

SINGLE-FAMILY HOUSE LOTS & STREET IMPROVEMENTS

0 MYRICK AVENUE
WORCESTER, MA 01605

SHEET INDEX

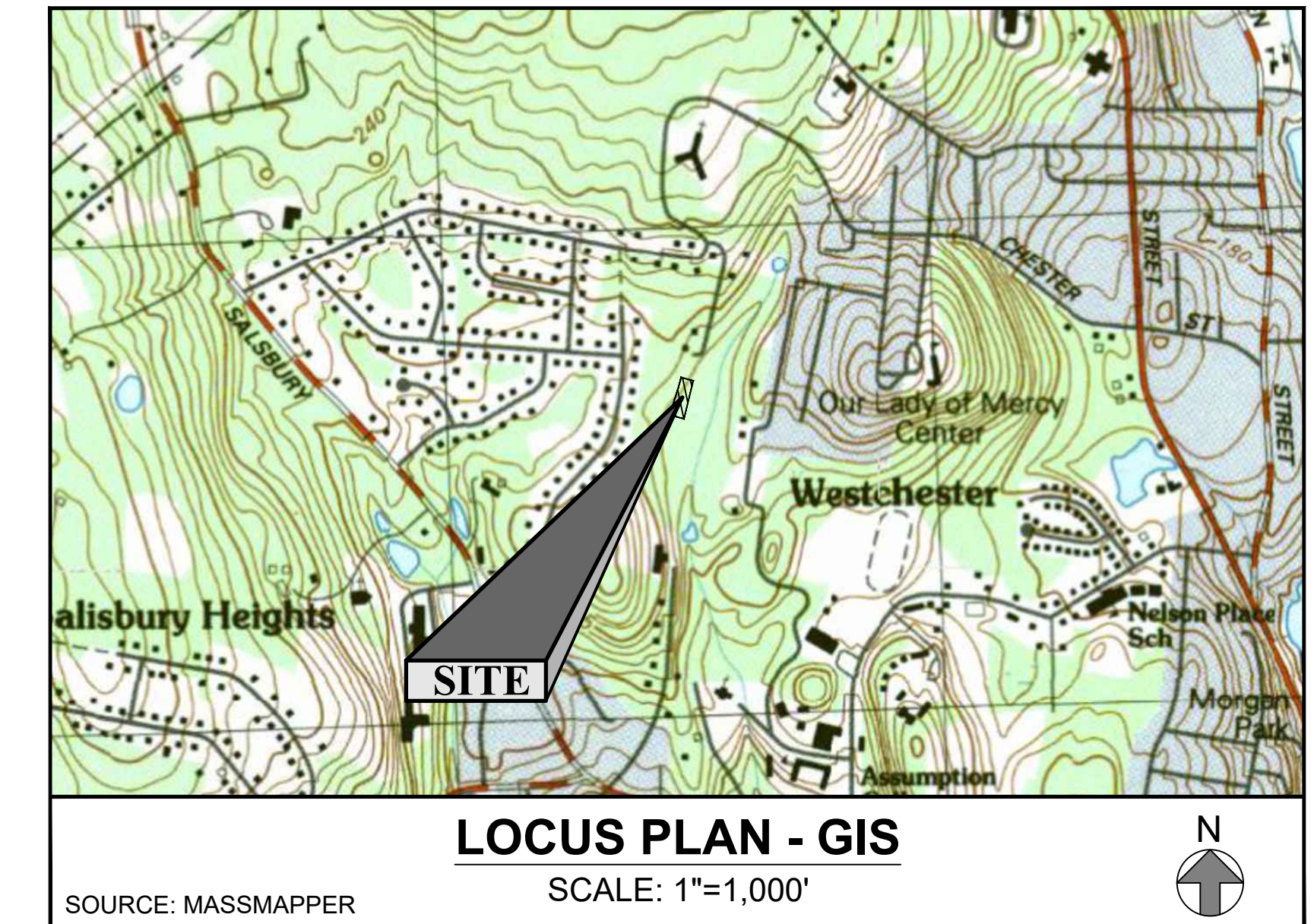
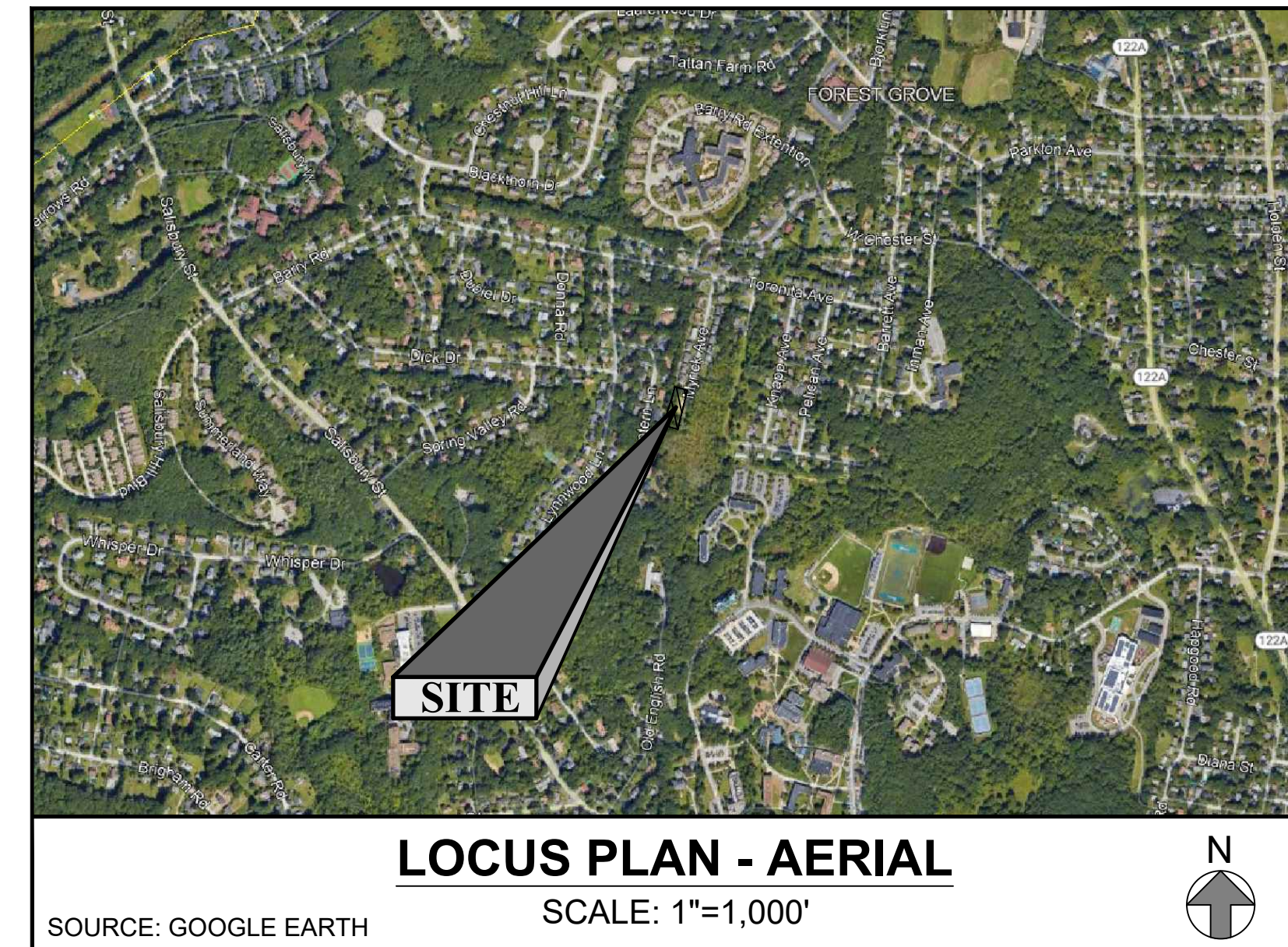
No.	Title	Issue Date
C001	Cover Sheet	December 20, 2023
C101	Site Demo, & Sediment & Erosion Control Plan	December 20, 2023
C102	Layout Plan	December 20, 2023
C103	Grading & Drainage Plan	December 20, 2023
C104	Utilities Plan	December 20, 2023
C501	Site Details - 1	December 20, 2023
C502	Site Details - 2	December 20, 2023

REFERENCE PLAN INDEX

No.	Title	Issue Date
E1	Existing Conditions Plan (B&R Survey, Inc.)	August 31, 2023
-	Single Family Home (Residential Design, Inc.)	November 14, 2023

REVISIONS/ISSUES

No.	Note	Date
1	Issued for Permitting	December 20, 2023



OWNER/APPLICANT

Kendall Homes Inc.
P.O. Box 766
Southborough, MA 01772

ENVIRONMENTAL CONSULTANT

EBT Environmental Consultants, Inc.
601 Main Street
Oxford, MA 01537

SURVEYOR

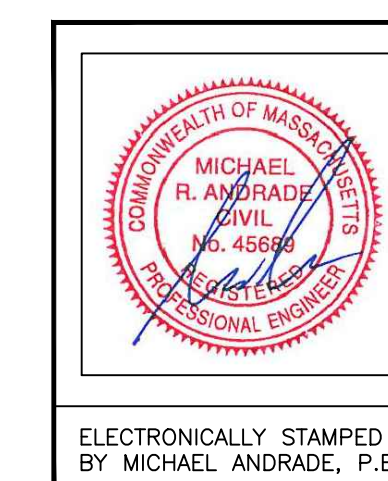
B&R Survey, Inc.
100 Grove Street
Worcester, MA 01605

ARCHITECT

Residential Design Inc.
P.O. Box 67
Conway, NH 03818



100 GROVE STREET | WORCESTER MA 01605
T 508-856-0321 | F 508-856-0357
gravesengineering.com



SHEET NOTES

- 1) PRIOR TO WORK, THE CONTRACTOR SHALL VERIFY THE DEPTH OF COVER OVER THE EXISTING UNDERGROUND UTILITIES IN THE AREA OF THE PROPOSED WORK. IF ADEQUATE COVER IS NOT PRESENT TO THE PROPOSED FINISH GRADES, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER IMMEDIATELY BEFORE BEGINNING WORK IN THIS AREA.
- 2) UTILITY MATERIALS, CONSTRUCTION, AND TESTING SHALL COMPLY WITH THE WORCESTER DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS, LATEST EDITION.
- 3) THE CONTRACTOR SHALL COORDINATE THE UTILITY WORK WITH THE PROPOSED BUILDING PLANS.
- 4) ALL UTILITY WORK SHALL BE COORDINATED BY THE CONTRACTOR WITH THE PROPER UTILITY COMPANIES.
- 5) THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING WATER AND SEWER SERVICE UTILITIES. IF CONFLICTS ARE FOUND THAT PROHIBIT THE INSTALLATION OF THE UTILITIES AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH THE WORK.
- 6) NEW CATCH BASIN FRAMES AND GRATES SHALL BE CITY STANDARD (MODEL: EJIW 728BZ1 (3-FLANGE), 728BZ (4-FLANGE), OR LEBARON LF288 CAST IRON FRAME & EJIW 7288M OR LEBARON L28SG1 CAST IRON GRATE.
- 7) EXTENSION OF EXISTING ELECTRICAL SERVICE ON MYRICK AVENUE IS NOT SHOWN ON THESE DRAWINGS. THE OWNER/CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE ELECTRIC UTILITY COMPANY FOR SAID EXTENSION OF SERVICE FOR THESE FOUR LOTS.

