

# WEST END YARDS

CATE STREET · PORTSMOUTH · NEW HAMPSHIRE

## SITE PLANS

MAY, 2019

PREPARED FOR  
**CATE STREET DEVELOPMENT, LLC**  
11 ELKINS STREET, SUITE 420  
BOSTON, MA 02127  
987.490.5278



PREPARED BY

**FUSS & O'NEILL**

UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
207.363.0669  
www.fando.com

### PROJECT TEAM

#### ARCHITECT

PRELLWITZ CHILINSKI ASSOCIATES  
221 HAMPSHIRE STREET  
CAMBRIDGE, MA. 02139  
617.547.8120

#### LANDSCAPE ARCHITECTS

SITE SOLUTIONS, LLC  
3715 NORTHSIDE PARKWAY  
300 NORTH CREEK, SUITE 720  
ATLANTA, GA. 30327  
404.705.9411

#### NATURAL RESOURCES

##### CONSULTANT

GOVE ENVIRONMENTAL SERVICES, INC  
8 CONTINENTAL DRIVE  
BUILDING 2, SUITE H  
EXETER, NH. 03833-7507  
603.778.0644

#### GEOTECHNICAL ENGINEERS

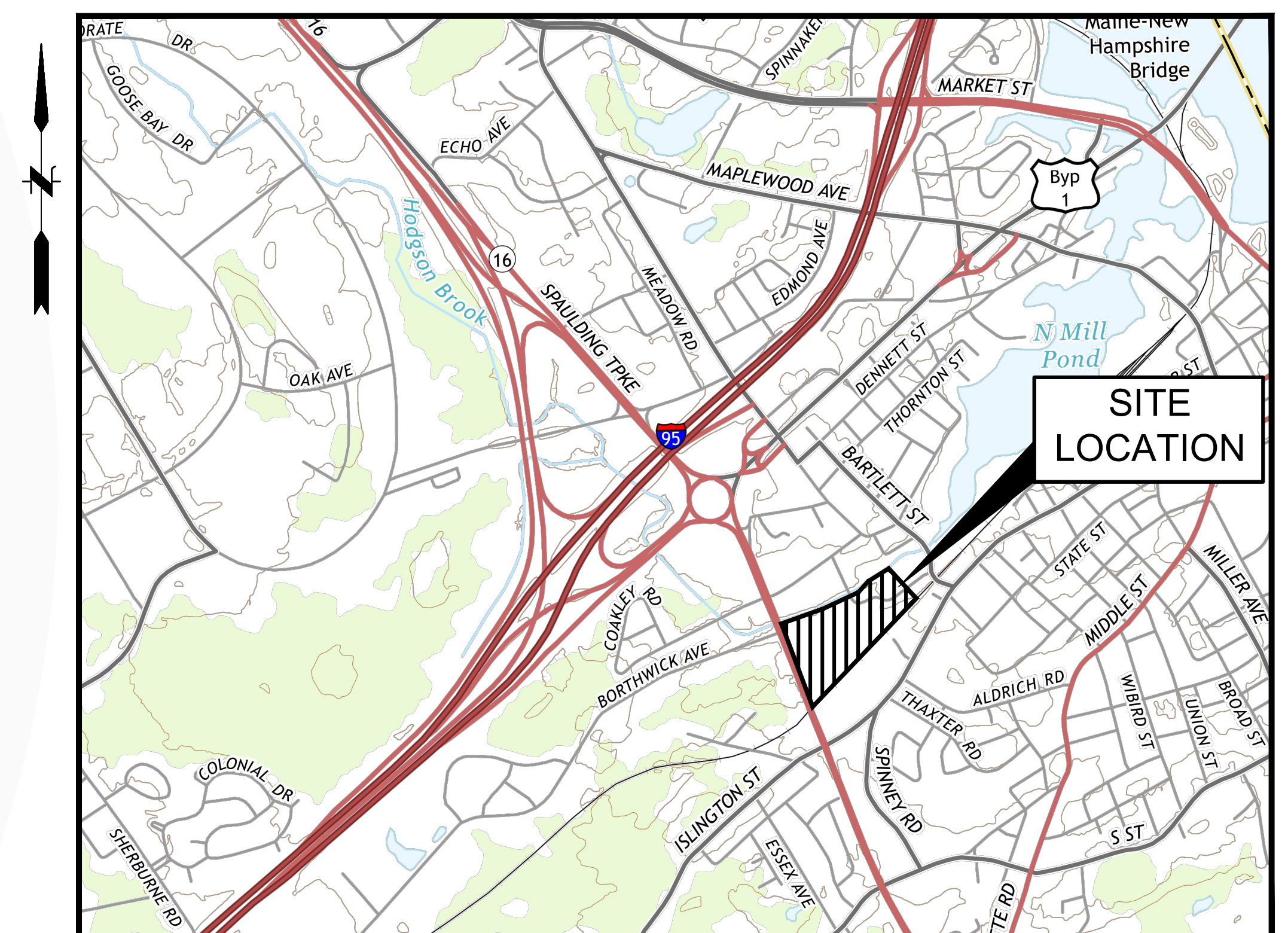
McPHAIL ASSOCIATES, LLC  
2269 MASSACHUSETTS AVENUE  
CAMBRIDGE, MA. 02140  
617.868.1420

#### LAND SURVEYOR

DOUCET SURVEY, INC  
102 KENT PLACE  
NEWMARKET, NH. 03857  
603.659.6560

### SHEET INDEX

<u>SHEET No.</u>	<u>SHEET TITLE</u>
GI-002	COVER SHEET
A1.11-A1.16	FLOOR PLANS
A2.11-A2.15	ELEVATIONS
A2.11-A3.12	RENDERINGS
CN-001-CN-002	GENERAL NOTES & LEGEND
CP-200-CP-204	SITE PREPARATION PLANS
CS-001	DEVELOPMENT STANDARDS SITE PLAN
CS-200-CS-203	SITE PLANS
CG-001	SITE DRAINAGE STRUCTURE TABLE
CG-200-CG-203	GRADING, DRAINAGE & EROSION CONTROL PLAN
CU-001	SITE SEWER STRUCTURE TABLE
CU-200-CU-203	UTILITY PLANS
CD-510-CD-512	DRAINAGE DETAILS
CD-520	WATER & MISC. DETAILS
CD-530-CD-531	SEWER DETAILS
CD-540	UTILITY DETAILS
CD-550-CD-551	SITE DETAILS
CD-560-CD-562	EROSION CONTROL DETAILS
CT-101-CT-107	TURNING MOVEMENTS
L1.00-IRI.01	LANDSCAPE PLANS
LS1	LIGHTING PLANS
SURVEY PLANS	PLAN OF LAND
SURVEY PLANS	TOPOGRAPHICAL PLANS

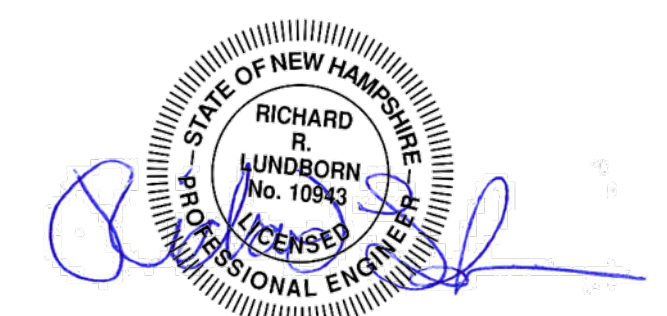


LOCATION MAP

SCALE: 1" = 1200'



CONTACT DIG SAFE 72 HOURS  
PRIOR TO CONSTRUCTION  
THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON  
THIS PLAN IS APPROXIMATE. GLD CONSULTING ENG.  
INC. MAKES NO CLAIM TO THE ACCURACY OR  
COMPLETENESS OF UTILITIES SHOWN. 72 HOURS PRIOR  
TO ANY EXCAVATION ON SITE, THE CONTRACTOR SHALL  
CONTACT DIG-SAFE AT 1-888-DIG-SAFE.



PROJ. No.: 20170317.A10  
DATE: MAY 2019

GI-002

**WEST END YARDS -  
PORTSMOUTH**  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

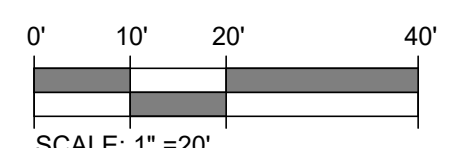
ORIGINAL ISSUE:

05/10/19

SCALE: 1" = 20'-0"

**GROUND FLOOR PLAN - AB**

**A1.11**



WEST END YARDS -  
PORTSMOUTH  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

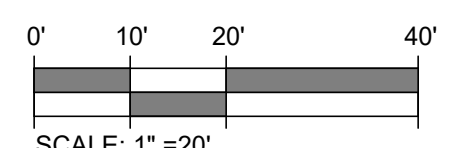
ORIGINAL ISSUE:

05/10/19

SCALE: 1" = 20'-0"

SECOND  
FLOOR - AB

A1.12



**WEST END YARDS -  
PORTSMOUTH**  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

ORIGINAL ISSUE:

05/10/19

SCALE: 1" = 20'-0"

THIRD FLOOR  
PLAN - AB

A1.13



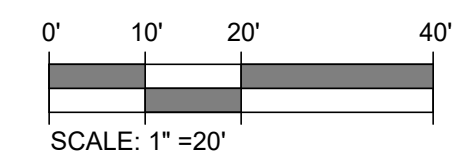
**WEST END YARDS -  
PORTSMOUTH**  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

ORIGINAL ISSUE:  
05/10/19  
SCALE: 1" = 20'-0"

**FOURTH  
FLOOR PLAN -  
AB**

**A1.14**



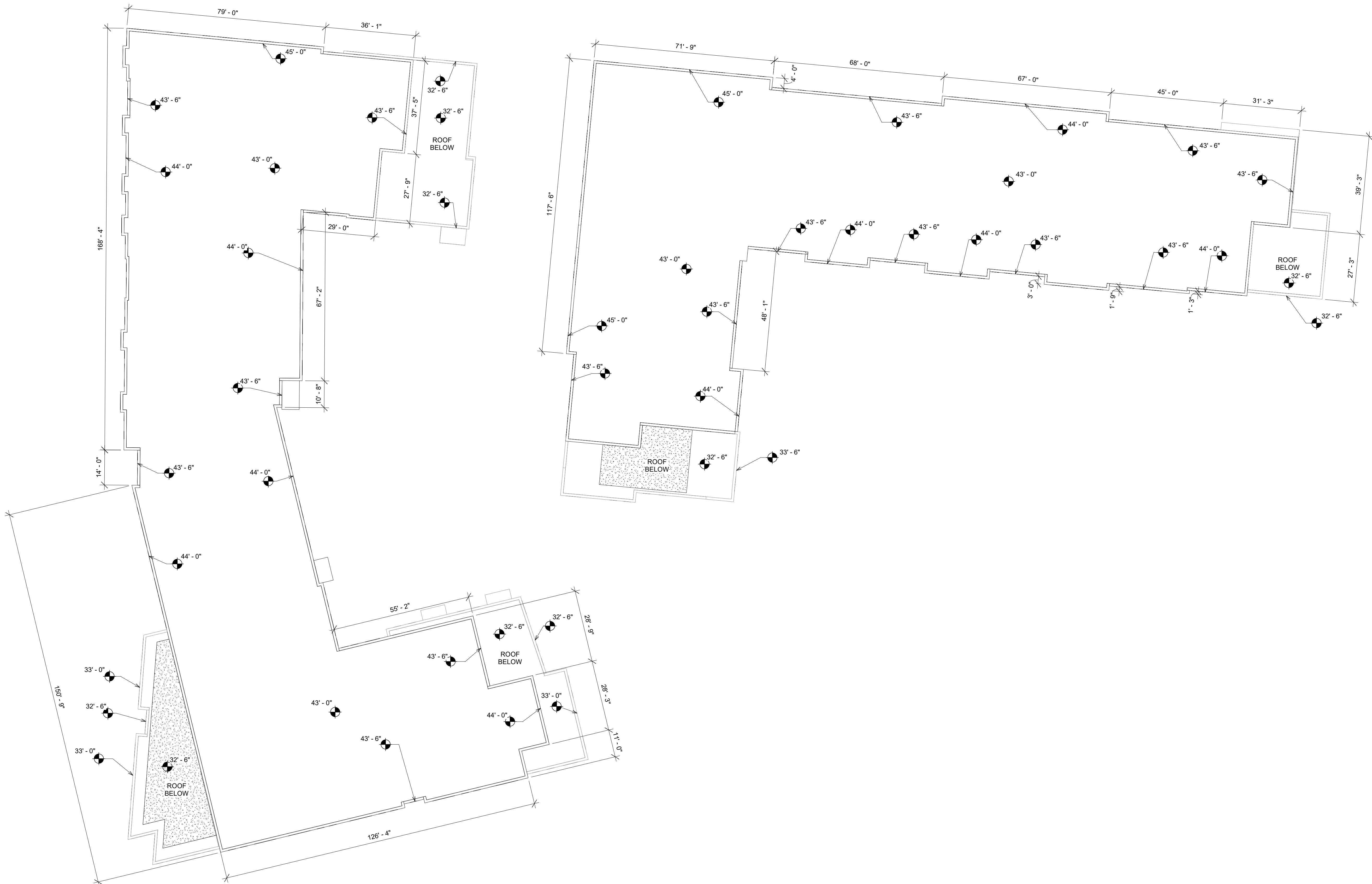
# WEST END YARDS - PORTSMOUTH

428 RT. 1 BYPASS - PORTSMOUTH

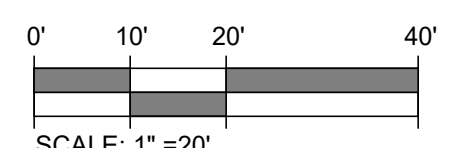
REVISIONS:
------------

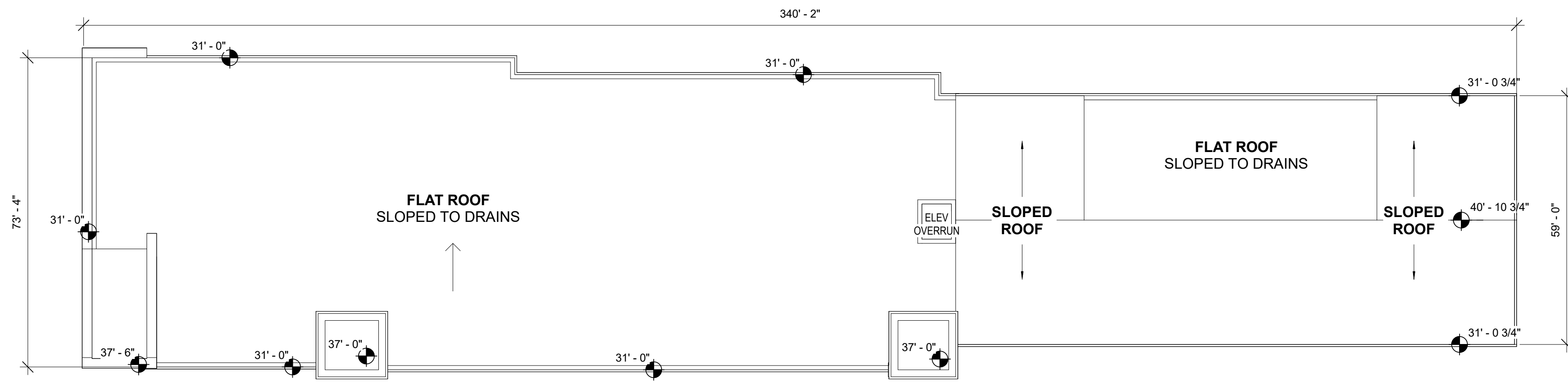
ORIGINAL ISSUE:  
05/10/19  
SCALE: 1" = 20'-0"

### ROOF PLAN - AB

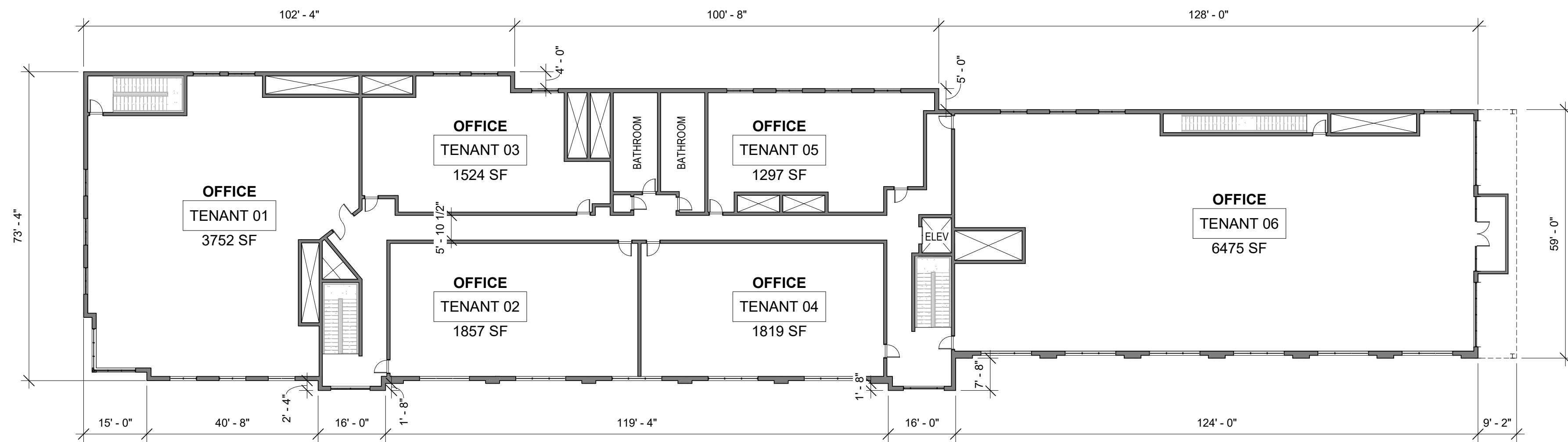


PRINTED: 05/09/19 12:52:24 PM

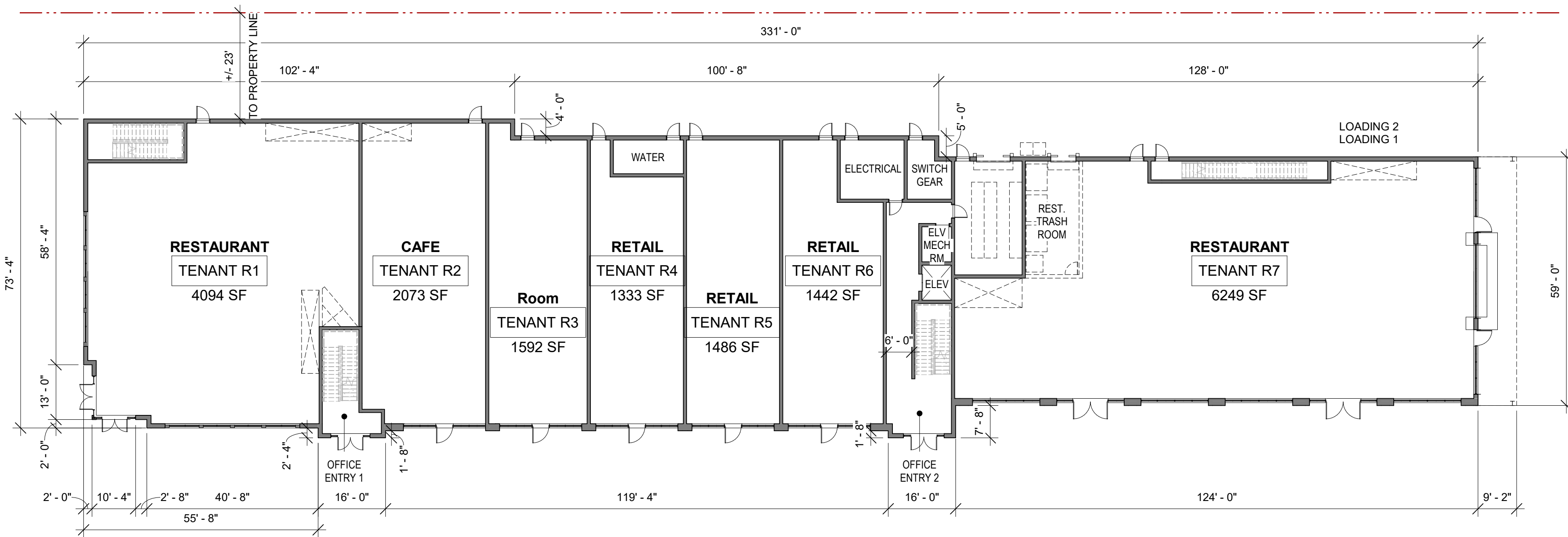




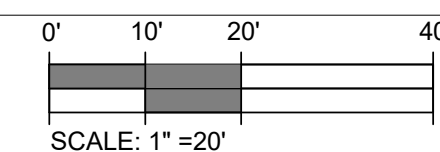
**3 ROOF**  
1" = 20'-0"



**2 SECOND FLOOR**  
1" = 20'-0"



**1 GROUND FLOOR**  
1" = 20'-0"



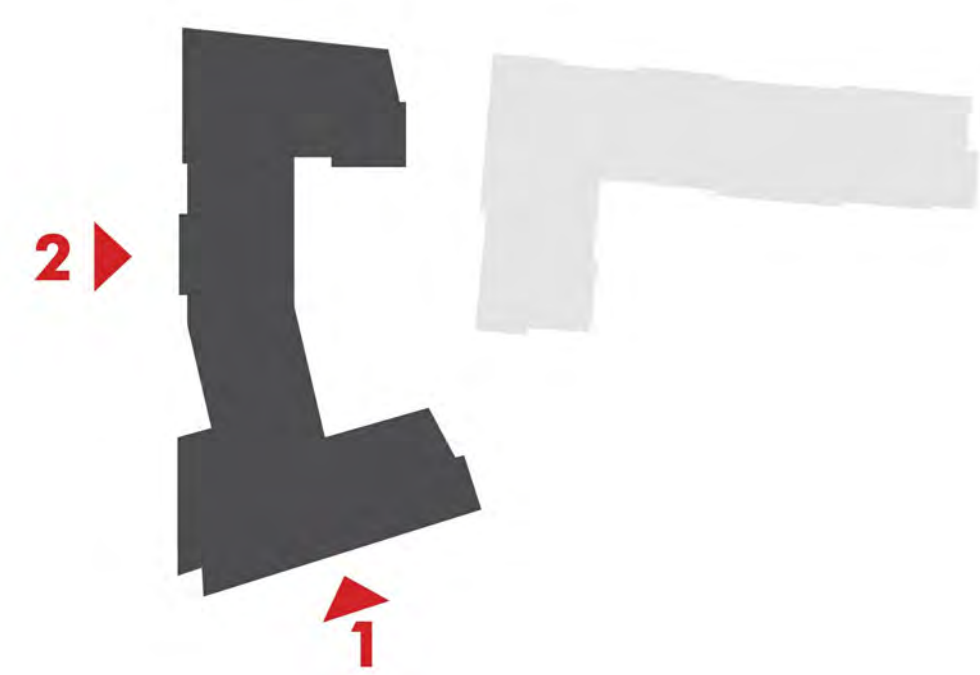
EXTERIOR MATERIALS LEGEND	
MARK	MATERIAL
1	METAL PANEL
2	SHINGLES
3	RIBBED PANEL
4	CLAPBOARD
5	FAUX WOOD PANEL
6	FIBER CEMENT PANEL



**1 SOUTH ELEVATION**  
1/16" = 1'-0"



**2 WEST ELEVATION**  
1/16" = 1'-0"



REVISIONS:

ORIGINAL ISSUE:  
05/10/19  
SCALE: As indicated

Building A  
Elevations



EXTERIOR MATERIALS LEGEND	
MARK	MATERIAL
1	METAL PANEL
2	SHINGLES
3	RIBBED PANEL
4	CLAPBOARD
5	FAUX WOOD PANEL
6	FIBER CEMENT PANEL



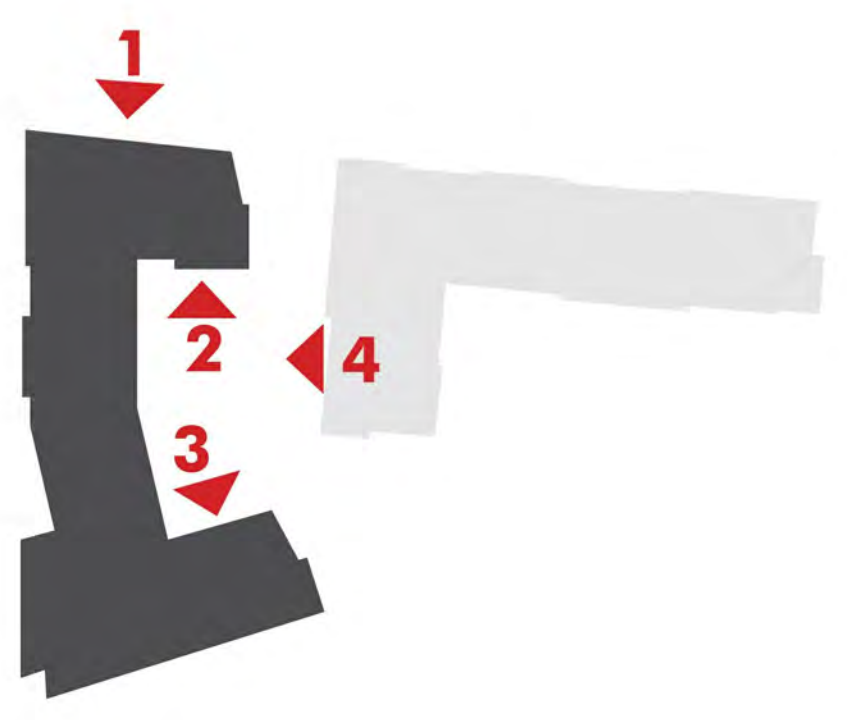
**1 NORTH ELEVATION**  
1/16" = 1'-0"

**2 NORTH ELEV. COURTYARD**  
1/16" = 1'-0"

**3 SOUTH ELEV. COURTYARD**  
1/16" = 1'-0"



**4 EAST ELEVATION**  
1/16" = 1'-0"



REVISIONS:

ORIGINAL ISSUE:  
05/10/19

SCALE: As indicated

Building A Elevations

A2.12  
© 2018 PCA

EXTERIOR MATERIALS LEGEND	
MARK	MATERIAL
1	METAL PANEL
2	SHINGLES
3	RIBBED PANEL
4	CLAPBOARD
5	FAUX WOOD PANEL
6	FIBER CEMENT PANEL

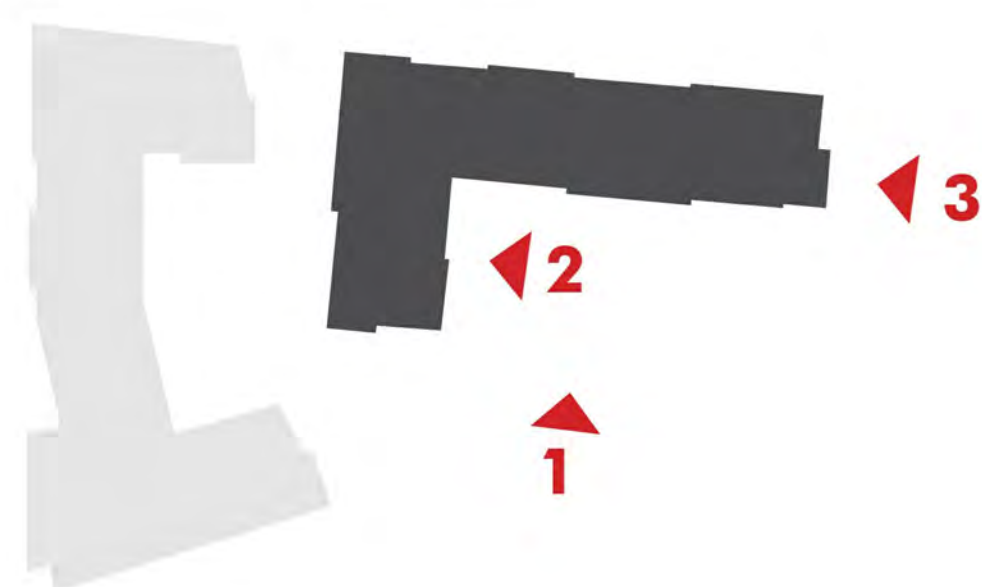


**1 SOUTH ELEVATION**  
1/16" = 1'-0"



**2 EAST ELEVATION**  
1/16" = 1'-0"

**3 EAST ELEVATION**  
1/16" = 1'-0"



REVISIONS:

ORIGINAL ISSUE:  
05/10/19  
SCALE: As indicated

Building B  
Elevations

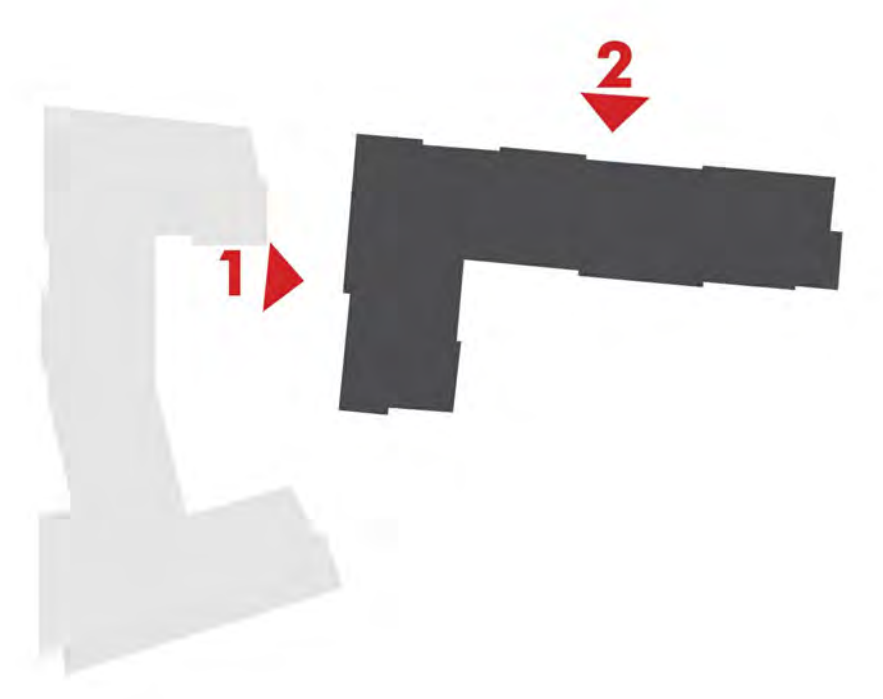
EXTERIOR MATERIALS LEGEND	
MARK	MATERIAL
1	METAL PANEL
2	SHINGLES
3	RIBBED PANEL
4	CLAPBOARD
5	FAUX WOOD PANEL
6	FIBER CEMENT PANEL



**1 WEST ELEVATION**  
1/16" = 1'-0"



**2 NORTH ELEVATION**  
1/16" = 1'-0"



REVISIONS:


ORIGINAL ISSUE:  
05/10/19

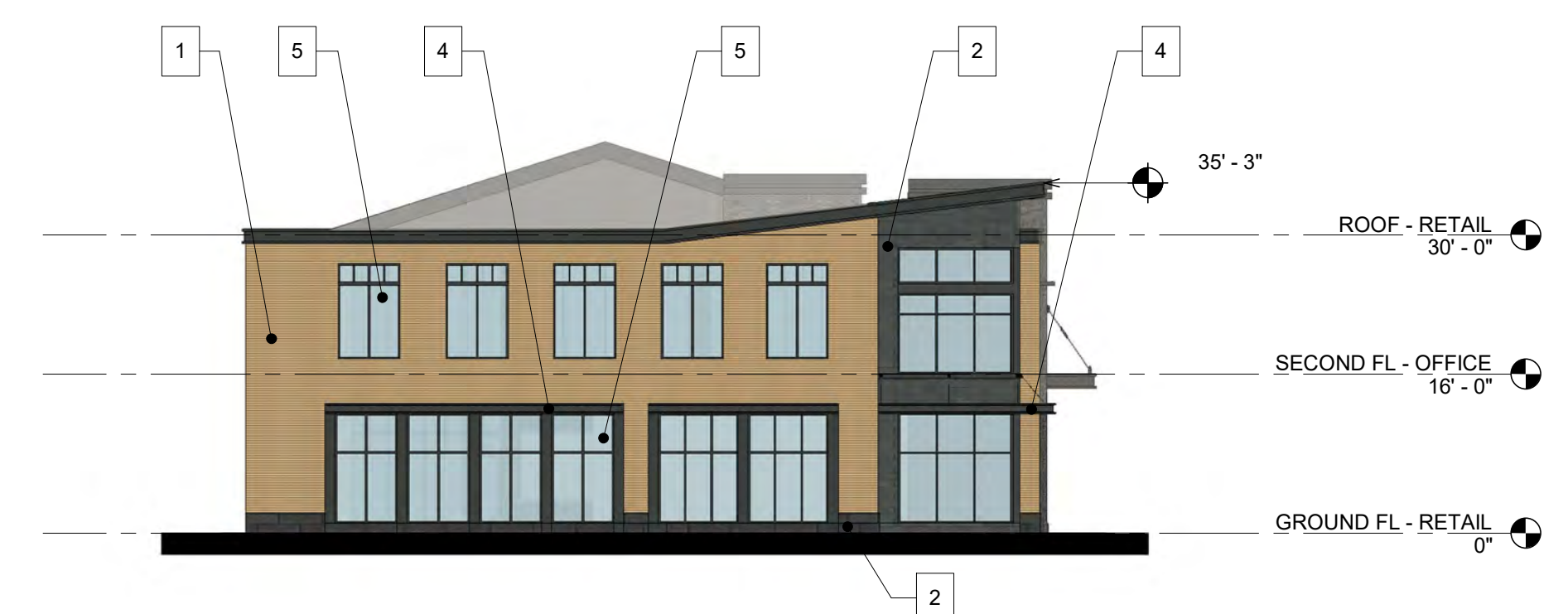
SCALE: As indicated

**Building B  
Elevations**

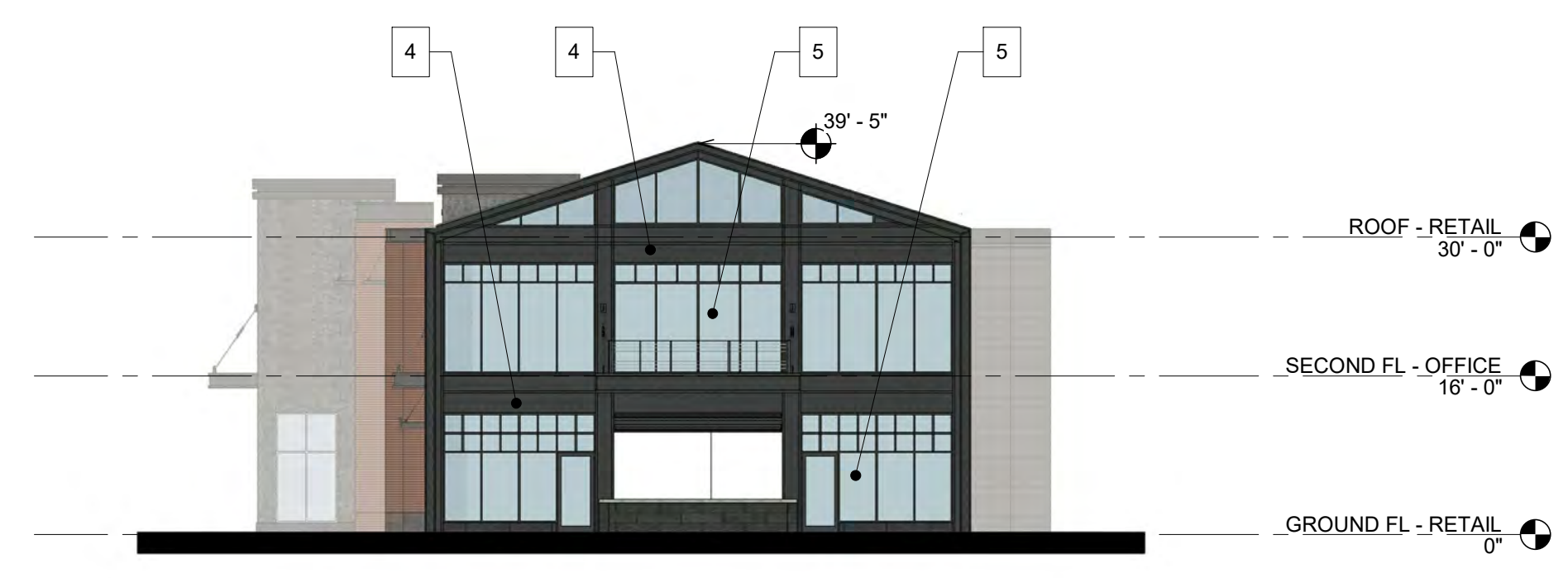
EXTERIOR MATERIALS LEGEND	
MARK	MATERIAL
1	RIBBED PANEL
2	CMU
3	BRICK
4	METAL PANEL
5	STOREFRONT



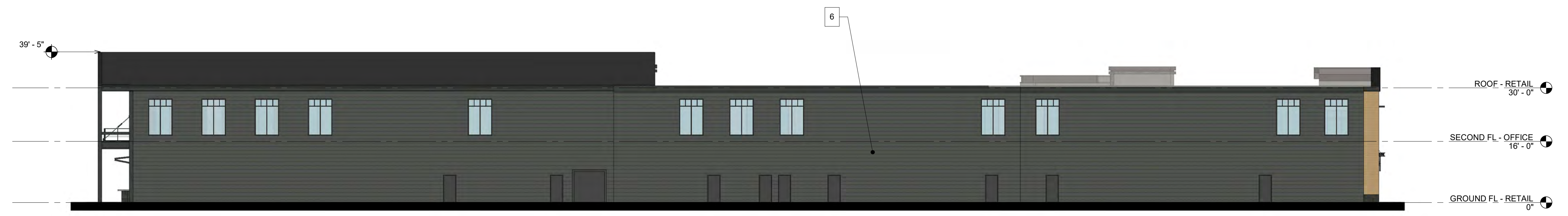
**1 SOUTH ELEVATION**  
1/16" = 1'-0"



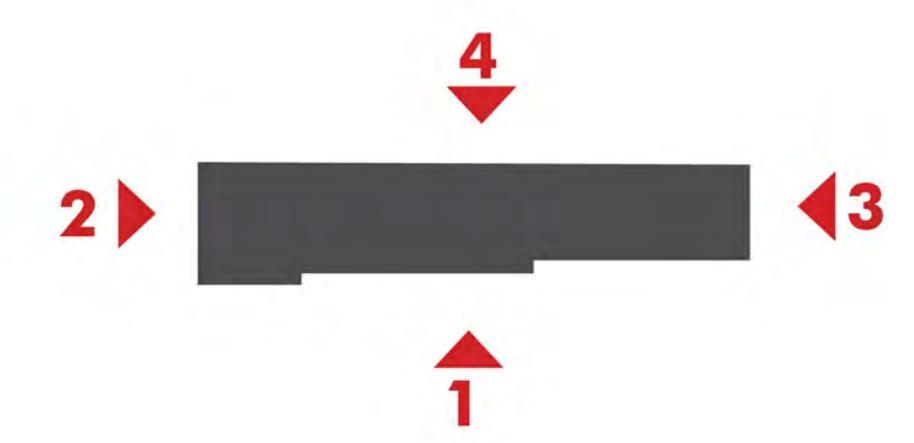
**2 WEST ELEVATION**  
1/16" = 1'-0"



**3 EAST ELEVATION**  
1/16" = 1'-0"



**4 NORTH ELEVATION**  
1/16" = 1'-0"



REVISIONS:

ORIGINAL ISSUE:  
05/10/19  
SCALE: As indicated

Retail Building Elevations

**WEST END YARDS -  
PORTSMOUTH**  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

ORIGINAL ISSUE:  
05/10/19

SCALE:

VIEW OF  
RETAIL

A3.11



**WEST END YARDS -  
PORTSMOUTH**  
428 RT. 1 BYPASS - PORTSMOUTH

REVISIONS:

ORIGINAL ISSUE:  
05/10/19

SCALE:

VIEW OF RESI

A3.12





File Path: F:\P20180317A10\CHi3\DWG\20180317A10\_COV01.dwg Layout: CN-002 (S) Plotted: Mon, May 20, 2019 - 4:08 PM User: ddugal  
 MS VIEW: LAYER STATE: Plotter: DWG TO PDF.PC3 CTB File: FO.STB

### BOUNDARIES

<b>EXISTING</b>	<b>PROPOSED</b>
BEARING DISTANCE	BEARING DISTANCE
PROPERTY LINE	PROPERTY LINE
APPROXIMATE LOT LINE	APPROXIMATE LOT LINE
INTERIOR LOT LINE	INTERIOR LOT LINE
APPROXIMATE ABUTTER LOT LINE	APPROXIMATE ABUTTER LOT LINE
EASEMENT LINE	EASEMENT LINE
TOWN LINE	TOWN LINE
COUNTY LINE	COUNTY LINE
STATE LINE	STATE LINE
BOUND FOUND	BOUND FOUND
RAILROAD SPIKE FOUND	RAILROAD SPIKE FOUND
IRON PIPE/ROD FOUND	IRON PIPE/ROD FOUND
4"x4" GRANITE BOUND TO BE SET	4"x4" GRANITE BOUND TO BE SET
5/8" REBAR W/D CAP TO BE SET	5/8" REBAR W/D CAP TO BE SET
CONCRETE	CONCRETE
BOUND FOUND	BOUND FOUND
IRON PIPE FOUND	IRON PIPE FOUND
CONCRETE	CONCRETE
DRILL HOLE	DRILL HOLE

### NATURAL RESOURCES

<b>EXISTING</b>	<b>PROPOSED</b>
MAJOR CONTOUR LINE	MAJOR CONTOUR LINE
MINOR CONTOUR LINE	MINOR CONTOUR LINE
SPOT ELEVATION	SPOT ELEVATION
EDGE OF WETLAND	EDGE OF WETLAND
WETLAND AREA	WETLAND AREA
CONIFEROUS TREE	CONIFEROUS TREE
DECIDUOUS TREE	DECIDUOUS TREE
MONITORING WELL	MONITORING WELL
TEST PIT	TEST PIT
TREE LINE	TREE LINE
SHRUB LINE	SHRUB LINE
EDGE OF WATER	EDGE OF WATER

### GENERAL

<b>EXISTING</b>	<b>PROPOSED</b>
STOCKADE FENCE	STOCKADE FENCE
CHAIN LINK FENCE	CHAIN LINK FENCE
BARBED WIRE FENCE	BARBED WIRE FENCE
STONE WALL	STONE WALL
RETAINING WALL	RETAINING WALL
GUARDRAIL	GUARDRAIL
SIGN	SIGN
SIGN (TWO POSTS)	SIGN (TWO POSTS)
FENCE POST	FENCE POST
POST	POST
BOLLARD	BOLLARD
FLAG POLE	FLAG POLE
CONCRETE	CONCRETE
CRUSHED STONE	CRUSHED STONE
LEDGE OUTCROP	LEDGE OUTCROP
LEACH FIELD	LEACH FIELD
GAS PUMPS	GAS PUMPS
STORAGE TANKS	STORAGE TANKS
CEMETERY	CEMETERY
INTERMITTENT WATER COURSE	INTERMITTENT WATER COURSE
RIVER (STREAM)	RIVER (STREAM)
SHORE LINE	SHORE LINE
SHORE LINE	SHORE LINE
POND	POND

### DRAINAGE

<b>EXISTING</b>	<b>PROPOSED</b>
SD	DRAIN LINE
XD	DRAIN LINE (SEE NOTE 20)
RD	CATCH BASIN
RD	DRAIN MANHOLE
R	ROOF DRAIN
UD	ROOF DRAIN LINE
UD	STORM UNDERDRAIN
UD	DRAINAGE FLOW DIRECTION ARROW
UD	PROPOSED REINFORCED CONCRETE CULVERT END
UD	PROPOSED TYPE "C-L" CATCH BASIN
UD	PROPOSED TYPE "C" CATCH BASIN
UD	PROPOSED HEAD WALL

### WATER

<b>EXISTING</b>	<b>PROPOSED</b>
W	WATER LINE
XW	WATER LINE (SEE NOTE 20)
W	FIRE HYDRANT
W	PROPOSED HYDRANT AND GATE VALVE
W	WATER GATE VALVE
W	SPIGOT
W	WELL

### SEWER

<b>EXISTING</b>	<b>PROPOSED</b>
SS	SEWER LINE
XS	SEWER LINE (SEE NOTE 20)
FM	SEWER FORCE MAIN
S	SANITARY SEWER MANHOLE
S	CLEANOUT

### GAS

<b>EXISTING</b>	<b>PROPOSED</b>
G	GAS NOTE
G	GAS MAIN
G	GAS GATE VALVE
G	OIL FILL CAP

### ELECTRIC

<b>EXISTING</b>	<b>PROPOSED</b>
OHW	OVERHEAD WIRES
OHW	UTILITY POLE
OHW	UTILITY POLE & GUY WIRE
OHW	UTILITY POLE W/ LIGHT
OHW	LIGHT POLES
OHW	ELECTRICAL SERVICE
OHW	ELECTRIC BOX
OHW	PROPOSED ELECTRICAL MANHOLE
OHW	MANHOLE
OHW	HAND HOLE
OHW	PROPOSED LIGHT

### TELEPHONE

<b>EXISTING</b>	<b>PROPOSED</b>
T	TELEPHONE LINE
T	TELEPHONE MANHOLE

### CATV

<b>EXISTING</b>	<b>PROPOSED</b>
C	CABLE LINE

### STRIPING

<b>EXISTING</b>	<b>PROPOSED</b>
SWL	SINGLE SOLID LINE (WHITE)
SWL	SINGLE BROKEN LINE (WHITE)
SWL	DOUBLE SOLID LINE (WHITE)
SYL	SINGLE SOLID LINE (YELLOW)
SYL	SINGLE BROKEN LINE (YELLOW)
DYL	DOUBLE SOLID LINE (YELLOW)
SWL	PSSL (W)
SWL	PSBL (W)
SWL	PDSL (W)
SYL	PSSL (Y)
SYL	PSBL (Y)
DYL	PDSL (Y)

GENERAL PAVEMENT MARKING NOTE:  
 PLACEMENT AND COLOR OF PAVEMENT MARKING LINES, SYMBOLS AND WORDS SHALL CONFORM TO THE (MUTCD) SECTION 632 OF NHDOT STANDARD SPECIFICATION BOOK, CONTRACT SUPPLEMENTAL SPECIFICATIONS, THE STATE OF NEW HAMPSHIRE PAVEMENT MARKING STANDARD DETAIL SHEETS, AND STANDARD PLAN SHEETS.

RETROREFLECTIVE PAINT PAVEMENT MARKING KEY:  
 THE FOLLOWING PAVEMENT MARKINGS SHALL BE RETROREFLECTIVE THERMOPLASTIC UNLESS OTHERWISE NOTIFIED BY THE STATE STANDARD SYMBOLS AND WORDS.

f - WORDS ONLY - WORDS  
 A = STOP BARS = 18" SSL (WHITE)(T)

### CURB

<b>EXISTING</b>	<b>PROPOSED</b>
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
SBB	SLOPED BITUMINOUS BERM
CC	CONCRETE CURB
BCC	BITUMINOUS CURB
	TIPDOWN

### TRAFFIC UTILITIES

SIGNAL CONDUIT (EXISTING)	
SIGNAL CONDUIT (PROPOSED)	
MAGNETIC DETECTOR SLEEVE	
LOOP DETECTOR	
PULLBOX	
HANDHOLE	
CONTROLLER CABINET	
SPREAD FOOTING	
CYLINDRICAL FOUNDATION	
MAST ARM POLE (WITH SIGNAL HEADS)	
STEEL SPAN WIRE POLES	
PEDESTRIAN SIGNAL POLE	
TRAFFIC SIGNAL (EXISTING)	
STREET LIGHT CONDUIT	

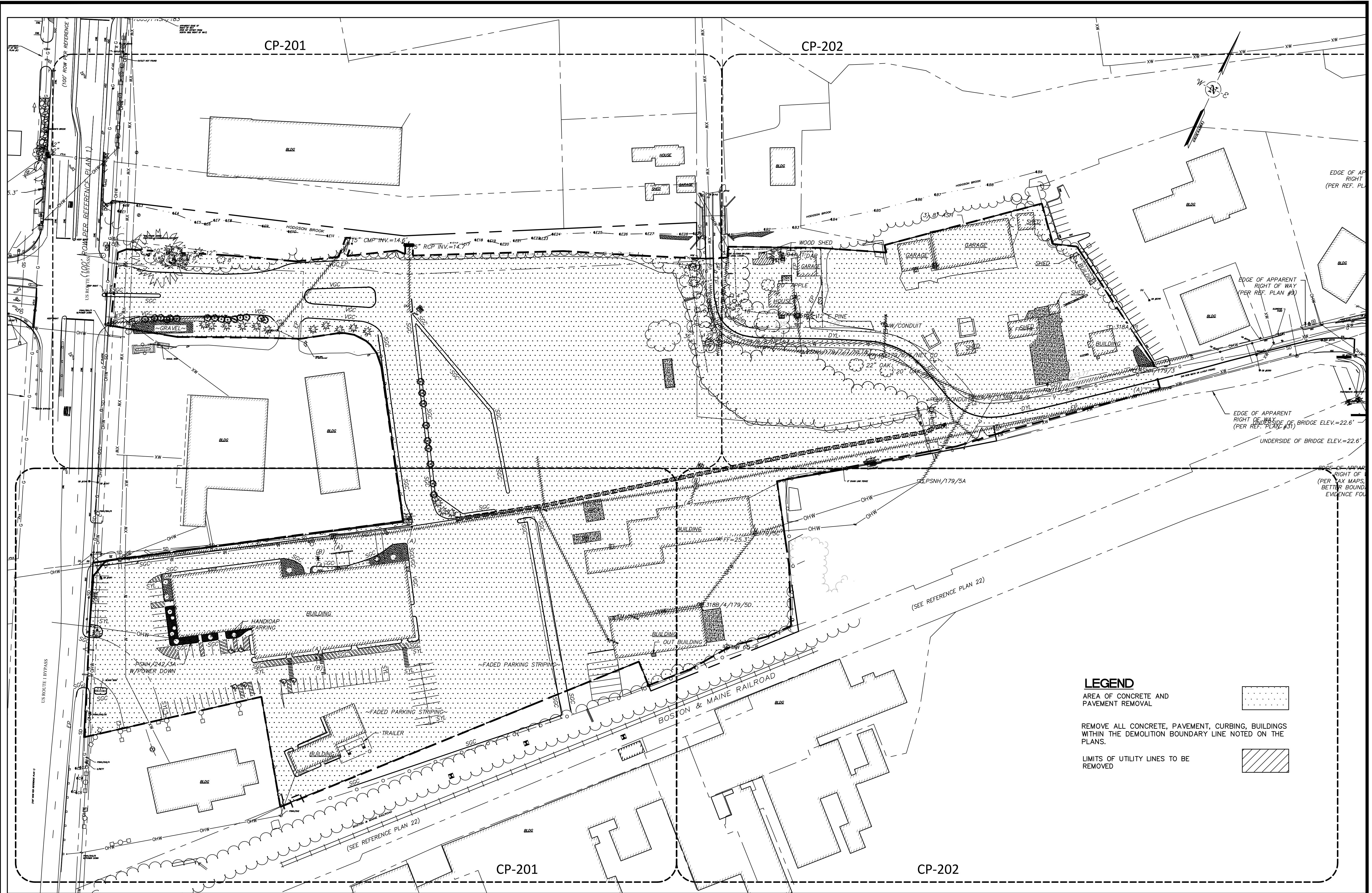
NOTE ANGLE FROM TO ARM

### EROSION CONTROL

PROPOSED SILT FENCE	SF
PROPOSED HAY BALES	HB
PROPOSED HAYBALE CHECK DAM	
PROPOSED SILT SOCKS	
PROPOSED EROSION CONTROL MAT	
PROPOSED INLET PROTECTION	
PROPOSED OUTLET PROTECTION	
PROPOSED STONE CHECK DAM	
PROPOSED LIMIT OF DISTURBANCE	LOD

SCALE: HORIZ: NTS	VERT: NTS
DATUM:	
FUSS & O'NEILL	
UPPER SQUARE BUSINESS CENTER	
5 FLETCHER STREET, SUITE 1	
KENNEBUNK, MAINE 04043	
www.fussandoneill.com	
CATE STREET DEVELOPMENT, LLC	
LEGEND	
CATE STREET/ WEST END YARDS	
PORTSMOUTH	
NEW HAMPSHIRE	
PROJ. No.: 20180317.A10	
DATE: 05/20/2019	
CN-002	

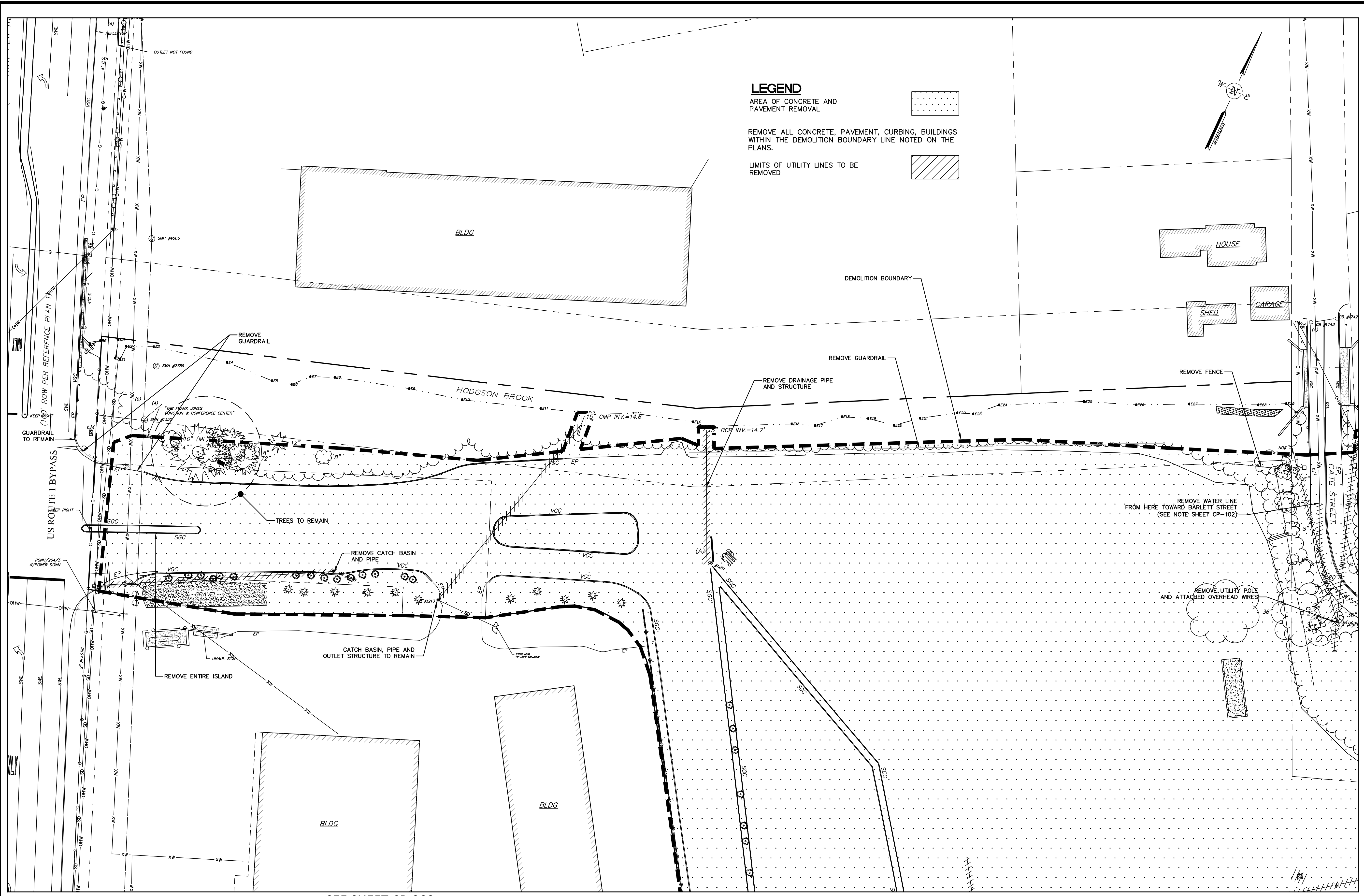




**LEGEND**

- AREA OF CONCRETE AND PAVEMENT REMOVAL
- REMOVE ALL CONCRETE, PAVEMENT, CURBING, BUILDINGS WITHIN THE DEMOLITION BOUNDARY LINE NOTED ON THE PLANS.
- LIMITS OF UTILITY LINES TO BE REMOVED

SCALE: HORIZ.: 1"=60' VERT.: 1"=60' DATUM: HORIZ.: NAD83 VERT.: NGVD29	
<b>FUSS &amp; O'NEILL</b> UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 207.563.0609 www.fussdo.com	
CATE STREET DEVELOPMENT, LLC <b>OVERALL SITE PREPARATION PLAN</b> CATE STREET/WEST END YARDS PORTSMOUTH NEW HAMPSHIRE	
PROJ. No.: 20180317.A10 DATE: 05/20/2019	
<b>CP-200</b>	

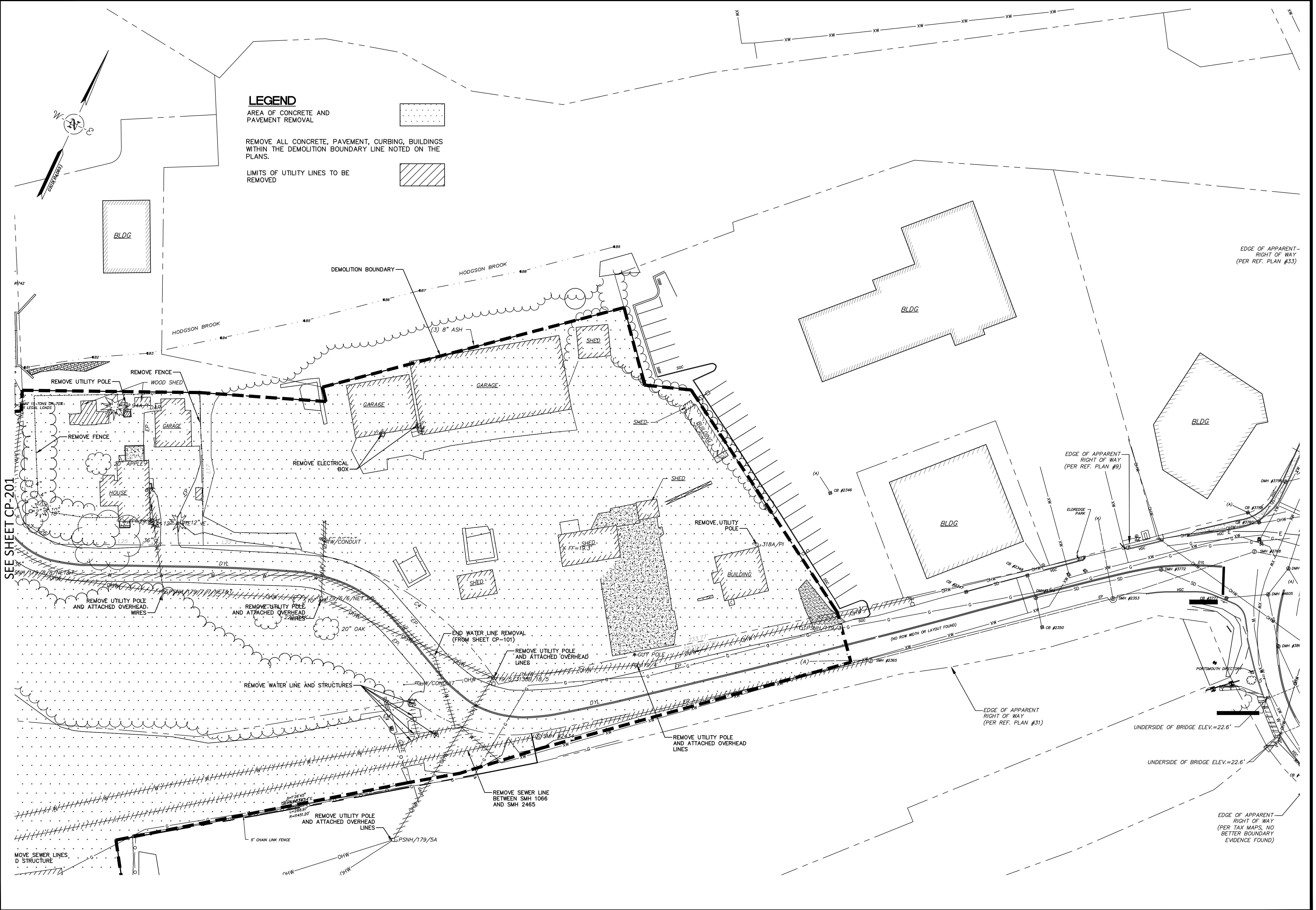


SEE SHEET CP-203

SEE SHEET CP-202

CATE STREET DEVELOPMENT, LLC			
SITE PREPARATION PLAN			
CATE STREET			
PORTSMOUTH	NEW HAMPSHIRE		
PROJ. No.: 20180317.A10			
DATE: 05/20/2019			
CP-201			
SCALE: HORZ.: 1"=30' VERT.: 1"=30'			
DATUM: HORZ.: NAD83 VERT.: NGVD29			
GRAPHIC SCALE			
FUSS & O'NEILL UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 www.fandoo.com			
RICHARD LUNDORF No. 10843 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE			
No.	DATE	DESCRIPTION	DESIGNER REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DA0 RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DA0 RRL

File Path: F:\P20180317A10\CH3\DWG\20180317A10\_DWG01.dwg Layout: CP-202 Plotted: Mon, May 20, 2019 - 5:03 PM User: ddugal  
MS VIEW: LAYER STATE: Plotter: DWG TO PDF PC3 CTB File: FO.STB



**LEGEND**  
AREA OF CONCRETE AND PAVEMENT REMOVAL [Dotted pattern]  
REMOVE ALL CONCRETE, PAVEMENT, CURBING, BUILDINGS WITHIN THE DEMOLITION BOUNDARY LINE NOTED ON THE PLANS.  
LIMITS OF UTILITY LINES TO BE REMOVED [Hatched pattern]

SCALE: HORIZ: 1"=30' VERT: 1"=30'		DATUM: HORIZ: NAD83 VERT: NGVD29	
30 15 0 30 GRAPHIC SCALE		PROJ. No.: 20180317.A10 DATE: 05/20/2019	
<b>FUSS &amp; O'NEILL</b> UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 www.fandod.com			
CATE STREET DEVELOPMENT, LLC		SITE PREPARATION PLAN	
PORTSMOUTH		CATE STREET	
NEW HAMPSHIRE		PORTSMOUTH	
DESIGNER		DESCRIPTION	
DATE		DATE	
No.		No.	
TAC SUBMITTAL		TAC SUBMITTAL	
JVA/DAO		JVA/DAO	
RRL		RRL	
DESIGNER REVIEWER		DESIGNER REVIEWER	

SEE SHEET CP-201

EDGE OF APPARENT RIGHT OF WAY (PER REF. PLAN #33)

EDGE OF APPARENT RIGHT OF WAY (PER REF. PLAN #9)

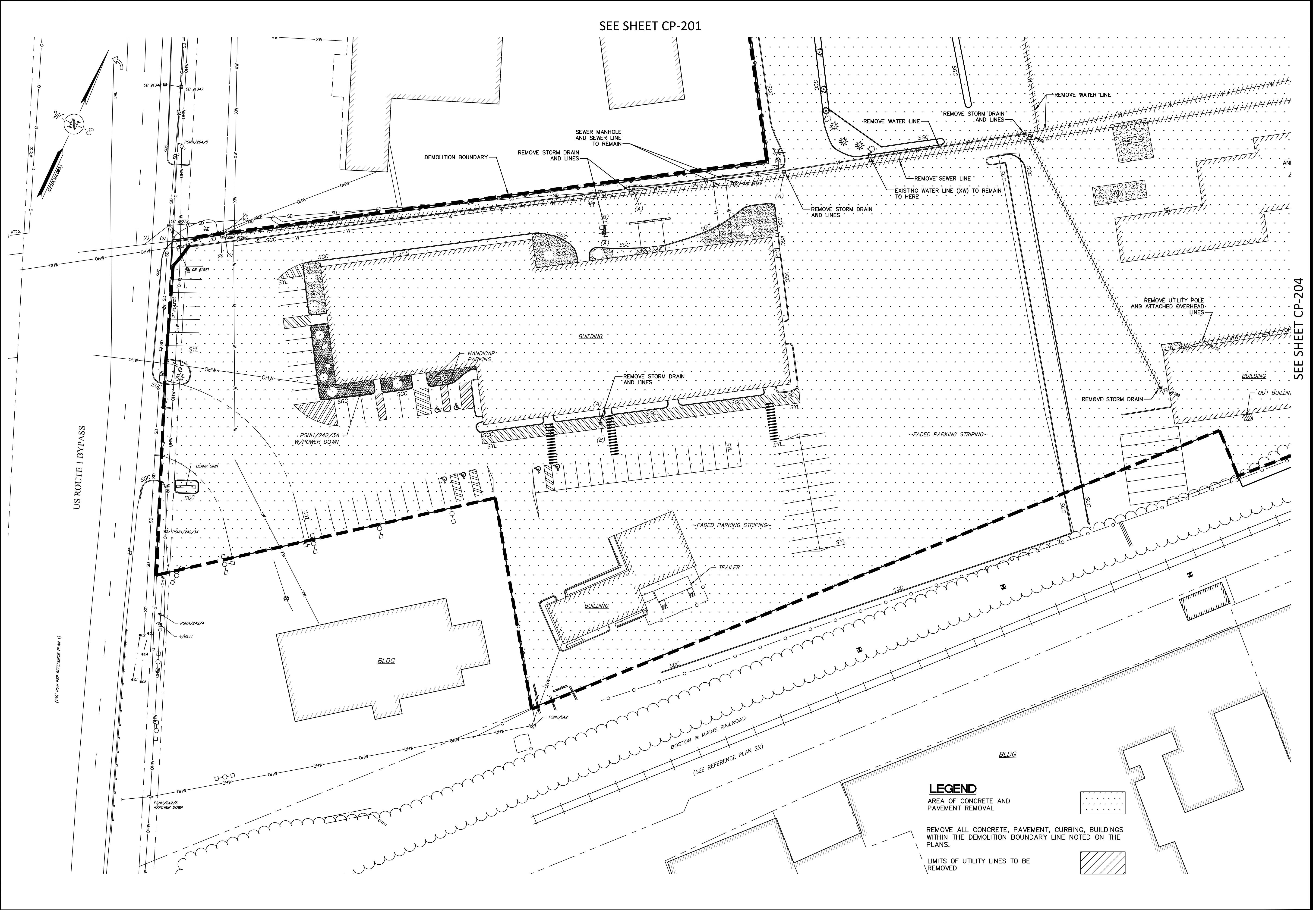
EDGE OF APPARENT RIGHT OF WAY (PER REF. PLAN #31)

UNDERSIDE OF BRIDGE ELEV.=22.6'

UNDERSIDE OF BRIDGE ELEV.=22.6'

EDGE OF APPARENT RIGHT OF WAY (PER REF. PLAN #31)

File Path: F:\P20180317A10\CH\3\DWG\20180317A10\_D\MO01.dwg Layout: CP-203 Plotted: Mon, May 20, 2019 - 5:03 PM User: ddigital  
 MS VIEW: [LAYER STATE: ] Plotter: DWG TO PDF-PC3 CTB File: FO-STB



SEE SHEET CP-201

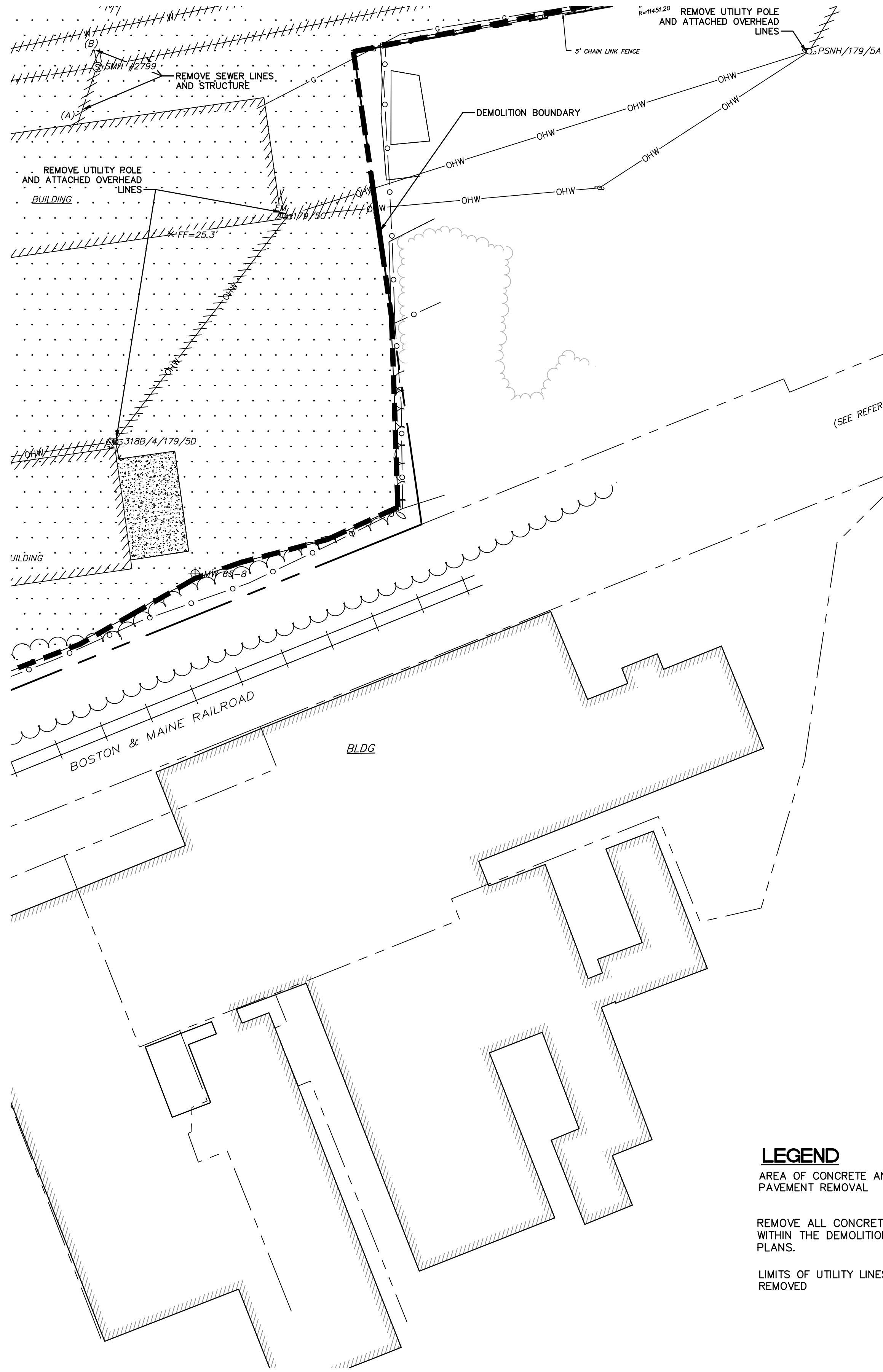
SEE SHEET CP-204

SCALE: HORIZ.: 1"=30' VERT.: 1"=30' DATUM: HORIZ.: NAD83 VERT.: NGVD29	
<b>FUSS &amp; O'NEILL</b> UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 207.533.6609 www.fandoo.com	
CATE STREET DEVELOPMENT, LLC <b>SITE PREPARATION PLAN</b> CATE STREET/ WEST END YARDS PORTSMOUTH NEW HAMPSHIRE	
PROJ. No.: 20180317.A10 DATE: 05/20/2019	
<b>CP-203</b>	

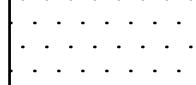
No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DA0	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DA0	RRL

SEE SHEET CP203


SEE SHEET CP-202

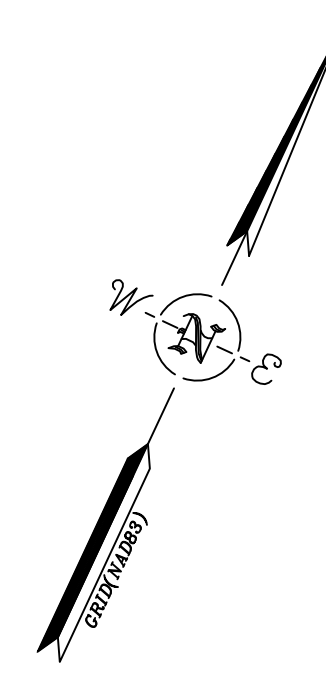


**LEGEND**

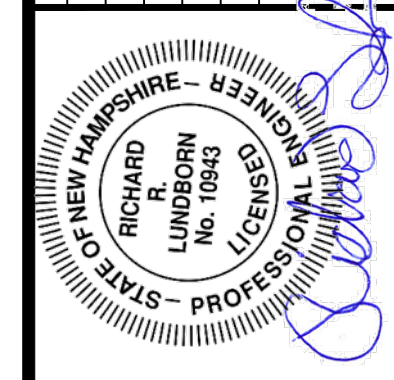
AREA OF CONCRETE AND PAVEMENT REMOVAL 

REMOVE ALL CONCRETE, PAVEMENT, CURBING, BUILDINGS WITHIN THE DEMOLITION BOUNDARY LINE NOTED ON THE PLANS.

LIMITS OF UTILITY LINES TO BE REMOVED 

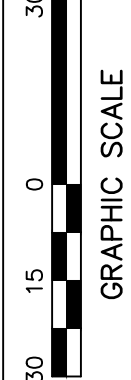


No.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAD
2	5/20/2019	TAC SUBMITTAL	JVA/DAD



SCALE:

HORIZ.: 1"=30'
VERT.: 1"=30'
DATUM: NAD83
VERT.: NGVD29



GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.0609  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
 SITE PREPARATION PLAN  
 CATE STREET/WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CP-204**

**SITE NOTES:**

1. TOTAL PARCEL AREA:  
 TAX MAP 163, LOT 33-12,230 SF (0.28 AC.)  
 TAX MAP 163, LOT 34-64,109 SF (1.47 AC.)  
 COMBINED AREA-451,572 SF (10.37 AC.)  
 TAX MAP 165, LOT 2  
 TAX MAP 172, LOT 1  
 TAX MAP 173, LOT 2

**OWNER OF RECORD:**  
 CATE STREET DEVELOPMENT, LLC  
 60 K STREET  
 BOSTON, MA 02127  
 RCRD BOOK5929, PAGE 109

2. ZONES: G-1-GATEWAY NEIGHBORHOOD MIXED USE

**3. DIMENSIONAL REQUIREMENTS, DEVELOPMENT SITE STANDARDS:**

	REQUIRED	PROPOSED
MIN. DEVELOPMENT AREA	20,000 sq.ft.	579,856 SF
MIN. SITE WIDTH	100 ft.	VARIABLE > 100 ft.
MIN. LOT DEPTH	100 ft.	VARIABLE > 100 ft.
MIN. PERIMETER BUFFER	75 ft. FROM RES. DIST., MIXED RES., OR CD4-L1 DIST.	N/A
MAX. DEV. BLOCK	800 ft. LENGTH, 2,200 LINEAR ft.	610 ft.
MIN. FRONTAGE	50 ft.	227 ft.
MAX. BUILDING HEIGHT	45 ft.	45 ft.
25-FT STEP BACK		
MAX. BUILDING COVERAGE	70 %	18.6 %
MIN. OPEN SPACE	20 %	32.7 %
COMMUNITY SPACE	ALL TYPES	
WETLAND SETBACKS	100 ft.	104 ft.
IMPERVIOUS COVER		390,471 sq. ft. (67.3%)

ZONING INFORMATION LISTED HEREON IS BASED ON THE CITY OF PORTSMOUTH ZONING ORDINANCE DATED JULY 11, 2016 AS AVAILABLE ON THE CITY WEBSITE ON DECEMBER 15, 2016. ADDITIONAL REGULATIONS APPLY, AND REFERENCE IS HEREBY MADE TO THE EFFECTIVE ZONING ORDINANCE. THE LAND OWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.

