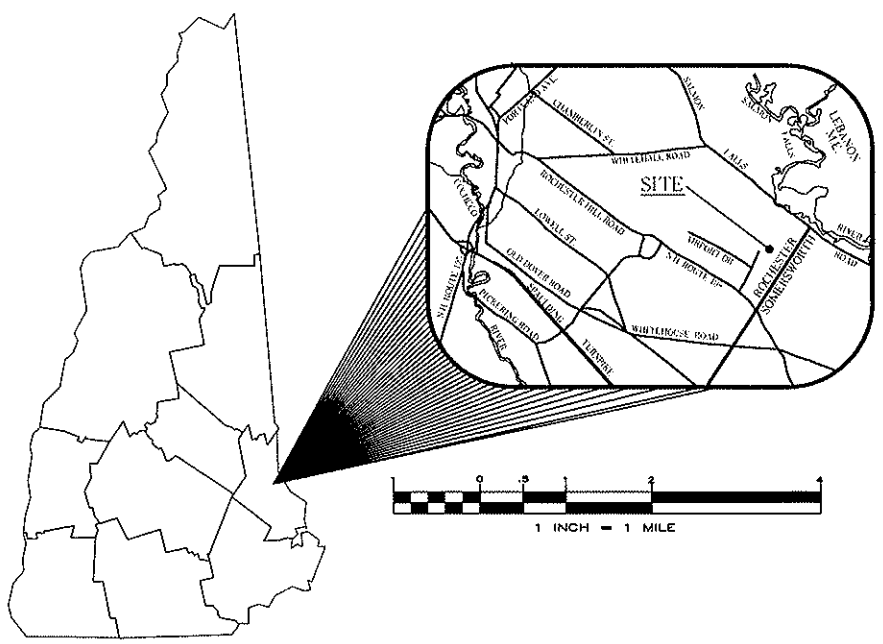
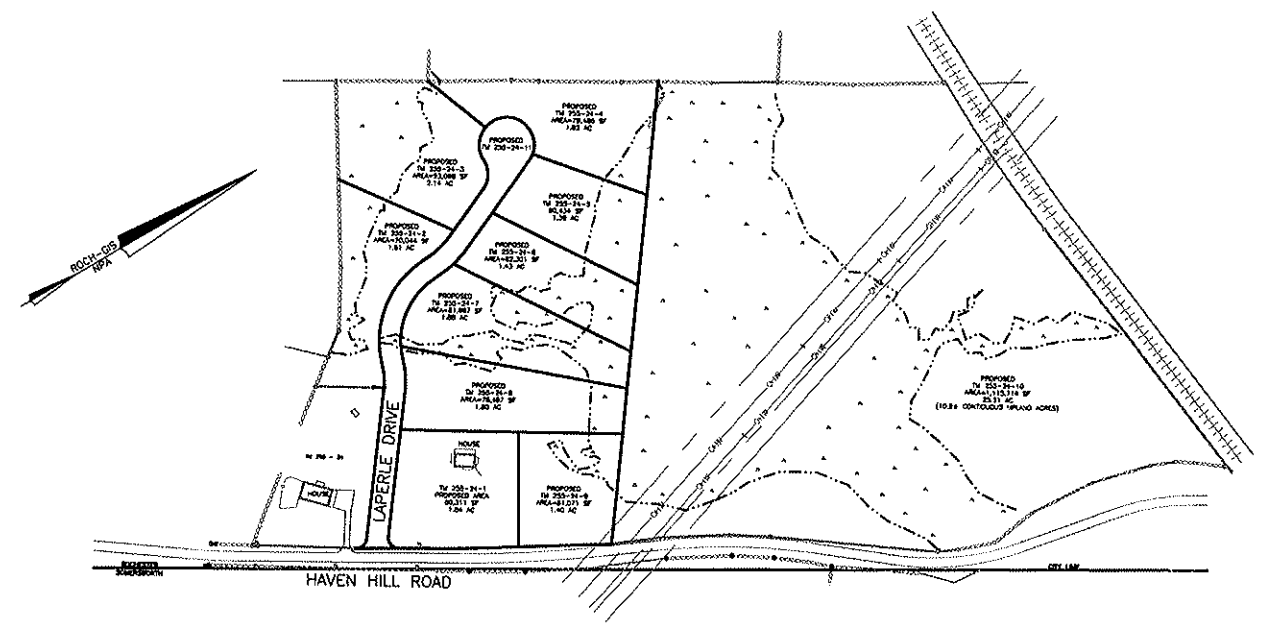
LAND SURVEYORS — CIVIL ENGINEERS

LAPERLE SUBDIVISION
52 HAVEN HILL ROAD
PREPARED FOR
LAPERLE FAMILY REVOCABLE TRUST
MARCH 2017

RECEIVED
MAR 30 2018
Planning





OVERALL SITE
1" = 200'

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10025 — LICENSED PROFESSIONAL ENGINEER

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

OWNER OF RECORD/APPLICANT
TM 255-24-1
LAPERLE FAMILY REVOCABLE TRUST
28 COPPERLINE ROAD
EPSOM, NH 03234
SCRD BOOK 2201 PAGE 342

STATE AND FEDERAL PERMITS:
STATE OF NEW HAMPSHIRE PERMIT NUMBERS:

NHDES ALTERATION OF TERRAIN:	NOT REQUIRED
NHDES WETLANDS PERMIT:	2017-01187
NHDES DAM PERMIT:	NOT REQUIRED
NHDES SUBDIVISION PERMIT:	NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT:	SA2017070701
NHDES WASTEWATER PERMIT:	NOT REQUIRED
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: _____ DATE: 4/11/18

SHEET INDEX

	COVER	AS SHOWN
S-1	OVERALL SUBDIVISION OF LAND	1" = 100'
S-2	SUBDIVISION PLAN	1" = 60'
S-3	TOPOGRAPHIC SUBDIVISION PLAN	1" = 60'
E-1	EXISTING FEATURES PLAN	1" = 100'
C-1	OVERALL ROADWAY PLAN	1" = 50'
C-2	GRADING AND DRAINAGE PLAN	1" = 50'
C-3	EROSION & SEDIMENTATION CONTROL PLAN	1" = 50'
C-4	ROADWAY PROFILE	1" = 50'
C-5	CONSTRUCTION DETAILS	AS SHOWN
C-6	DRAINAGE DETAILS	AS SHOWN
C-7	INFILTRATION BASIN & TREATMENT SWALE DETAIL	AS SHOWN
C-8	WETLAND IMPACT PLAN & PROFILE	AS SHOWN
C-9	GUARDRAIL DETAIL	AS SHOWN
C-10	EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
C-11	PERMANENT EROSION & SEDIMENTATION CONTROL DETAILS	AS SHOWN

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

ROD # 115-80+81

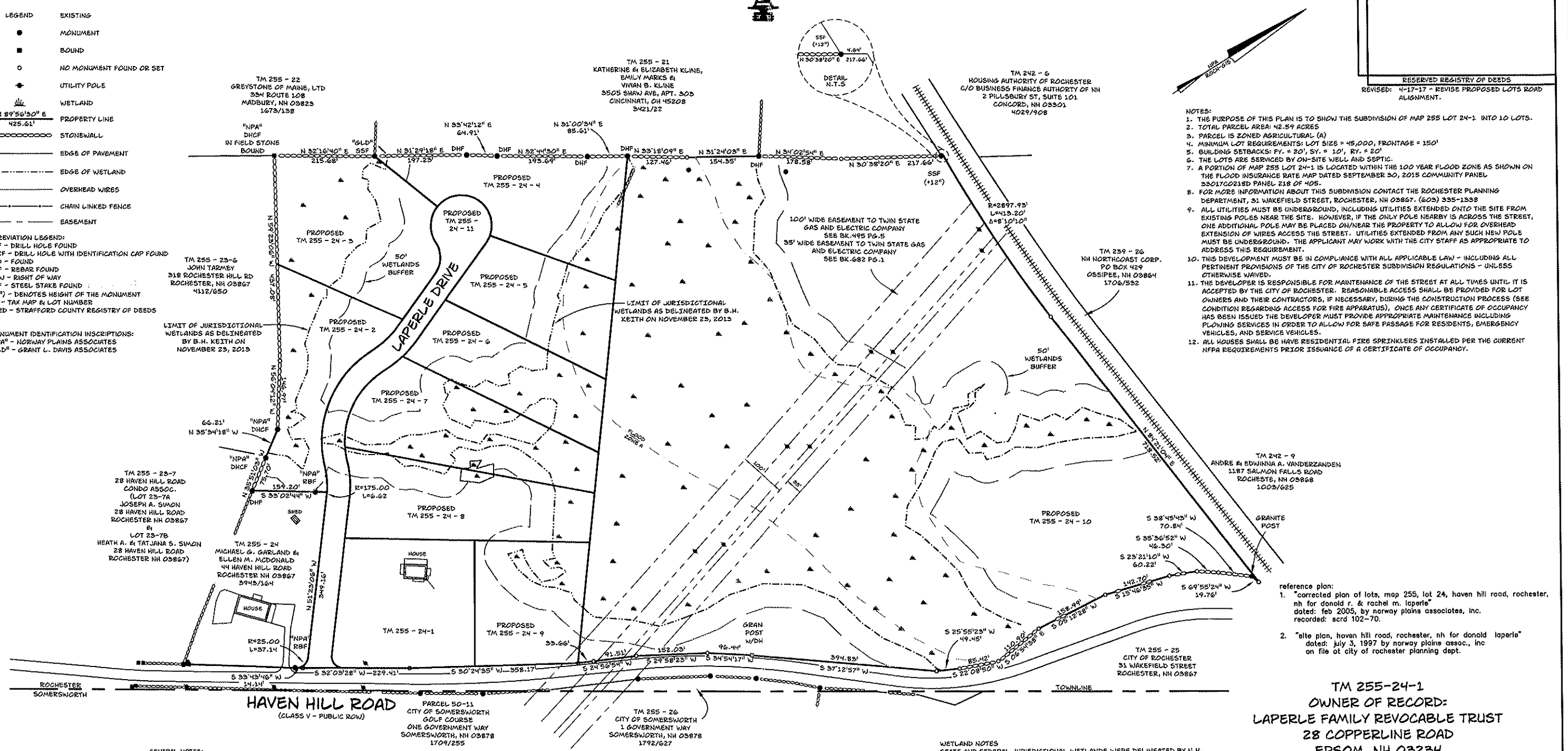
LAND SURVEYORS

CIVIL ENGINEERS

LEGEND	EXISTING
●	MONUMENT
■	BOUND
o	NO MONUMENT FOUND OR SET
	UTILITY POLE
	WETLAND
N 89°56'30" E 425.61'	PROPERTY LINE
	STONEWALL
EP	EDGE OF PAVEMENT
	EDGE OF WETLAND
	OVERHEAD WIRES
	CHAIN LINKED FENCE
	EASEMENT

ABBREVIATION 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
(+12") - DENOTES HEIGHT OF THE MONUMENT
TM - TAX MAP & LOT NUMBER
SCRD - STRAFFORD COUNTY REGISTRY OF DEEDS

MONUMENT IDENTIFICATION INSCRIPTIONS:
"NPA" - NORWAY PLAINS ASSOCIATES
"GLD" - GRANT L. DAVIS ASSOCIATES



RESERVED REGISTRY OF DEEDS

REVISED: 4-17-17 - REVISE PROPOSED LOTS ROAD ALIGNMENT.

NOTES:
1. THE PURPOSE OF THIS PLAN IS TO SHOW THE SUBDIVISION OF MAP 255 LOT 24-1 INTO 10 LOTS.
2. TOTAL PARCEL AREA: 42.59 ACRES
3. PARCEL IS ZONED AGRICULTURAL (A)
4. MINIMUM LOT REQUIREMENTS: LOT SIZE = 45,000, FRONTAGE = 150'
5. BUILDING SETBACKS: FY. = 20', SY. = 10', RY. = 20'
6. THE LOTS ARE SERVICED BY ON-SITE WELL AND SEPTIC.
7. A PORTION OF MAP 255 LOT 24-1 IS LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP DATED SEPTEMBER 30, 2015 COMMUNITY PANEL 33017C0218D PANEL 218 OF 405.
8. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338
9. 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.
10. THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW - INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SUBDIVISION REGULATIONS - UNLESS OTHERWISE WAIVED.
11. THE DEVELOPER IS RESPONSIBLE FOR MAINTENANCE OF THE STREET AT ALL TIMES UNTIL IT IS ACCEPTED BY THE CITY OF ROCHESTER. REASONABLE ACCESS SHALL BE PROVIDED FOR LOT OWNERS AND THEIR CONTRACTORS, IF NECESSARY, DURING THE CONSTRUCTION PROCESS (SEE CONDITION REGARDING ACCESS FOR FIRE APPARATUS). ONCE ANY CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED THE DEVELOPER MUST PROVIDE APPROPRIATE MAINTENANCE INCLUDING PLOWING SERVICES IN ORDER TO ALLOW FOR SAFE PASSAGE FOR RESIDENTS, EMERGENCY VEHICLES, AND SERVICE VEHICLES.
12. ALL HOUSES SHALL BE HAVE RESIDENTIAL FIRE SPRINKLERS INSTALLED PER THE CURRENT NFPA REQUIREMENTS PRIOR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

reference plan:
1. "corrected plan of lots, map 255, lot 24, haven hill road, rochester, nh for donald r. & rachel m. laperle" dated: feb 2005, by norway plains associates, inc. recorded: scrd 102-70.
2. "site plan, haven hill road, rochester, nh for donald laperle" dated: july 3, 1997 by norway plains assoc., inc on file at city of rochester planning dept.

TM 255-24-1
OWNER OF RECORD:
LAPERLE FAMILY REVOCABLE TRUST
28 COPPERLINE ROAD
EPSOM, NH 03234
2201/342

OVERALL SUBDIVISION PLAN

52 HAVEN HILL ROAD
ROCHESTER
STRAFFORD COUNTY, NH

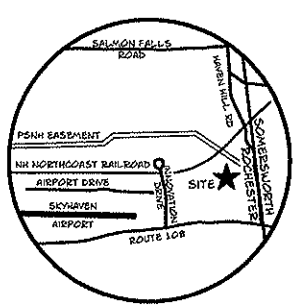
FOR: DONALD R. LAPERLE

1"=100' MARCH, 2017

GRAPHIC SCALE
100 0 50 100 200 400

REVISIONS:

S-1 OF 2 SHEET RECORDING PLAN SET



LOCUS
N.T.S

GENERAL NOTES:
1. ALL CONSTRUCTION MUST BE OUTSIDE THE 50 FOOT WETLANDS BUFFER.
2. ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS OR OTHER APPROPRIATE MONUMENTATION.
3. 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.
4. 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.
5. PRIOR TO DEDICATION OF THE STREETS TO THE CITY TWO STREET TREES (DECIDUOUS SHADE TREES) WITHIN THE FRONT 15 FEET OF EACH LOT. IDENTIFY THE SPECIES OF TREES TO BE PLANTED AND PLANTING SPECIFICATIONS. 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.
6. 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.
7. 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.
8. 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.
9. HOUSE CONSTRUCTION ON LOTS WITH SHALLOW SEASONAL HIGH WATER TABLE SHALL HAVE A PROPER FOUNDATION DRAINS, SUMP PUMPS, FOUNDATION WATERPROOFING AND OTHER APPROPRIATE PROTECTION FROM GROUNDWATER. FOUNDATION DRAINS SHALL NOT BE DIRECTED TO ABUTTING LOTS OR EXTENDED INTO THE WETLANDS BUFFERS OR WETLANDS.
10. THERE WERE NO VERNAL POOLS WITHIN THE PROPOSED SUBDIVISION LOTS.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY — DATE 4-11-18

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.