N/F
CHRISTINA
AN
PG. 333
87 PL. 31

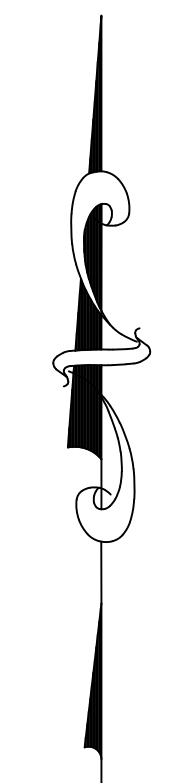
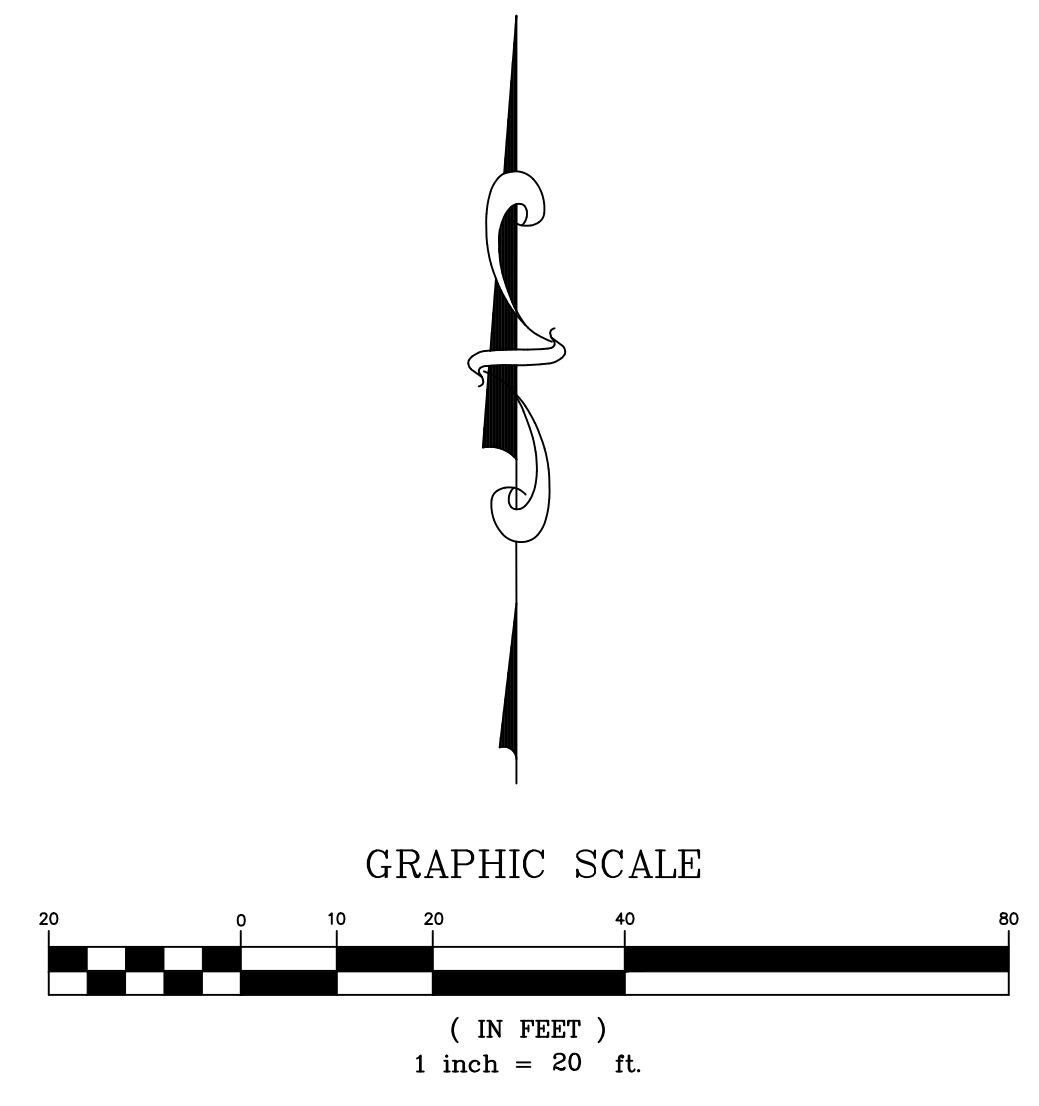
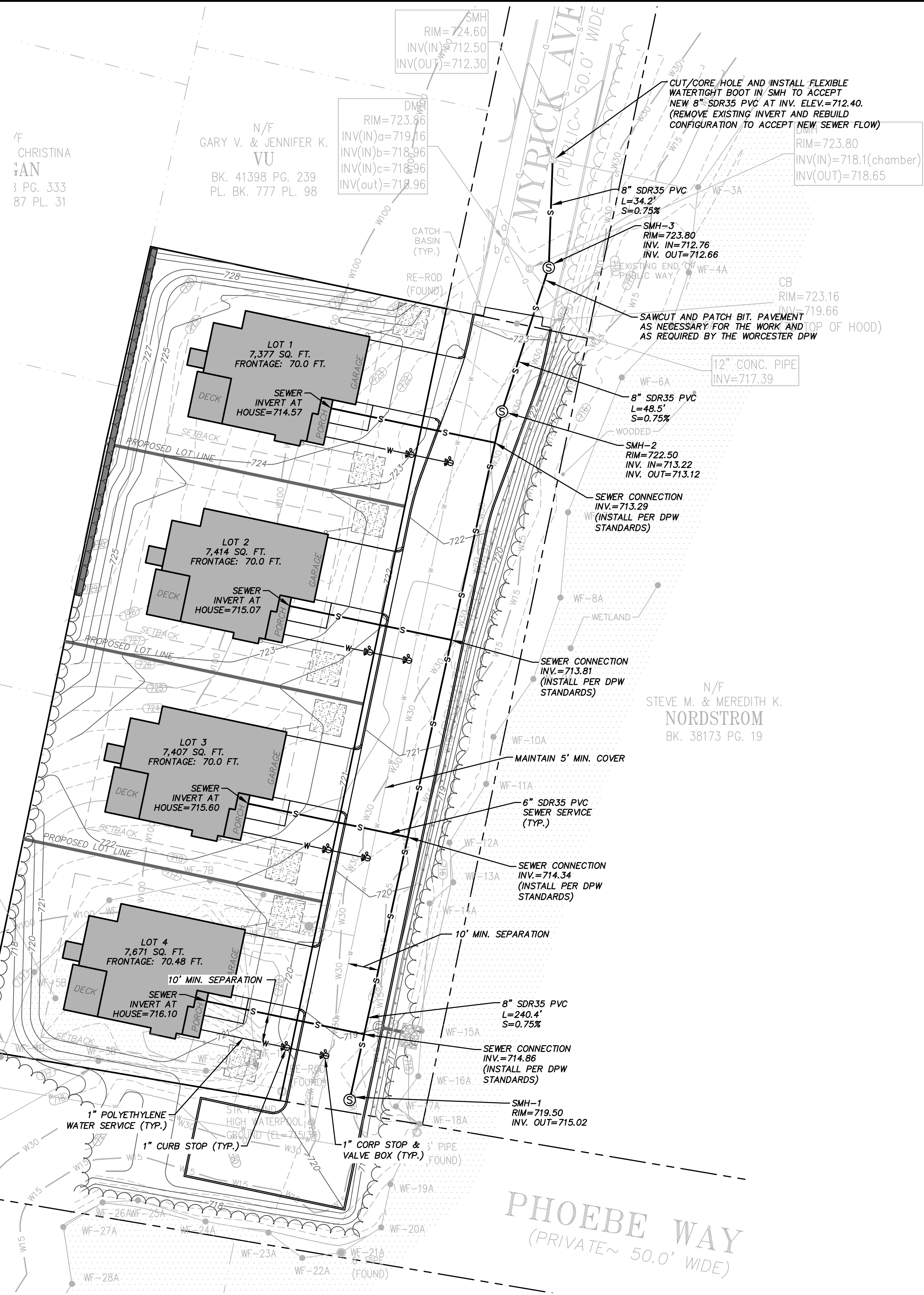
N/F
GARY V. & JENNIFER K.
VU
BK. 41398 PG. 239
PL. BK. 777 PL. 98

N/F
HELEN GANIAS
BK. 63962 PG. 82
PL. BK. 287 PL. 31
PL. BK. 564 PL. 118

LOT LINE AS SHOWN ON
PL. BK. 495 PL. 77

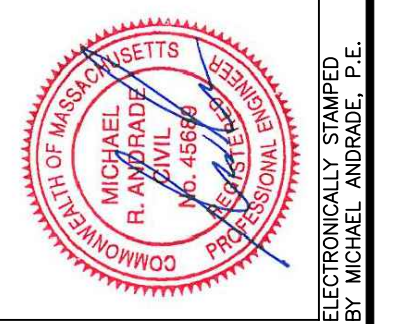
PHOEBE WAY
ESTABLISHED BY
PL. BK. 564 PL. 118

N/F
DANIEL RIGONAHY



GRAVES ENGINEERING, Inc.
100 GROVE STREET | WORCESTER MA 01605
T 508-856-0321 | F 508-856-0357
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
1	12/20/23	ROM	ISSUED FOR PERMITTING

