

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

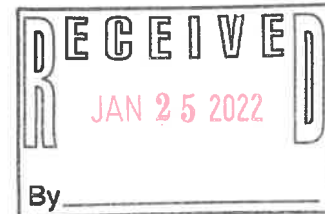
P.O. Box 249
Continental Blvd. (03867)
Rochester, NH 03866-0249
Phone (603) 335-3948
www.norwayplains.com



P. O. Box 268
31 Mooney St.
Alton, NH 03809
Phone & Fax (603) 875-3948

January 21, 2022

Shanna Saunders, Planning Director
Planning Department
City of Rochester
33 Wakefield Street
Rochester, NH 03867



Re: Nonresidential Site Plan Application; Ko-Go, LLC, 0 Farmington Road, Map 208, Lot 16.

Dear Ms. Saunders:

On behalf of Ko-Go, LLC, Norway Plains Associates, Inc. is pleased to submit a Non-Residential Site Plan Application. Ko-Go, LLC is in the process of purchasing the property located on Farmington Road for the purpose of constructing an electric vehicle charging facility. The parcel located in front of 127 Farmington Road is identified by the City of Rochester assessors as Tax Map 208, Lot 16. The 1.66 acre vacant parcel is currently owned by the estate of Robert A. Rowe. The property is located in the Granite Ridge Development Zoning District as well as the Conservation Overlay and Aquifer Protection Overlay Districts.

The parcel is located on the north side of Farmington Road. To the southwest of the property there is a wetland complex that was delineated by B.H. Keith Associates on December 27, 2021. The parcel abuts the Meineke Car Care Center to the south and there is a vacant commercial property located across Route 11 / Farmington Road. Behind the parcel is the NH Rails to Trails system with the residential parcel beyond. Access to the parcel is off Route 11 via a shared driveway a residential property located on Tax Map 208, Lot 17.

The proposed project is the construction of an electrical vehicle (EV) charging facility. This facility will have 6 charging stations located under a canopy. The charging stations are a distinct design that incorporates individually designated charging spots with assigned charging units, designed to service EV owners/drivers as a complete EV charging system. This distinct system operates much like a traditional gas station in which drivers pull up to a pump and "power" their vehicle. No long-term parking is allowed as this would prevent other drivers from accessing the "power" that is needed. In addition to the 6 charging stations, there is a small parking area for 4 additional vehicles waiting for a spot to open up.

A new driveway to the facility will be constructed about 18 feet from the location of the existing gravel driveway. This paved driveway will be constructed to a width of 24 feet to accommodate two-way traffic. A stop sign and painted stop bar will be installed at the intersection of Route 11 / Farmington. This driveway reconstruction will require approval from NH Department of Transportation, given Route 11 is within the State's jurisdiction.

With the exception of short periods for maintenance, the facility will be accessible 24 hours a day, 7 days a week. Built within the EV units is a limit of 60 minutes that a vehicle can be charged. This limitation will allow for more users to access the chargers. As such, there will not be any long term parking allowed at the site. All of this is spelled out within the company app which also informs the user where the station is and what the availability of open charging stations. Generally, most users will be on site between 20 and 30 minutes, as that will allow for about 60 to 80% charges to the vehicles. The owners anticipate a minimum of 10 vehicles a day utilizing the

facility at the start. As EV become more popular and common place, the number of users will surely increase. This type of designated charging facility is the first one in New Hampshire and should provide a great place for travelers to and from the White Mountains and the lake regions to recharge their batteries and alleviate their 'range' anxiety.

An employee will visit the site a minimum of once a week to perform routine site maintenance. Maintenance to the EV units will be mostly done remotely through software patches. The units will send an alert directly to the owners if the unit is down, to which an employee would come to the site. In addition to the occasional site visits by an employee, there will be multiple security cameras placed around the facility to video record and allow the owner to have access to a "live" view of the facility.

As a result of the proposed site development, there will be an increase in the overall impervious surfaces. To account for the additional stormwater runoff, a shallow grass infiltration basin will be constructed behind the facility. This basin will provide some recharge of runoff back into the groundwater, provide treatment of runoff and avoid any additional runoff from leaving the property. Furthermore, the stormwater management system will achieve the standards outlined for a new development project within the City of Rochester Chapter 218 ordinance.

At this timeframe, there are no proposed facilities on the premise. As such, there are no proposed connections to the City water or any sanitary disposal system or connection to the City sewer system. Overhead wires will continue to service the property and the abutting residence. A new pole will be added to provide underground power and communication to the facility.

Depicted on the site plan are three light poles to provide illumination of the parking and driveways. These pole mounted fixtures will be capable of running off solar power. Within the canopy, there are recessed light fixtures to ensure the fixtures are full cut-off and downlighting. Landscaping has been shown to provide a nice aesthetic appearance from Route 11 and to provide screening to the rear residential use. A freestanding sign will be installed near the entrance.

With the exception of the aforementioned NHDOT approval for the driveway reconstruction, there are no other State or Federal permits required for this development. A City of Rochester Stormwater Management and Erosion Control permit will be applied for prior to start of construction. A Use variance from the City of Rochester Zoning Board of Adjustment was granted on January 5, 2022 to allow for the construction of an electric vehicle charging facility with 6 charging stations and associated lighting. Please refer to case Z-22-02.

We look forward to discussing this project with staff and the Planning Board. Thank you for your consideration
Sincerely,

NORWAY PLAINS ASSOCIATES, INC.



By:
Scott A. Lawler, PE, Project Engineer

cc: Ko-Go, LLC

Describe proposed activity/use: Construct a commercial EV charging station with 6 charging units and parking for 10.

Describe existing conditions/use (vacant land?): The lot is current vacant land.

Utility information

City water? yes ___ no x; How far is City water from the site? _____

City sewer? yes ___ no x; How far is City sewer from the site? _____

If City water, what are the estimated total daily needs? _____ gallons per day

If City water, is it proposed for anything other than domestic purposes? yes ___ no ___

If City sewer, do you plan to discharge anything other than domestic waste? yes ___ no ___

Where will stormwater be discharged? Infiltration Basin

Building information

Type of building(s): Canopy

Building height: 13' Finished floor elevation: _____

Other information

parking spaces: existing: 0 total proposed: 10; Are there pertinent covenants? No

Number of cubic yards of earth being removed from the site N/A

Number of existing employees: 0; number of proposed employees total: 0

Check any that are proposed: variance x; special exception ___; conditional use ___

(see Case Z-22-02)
Wetlands: Is any fill proposed? No; area to be filled: _____; buffer impact? _____

Proposed <u>post-development</u> disposition of site (should total 100%)		
	Square footage	% overall site
Building footprint(s) – give for each building(canopy)	1,560	2.2
Parking and vehicle circulation	5,289	7.3
Planted/landscaped areas (excluding drainage)	3,870	5.3
Natural/undisturbed areas (excluding wetlands)	51,783	71.4
Wetlands	6,490	8.9
Other – drainage structures, outside storage, etc.	3,525	4.9

Comments

Please feel free to add any comments, additional information, or requests for waivers here:

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), and/or the agent.

I (we) hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the City of Rochester Site Plan Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner: _____

Date: _____

Signature of applicant/developer: Victoria Perry

Date: 24 Jan 2022

Signature of agent: [Signature]

