7 and 8 for typical inspection views.
- Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the outer annulus of the chamber.
- Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel (Fig.5).
- On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.

Floatables and Sediment Cleanout

Floatables cleanout is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.6).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vector hose and skimmer pole to be lowered to the base of the sump.

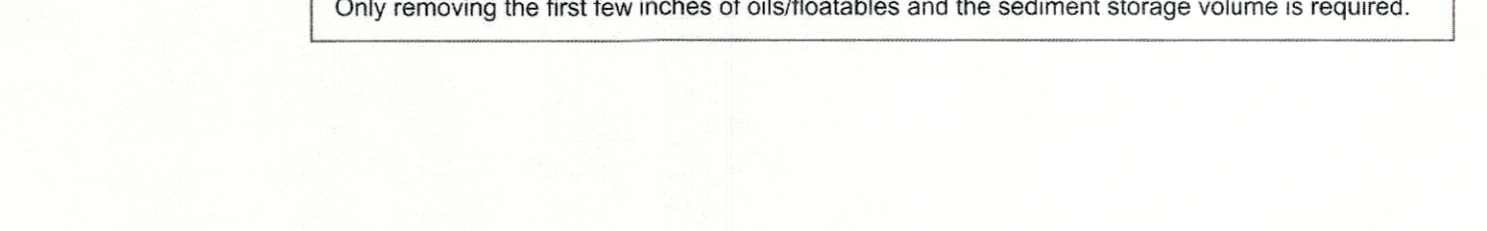
Scheduling

- Floatables and sump cleanout are typically conducted once a year during any season.
- If sediment depths are greater than 75% of maximum clean-out depths stated in Table 1, sediment removal is required.
- Floatables and sump cleanout should occur as soon as possible following a spill in the contributing drainage area.

Maintenance at a Glance

Activity	Frequency
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area

NOTE: For most cleanouts it is not necessary to remove the entire volume of liquid in the vessel. Only removing the first few inches of oils/floatables and the sediment storage volume is required.



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Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vector truck (6-inch/150mm diameter flexible hose recommended)
- Downstream Defender® Maintenance Log

Floatables and Sediment Clean Out Procedures

- Set up any necessary safety equipment around the access port or grate of the Downstream Defender® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
- Remove the lids to the manhole NOTE: The 4-ft (1.2m) Downstream Defender® will only have one lid.
- Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
- Using the Floatables Port for access, remove oil and floatables stored on the surface of the water with the vector hose or the skimmer net (Fig.9, top).
- Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (Pg.9).
- Once all floatables have been removed, drop the vector hose to the base of the sump via the Central Access Port. Vector out the sediment and gross debris off the sump floor (Fig.6 and 9).

7. Retract the vector hose from the vessel.

8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.

9. Securely replace the grate or lid.

Fig 9 Floatables and sediment are removed with a vector hose

Revisions:

No.	Date	Comments
1.	4/29/19	Plan, Dept. Comm.
2.	10/1/19	Plan, Dept. Comm.
3.	10/1/19	DEP Comments
4.	11/19/19	DEP Comments
5.	4/2/20	DEP Comments
6.	7/27/20	DEP Comments
7.	11/18/20	DEP Comments
8.	1/18/21	DEP Comments
9.	4/8/21	DEP Comments
10.	9/24/21	WCHD Comments