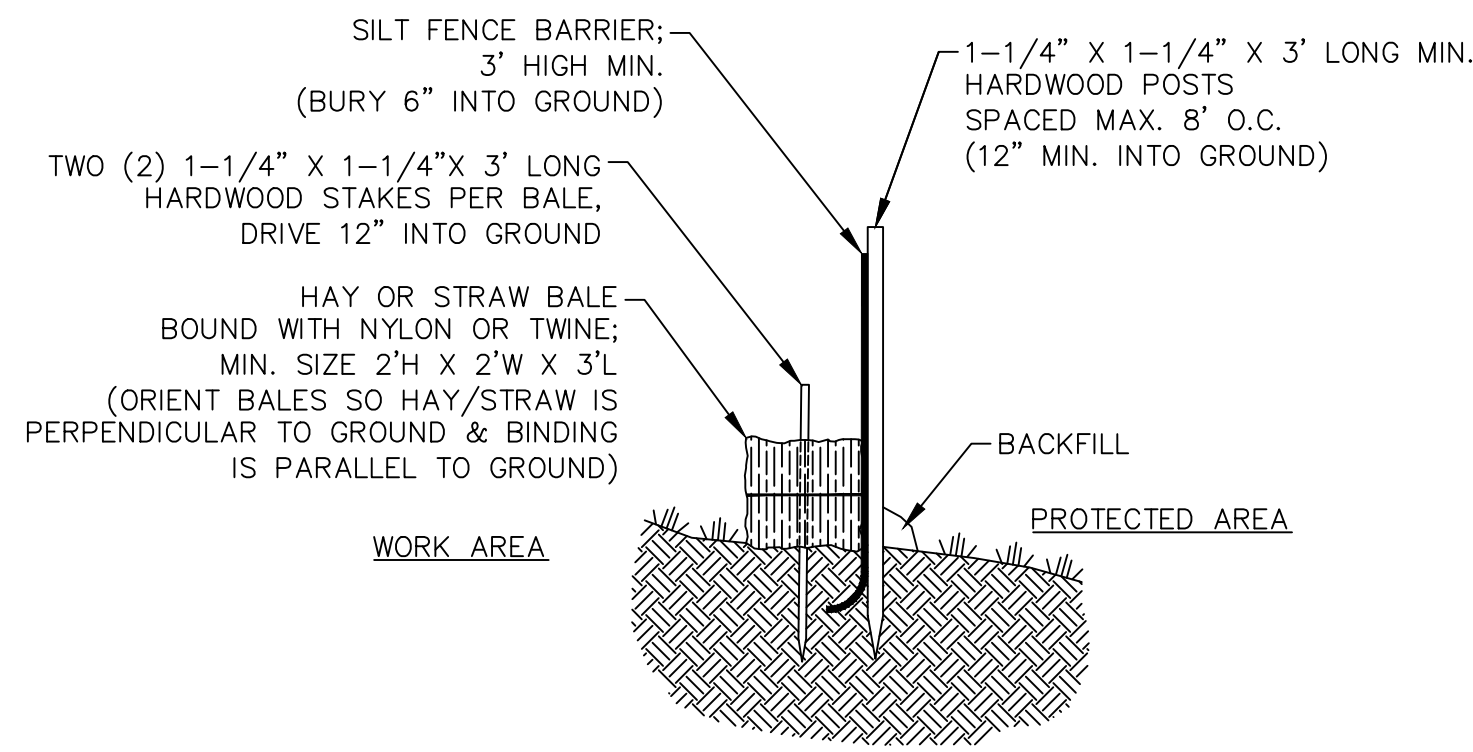


UTILITIES PLAN
SINGLE-FAMILY HOUSE LOTS & STREET IMPROVEMENTS
0 MYRICK AVENUE, WORCESTER, MA 01605

PREPARED FOR: KENDALL HOMES INC.
P.O. BOX 766, SOUTHBOROUGH, MA 01772

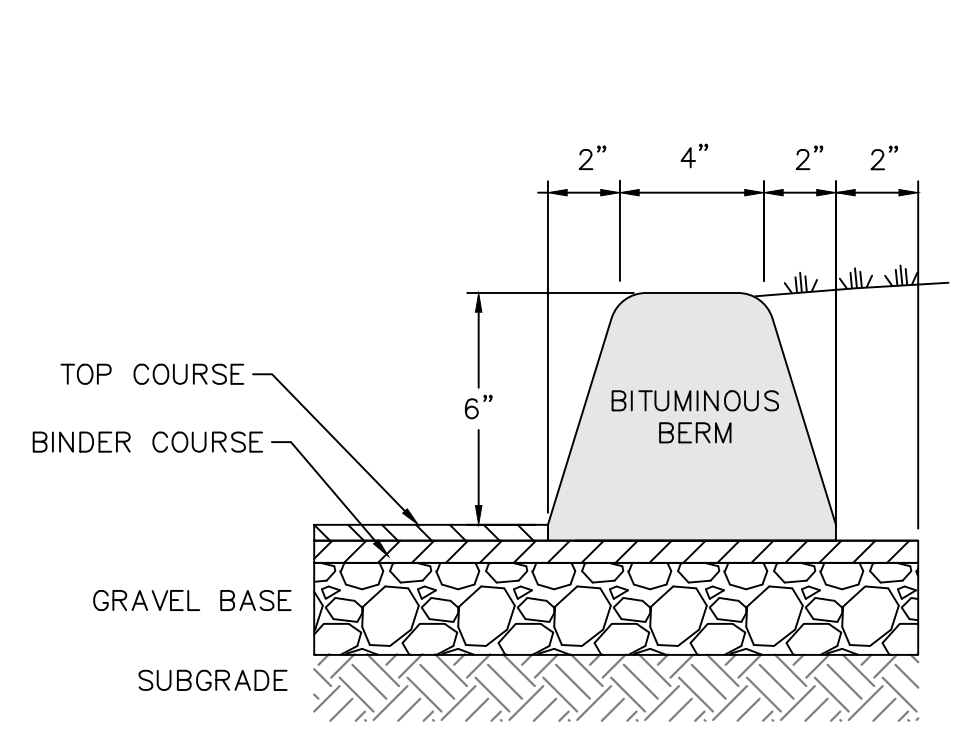
DATE: 12/20/23 SCALE: 1"=20'

DES. BY: ROM DRW. BY: ROM CHK. BY: MRA PRJ. NO.: 23127



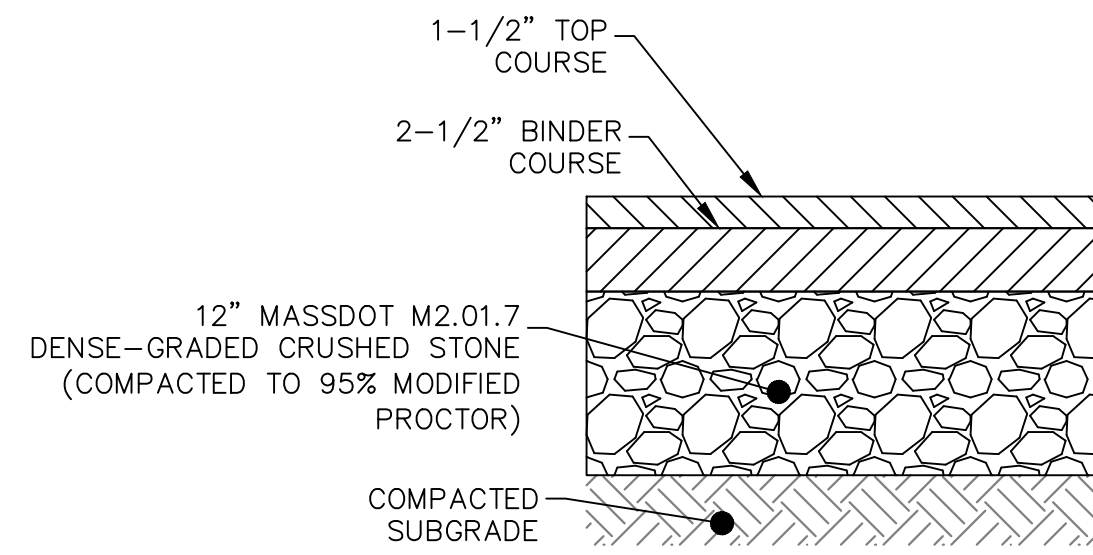
HAY/STRAW BALE & SILT FENCE NTS

- NOTE:
- 1) PROVIDE A 3' TO 6' LEVEL AREA BETWEEN THE HAY/STRAW BALE AND THE TOE OF ANY SLOPE TO PROVIDE AREA FOR SEDIMENT ACCUMULATION.



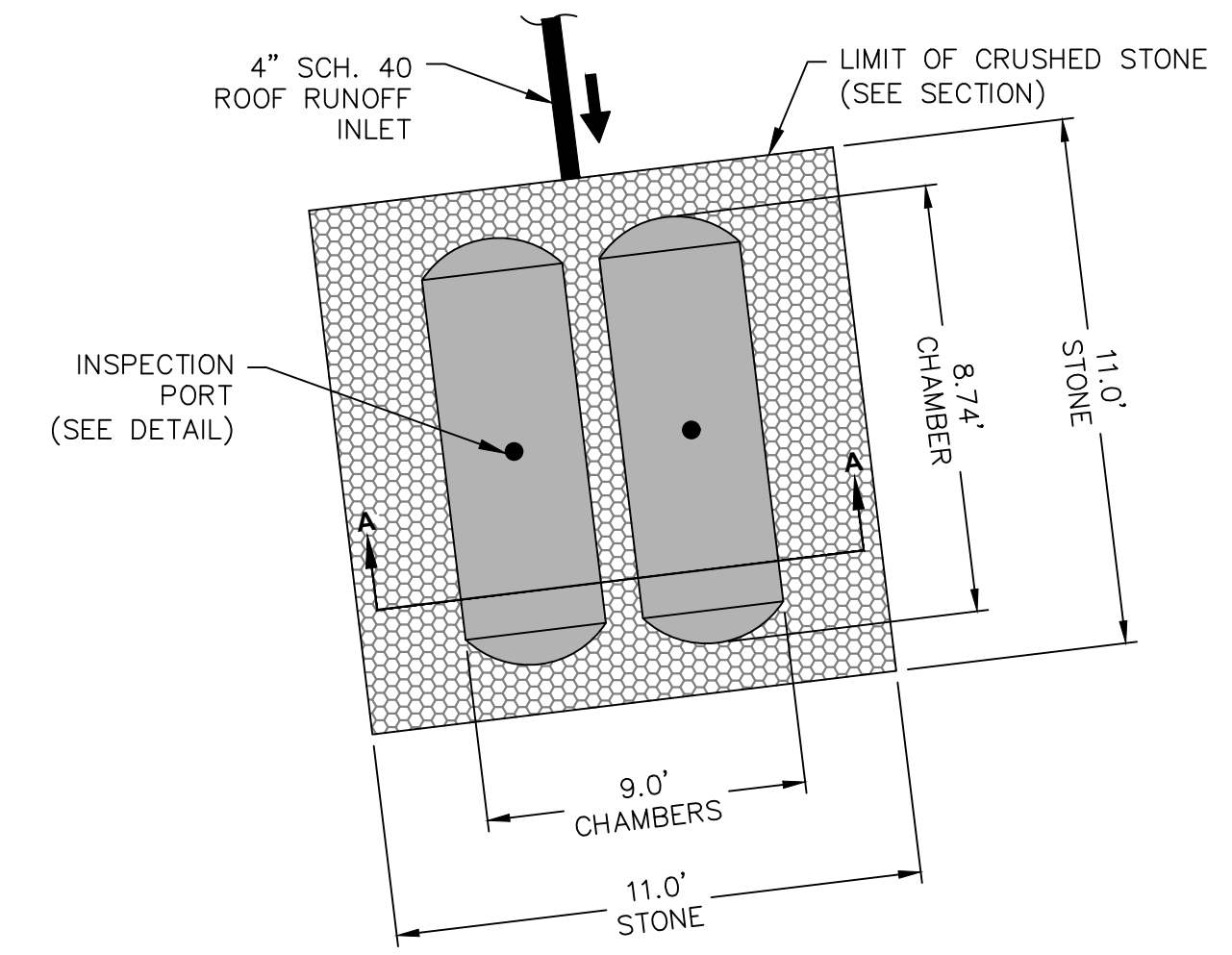
BITUMINOUS BERM-TYPE 3 NTS

- NOTES:
- 1) BERM SHALL BE LAID ON BINDER COURSE AND KEYED INTO TOP COURSE.
 - 2) BERM ASPHALT: MASSDOT M3.11.03, TABLE A, "HMA DENSE MIX".



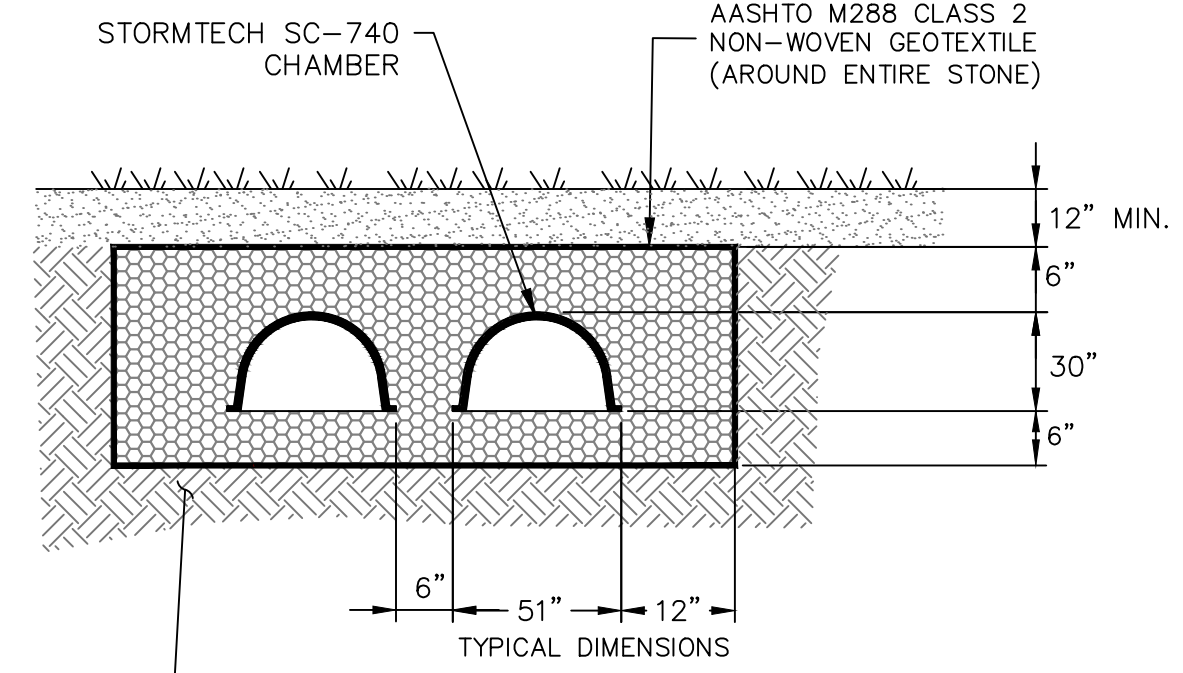
PAVEMENT SECTION-DRIVEWAY NTS

- NOTES:
- 1) TAMP ALL ASPHALT EDGES THAT ABUT LAWN, LANDSCAPED AREA, OR OTHER SOFT SURFACE.
 - 2) BINDER COURSE: - MASSDOT M3.11.03, TABLE A, "HMA INTERMEDIATE COURSE DENSE BINDER" OR SUPERPAVE INTERMEDIATE COURSE - 19.0MM (MIXTURE DESIGNATION SIC - 19.0).
 - 3) TOP COURSE: - MASSDOT M3.11.03, TABLE A, "SURFACE COURSE STANDARD TOP" OR SUPERPAVE SURFACE COURSE - 12.5MM (MIXTURE DESIGNATION SSC - 12.5).



