



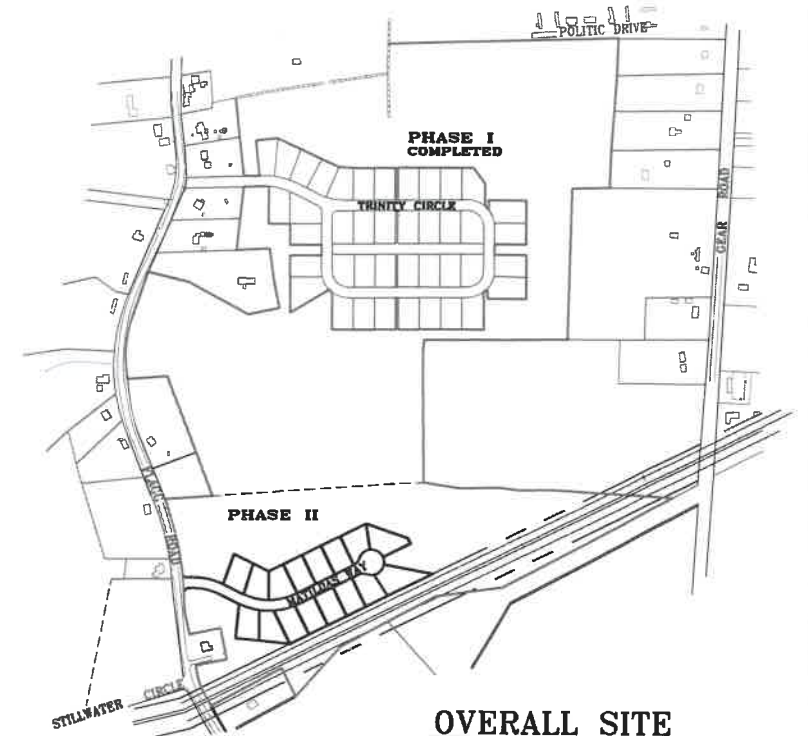
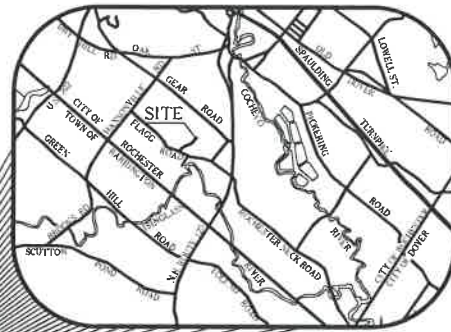
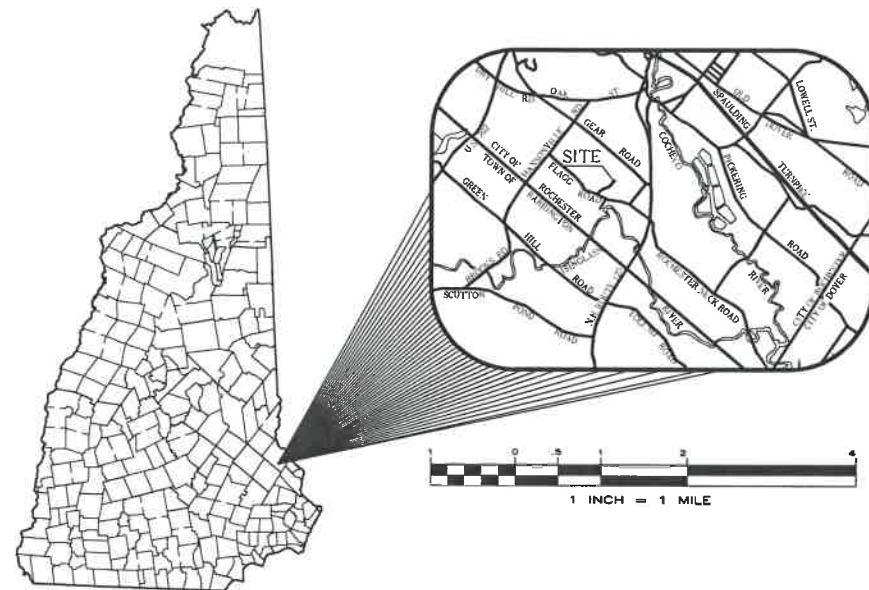
MATILDAS WAY SUBDIVISION

FLAGG ROAD, ROCHESTER, NH

PREPARED FOR

119 FLAGG ROAD DEVELOPMENT, LLC.

MARCH 2018



OVERALL SITE
1" = 400'

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



CIVIL ENGINEERS
NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BOULEVARD
ROCHESTER, NEW HAMPSHIRE 03867
(603) 335-3948

OWNER OF RECORD

TAX MAP 259, LOT 38-0 THRU 38-17
OWNER OF RECORD:
119 FLAGG ROAD DEVELOPMENT, LLC.
35 THIRD STREET
DOVER, NH 03820
SCRD BOOK 3549, PAGE 545

APPLICANT

119 FLAGG ROAD DEVELOPMENT, LLC
35 THIRD STREET
DOVER, NH 03820
(603) 742-5300

STATE AND FEDERAL PERMITS:

STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
NHDES ALTERATION OF TERRAIN: REQUIRED - ALTERATION OF TERRAIN PERMIT No. AOT 180410-53
NHDES WETLANDS PERMIT: NOT REQUIRED
NHDES DAM PERMIT: NOT REQUIRED
NHDES SUBDIVISION PERMIT: NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
NHDES WASTEWATER PERMIT: NOT REQUIRED
NHDDOT DRIVEWAY/ENTRANCE PERMIT: NOT REQUIRED

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):

NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).

NPDES PERMIT: REQUIRED

NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.

FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

SHEET INDEX		
COVER		
SHEET E-1	EXISTING FEATURES	1" = 100'
SHEET S-1	EASEMENT PLAN	1" = 100'
SHEET C-1	ROAD LAYOUT PLAN AND PROFILE	1" = 50'
SHEET C-2	UTILITY PLAN AND PROFILE	1" = 50'
SHEET C-3	GRADING AND DRAINAGE PLAN	1" = 50'
SHEET C-4	EROSION AND SEDIMENTATION CONTROL PLAN	1" = 50'
SHEET C-5	ROADWAY DETAILS	AS SHOWN
SHEET C-6	UTILITY DETAILS	AS SHOWN
SHEET C-7	DRAINAGE DETAILS	AS SHOWN
SHEET C-8	INFILTRATION BASIN AND TREATMENT SWALE DETAILS	AS SHOWN
SHEET C-9	GRAVEL WETLANDS BASIN DETAILS	AS SHOWN
SHEET C-10	TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
SHEET C-11	PERMANENT EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
SHEET C-12	SITE AMENITIES DETAILS	AS SHOWN

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: *Shanna Browder* DATE: *Feb 1, 2021*
Approved Feb 5, 2021

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
P.B. NO.

NORWAY PLAINS ASSOCIATES, INC.

LEGEND

PROPERTY LINE
LIMITS OF JURISDICTIONAL WETLANDS
JURISDICTIONAL WETLANDS 50 FOOT SETBACK
EXISTING TREE LINE
EXISTING CONTOUR LINE
EXISTING OVERHEAD WIRES
EXISTING EDGE OF PAVEMENT

EXISTING UTILITY POLE
EXISTING MONUMENT
EXISTING TEST PIT LOCATION & NUMBER
EXISTING WETLANDS

WETLAND LEGEND

POWx: PALUSTRINE OPEN WATER, EXCAVATED
PSS/FOIE: PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB & FORESTED, SEASONALLY FLOODED/SATURATED
PSS/FOI/4E: PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB & FORESTED AND NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED
PEM/SSIE: PALUSTRINE PERSISTENT EMERGENT/BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED

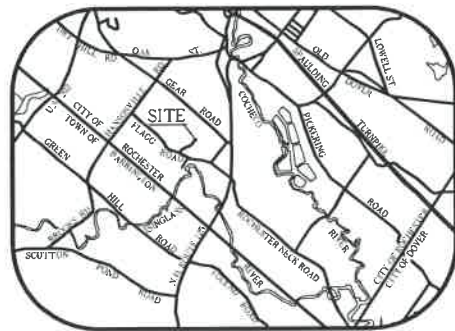
WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, ON JUNE 11, 2018. WETLANDS MAPPING WAS DONE BY N.H. LICENSED LAND SURVEYORS, NORWAY PLAINS ASSOCIATES, INC. IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:

1. N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.01) WITH THE TECHNIQUES OUTLINED IN THE 1987 U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1.
2. U.S. ARMY CORPS OF ENGINEERS, 2008, 'REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTAL AND NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-09-19.'
3. U.S. ARMY CORPS OF ENGINEERS, 2012, 'NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY.'
4. N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.02) WITH THE U.S. FISH AND WILDLIFE SERVICE MANUAL FWS/OBS-79/31 ENTITLED 'CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES, COMARON ET AL. 1979.'
5. NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2004, 3RD ED., 'FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND.' NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
6. U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, 2010, 'FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0.' L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.



LOT AREAS IN ACRES
LOT 38-0 = 40.44 (OPEN SPACE)
LOT 38-1 = 0.36 (HOUSE LOT)
LOT 38-2 = 0.34 (HOUSE LOT)
LOT 38-3 = 0.34 (HOUSE LOT)
LOT 38-4 = 0.34 (HOUSE LOT)
LOT 38-5 = 0.34 (HOUSE LOT)
LOT 38-6 = 0.34 (HOUSE LOT)
LOT 38-7 = 0.34 (HOUSE LOT)
LOT 38-8 = 0.40 (HOUSE LOT)
LOT 38-9 = 0.45 (HOUSE LOT)
LOT 38-10 = 0.34 (HOUSE LOT)
LOT 38-11 = 0.34 (HOUSE LOT)
LOT 38-12 = 0.34 (HOUSE LOT)
LOT 38-13 = 0.34 (HOUSE LOT)
LOT 38-14 = 0.36 (HOUSE LOT)
LOT 38-15 = 0.36 (HOUSE LOT)
LOT 38-16 = 0.36 (HOUSE LOT)
LOT 38-17 = 1.13 (ROAD EASEMENT)
TOTAL AREA = 53.43 ACRES



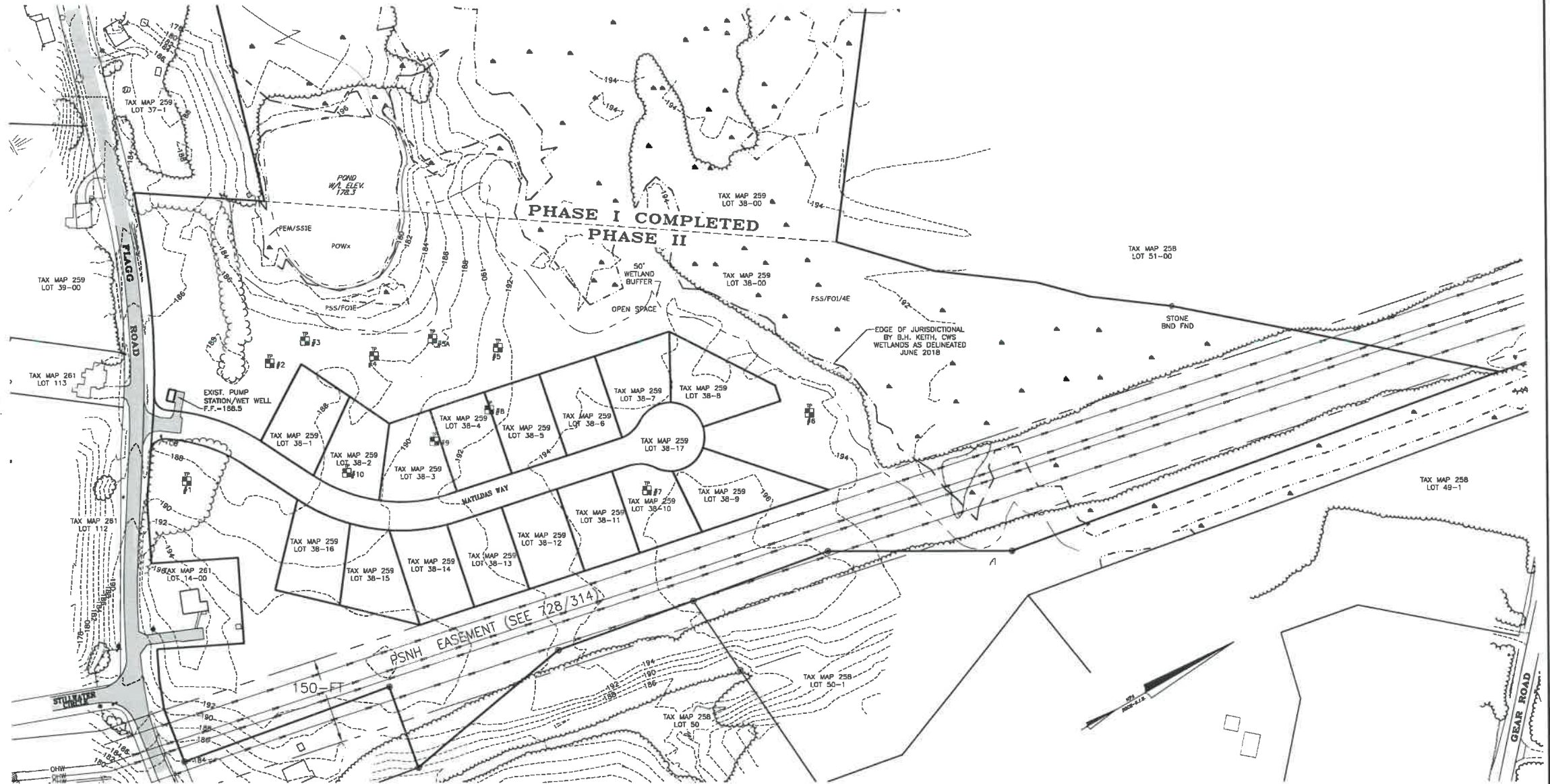
FILE NO. 134
PLAN NO. C-2379-S2
DWC. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

E-1



TEST PIT DATA:

The soils on the referenced property were examined on 21 November 2017 so that drainage and regulatory issues can be properly addressed. The soil profiles were examined and recorded using NRCS and N-HDES criteria as follows:

TP #1 11/21/17
0-10' 10yr 3/2 sandy loam, granular, friable
12-15' 7.5yr 4/6 sandy loam, granular, friable
28-38' 10yr 6/3 and 10yr 7/1 stratified very fine sands, weak platy, firm in place, friable in hand, roots to 38'.
38-39' 2.5 yr 3/4 coarse sand, cemented, certain layer, firm, discontinuous within profile examined and likely relic.
39-72' 10yr 6/6 fine sand, loose, single grained, roots to 60'.
Notes: SHWT= 72'. NRCS Windsor Series, Hydrologic Soil Group A

TP #2 11/21/17
0-16' 10yr 3/3 sandy loam, granular, friable.
16-42' fine sandy loam fill.
42-60' soil with burnt dry woody debris.
Notes: SHWT 60'. Test pit dug within an old burn pit. No evidence of seasonal water table noted.
Reported past activity on this site and the soil profile horizons observed, confirmed that soils within this area of the site had been excavated and then reggraded with fill from adjacent pond bottom.
Hydrologic Group not determinable. The original soils likely fit the Windsor Series.