Date: 24 Jan 2022

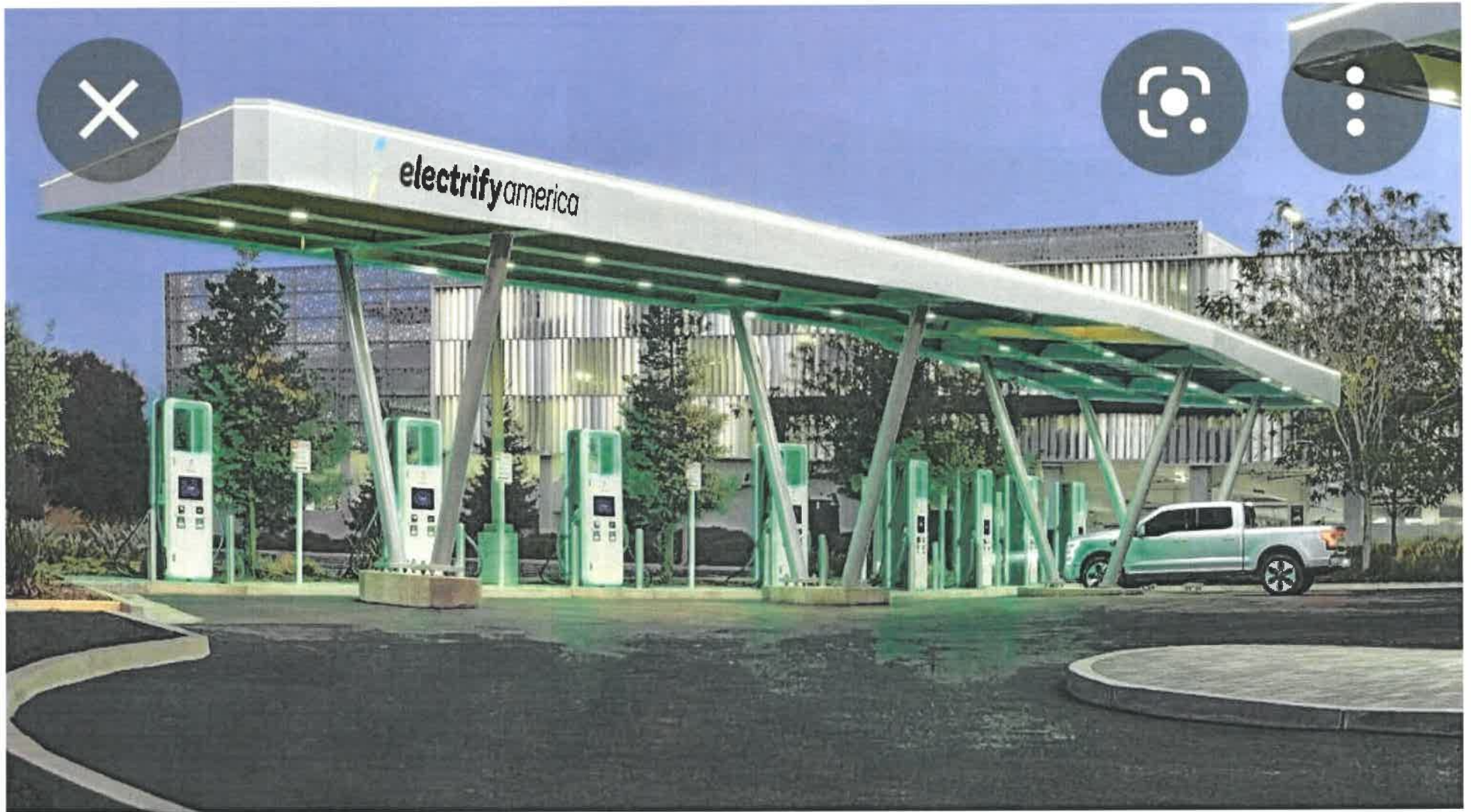
Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner: _____

Date: _____





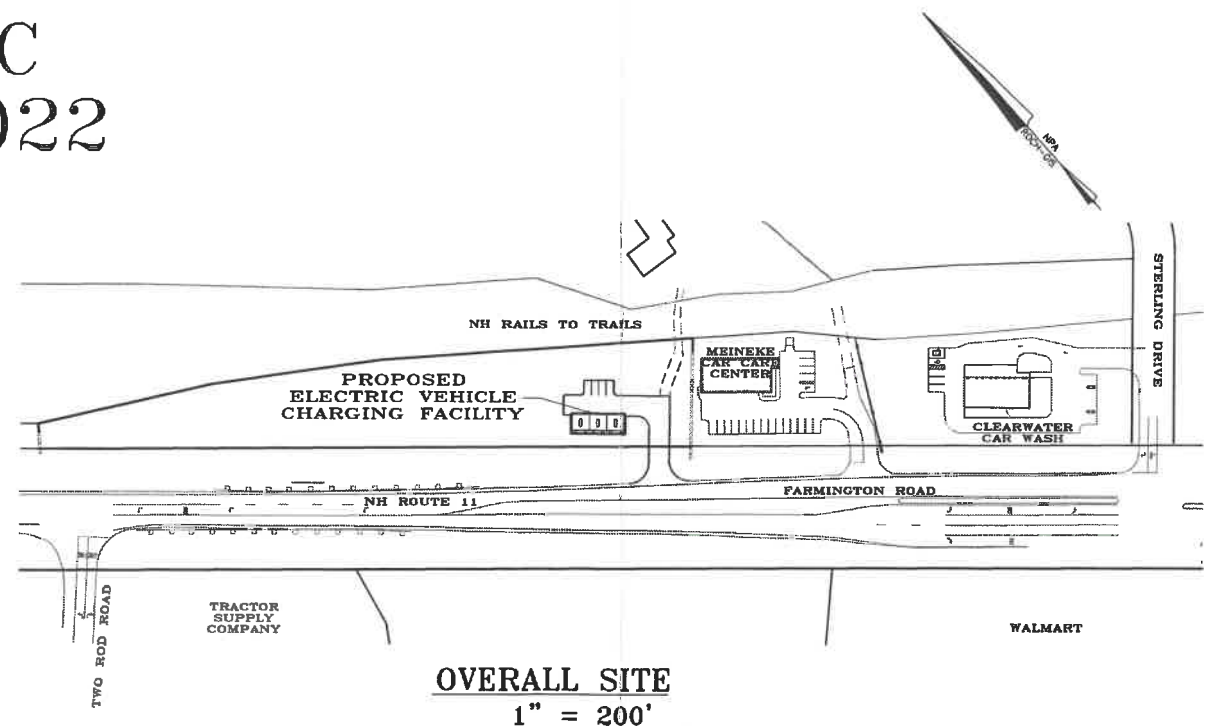
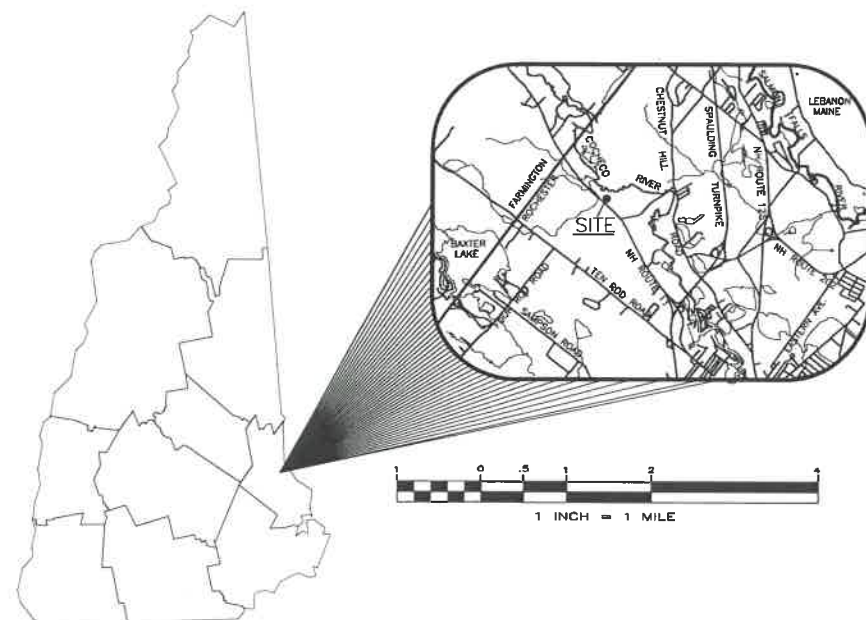


PROPOSED ELECTRIC VEHICLE CHARGING FACILITY

FARMINGTON ROAD

PREPARED FOR

KO-GO LLC
JANUARY 2022



OVERALL SITE
1" = 200'



CIVIL ENGINEERS

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

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

OWNER OF RECORD

TAX MAP 208, LOT 16
OWNER OF RECORD:
ESTATE OF ROBERT A. ROWE, SR.
C/O PAMELA M. WATSON
1215 BOND STREET
HERNDON, VA 20170
SCRD BOOK 4959, PAGE 42 &
BOOK 1747 PAGE 132

APPLICANT

KO-GO, LLC
C/O VICTORIA PEREZ
25 ERNEST AVENUE UNIT 1
EXETER, NH 03833
(603) 438-2695

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

NHDES ALTERATION OF TERRAIN:	NOT REQUIRED
NHDES WETLANDS PERMIT:	NOT REQUIRED
NHDES DAM PERMIT:	NOT REQUIRED
NHDES SUBDIVISION PERMIT:	NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT:	NOT REQUIRED
NHDES WASTEWATER PERMIT:	NOT REQUIRED
NHDOT DRIVEWAY/ENTRANCE PERMIT:	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).