4. PARKING CALCULATIONS:

COMMERCIAL BUILDING	AREA	REQUIREMENT	REQUIRED	PROVIDED
EATING AND DRINKING	13,600SF	1/100 SF	136	---
RETAIL	5800SF	1/300 SF	20	---
OFFICE	15900SF	1/350 SF	46	---
TOTAL			202	---

PER 10.112.60 SHARED PARKING WEEKDAY EVENINGS:

	REQUIRED	SHARED %	SHARED REQUIRED	PROVIDED
EATING AND DRINKING	136	90%	136	---
RETAIL	20	90%	20	---
OFFICE	46	20%	10	---
TOTAL			166	170
BICYCLE PARKING		1/10 PARKING	17	17
HANDICAP ACCESSIBLE = 6				

RESIDENTIAL A AND B:

UNITS	REQUIREMENT	REQUIRED	PROVIDED
UNITS <750 SQ. FT.	1/UNIT	144	---
UNITS >750 SQ. FT.	1.3/UNIT	106	---
TOTAL		282	284
BICYCLE PARKING IS INTERNAL			
HANDICAP ACCESSIBLE = 8			

TOWNHOMES:

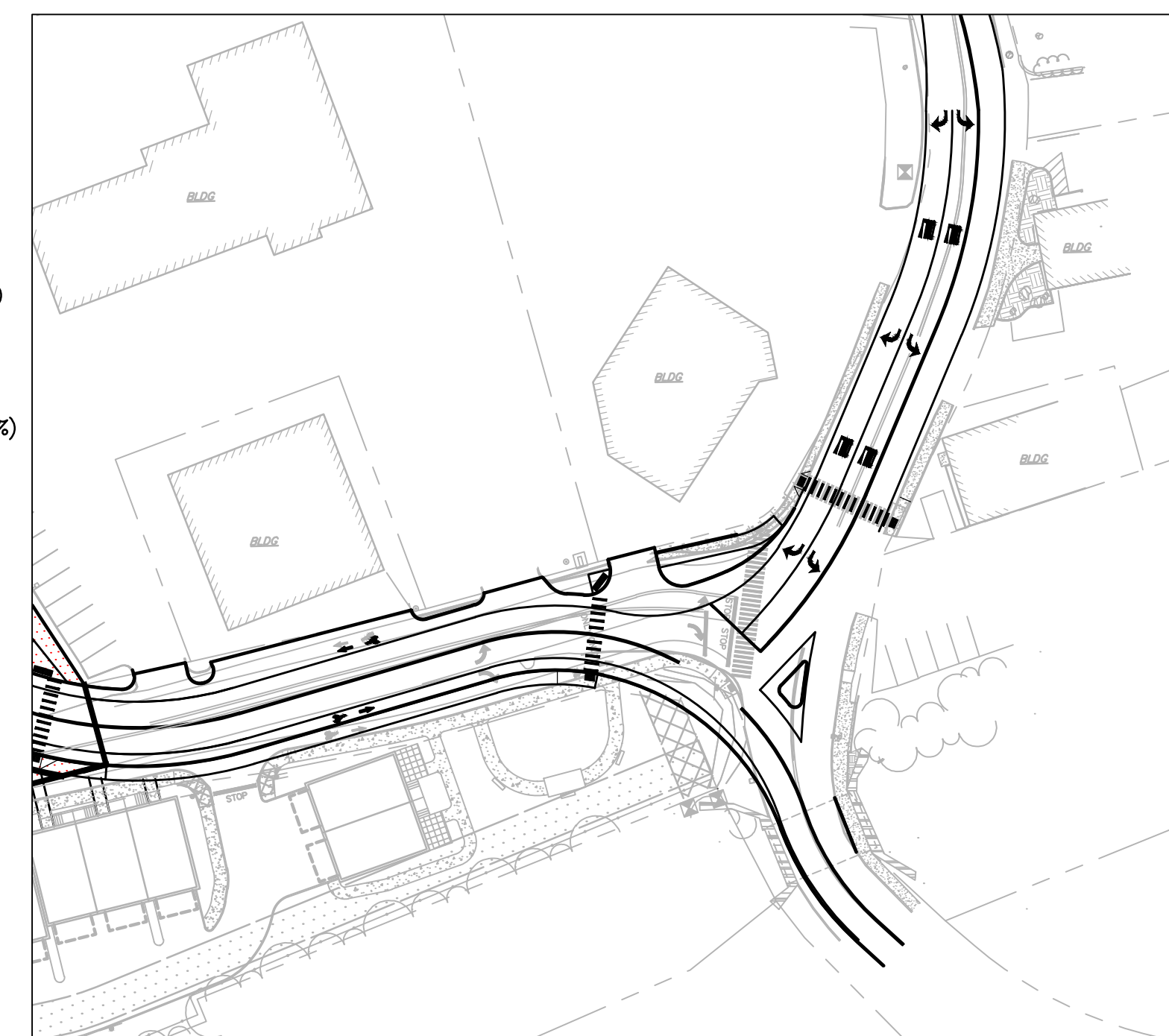
UNITS	REQUIREMENT	REQUIRED	PROVIDED
UNITS >750 SQ. FT.	1.3/UNIT	36	51
BICYCLE PARKING IS INTERNAL			

DEVELOPMENT SITE TOTAL: REQUIRED 484 PROVIDED 505  
 PER 10.8B82.10 TRANSIT ROUTE ACCESS 20% REDUCTION (COTTAGE ST)

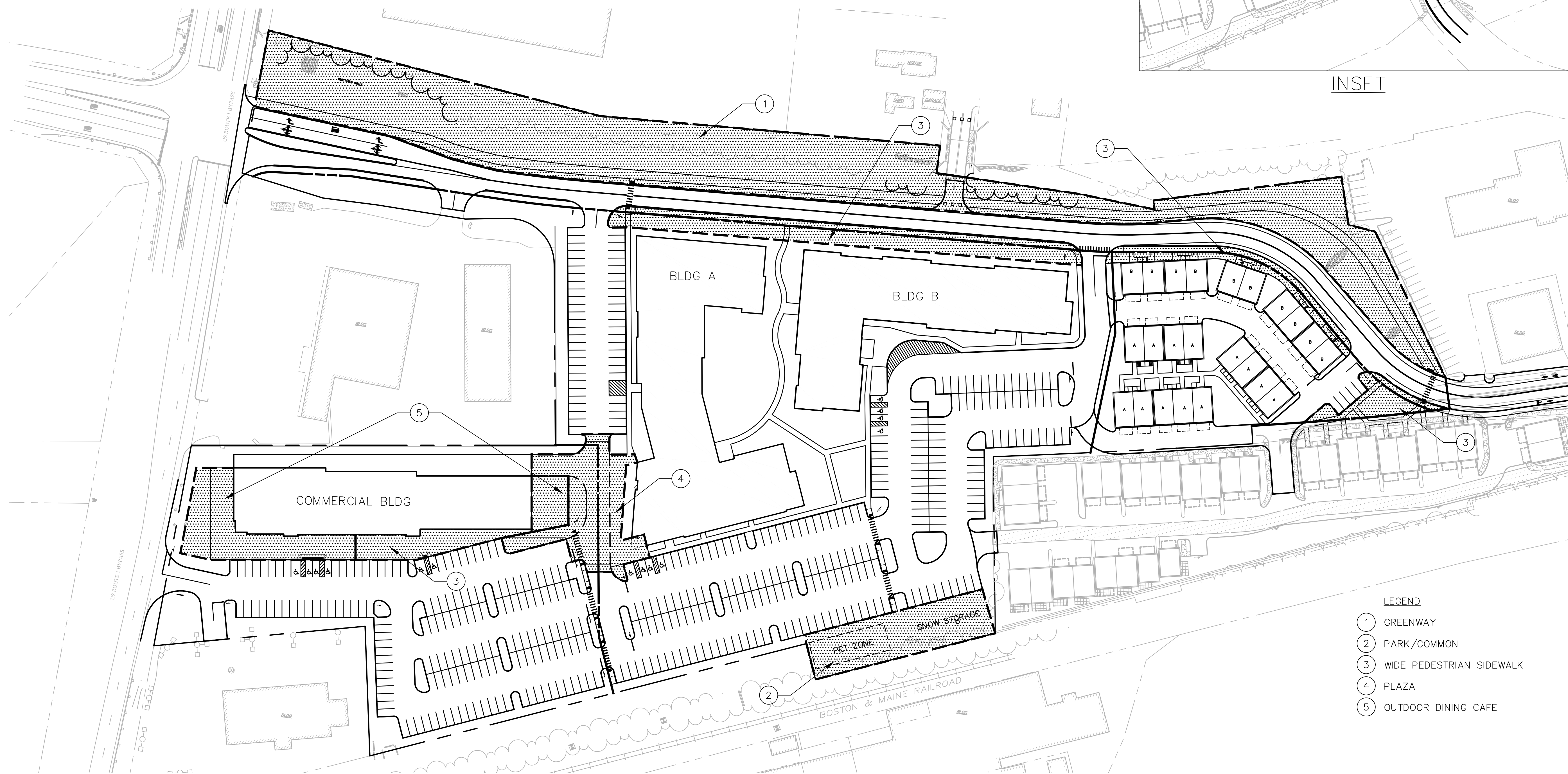
DEVELOPMENT SITE TOTAL(-20%) = REQUIRED 388 PROVIDED 505

5. COMMUNITY SPACE CALCULATION:

	REQUIRED	PROVIDED
TOTAL DEVELOPMENT SITE	---	579,818 SF
GREENWAY	---	85,226 SF (15%)
PARK/COMMON	---	10,480 SF (2%)
WIDE PEDESTRIAN SIDEWALK	---	24,507 SF (6%)
PLAZA	---	11,602 SF (2%)
OUTDOOR DINING	---	11,330 SF (2%)
TOTAL	115,964 SF (20%)	152,625 SF (26%)

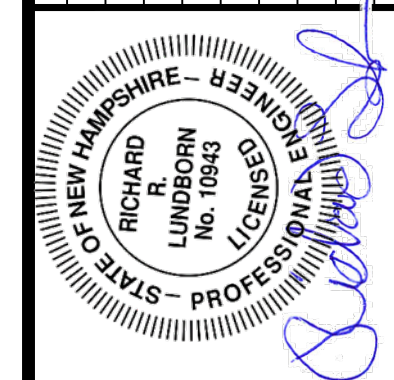


INSET



- LEGEND**
- ① GREENWAY
  - ② PARK/COMMON
  - ③ WIDE PEDESTRIAN SIDEWALK
  - ④ PLAZA
  - ⑤ OUTDOOR DINING CAFE

No.	DATE	DESCRIPTION	DESIGNER REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAD
2	5/20/2019	TAC SUBMITTAL	JVA/DAD



SCALE:

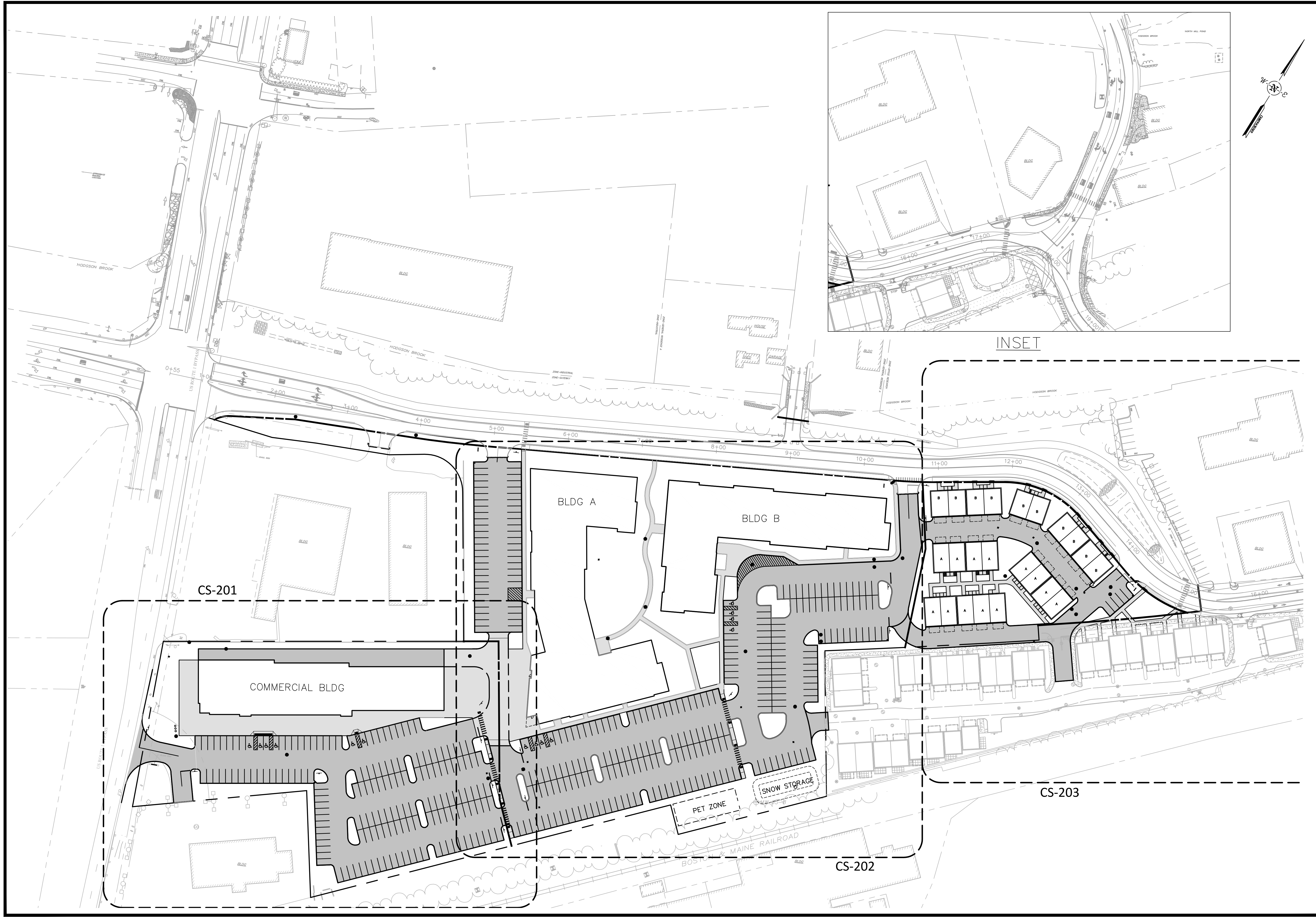
HORIZ.: 1"=60'	VERT.: 1"=60'
DATUM: NAD83	
HORIZ.: NAVD88	VERT.: NAVD88

GRAPHIC SCALE: 0, 30, 60

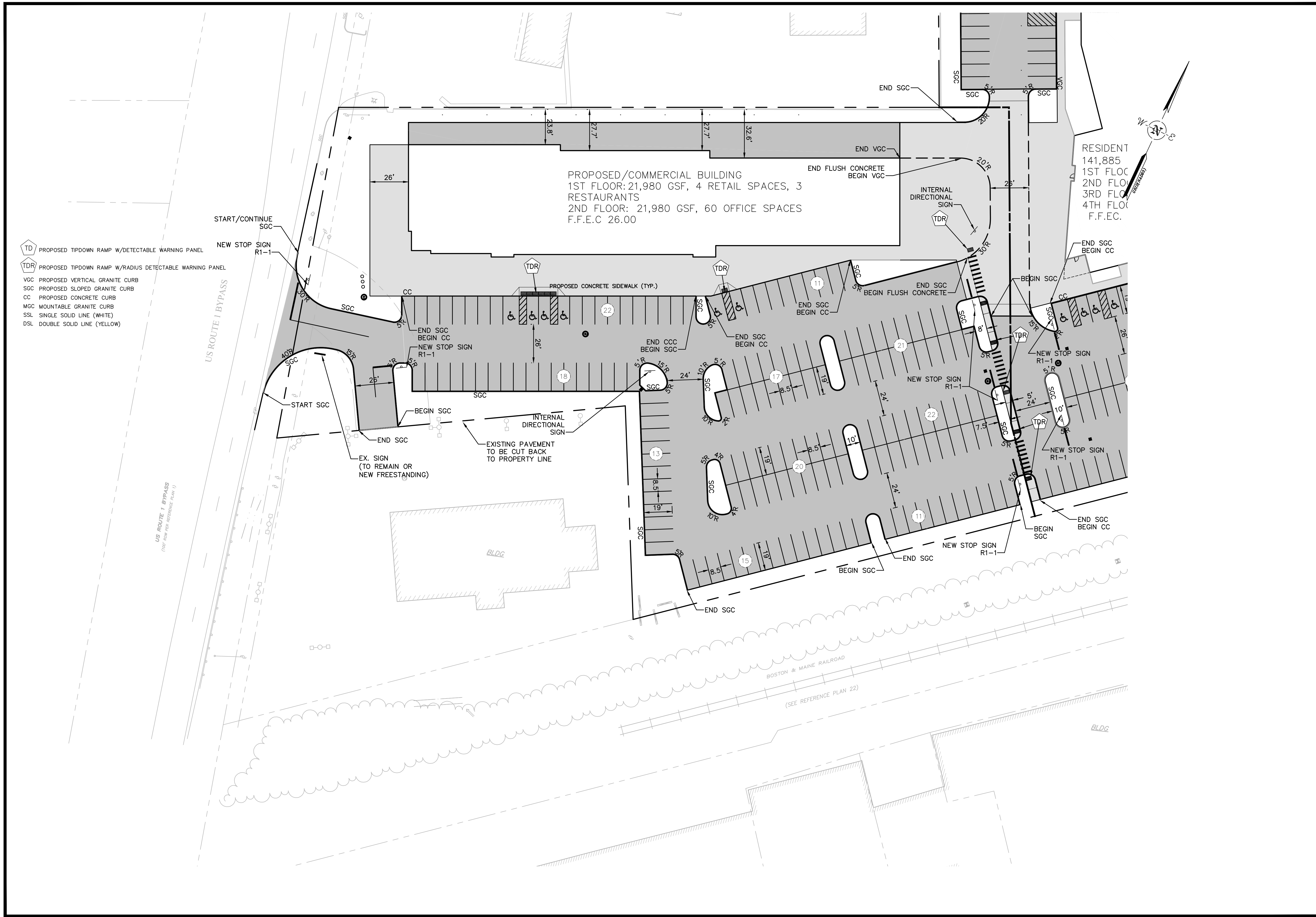
**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
 DEVELOPMENT STANDARDS  
 SITE PLAN  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

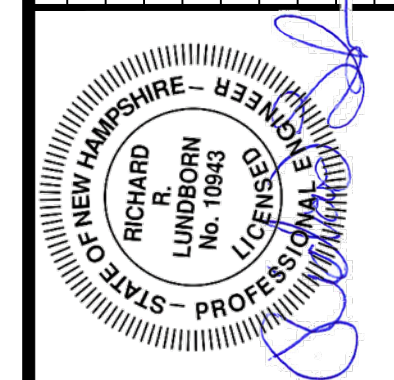
PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CS-001**



<p>SCALE: HORZ.: 1"=60'          VERT.: 1"=60'</p>		<p>GRAPHIC SCALE</p>
<p>DATUM: HORZ.: NAD83          VERT.: NAVD88</p>		
<p><b>FUSS &amp; O'NEILL</b>          UPPER SQUARE BUSINESS CENTER          5 FLETCHER STREET, SUITE 1          KENNEBUNK, MAINE 04043          www.fandoo.com</p>		
<p>CATE STREET DEVELOPMENT, LLC  <b>OVERALL SITE PLAN</b>          CATE STREET/ WEST END YARDS          PORTSMOUTH NEW HAMPSHIRE</p>		
<p>PROJ. No.: 20180317.A10          DATE: 05/20/2019</p>		
<p><b>CS-200</b></p>		
<p>STATE OF NEW HAMPSHIRE          RICHARD LUNDGREN          No. 10843          LICENSED PROFESSIONAL ENGINEER</p>		<p>DATE: 5/20/2019          DESCRIPTION: TAC SUBMITTAL          No. 1          DATE: 3/18/2019          DESCRIPTION: TAC SUBMITTAL          No. 2</p>
<p>DESIGNER REVIEWER</p>		<p>DESIGNER REVIEWER</p>



No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				
2.	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL
	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL



SCALE:	HORIZ.: 1"=30'	VERT.: 1"=30'
DATUM:	HORIZ.: NAD83	VERT.: NGVD29

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
**SITE PLAN**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

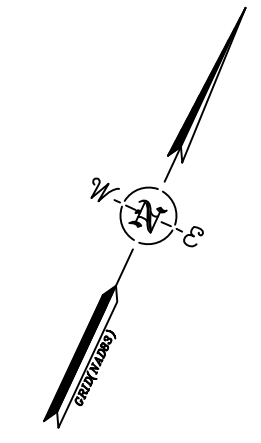
PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CS-201**



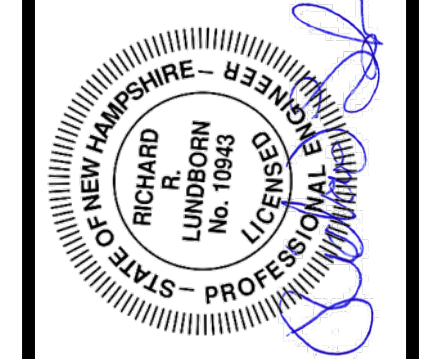
File Path: F:\P20180317A10\CH3\DWG\20180317A10\_STP01.dwg Layout: CS-202(S) Plotted: Tue, May 21, 2019 - 11:50 AM User: jandretta  
 MS VIEW: LAYER STATE: Plotter: DWG TO PDF-PC3 CTB File: FO.STB



- TD PROPOSED TIPDOWN RAMP W/DETECTABLE WARNING PANEL
- TDR PROPOSED TIPDOWN RAMP W/RADIUS DETECTABLE WARNING PANEL
- VGC PROPOSED VERTICAL GRANITE CURB
- SGC PROPOSED SLOPED GRANITE CURB
- CC PROPOSED CONCRETE CURB
- MGC MOUNTABLE GRANITE CURB
- SSL SINGLE SOLID LINE (WHITE)
- DSL DOUBLE SOLID LINE (YELLOW)



No.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAD
2	3/18/2019	TAC SUBMITTAL	RRL



SCALE: HORIZ.: 1"=30'  
 VERT.: 1"=30'  
 DATUM: HORIZ.: NAD83  
 VERT.: NGVD29

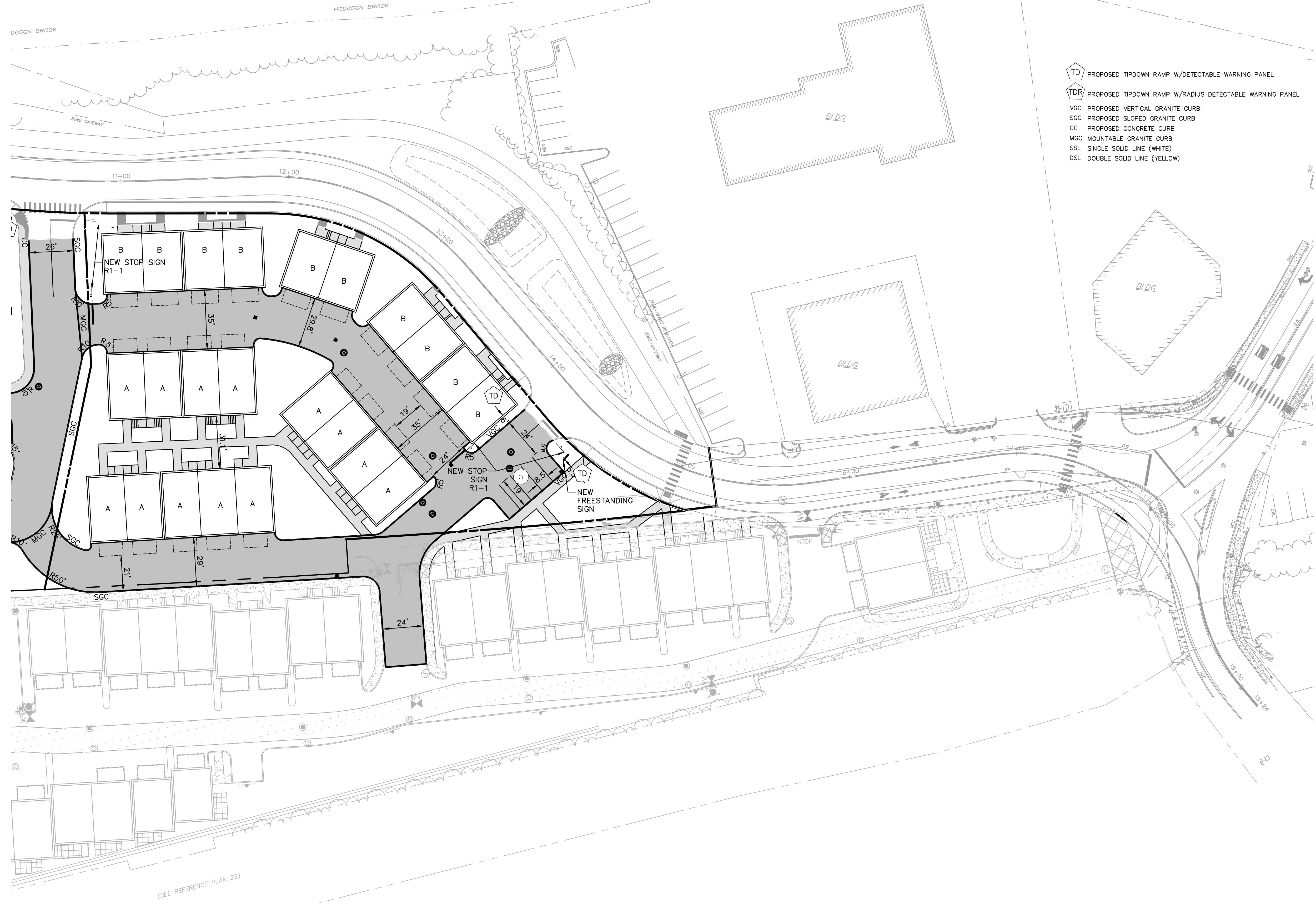
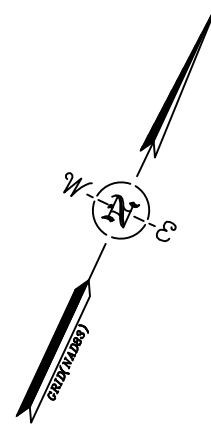
GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
**SITE PLAN**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

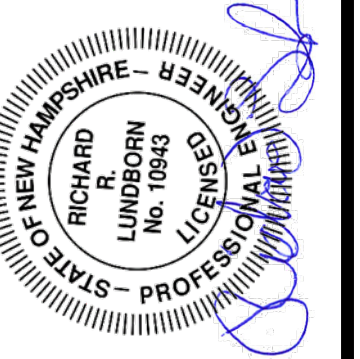
PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CS-202**



(SEE REFERENCE PLAN 22)

No.	DATE	DESCRIPTION	DESIGNER REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAD
2	3/18/2019	TAC SUBMITTAL	JVA/DAD



SCALE: HORZ.: 1"=30'  
 VERT.: 1"=30'

DATUM:  
 HORZ.: NAD83  
 VERT.: NGVD29

GRAPHIC SCALE

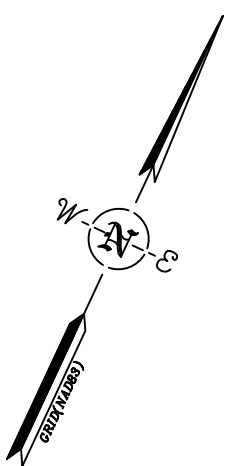
**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.6669  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
 SITE PLAN  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

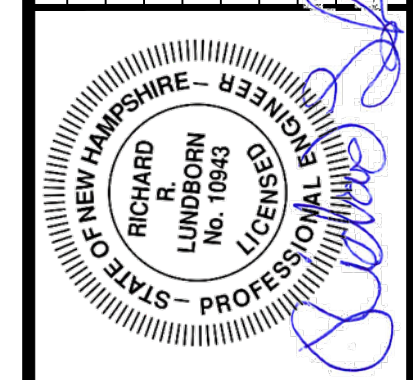
**CS-203**





INSET

NO.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1.	3/18/2019	TAC SUBMITTAL	RRL
2.	5/20/2019	TAC SUBMITTAL	RRL

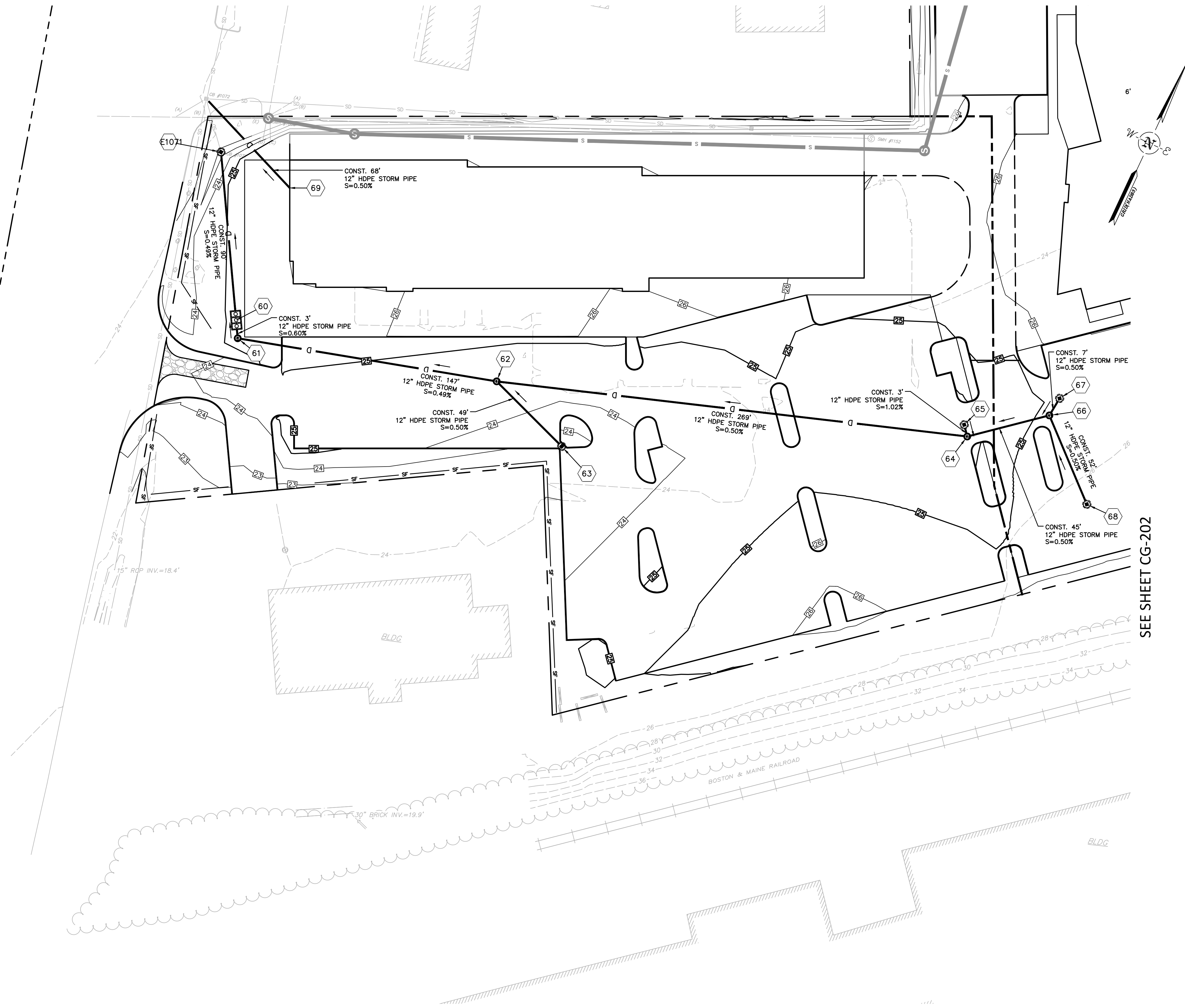


SCALE:	HORIZ: 1"=60'	VERT: 1"=60'
DATUM:	HORIZ: NAD83 VERT: NGVD29	
GRAPHIC SCALE		

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

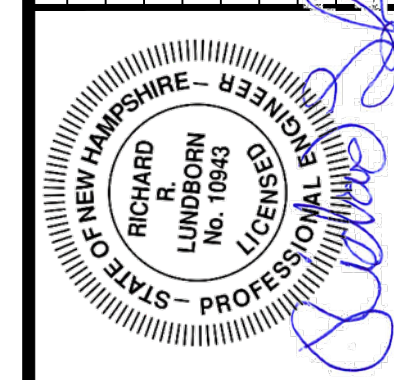
CATE STREET DEVELOPMENT, LLC  
**GRADING, DRAINAGE &  
 EROSION CONTROL PLAN**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CG-200**



SEE SHEET CG-202

NO.	DATE	DESCRIPTION	BY	CHK
1.	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL
2.	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL



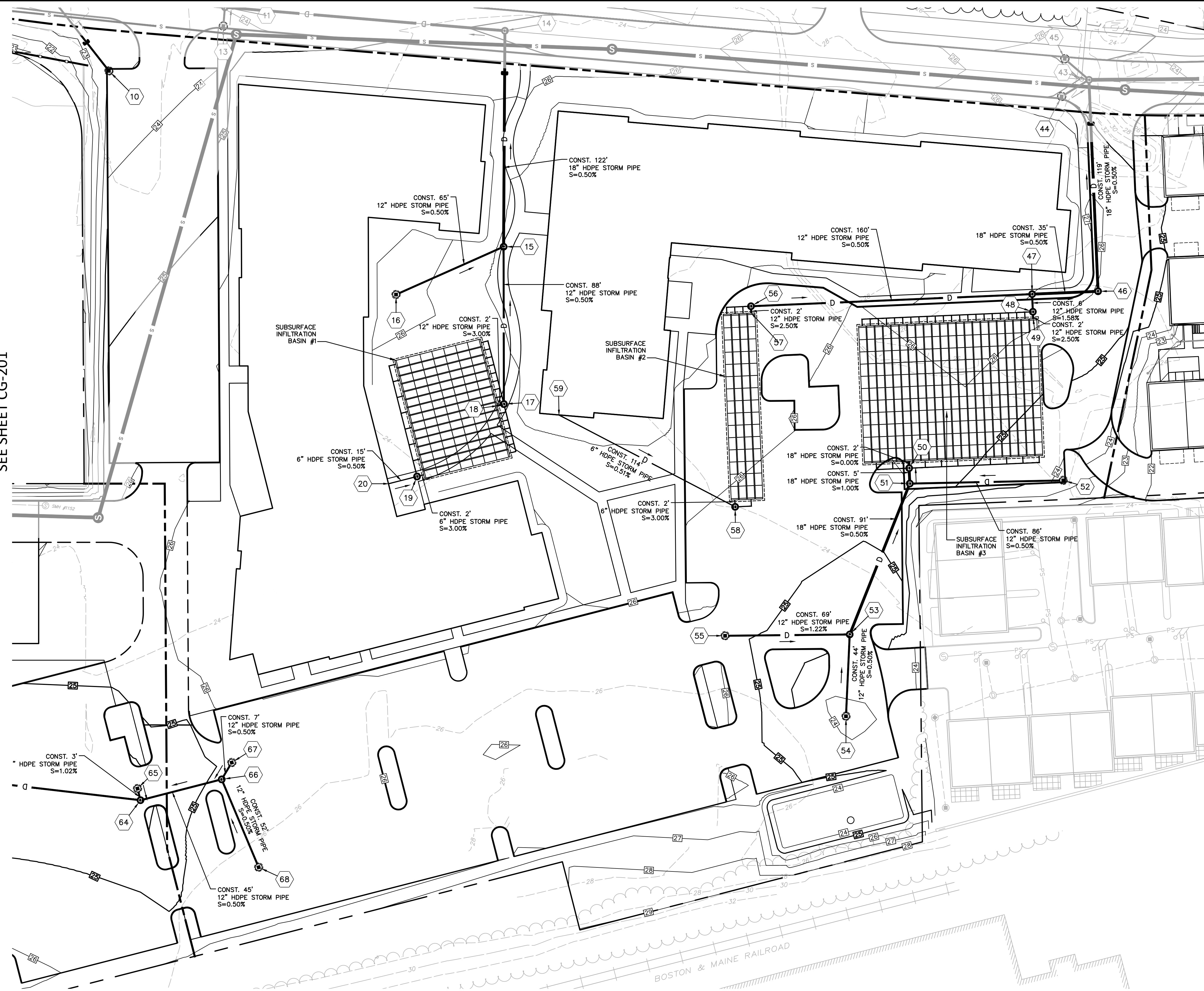
SCALE:	HORIZ.: 1"=30'
	VERT.: 1"=30'
DATUM:	HORIZ.: NAD83
	VERT.: NGVD29
	GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.0609  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
**GRADING, DRAINAGE & EROSION CONTROL PLAN**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

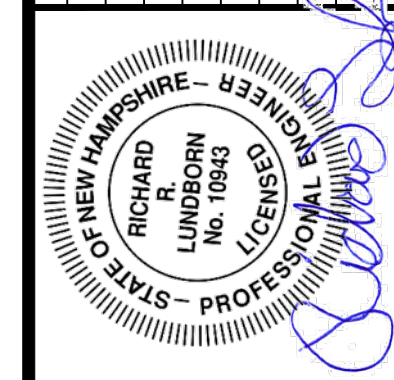
PROJ. No.: 20180317.A10
DATE: 05/20/2019
<b>CG-201</b>

SEE SHEET CG-201



SEE SHEET CG-203

NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL
2.	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL



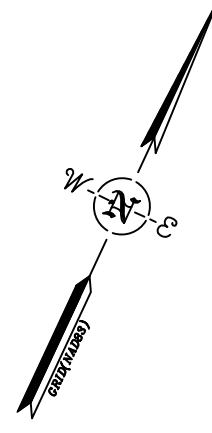
SCALE:	HORIZ.: 1"=30'
	VERT.: 1"=30'
DATUM:	HORIZ.: NAD83
	VERT.: NGVD29
	30 15 0 30
	GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.0609  
 www.fandco.com

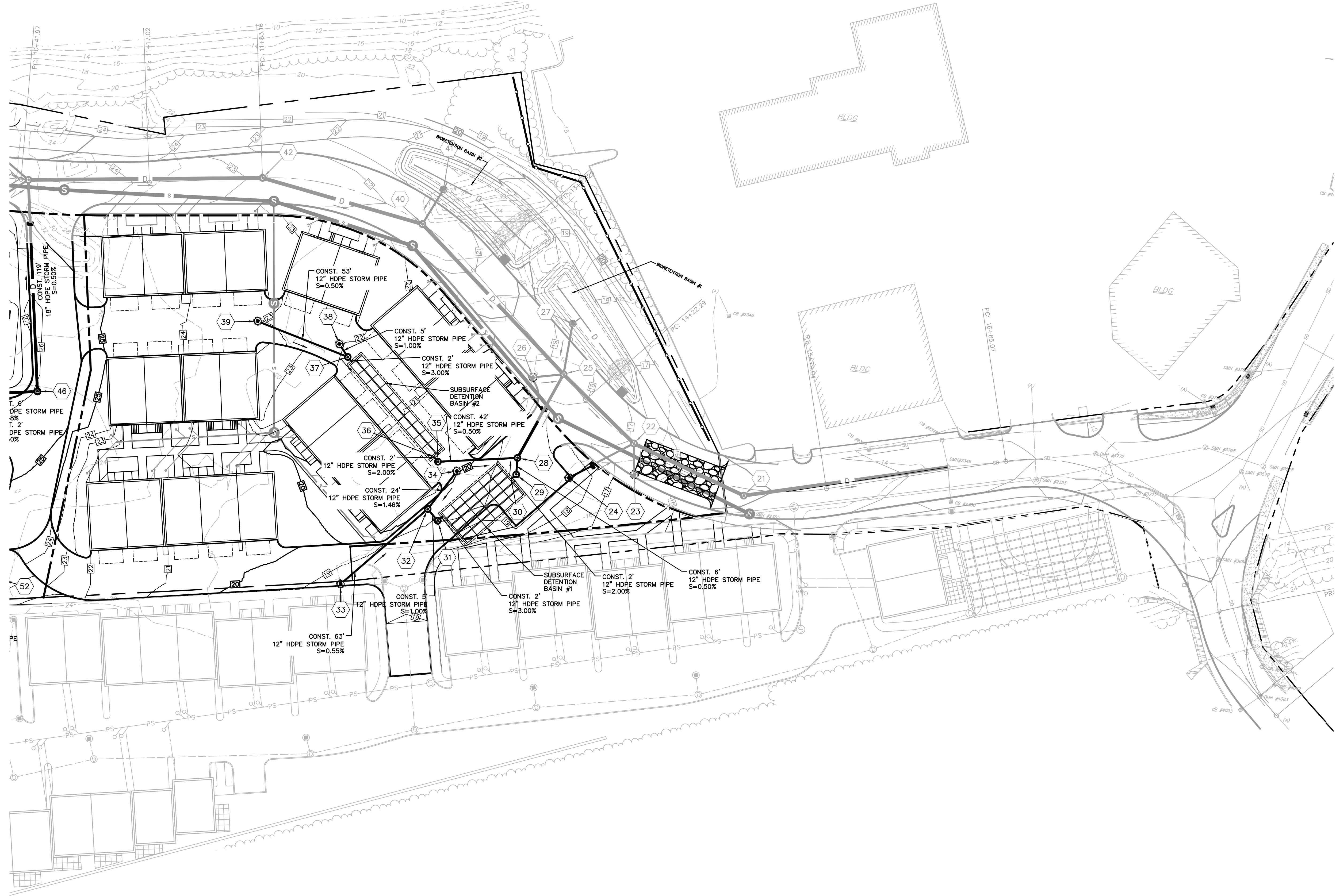
CATE STREET DEVELOPMENT, LLC  
**GRADING, DRAINAGE & EROSION CONTROL PLAN**  
 CATE STREET/WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CG-202**



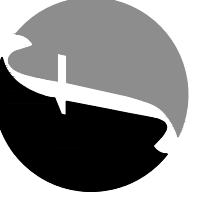
SEE SHEET CG-202



PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CG-203**

CATE STREET DEVELOPMENT, LLC  
**GRADING, DRAINAGE &  
 EROSION CONTROL PLAN**  
 CATE STREET/WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE



**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

SCALE: HORZ.: 1"=30'  
 VERT.: 1"=30'  
 DATUM: NAD83  
 HORZ.: NAD83  
 VERT.: NGVD29  
 30 15 0 30  
 GRAPHIC SCALE

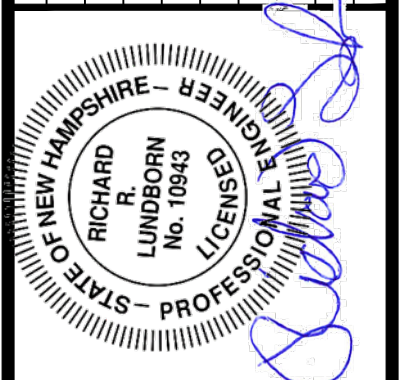


NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL
2.	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL

SEWER SYSTEM	
STRUCTURE	STRUCTURE DETAILS
E1350	PROPOSED 4' DIA. SEWER MANHOLE STA. 1+41.03, L 62.76' RIM = 18.76 (1) 12" PVC INV OUT = 14.40 CONSTRUCT 121 LF x 12" PVC S=0.0061
E1066	PROPOSED 4' DIA. SEWER MANHOLE STA. 0+00.00, 0.00' RIM = 23.34 (9) 24" PVC INV OUT = 11.50 CONSTRUCT 47 LF x 24" PVC S=0.0030
1	PROPOSED 4' DIA. SEWER MANHOLE STA. 15+35.74, R 14.36' RIM = 14.76 (2) 24" PVC INV IN = 9.30
2	PROPOSED 4' DIA. SEWER MANHOLE STA. 14+20.31, R 19.24' RIM = 17.71 (3) 24" PVC INV IN = 9.50 (1) 24" PVC INV OUT = 9.40 CONSTRUCT 121 LF x 24" PVC S=0.0008
3	PROPOSED 4' DIA. SEWER MANHOLE STA. 12+84.64, R 13.75' RIM = 21.37 (4) 24" PVC INV IN = 9.70 (2) 24" PVC INV OUT = 9.60 CONSTRUCT 129 LF x 24" PVC S=0.0008
4	PROPOSED 4' DIA. SEWER MANHOLE STA. 11+89.84, R 13.75' RIM = 22.41 (5) 24" PVC INV IN = 9.87 (12) 8" PVC INV IN = 11.10 (3) 24" PVC INV OUT = 9.77 CONSTRUCT 82 LF x 24" PVC S=0.0008
5	PROPOSED 4' DIA. SEWER MANHOLE STA. 10+67.47, R 4.59' RIM = 24.51 (6) 24" PVC INV IN = 10.06 (4) 24" PVC INV OUT = 9.96 CONSTRUCT 119 LF x 24" PVC S=0.0008
6	PROPOSED 4' DIA. SEWER MANHOLE STA. 7+67.66, R 5.51' RIM = 25.32 (7) 24" PVC INV IN = 10.40 (5) 24" PVC INV OUT = 10.30 CONSTRUCT 297 LF x 24" PVC S=0.0008
7	PROPOSED 4' DIA. SEWER MANHOLE STA. 5+48.63, R 15.25' RIM = 24.38 (10) 12" PVC INV IN = 11.57 (8) 24" PVC INV IN = 10.67 (6) 24" PVC INV OUT = 10.57 CONSTRUCT 216 LF x 24" PVC S=0.0008
8	PROPOSED 4' DIA. SEWER MANHOLE STA. 3+78.94, 0.00' RIM = 25.57 (9) 24" PVC INV IN = 11.00 (7) 24" PVC INV OUT = 10.90 CONSTRUCT 289 LF x 24" PVC S=0.0008
9	PROPOSED 4' DIA. SEWER MANHOLE STA. 0+50.41, 0.00' RIM = 25.61 (E1066) 24" PVC INV IN = 11.36 (8) 24" PVC INV OUT = 11.26 CONSTRUCT 325 LF x 24" PVC S=0.0008
10	PROPOSED 4' DIA. SEWER MANHOLE STA. 3+95.67, R 15.25' RIM = 23.36 (11) 12" PVC INV IN = 12.58 (7) 12" PVC INV OUT = 12.48 CONSTRUCT 150 LF x 12" PVC S=0.0061
11	PROPOSED 4' DIA. SEWER MANHOLE STA. 2+32.69, R 21.81' RIM = 24.21 (E1350) 12" PVC INV IN = 13.66 (10) 12" PVC INV OUT = 13.56 CONSTRUCT 161 LF x 12" PVC S=0.0061
12	PROPOSED 4' DIA. SEWER MANHOLE STA. 11+90.56, R 72.89' RIM = 23.20 (13) 8" PVC INV IN = 11.48 (4) 8" PVC INV OUT = 11.38 CONSTRUCT 56 LF x 8" PVC S=0.0050
13	PROPOSED 4' DIA. SEWER MANHOLE STA. 12+10.56, R 148.42' RIM = 20.94 (12) 8" PVC INV OUT = 11.84 CONSTRUCT 72 LF x 8" PVC S=0.0050

LIGHT TABLE ENTRIES FROM ROADWAY  
PLAN PROVIDED FOR REFERENCE ONLY

NO.	DATE	DESCRIPTION	DESIGNER REVIEWER
2	5/20/2019	TAC SUBMITTAL	JVA/DAD
1	3/18/2019	TAC SUBMITTAL	JVA/DAD



SCALE:	HORIZ:	VERT:
DATUM:	HORIZ:	VERT:
GRAPHIC SCALE		

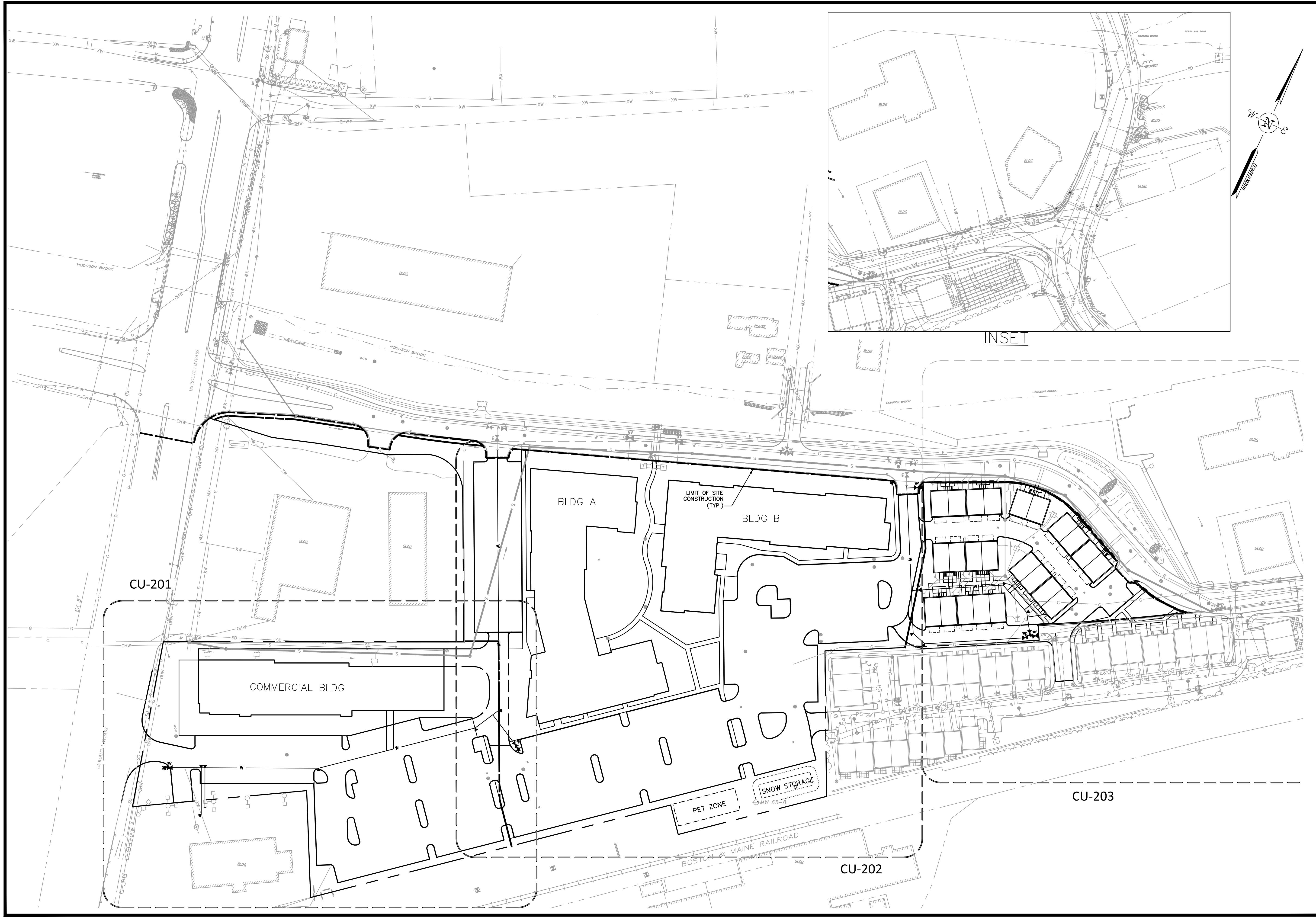
**FUSS & O'NEILL**  
UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
207.563.0609  
www.fandob.com

CATE STREET DEVELOPMENT, LLC  
SITE SEWER  
STRUCTURE TABLE  
CATE STREET/ WEST END YARDS  
PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
DATE: 05/20/2019

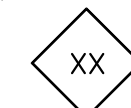
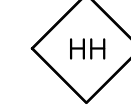



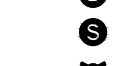



CU-001

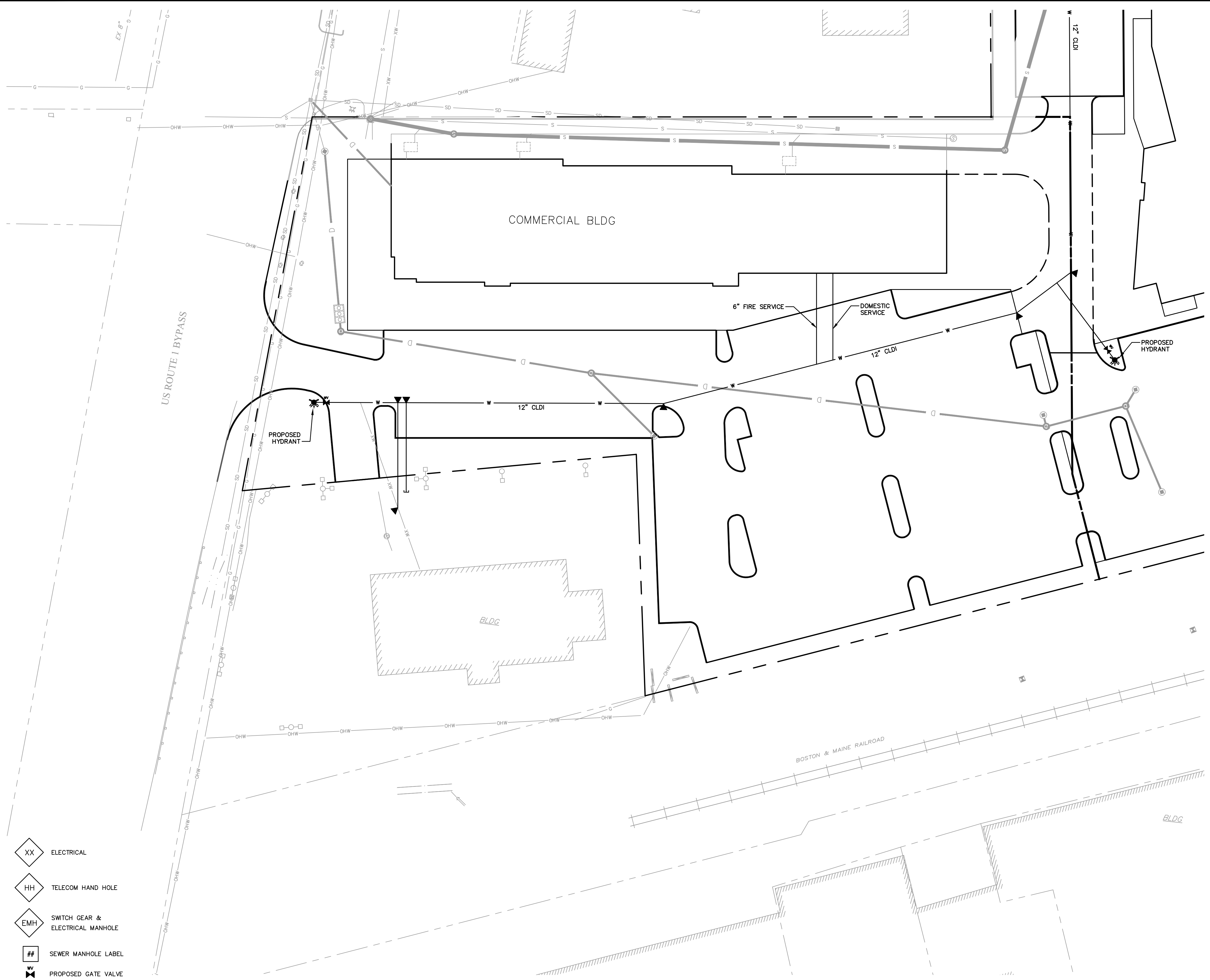




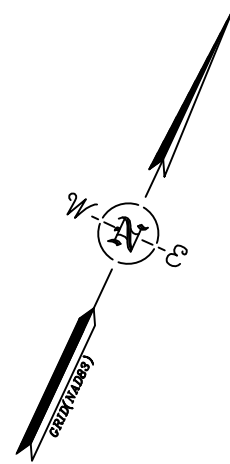
<p><b>FUSS &amp; O'NEILL</b>          UPPER SQUARE BUSINESS CENTER          5 FLETCHER STREET, SUITE 1          KENNEBUNK, MAINE 04043          www.fandoc.com</p>		<p>SCALE: HORZ.: 1"=60'          VERT.: 1"=60'          DATUM: NAD83          VERT.: NGVD29</p> <p>GRAPHIC SCALE</p>	<p>PROJ. No.: 20180317.A10          DATE: 05/20/2019</p>
<p>CATE STREET DEVELOPMENT, LLC  <b>OVERALL UTILITY PLAN</b>          CATE STREET/ WEST END YARDS          PORTSMOUTH NEW HAMPSHIRE</p>		<p>5/20/2019 TAC SUBMITTAL          3/18/2019 TAC SUBMITTAL</p>	<p>CU-200</p>
<p>STATE OF NEW HAMPSHIRE          RICHARD R. LUNDY          No. 10843          LICENSED PROFESSIONAL ENGINEER</p>		<p>1. JVA/DAD          2. JVA/DAD</p>	<p>DESIGNER REVIEWER</p>

LAYER STATE:

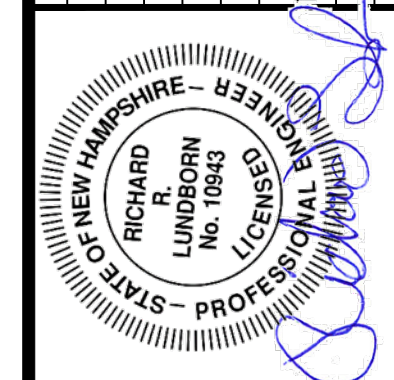
-  ELECTRICAL
-  TELECOM HAND HOLE
-  SWITCH GEAR & ELECTRICAL MANHOLE
-  SEWER MANHOLE LABEL
-  PROPOSED GATE VALVE
-  PROPOSED CATCH BASIN
-  PROPOSED DRAIN MANHOLE
-  PROPOSED SANITARY MANHOLE
-  PROPOSED HYDRANT



SEE SHEET CU-201



No.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAO
2	5/20/2019	TAC SUBMITTAL	JVA/DAO



SCALE:	HORIZ.: 1" = 30'
	VERT.: 1" = 30'
DATUM:	
	HORIZ.: NAD83
	VERT.: NGVD29
	30 15 0 30
	GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.0609  
 www.fandoo.com

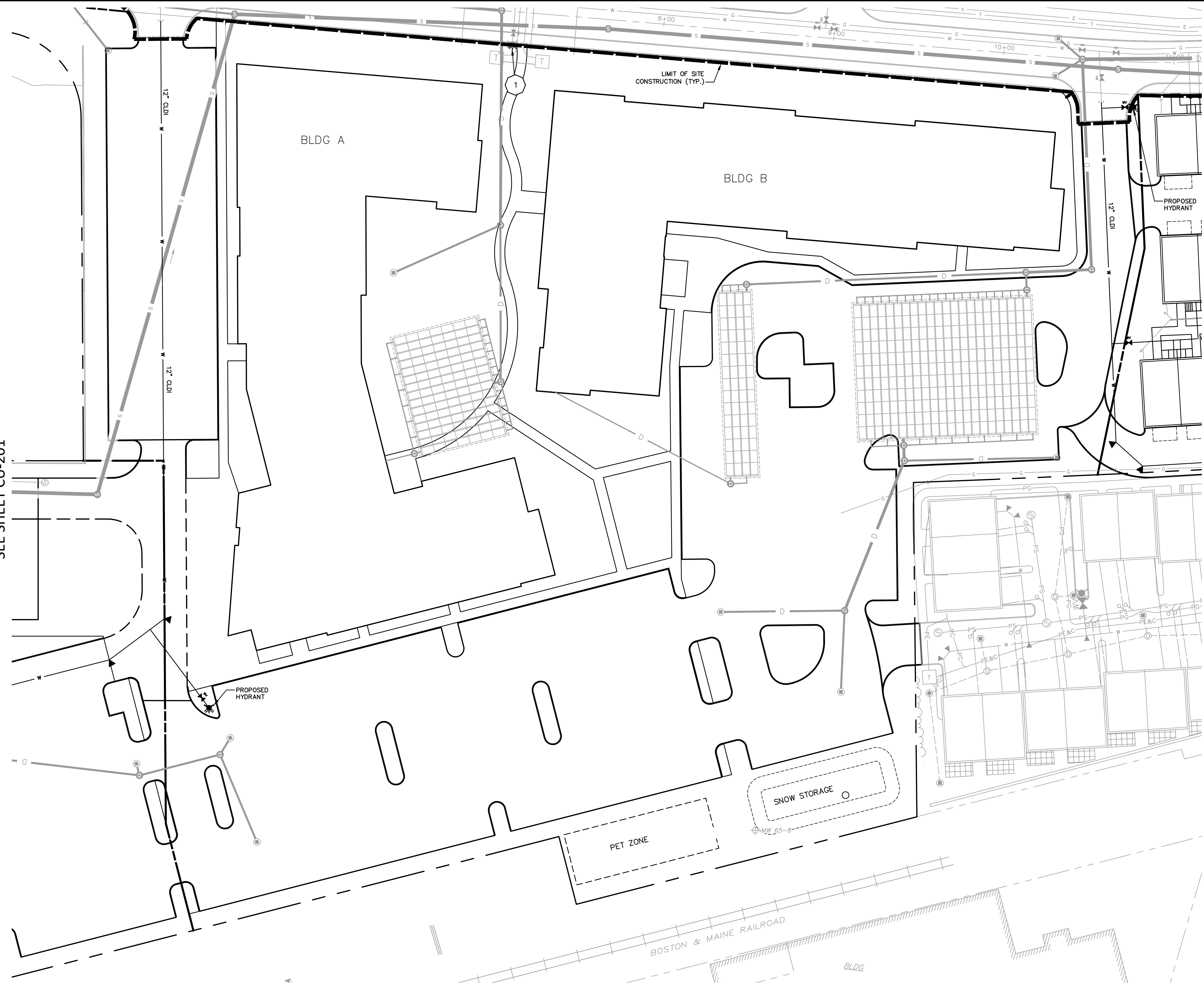
CATE STREET DEVELOPMENT, LLC  
 UTILITY PLAN  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CU-201**

- XX ELECTRICAL
- HH TELECOM HAND HOLE
- EMH SWITCH GEAR & ELECTRICAL MANHOLE
- # SEWER MANHOLE LABEL
- PROPOSED GATE VALVE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED HYDRANT

SEE SHEET CU-201



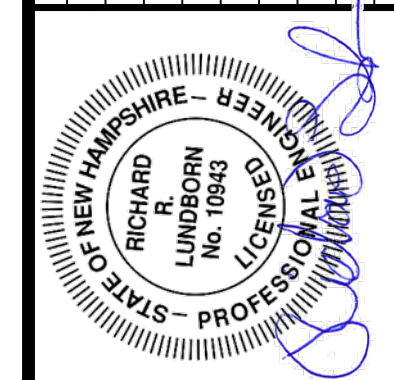
SEE SHEET CU-203

CU-202

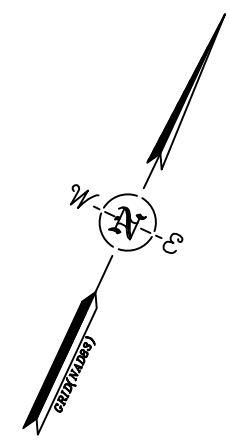
CATE STREET DEVELOPMENT, LLC  
 UTILITY PLAN  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandco.com

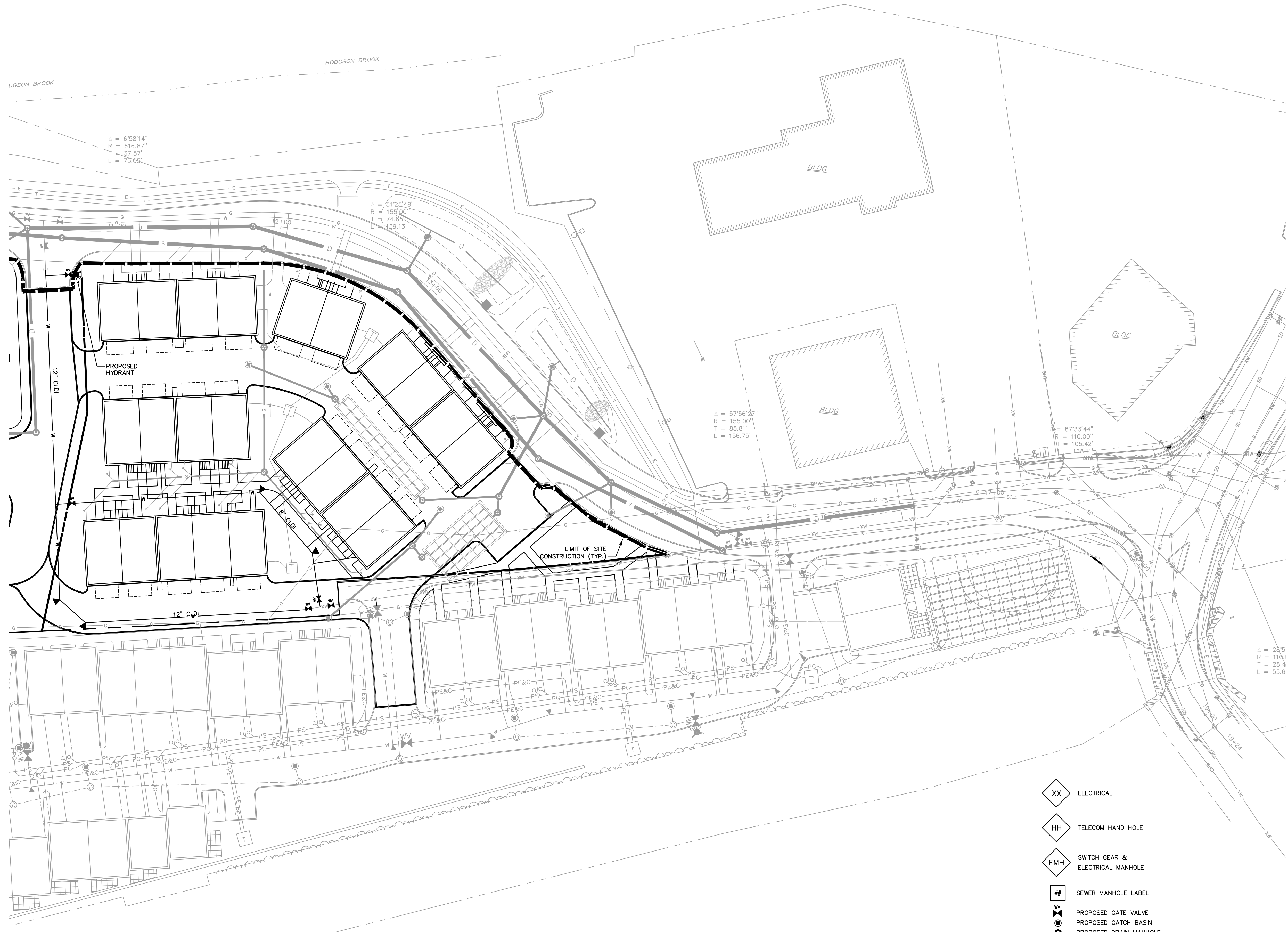
SCALE: HORZ.: 1"=30'  
 VERT.: 1"=30'  
 DATUM:  
 HORZ.: NAD83  
 VERT.: NGVD29  
 30 15 0 30  
 GRAPHIC SCALE



No.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	3/18/2019	TAC SUBMITTAL	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DAD



SEE SHEET CU-202



- XX ELECTRICAL
- HH TELECOM HAND HOLE
- EMH SWITCH GEAR & ELECTRICAL MANHOLE
- ## SEWER MANHOLE LABEL
- WV PROPOSED GATE VALVE
- CB PROPOSED CATCH BASIN
- DMH PROPOSED DRAIN MANHOLE
- SMH PROPOSED SANITARY MANHOLE
- HYDRANT PROPOSED HYDRANT

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL



SCALE: HORIZ.: 1"=30'  
 VERT.: 1"=30'

DATUM: HORIZ.: NAD83  
 VERT.: NGVD29

30 15 0 30  
 GRAPHIC SCALE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
 UTILITY PLAN  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CU-203**

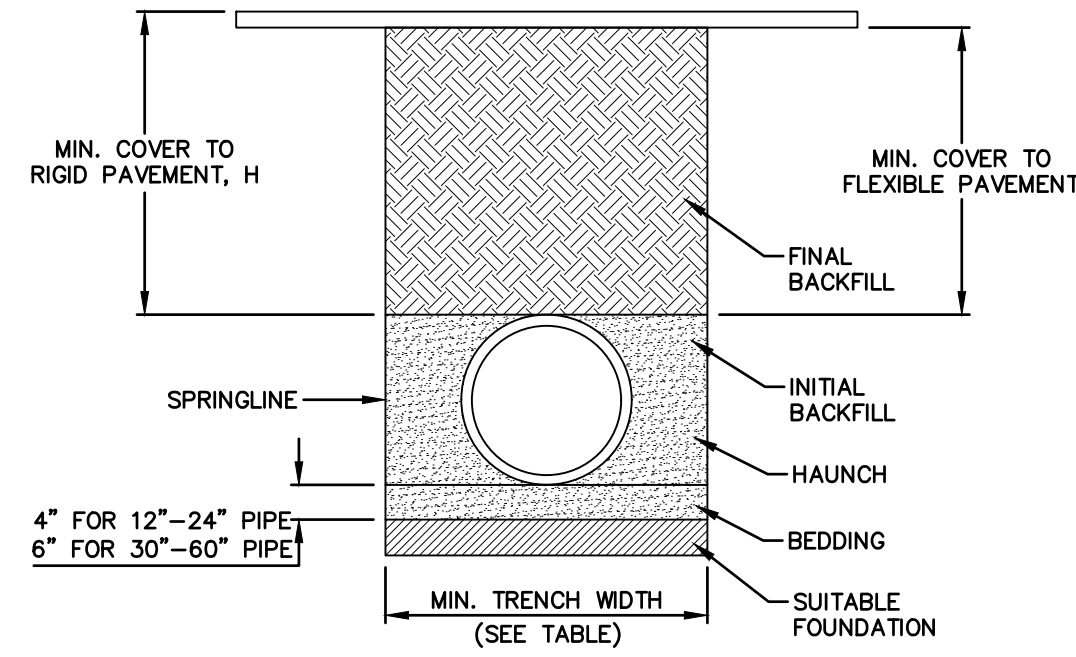


TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12"	30"
(300mm)	(762mm)
15"	34"
(375mm)	(864mm)
18"	39"
(450mm)	(991mm)
24"	48"
(600mm)	(1219mm)
30"	56"
(750mm)	(1422mm)
36"	64"
(900mm)	(1626mm)
42"	72"
(1050mm)	(1829mm)
48"	80"
(1200mm)	(2032mm)
60"	96"
(1500mm)	(2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOAD CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD)*
12"-48" (300mm-1200mm)	12" (305mm)	12" (305mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

\*VEHICLE IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, FT.

PIPE DIA.	CLASS I				CLASS II				CLASS III				CLASS IV			
	95%	90%	85%	95%	90%	85%	95%	90%	85%	95%	90%	85%	95%	90%	85%	
12"	41"	29"	21"	16"	20"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	
(305mm)	(12.5m)	(8.5m)	(6.4m)	(4.9m)	(6.4m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	
15"	42"	29"	21"	16"	20"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	
(375mm)	(12.8m)	(8.8m)	(6.4m)	(4.9m)	(6.4m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	
18"	42"	29"	21"	16"	20"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	
(450mm)	(12.8m)	(8.8m)	(6.4m)	(4.9m)	(6.4m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	
24"	44"	30"	24"	16"	22"	17"	16"	16"	16"	16"	16"	16"	16"	16"	16"	
(600mm)	(13.4m)	(9.1m)	(6.4m)	(4.9m)	(6.7m)	(5.2m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	
30"	44"	30"	24"	16"	22"	17"	16"	16"	16"	16"	16"	16"	16"	16"	16"	
(750mm)	(13.4m)	(9.1m)	(6.4m)	(4.9m)	(6.7m)	(5.2m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	(4.9m)	
36"	37"	26"	18"	14"	19"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	
(900mm)	(11.3m)	(7.9m)	(5.5m)	(4.3m)	(5.8m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	
42"	39"	27"	19"	14"	19"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	
(1050mm)	(11.9m)	(8.2m)	(5.8m)	(4.3m)	(5.8m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	(4.3m)	
48"	29"	20"	14"	9"	14"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	
(1200mm)	(8.5m)	(6.1m)	(4.3m)	(2.7m)	(4.3m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	
60"	28"	20"	14"	9"	14"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	
(1500mm)	(8.5m)	(6.1m)	(4.3m)	(2.7m)	(4.3m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	(3.0m)	

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:  
NO HYDROSTATIC PRESSURE  
UNIT WEIGHT OF SOIL (γs) - PCF

NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D3221, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS I/IV MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND PLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED.
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D3221, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICATION FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS: CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS: MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
- FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

HP STORM TRENCH INSTALLATION DETAIL  
NOT TO SCALE

- ALL SECTIONS SHALL BE CONCRETE, CLASS AA (4,000 PSI)
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
- THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.
- RISERS OF 1'-4" MAY BE USED TO REACH THE DESIRED ELEVATION.
- THE STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
- ADJUSTING THE FRAME TO GRADE MAY BE DONE WITH PRECAST CONCRETE GRADE RINGS OR CLAY BRICKS (2 COURSES MAX.). FRAME TO BE SET IN A FULL BED OF MORTAR.
- SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
- PIPE ELEVATIONS SHOWN ON THE PLAN SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- PIPE ENDS SHALL PROJECT NO MORE THAN 3-INCHES BEYOND THE INSIDE WALL OF THE STRUCTURE.
- PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4-INCHES HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING ONE STRIP OF BUTYL RUBBER SEALANT OR APPROVED FLEXIBLE SEALANT.
- STEPS ARE NOT ALLOWED.

CATCH BASIN SPECIFIC NOTES:

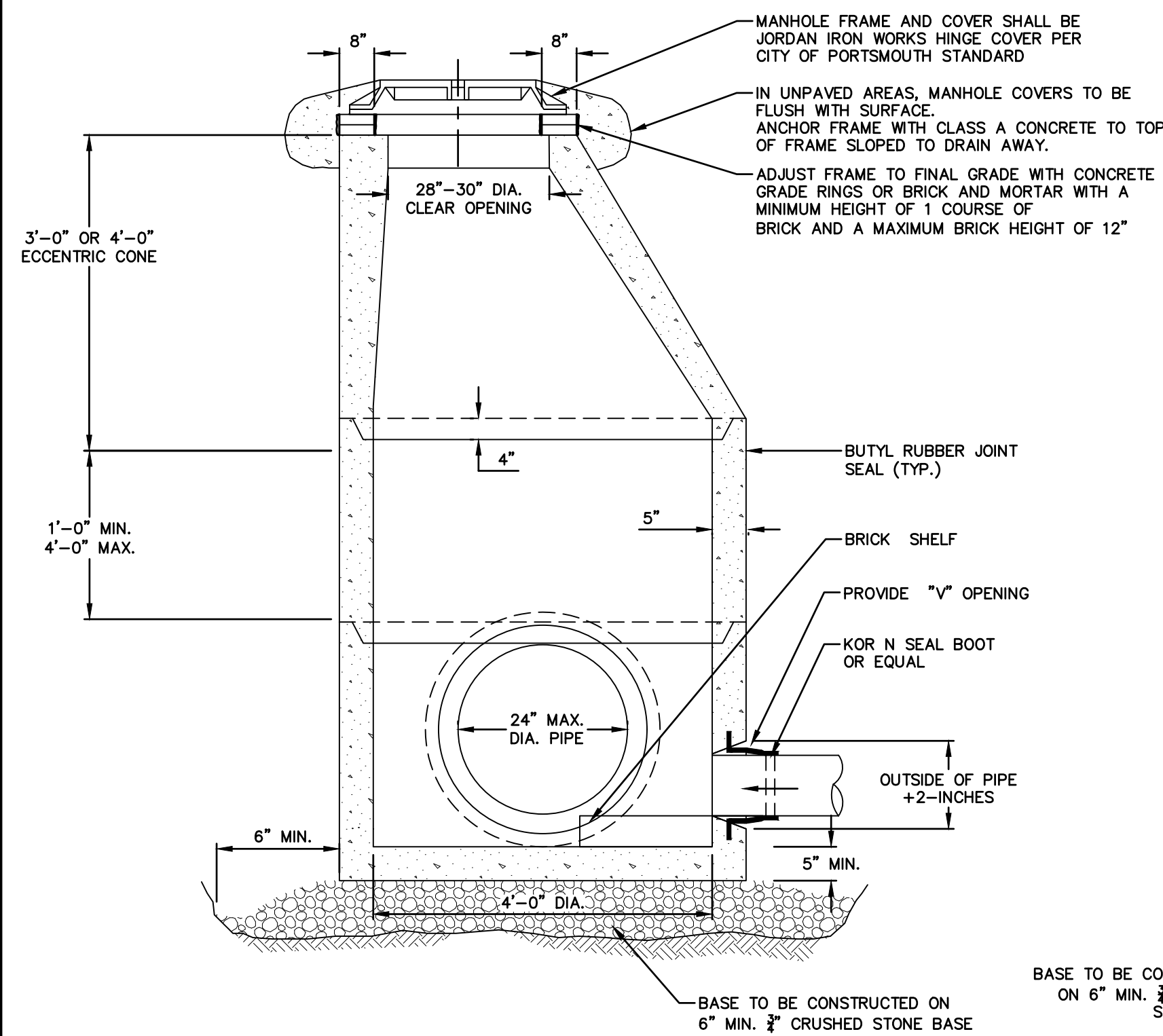
- CONE SECTIONS MAY BE CONCENTRIC OR ECCENTRIC FOR CATCH BASINS.
- "ELIMINATOR" OIL/WATER SEPARATORS SHALL BE INSTALLED TIGHT TO THE INSIDE OF THE CATCH BASINS ON THE OUTLET PIPE.

DRAIN MANHOLE SPECIFIC NOTES:

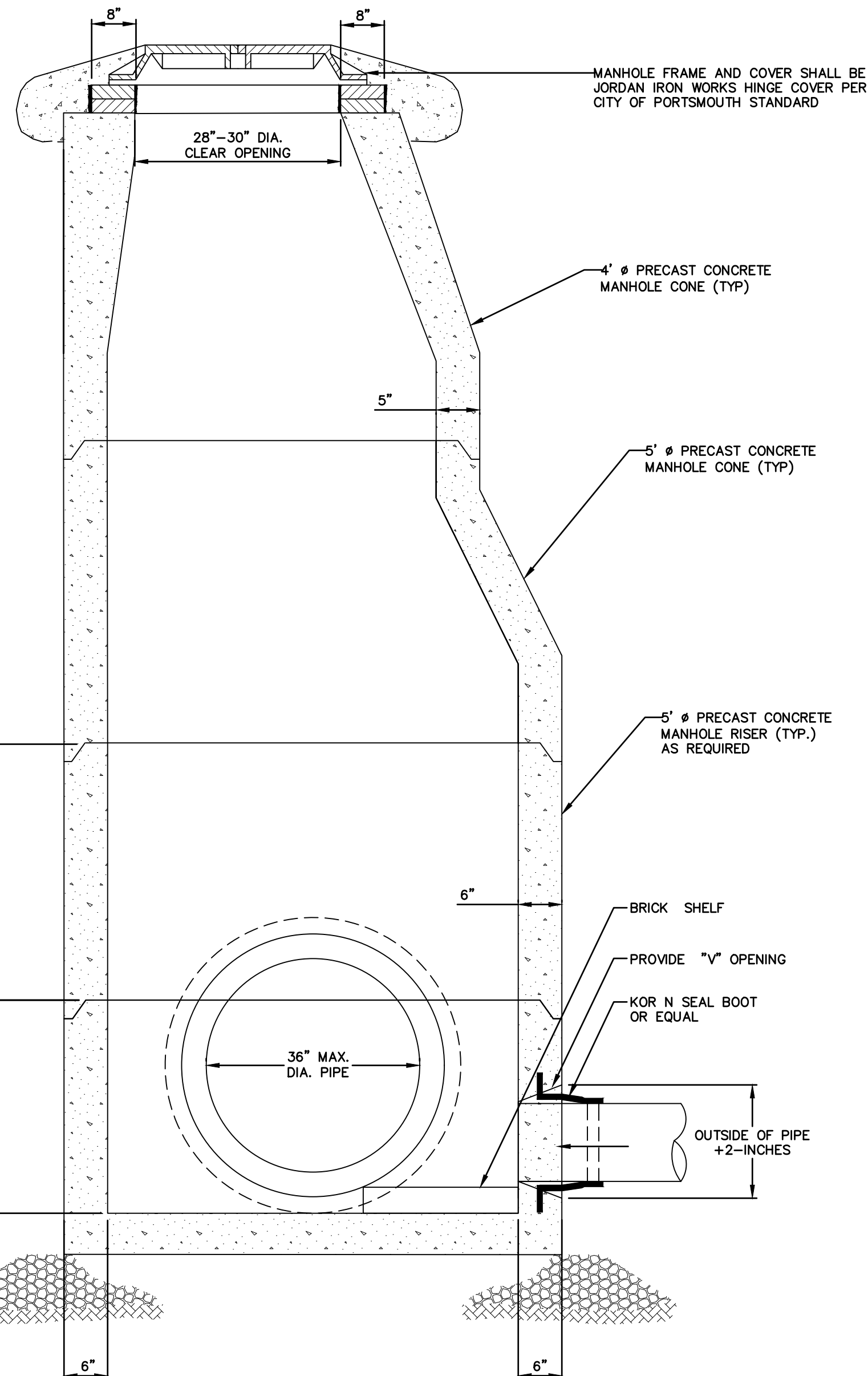
- ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12-INCHES OF INSIDE SURFACE BETWEEN THE HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3-INCHES TO ANY JOINT.

PRECAST DRAINAGE STRUCTURE NOTES

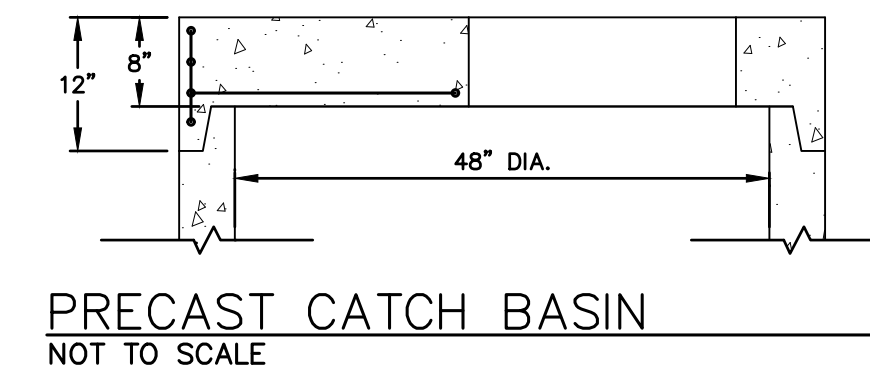
NOT TO SCALE



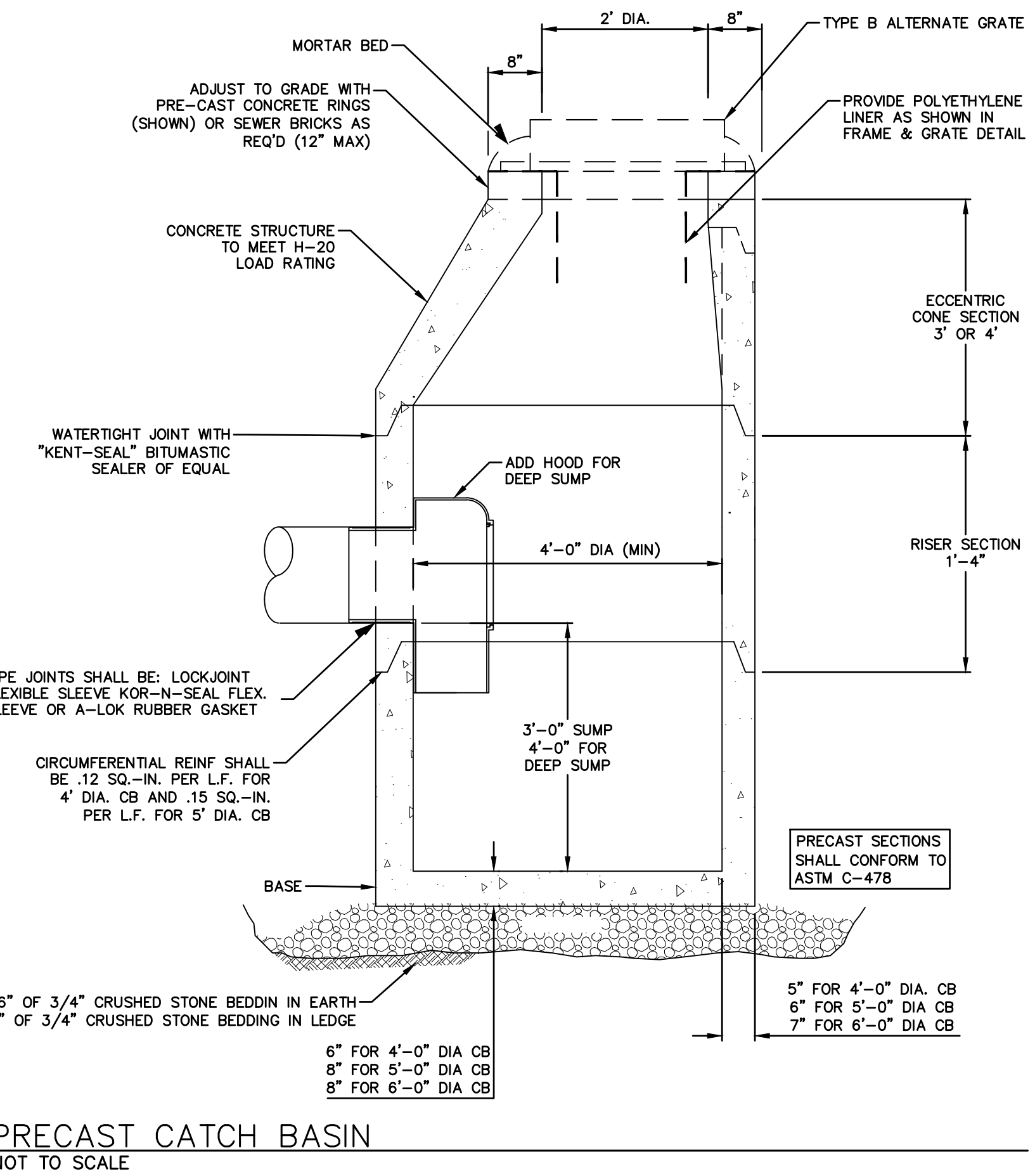
4' PRECAST DRAIN MANHOLE  
SCALE: N.T.S.



5' PRECAST DRAIN MANHOLE  
SCALE: N.T.S.



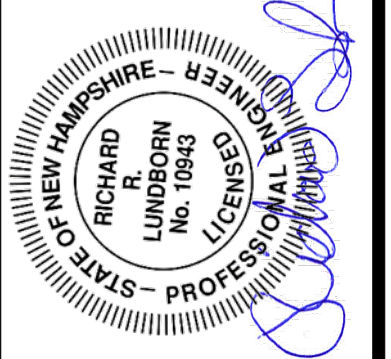
PRECAST CATCH BASIN  
NOT TO SCALE



PRECAST CATCH BASIN  
NOT TO SCALE

File Path: F:\20180317A10\CD-510-DRAINAGE\Layout: CD-510-DRAINAGE\_Plot: Mon, May 20, 2019 - 3:00 PM User: ddugal  
MS View: [LAYER STATE: Plotted: DWG TO PDF P3 CTB File: FO.STB]

No.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAD
2	3/18/2019	TAC SUBMITTAL	JVA/DAD

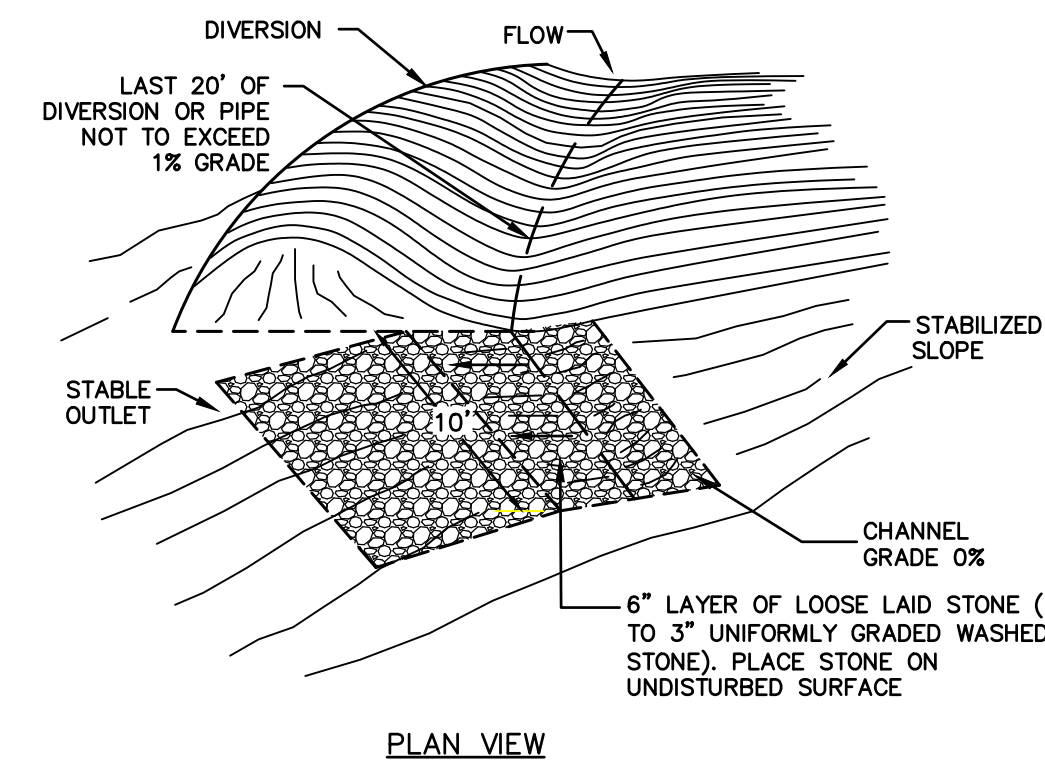


SCALE:	HORIZ: NTS	VERT: NTS
DATUM:	HORIZ: NTS	VERT: NTS
GRAPHIC SCALE	0	

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

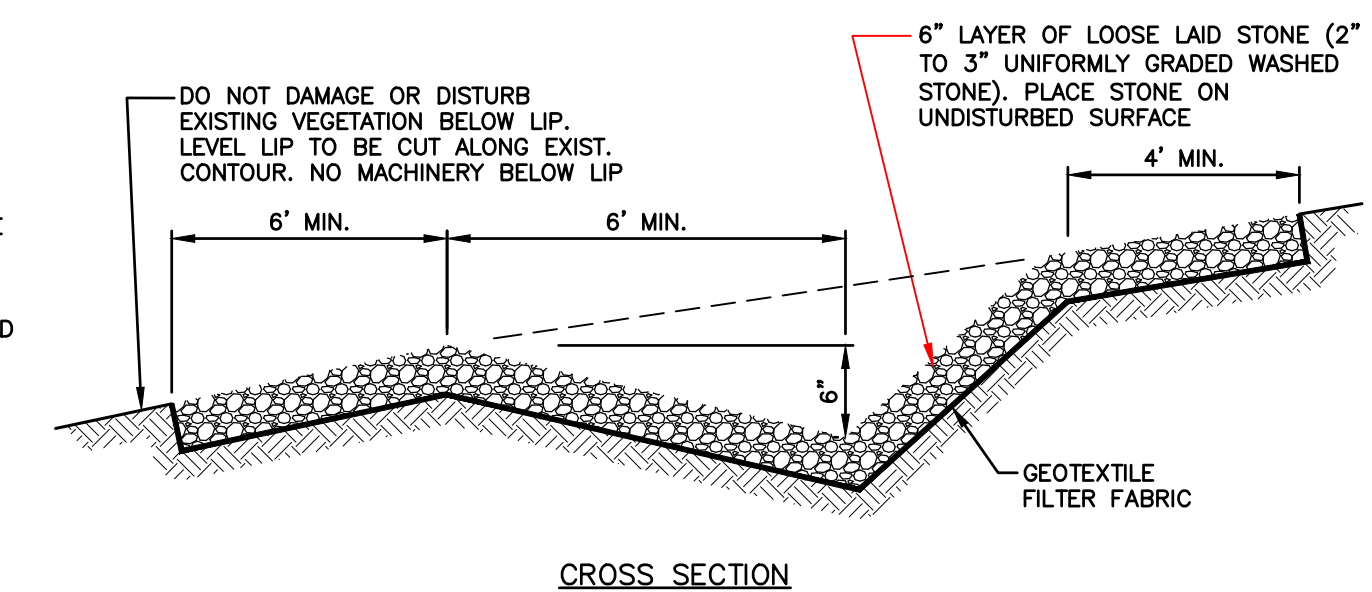
CATE STREET DEVELOPMENT, LLC  
**DRAINAGE DETAILS**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CD-510**

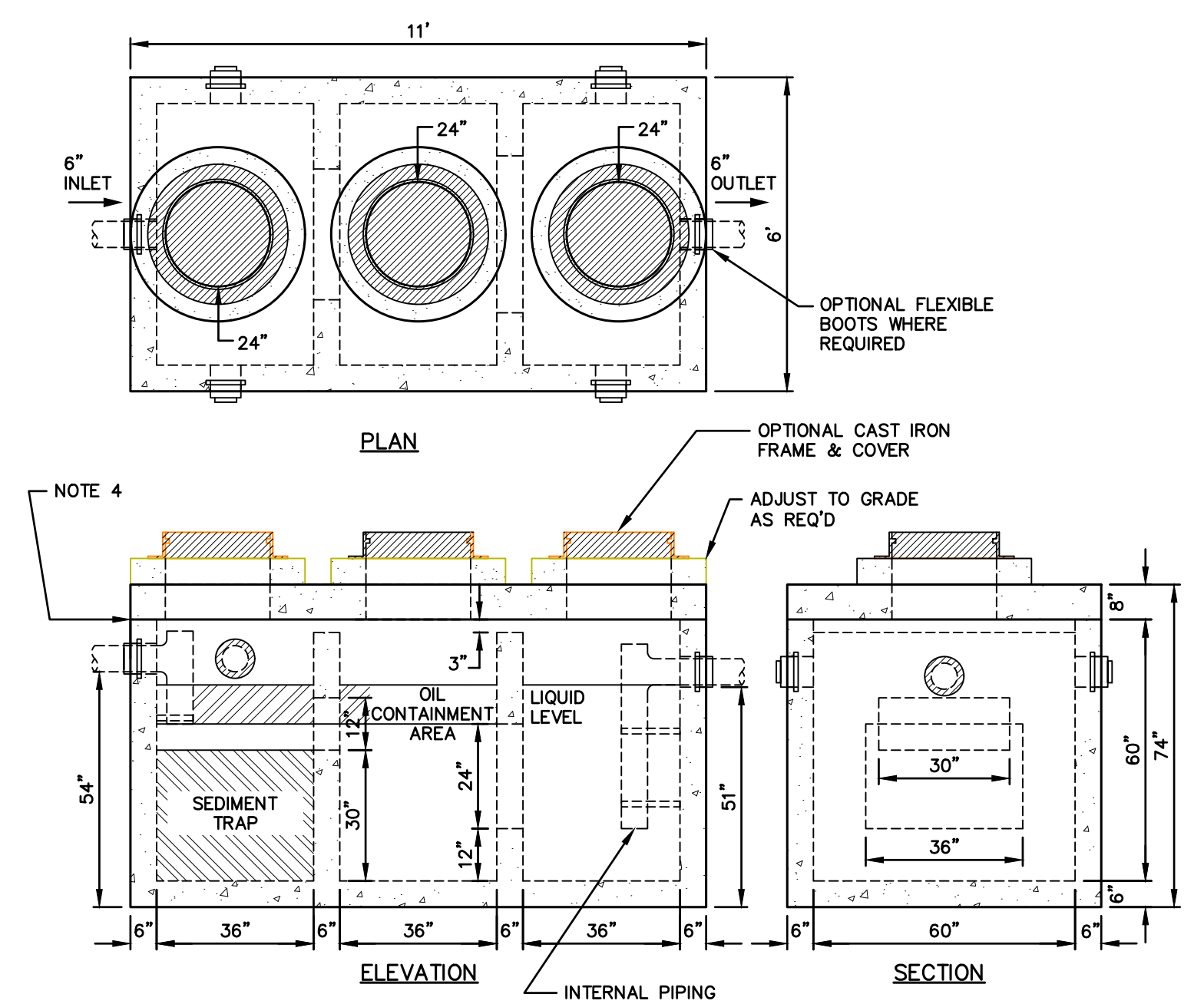


- CONSTRUCTION SPECIFICATIONS**
1. SPREADERS SHALL BE INSTALLED WITH LEVEL INSTRUMENT, CONSTRUCT LEVEL UP TO 0% GRADE TO ENSURE UNIFORM SHEET FLOW. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT FILL).
  2. SELECT GEOTEXTILE FABRIC BASED ON UNDISTURBED SOILS (SAND, SILTS, CLAY, ETC.)
  3. PLACE 6" LAYER OF UNIFORMLY GRADED STONE 2" TO 3" IN DIAMETER, TAKE TO FORM SMOOTH UNIFORM SURFACE. DO NOT FILL VOIDS IN STONE.
  4. THE INLET DITCH SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING THE SPREADER.
  5. STORM RUN-OFF CONVERTED TO SHEET FLOW ACROSS OUTLET APRON SHALL FLOW ONTO STABILIZED AREA. RUN-OFF SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
  6. CONSTRUCTION OF LEVEL LIP SPREADER SHALL BE UPHILL SIDE ONLY. LEVEL LIP AND AREA BELOW SPREADER SHALL BE AT EXISTING GRADE AND UNDISTURBED BY EARTHWORK OR EQUIPMENT.
  7. CONSTRUCT SPREADER WITH LIP AT EXISTING ELEVATION AS SPECIFIED.
  8. DOWN GRADIENT RECEIVING AREA MUST BE NATURALLY WELL VEGETATED.

