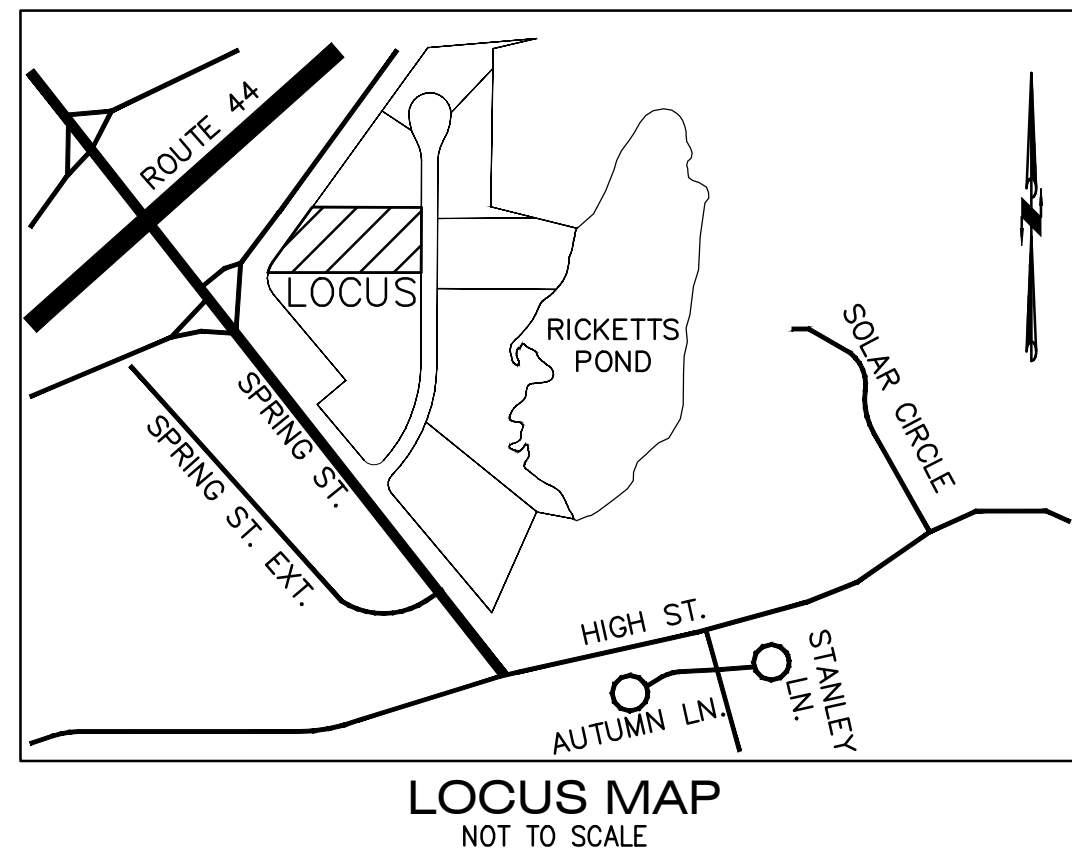


ABBREVIATIONS

ABAN	ABANDONED
ACP	ASBESTOS CEMENT PIPE
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
ASPH	ASPHALT
ACCOMP	ASPHALT COATED CORRUGATED METAL PIPE
B	BOLLARD
BLDG	BOUND
BIT CONC	BUILDING
BM	BITUMINOUS CONCRETE
BS	BENCHMARK
CAP	BOTTOM OF SLOPE
CB	CORRUGATED ALUMINUM PIPE
C&C	CATCH BASIN
CB/DH	CUT AND CAPPED
CB/EPLP	CONC. BOUND/DRILL HOLE
CB	CB/ESCUTCHEON
CB	CAPE COD BERM
CIP	CAST IRON PIPE
QIT	CHANGE IN TYPE
CLF	CENTERLINE
CO	CHAIN LINK FENCE
CONC	CLEAN OUT
COND	CONCRETE
CMP	CONDUIT
CPP	CORRUGATED METAL PIPE
CS	CORRUGATED POLYETHYLENE PIPE
CSMH	COMBINED SEWER
CULV	COMBINED SEWER MANHOLE
Δ	CULVERT
D	DELTA ANGLE
DCB	DRAIN
DIP	DOUBLE CATCH BASIN
DMH	DUCTILE IRON PIPE
E	DRAIN MANHOLE
ECC	ELECTRIC
ELEV	EXTRUDED CONCRETE CURB
EMH	ELEVATION
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	GROUND RAIL
GRAN.	GRANITE
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HR	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
PWMT	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
SCE	SLOPED GRANITE EDGING
SMH	SEWER MANHOLE
STA	STATION
SS	SEWER SERVICE
STL	STEEL
SW	SIDEWALK
T	TELEPHONE
TCB	TRAFFIC CONTROL BOX
TL	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

LEGEND

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



GENERAL NOTES

- CARVER: FORMERLY ASSESSOR'S MAP 32 PORTION OF LOT 1-2
LOCUS OWNER:
RPBP, LLC
3 MARION DRIVE
CARVER, MASSACHUSETTS 02330
- DEED BOOK REFERENCE: PLYMOUTH COUNTY REGISTRY OF DEEDS
BOOK 50438, PAGE 270
BOOK 51637, PAGE 211
PLAN BOOK 63, PAGE 848
 - 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)
 - LOCUS IS LOCATED WITHIN THE TOWN OF CARVER'S WATER RESOURCE PROTECTION OVERLAY DISTRICT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
 - 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 USED BEFORE FINAL STABILIZATION.
 - 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 AND MAY 2022.
 - THE PROPERTY SHOWN HEREON IS LOCATED IN THE TOWN OF CARVER SPRING STREET INNOVATION ZONING DISTRICT PER ZONING MAP DATED 2016.
 - 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.
 - 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.
 - LOCALS FALLS WITHIN ZONE X AS SHOWN ON F.I.R.M. PANEL NO: 25023C0334K DATED JULY 6, 2021.
 - ALL ELEVATIONS SHOWN REFER TO NAVD 1988 DATUM.
 - 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.
 - SEE PLAN 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.

GENERAL UTILITY NOTES

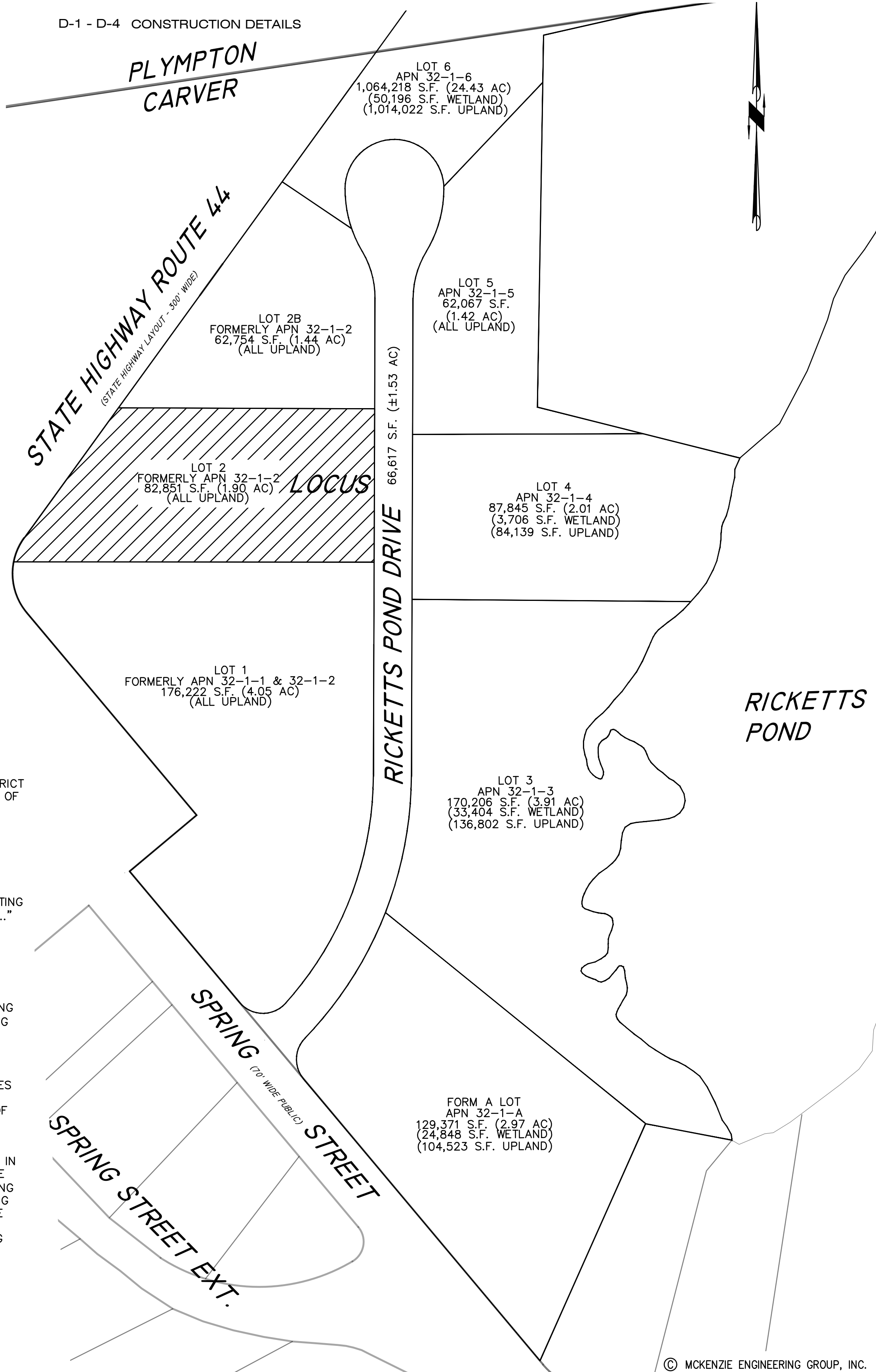
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR 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 COORDINATE ALL STREET WORK WITH THE CARVER DPW.
- ALL WATER SERVICES SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
- ALL POTABLE WELL WATER SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
- 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.
- 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.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH CARVER DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.

WAIVERS REQUESTED FROM THE TOWN OF CARVER ZONING BY-LAW EFFECTIVE APRIL 2020

- 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 PTOC, 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.
- 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.
- 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.
- SEC 3242 PARKING LOT PERIMETER LANDSCAPING:
REQUIRED: BUFFER STRIP OF 20 FT. LOCATED ALONG THE PERIMETER OF AT LEAST THREE SIDES OF THE PARKING AREA.
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 7 FT. IS PROVIDED ADJACENT TO EACH SIDE PROPERTY LINE, AND 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 AND LEAVING THE SITE. 24 FT. WIDE DRIVING AISLES ASSOCIATED WITH THE SITE ARE 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.

Drawing Index:

No.	Drawing Title
G-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
E-1	BUILDING ELEVATIONS
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
LA-1	LANDSCAPING PLAN
P-1	PHASING PLAN
EVA-1	EMERGENCY VEHICLE ACCESS PLAN
D-1 - D-4	CONSTRUCTION DETAILS



BY APP

DESCRIPTION

ESS

BCM

PEER REVIEW

6/6/22

DATE

1

REV

MEG
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
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

DRAWN BY: ESS

DESIGNED BY: ESS

CHECKED BY: BCM

APPROVED BY: BCM

DATE: FEBRUARY 28, 2022

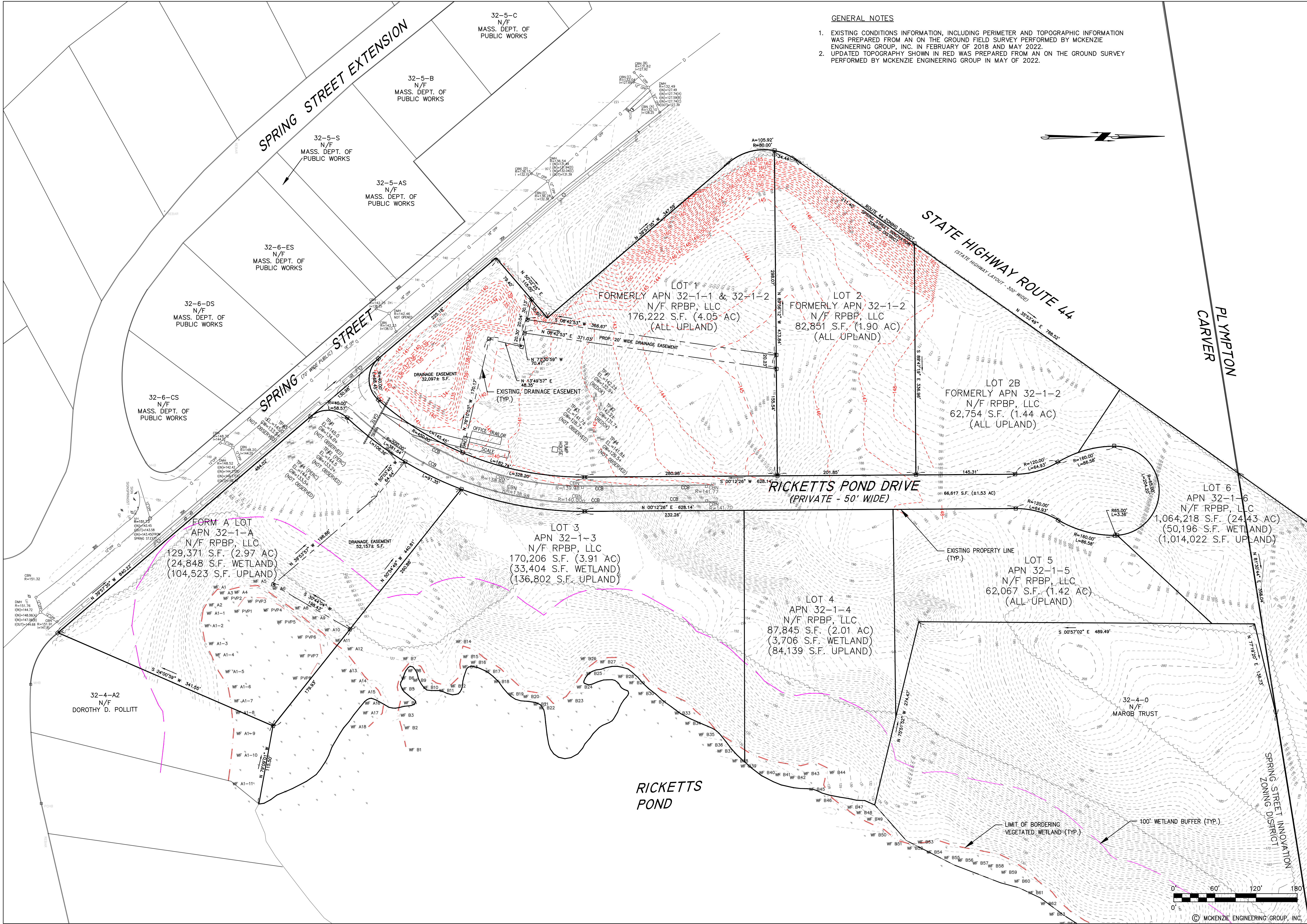
SCALE: 1"=100'

PROJECT NO.: 221-190

DWG. TITLE:

LEGEND,
ABBREVIATIONS &
GENERAL NOTES

DWG. NO:
G-1



GENERAL NOTES

- 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 AND MAY 2022.
- UPDATED TOPOGRAPHY SHOWN IN RED WAS PREPARED FROM AN ON THE GROUND SURVEY PERFORMED BY MCKENZIE ENGINEERING GROUP IN MAY OF 2022.

REV	DATE	DESCRIPTION	BY	APP
1	6/6/22	PEER REVIEW	ESS	BCM
2	6/24/22	ROAD INFRASTRUCTURE	ESS	BCM

MCKENZIE ENGINEERING GROUP
Mississippi Office Park
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Norwell, MA 02061
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www.mckeng.com

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

PROFESSIONAL SURVEYOR:

RICHARD J. HOOD
REGISTERED PROFESSIONAL LAND SURVEYOR

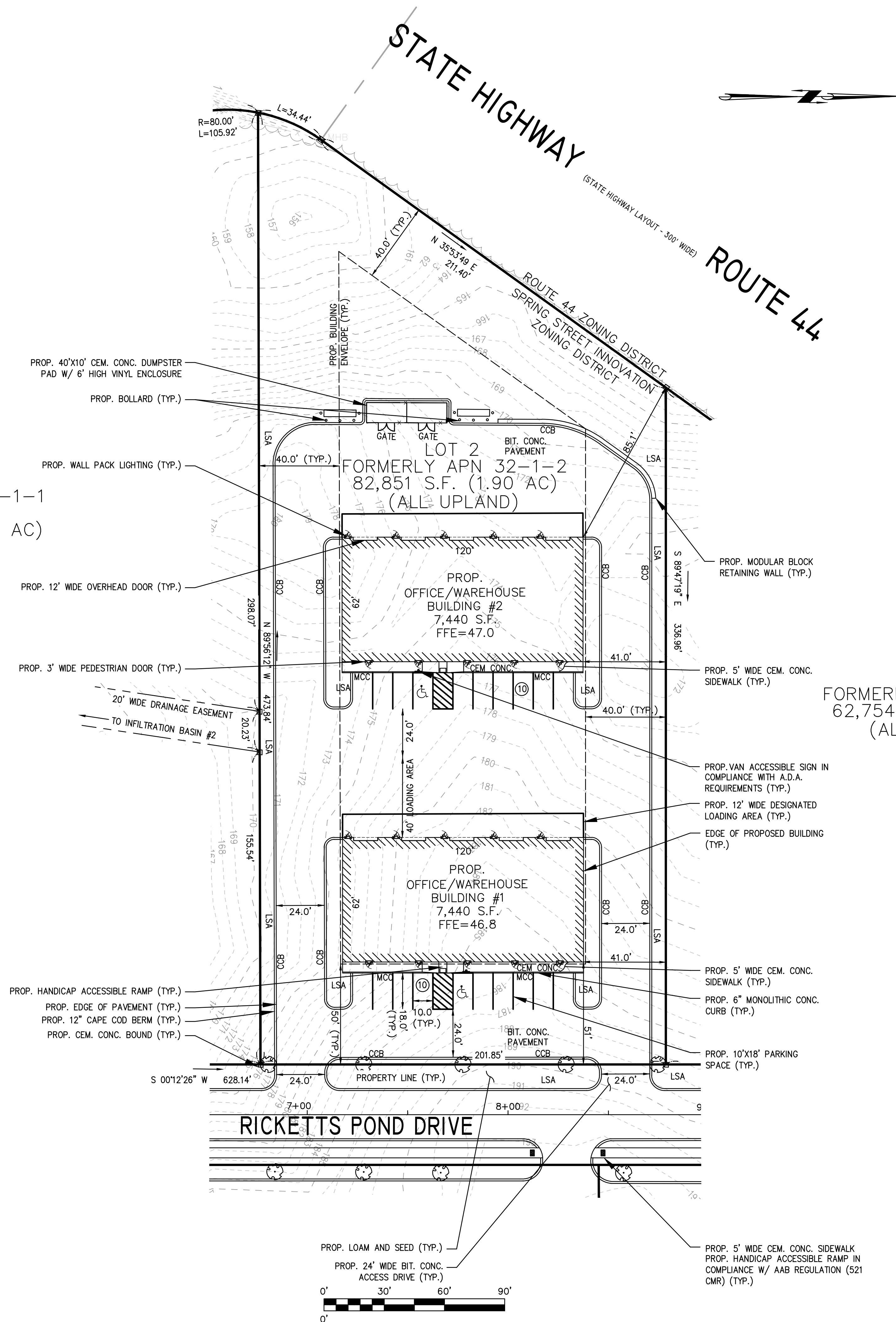
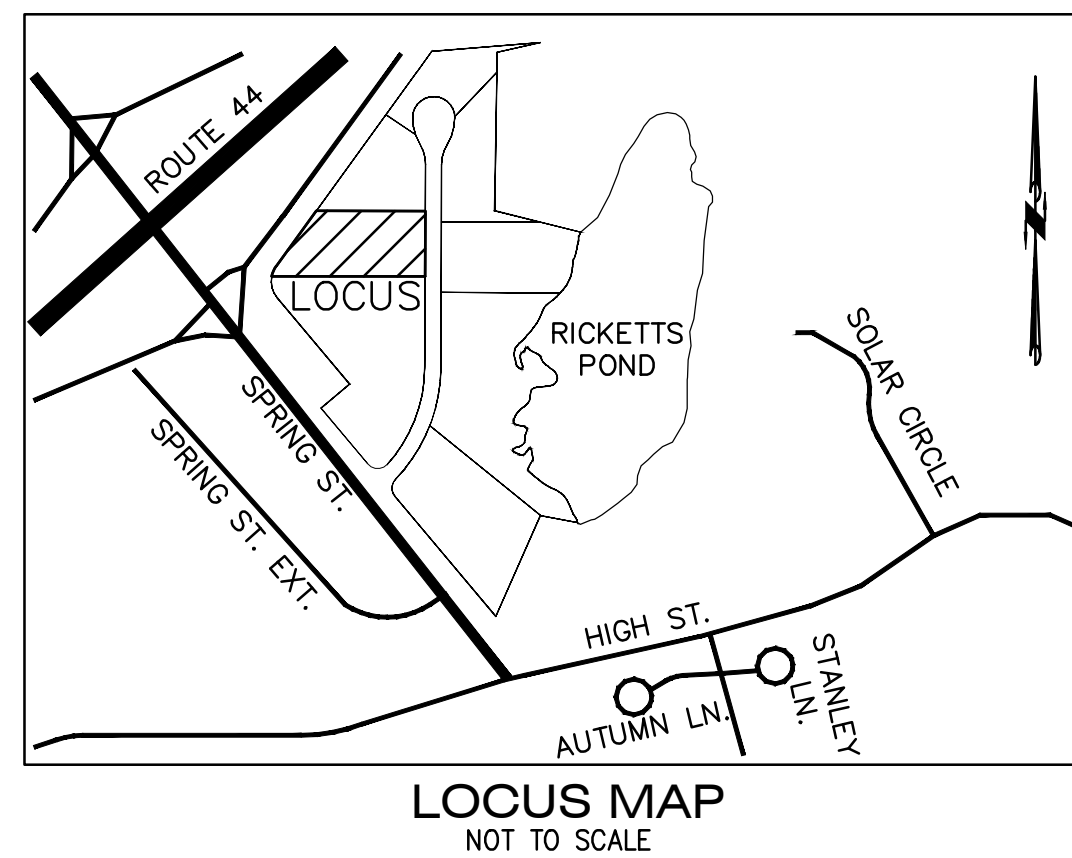
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

