



AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

6 December 2018

Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, NH 03801

**Re: City of Portsmouth Application for Conditional Use Permit
Tax Map 164, Lots 1 & 4, Map 157, Lots 1 & 2
105 Bartlett Street
Portsmouth, New Hampshire**

Dear Mr. Legg:

This letter transmits a City of Portsmouth Conditional Use Permit Application request to permit a total of 54,879 square feet of disturbance within the 100' City of Portsmouth Wetland Buffer on the above referenced parcels.

The project proposes roadway improvements, utility improvements, drainage improvement & treatment including separation of stormwater from sewer, parking improvements, buffer planting areas, and removal of two dilapidated structures.

The proposed roadway improvements include re-configuration of parking, construction of parking islands, re-grading and installation of curbing to direct stormwater.

The proposed drainage improvements includes separation of stormwater from sewer, and also providing stormwater treatment, a function that does not currently exist on the subject lots.

Attached to this application please find a plan set depicting existing and proposed conditions.

The project was presented at the November 14, 2018 Conservation Commission meeting where the project team received comments and questions. In response to those comments and questions, below is an itemized list of components that have been added to the plans and/or application.

- Demolition notes have been added to the plan ensuring the demolition is in accordance with state and local regulations. It is our belief that the local Demolition Permit approval and oversight process will identify any hazardous substances or materials within the dilapidated buildings and the soils underneath these buildings. It is also our belief that the Demolition Permit process will also include proper disposal of any hazardous substances or materials off site following demolition.
- The areas in which the demolition will take place and the construction access areas associated with the demolition will be filled with appropriate clean material, leveled, loamed and seeded.
- Erosion and sediment control devices have been added to the plan set.

- Concerns regarding the “bike path” design were expressed by the Conservation Commission. Since November 14, 2018 the City has set a Public Meeting for December 19, 2018 to discuss the “north Mill Pond Trail Project”.
- The applicant, Clipper Traders LLC, will develop a snow removal and snow storage plan that will reduce the amount of snow that is plowed toward, and stored directly adjacent to North Mill Pond. This plan is still under development but will become part of this application.
- A Buffer Planting Plan has been developed to provide vegetative plantings along the shoreline of North Mill Pond between the proposed sidewalk and the top of bank.

According to the City of Portsmouth Zoning Ordinance, *Article 10.1017.50 Criteria for Approval*, the proposal shall comply with the following criteria:

1. The land is reasonably suited to the use, activity or alteration.

The proposal is to construct various improvements to the existing traveled way, upgrade existing utilities, separate stormwater from sewer, provide a buffer planting plan, and provide some stormwater treatment, a function that does not currently exist. Given the fact that the proposal is to improve existing structures or conditions, the land is reasonable suited to the use, activity, or alteration, as it is currently used/previously developed for uses approved by the City through the years.

2. There is no alternative location outside of the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.

The proposal is to improve existing structures, conditions, and demolition of dilapidated structures which exist with the wetland buffer. Due to their existing location, it is not feasible to locate the improvements outside of the wetland buffer. Attached is a Stormwater Treatment Narrative that details the proposed drainage treatment system. The proposed outfalls are designed to discharge stormwater above the Highest Observable Tide Line and not within existing saltmarsh vegetation. Each proposed outfall will have a headwall and a rip rap lined outlet that will reduce discharge velocity and prevent erosion. It is anticipated that secondary impacts to saltmarsh vegetation located below the rip rap lined outlet will be insignificant as the rip rap lined outlet is designed to protect the adjacent vegetation. It is my belief that the erosional forces within North Mill Pond that include fetch from a northerly wind, and current velocity from Hodgdon Brook is more impactful to the saltmarsh vegetation and associated bank, than the proposed stormwater outfalls. This is evidenced by the existing erosion that exists along the southerly bank of North Mill Pond.

3. There will be no adverse impact on the wetland functional values of the site or surrounding properties.

The proposal will not impact the existing wetland resource located adjacent to the site and its current functions and values. The proposed improvements will improve the wetland functional values as stormwater will be separated from sewer, and the stormwater will receive some treatment under proposed conditions. The project will also result in a small reduction in impervious surface on the site, includes landscape plantings within the proposed parking islands, and a buffer planting plan that will vegetate the area between the existing sidewalk and the bank of North Mill Pond. I believe that the combination of the above project components will have no adverse impact on the adjacent wetland resource, but rather improve the functional values of the site.

4. Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.

Most of the areas within the 100' City of Portsmouth Wetland Buffer that are proposed to be impacted would be characterized as existing pavement or gravel. There will be alteration of the natural vegetative state to provide an outfall and outlet protection for drainage improvements. The vegetation within the outfall areas are dominated by maintained lawn, and sparse tree/shrub cover. Photo locations of each outfall are depicted in the attached photo log showing the vegetation to be removed for each outfall. Outfall locations are extremely limited as the system functions via gravity and the discharge points need to be adjacent to North Mill Pond.

5. The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this Section.

The project represents the alternative with the least adverse impacts to areas and environments while allowing reasonable use, and continued use of the property. The improvements associated with the proposal in terms of stormwater will increase the water quality leaving the site and entering the nearby wetland resource. While the area to be disturbed to complete the project covers a large area of the subject parcels, the result of the improvements greatly reduce impacts in terms of stormwater pollution.

6. Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.

The proposal includes three small areas of alteration of the natural vegetative state to provide outfalls and outlet protection for drainage improvements. This alteration is unavoidable as the system functions via gravity and the discharge point needs to be adjacent to North Mill Pond. A Buffer Planting Plan has been provided to vegetate the area between the proposed sidewalk and the bank of North Mill Pond, which will result in approximately 8,050 sq. ft. of the vegetated buffer strip along North Mill Pond returned to a more natural state than currently exists.

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,



Steven D. Riker
NH Certified Wetland Scientist/Environmental Permitting Specialist
Ambit Engineering, Inc.

Cc: Doug Pinciario & Ed Hayes, Clipper Traders LLC-Applicant
Tim Phoenix, Hoefle Phoenix Gormley & Roberts, PA.

Submission Requirements

The applicant must file 22 copies (10 copies for the Conservation Commission and 12 copies for the Planning Board) of a stamped and folded Site Plan to scale showing the location of the proposed structure, use, activity or alteration in relation to the wetland, as determined by on-site inspection by a certified wetland scientist at a time when conditions are favorable for such inspection and delineation. The plan shall include all information specified in Section 10.1017.20 of the Zoning Ordinance, and shall include a locus map with a north arrow.

Information for Applicant

If there is any question, however slight, of the presence of wetlands on the site, the applicant should consult the City Wetlands Map on file in the Planning Department. If it appears that wetlands might exist on site, the applicant should become familiar with the provisions of Section 10.1010 of the Zoning Ordinance.

Review by Independent Certified Wetland Scientist

In the majority of cases the Planning Board will require the opinion of a qualified independent certified wetland scientist. In such cases the procedure is that the Board applies to the Rockingham County Conservation District for the services of such an individual. The findings of the certified wetland scientist will include, but are not limited to, the suitability of the site for the proposed use and the effect of the project on the wetlands on site and in the vicinity.

The certified wetland scientist will render a report to the District, with copies to the Planning Board and the Conservation Commission. The District will bill the City directly for the services of the certified wetland scientist. The owner /applicant shall forward a check to the City made payable to Rockingham County Conservation District prior to the petition being reviewed by either the Conservation Commission or the Planning Board.

Following the receipt of the report from the Rockingham County Conservation District, the Conservation Commission will review the application and will make a recommendation to the Planning Board. Once such a recommendation is made by the Conservation Commission, the Planning Board will schedule a Public Hearing.

I have read and understand the above information. I will pay any additional fees due as required above.



Owner

Agent-See Authorization

Date: December 6, 2018

Applicant (if different)

Date:

8 February, 2018

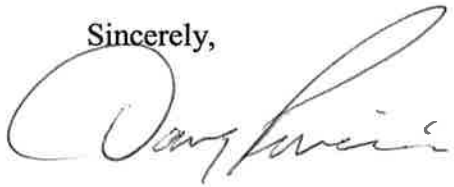
To Whom It May Concern

RE: Client Representation for Re-Development at 105 Bartlett Street, Tax Map 157, Lot 1, Portsmouth, NH

This letter is to inform the City of Portsmouth, NHDES, and other parties in accordance with State Law that Ambit Engineering is authorized to represent the above-mentioned property as our agent in the approval process. This includes signatory powers on any and all applications.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dan Fournier". The signature is written in black ink and is positioned below the word "Sincerely,".

Clipper Traders, LLC
Authorized Representative

8 February, 2018

To Whom It May Concern

RE: Client Representation for Re-Development at 105 Bartlett Street, Tax Map 164, Lots 1, 2, & 3 and Tax Map 157, Lot 2, Portsmouth, NH

This letter is to inform the City of Portsmouth, NHDES, and other parties in accordance with State Law that Ambit Engineering is authorized to represent the above-mentioned property as our agent in the approval process. This includes signatory powers on any and all applications.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

E.R. Hayer, member / mgr.

Portsmouth Lumber and Hardware, LLC
Authorized Representative



PAN AM SYSTEMS

1700 IRON HORSE PARK
NO. BILLERICA, MA 01862-1681
(978) 663-6949

12 October, 2018

To Whom It May Concern


**RE: Client Representation for Re-Development at 105 Bartlett Street, Tax Map
164, Lot 4, Portsmouth, NH**

This letter is to inform the City of Portsmouth, NHDES, and other parties in accordance with State Law, that Ambit Engineering is authorized to represent the above-mentioned property as our agent in the approval process. This includes signatory powers on any and all applications.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

Boston & Maine Corporation
Authorized Representative

By: 
Michael Twidle
Assitant to the Vice President

LIST OF OWNERS

105 Bartlett Street, Portsmouth, NH.

Tax Map 157, Lot 2
Tax Map 164, Lot 1

Portsmouth Lumber & Hardware LLC
105 Bartlett Street,
Portsmouth, NH 03801

Tax Map 157, Lot 1

Clipper Traders LLC
PO Box 121,
New Castle, NH 03854

Tax Map 164, Lot 4

Boston and Maine Corporation
1700 Iron Horse Park
Billerica, MA 01862

CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, NH

Stormwater Treatment Narrative:

Three underground sand filters, a filtration trench and a rain garden are proposed for the treatment of stormwater runoff from the site. Two of the three sand filters are designated for the area of the site where the drainage is being separated from the combined sewer and a third system treats the runoff from the parking lot of Lot 4 as well as the new section of roadway from approximate station 5+75 to the cul-de-sac. The proposed filtration trench is located at the northeast corner of the building on Lot 4. This system treats the runoff from the rooftop of that building. The proposed rain garden is located along the front of the building on Lot 2.

The underground sand filter operates in a similar fashion to a surface sand filter, except that the system is enclosed in a below-grade structure. The structure consists of a multi-chambered vault that accommodates pretreatment, as well as the filtration component of the system. The structure is made accessible through manholes. There is a drain manhole at the entry of each sand filter. This drain manhole contains a high flow diversion weir within it to divert / by-pass flows from higher level storm events.

A typical structure will consist of a three-chambered vault, with the first chamber comprising a sedimentation chamber, the second chamber consisting of the filter, and the final chamber serving as the outlet control for the system. The first chamber provides pretreatment by settling coarse sediments and by trapping floating materials such as trash and oil. The pretreated water then enters the sand filter. A permeable layer of gravel is installed on top of the filter to help prevent clogging of the filter media. A perforated underdrain at the bottom of the filter directs treated water towards the outlet. The subsurface filters are designed as an off-line device, with capacity to treat a portion of the Water Quality Volume whereas larger storm events are diverted from the device. Treatment of 19% to 28% of the Water Quality Volume is obtained with the design. Given the site constraints, the highest practicable levels of treatment is being obtained.

Also, in accordance with Alteration of Terrain Permit requirements, each closed system incorporates deep sump catch basins that are off line to provide pretreatment of stormwater prior to it entering the sand filter system. Each of the three outfalls will be fitted with a Tideflex CheckMate backflow preventer to prevent tidal surge from entering into the system.

CLIPPER TRADERS LLC
105 BARTLETT STREET
PORTSMOUTH, NH



Limited ground cover removal needed to access turntable for demolition. Access via existing pavement.



Access to structure for demolition via existing parking lot. Some trees growing within structure footprint.

CLIPPER TRADERS LLC
105 BARTLETT STREET
PORTSMOUTH, NH







Site Photograph #1

November 2018



Site Photograph #2

November 2018



Site Photograph #3

November 2018



Site Photograph #4

November 2018



Site Photograph #5

November 2018



Site Photograph #6

November 2018



Site Photograph #7

November 2018



Site Photograph #8

November 2018



Site Photograph #9

November 2018



Site Photograph #10

November 2018



Site Photograph #11

November 2018



Site Photograph #12

November 2018



Site Photograph #13

November 2018



PROPOSED SUBDIVISION CLIPPER TRADERS, LLC

PROPOSED CLIPPER LANE PORTSMOUTH, NEW HAMPSHIRE

CONDITIONAL USE PERMIT APPLICATION

APPLICANTS AND OWNERS:
CLIPPER TRADERS, LLC
PO BOX 121
NEW CASTLE, NH 03854

**PORTSMOUTH LUMBER AND
HARDWARE, LLC**
105 BARTLETT STREET
PORTSMOUTH, N.H. 03801

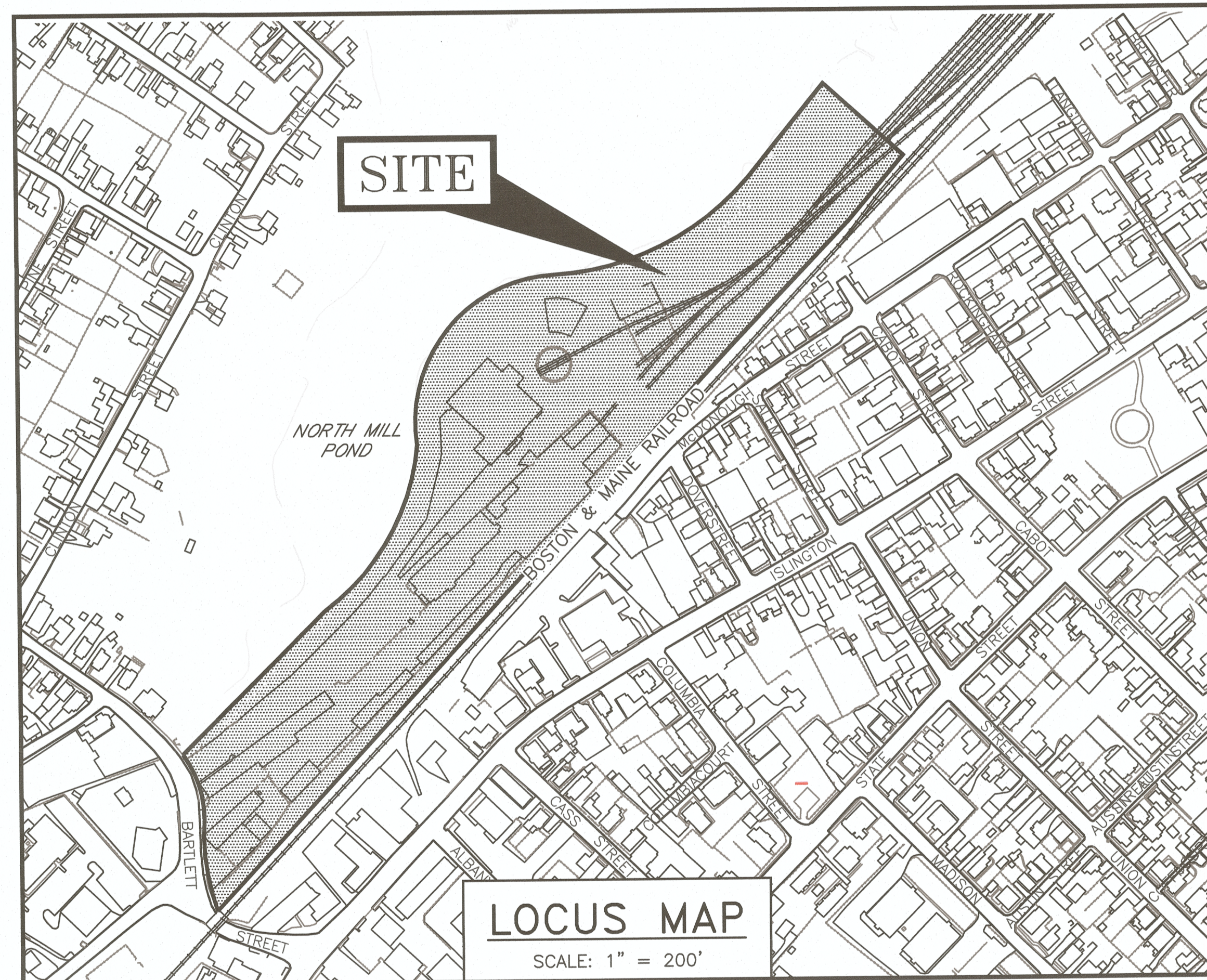
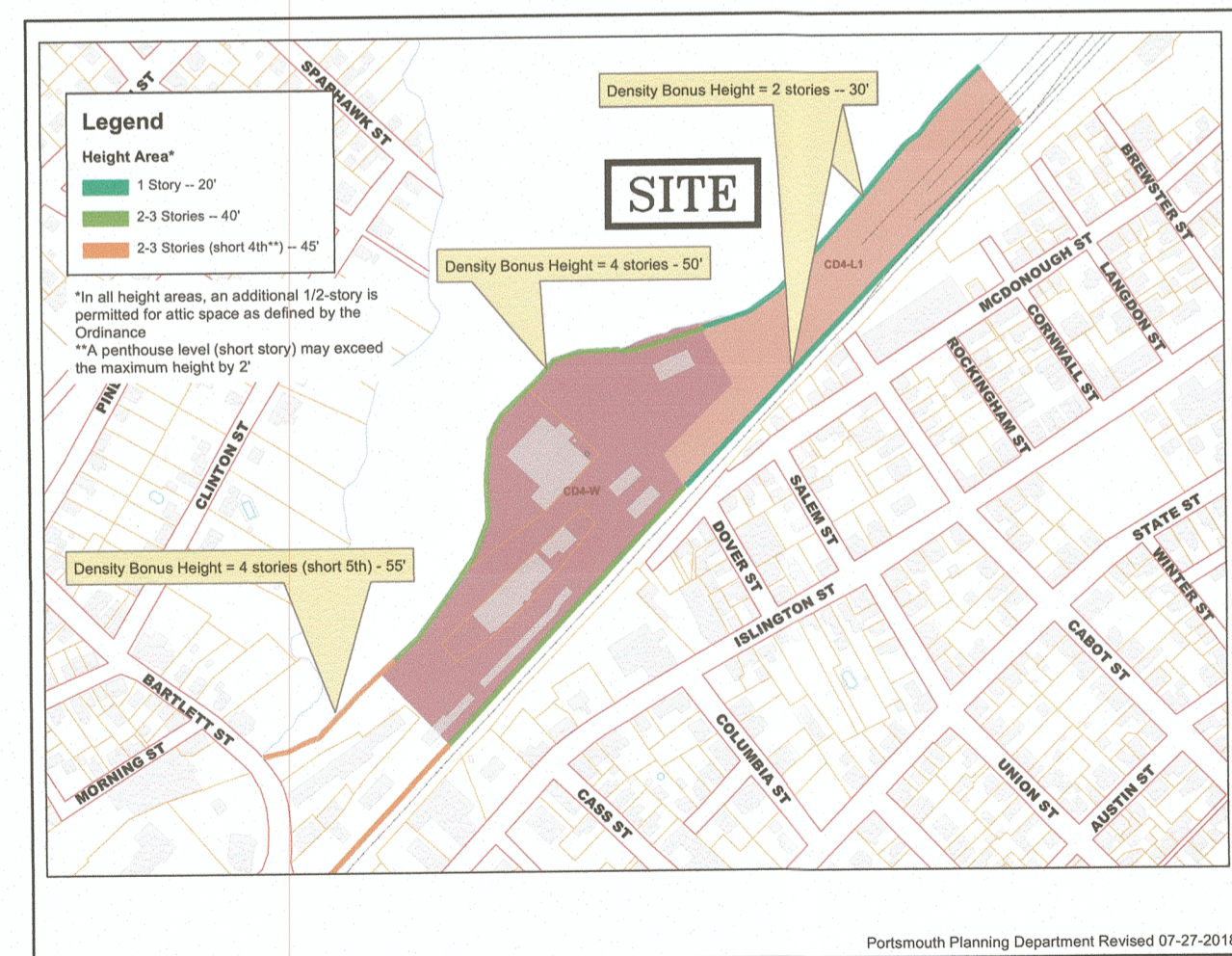
BOSTON AND MAINE CORPORATION
IRON HORSE PARK
HIGH STREET
NORTH BILLERICA, MA 01862

CIVIL ENGINEER & LAND SURVEYOR:
AMBIT ENGINEERING, INC.
200 GRIFFIN ROAD, UNIT 3
PORTSMOUTH, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

ARCHITECT:
WINTER HOLBEN
7 WALLINGFORD SQUARE
KITTERY, ME 03904
Tel (207) 994-3104

TRAFFIC ENGINEER:
STEPHEN G. PERNAW & COMPANY, INC.
PO BOX 1721
LOUDON, N.H. 03307
Tel (603) 731-8500
Fax (603) 929-6094

LANDSCAPE CONSULTANT:
TERRA FIRMA
163.A COURT STREET
PORTSMOUTH, N.H. 03801
Tel (603) 430-8388



LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCD	ROCKINGHAM COUNTY
	REGISTRY OF DEEDS
	MAP 11/LOT 21
IR FND	IRON ROD FOUND
IP FND	IRON PIPE FOUND
IR SET	IRON ROD SET
DH FND	DRILL HOLE FOUND
DH SET	DRILL HOLE SET
	GRANITE BOUND w/IRON ROD FOUND
MSL	MEAN SEA LEVEL
HOTL	HIGHEST OBSERVABLE TIDE LINE
	PHOTO LOCATION

EXISTING	PROPOSED	
---	---	PROPERTY LINE
---	---	SETBACK LINE
FM	FM	FORCE MAIN
S	S	SEWER PIPE
SL	SL	SEWER LATERAL
G	PG	GAS LINE
D	D	STORM DRAIN
FD	FD	FOUNDATION DRAIN
W	W	WATER LINE
FS	FS	FIRE SERVICE LINE
UE	UGE	UNDERGROUND ELECTRIC SUPPLY
		UNDERGROUND ELECTRIC SERVICE
OHW	OHW	OVERHEAD ELECTRIC WIRES
	---	RETAINING WALL
	---	EDGE OF PAVEMENT (EP)
	100	CONTOUR
97.3	98.0	SPOT ELEVATION
E	E	UTILITY POLE
		ELECTRIC METER
		TRANSFORMER ON CONCRETE PAD
		ELECTRIC HANDHOLD/PULLBOX
C.O.	C.O.	WATER SHUT OFF/CURB STOP
		PIPE CLEANOUT
	SV	GATE VALVE
	SMH	SEWER MANHOLE
	HYD	HYDRANT
	DMH	DRAIN MANHOLE
	CB	CATCH BASIN
	CB WMH	WATER METER MANHOLE
		TEST BORING
TP 1		TEST PIT
LA		LANDSCAPED AREA
CI	CI	CAST IRON PIPE
COP	COP	COPPER PIPE
CMP	CMP	CORRUGATED METAL PIPE
DI	DI	DUCTILE IRON PIPE
PVC	PVC	POLYVINYL CHLORIDE PIPE
RCP	RCP	REINFORCED CONCRETE PIPE
HYD	HYD	HYDRANT
CL	CL	CENTERLINE
EP	EP	EDGE OF PAVEMENT
EL	EL	ELEVATION
INV	INV	INVERT
FF	FF	FINISHED FLOOR
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL



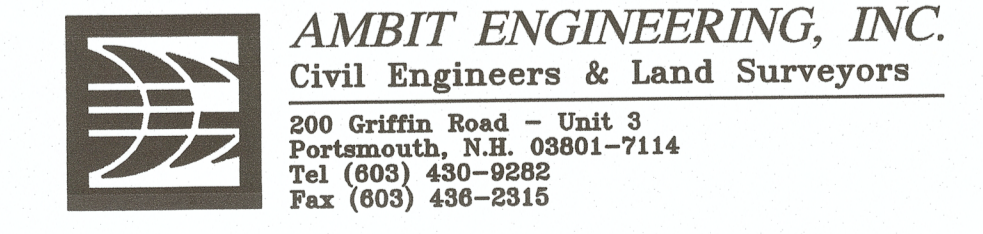
INDEX OF SHEETS

- O2 ENVIRONMENTAL PERMIT PLAN
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- L5 BUFFER PLANTING PLAN
- C1-C3 EXISTING CONDITIONS PLANS
- C4-C8 LOT PLANS
- C9-C10 STORMWATER SEPARATION PLANS
- P1-P2 ROADWAY PLAN & PROFILES
- D1-D7 DETAILS

UTILITY CONTACTS

- ELECTRIC:**
EVERSOURCE
1700 LAFAYETTE ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 436-7708, Ext. 555.5678
ATTN: MICHAEL BUSBY, P.E. (MANAGER)
- NATURAL GAS:**
UNITIL
325 WEST ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 294-5144
ATTN: DAVE BEAULIEU
- CABLE:**
COMCAST
155 COMMERCE WAY
PORTSMOUTH, N.H. 03801
Tel. (603) 679-5695 (X1037)
ATTN: MIKE COLLINS
- SEWER & WATER:**
PORTSMOUTH DEPARTMENT OF PUBLIC WORKS
680 PEVERLY HILL ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 427-1530
ATTN: JIM TOW
- COMMUNICATIONS:**
CONSOLIDATED COMMUNICATIONS
JOE CONSIDINE
1575 GREENLAND ROAD
GREENLAND, N.H. 03840
Tel. (603) 427-5525

**SUBDIVISION PLANS
PROPOSED SUBDIVISION
105 BARTLETT STREET
PORTSMOUTH, N.H.**



PLAN SET SUBMITTAL DATE: 6 DECEMBER 2018

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

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____



AMBIT ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 200 Griffin Road - Unit 3
 Portsmouth, N.H. 03801-7114
 Tel (603) 430-9282
 Fax (603) 436-2315

LEGEND:

- HOTL --- HIGHEST OBSERVABLE TIDE LINE
- TBZ --- 100' TIDAL BUFFER ZONE
- SWQPA --- 250' PROTECTED SHORELAND
- MHW --- MEAN HIGH TIDAL WATER
- PSS --- PRIMARY STRUCTURE SETBACK

WETLAND NOTES:

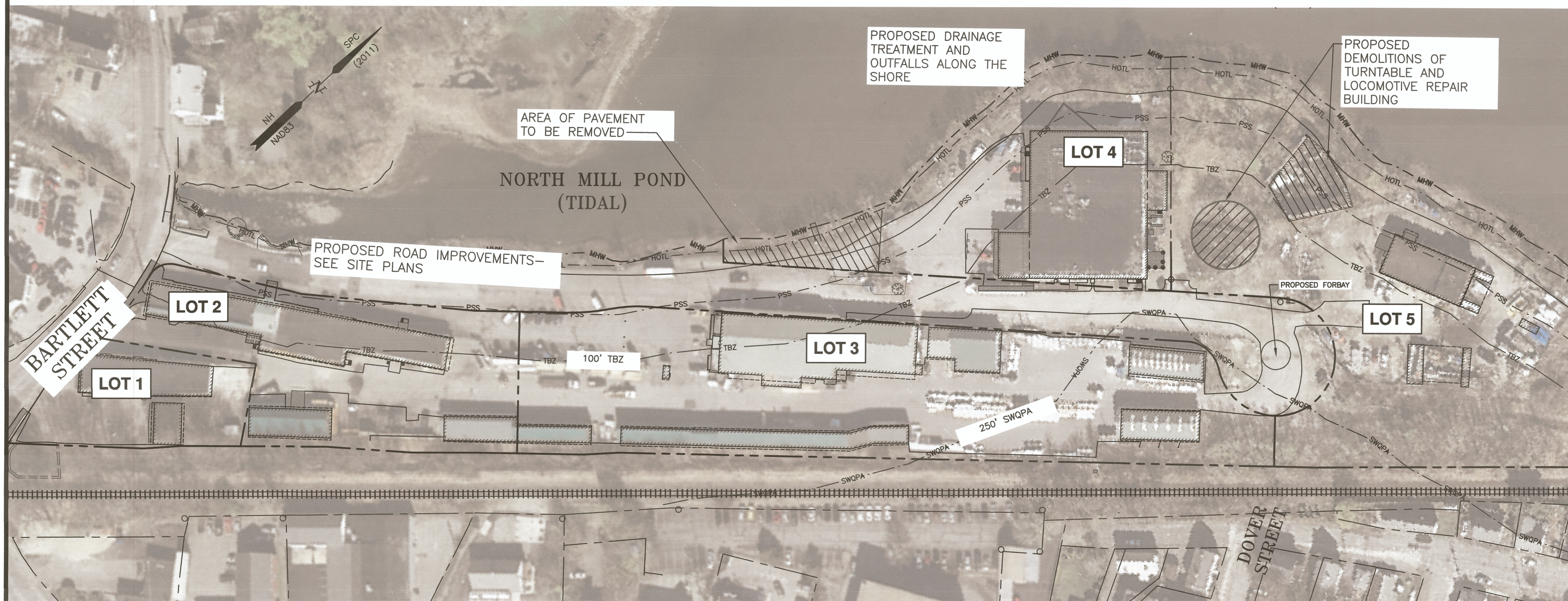
- 1) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987), AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
 - B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.1, USDA-NRCS, 2017 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEIWPCC WETLANDS WORK GROUP (2017).
 - C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
 - D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1997).
 - E) "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
- 2) WETLAND FLAGS WERE FIELD LOCATED ON 8/9/2017 BY AMBIT ENGINEERING, INC.

ANTICIPATED ENVIRONMENTAL PERMITTING

NH DES WETLANDS- IMPACTS TO TIDAL WETLAND AND THE PREVIOUSLY DEVELOPED 100' TIDAL BUFFER ZONE
 NH DES SHORELAND- IMPACTS TO THE 250' PROTECTED SHORELAND
 CITY OF PORTSMOUTH CONDITIONAL USE- IMPACTS TO CITY OF PORTSMOUTH 100' WETLAND BUFFER
 NH DES Aot- DISTURBANCE OF MORE THAN 50,000 SQUARE FEET ON A PARCEL WITHIN THE SHORELAND ZONE

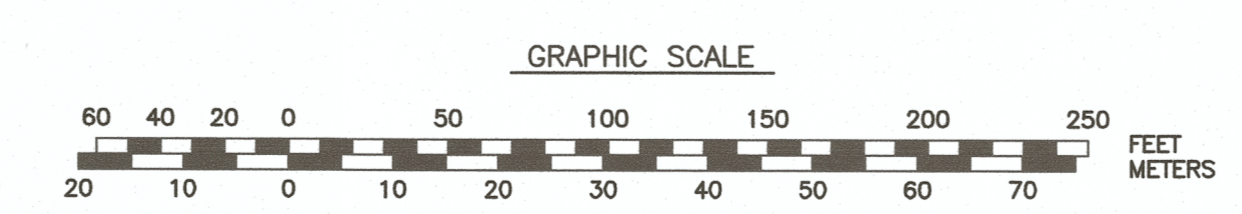
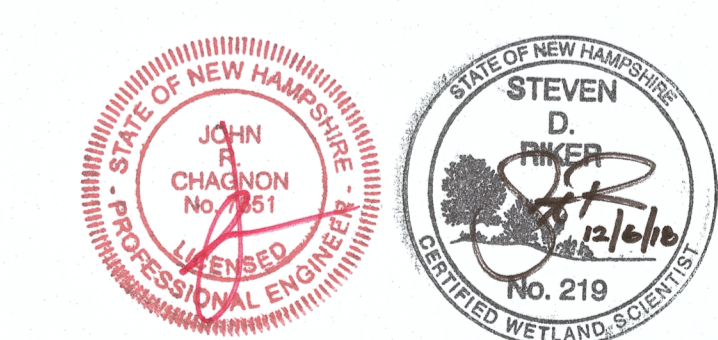
NOTES:

- 1) THE PURPOSE OF THIS PLAN IS TO SHOW THE ANTICIPATED IMPACTS WITHIN AREAS OF JURISDICTION (CITY AND STATE).
- 2) TEMPORARY CONSTRUCTION IMPACTS AND PERMANENT IMPACTS WILL BE CLEARLY DEPICTED AT THE TIME OF FILLING.
- 3) IT IS ANTICIPATED THAT THERE WILL BE A REDUCTION IN IMPERVIOUS SURFACE AS A RESULT OF THE PROJECT.
- 4) THE PROJECT DOES REQUIRE SOME REMOVAL OF VEGETATION WITHIN THE 50' WATERFRONT BUFFER.
- 5) RAIN GARDEN AND OTHER PROPOSED PLANTINGS WILL BE COMPOSED OF NATIVE SPECIES.
- 6) IT IS ANTICIPATED THAT THE NH DES WETLAND PERMIT WILL NOT REQUIRE ANY WAIVERS OF ANY RULES; ENV-WT 300-ENV-WT 800.
- 7) IT IS ANTICIPATED THAT THE PROJECT WILL BE CONSIDERED "LESS NON CONFORMING" UNDER THE SWQPA AND A MORE NEARLY CONFORMING WORKSHEET WILL BE SUBMITTED WITH THE NH DES SHORELAND APPLICATION.
- 8) ALL IMPACTS OCCUR IN AREA THAT ARE PREVIOUSLY DEVELOPED OR HISTORICALLY ALTERED.
- 9) PREVIOUSLY APPROVED CUP (2012) CITY OF PORTSMOUTH FILE 16-12 FOR LOT 2 BUILDING.



CLIPPER TRADERS
 105 BARTLETT STREET
 PROPOSED SUBDIVISION
 PORTSMOUTH, N.H.



1	NOTES - Aot PERMIT	12/6/18
0	ISSUED FOR COMMENT	10/16/18
NO.	DESCRIPTION	DATE
REVISIONS		



SCALE 1" = 60' SEPTEMBER 2018

ENVIRONMENTAL PERMIT PLAN **02**

**100' PREVIOUSLY DEVELOPED
TIDAL BUFFER ZONE IMPACT AREAS
IN S.F. FOR PROPOSED IMPROVEMENTS**

TYPE	AREA	HATCH
TEMPORARY	16,991	
PERMANENT	37,888	
TOTAL	54,879	

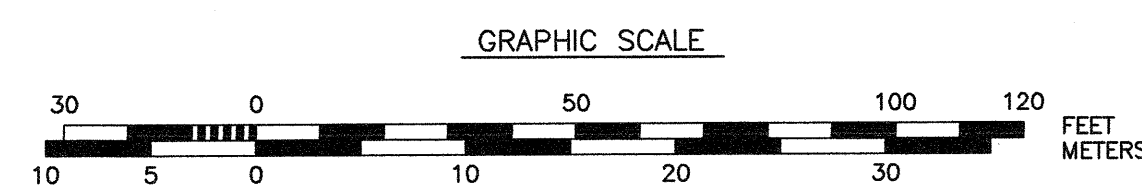
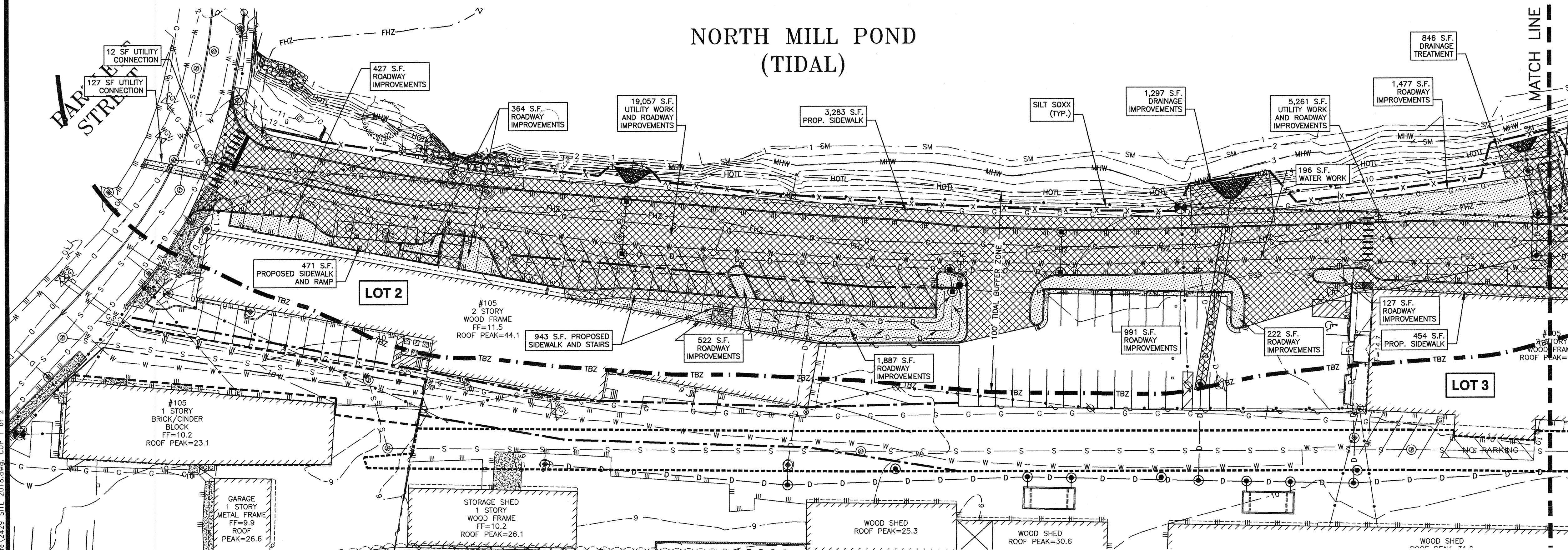


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Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

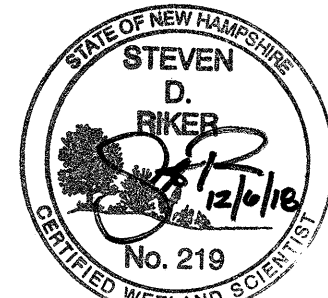
**NORTH MILL POND
(TIDAL)**



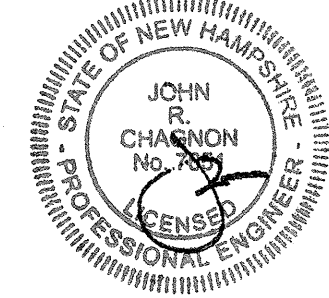
**SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
1	DISTURBANCE AREAS	12/6/18
0	ISSUED FOR COMMENT	10/24/18

REVISIONS



STEVEN
D.
RIKER
12/6/18
No. 219
CERTIFIED WETLAND SCIENTIST





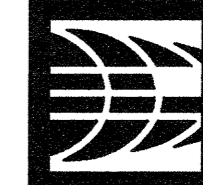
JOHN
R.
CHANNON
No. 219
LICENSED PROFESSIONAL ENGINEER

SCALE 1"=30' OCTOBER 2018

**CONDITIONAL USE
PERMIT PLAN** **CP1**

**100' PREVIOUSLY DEVELOPED
TIDAL BUFFER ZONE IMPACT AREAS
IN S.F. FOR PROPOSED IMPROVEMENTS**

TYPE	AREA	HATCH
TEMPORARY	16,991	
PERMANENT	37,888	
TOTAL	54,879	



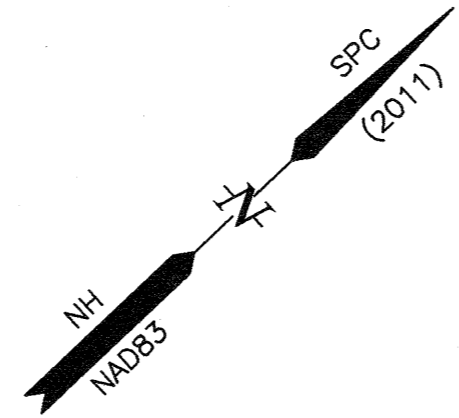
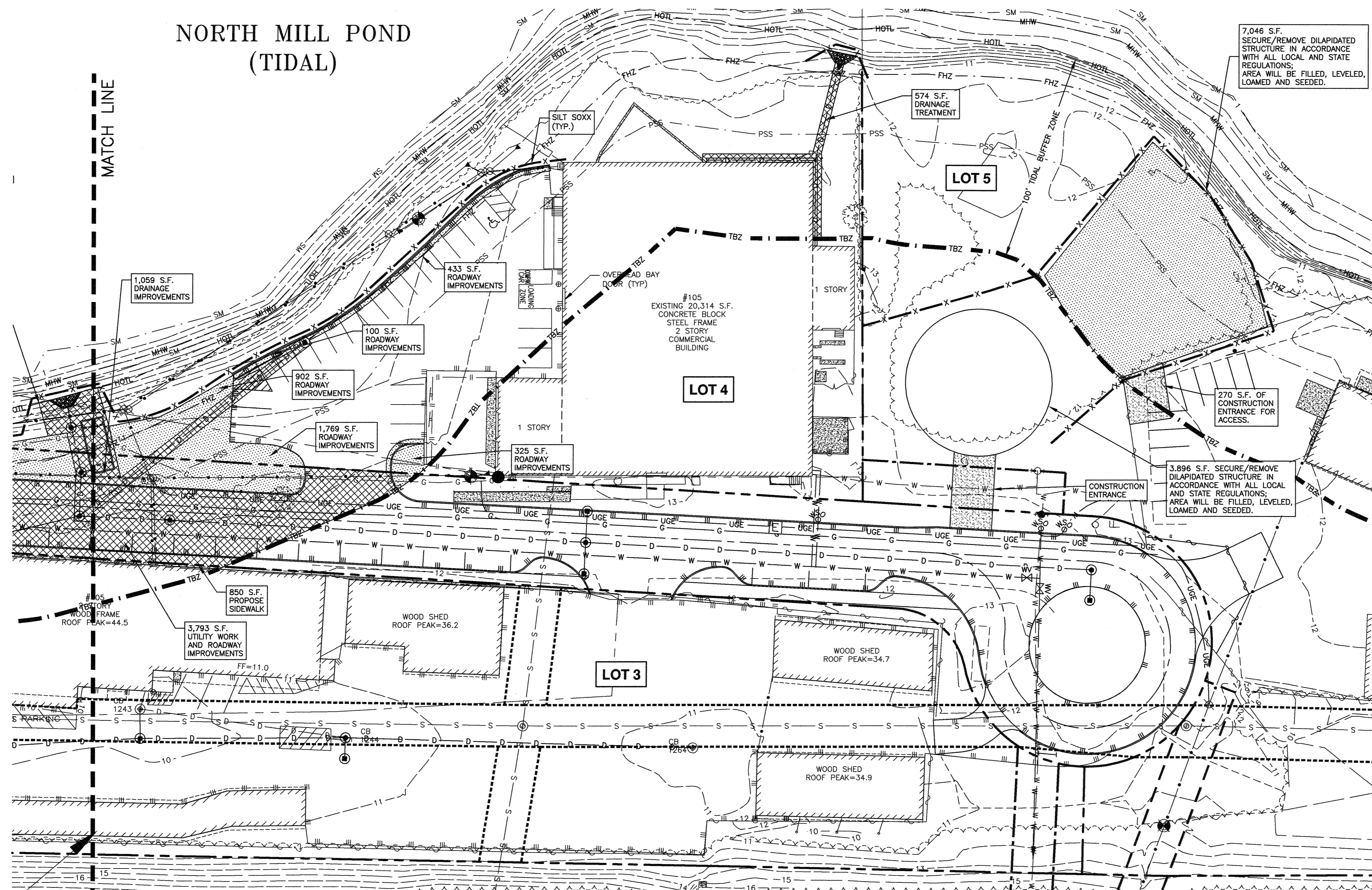
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2316

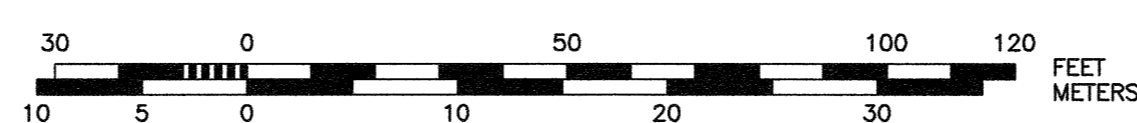
NOTES:

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).
- 4) ELECTRICAL CONDUITS WILL BE RUN AT THE TIME OF LOT 5 DEVELOPMENT. PULL ROPES TO BE INSTALLED AND LEFT FOR FUTURE USE.

