

ABANDONED  
ACP ASBESTOS CEMENT PIPE  
ACR ACCESSIBLE CURB RAMP  
ADJ ADJUST  
PPROX APPROXIMATE  
ASPH ASPHALT  
ACCOMP ASPHALT COATED CORRUGATED METAL PIPE  
B BOLLARD  
BOUND BOUND  
BLDG BUILDING  
CONC BITUMINOUS CONCRETE  
BM BENCHMARK  
CAP BOTTOM OF SLOPE  
CB CORRUGATED ALUMINUM PIPE  
CB CATCH BASIN  
C&C CUT AND CAPPED  
CB/DH CONC. BOUND/DRILL HOLE  
S/EPLP CB/ESCUTCHEON  
CCB CAPE COD BERM  
CIP CAST IRON PIPE  
CIT CHANGE IN TYPE  
C CENTERLINE  
CLN 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  
D DELTA ANGLE  
D DRAIN  
DCB DOUBLE CATCH BASIN  
DIP DUCTILE IRON PIPE  
DMH DRAIN MANHOLE  
E ELECTRIC  
ECC EXTRUDED CONCRETE CURB  
ELE ELEVATION  
EMH ELECTRIC MANHOLE  
E/T/C ELECTRIC, TELEPHONE, & CABLE TUBING  
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  
GRD GUARD RAIL  
GRAN GRANITE  
HDPE HIGH-DENSITY POLYETHYLENE PIPE  
HH HANDHOLE  
HOR HORIZONTAL  
HP HIGH PRESSURE  
HWL HEADWALL  
HYD HYDRANT  
INV INVERT  
IP IRON PIN  
I.R. IRON ROD  
L LEAD  
LSA LANDSCAPED AREA  
LP LIGHT POLE  
MAX MAXIMUM  
MC METAL COVER  
MH 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  
PVMT 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  
SGED STONE GRANITE EDGING  
SMH SEWER MANHOLE  
STA STATION  
SS SEWER SERVICE  
STL STEEL  
SW SIDEWALK  
T TELEPHONE  
TCB TRAFFIC CONTROL BOX  
TCL TRAFFIC LIGHT  
TMH TELEPHONE MANHOLE  
Tr 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

Existing	Proposed	Description
$\times 100.50$ $\frac{100.50}{100.00}$	$+ 100.50$ $\frac{100.50}{100.00}$	SPOT ELEVATIONS
$\frac{100.50}{100.00}$	$\frac{100.50}{100.00}$	TOP & BOTTOM ELEVATIONS
$\frac{100.50}{100.00}$	$\frac{100.50}{100.00}$	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 BOUNDARY
		WETLAND FLAG
		EXISTING BUILDING
		PROPOSED BUILDING
		MAJOR CONTOUR
		MINOR CONTOUR
		CHAINLINK FENCE
		CABLE TV LINE
		ELECTRIC, TELEPHONE, CABLE TV DUCTBANK
		UNDERGROUND ELECTRIC
		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



CARVER: FORMERLY ASSESSOR'S MAP 32 PORTION OF LOT 1-2  
LOCUS OWNER:  
RPPB, LLC  
3 MARION DRIVE  
CARVER, MASSACHUSETTS 02330

1. DEED BOOK REFERENCE: PLYMOUTH COUNTY REGISTRY OF DEEDS  
BOOK 50438, PAGE 270  
BOOK 51637, PAGE 211  
PLAN BOOK 63, PAGE 848
2. LOCUS IS FORMERLY SHOWN ON THE TOWN OF CARVER'S ASSESSOR'S MAP 32 AS PORTION OF PARCEL 1-2, TOTAL AREA = 82,851± S.F. (1.90 AC)
3. LOCUS IS LOCATED WITHIN THE TOWN OF CARVER'S WATER RESOURCE PROTECTION OVERLAY DISTRICT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
5. THE CONTRACTOR SHALL PROVIDE INLET PROTECTION, SUCH AS SILT SACKS, AT ALL CATCH BASINS TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER INFILTRATION BASINS. INLET PROTECTION WILL ALLOW THE STORM DRAIN INLETS TO BE BEFORE FINISH GRADE.
6. ALL EXISTING CONDITIONS INFORMATION, INCLUDING PERIMETER AND TOPOGRAPHIC INFORMATION WAS PREPARED FROM AN ON THE GROUND FIELD SURVEY PERFORMED BY MCKENZIE ENGINEERING GROUP, INC. IN FEBRUARY OF 2018.
7. THE PROPERTY SHOWN HEREON IS LOCATED IN THE TOWN OF CARVER SPRING STREET INNOVATION ZONING DISTRICT PER ZONING MAP DATED 2016.
8. 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. ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM AVAILABLE INFORMATION AND CONSTRUCTION AS THE LAND SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. BEFORE CONSTRUCTION CALL DIG SAFE SYSTEMS, INC. AT 1-888-344-7233.
9. ANY CHANGE IN THE FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER TO ENSURE THAT ANY MODIFICATIONS TO THE ORIGINAL DESIGN ARE PROPER AND ADEQUATE TO SERVE THE PROJECT'S NEEDS, AND COMPLY WITH THE APPLICABLE STANDARDS AND REGULATION.
10. LOCALS FALLS WITHIN ZONE X AS SHOWN ON F.I.R.M. PANEL NO: 25023C0334K DATED JULY 6, 2021.
11. ALL ELEVATIONS SHOWN REFER TO NAVD 1988 DATUM.
12. NO MUNICIPAL WATER SERVICE IS LOCATED ON SPRING STREET. THE PROPOSED BUILDINGS WILL USE PRIVATE WELLS THAT WILL BE APPROVED AND INSTALLED PER THE TOWN OF CARVER BOARD OF HEALTH REGULATIONS.
13. SEE PLANS ENTITLED "DEFINITIVE SUBDIVISION PLANS, RICKETTS POND BUSINESS PARK, SPRING STREET, CARVER, MASSACHUSETTS" PREPARED BY MEG DATED JANUARY 10, 2019 AND REVISED APRIL 2, 2019 FOR EXISTING AND PROPOSED SITE CONDITIONS FOR THE ADJACENT SUBDIVISION.

1. 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 EXISTING 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 PRIOR TO PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OCCUPY ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE CARVER DPW.
3. ALL WATER SERVICES SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
4. ALL POTABLE WELL WATER SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL, NATIONAL REQUIREMENTS.
5. AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CARVER DEPARTMENT OF PUBLIC WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
6. 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.
7. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH CARVER DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.

1. SEC 3341 PARKING LOT DESIGN:  

REQUIRED: "TO THE EXTENT FEASIBLE, REQUIRED PARKING AREAS SHALL NOT BE LOCATED FORWARD OF ANY BUILDING FRONT LINE ON THE LOT. NOTWITHSTANDING THE ABOVE, ANY DISTRICT EXCEPT FOR RA, V AND PTCD, THE PLANNING BOARD MAY GRANT PERMISSION IN THE COURSE OF SITE PLAN REVIEW TO LOCATE NOT MORE THAN EIGHT (8) PARKING SPACES IN FRONT OF THE PRINCIPAL BUILDING...."

PROVIDED: 20 TOTAL PARKING SPACES ARE PROVIDED IN FRONT OF THE TWO PROPOSED PRINCIPAL BUILDINGS.
2. SEC 3345 PARKING LOT DESIGN:  

REQUIRED: "FOR PARKING AREAS OF FIFTEEN (15) OR MORE SPACES, BICYCLE RACKS FACILITATING LOCKING SHALL BE PROVIDED TO ACCOMMODATE ONE BICYCLE PER FIVE (5) PARKING SPACES...."

PROVIDED: BICYCLE PARKING SPACES ARE NOT PROVIDED BY THIS SUBMISSION.
3. SEC 3130.G. SUBMITTAL REQUIREMENTS:  

REQUIRED: "EXISTING TREES 10" CALIPER OR BETTER AND EXISTING TREE/SHRUB MASSES; PROPOSED PLANTING, LANDSCAPING AND SCREENING;"

PROVIDED: DUE TO THE SIZE OF THE PROPOSED DEVELOPMENT, SPECIFIC LOCATIONS OF EXISTING TREES 10" CALIPER OR GREATER ARE NOT INCLUDED. OUR SUBMISSION WILL SHOW THE EXISTING TREELINE AS SURVEYED BY MCKENZIE ENGINEERING GROUP, INC.
4. SEC 3242 PARKING LOT PERIMETER LANDSCAPING:

PROVIDED: A LANDSCAPE BUFFER OF APPROXIMATELY 12 FT. IS PROVIDED ALONG THE SIDES OF EACH PARKING AREA FOR THE PROPOSED PRINCIPAL BUILDINGS. A LANDSCAPED BUFFER OF APPROXIMATELY 12 FT. IS PROVIDED ADJACENT TO EACH SIDE OF THE PROPERTY LINE. A 40 FT. LANDSCAPED BUFFER IS PROVIDED TO THE REAR PROPERTY LINE. THE SITE IS LOCATED WITHIN THE SPRING STREET INNOVATION ZONING DISTRICT, SPRING STREET RIGHT-OF-WAY IS LOCATED IN THE ROUTE 44 ZONING DISTRICT ADJACENT TO THE SUBDIVISION. THE SITE WILL NOT BE VISIBLE BY ANY RESIDENTIAL USES. THE 40' WIDE LOADING AREA BEHIND THE FRONT PRINCIPAL BUILDING HAS BEEN SIZED DUE TO THE REQUIRED MINIMUM TURNING RADIUS OF A BOX TRUCK ACCESSING THE LOADING DOCK. THE 40' WIDE LOADING AREA BEHIND THE FRONT PRINCIPAL BUILDING IS THE SITE AREA BASED ON THE MINIMUM REQUIRED WIDTH FOR TWO-WAY TRAFFIC BASED ON THE TECHNICAL JUSTIFICATION ABOVE. WE BELIEVE ADEQUATE PARKING LOT PERIMETER LANDSCAPING HAS BEEN PROVIDED.

No.	Drawing Title
G-1	LEGEND, ABBREVIATIONS & GENERAL NOTES
EX-1	EXISTING CONDITIONS PLAN
C-1	SITE LAYOUT PLAN
C-2	GRADING AND UTILITY PLAN
C-3	UTILITY PLAN
E-1	BUILDING ELEVATIONS
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
LA-1	LANDSCAPING PLAN
P-1	PHASING PLAN
D-1 - D-4	CONSTRUCTION DETAILS

The logo for McKenzie Engineering Group features the letters 'MEG' in a large, bold, sans-serif font. The 'M' and 'E' are dark grey, while the 'G' is a lighter grey. Below this, the words 'MCKENZIE' and 'ENGINEERING GROUP' are stacked in a smaller, all-caps, sans-serif font.

**MEG**  
**MCKENZIE**  
**ENGINEERING GROUP**

Assinippi Office Park  
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## PERMIT PLAN SET

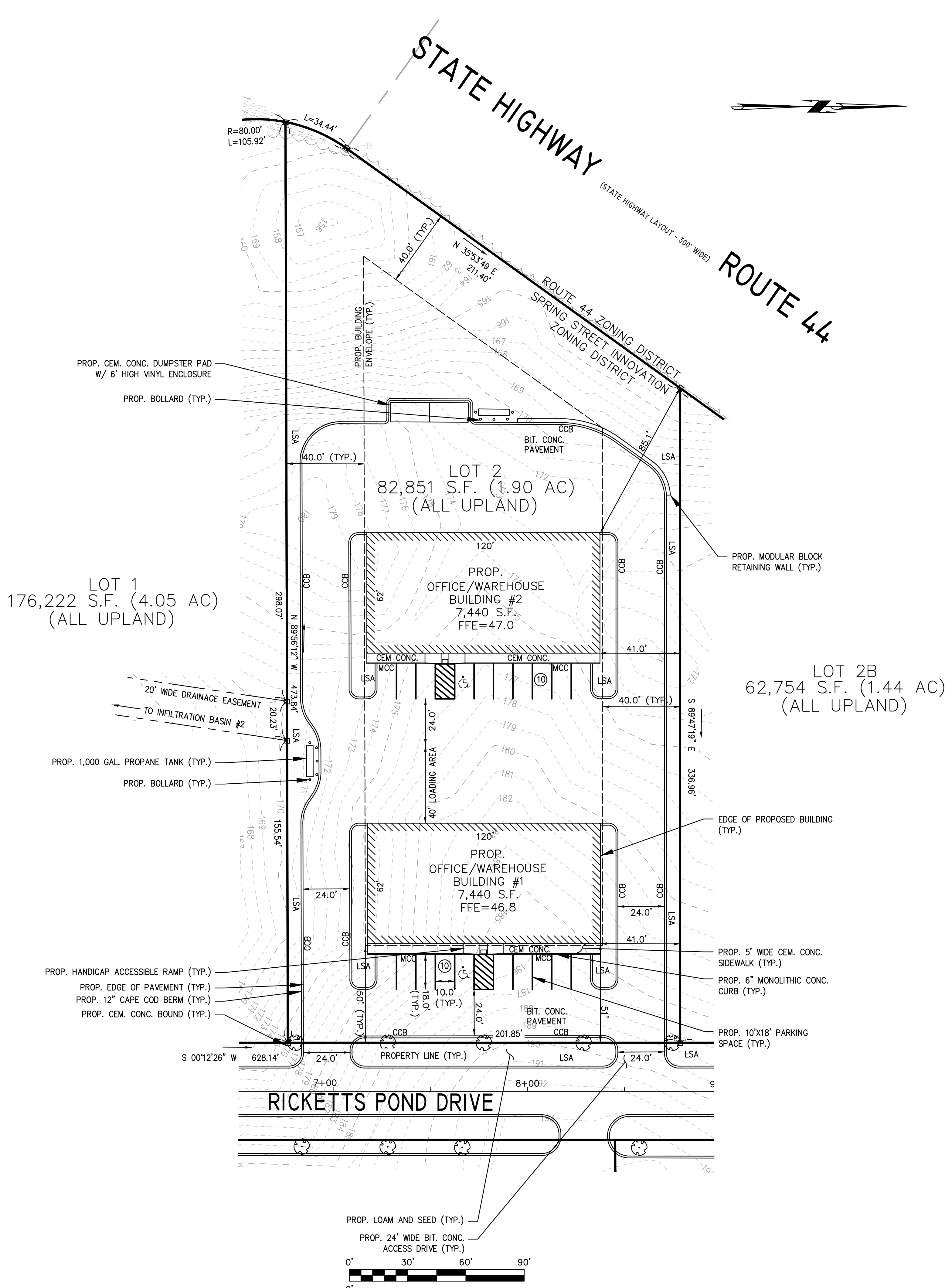
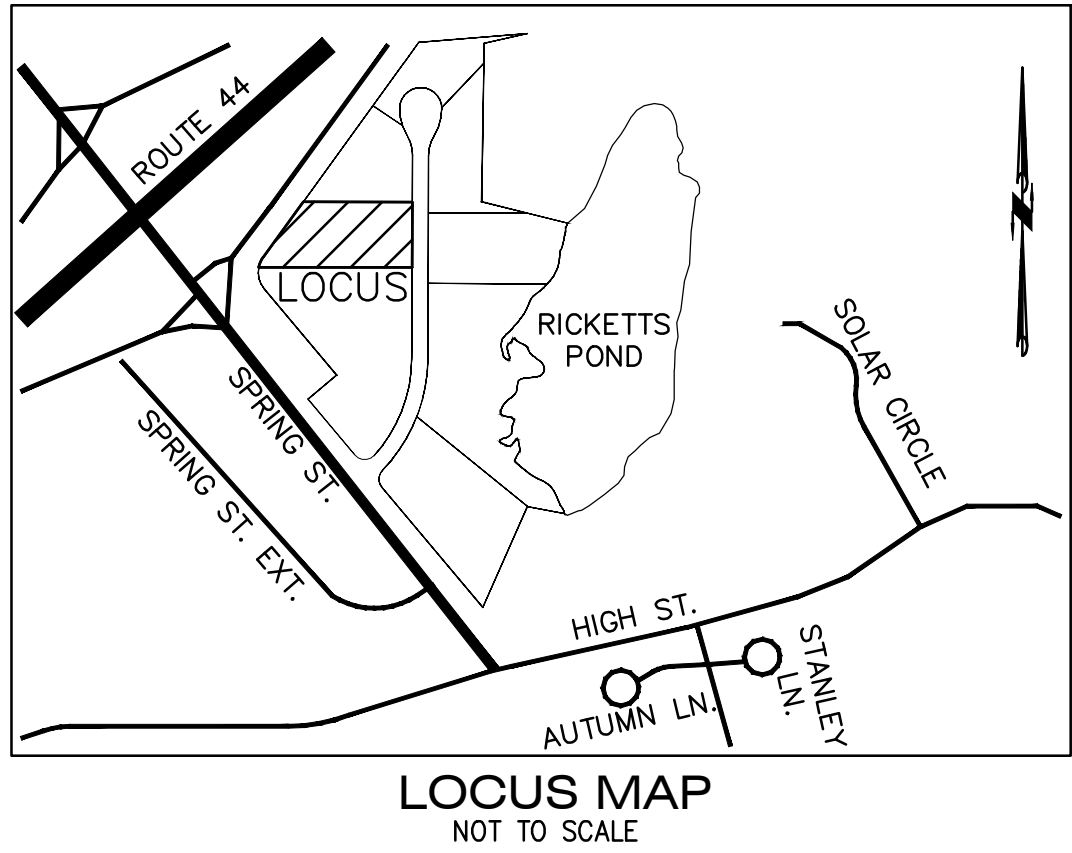
DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	1"=100'
PROJECT NO.:	221-190
DWG. TITLE:	

**G-1**









LAND USAGE TABLES

SECTION 2300: DIMENSIONAL REGULATIONS

SPRING STREET INNOVATION ZONING DISTRICT (SSID)		
CRITERIA	REQUIRED	PROPOSED
MIN. LOT AREA	60,000 S.F.	82,851 S.F.
MIN. FRONTAGE	175 FT.	201.85 FT.
MAX. BUILDING HEIGHT	40 FT.	<40 FT.
FRONT YARD BUILDING SETBACK	50 FT.	51.0 FT.
REAR YARD BUILDING SETBACK	40 FT.	85.1 FT.
SIDE YARD BUILDING SETBACK	40 FT.	41.0 FT.
MIN. LOT WIDTH AT BUILDING LINE	80 FT.	201.8 FT.
MAX. % OF LOT COVERED BY BUILDING	25%	18.0%

PARKING CALCULATIONS

SECTION 3300: TOWNWIDE PARKING AND LOADING REGULATIONS

CRITERIA	REQUIRED (CARVER ZONING BYLAW)	REQUIRED	PROPOSED
OFFICE	1 SPACE/250 S.F. GFA =(14,880 * 25%) / 250 S.F. = 14.9		
WAREHOUSE AND STORAGE	1 PER 2 EMPLOYEES BUT NOT LESS THAN 1 PER 5,000 S.F. (# EMPLOYEES IS UNKNOWN) =(14,880 * 75%) / 5,000 S.F. = 2.2	14.9 + 2.2 = 17.1	20 SPACES