DRAWN BY: ESS
DESIGNED BY: ESS
CHECKED BY: BCM
APPROVED BY: BCM
DATE: FEBRUARY 28, 2022
SCALE: 1"=60'
PROJECT NO.: 221-190
DWG. TITLE:

EXISTING CONDITIONS PLAN

DWG. NO: **EX-1**

PERMIT PLAN SET



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

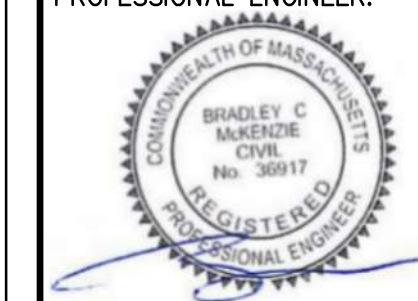
CRITERIA	REQUIRED (CARVER ZONING BYLAW)	REQUIRED	PROPOSE
OFFICE	1 SPACE/250 S.F. GFA =(14,880 * 25%) / 250 S.F. = 14.9		
WAREHOUSE AND STORAGE	1 PER 2 EMPLOYEES BUT NOT LESS THAN 1 PER 5,000 S.F. (# EMPLOYEES IS UNKNOWN) =(14,880 * 75%) / 5,000 S.F. = 2.2	14.9 + 2.2 = 17.1	20 SPACE

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)

**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

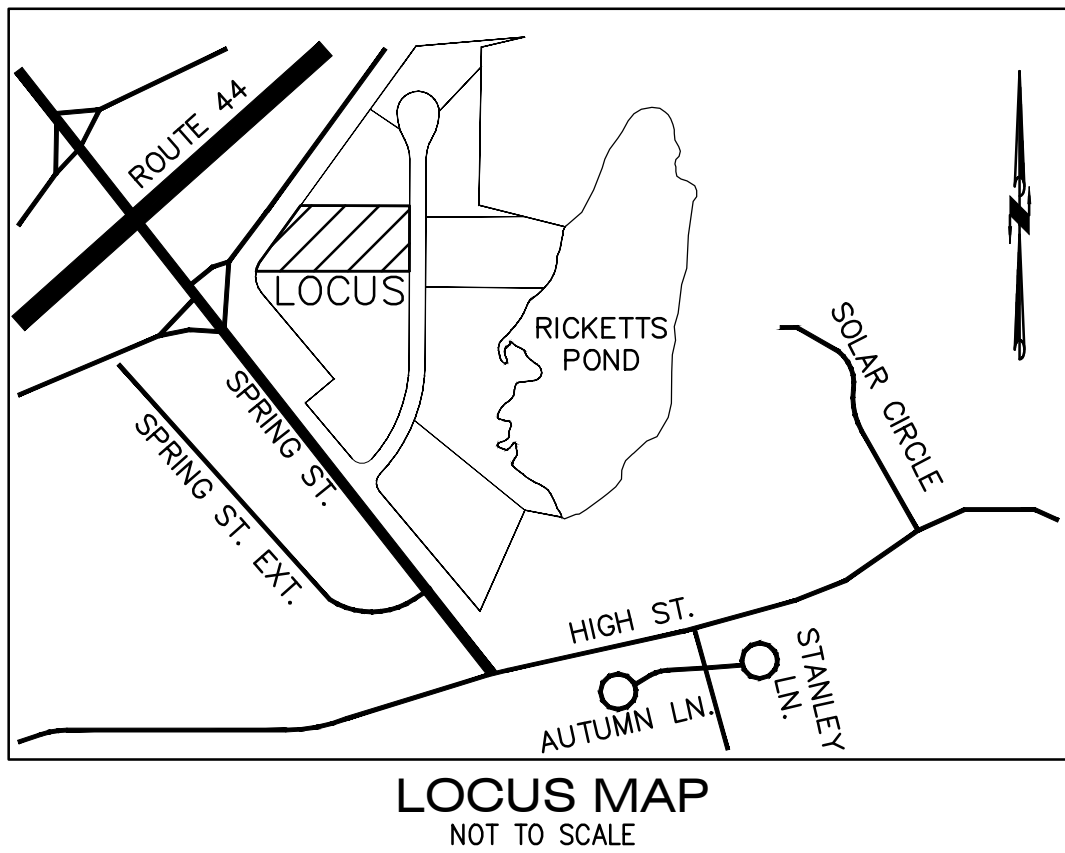
PERMIT PLAN SET

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



LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

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.

PROP. PRECAST CONC. CATCH BASIN (CB-3)
RIM=145.00
INV OUT=142.50

PROP. 12" HDPE DRAIN PIPE
46 LF (S=0.028)

PROP. PRECAST CONC. DRAIN MANHOLE (DMH-2)
RIM=146.05
INV IN=141.20
INV OUT=141.20

PROP. 12" HDPE DRAIN PIPE
100 LF (S=0.012)

PROP. PRECAST CONC. CATCH BASIN (CB-4)
RIM=145.00
INV OUT=141.30

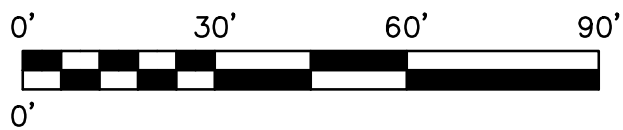
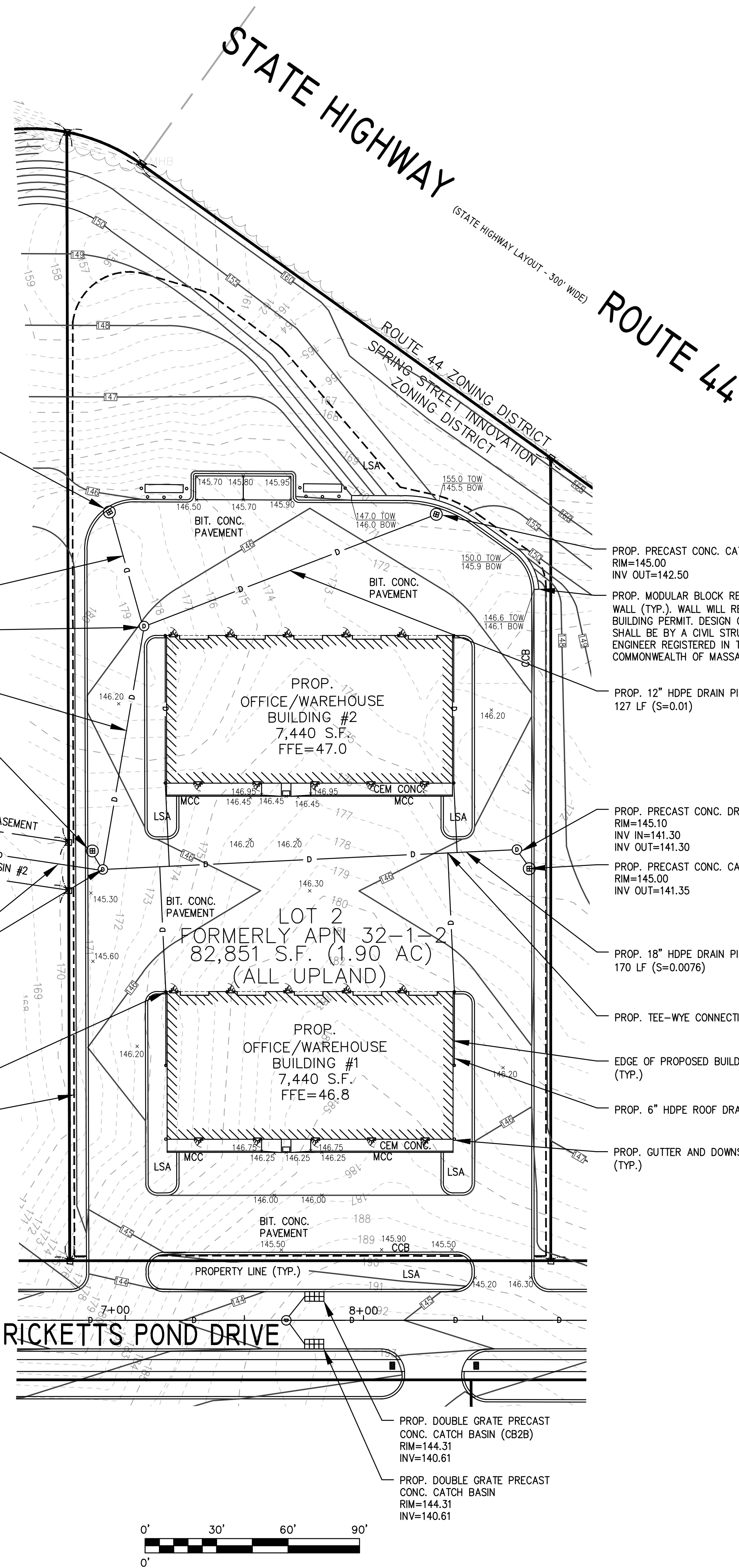
20' WIDE DRAINAGE EASEMENT
DISCHARGE TO INFILTRATION BASIN #2

PROP. 24" HDPE DRAIN PIPE

PROP. PRECAST CONC. DRAIN MANHOLE (DMH-3)
RIM=145.10
INV IN=140.00
INV OUT=140.00

PROP. ROOF LEADER AND DOWNSPOUT
(TYP.)

PROP. COMPOST FILTER TUBE (LIMIT OF
WORK) (TYP.)



- 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
1	6/6/22	PEER REVIEW	ESS

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

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

PROFESSIONAL ENGINEER:

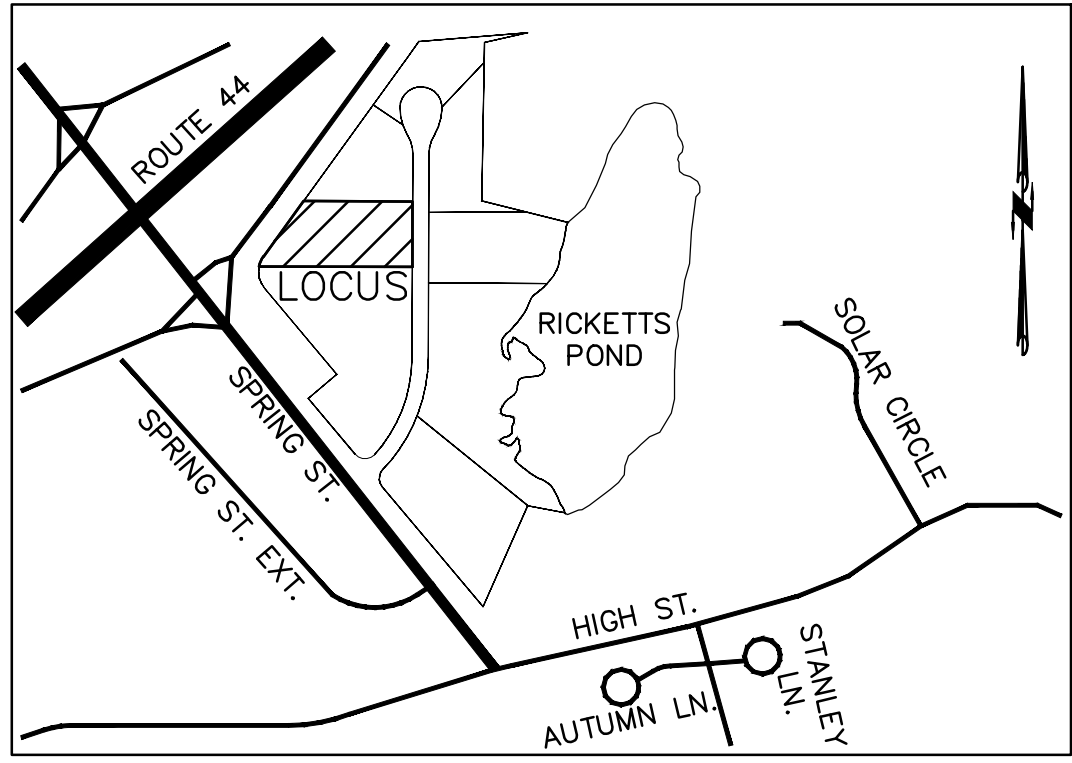


APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

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
DRAINAGE PLAN**

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

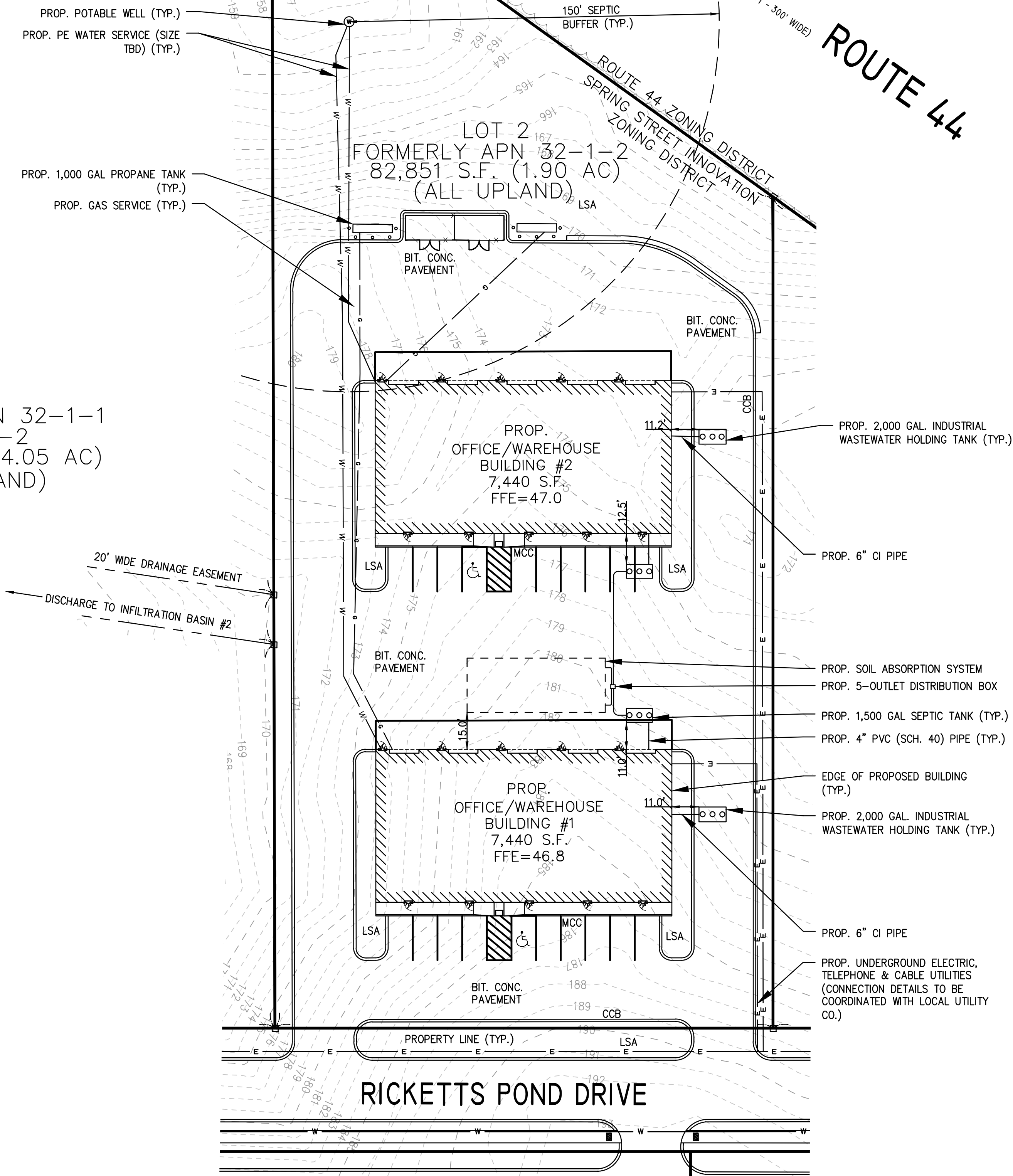


LOCUS MAP
NOT TO SCALE

LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

LOT 2
FORMERLY APN 32-1-2
82,851 S.F. (1.90 AC)
(ALL UPLAND)

LOT 2B
FORMERLY APN 32-1-2
62,754 S.F. (1.44 AC)
(ALL UPLAND)



REV	DATE	DESCRIPTION	BY
1	6/6/22	PEER REVIEW	ESS

M

G

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

PROFESSIONAL ENGINEER:

BRADLEY C. MCKENZIE

CIVIL

REGISTERED 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

[illegible]

