

LOCUS MAP  
Not to Scale

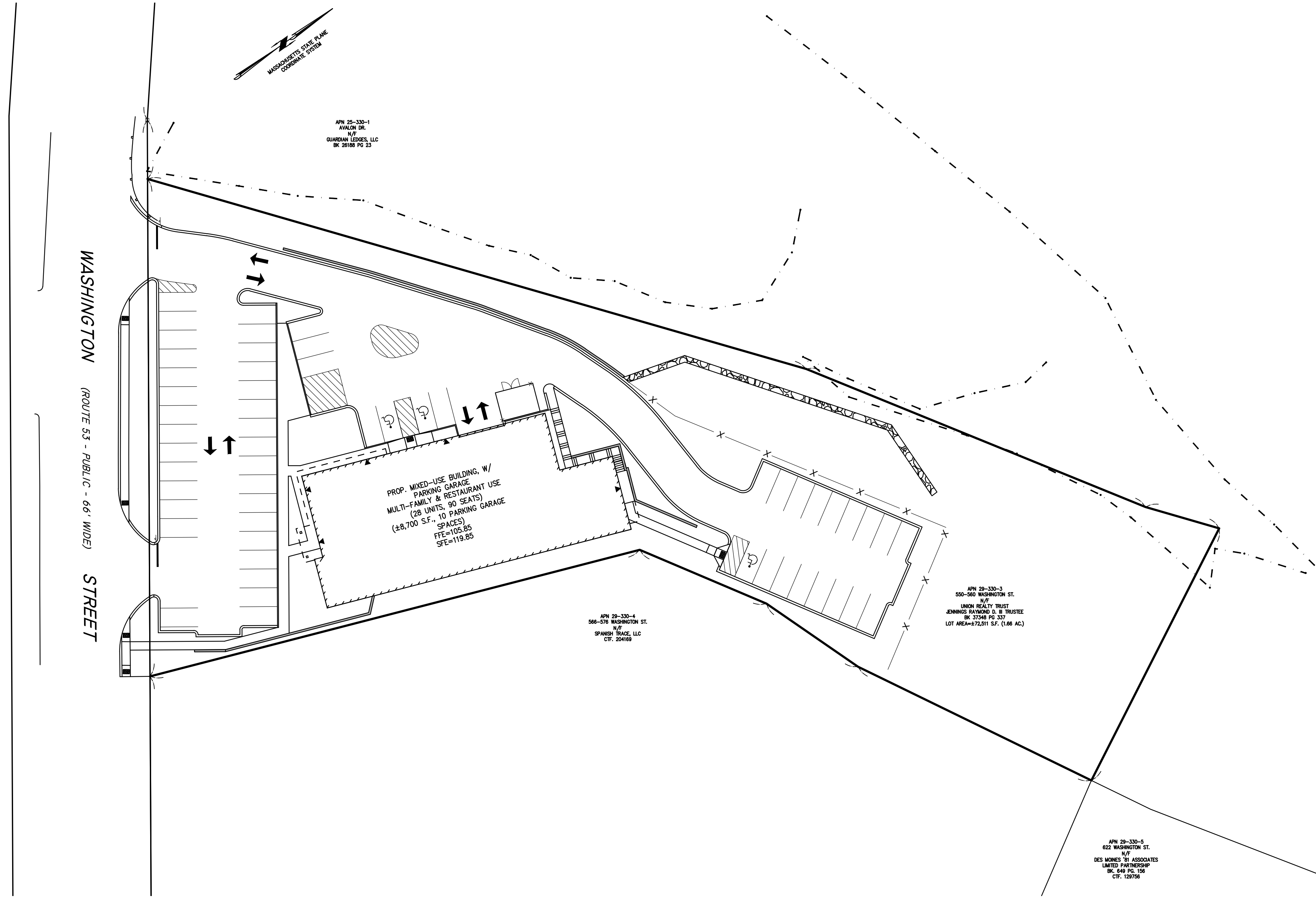
**Drawing Index:**

No.	Drawing Title
CS-1	COVER SHEET
L-1	LEGEND, ABBREVIATIONS & GENERAL NOTES
EX-1	EXISTING CONDITIONS PLAN
C-1	SITE LAYOUT PLAN
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C-3	UTILITY PLAN
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
T-1	TRUCK TURNING PLAN
SP-1	SEWER PROFILE PLAN
D-1 - D-6	CONSTRUCTION DETAILS

**Owner/Applicant:**  
UNION REALTY TRUST  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

**Engineer/Surveyor:**  
MCKENZIE ENGINEERING GROUP, INC.  
150 LONGWATER DRIVE  
SUITE 101  
NORWELL, MASSACHUSETTS 02061

# SITE DEVELOPMENT PLAN 550-560 WASHINGTON STREET (APN 29-330-3) IN WEYMOUTH, MASSACHUSETTS



ISSUE DATE: MARCH 24, 2023  
REVISED: JULY 3, 2023

REV	DATE	DESCRIPTION	BY	APP
1	4/20/23	TOWN REVIEW	ESS	BCM
2	5/24/23	SITE LAYOUT	ESS	BCM
3	7/3/23	TOWN REVIEW	ESS	BCM



**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS



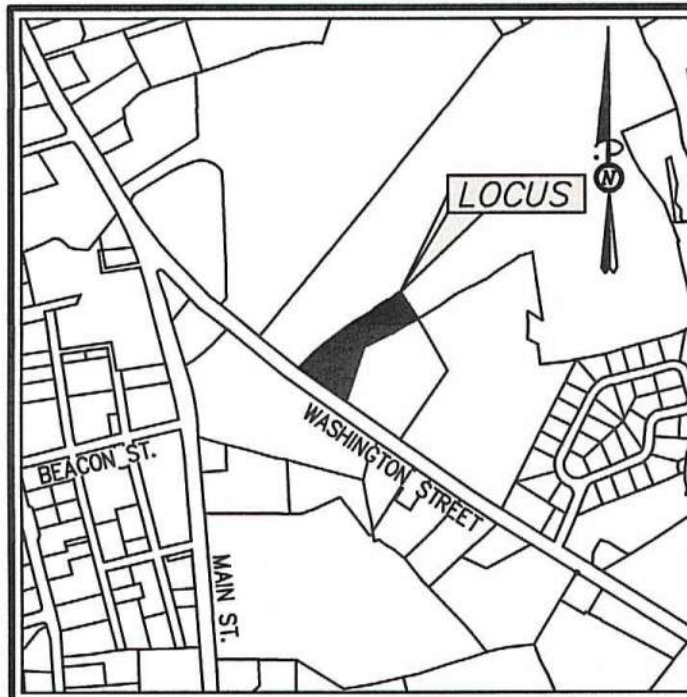
**OWNERS/APPLICANT:**  
UNION REALTY TRUST  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

**DRAWN BY:** ESS  
**DESIGNED BY:** ESS  
**CHECKED BY:** BCM  
**APPROVED BY:** BCM  
**DATE:** MARCH 24, 2023  
**SCALE:** 1" = 30'  
**PROJECT NO.:** 221-187  
**DWG. TITLE:**

**COVER SHEET**

**DWG. NO.:** CS-1





LOCUS MAP

**SURVEY NOTES:**

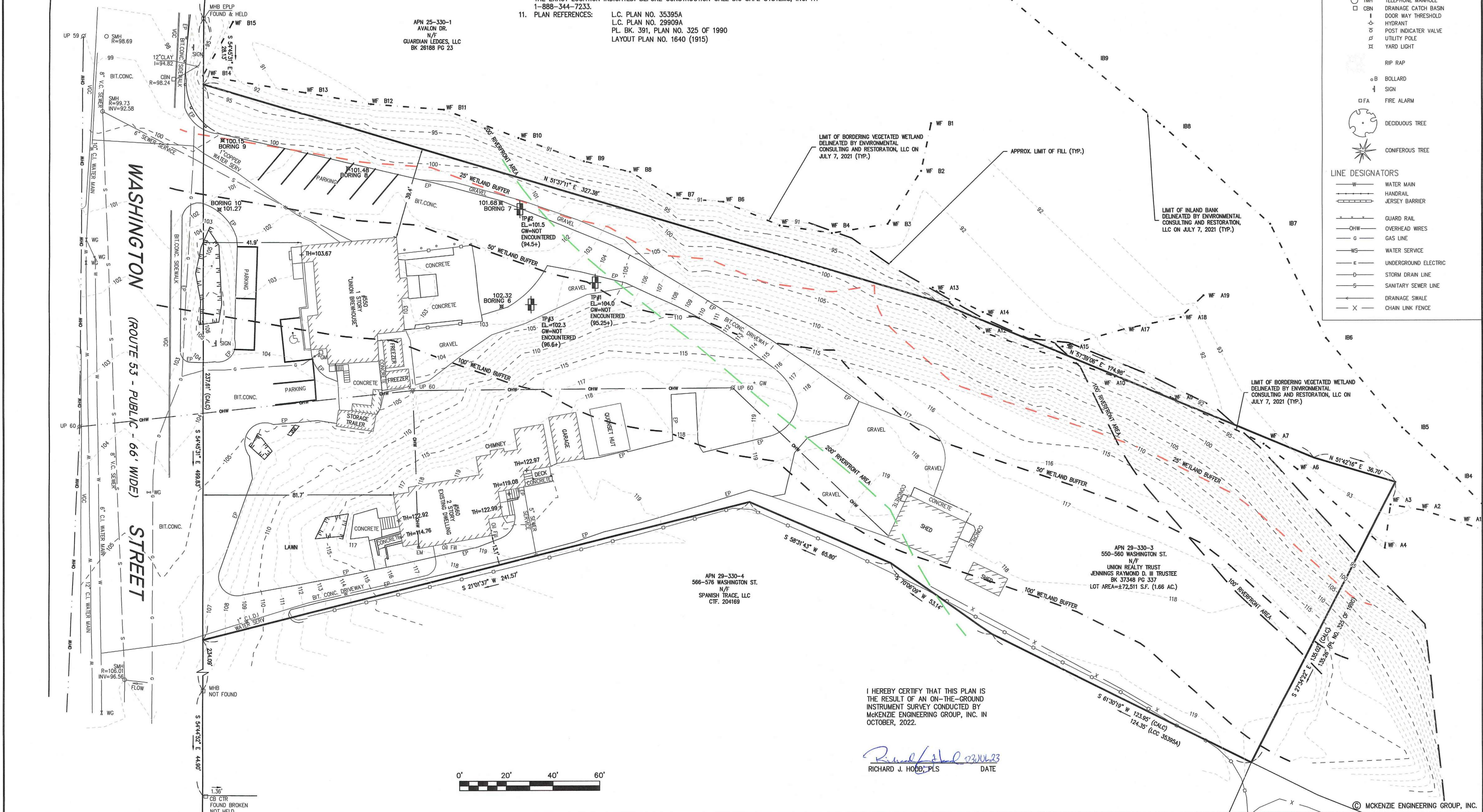
- LOCUS IS SHOWN AS PARCEL NUMBER 29-330-3 ON THE TOWN OF WEYMOUTH ASSESSORS MAPS.
- DEED TO LOCUS IS RECORDED IN THE NORFOLK COUNTY REGISTRY OF DEEDS AT BOOK 37348, PAGE 337.  
OWNER: N/F RAYMOND D. JENNINGS III, TRUSTEE OF UNION REALTY TRUST.
- THIS SURVEY WAS MADE ON THE GROUND IN OCTOBER OF 2022 AND UPDATED IN MAY OF 2023 BY MCKENZIE ENGINEERING GROUP, INC.
- ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. THE DELTA BETWEEN NAVD AND WEYMOUTH CITY BASE (WCB) IS -6.63'.
- WETLAND RESOURCE AREAS WERE DELINEATED BY ENVIRONMENTAL CONSULTING & RESTORATION, LLC ON JULY 7, 2021.
- LOCUS IS ZONED LIMITED BUSINESS (B-1)  
**MINIMUM SETBACK REQUIREMENTS:**  
FRONT YARD 30'  
SIDE YARD 10'  
REAR YARD 10'
- LOCUS IS SITUATED IN ZONE X AS SHOWN ON F.I.R.M. No 25021C0229E, EFFECTIVE JULY 17, 2012.
- LOCUS IS LOCATED IN THE TOWN OF WEYMOUTH LIMITED BUSINESS (B-1) ZONING DISTRICT AND COMMERCIAL CORRIDOR OVERLAY (CCOD) DISTRICT, WASHINGTON STREET CORRIDOR.
- LOCUS IS NOT LOCATED IN A DEP ZONE 2. LOCUS IS LOCATED IN THE TOWN OF WEYMOUTH WATERSHED PROTECTION DISTRICT.
- UTILITY INFORMATION FROM ABOVE GROUND OBSERVED EVIDENCE IN CONJUNCTION WITH DIG SAFE MARKINGS AND RECORD PLANS. THE LAND SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE LAND SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. BEFORE CONSTRUCTION CALL DIG SAFE SYSTEMS, INC. AT 1-888-344-7233.
- PLAN REFERENCES:  
L.C. PLAN NO. 35395A  
L.C. PLAN NO. 29909A  
PL. BK. 391, PLAN NO. 325 OF 1990  
LAYOUT PLAN NO. 1640 (1915)

**ABBREVIATIONS**

FTE	FIRST FLOOR ELEVATION
BIT CONC.	BITUMINOUS CONCRETE PAVEMENT
CCB	CAPE COD BERM
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET WALL	RETAINING WALL
CONC.	CONCRETE
RCP	REINFORCED CONCRETE PIPE
VCC	VERTICAL GRANITE CURB
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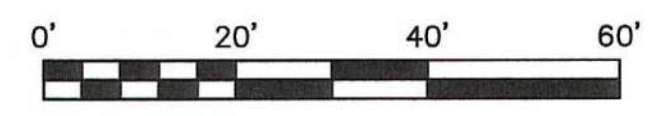
**LEGEND**

- SURVEY SYMBOLS**
- REBAR
  - ANGLE IRON
  - CONCRETE BOUND WITH DRILL HOLE
  - STONE BOUND
  - STONE BOUND
- UTILITY SYMBOLS**
- CHIMNEY
  - ELECTRIC HAND HOLE
  - GUY POLE
  - GUY WIRE
  - HVAC UNIT
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  - BUILDING LIGHT
  - TRANSFORMER
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  - EXHAUST VENT
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  - RYD LIGHT
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  - HANDRAIL
  - JERSEY BARRIER
  - GUARD RAIL
  - OVERHEAD WIRES
  - GAS LINE
  - WATER SERVICE
  - UNDERGROUND ELECTRIC
  - D
  - STORM DRAIN LINE
  - SANITARY SEWER LINE
  - DRAINAGE SWALE
  - CHAIN LINK FENCE



I HEREBY CERTIFY THAT THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY CONDUCTED BY MCKENZIE ENGINEERING GROUP, INC. IN OCTOBER, 2022.

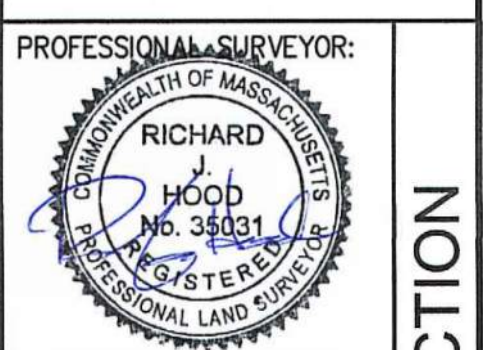
*Richard J. Hobb* 03/06/23  
RICHARD J. HOBBS, PLS DATE



REV	DATE	DESCRIPTION	BY	APP
1	5/24/23	LIMIT OF FILL	ESS	RJH
2	7/5/23	RECORD UTILITIES	ESS	RJH



**EXISTING CONDITION PLAN**  
(ASSESSOR'S PARCEL ID 29-330-3)  
550-560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS



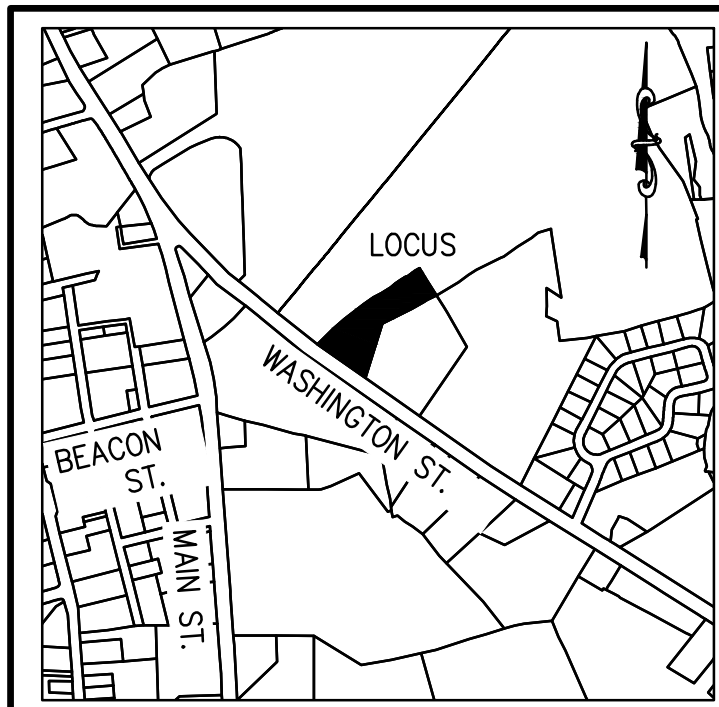
OWNERS/APPLICANT:  
UNION REALTY TRUST  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

DRAWN BY:	ESS
DESIGNED BY:	
CHECKED BY:	RTL
APPROVED BY:	RJH
DATE:	MARCH 17, 2023
SCALE:	1"=20'
PROJECT NO.:	222-182
DWG. TITLE:	

**EXISTING CONDITIONS PLAN**

DWG. NO: EX-1

NOT FOR CONSTRUCTION



LOCUS MAP  
Not to Scale

**LAND USAGE TABLES**

WEYMOUTH ZBL: TABLE 1 - SCHEDULE OF DISTRICT REGULATIONS  
ARTICLE VIIB: COMMERCIAL CORRIDOR OVERLAY DISTRICT (WASHINGTON ST. CORRIDOR)

LIMITED BUSINESS (B-1) ZONING DISTRICT COMMERCIAL CORRIDOR (CCOD) OVERLAY DISTRICT			
CRITERIA	REQUIRED (B-1)	REQUIRED (CCOD)	PROPOSED
MIN. LOT SIZE	10,000 S.F.	-	72,597 S.F.
MIN. LOT WIDTH	100 FT.	100 FT.	199 FT.
BUILDING HEIGHT	6 STORIES/80 FT. MAX.	3 STORY/45 FT. MIN. 5 STORY/70 FT. MAX.	<5 STORIES
MAX. LOT COVERAGE	50%	75% <sup>(3)</sup>	12.0% - BUILDING 52.0% - IMPERVIOUS
MIN. FRONT YARD DEPTH	30 FT.	25 FT. MIN. <sup>(1)</sup> 70 FT. MIN. <sup>(2)</sup>	70.1 FT.
MIN. SIDE YARD DEPTH	10 FT.	10 FT.	10.5 FT.
MIN. REAR YARD DEPTH	10 FT.	15 FT.	250.3 FT.
FLOOR AREA RATIO	-	1.00	0.29
OPEN SPACE	-	15%	48.0%

**TABLE NOTES**

- SEC. 120-25.17.B: THE MINIMUM FRONT YARD SETBACK SHALL INCLUDE A MINIMUM 5 FT. LANDSCAPED AREA ALONG THE FRONTAGE.
- SEC. 120-25.17.B: WHEN A SETBACK AVERAGING LESS THAN 70 FT. IS PROPOSED, THE HEIGHT OF THE BUILDING WILL BE LIMITED TO 2 STORIES AND 35 FT. FROM THE FRONT OF THE BUILDING TO THE 70 FT. SETBACK LINE. WHEN THE FRONT SETBACK IS USED FOR PARKING, A MIN. 70 FT. WILL BE PROVIDED TO ALLOW FOR A MIN. 5 FT. LANDSCAPED AREA ALONG THE FRONTAGE, A ROW OF PARKING, AND A TRAVEL AISLE.
- SEC. 120-25.19: MAXIMUM BUILDING COVERAGE OF 60% SHALL APPLY AND ONLY 75% OF THE SITE SHALL BE IMPERVIOUS.

**ZBL 120-25.20(A) REQUIRED PARKING & 120-74(D) MINIMUM REQUIRED SPACES**

COMPONENT	MINIMUM SPACES	MAXIMUM SPACES	REQUIRED (MIN.)	REQUIRED (MAX.)
STUDIOS & ONE BEDROOM DWELLING UNITS 28 TOTAL UNITS	1.25 PER UNIT	1.5 PER UNIT	35 SPACES	42 SPACES
EATING/DRINKING ESTABLISHMENT 3,200 SF 90 SEATS	2 SPACE FOR EACH 100 SF OF GROSS FLOOR AREA OR 1 SPACE PER 3 SEATS	--	30 SPACES	64 SPACES
			65 SPACES	106 SPACES
			65 SPACES (55 EXTERIOR) (10 INTERIOR)	

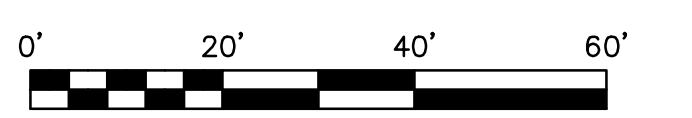
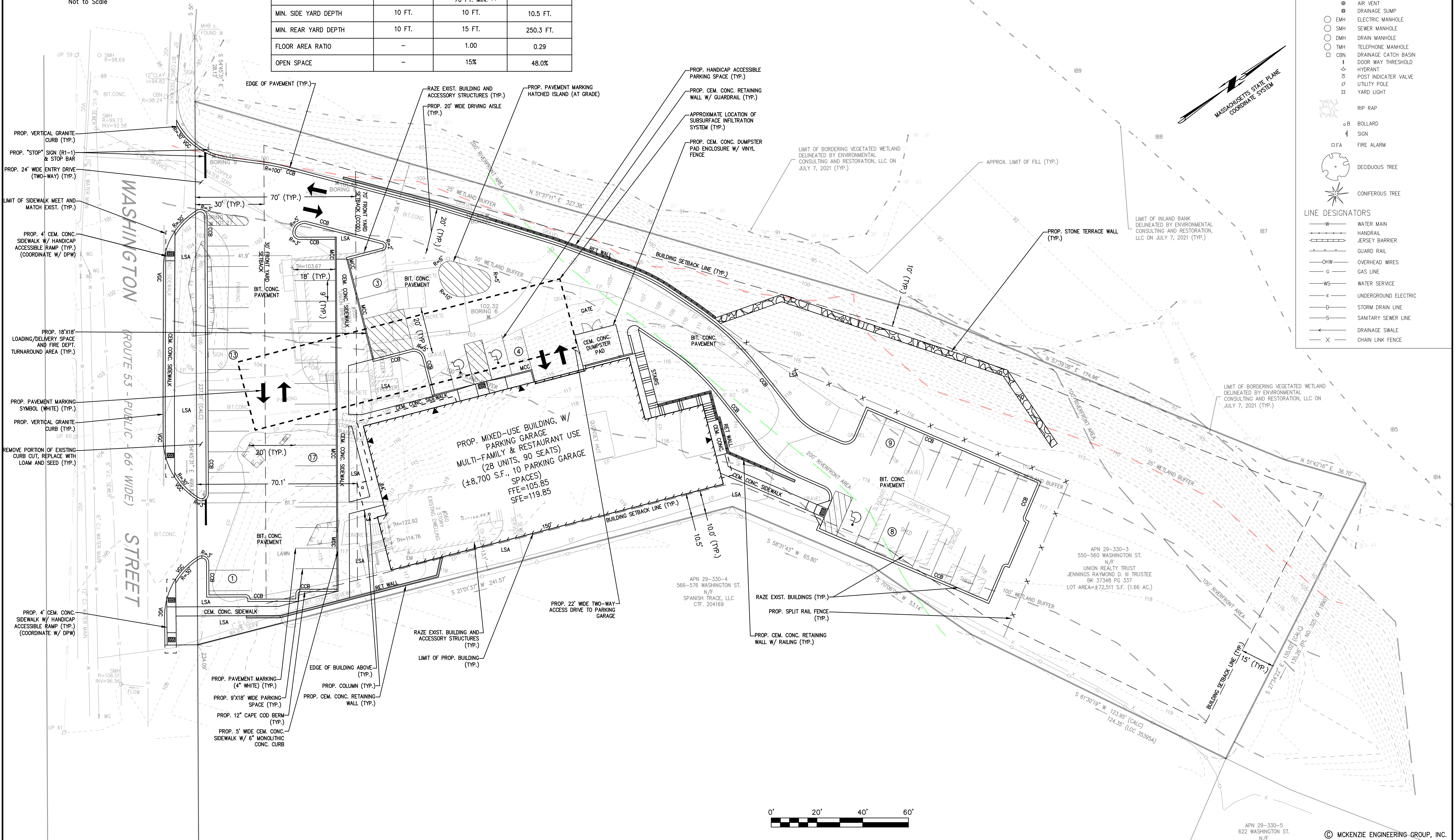
**PARKING NOTES:**  
1. 65 ON-SITE SPACES INCLUDES 3 AAB ACCESSIBLE 9' X 18' WITH 2 - 8' X 18' ACCESS AREA (VAN ACCESSIBLE SPACE) (521 CMR: ARCHITECTURAL ACCESS BOARD) ACCESSIBLE SPACES REQUIRED = 3 (51-75 PARKING SPACES)

**ABBREVIATIONS**

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BIT CONC.	BITUMINOUS CONCRETE PAVEMENT
CCB	CAPE COD BERM
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET WALL	RETAINING WALL
CONC.	CONCRETE
RCP	REINFORCED CONCRETE PIPE
VOC	VERTICAL GRANITE CURB
ETW	EDGE OF TRAVEL WAY
MTL	METAL BERM
VCC	VERTICAL CONCRETE CURB
CMP	CORRUGATED METAL PIPE
LSA	LANDSCAPED AREA

**LEGEND**

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- REBAR
  - ANGLE IRON
  - CONCRETE BOUND WITH DRILL HOLE
  - STONE BOUND
  - STONE BOUND
- UTILITY SYMBOLS**
- CHIMNEY
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  - FIRE ALARM
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  - CHAIN LINK FENCE



REV	DATE	DESCRIPTION
1	4/20/23	TOWN REVIEW
2	5/24/23	SITE LAYOUT
3	7/3/23	TOWN REVIEW

**MG**  
MCKENZIE  
ENGINEERING GROUP  
Assinippi Office Park  
150 Longwater Drive, Suite 101  
Norwell, MA 02061  
P: 781.792.3900  
F: 781.792.0333  
www.mckeng.com

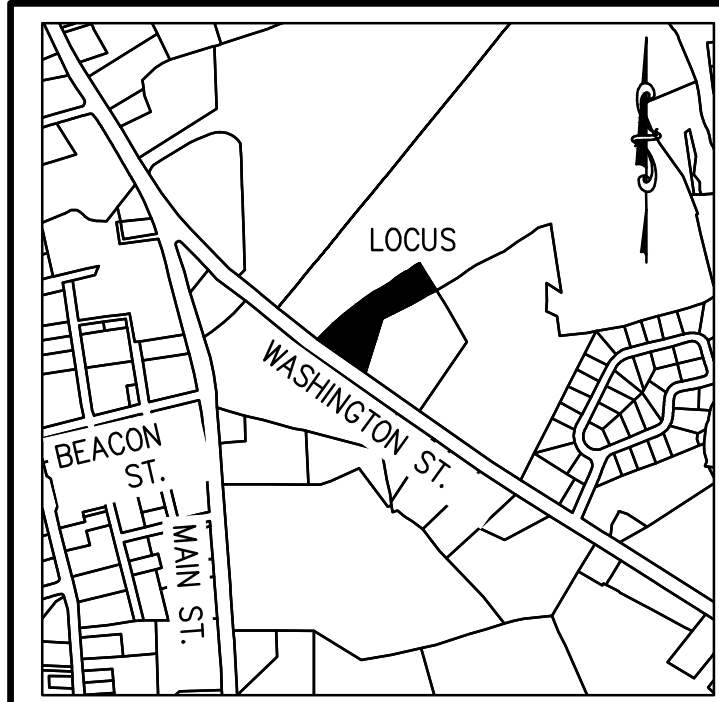
**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS

PROFESSIONAL ENGINEER:

OWNERS/APPLICANT:  
UNION REALTY TRUST  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

DRAWN BY: ESS  
DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MARCH 24, 2023  
SCALE: 1" = 20'  
PROJECT NO.: 222-182  
DWG. TITLE:

**SITE LAYOUT PLAN**  
DWG. NO.: C-1



**LOCUS MAP**  
Not to Scale

- GRADING & DRAINAGE NOTES:**
- ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY EARTH MOVING ACTIVITIES.
  - THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES, ADDITIONAL SILTATION FENCING AND FILTER FABRIC FOR INSTALLATION AS DIRECTED BY THE TOWN TO MITIGATE ANY EMERGENCY CONDITIONS.
  - UPON COMPLETION OF ALL SITE WORK THE CONTRACTOR SHALL INSPECT ALL ON-SITE AND OFF-SITE CATCH BASINS (THAT RECEIVED CATCH BASIN PROTECTION) AND DRAINAGE MANHOLES AND REMOVE ALL SEDIMENT AND DEBRIS THAT HAS ACCUMULATED DURING THE COURSE OF CONSTRUCTION.
  - UNSATURATED SOILS AND LEDGE LOCATED WITHIN THE LIMITS OF THE SUBSURFACE INFILTRATION SYSTEMS SHALL BE REMOVED PRIOR TO INSTALLATION OF THE SYSTEM. THE BOTTOM OF EXCAVATION SHALL BE INSPECTED BY THE PROJECT ENGINEER PRIOR TO THE PLACEMENT OF THE SUBSURFACE CHAMBERS.
  - SUBSURFACE INFILTRATION SYSTEM SUBSOIL SHALL BE OVEREXCAVATED UNTIL THE NATIVE SAND MATERIALS ARE ENCOUNTERED. THE SUBSURFACE INFILTRATION SYSTEM SHALL BE PLACED OVER IMPORTED SAND CONFORMING WITH THE REQUIREMENTS OF THE MASSACHUSETTS SANITARY CODE (TITLE V) AS NEEDED. WITHIN THE LIMITS OF THE SUBSURFACE INFILTRATION SYSTEM LEDGE SHALL BE REMOVED TO AN ELEVATION OF 96.60 IF ENCOUNTERED.
  - ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. THE DELTA BETWEEN NAVD AND WEYMOUTH CITY BASE (WCB) IS -6.63'.
  - DESIGN OF RETAINING WALLS SHALL BE BY A PROFESSIONAL CIVIL STRUCTURAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS.

**RIVERFRONT AREA CALCULATIONS**

TOTAL RIVERFRONT AREA = 33,003 S.F.

PREVIOUSLY DEGRADED RIVERFRONT AREA = 4,194 S.F.

TOTAL DEGRADED RIVERFRONT AREA UNDER THIS SUBMISSION = 9,137 S.F.

ALTERATION OF NON-PREVIOUSLY DEGRADED RIVERFRONT AREA = 4,943 S.F.

