



## NONRESIDENTIAL SITE PLAN APPLICATION

#### City of Rochester, New Hampshire

Date: 4/20/2021	Is a conditional use needed? Yes: No: X Unclear:
	(If so, we encourage you to submit an application as soon as possible.)
Property information	
Tax map #: 208 ; Lot	#('s): 4 & 5 ; Zoning district: GRD
Property address/location:	148 & 150 Farmington Road
Name of project (if applicable	e): Granite State Credit Union Branch Office
Size of site: 1.30 & 0.62 acres;	overlay zoning district(s)?
Property owner	
Name (include name of indiv	vidual): Granite State Credit Union, c/o Michele Plaza; Executive Vice President
Mailing address: PO Box 6420,	Manchester, NH 03101
Telephone #: (800) 645-4728	Email:
Applicant/developer (if Name (include name of indiv	different from property owner) vidual):
Mailing address:	
Telephone #:	Email:
Engineer/designer Name (include name of indiv Mailing address: PO Box 249, Ro	vidual): Norway Plains Associates, Inc.; Scott A. Lawler, PE
Telephone #: 603-335-3948	Fax #:
Email address: slawler@norwayp	lains.com Professional license #: 10026
	Site development (other structures, parking, utilities, etc.): X  ding(s): Demolition: X  Change of use: X
	Page 1 (of 3 pages)
\roch-fileshare\plan\$\Forms\Applications\Site 3/27/2019	Plan - Nonresidential.doc Updated

Describe proposed activity/use: The applicant is proposing a off of Farmington Road and Two Rod Road.	a 2,985 square feet credit union br	anch office with access
Describe existing conditions/use (vacant land?): There	ere are two residential houses loc	ated on the lots and a
garage. There are two driveways into the lot from Farmington Road, one for		
Utility information  City water? yes x no ; How far is City wate		ngton Road
City sewer? yes no $\frac{N}{}$ ; How far is City sewer		
If City water, what are the estimated total daily needs		
If City water, is it proposed for anything other than do		
If City sewer, do you plan to discharge anything othe		
Where will stormwater be discharged? Treatment swale ar		
Building information  Type of building(s): Wood & Steel construction with brick siding		
Building height: 23' Finished flo	oor elevation: 257.5	-0
# parking spaces: existing: total proposed: 25  Number of cubic yards of earth being removed from Number of existing employees: 0; number of existing employees: variance; specedited with the proposed of the complex content of the content of the complex content of the complex content of the	the site 2,000 cy ber of proposed employecial exception; co	yees total: 8 onditional use
	Square footage	% overall site
Building footprint(s) – give for each building	2,985 sf	3.5 %
Parking and venicle disculation	27,500 sf	32.7%
Planted/landscaped areas (excluding drainage)	16,925 sf	20.1%
Natural/undisturbed areas (excluding wetlands)	6,830 sf	8.2%
vvetiands	0 sf	0.0%
Other – drainage structures, outside storage, etc.	29,830 sf	35.5%

Updated

#### Page 2 (of 3 pages)

Comments	
Please feel free to add any comments, additional inf	ormation, or requests for waivers here:
Submission of application	
This application must be signed by the property own property owner), and/or the agent.	er, applicant/developer (if different from
I(we) hereby submit this Site Plan application to the	City of Rochester Planning Board
pursuant to the City of Rochester Site Plan Regulation	
knowledge all of the information on this application for	
materials and documentation is true and accurate. A	
property owner)/as agent, I attest that I am duly auth	
Signature of property owner:	
	Date: 4/26/21
Signature of applicant/developer:	
	Date:
Signature of agent:	
	Date:
Authorization to enter subject property	
I hereby authorize members of the Rochester Planning Conservation Commission, Planning Department, and boards and agencies to enter my property for the purincluding performing any appropriate inspections during cost-approval phase, construction phase, and occupate specifically to those particular individuals legitimately inspecting this specific application/project. It is understreasonable care, courtesy, and diligence when entering signature of property owner:	d other pertinent City departments, pose of evaluating this application ing the application phase, review phase incy phase. This authorization applies involved in evaluating, reviewing, or stood that these individuals must use all
roch-fileshare\plan\$\Forms\Applications\Site Plan - Nonresidential.doc	Updated

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#### 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

April 27, 2021

Seth Creighton, Chief Planner Planning Department City of Rochester 33 Wakefield Street Rochester, NH 03867

Re: Non- Residential Site Plan Application; Granite State Credit Union, 148 & 150 Farmington Road, Map 208, Lots 4 & 5.

Dear Mr. Creighton:

On behalf of Granite State Credit Union, Norway Plains Associates, Inc. is pleased to submit a Non-Residential Preliminary Design Review Site Plan Application. Granite State Credit Union is proposing to construct a 2,985 square foot branch office with drive up service at 150 Farmington Road. The lots are identified by the City of Rochester assessors as Tax Map 208, Lots 4 & 5. The parcels have a combined acreage of 1.93 acres and are located in the Granite Ridge Development Zoning District as well as the Aquifer Protection Overlay District. A lot merger application will be filed and recorded as part of the proposed project.

The parcels are located at the corner of Farmington Road (NH Route 11) and Two Rod Road. The parcels are abutted by an automobile sales and service business (Hagan's Motor Pool) to the northwest and vacant land Across Farmington Road are also vacant properties owned by the City of Rochester and the State of New Hampshire. On the other side of Two Rod Road is a retail store (Tractor Supply Co.). Two Rod Road is currently a Class VI highway owned by the City of Rochester and maintained by Tractor Supply Co. Access to NH Route 11 is within the State of New Hampshire Department of Transportation jurisdiction.

The parcels are currently single family residential properties serviced by wells and on-site septic systems. There are several structures on the properties that would all be removed as part of the redevelopment for the proposed credit union. The existing topography slopes from Route 11 towards the rear of the property, with the last third mostly wooded. The site was evaluated by B.H. Keith, Associates who determined there were no jurisdictional wetlands on the site.

The proposed project is to construct a 2,985 square foot credit union branch with three drive up services bays. The inner drive up lane will be designated for an ATM or teller window, whereas the outer two will be pneumatic tube delivery system. A parking lot is provided for up to 17 members that wish to enter into the branch. Angled parking off the drive will be designed for employees which brings the total on-site parking spaces to 25. A paved pull-off located on westerly edge of the circular drive will accommodate for a single larger utility truck. Access to the facility will be either off Farmington Road or Two Rod Road. Vehicular traffic flow will generally by a one way around the site, with painted arrows and signage, to create a safe passage for the members and employees. Concrete walkways will connect the parking areas to the front entrances and the employee entrance.

The Credit Union will operate Monday through Friday, typically from 8:30 a.m. to 5 p.m. and Saturday from 8:30 a.m. to 12 p.m. The drive-up ATM will be accessible 24-hours a day. The branch anticipates have between 6 and 8 employees working throughout the day.

Proposed Granite State Credit Union -Non Residential Site Review Narrative
Page 2

Stormwater runoff from the proposed redevelopment of the properties will directed towards a stormwater management system via a closed drainage system of curbing, catch basins and drainage pipes. The stormwater management system will consist of a treatment swale and a grass-lined infiltration basin located in the northwesterly corner of the site. Excess stormwater from larger storm events will connected to a new drainage system to be installed within the Route 11 ROW which will outlet to a large drainage pipe going under Farmington Road.

The new building will connect to the City water main located along Farmington Road. Due to no municipal sewer at the street, a new sanitary septic system will be designed and permitted with the NH Department of Environmental Services (NHDES). All other utilities will be located underground from the utility poles located on Farmington Road.

The Element Group, a national design build organization which specializes in design of financial institutions and has recently designed a GSCU branch in Nashua is lead designer on the project. Shremshock are the architects responsible for the building plans and coordination with all of the building construction disciplines.

A dumpster enclosure will be located at the rear of the site and out of the way. Due to the steepness of the existing topography, a retaining wall is needed along the rear property line. Snow storage will be located to the west and east of the developed area. All utilities will be run underground to the building. Lighting fixtures will be mounted on poles and under the drive-up canopy, all meeting the requirements of the City of Rochester lighting standards.

In addition to the NHDES approval for the proposed septic system, approval from the Department of Transportation will be necessary for the access to the State highway. A traffic impact assessment has been prepared by Stephen Pernaw & Co. for the development. Albeit there will be more traffic associated with the redevelopment compared to the residential uses, the average daily and peak hour trips generated by the credit union will be modest compared to other potential businesses that could develop this property. By having driveway access on both Route 11 and Two Rod Road, we anticipate the turning movements to be spread out. With the recently constructed center turning lane on Route 11, it is unlikely that substantial off-site roadway improvements will be warranted.

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: Granite State Credit Union The Element Group

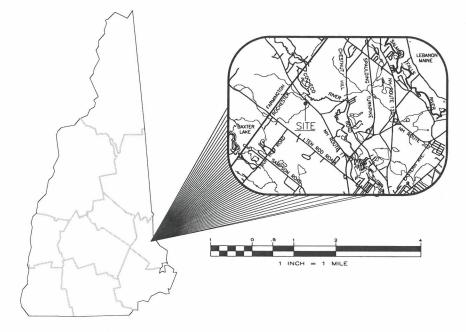
### PROPOSED CREDIT UNION BRANCH

150 FARMINGTON ROAD

PREPARED FOR

GRANITE STATE CREDIT UNION ROCHESTER, NH APRIL 2021







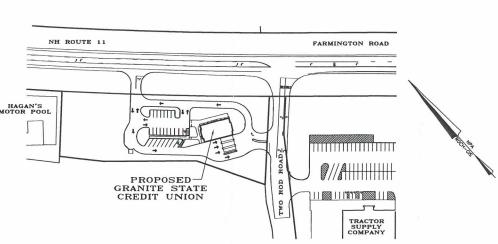
NHDES WEILANDS PERMIT:
NHDES DAM PERMIT:
NHDES SUBDIVISION PERMIT:
NHDES SUBDIVISION PERMIT:
NHDES SUBSURFACE SYSTEMS PERMIT:
NHDES WASTEWATER PERMIT: HHDOT DRIVEWAY/ENTRANCE PERMIT:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA
CRITERIA BELOW AND HANNO A POINT SOURCE STORMWATER DISCHARGE FROM THE
SITE TO AN ADJACENT WETLAND OR WATER BODY (LE. CULVERT, SWALE, ETC.
OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).