TP #3 11/21/17
0-12' 10yr 3/3 sandy loam, granular, friable.
12-22' 10yr 6/6 sandy loam, massive, firm.
22-40' 10yr 7/3 fine sand, massive, friable.
40-50' 10yr 3/3 fine sand, blocky, firm, redox features.
50-56' 7.5yr 3/4 coarse sand certain layer, cemented, firm.
56-66' 10yr 6/2 fine sand, blocky, firm, redox features.
Notes: SHWT= 40'. NRCS Windsor Series, Hydrologic Soil Group A

TP #4 11/21/17
0-31' FILL (as noted in TEST PIT # 2 Notes)
31-32' 10yr 3/3 sandy loam, (loose A horizon)
32-38' 10yr 6/6 fine sandy loam, massive, friable.
38-50' 10yr 6/4 fine sand, massive, friable.
50-66' 10yr 6/3 fine sand, blocky, friable, redox concentrations.
Notes: As noted with Test Pit #2, the upper portion of this profile is fill from adjacent pond bottom excavation. The SHWT from current soil surface is 50'. The fill overlies the remains of a Deerfield Series Soil which had a 32' SHWT (more than 24'). This profile to 50' fits within Hydrologic Group B. Below 50' the proper hydrologic grouping would need to be determined.

TP #5 11/21/17
0-12' 10yr 3/3 sandy loam, granular, friable.
12-18' 10yr 6/6 loamy sand, granular, friable.
18-27' 10yr 6/6 medium to coarse sand, single grained, loose.
27-44' 10yr 7/4 fine sand, granular, friable.
44-45' Ostrin layer cemented, firm redox.
45-65' 10yr 7/3 fine sand, massive, friable, redox features.
Notes: SHWT= 45'. NRCS Windsor Series, Hydrologic Soil Group A

TP #5A 11/21/17
0-20' FILL (as noted in TEST PIT # 2 Notes)
20-32' 10yr 6/4 sandy loam to loamy sand, massive, friable.
32-52' 10yr 6/6 fine sand, loose to massive, friable, roots to depth.
52-60' 10yr 7/3 fine sand, massive, friable, redox concentrations.
Notes: SHWT from current surface is 52'. The fill overlies the remains of a Deerfield Series Soil which had a 32' SHWT (more than 24'). With the fill horizon removed, this profile fits within Hydrologic Group B.

TP #6 11/21/17
0-12' 10yr 3/3 sandy loam, granular, friable.
12-24' 7.5yr 4/6 fine sand, massive, granular.
24-35' 10yr 6/6 sandy loam, massive, friable.
35-50' 10yr 6/4 medium to coarse sand, loose, single grained, roots to 50'.
50-66' 10yr 6/4 fine sand, massive, firm, redox concentrations.
Notes: SHWT= 50'. NRCS Windsor Series, Hydrologic Soil Group A

TP #7 11/21/17
0-7' 10yr 3/3 sandy loam, granular, friable.
7-13' 10yr 6/6 sandy loam, granular, friable.
13-66' 10yr 7/4 fine to medium sand, loose, single grained, no redox features.
Notes: SHWT= 66'. NRCS Windsor Series, Hydrologic Soil Group A

TP #8 11/21/2017
0-15' 10yr 3/3 sandy loam, granular, friable.
15-23' 10yr 6/6 loamy sand, granular, friable.
23-30' 10yr 6/6 fine sand, loose, single grained.
30-54' 10yr 6/4 very fine sand, massive, friable.
54-70' 10yr 7/3 fine sand, granular, friable, redox features.
Notes: SHWT= 54'. NRCS Windsor Series, Hydrologic Soil Group A

TP #9 11/21/17
0-18' 10yr 3/3 sandy loam, granular, friable.
18-25' 10yr 6/6 sandy loam to loamy sand, granular, friable.
25-46' 10yr 6/4 fine sand, single grained to granular, granular, friable.
46-72' 10yr 6/4 medium sand, granular, very friable.
Notes: SHWT 72'. NRCS Windsor Series, Hydrologic Soil Group A

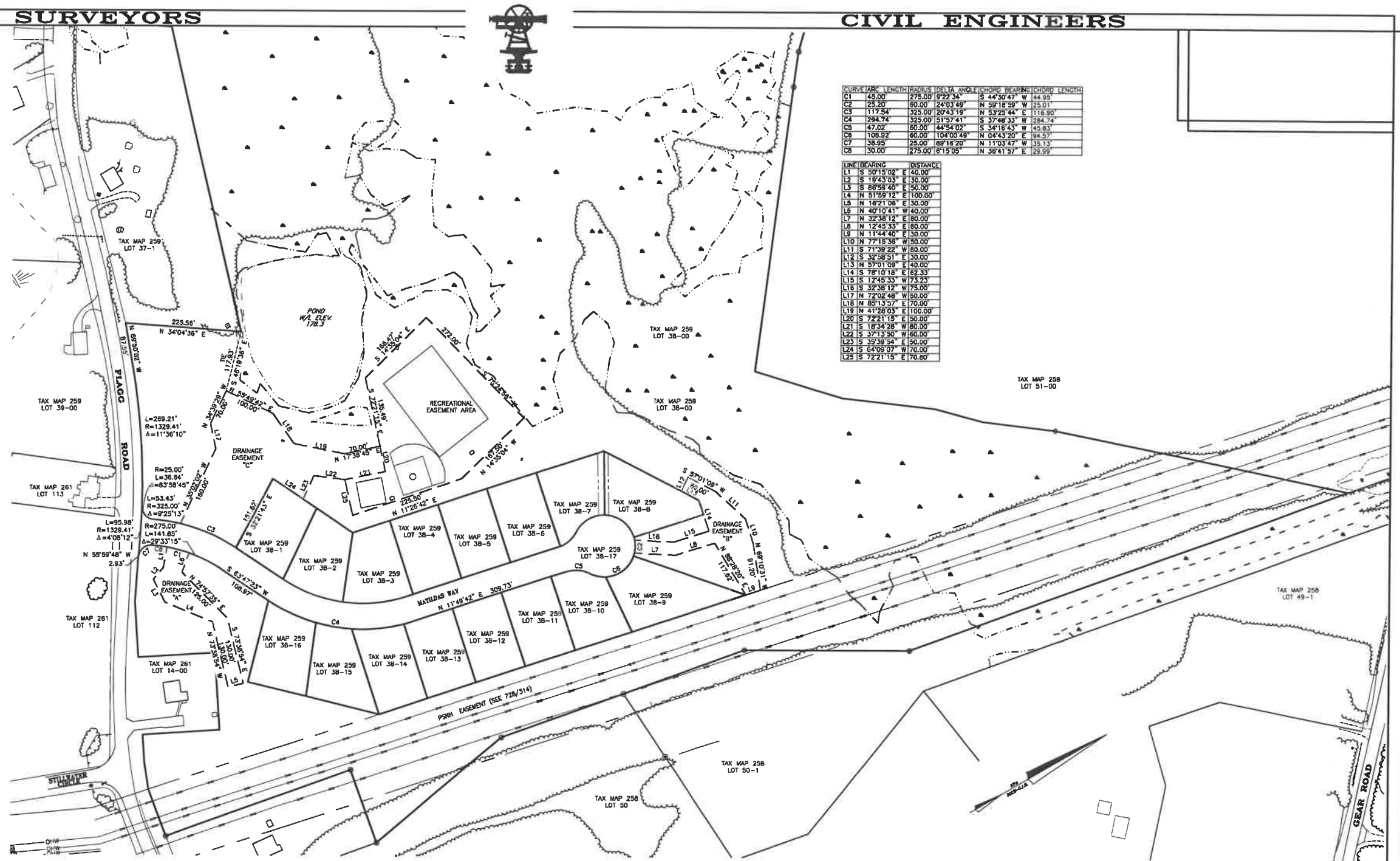
TP #10 11/21/17
0-18' 10yr 3/3 sandy loam, granular, friable.
18-30' 10yr 6/6 sandy loam to loamy sand, granular, friable.
30-36' 10yr 6/4 fine sand, single grained to granular, granular, friable.
36-50' 10yr 6/4 medium sand, granular, very friable.
Notes: SHWT 72'. NRCS Windsor Series, Hydrologic Soil Group A

EXISTING FEATURES PLAN
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT LLC
MARCH 2018



LEGEND

- PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING UTILITY POLE
- EXISTING MONUMENT
- EXISTING WETLANDS



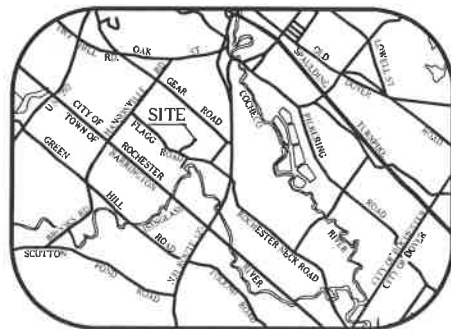
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	45.00	275.00	9°22'34"	S 44°30'47" W 44.95'	
C2	25.20	60.00	24°03'49"	N 59°18'59" W 25.01'	
C3	117.54	325.00	20°43'19"	N 53°25'44" E 116.90'	
C4	294.74	325.00	51°57'41"	S 37°48'33" W 284.74'	
C5	47.02	60.00	44°54'02"	S 34°16'43" W 45.83'	
C6	108.92	60.00	104°00'49"	N 04°43'20" E 94.53'	
C7	38.95	25.00	89°16'20"	N 11°03'47" W 38.13'	
C8	30.00	275.00	6°15'09"	N 35°41'57" E 29.99'	

LINE	BEARING	DISTANCE
L1	S 50°15'02" E	40.00'
L2	S 18°43'03" E	30.00'
L3	S 68°58'40" E	50.00'
L4	N 51°59'12" E	100.00'
L5	N 18°21'08" E	30.00'
L6	N 40°10'41" W	40.00'
L7	N 32°38'12" E	80.00'
L8	N 12°45'33" E	80.00'
L9	N 11°44'40" E	30.00'
L10	N 77°18'36" W	50.00'
L11	S 71°39'22" W	80.00'
L12	S 32°58'51" E	30.00'
L13	N 57°01'09" E	40.00'
L14	S 78°10'18" E	62.33'
L15	S 12°45'33" W	75.23'
L16	S 32°38'12" W	75.00'
L17	N 72°02'48" W	50.00'
L18	N 05°13'57" E	70.00'
L19	N 41°28'03" E	100.00'
L20	S 72°21'15" E	50.00'
L21	S 18°34'28" W	80.00'
L22	S 37°13'50" W	60.00'
L23	S 35°39'54" E	50.00'
L24	S 64°09'07" W	70.00'
L25	S 72°21'15" E	70.60'

LOT AREAS IN ACRES
 LOT 38-0 = 46.44 (OPEN SPACE)
 LOT 38-1 = 0.36 (HOUSE LOT)
 LOT 38-2 = 0.34 (HOUSE LOT)
 LOT 38-3 = 0.34 (HOUSE LOT)
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 LOT 38-13 = 0.34 (HOUSE LOT)
 LOT 38-14 = 0.36 (HOUSE LOT)
 LOT 38-15 = 0.36 (HOUSE LOT)
 LOT 38-16 = 0.38 (HOUSE LOT)
 LOT 38-17 = 1.1 (ROAD EASEMENT)
 TOTAL AREA = 53.43 ACRES

LOT 38-0 = 46.44 (OPEN SPACE)
 DRAINAGE EASEMENT AREA = 75,732 SQUARE FEET OR 1.739 ACRES
 RECREATION EASEMENT AREA = 68,441 SQUARE FEET OR 1.71 ACRES

REFERENCE PLANS:
 1. "OVERALL CLUSTER SUBDIVISION PLAN FLAGG ROAD, ROCHESTER, N.H. FOR TRINITY CONSERVATION, LLC"
 DATED: APRIL 2008 BY: NORWAY PLAINS ASSOCIATES, INC.
 RECORDED: SCRD PLAN 90 - 82.



LOCUS
N.T.S

FILE NO. 134
 PLAN NO. C-2379-S2
 DWG. NO. 16231/S-8
 F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 803-335-3948

S-1

EASEMENT PLAN
 TAX MAP 259, LOT 38
 FLAGG ROAD
 ROCHESTER, NH
 PREPARED FOR:
 119 FLAGG ROAD
 DEVELOPMENT LLC
 AUGUST 2018

100 0 50 100 200 400
 (IN FEET)
 1 INCH = 100 FEET

LAND SURVEYORS

CIVIL ENGINEERS



REVISIONS:
10/21/19 ADD APPROVED RECREATION AREAS TO PLAN.
11/02/20 ADD NOTES #18 AND #19, ADD CENTRALIZED POSTAL DELIVERY POINT.
11/02/20 REVISE NOTE 14.