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. 993 STEVEN M. OLES

STEVEN M. OLES, LLS — DATE:

WETLAND NOTES
STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND 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 OFHYDRIC SOILS IN THE UNITED STATES, VERSION 7.0." G.W. VASILAS,G.W. HURT, AND C.V. NOBLE (EDS.). USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

FILE NO.249
PLAN NO.C-2829
DWG. NO.16186/OVS-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- JURISDICTIONAL WETLANDS 50 FOOT SETBACK
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- 258 EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- OHW EXISTING OVERHEAD WIRES
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING WOODS PATH
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE BROOK
- FEMA FLOOD ZONE LINE
- NRCS SOIL TYPE BOUNDARY LINE
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING MONUMENT
- TP #1 EXISTING TEST PIT LOCATION & NUMBER
- EXISTING WETLANDS
- EXISTING CATCH BASIN

NRCS SOIL UNIT SYMBOL	MAP UNIT NAME
ChB	CHARLTON FINE SANDY
ChC	CHARLTON FINE SANDY
ChD	CHARLTON FINE SANDY
LeB	LEICESTER VERY STONY
SuB	SUTTON FINE SANDY
SvB	SUTTON VERY STONY

WETLAND LEGEND

PFO1E:	PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
PSS/EM1E:	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/PERSISTENT EMERGENT, SEASONALLY FLOODED/SATURATED (SCRUB-SHRUB DOMINANT)
PEM/SS1E:	PALUSTRINE PERSISTENT EMERGENT/BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED
R4UBJ:	RIVERINE INTERMITTENT, UNCONSOLIDATED BOTTOM, INTERMITTENTLY FLOODED

GENERAL SITE PLAN NOTES

1. THIS PARCELS ARE LOCATED IN THE AGRICULTURAL ZONE KNOW AS MAP 255 LOT 24-1.
2. TOTAL PARCEL AREA: 1,855,220 SQUARE FEET OR 42.59 ACRES.
3. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING FEATURES ON THE LOT.
4. ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
5. THESE PLANS SHOW ONLY THOSE FEATURES THAT WERE VISUALLY PER REFERENCE PLAN 1.
6. DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:
   AGRICULTURAL ZONE:
   MINIMUM LOT AREA = 43,000 SF OR 1.03 ACRES
   MINIMUM LOT FRONTAGE = 150 FEET
   MINIMUM YARD SETBACKS:
   FRONT = 20'
   SIDE = 10'
   REAR = 20'
   MAXIMUM LOT COVERAGE = 30%
   MAXIMUM BUILDING HEIGHT = 35'
7. ORIENTATION: HORIZONTAL AND VERTICAL DATUMS – CITY OF ROCHESTER GIS
8. A PORTION OF PARCEL IS LOCATED WITHIN ZONE A (100YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP, COMMUNITY #33017C0218E DATED SEPTEMBER 30, 2015.
9. WETLANDS WERE DELINEATED BY B.H. KEITH ASSOCIATES IN NOVEMBER 2013.

WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, DURING NOVEMBER 20, 2013 AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND 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."
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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.
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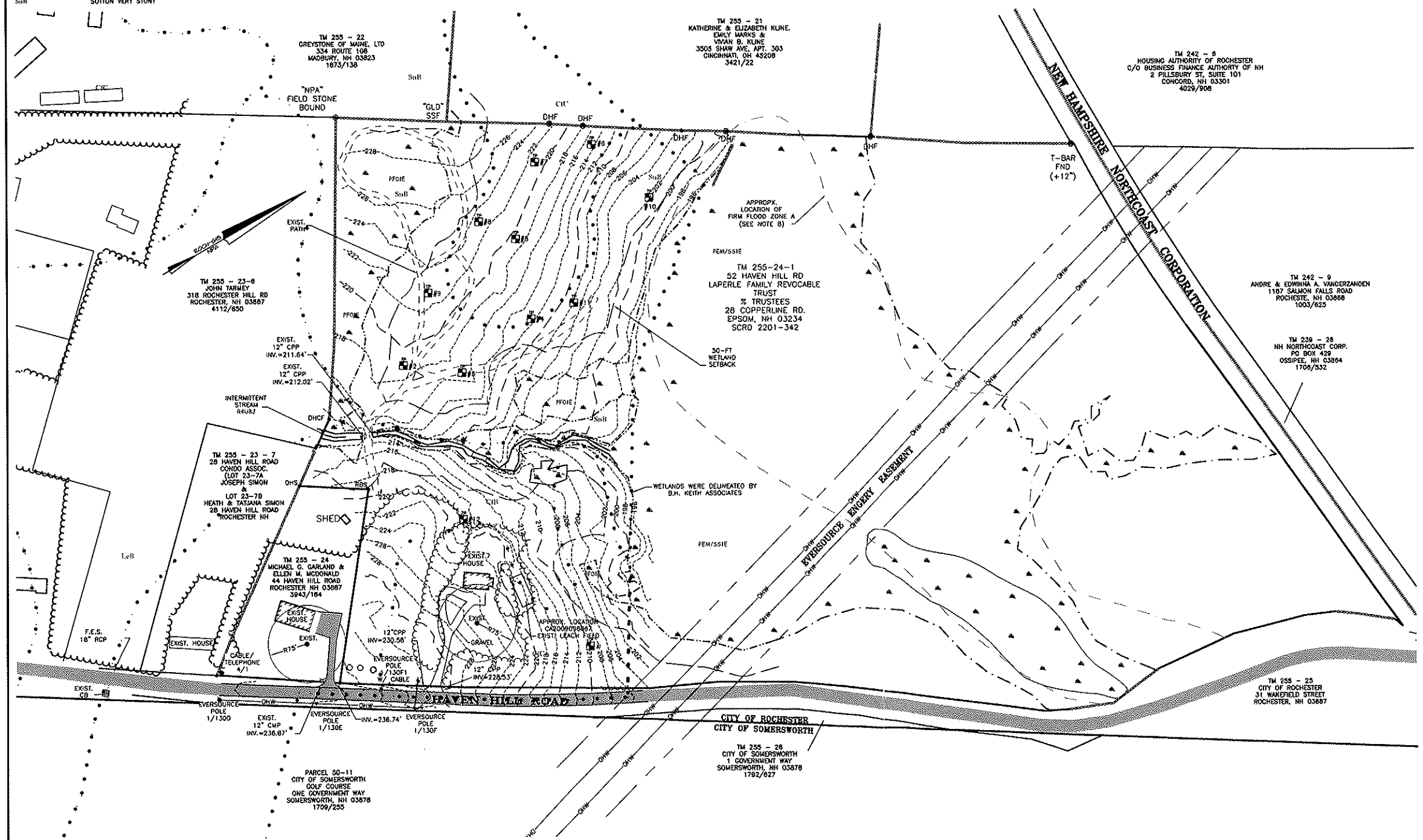


TEST PIT DATA (PERFORMED BY STEVE OLES, NHDES DESIGNER #1542)

TP 1 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–36" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
36–88" 2.5Y 5/4 SANDY LOAM, GRANULAR, FRIABLE
SHWT @ 38"
ROOTS: 38"
NO OBSERVED WATER
NO REFUSAL

TP 2 (PERFORMED OCTOBER 20, 2016)
0–12" 10YR 3/3 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
12–32" 10YR 4/6 FINE SANDY LOAM, GRANULAR FRIABLE
32–84" 2.5Y 5/3 LOAMY SAND, FIRM W/ REDOX
SHWT @ 32"
ROOTS: 32"
NO OBSERVED WATER
NO REFUSAL

TP 3 (PERFORMED OCTOBER 20, 2016)
0–10" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
10–36" 10YR 4/6 FINE SANDY LOAM, GRAVELLY, GRANULAR, FRIABLE
36–72" 2.5Y 5/4 LOAMY SAND, FIRM W/ REDOX, GRANULAR
SHWT @36"
ROOTS: 36"
NO OBSERVED WATER
NO REFUSAL

TP 4 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–20" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
20–84" LOAMY SAND, FIRM W/ REDOX
SHWT @ 20"
ROOTS: 20"
NO OBSERVED WATER
NO REFUSAL

TP 5 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–27" 10YRY 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
27–72" 2.5Y 5/3 LOAMY SAND, GRANULAR, FIRM W/ REDOX
SHWT @ 27"
ROOTS: 27"
NO OBSERVED WATER
NO REFUSAL

TP 6 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–20" 10YR 4/6 LOAMY SAND, GRANULAR, FRIABLE
20–72" 2.5Y 5/3 LOAMY SAND, GRANULAR, FIRM, BLOCKY W/ REDOX
SHWT @ 20"
ROOTS: 20"
NO OBSERVED WATER
NO REFUSAL

TP 7 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–18" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
18–72" 2.5Y 5/3 LOAMY SAND, GRANULAR, FIRM
SHWT @ 18"
ROOTS: 18"
NO OBSERVED WATER
NO REFUSAL

TP 8 (PERFORMED OCTOBER 20, 2016)
0–10" 10YR 2/2 FINE SANDY LOAM, GRANULAR, FRIABLE
10–30" 10YR 5/6 FINE SANDY LOAM, GRAVELLY, GRANULAR, FRIABLE
30–98" 2.5Y 5/3 SAND, GRANULAR, FIRM W/ REDOX
SHWT @ 30"
ROOTS: 30"
NO OBSERVED WATER
NO REFUSAL

TP 9 (PERFORMED OCTOBER 20, 2016)
0–6" 10YR 3/3 TOPSOIL, SANDY LOAM, GRANULAR, FRIABLE
6–28" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
28–60" 2.5Y 4/4 FINE LOAMY SAND, GRANULAR, FIRM W/ REDOX
SHWT @ 28"
ROOTS: 28"
NO OBSERVED WATER
NO REFUSAL

TP 10 (PERFORMED OCTOBER 20, 2016)
0–12" 10YR 2/1 TOPSOIL FINE SANDY LOAM, GRANULAR, FRIABLE
12–44" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
44–72" 2.5Y 5/4 FINE LOAMY SAND FIRM W/ REDOX
SHWT @ 44"
ROOTS: 44"
NO OBSERVED WATER
NO REFUSAL

TP 11 (PERFORMED OCTOBER 20, 2016)
0–8" 10YR 2/2 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
8–22" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
22–48" 2.5Y 5/3 LOAM SAND, GRANULAR, FIRM W/ REDOX
SHWT @ 22"
ROOTS: 22"
NO OBSERVED WATER
NO REFUSAL

TP 12 (PERFORMED OCTOBER 20, 2016)
0–12" 10YR 2/1 TOPSOIL, FINE SANDY LOAM, GRANULAR, FRIABLE
12–39" 10YR 4/6 FINE SANDY LOAM, GRANULAR, FRIABLE
39–54" 2.5Y 5/3 FINE LOAM SAND, GRANULAR, FIRM W/ REDOX
SHWT @ 39"
ROOTS: 39"
NO OBSERVED WATER
NO REFUSAL

EXISTING FEATURES PLAN
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH

PREPARED FOR:

LAPERLE FAMILY TRUST

MARCH 2017

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 INCH = 100 FEET

REFERENCE PLANS:
1. "CORRECTED PLAN OF LOTS, MAP 255, LOT 24, HAVEN HILL ROAD, ROCHESTER, NH FOR DONALD R. & RACHEL M. LAPERLE" DATED: FEB 2005, BY NORWAY PLAINS ASSOCIATES, INC. RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 102-70.

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

OWNER OF RECORD
TM 255-24-1
LAPERLE FAMILY REVOCABLE TRUST
28 COPPERLINE ROAD
EPSOM, NH 03234
SCRD BOOK 2201 PAGE 342

31 MOONEY STREET, ALTON, NH 603-875-3948

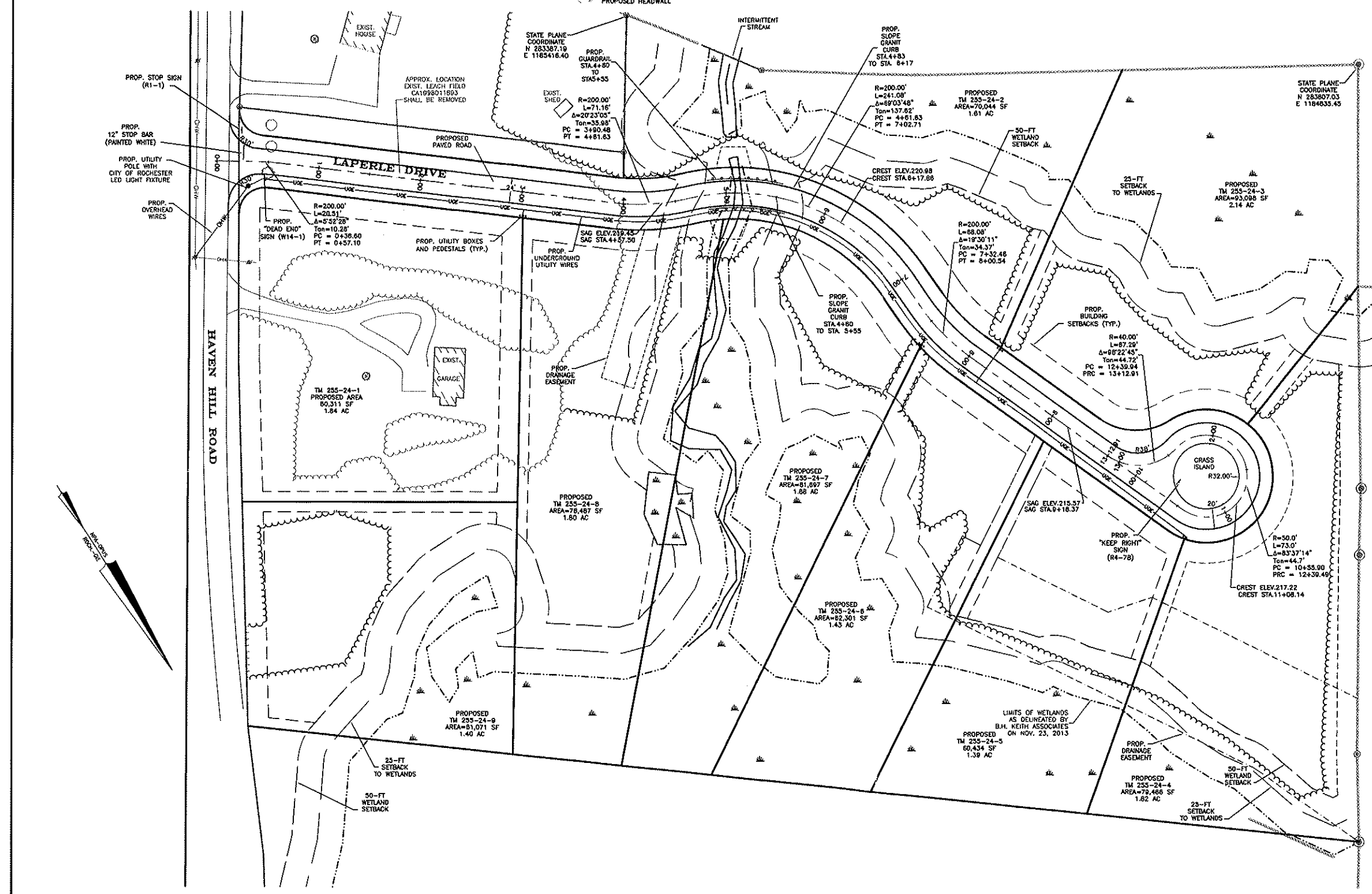
NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

LAND SURVEYORS — CIVIL ENGINEERS

LEGEND

- EXISTING PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- JURISDICTIONAL WETLANDS 50 FOOT SETBACK
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- 258 EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- OHW EXISTING OVERHEAD WIRES
- EXISTING PAVEMENT
- EXISTING EDGE BROOK
- EXISTING TREELINE
- PROPOSED PROPERTY LINE
- PROPOSED BUILDING SETBACK
- PROPOSED TREELINE
- PROPOSED PAVEMENT
- PROPOSED SLOPE GRANITE CURB
- PROPOSED GUARDRAIL
- UGE PROPOSED UNDERGROUND UTILITIES
- PROPOSED SLOPE GRANITE CURB
- PROPOSED DRIVEWAY
- PROPOSED EASEMENT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING MONUMENT
- EXISTING WETLANDS
- EXISTING CLASSIFICATION CODE
- PROPOSED UTILITY BOX AND PEDESTAL
- PROPOSED UTILITY BOX AND PEDESTAL
- PROPOSED SIGN
- PROPOSED CATCH BASIN
- PROPOSED HEADWALL