PARKING NOTES

1. 20 TOTAL SPACES INCLUDES 2 AAB ACCESSIBLE SPACES 10'X18' WITH 2-8'X18' (VAN ACCESSIBLE SPACES, (521 CMR: ARCHITECTURAL ACCESS BOARD) ACCESSIBLE SPACES REQUIRED = 1 (1-25 TOTAL SPACES)

REV	DATE	DESCRIPTION	BY	APP

**MCKENZIE ENGINEERING GROUP**  
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SITE DEVELOPMENT PLANS  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

APPLICANT:

PETER SPRAGUE  
44 FOX DEN ROAD  
KINGSTON, MA 02364

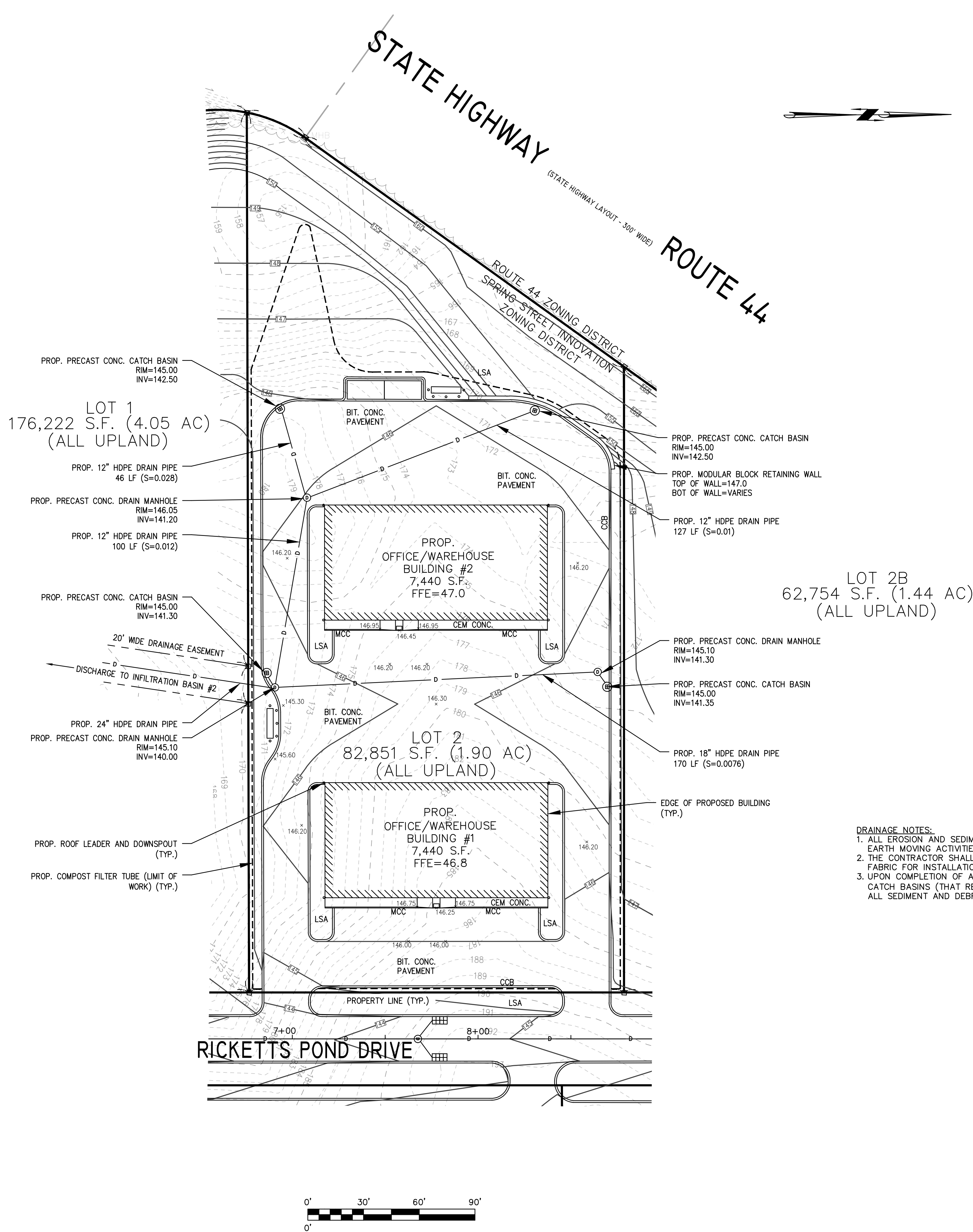
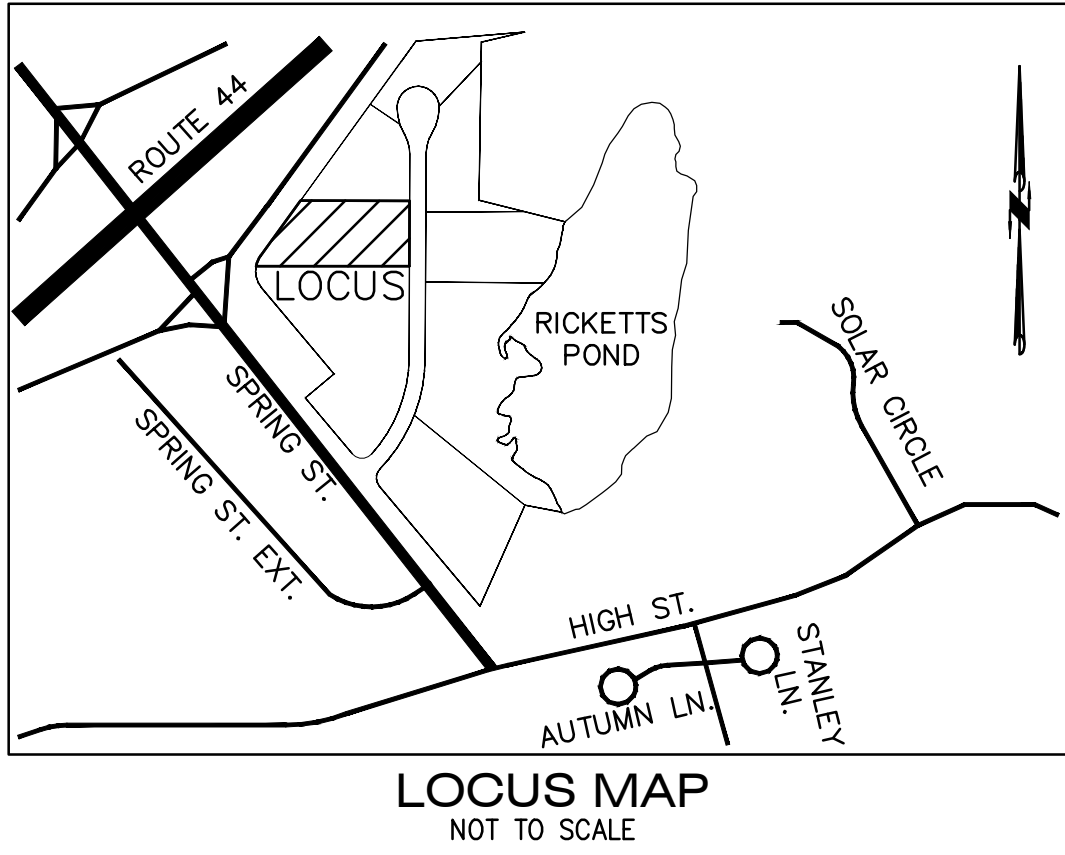
PERMIT PLAN SET

APPLICANT: PETER SPRAGUE  
44 FOX DEN ROAD  
KINGSTON, MA 02364

DRAWN BY: ESS  
DESIGNED BY: ESS  
CHECKED BY: BCM  
APPROVED BY: BCM  
DATE: FEBRUARY 28, 2022  
SCALE: 1"=30'  
PROJECT NO.: 221-190  
DWG. TITLE: SITE LAYOUT PLAN

DWG. NO: C-1





SEE "DEFINITIVE PLAN SET, RICKETTS POND BUSINESS PARK, OFF SPRING STREET, CARVER, MASSACHUSETTS" BY MCKENZIE ENGINEERING GROUP, INC. DATED JANUARY 10, 2019 FOR SUBDIVISION AND INFILTRATION BASIN DESIGN.

- 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.

REV	DATE	DESCRIPTION	BY	APP

**MCKENZIE ENGINEERING GROUP**  
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**SITE DEVELOPMENT PLANS  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS**

PROFESSIONAL ENGINEER:

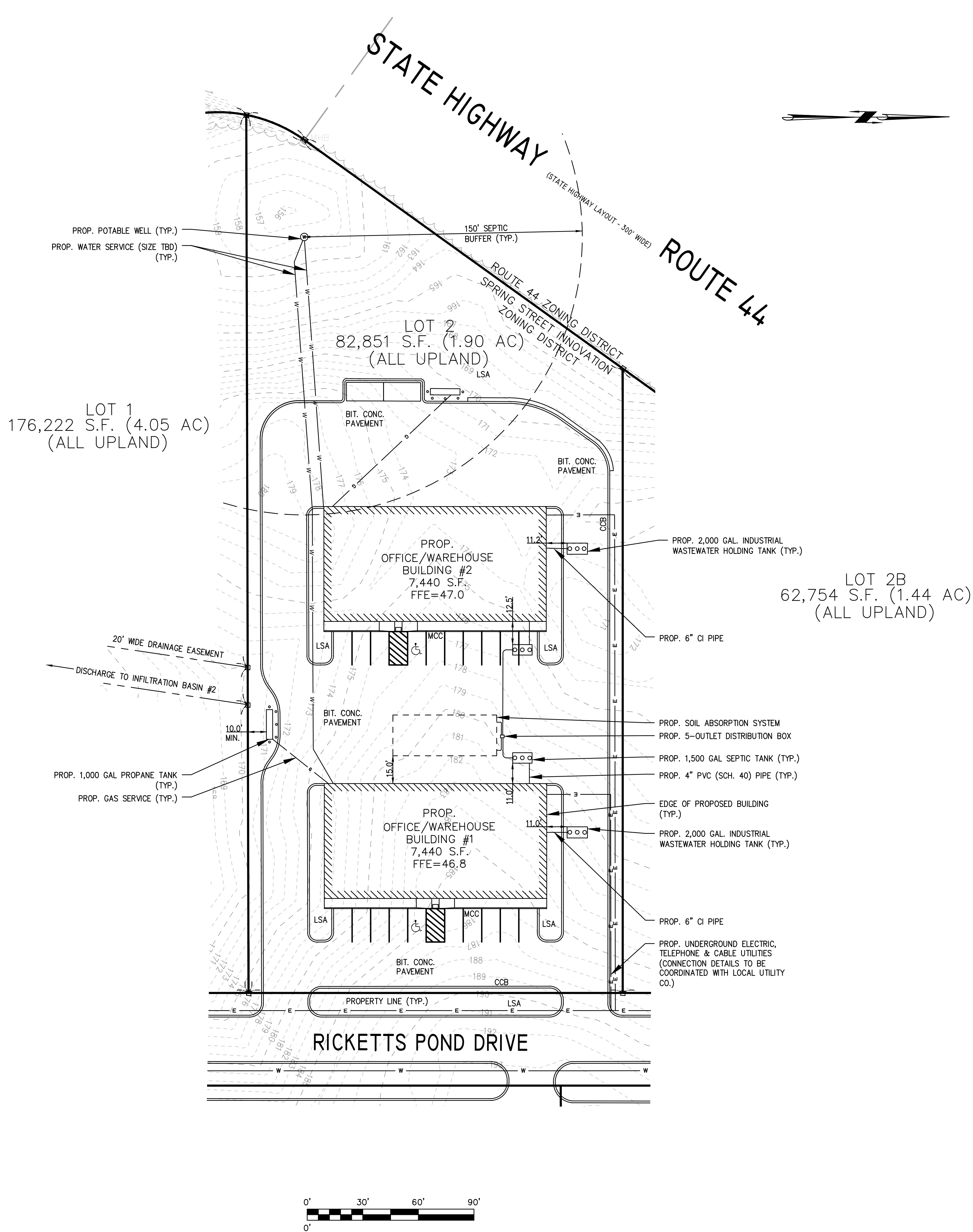
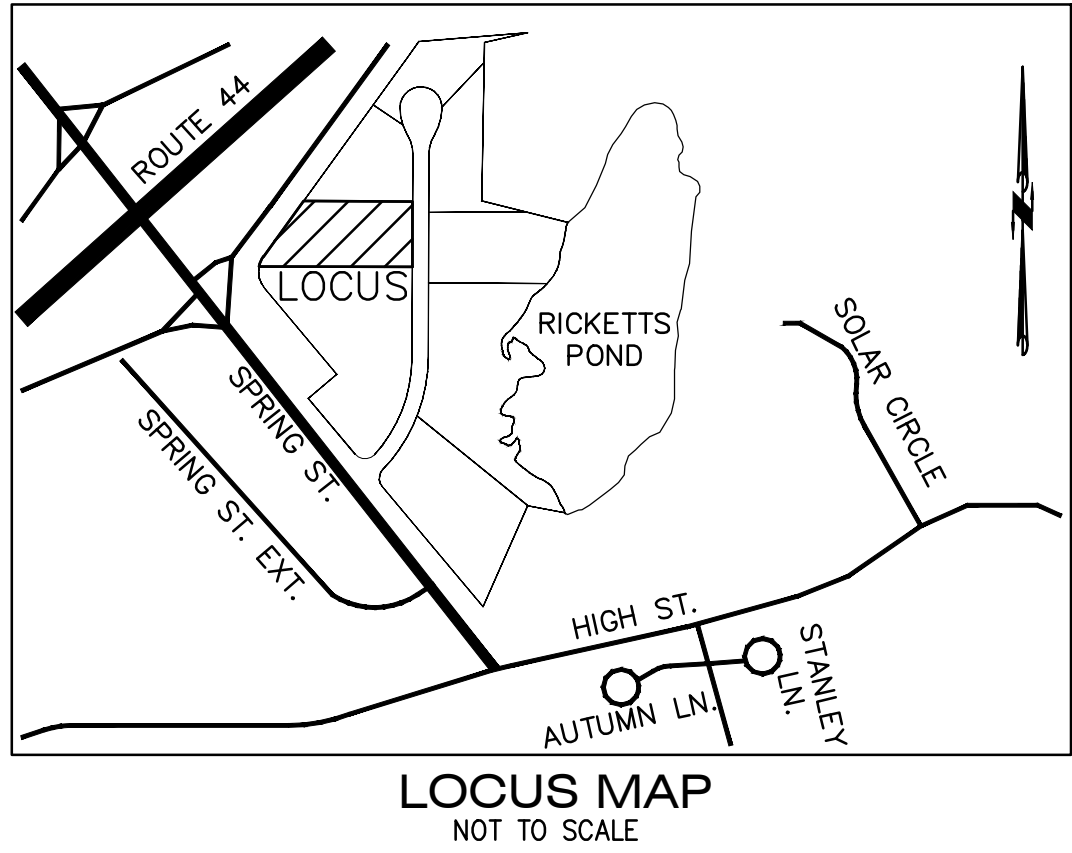
APPLICANT:  
**PETER SPRAGUE**  
44 FOX DEN ROAD  
KINGSTON, MA 02364

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	1" = 30'
PROJECT NO.:	221-190
DWG. TITLE:	

**GRADING AND  
UTILITY PLAN**

DWG. NO: **C-2**





REV	DATE	DESCRIPTION	BY	APP

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**SITE DEVELOPMENT PLANS  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS**

PROFESSIONAL ENGINEER:

APPLICANT:  
**PETER SPRAGUE  
44 FOX DEN ROAD  
KINGSTON, MA 02364**

DRAWN BY:	ESS
DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	1" = 30'
PROJECT NO.:	221-190
DWG. TITLE:	UTILITY PLAN