- OVERALL CONSTRUCTION AND GENERAL NOTES:
- ALL CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 8:00 P.M., MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 6:00 P.M. ON SATURDAY.
 - ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPED IRON MARKERS OR APPROPRIATE MONUMENTATION AFTER THE CONSTRUCTION OF THE ROAD IS COMPLETE.
 - ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE STREET. HOWEVER, IF THE ONLY POLE NEARBY IS ACROSS THE STREET, ONE ADDITIONAL POLE MAY BE PLACED ON/NEAR THE PROPERTY TO ALLOW FOR OVERHEAD EXTENSION OF WIRES ACCESS THE STREET. UTILITIES EXTENDED FROM ANY SUCH NEW POLE MUST BE UNDERGROUND. THE APPLICANT MAY WORK WITH THE CITY STAFF AS APPROPRIATE TO ADDRESS THIS REQUIREMENT. PRIOR TO DEDICATION OF THE STREETS TO THE CITY TWO STREET TREES (DECIDUOUS SHADE TREES) MUST BE MAINTAINED OR PLANTED WITHIN THE FRONT 15 FEET OF EACH LOT, AS A PRECEDENT CONDITION. THE APPLICATION MUST IDENTIFY / FLAG APPROPRIATE, HEALTHY, INDIVIDUAL TREES ON SITE THAT MEET THIS OBJECTIVE AND/OR SHOW LOCATIONS OF PROPOSED TREES ON THE PLAN. IF TREES ARE TO BE PLANTED A 15 FOOT EASEMENT MUST BE SHOWN AT THE FRONT OF THE LOTS WHICH ALLOWS FOR THE DEVELOPER TO PLANT THOSE TREES. NEWLY PLANTED TREES MUST BE SUITABLE TO THE SITE CONDITIONS AND OF NURSERY STOCK WITH A DIAMETER AT FOUR FOOT BREAST HEIGHT OF AT LEAST 2 INCHES. SUGGESTED (BUT NOT REQUIRED) SPECIES INCLUDE MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHAL SEEDLESS ASH, EUROPEAN HORSECH, CALDER PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA. WHERE SUITABLE COVERAGE OF EXISTING EVERGREEN TREES IS PRESENT, THESE MAY BE SUBSTITUTE FOR DECIDUOUS TREES.
 - AN ORANGE CONSTRUCTION FENCE MUST BE PLACED ON ALL LOTS THAT INCLUDES WETLAND BUFFERS PRIOR TO START OF CONSTRUCTION FOR ALL LOTS THAT CONTAIN WETLAND BUFFERS.
 - THE SIGHT DISTANCE AT THE ENTRANCE TO THE SUBDIVISION WILL BE ADEQUATE.
 - THE GRAVEL WETLAND, INFILTRATION BASIN, AND TREATMENT SWALES SHALL BE INSPECTED PRIOR TO ROADWAY ACCEPTANCE. ANY EROSION SHALL BE FIXED AND ANY SEDIMENT SHALL BE REMOVED AND VEGETATION REESTABLISHED ON THE INFILTRATION BASIN BOTTOM. THE INFILTRATION BASIN BOTTOM SHALL BE AT DESIGN ELEVATION AS SPECIFIED IN THE DETAILS ON SHEET C-8 OF THIS PLAN SET.
 - LOAM STOCKPILES SHALL BE SEEDING IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET C-9. IF STORED MORE THAN 30 DAYS, SILT FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT SIDE OF THE LOAM STOCKPILE AS SHOWN IN THE PLAN VIEW AROUND AT LEAST ONE HALF THE CIRCUMFERENCE OF THE PILE.
 - DURING ALL PHASES OF CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
 - THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF ANY OFF SITE IMPACTS ARE FOUND DURING CONSTRUCTION.
 - PRIOR TO ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST:
 - CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORMED TRAFFIC CONTROL DEVICES STANDARDS.
 - A STREET ACCEPTANCE SIGN AT THE ENTRANCE WHICH READS "POSTED, THIS SUBDIVISION IS UNDER CONSTRUCTION. THESE STREETS HAVE NOT YET BEEN ACCEPTED BY THE CITY OF ROCHESTER AND ARE NOT ELIGIBLE FOR CITY SERVICES, TRAVEL AT YOUR OWN RISK (PER THE ORDER OF PLANNING BOARD) THE LOCATION AND DESIGN OF THIS SIGN SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL IT BE LESS THAN 2'x4' AND IT SHALL BE ERECTED PRIOR TO ISSUANCE OF ANY BUILDING PERMIT.
 - FOR MORE INFORMATION ABOUT THIS SUBDIVISION, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT: 31 WAKEFIELD STREET, ROCHESTER, 03607, (603) 335-1338. ACCESS INTO THE SITE FOR FIRE APPARATUS MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THIS IS THE SOLE RESPONSIBILITY OF THE APPLICANT/DEVELOPER TO MAINTAIN THIS ACCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT (603) 335-7182 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
 - BUFFER MARKERS MUST BE INSTALLED ALONG THE INNER 25 FEET WETLAND BUFFER SPACED EVERY ONE HUNDRED (100) FEET.
 - THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW - INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SUBDIVISION REGULATIONS - UNLESS OTHERWISE WAIVED.
 - ALL PROPOSED BUILDINGS SHALL LOCATED WITHIN THE CURRENT ZONING SETBACKS AS SHOWN OR A VARIANCE SHALL BE SOUGHT FOR.
 - IF WOOD TURTLE OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK ARE, PLEASE CONTACT NHFG BIOLOGISTS MELISSA DOPRAKSKI AT 271-1738 OR JOSH MEDVESEY AT 271-1125 FOR FURTHER INSTRUCTIONS.
 - SITE AMENITIES (FIELDS / TOT LOTS) ARE TO BE CONSTRUCTED BEFORE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.
 - ALL DRIVEWAYS REQUIRE DRIVEWAY PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS.

ROAD PLAN AND PROFILE
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018



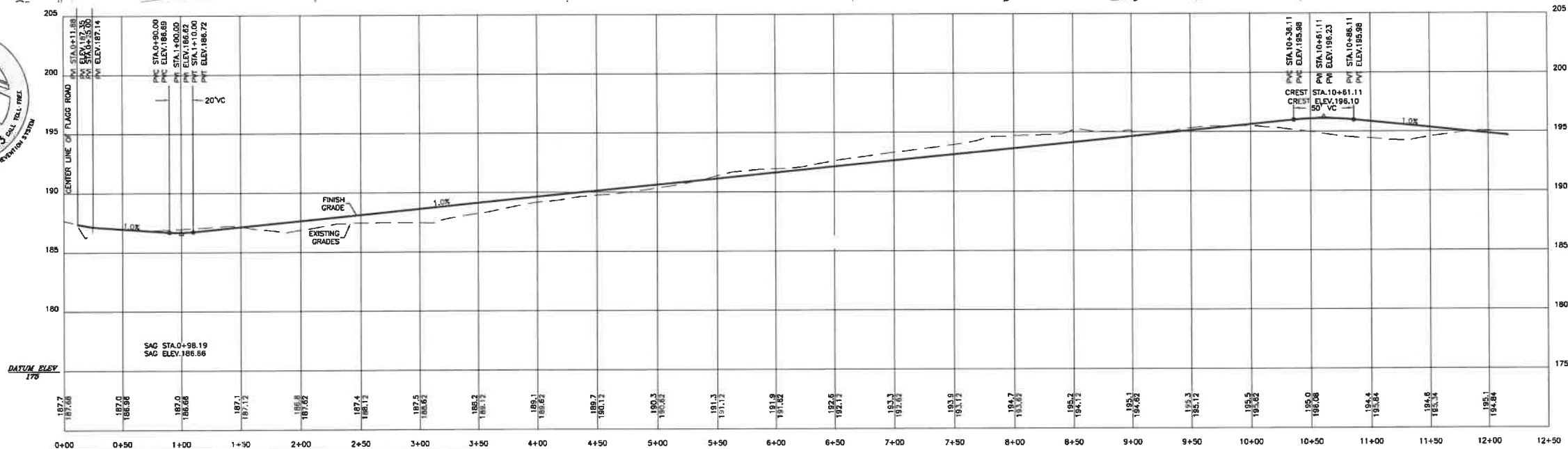
(IN FEET)
1 INCH = 50 FT.

ROAD PLAN VIEW

SCALE 1" = 50'

ROAD PROFILE

1" = 50' (HORZ.) & 1" = 5' (VERT.)



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FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-1

LAND SURVEYORS

CIVIL ENGINEERS



REVISIONS:
5/24/18 PER NHDES A-7 RPT LETTER DATED MAY 21, 2018
1/16/20 PER TRG COMMENTS

LEGEND

- +—+—+— EXISTING UTILITY POLE
- EDGE OF JURISDICTIONAL WETLANDS
- 30' WETLANDS BUFFER
- FENCE
- TREE LINE
- SEWER MANHOLE
- EXISTING HYDRANT
- GATE VALVE
- PROP. CATCH BASIN
- PROP. OUTLET STRUCTURE
- PROP. DRAINAGE PIPE
- PROP. SEWER MANHOLE
- PROP. LIGHT POST
- PROP. WATER MAIN
- PROP. HYDRANT

CB#1-OUTLET#1
STRUCTURE

PIPE	PIPE
CB#1 - 4-FT DIA. CENTER OF CUL-DE-SAC RM 194.40 (SEE E-1) INV. OUT 190.60' PIPE A SUMP 185.50' WITH ELIMINATOR	PIPE A 12" DIA. CPP L=75.0'
CB#2 STA 9+06.90 12.00 R RM 194.40 INV. IN 190.10' PIPE A INV. IN 190.10' PIPE B INV. OUT 190.00' PIPE C SUMP 185.10'	PIPE B 12" DIA. CPP L=20.0'
CB#3 STA 12+15.32 12.00 L RM 194.40 INV. OUT 190.40' PIPE B SUMP 186.40' WITH ELIMINATOR	PIPE C 12" DIA. CPP L=180.0'
CB#4 STA 7+22.93 12.00 R RM 192.50 INV. IN 188.80' PIPE C INV. OUT 188.50' PIPE D SUMP 184.50'	PIPE D 15" DIA. CPP L=20.0'
CB#5 STA 7+22.93 12.00 L RM 192.50 INV. IN 188.30' PIPE D INV. OUT 188.20' PIPE E SUMP 184.20'	PIPE E 15" DIA. CPP L=245.0'
CB#6 STA 4+47.55 12.00 R RM 190.10 INV. IN 189.90' PIPE E INV. IN 185.90' PIPE F INV. OUT 185.80' PIPE G SUMP 181.80'	PIPE F 12" DIA. CPP L=20.0'
CB#7 STA 4+47.55 12.00 L RM 190.10 INV. OUT 186.10' PIPE F SUMP 181.10' WITH ELIMINATOR	PIPE G 18" DIA. CPP L=199.2'
CB#8 STA 2+74.55 12.00 R RM 188.10 INV. IN 183.80' PIPE G INV. IN 183.80' PIPE H INV. OUT 183.70' PIPE I SUMP 179.70'	PIPE H 12" DIA. CPP L=20.0'
CB#9 STA 2+74.55 12.00 L RM 188.10 INV. OUT 184.10' PIPE H SUMP 180.10' WITH ELIMINATOR	PIPE I 15" DIA. CPP L=20.0'
CB#10 STA 0+98.19 12.00 R RM 186.40 INV. IN 184.00' PIPE L INV. OUT 182.80' PIPE J SUMP 178.80'	PIPE J 12" DIA. CPP L=60.0'
CB#11 STA 0+98.19 12.00 L RM 186.40 INV. IN 182.70' PIPE J INV. IN 182.70' PIPE I INV. OUT 182.60' PIPE K SUMP 178.60' WITH ELIMINATOR	PIPE K 24" DIA. CPP L=60.0'
	PIPE L 12" DIA. CPP L=80.0'

PLAN
SCALE 1" = 50'

PROFILE

1"=50' (HORIZ.) & 1"=5' (VERT.)

UTILITY PLAN & PROFILE
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT LLC
MARCH 2018

SCALE 1"=50' (HORIZ.)
1"=5' (VERT.)

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-2

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
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LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- 232
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- 232

- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- CORRUGATED POLYETHYLENE PIPE
- CATCH BASIN
- PROPOSED OUTLET PROTECTION
- EXISTING TEST PIT

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REVISIONS:
5/24/18 PER RHODES AOT RFI LETTER DATED MAY 21, 2018
10/21/19 ADD APPROVED RECREATION AREAS TO PLAN
01/20/20 ADD NOTES 4 THROUGH 7, ADD GRADING FOR BALL FIELDS, ETC.

- NOTES:
- ALL HOUSE LOTS GRADE TO REAR SO ROOF RUN OFF IS DIRECTED SWALE.
 - BASINS AND SWALE SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
 - TEMPORARY WATER DIVERSION (SWALE AND BASINS) MUST BE USED AS NECESSARY UNTIL AREA ARE STABILIZED.
 - WETLAND BUFFERS LINES BY SURVEY LOCATED AND MARKED WITH ORANGE SNOW FENCE PRIOR TO ANY ONSITE ACTIVITY.
 - INFORMATIVE PLACARD SHALL BE PLACED ALONG THE PATH OR AT THE EDGE OF THE GRAVEL WETLANDS AND INFILTRATION BASINS. THE PLACARD WILL EXPLAIN WHAT THE STORMWATER TREATMENT SYSTEM IS.
 - THE INNER 25-FOOT WETLAND BUFFER SHALL BE POSED WITH WETLAND CONSERVATION TAGS EVERY 100-FOOT. TAGS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.
 - AGENCIES (FIELD / TOT-LOTS) ARE REQUIRED TO BE CONSTRUCTED BEFORE ISSUANCE OF 1ST FIRST CERTIFICATE OF OCCUPANCY.



THE BLANDING'S TURTLE



THE WOOD TURTLE

IF WOOD TURTLE OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK ARE, PLEASE CONTACT NHFC BIOLOGISTS MELISSA DOPELALSKIE AT 271-1738 OR JOSH MEGESTY AT 271-1125 FOR FURTHER INSTRUCTIONS.

CB#1-OUTLET#1 STRUCTURE

PIPE	
PIPE A 12" DIA. CPP L=75.5'	CB#1 - 4-FT DIA. CENTER OF CUL-DE-SAC RM 194.40' (SEE/NEE SWALE) INV. OUT 190.60' PIPE A SUMP 186.60' WITH ELIMINATOR
PIPE B 12" DIA. CPP L=20.0'	CB#2 STA 9+06.90 12.00 R RM 194.40' INV. IN 190.10' PIPE A INV. IN 190.10' PIPE B INV. OUT 190.00' PIPE C SUMP 185.10'
PIPE C 12" DIA. CPP L=180.0'	CB#3 STA 12+15.32 12.00 L RM 194.40' INV. IN 188.80' PIPE B INV. OUT 189.40' PIPE B SUMP 185.40' WITH ELIMINATOR
PIPE D 15" DIA. CPP L=20.0'	CB#4 STA 7+22.93 12.00 R RM 192.60' INV. IN 188.80' PIPE C INV. OUT 188.50' PIPE D SUMP 184.50'
PIPE E 15" DIA. CPP L=246.0'	CB#5 STA 7+22.93 12.00 L RM 192.60' INV. IN 188.80' PIPE D INV. OUT 188.20' PIPE E SUMP 184.20'
PIPE F 12" DIA. CPP L=20.0'	CB#6 STA 4+47.55 12.00 R RM 190.10' INV. IN 185.90' PIPE E INV. IN 185.90' PIPE F INV. OUT 185.80' PIPE G SUMP 181.80'
PIPE G 18" DIA. CPP L=199.2'	CB#7 STA 4+47.55 12.00 L RM 190.10' INV. IN 185.10' PIPE F SUMP 181.10' WITH ELIMINATOR
PIPE H 12" DIA. CPP L=20.0'	CB#8 STA 2+74.55 12.00 R RM 188.10' INV. IN 183.80' PIPE G INV. IN 183.80' PIPE H INV. OUT 183.70' PIPE I SUMP 179.70'
PIPE I 24" DIA. CPP L=174.2'	CB#9 STA 2+74.55 12.00 L RM 188.10' INV. OUT 184.10' PIPE H SUMP 180.10' WITH ELIMINATOR
PIPE J 15" DIA. CPP L=20.0'	CB#10 STA 0+98.19 12.00 R RM 186.40' INV. IN 184.00' PIPE I INV. OUT 182.50' PIPE J SUMP 178.80'
PIPE K 24" DIA. CPP L=50.0'	CB#11 STA 0+98.19 12.00 L RM 186.40' INV. IN 182.70' PIPE J INV. IN 182.70' PIPE I INV. OUT 182.60' PIPE K SUMP 178.80' WITH ELIMINATOR
PIPE L 12" DIA. CPP L=60.0'	

GRADING & DRAINAGE PLAN
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD DEVELOPMENT, LLC.