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

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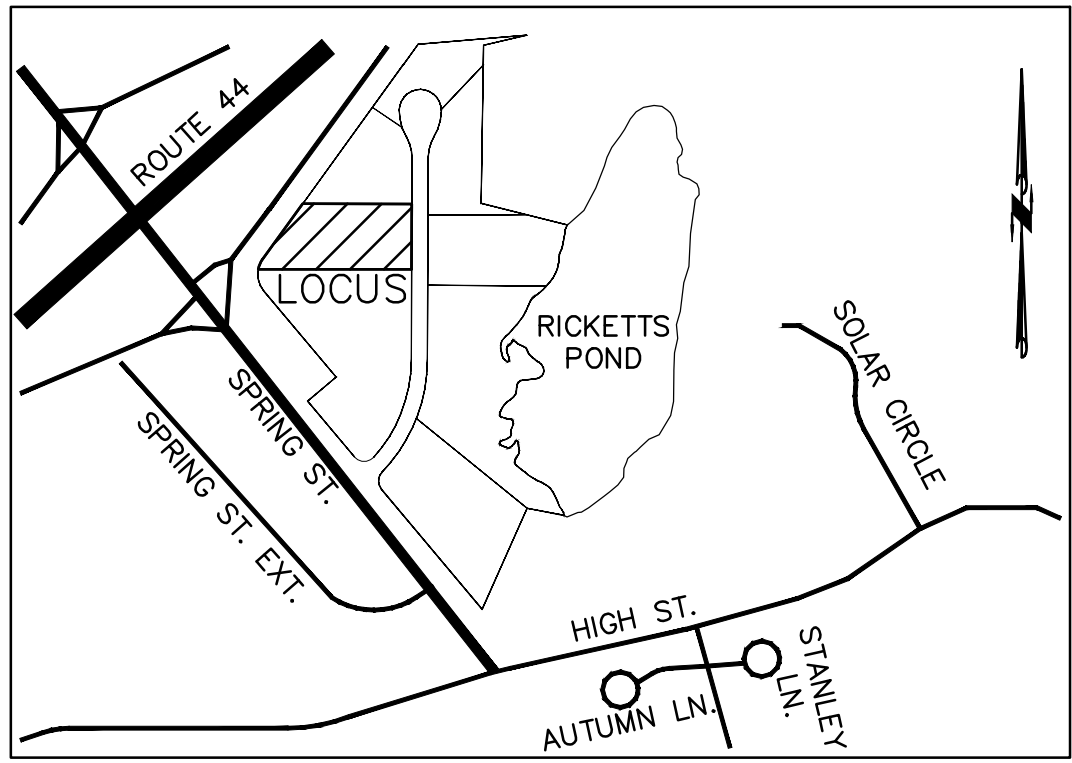
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

PERMIT PLAN SET

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:	

BUILDING ELEVATIONS

DWG. NO: **E-1**



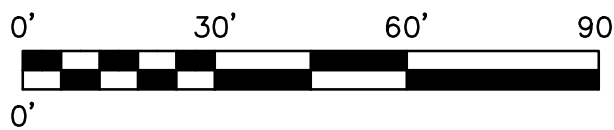
LOCUS MAP
NOT TO SCALE

LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

LOT 2
FORMERLY APN 32-1-2
82,851 S.F. (1.90 AC)
(ALL UPLAND)

LOT 2B
FORMERLY APN 32-1-2
62,754 S.F. (1.44 AC)
(ALL UPLAND)

RICKETTS POND DRIVE



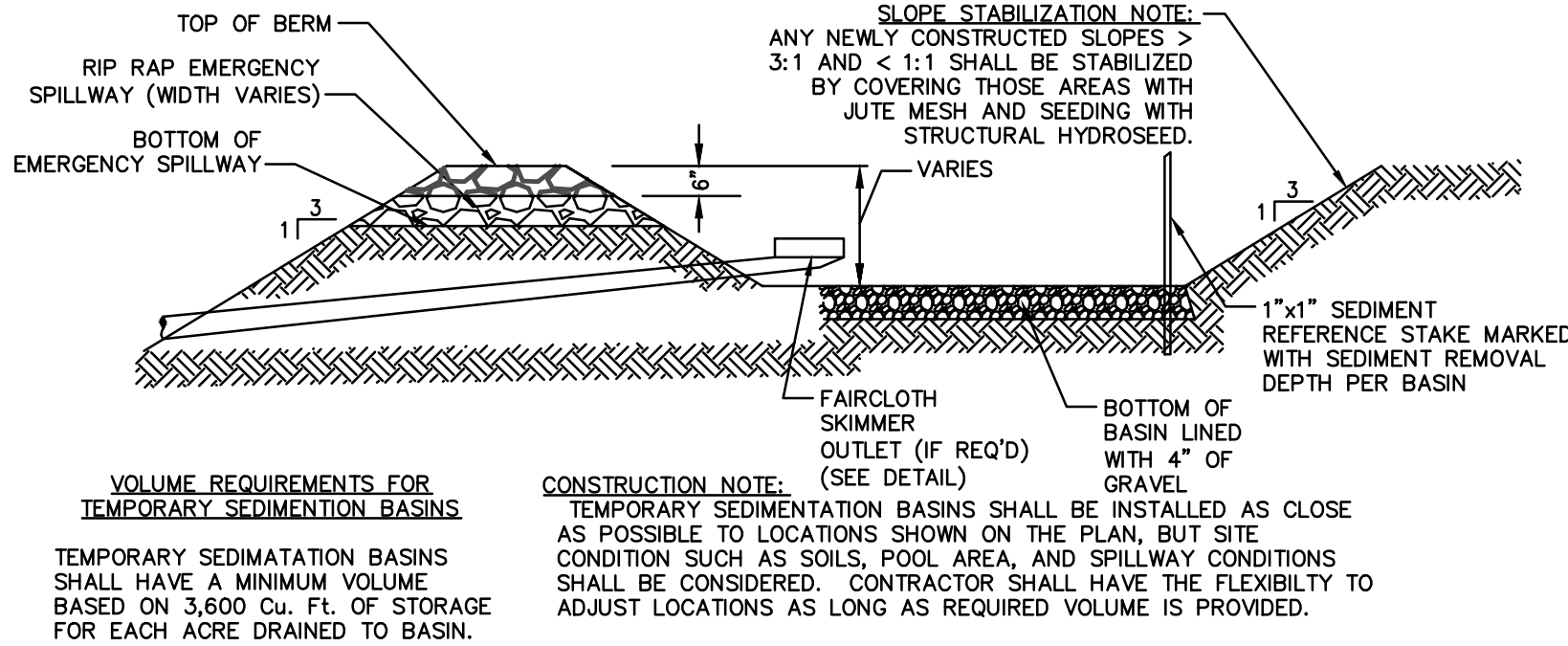
CONSTRUCTION PHASE BMP OPERATION AND MAINTENANCE NOTES:

- 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 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.
- 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.



TEMPORARY SEDIMENTATION BASIN
NOT TO SCALE

REV	DATE	DESCRIPTION	BY	APP
1	6/6/22	PEER REVIEW	ESS	BCM



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

PROFESSIONAL ENGINEER:



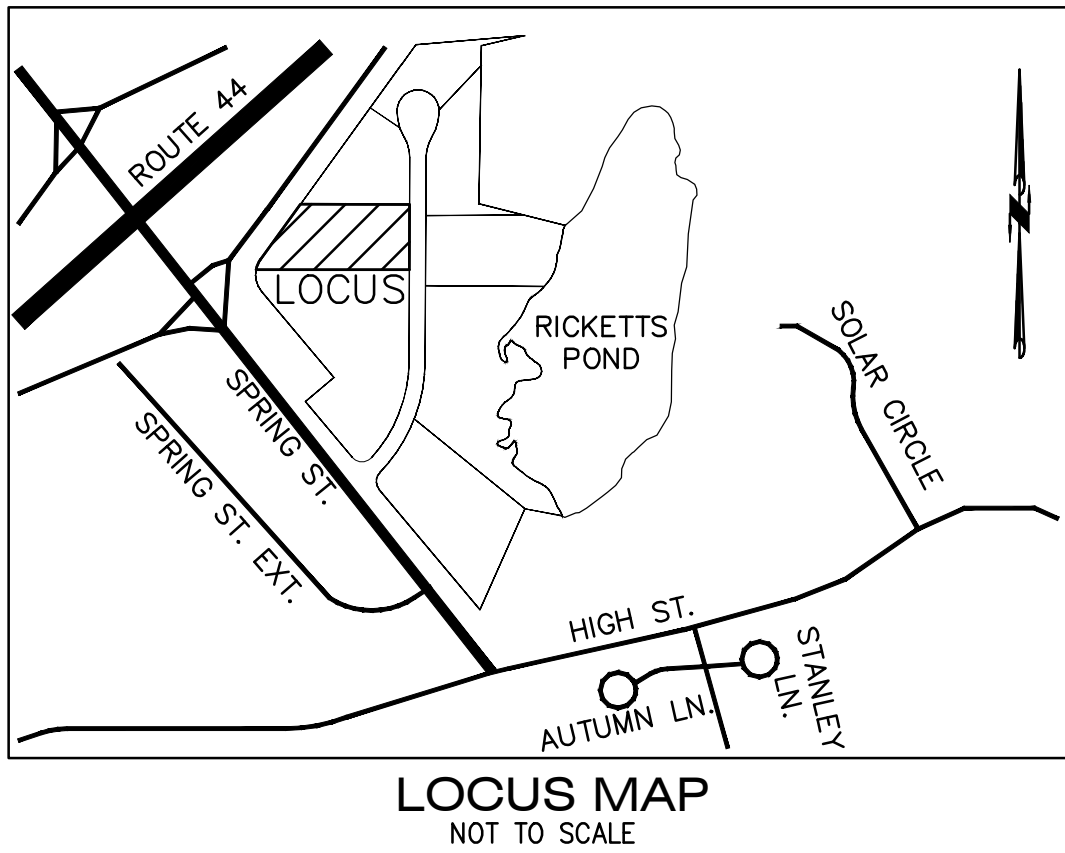
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

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:

EROSION AND
SEDIMENT
CONTROL PLAN

DWG. NO:
ESC-1

PERMIT PLAN SET



LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

PROP. CEM. CONC. DUMPSTER PAD
W/ 6' HIGH VINYL ENCLOSURE

PUSSY WILLOW (TYP.)

20' WIDE DRAINAGE EASEMENT
TO INFILTRATION BASIN #2

RED CEDAR
TREE (TYP.)

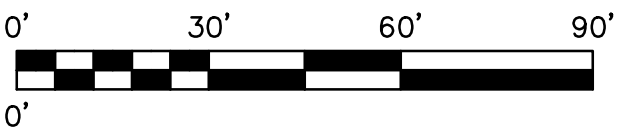
PROP. EDGE OF PAVEMENT (TYP.)
PROP. 12" CAPE COD BERM (TYP.)

PROP. STREET TREES, SEE
"DEFINITIVE PLANS SET, RICKETS
POND BUSINESS PARK, OFF
SPRING STREET, CARVER,
MASSACHUSETTS" (TYP.)

PIN OAK TREE
(TYP.)

PROP. LOAM AND SEED (TYP.)

PROP. 24' WIDE BIT. CONC.
ACCESS DRIVE (TYP.)



LOT 2
FORMERLY APN 32-1-2
82,851 S.F. (1.90 AC)
(ALL UPLAND)

PROP.
OFFICE/WAREHOUSE
BUILDING #2
7,440 S.F.
FFE=47.0

CCB

BIT. CONC.
PAVEMENT

LSA

CCB

CCB

CCB

CCB

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STATE HIGHWAY

(STATE HIGHWAY LAYOUT - 300' WIDE)

ROUTE 44

ROUTE 44 ZONING DISTRICT
SPRING STREET INNOVATION
ZONING DISTRICT

PROP. MODULAR BLOCK
RETAINING WALL (TYP.)

SMOOTH ROSE
(TYP.)

EASTERN REDBUD TREE (TYP.)

EDGE OF PROPOSED BUILDING
(TYP.)

EASTERN REDBUD TREE (TYP.)

PLANTING LIST

QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SYMBOL
TREES				
5	QUERCUS PALUSTRIS	PIN OAK	2.5"-3" CALIPER	
4	CERCOIS CANADENSIS	EASTERN REDBUD	20' HEIGHT	
13	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7'-8' HEIGHT	
SHRUBS				
52	ROSA BLANDA	SMOOTH ROSE	5 GALLON POT	
33	SALIX DISCOLOR	PUSSY WILLOW (MALE)	5 GALLON POT	

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.

BY APP

DESCRIPTION

DATE

REV

ESS BOM

PEER REVIEW

6/6/22

1

MG

MCKENZIE
ENGINEERING GROUP

Assinippi Office Park
150 Longwater Drive, Suite 101
Norwell, MA 02061
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SITE DEVELOPMENT PLANS
RICKETTS POND BUSINESS PARK,
LOT 2
OFF SPRING STREET
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:



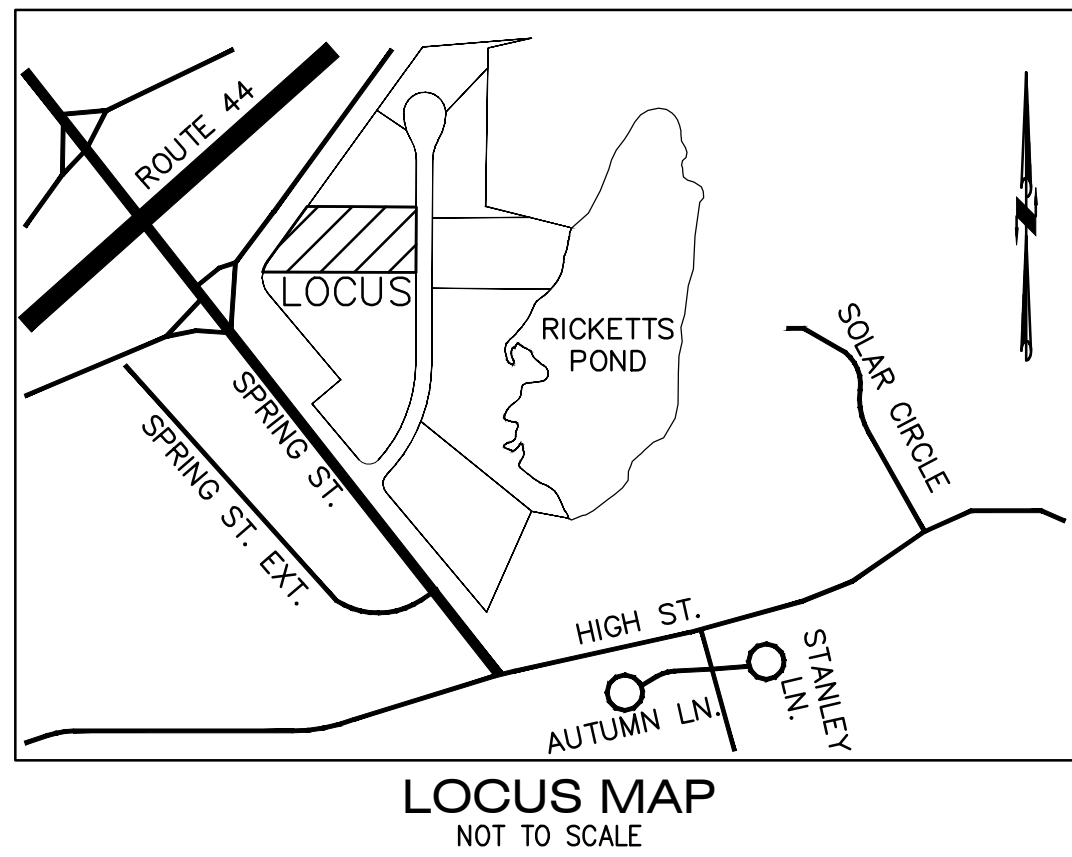
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

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

LANDSCAPING
PLAN

DWG. NO:
LA-1

PERMIT PLAN SET



LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

LOT 2
FORMERLY APN 32-1-2
82,851 S.F. (1.90 AC)
(ALL UPLAND)

LOT 2B
FORMERLY APN 32-1-2
62,754 S.F. (1.44 AC)
(ALL UPLAND)

GRADE FROM PROPOSED LIMIT OF PAVEMENT INTO EXISTING
SLOPE DURING PHASE 1 CONSTRUCTION AND MATCH EXISTING
GRADE; SLOPES NOT TO EXCEED 1V:3H

20' WIDE DRAINAGE EASEMENT
TO INFILTRATION BASIN #2

CORE EXISTING DRAIN MANHOLE
FOR PHASE 2 DRAIN CONNECTION

PROP. DUMPSTER AREA (PHASE 1)
(TYP.)

PROP. BUILDING, UTILITIES AND INFRASTRUCTURE TO BE
CONSTRUCTED DURING PHASE 1 (TYP.)

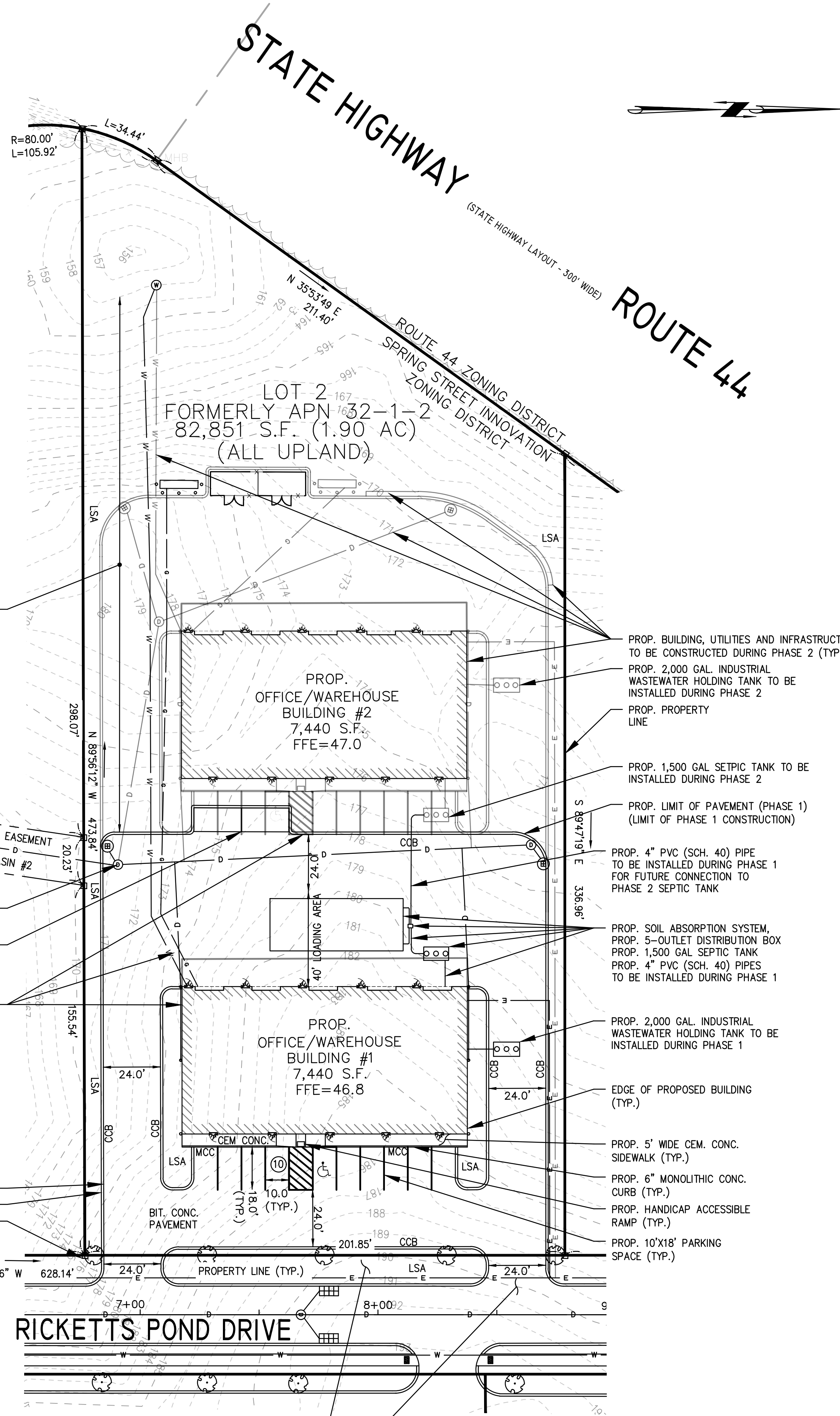
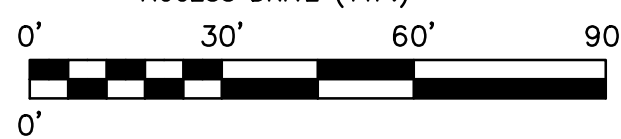
PROP. EDGE OF PAVEMENT (TYP.)