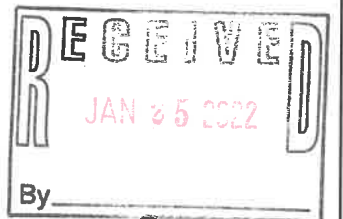
NPDES PERMIT: NOT REQUIRED

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: _____



SHEET INDEX

SHEET	DESCRIPTION	SCALE
COVER	EXISTING FEATURES	1" = 40'
C-1	OVERALL SITE PLAN	1" = 40'
C-2	SITE LAYOUT PLAN	1" = 20'
C-3	GRADING, DRAINAGE, EROSION AND SEDIMENTATION CONTROL PLAN	1" = 20'
C-4	CONSTRUCTION DETAILS	AS SHOWN
C-5	EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
L-1	SITE LANDSCAPING PLAN	1" = 20'
L-2	LIGHTING PLAN AND DETAILS	1" = 20'

FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

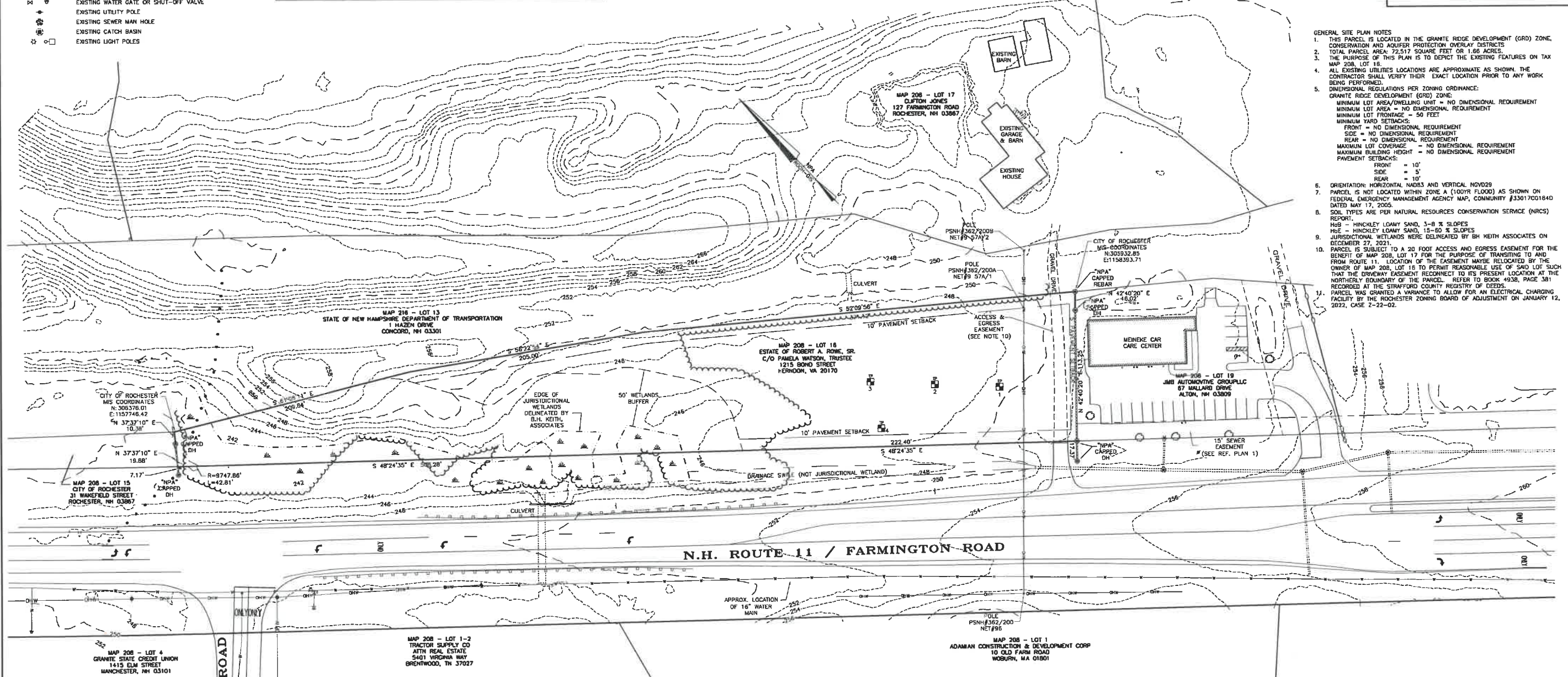
LAND SURVEYORS

CIVIL ENGINEERS

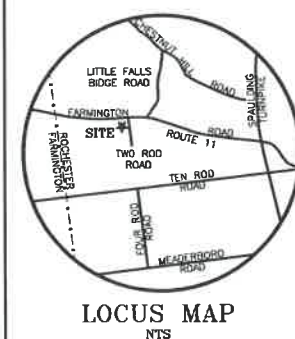
LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES

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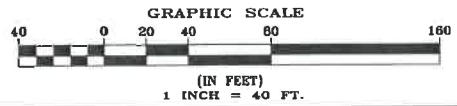
- GENERAL SITE PLAN NOTES
- THIS PARCEL IS LOCATED IN THE GRANITE RIDGE DEVELOPMENT (GRD) ZONE, CONSERVATION AND AQUIFER PROTECTION OVERLAY DISTRICTS.
 - TOTAL PARCEL AREA: 72,517 SQUARE FEET OR 1.66 ACRES.
 - THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING FEATURES ON TAX MAP 208, LOT 16.
 - ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
 - DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:
 - GRANITE RIDGE DEVELOPMENT (GRD) ZONE:
 - MINIMUM LOT AREA/DWELLING UNIT = NO DIMENSIONAL REQUIREMENT
 - MINIMUM LOT AREA = NO DIMENSIONAL REQUIREMENT
 - MINIMUM LOT FRONTAGE = 50 FEET
 - MINIMUM YARD SETBACKS:
 - FRONT = NO DIMENSIONAL REQUIREMENT
 - SIDE = NO DIMENSIONAL REQUIREMENT
 - REAR = NO DIMENSIONAL REQUIREMENT
 - MAXIMUM LOT COVERAGE = NO DIMENSIONAL REQUIREMENT
 - MAXIMUM BUILDING HEIGHT = NO DIMENSIONAL REQUIREMENT
 - PAVEMENT SETBACKS:
 - FRONT = 10'
 - SIDE = 5'
 - REAR = 10'
 - ORIENTATION: HORIZONTAL, VERTICAL AND VERTICAL NGVD29.
 - PARCEL IS NOT LOCATED WITHIN ZONE A (100YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP, COMMUNITY #33017001840 DATED MAY 17, 2005.
 - SOIL TYPES ARE PER NATURAL RESOURCES CONSERVATION SERVICE (NRCS) REPORT:
 - H08 - HINCKLEY LOAMY SAND, 3-8 % SLOPES
 - H09 - HINCKLEY LOAMY SAND, 15-50 % SLOPES
 - JURISDICTIONAL WETLANDS WERE DELINEATED BY BH KEITH ASSOCIATES ON DECEMBER 27, 2021.
 - PARCEL IS SUBJECT TO A 20 FOOT ACCESS AND EGRESS EASEMENT FOR THE BENEFIT OF MAP 208, LOT 17 FOR THE PURPOSE OF TRANSFERRING TO AND FROM ROUTE 11. LOCATION OF THE EASEMENT MAYBE RELOCATED BY THE OWNER OF MAP 208, LOT 15 TO PERMIT REASONABLE USE OF SAID LOT SUCH THAT THE DRIVEWAY EASEMENT RECONNECT TO ITS PRESENT LOCATION AT THE NORTHERLY BOUNDARY OF THE PARCEL. REFER TO BOOK 4938, PAGE 381 RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS.
 - PARCEL WAS GRANTED A VARIANCE TO ALLOW FOR AN ELECTRICAL CHARGING FACILITY BY THE ROCHESTER ZONING BOARD OF ADJUSTMENT ON JANUARY 12, 2022, CASE 2-22-02.