SCALE: NTS

DRAWN BY: JR

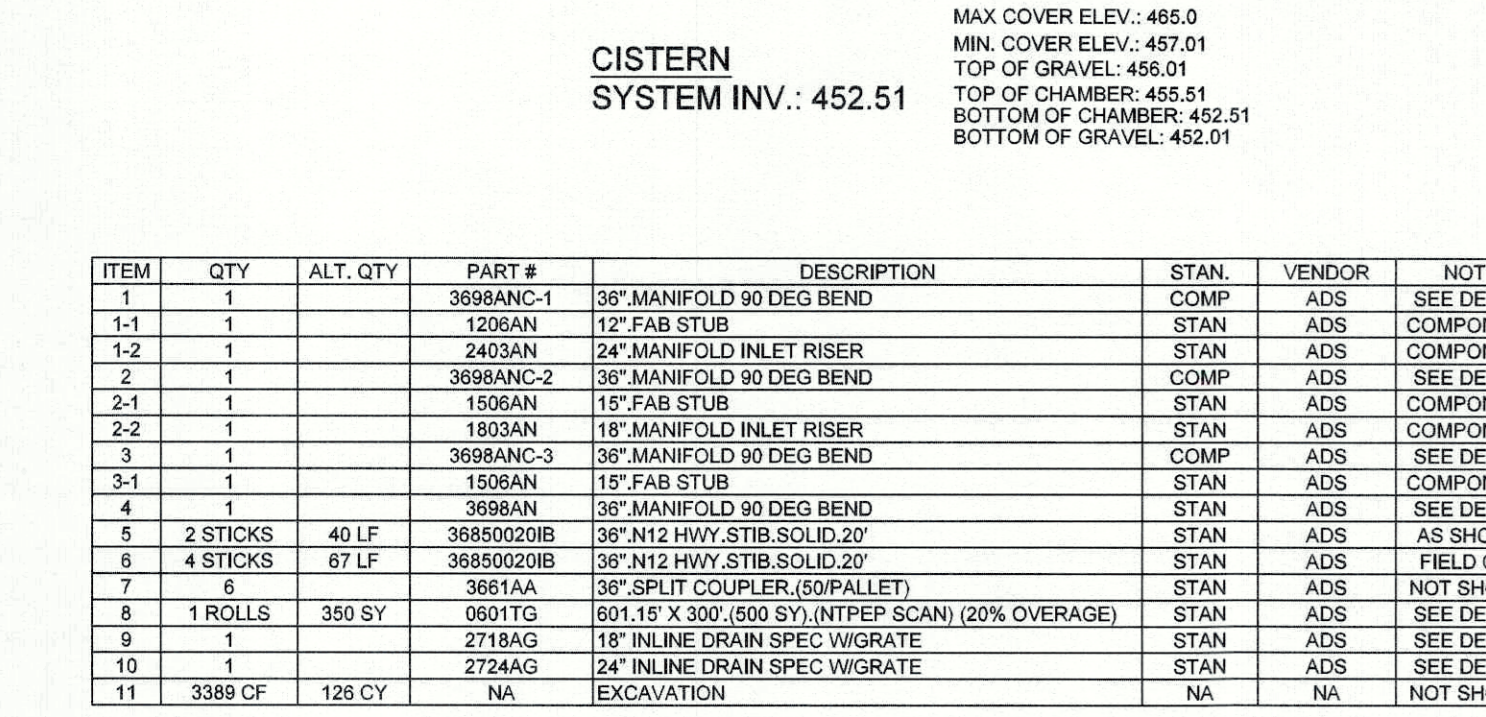
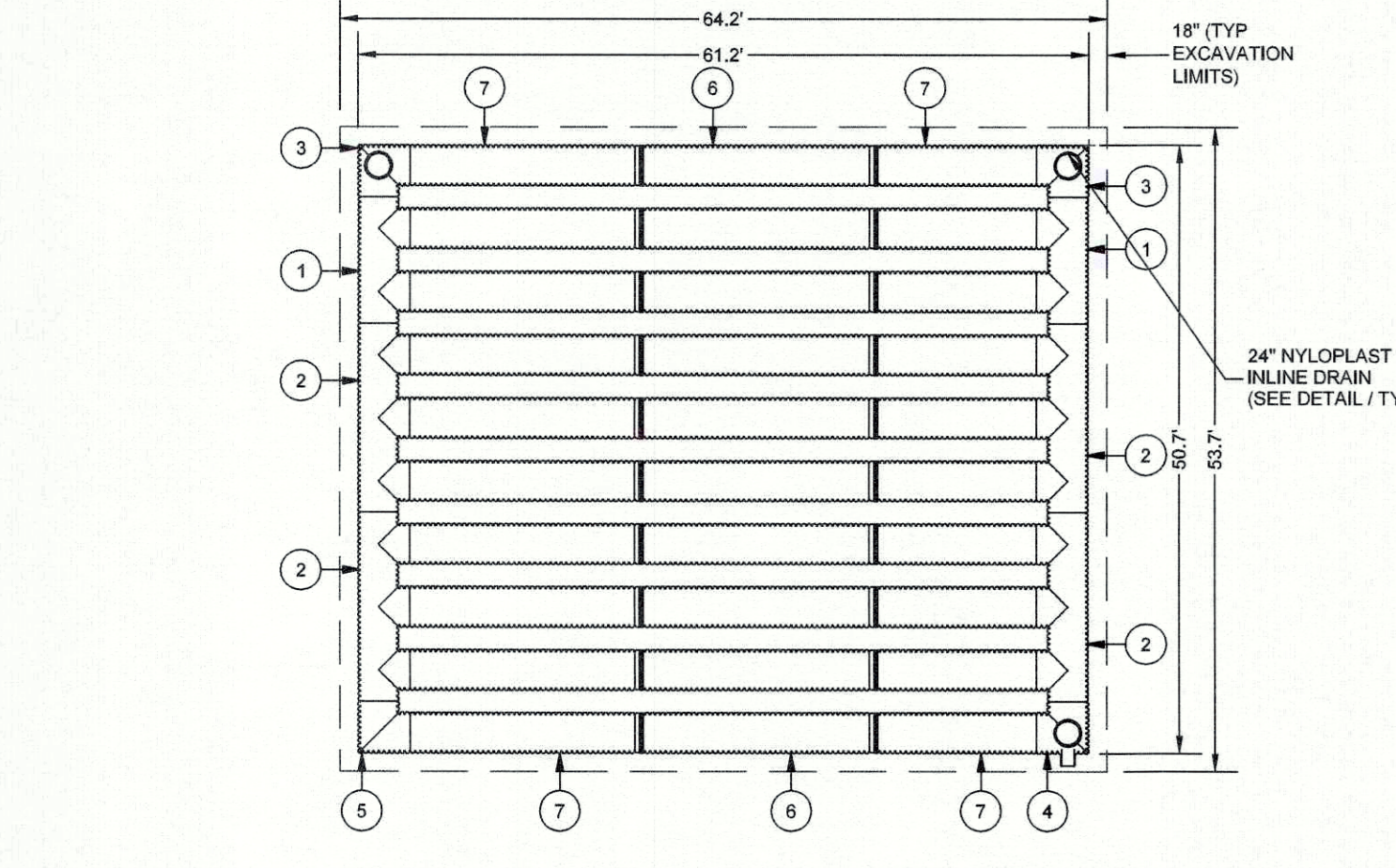
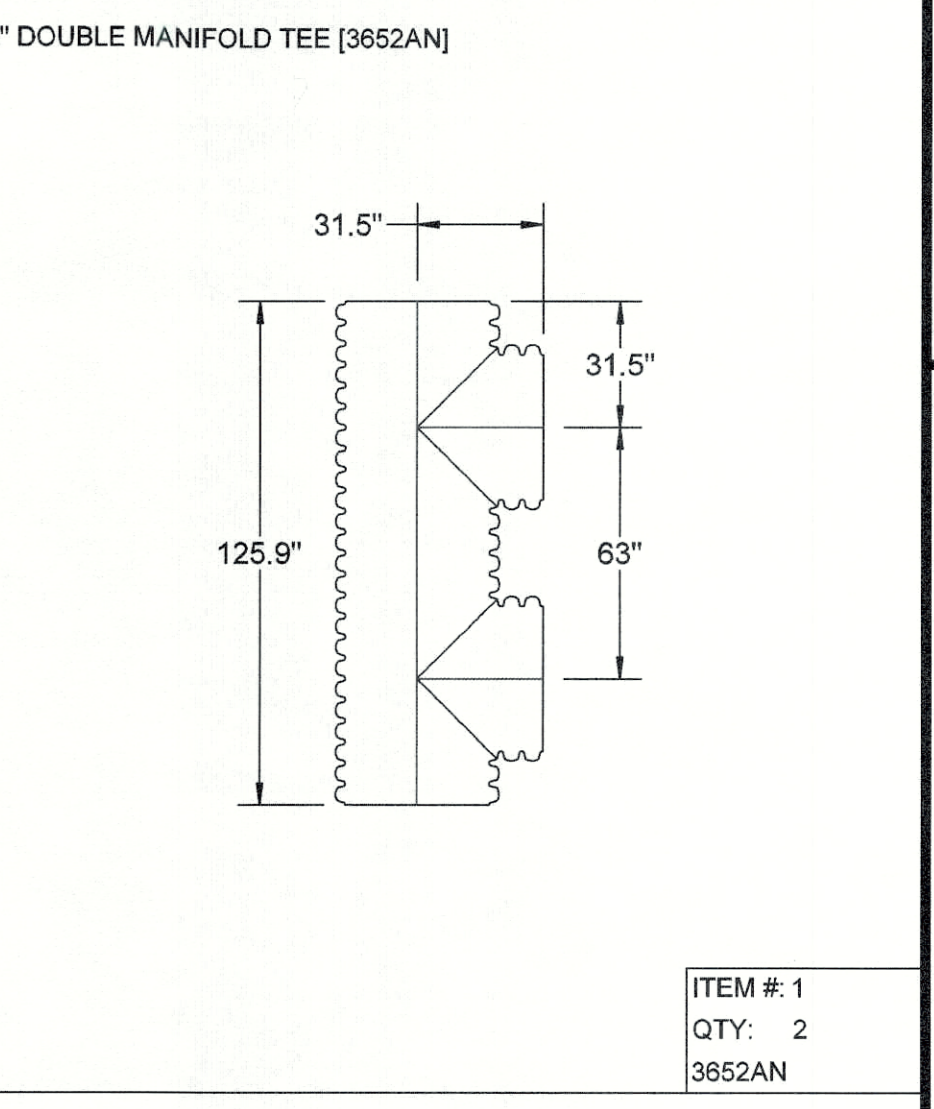
