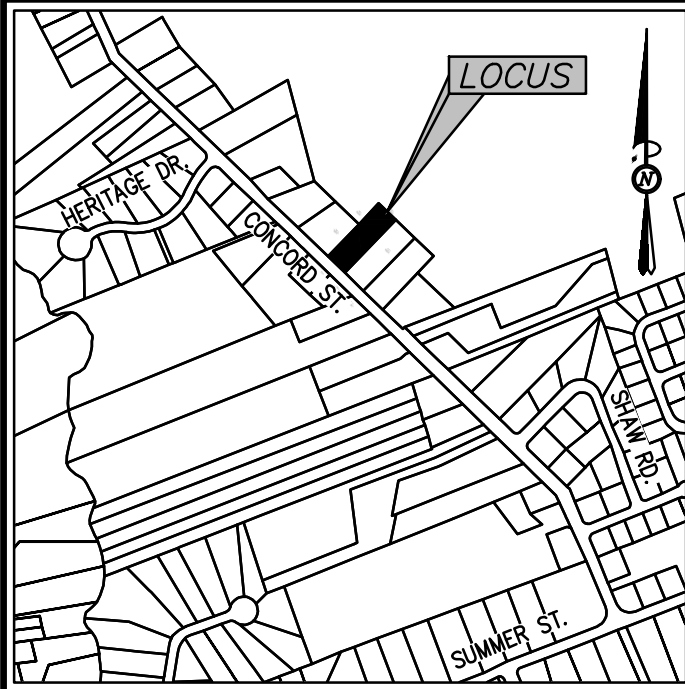




LOCUS MAP
Not to Scale

SITE DEVELOPMENT PLANS

PROPOSED RESIDENTIAL DEVELOPMENT

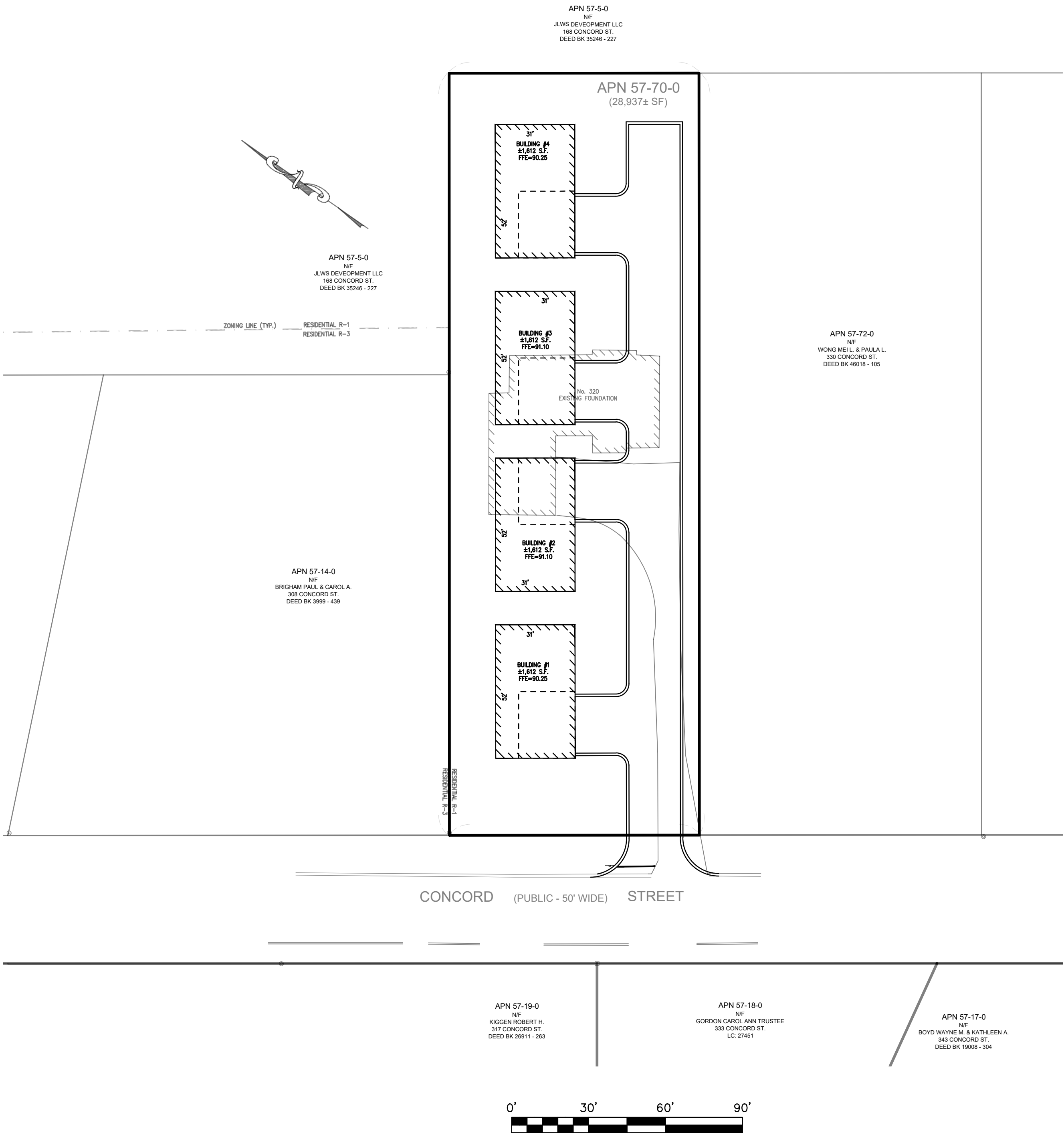
320 CONCORD STREET

IN

ROCKLAND, MASSACHUSETTS

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
C-2	GRADING AND DRAINAGE PLAN
C-3	UTILITY PLAN
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
D-1 - D-6	CONSTRUCTION DETAILS



Owner/Applicant:

WALL STREET DEVELOPMENT CORP.
2 WARTHIN CIRCLE
NORWOOD, MA 02062

Engineer/Surveyor:

MCKENZIE ENGINEERING GROUP, INC.
150 LONGWATER DRIVE
SUITE 101
NORWELL, MASSACHUSETTS 02061

REV	DATE	DESCRIPTION	BY	APP
1				



SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:



OWNERS/APPLICANT:
WALL STREET DEVELOPMENT
CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	1" = 30'
PROJECT NO.:	221-187
DWG. TITLE:	COVER SHEET

DWG. NO:
CS-1

ABBREVIATIONS

ABAN	ABANDONED
ACP	ASBESTOS CEMENT PIPE
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
ASPH	ASPHALT
ACOMP	ASPHALT COATED CORRUGATED METAL PIPE
B	BOLLARD
BD	BOUND
BLDG	BUILDING
BIT CONC	BITUMINOUS CONCRETE
BM	BENCHMARK
BS	BOTTOM OF SLOPE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
C&C	CUT AND CAPPED
CB/DH	CONC. BOUND/DRILL HOLE
CB/EPLP	CB/ESCUTCHEON
CCB	CAPE COD BERM
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
C	CENTERLINE
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
COND	CONDUIT
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
CS	COMBINED SEWER
CSMH	COMBINED SEWER MANHOLE
CULV	CULVERT
Δ	DELTA ANGLE
D	DRAIN
DCB	DOUBLE CATCH BASIN
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
E	ELECTRIC
ECC	EXTRUDED CONCRETE CURB
ELEV	ELEVATION
EMH	ELECTRIC MANHOLE
E/T/C	ELECTRIC, TELEPHONE, & CABLE TV
EW	END WALL
EXIST	EXISTING
FAB	FIRE ALARM BOX
FES	FLARED END SECTION
FND	FOUND
FND	FOUNDATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
G	GAS
GD	GROUND
GG	GAS GATE
GIP	GALVANIZED IRON PIPE
GP	GUARD POST
GS	GAS SERVICE
GR	GUARD RAIL
GRAN.	GRANITE
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HOR	HORIZONTAL
HP	HIGH PRESSURE
HWL	HEADWALL
HYD	HYDRANT
INV	INVERT
I.P.	IRON PIN
I.R.	IRON ROD
L	LEAD
LSA	LANDSCAPED AREA
LP	LIGHT POLE
MAX	MAXIMUM
MC	METAL COVER
MCC	MONOLITHIC CONCRETE CURB
MH	MANHOLE
MHB	MASS. HIGHWAY BOUND
MIN	MINIMUM
MLP	METAL LIGHT POLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OHW	OVERHEAD WIRE
PB	PULL BOX
PE	POLYETHYLENE PIPE
P	PROPERTY LINE
PROP	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
PVM	PAVEMENT
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
S	SEWER
SB	STONE BOUND
SB/DH	STONE BOUND/DRILL HOLE
SGE	SLOPED GRANITE EDGING
SMH	SEWER MANHOLE
STA	STATION
SS	SEWER SERVICE
STL	STEEL
SW	SIDEWALK
T	TELEPHONE
TCS	TRAFFIC CONTROL BOX
TL	TRAFFIC LIGHT
TMH	TELEPHONE MANHOLE
T	TREE
TRANS	TRANSFORMER
TS	TOP OF SLOPE
TSV	TAPPING SLEEVE, VALVE AND BOX
TYP	TYPICAL
UP	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
W	WATER MAIN
WG	WATER GATE

LEGEND

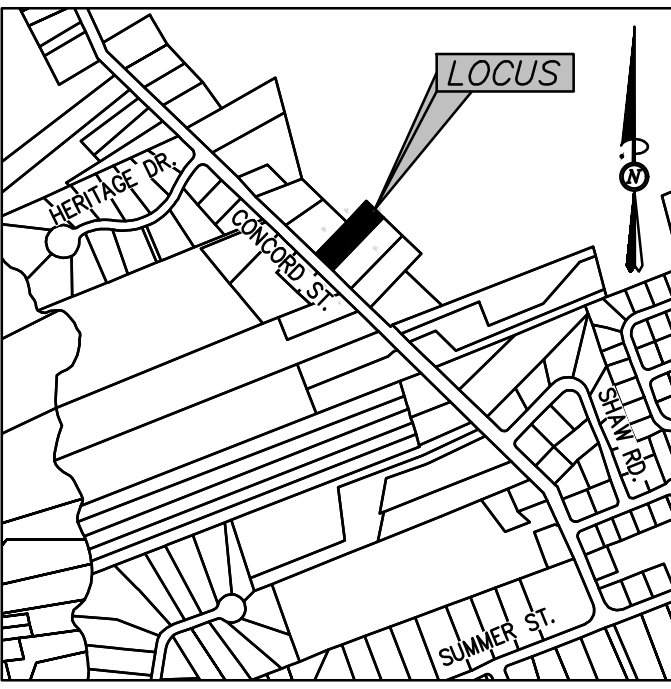
Existing	Proposed	Description
x 100.50	+ 100.50	SPOT ELEVATIONS
100.50	100.50	TOP & BOTTOM ELEVATIONS
100.00	100.00	
100.50	100.50	SPOT ELEVATIONS WITH LEADER
		HYDRANT
		WATER GATE VALVE
		WELL
		GAS GATE
		ELECTRIC HANDHOLE
		LIGHT POLE
		UTILITY POLE
		GUY POLE
		GUY ANCHOR
		DRAIN MANHOLE
		SEWER MANHOLE
		CATCH BASIN
		DOUBLE CATCH BASIN
		TEST PIT
		BORING
		SIGN SINGLE POST
		GRANITE OR CONCRETE BOUND
		WETLAND FLAG
		EXISTING BUILDING
		PROPOSED BUILDING
		MAJOR CONTOUR
		MINOR CONTOUR
		CHAINLINK FENCE
		CABLE TV LINE
		ELECTRIC, TELEPHONE, CABLE TV DUCTBANK
		OVERHEAD ELECTRIC
		NATURAL GAS LINE
		SANITARY SEWER MAIN
		DRAIN PIPE
		TELEPHONE LINE
		WATER MAIN
		FIRE PROTECTION LINE
		RETAINING WALL
		TREELINE
		HAYBALE & SILT FENCE
		LIMIT BORDERING VEGETATED WETLAND RESOURCE(1)
		100' WETLAND BUFFER ZONE

GENERAL NOTES

- SURVEY NOTES:**
- LOCUS IS SHOWN AS PARCEL NUMBER 57-70 ON THE TOWN OF ROCKLAND ASSESSORS MAPS.
 - DEED TO LOCUS IS RECORDED IN THE PLYMOUTH COUNTY REGISTRY OF DEEDS AT BOOK 54287, PAGE 47.
 - THIS SURVEY WAS MADE ON THE GROUND IN SEPTEMBER OF 2021 BY MCKENZIE ENGINEERING GROUP, INC.
 - ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988
 - WETLAND RESOURCE AREAS WERE NOT ENCOUNTERED DURING THE FIELD SURVEY.
 - LOCUS IS ZONED R1
- MINIMUM SETBACK REQUIREMENTS:**
- | | |
|------------|-----|
| FRONT YARD | 25' |
| SIDE YARD | 15' |
| REAR YARD | 50' |
- LOCUS IS SITUATED IN ZONE X AS SHOWN ON F.I.R.M. No 25023C0182K, EFFECTIVE JULY 6, 2021.
- LOCUS IS NOT LOCATED IN A DEP ZONE 2 OR TOWN OF ROCKLAND AQUIFER 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:
- | | |
|----|----|
| PB | PG |
| 44 | 80 |

- 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.
 - WHERE THE COVER OVER PROPOSED DRAINAGE PIPES IS LESS THAN 2.5 FEET, THE DRAINAGE PIPE SHALL BE CLASS 5 REINFORCED CONCRETE UNLESS OTHERWISE SPECIFIED.
 - UNSUITABLE SOILS 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.

- UTILITY NOTES:**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
 - THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE ROCKLAND DPW.
 - THE CONTRACTOR SHALL EXCAVATE THE TEST PITS PRIOR TO INSTALLING THE DOMESTIC WATER SERVICE TO VERIFY THE ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE RESULTS PRIOR TO COMMENCING ANY WORK.
 - THE WATER SERVICE SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
 - ALL WATER SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
 - THE DOMESTIC WATER SERVICE SHALL BE ADEQUATELY PROTECTED AGAINST BACKFLOW (BACKFLOW PREVENTION) AT THE BUILDING.
 - AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE DOMESTIC WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ABINGTON ROCKLAND JOINT WATER WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
 - THE DOMESTIC WATER SERVICE SHALL BE TESTED IN ACCORDANCE WITH DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. A MINIMUM OF 2 SEPARATE WATER SAMPLES SHALL BE TESTED AT A STATE CERTIFIED LABORATORY.
 - A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER SERVICES AND WATER SERVICE. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER SERVICE THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER SERVICE. ALL OTHER UTILITIES REQUIRE MINIMUM 5' SEPARATION FROM OTHER UTILITIES.
 - ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 UNLESS OTHERWISE NOTED.
 - WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
 - THE LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE AND COMMUNICATION (E.T.C.) SERVICES ARE APPROXIMATE. THE PROJECT ELECTRICAL ENGINEER SHALL VERIFY THESE LOCATIONS PRIOR TO THE START OF CONSTRUCTION. COORDINATE ALL E.T.C. WORK WITH THE APPROPRIATE UTILITY COMPANIES.
 - THE PROPOSED GAS SERVICE LOCATION IS APPROXIMATE ONLY. THE CONTRACTOR SHALL COORDINATE THE GAS SERVICE INSTALLATION WITH THE MUNICIPAL GAS COMPANY.
 - ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ROCKLAND DEPARTMENT OF PUBLIC WORKS AND ABINGTON ROCKLAND JOINT WATER WORKS SPECIFICATIONS.
 - ALL EXISTING UTILITIES WITHIN THE SITE ARE TO BE REMOVED UNLESS OTHERWISE STATED TO REMAIN.



