PROPOSED 16 LOT SUBDIVISION

FREEDOM DRIVE

PREPARED FOR

GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

REVISED MAY 4, 2021

OVERALL SITE

1" = 200'

Northern Black Racer

(New Hampshire state threatened species)

- Solid black with a white throat and chin
- Slender with glossy scales, 3-5 ft. long
- Hatchlings are very small and patterned

Immediately report sightings to NH Fish and Game
Melissa Doperalski (603-419-1129) or
Brandan Clifford (603-944-0885)
Please report promptly, stating specific location and date
Photographs strongly encouraged

NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS RELATED TO THREATENED AND ENDANGERED SPECIES:

- ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, EXCEPT FOR SILT FENCE INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.04, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH. SEE PLANS C-18 FOR SPECS.
- REPORT OBSERVATIONS OF NORTHERN BLACK RACERS IMMEDIATELY TO NHFG – MELISSA DOPERALSKI (CALL OR TEXT) 603-479-1129 OR THE WILDLIFE ADMINISTRATOR AT 603-271-2461. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE. OBSERVATIONS OF THESE SPECIES IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE.
- ALL CONSTRUCTION AND SITE OPERATORS SHALL BE PROVIDED WITH THE FLYER TO AID IN THE IDENTIFICATION OF NORTHERN BLACK RACER.
- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT HYPERLINK "mailto:NHFGreview@wildlife.nh.gov" NHFGREVIEW@WILDLIFE.NH.GOV, EMAIL SUBJECT LINE: NHB19-1831 AND UPDATED NHB21-0247 FREEDOM DRIVE SUBDIVISION. WILDLIFE SPECIES OBSERVATION. PHOTOGRAPHS SHALL BE PROVIDED FOR VERIFICATION AS FEASIBLE.
- IF ANY THREATENED OR ENDANGERED SPECIES ARE OBSERVED WITHIN THE DISTURBANCE AREA AND ARE IN HARM'S WAY, IF IT IS SAFE TO DO SO, MOVE TO THE CLOSEST LOCATION IN THE DIRECTION THEY WERE HEADING AND IMMEDIATELY CONTACT NHFG AT 603-271-2461 OR NHFG WILDLIFE BIOLOGIST MELISSA DOPERALSKI TEXT OR PHONE AT 603-479-1129. INCLUDE PHOTOGRAPH IF FEASIBLE.
- NHFG SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
- CATCH BASINS AND SUMPS ARE A KNOWN SOURCE OF MORTALITY TO SNAKES, TURTLES AND OTHER WILDLIFE. IN ORDER TO AVOID ENTRAPMENT OF PROTECTED SPECIES, THERE SHALL BE NO SUMPS IN CATCH BASINS. DRAIN MANHOLES OR STORMWATER BASIN OUTLET CONTROL STRUCTURES.

RECEIVED
DEC 16 2021
By

PRIOR TO THE START OF CONSTRUCTION A WILDLIFE WALK OVER SHALL TAKE PLACE TO ENSURE RARE SPECIES AREN'T WITHIN ACTIVE WORK ZONE AREAS.

STATE AND FEDERAL PERMITS:

STATE OF NEW HAMPSHIRE PERMIT NUMBERS:

NHDES ALTERATION OF TERRAIN:	AoT-1850
NHDES WETLANDS PERMIT:	2020-02289
NHDES DAM PERMIT:	NOT REQUIRED
NHDES SUBDIVISION PERMIT:	NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT:	NOT REQUIRED
NHDES WASTEWATER PERMIT:	0-2020-0808
NHDOT 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.

FINAL APPROVAL BY ROCHESTER PLANNING BOARD

CERTIFIED BY: Shawna B Saunders DATE: 2-10-22
Per April 20, 2021 PB Meeting

SHEET INDEX

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10026 LICENSED PROFESSIONAL ENGINEER

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

DEVELOPER
GOLDEN OAKS DEVELOPMENT, LLC
35 JENKINS ROAD
LEE, NH 03861

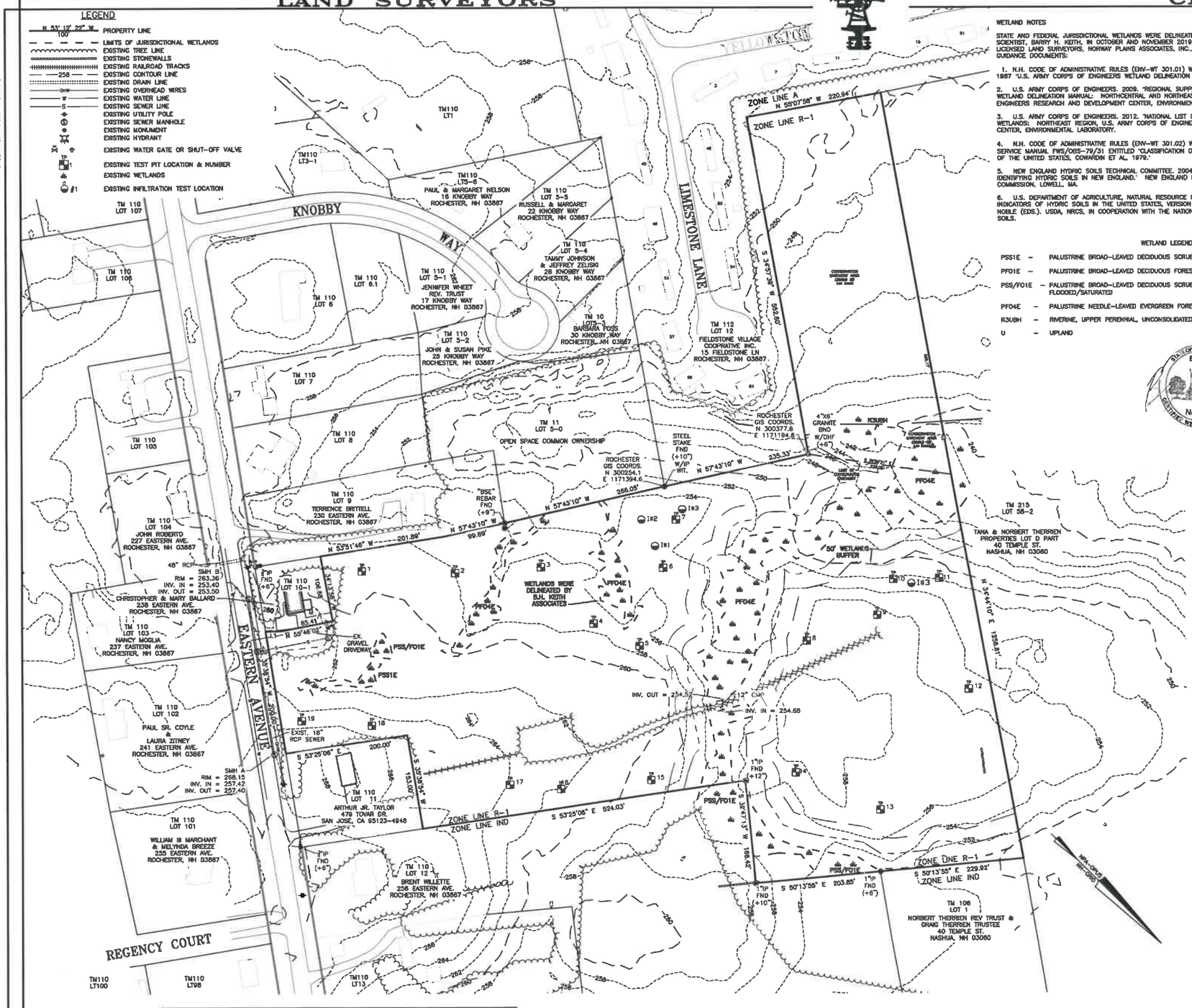
OWNER
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

Drawing Location: M:\19138\19138\DWGS\19138 S-1.dwg
Fri, 19 Nov 2021 - 2:15pm

LEGEND

- N 53° 10' 22" W 100' — PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- 258 — EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- EXISTING OVERHEAD WIRES
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING MONUMENT
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- TP #1 — EXISTING TEST PIT LOCATION & NUMBER
- EXISTING WETLANDS
- #1 — EXISTING INFILTRATION TEST LOCATION



WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN OCTOBER AND NOVEMBER 2019. 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. 2009. 'REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL 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, COWARDIN 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.

WETLAND LEGEND

PSS1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED
PFO1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
PSS/FO1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/FORESTED, SEASONALLY FLOODED/SATURATED
PFO4E	–	PALUSTRINE NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED
R3UBH	–	RIVERINE, UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODED
U	–	UPLAND

STATE OF NEW HAMPSHIRE BARRY H. KEITH No. 067 CERTIFIED WETLAND SCIENTIST

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING SITE FEATURE ON THE SUBJECT PARCEL AND ABUTTING PARCELS.
2. TOTAL PARCEL AREA: MAP 110, LOT 10-0(OPEN SPACE) AND LOTS 10-2 THRU 10-17 (HOUSE LOTS) AND LOT 10-18 (ROAD RIGH-OF-WAY) = 16.19 ACRES OR 705,207 SQ.FT.
3. THE PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS:
   LOT SIZE = 10,000 SF
   FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
8. ORIENTATION: HORIZONTAL DATUM IS NAD83 AND VERTICAL DATUM IS NGVD29
9. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338.

SOIL NOTES:
SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY

A. THIS SITE-SPECIFIC SOIL MAP WAS COMPLETED IN MARCH 2020 BY DAVID J. ALLAIN, NH CERTIFIED SOIL SCIENTIST #13, ROUND POND SOIL SURVEY, 374 POND HILL ROAD, BARRINGTON NH 03825. 'SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT', VERSION 5.0, DECEMBER 2017. SSSNNE SPECIAL PUBLICATION NO.3 WAS USED AS A REFERENCE AND GUIDE IN DEVELOPING THIS MAP. 'THE DISTURBED SOIL MAPPING SUPPLEMENT FOR NEW HAMPSHIRE DES AOT SITE SPECIFIC SOIL MAPS', DECEMBER 2017 WAS ALSO CONSIDERED TO COMPLY WITH THE SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ 1500, ALTERATION OF TERRAIN (AOT) PROGRAM. THE SOILS WERE IDENTIFIED USING THE 'NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND' PREPARED BY THE USDA NRCS, DURHAM NH, ISSUE #10, JANUARY 2011.

B. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR USE IN PLANNING AND CONSTRUCTING INFILTRATION STRUCTURES OR PRACTICES CONSISTENT WITH NHDES ALTERATION OF TERRAIN PROGRAM REQUIREMENTS PER ENV-WQ 1500 RULES. THIS MAP WAS PRODUCED BY A NH CERTIFIED SOIL SCIENTIST AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE.

SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY
SEE SHEET C-13 FOR TEST PIT DATA

LEGEND
HABITAT COVER TYPES

WP = White Pine
HEM = Eastern Hemlock
H = Mixed Hardwood
AF = Abandoned Field/Grassland
SL = Shrubland

Size Class:
1 = Saplings — 1-3" Diameter Breast Height (DBH)
2 = Pole-Sized — 3+"-6" DBH
3 = Young Forest — 6"+ -12" DBH
4 = Mature Forest — 12"+ DBH

Density:
A = Greater than 50%
B = Less than 50%

Ex. H1A - Mixed Hardwood, Saplings, Greater than 50% Density

TAX MAP 110 - LOTS
10-0, 10-2 THRU 10-17
OWNER OF RECORD:
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 1400, PG 649

EXISTING FEATURES PLAN
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

GRAPHIC SCALE
80 0 40 80 160 320
(IN FEET)
1 INCH = 80 FEET

E-1

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 WITH IN 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.

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

LEGEND

N 57°43'10" W / 99.69'	PROPERTY LINE
— — — — —	LIMITS OF JURISDICTIONAL WETLANDS
- — - — - —	DRAINAGE EASEMENT
ooooooooooo	EXISTING STONEWALLS
●	EXISTING MONUMENT
(wetland symbol)	EXISTING WETLANDS
⊡ ●	PROPOSED MONUMENT

ABREVIATION LEGEND:
DHF – DRILL HOLE FOUND
DHCF – DRILL HOLE WITH IDENTIFICATION CAP FOUND
FND – FOUND
RBF – REBAR FOUND
ROW – RIGHT OF WAY
SSF – STEEL STAKE FOUND
TAB – IDENTIFICATION DISK FOUND
(+2") – DENOTES HEIGHT OF THE MONUMENT
TM – TAX MAP & LOT NUMBER
SCRD – STRAFFORD COUNTY REGISTRY OF DEEDS

MONUMENT IDENTIFICATION INSCRIPTIONS:
"NPA" – NORWAY PLAINS ASSOCIATES

ABUTTERS IN FIELDSTONE VILLAGE

112-0012-0033
JAMES & JOAN COLLINS
21 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0034
SONJIA TAINTER & ROSE ROGERS
15 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0035
REGAN & MICHELLE LAMBERT
11 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0036
MANDY & MICHELLE DANIEL-CARR
7 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0037
PAUL & ELIZABETH STYVES
3 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0038
ROBERT & KAYLA PEACH
46 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0039
RODNEY & JR. & CARNEN LEARY
50 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0040
JOSE & PHYLLIS MANRIQUE
54 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0042
MARK BARTON
61 LIMESTONE LN
ROCHESTER, NH 03867

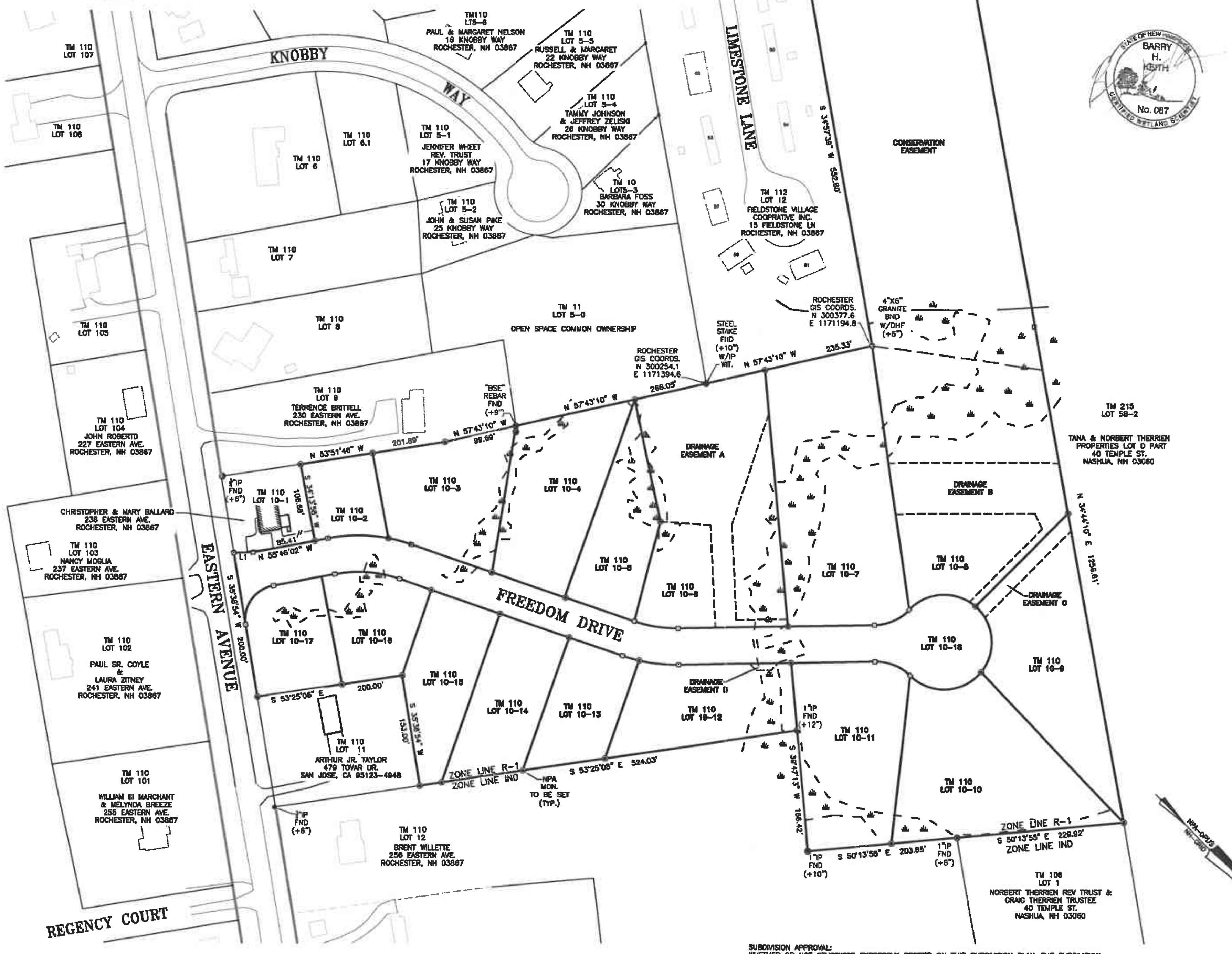
112-0012-0043
ANTHONY & MICHELE NASUTI
59 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0044
TRACI GLIDDEN & MARY PALMER
57 LIMESTONE LN
ROCHESTER, NH 03867

LINE	BEARING	DISTANCE
L1	N 46°20'38" W	25.87'

NOTES (CONTINUE):

26. LOT 10-8 IS SUBJECT TO A CONSERVATION EASEMENT WHICH PROHIBITS CONSTRUCTION OF STRUCTURES OR IMPROVEMENTS, REMOVAL OF VEGETATION EXCEPT FOR DEAD, DISEASED, OR INVASIVE SPECIES; AND SHALL MAINTAIN SIGNAGE AROUND THE PERIMETER OF THE EASEMENT AREA IDENTIFYING IS AS A WILDLIFE CONSERVATION AREA.
27. PLANS SHOW THAT STORMWATER BEST MANAGEMENT PRACTICES (BMPS) ARE LOCATED WITHIN DRAINAGE EASEMENTS ON INDIVIDUAL RESIDENTIAL LOTS. BEFORE TRANSFER OF SUBDIVIDED LOTS, DRAINAGE EASEMENTS AND DEED RESTRICTIONS SHALL BE RECORDED FOR EACH LOT THAT CONTAINS STORMWATER BMPS OR ACCESS TO STORMWATER BMPS. THE EASEMENT SHALL PROVIDE THE PERMITTEE, OR HIS SUCCESSORS, HEIRS OR ASSIGNS, ACCESS FOR INSPECTION, MAINTENANCE, AND REPAIR OF BMPS. A DEED RESTRICTION SHALL PROHIBIT THE OWNER FROM ALTERING THE LAND WITHIN THE EASEMENT. THE EASEMENTS SHALL RUN WITH AND BIND THE PROPERTY IN PERPETUITY AND SHALL INCLUDE A MAP SHOWING THE LOCATION OF THE EASEMENT WITH METES AND BOUNDS. COPIES OF RECORDED DEEDS MUST BE SUBMITTED TO DES WITHIN 7 DAYS OF RECORDING WITH THE REGISTRY OF DEEDS.
28. THE INDIVIDUAL LOT OWNERS OF LOTS 10-2, 10-3, 10-4, 10-5, 10-6, 10-7, 10-9, 10-10, 10-11, 10-12, 10-13,10-14, 10-16 & 10-17 ARE REQUIRED TO CONSTRUCT RAIN GARDENS ACCORDING TO THE APPROVED PLANS. THE RAIN GARDENS MUST CAPTURE AND INFILTRATE ALL STORMWATER RUNOFF FROM THE ROOFS ON THE LOT PER THE DETAILS ON THE PLANS. THE CURRENT LOT OWNER SHALL RECORD EASEMENTS AND DEED RESTRICTIONS FOR THE CONSTRUCTION AND MAINTENANCE OF THE RAIN GARDENS PRIOR TO OFFERING ANY OF THE PROPERTIES FOR SALE. COPIES OF RECORDED DEEDS MUST BE SUBMITTED TO DES WITHIN 7 DAYS OF RECORDING WITH THE REGISTRY OF DEEDS. AFTER THE SALE OF EACH LOT, THE INSPECTION AND MAINTENANCE REQUIREMENTS OF THE RAIN GARDEN WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL HOMEOWNER. THE RAIN GARDENS SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH ENV-WQ 1507.07 AND THE PROJECT INSPECTION AND MAINTENANCE (I&M) MANUAL. ALL RECORD KEEPING REQUIRED BY THE I&M MANUAL SHALL BE MAINTAINED BY THE LOT OWNER AND BE MADE AVAILABLE TO NHDES UPON REQUEST. PHOTOGRAPHS OF THE RAIN GARDENS MUST ACCOMPANY THE I&M SUBMITTALS.



LOCUS
N.T.S.