DIG SAFE

STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No.10926 LICENSED PROFESSIONAL ENGINEER

REVISION: PER TRC COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17

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. PRIOR TO DEDICATION OF THE STREETS TO THE CITY TWO STREET TREES (DECIDUOUS SHADE TREES) MUST BE MAINTAINED OR PLANTED WITHIN THE FRONT 15 FEET OF EACH LOT. AS A PRECEDENT CONDITION, THE APPLICATION MUST IDENTIFY / FLAG APPROPRIATE, HEALTHY, INDIVIDUAL TREES ON SITE THAT MEET THIS OBJECTIVE AND/OR SHOW LOCATIONS OF PROPOSED TREES ON THE PLAN. IF TREES ARE TO BE PLANTED A 15 FOOT EASEMENT MUST BE SHOWN AT THE FRONT OF THE LOTS WHICH ALLOWS FOR THE DEVELOPER TO PLANT THOSE TREES. NEWLY PLANTED TREES MUST BE SUITABLE TO THE SITE CONDITIONS AND OF NURSERY STOCK WITH A DIAMETER AT FOUR FOOT BREAST HEIGHT OF AT LEAST 2 INCHES. SUGGESTED (BUT NOT REQUIRED) SPECIES INCLUDE MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHALL SEEDLESS ASH, EUROPEAN HORNBEAM, CALLERY PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA. WHERE SUITABLE COVERAGE OF EXISTING EVERGREEN TREES IS PRESENT, THESE MAY BE SUBSTITUTE FOR DECIDUOUS TREES.
5. 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.
6. THE SIGHT DISTANCE AT THE ENTRANCE TO THE SUBDIVISION WILL BE ADEQUATE. NO IMPROVEMENT IS CREATED BY THE ALIGNMENT OR GRADE OF ENGLAND ROAD OR THE GRADE PROPOSED ENTRANCE.
7. THE INFILTRATION BASIN AND TREATMENT SWALES SHALL BE INSPECTED PRIOR TO ROADWAY ACCEPTANCE. ANY EROSION SHALL BE FIXED AND ANY SEDIMENT SHALL BE REMOVED AND VEGETATION REESTABLISHED ON THE INFILTRATION BASIN BOTTOM. THE INFILTRATION BASIN BOTTOM SHALL BE AT DESIGN ELEVATION AS SPECIFIED IN THE DETAILS ON SHEET C-7 OF THIS PLAN SET.
8. LOAM STOCKPILES SHALL BE SEEDED IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET C-9. IF STORED MORE THAN 30 DAYS. SILT FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT SIDE OF THE LOAM STOCKPILE AS SHOWN IN THE PLAN VIEW AROUND AT LEAST ONE HALF THE CIRCUMFERENCE OF THE PILE.
9. DURING ALL PHASES OF CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
10. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF ANY OFF SITE IMPACTS ARE FOUND DURING CONSTRUCTION.
11. 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.
12. FOR MORE INFORMATION ABOUT THIS SUBDIVISION, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT: 31 WAKEFIELD STREET, ROCHESTER, 03867, (603) 335-1338.
13. 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.
14. 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.
15. THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW – INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SUBDIVISION REGULATIONS – UNLESS OTHERWISE WAIVED."
16. ALL PROPOSED BUILDINGS SHALL LOCATED WITHIN THE CURRENT ZONING SETBACKS AS SHOWN OR A VARIANCE SHALL BE SOUGHT FOR.
17. EXISTING SPECTIC SYSTEM LOCATED IN PROPOSED ROADWAY SHALL BE REMOVED IN ACORDANCE WITH NHDES AND OR CITY OF ROCHESTER REQUIREMENTS.
18. THE CONDITIONAL USE FOR THE INFILTRATION BASINS AND TREATMENT SWALE WAS GRANTED SUBJECT TO THE THREE FOLLOWING TERMS: I) CONSTRUCTION VEHICLES MAY NOT DISTURB THE INNER 25 FEET OF THE WETLANDS BUFFER; II) THE CONSTRUCTION FENCE WITH SILT FENCE MUST BE INSTALLED PRIOR TO ANY EXCAVATION OR SITE DISTURBANCE; III) THE EXCAVATION WORK MUST BEGIN AT THE CONSTRUCTION FENCE AND WORK BACKWARDS FROM THERE.
19. ALL ROADWAY SIGNS SHALL BE INSTALLED AT THE DEVELOPER'S EXPENSE.
20. THIS PROJECT PROPOSED TO DISTURB OVER ONE ACRE OF EXISTING GROUND COVER AND MEETS OTHER SPECIFIC REQUIREMENTS RELATED TO PERMIT CRITERIA FOR EPA NPDES COMPLIANCE. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), SUBMISSION OF A NOTICE OF INTENT (NOI) TO EPA, INSPECTION AND MAINTENANCE OF SEDIMENT CONTROL MEASURES, DOCUMENTATION OF MAINTENANCE ACTIVITIES, AND SUBMISSION A NOTICE OF TERMINATION (NOT) TO EPA. THE CONTRACTOR IS ALSO RESPONSIBLE TO COMPLY WITH ANY OR ALL OTHER ASPECTS OF CURRENT FEDERAL, STATE AND LOCAL STORM WATER OR NPDES REGULATION OR REQUIREMENTS.
21. THE FINAL WEARING COURSE MUST BE INSTALLED AS FOLLOWS:
    - 1) IT MAY NOT BE INSTALLED UNTIL AT LEAST 50% OF THE NEW LOTS IN THE SUBDIVISION TAKING ACCESS FROM THE NEW STREET (I.E. 4 LOTS OUT OF THE 9 LOTS) ARE BUILT OUT (CERTIFICATES OF OCCUPANCY ISSUED);
    - 2) IT MAY NO BE INSTALLED UNTIL THE BINDER COURSE HAS BEEN IN PLACE FOR AT LEAST ONE WINTER SEASON; AND
    - 3) IT MUST BE INSTALLED WITHIN 12 MONTHS AFTER 50% OF THE LOTS IN THE SUBDIVISION ARE BUILT OUT.
22. THE DEVELOPER IS RESPONSIBLE FOR MAINTENANCE OF THE STREET AT ALL TIMES UNTIL IT IS ACCEPTED BY THE CITY OF ROCHESTER. REASONABLE ACCESS SHALL BE PROVIDED FOR LOT OWNERS AND THEIR CONTRACTORS, IF NECESSARY, DURING THE CONSTRUCTION PROCESS (SEE CONDITION REGARDING ACCESS FOR FIRE APPARATUS). ONCE ANY CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED THE DEVELOPER MUST PROVIDE APPROPRIATE MAINTENANCE INCLUDING PLOWING SERVICES IN ORDER TO ALLOW FOR SAFE PASSAGE FOR RESIDENTS, EMERGENCY VEHICLES, AND SERVICE VEHICLES.
23. ALL PROPOSED ROADWAY AND STORMWATER MANAGEMENT SYSTEMS SHALL BE CONSTRUCTED AND STABILIZED PRIOR TO ANY LOT DEVELOPMENT.
24. ALL HOUSES SHALL HAVE A RESIDENTIAL FIRE SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH THE CURRENT NFPA CODE AT THE TIME OF THE ISSUANCE OF A BUILDING PERMIT.

OVERALL ROADWAY PLAN
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH

PREPARED FOR:

LAPERLE FAMILY TRUST

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FEET

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3946

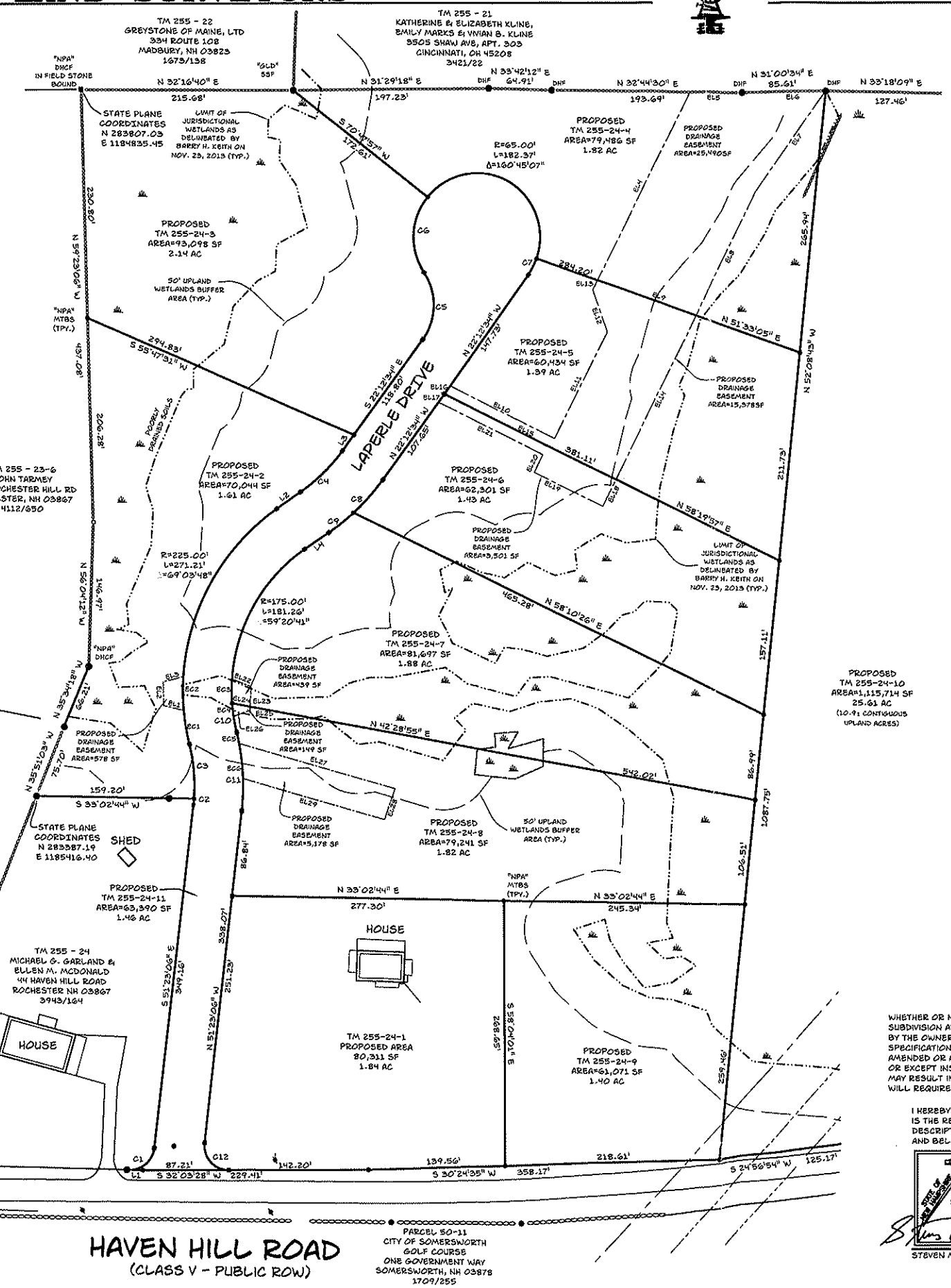
LAND SURVEYORS

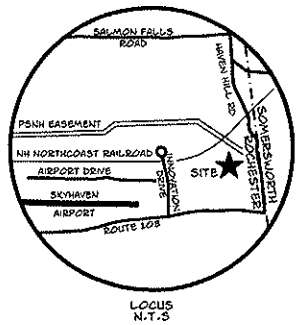
CIVIL ENGINEERS

LEGEND	EXISTING
●	MONUMENT
■	BOUND
o	NO MONUMENT FOUND OR SET
	UTILITY POLE
N 89°56'30" E 425.61'	PROPERTY LINE
	STONEWALL
EP	EDGE OF PAVEMENT
	OVERHEAD WIRES
	CHAIN LINKED FENCE
	EASEMENT

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 - STREAFFORD COUNTY REGISTRY OF DEEDS

MONUMENT IDENTIFICATION INSCRIPTIONS:
"NPA" - NORWAY PLAINS ASSOCIATES
"GLD" - GRANT L. DAVIS ASSOCIATES





LOCUS N.T.S

WETLAND NOTES
STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND 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 OFHYDRIC 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.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 33°13'46" W	14.18'
L2	N 02°42'23" W	29.75'
L3	S 22°12'34" E	19.98'
L4	N 02°42'23" W	29.75'

CURVE TABLE			
CURVE	LENGTH	RADIUS	CENTRAL ANGLE
C1	37.14'	25.00'	85°06'52"
C2	6.62'	175.00'	2°10'06"
C3	55.64'	175.00'	18°13'00"
C4	59.57'	175.00'	19°30'11"
C5	72.15'	60.00'	68°53'59"
C6	81.58'	65.00'	71°54'30"
C7	18.42'	65.00'	16°14'23"
C8	44.62'	225.00'	11°21'49"
C9	31.96'	225.00'	8°08'22"
C10	29.68'	175.00'	9°43'06"
C11	80.05'	225.00'	20°23'05"
C12	42.13'	25.00'	96°35'26"

BASEMENT LINE TABLE		
LINE	BEARING	DISTANCE
EL1	N 45°37'51" E	21.00'
EL2	S 58°32'59" E	24.00'
EL3	S 17°12'10" W	21.00'
EL4	S 31°49'51" E	212.36'
EL5	S 32°44'50" W	53.95'
EL6	S 31°00'34" W	85.61'
EL7	N 22°45'00" W	125.00'
EL8	N 31°46'57" W	138.48'
EL9	S 51°33'05" W	105.76'
EL10	S 58°19'57" W	120.00'
EL11	S 31°40'03" E	120.00'
EL12	S 76°32'27" E	45.00'
EL13	S 31°49'51" E	10.64'
EL14	N 31°46'57" W	185.02'
EL15	S 58°19'57" W	195.27'
EL16	S 22°12'34" E	10.14'
EL17	S 22°12'34" E	10.14'
EL18	N 31°46'57" W	30.00'
EL19	N 58°19'57" E	77.00'
EL20	S 31°40'03" E	20.00'
EL21	N 58°19'57" E	120.00'
EL22	S 55°13'54" W	21.00'
EL23	N 55°10'55" W	20.43'
EL24	S 42°28'55" W	18.87'
EL25	N 55°10'55" W	5.57'
EL26	N 12°35'04" E	18.00'
EL27	S 48°15'02" W	165.00'
EL28	N 39°27'59" W	33.00'
EL29	N 48°14'29" E	150.00'

BASEMENT CURVE TABLE			
CURVE	LENGTH	RADIUS	CENTRAL ANGLE
EC1	34.75'	225.00'	8°50'59"
EC2	34.52'	225.00'	8°44'24"
EC3	24.60'	175.00'	8°03'12"
EC4	15.06'	175.00'	4°56'34"
EC5	11.55'	225.00'	2°56'29"
EC6	35.76'	225.00'	9°06'23"

RESERVED REGISTRY OF DEEDS

REVISION: 04-17-17 - REVISE PROPOSED LOTS, ROADWAY AND EASEMENT AREAS.
07-06-17 - REVISE PER NHDES COMMENTS

NEW HAMPSHIRE BUREAU OF NATURAL RESOURCES
BARRY H. KEITH
No. 087
CERTIFIED WETLAND SCIENTIST

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD
CERTIFIED BY — DATE 4-11-18

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.