LOCUS MAP
Not to Scale

REV	DATE	DESCRIPTION	BY	APP
1				

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 PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

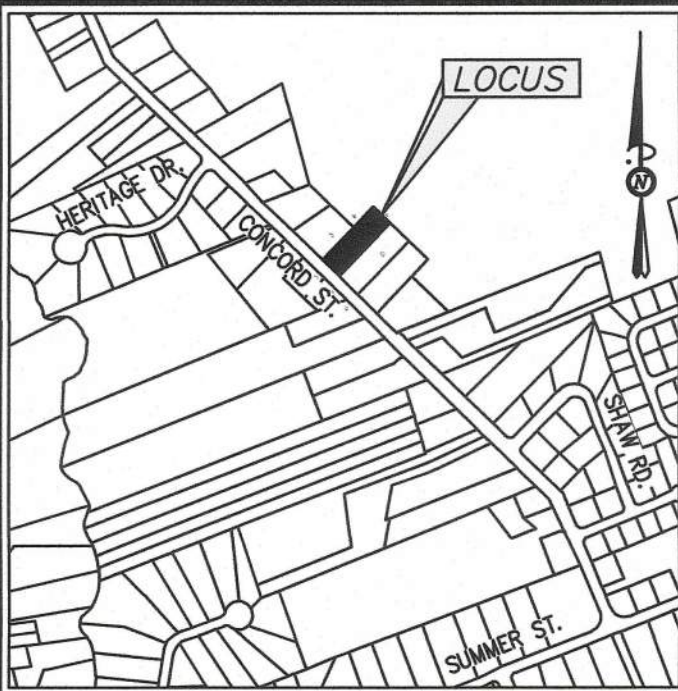


OWNERS/APPLICANT:
WALL STREET DEVELOPMENT CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

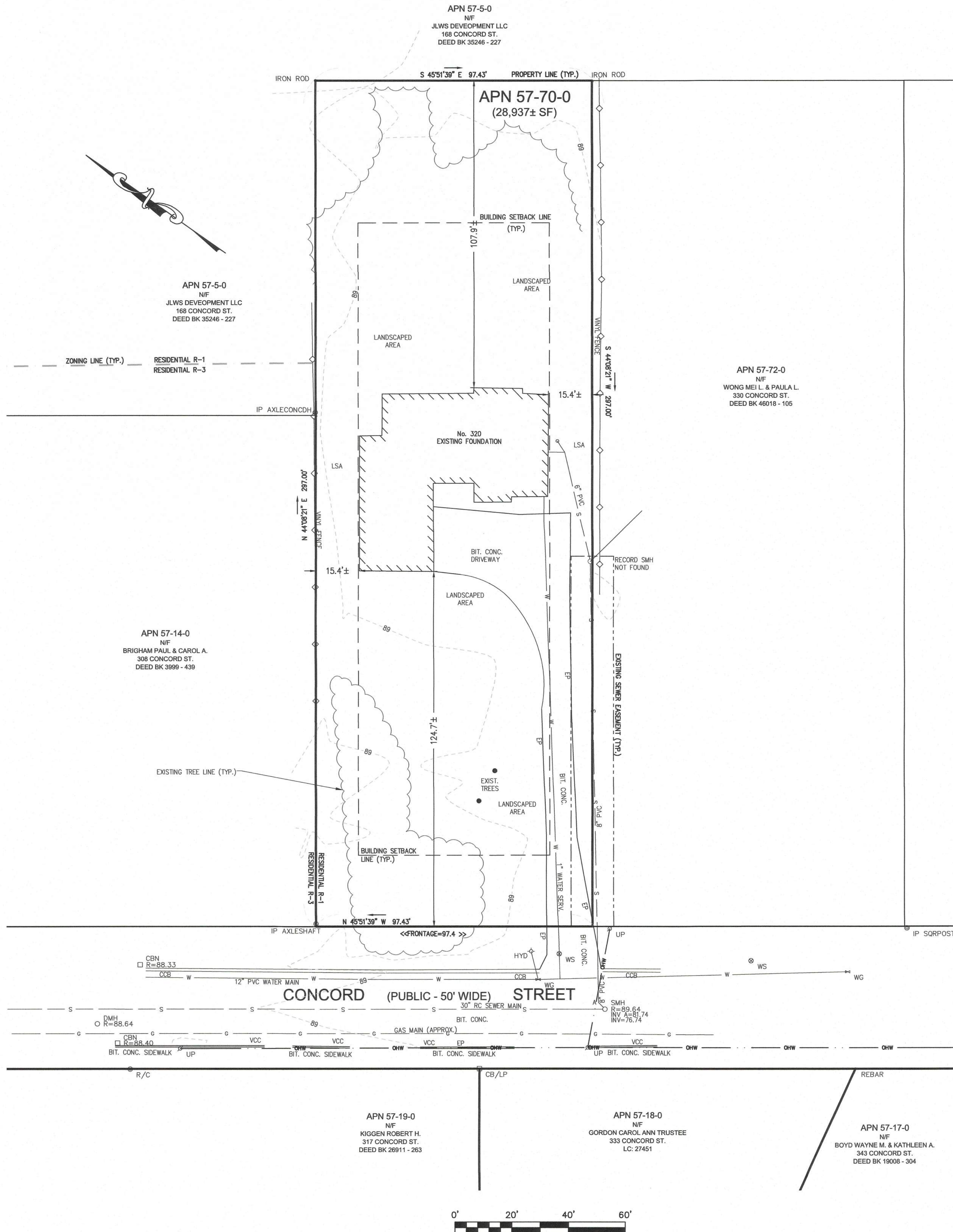
PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	
PROJECT NO.:	221-187
DWG. TITLE:	LEGEND, ABBREVIATIONS & GENERAL NOTES

DWG. NO: **L-1**



LOCUS MAP
Not to Scale



ABBREVIATIONS	
FTE	FIRST FLOOR ELEVATION
CCB	BITUMINOUS CONCRETE PAVEMENT
EP	EDGE OF PAVEMENT
BC	BITUMINOUS CONCRETE CURB
(AM)	AS MEASURED
RET WALL	RETAINING WALL
CONC.	CONCRETE
RCP	REINFORCED CONCRETE PIPE
VGC	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
- CONCRETE BOUND WITH DRILL HOLE
- STONE BOUND
- 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
- EMH
- SMH
- DMH
- TMH
- CBN
- DOOR WAY THRESHOLD
- HYDRANT
- POST INDICATOR VALVE
- UTILITY POLE
- YARD LIGHT

- RIP RAP
- BOLLARD
- SIGN
- FIRE ALARM

- DECIDUOUS TREE
- CONIFEROUS TREE

LINE DESIGNATORS

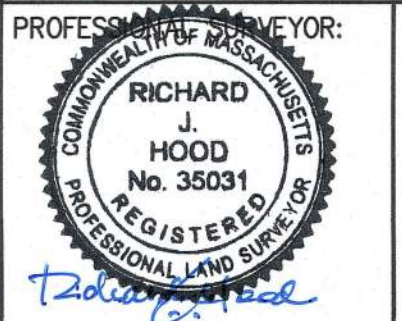
- WATER MAIN
- HANDRAIL
- JERSEY BARRIER
- GUARD RAIL
- OVERHEAD WIRES
- GAS LINE
- WATER SERVICE
- UNDERGROUND ELECTRIC
- STORM DRAIN LINE
- SANITARY SEWER LINE
- DRAINAGE SWALE
- CHAIN LINK FENCE

SURVEY NOTES:

- LOCUS IS SHOWN AS PARCEL NUMBER 57-70 ON THE TOWN OF ROCKLAND ASSESSORS MAPS.
- DEED TO LOCUS IS RECORDED IN THE PLYMOUTH COUNTY REGISTRY OF DEEDS AT BOOK 54287, PAGE 47.
- THIS SURVEY WAS MADE ON THE GROUND IN SEPTEMBER OF 2021 BY MCKENZIE ENGINEERING GROUP, INC.
- ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
- WETLAND RESOURCE AREAS WERE NOT ENCOUNTERED DURING THE FIELD SURVEY.
- LOCUS IS ZONED R1
- MINIMUM SETBACK REQUIREMENTS:
 - FRONT YARD 25'
 - SIDE YARD 15'
 - REAR YARD 50'
- LOCUS IS SITUATED IN ZONE X AS SHOWN ON F.I.R.M. No 25023C0182K, EFFECTIVE JULY 6, 2021.
- LOCUS IS NOT LOCATED IN A DEP ZONE 2 OR TOWN OF ROCKLAND AQUIFER PROTECTION DISTRICT.
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- PLAN REFERENCES:

PB	PG
44	80

EXISTING CONDITIONS PLAN (ASSESSOR'S MAP 57, PARCEL 70) 320 CONCORD STREET ROCKLAND, MASSACHUSETTS

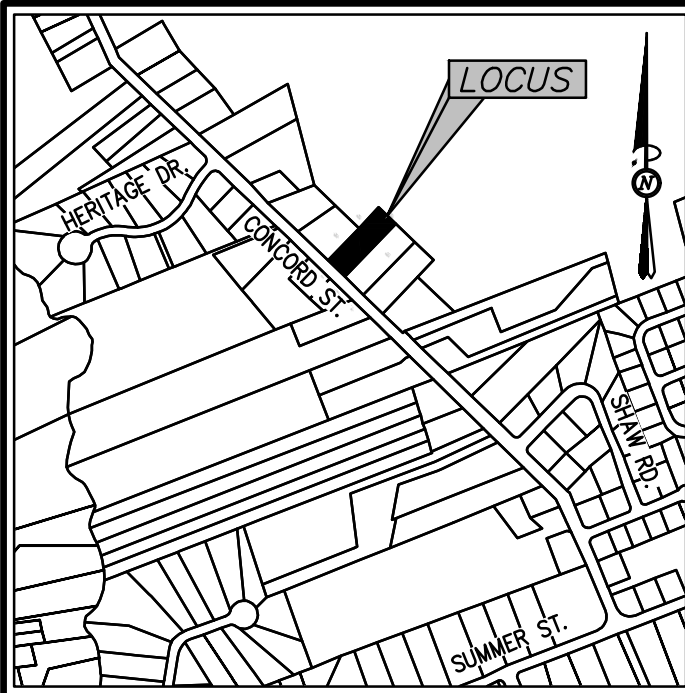


OWNERS/APPLICANT:
WALL STREET DEVELOPMENT
CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

DRAWN BY: ESS
DESIGNED BY: ESS
CHECKED BY: RTLS
APPROVED BY: R.H.
DATE: OCTOBER 7, 2021
SCALE: 1"=20'
PROJECT NO.: 221-187
DWG. TITLE:

EXISTING CONDITIONS PLAN

DWG. NO.: EX-1



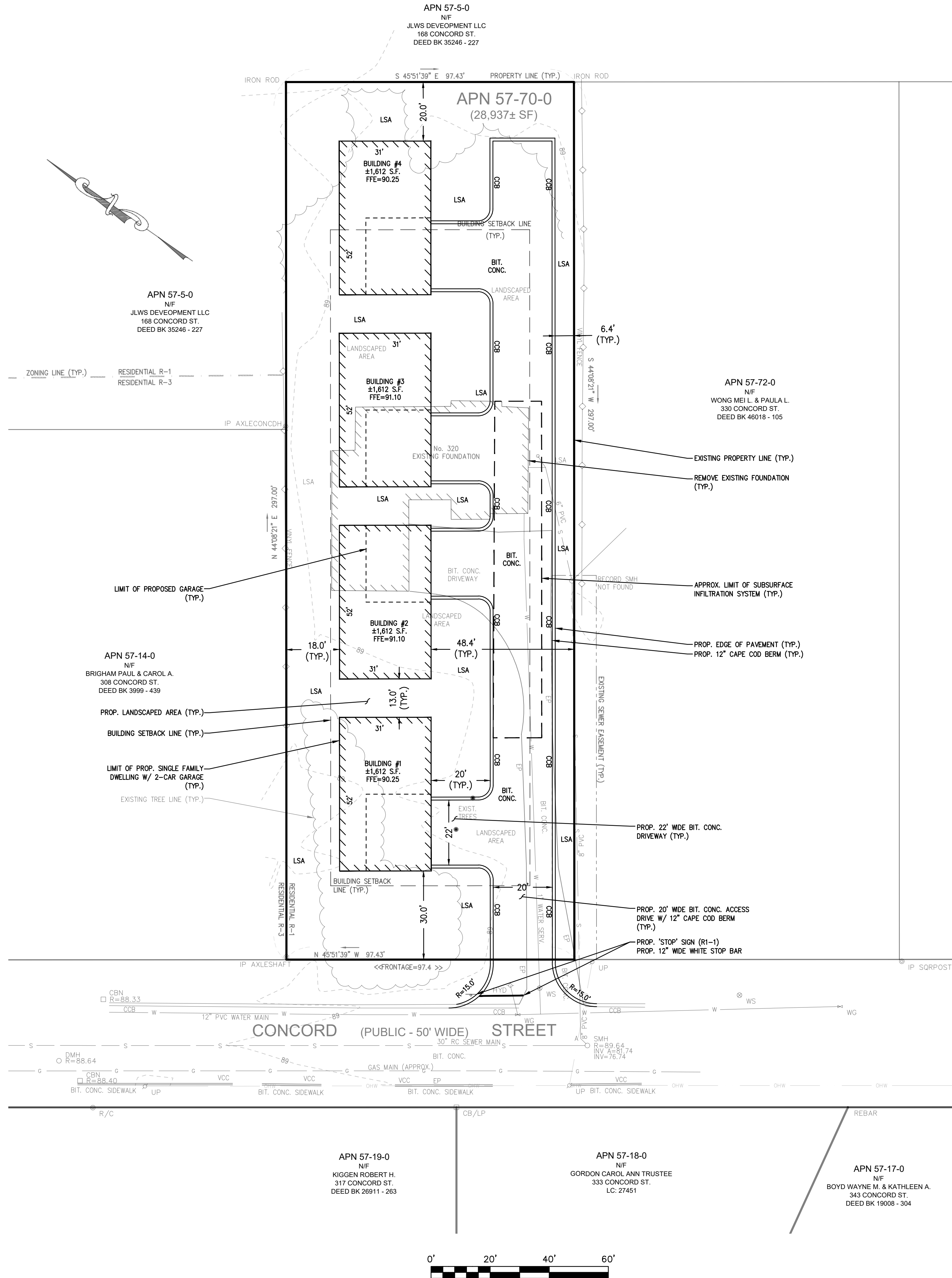
LOCUS MAP
Not to Scale

LAND USAGE TABLES

ARTICLE V – BUILDING, LOT AND GENERAL DISTRICT REGULATIONS

RESIDENTIAL (R-1) ZONING DISTRICT			
CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	32,670 S.F.	28,937 S.F.	28,937 S.F.
MIN. FRONTAGE AND LOT WIDTH	110 FT.	97.4 FT.	97.4 FT.
MAX. HEIGHT	2.5 STORIES/30 FT.*	1 STORY	<2.5 STORIES
MAX. BUILDING COVERAGE	25%	10.2%	22.3%
MAX. DWELLING UNITS PER 32,670 S.F.	1	1	4.5
MIN. FRONT YARD	25 FT.	124.7 FT.	30.0 FT.
MIN. SIDE YARD	15 FT.	15.4 FT.	18.0 FT.
MIN. REAR YARD	50 FT.	107.9 FT.	20.0 FT.

* THE MAXIMUM HEIGHT (STORIES/FEET) MAY BE INCREASED TO 3.0/36 ON LOTS WITH AN AREA OF 32,670 S.F. OR GREATER AND THAT THE STRUCTURE MEETS ALL THE CURRENT SETBACKS.



ABBREVIATIONS	
FFE	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
VGC	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	CHIMNEY
ELECTRIC HAND HOLE	ELECTRIC HAND HOLE
GUY POLE	GUY POLE
GUY WIRE	GUY WIRE
HVAC UNIT	HVAC UNIT
BUILDING LIGHT W/MAST	BUILDING LIGHT W/MAST
BUILDING LIGHT TRANSFORMER	BUILDING LIGHT TRANSFORMER
WATER GATE	WATER GATE
EXHAUST VENT	EXHAUST VENT
AIR VENT	AIR VENT
DRAINAGE SUMP	DRAINAGE SUMP
EMH	ELECTRIC MANHOLE
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
TMH	TELEPHONE MANHOLE
CBN	DRAINAGE CATCH BASIN
DOOR WAY THRESHOLD	DOOR WAY THRESHOLD
HYDRANT	HYDRANT
POST INDICATOR VALVE	POST INDICATOR VALVE
UTILITY POLE	UTILITY POLE
YARD LIGHT	YARD LIGHT
RIP RAP	RIP RAP
BOLLARD	BOLLARD
SIGN	SIGN
FIRE ALARM	FIRE ALARM
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE
LINE DESIGNATORS	
W	WATER MAIN
HANDRAIL	HANDRAIL
JERSEY BARRIER	JERSEY BARRIER
GUARD RAIL	GUARD RAIL
OVERHEAD WIRES	OVERHEAD WIRES
GAS LINE	GAS LINE
WATER SERVICE	WATER SERVICE
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
STORM DRAIN LINE	STORM DRAIN LINE
SANITARY SEWER LINE	SANITARY SEWER LINE
DRAINAGE SWALE	DRAINAGE SWALE
CHAIN LINK FENCE	CHAIN LINK FENCE

BY

APP

DESCRIPTION

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MG

MCKENZIE

ENGINEERING GROUP

Assinippi Office Park
150 Longwater Drive, Suite 101
Norwell, MA 02061
P: 781.792.0300
F: 781.792.0333
www.mckeng.com

SITE DEVELOPMENT PLANS

(ASSESSOR'S MAP 57, PARCEL 70)

320 CONCORD STREET

ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

BRADLEY C. MCKENZIE

REGISTERED PROFESSIONAL ENGINEER

NO. 30917

OWNERS/APPLICANT:

WALL STREET DEVELOPMENT

CORP.