PROP. 12" CAPE COD BERM (TYP.)

PROP. CEM. CONC. BOUND (TYP.)

PROP. LOAM AND SEED (TYP.)

PROP. 24" WIDE BIT. CONC.
ACCESS DRIVE (TYP.)



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

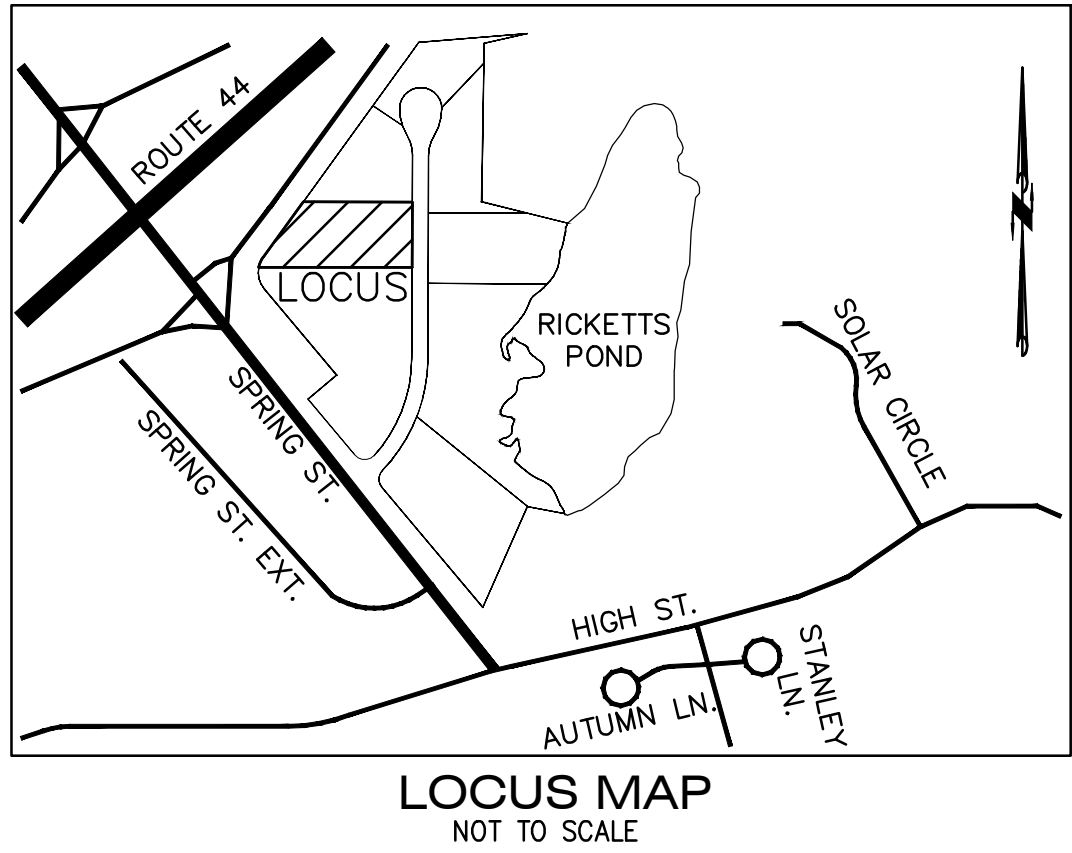
PHASING
PLAN

DWG. NO: **P-1**

REV	DATE	DESCRIPTION	BY
1	6/6/22	PEER REVIEW	ESS

MEG
MCKENZIE
ENGINEERING GROUP
Assinippi Office Park
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Norwell, MA 02061
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PERMIT PLAN SET



LOT 1
FORMERLY APN 32-1-1
& 32-1-2
176,222 S.F. (4.05 AC)
(ALL UPLAND)

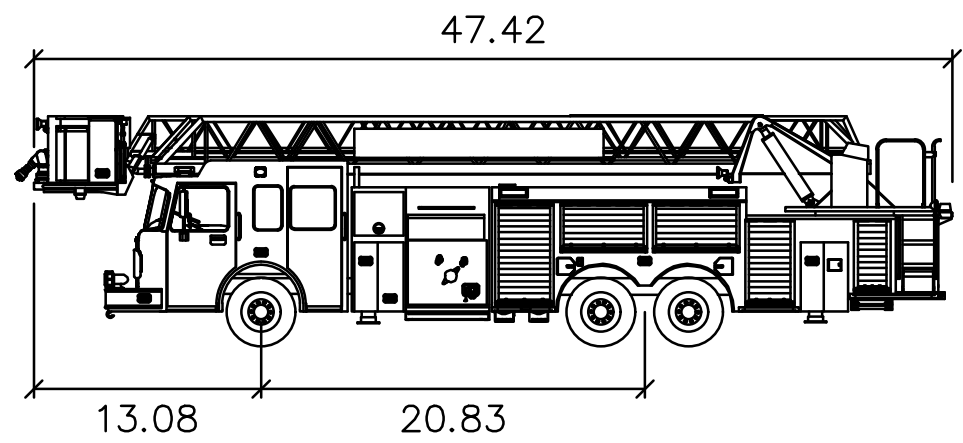
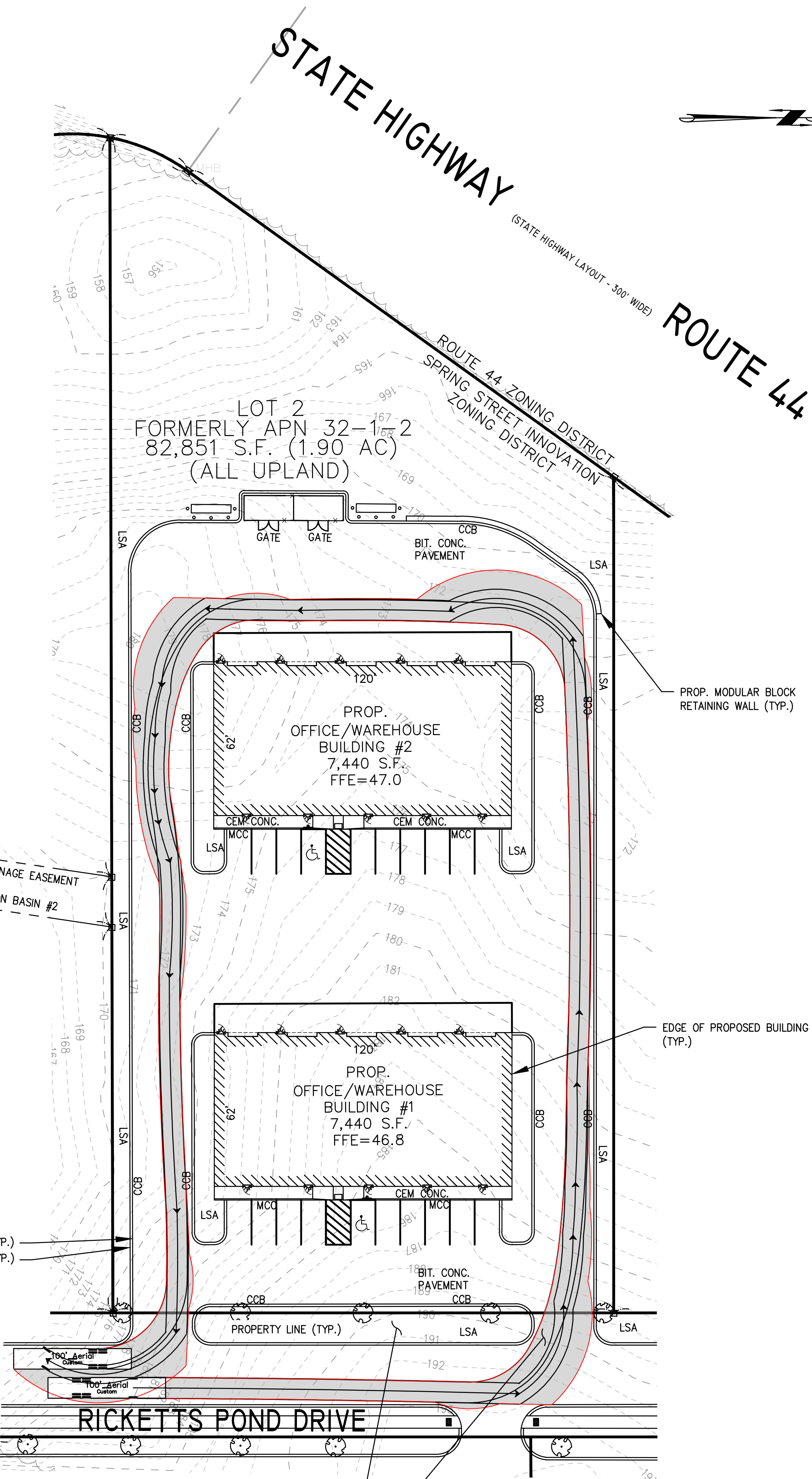
LOT 2
FORMERLY APN 32-1-2
82,851 S.F. (1.90 AC)
(ALL UPLAND)

LOT 2B
FORMERLY APN 32-1-2
62,754 S.F. (1.44 AC)
(ALL UPLAND)

20' WIDE DRAINAGE EASEMENT
TO INFILTRATION BASIN #2

PROP. EDGE OF PAVEMENT (TYP.)
PROP. 12" CAPE COD BERM (TYP.)

PROP. LOAM AND SEED (TYP.)
PROP. 24" WIDE BIT. CONC.
ACCESS DRIVE (TYP.)



100' Aerial Fire Truck

Width	: 8.33
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

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

REV

DATE

DESCRIPTION

BY

APP

1	6/6/22	PEER REVIEW	ESS	BCM

M

G

MCKENZIE

ENGINEERING GROUP

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

PROFESSIONAL ENGINEER:



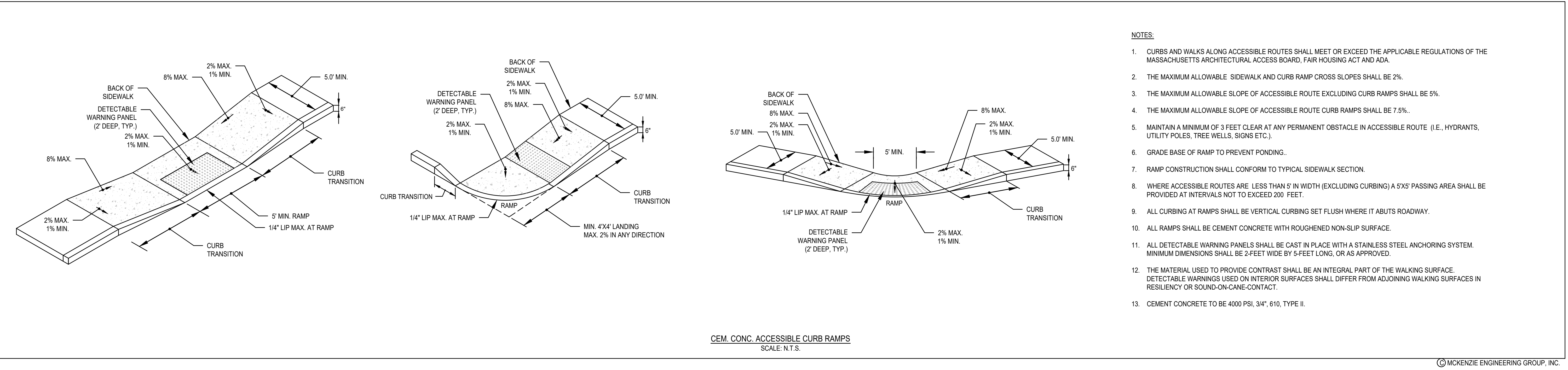
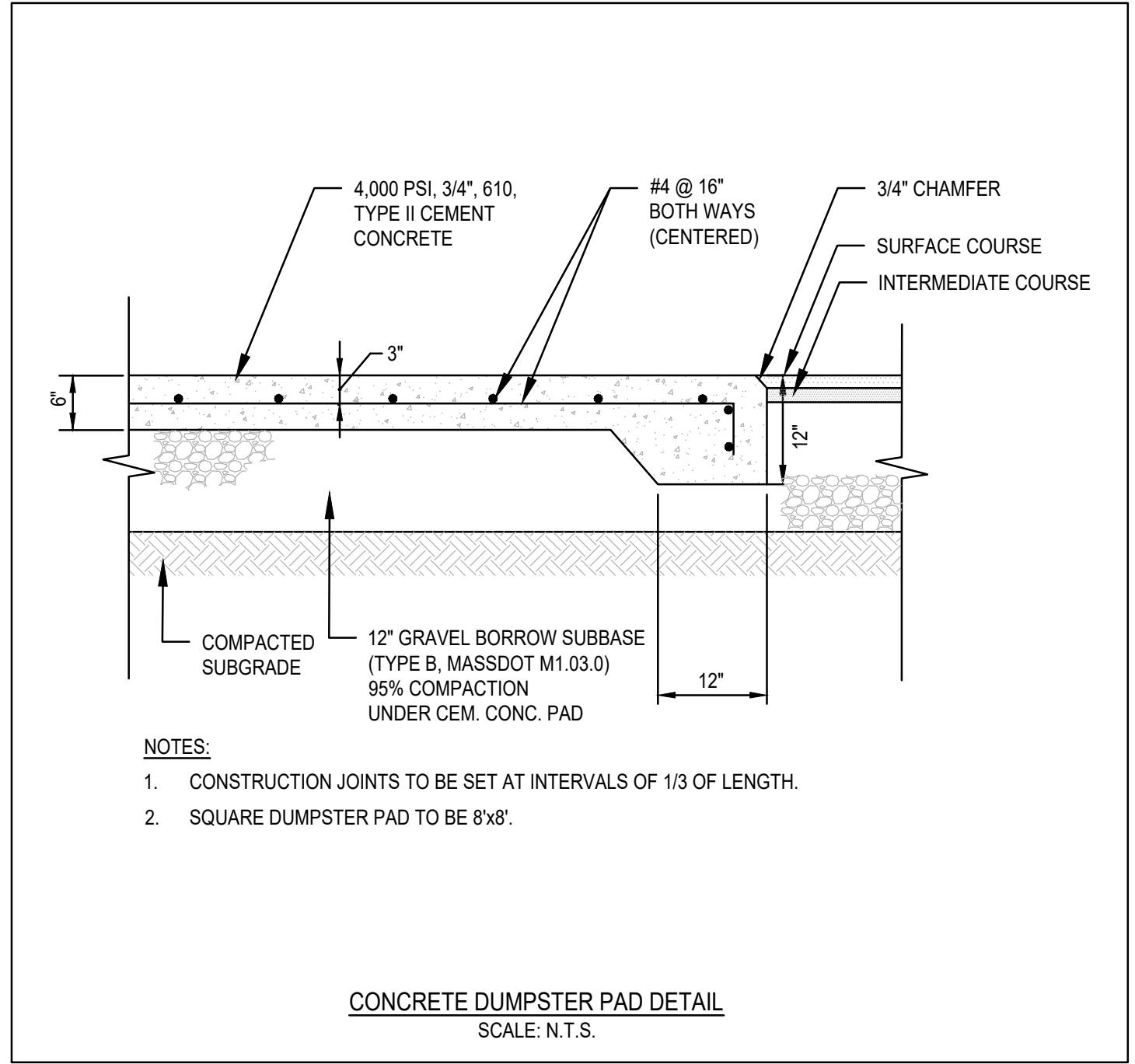
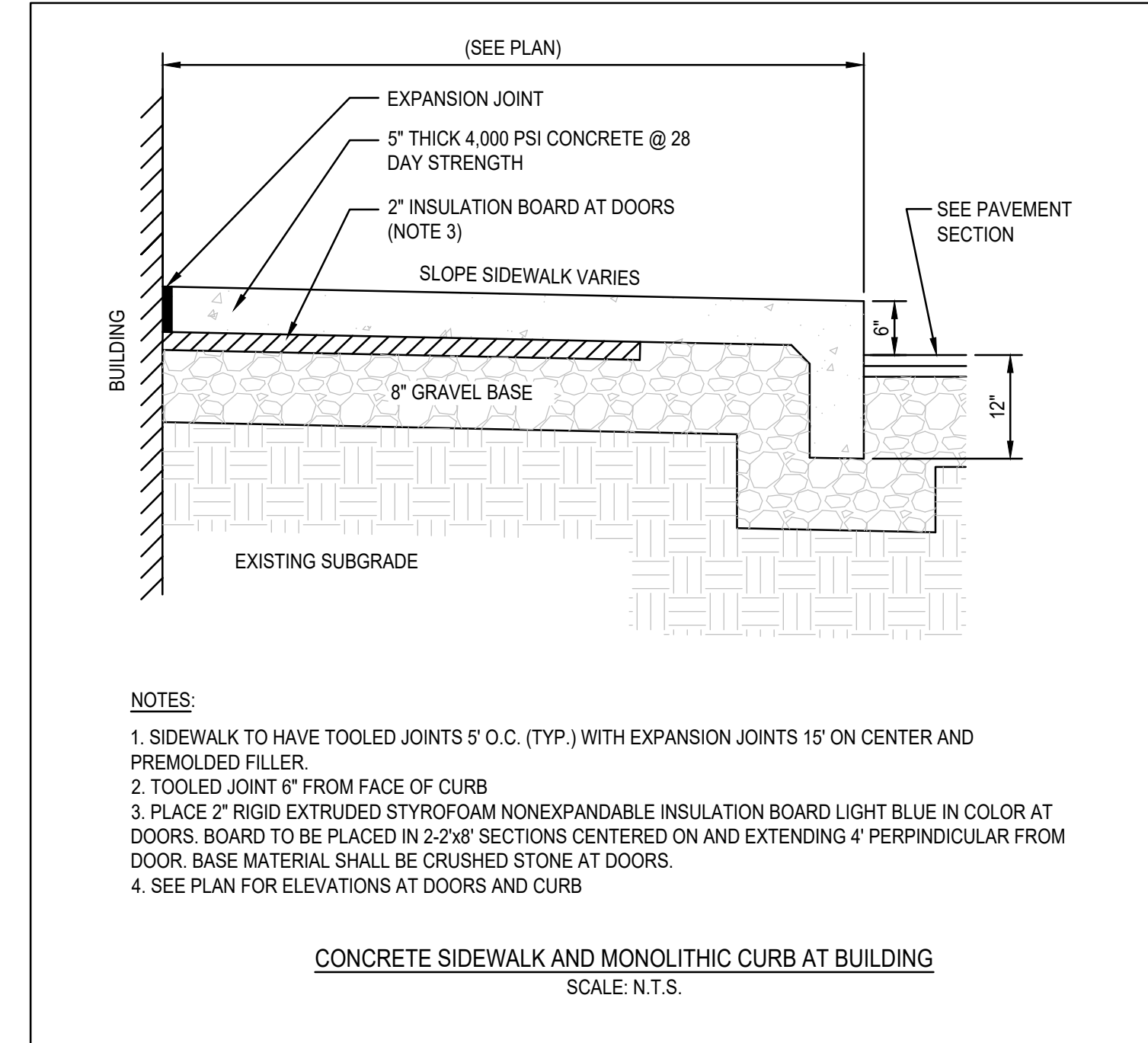
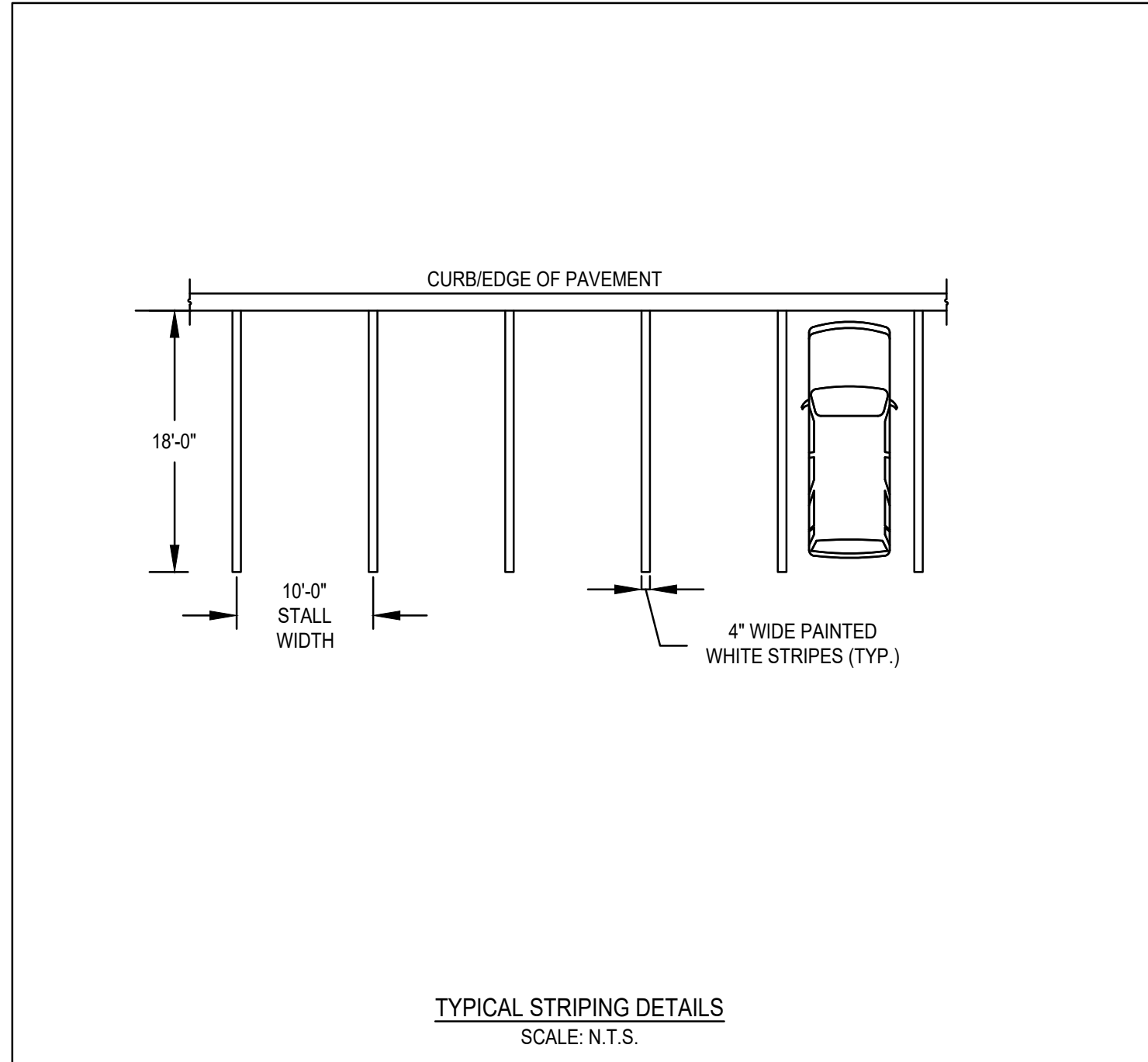
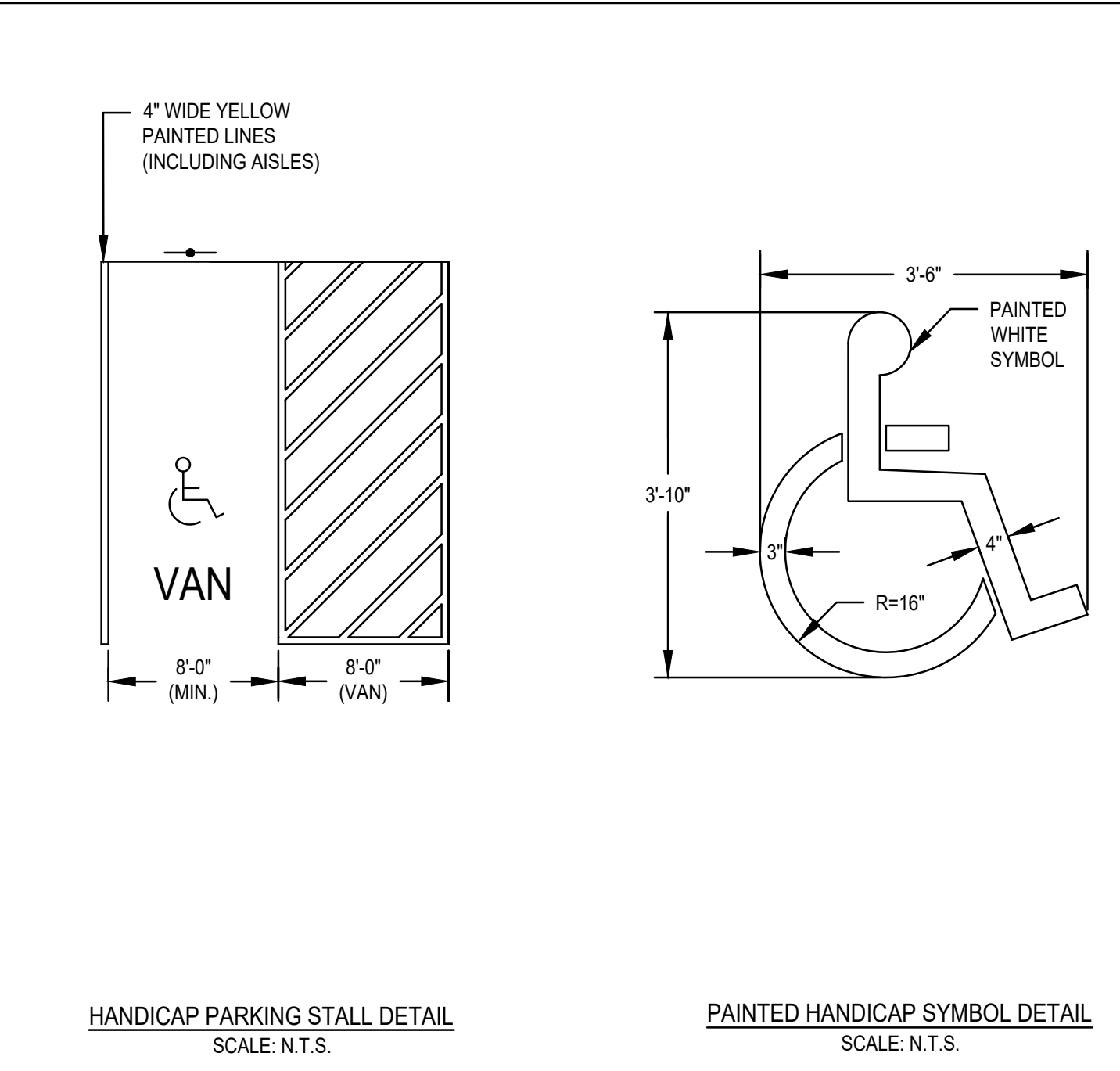
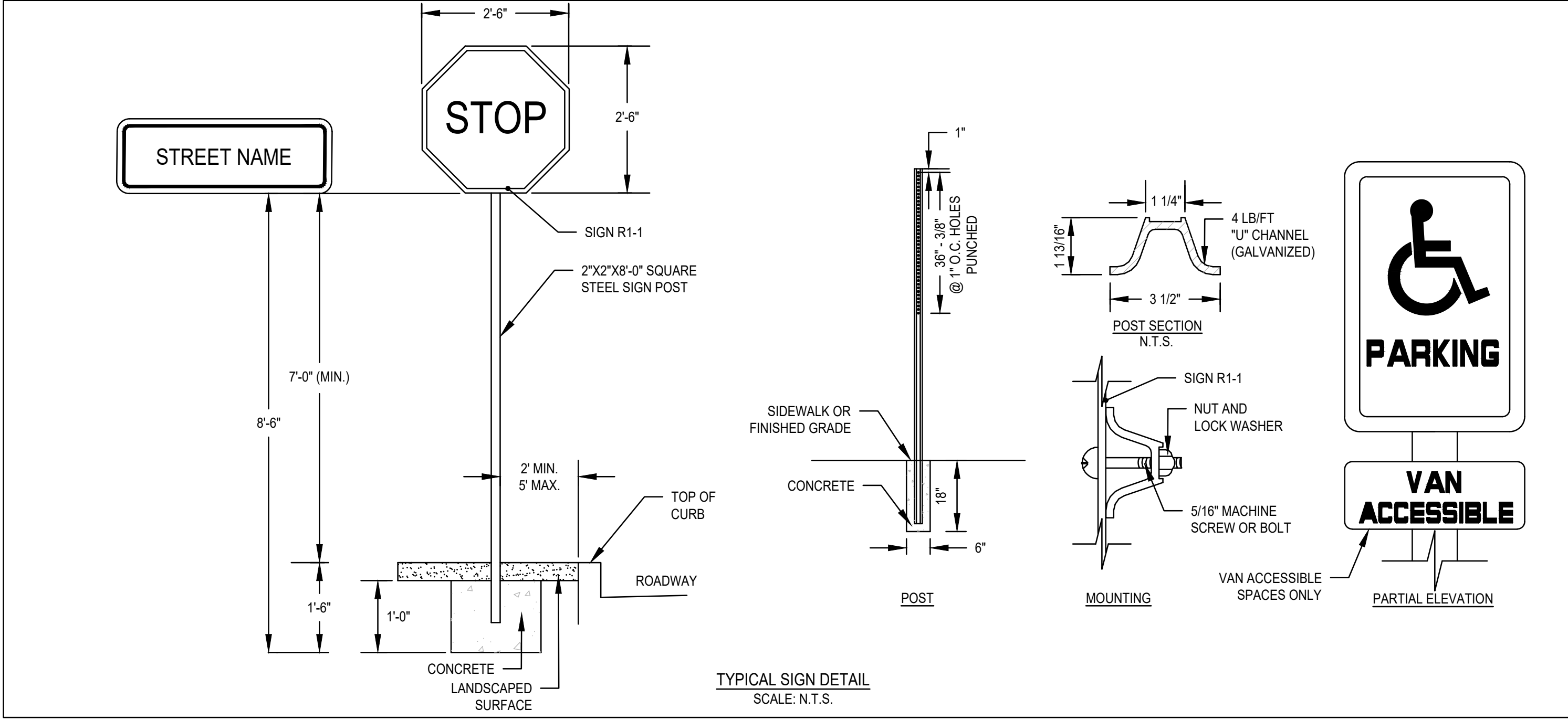
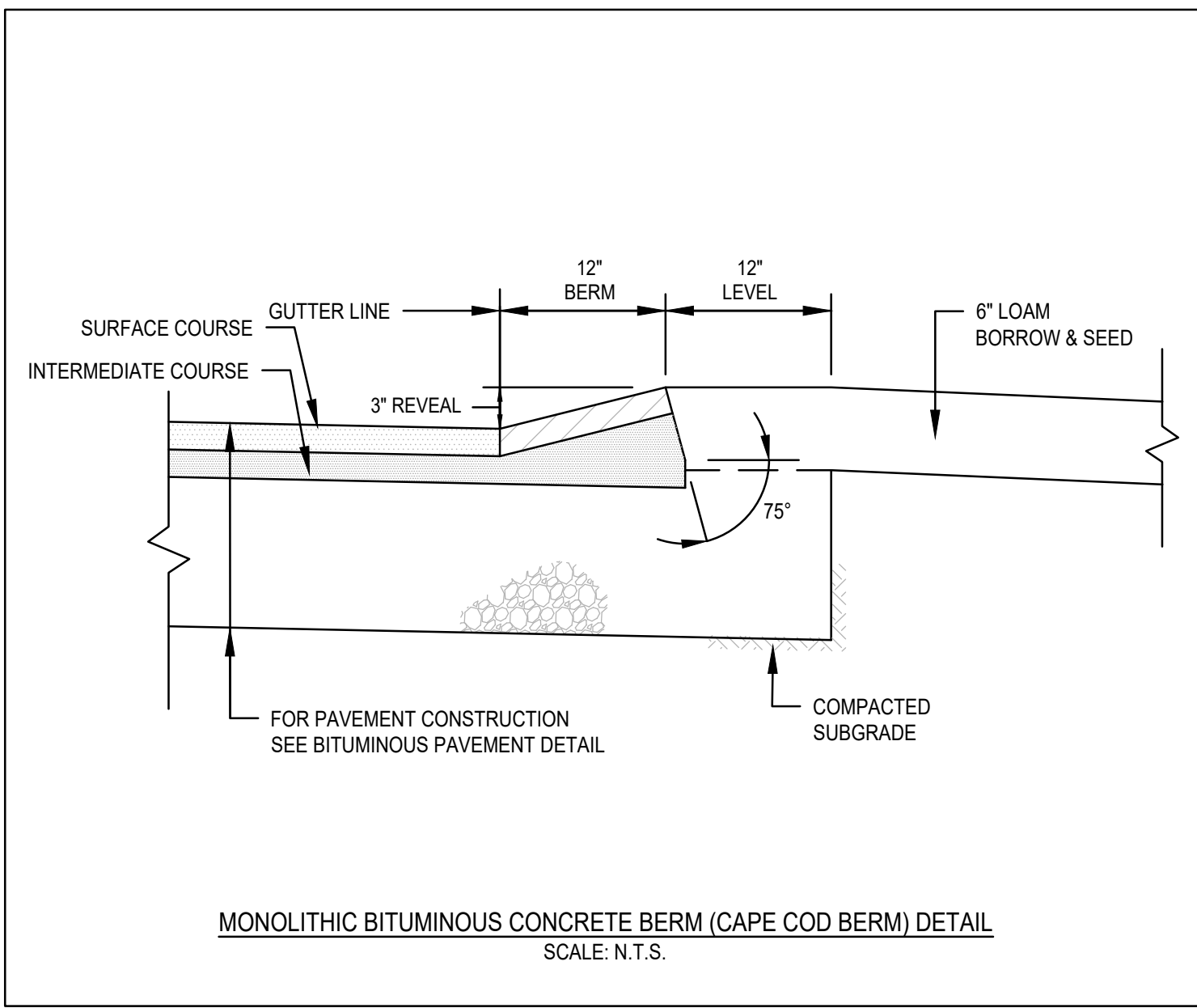
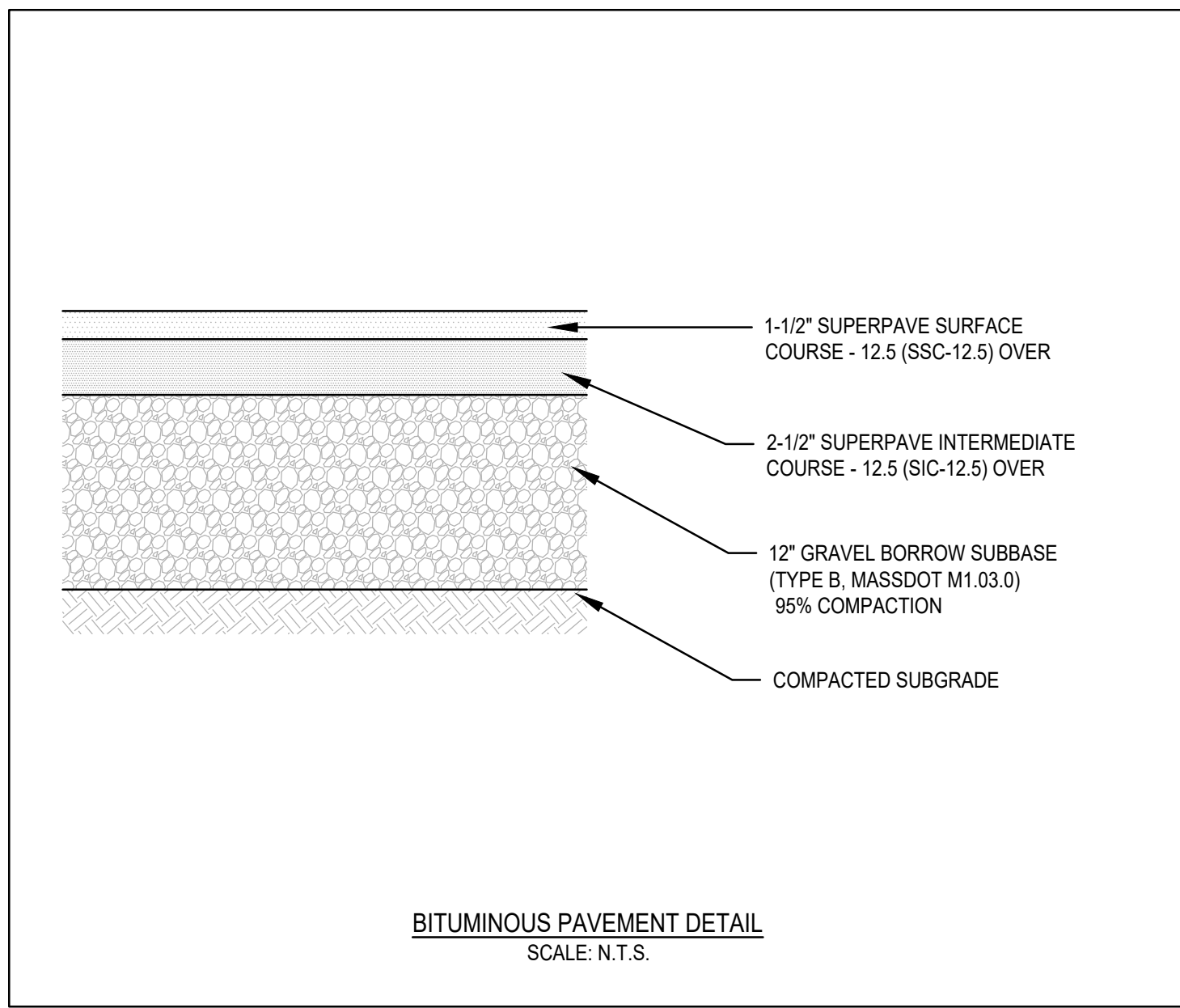
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

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:	