- TEST PITS PERFORMED ON JANUARY 19, 2022 BY ASHLEY ROWE, DESIGNER
- TEST PIT 1
0' - 12' LOAM TOPSOIL
12' - 66' LOOSE BANKRUN GRAVEL, COBBLES COMMON, NO REDOX FEATURES
PRESENT WATER OBSERVED AT 66'
- TEST PIT 2
0' - 8' LOAM TOPSOIL
8' - 67' LOOSE BANKRUN GRAVEL, COBBLES COMMON, NO REDOX FEATURES
PRESENT WATER OBSERVED AT 67'
- TEST PIT 3
0' - 8' LOAM TOPSOIL
8' - 60' LOOSE BANKRUN GRAVEL, COBBLES COMMON, NO REDOX FEATURES
PRESENT WATER OBSERVED AT 60'
- TEST PIT 4
0' - 7' LOAM TOPSOIL
7' - 43' LOOSE MEDIUM GRAIN SANDS, SINGLE GRAIN
43' - 79' LOOSE MEDIUM GRAIN SANDS, SINGLE GRAIN, REDOX FEATURES
PRESENT BELOW 43', WATER OBSERVED AT 79',
ESTIMATED SEASONAL HIGH WATER TABLE AT 43'

TAX MAP 208, LOT 16
OWNER OF RECORD:
ESTATE OF ROBERT ROWE
C/O PAMELA WATSON
1215 BOND STREET
HERNDON, VA 20170
SCRD BOOK 4959, PAGE 42 &
BOOK 1747 PAGE 132

EXISTING FEATURES
TAX MAP 208, LOT 16
FARMINGTON ROAD
ROCHESTER, NH
PREPARED FOR:
KO-GO LLC
JANUARY 2021



FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

REFERENCE PLANS:
1. LOT LINE REVISION - FARMINGTON RD/NH ROUTE 11 - ROCHESTER, N.H. FOR BLACK DOG CAR WASH LLC AND ROBERT A. ROWE, SR./ DATED OCTOBER 2003 BY NORWAY PLAINS ASSOCIATES, INC. AND RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS, PLAN 78-20.

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

NORWAY PLAINS ASSOCIATES, INC.

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

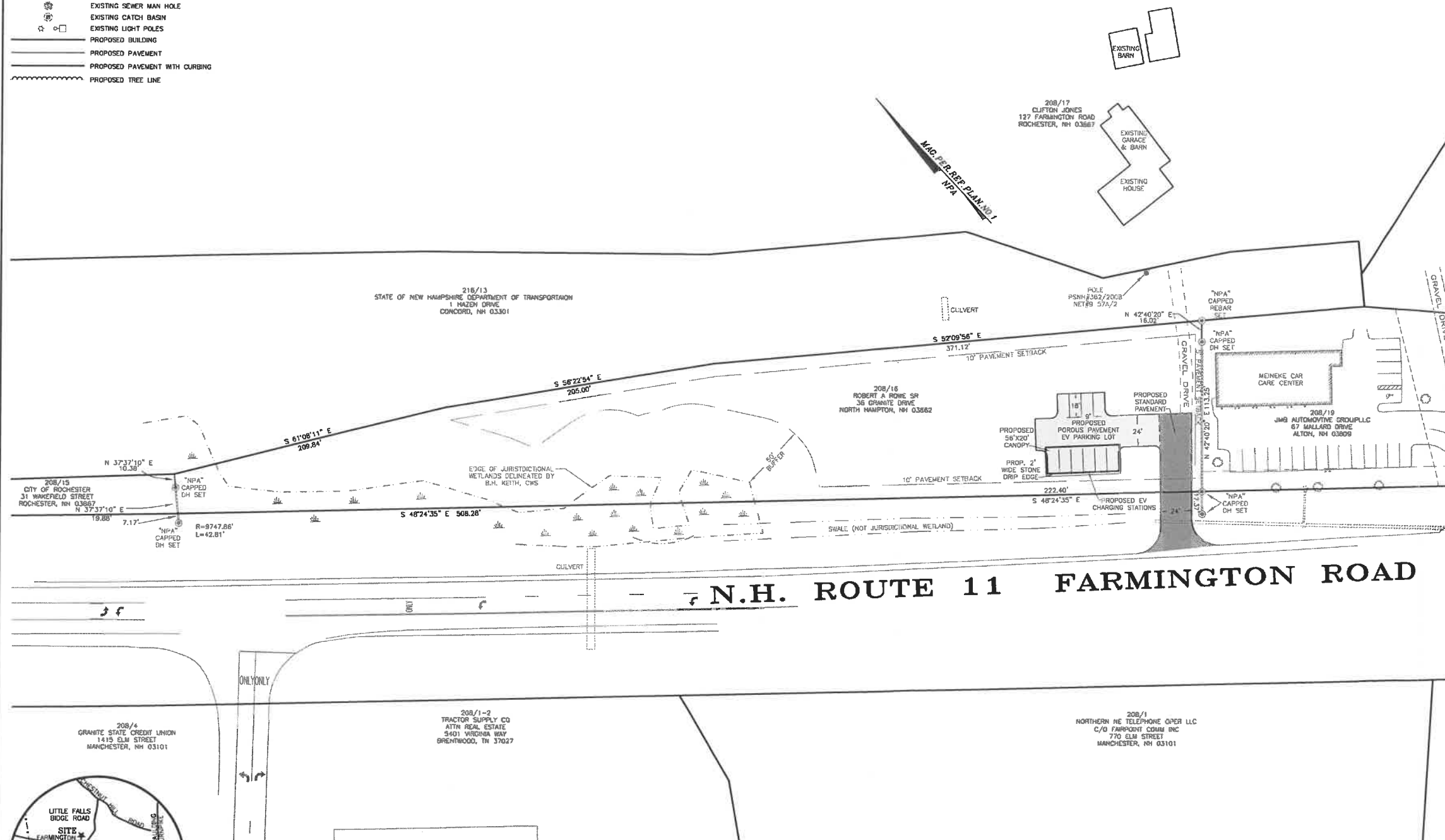
LAND SURVEYORS

CIVIL ENGINEERS

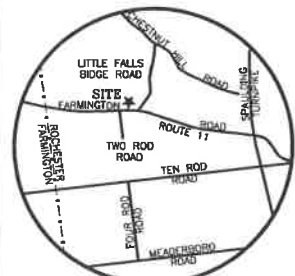
LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED TREE LINE

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



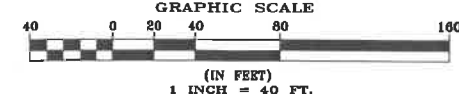
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 - THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED EV PARKING LOT.
 - ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
 - THESE PLANS SHOW ONLY THOSE FEATURES THAT WERE VISUALLY PER REFERENCE PLAN 1.
 - DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:
GRANITE RIDGE DEVELOPMENT (GRD) ZONE:
MINIMUM LOT AREA/DWELLING UNIT = NO DIMENSIONAL REQUIREMENT
MINIMUM LOT AREA = NO DIMENSIONAL REQUIREMENT
MINIMUM LOT FRONTAGE = 50 FEET
MINIMUM YARD SETBACKS:
FRONT = NO DIMENSIONAL REQUIREMENT
SIDE = NO DIMENSIONAL REQUIREMENT
REAR = NO DIMENSIONAL REQUIREMENT
MAXIMUM LOT COVERAGE = NO DIMENSIONAL REQUIREMENT
MAXIMUM BUILDING HEIGHT = NO DIMENSIONAL REQUIREMENT
PAVEMENT SETBACKS:
FRONT = 10'
SIDE = 5'
REAR = 10'
 - ORIENTATION: HORIZONTAL AND VERTICAL DATUMS - CITY OF ROCHESTER GIS.
 - PARCEL IS NOT LOCATED WITHIN ZONE A (100YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP, COMMUNITY #33017C01840 DATED MAY 17, 2005.
 - SOIL TYPES ARE PER NATURAL RESOURCES CONSERVATION SERVICE (NRCS) REPORT.
HOB - HINCKLEY LOAMY SAND, 3-8 % SLOPES
HBE - HINCKLEY LOAMY SAND, 15-60 % SLOPES
 - JURISDICTIONAL WETLANDS WERE DELINEATED BY BH KEITH IN 2004.