**NORTH MILL POND
(TIDAL)**



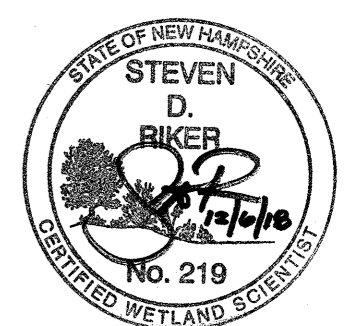
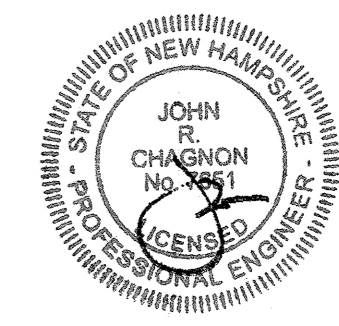
GRAPHIC SCALE



**SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
1	IMPACT AREAS	12/6/18
0	ISSUED FOR COMMENT	10/24/18

REVISIONS



SCALE 1"=30'

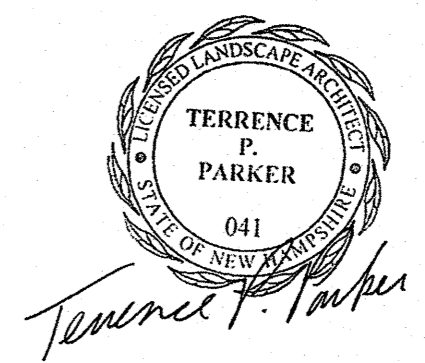
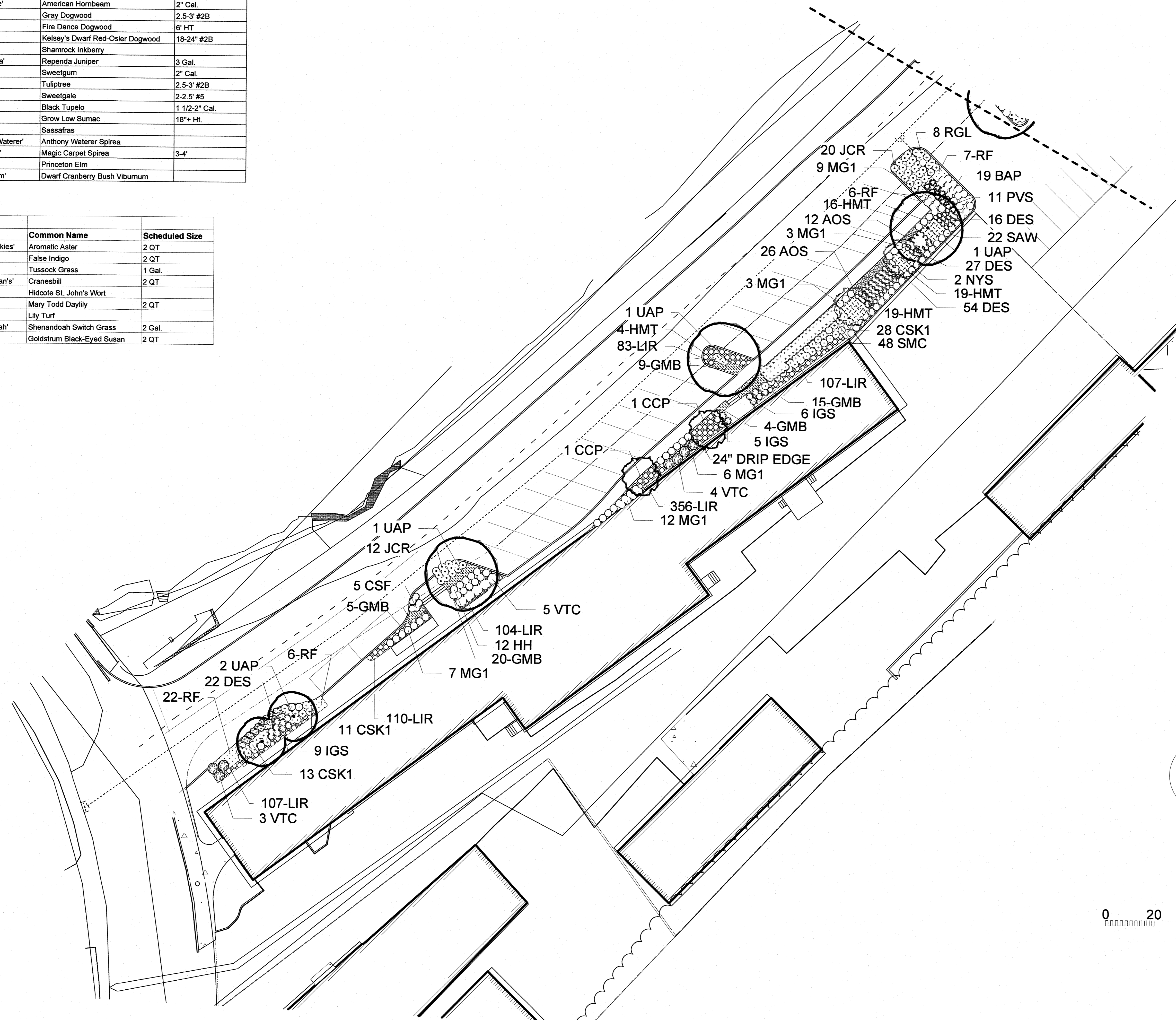
OCTOBER 2018

**CONDITIONAL USE
PERMIT PLAN**

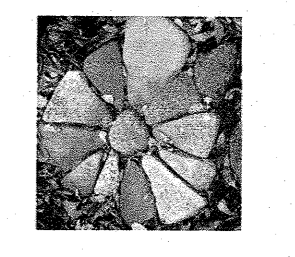
CP2

Plant List - TREES AND SHRUBS				
ID	Qty	Latin Name	Common Name	Scheduled Size
CCP	2	Carpinus caroliniana 'Palisade'	American Hornbeam	2" Cal.
CR1	21	Cornus racemosa	Gray Dogwood	2.5-3' #2B
CSF	5	Cornus sericea 'Fire Dance'	Fire Dance Dogwood	6' HT
CSK1	52	Cornus sericea 'Kelsey' (1)	Kelsey's Dwarf Red-Osier Dogwood	18-24" #2B
IGS	20	Ilex glabra 'Shamrock'	Shamrock Inkberry	
JCR	54	Juniperus communis 'Repanda'	Repanda Juniper	3 Gal.
LS	4	Liquidambar styraciflua	Sweetgum	2" Cal.
LT1	3	Liriodendron tulipifera	Tuliptree	2.5-3' #2B
MG1	90	Myrica gale	Sweetgale	2-2.5' #5
NYS	4	Nyssa sylvatica	Black Tupelo	1 1/2-2" Cal.
RGL	95	Rhus aromatica 'Grow Low'	Grow Low Sumac	18"+ Ht.
SAS	4	Sassafras albidum	Sassafras	
SAW	102	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spirea	
SMC	48	Spiraea jaonica 'Magic Carpet'	Magic Carpet Spirea	3-4'
UAP	10	Ulmus americana 'Princeton'	Princeton Elm	
VTC	12	Viburnum trilobum 'Compactum'	Dwarf Cranberry Bush Viburnum	

Plant List - PERENNIALS				
ID	Qty	Latin Name	Common Name	Scheduled Size
AOS	38	Aster oblongifolius 'October Skies'	Aromatic Aster	2 QT
BAP	49	Baptisia australis	False Indigo	2 QT
DES	119	Deschampsia cespitosa	Tussock Grass	1 Gal.
GMB	53	Geranium macrorrhizum 'Bevan's'	Cranesbill	2 QT
HH	12	Hypericum 'Hidcote'	Hidcote St. John's Wort	
HMT	72	Hemerocallis 'Mary Todd'	Mary Todd Daylily	2 QT
LIR	867	Liriope spicata	Lily Turf	
PVS	191	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	2 Gal.
RF	41	Rudbeckia fulgida 'Goldstrum'	Goldstrum Black-Eyed Susan	2 QT



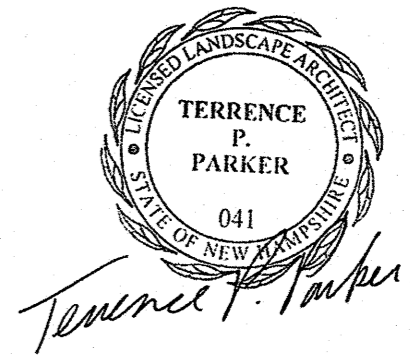
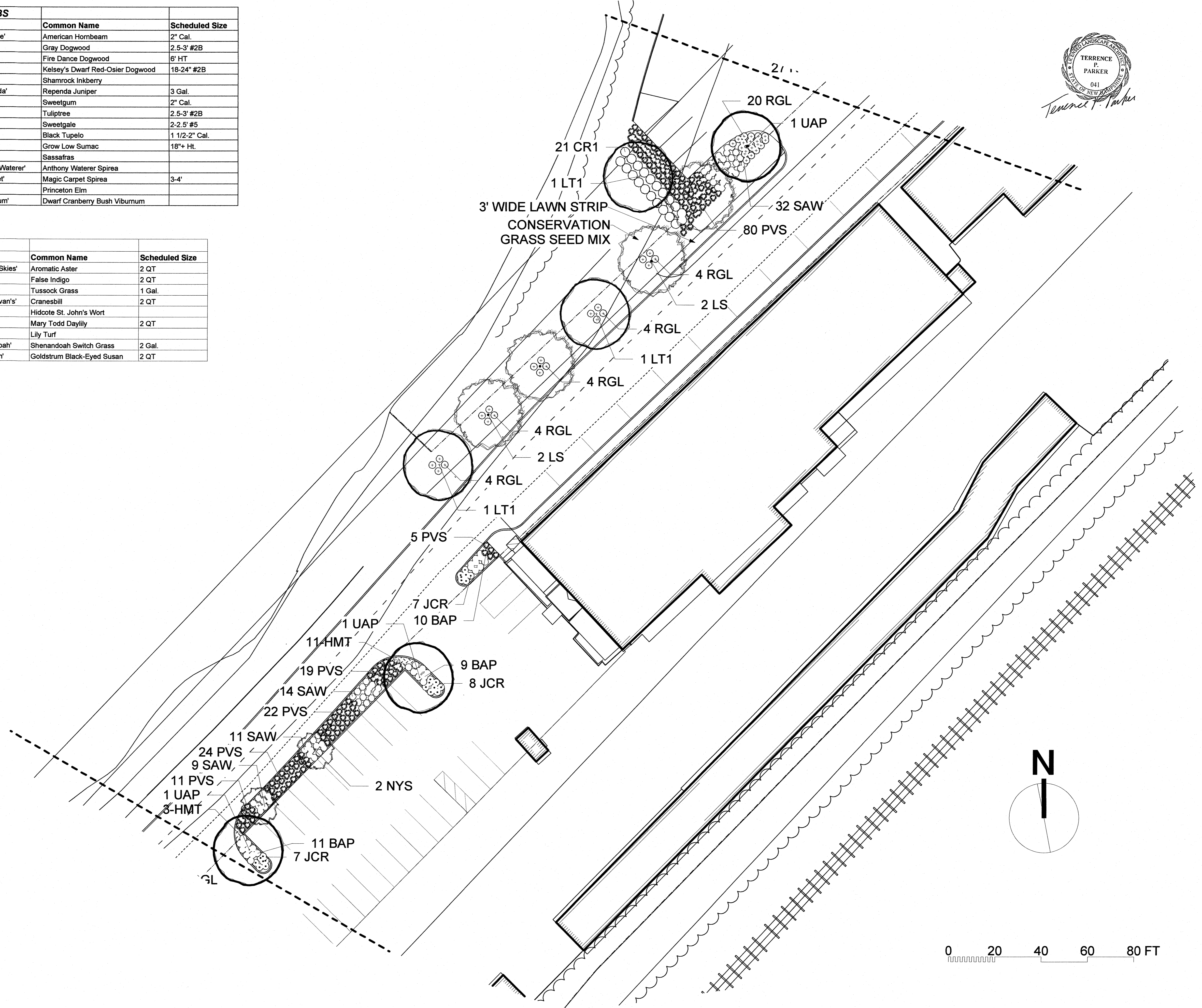
terra firma
landscape architecture
163.a court street, portsmouth, nh 03801
phone: 603.430.8388 | terrence@terrefirma.com



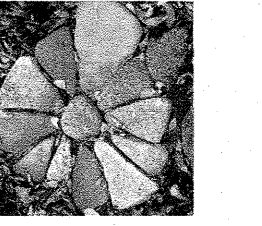
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Designed By: TP	Drawn By: TC	Checked By: TP	Reviewed By: TP	Project: CLIPPERS TRADERS	Drawing Code:	Issue Notes:	
				CAD File Name: 101016.dwg	Scale: 1"=20'		
				Project Manager:	Sheet No.:		
Design Firm: terra firma landscape architecture 163.a Court Street Portsmouth, NH 03801				Project Title: CLIPPERS TRADERS			
				Sheet Title: LANDSCAPE PLAN PART 1			
				Scale: 1"=20'			
				Sheet No. L-1 of 4			

Plant List - TREES AND SHRUBS				
ID	Qty	Latin Name	Common Name	Scheduled Size
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CR1	21	Cornus racemosa	Gray Dogwood	2.5-3' #2B
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IGS	20	Ilex glabra 'Shamrock'	Shamrock Inkberry	
JCR	54	Juniperus communis 'Repanda'	Repanda Juniper	3 Gal.
LS	4	Liquidambar styraciflua	Sweetgum	2' Cal.
LT1	3	Liriodendron tulipifera	Tuliptree	2.5-3' #2B
MG1	90	Myrica gale	Sweetgale	2-2.5' #5
NYS	4	Nyssa sylvatica	Black Tupelo	1 1/2-2' Cal.
RGL	95	Rhus aromatica 'Grow Low'	Grow Low Sumac	18"+ Ht.
SAS	4	Sassafras albidum	Sassafras	
SAW	102	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spirea	
SMC	48	Spiraea jaonica 'Magic Carpet'	Magic Carpet Spirea	3-4'
UAP	10	Ulmus americana 'Princeton'	Princeton Elm	
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GMB	53	Geranium macrorrhizum 'Bevan's'	Cranesbill	2 QT
HH	12	Hypericum 'Hidcote'	Hidcote St. John's Wort	
HMT	72	Heemerocallis 'Mary Todd'	Mary Todd Daylily	2 QT
LIR	867	Liriope spicata	Lily Turf	
PVS	191	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	2 Gal.
RF	41	Rudbeckia fulgida 'Goldstrum'	Goldstrum Black-Eyed Susan	2 QT



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landscape architecture



No.	Date	Issue Notes

Date	Revision	Project ID	Drawing Code	CAD File	Plot Date
11/29/2018		CLIPPERS TRADERS		101018.dwg	00/0000

terra firma landscape architecture
163 a Court Street
Portsmouth, NH 03801

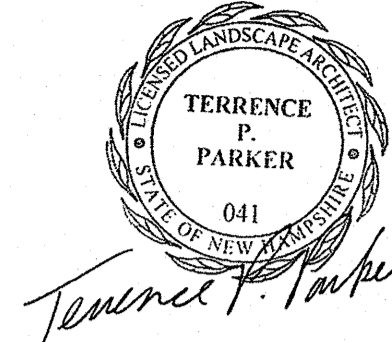
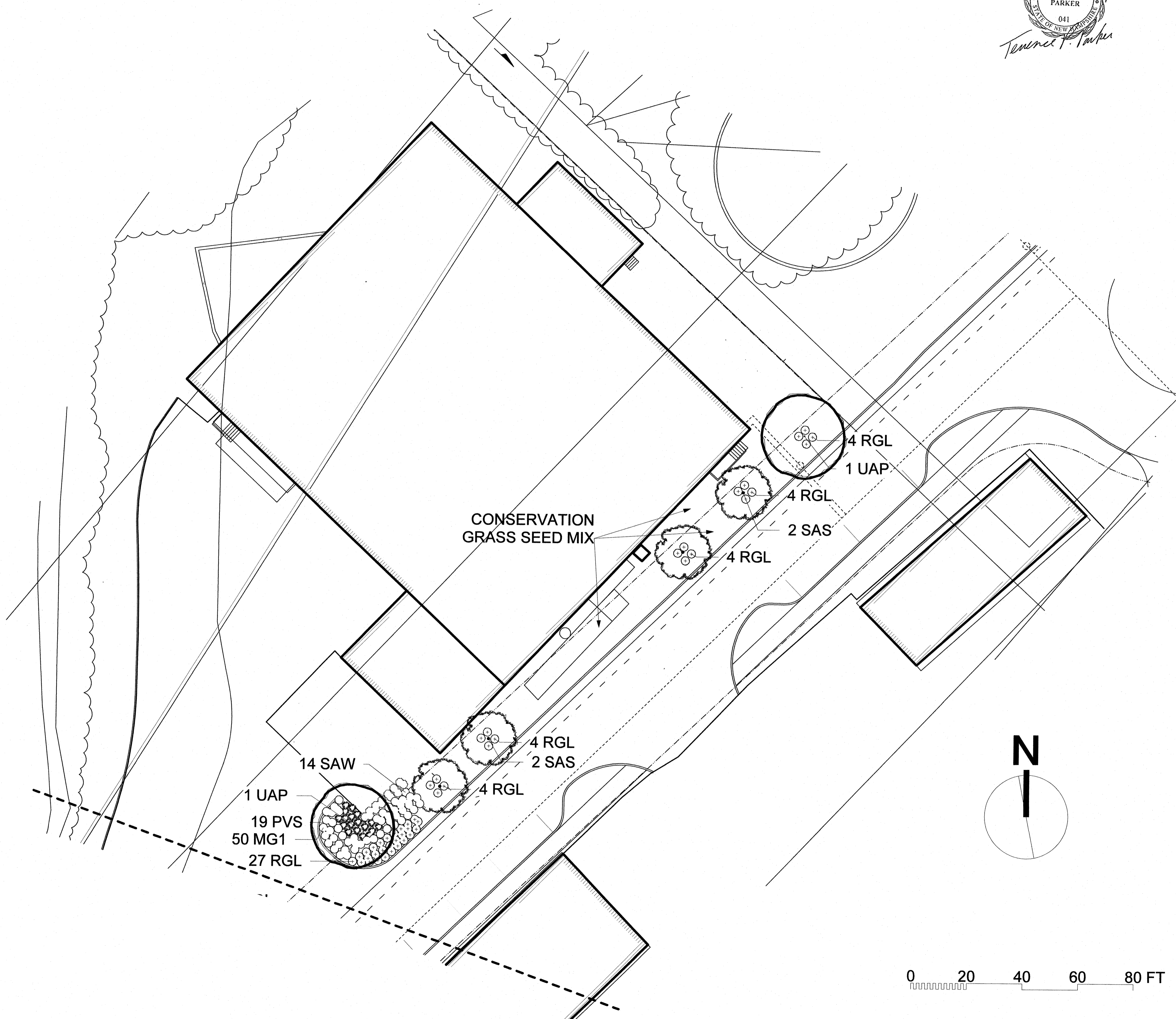
CLIPPERS TRADERS
LANDSCAPE PLAN
PART 2

Scale 1"=20'

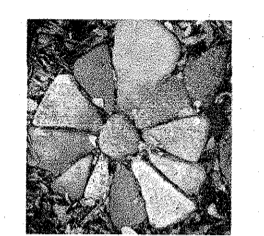
Sheet No. L-2 of 4

Plant List - TREES AND SHRUBS				
ID	Qty	Latin Name	Common Name	Scheduled Size
CCP	2	Carpinus caroliniana 'Palisade'	American Hornbeam	2" Cal.
CR1	21	Cornus racemosa	Gray Dogwood	2.5-3' #2B
CSF	18	Cornus sericea 'Fire Dance'	Fire Dance Dogwood	6' HT
CSK1	24	Cornus sericea 'Kelseyi' (1)	Kelsey's Dwarf Red-Osier Dogwood	18-24" #2B
IGS	20	Ilex glabra 'Shamrock'	Shamrock Inkberry	
JCR	93	Juniperus communis 'Repanda'	Repanda Juniper	3 Gal.
LS	4	Liquidambar styraciflua	Sweetgum	2" Cal.
LT1	3	Liriodendron tulipifera	Tuliptree	2.5-3' #2B
MG1	106	Myrica gale	Sweetgale	2-2.5' #5
NYS	4	Nyssa sylvatica	Black Tupelo	1 1/2-2" Cal.
RGL	87	Rhus aromatica 'Grow Low'	Grow Low Sumac	18"+ Ht.
SAS	4	Sassafras albidum	Sassafras	
SAW	126	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spirea	
UAP	10	Ulmus americana 'Princeton'	Princeton Elm	
VTC	12	Viburnum trilobum 'Compactum'	Dwarf Cranberry Bush Viburnum	

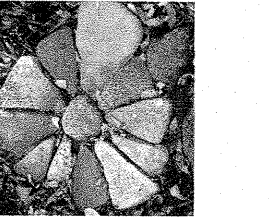
Plant List - PERENNIALS				
ID	Qty	Latin Name	Common Name	Scheduled Size
BAP	37	Baptisia australis	False Indigo	2 QT
DES	22	Deschampsia cespitosa	Tussock Grass	1 Gal.
GMB	34	Geranium macrorrhizum 'Bevan's'	Cranesbill	2 QT
HH	12	Hypericum 'Hidcote'	Hidcote St. John's Wort	
HMT	93	Hemerocallis 'Mary Todd'	Mary Todd Daylily	2 QT
LIR	808	Liriope spicata	Lily Turf	
PVS	180	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	2 Gal.
RF	59	Rudbeckia fulgida 'Goldstrum'	Goldstrum Black-Eyed Susan	2 QT
SH	59	Sporobolus heterolepis	Prairie Dropseed	1 Gal.



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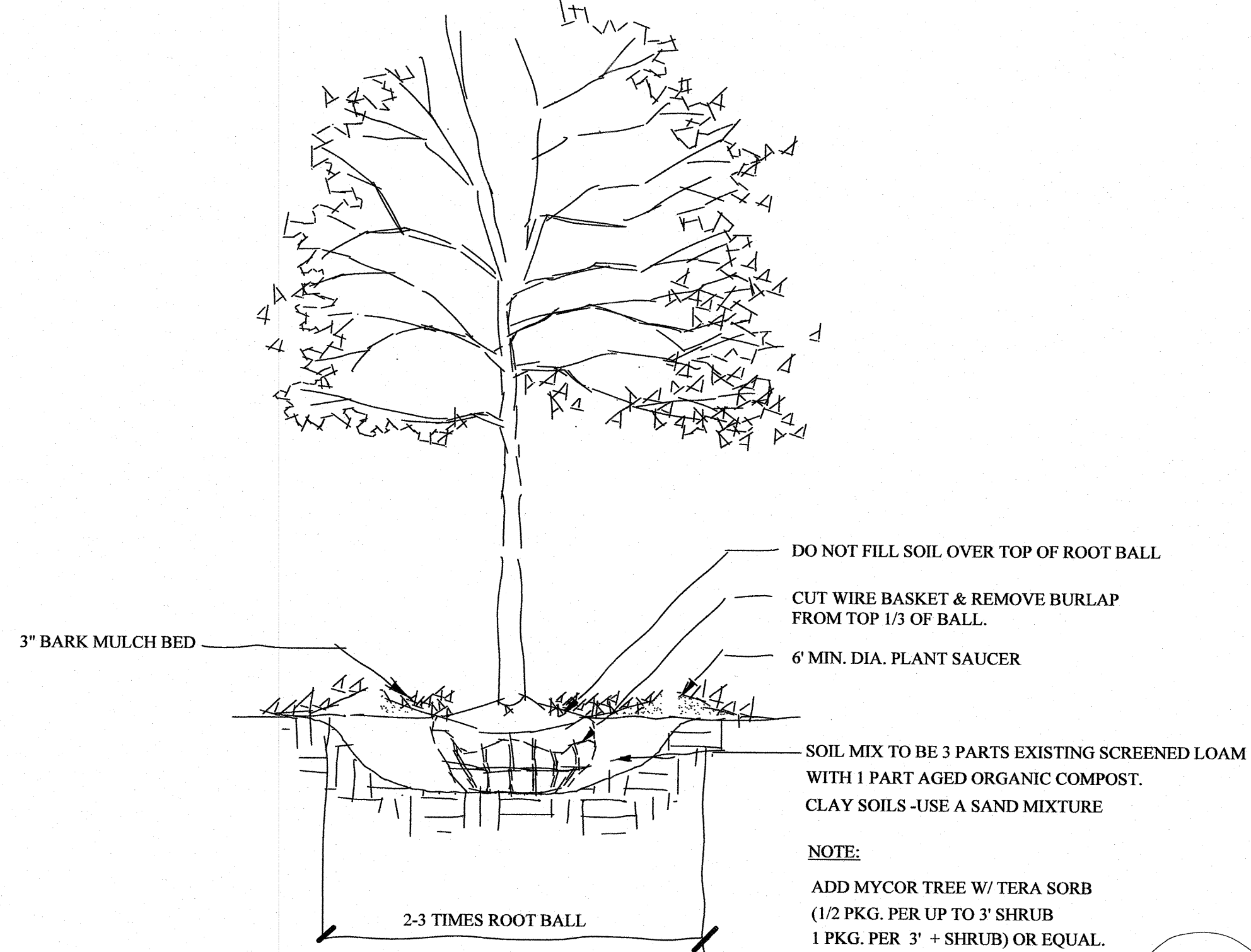


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Design Firm	Date	Revision	Revision	No.	Date
terra firma landscape architecture	11/14/2018	CLIPPERS TRADERS	CLIPPERS TRADERS		
163 a Court Street Portsmouth, NH 03801		Project ID	Drawing Code		
		Checked By	CAD File Name		
		Reviewed By	101018c1e1		
		Submitted By	Per Date		
		Project Manager	00/00/00		
Project Title	CLIPPERS TRADERS		LANDSCAPE PLAN PART 3		
Scale	1"=20'				
Sheet No.	L-3				
	of 4				

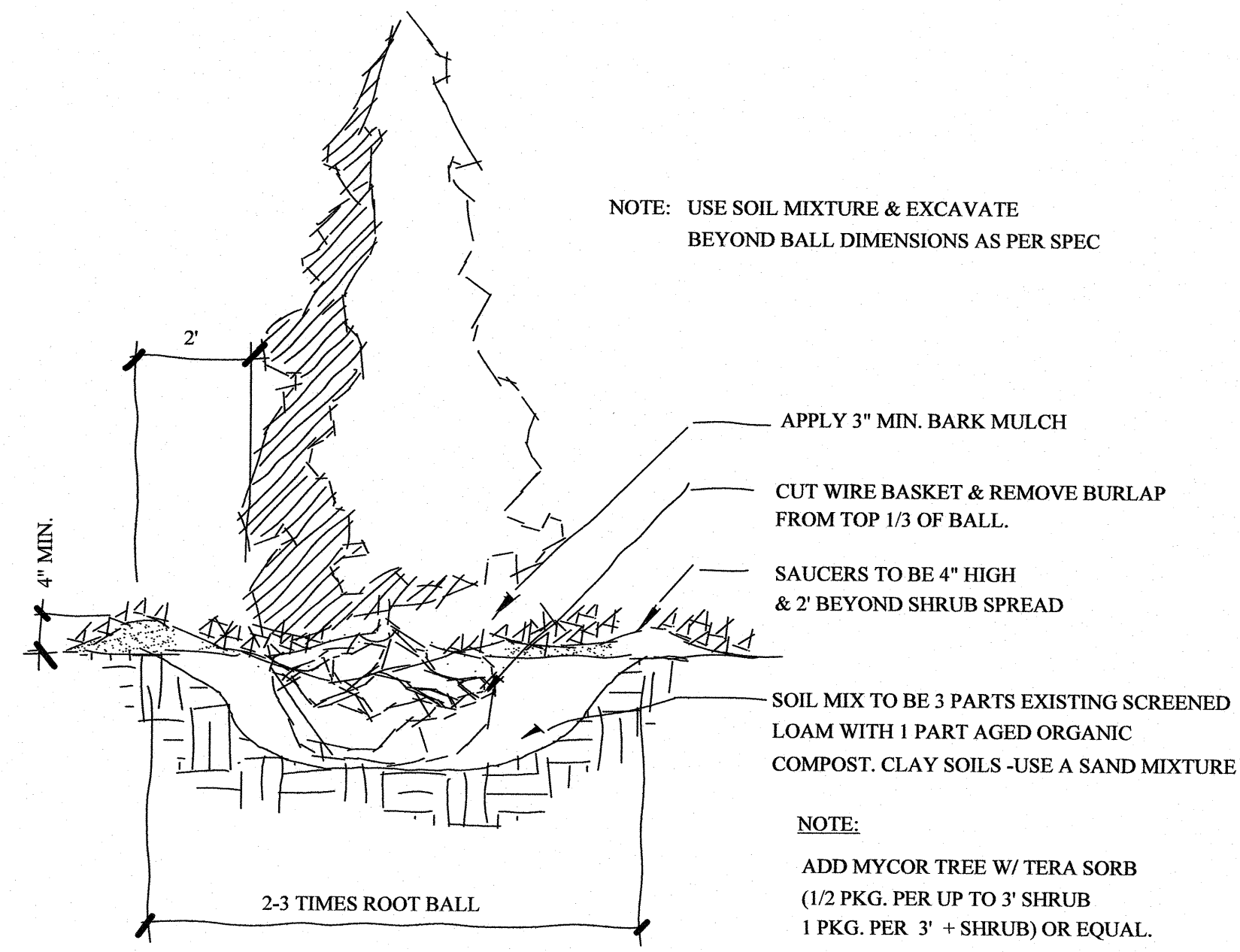


LANDSCAPE NOTES:

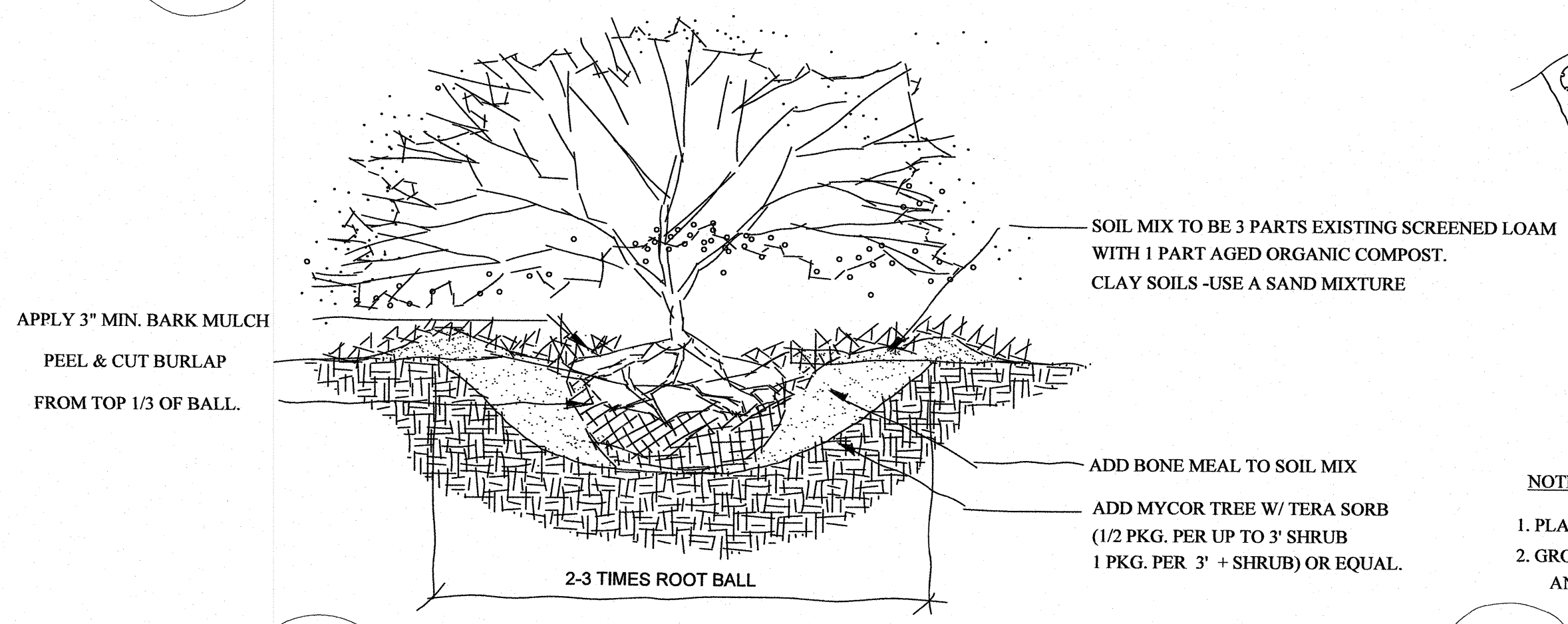
1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.
5. ALL PLANT MATERIALS SHALL BE EXACTLY AS SPECIFIED BY THE LANDSCAPE ARCHITECT. IF PLANT SPECIES CULTIVARS ARE FOUND TO VARY FROM THAT SPECIFIED AT ANY TIME DURING THE GUARANTEE PERIOD, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO HAVE THE CONTRACTOR REPLACE THAT PLANT MATERIAL. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT DELIVERED TO THE SITE FOR AESTHETIC REASONS BEFORE PLANTING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE QUALITY FOR ALL THE PLANTS.
6. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ON-GOING TO CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
7. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
8. NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE ARCHITECT.
9. ALL PLANTS SHALL BE INSTALLED AND DETAILED PER PROJECT SPECIFICATIONS.
10. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
11. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NOT LESS THAN ONE FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OR OTHERWISE FORFEIT HIS CLAIM. LANDSCAPE CONTRACTOR SHALL PRUNE PLANTINGS OF DEAD LIMBS OR TWIGS DURING THE FIRST YEAR OF GROWTH.
12. FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT WILL BE MADE UPON THE CONTRACTOR'S REQUEST AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.
13. LANDSCAPE CONTRACTOR SHOULD REPLACE DEAD PLANTINGS IMMEDIATELY UPON OWNER DIRECTION WITHIN THE WARRANTY PERIOD AND AGAIN AT THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAVE DIED, THAT HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING OR INADEQUATE OR IMPROPER CARE, OR THAT ARE, IN THE OPINION OF THE LANDSCAPE ARCHITECT, IN UNHEALTHY OR UNSIGHTLY CONDITION.
14. ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS CALLED FOR.
15. ALL TREES AND SHRUBS TO BE PLANTED IN MULCH BEDS WITH DEFINED AND CUT EDGES TO SEPARATE TURF GRASS AREAS.
16. FOR ANY LANDSCAPE AREA SO DESIGNATED TO REMAIN, WHETHER ON OR OFF-SITE, REMOVE WEEDS, ROCKS, CONSTRUCTION ITEMS, ETC., THEN APPLY GRASS SEED OR PINE BARK MULCH AS DEPICTED ON PLANS.
17. LANDSCAPE CONTRACTOR SHALL FEED AND PRUNE EX. TREES, ON OR JUST OFF SITE, THAT HAVE EXPERIENCED ROOT BASE INTRUSION OR DAMAGE DURING CONSTRUCTION IMMEDIATELY AND FOR THE DURATION OF THE WARRANTY PERIOD AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
18. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY SNOW FENCING AT THE EDGE OF THE EX. TREE CANOPY THE CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS WITHIN THE LANDSCAPED AREAS. ANY DAMAGE TO EXISTING TREES, SHRUBS OR LAWN SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
19. ALL MULCH AREAS SHALL RECEIVE A 2" LAYER OF SHREDDED PINE BARK MULCH.
20. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.