MITIGATION AREA PROVIDED = 12,580 S.F. (2.55:1)

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**LEGEND**

**SURVEY SYMBOLS**

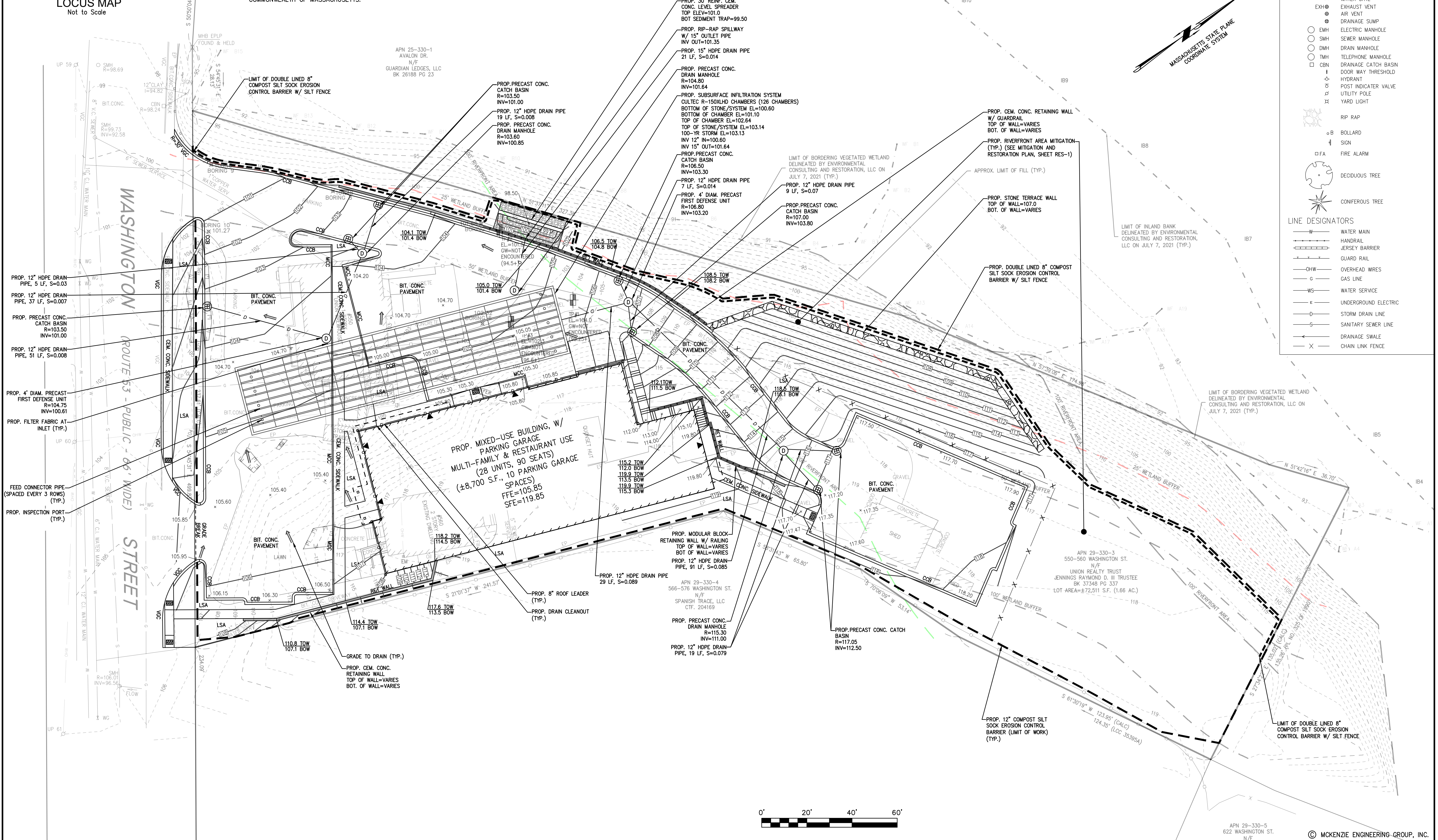
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- CB/DH □ CONCRETE BOUND WITH DRILL HOLE
- SB □ STONE BOUND
- SB/DH □ STONE BOUND

**UTILITY SYMBOLS**

- CHIMNEY
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- GUY WIRE
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- SMH SEWER MANHOLE
- DMH DRAIN MANHOLE
- TMH TELEPHONE MANHOLE
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**LINE DESIGNATORS**

- W WATER MAIN
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(APN 29-330-3)



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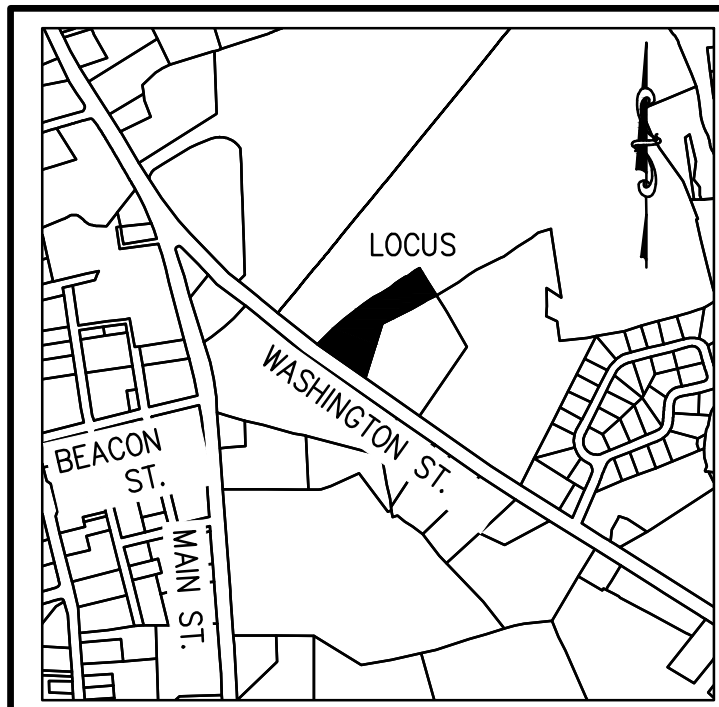
**DATE:** MARCH 24, 2023  
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**PROJECT NO.:** 222-182  
**DWG. TITLE:** GRADING AND DRAINAGE PLAN

**DWG. NO.:** C-2

**PERMIT PLAN SET**

**APN 29-330-5**  
622 WASHINGTON ST.  
N/F  
© MCKENZIE ENGINEERING GROUP, INC.

**M:\2022 PROJECTS\222-182 UNION REALTY TRUST - 550-560 WASH. ST., WEYMOUTH\DWGS\222-182\_MAIN1.DWG**



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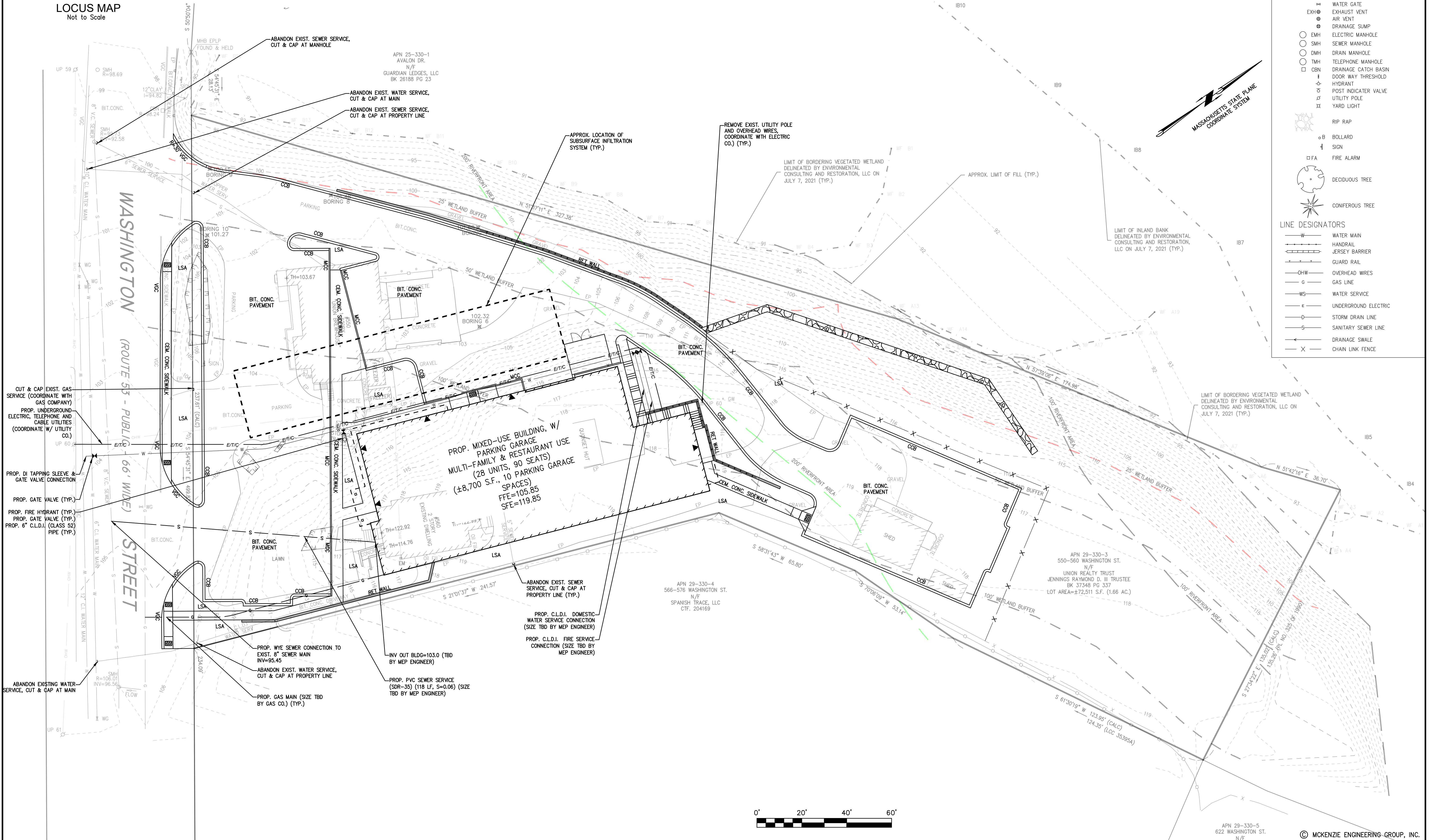


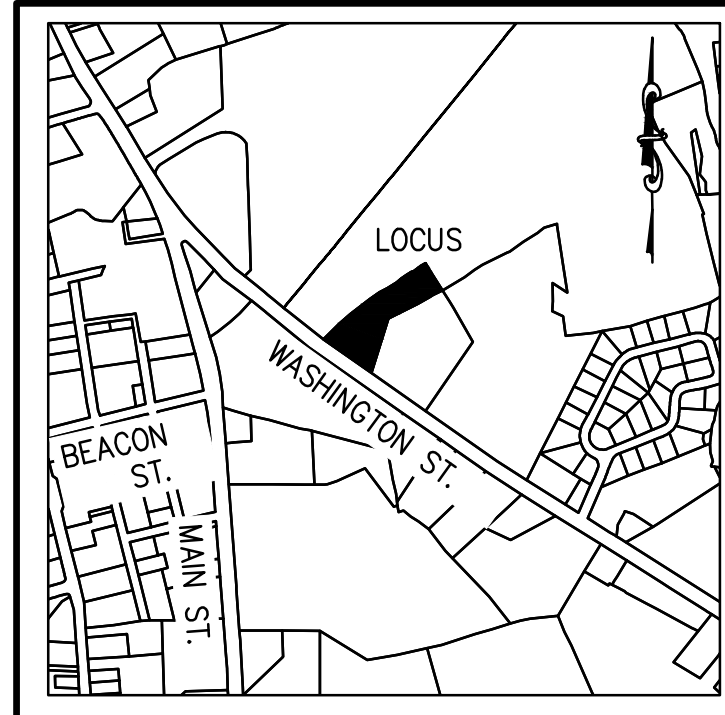
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PERMIT PLAN SET

DRAWN BY:	ESS
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CHECKED BY:	BCM
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DATE:	MARCH 24, 2023
SCALE:	1"=20'
PROJECT NO.:	222-182
DWG. TITLE:	UTILITY PLAN

DWG. NO.: **C-3**





LOCUS MAP  
Not to Scale

**CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:**

1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. OPERATOR PERSONNEL AND/OR ITS CONSULTANTS MUST INSPECT THE CONSTRUCTION SITE AT LEAST ONCE EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT 1/4 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:
  - A. WHETHER OR NOT THE BMP WAS INSTALLED/PERFORMED CORRECTLY.
  - B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE BMP SINCE IT WAS INSTALLED OR PERFORMED.
  - C. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE BMP.
4. THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
5. ALL SLOPES EXCEEDING 15% RESULTING FROM SITE GRADING SHALL BE BOTH COVERED WITH FOUR INCHES OF TOPSOIL AND PLANTED WITH A VEGETATED COVER SUFFICIENT TO PREVENT EROSION.

**CONSTRUCTION SEQUENCE**

- TO PREVENT EXCESSIVE EROSION AND SILTING, THE FOLLOWING CONSTRUCTION SEQUENCE COUPLED WITH OTHER WIDELY ACCEPTED PRINCIPALS FOR REDUCING EROSION AND SEDIMENTATION SHALL BE IMPLEMENTED IN THE DEVELOPMENT OF THE SITE.
1. THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
  2. STABILIZATION PRACTICES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN & PLACE SILTATION FENCE ON THE SITE PLANS.
  3. CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE ROADWAY, PARKING AREAS AND RELATED INFRASTRUCTURE.
  4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
  5. EXCAVATE TOPSOIL AND SUBSOIL FROM CUT AND FILL AREAS AND STOCKPILE ON SITE IN LOCATIONS SHOWN ON THE PLAN. CONSIDERATION SHOULD BE GIVEN TO LOCATING STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, WHERE POSSIBLE, TO ACT AS TEMPORARY DIVERSIONS.
  6. CONSTRUCT CUT AND FILL AREAS, INSTALLING HAYBALE CHECK DAMS AT TOES OF ALL 3:1 OR GREATER SLOPES, AND AT ENDS OF ALL CUT AREAS. ALL FILL WILL BE INSTALLED USING 12" MAXIMUM COMPACTION LIFTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN. THE SUBSURFACE INFILTRATION SYSTEM SHALL BE CONSTRUCTED IMMEDIATELY AFTER THE ROADWAY ROUGH GRADING IS COMPLETED AND THE AREA HAS BEEN CLEARED OF VEGETATION.
  7. INSTALL CLOSED DRAINAGE SYSTEM AND OTHER UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILTSACK OR EQUIVALENT INLET PROTECTION.
  8. GRADE ROADWAY AND PARKING AREAS TO SUBGRADE ELEVATION AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN.
  9. EXCAVATE AND CONSTRUCT BUILDING FOUNDATION.
  10. PLACE GRAVEL SUBBASE.
  11. PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS.
  12. CONSTRUCT BUILDING STRUCTURES AND ASSOCIATED UTILITY CONNECTIONS.
  13. GRADE SLOPES AND STABILIZE CUT AREAS AT TOE OF SLOPES. BLEND ALL SLOPES INTO EXISTING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH.
  14. PLACE THE FINAL WEARING COURSE OF PAVEMENT.
  15. COMPLETE FINE GRADING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
  16. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.

**ABBREVIATIONS**

FFE	FIRST FLOOR ELEVATION
BIT CONC.	BITUMINOUS CONCRETE PAVEMENT
CCB	CAPE COB BERM
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET WALL	RETAINING WALL
CONC.	CONCRETE
RCP	REINFORCED CONCRETE PIPE
VOC	VERTICAL GRANITE CURB
ETW	EDGE OF TRAVEL WAY
MTL	METAL BERM
VCC	VERTICAL CONCRETE CURB
CMP	CORRUGATED METAL PIPE
LSA	LANDSCAPED AREA

**LEGEND**

**SURVEY SYMBOLS**

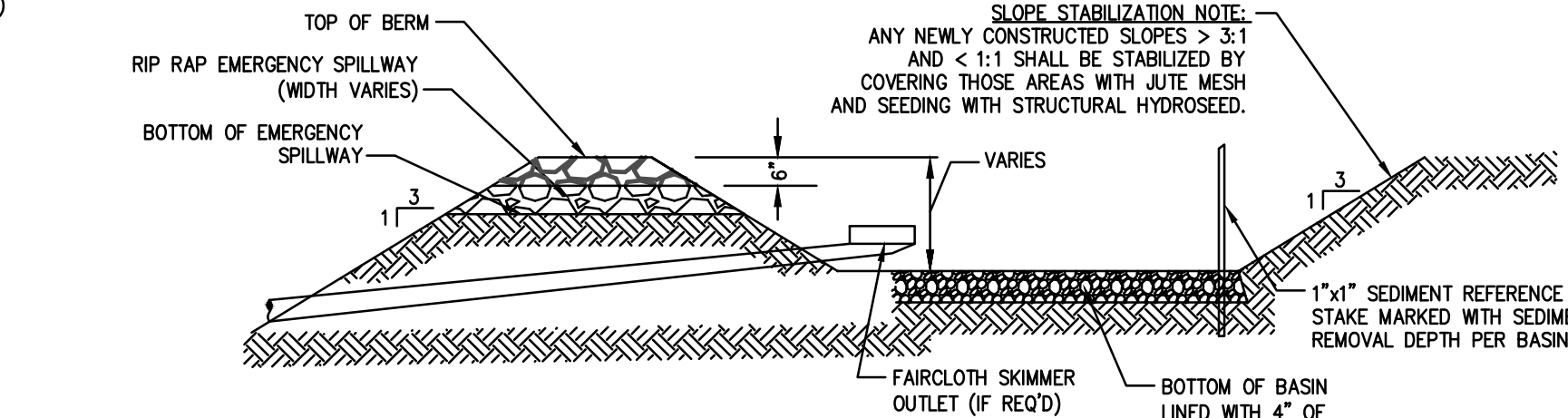
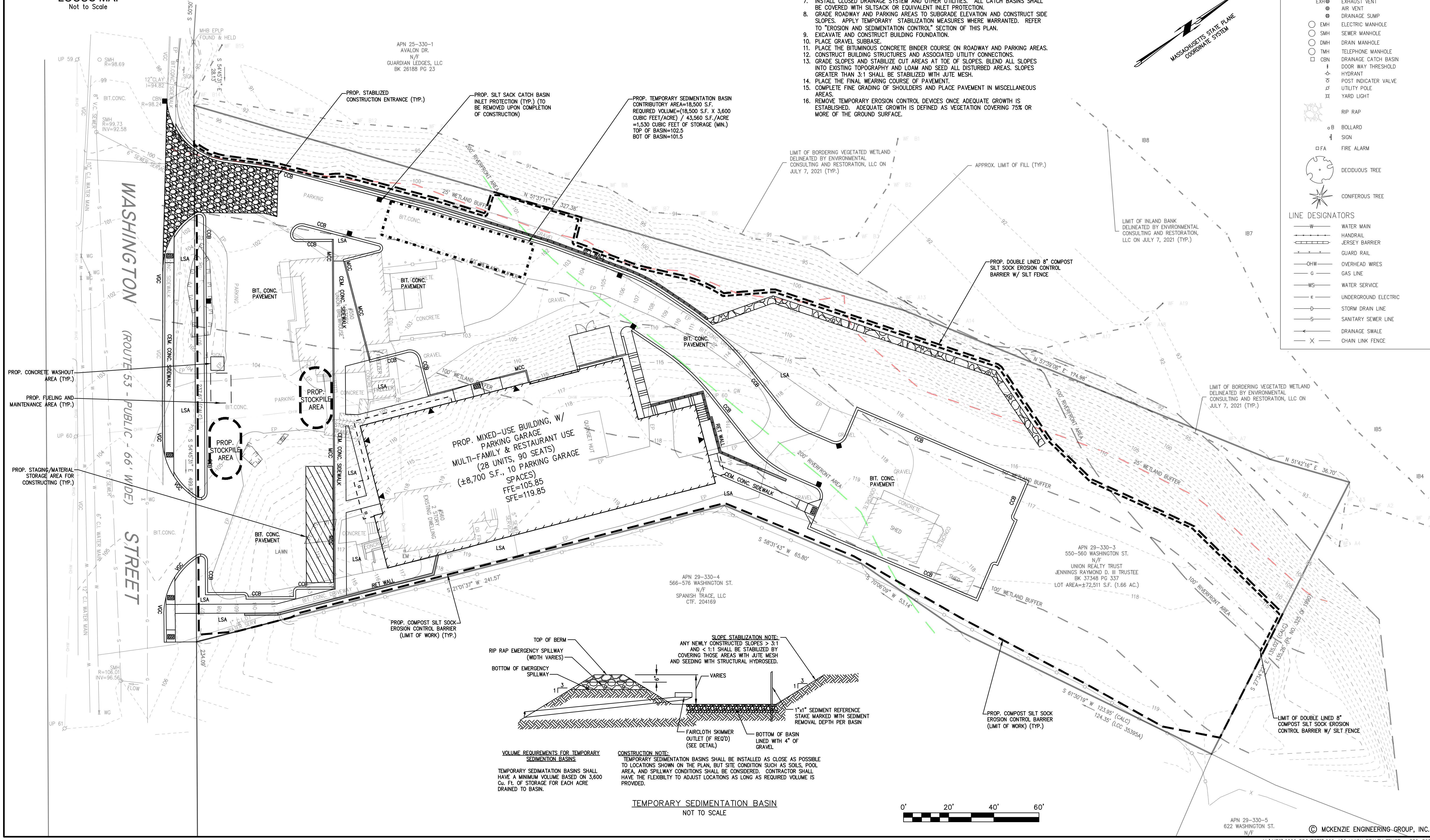
•	REBAR
∨	ANGLE IRON
CB/DH	CONCRETE BOUND WITH DRILL HOLE
SB	STONE BOUND
SB/DH	STONE BOUND

**UTILITY SYMBOLS**

⊞	CHIMNEY
⊞	ELECTRIC HAND HOLE
⊞	GUY POLE
→GW	GUY WIRE
⊞	HVAC UNIT
☀	BUILDING LIGHT W/MAST
⊞	BUILDING LIGHT TRANSFORMER
⊞	WATER GATE
EMH	EXHAUST VENT
⊞	AIR VENT
⊞	DRAINAGE SUMP
⊞	ELECTRIC MANHOLE
⊞	SEWER MANHOLE
⊞	DRAIN MANHOLE
⊞	TELEPHONE MANHOLE
⊞	DRAINAGE CATCH BASIN
⊞	DOOR WAY THRESHOLD
⊞	HYDRANT
⊞	POST INDICATOR VALVE
⊞	UTILITY POLE
⊞	YARD LIGHT

**LINE DESIGNATORS**

W	WATER MAIN
H	HANDRAIL
J	JERSEY BARRIER
G	GUARD RAIL
OWH	OVERHEAD WIRES
G	GAS LINE
WS	WATER SERVICE
E	UNDERGROUND ELECTRIC
D	STORM DRAIN LINE
S	SANITARY SEWER LINE
D	DRAINAGE SWALE
X	CHAIN LINK FENCE



**VOLUME REQUIREMENTS FOR TEMPORARY SEDIMENTATION BASINS:**  
TEMPORARY SEDIMENTATION BASINS SHALL HAVE A MINIMUM VOLUME BASED ON 3,600 Cu. Ft. OF STORAGE FOR EACH ACRE DRAINED TO BASIN.

**CONSTRUCTION NOTE:**  
TEMPORARY SEDIMENTATION BASINS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN ON THE PLAN, BUT SITE CONDITIONS SUCH AS SOILS, POOL AREA AND SPILLWAY CONDITIONS SHALL BE CONSIDERED. CONTRACTOR SHALL HAVE THE FLEXIBILITY TO ADJUST LOCATIONS AS LONG AS REQUIRED VOLUME IS PROVIDED.

TEMPORARY SEDIMENTATION BASIN  
NOT TO SCALE



REV	DATE	DESCRIPTION	BY	APP
1	4/20/23	TOWN REVIEW	ESS	BCM
2	5/24/23	SITE LAYOUT	ESS	BCM
3	7/27/23	TOWN REVIEW	ESS	BCM



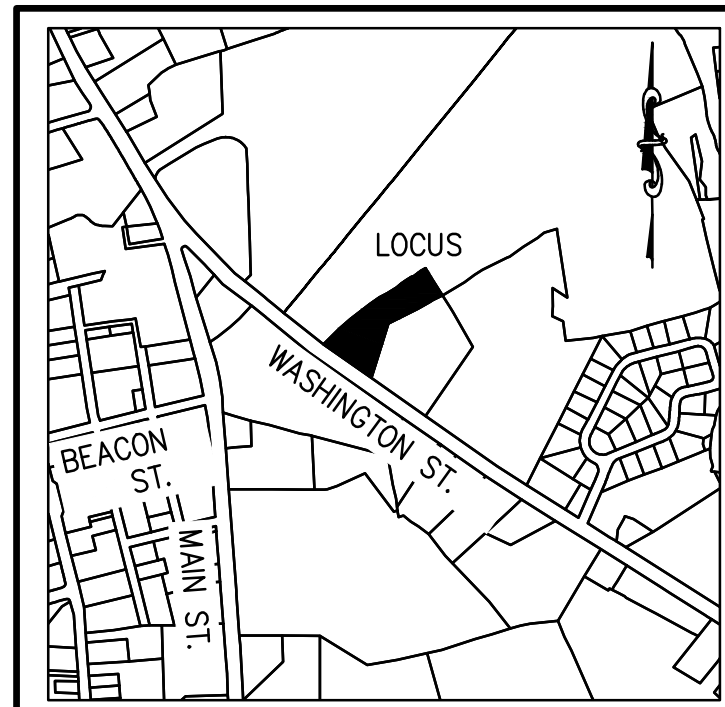
**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS



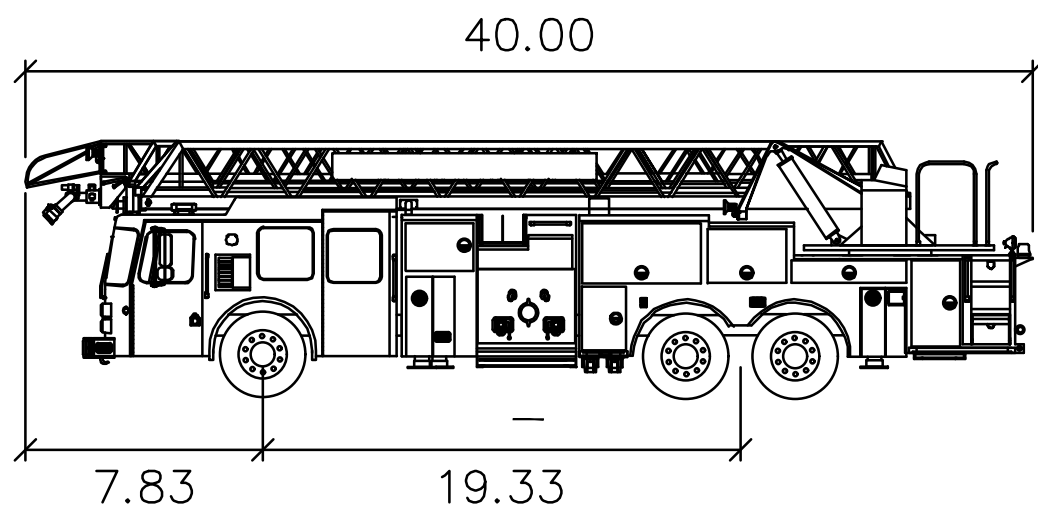
UNION REALTY TRUST  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

OWNERS/APPLICANT:

DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MARCH 24, 2023  
SCALE: 1"=20'  
PROJECT NO.: 222-182  
DWG. TITLE: EROSION AND SEDIMENT CONTROL PLAN  
DWG. NO.: ESC-1



LOCUS MAP  
Not to Scale



Weymouth Ladder 105'

Width : 8.00 feet  
Track : 6.91  
Lock to Lock Time : 6.0  
Steering Angle : 45.0

NOTE: LIMIT OF BUMPER OVERHANG IS SHOWN IN RED. VEHICLE WHEEL PATH IS SHOWN AS BLACK LINES.

ABBREVIATIONS

FFE	FIRST FLOOR ELEVATION
BIT CONC.	BITUMINOUS CONCRETE PAVEMENT
CCB	CAPE COB BERM
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET. WALL	RETAINING WALL
CONC.	CONCRETE
RCF	REINFORCED CONCRETE PIPE
VCC	VERTICAL GRANITE CURB
ETW	EDGE OF TRAVEL WAY
MTL	METAL BERM
VCC	VERTICAL CONCRETE CURB
CMP	CORRUGATED METAL PIPE
LSA	LANDSCAPED AREA

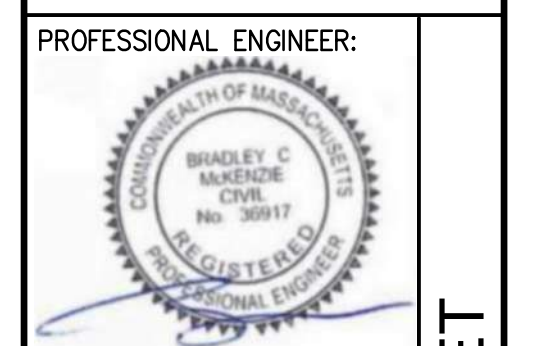
LEGEND

- SURVEY SYMBOLS
- REBAR
  - ∨ ANGLE IRON
  - CB/DH □ CONCRETE BOUND WITH DRILL HOLE
  - SB □ STONE BOUND
  - SB/DH □ STONE BOUND
- UTILITY SYMBOLS
- ⊞ CHIMNEY
  - ⊞ ELECTRIC HAND HOLE
  - ⊞ GUY POLE
  - ⊞ GUY WIRE
  - ⊞ HVAC UNIT
  - ⊞ BUILDING LIGHT W/MAST
  - ⊞ BUILDING LIGHT TRANSFORMER
  - ⊞ WATER GATE
  - ⊞ EXHAUST VENT
  - ⊞ AIR VENT
  - ⊞ DRAINAGE SUMP
  - ⊞ ELECTRIC MANHOLE
  - ⊞ SEWER MANHOLE
  - ⊞ DRAIN MANHOLE
  - ⊞ TELEPHONE MANHOLE
  - ⊞ DRAINAGE CATCH BASIN
  - ⊞ DOOR WAY THRESHOLD
  - ⊞ HYDRANT
  - ⊞ POST INDICATOR VALVE
  - ⊞ UTILITY POLE
  - ⊞ YARD LIGHT
  - ⊞ RIP RAP
  - ⊞ BOLLARD
  - ⊞ SIGN
  - ⊞ FA FIRE ALARM
  - ⊞ DECIDUOUS TREE
  - ⊞ CONIFEROUS TREE
- LINE DESIGNATORS
- W WATER MAIN
  - H HANDRAIL
  - J JERSEY BARRIER
  - G GUARD RAIL
  - OHW OVERHEAD WIRES
  - G GAS LINE
  - WS WATER SERVICE
  - E UNDERGROUND ELECTRIC
  - S STORM DRAIN LINE
  - S SANITARY SEWER LINE
  - D DRAINAGE SWALE
  - X CHAIN LINK FENCE