2 WARTHIN CIRCLE

NORWOOD, MASSACHUSETTS 02062

DESIGNED BY:

ESS

CHECKED BY:

BCM

APPROVED BY:

BCM

DATE:

OCTOBER 7, 2021

SCALE:

1"=20'

PROJECT NO.:

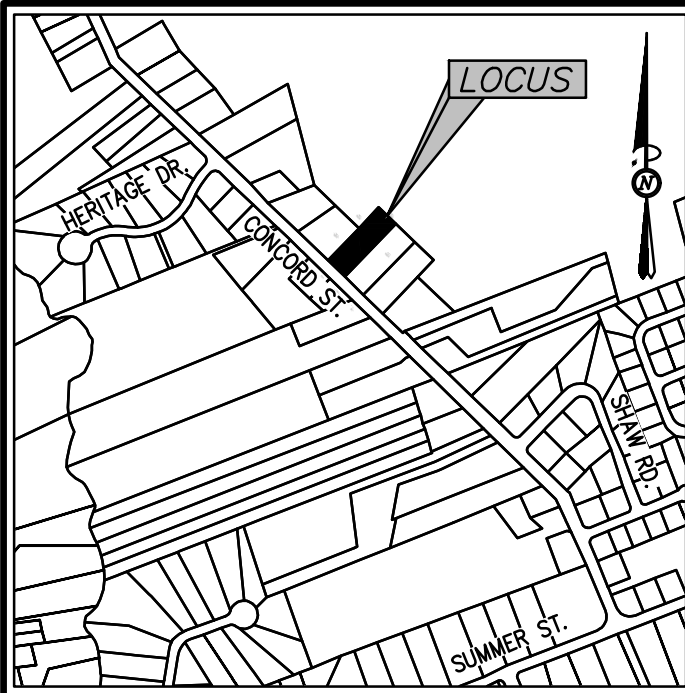
221-187

DWG. TITLE:

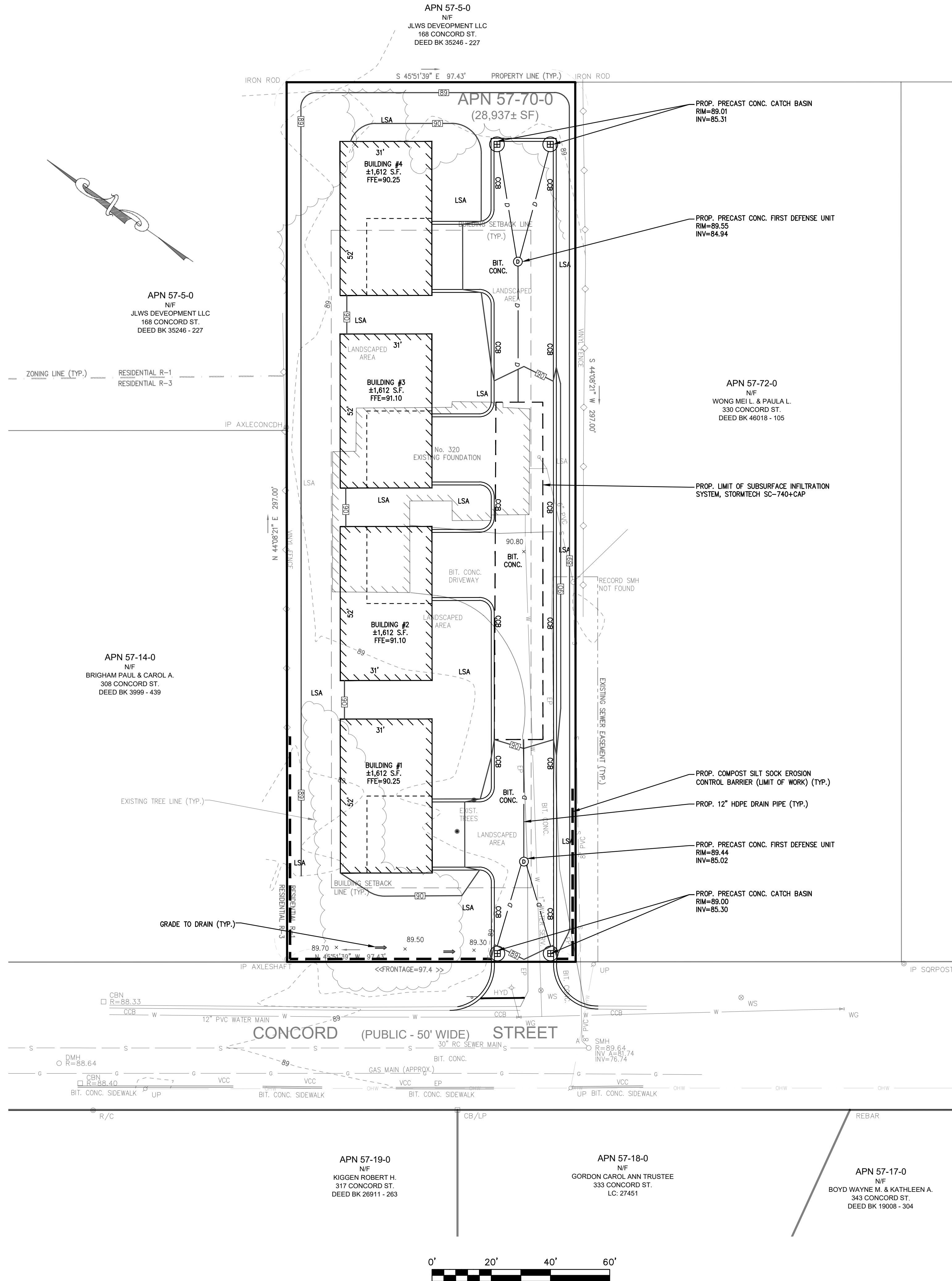
SITE LAYOUT PLANS

DWG. NO.:

C-1



LOCUS MAP
Not to Scale



- DRAINAGE NOTES:**
1. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY EARTH MOVING ACTIVITIES.
 2. 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.
 3. 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.
 4. WHERE THE COVER OVER PROPOSED DRAINAGE PIPES IS LESS THAN 2.5 FEET, THE DRAINAGE PIPE SHALL BE CLASS 5 REINFORCED CONCRETE UNLESS OTHERWISE SPECIFIED.
 5. UNSUITABLE SOILS 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.

ABBREVIATIONS

F.F.E. 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
VGC 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
- CONCRETE BOUND WITH DRILL HOLE
- STONE BOUND
- 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
- FIRE ALARM
- DECIDUOUS TREE
- CONIFEROUS TREE

LINE DESIGNATORS

- WATER MAIN
- HANDRAIL
- JERSEY BARRIER
- GUARD RAIL
- OVERHEAD WIRES
- GAS LINE
- WATER SERVICE
- UNDERGROUND ELECTRIC
- STORM DRAIN LINE
- SANITARY SEWER LINE
- DRAINAGE SWALE
- CHAIN LINK FENCE

REV	DATE	DESCRIPTION	BY	APP
1				



SITE DEVELOPMENT PLANS (ASSESSOR'S MAP 57, PARCEL 70) 320 CONCORD STREET ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:



OWNERS/APPLICANT:
WALL STREET DEVELOPMENT
CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

PERMIT PLAN SET

DRAWN BY: ESS
DESIGNED BY: ESS
CHECKED BY: BCM
APPROVED BY: BCM
DATE: OCTOBER 7, 2021
SCALE: 1"=20'
PROJECT NO.: 221-187
DWG. TITLE:

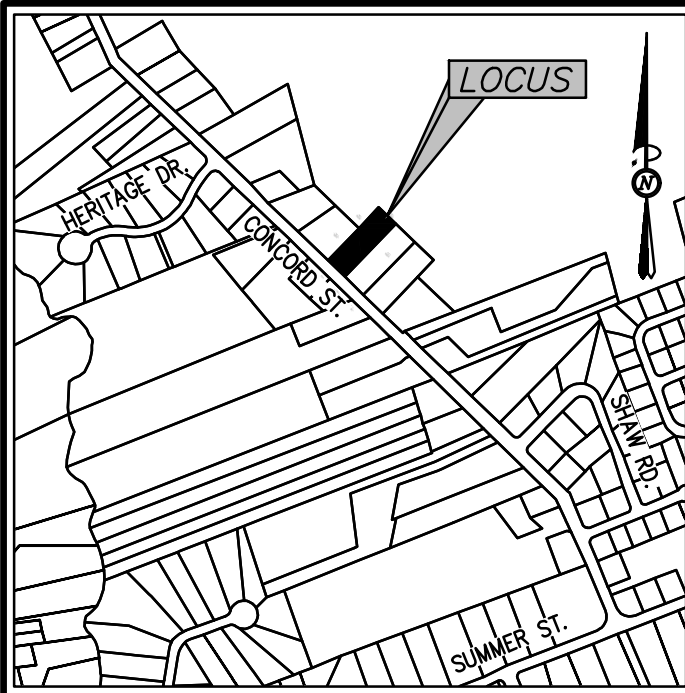
GRADING & DRAINAGE PLAN

DWG. NO:

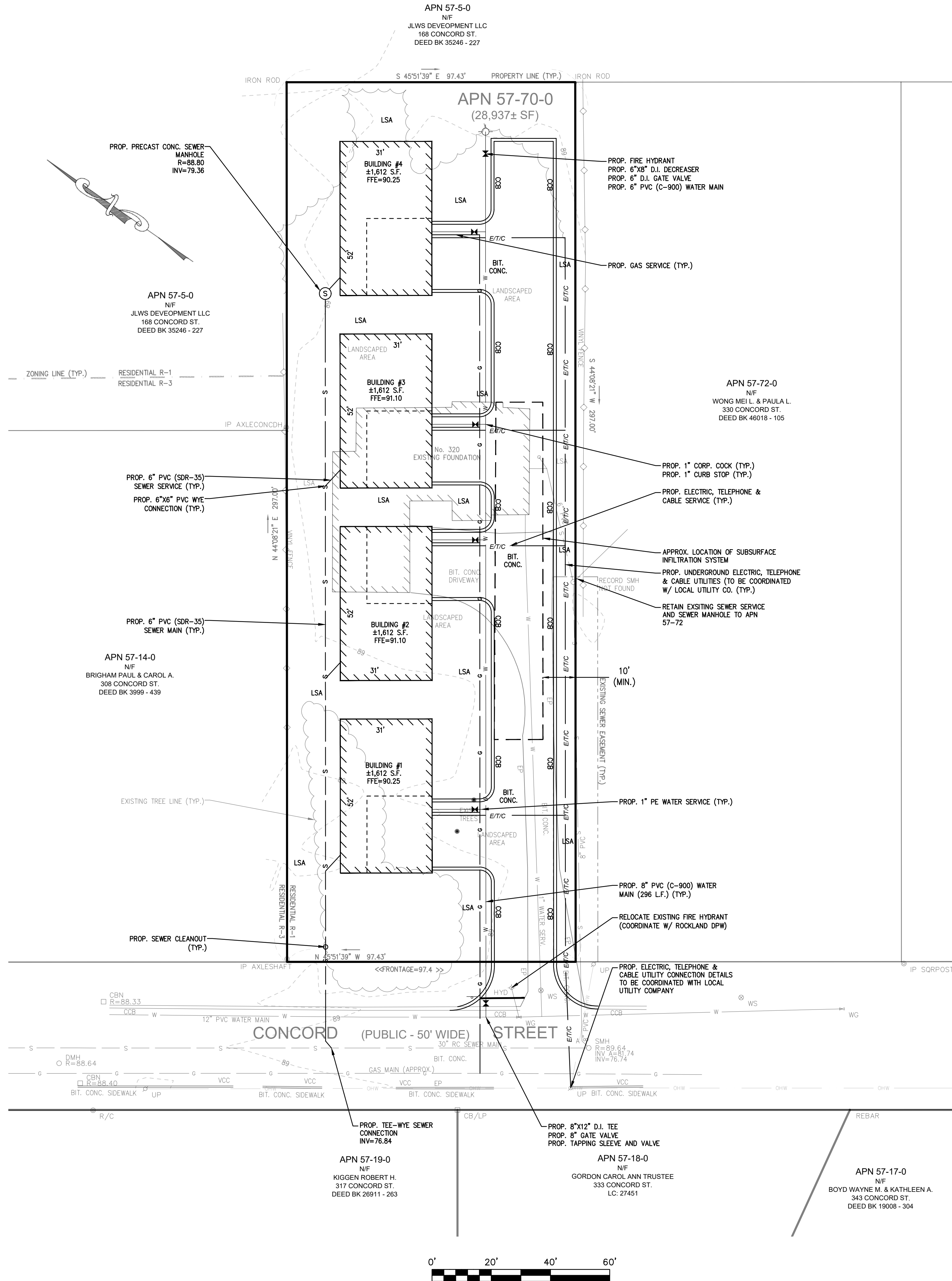
C-2

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M:\MEG\2021 PROJECTS\221-187 WALL ST. DEV. CORP. - 320 CONCORD ST., ROCKLAND\DWGS\221-187 MAIN1.DWG



LOCUS MAP
Not to Scale



ABBREVIATIONS

FFE	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
VGC	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	CHIMNEY
ELECTRIC HAND HOLE	ELECTRIC HAND HOLE
GUY POLE	GUY POLE
GUY WIRE	GUY WIRE
HVAC UNIT	HVAC UNIT
BUILDING LIGHT W/MAST	BUILDING LIGHT W/MAST
BUILDING LIGHT	BUILDING LIGHT
TRANSFORMER	TRANSFORMER
WATER GATE	WATER GATE
EXHAUST VENT	EXHAUST VENT
AIR VENT	AIR VENT
DRAINAGE SUMP	DRAINAGE SUMP
EMH	ELECTRIC MANHOLE
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
TMH	TELEPHONE MANHOLE
CSN	DRAINAGE CATCH BASIN
DOOR WAY THRESHOLD	DOOR WAY THRESHOLD
HYDRANT	HYDRANT
POST INDICATOR VALVE	POST INDICATOR VALVE
UTILITY POLE	UTILITY POLE
YARD LIGHT	YARD LIGHT
RIP RAP	RIP RAP
BOLLARD	BOLLARD
SIGN	SIGN
FIRE ALARM	FIRE ALARM
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE
LINE DESIGNATORS	
W	WATER MAIN
HANDRAIL	HANDRAIL
JERSEY BARRIER	JERSEY BARRIER
GUARD RAIL	GUARD RAIL
OVERHEAD WIRES	OVERHEAD WIRES
GAS LINE	GAS LINE
WS	WATER SERVICE
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
STORM DRAIN LINE	STORM DRAIN LINE
SANITARY SEWER LINE	SANITARY SEWER LINE
DRAINAGE SWALE	DRAINAGE SWALE
CHAIN LINK FENCE	CHAIN LINK FENCE

UTILITY NOTES:

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE ROCKLAND DPW.
- THE CONTRACTOR SHALL EXCAVATE THE TEST PITS PRIOR TO INSTALLING THE DOMESTIC WATER SERVICE TO VERIFY THE ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE RESULTS PRIOR TO COMMENCING ANY WORK.
- THE WATER SERVICE SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
- ALL WATER SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
- THE DOMESTIC WATER SERVICE SHALL BE ADEQUATELY PROTECTED AGAINST BACKFLOW (BACKFLOW PREVENTION) AT THE BUILDING.
- AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE DOMESTIC WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ABINGTON ROCKLAND JOINT WATER WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
- THE DOMESTIC WATER SERVICE SHALL BE TESTED IN ACCORDANCE WITH DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. A MINIMUM OF 2 SEPARATE WATER SAMPLES SHALL BE TESTED AT A STATE CERTIFIED LABORATORY. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER SERVICES AND WATER SERVICE. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER SERVICE THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER SERVICE. ALL OTHER UTILITIES REQUIRE MINIMUM 5' SEPARATION FROM OTHER UTILITIES.
- ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 UNLESS OTHERWISE NOTED.
- WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- THE LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE AND COMMUNICATION (E.T.C.) SERVICES ARE APPROXIMATE. THE PROJECT ELECTRICAL ENGINEER SHALL VERIFY THESE LOCATIONS PRIOR TO THE START OF CONSTRUCTION. COORDINATE ALL E.T.C. WORK WITH THE APPROPRIATE UTILITY COMPANIES.
- THE PROPOSED GAS SERVICE LOCATION IS APPROXIMATE ONLY. THE CONTRACTOR SHALL COORDINATE THE GAS SERVICE INSTALLATION WITH THE MUNICIPAL GAS COMPANY.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ROCKLAND DEPARTMENT OF PUBLIC WORKS AND ABINGTON ROCKLAND JOINT WATER WORKS SPECIFICATIONS.
- ALL EXISTING UTILITIES WITHIN THE SITE ARE TO BE REMOVED UNLESS OTHERWISE STATED TO REMAIN.

BY	APP	DESCRIPTION	DATE	REV

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Assinippi Office Park
150 Longwater Drive, Suite 101
Norwell, MA 02061
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www.mckeng.com

SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

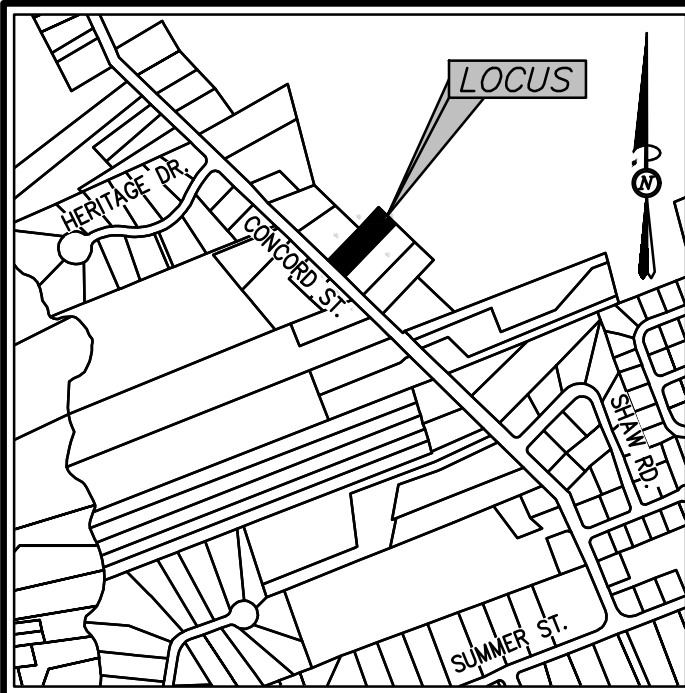
BRADLEY C. MCKENZIE
No. 38917
REGISTERED PROFESSIONAL ENGINEER
STATE OF MASSACHUSETTS

OWNERS/APPLICANT:
WALL STREET DEVELOPMENT CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	1"=20'
PROJECT NO.:	221-187
DWG. TITLE:	

UTILITY PLAN

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



LOCUS MAP
Not to Scale

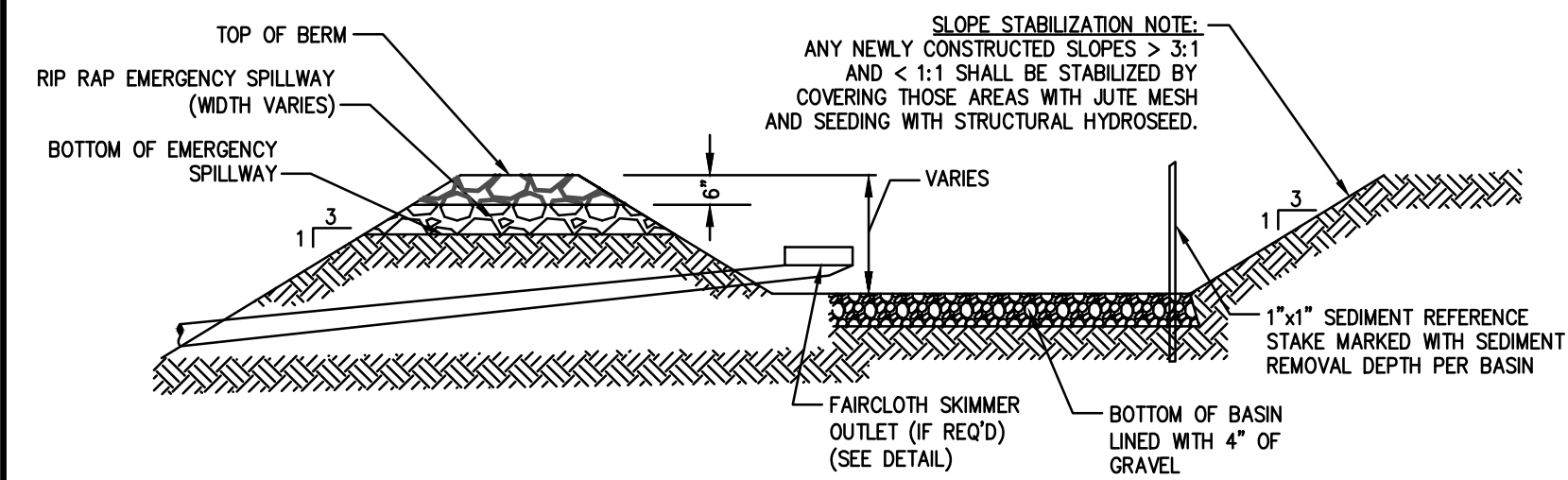
CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:

- STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
- STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
- 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 $\frac{1}{8}$ INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:
 - WHETHER OR NOT THE BMP WAS INSTALLED/PERFORMED CORRECTLY.
 - WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE BMP SINCE IT WAS INSTALLED OR PERFORMED.
 - WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE BMP.
- THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
- 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.

- THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
- 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.
- CLEAR AND GRUB UP AS REQUIRED FOR THE CONSTRUCTION OF THE ROADWAY, PARKING AREAS AND RELATED INFRASTRUCTURE.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
- 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.
- 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.
- INSTALL CLOSED DRAINAGE SYSTEM AND OTHER UTILITIES. ALL CATCH BASINS SHALL BE COVERED WITH SILTSACK OR EQUIVALENT INLET PROTECTION.
- GRADE ROADWAY TO SUBGRADE ELEVATION AND CONSTRUCT SIDE SLOPES. APPLY TEMPORARY STABILIZATION MEASURES WHERE WARRANTED. REFER TO "EROSION AND SEDIMENTATION CONTROL" SECTION OF THIS PLAN.
- GRADE GRAVEL SUBBASE.
- PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS.
- 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.
- PLACE THE FINAL WEARING COURSE OF PAVEMENT.
- COMPLETE FINE GRADING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
- REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.



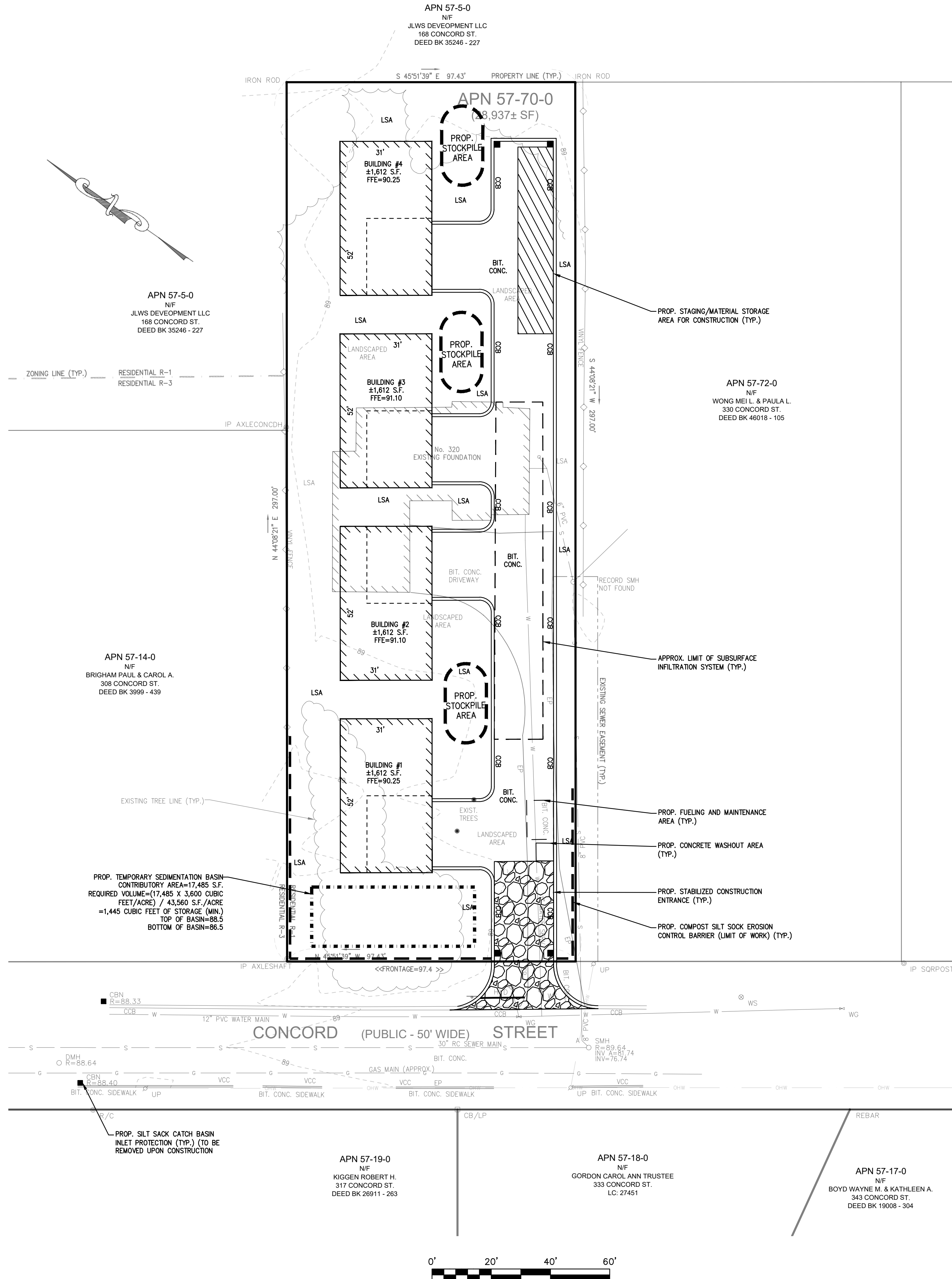
VOLUME REQUIREMENTS FOR TEMPORARY SEDIMENTATION BASINS

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 CONDITION 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



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
ETW	EDGE OF TRAVEL WAY
MTL	METAL BERM
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CMP	CORRUGATED METAL PIPE
LSA	LANDSCAPED AREA

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
- BUILDING LIGHT W/MAST
- BUILDING LIGHT TRANSFORMER
- WATER GATE
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LINE DESIGNATORS

- WATER MAIN
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- UNDERGROUND ELECTRIC
- STORM DRAIN LINE
- SANITARY SEWER LINE
- DRAINAGE SWALE
- CHAIN LINK FENCE

REV	DATE	DESCRIPTION	BY	APP
1				



SITE DEVELOPMENT PLANS (ASSESSOR'S MAP 57, PARCEL 70) 320 CONCORD STREET ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:



OWNERS/APPLICANT:
WALL STREET DEVELOPMENT CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

DRAWN BY: ESS
DESIGNED BY: ESS
CHECKED BY: BCM
APPROVED BY: BCM
DATE: OCTOBER 7, 2021
SCALE: 1"=20'
PROJECT NO.: 221-187
DWG. TITLE:

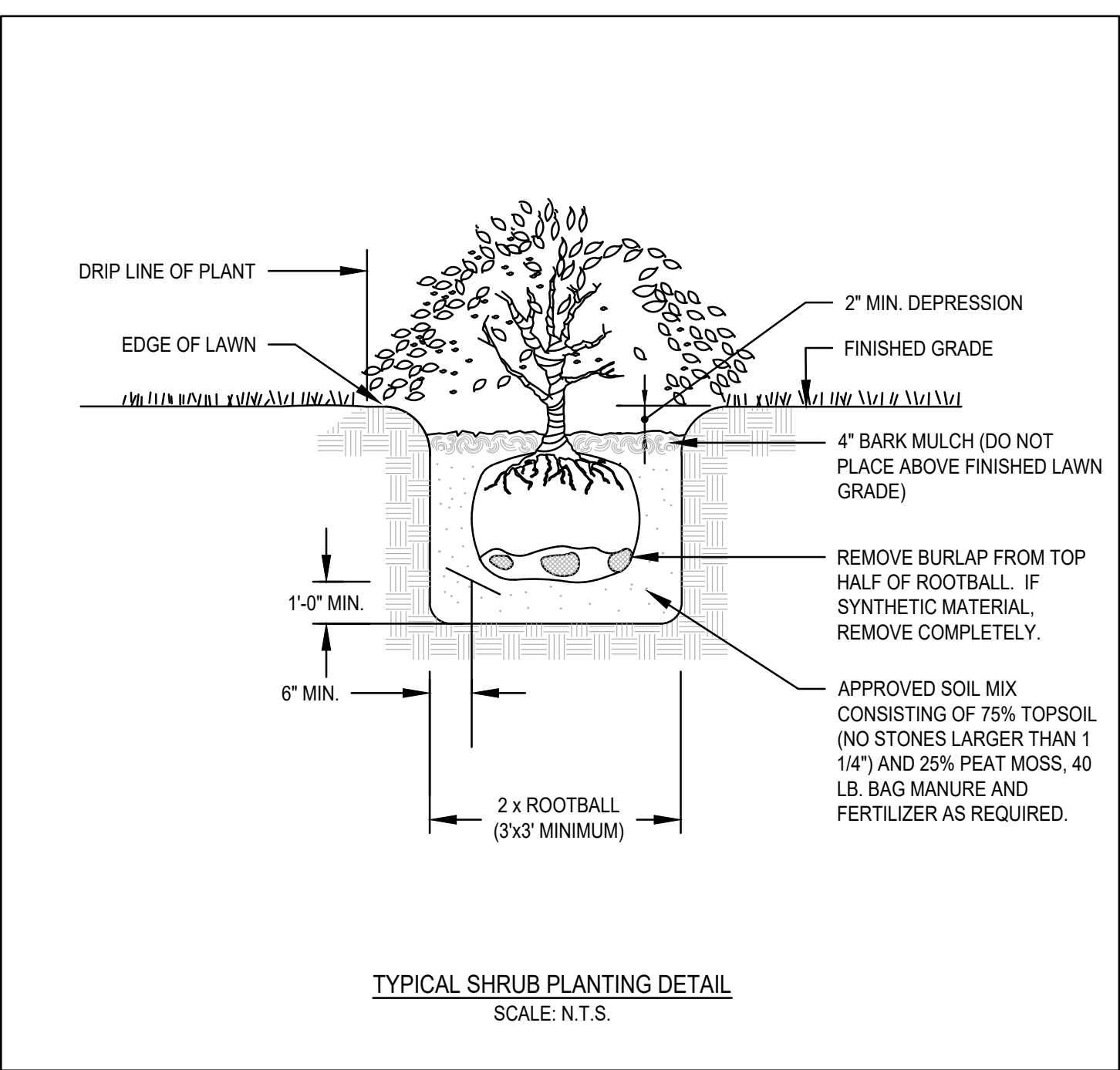
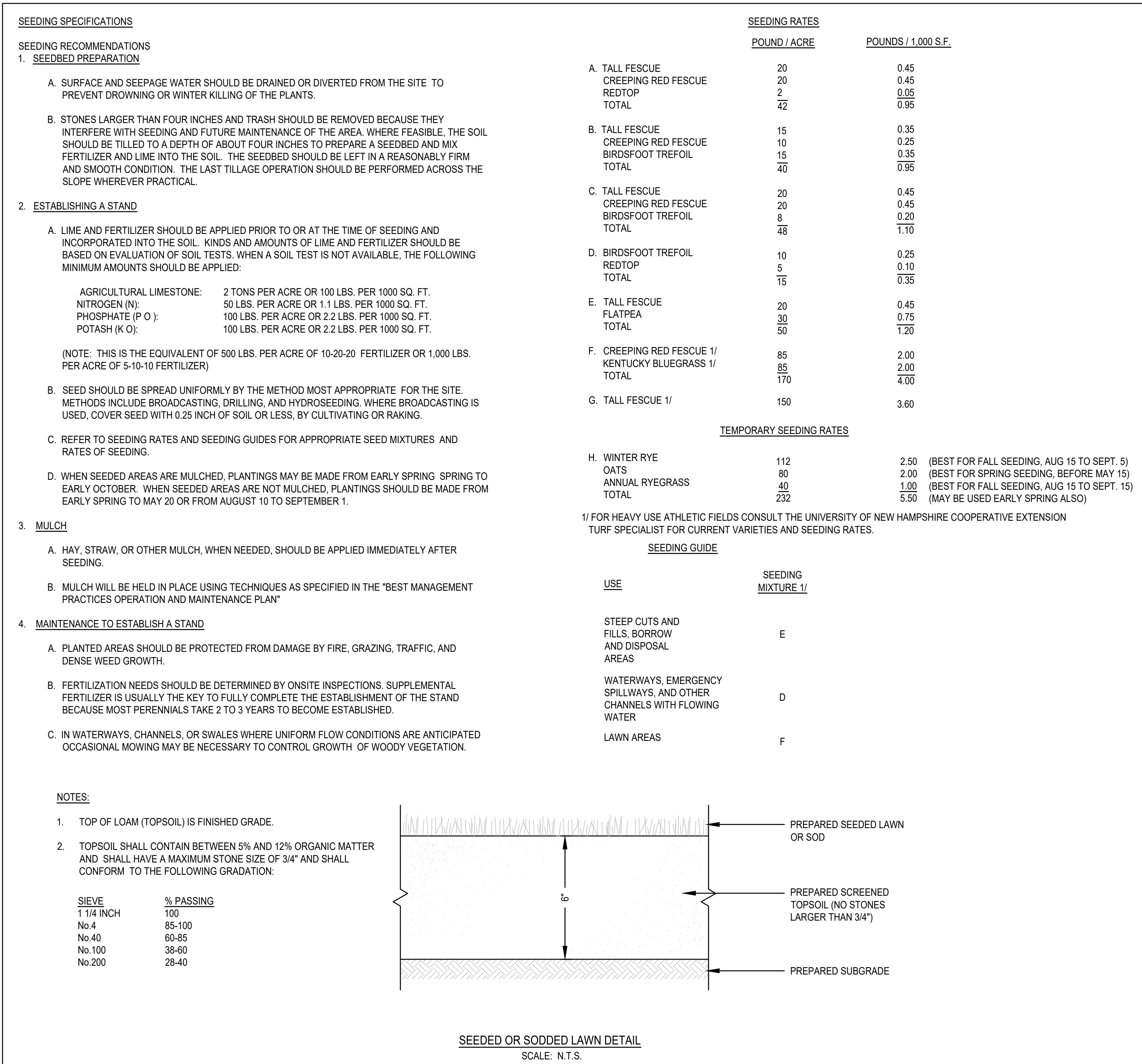
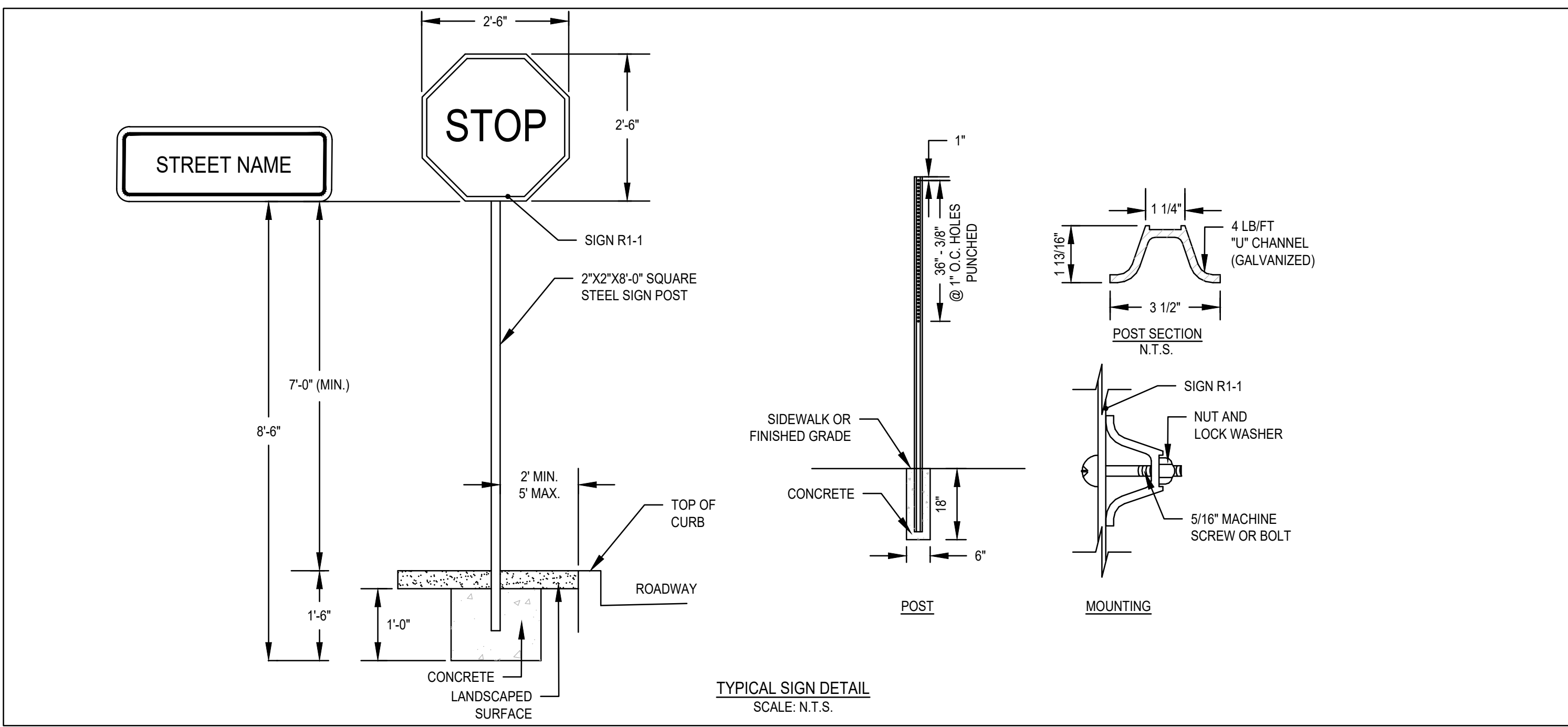
EROSION & SEDIMENT CONTROL PLAN