CIVIL ENGINEERS

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STATE OF NEW HAMPSHIRE – BARRY H. KEITH – No. 087 – CERTIFIED WETLAND SCIENTIST

REVISIONS:
09/22/21 – REVISE PER ROCHESTER PLANNING BOARD NOTICE OF DECISION

I HEREBY CERTIFY THAT THIS PLAN, PREPARED UNDER MY DIRECTION, IS THE RESULT OF A SURVEY MADE ON THE GROUND AS PER RECORD DESCRIPTIONS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE PLAN CLOSURE EXCEEDS 1:10,000.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 885 JOEL D. RUNNALS

JOEL D. RUNNALS, L.L.S. 885 — DATE: 11/19/2021

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCELS INTO 16 RESIDENTIAL LOTS.
2. TOTAL PARCEL AREA:
   MAP 110, LOTS 10-2 THRU 10-17 (HOUSE LOTS), LOT 10-18 (ROAD RIGHT OF WAY)
   TOTAL AREA= 16.19 ACRES OR 705,207 SQUARE FEET.
3. PARCELS ARE ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS: (R-1 WITH CITY WATER & SEWER)
   LOT SIZE = 10,000 SF
   FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
8. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338.
9. STATE OF NEW HAMPSHIRE PERMIT NUMBERS;
   WETLANDS AND NON-SITE SPECIFIC PERMIT: 2020-02289
   WASTEWATER CONNECTION PERMIT: D2020-0808
   ALTERATION OF TERRAIN PERMIT: AOT-1950
10. ALL CONSTRUCTION MUST BE OUTSIDE THE 50 FOOT WETLANDS BUFFER, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
11. ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS AND THE RIGHT OF WAY POINT CURVATURE AND POINT TANGENT SHALL BE MARKED WITH GRANITE BOUNDS. THESE SHALL BE SET PRIOR BEFORE THE ROADWAY CANE BE CONSIDERED FOR CITY ACCEPTANCE AND ALL LOT PINS AND PINS FOR EASEMENTS ON LOTS BE SET BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED FOR SAID LOT. A LETTER FROM A NH LICENSED LAND SURVEYOR STATING PINS/MONUMENTS HAVE BEEN SET MUST BE SUBMITTED TO THE PLANNING DEPARTMENT ON A LOT BY LOT BASIS, AND A CERTIFICATE OF OCCUPANCY (CO) WILL NOT BE ISSUED FOR THE LOT REQUESTING A CERTIFICATE OF OCCUPANCY WITHOUT THIS LETTER; A SIMILAR LETTER IS REQUIRED BEFORE ASKING FOR STREET ACCEPTANCE AND/OR CLOSE-OUT OF PROJECT/SURETY.
12. THERE IS A 50 FOOT BUFFER REQUIREMENT FROM WETLANDS UNDER THE CITY OF ROCHESTER ZONING ORDINANCE AS SHOWN ON THIS PLAN SET. THERE MAY BE NO ENCROACHMENT WITHIN THESE BUFFERS EXCEPT AS PERMITTED UNDER THE ORDINANCE.
13. THE ROAD, UTILITIES AND DRAINAGE MUST BE PRIVATELY MAINTAINED UNLESS THE CITY ACCEPTS THE STREET.
14. SMALL INFORMATIONAL SIGNS TO BE INSTALLED AT THE INFILTRATION PONDS; SIGNS SHALL STATE THAT THESE ARE STORMWATER MANAGEMENT AREAS AND ARE TO BE MAINTAINED BUT NOT ALTERED, AND SHALL BE OFF-LIMITS.
15. PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST: A) CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS; AND B) STREET ACCEPTANCE SIGNS WITH THE FOLLOWING LANGUAGE AT ALL ENTRY POINTS TO THE SUBDIVISION: "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 ORDER OF PLANNING BOARD)". THE LOCATION AND DESIGN OF THE SIGNS SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL THEY BE LESS THAN 2'X4'. THE SIGNS SHALL BE ERECTED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.
16. AN ORANGE CONSTRUCTION FENCE MUST BE PLACED AT THE WETLAND BUFFER ON ALL LOTS THAT INCLUDES WETLAND BUFFERS PRIOR TO START OF CONSTRUCTION FOR ALL LOTS THAT CONTAIN WETLAND BUFFERS.
17. BUFFER MARKERS MUST BE INSTALLED ALONG THE OUTER EDGE OF THE WETLAND BUFFER ON ALL LOTS THAT CONTAIN A WETLAND BUFFER. THE MARKER MUST BE INSTALLED AT THE TIME THAT THE ORANGE CONSTRUCTION FENCE IS REMOVED. THE MARKER MUST BE IN PLACE IN ORDER FOR THE CERTIFICATE OF OCCUPANCY FOR THAT LOT TO BE ISSUED. THE BUFFER MARKERS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.
18. ALL PROPOSED DRIVEWAYS SHALL BE PLACED IN A LOCATION THAT WILL PROVIDE THE REQUIRED STOPPING SIGHT DISTANCE FOR THE POSTED SPEED LIMIT AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
19. THERE WERE NO VERNAL POOLS WITHIN THE PROPOSED SUBDIVISION LOTS.
20. ALL UTILITIES MUST BE UNDERGROUND.
21. ALL LOTS SHALL HAVE INDIVIDUAL SEPTIC TANK WITH PUMP CHAMBER AND AN EFFLUENT PUMP THAT WILL TIE INTO THE FORCE MAIN LOCATED WITHIN THE PROPOSED RIGHT-OF-WAY. THE COST OF INSTALLATION AND MAINTENANCE OF THE SEPTIC TANK AND EFFLUENT PUMPS WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS.
22. NO STRUCTURES OR SANITARY SEWERAGE INFRASTRUCTURE ARE ALLOWED WITHIN THE DRAINAGE EASEMENTS.
23. DEEDS TO THIRD PARTY PURCHASERS OF RESIDENTIAL LOTS SHALL EXPRESS INTENT THAT LOTS EXCLUDE FEE OWNERSHIP OF ABUTTING ROADWAY LAND (LOT 10-18) TO CENTER LINE TO PRESERVE DEVELOPERS' CONVEYANCE OF FEE TO CITY UPON STREET ACCEPTANCE, OR TO HOMEOWNERS' ASSOCIATION IN ABSENCE OF CITY ACCEPTANCE.
24. PRIOR TO DEDICATION OF THE STREETS TO THE CITY THERE SHALL BE AT LEAST ONE STREET TREE (DECIDUOUS SHADE TREES) ON THE FRONT PROPERTY LINE OF EACH LOT. 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. ONE OF THE FOLLOWING SPECIES MUST BE USED UNLESS OTHERWISE APPROVED BY THE PLANNING DEPARTMENT: MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHALL SEEDLESS ASH, EUROPEAN HORNBEAM, CALLERY PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA.
25. ALL LOTS WILL BE SUBJECT TO IMPACT FEES TO BE DETERMINED AT THE ISSUANCE OF A BUILDING PERMIT.

TAX MAP 110 – LOT 10-00,
LOTS 10-2 THRU 10-17
OWNER OF RECORD:
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

SUBDIVISION APPROVAL:
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUBDIVISION PLAN, THE SUBDIVISION APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS, AND SPECIFICATIONS OF THE CITY OF ROCHESTER LAND SUBDIVISION REGULATIONS, AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED IN ANY PARTICULAR, BELOW. NON- ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FROM SUBDIVISION APPROVAL.

FINAL APPROVAL BY ROCHESTER PLANNING BOARD

CERTIFIED BY: ____________ DATE: ________

OVERALL SUBDIVISION PLAN
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

GRAPHIC SCALE
80 0 40 80 160 240
(IN FEET)
1 INCH = 80 FEET
(SHEET 1 OF 3 FOR RECORDING)

S-1

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1

REFERENCE PLANS:
1. "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 – LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." DATED NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. AND RECORDED AT STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 87-76.

31 MOONEY STREET, ALTON, N.H. 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

- N 57°43'10" W / 99.69' — PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- 50' WETLANDS BUFFER
- DRAINAGE EASEMENT
- BUILDING SETBACK LINES
- EXISTING STONEWALLS
- EXISTING MONUMENT
- EXISTING WETLANDS
- PROPOSED MONUMENT

ABREVIATION LEGEND:
DHF – DRILL HOLE FOUND
DHCF – DRILL HOLE WITH IDENTIFICATION CAP FOUND
FND – FOUND
RBF – REBAR FOUND
ROW – RIGHT OF WAY
SSF – STEEL STAKE FOUND
TAB – IDENTIFICATION DISK FOUND
(+2") – DENOTES HEIGHT OF THE MONUMENT
TM – TAX MAP & LOT NUMBER
SCRD – STRAFFORD COUNTY REGISTRY OF DEEDS

MONUMENT IDENTIFICATION INSCRIPTIONS:
"NPA" – NORWAY PLAINS ASSOCIATES

NOTES (CONTINUE):

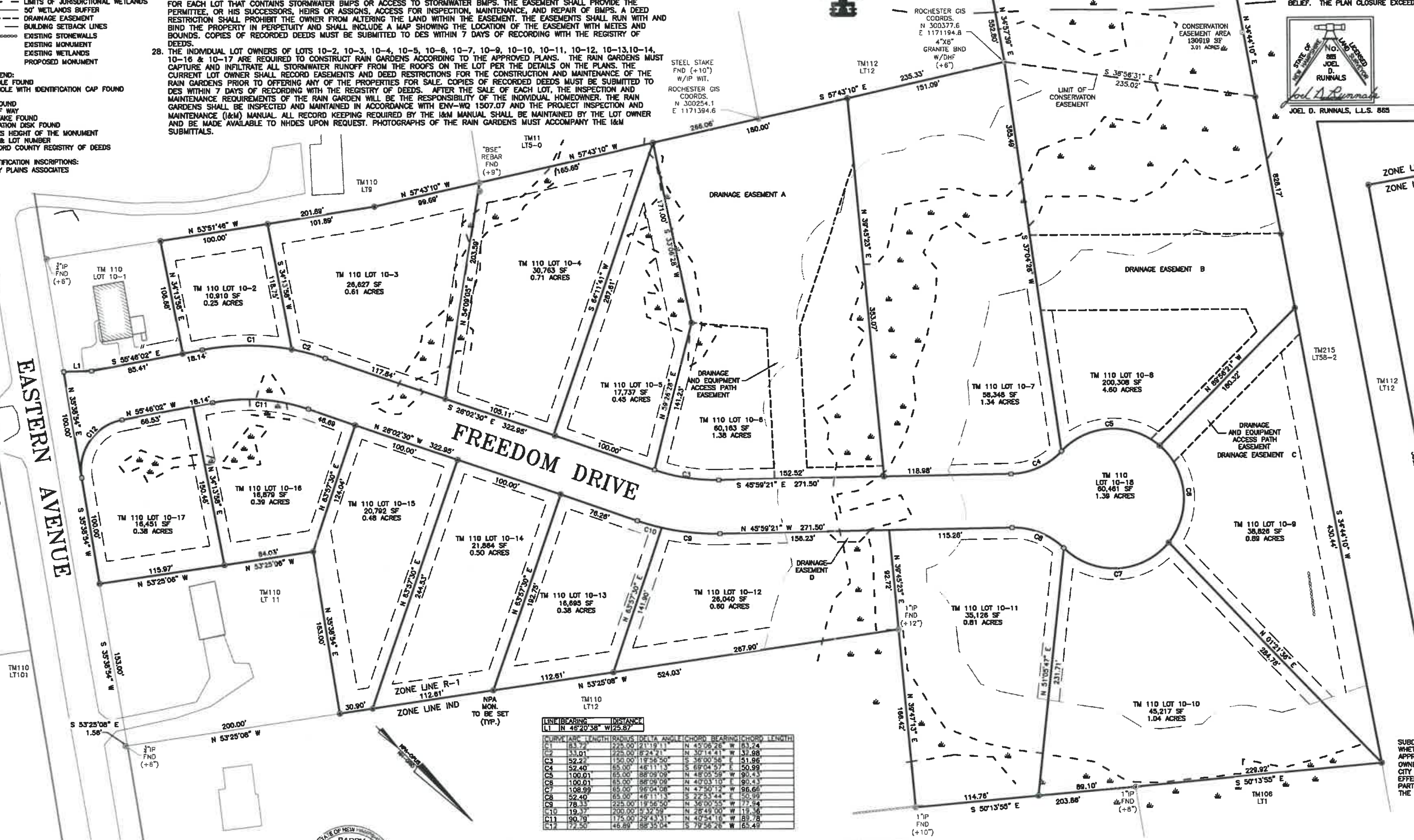
27. PLANS SHOW THAT STORMWATER BEST MANAGEMENT PRACTICES (BMPS) ARE LOCATED WITHIN DRAINAGE EASEMENTS ON INDIVIDUAL RESIDENTIAL LOTS. BEFORE TRANSFER OF SUBDIVIDED LOTS, DRAINAGE EASEMENTS AND DEED RESTRICTIONS SHALL BE RECORDED FOR EACH LOT THAT CONTAINS STORMWATER BMPS OR ACCESS TO STORMWATER BMPS. THE EASEMENT SHALL PROVIDE THE PERMITTEE, OR HIS SUCCESSORS, HEIRS OR ASSIGNS, ACCESS FOR INSPECTION, MAINTENANCE, AND REPAIR OF BMPS. A DEED RESTRICTION SHALL PROHIBIT THE OWNER FROM ALTERING THE LAND WITHIN THE EASEMENT. THE EASEMENTS SHALL RUN WITH AND BIND THE PROPERTY IN PERPETUITY AND SHALL INCLUDE A MAP SHOWING THE LOCATION OF THE EASEMENT WITH METES AND BOUNDS. COPIES OF RECORDED DEEDS MUST BE SUBMITTED TO DES WITHIN 7 DAYS OF RECORDING WITH THE REGISTRY OF DEEDS.
28. THE INDIVIDUAL LOT OWNERS OF LOTS 10–2, 10–3, 10–4, 10–5, 10–6, 10–7, 10–9, 10–10, 10–11, 10–12, 10–13, 10–14, 10–16 & 10–17 ARE REQUIRED TO CONSTRUCT RAIN GARDENS ACCORDING TO THE APPROVED PLANS. THE RAIN GARDENS MUST CAPTURE AND INFILTRATE ALL STORMWATER RUNOFF FROM THE ROOFS ON THE LOT PER THE DETAILS ON THE PLANS. THE CURRENT LOT OWNER SHALL RECORD EASEMENTS AND DEED RESTRICTIONS FOR THE CONSTRUCTION AND MAINTENANCE OF THE RAIN GARDENS PRIOR TO OFFERING ANY OF THE PROPERTIES FOR SALE. COPIES OF RECORDED DEEDS MUST BE SUBMITTED TO DES WITHIN 7 DAYS OF RECORDING WITH THE REGISTRY OF DEEDS. AFTER THE SALE OF EACH LOT, THE INSPECTION AND MAINTENANCE REQUIREMENTS OF THE RAIN GARDEN WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL HOMEOWNER. THE RAIN GARDENS SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH ENV–WQ 1507.07 AND THE PROJECT INSPECTION AND MAINTENANCE (I&M) MANUAL. ALL RECORD KEEPING REQUIRED BY THE I&M MANUAL SHALL BE MAINTAINED BY THE LOT OWNER AND BE MADE AVAILABLE TO NHDES UPON REQUEST. PHOTOGRAPHS OF THE RAIN GARDENS MUST ACCOMPANY THE I&M SUBMITTALS.

I HEREBY CERTIFY THAT THIS PLAN, PREPARED UNDER MY DIRECTION, IS THE RESULT OF A SURVEY MADE ON THE GROUND AS PER RECORD DESCRIPTIONS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE PLAN CLOSURE EXCEEDS 1:10,000.

STATE OF NEW HAMPSHIRE — No. 865 JOEL D. RUNNALS — LICENSED LAND SURVEYOR

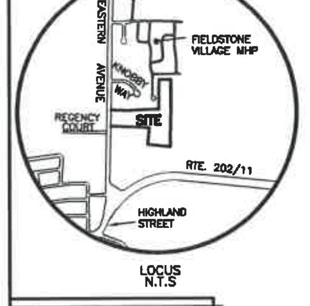
Joel D. Runnals — 11/19/2021
JOEL D. RUNNALS, L.L.S. 865 — DATE

REVISIONS:
09/22/21 – REVISE PER ROCHESTER PLANNING BOARD NOTICE OF DECISION



LINE	BEARING	DISTANCE
L1	N 46°20'38" W	25.87'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	83.72'	225.00'	21°19'11"	N 45°06'26" W	83.24'
C2	33.01'	225.00'	8°24'21"	N 30°14'41" W	32.98'
C3	52.22'	150.00'	19°56'50"	S 36°00'56" E	51.96'
C4	52.40'	65.00'	46°11'13"	S 69°04'57" E	50.99'
C5	100.01'	65.00'	88°09'09"	N 48°05'59" W	90.43'
C6	100.01'	65.00'	88°09'09"	N 40°03'10" E	90.43'
C7	108.99'	65.00'	96°04'08"	N 47°50'12" W	96.66'
C8	52.40'	65.00'	46°11'13"	S 22°53'44" E	50.99'
C9	78.33'	225.00'	19°56'50"	N 36°00'55" W	77.94'
C10	19.37'	200.00'	5°32'59"	N 28°49'00" W	19.36'
C11	90.79'	175.00'	29°43'31"	N 40°54'16" W	89.78'
C12	72.50'	46.89'	88°35'04"	S 79°56'26" W	65.49'



LOCUS
N.T.S

STATE OF NEW HAMPSHIRE — BARRY H. KEITH — No. 067 — CERTIFIED WETLAND SCIENTIST

WETLAND NOTES:

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN OCTOBER AND NOVEMBER 2019. 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. 2009. "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL 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, COWARDIN 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.

REFERENCE PLANS:

1. "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 – LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." DATED NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. AND RECORDED AT STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 87–76.

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCELS INTO 16 RESIDENTIAL LOTS.
2. TOTAL PARCEL AREA:
   MAP 110, LOTS 10–2 THRU 10–17 (HOUSE LOTS), LOT 10–18 (ROAD RIGHT OF WAY)
   TOTAL AREA = 16.19 ACRES OR 705,207 SQUARE FEET.
3. PARCELS ARE ZONED RESIDENTIAL–1 DISTRICT (R–1)
4. MINIMUM LOT REQUIREMENTS: (R–1 WITH CITY WATER & SEWER)
   LOT SIZE = 10,000 SF
   FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
8. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335–1338.
9. STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
   WETLANDS AND NON–SITE SPECIFIC PERMIT: 2020–02289
   WASTEWATER CONNECTION PERMIT: D2020–0808
   ALTERATION OF TERRAIN PERMIT: AOT–1950
10. ALL CONSTRUCTION MUST BE OUTSIDE THE 50 FOOT WETLANDS BUFFER, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
11. ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS AND THE RIGHT OF WAY POINT CURVATURE AND POINT TANGENT SHALL BE MARKED WITH GRANITE BOUNDS. THESE SHALL BE SET PRIOR BEFORE THE ROADWAY CANE BE CONSIDERED FOR CITY ACCEPTANCE AND ALL LOT PINS AND PINS FOR EASEMENTS ON LOTS BE SET BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED FOR SAID LOT. A LETTER FROM A NH LICENSED LAND SURVEYOR STATING PINS/MONUMENTS HAVE BEEN SET MUST BE SUBMITTED TO THE PLANNING DEPARTMENT ON A LOT BY LOT BASIS, AND A CERTIFICATE OF OCCUPANCY (CO) WILL NOT BE ISSUED FOR THE LOT REQUESTING A CERTIFICATE OF OCCUPANCY WITHOUT THIS LETTER; A SIMILAR LETTER IS REQUIRED BEFORE ASKING FOR STREET ACCEPTANCE AND/OR CLOSE–OUT OF PROJECT/SURETY.
12. THERE IS A 50 FOOT BUFFER REQUIREMENT FROM WETLANDS UNDER THE CITY OF ROCHESTER ZONING ORDINANCE AS SHOWN ON THIS PLAN SET. THERE MAY BE NO ENCROACHMENT WITHIN THESE BUFFERS EXCEPT AS PERMITTED UNDER THE ORDINANCE.
13. THE ROAD, UTILITIES AND DRAINAGE MUST BE PRIVATELY MAINTAINED UNLESS THE CITY ACCEPTS THE STREET.
14. SMALL INFORMATIONAL SIGNS TO BE INSTALLED AT THE INFILTRATION PONDS; SIGNS SHALL STATE THAT THESE ARE STORMWATER MANAGEMENT AREAS AND ARE TO BE MAINTAINED BUT NOT ALTERED, AND SHALL BE OFF–LIMITS.

NOTES (CONTINUE):

15. PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST: A) CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS; AND B) STREET ACCEPTANCE SIGNS WITH THE FOLLOWING LANGUAGE AT ALL ENTRY POINTS TO THE SUBDIVISION: "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 ORDER OF PLANNING BOARD)". THE LOCATION AND DESIGN OF THE SIGNS SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL THEY BE LESS THAN 2'X4'. THE SIGNS SHALL BE ERECTED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.
16. AN ORANGE CONSTRUCTION FENCE MUST BE PLACED AT THE WETLAND BUFFER ON ALL LOTS THAT INCLUDES WETLAND BUFFERS PRIOR TO START OF CONSTRUCTION FOR ALL LOTS THAT CONTAIN WETLAND BUFFERS.
17. BUFFER MARKERS MUST BE INSTALLED ALONG THE OUTER EDGE OF THE WETLAND BUFFER ON ALL LOTS THAT CONTAIN A WETLAND BUFFER. THE MARKER MUST BE INSTALLED AT THE TIME THAT THE ORANGE CONSTRUCTION FENCE IS REMOVED. THE MARKER MUST BE IN PLACE IN ORDER FOR THE CERTIFICATE OF OCCUPANCY FOR THAT LOT TO BE ISSUED. THE BUFFER MARKERS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.
18. ALL PROPOSED DRIVEWAYS SHALL BE PLACED IN A LOCATION THAT WILL PROVIDE THE REQUIRED STOPPING SIGHT DISTANCE FOR THE POSTED SPEED LIMIT AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
19. THERE WERE NO VERNAL POOLS WITHIN THE PROPOSED SUBDIVISION LOTS.
20. ALL UTILITIES MUST BE UNDERGROUND.
21. ALL LOTS SHALL HAVE INDIVIDUAL SEPTIC TANK WITH PUMP CHAMBER AND AN EFFLUENT PUMP THAT WILL TIE INTO THE FORCE MAIN LOCATED WITHIN THE PROPOSED RIGHT–OF–WAY. THE COST OF INSTALLATION AND MAINTENANCE OF THE SEPTIC TANK AND EFFLUENT PUMPS WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS.
22. NO STRUCTURES OR SANITARY SEWERAGE INFRASTRUCTURE ARE ALLOWED WITHIN THE DRAINAGE EASEMENTS.
23. DEEDS TO THIRD PARTY PURCHASERS OF RESIDENTIAL LOTS SHALL EXPRESS INTENT THAT LOTS EXCLUDE FEE OWNERSHIP OF ABUTTING ROADWAY LAND (LOT 10–18) TO CENTER LINE TO PRESERVE DEVELOPERS' CONVEYANCE OF FEE TO CITY UPON STREET ACCEPTANCE, OR TO HOMEOWNERS' ASSOCIATION IN ABSENCE OF CITY ACCEPTANCE.
24. PRIOR TO DEDICATION OF THE STREETS TO THE CITY THERE SHALL BE AT LEAST ONE STREET TREE (DECIDUOUS SHADE TREES) ON THE FRONT PROPERTY LINE OF EACH LOT. 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. ONE OF THE FOLLOWING SPECIES MUST BE USED UNLESS OTHERWISE APPROVED BY THE PLANNING DEPARTMENT: MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHALL SEEDLESS ASH, EUROPEAN HORNBEAM, CALLERY PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA.
25. ALL LOTS WILL BE SUBJECT TO IMPACT FEES TO BE DETERMINED AT THE ISSUANCE OF A BUILDING PERMIT.
26. LOT 10–8 IS SUBJECT TO A CONSERVATION EASEMENT WHICH PROHIBITS CONSTRUCTION OF STRUCTURES OR IMPROVEMENTS, REMOVAL OF VEGETATION EXCEPT FOR DEAD, DISEASED, OR INVASIVE SPECIES; AND SHALL MAINTAIN SIGNAGE AROUND THE PERIMETER OF THE EASEMENT AREA IDENTIFYING IS AS A WILDLIFE CONSERVATION AREA.

SUBDIVISION APPROVAL:
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUBDIVISION PLAN, THE SUBDIVISION APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS, AND SPECIFICATIONS OF THE CITY OF ROCHESTER LAND SUBDIVISION REGULATIONS, AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED IN ANY PARTICULAR, BELOW. NON– ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FROM SUBDIVISION APPROVAL.