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. 863
STEVEN M. OLES
LAND SURVEYOR

STEVEN M. OLES, LLS — DATE:

TM 255-24-1
OWNER OF RECORD:
LAPERLE FAMILY REVOCABLE TRUST
28 COPPERLINE ROAD
EPSOM, NH 03234
2201/342

SUBDIVISION PLAN
52 HAVEN HILL ROAD
ROCHESTER
STRAFFORD COUNTY, NH
FOR: DONALD R. LAPERLE

1"=60' MARCH, 2017

GRAPHIC SCALE
60 0 30 60 120 240

REVISIONS:

S-2 OF 2 SHEET RECORDING PLAN SET

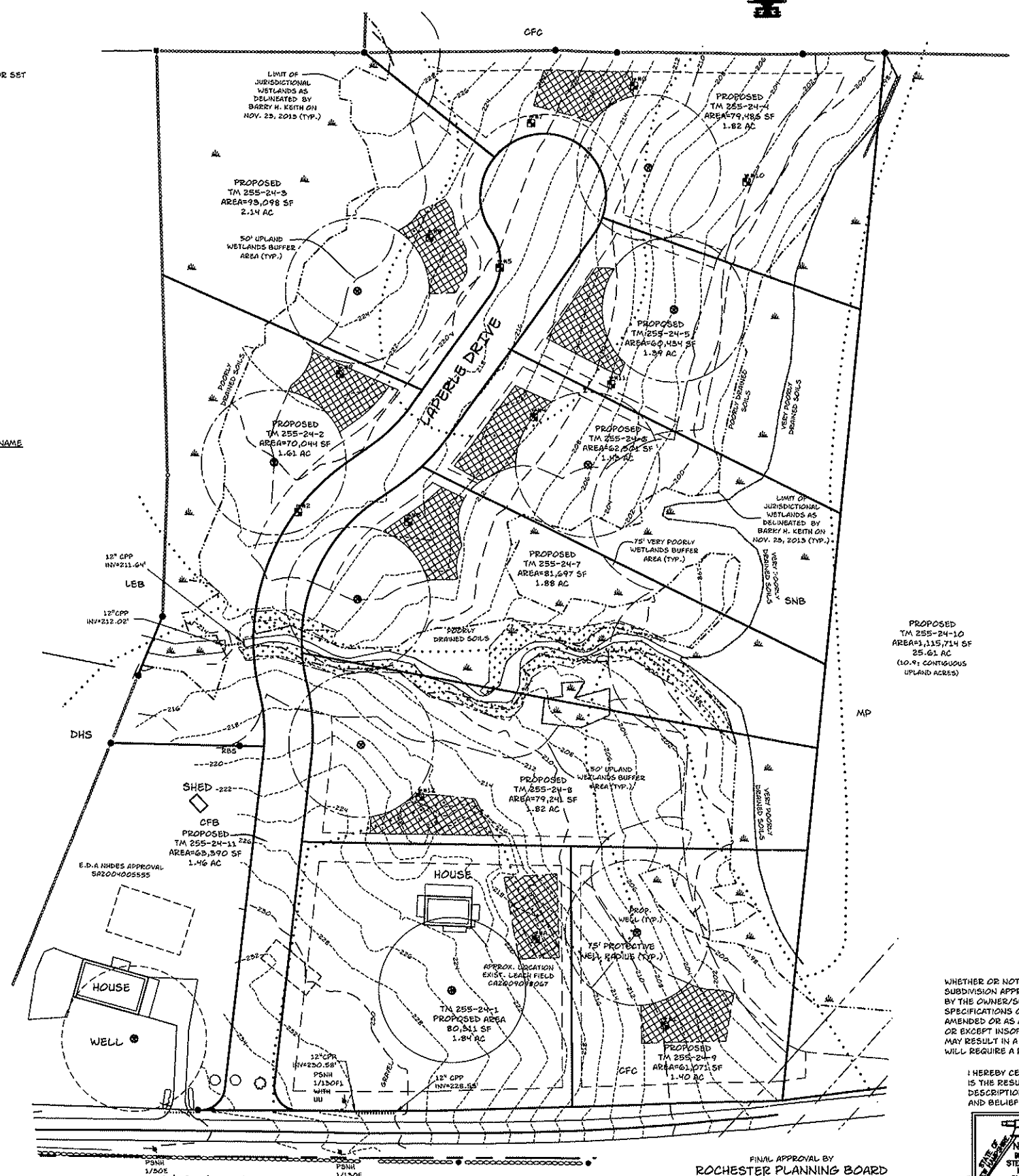
FILE NO.249
PLAN NO.C-2829
DWG. NO.16186\S-1
F.B. NO.

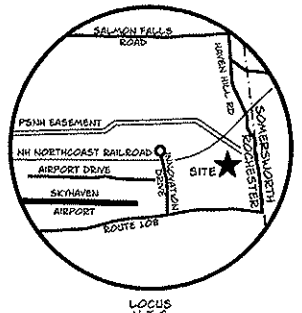
31 MOONEY STREET, ALTON, NH 603-875-3948
NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

LAND SURVEYORS — CIVIL ENGINEERS

LEGEND	EXISTING
●	MONUMENT
■	BOUND
○	NO MONUMENT FOUND OR SET
	UTILITY POLE
	WETLAND
N 89°56'30" E 425.61'	PROPERTY LINE
	STONEWALL
EP	EDGE OF PAVEMENT
	EDGE OF WETLAND
	OVERHEAD WIRES
	CHAIN LINKED FENCE
	SETBACK LINE
	EASEMENT
	4K RESERVE AREA
	SLOPES BETWEEN 15% AND 25%

NRCS SOIL MAP UNIT SYMBOL AND MAP UNIT NAME
CFB - CHARLTON FINE SANDY
CFC - CHARLTON FINE SANDY
CFD - CHARLTON FINE SANDY
LEB - LEICESTER VERY STONY
SNB - SUTTON FINE SANDY
SUB - SUTTON VERY STONY





LOCUS N.T.S

HAVEN HILL ROAD
(CLASS V - PUBLIC ROW)

FINAL APPROVAL BY ROCHESTER PLANNING BOARD
4-11-18
CERTIFIED BY — DATE

test pit data (performed by steve oles, nhdes designer #1542)

tp 1 (performed october 20, 2016)
0–8" 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–38" 10yr 4/6 fine sandy loam, granular, friable
38–96" 2.5y 5/4 sandy loam, granular, friable
shwt @ 38"
roots: 38"
no observed water
no refusal PERC RATE : 9 Min/inch

tp 2 (performed october 20, 2016)
0–12" 10yr 3/3 topsoil, fine sandy loam, granular, friable
12–32" 10yr 4/6 fine sandy loam, granular friable
32–84" 2.5y 5/3 loamy sand, frim w/ redox
shwt @ 32"
roots: 32"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 3 (performed october 20, 2016)
0–10" 10yr 2/2 topsoil, fine sandy loam, granular, friable
10–36" 10yr 4/6 fine sandy loam, gravelly, granular, friable
36–72" 2.5y 5/4 loamy sand, firm w/ redox, granular
shwt @36"
roots: 36"
no observed water
no refusal PERC RATE : 10 Min/inch

tp 4 (performed october 20, 2016)
0–8 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–20" 10yr 4/6 fine sandy loam, granular, friable
20–84" loamy sand, firm w/ redox
shwt @ 20"
roots: 20"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 5 (performed october 20, 2016)
0–8" 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–27" 10yry 4/6 fine sandy loam, granular, friable
27–72" 2.5y 5/3 loamy sand, granular, firm w/ redox
shwt @ 27"
roots: 27"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 6 (performed october 20, 2016)
0–8" 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–20" 10yr 4/6 loamy sand, granular, friable
20–72" 2.5y 5/3 loamy sand, granular, firm, blocky w/ redox
shwt @ 20"
roots: 20"
no observed water
no refusal PERC RATE : 9 Min/inch

tp 7 (performed october 20, 2016)
0–8" 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–18" 10yr 4/6 fine sandy loam, granular, friable
18–72" 2.5y 5/3 loamy sand, granular, firm
shwt @ 18"
roots: 18"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 8 (performed october 20, 2016)
0–10" 10yr 2/2 fine sandy loam, granular, friable
10–30" 10yr 3/8 fine sandy loam, gravelly, granular, friable
30–96" 2.5y 5/3 sand, granular, firm w/ redox
shwt @ 30"
roots: 30"
no observed water
no refusal PERC RATE : 10 Min/inch

tp 9 (performed october 20, 2016)
0–8" 10yr 3/3 topsoil, sandy loam, granular, friable
8–28" 10yr 4/6 fine sandy loam, granular, friable
28–80" 2.5y 4/4 fine loamy sand, granular, firm w/ redox
shwt @ 28"
roots: 28"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 10 (performed october 20, 2016)
0–12" 10yr 2/1 topsoil fine sandy loam, granular, friable
12–44" 10yr 4/6 fine sandy loam, granular, friable
44–72" 2.5y 5/4 fine loamy sand firm w/ redox
shwt @ 44"
roots: 44"
no observed water
no refusal PERC RATE : 8 Min/inch

tp 11 (performed october 20, 2016)
0–8" 10yr 2/2 topsoil, fine sandy loam, granular, friable
8–22" 10yr 4/6 fine sandy loam, granular, friable
22–48" 2.5y 5/3 loam sand, granular, firm w/ redox
shwt @ 22"
roots: 22"
no observed water
no refusal PERC RATE : 10 Min/inch

tp 12 (performed october 20, 2016)
0–12" 10yr 2/1 topsoil, fine sandy loam, granular, friable
12–39" 10yr 4/6 fine sandy loam, granular, friable
39–84" 2.5y 5/3 fine loam sand, granular, firm w/ redox
shwt @ 39"
roots: 39"
no observed water
no refusal PERC RATE : 8 Min/inch

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.

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.

STEVEN M. OLES, LLS — DATE:

NPA ROOFTOPS

RESERVED REGISTRY OF DEEDS
REVISION: 04-17-17 - REVISE PROPOSED LOTS, ROADWAY AND BASEMENT AREAS.
07-06-17 - REVISE PER NHDES COMMENTS

WETLAND NOTES
STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND 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.

test pit data (performed by charles e. karcher, jr., nhdes designer #211)

tp a (performed june 2005)
0–8" 10yr 3/3 sandy loam
8–12" 10yr 5/6 sandy loam, granular, friable
12–48" 10yr 5/4 sandy loam, granular, friable
48–75" 2.5y 5/3 loamy sand, very firm, pan
shwt @ 48"
no observed water
PERC RATE : 8 Min/inch

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

NEW HAMPSHIRE Designer of Subsurface Disposal Systems ★★★ Steven M. Oles No.1542 — Department of Environmental Services

TM 255-24-1
OWNER OF RECORD:
LAPERLE FAMILY REVOCABLE TRUST
28 COPPERLINE ROAD
EPSOM, NH 03234
2201/342

~TOPOGRAPHIC~

SUBDIVISION PLAN
52 HAVEN HILL ROAD
ROCHESTER
STRAFFORD COUNTY, NH
FOR: DONALD R. LAPERLE

1"=60' MARCH, 2017

GRAPHIC SCALE
60 0 30 60 120 240

REVISIONS:

S-3

FILE NO.249
PLAN NO.C-2829
DWG. NO.16186\S-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- JURISDICTIONAL WETLANDS 50 FOOT SETBACK
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- 255 — EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- OHW — EXISTING OVERHEAD WIRES
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- P205.50' — PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- 232 — PROPOSED CONTOUR LINE
- PROPOSED EFFLUENT DISPOSAL AREA (EDA)
- PROPOSED TREATMENT SWALE
- UD — PROPOSED UNDERDRAIN
- PROPOSED GUARDRAIL
- PROPOSED DRIVEWAY CULVERT
- NRCS SOIL TYPE BOUNDARY LINE
- EXISTING UTILITY POLE
- EXISTING MONUMENT
- TP — EXISTING TEST PIT LOCATION & NUMBER
- EXISTING WETLANDS
- EXISTING CLASSIFICATION CODE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- PROPOSED OUTLET PROTECTION
- PROPOSED HEADWALL
- CPP — CORRUGATED POLYETHYNE PIPE
- CB — CATCH BASIN

NRCS SOIL MAP UNIT SYMBOL AND MAP UNIT NAME

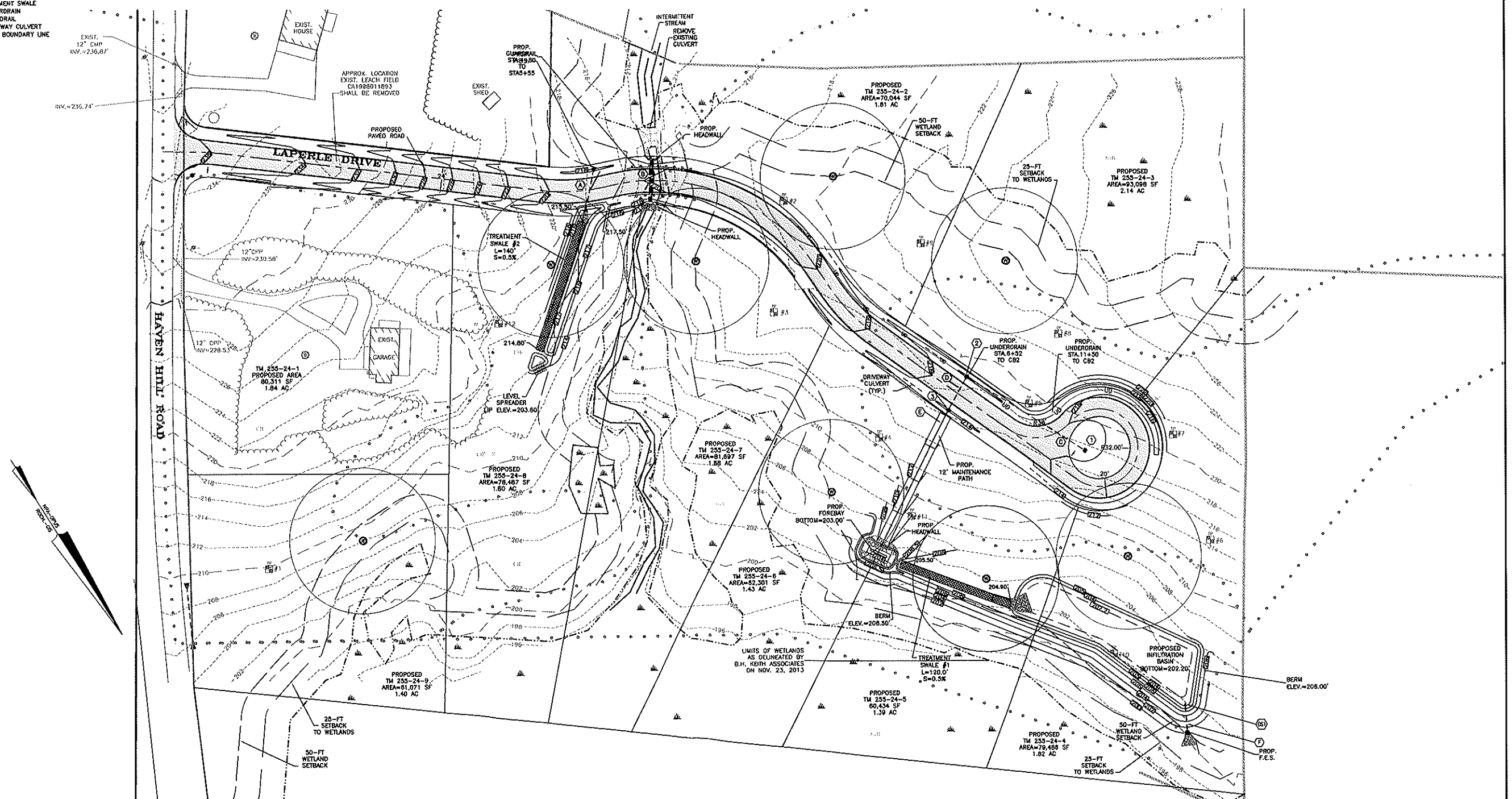
CHB	CHARLTON FINE SANDY
CHC	CHARLTON FINE SANDY
CHD	CHARLTON FINE SANDY
LeB	LEICESTER VERY STONY
SuB	SUTTON FINE SANDY
SvB	SUTTON VERY STONY

NOTES:
1. TOTAL AREA TO BE DISTRIBUTED=93,000 SF
2. LOT 24-4, LOT 24-5 AND LOT 24-6 SHALL HAVE;
   A) FOUNDATION DRAIN
   B) WATERPROOFING ON THE OUTSIDE FOUNDATION WALL
   C) SUMP PUMP SHALL BE INSTALLED IN THE BASEMENT