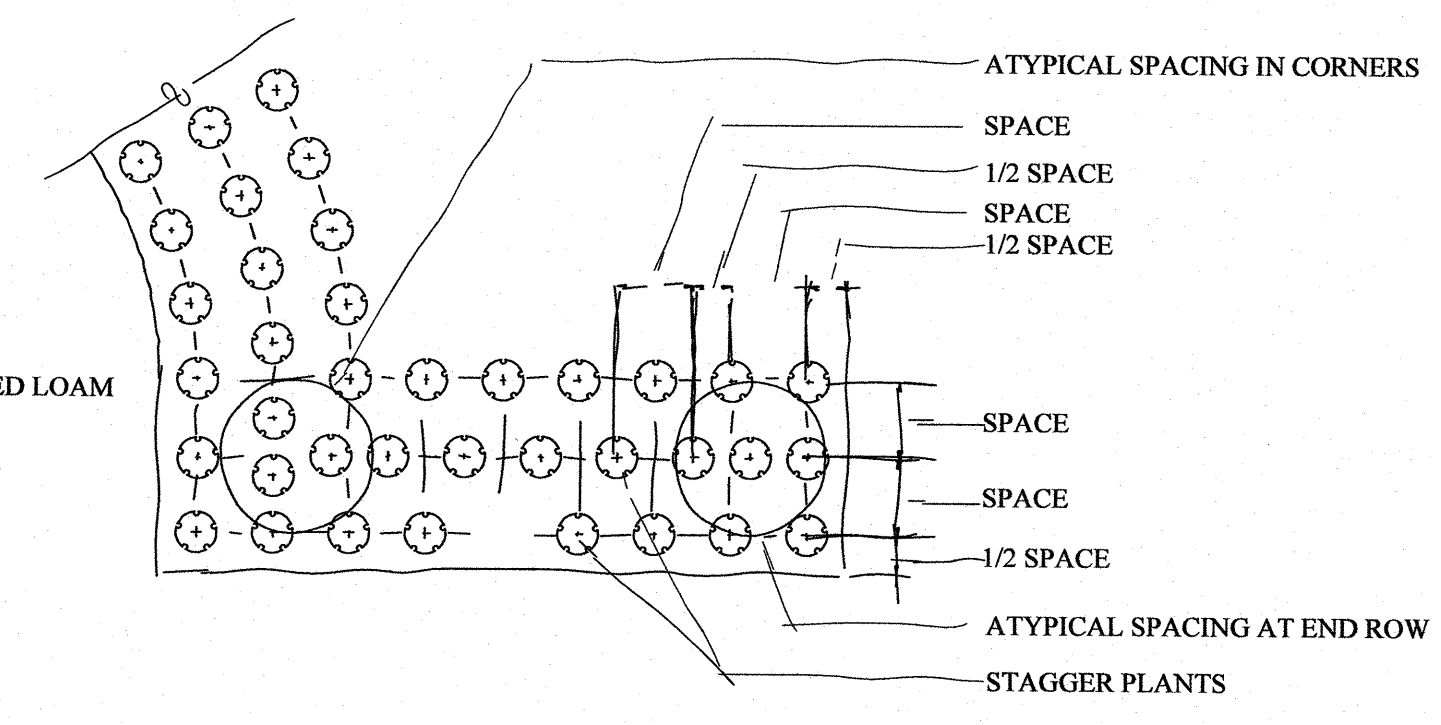
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SCALE: NTS



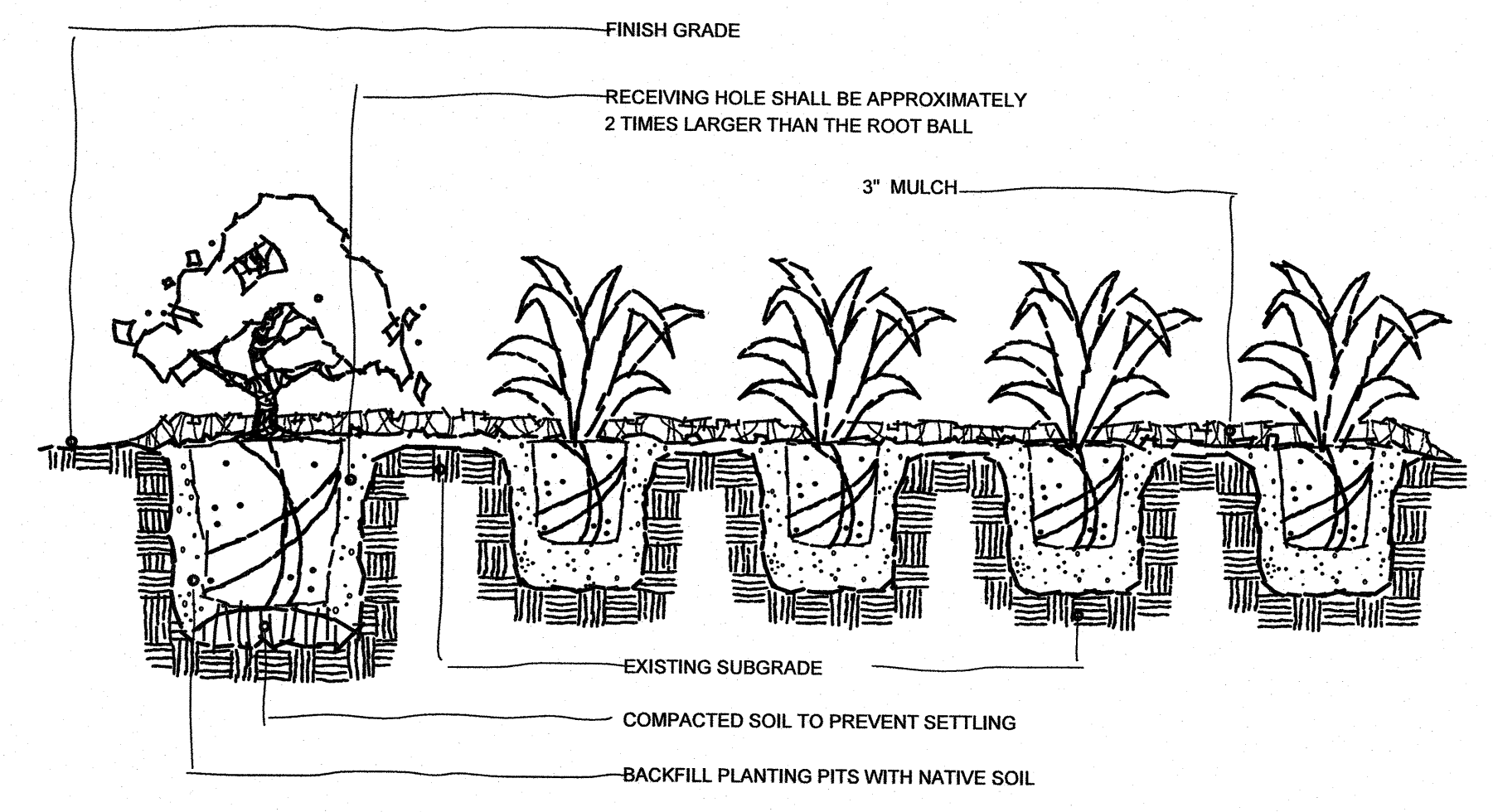
2 PYRAMIDAL EVERGREEN TREE PLANTING
SCALE: NTS



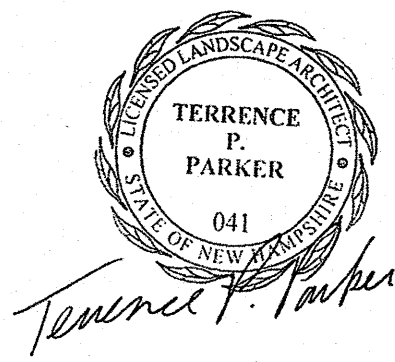
3 B&B SHRUB PLANTING
SCALE: NTS



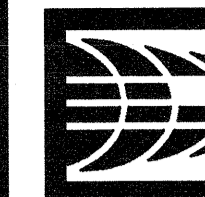
4 GROUND COVER SPACING DETAIL
SCALE: NTS



5 SHRUB/GROUND COVER PLANTING DETAIL
SCALE: NTS



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Sheet Title		LANDSCAPE DETAILS		Scale		NTS	
Date		10/15/2018		Revision			
Designed By		TP		Checked By		TP	
Drawn By		TC		Reviewed By		TP	
Project Manager		TP		Drawing Code		101018clb1	
Date				Issue No.			
Date				Date			



AMBIT ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 200 Griffin Road - Unit 3
 Portsmouth, N.H. 03801-7114
 Tel (603) 430-9282
 Fax (603) 438-2315

NOTES:

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LEGEND:

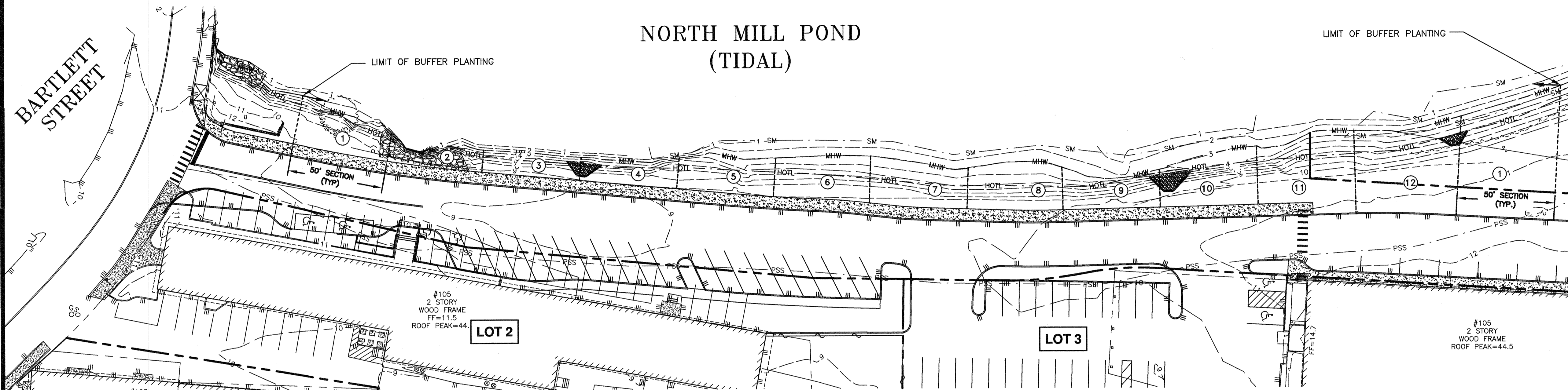
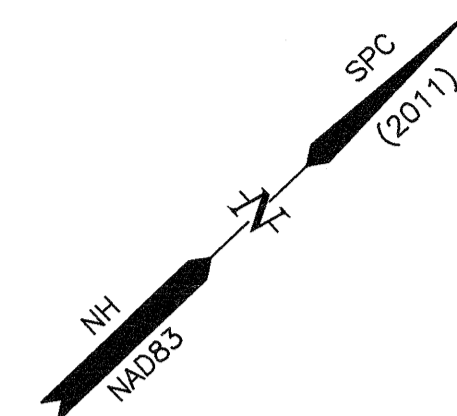
① BUFFER PLANTING SECTION NUMBER 1

BUFFER PLANTING SCHEDULE

ITEM	SIZE	QTY
RED MAPLE	3-4 GALLON	8
ACER RUBRUM	3-4 GALLON	
CREeping JUNIPER	1 GALLON	10
JUNIPERUS VIRGINIANA	1 GALLON	
WITCH HAZEL	3-4 GALLON	6
HAMAMELIS VIRGINIANA	3-4 GALLON	
WHITE ASH	3-4 GALLON	6
FRAXINUS AMERICANA	3-4 GALLON	
WINTERBERRY HOLLY	1 GALLON	5
ILEX VERTICILLATA	1 GALLON	
BOXWOOD	1 GALLON	5
BUXUS SPP.	1 GALLON	
*TOTAL QUANTITY:		40

* EACH 50' SECTION ALONG SHORELINE WILL BE PLANTED ACCORDING TO THE BUFFER PLANTING SCHEDULE.

EXCLUDING SECTIONS 2, 3 & 4

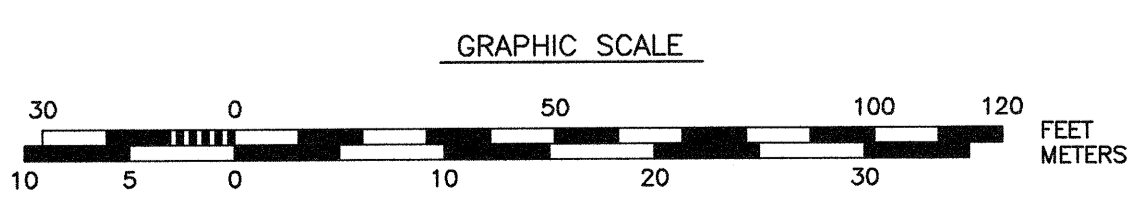
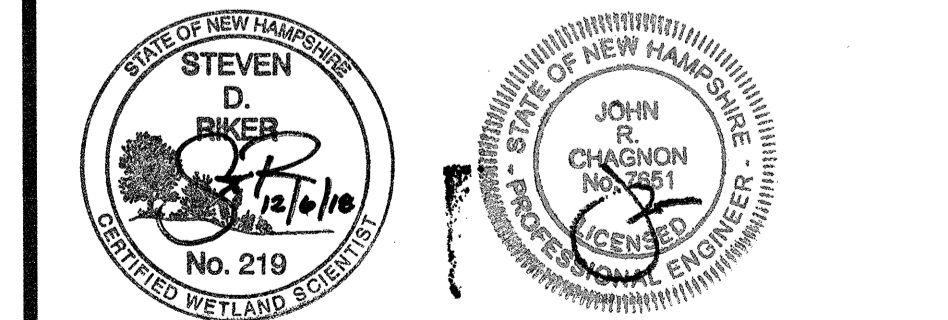


NORTH MILL POND (TIDAL)

J:\0524\2403\N 2425\N 2425\Site Development Plans & Specs\Site Y2425\Site Y2425.dwg, 12/6/18, L5

SUBDIVISION PLAN
 CLIPPER TRADERS, LLC
 OFF BARTLETT STREET
 PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	12/6/18
REVISIONS		



SCALE 1"=30' DECEMBER 2018

BUFFER PLANTING PLAN **L5**



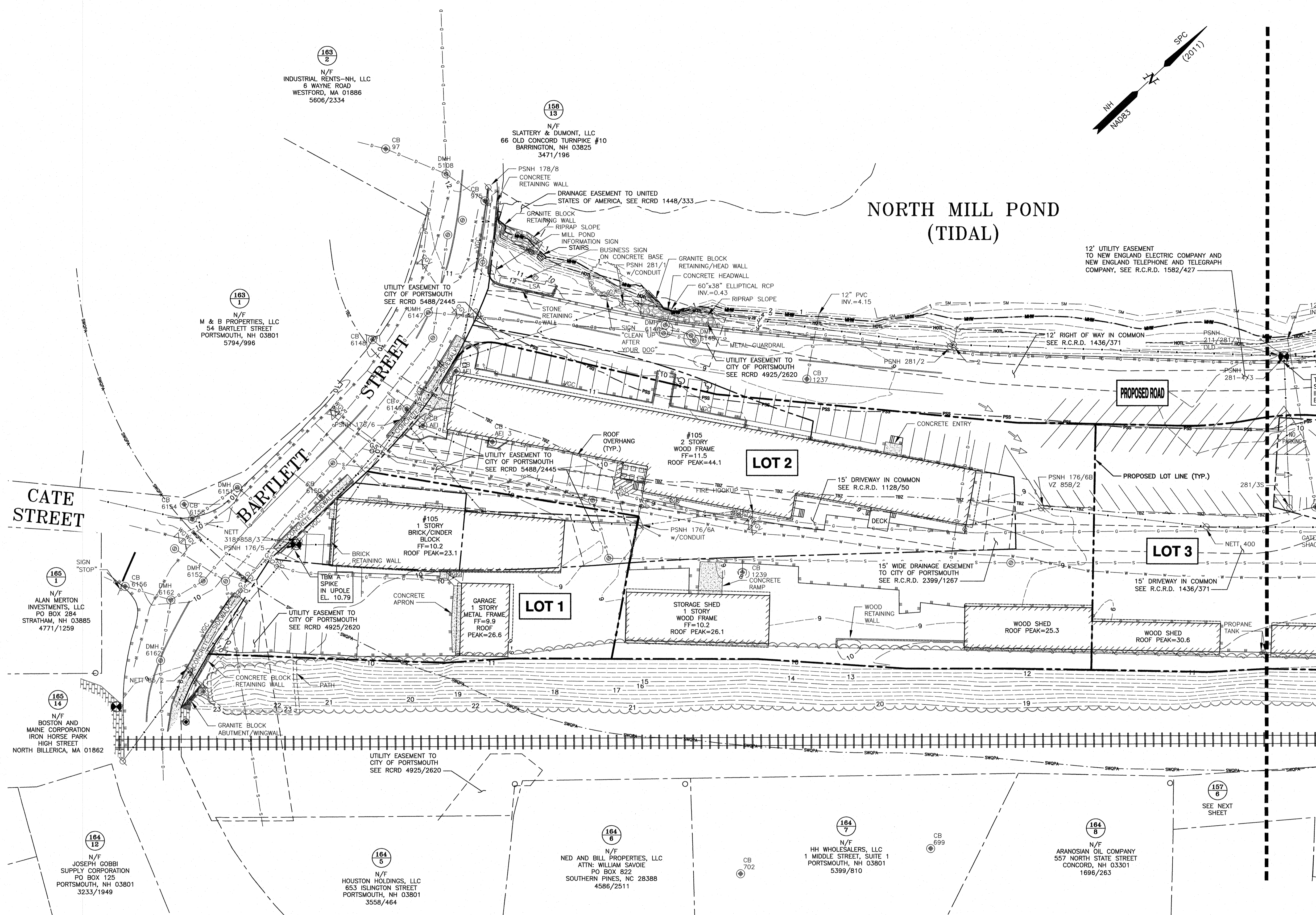
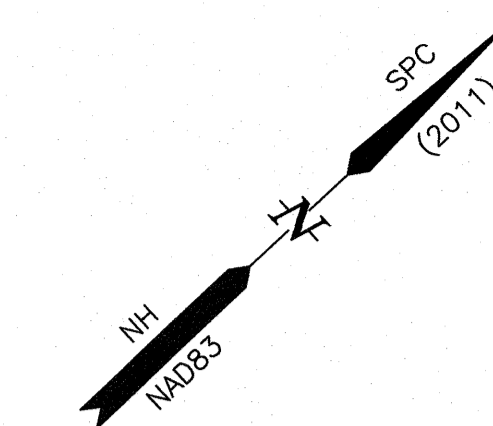
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Fax (603) 436-2315

NOTES:

- 1) PARCELS ARE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 157 AS LOTS 1 & 2 AND ASSESSOR'S MAP 16 AS LOTS 1, 2, 3, & 4.
- 2) PORTIONS OF MAP 157 LOT 1 AND MAP 164 LOT 4 ARE IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 3) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON THE PARCELS.
- 4) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.3').
- 5) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS.

**NORTH MILL POND
(TIDAL)**



**SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	ADD EXISTING EASEMENTS	10/16/18
2	RENAME PROPOSED ROAD	7/17/18
1	ISSUED FOR CONCEPTUAL REVIEW	3/5/18
0	ISSUED FOR COMMENT	2/12/18

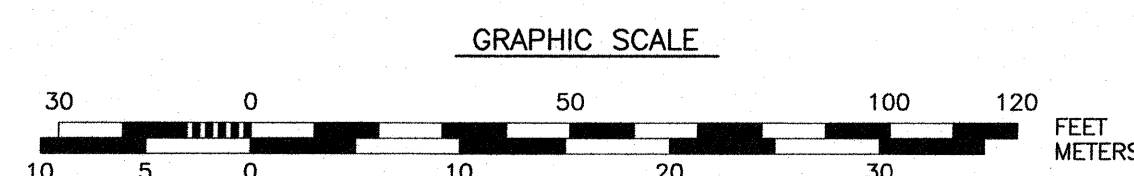
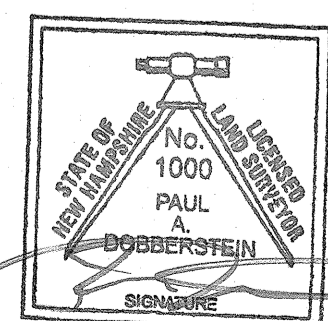
REVISIONS

SCALE 1"=30' FEBRUARY 2018

EXISTING CONDITIONS
PLAN

C1

"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."



PAUL A. DOBBERSTEIN, L.L.S.

DATE 10/16/2018

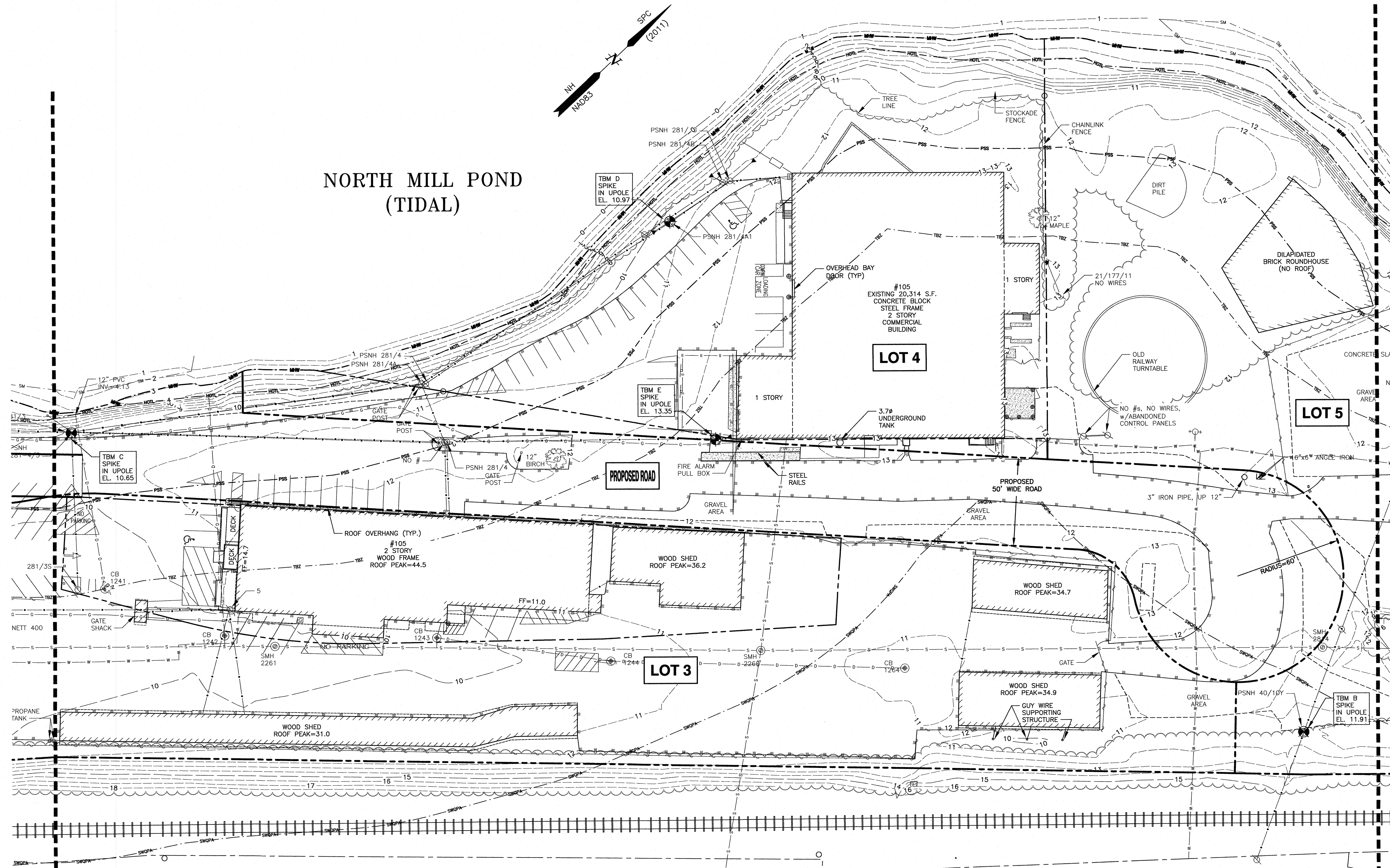


AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

- 1) PARCELS ARE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 157 AS LOTS 1 & 2 AND ASSESSOR'S MAP 16 AS LOTS 1, 2, 3, & 4.
- 2) PORTIONS OF MAP 157 LOT 1 AND MAP 164 LOT 4 ARE IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 3) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON THE PARCELS.
- 4) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.3').
- 5) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS.

**NORTH MILL POND
(TIDAL)**



**SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.**

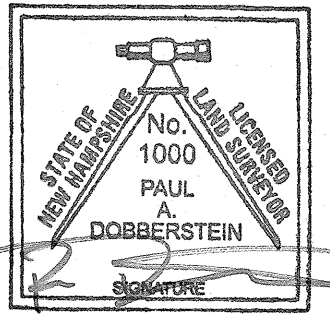
NO.	DESCRIPTION	DATE
3	ADD EXISTING EASEMENTS, ADD TOPOGRAPHIC INFORMATION ON LOT 157/1	10/16/18
2	RENAME PROPOSED ROAD	7/17/18
1	ISSUED FOR CONCEPTUAL REVIEW	3/5/18
0	ISSUED FOR COMMENT	2/12/18

REVISIONS	

SCALE 1"=30' FEBRUARY 2018

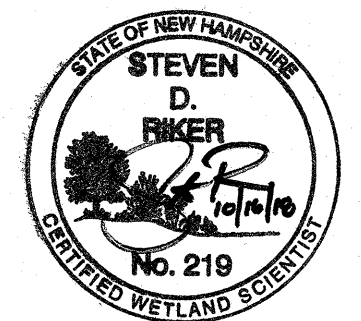
**EXISTING CONDITIONS
PLAN** **C2**

"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."



PAUL A. DOBBERSTEIN, LLS

DATE 10/16/2018



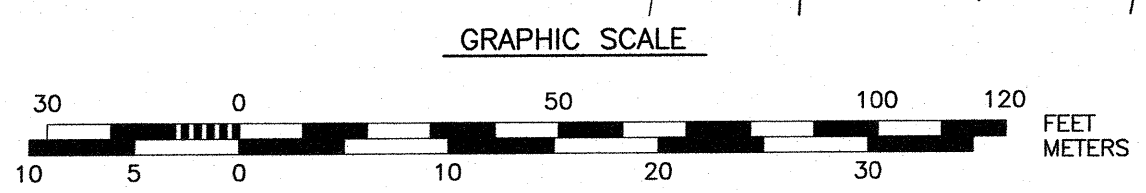
157/8
N/F
SUMMIT 501 ISLINGTON, LLC
c/o TODD BAKER
953 ISLINGTON STREET #23D
PORTSMOUTH, NH 03801
5256/441

157/7
N/F
J & J'S DROP AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801
5353/2395

157/16
N/F
J & J'S DROP AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801
5353/2395

157/14
N/F
J & J'S DROP AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801
5353/2395

157/13
N/F
J & J'S DROP AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801
5353/2395





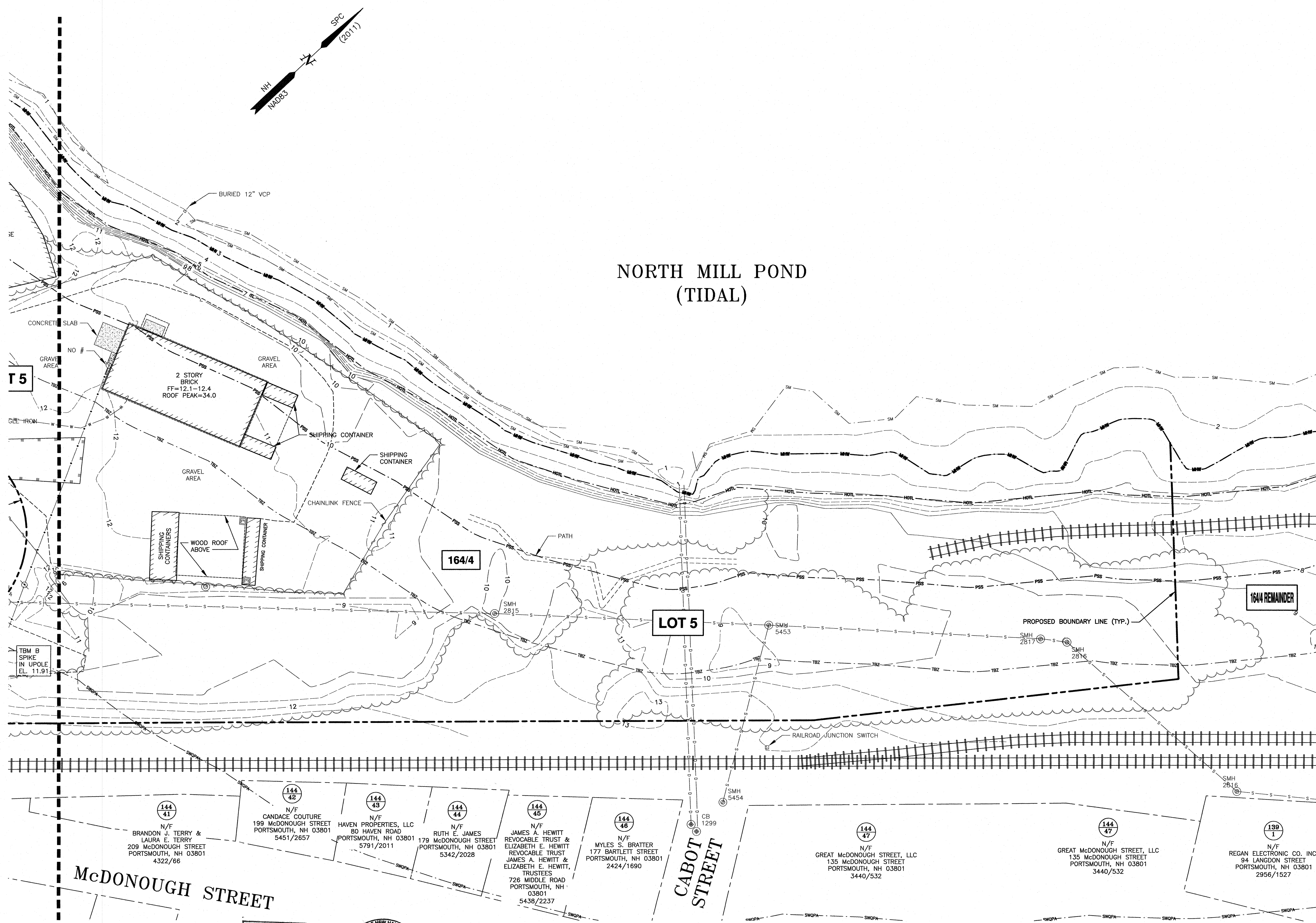
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

- 1) PARCELS ARE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 157 AS LOTS 1 & 2 AND ASSESSOR'S MAP 16 AS LOTS 1, 2, 3, & 4.
- 2) PORTIONS OF MAP 157 LOT 1 AND MAP 164 LOT 4 ARE IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 3) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON THE PARCELS.
- 4) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS ($\pm 0.3'$).
- 5) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS.

NORTH MILL POND (TIDAL)



SUBDIVISION PLAN CLIPPER TRADERS, LLC OFF BARTLETT STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	ISSUED FOR CONCEPTUAL REVIEW	3/5/18
0	ISSUED FOR COMMENT	2/12/18

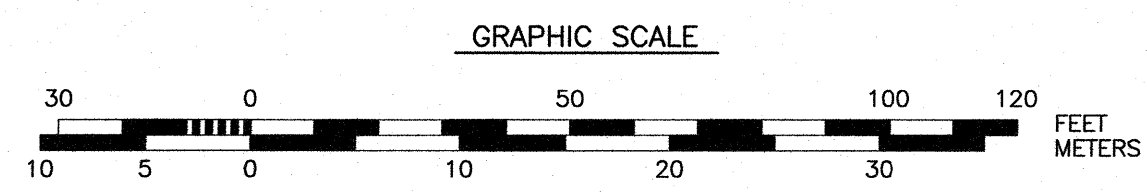
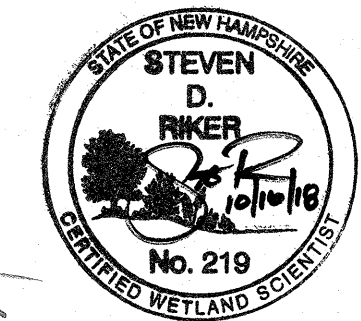
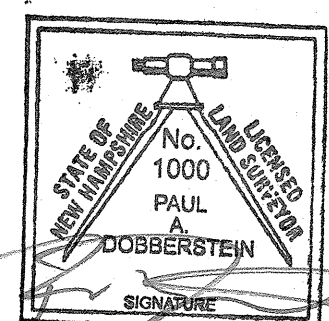
REVISIONS		
NO.	DESCRIPTION	DATE

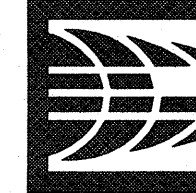
SCALE 1"=30' FEBRUARY 2018

EXISTING CONDITIONS
PLAN **C3**

"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

PAUL A. DOBBERSTEIN
PAUL A. DOBBERSTEIN, LLS DATE 10/16/2018





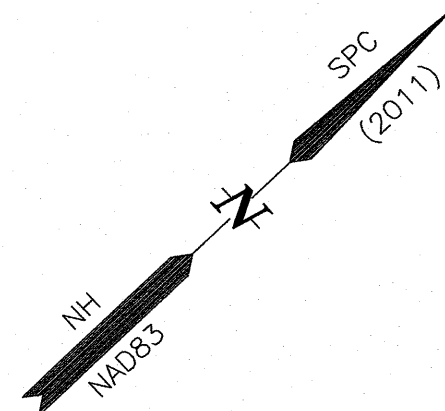
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

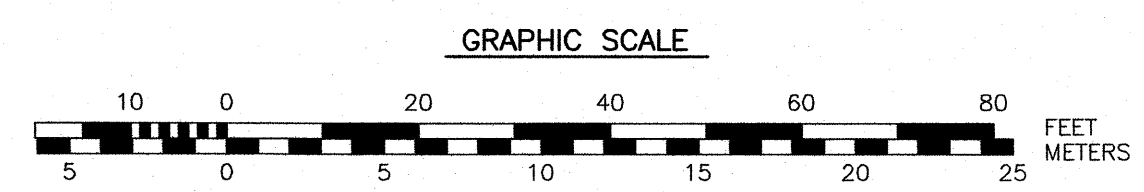
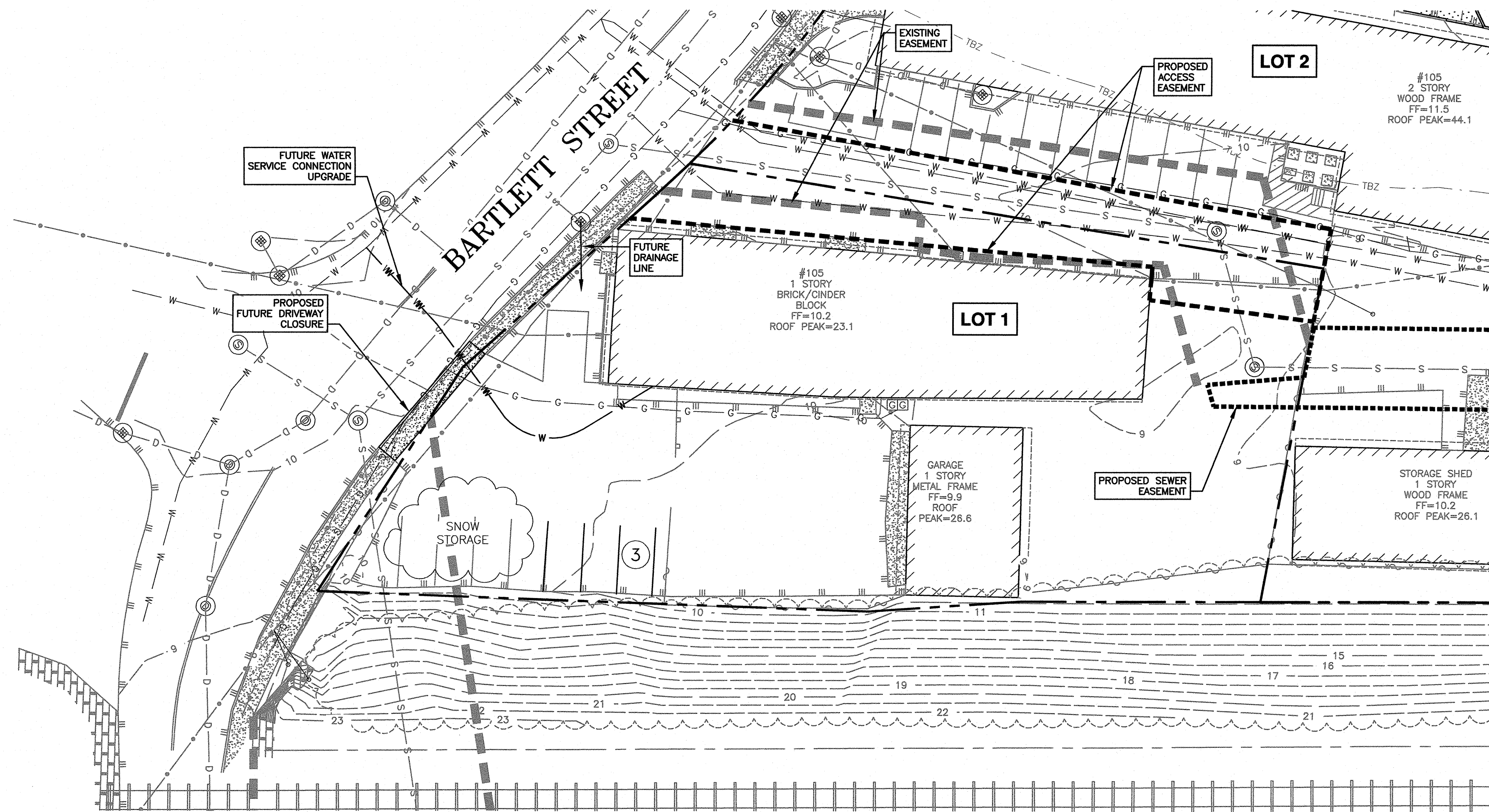
NOTES:

- 1) CITY OF PORTSMOUTH ASSESSOR'S MAP AND LOT NUMBER TO BE DETERMINED.
- 2) OWNER OF RECORD:
PORTSMOUTH LUMBER AND HARDWARE, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801
- 3) PROPOSED LOT AREA:
20,677 SF; 0.4747 ACRE
- 4) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 5) PARCEL ARE LOCATED IN CHARACTER DISTRICT 4-W (CD4-W) ZONING DISTRICT.
- 6) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.3').
- 7) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS.
- 8) THE PURPOSE OF THIS PLAN IS TO SHOW SITE DETAILS ON PROPOSED LOT 1.
- 9) PARKING CALCULATION:
EXISTING USE:
GARAGE (NO REQUIREMENT)
WAREHOUSE: 4,800 S.F.
4,800 S.F. x 1 Space/1,000 S.F. = 3 SPACES REQUIRED