- MAINTENANCE NOTES:**
1. THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND TO DETERMINE THAT THE DESIGN CONDITIONS HAVE NOT CHANGED.
  2. ANY DETRIMENTAL ACCUMULATION OF SEDIMENTS SHOULD BE REMOVED.
  3. IF RILLING HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED AND RE-VEGETATED.
  4. THE VEGETATION SHOULD BE MOWED OCCASIONALLY TO CONTROL WEEDS AND THE ENCROACHMENT OF WOODY VEGETATION. CLIPPINGS SHOULD BE REMOVED AND DISPOSED OF OUTSIDE THE SPREADER AND AWAY FROM THE OUTLET AREA.



**STONE LINED LEVEL SPREADER**  
 NOT TO SCALE



- GENERAL NOTES**
1. CONCRETE: FC = 5,000 PSI @ 28 DAYS MINIMUM TYPE III CEMENT
  2. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATIONS: ASTM-A615 GRADE 60 BLACK DEFORMED BARS
  3. DESIGN LOADING: AASHTO-HS20-44 DESIGN SPECIFIED AS ACI 318-08, AASHTO-1992
  4. BUTYL RUBBER JOINT SEALANT PROVIDED
  5. FLEXIBLE SLEEVES PROVIDED ALL PIPE CONNECTIONS
  6. PIPE SIZES AND COMPARTMENT CONFIGURATIONS PER JOB SPECIFICATIONS

**EST WEIGHTS:**  
 TOP SLAB - 6,500 LBS  
 BASE - 20,500 LBS  
 TOTAL - 27,000 LBS

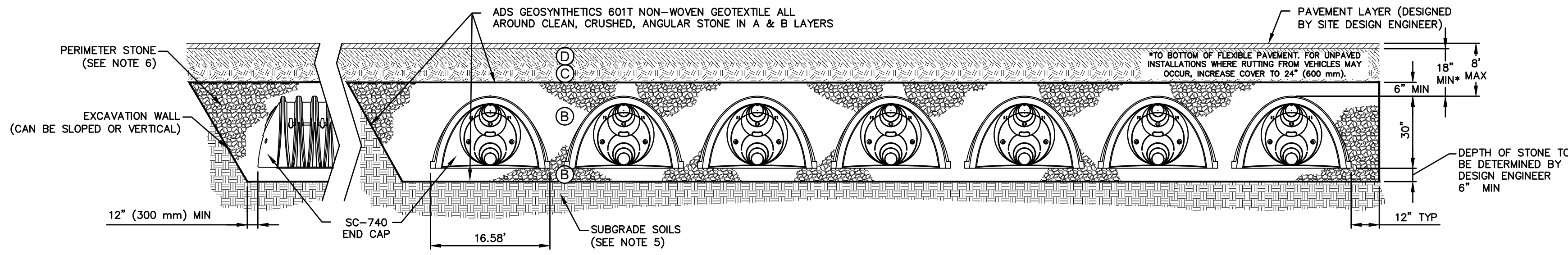
**1,500 GALLON 3-COMPARTMENT HS-20 OIL & SEDIMENT SEPARATOR (PHOENIX PRECAST PRODUCTS)**  
 NOT TO SCALE

SCALE: HORZ.: NTS VERT.: DATUM: HORZ.: VERT.: GRAPHIC SCALE	
<b>FUSS &amp; O'NEILL</b> UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 207.563.6669 www.fandoo.com	
CATE STREET DEVELOPMENT, LLC <b>DRAINAGE DETAILS</b> CATE STREET/ WEST END YARDS PORTSMOUTH NEW HAMPSHIRE	
PROJ. No.: 20180317.A10 DATE: 05/20/2019	
<b>CD-511</b>	

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2.4, A-3  OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>1</sup>

**PLEASE NOTE:**

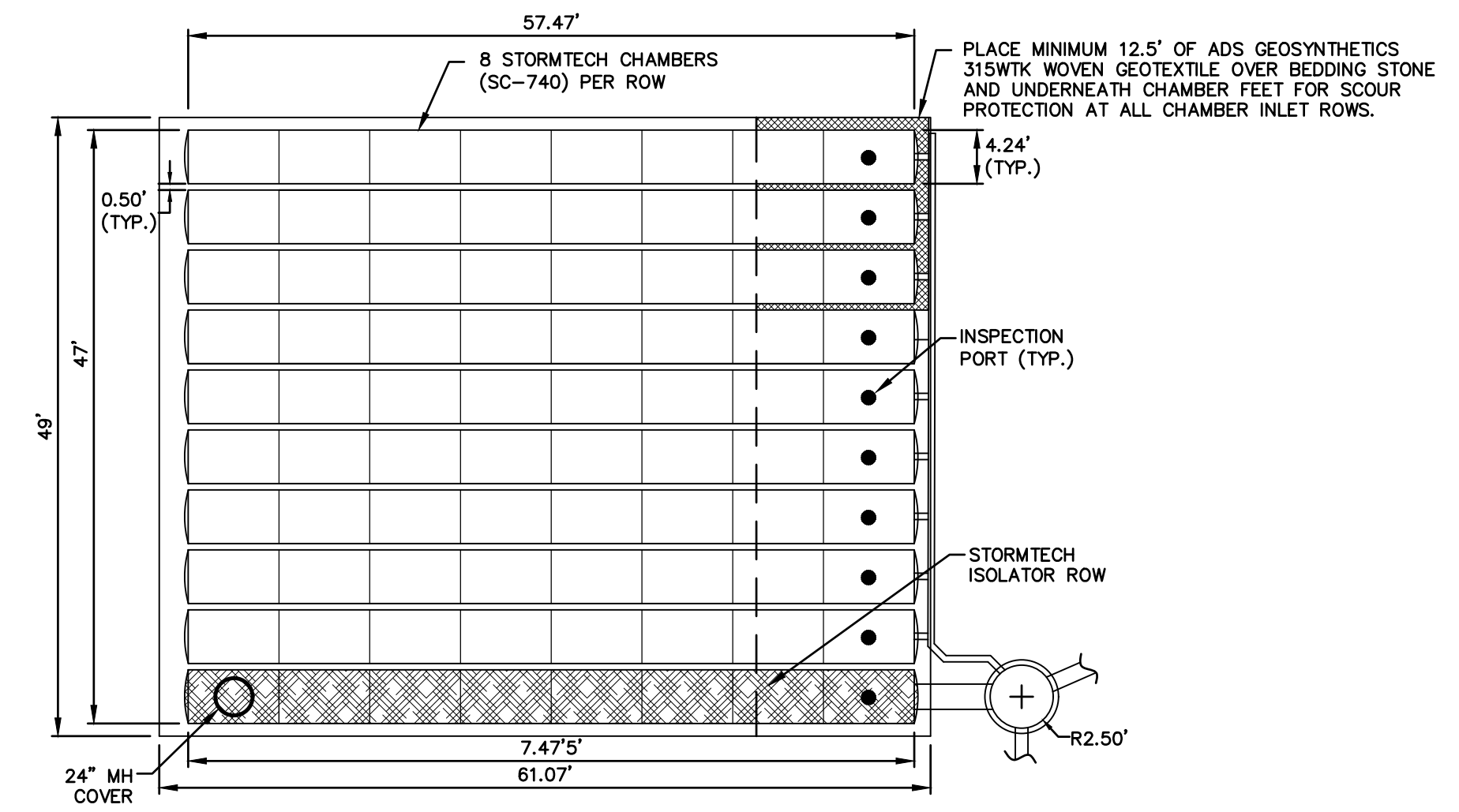
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



SC-740 SECTION VIEW

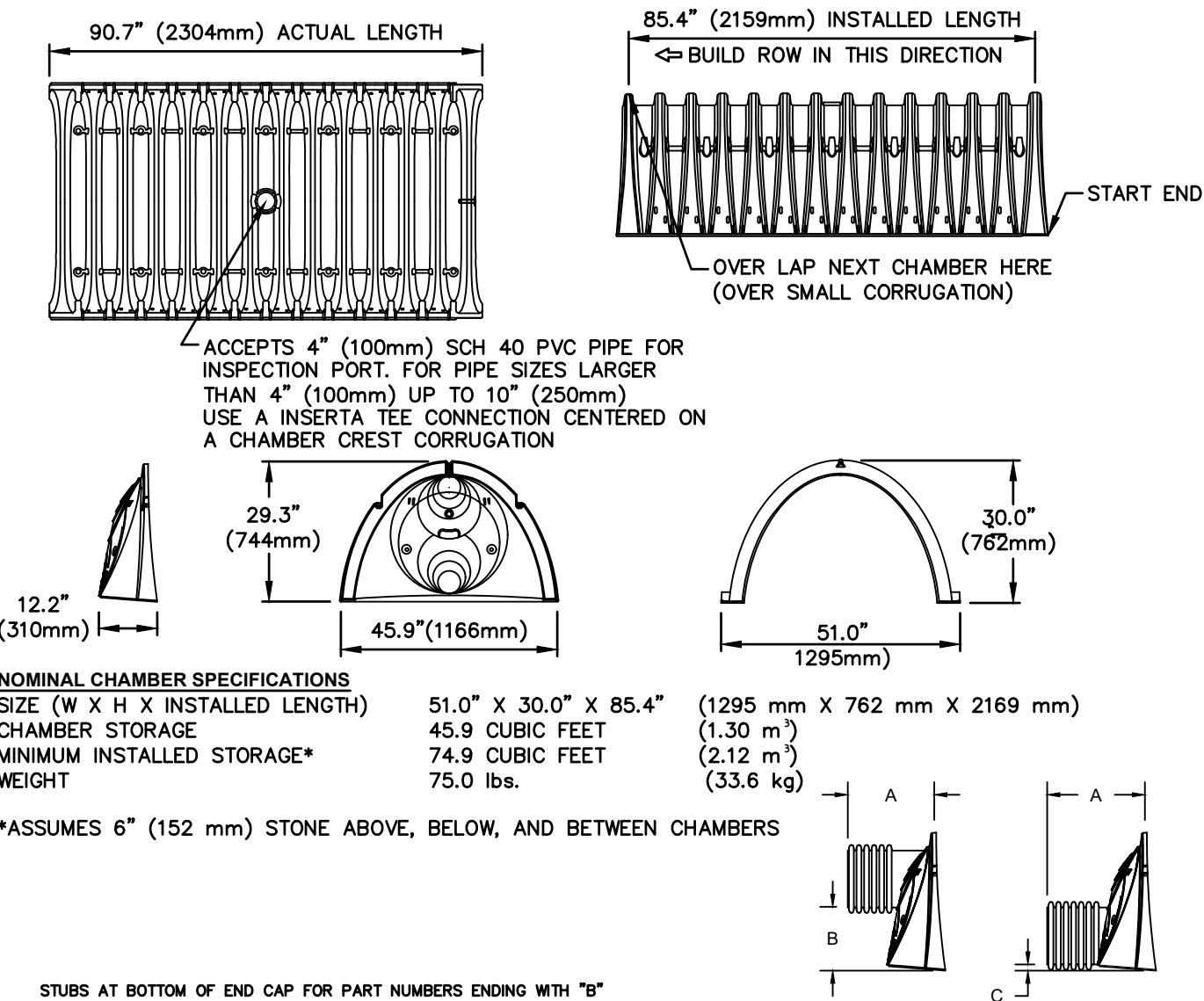
**NOTES:**

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



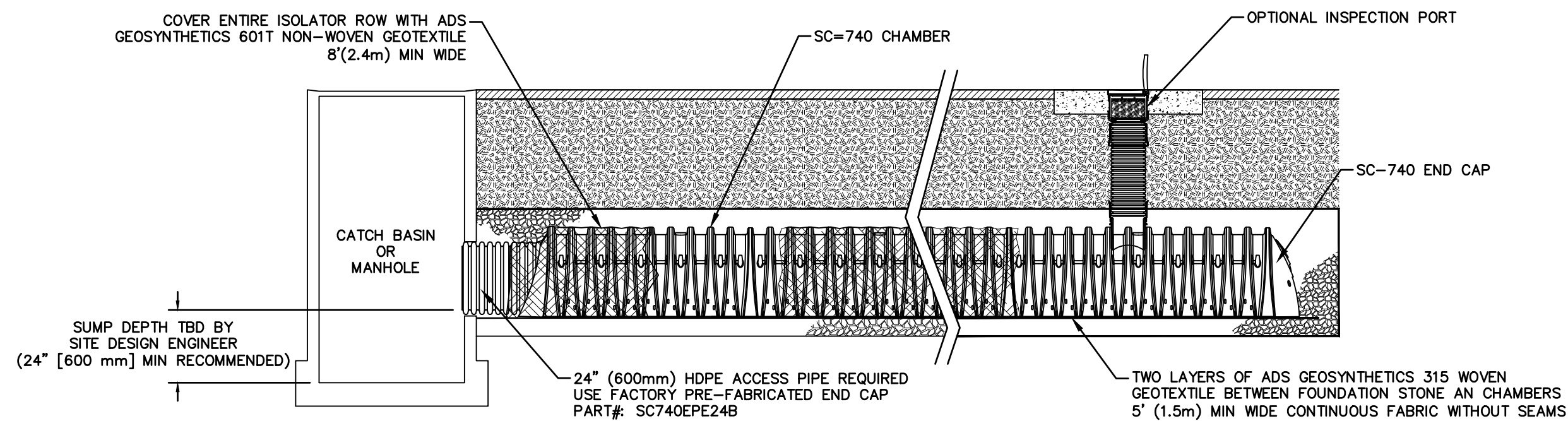
SC-740 PLAN VIEW

SC-740 TECHNICAL SPECIFICATION



PART #	STUB	A	B	C
SC740EPE08T / SC740EPE08TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE08B / SC740EPE08BPC	---	---	---	0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC	---	---	---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC	---	---	---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC	---	---	---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC	---	---	---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC	---	---	---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.  
\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE H-12 STUB SO THAT THE FITTING SITS LEVEL.  
NOTE: ALL DIMENSIONS ARE NOMINAL.



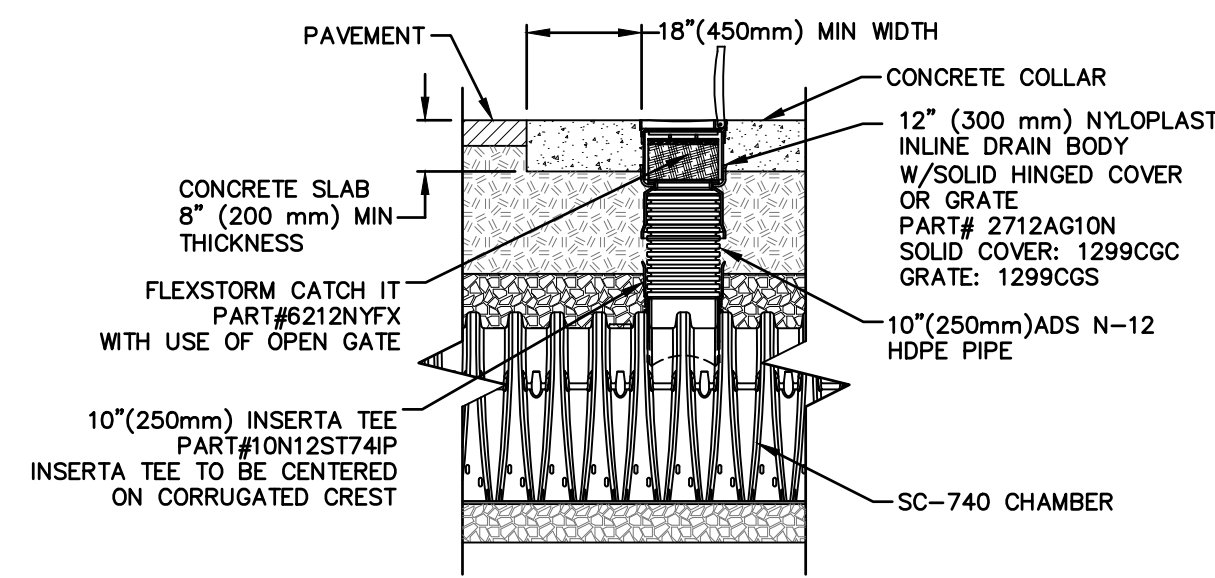
SC-740 ISOLATOR ROW DETAIL

**INSPECTION & MAINTENANCE**

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

**NOTES**

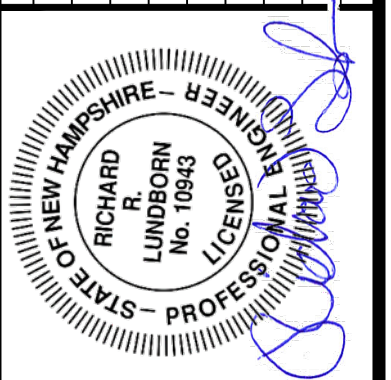
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



SC-740 INSPECTION PORT DETAIL

File Path: F:\P20180317A10\CH\3\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-512-DRAINAGE\_Plotter: Mon, May 20, 2019 - 3:00 PM User: ddigital  
 MS VIEW: [LAYER STATE: PLOTTER: DWG TO PDF.PC3 CTB File: FO.STB]

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DA0	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DA0	RRL

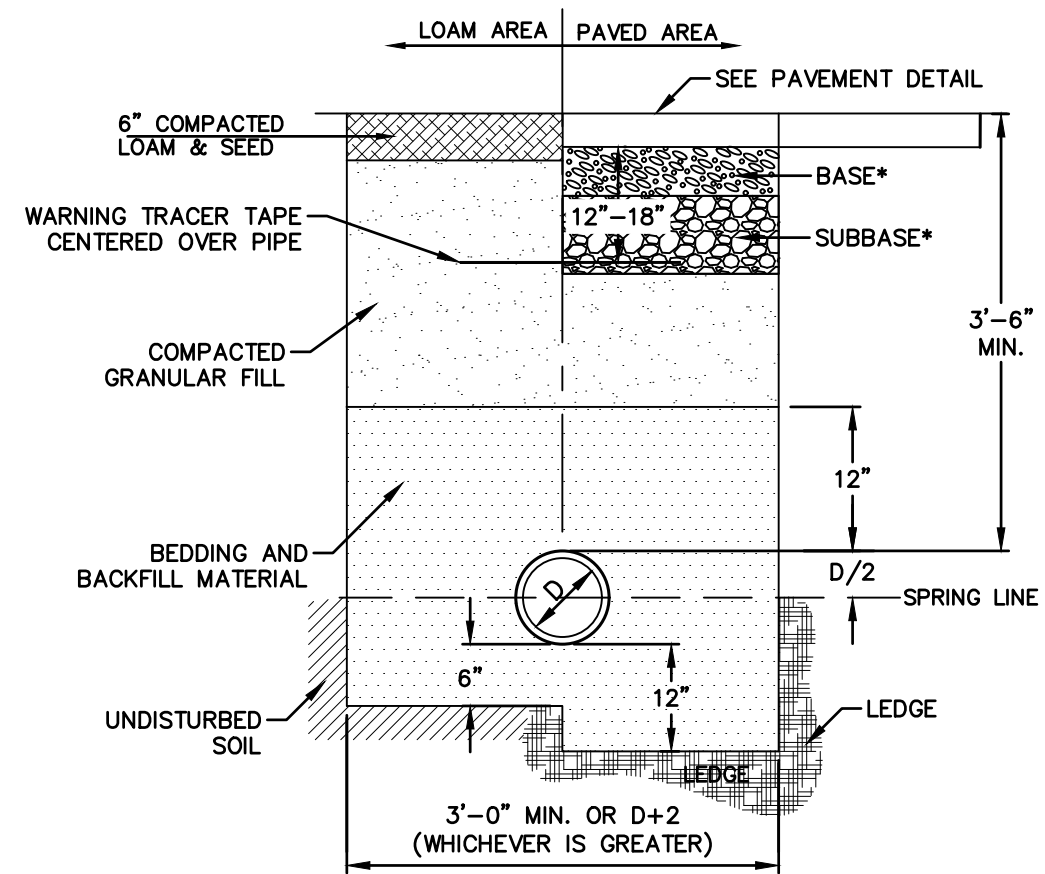


SCALE:	HORIZ.: NTS	VERT.: NTS
DATUM:	HORIZ.: NTS	VERT.: NTS
GRAPHIC SCALE	0	

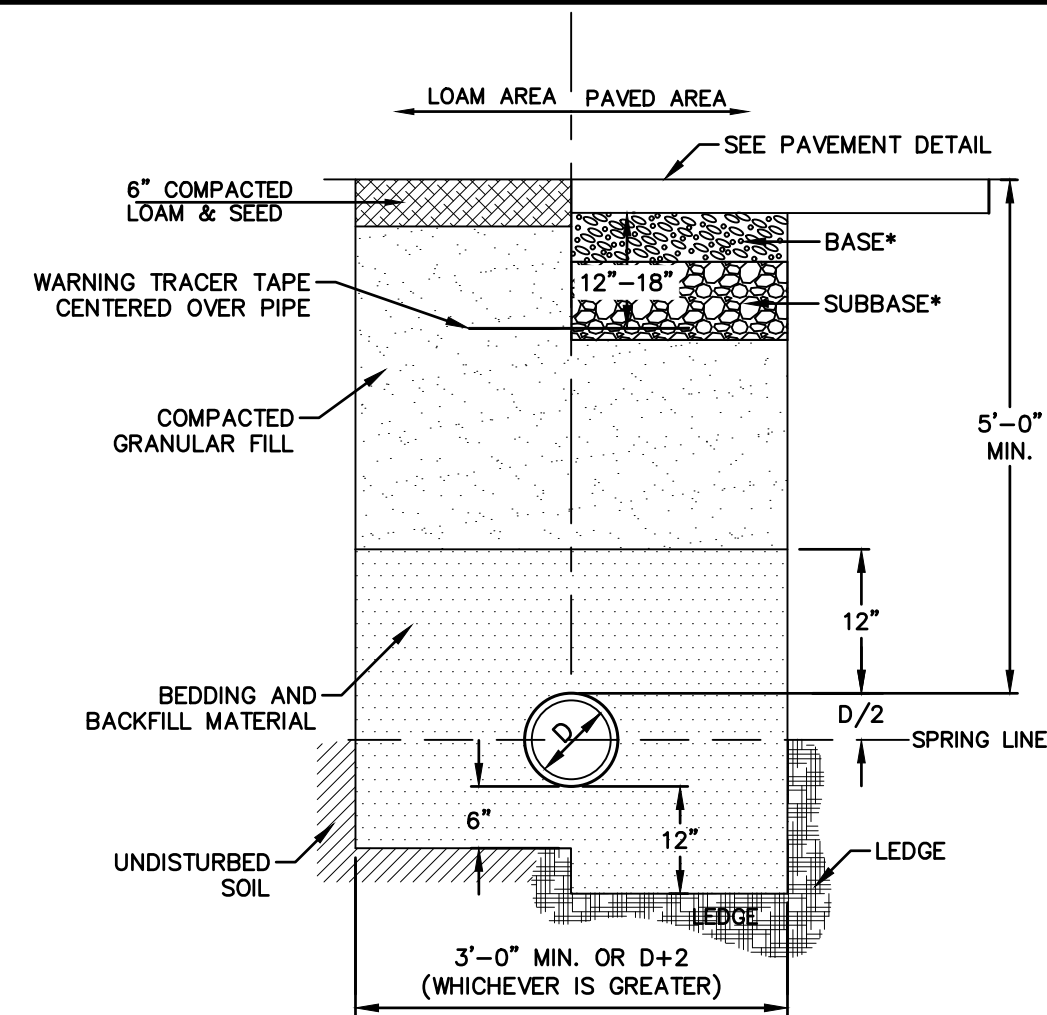
**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoc.com

CATE STREET DEVELOPMENT, LLC  
**DRAINAGE DETAILS**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

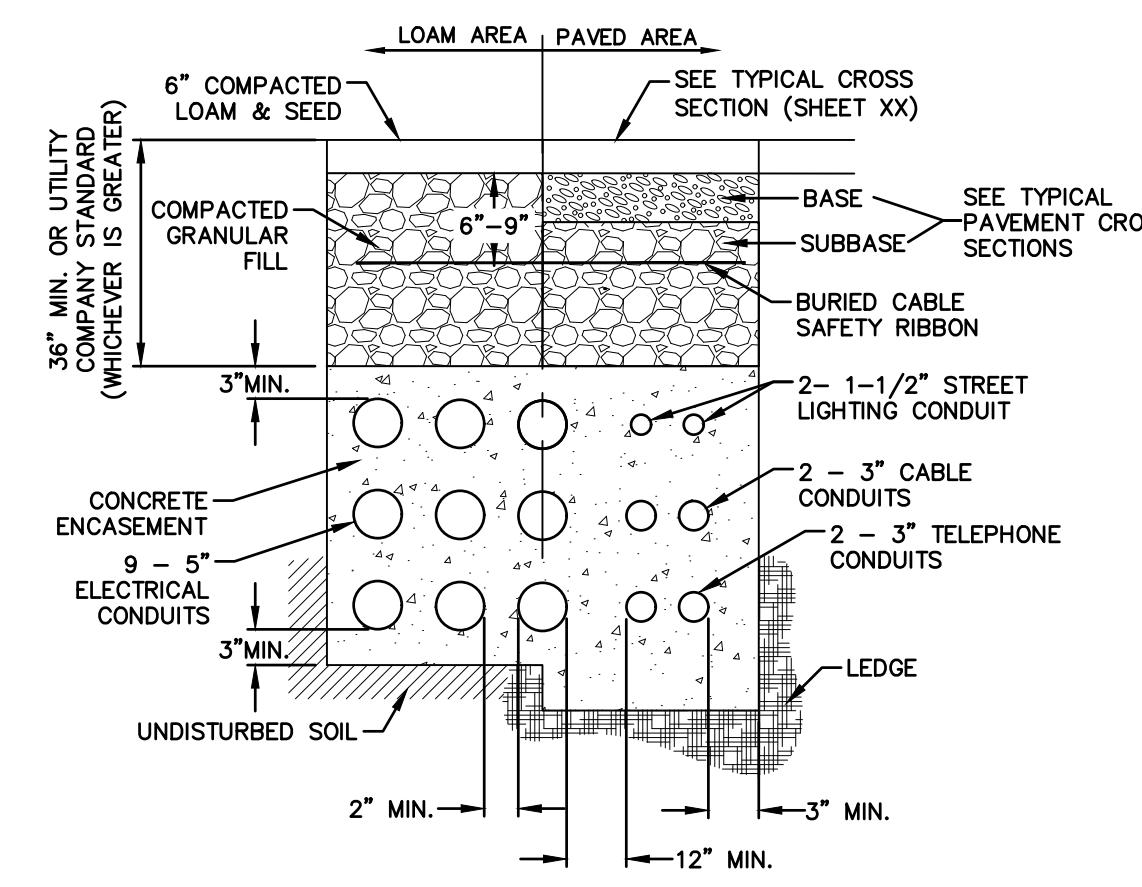
PROJ. No.: 20180317.A10  
 DATE: 05/20/2019  
**CD-512**



**GAS TRENCH**  
NOT TO SCALE

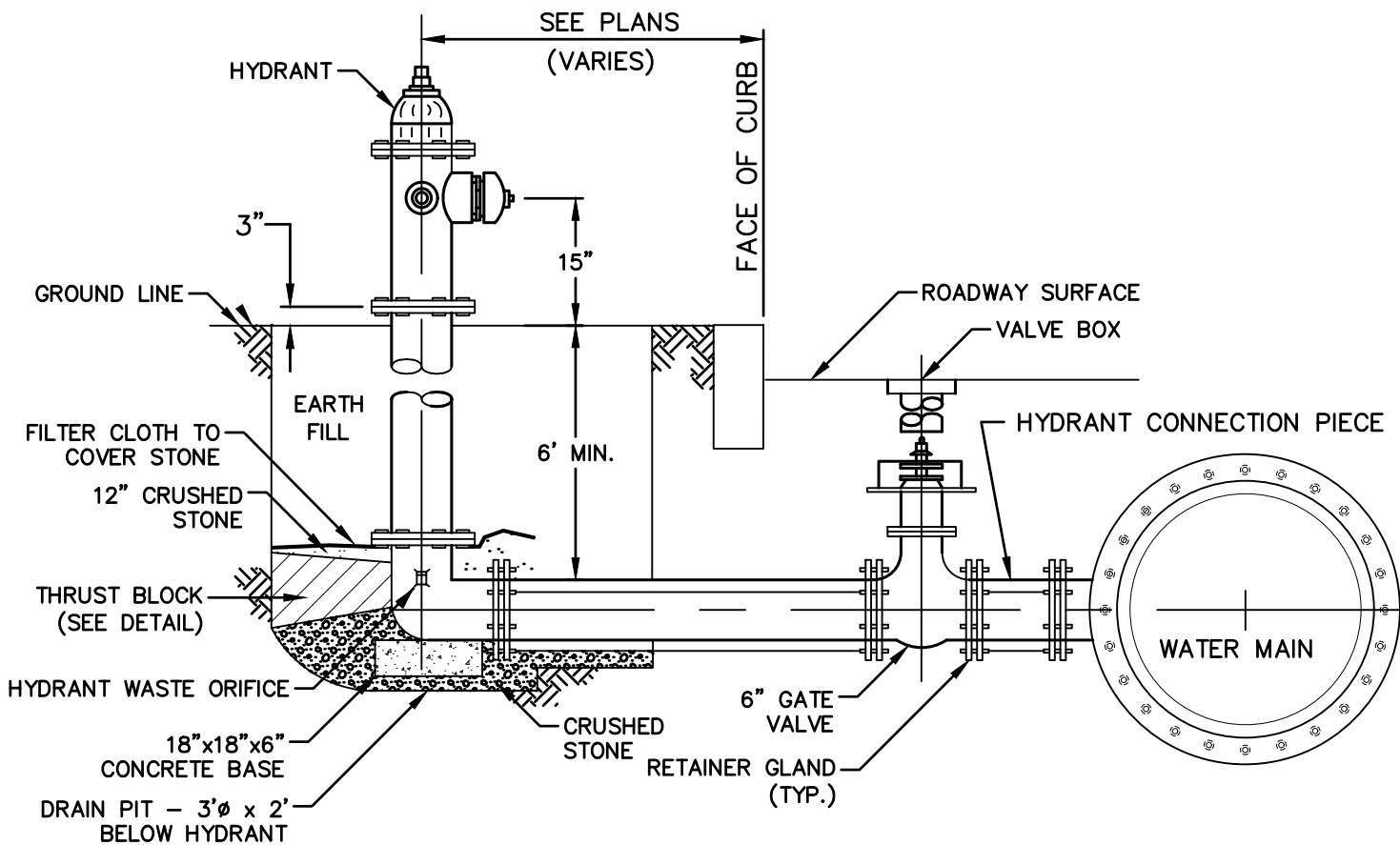


**WATER TRENCH SECTION**  
NOT TO SCALE



**ELECTRICAL AND COMMUNICATION CONDUIT**  
NOT TO SCALE

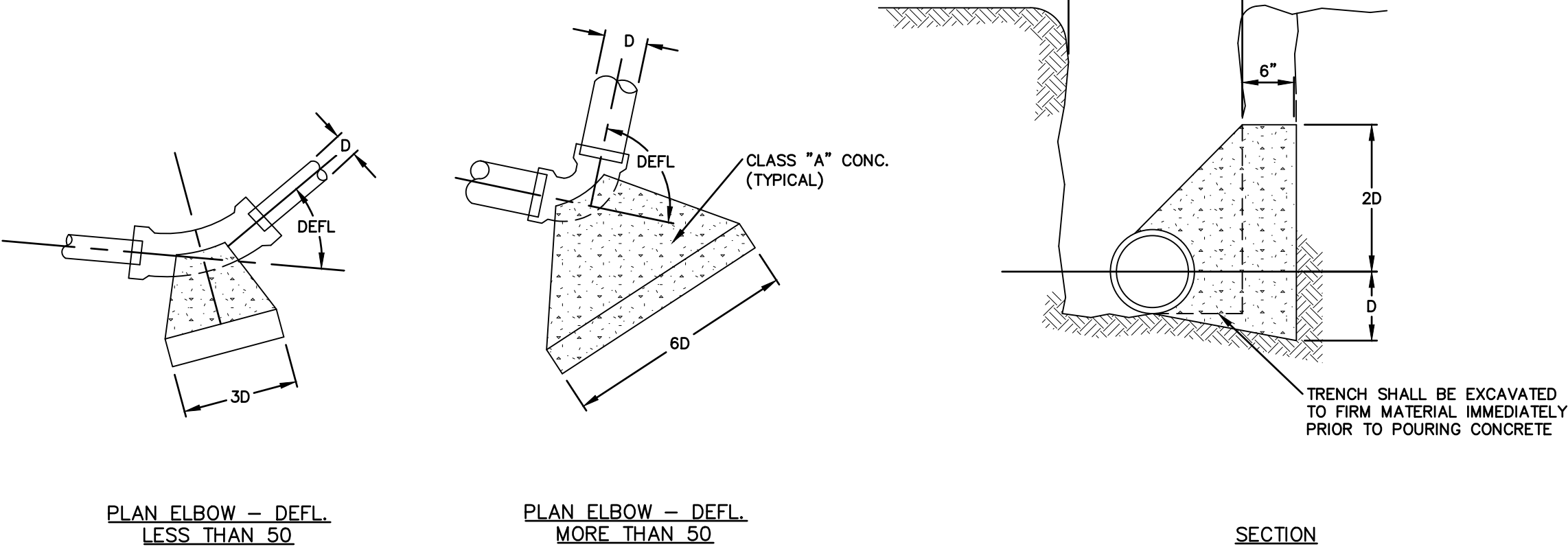
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL OR AS SHOWN ON CONDUIT PLAN.
2. DIMENSIONS SHOWN REPRESENTS OWNER'S MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT MAY NOT BE LESS THAN SHOWN.
3. NO CONDUIT SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL SWEEPS WITH A 35" TO 48" RADIUS.?????



**FIRE HYDRANT**  
NOT TO SCALE

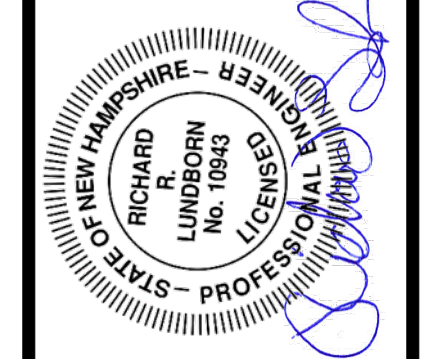
PPE DIA. (INCHES)	MINIMUM THRUST BLOCK VOLUME (CUBIC YARDS)
4	0.2
6	0.25
8	0.3
10	0.35
12	0.4
16	0.7

PPE DIA. (INCHES)	MINIMUM THRUST BLOCK VOLUME (CUBIC YARDS)
4	0.25
6	0.3
8	0.5
10	0.7
12	1.0
16	1.6



**CONCRETE THRUST BLOCKS**  
NOT TO SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL



SCALE:	HORIZ.: NTS	VERT.: NTS
DATUM:	HORIZ.: 0	VERT.: 0
GRAPHIC SCALE		

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.6609  
 www.fandoc.com

CATE STREET DEVELOPMENT, LLC  
 WATER & UTILITY DETAILS  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

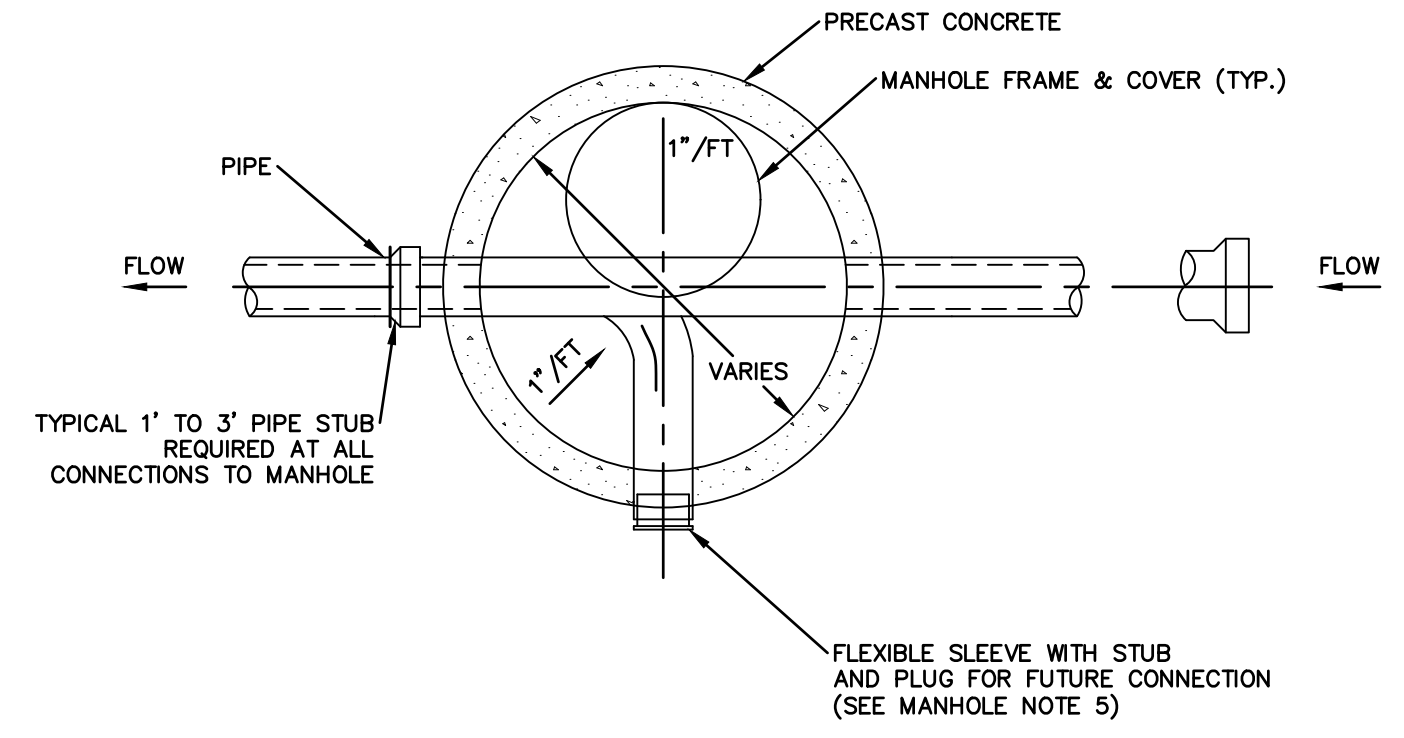
PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CD-520**



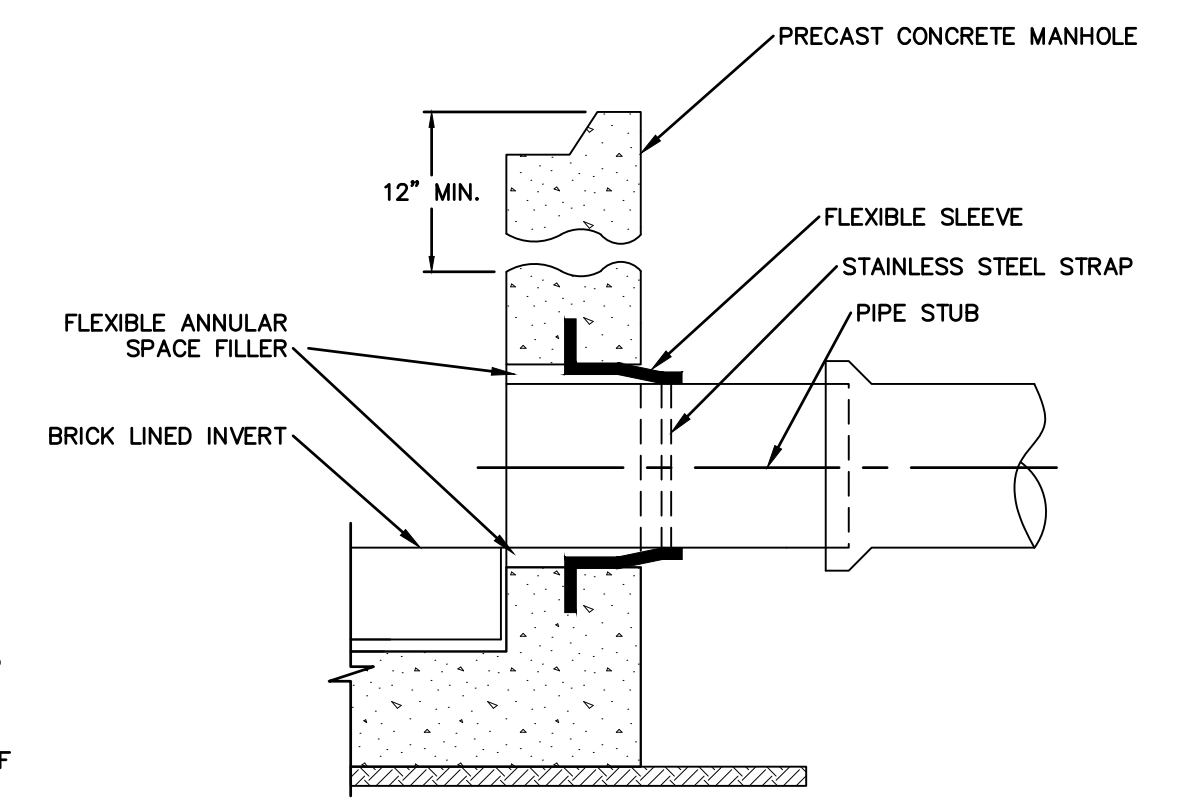
File Path: F:\P20180317A10\CH\3D\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-530-SEWER Plotted: Mon, May 20, 2019 - 3:00 PM User: dtdugal  
 MS VIEW: [LAYER STATE: PLOTTER: DWG TO PDF-PC3 CTB File: FO-STB]

- MANHOLE NOTES**
- ALL PIPES SHALL BE CUT FLUSH WITH INSIDE WALL OF STRUCTURE.
  - MANHOLES SHALL BE PLACED ON 8" MINIMUM CRUSHED STONE BASE.
  - MORTAR IN LIFTING HOLES AFTER INSTALLING RUBBER PLUGS.
  - MANHOLES SHALL RECEIVE A BITUMINOUS DAMP-PROOFING PRIOR TO DELIVERY TO THE SITE.
  - PROVIDE WATERTIGHT STUB AND FLEXIBLE SLEEVE AS NOTED ON THE DRAWING OR AS DIRECTED BY THE ENGINEER.
  - PIPE TO MANHOLE JOINTS SHALL BE SEALED WATERTIGHT BY USE OF PRE-MOLDED ELASTOMERIC SEALED JOINTS CAST INTO CONCRETE MANHOLE BASE AND SHALL CONFORM TO ASTM C 443 AND ASTM C 923M.
  - MANHOLE FRAME AND COVERS SHALL BE OF THE TYPE INDICATED BELOW OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED.
- | LOCATION                              | TYPE   |
|---------------------------------------|--|
| GUTTERS, LOW LYING, WET UNPAVED AREAS | BOLTED & GASKETED (BOLTS SHALL BE 1/2" STAINLESS STEEL.) |
| NORMALLY DRY UNPAVED AND PAVED AREAS  | STANDARD   |
- VALVE STRUCTURES WATERTIGHT  
 THE COVER SHALL HAVE THE WORDS "SANITARY SEWER", "CONFINED SPACE PERMIT REQUIRED" CAST INTO THE COVER IN 2" LETTERS.
- MANHOLE STEPS SHALL BE STEEL REINFORCED POLYPROPYLENE OR ALUMINUM.
  - WHERE THE DIFFERENCE IN ELEVATION BETWEEN THE INCOMING SEWER AND THE MANHOLE INVERT IS 24" OR LESS, THE INVERT SHALL BE FILLETED.
  - PAYMENT DEPTHS ARE MEASURED FROM TOP OF CONE TO INVERT OF STRUCTURE.

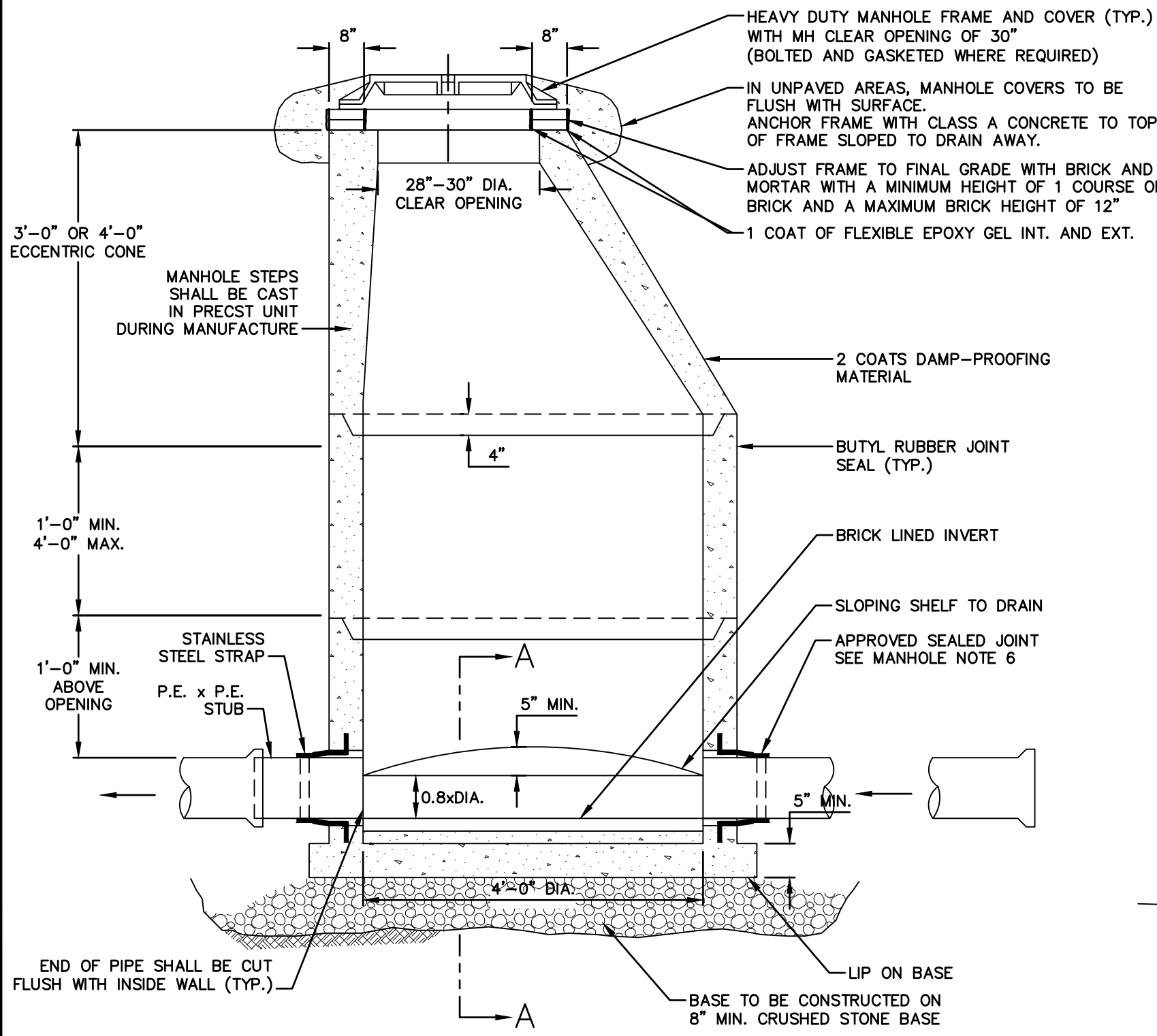


**MANHOLE PLAN VIEW**  
 SCALE: N.T.S.

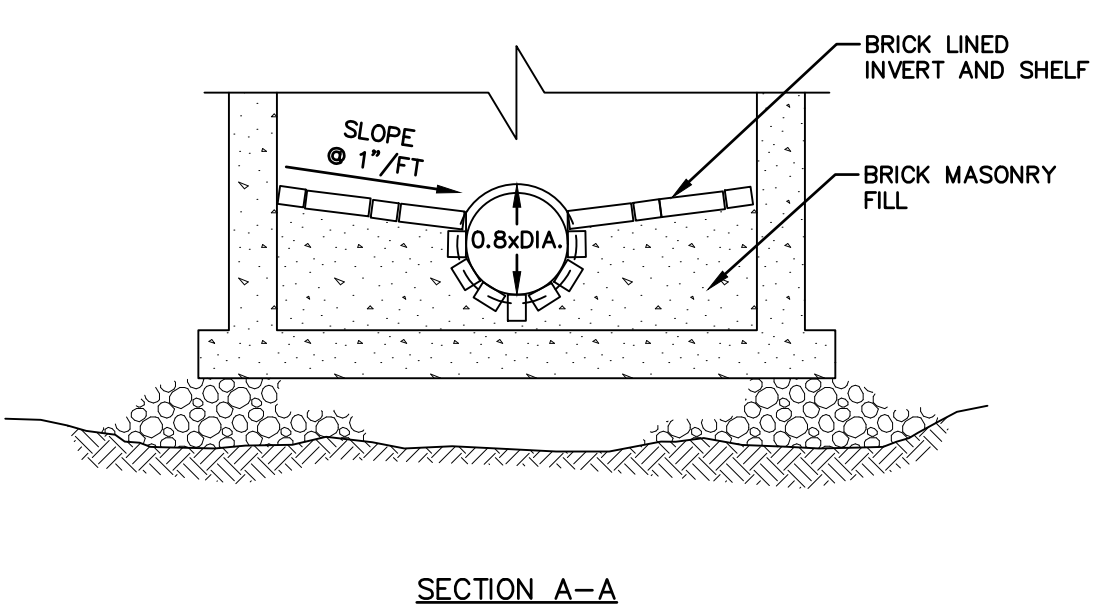
**MANHOLE NOTES**  
 SCALE: N.T.S.



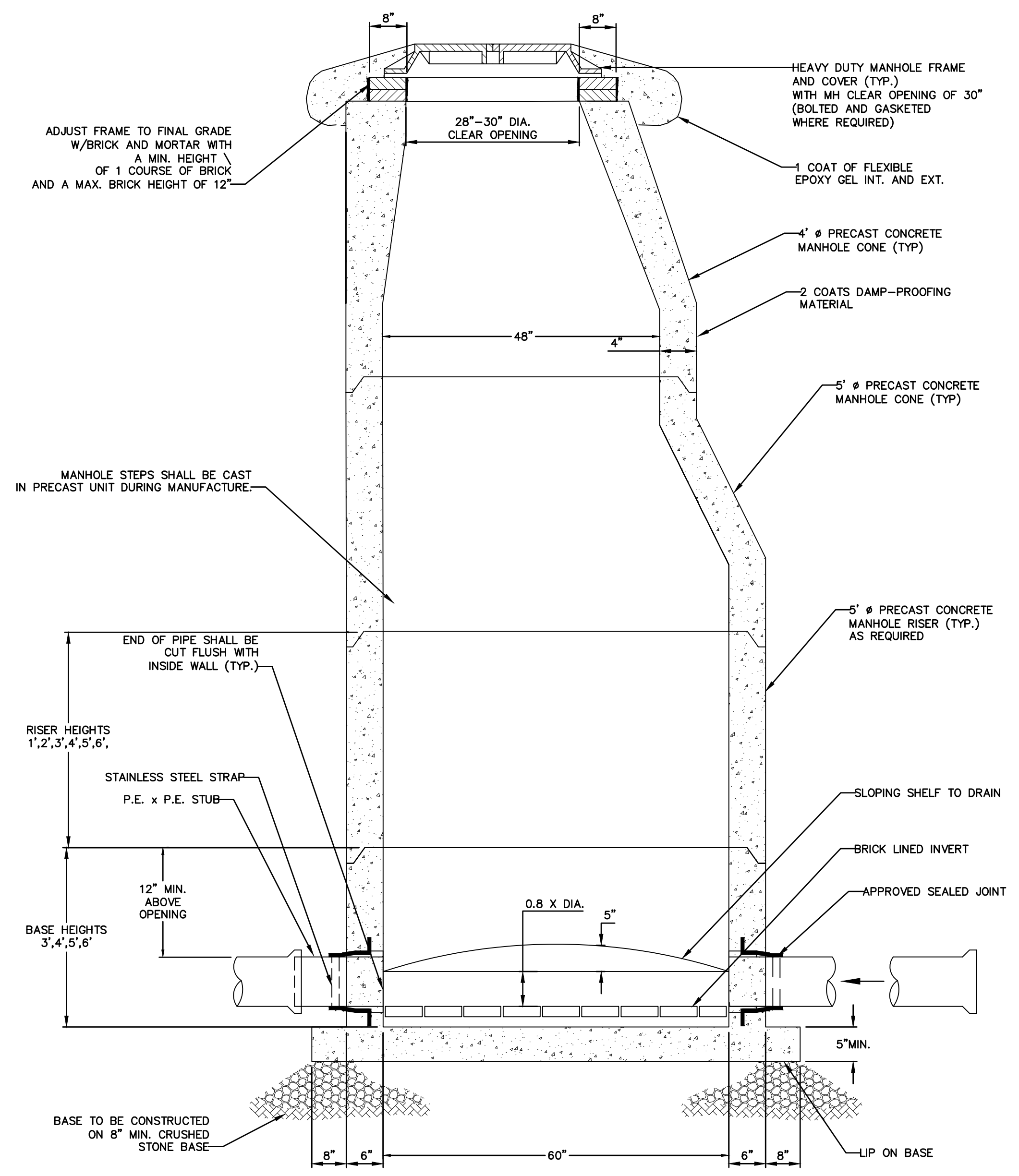
**FLEXIBLE SLEEVE**  
 SCALE: N.T.S.



**4' PRECAST MANHOLE**  
 SCALE: N.T.S.

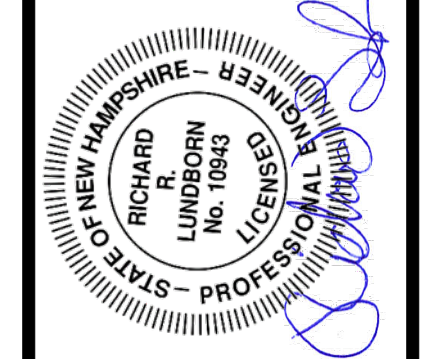


**SECTION A-A**



**5' PRECAST MANHOLE**  
 SCALE: N.T.S.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL
2	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL



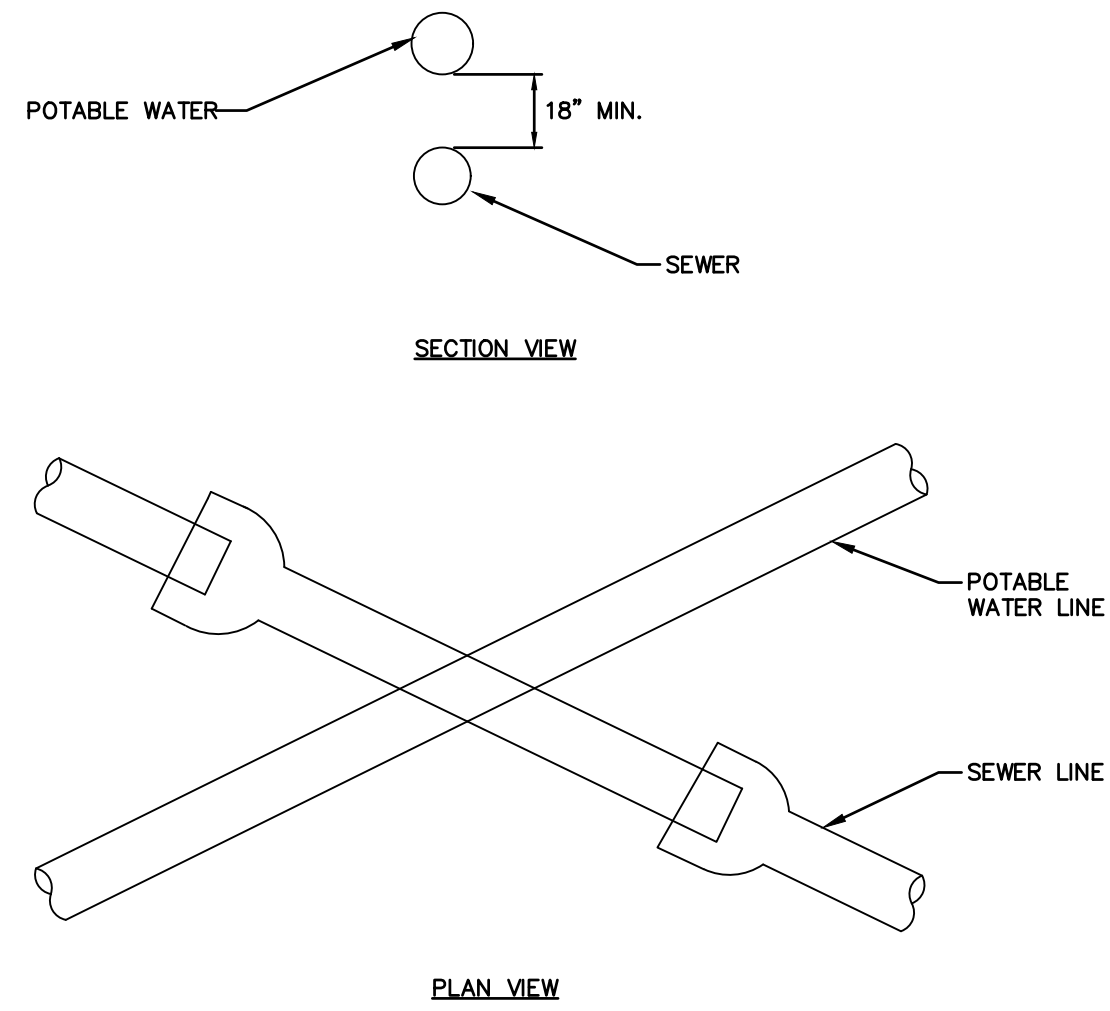
SCALE:	HORIZ.: N.T.S.
	VERT.: N.T.S.
DATUM:	HORIZ.: N.T.S.
	VERT.: N.T.S.

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoc.com

CATE STREET DEVELOPMENT, LLC  
**SEWER DETAILS**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

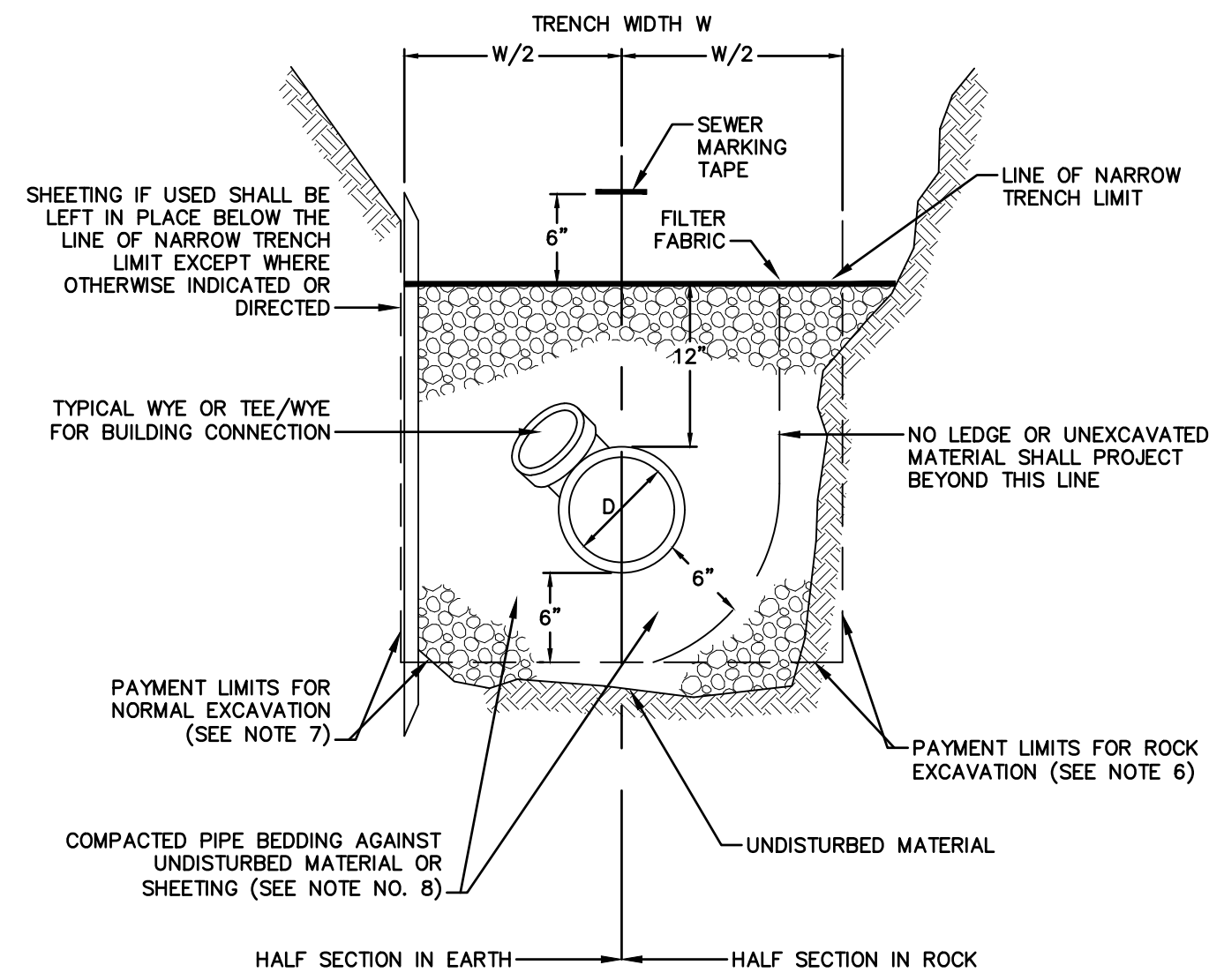
**CD-530**



**SEWER AND WATER CROSSING NOTES**

- SEWER JOINTS SHALL BE EQUIDISTANT FROM AND LOCATED AS FAR AS POSSIBLE AWAY FROM THE WATER LINE
- IF THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER IS LESS THAN 18 INCHES (WATER MAIN IS ABOVE SEWER), USE ONE OF THE FOLLOWING PROCEDURES: A) THE WATER MAIN SHALL BE RECONSTRUCTED FOR A DISTANCE OF 10 FEET ON EACH SIDE OF SEWER WITH RUBBER-GASKETED MECHANICAL JOINT PIPE ONE FULL LENGTH WATER MAIN SHOULD BE CENTERED OVER SEWER, B) CONSTRUCT BOTH THE WATER & SEWER PIPE OF RUBBER-GASKETED, CEMENT-LINED DUCTILE IRON PIPE OR EQUIVALENT AND PRESSURE TEST BOTH PIPES, OR C) ENCASE BOTH PIPES IN CONCRETE.

**CROSSING OF SEWER & POTABLE WATER LINES**  
NOT TO SCALE

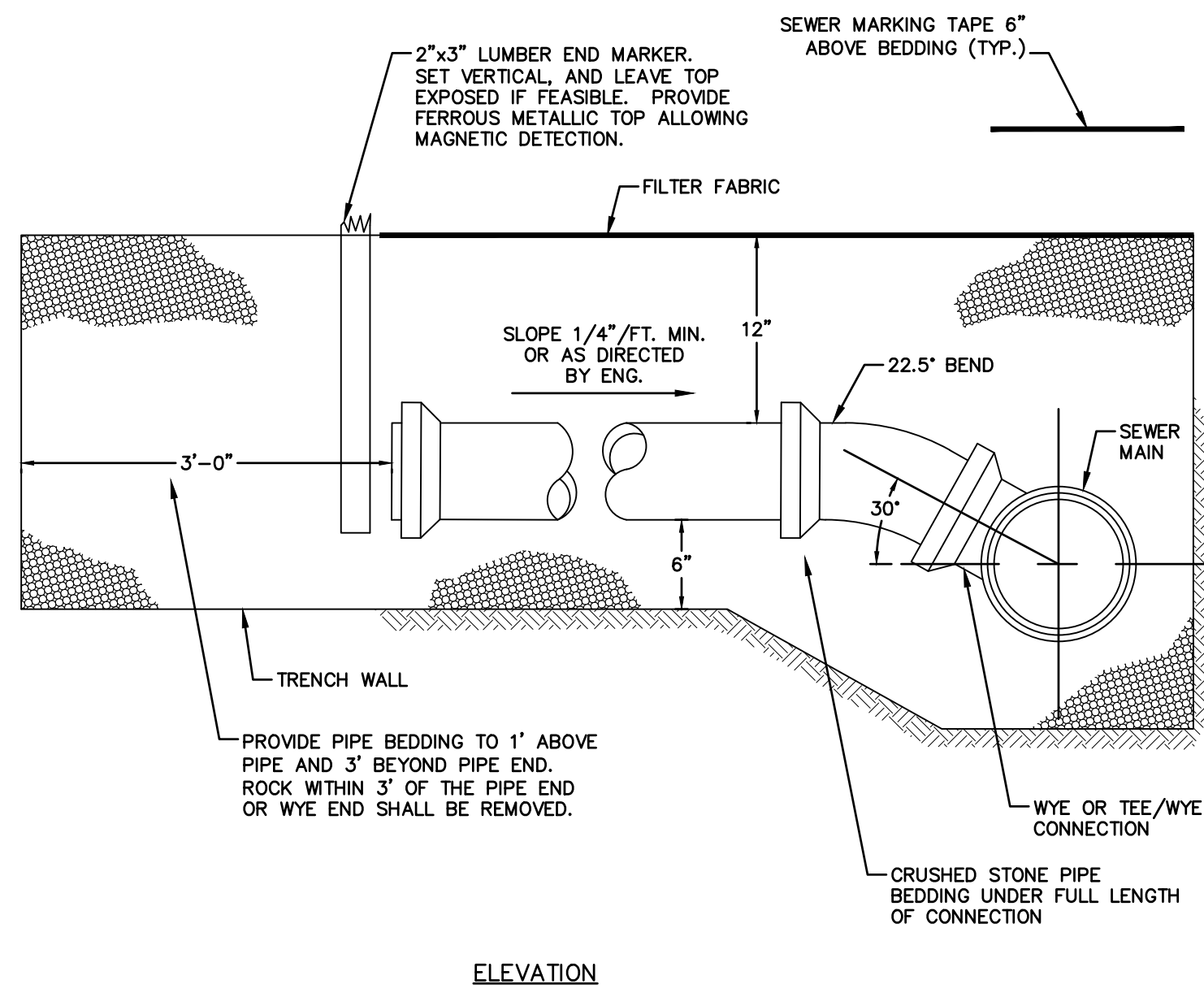


**TYPICAL SEWER TRENCH**  
NOT TO SCALE

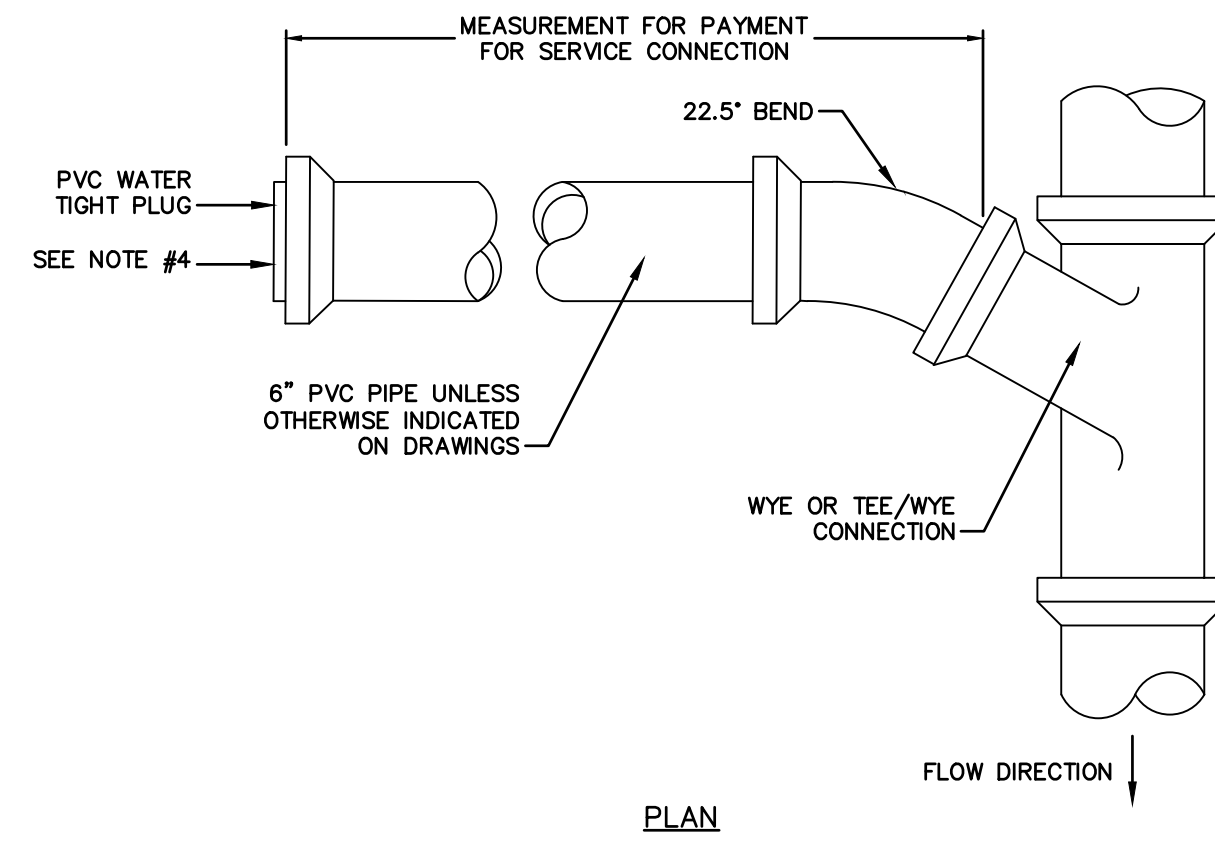
**SANITARY SEWER PIPE TRENCH NOTES**

- DEPTH OF SEWER SHALL BE AS SHOWN ON DRAWINGS.
  - SEWER TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH W ABOVE THE "LINE OF NARROW TRENCH LIMIT." AT THE CONTRACTORS EXPENSE.
  - BELOW THE "LINE OF NARROW TRENCH LIMIT" THE TRENCH SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH W.
  - IF EXCAVATION AND BACKFILL BELOW NORMAL DEPTH IS REQUIRED, SHEETING MAY BE ORDERED.
  - SHEETING, IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE SEWER PIPE, UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER.
  - ALL ROCK WITHIN 3'-0" HORIZONTALLY OF THE ENDS OF BUILDING CONNECTIONS, BRANCHES AND STUBS, AND DOWN TO A HORIZONTAL PLANE 6" BELOW THE BOTTOMS OF SUCH ITEMS SHALL BE REMOVED.
  - TRENCH WIDTHS AND PAYMENT LIMIT SHALL BE AS FOLLOWS:
- | NUMBER OF PIPE IN TRENCH | DIAMETER PIPE "D" | TRENCH WIDTH "W" | PAYMENT LIMIT |
|--------------------------|-------------------|------------------|---------------|
| ONE                      | 12" AND SMALLER   | 4'-0"            | 4'-0"         |
| TWO                      | 12" AND SMALLER   | 7'-0"            | 7'-0"         |
- WHERE CONCRETE ENCASEMENT IS CALLED FOR BY THE PLANS, OR WHEN DIRECTED BY THE ENGINEER, REPLACE BEDDING AND BACKFILL BELOW THE "LINE OF NARROW TRENCH LIMIT" WITH CLASS "A" CONCRETE.
  - SEWER MARKING TAPE SHALL BE INSTALLED A MINIMUM OF 18" ABOVE THE SANITARY SEWER, FORCE MAIN AND SERVICE CONNECTION PIPE.
  - SANITARY SEWER PIPE AND SERVICE CONNECTION PIPE SHALL HAVE FILTER FABRIC INSTALLED ON TOP OF THE PIPE BEDDING AS SHOWN ON THE DETAILS.