FINAL APPROVAL BY ROCHESTER PLANNING BOARD

CERTIFIED BY: ______________ DATE: __________

TAX MAP 110 – LOT 10–00,
LOTS 10–2 THRU 10–17
OWNER OF RECORD:
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123–4948
BK 3434, PG 903

SUBDIVISION PLAN
TAX MAP 110
LOTS 10–2 THRU 10–17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:

GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FEET

(SHEET 2 OF 3 FOR RECORDING) S–2

FILE NO. 166
PLAN NO. C–3043
DWG. NO. 19138/S–1
F.B. NO. "33" "CEK"

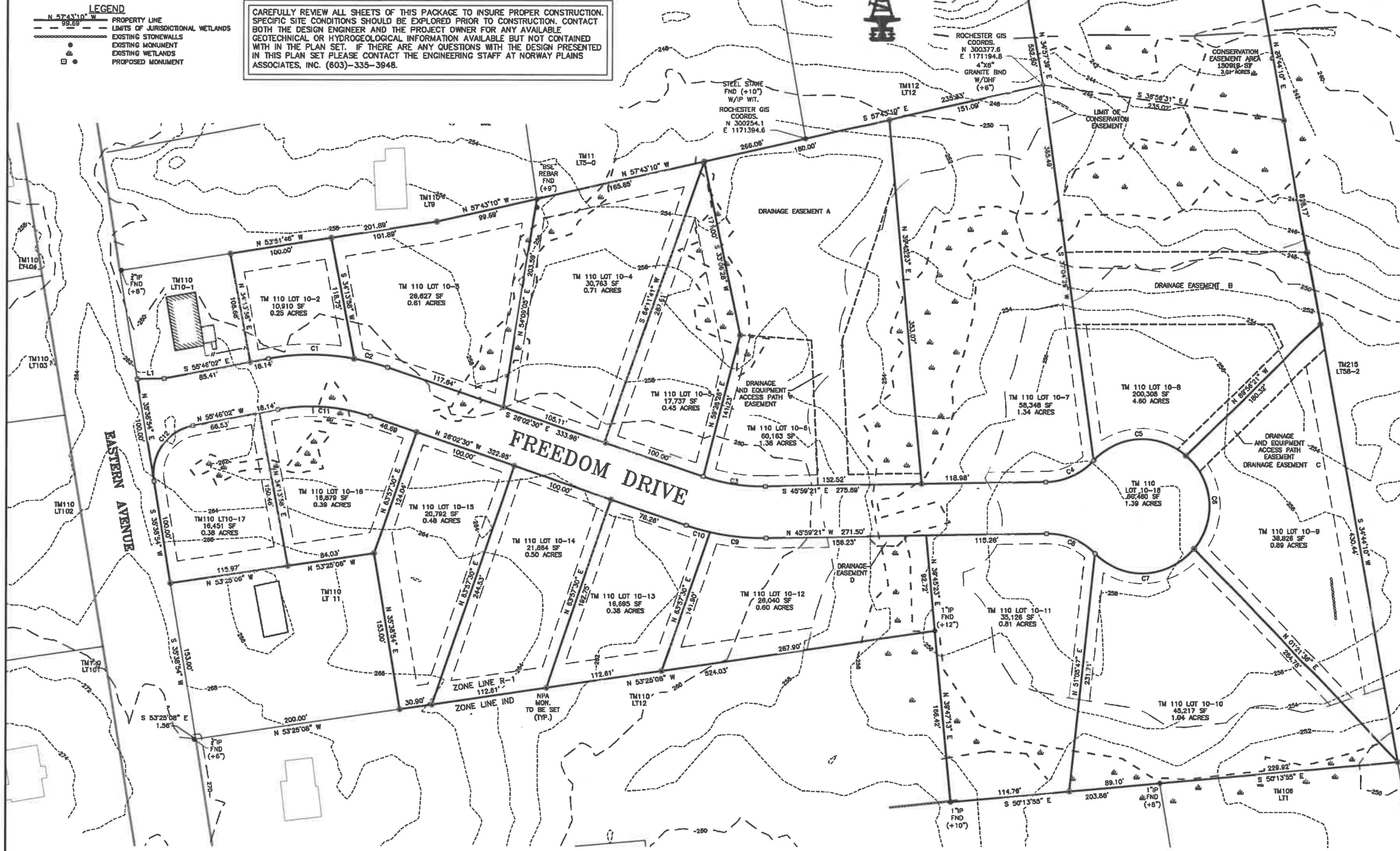
31 MOONEY STREET, ALTON, N.H. 603–875–3948 — NORWAY PLAINS ASSOCIATES, INC. — 2 CONTINENTAL BLVD., ROCHESTER, N.H. 603–335–3948

LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

- N 57°43'10" W / 99.69' — PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- EXISTING STONEWALLS
- EXISTING MONUMENT
- EXISTING WETLANDS
- PROPOSED MONUMENT

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 PROPERTY OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN 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.



NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCELS INTO 16 RESIDENTIAL LOTS.
2. TOTAL PARCEL AREA:
   MAP 110, LOTS 10-2 THRU 10-17 (HOUSE LOTS), LOT 10-18 (ROAD RIGHT OF WAY)
   TOTAL AREA= 16.19 ACRES.
3. PARCELS ARE ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS: (R-1 WITH CITY WATER & SEWER)
   LOT SIZE = 10,000 SF
   FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
8. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338.
9. STATE OF NEW HAMPSHIRE PERMIT NUMBERS;
   WETLANDS AND NON-SITE SPECIFIC PERMIT: 2020-02289
   WASTEWATER CONNECTION PERMIT: D2020-0808
   ALTERATION OF TERRAIN PERMIT: AOT-1950
10. ALL CONSTRUCTION MUST BE OUTSIDE THE 50 FOOT WETLANDS BUFFER, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
11. ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS AND THE RIGHT OF WAY POINT CURVATURE AND POINT TANGENT SHALL BE MARKED WITH GRANITE BOUNDS. THESE SHALL BE SET PRIOR BEFORE THE ROADWAY CANE BE CONSIDERED FOR CITY ACCEPTANCE AND ALL LOT PINS AND PINS FOR EASEMENTS ON LOTS BE SET BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED FOR SAID LOT. A LETTER FROM A NH LICENSED LAND SURVEYOR STATING PINS/MONUMENTS HAVE BEEN SET MUST BE SUBMITTED TO THE PLANNING DEPARTMENT ON A LOT BY LOT BASIS, AND A CERTIFICATE OF OCCUPANCY (CO) WILL NOT BE ISSUED FOR THE LOT REQUESTING A CERTIFICATE OF OCCUPANCY WITHOUT THIS LETTER; A SIMILAR LETTER IS REQUIRED BEFORE ASKING FOR STREET ACCEPTANCE AND/OR CLOSE-OUT OF PROJECT/SURETY.
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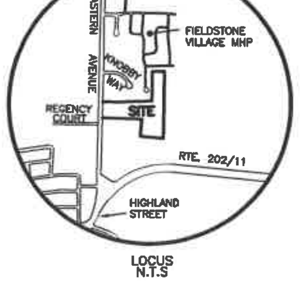
13. THE ROAD, UTILITIES AND DRAINAGE MUST BE PRIVATELY MAINTAINED UNLESS THE CITY ACCEPTS THE STREET.
14. SMALL INFORMATIONAL SIGNS TO BE INSTALLED AT THE INFILTRATION PONDS; SIGNS SHALL STATE THAT THESE ARE STORMWATER MANAGEMENT AREAS AND ARE TO BE MAINTAINED BUT NOT ALTERED, AND SHALL BE OFF-LIMITS.
15. PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST: A) CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS; AND B) STREET ACCEPTANCE SIGNS WITH THE FOLLOWING LANGUAGE AT ALL ENTRY POINTS TO THE SUBDIVISION: "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 ORDER OF PLANNING BOARD)". THE LOCATION AND DESIGN OF THE SIGNS SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL THEY BE LESS THAN 2'X4'. THE SIGNS SHALL BE ERECTED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.
16. AN ORANGE CONSTRUCTION FENCE MUST BE PLACED AT THE WETLAND BUFFER ON ALL LOTS THAT INCLUDES WETLAND BUFFERS PRIOR TO START OF CONSTRUCTION FOR ALL LOTS THAT CONTAIN WETLAND BUFFERS.
17. BUFFER MARKERS MUST BE INSTALLED ALONG THE OUTER EDGE OF THE WETLAND BUFFER ON ALL LOTS THAT CONTAIN A WETLAND BUFFER. THE MARKER MUST BE INSTALLED AT THE TIME THAT THE ORANGE CONSTRUCTION FENCE IS REMOVED. THE MARKER MUST BE IN PLACE IN ORDER FOR THE CERTIFICATE OF OCCUPANCY FOR THAT LOT TO BE ISSUED. THE BUFFER MARKERS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.
18. ALL PROPOSED DRIVEWAYS SHALL BE PLACED IN A LOCATION THAT WILL PROVIDE THE REQUIRED STOPPING SIGHT DISTANCE FOR THE POSTED SPEED LIMIT AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
19. THERE WERE NO VERNAL POOLS WITHIN THE PROPOSED SUBDIVISION LOTS.
20. ALL UTILITIES MUST BE UNDERGROUND.
21. ALL LOTS SHALL HAVE INDIVIDUAL SEPTIC TANK WITH PUMP CHAMBER AND AN EFFLUENT PUMP THAT WILL TIE INTO THE FORCE MAIN LOCATED WITHIN THE PROPOSED RIGHT-OF-WAY. THE COST OF INSTALLATION AND MAINTENANCE OF THE SEPTIC TANK AND EFFLUENT PUMPS WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS.
22. NO STRUCTURES OR SANITARY SEWERAGE INFRASTRUCTURE ARE ALLOWED WITHIN THE DRAINAGE EASEMENTS.
23. DEEDS TO THIRD PARTY PURCHASERS OF RESIDENTIAL LOTS SHALL EXPRESS INTENT THAT LOTS EXCLUDE FEE OWNERSHIP OF ABUTTING ROADWAY LAND (LOT 10-18) TO CENTER LINE TO PRESERVE DEVELOPERS' CONVEYANCE OF FEE TO CITY UPON STREET ACCEPTANCE, OR TO HOMEOWNERS' ASSOCIATION IN ABSENCE OF CITY ACCEPTANCE.
24. PRIOR TO DEDICATION OF THE STREETS TO THE CITY THERE SHALL BE AT LEAST ONE STREET TREE (DECIDUOUS SHADE TREES) ON THE FRONT PROPERTY LINE OF EACH LOT. 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. ONE OF THE FOLLOWING SPECIES MUST BE USED UNLESS OTHERWISE APPROVED BY THE PLANNING DEPARTMENT: MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHALL SEEDLESS ASH, EUROPEAN HORNBEAM, CALLERY PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA.
25. ALL LOTS WILL BE SUBJECT TO IMPACT FEES TO BE DETERMINED AT THE ISSUANCE OF A BUILDING PERMIT.



LOCUS
N.T.S

LINE	BEARING	DISTANCE
L1	N 46°20'38" W	25.87'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	83.72'	225.00'	21°19'11"	N 45°06'26" W	83.24'
C2	33.01'	225.00'	8°24'21"	N 30°14'41" W	32.98'
C3	52.22'	150.00'	19°56'50"	S 36°00'56" E	51.96'
C4	52.40'	65.00'	46°11'13"	S 69°04'57" E	50.99'
C5	100.01'	65.00'	88°09'09"	N 48°05'59" W	90.43'
C6	100.01'	65.00'	88°09'09"	N 40°03'10" E	90.43'
C7	108.99'	65.00'	96°04'06"	N 47°50'12" W	96.66'
C8	52.40'	65.00'	46°11'13"	S 22°53'44" E	50.99'
C9	78.33'	225.00'	19°56'50"	N 36°00'55" W	77.94'
C10	19.37'	200.00'	5°32'59"	N 28°49'00" W	19.36'
C11	90.79'	175.00'	29°43'31"	N 40°54'16" W	89.78'
C12	72.50'	46.89'	88°35'04"	S 79°56'26" W	65.49'

TAX MAP 110 – LOT 10-00,
LOTS 10-2 THRU 10-17
OWNER OF RECORD:
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

TOPOGRAPGHIC PLAN
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 INCH = 50 FEET

SUBDIVISION APPROVAL:
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUBDIVISION PLAN, THE SUBDIVISION APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS, AND SPECIFICATIONS OF THE CITY OF ROCHESTER LAND SUBDIVISION REGULATIONS, AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED IN ANY PARTICULAR, BELOW. NON- ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FROM SUBDIVISION APPROVAL.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: ______________ DATE: ________

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

REFERENCE PLANS:

1. "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 – LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." DATED NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. AND RECORDED AT STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 87-76.

S-4

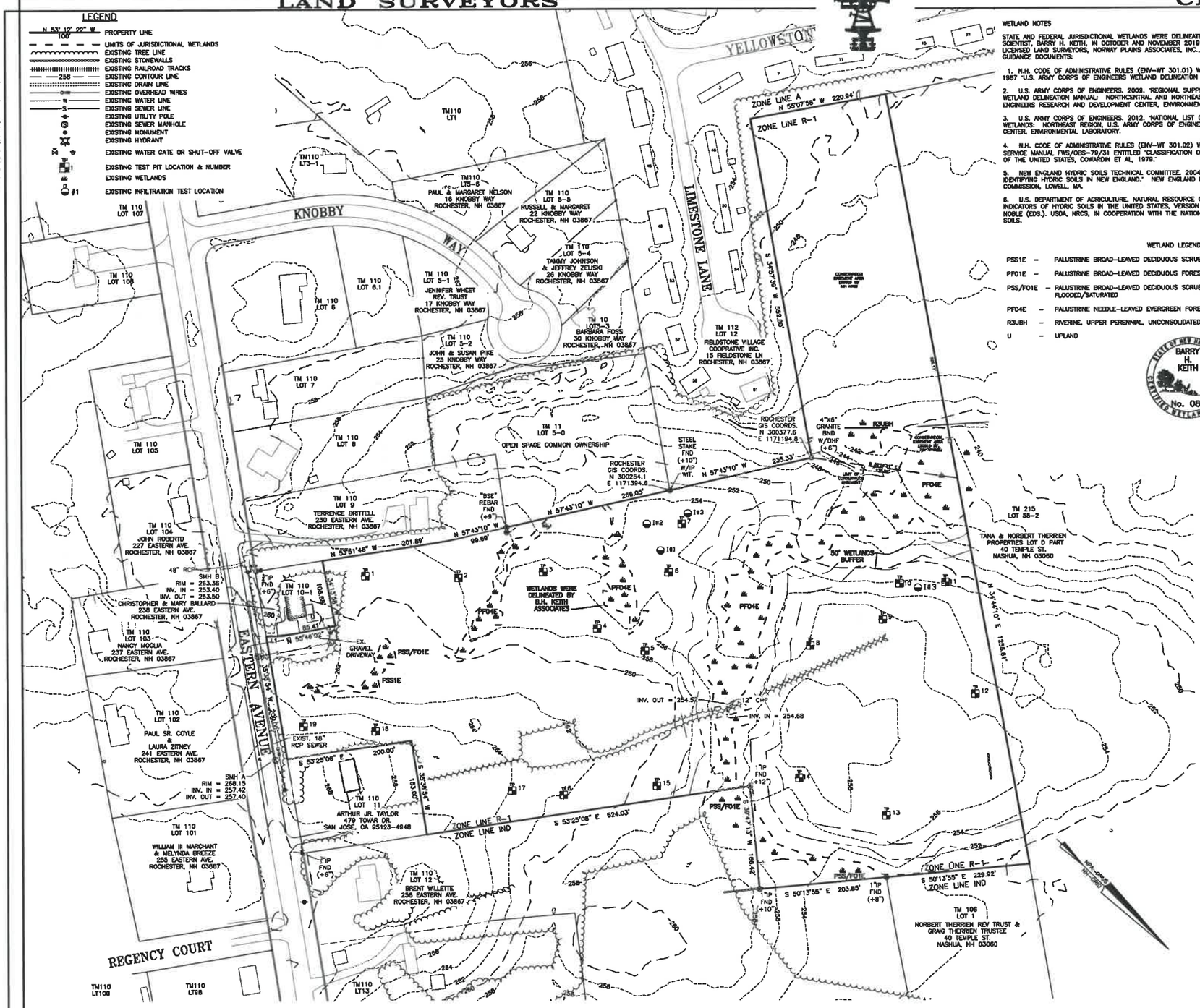
LAND SURVEYORS

CIVIL ENGINEERS

Drawing Location: N:\2019\19136\DWGS\19136 S-1.dwg
Thu, 30 Sep 2021 - 7:09am

LEGEND

- N 53° 17' 22" W 100' — PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- 258 — EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- OHW — EXISTING OVERHEAD WIRES
- W — EXISTING WATER LINE
- S — EXISTING SEWER LINE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING MONUMENT
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- TP — EXISTING TEST PIT LOCATION & NUMBER
- EXISTING WETLANDS
- #1 — EXISTING INFILTRATION TEST LOCATION



WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN OCTOBER AND NOVEMBER 2019. 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. 2009. "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL 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, COWARDIN 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.

WETLAND LEGEND

PSS1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED
PFO1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
PSS/FO1E	–	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/FORESTED, SEASONALLY FLOODED/SATURATED
PFO4E	–	PALUSTRINE NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED
R3UBH	–	RIVERINE, UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODED
U	–	UPLAND

STATE OF NEW HAMPSHIRE
BARRY H. KEITH
No. 087
CERTIFIED WETLAND SCIENTIST

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING SITE FEATURE ON THE SUBJECT PARCEL AND ABUTTING PARCELS.
2. TOTAL PARCEL AREA: MAP 110, LOT 10-0(OPEN SPACE) AND LOTS 10-2 THRU 10-17 (HOUSE LOTS) AND LOT 10-18 (ROAD RIGH-OF-WAY) = 17.16 ACRES OR 747,489.6 SQ.FT.
3. THE PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS:
   LOT SIZE = 10,000 SF
   FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10'. RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
8. ORIENTATION: HORIZONTAL DATUM IS NAVD83 AND VERTICAL DATUM IS NGVD29
9. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338.

SOIL NOTES:
SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY

A. THIS SITE-SPECIFIC SOIL MAP WAS COMPLETED IN MARCH 2020 BY DAVID J. ALLAIN, NH CERTIFIED SOIL SCIENTIST #13, ROUND POND SOIL SURVEY, 374 POND HILL ROAD, BARRINGTON NH 03825. "SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT", VERSION 5.0, DECEMBER 2017, SSSNNE SPECIAL PUBLICATION NO.3 WAS USED AS A REFERENCE AND GUIDE IN DEVELOPING THIS MAP. "THE DISTURBED SOIL MAPPING SUPPLEMENT FOR NEW HAMPSHIRE DES AOT SITE SPECIFIC SOIL MAPS", DECEMBER 2017 WAS ALSO CONSIDERED TO COMPLY WITH THE SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ 1500, ALTERATION OF TERRAIN (AOT) PROGRAM. THE SOILS WERE IDENTIFIED USING THE "NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND" PREPARED BY THE USDA NRCS, DURHAM NH, ISSUE #10, JANUARY 2011.

B. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR USE IN PLANNING AND CONSTRUCTING INFILTRATION STRUCTURES OR PRACTICES CONSISTENT WITH NHDES ALTERATION OF TERRAIN PROGRAM REQUIREMENTS PER ENV-WQ 1500 RULES. THIS MAP WAS PRODUCED BY A NH CERTIFIED SOIL SCIENTIST AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE.

SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY
SEE SHEET C-13 FOR TEST PIT DATA

LEGEND
HABITAT COVER TYPES

- WP – White Pine
- HEM – Eastern Hemlock
- H – Mixed Hardwood
- AF – Abandoned Field/Grassland
- SL – Shrubland

Size Class:
- 1 = Saplings — 1-3" Diameter Breast Height (DBH)
- 2 = Pole-Sized — 3+"-5" DBH
- 3 = Young Forest — 5"+ -12" DBH
- 4 = Mature Forest — 12"+ DBH

Density:
- A = Greater than 50%
- B = Less than 50%

Ex. H1A – Mixed Hardwood, Saplings, Greater than 50% Density

TAX MAP 110 – LOTS
10-0, 10-2 THRU 10-17
OWNER OF RECORD:
ARTHUR TAYLOR, LLC
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 1400, PG 649

EXISTING FEATURES PLAN
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

GRAPHIC SCALE
80 0 40 80 160 320
(IN FEET)
1 INCH = 80 FEET

E-1

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 WITH IN 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.

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19136/S-1
F.B. NO. "33" "CEK"

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

NORWAY PLAINS ASSOCIATES, INC.