DWG. NO: **C-3**





FRONT ELEVATION  
NOT TO SCALE



FRONT ELEVATION  
NOT TO SCALE



REAR ELEVATION  
NOT TO SCALE

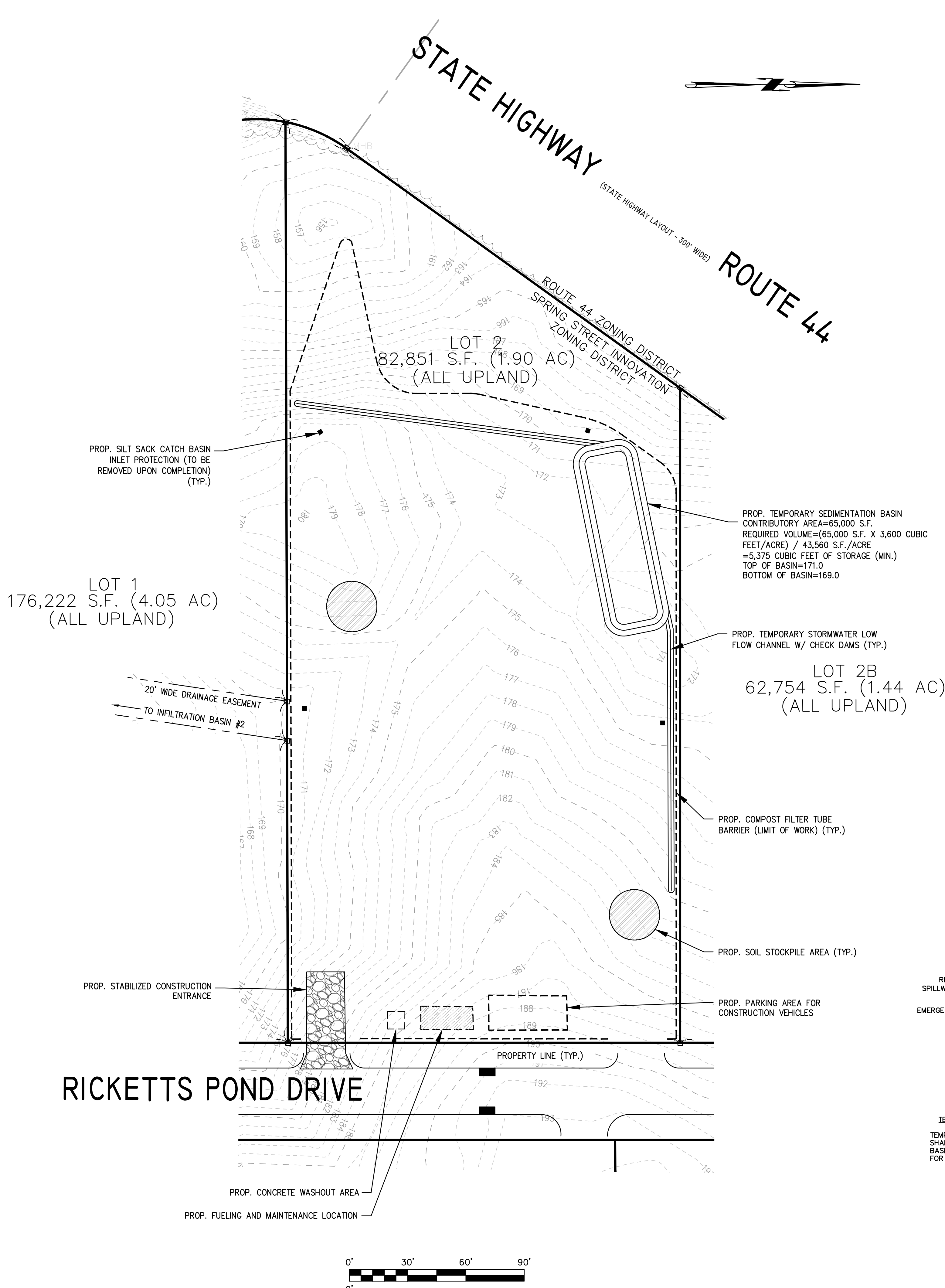
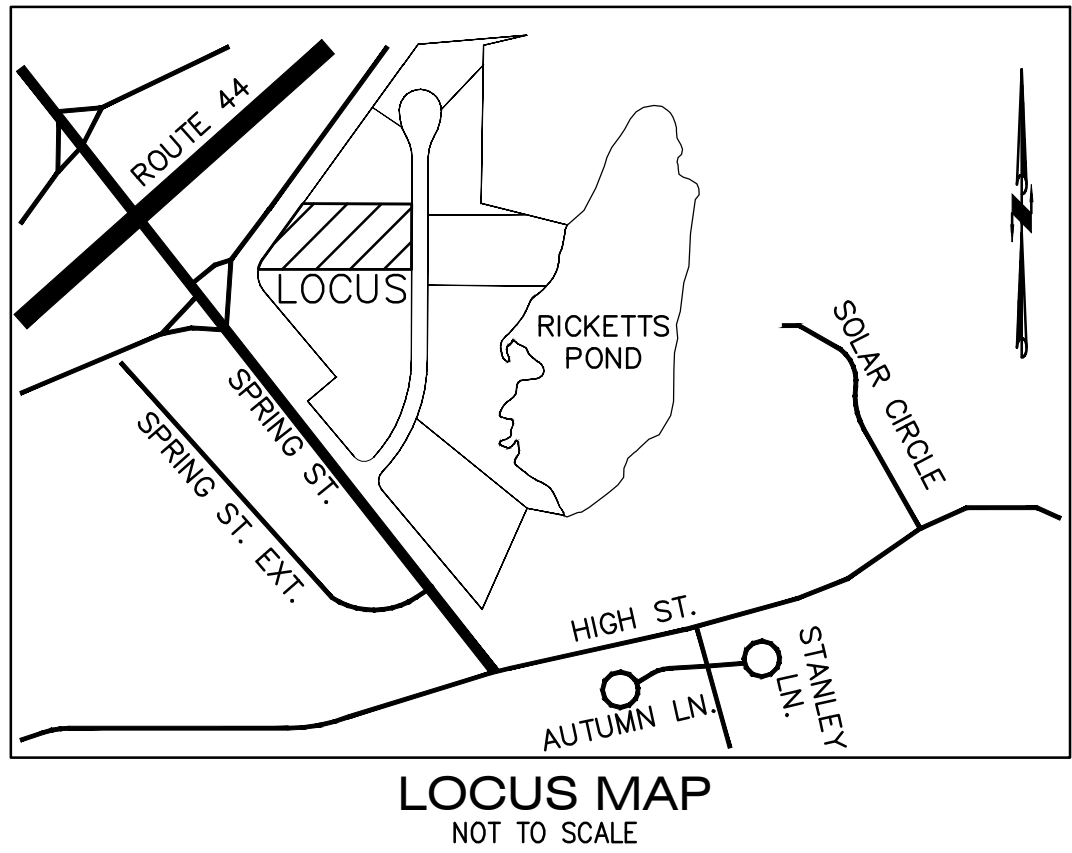
REV	DATE	DESCRIPTION	BY	APP

**MCKENZIE**  
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**SITE DEVELOPMENT PLANS**  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:		PERMIT PLAN SET
APPLICANT: PETER SPRAGUE 44 FOX DEN ROAD KINGSTON, MA 02364		
DRAWN BY: ESS		
DESIGNED BY: ESS		
CHECKED BY: BCM		
APPROVED BY: BCM		
DATE: FEBRUARY 28, 2022		
SCALE: NOT TO SCALE		
PROJECT NO.: 221-190		
DWG. TITLE: <b>BUILDING ELEVATIONS</b>		
DWG. NO: <b>E-1</b>		





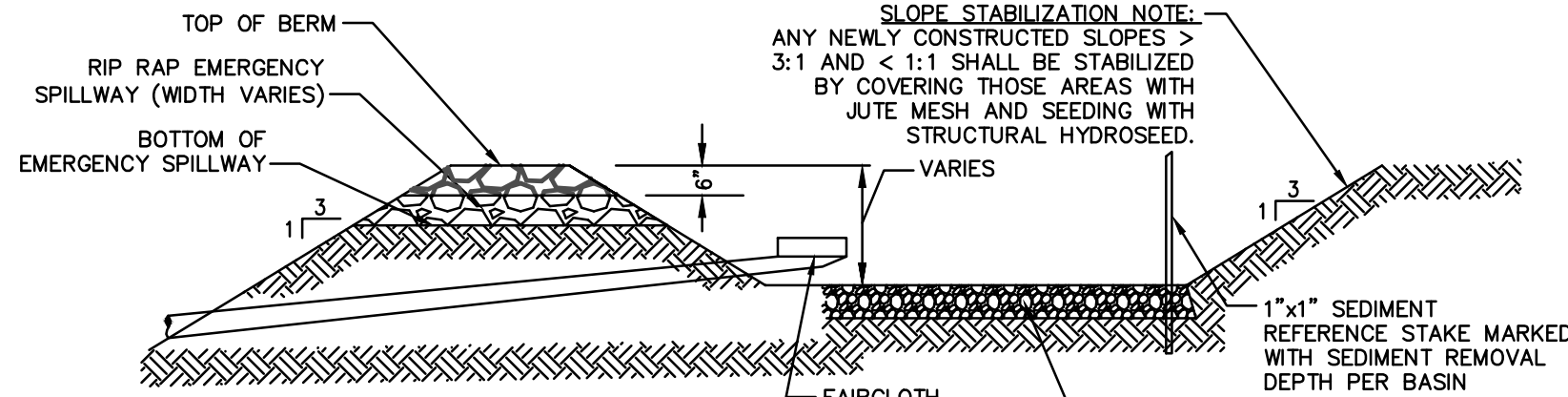
CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:

- 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  $\frac{1}{4}$  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 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 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.
- EXCAVATE AND CONSTRUCT BUILDING FOUNDATIONS.
- PLACE GRAVEL SUBBASE.
- PLACE THE BITUMINOUS CONCRETE BINDER COURSE ON ROADWAY AND PARKING AREAS.
- CONSTRUCT BUILDING STRUCTURES AND ASSOCIATED UTILITY CONNECTIONS.
- 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

REV	DATE	DESCRIPTION	BY	APP

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**SITE DEVELOPMENT PLANS**  
**RICKETTS POND BUSINESS PARK,**  
**LOT 2**  
**OFF SPRING STREET**  
**CARVER, MASSACHUSETTS**

PROFESSIONAL ENGINEER:



**PERMIT PLAN SET**

APPLICANT:  
**PETER SPRAGUE**  
44 FOX DEN ROAD  
KINGSTON, MA 02364

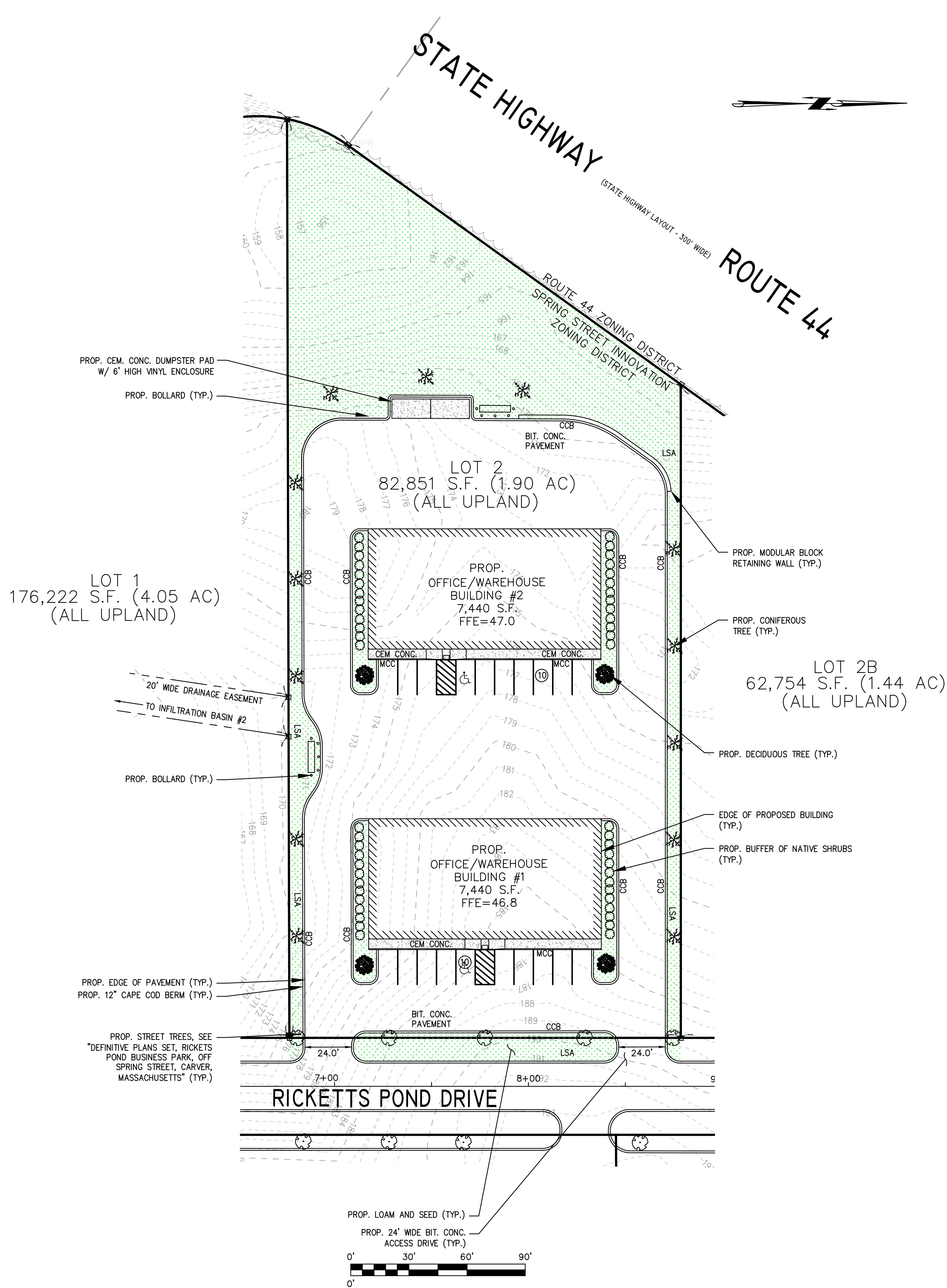
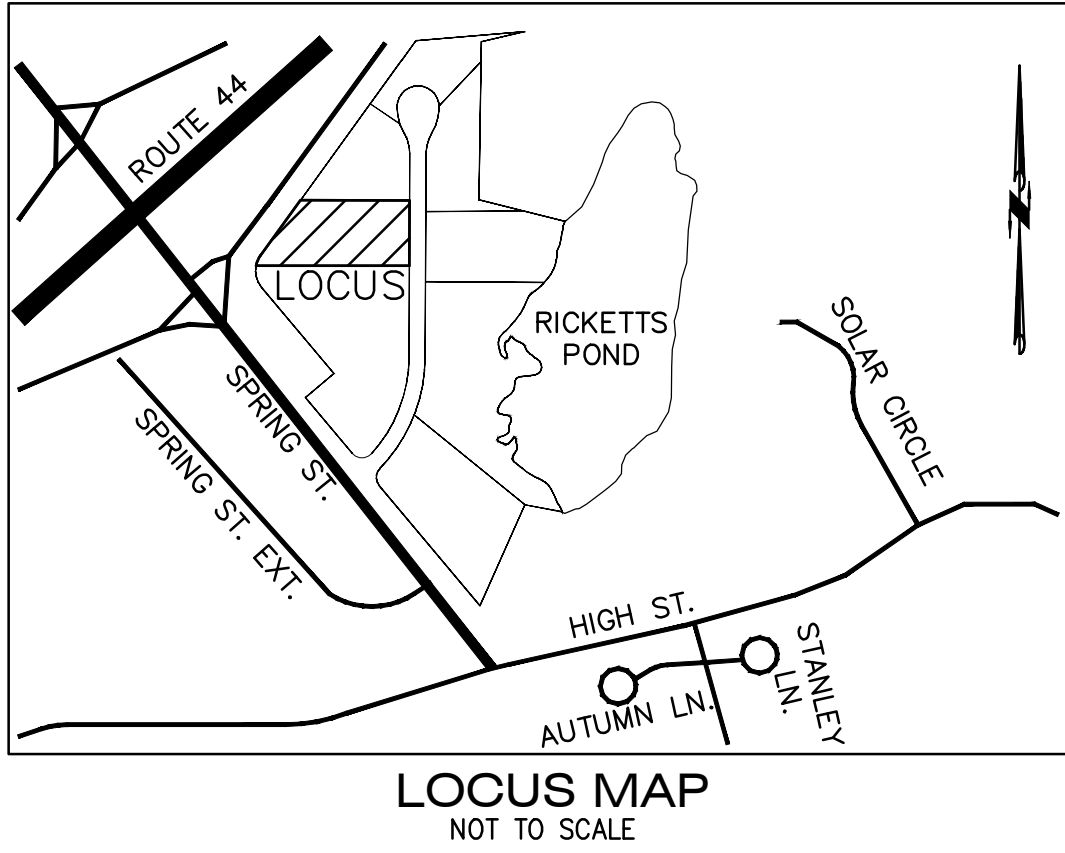
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APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	1"=30'
PROJECT NO.:	221-190
DWG. TITLE:	

**EROSION AND SEDIMENT CONTROL PLAN**

DWG. NO:

**ESC-1**





PROPOSED SURFACE TREATMENTS TABLE	
	CEMENT CONCRETE
	LANDSCAPED AREA (LOAM AND SEED)
	PROPOSED BUILDING

- LANDSCAPING NOTES:
1. TO THE GREATEST EXTENT POSSIBLE, EXISTING NATIVE TREES AND SHRUBS SHALL BE MAINTAINED.
  2. NO TREE, SHRUB OR PLANT SHALL BE USED THAT HAS BEEN IDENTIFIED AS AN INVASIVE SPECIES BY THE MASSACHUSETTS PLANT ADVISORY GROUP IN THE MOST RECENT VERSION OF "THE EVALUATION OF NON-NATIVE PLANT SPECIES FOR INVASIVENESS IN MASSACHUSETTS" (WITH ANNOTATED LIST) OR HAS BEEN IDENTIFIED AS INVASIVE OR BANNED ON THE "MASSACHUSETTS PROHIBITED PLANT LIST" AS PERIODICALLY UPDATED BY THE MASSACHUSETTS DEPARTMENT OF AGRICULTURE.
  3. EXISTING INVASIVE PLANTS SHALL BE REMOVED.

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SITE DEVELOPMENT PLANS  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

APPLICANT:

PETER SPRAGUE  
44 FOX DEN ROAD  
KINGSTON, MA 02364

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PROJECT NO.:221-190  
DWG. TITLE:

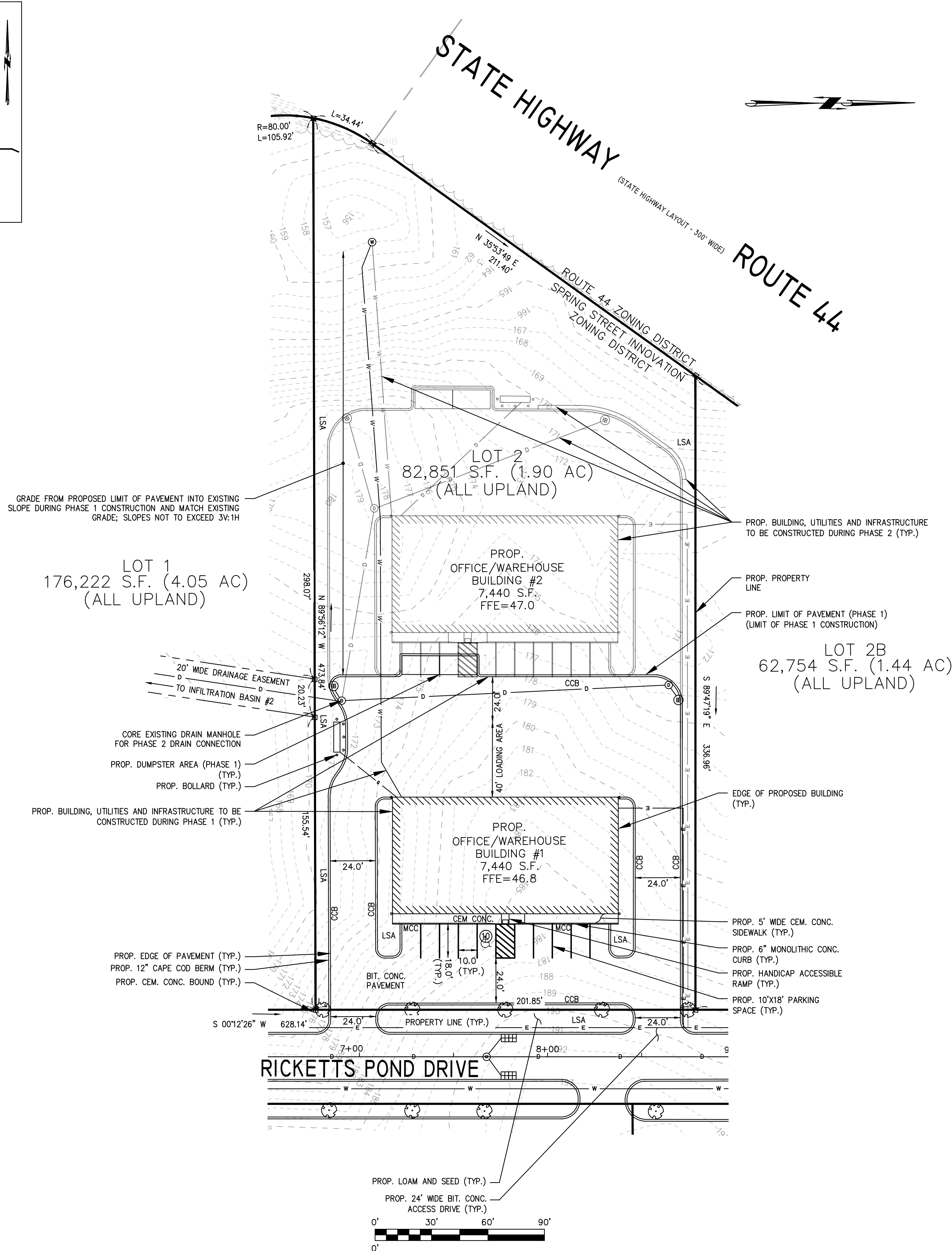
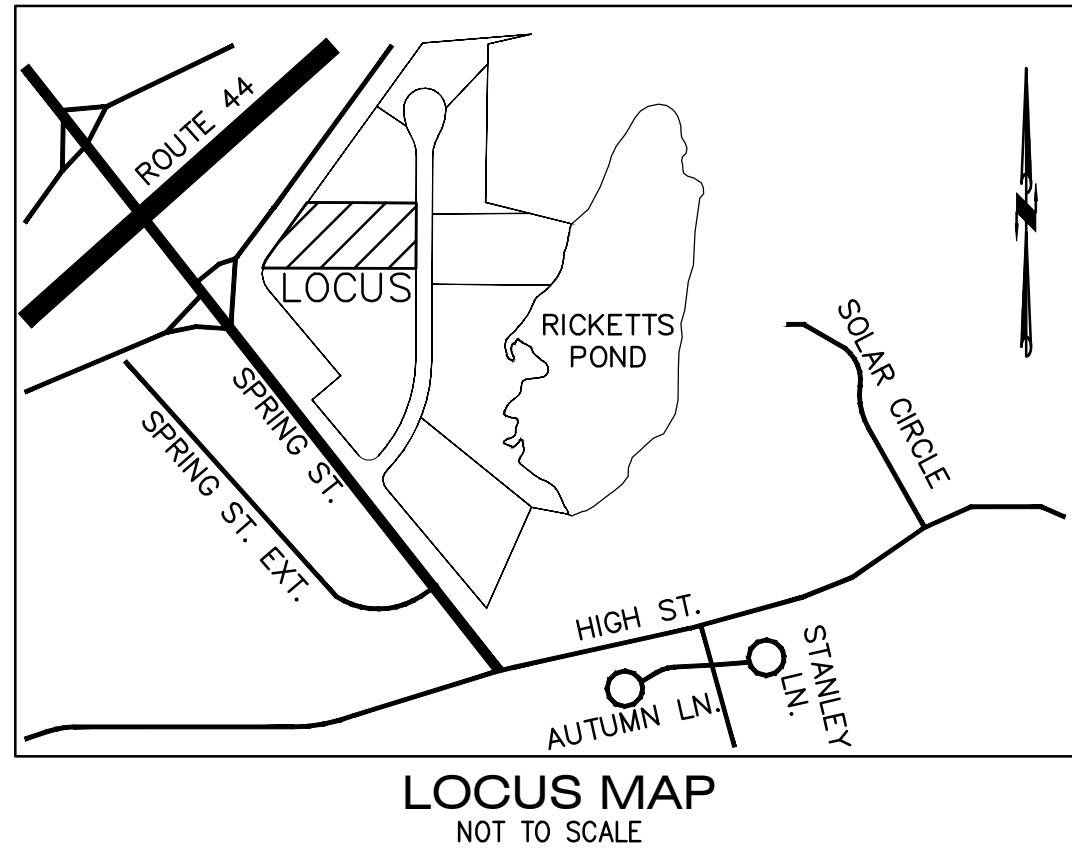
LANDSCAPING  
PLAN

DWG. NO:

LA-1

PERMIT PLAN SET





REV	DATE	DESCRIPTION	BY	APP

**MEG**  
MCKENZIE  
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SITE DEVELOPMENT PLANS

RICKETTS POND BUSINESS PARK,

LOT 2

OFF SPRING STREET

CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

APPLICANT:

PETER SPRAGUE

44 FOX DEN ROAD

KINGSTON, MA 02364

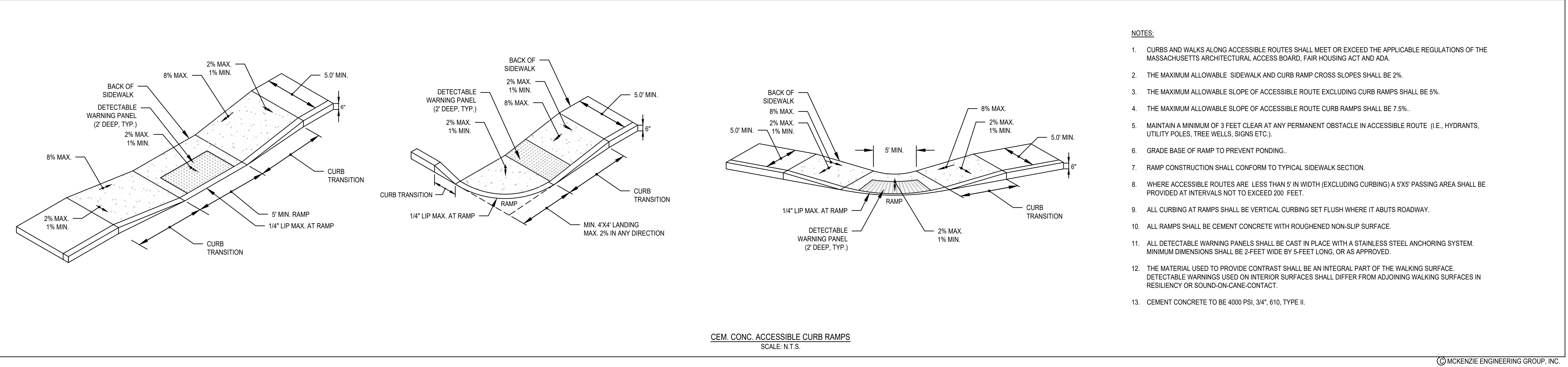
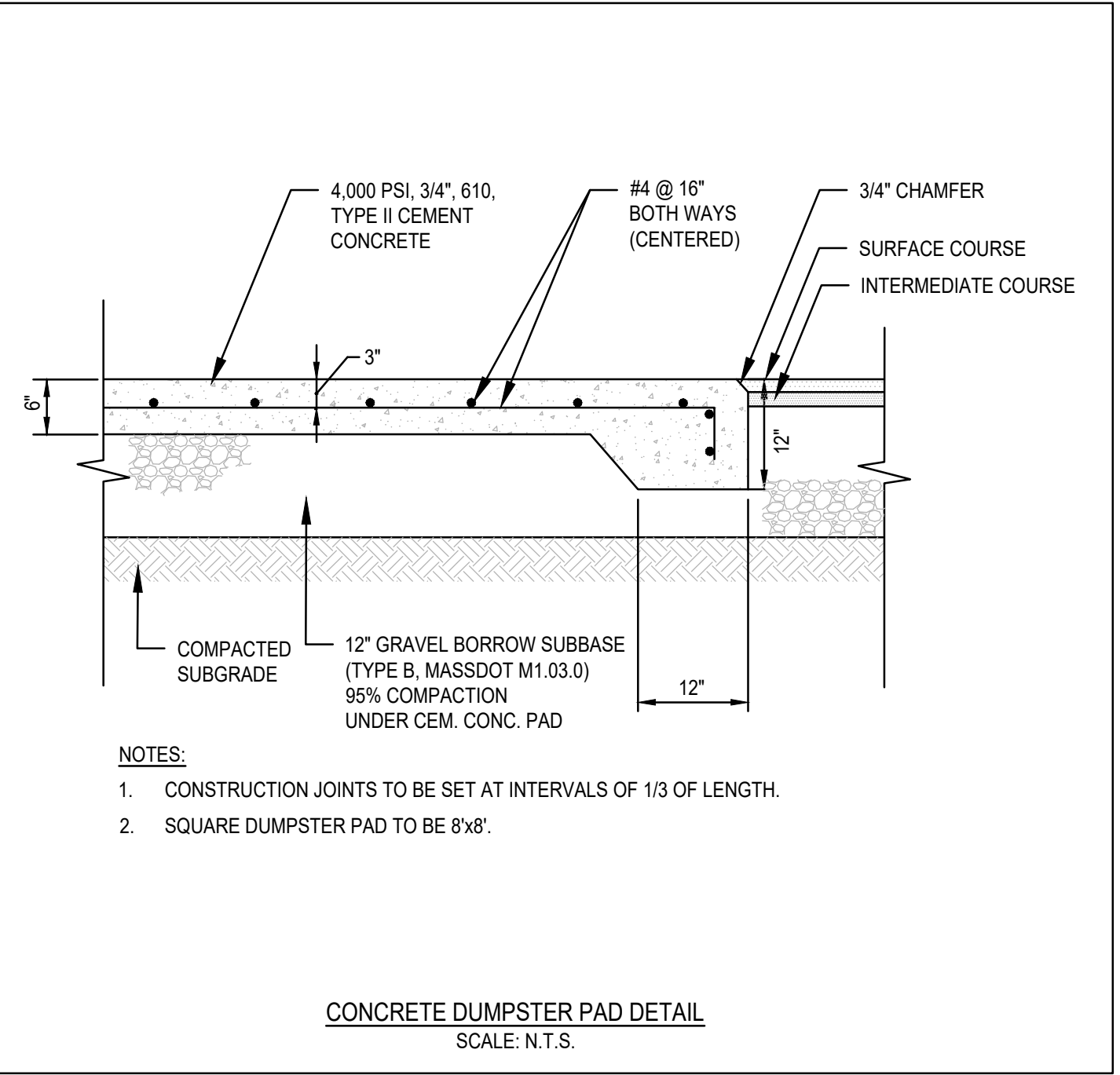
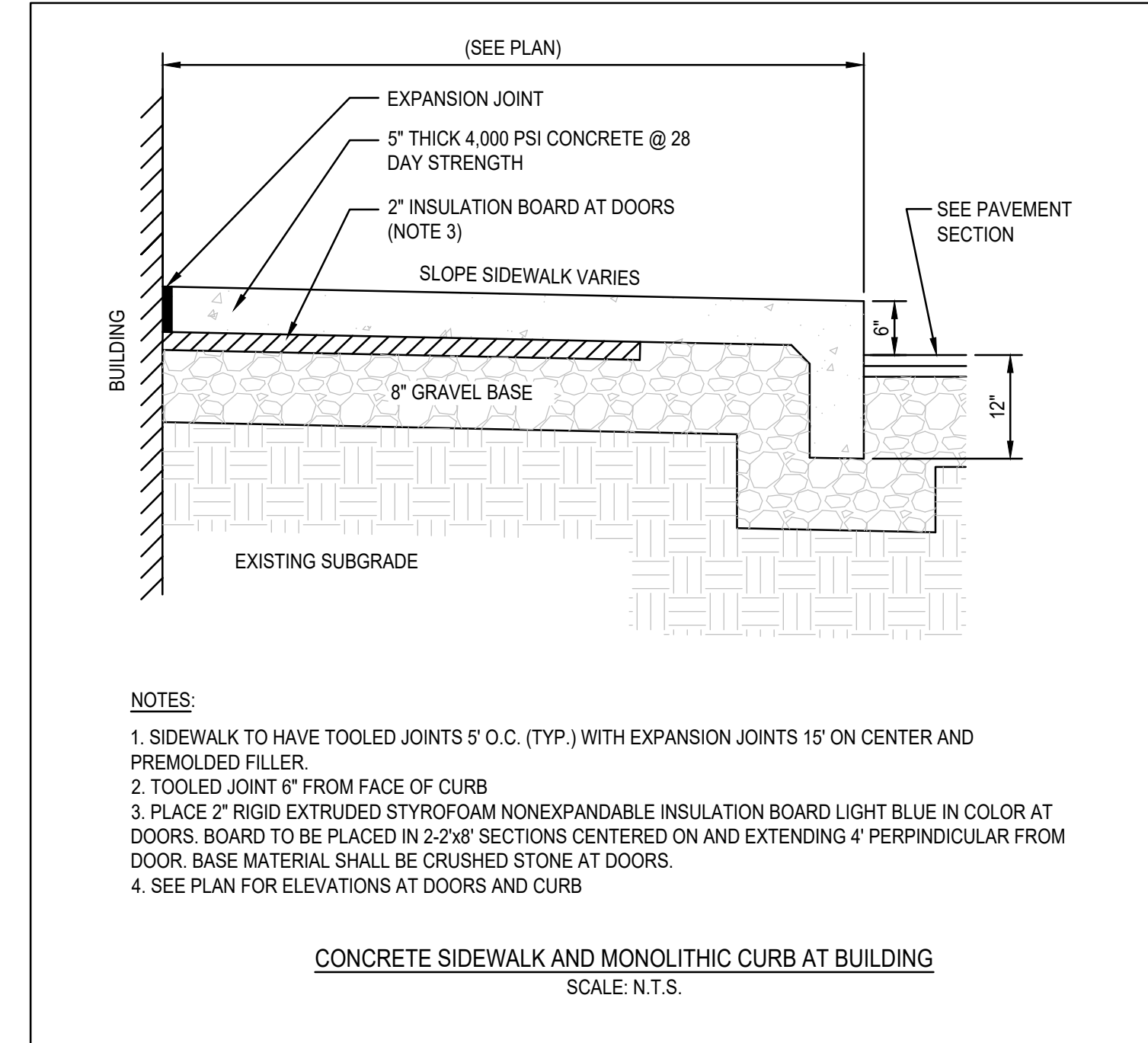
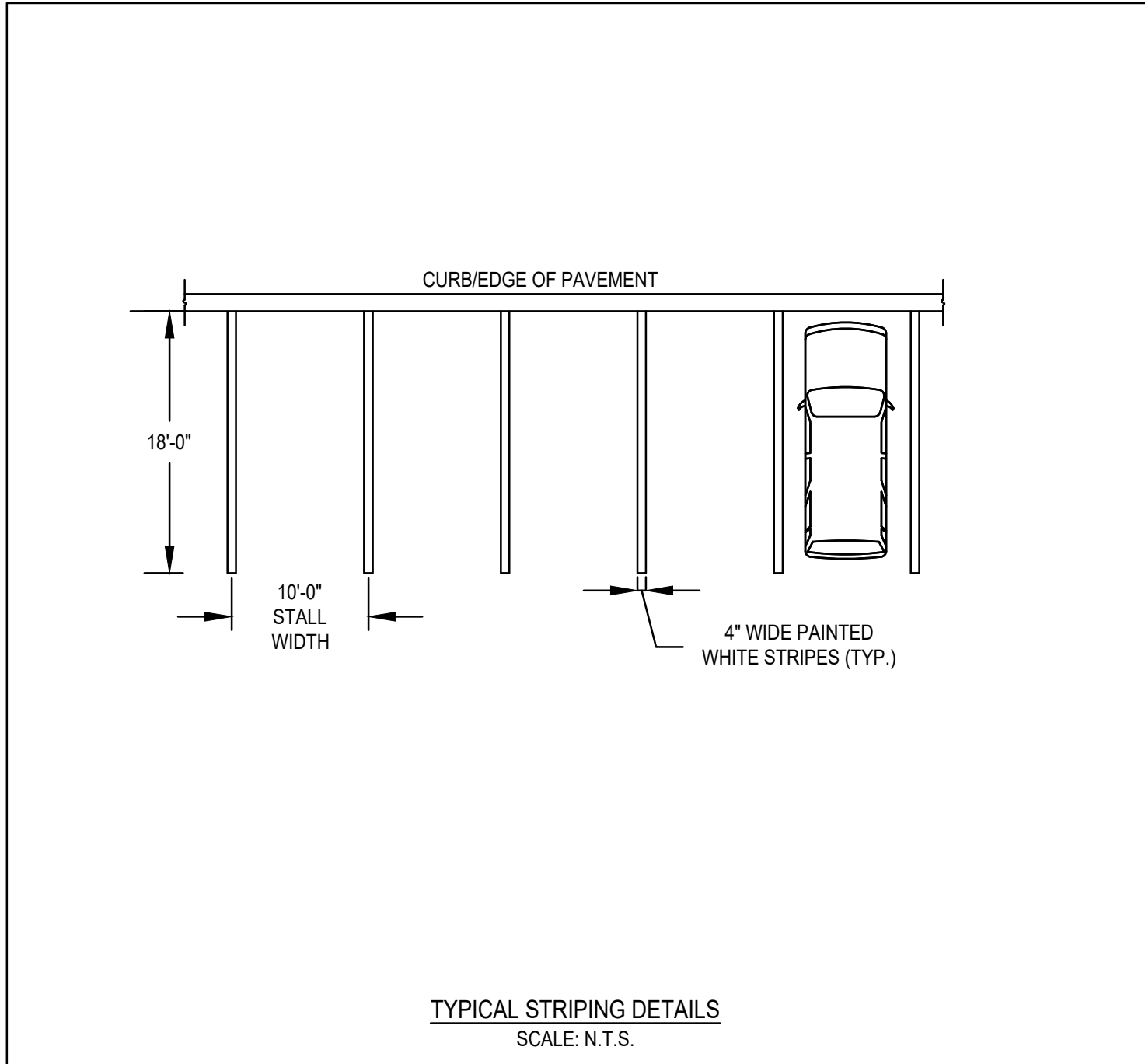
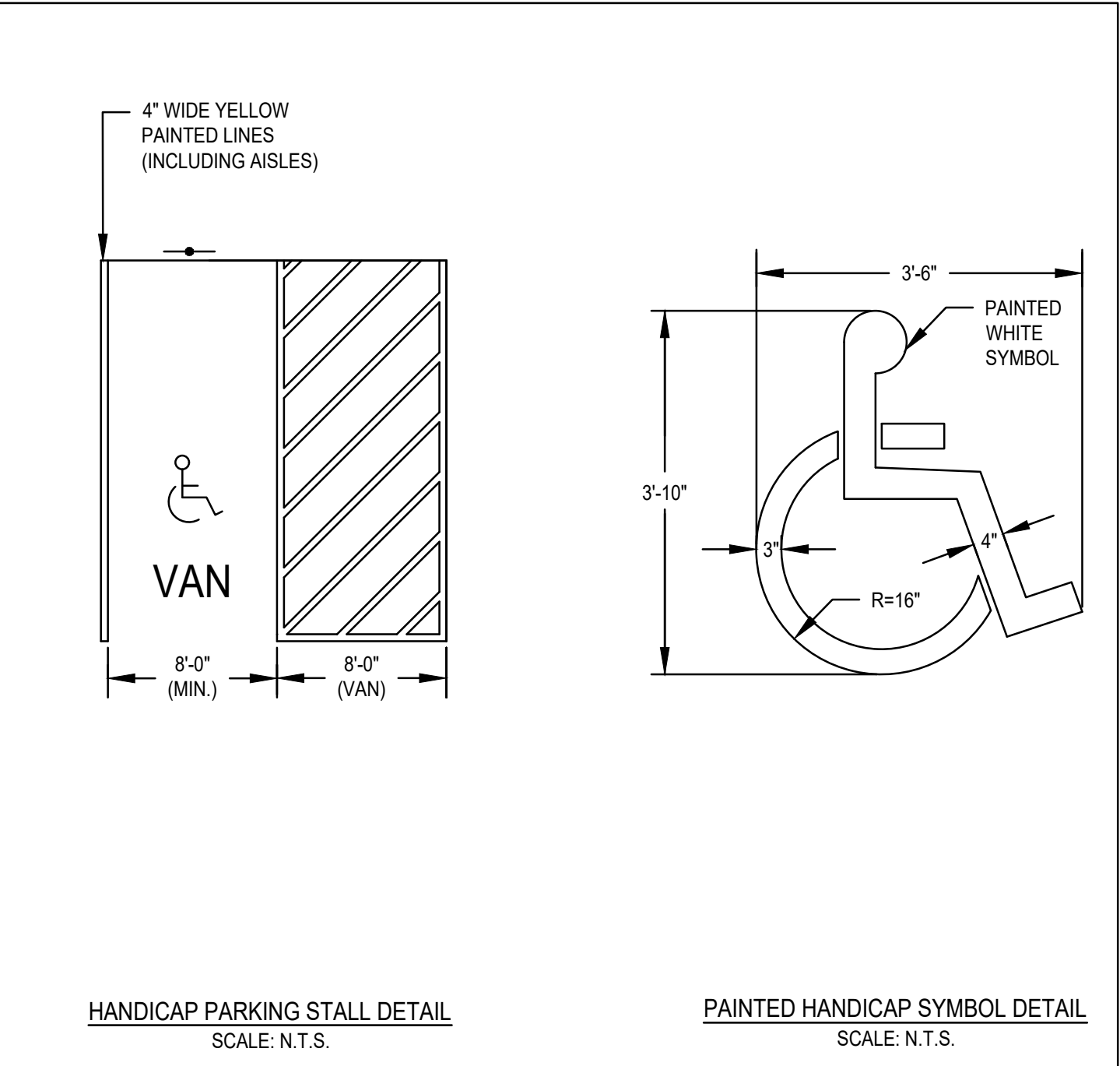
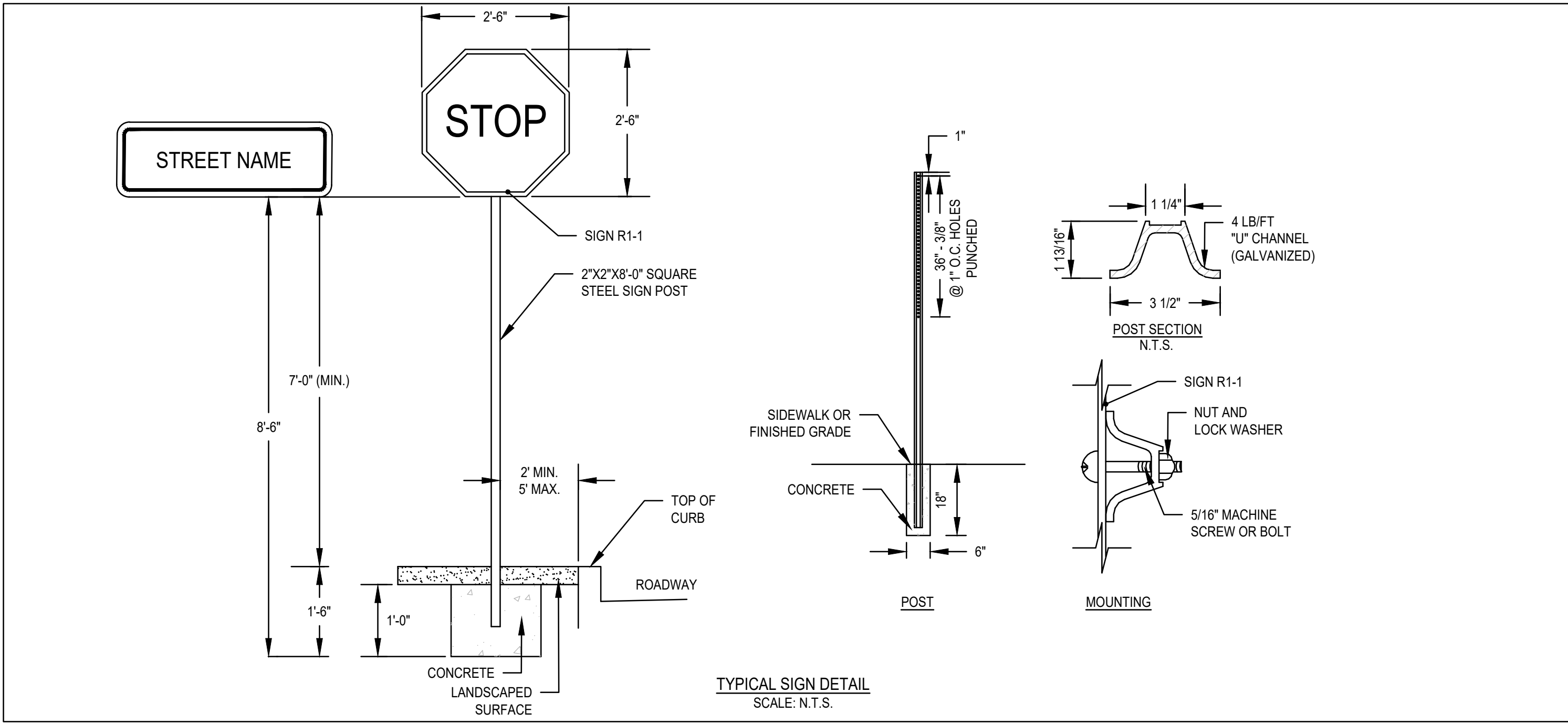
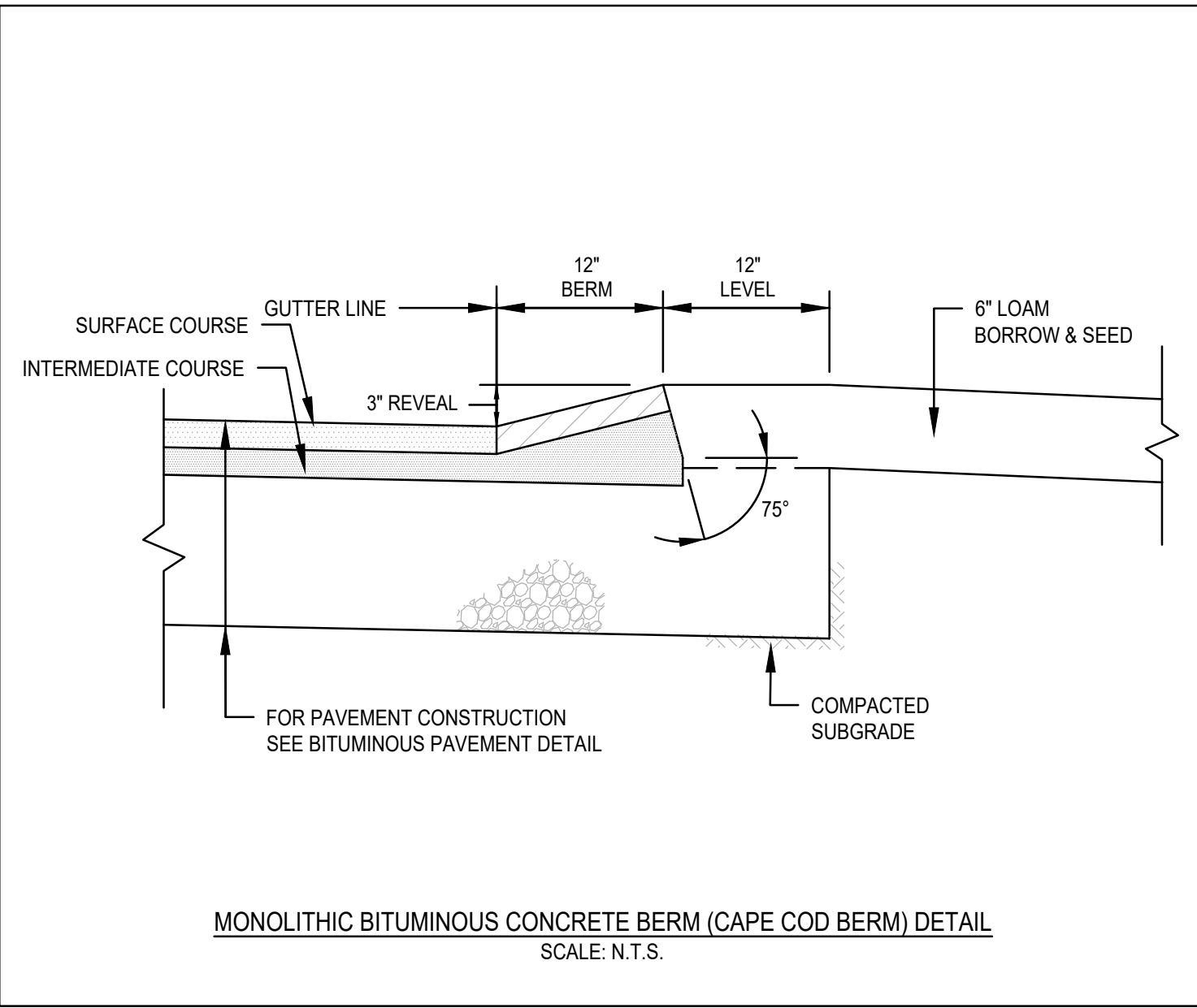
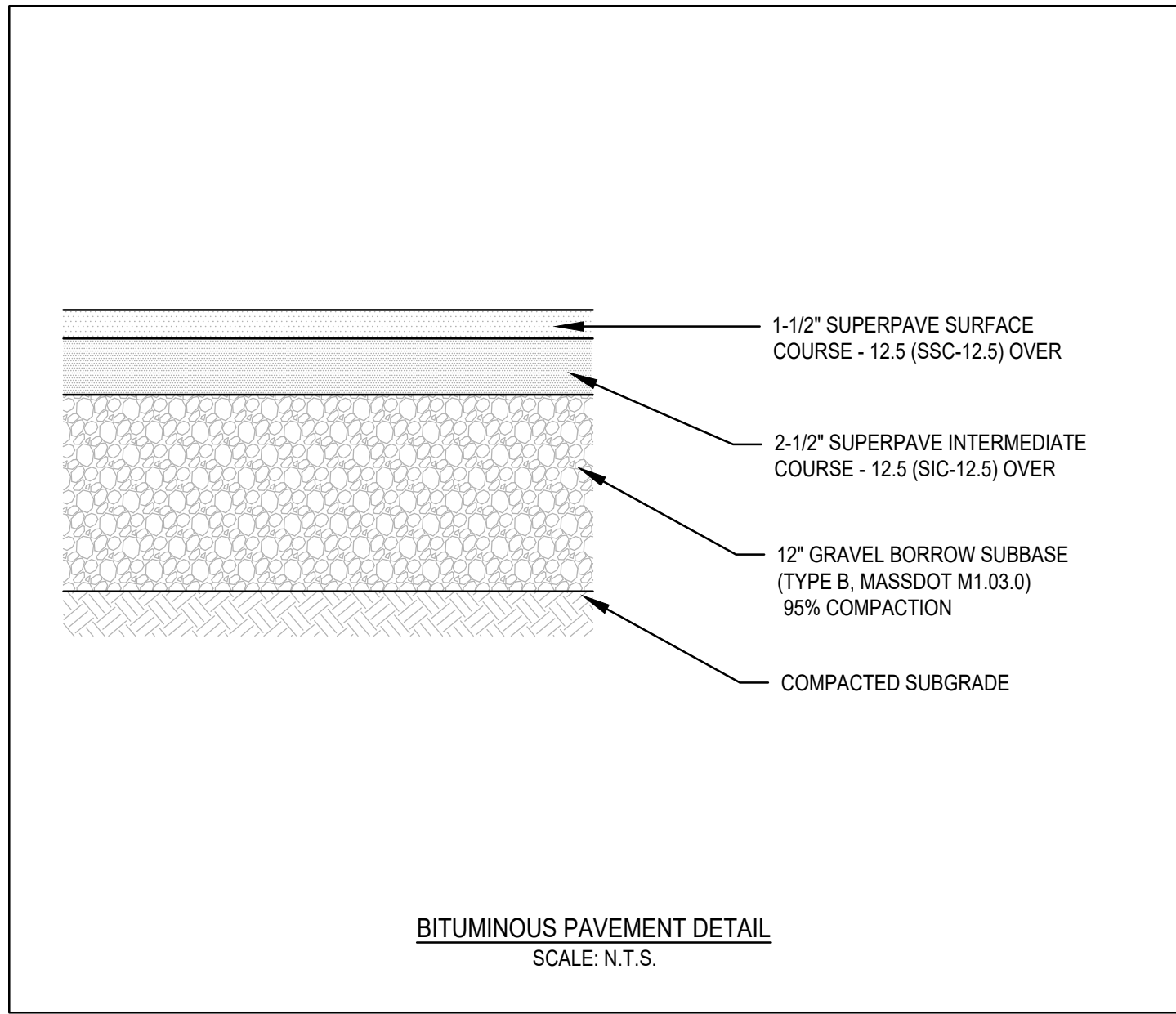
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DATE:	FEBRUARY 28, 2022
SCALE:	1" = 30'
PROJECT NO.:	221-190
DWG. TITLE:	PHASING PLAN