LOCUS MAP
NTS

FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

PROPOSED EV PARKING LOT SKETCH
TAX MAP 208, LOT 16
0 FARMINGTON ROAD
ROCHESTER, NH
PREPARED FOR:
KO-GO LLC
DECEMBER 2021



C-1

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

CIVIL ENGINEERS

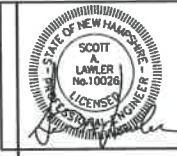
LEGEND

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- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED CANOPY
- PROPOSED PAVEMENT
- PROPOSED TREE LINE
- PROPOSED STANDARD PAVEMENT
- PROPOSED CONCRETE



EXISTING HOUSE

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



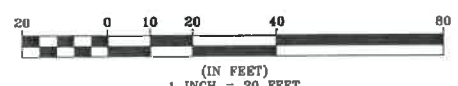
PROJECT SPECIFIC CONSTRUCTION PHASING:

- REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
- INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (E. SILT SOCK, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-3 PRIOR TO EARTH MOVING OPERATIONS.
- INSTALL ORANGE SOD FENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
- CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED DRIVEWAY CONNECTION TO FARMINGTON ROAD. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.
- STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILE PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION BASIN DETAILS SHOWN ON SHEET C-4.
- ALL DITCHES/SWALES AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE CANOPY AND PARKING LOT AREAS.
 - INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
- AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (E.G. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).
- INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (E.G. PIPE CULVERTS, CATCH BASINS AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-2 AND C-3. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENT CONTROL MEASURE.
- CONSTRUCT THE INFILTRATION BASIN 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 DETAIL ON SHEET C-3.
- ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEEDED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.
- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
- THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
- INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL. IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS, IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.
- ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND N.H.S.M. VOL. 3 SHOULD BE EMPLOYED.

SITE LAYOUT PLAN TAX MAP 208, LOT 16 FARMINGTON ROAD ROCHESTER, NH

PREPARED FOR:
KO-GO LLC

JANUARY 2021
GRAPHIC SCALE



GENERAL UTILITY NOTES

- CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888 344-7233) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND ELEVATIONS.
- THIS PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF THE SURVEY. THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THIS PLAN, BUT IN EXISTENCE IS NOT INTENDED OR IMPLIED.
- ANY UTILITY POLES THAT NEED TO BE RELOCATED OR INSTALLED SHALL BE COORDINATED WITH EVERSOURCE OR FAIRPOINT, WHOM EVER HAS CONTROL OVER THEM.
- PROPOSED UTILITIES ARE TO BE UNDERGROUND. COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFORMER PADS WITH EVERSOURCE AND OTHER PERTINENT UTILITY COMPANIES.

FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

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

NORWAY PLAINS ASSOCIATES, INC.

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

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- EXISTING TEST PIT
- E234.1' EXISTING SPOT GRADE
- P234.25' PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED ROOF DRAIN LINE
- PROPOSED CONTOUR LINE
- S/S PROPOSED SILTATION SOCK
- CPP CORRUGATED POLYETHYLENE PIPE
- PROPOSED OUTLET PROTECTION
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION

TEST PITS PERFORMED ON JANUARY 19, 2022 BY ASHLEY ROWE, DESIGNER

TEST PIT 1
0' - 12" LOAM TOPSOIL
12' - 66" LOOSE BANKRUN GRAVEL, COBBLES COMMON. NO REDOX FEATURES
WATER OBSERVED AT 66"

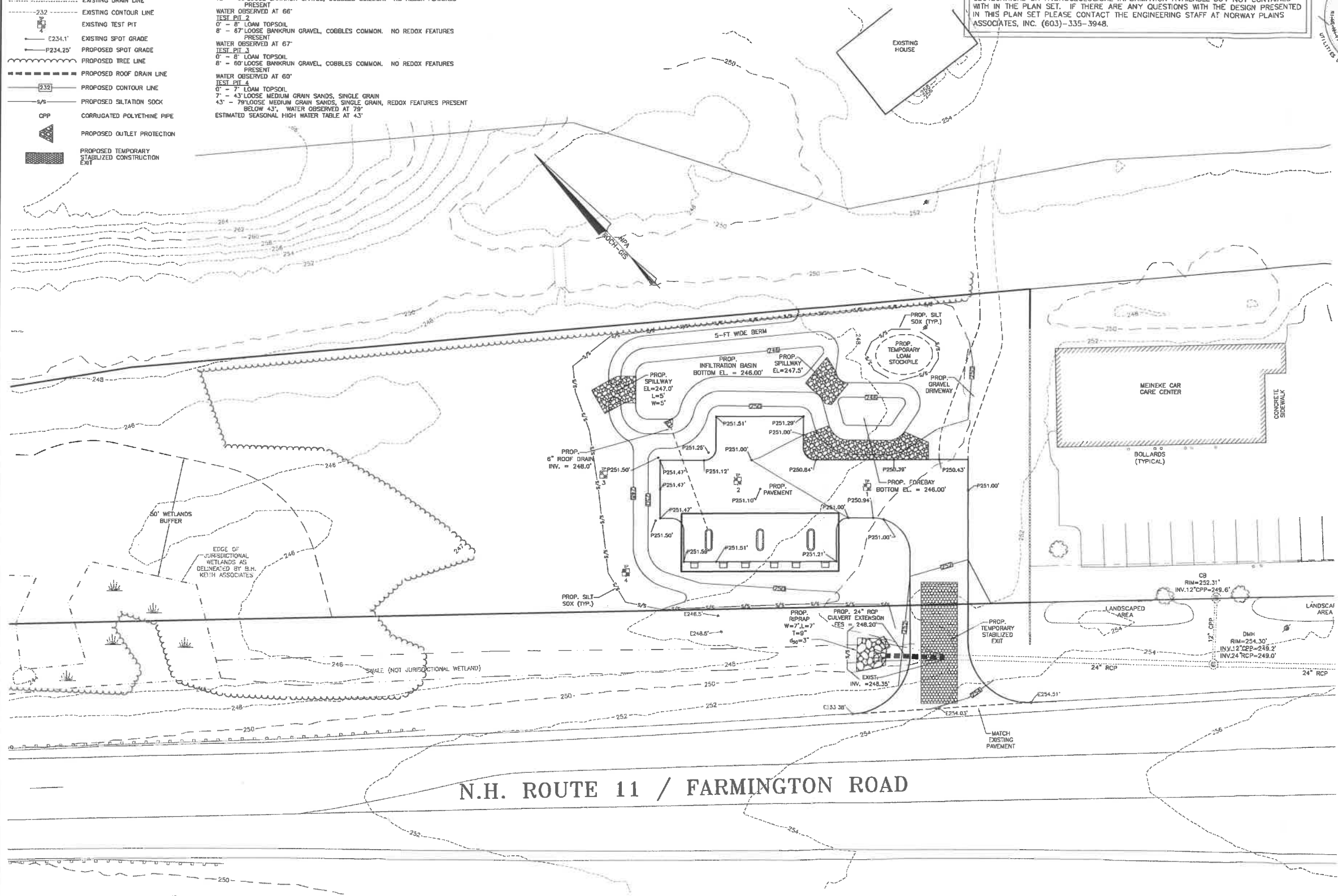
TEST PIT 2
0' - 8" LOAM TOPSOIL
8' - 87" LOOSE BANKRUN GRAVEL, COBBLES COMMON. NO REDOX FEATURES
WATER OBSERVED AT 67"

TEST PIT 3
0' - 8" LOAM TOPSOIL
8' - 60" LOOSE BANKRUN GRAVEL, COBBLES COMMON. NO REDOX FEATURES
WATER OBSERVED AT 60"

TEST PIT 4
0' - 7" LOAM TOPSOIL
7' - 43" LOOSE MEDIUM GRAIN SANDS, SINGLE GRAIN
43' - 79" LOOSE MEDIUM GRAIN SANDS, SINGLE GRAIN, REDOX FEATURES PRESENT
BELOW 43', WATER OBSERVED AT 79"
ESTIMATED SEASONAL HIGH WATER TABLE AT 43"

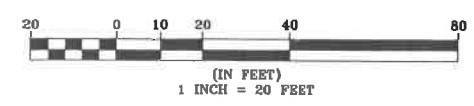


CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN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



N.H. ROUTE 11 / FARMINGTON ROAD

GRADING, DRAINAGE,
EROSION AND
SEDIMENTATION
CONTROL PLAN
TAX MAP 208, LOT 16
FARMINGTON ROAD
ROCHESTER, NH
PREPARED FOR:
KO-GO LLC
JANUARY 2021
GRAPHIC SCALE



FILE NO. 116
PLAN NO. C-2188
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GRAVEL DRIVEWAY NOTES:

1. PLACE COMMON FILL IN 12 INCH LIFTS. COMPACT COMMON FILL TO 95% MAXIMUM PROCTOR DENSITY.
2. PLACE GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.
3. PLACE CRUSHED GRAVEL IN MAXIMUM 8 INCH LIFTS. COMPACT TO 95% MAXIMUM PROCTOR DENSITY.