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

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

REVISION: PER TRG COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17



PROPOSED DRAINAGE PIPES

ALL DRAINAGE PIPES TO HAVE AN ANTI-SEEP COLLAR AT THE MID POINT OF THE PIPE RUN

- (A) PROP. PIPE — 12" CPP, INV. IN=218.00', INV. OUT=213.60', L = 40.0'
- (B) PROP. PIPE — 28" CPP, INV. 211.30', INV. OUT=209.94', L = 45.0', FILL 6" OF THE BOTTOM WITH ROUND STONE d50=3"
- (C) PROP. PIPE — 12" CPP, INV. IN=212.00', INV. OUT=209.50', L = 140.0'
- (D) PROP. PIPE — 15" CPP, INV. IN=209.25', INV. OUT=207.50', L = 35.0'
- (E) PROP. PIPE — 15" CPP, INV. IN=207.40', INV. OUT=205.00', L = 155.0'
- (F) PROP. PIPE — 18" CPP, INV. IN=201.00', INV. OUT=200.00', L = 30.0'

PROPOSED DRAINAGE STRUCTURES

- (1) PROP. 4-FT CB #1 — RIM = 215.50', INV. OUT = 212.00' (C), SUMP = 209.00'
- (2) PROP. 4-FT CB #2 — RIM = 213.50', INV. IN = 209.50' (C), INV. OUT = 209.25' (D), SUMP = 206.25'
- (3) PROP. 4-FT CB #3 — RIM = 213.50', INV. IN = 207.50' (D), INV. OUT = 207.40' (E), SUMP = 203.40', INSTALL THE ELIMINATOR OIL AND DEBRIS TRAP DETAIL
- (DS) PROP. OUTLET STRUCTURE — RIM = 203.70' WITH TRASH GRATE, USE PIPE (F), SUMP = 198.00'

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

GRADING AND DRAINAGE PLAN
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
APRIL 2017

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- JURISDICTIONAL WETLANDS 50 FOOT SETBACK
- EXISTING TREE LINE
- EXISTING STONEWALLS
- EXISTING RAILROAD TRACKS
- EXISTING CONTOUR LINE
- EXISTING DRAIN LINE
- EXISTING OVERHEAD WIRES
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING CHAIN LINK FENCE
- EXISTING GRAVEL ROAD
- EXISTING EDGE OF PAVEMENT
- PROPOSED SILT FENCE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING MONUMENT
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING TEST PIT LOCATION & NUMBER
- EXISTING WETLANDS
- EXISTING CLASSIFICATION CODE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- PROPOSED OUTLET PROTECTION
- CONSTRUCTION EXIT
- PROPOSED CATCH BASIN INLET PROTECTION
- PROPOSED STONE CHECK DAM
- PROPOSED EROSION CONTROL BLANKET

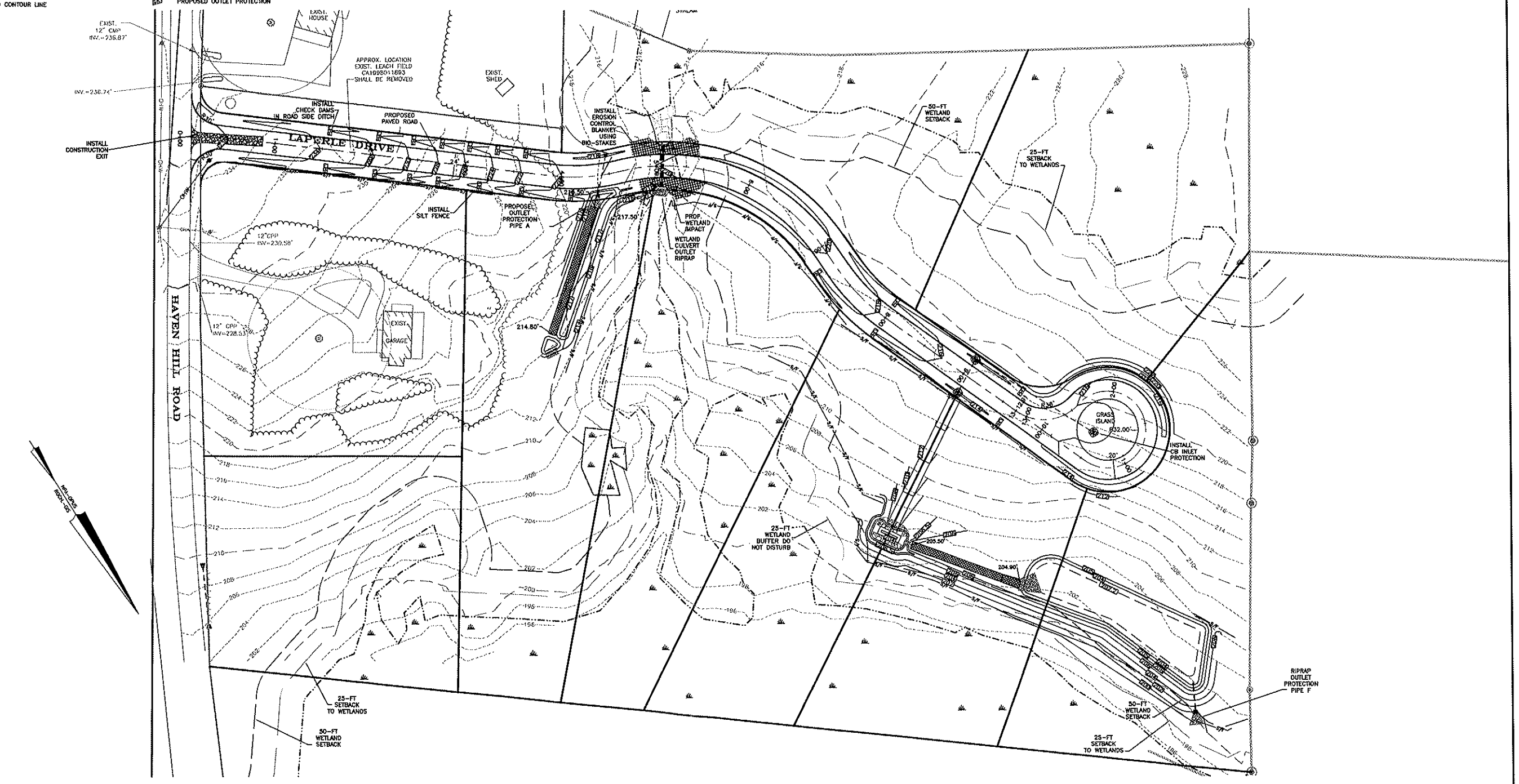
DIG SAFE

1-888-344-7233 (ALL TELL, INC.)

UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE SCOTT A. LAWLER No.16026 LICENSED PROFESSIONAL ENGINEER

REVISION: PER TRC COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17



MAY 2016

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FEET

EROSION & SEDIMENTATION CONTROL PLAN

TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH

PREPARED FOR:
LAPERLE FAMILY TRUST

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

C-3

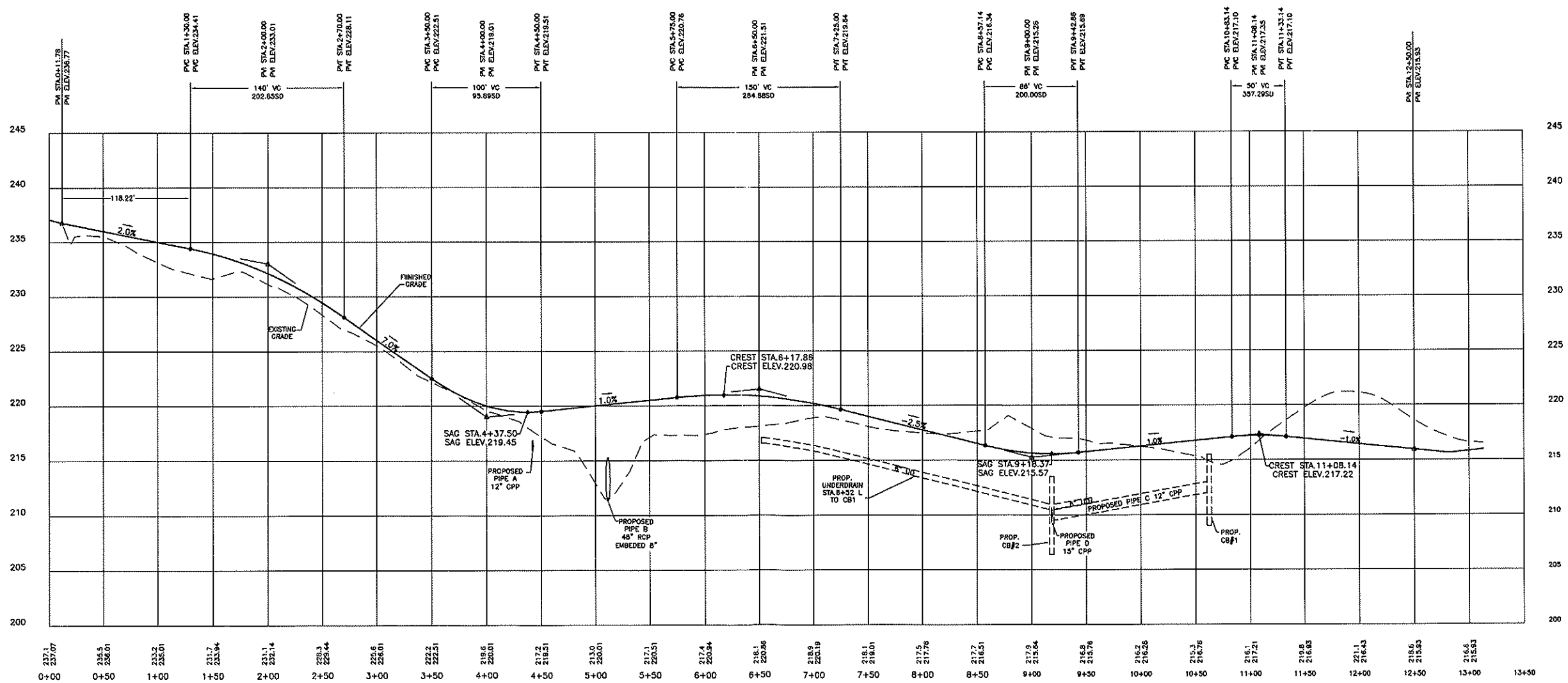
LAND SURVEYORS

CIVIL ENGINEERS

DIG SAFE

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

REVISION: PER TRG COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17



ROAD PROFILE
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

ROAD PROFILE
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

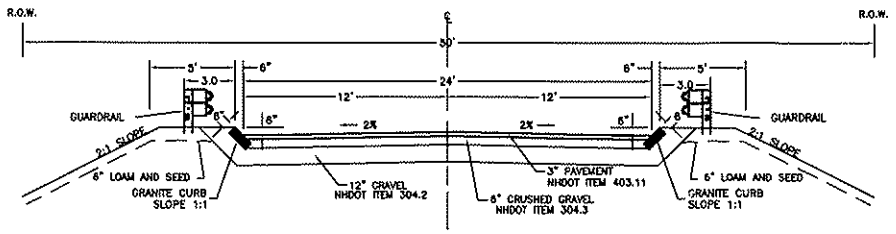
NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

C-4

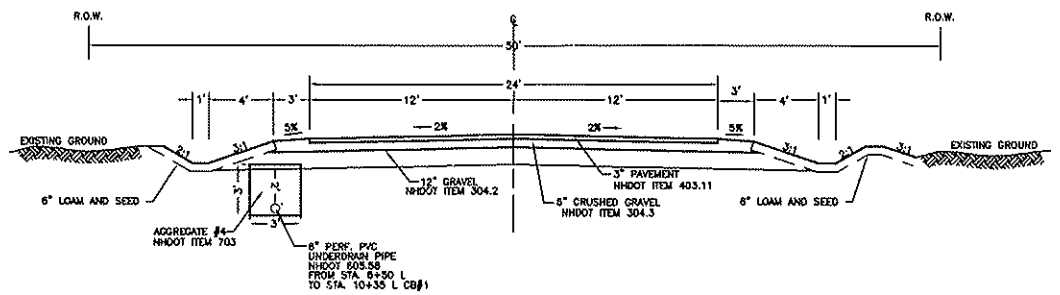
STATE OF NEW HAMPSHIRE
SCOTT A. LAWLER
No.10025
LICENSED
PROFESSIONAL ENGINEER

REVISION: PER TRC COMMENT DATED 3/16/17



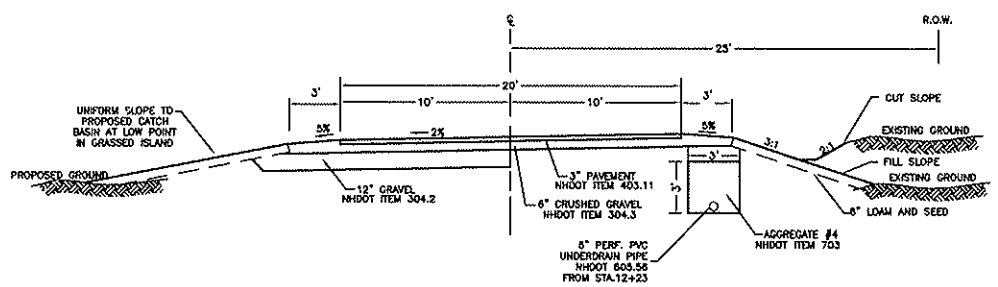
TYPICAL ROADWAY CROSS SECTION STA.4+83 TO STA.5+50

SCALE: 1"=5'



TYPICAL ROADWAY CROSS SECTION

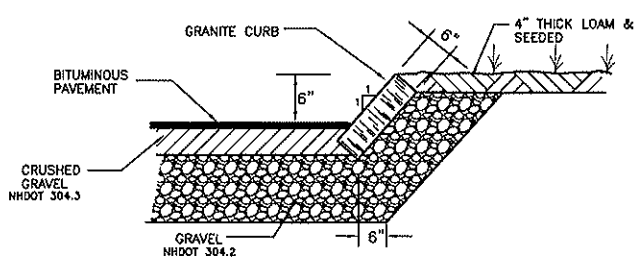
SCALE: 1"=5'



TYPICAL ROADWAY CROSS SECTION (AT CUL-DE-SAC)

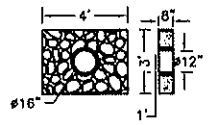
SCALE: 1"=5'

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



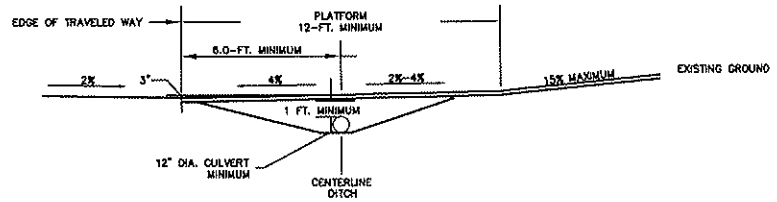
GRANITE SLOPE CURB DETAIL

NOT TO SCALE



TYPICAL DRIVE HEADWALL

NOT TO SCALE

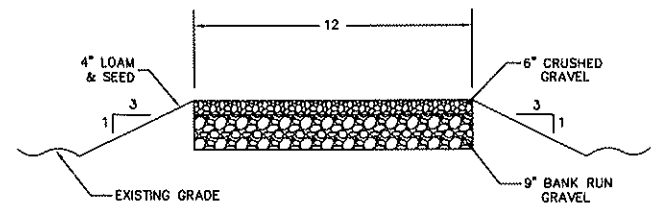


TYPICAL DRIVE IN CUT SECTION

NOT TO SCALE

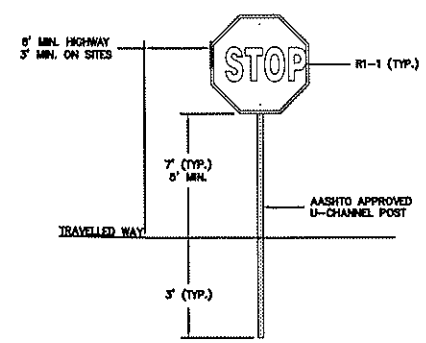
DRIVEWAY NOTES:

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.



