

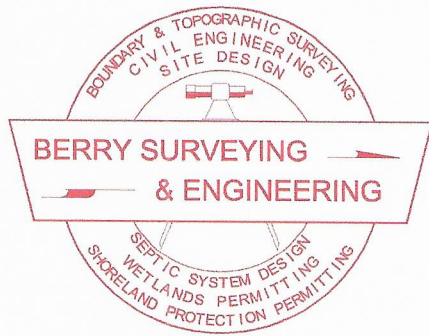


CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: 1st Floor Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, November 14, 2019**
Meeting Time: **10:30 AM**

1. 10:30 AM - 11:15 AM: TRC Review for Knox Marsh Development LLC, Assessor's Map 38, Lot 32-1 & 32-2, zoned R-12, and located at 7 Glenwood Avenue. (Proposal is to construct a 1,688 s.f. single family and paved parking next to the existing 4 unit residential building.) {*TRC Review is a Condition of Approval P19-31*} (P19-75)



BERRY SURVEYING & ENGINEERING

335 Second Crown Point Road

Barrington, NH 03825

Phone: (603) 332-2863

Fax: (603) 335-4623

www.BerrySurveying.Com

crberry@metrocast.net

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

October 22, 2019

Re: Minor Site Plan
Knox Marsh Development, LLC
7 Glenwood Avenue
Dover, NH
Tax Map 38, Lot 32-1 & 32-2

Dear Mrs. Benton,

On behalf of our client Knox Marsh Development LLC, Berry Surveying & Engineering (BS&E) is submitting for TRC to discuss the proposed minor site development at 7 Glenwood Avenue.

Background and General Narrative:

Knox Marsh Development LLC own the parcels known as 7 Glenwood Avenue in Dover, NH (Tax Map 38, Lot 32-1 & Lot 32-2). Berry Surveying and Engineering has conducted an on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis. Please note there are no wetlands found on the parcel or within 50 feet of the parcel. The site contains an existing 4 unit building, with an attached barn and garage. The site slopes up from Glenwood Avenue towards the rear of the parcel. The site is mostly open with small pockets of trees on either side of the parcel.

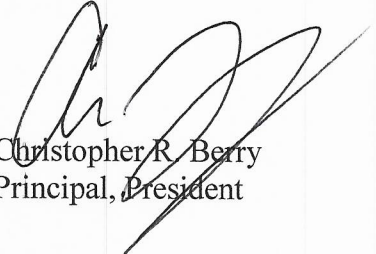
The Proposal:

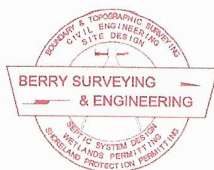
The proposal is to construct a paved parking area next to the existing 4 unit building. The parking lot will have 20 foot aisle way with ADA spaces. The proposed parking area will be constructed in place of the existing gravel parking area. A dumpster, with an enclosure will be constructed at the end of the parking area for solid waste disposal. As part of the parking lot construction, the applicant will also be constructing a small rain garden and dry well at the front of the parking area. The stormwater management practices will serve to capture and treat the generated runoff from the proposed parking area. There will be no change to the existing utilities on site as part of the development.

The applicant will construct a single family home on lot 32-2. A drip edge will be installed around the proposed home in order to capture and treat the generated runoff from the roof.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING


James F. Hayden
Engineering Technician


Christopher R. Berry
Principal, President



BERRY SURVEYING & ENGINEERING
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLAN
SHEET 3 ~ SITE PLAN
SHEET 4 ~ GRADING PLAN
SHEET 5 ~ PLAN AND PROFILE PROPOSED DRIVEWAY
SHEET 6 ~ EROSION & SEDIMENT CONTROL PLAN
SHEET 7 ~ E101-SEDIMENT & EROSION DETAILS
SHEET 8 ~ E102-SEDIMENT & EROSION DETAILS
SHEET 9 ~ C101-CONSTRUCTION DETAILS
SHEET 10 ~ C101-CONSTRUCTION DETAILS

OWNER: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03821

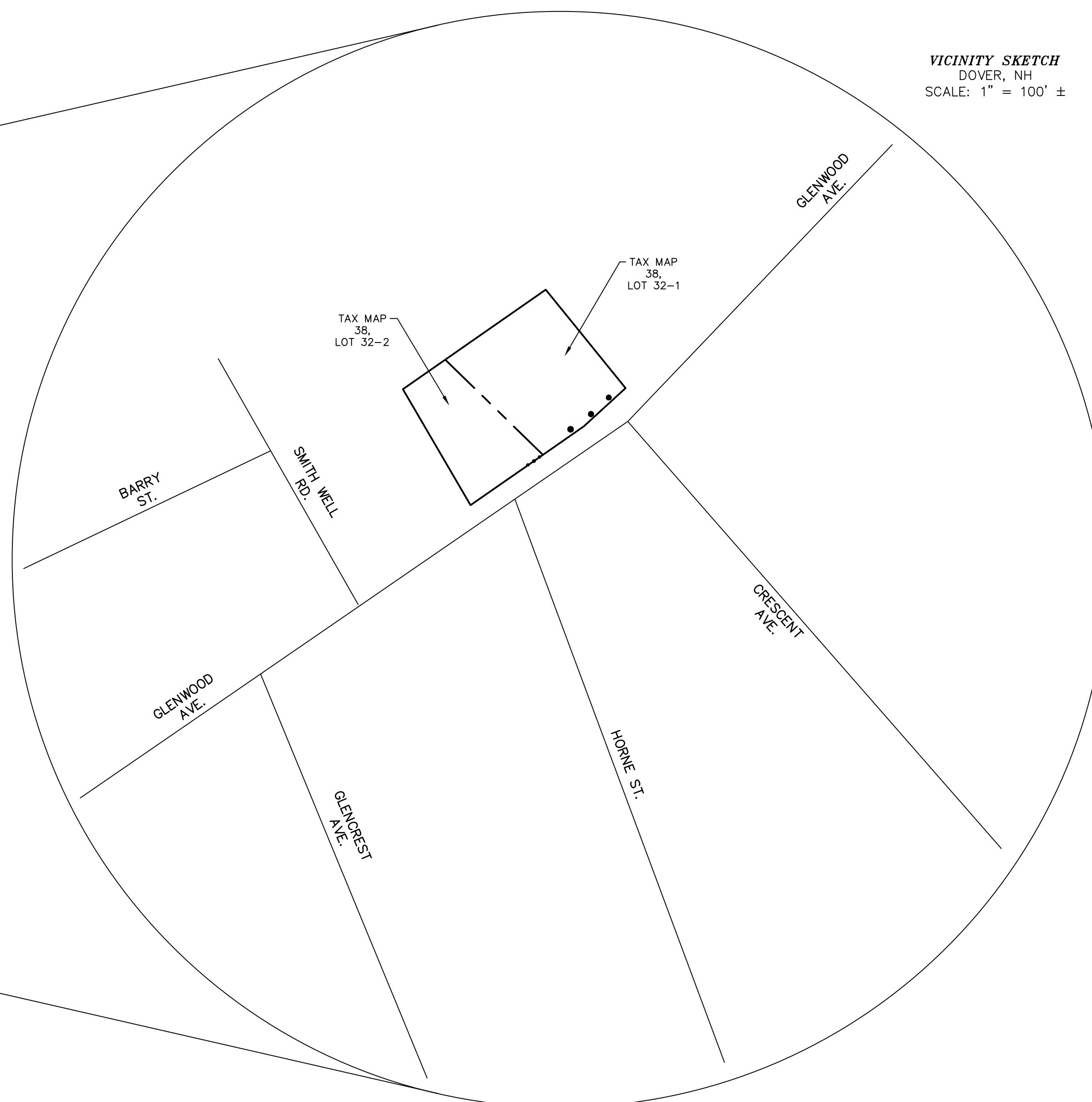
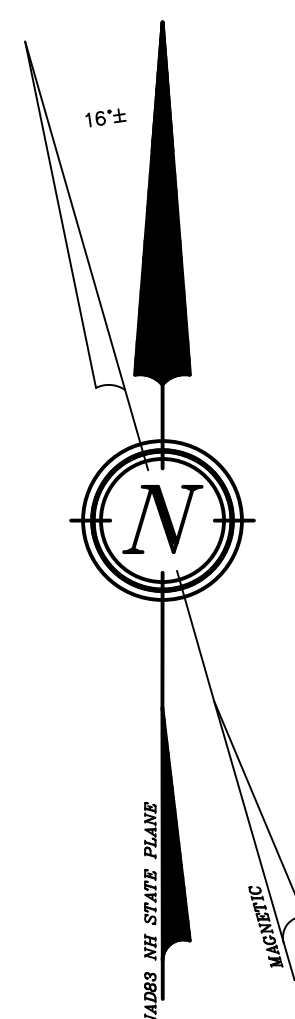
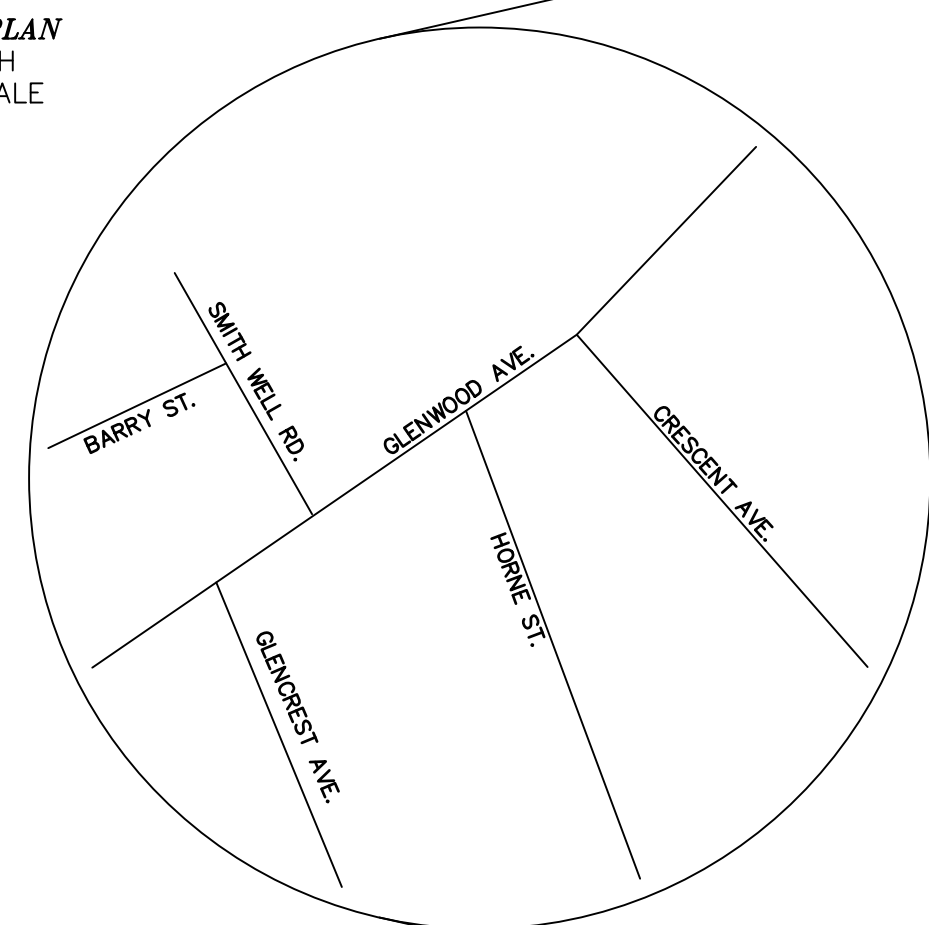
SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

APPLICANT: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03821

ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

WETLAND SCIENTIST: GOVE ENVIRONMENTAL SERVICES, INC.
LUKE D. HURLEY, CWS 232
8 CONTINENTAL DR. BUILDING #2, UNIT H
EXETER, NH 03833
603-778-0644

LOCATION PLAN
DOVER, NH
NOT TO SCALE



VICINITY SKETCH
DOVER, NH
SCALE: 1" = 100' ±

- 1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.
- 2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

OWNER'S SIGNATURE

DATE _____

APPLICANT'S SIGNATURE

DATE _____

# #1	DATE	REVISION	RECONSTRUCTION
	10-22-19 3-28-19		REVISED FOR TRC REVISED PER CITY OF DOVER

DEVELOPMENT PLAN
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVENUE
DOVER, N.H.
TAX MAP 38, LOT 32-1



STATE OF NEW HAMPSHIRE
PROFESSIONAL ENGINEER

KENNETH A. BERRY
No. 14243
LICENSED

BERRY SURVEYING & ENGINEERING

335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603) 332-2863

SCALE : AS SHOWN	DATE : MARCH 3, 2019
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ABBREVIATION LEGEND:

V.G.C. VERTICAL GRANITE CURB
E.O.P. EDGE OF PAVEMENT
BITUM. BITUMINOUS
E.S.H.W.T. ESTIMATED SEASONAL HIGH WATER TABLE
TYP. TYPICAL
U.G.E. UNDER GROUND ELECTRIC / UTILITY
HDPE HIGH DENSITY POLYETHYLENE
ACP ASBESTOS CLAY PIPE
F.G. FINISHED GRADE
E.G. EXISTING GRADE
L.F. LINEAR FOOT
F.D. FINISHED FLOOR
FND FOUND
T.B.R. TO BE REMOVED
P.L. PROPERTY LINE
E.L. EASEMENT LINE
T.B.M. TEMPORARY BENCHMARK
'/, FOOT / FOOT

SSL () ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
DSL () ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
SSB () ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
SBL () ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
DBL () ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

EXISTING LEGEND:

○ IRON BOUND (FND)
○ REBAR (FND)
⊕ RAILROAD SPIKE (FND)
⊕ UTILITY POLE / GUY WIRE
+ SINGLE POST SIGN
+ CURB STOP
+ GATE VALVE
+ GAS VALVE
+ FIRE HYDRANT
+ CATCH BASIN
+ SEWER MANHOLE
+ DRAIN MANHOLE
+ TREE

E113.83 EXISTING SPOT ELEVATION

--- GAS --- GAS --- GAS --- GAS ---
--- EWL --- EWL --- EWL --- EWL ---
--- S --- S --- S --- S ---
--- D --- D --- D --- D ---
--- OHU --- OHU --- OHU --- OHU ---
--- 116 --- 116 --- 116 --- 116 ---
--- 115 --- 115 --- 115 --- 115 ---

PROPOSED LEGEND:

○ IRON BOUND (FND)
⊕ TEMPORARY BENCHMARK

P114.05 PROPOSED SPOT ELEVATION
P41 PROPOSED CONTOUR MINOR
P40 PROPOSED CONTOUR MAJOR
UGB PROPOSED UNDERGROUND UTILITY
SF SILT FENCE / EROSION MIX BERM
SS SS SS FILTREXX SILT SOXX (8" or 12" AS NOTED)
C C C ORANGE CONSTRUCTION PERIMETER FENCE

SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY
R1-1	30"x30"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	RED	WHITE	WHITE	SQUARE (1)
R7-8	12"x18"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	WHITE	GREEN W/ WHITE SYMBOL ON BLUE	RED	SQUARE (1)
R7-8a	12"x6"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	WHITE	GREEN	GREEN	SQUARE (0)

ABUTTERS WITHIN 200':

GAYE H & MICHAEL D DEAN
4A SMITH WELL RD
DOVER, NH 03820
TAX MAP 38, LOT 32-1
S.C.R.D. BOOK 2509, PAGE 766

RICHARD AND JUNE CLARK TRUST OF
JUNE & RICHARD CLARK, SR TSTEEES
15 GLENWOOD AVE
DOVER, NH 03820
TAX MAP 38, LOT 32-A
S.C.R.D. BOOK 3401, PAGE 636
DARLENE & PETER L STICKLES
2 SMITH WELL RD
DOVER, NH 03820
TAX MAP 38, LOT 32-D
S.C.R.D. BOOK 1129, PAGE 711

GAYE H & MICHAEL D DEAN
4A SMITH WELL RD
DOVER, NH 03820
TAX MAP 38, LOT 32
S.C.R.D. BOOK 2508, PAGE 637

THEODORE D BARTON
5 GLENWOOD AVE
DOVER, NH 03820
TAX MAP D, LOT 32-F
S.C.R.D. BOOK 4175, PAGE 420

AILEEN P WEST
10 GLENWOOD AVE
DOVER, NH 03820
TAX MAP 37, LOT 68
S.C.R.D. BOOK 3807, PAGE 954

ABUTTERS WITHIN 200' CONT.:

NIKI MOUTEVELIS
12 GLENWOOD AVE
DOVER, NH 03820
TAX MAP 37, LOT 39
S.C.R.D. BOOK 2961, PAGE 115

SALE C LYONS REV TST
GALE C LYONS TSTEE
102 HORNE ST
DOVER, NH 03820
TAX MAP 36, LOT 34
S.C.R.D. BOOK 2444, PAGE 494
JOAN & KENT NEWMAN
GRACE & JAMES MCGUIRE
14701 NANTUCKET RD
N FT. MYERS FL 33917-9039
TAX MAP 38, LOT 32-E
S.C.R.D. BOOK 1255, PAGE 078

JAMIE S & KILEY J HEMPHILL
6 SMITH WELL RD
DOVER, NH 03820-2410
TAX MAP 38, LOT 32-C
S.C.R.D. BOOK 3773, PAGE 430

GEORGE A JR & CHRISTINE R TROJAN
3 SMITH WELL RD
DOVER, NH 03820-2429
TAX MAP D, LOT 62
S.C.R.D. BOOK 3072, PAGE 545

MICHAEL S BRAGG & DIANE HAWKES
1 SMITH WELL RD
DOVER, NH 03820
TAX MAP 38, LOT 32-C
S.C.R.E. BOOK 2893, PAGE 785

ABUTTERS WITHIN 200' CONT.:

LAURIE A LAZAR REVOCABLE TRUST
LAURIE A LAZAR TRUSTEE
16 GLENWOOD AVE
DOVER NH 03820
TAX MAP 36, LOT 32
S.C.R.D. BOOK 4582, PAGE 142