IMPERVIOUS SURFACE AREAS (TO PROPERTY LINE)		
STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
STRUCTURE (TO ROOF EDGE)	6,379	6,379
CONCRETE	165	169
GRAVEL	0	0
RETAINING WALLS	13	13
PAVEMENT	8,693	8,693
TOTAL	15,250	15,254
LOT SIZE	20,677	20,677
% LOT COVERAGE	73.8%	73.8%



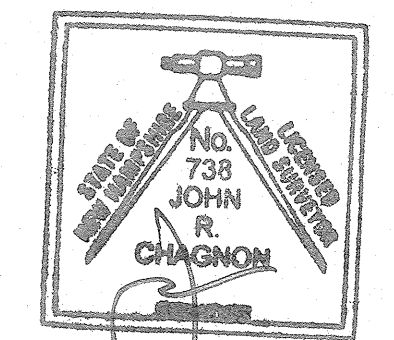
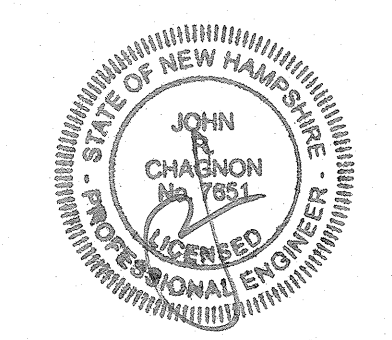
CATE STREET



**CLIPPER TRADERS
PROPOSED LOT 1
PORTSMOUTH, N.H.**

4	UTILITIES	11/6/18
3	PARKING, NOTES	10/16/18
2	ISSUED FOR APPROVAL	9/18/18
1	ISSUED FOR APPROVAL	5/22/18
0	ISSUED FOR COMMENT	4/26/18

NO.	DESCRIPTION	DATE
REVISIONS		



SCALE 1" = 20' APRIL 2018

LOT 1 PLAN **C4**

J:\0852\UN24005\IN 2429\2017 Site Development\Plans & Specs\Site\2429 SITE 2018.dwg, C4 LOT 1



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

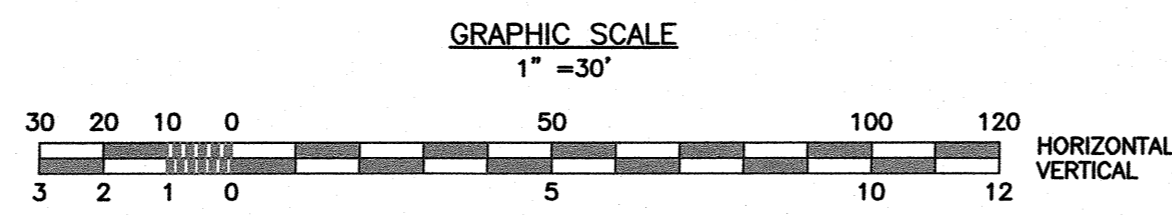
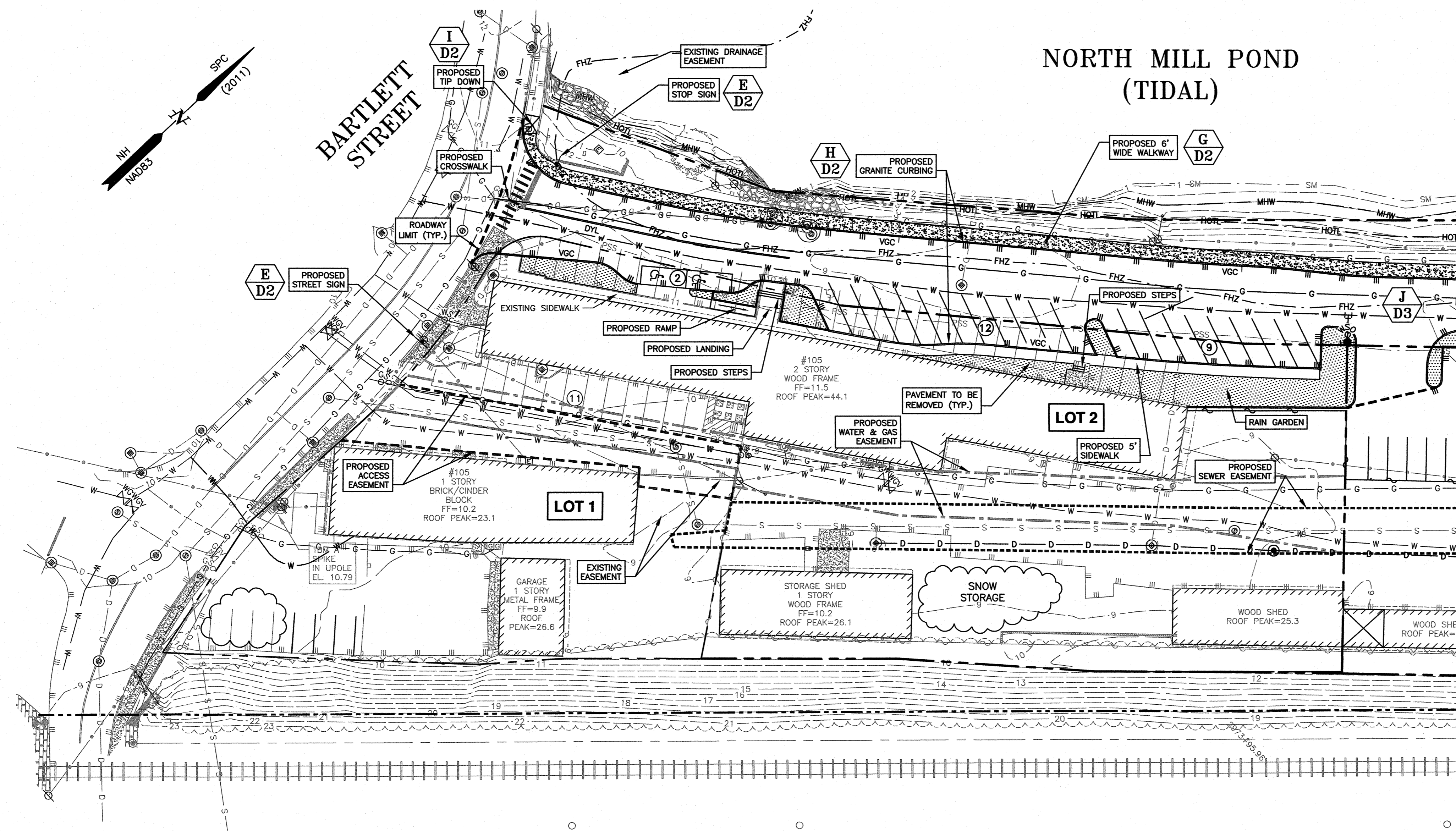
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

IMPERVIOUS SURFACE AREAS (TO PROPERTY LINE)		
STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
MAIN STRUCTURE	17,203	17,203
CONCRETE, STAIRS, PADS	1,117	594
RETAINING WALLS	60	60
PAVEMENT	24,049	23,691
TOTAL	42,429	41,548
LOT SIZE	51,952	51,952
% LOT COVERAGE	81.7%	80.0%

NOTES:

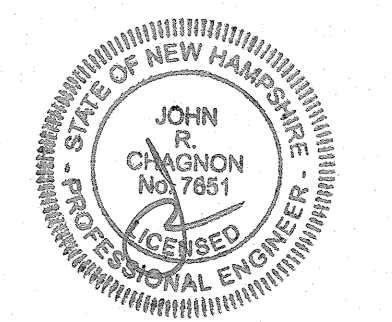
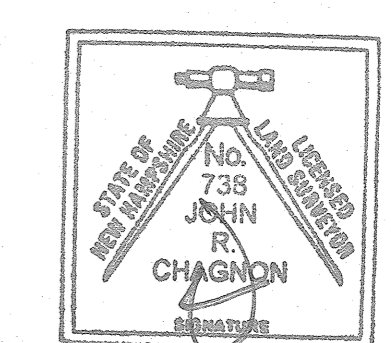
- 1) PARCEL IS TO BE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP WITH LOT NUMBER TO BE DETERMINED.
- 2) OWNER OF RECORD: PORTSMOUTH LUMBER AND HARDWARE, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801
- 3) PROPOSED LOT AREA:
51,952 SF; 1.192 ACRES
- 4) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 5) PARCEL IS LOCATED IN THE CHARACTER DISTRICT 4-W (CD4-W) ZONING DISTRICT.
- 6) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.3').
- 7) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS
- 8) PARKING REQUIREMENTS:
GENERAL RETAIL:
4832 SF X 1 SP PER 300 SF = 17 SPACES
GENERAL MANUFACTURING:
1888 SF X 1 SP PER 1000SF = 2 SPACES
WHOLESALE USE/WAREHOUSE FL 1:
4550 SF X 1 SP PER 2000SF = 3 SPACES
WHOLESALE USE/WAREHOUSE FL 2:
5048 SF X 1 SP PER 2000SF = 3 SPACES
BUSINESS OFFICE:
1000 SF X 1 SP/350 SF = 3 SPACES
TOTAL SPACES: 28 REQUIRED SPACES
PROPOSED SPACES: 32 SPACES
- 8) THE PURPOSE OF THIS PLAN IS TO SHOW SITE DETAILS ON PROPOSED LOT 2.

**NORTH MILL POND
(TIDAL)**



**CLIPPER TRADERS
PROPOSED LOT 2
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	EASEMENTS, SIDEWALK	11/6/18
2	PARKING, COVERAGE	10/16/18
1	ISSUED FOR APPROVAL	5/22/18
0	ISSUED FOR COMMENT	4/26/18

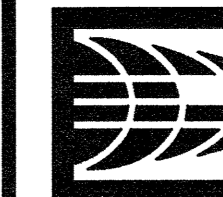


SCALE 1" = 30' APRIL 2018

LOT 2 PLAN

C5

J:\JOBS2\IN2400s\IN_2429\2017 Site Development\Plans & Specs\Site\2429 SITE 2018.dwg, C5 LOT 2



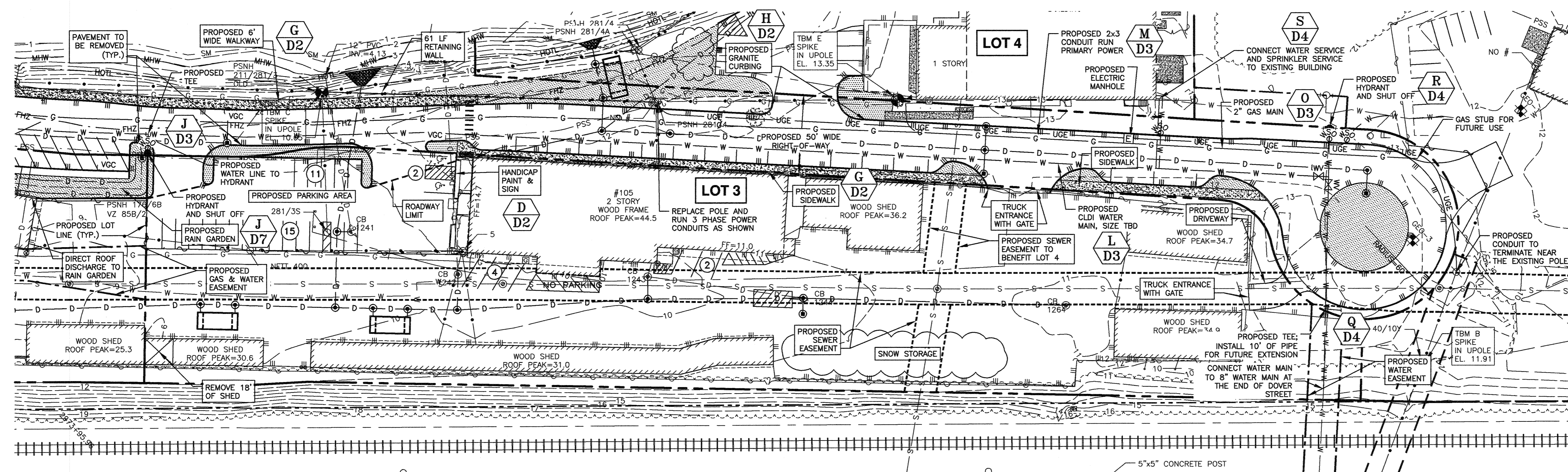
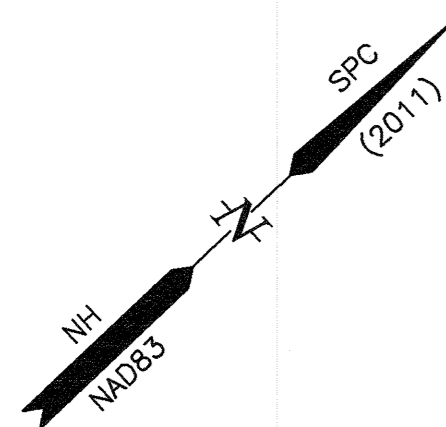
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

- 1) PARCEL IS TO BE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP AND LOT NUMBER TO BE DETERMINED.
- 2) OWNER OF RECORD:
PORTSMOUTH LUMBER AND HARDWARE, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801
- 3) PROPOSED LOT AREA:
102,003 SF; 2.341 ACRES
- 4) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 5) PARCEL IS LOCATED IN THE CHARACTER DISTRICT 4-W (CD4-W) ZONING DISTRICT.
- 6) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS (±0.3').
- 7) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS
- 8) THE PURPOSE OF THIS PLAN IS TO SHOW SITE DETAILS ON PROPOSED LOT 3.
- 9) PROPOSED PARKING:
STORE: 8,100 SF x 1 SP/300 SF = 27
OFFICE: 2,050 SF x 1 SP/350 SF = 6
LUMBER OPERATIONS: 10,490 SF NO REQUIREMENT
TOTAL REQUIRED: 33 SPACES
TOTAL PROVIDED: 34 SPACES
- 10) THE CITY OF PORTSMOUTH WILL BE GRANTED A BLANKET EASEMENT FOR THE EXISTING WATER UTILITY.

IMPERVIOUS SURFACE AREAS (TO PROPERTY LINE)		
STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
STRUCTURES	26,062	26,062
CONCRETE & CURBING	59	59
GRAVEL	1,352	1,352
PAVEMENT	59,798	58,831
TOTAL	87,271	86,304
LOT SIZE	102,003	102,003
% LOT COVERAGE	85.6%	84.6%



164
8
N/F
ARANOSIAN OIL COMPANY
557 NORTH STATE STREET
CONCORD, NH 03301
1696/263

157
6
N/F
SUMMIT 501 ISLINGTON, LLC
c/o TODD BAKER
953 ISLINGTON STREET #230
PORTSMOUTH, NH 03801
5256/441

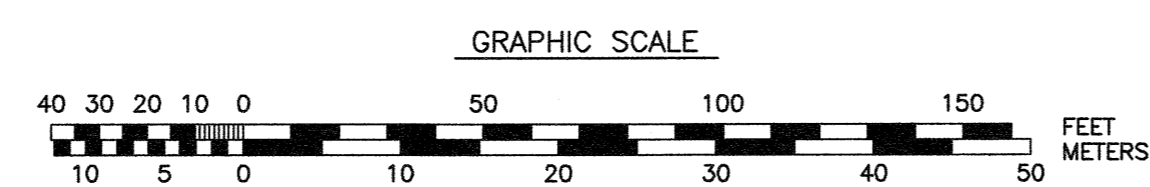
157
7
N/F
J & J'S DROP
AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801

157
15
N/F
J & J'S DROP
AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801

157
14
N/F
J & J'S DROP
AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801

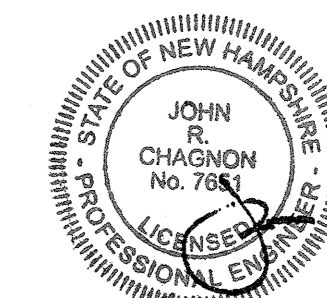
157
13
N/F
J & J'S DROP
AND DRIVE, LLC
402 DEER STREET
PORTSMOUTH, NH 03801

BRANDI
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**CLIPPER TRADERS
PROPOSED LOT 3
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
4	CALL OUTS, UTILITIES	12/6/18
3	EASEMENT, UTILITIES	11/6/18
2	PARKING NOTES	10/16/18
1	ISSUED FOR APPROVAL	5/22/18
0	ISSUED FOR COMMENT	4/26/18



SCALE 1" = 40' APRIL 2018

LOT 3 PLAN **C6**

IMPERVIOUS SURFACE AREAS (TO PROPERTY LINE)		
STRUCTURE	PR-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
MAIN STRUCTURE	20,552	20,552
CONCRETE	572	572
RAMP	157	157
GRAVEL	611	1,352
PAVEMENT	14,416	11,908
RETAINING WALL	78	78
TOTAL	36,308	34,541
LOT SIZE	61,781	61,781
% LOT COVERAGE	58.8%	55.9%

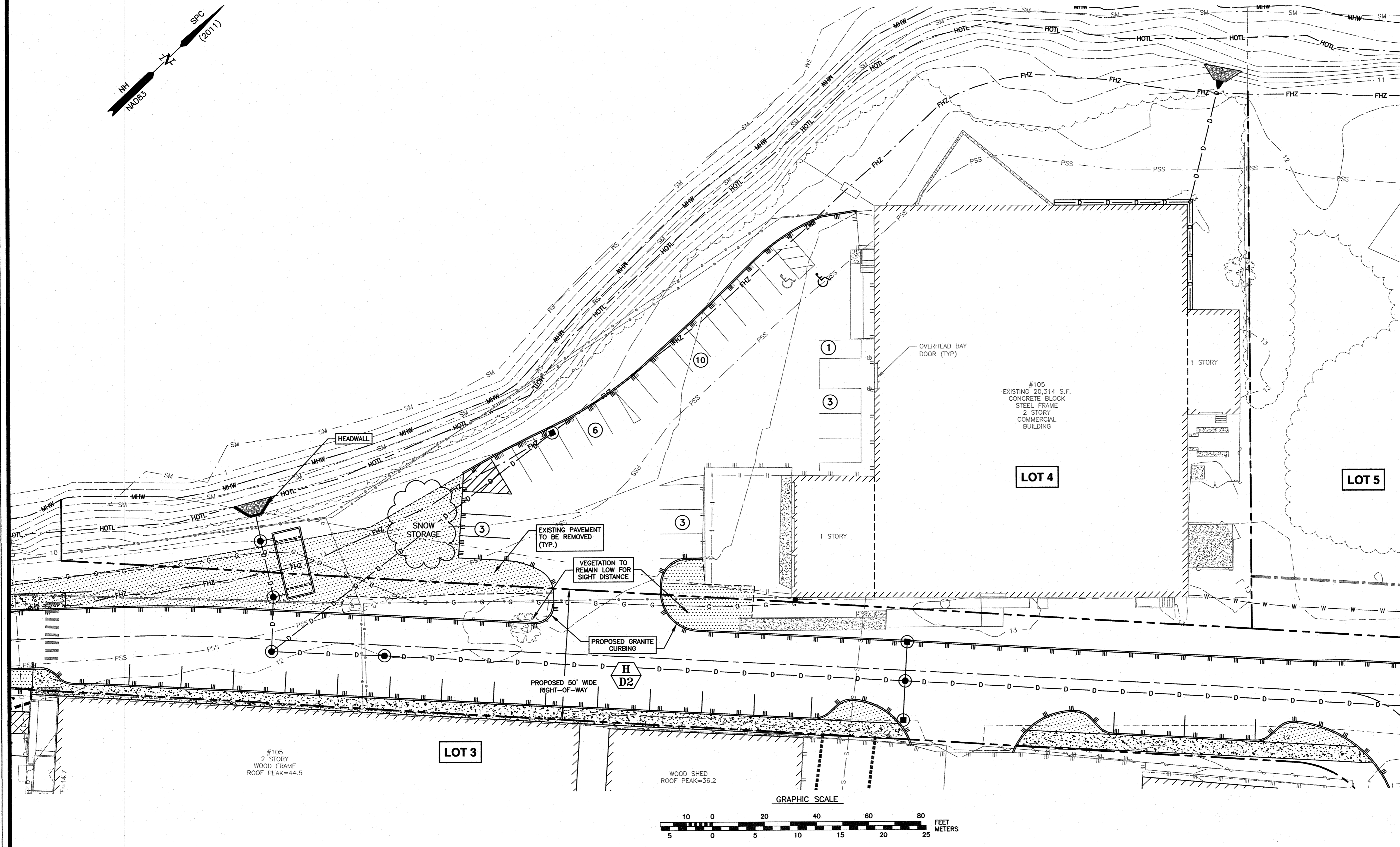
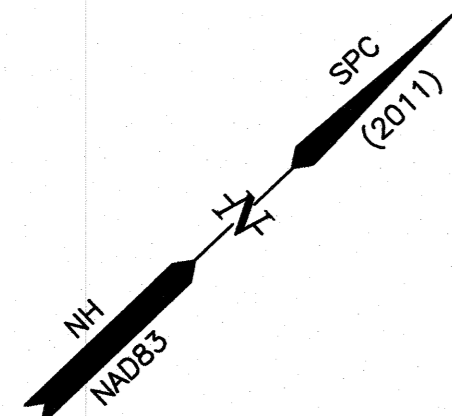


AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
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NOTES:

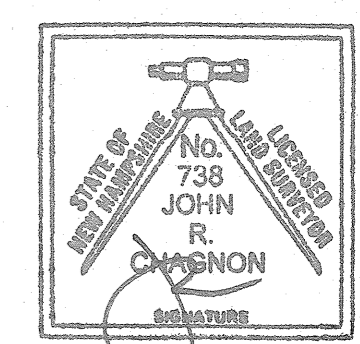
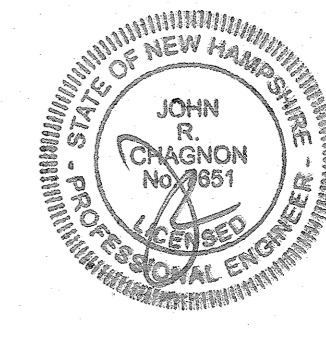
- 1) PARCEL IS TO BE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP AND LOT NUMBER TO BE DETERMINED.
- 2) OWNERS OF RECORD:
BOSTON AND MAINE CORPORATION
IRON HORSE PARK
NORTH BILLERICA, MA 01862

CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801
5598/2725
- 3) PROPOSED LOT AREA:
61,764 SF; 1.418 ACRES
- 4) PORTIONS OF THE PARCEL IS IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
- 5) PROPOSED PARCEL IS LOCATED IN THE CD-4W ZONING DISTRICT.
- 6) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS ($\pm 0.3'$).
- 7) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS
- 8) THE PURPOSE OF THIS PLAN IS TO SHOW SITE DETAILS ON PROPOSED LOT 4.
- 9) PROPOSED PARKING:
25 SPACES REQUIRED PER VARIANCE GRANTED 3/21/2016
25 SPACES PROVIDED



**CLIPPER TRADERS
PROPOSED LOT 4
PORTSMOUTH, N.H.**

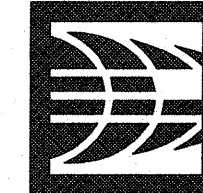
3	SIGHT DISTANCE AREAS	11/6/18
2	PARKING NOTES	10/16/18
1	ISSUED FOR APPROVAL	5/22/18
0	ISSUED FOR COMMENT	4/26/18
NO.	DESCRIPTION	DATE
REVISIONS		



SCALE 1" = 20' APRIL 2018

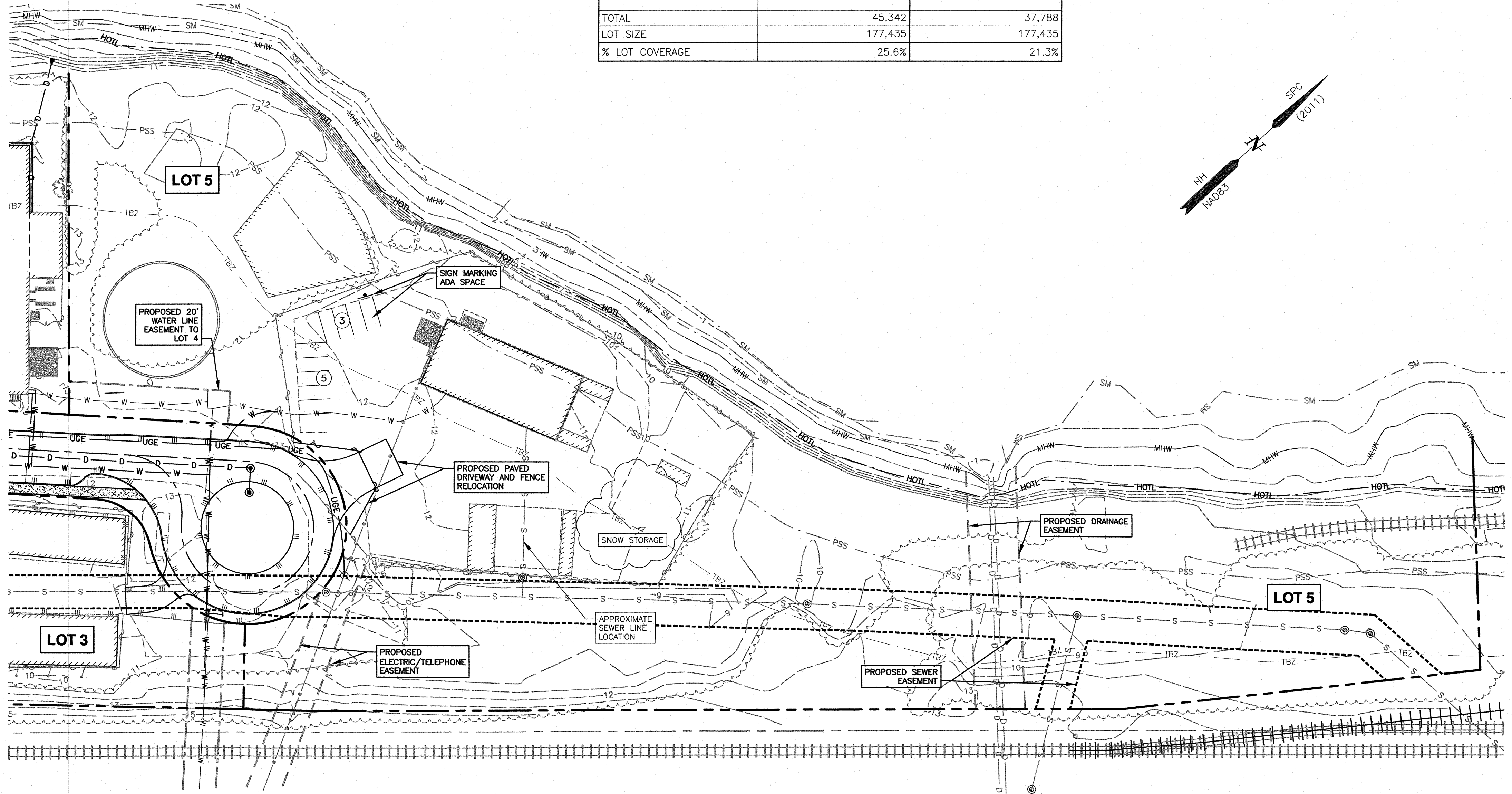
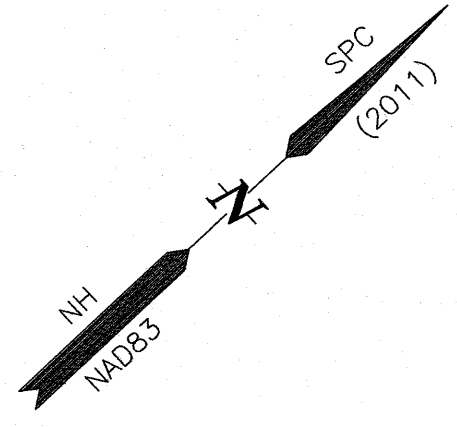
LOT 4 PLAN **C7**

J:\JOB52\N24006\N 2429\2017 Site Development\Plans & Sheets\Site\2429 SITE 2018.dwg, C7 LOT 4



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

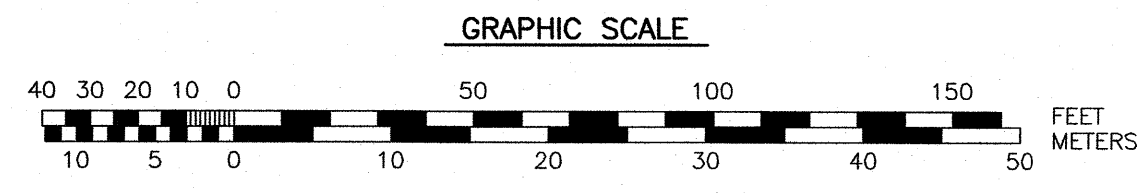
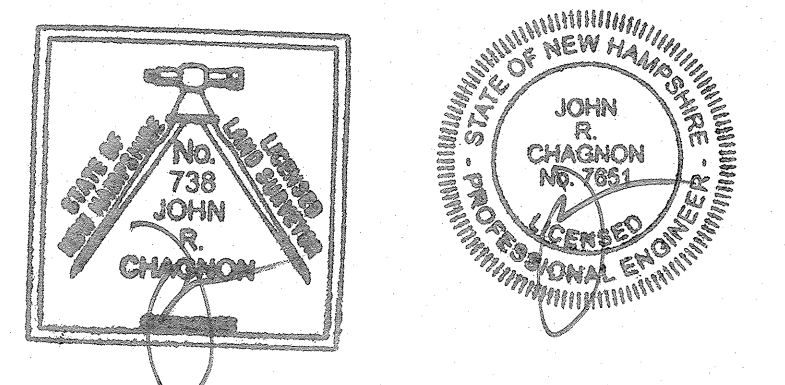
IMPERVIOUS SURFACE AREAS (TO PROPERTY LINE)		
STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
STRUCTURES + TURNSTYLE	14,688	7,351
CONCRETE	227	227
GRAVEL	29,191	29,191
PAVEMENT	1,236	1,019
TOTAL	45,342	37,788
LOT SIZE	177,435	177,435
% LOT COVERAGE	25.6%	21.3%



- NOTES:**
- 1) PARCEL IS TO BE SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP AND LOT NUMBER TO BE DETERMINED.
 - 2) OWNERS OF RECORD:
BOSTON AND MAINE CORPORATION
IRON HORSE PARK
NORTH BILLERICA, MA 01862
 - 3) PROPOSED LOT AREA:
177,435 SF
 - 4) PORTIONS OF THE PARCEL IS IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. EFFECTIVE DATE MAY 17, 2005.
 - 5) PROPOSED PARCEL IS LOCATED IN THE CD4-W & CD4-L1 ZONING DISTRICTS.
 - 6) VERTICAL DATUM IS MEAN SEA LEVEL NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS ($\pm 0.3'$).
 - 7) HORIZONTAL DATUM AND BASIS OF BEARINGS IS THE NH STATE PLANE COORDINATE SYSTEM NAD 83 (2011). BASIS OF HORIZONTAL DATUM IS REDUNDANT RTN GPS OBSERVATIONS.
 - 8) THE PURPOSE OF THIS PLAN IS TO SHOW SITE DETAILS ON PROPOSED LOT 5.
 - 9) PROPOSED PARKING: LIGHT INDUSTRY
4,000 SF x 1 SP/500 SF = 8 SPACES REQUIRED
8 SPACES PROVIDED.

**CLIPPER TRADERS
PROPOSED LOT 5
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	PARKING, UTILITIES	11/6/18
2	DRIVEWAY & PARKING NOTES	10/16/18
1	ISSUED FOR APPROVAL	5/22/18
0	ISSUED FOR COMMENT	4/26/18



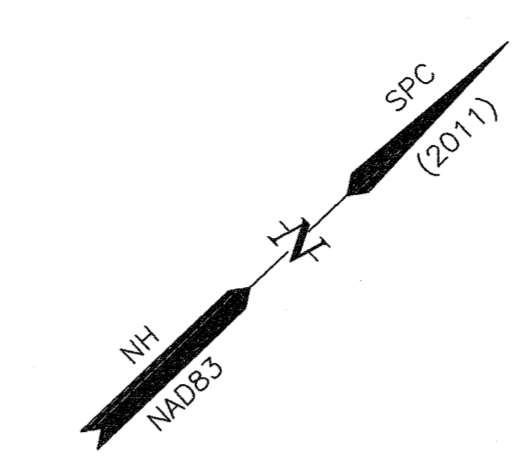
SCALE 1" = 40' APRIL 2018

LOT 5 PLAN **C8**

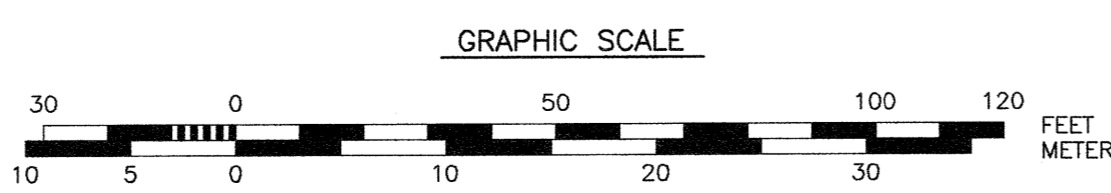
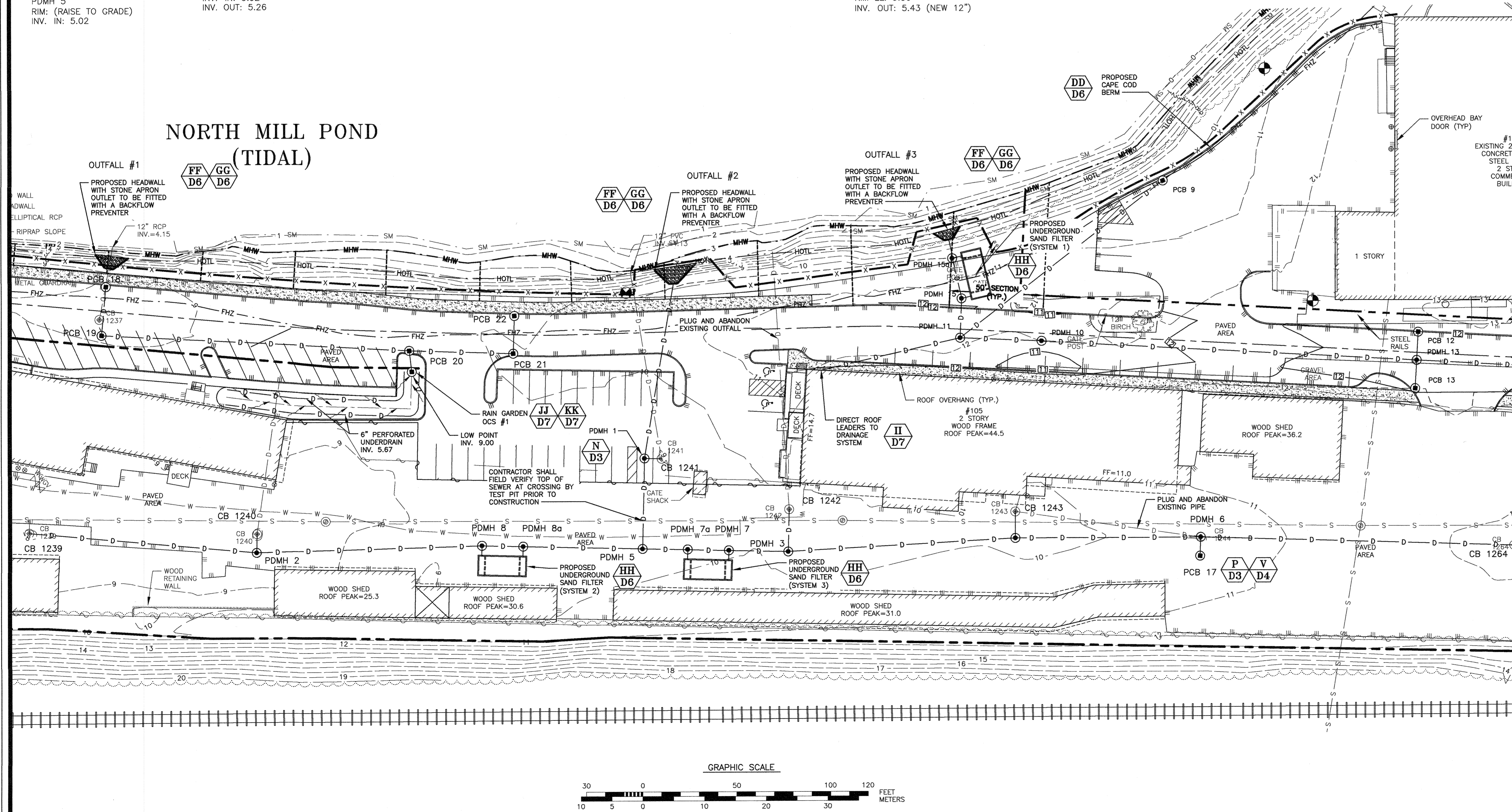
J:\0852\102400a\102429\102429.dwg, CB LOT 5

DRAINAGE STRUCTURES

STONE APRON INV. OUT: 4.49	INV. IN: 6.42 INV. OUT: 5.02	CB 1264 RIM: 10.22 INV. OUT: 8.19	FROM STONE APRON TO PDMH 1 36" HDPE: L= 90 SLOPE: 0.004	STONE APRON OUT: 4.49
PDMH 1 RIM: 9.XX (RAISE TO GRADE) INV. IN: 4.85 INV. IN: 4.85 INV. OUT: 4.85 INSTALL TIDEFLEX CHECKMATE VALVE ON OUTLET PIPE	PDMH 6 RIM: (RAISE TO GRADE) INV. IN: 7.54 INV. IN: 7.54 INV. OUT: 7.54	PCB 17 RIM: 10.20 INV. OUT: 7.56 (12")	FROM PDMH 1 TO PDMH 5 36" HDPE: L= 43 SLOPE: 0.004	PCB 18 RIM: 9.XX INV. IN: 4.67 INV. OUT: 4.67 (EXISTING 12") INSTALL TIDEFLEX CHECKMATE VALVE ON OUTLET PIPE
PDMH 2 RIM: 8.XX (RAISE TO GRADE) INV. IN: 5.79 INV. IN: 5.79 INV. IN: 5.79	PDMH 7 RIM: (RAISE TO GRADE) INV. IN: 6.59 INV. OUT: 6.59 WEIR: 7.25	CB 1243 RIM: 9.54 INV. IN: 7.43 (4") INV. OUT: 7.21 (NEW 12")	FROM PDMH 5 TO PDMH 7a 36" HDPE: L= 19 SLOPE: 0.0042	PCB 19 RIM: 9.XX INV. IN: 4.77 INV. OUT: 4.77 (NEW 12")
PDMH 3 RIM: (RAISE TO GRADE) INV. IN: 6.70 INV. IN: 6.70 INV. OUT: 6.70	PDMH 7a RIM: (RAISE TO GRADE) INV. IN: 6.50 INV. IN: 6.57 INV. OUT: 6.50	CB 1242 RIM: 9.34 INV. IN: 3.88 (6") INV. OUT: 6.79 (NEW 12")	FROM PDMH 7a TO PDMH 7 36" HDPE: L= 17 SLOPE: 0.0053	PCB 20 RIM: 9.XX INV. IN: 5.41 INV. IN: 5.41 INV. OUT: 5.41 (NEW 12")
PDMH 4 RIM: (RAISE TO GRADE) INV. IN: 7.16 INV. IN: 7.16 INV. OUT: 7.16	PDMH 8 RIM: (RAISE TO GRADE) INV. IN: 5.33 INV. OUT: 5.33 WEIR: 6.00	CB 1241 RIM: 8.91 INV. OUT: 4.87 (NEW 12")	FROM PDMH 7 TO PDMH 3 36" HDPE: L= 27 SLOPE: 0.0041	PCB 21 RIM: 9.XX INV. IN: 5.61 (NEW 12") INV. OUT: 5.61 (NEW 12")
PDMH 5 RIM: (RAISE TO GRADE) INV. IN: 5.02	PDMH 8a RIM: (RAISE TO GRADE) INV. IN: 5.31 INV. IN: 5.32 INV. OUT: 5.26	CB 1240 RAISE RIM EL. 8.13 INV. OUT: 6.04 (NEW 12")	FROM PDMH 3 TO PDMH 4 36" HDPE: L= 116 SLOPE: 0.004	PCB 22 RIM: 9.XX INV. OUT: 5.67 (NEW 12")
		CB 1239 RAISE RIM EL. 8.13 INV. OUT: 6.26 (NEW 24")	FROM PDMH 4 TO PDMH 6 36" HDPE: L= 94 SLOPE: 0.004	OCS #1 RIM EL. 9.50 INV. OUT: 5.43 (NEW 12")