- | ITEM NO. | SIGN SIZE | | TEXT | NO. SIGNS REQ'D |
|----------|-----------|-------|---|-----------------|
| | HEIGHT | WIDTH | | |
| R1-1 | 30" | 30" |  | 1 |

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



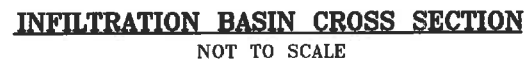
TOP VIEW

SIDE VIEW

FRONT VIEW

DIMENSIONS (INCHES)				
PIPE DIAMETERS	A	B	C	D
10" / 12"	42	14.5	33	6
15"	41	19	34	6
18"	49	22	43	6
24"	59.5	28	48	6
30"	88	38	63.5	6
36"	88	43	66.5	6

NOT TO SCALE



NORWAY PLAINS ASSOCIATES, INC.

The diagram illustrates a cross-section of a trench. The trench is 12" wide and 12" deep. The layers from top to bottom are: 4" COMPACTED 0.0M & SEEDED, ROAD BASE COURSE, and BACKFILL (SEE NOTE #3). The trench is flanked by CUT SLOPE (SEE NOTE #1). The trench is located 3' MIN. OR D+2 (WHICHEVER IS GREATER) from the edge of the road. The trench contains 36" PRIMARY CABLE, 30" SECONDARY CABLE, 4 OTHER UTILITIES (I.E. TELEPHONE, CABLE), and 3 ELECTRICAL CONDUITS (SEE NOTE #8 FOR SIZE). The trench is also labeled as UNDER PAVEMENT TRENCH and CROSS COUNTRY TRENCH. The diagram also shows UNDISTURBED SOIL and CAUTION TAPE.

- NOTES:**
1. ALL NON-METALLIC CONDUIT AND FITTINGS SHALL BE ELECTRICAL GRADE, SCHEDULE 40 PVC, AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE 1993 IBC AND THE USE OF UNFINISHED, GRAY-GOLD-COLORED CONDUIT WILL BE REJECTED. ANY PVC CONDUIT NOT HAVING THE PROPER RINGS AND UL MARKINGS WILL NOT BE ACCEPTED. ALL STEEL CONDUITS SHALL CONFORM TO ASTM A101 AND BE REGRD GALVANIZED STEEL. ALL PVC JOINTS MUST BE CEMENTED. STEEL FITTINGS SHALL BE SEALED WITH COMPOUND.
 2. ALL SECONDARY SWEEP SHALL BE 1/2" THICK, SWEET-PIPING STEEL, WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES. ALL STEEL SWEETS WITHIN 18" OF THE SURFACE SHALL BE PROPERLY GROUND.
 3. A 10-FOOT HORIZONTAL SECTION OF SECONDARY SWEEP SHALL BE REGRD GALVANIZED STEEL. SECONDARY SWEEP SHALL BE REGRD GALVANIZED STEEL. THE SECONDARY SWEEP-PIPING IS NOT SUBJECT TO FAILURING DURING CABLE PULLING.
 4. THE CONDUIT SHALL CROSS PAVED AREAS AT APPROXIMATELY 90 DEGREES.
 5. ALL MATERIALS USED IN THE CONDUIT SHALL BE OF THE BEST QUALITY. SUCH MATERIAL IS DEEMED UNSUITABLE BY EVERSOURCE. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE THOROUGHLY COMPACTED IN 8-INCH LAYERS.
 6. ALL PULLS SHALL BE MADE WITH A MINIMUM OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE EVERSOURCE IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSIGNED TO AND AFTER BONDING THE STRING TO THE CONDUIT.
 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EVERSOURCE. INSTALLATION OF THE CONDUIT WILL BE DONE BY THE CONTRACTOR. THE EVERSOURCE SUPERVISOR MUST BE NOTIFIED 2 BUSINESS DAYS PRIOR TO BACKFILLING THE TRENCH. IN THE EVENT THAT A CABLE CANNOT BE SUCCESSFULLY PULLED THROUGH THE COMPLETED CONDUIT SYSTEM DUE TO A CONSTRUCTION ERROR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND REMOVE THE CABLE FROM THE CONDUIT.
 8. MINIMUM CONDUIT SIZES FOR EVERSOURCE ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY.
 9. ALL CONDUIT INSTALLATIONS MUST COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
 10. CONDUIT TO BE INSTALLED EXPOSED TO 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.

NOT TO SCALE



C-7

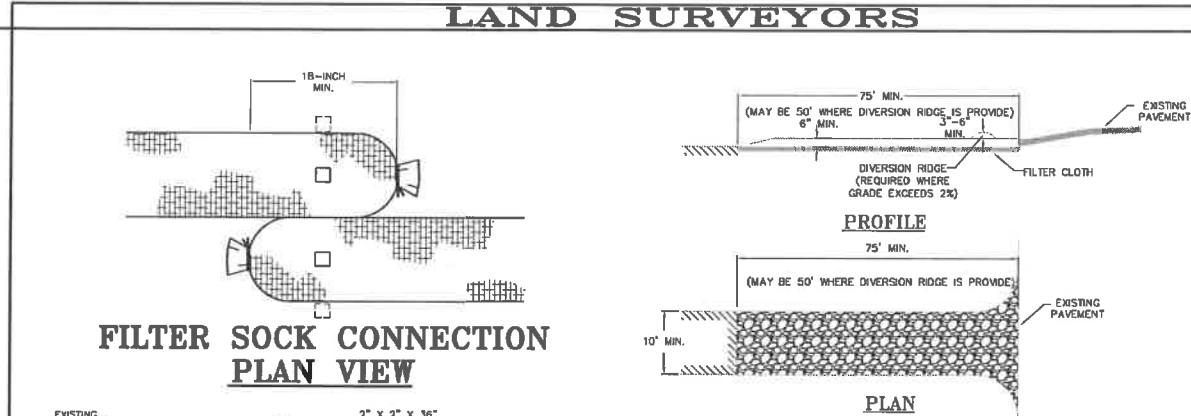


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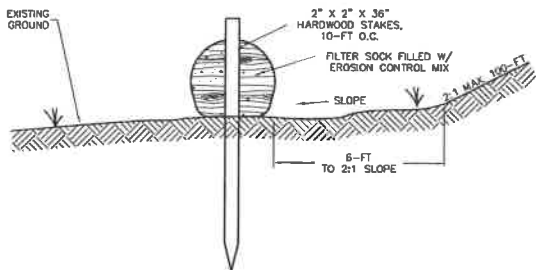
GENERAL CONSTRUCTION PHASING:

- STABILIZATION:**
 - A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
 - AIN AREAS THAT WILL NOT BE PAVED;
 - A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
 - RAIN AREAS TO BE PAVED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED.
- TEMPORARY STABILIZATION:**
 - ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE OR OTHERWISE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- PERMANENT STABILIZATION:**
 - ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- MAXIMUM AREA OF DISTURBANCE:**
 - THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME.
- ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.**
 - FLAT OR OTHERWISE DELINEATED AREAS SHALL BE MAINTAINED AS SUCH.
 - EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.**
- ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED, AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-3.**
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.**
- STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PROTECTION".**
- SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.**
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.**
- AREAS SHALL BE "SEARDED" TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.**
- ALL 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 PUMP FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.**
- 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.**
- 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, DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.**
- ON STEEP SLOPES, OR SLOPES WHERE THERE IS A HIGH CHANCE OF EROSION, MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER CLOSE SUPERVISION AND FACILITATE VEGETATION ESTABLISHMENT.**
- THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR SHADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAN TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE N.H.S.M. VOL.3.**
- ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.**
- USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.**
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.**
- STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.**
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.**
- THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARC 3800 RELATIVE TO INVASIVE SPECIES.**

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



FILTER SOCK CONNECTION PLAN VIEW



FILTER SOCK CROSS-SECTION

CONTINUOUS CONTAINED BERM (FILTER SOCK ALTERNATIVE):

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

MAINTENANCE REQUIREMENTS:

- FILTER SOCK MAINTENANCE SHALL FOLLOW THE SAME SCHEDULE AS EROSION CONTROL MIX BERMS.