DWG. NO:

P-1

PERMIT PLAN SET





- NOTES:
1. CURBS AND WALKS ALONG ACCESSIBLE ROUTES SHALL MEET OR EXCEED THE APPLICABLE REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD, FAIR HOUSING ACT AND ADA.
  2. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 2%.
  3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
  4. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 7.5%..
  5. MAINTAIN A MINIMUM OF 3 FEET CLEAR AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS ETC.).
  6. GRADE BASE OF RAMP TO PREVENT PONDING..
  7. RAMP CONSTRUCTION SHALL CONFORM TO TYPICAL SIDEWALK SECTION.
  8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'X5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
  9. ALL CURBING AT RAMPS SHALL BE VERTICAL CURBING SET FLUSH WHERE IT ABUTS ROADWAY.
  10. ALL RAMPS SHALL BE CEMENT CONCRETE WITH ROUGHENED NON-SLIP SURFACE.
  11. ALL DETECTABLE WARNING PANELS SHALL BE CAST IN PLACE WITH A STAINLESS STEEL ANCHORING SYSTEM. MINIMUM DIMENSIONS SHALL BE 2-FEET WIDE BY 5-FEET LONG, OR AS APPROVED.
  12. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE-CONTACT.
  13. CEMENT CONCRETE TO BE 4000 PSI, 3/4\", 610, TYPE II.

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**SITE DEVELOPMENT PLANS**  
**RICKETTS POND BUSINESS PARK,**  
**LOT 2**  
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**CARVER, MASSACHUSETTS**

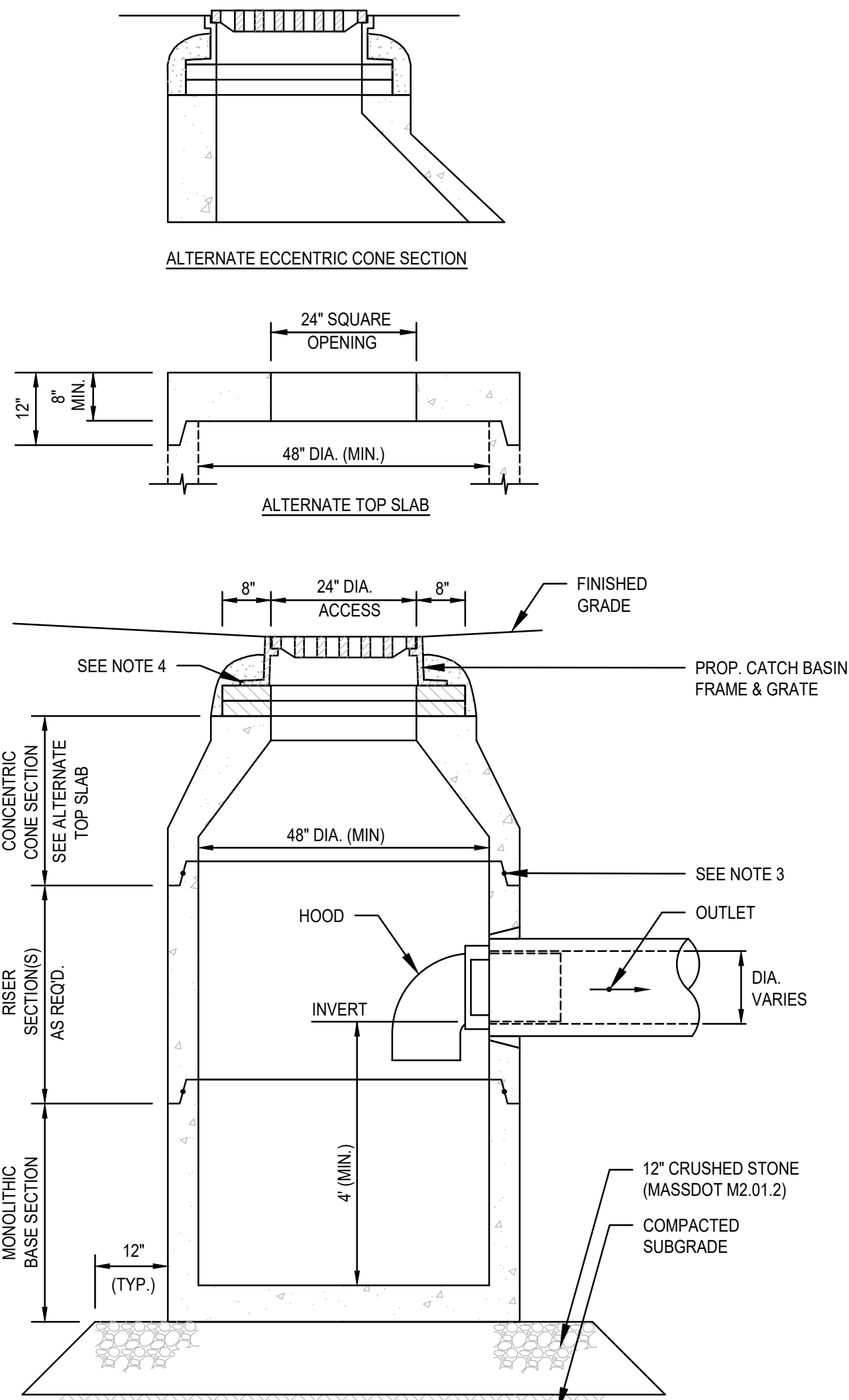
PROFESSIONAL ENGINEER:

APPLICANT:  
**PETER SPRAGUE**  
**44 FOX DEN ROAD**  
**KINGSTON, MA 02364**

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PROJECT NO.:	221-190
DWG. TITLE:	CONSTRUCTION DETAILS
DWG. NO.:	D-1

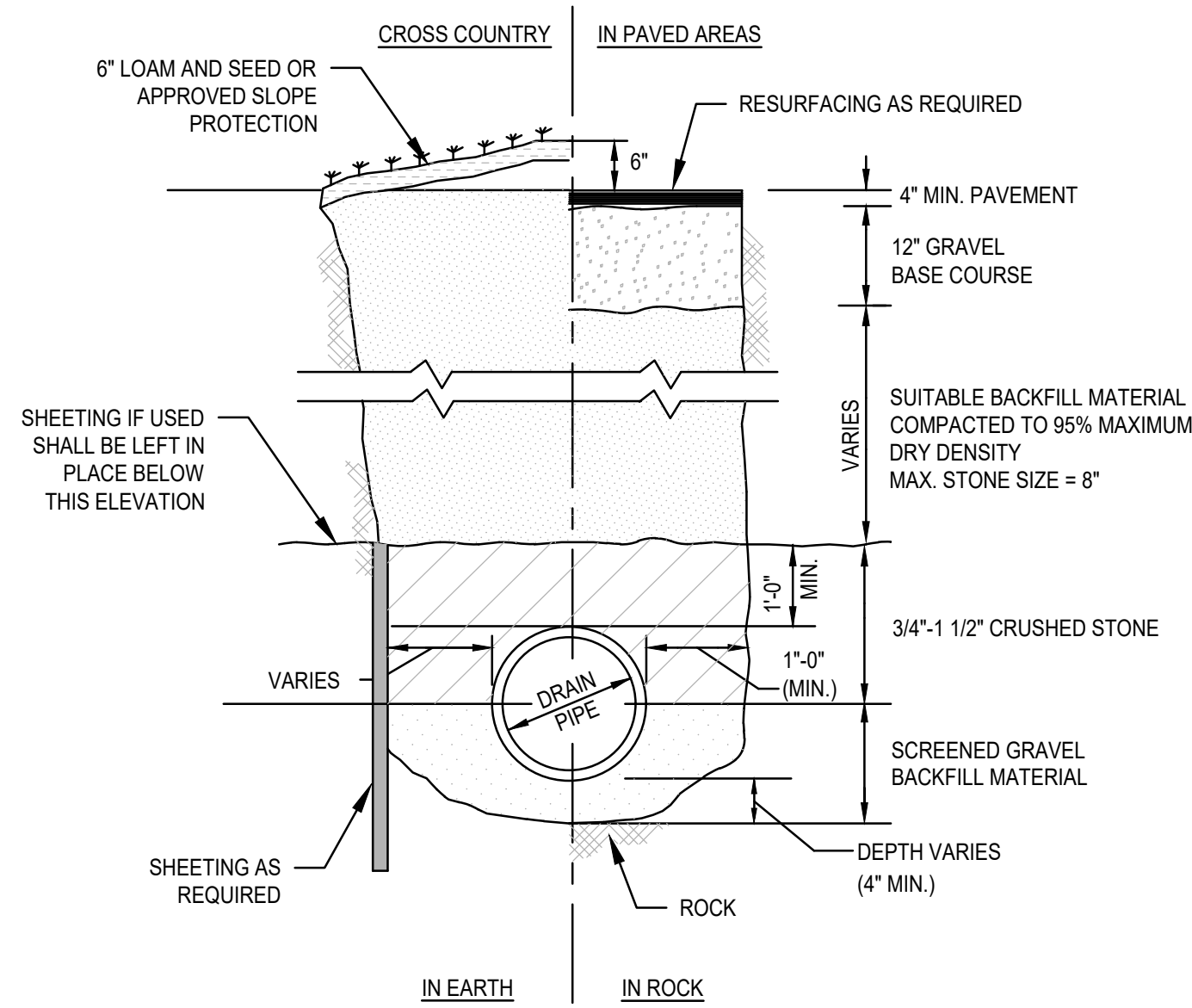




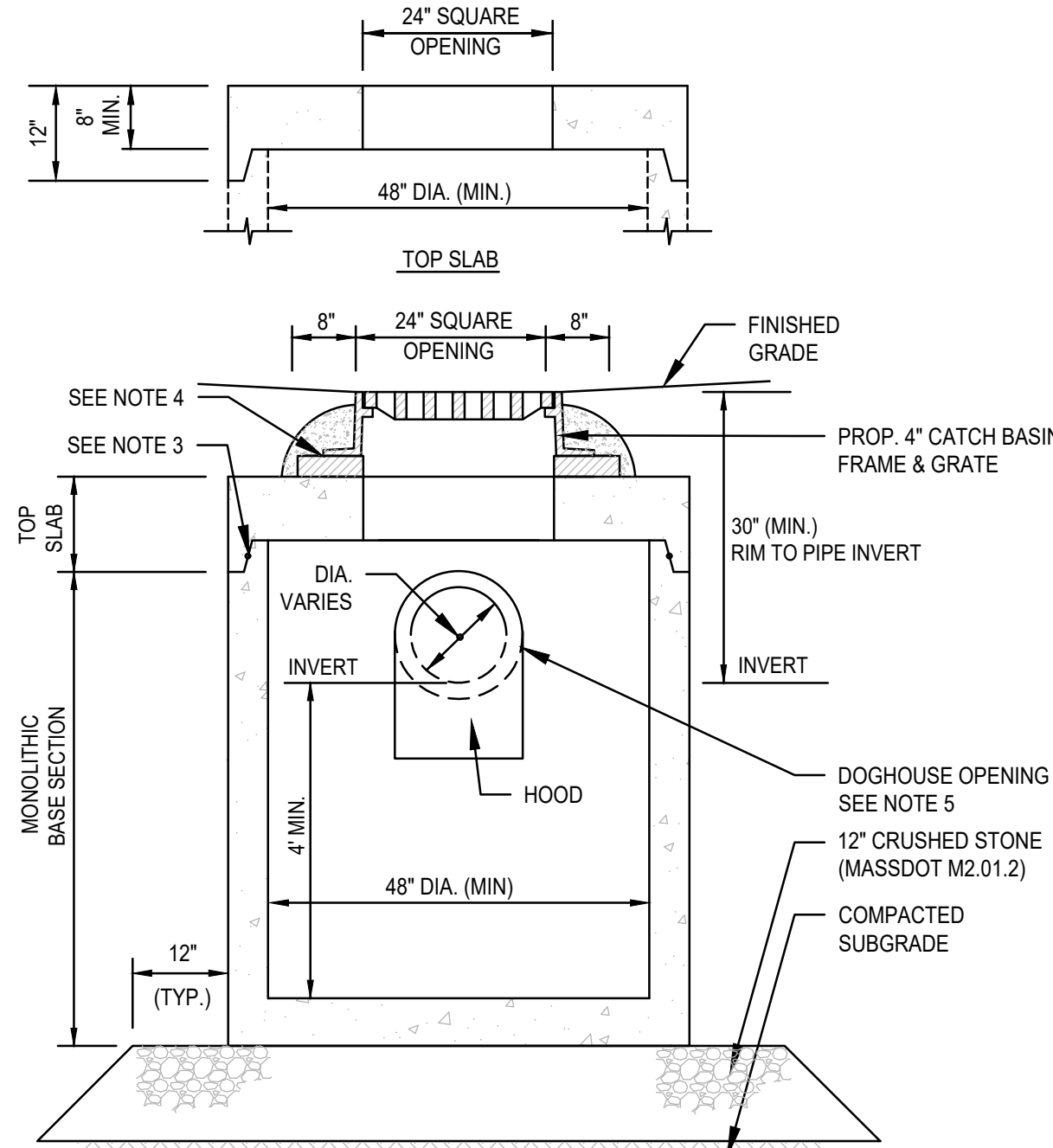
#### NOTES:

- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
- PROVIDE "V" 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).

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



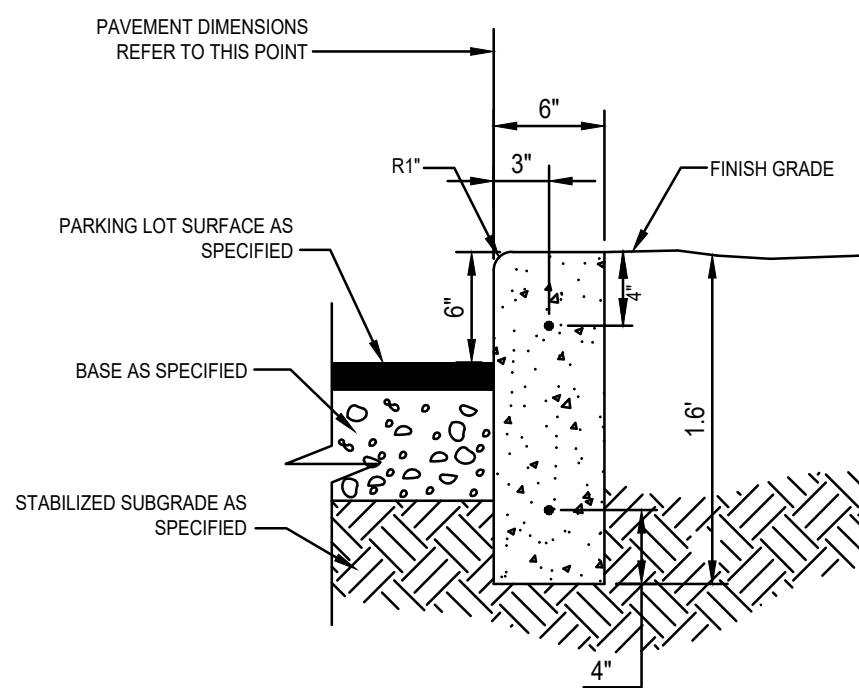
TYPICAL DRAIN TRENCH DETAIL  
SCALE: N.T.S.



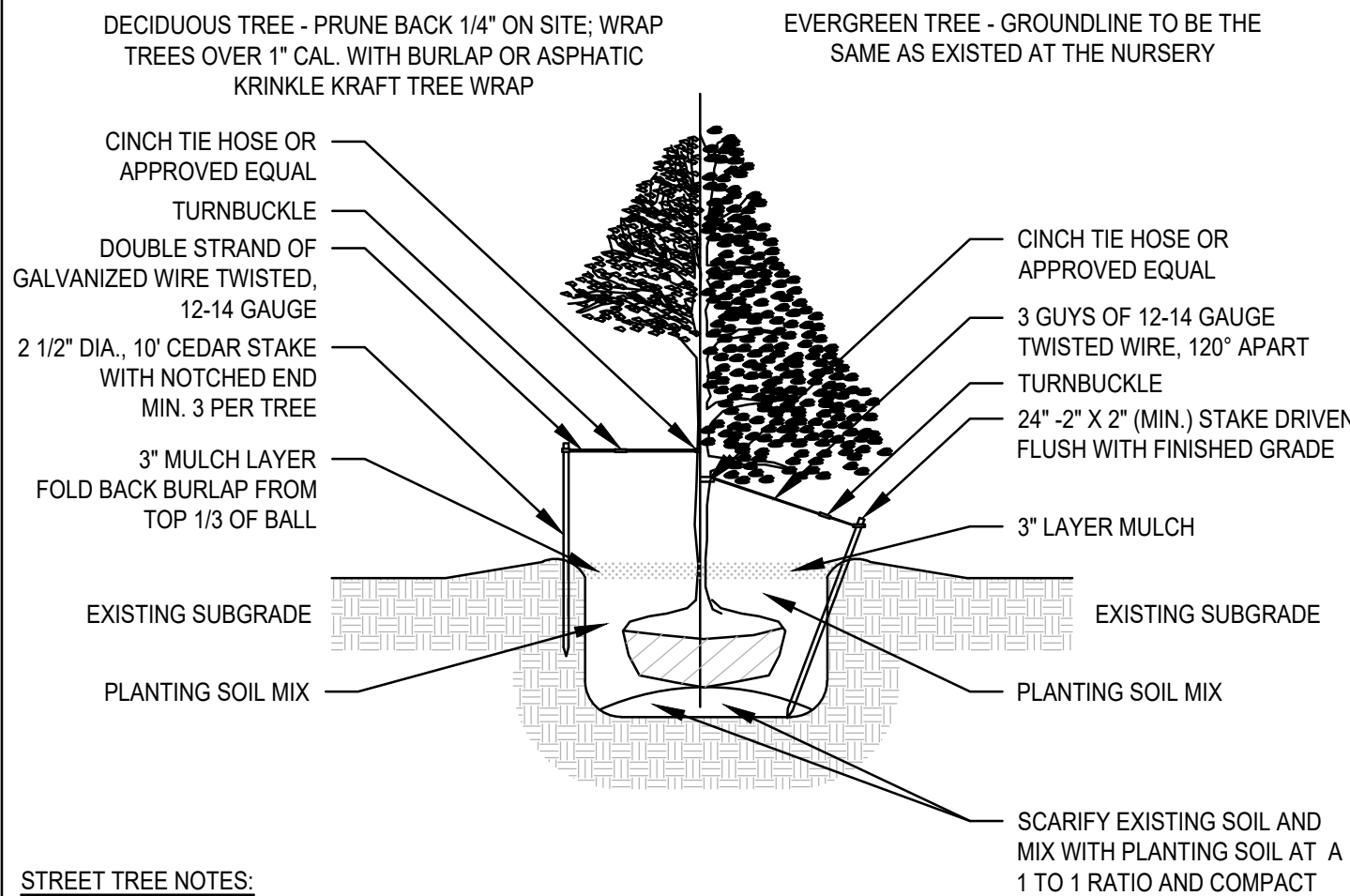
#### NOTES:

- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
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- 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.

SHALLOW CATCH BASIN  
SCALE: N.T.S.



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



#### STREET TREE NOTES:

- NEW TREES SHALL BE NURSERY GROWN AND COMPLY WITH THE ASSOCIATION OF AMERICAN NURSRIES SPECIFICATIONS AND BE AT LEAST 3 INCHES IN CALIPER.
- THE PRESERVATION OF EXISTING TREES AND THE VARIETIES OF NEW TREES FOR PLANTING SHALL BE SUBJECT TO THE APPROVAL OF THE PLANNING BOARD WHICH SHALL BE GUIDED BY THE RECOMMENDATION OF THE TOWNS DIRECTOR OF LANDS AND NATURAL RESOURCES AS TO THE NUMBER, LOCATION, CONDITION AND SPECIES OF SUCH TREES AND UNDER APPENDIX III 0 DETAIL B.

DECIDUOUS AND EVERGREEN TREE  
PLANTING DETAIL  
SCALE: N.T.S.

#### SEEDING SPECIFICATIONS

##### SEEDING RECOMMENDATIONS

###### 1. 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.

###### 2. 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.

(NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10 FERTILIZER)

- SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH 0.25 INCH OF SOIL OR LESS, BY CULTIVATING OR RAKING.
- REFER TO SEEDING RATES AND SEEDING GUIDES FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING.
- WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

###### 3. 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"

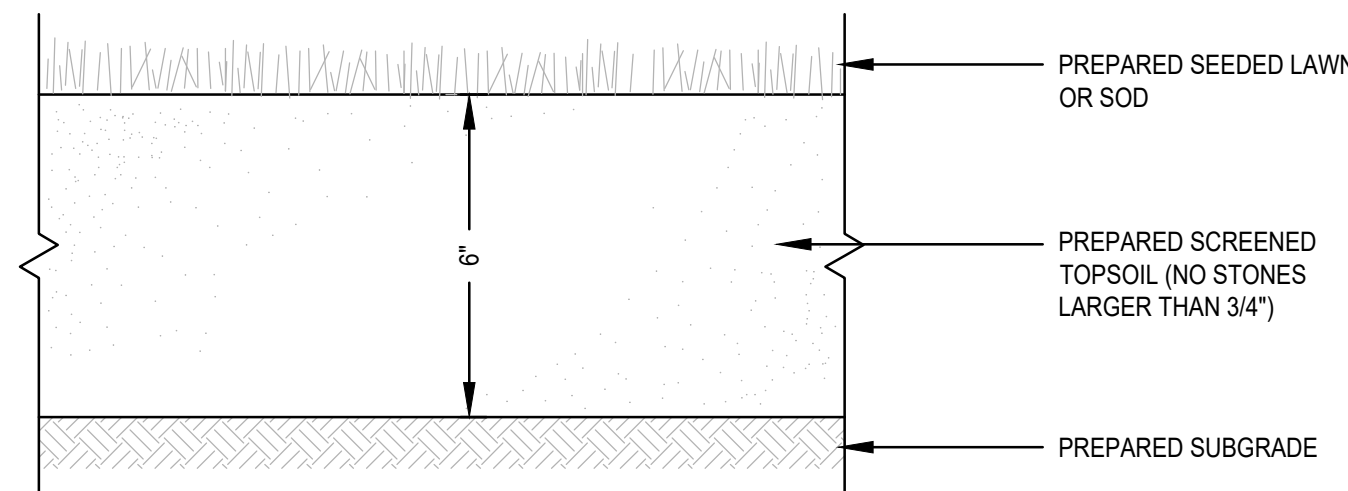
###### 4. MAINTENANCE TO ESTABLISH A STAND

- 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.