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.



OVERALL SITE 1" = 100'

#### CIVIL ENGINEERS

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

#### LANDSCAPE ARCHITECTS

WOODBURN & COMPANY LANDSCAPE ARCHITECTS, LLC 103 KENT PLACE NEWMARKET, NEW HAMPSHIRE 03857 (603) 659-5949

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

#### OWNER & APPLICANT

GRANITE STATE CREDIT UNION PO BOX 6420 1415 ELM STREET MANCHESTER, NEW HAMPSHIRE 03101 (800) 645-4728

#### FINAL APPROVAL BY

ROCHESTER PLANNING BOARD

CERTIFIED BY: \_\_\_\_\_ DATE: \_\_\_\_

#### DESIGNERS

THE ELEMENT GROUP 155 BREWERY LANE; SUITE 1 PORTSMOUTH, NEW HAMPSHIRE 03301 (603) 319-8951

#### **ARCHITECTS**

SHREMSHOCK 7775 WALTON PARKWAY, SUITE 250 NEW ALBANY, OHIO 43054 (514) 545-4550

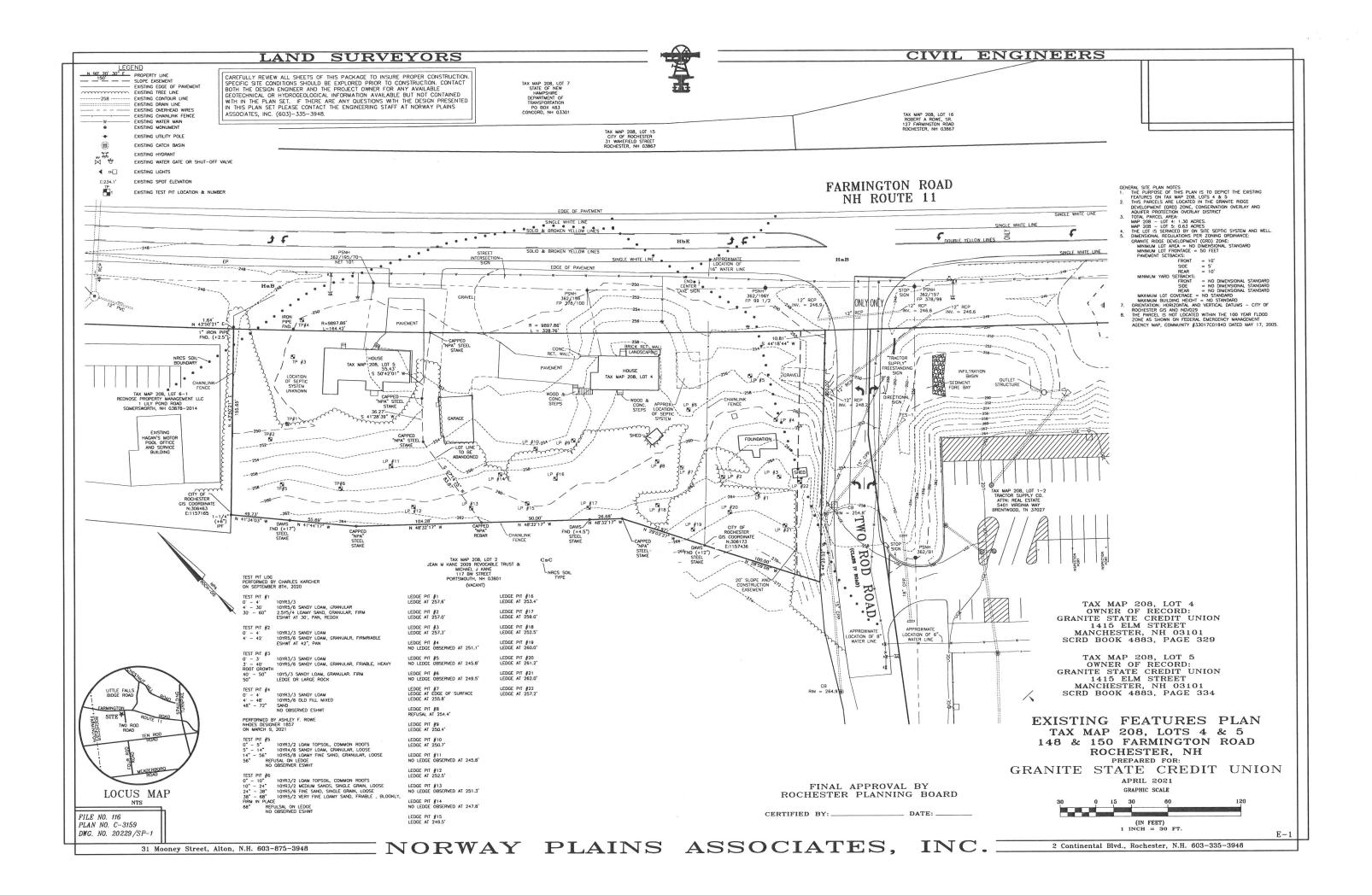
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE CEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN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

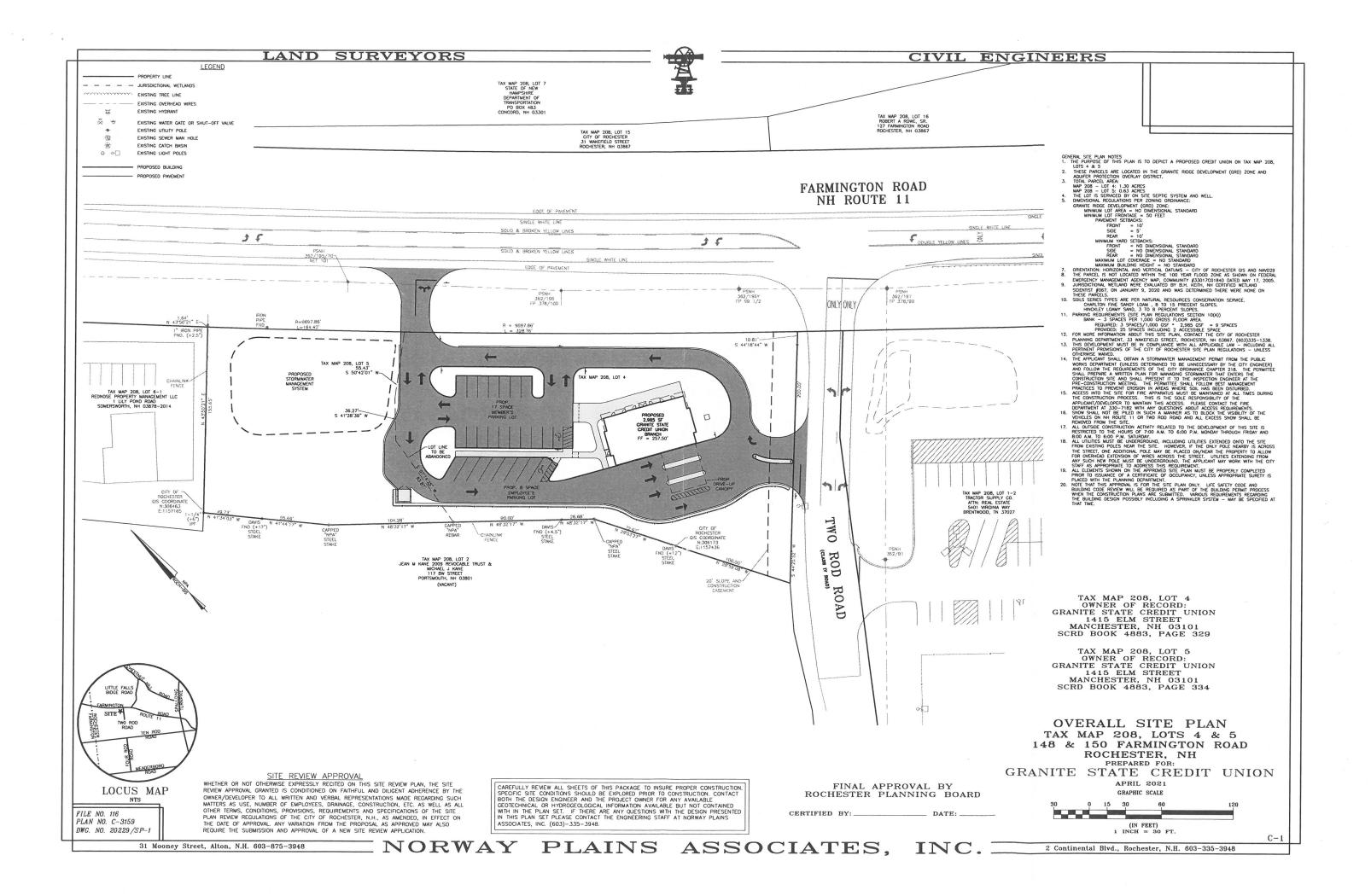
#### SHEET INDEX SHEET SHEET SHEET SHEET SHEET COVER EXISTING FEATURES OVERALL SITE PLAN SITE LAYOUT PLAN GRADING AND DRAINAGE PLAN SHEET C-4 SHEET C-5 SHEET C-6 SHEET C-7 EROSION AND SEDIMENTATION CONTROL PLAN UTILITY PLAN DRIVEWAY PROFILES CONSTRUCTION DETAILS 1" = 30' 1" = 30' AS SHOWN AS SHOWN AS SHOWN AS SHOWN SHEET C-8 DRAINAGE DETAILS SHEET C-9 INFLITRATION BASIN DETAILS SHEET C-10 TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS AS SHOWN SHEET C-11 PERMANENT EROSION AND SEDIMENTATION AS SHOWN CONTROL DETAILS SHEET C-12 UTILITY DETAILS SHEET L-1 LIGHTING PLAN AND DETAILS = 30' SHEET L-2 SITE LANDSCAPING PLAN C-0