DWG. NO:

ESC-1

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M:\MEG\2021 PROJECTS\221-187 WALL ST. DEV. CORP. - 320 CONCORD ST., ROCKLAND\DWGS\221-187 MAINT.DWG



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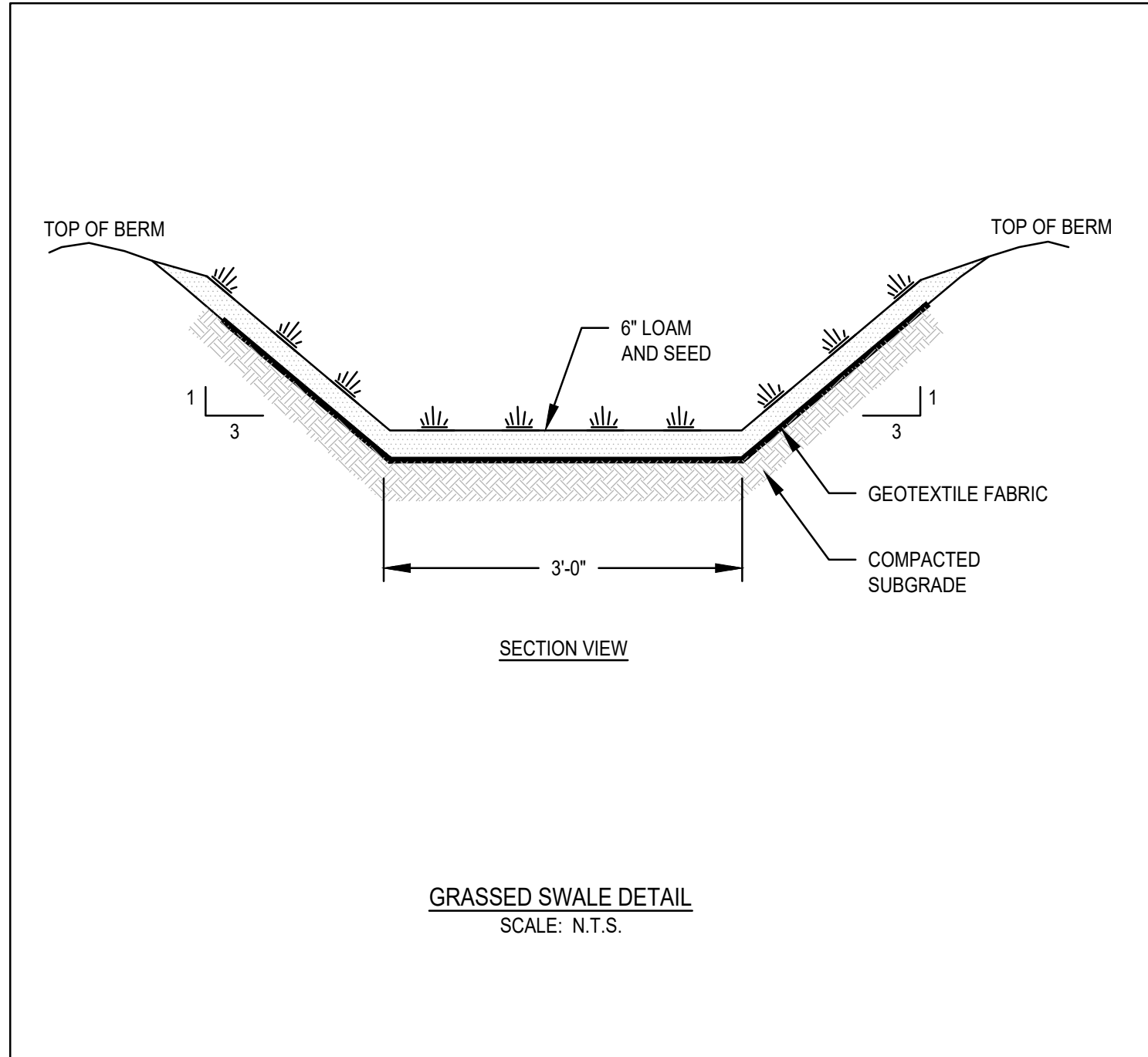
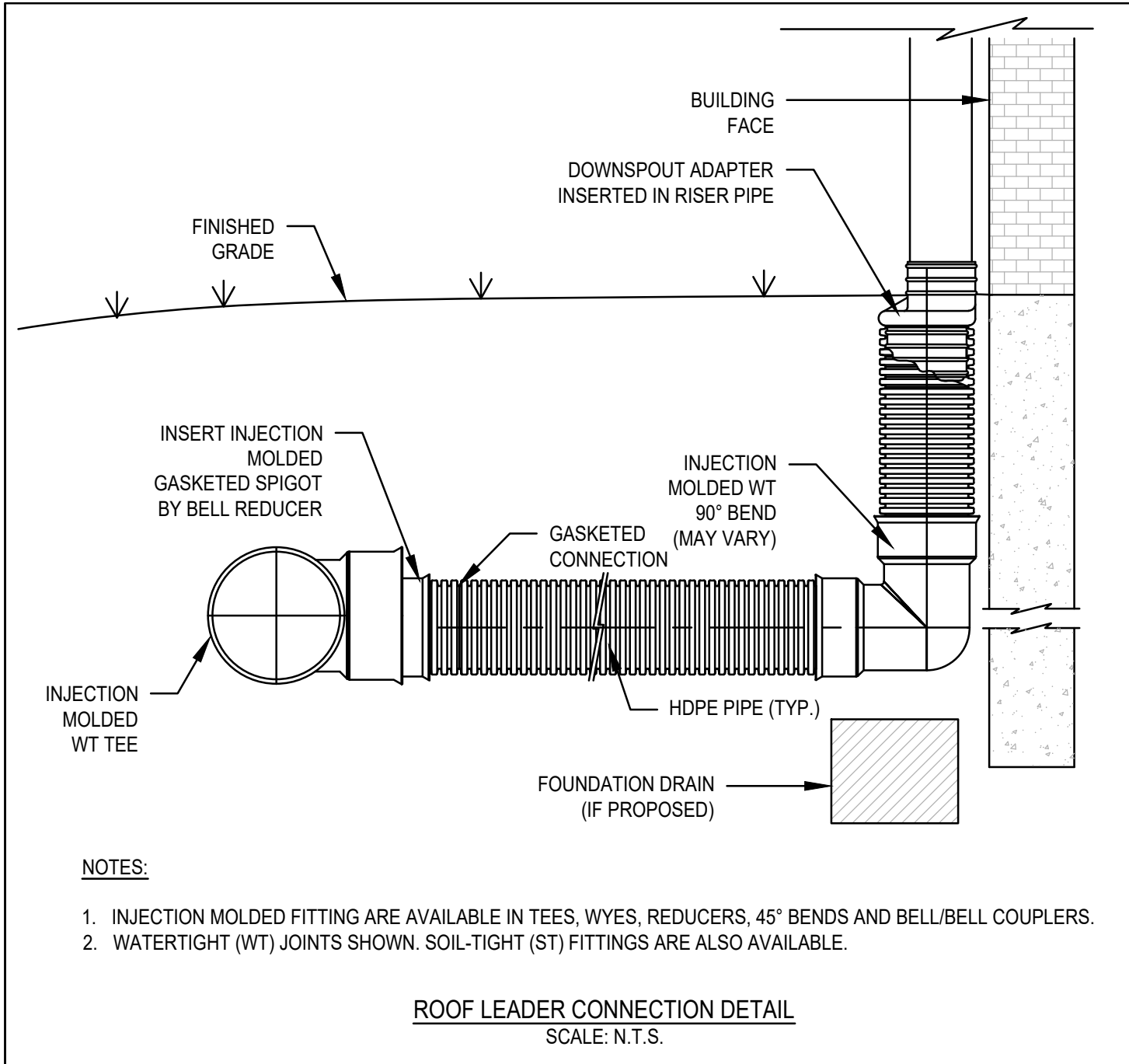
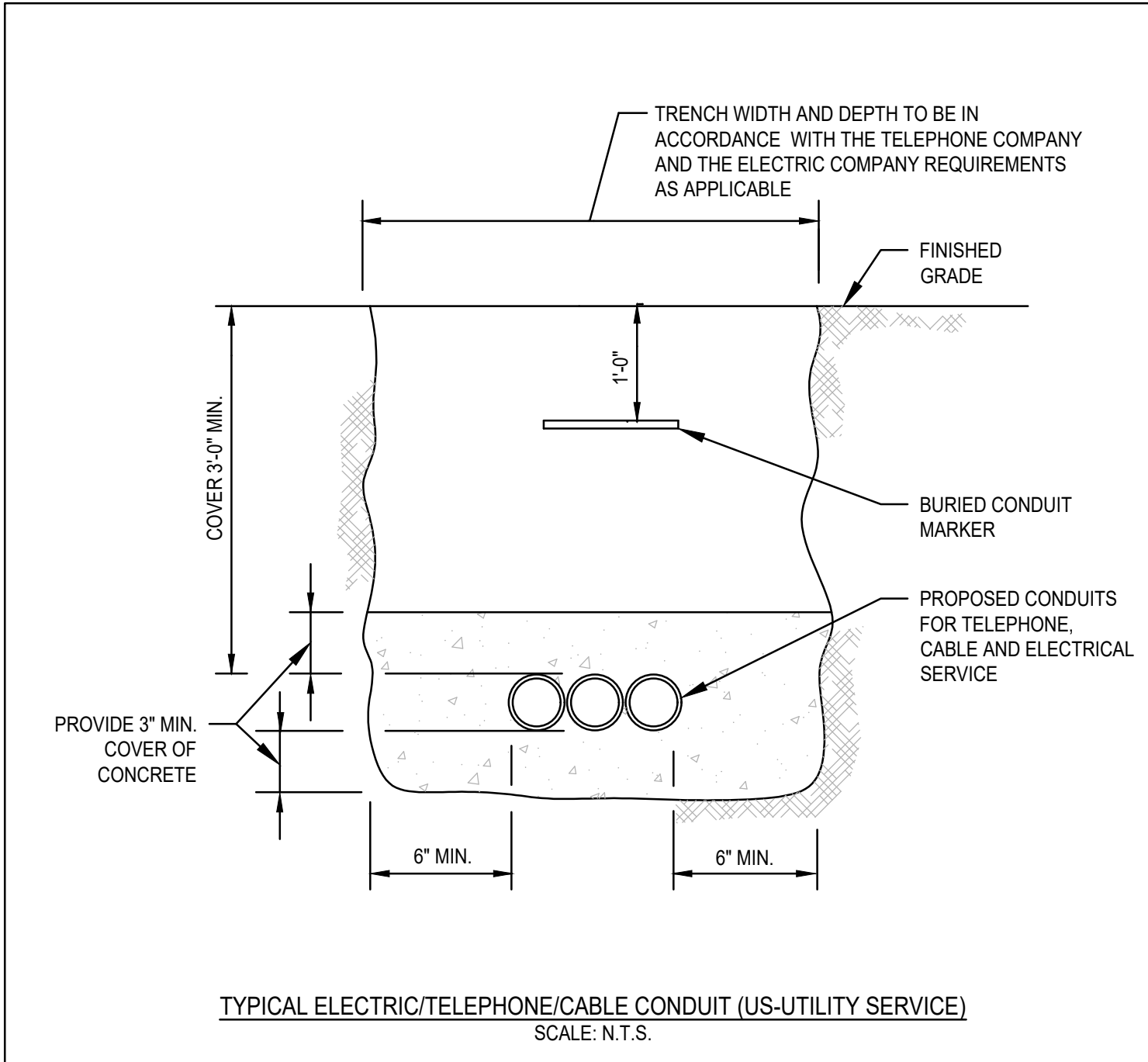
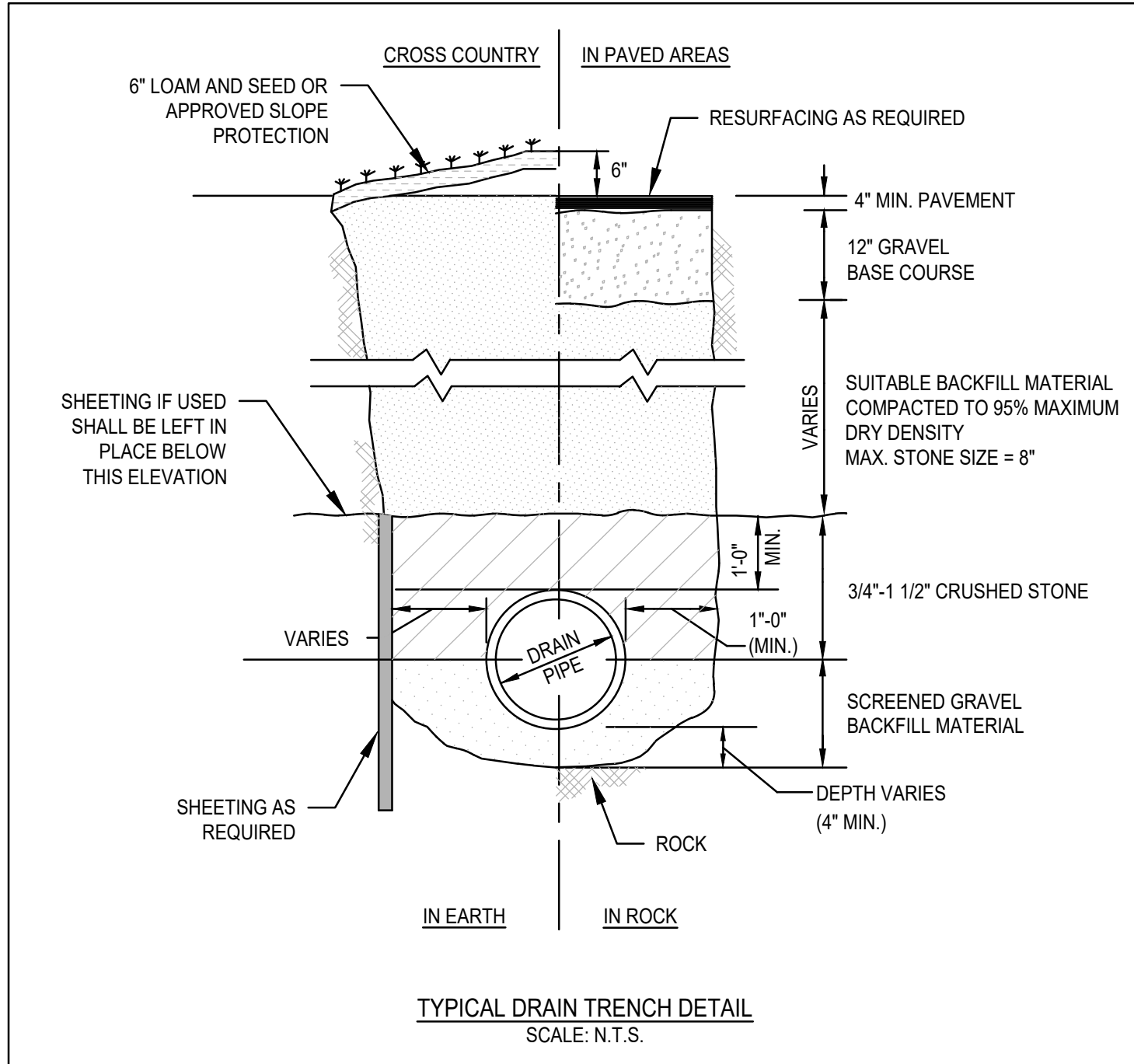
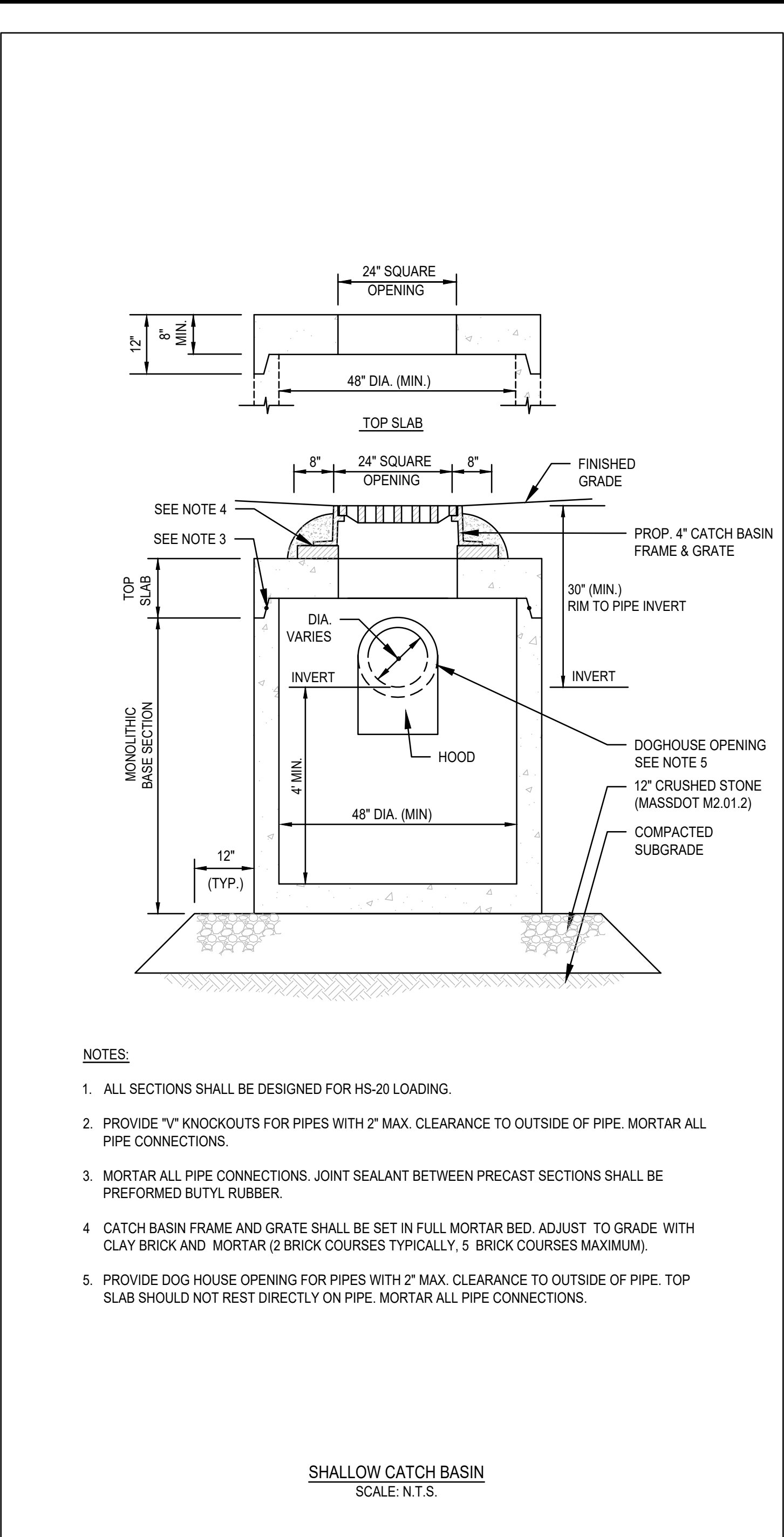
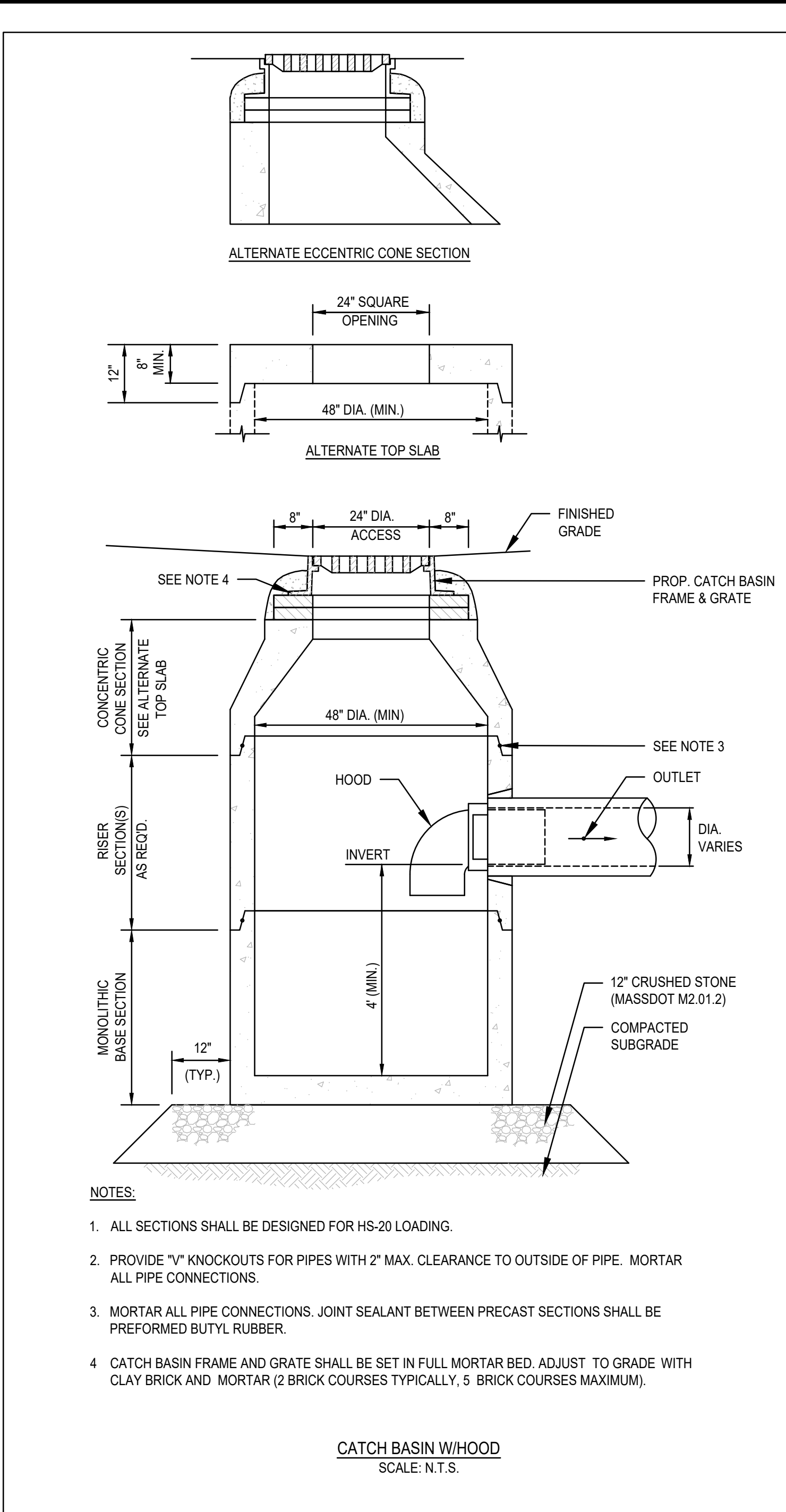
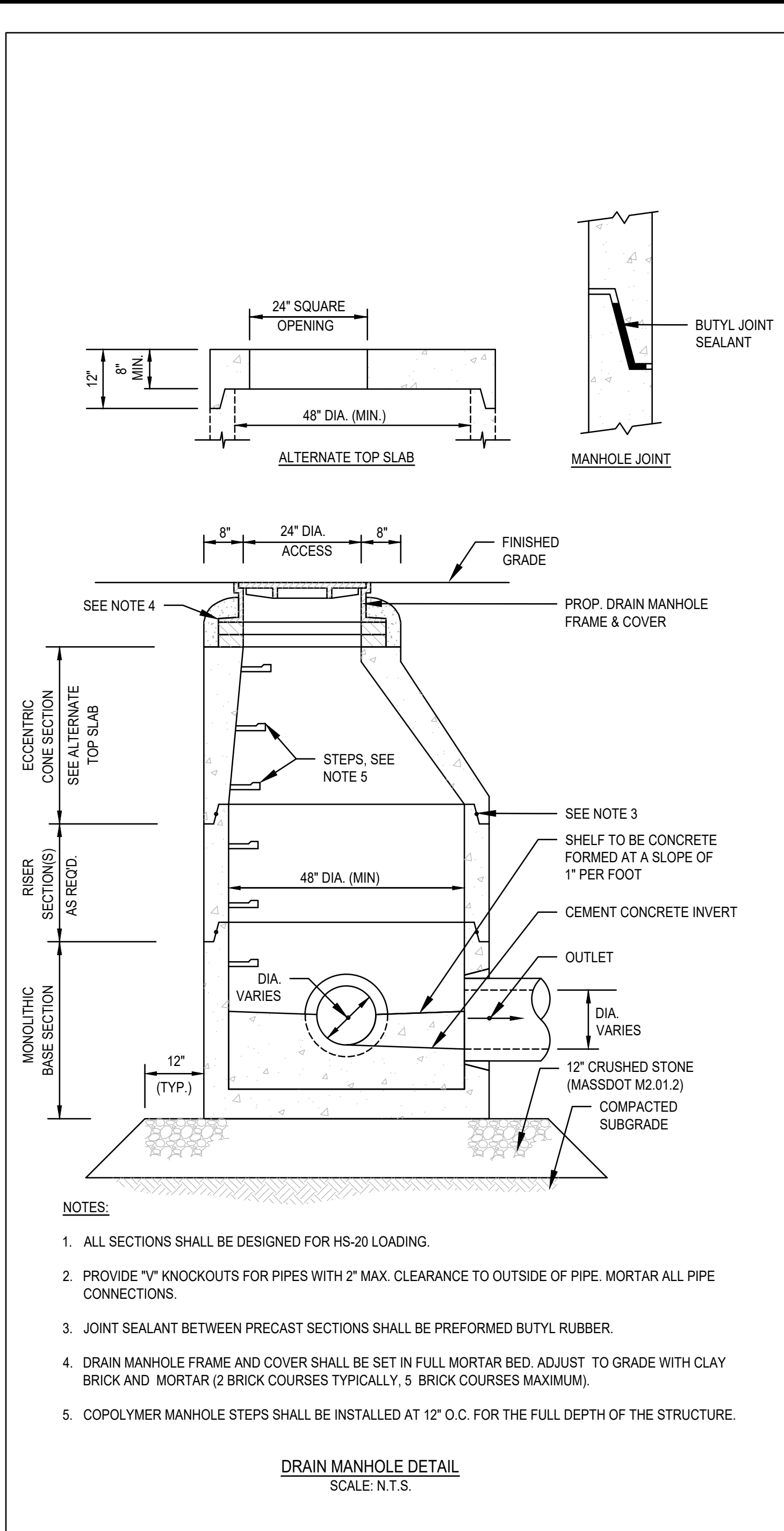
SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