CONSTRUCTION SPECIFICATIONS:

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

CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL

NOT TO SCALE

TEMPORARY VEGETATION:

SPECIFICATIONS:

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.

- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.

- RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.

- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

- STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE 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:

- 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.
- TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
- AREAS SEEDD 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 N.H.S.M. VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

MAINTENANCE REQUIREMENTS:

- 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 DETERMINE WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
- BASED ON INSPECTION, AREAS SHALL BE RESEEDD 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.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEEDD, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

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

TEMPORARY CONSTRUCTION EXIT NOT TO SCALE

MAINTENANCE REQUIREMENTS:

- 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 THEN BE RECONSTRUCTED.
- THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
- 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:

- THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
- THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
- THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
- THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
- THE PAD SHALL BE AT LEAST 6 INCHES THICK.
- THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
- 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.
- NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

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

SOURCES:

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

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)

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

- 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.
- 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.
- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1-ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN N.H.S.M. VOL. 3 AND ELSEWHERE IN THIS PLAN SET, PRIOR TO ANY THAW OR SPRING MELT EVENT.
- 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.
 - 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 SEEDD 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 N.H.S.M. VOL. 3 FOR SPECIFICATION).
 - 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 SEEDD 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.
- ALL STONE COVERED AREAS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
- INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
- ALL MULCH APPLIED DURING WINTER SHALL BE ANCHORED (I.E. BY NETTING, TRACKING, WOOD CELLULOSE FIBER), WITHIN 24 HOURS OF STOCKPILING SOIL MATERIALS SHALL BE COVERED 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.
- 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.
- INSTALLATION OF EROSION CONTROL BLANKETS SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
- 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 PROMOTE ADEQUATE WATER FLOW AFTER PLACEMENT OF THE STONE.
- ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
- AFTER OCTOBER 15, INCOMPLETE 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.
- 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 EMBEDEDMENT OF THESE BARRIERS.

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

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

SEEDBED PREPARATION:

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

- INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
- SPRING SEEDING USUALLY OIVES 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 SEEDD IN LATE SUMMER AT LEAST 30% 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 N.H.S.M. VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- AREAS SEEDD 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 N.H.S.M. VOL. 3.
- 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:

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

MAINTENANCE REQUIREMENTS:

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

DUST CONTROL PRACTICES:

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

STOCKPILE PRACTICES:

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

PROTECTION OF INACTIVE STOCKPILES:

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

PROTECTION OF ACTIVE STOCKPILES:

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

LAND SURVEYORS

CIVIL ENGINEERS

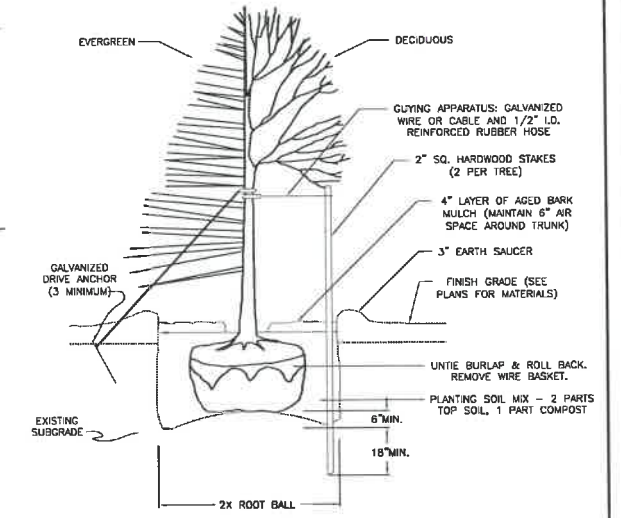
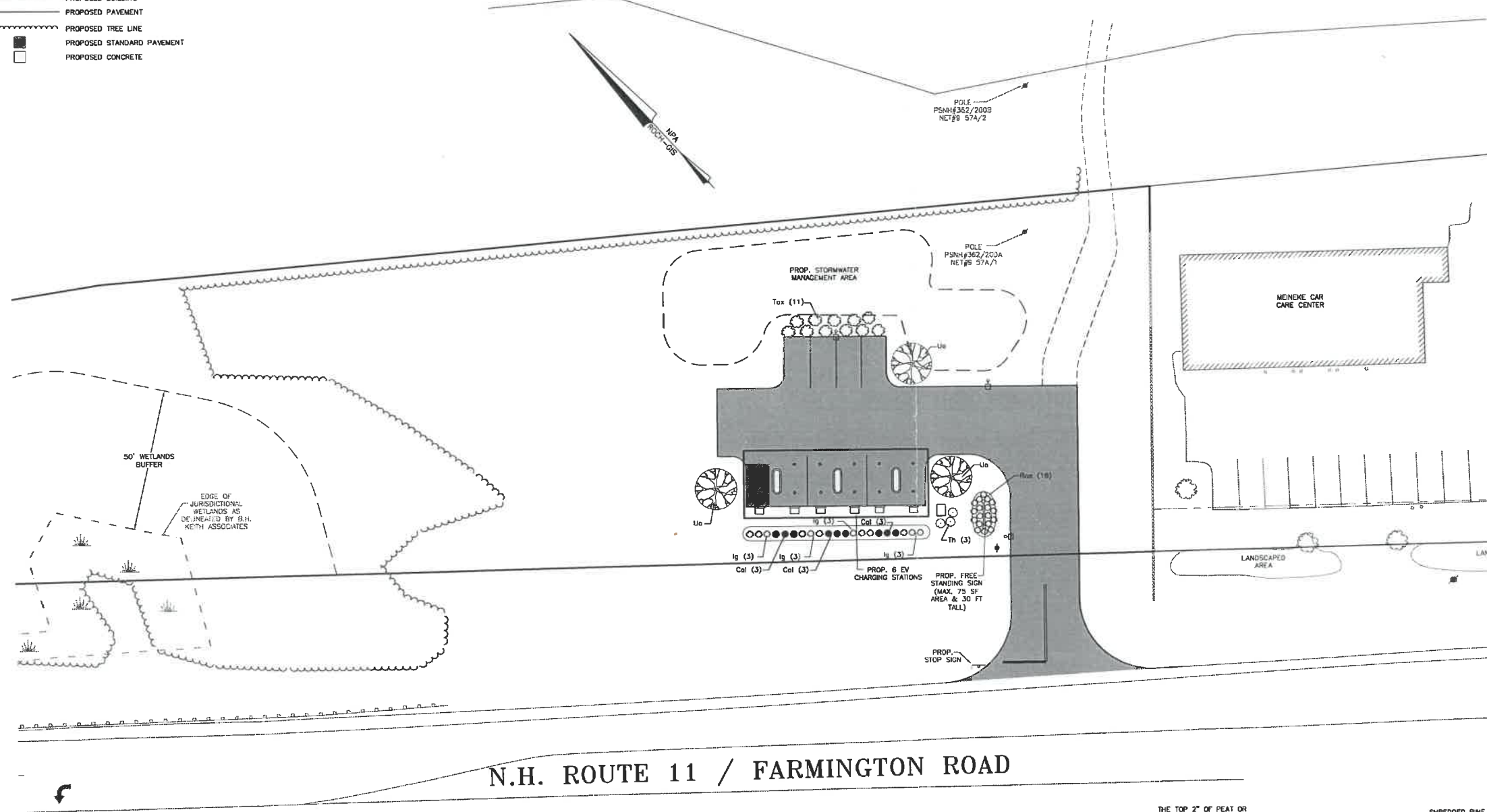
LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED TREE LINE
- PROPOSED STANDARD PAVEMENT
- PROPOSED CONCRETE

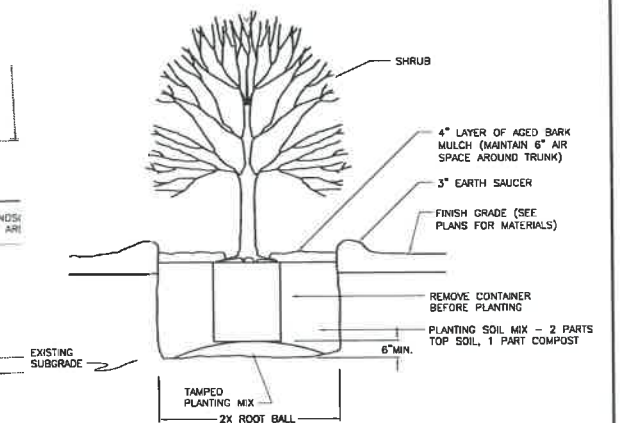


EXISTING HOUSE

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



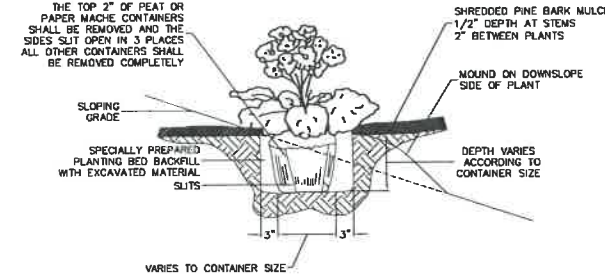
TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
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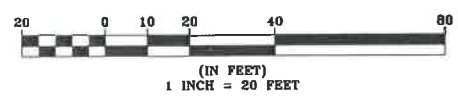
PLANT LIST