EMERGENCY
VEHICLE ACCESS
PLAN

DWG. NO:
EVA-1

PERMIT PLAN SET



REV	DATE	DESCRIPTION	BY	APP
1	6/6/22	PEER REVIEW	ESS	BCM

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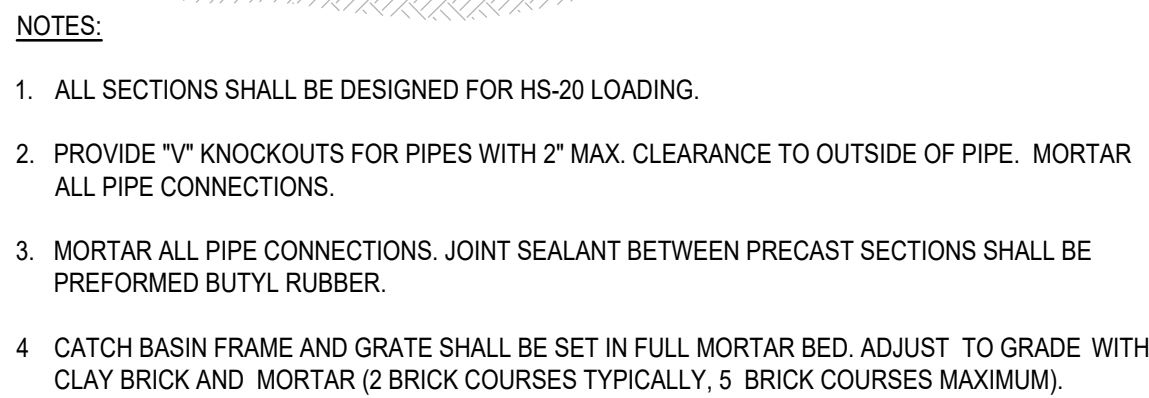
SITE DEVELOPMENT PLANS
RICKETTS POND BUSINESS PARK,
LOT 2
OFF SPRING STREET
CARVER, MASSACHUSETTS

PROFESSIONAL ENGINEER:

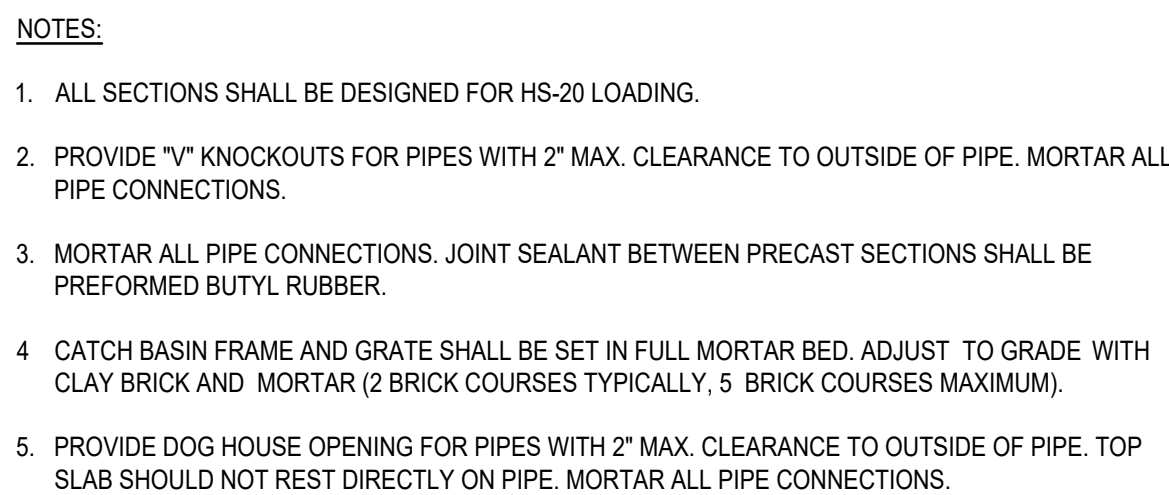
APPLICANT:
PETER SPRAGUE
44 FOX DEN ROAD
KINGSTON, MA 02364

PERMIT PLAN SET

DRAWN BY:	ESS
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-1



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



SHALLOW CATCH BASIN
SCALE: N.T.S.



1. NEW TREES SHALL BE NURSERY GROWN AND COMPLY WITH THE ASSOCIATION OF AMERICAN NURSRIES SPECIFICATIONS AND BE AT LEAST 3 INCHES IN CALIPER.
2. 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 UNDER AND APPENDIX III I DETAII. B.

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



SEEDING SPECIFICATIONS

SEEDING RECOMMENDATIONS

- A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
- B. 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

- A. 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)

- B. 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.

- C. REFER TO SEEDING RATES AND SEEDING GUIDES FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING.

- D. 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

- A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.

- B. MULCH WILL BE HELD IN PLACE USING TECHNIQUES AS SPECIFIED IN THE "BEST MANAGEMENT PRACTICES OPERATION AND MAINTENANCE PLAN"

- ### MAINTENANCE TO ESTABLISH A STAND

- A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.

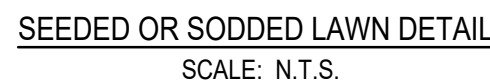
- B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.

- C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

NOTES:

1. TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.
2. 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:

<u>SIEVE</u>	<u>% PASSING</u>
1 1/4 INCH	100
No.4	85-100
No.40	60-85
No.100	38-60
No.200	28-40



SEEDING RATES

A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
REDTOP	2	<u>0.05</u>
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/ KENTUCKY BLUEGRASS 1/	85	2.00
TOTAL	170	<u>2.00</u> 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)

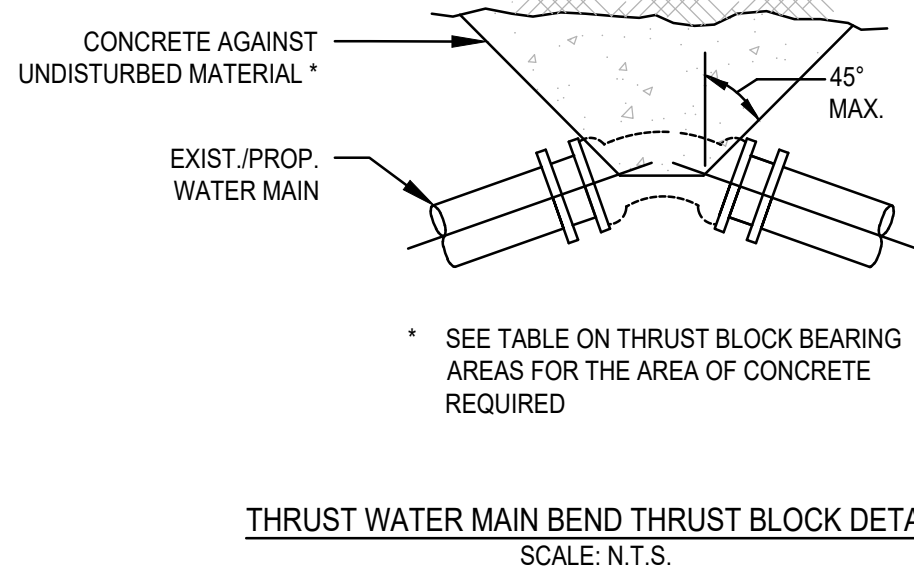
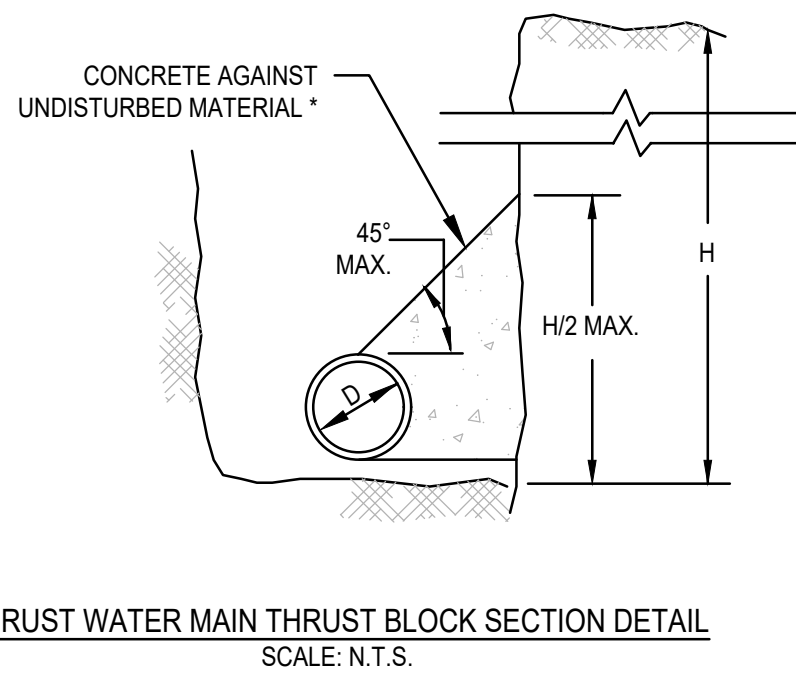
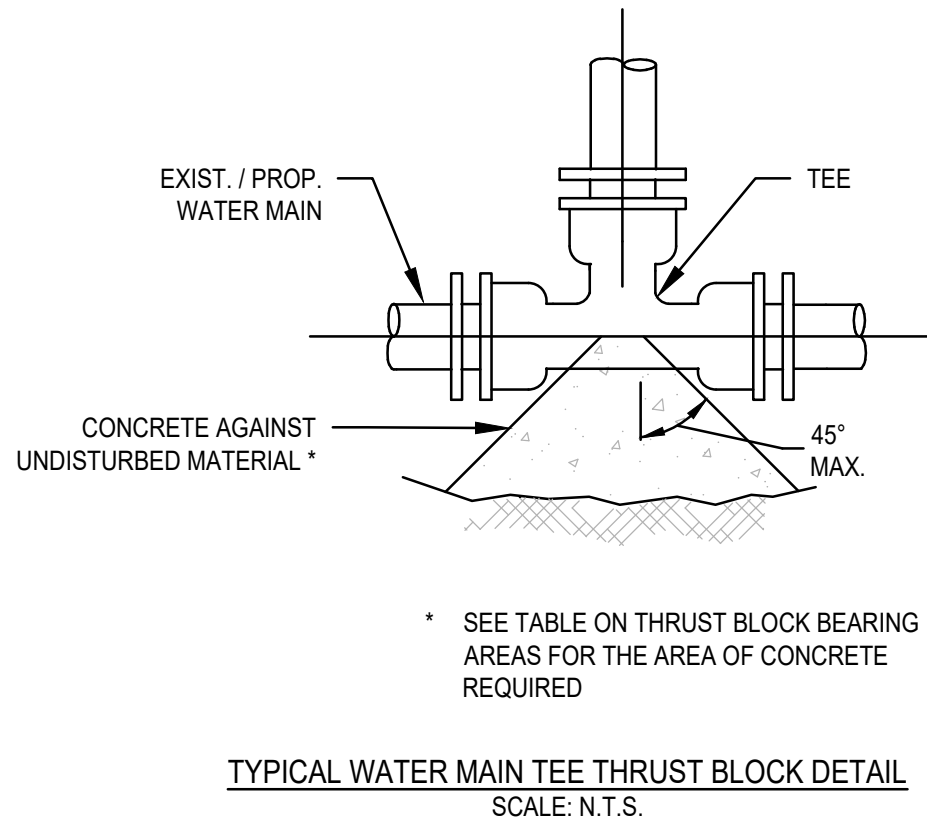
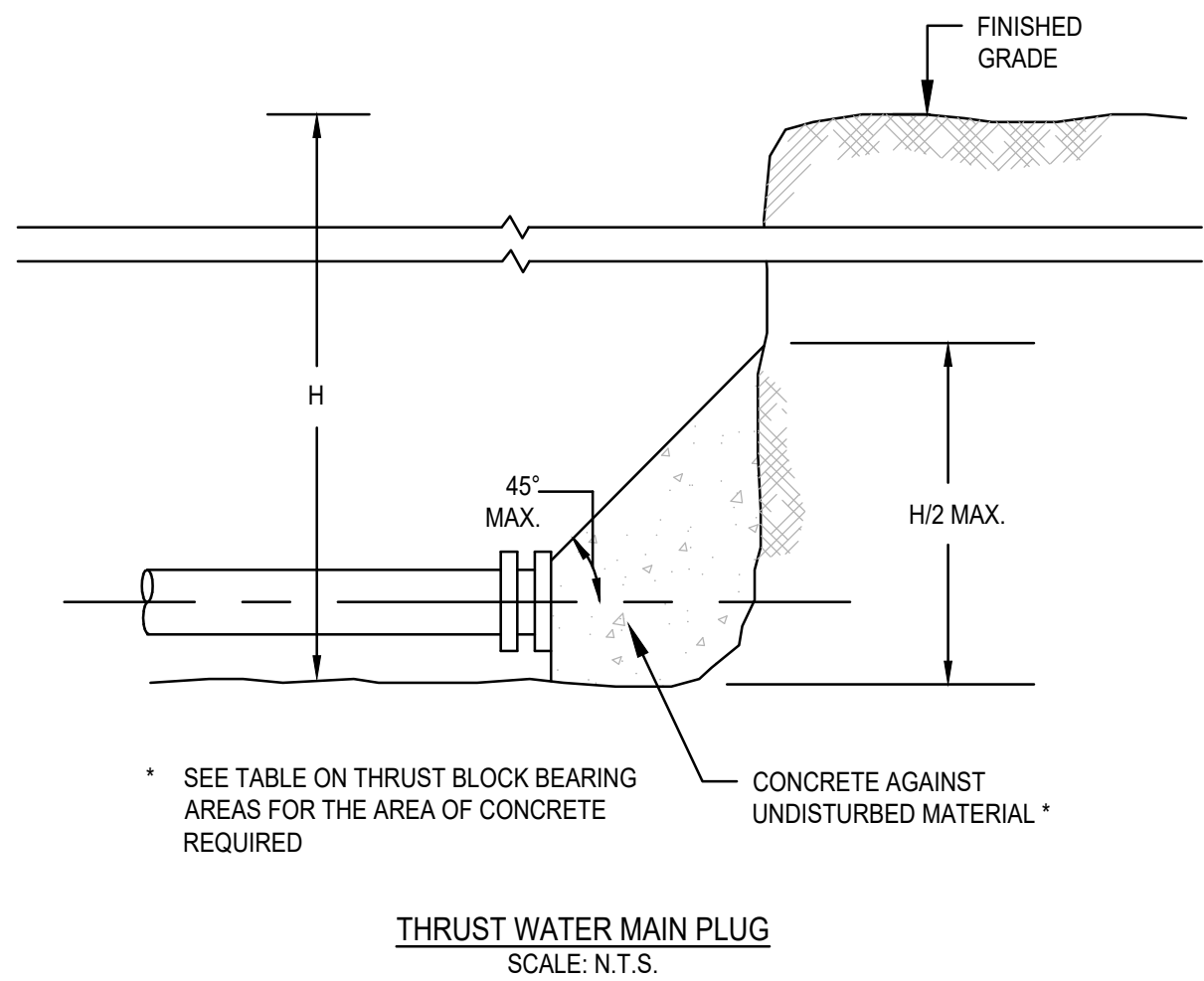
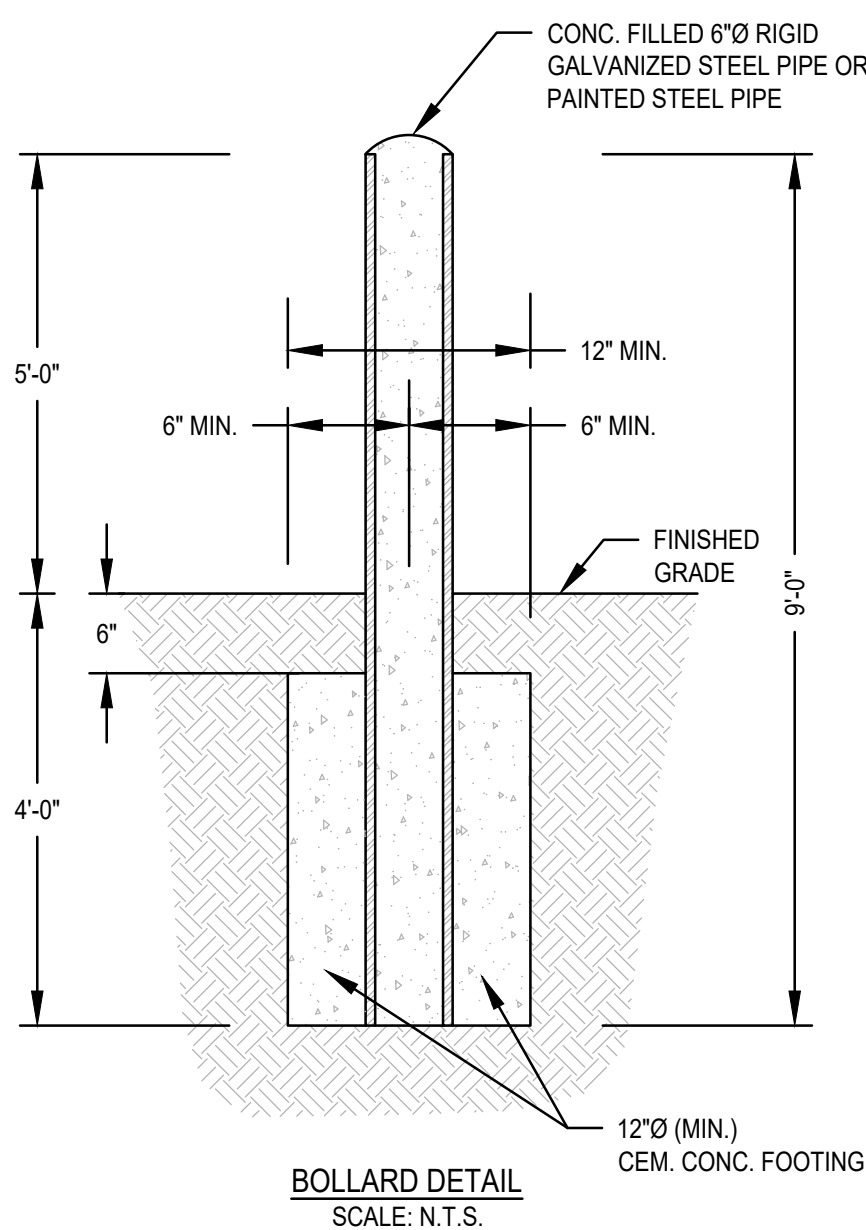
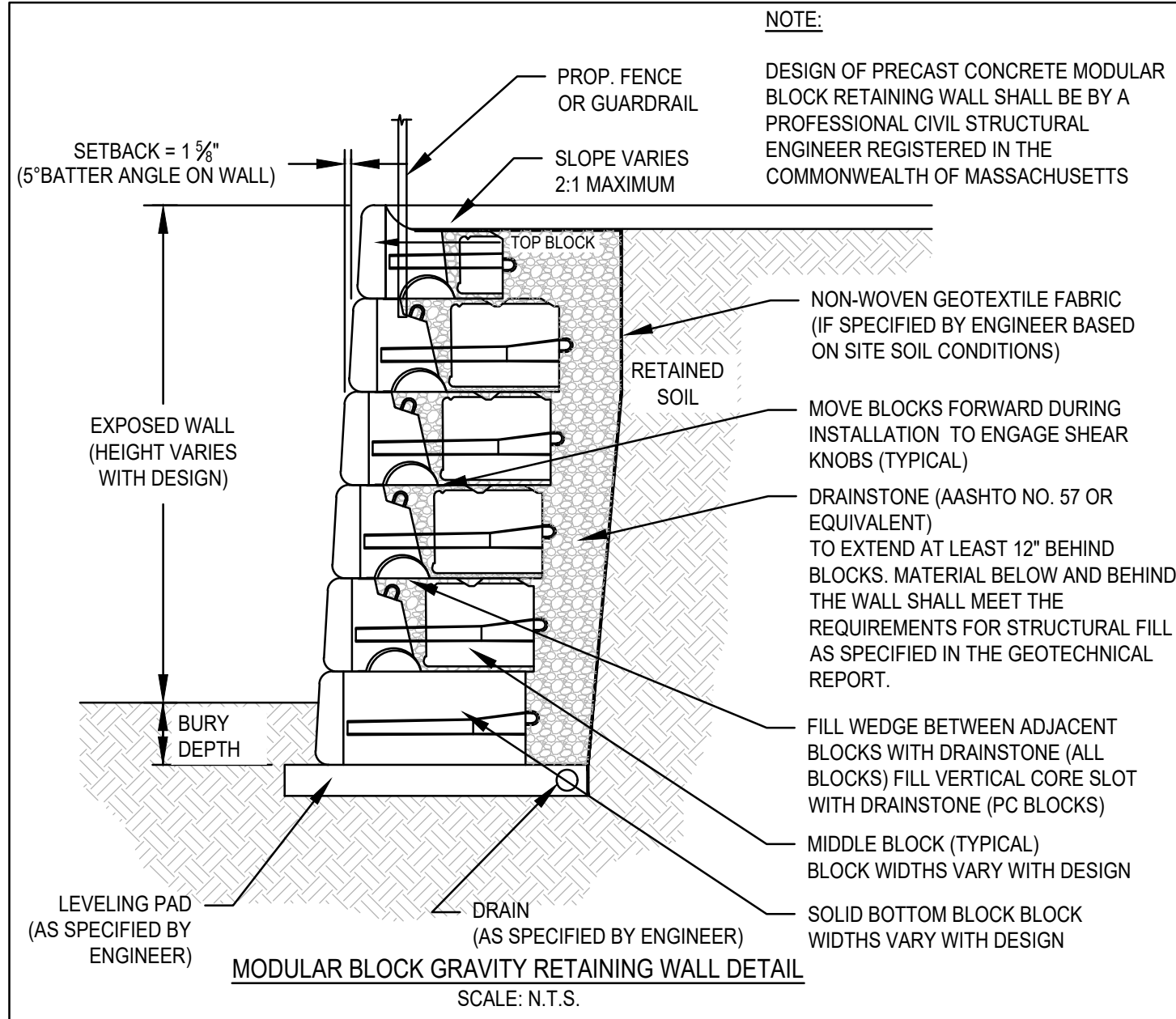
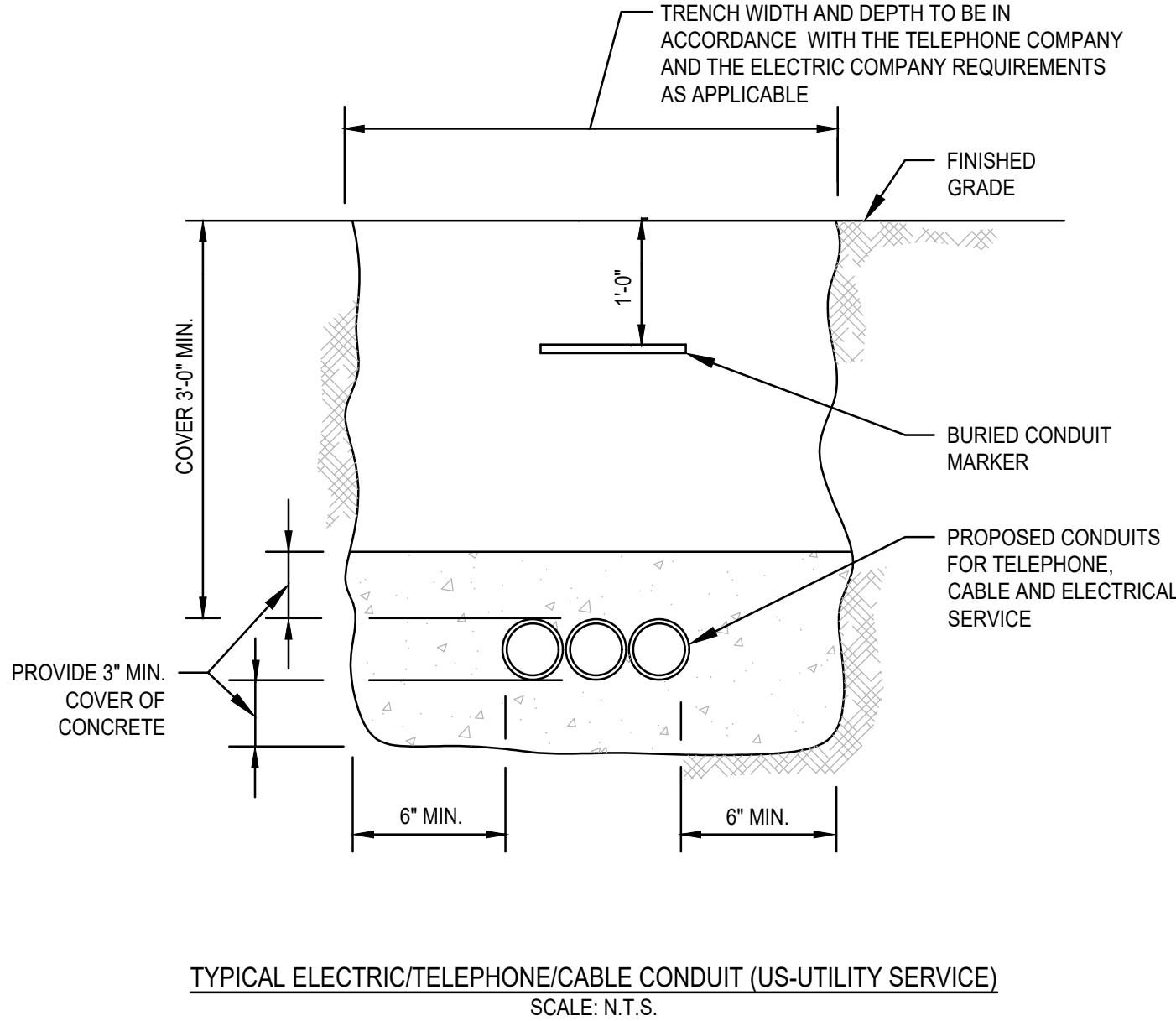
1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