NORTH MILL POND (TIDAL)

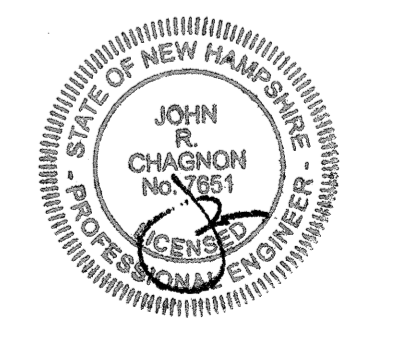


AMBIT ENGINEERING, INC.
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Tel (603) 430-9282
Fax (603) 438-2315

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

**SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	DRAINAGE, RAIN GARDEN	12/6/18
2	DRAINAGE LAYOUT, TREATMENT	11/6/18
1	ISSUED TO NHDES	11/1/18
0	ISSUED FOR COMMENT	10/16/18



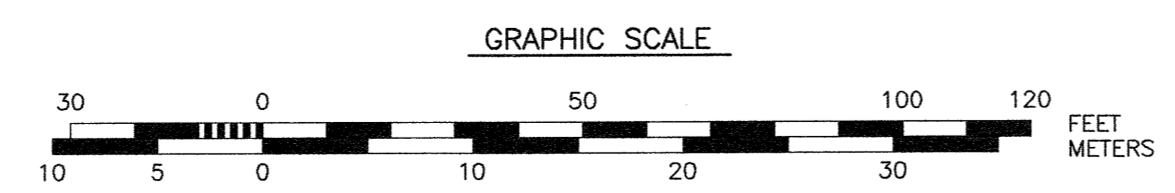
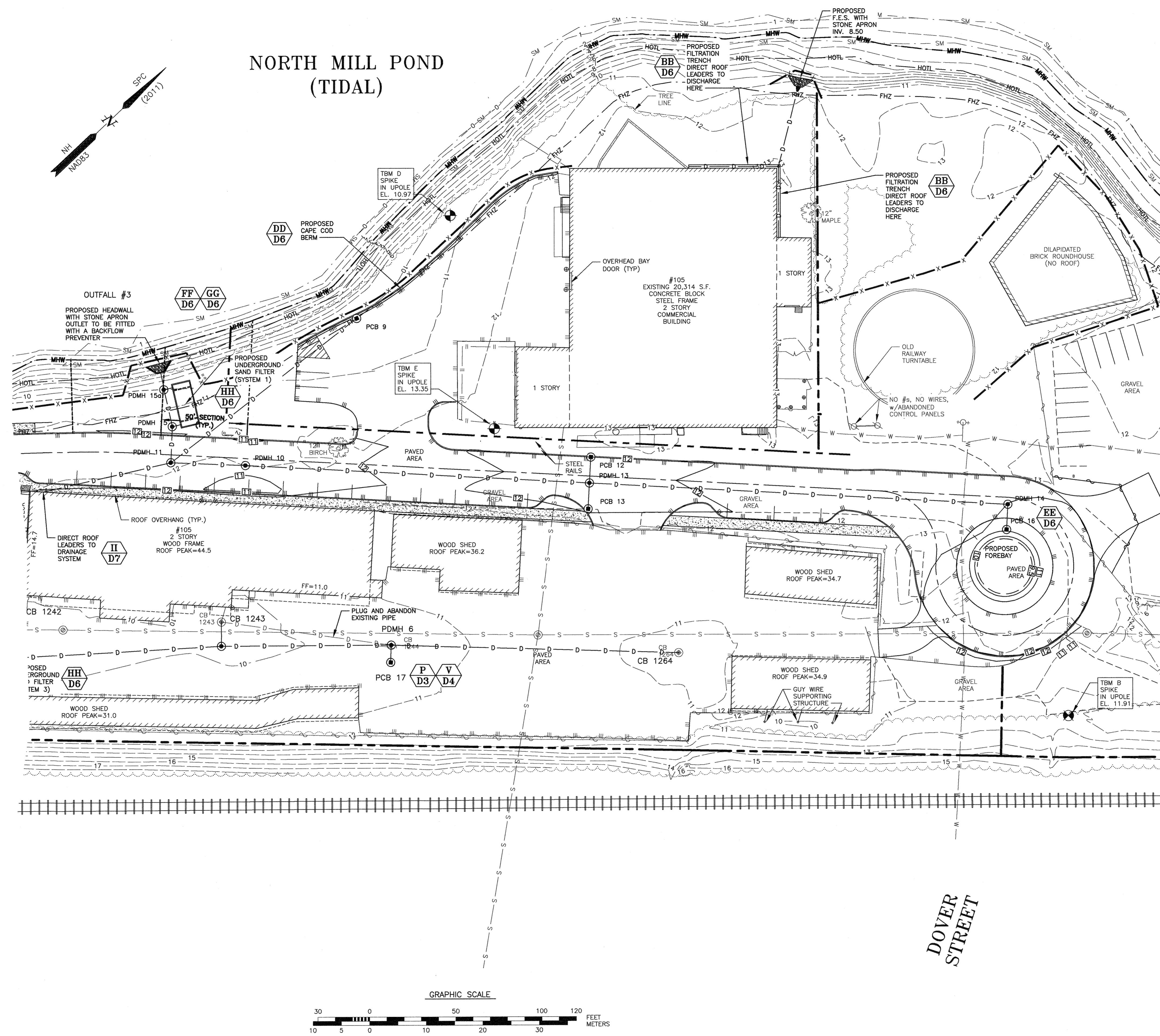
SCALE 1"=30' FEBRUARY 2018

STORMWATER & SEPARATION PLAN

C9

DRAINAGE STRUCTURES

- STONE APRON
INV. OUT: 5.71
- PDMH 10
RIM: 11.19
INV. IN: 6.03
INV. OUT: 6.03
- PDMH 11
RIM: 11.65
INV. IN: 5.88
INV. IN: 5.88
INV. IN: 5.88 (ROOF DRAIN)
OUT: 5.88
- PDMH 13
RIM: 11.63
INV. IN: 7.00
INV. IN: 7.00
INV. IN: 7.00
INV. OUT: 7.00
- PDMH 14
RIM: 12.00
INV. IN: 8.19
OUT: 8.19
- PDMH 15
RIM: 10.97
INV. IN: 5.82
OUT: 5.82
OUT: 5.82
WEIR: 6.50
INSTALL TIDEFLEX CHECKMATE VALVE ON OUTLET PIPE
- PDMH 15a
RIM: 10.97
INV. IN: 5.75
INV. IN: 5.80 (8")
RIM: 10.90
INV. OUT: 7.50
- PCB 12
RIM: 11.41
OUT: 7.05
- PCB 13
RIM: 11.41
OUT: 7.05
- PCB 16
SEE DETAIL SHEET
RIM: 10.75
ORIFICE: 9.50 (3 - 2" DIA.)
OUT: 8.25
- FROM STONE APRON TO PDMH 15a
24" HDPE: L: 9.5 FT
SLOPE: 0.004
- FROM PDMH 15a TO PDMH 15
24" HDPE: L: 17 FT
SLOPE: 0.0041
- FROM PDMH 15 TO PDMH 11
24" HDPE: L: 16 FT
SLOPE: 0.0037
- FROM PDMH 11 TO PDMH 10
24" HDPE: L: 38 FT
SLOPE: 0.0039
- FROM PDMH 10 TO PDMH 13
24" HDPE: L: 195 FT
SLOPE: 0.005
- FROM PDMH 13 TO PDMH 14
24" HDPE: L: 238 FT
SLOPE: 0.005

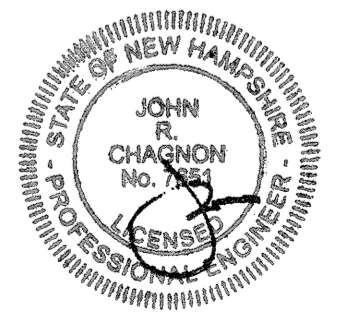


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**SUBDIVISION PLAN
 CLIPPER TRADERS, LLC
 OFF BARTLETT STREET
 PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	DRAINAGE	12/6/18
2	DRAINAGE LAYOUT, TREATMENT	11/6/18
1	ISSUED TO NHDES	11/1/18
0	ISSUED FOR COMMENT	10/16/18



SCALE 1"=30' FEBRUARY 2018

STORMWATER & SEPARATION PLAN

C10

BARTLETT STREET

NORTH MILL POND
(TIDAL)

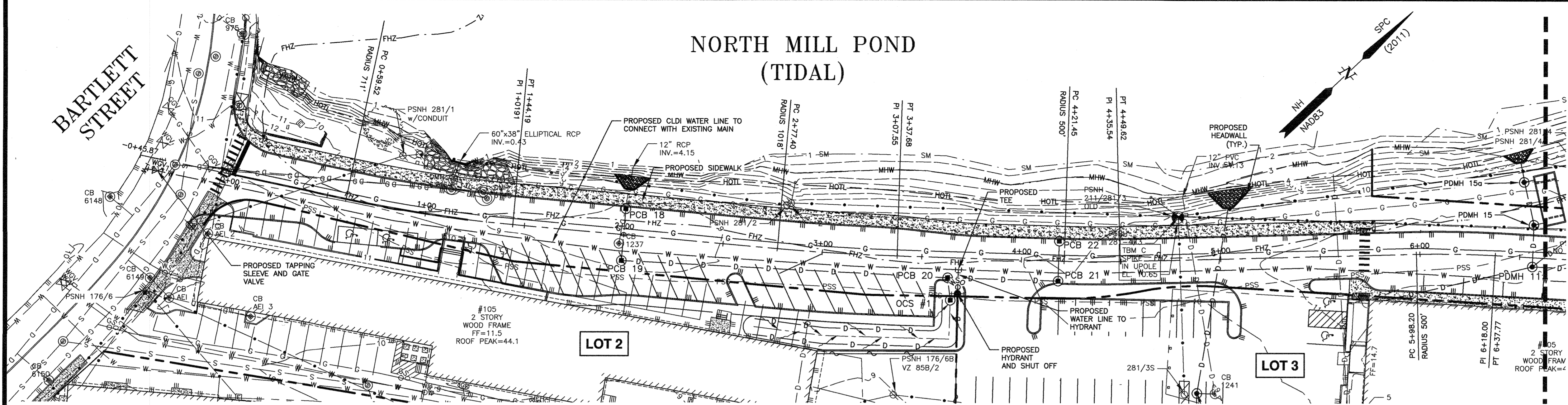


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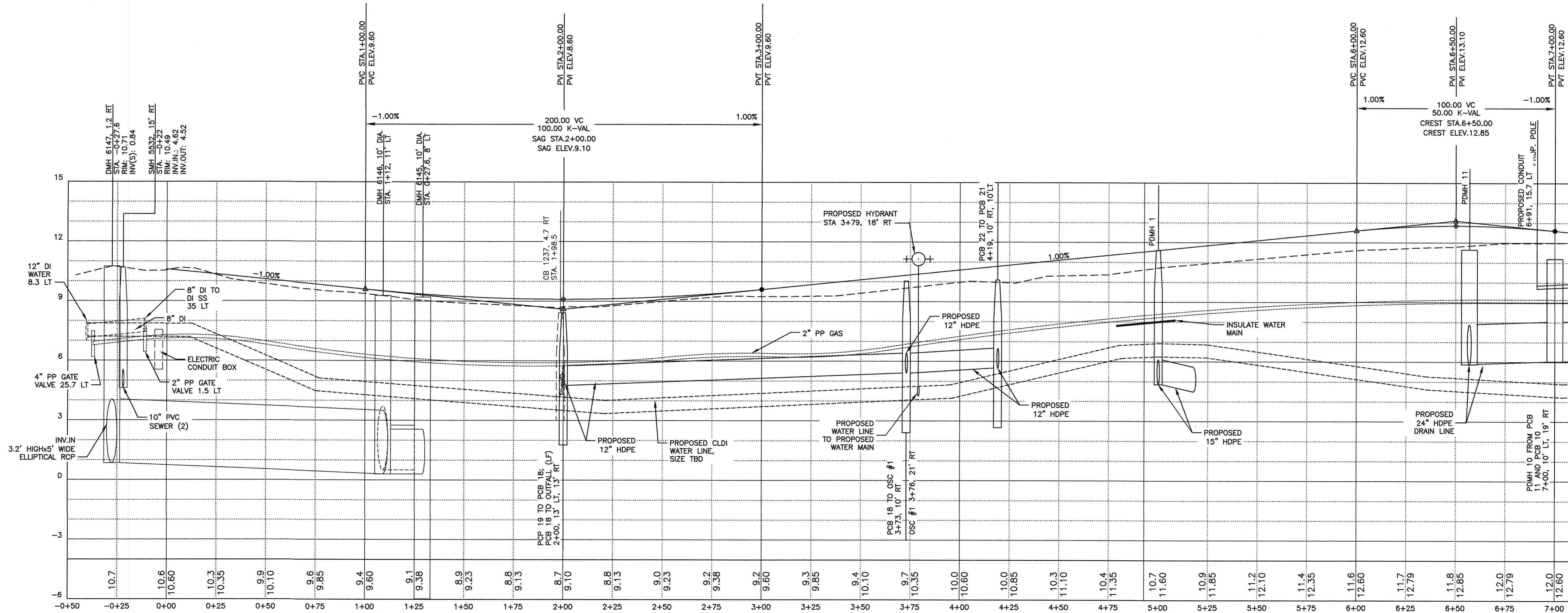
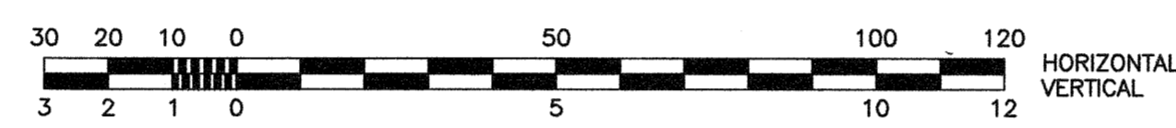
NOTES:

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GRAPHIC SCALE

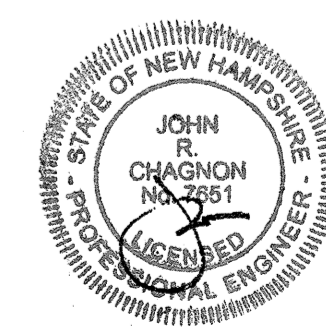
1" = 3' VERT.
1" = 30' HOR.



SUBDIVISION PLAN
CLIPPER TRADERS, LLC
OFF BARTLETT STREET
PORTSMOUTH, N.H.

4	PROFILE, ELEVATIONS	12/6/18
3	DRAINAGE	11/6/18
2	ADDED UTILITIES	10/16/18
1	ISSUED FOR APPROVAL	9/18/18
0	ISSUED FOR COMMENT	2/12/18

NO.	DESCRIPTION	DATE
REVISIONS		

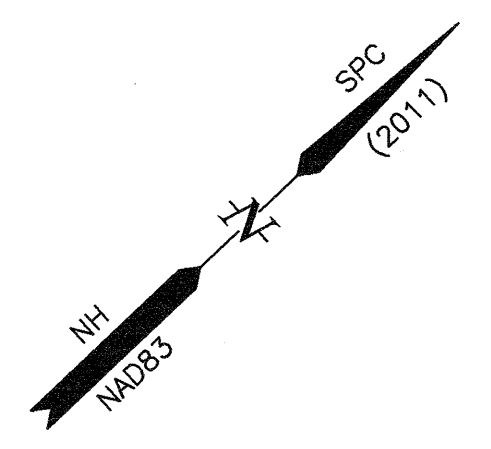
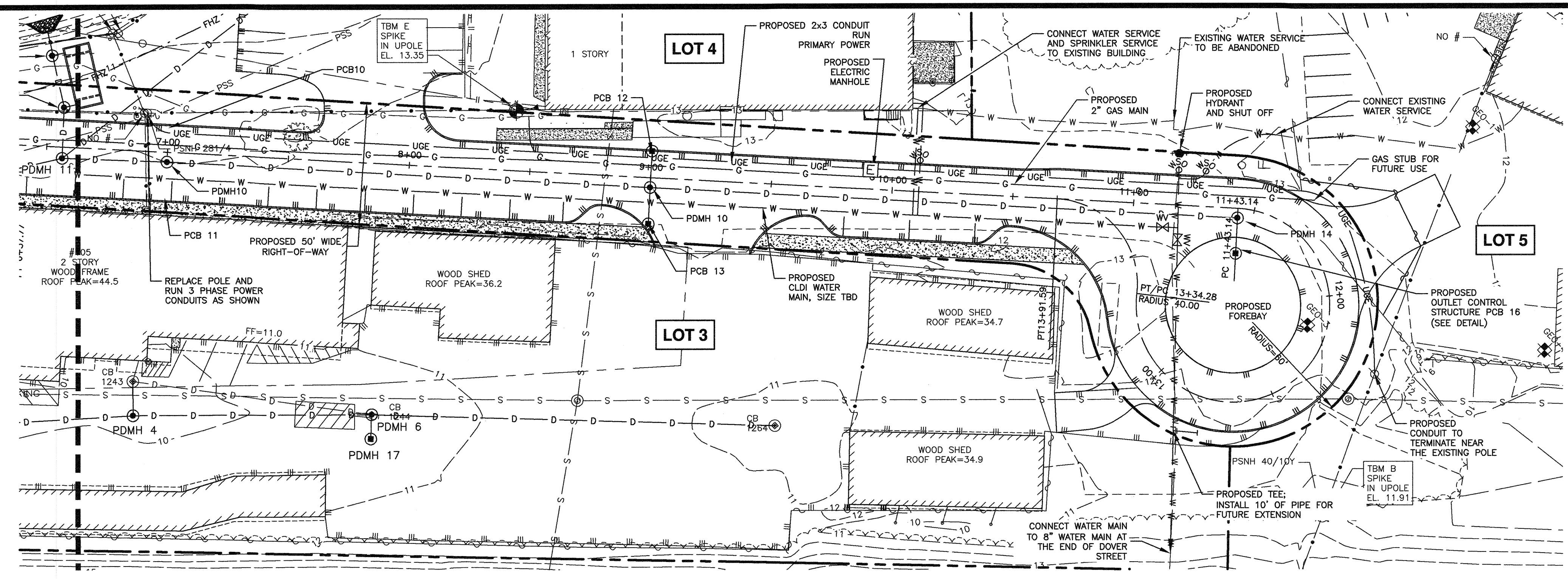


SCALE 1"=30' FEBRUARY 2018

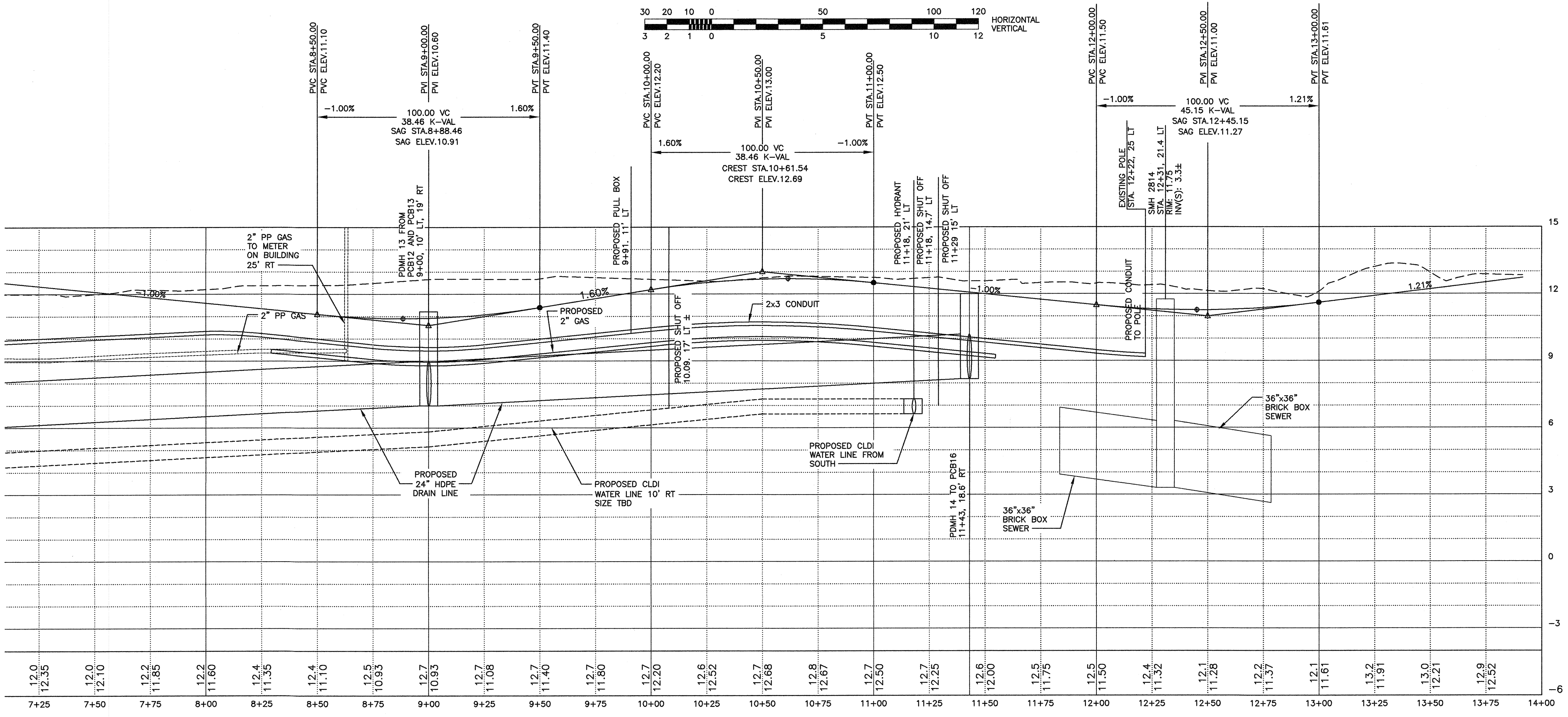
ROADWAY
PLAN & PROFILE

P1

- NOTES:**
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 - 4) ELECTRICAL CONDUITS WILL BE RUN DURING ROAD CONSTRUCTION. PULL ROPES TO BE INSTALLED AND LEFT FOR FUTURE USE.



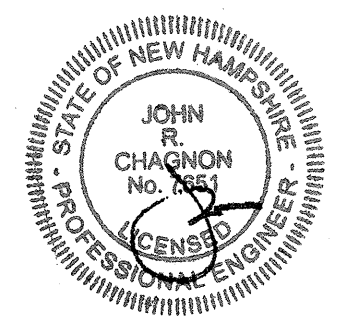
GRAPHIC SCALE
 1" = 3' VERT.
 1" = 30' HOR.



**SUBDIVISION PLAN
 CLIPPER TRADERS, LLC
 OFF BARTLETT STREET
 PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
4	PROFILE, ELEVATIONS	12/6/18
3	DRAINAGE	11/6/18
2	ADDED UTILITIES	10/16/18
1	ISSUED FOR APPROVAL	9/18/18
0	ISSUED FOR COMMENT	2/12/18

REVISIONS



SCALE 1"=30' FEBRUARY 2018

**ROADWAY
 PLAN & PROFILE**

P2



AMBIT ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 200 Griffin Road - Unit 3
 Portsmouth, N.H. 03801-7114
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 Fax (603) 436-2315

NOTES:

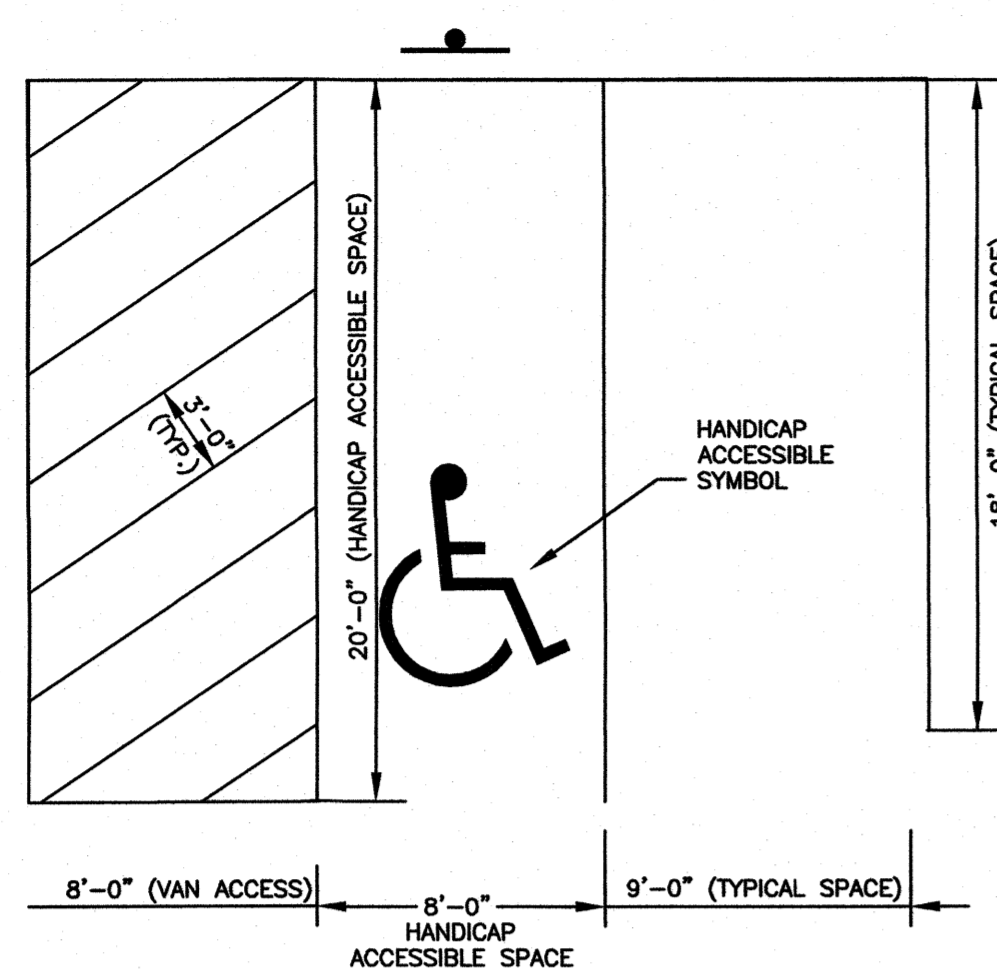
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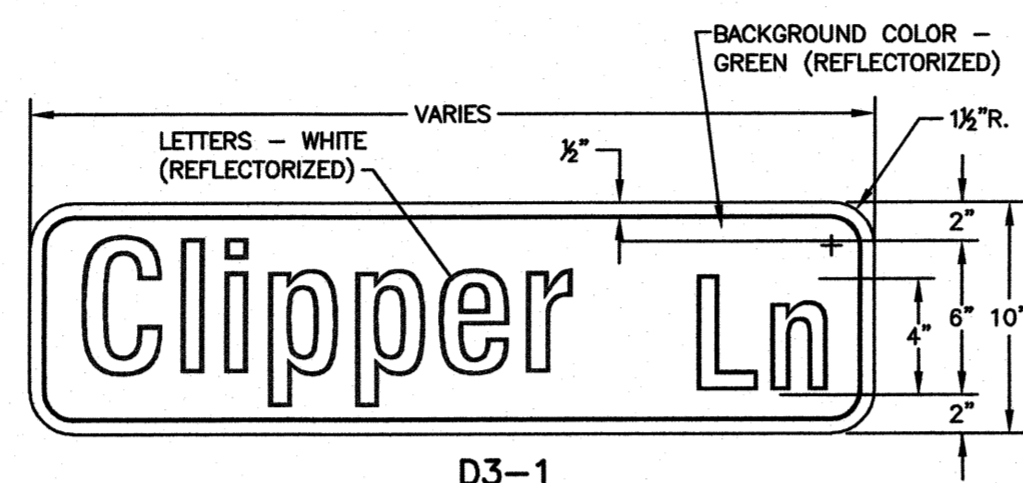
3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).



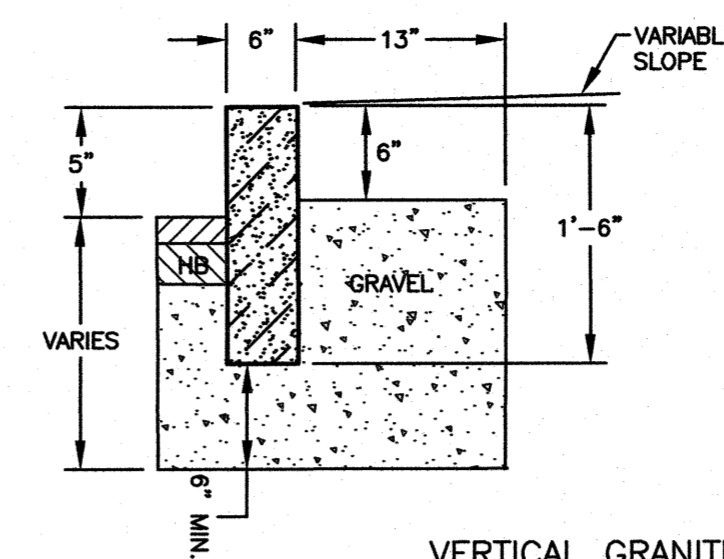
R7-8a
 12" x 18"
 SIGN ON POST
 EACH SPACE
 SHALL HAVE
 THIS SIGN
 DISPLAYED PER
 ADA CODE



D **D** ADA PARKING SIGN AND STRIPING
 C2 C3 NTS



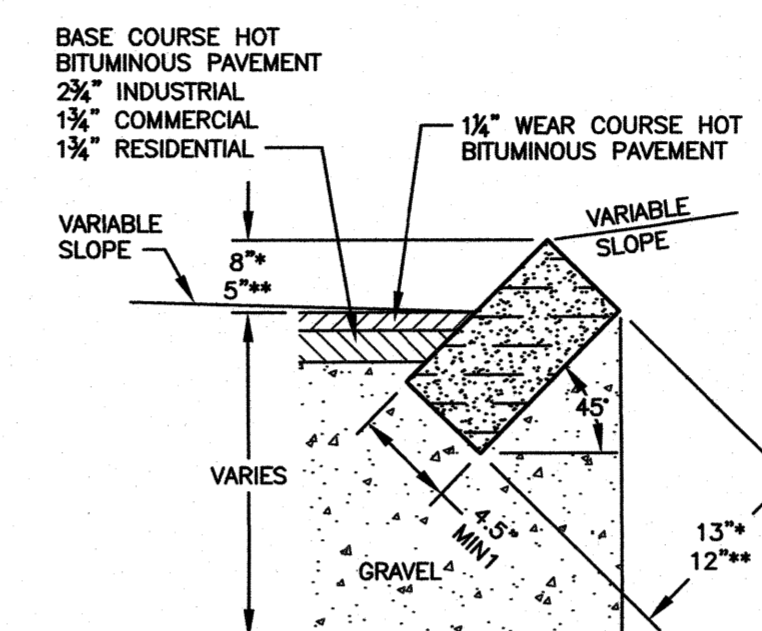
E "STREET NAME" SIGN DETAIL
 C2 NTS



MIN. LENGTH OF CURB STONES: 3FT.
 MAX. LENGTH OF CURB STONES: 10FT.
 MAX. LENGTH OF STRAIGHT CURB
 STONES LAID ON CURVE: SEE CHART
 NOTE: ADJOINING STONES SHALL HAVE
 THE SAME OR APPROXIMATE LENGTH.

Radius	Max. length
21'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
over 60'	10'

VERTICAL GRANITE CURB
 (COMMERCIAL STREETS)



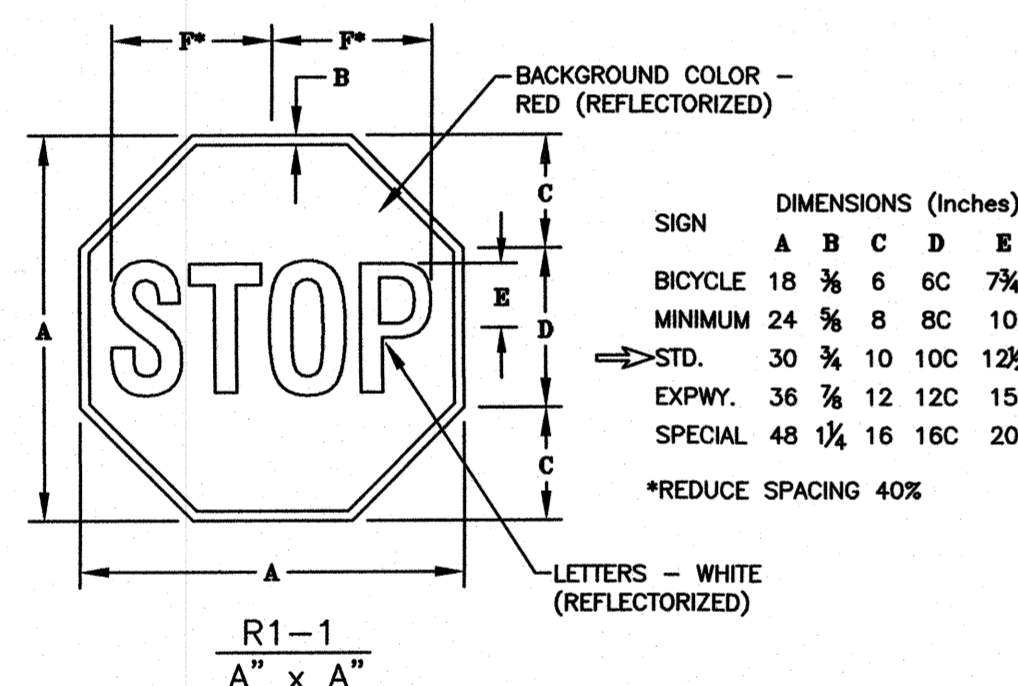
MIN. LENGTH OF STRAIGHT CURB STONES: 18"
 MAX. LENGTH OF STRAIGHT CURB STONES: 8FT.
 MAX. LENGTH OF STRAIGHT CURB STONES
 LAID ON CURVE: SEE CHART

Radius for stones with square joints	Maximum length
16' - 28'	6" to 1'
29' - 41'	2'
42' - 55'	3'
56' - 68'	4'
69' - 82'	5'
83' - 96'	6'
97' - 110'	7'
over 110'	8'

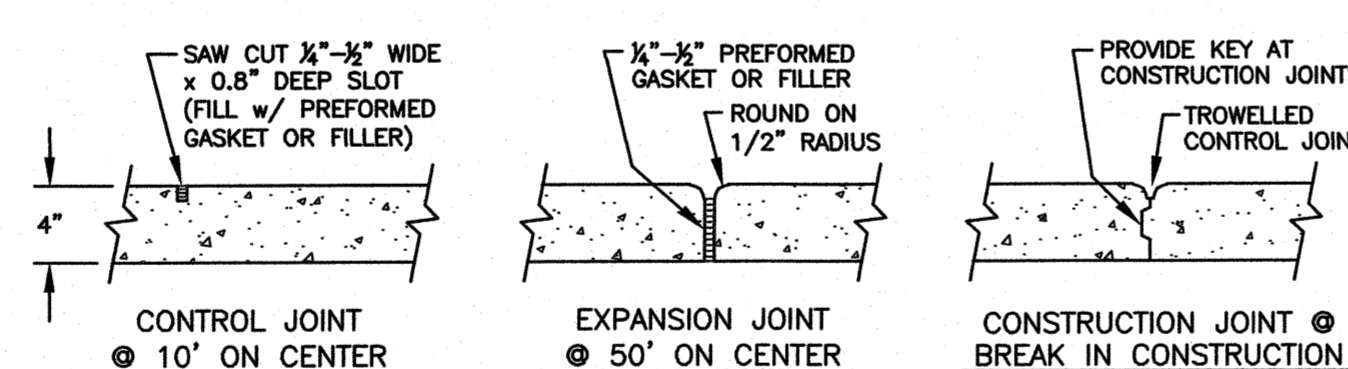
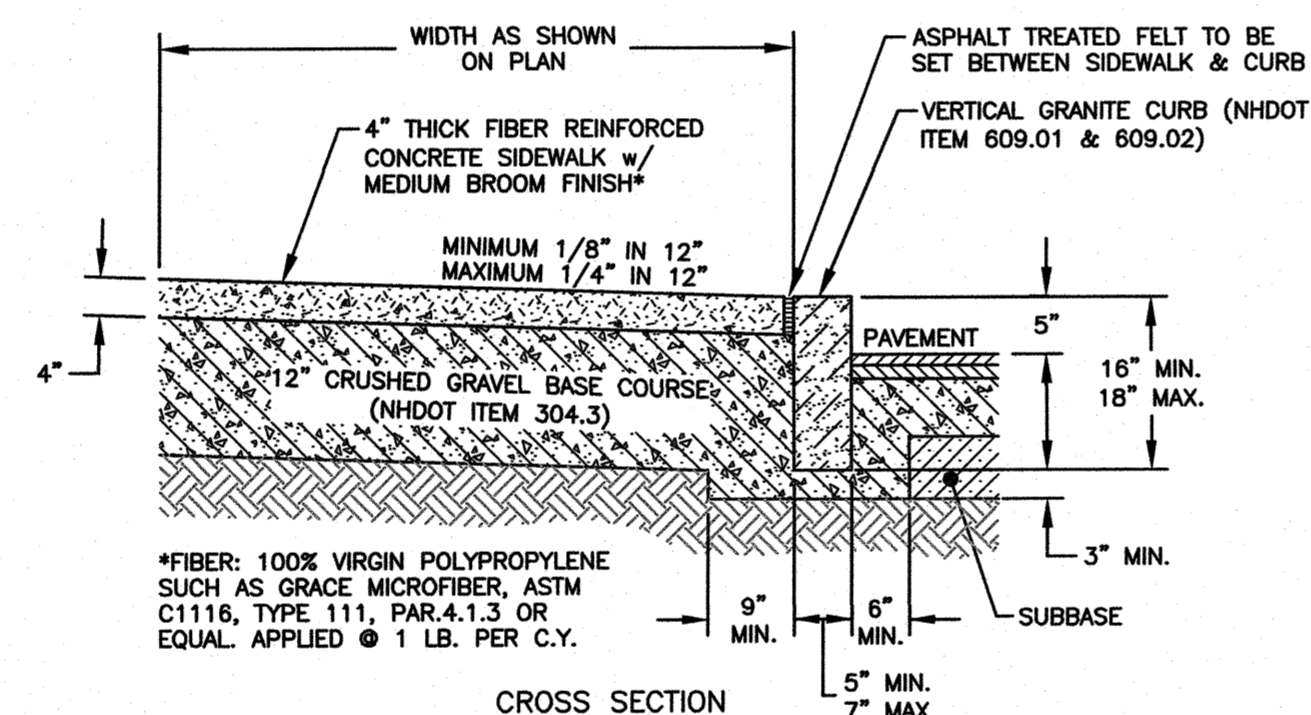
* RESIDENTIAL STREET
 ** INDUSTRIAL STREET

SLOPED GRANITE CURB
 (RESIDENTIAL & INDUSTRIAL STREETS)

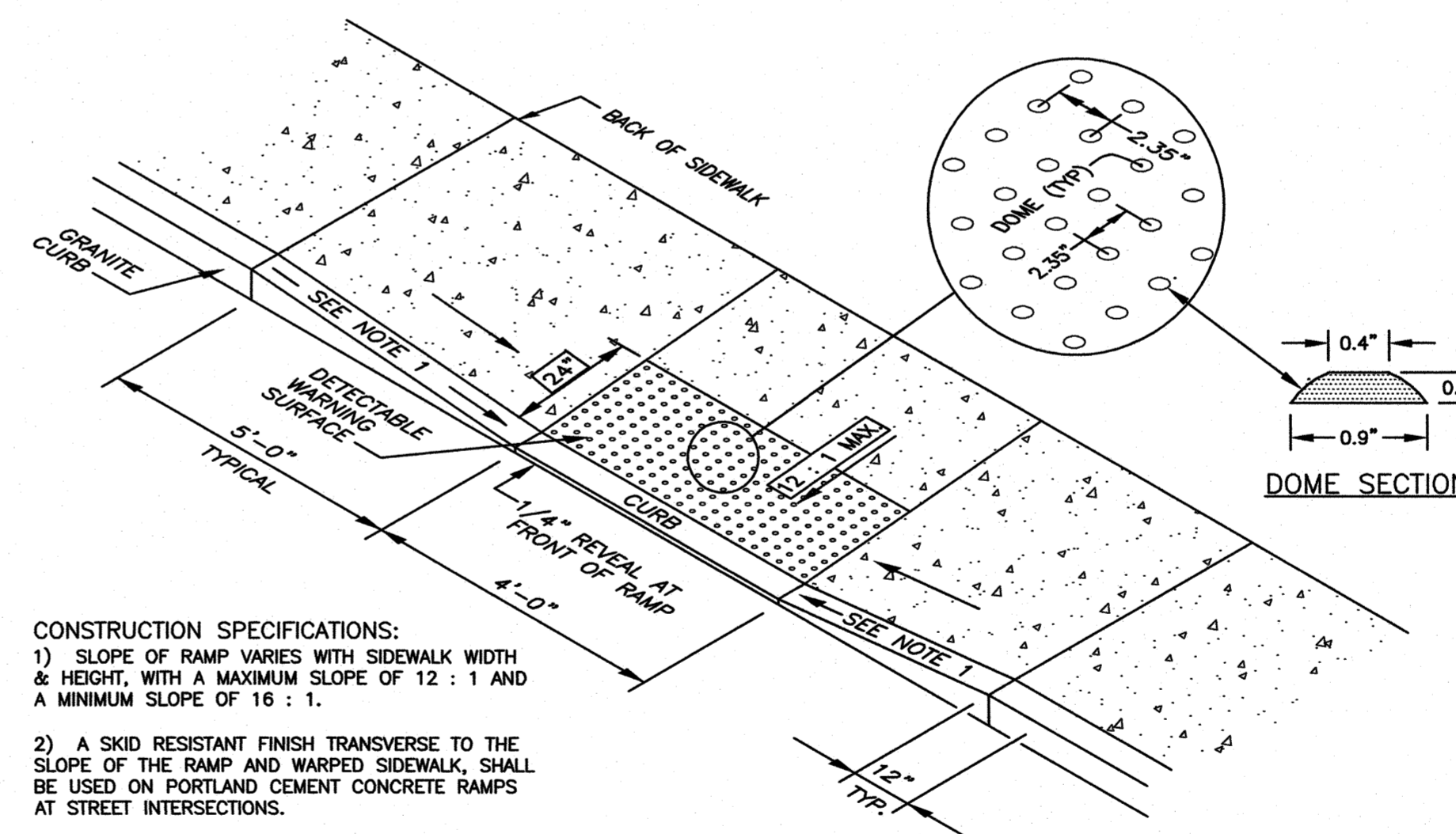
H **H** GRANITE CURBING DETAILS
 C2 C8 (CITY OF PORTSMOUTH) NTS



E STOP SIGN DETAIL
 C2 NTS



G **G** PORTLAND CEMENT CONCRETE SIDEWALK
 C2 C8 (WITH VERTICAL GRANITE CURB) NTS



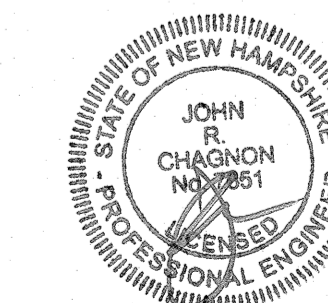
CONSTRUCTION SPECIFICATIONS:
 1) SLOPE OF RAMP VARIES WITH SIDEWALK WIDTH & HEIGHT, WITH A MAXIMUM SLOPE OF 12 : 1 AND A MINIMUM SLOPE OF 16 : 1.
 2) A SKID RESISTANT FINISH TRANSVERSE TO THE SLOPE OF THE RAMP AND WARPED SIDEWALK, SHALL BE USED ON PORTLAND CEMENT CONCRETE RAMPS AT STREET INTERSECTIONS.