MARCH 2018



(IN FEET)
1 INCH= 50 FT.

FILE NO. 134
PLAN NO. C-2379-S2
DWC. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-3

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

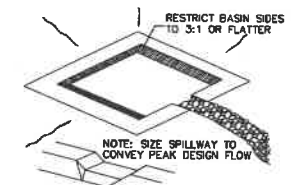
- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING CONTOUR LINE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- PROPOSED SILTATION FENCE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- PROPOSED TEMPORARY CATCH BASIN FILTERS
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- PROPOSED TEMPORARY STONE CHECK DAMS

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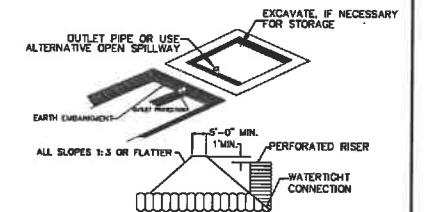


REVISIONS:
1/16/20 - ADD TEMPORARY STONE CHECK DAMS TO SWALES

NOTE:
IF WOOD TURTLE OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, PLEASE CONTACT NHFG BIOLOGISTS MELISSA DOPERSALSKIE AT 271-1738 OR JOSH MCGEYSEY AT 271-1125 FOR FURTHER INSTRUCTIONS.
IF THE USE OF SEDIMENTATION CONTROL BERM, FILTERS OR EQUAL FILTER SOCK, USE WILDLIFE FRIENDLY OPTION SUCH AS WOVEN ORGANIC MATERIAL. DO NOT USE WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD MATTING ON SITE. NORTH AMERICAN GREEN SIGN SC150BN



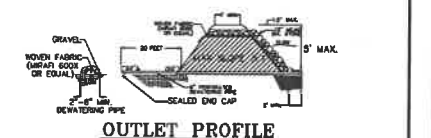
TYPICAL OPEN SPILLWAY



EMBANKMENT SECTION THRU RISER

LENGTH OF SPILLWAY (FEET)	LENGTH OF SPILLWAY (FEET)
10-15	30
16-20	40
21-25	50
26-30	60
31-35	70
36-40	80
41-45	90
46-50	100

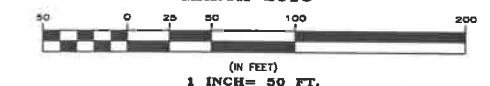
PLAN VIEW



OUTLET PROFILE

SEDIMENT TRAP
NOT TO SCALE

**EROSION & SEDIMENTATION
CONTROL PLAN**
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
GRAPHIC SCALE
MARCH 2018



1 INCH = 50 FT.

FILE NO. 134
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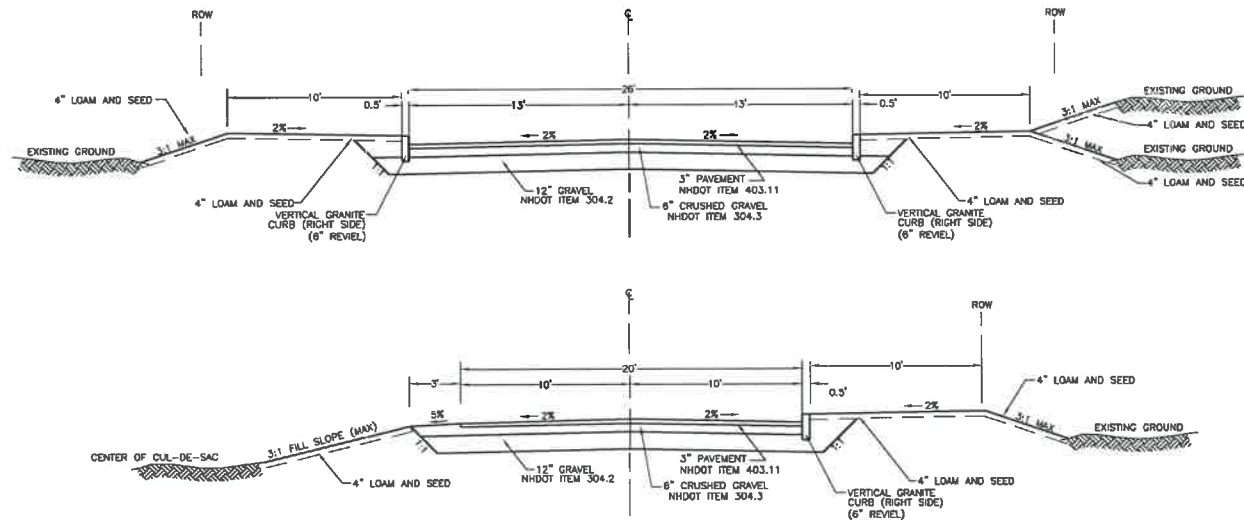
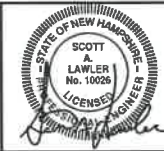
C-4

LAND SURVEYORS



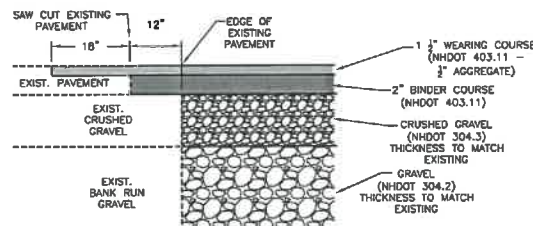
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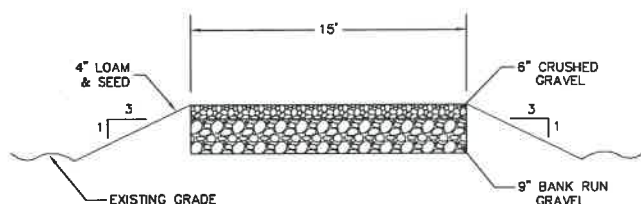
**TYPICAL ROADWAY CROSS SECTION
(AT CUL-DE-SAC)**
SCALE: 1"=5'

- CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH NHDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE CITY OF ROCHESTER CONSTRUCTION SPECIFICATIONS.
- THE ENTIRE AREA OF THE STREET WITHIN ITS RIGHT-OF-WAY LINES AND ITS ADJOINING SLOPED AREAS SHALL BE CLEARED OF ALL STUMPS, BRUSH, ROOTS, ROCKS, BOULDERS, AND LIKE MATERIALS AND ALSO OF ALL TREES NOT INTENDED FOR PRESERVATION.
- CONTRACTOR IS TO CONTACT CITY ENGINEER, TO REVIEW CONDITION OF THE ROUGHED IN ROAD, 72 HOURS PRIOR TO THE INSTALLATION PAVEMENT.
- ALL BACK FILL IN TRENCHES AND FILL FOR THE ROAD BEDS SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
- UNDERDRAIN SHALL BE INSTALLED IN AREAS DEEMED NECESSARY AS DETERMINED BY SUBDRAINAGE CONDITIONS OR AS REQUIRED BY THE CITY ENGINEER. (NHDOT ITEM 605.56)
- AGGREGATE #4 (NHDOT ITEM 703) SHALL BE WRAPPED IN A SUPPORT MEMBRANE (FILTER FABRIC).
- UNDERDRAIN SHALL BE TIED IN TO THE PROPOSED DRAINAGE STRUCTURES.

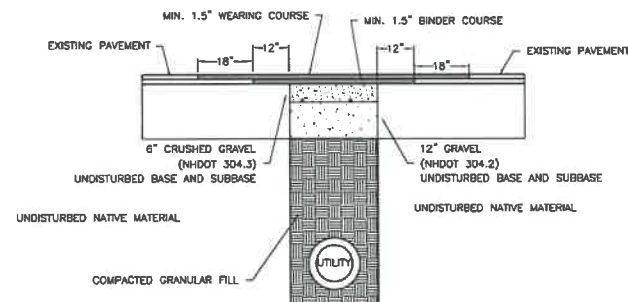


TYPICAL PAVEMENT MATCHING DETAIL
NOT TO SCALE

- PAVEMENT MATCHING NOTES:
- BINDER COURSE PAVEMENT EDGES SHALL BE STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 - WEARING COURSE PAVEMENT EDGES SHALL BE DEFINED BY A MILLED EDGE.
 - SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY.
 - ALL BACKFILL MATERIAL TO BE USED SHALL MATCH EXISTING MATERIALS UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER OR THEIR DESIGNEE.
 - ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
 - PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN CASES SHALL BE LESS THAN 3 1/2" IN TOTAL THICKNESS.
 - PAVEMENT FOR TRENCH PATCHES SHALL BE PLACED IN TWO PHASES:
 - THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED AREA AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD.
 - THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5". WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
 - ANY EXCAVATION WITHIN A CITY RIGHT-OF-WAY REQUIRES PRE-APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

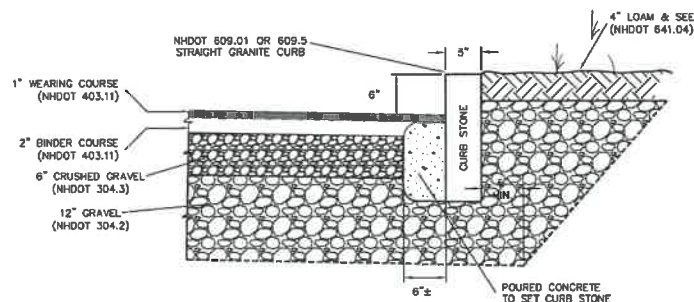


MAINTENANCE PATH CROSS-SECTION
NOT TO SCALE



- NOTES:
- PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 - TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS DRY DENSITY.
 - TOP 18" OF BACKFILL SHALL BE 6" OF COMPACTED 3/4" CRUSHED GRAVEL (NHDOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NHDOT 304.2).
 - ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
 - PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN NOT CASE SHALL BE LESS THAN 3" THICK TOTAL.
 - PAVEMENT SHALL BE PLACED IN TWO PLACES:
 - THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.
 - THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5". WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
 - ANY TRENCH PATCH REQUIRES PRE-APPROVAL BY DPW AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

TRENCH PATCH PROFILE
NOT TO SCALE

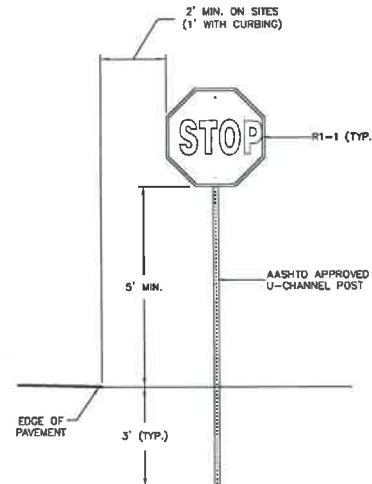


GRANITE CURB DETAIL
NOT TO SCALE

ITEM NO.	SIGN SIZE		TEXT	NO. SIGNS REQ'D
	HEIGHT	WIDTH		
R1-1	30"	30"	STOP	1
R4-7b	30"	24"	KEEP RIGHT	1
W14-1	30"	30"	DEAD END	1
ROCHESTER STREET SIGN	9" HIGH (GREEN) W/ 6" WHITE LETTERS		MATILDAS WAY	1

NOTES:
1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

SIGN SCHEDULE
NOT TO SCALE



- NOTES:
- SIGN POST SHALL BE AASHTO APPROVED U-CHANNEL OR OTHER PER AASHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINARIES AND SIGNALS", LATEST EDITION.
 - SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
 - SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 2 FT. FROM EDGE OF PAVEMENT UNLESS CURBED.

TYPICAL TRAFFIC SIGN
NOT TO SCALE

ROADWAY DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
MARCH 2018

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
P.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-5

LAND SURVEYORS

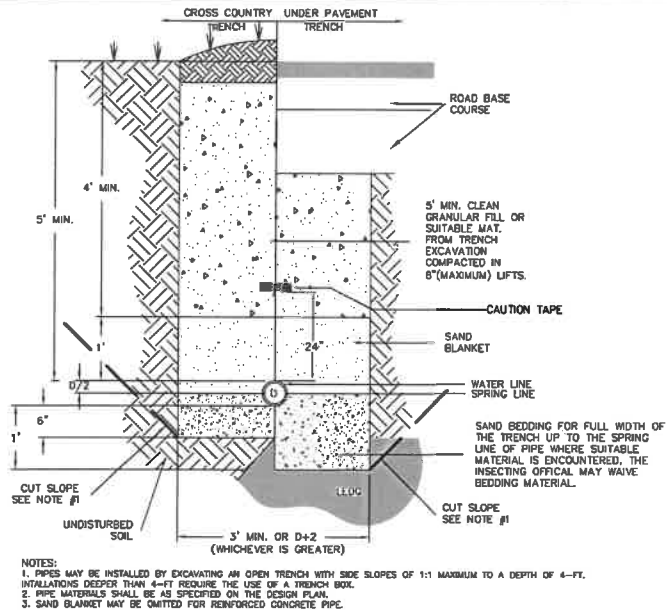


CIVIL ENGINEERS

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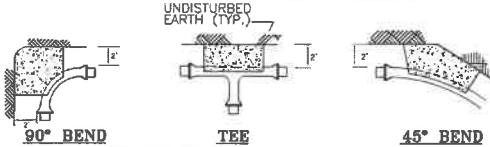


REVISIONS:
1/16/20 REVISE HYDRANT DETAIL



WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



PIPE SIZE	90° BEND	TEE	PLUG	45° BEND	22 1/2° SMALLER
6"	5	4	3	2	2
8"	10	8	6	6	3
12"	24	18	8	12	8

NOTE: SIZE OF THRUST BLOCKS MAY BE INCREASED BY THE ENGINEER TO MEET SOIL CONDITIONS FOUND DURING CONSTRUCTION.

WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE

DUCTILE IRON MECHANICAL RETRAINED LENGTH (FEET)																		
PIPE DIAMETER (INCHES)	BENOS																DEAD END	
	11 1/4"				22 1/2"				45'				90'					
2"	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi
4"	0	0	1	1	0	1	1	1	1	1	2	3	2	4	5	7	8	12
6"	0	0	1	1	1	1	2	2	1	2	3	4	3	5	8	10	16	23
8"	0	1	1	1	1	2	3	3	1	3	4	6	3	7	10	13	15	23
10"	0	1	1	2	1	2	3	3	2	3	5	7	4	8	12	16	9	28
12"	0	1	1	2	1	2	3	4	2	4	6	8	5	9	14	19	11	22
TEE*																		
REDUCER																		
SAME SIZE				ONE SIZE SMALLER				ONE SIZE SMALLER				TWO SIZE SMALLER						
2"	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi
4"	1	1	1	1	1	1	1	1	1	3	4	5	—	—	—	—	—	—
6"	1	1	1	4	1	1	1	1	3	6	9	12	4	8	12	16	—	—
8"	1	1	3	11	1	1	1	1	3	6	10	13	6	11	17	22	—	—
10"	1	1	8	17	1	1	1	6	3	6	10	13	6	11	17	23	—	—
12"	1	2	13	24	1	1	4	13	5	11	16	22	6	12	18	23	—	—

* BASED ON A MINIMUM ATTACHED PIPE ALONG RUN (L) = 5 FEET

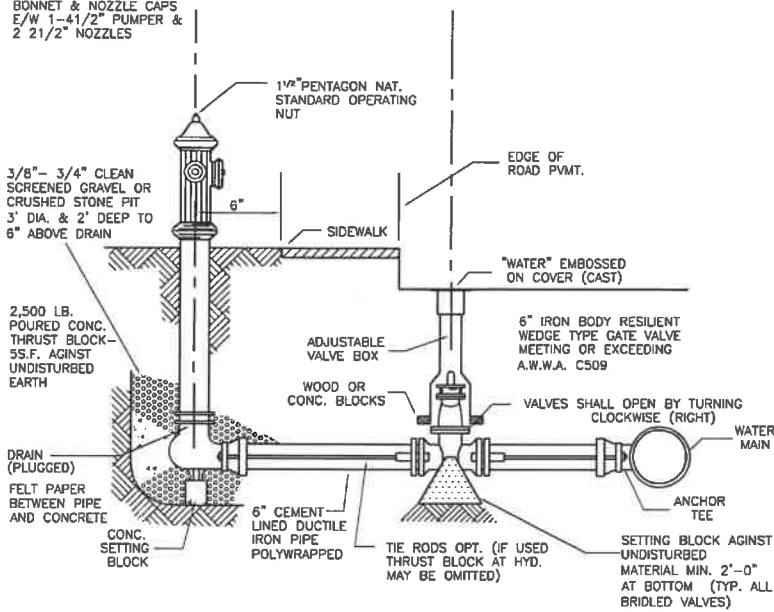
MECHANICAL RESTRAINED LENGTH SCHEDULE

NOT TO SCALE

NOTES:
1. PIPE IS BURIED TO A DEPTH OF 6 FEET WITH A MINIMUM OF 4 INCHES OF COMPACTED GRANULAR MATERIAL UNDER THE PIPE TO THE SPRING LINE OF THE PIPE.
2. THE EXISTING SOIL IS POORLY GRADED GRAVEL AND GRAVEL SAND MIXTURE WITH LITTLE TO NO FINES.
3. ALL CALCULATIONS ARE BASED ON A FACTOR OF SAFETY OF 1.5 TO 1.
4. ALL CALCULATIONS ARE BASED ON THE "RESTRAINED LENGTH CALCULATION PROGRAM" BY EBAA IRON, INC., RELEASE 3.1.

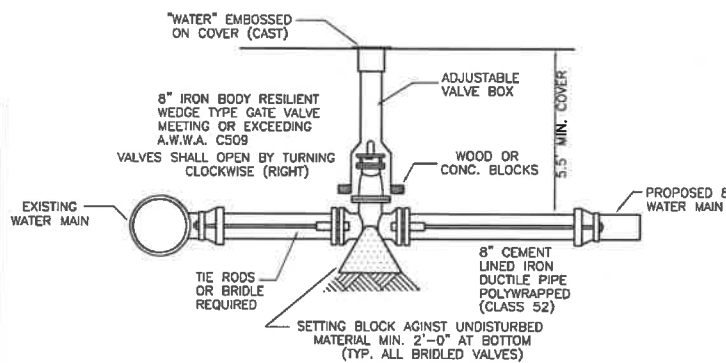
HYDRANTS ARE TO BE KENNEDY GUARDIAN MODEL #K81A W/6" MECHANICAL JOINT SHOE W/BREAK FLANGE TO BE PROVIDED W/DRAIN-OPENING CLOCKWISE (RIGHT). HYDRANTS SHALL MEET OR EXCEED ALL REQ. OF A.W.W.A. STANDARD SPEC. C502

HYDRANTS TO BE OSHA RED W/WHITE FLOURESCENT BONNET & NOZZLE CAPS E/W 1-4 1/2" PUMPER & 2 2 1/2" NOZZLES



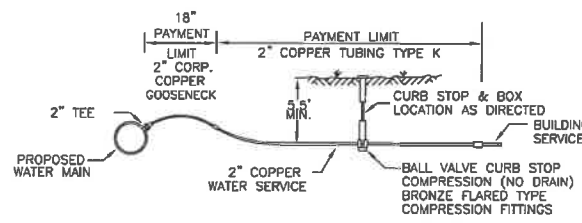
TYPICAL HYDRANT SECTION

NOT TO SCALE



WATER MAIN CONNECTION

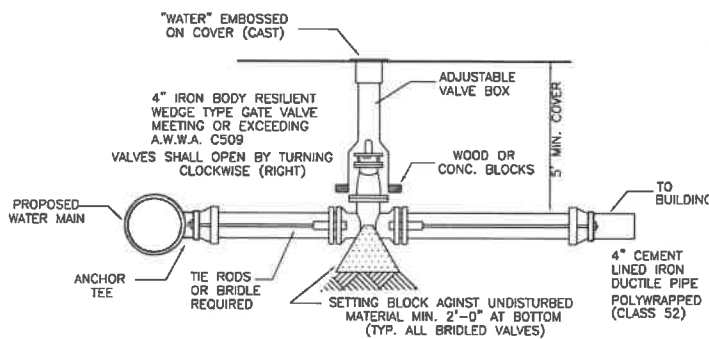
NOT TO SCALE



NOTE: SERVICE LINE SHALL BE TYPE K COPPER CONFORMING TO ASTM-D88

TYPICAL DOMESTIC SERVICE CONNECTION

NOT TO SCALE



TYPICAL FIRE SERVICE CONNECTION

NOT TO SCALE

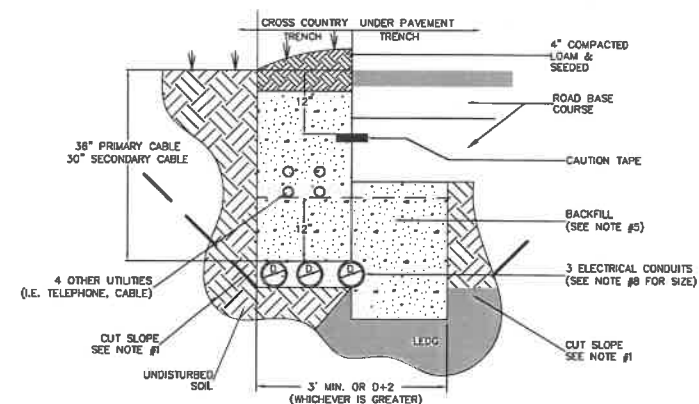
GENERAL UTILITY NOTES

- CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888 344-7233) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND ELEVATIONS.
- THESE PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF THE SURVEY. THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THIS PLAN, BUT IN EXISTENCE IS NOT INTENDED OR IMPLIED.
- ANY UTILITY POLES THAT NEED TO BE RELOCATED SHALL BE COORDINATED WITH EVERSOURCE OR VERIZON, WHOM EVER HAS CONTROL OVER THEM.
- PROPOSED UTILITIES ARE TO BE UNDERGROUND. COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFORMER PADS WITH PSNH AND OTHER PERTINENT UTILITY COMPANIES.
- WATER AND SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10'-FT APART HORIZONTALLY.
- WHERE SEWER AND WATER LINES MUST CROSS, SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM 9'-FT HORIZONTALLY FROM THE WATER LINE AND A VERTICAL SEPARATION OF 18-INCHES SHALL BE MAINTAINED.
- SEWER PIPE JOINTS SHALL BE TESTED WITH ZERO LEAKAGE AT 25 POUNDS PER SQUARE INCH FOR GRAVITY SEWER AND AT 1-1/2 TIMES WORKING PRESSURE FOR ALL FORCE MAINS.
- WATERLINE CONSTRUCTION:
A.) ALL PROPOSED WATER LINE MATERIAL USED SHALL MEET ROCHESTER WATER DEPARTMENT AND ROCHESTER ENGINEERING DEPARTMENT SPECIFICATIONS. WATER LINES SHALL BE A.W.W.A. C 151, CLASS 52, CEMENT LINED, DUCTILE IRON PIPE.
B.) PROPOSED WATER GATE VALVES SHALL BE MANUFACTURED BY KENNEDY OF AMERICAN FLOW CONTROL, RESILIENT SEAT TYPE.
C.) ALL WATER LINES SHALL BE BURIED A MINIMUM OF 5'.
D.) IF 5' OF COVER IS NOT AVAILABLE WATER LINE SHALL BE INSULATED AS SHOWN IN THE "SHALLOW COVER TRENCH DETAIL FOR INSULATED WATER PIPE".
E.) ALL WATER FITTINGS SHALL BE CLASS 52.
F.) PROPOSED WATER GATE VALVE SHALL OPEN CLOCKWISE (RIGHT).
- WORK TO CONNECT INTO THE WATER OR SEWER MAINS REQUIRES A PERMIT FROM THE ROCHESTER PUBLIC WORKS DEPARTMENT. CONTRACTORS ARE TO BE PRE-QUALIFIED.

CITY OF ROCHESTER LIGHT FIXTURE

NOT TO SCALE

- NOTES:
1. PROPOSED COBRA HEAD LIGHT SHALL BE MOUNTED ON THE PROPOSED UTILITY POLE AT THE ENTRANCE OF THE PROPOSED ROADWAY. COORDINATE INSTALLATION WITH EVERSOURCE UTILITY COMPANY.
2. THE PROPOSED COBRA HEAD STYLE LIGHT FIXTURE SHALL BE AN AFFINITY MODEL S600-25W-30K-CCT-10V WITH WHITE HEADS.
3. CONTRACTOR SHALL CONTACT THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT PRIOR TO ORDERING AND INSTALLING THE FIXTURE TO VERIFY THE FIXTURE SPECIFICATIONS.



- NOTES:
1. ALL NON-METALLIC CONDUIT AND FITTINGS SHALL BE ELECTRICAL GRADE, SCHEDULE 40 PVC, AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEMA 12C-1990 AND BE UL LISTED. ONLY GRAY-COLORED CONDUIT WILL BE ACCEPTED. ANY PVC CONDUIT NOT HAVING THE PROPER NEMA AND UL MARKINGS WILL NOT BE ACCEPTED. ALL STEEL CONDUITS SHALL CONFORM TO ASTM A122 AND BE RIGID GALVANIZED STEEL. ALL PVC JOINTS MUST BE CEMENTED. STEEL FITTINGS SHALL BE SEALED WITH COMPOUND.
2. ALL 90 DEGREE SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES. ALL STEEL SWEEPS SHALL BE PROPERLY GROUNDED.
3. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE PSNH DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING CABLE PULLING.
4. THE CONDUIT SHALL CROSS PAVED AREAS AT APPROXIMATELY 90 DEGREES.
5. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY PSNH. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE THOROUGHLY COMPACTED IN 6-INCH LAYERS.
6. A SUITABLE PULL STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE PSNH IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID REMOVING THE STRING TO THE CONDUIT.
7. ROUTING OF THE CONDUIT AND INSPECTION PRIOR TO BACKFILL WILL BE PROVIDED BY PSNH. INSTALLATION OF THE CONDUIT WILL BE DONE BY THE CONTRACTOR. THE PSNH SUPERVISOR MUST BE NOTIFIED 2 BUSINESS DAYS PRIOR TO BACKFILLING THE TRENCH. IN THE EVENT THAT A CABLE CANNOT BE SUCCESSFULLY PULLED THROUGH THE COMPLETED CONDUIT SYSTEM DUE TO A CONSTRUCTION ERROR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND REPAIR THE INVOLVED CONDUIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESULTING EXPENSES.
8. MINIMUM 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.
9. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE THE NATIONAL ELECTRIC CODE.
10. CONDUIT MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.

ELECTRICAL & UNDERGROUND UTILITY TRENCH INSTALLATION DETAIL

NOT TO SCALE

UTILITY DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
MARCH 2018

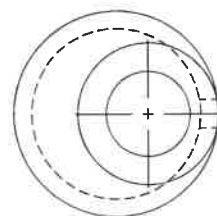
FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
P.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

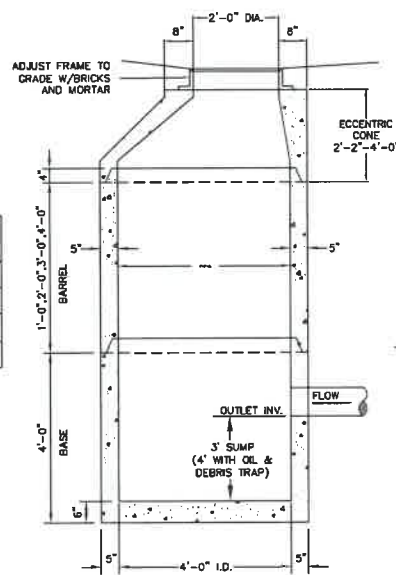
C-6



PLAN VIEW

DRAIN LINE DIAMETER	SUM OF DRAIN LINE DIAMETER	CATCH BASIN DIAMETER
15" TO 18"	LESS THAN 54"	4'
21" TO 27"	LESS THAN 72"	5'
30" TO 33"	LESS THAN 90"	6'
36" & LARGER	GREATER THAN 90"	REFER TO THE STANDARD

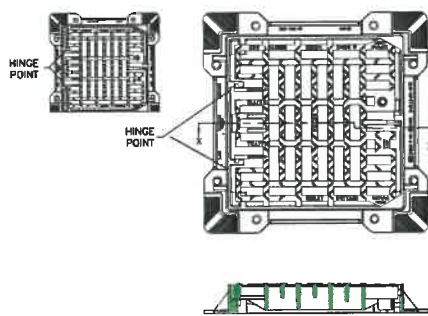
- NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
 2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
 3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
 4. PIPE OPENINGS CAST IN AS REQUIRED.
 5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
 6. PIPE CONNECTIONS SHALL BE MORTARED.
 7. PRECAST SECTIONS SHALL CONFORM TO ASTM C-478.
 8. SEE SLAB TOP DETAIL FOR STRUCTURES REQUIRING SLAB TOPS, I.E. DOUBLE GRATE AND FRAME STRUCTURES.