REV	DATE	DESCRIPTION
1	4/20/23	TOWN REVIEW
2	5/24/23	SITE LAYOUT
3	7/3/23	TOWN REVIEW



**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS

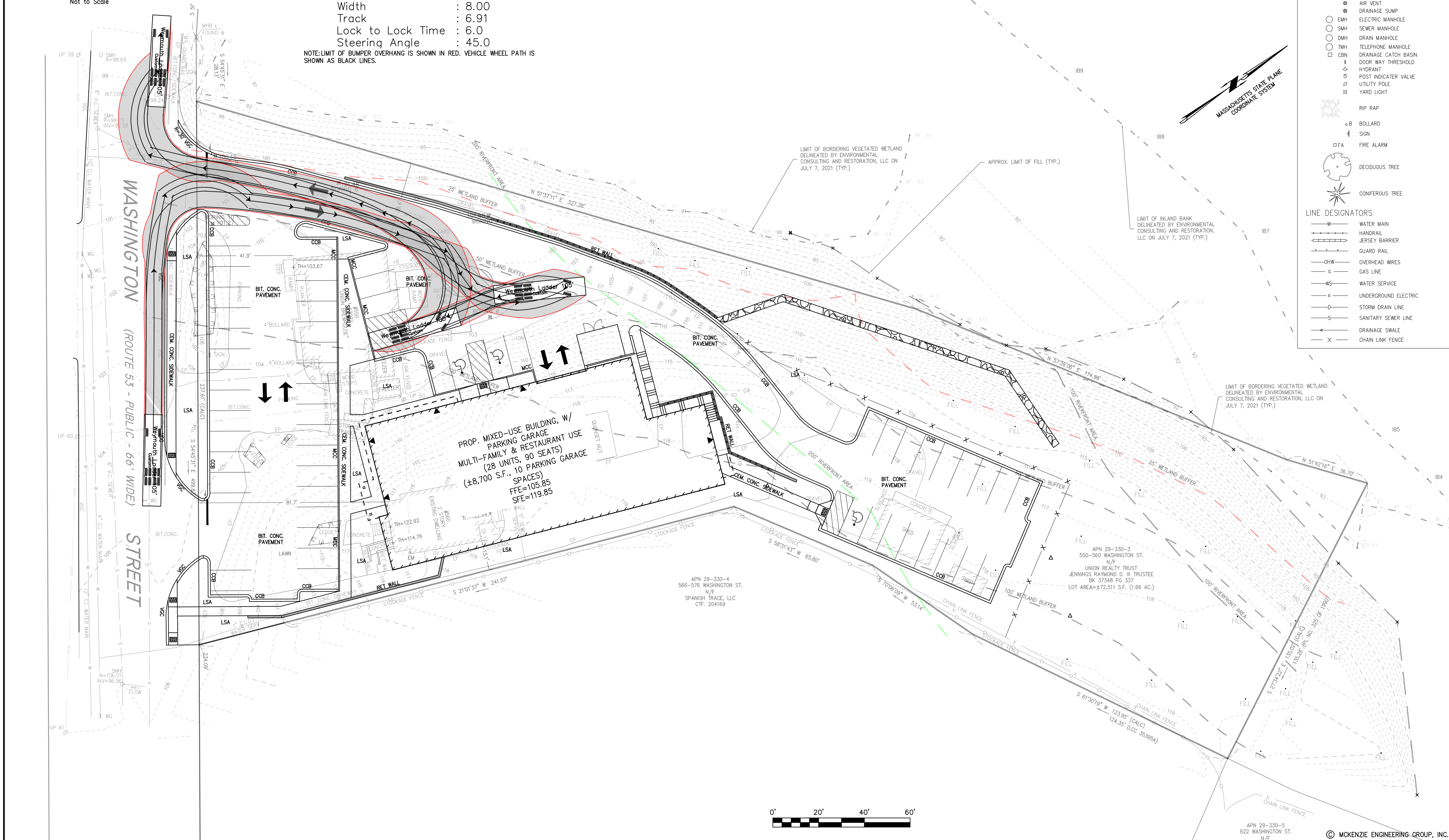


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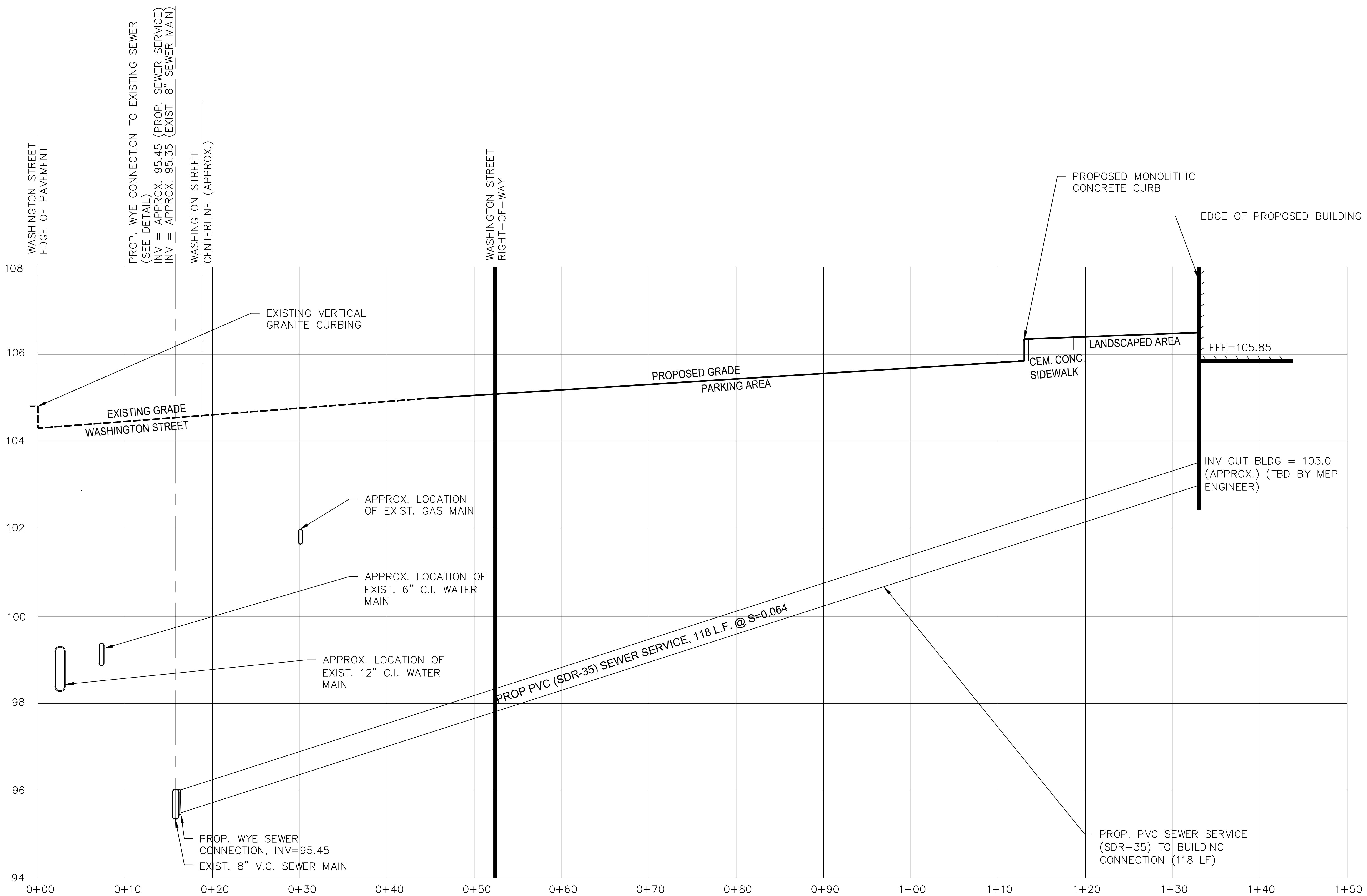
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DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MARCH 24, 2023  
SCALE: 1"=20'  
PROJECT NO.: 222-182  
DWG. TITLE:

**TRUCK TURNING PLAN**

DWG. NO.: **T-1**







**PROPOSED SEWER CONNECTION**  
 VERTICAL SCALE: 1 IN. = 1 FT.  
 HORIZONTAL SCALE: 1 IN. = 5 FT.

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REV	DATE	DESCRIPTION	BY	APP
1	4/20/23	TOWN REVIEW	ESS	BCM
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3	7/3/23	TOWN REVIEW	ESS	BCM



**SITE DEVELOPMENT PLAN**  
 550-560 WASHINGTON STREET  
 (APN 29-330-3)  
 WEYMOUTH, MASSACHUSETTS



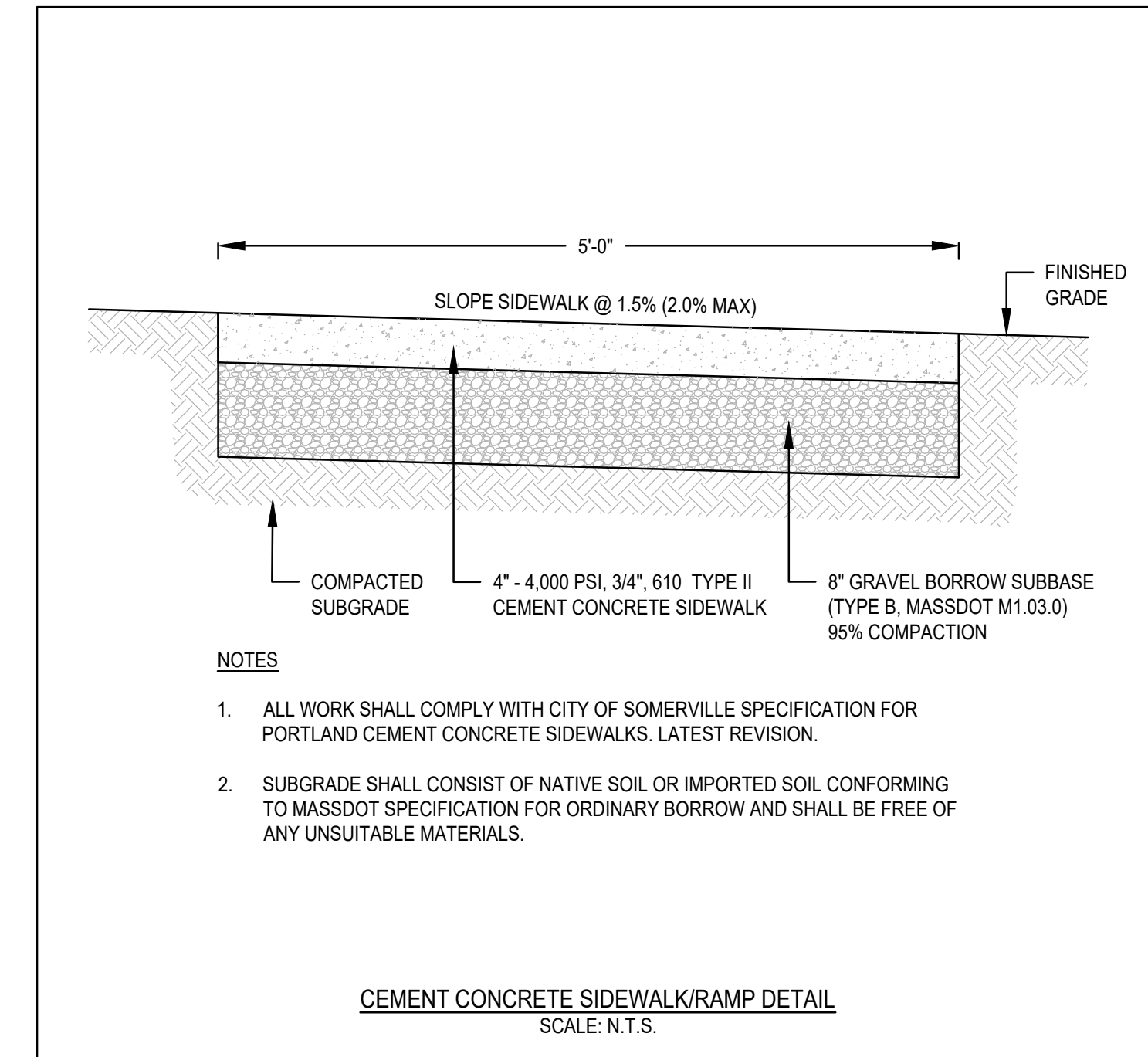
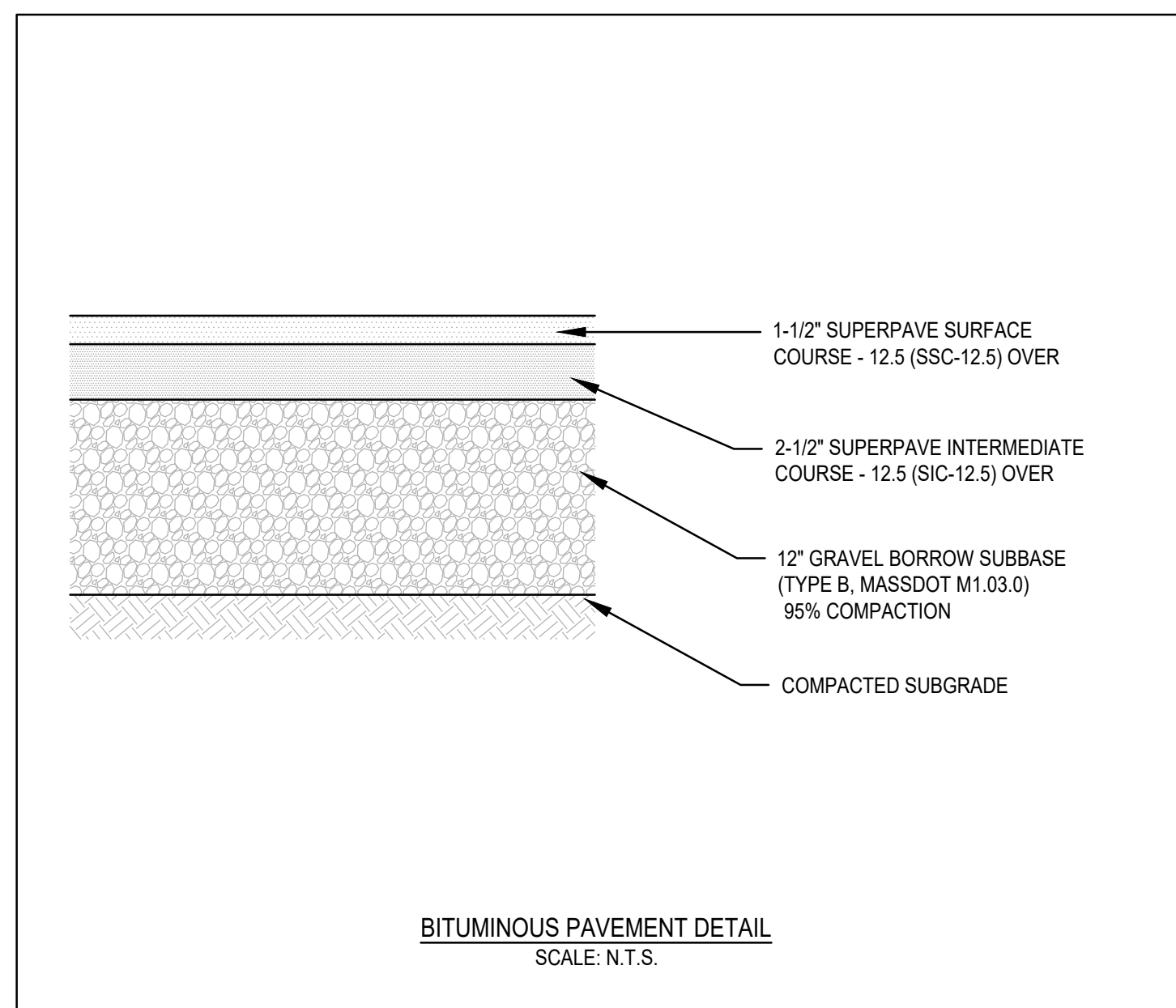
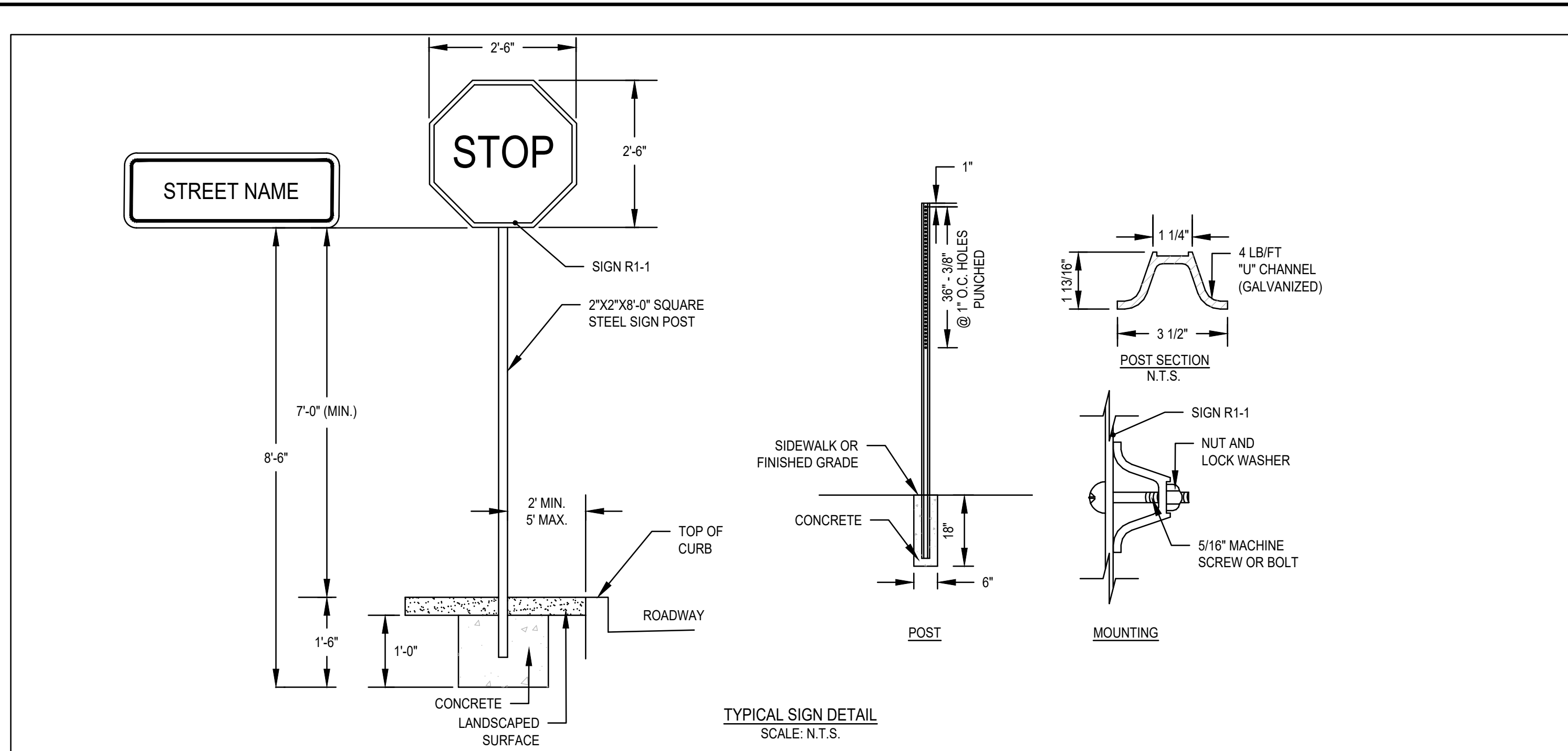
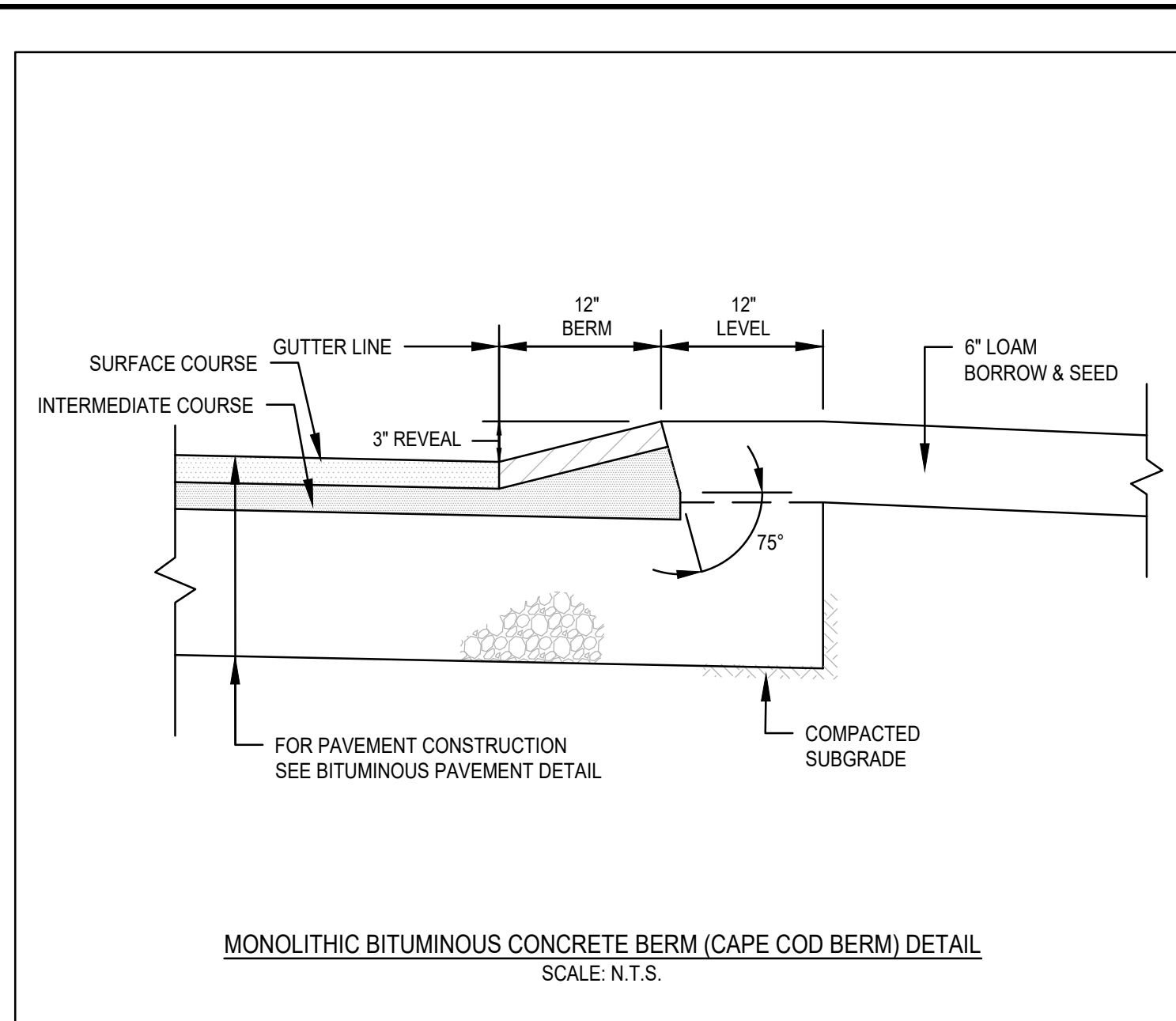
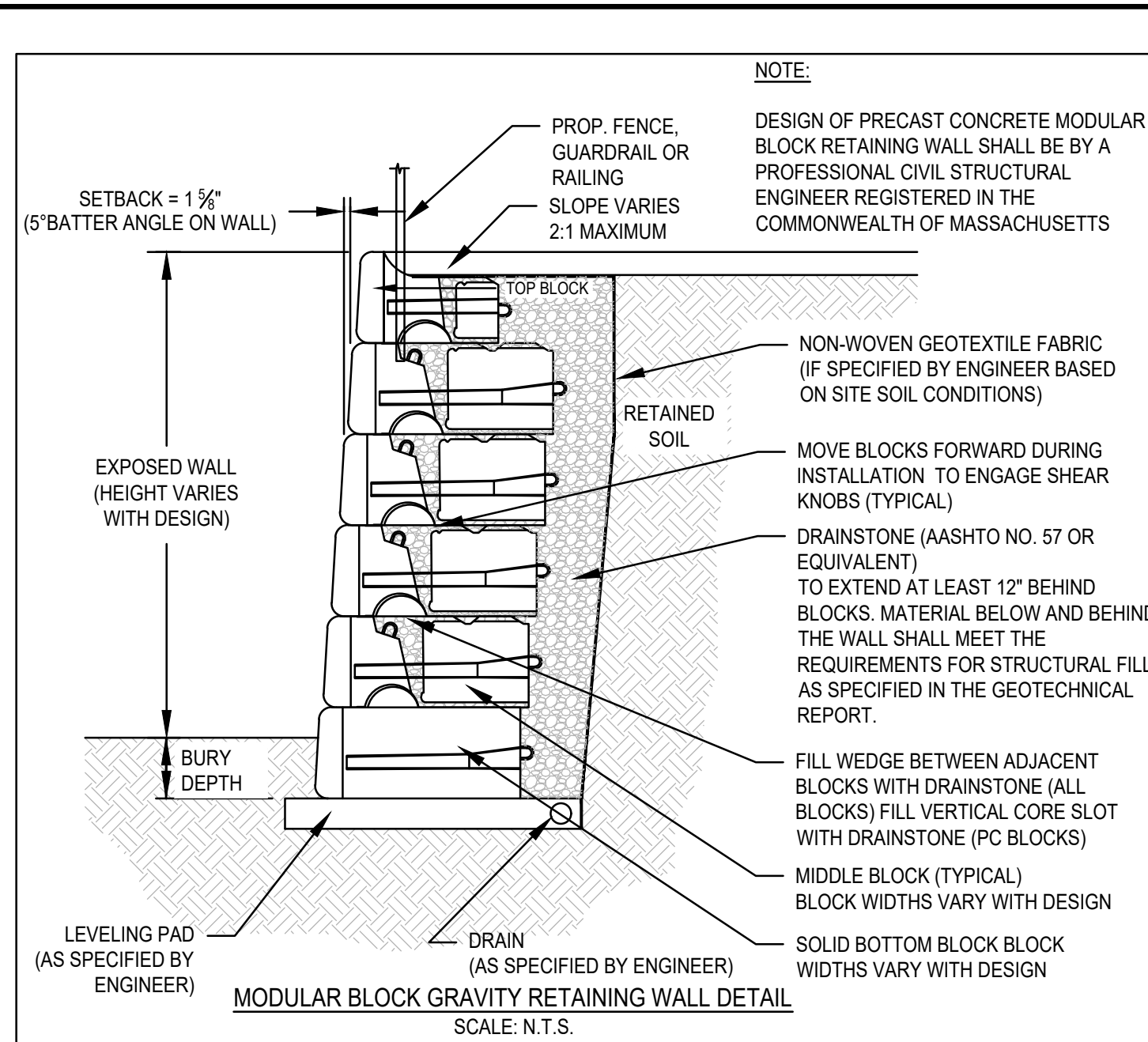
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 UNION REALTY TRUST  
 560 WASHINGTON STREET  
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PERMIT PLAN SET

DRAWN BY: ESS  
 DESIGNED BY: ESS  
 CHECKED BY: BCM  
 APPROVED BY: BCM  
 DATE: MARCH 24, 2023  
 SCALE: AS NOTED  
 PROJECT NO.: 222-182  
 DWG. TITLE:

**SEWER PROFILE PLAN**

DWG. NO.: **SP-1**



**SEEDING SPECIFICATIONS**

**SEEDING RECOMMENDATIONS**

- SEEDBED PREPARATION**
  - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
  - STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT FOUR INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
- ESTABLISHING A STAND**
  - LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
    - AGRICULTURAL LIMESTONE: 2 TONS PER ACRE OR 100 LBS. PER 1000 SQ. FT.
    - NITROGEN (N): 50 LBS. PER ACRE OR 1.1 LBS. PER 1000 SQ. FT.
    - PHOSPHATE (P O): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.
    - POTASH (K O): 100 LBS. PER ACRE OR 2.2 LBS. PER 1000 SQ. FT.

**SEEDING RATES**

	POUND / ACRE	POUNDS / 1,000 S.F.
A. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
REDTOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREeping RED FESCUE	10	0.35
BIRDFOOT TREFOIL	15	0.35
TOTAL	40	0.95
C. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDFOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. BIRDFOOT TREFOIL	10	0.25
REDTOP	5	0.10
TOTAL	15	0.35
E. TALL FESCUE	20	0.45
FLATPEA	30	0.75
TOTAL	50	1.20
F. CREeping RED FESCUE 1/	85	2.00
KENTUCKY BLUEGRASS 1/	85	2.00
TOTAL	170	4.00
G. TALL FESCUE 1/	150	3.60

**TEMPORARY SEEDING RATES**

H. WINTER RYE	112	2.50 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 5)
OATS	80	2.00 (BEST FOR SPRING SEEDING, BEFORE MAY 15)
ANNUAL RYEGRASS	40	1.00 (BEST FOR FALL SEEDING, AUG 15 TO SEPT. 15)
TOTAL	232	5.50 (MAY BE USED EARLY SPRING ALSO)

**SEEDING GUIDE**

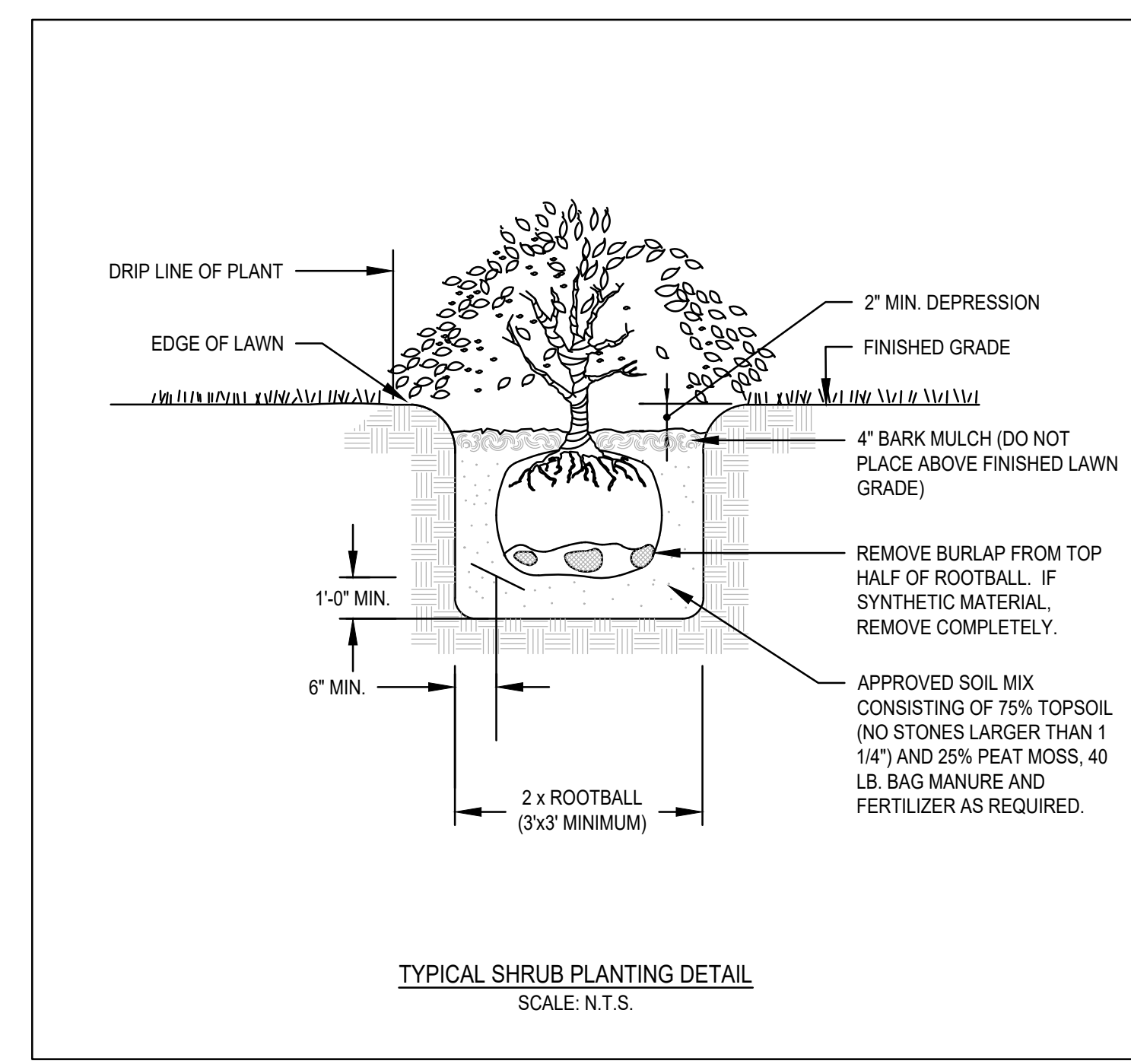
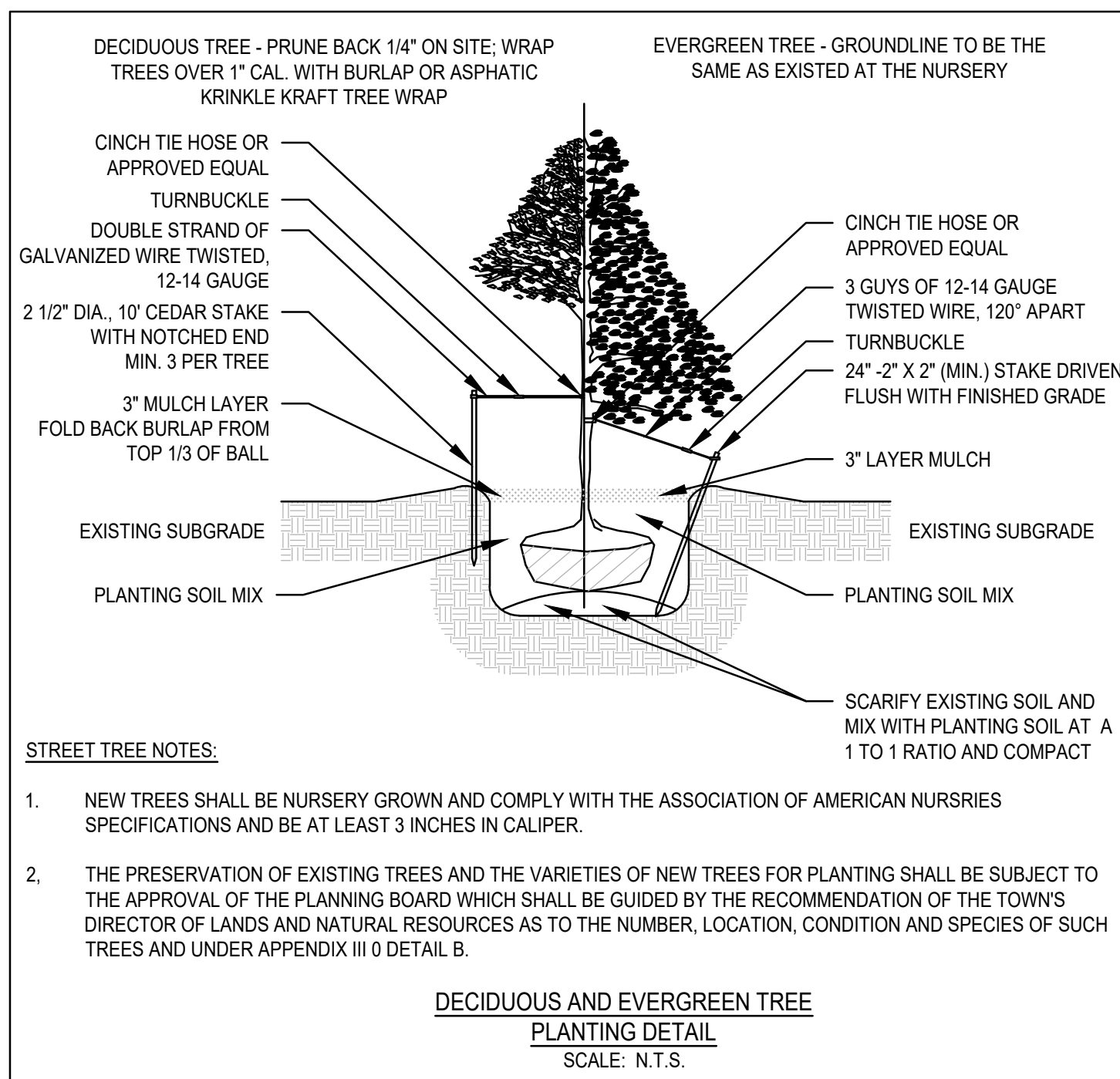
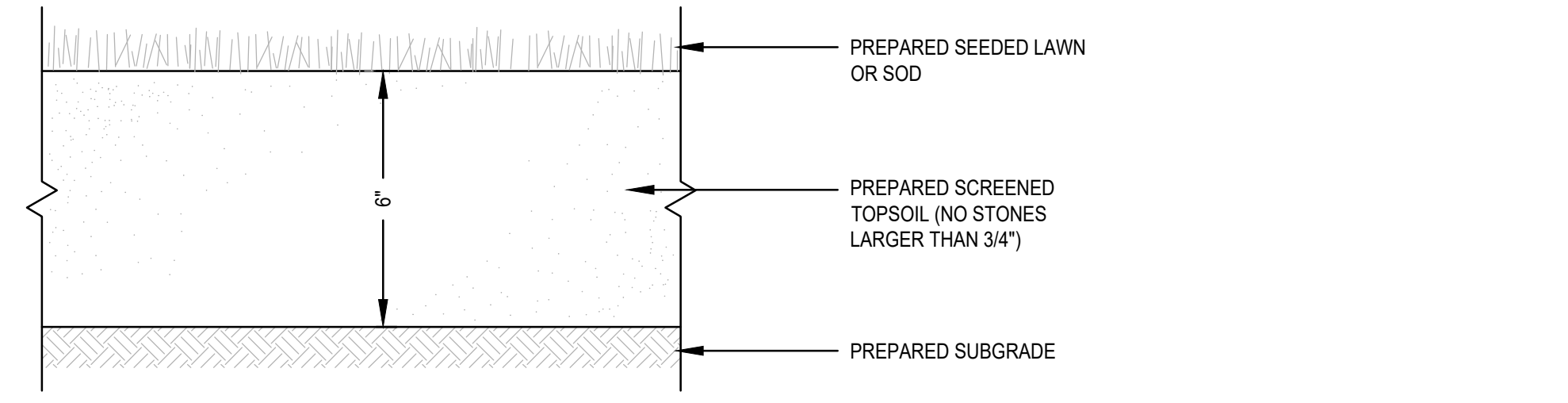
USE	SEEDING MIXTURE 1/
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	E
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	D
LAWN AREAS	F