MAINTENANCE PATH CROSS-SECTION

NOT TO SCALE



NOTES:

1. SIGN POST SHALL BE AASHTO APPROVED U-CHANNEL OR OTHER PER ASSHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINAIRES AND SIGNALS", LATEST EDITION.
2. SIGNS SHALL BE MOUNTED 7 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
3. SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 8 FT. FROM TRAVELED WAY.

TYPICAL TRAFFIC SIGN

NOT TO SCALE

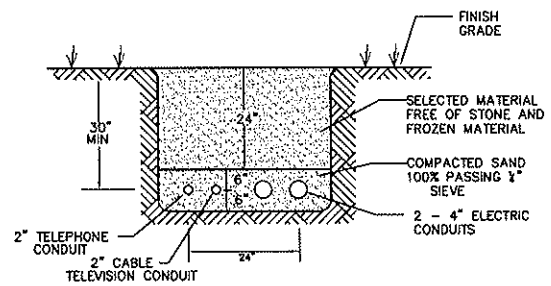
ITEM NO.	SIGN SIZE		TEXT	NO. SIGNS REQ'D
	HEIGHT	WIDTH		
R1-1	30"	30"	STOP	1
R4-7b	30"	24"	KEEP RIGHT	1
W14-1	30"	30"	DEAD END	1
ROCHESTER STREET SIGN	9" HIGH (GREEN) W/ 6" WHITE LETTERS		STREET NAME	1

NOTES:

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

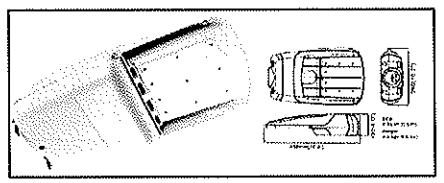
SIGN SCHEDULE

NOT TO SCALE



TELEPHONE AND ELECTRICAL COMPANY TRENCH CROSS SECTION

NOT TO SCALE



CITY OF ROCHESTER LIGHT FIXTURE

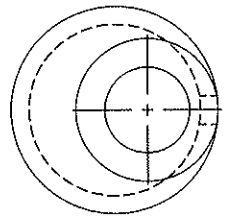
NOT TO SCALE

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 S800-25W-30K-CCT-10V WITH WHITE HEADS.
3. CONTRACTOR SHALL CONTACT THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT PRIOR TO ORDERING AND INSTALLING THE FIXTURE TO VERIFY THE FIXTURE SPECIFICATIONS.

CONSTRUCTION DETAILS
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
MARCH 2017

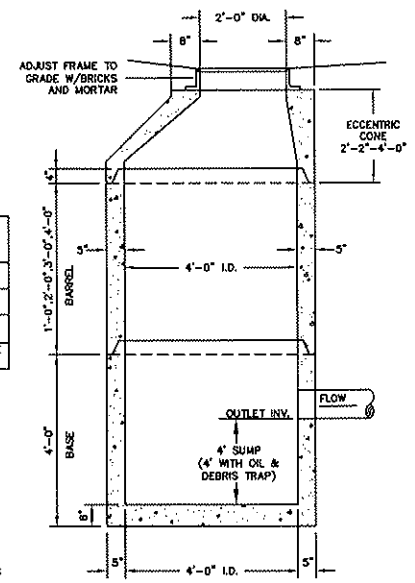
FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.



PLAN VIEW

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

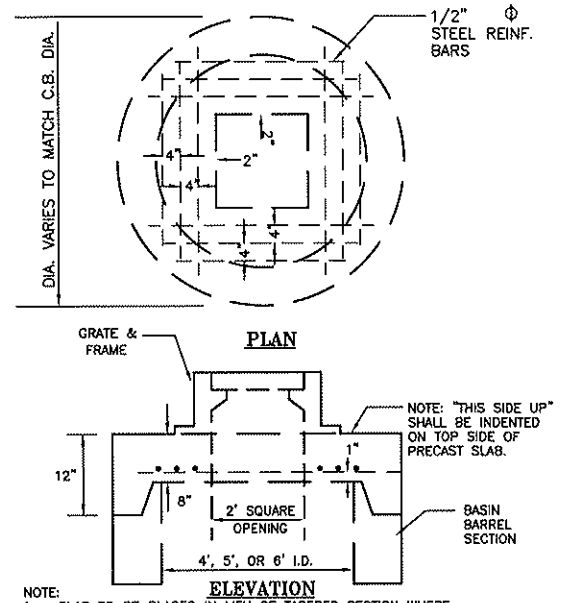
NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
6. PIPE CONNECTIONS SHALL BE MORTARED.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



SECTION VIEW

PRE-CAST REINFORCED CATCH BASIN

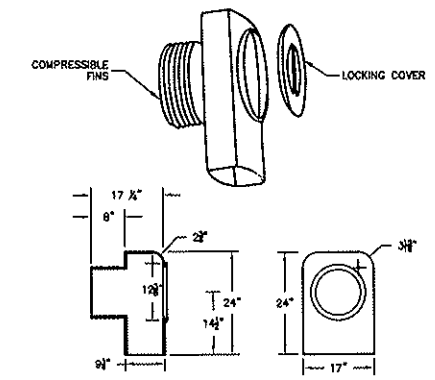
NOT TO SCALE



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



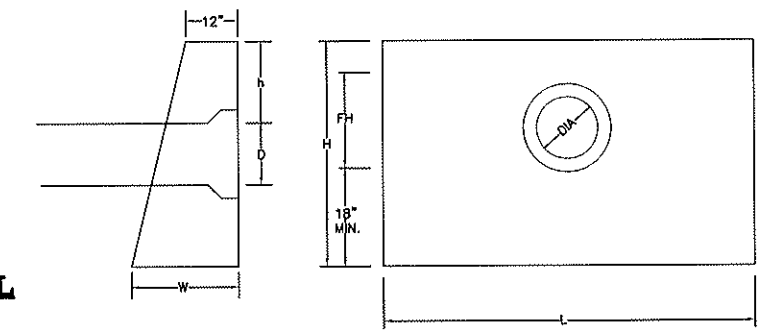
ELIMINATOR CATCH BASIN OIL AND DEBRIS TRAP DETAIL

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.

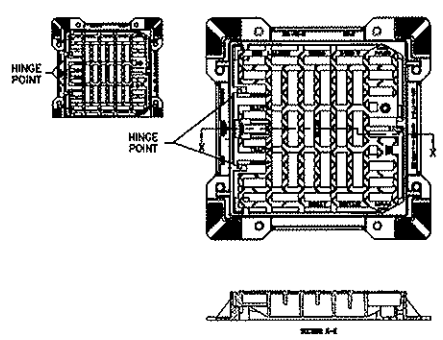
STATE OF NEW HAMPSHIRE — SCOTT A. LAWLER No. 10805 — LICENSED PROFESSIONAL ENGINEER

REVISION: PER TRC COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17



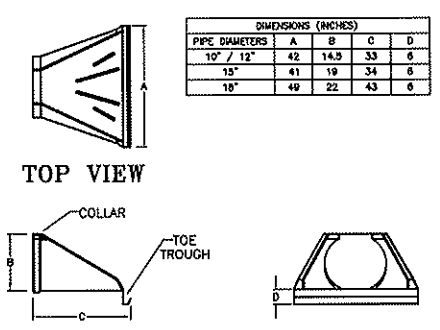
DIA. D	HEADWALL LENGHT L	HEADWALL HIGHT H	FILL HIGHT FH	PIPE COVER h	HEADWALL BTM HEIGHT W
12"	4'3"	3'9"	1'1"	1'3"	2'
15"	6'	4'3"	1'7"	1'8"	2'1"

PRE-CAST HEADWALL



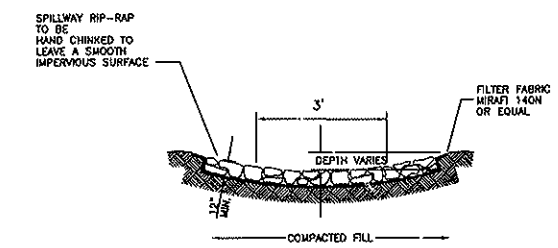
24" REXUS DI CB F & GRATE 62114 CB3R

NOT TO SCALE

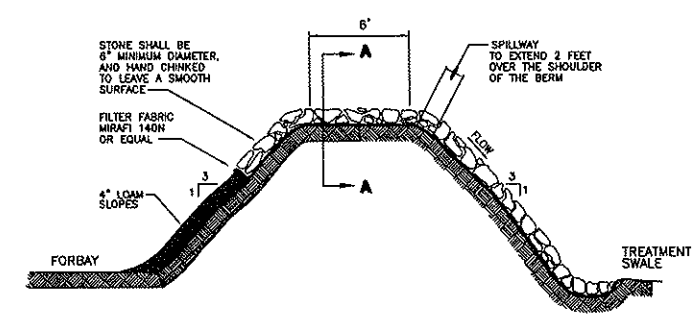


HDPE FLAIRED END SECTION DETAIL

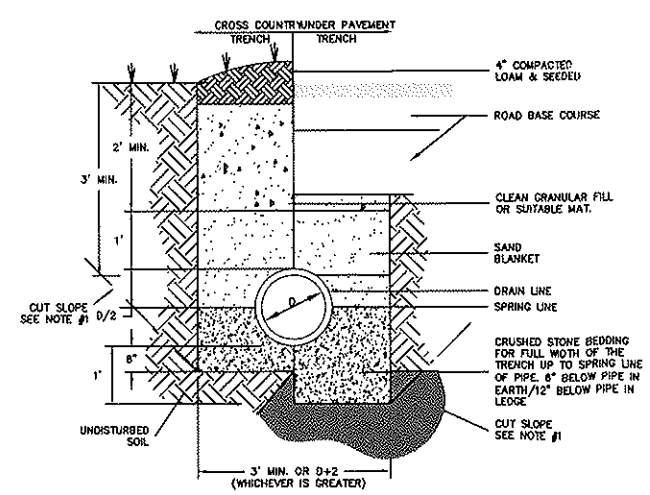
NOT TO SCALE



SECTION "A"



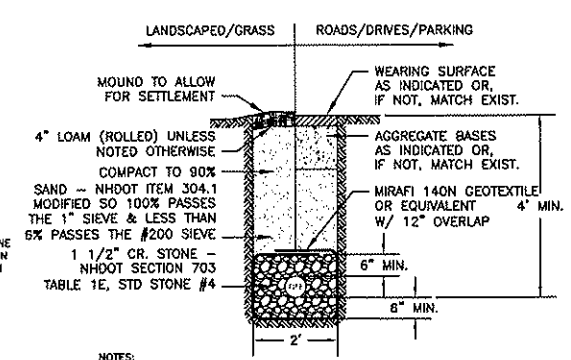
SPILLWAY DETAIL



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.

DRAINAGE PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



NOTES:
1. PIPE SHALL BE HDPE CORRUGATED TUBING (SEE PLAN FOR SIZE) COMPLYING WITH AASHTO M252 W/ CLASS 2 PERFORATIONS (NHDOT SECTION 605.2.4.1).
2. UNLESS NOTED OTHERWISE, ALL SOIL AND AGGREGATE MATERIALS (EXCEPT LOAM) TO BE COMPACTED TO 95% BASED ON ITS OPTIMUM DENSITY PER AASHTO T-99.

TYPICAL UNDERDRAIN

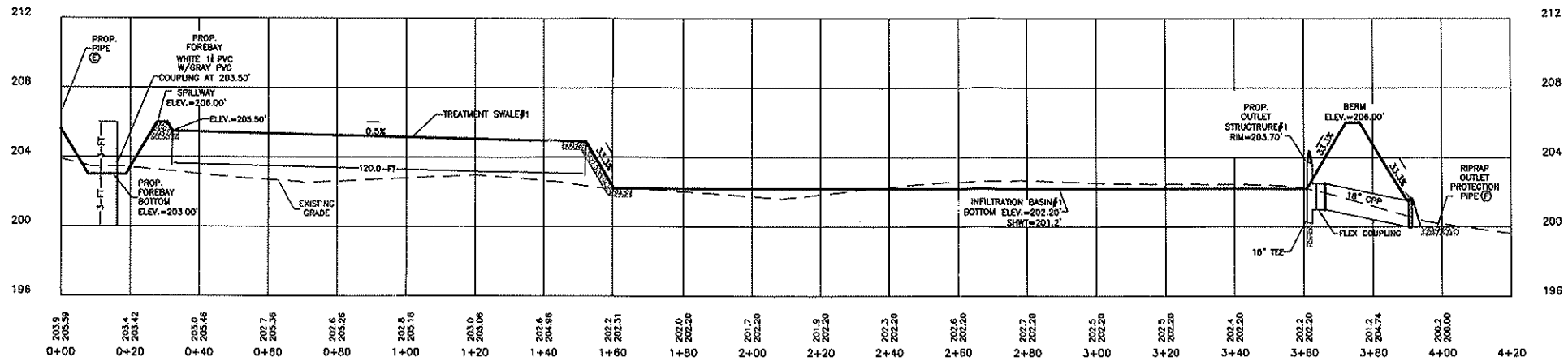
NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
APRIL 2017

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.

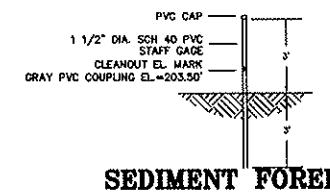
STATE OF NEW HAMPSHIRE SCOTT A. LANLER No.10035 LICENSED PROFESSIONAL ENGINEER

REVISION: PER TRG COMMENT DATED 3/16/17
PER PLANNING BOARD COMMENT DATED 4/3/17



PIPE E TO FORBAY TO TREATMENT SWALE#1 TO INFILTRATION BASIN#1 PROFILE

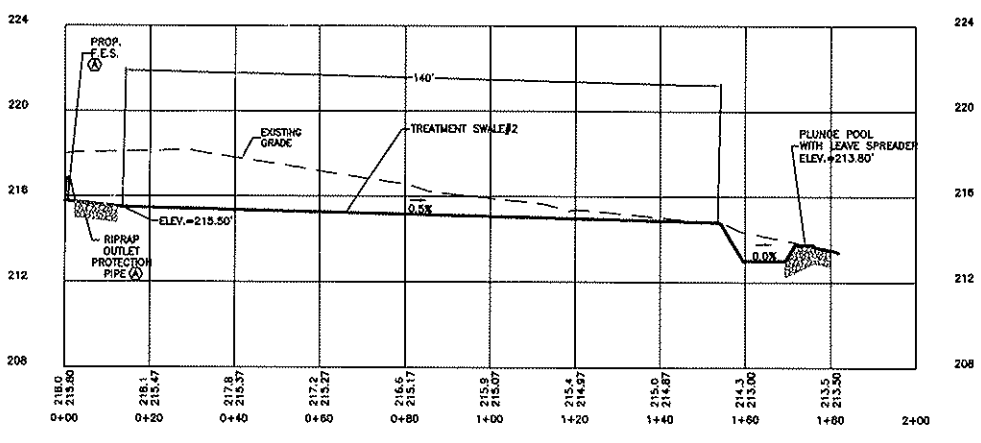
1" =20' (HORZ.) & 1" = 4' (VERT.)



SEDIMENT FOREBAY GAUGE DETAIL

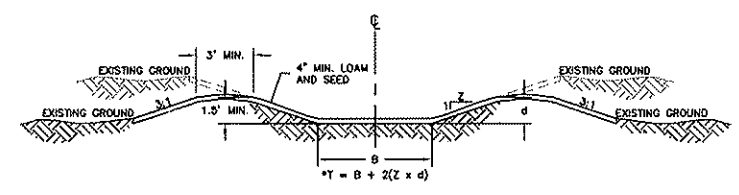
NOT TO SCALE

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.



PIPE A TO TREATMENT SWALE#2 PROFILE

1" =20' (HORZ.) & 1" = 4' (VERT.)