SEEDING GUIDE

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

GENERAL NOTES

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



THRUST BLOCK BEARING AREAS FOR WATER PIPE			
TABLE OF BEARING AREAS IN SQ. FT. AGAINST UNDISTURBED MATERIAL FOR WATER MAIN FITTINGS*			
SIZE OF MAIN (IN.)	90 ° BEND	TEES AND PLUGS	45 ° BEND
6	4	2.5	2
8	6	4	3
12	12	9	7
16	21	16	12

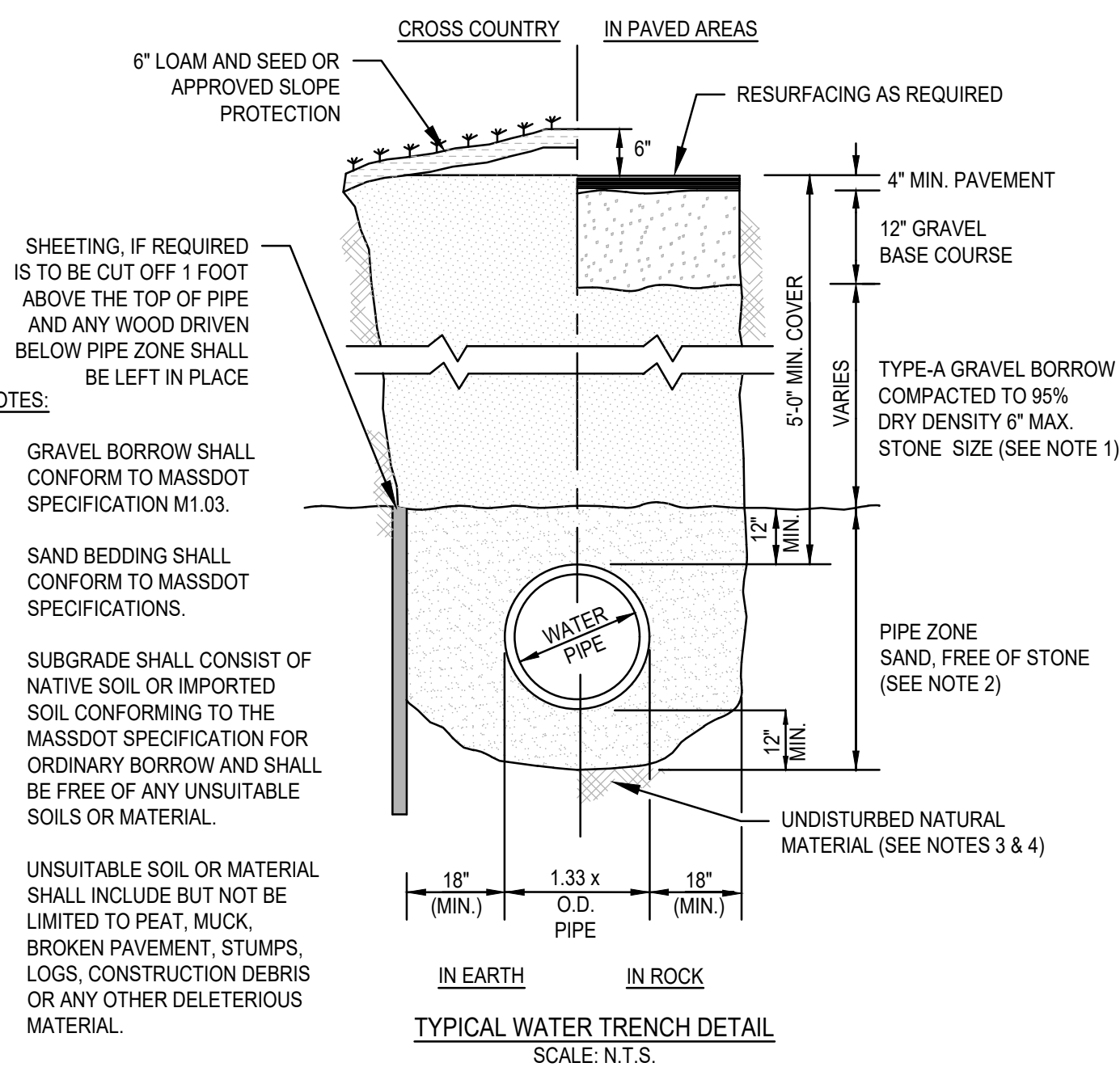
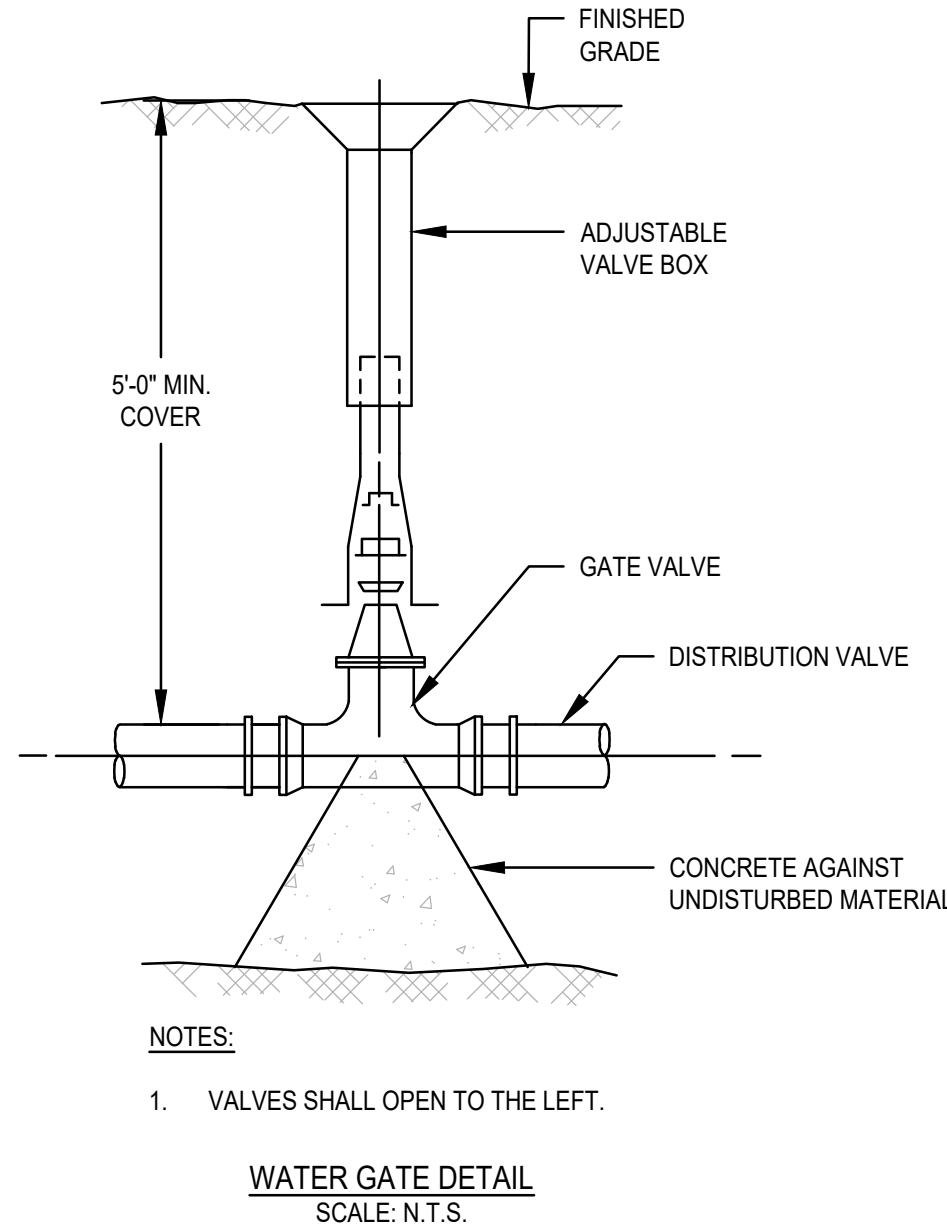
NOTES:

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

ASSUMPTIONS:

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

THRUST BLOCK DETAILS
SCALE: N.T.S.



C MCKENZIE ENGINEERING GROUP, INC.

BY APP ESS
DESCRIPTION PEER REVIEW
DATE 6/6/22
REV 1

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

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

DRAWN BY: ESS
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

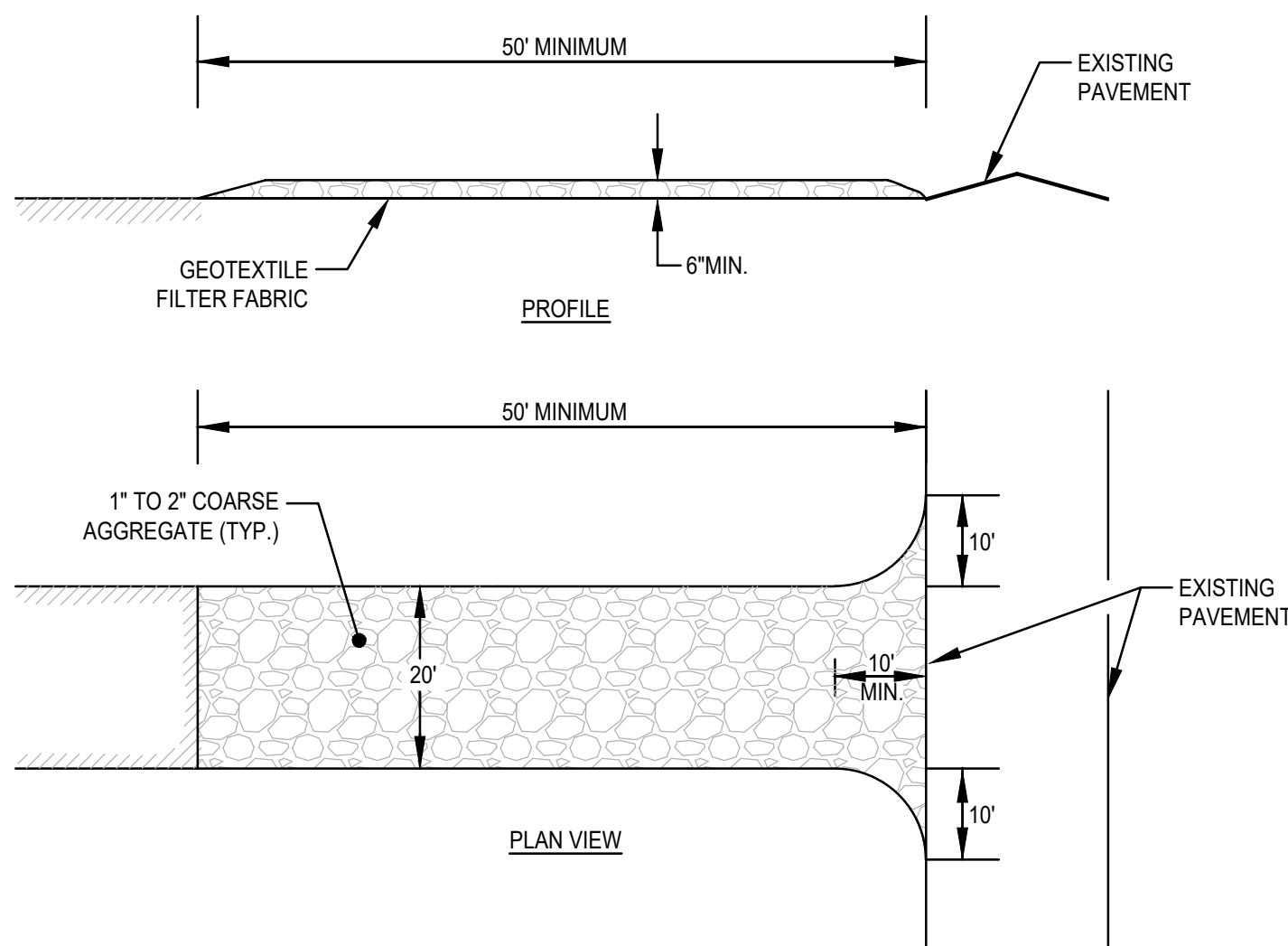
TO PREVENT EXCESSIVE EROSION AND SILTING, THE FOLLOWING CONSTRUCTION SEQUENCE COUPLED WITH OTHER WIDELY ACCEPTED PRINCIPALS FOR REDUCING EROSION AND SEDIMENTATION SHALL BE IMPLEMENTED IN THE DEVELOPMENT OF THE SITE.

1. THE CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. THE CONTRACTOR SHALL PROVIDE 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 LOTS TO MINIMIZE THE PLANTING AND SOIL LOSS. STOCKPILES SHOULD BE COVERED WITH 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. PROVIDE SLOPES OF ALL CUT AREAS. ALL FILL WILL BE INSTALLED USING MAXIMUM COMPACTION LISTS. PLACE ALL SLOPE PROTECTION WHERE INDICATED ON THE PLAN.
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. CONSTRUCT BUILDING FOUNDATIONS AND ASSOCIATED UTILITY CONNECTIONS.
12. GRADE SLOPES AND STABILIZE CUT AREAS AT TOP OF SLOPES. BLEND ALL SLOPES INTO EXISTING TOPOGRAPHY AND LOAM AND SEED ALL DISTURBED AREAS. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH GEOTEXTILES.
13. PLACE THE FINAL WEARING COURSE OF PAVEMENT.
14. COMPLETE FINE GRADING OF SHOULDERS AND PLACE PAVEMENT IN MISCELLANEOUS AREAS.
15. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE ADEQUATE GROWTH IS ESTABLISHED. ADEQUATE GROWTH IS DEFINED AS VEGETATION COVERING 75% OR MORE OF THE GROUND SURFACE.