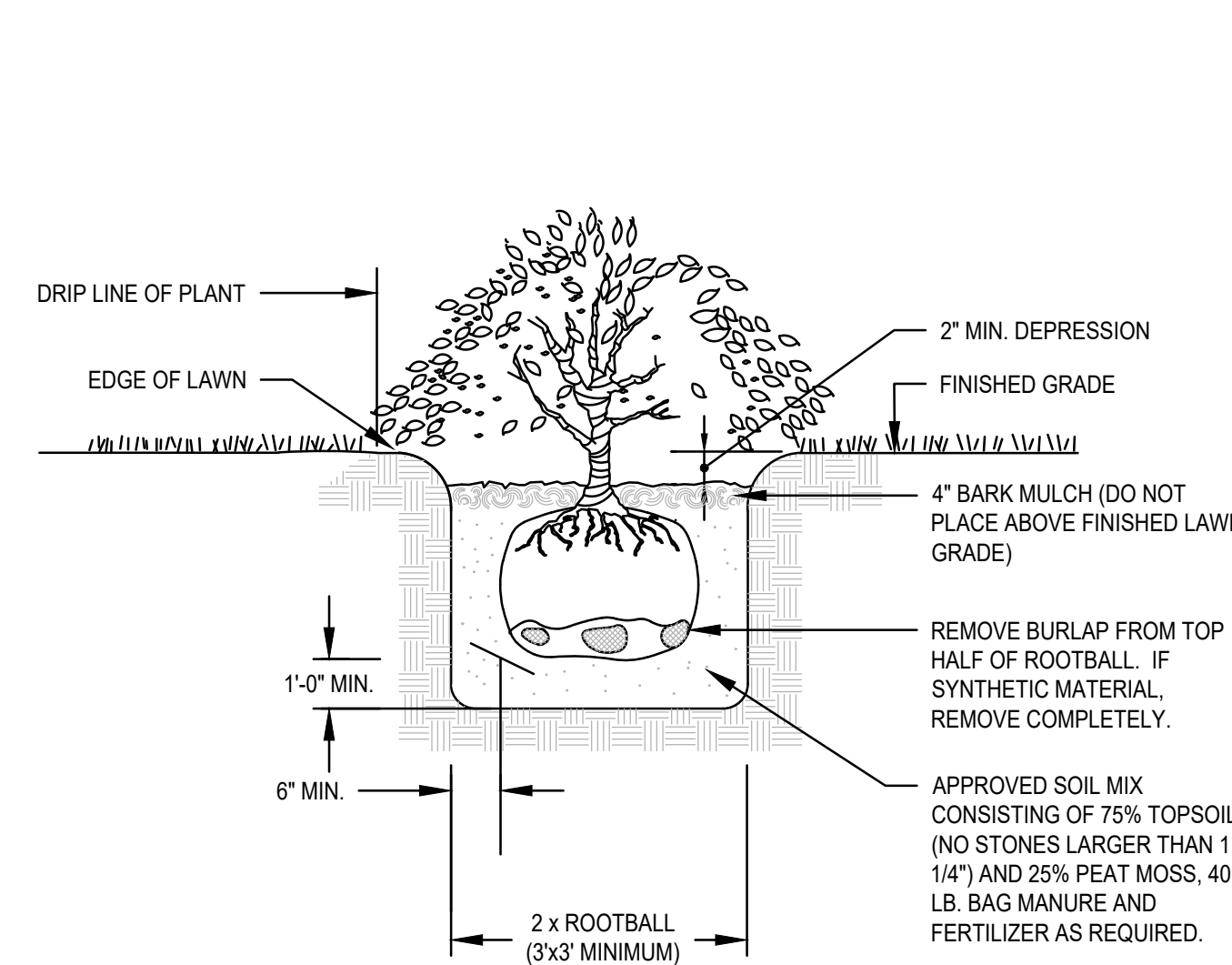
#### NOTES:

- 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



SEEDED OR SODDED LAWN DETAIL  
SCALE: N.T.S.



TYPICAL SHRUB PLANTING DETAIL  
SCALE: N.T.S.

#### 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	0.25
BIRDSFOOT TREFOIL	15	0.35
TOTAL	40	0.95
C. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. BIRDSFOOT 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)

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

#### 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

BY	APP	DESCRIPTION	DATE	REV

**MCKENZIE ENGINEERING GROUP**

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## SITE DEVELOPMENT PLANS

### RICKETTS POND BUSINESS PARK, LOT 2 OFF SPRING STREET CARVER, MASSACHUSETTS

#### PROFESSIONAL ENGINEER:



APPLICANT:  
**PETER SPRAGUE**  
44 FOX DEN ROAD  
KINGSTON, MA 02364

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DESIGNED BY:	ESS
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APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	AS NOTED
PROJECT NO.:	221-190
DWG. TITLE:	

## CONSTRUCTION DETAILS

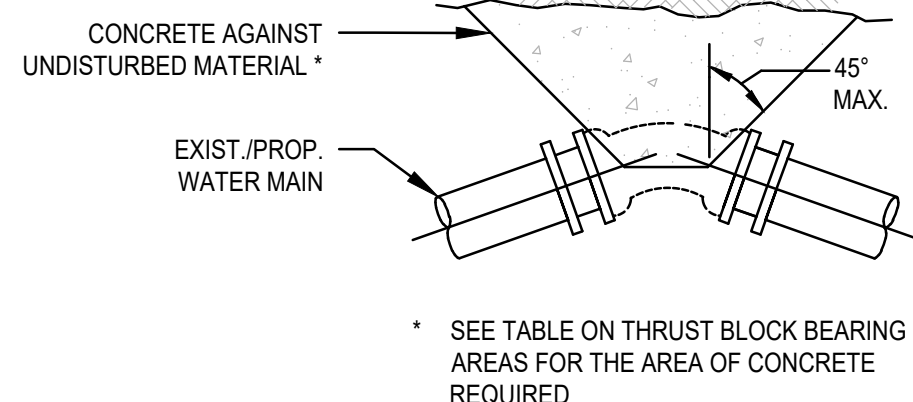
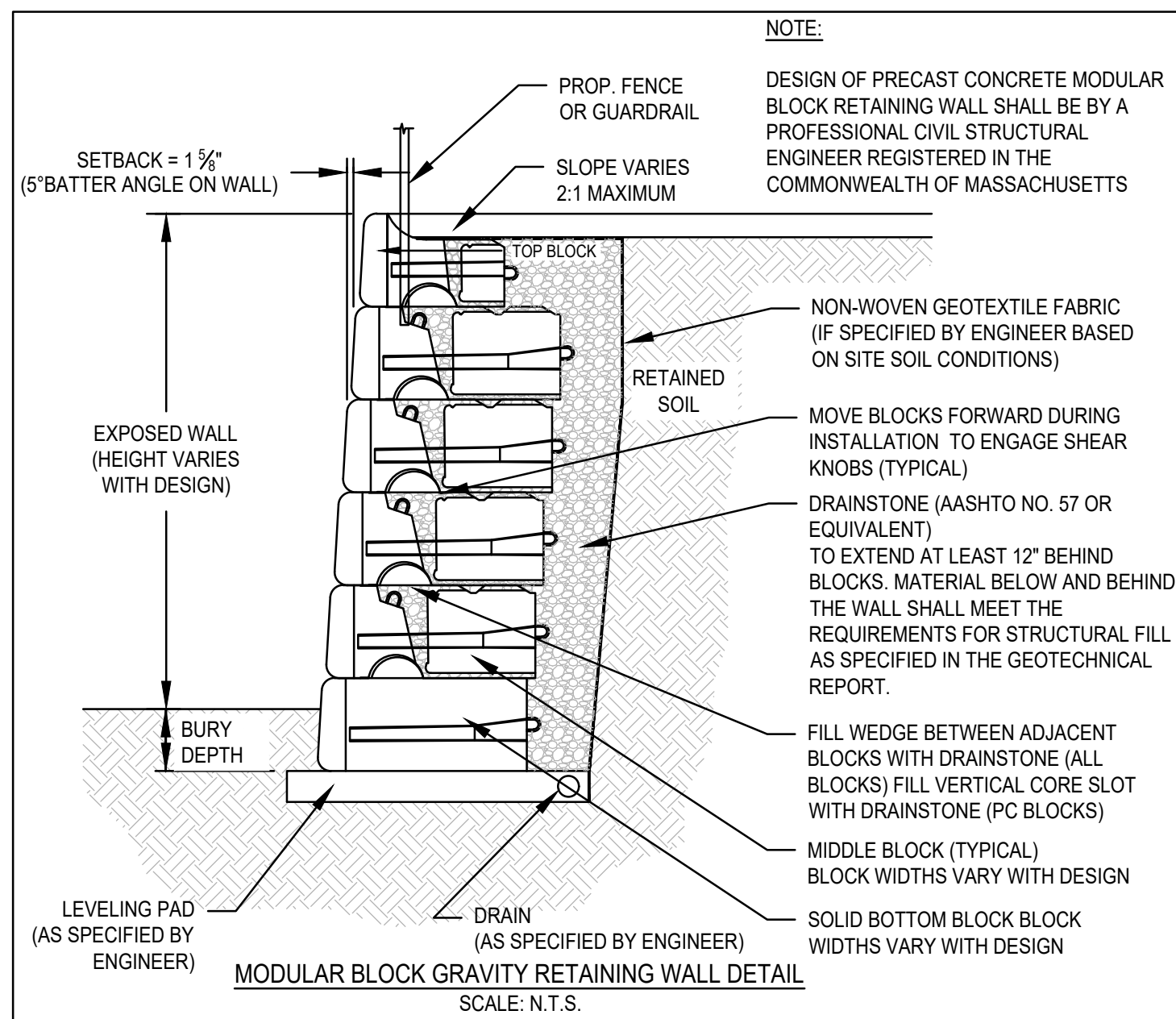
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PERMIT PLAN SET



4. IF SHEETING IS USED, IT SHALL BE CUT OFF NO MORE THAN 12" ABOVE TOP OF PIPE.
5. ALL PIPES SHALL BE PRESSURE TESTED AT 200 PSI WORKING PRESSURE FOR A MINIMUM DURATION OF TWO HOURS.
6. 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 CARVER WATER SUPERINTENDENT/ENGINEER.
7. 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 TOWNS WATER SUPERINTENDENT/ENGINEER.
8. ALL PIPING SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH A.W.W.A. STANDARDS PRIOR TO PAVING IF PAVING ABOVE TRENCH IS REQUIRED.
9. BACKFILL IS TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY BY AASHTO T-180 D.
10. ALL WATER PIPE SHALL BE LAID WITH A MINIMUM OF 5 FEET OF COVER OF APPROVED MATERIALS.
11. RESULTS FROM PRESSURE TESTING AND DISINFECTION SHALL BE FURNISHED TO THE CARVER WATER DEPT. AND DIRECTOR OF PUBLIC WORKS FOR APPROVAL PRIOR TO WATER BEING TURNED ON.
12. ALL WORK SHALL BE IN CONFORMANCE WITH CARVER WATER DEPT. STANDARDS.
13. ALL PERMITS REQUIRED FOR STREET OPENINGS AND WATER MAIN TAPPING MUST BE OBTAINED.
14. NO WATER WILL BE TURNED ON IN THE PROJECT WITHOUT CARVER WATER DEPT. APPROVAL.



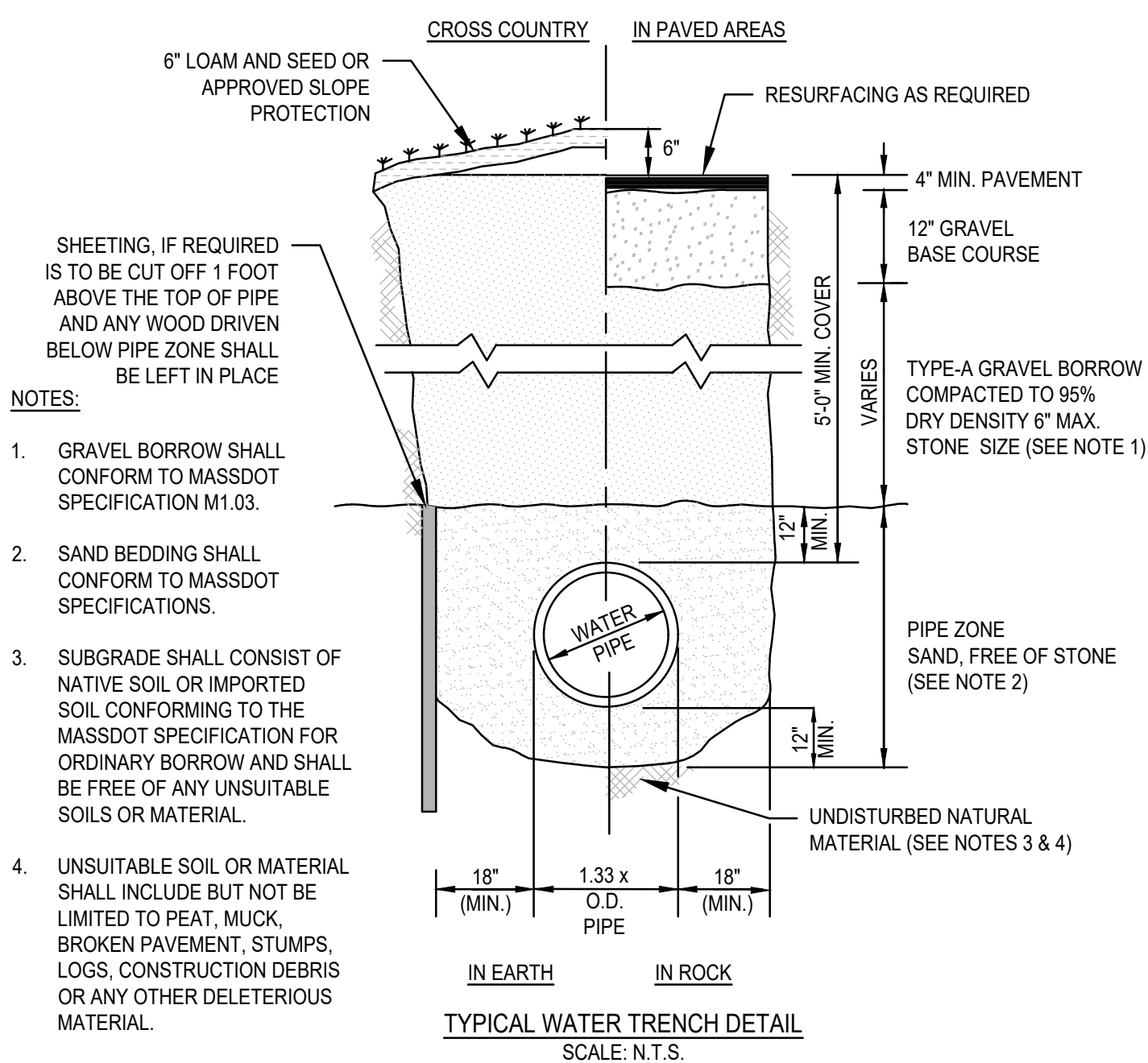
THRUST WATER MAIN BEND THRUST BLOCK DETAIL  
SCALE: N.T.S.

NOTES:

1. FOR FITTINGS WITH LESS THAN 45° DEFLECTION, USE BEARING AREAS FOR 45° BEND.
2. 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 DEDICATED 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.
3. THE CONTRACTOR SHALL SUBMIT 2 WEEKS IN ADVANCE OF PLACEMENT, WORKING DRAWINGS FOR EACH THRUST BLOCK TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. 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.



**SITE DEVELOPMENT PLANS**  
RICKETTS POND BUSINESS PARK,  
LOT 2  
OFF SPRING STREET  
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER



APPLICANT: PETER SPRAGUE  
44 FOX DEN ROAD  
KINGSTON, MA 02364

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DESIGNED BY:	ESS
CHECKED BY:	BCM
APPROVED BY:	BCM
DATE:	FEBRUARY 28, 2022
SCALE:	AS NOTED
PROJECT NO.:	221-190
DWG. TITLE:	

## CONSTRUCTION DETAILS

DWG. NO:

**D-3**

C MCKENZIE ENGINEERING GROUP, INC.



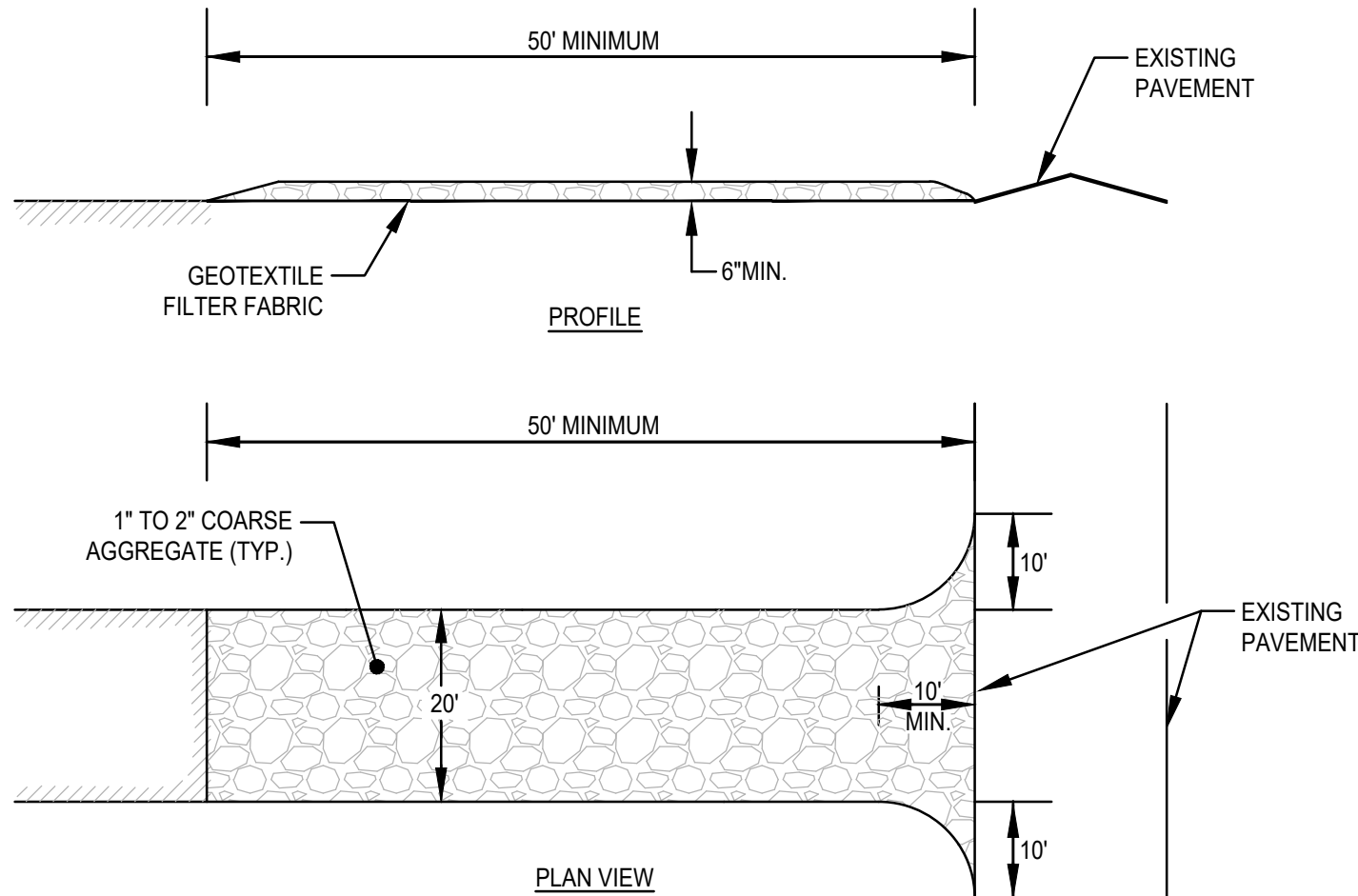
CONSTRUCTION SEQUENCE

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 FOUNDATIONS.
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.