BRUCE & LISA A LAURIE
14 GLENWOOD AVE
DOVER NH 03820
TAX MAP 36, LOT 33
S.C.R.D. BOOK 2869, PAGE 310

JASON & HANNAH PIER
100 HORNE ST
DOVER NH 03820
TAX MAP 36, LOT 34-A
S.C.R.D. BOOK 4399, PAGE 160

MICHAEL V & KERRY L SIEBERSMA
99 HORNE ST
DOVER NH 03820
TAX MAP 37, LOT 39-A
S.C.R.D. BOOK 3941, PAGE 403

BENJAMIN M FLETCHER
1 CRESCENT AVE
DOVER NH 03820
TAX MAP 37, LOT 39-H
S.C.R.D. BOOK 4409, PAGE 096

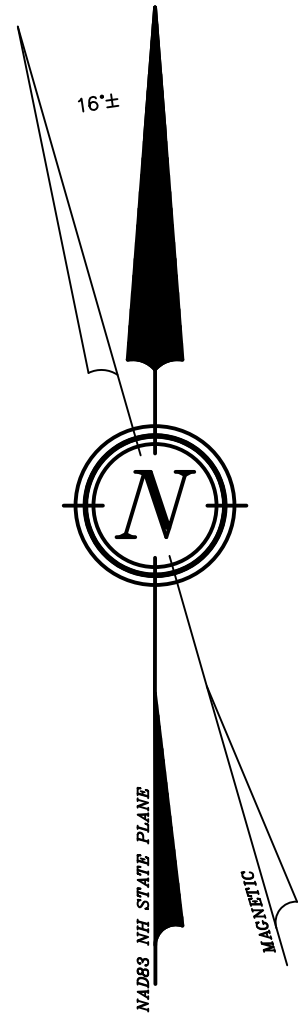
KELLEY FAMILY REVOCABLE TRUST
ANN R & BRIAN T KELLEY SR TSTEEES
2 CRESCENT AVE
TAX MAP 37, LOT 65
S.C.R.E. BOOK 3094, PAGE 298

ABUTTERS WITHIN 200' CONT.:

OKAD OF DOVER LLC
321 D LAFAYETTE RD
HAMPTON NH 03842
TAX MAP 37, LOT 38
S.C.R.D. BOOK 4507, PAGE 365

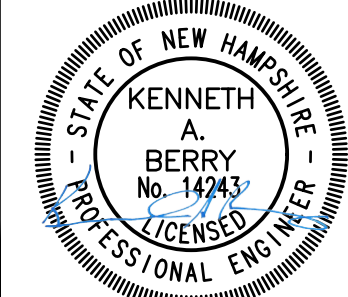
BULWARK DOVER LLC
C/O WALGREEN STORE NO 10780
PO BOX 1159
DEERFIELD IL 60015
TAX MAP 38, LOT 39
S.C.R.D. BOOK 3655, PAGE 315

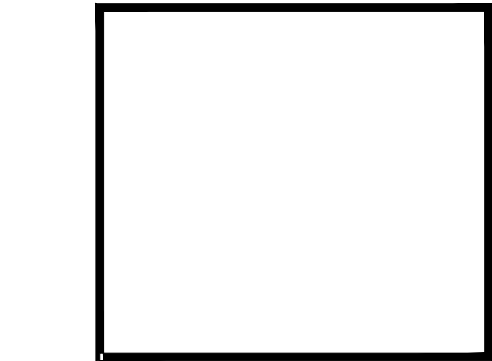
GIS SKETCH
DOVER, NH
SCALE: 1" = 100' ±



NEIGHBORHOOD PLAN
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVE
DOVER, NH
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : AS SHOWN
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029





GOVE ENVIRONMENTAL SERVICES, INC.
LUKE D. HURLEY, CWS #232

SOILS:

HaB - HINCKLEY LOAMY SAND, 3 TO 8% SLOPES

WfB - WINDSOR LOAMY FINE SAND, CLAY SUBSOIL 0 TO 8% SLOPES

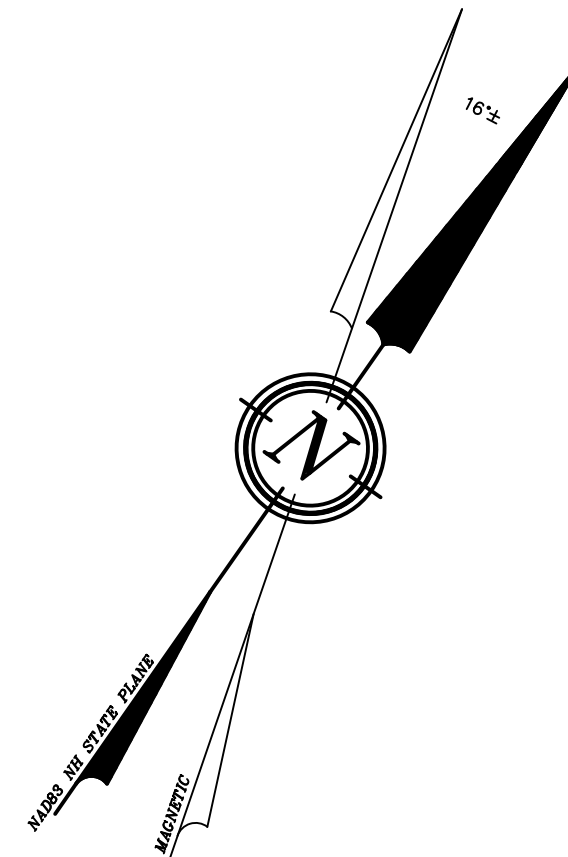
SEE WEBSOIL USDA-NRCS

LEGEND:

- IRON BOUND (FND)
- REBAR (FND)
- GRANITE BOUND (FND)
- CONCRETE BOUND (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- TREE
- BUILDING SETBACK LINE
- OVERHEAD UTILITIES LINE
- GAS LINE
- WATER LINE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MINOR
- SEWER & DRAIN LINES
- STRAFFORD COUNTY REGISTRY OF DEEDS
- TYPICAL
- FOUND

OHU
GAS
EWL
-116
-115

S.C.R.D.
TYP.
FND



NOTES:

- 1.) OWNER: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- 1A.) APPLICANT: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- 2.) TAX MAP 38, LOT 32-1
- 3.) LOT AREA: 31,500 Sq. Ft., 0.72 Ac
- 4.) S.C.R.D. BOOK 4651, PAGE 1
- 5.) ZONING: MEDIUM DENSITY RESIDENTIAL (R-12) DISTRICT
SETBACKS:
FRONT - BUILD TO LINE 15-25'
SIDE - 15.0'
REAR - 30.0'
WETLANDS SETBACK - 50.0'
MIN. LOT SIZE - 12,000 Sq. Ft.
MIN. LOT FRONTAGE - 100'
MAX. BLDG. HEIGHT - 35'
MAX. LOT COVERAGE - 30%
- 6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY# - 330145, MAP# - 33017C0310E, DATED: SEPTEMBER 30, 2015.
- 7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.
- 8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN MARCH OF 2019, WITH AN ERROR OF CLOSURE OF 1 PART IN 27,268.
- 9.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS PLAN FOR LOT 32-1 & 32-2 AS OF THE DATE OF THE SURVEY.
- 10.) BOTH LOTS ARE SERVICED BY MUNICIPAL SEWER AND WATER.

PLAN REFERENCES:

- 1.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR GAYE H. DEAN & MICHAEL D. DEAN, TAX MAP 38, LOT NOS. 32 & 32-1, 7 GLENWOOD AVE. & 4A SMITH WELL RD., CITY OF DOVER, COUNTY OF STRAFFORD, STATE OF NEW HAMPSHIRE"
BY: MCNEANEY SURVEY ASSOCIATES, INC
DATED: JANUARY 7, 2011
S.C.R.D. PLAN #102-22
- 2.) "MINOR SUBDIVISION OR LAND PREPARED FOR GREGORIOS KOUTRELAKOS REVOCABLE TRUST, TAX MAP 38, LOT NO. 32, GLENWOOD AVENUE & SMITH WELL ROAD, CITY OF DOVER, COUNTY OF STRAFFORD, STATE OF NEW HAMPSHIRE"
BY: MCNEANEY SURVEY ASSOCIATES, INC
DATED: MARCH 27, 2002
S.C.R.D. PLAN #65-75
- 3.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR DARLENE AND PETER STICKLES AND HELEN AND GREGORIOS KOUTRELAKOS, GLENWOOD AVENUE & SMITHWELL ROAD, DOVER, NEW HAMPSHIRE"
BY: MCNEANEY SURVEY ASSOCIATES, INC
DATED: AUGUST 7, 1995
S.C.R.D. PLAN #46-78
- 4.) "PLAN OF LAND, JOHN J. LINK & FRED V. LABONTE, DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: JUNE 1964
S.C.R.D. PLAN #20, POCKET #7, FOLDER #2
- 5.) "PROPOSED DEVELOPMENT, GLENCREST - INC, DOVER NEW HAMPSHIRE"
BY: DAVIS & ASSOCIATES
DATED: MARCH 1950
S.C.R.D. PLAN #36, POCKET #3, FOLDER #1

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. - 1:10,000 -
KENNETH A. BERRY LLS 805 DATE

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.
KENNETH A. BERRY L.L.S. 805 DATE

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

EXISTING CONDITIONS PLAN

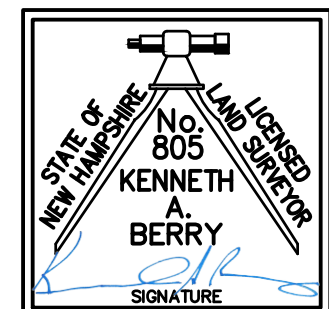
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVE.
DOVER, NH
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.

DATE : MARCH 3, 2019

FILE NO. : DB 2019 - 029



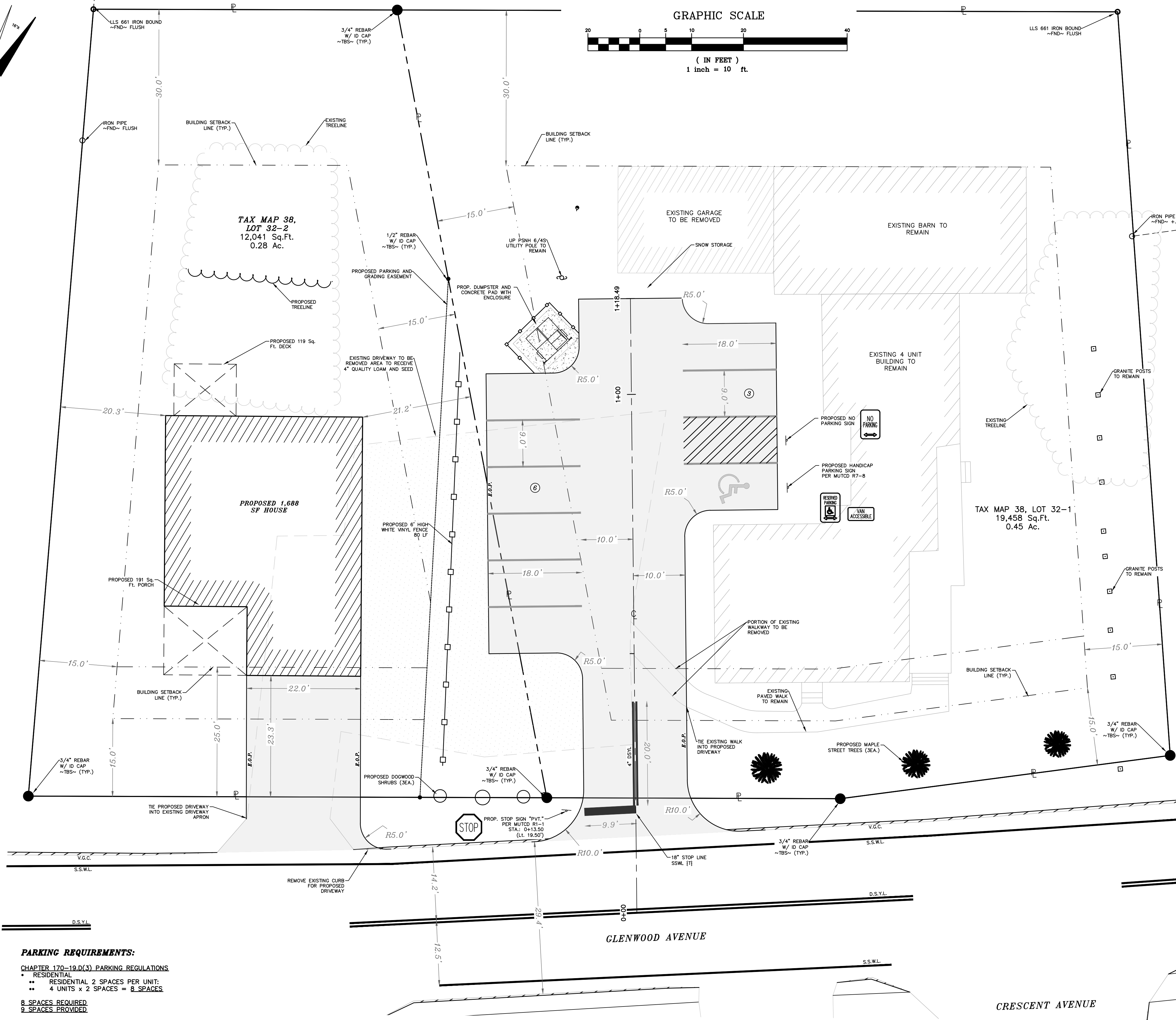
NOTES:

- OWNER: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- APPLICANT: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- TAX MAP 38, LOT 32-1
- LOT AREA: 31,500 Sq. Ft., 0.72 Ac.
- S.C.R.D. BOOK 4651, PAGE 1
- ZONING: MEDIUM DENSITY RESIDENTIAL (R-12) DISTRICT
SETBACKS:
FRONT - BUILD TO LINE 15-25'
SIDE - 15.0'
REAR - 30.0'
WETLANDS SETBACK - 50.0'
MIN. LOT SIZE - 12,000 Sq. Ft.
MIN. LOT FRONTAGE - 100'
MIN. BLDG. HEIGHT - 35'
MAX. LOT COVERAGE - 30%
- I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY# - 330145, MAP# - 33017C0310E, SEPTEMBER 30, 2015.
- VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.
- THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN MARCH OF 2019, WITH AN ERROR OF CLOSURE OF 1 PART IN 27,268.
- THE INTENT OF THIS PLAN IS TO SHOW THE SITE PLAN ELEMENTS ON TAX MAP 38, LOT 32-1 & 32-2.
- LOT 32-1 WILL REMAIN AS A 4 UNIT LOT, WHILE LOT 32-2 WILL BE SINGLE FAMILY.
- THE EXISTING LOT COVERAGE IS 4,005 SQ. FT. PROPOSED LOT COVERAGE IS 3,387 Sq.Ft.
- AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON A REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E.
- ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
- THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
- ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
- THE LIMITS OF CONSTRUCTION DISTURBANCE SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO THE COMMENCEMENT OF SITE WORK.
- ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
- A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS. COORDINATE WITH CITY OF DOVER, COMMUNITY SERVICES AND ENGINEERING DEPARTMENT.
- A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR, AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
- BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
- THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
NONE
- THIS PLAN PROPOSES 9,000 SQ. FT. OF DISTURBANCE.
- CALL DIG SAFE PRIOR TO BEGINNING WORK (1-888-344-7233)
- ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONSTRUCTION SHALL ALSO CONFORM TO THE CITY OF DOVER POLICIES AND PRACTICES.
- WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
- THE PROPOSED USE FOR THE SITE IS, AN EXISTING 4 UNIT RESIDENTIAL BUILDING AND A PROPOSED SINGLE FAMILY RESIDENCE.
- THE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM, SATURDAY AND SUNDAY 9 AM-4PM. NO SUNDAY HOURS. HOURS OF CONSTRUCTION SHALL BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR.
- COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
- THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED. SITE PLANS SHALL SHOW ANY EASEMENTS FOR THESE SERVICES.
- LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR ANY CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPERTY, INCLUDING CASE NUMBER AND DATE OF DECISION AND ANY CONDITIONS: NONE
- THE PROJECT SITE WAS REVIEWED BY LUKE HURLEY, CWS OF GOVE ENVIRONMENTAL SERVICES. NO WETLANDS FOUND ON SITE.
- THE EXISTING 4 UNIT BUILDING AND THE PROPOSED SINGLE FAMILY BUILDING IS SERVICED BY MUNICIPAL WATER AND SEWER.
- THERE ARE NO EXISTING ADA ACCESSIBLE ENTRANCES IN TO THE 4 UNIT BUILDING.