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

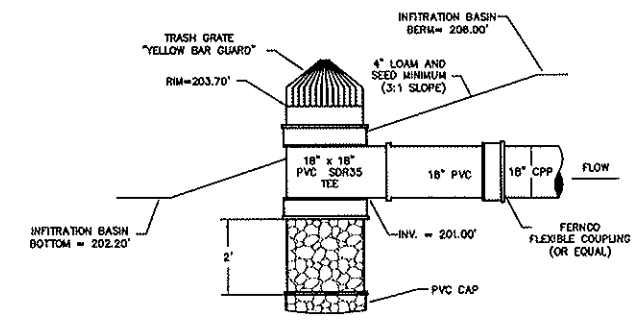
SWALE DIMENSION TABLE

LOCATION	B	d	Z	LENGTH
TS1	8'	1.5'	4	120'
TS2 PIPE A	8'	1.5'	3	140'

VEGETATED TREATMENT SWALE DETAIL

NOT TO SCALE

ALL EARTHEN BERMS TO BE CONSTRUCTED WITH CLEAN SILTY OR CLAYEY MATERIAL UNIFIED SOIL CLASSIFICATION CH OR CL. SUBMIT SAMPLES TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. INSTALL MATERIAL IN 6" LIFTS.



INFILTRATION BASIN #1 OUTLET STANDPIPE DETAIL

NOT TO SCALE

INFILTRATION BASIN:

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. 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.
4. VEGETATION SHALL BE ESTABLISHED IMMEDIATELY AFTER FINIAL GRADING IS COMPLETED.
5. CONSTRUCT THE INFILTRATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
6. LOAM AND SEED ONLY THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-10. SEED MIXTURE = A
7. 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.

FILE NO. 249
PLAN NO. C-2780
DWG. NO. 15225/SP-1
F.B. NO.

INFILTRATION BASIN & TREATMENT SWALE PROFILE & DETAILS

TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
APRIL 2017

LAND SURVEYORS

CIVIL ENGINEERS

PROPERTY LINE
LIMITS OF JURISDICTIONAL WETLANDS
JURISDICTIONAL WETLANDS 50 FOOT SETBACK
EXISTING TREE LINE
EXISTING STONEWALLS
EXISTING RAILROAD TRACKS
EXISTING CONTOUR LINE
EXISTING DRAIN LINE
EXISTING WATER LINE
EXISTING SEWER LINE
EXISTING WOODS PATH
EXISTING EDGE BROOK
PROPOSED GUARDRAIL
PROPOSED PAVEMENT
PROPOSED CULVERT
PROPOSED TEMPORAY WETLAND IMPACT
PROPOSED WETLAND IMPACT
PROPOSED STONE CHECK DAM
PROPOSED EROSION CONTROL BLANKET
PROPOSED SILT FENCE
PROPOSED LIMITS OF CLEARING
PROPOSED STONE

EXISTING WETLANDS

WETLAND LEGEND

PFO1E:	PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
R4UB3:	RIVERINE INTERMITTENT, UNCONSOLIDATED BOTTOM, INTERMITTENTLY FLOODED

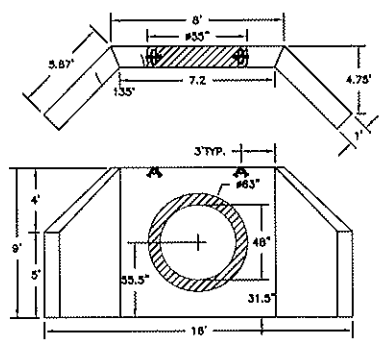
WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, DURING NOVEMBER 20, 2013 AND MAPPED BY NORWAY PLAINS ASSOCIATES, INC. USING TOTAL STATION SURVEY METHODS AND 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 OFHYDRIC 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.

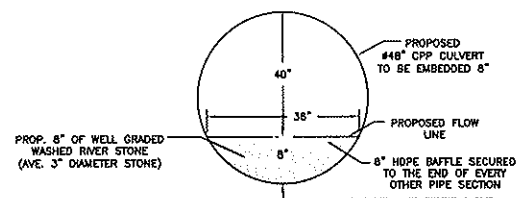
STATE OF NEW HAMPSHIRE
SCOTT A. LAWLER
No. 10026
LICENSED
PROFESSIONAL ENGINEER

REVISION: PER TRG COMMENT DATED 3/18/17
PER PLANNING BOARD COMMENT DATED 4/3/17



48" PIPE PRE-CAST WINGED WALL

NOT TO SCALE



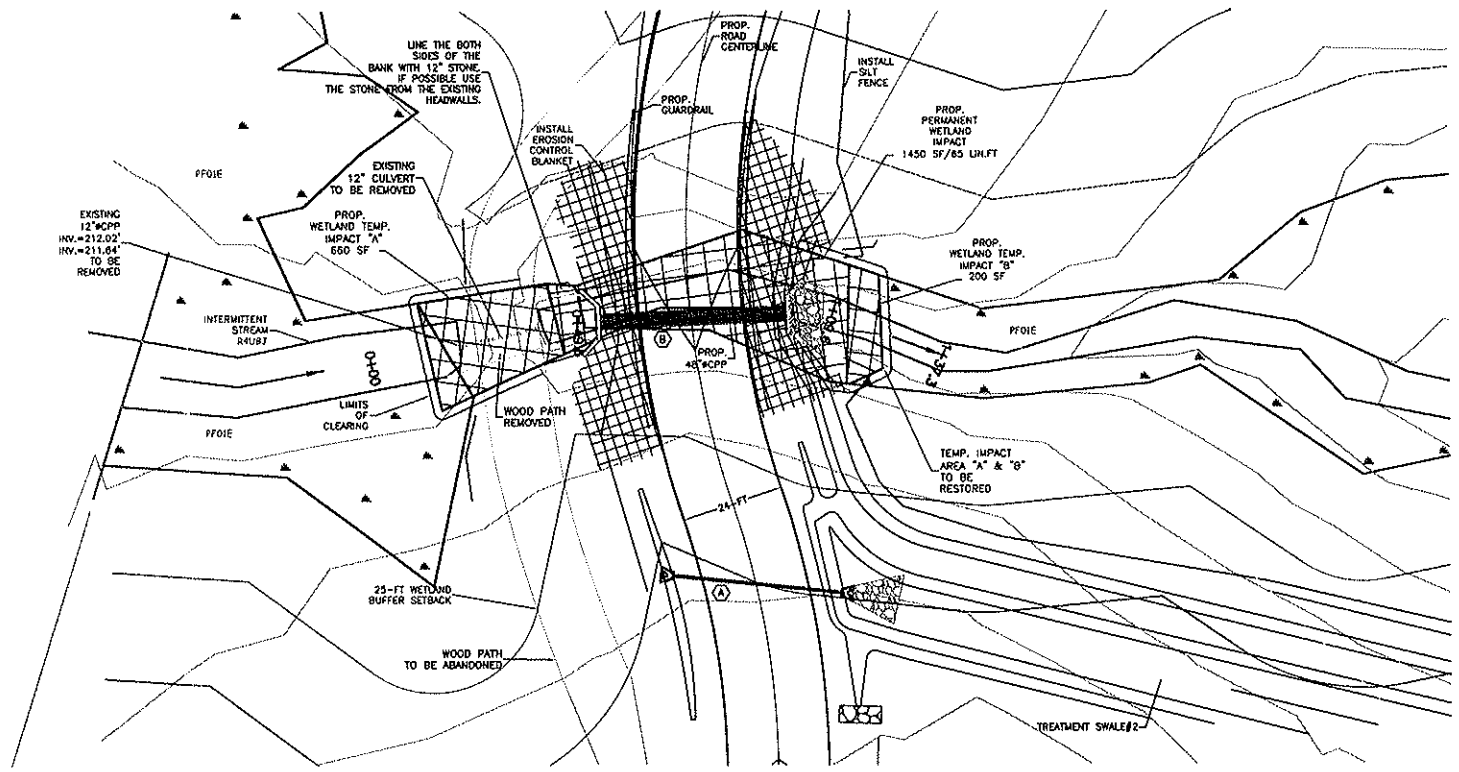
STONE LINED CULVERT DETAIL

NOT TO SCALE

RIVER STONE GRADATION
d50 = 3"

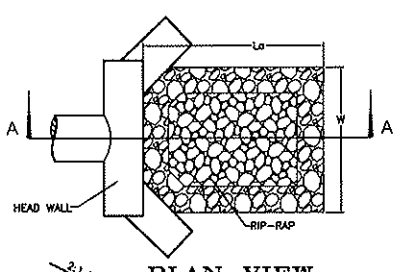
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)		
100	3	TO	4
85	3	TO	4
50	2	TO	3
15	1	TO	1

(B)— PROP. PIPE
48" CPP
INV. 211.30'
INV. OUT=209.94'
L = 45.0'
FILL 8" OF THE BOTTOM WITH ROUND STONE d50=3"



WETLAND CROSSING PLAN VIEW

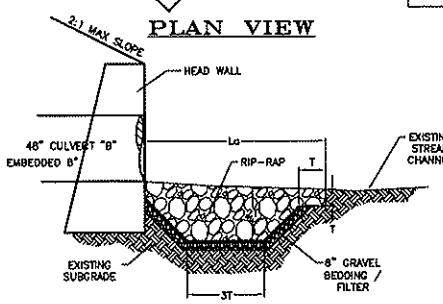
1" =20'



PLAN VIEW

RIP-RAP GRADATION
d50 = 6"

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)		
100	9	TO	12
85	9	TO	11
50	8	TO	9
15	2	TO	3



SECTION A-A

APRON DIMENSION TABLE

CULVERT	W	La	T	d50
PIPE B	8'	8'	16"	6"

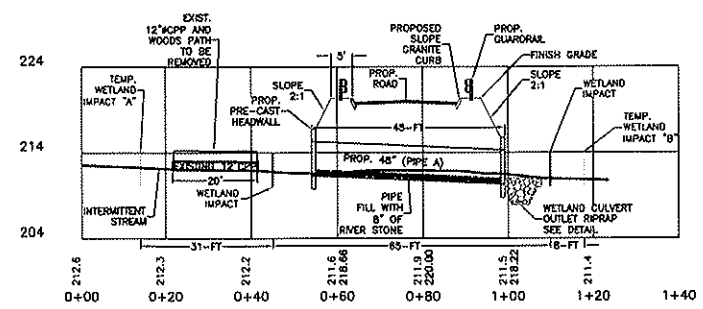
NOTES:
1. ALL PIPE CULVERTS SHALL HAVE HEADWALLS.
2. THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
3. APRON, WIDTHS AND THICKNESS HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.
4. THESE DETAILS SHALL BE USED AT THE WETLANDS CROSSING LOCATIONS.

CONSTRUCTION SPECIFICATIONS:
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC OR RIP RAP SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, VEGETATION, AND DEBRIS AND PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS AND DETAILS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. 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.
4. 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 DISPLACEMENT OF THE UNDERLYING MATERIALS. HAND PLACEMENT MAY BE REQUIRED TO PREVENT DAMAGE TO ANY PERMANENT STRUCTURES.
5. STONE FOR RIP RAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHALL BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT. FLAT ROCKS SHALL NOT BE USED FOR RIPRAP.
6. VOIDS IN THE RIP RAP SHALL BE FILLED WITH SPALLS AND SMALLER ROCKS.

MAINTENANCE NOTES:
1. ROCK RIP SHALL BE CHECKED AT LEAST TWICE A YEAR OR AFTER EVERY STORM GREATER THAN 2.5 INCHES OF RAIN OVER A 24-HOUR PERIOD.
2. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY UPON INSPECTION BEFORE FURTHER DAMAGE CAN TAKE PLACE.
3. WOODY VEGETATION SHALL BE REMOVED FROM THE ROCK RIP RAP ANNUALLY DUE TO TREE ROOTS EVENTUALLY DISLODGING THE ROCK RIPRAP.

WETLAND CULVERT OUTLET RIP-RAP DETAIL

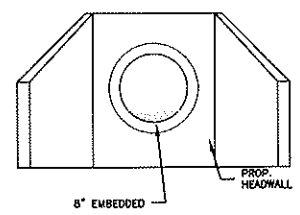
NOT TO SCALE



PIPE B PROFILE

1" =20' (HORZ.) & 1" = 10' (VERT.)

WETLAND IMPACT	SURFACE AREA	STREAM CHANNEL LEGNTH
TEMPORARY "A"	660 SF	31 FT
TEMPORARY "B"	200 SF	8 FT
PERMANENT	1,450 SF	65 FT
TOTAL	2,310 SF	104 FT



PIPE B FRONT VIEW AT UP STREAM HEADWALL

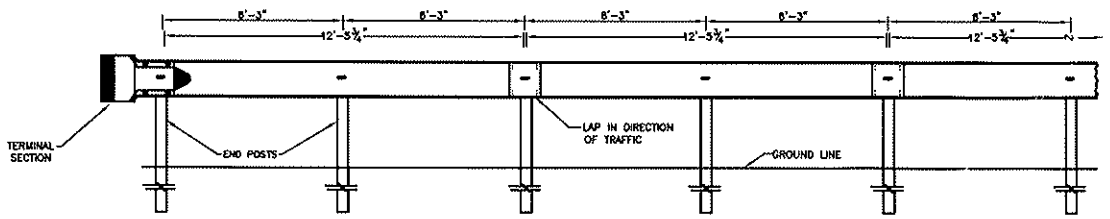
1"=5'

WETLAND CROSSING PLAN & DETAILS

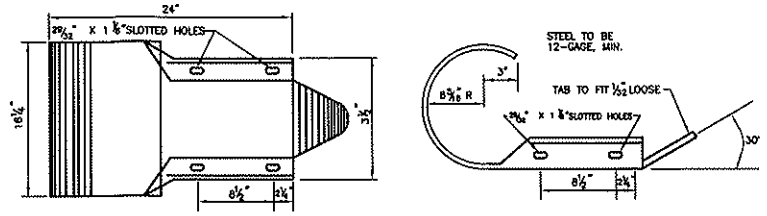
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
MARCH 2017

FILE NO. 249
PLAN NO. C-2780
DWG. NO. 15225/SP-1
F.B. NO.

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



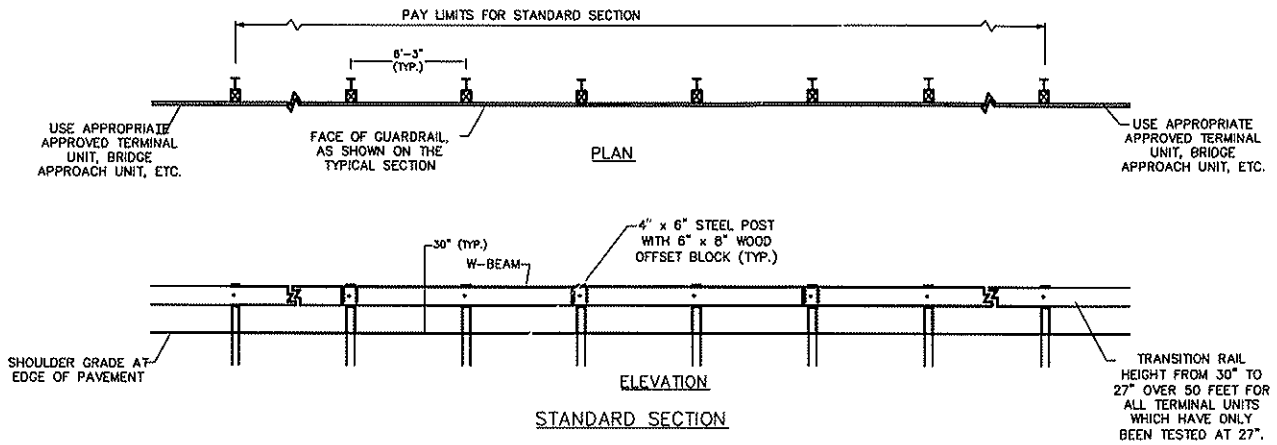
SAMPLE GUARDRAIL INSTALLATION LAYOUT



FRONT ELEVATION

PLAN VIEW

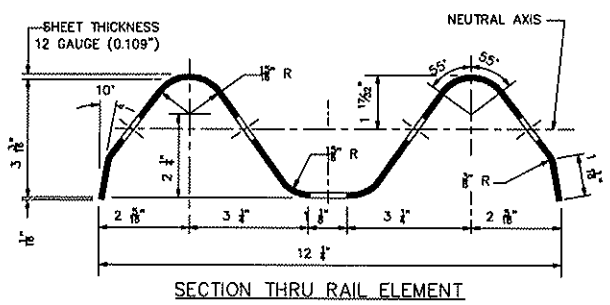
TERMINAL SECTION



ELEVATION

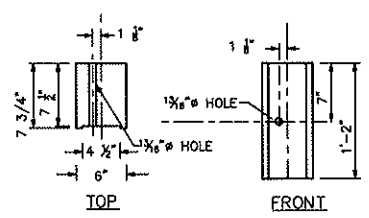
STANDARD SECTION

ITEM	606.120 – BEAM GUARDRAIL (STANDARD SECTION–STEEL POSTS)
PAID:	LINEAR FOOT
USE:	WHEREVER GUARDRAIL IS REQUIRED (NOTE: STEEL POSTS FOR PERMANENT INSTALLATIONS MAY ONLY BE USED IF SPECIFICALLY APPROVED BYT HE CHIEF ENGINEER.)