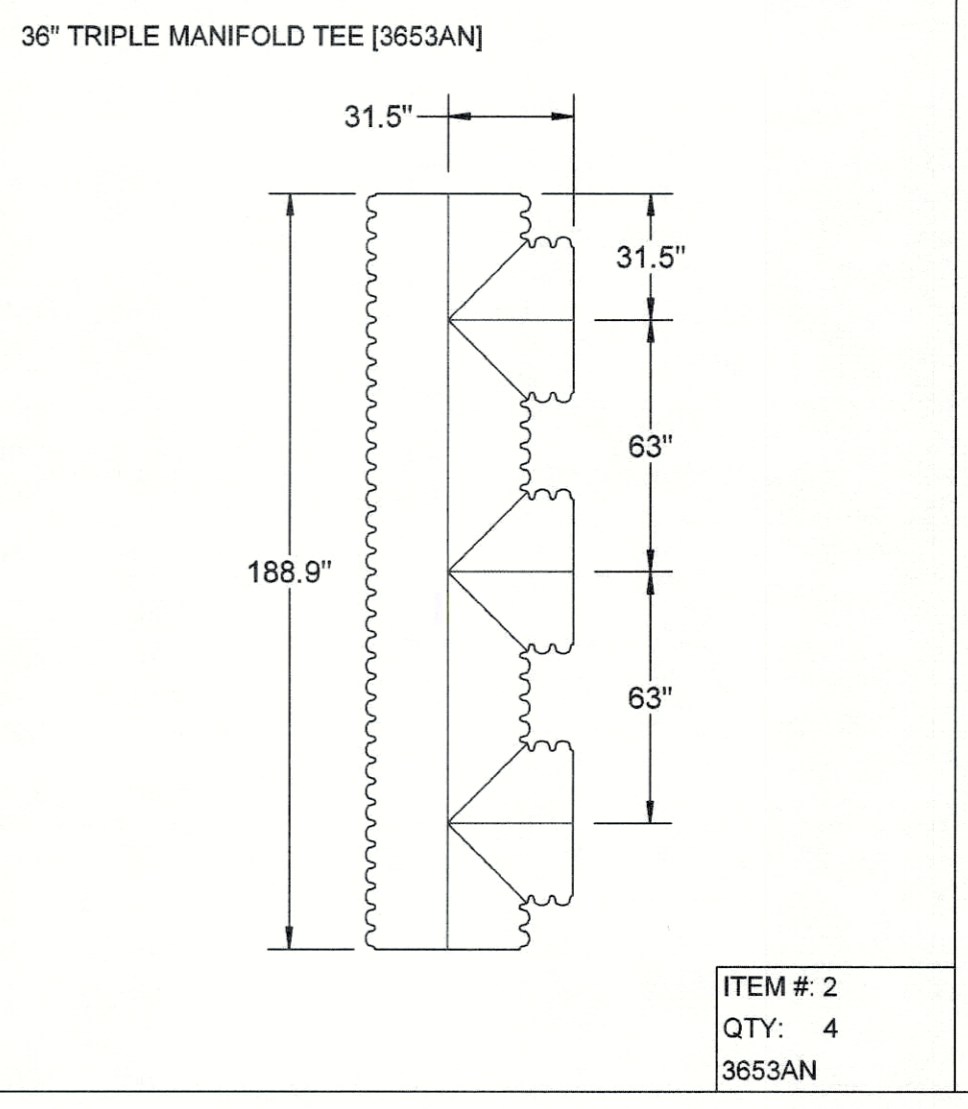
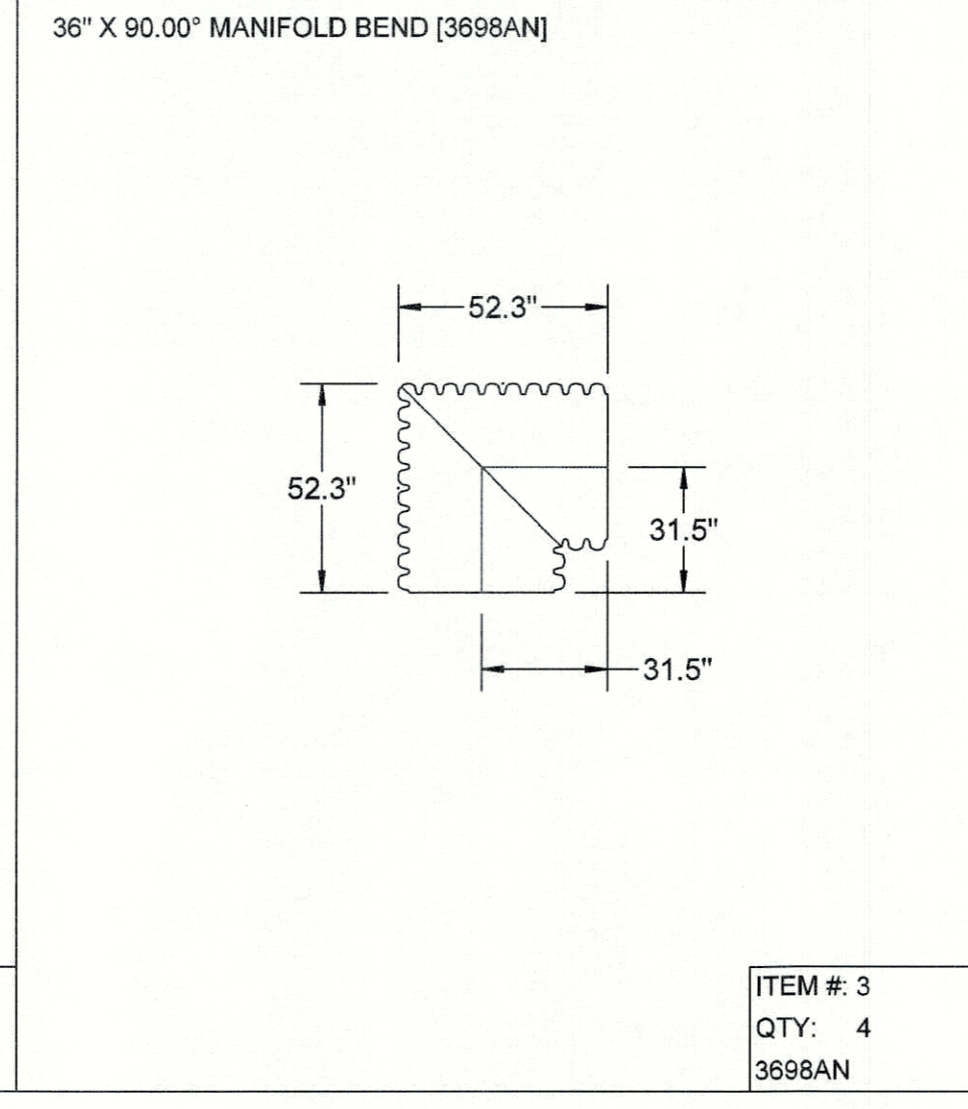
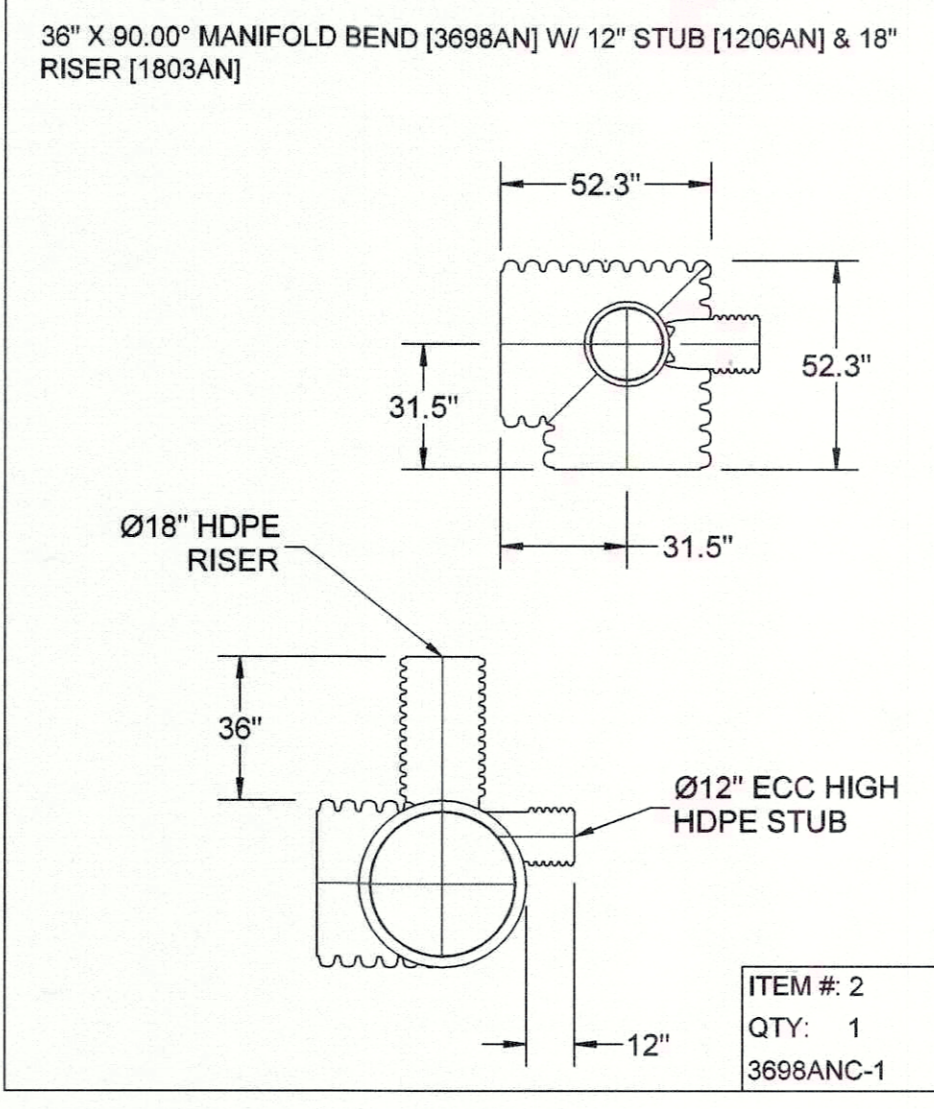
DATE: 10-26-18