PARKING REQUIREMENTS:

- CHAPTER 170-19.0(3) PARKING REGULATIONS
- RESIDENTIAL
 - RESIDENTIAL 2 SPACES PER UNIT:
 - 4 UNITS x 2 SPACES = 8 SPACES

8 SPACES REQUIRED
9 SPACES PROVIDED



REVISION	DATE	DESCRIPTION
10-22-19	3-28-19	REVISED FOR TRC
#1		REVISED PER CITY OF DOVER

SITE PLAN
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVENUE
DOVER, NH
TAX MAP 38, LOT 32-1

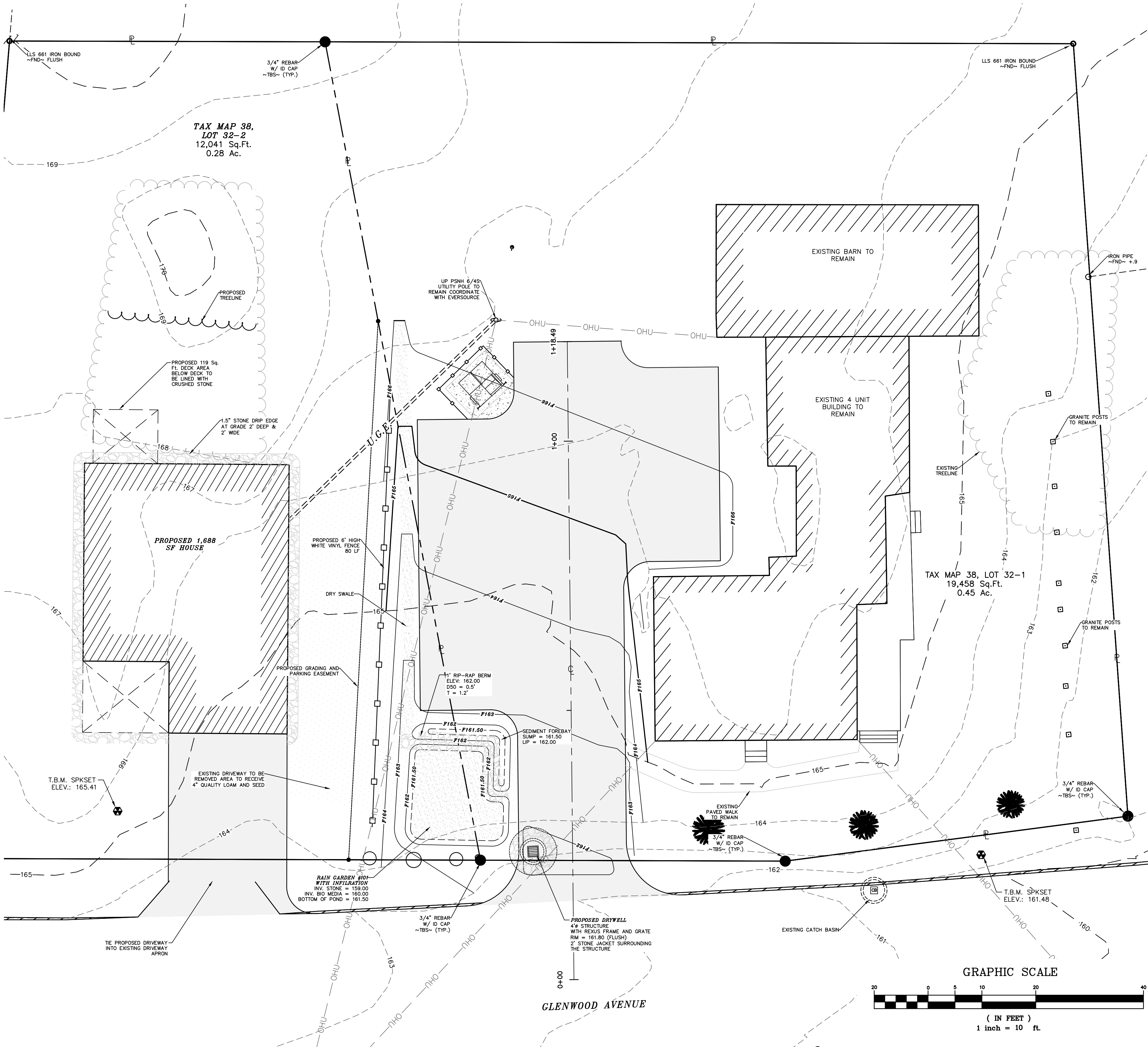
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : 1 IN. EQUALS 10 FT.
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 3 OF 10

STANDARD CONSTRUCTION NOTES:

- EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.
- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2010. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.
- CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION
- WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R)
- ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH {} SHALL BE THERMOPLASTIC
- THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED OR ARE PENDING FOR THE SUBJECT PROPERTY:
NONE REQUIRED
- ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.
- ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.
- UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASIN SUMPS.
- ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED
- ALL TREATMENT SWALE TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS UNLESS OTHERWISE INSTRUCTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.
- A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, AS MAY BE APPLICABLE.
- A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND DOVER CITY STAFF SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
- BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.
- THIS SITE PLAN PROPOSES 5,500 ± SQ. FT. OF DISTURBANCE. PER ENV-WQ 1503.12 (B) AN ALTERATION OF TERRAIN PERMIT IS NOT REQUIRED.
- WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH CITY OF DOVER CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
- THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.
- THE EXISTING 4 UNIT BUILDING WILL RETAIN ITS EXISTING SEWER AND WATER CONNECTION. THE CONTRACTOR IS RESPONSIBLE FOR CONNECTING THE PROPOSED SINGLE FAMILY DWELLING TO CITY WATER AND SEWER.

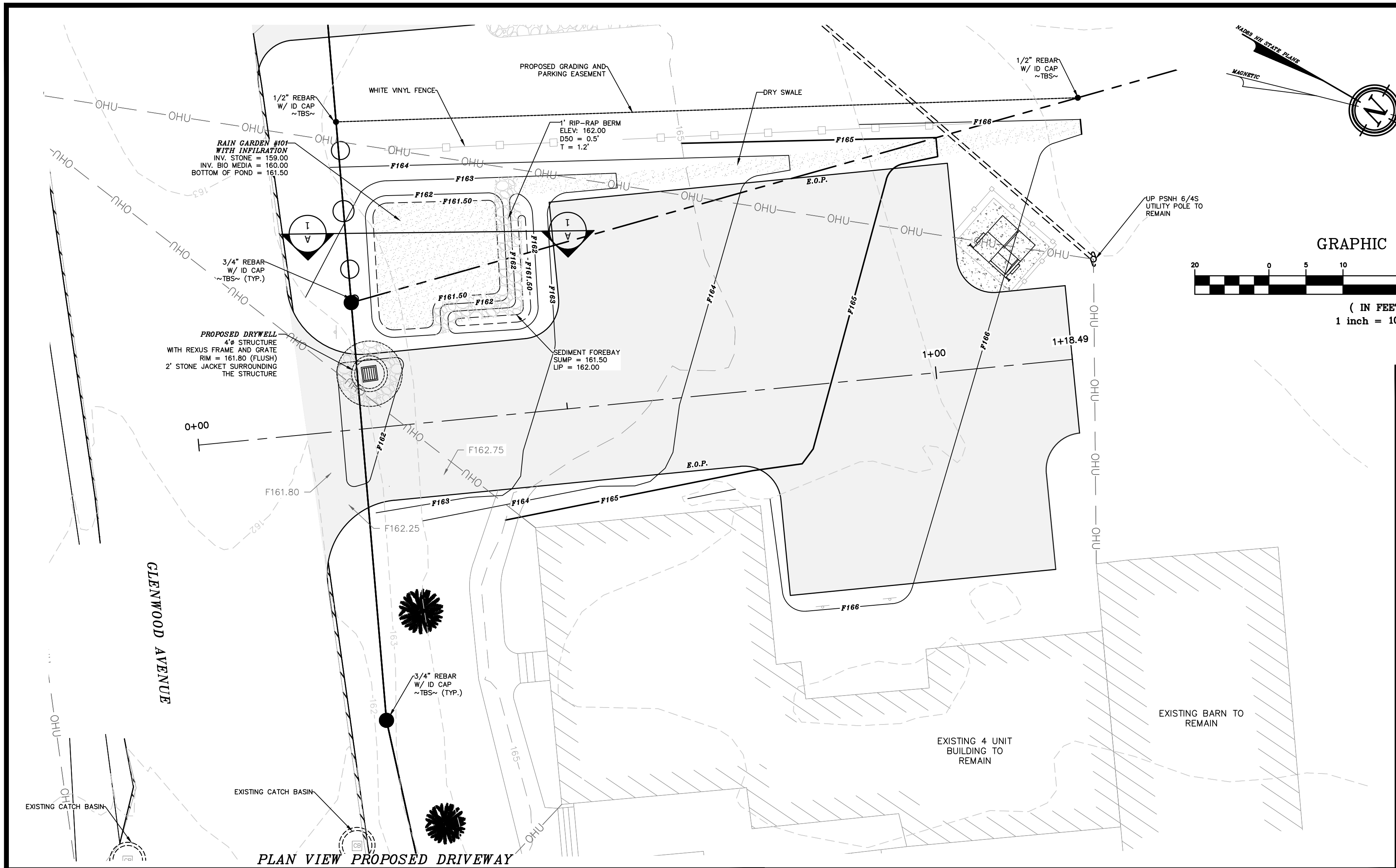


#	REVISION	DATE	DESCRIPTION
1	10-22-19 3-28-19		REVISED FOR TRC REVISED PER CITY OF DOVER

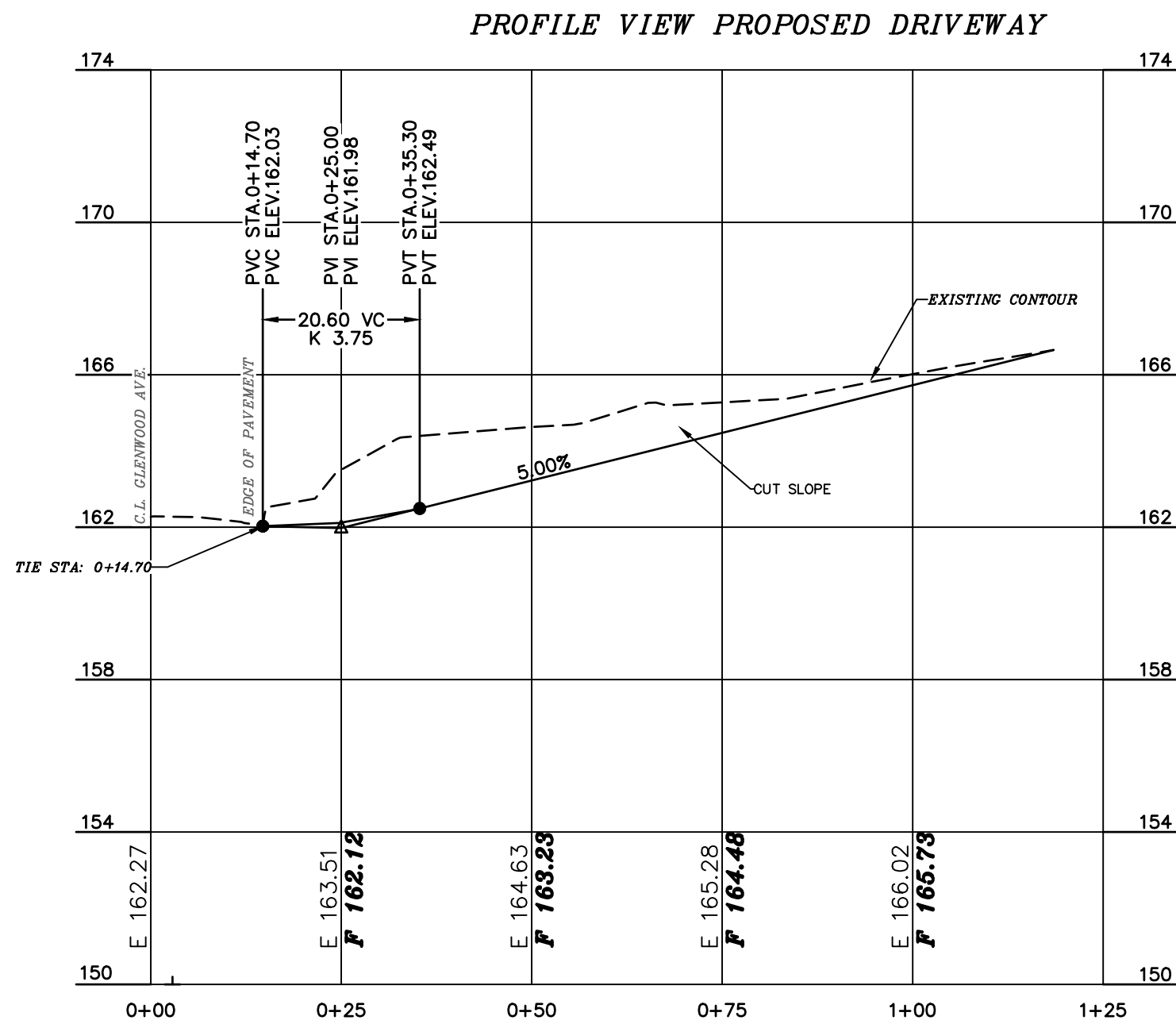
GRADING PLAN
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVENUE
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : 1 IN. EQUALS 10 FT.
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

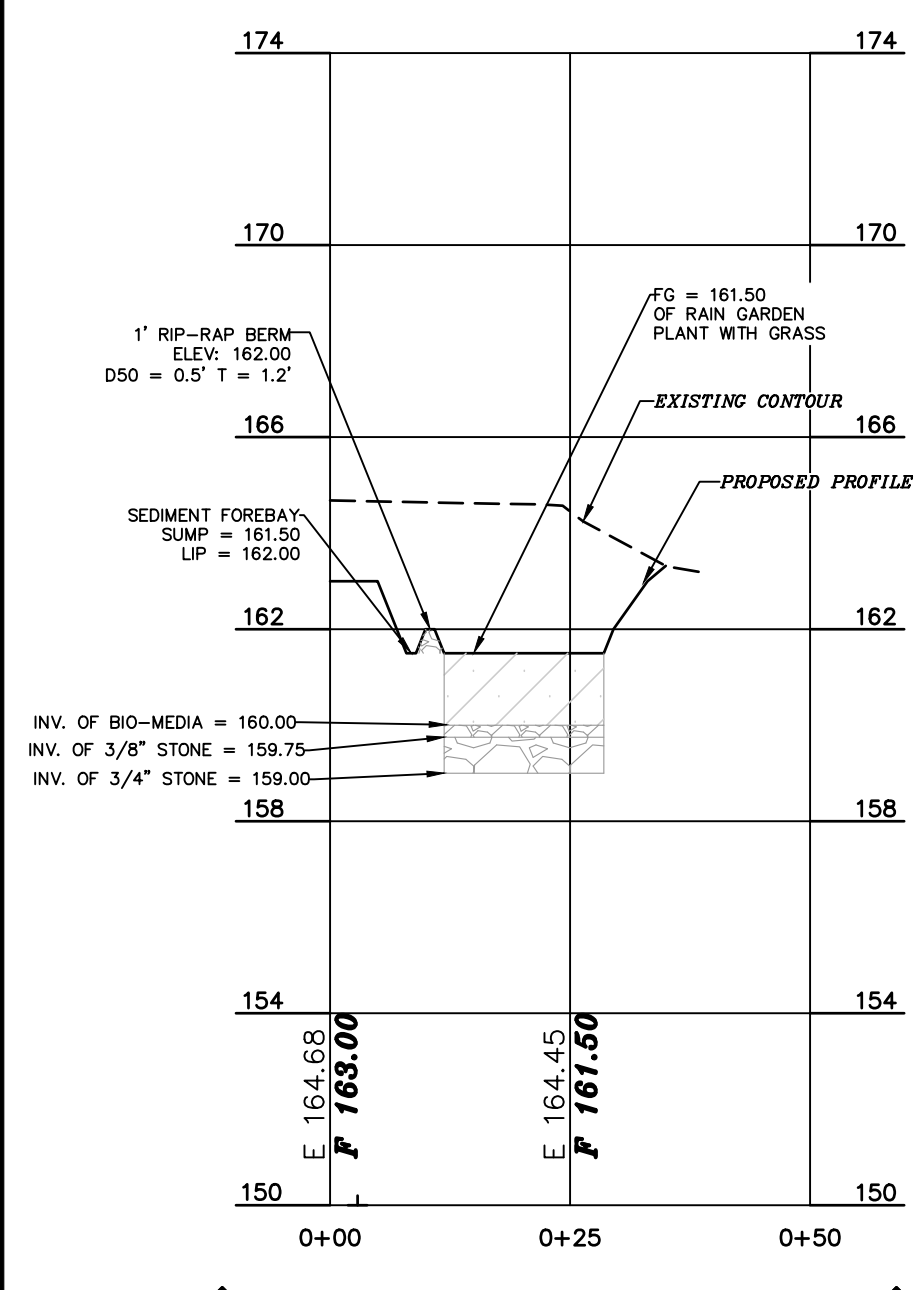


PLAN VIEW PROPOSED DRIVEWAY

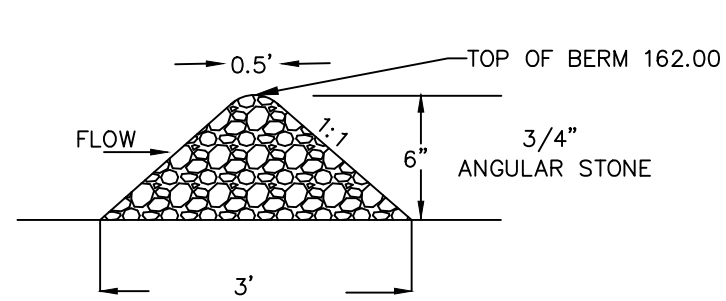


GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft. VERTICAL SCALE: 1" = 4'



SECTION OF RAIN GARDEN R101



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 20'