TREES	SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
	Ua	Ulmus americana 'Princeton'	Princeton American Elm	3	3-3.5" col.
SHRUBS	SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
	Th	Thuja plicata 'Green Giant'	Green Giant Arborvitae	3	3-4' HL
	Tox	Taxus Media 'Greenwave'	Greenwave Yew	11	5 gal.
	Ros	Rosa 'Sunny Knockout'	Sunny Knockout Rose	18	3 gal.
PERENNIALS, GROUNDCOVERS, VINES and ANNUALS	SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
	Ig	Ilex glabra 'Shamrock'	Shamrock Inkberry	12	5 gal.
	Col	Colomogrostis cutiflora 'Karl Foerster'	Feather Reed Grass	9	1 gal.



PERENNIAL PLANTING DETAIL
NOT TO SCALE

LANDSCAPING PLAN
TAX MAP 208, LOT 16
FARMINGTON ROAD
ROCHESTER, NH
PREPARED FOR:
KO-GO LLC
JANUARY 2021
GRAPHIC SCALE



FILE NO. 116
PLAN NO. C-2188
DWG. NO. 21396

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES
- PROPOSED LIGHT FOOTCANDLE
- PROPOSED LIGHT ISOLLLUMINATION LINES

Luminaire Schedule				
Symbol	Label	Qty	Arrangement	Description
⊙	C	12	SINGLE	HC615D010-HM612840-61WDB
⊙	S3	1	SINGLE	FIRSTLIGHT-SCL2-SPMU-BZ-T3-NW-00 (15' AFG)
⊙	S4	2	SINGLE	FIRSTLIGHT-SCL2-SPMU-BZ-T4F-NW-00-BLS (15' AFG)



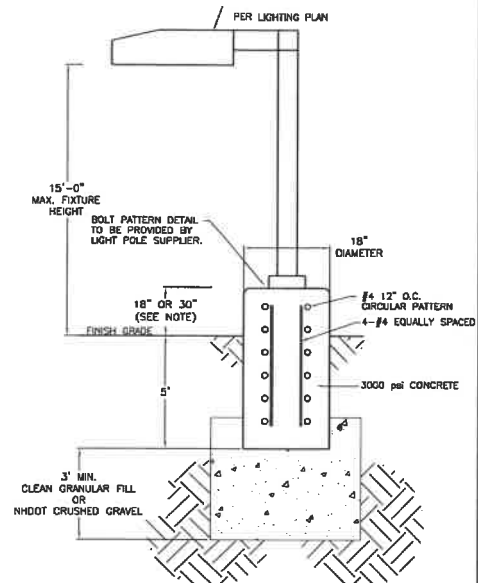
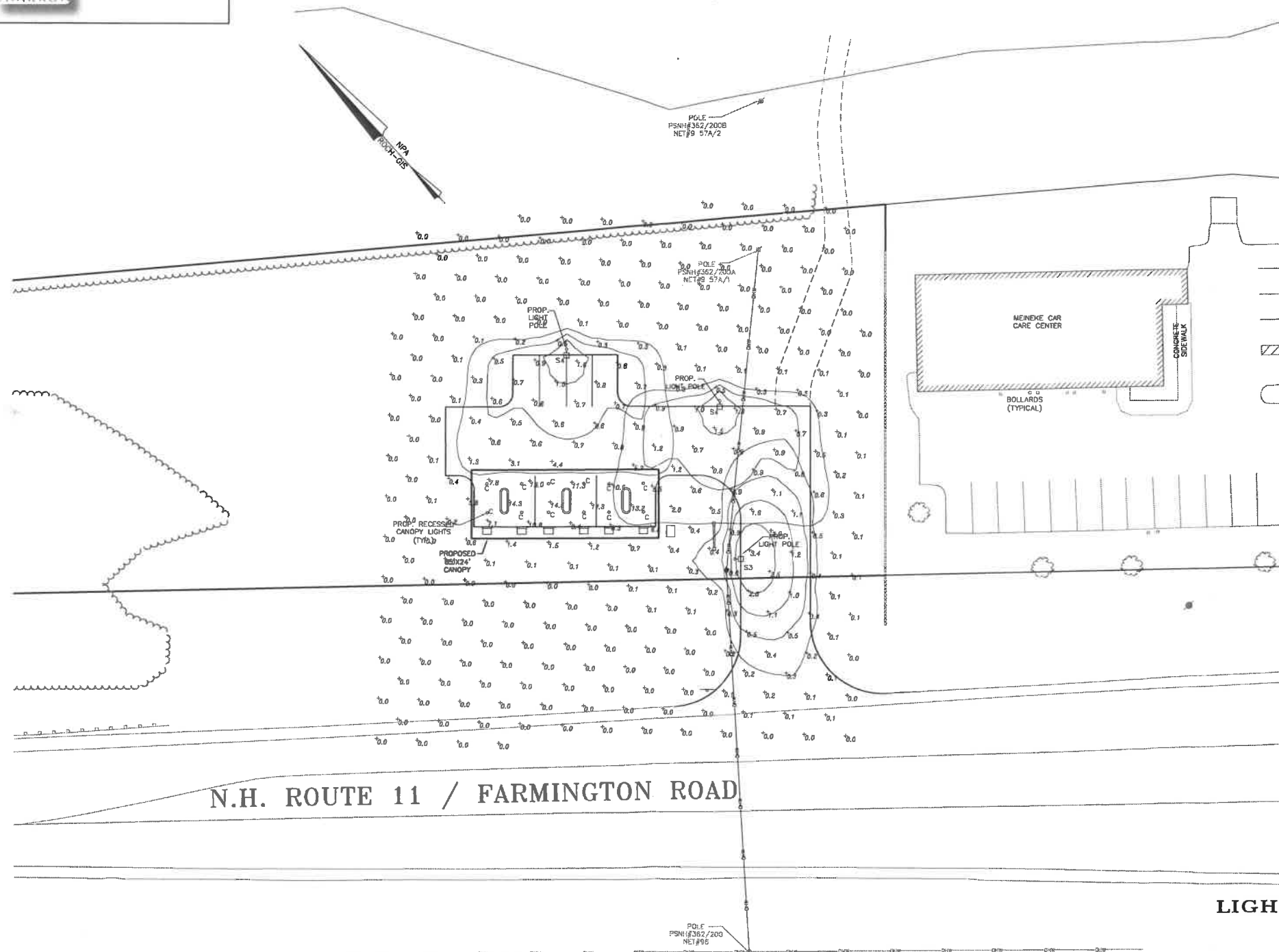
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FIRSTLIGHT TECHNOLOGIES SOLAR LED LIGHT



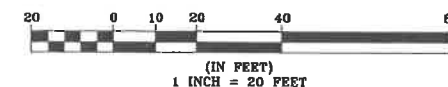
COOPER LIGHTING SOLUTIONS HALO COMMERCIAL



POLE MOUNTED LIGHT DETAIL
NOT TO SCALE

- NOTE:
1. LIGHT POLE BASE SHALL BE 18" ABOVE FINISH GRADE FOR NON VEHICLE IMPACT AREAS AND 30" FOR VEHICLE IMPACT AREAS.
 2. THE LIGHT POLE BASES CAN BE PRECAST, WITH COORDINATION WITH THE LIGHTING FIXTURE MANUFACTURE FOR BOLT PATTERN.

LIGHTING PLAN AND DETAILS
TAX MAP 208, LOT 16
FARMINGTON ROAD
ROCHESTER, NH
PREPARED FOR:
KO-GO LLC
JANUARY 2021
GRAPHIC SCALE



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PLAN NO. C-2188
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