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.



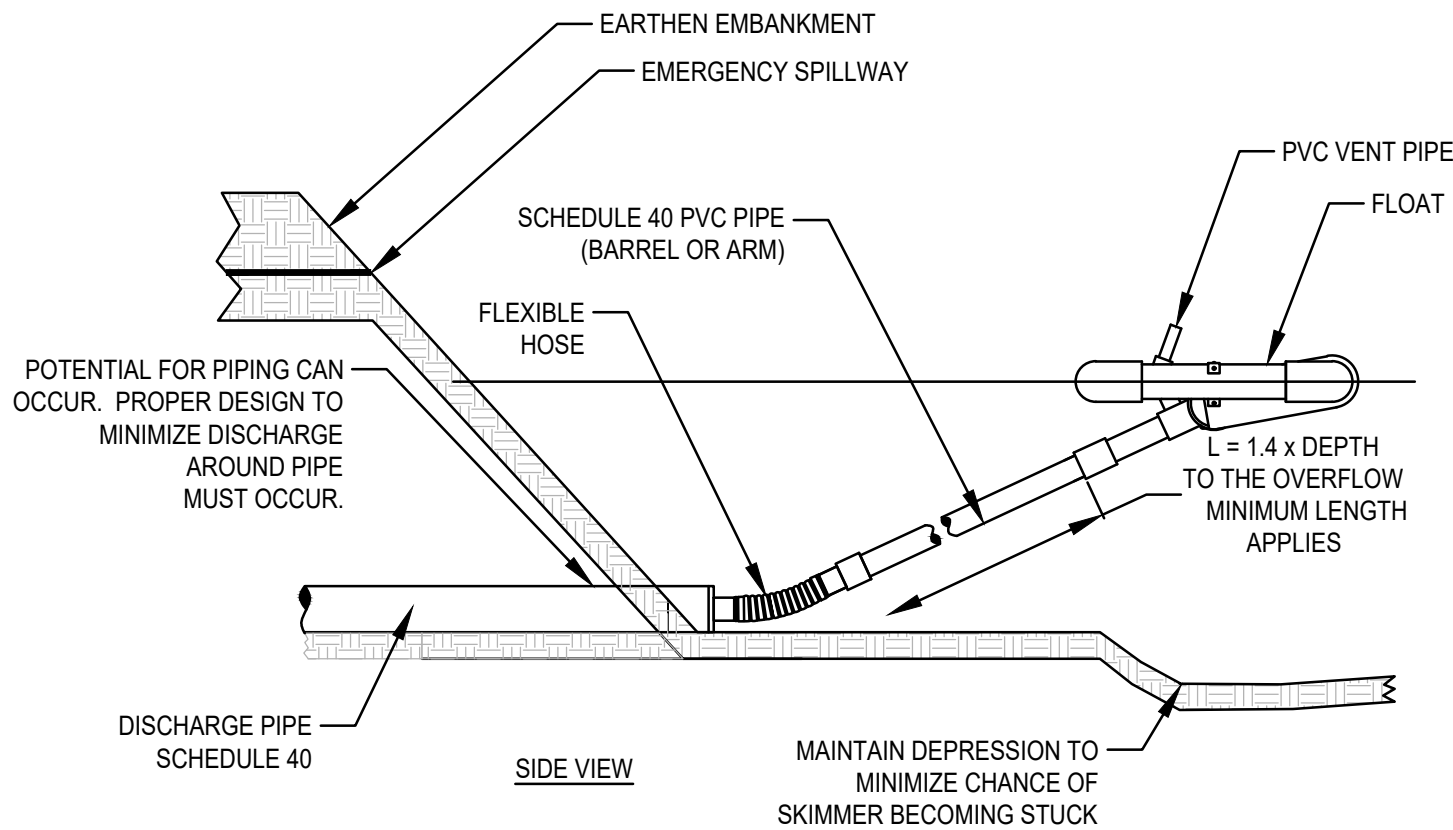
(SCE) CONSTRUCTION SPECIFICATIONS:

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, WHICHEVER 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.

CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:

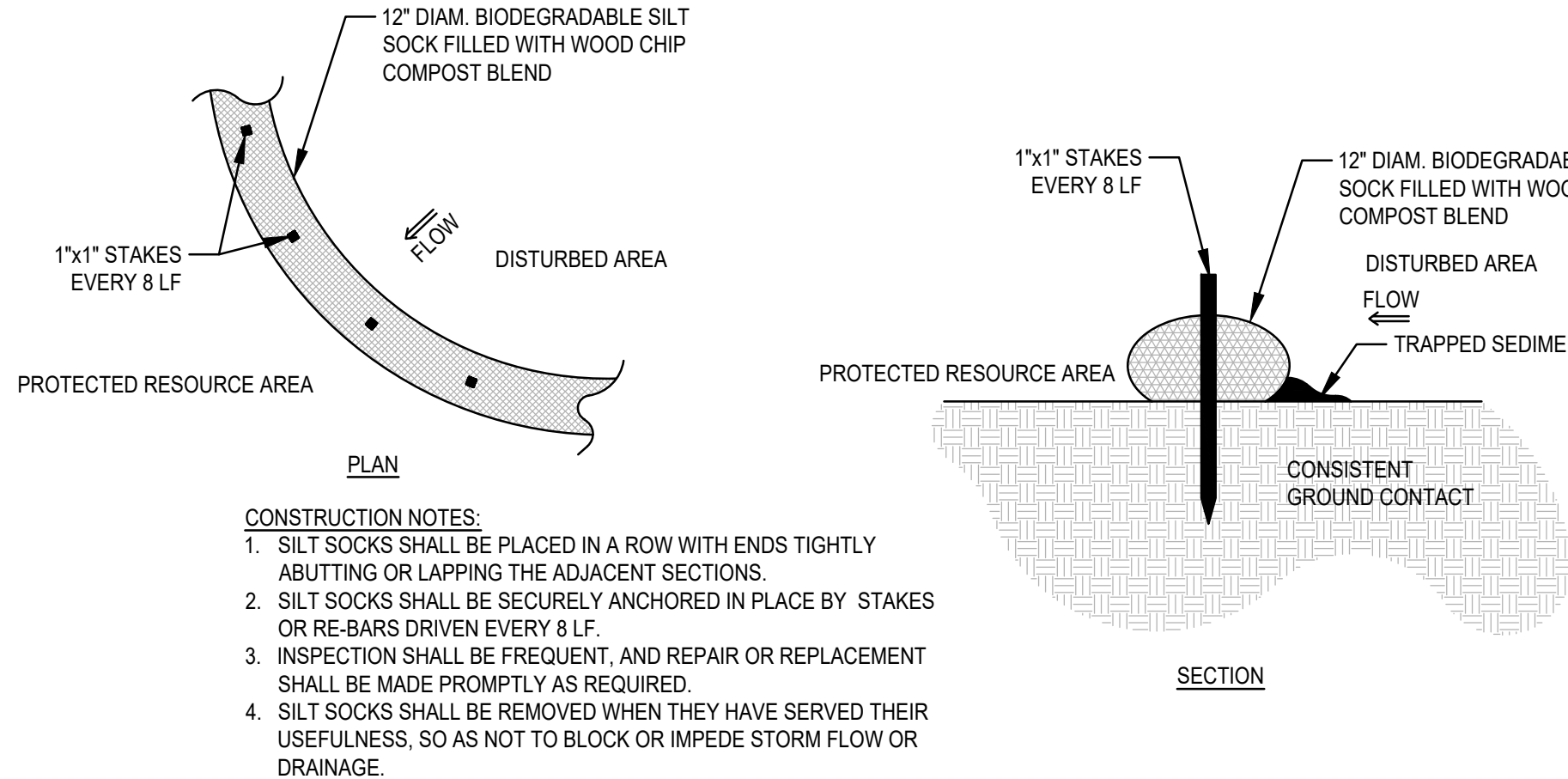
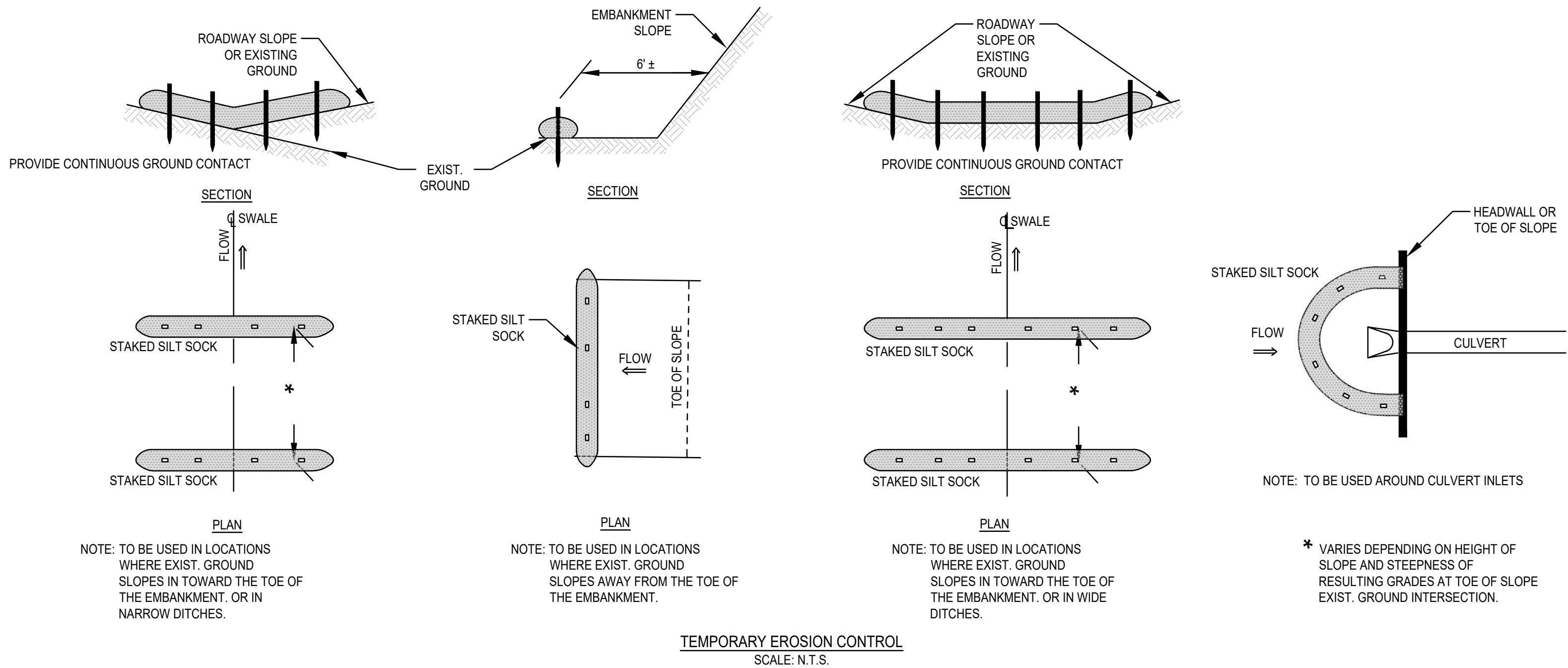
1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK, EROSION CONTROL BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND INLET PROTECTION.
2. STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), 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 1/2 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.



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.

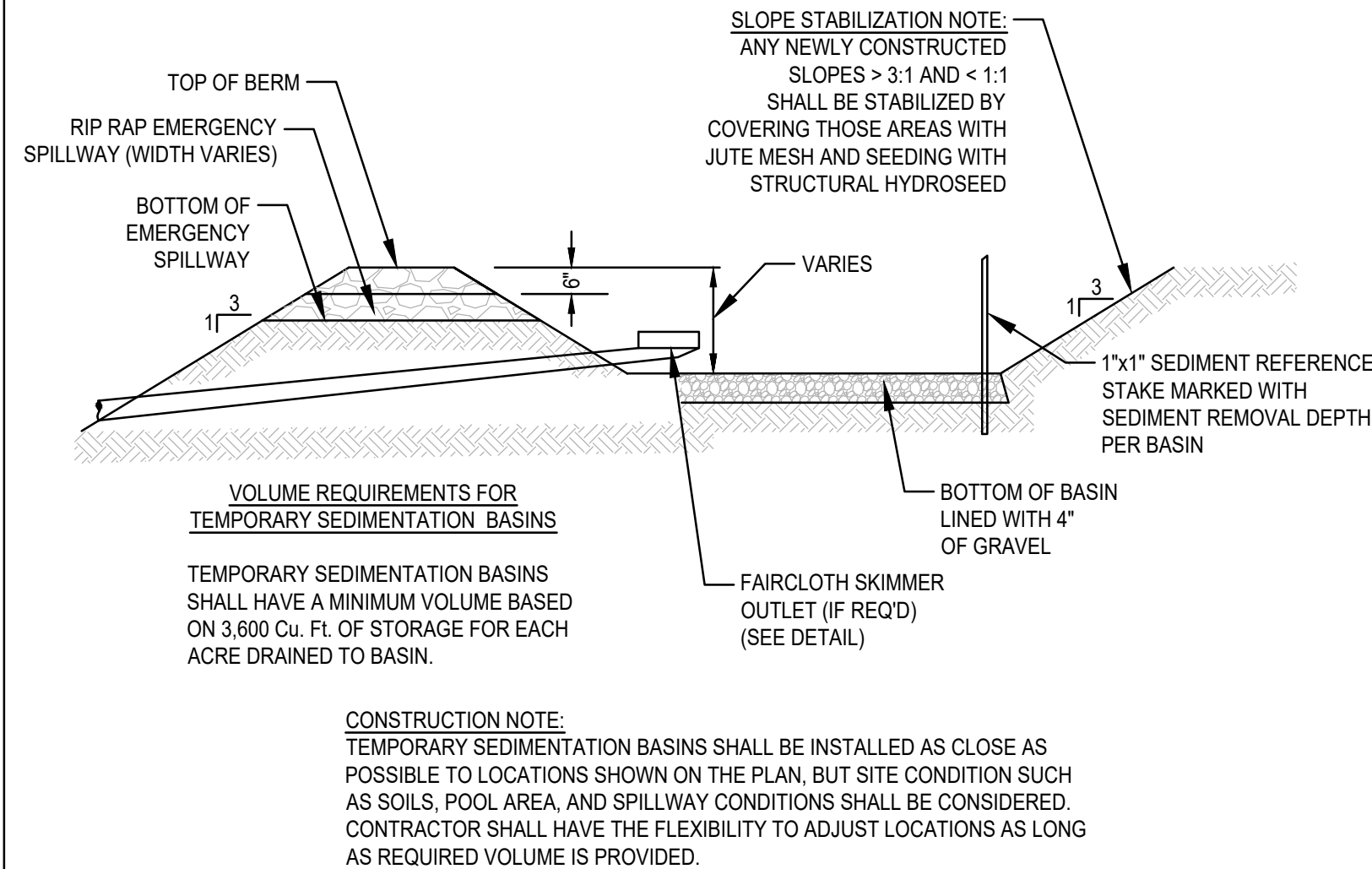
FAIRCLOTH SKIMMER DISCHARGE SYSTEM W/EMBANKMENT  
SCALE: N.T.S.



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 STAKES 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.

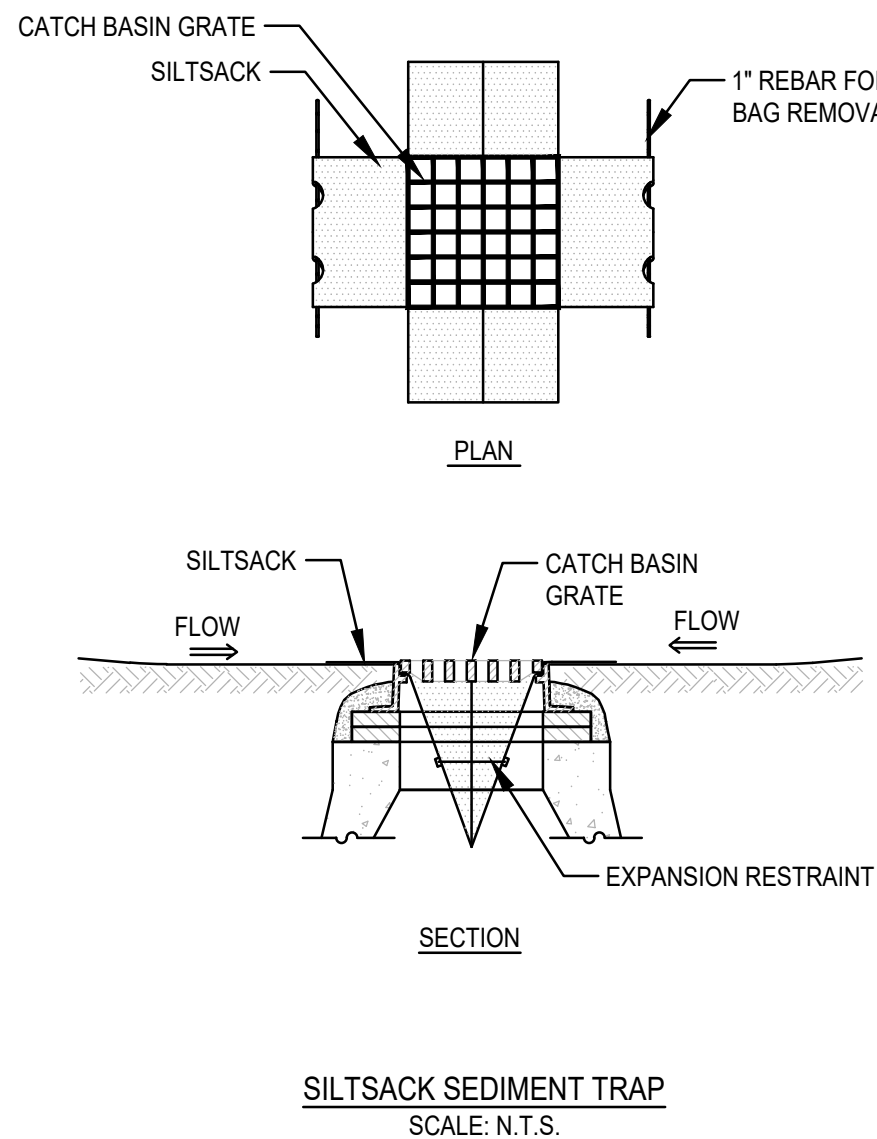
SILT SOCK EROSION CONTROL BARRIER DETAIL  
SCALE: N.T.S.



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  
SCALE: N.T.S.



REV	DATE	DESCRIPTION	BY	APP

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PROFESSIONAL ENGINEER:



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**EROSION AND  
SEDIMENTATION  
DETAILS**

DWG. NO:

**D-4**

PERMIT PLAN SET