DOWNSTREAM DEFENDER DETAILS

SITE PLAN PREPARED FOR
THE WEYANT
2040 CROMPOD ROAD
Town of Yorktown
Westchester County, New York

Joseph C. Rima, P.E.
NYS Lic. No. 64431

ITEM	QTY	ALT. QTY	PART #	DESCRIPTION	STAN.	VENDOR	NOTE
1	2		3652AN	36" DOUBLE MANIFOLD TEE	STAN.	ADS	SEE DETAIL
2	4		3653AN	36" TRIPLE MANIFOLD TEE	STAN.	ADS	SEE DETAIL
3	2		3688ANC-1	36" MANIFOLD 90 DEG BEND	COMP.	ADS	SEE DETAIL
3-1	1		2403AN	24" MANIFOLD INLET RISER	STAN.	ADS	COMPONENT
4	1		3688ANC-2	36" MANIFOLD 90 DEG BEND	COMP.	ADS	SEE DETAIL
4-1	1		1206AN	12" FAB STUB	STAN.	ADS	COMPONENT
4-2	1		2403AN	24" MANIFOLD INLET RISER	STAN.	ADS	COMPONENT
5	1		3698AN	36" MANIFOLD 90 DEG BEND	STAN.	ADS	SEE DETAIL
6	10 STICKS	197 LF	36850020B	36" N12 HWY STUB SOLID 20"	STAN.	ADS	AS SHOWN
7	17 STICKS	328 LF	36850020B	36" N12 HWY STUB SOLID 20"	STAN.	ADS	FIELD CUT
8	28		3661AA	36" SPLIT COUPLER (60 PALLET)	STAN.	ADS	NOT SHOWN
9	3 ROLLS	1067 SY	0601TG	601.15" X 300' (500 SY) (NIPPE SCAN) (20% OVERAGE)	STAN.	ADS	SEE DETAIL
10	3		2724AG	24" INLINE DRAIN SPEC. W/GRATE	STAN.	ADS	SEE DETAIL
11	15418 CF	872 CY	NA	EXCAVATION	NA	NA	NOT SHOWN



NOTES

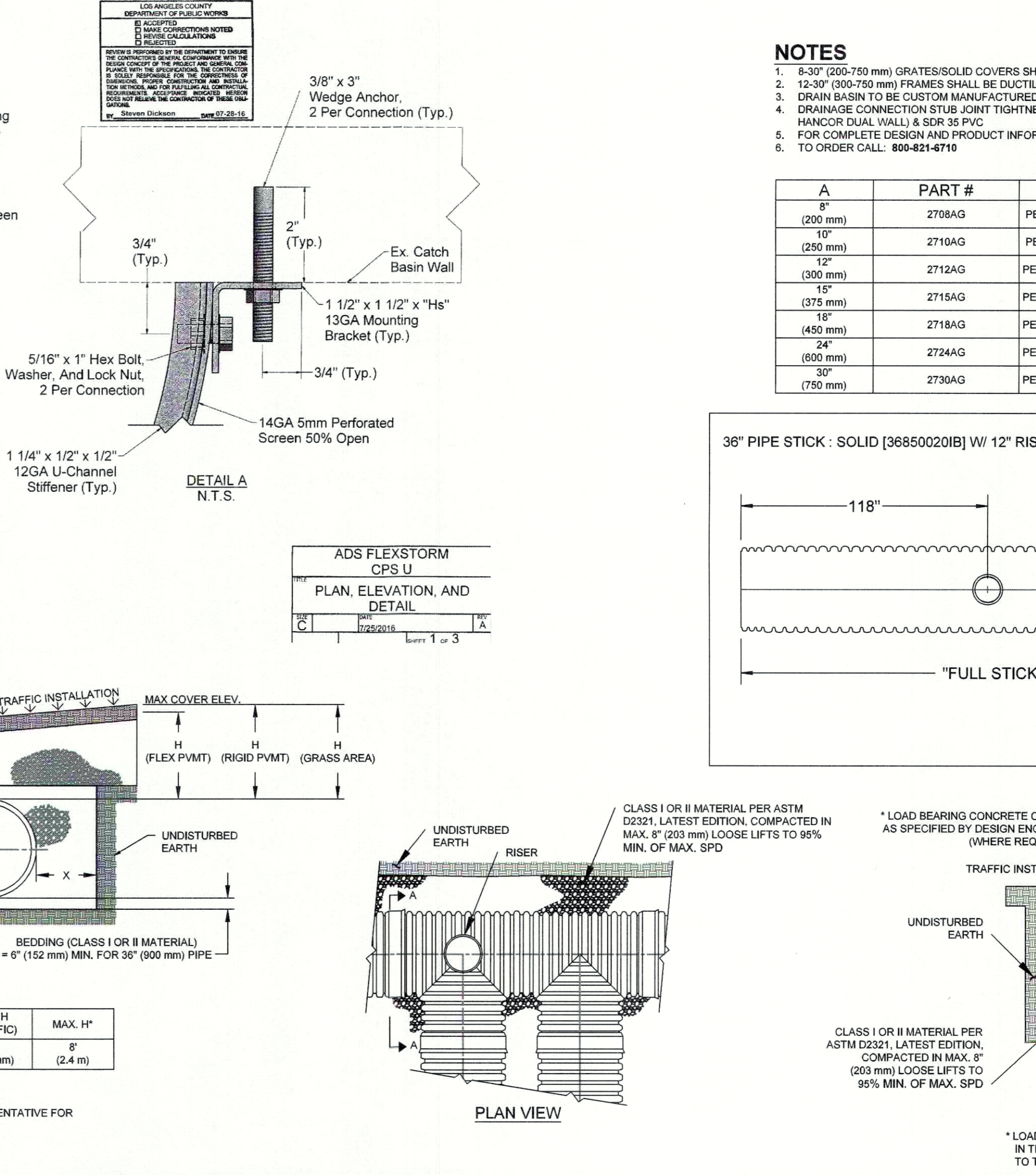
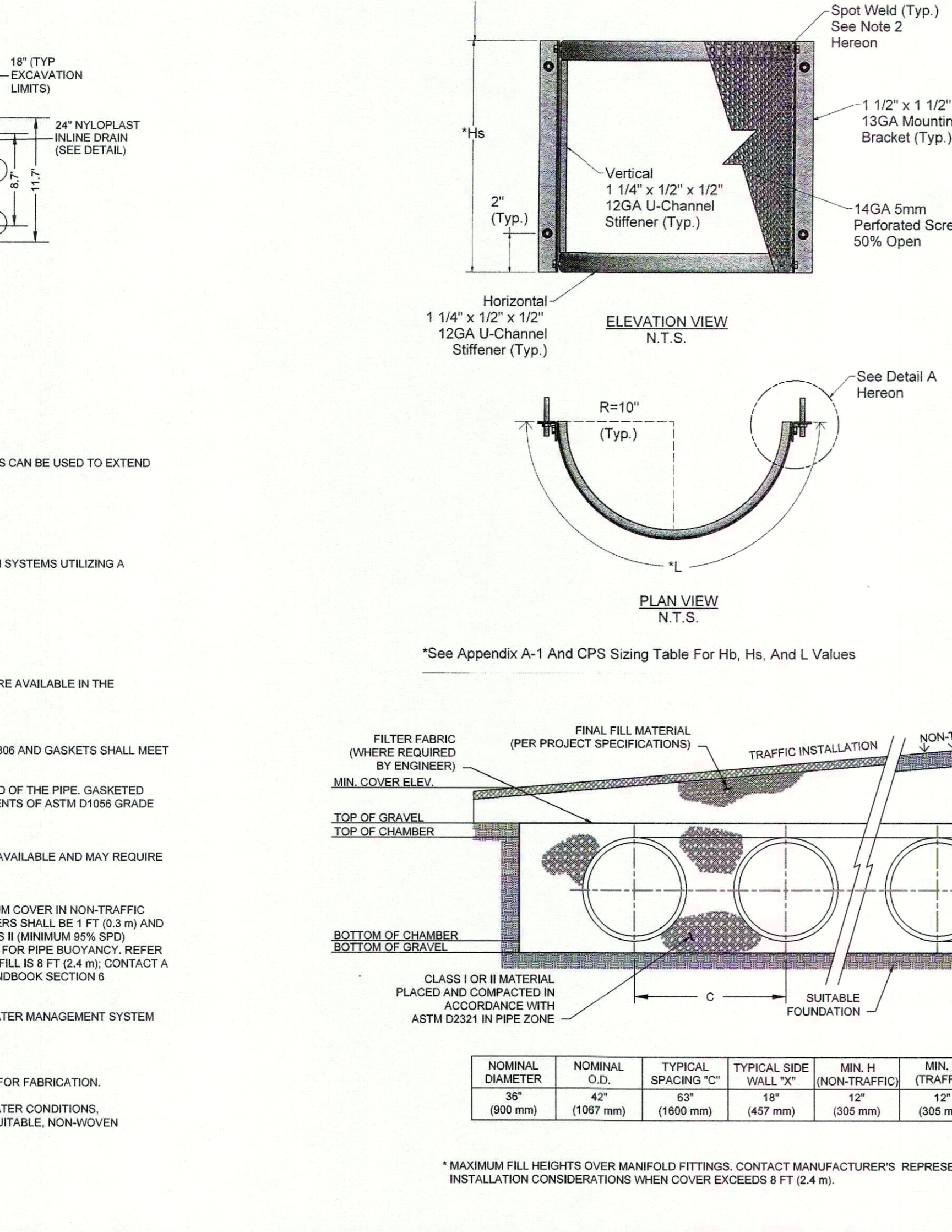
- ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS, INLETS AND OUTLETS, SHALL BE VERIFIED BY THE ENGINEER PRIOR TO RELEASING FOR FABRICATION.
- IN SITUATIONS WHERE A FINE-GRAINED MATERIAL IS USED ADJACENT TO THE PIPE SYSTEM AND ESPECIALLY INVOLVING GROUND WATER CONDITIONS, CONSIDERATION SHOULD BE GIVEN TO THE USE OF GASKETED PIPE JOINTS. AT THE VERY LEAST THE PIPE JOINTS SHOULD BE WRAPPED IN A SUITABLE, NON-WOVEN GEOTEXTILE FABRIC TO PREVENT INFILTRATION OF FINES INTO THE PIPE SYSTEM.
- CONSIDERATION FOR CONSTRUCTION EQUIPMENT LOADS MUST BE TAKEN INTO ACCOUNT.
- ALL PIPE DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.
- ALL RISERS TO BE FIELD EXTENDED OR TRIMMED TO FINAL GRADE.