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

Drawing Location: M:\2019\19138\DWGS\19138 S-1.dwg
Thu, 30 Sep 2021 – 7:06am

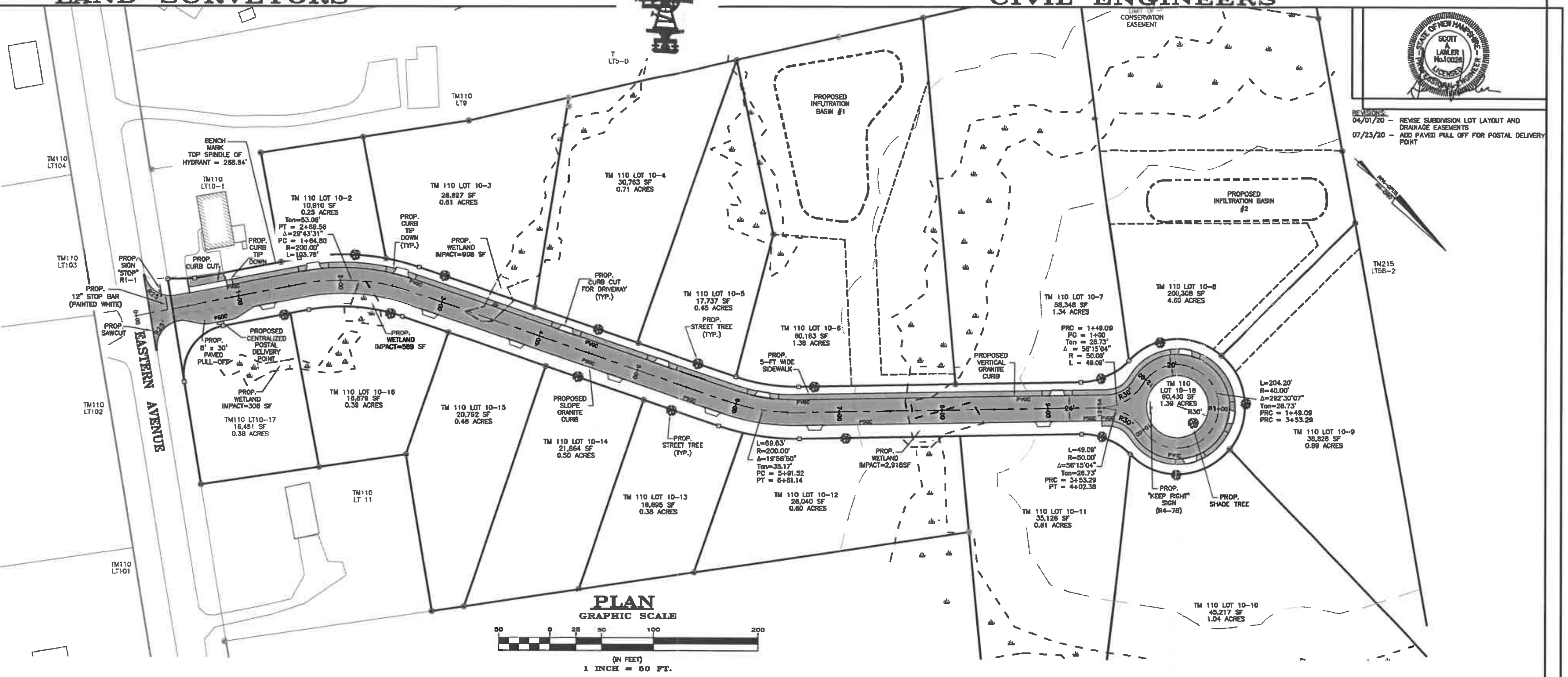
LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

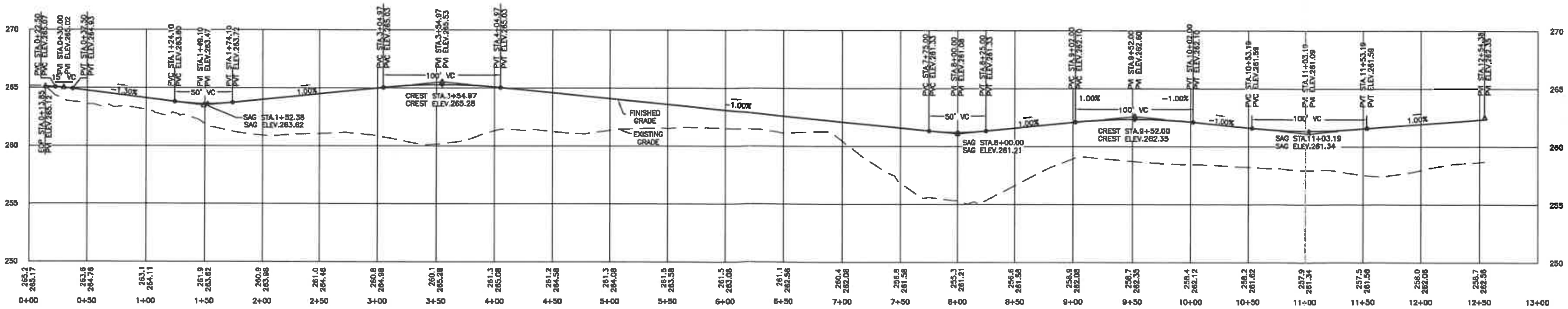
- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE

OVERALL CONSTRUCTION AND GENERAL NOTES:

1. ALL CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 6:00 P.M., MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 6:00 P.M. ON SATURDAY.
2. ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS OR APPROPRIATE MONUMENTATION AFTER THE CONSTRUCTION OF THE ROAD IS COMPLETE.
3. ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE SITE. 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.
4. 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.
5. THE SIGHT DISTANCE AT THE ENTRANCE TO THE SUBDIVISION WILL BE ADEQUATE. NO IMPEDIMENT IS CREATED BY THE ALIGNMENT OR GRADE OF FREEDOM DRIVE OR THE GRADE PROPOSED ENTRANCE.
6. THE INFILTRATION BASINS 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-3 AND C-9 OF THIS PLAN SET.
7. LOAM STOCKPILES SHALL BE SEEDED IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET C-12. 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.
8. DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
9. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF ANY OFF SITE IMPACTS ARE FOUND DURING CONSTRUCTION.
10. PRIOR TO ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST:
    - A.) CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORMED TRAFFIC CONTROL DEVICES STANDARDS.
    - B.) 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 YOU 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.
11. FOR MORE INFORMATION ABOUT THIS SUBDIVISION, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT; 31 WAKEFIELD STREET, ROCHESTER, 03867, (603) 335-1338.
12. 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) 330-7182 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
13. BUFFER MARKERS MUST BE INSTALLED ALONG THE OUTER EDGE OF THE WETLAND BUFFER ON ALL LOTS THAT CONTAIN A WETLAND BUFFER. THE MARKER MUST BE INSTALLED AT THE TIME THAT THE ORANGE CONSTRUCTION FENCE IS REMOVED. THE MARKER MUST BE IN PLACE IN ORDER FOR THE CERTIFICATE OF OCCUPANCY FOR THAT LOT TO BE ISSUED.
14. THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW – INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SUBDIVISION REGULATIONS – UNLESS OTHERWISE WAIVED."
15. ALL ROADWAY SIGNS SHALL BE INSTALLED AT THE DEVELOPER'S EXPENSE.



REVISIONS:
04/01/20 – REVISE SUBDIVISION LOT LAYOUT AND DRAINAGE EASEMENTS
07/23/20 – ADD PAVED PULL OFF FOR POSTAL DELIVERY POINT



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

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 WITH IN 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.

DIG SAFE
1-888-344-7233

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

ROAD PLAN AND PROFILE
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

C-1

31 Mooney Street, Alton, N.H. 603-875-3948 — NORWAY PLAINS ASSOCIATES, INC. — 2 Continental Blvd., Rochester, N.H. 603-335-3948

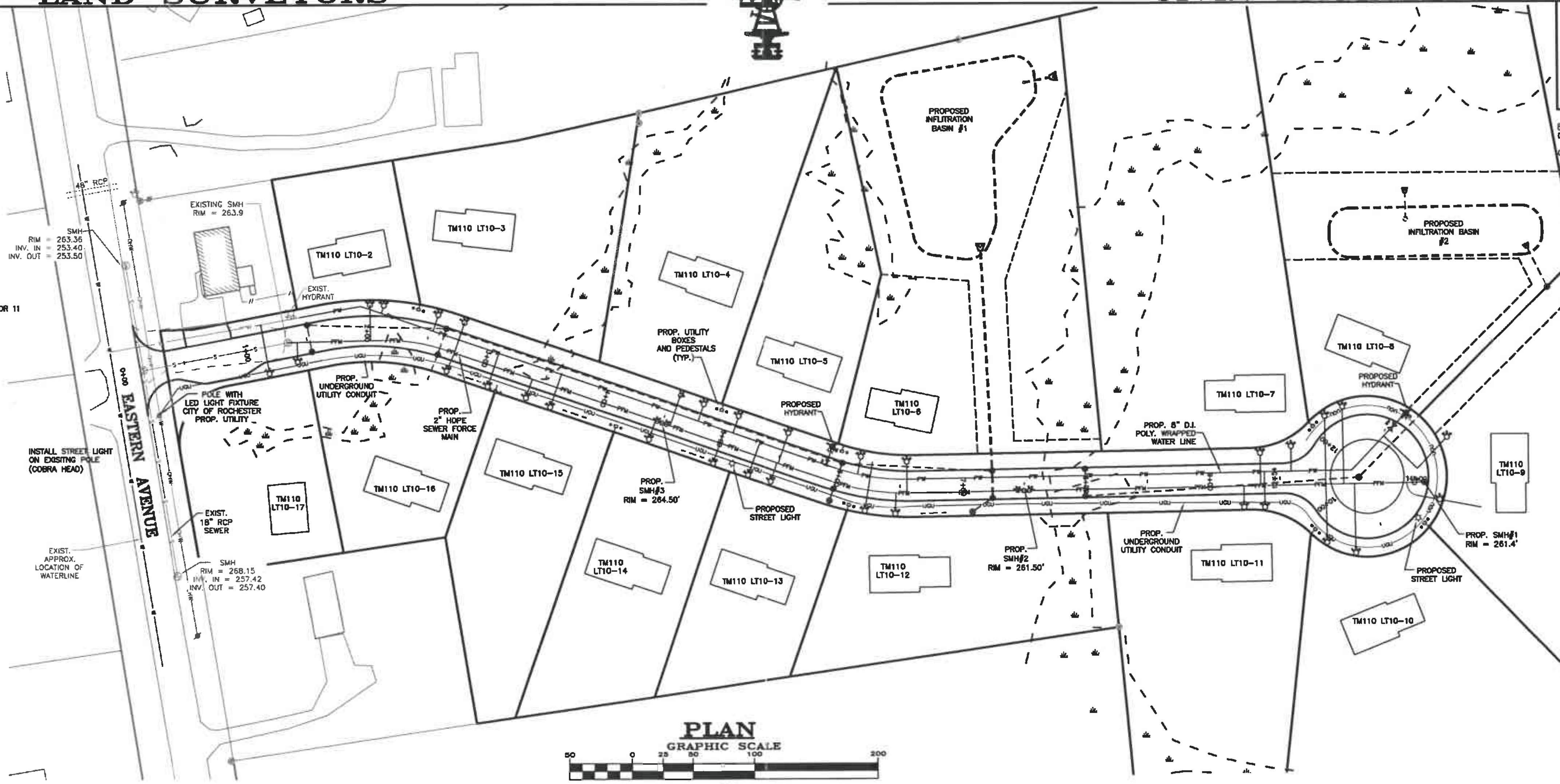
LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

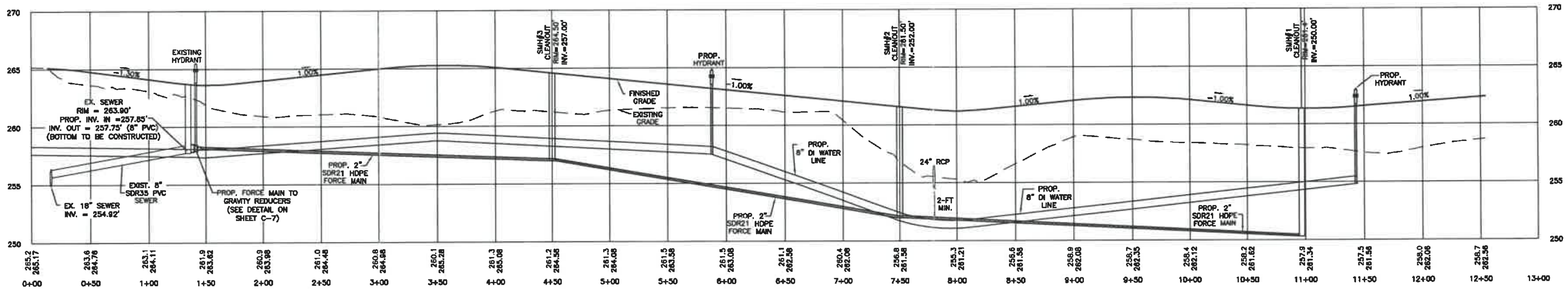
- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING OVERHEAD WIRES
- EXISTING WATER MAIN
- EXISTING GRAVITY SEWER MAIN
- EXISTING SEWER FORCE MAIN
- EXISTING UNDERGROUND ELECTRIC WIRES
- EXISTING UNDERGROUND UTILITY WIRES
- EXISTING GAS PIPE
- EXISTING DRAIN LINE
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED DRAIN LINE
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED SEWER FORCE MAIN PIPE HDPE SDR 11
- PROPOSED PROPANE GAS LINE
- PROPOSED UNDERGROUND UTILITY WIRES
- PROPOSED HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER SHUT-OFF VALVE
- PROPOSED SEWER SHUT-OFF VALVE
- PROPOSED UTILITY POLE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES

SCOTT A. LAWLER No.10026 — STATE OF NEW HAMPSHIRE — LICENSED PROFESSIONAL ENGINEER

REVISIONS:
04/01/20 – REVISE SUBDIVISION LOT LAYOUT AND DRAINAGE EASEMENTS
09/05/20 – REVISE LOCATION OF SMH#1 AND LAST HOUSE SERVICE LOCATION, REVISE SEWER PROFILE TO DEPICT FORCEMAIN TO GRAVITY CONNECTION. ADD NOTE #1 AND #6.



NOTES:
1) ORIENTATION: HORIZONTAL DATUM IS NAVD83 AND VERTICAL DATUM IS NGVD29.
2) CONSTRUCTION WILL CONFORM TO THE FOLLOWING UTILITIES STANDARDS AND SPECIFICATION:
   A) SANITARY SEWER DISPOSAL – NHDES
   B) ELECTRIC DISTRIBUTION – EVERSOURCE
   C) TELEPHONE – FAIRPOINT
   D) CABLE – ATLANTIC BROADBAND
   E) WATER – CITY OF ROCHESTER, STANDARDS
3) ALL PROPOSED ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
4) ALL WATER SHUT-OFF VALVES SHALL BE PAINTED BLUE AND STAMPED "WATER".
5) ALL SEWER SHUT-OFF VALVE SHALL BE PAINTED GREEN AND STAMPED "SEWER".
6) EXISTING SEWER MANHOLE WHERE PROPOSED FORCE MAIN CONNECTION SHALL BE TESTED IN ACCORDANCE WITH NHDES Env-Wq 704.17.



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

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 WITH IN 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.

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

UTILITY PLAN & PROFILE
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

C-2

31 Mooney Street, Alton, N.H. 603-875-3948 — NORWAY PLAINS ASSOCIATES, INC. — 2 Continental Blvd., Rochester, N.H. 603-335-3948

LAND SURVEYORS — CIVIL ENGINEERS

Drawing Location: M:\2019\19138\DWGS\19138 S-1.dwg
Thu, 30 Sep 2021 - 7:07am

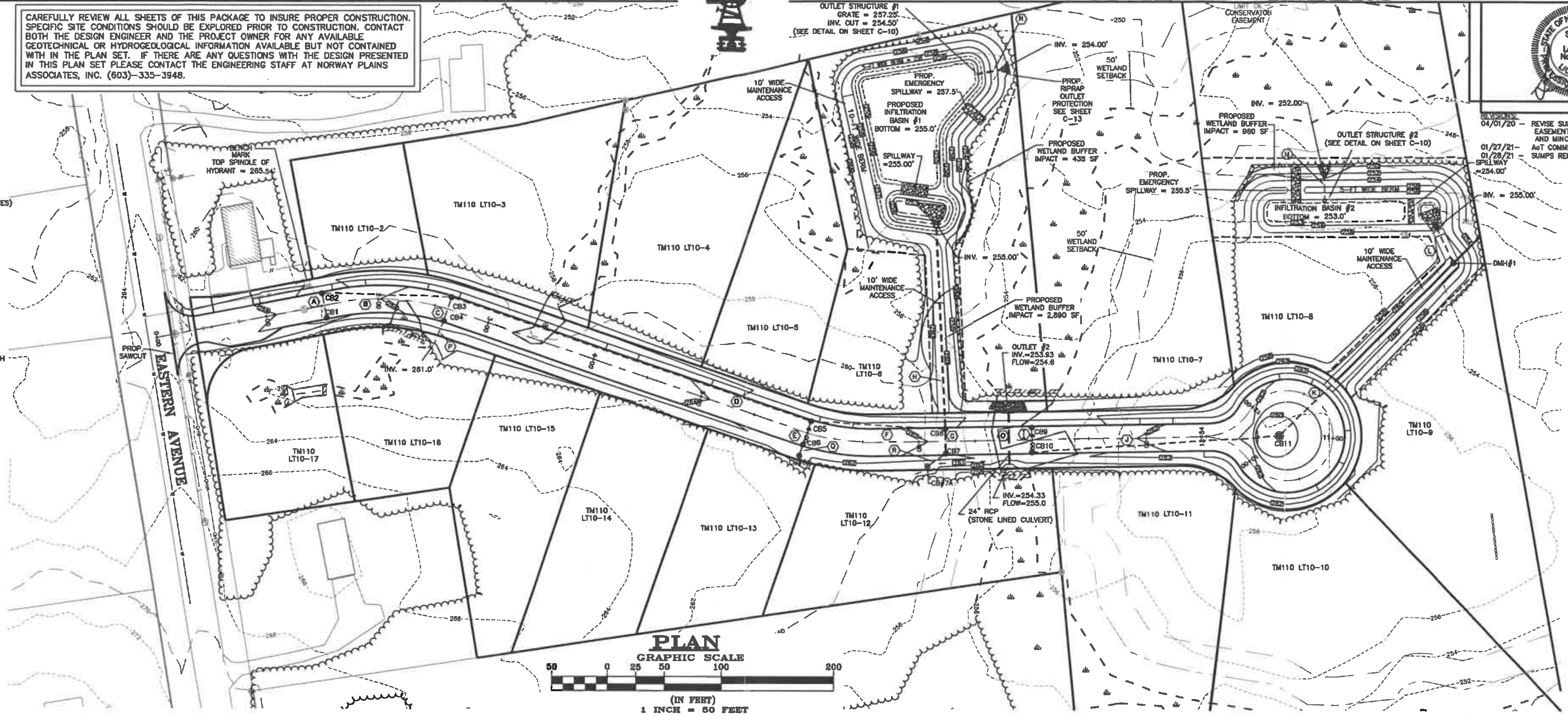
LEGEND

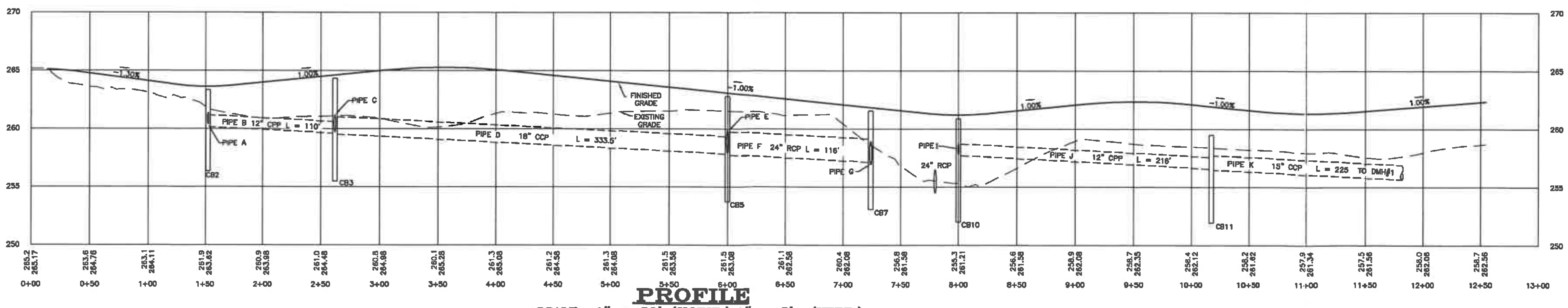
- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- 232 EXISTING CONTOUR LINE
- TP #8 EXISTING TEST PIT
- E234.1' EXISTING SPOT GRADE
- P234.25' PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- 232 PROPOSED CONTOUR LINE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- CPP CORRUGATED POLYETHINE PIPE
- RCP REINFORCE CONCRETE PIPE
- CB CATCH BASIN
- PSGC SLOPE GRANITE CURB
- PROPOSED OUTLET PROTECTION

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 WITH IN 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.

NOTES:

1. BASINS AND SWALE SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
2. TEMPORARY WATER DIVERSION (SWALE AND BASINS) MUST BE USED AS NECESSARY UNTIL AREA ARE STABILIZED.
3. NO DISTURBANCE OF INDIVIDUAL LOTS, EXCEPT AS SHOWN ON THIS PLAN, SHALL BE PERFORMED UNTIL AFTER THE CONSTRUCTION AND STABILIZATION OF ALL OTHER CONSTRUCTION ASSOCIATED WITH THE SUBDIVISION HAS BEEN COMPLETED.





PROFILE

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

PROPOSED DRAINAGE STRUCTURES

(1) CB#1 4'Ø
STA. 1+52.38 R
RIM = 263.35'
INV. = 260.35' TO CB#2
SUMP = 256.35'

(2) CB#2 4'Ø
STA. 1+52.38 L
RIM = 263.35'
INV. IN = 260.25' FROM CB#2
INV. OUT = 260.15' TO CB#3
SUMP = 256.15'

(3) CB#3 4'Ø
STA. 2+62.23 L
RIM=264.35'
INV. IN = 259.60' FROM CB#2
INV. IN = 259.70' FROM CB#4
INV. OUT = 259.50' TO CB#5
SUMP = 255.50'

(4) CB#4 4'Ø
STA. 2+62.23 R
RIM = 264.35'
INV. IN = 259.90' FROM PIPE P
INV. OUT = 259.80' TO CB#3
(WITH ELIMINATOR)
SUMP = 255.80'

(5) CB#5 4'Ø
STA. 6+00 L
RIM = 262.80'
INV. IN = 257.83' FROM CB#3
INV. IN = 257.91' FROM CB#6
INV. OUT = 257.73' TO CB#7
SUMP = 253.73'

(6) CB#6 4'Ø
STA. 6+00 R
RIM = 262.80'
INV. IN = 258.10' FROM CB#6A
INV. OUT = 258.00' TO CB#5
(WITH ELIMINATOR)
SUMP = 255.80'

(6A) CB#6A 4'Ø
RIM = 260.20' (BEE HIVE GRATE)
INV. OUT = 258.15' TO CB#6
(WITH ELIMINATOR)
SUMP = 254.15'
L = 5' (PIPE Q) 18" CPP

(7) CB#7 4'Ø
STA. 7+24 R
RIM = 261.57'
INV. IN = 257.13' FROM CB#7A
INV. OUT = 257.03' TO CB#8
SUMP = 253.03'

(7A) CB#7A 4'Ø
RIM = 259.0' (BEE HIVE GRATE)
INV. OUT = 257.22' TO CB#7 ELIMINATOR
SUMP = 257.22'
L = 16' (PIPE R) 15" CPP

(8) CB#8 4'Ø
STA. 7+24 L
RIM = 261.57'
INV. IN = 257.13' FROM CB#5
INV. IN = 258.94' FROM CB#7
INV. OUT = 256.84' TO FOREBAY
(WITH ELIMINATOR)
SUMP = 252.84'

(9) CB#9 4'Ø
STA. 8+00 L
RIM = 260.90'
INV. OUT = 257.90' TO CB#10
SUMP = 253.90'

(10) CB#10 4'Ø
STA. 8+00 R
RIM = 260.90'
INV. IN = 257.80' FROM CB#9
INV. OUT = 257.70' TO CB#11
SUMP = 253.70'

(11) CB#11 4'Ø
LOW POINT IN CUL-DE-SAC
RIM = 259.50' (BEE HIVE GRATE)
INV. IN = 256.57' FROM CB#10
INV. OUT = 256.47' TO DMH#1
(WITH ELIMINATOR)
SUMP = 252.47'

(12) DMH#1 4'Ø
RIM = 260.00'
INV. IN = 255.30' FROM CB#10
INV. OUT = 255.20' TO FOREBAY

PROPOSED DRAINAGE PIPES

(A) PROP. PIPE A 12" RCP L =18.0'

(B) PROP. PIPE B 12" CPP L = 110.0'

(C) PROP. PIPE C 18" CPP L = 18.0'

(D) PROP. PIPE D 18" CPP L = 333.5'

(E) PROP. PIPE E 24" CPP L =18.0'

(F) PROP. PIPE F 24" RCP L = 116.0'

(G) PROP. PIPE G 24" CPP L = 18.0'

(H) PROP. PIPE H 24" CPP L = 176.0'

(I) PROP. PIPE I 12" RCP L =18.0'

(J) PROP. PIPE J 12" CPP L = 216.0'

(K) PROP. PIPE K 15" CPP L = 213.0'

(L) PROP. PIPE L 15" CPP L = 33'

(M) PROP. PIPE M 12" CPP L = 20.0' ANTI-SEEP COLLAR

(N) PROP. PIPE N 12" CPP L = 20.0' ANTI-SEEP COLLAR

(O) PROP. PIPE O 24" RCP L = 50.0'

(P) PROP. PIPE P 12" CPP L = 20.0'

(Q) PROP. PIPE Q 18" CPP L = 5.0'

(R) PROP. PIPE R 15" CPP L = 16.0'

DIG SAFE
1-888-344-7233 CALL TOLL FREE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

SCOTT A. LAWLER No.10026 LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE

REVISIONS:
04/01/20 - REVISE SUBDIVISION LOT LAYOUT, DRAINAGE EASEMENTS, MAINTENANCE ACCESS PATHS AND MINOR GRADING AROUND BASINS.
01/27/21- AoT COMMENTS
01/28/21 - SUMPS REMOVED