SECTION VIEW

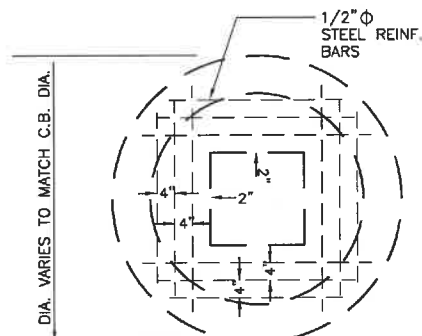
PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE

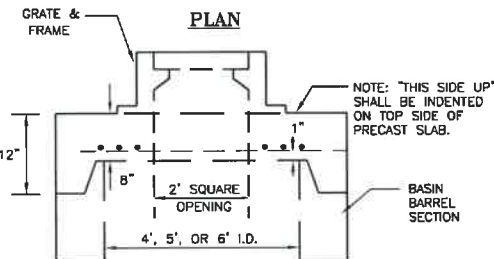


24" REXUS DI CB F & GRATE 62114 CB3R

NOT TO SCALE



PLAN

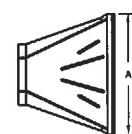


ELEVATION

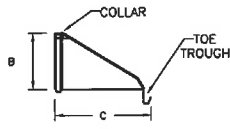
- NOTE:
1. SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 2. SLAB TOP MAY BE CASTED WITH MINIMUM OR NO INTERLOCKING CHANNEL. HOWEVER, THE CONTRACTOR MUST ENSURE THE SLAB TOP IS FIRMLY ATTACHED TO THE STRUCTURE.

REINFORCED CONCRETE SLAB COVER

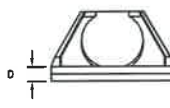
NOT TO SCALE



TOP VIEW



SIDE VIEW



FRONT VIEW

FLAIRED END SECTION DETAIL

NOT TO SCALE

PIPE DIAMETERS	A	B	C	D
10" / 12"	42	14.5	33	8
15"	41	19	34	8
18"	49	22	43	8
24"	59.5	28	48	8
30"	88	36	63.5	8
36"	88	43	66.5	8

- INSTALLATION NOTES:
1. ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVANIZED SHEET STEEL IF BEING USED WITH CORRUGATED METAL PIPE AND SHALL BE POURED CONCRETE IF BEING USED WITH REINFORCED CONCRETE PIPE.
 2. ANTI-SEEP COLLAR SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE OUTLET PIPE.
 3. A NUMBER OF ANTI-SEEP COLLARS SHALL BE PLACED ALONG THE PIPE IN A SPACING THAT INCREASES THE PIPE LENGTH BY 15%.

SOURCES FOR PLASTIC ANTI-SEEP COLLARS FOR USE WITH PLASTIC PIPE:

1. THE FOLLOWING ARE A FEW MANUFACTURERS OF PLASTIC ANTI-SEEP COLLARS:
2. COLLARS FROM THESE MANUFACTURERS MAY BE USED WITH BOTH SMOOTH WALLED AND CORRUGATED OUTSIDE WALLED PIPE.

MRIP MANUFACTURING
16 MESERVE ROAD
DURHAM, NH 03824
PHONE: (603) 868-5178
FAX: (603) 868-2074
E-MAIL: info@trenchdom.com

SCHIEB DRAINAGE PRODUCTS
203 SOUTH MONROE STREET
OREGON, MO 64473
PHONE: (650)-446-2343

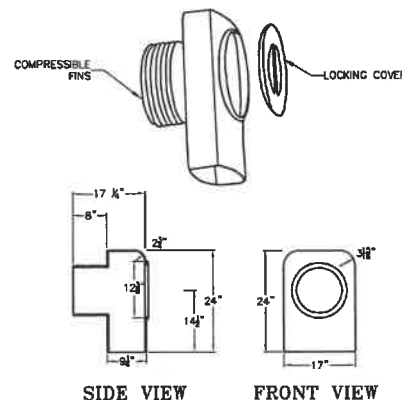
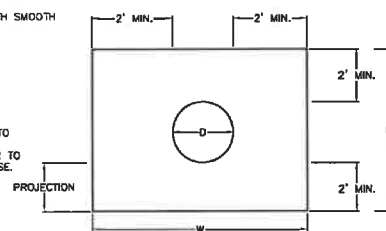
2. IT IS ALSO SUGGESTED THAT LOCAL SUPPLIERS BE CONTACTED TO ENSURE ABOUT SUITABLE ANTI-SEEP COLLAR PRODUCTS. IF A POSSIBLE ALTERNATIVE IS FOUND CONTACT THE DESIGN ENGINEER TO ENSURE ITS APPROPRIATENESS AND TO GET APPROVAL FOR ITS USE.

COLLAR DIMENSION TABLE

D	W	H
12	10"	6"
18	10.25"	6"
24	12"	7.5"
30	12"	7.5"

ANTI-SEEP COLLAR DETAIL

NOT TO SCALE



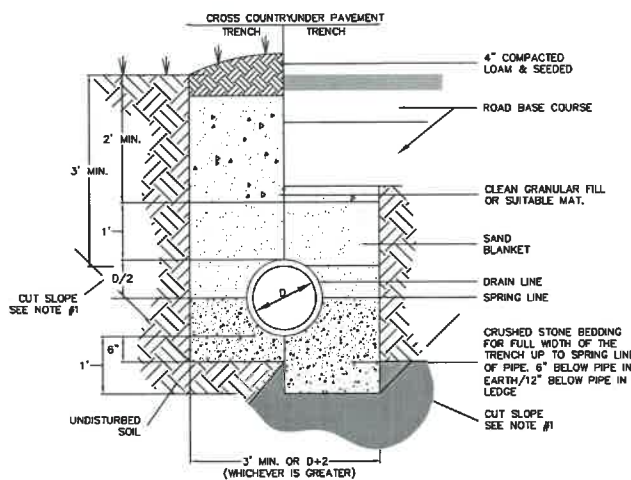
SIDE VIEW

FRONT VIEW

ELIMINATOR CATCH BASIN OIL AND DEBRIS TRAP DETAIL

NOT TO SCALE

- NOTES:
1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM
 2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.



- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INSTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
 2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

DRAINAGE PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018

FILE NO. 134
PLAN NO. C-2379-S2
DWC. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

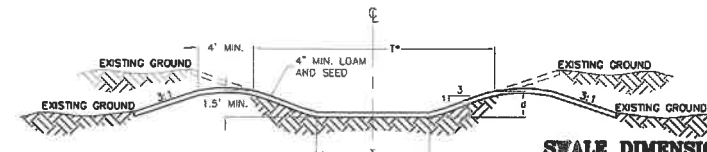
C-7



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



REVISIONS:
5/24/18 PER NHDES AOT RFM LETTER DATED MAY 21, 2018



SWALE DIMENSION TABLE

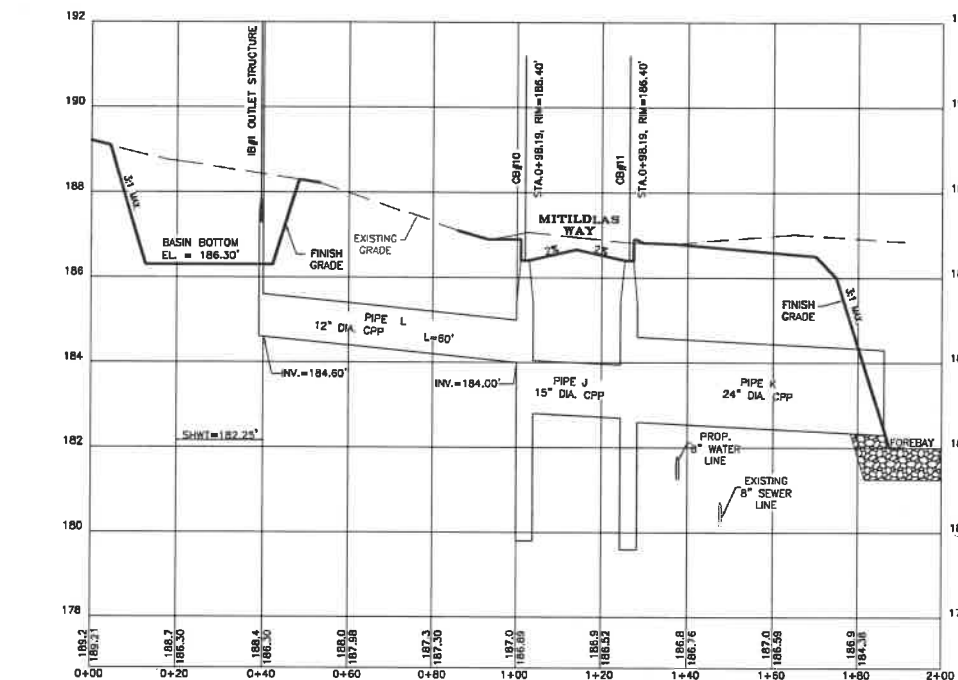
LOCATION	1	2	3
TREATMENT SWALE 1 DISCHARGE TO IB#1	175'	3'	4'
TREATMENT SWALE 2 DISCHARGE TO IB#2	315'	3'	8.5'
TREATMENT SWALE 2A DISCHARGE TO IB#2	214'	3'	4'
TREATMENT SWALE 3 DISCHARGE TO IB#3	150'	3'	4'

MAINTENANCE NOTES:

1. THE SWALE(S) SHALL BE MOWED WITH THE REST OF THE SITE'S LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY VEGETATION. DO NOT MOW GRASS IN SWALE(S) SHORTER THAN 4-INCHES. THIS WILL REDUCE THE SWALES FILTERING ABILITY.
2. THE SWALE(S) SHOULD BE FERTILIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION COULD RESULT IN THE SWALE(S) BECOMING A SOURCE OF POLLUTION TO THE SURROUNDING WETLAND AREAS.
3. THE SWALE(S) SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

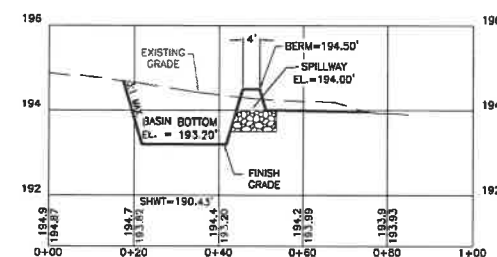
VEGETATED TREATMENT SWALE DETAIL

NOT TO SCALE



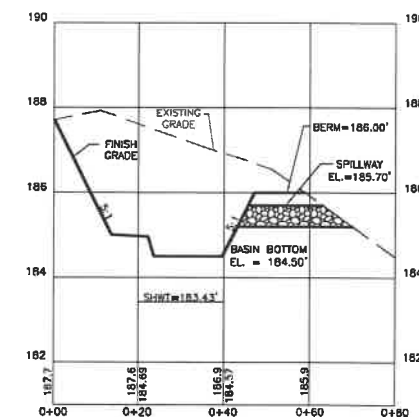
INFILTRATION BASIN #1 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



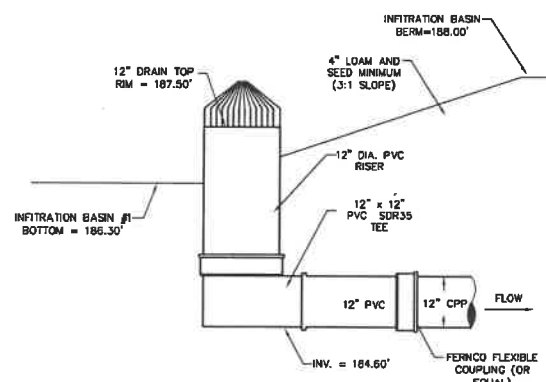
INFILTRATION BASIN #2 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



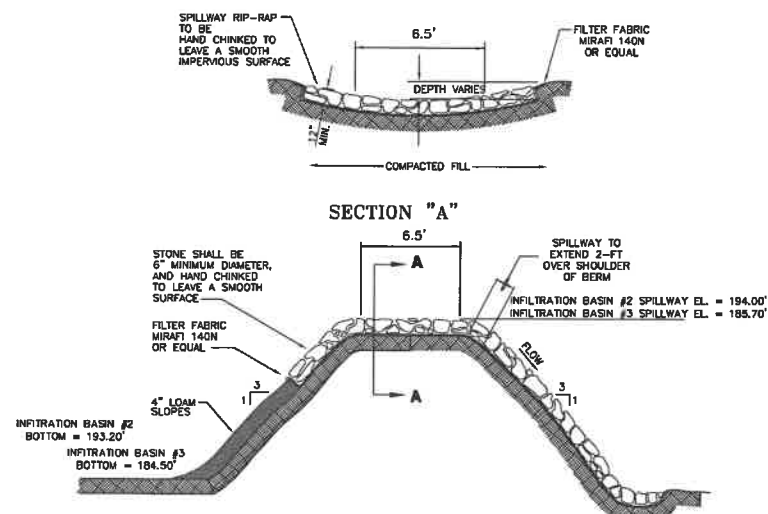
INFILTRATION BASIN #3 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