NOTES

- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
- MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
- FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

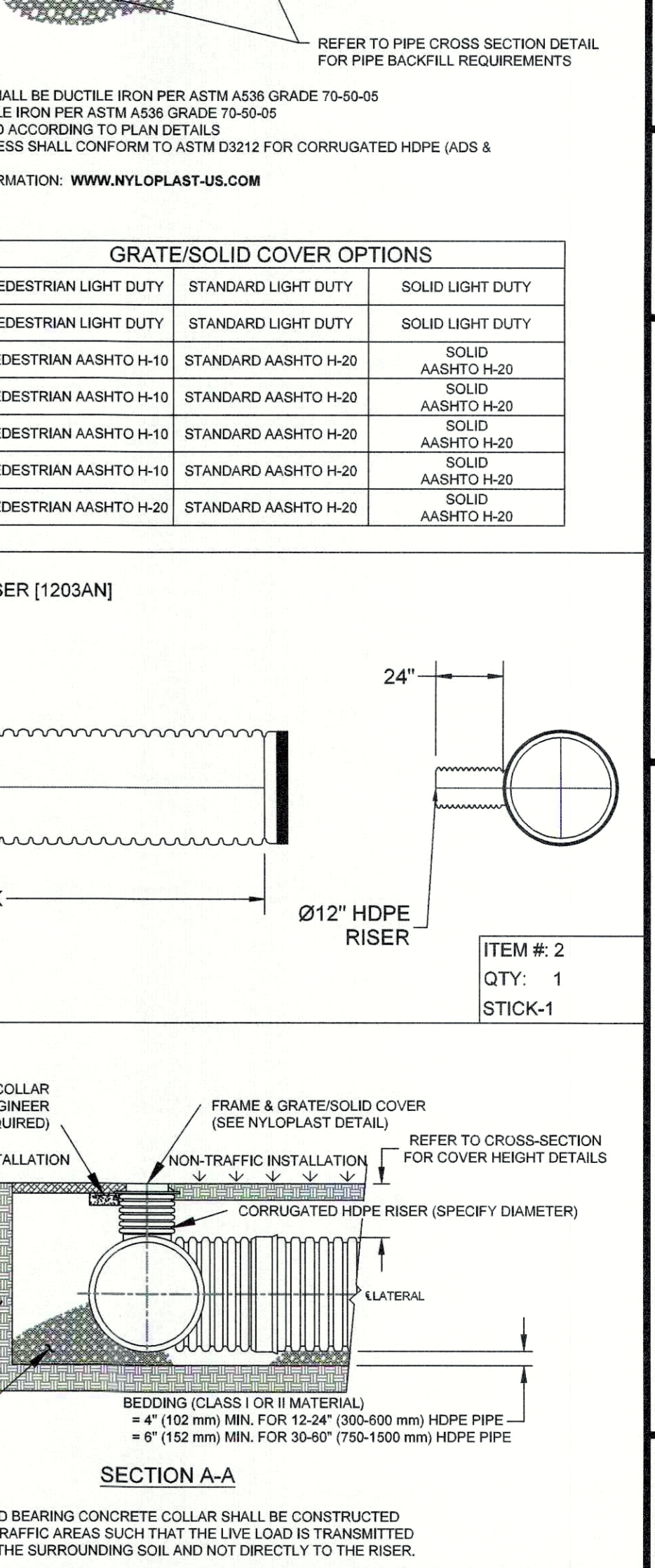
NOTES

- ALL Materials Are Type 304SS Unless Otherwise Noted
- All Horizontal And Vertical Stiffeners Shall Be Spot Welded @ 4" C.C. (Max.) To Perforated Screen
- For Catch Basin Uneven Floor Extension Panel Detail See Sh. 3



GRATE/SOLID COVER OPTIONS

A	PART #	GRATE/SOLID COVER OPTIONS	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
8" (200 mm)	2708AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2710AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2712AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2715AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2718AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2724AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2730AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20



DATE: 10-26-18

SCALE: N.T.S.