CONSTRUCTION DETAILS

DWG. NO



REV	DATE	DESCRIPTION	BY	APP

MCKENZIE ENGINEERING GROUP
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SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER:

BRADLEY C. MCKENZIE
CIVIL
No. 36917
REGISTERED PROFESSIONAL ENGINEER

OWNERS/APPLICANT:
WALL STREET DEVELOPMENT CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

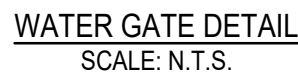
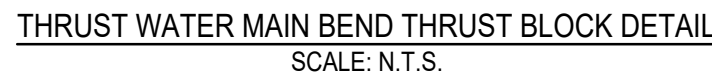
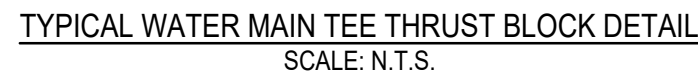
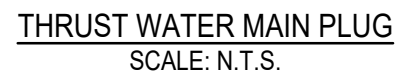
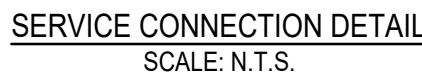
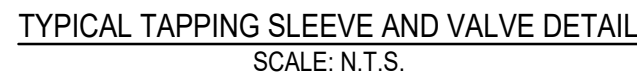
PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

CONSTRUCTION DETAILS

DWG. NO:
D-2

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



THRUST BLOCK DETAILS
SCALE: N.T.S.

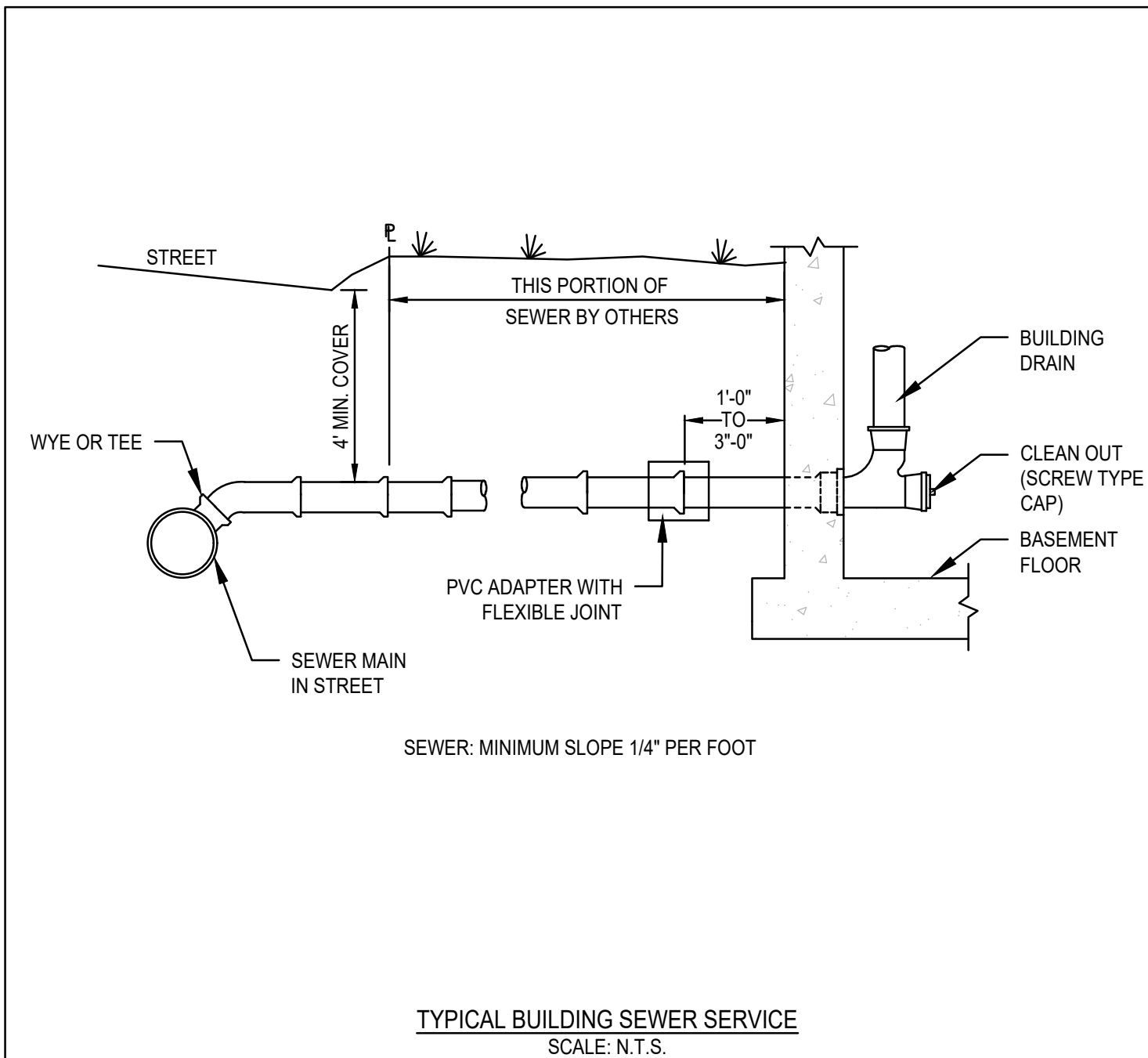
SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

CONSTRUCTION DETAILS

DWG. NO:



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

PERMIT PLAN SET

DWG. NO

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. STABILIZATION PRACTICES FOR EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED

- ## EROSION AND SEDIMENTATION CONTROL

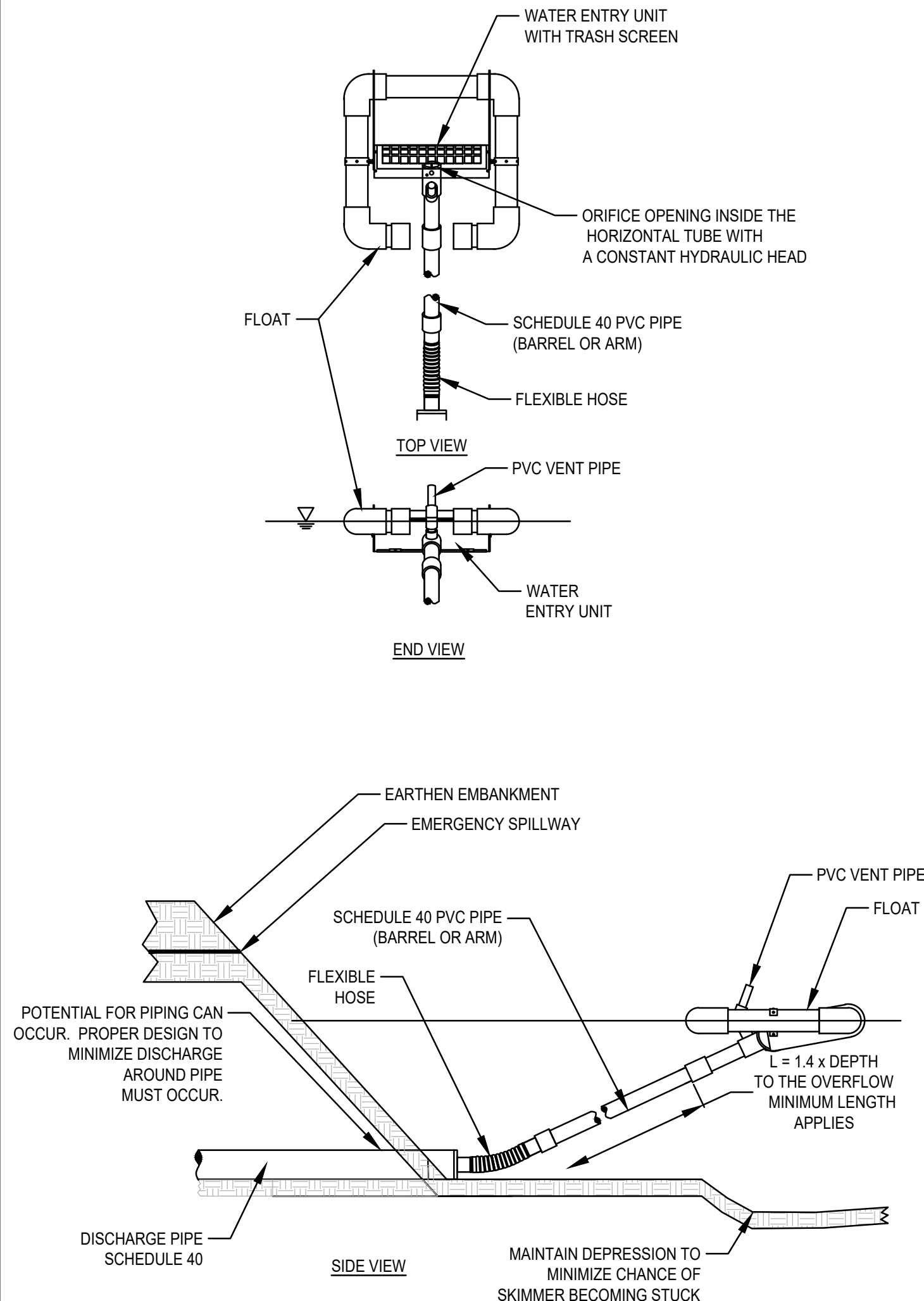
-
- The image contains two technical drawings of a trench repair. The top drawing is a **PROFILE** view, showing a cross-section of the trench. It features a horizontal line representing the ground surface, with a hatched area below it labeled **EXISTING PAVEMENT**. A horizontal dimension line above the profile indicates a length of **50' MINIMUM**. A vertical arrow points to the bottom of the trench, labeled **6" MIN.**. A horizontal line within the trench is labeled **GEOTEXTILE FILTER FABRIC**. The bottom drawing is a **PLAN VIEW**, showing a top-down view of the trench. It features a horizontal line representing the ground surface, with a hatched area below it labeled **EXISTING PAVEMENT**. A horizontal dimension line above the plan view indicates a length of **50' MINIMUM**. A vertical dimension line to the right of the plan view indicates a width of **10'**. A horizontal dimension line to the right of the plan view indicates a width of **10' MIN.**. A vertical line within the plan view is labeled **1" TO 2" COARSE AGGREGATE (TYP.)**. The label **EXISTING PAVEMENT** is also present on the right side of the plan view.