**SANITARY SEWER PIPE TRENCH NOTES**  
SCALE: N.T.S.



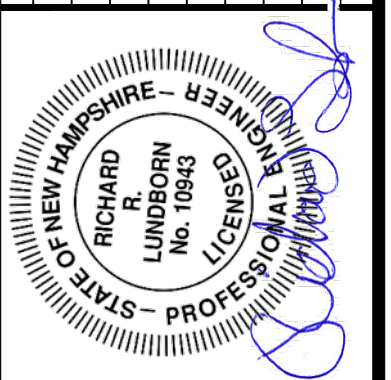
**SERVICE CONNECTIONS**  
NOT TO SCALE



**SERVICE CONNECTION NOTES**

- NO LEDGE OR UNEXCAVATED MATERIAL SHALL PROJECT WITHIN 6" OF THE PIPE IN ANY DIRECTION
- EXACT LOCATION AND ELEVATION OF SERVICE CONNECTIONS TO BE DETERMINED AND SET IN THE FIELD DURING CONSTRUCTION
- EXACT LOCATION OF WYES/TEES, WHERE DIRECTED TO BE INSTALLED, SHALL BE SET IN THE FIELD DURING CONSTRUCTION
- PROVIDE DI TO PVC TRANSITION COUPLING AT END OF DI SERVICE CONNECTION

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRJ
2	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRJ



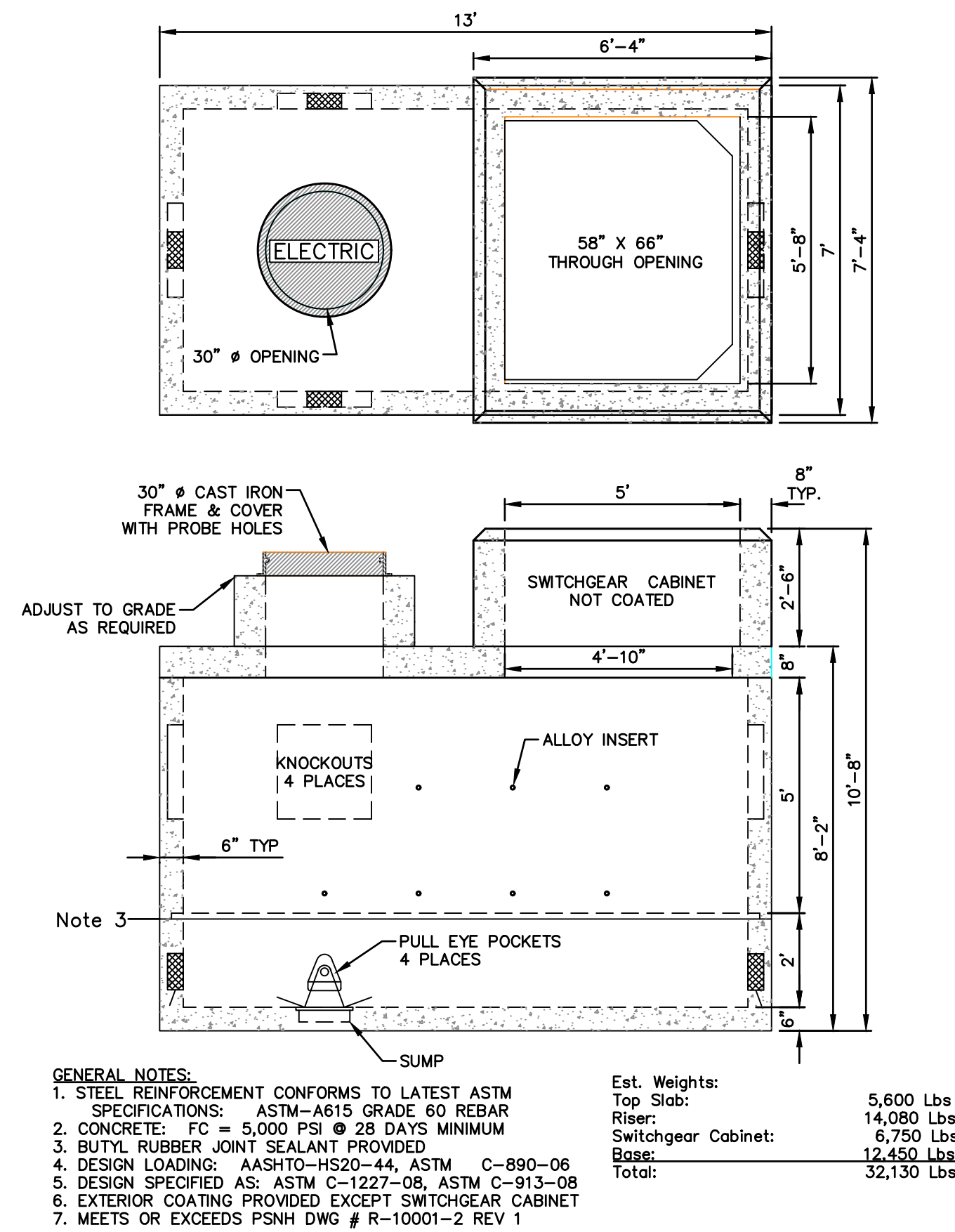
SCALE:	HORIZ.: NTS	VERT.:	
DATUM:		HORIZ.:	
		VERT.:	
			GRAPHIC SCALE

**FUSS & O'NEILL**  
UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
www.fandoc.com

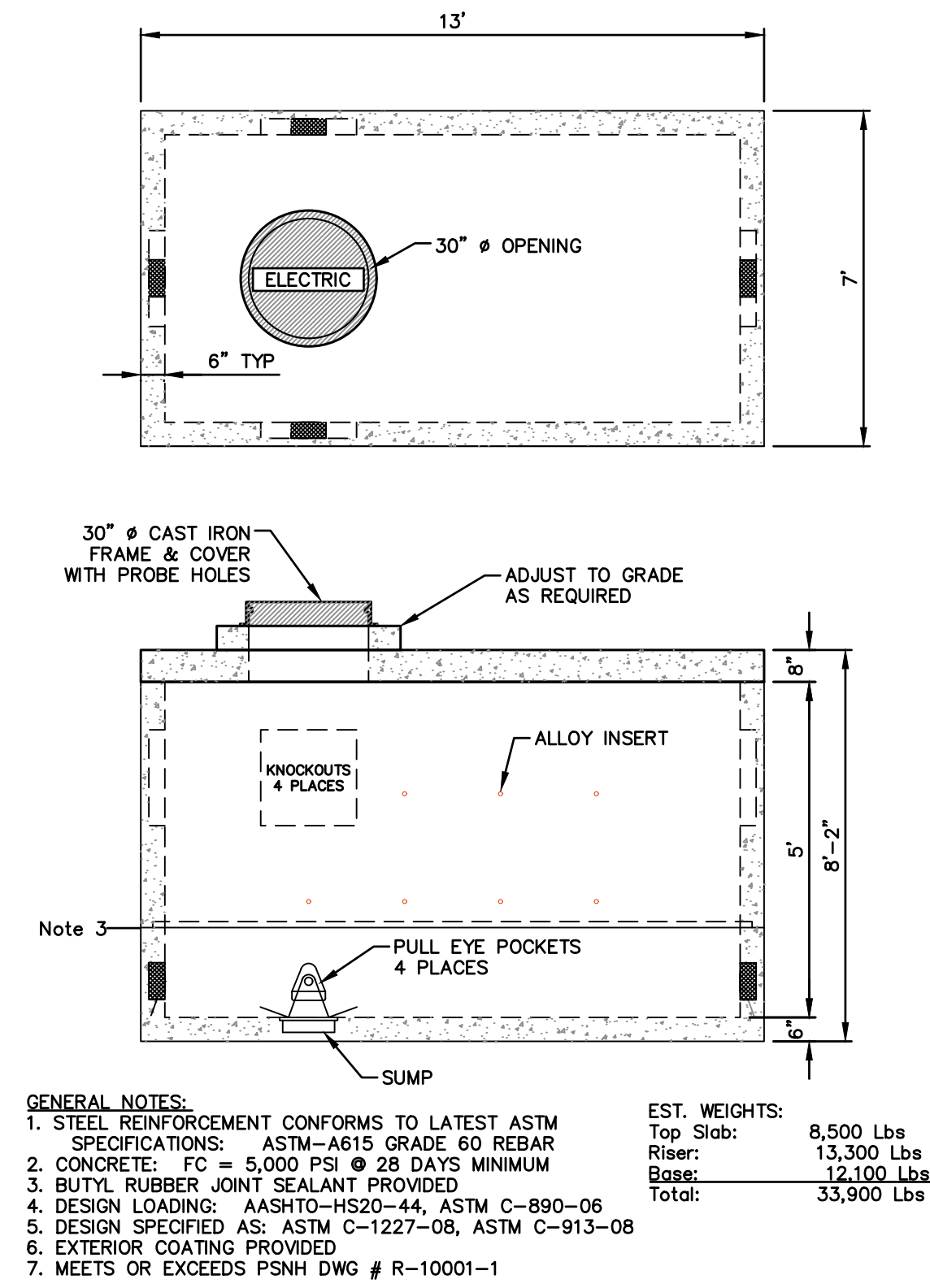
CATE STREET DEVELOPMENT, LLC  
SEWER DETAILS  
CATE STREET/ WEST END YARDS  
PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
DATE: 05/20/2019  
**CD-531**

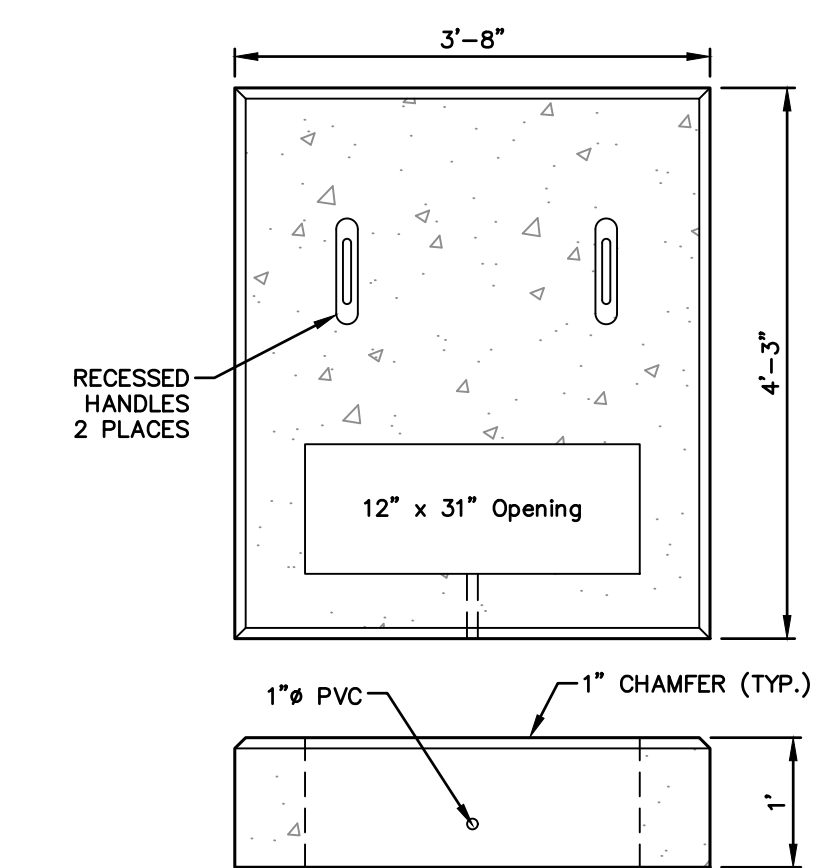
File Path: F:\P20180317A10\CH\3\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-531-SEWER Plotted: Mon, May 20, 2019 - 3:00 PM User: ddugal  
MS VIEW: LAYER STATE: Plotter: DWG TO PDF-PC3 CTB File: FO.STB



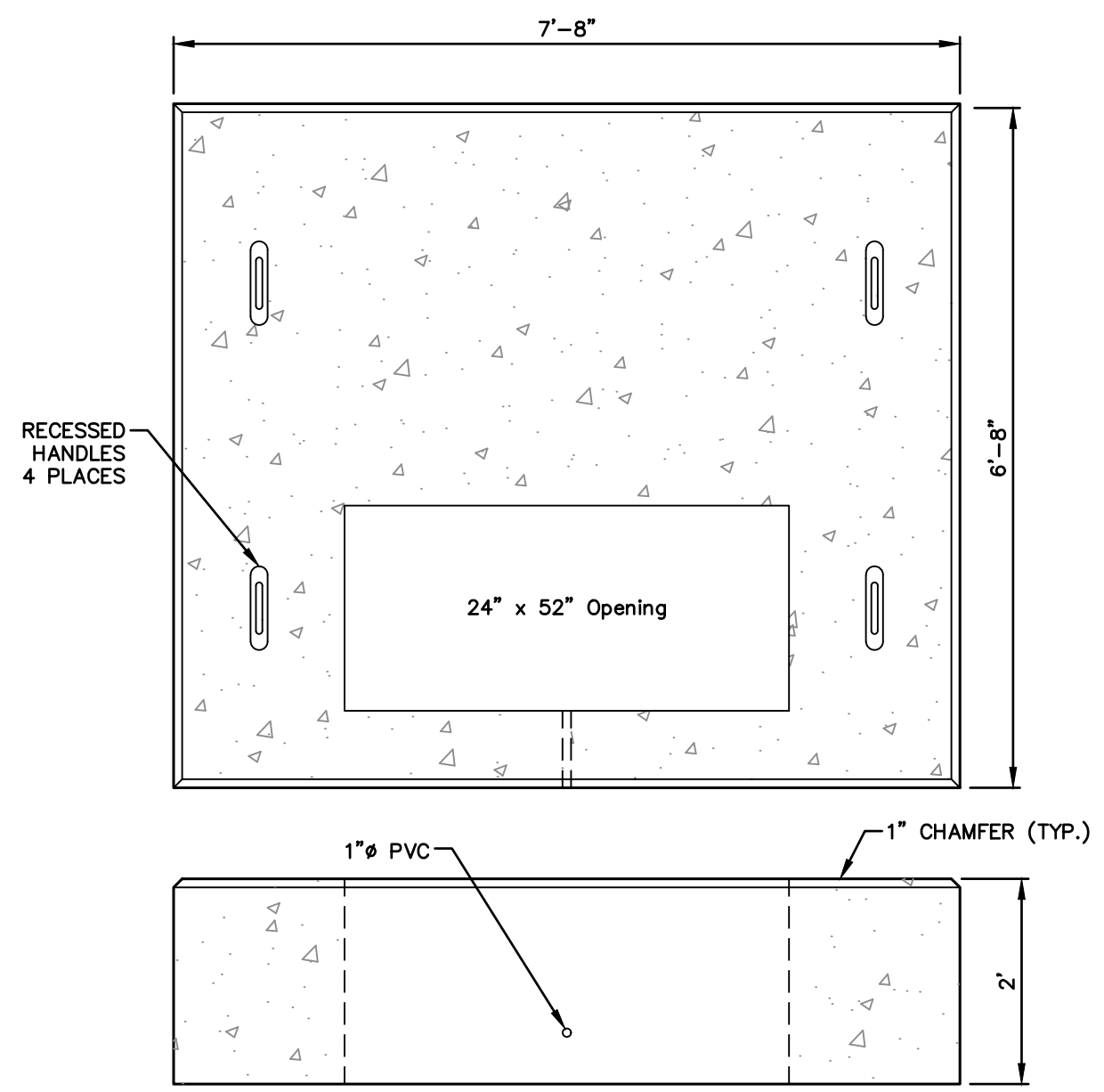
**EVERSOURCE SWITCHGEAR CABINET ASSEMBLY**  
 NOT TO SCALE



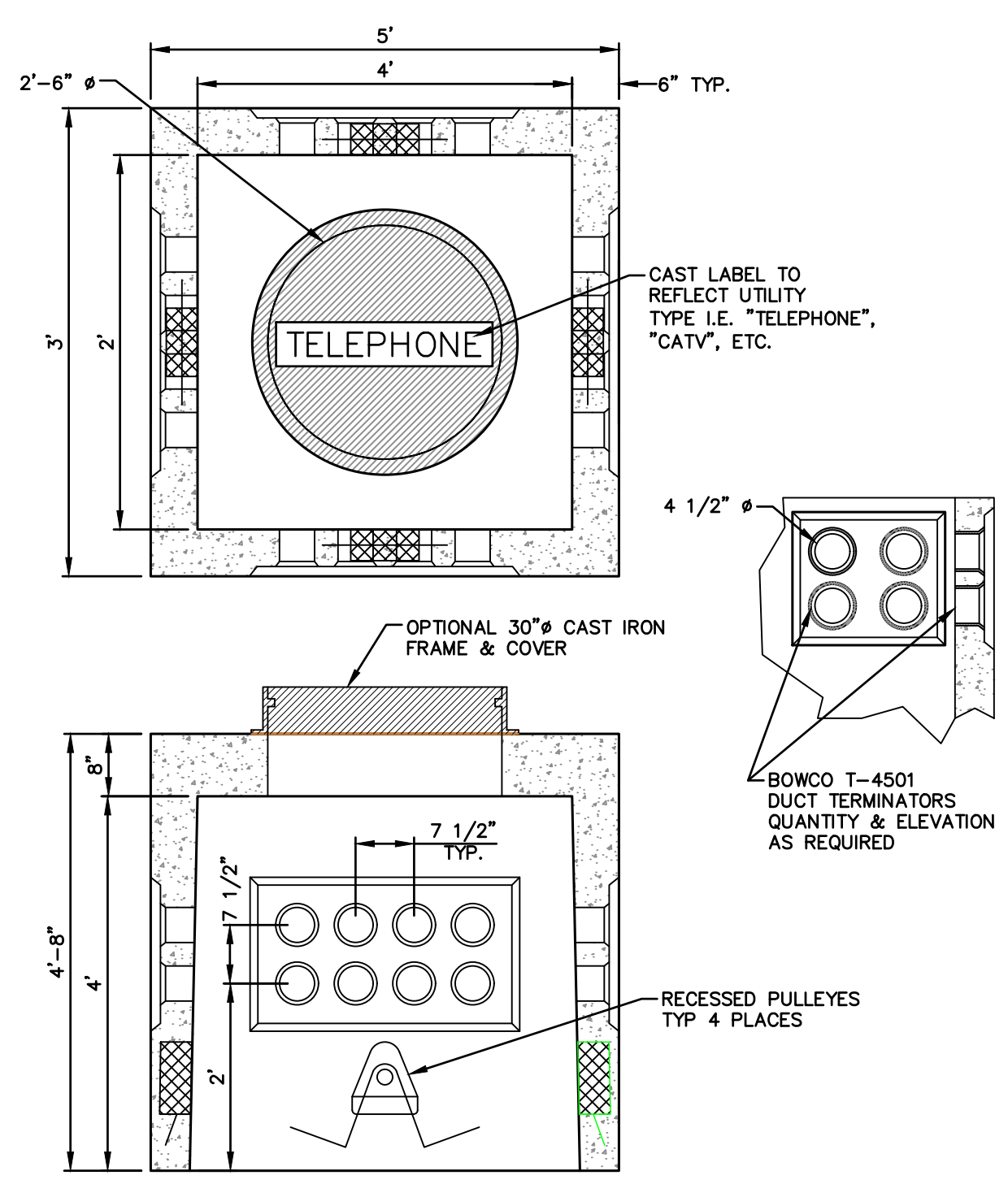
**EVERSOURCE MANHOLE ASSEMBLY**  
 NOT TO SCALE



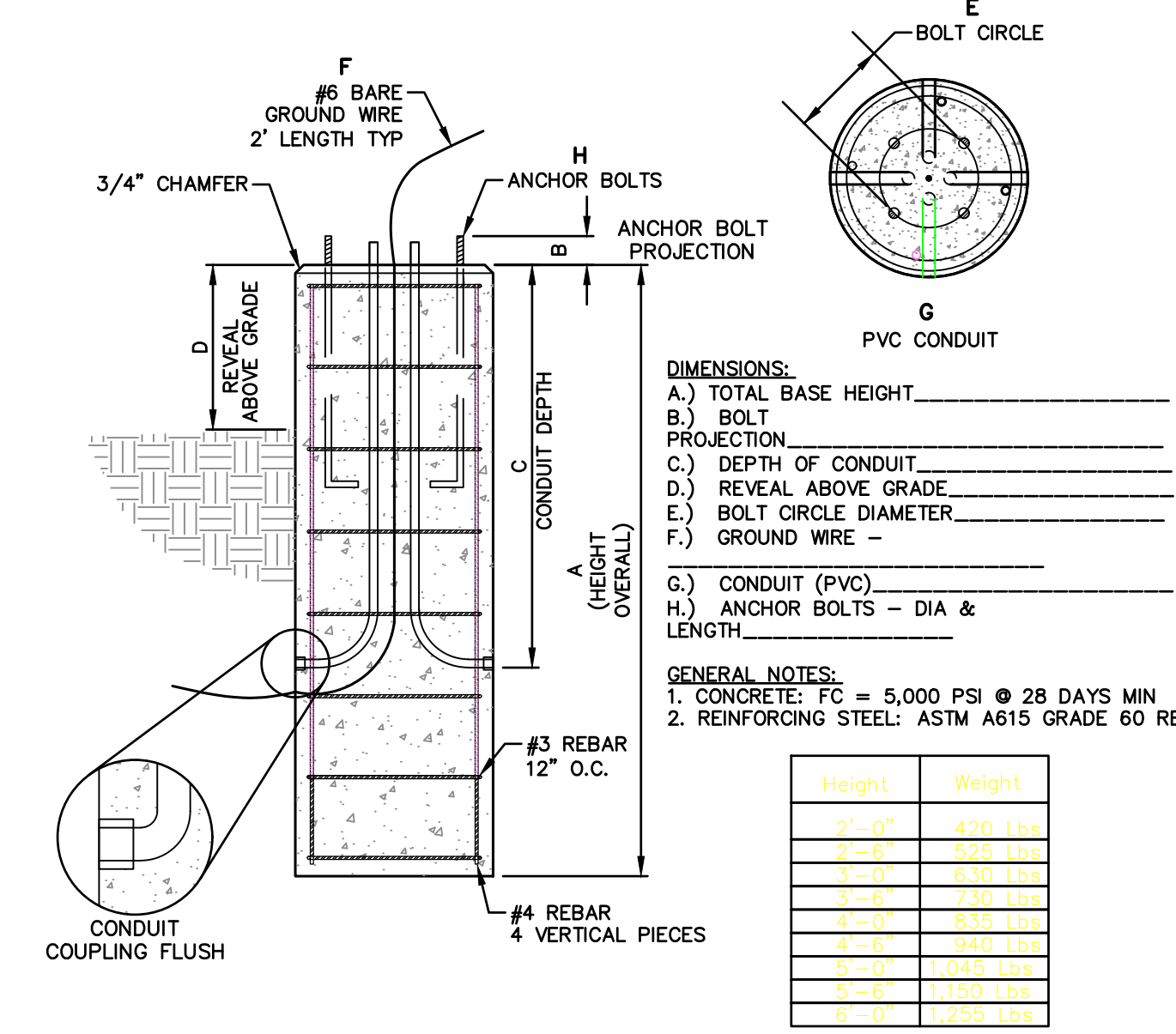
**SINGLE-PHASE TRANSFORMER PAD**  
 NOT TO SCALE 25-75 KVA



**3 PHASE TRANSFORMER PAD**  
 NOT TO SCALE 75-500 KVA



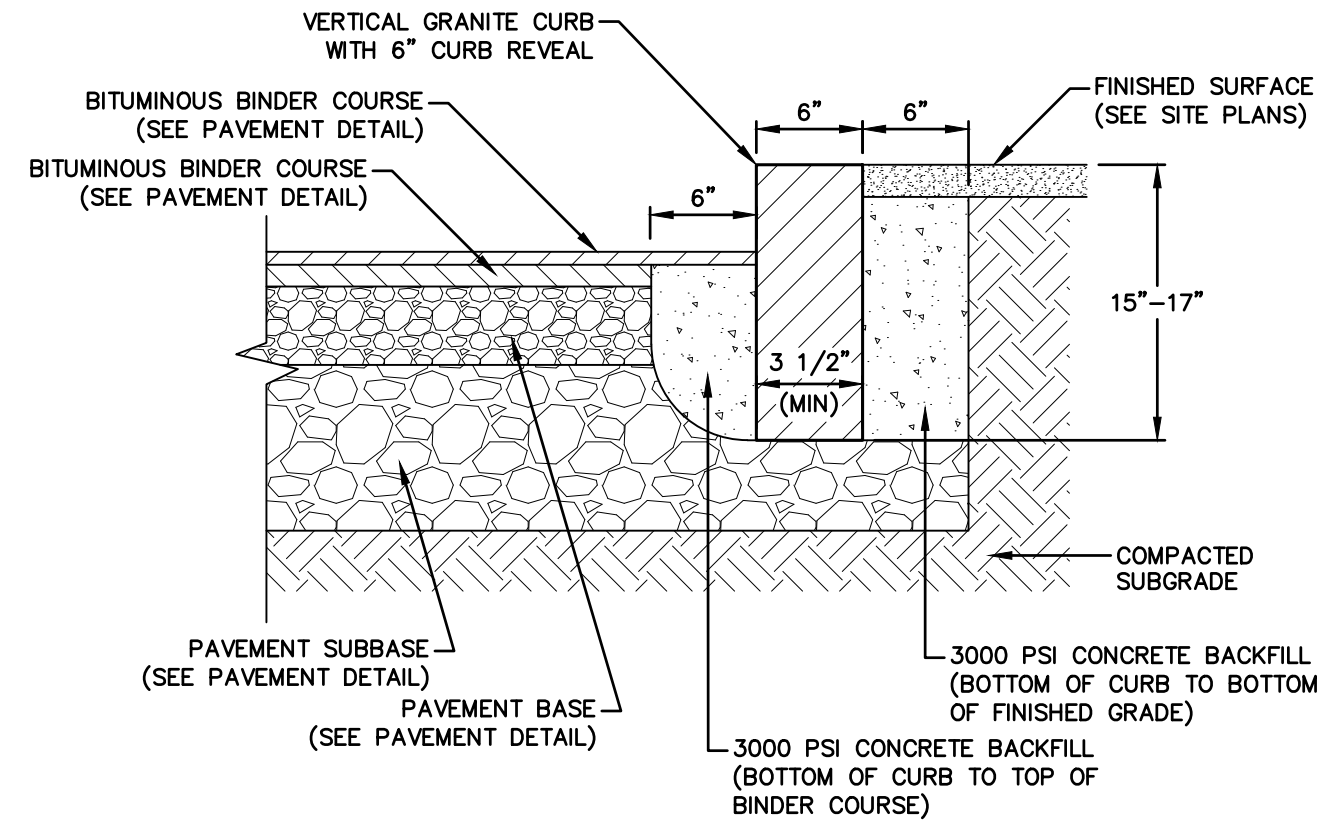
**4'x4'x4' HANDHOLE**  
 NOT TO SCALE



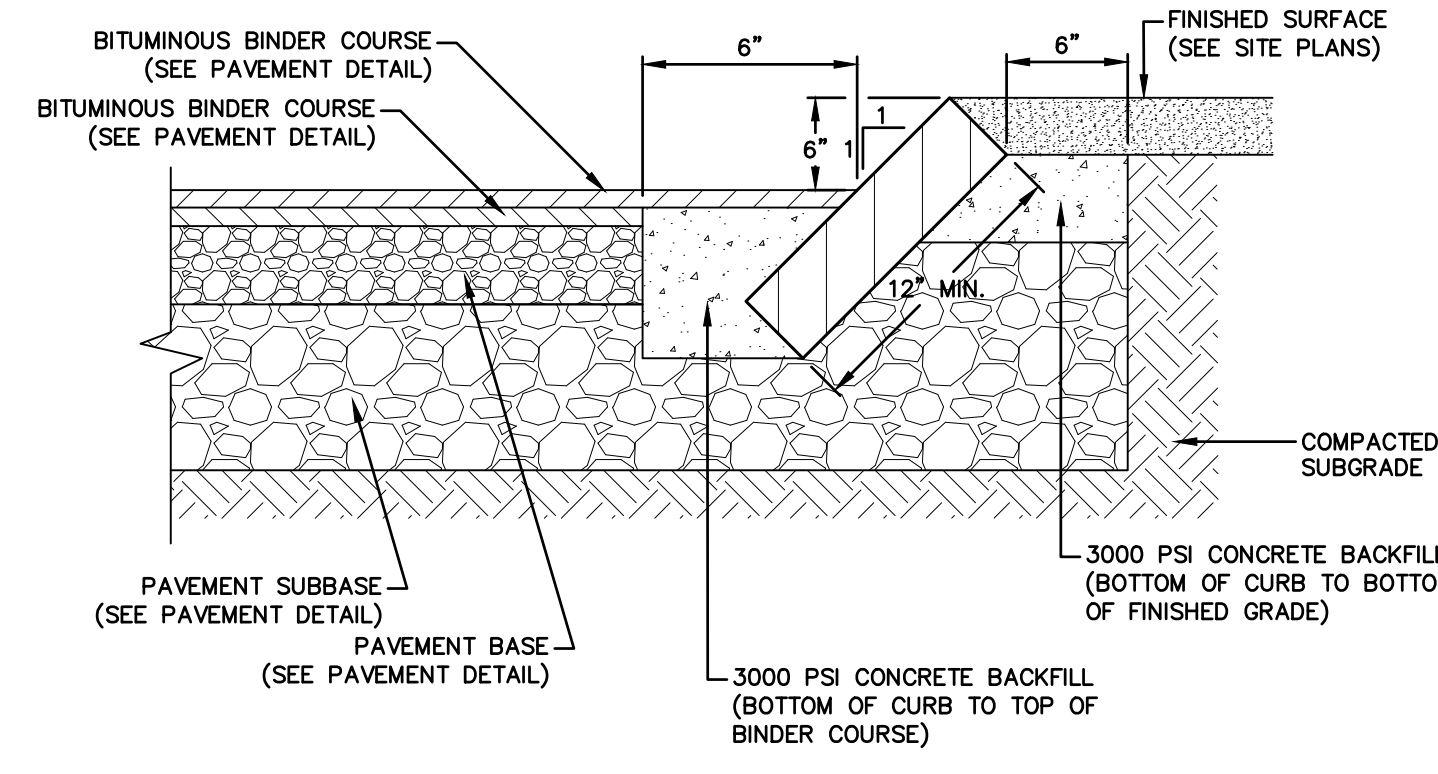
**16" Ø LIGHT POLE BASE**  
 NOT TO SCALE

**NOTES:**  
 1. ALL PRECAST CONCRETE STRUCTURES TO BE PHOENIX PRECAST PRODUCTS OR EQUAL.  
 PHOENIX PRECAST PRODUCTS  
 77 REGIONAL DRIVE  
 CONCORD, NH 03301  
 1.800.639.2199  
 info@phoenixprecast.com

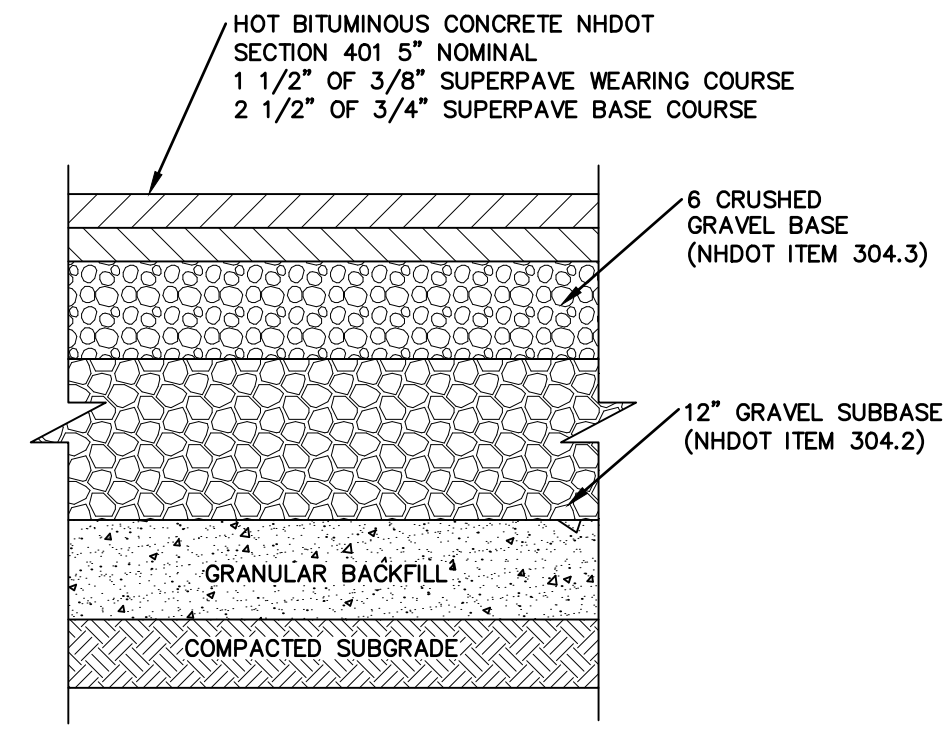
PROJ. No.: 20180317.A10	DATE: 05/20/2019			
<b>CD-540</b>				
<b>FUSS &amp; O'NEILL</b> UPPER SQUARE BUSINESS CENTER 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 www.fandoc.com				
<b>CATE STREET DEVELOPMENT, LLC</b> UTILITY DETAILS CATE STREET/ WEST END YARDS PORTSMOUTH NEW HAMPSHIRE				
SCALE: HORIZ: NTS VERT: NTS DATUM: HORIZ: 0 VERT: 0 GRAPHIC SCALE				
No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL
2	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL



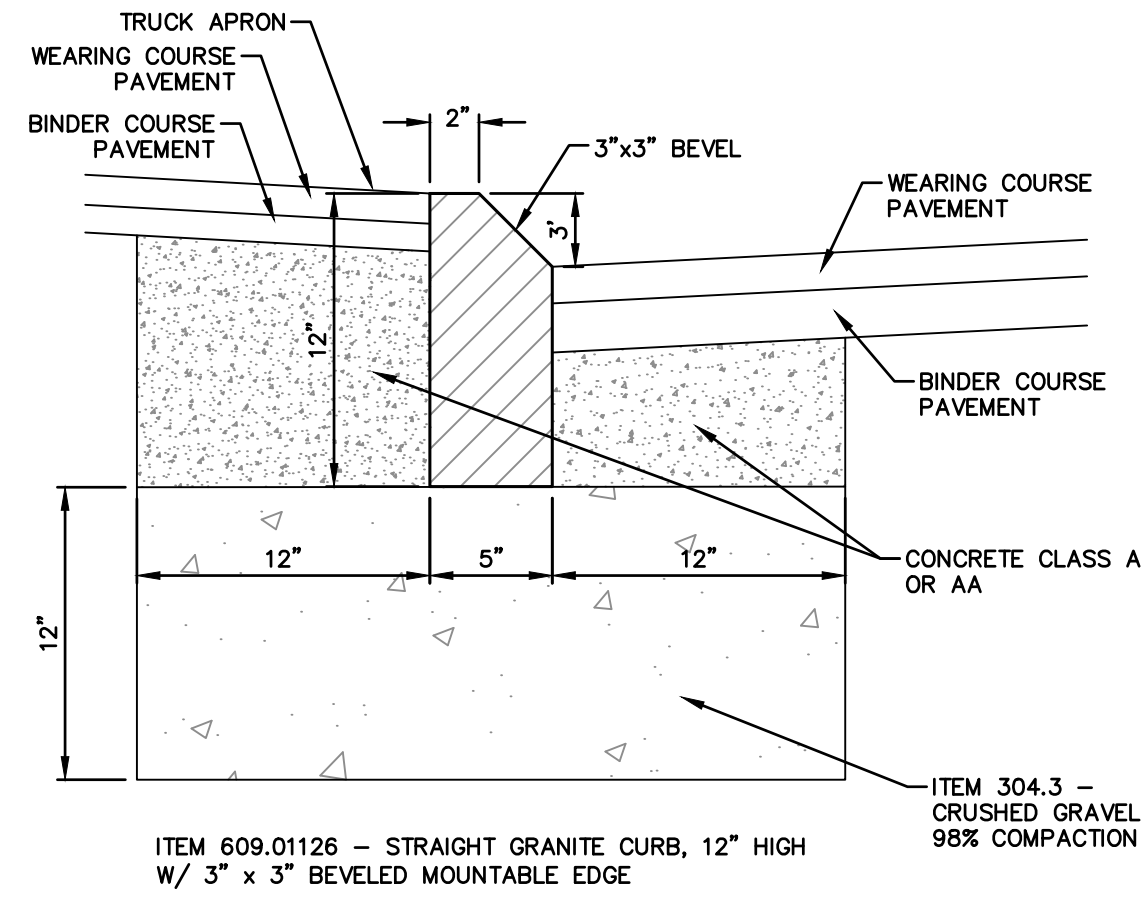
**VERTICAL GRANITE CURB INSTALLED**  
SCALE: NOT TO SCALE



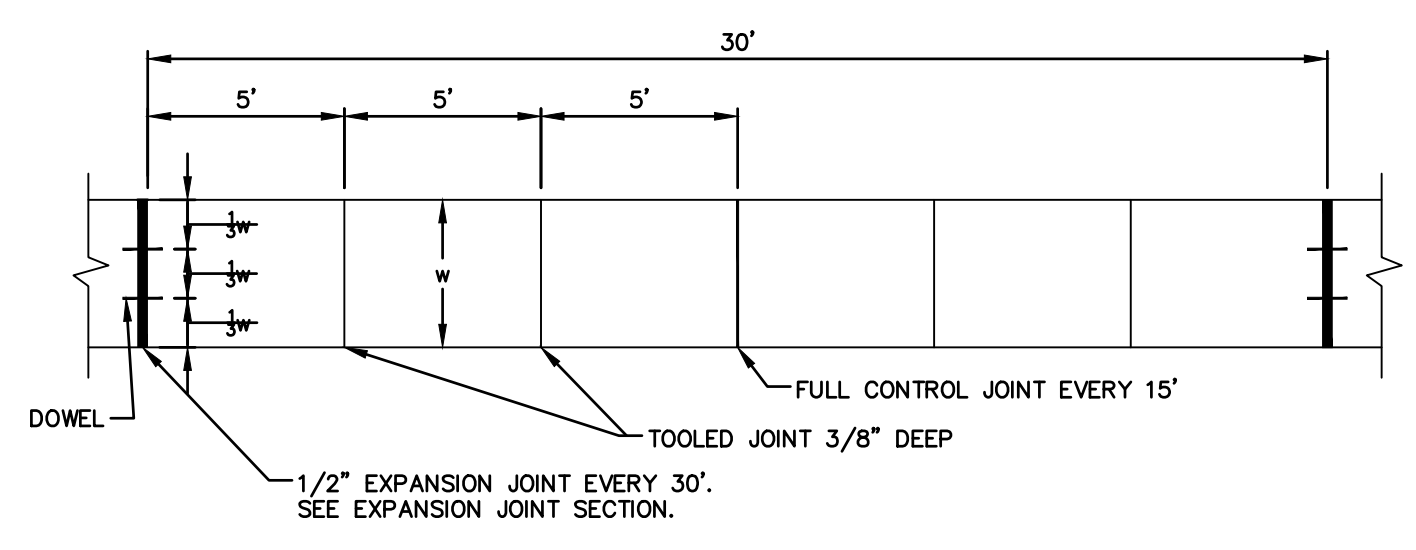
**SLOPED GRANITE CURB INSTALLED**  
SCALE: NOT TO SCALE



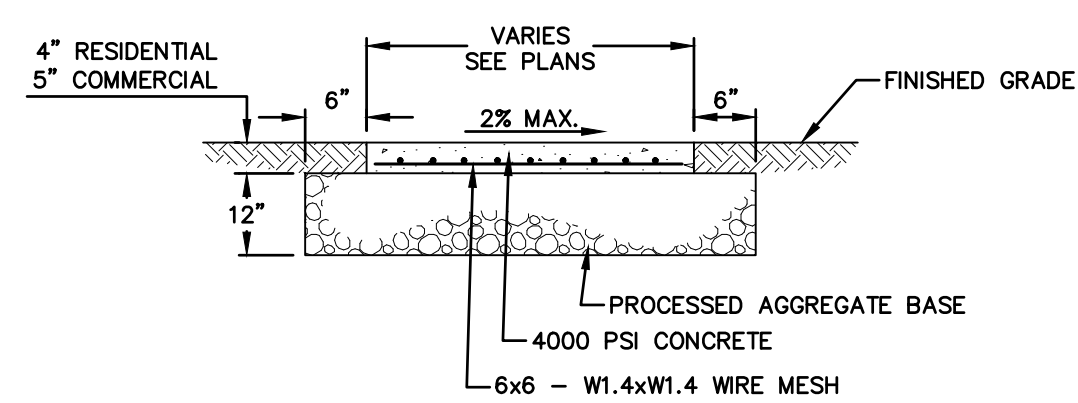
**TYPICAL SITE PAVEMENT SECTION**  
SCALE: NOT TO SCALE



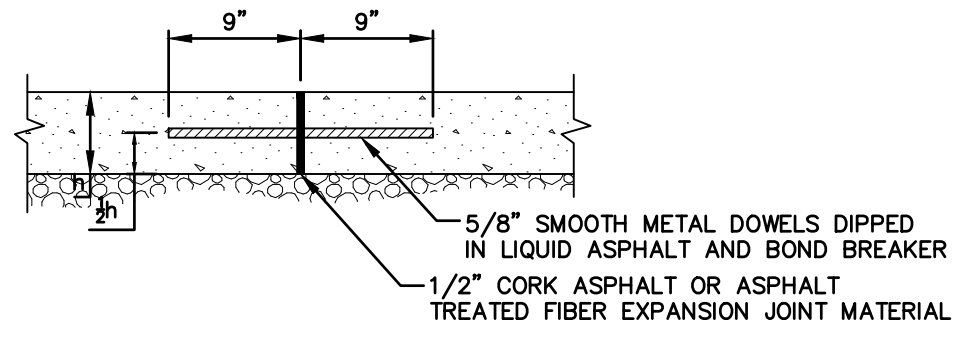
**MOUNTABLE GRANITE CURB INSTALLED**  
NOT TO SCALE



**PLAN**

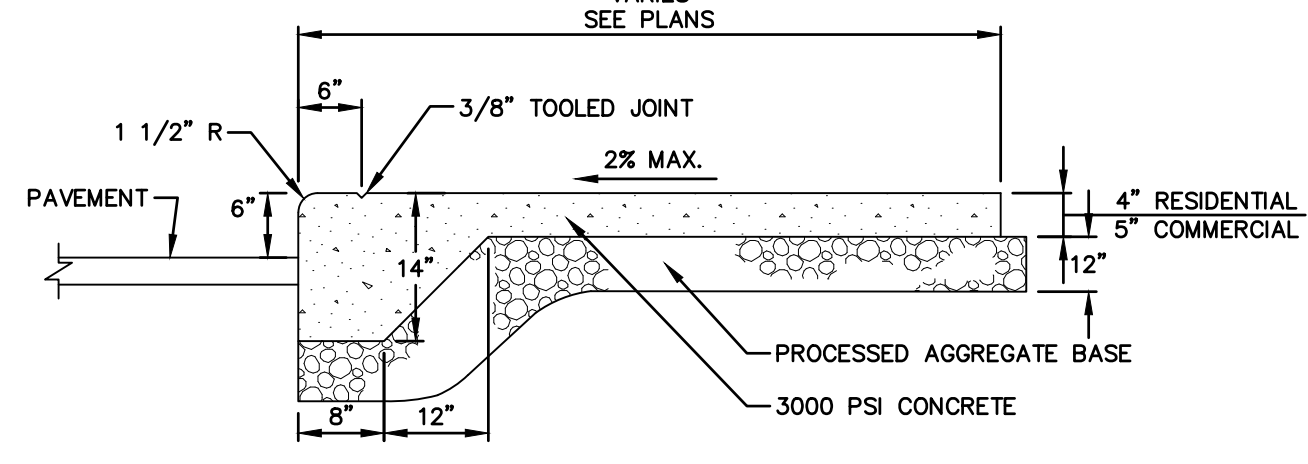


**SIDEWALK SECTION**

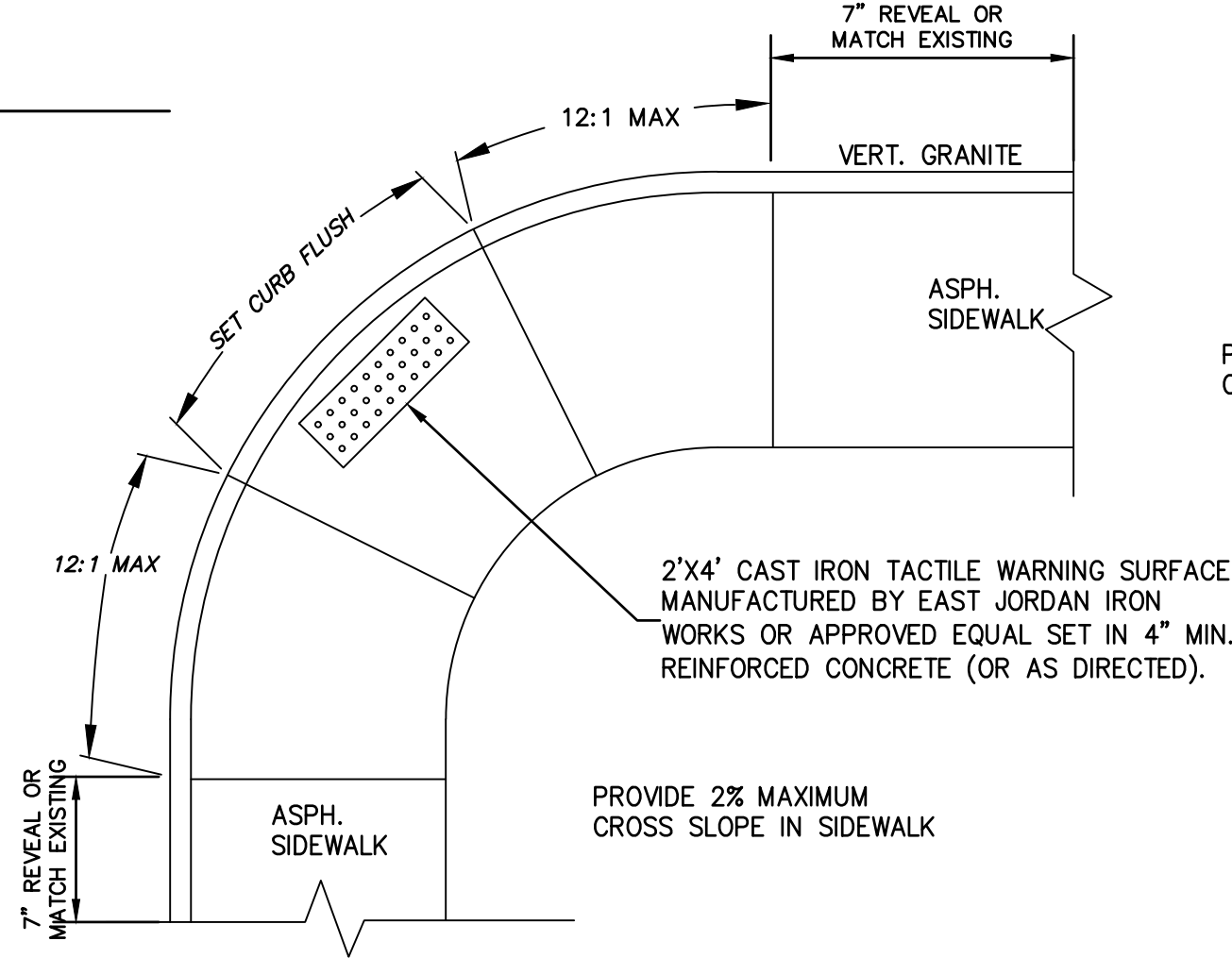


**EXPANSION JOINT SECTION**

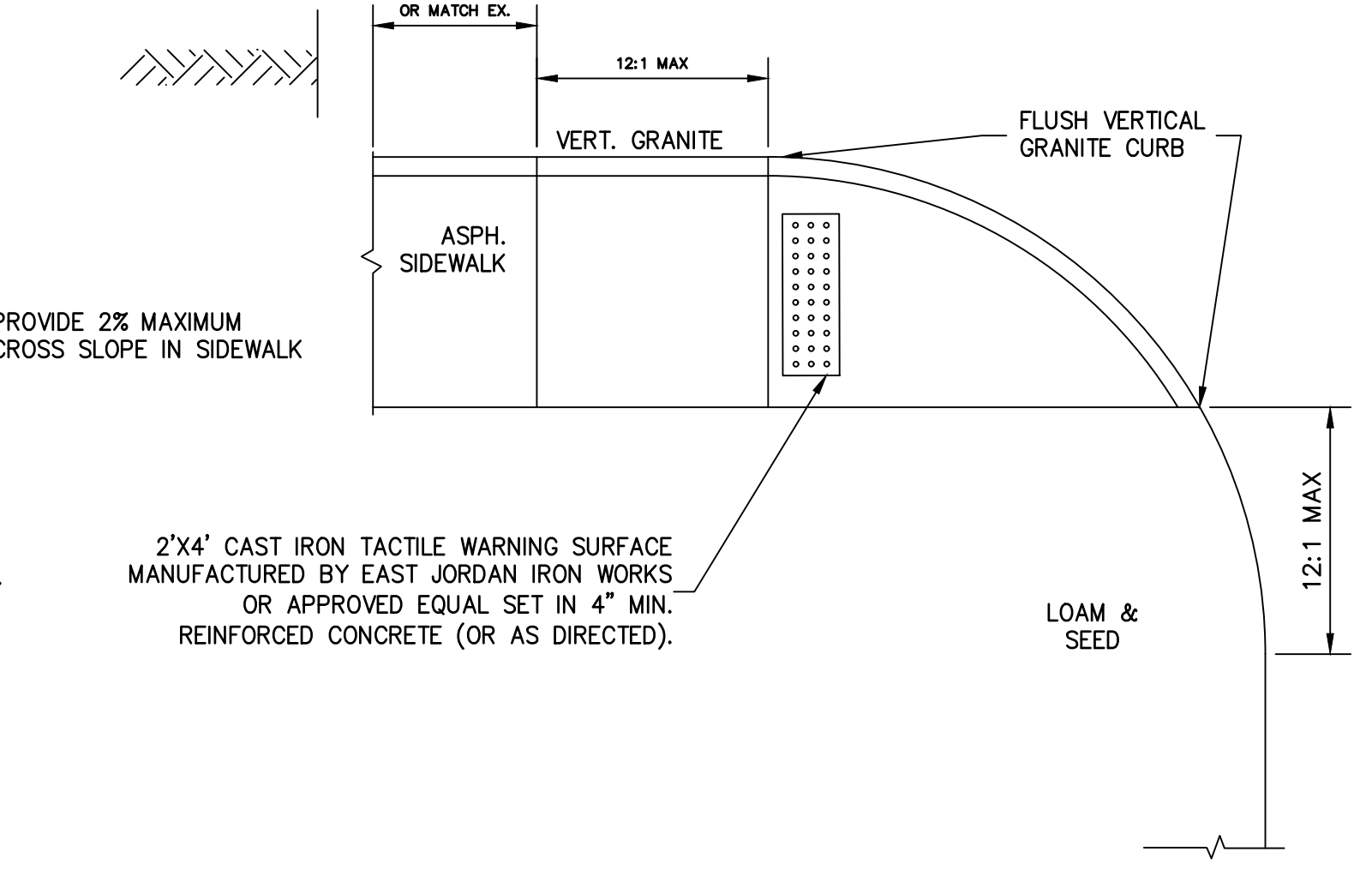
**CONCRETE SIDEWALK**  
SCALE: NOT TO SCALE



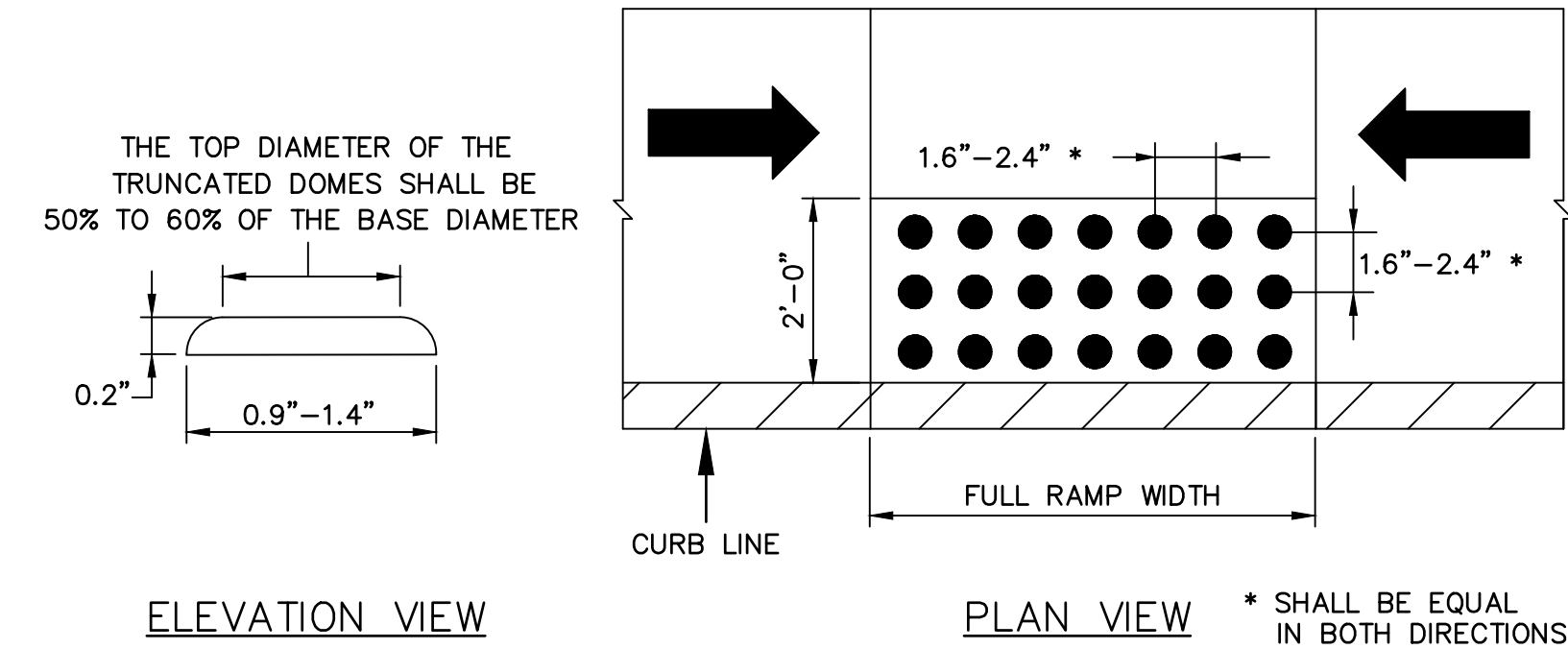
**MONOLITHIC CONCRETE CURB AND WALK**  
SCALE: NOT TO SCALE



**TYPICAL CORNER PEDESTRIAN RAMP**  
NOT TO SCALE



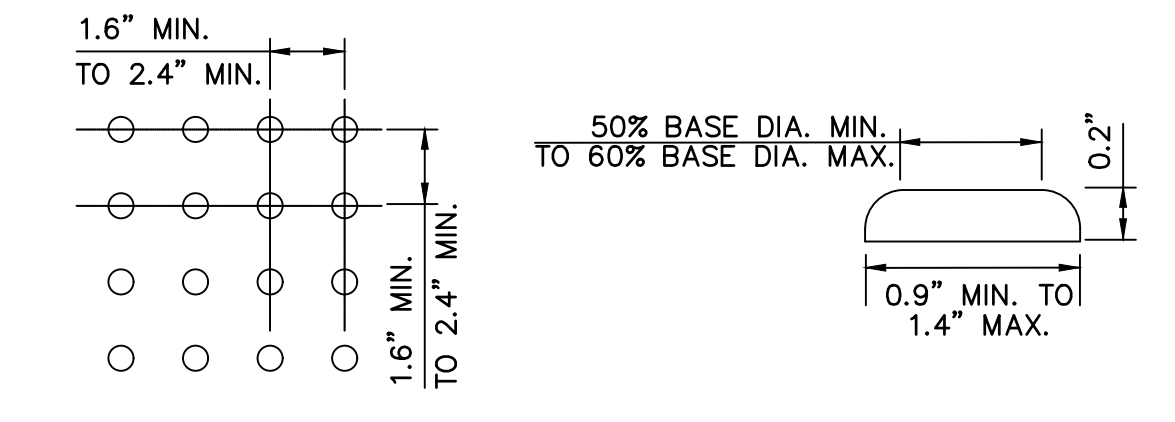
**END OF SIDEWALK PEDESTRIAN RAMP**  
NOT TO SCALE



**ELEVATION VIEW PLAN VIEW** \* SHALL BE EQUAL IN BOTH DIRECTIONS

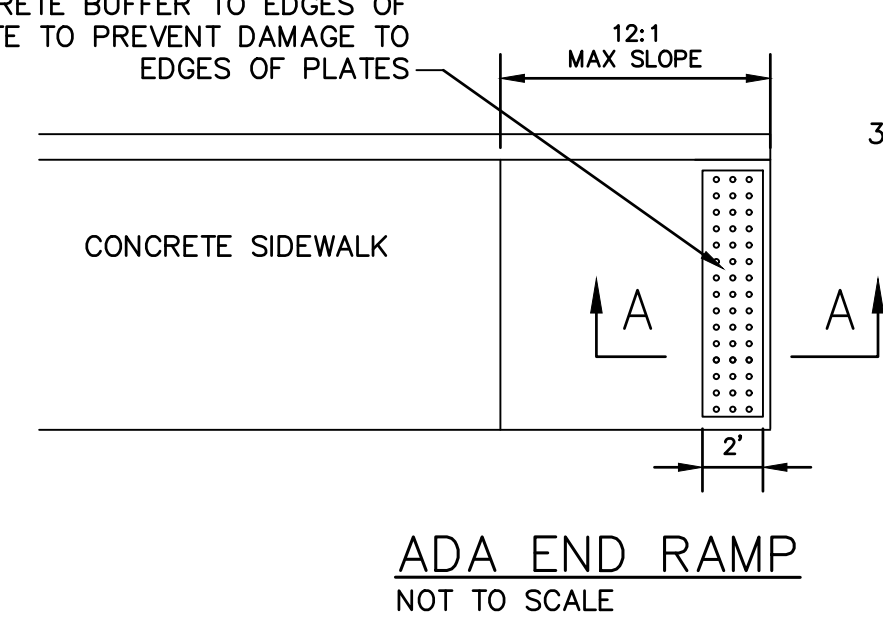
NOTE: THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP LANDING OR CURB RAMP AND THE STREET. DETECTABLE WARNING PANEL LOCATION, LENGTH AND ORIENTATION SHALL BE REVIEWED WITH ENGINEER IN THE FIELD PRIOR TO ORDERING MATERIALS.

**DOMES AND DETECTABLE WARNING DETAILS**  
NOT TO SCALE TO BE INSTALLED AT ADA WALKWAY TIPDOWNS.

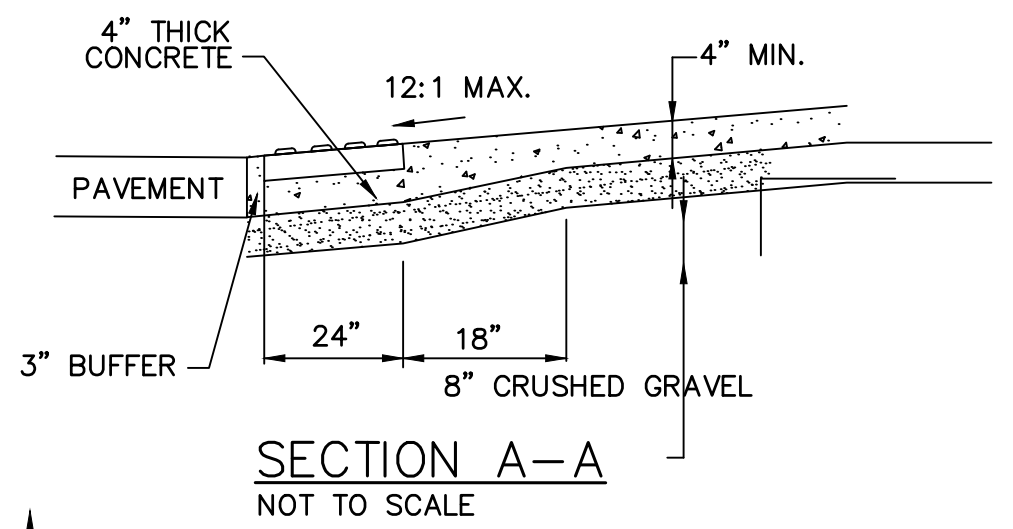


**DOMES SPACING DOME SECTION**  
NOT TO SCALE

CAST IRON TACTILE WARNING SURFACE MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL SET IN 4" MIN. REINFORCED CONCRETE (OR AS DIRECTED). PROVIDE AS SHOWN ON GENERAL PLANS PROVIDE AT LEAST 3" CONCRETE BUFFER TO EDGES OF CONCRETE TO PREVENT DAMAGE TO EDGES OF PLATES

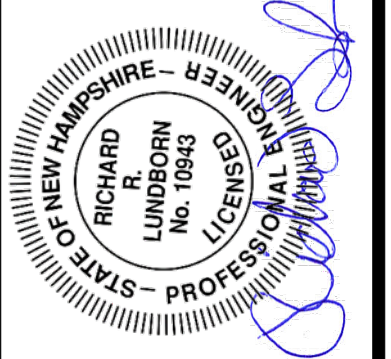


**ADA END RAMP**  
NOT TO SCALE



**SECTION A-A**  
NOT TO SCALE

NO.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAD
2	5/20/2019	TAC SUBMITTAL	JVA/DAD



SCALE:	HORIZ.: NTS
	VERT.: NTS
DATUM:	HORIZ.: NTS
	VERT.: NTS

**FUSS & O'NEILL**  
UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
www.fandoc.com

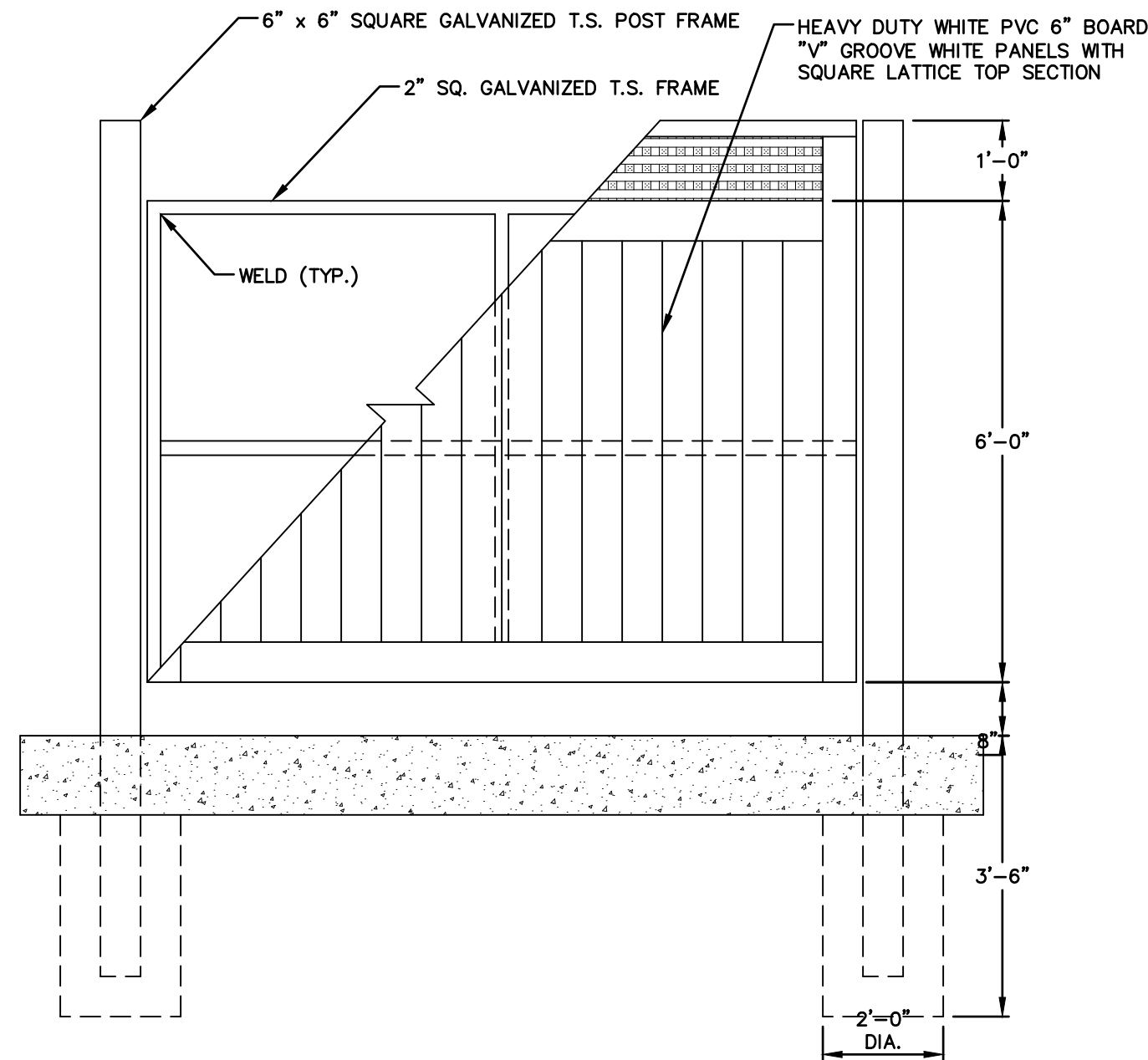
CATE STREET DEVELOPMENT, LLC  
**SITE DETAILS**  
CATE STREET/ WEST END YARDS  
PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
DATE: 05/20/2019

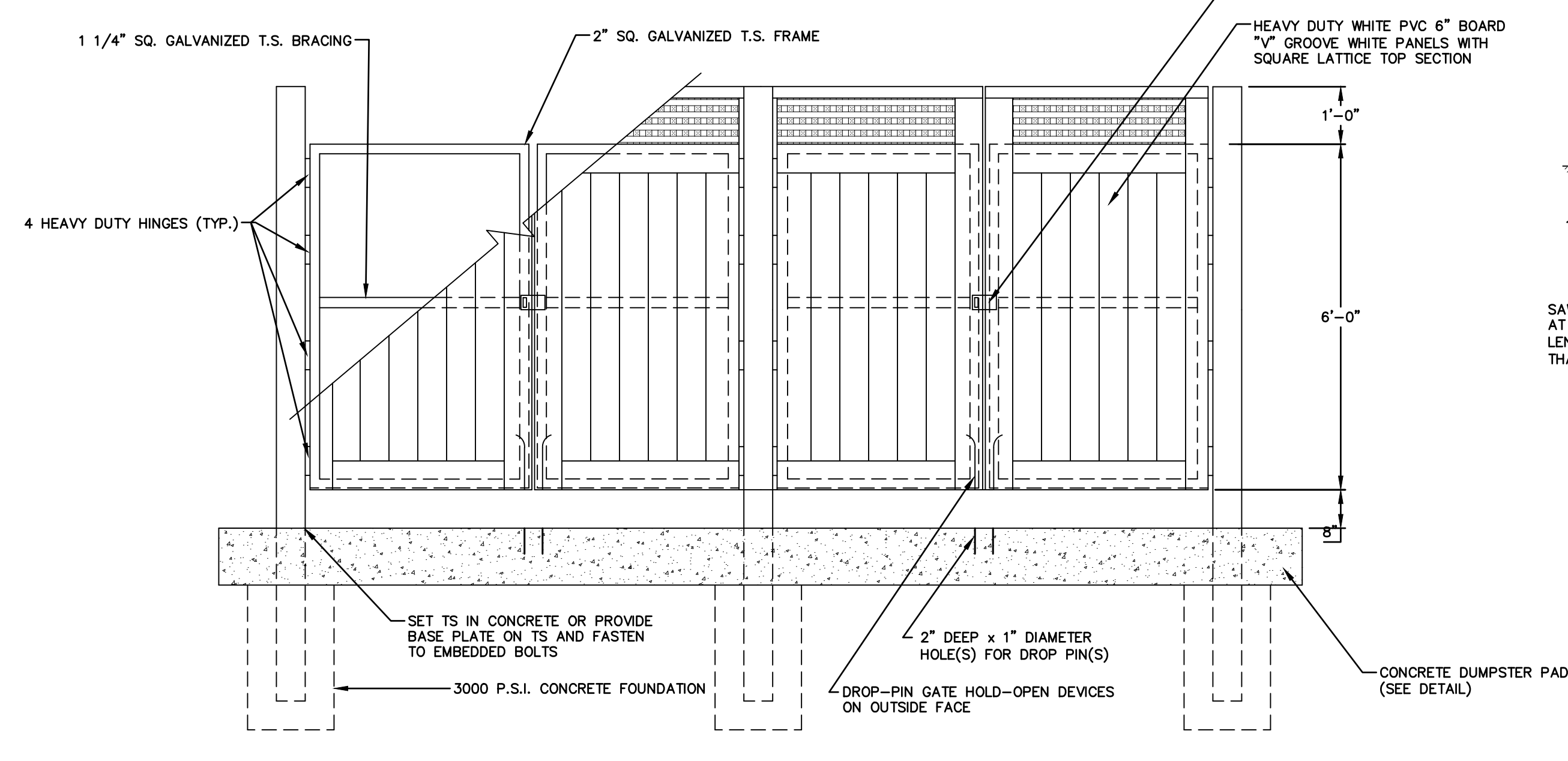
**CD-550**

File Path: F:\20180317A10\CH\3\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-550-SITE Plotted: Mon, May 20, 2019 - 3:00 PM User: ddugal  
MS VIEW: LAYER STATE: PLOTTER: DWG TO PDF-PC3 CTB File: FO.STB

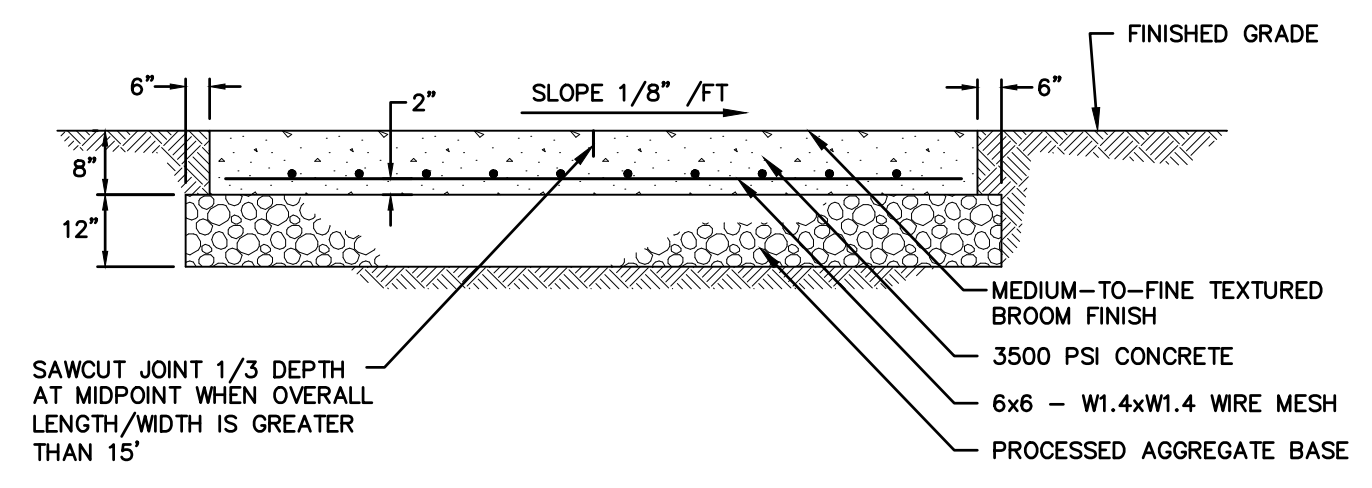
File Path: F:\P20180317A10\CH03\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-551-SITE Plotted: Mon, May 20, 2019 - 3:00 PM User: ddugal  
 MS VIEW: PLOTTER: DWG TO PDF-PC3 CTB File: FO-STB



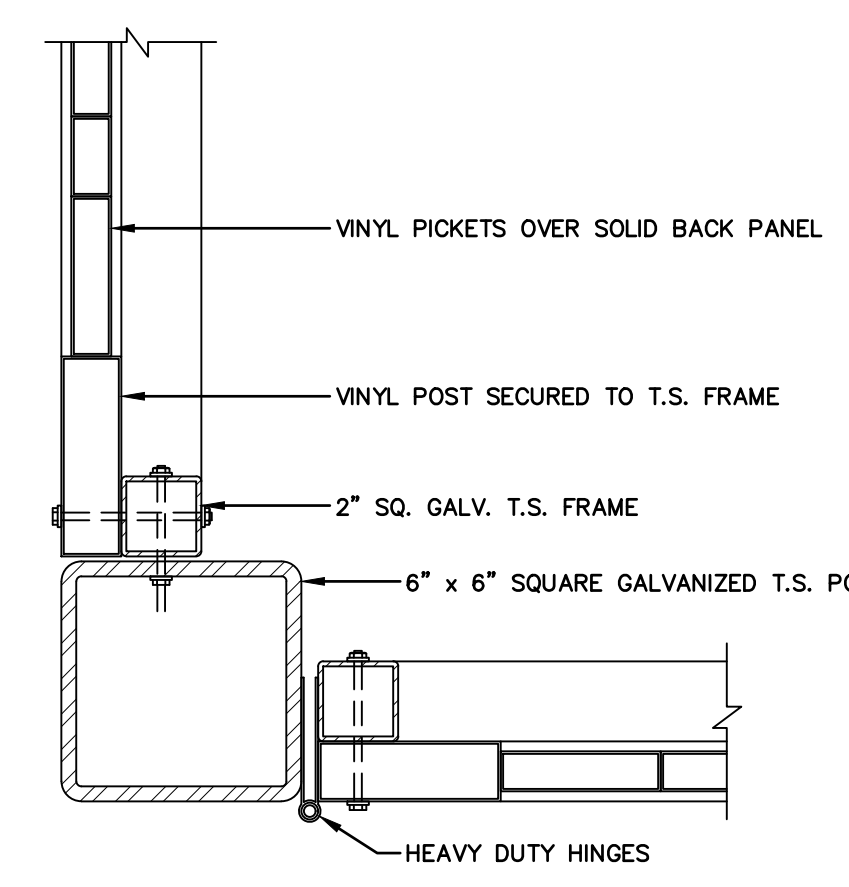
SIDE ELEVATION



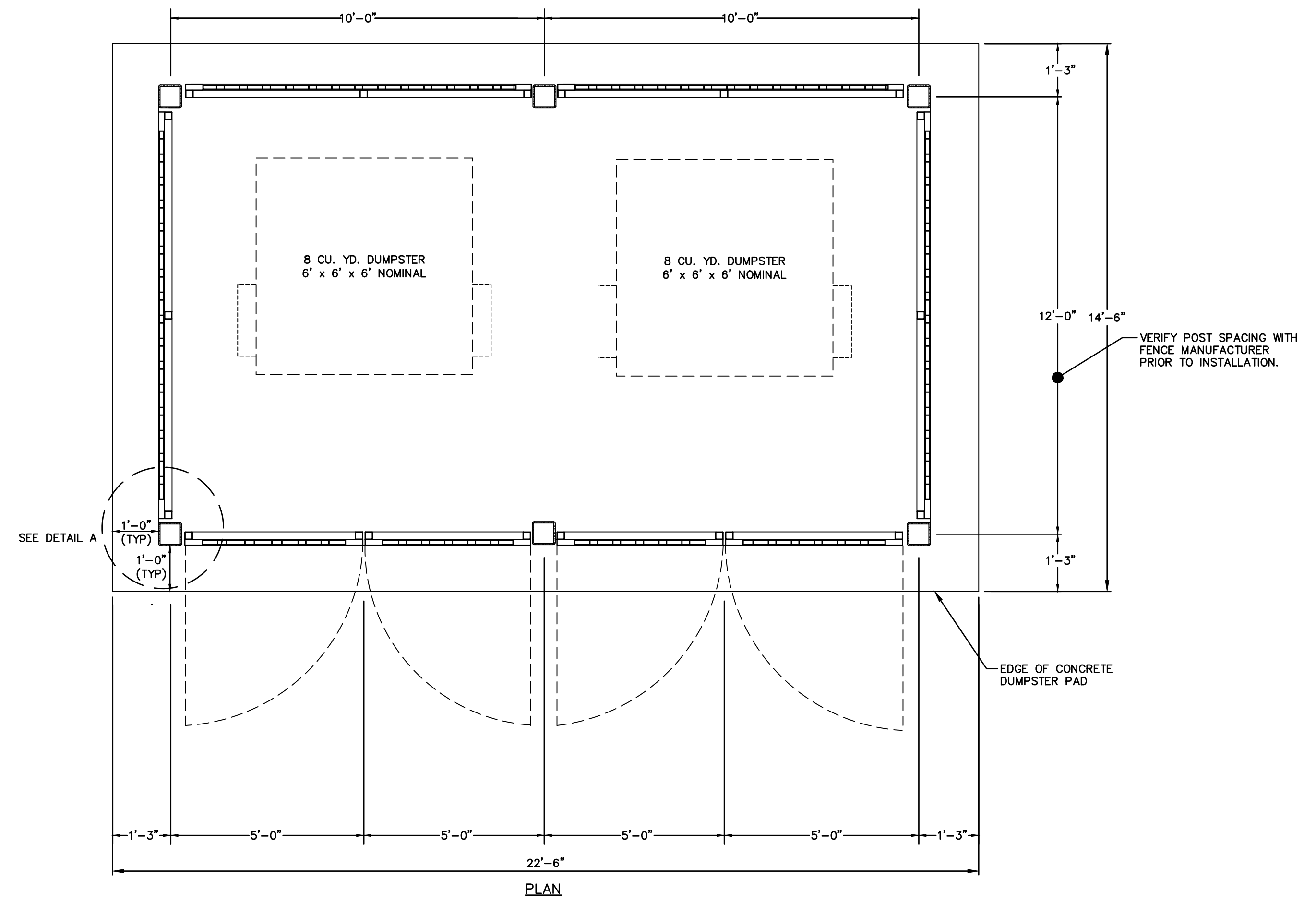
FRONT ELEVATION



CONCRETE DUMPSTER PAD  
NOT TO SCALE



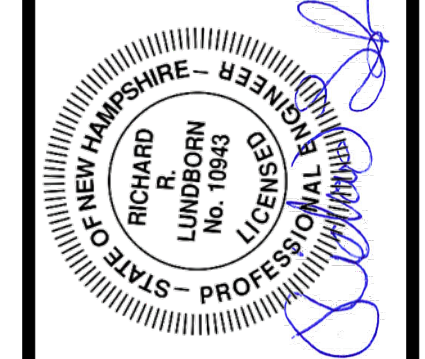
DETAIL A



PLAN

**DOUBLE DUMPSTER ENCLOSURE**  
SCALE: N.T.S.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL



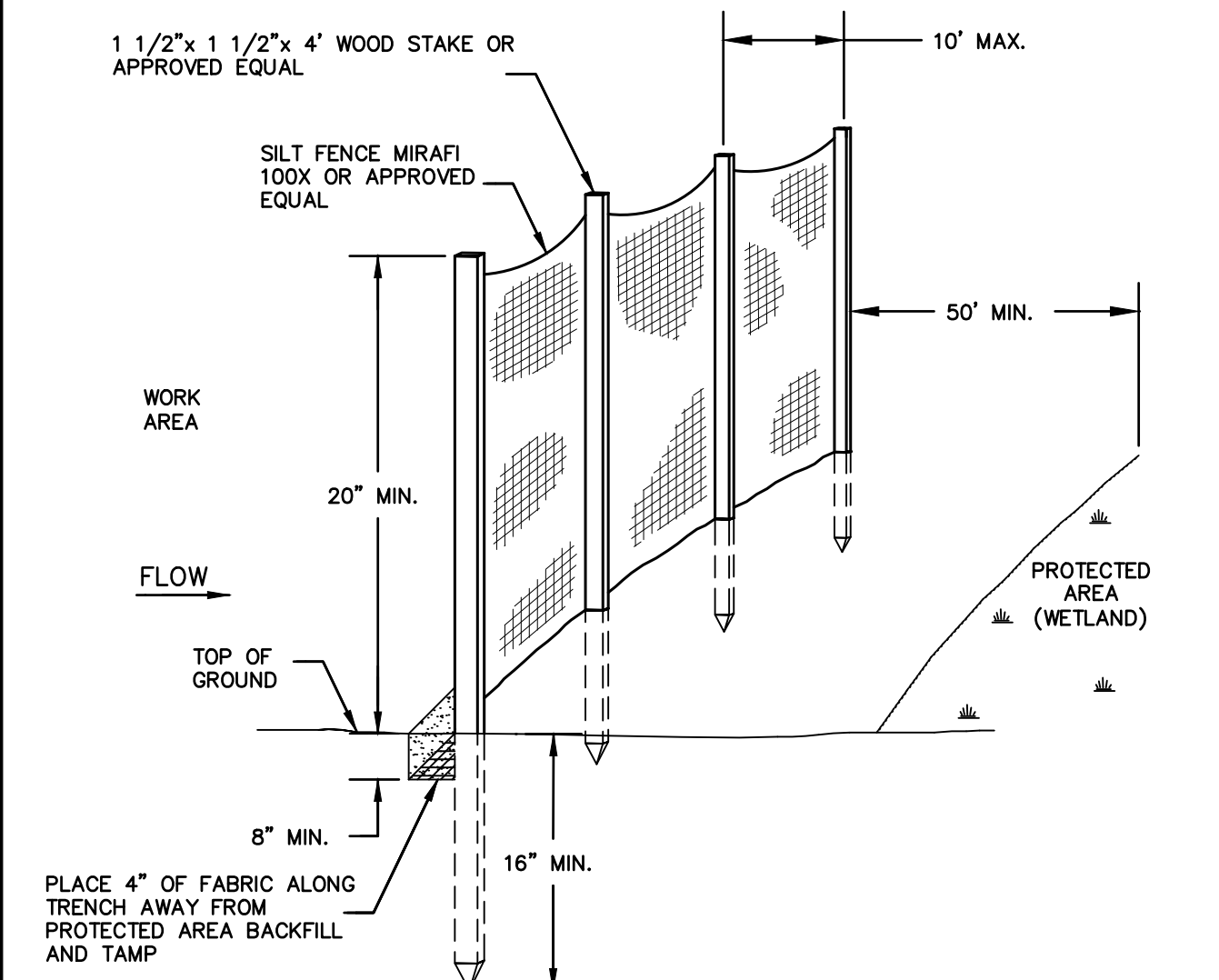
SCALE:	HORIZ.: NTS	VERT.: NTS
DATUM:	HORIZ.:	VERT.:
GRAPHIC SCALE		

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.0609  
 www.fandoc.com

CATE STREET DEVELOPMENT, LLC  
 SITE DETAILS  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

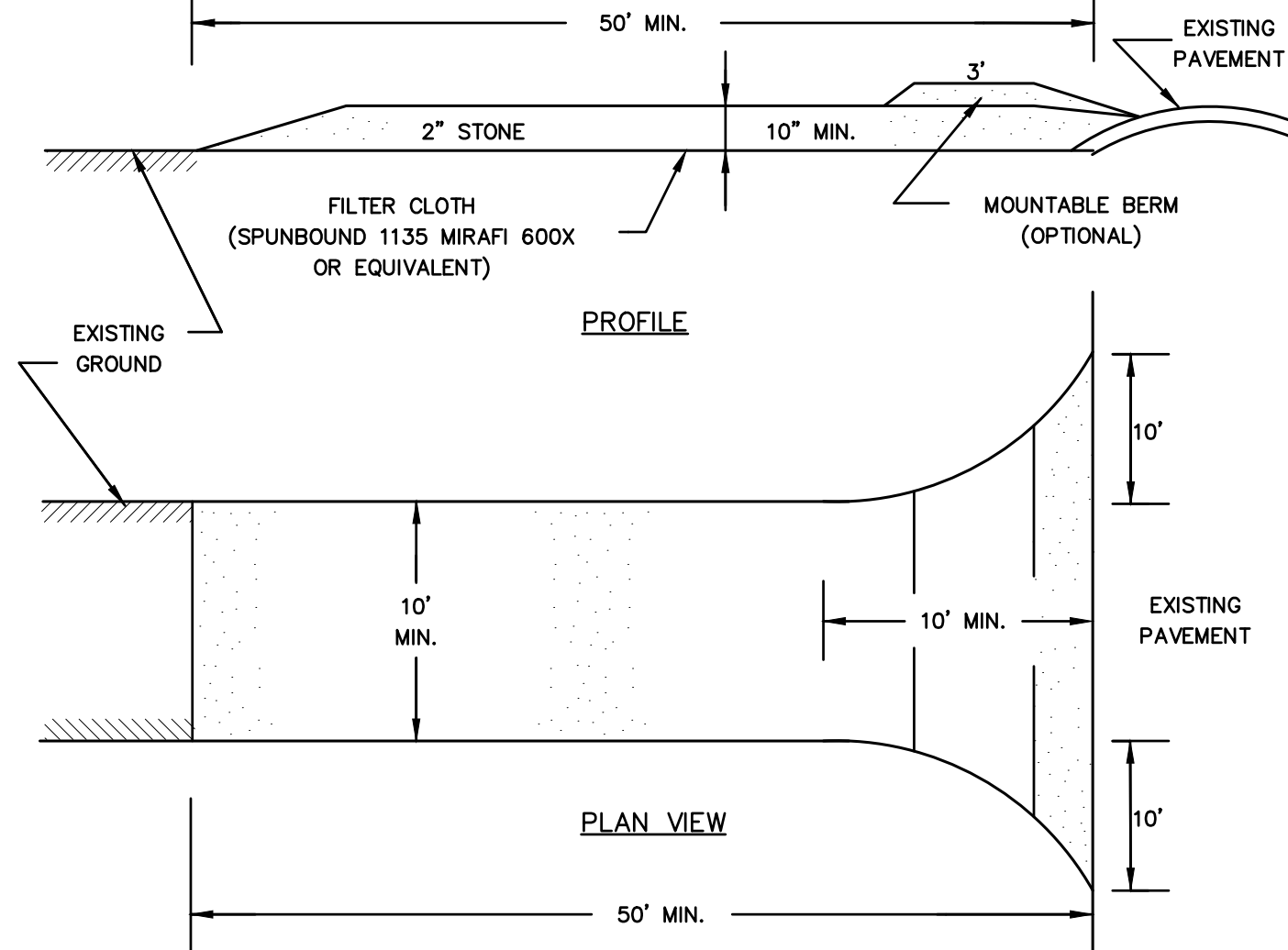
**CD-551**



- MAINTENANCE REQUIREMENTS:**
- FENCES SHOULD BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS;
  - SEDIMENT DEPOSITION SHOULD BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE SILT FENCE.
  - SILT FENCES SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHOULD BE REPLACED WITH A TEMPORARY CHECK DAM.
  - SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY; THE FABRIC SHOULD BE REPLACED PROMPTLY.
  - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE PREPARED AND SEEDED.
  - IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
  - SILT FENCES HAVE A USEFUL LIFE OF ONE SEASON. ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHOULD BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.

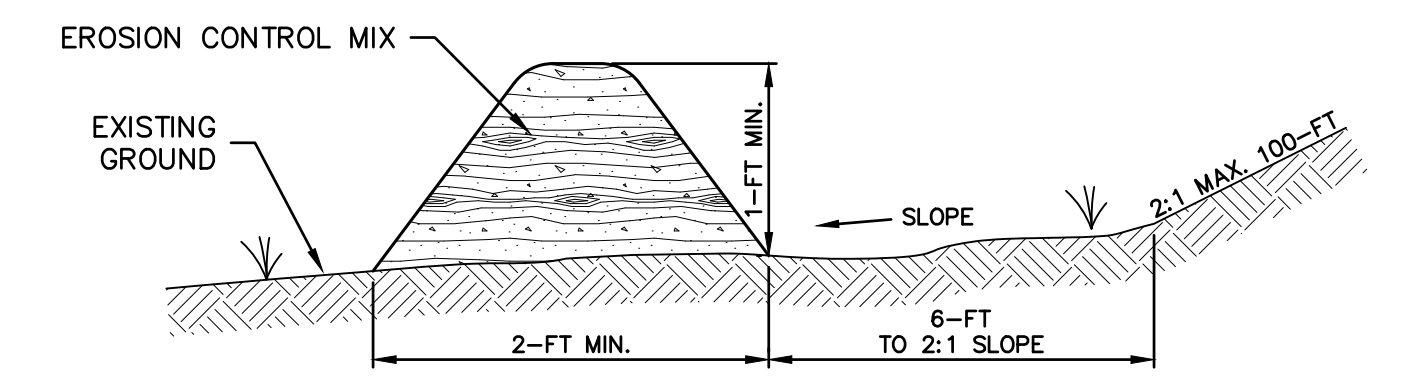
- CONSTRUCTION SPECIFICATIONS:**
- FENCES SHOULD BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE FENCE. SEDIMENT BARRIERS SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
  - THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHOULD BE LESS THAN 1A ACRE PER 100 LINEAR FEET OF FENCE;
  - THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET;
  - THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1;
  - FENCES SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND A. THE ENDS OF THE FENCE SHOULD BE FLARED UPSLOPE.  
 B. THE FABRIC SHOULD BE EMBEDDED A MINIMUM OF 8 INCHES IN DEPTH AND 4 INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FABRIC SHOULD BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE;  
 C. THE SOIL SHOULD BE COMPACTED OVER THE EMBEDDED FABRIC;  
 D. SUPPORT POSTS SHOULD BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET.  
 E. ADJOINING SECTIONS OF THE FENCE SHOULD BE OVERLAPPED BY A MINIMUM OF 6 INCHES (24 INCHES IS PREFERRED), FOLDED AND STAPLED TO A SUPPORT POST. IF METAL POSTS ARE USED, FABRIC SHOULD BE WIRE-TIED DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
  - SILT FENCING SHOULD NOT BE STAPLED OR NAILED TO TREES.
  - THE FILTER FABRIC SHOULD BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHOULD BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
  - THE FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
  - POSTS FOR SILT FENCES SHOULD BE EITHER 4-INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHOULD HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS SHOULD BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRIC.
  - THE HEIGHT OF A SILT FENCE SHOULD NOT EXCEED 36 INCHES AS HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
  - THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHOULD BE SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED.
  - A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
  - POST SPACING SHOULD NOT EXCEED 6 FEET.
  - A TRENCH SHOULD BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
  - THE STANDARD STRENGTH OF FILTER FABRIC SHOULD BE STAPLED OR WIRED TO THE POST, AND 8 INCHES OF THE FABRIC SHOULD BE EXTENDED INTO THE TRENCH. THE FABRIC SHOULD NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
  - THE TRENCH SHOULD BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
  - SILT FENCE MAY BE INSTALLED BY "SLICING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLICING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "PLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOIL. THE SLICING METHOD MINIMALLY DISRUPTS THE SOIL UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
  - SILT FENCES SHOULD BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
  - THE ENDS OF THE FENCE SHOULD BE TURNED UPHILL.
  - SILT FENCES PLACED AT THE TOE OF A SLOPE SHOULD BE SET AT LEAST 6 FEET FROM THE TOE M ALLOW SPACE FOR SHALLOW PONDING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
  - SILT FENCES SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

**SILT FENCE BARRIER**  
 NOT TO SCALE



- MAINTENANCE REQUIREMENTS:**
- WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHOULD BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED.
  - THE CONTRACTOR SHOULD SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
  - WHEN WHEEL WASHING IS REQUIRED, IT SHOULD BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.
- CONSTRUCTION SPECIFICATIONS:**
- THE MINIMUM STONE USED SHOULD BE 3-INCH CRUSHED STONE.
  - THE MINIMUM LENGTH OF THE PAD SHOULD BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
  - THE PAD SHOULD BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
  - THE PAD SHOULD SLOPE AWAY FROM THE EXISTING ROADWAY.
  - THE PAD SHOULD BE AT LEAST 6 INCHES THICK.
  - THE GEOTEXTILE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
  - THE PAD SHOULD BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
  - NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

**USDA-SCS STABILIZED CONSTRUCTION ENTRANCE**  
 NOT TO SCALE



**EROSION CONTROL MIX BERM**  
**CROSS SECTION**  
 NOT TO SCALE

- MAINTENANCE REQUIREMENTS:**
- EROSION CONTROL MIX BERMS SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
  - EROSION CONTROL MIX BERMS SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM.
  - IF THERE ARE SIGNS OF BREACHING OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, THE EROSION CONTROL MIX BERMS SHOULD BE REPLACED WITH OTHER MEASURES TO INTERCEPT AND TRAP SEDIMENT (SUCH AS A DIVERSION BERM DIRECTING RUNOFF TO A SEDIMENT TRAP OR BASIN).
  - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT.
  - SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD (1/3) OF THE HEIGHT OF THE BARRIER.
  - EROSION CONTROL MIX BERMS SHOULD BE RESHAPED OR REAPPLIED AS NEEDED.
  - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

- CONSTRUCTION SPECIFICATIONS:**
- EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF OF THE PROJECT SITE.
  - EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS.
  - WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
  - COMPOSITION OF THE EROSION CONTROL MIX SHOULD BE AS FOLLOWS:  
 A. EROSION CONTROL MIX SHALL BE A WELL GRADED MIXTURE OF PARTICLE SIZES FREE OF REFUSE, PHYSICAL CONTAMINANTS, MATERIAL TOXIC TO PLANT GROWTH AND MAY NOT CONTAIN ROCKS LESS THAN 4-INCHES IN DIAMETER.  
 B. ORGANIC MATTER = 25-65% DRY WEIGHT BASIS  
 C. PARTICLES PASSING BY WEIGHT:  

SCREEN:	PASSING BY WEIGHT:
3-INCH	100%
1-INCH	90-100%
3/4-INCH	70-100%
1/4-INCH	30-75%

 D. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.  
 E. THE MIX SHOULD CONTAIN NO SILTS, CLAYS OR FINE SANDS.  
 F. SOLUBLE SALTS CONTENT < 4.0 mmhos/cm  
 G. pH OF THE MIX SHOULD BE BETWEEN 5.0 AND 8.0  
 H. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.  
 I. IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.  
 J. THE BARRIER MUST BE A MINIMUM OF 12-INCHES TALL AS MEASURED ON THE UPHILL SIDE OF THE BARRIER.  
 K. THE BARRIER MUST BE A MINIMUM OF 2-FT WIDE.