DRAWN BY: JR

REVISED: 10/26/18

REVISIONS:

No.	Date	Comments
1	4/29/19	Plan, Dept. Comm.
2	5/29/19	I.E. Comments
3	10/17/19	DEP Comments
4	11/09/19	DEP Comments
5	1/22/20	DEP Comments
6	7/22/20	DEP Comments
7	12/22/20	DEP Comments
8	3/18/21	DEP Comments
9	4/8/21	DEP Comments
10	9/24/21	TWCHD Comments

Site Design Consultants
 Civil Engineers • Land Planners
 251-F Underhill Avenue, Yorktown Heights, NY 10598
 (914) 962-4488 - Fax: (914) 962-7386
 www.sitedesignconsultants.com

THE WEYANT
 2040 CROMPOUND ROAD
 Westchester County, New York
 Town of Yorktown

CISTERN DETAILS

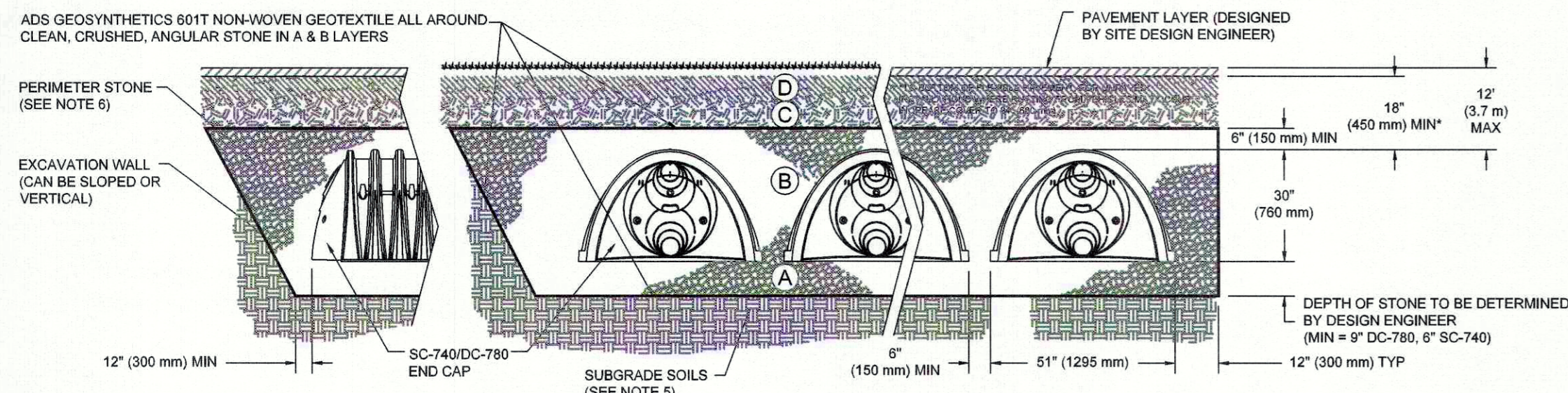
Sheet **C-508**

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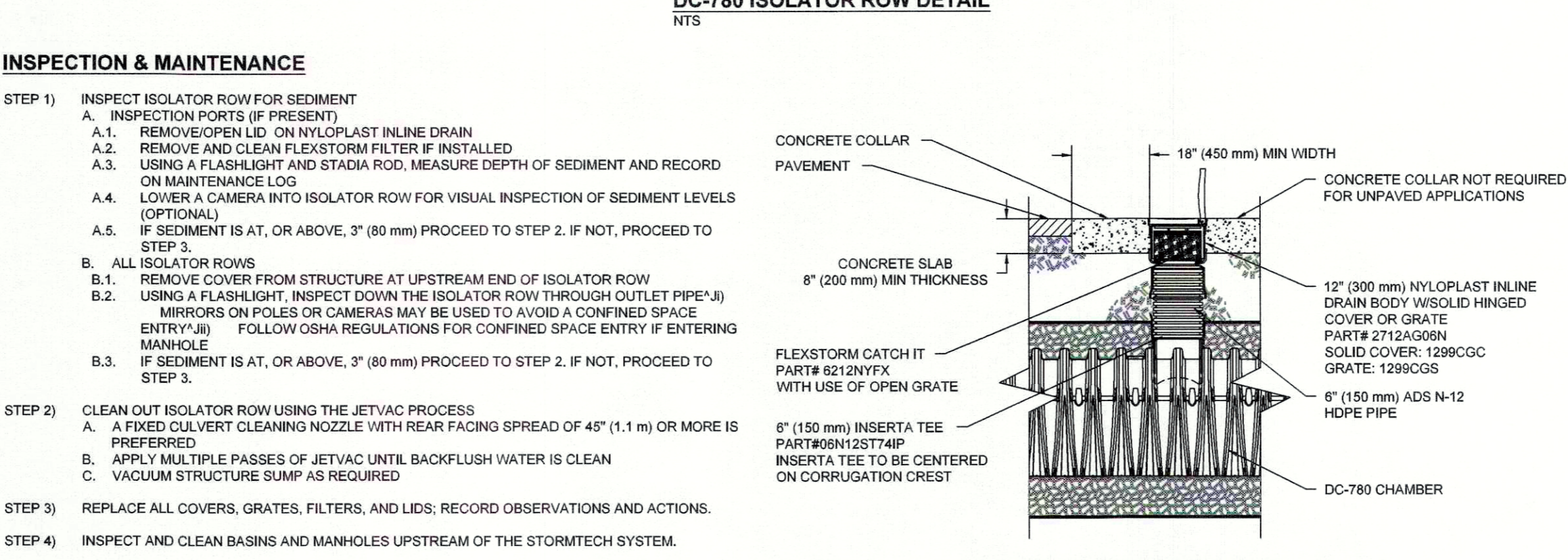
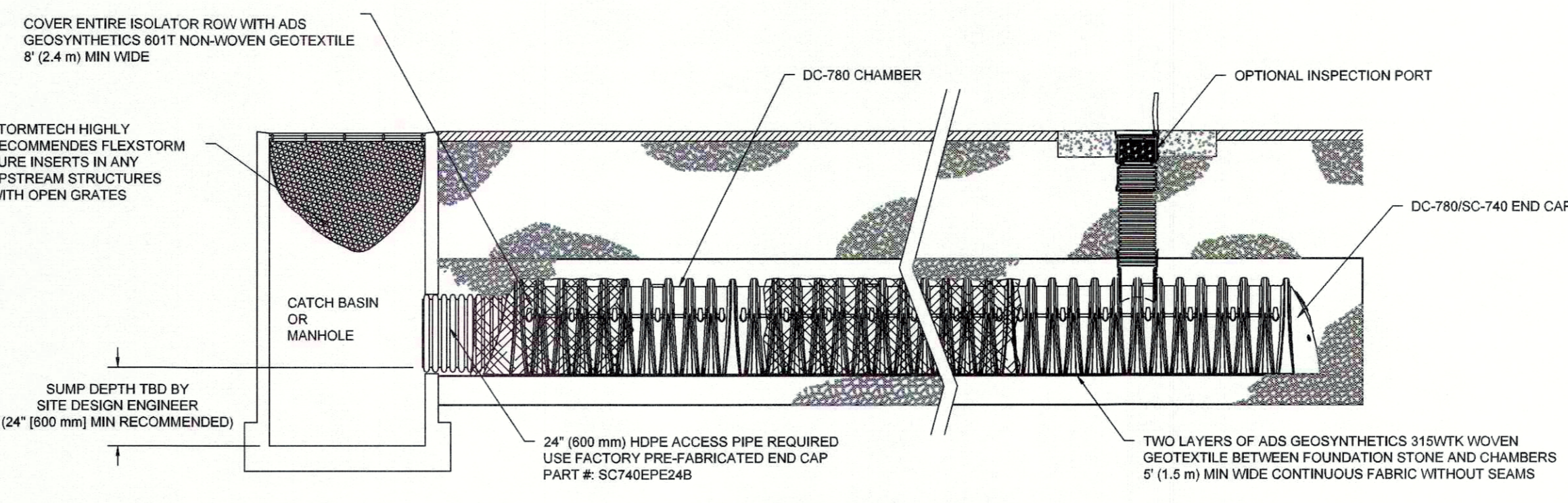
ACCEPTABLE FILL MATERIALS: STORMTECH DC-780 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE TO LAYER 'B' TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	AASHTO M145* A-1, A-2, A-3 OR AASHTO M43* 3, 357, 4, 487, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (55 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43* 3, 357, 4, 487, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43* 3, 357, 4, 487, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. **

- PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE.
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



- NOTES:**
- DC-780 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - DC-780 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
 - THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
 - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



- NOTES:**
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
 - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

DC-780 TECHNICAL SPECIFICATION

NTS

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
51.0" X 30.0" X 85.4"	46.2 CUBIC FEET	78.4 CUBIC FEET (2.20 m³)	75.0 lbs. (33.8 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, 9" (229 mm) BELOW, AND 6" (152 mm) BETWEEN CHAMBERS.