INFILTRATION BASIN #1
OUTLET STANDPIPE DETAIL

NOT TO SCALE



SPILLWAY DETAIL FOR INFILTRATION BASIN #2 AND #3

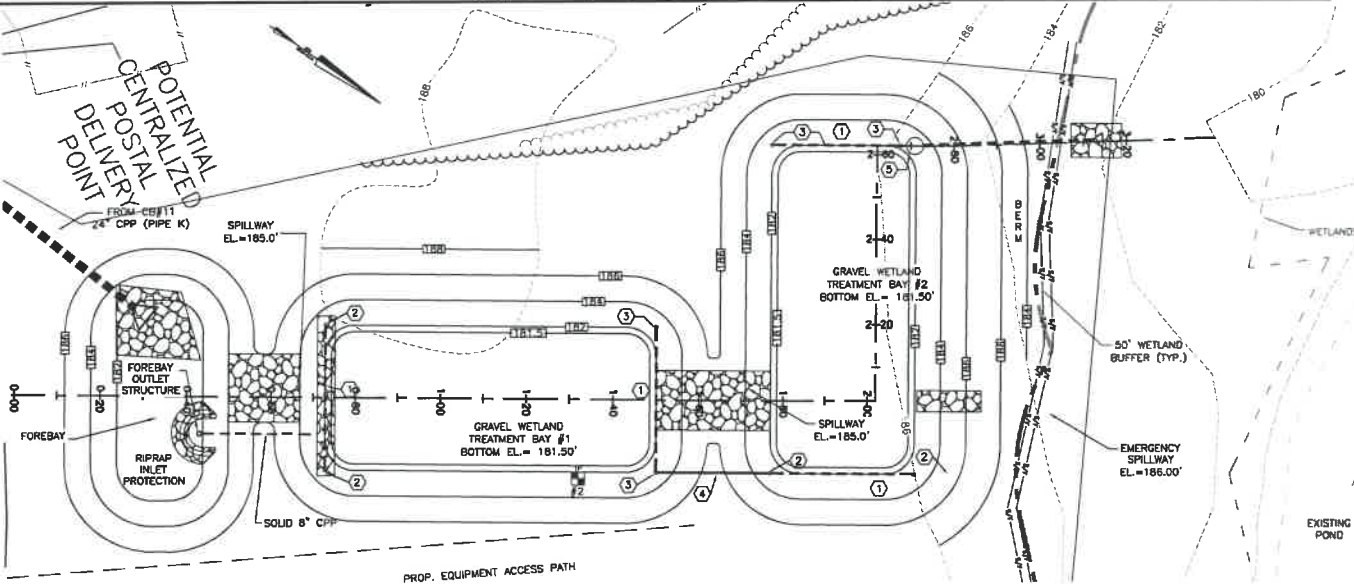
INFILTRATION BASIN
& TREATMENT SWALE DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018

FILE NO. 134
PLAN NO. C-2379-S2
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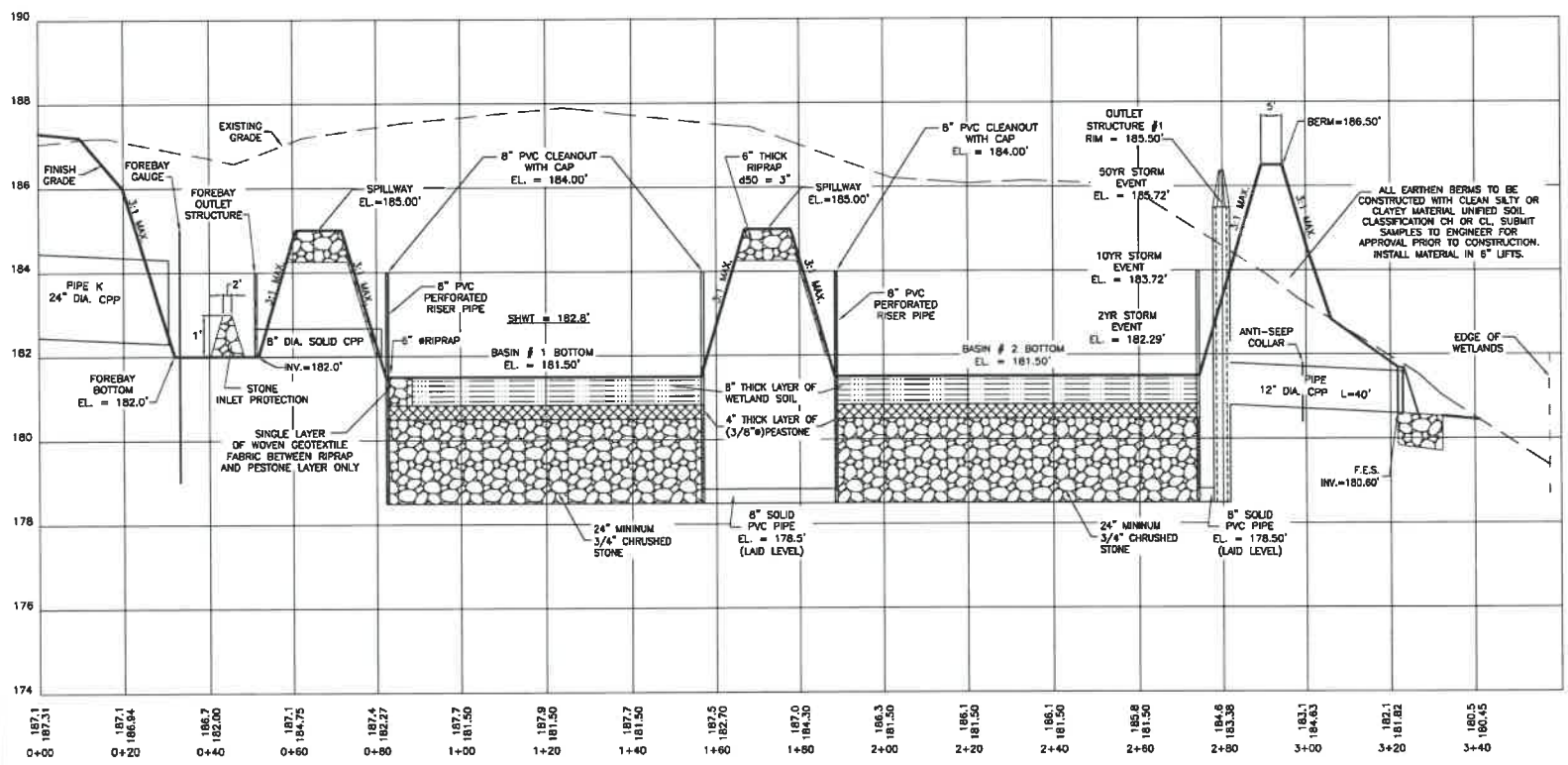
31 Mooney Street, Alton, N.H. 603-875-3948

LAND SURVEYORS



GRAVEL WETLANDS BASIN PLAN

1" = 20'



GRAVEL WETLAND MATERIALS CROSS-SECTION

NOT TO SCALE

LOW PERMEABILITY MATERIAL GRADATION:	
SIZE	PERCENT
#4	95-100
#40	50-90
#100	40-60
#200	25-45

CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



REVISIONS:
5/24/18 PER RHODES AOT RFM LETTER DATED MAY 21, 2018

SEDIMENT FOREBAY GAUGE DETAIL

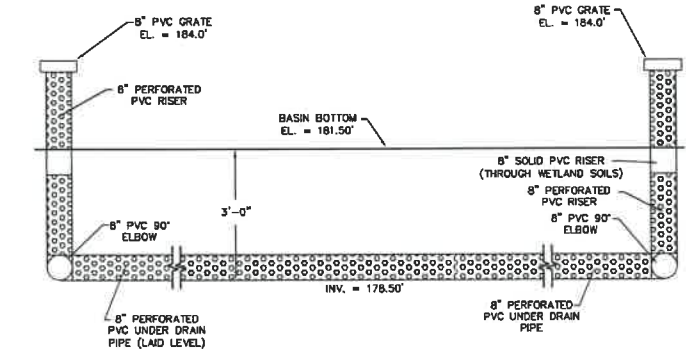
NOT TO SCALE

- NOTES:
- STAFF GAGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR PLACED IN GROUND A MINIMUM 3'-FT.
 - CLEANOUT MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

SEDIMENT FOREBAY:

- SPECIFICATIONS:**
- CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION. OVER EXCAVATE THE 3/4-INCH STONE MEDIA BED AS DEPICTED TO ACCOMMODATE THE 24-INCHES OF STONE AND 3-INCHES OF 3/8" PEA GRAVEL AS SHOWN IN THE CROSS-SECTION.
 - INSTALL THE WETLAND SOIL IN AN 8-INCH LAYER COMPRISED THE SPECIFICATION BELOW OF:
WETLAND SOILS MIX:
COMPOST = 25%
LOAM = 25%
PEAT MOSS = 25%
COARSE SAND (SPT10) = 25%
FOUND ON SHEET C-11, SEED MIXTURE = A.
 - LOAM AND SEED ONLY THE SLOPES OF THE GRAVEL WETLAND AS PRESCRIBED NOTES FOUND ON SHEET C-11, SEED MIXTURE = B.
 - PLANT THE BOTTOM OF THE GRAVEL WETLAND AS PRESCRIBED ON SHEET C-11.
- RECOMMENDED SEEDING RATES:**
SUPPLEMENTAL LLB/6,000 SQ. FT. OR STRAIGHT LLB/3,000 SQ.FT.
- MAINTENANCE REQUIREMENTS:**
- INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND SURFACE BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND AFTER ANY RAINFALL EVENT OF 2.5-INCHES IN A 24-HOUR PERIOD OR GREATER.
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY.
 - PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTION.
 - REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
 - CONDUCT PERIODIC MOWING OF THE INFILTRATION BASIN SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE INFILTRATION BASIN EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 - REMOVE PLANT MATERIAL THAT DIES BACK IN THE FALL FROM THE GRAVEL WETLAND SURFACE (I.E. GRASSES, REEDS, ETC.) ONLY REMOVE THE ABOVE GROUND GROWTH THAT HAS DIED BACK. LEAVE THE ROOT MASS INTACT.
 - IF THE GRAVEL WETLAND DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED WETLAND OR SOILS SCIENTIST OR LANDSCAPE ARCHITECT, ETC.) SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE STONE BED AND PIPE MANIFOLD.

FOREBAY OUTLET STRUCTURE



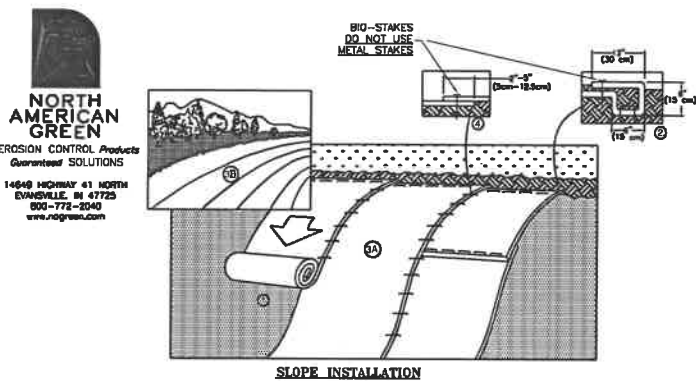
GRAVEL WETLANDS OUTLET STRUCTURE DETAIL

SCALE: NOT TO SCALE

GRAVEL WETLAND DETAILS

TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC
MARCH 2018

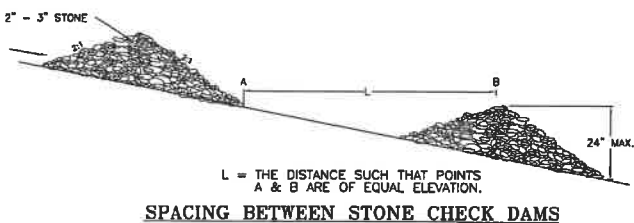
LAND SURVEYORS



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

- CONSTRUCTION SPECIFICATIONS:**
1. MANUFACTURER'S INSTALLATION INSTRUCTIONS:
 - A. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 - B. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 - C. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF BIO-STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH.
 - D. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF BIO-STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
 - E. 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 BIO-STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, BIO-STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
 - F. CONSECUTIVE RECP'S SPUN DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
 - G. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
 2. SITE PREPARATION:
 - A. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.
 - B. GRADE AND SHAPE AREA IF INSTALLATION.
 - C. REMOVE ALL ROCKS, CLODS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
 - D. PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
 - E. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.
 3. SEEDING:
 - A. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEEDED.
 - B. WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

TEMPORARY EROSION CONTROL BioNet SC150BN BIODEGRADABLE DETAIL NOT TO SCALE



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

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

STONE CHECK DAM INSTALLATION DETAIL NOT TO SCALE

FILE NO. 134
PLAN NO. C-2379-S2
DWC. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948



CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE. GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

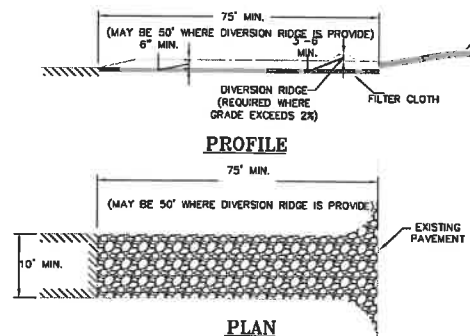


REVISIONS:
5/24/18 PER RHODES A&T RFM LETTER DATED MAY 21, 2018

TEMPORARY VEGETATION:

- SPECIFICATIONS:**
1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
 2. GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
 3. RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
 4. ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
- SEEDING PREPARATION:**
1. STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
 2. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
 3. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
 4. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:
- LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE
- FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)
*LOW PHOSPHATE FERTILIZER (8-0-4) OR EQUIVALENT

- SEEDING:**
1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
 2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
 3. AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT PRACTICE DESIGN" IN THE RHSDM, VOL. 3.
 4. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.
- MAINTENANCE REQUIREMENTS:**
1. TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL BE INSPECTED LATE PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
 2. BASED ON INSPECTION, AREAS SHALL BE RESEEDING TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
 3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDING, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.



TEMPORARY CONSTRUCTION EXIT NOT TO SCALE

- MAINTENANCE REQUIREMENTS:**
1. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE PERIODICALLY COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL THEN BE RECONSTRUCTED.
 2. THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
 3. WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

- CONSTRUCTION SPECIFICATIONS:**
1. THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
 2. THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
 3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
 4. THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
 5. THE PAD SHALL BE AT LEAST 6 INCHES THICK.
 6. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
 7. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
 8. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

TEMPORARY EROSION AND SEDIMENTATION CONTROL TAX MAP 259, LOT 38 FLAGG ROAD ROCHESTER, NH PREPARED FOR: 119 FLAGG ROAD DEVELOPMENT, LLC.

MARCH 2018

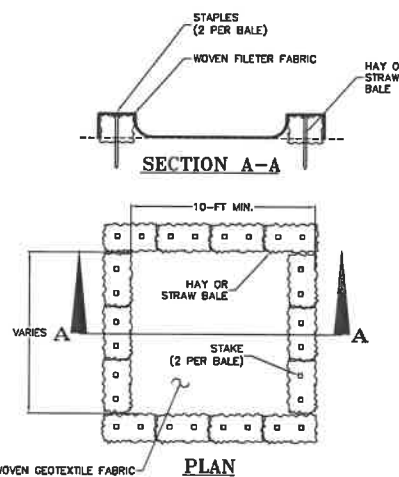
2 Continental Blvd., Rochester, N.H. 603-335-3948

C-10

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS:**
1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4-INCH, 8-INCH AND 12-INCH WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH.
 2. WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
 3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN FIGURE 16.7. STONE GRADATION SHALL BE WELL GRADED WITH THE MAXIMUM STONE SIZE OF 6 INCHES AND MINIMUM STONE SIZE OF 1 INCH.
 4. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

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



- CONSTRUCTION SPECIFICATIONS:**
1. THE DE-WATERING AREA WILL BE CONSTRUCTED BEFORE ANY PUMPING OCCURS AT THE SITE.
 2. TEMPORARY DE-WATERING AREA TYPE, ABOVE GRADE, WILL BE CONSTRUCTED AS SHOWN ABOVE, WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10-FT.
 3. THE DE-WATERING AREA WILL BE LOCATED AS SHOWN OR AS DIRECTED BY THE ENVIRONMENTAL CONSULTANT.
 4. GEOTEXTILE LINING WILL BE FREE OF TEARS, OR OTHER DEFECTS THAT COMPROMISE THE DURABILITY OF THE MATERIAL.