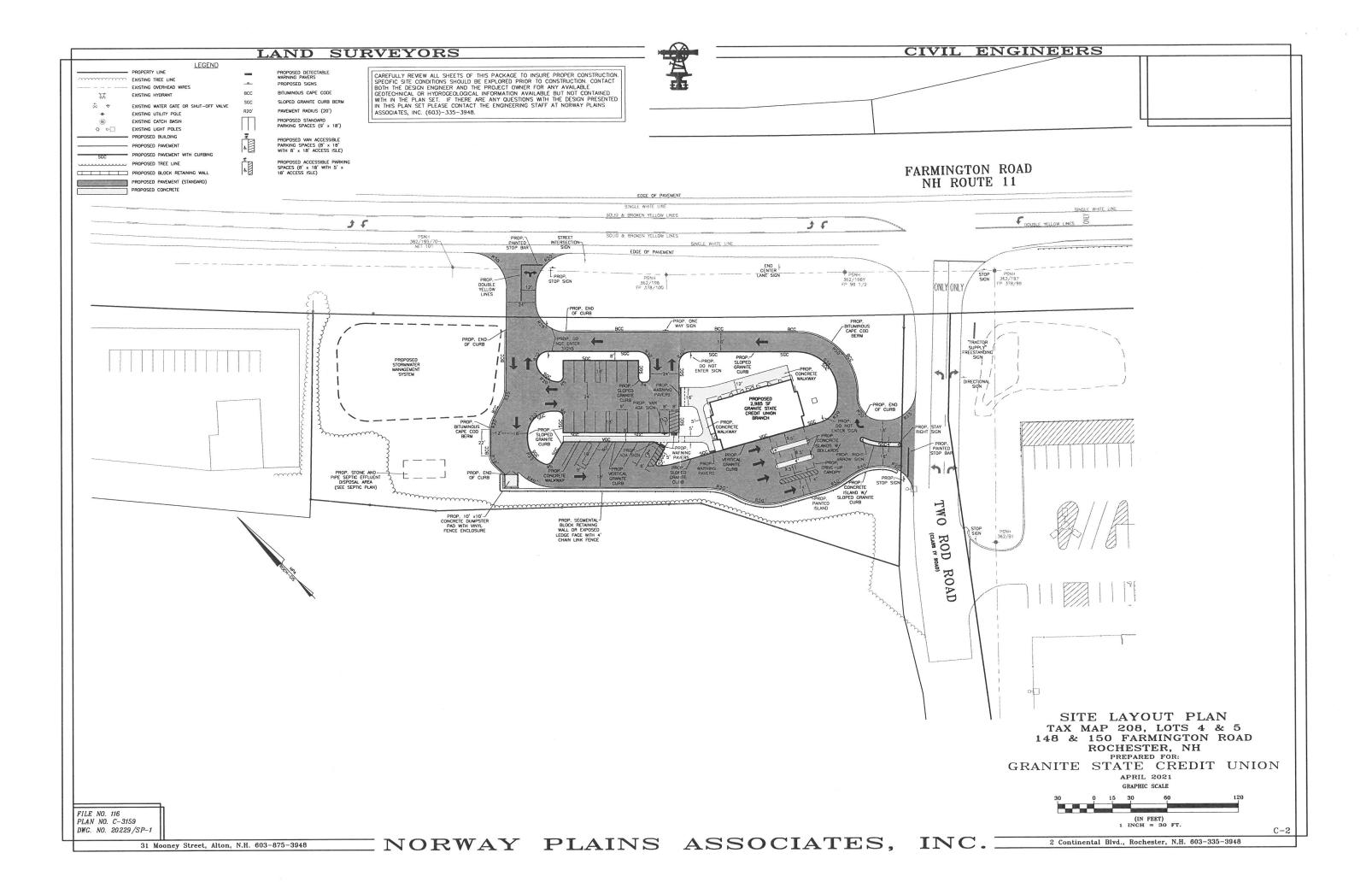
FILE NO. 116 PLAN NO. C-3159 DWG. NO. 20229 /SP-1

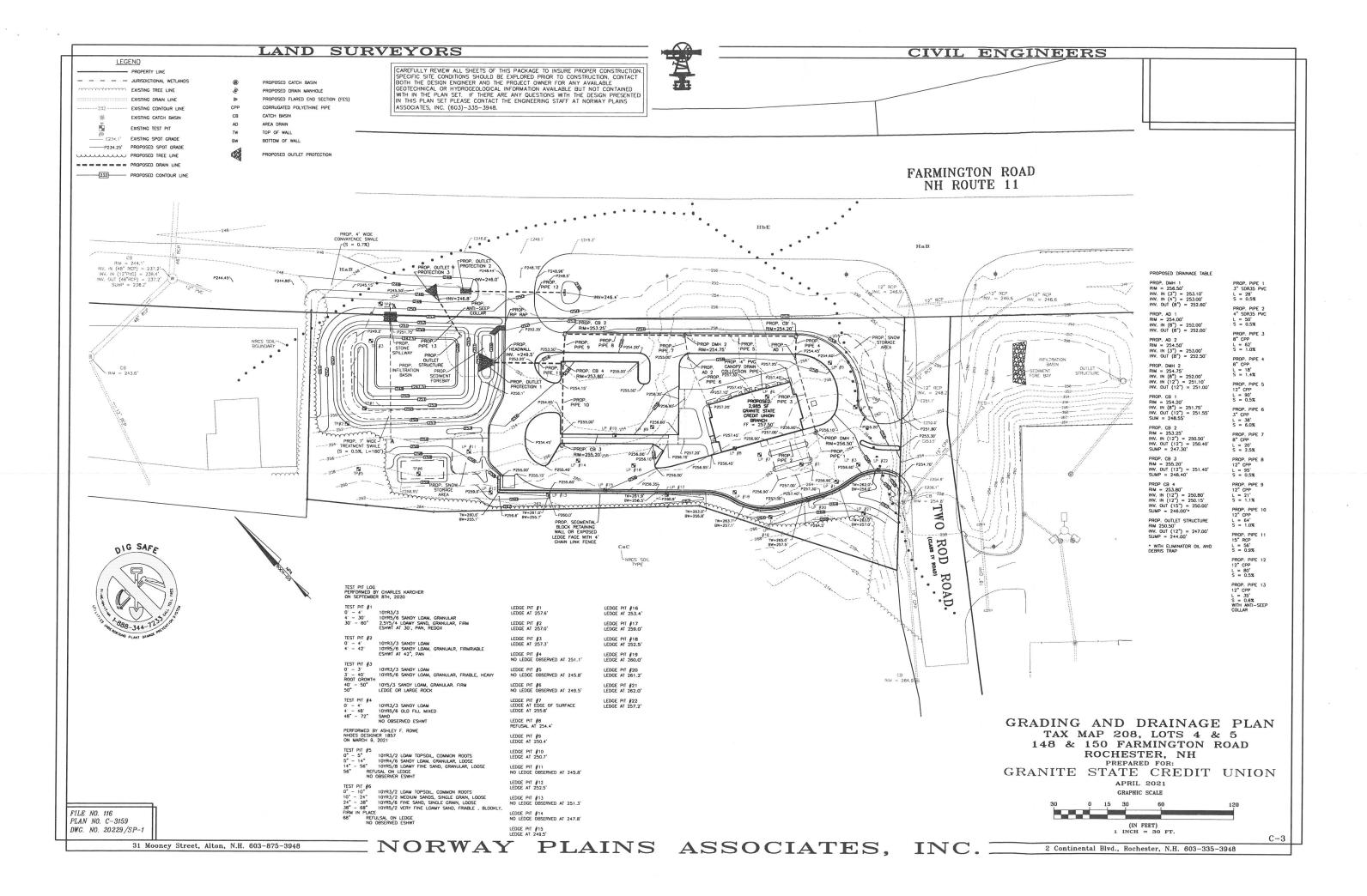
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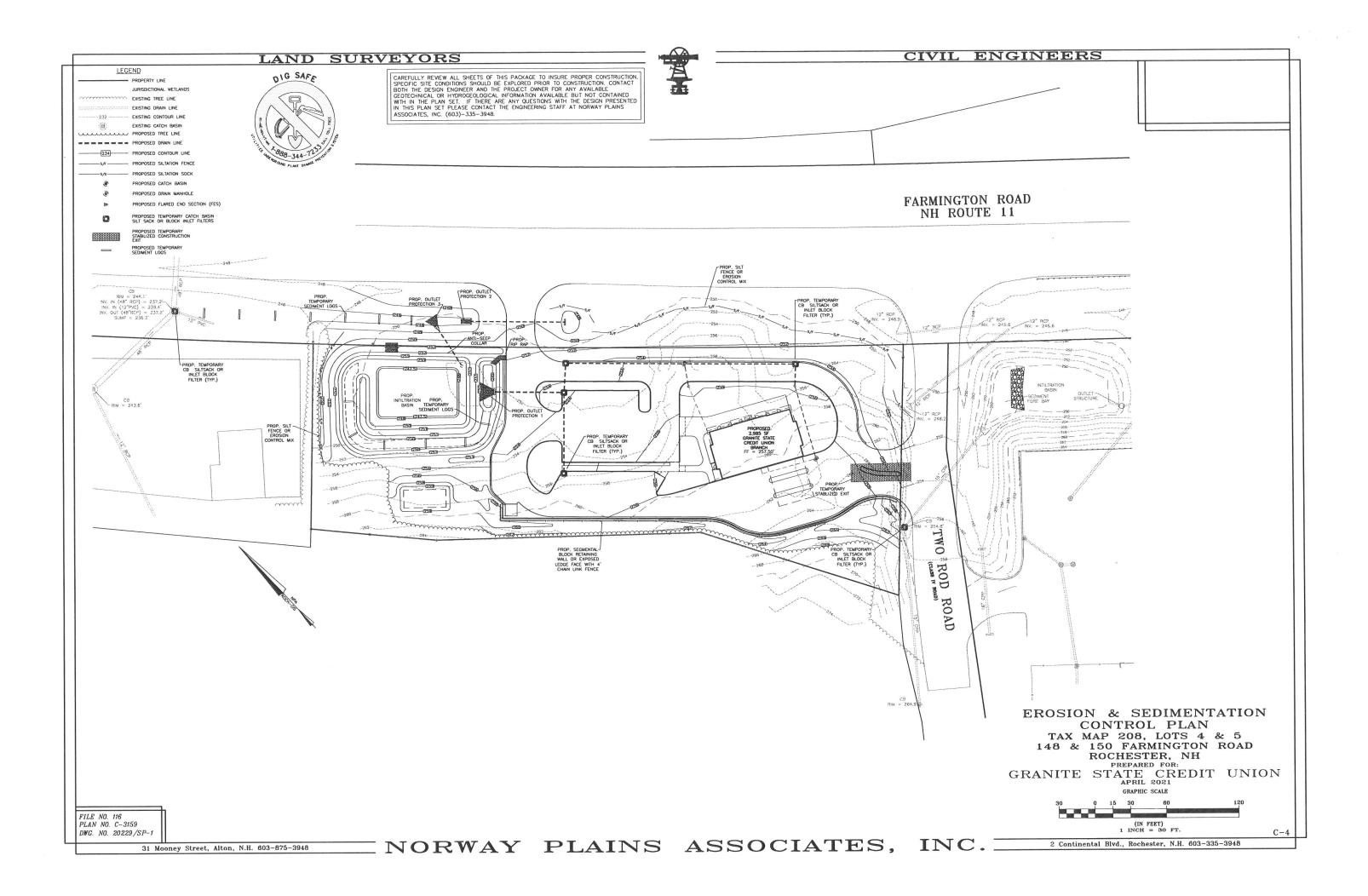
2 Continental Blvd., Rochester, N.H. 603-335-3948