(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.

STABILIZED CONSTRUCTION ENTRANCE (SCE) DETAIL
SCALE: N.T.S.

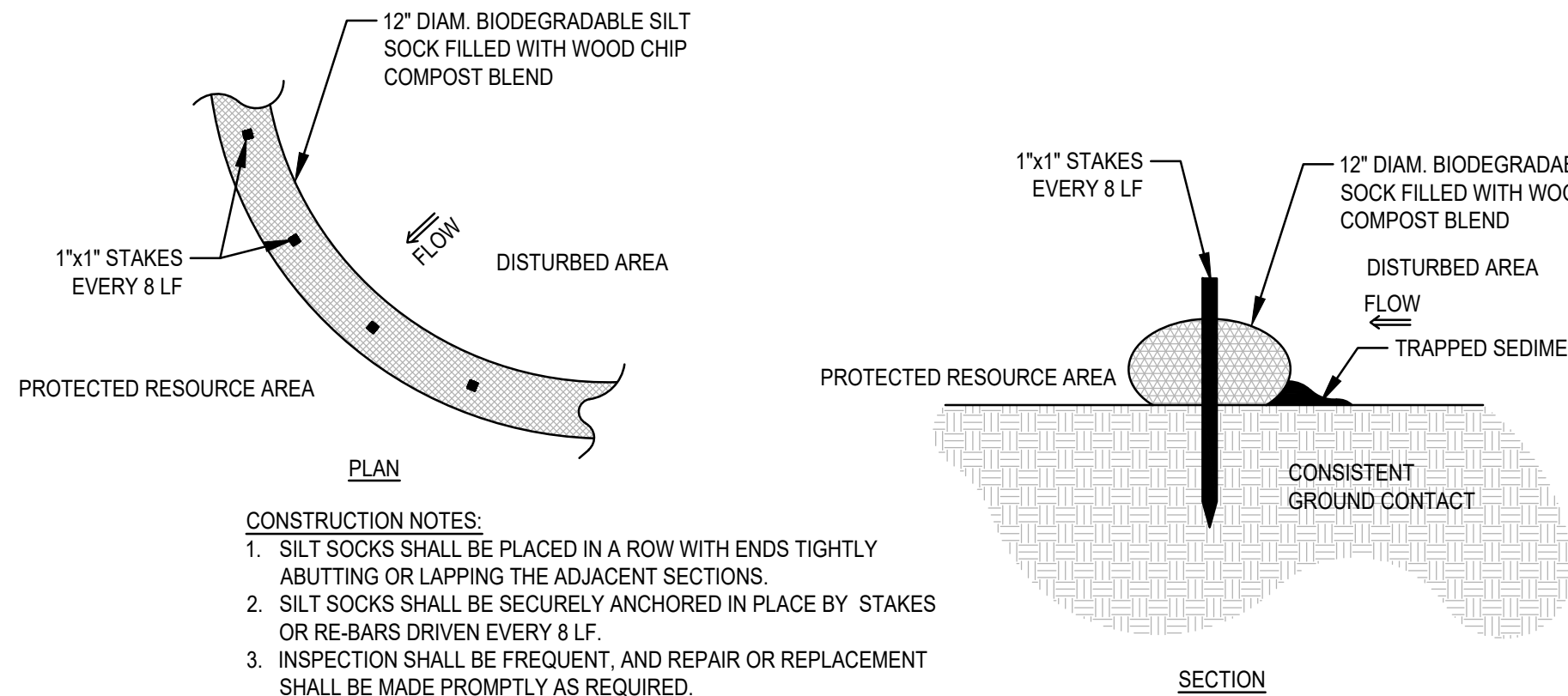
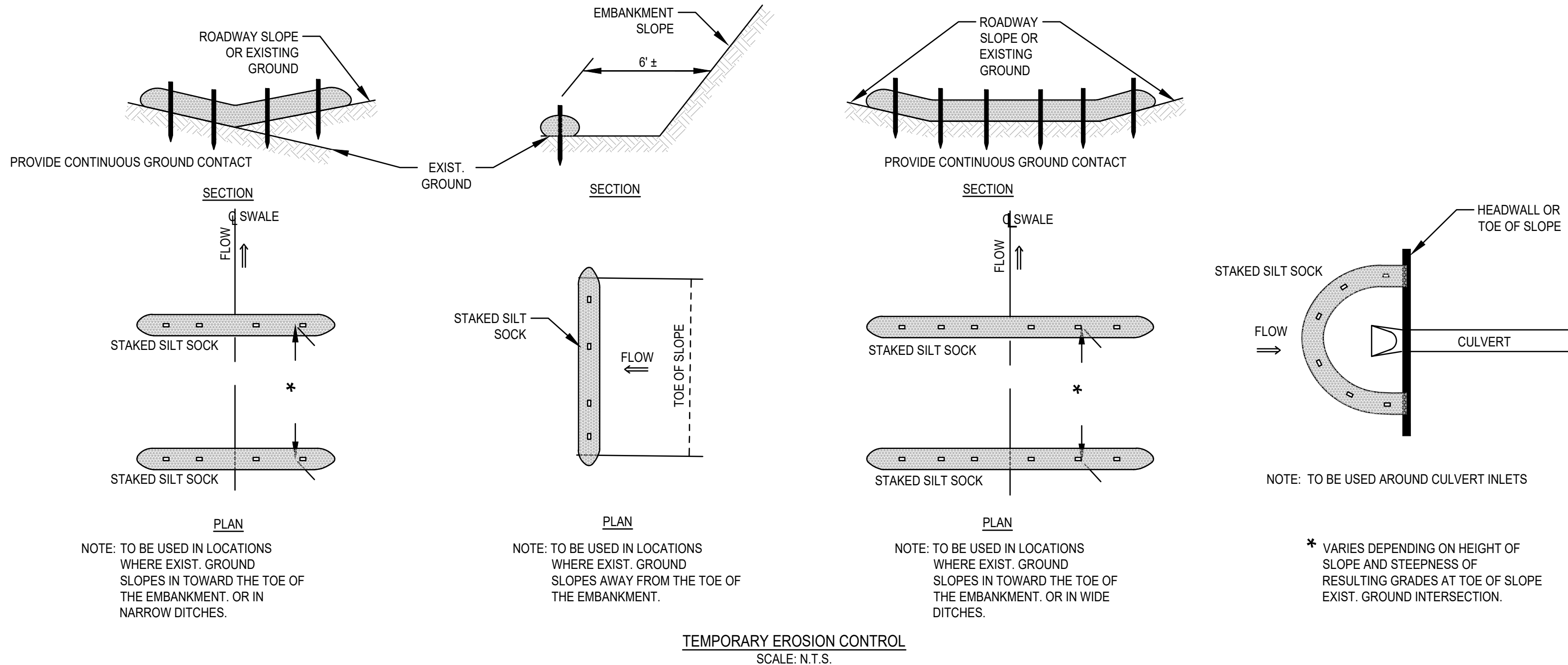
1. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED UNDER THE E.P.A. GENERAL CONSTRUCTION PERMIT PROVISIONS FOR FURTHER DETAIL OF STRUCTURAL, STABILIZATION, DUST CONTROL AND EROSION AND SEDIMENTATION CONTROL MEASURES.
2. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, TEMPORARY DIVERSION SWALES WITH CHECK DAMS, SEDIMENT BASINS, AND INLET PROTECTION.
3. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.
4. OPERATOR PERSONNEL MUST INSPECT THE CONSTRUCTION SITE AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 1/2 INCH OR GREATER. THE INSPECTOR SHOULD REVIEW THE EROSION AND SEDIMENT CONTROLS WITH RESPECT TO THE FOLLOWING:
 - A. WHETHER OR NOT THE MEASURE WAS INSTALLED/PERFORMED CORRECTLY
 - B. WHETHER OR NOT THERE HAS BEEN DAMAGE TO THE MEASURE SINCE IT WAS INSTALLED OR PERFORMED
 - C. WHAT SHOULD BE DONE TO CORRECT ANY PROBLEMS WITH THE MEASURE.
5. THE INSPECTOR SHALL COMPLETE THE INSPECTION SCHEDULE AND EVALUATION CHECKLIST FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR. THE CHECKLIST IS PROVIDED WITHIN THE OPERATION AND MAINTENANCE PLAN.
6. THE TEMPORARY BASINS SHALL BE INSPECTED AND CLEANED IF REQUIRED PRIOR TO ANY PREDICTED LARGE STORM EVENT.



GENERAL NOTES

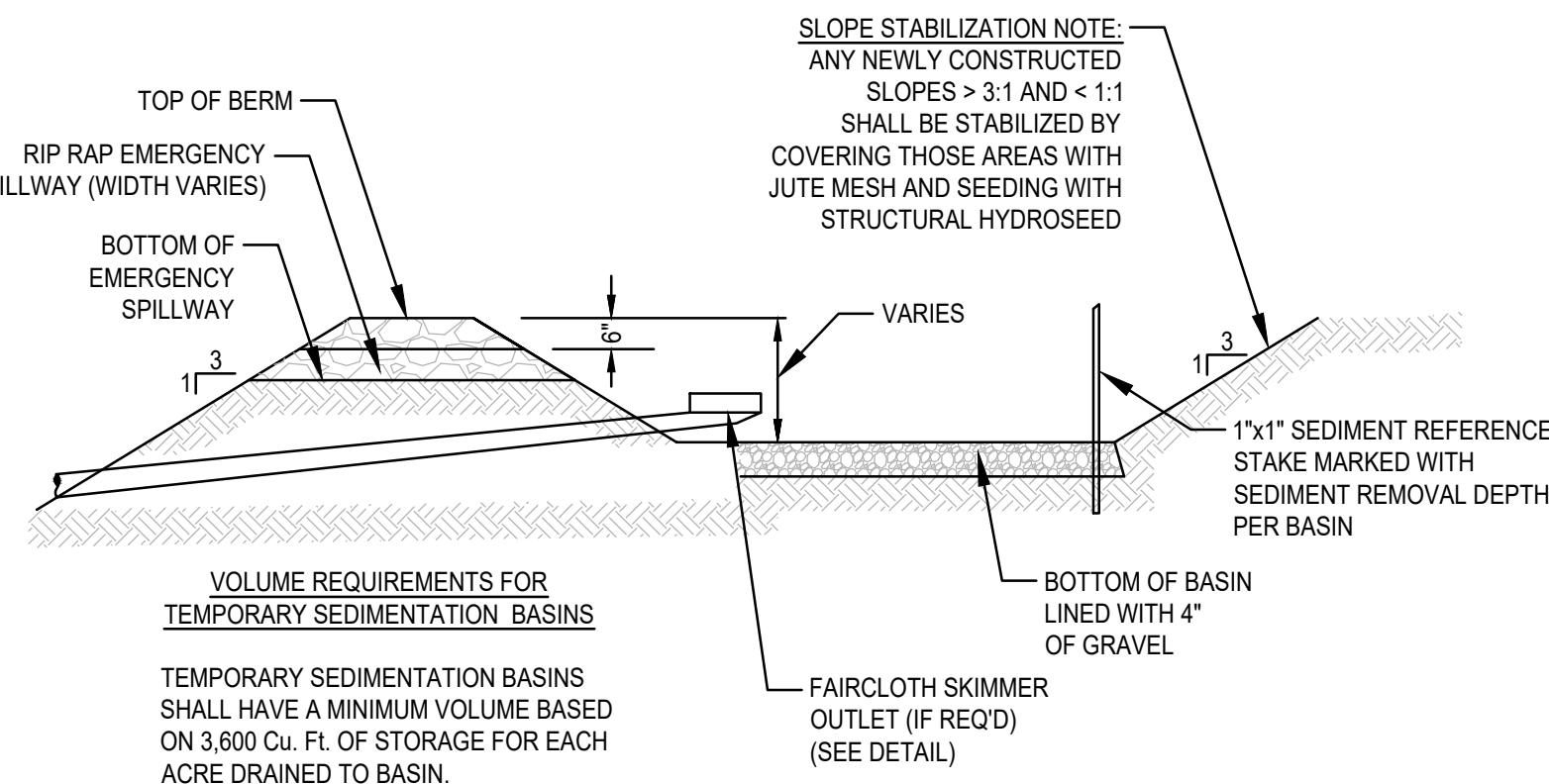
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PILING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY 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.

FAIRCLOTH SKIMMER DISCHARGE SYSTEM W/EMBANKMENT
SCALE: N.T.S.

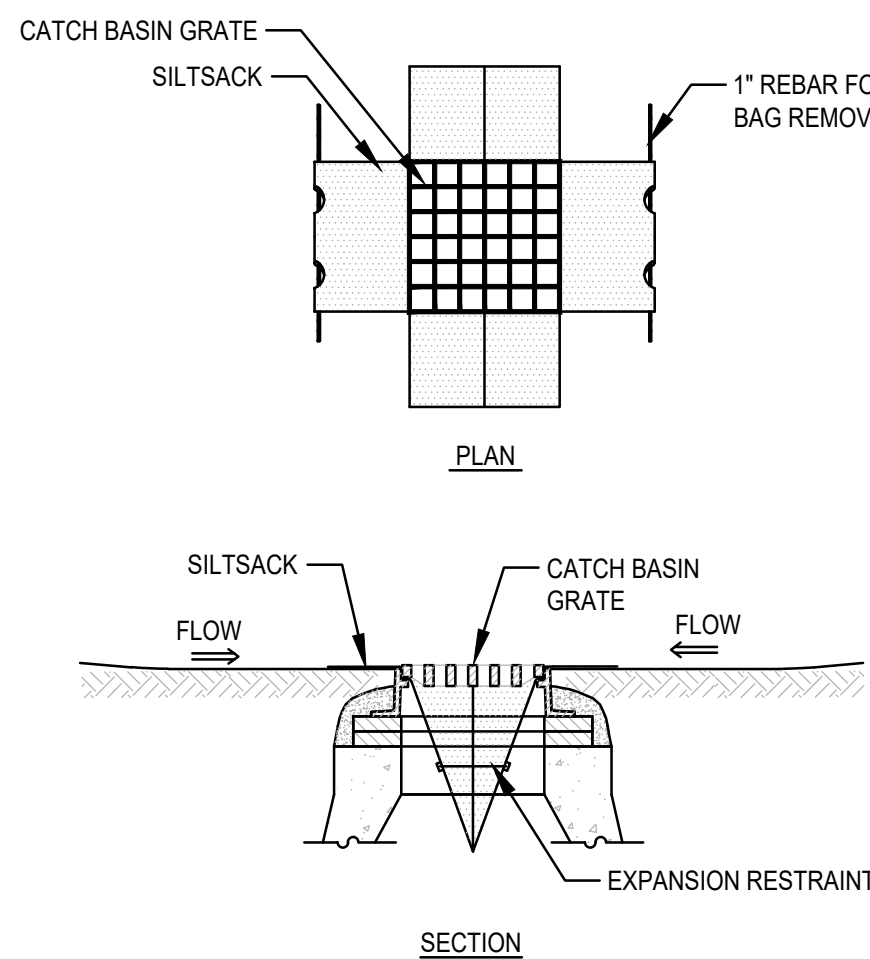


SILT SOCK EROSION CONTROL BARRIER DETAIL
SCALE: N.T.S.

- CONSTRUCTION NOTES:**
1. SILT SOCKS SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING OR LAPPING THE ADJACENT SECTIONS.
 2. SILT SOCKS SHALL BE SECURELY ANCHORED IN PLACE BY STAKE OR RE-BARS DRIVEN EVERY 8 LF.
 3. INSPECTION SHALL BE FREQUENT, AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
 4. SILT SOCKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



TEMPORARY SEDIMENTATION BASIN
SCALE: N.T.S.



SILTSACK SEDIMENT TRAP
SCALE: N.T.S.