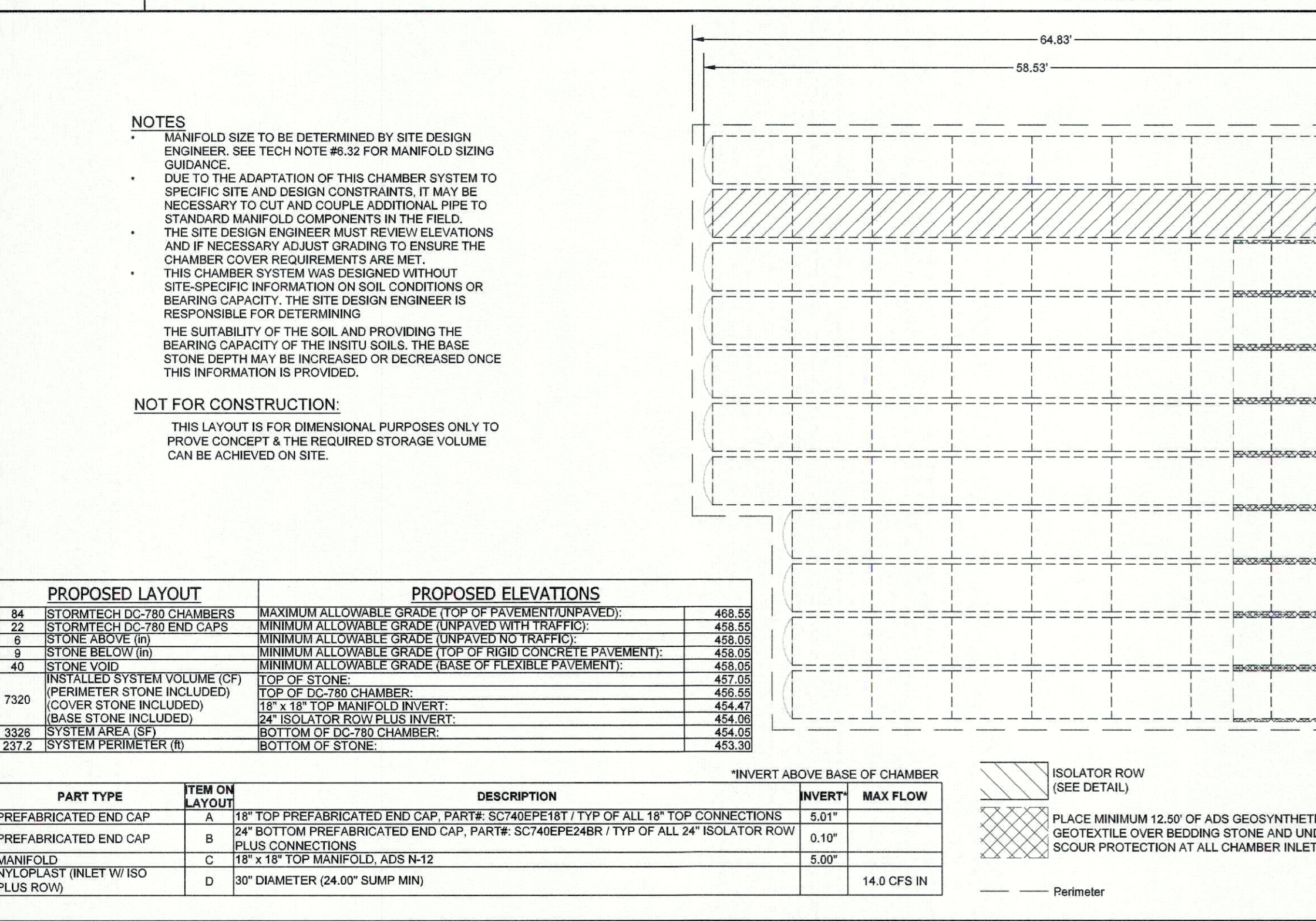
PART #	STUB	A	B	C
SC740EPE007 / SC740EPE007PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	—
SC740EPE008 / SC740EPE008PC	—	—	—	0.5" (13 mm)
SC740EPE011 / SC740EPE011PC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	—
SC740EPE012 / SC740EPE012PC	—	—	—	0.6" (15 mm)
SC740EPE101 / SC740EPE101PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EPE102 / SC740EPE102PC	—	—	—	0.7" (18 mm)
SC740EPE121 / SC740EPE121PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EPE122 / SC740EPE122PC	—	—	—	1.2" (30 mm)
SC740EPE151 / SC740EPE151PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EPE152 / SC740EPE152PC	—	—	—	1.3" (33 mm)
SC740EPE181 / SC740EPE181PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EPE182 / SC740EPE182PC	—	—	—	1.6" (41 mm)
SC740EPE24B	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

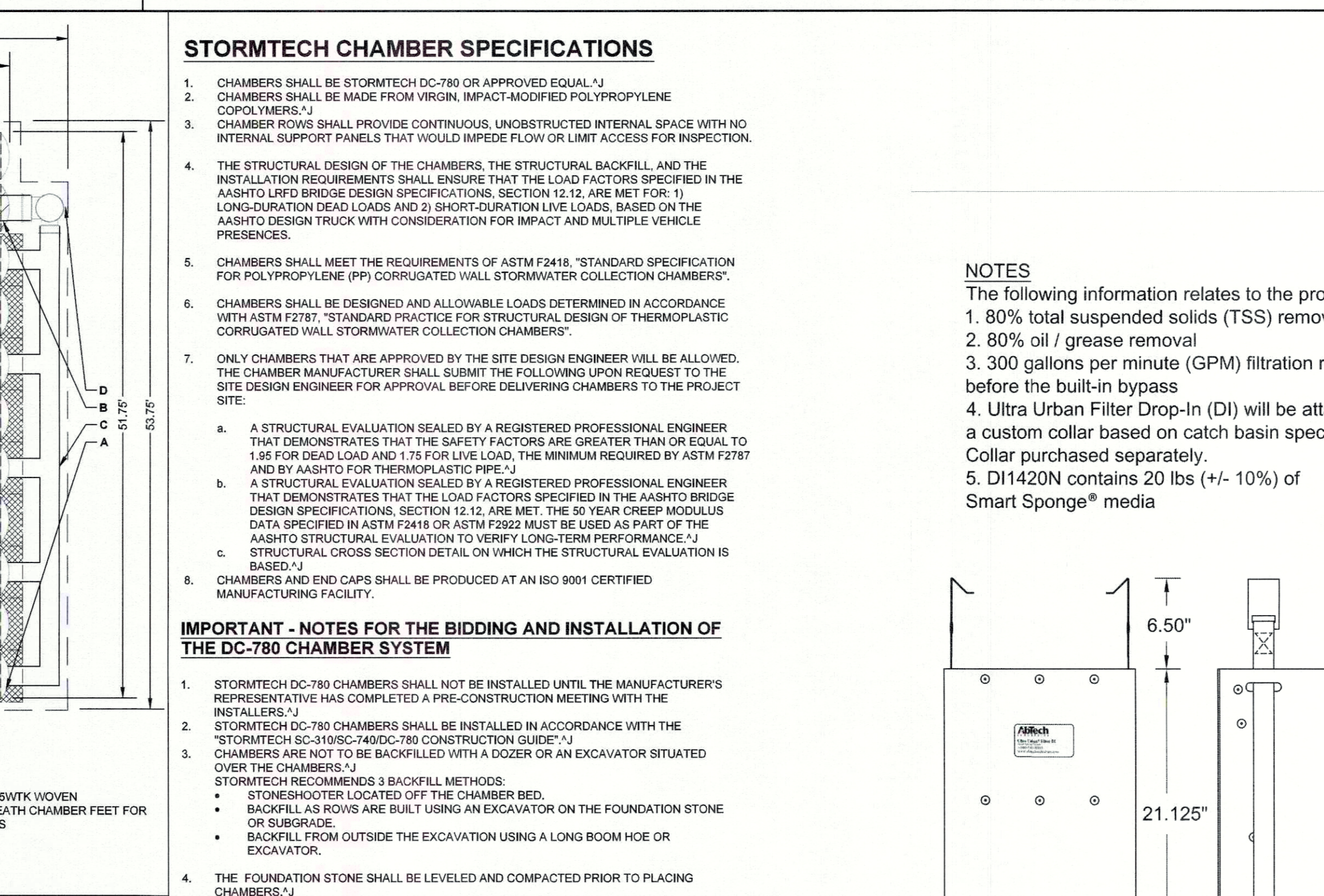
*FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL.