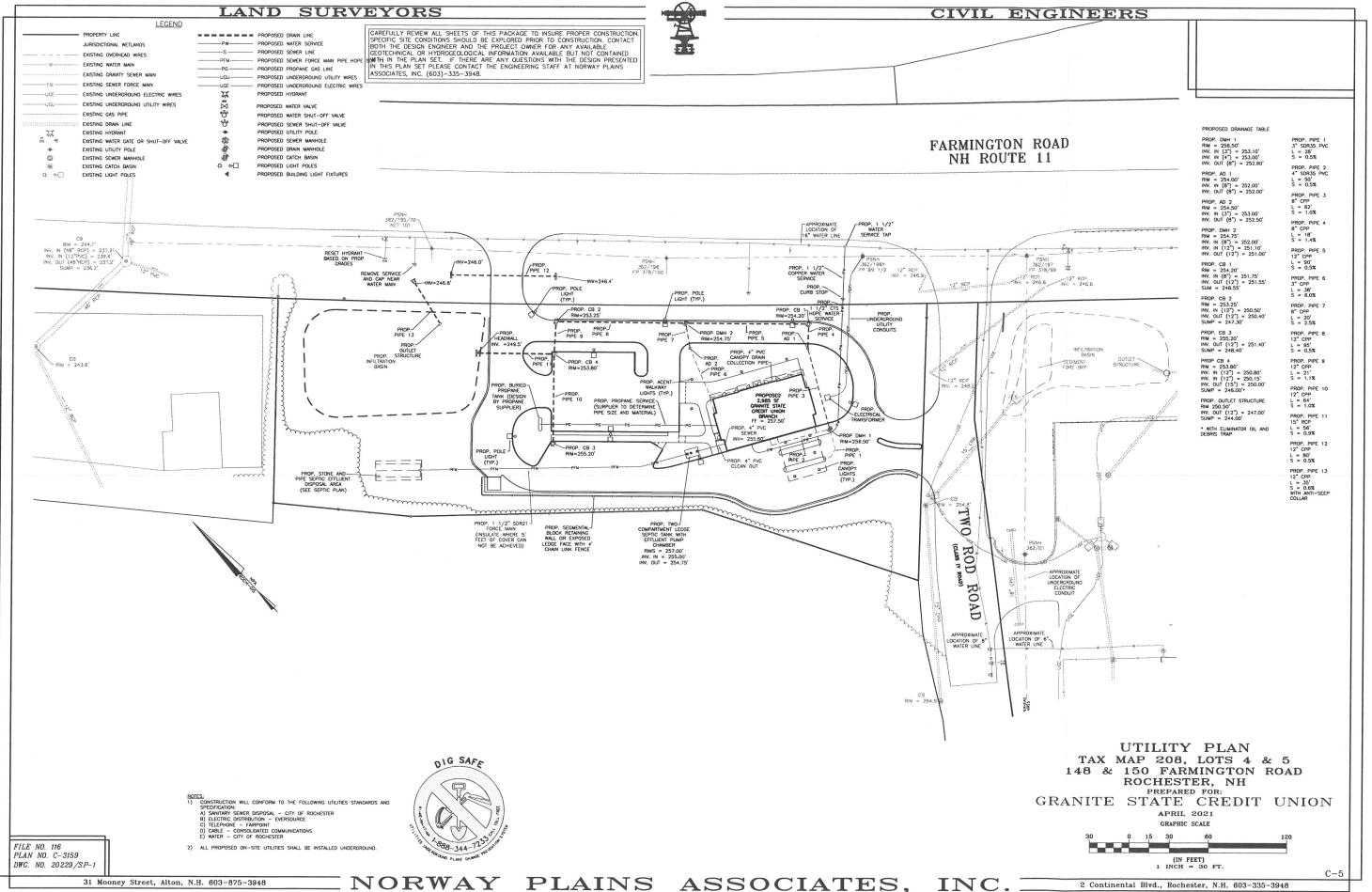


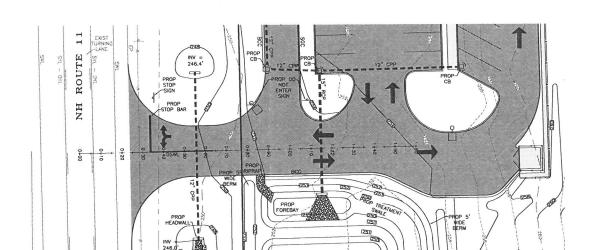




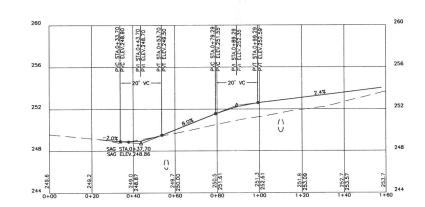




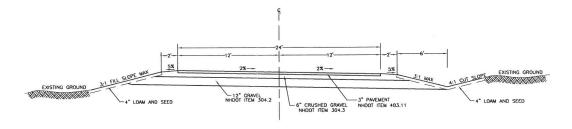




ROUTE 11 DRIVEWAY PLAN VIEW



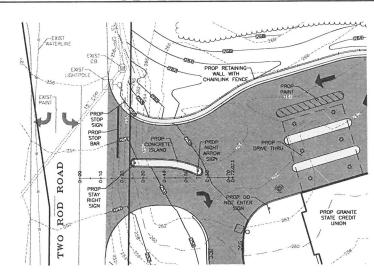
ROUTE 11 DRIVEWAY PROFILE 1" = 20' (HORZ.) & 1" = 4' (VERT.)



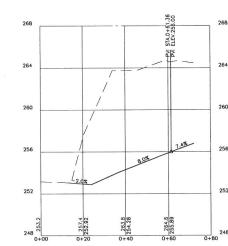
ROUTE 11 DRIVEWAY CROSS-SECTION



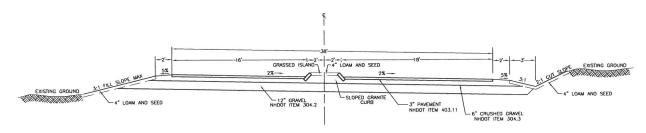




TWO ROD ROAD DRIVEWAY PLAN VIEW 1" = 20'



TWO ROD ROAD DRIVEWAY PROFILE 1" = 20' (HORZ.) & 1" = 4' (VERT.)