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

ROAD GRADING & DRAINAGE PLAN & PROFILE PHASE 1
TAX MAP 110
LOTS 10-2 THRU LOT 10-18
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

C-3A

31 Mooney Street, Alton, N.H. 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
2 Continental Blvd., Rochester, N.H. 603-335-3948

Drawing Location: M:\2019\19138\DWGS\19138 S-1.dwg
Thu, 30 Sep 2021 - 7:07am

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
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- CPP CORRUGATED POLYETHINE PIPE
- RCP REINFORCE CONCRETE PIPE
- CB CATCH BASIN
- PSGC SLOPE GRANITE CURB
- PROPOSED OUTLET PROTECTION
- PROPOSED HOUSE

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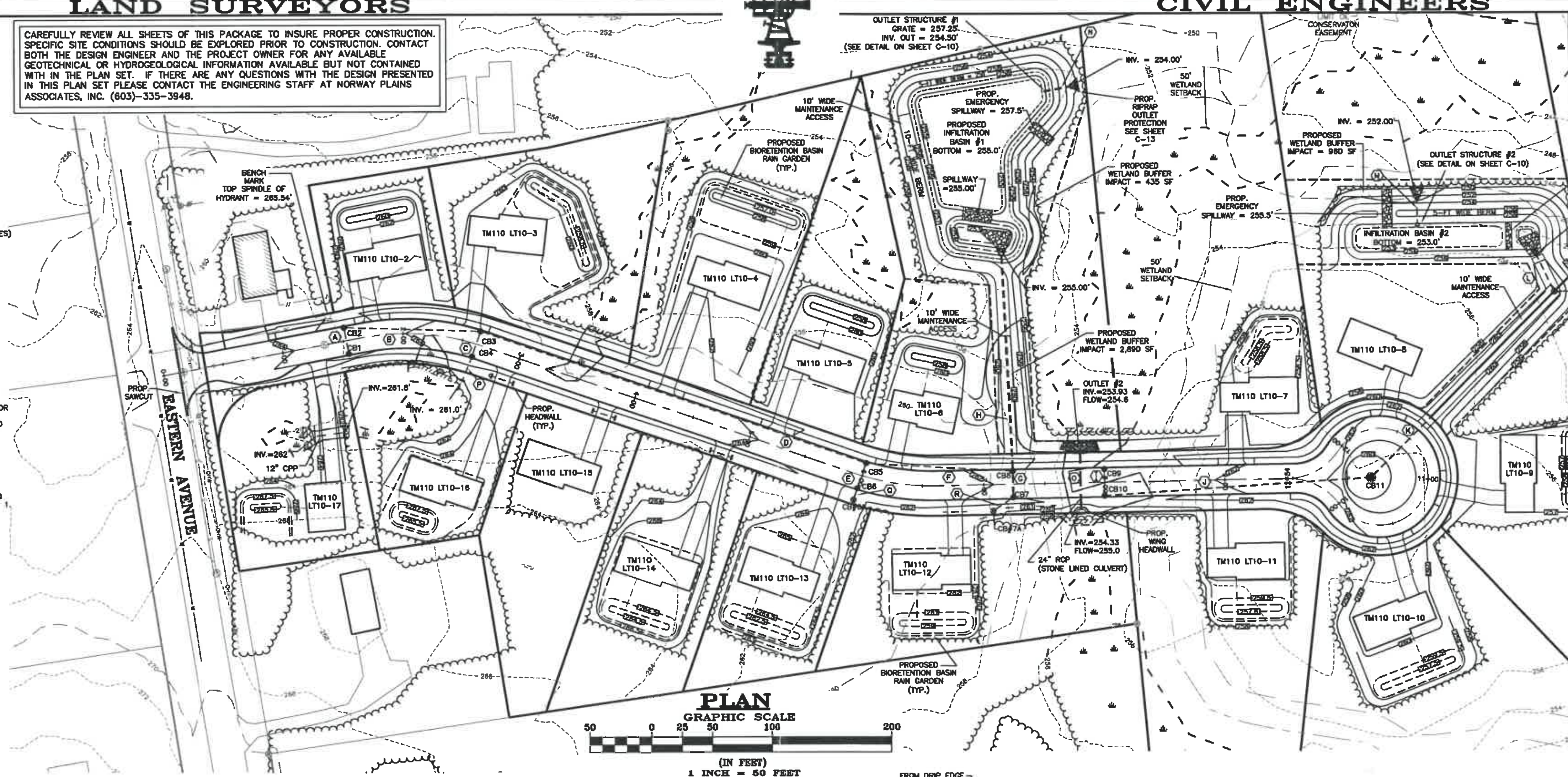
NOTES:

1. LOTS 10-2 THRU 10-7 AND LOTS 10-9 THRU 10-14 AND LOT 10-16 AND 10-17 HOUSES ROOF RUNOFF DIRECTED TO BIORETENTION BASIN BY GUTTER OR DRIP EDGE. SEE DETAIL SHEET FOR DRIP EDGE DETAIL.
2. WETLAND BUFFERS LINES BY SURVEY LOCATED AND MARKED WITH ORANGE SNOW FENCE PRIOR TO ANY ON SITE ACTIVITY.
3. THE INNER 25-FOOT WETLAND BUFFER SHALL BE POSTED WITH WETLAND CONSERVATION TAGS EVERY 100-FEET. TAGS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.
4. NO DISTURBANCE OF INDIVIDUAL LOTS, SHALL BE PERFORMED UNTIL AFTER THE CONSTRUCTION AND STABILIZATION OF ALL OTHER CONSTRUCTION ASSOCIATED WITH THE SUBDIVISION HAS BEEN COMPLETED IN PHASE 1.



PLAN

GRAPHIC SCALE

(IN FEET)

1 INCH = 50 FEET

REVISIONS:

01/27/21 - AoT COMMENTS

SCOTT A. LAWLER No.10026 — STATE OF NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER

PROPOSED RAIN GARDEN

LOT 10-2
BOTTOM = 260.0' AREA $_{min}$ = 251 sf
BERM = 262.0'

LOT 10-3
BOTTOM = 258.5' AREA $_{min}$ = 289 sf
BERM = 260.5'

LOT 10-4
BOTTOM = 257.0' AREA $_{min}$ = 369 sf
BERM = 259.0'

LOT 10-5
BOTTOM = 258.0' AREA $_{min}$ = 273 sf
BERM = 260.0'

LOT 10-6
BOTTOM = 258.0' AREA $_{min}$ = 178 sf
BERM = 260.0'

LOT 10-7
BOTTOM = 256.5' AREA $_{min}$ = 276 sf
BERM = 258.5'

LOT 10-9
BOTTOM = 255.5' AREA $_{min}$ = 280 sf
BERM = 257.5'

LOT 10-10
BOTTOM = 257.5' AREA $_{min}$ = 369 sf
BERM = 259.5'

LOT 10-11
BOTTOM = 257.6' AREA $_{min}$ = 275 sf
BERM = 259.5'

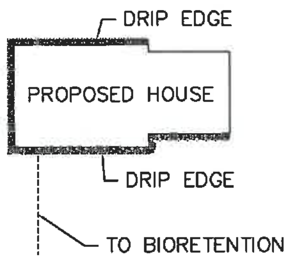
LOT 10-12
BOTTOM = 259.0' AREA $_{min}$ = 268 sf
BERM = 261.0'

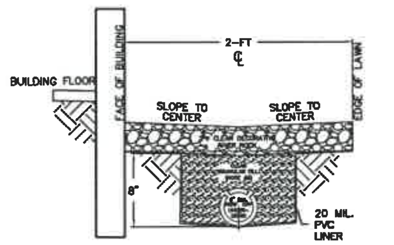
LOT 10-13
BOTTOM = 262.5' AREA $_{min}$ = 301 sf
BERM = 264.5'

LOT 10-14
BOTTOM = 264.5' AREA $_{min}$ = 254 sf
BERM = 266.5'

LOT 10-16
BOTTOM = 265.5' AREA $_{min}$ = 121 sf
BERM = 267.5'

LOT 10-17
BOTTOM = 265.5' AREA $_{min}$ = 121 sf
BERM = 267.5'



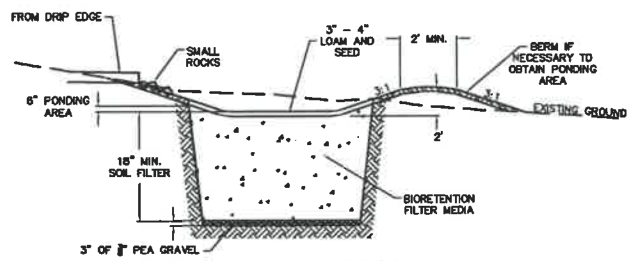


DRIP EDGE AND UNDERDRAIN DETAIL

NOT TO SCALE

NOTES:

1. THE DRIP EDGE SHALL BE 2 FT. WIDE, 3 INCHES THICK, 2 INCH DIAMETER SEPTIC STONE.
2. THE UNDERDRAIN SHALL BE 4 INCH DIAMETER PERFORATED CORRUGATED PLASTIC PIPE (ADS OR EQUAL). THE PERFORATED SIDE FACING UPWARD.
3. USE CLEAN 3/4" DRAIN STONE FOR THE MATERIAL SURROUNDING THE UNDERDRAIN.
4. A 20MIL PVC LINER SHALL BE INSTALL TO INSURE THERE IN NO INFILTRATION.
4. OUTLET TO RAIN GARDEN



CROSS SECTION

RAIN GARDEN DETAIL

NOT TO SCALE

VEGETATED RESIDENTIAL RAIN GARDEN CONSTRUCTION AND MAINTENANCE NOTES FOR LOTS 10-2 THR 10-7 AND LOTS 10-9 THRU 10-14 AND LOTS 10-16 AND 10-17:

1. RAIN GARDEN AREAS SHOULD BE LOCATED CLOSE TO THE SOURCE OF RUNOFF.
2. DO NOT PLACE RAIN GARDEN SYSTEMS INTO SERVICE UNTIL THE BASIN AND THE ADJACENT AREAS ARE FULLY ESTABLISHED.
3. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENTS EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION AS WARRANTED BY SUCH INSPECTION.
4. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
5. AT LEAST ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF THE RAIN GARDEN DOES NOT DRAIN WITHIN 72 HOUSE FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITIONS OF THE GARDEN TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.

BIORETENTION FILTER MEDIA			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL: SIEVE NO.	GRADATION OF MATERIAL: PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COURSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

DIG SAFE — 1-888-344-7233 CALL TOLL FREE — UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

LOT GRADING & DRAINAGE
PHASE II
TAX MAP 110
LOTS 10-2 THRU LOT 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

C-3B

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

31 Mooney Street, Alton, N.H. 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
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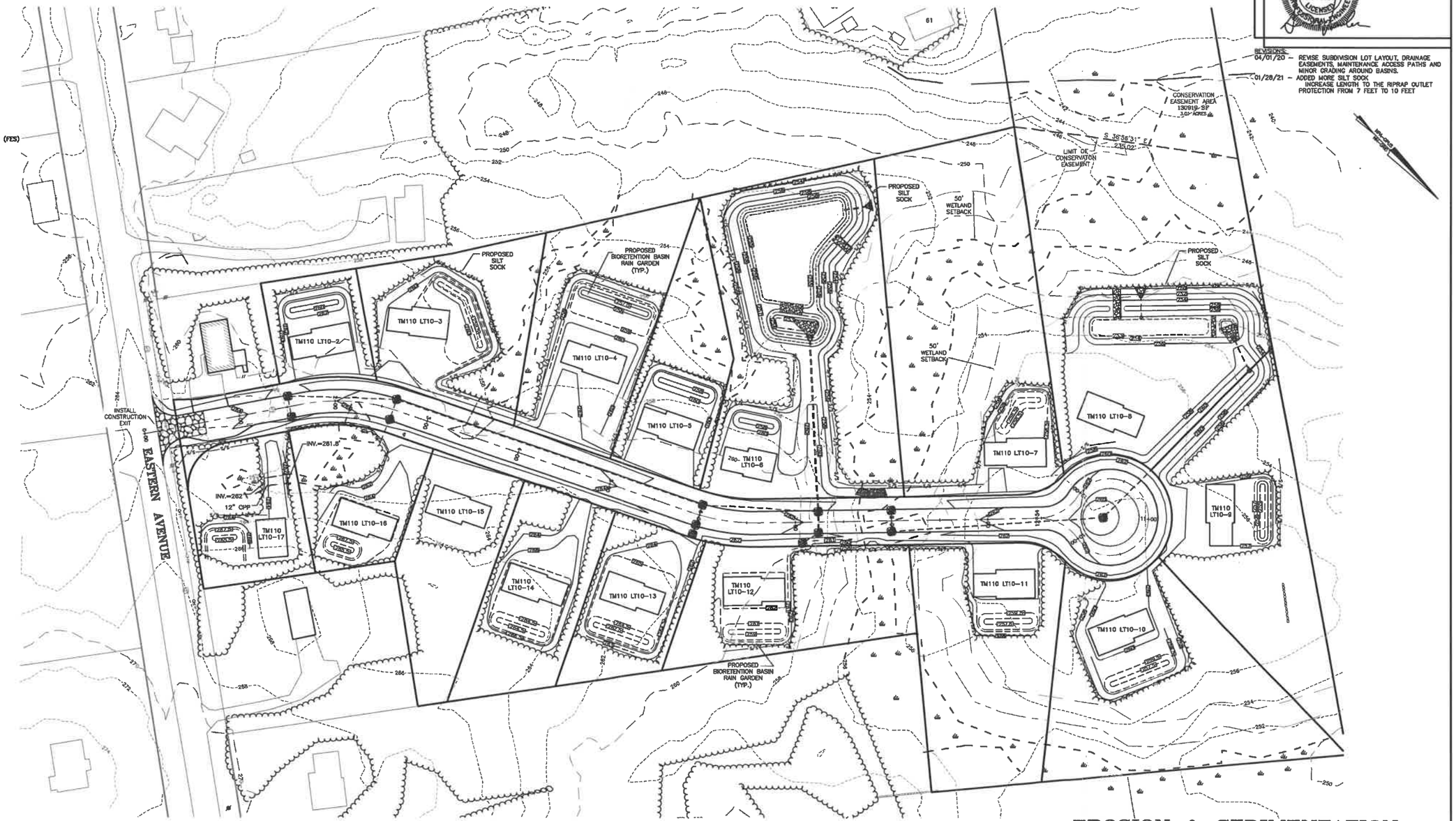
LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- 232 EXISTING CONTOUR LINE
- EXISTING CATCH BASIN
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- 234 PROPOSED CONTOUR LINE
- S/F PROPOSED SILTATION FENCE
- S/S PROPOSED SILTATION SOCK
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED FLARED END SECTION (FES)
- PROPOSED TEMPORARY CATCH BASIN FILTERS WITH BLOCK AND GRAVEL
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- PROPOSED TEMPORARY STONE CHECK DAMS



REVISIONS:
04/01/20 – REVISE SUBDIVISION LOT LAYOUT, DRAINAGE EASEMENTS, MAINTENANCE ACCESS PATHS AND MINOR GRADING AROUND BASINS.
01/28/21 – ADDED MORE SILT SOCK. INCREASE LENGTH TO THE RIPRAP OUTLET PROTECTION FROM 7 FEET TO 10 FEET

STATE OF NEW HAMPSHIRE
SCOTT A. LAWLER No. 10026
LICENSED PROFESSIONAL ENGINEER

DIG SAFE
1-888-344-7233 CALL TOLL FREE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

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EROSION & SEDIMENTATION CONTROL PLAN
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

GRAPHIC SCALE
50 0 25 50 100 200
1 INCH = 50 FEET

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

C-4

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

NORWAY PLAINS ASSOCIATES, INC.

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

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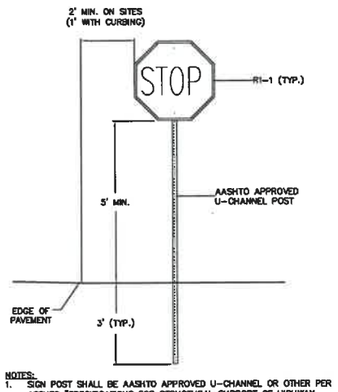
STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10028 — LICENSED — CIVIL ENGINEER

REVISIONS:
04/01/20 - REVISE SIGN, TYPICAL CROSS SECTION AND SIDEWALK DETAILS. ADD MAINTENANCE PATH AND TREE PLANTING DETAIL.

ITEM NO.	SIGN SIZE HEIGHT	SIGN SIZE WIDTH	TEXT	NO. SIGNS REQ'D
R1-1	30"	30"	STOP	1
R4-7b	30"	24"	KEEP RIGHT	1
W14-1	30"	30"	DEAD END	1
ROCHESTER STREET SIGN WITH REMOVABLE "PRIVATE" TOPPER	4" 9"	8" 24"	PRIVATE FREEDOM DRIVE	1 1
ROCHESTER SUBDIVISION SIGN	24"	48"	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 ORDER OF PLANNING BOARD)	1

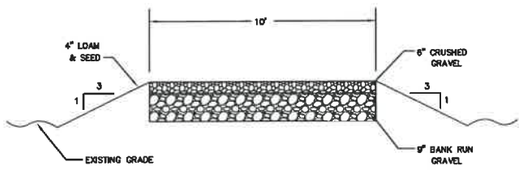
NOTES:
1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

SIGN SCHEDULE
NOT TO SCALE

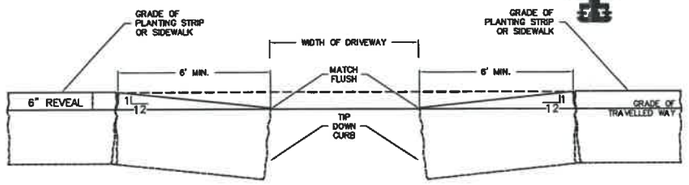


NOTES:
1. SIGN POST SHALL BE AASHTO APPROVED U-CHANNEL OR OTHER PER ASSHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINARIES AND SIGNALS", LATEST EDITION.
2. SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
3. SIGNS SHALL BE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

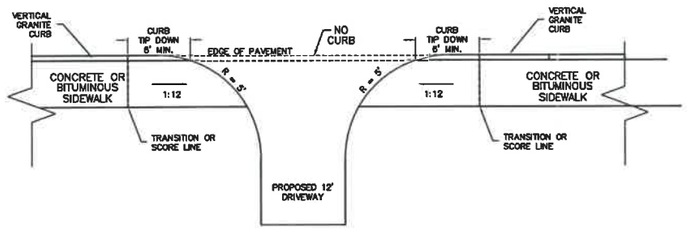
TYPICAL TRAFFIC SIGN
NOT TO SCALE



MAINTENANCE PATH CROSS-SECTION
NOT TO SCALE

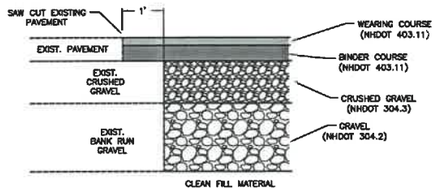


TIP-DOWN PROFILE



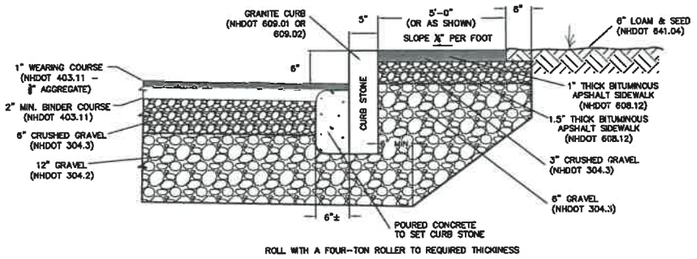
PLAN VIEW

CURB TIP-DOWN PLAN & PROFILE DETAIL
NOT TO SCALE

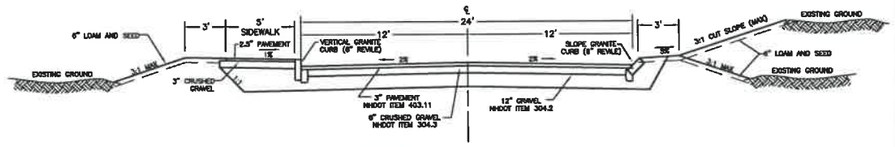


PAVEMENT SAWCUT NOTES:
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED.
2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
3. PLACE BINDER COURSE.
4. GRIND OR SAWCUT EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.

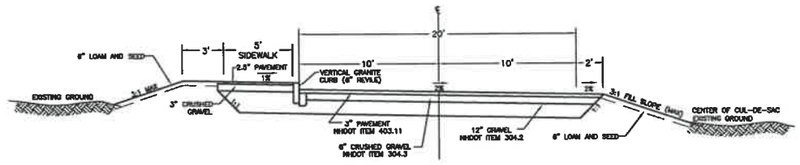
TYPICAL PAVEMENT SAWCUT DETAIL
NOT TO SCALE



PAVED SIDEWALK WITH GRANITE CURB DETAIL
NOT TO SCALE

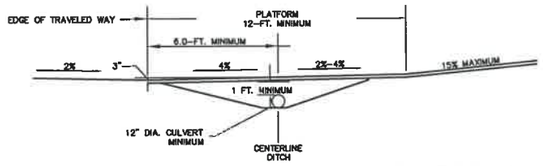


ROADWAY CROSS-SECTION
1" = 5'



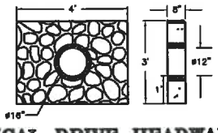
CUL-DE-SAC CROSS-SECTION
1" = 5'

PAVEMENT NOTES:
1. PLACE COMMON FILL IN 12 INCH LIFTS. COMPACT COMMON FILL TO 95% MAXIMUM PROCTOR DENSITY.
2. PLACE GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
3. PLACE CRUSHED GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
4. PAVEMENT MUST BE INSTALLED IN TWO COURSES, A BINDER COURSE AND A WEARING COURSE.

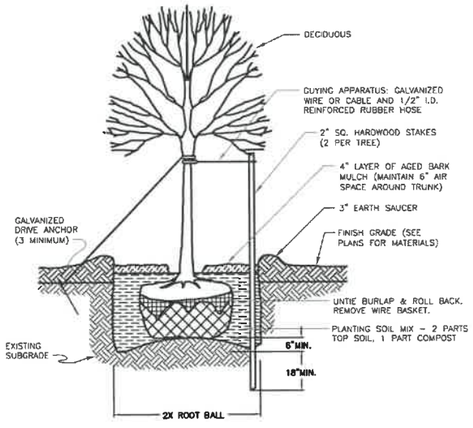


TYPICAL DRIVE IN CUT SECTION
NOT TO SCALE

DRIVEWAY NOTES:
1. THE OWNER OF THE LOT WILL BE RESPONIBLE FOR OBTAINING A DRIVEWAY PERMIT FROM ROCHESTER PUBLIC WORKS.
2. DRIVEWAY CULVERTS SHALL BE 12"ø MIN. AND SHALL EXTEND 5 FEET BEYOND BOTH SIDES OF THE DRIVEWAY UNLESS CONCRETE HEADWALLS ARE PROVIDED.
3. GRADES BEYOND PLATFORM SHALL NOT EXCEED 15% NOR SHALL THEY BE LESS THAN 0.5%.
4. THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADE CHANGES SHOULD NOT EXCEED 10%.
5. DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.
6. USE RUBBLE MASONRY OR PRECAST HEADWALLS OR SLOPE END SECTIONS ON CULVERT PIPES.