[illegible]

SITE DEVELOPMENT PLANS
(ASSESSOR'S MAP 57, PARCEL 70)
320 CONCORD STREET
ROCKLAND, MASSACHUSETTS

PROFESSIONAL ENGINEER



OWNERS/APPLICANT:
WALL STREET DEVELOPMENT
CORP.
2 WARTHIN CIRCLE
NORWOOD, MASSACHUSETTS 02062

PERMIT PLAN SET

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	OCTOBER 7, 2021
SCALE:	AS NOTED
PROJECT NO.:	221-187
DWG. TITLE:	

CONSTRUCTION DETAILS

DWG. NO

D-5

STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740 OR SC-310.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- 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 ASTM F2822 (POLYETHYLENE) OR ASTM F2418-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC 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 1.95 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 LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET, THE 60 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.

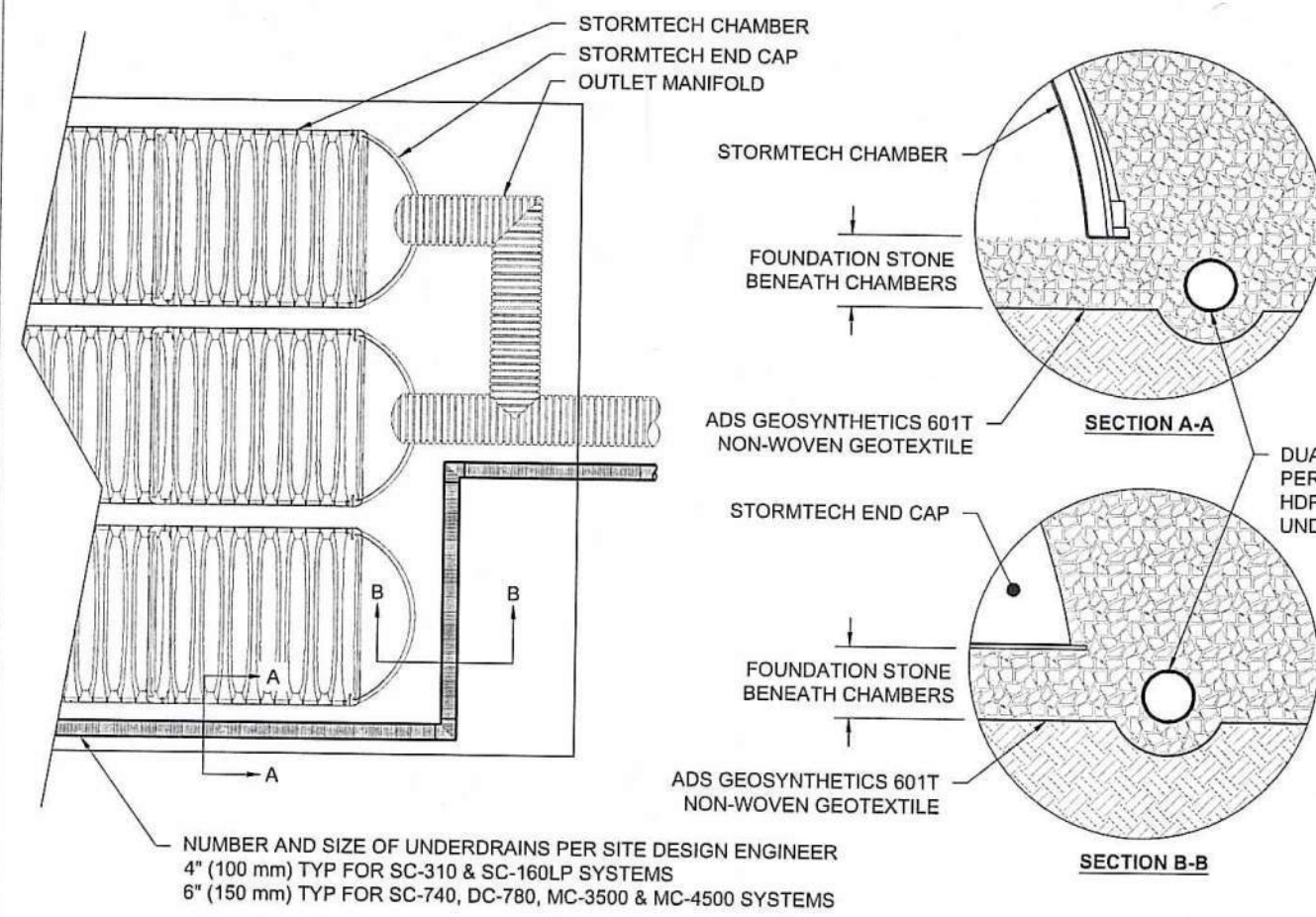
IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

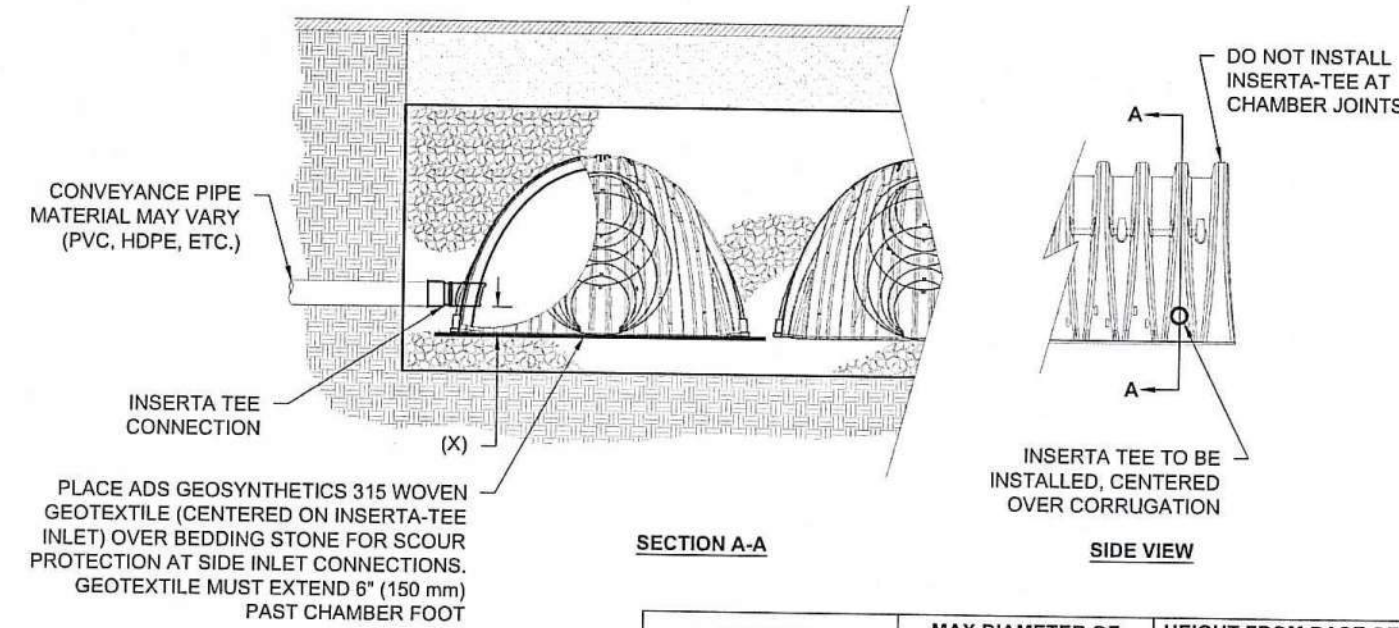
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



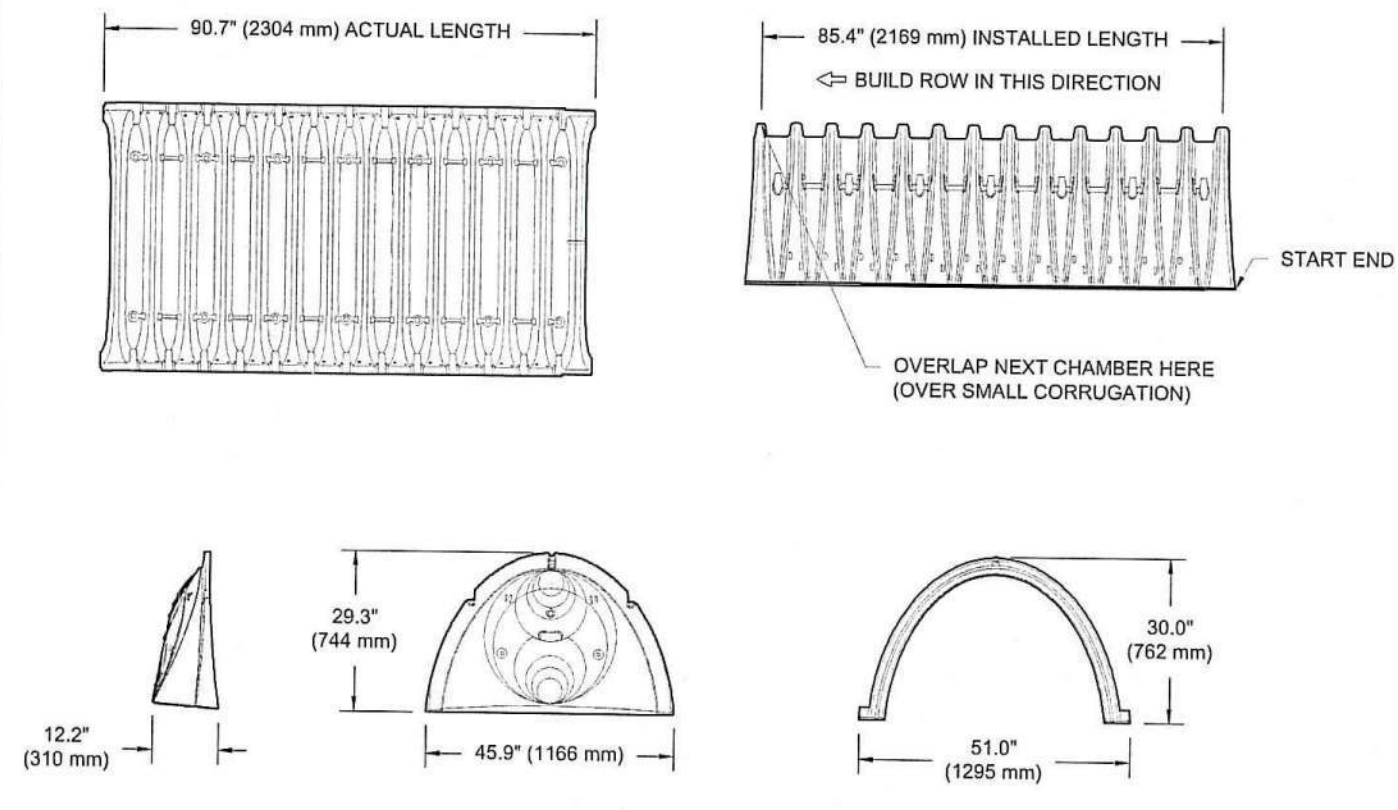
5 UNDERDRAIN DETAIL



NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	6" (150 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-600 OR DUCTILE IRON



NOMINAL CHAMBER SPECIFICATIONS	51.0" X 30.0" X 86.4" (1295 mm X 762 mm X 2169 mm)
SIZE (W X H X INSTALLED LENGTH)	45.9 CUBIC FEET (1.30 m³)
CHAMBER STORAGE	74.9 CUBIC FEET (2.12 m³)
MINIMUM INSTALLED STORAGE*	75.9 lbs. (33.6 kg)
WEIGHT	

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

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC740EP00T / SC740EP00TPC			18.5" (470 mm)	
SC740EP00B / SC740EP00BPC	6" (150 mm)	10.9" (277 mm)		0.5" (13 mm)
SC740EP00T / SC740EP00TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	
SC740EP00B / SC740EP00BPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.6" (15 mm)
SC740EP10T / SC740EP10TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	0.7" (18 mm)
SC740EP10B / SC740EP10BPC	14" (350 mm)	15.9" (404 mm)	10.5" (267 mm)	0.8" (20 mm)
SC740EP12T / SC740EP12TPC	16" (400 mm)	17.1" (433 mm)	8.5" (216 mm)	0.9" (23 mm)
SC740EP12B / SC740EP12BPC	18" (450 mm)	18.3" (465 mm)	6.5" (165 mm)	1.0" (25 mm)
SC740EP16T / SC740EP16TPC	20" (500 mm)	19.5" (495 mm)	4.5" (114 mm)	1.1" (28 mm)
SC740EP16B / SC740EP16BPC	22" (550 mm)	20.7" (526 mm)	2.5" (64 mm)	1.2" (30 mm)
SC740EP24B	24" (600 mm)	21.9" (557 mm)	0.5" (13 mm)	1.3" (33 mm)

ALL STUBS, EXCEPT FOR THE SC740EP24B 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 SC740EP24B 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

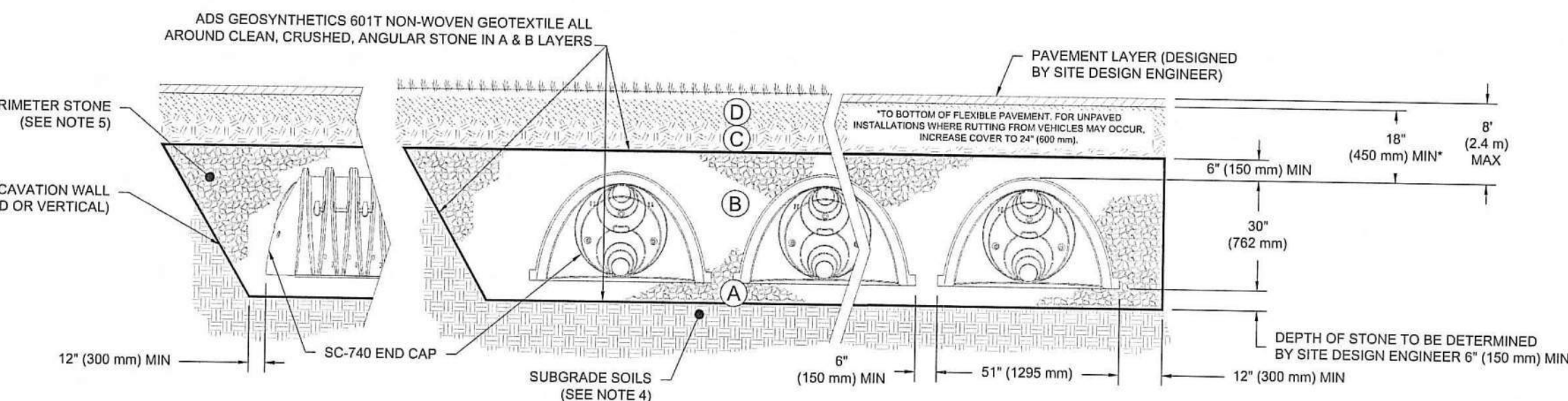
6 INSERTA-TEE SIDE INLET DETAIL

2 SC-740 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 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 ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ¹ 3, 357, 4, 457, 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 (53 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 ¹ 3, 357, 4, 457, 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 ¹ 3, 357, 4, 457, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

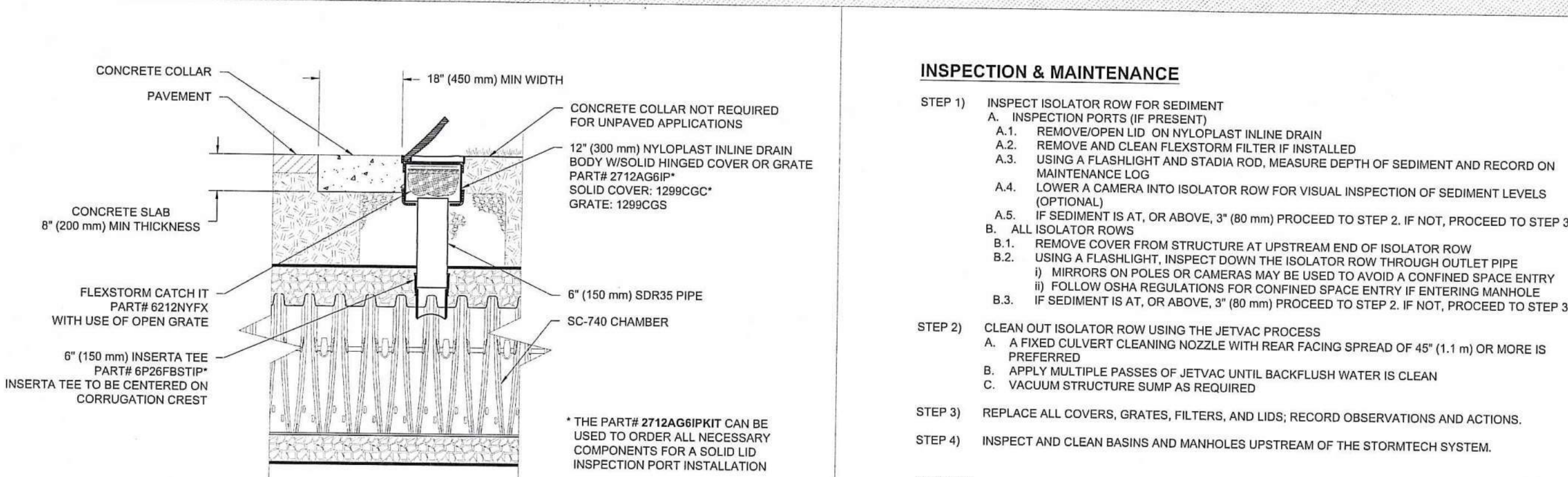
- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, NO. 4 (AASHTO M43) STONE.
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - 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 REQUIREMENTS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 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 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.
- SUBSOILS SHALL BE OVEREXCAVATED UNTIL THE NATIVE SAND AND GRAVEL MATERIALS ARE ENCOUNTERED.

SC-740 ISOLATOR ROW DETAIL



INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLOOD WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

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.