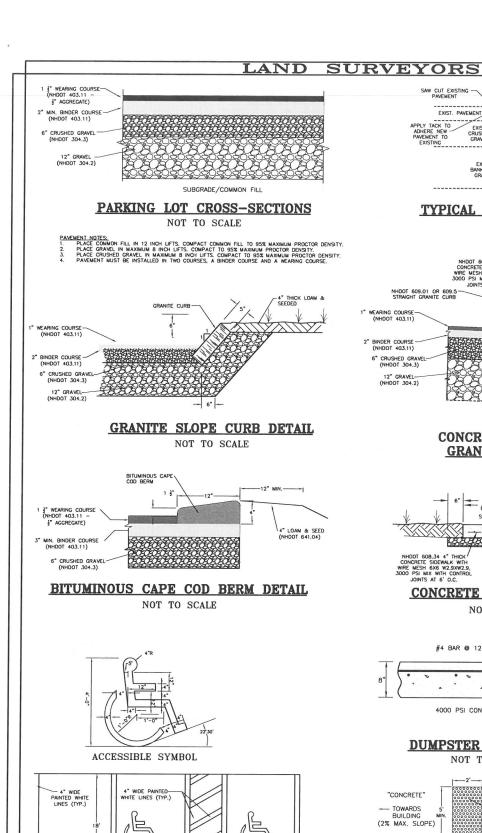
TWO ROD ROAD DRIVEWAY CROSS-SECTION

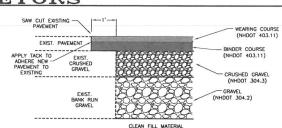
- CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH NHOOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION"
  THE ENTIRE AREA OF THE DRIVEWAY AND IT'S ADJOINING SLOPED AREAS SHALL BE CLEARED OF ALL STUMPS, BRUSH, ROOTS, ROCKS, BOULDERS, AND LIKE MATERIALS AND ALSO OF
  ALL TREES NOT INTENDED FOR PRESENTATION.
  CONTRACTOR IS TO CONTACT CITY ENGINEER, TO REVIEW CONDITION OF THE ROUGHED IN ROAD, 72 HOURS PRIOR TO THE INSTALLATION PAVEMENT.
  ALL BACK FILL IN TRENCHES AND FILL FOR THE ROAD SERS SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
  AGGREGATE #4 (NHOOT ITEM 703) SHALL BE WRAPPED IN A SUPPORT MEMBRANE (FILTER FABRIC).

DRIVEWAY PLAN & PROFILES TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH PREPARED FOR: GRANITE STATE CREDIT UNION

APRIL 2021

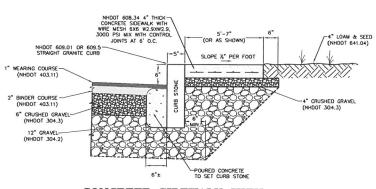
FILE NO. 116 PLAN NO. C-3159 DWG. NO. 20229/SP-1





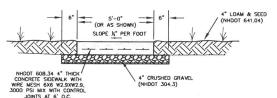
#### TYPICAL PAVEMENT MATCHING DETAIL

NOT TO SCALE



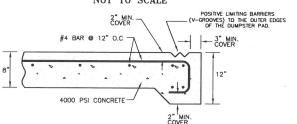
#### CONCRETE SIDEWALK WITH **GRANITE CURB DETAIL**

NOT TO SCALE



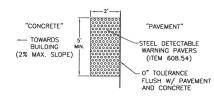
#### CONCRETE SIDEWALK DETAIL

NOT TO SCALE



#### **DUMPSTER PAD DETAIL**

NOT TO SCALE



#### DETECTABLE WARNING PAVER DETAIL

NOT TO SCALE

NUT TO SCALE

DETECTABLE WARNING PAPER NOTES:

1. THE MAXIMUM CROSS OF CONCRETE WALKWAY SLOPE IS 2%. THE SLOPE OF THE
LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.

2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

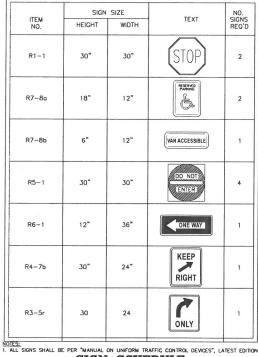
3. DETECTABLE WARNING PAPERS (THEN BOBS-4) SHALL BE USED ON CONCRETE RAMPS AS
SHOWN. EACH TACTICAL WARNING STRIP PANEL SHALL A TRUNCATED DOWED SUBFACE
AT LEAST 2"-0" IN WIDTH, MEASURED FROM THE BACK OF THE CURB TIP DOWN, AND
5"-0" IN LENGTH MEASURE PERPENDICULAR T THE DIRECTION OF PEDESTRIAN TRAVEL.

4. ALL DETECTABLE WARNING PAPERS SHALL BE CAST IN PLACE ARMOR—TILE TACTILE
SYSTEM, YELLOW IN COLOR, OR APPROVED EQUAL.



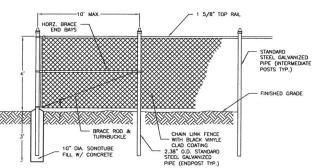
#### CIVIL ENGINEERS

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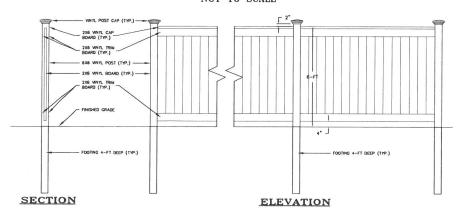


NOTES: 1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

SIGN SCHEDULE



#### TYPICAL CHAINLINK FENCE



TYPICAL SOLID VINYL FENCE DUMPSTER ENCLOSURE

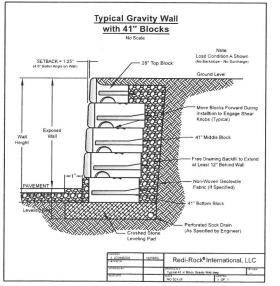
2' MIN. ON SITES (1' WITH CURBING) 0.D. 6" - CONCRETE FILLED CLEAN GRAVEL COMPACTED TO 95% TYPICAL TRAFFIC SIGN 12" 12" NOTES: NOTE: NOTES: NOTE: NOTES: NOTE: NOTES: NOTE: NOT TO SCALE

#### STEEL BOLLARD DETAIL

NOT TO SCALE

BOLLARD NOTES:

1. BOLLARDS SHALL BE COVERED WITH DURABLE PLASTIC OR PVC COVER WHITE IN COLOR.



#### TYPICAL BLOCK RETAINING WALL DETAIL

NOT TO SCALE

ES:
DESIGN OF RETAINING WALLS TO BE PROVIDED BY MANUFACTURE AND INSTALLED PER THE MANUFACTURES REQUIREMENTS.
SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO ORDERING AND APPROVED BY NORWAY PLANS ASSOCIATES, INC.

CHAINLINK FENCE SHALL BE INSTALLED ON TOP OF WALL WHERE THE VERTICAL DROP IS GREATER THAN 2 FEET OR AS REQUIRED BY CODES.

CONSTRUCTION DETAILS TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH

PREPARED FOR: GRANITE STATE CREDIT UNION APRIL 2021

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

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

8' OR 5' ACCESSIBLE

HANDICAP GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN SPACE.

SYMBOL TO BE PAINTED ON ASPHALT AS PER DETAIL

FILE NO. 116 PLAN NO. C-3159

DWG. NO. 20229 /SP-1

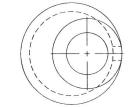
STALL STRIPING DETAIL

NORWAY PLAINS ASSOCIATES, INC.

CONE 2'-2"-4'-0"

OUTLET INV.

SECTION VIEW



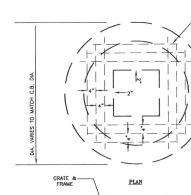
PLAN VIEW

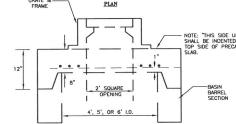
DRAIN LINE DIAMETER	SUM OF DRAIN LINE DIAMETER	CATCH BASIN DIAMETER	
15" TO 18"	LESS THAN 54"	4'	
21" TO 27"	LESS THAN 72"	5'	
30" TO 33"	LESS THAN 90"	6'	
36" & LARGER	GREATER THAN 90"	REFER TO THE STANDARD	

- (OTES: 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.

  THE SERVING CAST IN AS REQUIRED.

- 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





**ELEVATION** NOTE:

1. SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD
OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE
PERMITTED.

PERMITTED.

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

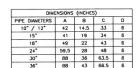
# FILTER FABRIC ON ALL SIDES (MIRAFI 140N OR EQUAL)

PRE-CAST REINFORCED CATCH BASIN

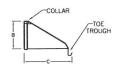
NOT TO SCALE

#### FOUNDATION DRAIN DETAIL NOT TO SCALE





TOP VIEW

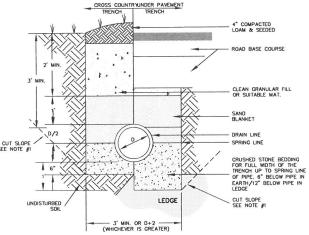




FRONT VIEW FLAIRED END SECTION DETAIL

NOT TO SCALE

FILE NO. 116 PLAN NO. C-3159 DWG. NO. 20229/SP-1



#### DRAINAGE PIPE TRENCH INSTALLATION DETAIL

#### CIVIL ENGINEERS

MANITENANCE NOIES:

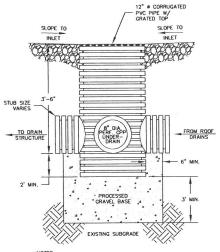
1. THE SWALE(S) SHALL BE MOWED WITH THE REST OF THE SITES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODLY NECETATION. DO NOT MOW GRASS IN SWALE(S) AND WOODLY NECETATION. DO NOT MOW GRASS IN SWALE(S) SHOULD BE FERRILLIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERRILLIZED TO COULD RESULT IN THE SWALE(S) SHOULD BE FERRILLIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERRILLIZED COULD COULD THE SURRECUNDING WETLAND AREAS.

1. THE SWALE(S) SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM, RILLS AND DAMAGED AREAS SHOULD BE ROMPHLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER

VEGETATED TREATMENT SWALE DETAIL

NOT TO SCALE

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



- NOTES:

  1. AREA DRAINS TO BE ADS PIPE TEE & RISER SECTIONS WITH

  1. AREA DRAINS SHALL BE SET ON 3 FT OF PROCESSED GRAVEL

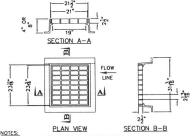
  BASE, COMPACTED TO 95% PROCTOR DENSITY.

  2. USE EITHER CLEAN GRAVILAR FILL OR INHOIT ORUSHED

  GRAVEL FOR THE PROCESSED GRAVEL BASE (SEE 66).