- MULCH**
  - HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
  - MULCH WILL BE HELD IN PLACE USING TECHNIQUES AS SPECIFIED IN THE "BEST MANAGEMENT PRACTICES OPERATION AND MAINTENANCE PLAN"
- MAINTENANCE TO ESTABLISH A STAND**
  - PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
  - FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
  - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

**NOTES:**

- TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.
- TOPSOIL SHALL CONTAIN BETWEEN 5% AND 12% ORGANIC MATTER AND SHALL HAVE A MAXIMUM STONE SIZE OF 3/4" AND SHALL CONFORM TO THE FOLLOWING GRADATION:

SIeve	% PASSING
1 1/4 INCH	100
No. 4	85-100
No. 40	60-85
No. 100	38-60
No. 200	28-40



REV	DATE	DESCRIPTION
1	4/20/23	TOWN REVIEW
2	5/24/23	ESS REVIEW
3	7/20/23	TOWN REVIEW

**MG**  
MCKENZIE ENGINEERING GROUP  
Assinippi Office Park  
150 Longwater Drive, Suite 101  
Norwell, MA 02061  
P: 781.792.3900  
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www.mckeng.com

**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS

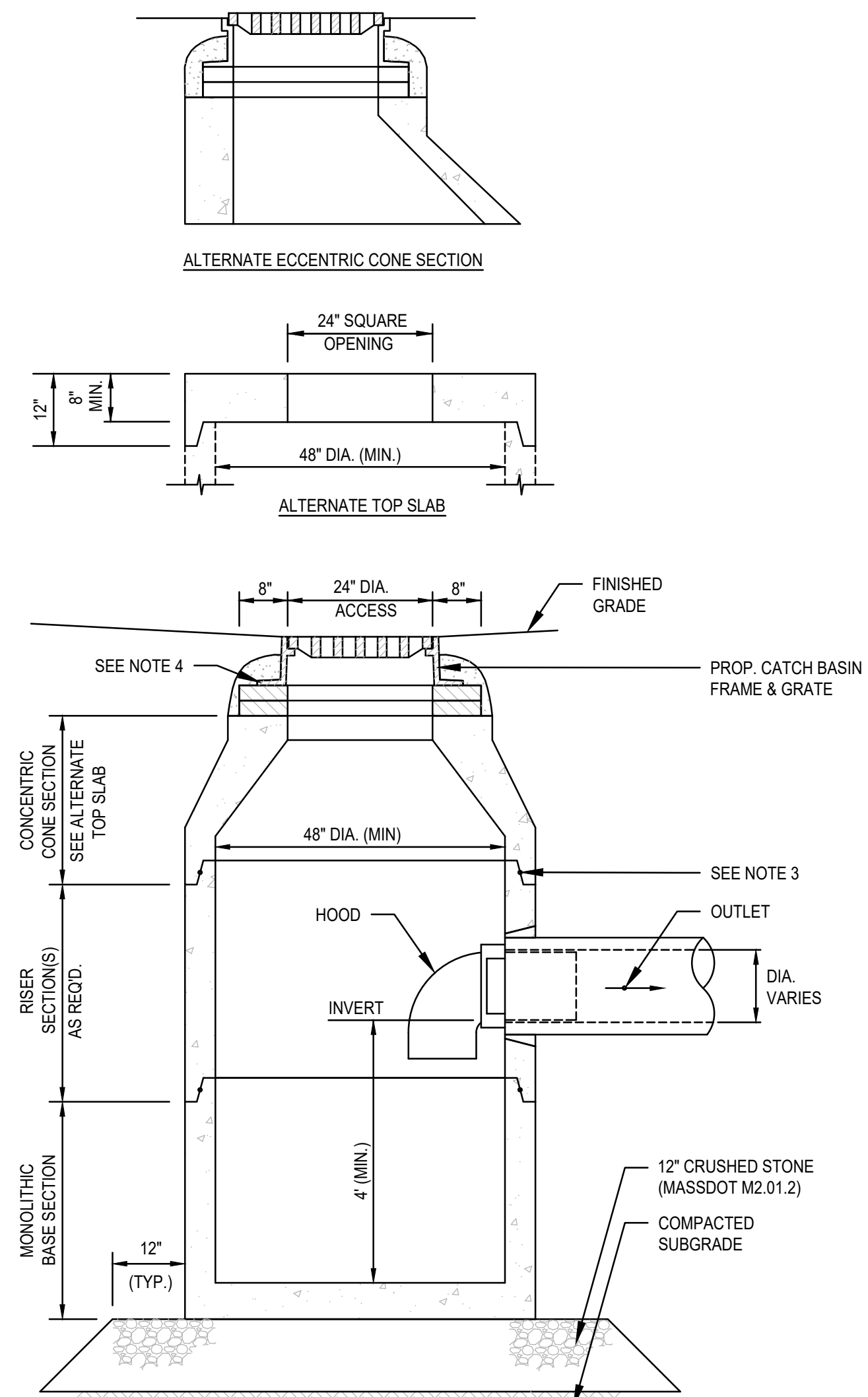
PROFESSIONAL ENGINEER:

OWNER/APPLICANT:  
**UNION REALTY TRUST**  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

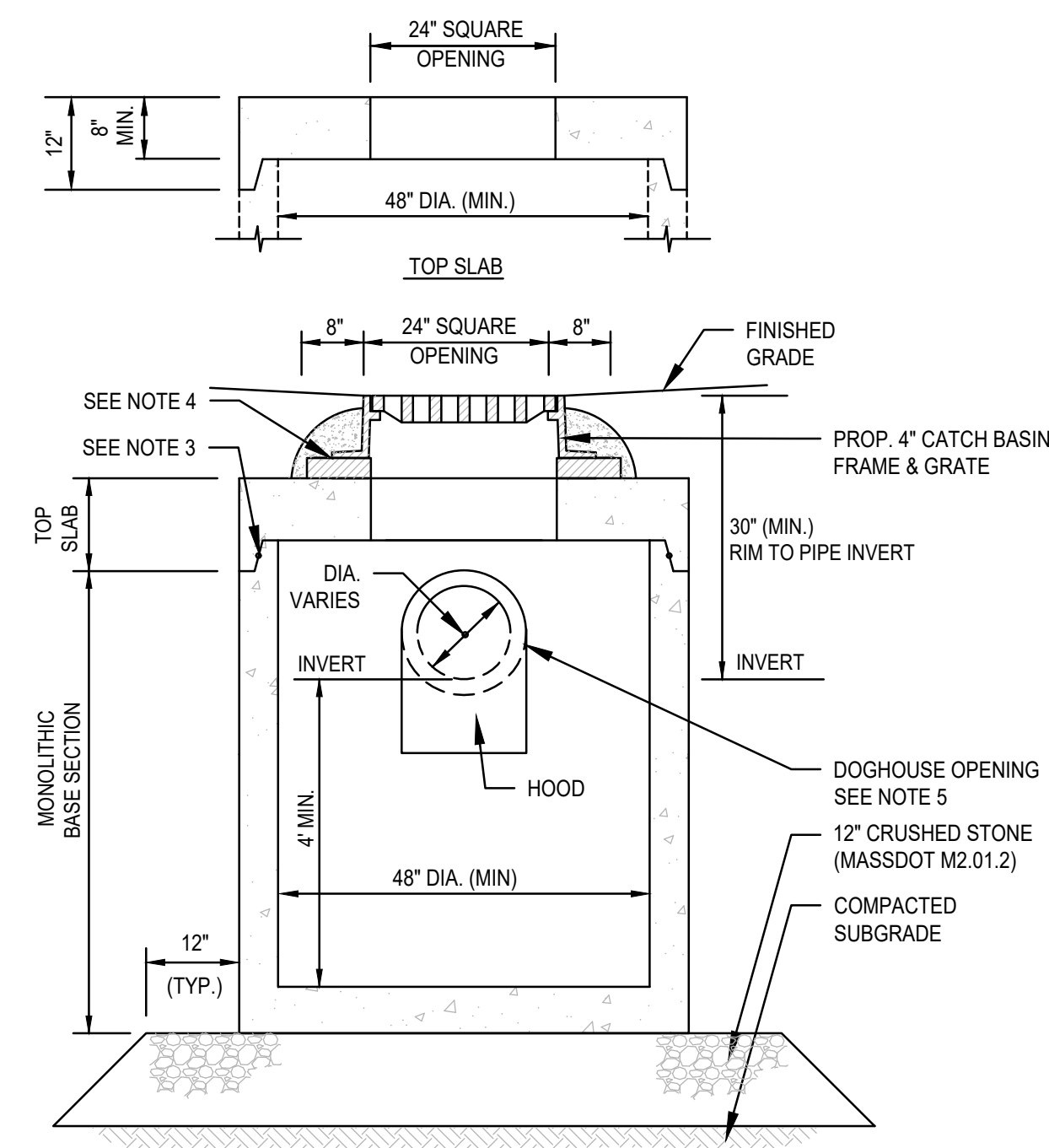
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APPROVED BY:	BCM
DATE:	MARCH 24, 2023
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

**CONSTRUCTION DETAILS**

DWG. NO.: **D-1**



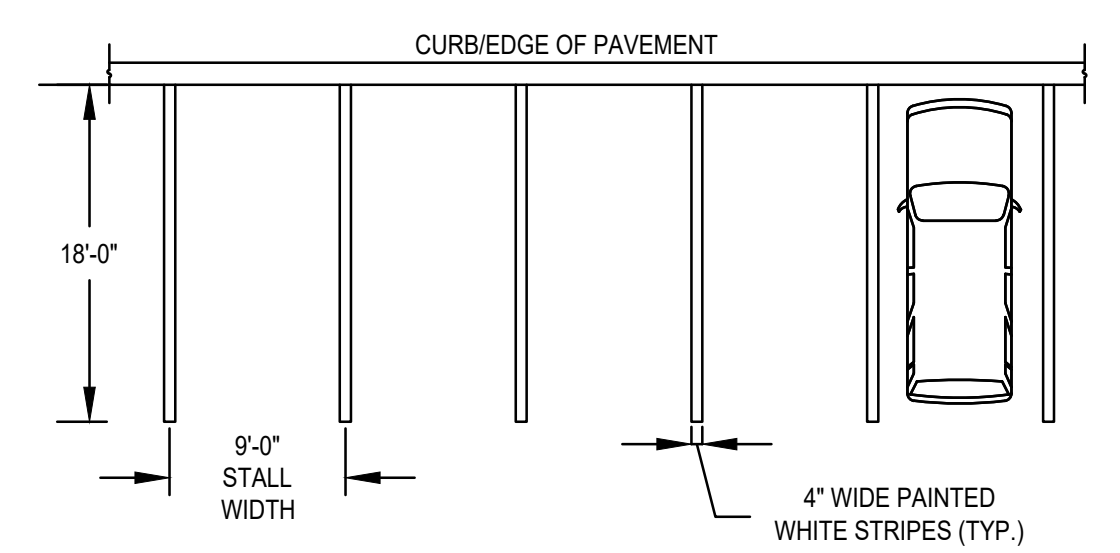
**CATCH BASIN W/HOOD**  
SCALE: N.T.S.



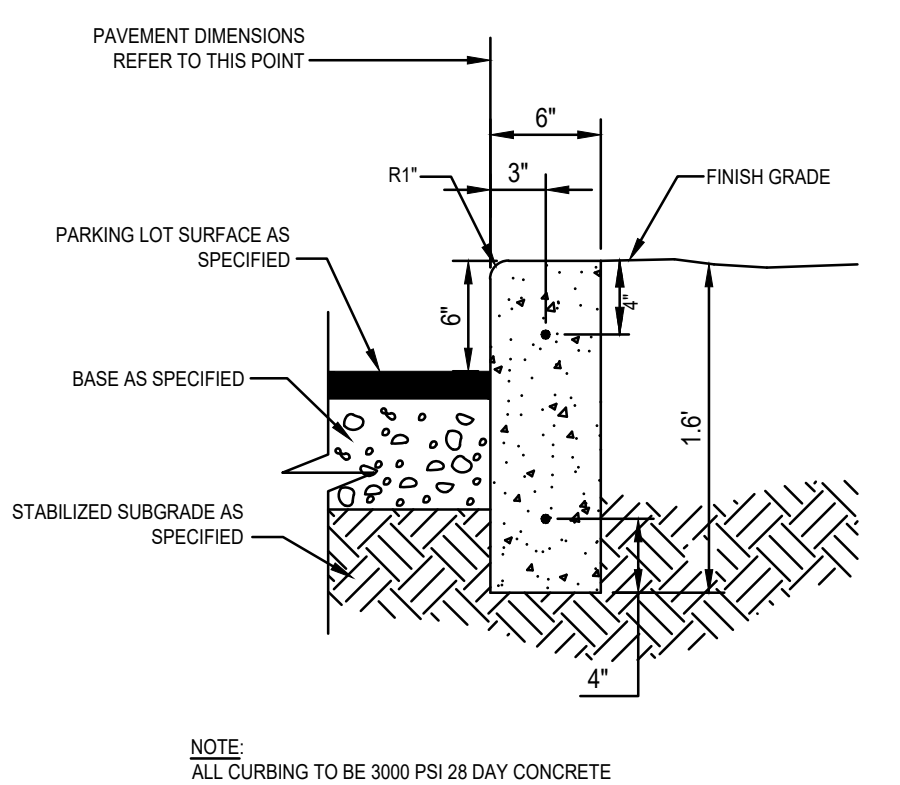
**SHALLOW CATCH BASIN**  
SCALE: N.T.S.

- NOTES:**
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  - PROVIDE 1/2" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  - MORTAR ALL PIPE CONNECTIONS. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
  - CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

- NOTES:**
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  - PROVIDE 1/2" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  - MORTAR ALL PIPE CONNECTIONS. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
  - CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).
  - PROVIDE DOG HOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHOULD NOT REST DIRECTLY ON PIPE. MORTAR ALL PIPE CONNECTIONS.

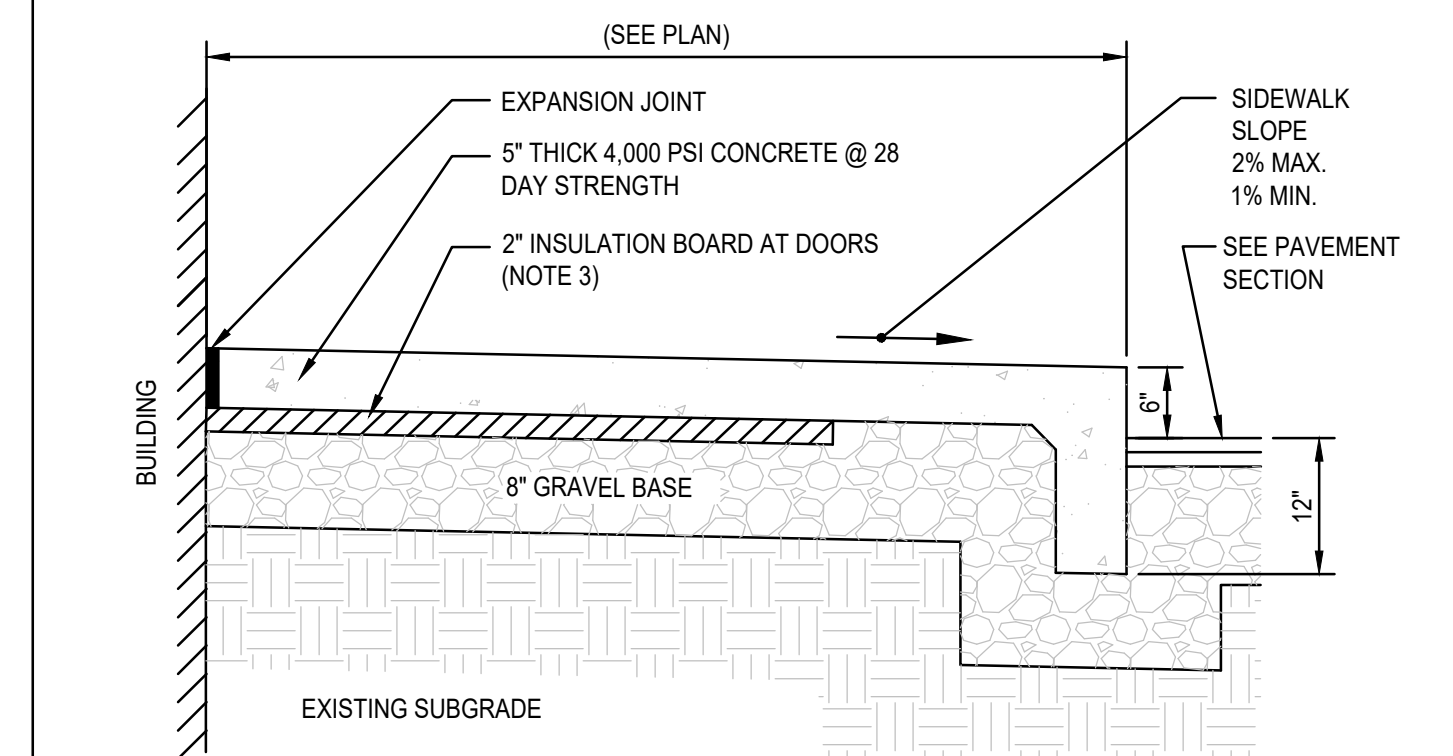


**TYPICAL STRIPING DETAILS**  
SCALE: N.T.S.



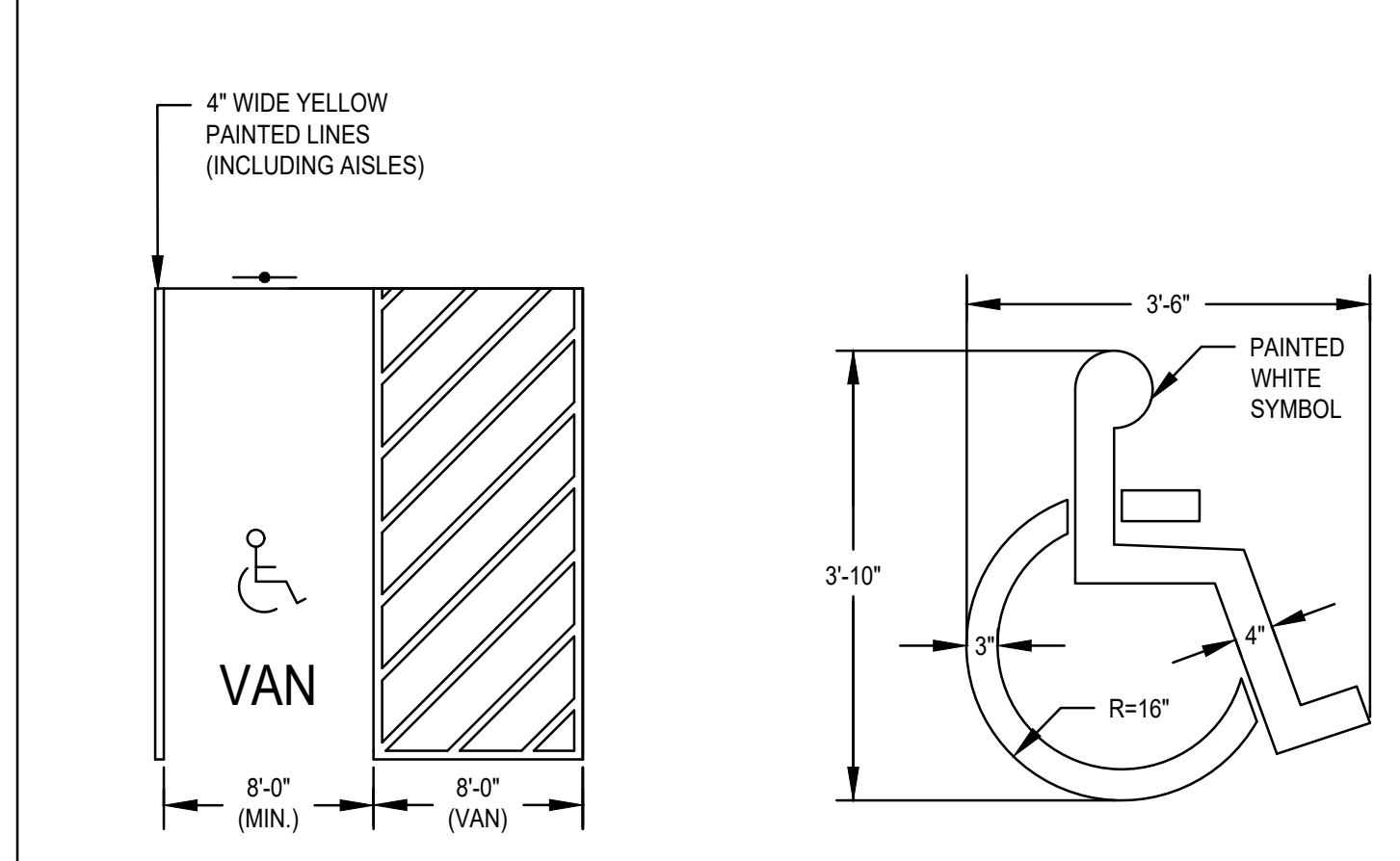
**PRECAST MONOLITHIC CEMENT CONCRETE CURB DETAIL**  
SCALE: N.T.S.

- NOTE:**  
ALL CURBING TO BE 3000 PSI 28 DAY CONCRETE



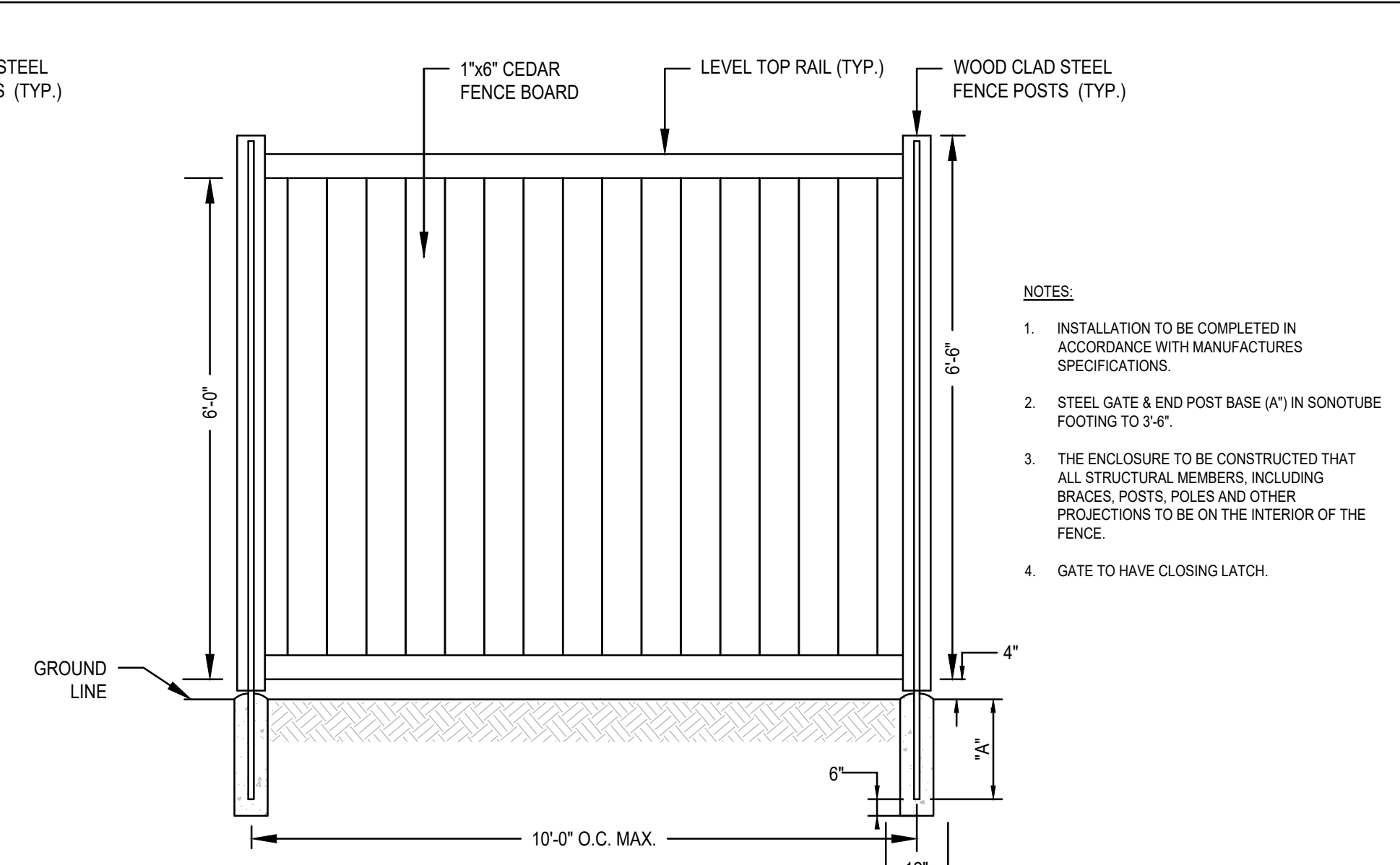
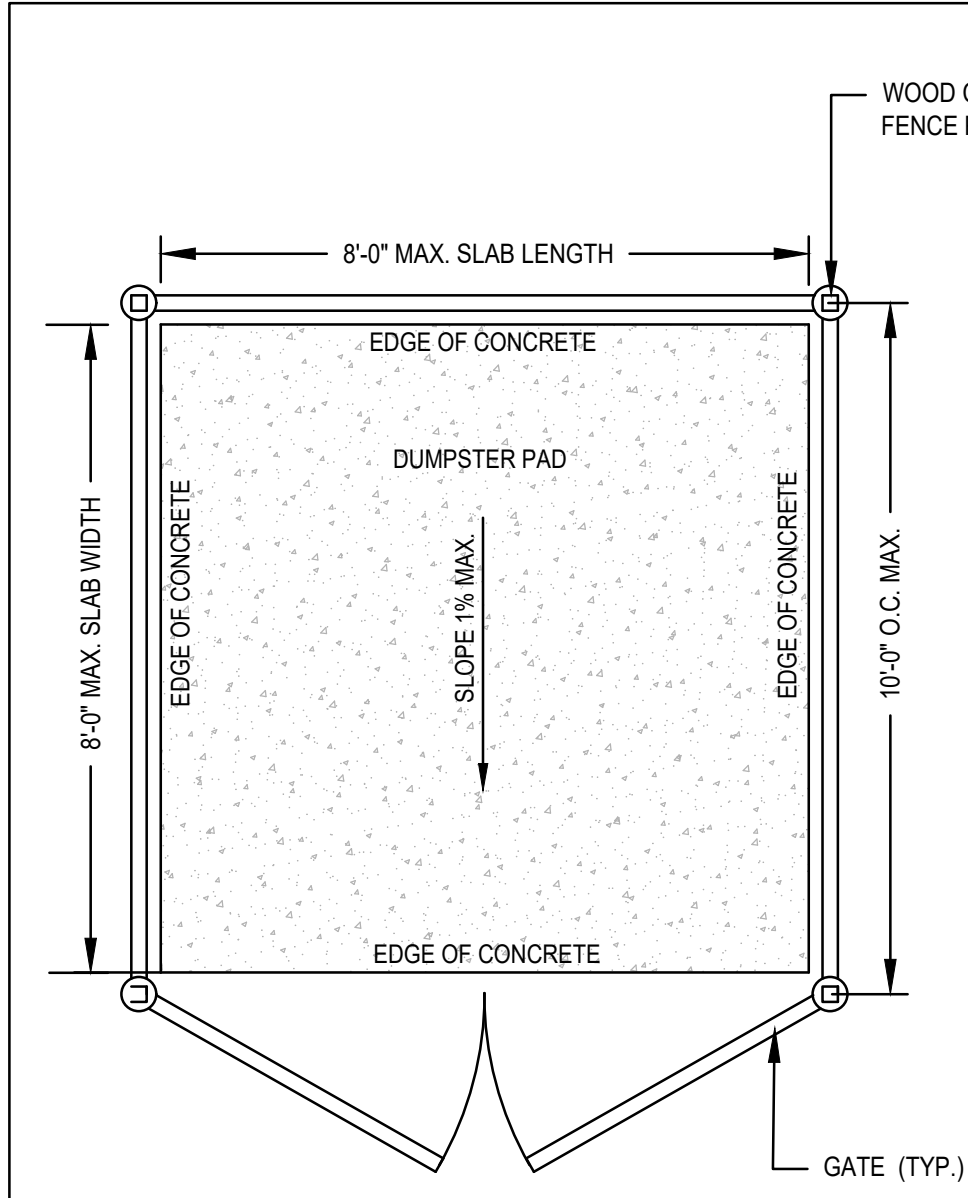
- NOTES:**
- SIDEWALK TO HAVE TOOLED JOINTS 5' O.C. (TYP.) WITH EXPANSION JOINTS 15' ON CENTER AND PREMOLDED FILLER.
  - TOOLED JOINT 6" FROM FACE OF CURB
  - PLACE 2" RIGID EXTRUDED STYROFOAM NONEXPANDABLE INSULATION BOARD LIGHT BLUE IN COLOR AT DOORS. BOARD TO BE PLACED IN 2-2x8" SECTIONS CENTERED ON AND EXTENDING 4" PERPENDICULAR FROM DOOR. BASE MATERIAL SHALL BE CRUSHED STONE AT DOORS.
  - SEE PLAN FOR ELEVATIONS AT DOORS AND CURB

**CONCRETE SIDEWALK AND MONOLITHIC CURB AT BUILDING**  
SCALE: N.T.S.



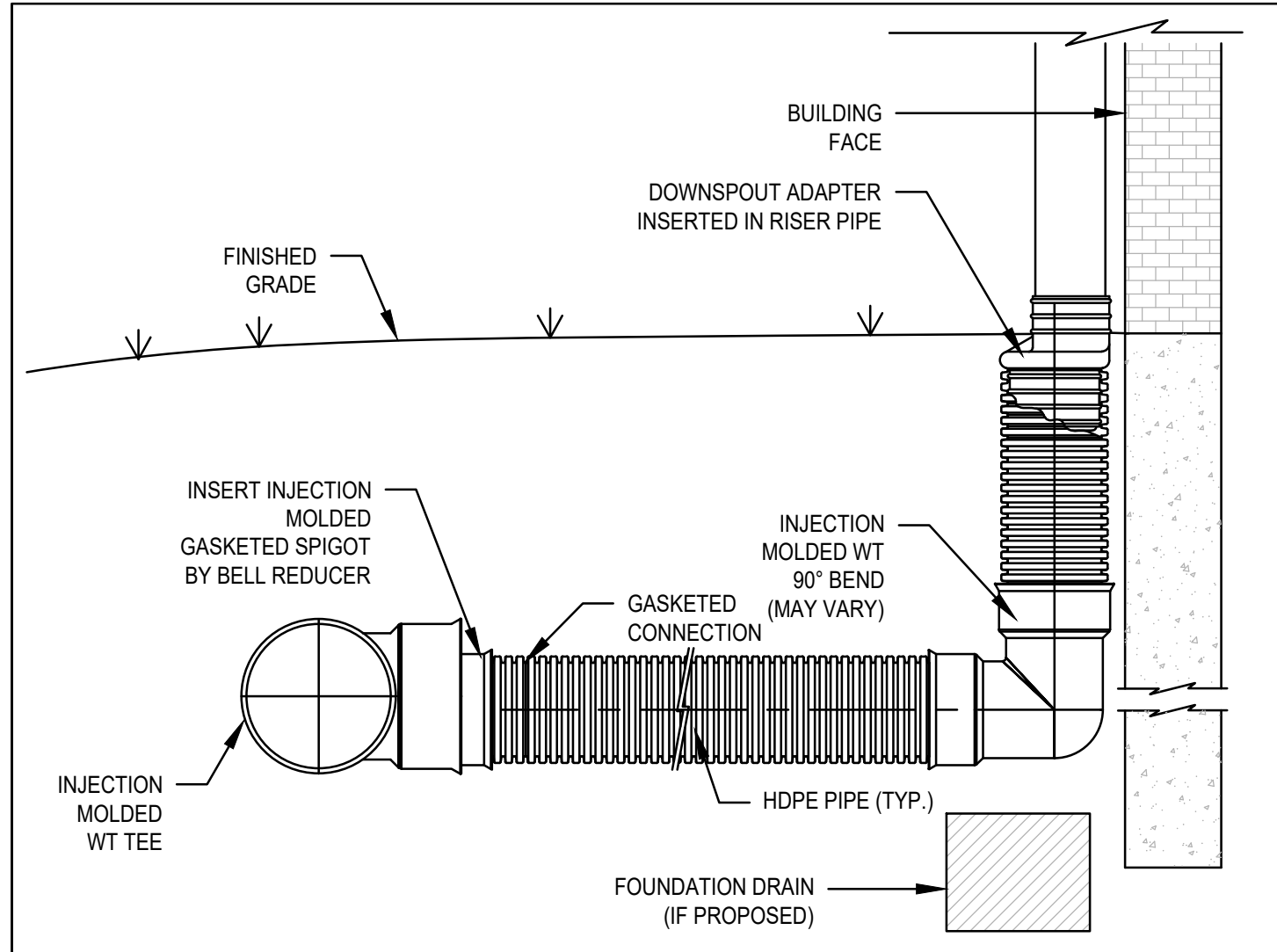
**HANDICAP PARKING STALL DETAIL**  
SCALE: N.T.S.