- CONTINUOUS CONTAINED BERM (ALTERNATIVE):**
- AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINMENT AND STABILITY TO A BERM OF EROSION CONTROL MIX.
  - IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.
  - INSTALLATION OF CONTINUOUS CONTAINED BERMS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

**EROSION CONTROL MIX BERM DETAIL**  
 NOT TO SCALE

**WINTER STABILIZATION & CONSTRUCTION PRACTICES:**

- MAINTENANCE REQUIREMENTS:**
- MAINTENANCE MEASURES SHOULD BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHOULD CONDUCT INSPECTION OF ALL INSTALLED EROSION CONTROL PRACTICES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUED FUNCTION.
  - FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHOULD CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF THE VEGETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH.)

- SPECIFICATIONS:**  
 THE FOLLOWING STABILIZATION TECHNIQUES SHOULD BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 15.
- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO 1-ACRE AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN NBSMM, VOL. 3 AND ELSEWHERE IN THIS PLAN SET, PRIOR TO ANY THAW OR SPRING MELT EVENT. STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
  - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (REFER TO NBSMM, VOL. 3 FOR SPECIFICATION).
  - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15 SHOULD BE SEEDED AND COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET OR WITH A MINIMUM OF 4 INCHES OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
  - ALL STONE COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
  - INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
  - ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (I.E. BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
  - WITHIN 24 HOURS OF STOCKPILING SOIL MATERIALS SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4 INCH LAYER OF EROSION CONTROL MIX. MULCH SHOULD BE RE-ESTABLISHED PRIOR TO ANY RAIN OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100-FT. OF ANY WETLAND OR OTHER WATER RESOURCE AREA.
  - FROZEN MATERIAL (I.E. FROST LAYER REMOVED DURING WINTER CONSTRUCTION) SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION AWAY FROM ANY AREA NEEDING PROTECTION. FROZEN MATERIAL STOCKPILES CAN MELT IN SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO HIGH SOIL MOISTURE CONTENT.
  - INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
  - ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED BY SEPTEMBER 1. ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS AS DETERMINED BY A PROFESSIONAL ENGINEER. IF STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
  - ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
  - AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION HAS STOPPED FOR THE WINTER SHOULD BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF SAND AND GRAVEL WITH A GRADATION THAT IS LESS THAN 12% OF THE SAND PORTION, OR MATERIAL PASSING THE NUMBER 4 SIEVE, BY WEIGHT, PASSES THE NUMBER 200 SIEVE.
  - SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEEDMENT OF THESE BARRIERS.

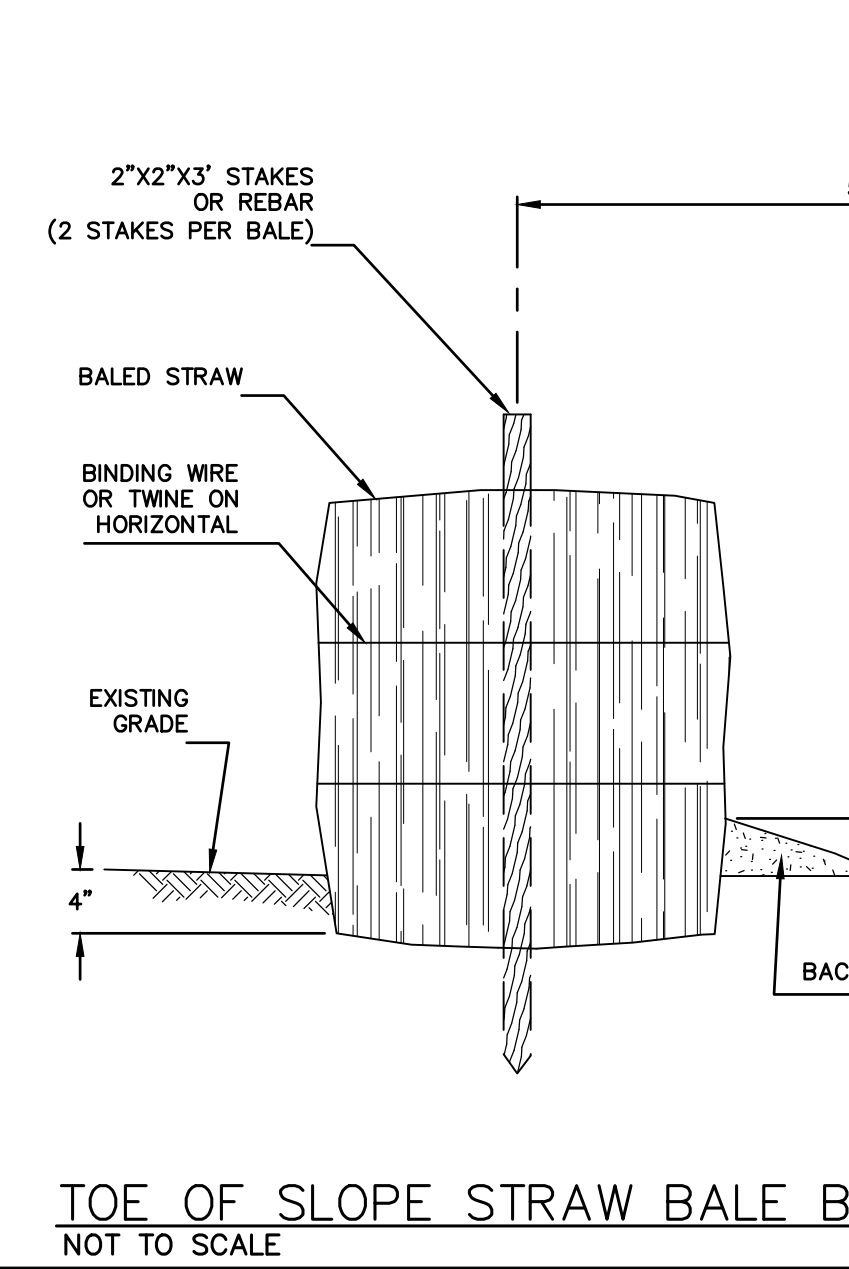
- DUST CONTROL PRACTICES:**
- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
  - WATER APPLICATION:**  
 A) MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.  
 B) AVOID EXCESSIVE APPLICATION OF WATER THAT WOULD RESULT IN MOBILIZING SEDIMENT AND SUBSEQUENT DEPOSITION IN NATURAL WATERBODIES.
  - STONE APPLICATION:**  
 A) COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.  
 B) IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE.
  - REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (I.E. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

**DUST CONTROL PRACTICES:**

- INVASIVE SPECIES NOTE:**
- THE CONTRACTOR SHALL TAKE STEPS TO PREVENT THE SPREAD OF INVASIVE PLANT, INSECT, AND FUNGAL SPECIES BY MEETING THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES. [http://encourc.state.nh.us/rules/state\\_agencies/agr3800.html](http://encourc.state.nh.us/rules/state_agencies/agr3800.html)

**INVASIVE SPECIES NOTE:**

THE CONTRACTOR SHALL TAKE STEPS TO PREVENT THE SPREAD OF INVASIVE PLANT, INSECT, AND FUNGAL SPECIES BY MEETING THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES. [http://encourc.state.nh.us/rules/state\\_agencies/agr3800.html](http://encourc.state.nh.us/rules/state_agencies/agr3800.html)



**TOE OF SLOPE STRAW BALE BARRIER**  
 NOT TO SCALE

**GENERAL CONSTRUCTION PHASING:**

- 1. STABILIZATION:**  
 SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
- IN AREAS THAT WILL NOT BE PAVED:  
 i) A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;  
 ii) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;  
 iii) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
  - IN AREAS TO BE PAVED:  
 i) BASE COURSE GRAVELS HAVE BEEN INSTALLED.

- 2. TEMPORARY STABILIZATION:**  
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- 3. PERMANENT STABILIZATION:**  
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- 4. MAXIMUM AREA OF DISTURBANCE:**  
 THE AREA OF UNSTABILIZED SOIL SHOULD NOT EXCEED 5 ACRES AT ANY TIME.
- 5. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.**
- FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
  - EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.

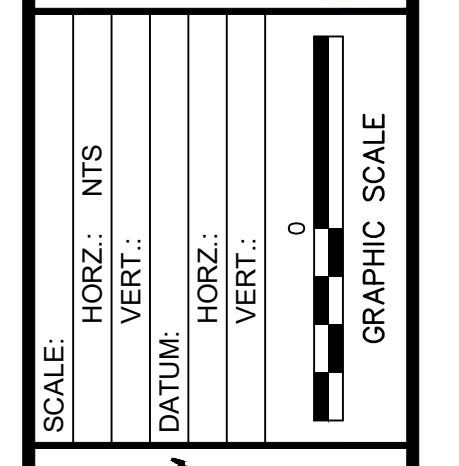
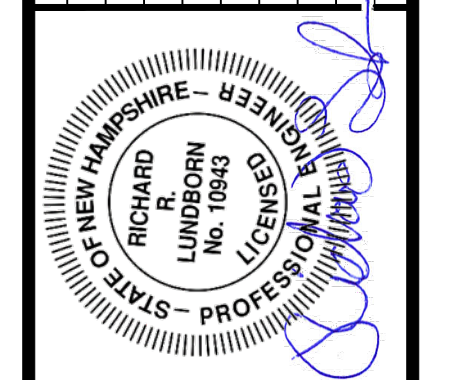
- 6. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHOULD BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET CE-101.**
- 7. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHOULD BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET CE-101.**
- 8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHOULD BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.**
- 9. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".**
- 10. SLOPES SHOULD NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.**
- 11. AREAS TO BE FILLED SHOULD BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.**
- 12. AREAS SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHOULD BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.**
- 13. ALL FILLS SHOULD BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHOULD BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.**
- 14. IN GENERAL, FILLS SHOULD BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHOULD REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.**
- 15. ANY AND ALL FILL MATERIAL SHOULD BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.**
- 16. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHOULD BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.**
- 17. THE OUTER FACE OF THE FILL SLOPE SHOULD BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NBSMM, VOL.3.**
- 18. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.**
- 19. USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHOULD BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.**
- 20. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHOULD BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHOULD BE REVISED TO PROPERLY MANAGE THE CONDITION.**
- 21. STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.**
- 22. ALL GRADED AREAS SHOULD BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.**

**SOIL STOCKPILE PRACTICES:**

- ABOVE NOTES EXCEPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NBSMM, VOL. 3)
- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
  - PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
  - STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NBSMM VOL. 3. TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
  - IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
  - PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.
- PROTECTION OF INACTIVE STOCKPILES:**
- INACTIVE SOIL STOCKPILES SHOULD BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
  - INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHOULD BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHOULD ALSO BE COVERED.
- PROTECTION OF ACTIVE STOCKPILES:**
- ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
  - WHEN A STORM IS PREDICTED, STOCKPILES SHOULD BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

- GENERAL CONSTRUCTION PHASING:**
- STABILIZATION:  
 SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:  
 A) IN AREAS THAT WILL NOT BE PAVED:  
 i) A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;  
 ii) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;  
 iii) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.  
 B) IN AREAS TO BE PAVED:  
 i) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
  - TEMPORARY STABILIZATION:  
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
  - PERMANENT STABILIZATION:  
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
  - MAXIMUM AREA OF DISTURBANCE:  
 THE AREA OF UNSTABILIZED SOIL SHOULD NOT EXCEED 5 ACRES AT ANY TIME.
  - ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.  
 A) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.  
 B) EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
  - ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHOULD BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET CE-101.
  - ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHOULD BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET CE-101.
  - TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHOULD BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
  - STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
  - SLOPES SHOULD NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.
  - AREAS TO BE FILLED SHOULD BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
  - AREAS SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHOULD BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
  - ALL FILLS SHOULD BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHOULD BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
  - IN GENERAL, FILLS SHOULD BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHOULD REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
  - ANY AND ALL FILL MATERIAL SHOULD BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.
  - FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHOULD BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
  - THE OUTER FACE OF THE FILL SLOPE SHOULD BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NBSMM, VOL.3.
  - ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
  - USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHOULD BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
  - SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHOULD BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHOULD BE REVISED TO PROPERLY MANAGE THE CONDITION.
  - STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
  - ALL GRADED AREAS SHOULD BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
- ABOVE NOTES EXCEPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NBSMM, VOL. 3)
- SOIL STOCKPILE PRACTICES:**
- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
  - PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
  - STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NBSMM VOL. 3. TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
  - IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
  - PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.
- PROTECTION OF INACTIVE STOCKPILES:**
- INACTIVE SOIL STOCKPILES SHOULD BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
  - INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHOULD BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHOULD ALSO BE COVERED.
- PROTECTION OF ACTIVE STOCKPILES:**
- ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
  - WHEN A STORM IS PREDICTED, STOCKPILES SHOULD BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRJ
2.	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRJ



**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNESBUNK, MAINE 04043  
 207.563.0669  
 www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
**EROSION CONTROL DETAILS**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH  
 NEW HAMPSHIRE

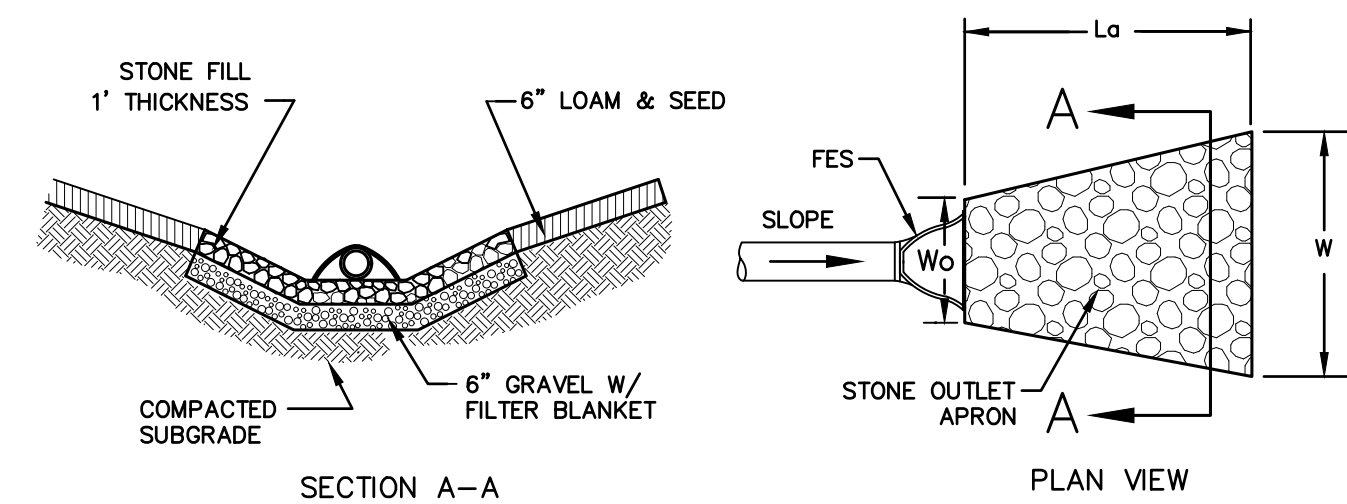
PROJ. No.: 20180317A10  
 DATE: 05/20/2019  
**CD-560**

D10=10" RIP-RAP GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	15 TO 20
85	13 TO 18
50	10 TO 15
15	3 TO 5

APRON DIMENSION TABLE

PIPE OUTLET	W <sub>o</sub>	W	L <sub>a</sub>	T	d50
24" HDPE OUTLET	6.0'	11'	8'	12"	3"



STONE: D50 = 6"  
WELL GRADED WITH SUFFICIENT SAND AND GRAVEL TO FILL THE VOIDS

THE HEIGHT OF THE STRUCTURAL LINING ALONG THE CHANNEL SIDES SHALL BEGIN AT THE ELEVATION EQUAL TO THE TOP OF THE CONDUIT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.

**NOTES:**

- ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.
- THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
- APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.

**CONSTRUCTION SPECIFICATIONS:**

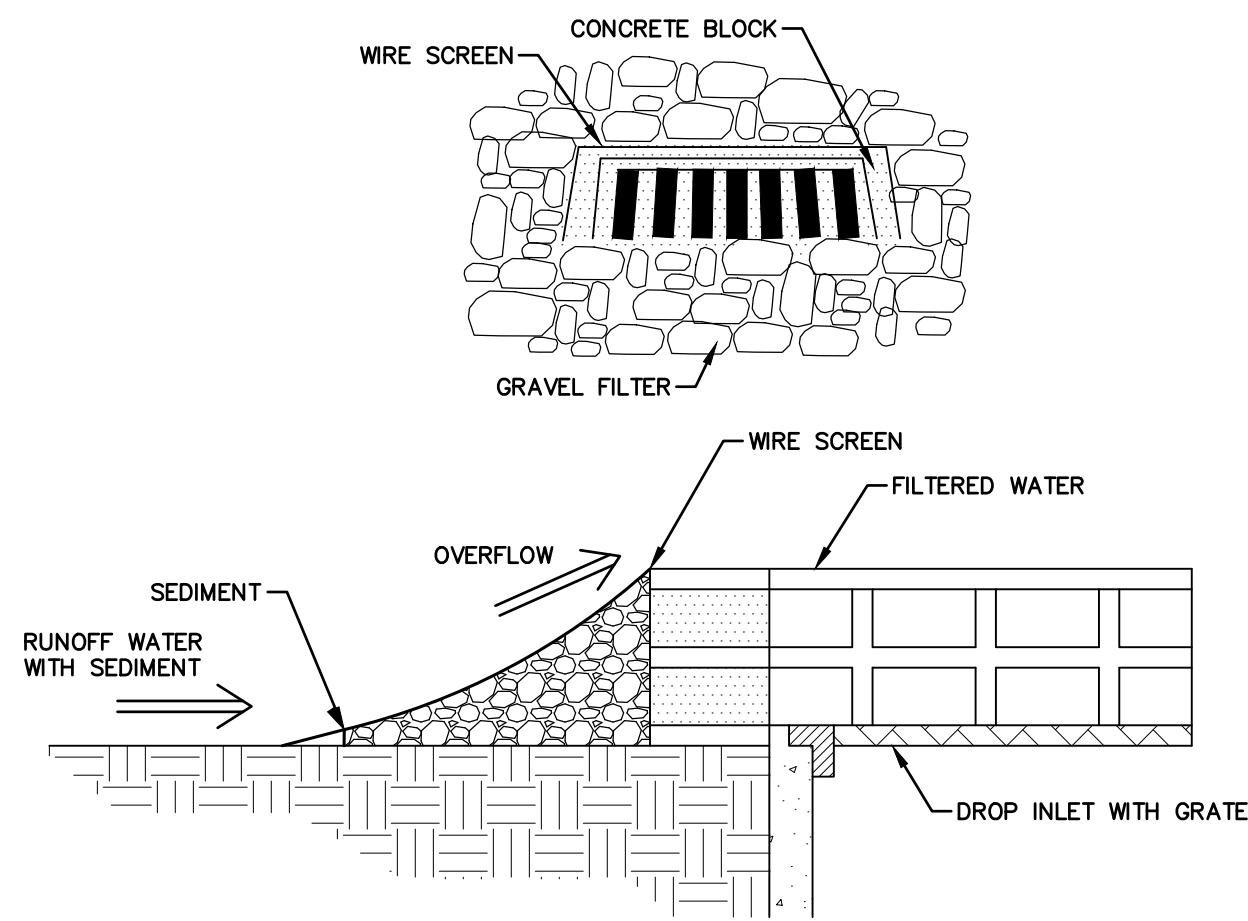
- PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
- MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
- THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
- STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

**MAINTENANCE NOTES:**

- OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
- THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
- THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

**RIP RAP APRON OUTLET PROTECTION**

NOT TO SCALE



**BLOCK AND GRAVEL INLET SEDIMENT FILTER**

NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS:**

- PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4-INCH, 8-INCH AND 12-INCH WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH.
- WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
- STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN ABOVE. STONE GRADATION SHALL BE WELL GRADED WITH THE MAXIMUM STONE SIZE OF 6 INCHES AND MINIMUM STONE SIZE OF 1 INCH.
- IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

**MAINTENANCE NOTES:**

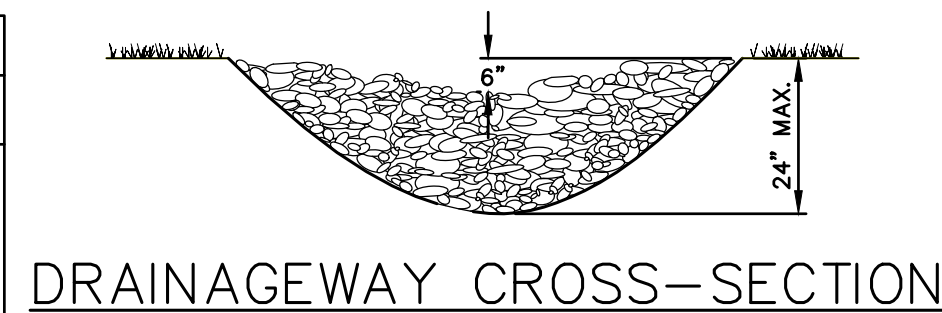
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**SEDIMENTATION CONTROL AT CATCH BASINS**

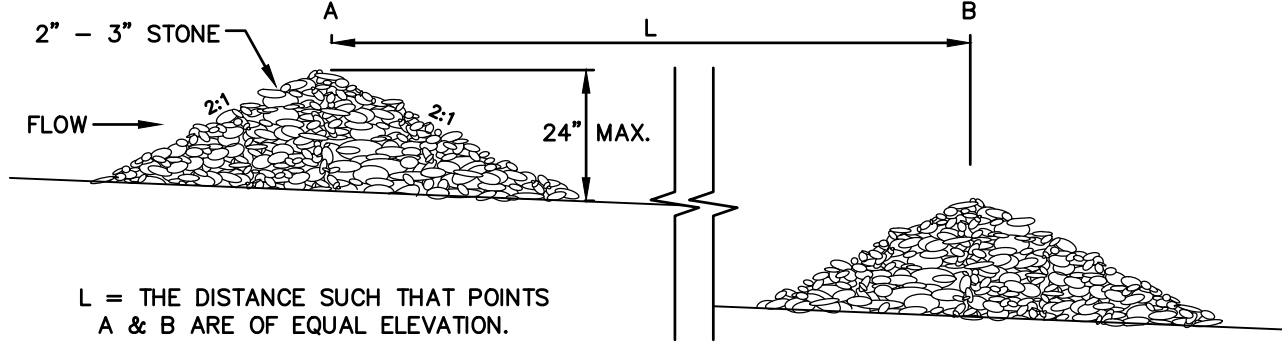
NOT TO SCALE

SPACING BETWEEN CHECK DAMS

SLOPE (FT/FT)	LENGTH (FT)
0.020	75
0.030	50
0.040	37
0.050	30
0.060	25
0.080	19
0.100	15
0.120	13
0.150	10



**DRAINAGEWAY CROSS-SECTION**



L = THE DISTANCE SUCH THAT POINTS A & B ARE OF EQUAL ELEVATION.

**SPACING BETWEEN STONE CHECK DAMS**

**CONSTRUCTION SPECIFICATIONS:**

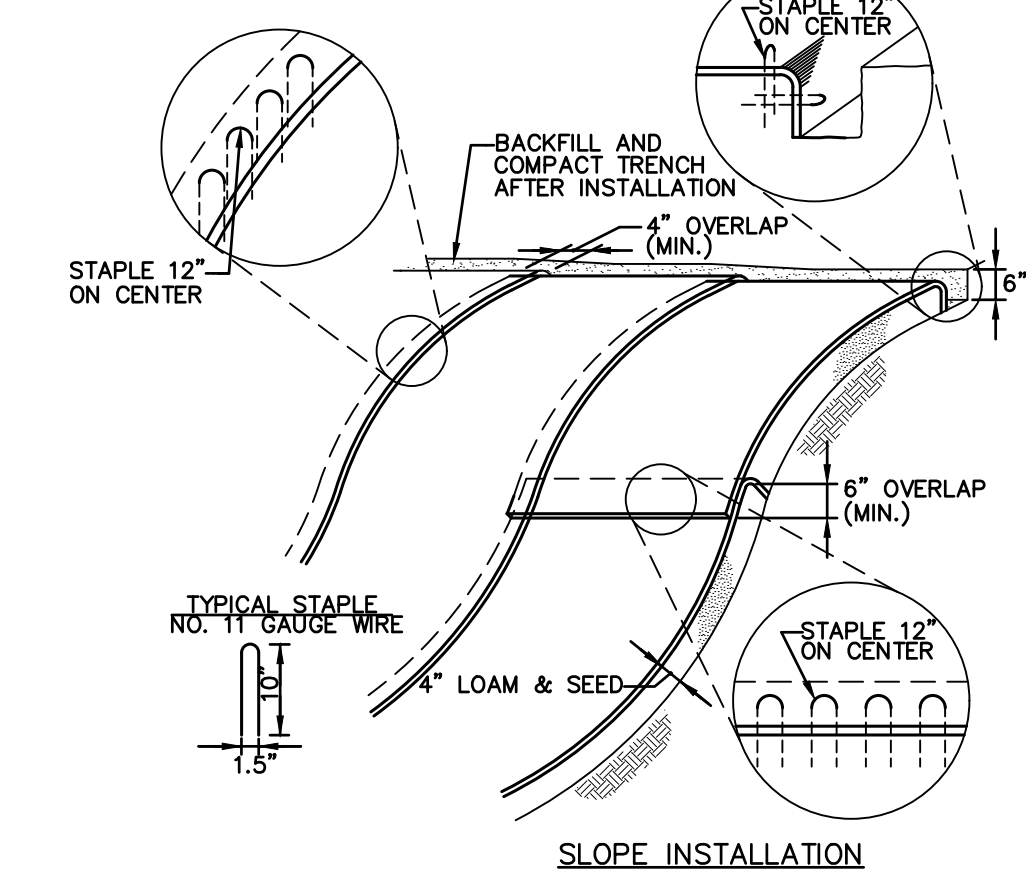
- STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.
- STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

**MAINTENANCE NOTES:**

- TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
- PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
- WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE.

**STONE CHECK DAM INSTALLATION DETAIL**

NOT TO SCALE



**SLOPE INSTALLATION**

**MAINTENANCE REQUIREMENTS:**

- ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
- ANY FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEEDED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.

**CONSTRUCTION SPECIFICATIONS:**

- MANUFACTURER'S INSTALLATION INSTRUCTIONS:
  - PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
  - ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  - THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
  - CONSECUTIVE RECP's SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

**SITE PREPARATION:**

- PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.
- GRADE AND SHAPE AREA IF INSTALLATION.
- REMOVE ALL ROCKS, CLOUDS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
- PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
- INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

**SEEDING:**

- SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEEDED.
- WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

**EROSION CONTROL - BLANKET SLOPE PROTECTION**

NOT TO SCALE

**PERMANENT VEGETATION:**

**SPECIFICATIONS:**

**SITE PREPARATION:**

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHOULD BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHOULD INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

**SEEDBED PREPARATION:**

- WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
- REMOVE FROM THE SURFACE ALL STONES 2INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLOUDS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHOULD BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)\*

\*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 600 LB./ACRE (13.8 LB./1,000-SF)\*

\*LOW PHOSPHATE FERTILIZER (N-P205-K20) OR EQUIVALENT

- FERTILIZER SHOULD BE RESTRICTED TO LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 AND 250-FT FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25-FT OF A SURFACE WATER BODY. THESE ARE THE REQUIREMENTS FOR ANY WATER BODY PROTECTED BY THE COMPREHENSIVE SHORELAND PROTECTION ACT.

**SEEDING:**

- INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER CULTPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
- SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3. AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- AREAS SEEDED BETWEEN MAY 15 AND AUGUST 15 SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.

**HYDROSEEDING:**

- WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
- SLOPES MUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY).
- LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
- SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

**MAINTENANCE REQUIREMENTS:**

- PERMANENT SEEDED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
- SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.
- BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
- AT A MINIMUM 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

**PERMANENT VEGETATION SEEDING RECOMMENDATIONS**

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP TOTAL	2	0.05
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP TOTAL	2	0.05
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP TOTAL	2	0.05
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREeping RED FESCUE	50	1.15
		KENTUCKY BLUEGRASS	50	1.15
		TOTAL	100	2.30

**SOURCES:**

- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
- MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

**TEMPORARY VEGETATION:**

**SPECIFICATIONS:**

**SITE PREPARATION:**

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHOULD BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHOULD INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

**SEEDBED PREPARATION:**

- STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHOULD BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)\*

\*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 600 LB./ACRE (13.8 LB./1,000-SF)\*

\*LOW PHOSPHATE FERTILIZER (N-P205-K20) OR EQUIVALENT

- FERTILIZER SHOULD BE RESTRICTED TO LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 AND 250-FT FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25-FT OF A SURFACE WATER BODY. THESE ARE THE REQUIREMENTS FOR ANY WATER BODY PROTECTED BY THE COMPREHENSIVE SHORELAND PROTECTION ACT.

**SEEDING:**

- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
- TEMPORARY SEED SHOULD TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
- AREAS SEEDED BETWEEN MAY 15 AND AUGUST 15 SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.

**MAINTENANCE REQUIREMENTS:**

- TEMPORARY SEEDING SHOULD BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHOULD BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
- BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHOULD BE IMPLEMENTED.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

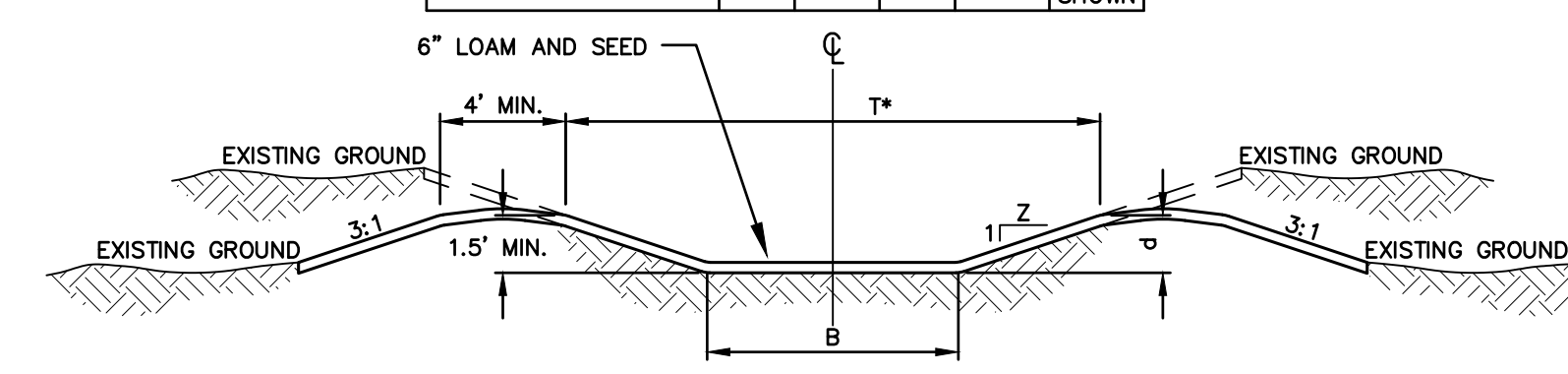
**TEMPORARY VEGETATION SEEDING RECOMMENDATIONS**

SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYEGRASS	40 LBS.	1.0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYEGRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.

SOURCES:  
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1  
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

**SWALE DIMENSION TABLE**

LOCATION	B	d	Z	T	LENGTH
WHERE SHOWN	4-FT	2-FT	3-FT	20-FT	AS SHOWN



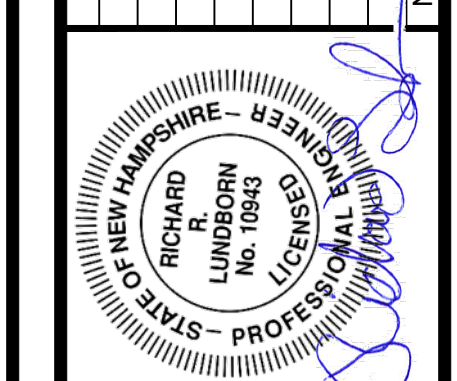
**MAINTENANCE NOTES:**

- THE SWALE(S) SHALL BE MOWED WITH THE REST OF THE SITES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY VEGETATION. DO NOT MOW GRASS IN SWALE(S) TOO SHORT. THIS WILL REDUCE THE SWALES FILTERING ABILITY.
- THE SWALE(S) SHOULD BE FERTILIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION COULD RESULT IN THE SWALE(S) BECOMING A SOURCE OF POLLUTION TO THE SURROUNDING WETLAND AREAS.
- THE SWALE(S) SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

**VEGETATED SWALE DETAIL**

NOT TO SCALE

NO.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAD
2	3/18/2020	TAC SUBMITTAL	JVA/DAD

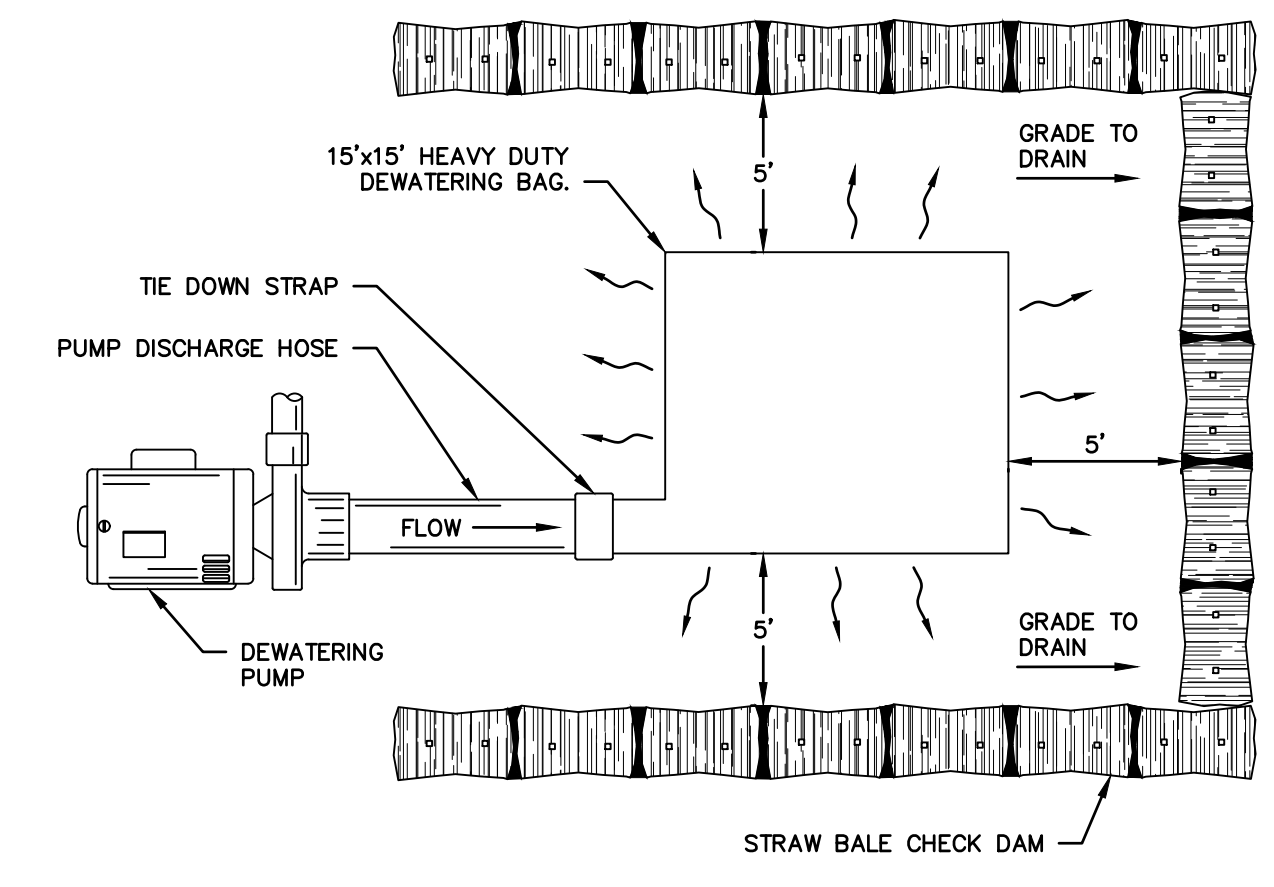


SCALE:	HORIZ: NTS	VERT: 1"=10'	DATUM:	HORIZ: 1"=10'	VERT: 1"=10'
GRAPHIC SCALE					

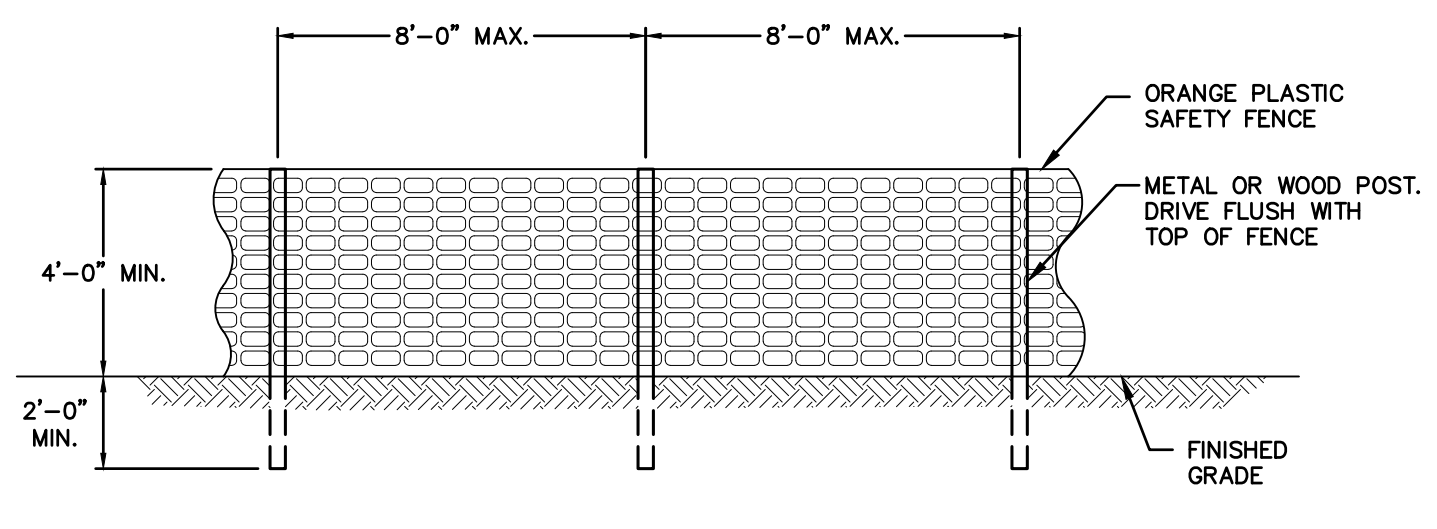
**FUSS & O'NEILL**  
UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
207.563.0669  
www.fandoo.com

CATE STREET DEVELOPMENT, LLC  
DETAILS  
CATE STREET/ WEST END YARDS  
PORTSMOUTH  
NEW HAMPSHIRE

File Path: F:\P20180317A10\CH3\DWG\20180317A10\_DET01-SITE.dwg Layout: CD-562-ECP Plotted: Mon, May 20, 2019 - 3:00 PM User: ddugal  
 MS VIEW: PLOTTER: DWG TO PDF-PC3 CTB File: FO-STB

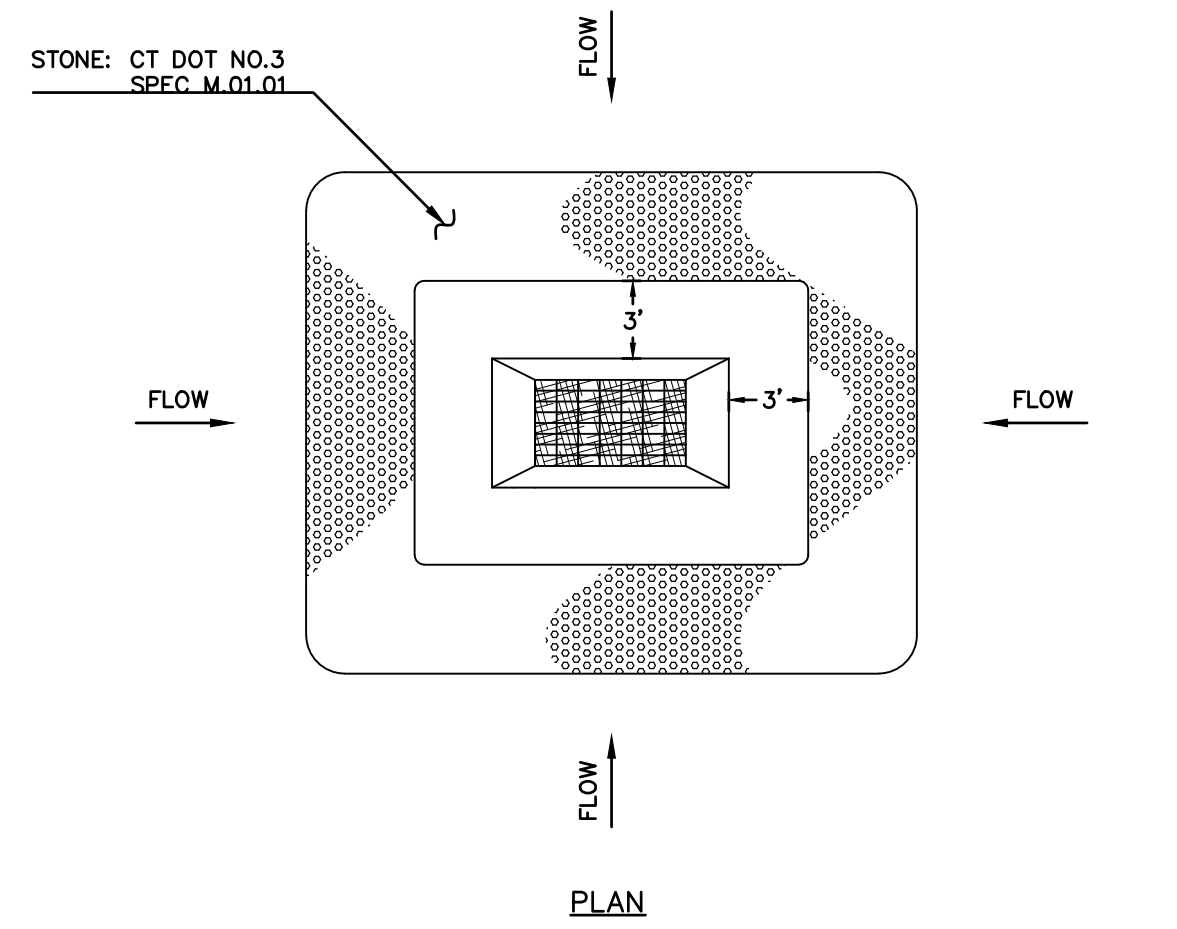


**DEWATERING BAG**  
 NOT TO SCALE

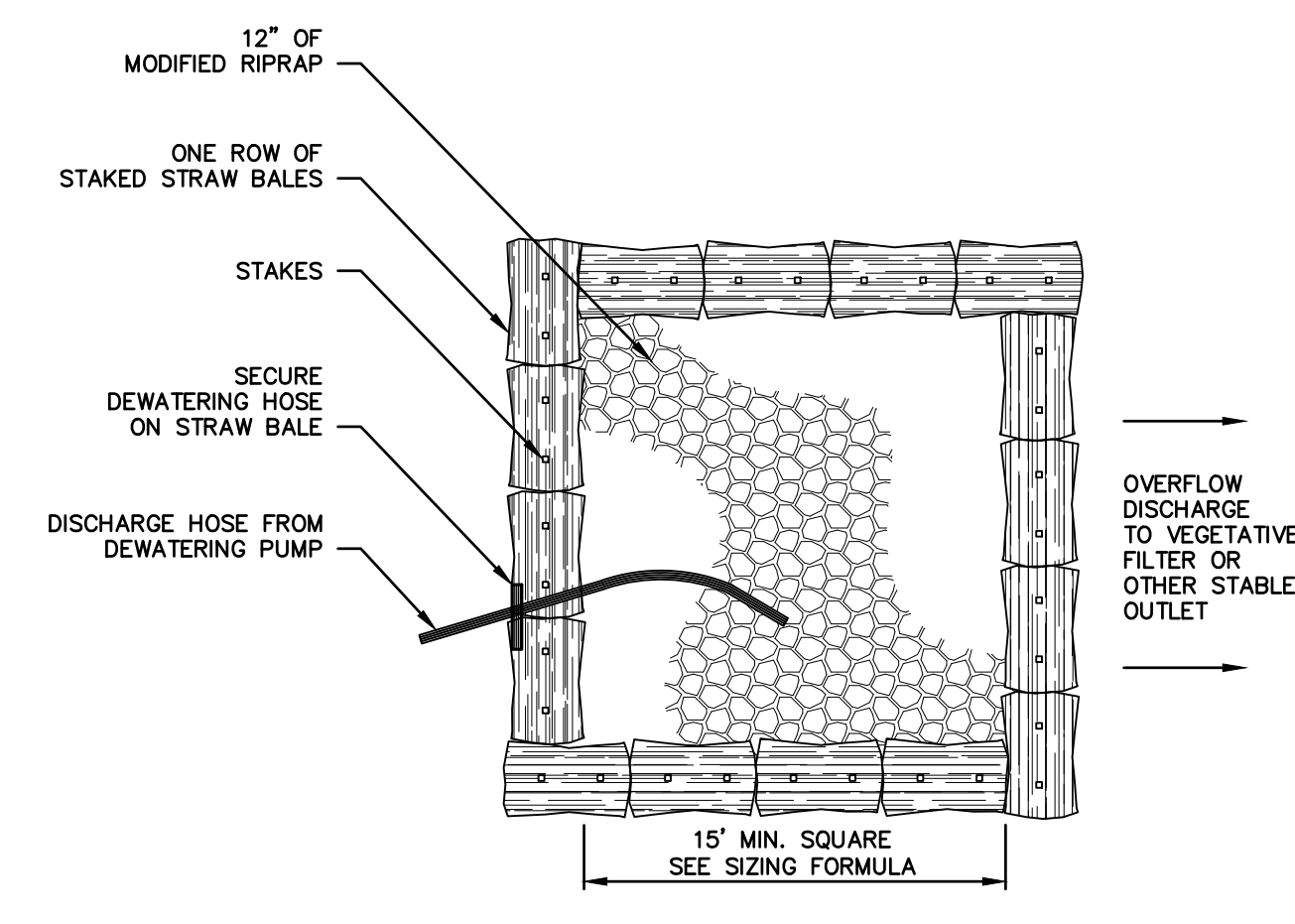


FOR TREE PROTECTION FENCE SHALL BE PLACED AT DRIPLINE OF TREES.

**PROTECTIVE SAFETY FENCE**  
 SCALE: N.T.S.

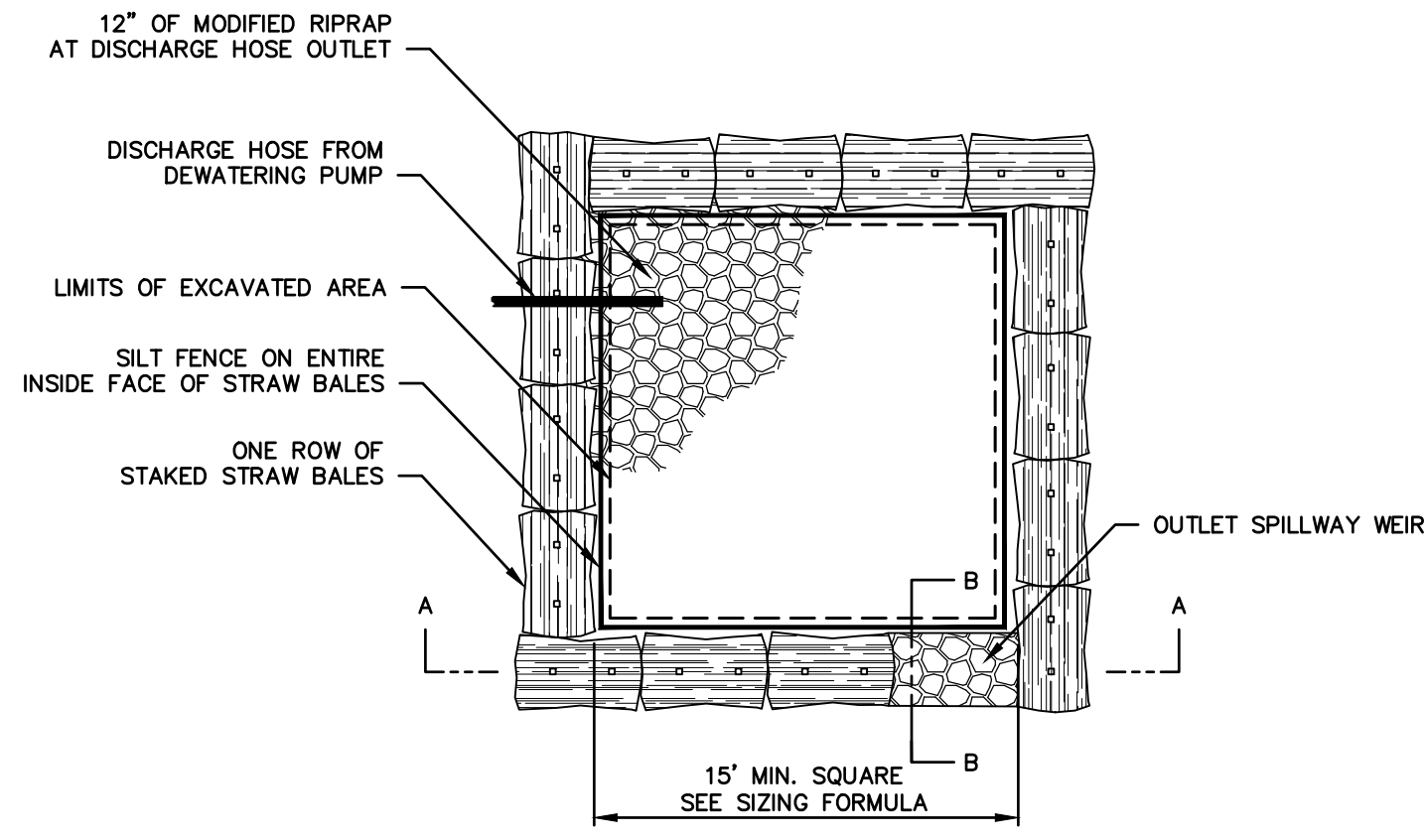


**LOW POINT STONE CHECK DAM**  
 NOT TO SCALE



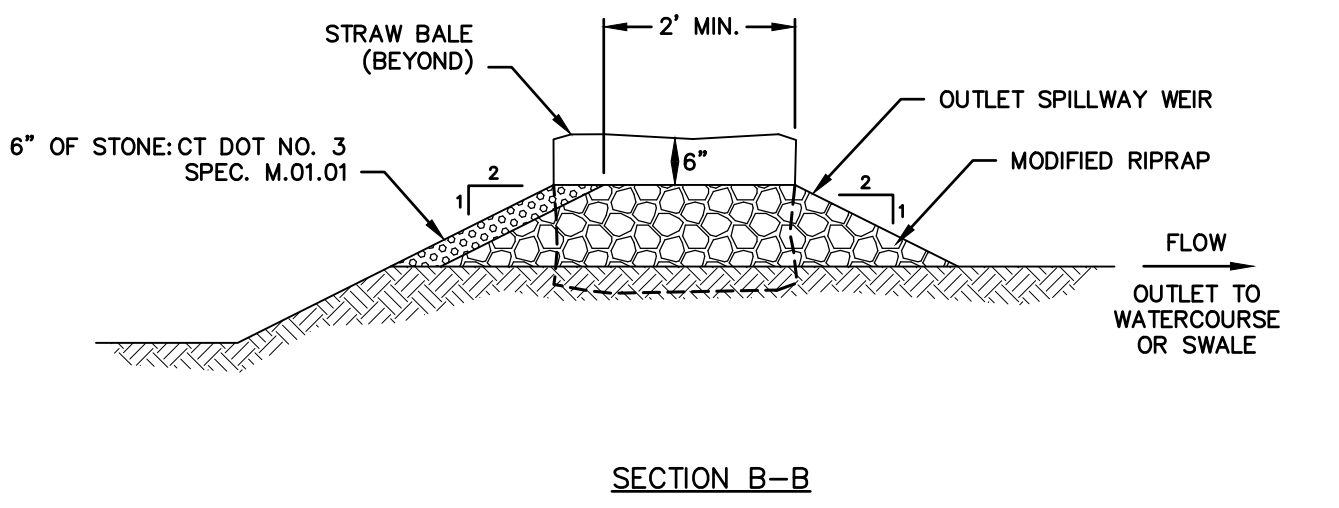
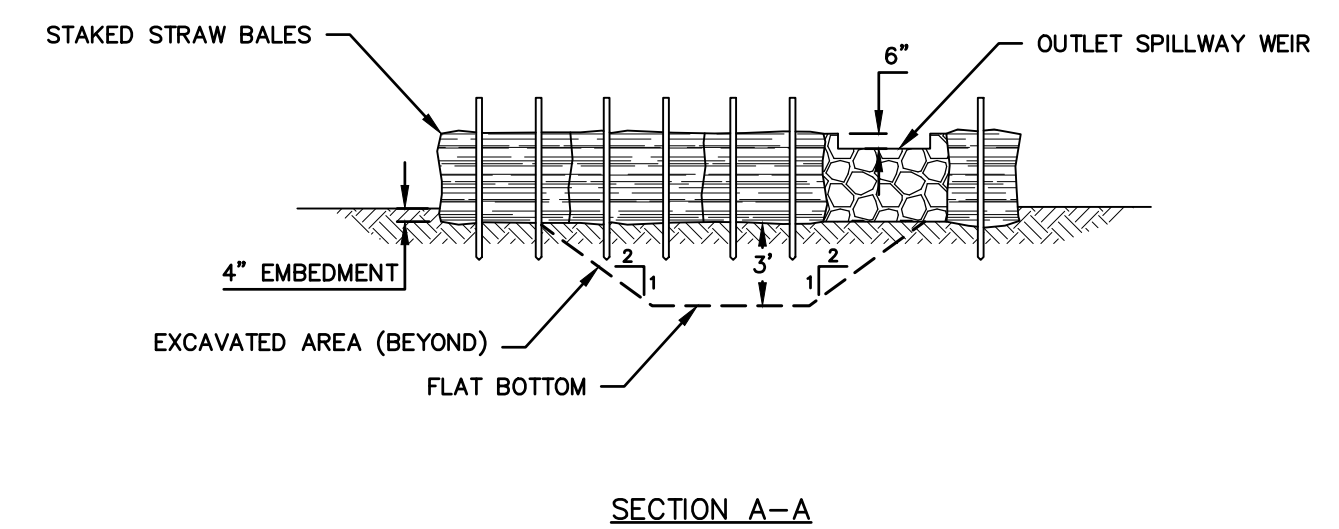
**SIZING FORMULA:**  
 CUBIC FT. OF REQUIRED STORAGE = PUMP DISCHARGE RATE (GPM) x 16

**PUMP SETTLING BASIN TYPE I**  
 NOT TO SCALE

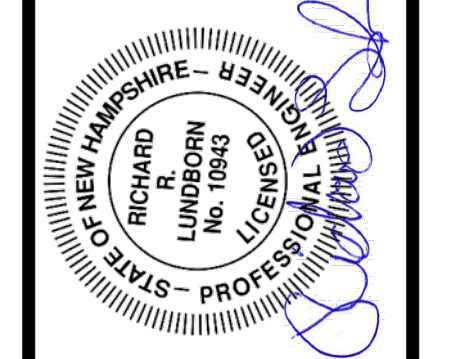


**SIZING FORMULA:**  
 CUBIC FT. OF REQUIRED STORAGE = PUMP DISCHARGE RATE (GPM) x 16

**PUMP SETTLING BASIN TYPE II**  
 NOT TO SCALE



NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL
2	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL



SCALE:	HORIZ.: NTS	VERT.: NTS
DATUM:	HORIZ.: NTS	VERT.: NTS
GRAPHIC SCALE		

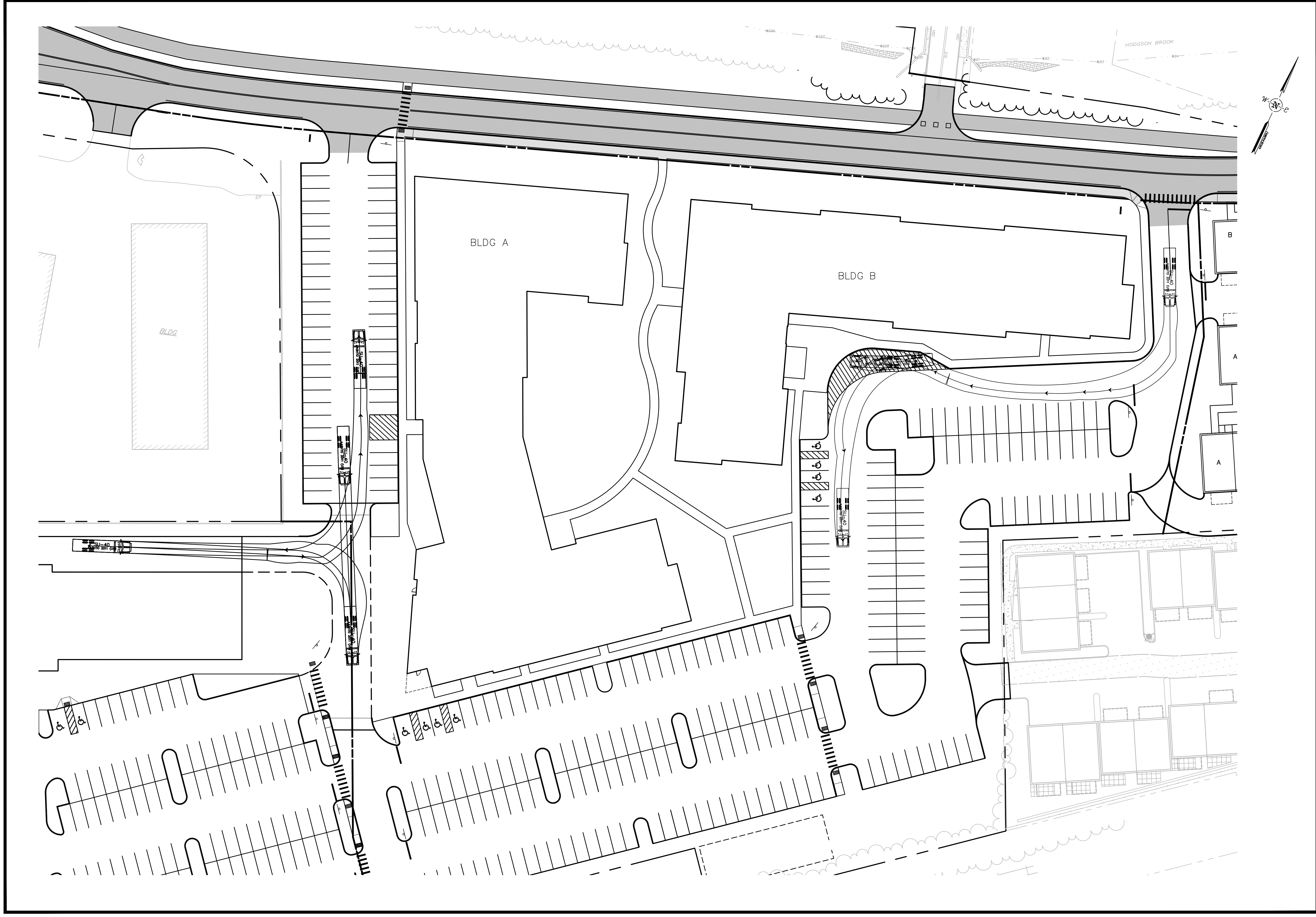
**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoc.com

CATE STREET DEVELOPMENT, LLC  
**EROSION CONTROL DETAILS**  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

**CD-562**





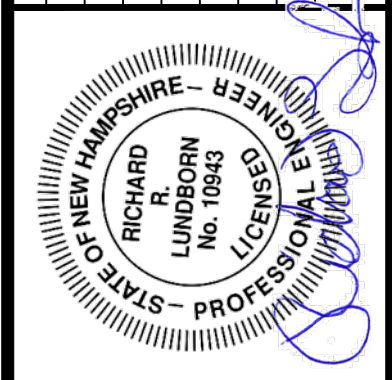
CT-101

CATE STREET DEVELOPMENT, LLC  
 SU-40 BOX TRUCK  
 TURNING MOVEMENTS  
 CATE STREET/ WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

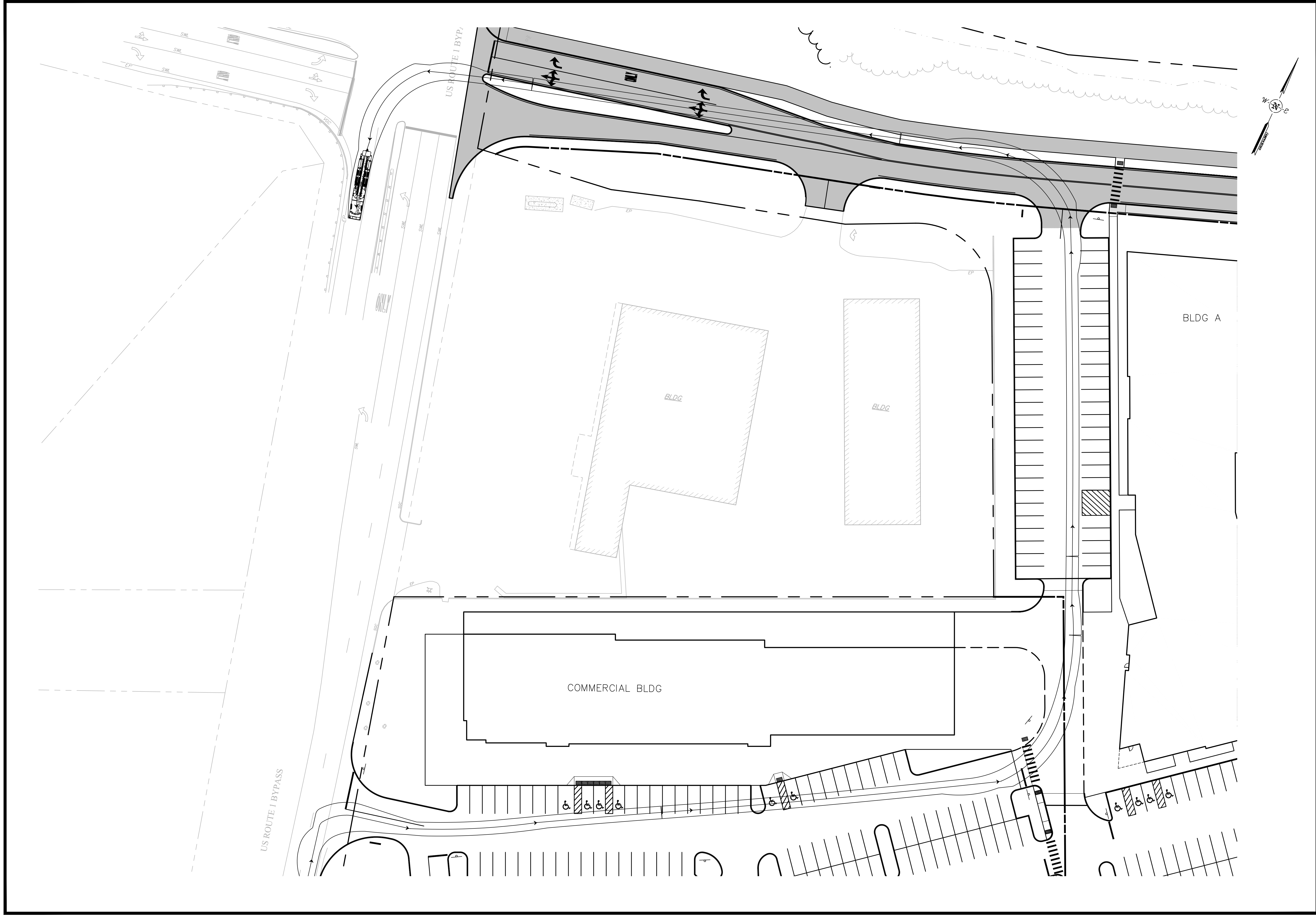
**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 207.563.6609  
 www.fandoo.com

SCALE:  
 HORZ.: 1"=30'  
 VERT.: 1"=30'  
 DATUM:  
 HORZ.: NAD83  
 VERT.: NGVD29

GRAPHIC SCALE



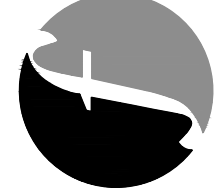
NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	3/18/2019	TAC SUBMITTAL	JVA/DAO	RRL
2.	5/20/2019	TAC SUBMITTAL	JVA/DAO	RRL



PROJ. No.: 20180317.A10  
 DATE: 05/20/2019

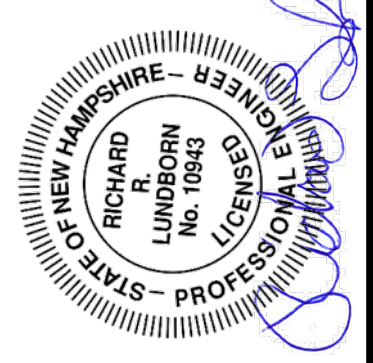
CT-103

CATE STREET DEVELOPMENT, LLC  
 WB-50 TRUCK  
 TURNING MOVEMENTS  
 CATE STREET/WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

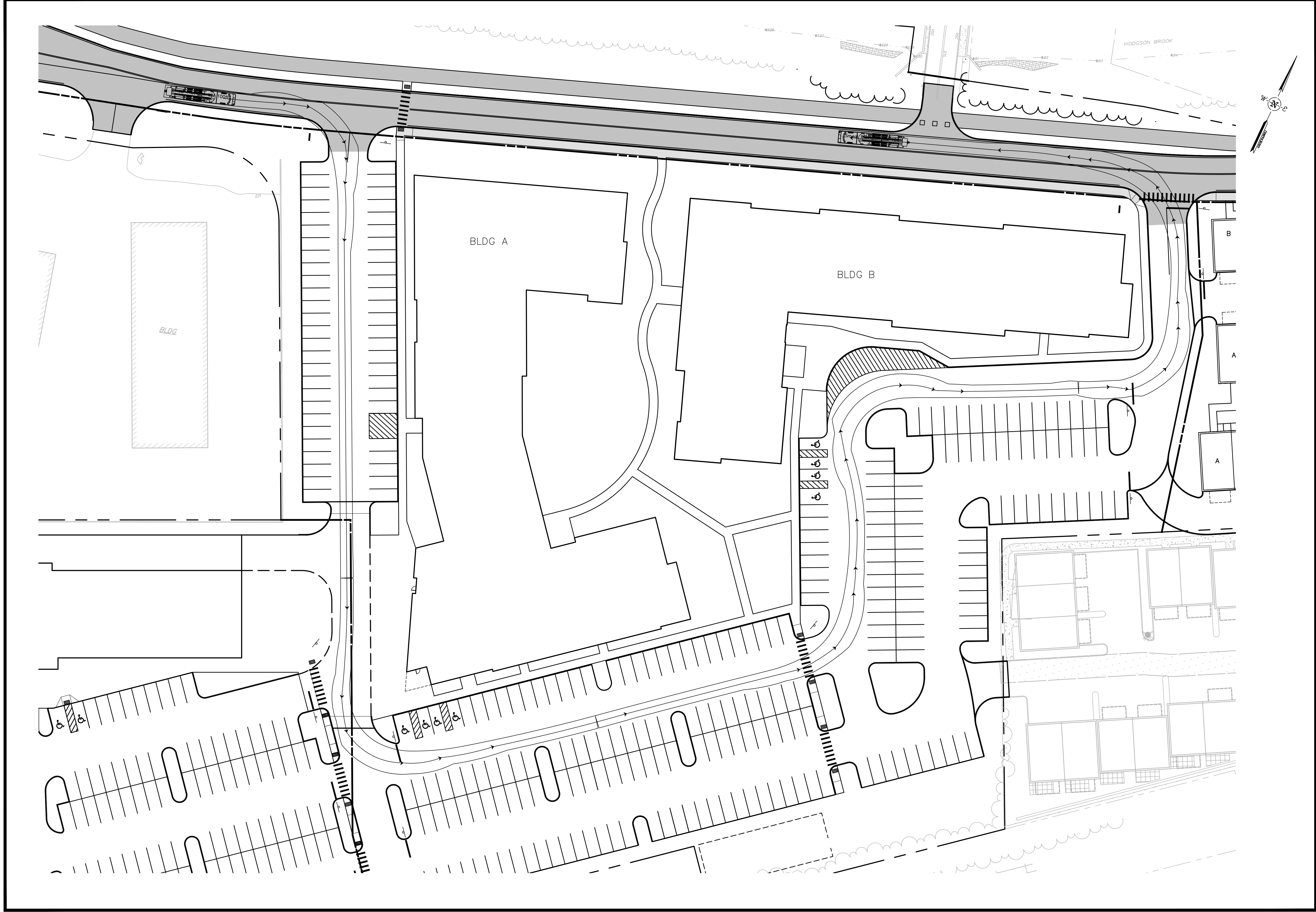


**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

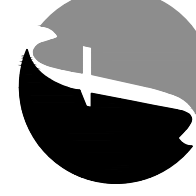
SCALE: HORIZ.: 1"=30'  
 VERT.: 1"=30'  
 DATUM: NAD83  
 HORIZ.: NAD83  
 VERT.: NGVD29  
 30 15 0 30  
 GRAPHIC SCALE



NO.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1	3/18/2019	TAC SUBMITTAL	RRL
2	5/20/2019	TAC SUBMITTAL	JVA/DAO



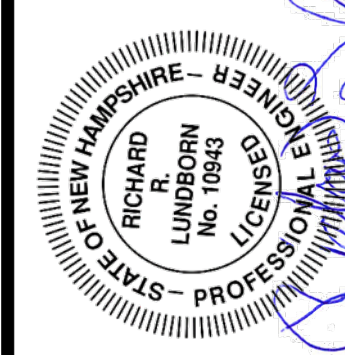
CATE STREET DEVELOPMENT, LLC  
WB-50 TRUCK  
TURNING MOVEMENTS  
CATE STREET/ WEST END YARDS  
PORTSMOUTH NEW HAMPSHIRE



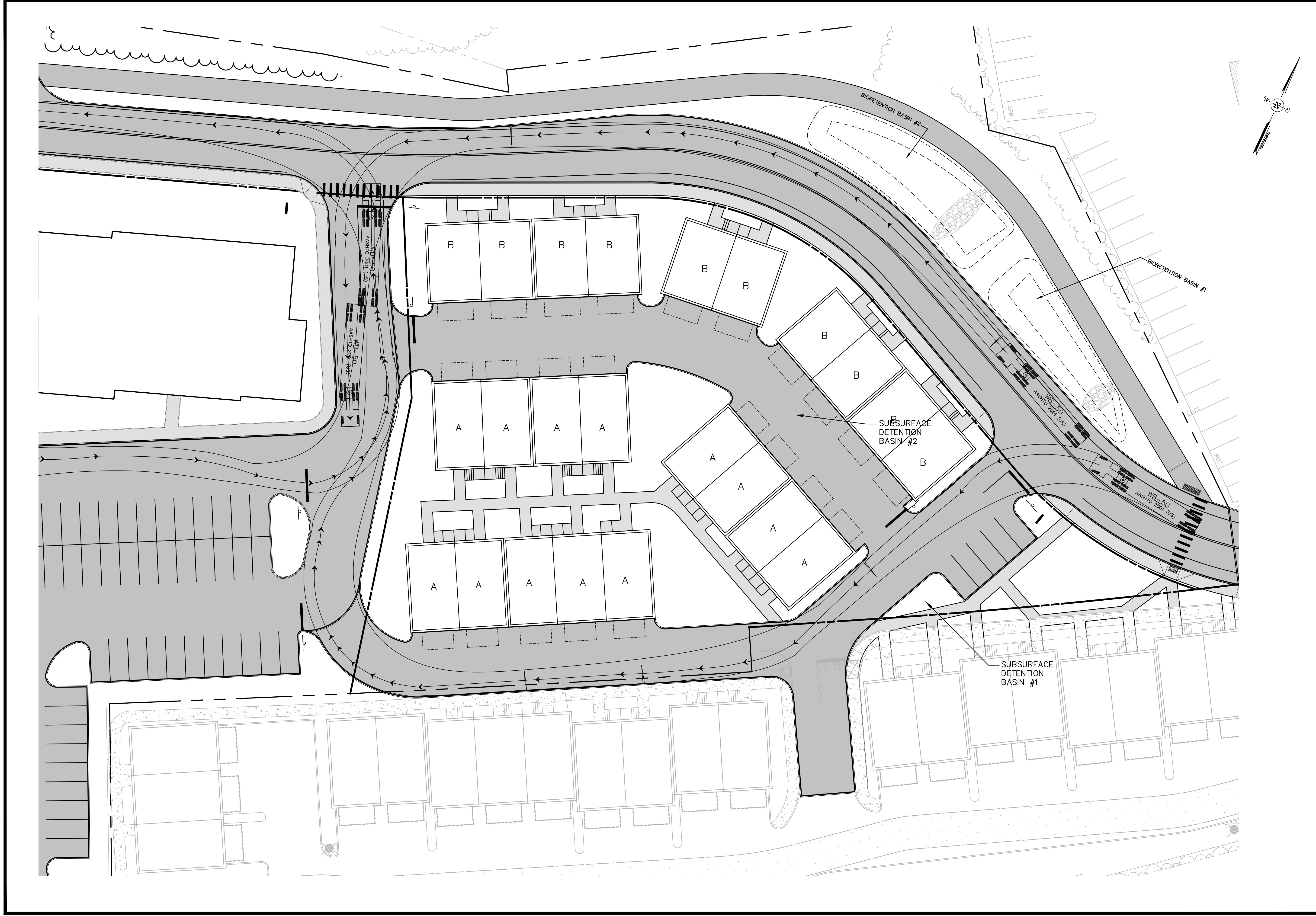
**FUSS & O'NEILL**

UPPER SQUARE BUSINESS CENTER  
5 FLETCHER STREET, SUITE 1  
KENNEBUNK, MAINE 04043  
207.363.6609  
www.fandoo.com

SCALE: HORZ.: 1"=30'  
VERT.: 1"=30'  
DATUM: HORZ.: NAD83  
VERT.: NGVD29  
30 15 0 30  
GRAPHIC SCALE



NO.	DATE	DESCRIPTION	DESIGNER/REVIEWER
1.	3/18/2019	TAC. SUBMITTAL	JVA/DAD
2.	5/20/2019	TAC. SUBMITTAL	JVA/DAD

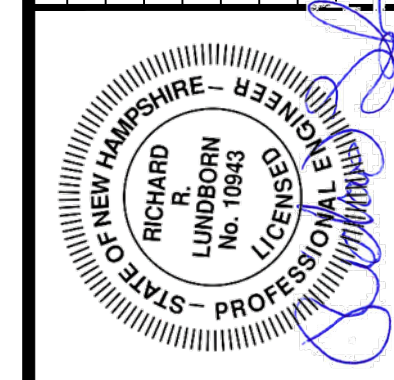


**CT-105**

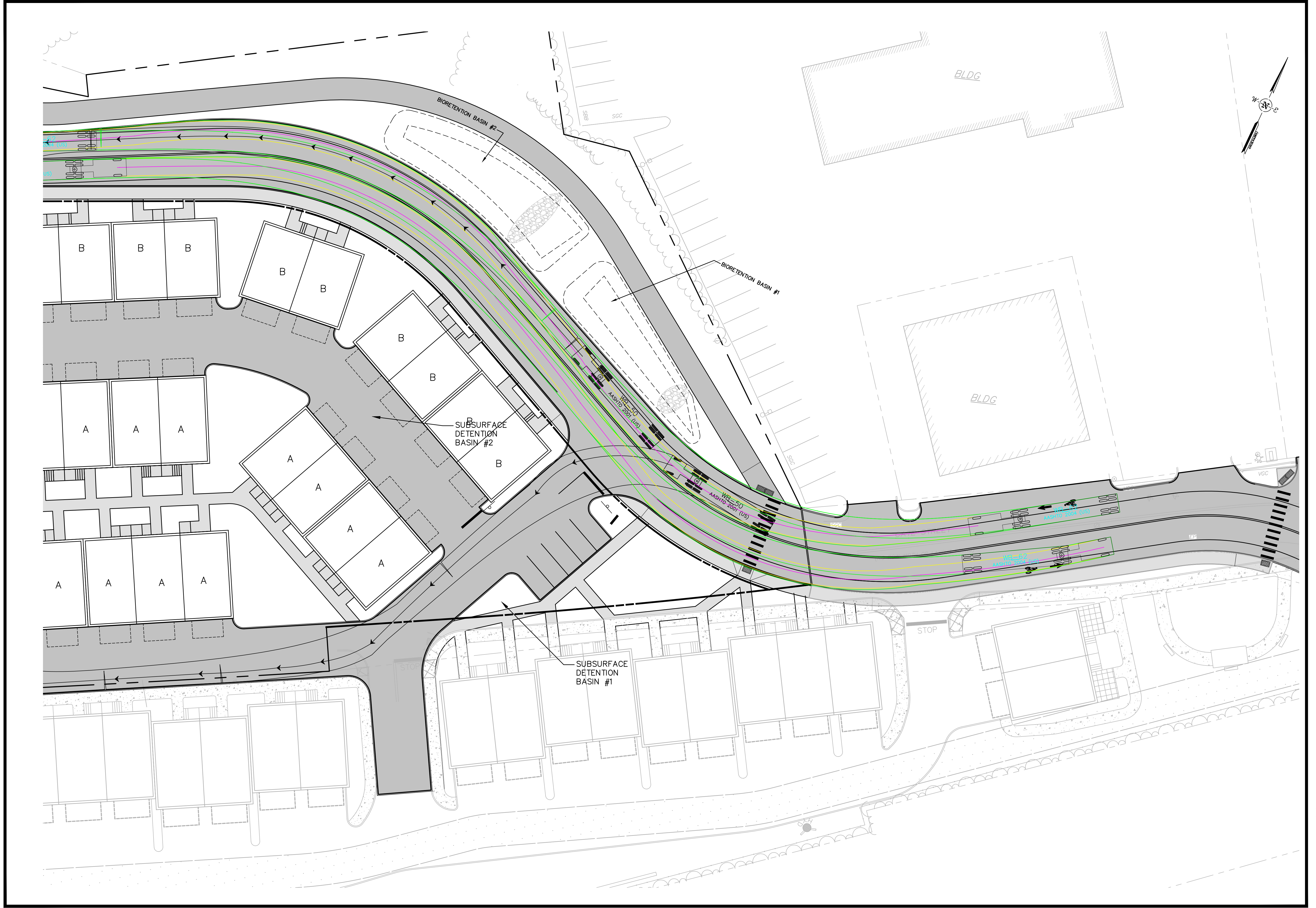
CATE STREET DEVELOPMENT, LLC  
 WB-50 TRUCK  
 TURNING MOVEMENTS  
 CATE STREET/WEST END YARDS  
 PORTSMOUTH NEW HAMPSHIRE

**FUSS & O'NEILL**  
 UPPER SQUARE BUSINESS CENTER  
 5 FLETCHER STREET, SUITE 1  
 KENNEBUNK, MAINE 04043  
 www.fandoo.com

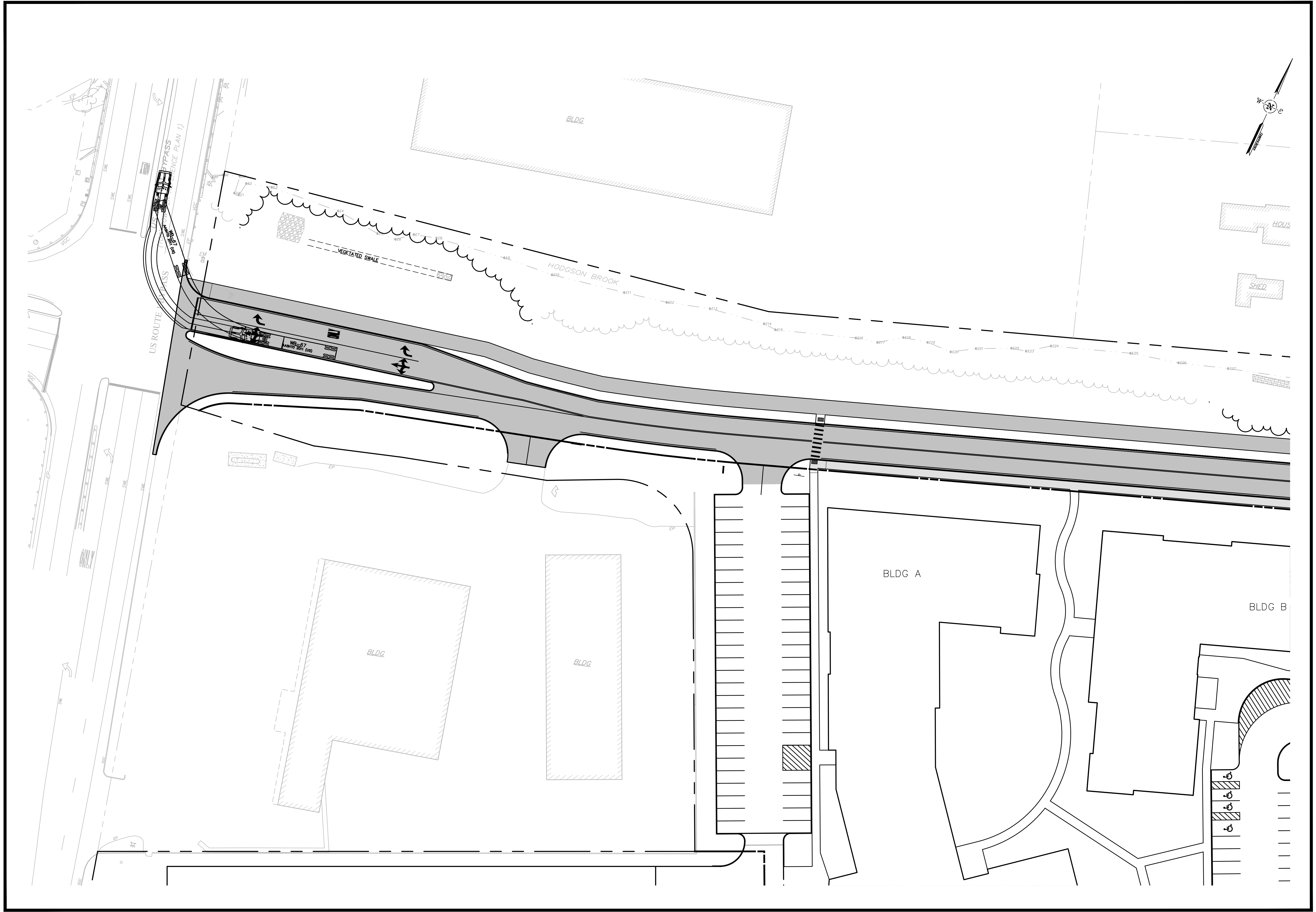
SCALE: HORIZ.: 1"=20'  
 VERT.: 1"=20'  
 DATUM: NAD83  
 HORIZ.: NAD83  
 VERT.: NGVD29  
 20 10 0 20  
 GRAPHIC SCALE



NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL
2.	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL



<p>SCALE: HORZ.: 1"=20'          VERT.: 1"=20'</p>		<p>DATUM: NAD83          VERT.: NGVD29</p>	
<p>20 10 0 20          GRAPHIC SCALE</p>		<p>PROFESSIONAL SEAL          RICHARD R. LUNDBORN          No. 10843          ENGINEER - HAMPSHIRE          STATE OF NEW HAMPSHIRE</p>	
<p>PROJ. No.: 20180317.A10          DATE: 05/20/2019</p>		<p>DATE DESCRIPTION RRL          1. 3/18/2019 TAC SUBMITTAL RRL          2. 5/20/2019 TAC SUBMITTAL RRL          JVA/DAO JVA/DAO          DESIGNER REVIEWER</p>	
<p>CATE STREET DEVELOPMENT, LLC          WB-62 TRUCK          TURNING MOVEMENTS          CATE STREET/WEST END YARDS          PORTSMOUTH NEW HAMPSHIRE</p>			
<p><b>FUSS &amp; O'NEILL</b>          UPPER SQUARE BUSINESS CENTER          5 FLETCHER STREET, SUITE 1          KENNEBUNK, MAINE 04043          www.fandoo.com</p>			
<p>CT-106</p>			



<p>SCALE: HORZ.: 1"=30'          VERT.: 1"=30'</p> <p>DATUM:          HORZ.: NAD83          VERT.: NGVD29</p> <p>30 15 0 30          GRAPHIC SCALE</p>			<p>1. 3/18/2019 TAC SUBMITTAL RRL</p> <p>2. 5/20/2019 TAC SUBMITTAL RRL</p>
<p>PROJ. No.: 20180317.A10          DATE: 05/20/2019</p>			<p>NO. DATE DESCRIPTION</p> <p>DESIGNER REVIEWER</p>
<p><b>FUSS &amp; O'NEILL</b>          UPPER SQUARE BUSINESS CENTER          5 FLETCHER STREET, SUITE 1          KENNEBUNK, MAINE 04043          207.563.0609          www.fandoo.com</p>			<p>CATE STREET DEVELOPMENT, LLC          WB-67 TRUCK          TURNING MOVEMENTS          CATE STREET/WEST END YARDS          PORTSMOUTH NEW HAMPSHIRE</p>
<p>CT-107</p>			

**WEST END YARDS**  
PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

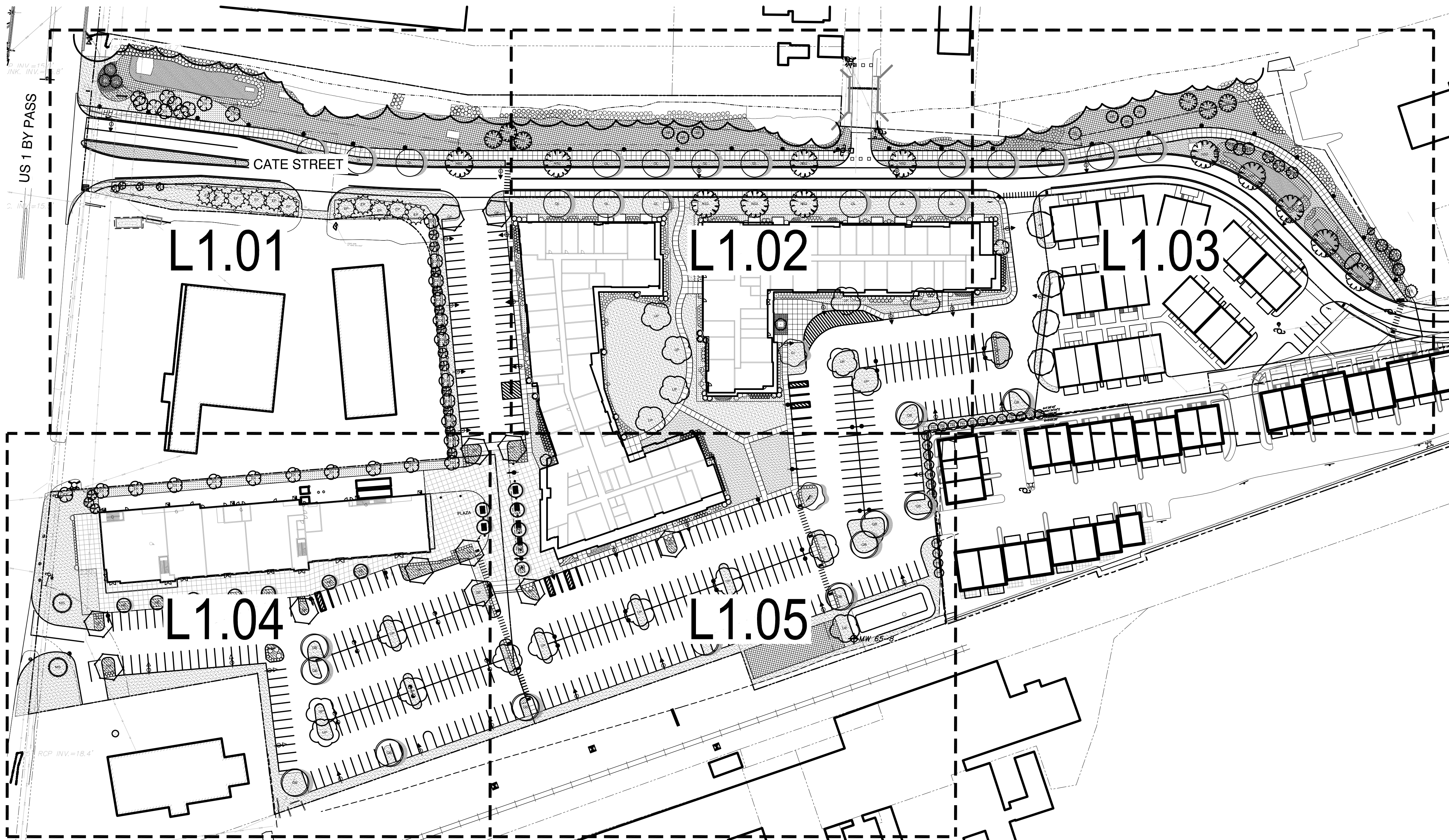
SHEET TITLE:

**LANDSCAPE PLAN**

PROJECT NUMBER:  
**18041.00**

**L1.00**

DATE: 03.18.2019  
PERMIT ISSUE



**NOTE:**  
REFER TO PLANT SCHEDULE ON SHEET L1.06 FOR THE DETAILED PLANT SCHEDULE PER SECTION 6.2-2A OF THE CITY OF PORTSMOUTH SITE PLAN REVIEW REGULATIONS

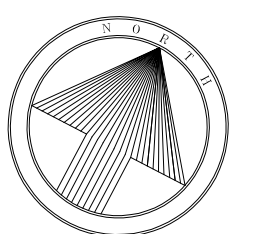
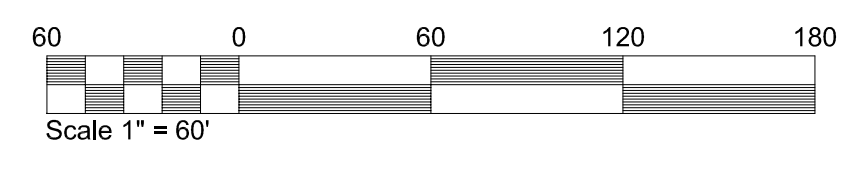
**SITE PLAN NOTE:**  
ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

PLANT SCHEDULE PLANT SCHEDULE						
TREES	QTY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	SPACING	REMARKS
AF	4	Acer rubrum 'Franksred' TM / Red Sunset Maple	2.5" cal.	B & B		
EP	11	Existing Tree Pine / Existing Tree Pine	-			
EX	25	Existing Tree / Existing Tree	-			
GI	2	Gleditsia triacanthos inermis 'Skycole' TM / Skyline Thornless Honey Locust	3" cal.	B & B		
GP	12	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo	2.5" cal.	B & B		
ME	1	Magnolia x 'Elizabeth' / Magnolia	2" cal	B & B		
MG	2	Metasequoia glyptostroboides / Dawn Redwood	12' ht.	B & B		
NS2	3	Nyssa sylvatica / Sour Gum	3" cal.	B & B		
PA	15	Picea abies / Norway Spruce	8' ht.	B & B	20' o.c.	
PE	14	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree	2.5" cal.	B & B		
PR	24	Pinus rigida / Pitch Pine	5' ht.	B & B		
QB	12	Quercus bicolor / Swamp White Oak	3" cal.	B & B		
QL	6	Quercus robur x bicolor 'Long' / Regal Prince Oak	3" cal.	B & B		
SP	2	Stewartia pseudocamellia / Japanese Stewartia	2" cal	B & B		
TH	10	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar	7' ht.	B & B		
TS	25	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae	10' ht.	B & B		
UP	19	Ulmus americana 'Princeton' / American Elm	2.5" cal.	B & B		

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONTAINER	MIN. SIZE	SPACING	REMARKS
B2	22	Buxus sempervirens / American Boxwood	36" ht. x 36" sprd.	36" o.c.		
BW	28	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood	5 gal.			
CH	27	Clethra alnifolia 'Hummingbird' / Summersweet Clethra	3 gal		30" o.c.	
HB	30	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon	4' ht.			
HL	51	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea	3 gal.		4' o.c.	
IP	26	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly	4' ht.		3' o.c.	
MP	29	Myrica pensylvanica / Northern Bayberry	3 gal		36" o.c.	
PM	8	Pinus mugo / Mugo Pine	7 gal.			
RG	68	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.		24" o.c.	
RP	267	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.	3 gal			
SB	116	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem	3 gal		36" o.c.	
SG	15	Spiraea japonica 'Goldmound' / Spirea	3 gal			
SM	35	Syringa meyeri 'Pallidin' / Dwarf Korean Lilac	5 gal.		3' o.c.	
TD	305	Taxus x media 'Densiformis' / Dense Yew	3 gal		3' o.c.	