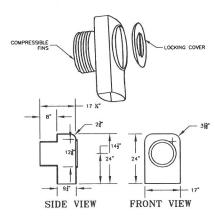
#### AREA DRAIN DETAIL

NOT TO SCALE



#### CATCH BASIN TYPE 'B' GRATE DETAIL

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 ©
WWK.KLEANSTREAM.CO.
2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.

TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH GRANITE STATE CREDIT UNION APRIL 2021

DRAINAGE DETAILS

PIPE HEADWALL
COVER BTM HEIGHT

PRE-CAST HEADWALL

SWALE DIMENSION TABLE

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

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

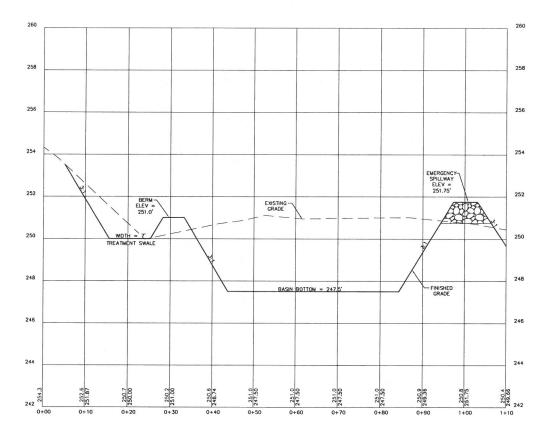




#### CIVIL ENGINEERS

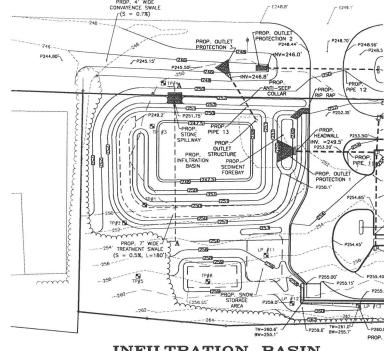
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION, CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN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



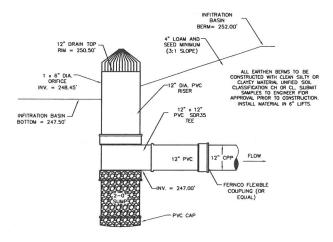


#### INFILTRATION BASIN CROSS SECTION A-A

1'' = 10' (HORZ.) & 1'' = 2' (VERT.)



#### INFILTRATION BASIN



**INFILTRATION BASIN #1 OUTLET STANDPIPE DETAIL** 

NOT TO SCALE

- SPECIFICATIONS:

  DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILITATION BASIN.

  DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT, IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSTRONED DUTISDE THE LIMITS OF THE INFILITATION BASIN.

  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 INFILITATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.

  VEGETATION SHALL BE ESTABLISHED IMMEDIATLY AFTER FINIAL GRADING IS COMPLETED. THE INFILITATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND COMPLETE THE INFILITATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND COMPLETE THE INFILITATION BASIN TO THE MILITATION BASIN AS DESCRIBED IN

- CROSS-SECTION. THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "REPREMANENT VIGCETATION" NOTES FOUND ON SHEET C-11. SEED MIXTURE = A DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN PLLY STABILIZED.

- MAINTENANCE REQUIREMENT STABILIZED.

  MINITENANCE REQUIREMENT STABILIZED.

  INSPECT PRETREATMENT LEASURES (LE. SEDMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) AT LEAST IMCE A YEAR AND AFTER EVERY STORM GREATER THAN 2.5 INCHES OF RAIN OVER A 24-HOUR PERIOD.

  INSPECT INFLITATION SURFACE B-MANUALLY. ONCE IN THE SPRING PROR TO MAY STABLE STABL

#### SEDIMENT FOREBAY

- SPECIFICATIONS:

  1. COMS TRUE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN

  1. COMS TRUES—S-SCITCIB.

  2. LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS
  PRESCRIBED IN THE "EREMANENT VEGETATION". NOTES FOUND ON SHEET C-10.

  SEED MIXTURE = A

  MAINTENANCE REQUIREMENTS:

  1. INSPECT SEDIMENT FOREBAY BI—ANNUALLY. ONCE IN THE SPRING PRIOR TO

  1. INSPECT SEDIMENT FOREBAY BI—ANNUALLY. ONCE IN THE SPRING PRIOR TO

  2. CONDUCT PERFORCIA WOMEN OF THE SEDIMENT FOREBAY SLOPES AND

  EMBANICATION SERVICE SEDIMENT FOREBAY SLOPES AND

  EMBANICATION SERVICE SEDIMENT FOREBAY SLOPES AND

  EMBANICATION SEDIMENT SEDIMENT FOREBAY

  MEMANICATION SEDIMENT SEDIMENT FOREBAY

  MEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAGE

  INSTALLED IN THE FOREBAY, RAMVE SEDIMENT AND DISPOSE OF IT

  OFF—SITE IN ACCORDANCE WITH STATE AND LOCAR EQUILATIONS,

  ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE = 249.5.

1 1/2" DIA. WHITE SCH 40 PVC STAFF GAGE

#### SEDIMENT FOREBAY GAUGE DETAIL

NOT TO SCALE

# **EMERGENCY** SPILLWAY DETAIL NOT TO SCALE

-COMPACTED FILL -

SECTION "A"

INSTALLATION NOTES:

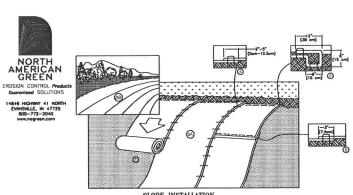
1. ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVINIZED SHEET
STEEL IF BEING USED WITH CORRUGATED METAL PIPE AND SHALL BE POURED CONCRETE IF BEING USED WITH REINFORCED CONCRETE 2. ANTI-SEEP COLLAR SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION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

1. THE FOLLOWING ARE A FEW MANFACTURER'S OF PLASTIC ANTI-SEEP
COLLARS.
COLLARS FROM THESE MANUFACTURER'S MAY BE USED WITH BOTH SMOOTH
WALLED AND CORRUGATED OUTSIDE WALLED PIPE. 2. IT IS ALSO SUGGESTED THAT LOCAL SUPPLIERS BE CONTACTED TO ENQUIRE ABOUT SUITABLE ANTI-SEEP COLLAR PRODUCTS. IF A POSSIBLE ALTERNATIVE IS FOUND CONTACT THE DESIGN ENGINEER TO ENSURE ITS PPROPRIATENESS AND TO GET APPROVAL FOR ITS USE. PROJECTION COLLAR DIMENSION TABLE D W H 18 10.25' 6' 24 12' 7.5' ANTI-SEEP COLLAR DETAIL NOT TO SCALE

FILE NO. 116 PLAN NO. C-3159 DWG. NO. 20229/SP-1 INFILTRATION BASIN DETAILS TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH PREPARED FOR:

GRANITE STATE CREDIT UNION APRIL 2021

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



#### SLOPE INSTALLATION

- NINEMANCE REQUIREMENTS:
  ALL BEANET AND MATS SHALL BE INSPECTED WERLLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT
  EXCEDING 1/2 INCH IN A 24-HOUR PERIOD.
  ANY FALIURE SHALL BE REPARED 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.

- OCCURS, THE AFFECTED SLOPE SHALL BE REPARED AND INSECTION.

  INSECTION SECRETARIES INSTALLATION INSTRUCTIONS:

  A PREPARE SOLI BEFORE INSTALLATION ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LINE, FERTILIZER, AND SEED.

  APPLICATION OF LINE, FERTILIZER, AND SEED.

  APPLICATION USING GELL—O-SEED DO NOT SEED PREPARED AREA. CELL—O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

  SIDE DOWN.

  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. ANCHORING THE RECP'S LOOK ONLY APPARED THE BOTTOM OF THE TRENCH.
- WITH APPROXIMATELY 12" (JOCM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH, ANOLONG THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (JOC M) PARTI IN THE BOTTOM OF THE TRENCH. BEACKFILL AND COMPACT THE TRENCH AFTER STAPLING, APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (JOC CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OUL AND FOLD REMAINING 11" (AND OF STAPLES/STAKES SPACED APPROXIMATELY 12" (JOC CM) PARTI ACROSS THE WIDTH OF THE RECP'S. ROLL THE RECP'S AND LOWN ON (B), HORSINGTELY ASSOCIATED STAPLES STANGES STAPLES STARGES STAPLES STARGES AND ASSOCIATED AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM. STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING THE APPROPRIATE STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING THE APPROPRIATE THE FORCE OF PARALLE RECP'S MUST BE STAPLES STANGES SHALL BE PLACED.
- STAPLE PATTERN.
  THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" 5" (5 CM 12.5 CM) OVERLAP
  DEPENDING ON RECP'S TYPE.
  CONSECUTINE 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 WITHOUT STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART
  NOTE: IN LOOSE DOLL CONDITIONS. THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE
  PREPARATION.
  PROPERLY SECURE THE RECP'S.
- EPARATION:

  PER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.

  DE AND SHAPE AREA IF INSTALLATION.

  DOE ALL ROSE, CLODS, TRACK VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE
  CCT CONTACT WITH THE SOIL.

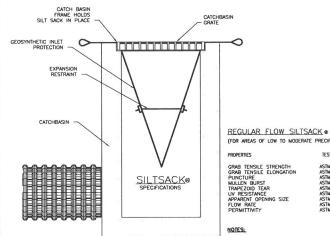
  PARE SECEDED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.

  REPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.
- SEEDING:
  A SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVIGETATION. SEEDING AFTER MAI INSTALLATION IS
  OFTEN SPECIFIED FOR TURE REINFORCEMENT APPLICATIONS, WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS
  AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEDED.