G **I** TIP DOWN FOR CONCRETE SIDEWALK
 C2 C5 NTS

PROPOSED SUBDIVISION
CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
4	DETAIL CALLOUTS	12/6/18
3	DETAIL "E"	11/2/18
2	ISSUED FOR APPROVAL	10/16/18
1	ISSUED FOR COMMENT	9/18/18
0	ISSUED FOR COMMENT	2/12/18

REVISIONS



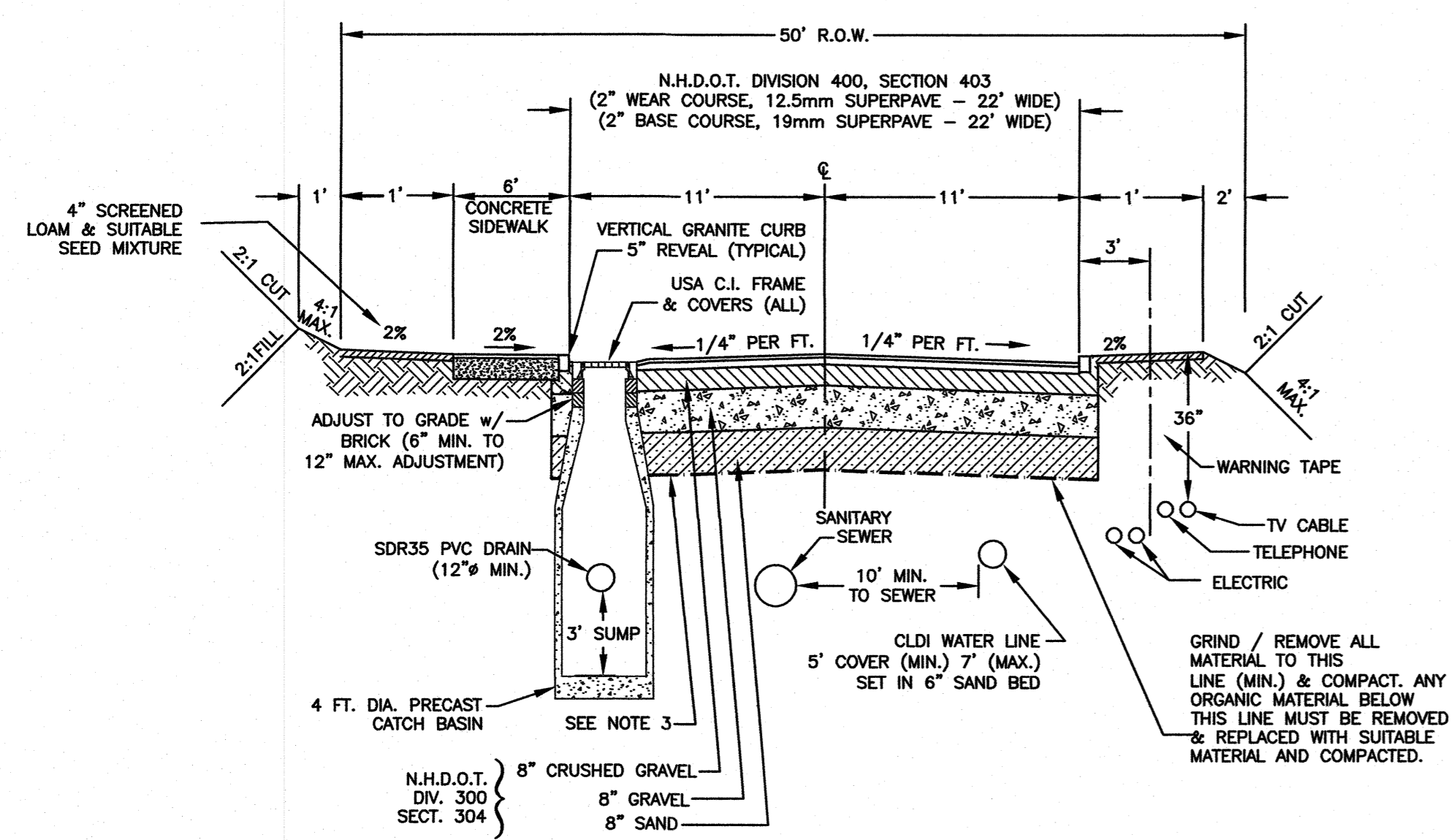
SCALE: AS NOTED FEBRUARY 2018

DETAILS

D2

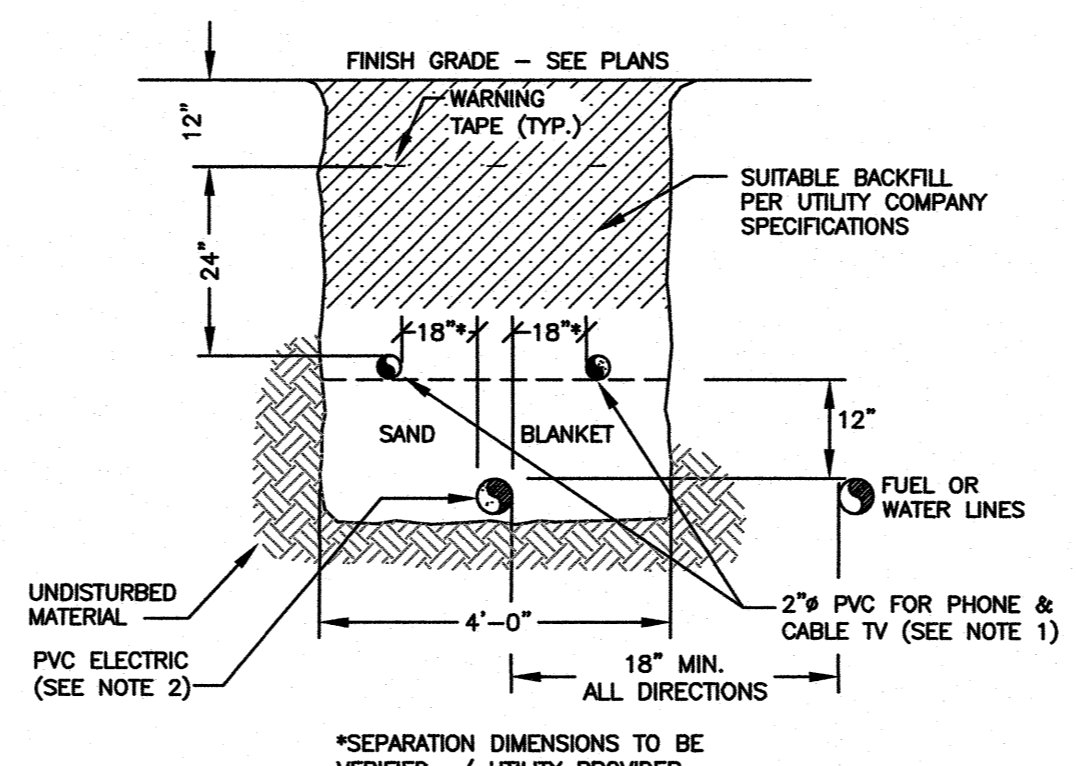
APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____



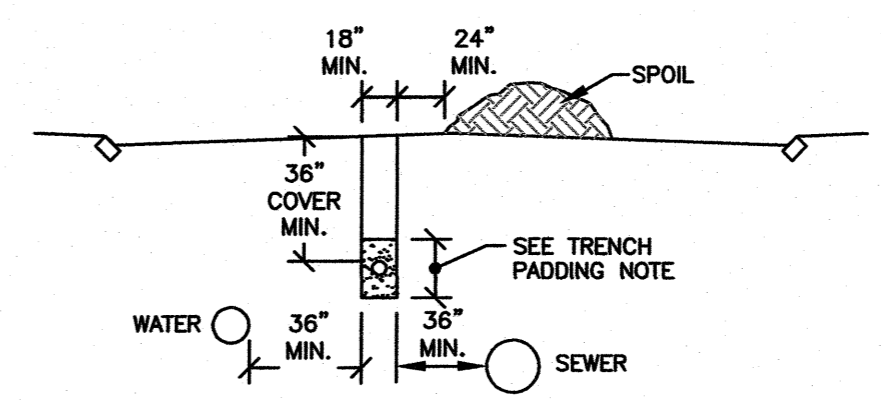
- NOTES:
 1) REMOVE LEDGE TO 28" BELOW FINISHED SURFACE.
 2) REMOVE CLAY, LOAM AND ANY OTHER UNSUITABLE MATERIALS TO 28" BELOW FINISHED SURFACE.
 3) INSTALL GEOTEXTILE FABRIC ABOVE CLAYS AND SILTS OR IN AREAS WHERE EXCAVATION IS BELOW THE SEASONAL HIGH WATER TABLE.

J TYPICAL ROADWAY CROSS SECTION
 NTS



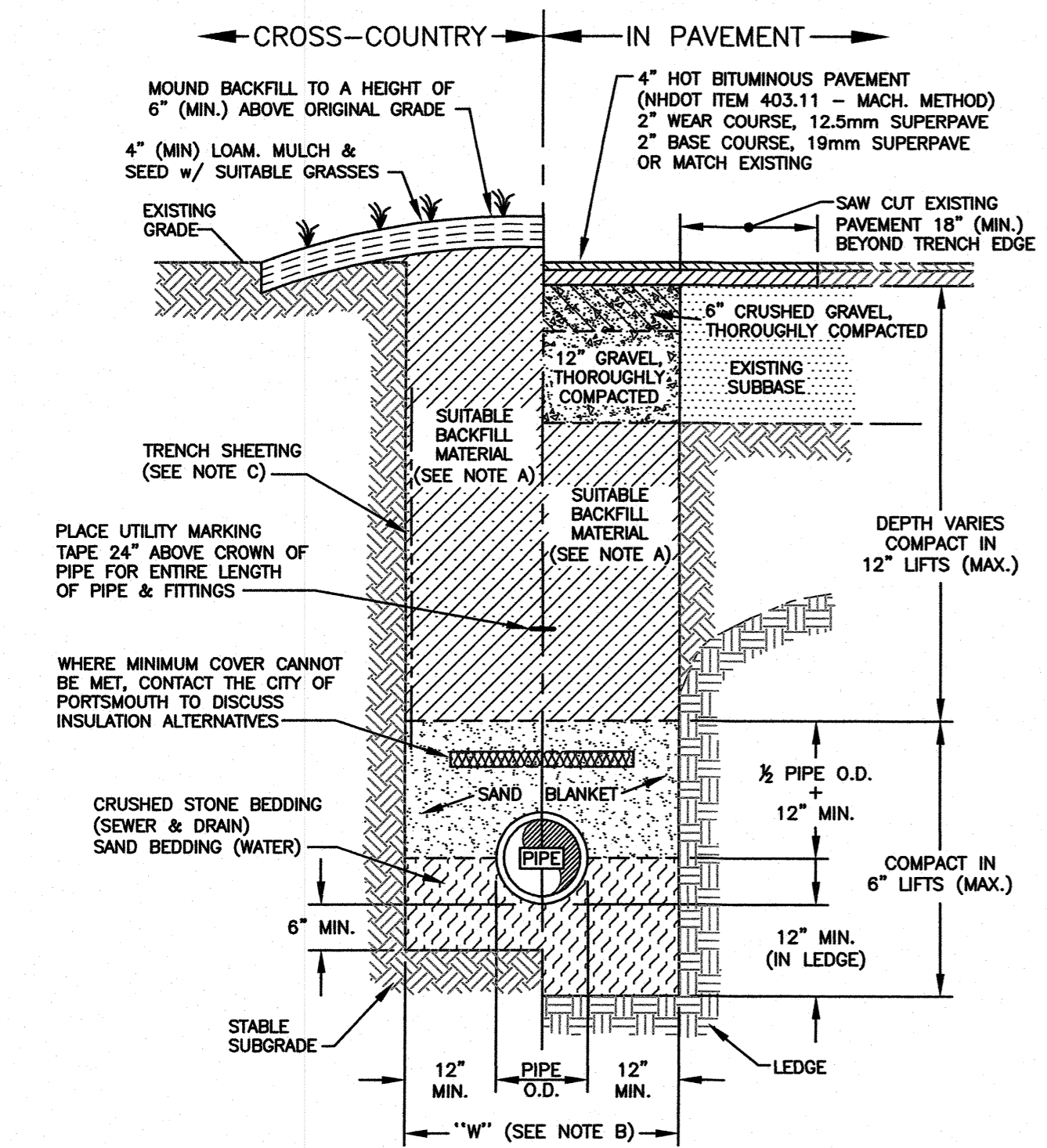
- NOTES:
 1) ALL CONDUIT TO BE U.L. LISTED, SCH. 80 UNDER ALL TRAVEL WAYS, & SCHED. 40 FOR THE REMAINDER.
 2) NORMAL CONDUIT SIZES FOR PSNH ARE 3 INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4 INCH FOR THREE PHASE SECONDARY, AND 5 INCH FOR THREE PHASE PRIMARY.
 3) ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE (LATEST REVISION)
 4) INSTALL A 200# PULL ROPE FOR EACH CONDUIT

M BURIED ELEC/COMM CABLE
 NTS



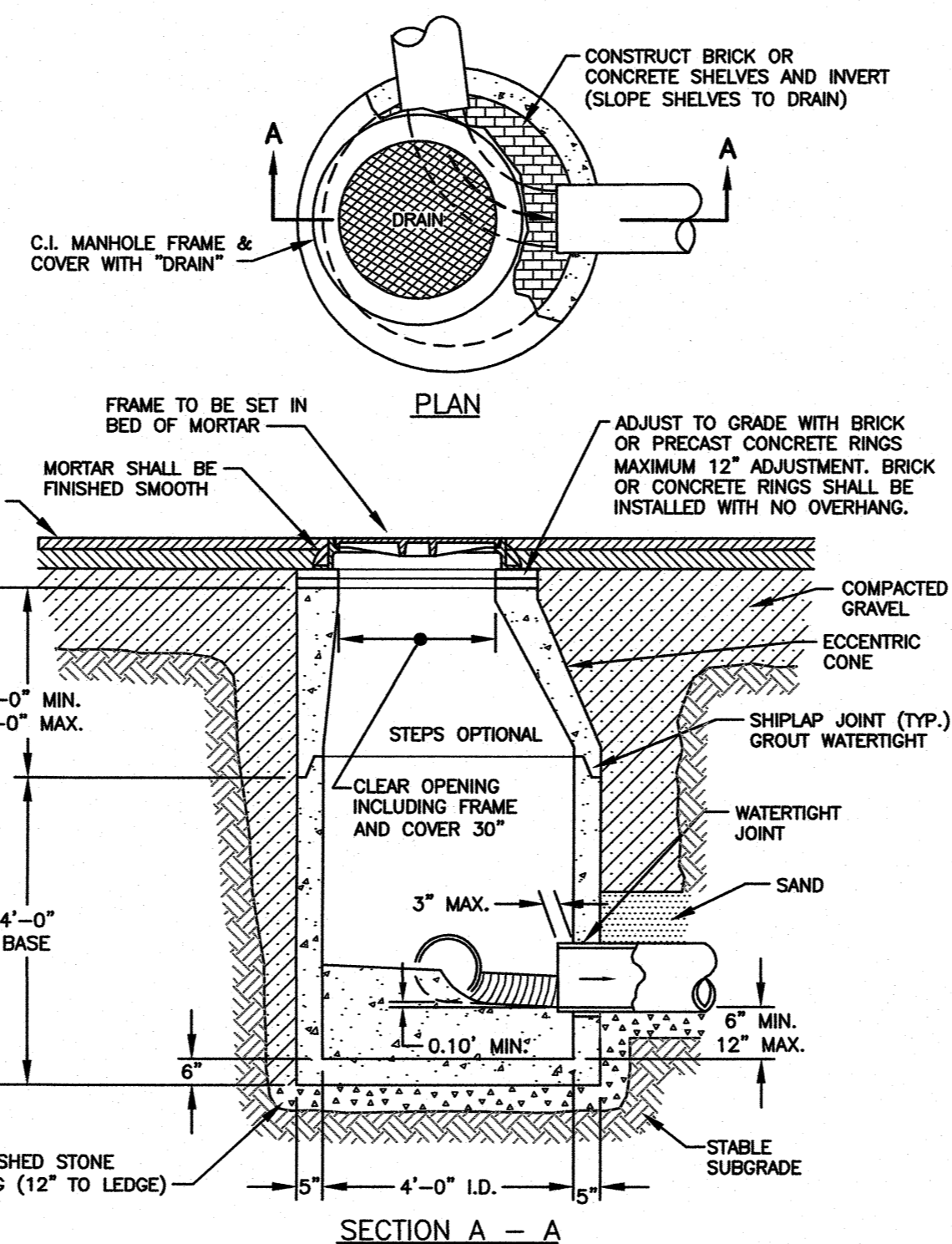
- TRENCH DEPTH:
 MAINS: THE TRENCH SHALL BE DEEP ENOUGH TO PROVIDE 36" OF COVER FROM FINISHED GRADE TO CROWN OF PIPE.
 SERVICES & MAINS ON PRIVATE PROPERTY: 24" OF COVER REQUIRED
- TRENCH WIDTH:
 TRENCH SHALL BE AT LEAST 18" WIDE, UNLESS OTHERWISE SPECIFIED BY UNTIL PERSONNEL. THE SPOIL SHOULD BE AT LEAST 24" FROM THE EDGE OF THE TRENCH (O.S.H.A.).
- TRENCH OFFSET:
 TRENCH SHALL BE LAID OUT SO AS TO PROVIDE A MINIMUM OFFSET OF 36" FROM OTHER UTILITIES. WHERE PRACTICAL, GAS MAINS SHOULD BE ON THE OPPOSITE SIDE OF THE STREET FROM WATER MAIN.
- TRENCH PADDING:
 THE NATURAL BOTTOM OF THE TRENCH SHALL BE PADDED WITH 6" OF SAND. ALSO, SUFFICIENT SAND MUST BE PROVIDED FOR A MINIMUM OF 6" OF COVER ABOVE THE GAS MAIN. SAND SHALL BE PROVIDED BY THE EXCAVATOR AND MUST BE ON SITE PRIOR TO INSTALLATION OF PIPE.
- PRE-CONSTRUCTION MEETING:
 NO TRENCHING SHALL BE STARTED PRIOR UNTIL AN ON SITE MEETING HAS BEEN HELD BETWEEN THE EXCAVATING CONTRACTOR AND UNTIL PERSONNEL PRIOR TO THE MEETING. THE CONTRACTOR MUST NOTIFY DIGSAFE OF THE PROPOSED WORK. THE FOLLOWING SHALL BE CONFIRMED AT THE MEETING: ROUTE OF TRENCH AND TENTATIVE START DATE.
- INSTALLATION OF GAS MAIN & SERVICES:
 ONCE UNTIL HAS INSTALLED THE MAIN AND SERVICES, THE BUILDER/DEVELOPER WILL COVER THE PIPE WITH 6" OF SAND AND INSTALL THE TRACING WIRE AND WARNING TAPE PRIOR TO BACKFILLING. THE EXCAVATING CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER COMPACTING OF THE TRENCH AND MAINTAINING ALL SURFACE (VALVE) BOXES PRIOR TO AND DURING ON SITE PAVING.
- IF THIS WORK IS TO TAKE PLACE OUTSIDE OF NORMAL CONSTRUCTION SEASON (APRIL THROUGH NOVEMBER), OFF SITE TIE-INS ON CITY STREETS SHALL BE DONE SUBJECT TO UNTIL CREW AVAILABILITY AND ISSUANCE OF REQUIRED PERMITS.

O GAS INSTALLATION
 NTS



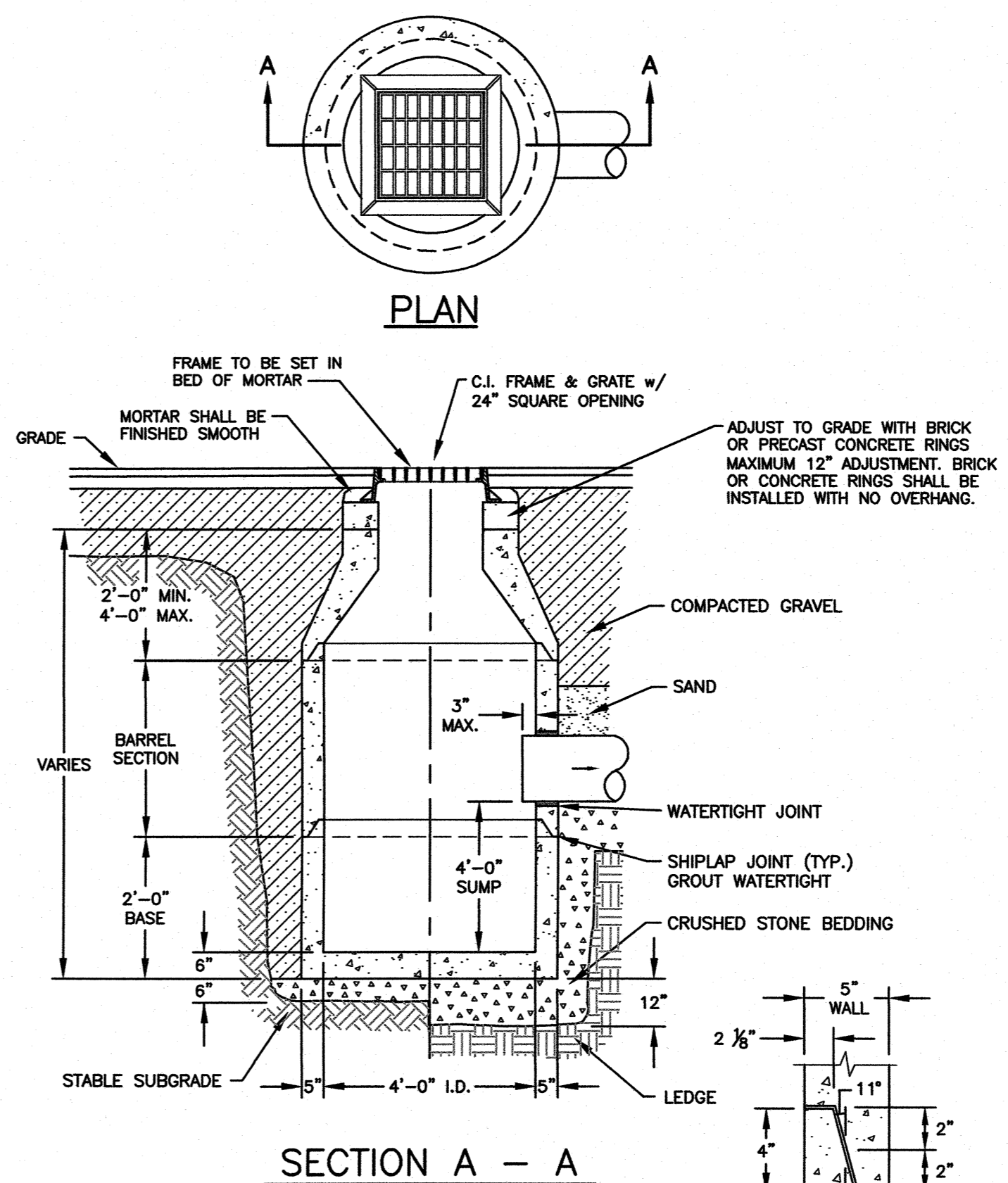
- TRENCH NOTES:
 A) TRENCH BACKFILL: - IN PAVED AREAS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIALS DEEMED TO BE UNACCEPTABLE BY THE ENGINEER.
 - IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE.
 B) "W" = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D.
 C) TRENCH SHEETING: IF REQUIRED, WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.
 D) MINIMUM PIPE COVER FOR UTILITY MAINS (UNLESS GOVERNED BY OTHER CODES):
 6" MINIMUM FOR SEWER (IN PAVEMENT)
 4" MINIMUM FOR SEWER (CROSS COUNTRY)
 3" MINIMUM FOR STORMWATER DRAINS
 5" MINIMUM FOR WATER MAINS
 E) ALL PAVEMENT CUTS SHALL BE REPAIRED BY THE INFRARED HEAT METHOD.

L TYPICAL PIPE TRENCH
 NTS



- NOTES:
 1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
 4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.

N DRAIN MANHOLE DETAIL
 NTS



- NOTES:
 1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS & SHALL BE PLACED IN THE CENTER THIRD OF WALL.
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 4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.

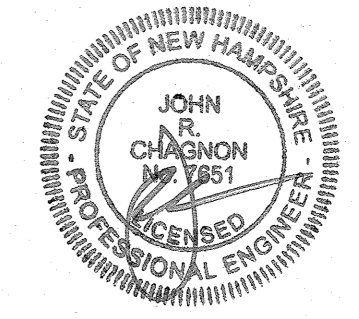
P CATCH BASIN
 NTS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

**PROPOSED SUBDIVISION
 CLIPPER TRADERS, LLC
 105 BARTLETT STREET
 PORTSMOUTH, N.H.**

NO.	DESCRIPTION	DATE
3	DETAIL REFERENCES	12/6/18
2	ISSUED FOR APPROVAL	10/16/18
1	ISSUED FOR COMMENT	9/18/18
0	ISSUED FOR COMMENT	2/12/18



SCALE: AS NOTED FEBRUARY 2018

DETAILS

D3



HORIZONTAL ANCHOR DIMENSIONS FOR PIPE INSTALLATION IN ROCK
UP TO 150 P.S.I. WORKING PRESSURE

PIPE SIZE	TEE OR TAP SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
4"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"
6"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"
8"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"
10"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"
12"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"

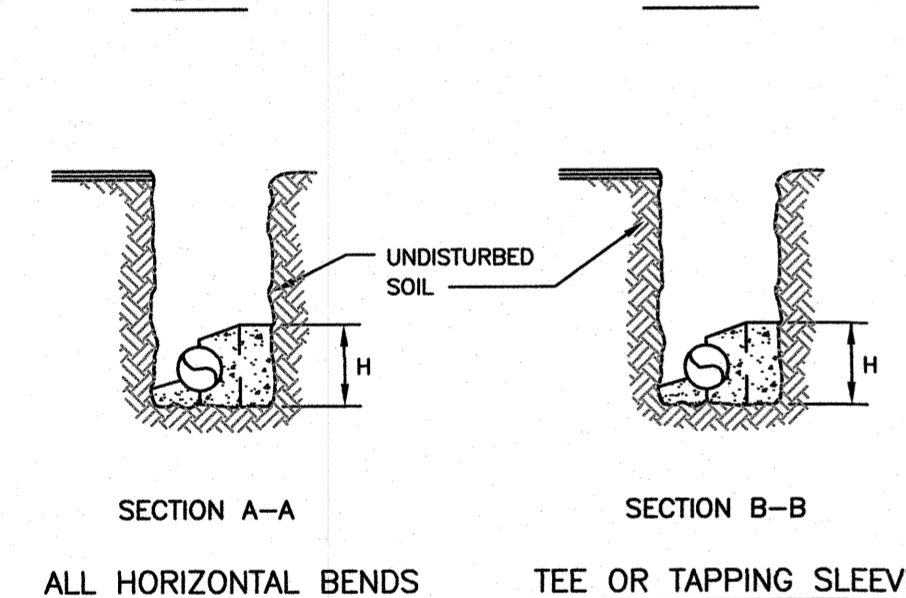
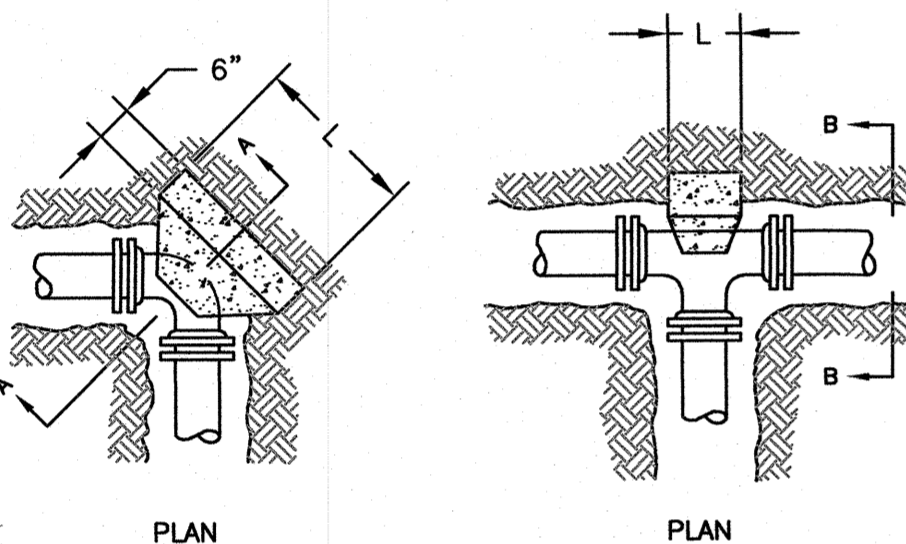
* - FOR 3" AND SMALLER PIPES

HORIZONTAL ANCHOR DIMENSIONS FOR AVERAGE SOIL CONDITIONS
UP TO 150 P.S.I. WORKING PRESSURE

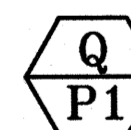
PIPE SIZE	TEE OR TAP SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
4"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"
6"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"
8"	1'-4"	2'-8"	1'-4"	2'-8"	1'-4"	2'-8"	1'-4"	2'-8"	1'-4"	2'-8"
10"	1'-8"	3'-4"	1'-8"	3'-4"	1'-8"	3'-4"	1'-8"	3'-4"	1'-8"	3'-4"
12"	2'-0"	4'-0"	2'-0"	4'-0"	2'-0"	4'-0"	2'-0"	4'-0"	2'-0"	4'-0"

* - FOR 3" AND SMALLER PIPES

- NOTES:
- 1) TABLES ARE BASED ON AN ALLOWABLE SOIL PRESSURE OF 3000 PSF ON UNDISTURBED EARTH BEHIND THE ANCHOR BLOCK. WHERE SOIL HAS BEEN DISTURBED BY ADJACENT EXCAVATIONS OR WHERE SOIL CANNOT WITHSTAND SUCH A PRESSURE, THE TABLE DOES NOT APPLY.
 - 2) WHERE ENTIRE DEPTH OF PIPE IS BELOW THE TOP SURFACE OF SOUND ROCK, USE "HORIZONTAL ANCHOR DIMENSIONS FOR PIPE INSTALLATION IN ROCK" TABLE.