TYPICAL DRIVE HEADWALL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

ROADWAY DETAILS
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

C-5

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. '33' "CEK"

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

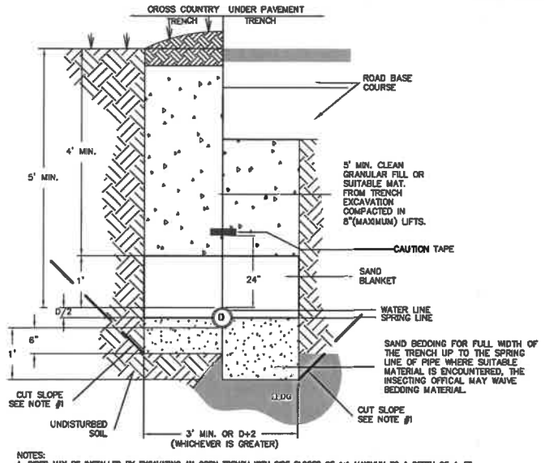
NORWAY PLAINS ASSOCIATES, INC.

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

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 WITH IN 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.

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10028 — LICENSED PROFESSIONAL ENGINEER

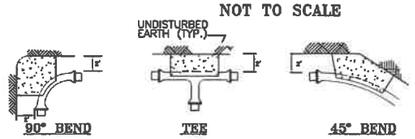
REVISIONS:
04/01/20 – REVISE HYDRANT DETAIL AND ADD SEWER WATER CROSSING DETAIL.



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.

WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE

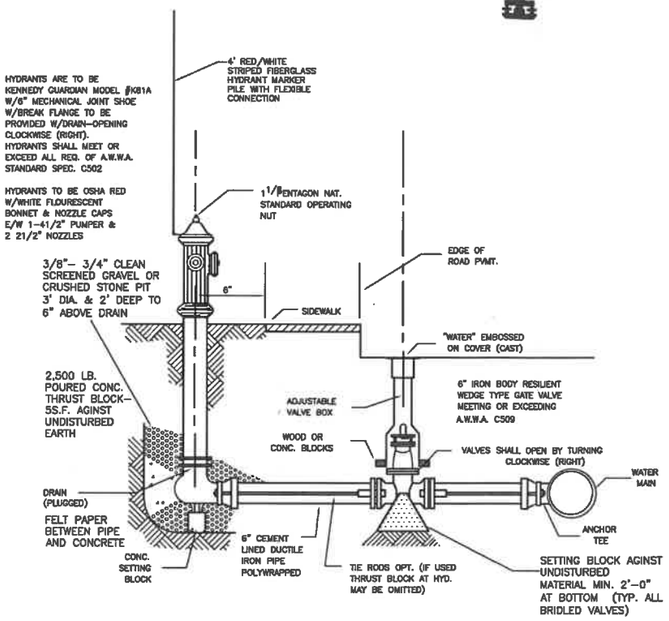


MINIMUM THRUST BLOCK BEARING AREA REQ'D AGAINST UNDISTURBED MATERIAL (SQ. FT.)					
PIPE SIZE	90 BEND	TEE	PLUG	45 BEND	22½° & 11¼° BEND
6"	5	4	3	2	2
8"	10	8	6	6	3
12"	24	18	8	12	8

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

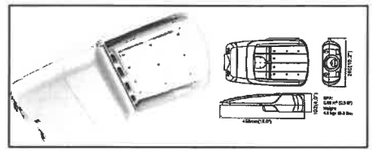
WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE



TYPICAL HYDRANT SECTION

NOT TO SCALE



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 MODLE S500-25W-30K-OCT-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.

GENERAL UTILITY NOTES

1.) CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888 344-7233) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
2.) ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND ELEVATIONS.
3.) 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.
4.) ANY UTILITY POLES THAT NEED TO BE RELOCATED SHALL BE COORDINATED WITH EVERSOURCE OR VERIZON, WHOM EVER HAS CONTROL OVER THEM.
5.) PROPOSED UTILITIES ARE TO BE UNDERGROUND. COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFORMER PADS WITH PSNH AND OTHER PERTINENT UTILITY COMPANIES.
6.) WATER AND SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10-FT APART HORIZONTALLY.
7.) 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.
8.) 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.
9.) 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).
10.) WORK TO CONNECT INTO THE WATER OR SEWER MAINS REQUIRES A PERMIT FROM THE ROCHESTER PUBLIC WORKS DEPARTMENT. CONTRACTORS ARE TO BE PRE-QUALIFIED.

DUCTILE IRON MECHANICAL RETRAINED LENGTH (FEET)																			
PIPE DIAMETER (INCHES)	BENDS																DEAD END		
	11 1/4°				22 1/2°				45°				90°						
	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	150 psi	200 psi
2"	0	0	1	1	0	1	1	1	1	1	2	3	2	4	5	7	4	8	12	17
6"	0	0	1	1	1	1	2	2	1	2	3	4	3	5	8	10	6	12	18	23
8"	0	1	1	1	1	1	2	3	1	3	4	6	3	7	10	13	8	15	23	31
10"	0	1	1	2	1	2	2	3	2	3	5	7	4	8	12	16	9	19	28	37
12"	0	1	1	2	1	2	3	4	2	4	5	8	5	9	14	19	11	22	33	44

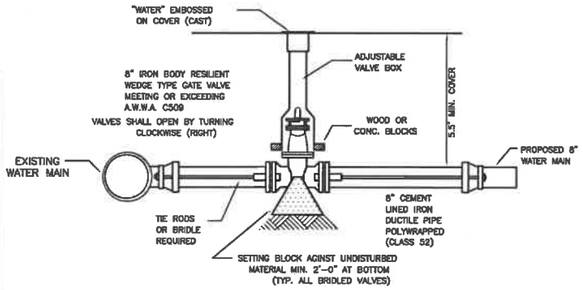
	TEE*								REDUCER							
	SAME SIZE				ONE SIZE SMALLER				ONE SIZE SMALLER				TWO SIZE SMALLER			
	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi
2"	1	1	1	1	1	1	1	1	1	3	4	5	–	–	–	–
6"	1	1	1	4	1	1	1	1	3	6	9	12	4	8	12	16
8"	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 (Lr) = 5 FEET

MECHANICAL RESTRAINED LENGTH SCHEDULE

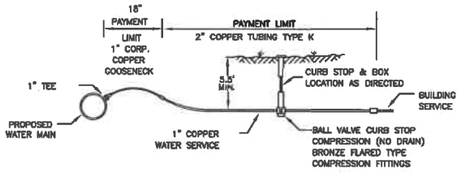
NOT TO SCALE

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.



WATER MAIN CONNECTION

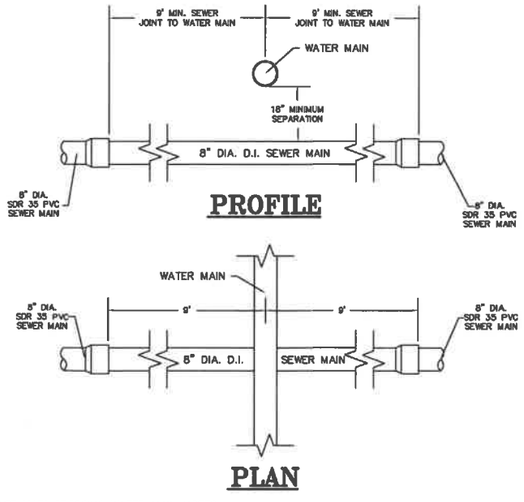
NOT TO SCALE



NOTE: SERVICE LINE SHALL BE TYPE K COPPER CONFORMING TO ASTM-B88

TYPICAL DOMESTIC SERVICE CONNECTION

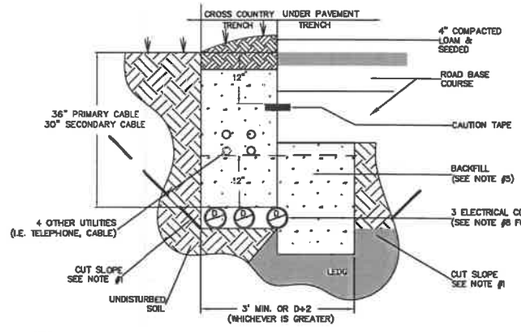
NOT TO SCALE



SEWER MAIN CROSSING WATER MAIN NOTES:
1. SEWER PIPE SHALL BE CLASS 52 DUCTILE IRON.
2. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 9-FT HORIZONTALLY FROM THE WATER MAIN.
3. SEWER PIPE JOINTS SHALL BE PRESSURE TESTED TO 25 POUNDS PER SQUARE INCH FOR GRAVITY SEWERS, AND AT 1-1/2 TIMES WORKING PRESSURE FOR FORCE MAINS.
4. VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL NOT BE LESS THAN 18 INCHES.

WATER MAIN/SEWER MAIN CROSSING DETAIL

NOT TO SCALE



NOTES:
1. ALL NON-METALLIC CONDUIT AND FITTINGS SHALL BE ELECTRICAL GRADE, SCHEDULE 40 PVC, AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEMA TC2-1990 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 A120 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 WITHIN 18" OF THE SURFACE 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 BONDING 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. NORMAL CONDUIT SIZES FOR PSNH ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY.
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

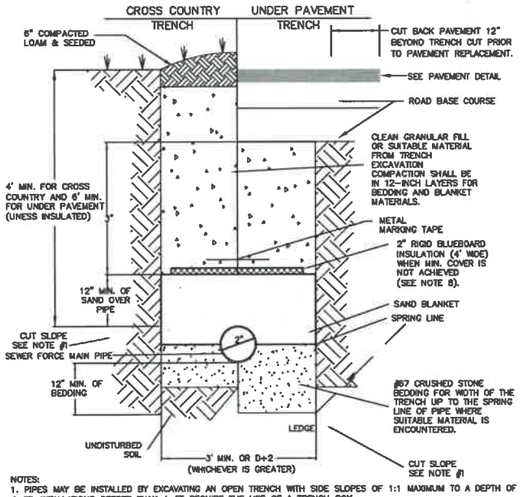
NOT TO SCALE

UTILITY DETAILS
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS LLC
MARCH 2020

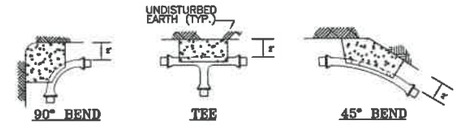
C-6

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"



NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
3. HDPE PRESSURE MAIN PIPE SECTIONS SHALL BE JOINED BY THERMAL HEAT FUSION. CONNECTIONS OR TRANSITIONS TO NON-HDPE COMPONENTS SHALL BE MADE WITH FITTINGS APPROVED FOR HDPE CONNECTIONS. THE WELDING TECHNICIAN SHALL BE EXPERIENCED IN HDPE HEAT FUSION WELDING WITH MINIMUM OF 500 HOURS OF WELDING EXPERIENCE.
4. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.
5. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, THE SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE AND AT LEAST 3 FEET BELOW FINISHED GRADE.
6. THE PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSES A ½-INCH SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.
7. TRENCH BACKFILL MATERIAL IN ROADWAY LOCATIONS SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION, EXCLUDING:
   (1) DEBRIS;
   (2) PIECES OF PAVEMENT;
   (3) ORGANIC MATTER;
   (4) TOP SOIL;
   (5) WET OR SOFT MUCK;
   (6) PEAT OR CLAY;
   (7) EXCAVATED LEDGE MATERIAL;
   (8) ROCKS OVER 6 INCHES IN THE LARGEST DIMENSION; AND
   (9) ANY MATERIAL NOT APPROVED BY THE ENGINEER.
8. CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS TO DETERMINE IF INSULATIONS IS NECESSARY WHEN THE FORCE MAIN CROSSES ANY DRAIN PIPE.

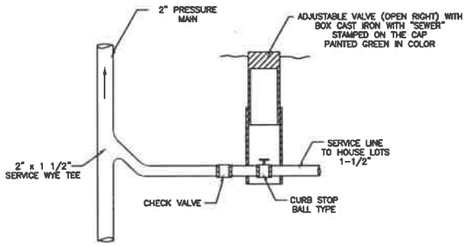
FORCE MAIN SEWER PIPE TRENCH INSTALLATION DETAIL
NOT TO SCALE



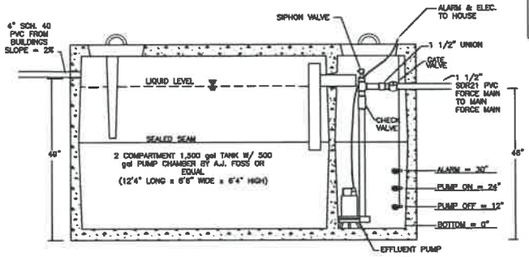
MINIMUM THRUST BLOCK BEARING AREA REQ'D AGAINST UNDISTURBED MATERIAL (SQ. FT.)					
PIPE SIZE	90 BEND	TEE	PLUG	45 BEND	22½° & SMALLER
2"	5	4	3	2	2

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

SEWER MAIN THRUST BLOCK DETAILS
NOT TO SCALE



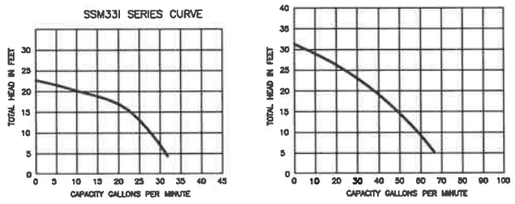
PUMP DISCHARGE LINE CONNECTION TO MAIN DETAIL
NOT TO SCALE



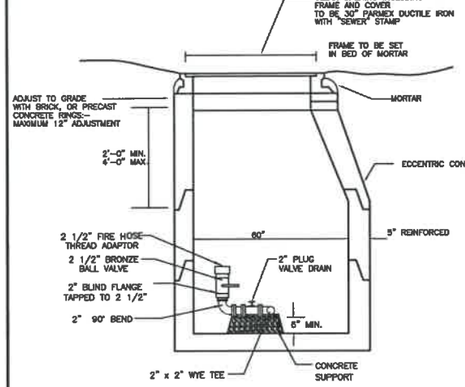
ALARM SHALL BE VISIBLE AND AUDIBLE WITH A PUSH BUTTON SILENCE SWITCH.

SEPTIC TANK & PUMP DETAIL
NOT TO SCALE

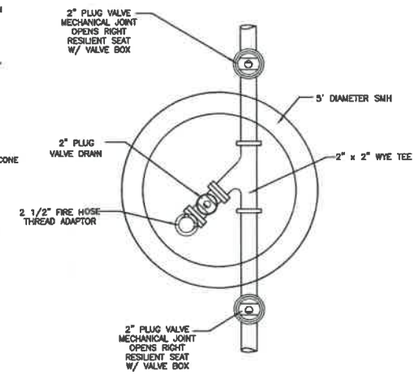
NOTES:
1. INSTALL 2" PVC VENT FROM THE PUMP CHAMBER TO THE HOUSE.
2. INSTALL THE GATE VALVE ON A 45 DEGREE FROM VERTICAL.
3. ALL PUMPING SYSTEMS ELCTRICAL COMPONENTS SHALL COMPLY WITH NEC AND NFPA REQUIREMENTS AND MEET ALL CITY OF ROCHESTER REQUIREMENTS.
4. PUMPS SHALL BE SIZED TO PROVIDE A MINIMUM VELOCITY WITHIN ALL OF THE FORCE MAIN PIPES OF 2 FEET PER SECOND.
5. THE CONTRACTOR SHALL PROVIDE ENGINEERED PUMP SPECIFICATIONS AND SEPTIC TANK SIZING TO THE ROCHESTER DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO INSTALLATION.



LOT	PUMP SELECTION	TOTAL DYNAMIC HEAD (FT)	DESIGN PUMP RATE (GPM)
110-10-2	SSM 33I	6.5 FT	30 GPM
110-10-3	SSM 33I	9.1 FT	30 GPM
110-10-4	SSM 33I	12.0 FT	30 GPM
110-10-5	SSM 33I	13.0 FT	27 GPM
110-10-6	SSM 33I	14.0 FT	25 GPM
110-10-7	ME 3F	22.0 FT	27 GMP
110-10-8	ME 3F	26.7 FT	30 GPM
110-10-9	ME 3F	27.0 FT	30 GPM
110-10-10	ME 3F	26.7 FT	30 GPM
110-10-11	ME 3F	22.0 FT	27 GPM
110-10-12	SSM 33I	14.0 FT	25 GPM
110-10-13	SSM 33I	13.0 FT	27 GPM
110-10-14	SSM 33I	12.0 FT	30 GPM
110-10-15	SSM 33I	8.5 FT	30 GPM
110-10-16	SSM 33I	9.1 FT	30 GPM
110-10-17	SSM 33I	6.5 FT	30 GPM



ELEVATION VIEW



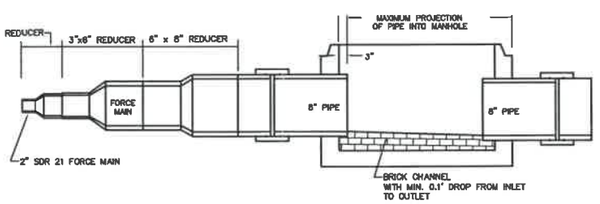
PLAN VIEW

CLEANOUT MANHOLE DETAIL
NOT TO SCALE

MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.
PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE AS SHOWN BELOW;

HYDRATED LIME	SAND	TYPE II PORTLAND CEMENT
NONE	4.5 PARTS	1.5 PARTS
0.5 PARTS	4.5 PARTS	1 PART

CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED.
HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED.
SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY 'STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES'



SEWER MANHOLE CONNECTION
NOT TO SCALE

NOTES:
1. THE FLUSHING MANHOLE CONSTRUCTION SHALL MEET ALL DESIGN REQUIREMENTS OF A SANITARY MANHOLES. SEE NOTES THIS SHEET.
2. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARREL SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
3. PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
   (1) ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
   (2) CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;
   (3) ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
   (4) NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
4. ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
5. PRECAST BASES SHALL BE PLACED ON A 6-INCH LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO THE ASTM C33/C33M NO. 67 STONE STANDARD IN EFFECT WHEN THE STONE IS PROCESSED BY THE MANUFACTURER, AVAILABLE AS NOTED IN APPENDIX D. THE EXCAVATION SHALL BE DEWATERED WHILE PLACING BEDDING MATERIAL AND SETTING THE BASE OR POURING CONCRETE.
6. CONCRETE FOR MANHOLES AND CONCRETE GRADE RINGS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AA CONCRETE IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATIONS 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
7. REINFORCING FOR CONCRETE MANHOLES AND CONCRETE GRADE RINGS SHALL BE STEEL OR STRUCTURAL FIBERS THAT CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
8. PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO THE ASTM C478 STANDARD IN EFFECT AT THE TIME THE BARREL SECTIONS, CONES, AND BASES ARE MANUFACTURED.
9. FOR THE POWER SOURCE FOR THE ALARM SYSTEM SHALL BE THE MAIN LINE POWER WITH A BACK UP BATTERY SYSTEM, WHICH SHALL BE CONNECTED AUTOMATICALLY SHOULD MAIN POWER FAILURE.
10. A CONNECTION FOR A PORTABLE GENERATOR HOOK-UP SHALL BE PROVIDED FOR EACH HOUSE LOT.

SCOTT A. LAMLER No.10026 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS:
04/01/20 – REVISE NOTES AND SEWER CURB STOP DETAIL. ADD PUMP INFORMATION.
09/05/20 – REVISE BEDDING MATERIAL SPECIFICATIONS, ADD ADDITIONAL PUMP INFORMATION FOR EACH LOT
09/20/21 – REVISE TRENCH INSTALLATION DETAIL AND SEWER CONNECTION DETAILS