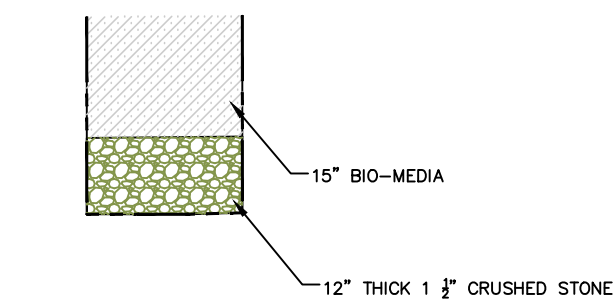
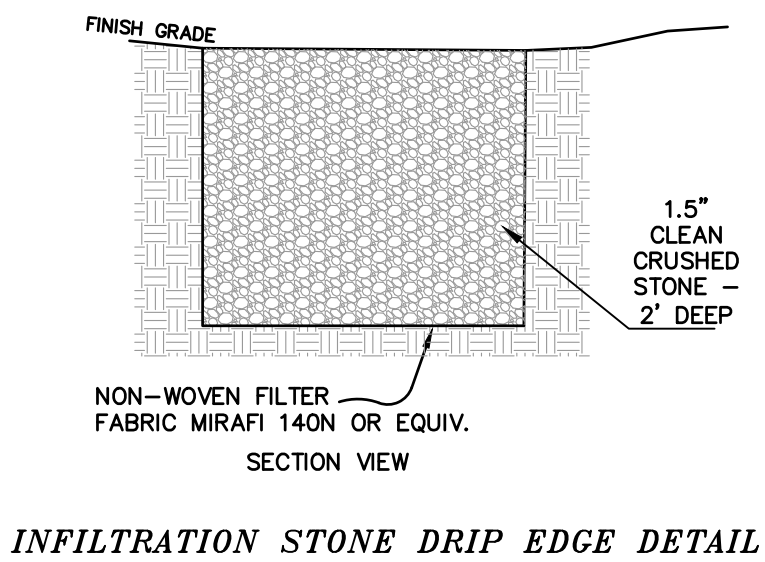
	ITEM NO.	WEIGHT
1200 GALLON	1200SDW	7,400#
3' STACKABLE	1200SDWH	7,400#
	3SS	2,008#

NOTES:

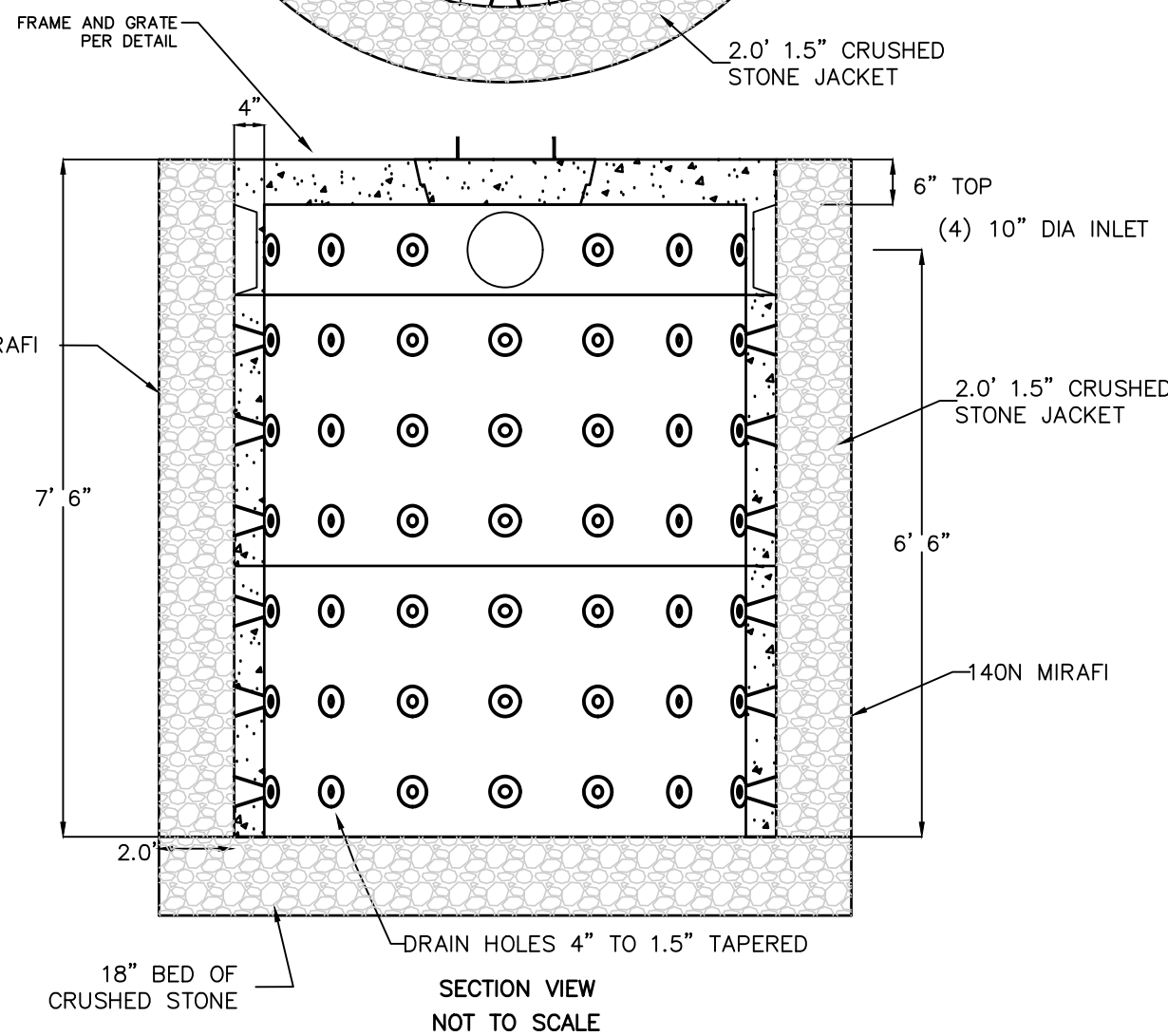
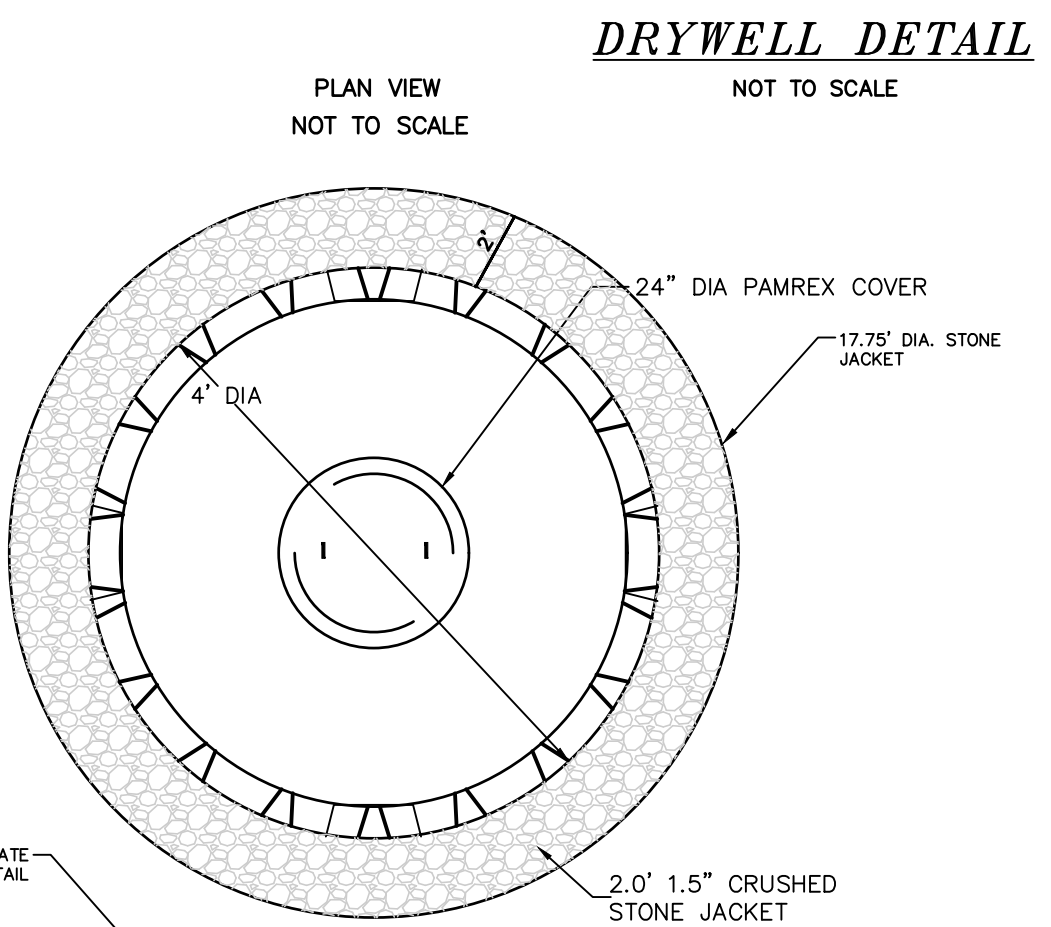
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. ALSO AVAILABLE IN AASHTO HS-20 LOADING.
3. CAPACITY INCREASES IN INCREMENTS OF 500 GALLONS FOR EACH 3' SECTION ADDED.
4. MUST BE SHEA CONCRETE PRODUCT OR EQUAL.

NOTES:

1. OWNER: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
2. APPLICANT: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
3. TAX MAP 38, LOT 32-1
4. LOT AREA: 31,500 Sq. Ft., 0.72 Ac.
5. S.C.R.D. BOOK 4651, PAGE 1
6. THE INTENT OF THIS PLAN IS TO SHOW THE GRADING DESIGN FOR THE PROPOSED LOT DEVELOPMENT.
7. SEE GRADING PLAN FOR STANDARD CONSTRUCTION NOTES.



DRYSWALE DETAIL
NOT TO SCALE



#	REVISION	DATE	DESCRIPTION
1	10-22-19	3-28-19	REVISED FOR TRC REVISED PER CITY OF DOVER

PLAN AND PROFILE PROPOSED DRIVEWAY	FOR KNOX MARSH DEVELOPMENT LLC 7 GLENWOOD AVENUE DOVER, NH 03820 TAX MAP 38, LOT 32-1
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BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : AS SHOWN
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER -

NOTES:

- 1.) OWNER: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- 2.) APPLICANT: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820
- 3.) THE PROJECT PARCEL IS TAX MAP 38, LOTS 32-1 & 32-2
- 4.) LOT AREA: 31,500 Sq. Ft., 0.72 Ac.
- 5.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.
- 6.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 7.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.
- 8.) UPON FINAL COMPLETION AND 85% STABILIZATION, THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS. SEDIMENT CONTROL PRACTICES REMOVED AND DISPOSED OF PROPERLY, AND ANNUAL MAINTENANCE PERFORMED ON ALL DRAINAGE PRACTICES.
- 9.) EROSION AND SEDIMENT CONTROL INSPECTIONS TO BE CONDUCTED ONCE PER EVERY SEVEN DAYS AND AT AN INCREASED FREQUENCY INCLUDING WITHIN 24-HOURS OF A 0.25 INCH RAIN EVENT. INSPECTIONS TO BE CONDUCTED BY A "QUALIFIED PERSON" AS DEFINED BY EPA CGP 4.1.1 AND INSPECTION REPORTS SUBMITTED TO THE CITY OF DOVER, NH, ENGINEERING DEPARTMENT WITHIN 24 HOURS IN ACCORDANCE WITH CGP 4.1.7 AND MAINTAINED BY THE OWNER FOR A PERIOD OF THREE YEARS AFTER THE PROJECT IS COMPLETED. SEE ALSO CITY OF DOVER ADDITIONAL INSPECTION REQUIREMENTS BELOW.
- 10.) SILT FENCE MAY BE SUBSTITUTED WITH FILTREXX SILT SOXX OR EROSION CONTROL MIX BERM. SILT FENCE IS NOT A SUBSTITUTE FOR FILTREXX SILT SOXX OR APPROVED EQUAL.
- 11.) PER EPA CGP 2.1.2.2 (INSTALL PERIMETER CONTROL), "YOU MUST INSTALL SEDIMENT CONTROLS ALONG THOSE PERIMETER AREAS OF YOUR SITE THAT WILL RECEIVE STORMWATER FROM EARTH DISTURBING ACTIVITIES." AS A RESULT OF SWPPP INSPECTIONS, THE CONTRACTOR MAY HAVE TO EXPAND PERIMETER CONTROLS TO MEET THIS REQUIREMENT. THE E&SC PLAN IS INITIAL GUIDANCE AS TO THE ANTICIPATED REQUIREMENTS AND IT THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT STORMWATER VIOLATION DO NOT OCCUR.
- 12.) CITY OF DOVER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS (149-14) THE FOLLOWING STORMWATER MEASURES ARE REQUIRED. THIS SITE DEVELOPMENT QUALIFIES AS A REDEVELOPMENT PROJECT. THE EXISTING IMPERVIOUS AREA IS 12.7% AND PROPOSED IMPERVIOUS AREA IS 10.7%. THE CONTIGUOUS LAND DISTURBANCE IS 5,500 SQUARE FEET.
 - A.) ALL PROPOSED BMPs WILL CONFORM TO THE NH STORMWATER MANUAL VOLUME 3.
 - B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY COMMUNITY SERVICE.
 - C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN CALENDAR DAYS FOR EXPOSED SOILS AREAS THAT ARE WITHIN ONE HUNDRED FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.
 - D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL STABILIZATION IS ACCOMPLISHED.
 - E.) COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS AND SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION, DURING NORMAL WORKING HOURS.
 - F.) THE PLANNING BOARD OR COMMUNITY SERVICES MAY REQUIRE THE DESIGN ENGINEER AND/OR AN INDEPENDENT, THIRD-PARTY INSPECTION AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIMENT CONTROL AT THEIR DISCRETION. THE OWNER / APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS.
 - G.) ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORMWATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORMWATER QUALITY (CPSWQ). INSPECTION REPORTS WILL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.
- 13.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

SOILS & DEWATERING:

W/B WINDSOR LOAMY FINE SAND K= 0.17

SEE SITE SPECIFIC SOILS MAP (SSSM)

SEE WEBSOIL USDA-NRCS
ERODIBILITY FACTOR - K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC. &
ROCKINGHAM COUNTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

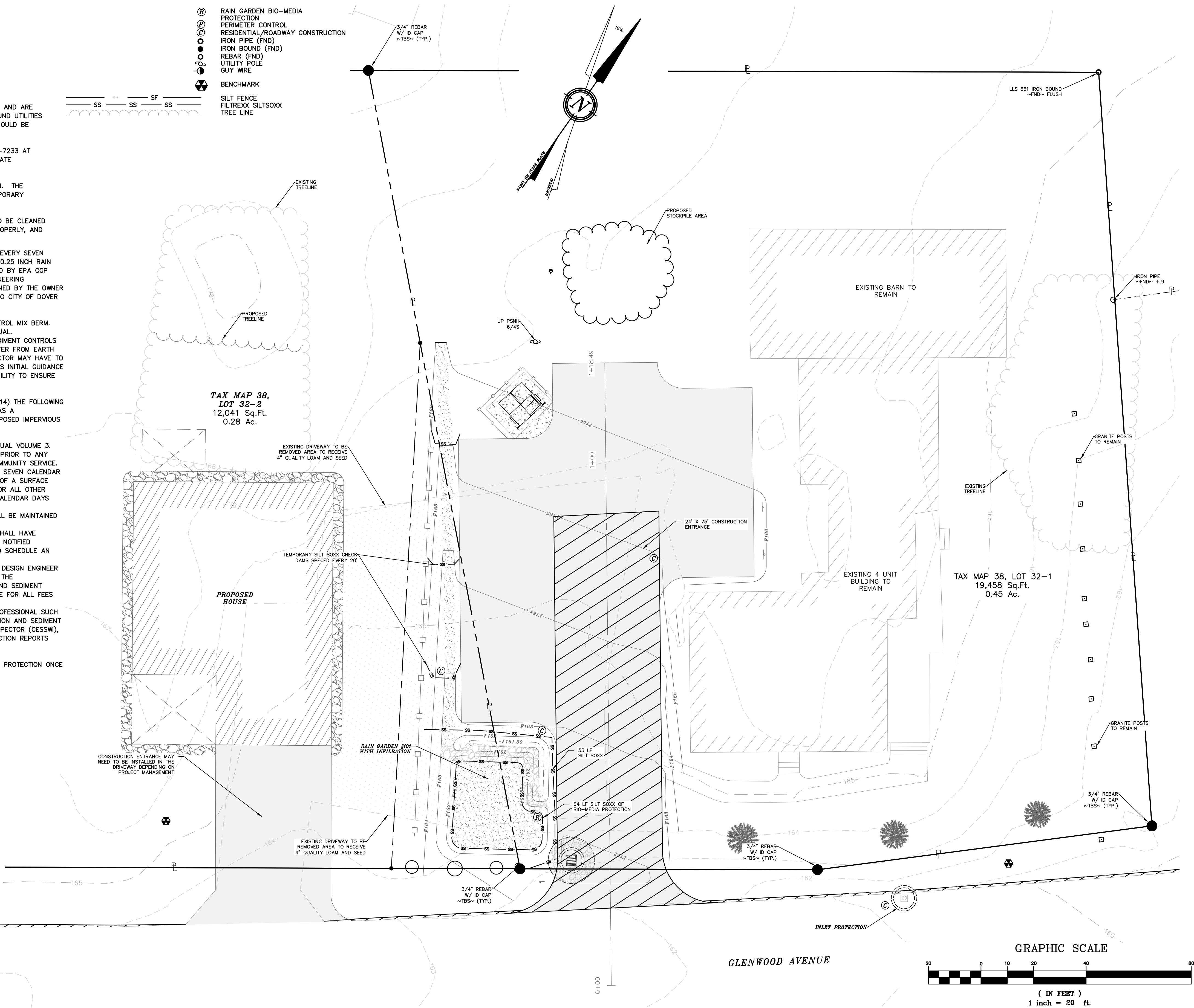
CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.