GROUND COVERS	QTY	BOTANICAL NAME / COMMON NAME	CONTAINER	MIN. SIZE	SPACING	REMARKS
AB	123	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower	1 gal.		12" o.c.	
CM	2,972 sf	Conservation Seed Mix / Conservation Seed	SF			Hydroseed
FA	78,428	Festuca arundinacea / Tall Fescue Seed Mix	SF			
HO	16	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily	1 gal.			
LC	1,403	Liriope spicata / Creeping Lily Turf	1 gal.		18" o.c.	
MM	10,917	Mulch / Hardwood Mulch	SF		12" o.c.	
PA2	197	Perovskia atriplicifolia / Russian Sage	1 gal.		12" o.c.	



SHEET STATUS

MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:

**LANDSCAPE PLAN**

PROJECT NUMBER:

18041.00

**L1.01**

DATE: 03.18.2019

PERMIT ISSUE



**PLANT SCHEDULE PLANT SCHEDULE**

TREES	BOTANICAL NAME / COMMON NAME
AF	Acer rubrum 'Franksred' TM / Red Sunset Maple
EP	Existing Tree Pine / Existing Tree Pine
EX	Existing Tree / Existing Tree
GI	Gleditsia triacanthos inermis 'Skycole' TM / Skyline Thornless Honey Locust
GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo
ME	Magnolia x 'Elizabeth' / Magnolia
MG	Metasequoia glyptostroboides / Dawn Redwood
NS2	Nyssa sylvatica / Sour Gum
PA	Picea abies / Norway Spruce
PE	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree
PR	Pinus rigida / Pitch Pine
QB	Quercus bicolor / Swamp White Oak
QL	Quercus robur x bicolor 'Long' / Regal Prince Oak
SP	Stewartia pseudocamellia / Japanese Stewartia
TH	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar
TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae
UP	Ulmus americana 'Princeton' / American Elm

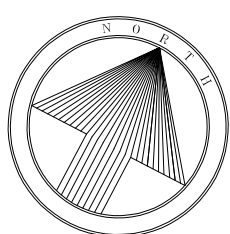
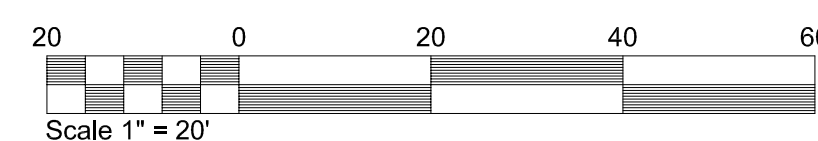
SHRUBS	BOTANICAL NAME / COMMON NAME
B2	Buxus sempervirens / American Boxwood
BW	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood
CH	Clethra alnifolia 'Hummingbird' / Summersweet Clethra
HB	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon
HL	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea
IP	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly
MP	Myrica pensylvanica / Northern Bayberry
PM	Pinus mugo / Mugo Pine
RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac
RP	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.
SB	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem
SG	Spiraea japonica 'Goldmound' / Spirea
SD	Syringa meyeri 'Palibin' / Dwarf Korean Lilac
TD	Taxus x media 'Densiflora' / Dense Yew

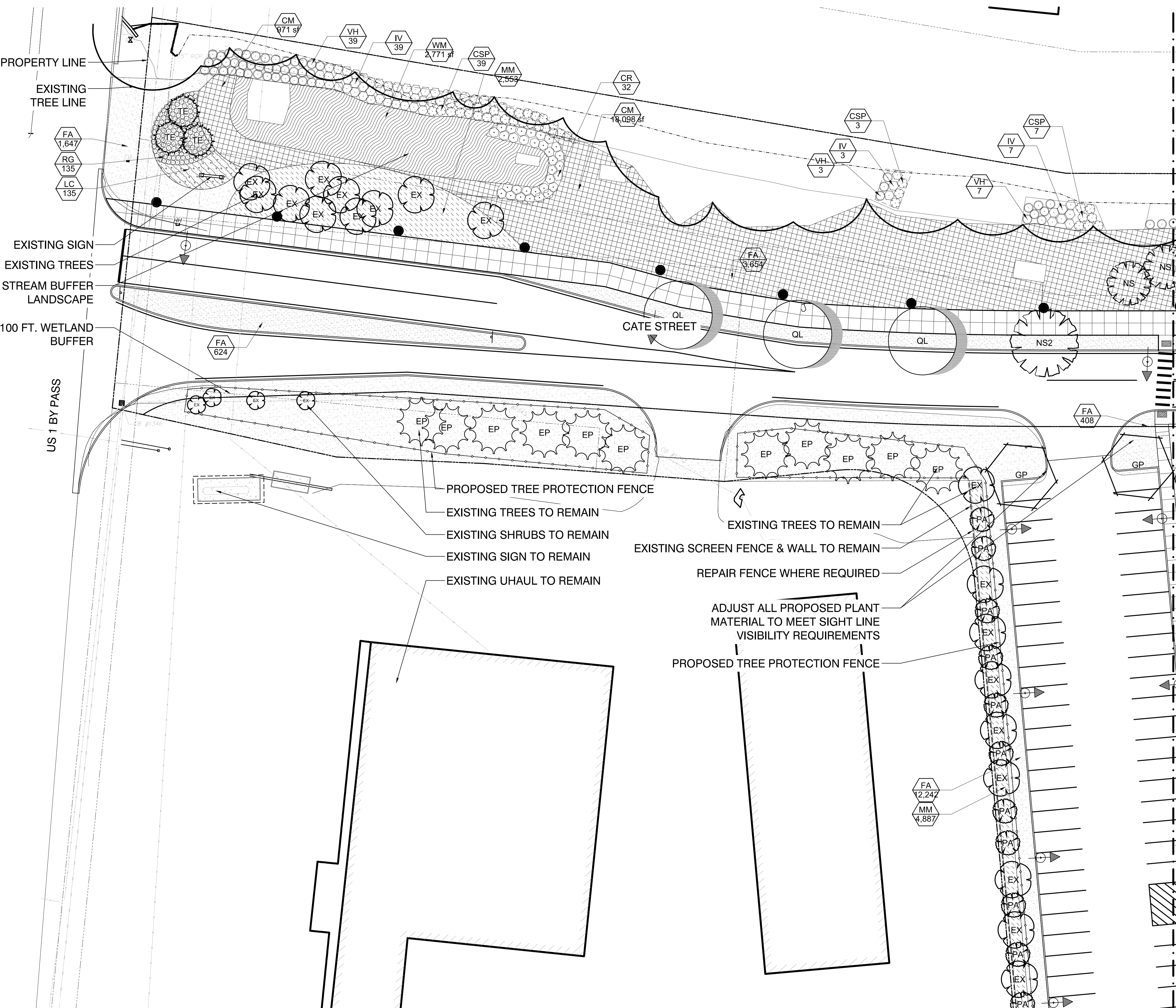
GROUND COVERS	BOTANICAL NAME / COMMON NAME
AB	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower
CM	Conservation Seed Mix / Conservation Seed
FA	Festuca arundinacea / Tall Fescue Seed Mix
HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
LC	Liriope spicata / Creeping Lily Turf
MM	Mulch / Hardwood Mulch
PA2	Perovskia atriplicifolia / Russian Sage

**SITE PLAN NOTE:**

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.



SHEET L1.02



PROPERTY LINE  
 EXISTING TREE LINE  
 FA 1,647  
 RG 135  
 LC 135

EXISTING SIGN  
 EXISTING TREES  
 STREAM BUFFER  
 LANDSCAPE  
 100 FT. WETLAND BUFFER

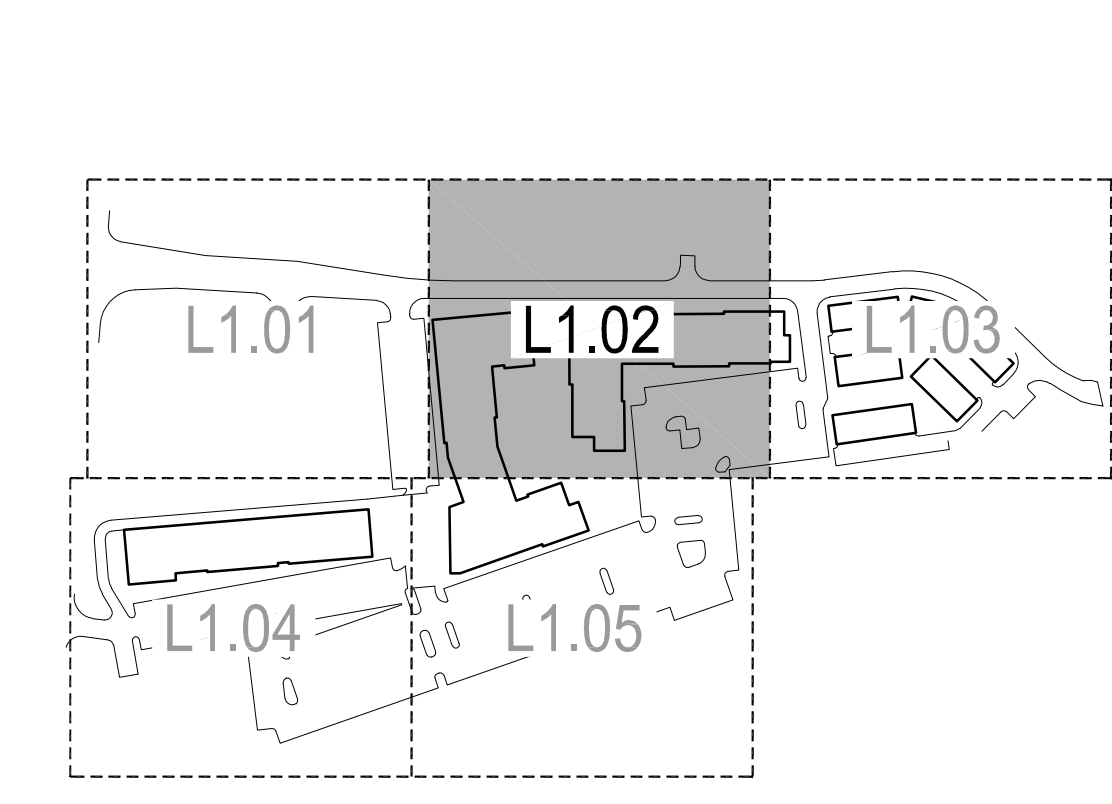
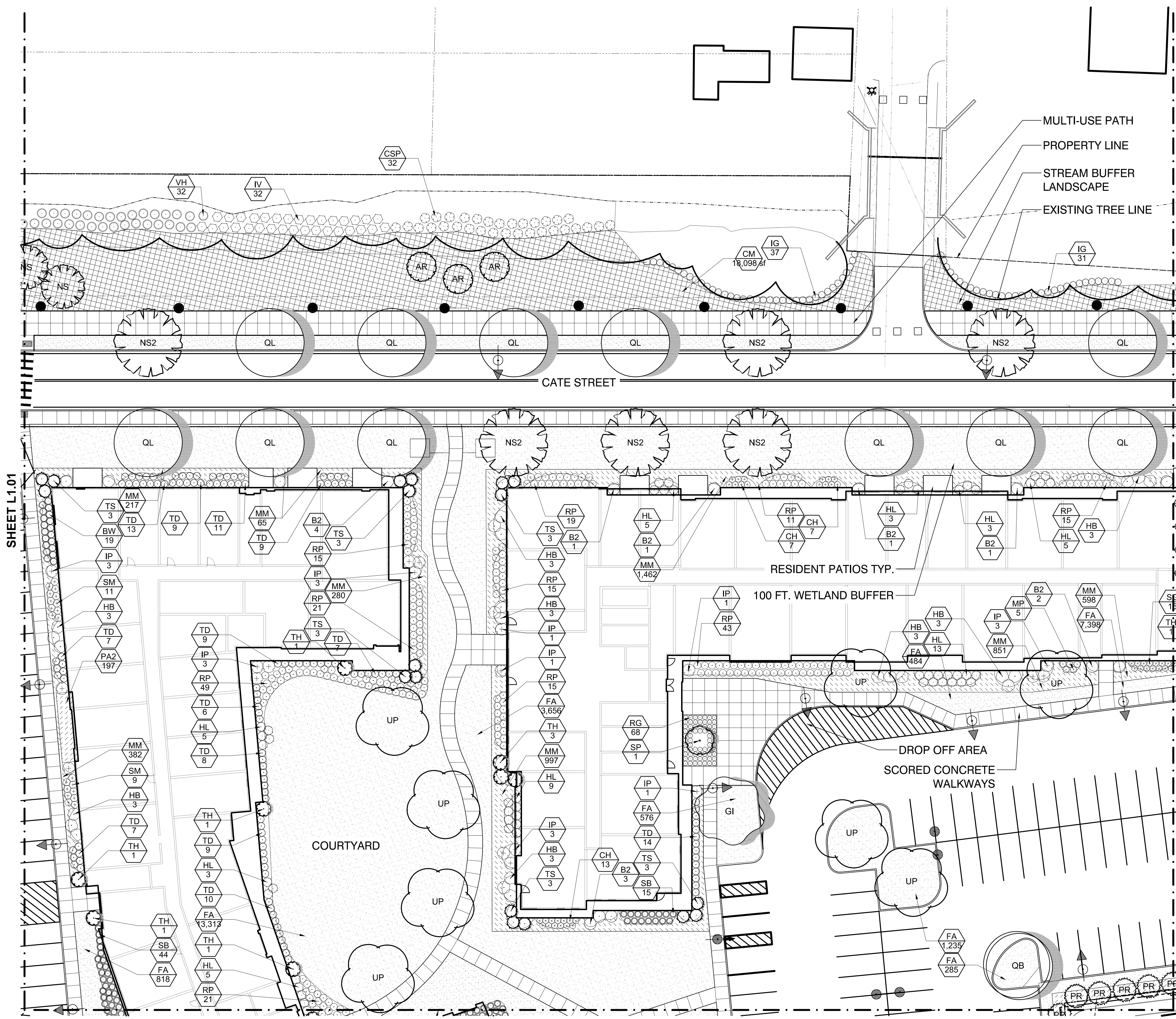
US 1 BY PASS

PROPOSED TREE PROTECTION FENCE  
 EXISTING TREES TO REMAIN  
 EXISTING SHRUBS TO REMAIN  
 EXISTING SIGN TO REMAIN  
 EXISTING UHAUL TO REMAIN

EXISTING TREES TO REMAIN  
 EXISTING SCREEN FENCE & WALL TO REMAIN  
 REPAIR FENCE WHERE REQUIRED  
 ADJUST ALL PROPOSED PLANT MATERIAL TO MEET SIGHT LINE VISIBILITY REQUIREMENTS  
 PROPOSED TREE PROTECTION FENCE

FA 12,242  
 MM 4,887





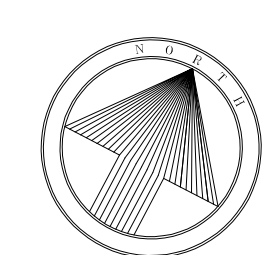
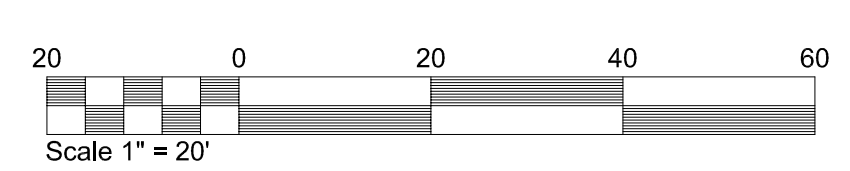
PLANT SCHEDULE	
TREES	BOTANICAL NAME / COMMON NAME
AF	Acer rubrum 'Franksred' TM / Red Sunset Maple
EP	Existing Tree Pine / Existing Tree Pine
EX	Existing Tree / Existing Tree
GI	Gleditsia trifacanthos Inermis 'Skycole' TM / Skyline Thornless Honey Locust
GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo
ME	Magnolia x 'Elizabeth' / Magnolia
MG	Metasequoia glyptostroboides / Dawn Redwood
NS2	Nyssa sylvatica / Sour Gum
PA	Picea abies / Norway Spruce
PE	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree
PR	Pinus rigida / Pitch Pine
QB	Quercus bicolor / Swamp White Oak
QL	Quercus robur x bicolor 'Long' / Regal Prince Oak
SP	Stewartia pseudocamellia / Japanese Stewartia
TH	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar
TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae
UP	Ulmus americana 'Princeton' / American Elm

SHRUBS	
	BOTANICAL NAME / COMMON NAME
B2	Buxus sempervirens / American Boxwood
BW	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood
CH	Clethra alnifolia 'Hummingbird' / Summersweet Clethra
HB	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon
HL	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea
IP	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly
MP	Myrica pensylvanica / Northern Bayberry
PM	Pinus muogo / Mugo Pine
RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac
RP	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.
SB	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem
SG	Spiraea japonica 'Goldmound' / Spirea
SM	Syringa meyeri 'Palibin' / Dwarf Korean Lilac
TD	Taxus x media 'Densiformis' / Dense Yew

GROUND COVERS	
	BOTANICAL NAME / COMMON NAME
AB	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower
CM	Conservation Seed Mix / Conservation Seed
FA	Festuca arundinacea / Tall Fescue Seed Mix
HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
LC	Liriope spicata / Creeping Lily Turf
MM	Mulch / Hardwood Mulch
PA2	Perovskia atriplicifolia / Russian Sage

**SITE PLAN NOTE:**

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.



**SITE solutions**

LANDSCAPE ARCHITECTURE • LAND PLANNING  
 3715 Northside Parkway T: 404.705.9411  
 300 Northcreek, Bldg. 300 F: 404.705.9491  
 Atlanta, Georgia 30327 www.sitesolutionsla.com

COPYRIGHT © 2005 BY SITE solutions, LLC. LANDSCAPE ARCHITECTS. ALL RIGHTS RESERVED. THIS DOCUMENT (INCLUDING ELECTRONIC AND REPRODUCTIONS) IS THE PROPERTY OF SITE solutions, LLC, AND ONLY FOR USE ON THE PROJECT SPECIFIED HEREIN. IT IS NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR IN PART, EXCEPT BY THE EXPRESSED WRITTEN AGREEMENT WITH SITE solutions, LLC. THIS DOCUMENT AND REPRODUCTIONS SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PROFESSIONAL STAMP:

**WEST END YARDS**  
 PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**LANDSCAPE PLAN**

PROJECT NUMBER:  
 18041.00

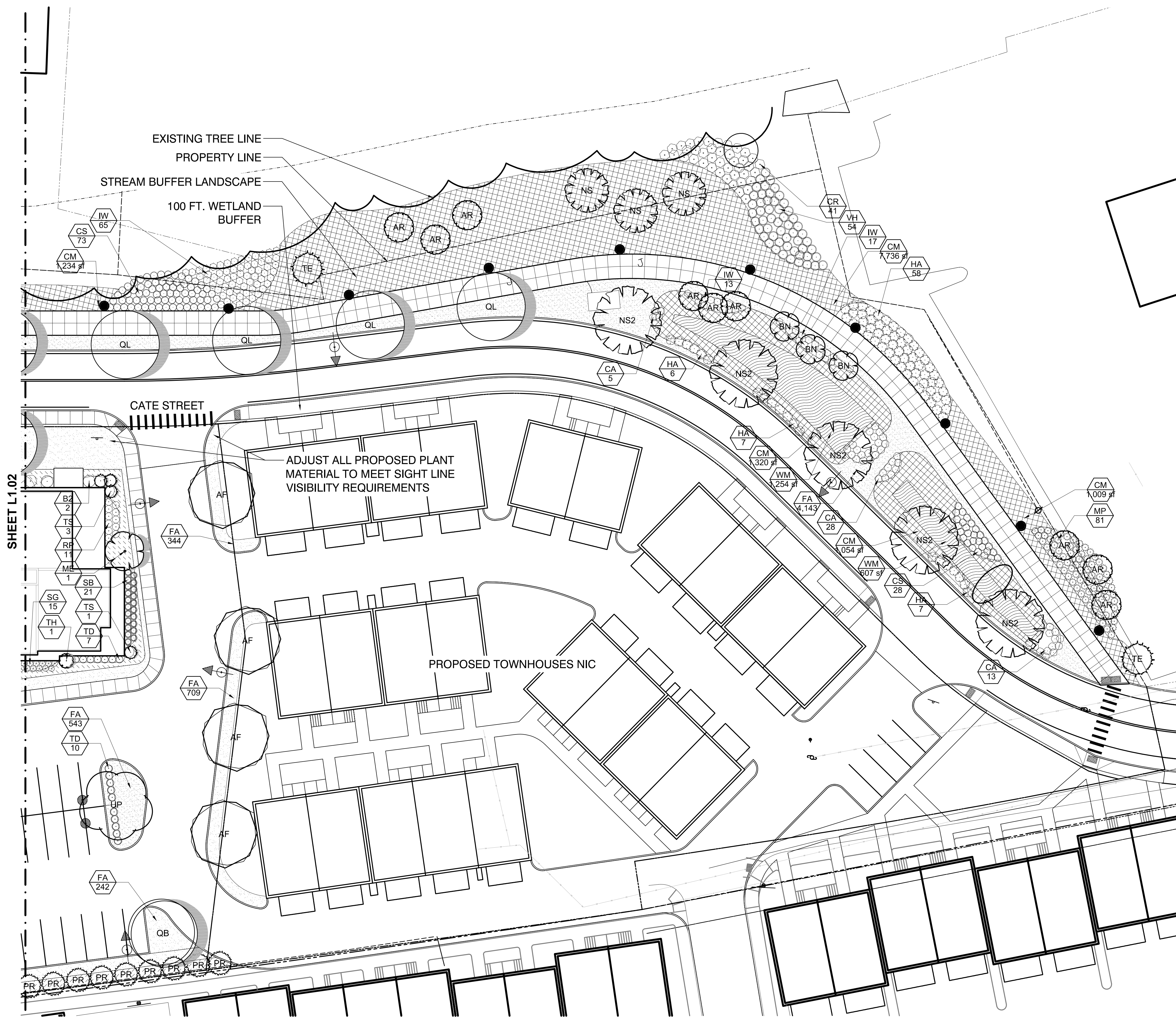
**L1.02**

DATE: 03.18.2019  
 PERMIT ISSUE

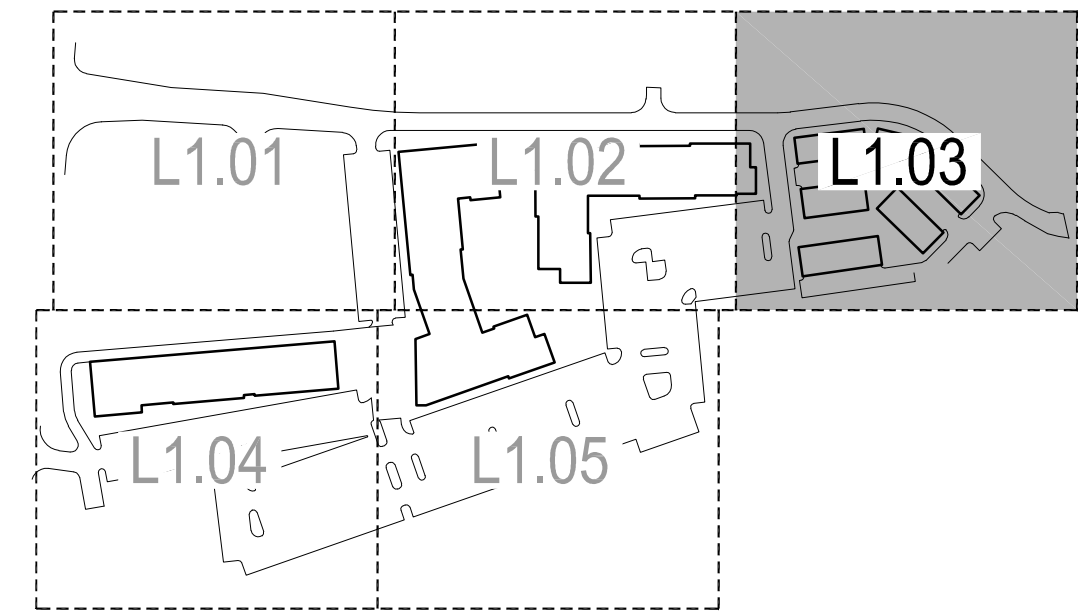
SHEET L1.01

SHEET L1.03

SHEET L1.05

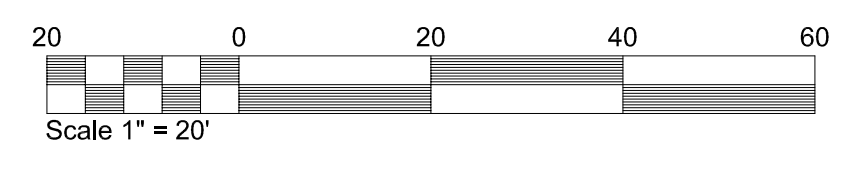


SHEET L1.02



PLANT SCHEDULE	
TREES	BOTANICAL NAME / COMMON NAME
AF	Acer rubrum 'Franksred' TM / Red Sunset Maple
EP	Existing Tree Pine / Existing Tree Pine
EX	Existing Tree / Existing Tree
GI	Gleditsia triacanthos inermis 'Skycole' TM / Skyline Thornless Honey Locust
GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo
ME	Magnolia x 'Elizabeth' / Magnolia
MG	Metasequoia glyptostroboides / Dawn Redwood
NS2	Nyssa sylvatica / Sour Gum
PA	Picea abies / Norway Spruce
PE	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree
PR	Pinus rigida / Pitch Pine
QB	Quercus bicolor / Swamp White Oak
QL	Quercus robur x bicolor 'Long' / Regal Prince Oak
SP	Stewartia pseudocamellia / Japanese Stewartia
TH	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar
TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae
UP	Ulmus americana 'Princeton' / American Elm
SHRUBS	BOTANICAL NAME / COMMON NAME
B2	Buxus sempervirens / American Boxwood
BW	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood
CH	Clethra alnifolia 'Hummingbird' / Summersweet Clethra
HB	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon
HL	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea
IP	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly
MP	Myrica pensylvanica / Northern Bayberry
PM	Pinus mugo / Mugo Pine
RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac
RP	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.
SB	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem
SG	Spiraea japonica 'Goldmound' / Spiraea
SM	Syringa meyeri 'Palibin' / Dwarf Korean Lilac
TD	Taxus x media 'Densiflora' / Dense Yew
GROUND COVERS	BOTANICAL NAME / COMMON NAME
AB	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower
CM	Conservation Seed Mix / Conservation Seed
FA	Festuca arundinacea / Tall Fescue Seed Mix
HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
LC	Liriope spicata / Creeping Lily Turf
MM	Mulch / Hardwood Mulch
PA2	Perovskia atriplicifolia / Russian Sage

**SITE PLAN NOTE:**  
ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.



PROFESSIONAL STAMP:

**WEST END YARDS**  
PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

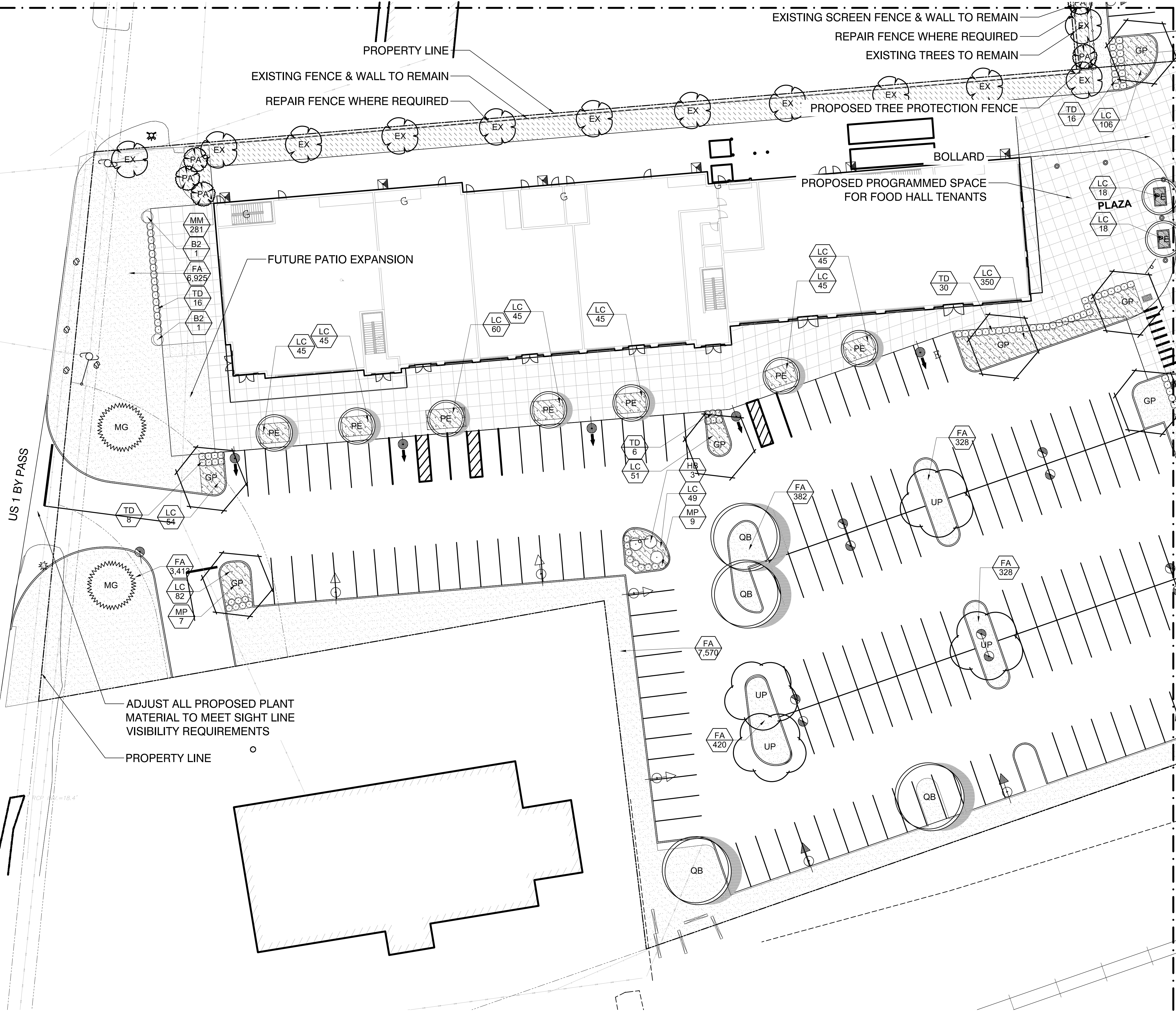
SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**LANDSCAPE PLAN**

PROJECT NUMBER:  
**18041.00**

**L1.03**

DATE: 03.18.2019  
PERMIT ISSUE



**PLANT SCHEDULE**

TREES	BOTANICAL NAME / COMMON NAME
AF	Acer rubrum 'Franksred' TM / Red Sunset Maple
EP	Existing Tree Pine / Existing Tree Pine
EX	Existing Tree / Existing Tree
GI	Gleditsia triacanthos inermis 'Skycole' TM / Skyline Thornless Honey Locust
GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo
ME	Magnolia x 'Elizabeth' / Magnolia
MG	Metasequoia glyptostroboides / Dawn Redwood
NS2	Nyssa sylvatica / Sour Gum
PA	Picea abies / Norway Spruce
PE	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree
PR	Pinus rigida / Pitch Pine
QB	Quercus bicolor / Swamp White Oak
QL	Quercus robur x bicolor 'Long' / Regal Prince Oak
SP	Stewartia pseudocamellia / Japanese Stewartia
TH	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar
TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae
UP	Ulmus americana 'Princeton' / American Elm

SHRUBS	BOTANICAL NAME / COMMON NAME
B2	Buxus sempervirens / American Boxwood
BW	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood
CH	Clethra alnifolia 'Hummingbird' / Summersweet Clethra
HB	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon
HL	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea
IP	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly
MP	Myrica pensylvanica / Northern Bayberry
PM	Pinus mugo / Mugo Pine
RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac
RP	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.
SB	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem
SG	Spiraea japonica 'Goldmound' / Spiraea
SM	Syringa meyeri 'Palibin' / Dwarf Korean Lilac
TD	Taxus x media 'Densiflora' / Dense Yew

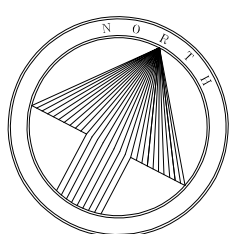
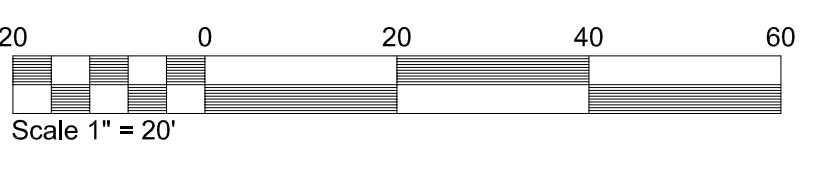
GROUND COVERS	BOTANICAL NAME / COMMON NAME
AB	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower
CM	Conservation Seed Mix / Conservation Seed
FA	Festuca arundinacea / Tall Fescue Seed Mix
HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
LC	Liriope spicata / Creeping Lily Turf
MM	Mulch / Hardwood Mulch
PA2	Perovskia atriplicifolia / Russian Sage

**SHEET STATUS**

MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

**SITE PLAN NOTE:**

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.



PROFESSIONAL STAMP:

**WEST END YARDS**  
PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

**SHEET STATUS**

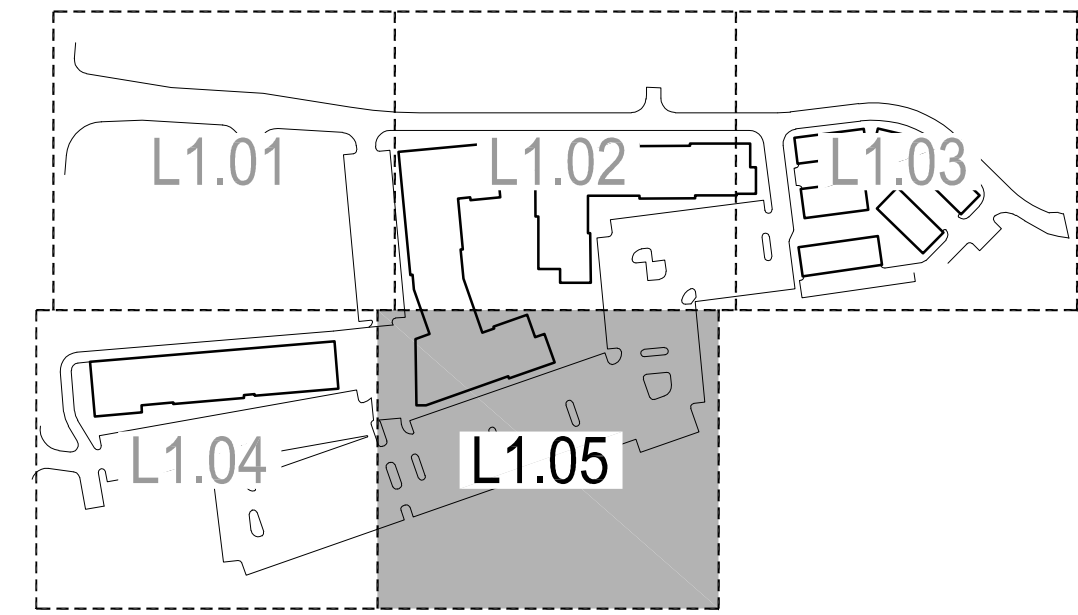
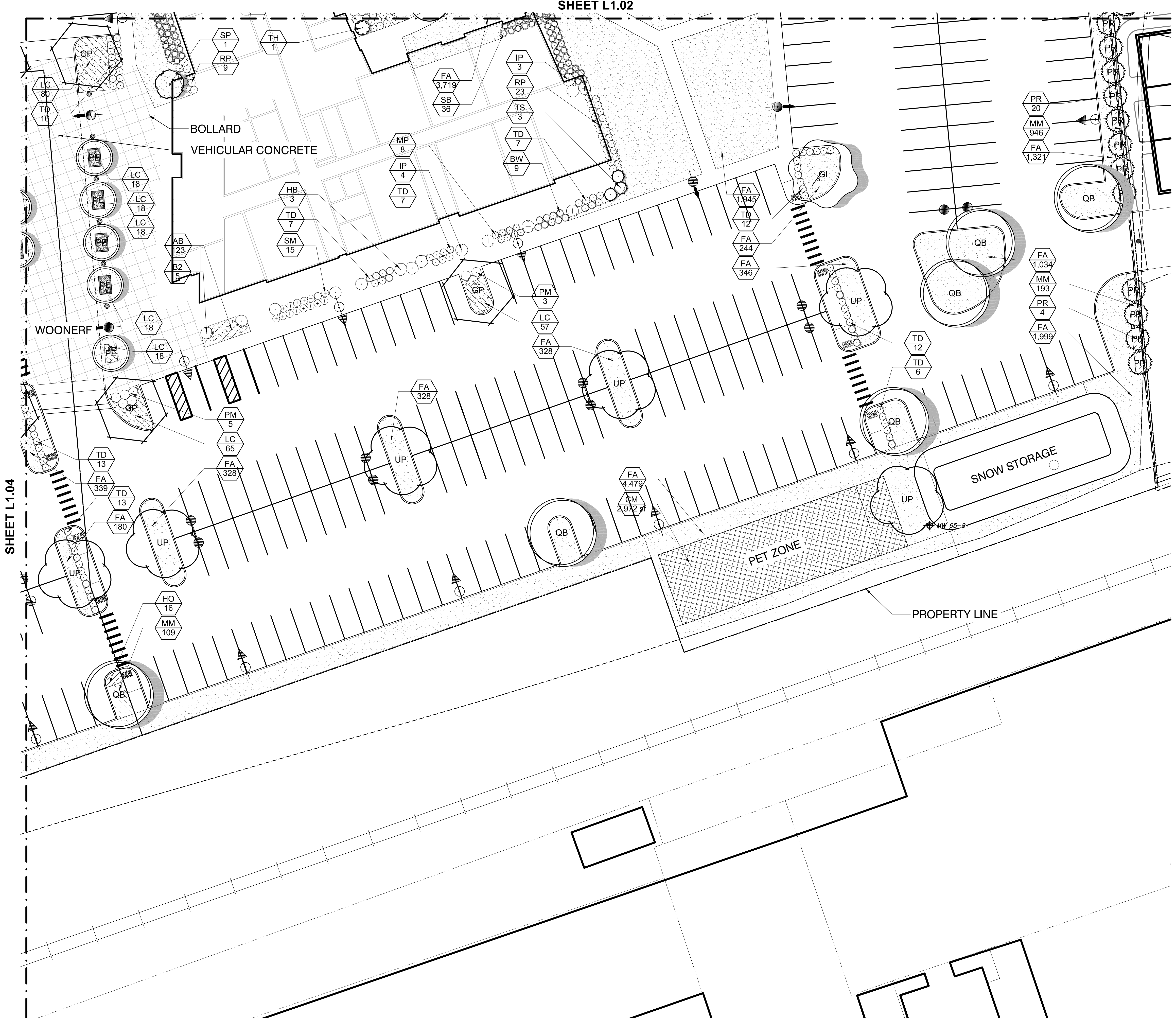
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**LANDSCAPE PLAN**

PROJECT NUMBER:  
18041.00

**L1.04**

DATE: 03.18.2019  
PERMIT ISSUE



PLANT SCHEDULE PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME
AF	Acer rubrum 'Franksred' TM / Red Sunset Maple
EP	Existing Tree Pine / Existing Tree Pine
EX	Existing Tree / Existing Tree
GI	Gleditsia triacanthos inermis 'Skycole' TM / Skyline Thornless Honey Locust
GP	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo
ME	Magnolia x 'Elizabeth' / Magnolia
MG	Metasequoia glyptostroboides / Dawn Redwood
NS2	Nyssa sylvatica / Sour Gum
PA	Picea abies / Norway Spruce
PE	Platanus x acerifolia 'Exclamation' TM / Exclamation London Plane Tree
PR	Pinus rigida / Pitch Pine
QB	Quercus bicolor / Swamp White Oak
QL	Quercus robur x bicolor 'Long' / Regal Prince Oak
SP	Stewartia pseudocamellia / Japanese Stewartia
TH	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar
TS	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae
UP	Ulmus americana 'Princeton' / American Elm

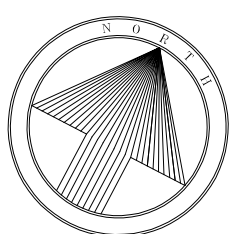
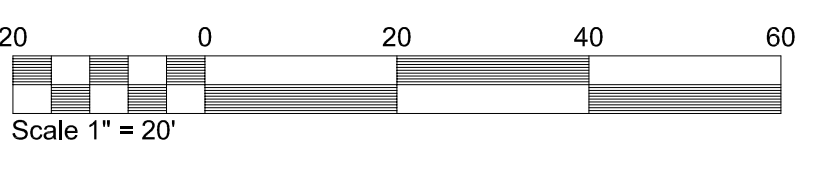
SHRUBS	BOTANICAL NAME / COMMON NAME
B2	Buxus sempervirens / American Boxwood
BW	Buxus microphylla 'Wintergreen' / Wintergreen Boxwood
CH	Clethra alnifolia 'Hummingbird' / Summersweet Clethra
HB	Hibiscus syriacus 'Blue Satin' / Rose-of-Sharon
HL	Hydrangea paniculata 'Limelight' TM / Limelight Hydrangea
IP	Ilex x meserveae 'Blue Prince' TM / Blue Prince Holly
MP	Myrica pensylvanica / Northern Bayberry
PM	Pinus mugo / Mugo Pine
RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac
RP	Rhododendron x 'P.J.M.' / Rhododendron P.J.M.
SB	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem
SG	Spiraea japonica 'Goldmound' / Spirea
SM	Syringa meyeri 'Palibin' / Dwarf Korean Lilac
TD	Taxus x media 'Densiflora' / Dense Yew

GROUND COVERS	BOTANICAL NAME / COMMON NAME
AB	Amsonia tabernaemontana 'Blue Ice' / Blue Ice Star Flower
CM	Conservation Seed Mix / Conservation Seed
FA	Festuca arundinacea / Tall Fescue Seed Mix
HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
LC	Liriope spicata / Creeping Lily Turf
MM	Mulch / Hardwood Mulch
PA2	Perovskia atriplicifolia / Russian Sage

SITE PLAN NOTE:

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.



PROFESSIONAL STAMP:

**WEST END YARDS**  
 PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

SHEET STATUS

MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**LANDSCAPE PLAN**

PROJECT NUMBER:  
 18041.00

**L1.05**

DATE: 03.18.2019  
 PERMIT ISSUE

**LANDSCAPE & SCREENING NOTES:**

A) "THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR AND REPLACEMENT OF ALL REQUIRED SCREENING AND LANDSCAPE MATERIALS."

B) "ALL REQUIRED PLANT MATERIALS SHALL BE TENDED AND MAINTAINED IN A HEALTHY GROWING CONDITION, REPLACED WHEN NECESSARY, AND KEPT FREE OF REFUSE AND DEBRIS. ALL REQUIRED FENCES AND WALLS SHALL BE MAINTAINED IN GOOD REPAIR."

C) "THE PROPERTY OWNER SHALL BE RESPONSIBLE TO REMOVE AND REPLACE DEAD OR DISEASED PLANT MATERIALS IMMEDIATELY WITH THE SAME TYPE, SIZE AND QUANTITY OF PLANT MATERIALS AS ORIGINALLY INSTALLED, UNLESS ALTERNATIVE PLANTINGS ARE REQUESTED, JUSTIFIED AND APPROVED BY THE PLANNING BOARD OR PLANNING DIRECTOR."

**CITY OF PORTSMOUTH PLANTING SPECIFICATIONS:**

1. ALL PLANTING HOLES SHALL BE HAND DUG- NO MACHINES-NO EXCEPTIONS.
2. ALL WIRE CAGE AND BURLAP SHALL BE REMOVED FROM TREE AND PLANTING HOLE.
3. THE ROOT COLLAR OF THE TREE SHALL BE 2"-3" ABOVE GRADE.
4. ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH **ORGANIC** COMPOST.
5. ALL PLANTINGS SHALL BE BACKFILLED IN LIFTS AND ALL LIFTS SHALL BE WATERED SO THAT THE PLANTING WILL BE SET AND FREE FROM AIR POCKETS.
6. A RING OF SOIL SHALL BE CREATED AROUND THE PERIMETER OF THE HOLE TO CREATE A WELL FOR WATERING.
7. AT THE TIME THE PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE THOROUGH HYDRATION OF THE ROOTS AND BACKFILL MATERIAL.
8. 2"-3" OF **COMPOSTED** WOODCHIPS SHALL BE PLACED OVER THE PLANTING AREA.
9. STAKES AND GUYS SHALL BE USED WHERE APPROPRIATE AND/OR NECESSARY. GUY MATERIAL SHALL BE NON-DAMAGING TO THE TREE.

**SITE PLAN NOTE:**

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

**LANDSCAPE NOTES:**

- 1) ALL SHRUBS ON PARKING LOT ISLANDS SHOULD BE MAINTAINED AT A HEIGHT OF NO MORE THAN 3 FEET, TO ENSURE SIGHT LINES AT INTERSECTIONS.

WEST END YARDS DETAILED PLANT SCHEDULE						
Trees	Botanical Name / Common Name	Plant Size at Installation	Plant Size at maturity	Growth Habit	Salt Tolerance (soil)	Notes
4	Acer rubrum `Franksred` TM/ Red Sunset Maple	2.5" cal.	45' ht.	Broadly Pyramidal	Low	Native
2	Gleditsia triacanthos inermis `Skycole` TM/ Skyline Thornless Honey Locust	3" cal.	40' ht.	Broadly Pyramidal	High	
12	Ginkgo biloba `Princeton Sentry` / Princeton Sentry Ginkgo	2.5" cal.	60' ht.	Narrow Upright	High	Male Species Only
1	Magnolia X `Elizabeth` (M. acuminata X M. denudata) / Elizabeth Magnolia	2" cal	50' ht.	Pyramidal	Low	Very Cold Hardy
2	Metasequoia glyptostroboides / Dawn Redwood	12' ht.	70' ht.	Conically Pyramidal	Low	Hardy to Zone 5-B
3	Nyssa Sylvatica / Sour Gum	3" cal.	40-70' ht.	Pyramidal	Medium	Native
15	Picea abies / Norway Spruce	8' ht.	40' ht.	Pyramidal	Medium	
14	Platanus x acerifolia `Exclamation` TM/ Exclamation London Plane Tree	2.5" cal.	75' ht.	Upright spreading	Medium	Hardy to Zone 5-B
24	Pinus rigida / Pitch Pine	5' ht.	30' ht.	Pyramidal	High	Native
12	Quercus bicolor / Swamp White Oak	3" cal.	60' ht.	Spreading	High	Native
8	Quercus robur x bicolor `Long` / Regal Prince Oak	3" cal.	60' ht.	Columnar	Medium	
2	Stewartia pseudocamellia / Japanese Stewartia	2" cal	30' ht.	Pyramidal/Oval	Low	Hardy to Zone 5-B
10	Thuja occidentalis `Holmstrup` / Holmstrup Cedar	7' ht.	5' ht.	Narrow Compact	High	Native
25	Thuja occidentalis `Smaragd` / Emerald Green Arborvitae	10' ht.	40' ht.	Conically Pyramidal	High	Native
19	Ulmus americana `Princeton` / American Elm	2.5" cal.	60' ht.	Ascending vase shape	High	Native
<b>Shrubs</b>						
22	Buxus sempervirens / American Boxwood	36" ht. x 36" spd.	4' ht. x 4' spd.	Globe shape	Low	
28	Buxus microphylla `Wintergreen` / Wintergreen Boxwood	5 gal.	4' ht. x 4' spd.	Globe shape	High	
27	Clethra alnifolia `Hummingbird` / Summersweet	3 gal	6' ht.	Spreading open	High	Tolerates salt spray
30	Hibiscus syriacus `Blue Satin` / Rose-of-Sharon	4' ht.	8' ht.	Upright Spreading	Low	Tolerates alkaline soil
51	Hydrangea paniculata `Limelight` TM/ Limelight Hydrangea	3 gal.	4'-8' ht.	Spreading	High	Long Lived
26	Ilex x meserveae `Blue Prince` TM/ Blue Prince Holly	4' ht.	12' ht.	Dense compact	Low	Very Cold Hardy
29	Myrica pensylvanica / Northern Bayberry	3 gal	6'-8' ht.	Rounded	High	Tolerates salt spray
8	Pinus mugo / Mugo Pine	7 gal.	4-10' ht.	Spreading	High	
68	Rhus aromatica `Gro-Low` / Gro-Low Fragrant Sumac	3 gal.	2' ht.	Low Spreading	High	
267	Rhododendron x `P.J.M.` / Rhododendron P.J.M.	3 gal	4-8' ht.	Dense compact	Low	
116	Schizachyrium scoparium `Blue Heaven` / Blue Heaven Little Bluestem	3 gal	3-4' ht.	Upright	Medium	
15	Spiraea japonica `Goldmound` / Spirea	3 gal	4' ht. x 4' spd.	Rounded Bushy	Low	
35	Syringa meyeri `Palibin` / Dwarf Korean Lilac	5 gal.	4-8' ht.	Spreading	Medium	
305	Taxus x media `Densiformis` / Dense Yew	3 gal	4' ht.	Upright	High	
<b>Ground Cover and Lawn</b>						
123	Amsonia tabernaemontana `Blue Ice` / Blue Ice Star Flower	1 gal.	12" ht.	Spreading	Low	
197	Perovskia atriplicifolia / Russian Sage	1 gal.	3-4' ht.	Upright	High	
1403	Liriope spicata / Creeping Lily Turf	1 gal.	12" ht.	Spreading	Low	
16	Hemerocallis x `Stella de Oro` / Stella de Oro Daylily	1 gal.	12" ht.	Upright spreading	Medium	
2972.42	Conservation Seed Mix / Conservation Seed	SF				
78428	Festuca arundinacea / Tall Fescue Grass	SF				
10917	Mulch / Hardwood Mulch	SF				



LANDSCAPE ARCHITECTURE+ LAND PLANNING  
 3715 Northside Parkway T: 404.705.9411  
 300 Northcreek, Bldg. 300 F: 404.705.9491  
 Atlanta, Georgia 30327 www.sitesolutionsla.com

COPYRIGHT © 2005 BY SITE solutions, LLC. LANDSCAPE ARCHITECTS. ALL RIGHTS RESERVED. THIS DOCUMENT (INCLUDING ELECTRONIC AND REPRODUCTIONS) IS THE PROPERTY OF SITE solutions, LLC. AND ONLY FOR USE ON THE PROJECT SPECIFIED HEREIN. IT IS NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR IN PART, EXCEPT BY THE EXPRESSED WRITTEN AGREEMENT WITH SITE solutions, LLC. THIS DOCUMENT AND REPRODUCTIONS SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PROFESSIONAL STAMP:

WEST END YARDS

PREPARED FOR

CATE STREET DEVELOPMENT LLC

SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
 LANDSCAPE NOTES & PLANT SCHEDULES

PROJECT NUMBER:  
 18041.00

L1.06

DATE: 03.18.2019  
 PERMIT ISSUE

**NEW ENGLAND WETLAND PLANTS, INC**

820 WEST STREET, AMHERST, MA 01002  
 PHONE: 413-548-8000 FAX 413-549-4000  
 EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

**New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites**

Botanical Name	Common Name	Indicator
<i>Elymus riparius</i>	Riverbank Wild Rye	FACW
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Vernonia noveboracensis</i>	New York Ironweed	FACW+
<i>Agrostis perennans</i>	Upland Bentgrass	FACU
<i>Bidens cernua</i>	Nodding Bur Marigold	OBL
<i>Eupatorium maculatum (Eutrochium maculatum)</i>	Spotted Joe Pye Weed	OBL
<i>Eupatorium perfoliatum</i>	Boneset	FACW
<i>Aster novae-angliae (Symphyotrichum novae-angliae)</i>	New England Aster	FACW-
<i>Scirpus cyperinus</i>	Wool Grass	FACW
<i>Juncus effusus</i>	Soft Rush	FACW+

PRICE PER LB. \$34.00 MIN. QUANTITY 3 LBS. TOTAL: \$102.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation. This mix is particularly appropriate for detention basins that do not hold standing water. Many of the plants in this can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed-to-soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

**NEW ENGLAND WETLAND PLANTS, INC**

820 WEST STREET, AMHERST, MA 01002  
 PHONE: 413-548-8000 FAX 413-549-4000  
 EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

**New England Conservation/Wildlife Mix**

Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium paniculatum</i>	Panicledleaf Tick Trefoil	
<i>Verbena hastata</i>	Blue Vervain	FACW
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Helianthus autumnale</i>	Common Sneezeweed	FACW+
<i>Aster pilosus (Symphyotrichum pilosum)</i>	Heath Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	
<i>Agrostis perennans</i>	Upland Bentgrass	FACU

PRICE PER LB \$36.50 MIN. QUANTITY 2 LBS. TOTAL: \$73.00 APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes for both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

**RESTORATION SEQUENCE NOTES:**

- EROSION CONTROL WILL BE PLACED AROUND ALL JURISDICTIONAL WETLANDS PRIOR TO THE START OF WORK.
- INITIAL WORK FOR INVASIVE SPECIES REMOVAL WILL BE PERFORMED WITH GUIDANCE BY STAFF FROM GES INC.
- INVASIVE SPECIES REMOVAL WILL IDEALLY BE DONE ONCE THE VEGETATION IS MATURE DURING THE LATE SPRING OR EARLY SUMMER TO AID IN IDENTIFICATION. INVASIVE SPECIES VEGETATION WILL INITIALLY BE CUT AS NEEDED TO AVOID THE POTENTIAL SPREAD OF SEEDS. ANY MATERIAL IN "SEED" WILL BE BAGGED AND DISPOSED OF PROPERLY.
- ALL WORK WILL BE PERFORMED FROM THE UPPER AREA OF THE SITE BY LONG REACH EXCAVATORS. ANY SMALL-SCALE WORK WILL BE DONE BY HAND TO REDUCE BANK IMPACTS AND ELIMINATE ANY UNNEEDED WEEKENING OF THE STABILITY OF THE BANK. NO WORK WILL BE PERFORMED FROM WITHIN THE STREAM.
- EXCAVATION WORK WILL BEGIN BY REMOVING REMAINING ROOT MATERIAL AND "SEED BANK" FROM THE SLOPE AND ANY DEBRIS.
- ALL FILL MATERIAL, INCLUDING PAVEMENT, CINDER BLOCKS, CEMENT, TRASH, I.E, BUCKETS, COUCHES, APPLIANCES, EXERCISE EQUIPMENT, ETC., WILL BE REMOVED AND DISPOSED OF PROPERLY.
- ANY CULVERTS EXISTING IN THE BANK TO BE REMOVED WILL BE SAW CUT OR CRUSHED AND REMOVED. THE REMANING PORTIONS OF CULVERTS WILL BE LEFT IN PLACE AND WILL BE FILLED WITH CEMENT TO CLOSE THEM OFF. THIS WILL REDUCE THE ADDITIONAL BANK IMPACT RESULTING FROM THEIR REMOVAL ENTIRELY.
- ANY DEBRIS REMOVAL NEAR MATURE TREE ROOTS WILL BE PERFORMED BY HAND SHOVEL OR SMALL MACHINE TO REDUCE DAMAGE TO ROOT STRUCTURE.
- CLEAN TOP SOIL WILL BE ADDED TO AREAS OF REMOVED MATERIALS, INCLUDING CULVERT ENDS. THIS MATERIAL WILL BE LEVELED TO CREATE A SMOOTH BANK TO BE PLANTED.
- THE FOLLOWING SPECIES WILL BE PLANTED IN RANDOM SPACING AT THE SPECIFIED NUMBERS AND SPACING IN EACH RESTORATION AREA BELOW: HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM), WINTERBERRY (ILEX VERTICILATTA), SWEET PEPPER BUSH (CLETHERA ALNIFOLIA). ANY EXPOSED AREAS WILL BE SEEDED WITH AN EROSION CONTROL SEED MIX @ 35LBS/ACRE. THIS WORK WILL BE PERFORMED BY HAND TOOLS. ALL PLANTS ARE TO BE IN 1-2 GALLON POTS AS AVAILABLE AT THE TIME OF THE PLANTING. PLANTS WILL BE LAID OUT PER THE RESTORATION PLAN IN RANDOM ORDER. HOLES WILL BE DUG BY HAND FOR PLANTING. ONCE PLANTED THE HOLES WILL BE BROUGHT LEVEL WITH ADDITIONAL SOIL. THE ENTIRE EXPOSED SLOPES WILL BE SEEDED AS SPECIFIED AND WILL BE COVERED WITH JUTE MATTING AFTER TO ELIMINATE EROSION. SUPPLEMENTAL WATERING WILL OCCUR SHOULD THERE NOT BE SIGNIFICANT RAINFALL.

IMPACT AREA 1 WILL HAVE 1,875 SF OF DISTURBANCE. THIS WILL BE PLANTED WITH A TOTAL OF 117 PLANTS AT A SPACING OF 4' OC

39- HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM),

39- WINTERBERRY (ILEX VERTICILATTA)

39- SWEET PEPPER BUSH (CLETHERA ALNIFOLIA),

IMPACT AREA 2 WILL HAVE 148 SF OF DISTURBANCE. THIS WILL BE PLANTED WITH A TOTAL OF 9 PLANTS AT A SPACING OF 4' OC

3- HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM),

3- WINTERBERRY (ILEX VERTICILATTA)

3- SWEET PEPPER BUSH (CLETHERA ALNIFOLIA),

IMPACT AREA 3 WILL HAVE 344 SF OF DISTURBANCE. THIS WILL BE PLANTED WITH 21 TOTAL PLANTS AT 4' OC SPACING

7- HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM),

7- WINTERBERRY (ILEX VERTICILATTA)

7- SWEET PEPPER BUSH (CLETHERA ALNIFOLIA),

IMPACT AREA 4 WILL HAVE 3,412 SF OF DISTURBANCE. THIS WILL BE PLANTED WITH A TOTAL OF 96 PLANTS AT A SPACING OF 6' OC.

32- HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM),

32- WINTERBERRY (ILEX VERTICILATTA)

32- SWEET PEPPER BUSH (CLETHERA ALNIFOLIA),

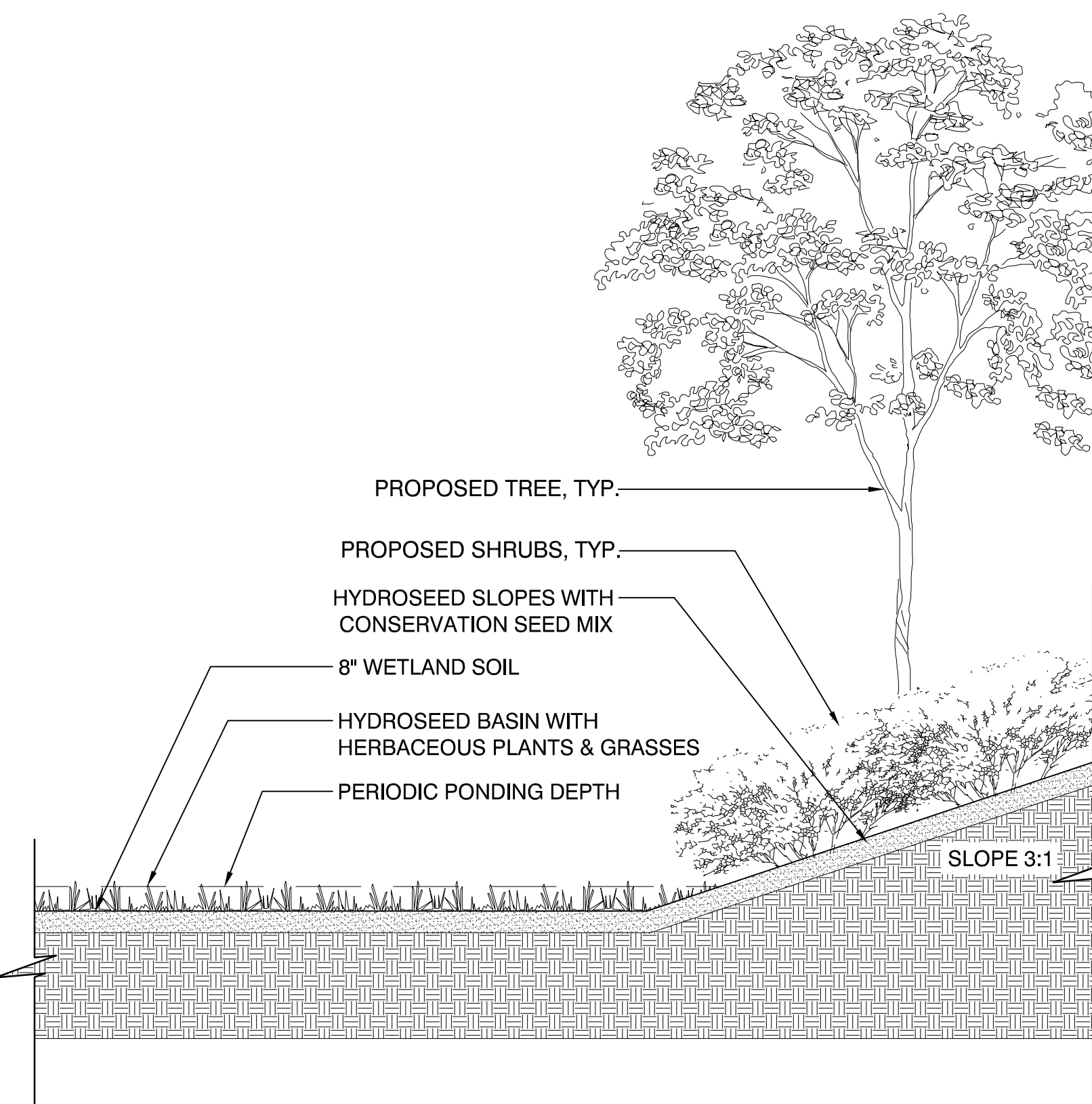
10. MONITORING OF THE RESTORATION AREAS WILL BE DONE UNDER THE DIRECTION OF THE NHDES WETLANDS BUREAU, AS THESE AREAS FALL UNDER THEIR JURISDICTION.

**1 SPEC: WETLAND SEED MIX**

N.T.S.

**2 SPEC: CONSERVATION SEED MIX**

N.T.S.



**3 DETAIL: WATER CONSERVATION POND**

1/4" = 1'-0"

**City of Portsmouth Tree Planting Requirements**

The base of the City of Portsmouth Tree Planting Requirements is the ANSI A300 Part 6 Standard Practices for Planting and Transplanting. ANSI A300 Part 6 lays out terms and basic standards as set forth by industry but it is NOT the "end all" for the City of Portsmouth. The following are the City of Portsmouth, NH Tree Planting Requirements that are in addition to or that go beyond the ANSI A300 Part 6.

- All planting holes shall be dug by hand- **NO MACHINES**. The only exceptions are new construction where new planting pits, planting beds with granite curbing, and planting sites with Silva Cells are being created. If a machine is used to dig in any of these situations and planting depth needs to be raised the material in the bottom of the planting hole **MUST** be firmed with machine to prevent sinking of the root ball.
- ALL** Wire and Burlap shall be removed from the root ball **AND** planting hole.
- The root ball of the tree shall be worked so that the root collar of the tree is visible and no girdling roots are present.
- The root collar of the tree shall be 2"-3" above grade of planting hole for finished depth.
- All plantings shall be backfilled with soil from the site and amended no more than 20% with Organic Compost. The only exceptions are new construction where engineered soil is being used in conjunction with Silva Cells and where new planting beds are being created.
- All plantings shall be backfilled in three lifts and **ALL** lifts shall be watered so the planting will be set and free of air pockets- **NO EXCEPTIONS**.
- An earth berm shall be placed around the perimeter of the planting hole except where curbed planting beds or pits are being used.
- 2"-3" of mulch shall be placed over the planting area.
- At the time the planting is complete the planting shall receive additional water to ensure complete hydration of the roots, backfill material and mulch layer.
- Stakes and guys shall be used where appropriate and/or necessary. Guy material shall be non-damaging to the tree.
- All planting stock shall be specimen quality, free of defects, and disease or injury. The City of Portsmouth, NH reserves the right to refuse/reject any plant material or planting action that fails to meet the standards set forth in the ANSI A300 Part 6 Standard Practices for Planting and Transplanting and/or The City of Portsmouth, NH Planting Requirements.

**4 DETAIL: CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS**

**5 DETAIL: RESTORATION SEQUENCE NOTES**

**SITE solutions**

LANDSCAPE ARCHITECTURE+ LAND PLANNING  
 3715 Northside Parkway T: 404.705.9411  
 300 Northcreek Bldg, 300 F: 404.705.9491  
 Atlanta, Georgia 30327 www.sitesolutionsla.com

COPYRIGHT © 2005 BY SITE solutions, LLC. LANDSCAPE ARCHITECTS. ALL RIGHTS RESERVED. THIS DOCUMENT (INCLUDING ELECTRONIC AND REPRODUCTIONS) IS THE PROPERTY OF SITE solutions, LLC. AND ONLY FOR USE ON THE PROJECT SPECIFIED HEREIN. IT IS NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR IN PART, EXCEPT BY THE EXPRESSED WRITTEN AGREEMENT WITH SITE solutions, LLC. THIS DOCUMENT AND REPRODUCTIONS SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PROFESSIONAL STAMP:

**WEST END YARDS**

PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

SHEET STATUS

MARK	DATE	BY	RELEASE
A	03/06/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:

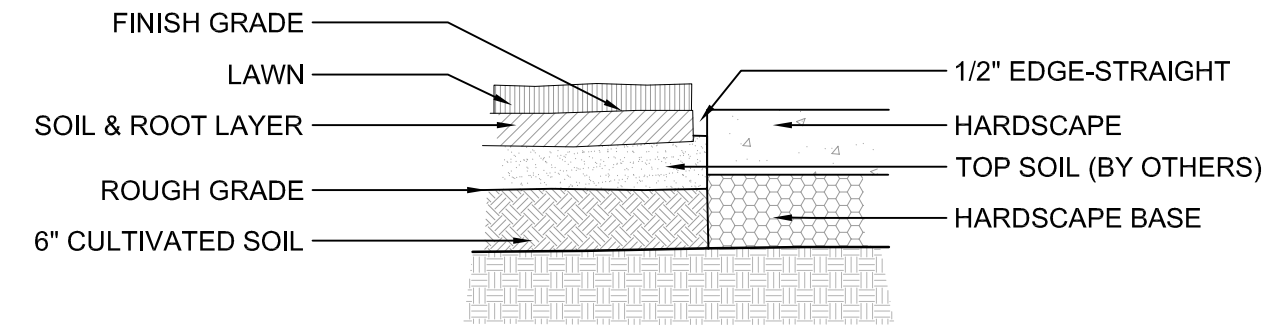
**STREAM BUFFER DETAILS**

PROJECT NUMBER:  
 18041.00

**L2.01**

DATE: 03.18.2019

NOT FOR CONSTRUCTION

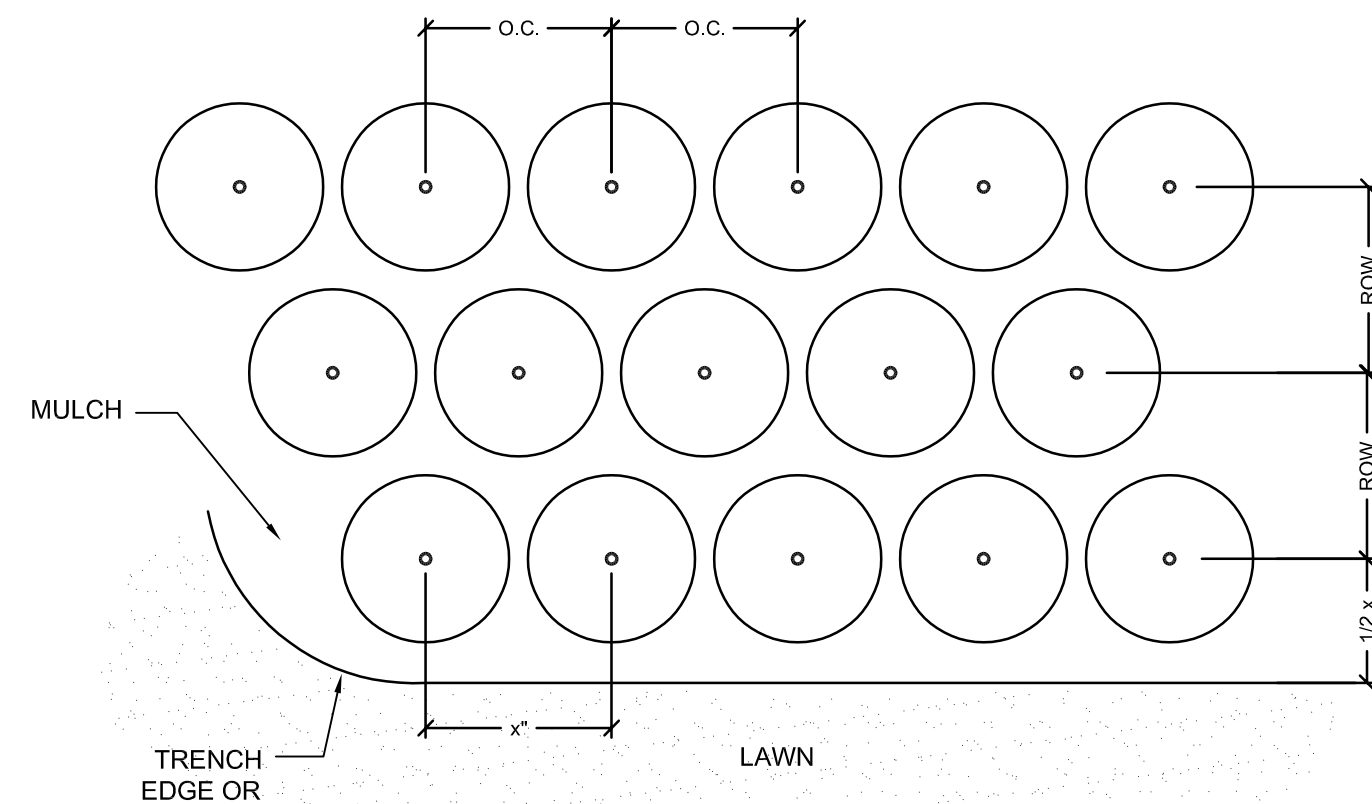


**INSTALLATION NOTES:**

1. GENERAL CONTRACTOR TO PROVIDE GRADES TO WITHIN TWO TENTH OF A FOOT FOR PROPOSED GRADES.
2. CULTIVATE TO A DEPTH OF 6".
3. FINE GRADE AS REQUIRED TO REACH FINISH GRADE PER CIVIL DRAWINGS.
4. APPLY LIME AND FERTILIZER, AS SPECIFIED.
5. APPLY PRE-EMERGENT HERBICIDE PER MANUFACTURE'S RECOMMENDATION.
6. LAY SOD & ROLL LEVEL.
7. WATER ENTIRE AREA THOROUGHLY.
8. 1. INSTALL SOD SO THAT THE TOP OF SOIL & ROOT LAYER IS LEVEL WITH TOP OF PAVEMENT

**1 SECTION: TYP. SOD INSTALLATION**

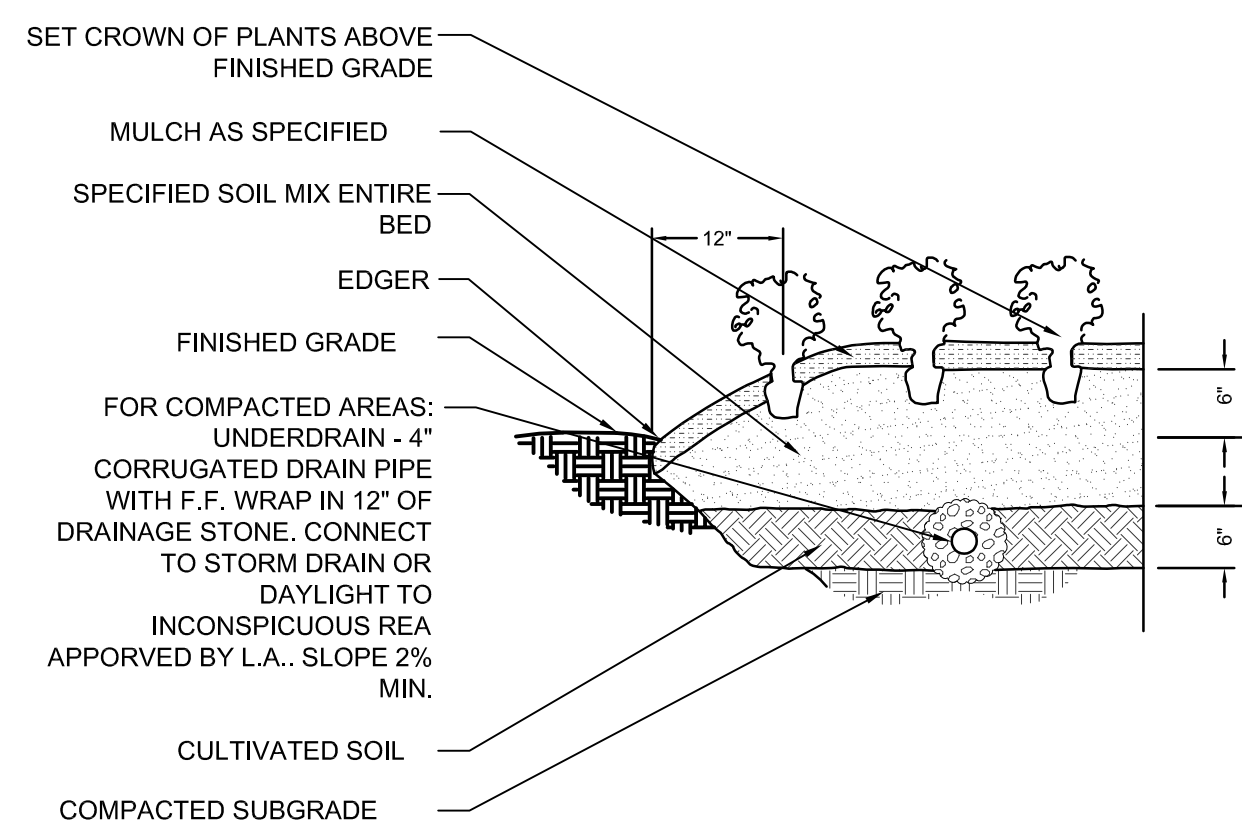
SCALE: N.T.S.