HORIZONTAL ANCHORING

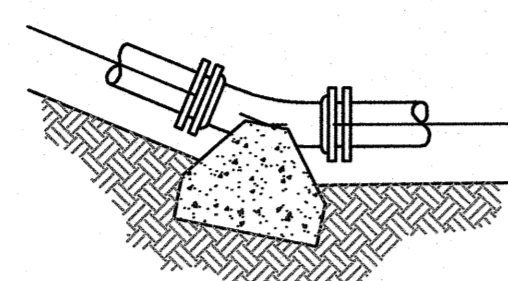


PRESSURE PIPE ANCHORING DETAILS

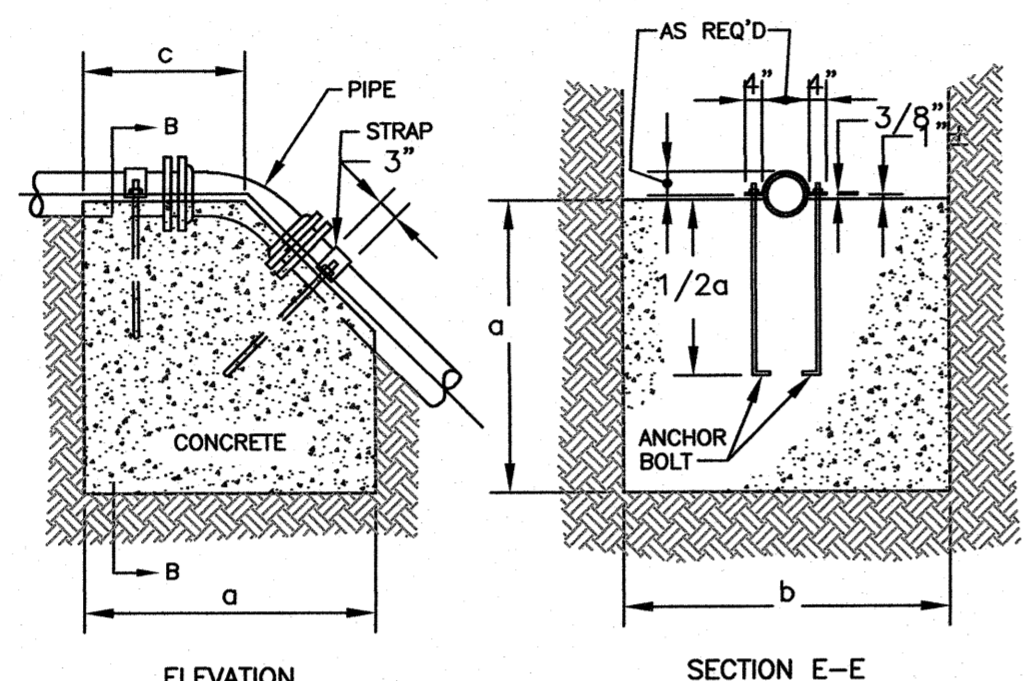
NTS

VERTICAL ANCHOR DIMENSIONS
UP TO 150 P.S.I. WORKING PRESSURE

PIPE SIZE	45° BEND			22 1/2° BEND			11 1/4° BEND		
	DIMENSION	ROD DIA.	ROD DIA.	DIMENSION	ROD DIA.	ROD DIA.	DIMENSION	ROD DIA.	ROD DIA.
4"	3'-0"	3/4"	2'-0"	2'-6"	3/4"	2'-0"	2'-0"	3/4"	2'-0"
6"	3'-0"	3/4"	2'-0"	2'-6"	3/4"	2'-0"	2'-0"	3/4"	2'-0"
8"	3'-6"	3/4"	2'-6"	3'-0"	3/4"	2'-6"	2'-6"	3/4"	2'-6"
10"	4'-3"	3/4"	3'-0"	3'-6"	3/4"	3'-0"	2'-9"	3/4"	2'-9"
12"	4'-9"	3/4"	3'-3"	4'-0"	3/4"	3'-3"	3'-3"	3/4"	3'-3"

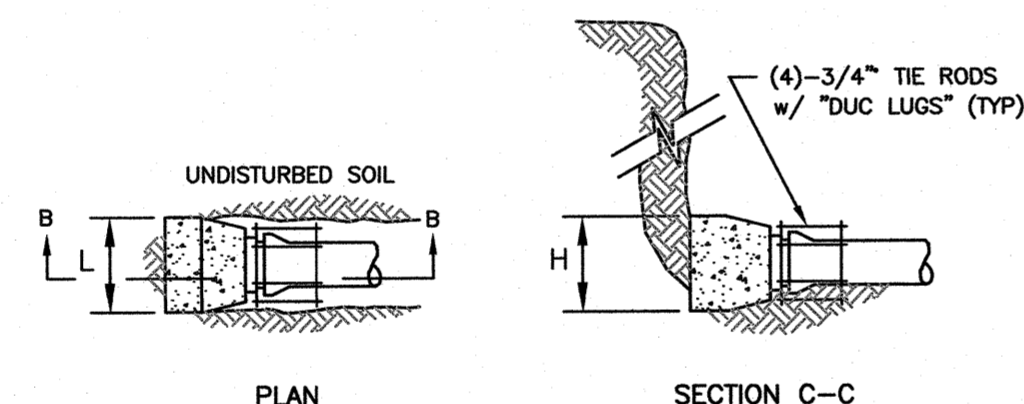


USE SAME DIMENSIONS AS FOR HORIZONTAL BEND ANCHORS



VERTICAL BEND

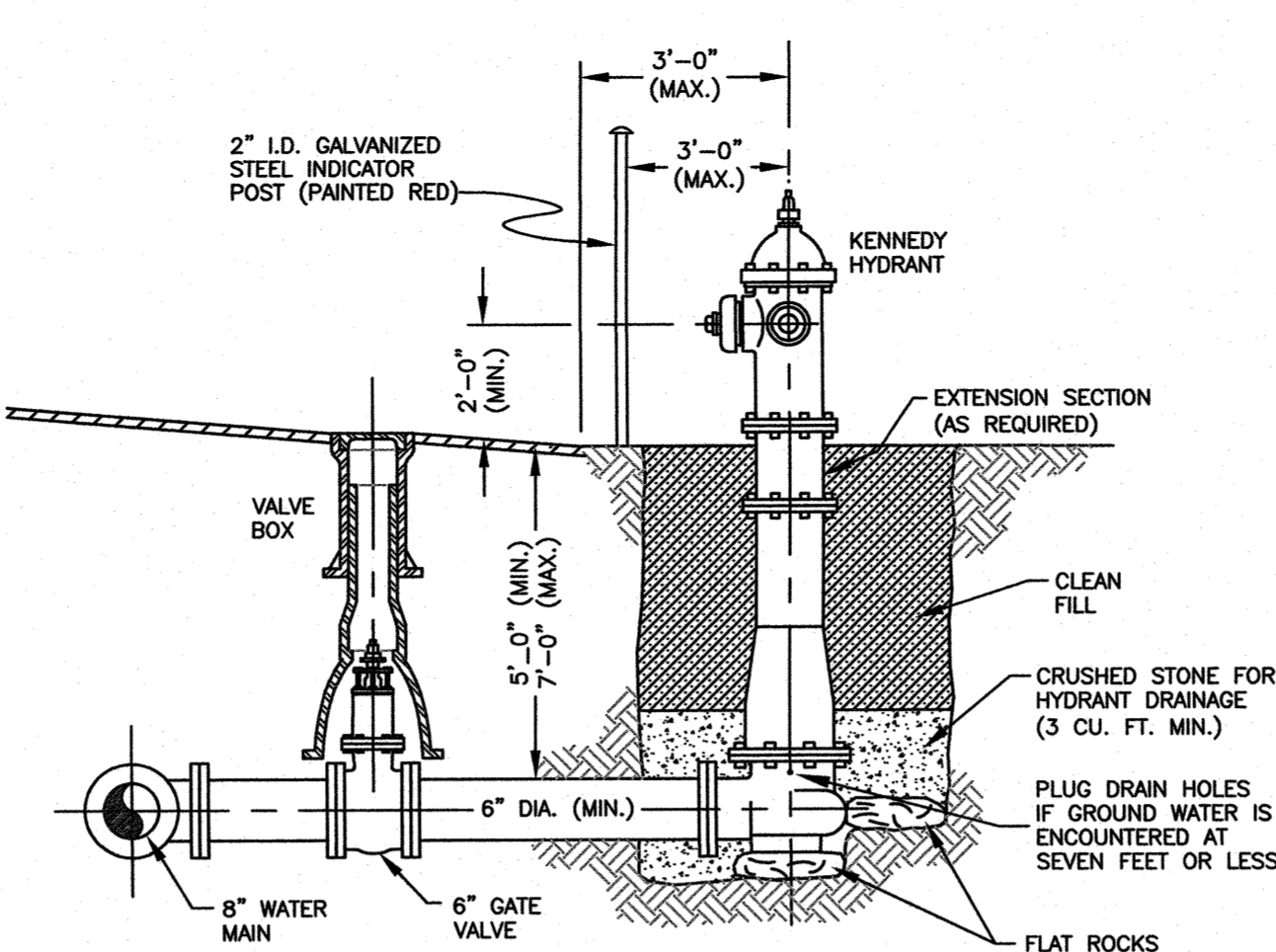
ALL EXPOSED PORTIONS OF ANCHOR STRAPS TO RECEIVE TWO FIELD COATS (MIN.) OF BITUMASTIC MATERIAL



RESTRAINED PLUG OR CAP

NOTE: SEE CHART "HORIZONTAL ANCHOR DIMENSIONS" TIE RODS TO BE PROVIDED IN LIEU OF THRUST BLOCK

VERTICAL ANCHORING



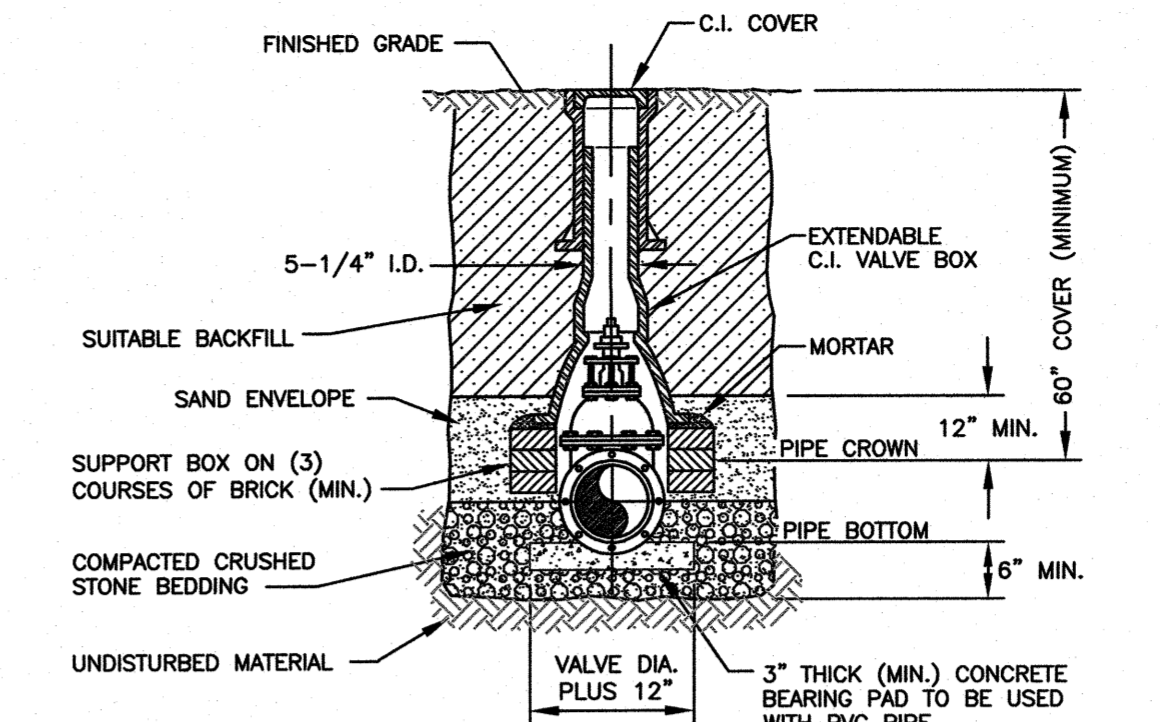
- NOTES:
- 1) HYDRANTS SHALL BE INSTALLED A MAXIMUM DISTANCE OF 3 FEET CURB LINE TO OPERATING NUT.
 - 2) THE PUMPER OUTLET NOZZLE SHALL FACE THE STREET.
 - 3) CENTERLINE OF NOZZLES SHALL BE A MINIMUM OF 2 FEET ABOVE FINISHED GRADE OF STREET.
 - 4) AREA AROUND HYDRANT SHALL BE GRADED TO ALLOW ANY SURFACE WATER TO DRAIN AWAY FROM HYDRANT.
 - 5) HYDRANT SHALL BE FIRMLY SUPPORTED ALL AROUND THE STANDPIPE.
 - 6) EARTH FILL SHALL BE TAMPED TO GIVE FIRM SUPPORT TO THE HYDRANT BARREL.
 - 7) A GATE VALVE SHALL BE INSTALLED BETWEEN THE HYDRANT AND THE MAIN ON THE LATERAL.
 - 8) HYDRANT LATERALS SHALL BE 6" INSIDE DIAMETER (MINIMUM).
 - 9) HYDRANT LATERALS SHALL BE CONNECTED TO WATER MAINS 8 INCHES IN DIAMETER OR LARGER.
 - 10) ALL JOINTS AT HYDRANT CONNECTION SHALL BE RESTRAINED MECHANICAL JOINTS.
 - 11) INSTALLATION OF HYDRANTS IN AREAS OF HEAVY VEGETATIVE GROWTH SHALL HAVE A 10 FOOT RADIUS CLEAR AREA ALL AROUND THE OPERATING NUT OF THE HYDRANT.
 - 12) THERE SHALL ALSO BE AN INDICATOR POST FABRICATED FROM 2 INCH INSIDE DIAMETER GALVANIZED STEEL PIPE, 7 FEET ABOVE FINISHED GRADE, AND SET 2 FEET BELOW GRADE IN CLASS "A" CONCRETE CONCRETE 6 INCHES ALL AROUND POST. THIS POST SHALL BE COATED WITH ZINC CHROMATE PRIMER AND PAINTED WITH HIGH VISIBILITY RED. THE INDICATOR POST SHALL BE NO CLOSER THAN 3 FEET FROM THE OPERATING NUT, AND SET ON THE SIDE OF THE HYDRANT FACING ONCOMING TRAFFIC. TOP OF POST SHALL BE THREADED AND CAPPED.
 - 13) INSTALLATION OF HYDRANTS IN HEAVY GROWTH AREAS SHALL HAVE GATE BOXES RAISED 6 INCHES ABOVE GRADE AND SHALL BE PAINTED ORANGE FOR HIGH VISIBILITY.



FIRE HYDRANT INSTALLATION DETAIL

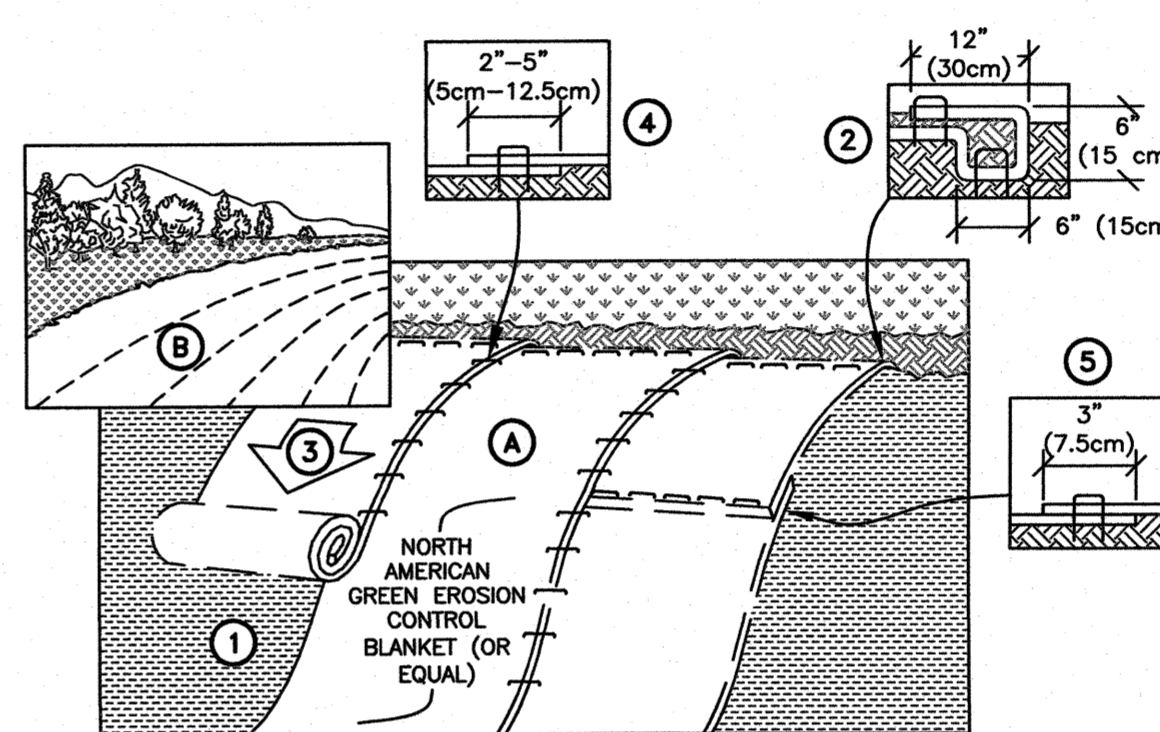
PORTSMOUTH

NTS



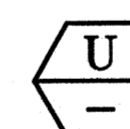
TYPICAL VALVE BOX INSTALLATION

NTS



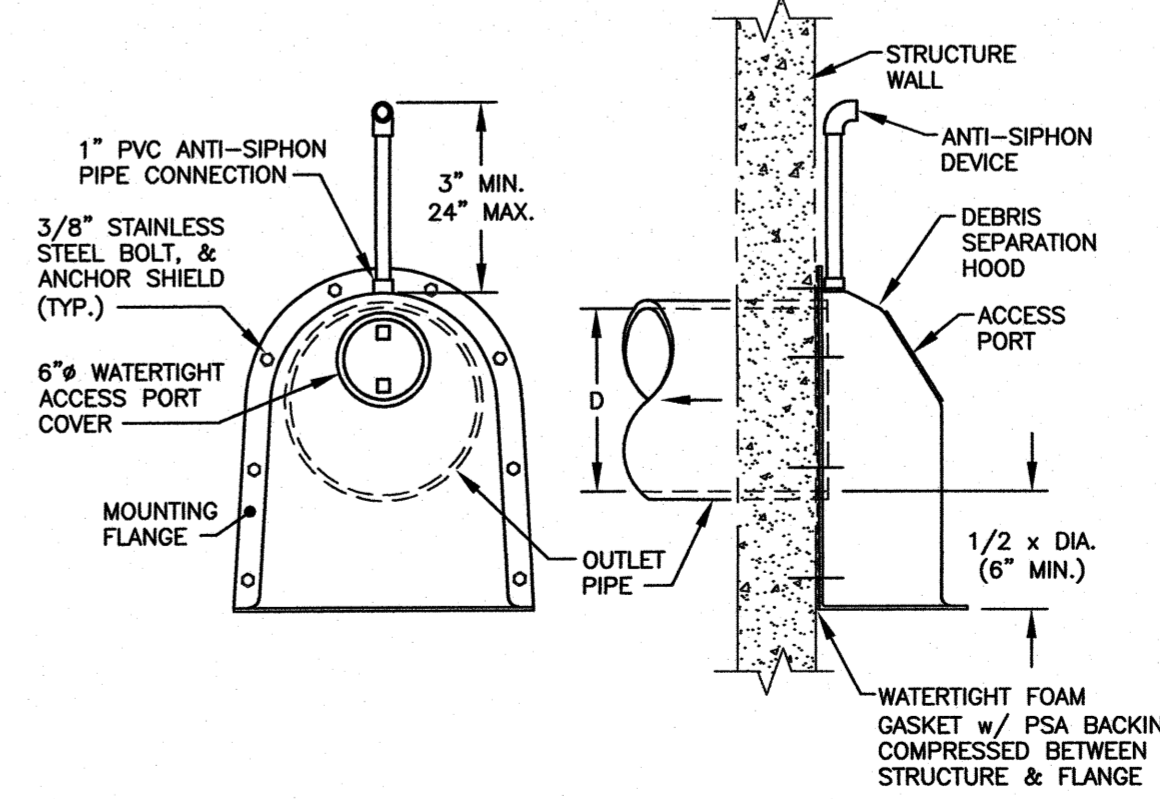
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" 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" APART ACROSS THE WIDTH OF THE RECP'S.
3. 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.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.



EROSION CONTROL BLANKET

FOR SLOPES STEEPER THAN 3:1, UP TO 2:1 (AS NEEDED) NTS



FRONT VIEW

SIDE VIEW

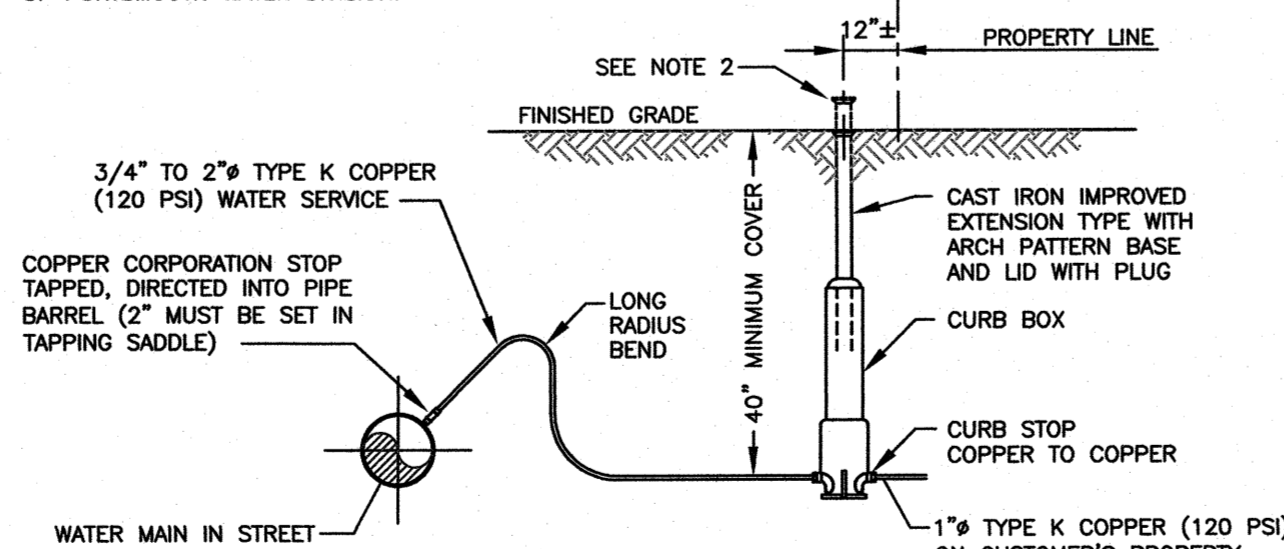


CATCH BASIN OUTLET HOOD DETAIL

THE "SNOOT"

NTS

- NOTE:
- 1) INSTALLATION OF WATER MAIN TAP & CURB STOP & BOX SHALL ONLY BE PERFORMED BY THOSE AUTHORIZED BY THE PUBLIC WORKS DEPARTMENT.
 - 2) IN AREAS OF HEAVY GROWTH THE CURB BOX COVER SHALL BE SET 6" ABOVE FINISH GRADE AND A WITNESS STAKE SET.
 - 3) CURB BOX SHALL BE SET APPROXIMATELY 12" OUTSIDE PROPERTY LINE AS SHOWN.
 - 4) PRIOR TO ACCEPTANCE, A PLAN INDICATING THE LOCATION OF THE CURB BOX SHALL BE SUBMITTED TO THE CITY OF PORTSMOUTH WATER DIVISION.



WATER SERVICE CONNECTION

(PORTSMOUTH)

NTS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE

PROPOSED SUBDIVISION CLIPPER TRADERS, LLC 105 BARTLETT STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
3	DETAIL REFERENCES	12/6/18
2	ISSUED FOR APPROVAL	10/16/18
1	ISSUED FOR COMMENT	9/18/18
0	ISSUED FOR COMMENT	2/12/18

REVISIONS

NO.	DESCRIPTION	DATE

SCALE: AS NOTED FEBRUARY 2018

DETAILS

D4

GENERAL NOTES

- 1) MINIMUM PIPE SIZE FOR COMMERCIAL SERVICE SHALL BE SIX INCHES.
- 2) PIPE AND JOINT MATERIALS:
 - A. PLASTIC SEWER PIPE

1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F679	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F789	PVC (SOLID WALL)	4" THROUGH 18" (T-1 To T-3)
F794	PVC (RIBBED WALL)	8" THROUGH 36"
AWWA C900	PVC (SOLID WALL)	8" THROUGH 18"

*PVC: POLYVINYL CHLORIDE

2. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON BELL AND SPIGOT TYPE.

B. DUCTILE IRON PIPE, FITTINGS AND JOINTS.

1. DUCTILE IRON PIPE AND FITTINGS FOR SEWERS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:

A21.50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A-536 DUCTILE IRON CASTINGS.

A21.51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOULDS OR SAND LINED MOULDS FOR SEWER APPLICATIONS.

2. JOINTS SHALL BE OF THE MECHANICAL OR PUSH ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO:

A21.11 RUBBER GASKET JOINTS FOR CAST IRON PRESSURE PIPE & FITTINGS.

3) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.

5) TEES AND WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE DEPENDING ON THE PIPE ENCOUNTERED, FOR PVC PIPE, USE PVC SADDLES OR INSERT-A-TEE, OR CUT IN A SANITARY TEE. FOR CLAY PIPE, USE INSERT-A-TEE OR CUT IN A SANITARY TEE. ALL WORK TO BE APPROVED BY GOVERNING BODY.

6) HOUSE SEWER INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND REFILL FOR DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7) TESTING: WHEN REQUIRED BY THE GOVERNING AUTHORITY, TESTING SHALL CONFORM TO ENV-WQ 704.07.

8) ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM DWELLING TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR OTHER SIMILAR CONNECTIONS CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.

9) WATER SERVICE SHALL NOT BE LAID IN SAME TRENCH AS SEWER SERVICE, UNLESS IT IS ON A SHELF 12" HIGHER, AND 18" APART.

10) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE, FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90%-100% PASSING	3/4 INCH SCREEN
20%- 55% PASSING	3/8 INCH SCREEN
0%- 10% PASSING	#4 SIEVE
0%- 5% PASSING	#8 SIEVE

WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.

11) LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPE FINDER.

12) CAST-IN-PLACE CONCRETE: SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

CEMENT:	6.0 BAGS PER CUBIC YARD
WATER:	5.75 GALLONS PER BAG OF CEMENT
MAXIMUM AGGREGATE SIZE:	3/4 INCH

13) CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION. CHIMNEY INSTALLATION AS RECOMMENDED BY THE PIPE MANUFACTURER MAY BE USED IF APPROVED BY THE ENGINEER.

14) BACKFILL UP TO SUBBASE GRAVEL SHALL BE WITH EXCAVATED SOIL FROM TRENCHING OPERATIONS. COMPACT IN 8" LIFTS WITH VIBRATORY PLATE COMPACTORS TO 90% OF MODIFIED PROCTOR DENSITY. IF FINE-GRAINED, COMPACT WITH POGO STICKS OR SHEEPSFOOT ROLLERS. PLACE NO LARGE ROCKS WITHIN 24" OF PIPE. TRENCHES THAT ARE NOT ADEQUATELY COMPACTED SHALL BE RE-EXCAVATED AND BACKFILLED UNDER THE SUPERVISION OF THE DESIGN ENGINEER OR GOVERNING BODY. UNSUITABLE BACKFILL MATERIAL INCLUDES CHUNKS OF PAVEMENT, TOPSOIL, ROCKS OVER 6" IN SIZE, MUCK, PEAT OR PIECES OF PAVEMENT.

15) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB-SITE SAFETY AND COMPLIANCE WITH GOVERNING REGULATIONS.

GENERAL NOTES, cont'd

16) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. FOR TRENCH WIDTH SEE TRENCH DETAIL.

17) SAND BLANKET: CLEAN SAND, FREE FROM ORGANIC MATTER, SO GRADED THAT 90% - 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.

18) BASE COURSE GRAVEL, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE:

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION.

19) FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

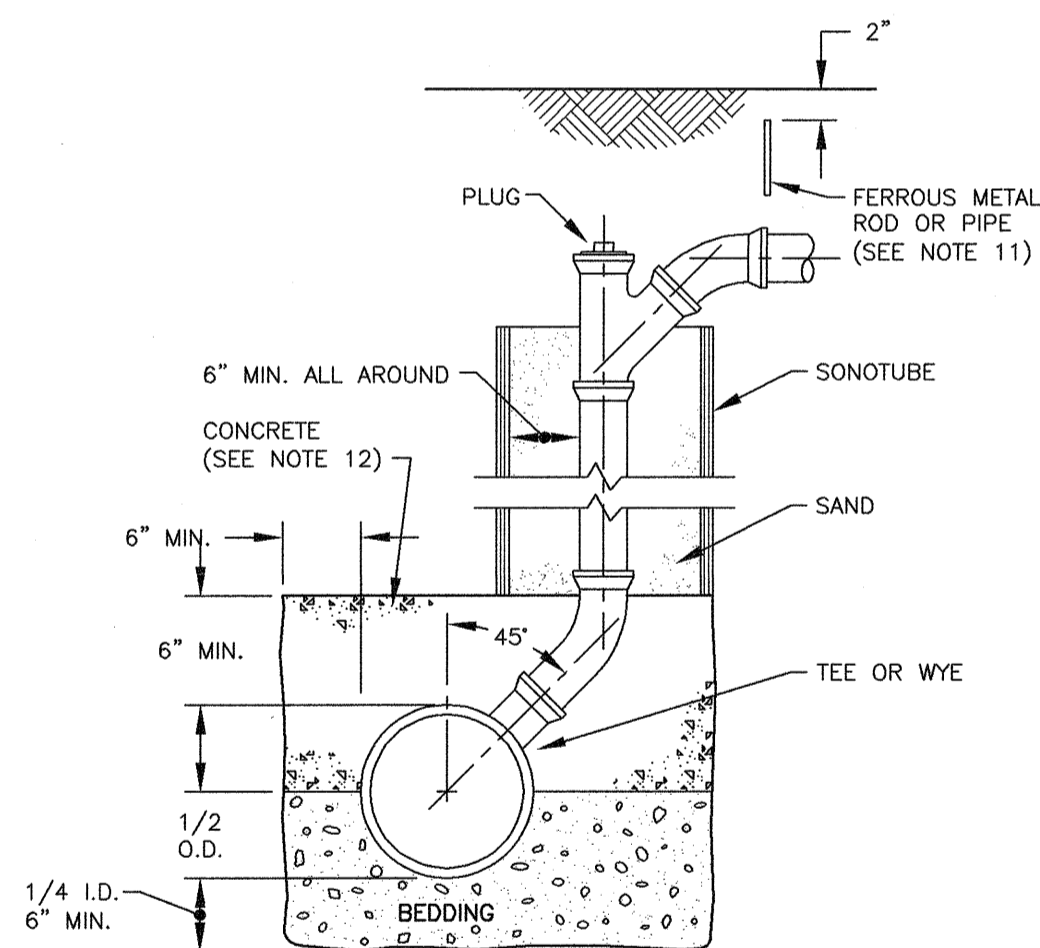
20) IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.

21) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

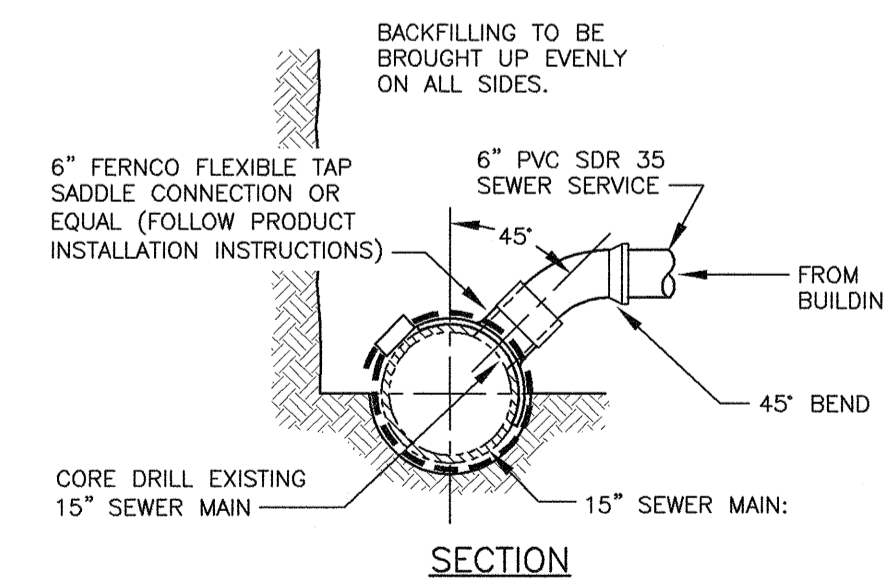
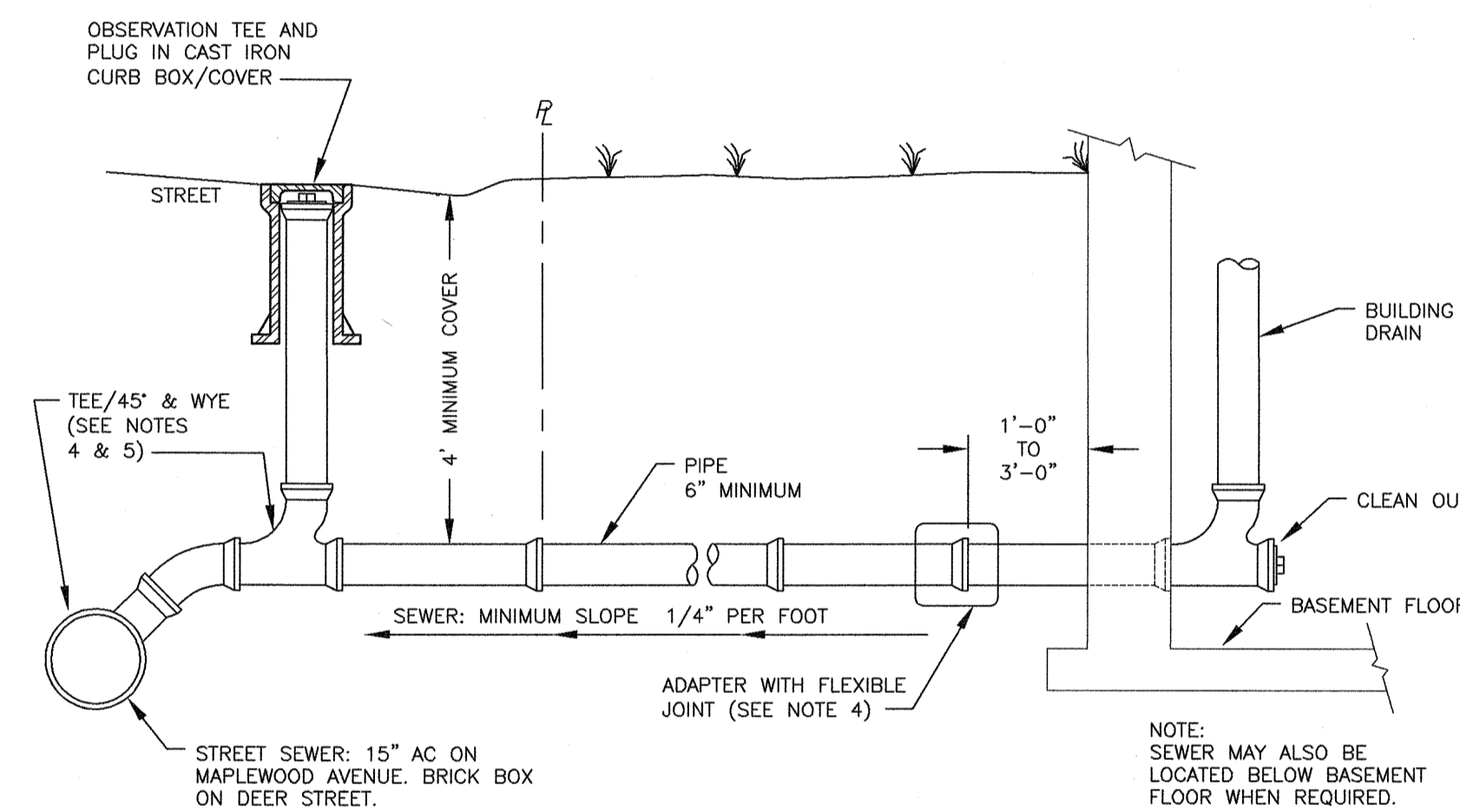
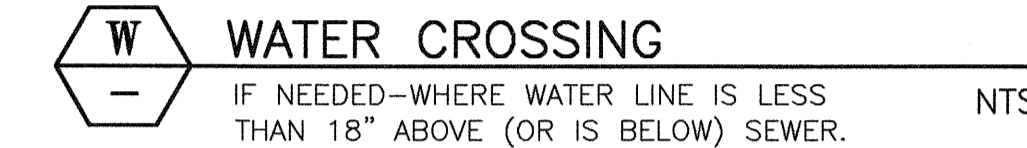
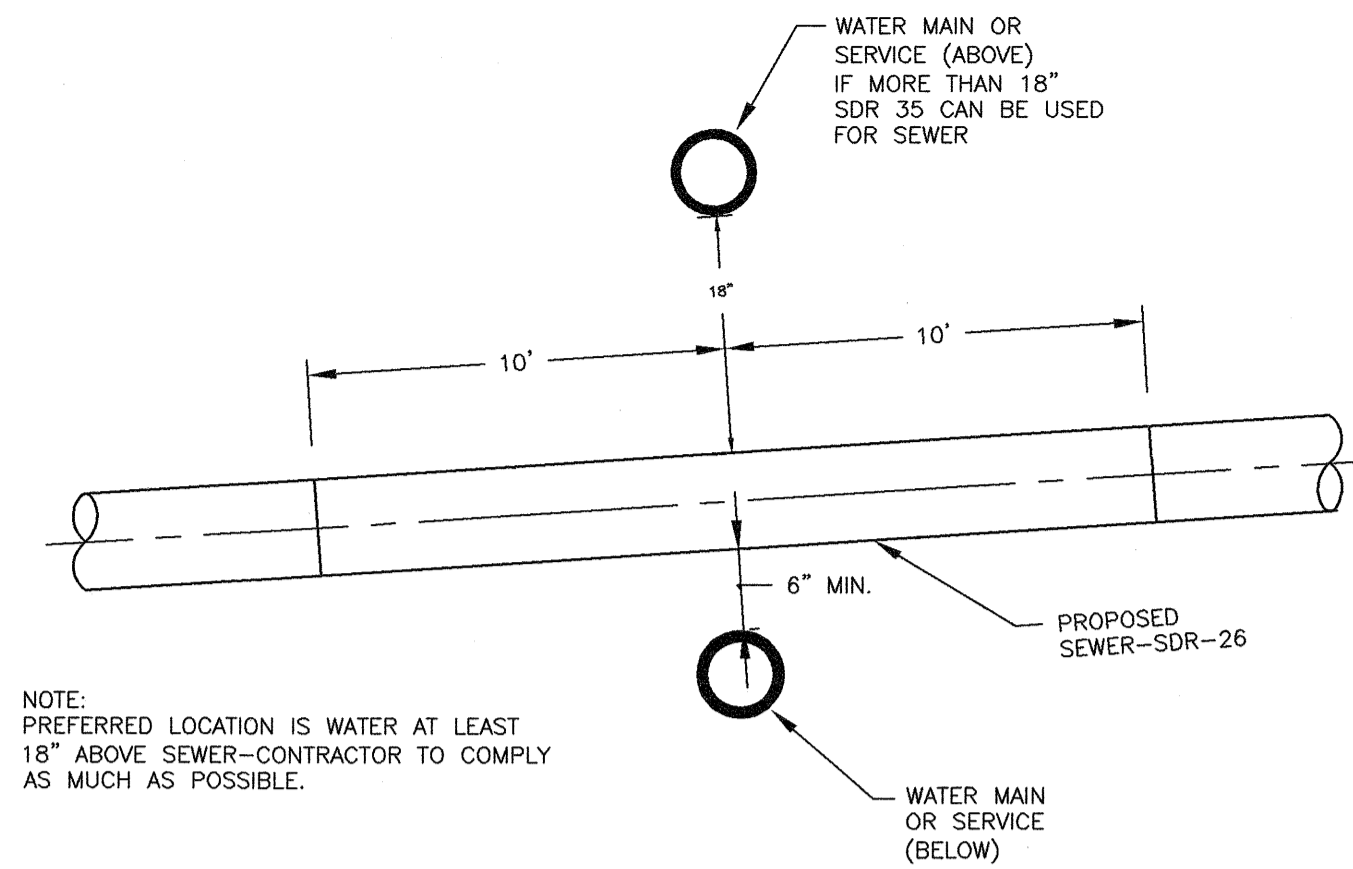
22) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION.

23) THE PURPOSE OF THIS PLAN IS TO SHOW STANDARDS FOR SEWER CONSTRUCTION.

24) ALL WORK SHALL BE IN COMPLIANCE WITH NHDES CODE OF ADMINISTRATIVE RULES PART ENV-WQ 704 DESIGN OF SEWERS.



NO BACKFILLING BEFORE CONCRETE HAS TAKEN INITIAL SET (7 HRS. MIN.). BACKFILLING TO BE BROUGHT UP EVENLY ON ALL SIDES.