NOTES:
1. IT IS INTENTION OF THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAK PROOF QUALITIES CONSIDERED NECESSARY BY THE PUBLIC WORKS DEPARTMENT FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE, OR POURED IN PLACE REINFORCED CONCRETE.
3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
4. VACUUM LEAKAGE TESTING (ASTM C1244) SHALL BE PERFORMED FOR ALL MANHOLES, LOW-PRESSURE AIR TESTING (ASTM F1417) AND DEFLECTION TRETING USING A "GO/NO GO" MANDREL FOR ALL SANITARY SEWERS, IN ACCORDANCE WITH THE RHDES SEWER REGULATIONS AND THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.
5. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. BRICK MASONRY CONFORM WITH ASTM C32. INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED
6. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) LETTER "SEWER" FOR SEWERS OR "DRAIN" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
   SEWER MANHOLE FRAME AND COVER: PAMREX 32" D.I. MANHOLE FRAME AND COVER SEWER – E.J.PRESCOTT PRODUCT# 62113-32-S. IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
7. BEDDING: MIN. 6" OF #67 STONE (12" IN LEDGE) FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33:
   100% PASSING 1 INCH SCREEN
   90-100% PASSING 3/4 INCH SCREEN
   20-55% PASSING 3/8 INCH SCREEN
   0-10% PASSING #4 SIEVE
   0-5% PASSING #8 SIEVE
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE MIN. 3/4" SHALL BE USED.
8. CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
   CEMENT: 6.0 BAGS PER CUBIC YARD
   WATER: 5.75 GALLONS PER BAG CEMENT
   MAXIMUM SIZE OF AGGREGATE: 1 INCH.
9. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
   RCP & CI PIPE – ALL SIZES = 48"
   AC & VC PIPE – UP THROUGH 12" DIA. – 18" SEE NOTE 9.A.
   AC & VC PIPE – LARGER THAN 12" DIA. – 36"
   DI PIPE– NONE REQUIRED
   PVC (ASTM 3034) – UP THROUGH 15" DIA. – NONE REQUIRED
   PVC (ASTM F 679) –LARGER THAN 15" DIA – 48" TO 60"
   PVC (ASTM F 789) – ALL SIZES – 48" TO 60"
   9. UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, VARIATIONS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPES SHALL BE REVIEWED ON A CASE BY CASE BASIS.
10. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
11. MANHOLE STEPS SHALL NOT BE PROVIDED WITHIN THE MANHOLES AS DIRECTED BY THE CITY OF ROCHESTER.
12. MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE 4 INCHES.
13. PIPE AND JOINT MATERIALS P.V.C. (POLY VINYL CHLORIDE) PIPE: ALL P.V.C. PIPE AND FITTINGS SHALL CONFORM TO THE MOST RECENT REQUIREMENTS OF ASTM SPECIFICATIONS FOR TYPE PSM POLY VINYL CHLORIDE (P.V.C.) SEWER PIPE AND FITTINGS, DESIGNATION D-3034 AND ASTM SPECIFICATIONS FOR SEWER PIPE, JOINTS USING ELASTOMERC SEALS, DESIGNATION D-3212. MANUFACTURER'S CERTIFICATE OF COMPLIANCE SHALL BE FURNISHED TO THE ENGINEER, PRIOR TO INSTALLATION METHODS OF SHIPPING AND STORAGE ON SITE SHALL BE SUCH AS TO AVOID INJURY TO THE PIPE. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB. MINIMUM "PIPE STIFFNESS" (F/Y) AT 7 1/2" DEFLECTION SHALL BE 45 PSI FOR SIZE WHEN TESTED IN ACCORDANCE WITH ASTM METHODS OF TEST D-2412, "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL – PLATE LOADING." ALL P.V.C. PIPE SHALL BE TYPE SDR-35 (A MEASURE OF THICKNESS AND ROUNDITY) AND SHALL HAVE ELASTOMERIC GASKET JOINTS. SOLVENT CEMENT JOINTS SHALL NOT BE ALLOWED. P.V.C. USED FOR FORCE MAINS SHALL CONFORM TO ASTM D-2241 AND D-1784 (CLASS 1254-B). A SAFETY FACTOR OF 2.5 SHALL BE USED FOR PRESSURE RATING DETERMINATION WITH A STANDARD DIMENSION RATIO (SDR) NO HIGHER THAN 21.
14. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE
15. JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIAL USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
16. TEES OR WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE, FOLLOWING MANUFACTURERS INSTRUCTIONS USING A BOLTED, CLAMPED, OR EPOXY-CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER. DOES (NOT APPLY TO INSTALLATIONS WHERE TEES & WYES ARE USED.)
17. PIPE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED, AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH THE APPROPRIATE MECHANICAL DEVICES. THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.
18. TESTING. THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING)
   A. AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND, WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
   B. THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
   C. DRY FLUORESCENCE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE. LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP IF NECESSARY AND RE-LAID SO AS TO ASSURE WATER-TIGHTNESS.
19. ILLEGAL CONNECTION: NOTHING BUT SANITARY WASTE FLOW FROM THE HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS OR SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE, OR GROUND WATER, SHALL NOT BE PERMITTED.
20. HOUSE AND WATER SERVICE SHOULD NOT BE LAID IN THE SAME TRENCH AS SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO THE SIDE OF THE HOUSE SEWER AS SHOWN.
21. BEDDING: MIN. 3/4" CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33.6
   100% PASSING 1 INCH SCREEN
   90-100% PASSING 3/4 INCH SCREEN
   20-55% PASSING 3/8 INCH SCREEN
   0-10% PASSING #4 SIEVE
   0-5% PASSING #8 SIEVE
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, MIN. 3/4" CRUSHED STONE SHALL BE USED.
22. LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY": DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.
23. CONCRETE: CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI.) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WATER WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
   CEMENT: 6.0 BAGS/C.Y.
   WATER: 5.75 GALLONS/BAG OF CEMENT
   AGGREGATE: 1 1/2" MAX.
24. CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4', A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION. 25- ALL DRAINAGE AND SEWER STRUCTURES INCLUDING FRAMES AND GRATES SHALL BE H-20 LOADING. 26- ALL SEWER CONSTRUCTION SHALL BE CONSTRUCTED TO RHDES AND THE CITY OF ROCHESTER STANDARDS & SPECIFICATIONS
27. HORIZONTAL JOINTS: BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE COMMISSION, WHICH TYPE SHALL IN GENERAL DEPEND FOR WATER TIGHTNESS UPON AN ELASTOMERC OR MASTIC-LIKE GASKET.
28. PIPE TO MANHOLE JOINTS: SHALL BE ONLY AS APPROVED BY THE COMMISSION AND IN GENERAL, WILL DEPEND FOR WATER TIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERC SEALANT.
29. FOR BITUMASTIC TYPE JOINTS: THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY APPROVED BITUMASTIC SEALANTS: RAW-HEK KENT SEAL NO.2 EZ
30. THE CONTRACTOR SHALL NOTIFY DIG-SAFE 1-888-344-7233 PRIOR TO CONSTRUCTION.

LOW PRESSURE SEWER & SEPTIC TANK DETAILS
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC
MARCH 2020

C-7

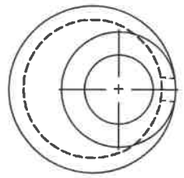
FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

NORWAY PLAINS ASSOCIATES, INC.
31 Mooney Street, Alton, N.H. 603-875-3948
2 Continental Blvd., Rochester, N.H. 603-335-3948

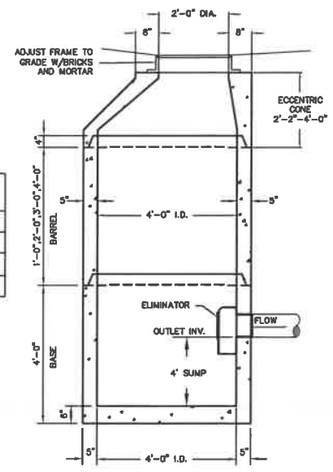
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN 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.

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10026 — LICENSED PROFESSIONAL ENGINEER

REVISIONS:
04/01/20 - ADD ANTI-SEEP COLLAR AND DRAIN MANHOLE DETAILS.
01/27/21 - ADDED DRIP EDGE DETAIL
01/28/21 - REMOVED SUMP



PLAN VIEW



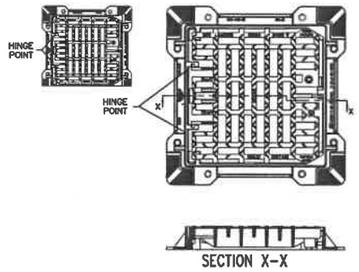
SECTION VIEW

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.

PRE-CAST REINFORCED CATCH BASIN

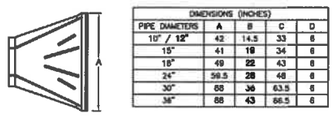
NOT TO SCALE



SECTION X-X

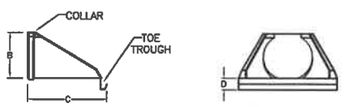
24" REXUS DI CB F & GRATE 62114 CB3R

NOT TO SCALE



DIMENSIONS (INCHES)					
PIPE DIAMETERS	A	B	C	D	
10" / 12"	42	14.5	33	6	
15"	41	19	34	6	
18"	49	22	43	6	
24"	59.5	28	48	6	
30"	68	36	63.5	6	
36"	68	43	66.5	6	

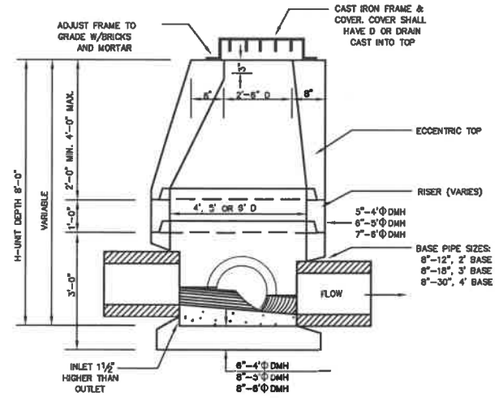
TOP VIEW



SIDE VIEW FRONT VIEW

FLAIRED END SECTION DETAIL

NOT TO SCALE



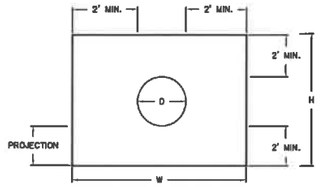
NOTES:
1. CONCRETE SHALL BE 4,000 PSI MIN. STRENGTH
2. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH

PRE-CAST REINFORCED DRAIN MANHOLE

NOT TO SCALE

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

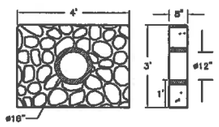
COLLAR DIMENSION TABLE



INSTALLATION NOTES:
1. ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVNIZED 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%

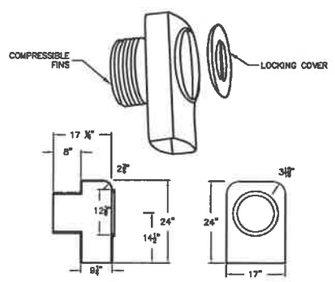
ANTI-SEEP COLLAR DETAIL

NOT TO SCALE



TYPICAL DRIVE HEADWALL

NOT TO SCALE

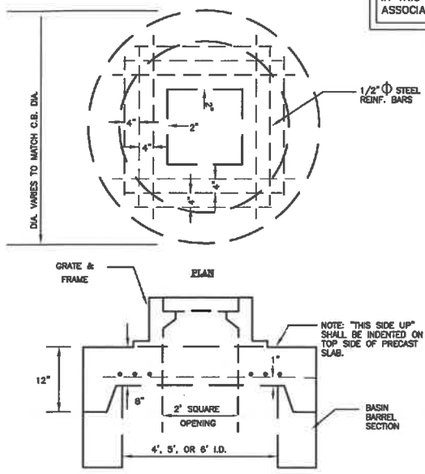


SIDE VIEW FRONT VIEW

ELIMINATOR CATCH BASIN OIL AND DEBRIS TRAP DETAIL

NOT TO SCALE

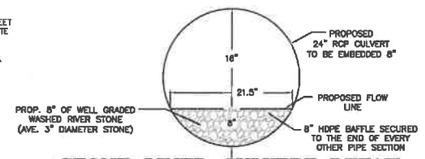
NOTES:
1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM
2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.



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.

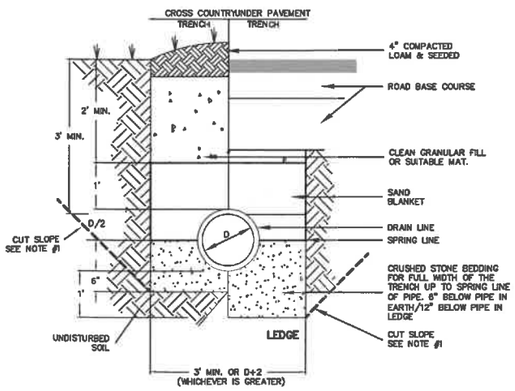
REINFORCED CONCRETE SLAB COVER

NOT TO SCALE



STONE LINED CULVERT DETAIL

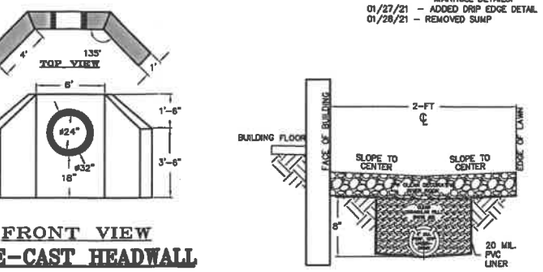
NOT TO SCALE



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



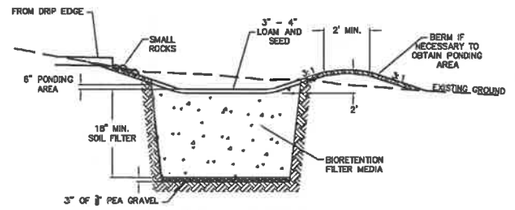
FRONT VIEW

PRE-CAST HEADWALL

DRIP EDGE AND UNDERDRAIN DETAIL

NOT TO SCALE

NOTES:
1. THE DRIP EDGE SHALL BE 2 FT. WIDE, 3 INCHES THICK, 2 INCH DIAMETER SEPTIC STONE.
2. THE UNDERDRAIN SHALL BE 4 INCH DIAMETER PERFORATED CORRUGATED PLASTIC PIPE (ADS OR EQUAL). THE PERFORATED SIDE FACING UPWARD.
3. USE CLEAN 3/4" DRAIN STONE FOR THE MATERIAL SURROUNDING THE UNDERDRAIN.
4. A 20MIL PVC LINER SHALL BE INSTALL TO INSURE THERE IN NO INFILTRATION.
4. OUTLET TO RAIN GARDEN



CROSS SECTION

RAIN GARDEN DETAIL

NOT TO SCALE

VEGETATED RESIDENTIAL RAIN GARDEN CONSTRUCTION AND MAINTENANCE NOTES FOR LOTS 10-2 THR 10-7 AND LOTS 10-9 THRU 10-14 AND LOTS 10-16 AND 10-17:
1. RAIN GARDEN AREAS SHOULD BE LOCATED CLOSE TO THE SOURCE OF RUNOFF.
2. DO NOT PLACE RAIN GARDEN SYSTEMS INTO SERVICE UNTIL THE BASIN AND THE ADJACENT AREAS ARE FULLY ESTABLISHED.
3. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENTS EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION AS WARRANTED BY SUCH INSPECTION.
4. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
5. AT LEAST ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF THE RAIN GARDEN DOES NOT DRAIN WITHIN 72 HOUSE FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITIONS OF THE GARDEN TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.

BIORETENTION FILTER MEDIA			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	30 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COURSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

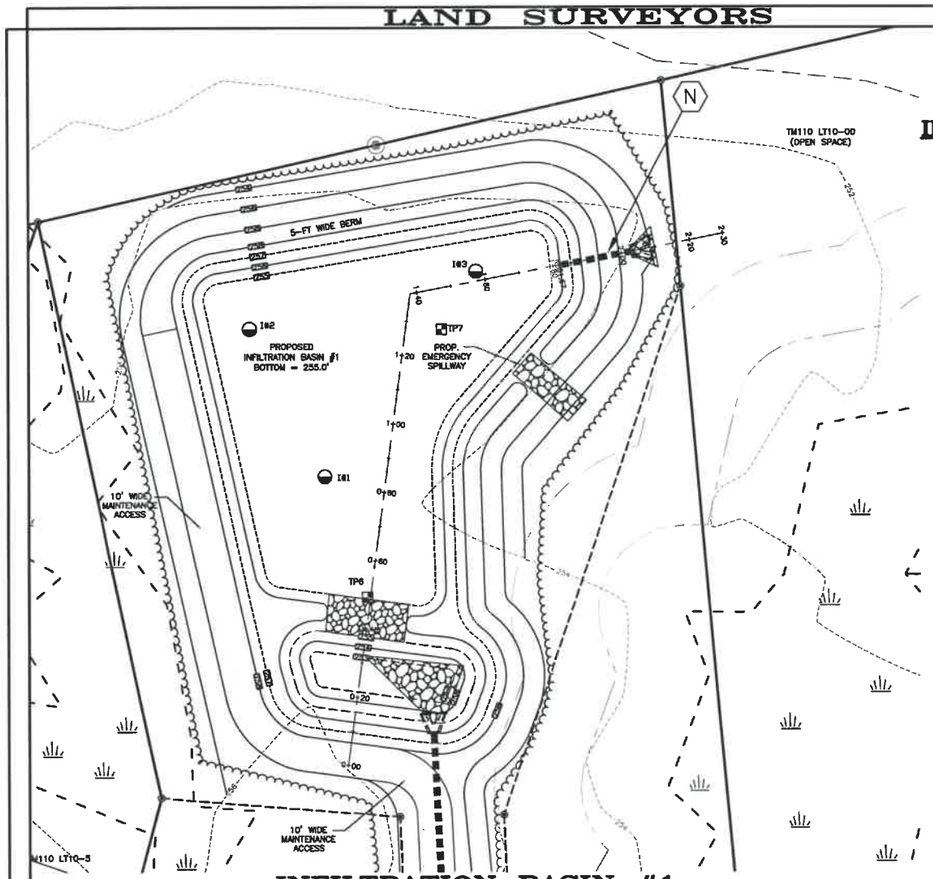
FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

DRAINAGE DETAILS
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC
MARCH 2020

31 Mooney Street, Alton, N.H. 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
2 Continental Blvd., Rochester, N.H. 603-335-3948

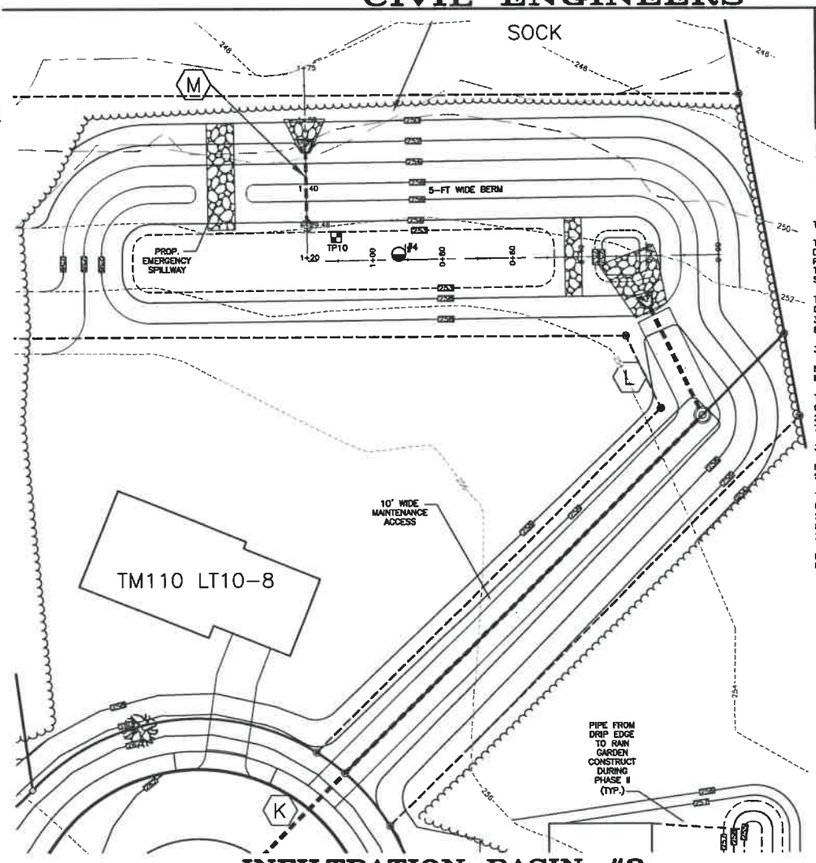
LAND SURVEYORS

CIVIL ENGINEERS



INFILTRATION BASIN #1

1" = 20'



INFILTRATION BASIN #2

1" = 20'

INFILTRATION BASIN NOTES

SPECIFICATIONS:

1. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILTRATION BASIN.
2. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION BASIN.
3. REMOVE THE TOP ORGANIC LAYER OF THE EXISTING GROUND AS NEEDED.
4. AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
5. VEGETATION SHALL BE ESTABLISHED IMMEDIATELY AFTER FINAL GRADING IS COMPLETED.
6. CONSTRUCT THE INFILTRATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
7. LOAM AND SEED ONLY THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-12. SEED MIXTURE = A
8. BASIN FLOOR SHALL LOAM AND SEEDED WITH SEED MIXTURE = A.
9. DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

MAINTENANCE REQUIREMENTS:

1. INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) AT LEAST TWICE A YEAR AND AFTER EVERY STORM GREATER THAN 2.5 INCHES OF RAIN OVER A 24-HOUR PERIOD.
2. INSPECT INFILTRATION SURFACE BI-ANNUALLY. ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
3. INSPECT INFILTRATION SURFACE AFTER ANY RAINFALL EVENT OF 2.5-INCHES OR GREATER IN A 24-HOUR PERIOD.
4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY TO RESTORE INFILTRATION CAPACITY.
5. PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTIONS.
6. REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
7. 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.
8. IF THE INFILTRATION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED SOILS SCIENTIST, ETC.) SHALL ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE INFILTRATION SURFACE.

SCOTT A. LAWLER No. 10024 LICENSED LAND SURVEYOR STATE OF NEW HAMPSHIRE

REVISIONS:

04/01/20 – REVISE SUBDIVISION LOT LAYOUT, DRAINAGE EASEMENTS, MAINTENANCE ACCESS PATHS AND MINOR GRADING AROUND BASINS.

01/27/21 – ADD NOTES TO SPECIFICATION

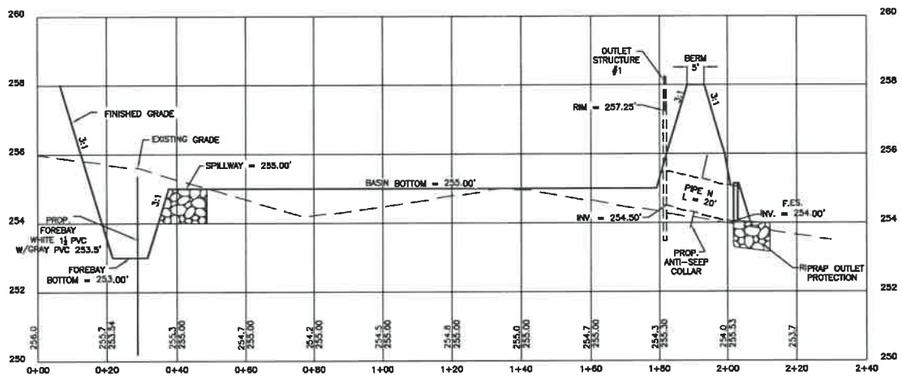
TEST PIT DATA:

THE SOILS ON THE REFERENCED PROPERTY WERE EXAMINED BY DAVID J. ALLAIN CSS#L3 ON FEBRUARY 24 AND 28, 2020 TO PROPERLY ADDRESS DRAINAGE AND REGULATORY REQUIREMENTS. THE SOIL PROFILES WERE EXAMINED AND RECORDED USING NRCS, SSSNNE AND NHDES CRITERIA AS FOLLOWS:

TP# 6 (2-24-2020)
0-3" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE.
3-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8-38" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
38-58" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 38", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 7 (2-24-2020)
0-2" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE.
2-7" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
7-30" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
30-62" 10YR 5/3 LOAMY SANDS, MASSIVE, GRANULAR, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 30", OBSERVED WATER AT 58", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

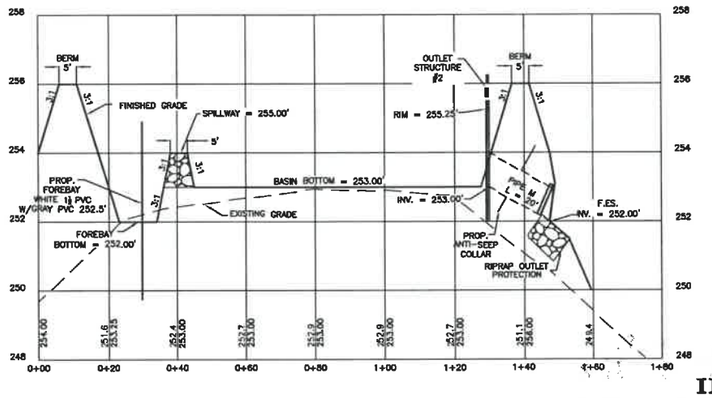
TP# 10 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8-30" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE,
30-55" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 30", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.



PROFILE

HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

INFILTRATION BASIN #1



PROFILE

HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

INFILTRATION BASIN #2

INFILTRATION BASIN PLAN & PROFILE

TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC
MARCH 2020

C-9

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 WITH IN 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.