- NOTE:**
1. IF ROOTBALL IS WRAPPED IN NON-BIODEGRADABLE BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT.
  2. "X"= TYP. ON CENTER SPACING AS SHOWN ON PLANT SCHEDULE
  3. ALL ROWS TO BE STRAIGHT AND PARALLEL

**4 PLAN: TYP. PLAN MASS SPACING**

SCALE: NTS

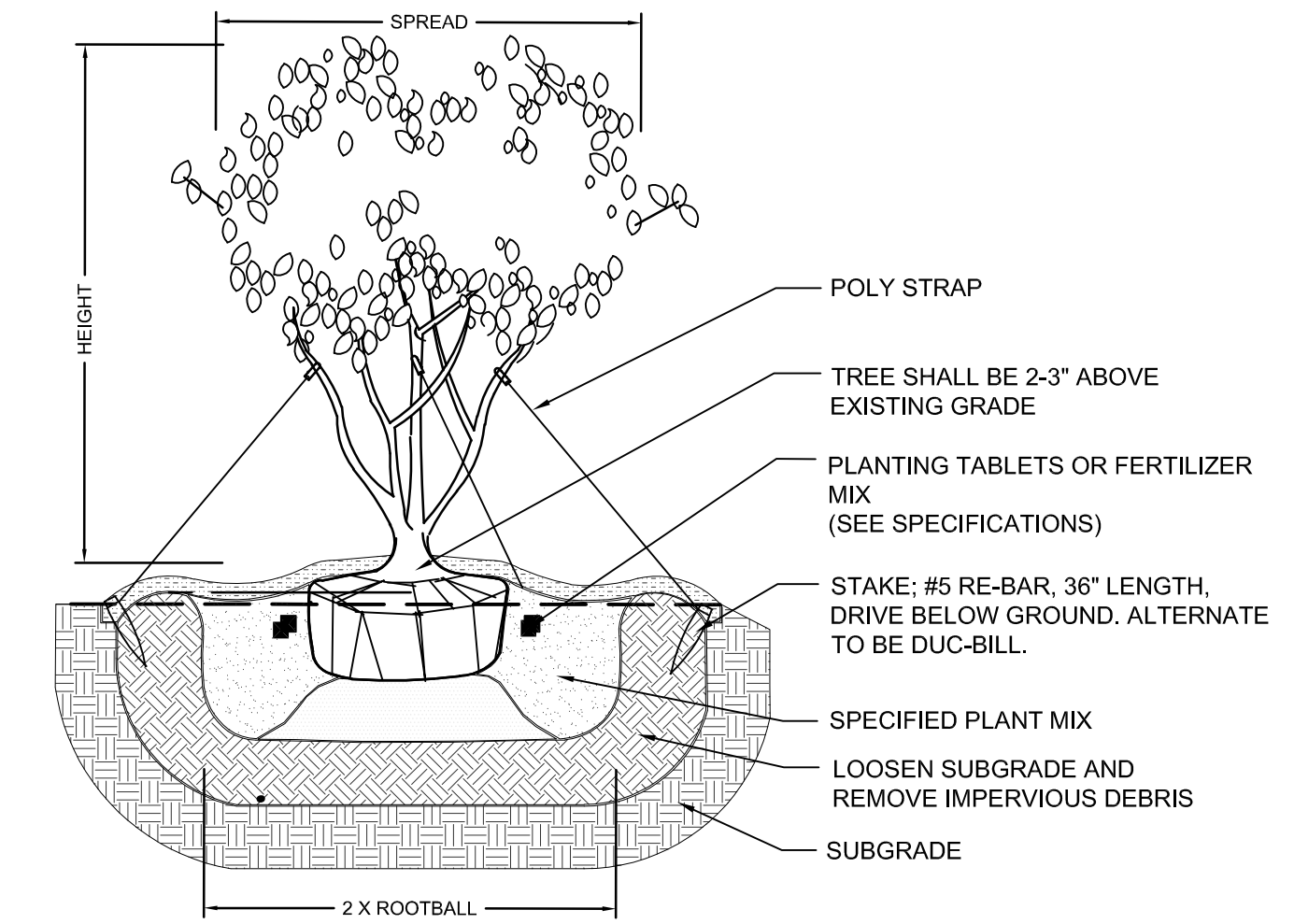


**NOTES:**

1. REFER TO SPECIFICATIONS FOR FERTILIZATION REQUIREMENTS.

**7 SECTION: SEASONAL COLOR & PERENNIAL BED PREP.**

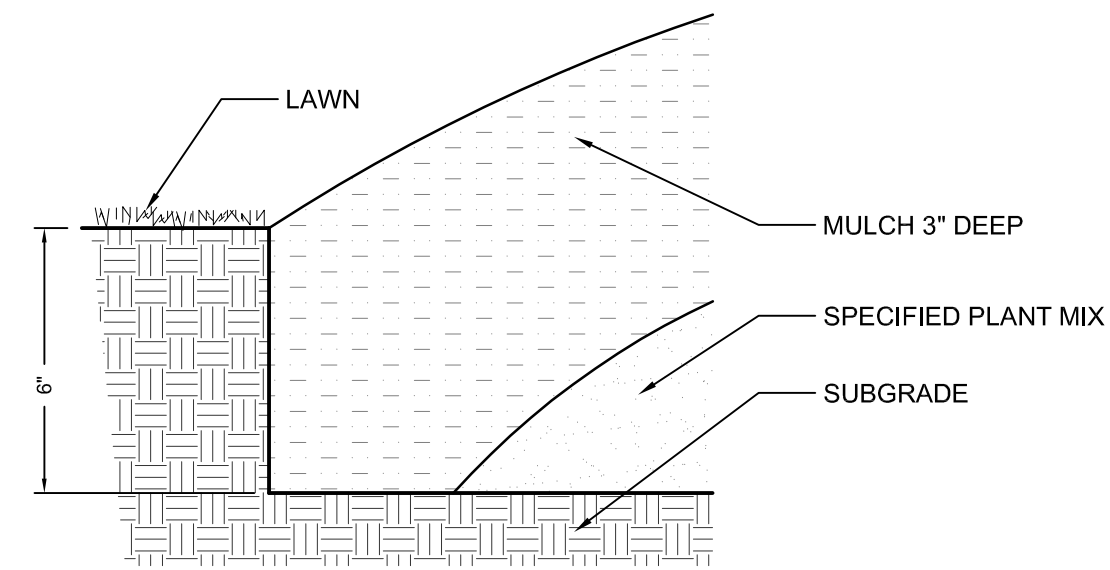
SCALE: NTS



**9 SECTION: TYP. MULTI TRUNK TREE PLANTING 6' & UP**

SCALE: NTS

1. Contractor to carefully examine the contract documents and existing conditions before submitting bid proposal or commencing work.
2. Damage to existing utilities or site improvements caused by the contractor are the full responsibility of contractor.
3. Contractor's base bid to include all materials, labor, permits, equipment, tools, insurance, ETC. to perform the work as described in the contract documents.
4. Contractor to complete work within schedule established by owner.
5. Contractor to provide one year warranty for all material from date of substantial completion.
6. Provide unit price for all materials (installed cost) listed on the plant schedule.
7. Contractor to provide interim maintenance (watering, pruning, fertilizing, guying, mowing, trimming, adequate drainage of ponding areas, edging, weeding, mulching, application of insecticides/herbicides, and general landscape clean-up) until substantial completion notice is provided by the owner or landscape architect.
8. Perform work in compliance with all applicable laws, codes, and regulations required by authorities having jurisdiction over such work and provide for permits required by local authorities.
9. Topsoil shall be natural, fertile, friable, sandy clay loam capable of sustaining plant growth, free of stones, stumps, ETC.
10. For all turf lawn areas spread 2-3" of topsoil into existing soil to a depth of 6" below finish grade. Hand rake finished grades to provide even contours.
11. All planted material shall be equivalent in quality to specimen grade or better, as noted by the American Association of Nurserymen, latest edition. All trees of lesser quality shall be rejected by the city arborist.
12. Plant material to be free of disease, insect pests, eggs, or larvae. Damaged plant material shall be rejected.
13. Mulch to be clean, fresh, new, double shredded bark, 3 inches deep.
14. Test plant beds and plant pits for adequate drainage. Work shall be made by the contractor at no additional cost to owner. Hardpan or moisture barriers shall be broken, or drain pipes to be installed to provide proper drainage of plant areas. Plant pits shall be excavated to the bottom of the pit. Fill each plant pit with water and observe the pit for 2 hours. If the water has not dissipated by 50% within 2 hours, notify the landscape architect of such in writing before installing plants in the questionable area(s), otherwise contractor shall be held liable for the livability of the plant. In hardpan conditions where water does not drain within 2 hours, install drain pipes as per tree planting in compacted soil area detail.
15. Trees shall be installed 2-3" above finish grade in hardpan areas unless otherwise directed to provide drainage.
16. Plant beds shall be neatly edged using a 3" wide by 6" wide deep trench. Provide 2/1 side slope behind trench edge.
17. Ground cover, shrub mass beds shall be cultivated to a depth of 12 inches below grade to break through compacted or hardpan soil. Remove all stones, roots, and inferior material. Add specified soil amendments and fertilizer. Elevate entire bed 6 inches above original grade. Rake to a consistent smooth surface. Install plants, edge bed area, mulch and water thoroughly.
18. Set all plants plumb and turned so that the most attractive side is viewed.
19. Plants shall be measured to their main structure, not tip to tip of branches.
20. Remove top one-third burlap of B & B wrapping. Remove all binding. If rootball is wrapped in non-biodegradable burlap, remove entire wrap after placed in pit.
21. Tree pit and shrub pit to be twice the size of the root mass. Fill with plant mix. See details.
22. Broken root balls for trees shall be rejected.
23. Any plant materials shipped to site in uncovered vehicles/ trailer shall be rejected regardless of season.
24. Space shrubs, ground cover, and seasonal color evenly and in straight rows.
25. All tree scars over 1 -1/2" shall be rejected and tree to be replaced.
26. All shrubs to be dense and full. All trees to have a symmetrical growth habit (360 degrees) unless uncharacteristic to plant type.
27. Scarify root mass of shrubs and ground cover before installing.
28. Remove all excess growth of trees and shrubs as directed by landscape architect. Do not cut central leader.
29. Layout all plant material according to landscape drawings. Receive approval of all layouts before installation. Adjustments to the layout shall be made by the landscape architect. Landscape contractor to make adjustments to layout at no additional cost to the owner. Landscape contractor responsible for adjustment of layout in order to avoid utilities. Notify landscape architect of contemplated adjustments to the layout and receive approval before commencing.
30. General contractor to provide grades to two-tenths (.20+) of a foot of proposed finish grades.
31. All shrubs shall be dense and well-branched from bottom to top and all sides. "Leggy" shrubs will be rejected by L.A.
32. Owner or landscape architecture shall review project at completion of installation for substantial completion. Final completion shall be given at the end of the warranty period if all items are completed to the owner's satisfaction. Contractor shall be notified in writing of substantial and final completion dates.
33. See civil drawings for further information regarding: erosion sediment control information, locations of existing and proposed structures, paving, driveways, cut and fill areas, and retention areas, limits of construction, locations of existing and proposed utilities or easements.
34. Contractor shall collect three (3) soil samples of existing soil from areas on site to receive planting for testing. Each soil sample shall be approximately 1 kg. (1 gal. zip lock bag) in volume and will receive the following tests by A&L Agricultural Labs:  
- s1-a  
- s3  
- texture analysis  
- infiltration
34. Sight lines may not be obstructed between a height of 30-inches and 84-inches above the crown of the roadway surface. The property owner must maintain all landscaping according to this requirement at all times.

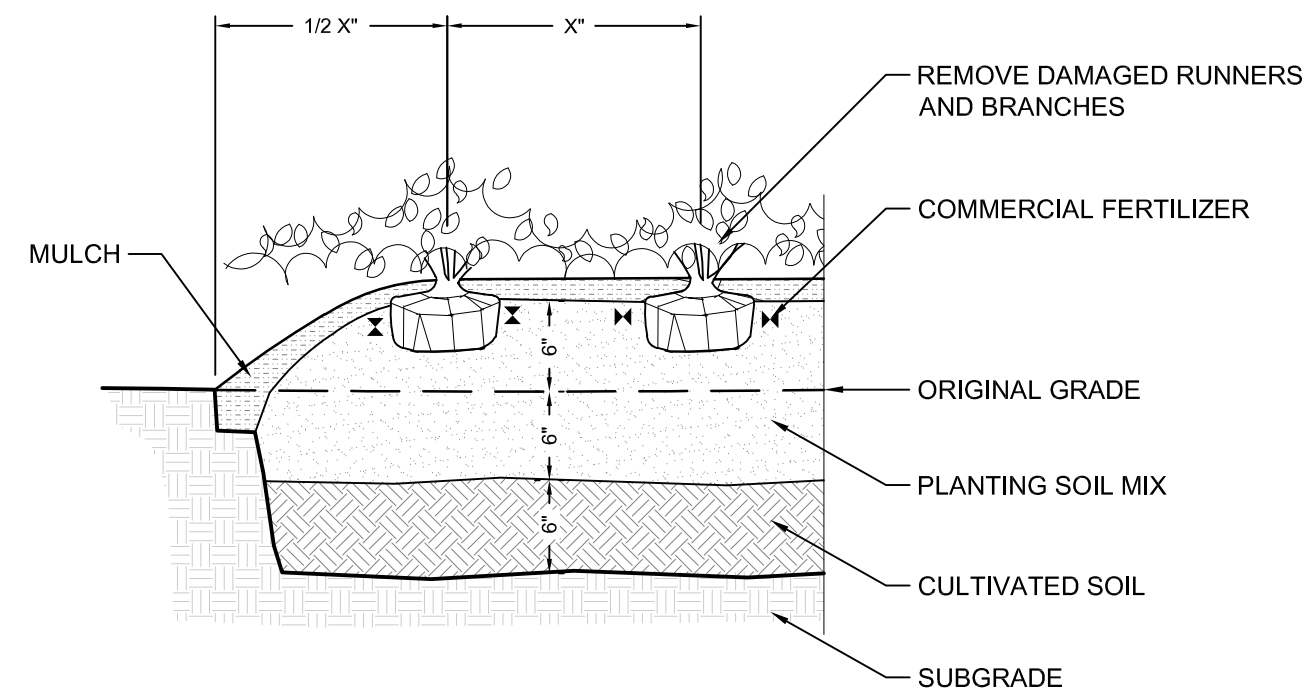


**NOTES:**

1. TRENCH EDGE IS TO BE LOCATED BETWEEN ALL PLANTING BEDS & LAWN AREAS.

**2 SECTION: TRENCH EDGE**

SCALE: NTS

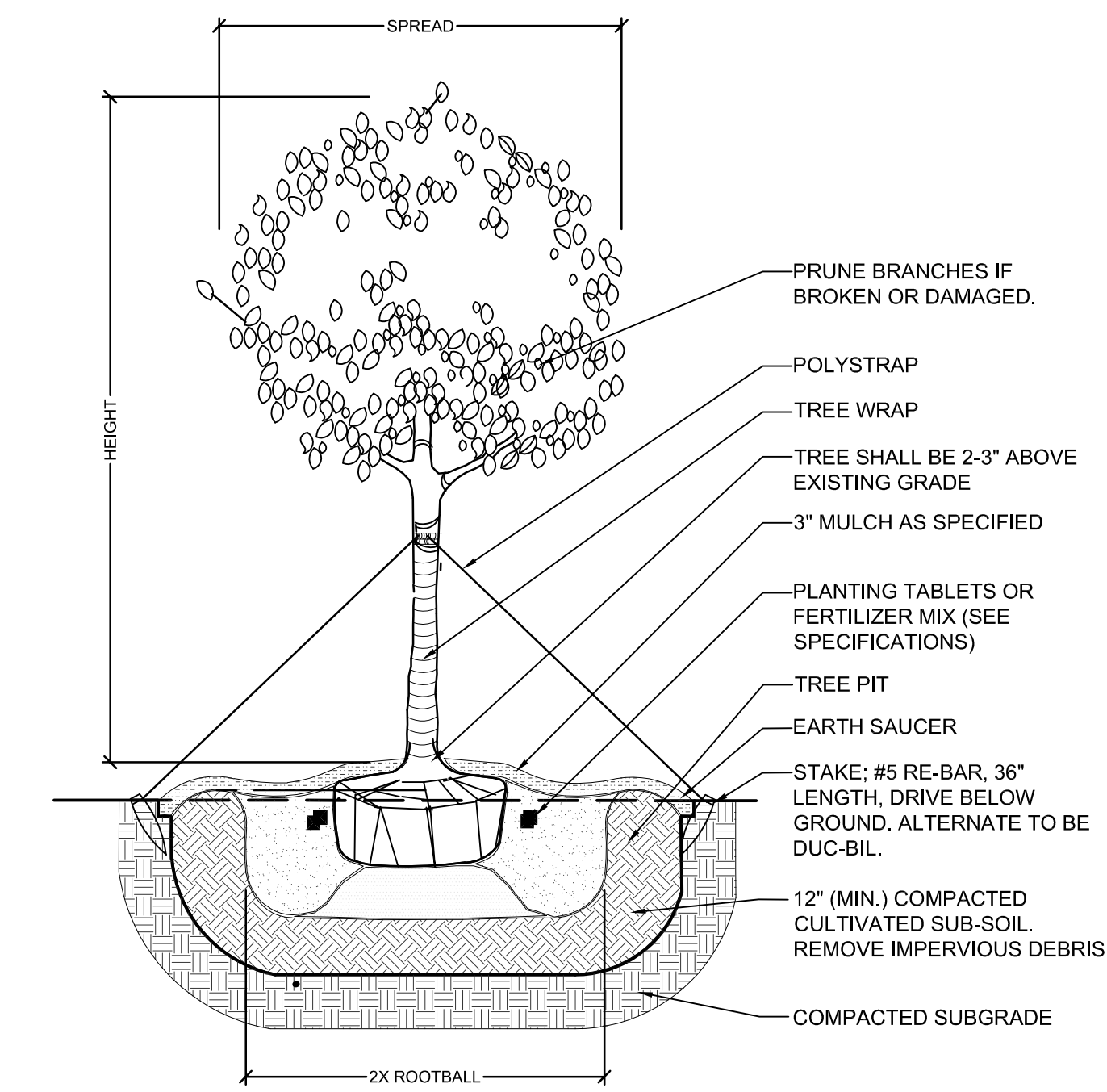


**NOTES:**

1. IF ROOTBALL IS WRAPPED IN NON-BIODEGRADABLE BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT.
2. "X"= TYP. ON CENTER SPACING AS SHOWN ON PLANT SCHEDULE
3. ALL ROWS TO BE STRAIGHT AND PARALLEL
4. TYP. BED INSTALLATION DETAIL FOR ERICACEOUS PLANT MATERIAL (RHODODENDRON, AZALEAS, PIERIS, ECT.)

**5 SECTION: TYP. ERICACEOUS PLANT MATERIAL INSTALL.**

SCALE: NTS

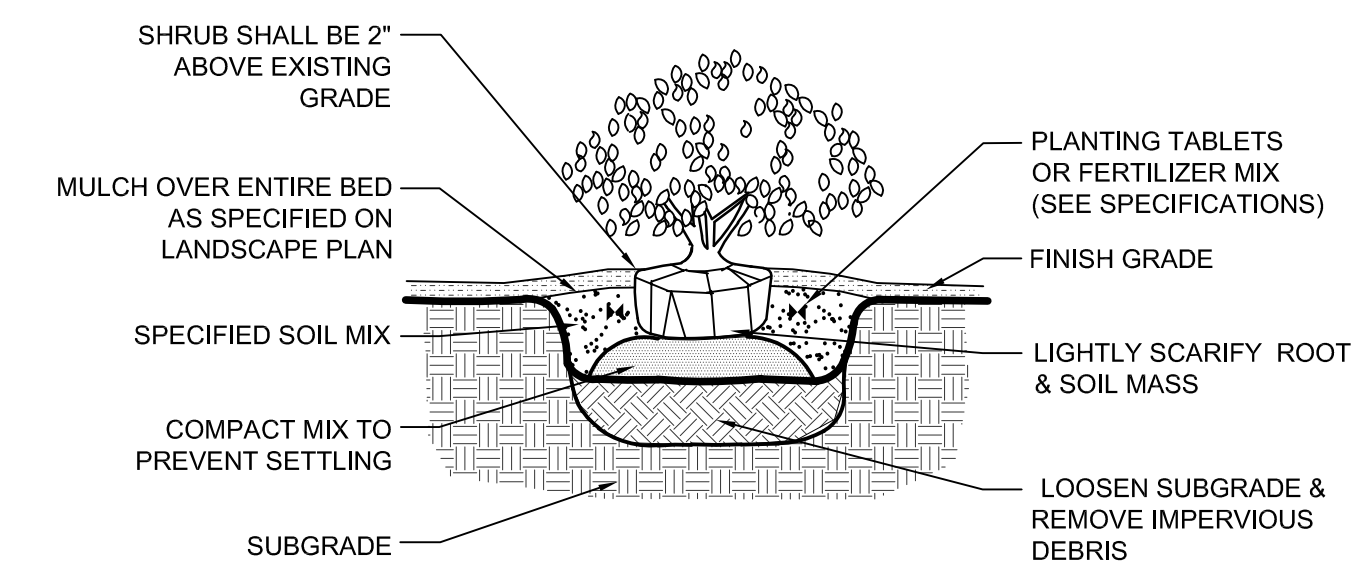


**TREE PLANTING NOTES & PROCEDURES**

1. EXCAVATE TREE PIT TO A DEPTH EQUAL TO DEPTH OF ROOTBALL PLUS 24", AND A WIDTH EQUAL TO TWO (2) TIMES THE DIAMETER OF THE ROOTBALL.
2. FILL TREE PIT WITH WATER AND CONFIRM PERCOLATION RATE. (NOTIFY LANDSCAPE ARCHITECT IF POOR DRAINAGE CONDITIONS EXIST.)
3. INSTALL TREE PER DETAIL AVOIDING DAMAGE TO ROOTBALL OR TREE TRUNK.
4. ADD SPECIFIED FERTILIZER TABLETS & MYCORRHIZAL TRANSPLANT INOCULANT.
5. REMOVE BURLAP ON TOP 1/3 OF TREE ROOTBALL. REMOVE BURLAP ON TOP 1/3 OF TREE ROOTBALL.
6. IMMEDIATELY SOAK TREE PIT WITH WATER AND REMOVE ANY AIR POCKETS THAT MAY HAVE OCCURRED DURING BACKFILLING.

**8 SECTION: TYPICAL TREE PLANTING**

SCALE: NTS

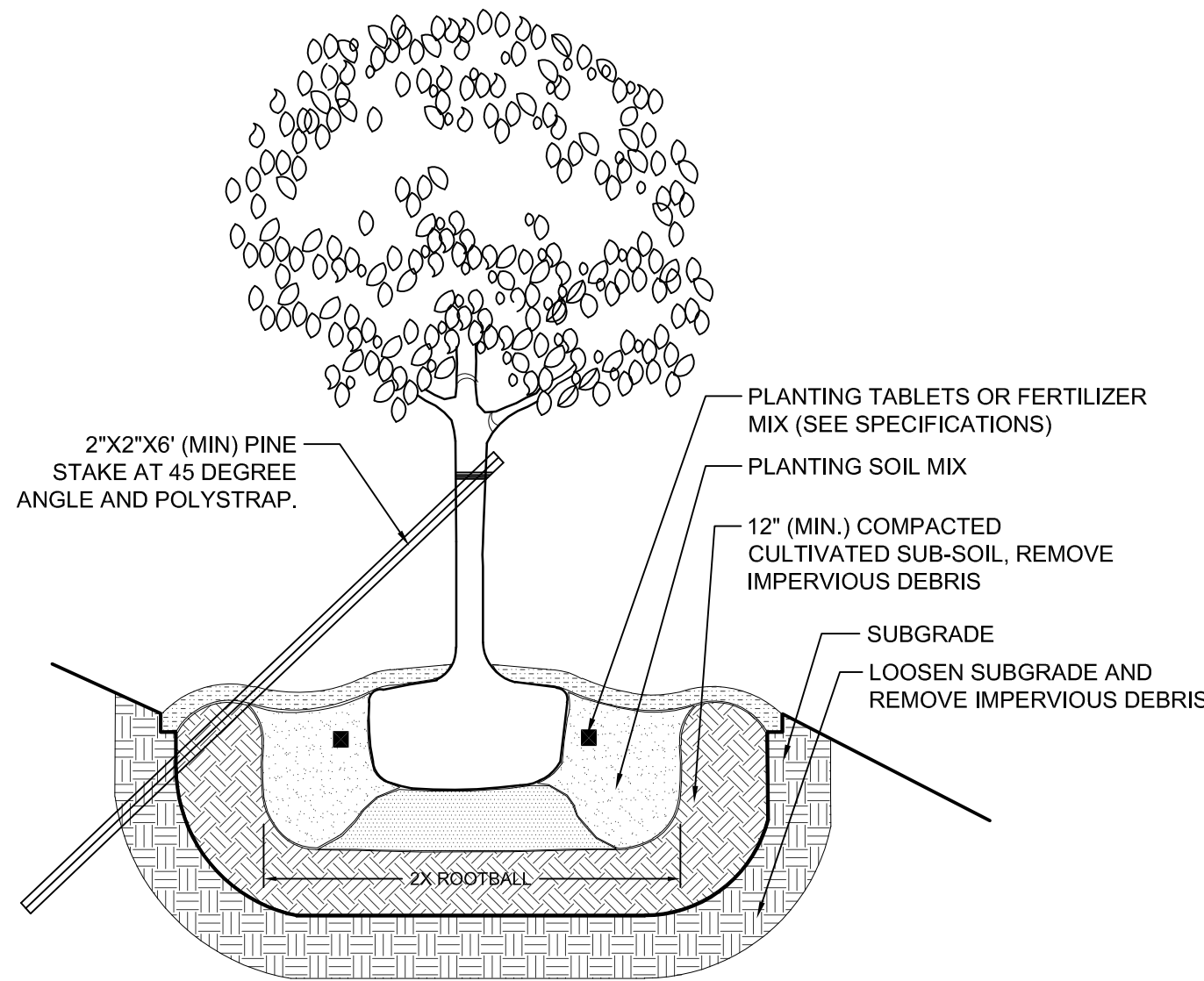


**NOTES:**

1. IF ROOTBALL IS WRAPPED IN NON-BIODEGRADABLE BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT.

**3 SECTION: TYP. CONTAINERIZED SHRUB PLANTING**

SCALE: NTS



**TREE PLANTING NOTES & PROCEDURES**

1. DRIVE STAKE 30" INTO GRADE AT A 45 DEGREE ANGLE.
2. ALL STAKES AND INSTALLATION TO MATCH.
3. PROVIDE TREE SAUCER TO EACH TREE.
4. SECURE STAKE TO TREE WITH #4 GALVANIZED WIRE & POLYSTRAPS.
5. MINIMUM ONE STAKE PER TREE UNDER 2" CALIPER. STAKE TO BE 2"X2" PINE.
6. MINIMUM ONE GUY PER TREE ALL TREES OVER 2" CALIPER. SEE TREE PLANTING NOTES.
7. IF ROOTBALL IS WRAPPED IN NON-BIODEGRADABLE BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT.
8. SEE TYPICAL TREE PLANTING DETAIL

**6 SECTION: TYP. TREE PLANTING ON SLOPE**

SCALE: NTS

PROFESSIONAL STAMP:

SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/06/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:

**LANDSCAPE DETAILS**

PROJECT NUMBER:

18041.00

**L2.02**

DATE: 03.18.2019

NOT FOR CONSTRUCTION

New Hampshire Invasive Species Committee

NH Invasive Plant Species Watch List  
Approved by the ISC April 11, 2018

The NH Invasive Plant Species Watch List is a non-regulatory reference tool that serves to:

- identify potentially invasive non-native plant species based on degree of invasive qualities (e.g., aggressive growth, rapid reproduction, and/or lack of natural herbivores) and presence (but not necessarily abundance) in NH and/or nearby elsewhere in New England;
- inform prevention (e.g., early detection/rapid response), monitoring, and management decision-making for species that may impact NH's ecosystems or economy; and
- increase awareness of invasive plant species.

Scientific Name	Synonyms	Common Name
<i>Abutilon theophrasti</i> Medik.		Velvetleaf Indian-mallow
<i>Acer ginnala</i> Maxim.		Amur maple
<i>Agrostemma githago</i> L. var. <i>githago</i>	<i>Lychnis githago</i> (L.) Scop.	Common corncockle
<i>Aira caryophyllica</i> L.	<i>Aspris caryophyllica</i> (L.) Nash	Common silver-hairgrass
<i>Allium vineale</i> L.		Crow garlic
<i>Amorpha fruticosa</i> L.	<i>Amorpha fruticosa</i> L. var. <i>angustifolia</i> Pursh; <i>A. fruticosa</i> L. var. <i>oblongifolia</i> Palmer; <i>A. fruticosa</i> L. var. <i>tennesseensis</i> (Shuttw. ex Kunze) Palmer	False indigo-bush
<i>Aralia elata</i> (Miq.) Seem.	<i>Dimorpharthus elatus</i> Miq.	Japanese angelica-tree
<i>Barbarea vulgaris</i> Ait. f.	<i>Barbarea arcuata</i> (Opiz ex J. & K. Presl) Reichenb.; <i>B. stricta</i> , of authors not Andr.; <i>B. vulgaris</i> var. <i>arcuata</i> (Opiz ex J. & K. Presl) Fries; <i>Campy barbarea</i> (L.) W. Wight ex Piper; <i>C. stricta</i> , of authors not (Andr.) W. Wight ex Piper; <i>Erysimum barbarea</i> L.	Garden yellow-rocket
<i>Brassica juncea</i> (L.) Czern.	<i>Brassica juncea</i> (L.) Czern. var. <i>crispifolia</i> Bailey; <i>Sinapis juncea</i> L.	Chinese mustard
<i>Brassica nigra</i> (L.) W.D.J. Koch	<i>Sinapis nigra</i> L.	Black mustard
<i>Bromus tectorum</i> L.	<i>Anisantha tectorum</i> (L.) Nevski	Cheat brome
<i>Cardamine impatiens</i> L.		Narrow-leaved bitter-cress
<i>Centaurea jacea</i> L.	<i>Centaurea debeauxii</i> Gren. & Godr. ssp. <i>thullieri</i> Dostal; <i>C. jacea</i> L. ssp. <i>decipiens</i> (Thunb.) Čelak.; <i>C. jacea</i> L. ssp. <i>pratensis</i> Čelak.; <i>C. pratensis</i> Thunb.; <i>C. thullieri</i> (Dostal) J. Duvin. & Lambinon; <i>Cyanus jacea</i> (L.) P. Gaertn.; <i>Jacea pratensis</i> Lam.	Brown knapweed
<i>Centaurea nigra</i> L.	<i>Jacea nigra</i> (L.) Hill	Black knapweed

NH Invasive Plant Species Watch List: April 11, 2018

Scientific Name	Synonyms	Common Name
<i>Chelidonium majus</i> L.	<i>Chelidonium majus</i> L. var. <i>laciniatum</i> (P. Mill.) Syme; <i>C. majus</i> L. var. <i>plenum</i> Wehrhahn	Greater celandine
<i>Cirsium palustre</i> (L.) Scop.	<i>Carduus palustris</i> L.	Marsh thistle
<i>Cirsium vulgare</i> (Savi) Ten.	<i>Carduus lanceolatus</i> L.; <i>C. vulgaris</i> Savi; <i>Cirsium lanceolatum</i> (L.) Scop.	Common thistle
<i>Convolvulus arvensis</i> L.	<i>Strophocalos arvensis</i> (L.) Small	Field bindweed
<i>Cytisus scoparius</i> (L.) Link	<i>Spartium scoparium</i> L.	Scotch broom
<i>Digitaria sanguinalis</i> (L.) Scop.	<i>Panicum sanguinale</i> L.	Hairy crabgrass
<i>Eichhornia crassipes</i> (Mart.) Solms-Laubach	<i>Eichhornia speciosa</i> Kunth; <i>Piaropus crassipes</i> (Mart.) Raf.	Common water-hyacinth
<i>Elymus repens</i> (L.) Gould	<i>Agropyron repens</i> (L.) Gould; <i>Elytrigia repens</i> (L.) Desv. ex B.D. Jackson; <i>Triticum repens</i> L.	Creeping wild-rye
<i>Epilobium hirsutum</i> L.		Hairy willow-herb
<i>Epipactis helleborine</i> (L.) Crantz	<i>Epipactis latifolia</i> (L.) All.; <i>Serapias helleborine</i> L.	Broad-leaved helleborine
<i>Euonymus europaeus</i> L.		European spindle-tree
<i>Euonymus fortunei</i> (Turcz.) Hand.-Mazz	<i>Euonymus fortunei</i> (Turcz.) Hand.-Mazz var. <i>radicans</i> (Sieb. ex Miq.) Rehd.; <i>E. fortunei</i> (Turcz.) Hand.-Mazz var. <i>vegetus</i> (Rehd.) Rehd.; <i>E. radicans</i> Sieb. ex Miq.; <i>E. radicans</i> Sieb. ex Miq. var. <i>vegetus</i> Rehd.	Climbing spindle-tree
<i>Festuca filiformis</i> Pourret	<i>Festuca capillata</i> Lam.; <i>F. ovina</i> L. var. <i>capillata</i> (Lam.) Alef.; <i>F. tenuifolia</i> Sibthorp	Fine-leaved sheep fescue
<i>Ficaria verna</i> Huds. ssp. <i>fertilis</i> (Lawralie ex Laegaard) Stace	<i>Ficaria verna</i> Huds. ssp. <i>bulbifera</i> A. & D. Löve; <i>Ranunculus ficaria</i> L. ssp. <i>bulbifer</i> Lambinon; <i>R. ficaria</i> L. ssp. <i>bulbifera</i> (Marsden-Jones) Lawalree, an illegitimate name; <i>R. ficaria</i> var. <i>bulbifera</i> Marsden-Jones	Fig-crowfoot
<i>Froelichia gracilis</i> (Hook.) Moq.	<i>Oplotecha gracilis</i> Moq.	Slender cotton-weed
<i>Galium mollugo</i> L.		Whorled bedstraw
<i>Glechoma hederacea</i> L.	<i>Glechoma hederacea</i> L. var. <i>micrantha</i> Moric.; <i>G. hederacea</i> L. var. <i>parviflora</i> (Benth.) House; <i>Nepeta hederacea</i> (L.) Trevisan	Git-over-the-ground
<i>Hylotelephium telephium</i> (L.) H. Ohba	<i>Sedum purpureum</i> (L.) J.A. Schultes; <i>S. purpurascens</i> W.D.J. Koch; <i>S. telephium</i> L.	Purple orpine
<i>Kochia scoparia</i> (L.) Schrad.	<i>Bassia scoparia</i> (L.) A.J. Scott; <i>Chenopodium scoparium</i> L.; <i>Kochia scoparia</i> (L.) Schrad. var. <i>pubescens</i> Fernal.; <i>K. scoparia</i> (L.) Schrad. var. <i>subvillosa</i> Moq.	Summer-cypress
<i>Lamium amplexicaule</i> L. var. <i>amplexicaule</i>		Common henbit

NH Invasive Plant Species Watch List: April 11, 2018

Scientific Name	Synonyms	Common Name
<i>Lamium purpureum</i> L.	<i>Lamium dissectum</i> With.; <i>L. hybridum</i> , of authors not Vill.	Red henbit
<i>Lonicera xylosteum</i> L.		Fly honeysuckle
<i>Lupinus polyphyllus</i> Lindl. var. <i>polyphyllus</i>	<i>Lupinus pallidipes</i> Heller; <i>L. polyphyllus</i> Lindl. var. <i>albiflorus</i> L.H. Bailey; <i>L. polyphyllus</i> Lindl. var. <i>pallidipes</i> (Heller) C.P. Sm.	Blue lupine
<i>Lychnis flos-cuculi</i> L. ssp. <i>flos-cuculi</i>	<i>Coronaria flos-cuculi</i> (L.) A. Braun; <i>Silene flos-cuculi</i> (L.) Clairville	Ragged robin lychnis
<i>Lysimachia arvensis</i> (L.) U. Manns & A. Anderb.	<i>Anagallis arvensis</i> L.; <i>A. arvensis</i> L. var. <i>caerulea</i> (Schreb.) Gren. & Godr.; <i>A. caerulea</i> Schreb.	Scarlet pimpernel
<i>Lysimachia vulgaris</i> L.		Garden yellow-loosestrife
<i>Miscanthus sinensis</i> Anders.	<i>Miscanthus sinensis</i> Anders. var. <i>gracillimus</i> A.S. Hitchc.	Chinese silvergrass
<i>Mycelis muralis</i> (L.) Dumort.	<i>Lactuca muralis</i> (L.) Fresen	Wall-lettuce
<i>Myosotis scorpioides</i> L.	<i>Myosotis palustris</i> (L.) Hill	Water forget-me-not
<i>Nasturtium microphyllum</i> Boenn. ex Reichenb.	<i>Nasturtium officinale</i> All. f. var. <i>microphyllum</i> (Boenn. ex Reichenb.) Thellung; <i>Perrippa microphylla</i> (Boenn. ex Reichenb.) Hyl. ex A. & D. Löve	One-rowed water-cress
<i>Nasturtium officinale</i> All. f.	<i>Baumeria nasturtium-aquaticum</i> (L.) Hayek; <i>Rorippa nasturtium-aquaticum</i> (L.) Hayek; <i>Sisymbrium nasturtium-aquaticum</i> L.	Two-rowed water-cress
<i>Oenanthe javanica</i> (Blume) DC		Java water dropwort
<i>Persicaria longiseta</i> (Brujin) Kitagawa	<i>Persicaria caespitosa</i> (Blume) Nakai var. <i>longiseta</i> (Brujin) Reed; <i>Polygonum caespitosum</i> Blume var. <i>longisetum</i> (Brujin) Steward; <i>P. longisetum</i> Brujin	Oriental lady's-thumb smartweed
<i>Phellodendron amurense</i> Rupr.	<i>Phellodendron amurense</i> Rupr. var. <i>sachalinense</i> F. Schmidt; <i>P. japonicum</i> Maxim.; <i>P. sachalinense</i> (F. Schmidt) Sarg.	Amur corktree
<i>Poa compressa</i> L.		Flat-stemmed blue grass
<i>Poa nemoralis</i> L.		Wood blue grass
<i>Populus alba</i> L.	<i>Populus alba</i> L. var. <i>balleana</i> Lauche	White poplar
<i>Ranunculus repens</i> L.	<i>Ranunculus repens</i> L. var. <i>degenerates</i> Schur; <i>R. repens</i> L. var. <i>erectus</i> DC.; <i>R. repens</i> L. var. <i>glaberratus</i> DC.; <i>R. repens</i> L. var. <i>pleniflorus</i> Fern.; <i>R. repens</i> L. var. <i>villosus</i> Lamotte	Spot-leaved crowfoot
<i>Raphanus raphanistrum</i> L. ssp. <i>raphanistrum</i>		Wild radish

NH Invasive Plant Species Watch List: April 11, 2018

Scientific Name	Synonyms	Common Name
<i>Rhinanthus minor</i> L. ssp. <i>minor</i>	<i>Rhinanthus crista-galli</i> L., in part; <i>R. crista-galli</i> L. var. <i>fallax</i> (Wimmer & Grab.) Druce; <i>R. stenophyllus</i> (Schur) Schinz & Thellung	Little yellow-rattle
<i>Rumex acetosella</i> L. ssp. <i>pyrenaicus</i> (Pourret ex Lapeyr.) Akeroyd	<i>Acetosella vulgaris</i> (Koch) Fourr. ssp. <i>pyrenaica</i> (Pourret ex Lapeyr.) A. Löve; <i>Rumex acetosella</i> L. var. <i>pyrenaicus</i> (Pourret ex Lapeyr.) Timbal-Lagrove; <i>R. pyrenaicus</i> Pourret ex Lapeyr.	Sheep dock
<i>Securigera varia</i> (L.) Lassen	<i>Coronilla varia</i> L.	Purple crown-vetch
<i>Silphium perfoliatum</i> L.		Cup-plant rosinweed
<i>Sinapis arvensis</i> L.	<i>Brassica arvensis</i> Rabenh.; <i>B. kaber</i> (DC.) L.C. Wheeler; <i>B. kaber</i> (DC.) L.C. Wheeler var. <i>pinnatifida</i> (Stokes) L.C. Wheeler	Corn charlock
<i>Solanum carolinense</i> L. var. <i>carolinense</i>		Carolina nightshade
<i>Solanum dulcamara</i> L.		Climbing nightshade
<i>Sonchus arvensis</i> L.	<i>Sonchus arvensis</i> L. ssp. <i>uliginosus</i> (Bieb.) Byman; <i>S. uliginosus</i> Bieb.	Field sow-thistle
<i>Sorbaria sorbifolia</i> (L.) A. Braun	<i>Schizanthus sorbifolius</i> (L.) Lindl.; <i>Spiraea sorbifolia</i> L.	False spiraea
<i>Tanacetum vulgare</i> L.	<i>Chrysanthemum uliginosum</i> Pers.; <i>C. vulgare</i> (L.) Bernh.	Common tansy
<i>Tussilago farfara</i> L.		Coltsfoot
<i>Typha xglauca</i> Godr.		Hybrid cattail
<i>Valeriana officinalis</i> L.		Common valerian
<i>Vinca minor</i> L.		Lesser periwinkle

Taxonomy: Haines, A. 2015 (November 17). Tracheophyte Checklist of New England. Website: <http://www.artburhaines.com/tracheophyte-checklist>

NH Invasive Plant Species Watch List: April 11, 2018

Fact Sheet:  
Prohibited Invasive Plant Species Rules, Agr 3800



Updated 01/31/2017

This fact sheet is a synopsis of the adopted rules on invasive plant species and is intended for general use by the nursery and landscape industry, plant growers, plant dealers, general public, State Agencies, and Municipalities. A complete copy of the rules can be accessed on the internet at [http://agriculture.nh.gov/topics/plants\\_insects.htm](http://agriculture.nh.gov/topics/plants_insects.htm).

In accordance with the Invasive Species Act, HB 1258-FN, the NH Department of Agriculture, Markets & Food, Division of Plant Industry is the lead state agency responsible for the evaluation, publication and development of rules on invasive plant species for the purpose of protecting the health of native species, the environment, commercial agriculture, forest crop production, or human health. The rule, Agr 3800, states: "No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1, New Hampshire prohibited invasive species list".

New Hampshire Prohibited Invasive Plant Species List

Scientific name	Synonyms	Common name
<i>Acer platanoides</i> L.	<i>Acer platanoides</i> var. <i>schwedleri</i> Nichols	Norway maple
<i>Ailanthus altissima</i> (P. Mill.) Swingle	<i>Ailanthus glandulosa</i> Desv.	Tree of heaven
<i>Alliaria petiolata</i> (Bieb.) Cavara & Grande	<i>Alliaria alliaria</i> (L.) Britt.; <i>Alliaria officinalis</i> Andr. ex Bieb.; <i>Erysimum alliaria</i> L.; <i>Sisymbrium alliaria</i> (L.) Scop.	Garlic mustard
<i>Alnus glutinosa</i> (L.) Gaertn.	<i>Alnus alnus</i> (L.) Britt.; <i>Betula alnus</i> L. var. <i>glutinosa</i> L.	European black alder
<i>Berberis thunbergii</i> DC.		Japanese barberry
<i>Berberis vulgaris</i> L.		European barberry
<i>Celastrus orbiculatus</i> Thunb.		Oriental bittersweet
<i>Centaurea stoebe</i> L. ssp. <i>micranthos</i> (Gugler) Hayek	<i>Centaurea hiebersteini</i> DC.; <i>Centaurea maculosa</i> Lam., misapplied; <i>Centaurea maculosa</i> Lam. ssp. <i>micranthos</i> Gugler	Spotted knapweed
<i>Cynanchum louiseae</i> Kartsch & Gandhi	<i>Cynanchum nigrum</i> (L.) Pers.; <i>Vincetoxicum nigrum</i> (L.) Pers.	Black swallow-wort
<i>Cynanchum rossicum</i> (Kleopow) Borhidi	<i>Cynanchum medium</i> , of authors not R. Br.; <i>Vincetoxicum medium</i> , of authors not (R. Br.) Dcne.; <i>Vincetoxicum rossicum</i> (Kleopow) Barbarich	Pale swallow-wort
<i>Elaeagnus umbellata</i> Thunb. var. <i>parvifolia</i> (Royle) Schneid.	<i>Elaeagnus parvifolia</i> Royle	Autumn olive
<i>Euonymus alatus</i> (Thunb.) Sieb.	<i>Celastrus alatus</i> Thunb.	Burning bush
<i>Fraxinus alnus</i> P. Mill.	<i>Rhamnus frangula</i> L.	Glossy buckthorn
<i>Glycyrrhiza maxilla</i> (Hartman) Holmb.	<i>Glycyrrhiza spectabilis</i> Mert. & Koch; <i>Molinia maxima</i> Hartman	Reed sweet grass
<i>Heracleum mantegazzianum</i> Sommier & Levier		Giant hogweed
<i>Hesperis matronalis</i>		Dames rocket

<i>Impatiens glandulifera</i> Royle	<i>Impatiens roylei</i> Walp.	Ornamental jewelweed
<i>Iris pseudacorus</i> L.		Water-flag
<i>Lepidium latifolium</i> L.	<i>Cardaria latifolia</i> (L.) Spach	Perennial pepperweed
<i>Ligustrum obtusifolium</i> Sieb. & Zucc. var. <i>obtusifolium</i>	<i>Ligustrum obtusifolium</i> var. <i>leiocalyx</i> (Nakai) H. Hara	Blunt-leaved privet
<i>Ligustrum vulgare</i> L.		Common privet
<i>Lonicera japonica</i> Thunb.	<i>Nintooa japonica</i> (Thunb.) Sweet	Japanese honeysuckle
<i>Lonicera maackii</i> (Rupr.) Herder*		Amur honeysuckle*
<i>Lonicera morrowii</i> Gray*		Morrow's honeysuckle*
<i>Lonicera tatarica</i> L.*		Tartarian honeysuckle*
<i>Lonicera x bella</i> Zabel*	<i>Lonicera morrowii</i> x <i>L. tatarica</i>	Bella honeysuckle*
<i>Lysimachia nummularia</i> L.		Moneypew
<i>Microsagium vimineum</i> (Trin.) A. Camus	<i>Andropogon vimineum</i> Trin.; <i>Eulalia viminea</i> (Trin.) Kuntze	Japanese silt grass
<i>Persicaria perfoliata</i> (L.) H. Gross	<i>Ampelgynomium perfoliatum</i> (L.) Roberty & Vautier; <i>Polygonum perfoliatum</i> L.	Mile-a-minute weed
<i>Pueraria montana</i> (Lour.) Merr. var. <i>lobata</i> (Willd.) Maesen & S. Almeida	<i>Dalichos lobatus</i> Willd.; <i>Pueraria lobata</i> (Willd.) Ohwi; <i>Pueraria thumbergiana</i> (Sieb. & Zucc.) Benth.	Kudzu
<i>Reynoutria japonica</i> Houtt. var. <i>japonica</i>	<i>Fallopia japonica</i> (Houtt.) R. Deer.; <i>Pleuroperis cuspidatus</i> (Sieb. & Zucc.) Moldenke; <i>Polygonum cuspidatum</i> Sieb. & Zucc.	Japanese knotweed
<i>Reynoutria sachalinensis</i> (F. Schmidt) Nakai	<i>Fallopia sachalinensis</i> (F.S. Petrop. ex Maxim.) R. Deer.; <i>Polygonum sachalinense</i> F. Schmidt ex Maxim.	Giant knotweed
<i>Reynoutria x bohémica</i> Chrtěk & Chrtěková	<i>Fallopia japonica</i> x <i>F. sachalinensis</i> ; <i>Fallopia x bohémica</i> (Chrtěk & Chrtěková) J.P. Bailey; <i>Polygonum x bohémicum</i> (Chrtěk & Chrtěková) P.F. Zika & A.L. Jacobson	Bohemia knotweed
<i>Rhamnus cathartica</i> L.		Common buckthorn
<i>Rosa multiflora</i> Thunb. ex Murr.		Multiflora rose

Variance: Persons conducting temporary scientific studies, which may include hybridization of seedless species may apply for a variance to do so by contacting the NH Department of Agriculture, Markets & Food, Division of Plant Industry.

For additional information

Douglas Cygan, Invasive Species Coordinator  
New Hampshire Department of Agriculture  
Division of Plant Industry  
State Lab Building, Lab D  
29 Hazen Drive  
Concord, NH 03301  
(603) 271-3488

[douglas.cygan@agr.nh.gov](mailto:douglas.cygan@agr.nh.gov)  
<http://www.agriculture.nh.gov/divisions/plant-industry/invasive-plants.htm>



SITE  
solutions

LANDSCAPE ARCHITECTURE + LAND PLANNING  
3715 Northside Parkway T: 404.705.8411  
300 Northcreek Blvd, 300 F: 404.705.9491  
Atlanta, Georgia 30327 www.sitesolutionsla.com

COPYRIGHT © 2005 BY SITE solutions, LLC. LANDSCAPE ARCHITECTS. ALL RIGHTS RESERVED. THIS DOCUMENT (INCLUDING ELECTRONIC AND REPRODUCTIONS) IS THE PROPERTY OF SITE solutions, LLC, AND ONLY FOR USE ON THE PROJECT SPECIFIED HEREIN. IT IS NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR IN PART, EXCEPT BY THE EXPRESSED WRITTEN AGREEMENT WITH SITE solutions, LLC. THIS DOCUMENT AND REPRODUCTIONS SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PROFESSIONAL STAMP:

WEST END YARDS

PREPARED FOR

CATE STREET DEVELOPMENT LLC

SHEET STATUS

MARK	DATE	BY	RELEASE
A	03/06/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:

LANDSCAPE  
DETAILS

PROJECT NUMBER:

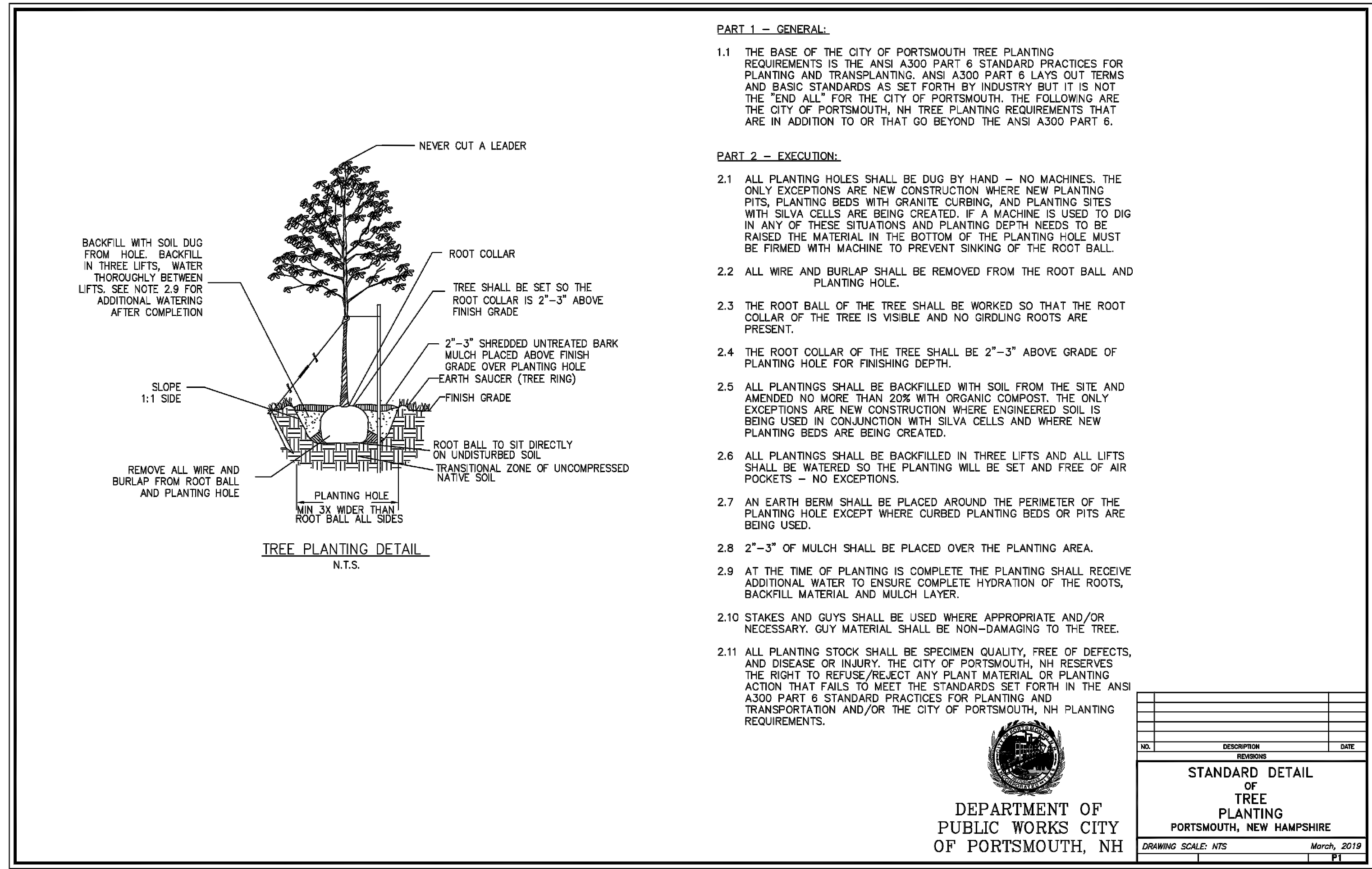
18041.00

L2.03


DATE: 03.18.2019

NOT FOR CONSTRUCTION





- PART 1 – GENERAL:**
- 1.1 THE BASE OF THE CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS IS THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPLANTING. ANSI A300 PART 6 LAYS OUT TERMS AND BASIC STANDARDS AS SET FORTH BY INDUSTRY BUT IT IS NOT THE "END ALL" FOR THE CITY OF PORTSMOUTH. THE FOLLOWING ARE THE CITY OF PORTSMOUTH, NH TREE PLANTING REQUIREMENTS THAT ARE IN ADDITION TO OR THAT GO BEYOND THE ANSI A300 PART 6.
- PART 2 – EXECUTION:**
- 2.1 ALL PLANTING HOLES SHALL BE DUG BY HAND – NO MACHINES. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE NEW PLANTING PITS, PLANTING BEDS WITH GRANITE CURBING, AND PLANTING SITES WITH SILVA CELLS ARE BEING CREATED. IF A MACHINE IS USED TO DIG IN ANY OF THESE SITUATIONS AND PLANTING DEPTH NEEDS TO BE RAISED THE MATERIAL IN THE BOTTOM OF THE PLANTING HOLE MUST BE FIRMED WITH MACHINE TO PREVENT SINKING OF THE ROOT BALL.
  - 2.2 ALL WIRE AND BURLAP SHALL BE REMOVED FROM THE ROOT BALL AND PLANTING HOLE.
  - 2.3 THE ROOT BALL OF THE TREE SHALL BE WORKED SO THAT THE ROOT COLLAR OF THE TREE IS VISIBLE AND NO GIRDLING ROOTS ARE PRESENT.
  - 2.4 THE ROOT COLLAR OF THE TREE SHALL BE 2"–3" ABOVE GRADE OF PLANTING HOLE FOR FINISHING DEPTH.
  - 2.5 ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH ORGANIC COMPOST. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE ENGINEERED SOIL IS BEING USED IN CONJUNCTION WITH SILVA CELLS AND WHERE NEW PLANTING BEDS ARE BEING CREATED.
  - 2.6 ALL PLANTINGS SHALL BE BACKFILLED IN THREE LIFTS AND ALL LIFTS SHALL BE WATERED SO THE PLANTING WILL BE SET AND FREE OF AIR POCKETS – NO EXCEPTIONS.
  - 2.7 AN EARTH BERM SHALL BE PLACED AROUND THE PERIMETER OF THE PLANTING HOLE EXCEPT WHERE CURBED PLANTING BEDS OR PITS ARE BEING USED.
  - 2.8 2"–3" OF MULCH SHALL BE PLACED OVER THE PLANTING AREA.
  - 2.9 AT THE TIME OF PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE COMPLETE HYDRATION OF THE ROOTS, BACKFILL MATERIAL AND MULCH LAYER.
  - 2.10 STAKES AND GUYS SHALL BE USED WHERE APPROPRIATE AND/OR NECESSARY. GUY MATERIAL SHALL BE NON-DAMAGING TO THE TREE.
  - 2.11 ALL PLANTING STOCK SHALL BE SPECIMEN QUALITY, FREE OF DEFECTS, AND DISEASE OR INJURY. THE CITY OF PORTSMOUTH, NH RESERVES THE RIGHT TO REFUSE/REJECT ANY PLANT MATERIAL OR PLANTING ACTION THAT FAILS TO MEET THE STANDARDS SET FORTH IN THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPORTATION AND/OR THE CITY OF PORTSMOUTH, NH PLANTING REQUIREMENTS.

  
 DEPARTMENT OF  
 PUBLIC WORKS CITY  
 OF PORTSMOUTH, NH

NO.	DESCRIPTION REVISIONS	DATE
<b>STANDARD DETAIL          OF          TREE          PLANTING          PORTSMOUTH, NEW HAMPSHIRE</b>		
DRAWING SCALE: NTS <span style="float: right;">March, 2019</span>		
		P1

**1** DETAIL: TREE PLANTING  
SCALE: NTS

PROFESSIONAL STAMP:

**WEST END YARDS**  
 PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

SHEET STATUS

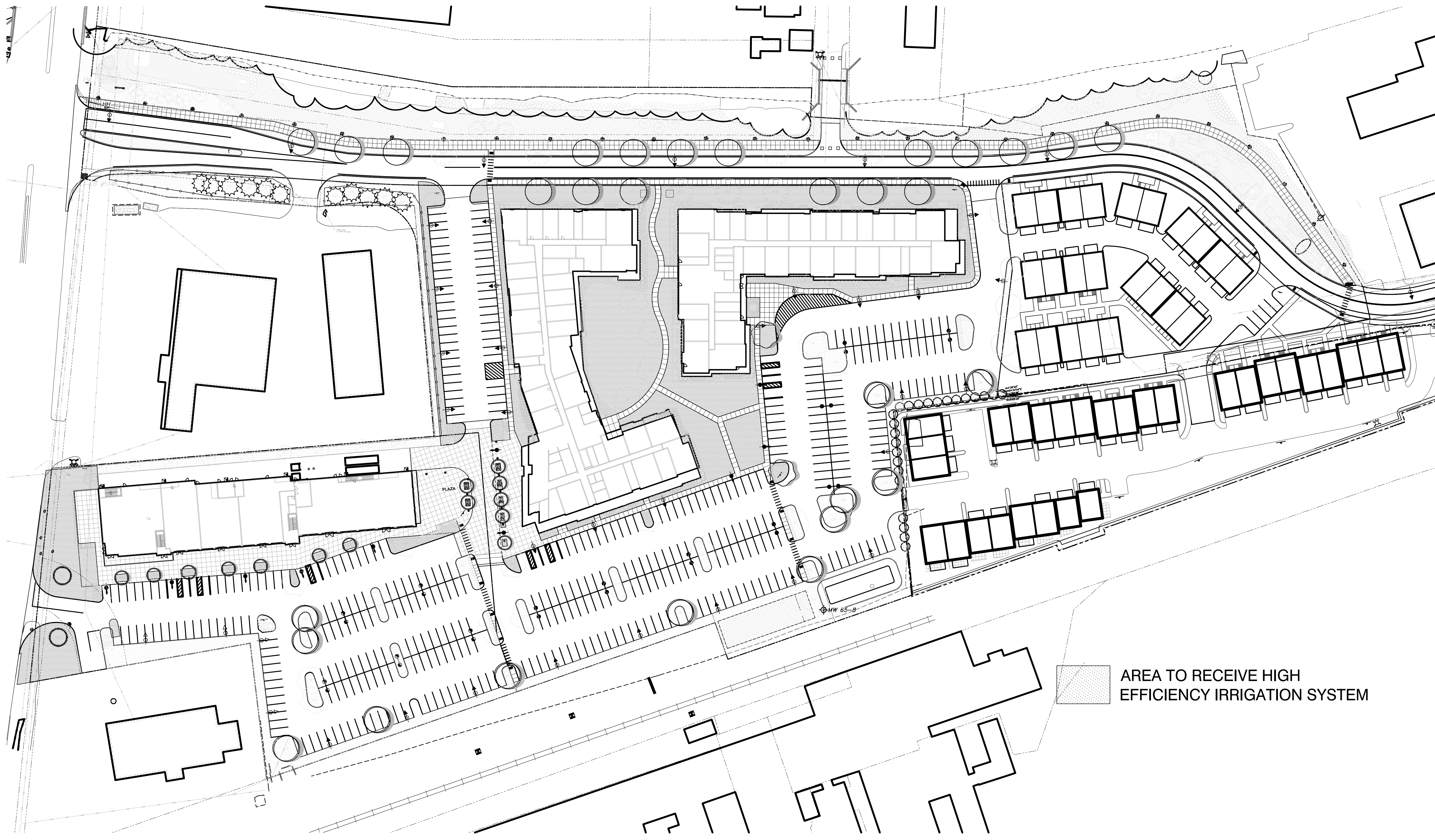
MARK	DATE	BY	RELEASE
A	03/06/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**LANDSCAPE DETAILS**

PROJECT NUMBER:  
**18041.00**

**L2.04**

DATE: 03.18.2019  
NOT FOR CONSTRUCTION



AREA TO RECEIVE HIGH EFFICIENCY IRRIGATION SYSTEM

PROFESSIONAL STAMP:

**WEST END YARDS**  
PREPARED FOR  
**CATE STREET DEVELOPMENT LLC**

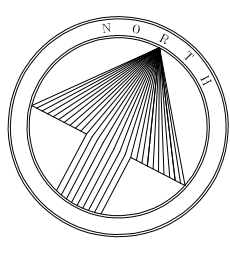
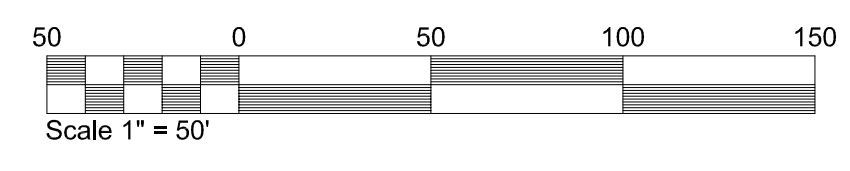
SHEET STATUS			
MARK	DATE	BY	RELEASE
A	03/18/2019	SS	TAC SUBMITTAL
B	05/20/2019	SS	TAC RE-SUBMITTAL

SHEET TITLE:  
**IRRIGATION LAYOUT PLAN**

PROJECT NUMBER:  
**18041.00**

**IR1.01**

DATE: 03.18.2019  
PERMIT ISSUE



# REVISIONS

REV #	DATE	BY:
1	12/10/18	TO
2	3/17/19	TO
3	5/16/19	TO
4	5/19/19	TO



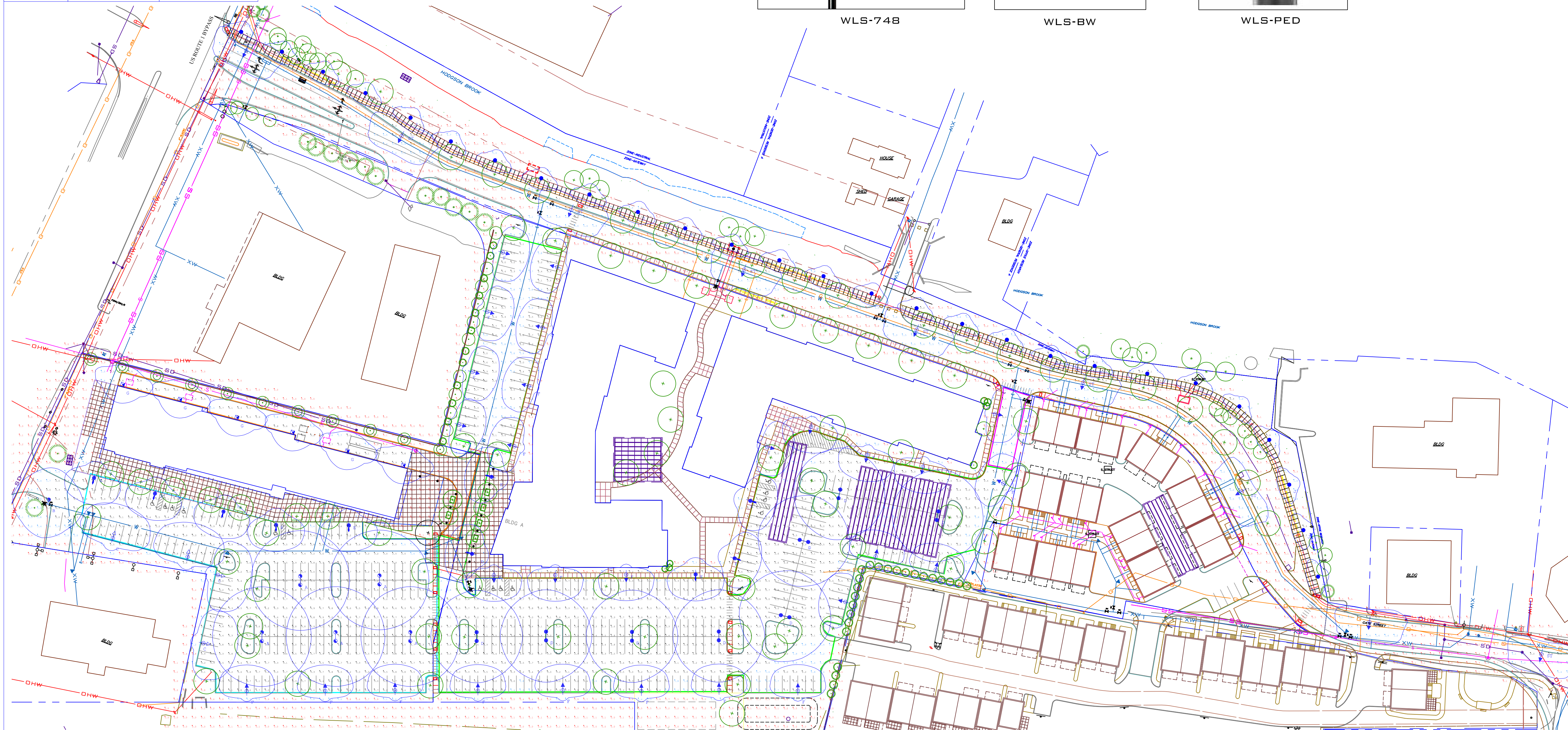
WLS-748



WLS-BW



WLS-PED



ENERGY SERVICES GROUP OF WLS

1-800-633-8711 - WWW.WLSLIGHTING.COM

BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER VARIABLE FIELD CONDITIONS.

Label	Avg	Max	Min	Avg/Min	Max/Min	PtSpcLr	PtSpcTb
CATE ST ENTRANCE	1.8	4.4	0.9	2.0	4.9	10	10
RESIDENTIAL PARKING	2.8	6.4	0.8	3.5	8.0	10	10
RETAIL PARKING	3.7	7.2	0.9	4.1	8.0	10	10
RETAIL REAR AND SIDE	2.3	4.7	0.3	7.7	15.7	10	10

Symbol	Qty	Label	Lumens	LLF	Description	Lum. Watts
⊙	5	A	N.A.	0.950	WLS-748-135W-5F-4K 20' MOUNTING HEIGHT	135
⊙	1	B	N.A.	0.950	WLS-748-135W-5F-4K 20' MOUNTING HEIGHT	135
⊙	4	C	N.A.	0.950	WLS-748-135W-4F-4K-HS 20' MOUNTING HEIGHT	135
⊙	8	D	N.A.	0.950	WLS-748-110W-5F-4K 20' MOUNTING HEIGHT	110
⊙	10	E	N.A.	0.950	WLS-748-80W-4F-4K 16' MOUNTING HEIGHT	80
⊙	28	F	N.A.	0.950	WLS-748-80W-4F-4K-HS 16' MOUNTING HEIGHT	80
⊙	6	G	N.A.	0.980	WLS-BW-70-2M-4K ASST MOUNTING HEIGHT	70
⊙	27	J	N.A.	0.980	WLS-PED-2M-P8-02-525-4K 8' MOUNTING HEIGHT	34
⊙	9	ST	9316	0.900	AFFIN-S901-80W-30K-T2-10-M 25' MOUNTING HEIGHT	80

WEST END YARDS  
PORTSMOUTH, NH

WLS LIGHTING SYSTEMS

Consider the Impact!

1919 WINDSOR PLACE  
FORT WORTH, TX 76110  
WWW.WLSLIGHTING.COM

WLS-14527A

DATE - 11/16/18

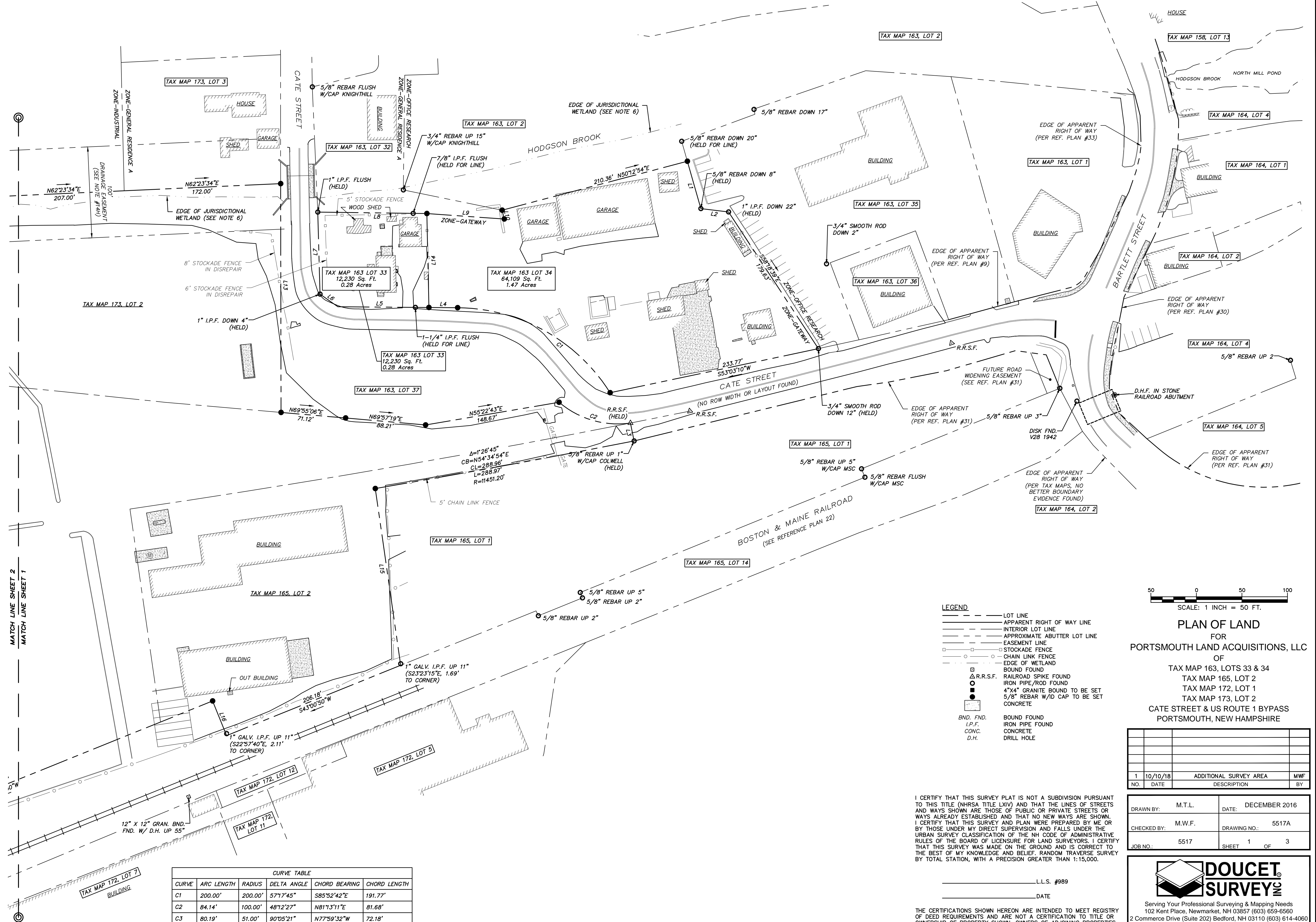
SCALE: 1"=60'

800-633-8711

PM: ROBBY

BY: TO

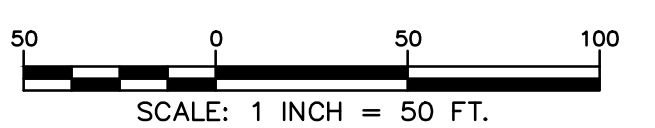
SHEET 1 OF 1



LINE	BEARING	DISTANCE
L1	S40°55'22"E	54.00'
L2	N71°55'42"E	30.64'
L3	S36°26'29"E	20.01'
L4	S65°28'25"W	31.49'
L5	S65°28'25"W	100.01'
L6	N79°44'51"W	24.00'
L7	N26°33'24"W	90.08'
L8	N65°44'42"E	119.82'
L9	N69°04'00"E	85.18'
L10	N38°11'17"W	10.00'
L11	N32°56'35"W	25.61'
L12	S66°29'44"W	99.38'
L13	S25°06'26"E	251.24'
L14	S26°14'37"E	103.19'
L15	S33°10'10"E	196.10'
L16	N46°59'10"W	41.00'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	200.00'	200.00'	57°17'45"	S85°52'42"E	191.77'
C2	84.14'	100.00'	48°12'27"	N81°13'11"E	81.68'
C3	80.19'	51.00'	90°05'21"	N77°59'32"W	72.18'

- LEGEND**
- LOT LINE
  - - - APPARENT RIGHT OF WAY LINE
  - INTERIOR LOT LINE
  - - - APPROXIMATE ABUTTER LOT LINE
  - - - EASEMENT LINE
  - STOCKADE FENCE
  - CHAIN LINK FENCE
  - EDGE OF WETLAND
  - BOUND FOUND
  - △ R.R.S.F.
  - RAILROAD SPIKE FOUND
  - IRON PIPE/ROD FOUND
  - 4"x4" GRANITE BOUND TO BE SET
  - 5/8" REBAR W/ID CAP TO BE SET
  - CONCRETE
  - BND. FND.
  - I.P.F.
  - CONC.
  - D.H.
  - BOUND FOUND
  - IRON PIPE FOUND
  - CONCRETE
  - DRILL HOLE



**PLAN OF LAND**  
FOR  
**PORTSMOUTH LAND ACQUISITIONS, LLC**  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	ADDITIONAL SURVEY AREA	DESCRIPTION	BY
1	10/10/18	ADDITIONAL SURVEY AREA		MMF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	1 OF 3

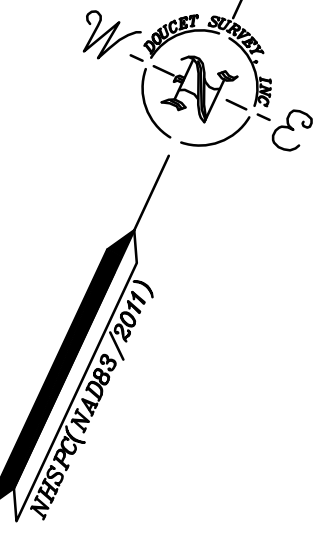
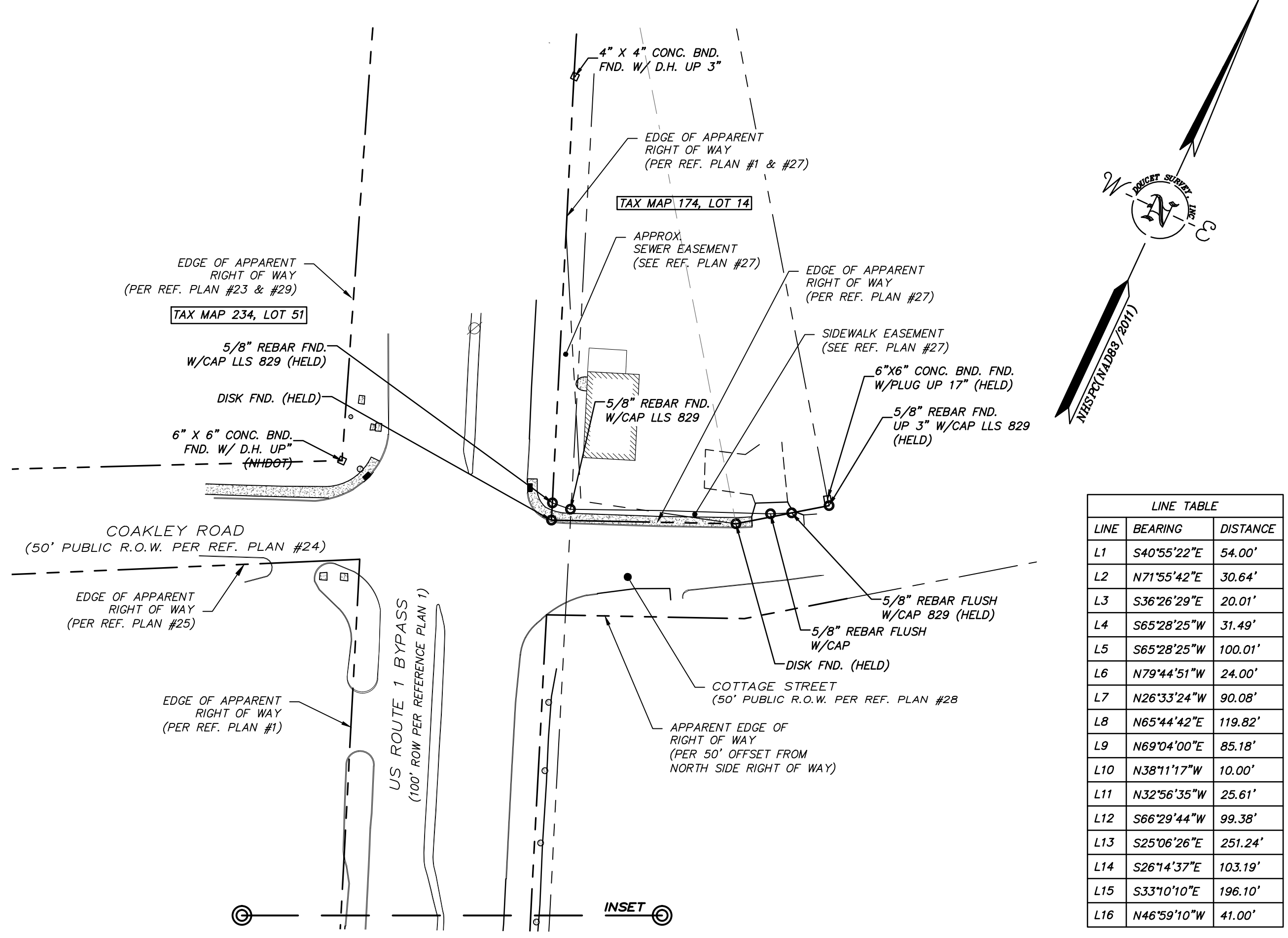
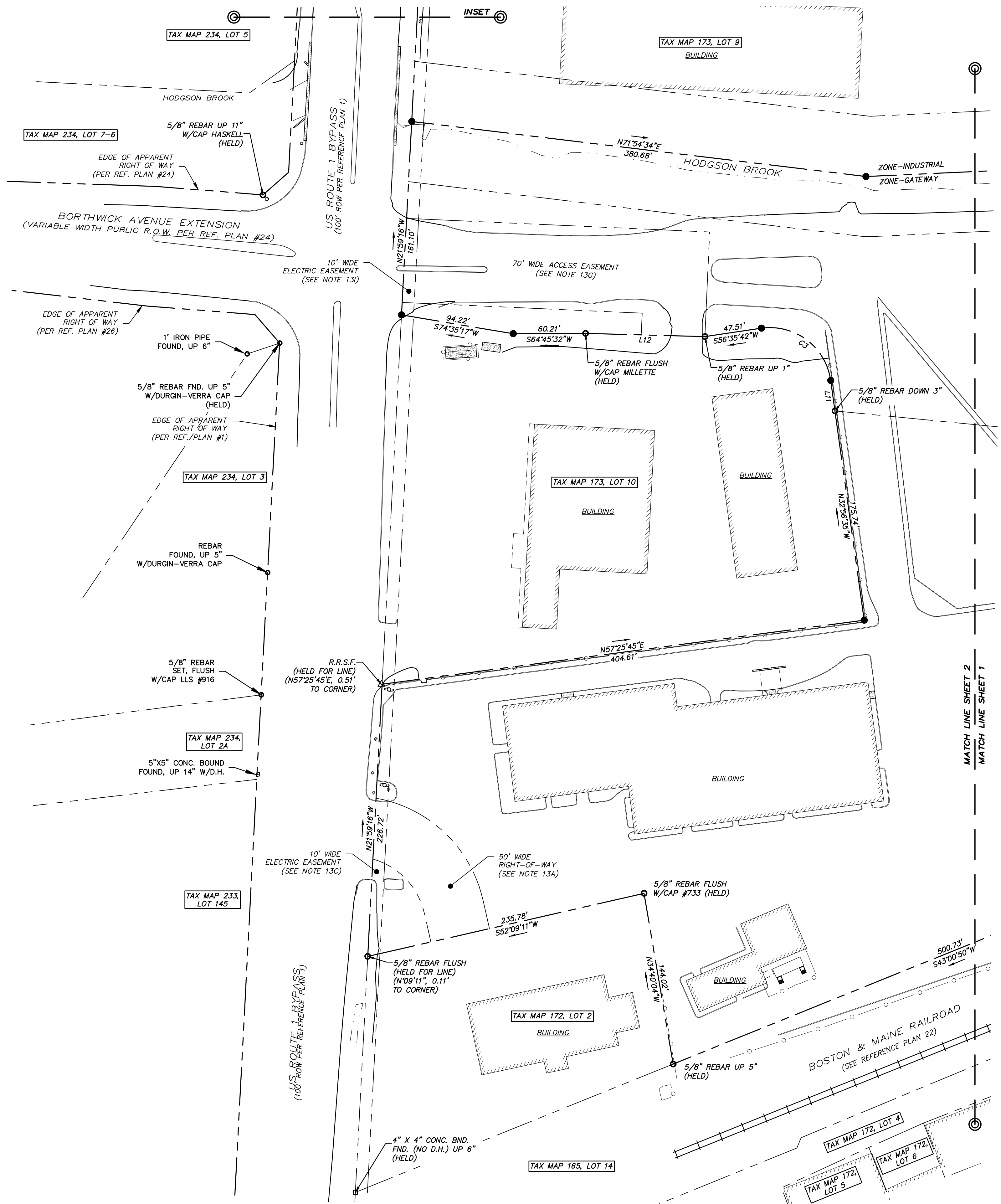
I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE (NHRSA TITLE LXIV) AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

\_\_\_\_\_  
L.L.S. #989  
DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

**DOUCET SURVEY**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
http://www.doucetsurvey.com

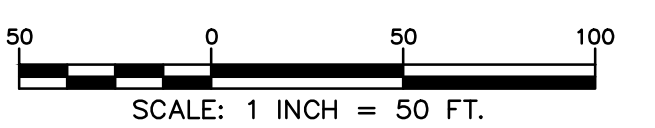
FILE NAME: Y:\PROJECTS\101517\_CAD (REV. 4/13)/101517A\_C3D.dwg LAYOUT: MAP\_173.dwg PLOTTED: Wednesday, October 10, 2018 - 2:56pm