LEGEND:

- RAIN GARDEN BIO-MEDIA PROTECTION
- PERIMETER CONTROL
- RESIDENTIAL/ROADWAY CONSTRUCTION
- IRON PIPE (FND)
- IRON BOUND (FND)
- REBAR (FND)
- UTILITY POLE
- GUY WIRE
- BENCHMARK
- SILT FENCE
- FILTREXX SILT SOXX
- TREE LINE



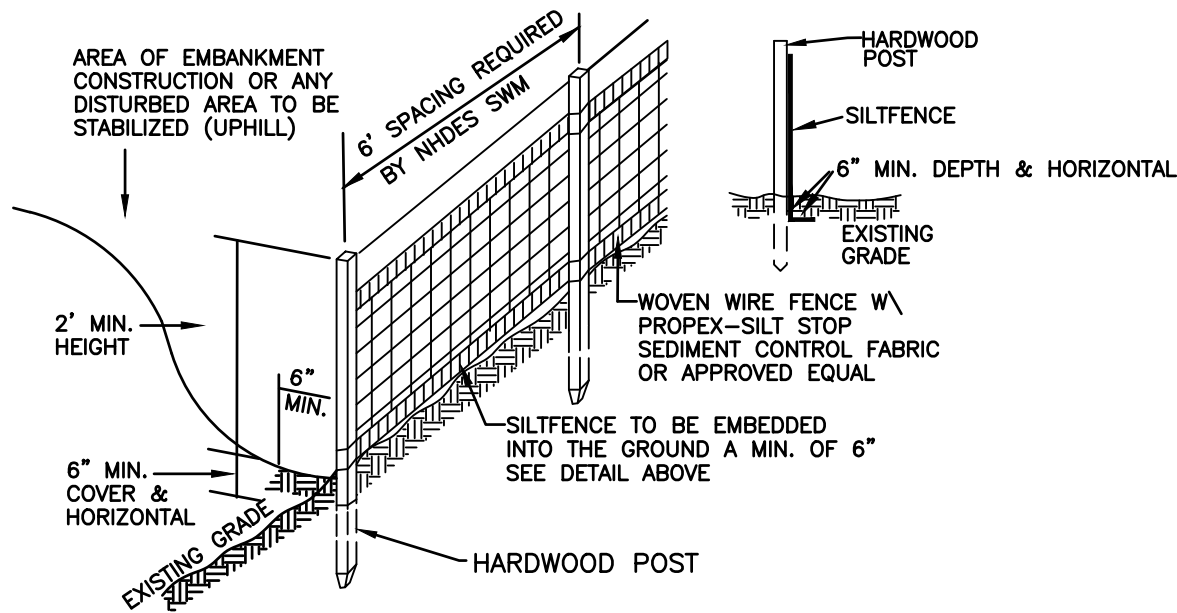
EROSION AND SEDIMENT CONTROL PLAN

FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVENUE
DOVER, NH
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : 1 IN. EQUALS 20 FT.
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER -

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

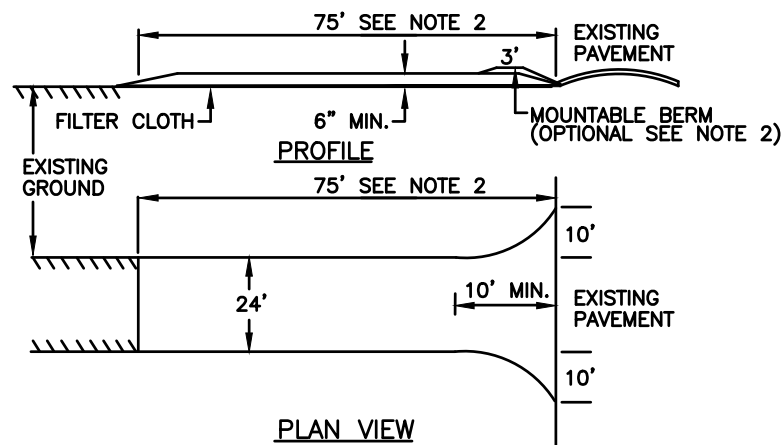
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 6" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 6' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW, REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

SILT FENCE DETAIL
NOT TO SCALE

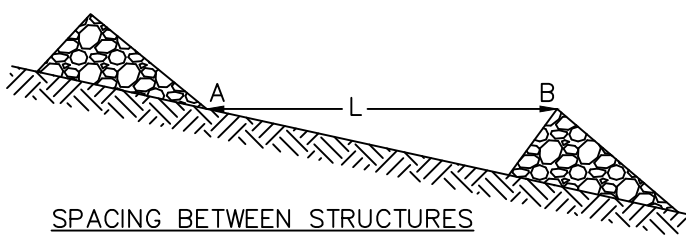
E5 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. ALL SURFACE WATER THAT IS DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

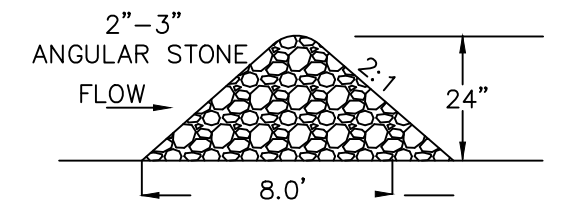
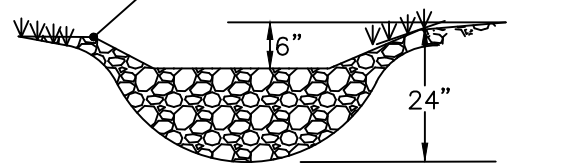
STONE CHECK DAM
NOT TO SCALE

THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



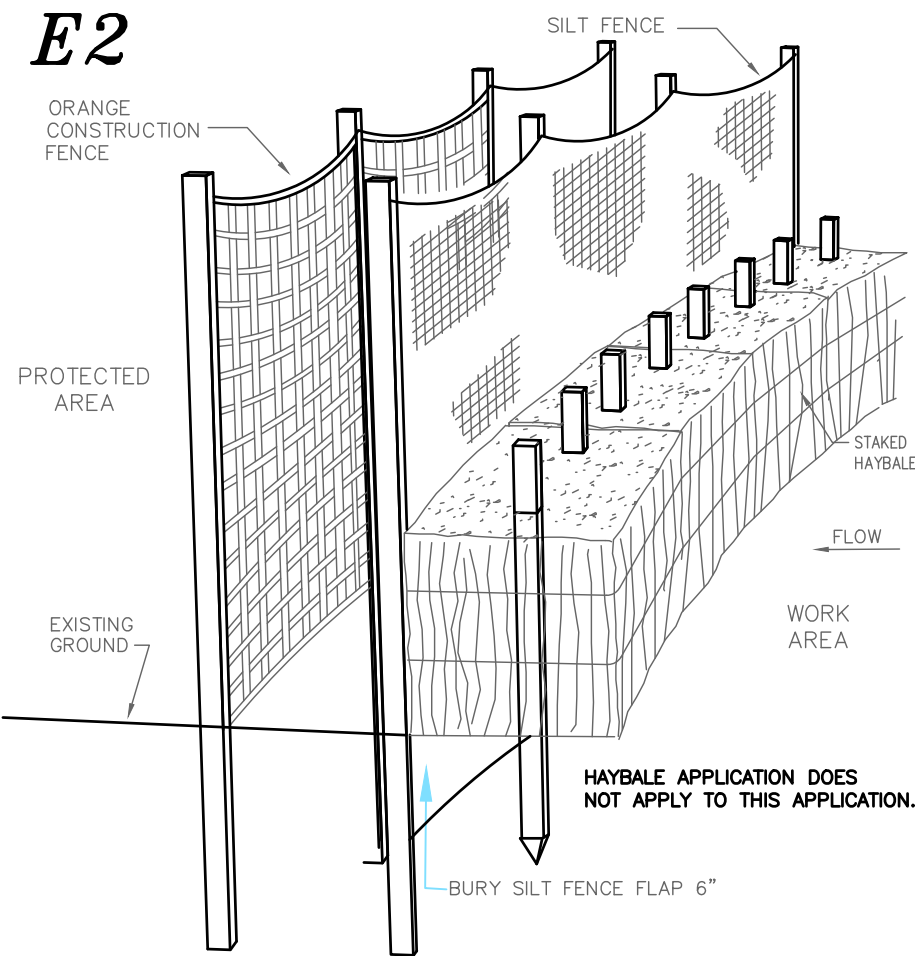
1. CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THAN ONE ACRE.
3. THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET.
4. THE CENTER OF THE DAM SHOULD BE AT LEAST SIX INCHES LOWER THAN THE OUTER EDGES.
5. THE MAXIMUM SPACING IS AS SHOWN ON THE PROJECT SITE PLANS.
6. CHECK DAMS WILL NOT BE USED IN A FLOWING STREAM.
7. TEMPORARY CHECK DAMS WILL BE REMOVED ONCE THE SWALE OR DITCH IS DETERMINED STABLE.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CHECK DAMS, PAGE 114.

NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM.



STONE GRADE STABILIZATION STRUCTURE

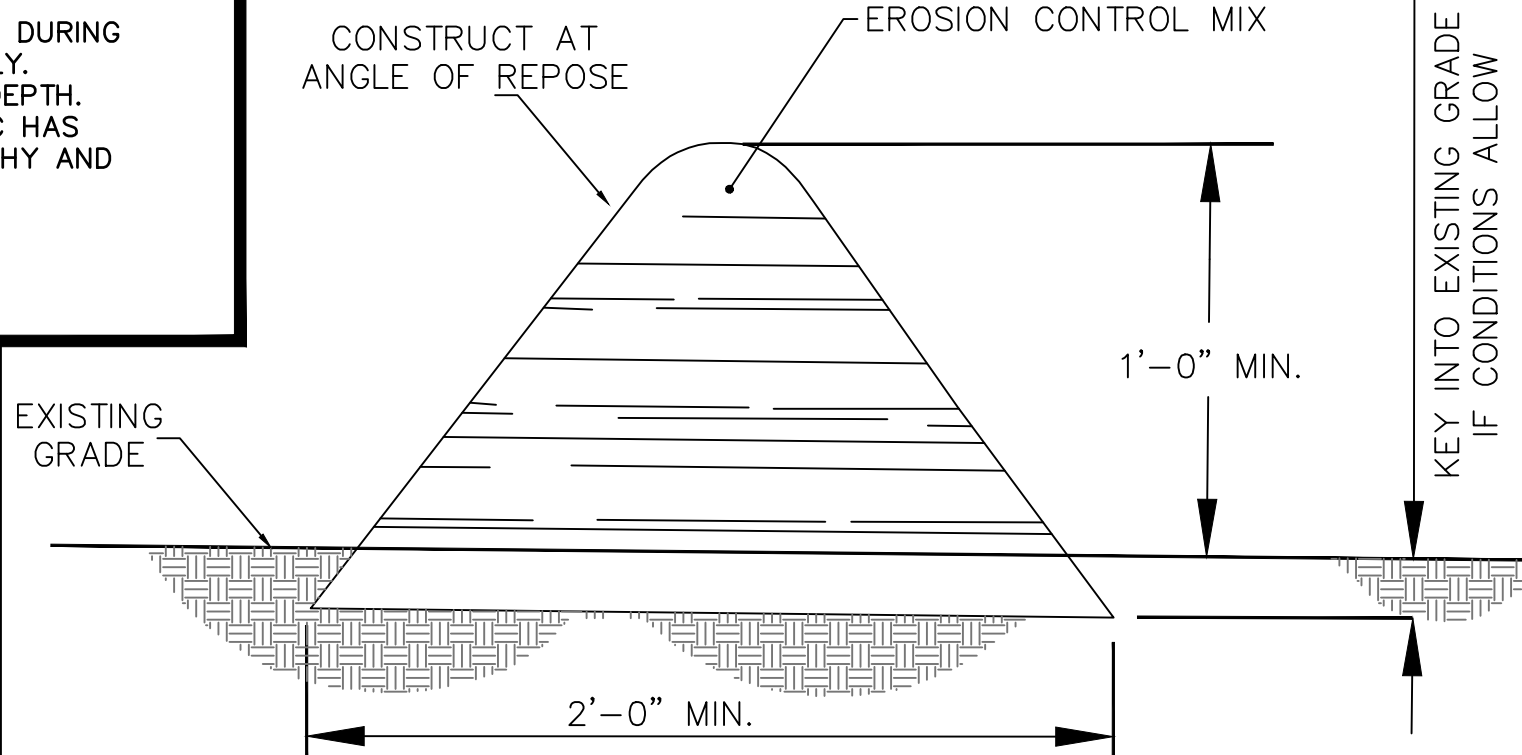
E2



SILT FENCE/HAYBALE BARRIER DETAIL
THIS METHOD TO BE USED ALONG THE REAR OF THE PROPERTY
NOT TO SCALE

E6

EROSION CONTROL MIX BERM
NOT TO SCALE

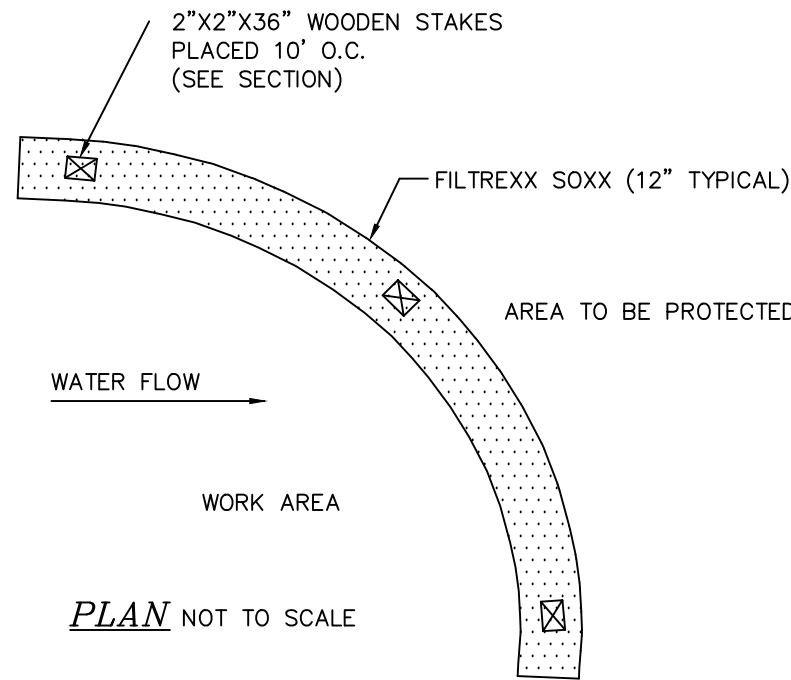


EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. BERMS SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE BERM.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%.
4. SUBJECT TO (E), BELOW, THE MIX SHALL HAVE AN ORGANIC PORTION BETWEEN 80 AND 100% DRY WEIGHT BASIS, AND BE FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. WOOD AND BARK, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL.
5. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
6. THE MIX SHALL HAVE A PARTICLE SIZE BY WEIGHT OF 70 TO 85% PASSING A 6-INCH SCREEN AND A MAXIMUM OF 85% PASSING THE 0.75-INCH SCREEN.
7. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
8. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
9. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

E9

E10

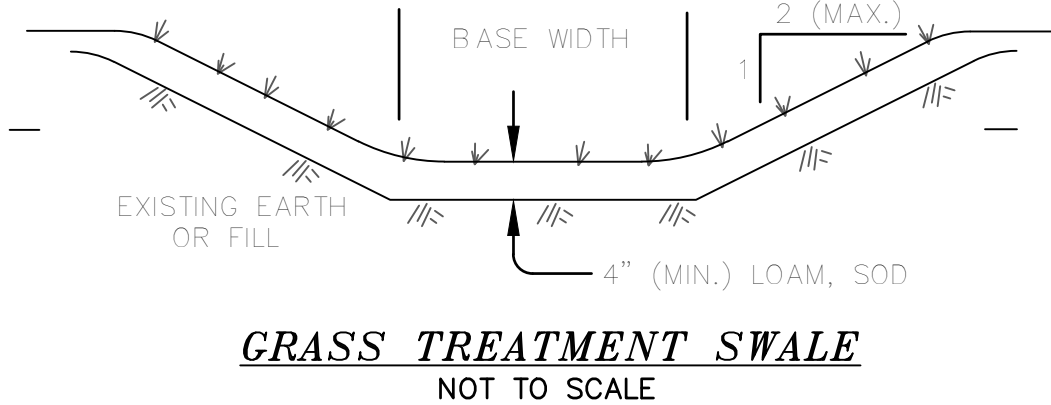


PLAN NOT TO SCALE

NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILT/STOCK MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILT/STOCK COMPOST/STOCK/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXX INTERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1: EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL.

E3



GRASS TREATMENT SWALE
NOT TO SCALE

INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCTION

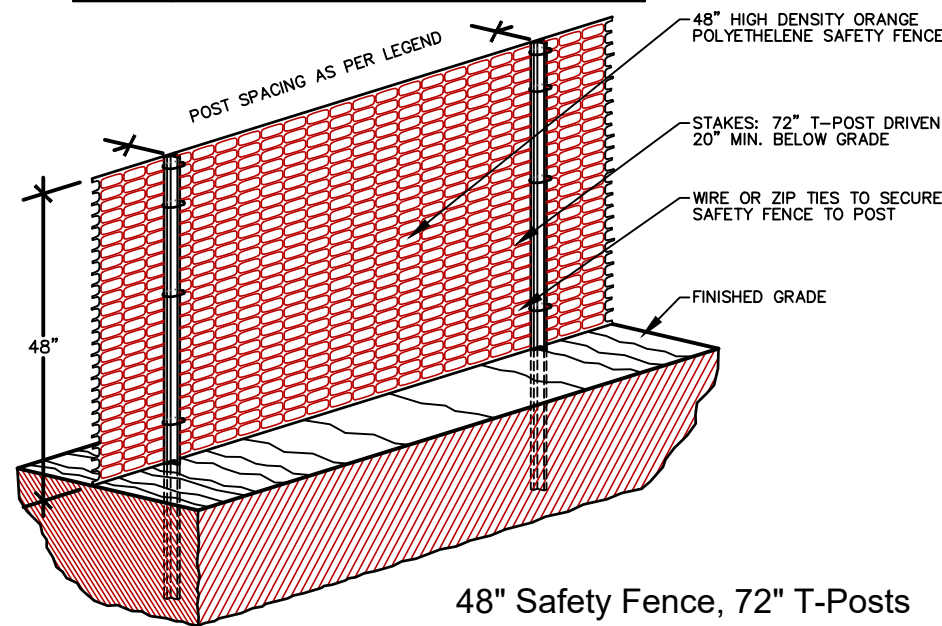
TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5
TREATMENT SWALES, PAGE 123.