**PAINTED HANDICAP SYMBOL DETAIL**  
SCALE: N.T.S.



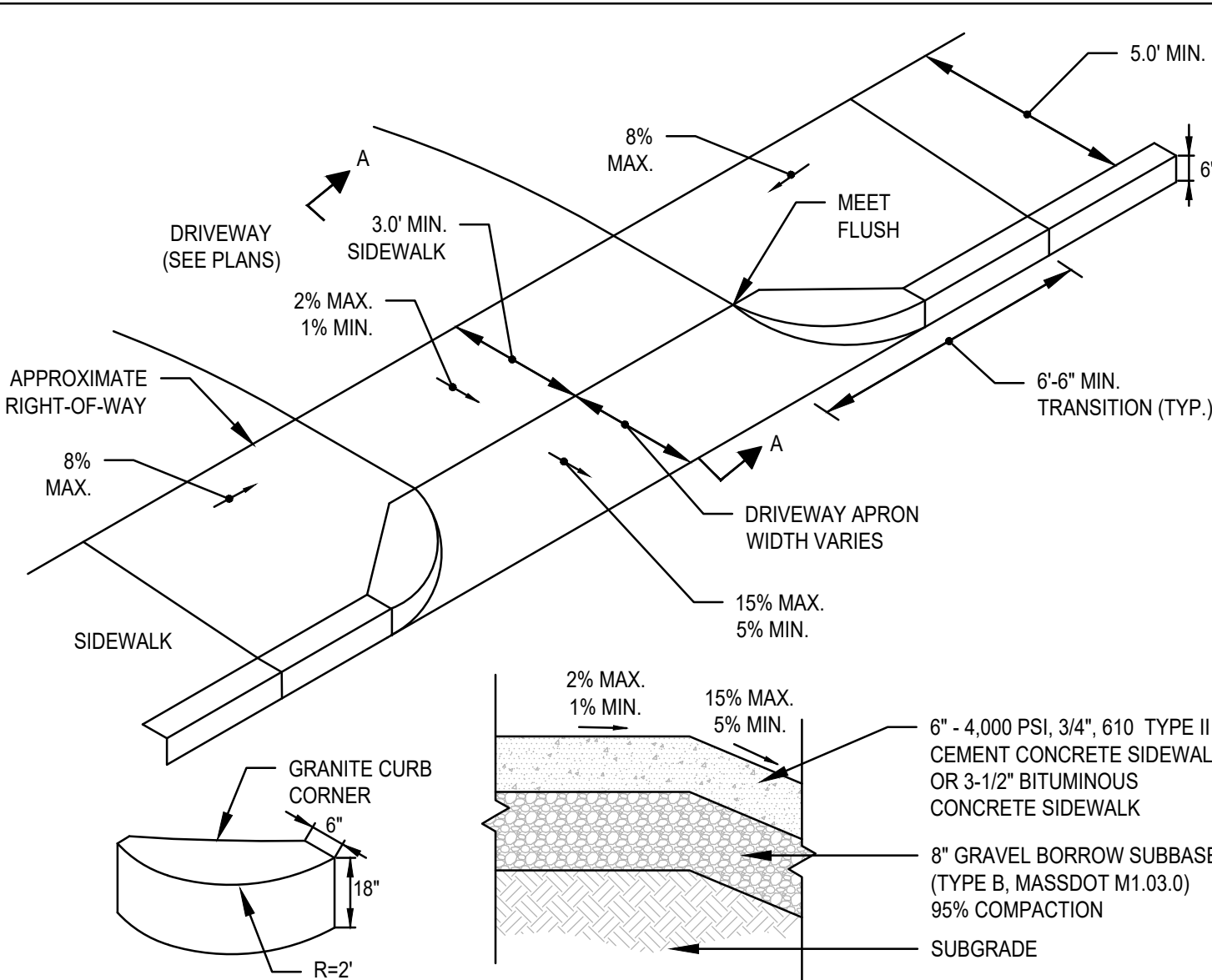
- NOTES:**
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
  - STEEL GATE & END POST BASE (A) IN SONOTUBE FOOTINGS TO 3'-4".
  - THE ENCLOSURE TO BE CONSTRUCTED THAT ALL STRUCTURAL MEMBERS INCLUDING BRACES, POSTS, POLES AND OTHER PROJECTIONS TO BE ON THE INTERIOR OF THE FENCE.
  - GATE TO HAVE CLOSING LATCH.

**DUMPSTER PAD ENCLOSURE DETAIL**  
SCALE: N.T.S.



- NOTES:**
- INJECTION MOLDED FITTING ARE AVAILABLE IN TEES, WYES, REDUCERS, 45° BENDS AND BELL/BELL COUPLERS.
  - WATERTIGHT (WT) JOINTS SHOWN. SOIL-TIGHT (ST) FITTINGS ARE ALSO AVAILABLE.

**ROOF LEADER CONNECTION DETAIL**  
SCALE: N.T.S.



**SIDEWALK THRU DRIVEWAYS WITH CURB RETURNS**  
SCALE: N.T.S.

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REV	DATE	DESCRIPTION	BY	APP
1	4/20/23	TOWN REVIEW	ESS	BCM
2	5/24/23	SITE LAYOUT	ESS	BCM
3	7/20/23	TOWN REVIEW	ESS	BCM

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**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS

PROFESSIONAL ENGINEER:  
  
 BRADLEY C. MCKENZIE  
 CIVIL  
 NO. 35817  
 STATE OF MASSACHUSETTS

OWNERS/APPLICANT:  
 UNION REALTY TRUST  
 560 WASHINGTON STREET  
 WEYMOUTH, MASSACHUSETTS 02188

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	MARCH 24, 2023
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

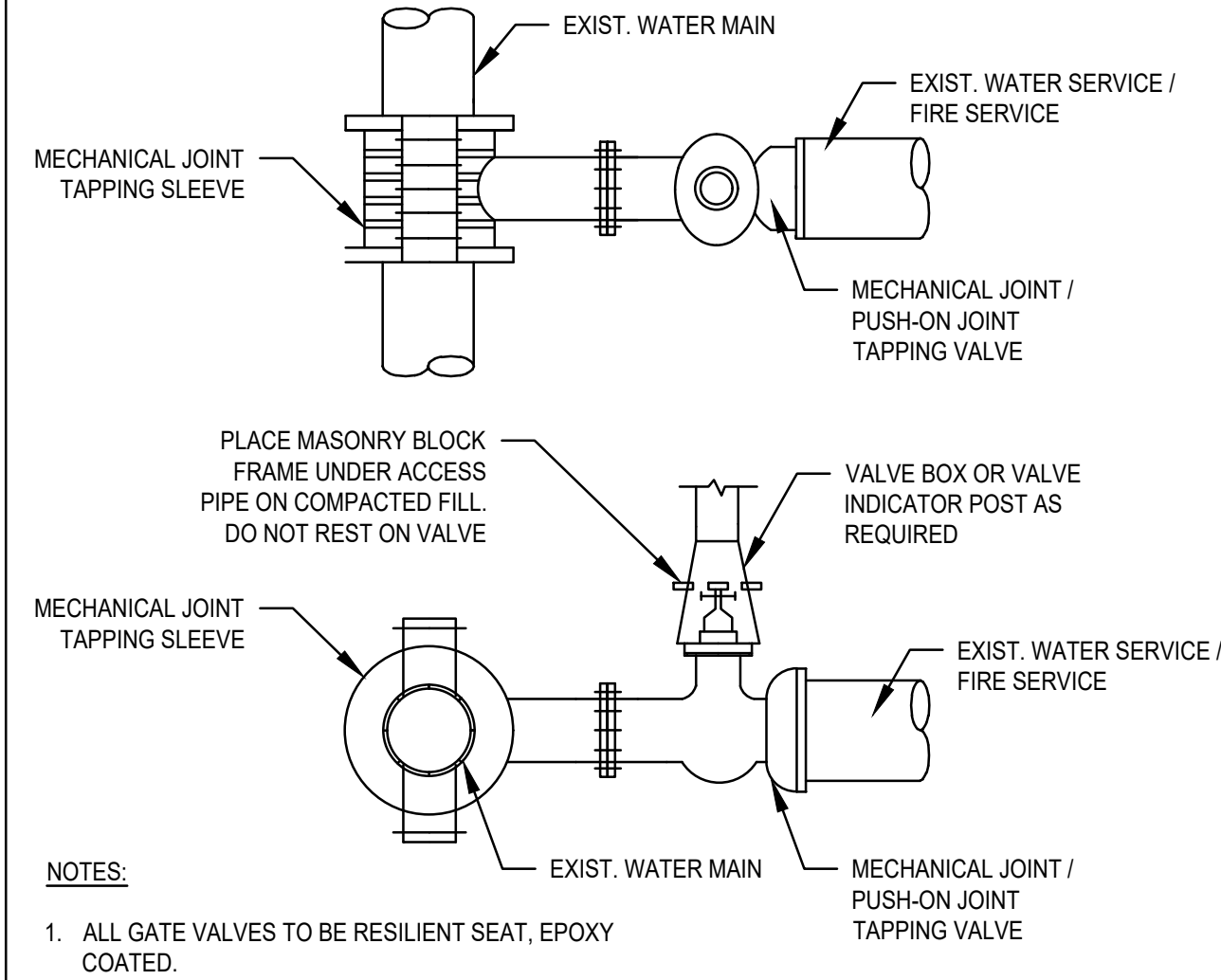
**CONSTRUCTION DETAILS**

DWG. NO.: **D-2**

PERMIT PLAN SET

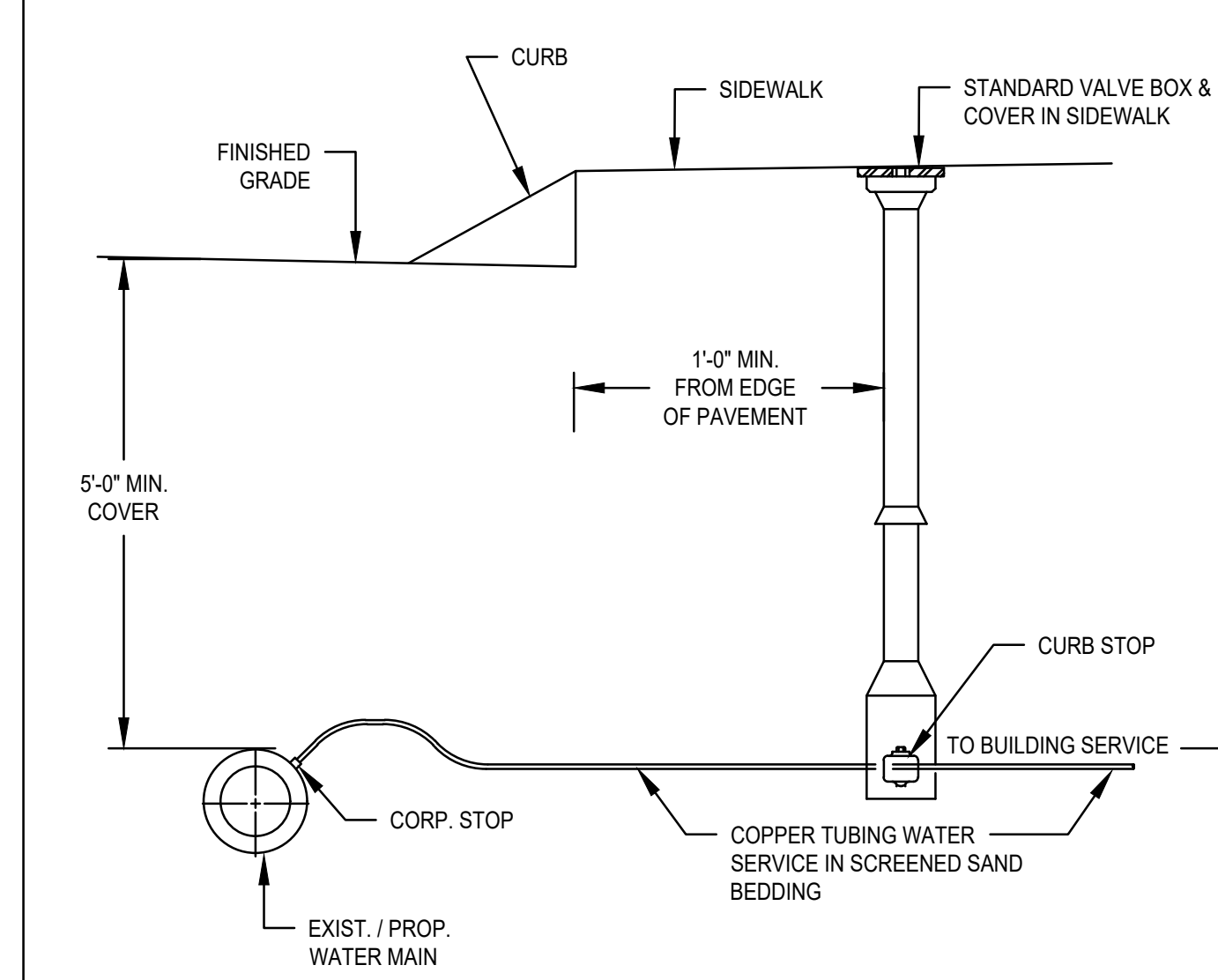
**GENERAL NOTES**

- IF SHEETING IS USED, IT SHALL BE CUT OFF NO MORE THAN 12" ABOVE TOP OF PIPE.
- ALL PIPES SHALL BE PRESSURE TESTED AT 200 PSI WORKING PRESSURE FOR A MINIMUM DURATION OF TWO HOUR.
- WATER SYSTEM IS TO BE DISINFECTED TO 50 P.P.M. AVAILABLE CHLORINE AND AFTER 24 HOURS TO 25 P.P.M. OR AS REQUIRED BY WEYMOUTH WATER SUPERINTENDENT/ENGINEER.
- WATER PIPE IS TO BE CEMENT LINED DUCTILE IRON "TYTON" OR EQUAL TYPE JOIN, CONFORMING TO A.N.S.I./A.W.W.A. C150/A21.50, CLASS 52, AS APPROVED BY THE TOWN'S WATER SUPERINTENDENT/ENGINEER.
- ALL PIPING SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH A.W.W.A. STANDARDS PRIOR TO PAVING IF PAVING ABOVE TRENCH IS REQUIRED.
- BACKFILL IS TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY BY AASHTO T-180 D.
- ALL WATER PIPE SHALL BE LAID WITH A MINIMUM OF 5 FEET OF COVER OF APPROVED MATERIALS.
- RESULTS FROM PRESSURE TESTING AND DISINFECTION SHALL BE FURNISHED TO THE WEYMOUTH WATER DEPT. WORKS AND DIRECTOR OF PUBLIC WORKS FOR APPROVAL PRIOR TO WATER BEING TURNED ON.
- ALL WORK SHALL BE IN CONFORMANCE WITH WEYMOUTH WATER DEPT. STANDARDS.
- ALL PERMITS REQUIRED FOR STREET OPENINGS AND WATER MAIN TAPPING MUST BE OBTAINED.
- NO WATER WILL BE TURNED ON IN THE PROJECT WITHOUT WEYMOUTH WATER DEPT. APPROVAL.

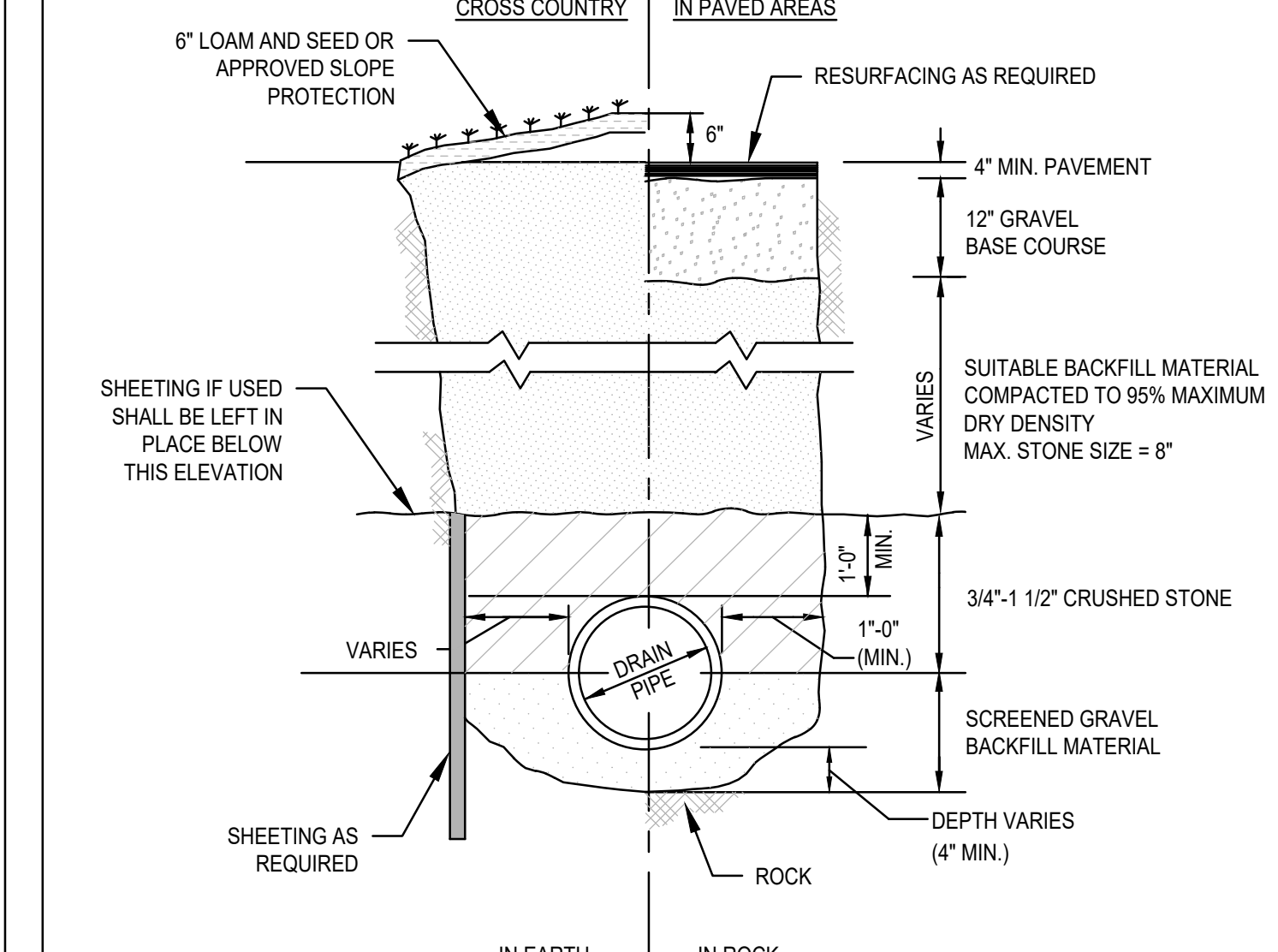


**TYPICAL TAPPING SLEEVE AND VALVE DETAIL**  
SCALE: N.T.S.

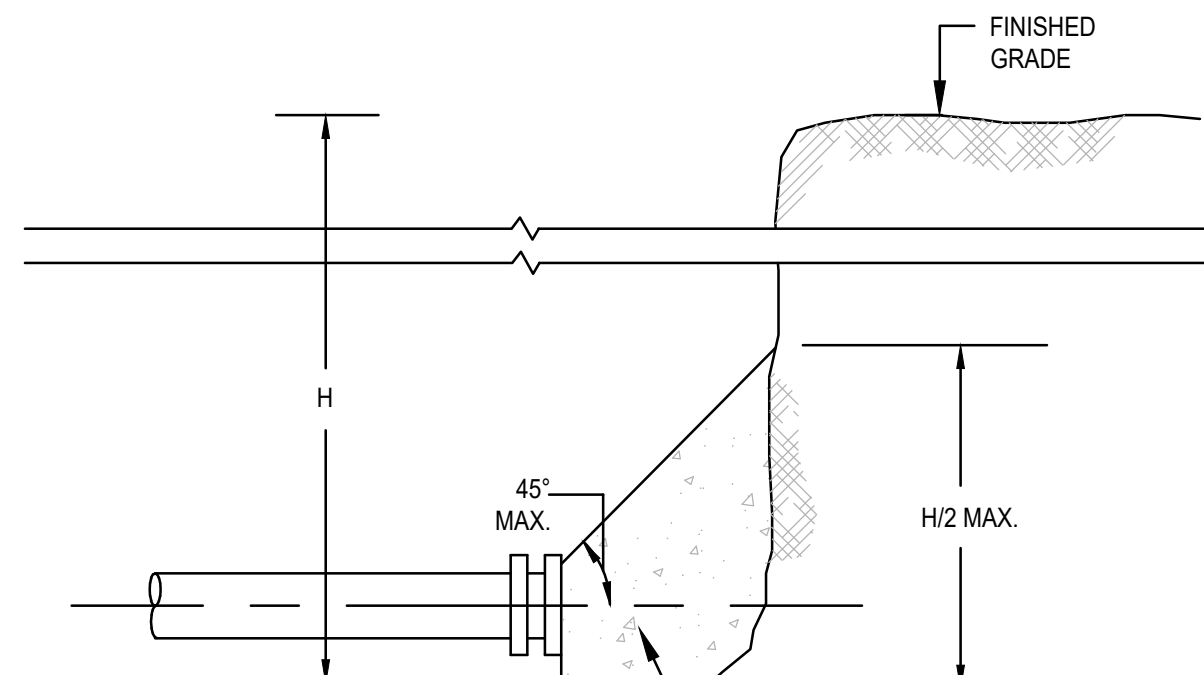
**NOTES:**  
1. ALL GATE VALVES TO BE RESILIENT SEAT, EPOXY COATED.



**SERVICE CONNECTION DETAIL**  
SCALE: N.T.S.

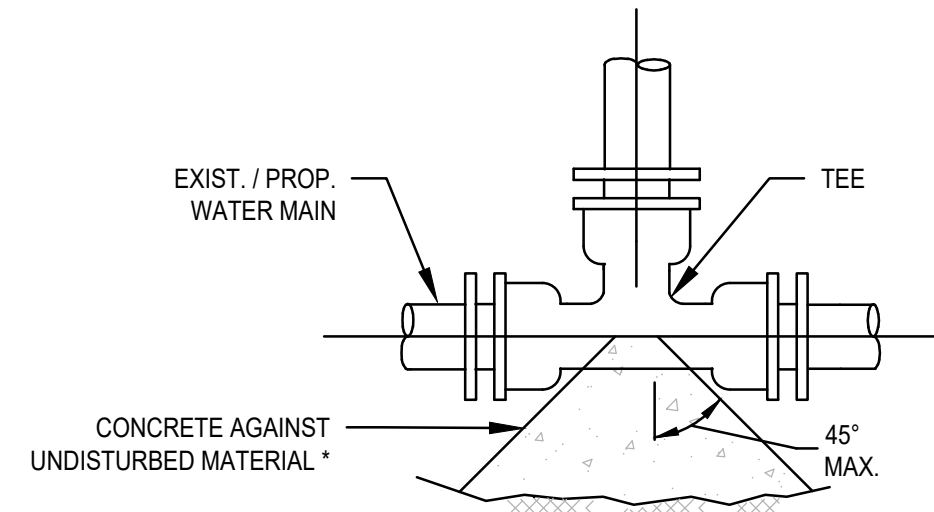


**TYPICAL DRAIN TRENCH DETAIL**  
SCALE: N.T.S.



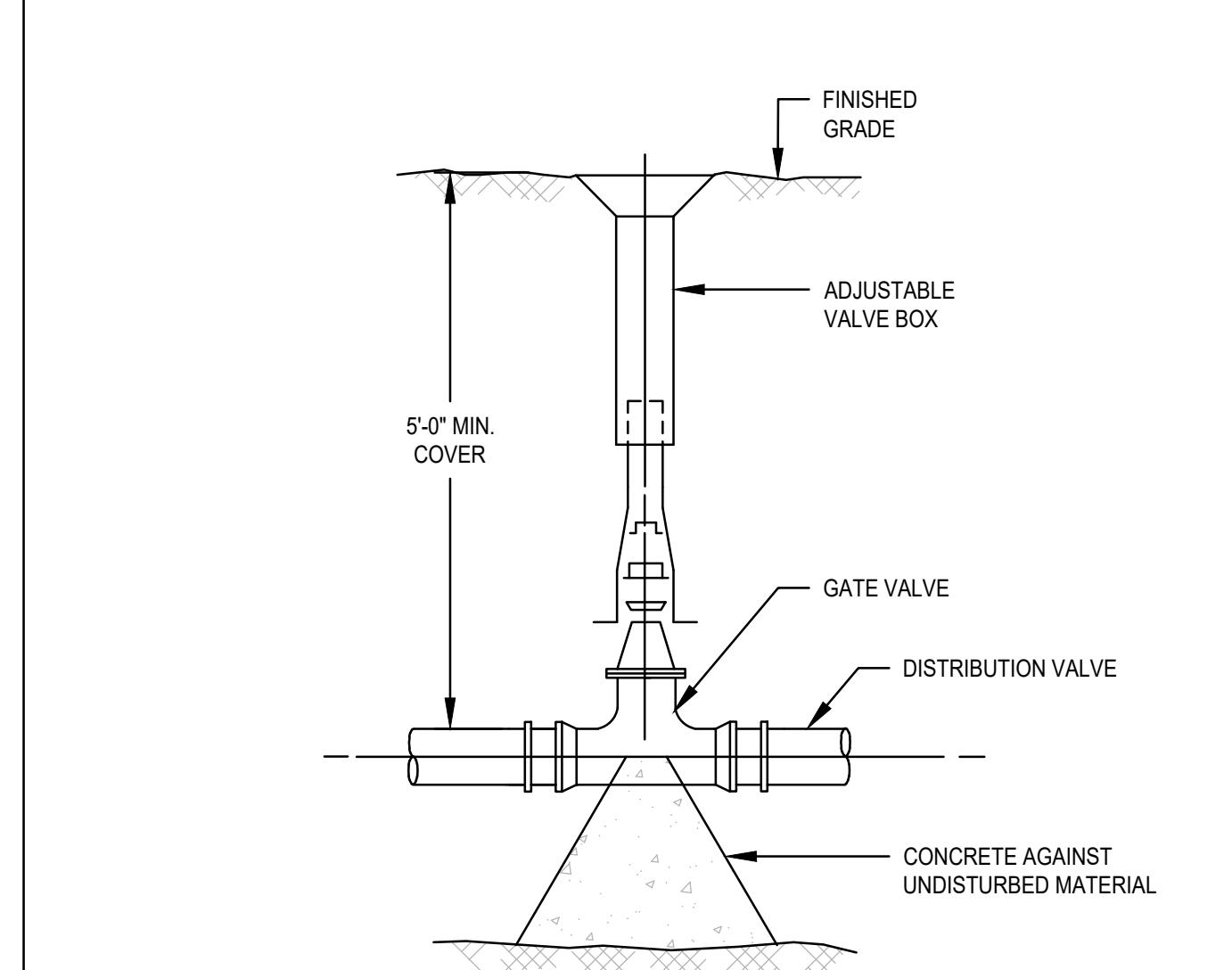
**THRUST WATER MAIN PLUG**  
SCALE: N.T.S.