- 2 STORMTECH SC-740 CHAMBERS ARRANGED IN 2 ROWS OF 1 CHAMBERS EACH WITH END CAPS INSTALLED WITH 6" COVER STONE & 6" BASE STONE

SYSTEM LAYOUT



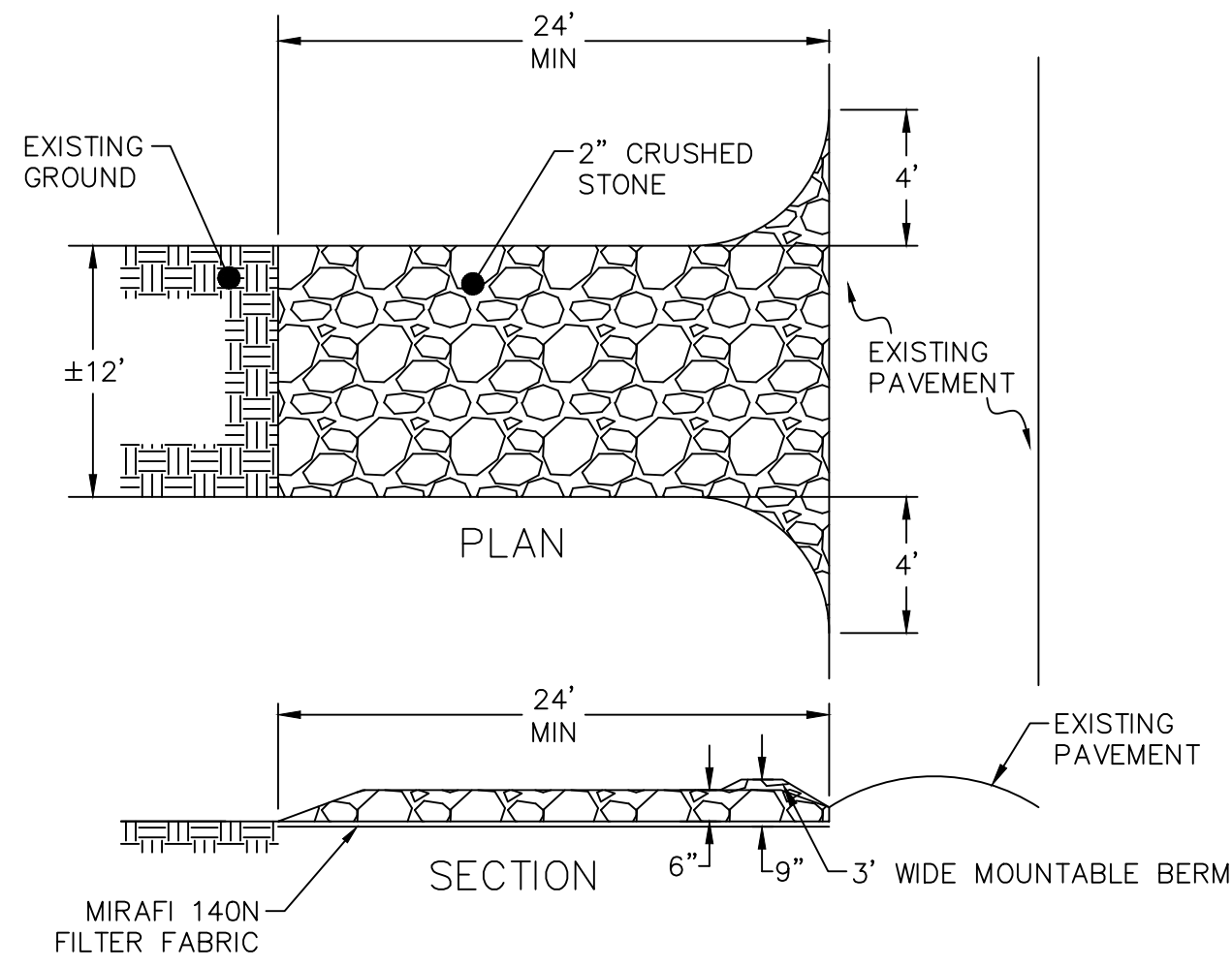
SECTION A-A NTS

- COMPACTED NATIVE SUBGRADE OR WHERE FILL IS NEEDED USE GRANULAR WELL GRADED SOIL/AGGREGATE MIXTURES, <35% FINES, COMPACT IN 6" LIFTS TO 95% PROCTOR DENSITY. SEE MANUFACTURER'S INSTRUCTIONS FOR ACCEPTABLE FILL MATERIALS.

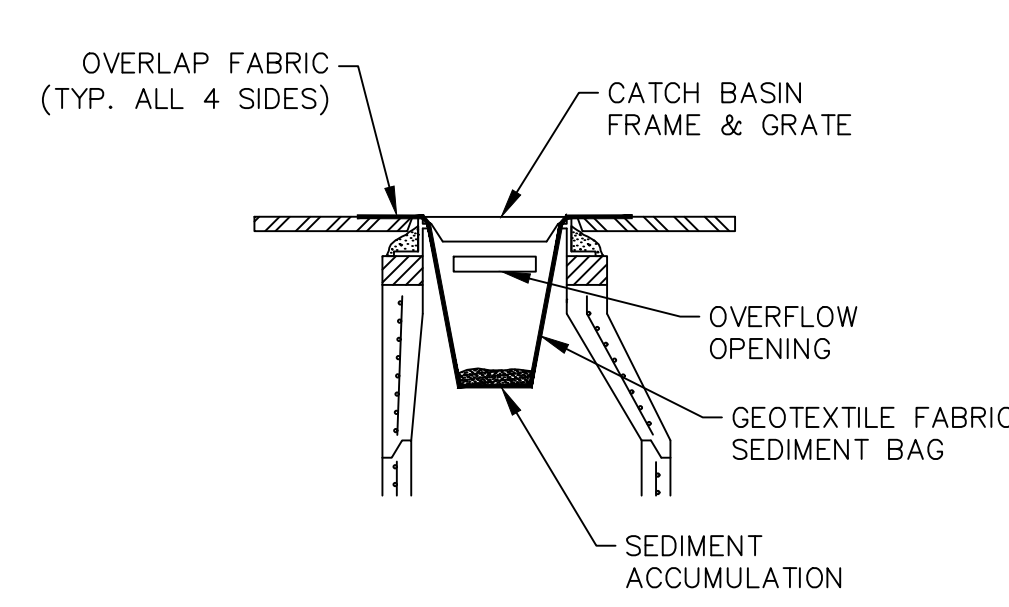
INSPECTION PORT NTS

SUBSURFACE ROOF INFILTRATION SYSTEM NTS

- NOTE:
- 1) ONSITE SOIL TESTING SHALL BE CONDUCTED PRIOR TO CONSTRUCTION AND WITNESSED BY THE ENGINEER.