  B. WHEN SOL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO
  FILLING THE MAT WITH SOL

#### **TEMPORARY** EROSION CONTROL BLANKET DETAIL

NOT TO SCALE



(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF) TEST METHOD 0.55 SEC -1

2 FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF HILBH IRAP'S SHALL BE INSPECIED AFTER EVERT FOR EXPENT OF 0.25" OR GREATER AND SEIDMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS READHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SUEFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.

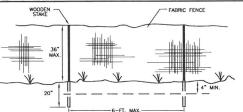
3. INSTALL SILT SACKS IN CATCH BASIN UPON INSTALLATION OF STRUCTURE.

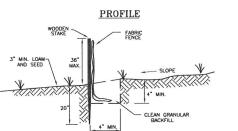
#### CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP

NOT TO SCALE

DWG. NO. 20229/SP-1 31 Mooney Street, Alton, N.H. 603-875-3948

FILE NO. 116





#### CROSS-SECTION

- MAINTENANCE REQUIREMENTS:

  1. FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS:
  RAIN
- PLENCE, AND MOVED ID AN APPROPHATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE SLIT FENCE.

  SLIT FENCES SHALL BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSON OR SEDIMENTATION BELOW THAN IF THERE ARE SIGNS OF UNDERCOTTING AT THE CONTER OF THE ELOSS OF THE BARBER, ON IMPOUNDING OF LARGE VOLUMES OF WATER SHADOW THE SAME OF THE SAME OF

# CONSTRUCTION SPECIFICATIONS: 1. FENCES SHALL BE USED IN ACCOUNT ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO TO ANY SHALL BE USED IN ACCOUNT ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO TO ANY SOLD ISSURBANCE OF THE CONTRIBUTION DRAINAGE AREA ABOVE THE FENCE. SEDMENT BARRIERS SHALL BE WISTALLED PRIOR TO ANY SOLD ISSURBANCE OF THE CONTRIBUTION DRAINAGE AREA ABOVE THE FENCE. 2. THE MAXIMUM CONTRIBUTION GRAINAGE AREA ABOVE THE FENCE SHALL BE LESS THAN I ACRE PER 100 LINEAR FEET OF FENCE; 3. THE MAXIMUM SLOTE ABOVE THE FENCE SHALL BE LEST BE 100 FEET: 4. THE MAXIMUM SLOTE ABOVE THE FENCE SHALL BE LEST OF THE LAND AS CLOSELY AS POSSIBLE, AND A. THE BOOK OF THE FENCE SHALL BE LEST OF THE LAND AS CLOSELY AS POSSIBLE, AND A. THE BOOK OF THE FENCE SHALL BE AREAD UPSLOTE; B. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 4 INCHES IN DEPTH AND INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE ORDINARY OF THE FROM THE SHALL BE EMBEDDED A MINIMUM OF 4 INCHES IN SEPTIME AND THE SHALL BE ASSOCIATED THE ORDINARY OF THE FROM THE SHALL BE ASSOCIATED THE ORDINARY OF THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE

- UNDURING, OF P SHE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FABRIC SHALL BE EMBEDDED WITH A MINIMUM THICKNESS OF B INCHES OF 3/4-INCH STONE; THE SOL SHALL BE COMPACTED OVER THE EMBEDDED FABRIC SHALL BE COMPACTED OVER THE EMBEDDED FABRIC. SUPPORT POSTS SHALL BE SZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SHADING OF FEET;

- O. SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH ANXIMUM POST SHADING OF 6 FEET;

  SHADING OF 6 FEET;

  AND THE FORM SHADING OF FENCE SHALL BE OVERLAMPED BY A MINIMUM OF 6 INCHES (24 PICKES) FOR PEFERRED), FOLDED THREE DIAGNAL THE STANDARD SHADING OF THE FORTS WITH THREE DIAGNAL THE STANDARD SHADING OF THE FORTS WITH THREE DIAGNAL THE STANDARD SHADING OF THE FORTS WITH THREE DIAGNAL THE STANDARD SHADING OF THE FORTS WITH THREE DIAGNAL THE STANDARD SHADING OF THE STANDARD SHADING OF THE FORTS WITH THREE DIAGNAL THE STANDARD SHADING OF THE STANDARD SHADING SHADING OF THE STANDARD SHADING SHADING OF THE STANDARD SHADING SHADING SHADING SHADING SHADING OF THE STANDARD SHADING SHADING SHADING SHADING SHADING SHADING OF THE STANDARD SHADING S

- GRADENT FROM THE BARRER.

  THE STANDARD STERMING FOR FILTER FABRIC SHALL BE STANLED OR WRED TO THE FOST, 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 SUFFACE.

  SITE FINCE MAY BE INSTALLED BY "SULVING" USING RECONANCE, EXCUMPENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SULCING METHOD USES AN IMPLEMENT TOMED BEHIND A TRACTOR TO "PLOW" OR SUCE THE SILT FENCE MATERIAL INTO THE SOLIC HE SULCING METHOD USES AN IMPLEMENT TOMED BEHIND A TRACTOR TO "PLOW" OR SUCE THE SILT FENCE MATERIAL INTO THE SOLIC BESIDES AND OFFICE AND

#### SILTATION CONTROL FENCE DETAIL

NOT TO SCALE

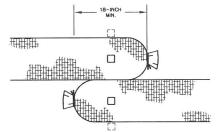
#### TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYE GRASS	40 LBS.	1,0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION, USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15, COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYE GRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.

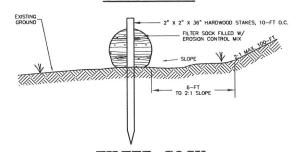
DURCES: NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

#### CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GOTECHNICAL 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.



#### FILTER SOCK CONNECTION PLAN VIEW



#### FILTER SOCK CROSS-SECTION

- CONTINUOUS CONTAINED BERM (FILTER SOCK ALTERNATIVE):

  1. AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINED STABILITY TO A BERM OF EROSION CONTROL MIX.

  2. IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.

  3. INSTALLATION OF CONTINUOUS CONTAINED BERM'S SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

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

#### CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL

NOT TO SCALE

#### **TEMPORARY 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.

  3. RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.

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

  STORES AND TREATMENT AND THE SECOND OF THE CHIEF TO CHICA SECOND PREPARATION:

  STORES AND TREATMENT AND THE SECOND PROPERTY OF THE SECOND AREA.

  STORES AND THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.

  IN PAPELCABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING
- SEASON.
  APPLY LIBESTONE 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 FEASBLE 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

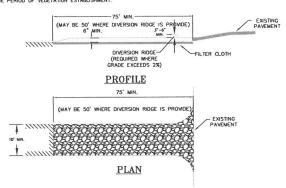
SEEDING: 1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO SEEDER 1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULITIPACKEN TYPE SEEDEN ON HYDRO SELDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSECIONG THAT INCLUDES MUICH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10X WHEN HYDROSECIONED.

2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15, AREAS SEEDED BETMEER 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 VECTATED GROWTH COVERING AT LEAST BSS OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15, IF HIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER MINTER PROTECTION.

- MAINTENANCE REQUIREMENTS:

  1. TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION STES. TEMPORARY SEEDING SHALL BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER
- PERIOD.

  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 IS TO ACCURATE TEMPORARY AND THE TEMPORARY AND THE TEMPORARY AREAS SHALL BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VECETATION ESTABLISHMENT.



#### TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

- MAINTENANCE REQUIREMENTS:

  1. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTE SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL TEN BE RECONSTRUCTED SHALL SWEEP THE PAYEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED THE CONTROL SHALL SWEEP THE PAYEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED 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 STORM USDS SHALL BE 3-INCH CRUSHED STONE.

  2. THE MINIMUM STORM USD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERN IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.

  3. THE PAO SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS

- THE PAD SHALL BE THE FULL WIDTH OF CONSINULTION ACCUSATION TO THE EXISTING ROADWAY.

  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.

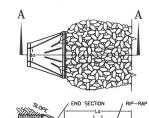
  NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

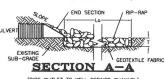
TEMPORARY EROSION AND SEDIMENTATION CONTROLS TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH

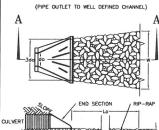
PREPARED FOR:

GRANITE STATE CREDIT UNION APRIL 2021

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







#### SECTION A-A (PIPE OUTLET TO FLAT AREA NO WELL DEFINED CHANNEL)

#### RIP-RAP GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE		E OF STO	
100	5	TO	6
85	4	TO	5
50	3	TO	5
15	1	TO	2

_050	- +		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE		(INCHES)	
100	6	TO	8
85	5	TO	7
50	4	TO	6
15	1	TO	2
	= 6"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE		OF STO	

13	1.0	10	1 3
_d50	= 9"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE		OF ST	
100	13.5	TO	18
85	11.7	TO	16.2
50	9	TO	13.5
15	2.7	TO	4.5

#### APRON DIMENSION TABLE

	COTLET FROM	FIFE OUTLET	mo	17	LU		030
RIC	1	15" CPP	4"	16'	12"	9"	9"
	2	12" CPP	3'	4"	8'	9"	3"
	3	12" CPP	3'	11'	8'	9"	3"

NOTES:

ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.

THE LARGEST HIP-RAP SZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND

SIMPLICITY.

J. 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.

MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROOK RIP—RAP.
THE ROOK OR GRAVEL USED FOR FILTER OR RIP—RAP SHALL CONFORM TO THE SPECIFED GRADATION.
GEOTEXTILE FABRICS SHALL BE PROTECTED FORM PUNCTURE OR TEARING DURING THE PLACEMENT OF ROOK RIP—RAP. DAMAGED
ACCOUNTED THE REPORT SHALL BE REPORTED BY PLACED OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE
FEBRUAGEMENT FOR BARIC. ALL OVERLAPS REQUIRED FOR REPARS ON JOINING THE OZ PIECES OF FABRIC SHALL BE A
MINIMUM OF IZ INCHES.
STONE FOR THE RIP—RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE
OPERATION AND IN SUCH A MANNER AS TO PREVENT SECREGATION OF THE STONE SIZES.
RIP—RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP—RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE
THE SAME GRADATION AND THICKNESS.