FILE NO. 166
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DWG. NO. 19138/S-1
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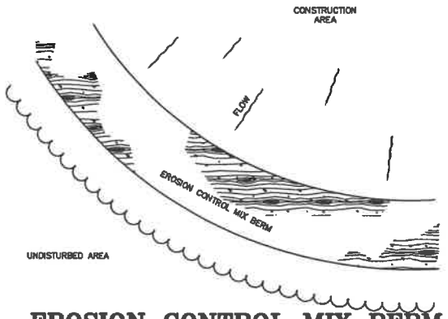
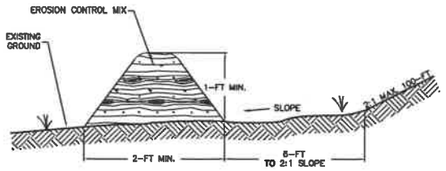


EROSION CONTROL MIX BERM CROSS-SECTION



EROSION CONTROL MIX BERM CROSS-SECTION

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

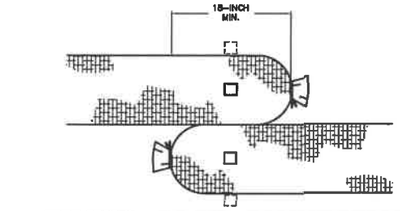
CONSTRUCTION SPECIFICATIONS:
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF OF THE PROJECT SITE.
2. EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS.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

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

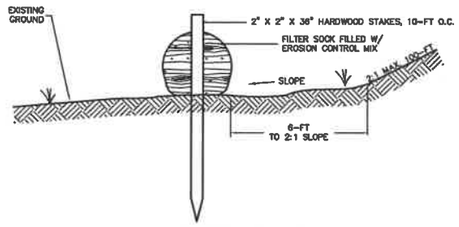
   E. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   F. THE MIX SHOULD CONTAIN NO SILTS, CLAYS OR FINE SANDS.
   G. SOLUBLE SALTS CONTENT < 4.0 mmhos/cm
   H. pH OF THE MIX SHOULD BE BETWEEN 5.0 AND 8.0
5. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
6. IT MAY BE NECESSARY TO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

EROSION CONTROL MIX BERM DETAIL

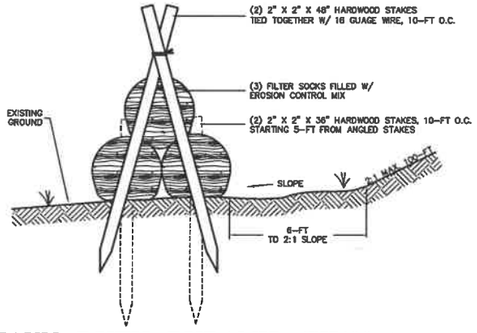
NOT TO SCALE



FILTER SOCK CONNECTION PLAN VIEW



FILTER SOCK CROSS-SECTION



HEAVY DUTY PYRAMID FILTER SOCK CROSS-SECTION

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

MAINTENANCE REQUIREMENTS:
1. FILTER SOCK MAINTENANCE SHALL FOLLOW THE SAME SCHEDULE AS EROSION CONTROL MIX BERMS.

CONSTRUCTION SPECIFICATIONS:
1. COMPOSITION OF THE EROSION CONTROL MIX SHALL EITHER BE THE SAME AS EROSION CONTROL MIX BERM MATERIAL OR AS SPECIFIED BY THE FILTER SOCK MANUFACTURER.
2. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
3. IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
4. FILTER SOCK DIAMETER (HEIGHT) SHALL BE PER THE MANUFACTURER RECOMMENDATION FOR THE AREA OF INSTALLATION.

CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL

NOT TO SCALE

OR

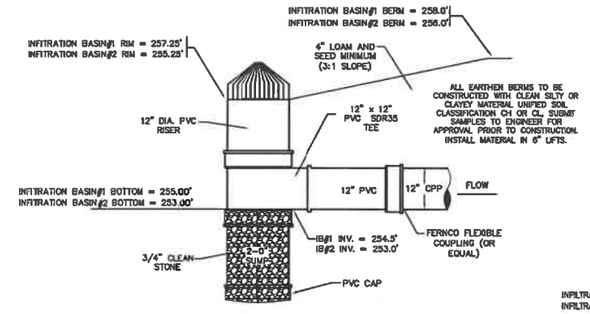
REVISIONS:
04/01/20 - REVISE RIM ELEVATIONS OF THE OUTLET STRUCTURES.

SPECIFICATIONS:
1. CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
2. LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-12. SEED MIXTURE = A

MAINTENANCE REQUIREMENTS:
1. INSPECT SEDIMENT FOREBAY BI-ANNUALLY. ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
2. CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
3. REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.

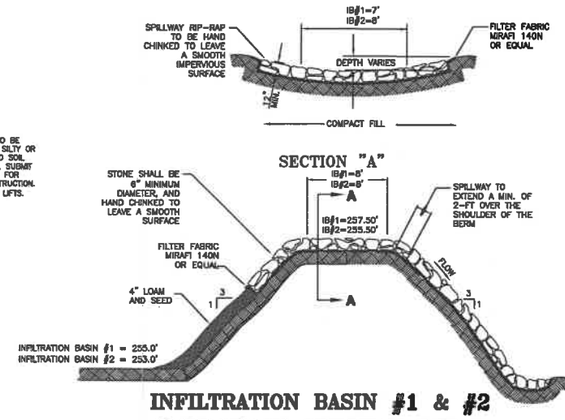
ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE FOREBAY #1=253.5'
ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE FOREBAY #2=252.5'

SEDIMENT FOREBAY



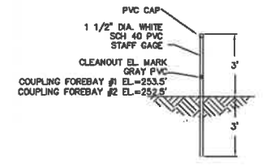
INFILTRATION BASIN #1 & #2 OUTLET STANDPIPE DETAIL

NOT TO SCALE



INFILTRATION BASIN #1 & #2 EMERGENCY SPILLWAY DETAIL

NOT TO SCALE



INFILTRATION BASIN #1 & #2 SEDIMENT FOREBAY GAUGE DETAIL

NOT TO SCALE

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

INFILTRATION BASIN DETAIL SHEET AND SILT SOCK AND EARTH BERM DETAIL

TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS LLC

MARCH 2020

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LAND SURVEYORS

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 WITH IN 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.

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.11002 — LICENSED PROFESSIONAL ENGINEER

REVISIONS:
1/28/21 – ADD TEMPORARY SEEDING
1/28/21 – CONTROL MATTING TO BioNet
5/04/21 – REPLACE CB SILT SACK WITH BLOCK AND GRAVEL FILTER

NORTH AMERICAN GREEN
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EVANSVILLE, IN 47725
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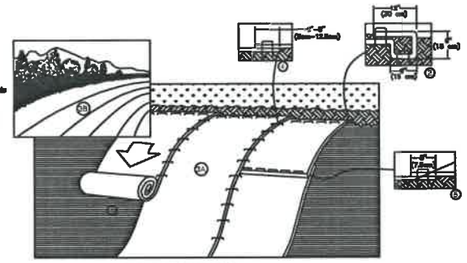


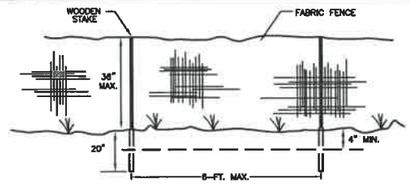
SLOPE INSTALLATION

GENERAL NOTES:
1. AVOID THE USE OF WELDED PLASTIC OR "BIODEGRADEABLE PLASTIC NETTING OR THREAD (E.G. POLYPROPYLENE) IN EROSION CONTROL MATTING. THERE ARE NUMEROUS DOCUMENTED CASES OF SNAKES, TURTLES, WATERFOWL AND OTHER WILDLIFE BEING TRAPPED AND KILLED IN EROSION CONTROL MATTING WITH SYNTHETIC NETTING AND THREAD; THEREFORE, THE USE OF BIONET SC150BN BIODEGRADEABLE MATTING OR THE LIKE IS MANADORTORY TO PROTECT THE WILDLIFE IN THE PROJECT AREA.

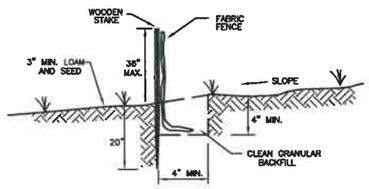
MAINTENANCE REQUIREMENTS:
1. ALL BLANKET AND MATS SHALL BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
2. ANY FAILURE SHALL BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS,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

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



PROFILE



CROSS-SECTION

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

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

SILTATION CONTROL FENCE DETAIL
NOT TO SCALE

TEMPORARY VEGETATION:

SPECIFICATIONS:
SITE PREPARATION:
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 O THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED 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 (6-0-4) OR EQUIVALENT

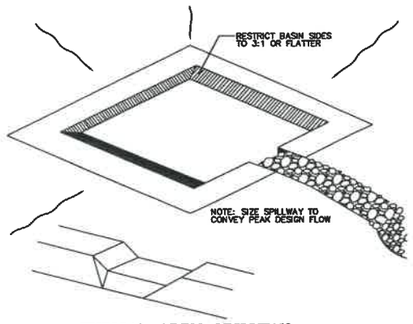
SEEDING:
1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
3. AREAS 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 NHSSM, 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 JUST 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 RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

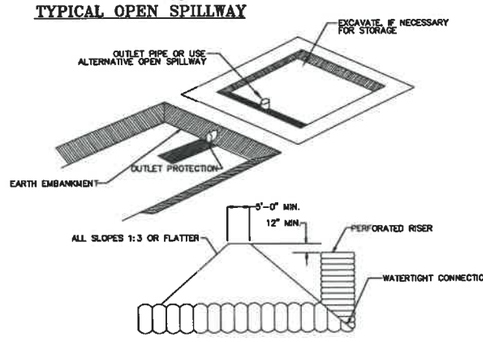
TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL 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.

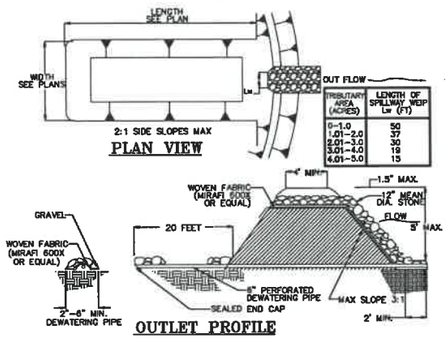
SOURCES:
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1
2. MINNICK, E.L. AND H.T. MARSHALL (AUGUST 1992)



TYPICAL OPEN SPILLWAY

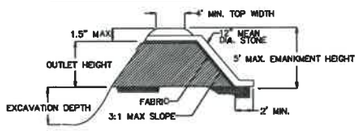


EMBANKMENT SECTION THRU RISER



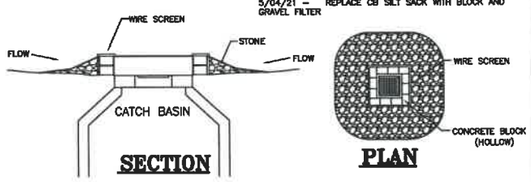
PLAN VIEW

OUTLET PROFILE



ALTERNATE OUTLET PROFILE

SEDIMENT TRAP

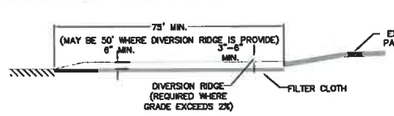


SECTION PLAN

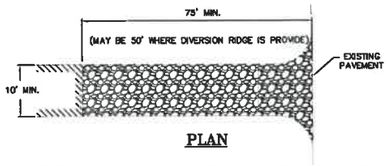
BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

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 18.7. 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.



PROFILE



PLAN

TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE

MAINTENANCE REQUIREMENTS:
1. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL TEN 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.

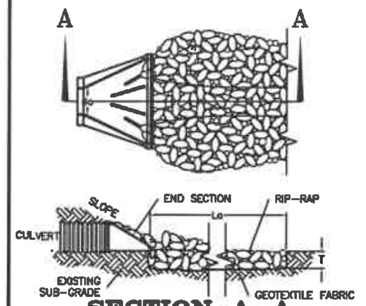
CONSTRUCTION SPECIFICATIONS:
1. THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
2. THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
4. THE PAD SHALL SLOPE AWAY FROM THE EASTERN AVENUE.
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 & SEDIMENTATION CONTROL DETAILS
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC
MARCH 2020

C-11

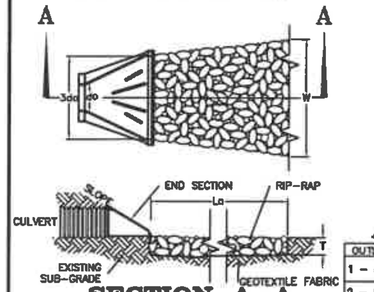
FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

31 Mooney Street, Alton, N.H. 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
2 Continental Blvd., Rochester, N.H. 603-335-3948



SECTION A–A

(PIPE OUTLET TO WELL DEFINED CHANNEL)



SECTION A–A

(PIPE OUTLET TO FLAT AREA NO WELL DEFINED CHANNEL)

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	5
15	1	TO	2

d50 = 4"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)		
100	6	TO	8
85	5	TO	7
50	4	TO	6
15	1	TO	2

d50 = 6"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)		
100	9	TO	12
85	7.8	TO	10.8
50	6	TO	9
15	1.8	TO	3

d50 = 9"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)		
100	13.5	TO	18
85	11.7	TO	16.2
50	9	TO	13.5
15	2.7	TO	4.5

APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	Wo	W	Lo	T	d50
1 – FB#1 PIPE H	24" CPP	6'	23'	17'	12"	3"
2 – DMH1 PIPE L	15" CPP	4'	15'	11'	12"	3"
3 – OS#2 PIPE M	12" CPP	3'	12'	10'	12"	3"
4 – OS#1 PIPE N	12" CPP	3'	12'	7'	12"	3"

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

CONSTRUCTION SPECIFICATIONS:
1. PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
2. MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
3. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
4. 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.
5. 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.
6. 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:
1. 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.
2. THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
3. 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:

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

STOCKPILE PRACTICES:

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

PROTECTION OF INACTIVE STOCKPILES:
6. 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.
7. 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:
8. 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.
9. WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:
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.

SEEDBED PREPARATION:
1. 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. (ALL CITY OWNED EASEMENTS AND RIGHT-OF-WAYS SHALL RECEIVE 6 INCHES OF LOAM PRIOR TO SEEDING).
2. REMOVE FROM THE SURFACE ALL STONES 2INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
3. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
4. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
5. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
6. 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 (6-0-4) OR EQUIVALENT

SEEDING:
1. INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
2. 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.
3. 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.
4. 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 SEEDED IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL 3. AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
5. 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 NHSSM, VOL 3.
6. 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.

HYDROSEEDING:
1. 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.
2. SLOPES BUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY.
3. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
4. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

MAINTENANCE REQUIREMENTS:
1. PERMANENT SEEDED 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.
2. SEEDED AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.
3. BASED ON INSPECTION, AREAS SHALL BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
4. AT A MINIMUM 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION.
5. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREEPING RED FESCUE KENTUCKY BLUEGRASS TOTAL	50 50 100	1.15 1.15 2.30

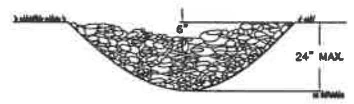
SOURCES:
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

GENERAL CONSTRUCTION PHASING:

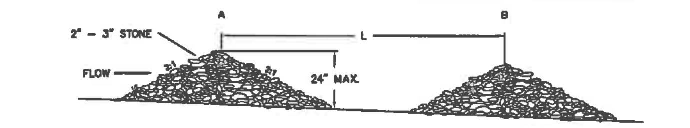
1. STABILIZATION:
   A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
   A)IN AREAS THAT WILL NOT BE PAVED:
   a) A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
   b) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
   c) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
   B)IN AREAS TO BE PAVED:
   a) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
2. 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.
3. 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.
4. MAXIMUM AREA OF DISTURBANCE:
   THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME.
5. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.
   A) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
   B) EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
6. 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.
7. 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.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
9. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
10. SLOPES 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.
11. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
12. 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.
13. ALL FILLS 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.
14. IN GENERAL, FILLS 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.
15. 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.
16. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
17. 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 NHSMM, VOL.3.
18. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
19. USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
20. 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.
21. STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
22. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
23. THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

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

SPACING BETWEEN CHECK DAMS	
SLOPE (FT/FT)	LENGTH (FT)
0.020	75
0.030	50
0.040	37
0.050	30
0.080	19
0.100	15
0.120	13
0.150	10



DRAINAGEWAY CROSS-SECTION



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

SPACING BETWEEN STONE CHECK DAMS

CONSTRUCTION SPECIFICATIONS:
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.
5. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE NOTES:
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
2. PARTICULAR ATTENTION SHOULD 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, SEEDED 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

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 WITH IN 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.

PROJECT SPECIFIC CONSTRUCTION PHASING:

1. 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.
2. 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.
3. INSTALL ORANGE SNOW FENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
4. 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.
5. INSTALL A TEMPORARY CONSTRUCTION EXIT AT INTERSECTION OF FREEDOM DRIVE AND EASTERN AVENUE. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.
6. STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILES PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
7. 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-8.
8. CONSTRUCT THE INFILTRATION BASINS, SEDIMENT FOREBAY, THE TREATMENT SWALE AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASINS AND TREATMENT SWALE AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TREATMENT SWALE DETAILS.
9. ALL DITCHES/SWALES/AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
10. PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE ROADWAY.
    A) INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
11. AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (I.E. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.)
12. INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS, CATCH BASINS, SEWER AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-6, C-7, C-8 AND C-9, AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENTATION CONTROL MEASURE.
13. 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.
14. INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE ROADWAY AS SPECIFIED IN THE CORRESPONDING DETAILS.
15. 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 THROUGH OUT THE WINTER MONTHS.
16. 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 NHSMM, VOL. 3 SHOULD BE EMPLOYED.

MAINTENANCE AND INSPECTION:
1. 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.
2. 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.
3. ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
4. SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE.

PROJECT COMPLETION AND STABILIZATION:
1. 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.
2. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS AND THE SEDIMENT FOREBAY.

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER — No.10026 — LICENSED PROFESSIONAL ENGINEER

REVISIONS:
09/20/21 – REVISE NOTE 1 IN SEEDBED PREPARATION UNDER PERMANENT VEGETATION.

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

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

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

PERMANENT EROSION & SEDIMENTATION CONTROL DETAILS

TAX MAP 110
LOTS 10–2 THRU 10–17
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC
MARCH 2020

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

C-12

LAND SURVEYORS

CIVIL ENGINEERS

TEST PIT DATA:

THE SOILS ON THE REFERENCED PROPERTY WERE EXAMINED BY DAVID J. ALLAIN CSS#13 ON FEBRUARY 24 AND 28, 2020 TO PROPERLY ADDRESS DRAINAGE AND REGULATORY REQUIREMENTS. THE SOIL PROFILES WERE EXAMINED AND RECORDED USING NRCS, SSSNNE AND NHDES CRITERIA AS FOLLOWS:

TP# 1 (2-24-2020)
0-3" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
3-12" 10YR3/4 LOAMY SAND, GRANULAR, FRIABLE
12-48" 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND,
REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT AT 12" NO OBSERVED WATER, (915) DEERFIELD VARIANT, SOMEWHAT POORLY DRAINED. BECAUSE THE SHWT IS LESS THAN 24", THE HYDROLOGIC SOIL GROUP IS D.,

TP# 2 (2-24-2020)
0-2" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
2-25" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
25-60" 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND. REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT AT 25', OBSERVED WATER AT 29', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC GROUP B.

TP# 3 (2-24-2020)
0-5" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
5-36" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
36-56" 10YR6/2 LOAMY SAND, MASSIVE, FRIABLE. REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT AT 36", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 4 (2-24-2020)
0-3" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
3-24" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE
24-64" 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND.
REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT AT 24', OBSERVED WATER AT 48", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 5 (2-24-2020)
0-3" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
3-18" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE
18-48" 10YR6/2 LOAMY SAND, MASSIVE, FRIABLE.
REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT AT 18", OBSERVED WATER AT 48", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, BECAUSE THE SHWT IS LESS THAN 24", THE HYDROLOGIC SOIL GROUP IS D.

TP# 6 (2-24-2020)
0-3" 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE.
3-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8- 38" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
38-58" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 38", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 7 (2-24-2020)
0-2 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-7 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
7- 30" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE. FEW COBBLE SIZE STONES.
30-62" 10YR 5/3 LOAMY SANDS, MASSIVE, GRANULAR, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 30", OBSERVED WATER AT 58", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 8 (2-24-2020)
0-6" 10YR4/4 SANDY LOAM, GRANULAR, FRIABLE.
6- 18" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE.
18- 28" 10YR5/4 LOAMY SAND, MASSIVE, FRIABLE.
28-60" 10YR 6/2 LOAMY SAND, MASSIVE, FRIABLE. REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 28", OBSERVED WATER AT 62", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 9 (2-24-2020)
0-10" 10YR5/4 SANDY LOAM, GRANULAR, FRIABLE.
10-33" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE.
33-64" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 33", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 10 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8- 30" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE.
30-58" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 30", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 11 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-16" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE.
16-24" 10YR5/3 LOAMY SAND, GRANULAR, FRIABLE.
24-58" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 24", NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 12 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-4" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
4- 30" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
30-60" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 30", OBSERVED WATER AT 58", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 13 (2-24-2020)
0-3" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
3-12" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
12- 23" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE.
23-62" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS, FEW ROUNDED BOULDERS.
NOTES: SHWT 23', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, BECAUSE THE SHWT IS LESS THAN 24", THE HYDROLOGIC SOIL GROUP IS D.

TP# 14 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-13" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
12- 23" 10YR5/8 LOAMY SAND, GRANULAR, FRIABLE.
23-63" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 23', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. BECAUSE THE SHWT IS LESS THAN 24", THE HYDROLOGIC SOIL GROUP IS D.

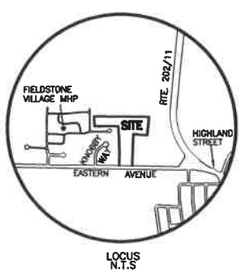
TP# 15 (2-24-2020)
0-12 10YR5/4 SANDY LOAM, GRANULAR, FRIABLE.
12-28" 10YR 5/6 LOAMY SAND, GRANULAR, FRIABLE. FEW COBBLE SIZE STONES
28-65" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 28", OBSERVED WATER AT 32" , (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 16 (2-24-2020)
0-2 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-9" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
9- 26" 10YR5/6 LOAMY SAND, MASSIVE, FRIABLE.
26-62" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 26", OBSERVED WATER AT 48" , (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 17 (2-24-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
3-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8- 28" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE,
28-63" 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 28", OBSERVED WATER AT 50", (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 18 (2-28-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8- 25" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
25-48" 10YR 6/2 LOAMY SANDS, MASSIVE, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 25', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.

TP# 19 (2-28-2020)
0-2" 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
2-8" 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
8- 25" 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, MANY COBBLE SIZE STONES.
25-50" 10YR 6/2 LOAMY SANDS, MASSIVE, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.
NOTES: SHWT 25', OBSERVED WATER ENTERING RAPIDLY FROM DOWN HILL SIDE, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED. HYDROLOGIC SOIL GROUP B.



LOCUS
N.T.S

TAX MAP 110 - LOT 10-00,
LOTS 10-2 THRU 10-17
OWNER OF RECORD:
ARTHUR TAYLOR, JR.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4946
BK 3434, PG 903

TEST PIT DATA
TAX MAP 110
LOTS 10-2 THRU 10-17
FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020

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

C-13

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 WITH IN 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.

FILE NO. 166
PLAN NO.C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

31 MOONEY STREET, ALTON, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948