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.

STABILIZATION PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING.

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 AND SHOULD BE PROTECTED BY WIND EROSION CONTROL MEASURES. DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND THAT WILL BE REGRATED AT A LATER DATE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH WINTER RYE TO PREVENT EROSION.

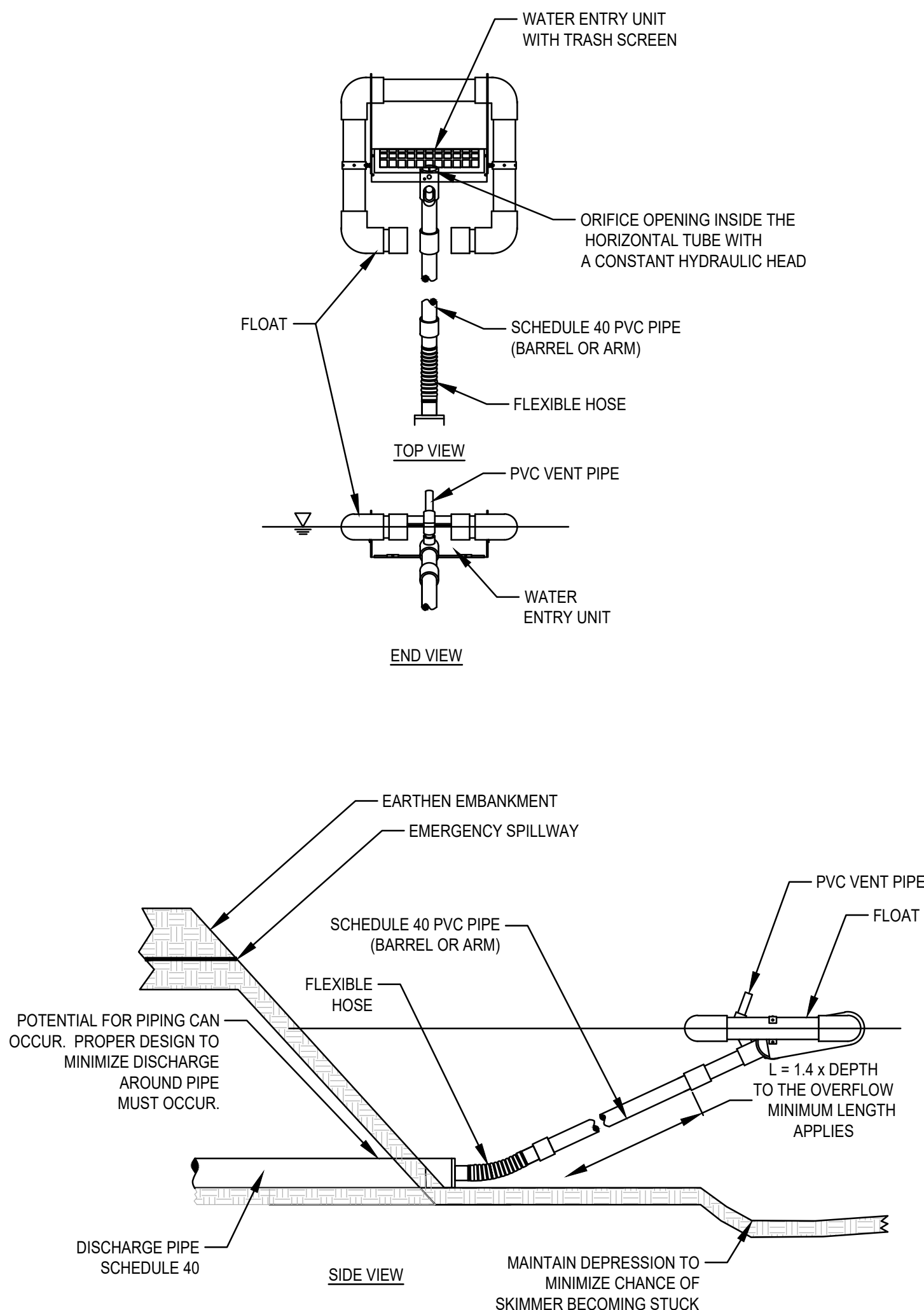


(SCE) CONSTRUCTION SPECIFICATIONS

1. STONE FOR A STABILIZATION CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN A FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO LAYING 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.

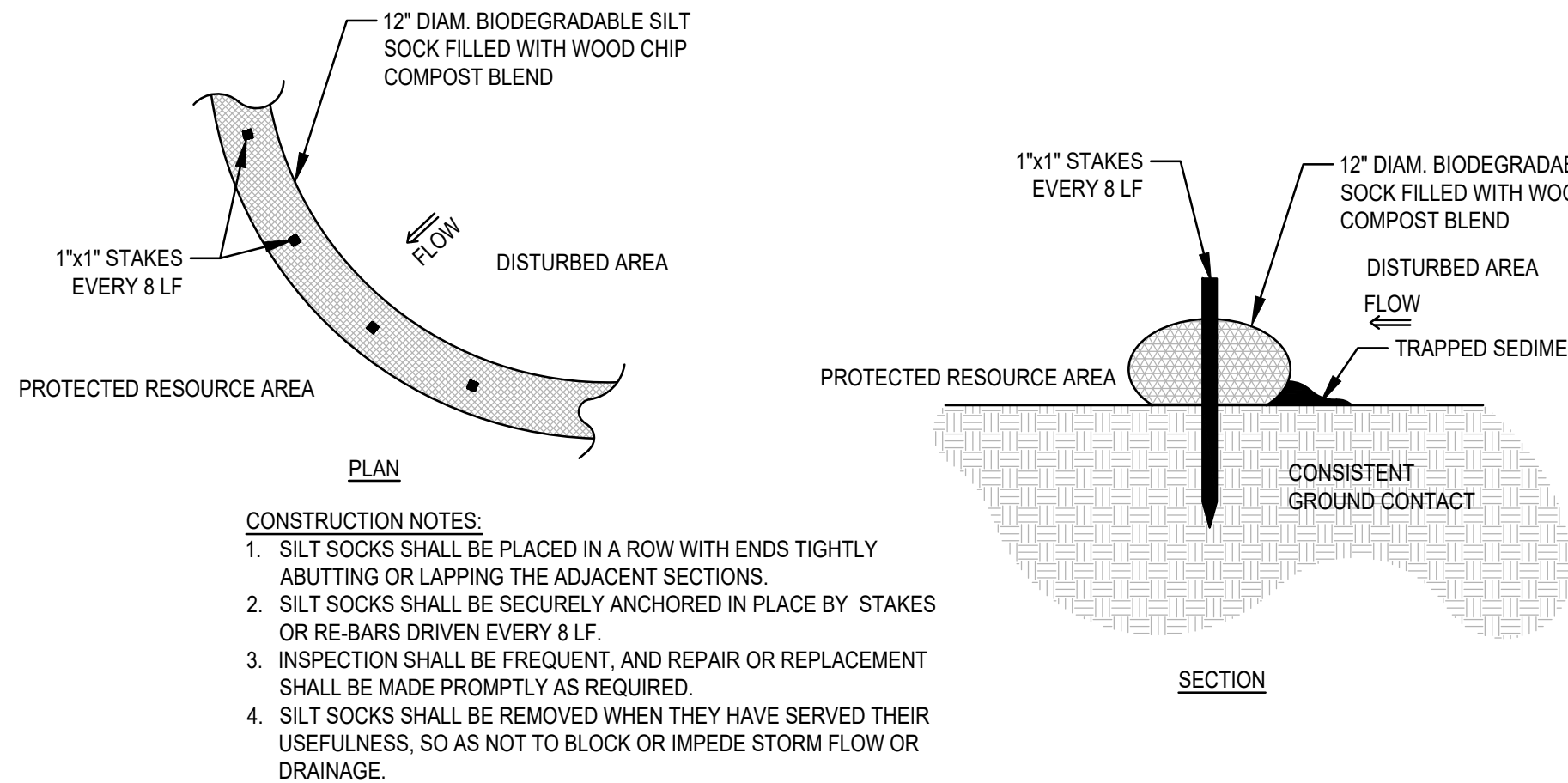
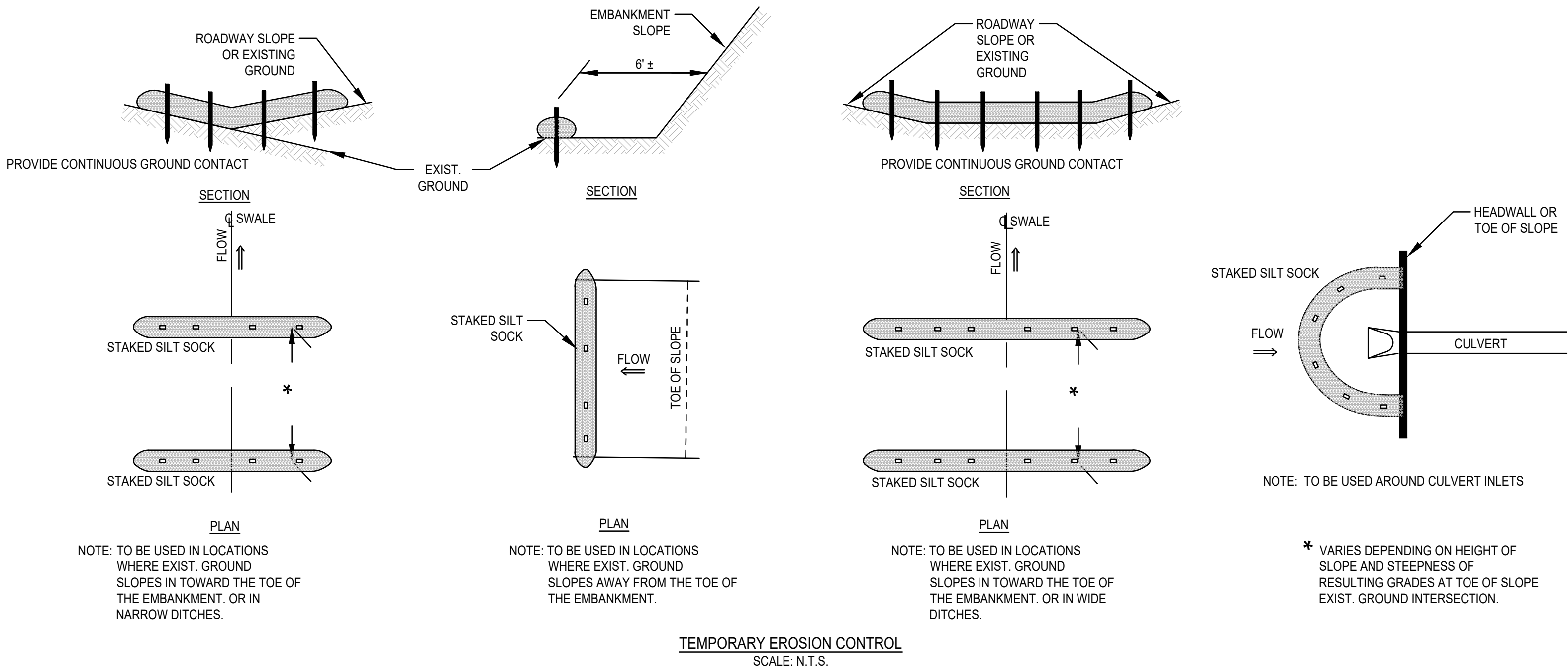
1. STRUCTURAL PRACTICES UTILIZED FOR THE PROJECT WILL INCLUDE SILT SOCK EROSION CONTROL, BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, CONCRETE WASH STATIONS, STOCKPILE AREAS, AND ILT PROTECTION
2. EROSION CONTROL PRACTICES TO BE USED WILL INCLUDE TEMPORARY SEEDING, GEOTEXTILES (JUTE MESH), MULCHING, AND PERMANENT SEEDING
3. OPERATOR PERSONNEL AND/OR ITS CONSULTANTS MUST INSPECT THE CONSTRUCTION AREA FOR EROSION ONCE EVERY 24 HOURS. IF EROSION OCCURS 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:
 - 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 QUESTIONS FOR FINDINGS AND SHOULD REQUEST THE REQUIRED MAINTENANCE OR REPAIR.
5. ALL SLOPES EXCEEDING 15% RESULTING FROM SITE GRADING SHALL BE BOTH PROTECTED WITHIN FOUR FEET OF THE EROSION CONTROL AND PLANTED WITH A VEGETATED COVER SUFFICIENT TO PREVENT EROSION.



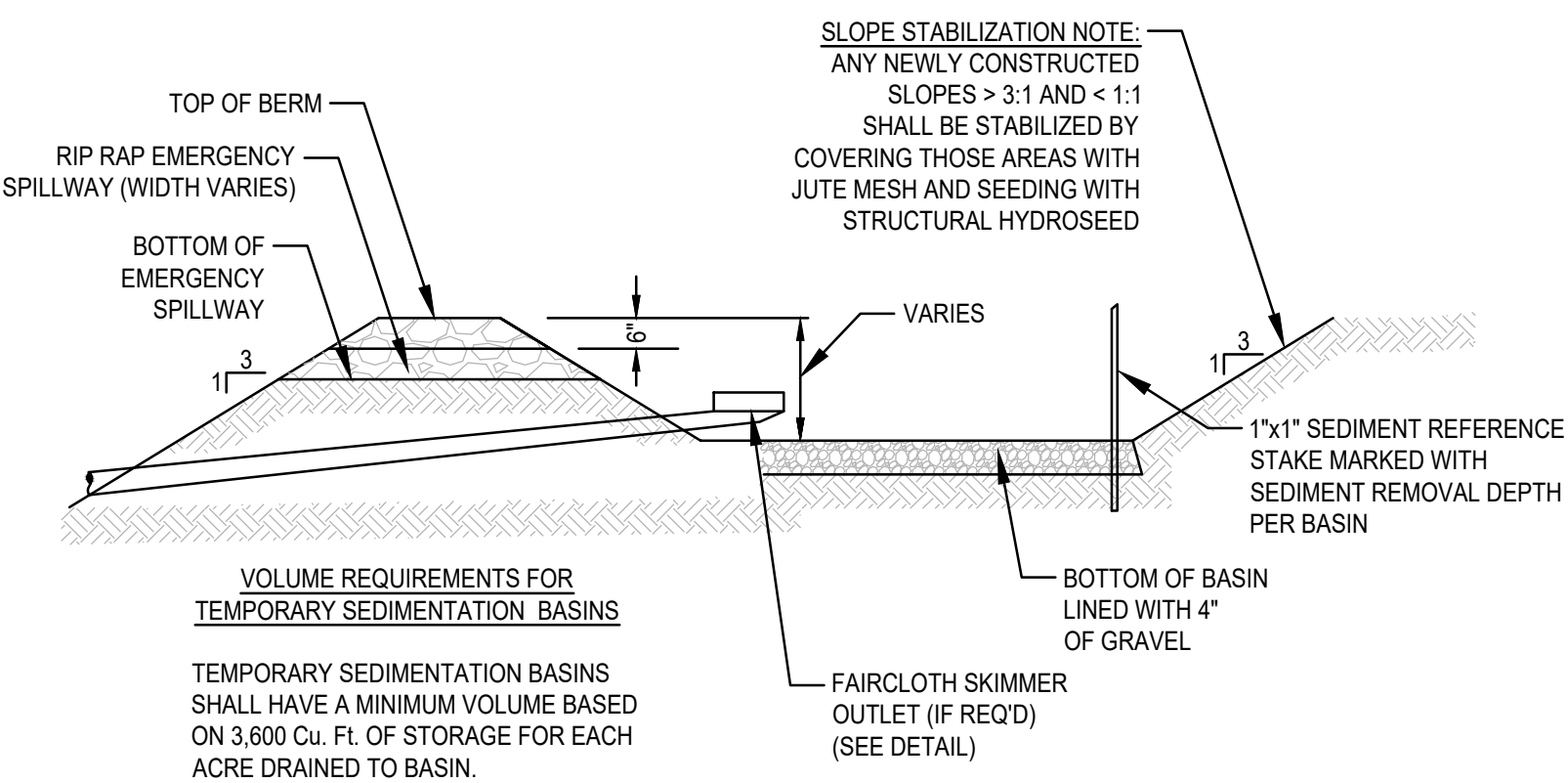
GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING ALONG 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. ENTIRE SYSTEM REQUIRED 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.

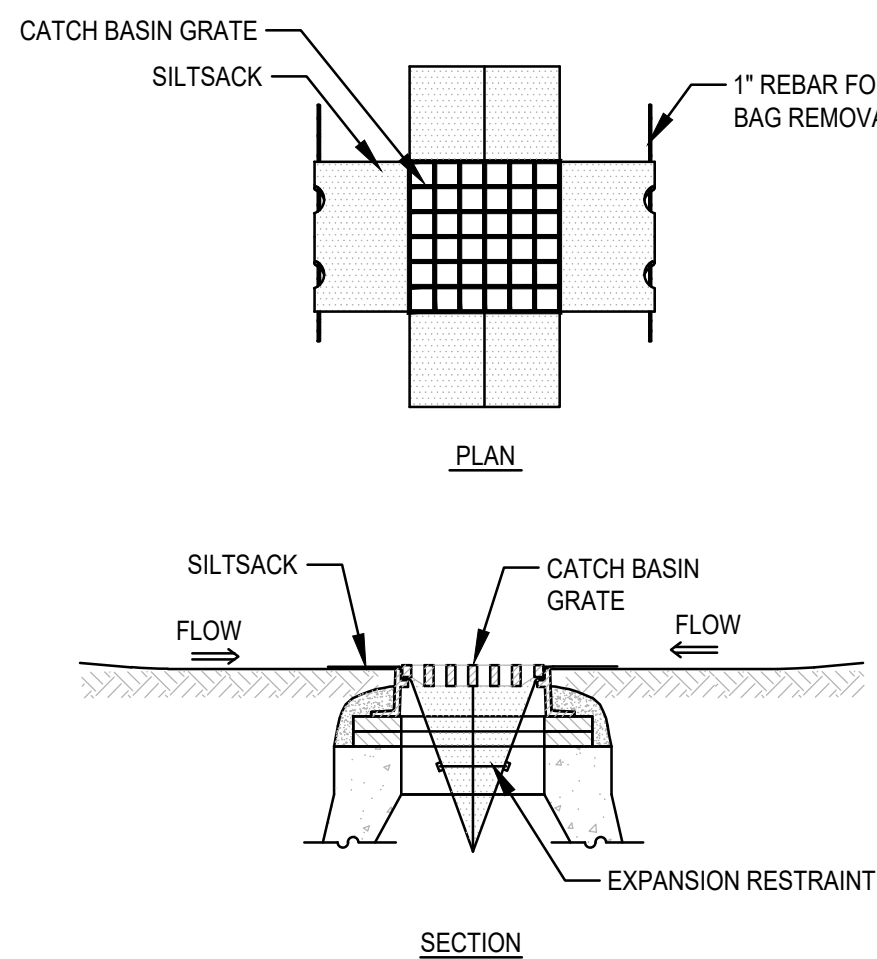
FAIRCLOTH SKIMMER DISCHARGE SYSTEM W/EMBANKMENT
SCALE: N.T.S.



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



TEMPORARY SEDIMENTATION BASIN
SCALE: N.T.S.



SILTSACK SEDIMENT TRAP
SCALE: N.T.S.

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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:	AS NOTED
PROJECT NO.:	221-190
DWG. TITLE:	

EROSION AND SEDIMENTATION DETAILS

DWG. NO

D-4

C MCKENZIE ENGINEERING GROUP, INC