E4

CONSTRUCTION SAFETY FENCE

NOT TO SCALE

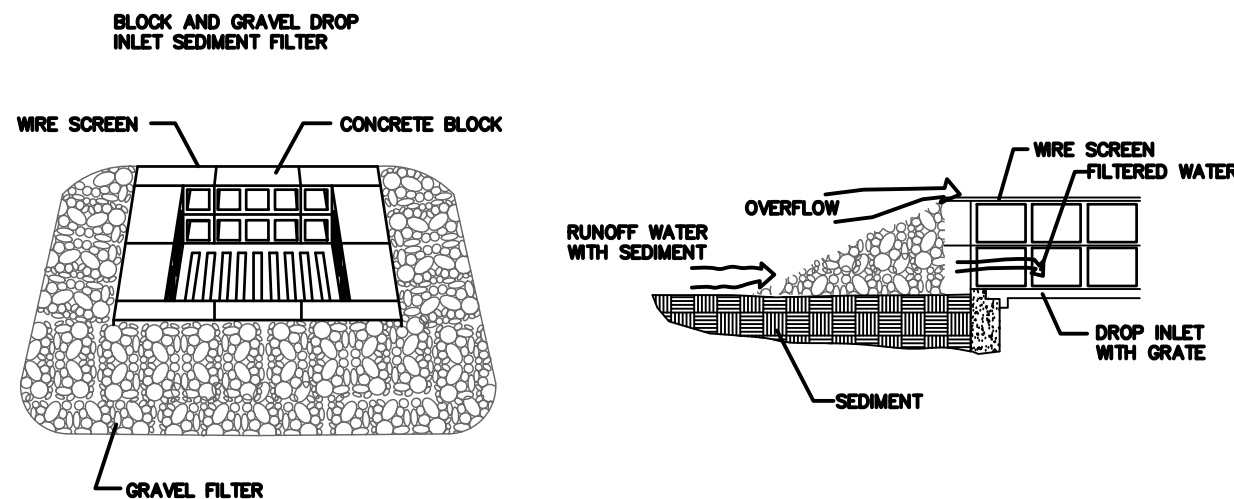
LEGEND	
SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C.
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C.
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.



48" Safety Fence, 72" T-Posts

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHALL BE FASTENED SECURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

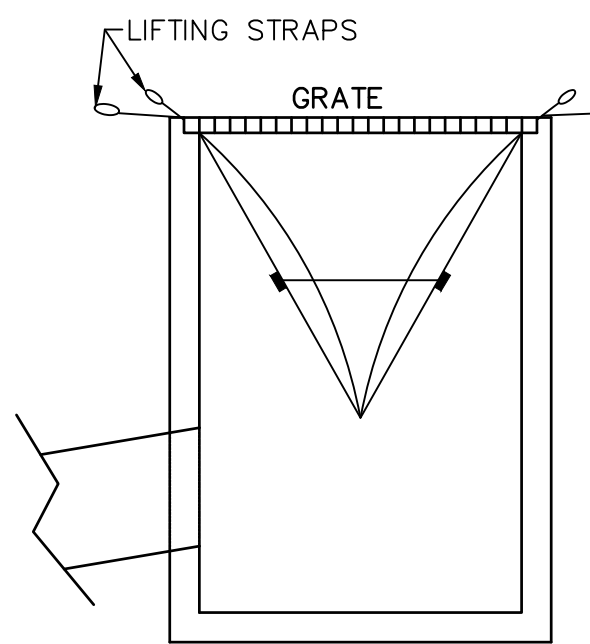
BLOCK & GRAVEL DROP
INLET SEDIMENT FILTER

NOT TO SCALE

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

E11



RECOMMENDED MAINTENANCE SCHEDULE

-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

SILTSACK DETAIL
NOT TO SCALE

E-101

REVISED FOR TRC
REVISED PER CITY OF DOVER

10-22-19
3-28-19

#1
#1

REVISION

DATE

DESCRIPTION

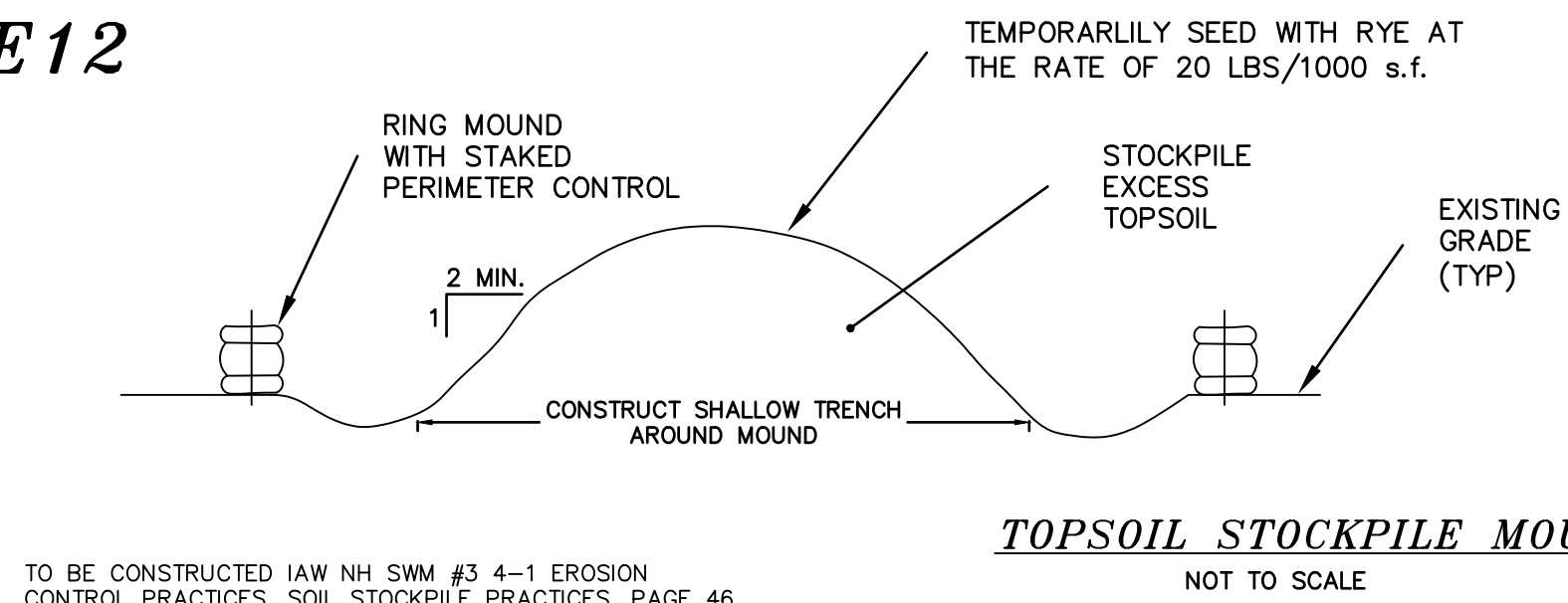
EROSION & SEDIMENT CONTROL DETAILS
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENN ROAD
DOVER, NH
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

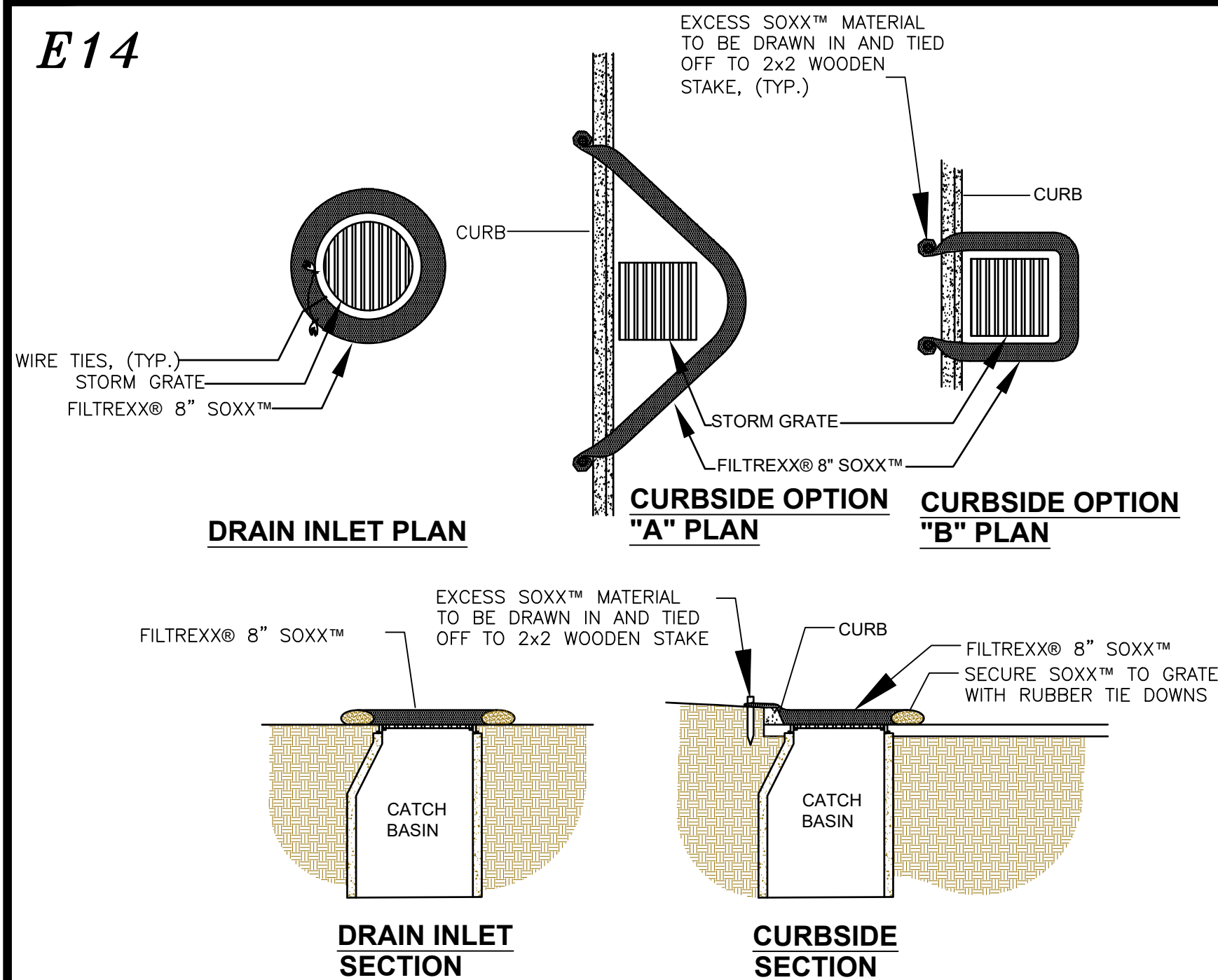
AS NOTED
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

E12



E14



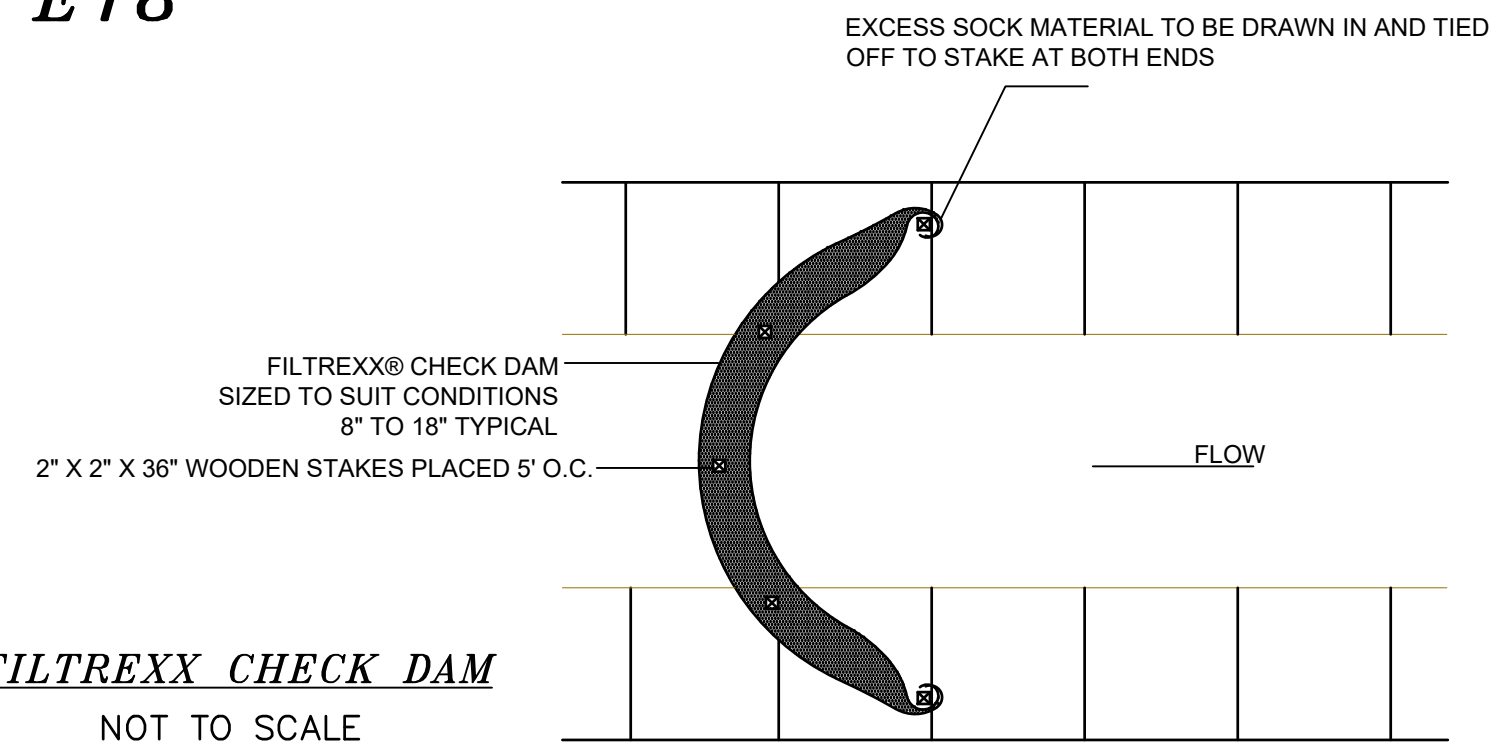
NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION

NOT TO SCALE

E18



NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 10 ACRES OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED™ INSTALLER.

E13

WINTER STABILIZATION NOTES

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.
2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.
3. PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.
4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

E15

NOTE: Temporary seed mix for stabilization of turf shall be winter type or oats at a rate of 2.5 lbs. per 1000 s.f. and shall be placed prior to OCT. 15, if permanent seeding not yet complete.

SEEDING GUIDE				
USE	SEEDING MIXTURE 1/	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD
	B	POOR	GOOD	GOOD
	C	FAIR	GOOD	GOOD
	D	FAIR	GOOD	GOOD
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD
	B	GOOD	GOOD	GOOD
	C	GOOD	GOOD	GOOD
	D	GOOD	GOOD	GOOD
LIGHTLY USED PARKING LOTS, GOLF COURSES, UNDEVELOPED LANDS, AND LOW INTENSITY USE RECREATION SITES	A	GOOD	GOOD	GOOD
	B	GOOD	GOOD	GOOD
	C	GOOD	GOOD	GOOD
	D	GOOD	GOOD	GOOD
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL IS ESSENTIAL FOR GOOD TURF)	F	FAIR	EXCELLENT	EXCELLENT
	G	FAIR	EXCELLENT	EXCELLENT

GRAVEL PIT: SEE NH-PW-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36.

2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
A. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
RED TOP	20	0.45
TOTAL	40	0.95
B. TALL FESCUE	15	0.35
CREeping RED FESCUE	15	0.35
CROWN VETCH	10	0.25
FLAT PEA	10	0.35
TOTAL	40	0.95
C. TALL FESCUE	24	0.55
CREeping RED FESCUE	24	0.55
BIRD'S FOOT TREFOIL	24	0.55
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	20	0.45
TOTAL	40	0.95
E. CREeping RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/2	100	2.35
TOTAL	150	3.60
F. TALL FESCUE 1	150	3.60

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
RED FESCUE (35%)	75	1.75
TALL FESCUE (25%)	55	1.25
ANNUAL RYEGRASS (12%)	33	0.75
PERENNIAL RYEGRASS (10%)	26	0.60
KENTUCKY BLUEGRASS (10%)	22	0.50
WHITE CLOVER (3%)	7	0.15

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
 - A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED.
 - WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
 - A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 - B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEED BED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
 - A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED: AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT. NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT. PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT. POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT. (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000LBS. PER ACRE OF 5-10-10.)
4. MULCH
 - A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
 - B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
 - A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
 - B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
 - C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.

- A. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
- C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRD'S FOOT TREFOIL, AND FLAT PEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
- D. WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

RAIN GARDEN SPECIFICATIONS

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL BIORETENTION FILTER MEDIA SHALL BE AS SHOWN ABOVE. "BIO MEDIA" MEANS BIORETENTION FILTER MEDIA. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
3. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
6. CENTER CORE OF THE BERM IS TO BE CONSTRUCTED UNDERNEATH THE EMERGENCY SPILLWAY.