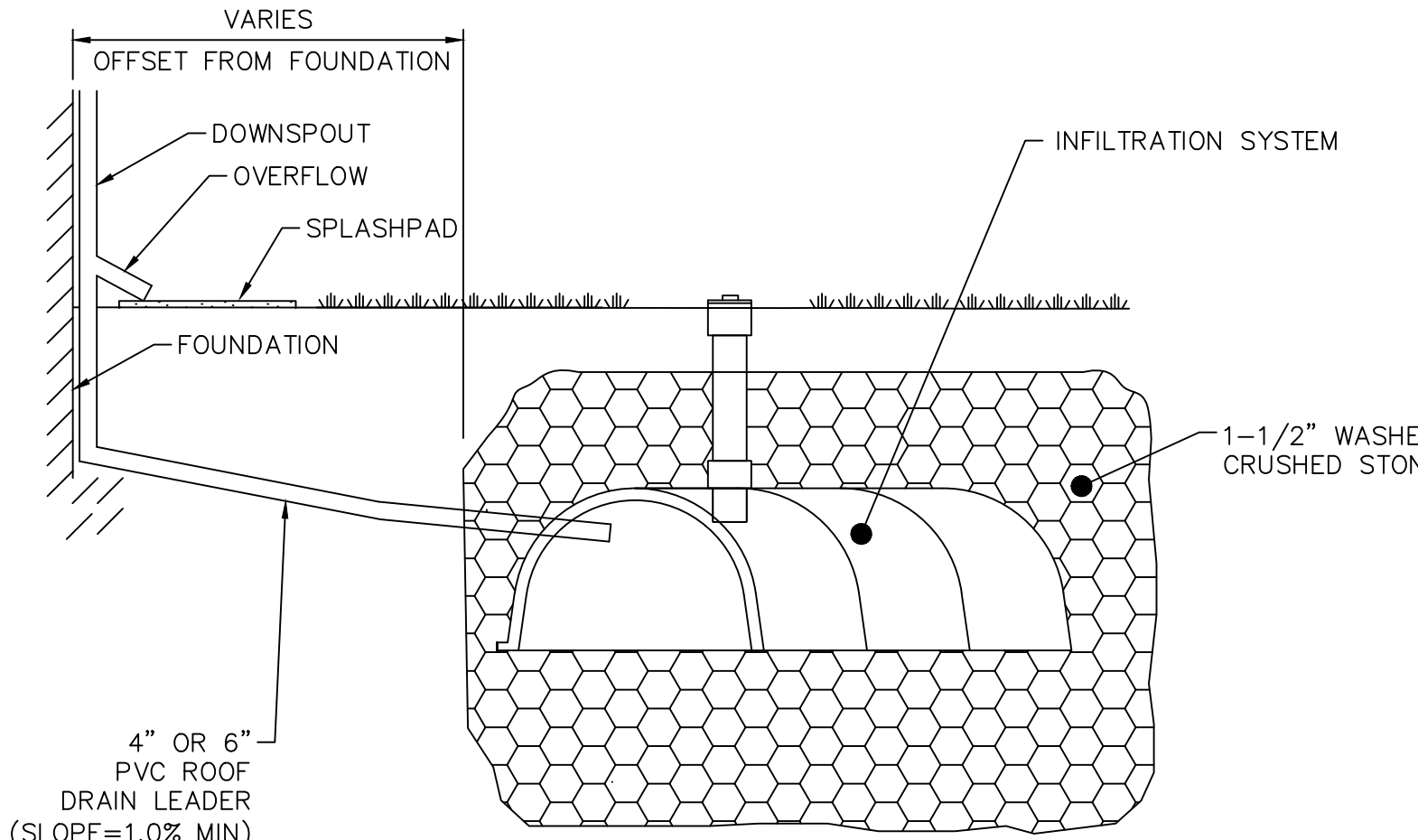


STABILIZED CONSTRUCTION ENTRANCE NTS

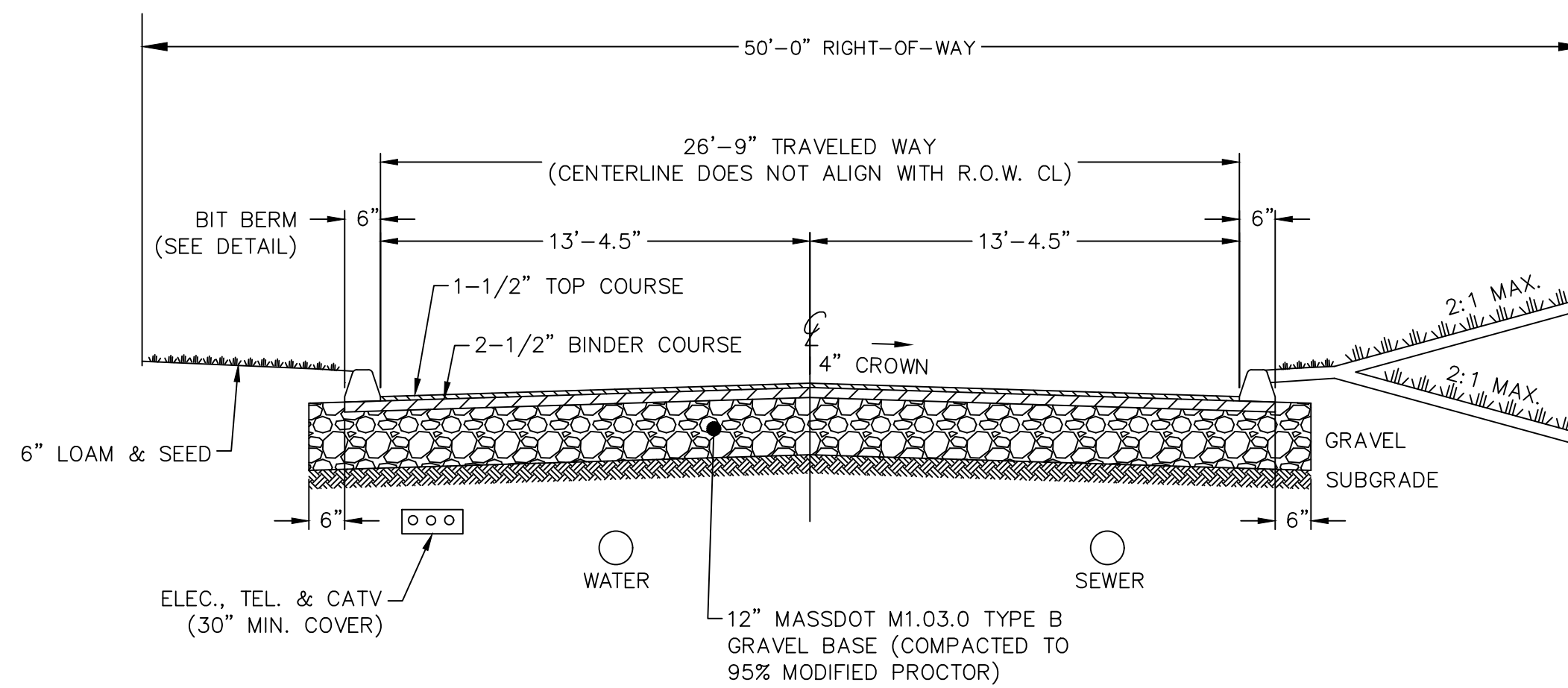


CATCH BASIN SEDIMENT BAG NTS

- NOTES:
- 1) SEDIMENT BAG SHALL BE SILTSACK BY ACF ENVIRONMENTAL, OR APPROVED EQUAL.
 - 2) OIL ABSORPTION MEDIUM MAY ALSO BE PLACED IN BAG (OPTIONAL).
 - 3) INSTALL AND MAINTAIN PER MANUFACTURER'S INSTRUCTIONS.

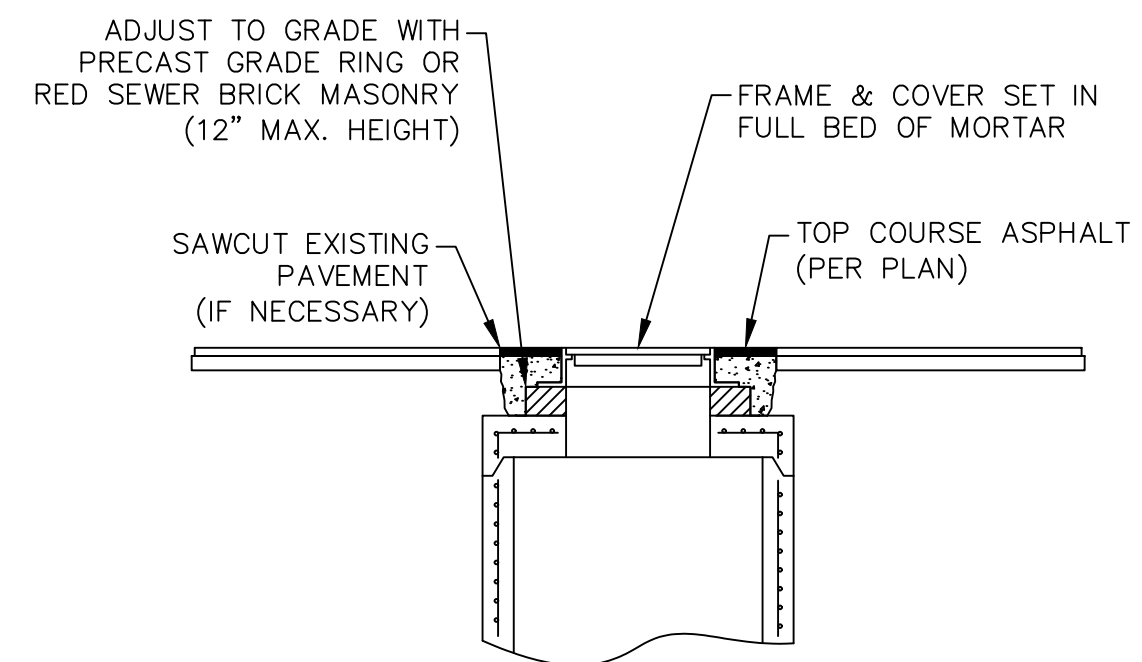


ROOF DRAIN OVERFLOW NTS

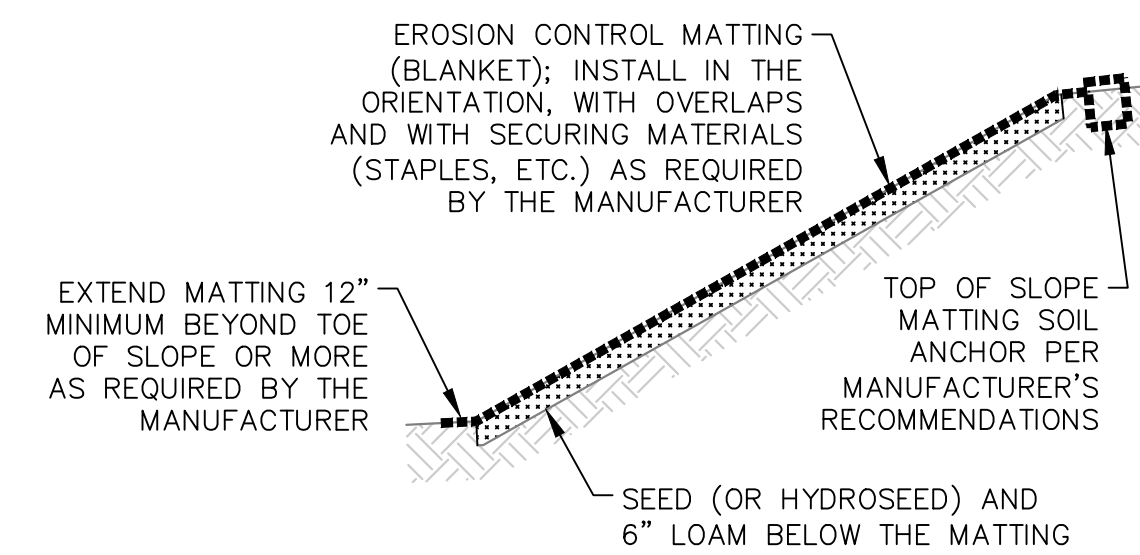


TYPICAL ROADWAY CROSS SECTION NTS

- NOTES:
- 1) TAMP ALL ASPHALT EDGES THAT ABUT LAWN, LANDSCAPED AREA, OR OTHER SOFT SURFACE.
 - 2) BINDER COURSE: - MASSDOT M3.11.03, TABLE A, "HMA INTERMEDIATE COURSE DENSE BINDER" OR SUPERPAVE INTERMEDIATE COURSE - 12.5MM, LEVEL 2 (MIXTURE DESIGNATION SIC - 12.5).
 - 3) TOP COURSE: - MASSDOT M3.11.03, TABLE A, "SURFACE COURSE STANDARD TOP" OR SUPERPAVE SURFACE COURSE - 9.5MM, LEVEL 2 (MIXTURE DESIGNATION SSC - 9.5).



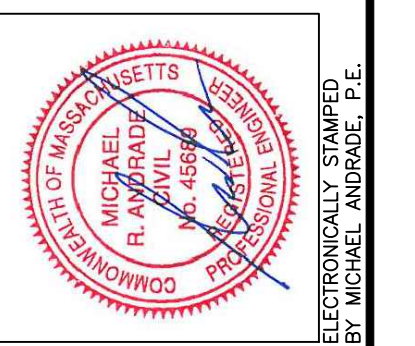
STRUCTURE ADJUSTMENT NTS

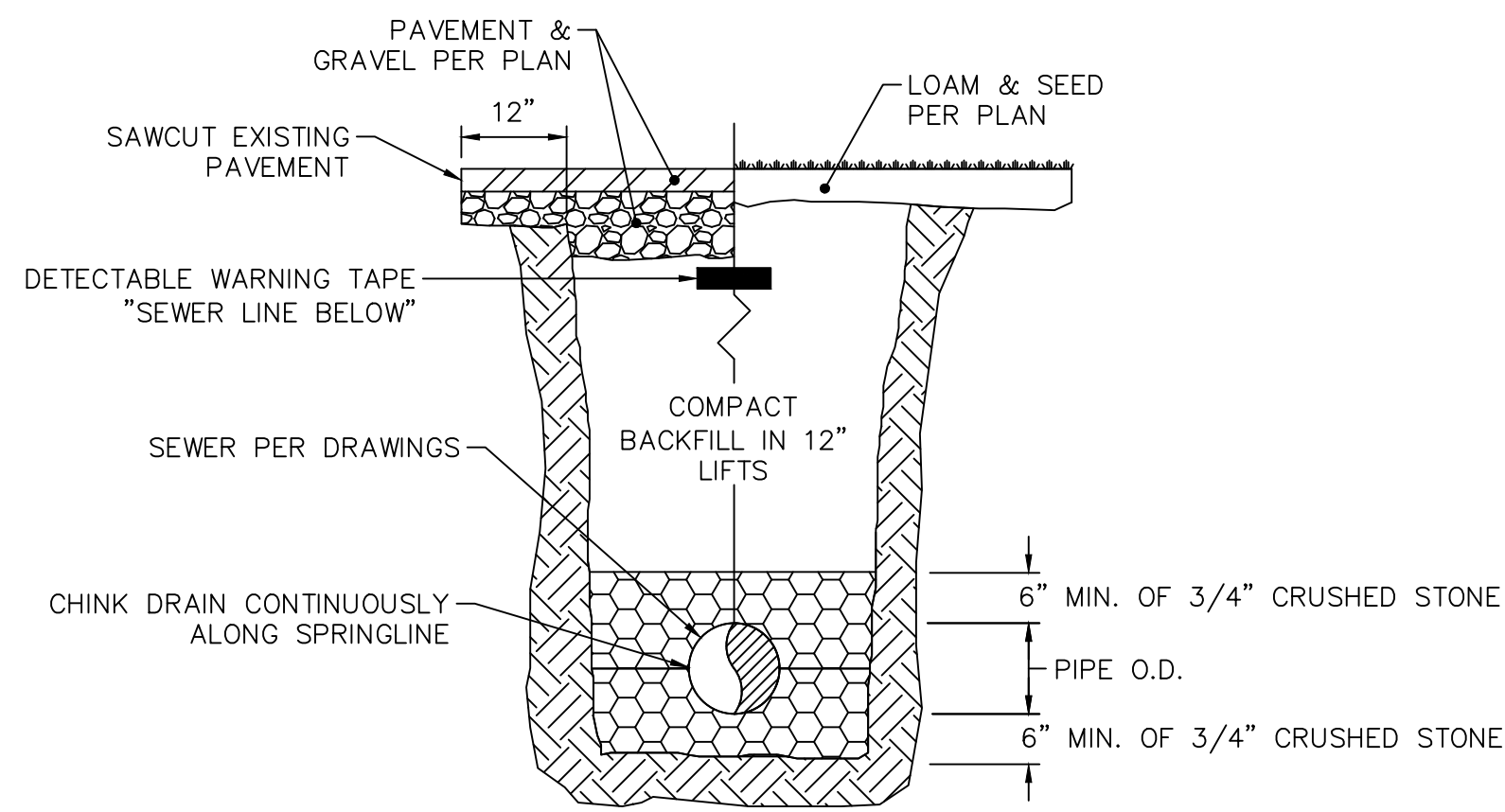


EROSION CONTROL BLANKET SLOPE STABILIZATION NTS

- NOTES:
- 1) EROSION CONTROL MATTING (BLANKETS) SHALL BE INSTALLED ON ALL FINISHED SLOPES SHOWN EQUAL TO OR EXCEEDING A 3:1 SLOPE (33.5%).
 - 2) INSTALLATION SHALL STRICTLY FOLLOW THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
 - 3) UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS FOR A PARTICULAR LOCATION AND APPLICATION, ACCEPTABLE EROSION CONTROL BLANKETS FOR GENERAL SLOPE STABILIZATION ARE: SC150 BY NORTH AMERICAN GREEN, CURLEX II BY AMERICAN EXCELSIOR COMPANY, OR LANDLOK C2 BY PROPEX (OR ENGINEER APPROVED EQUAL).