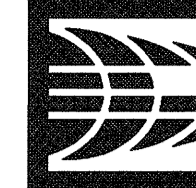


NOTE: COORDINATE DESIGN OF BRICK BOX SEWER CONNECTION WITH CITY OF PORTSMOUTH DPW. PROVIDE SHOP DRAWINGS FOR REVIEW.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

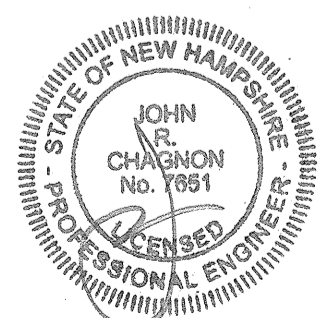
1) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

2) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

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**PROPOSED SUBDIVISION
CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, N.H.**

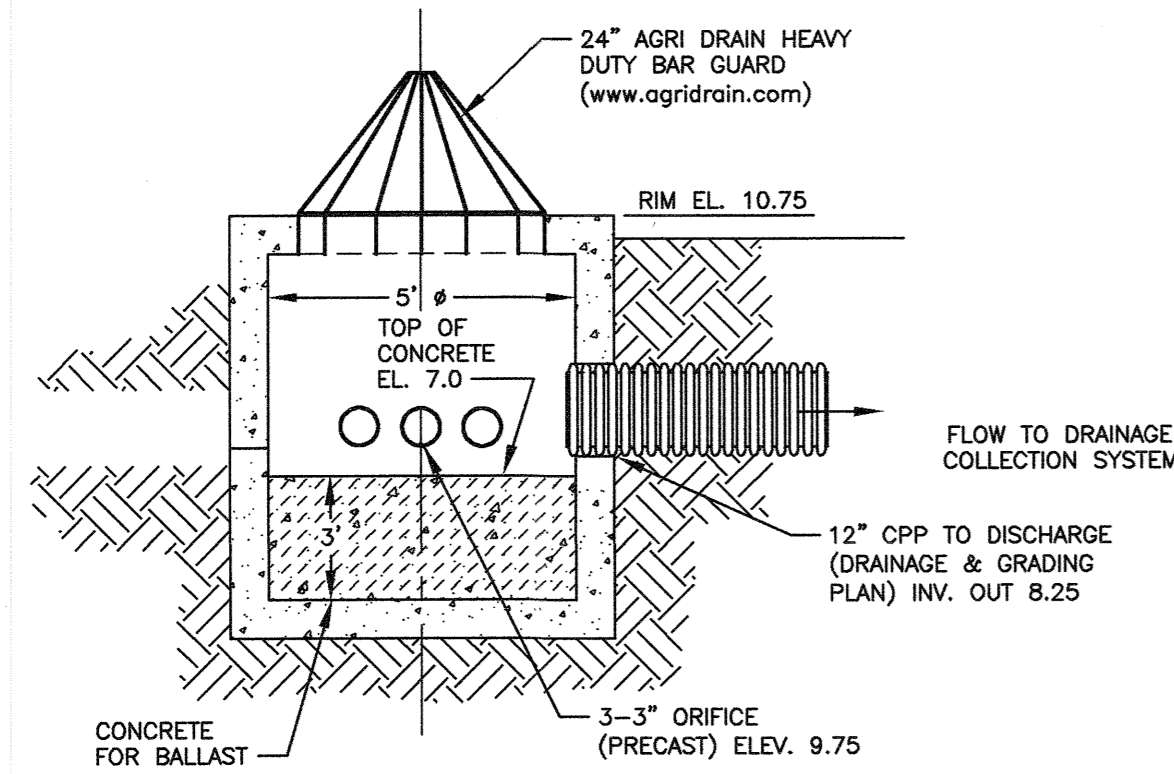
NO.	DESCRIPTION	DATE
0	ISSUED FOR APPROVAL	10/16/18
REVISIONS		



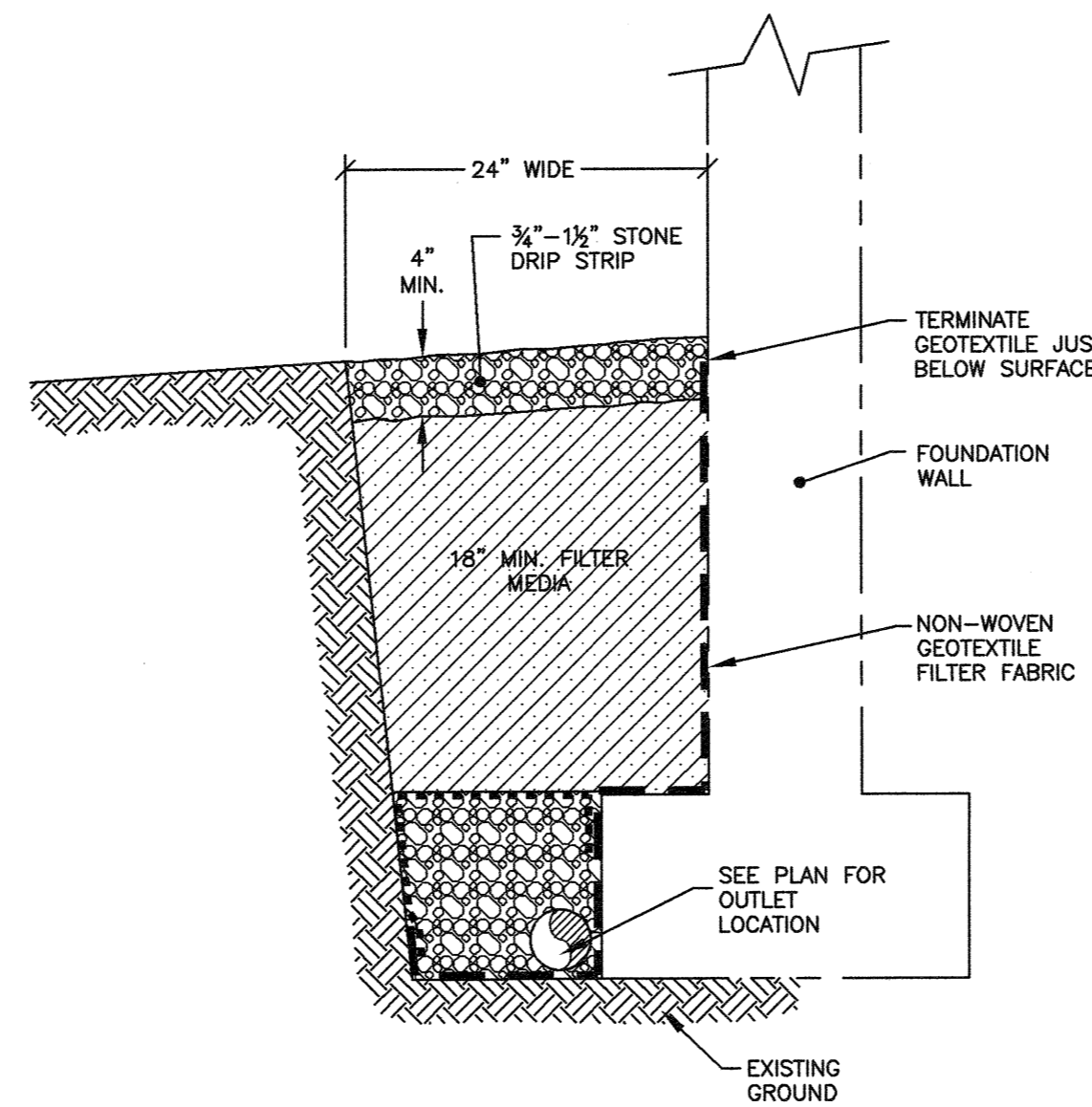
SCALE: AS NOTED FEBRUARY 2018

SEWER DETAILS

D5



EE C9 FOREBAY OUTLET CONTROL STRUCTURE NTS



BB C10 STONE DRIP APRON (UNDER BUILDING DRIP LINE) NTS

SAND SPECIFICATION

SIEVE SIZE	ASTM C33 FINE AGGREGATE SPECIFICATION
3/8"	100
#4	95-100
#10	80-100
#16	50-85
#30	25-60
#40	50-85
#50	5-30
#100	0-10

FILTER MEDIA

SOIL FILTER LAYER:
 20% - 30% MULCH BY VOLUME, MIXED THOROUGHLY WITH LOAMY, COARSE SAND (70% - 80% BY VOLUME) MEETING THE FOLLOWING GRADATION:

SIEVE NO.	% BY WEIGHT, PASSING
10	85 - 100
20	70 - 100
60	15 - 40
200	8 - 15

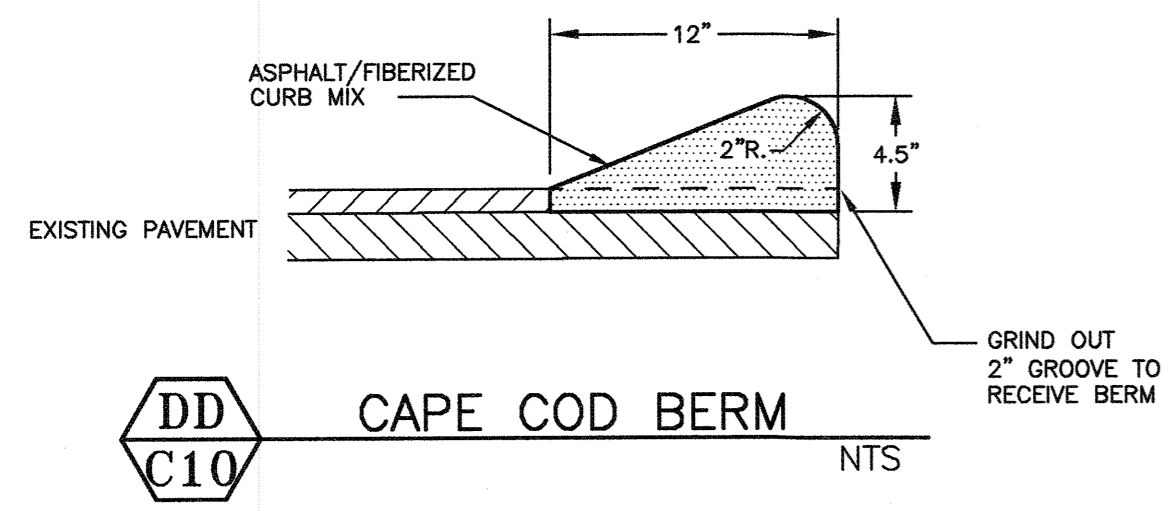
FILTRATION MAINTENANCE
 SOILS: VISUALLY INSPECT AND REPAIR EROSION MONTHLY. USE SMALL STONES TO STABILIZE EROSION ALONG DRAINAGE PATHS. CHECK THE pH ONCE OR TWICE A YEAR. APPLY AN ALKALINE PRODUCT, SUCH AS LIMESTONE, IF NEEDED.

FILTRATION CONSTRUCTION
 SOILS: DO NOT COMPACT SOIL. HAND RAKE STONE, PEA STONE AND MULCH LAYERS.

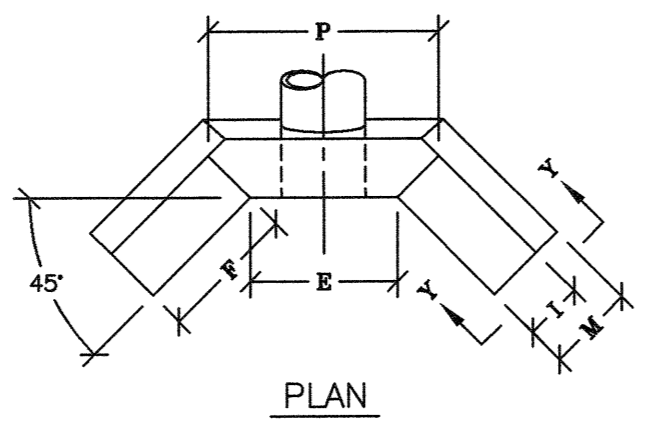
IF FILTRATION BASIN FAILS TO EMPTY 72 AFTER A RAINFALL, THE BASIN SHALL BE INSPECTED. IF AFTER INSPECTION IT IS DETERMINED THAT THE ENGINEERED SOIL HAS CLOGGED, THE ENGINEERED SOIL SHALL BE REPLACED. IN THE EVENT OF SOIL REPLACEMENT IN THE FILTRATION BASIN, AN AIRSPADE SHALL BE USED, TO CAREFULLY REMOVE THE SOILS SURROUNDING THE TREE ROOTS. TREE ROOTS ARE TO BE PROTECTED FROM DRYING OUT DURING THE PLACEMENT OF NEW SOILS AND NEW SOILS ARE TO BE REPLACED IMMEDIATELY UPON EXPOSING THE ROOT SYSTEMS.

FILTRATION CONSTRUCTION INSPECTION
 INSPECT EACH LAYER OF CONSTRUCTION. CONTACT THE PORTSMOUTH DEPARTMENT OF PUBLIC WORKS FOR INSPECTIONS DURING THE CONSTRUCTION PROCESS. CALL FOR INSPECTION BEFORE FILLING EXCAVATION WITH STONE, PEA STONE AND MULCH.

- NOTES:**
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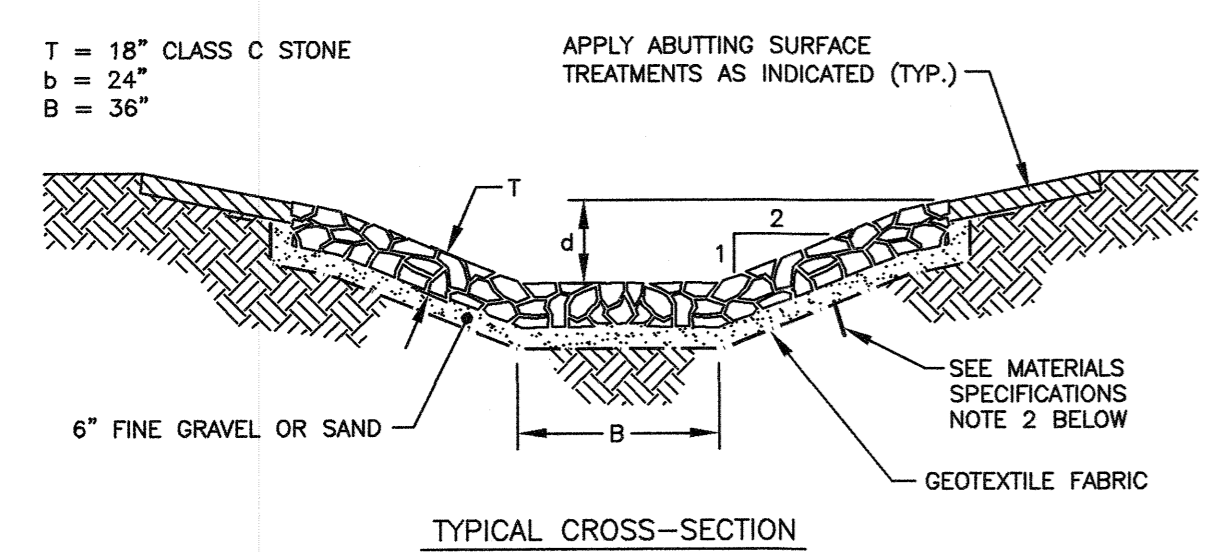


DD C10 CAPE COD BERM NTS

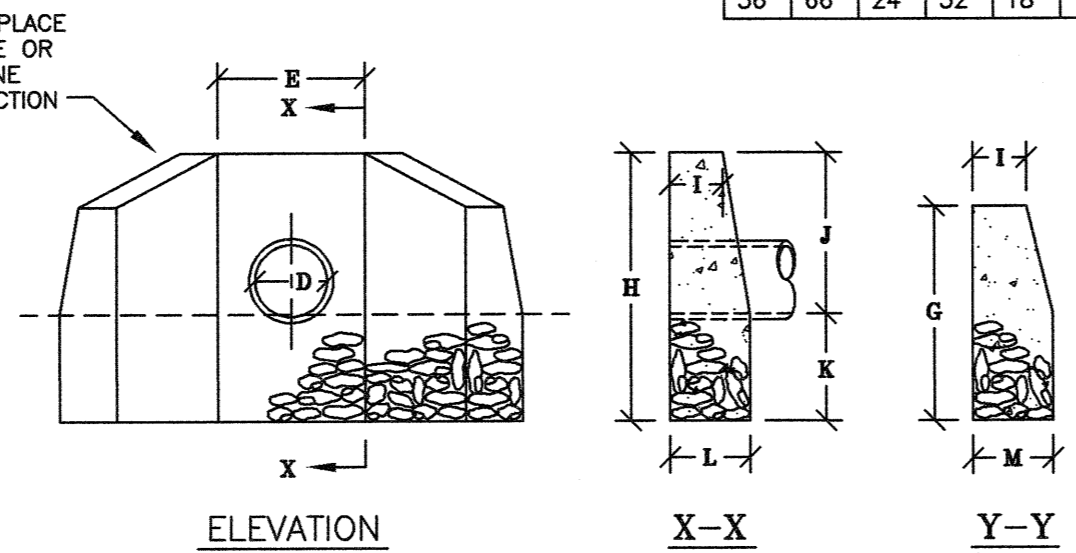


D	E	F	G	H	I
12"	30"	60"	48"	60"	12"
15"	33"	32"	48"	60"	12"
18"	36"	36"	48"	60"	12"
24"	42"	60"	48"	66"	12"
30"	48"	52"	48"	72"	12"
36"	54"	60"	48"	90"	12"

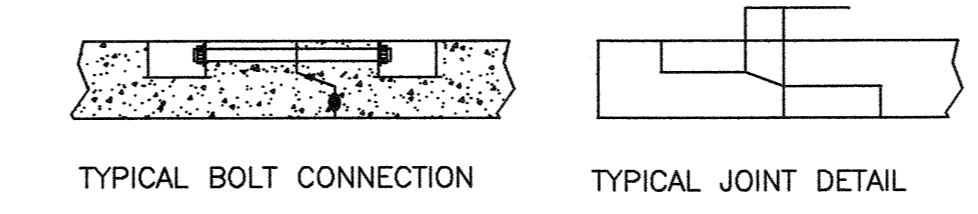
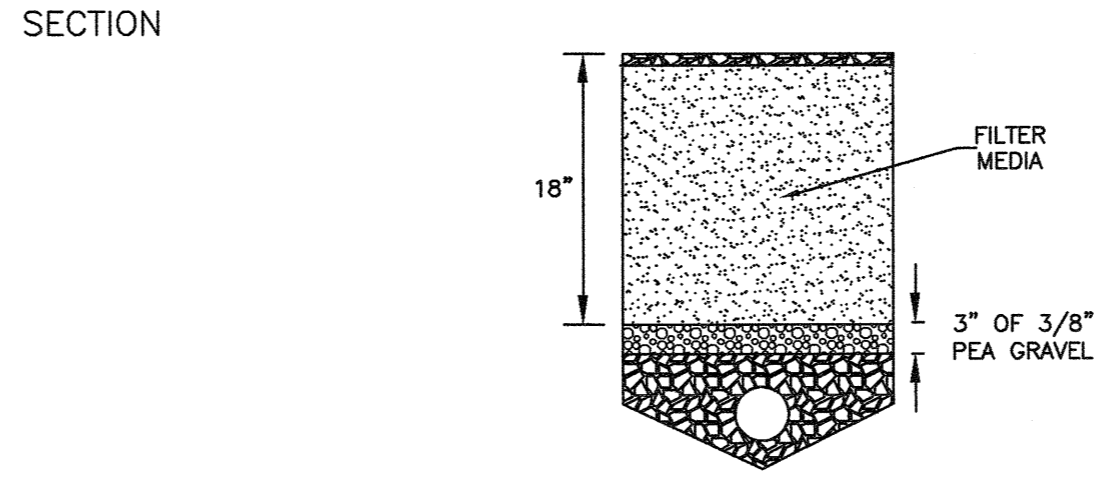
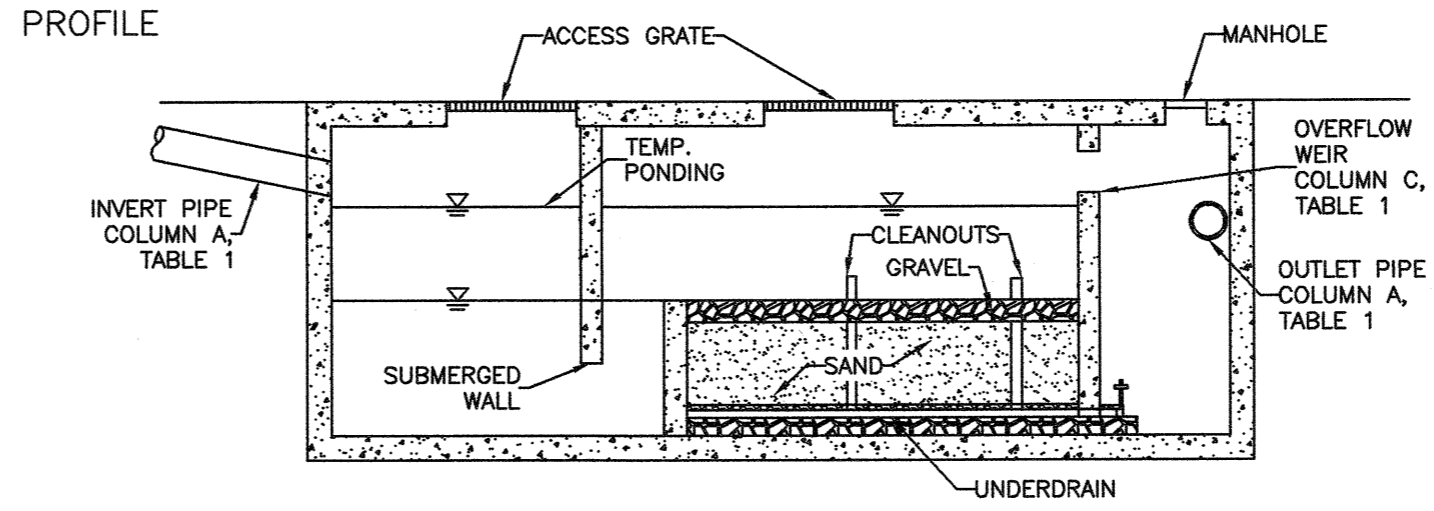
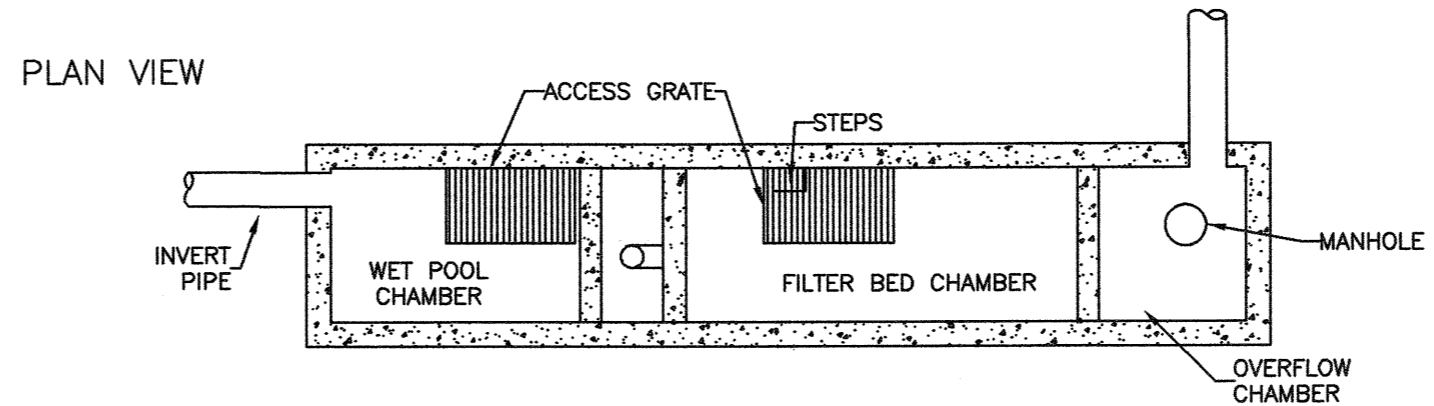
D	J	K	L	M	P
12"	66"	24"	16"	18"	47"
15"	36"	24"	18"	18"	50"
18"	36"	24"	20"	18"	53"
24"	42"	24"	24"	18"	60"
30"	48"	24"	28"	18"	65"
36"	66"	24"	32"	18"	72"



FF C9 C10 RIP RAP LINED OUTLET NTS



GG C9 C10 HEADWALL DETAIL NTS



- NOTES:**
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 2. DESIGN CONFORMS WITH 310 CMR 15.00, DEP TITLE 5 REGS, FOR SEPTIC TANKS.
 3. ALL REINFORCEMENT PER ASTM A-615
 4. DESIGNED FOR AASHTO HS-20 LOADING, 2 TO 5 FEET COVER.
 5. PIPES AND FILTER MEDIA PROVIDED BY SITE CONTRACTOR.
 6. TONGUE AND GROOVE JOINT SEALED WITH BUTYL RESIN AND BOLTED WITH 3/4" DIA BOLTS.

TABLE 1

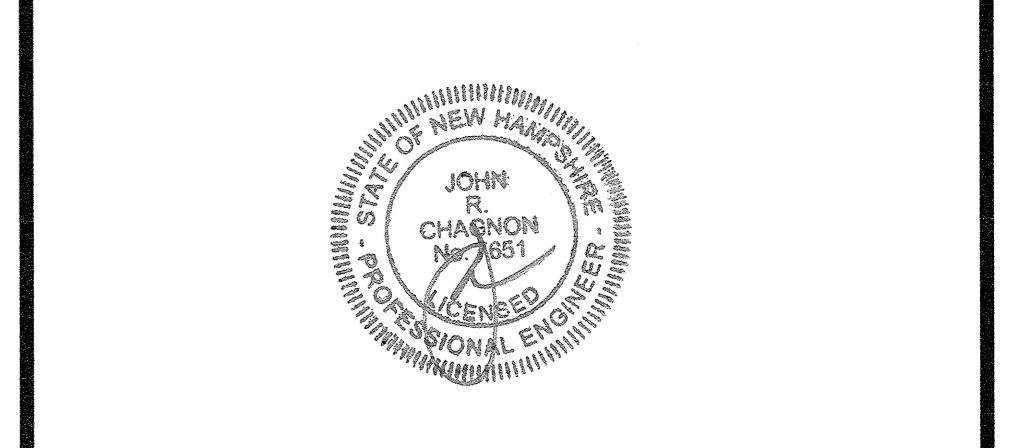
SYSTEM	A	B	C
1	5.81	0.81	6.48
2	5.32	0.32	5.99
3	6.58	1.58	7.52

HH C9 C10 UNDERGROUND SAND FILTER NTS
 SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION

- MATERIALS SPECIFICATIONS:**
1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF THE STORMWATER MANAGEMENT AND EROSION CONTROL HANDBOOK FOR NEW HAMPSHIRE BEST MANAGEMENT PRACTICE (BMP) FOR ROCK RIP RAP.
 2. ANCHOR PINS FOR FABRIC SHALL MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE FABRIC.
 3. RIP RAP SHALL BE A WELL GRADED MIX OF DURABLE ANGULAR OR SUBANGULAR STONES. FLAT ROCKS SHALL NOT BE USED FOR RIP RAP.
- CONSTRUCTION SPECIFICATIONS:**
1. THE SUBGRADE FOR THE RIP RAP SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, VEGETATION, AND DEBRIS AND PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
 2. THE THICKNESS OF THE RIP RAP LAYER (T) SHALL BE 2.25 TIMES THE ROCK d₅₀ AS DETERMINED BY THE METHOD IN BEST MANAGEMENT PRACTICE FOR ROCK RIP RAP.
 3. GEOTEXTILE FABRIC SHALL BE PROTECTED FROM PUNCTURES OR TEARING DURING PLACEMENT OF THE ROCK RIP RAP BY PLACING A CUSHION OF SAND OR FINE GRAVEL OVER THE FABRIC. 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 PIECES OF FABRIC, SHALL BE A MINIMUM OF 12 INCHES.
 4. STONE FOR 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 DISPLACEMENT OF THE UNDERLYING MATERIALS. HAND PLACEMENT MAY BE REQUIRED TO PREVENT DAMAGE TO ANY PERMANENT STRUCTURES.
 5. VOIDS IN RIP RAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

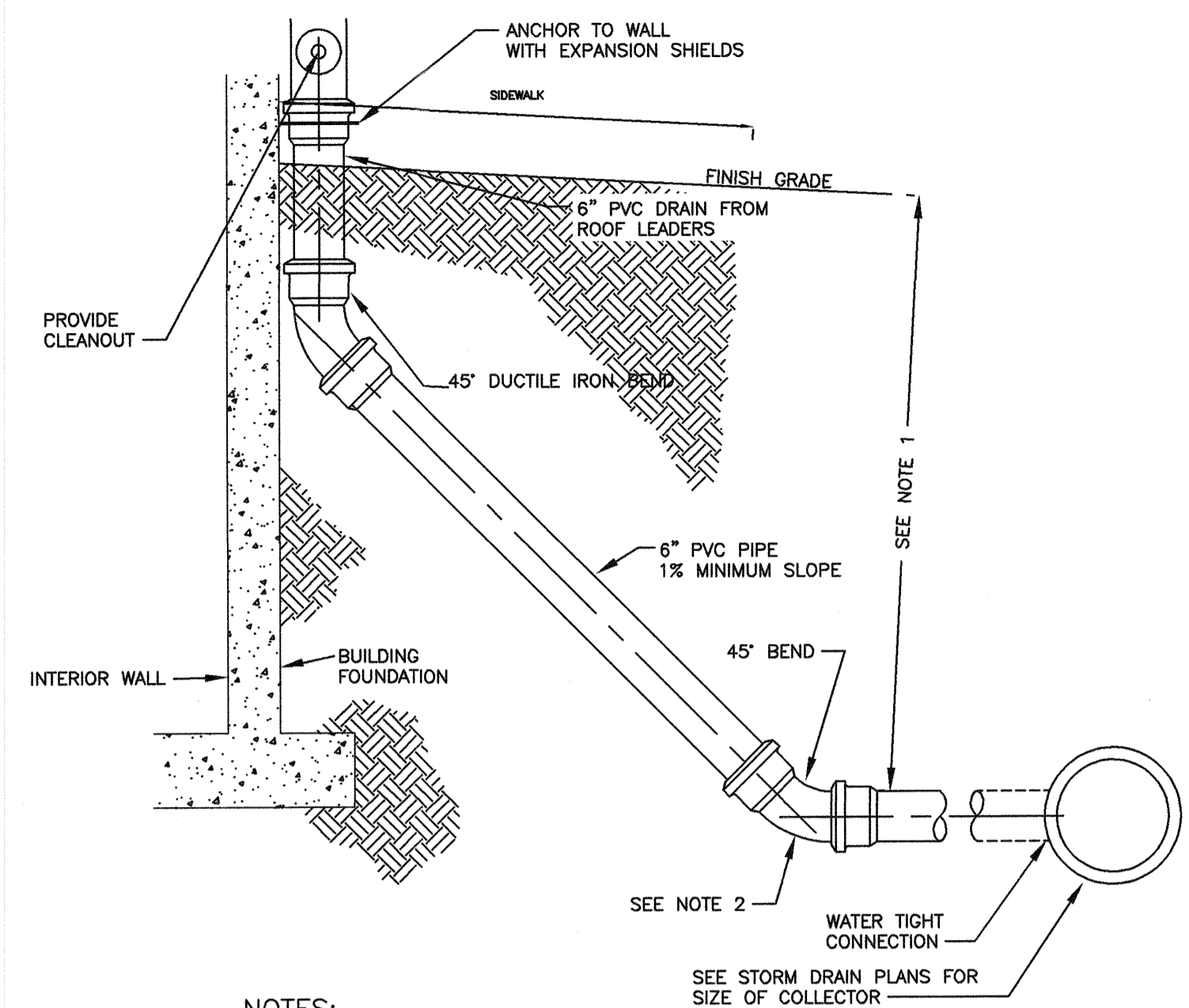
PROPOSED SUBDIVISION
CLIPPER TRADERS, LLC
 105 BARTLETT STREET
 PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
3	HH AND CALLOUTS	12/6/18
2	DETAIL HH	11/30/18
1	DETAIL BB, EE, FF, GG,	11/6/18
0	ISSUED FOR APPROVAL	10/16/18



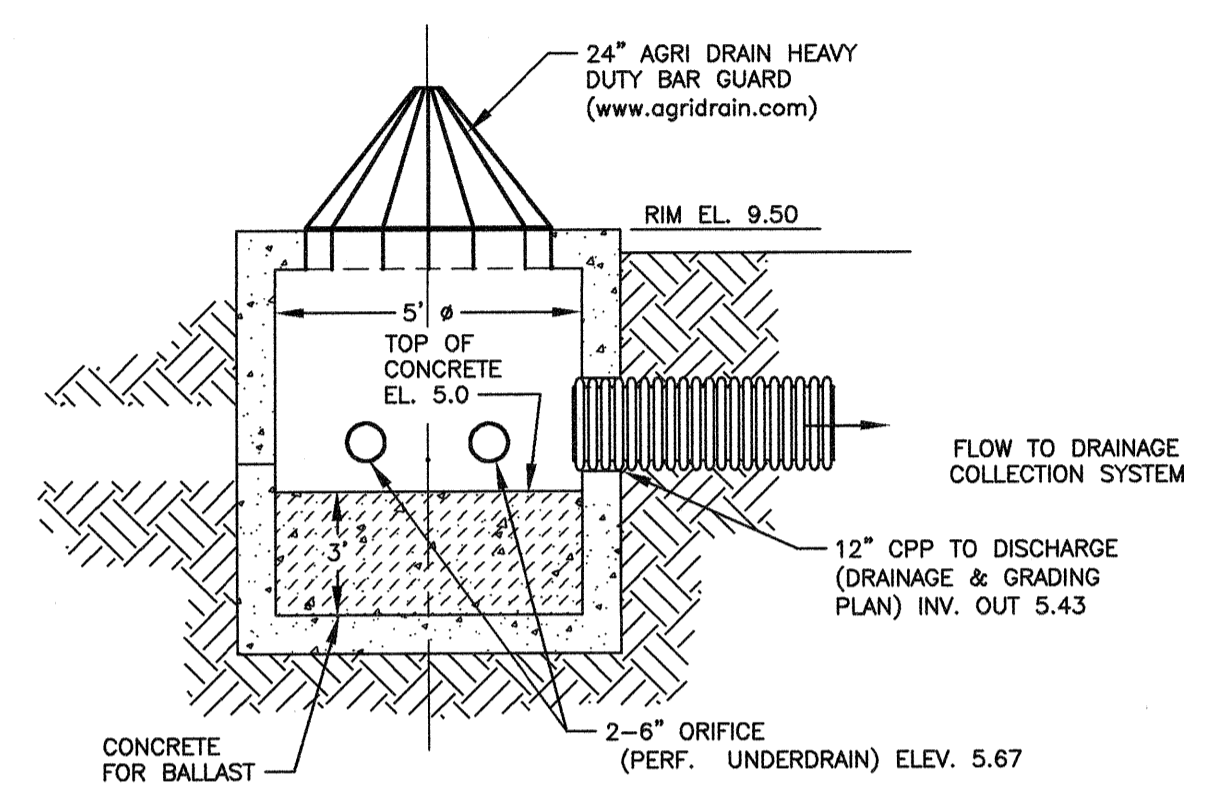
SCALE: AS NOTED FEBRUARY 2018

DETAILS **D6**



- NOTES:**
- 1) FOR ALL DEPTHS OF COVER LESS THAN 2 FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN 2 FEET, FLEXIBLE PIPE MAY BE USED.
 - 2) A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
 - 3) THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE FOUNDATION PENETRATION. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INTERIOR CONNECTION.

II ROOF DRAIN DETAIL
C9 NTS

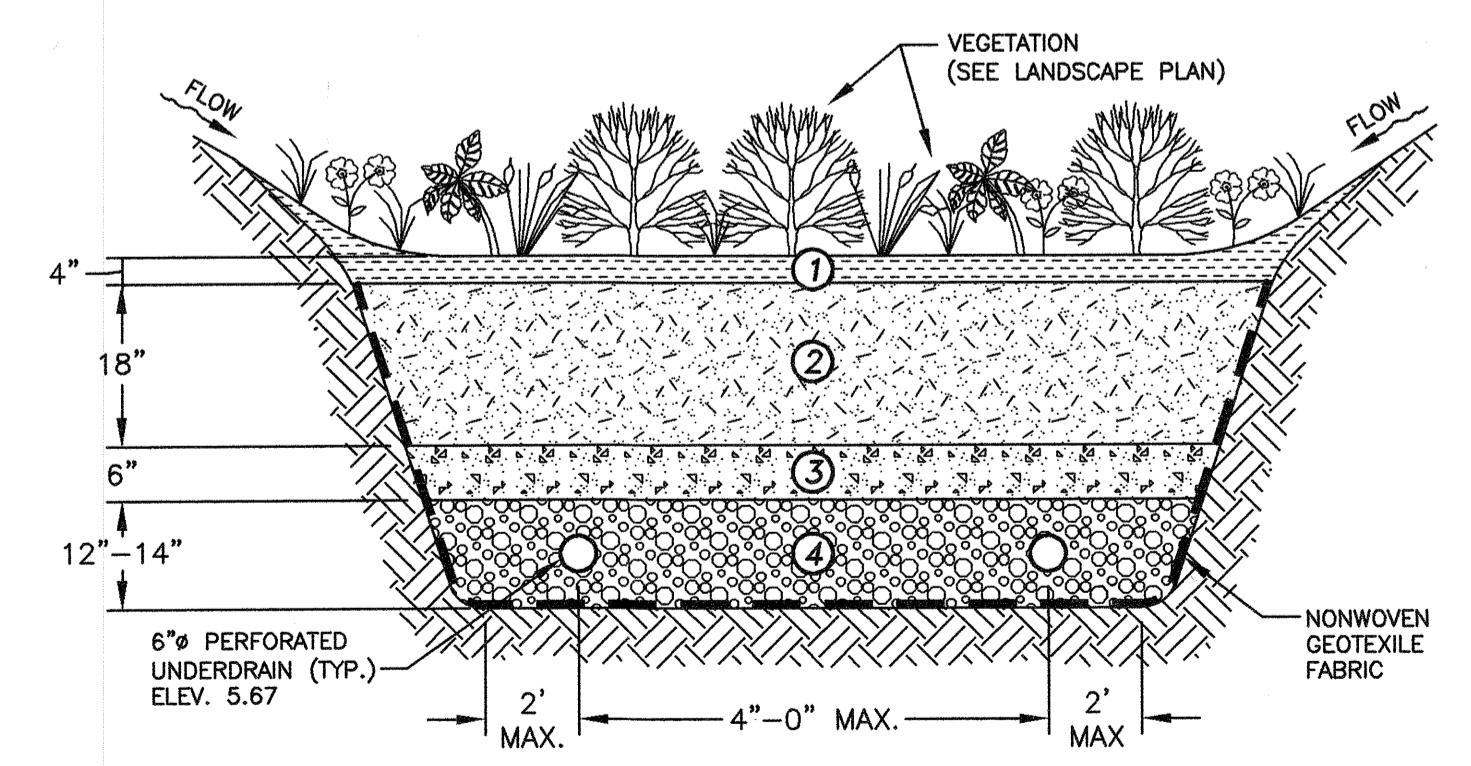


KK RAIN GARDEN OUTLET CONTROL STRUCTURE
C9 NTS

BIORETENTION MAINTENANCE
SOILS: VISUALLY INSPECT AND REPAIR EROSION MONTHLY. USE SMALL STONES TO STABILIZE EROSION ALONG DRAINAGE PATHS. CHECK THE pH ONCE OR TWICE A YEAR. APPLY AN ALKALINE PRODUCT, SUCH AS LIMESTONE, IF NEEDED.
MULCH: REMULCH ANY VOID AREAS BY HAND AS NEEDED. EVERY 6 MONTHS, IN THE SPRING AND FALL, ADD A FRESH MULCH LAYER. ONCE EVERY 2 TO 3 YEARS, IN THE SPRING, REMOVE OLD MULCH LATER BEFORE APPLYING NEW ONE.
PLANTS: IMMEDIATELY AFTER THE COMPLETION OF CELL CONSTRUCTION, WATER PLANT MATERIAL FOR 14 CONSECUTIVE DAYS UNLESS THERE IS SUFFICIENT NATURAL RAINFALL. WHEN TREES HAVE TAKEN ROOT, OR AT LEAST BY 6 MONTHS, REMOVE STAKES AND WIRES. ONCE A MONTH (MORE FREQUENTLY IN SUMMER), VISUALLY INSPECT VEGETATION FOR DISEASE OR PEST PROBLEMS. IF TREATMENT IS WARRANTED, USE THE LEAST TOXIC APPROACH. TWICE A YEAR, FROM MARCH 15TH TO APRIL 30TH AND OCTOBER 1ST TO NOVEMBER 30TH, REMOVE AND REPLACE ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. DURING TIMES OF EXTENDED DROUGHT, LOOK FOR PHYSICAL FEATURES OF STRESS (UNREVIVED WILTING, YELLOW, SPOTTED OR BROWN LEAVES, LOSS OF LEAVES, ETC.). WATER IN THE EARLY MORNING AS NEEDED. WEED REGULARLY, IF NEEDED.

- RAIN GARDEN MEDIA**
- 1) MULCH/GROWING MEDIUM: FINELY SHREDDED WOOD FIBER MULCH OR YARD WASTE COMPOST (FINES <5%).
 - 2) SOIL FILTER LAYER: 20% - 30% MULCH ? BY VOLUME, MIXED THOROUGHLY WITH LOAMY, COARSE SAND (70% - 80% BY VOLUME) MEETING THE FOLLOWING GRADATION:

SIEVE NO.	% BY WEIGHT, PASSING
10	85 - 100
20	70 - 100
60	15 - 40
200	8 - 15
 - 3) ASTM 33 CONCRETE SAND
 - 4) 0.75" - 1.5" CRUSHED STONE, WASHED.

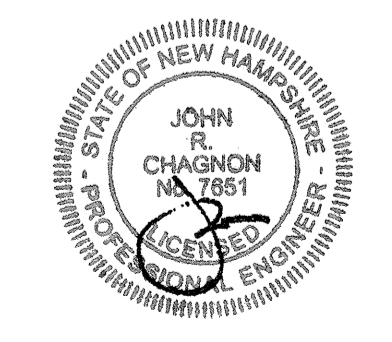


JJ RAIN GARDEN/BIORETENTION DETAIL
C9 NTS

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PROPOSED SUBDIVISION
CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR APPROVAL	12/6/18



SCALE: AS NOTED FEBRUARY 2018

DETAILS **D7**