SECTION THRU RAIL ELEMENT

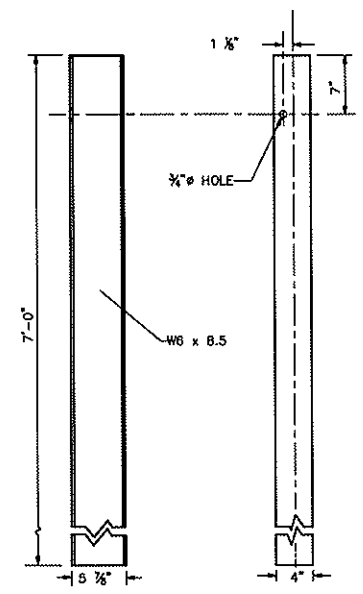
[RWM02a (12'-6") OR RWM22a (25'-0")]



TOP

FRONT

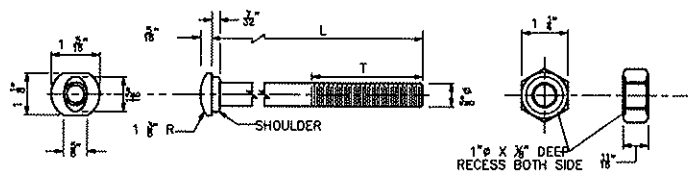
SYNTHETIC OFFSET BLOCK



SIDE

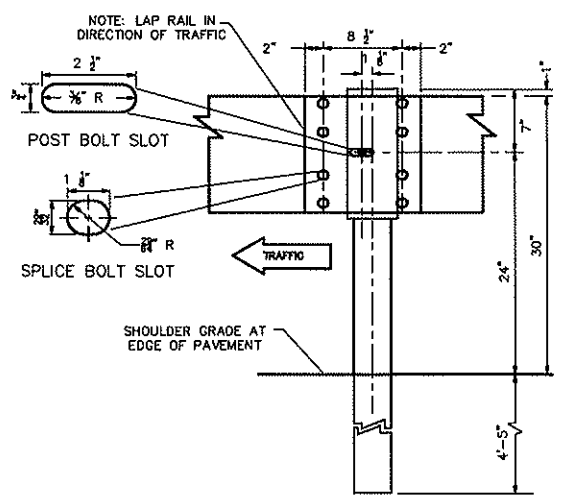
FRONT

STRUCTURAL SHAPE STEEL POST

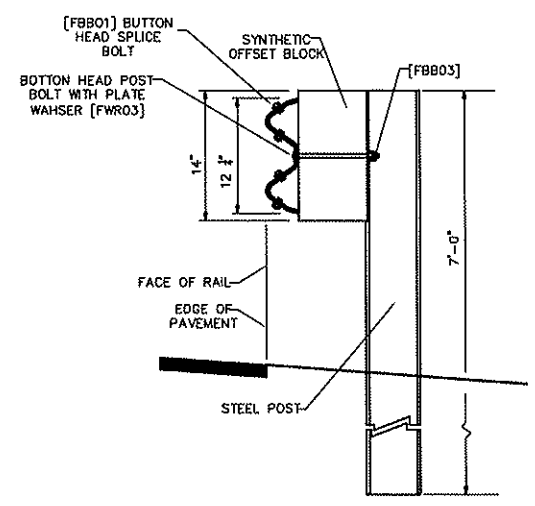


DESIGNATOR	L	T	INTENDED USE
FBB01	1 ¼"	FULL LENGTH THREAD	RAIL SPLICE BOLTS
FBB02	2"	1 ¼" MIN. THREAD LENGTH	POST BOLT (STEEL POSTS)
FBB03	10"	4" MIN. THREAD LENGTH	POST BOLT

5/8" BUTTON HEAD BOLT AND RECESSED NUT



LINE POST ELEVATION VIEW AT BEAM SPLICE



TYPICAL SIDE VIEW

(SHOWN WITH FASTENERS)

GENERAL NOTES

1. LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE "ROADSIDE – LATEST ADOPTED VERSION. DESIGN GUIDE"
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE "A GUIDE TO STANDARDIZED STANDARD ELEMENTS DETAILED IN, LATEST ADOPTED VERSION, HIGHWAY BARRIER HARDWARE" AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
3. THE RECTANGULAR PLATE WASHER [FWR03] IS USED ONLY FOR 37'-6" OF STANDARD SECTION UPSTREAM OF A TERMINAL UNIT TYPE G-2 (SEE STANDARD NO. GR-10).
4. USE 12'-6" LENGTH RAIL ELEMENT IN CURVES OF LESS THAN 300' RAIL RADIUS.
5. WHEN GUARDRAIL IS INSTALLED BEHIND CURB, EITHER 6'-0" BEHIND SLOPE CURB ON A CURBED RAMP OR AT THE BACK OF SIDEWALK WITH BARRIER CURB, THE RAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.
6. POSTS SHORTER THAN THE 7'-0" INDICATED ON THE DETAIL, BUT NOT LESS THAN 6'-0", MAY ONLY BE USED WHEN
   A) THE SLOPE BEHIND THE GUARDRAIL IS NO STEEPER THAN 4:1
   B) WHERE THE DISTANCE FROM THE BACK OF THE POST TOTHE BREAK OF THE SLOPE IS A MINIMUM OF 2'-0"
   C) AND THEN ONLY AS APPROVED OR SPECIFICALLY SHOWN ON THE PLANS.
7. TO INSTALL THE 7'-0" POSTS IN ROCK FILL AREAS AND IN AREAS OF OTHER DIFFICULT SITE CONDITIONS, METHODS SUCH AS AUGURING, EXCAVATING, AND OTHER MORE UNUSUAL METHODS MAY BE REQUIRED FOR INSTALLING POSTS. THOSE CONDITIONS AND THE REQUIREMENT FOR UNUSUAL METHODS OF POST INSTALLATION ARE NOT CONSIDERED JUSTIFICATION FOR REDUCING THE EMBEDMENT DEPTH OF THE POSTS AND WILL NOT BE APPROVED AS SUCH.
8. THE FHWA ADMINISTRATION HAS APPROVED THE USE OF OFFSET BLOCKS WITH DIMENSIONS THAT VARY MORE THAN WOULD BE CONSIDERED WITHIN THE NORMAL CONTEXT OF NOMINAL DIMENSIONS. IN ORDER TO PROPOSE THE USE OF ANY OFFSET BLOCKS THAT HAVE OTHER THAN THE NOMINAL DIMENSIONS SHOWN ON THE DETAILS, THE FOLLOWING CRITERION APPLIES:
   A) THE OFFSET BLOCKS BE SHOWN TO BE APPROVED BY THE FHWA ADMINISTRATION AS MEETING THE TL-3 CRITERIA AS DESCRIBED IN THE NCHRP 350 TESTING,
   B) THE FACE OF RAIL MUST REMAIN AT THE EDGE OF PAVEMENT OR AT THE INDICATED OFFSET, PER THE DESIGN PLANS, AND
   C) THERE MUST NOT BE A DECREASE IN THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK IN THE SLOPE AS SHOWN ON THE DESIGN PLANS. AN INCREASE IN THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK IN THE SLOPE IS ACCEPTABLE.
   D) ALL OTHER REQUIREMENTS OF THE PERTINENT SPECIFICATIONS AND DETAILS REMAIN IN FORCE.

REFERENCE NOTE

1. DETAILS FOR GUARDRAIL SHOWN ON THIS PAGE EXCERPTED FROM AND SPECIFIED TO MATCH NHDOT STANDARD PLANS, STANDARD NO. GR-2 AND GR-10; BEAM GUARDRAIL STANDARD SECTION – STEEL POST & HARDWARE DETAILS.

GUARDRAIL DETAILS
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH

PREPARED FOR:

LAPERLE FAMILY TRUST

MARCH 2017

FILE NO. 249
PLAN NO. C-2751
DWG. NO. 15111/SP-1
F.B. NO. SDR-TJR

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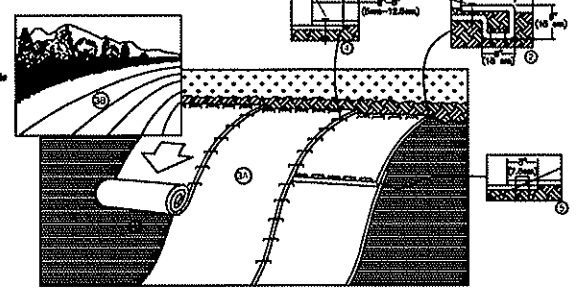


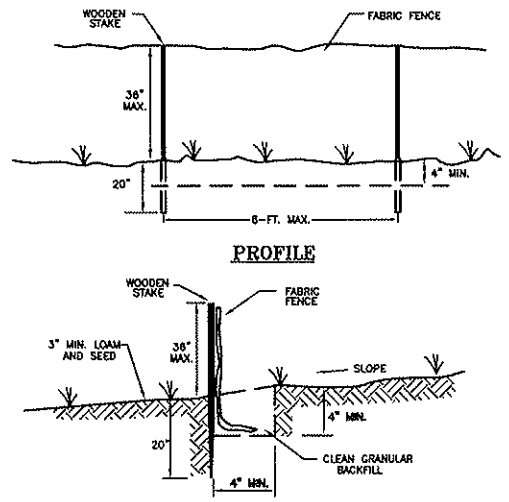
SLOPE INSTALLATION

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's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
      NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
   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 BIO-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 BIO-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 BIO-STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , BIO-STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
   D. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 3" (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 BLANKET DETAIL

NOT TO SCALE

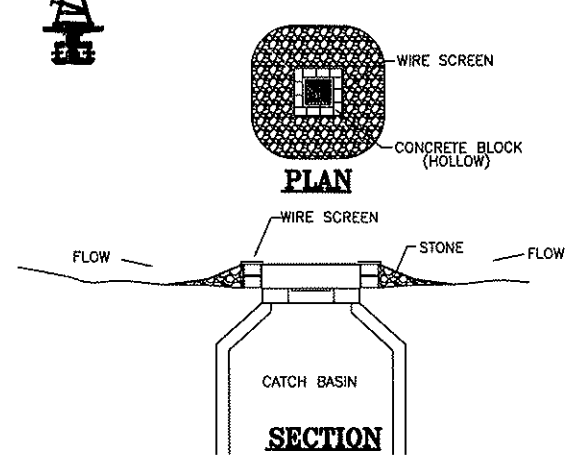


MAINTENANCE REQUIREMENTS:
1. FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS.
2. SEDIMENT DEPOSITION SHALL BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION 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 8 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 8 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 TO 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



BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER

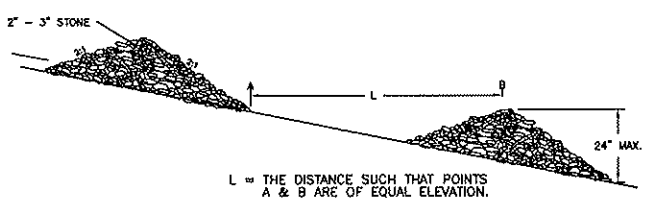
NOT TO SCALE

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

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

DRAINAGE WAY CROSS-SECTION

SPACING BETWEEN CHECK DAMS	
SLOPE (FT/FT)	LENGTH (FT)
0.020	75
0.030	50
0.040	37
0.050	30
0.060	19
0.100	15
0.120	13
0.150	10



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.
3. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE NOTES:
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHALL BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
2. PARTICULAR ATTENTION SHALL BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
3. WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, 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

NOT TO SCALE

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

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

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

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.

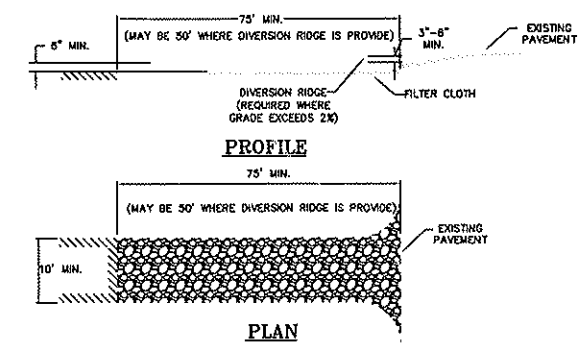
SEEDBED PREPARATION:
1. STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
2. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
3. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS 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 (8-0-4) OR EQUIVALENT

SEEDING:
1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
3. AREAS 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. VEGETATIVE 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 CONSTRUCTION EXIT

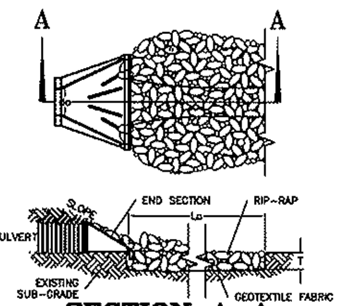
NOT TO SCALE

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.
3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
4. THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
5. THE PAD SHALL BE AT LEAST 6 INCHES THICK.
6. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
7. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
8. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

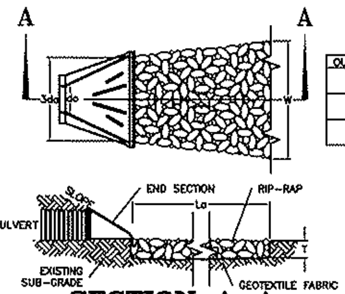
TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
MARCH 2017

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.



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

APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	Wo	W	Lo	T	d50
PIPE A	12" CPP	3'	12.9'	9.9'	9"	3"
PIPE E	15" CPP	3.75'	15.9'	12.1'	9"	3"
PIPE F	18" CPP	4.5'	15.2'	10.7'	9"	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.
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.
A) IN AREAS TO BE PAVED:
a) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
1. 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, BUT IN NO CASE EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREA ARE STABILIZED.
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.
1. 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-2.
2. 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-3.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
4. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
5. 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.
6. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
14. 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.
15. 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.
16. 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.
17. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
18. THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 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)

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 PEREMITER OF THE INFILTATION 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 THE LOCATION OF THE PROPOSED DRIVEWAY CONNECTION TO AIRPORT DRIVE. 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 GRAVEL WETLANDS BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE GRAVEL WETLAND BASIN DETAILS SHOWN ON SHEET C-10.
8. 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-11.
9. CONSTRUCT THE GRAVEL WETLANDS BASIN, SEDIMENT FOREBAY AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS.
10. ALL DITCHES/SWALES/AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
11. PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS.
A) INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
1. 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.)
2. INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS, CATCH BASINS AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-8, AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING
3. CONSTRUCT THE INFILTRATION BASINS AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON SHEET C-7.
4. 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.
5. INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
6. THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
7. 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.
8. 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:
20. 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.
21. 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.
22. ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
23. SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE.

PROJECT COMPLETION AND STABILIZATION:
24. 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.
25. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS AND THE SEDIMENT FOREBAYS TO THE GRAVEL WETLANDS BASIN.

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

REVISION: PER TRC COMMENT DATED 3/16/17

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 NOVEMBER 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 AND SEDIMENTATION CONTROL
TAX MAP 255, LOT 24-1
52 HAVEN HILL RD.
ROCHESTER, NH
PREPARED FOR:
LAPERLE FAMILY TRUST
APRIL 2016

FILE NO. 249
PLAN NO. C-2829
DWG. NO. 16186/S-1
F.B. NO.