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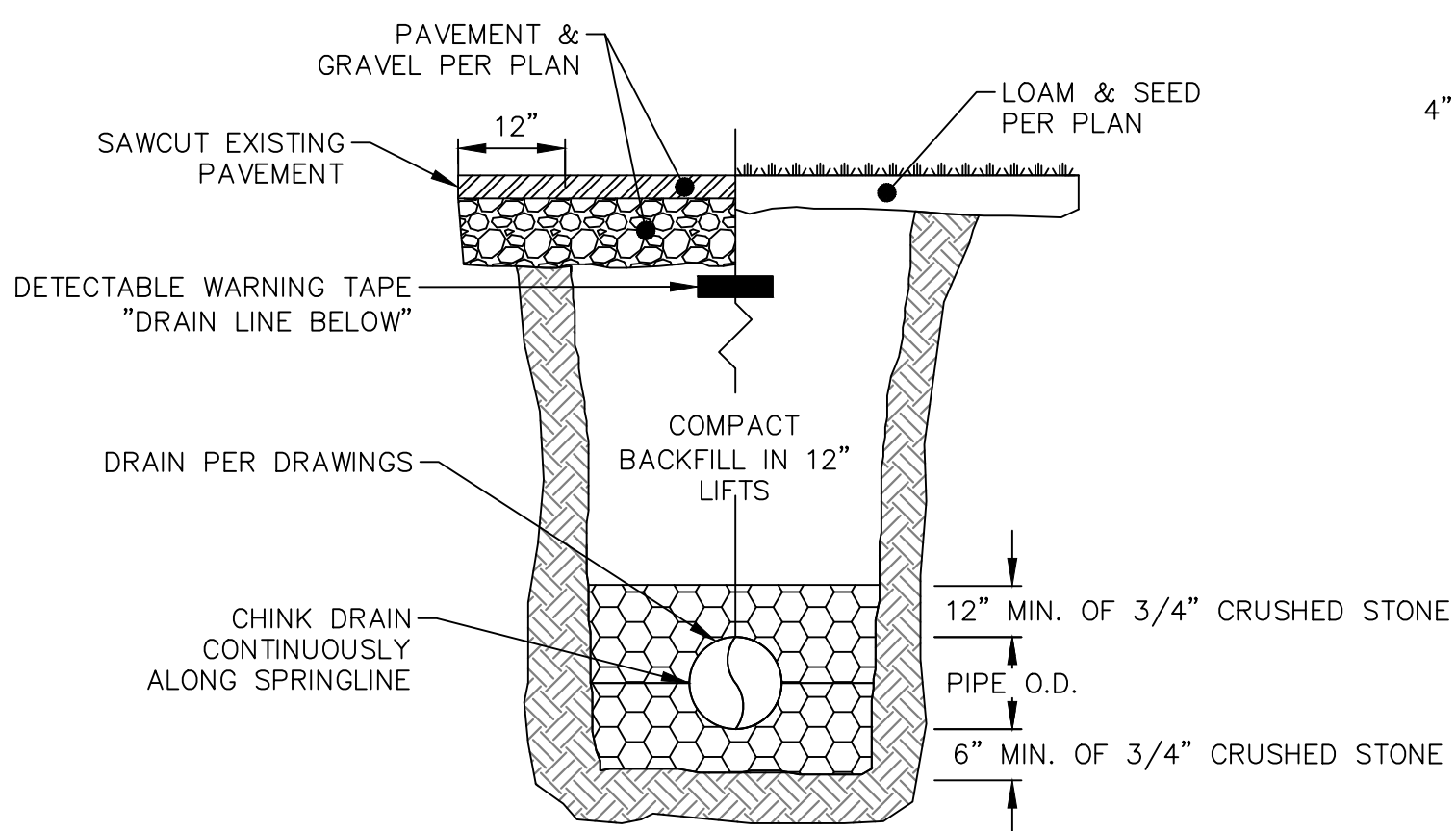




SEWER TRENCH SECTION NTS

NOTE:

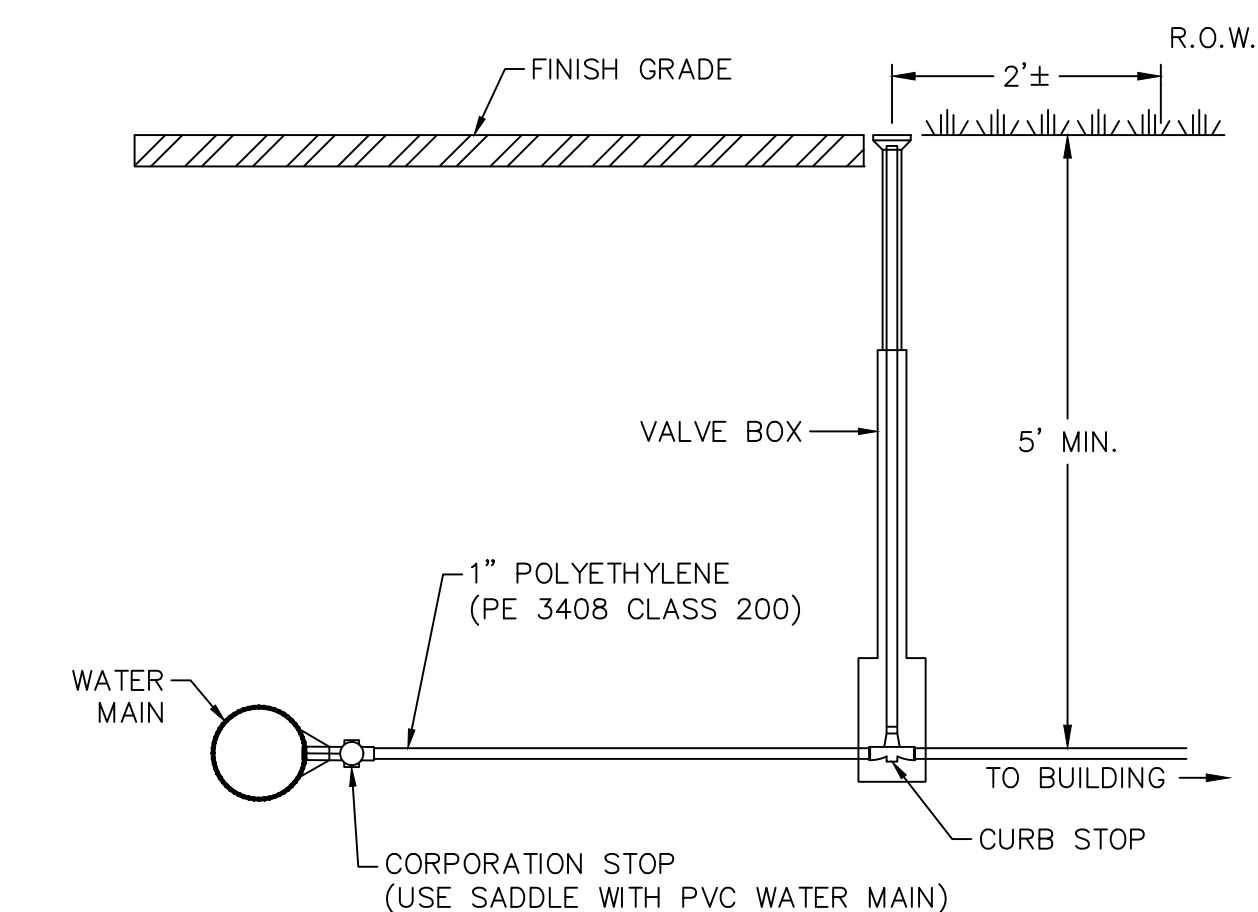
- BACKFILL SHALL BE AN AASHTO CLASS III SOIL; EITHER TRENCH SPOILS OR AN IMPORTED SAND AND GRAVEL WITH FINES AND COMPACTED TO 90% OF THE PROCTOR DENSITY.



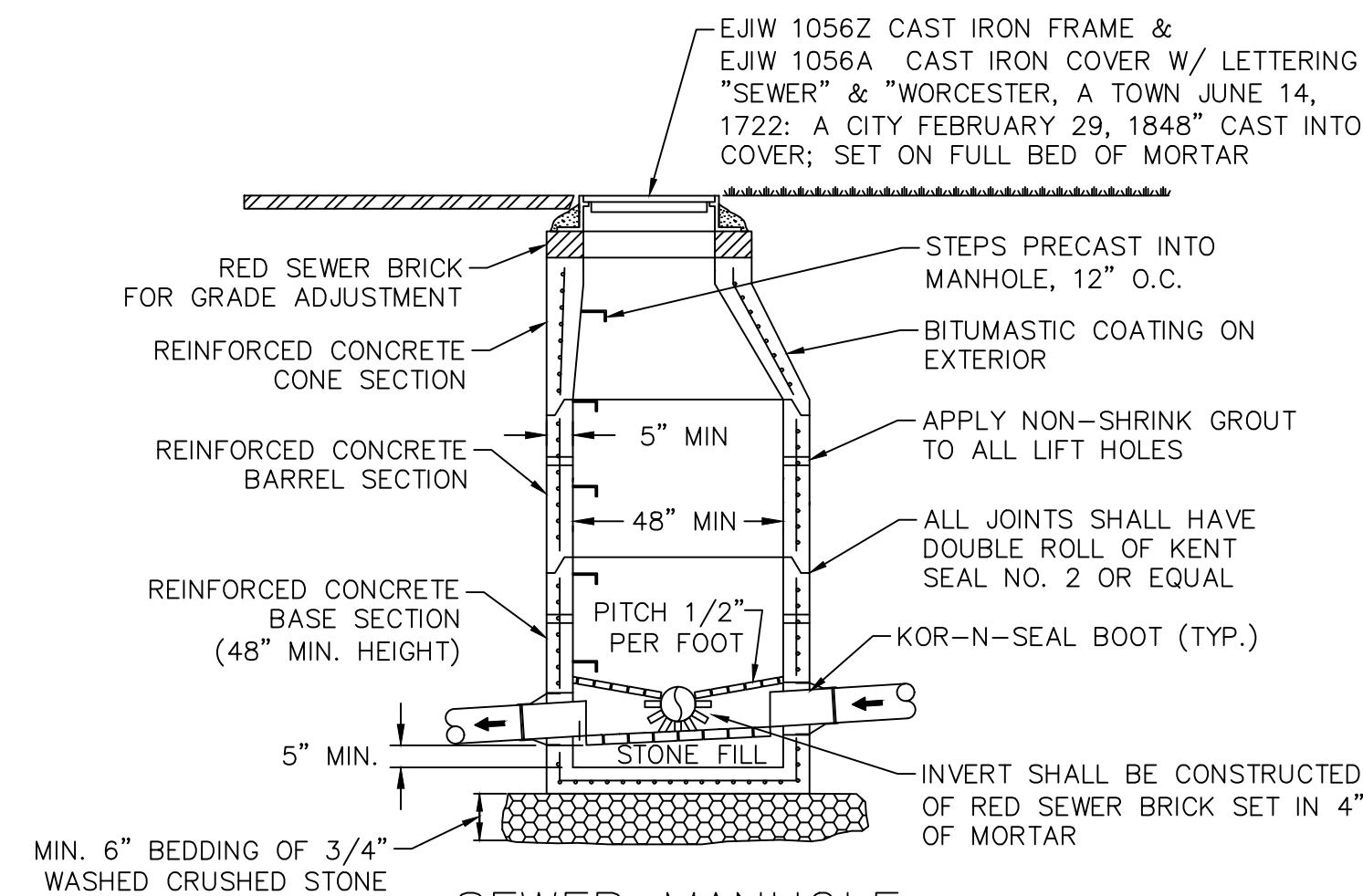
HDPE/PVC DRAIN TRENCH SECTION NTS

NOTES:

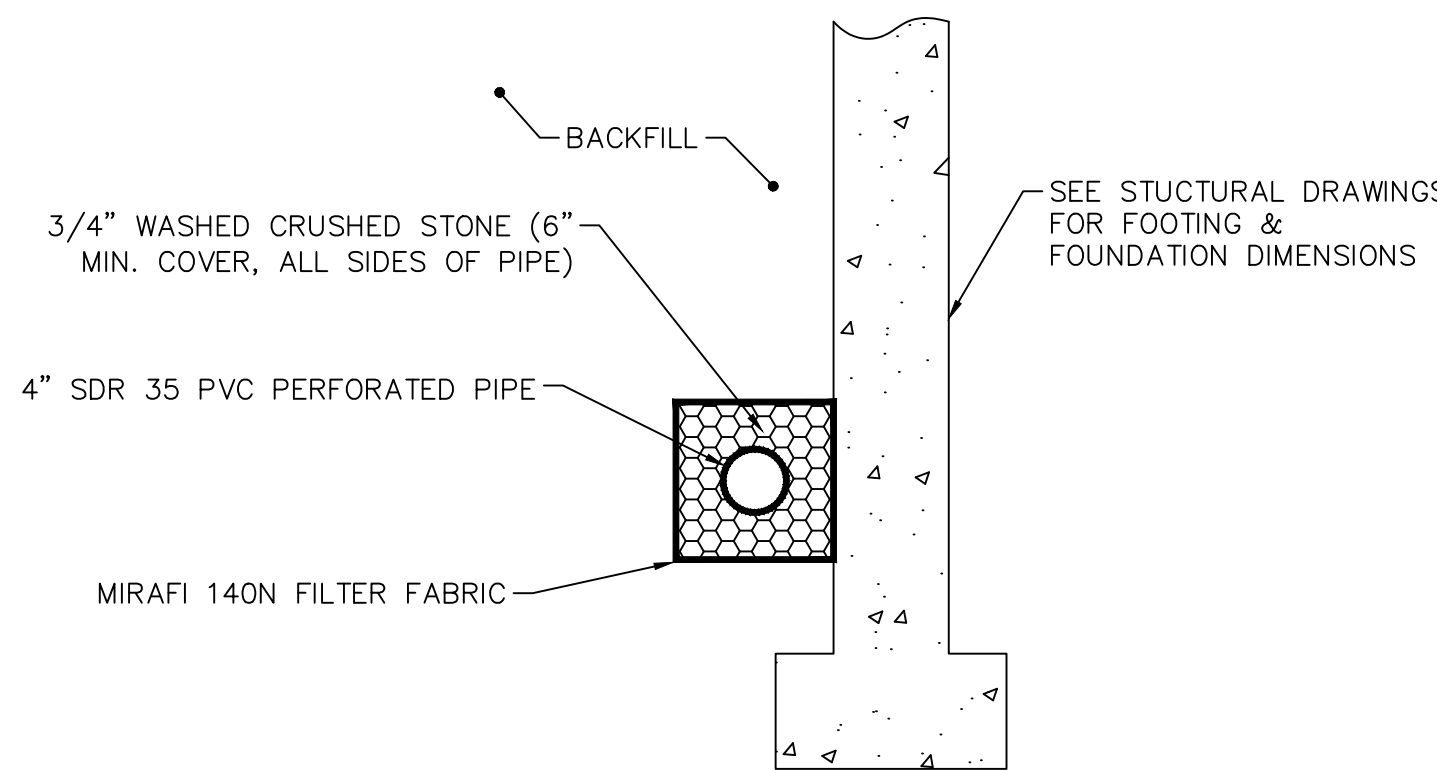
- BACKFILL SHALL BE AN AASHTO CLASS III SOIL; EITHER TRENCH SPOILS OR AN IMPORTED SAND AND GRAVEL WITH FINES AND COMPACTED TO 90% OF THE PROCTOR DENSITY.
- BACKFILL OF HDPE PIPE SHALL CONFORM TO ASTM D2321 AND/OR MANUFACTURER'S SPECIFICATIONS.



WATER SERVICE NTS



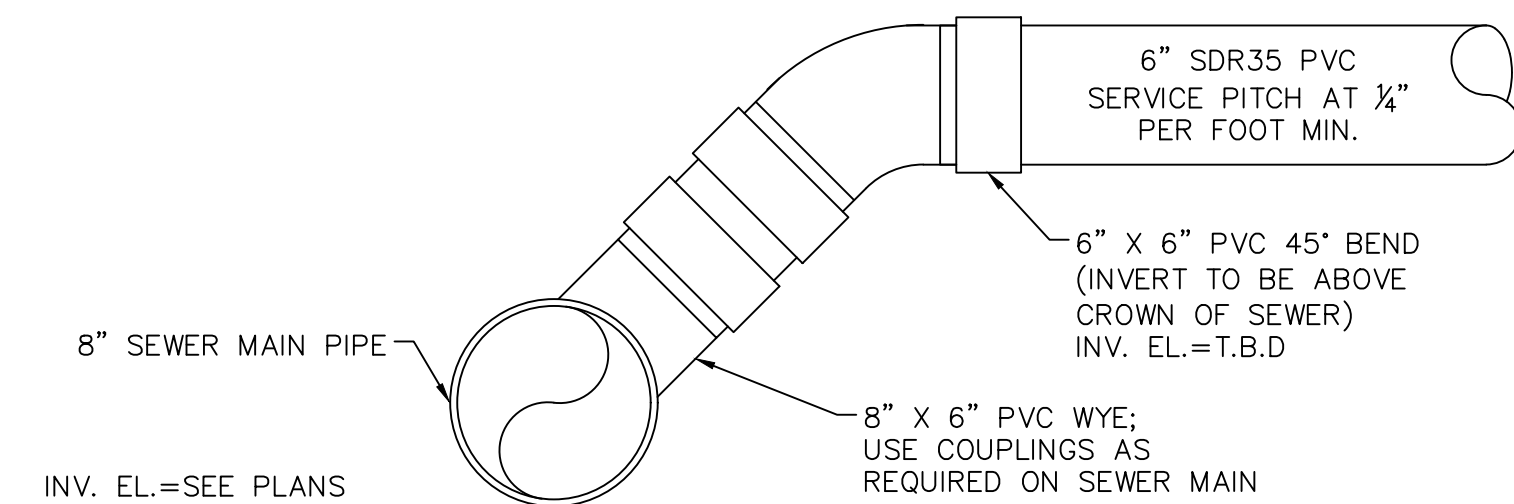
SEWER MANHOLE NTS



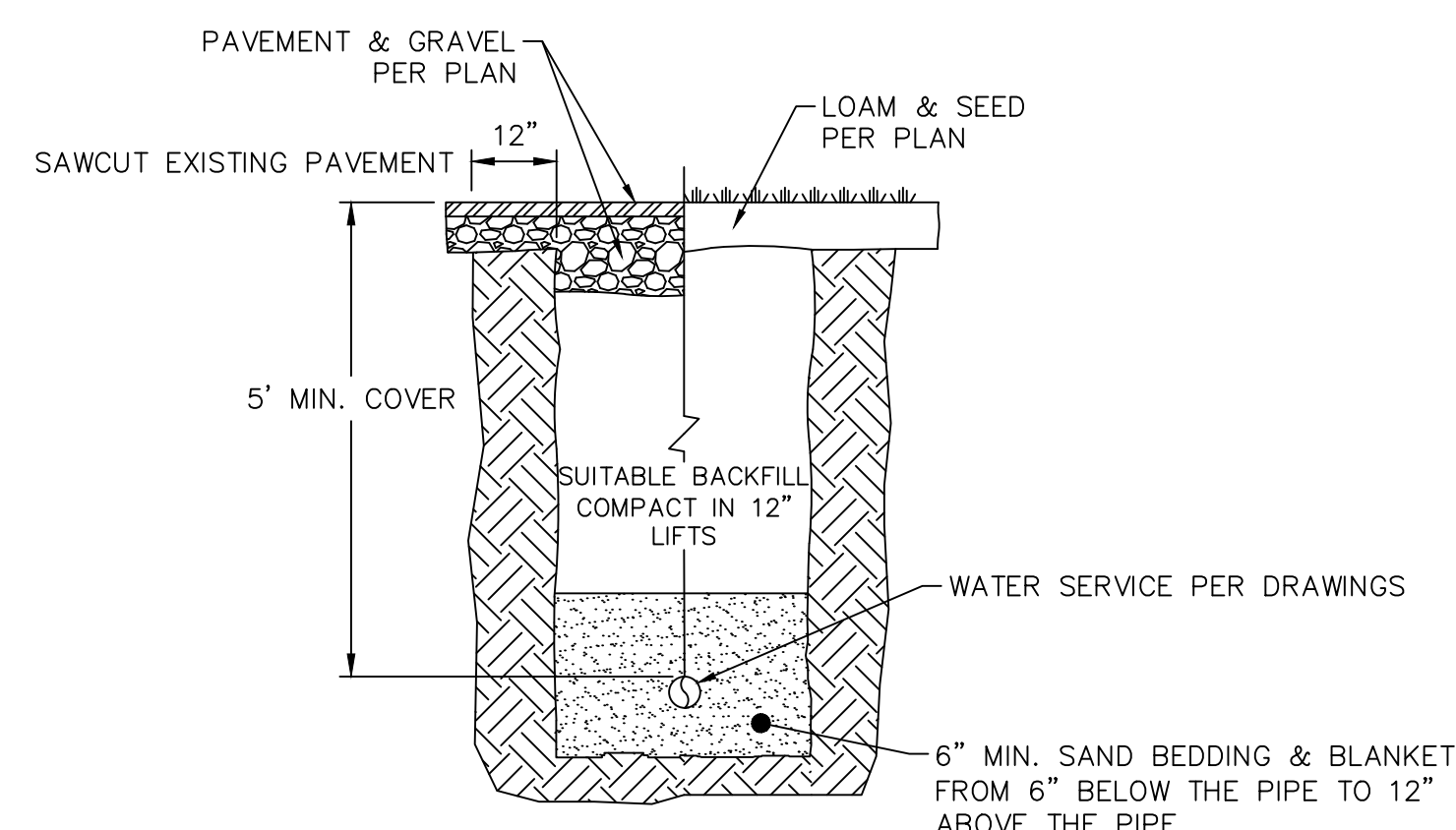
PERIMETER DRAIN DETAIL NTS

NOTE:

- PERIMETER DRAIN ELEVATION VARIES.