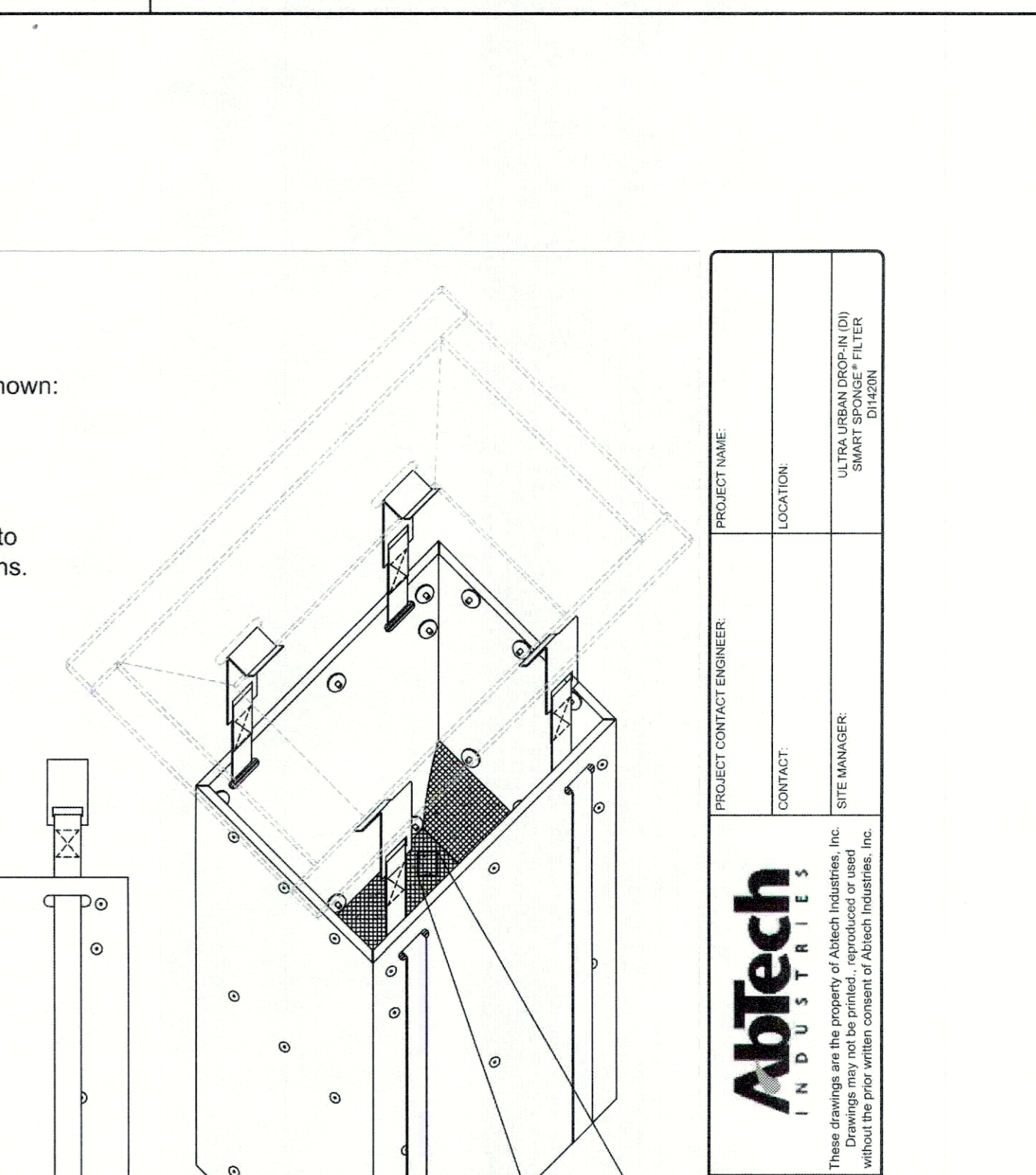
SW-1 STORMTECH SC-740/DC-780 CROSS SECTION DETAIL



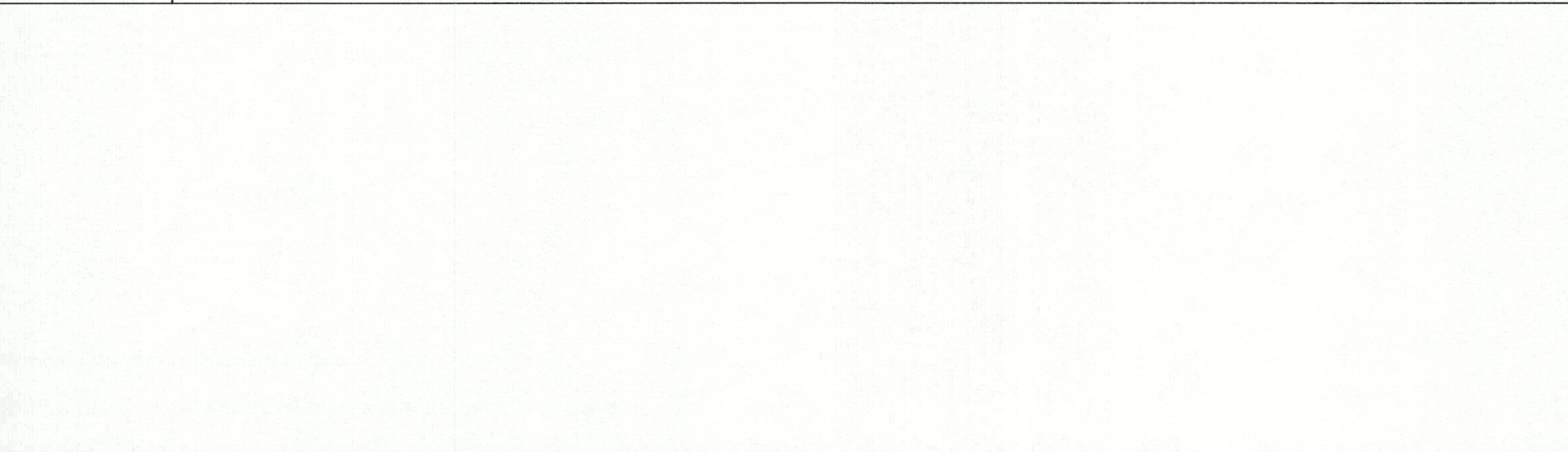
SW-2 STORMTECH SC-740/DC-780 ISOLATOR ROW DETAIL



SW-3 STORMTECH SC-740/DC-780 CHAMBER DETAIL



SW-4 STORMTECH SC-740/DC-780 CROSS SECTION DETAIL



STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH DC-780 OR APPROVED EQUAL.
- CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.5 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 90 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2822 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

NOTES

- The following information relates to the product shown:
- 80% total suspended solids (TSS) removal
 - 80% oil / grease removal
 - 300 gallons per minute (GPM) filtration rate before the built-in bypass
 - Ultra Urban Filter Drop-In (DI) will be attached to a custom collar based on catch basin specifications. Collar purchased separately.
 - DI1420N contains 20 lbs (+/- 10%) of Smart Sponge® media

Site Design Consultants
 Civil Engineers • Land Planners
 251-L Underhill Avenue, Yorktown Heights, NY 10598
 (914) 962-4488 • Fax: (914) 962-7586
 www.sitedesignconsultants.com

STORMTECH DETAILS

THE WEYANT
 2040 CROMPOD ROAD
 Westchester County, New York
 Town of Yorktown

C-509

Sheet