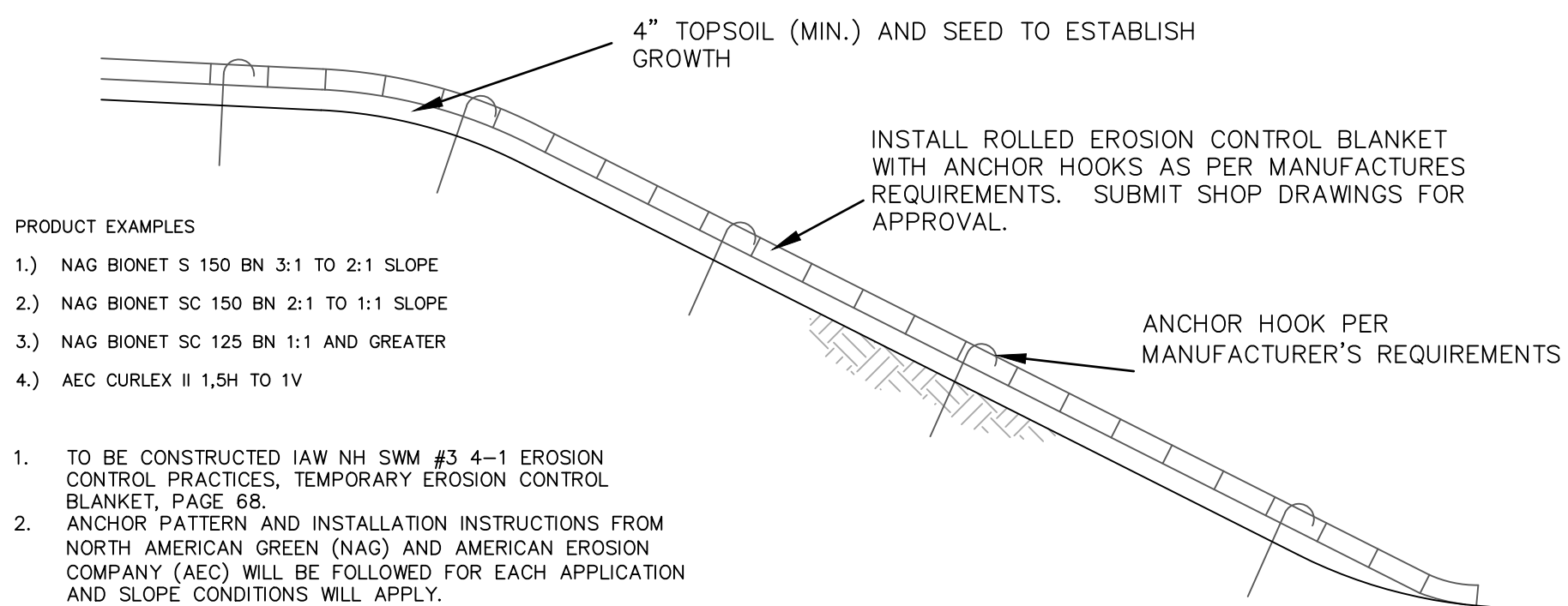
MAINTENANCE REQUIREMENTS

1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
3. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
4. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, PRUNING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

DESIGN REFERENCES

1. UNH STORMWATER CENTER
2. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

E16



1. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68.
2. ANCHOR PATTERN AND INSTALLATION INSTRUCTIONS FROM NORTH AMERICAN GREEN (NAG) AND AMERICAN EROSION COMPANY (AEC) WILL BE FOLLOWED FOR EACH APPLICATION AND SLOPE CONDITIONS WILL APPLY.

ROLLED EROSION CONTROL BLANKET (RECB) SLOPE STABILIZATION DETAIL

NOT TO SCALE

E17 DEFINITION OF STABLE:

PER ENV-WQ 1500 ALTERATION OF TERRAIN

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
 2. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED..
 3. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
 - OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- ADDITION STABILIZATION NOTES:
5. HAY MULCH OR OTHER APPROVED METHODS SHALL BE USED TO CONTROL EROSION OF NEWLY GRADED AREAS. ALL CUT AND FILL SLOPES SHALL BE SEED AND MULCHED WITHIN 72 HOURS AFTER THEIR CONSTRUCTION.
 6. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN (7) CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN ONE HUNDRED (100) FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE (3) CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

E19

BIORETENTION FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Bioretention Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 - 100
# 4	22 - 55
# 8	0 - 10

* EQUIVALENT TO STANDARD WASHED STONE - SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

3/4" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 - 100
1/2"	15 - 55
# 10	0 - 5

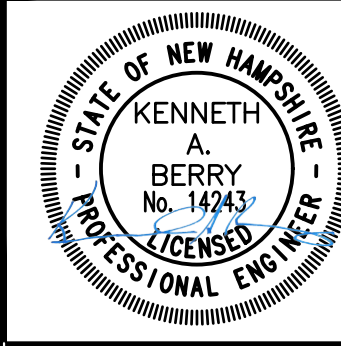
* EQUIVALENT TO STANDARD WASHED STONE - SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

REVISION	DATE	DESCRIPTION
#1	10-22-19 3-28-19	REVISED FOR TRC REVISED PER QTY OF DOVER

EROSION & SEDIMENT CONTROL DETAILS

FOR
KNOX MARSH DEVELOPMENT LLC
7 GLOVERMAN
TAX MAP 38, LOT 32-1

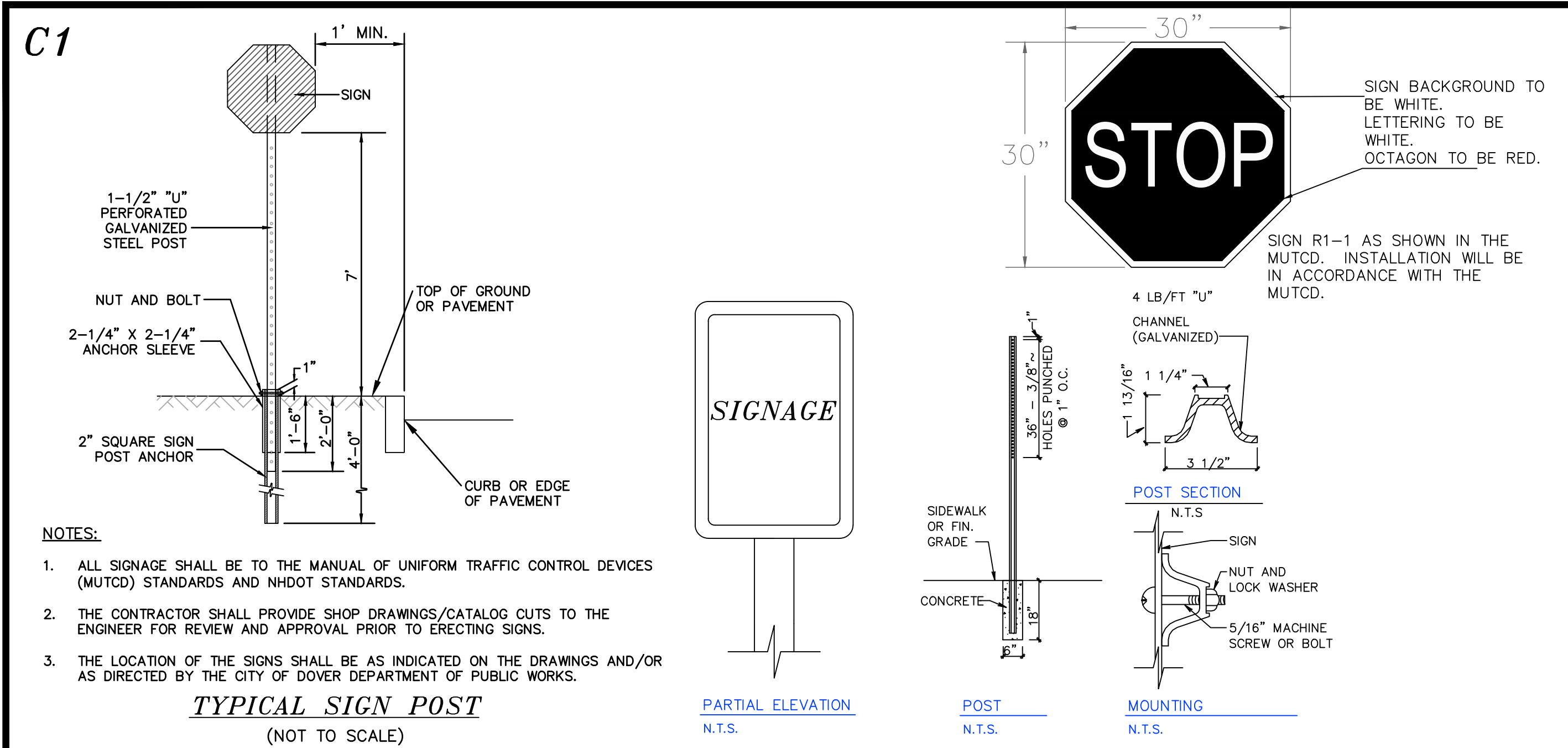
BERRY SURVEYING & ENGINEERING	335 SECOND CROWN POINT ROAD BARRINGTON, NH 03825 (603)332-2863
AS NOTED	DATE : MARCH 3, 2019
FILE NO. :	DB 2019 - 029