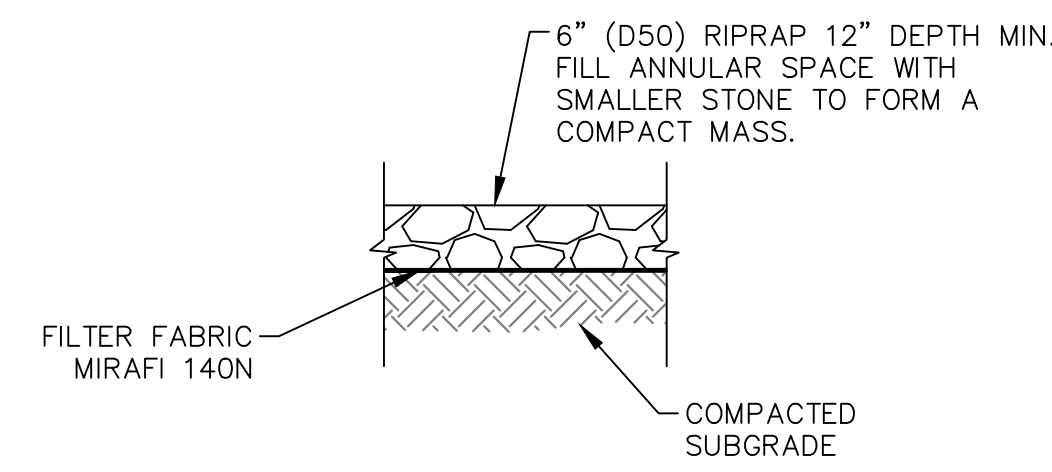
SEWER SERVICE CONNECTION DETAIL NTS



WATER SERVICE TRENCH SECTION NTS

NOTE:

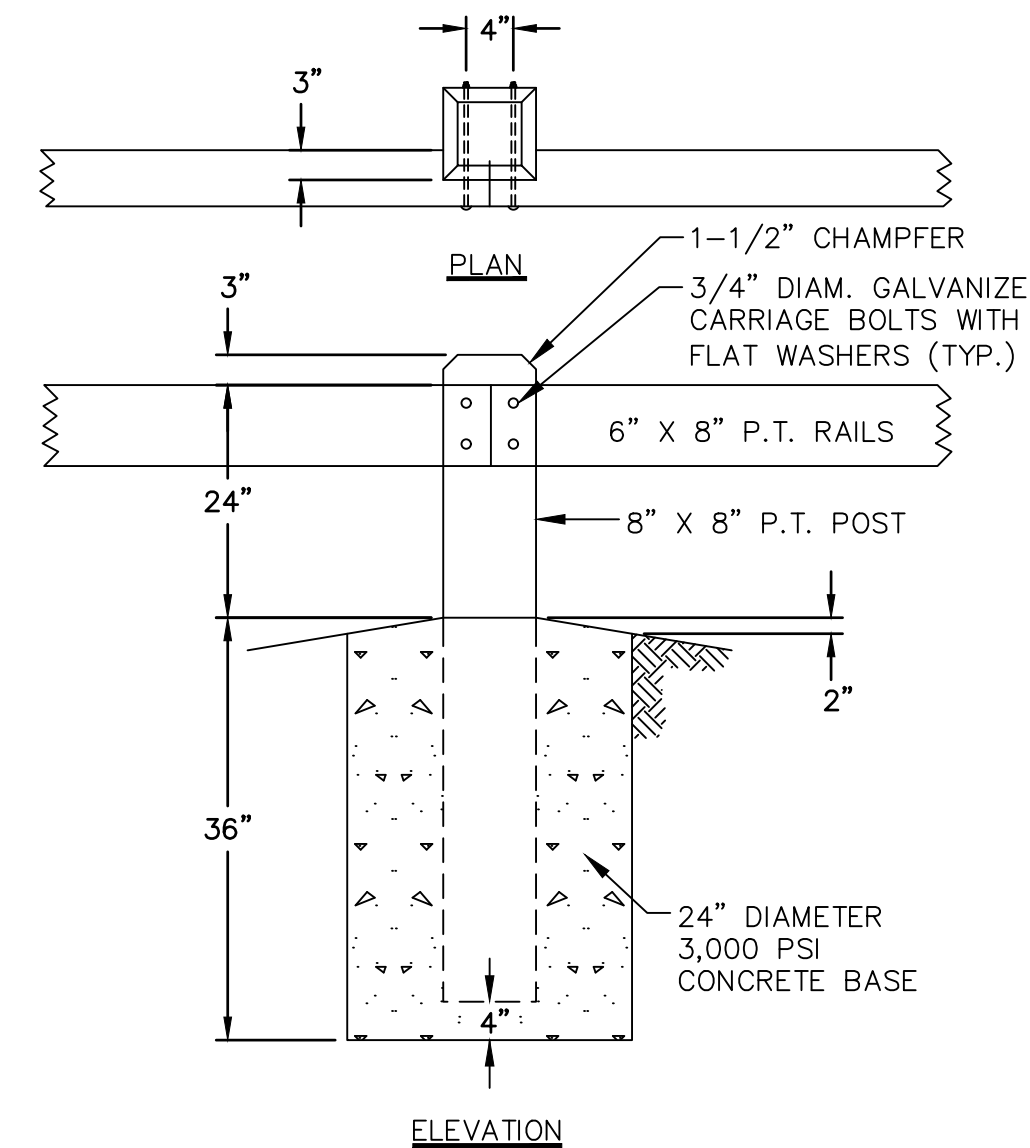
- SUITABLE BACKFILL SHALL BE AN AASHTO CLASS III SOIL; EITHER TRENCH SPOILS OR AN IMPORTED SAND AND GRAVEL WITH FINES AND COMPACTED TO 90% OF THE PROCTOR DENSITY.



RIPRAP APRON SECTION NTS

NOTE:

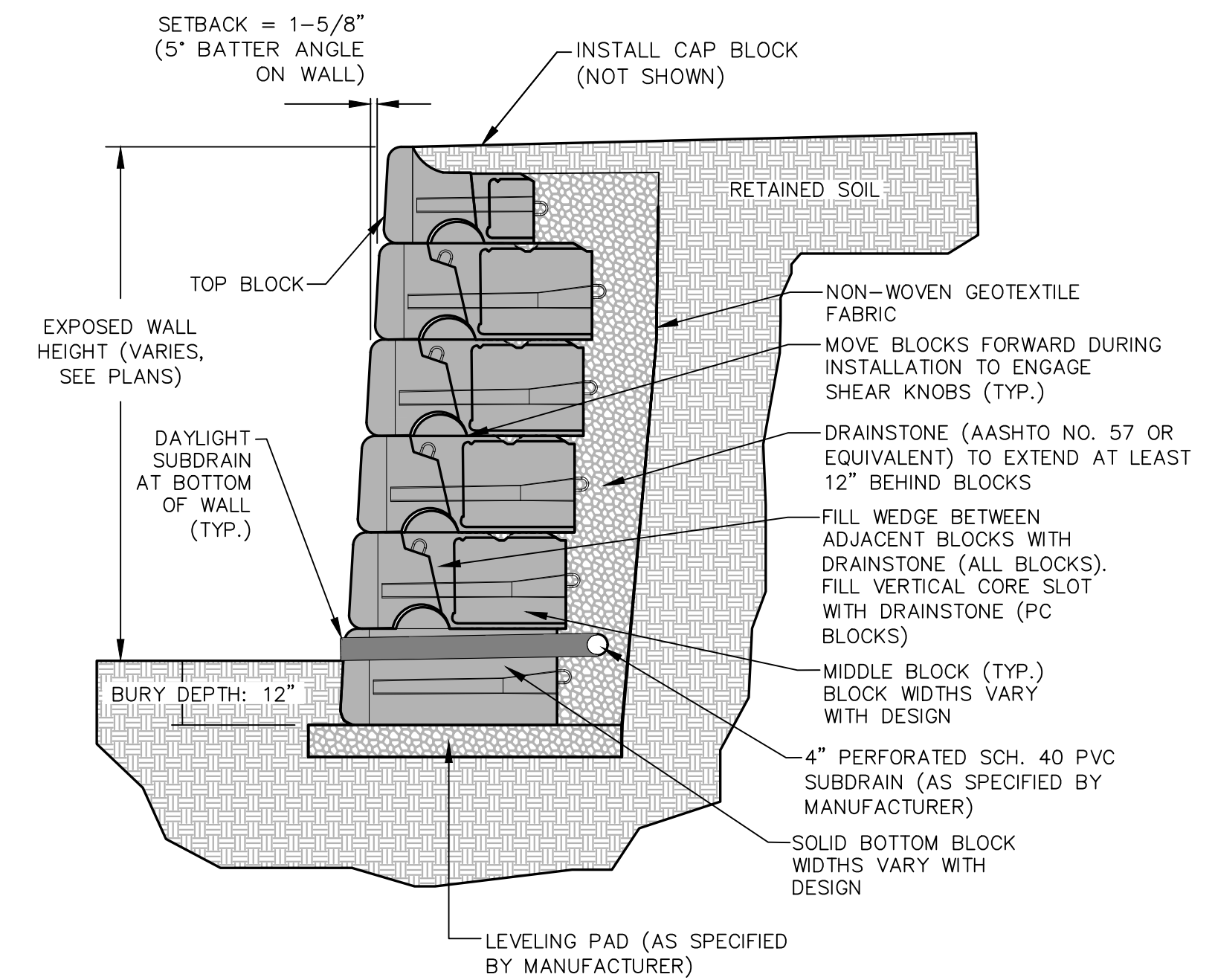
- THIS DETAIL APPLIES TO ALL SPECIFIED RIPRAP APPLICATIONS.



WOOD GUARDRAIL NTS

NOTE:

- POST SPACING SHALL BE 8'-0" ON CENTER.



TYPICAL GRAVITY-TYPE PRECAST CONCRETE MODULAR BLOCK RETAINING WALL SECTION NTS

NOTES:

- BLOCK TEXTURE (FINISH) SHALL BE SIMILAR TO "LIMESTONE" BY REDI-ROCK INTERNATIONAL, LLC. AND BASED ON CONTRACTOR-SELECTED WALL MANUFACTURER.
- BLOCK COLOR SHALL BE GRAY.
- CONTRACTOR IS RESPONSIBLE FOR WALL MANUFACTURER'S COST OF PREPARING STRUCTURAL ENGINEERING DRAWINGS.
- DESIGN SUBJECT TO CHANGE BASED ON STRUCTURAL ENGINEER-PREPARED DRAWINGS AND OWNER MATERIAL SELECTIONS.

STORMCEPTOR DESIGN NOTES

THE STANDARD STC4501 CONFIGURATION WITH ROUND, SOLID FRAME AND COVER, AND INLET PIPE IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION	
GRADED INLET ONLY (NO INLET PIPE)	
GRADED INLET WITH INLET PIPE OR PIPES	
CURB INLET ONLY (NO INLET PIPE)	
CURB INLET WITH INLET PIPE OR PIPES	

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID			
WATER QUALITY FLOW RATE (GAL/HR)			
PEAK FLOW RATE (GAL/HR)			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:			
INLET PIPE 1	INVERT	MATERIAL	DIAMETER
INLET PIPE 2			
OUTLET PIPE			

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE: www.conteches.com
- STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STORMCEPTOR STRUCTURE SHALL MEET AASHTO HEAVY LOAD RATING, ASSURING EARLY COVER OF 2" TO 4" AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.
- ALTERNATE UNITS ARE SHOWN IN MILLIMETERS (mm).

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL, DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

FRAME AND COVER (MAY VARY) NOT TO SCALE

FRAME AND GRATE (MAY VARY) NOT TO SCALE

CONTECH ENGINEERED SOLUTIONS LLC
 8025 Curtis Park Dr., Ste. 200, West Grove, OH 45398
 513.348.1122 | 513.348.7000 | 513.348.7883 FAX

STC4501 STORMCEPTOR STANDARD DETAIL

CB-1 - WATER QUALITY UNIT NTS

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