- MAINTENANCE NOTES:**
1. THE DE-WATERING AREA(S) WILL BE INSPECTED DAILY TO ENSURE THAT ALL SEDIMENT IS BEING DISCHARGED INTO THE HAYBALE DAM AREA, NO TEARS ARE PRESENT AND TO IDENTIFY WHEN SEDIMENT NEED OF BE REMOVED.
 2. THE DE-WATERING AREA(S) WILL BE CLEANED OUT ONCE THE AREA IS FILLED TO 75 PERCENT OF ITS HOLDING CAPACITY.
 3. ONCE THE HOLDING CAPACITY HAS BEEN REACHED THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATION.
 4. THE GEOTEXTILE LINING WILL BE REPLACED IF TEARS OCCUR DURING REMOVAL OF SEDIMENT FROM THE DE-WATERING AREA.

DE-WATERING AREA DETAIL NOT TO SCALE

SILTATION CONTROL FENCE DETAIL NOT TO SCALE

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

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

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

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS

RIP-RAP GRADATION

d50 = 3"

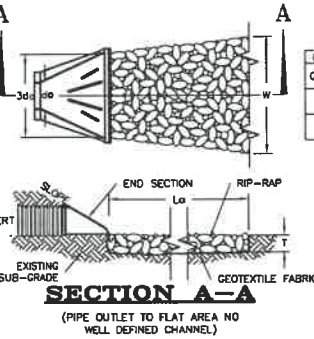
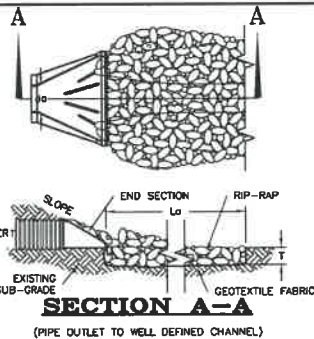
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	5 TO 6
85	4 TO 5
50	3 TO 4
15	1 TO 2

d50 = 4"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	6 TO 8
85	5 TO 6
50	4 TO 5
15	1 TO 2

APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	W ₆	W	L ₆	T	d50
GRAVEL WETLAND	12" CPP	3'	15.3'	10.8'	9"	3"
PIPE K	24" CPP	6'	13.1'	18'	9"	3"



NOTES:

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

CONSTRUCTION SPECIFICATIONS:

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

MAINTENANCE NOTES:

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

PIPE OUTLET PROTECTION DETAIL

DUST CONTROL PRACTICES:

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

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
- PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERM, SANDBARS OR OTHER PERMITTED PRACTICES.
- STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHEM VOL. 3, TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
- IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
- PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.

PROTECTION OF INACTIVE STOCKPILES:

- INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
- INACTIVE STOCKPILES OF CONCRETE, RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.

PROTECTION OF ACTIVE STOCKPILES:

- ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION.
- PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE.
- THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
- WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948



GENERAL CONSTRUCTION PHASING:

- STABILIZATION: A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
 - IN AREAS THAT WILL NOT BE PAVED:
 - A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
- TEMPORARY STABILIZATION: ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES. THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- PERMANENT STABILIZATION: ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING. MAXIMUM AREA OF DISTURBANCE: THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREA ARE STABILIZED.
- ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION. FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED. EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-4.
- TOPSOIL RESTORED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
- STOCKPILE BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
- SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
- ALL FILL SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- IN GENERAL, FILL SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
- ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.
- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
- THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHEM VOL. 3.
- ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
- USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.
- STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
- THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARC 3800 RELATIVE TO INVASIVE SPECIES.
- LOT DEVELOPMENT, OTHER THAN SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

ABOVE NOTES EXCERPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHEM, VOL. 3)

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

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

SEEDBED PREPARATION:

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

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)
*LOW PHOSPHATE FERTILIZER (8-0-4) OR EQUIVALENT

SEEDING:

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

HYDROSEEDING:

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

MAINTENANCE REQUIREMENTS:

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

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AREAS AND DISPOSAL AREAS	A	TALL FESCUE	20	0.45
		CREEPING RED FESCUE	20	0.45
		RED TOP TOTAL	42	0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE	20	0.45
		CREEPING RED FESCUE	20	0.45
		RED TOP TOTAL	42	0.95
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREEPING RED FESCUE	20	0.45
		RED TOP TOTAL	42	0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREEPING RED FESCUE	50	1.15
		KENTUCKY BLUEGRASS	50	1.15
		TOTAL	100	2.30

SOURCES:

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

CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



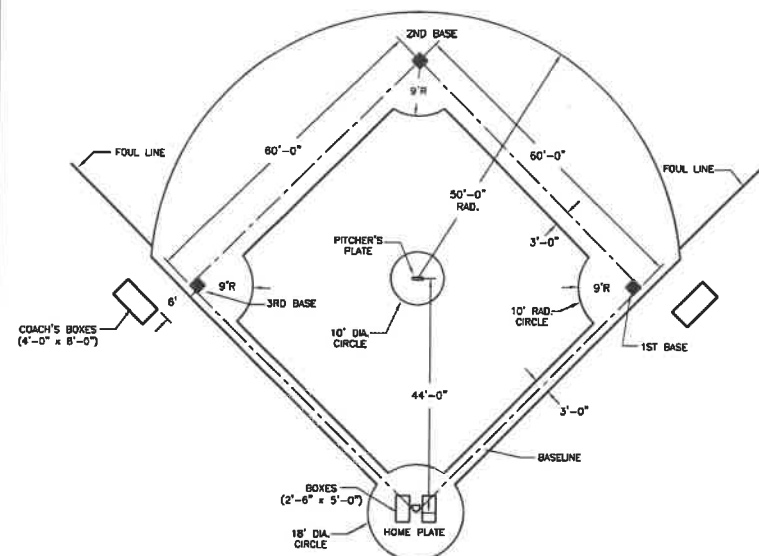
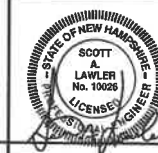
REVISIONS:
5/24/16 PER NHDES A&T RFM LETTER DATED MAY 21, 2016

PROJECT SPECIFIC CONSTRUCTION PHASING:

- REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
- INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-4 PRIOR TO EARTH MOVING OPERATIONS.
- INSTALL GRAVEL SNOW FENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
- CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- PERFORM THE NECESSARY CONSTRUCTION EXOT AT THE LOCATION OF THE PROPOSED DRIVEWAY CONNECTION TO FLAGG ROAD. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXOT DETAIL.
- STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILE PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE GRAVEL WETLAND AND INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION/BIORETENTION BASIN DETAILS SHOWN ON SHEET C-6.
- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION BASIN DETAILS SHOWN ON SHEET C-6.
- CONSTRUCT THE GRAVEL WETLAND BASIN, SEDIMENT FOREBAY AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED FOR THE STABILIZATION OF CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILE PRACTICES".
- STOCKPILE BORROW AREAS AND SPOILS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS. INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
- AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).
- INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-1 AND C-2. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING.
- CONSTRUCT THE INFILTRATION BASINS AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON SHEET C-2.
- ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEEDED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.
- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PAVED AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
- THE PAVED AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
- INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL, IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS. IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.
- ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND NHEM, VOL. 3 SHOULD BE EMPLOYED.
- DURING CONSTRUCTION ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY. EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.
- ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL, AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
- SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE. PROJECT COMPLETION AND STABILIZATION.
- UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED), THE TEMPORARY SEDIMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.
- ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE SWALE AND THE SEDIMENT FOREBAYS TO THE INFILTRATION BASIN.

PERMANENT EROSION AND SEDIMENTATION CONTROL
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MAY 2016



LITTLE LEAGUE BASEBALL FIELD LAYOUT

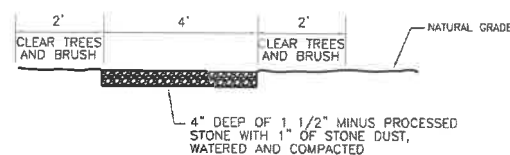
NOT TO SCALE



- NOTES:
1. LOAM TO BE PLACED WITH MINIMUM COMPACTION WITH USE OF TRACKED OR
FLOATION TIRED EQUIPMENT.
2. FIELD SHALL BE AERATED A MINIMUM OF 4 TIMES PER YEAR.

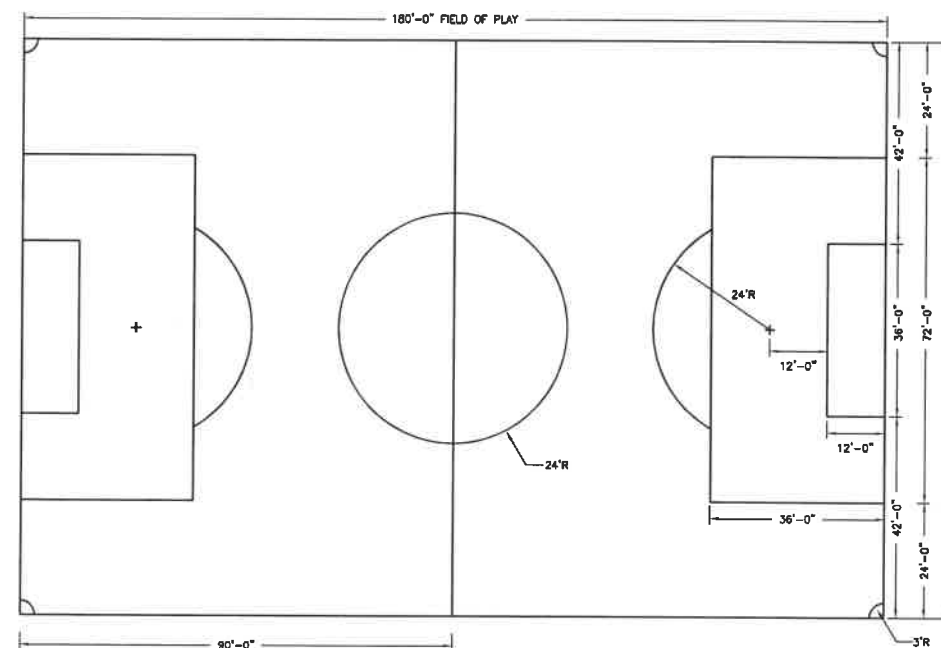
TYPICAL PLAY FIELD DETAIL

NOT TO SCALE



STONE DUST PATH SECTION

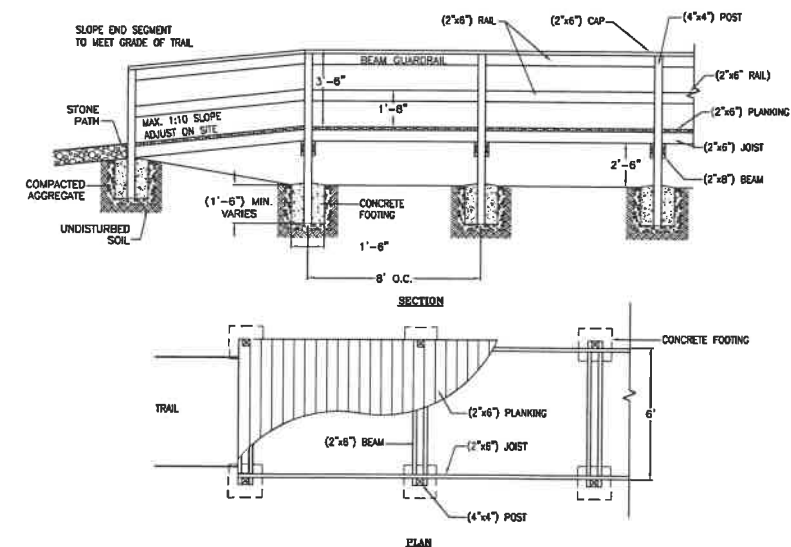
NOT TO SCALE



SOCCER FIELD LAYOUT

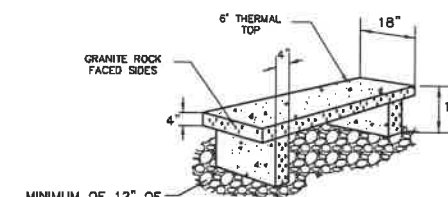
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- CONSTRUCTION NOTES:**
1. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM, HYDROSEEDED AND A MULCH.
 2. ALL SLOPES GREATER THAN 3:1 SHALL HAVE EROSION CONTROL, FABRIC PLACED AFTER SEEDING.
 3. IRRIGATION FOR ATHLETIC FIELDS SHALL BE INSTALLED DURING THE RECONSTRUCTION OF THE FIELD. PROPOSED IRRIGATION SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF CHICAGO PLANS SUBMITTED TO THE OWNER PRIOR TO INSTALLATION.
 4. ALL EXISTING AND PROPOSED GRASSES SHALL BE MAINTAINED. AS SHOWN, AROUND THE CONSTRUCTED FIELD AFTER ALL SITE WORK IS COMPLETED TO PROHIBIT UNAUTHORIZED ACCESS UNTIL THE FIELD IS FULLY SEED.
 5. CONTRACTOR SHALL INSTALL PERMANENT IRON MARKERS AT THE OUTSIDE CORNERS OF EACH FIELD TO INDICATE THE LOCATION OF PAINTING. MARKERS SHALL BE INSTALLED FLUSH WITH THE BASE OF THE SOIL, SUCH AS TO NOT BE HAZARDOUS TO PLAYERS OF IMPROVISED JUVENILE OPERATION.



FOOT BRIDGE DETAIL

NOT TO SCALE



PERSPECTIVE VIEW DETAIL

- NOTES:**
1. SPECIFICATIONS FOR SIZE DIMENSIONS OF BENCH SHOULD BE AS SHOWN OR NO GREATER THAN 24"x24"x6'.
 2. THE BENCH SHALL BE A SOLID GRANITE BLOCK WITH A THERMAL TOP AND ROCK FACED SIDES AS SHOWN.
 3. THE BENCH SHALL BE SET ON 12" COMPACTED GRAVEL AS SHOWN (IF NOT ON CONCRETE OR SOME OTHER PAVED SURFACE).

SOLID GRANITE BLOCK BENCH

NOT TO SCALE

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

SITE AMENITIES DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

JANUARY 2020

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-12