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S40°55'22"E	54.00'
L2	N71°55'42"E	30.64'
L3	S36°26'29"E	20.01'
L4	S65°28'25"W	31.49'
L5	S65°28'25"W	100.01'
L6	N79°44'51"W	24.00'
L7	N26°33'24"W	90.08'
L8	N65°44'42"E	119.82'
L9	N69°04'00"E	85.18'
L10	N38°11'17"W	10.00'
L11	N32°56'35"W	25.61'
L12	S66°29'44"W	99.38'
L13	S25°06'26"E	251.24'
L14	S26°14'37"E	103.19'
L15	S33°10'10"E	196.10'
L16	N46°59'10"W	41.00'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	200.00'	200.00'	57°17'45"	S85°52'42"E	191.77'
C2	84.14'	100.00'	48°12'27"	N81°13'11"E	81.68'
C3	80.19'	51.00'	90°05'21"	N77°59'32"W	72.18'

- LEGEND**
- LOT LINE
  - APPARENT RIGHT OF WAY LINE
  - INTERIOR LOT LINE
  - APPROXIMATE ABUTTER LOT LINE
  - EASEMENT LINE
  - STOCKADE FENCE
  - CHAIN LINK FENCE
  - EDGE OF WETLAND
  - BOUND FOUND
  - △ R.R.S.F.
  - RAILROAD SPIKE FOUND
  - IRON PIPE/ROD FOUND
  - 4"x4" GRANITE BOUND TO BE SET
  - 5/8" REBAR W/ID CAP TO BE SET
  - CONCRETE
  - BND. FND.
  - I.P.F.
  - CONC.
  - D.H.
  - BOUND FOUND
  - IRON PIPE FOUND
  - CONCRETE
  - DRILL HOLE



**PLAN OF LAND**  
FOR  
**PORTSMOUTH LAND ACQUISITIONS, LLC**  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	ADDITIONAL SURVEY AREA DESCRIPTION	MMF	BY
1	10/10/18	ADDITIONAL SURVEY AREA		MMF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	2 OF 3

I CERTIFY THAT THIS SURVEY PLAN IS NOT A SUBDIVISION PURSUANT TO THIS TITLE (NH RSA TITLE LXIV) AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

\_\_\_\_\_  
L.L.S. #989  
DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

**DOUCET SURVEY**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
<http://www.doucetsurvey.com>

ABUTTERS

TAX MAP 158, LOT 13  
SLATTERY & DUMONT, LLC  
66 OLD CONCORD TURNPIKE #10  
BARRINGTON, NH 03825  
R.C.R.D. BOOK 3471, PAGE 196

TAX MAP 163, LOT 1  
M & B PROPERTIES, LLC  
54 BARTLETT STREET  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5794, PAGE 996

TAX MAP 163, LOT 2  
INDUSTRIAL RENTS-NH, LLC  
6 WAYNE ROAD  
WESTFORD, MA 01886  
R.C.R.D. BOOK 5606, PAGE 2334

TAX MAP 163, LOT 37  
CITY OF PORTSMOUTH  
PO BOX 628  
PORTSMOUTH, NH 03802  
R.C.R.D. BOOK 2284 PAGE 812

TAX MAP 163, LOT 1  
M & B PROPERTIES, LLC  
54 BARTLETT ST  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5794 PAGE 996

TAX MAP 163, LOT 2  
INDUSTRIAL RENTS-NH, LLC  
6 WAYNE RD  
WESTFORD, MA 01886  
R.C.R.D. BOOK 5606 PAGE 2334

TAX MAP 163, LOT 32  
SHARAN R. GROSS REV. TRUST  
180 BIRCH HILL RD  
YORK, ME 03909  
R.C.R.D. BOOK 5261 PAGE 2208  
R.C.R.D. BOOK 3406 PAGE 1383

TAX MAP 163, LOT 35  
ELDRIDGE BREWERY REALTY PARTNERSHIP  
1 CATE ST  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 2572 PAGE 2635

TAX MAP 163, LOT 36  
CST HOLDINGS, LLC  
3 CATE ST  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 3923 PAGE 202

TAX MAP 164, LOT 1  
PORTSMOUTH LUMBER & HARDWARE, LLC  
105 BARTLETT STREET  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5372, PAGE 2606

TAX MAP 164, LOT 2  
PORTSMOUTH LUMBER & HARDWARE, LLC  
105 BARTLETT STREET  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5808, PAGE 1379

TAX MAP 164, LOT 4  
BOSTON & MAINE CORP.  
IRON HORSE PARK, HIGH STREET  
NO. BILLERICA, MA 01862

TAX MAP 164, LOT 5  
HOUSTON HOLDINGS, LLC  
653 ISLINGTON STREET  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 3558, PAGE 464

TAX MAP 164, LOT 12  
JOSEPH GOBBI SUPPLY CORP.  
PO BOX 125  
PORTSMOUTH, NH 03802  
R.C.R.D. BOOK 3233, PAGE 1949

TAX MAP 165, LOT 1  
MERTON ALAN INVESTMENTS, LLC  
C/O JOAN RYAN & CASSASSA  
459 LAFAYETTE RD  
HAMPTON, NH 03842  
R.C.R.D. BOOK 4771 PAGE 1259

TAX MAP 165, LOT 14  
BOSTON AND MAINE CORP  
IRON HORSE PK HIGH ST  
NO BILLERICA, MA 01862  
R.C.R.D. BOOK PAGE

TAX MAP 172, LOT 2  
406 HIGHWAY 1 BYPASS, LLC  
549 US HIGHWAY 1 BYPASS  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5671 PAGE 2150

TAX MAP 173, LOT 9  
PAUL J. HOLLOWAY  
C/O COAST PONTIAC  
500 US HWY 1 BYPASS  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 2821 PAGE 2396

TAX MAP 173, LOT 10  
AREC 13, LLC C/O U-HAUL INTERNATIONAL  
PO BOX 29046  
PHOENIX, AZ 85038  
R.C.R.D. BOOK 4575 PAGE 950

TAX MAP 174, LOT 14  
COLMAN C. GARLAND  
416 SADDLEBACK DRIVE  
FARVIEW, TX 75069  
R.C.R.D. BOOK 2232, PAGE 1002

TAX MAP 233, LOT 145  
CITY OF PORTSMOUTH  
1 JUNKINS AVENUE  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5127, PAGE 2074

TAX MAP 234, LOT 2A  
PUBLIC SERVICE CO. OF NH  
PO BOX 270  
HARTFORD, CT 06141  
R.C.R.D. BOOK 1257, PAGE 324

TAX MAP 234, LOT 3  
PUBLIC SERVICE CO. OF NH  
PO BOX 270  
HARTFORD, CT 06141  
R.C.R.D. BOOK 5548, PAGE 738

TAX MAP 234, LOT 5  
SEACOAST DEVELOPMENT GROUP, LLC  
505 US ROUTE 1 BYPASS  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 3107, PAGE 950

TAX MAP 234, LOT 7-6  
CREFIII WARAMAUG PORTSMOUTH, LLC  
C/O CTMI, LLC  
PO BOX 741328  
DALLAS, TX 75374  
R.C.R.D. BOOK 5620, PAGE 1675

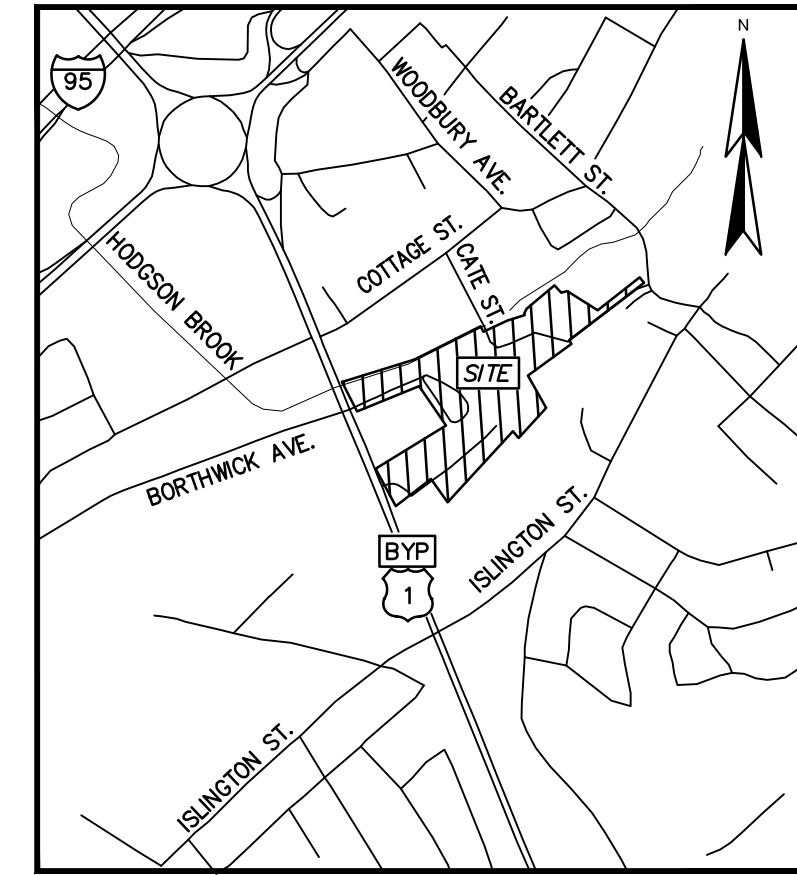
TAX MAP 234, LOT 51  
MEADOWBROOK INN CORP.  
C/O PORTSMOUTH CHEVROLET  
549 ROUTE 1 BYPASS  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 2382, PAGE 1968

NOTES:

- REFERENCE: TAX MAP 163, LOT 33  
TAX MAP 163, LOT 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2
- TOTAL PARCEL AREA: TAX MAP 163, LOT 33-12,230 SQ. FT. OR 0.28 AC.  
TAX MAP 163, LOT 34-64,109 SQ. FT. OR 1.47 AC.  
COMBINED AREA-451,572 SQ. FT. OR 10.37 AC.  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2
- OWNER OF RECORD: PORTSMOUTH LAND ACQUISITIONS, LLC  
300 GAY STREET  
MANCHESTER, NH 03103  
R.C.R.D. BOOK 5393, PAGE 2976
- ZONES: GW-GATEWAY  
DIMENSIONAL REQUIREMENTS:  
MIN. LOT AREA 43,560 sq.ft.  
MIN. FRONTAGE 200 ft.  
MIN. FRONT SETBACK 30 ft.  
MIN. SIDE SETBACK 30 ft.  
MIN. REAR SETBACK 50 ft.  
MAX. BUILDING HEIGHT 40 ft.  
MAX. BUILDING COVERAGE 30 %  
WETLAND SETBACKS 100 ft.
- ZONING INFORMATION LISTED HEREON IS BASED ON THE CITY OF PORTSMOUTH ZONING ORDINANCE DATED JULY 11, 2016 AS AVAILABLE ON THE CITY WEBSITE ON DECEMBER 15, 2016. ADDITIONAL REGULATIONS APPLY, AND REFERENCE IS HEREBY MADE TO THE EFFECTIVE ZONING ORDINANCE. THE LAND OWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.
- FIELD SURVEY PERFORMED BY P.J.S. & J.C.M. DURING NOVEMBER 2016 USING A TRIMBLE S6 TOTAL STATION, A TRIMBLE R8 SURVEY GRADE GPS UNIT, A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL, BY L.P.S. & S.N.F. DURING JULY 2018 AND T.M.M. & J.C.M. IN SEPTEMBER & OCTOBER 2018 USING A TRIMBLE S6 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR, TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS. ADDITIONAL FIELD SURVEY PERFORMED BY M.C. DURING NOVEMBER 2016 AND OCTOBER 2018 USING A LEICA HDS SCANNER.
- MANMADE AND NATURAL JURISDICTIONAL WETLAND BOUNDARIES WERE DELINEATED BY MARC JACOBS, CERTIFIED WETLAND SCIENTIST NUMBER 080, IN NOVEMBER 2016 ACCORDING TO THE STANDARDS OF THE US ARMY CORPS OF ENGINEERS - WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1, JANUARY 1987; THE U.S. ARMY CORPS OF ENGINEERS REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL- NORTHCENTRAL AND NORTHEAST REGION 2012; THE CODE OF ADMINISTRATIVE RULES, NH DEPARTMENT OF ENVIRONMENTAL SERVICES - WETLANDS BUREAU - CHAPTER ENV-WT 100-900 AND THE CITY OF PORTSMOUTH ZONING ORDINANCE, ARTICLE 10. PREDOMINANT HYDRIC SOILS WERE IDENTIFIED UTILIZING THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 3, APRIL 2004 AND THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7, 2010. THE STATUS OF VEGETATION AS HYDROPHYTIC WAS DETERMINED ACCORDING TO THE NORTHCENTRAL AND NORTHEAST 2016 REGIONAL WETLAND PLANT LIST -U.S. ARMY CORPS OF ENGINEERS. COPIES OF SITE PLANS DEPICTING THE WETLAND DELINEATION WHICH HAVE BEEN REVIEWED BY THE WETLAND SCIENTIST ARE INDIVIDUALLY STAMPED & SIGNED AND DATED. THIS NOTE HAS BEEN CUSTOMIZED FOR THIS SITE/PROJECT.
- FLOOD HAZARD ZONE: "X", PER FIRM MAP #33015C0259E, DATED 5/17/05.
- VERTICAL DATUM IS BASED ON NGVD29 PER DISK V 28 1942 ELEV. 25.59.
- HORIZONTAL DATUM BASED ON NEW HAMPSHIRE STATE PLANE(2800) NAD83(2011) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
- THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.
- DUE TO THE COMPLEXITY OF RESEARCHING ROAD RECORDS AS A RESULT OF INCOMPLETE, UNORGANIZED, INCONCLUSIVE, OBLITERATED, OR LOST DOCUMENTS, THERE IS AN INHERENT UNCERTAINTY INVOLVED WHEN ATTEMPTING TO DETERMINE THE LOCATION AND WIDTH OF A ROADWAY RIGHT OF WAY. THE EXTENT OF (THE ROAD(S)) AS DEPICTED HEREON IS/ ARE BASED ON RESEARCH CONDUCTED AT THE PORTSMOUTH CITY HALL, PORTSMOUTH DEPARTMENT OF ENGINEERING, THE ROCKINGHAM COUNTY REGISTRY OF DEEDS, AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- FINAL MONUMENTATION MAY BE DIFFERENT THAN THE PROPOSED MONUMENTATION SHOWN HEREON, DUE TO THE FACT THAT SITE CONDITIONS WILL DICTATE THE ACTUAL LOCATION AND TYPE OF MONUMENTS INSTALLED IN THE FIELD. PLEASE REFER TO EITHER THE "MONUMENTATION LOCATION PLAN" TO BE RECORDED OR CONTACT DOUCET SURVEY, INC. FOR CLARIFICATION OF MONUMENTS SET. (A RECORDED PLAN WILL BE PRODUCED AT THE DISCRETION OF DOUCET SURVEY, INC.).
- THE FOLLOWING LOTS ARE EITHER SUBJECT TO OR IN BENEFIT OF, BUT NOT LIMITED TO, THE FOLLOWING EASEMENTS/RIGHTS OF RECORD:  
**TAX MAP 172, LOT 1**  
A. SUBJECT TO A 50' WIDE RIGHT OF WAY FOR THE BENEFIT OF TAX MAP 172, LOT 2 SEE R.C.R.D. BOOK 3127, PAGE 176 AND R.C.R.D. PLAN D-10722.  
B. EXCEPTING AN 8" WATER PIPE LOCATED UNDER SUBJECT PARCEL, SEE R.C.R.D. BOOK 2783, PAGE 560, LOCATION OF SUBJECT WATER PIPE UNKNOWN.  
C. SUBJECT TO A 10' WIDE ELECTRIC EASEMENT, SEE R.C.R.D. BOOK 1257, PAGE 324 AND R.C.R.D. PLAN D-19110.  
D. SUBJECT TO A WATER LINE EASEMENT, SEE R.C.R.D. BOOK 950, PAGE 174, LOCATION OF SUBJECT WATERLINE UNKNOWN.  
E. SUBJECT TO AN ELECTRIC EASEMENT, SEE R.C.R.D. BOOK 1374, PAGE 97, LOCATION OF SUBJECT EASEMENT UNKNOWN.  
F. SUBJECT TO AN ELECTRIC EASEMENT, SEE R.C.R.D. BOOK 2364, PAGE 397, LOCATION OF SUBJECT EASEMENT UNKNOWN.  
**TAX MAP 173, LOT 2**  
G. SUBJECT TO A 70' WIDE ACCESS EASEMENT IN FAVOR OF TAX MAP 173, LOT 10, SEE R.C.R.D. BOOK 3204, PAGE 87 AND R.C.R.D. PLAN D-24912.  
H. SUBJECT TO A DRAINAGE EASEMENT TO THE UNITED STATES OF AMERICA, SEE R.C.R.D. BOOK 1423, PAGE 240.  
I. SUBJECT TO A 10' WIDE ELECTRIC EASEMENT, SEE R.C.R.D. BOOK 1257, PAGE 324. SEE ALSO R.C.R.D. PLAN D-19110.

REFERENCE PLANS

- "MAINE-NEW HAMPSHIRE INTERSTATE BRIDGE AUTHORITY, PISCATAQUA RIVER BRIDGE, KITTERY, MAINE-PORTSMOUTH, NEW HAMPSHIRE, RIGHT OF WAY MAPS, N.H. APPROACH, BY ALBERT MOULTON, CE, DATED 1954, ON FILE AT THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- "PLAT OF LAND U.S. ROUTE 1 BY-PASS PORTSMOUTH, NEW HAMPSHIRE FOR GRIFFIN FAMILY CORP.", BY DURGIN, VERRA AND ASSOCIATES, INC., DATED JANUARY 20, 1992, RECEIVED FROM THE OFFICE OF JAMES VERRA.
- "LOT LINE REVISION U.S. ROUTE ONE BY-PASS, PORTSMOUTH, N.H. FOR WIGGIN, PARSONS, & O'BRIEN, BY JOHN W. DURGIN ASSOCIATES, INC., DATED JANUARY 22, 1982, R.C.R.D. PLAN D-10722.
- "PLAN OF LAND FOR JOSEPH J. O'BRIEN JR. & SR., CATE STREET/ROUTE 1 BY-PASS, PORTSMOUTH, N.H., BY RICHARD P. MILLETTE AND ASSOCIATES, DATED NOVEMBER 17, 1988, R.C.R.D. PLAN D-19110.
- "LAND IN PORTSMOUTH, N.H., BOSTON AND MAINE RAILROAD TO ALL STATE REALTY CORPORATION", BY BRENTON V. SCHOFIELD, DATED FEBRUARY 1964, R.C.R.D. PLAN 160.
- "LOT LINE RELOCATION PLAN FOR U-HAUL REAL ESTATE COMPANY AND FRANCIS J. COSTELLO CATE STREET/ROUTE 1 BY-PASS, PORTSMOUTH, N.H.", BY RICHARD P. MILLETTE AND ASSOCIATES, DATED MAY 25, 1995, R.C.R.D. PLAN D-24912.
- "SUBDIVISION OF LAND HEIRS OF CORNELIUS COAKLEY", BY MCKENNA ASSOCIATES, DATED JULY 26, 1972, R.C.R.D. PLAN D-3790.
- "LOT LINE REVISION PORTSMOUTH, N.H. FOR MICHAEL A. PAGANO", BY JOHN W. DURGIN ASSOCIATES, DATED JUNE 26, 1981, R.C.R.D. PLAN D-10278.
- "SITE PLAN OF ELDRIDGE PARK WEST PREPARED FOR ELDRIDGE BREWERY REALTY PARTNERSHIP", BY KIMBALL CHASE COMPANY, INC., DATED JULY 23, 1987, R.C.R.D. PLAN D-16894.
- "PLAN OF LAND OF FRANK JONES BREWING CORP. & PAUL C. BADGER & NORMAN E. RAND PORTSMOUTH, N.H.", BY JOHN W. DURGIN, CIVIL ENGINEERS, DATED SEPTEMBER 1950, R.C.R.D. PLAN 01635.
- "LOT LINE ADJUSTMENT PLAN FOR LAND OWNED BY SHARON R. GROSS REVOCABLE TRUST, KNOWN AS TAX MAP 163, LOT 31 & 32 LOCATED ALONG #201 & 235 CATE STREET", BY KNIGHT HILL LAND SURVEYING SERVICES, INC., DATED JULY 28, 2011, R.C.R.D. PLAN D-37021.
- "SITE REVIEW PLAN FOR LAND OWNED BY SHARON R. GROSS REVOCABLE TRUST, KNOWN AS TAX MAP 163, LOT 32 LOCATED ALONG #201 & CATE STREET", BY KNIGHT HILL LAND SURVEYING SERVICES, INC., DATED DECEMBER 2002, R.C.R.D. PLAN D-30850.
- "PLAN SHOWING DIVISION OF ELDRIDGE BREWING CO. LOT IN PORTSMOUTH, N.H. OWNED BY ALBERT HISLOP", BY WM A. GROVER, DATED DECEMBER 11, 1918, R.C.R.D. PLAN 18.
- "PLAN OF LAND PORTSMOUTH, N.H. ATLANTIC REALTY CORP. TO KITTERY LAUNDRY, INC.", BY JOHN W. DURGIN, DATED AUGUST 1964, R.C.R.D. PLAN 300.
- "CITY OF PORTSMOUTH, N.H. DEFENSE HOMES SEWER LOCATION PLAN", BY JOHN W. DURGIN DATED MAY 1961, R.C.R.D. PLAN 1106.
- "LAND IN PORTSMOUTH, N.H. BOSTON AND MAINE RAILROAD TO M.H. PARSONS & SONS LUMBER COMPANY, INC.", R.C.R.D. BOOK 1267, PAGE 16.
- "PLAN OF LAND PORTSMOUTH, N.H. FOR M.H. PARSONS REALTY CORP.", BY JOHN W. DURGIN, DATED DECEMBER 1956, R.C.R.D. BOOK 1431, PAGE 275.
- "SITE PLAN PORTSMOUTH, N.H. PREPARED FOR U-HAUL OF N.H. AND VT., INC.", BY JOHN W. DURGIN, DATED JUNE 4, 1980, R.C.R.D. PLAN D-9642.
- "STANDARD PROPERTY SURVEY & PROPOSED SIDEWALK EASEMENT FOR THE CITY OF PORTSMOUTH FOR PROPERTY AT 185 COTTAGE STREET OWNED BY COLMAN C. GARLAND", BY EASTERLY SURVEYING, INC., SAIED NOVEMBER 30, 2012, R.C.R.D. PLAN D-38047.
- "PLOT PLAN FOR MARIAN M. BADGER, PORTSMOUTH, N.H.", BY JOHN W. DURGIN, DATED JULY 1973, RECIEVED FROM THE OFFICE OF JAMES VERRA.
- "LAND ON CATE STREET, PORTSMOUTH, N.H., BADGER & RAND TO PORTSMOUTH POWER CO.", BY JOHN W. DURGIN, DATED JANUARY 8, 1926, RECEIVED FROM THE OFFICE OF JAMES VERRA.
- "RIGHT-OF-WAY AND TRACK MAP BOSTON AND MAINE R.R. OPERATED BY THE BOSTON & MAINE R.R., STATION 2928+05 TO 2966+20", DATED JUNE 30, 1914, ON FILE AT THE NH DEPARTMENT OF TRANSPORTATION.
- "ALTA/ACSM LAND TITLE SURVEY, TAX MAP 234, LOT 51 PROPERTY OF THE MEADOWBROOK INN CORPORATION", BY MSC CIVIL ENGINEERS & LAND SURVEYORS, DATED DECEMBER 2, 2018, R.C.R.D. PLAN D-36990.
- "LOT LINE REVISION PLAN TAX MAP R-34 LOTS 6 & 7-6, LOCATED ON BORTHWICK AVE., COAKLEY ROAD AND U.S. ROUTE 1 BYPASS IN PORTSMOUTH, NH", BY KIMBALL CHASE, DATED OCTOBER 20, 1993, R.C.R.D. PLAN #D-22886.
- "PLAN OF LAND FOR SEACOAST DEVELOPMENT GROUP, LLC, US ROUTE 1 BYPASS & COAKLEY ROAD, PORTSMOUTH, NH", BY MILLETTE, SPRAGUE & COLWELL, INC., DATED JUNE 7, 2002, R.C.R.D. PLAN #D-30041.
- "LOT LINE REVISION PLAN LAND OF SEARAY REALTY, LLC", BY DOUCET SURVEY, INC., DATED MARCH 12, 2014, R.C.R.D. PLAN D-38435.
- "STANDARD PROPERTY SURVEY & PROPOSED SIDEWALK EASEMENT FOR THE CITY OF PROTSMOUTH FOR PROPERTY AT 185 COTTAGE STREET PORTSMOUTH, NH OWNED BY COLMAN C. GARLAND", BY NORTH EASTERLY SURVEYING, INC., DATED NOVEMBER 30, 2012, R.C.R.D. PLAN #D-38017.
- "PLAN OF A LOT OF LAND BELONGING TO FRANK JONES", DATED JULY 1901, R.C.R.D. PLAN #223.
- "MEADOWBROOK INN CONDOMINIUM SITE PLAN, MAP 234, LOT 51 IN PORTSMOUTH, NH, PREPARED FOR THE MEADOWBROOK INN CORPORATION", BY VANASSE HANGEN BRUSTLIN, INC., DATED SEPTEMBER 25, 2009, R.C.R.D. PLAN #D-36162.
- "PROPOSED EASEMENTS - BARTLETT STREET, BARTLETT SEWER SEPARATION PROJECT OVER LAND OF PAN AM RAILWAYS, PORTSMOUTH, NH FOR CITY OF PORTSMOUTH", BY JAMES VERRA AND ASSOCIATES, INC., DATED OCTOBER 1, 2007, R.C.R.D. PLAN #D-35477.
- "EASEMENT PLAN - 653 ISLINGTON STREET, BARTLETT SEWER SEPARATION PROJECT OVER LAND OF HOUSTON HOLDINGS, LLC", BY JAMES VERRA AND ASSOCIATES, INC., DATED JUNE 22, 2009, R.C.R.D. PLAN #D-35957.
- "LAND TRANSFER AND EASEMENT PLAN, 30 CATE STREET PORTSMOUTH, NH OWNED BY MERTON ALAN INVESTMENTS, LLC", BY TF MORAN/MSC, DATED OCTOBER 31, 2017, R.C.R.D. PLAN #D-40742.
- "LAND IN PORTSMOUTH, N.H. BARTLETT & CATE STREET", BY JOHN W. DURGIN CIVIL ENGINEER, DATED JULY 1924, R.C.R.D. PLAN #0133.



LOCATION MAP (n.t.s.)

PLAN OF LAND  
FOR  
PORTSMOUTH LAND ACQUISITIONS, LLC  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	ADDITIONAL SURVEY AREA DESCRIPTION	MMF	BY
1	10/10/18			

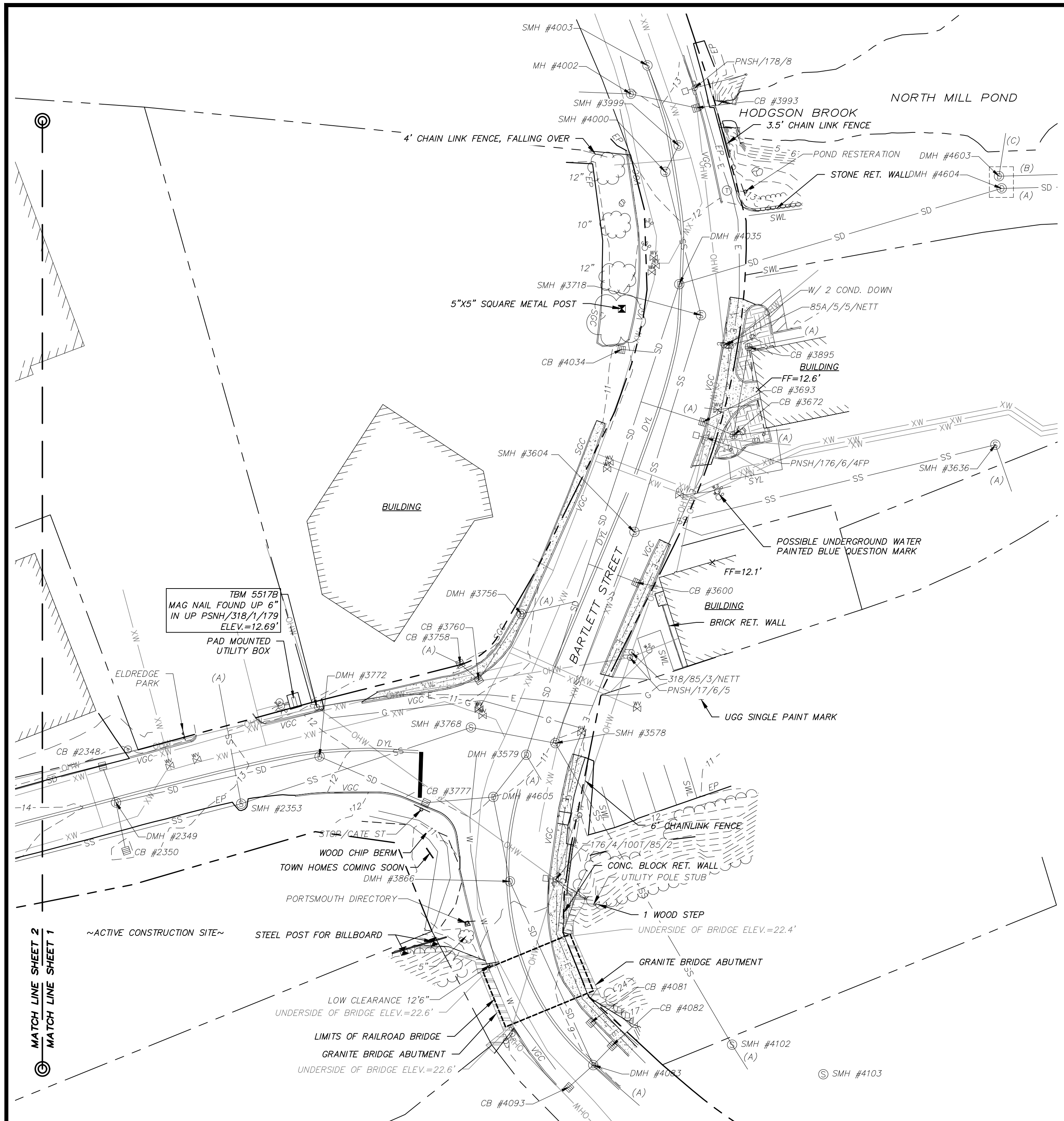
DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	3 OF 3

**DOUCET SURVEY**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
http://www.doucetsurvey.com

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE (NH RSA TITLE LXIV) AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

\_\_\_\_\_.L.L.S. #989  
\_\_\_\_\_.DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.



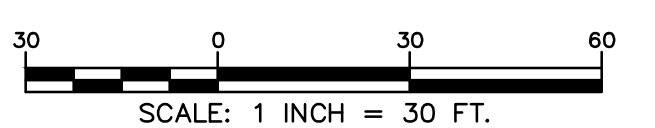
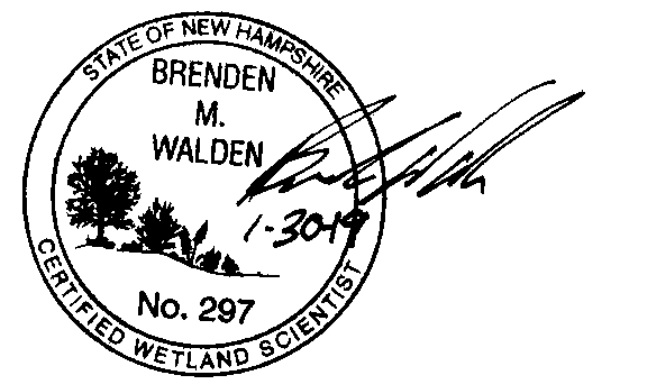
**NOTES:**

- REFERENCE: TAX MAP 163, LOT 33  
TAX MAP 163, LOT 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2
- FIELD SURVEY PERFORMED BY P.J.S. & J.C.M. DURING NOVEMBER 2016 USING A TRIMBLE S6 TOTAL STATION, A TRIMBLE RB SURVEY GRADE GPS UNIT, A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL, BY L.P.S. & S.N.F. DURING JULY 2018 AND T.M.M. & J.C.M. IN SEPTEMBER & OCTOBER 2018 USING A TRIMBLE S6 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS. ADDITIONAL FIELD SURVEY PERFORMED BY M.C. DURING NOVEMBER 2016 AND OCTOBER 2018 USING A LEICA HDS SCANNER.
- THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY MARC JACOBS IN NOVEMBER 2016 AND REVIEWED BY GOVE ENVIRONMENTAL SERVICES, INC. DURING APRIL 2018 IN ACCORDING TO THE US ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1, JANUARY 1987 AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTERN AND NORTHEAST REGION, VERSION 2.0, JANUARY 2102 AND FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, MAY 2017, NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE.
- VERTICAL DATUM IS BASED ON NGVD29 PER DISK V 28 1942 ELEV. 25.59'.
- HORIZONTAL DATUM BASED ON NEW HAMPSHIRE STATE PLANE(2800) NAD83(2011) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
- PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 1' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.
- UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE.
- THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING: THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.
- ALL ELECTRIC, GAS, TEL, WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION. THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.
- UNDERGROUND UTILITY DATA WAS PROVIDED TO DOUCET SURVEY, INC. BY THE CITY OF PORTSMOUTH GIS DEPARTMENT ON NOVEMBER 15, 2016. THIS DATA IS FOR PLANNING PURPOSES ONLY AND DOUCET SURVEY DOES NOT GUARANTEE THE ACCURACY OR EXISTENCE OF THE DATA PROVIDED. ON-SITE INSPECTION SHOULD BE CONDUCTED PRIOR FINAL DESIGN AND/OR CONSTRUCTION.

**OWNER OF RECORD**  
CATE STREET DEVELOPMENT, LLC  
60 K STREET  
BOSTON, MA 02127  
R.C.R.D. BOOK 5959, PAGE 109

DRAINAGE STRUCTURES			
CB #1056 RIM ELEV.=23.3' (A) 4" UNKN. INV.=17.6' (B) 4" UNKN. INV.=17.7'	CB #1348 RIM ELEV.=24.6' (1347) 12" RCP INV.=19.2'	CB #3600 RIM ELEV.=11.1' 12" PVC INV.=7.5'	CB #4034 RIM ELEV.=10.8' 12" PVC INV.=7.5'
CB #1071 RIM ELEV.=22.7' (1072) 12" RCP INV.=17.3'	CB #1742 RIM ELEV.=24.7' (1743) 12" RCP INV.=19.7'	CB #3672 RIM ELEV.=11.9' (3693) 4" PVC INV.=8.2' (3895) 4" PVC INV.=8.7'	DMH #4035 RIM ELEV.=11.7' (NO VISIBLE PIPES) SUMP=1.3'
CB #1072 RIM ELEV.=23.7' (A) 6" CMP INV.=17.6' (1071) 12" RCP INV.=17.5' (1148) 12" CMP INV.=17.5' (1347) 15" RCP INV.=17.1' (B) 15" RCP INV.=17.0'	CB #1743 RIM ELEV.=24.7' (1742) 12" RCP INV.=19.5'	CB #3693 RIM ELEV.=11.0' (3672) 4" PVC INV.=8.2' (A) 12" PVC INV.=7.9'	CB #4081 RIM ELEV.=8.7' (4082) 12" HDPE INV.=5.8'
CB #1128 RIM ELEV.=22.7' (A) 6" PVC INV.=19.4' (1186) 12" CMP INV.=18.9' (1148) 12" CMP INV.=18.8'	CB #2346 RIM ELEV.=15.6' (A) 12" RCP INV.=11.3'	DMH #3756 RIM ELEV.=11.6' (2360) 12" PVC INV.=7.8' (A) 12" PVC INV.=7.8'	CB #4082 RIM ELEV.=8.7' (4081) 12" HDPE INV.=5.7' (4083) 12" HDPE INV.=5.9'
CB #1147 RIM ELEV.=22.2' (A) 6" PVC INV.=18.7' (B) 12" CMP INV.=18.3'	CB #2348 RIM ELEV.=13.8' (2348) 15" HDPE INV.=9.7'	DMH #3756 RIM ELEV.=11.6' (3760) 12" PVC INV.=7.7' (A) 12" PVC INV.=7.8'	DMH #4083 RIM ELEV.=8.9' (3866) 42"WX24H CMP INV.=5.0' (4083) 12" HDPE INV.=5.7' (4093) 12" HDPE INV.=5.6' (A) 42"WX24H CMP INV.=5.0'
CB #1148 RIM ELEV.=22.4' (A) 6" PVC INV.=18.7' (1128) 12" CMP INV.=18.1' (1148) 12" CMP INV.=18.2'	CB #2349 RIM ELEV.=13.6' (2347) 15" HDPE INV.=9.8' (2349) 15" HDPE INV.=9.8'	CB #3758 RIM ELEV.=10.9' (3760) 12" PVC INV.=8.0' (A) 8" PVC INV.=7.9'	CB #4093 RIM ELEV.=9.0' (4083) 12" HDPE INV.=5.9'
CB #1186 RIM ELEV.=23.5' (1188) 12" CMP (NOT VISIBLE) (1128) 12" CMP INV.=20.0'	CB #2350 RIM ELEV.=12.6' (FULL OF SILT & DEBRIS)	DMH #3772 RIM ELEV.=12.2' (2349) 15" HDPE INV.=8.7' (3777) 15" HDPE INV.=8.6'	CB #4239 RIM ELEV.=25.0' 12" CMP INV.=20.3'
CB #1188 RIM ELEV.=25.7' (1186) 8" PVC INV.=22.3'	CB #2993 RIM ELEV.=30.2' (A) 15" RCP INV.=26.2' (B) 12" UNKN. INV.=26.1' (3281) 15" RCP INV.=26.0'	CB #3777 RIM ELEV.=10.7' (3772) 15" HDPE INV.=7.7' (4605) 15" HDPE INV.=7.6'	CB #4545 RIM ELEV.=27.8' (3281) 15" RCP INV.=22.0' (A) 18" RCP INV.=21.3'
CB #1213 RIM ELEV.=20.3' (HDWL) 12" HDPE INV.=17.6'	CB #3019 RIM ELEV.=28.8' (A) 8" PVC INV.=25.4'	DMH #3866 RIM ELEV.=10.2' (4083) 42"WX24H CMP INV.=5.3' (4605) 24" RCP INV.=5.4' (A) 8" CI INV.=8.0'	DMH #4603 & 4604 RIM ELEV.=10.3' (4035) 42" RCP INV.=1.0' (A) 36" RCP INV. (RECESSED) (B) UNKN. (RECESSED) (C) 42" RCP INV.=1.2'
CB #1251 RIM ELEV.=20.9' (A) 18" CMP INV.=16.5'	CB #3065 RIM ELEV.=31.5' WATER ELEV.=27.4' (NO PIPES VISIBLE)	CB #3895 RIM ELEV.=11.9' (3672) 4" PVC INV.=9.7' (A) 4" PVC INV.=9.9'	DMH #4605 RIM ELEV.=11.0' (3579) 24" RCP INV.=4.4' (3777) 15" CMP INV.=7.5' (3866) 24" RCP INV.=4.6'
CB #1345 RIM ELEV.=23.3' (1346) 12" RCP INV.=19.1'	CB #3281 RIM ELEV.=29.8' (2993) 15" RCP INV.=24.3' (4545) 15" RCP INV.=24.2'	CB #3993 RIM ELEV.=12.6' (NO VISIBLE PIPES) APPEARS TO OPEN TO BROOK SUMP=1.5' WATER LEVEL=1.8'	
CB #1346 RIM ELEV.=25' (1345) 12" RCP INV.=17.4' (1347) 15" RCP INV.=15.9' (A) 15" RCP INV.=15.7'	DMH #3579 RIM ELEV.=11.2' (4035) 36" BRICK TROUGH INV.=2.0' (4605) 24" RCP INV.=4.2'	CB #4002 RIM ELEV.=12.9' (BOLTED SHUT)	
CB #1347 RIM ELEV.=23.9' (1348) 12" RCP INV.=18.8' (1072) 15" RCP INV.=15.9' (1346) 15" RCP INV.=15.8'			

SEWER STRUCTURES		
SMH #1066 RIM ELEV.=23.2' (A) 4" PVC INV.=18.5' (D) UNKN. INV.=12.3' (1152) 10" UNKN. INV.=11.8' (C) 4" PVC INV.=16.0' (D) 4" PVC INV.=16.0' (1350) UNKN. INV.=11.9' (E) UNKN. INV.=11.6'	SMH #2434 RIM ELEV.=18.2' (2799) 10" UNKN. INV.=9.7' (2365) 12" UNKN. INV.=9.7' (SMH #2789) RIM ELEV.=20.1' (SUMP) INV.=9.9' (NO PIPES VISIBLE)	SMH #3768 RIM ELEV.=11.4' (2353) 24" PVC INV.=6.0' (3578) 24" PVC INV.=5.9' (SMH #3999) RIM ELEV.=12.6' (4000) 10" PVC INV.=5.9' (4003) 12" PVC INV.=5.8'
SMH #1152 RIM ELEV.=22.6' (1066) 10" UNKN. INV.=11.3' (2799) 10" UNKN. INV.=11.2'	SMH #2799 RIM ELEV.=23.8' (A) 4" DI INV.=21.1' (B) 8" UNKN. INV.=12.1' (1527) 8" CLAY DROP INLET INV.=21.1'	SMH #4000 RIM ELEV.=12.3' (3718) 10" PVC INV.=5.8' (3999) 10" PVC INV.=5.8'
SMH #1350 RIM ELEV.=25.5' (A) 8" CLAY INV.=14.9' (4565) UNKN. INV.=14.7' (1066) UNKN. INV.=14.4'	SMH #3280 RIM ELEV.=29.8' (1527) 8" CLAY DROP INLET INV.=21.1'	SMH #4003 RIM ELEV.=13.3' (3999) 12" PVC INV.=6.5' (A) 10" CI INV.=6.6'
SMH #1470 RIM ELEV.=29.4' FULL OF DEBRIS	(A) 4" CI INV.=23.3' (B) UNKN. INV.=16.5'	SMH #4102 RIM ELEV.=11.3' (3578) 30" PVC INV.=3.7' (A) 30" PVC INV.=3.6'
SMH #1527 RIM ELEV.=31.6' (3280) 8" CLAY INV.=24.8' (A) 8" CLAY INV.=25.3' (B) 8" CLAY INV.=24.7'	SMH #3578 RIM ELEV.=10.9' (3604) 36" PVC INV.=3.0' (3768) 24" PVC INV.=5.8' (4102) 30" PVC INV.=3.1'	SMH #4103 RIM ELEV.=12.5' (NO VISIBLE PIPES, POSSIBLE ELECTRIC MANHOLE)
SMH #2353 RIM ELEV.=12.7' (2365) 24" PVC INV.=6.5' (3768) 24" PVC INV.=6.5' (A) 6" PVC INV.=7.2'	SMH #3604 RIM ELEV.=11.3' (3578) 36" PVC INV.=2.5' (3636) 36" PVC INV.=2.5' (3718) 10" PVC INV.=4.7'	SMH #4565 RIM ELEV.=28.4' PIPES SUBMERGED WATER LEVEL=16.5' SUMP=15.4'
SMH #2365 RIM ELEV.=14.4' (A) 10" CI INV.=9.3' (2434) 10" METAL INV.=9.2' (2353) 24" METAL INV.=9.2'	SMH #3636 RIM ELEV.=10.3' (3604) 36" PVC INV.=2.3' (A) 36" PVC INV.=2.2'	SMH #4607 RIM ELEV.=13.2' (A) 8" PVC INV.=17.9' (B) 8" PVC INV.=17.7'
	SMH #3718 RIM ELEV.=11.5' (3604) 10" PVC INV.=5.3' (4000) 10" PVC INV.=5.5'	

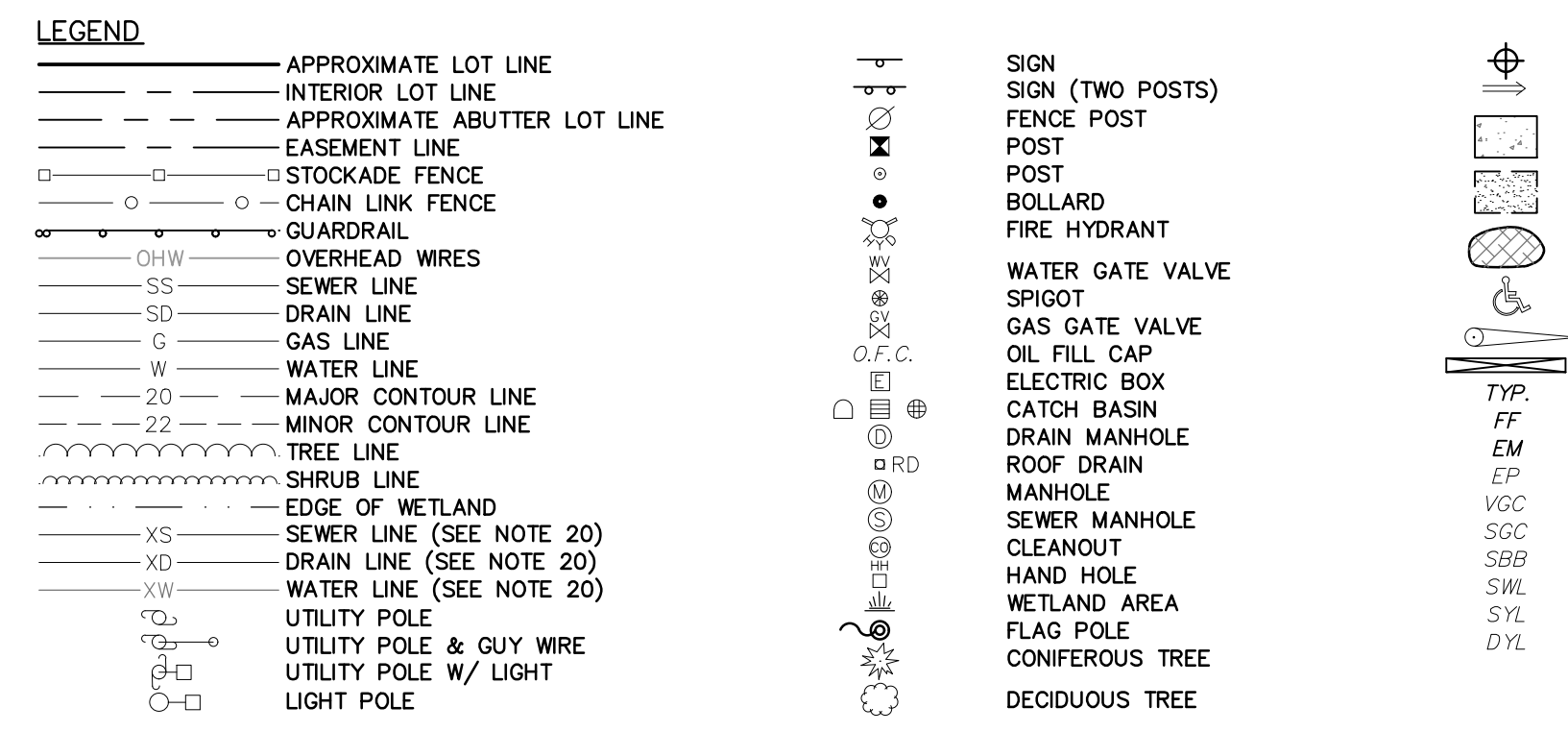


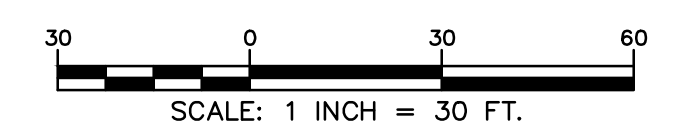
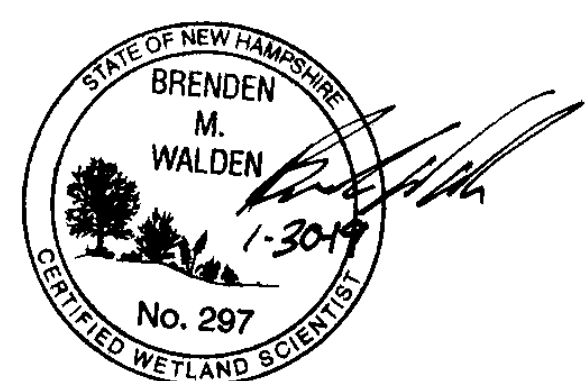
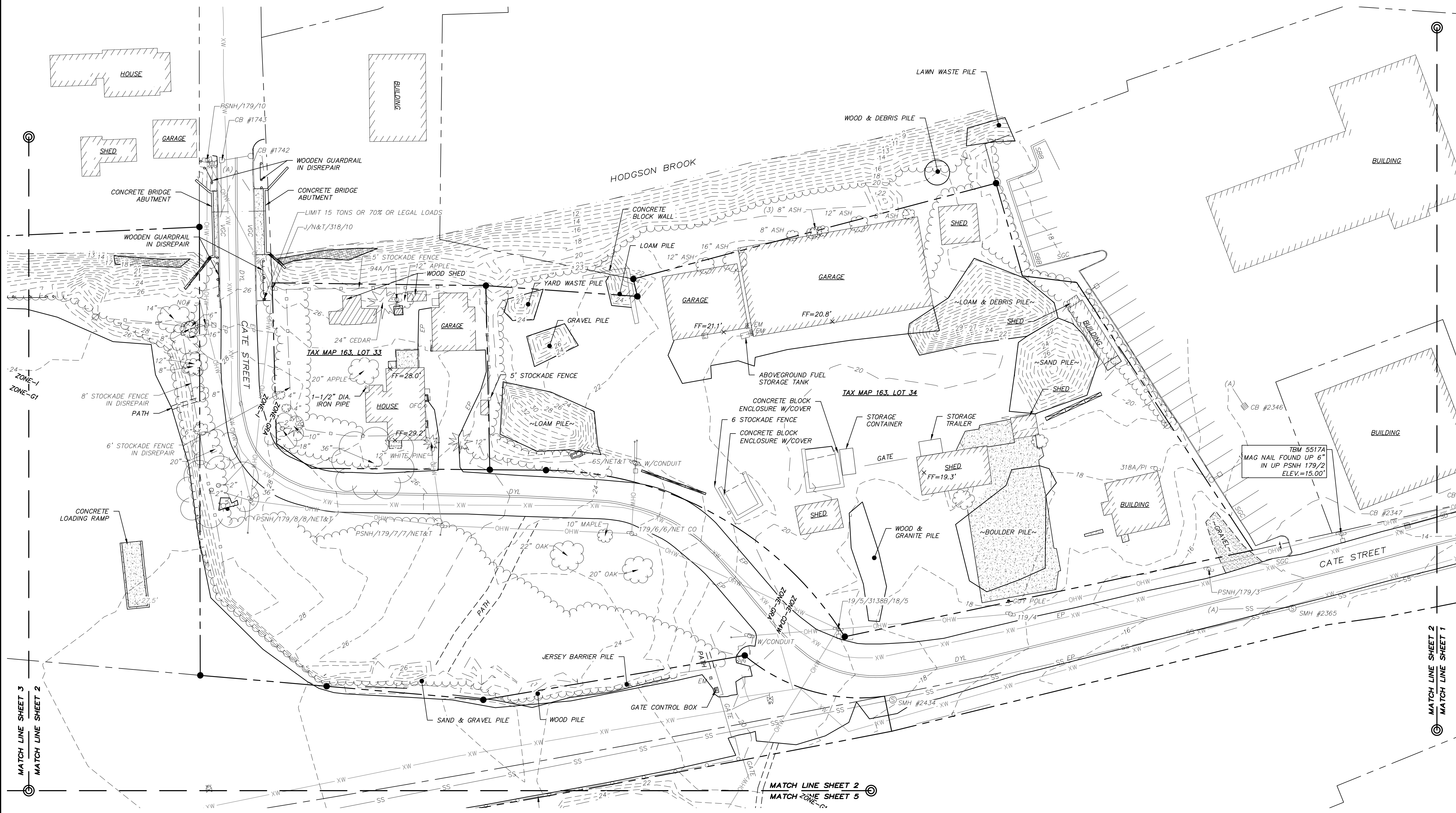
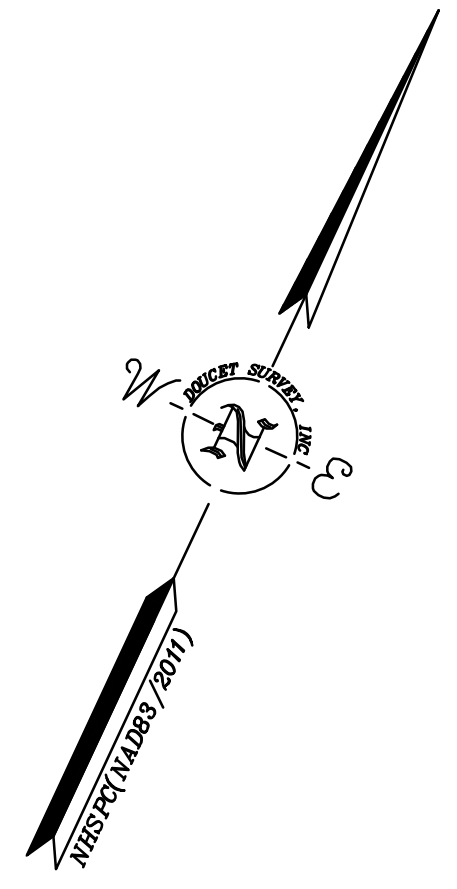
**TOPOGRAPHIC PLAN**  
FOR  
**CATE STREET DEVELOPMENT, LLC**  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
2	1/30/19	REVISE WETLAND NOTE & OWNER INFO.	MWF
1	10/10/18	ADDITIONAL SURVEY AREA	MWF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	1 OF 5

**DOUCET SURVEY**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-0660  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
http://www.doucetsurvey.com

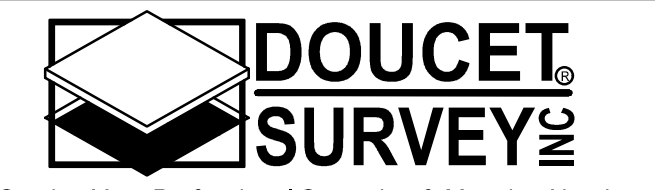




**TOPOGRAPHIC PLAN**  
 FOR  
**CATE STREET DEVELOPMENT, LLC**  
 OF  
 TAX MAP 163, LOTS 33 & 34  
 TAX MAP 165, LOT 2  
 TAX MAP 172, LOT 1  
 TAX MAP 173, LOT 2  
 CATE STREET & US ROUTE 1 BYPASS  
 PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
2	1/30/19	REVISE WETLAND NOTE & OWNER INFO.	MWF
1	10/10/18	ADDITIONAL SURVEY AREA	MWF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	2 OF 5



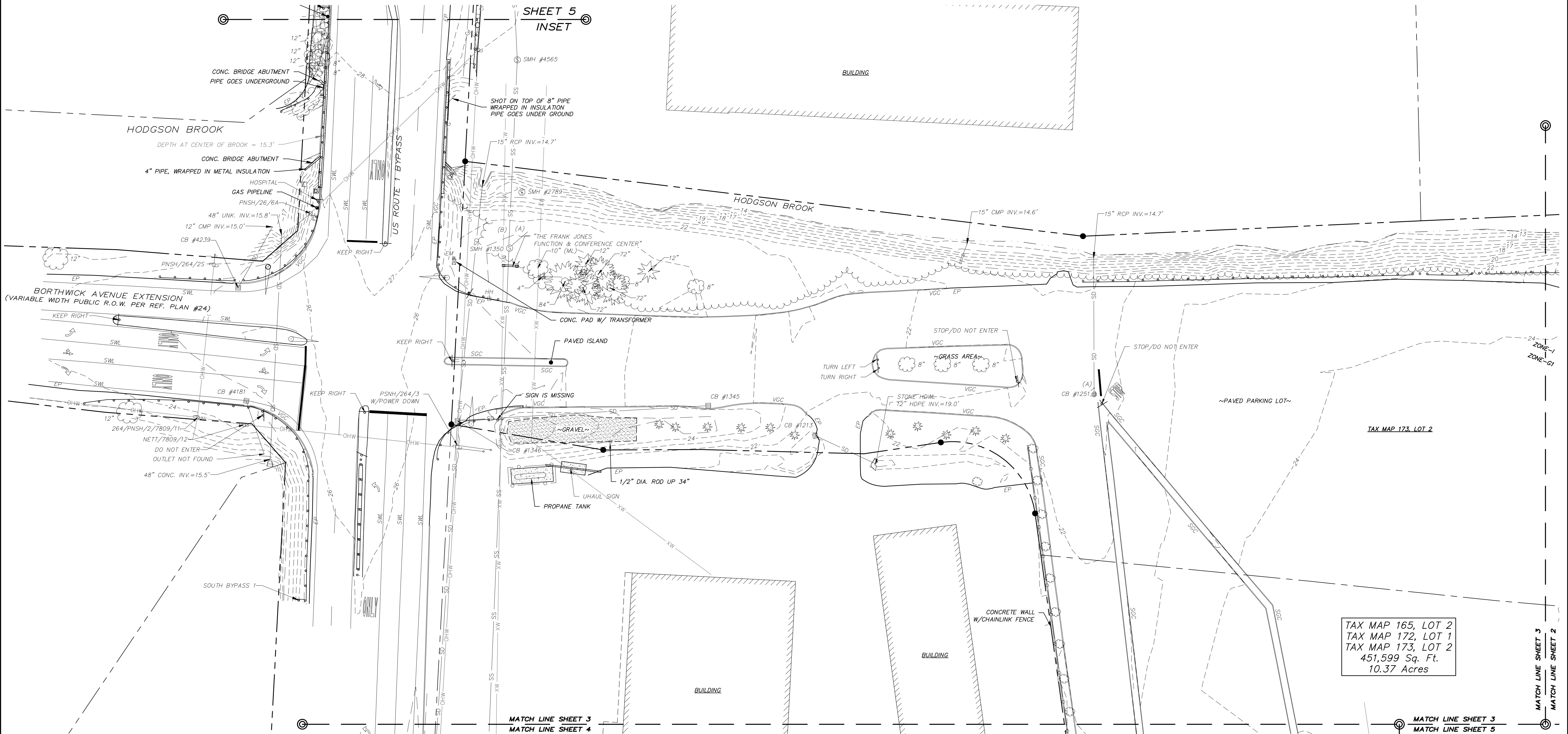
Serving Your Professional Surveying & Mapping Needs  
 102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
 2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
 10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
<http://www.doucetsurvey.com>

FILE NAME: \\P:\PROJECTS\5517\_CSD (S&E)\_4130\DWG\5517A\_CSD.dwg LAYOUT NAME: 163P DTD: 12/20/16 10:50:00 AM

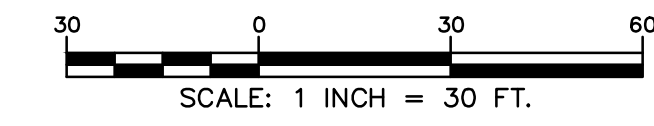
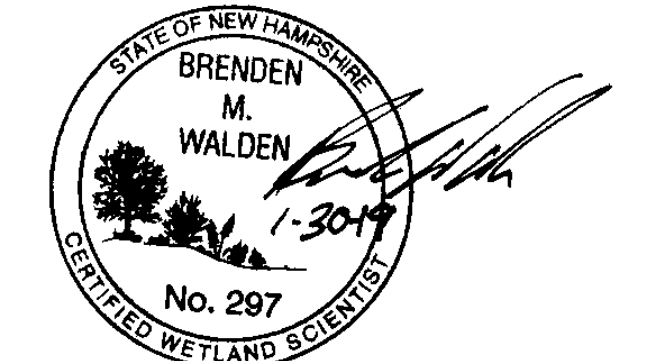


FILE NAME: Y:\PROJECTS\5517\_CSD (SE 4130)\DWG\5517A\_CSD.dwg LAYOUT NAME: TPO (3) PLOTTED: Wednesday, January 30, 2019 - 9:35am

SHEET 5  
INSET



TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
451,599 Sq. Ft.  
10.37 Acres

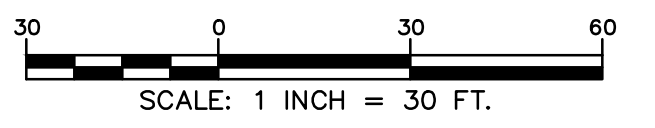
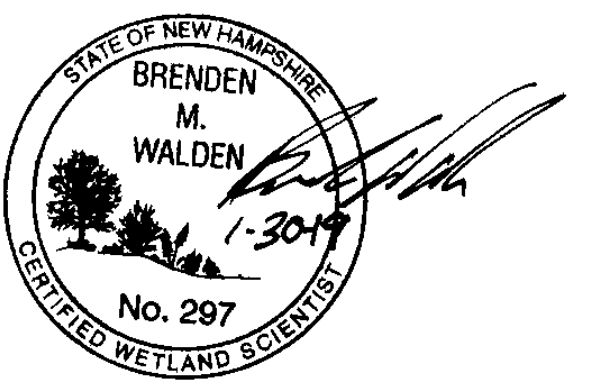
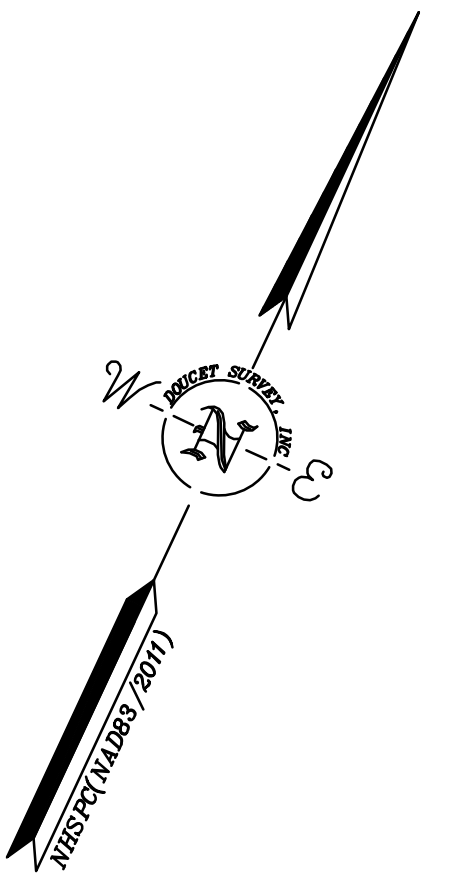
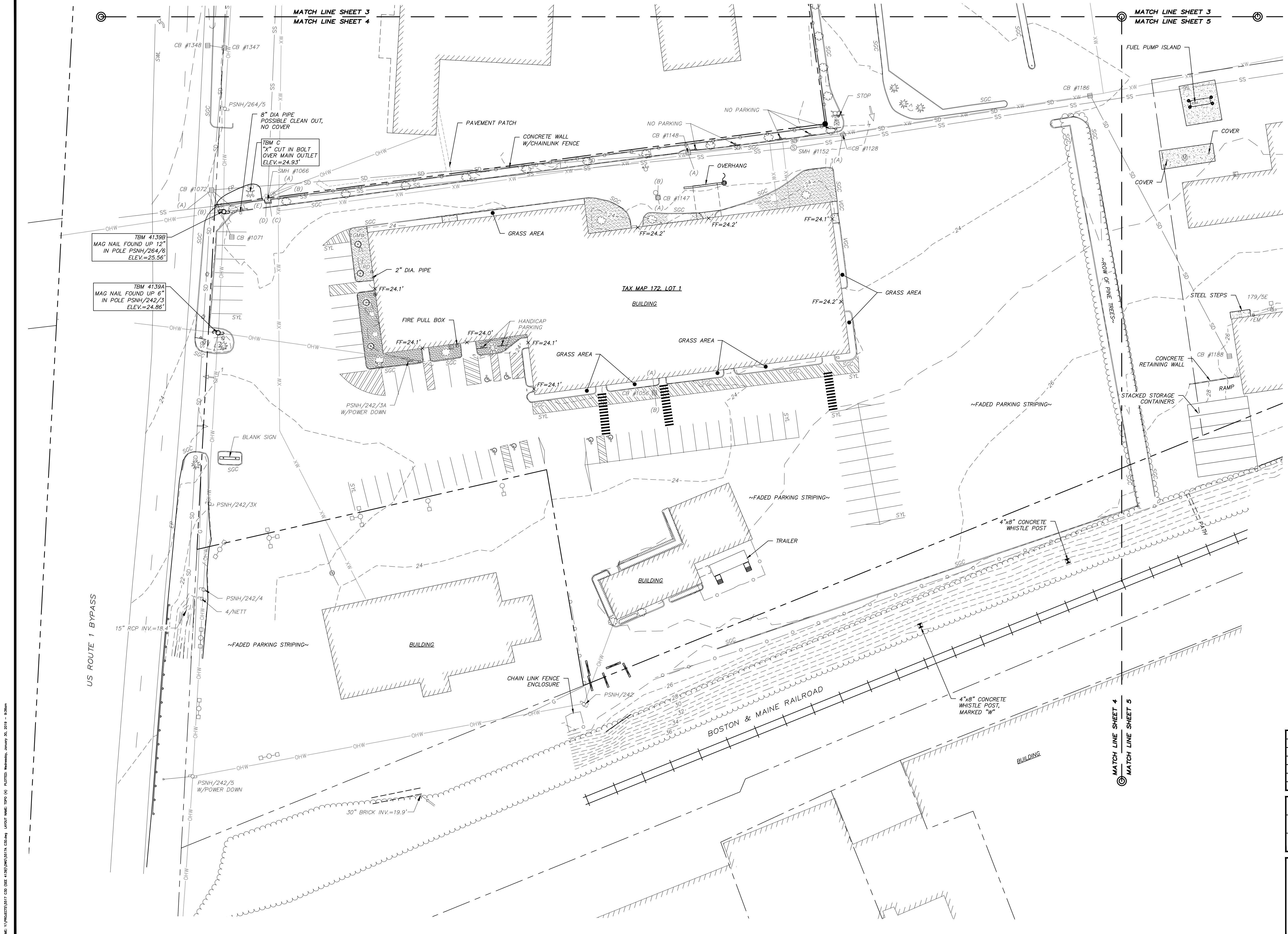


TOPOGRAPHIC PLAN  
FOR  
CATE STREET DEVELOPMENT, LLC  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
2	1/30/19	REVISE WETLAND NOTE & OWNER INFO.	MWF
1	10/10/18	ADDITIONAL SURVEY AREA	MWF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	3 OF 5

**DOUCET SURVEY INC.**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
<http://www.doucetsurvey.com>



**TOPOGRAPHIC PLAN**  
 FOR  
**GATE STREET DEVELOPMENT, LLC**  
 OF  
 TAX MAP 163, LOTS 33 & 34  
 TAX MAP 165, LOT 2  
 TAX MAP 172, LOT 1  
 TAX MAP 173, LOT 2  
 GATE STREET & US ROUTE 1 BYPASS  
 PORTSMOUTH, NEW HAMPSHIRE

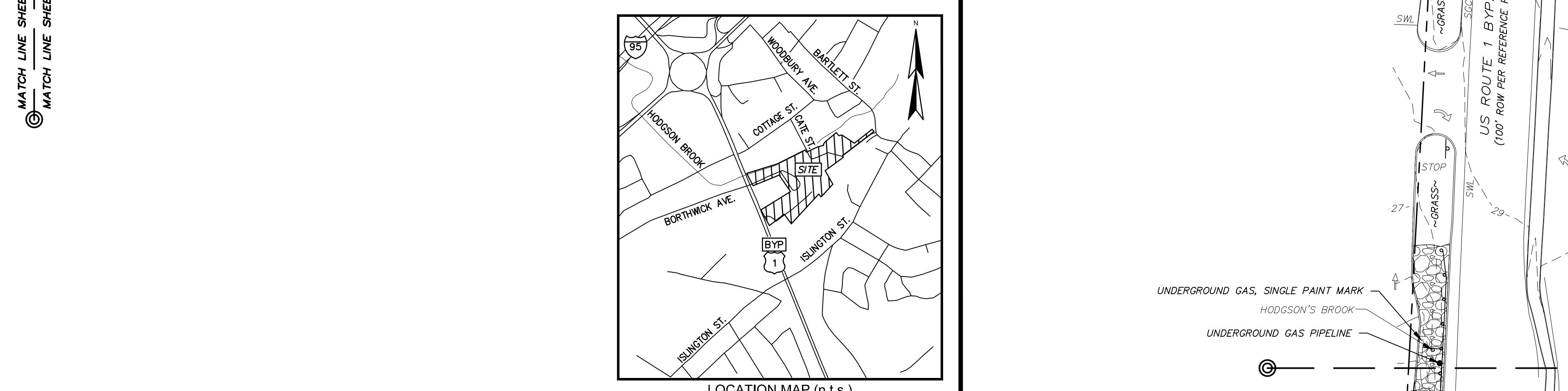
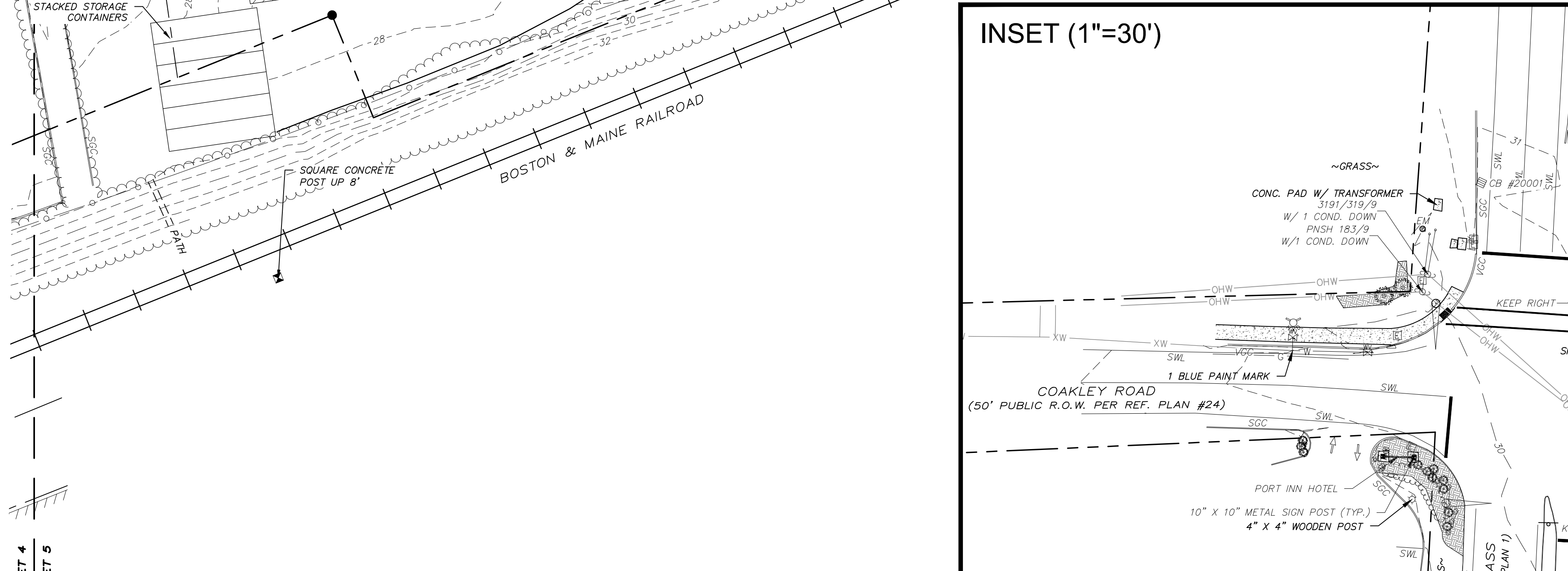
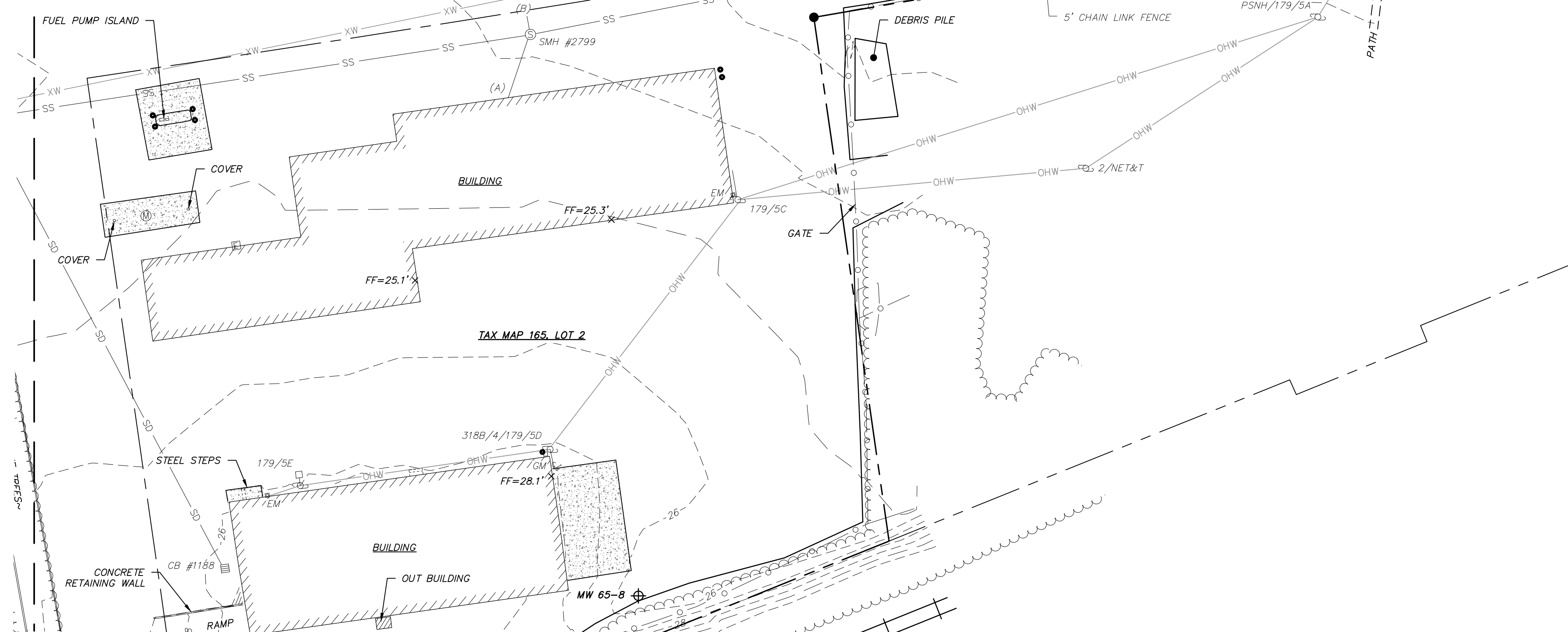
NO.	DATE	DESCRIPTION	BY
2	1/30/19	REVISE WETLAND NOTE & OWNER INFO.	MWF
1	10/10/18	ADDITIONAL SURVEY AREA	MWF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	4 OF 5

**DOUCET SURVEY**  
 Serving Your Professional Surveying & Mapping Needs  
 102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
 2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
 10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
<http://www.doucetsurvey.com>

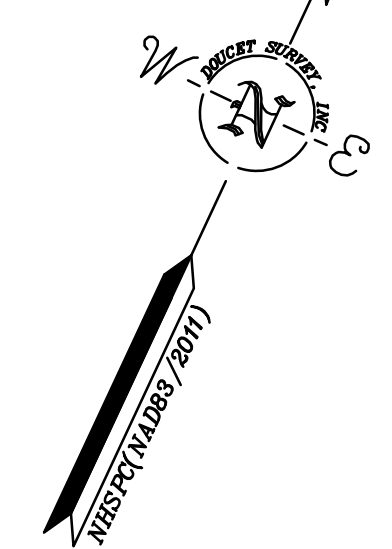
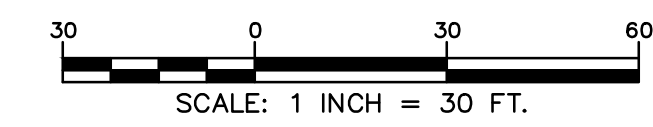
FILE NAME: \\PRODUCTS\5517\_CAD\5517\5517A\_C350.dwg LAYOUT: NAME: 5517.DWG PLOTTED: Wednesday, January 30, 2019 - 9:36am

MATCH LINE SHEET 3  
MATCH LINE SHEET 5



MATCH LINE SHEET 4  
MATCH LINE SHEET 5

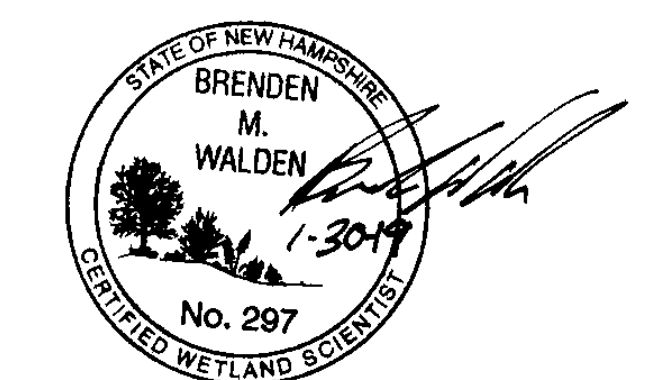
TOPOGRAPHIC PLAN  
FOR  
CATE STREET DEVELOPMENT, LLC  
OF  
TAX MAP 163, LOTS 33 & 34  
TAX MAP 165, LOT 2  
TAX MAP 172, LOT 1  
TAX MAP 173, LOT 2  
CATE STREET & US ROUTE 1 BYPASS  
PORTSMOUTH, NEW HAMPSHIRE



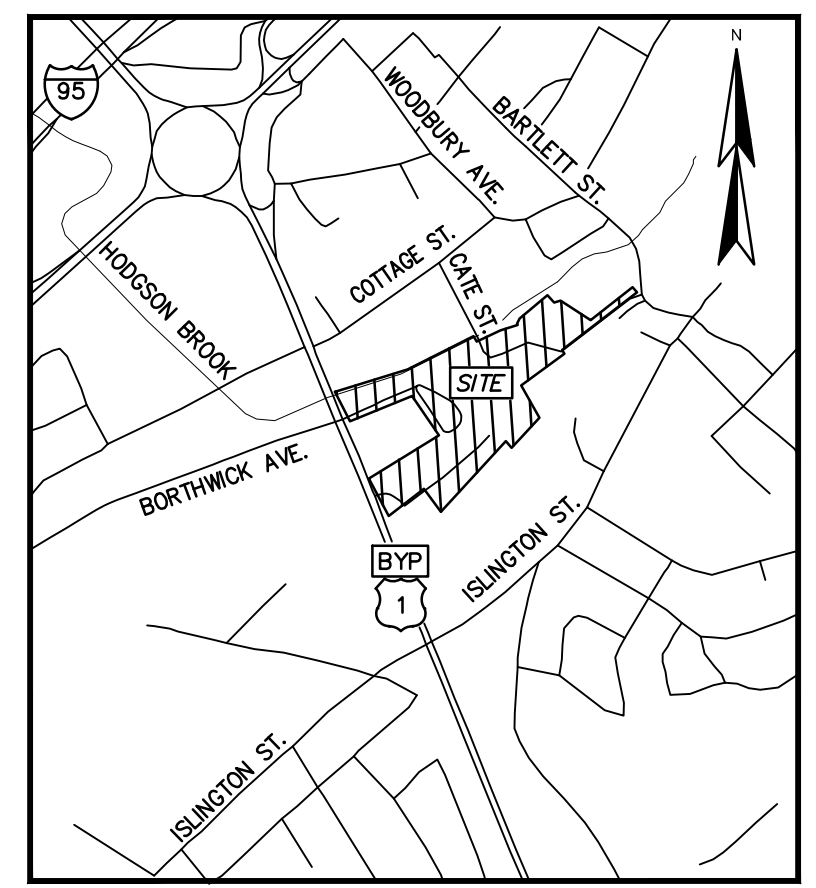
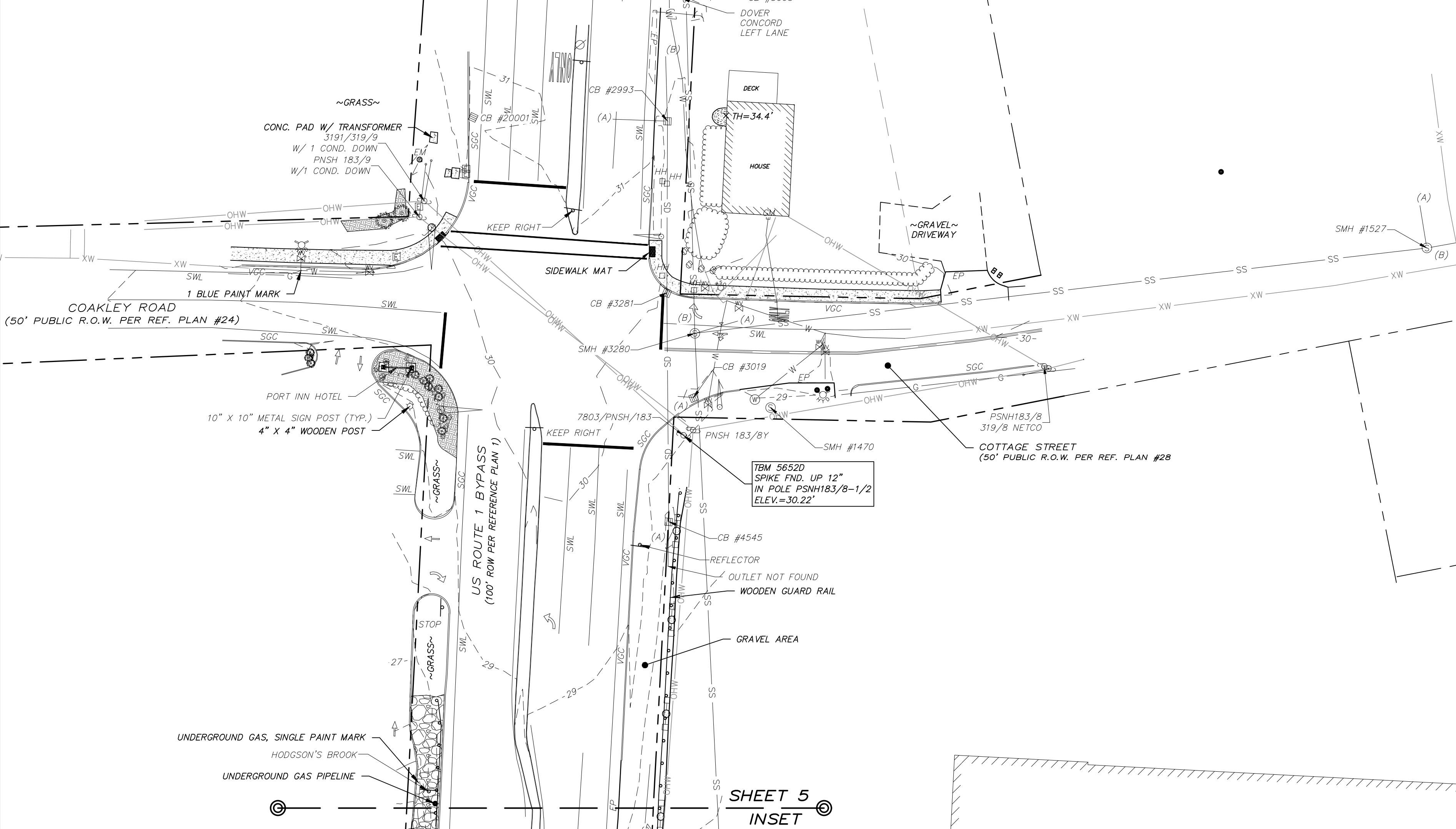
**DOUCET SURVEY**  
Serving Your Professional Surveying & Mapping Needs  
102 Kent Place, Newmarket, NH 03857 (603) 659-6560  
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060  
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005  
<http://www.doucetsurvey.com>

NO.	DATE	DESCRIPTION	BY
2	1/30/19	REVISE WETLAND NOTE & OWNER INFO.	MWF
1	10/10/18	ADDITIONAL SURVEY AREA	MWF

DRAWN BY:	M.T.L.	DATE:	DECEMBER 2016
CHECKED BY:	M.W.F.	DRAWING NO.:	5517A
JOB NO.:	5517	SHEET	5 OF 5



INSET (1"=30')



LOCATION MAP (n.t.s.)

FILE NAME: \\PROJECTS\5517A\_CSD (S&E) 4130\DWG\5517A\_CSD.dwg LAYOUT NAME: TPO (S) PLOTTED: Wednesday, January 30, 2019 - 8:27am