\* SEE TABLE ON THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED



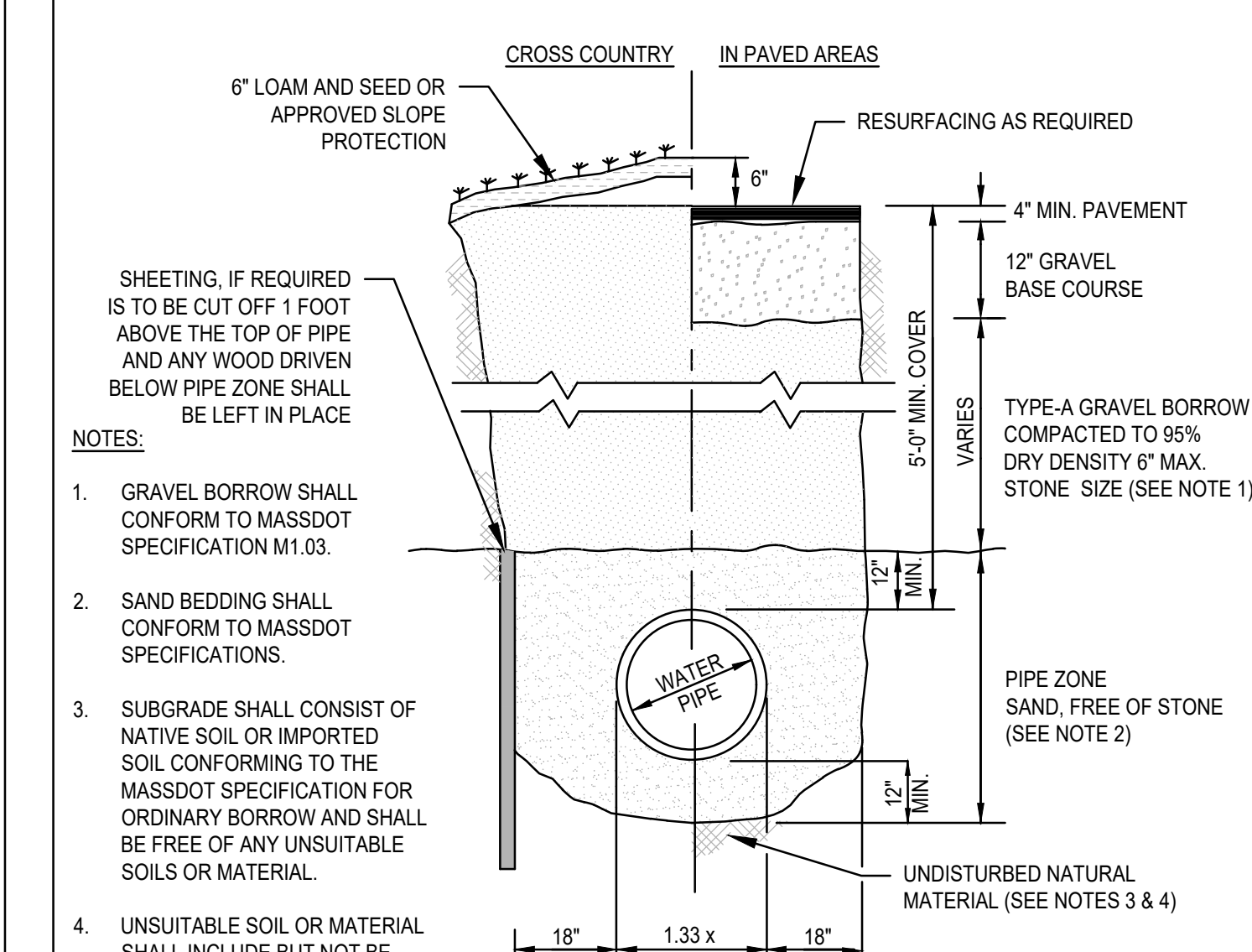
**TYPICAL WATER MAIN TEE THRUST BLOCK DETAIL**  
SCALE: N.T.S.

\* SEE TABLE ON THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED



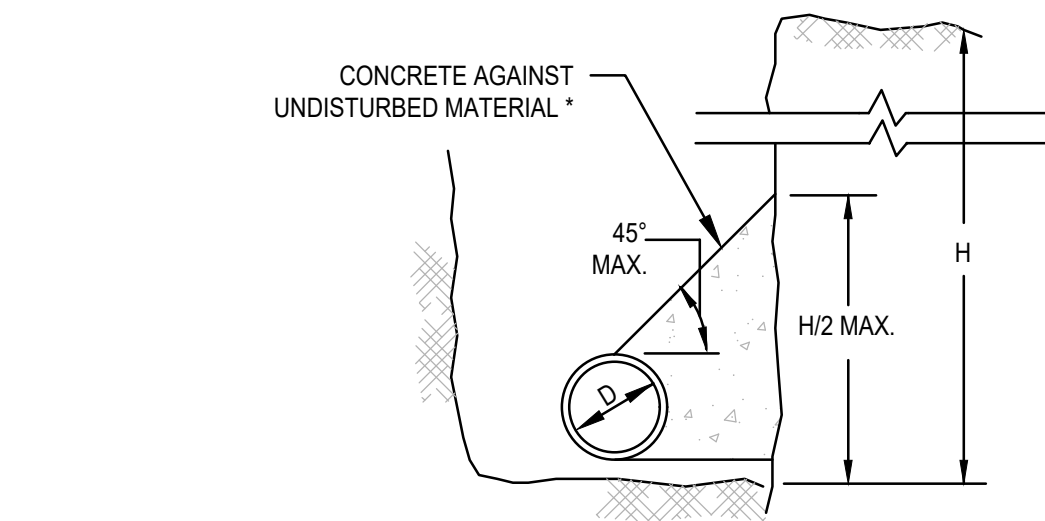
**WATER GATE DETAIL**  
SCALE: N.T.S.

**NOTES:**  
1. VALVES SHALL OPEN TO THE LEFT.

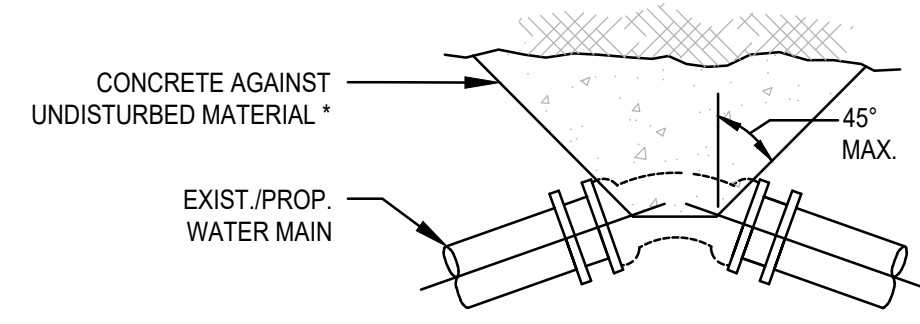


**TYPICAL WATER TRENCH DETAIL**  
SCALE: N.T.S.

**NOTES:**  
1. GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.  
2. SAND BEDDING SHALL CONFORM TO MASSDOT SPECIFICATIONS.  
3. SUBGRADE SHALL CONSIST OF NATIVE SOIL OR IMPORTED SOIL CONFORMING TO THE MASSDOT SPECIFICATION FOR ORDINARY BORROW AND SHALL BE FREE OF ANY UNSUITABLE SOILS OR MATERIAL.  
4. UNSUITABLE SOIL OR MATERIAL SHALL INCLUDE BUT NOT BE LIMITED TO PEAT, MUCK, BROKEN PAVEMENT, STUMPS, LOGS, CONSTRUCTION DEBRIS OR ANY OTHER DELETERIOUS MATERIAL.

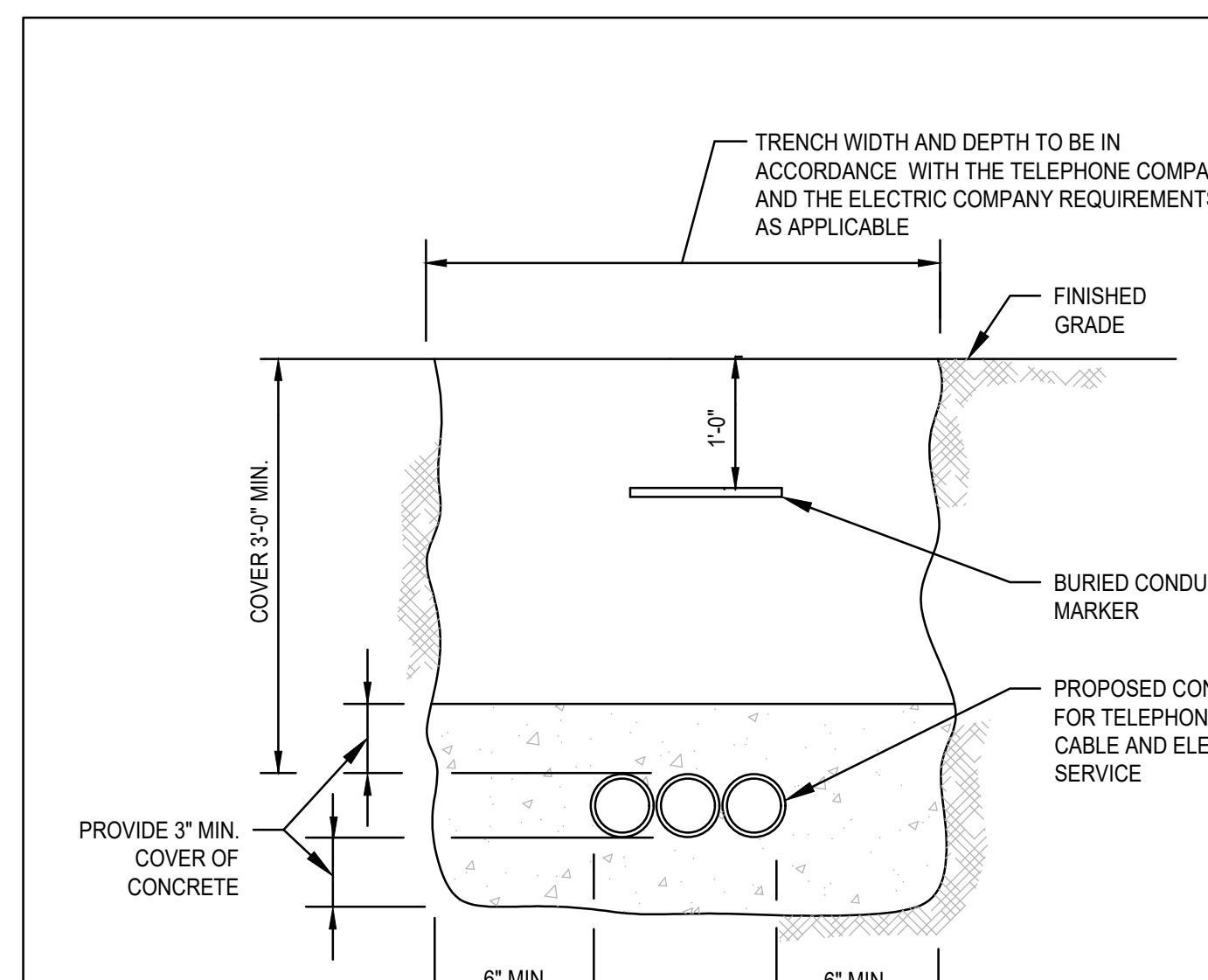


**THRUST WATER MAIN THRUST BLOCK SECTION DETAIL**  
SCALE: N.T.S.

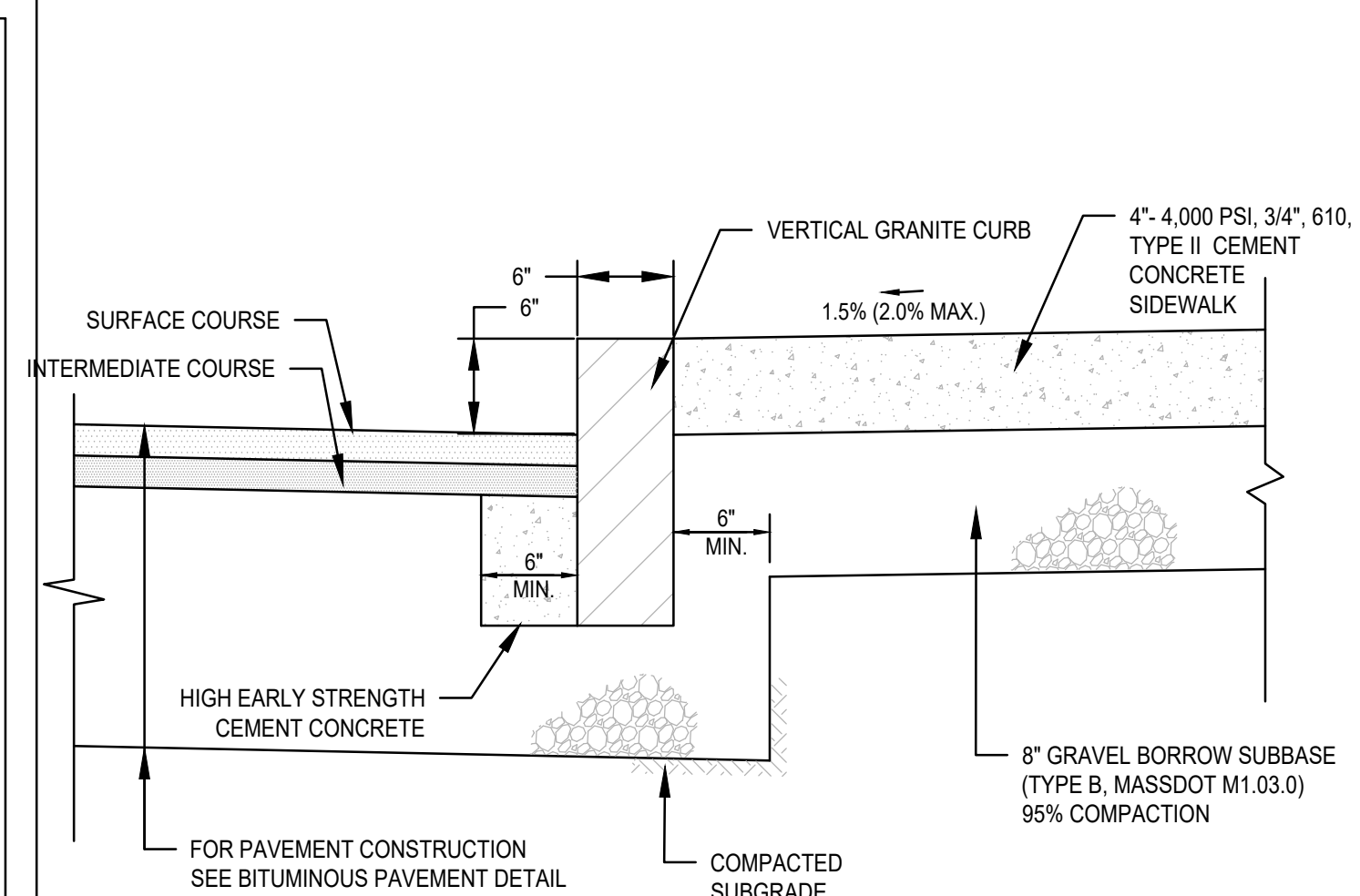


**THRUST WATER MAIN BEND THRUST BLOCK DETAIL**  
SCALE: N.T.S.

\* SEE TABLE ON THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED



**TYPICAL ELECTRIC/TELEPHONE/CABLE CONDUIT (US-UTILITY SERVICE)**  
SCALE: N.T.S.



**VERTICAL GRANITE CURB WITH CEM. CONC. SIDEWALK DETAIL**  
SCALE: N.T.S.

**THRUST BLOCK BEARING AREAS FOR WATER PIPE**

TABLE OF BEARING AREAS IN SQ. FT. AGAINST UNDISTURBED MATERIAL FOR WATER MAIN FITTINGS\*

SIZE OF MAIN (IN.)	90° BEND	TEES AND PLUGS	45° BEND
6	4	2.5	2
8	6	4	3
12	12	9	7
16	21	16	12

**NOTES:**

- FOR FITTINGS WITH LESS THAN 45° DEFLECTION, USE BEARING AREAS FOR 45° BEND.
- BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 P.S.F. AND INTERNAL WATER PRESSURE OF 150 P.S.I.G. JOINTS SHALL NOT BE ENCASED IN CONCRETE. BEARING AREAS MAY BE DREGARDED FOR TRENCHES IN ROCK WHERE THE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN THE PIPE AND THE ROCK FACE.
- THE CONTRACTOR SHALL SUBMIT 2 WEEKS IN ADVANCE OF PLACEMENT, WORKING DRAWINGS FOR EACH THRUST BLOCK TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- ALL VALVES AND FITTINGS SHALL BE RODDED TOGETHER.

**ASSUMPTIONS:**

\* TYPE OF SOIL IS MEDIUM CLAYEY, 6 OR MORE BLOWS PER FOOT, OR LOOSE GRANULAR, 9 OR MORE BLOWS PER FOOT. SOIL CONDITIONS OTHER THAN THOSE GIVEN WILL REQUIRE LARGER BEARING AREAS.

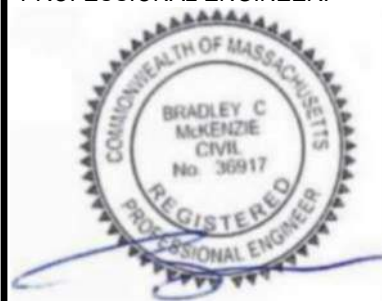
**THRUST BLOCK DETAILS**  
SCALE: N.T.S.

REV	DATE	DESCRIPTION
1	4/20/23	TOWN REVIEW
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3	7/20/23	TOWN REVIEW

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PROFESSIONAL ENGINEER:



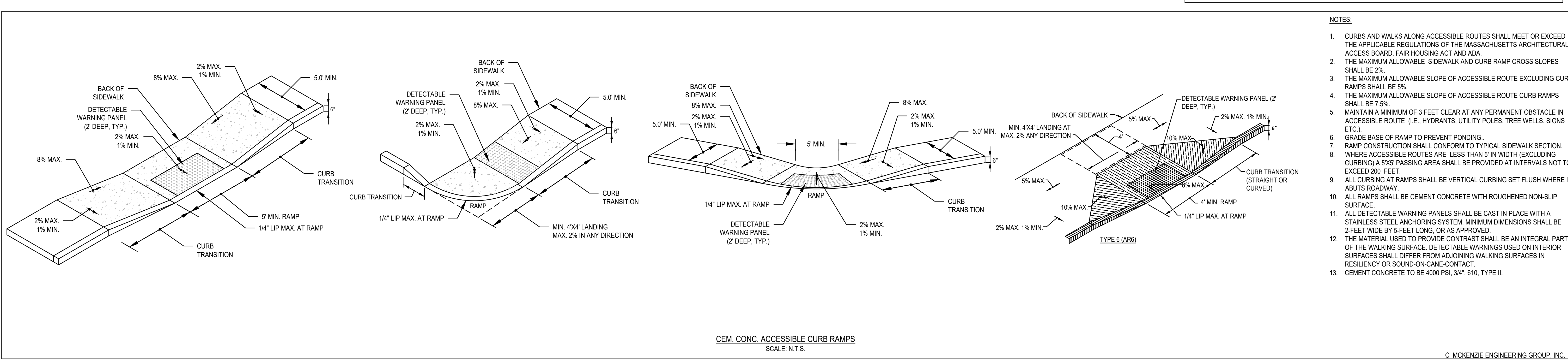
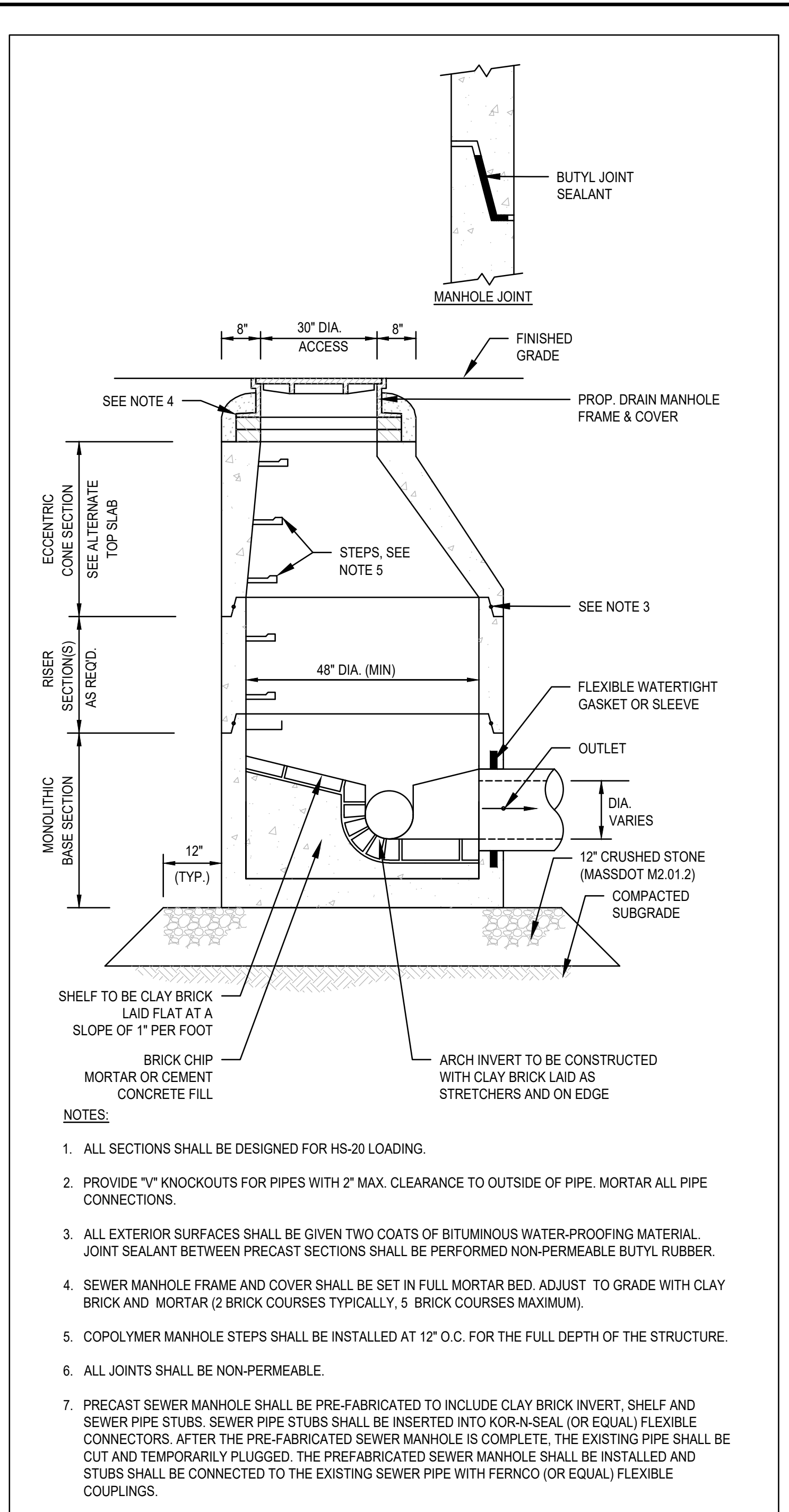
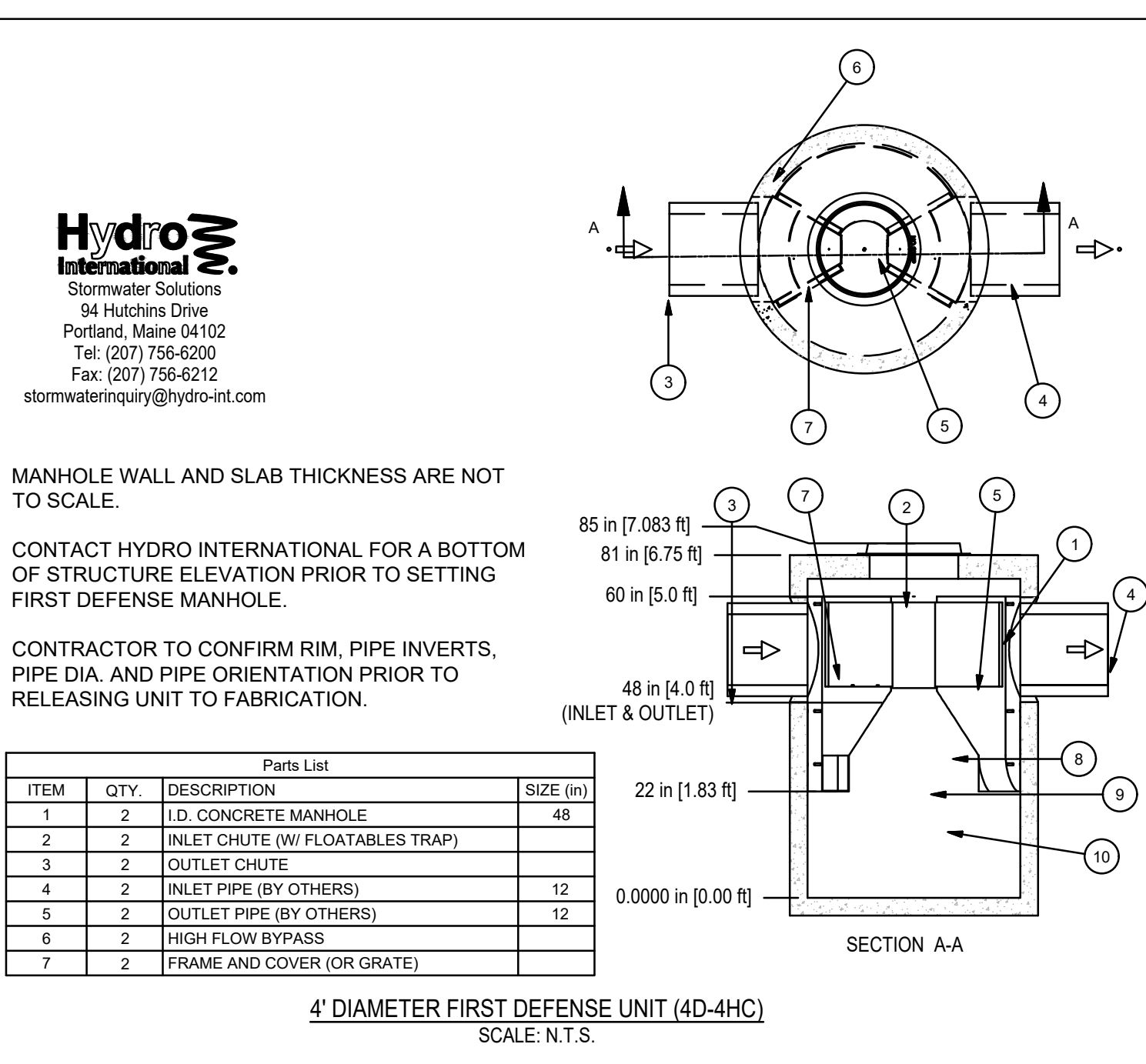
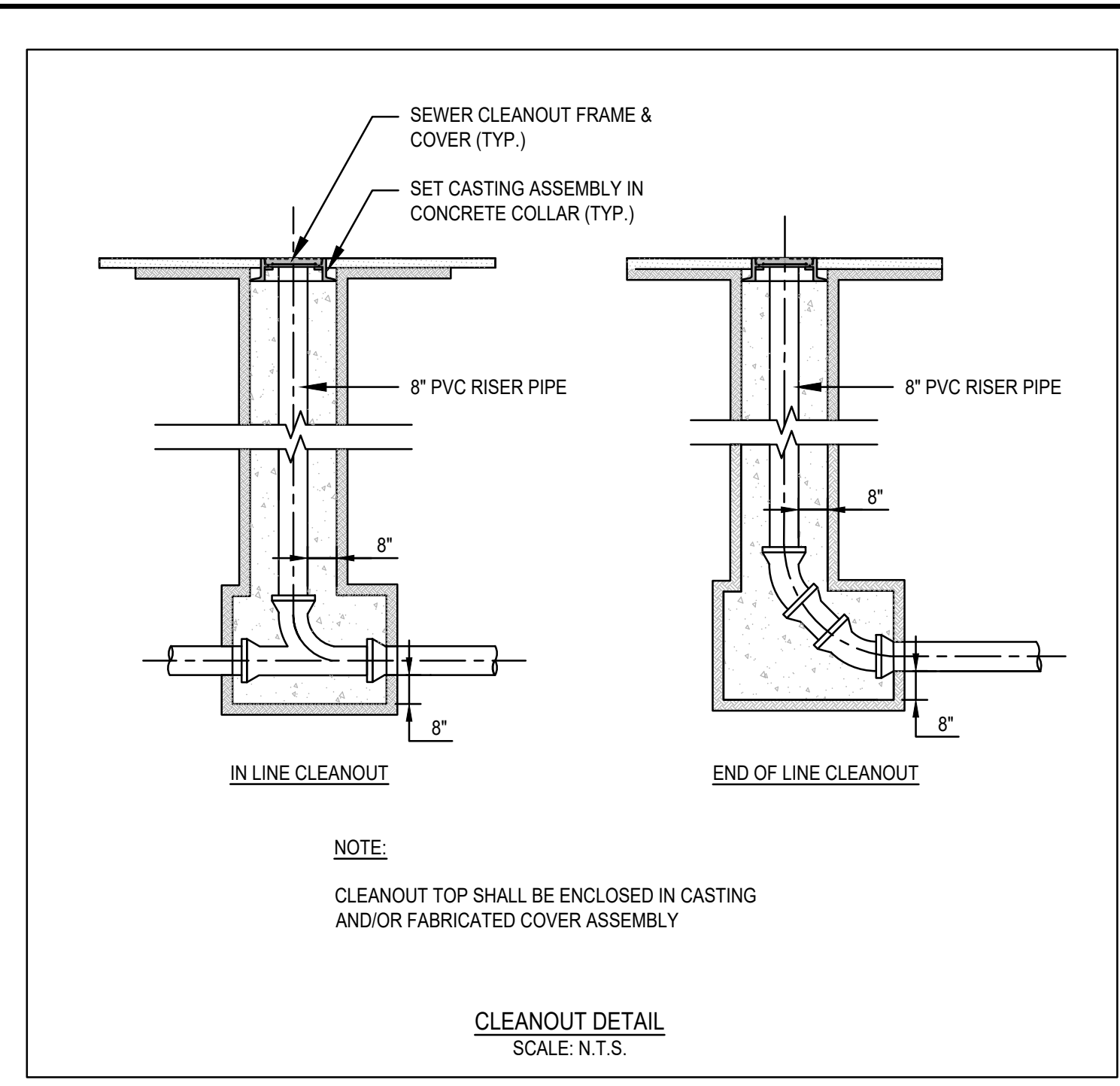
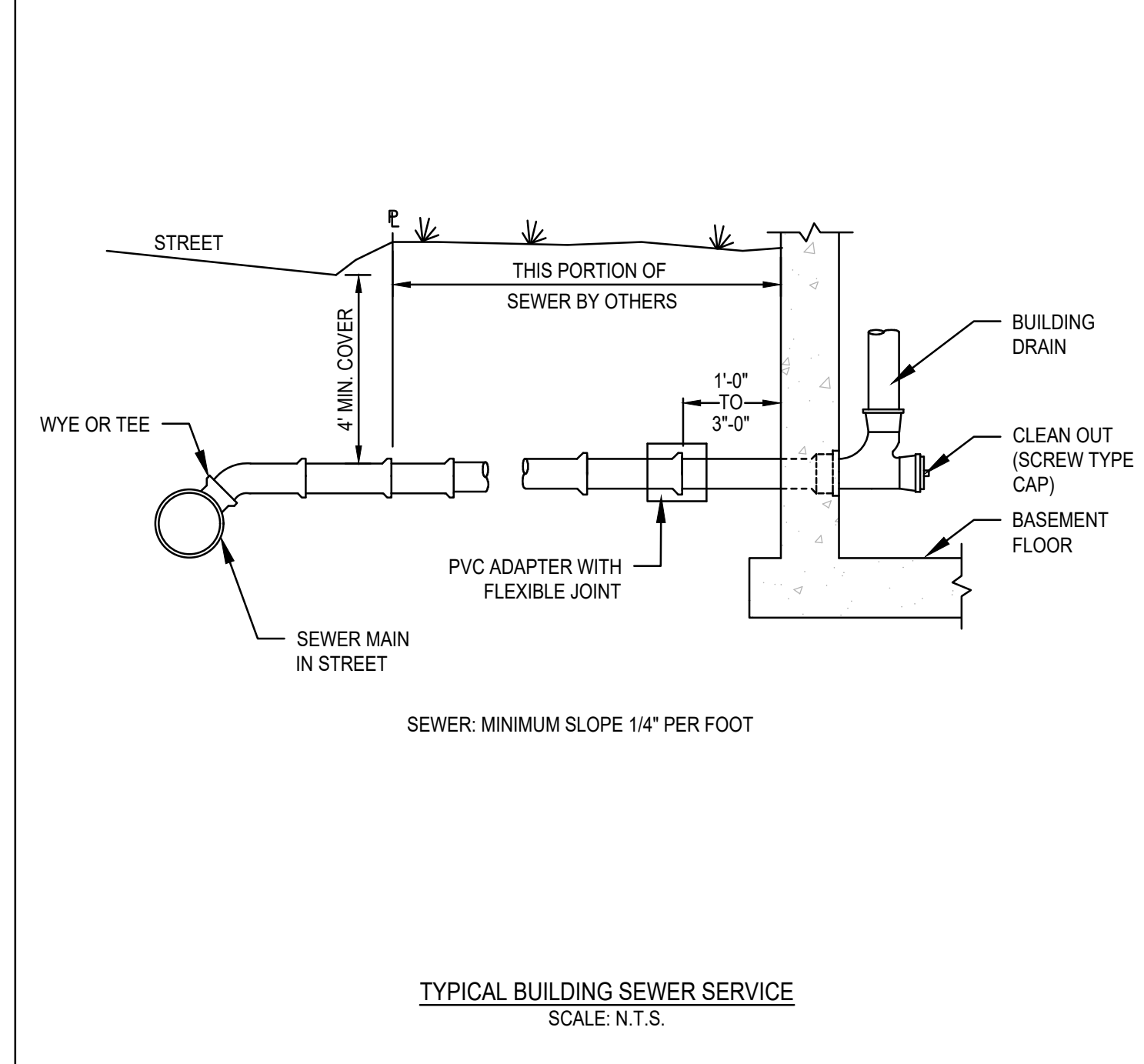
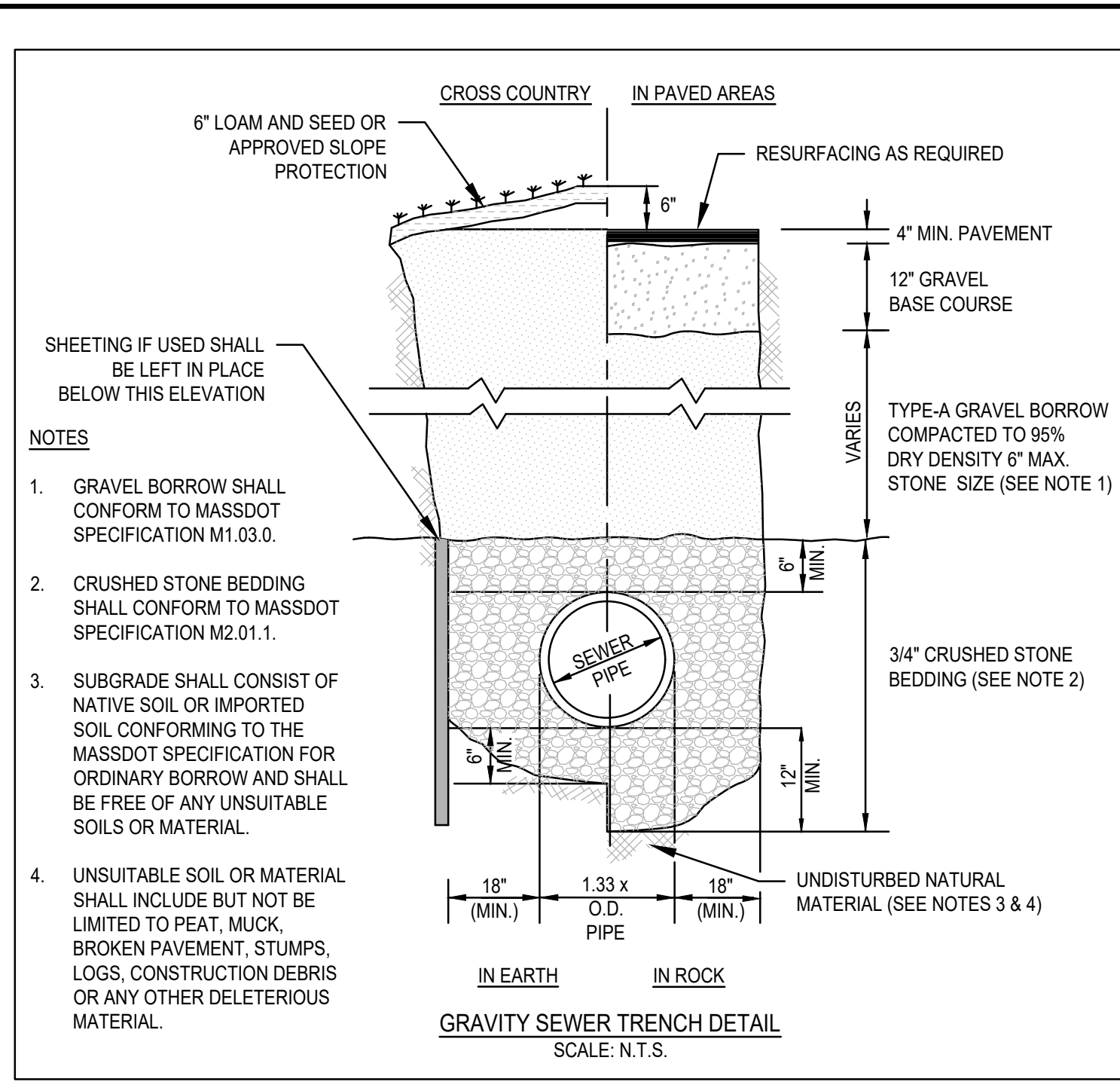
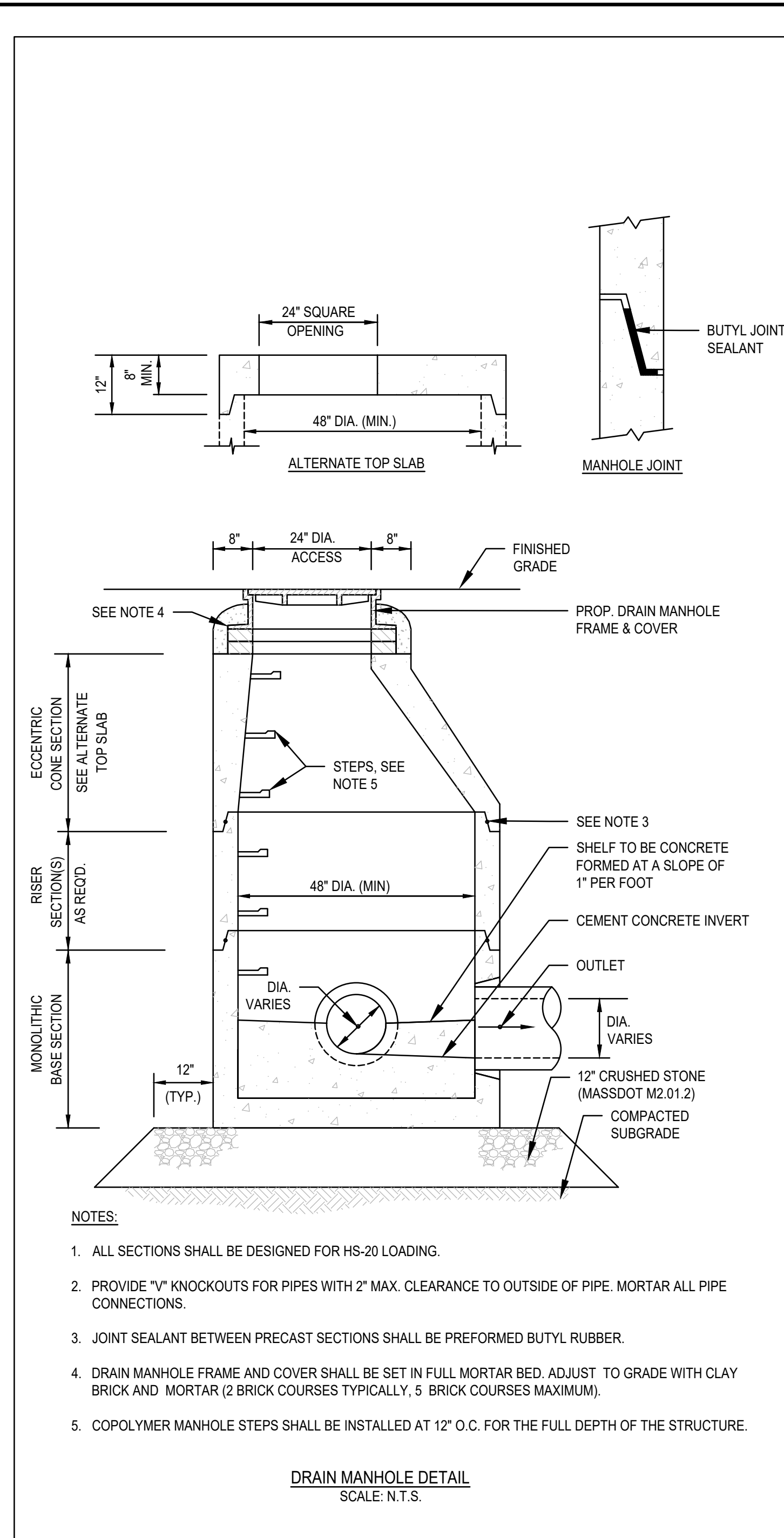
OWNERS/APPLICANT:  
**UNION REALTY TRUST**  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