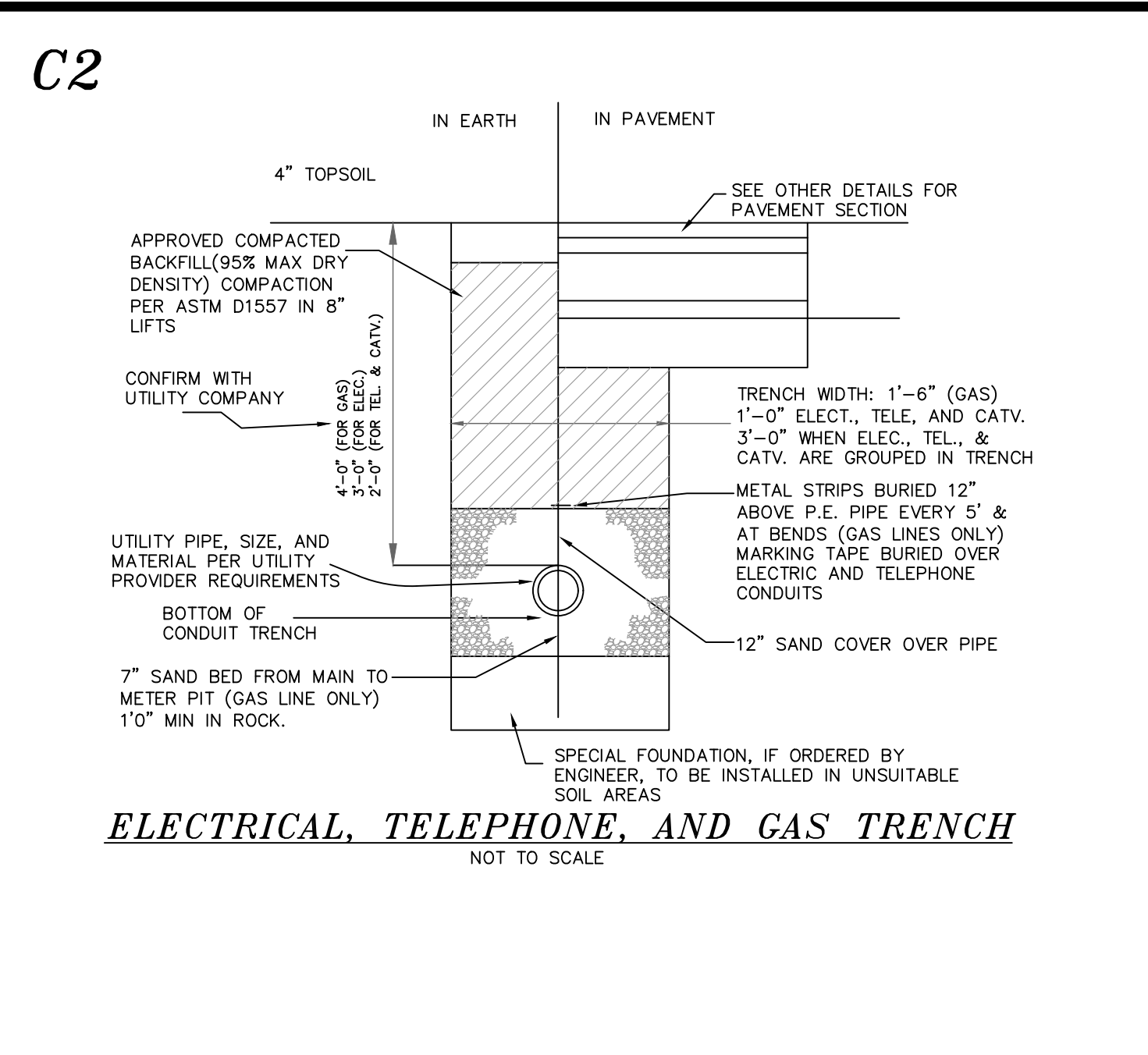
E-102

SHEET 8 OF 10

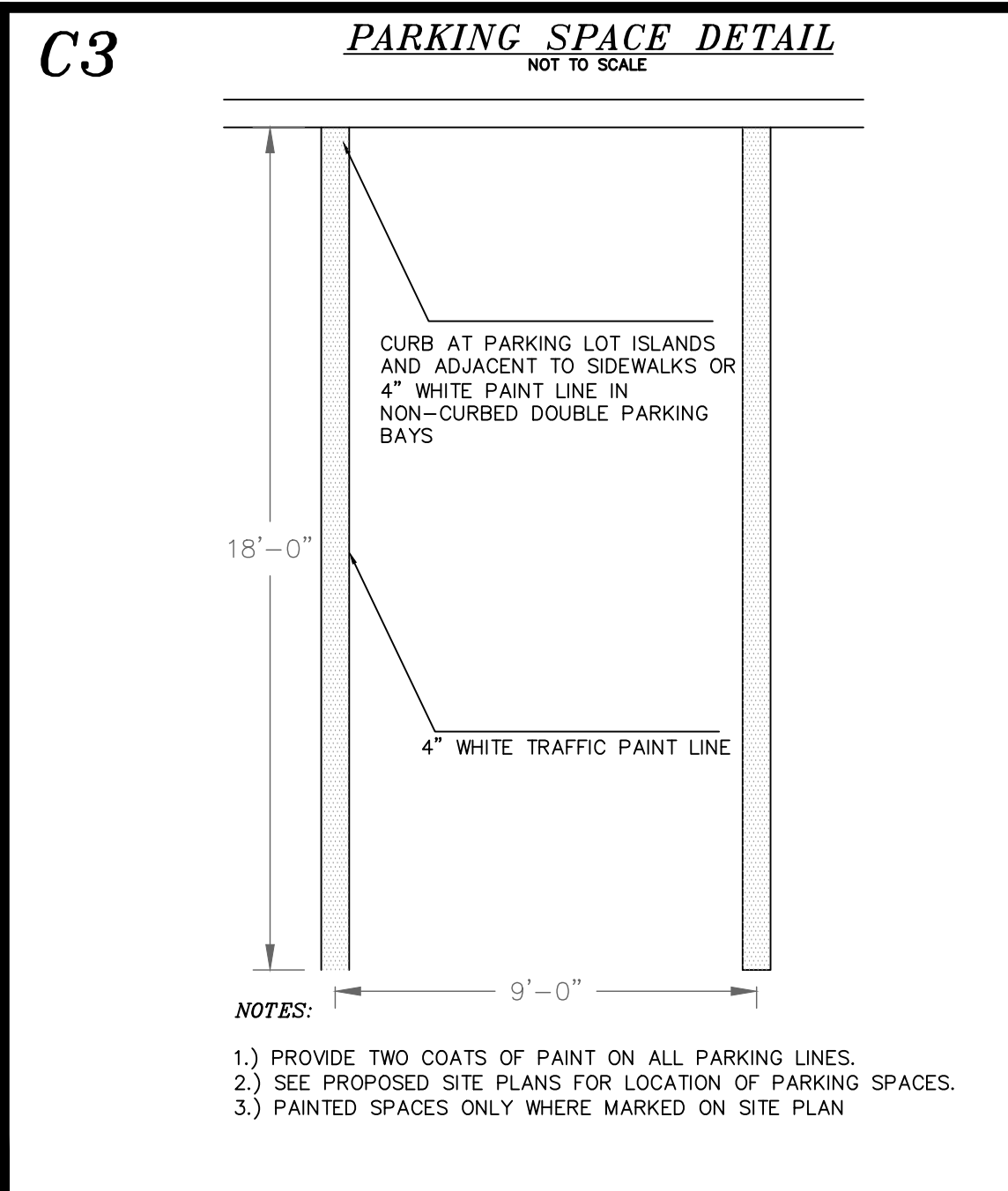
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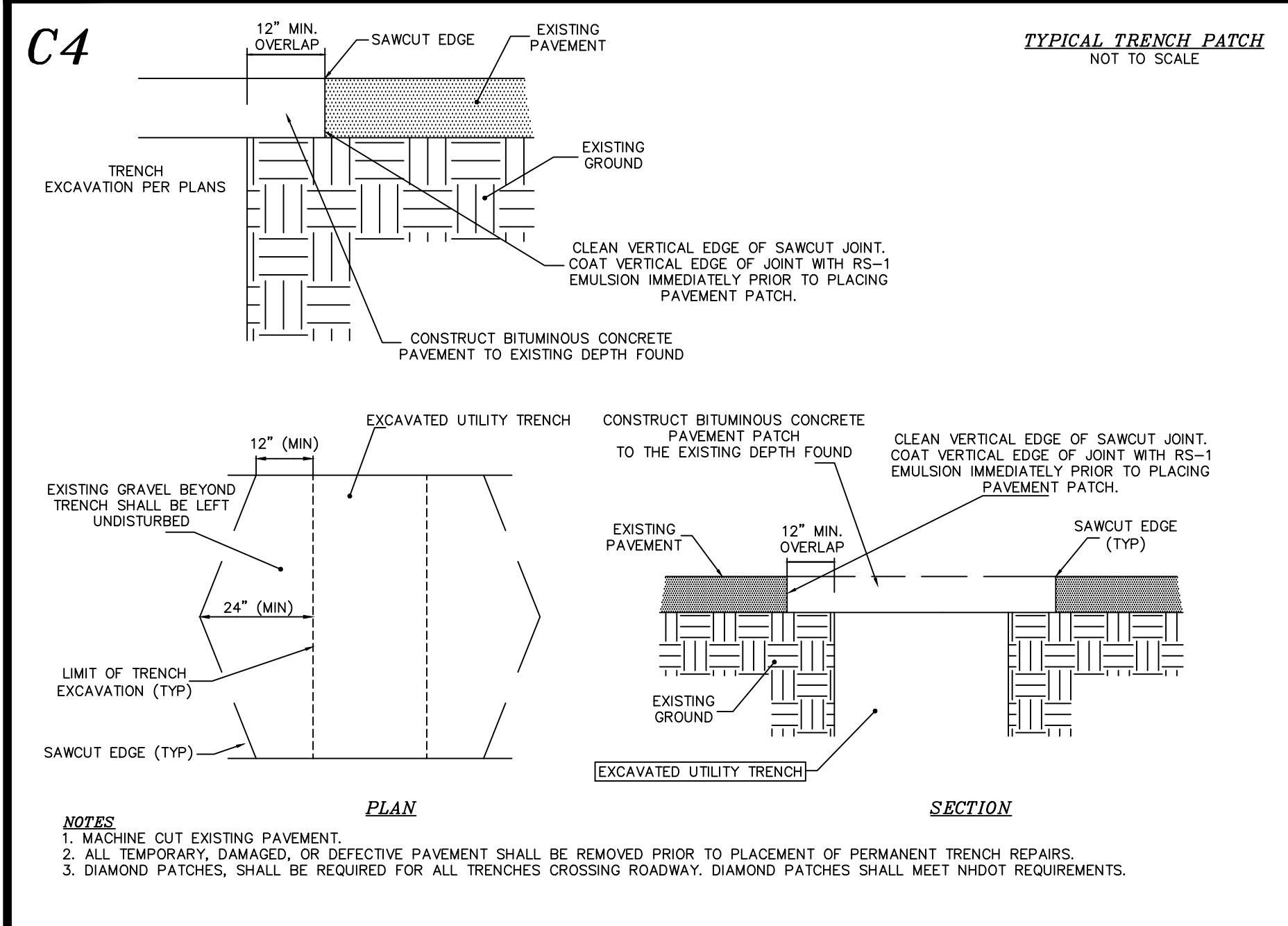
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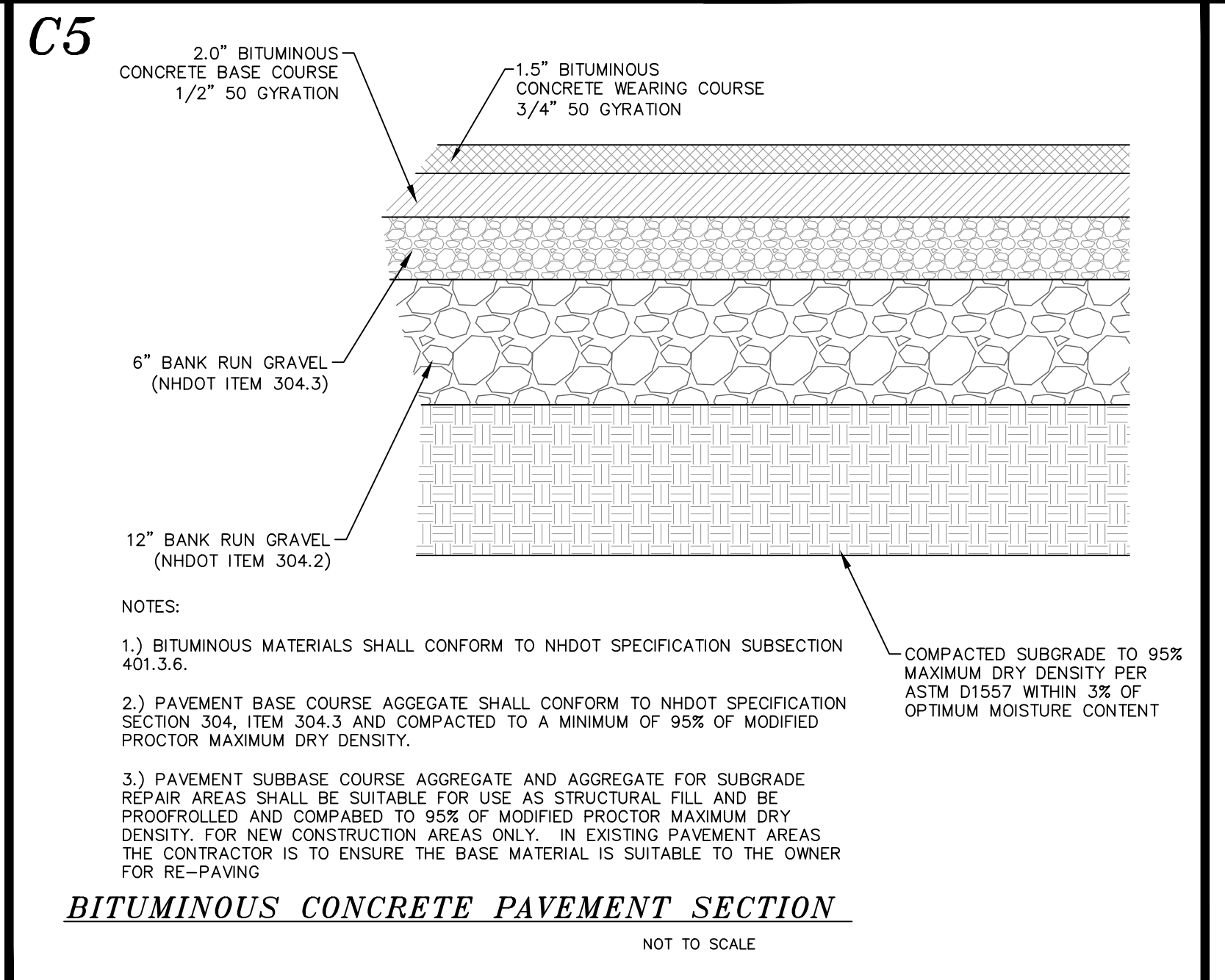
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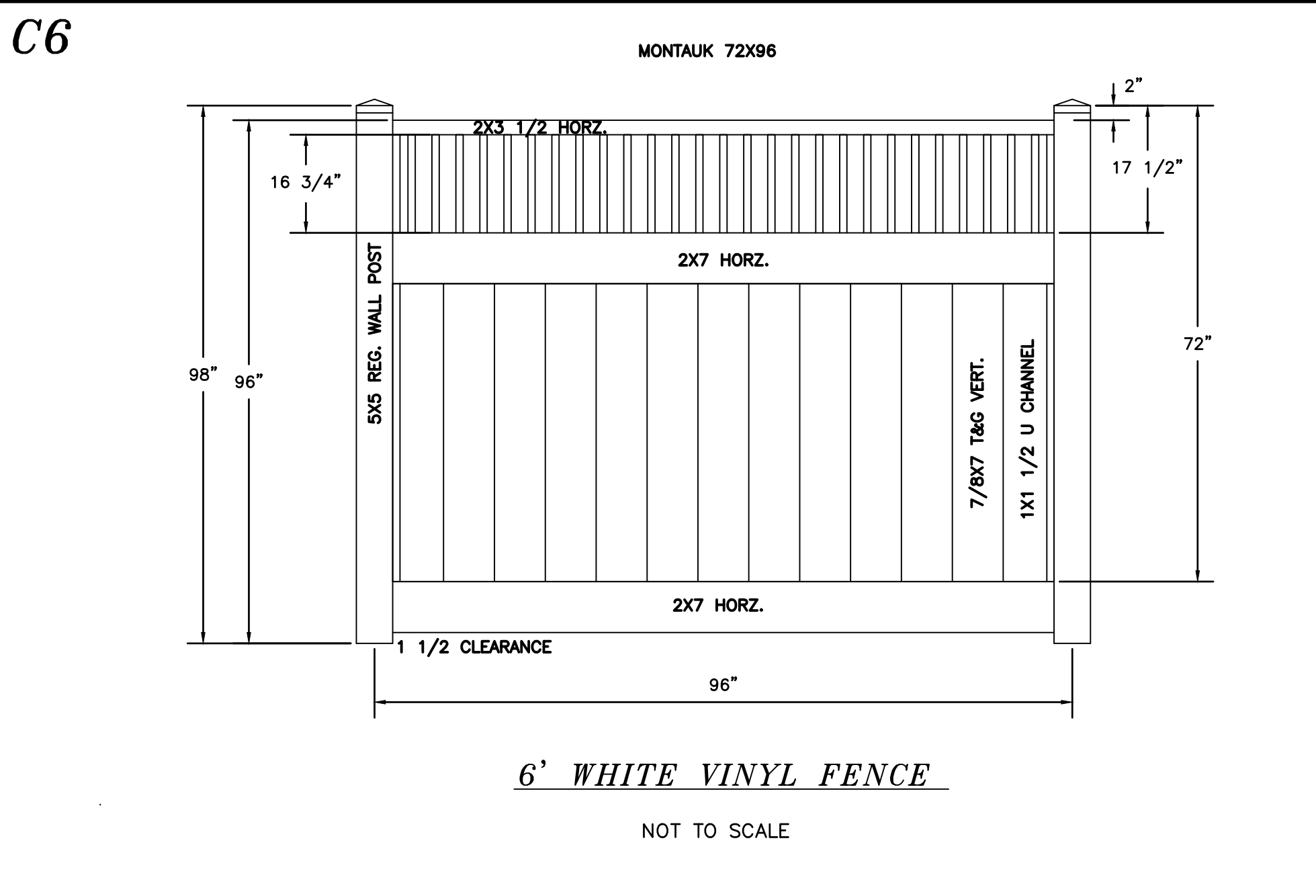
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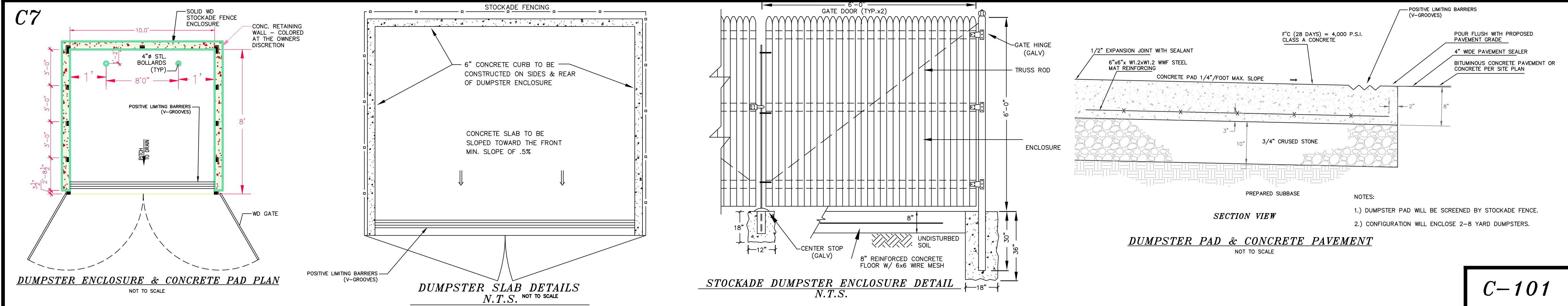
C5



C6



C7



REVISION		DATE	DESCRIPTION
#	#1	10-22-19 3-28-19	REVISED FOR TRC REVISED PER CITY OF DOVER

CONSTRUCTION DETAILS
FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENN
TAX MAP 38, LOT 32-1

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
AS NOTED
DATE : MARCH 3, 2019
FILE NO. : DB 2019 - 029

KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 9 OF 10

C8

Manhole Castings L-1

Rexus Ductile Iron Frame & Cover

REXUS manhole covers feature a unique spring bar locking mechanism and a spline located in the hinge housing for improved security; additional locking options are available to further deter unauthorized access and theft. Made from ductile iron — an engineered material that offers many advantages over traditional cast iron — REXUS covers deliver excellent performance in all the key areas of concern to municipal engineers.

Highlights:

- Ductile iron
- Spring bar locking
- Available in 24" opening
- Hinged cover
- Cover with 90° blocking mechanism
- Exceeds H20 loading
- Optional locking features
- Independently certified



Rexus Frame & Grate

DESCRIPTION	PRODUCT NUMBER
24" REXUS DI MH F & C - Plain	62114 24 P
24" REXUS DI MH F & C - Sewer	62114 24 S
24" REXUS DI MH F & C - Drain	62114 24 D
24" REXUS DI MH F & C - Water	62114 24 WTR
24" REXUS DI CB F & Grate	62114 CBTR
REXUS Prest Lock with Key	62132 P32 01
REXUS Prest Lock without Key	62132 P32 02



REXUS Anti-Theft Cover Locks

Pent Locking Kit:

- ¼ turn lock activated by an asymmetrical five-sided bolt head.
- On-site installation takes five minutes:
 1. Punch out the center of the locking bolt area.
 2. Install the kit in compliance with the instructions supplied.
- Lock must be operated with the handling key (supplied with the kit; can be purchased separately).

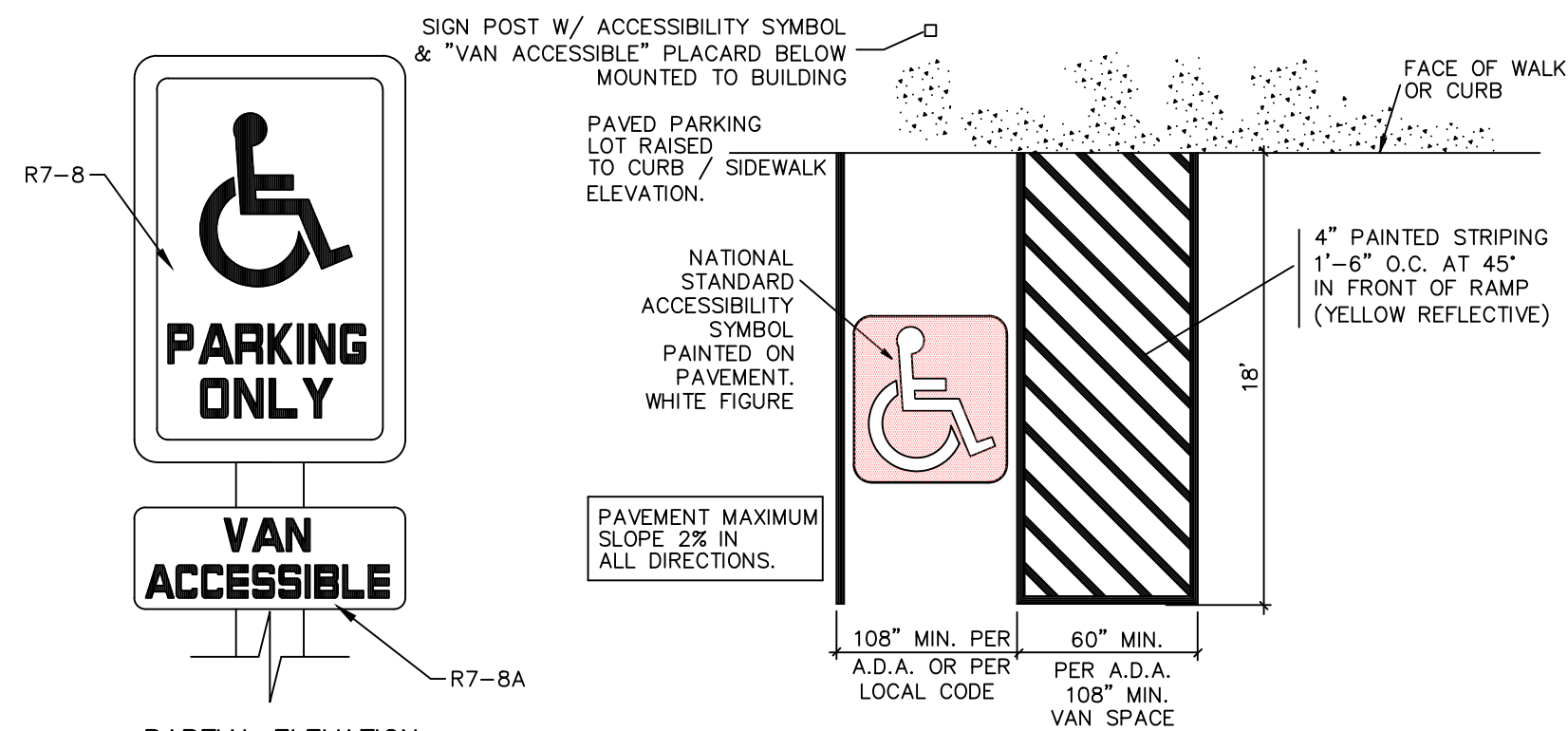
www.ejprescott.com

SPECIFICATIONS:

Manhole cover and frame shall be called REFUS or approved equal. Cover and frame shall be manufactured from Ductile Iron and be 3rd party certified and ISO 9000 approved. Covers shall be hinged and incorporate a 90-degree blocking system to prevent accidental closure. Covers shall be one-man operable using standard tools and shall be capable of withstanding a test load of 100,000 lbs. The cover shall incorporate a spring bar locking system, which automatically activates when the cover is closed. The locking system shall be designed to prevent the cover from being completely removed from the frame. This device shall be capable of being deactivated if required. Frames shall be circular, incorporate a seating ring, and have a nominal 24-inch clear opening. Frame depth shall not exceed 4 inches, and the flange shall incorporate bedding slots and bolt holes.

1.1

C9



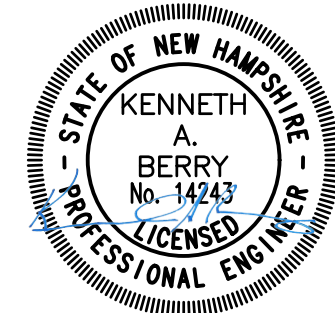
HANDICAP SIGNAGE & PARKING
NOT TO SCALE

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED

DATE : MARCH 3, 2019

FILE NO. : DB 2019 - 029



FOR
KNOX MARSH DEVELOPMENT LLC
7 GLENWOOD AVENUE
DOVER, N.H.
TAX MAP 38, LOT 32-1

# #1	10--22--19 3--28--19	REVISED FOR TRC REVISED PER CITY OF DOVER	REVISION	DATE	DESCRIPTION