DRAWN BY: ESS  
DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MARCH 24, 2023  
SCALE: AS NOTED  
PROJECT NO.: 221-187  
DWG. TITLE:

**CONSTRUCTION DETAILS**

DWG. NO:

**D-3**



REV	DATE	DESCRIPTION
1	4/20/23	TOWN REVIEW
2	5/24/23	ESS REVIEW
3	7/20/23	TOWN REVIEW

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**SITE DEVELOPMENT PLAN**  
**550-560 WASHINGTON STREET**  
**(APN 29-330-3)**  
**WEYMOUTH, MASSACHUSETTS**

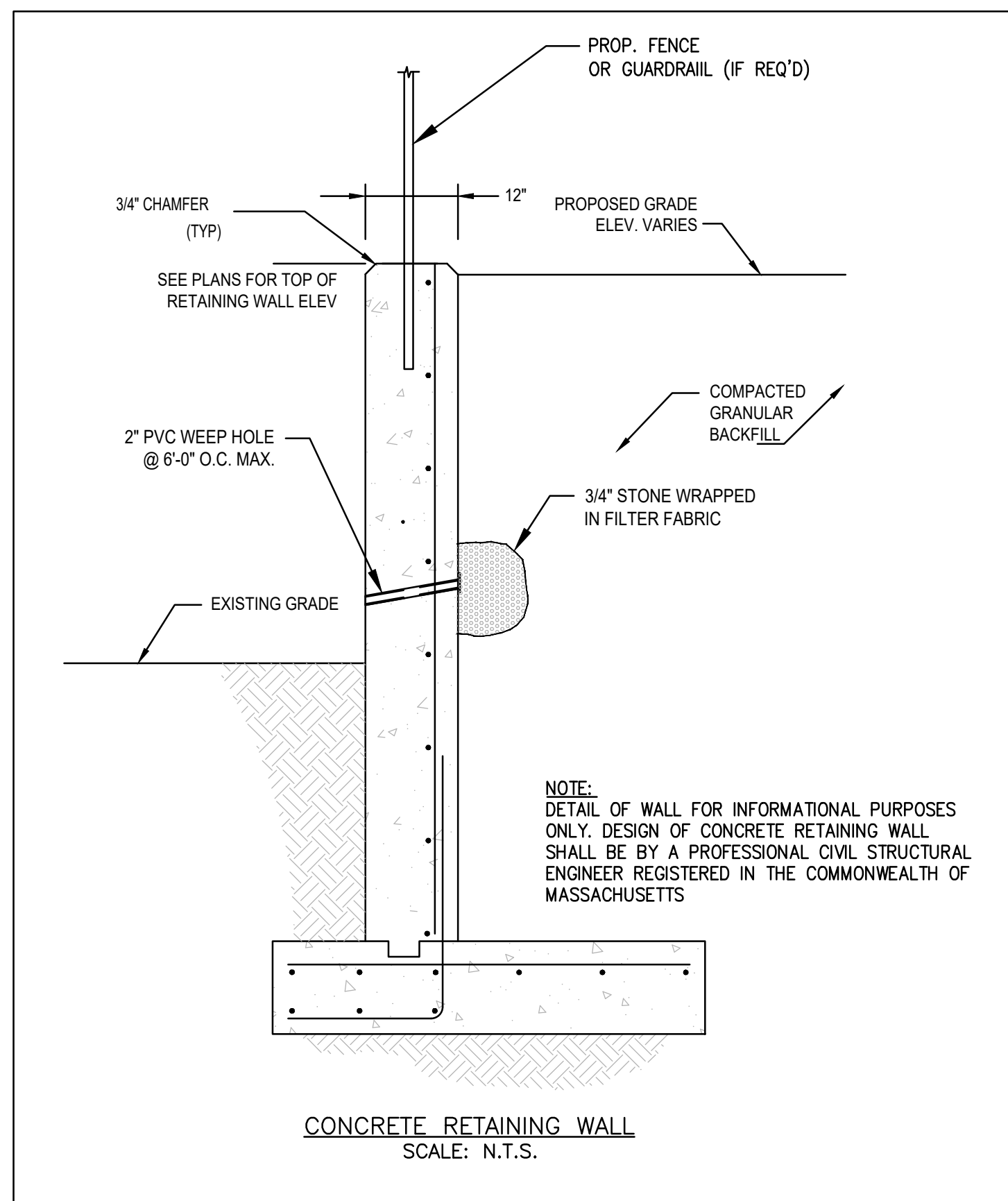
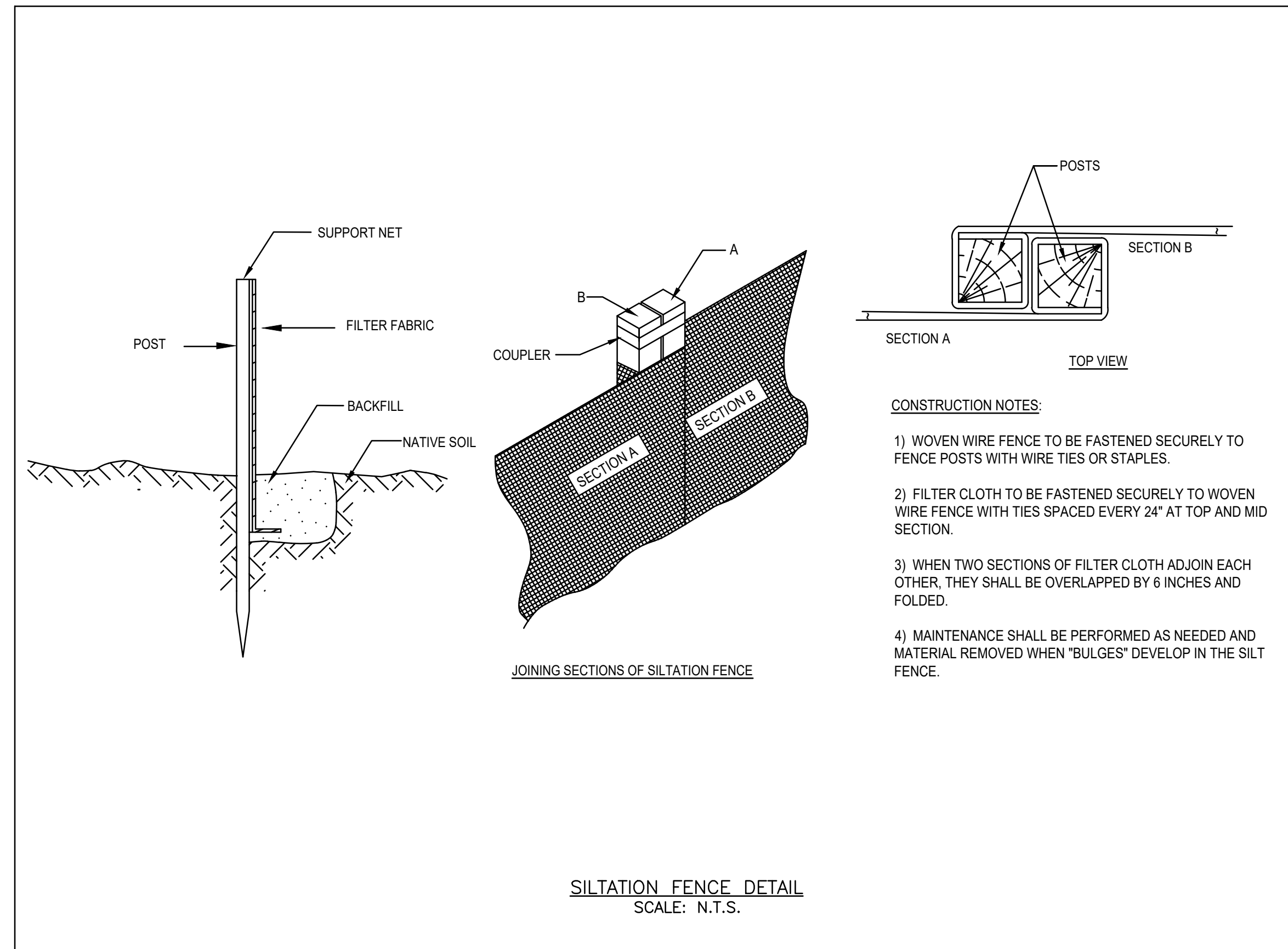
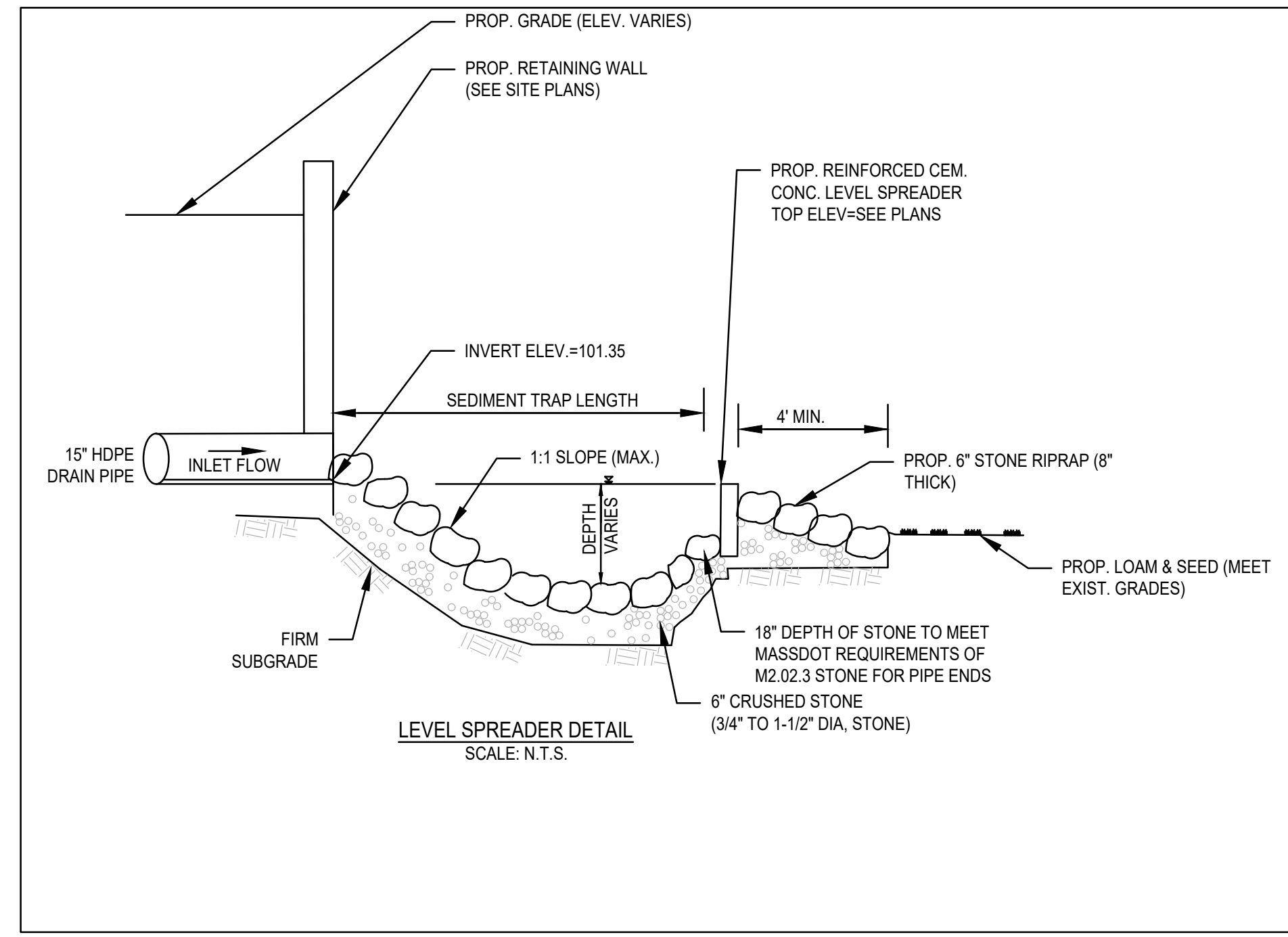
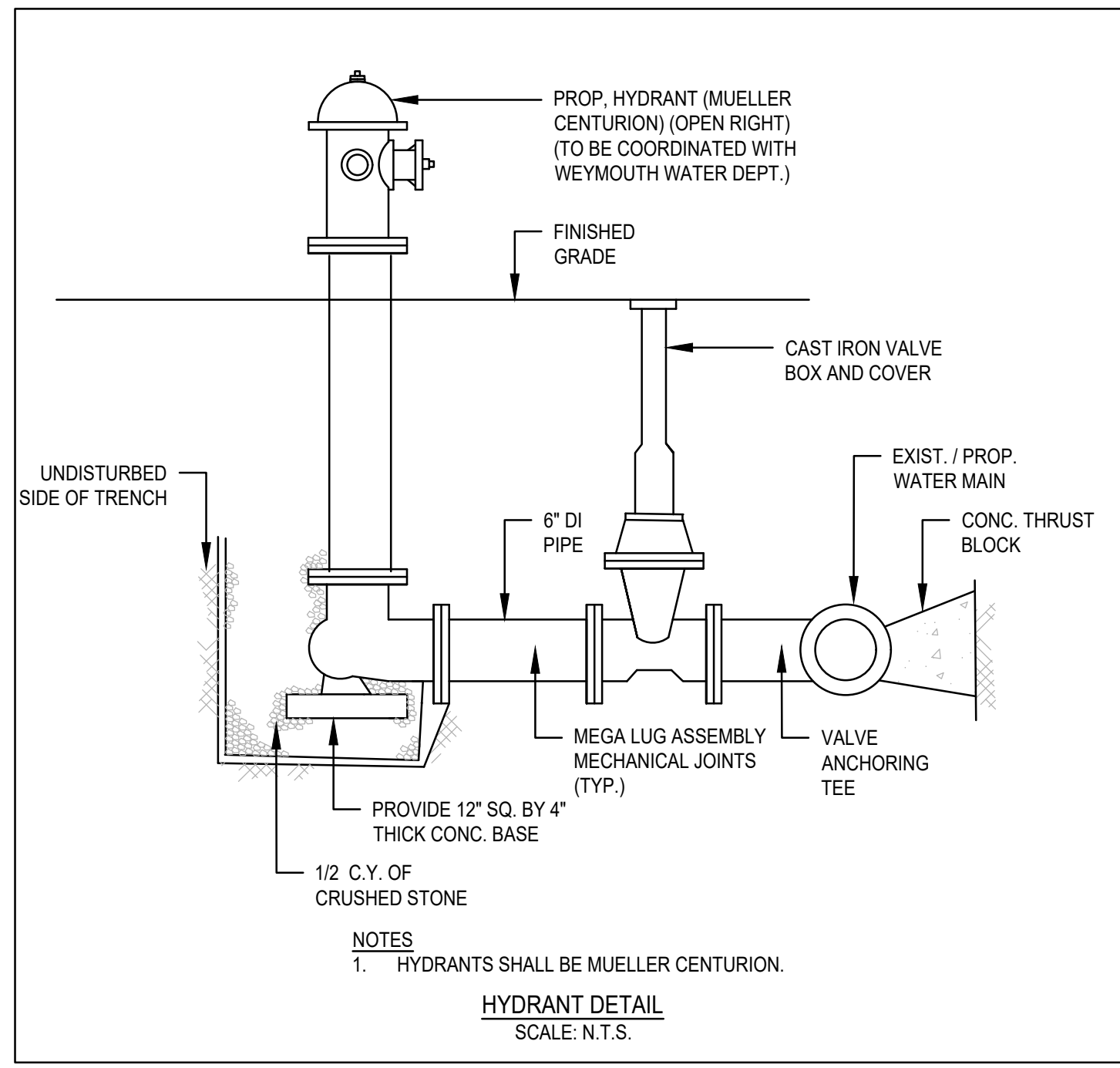
PROFESSIONAL ENGINEER:

OWNER/APPLICANT:  
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 560 WASHINGTON STREET  
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 DATE: MARCH 24, 2023  
 SCALE: AS NOTED  
 PROJECT NO.: 221-187  
 DWG. TITLE: CONSTRUCTION DETAILS

DWG. NO.: **D-4**

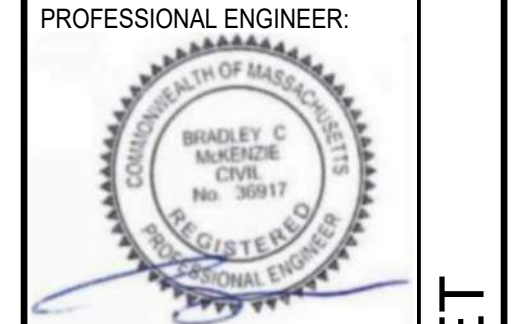
PERMIT PLAN SET



REV	DATE	DESCRIPTION
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2	5/24/23	SITE LAYOUT
3	7/20/23	TOWN REVIEW

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DWG. TITLE:

**CONSTRUCTION DETAILS**

DWG. NO.: **D-5**

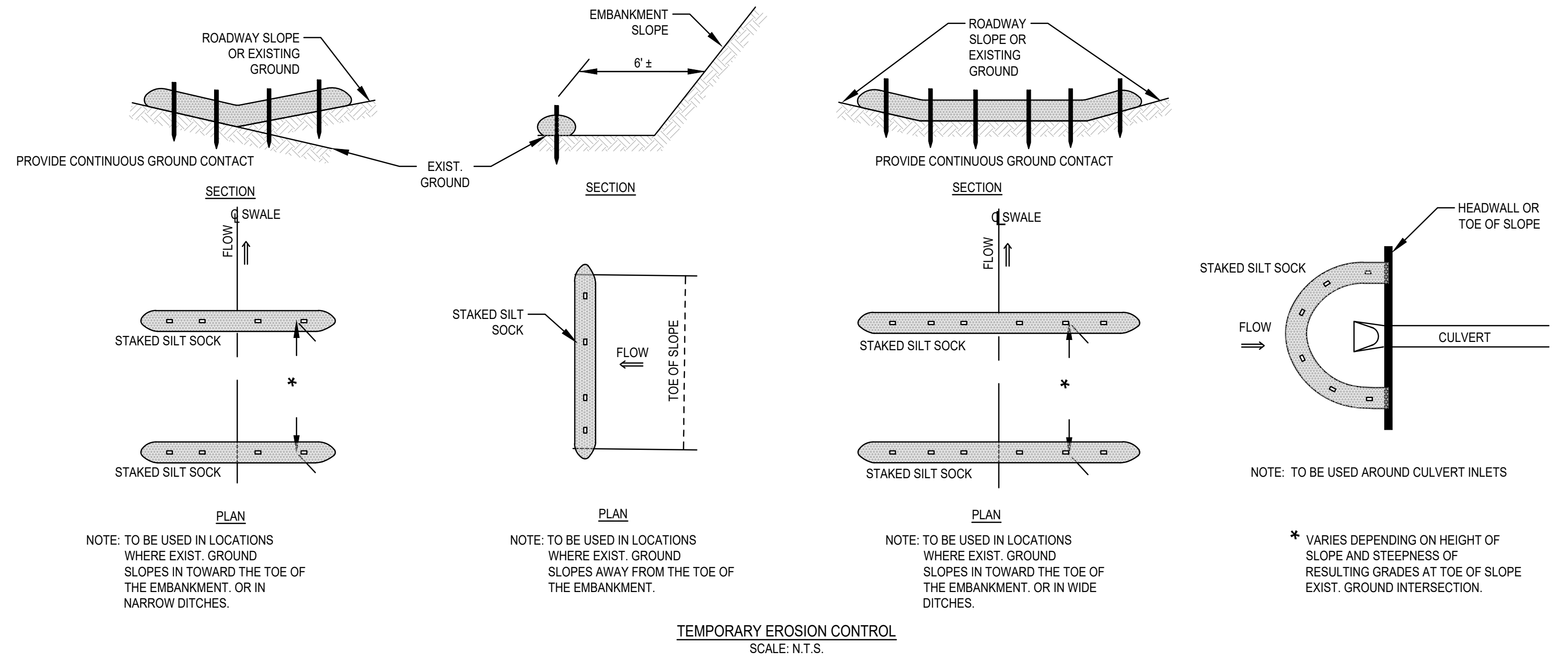
**CONSTRUCTION SEQUENCE**

TO PREVENT EXCESSIVE EROSION AND SILTING, THE FOLLOWING CONSTRUCTION SEQUENCE COUPLED WITH OTHER WIDELY ACCEPTED PRINCIPALS FOR REDUCING EROSION AND SEDIMENTATION SHALL BE IMPLEMENTED IN THE DEVELOPMENT OF THE SITE.

1. THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. STABILIZATION PRACTICES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN & PLACE SILTATION FENCE ON THE SITE PLANS.
3. CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE ROADWAY, PARKING AREAS AND RELATED INFRASTRUCTURE.
4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
5. EXCAVATE TOPSOIL AND SUBSOIL FROM CUT AND FILL AREAS AND STOCKPILE ON SITE IN LOCATIONS SHOWN ON THE PLAN. CONSIDERATION SHOULD BE GIVEN TO LOCATING STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, WHERE POSSIBLE, TO ACT AS TEMPORARY DIVERSIONS.
6. CONSTRUCT CUT AND FILL AREAS, INSTALLING HAYBALE CHECK DAMS AT TOES OF ALL 3:1 OR GREATER SLOPES, AND AT ENDS OF ALL CUT AREAS. ALL FILL WILL BE INSTALLED USING 12" MAXIMUM COMPACTION LIFTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN. THE SUBSURFACE INFILTRATION SYSTEM SHALL BE CONSTRUCTED IMMEDIATELY AFTER THE ROADWAY ROUGH GRADING IS COMPLETED AND THE AREA HAS BEEN CLEARED OF VEGETATION.
7. INSTALL CLOSED DRAINAGE SYSTEM AND OTHER UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILT SACK OR EQUIVALENT INLET PROTECTION.
8. GRADE ROADWAY AND PARKING AREAS TO SUBGRADE ELEVATION AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN.
9. EXCAVATE AND CONSTRUCT BUILDING FOUNDATION.
10. PLACE GRAVEL SUBBASE.
11. PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS.
12. CONSTRUCT BUILDING STRUCTURES AND ASSOCIATED UTILITY CONNECTIONS.
13. GRADE SLOPES AND STABILIZE CUT AREAS AT TOE OF SLOPES. BLEND ALL SLOPES INTO EXISTING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH.
14. PLACE THE FINAL WEARING COURSE OF PAVEMENT.
15. COMPLETE FINE GRADING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
16. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.

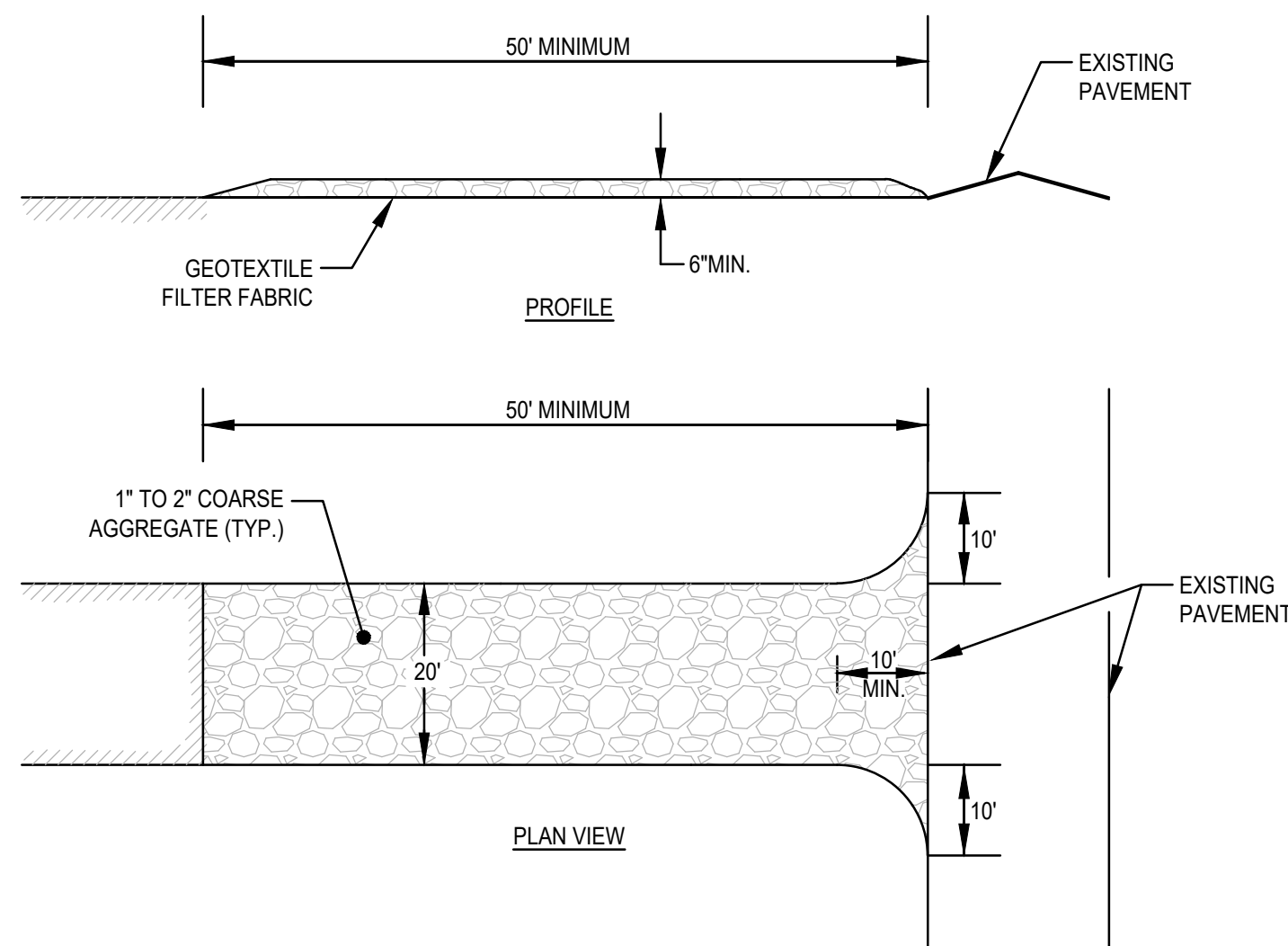
**CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:**

1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. OPERATOR PERSONNEL AND/OR ITS CONSULTANTS MUST INSPECT THE CONSTRUCTION SITE AT LEAST ONCE EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT 1/4 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:
  - A. WHETHER OR NOT THE BMP WAS INSTALLED/PERFORMED CORRECTLY.
  - B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE BMP SINCE IT WAS INSTALLED OR PERFORMED.
  - C. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE BMP.
4. THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
5. ALL SLOPES EXCEEDING 15% RESULTING FROM SITE GRADING SHALL BE BOTH COVERED WITH FOUR INCHES OF TOPSOIL AND PLANTED WITH A VEGETATED COVER SUFFICIENT TO PREVENT EROSION.



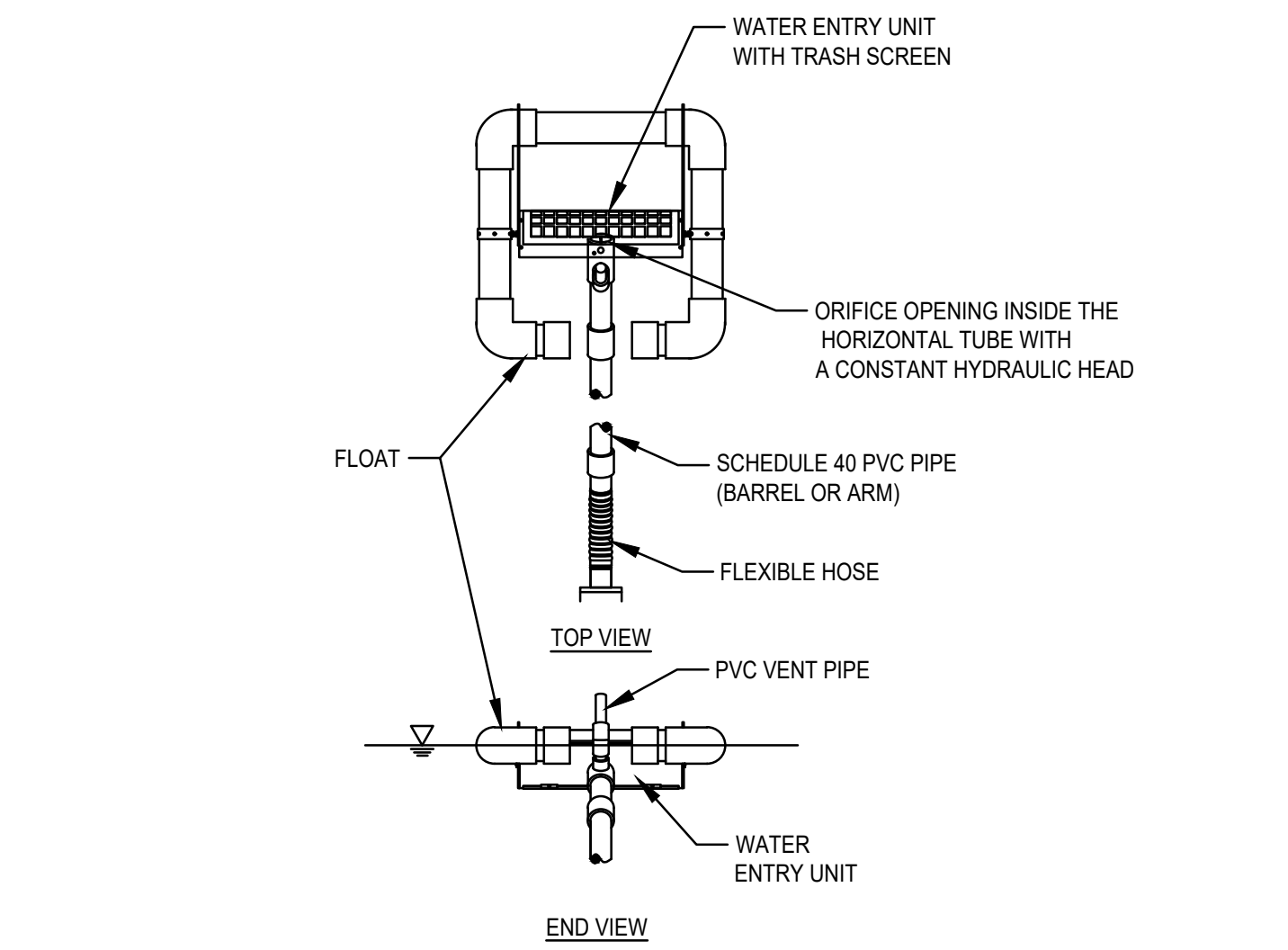
**EROSION AND SEDIMENTATION CONTROL**

1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK BARRIER CONTROLS, STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY DIVERSION SWALES WITH STONE CHECK DAMS, SEDIMENT BASINS, AND INLET PROTECTION.
2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
3. IN GENERAL, THE SMALLEST POSSIBLE AREA OF LAND SHOULD BE EXPOSED AT ONE TIME. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHALL BE CONFINED TO A MAXIMUM PERIOD OF 3 MONTHS. LAND SHALL NOT BE EXPOSED DURING THE WINTER MONTHS. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND THAT WILL BE REGRADED AT A LATER DATE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH WINTER RYE TO PREVENT EROSION.



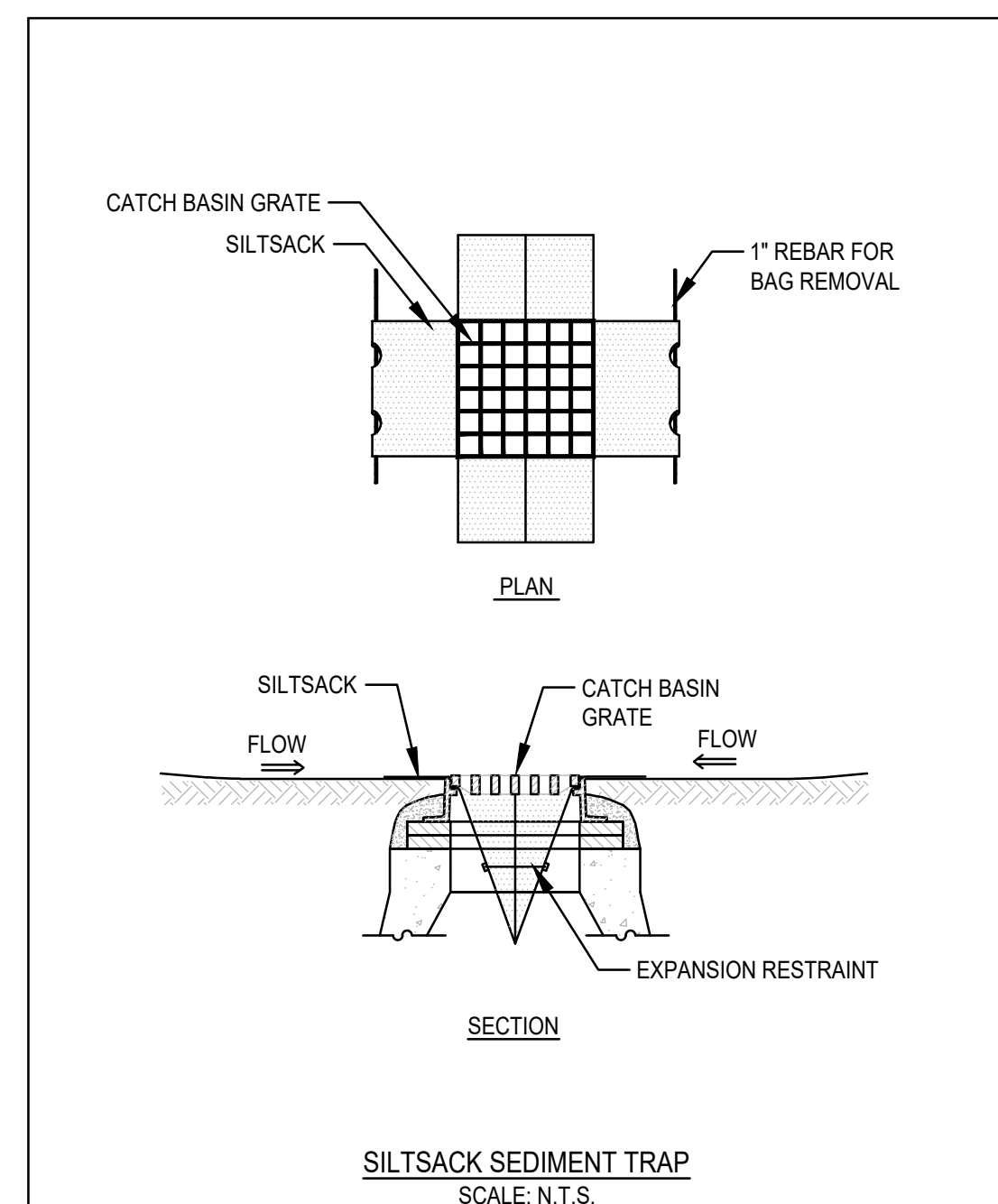
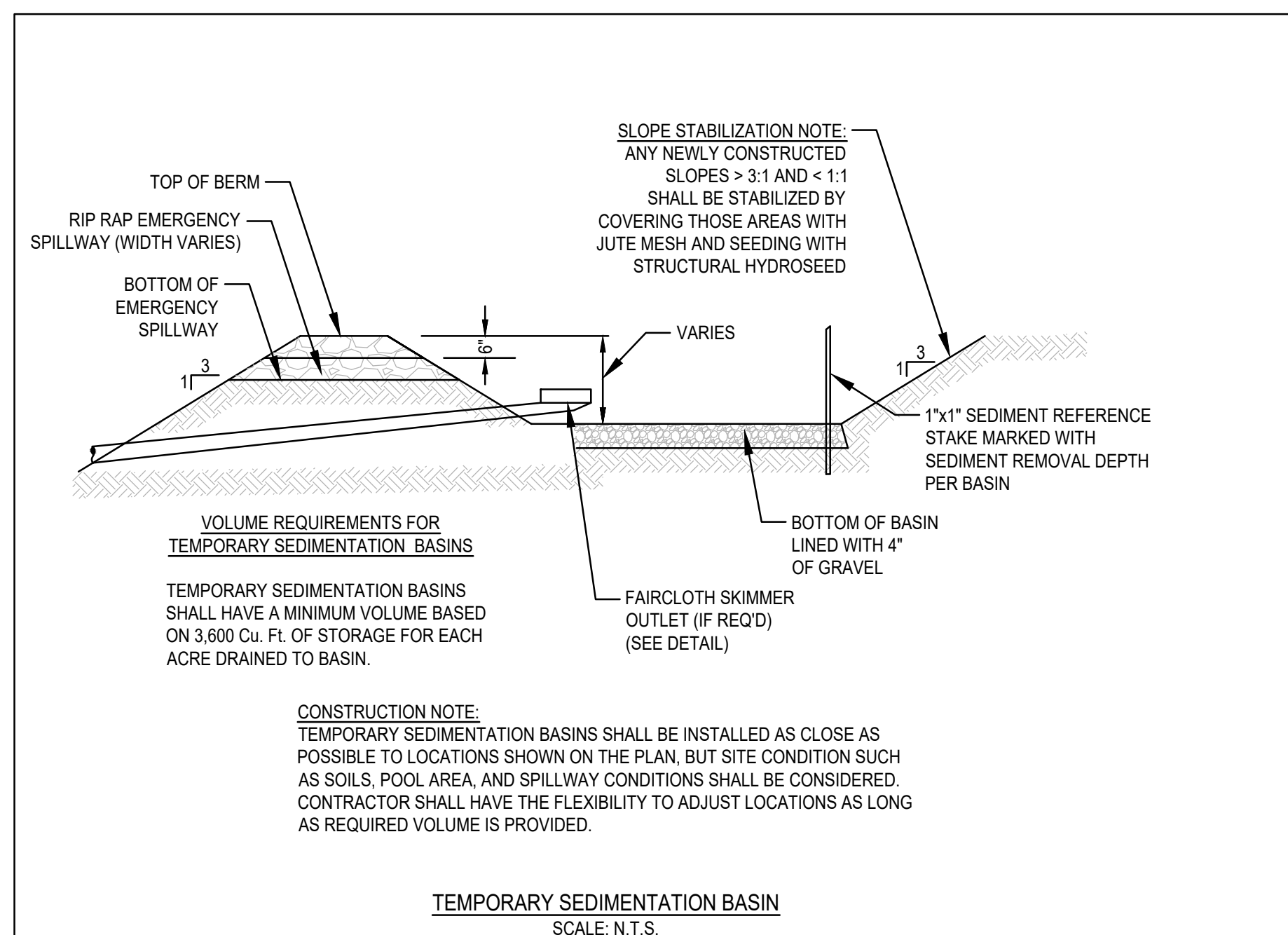
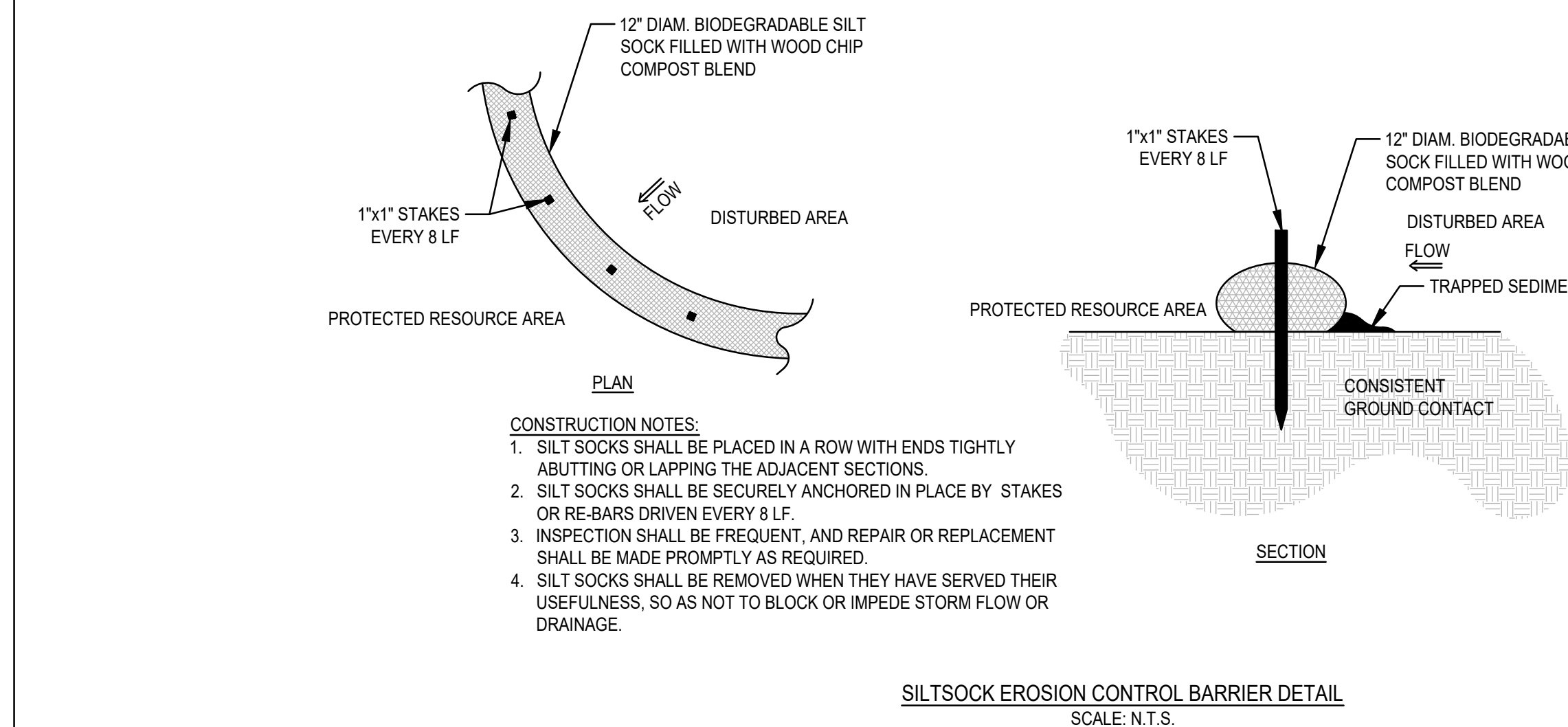
**(SCE) CONSTRUCTION SPECIFICATIONS:**

1. STONE FOR A STABILIZATION CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN A FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DEVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.



**GENERAL NOTES:**

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE. REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.



REV	DATE	DESCRIPTION	BY	APP
1	4/20/23	TOWN REVIEW	ESS	BCM
2	5/4/23	SITE LAYOUT	ESS	BCM
3	7/23/23	TOWN REVIEW	ESS	BCM

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**SITE DEVELOPMENT PLAN**  
550-560 WASHINGTON STREET  
(APN 29-330-3)  
WEYMOUTH, MASSACHUSETTS

PROFESSIONAL ENGINEER:



OWNERS/APPLICANT:  
**UNION REALTY TRUST**  
560 WASHINGTON STREET  
WEYMOUTH, MASSACHUSETTS 02188

DRAWN BY: ESS  
DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: MARCH 24, 2023  
SCALE: AS NOTED  
PROJECT NO.: 221-187  
DWG. TITLE:

**CONSTRUCTION DETAILS**

DWG. NO:

**D-6**

PERMIT PLAN SET

**CULTEC RECHARGER 150XLHD SPECIFICATIONS**

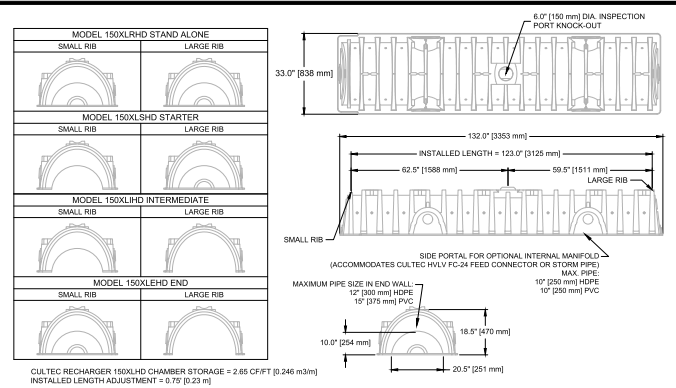
**GENERAL**  
 CULTEC RECHARGER 150XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

- CHAMBER PARAMETERS**
1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4418 OR 1-800-428-6832)
  2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT POLYETHYLENE (HDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR
  3. THE CHAMBER SHALL BE ARCHED IN SHAPE
  4. THE CHAMBER SHALL BE OPEN BOTTOMED
  5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY ENCLOSED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLES OR SEPARATE END WALLS
  6. THE NORMAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 18.5 INCHES (470 mm) TALL, 33 INCHES (838 mm) WIDE AND 11 FEET (3.36 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 150XLHD SHALL BE 30.0 FEET (9.14 m).
  7. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)
  8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NORMAL INSIDE DIMENSIONS OF EACH SIDE PORTAL SHALL BE 8.5 INCHES (215 mm) HIGH BY 18 INCHES (457 mm) WIDE. MAXIMUM ALLOWABLE COVER DIMENSION (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 10.5 INCHES (267 mm)
  9. THE NORMAL STORAGE VOLUME OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (615 mm) LONG
  10. THE NORMAL STORAGE VOLUME OF THE RECHARGER 150XLHD CHAMBER SHALL BE 2,650 FT<sup>3</sup> (74,248 m<sup>3</sup>) WITHOUT STONE. THE NORMAL STORAGE VOLUME OF A JOINED RECHARGER 150XLHD SHALL BE 27.16 FT<sup>3</sup> UNIT (0.77 m<sup>3</sup>) UNITS WITHOUT STONE
  11. THE NORMAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.93 FT<sup>3</sup> (26.56 m<sup>3</sup>) WITHOUT STONE
  12. THE RECHARGER 150XLHD CHAMBER SHALL HAVE THIRTY DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNITS CURE TO PROMOTE LATERAL CONVEYANCE OF WATER
  13. THE RECHARGER 150XLHD CHAMBER SHALL HAVE 20 CORRUGATIONS
  14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
  15. THE RECHARGER 150XLHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTERNAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE ENDWALLS
  16. THE RECHARGER 150XLHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTERNAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRAFFIC OPENING OF 10 INCHES (254 mm) HIGH X 20 INCHES (508 mm) WIDE
  17. THE RECHARGER 150XLHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRAFFIC OPENING OF 10 INCHES (254 mm) HIGH X 20 INCHES (508 mm) WIDE
  18. THE RECHARGER 150XLHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 150XLHD AND ACT AS CROSS FEED CONNECTIONS.
  20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS
  21. THE CHAMBER SHALL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN OUT
  22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION
  23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY
  24. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS
  25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF ASTM D6301S INCLUDING RESISTANCE TO ASHFT15 AND H-20 HIGHWAY LIVE LOADS. WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS
  26. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATION OF NHA BRUSH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND MITIGATION
  27. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m)

**CULTEC HVLV FC-24 FEED CONNECTOR SPECIFICATIONS**

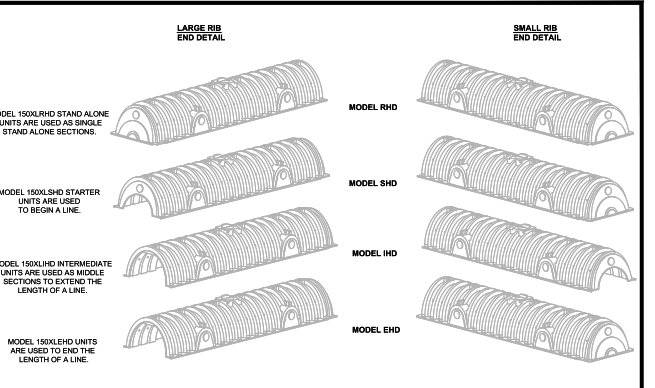
**GENERAL**  
 CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER 150XLHD CHAMBERS.

- CHAMBER PARAMETERS**
1. THE CHAMBER SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4418 OR 1-800-428-6832)
  2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT POLYETHYLENE (HDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR
  3. THE CHAMBER SHALL BE ARCHED IN SHAPE
  4. THE CHAMBER SHALL BE OPEN BOTTOMED
  5. THE NORMAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 18 INCHES (457 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (615 mm) LONG
  6. THE NORMAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.93 FT<sup>3</sup> (26.56 m<sup>3</sup>) WITHOUT STONE
  7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS
  8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER WITH TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER 150XLHD CHAMBER AND FIT ALL SIDE PORTALS CORRECTLY WITH AN INTERNAL MANIFOLD
  9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS
  10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY
- CULTEC NO. 410\* NON-WOVEN GEOTEXTILE**  
 CULTEC NO. 410\* NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONNECTORS AND RECHARGERS. STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTERFERENCE INTO THE STONE.
- GEOTEXTILE PARAMETERS**
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4418 OR 1-800-428-6832)
  2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE
  3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.3 OZ/SY (142 GM)
  4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 100 LBS (453 N) PER ASTM D4353 TESTING METHOD
  5. THE GEOTEXTILE SHALL HAVE AN ELONGATION & BREAK VALUE OF 50% PER ASTM D4353 TESTING METHOD
  6. THE GEOTEXTILE SHALL HAVE A HULLER BARELY VALUE OF 220 PLS (950 N) PER ASTM D3706 TESTING METHOD
  7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 60 LBS (268 N) PER ASTM D4353 TESTING METHOD
  8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1533 N) PER ASTM D4353 TESTING METHOD
  9. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR VALUE OF 50 LBS (222 N) PER ASTM D4353 TESTING METHOD
  10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SEIVE (0.212 986) PER ASTM D4915 TESTING METHOD
  11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.75 SEC-1 PER ASTM D4915 TESTING METHOD
  12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE OF 135 GAL/MIN (500 L/MIN) PER ASTM D4915 TESTING METHOD
  13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4353 TESTING METHOD



**CULTEC RECHARGER 150XLHD HEAVY DUTY THREE VIEW**

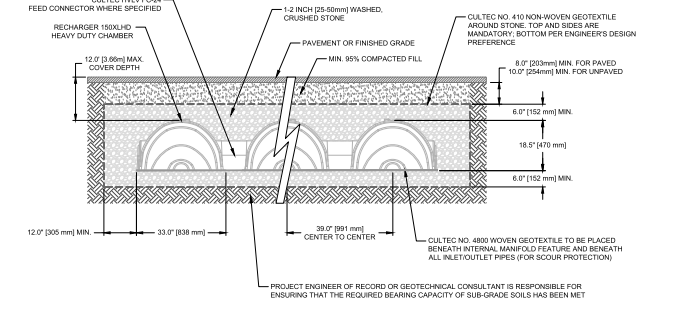
CULTEC RECHARGER 150XLHD CHAMBER STORAGE = 2.65 CF/FT (246 m<sup>3</sup>/m)  
 INSTALLED LENGTH ADJUSTMENT = 0.77 (2.3 m)



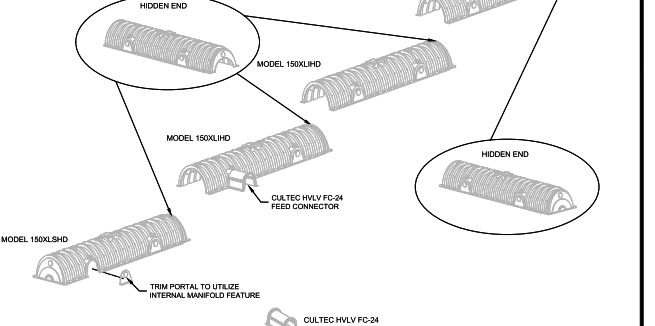
**CULTEC RECHARGER 150XLHD HEAVY DUTY END DETAIL INFORMATION**

**CULTEC NO. 4800\* WOVEN GEOTEXTILE**  
 CULTEC NO. 4800\* WOVEN GEOTEXTILE IS DESIGNED AS AN UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTERFERENCE INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

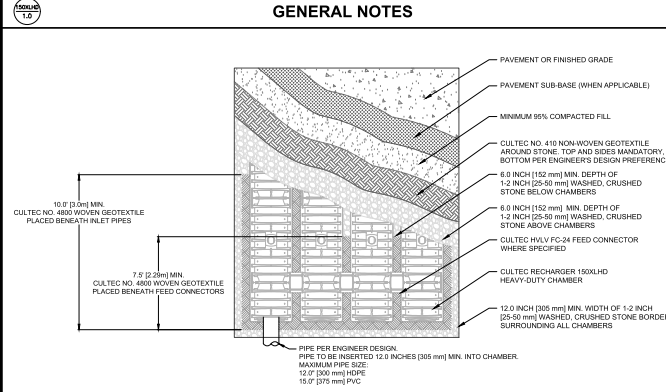
- GEOTEXTILE PARAMETERS**
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4418 OR 1-800-428-6832)
  2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE
  3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4353 TESTING METHOD
  4. THE GEOTEXTILE SHALL HAVE AN ELONGATION & BREAK RESISTANCE OF 20 X 20% PER ASTM D4353 TESTING METHOD
  5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LB/FT<sup>2</sup> (74 X 74 kN/m) PER ASTM D4353 TESTING METHOD
  6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TRUSS RESISTANCE @ 2% STRAIN OF 960 X 1,096 LB/FT<sup>2</sup> (14.4 X 16.4 kN/m) PER ASTM D4353 TESTING METHOD
  7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2,740 LB/FT<sup>2</sup> (47 X 47 kN/m) PER ASTM D4353 TESTING METHOD
  8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,880 X 4,880 LB/FT<sup>2</sup> (75 X 75 kN/m) PER ASTM D4353 TESTING METHOD
  9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD
  10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4353 TESTING METHOD
  11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 U.S. SEIVE (0.425 mm) PER ASTM D4915 TESTING METHOD
  12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4915 TESTING METHOD
  13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT<sup>2</sup> (410 LPM/IN) PER ASTM D4915 TESTING METHOD
  14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 60% @ 500 HRS. PER ASTM D4353 TESTING METHOD



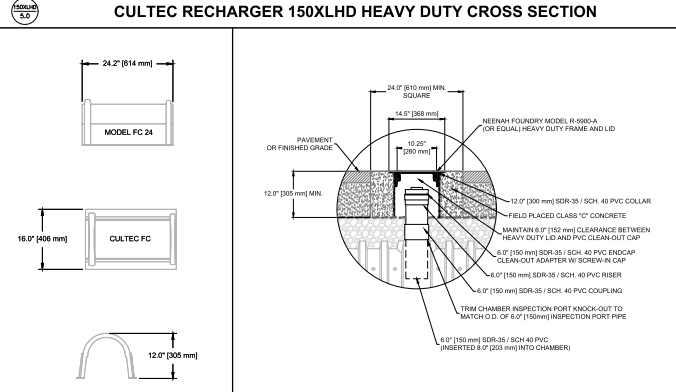
**CULTEC RECHARGER 150XLHD HEAVY DUTY CROSS SECTION**



**CULTEC RECHARGER 150XLHD HEAVY DUTY TYPICAL INTERLOCK**

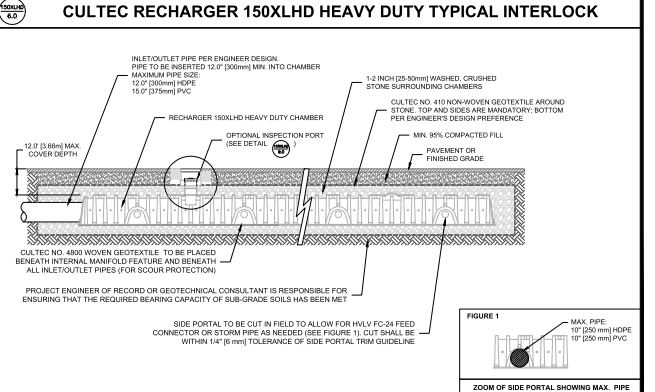


**GENERAL NOTES**



**CULTEC HVLV FC-24 FEED CONNECTOR THREE VIEW**

**OPTIONAL INSPECTION PORT - ZOOM DETAIL**



**CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL**

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 tech@cultec.com

THIS DRAWING WAS PREPARED TO SUPPORT THE DESIGN ENGINEER FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ASSURE THAT THE STORMWATER SYSTEMS DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC INC. DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS. THE DESIGNING ENGINEER IS RESPONSIBLE FOR ALL DESIGN DECISIONS.

**RECHARGER 150XLHD DETAIL SHEET**  
 TRAFFIC APPLICATION

**CULTEC STORMWATER CHAMBER**

PROJECT NO:	DATE:	2019
DESIGNED BY: CULTEC, INC	DRAWN BY: TECH	
SCALE: N.T.S.	SHEET NO: 1 OF 1	