MAINTENANCE NOTES:
1. OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO

OUTLETS STALL BE INSTRUCTED AND CLEARED ANNUALITY AND AFTER ANY MAJOR STORM EVENT. ANY ENGIGIN OF DAMAGE TO THE RIP-RAP STALL BE REPARED IMMEDIATELY. THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBMS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERMS AND/OR TAILWATER DEPTHS ON THE PIPPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION AROUS .

#### PIPE OUTLET PROTECTION DETAIL

#### **DUST CONTROL PRACTICES:**

- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.

  MAIER\_APPLICATION.
  A) MOSTER 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 WATERBOOKS.

- DEPOSITION IN NATURAL WATERBOOIES.
  SIDNE APPLICATION:
  A) COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.
  B) IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE.
  BEFER TO "NEW HAMPSHIRE STORWAYTER 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.

  COURSES OR INLETS.

  FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.

  STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRERS AS DESCRIBED ON THE PLANS AND IN NISMM VOL. 3. TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE. MIPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.

  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 PERMIETER SCIENCY BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.

7. INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASSHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND

#### PROTECTION OF ACTIVE STOCKPILES:

PIAN NO C-3159

RUILCITION OF ACTIVE. STOCKPILES:

ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.
PRIOR TO THE ONSET OF PREOPITATION. PERMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES,
ADJUSTED AS NEEDED TO ACCOMMONATE 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.

#### PERMANENT VEGETATION:

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. RUNDEF SHALL BE DIVERTED FROM THE SEEDBED AREA.

4. ON SLOPES 4: 10 RISTERER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNDEF.

IF APPLICABLE, FERRILIZER AND ORGANIC SOIL AMENUMENTS STALL BE APPLICABLE. FERRILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS, FERRILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS, FERRILIZER SHALL BE RESTRICTED TO LINE, WOOD ASH ON PLOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNILESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARBABLE SITES, OF 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

SEEDING.

1. MOCILATE ALL LEGUME SEED WITH THE CORRECT TYPE OF MOCILANT.

1. MOCILATE ALL LEGUME SEED WITH THE CORRECT TYPE OF MOCILANT.

1. MOCILATE ALL LEGUME SEED OF THE CORRECT TYPE SEEDER OR HYPORYSEED WITH THE CORRECT TYPE SEED OF THE SEED

WERE EASIBLE RAZET IMFRE DITIER OUTSTANDER THE SECRETARY OF STRAIN SERVICE AS EXPENDED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR USED, THE SEEDING SHALLLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGIMES. SPRING SEEDING LIBE ECOMPLETED 45 DATS PRIOR TO FIRST SKILLING FROST. HERE CROWN VETCH IS SEEDED IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (WINDOWS SEED) WITH SEED SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY AND PERMANENT MULCHING PRACTICE DESCRIBED IN THE HISSAY, VOL. 3. AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING DATES, MULCH, ACCORDING TO THE TEMPORARY AND PERMANENT MULCHING PRACTICE DESCRIBED IN THE HISSAY, VOL. 3. THE SEED SEEDING PERIOD. MULCH, ACCORDING TO THE TEMPORARY AND PERMANENT MULCHING PRACTICE DESCRIBED IN THE NISSAY, VOL. 3. THE TEMPORARY AND PERMANENT MULCHING PRACTICE DESCRIBED IN THE NISSAY, VOL. 3. THE SEED SHALL BE CONCEINED IN THE NISSAY, VOL. 3. THE SEED SHALL BE ACHIEVED PRIOR TO COCROBER 51. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

VIROSECTING:

WHEN HYDROSEDING (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 BUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY. LIME AND FERTILIZER MAY BE APPLIED SMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER FROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADMESTIC MUST GAINED BY AGRE OF WOOD FIBER MULCH.

SEEDING RATES MUST BE INCREASED BY 1037 WHEN THORSEEDING.

MAINTENANCE REQUIREMENTS:

1. PERMANENT SEEDED AREAS SHALL BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. MSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHALL CONTINUE 2. SEEDED AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VECETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.

3. BASED ON INSPECTION, AREAS SHALL BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOLS.

#### 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 RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, E USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLI

#### PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	1,000-5
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

#### MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

CONSTRUCTION PHASING:

STABILIZATION:

A STE IS DEEDED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON STE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10 - TEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO: All NAREAS THAT WHILL NOT THE PAYED;

OF A MINIMUM OF BSX VEGETATIVE COVER HAS BEEN ESTABLISHED;

OF A MINIMUM OF BSX VEGETATIVE COVER HAS BEEN ESTABLISHED;

CERTIFIED COMPONENTS OF NON-EROSINE MATERIAL SUCH AS STONE OR A CEPTION CONTROL BLANKETS HAVE BEEN INSTALLED.

BINN AREAS TO BE PAYED;

OF BMSS COUNSE GRAVELS HAVE BEEN INSTALLED.

FROM EROSION, STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED

FINISHED GRADING.

2.3. 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 MAINGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHSMM, VOL. 3)

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)-335-3048.

CIVIL ENGINEERS

#### 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.

OVERALL CONSTRUCTION AND SHALL BE ADMERD TO THE MISTALL ALL TEMPORARY SEQUENT CONTROL BARRERS (I.E. SILT FENCE, EROSION CONTROL MIX BERN, STONE CHECK DAMS, ETC.). ARQUNO THE QUITER PERMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET INSTALL ORNORES SKOW FENCE. ARQUNO THE PERMETER OF THE INSTALL ORNORES SKOW FENCE. ARQUNO THE PERMETER OF THE INSTALL ORNORES SKOW FENCE. ARQUNO THE PERMETER OF THE CONSTRUCTION OF THE BASINS HAS STATTED.
CONSTRUCTION OF THE BASINS HAS STATTED.
CLEAR, GRUB AND STRIP THE STE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. 1895: CUMPSE UMPNEL PROPERTY OF THE STATE OF THE ISSUED PERMIT STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN AS DAYS FROM THE TIME OF INITIAL STABILIZED INTERIOR OF THE STATE OF THE

DISTURBENCE, UNION STOURCE APPROVED AS PART OF THE ISSUEU PLAWNI UNION, CONSTRUCTION STOURCE APPROVED AS PART OF THE ISSUEU PLAWNI UNION, CONSTRUCTION STOURCE APPROVED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LAFER THAN 3 DAYS, FOLLOWING FIRM GRADING.
ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LAFER THAN 3 DAYS, FOLLOWING CONSTRUCTION, NO INCOME. THE SMALLEST PRACTICAL AREA SHALL BE INSTRUCTED UNION CONSTRUCTION, NO INCOME. THE SMALLEST PRACTICAL AREA SHALL BE RESEASED ON CONSTRUCTION, NO INCOME. THE SMALLEST PRACTICAL AREA SHALL BE RESEASED ON CONSTRUCTION OF A SHALL BE APPROVED GRADING AND PRESERVE NATURAL VEGETATION.

A) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.

B) EXCLUDE VEHICLES AND CONSTRUCTION COUPPIEMT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.

C) LAGRING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAWNGE FAUN DEPICTED ON SHEET.

CANADAL AREA OF THE STABLISHMENT OF VEGETATION SHALL BE STOCKPHED IN THE AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET.

CANADAL AREA OF THE STABLISHMENT OF VEGETATION SHALL BE STOCKPHED IN THE ANDROVEN AREAS AND SPOILS SHALL BE STABLIZED AS DESCRIBED. CLEAR, CRUB AND STRIP THE SITE. JUMPA.

CLEAR, CRUB AND STRIP THE SITE. AND THE STATE AND LOCAL REGULATIONS.

INSTALL A ENDPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED RODAWY CONNECTION TO ROAD NAME. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DEFINEL.

IN THE TEMPORARY CONSTRUCTION EXIT DEFINEL. TO BE REJUSED ON SITE OF THE STATE OF THE STRUCTURE OF THE STATE OF THE STOCKPILES OF THE STOCKPILES AND THE STOCKPILES AS DIRECTED IN THE SOIL STOCKPILES MAINTAIN THE STOCKPILES AS DIRECTED IN THE SOIL STOCKPILES PRACTICES.

THE PROPERTY OF THE STOCKPILES AS DIRECTED IN THE SOIL STOCKPILES AS DIRECTED AND IN ACCORDANCE WITH THE SOIL STOCKPILES AS DIRECTED AND IN ACCORDANCE WITH THE INFILITATION BASIN ETAILS SHOWN ON SELET C.-9.

CONSTRUCT THE GRAVEL WETLANDS BASIN, SEDIMENT FORESTAY AND EASINE STATES SHOWN ON SELET C.-9.

CONSTRUCT THE GRAVEL WETLANDS BASIN, SEDIMENT FORESTAY AND EASINE STATES.

ALD INTOFESS AND SASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF OF THE INFILITATION BASIN BETALE.

PREFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PRANKING LOT AREA TO THEM.

DIRECTING RUNGEF TO THEM.

10. PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS.

A) INSTALL REQUIRED FILLS IN MAXIMUM B-INCH LIFTS AND COMPACT

1). AS SUBGRADE IS ACHIEVED INSTALL REALINED SEDIMENT CONTROL

BE AND LIFT TO 95% MAXIMUM PROCTOR DENSITY.

1). AS SUBGRADE IS ACHIEVED INSTALL REALINING SEDIMENT CONTROL

BE SUBGRADE IS ACHIEVED INSTALL REALINING SEDIMENT CONTROL

BE SUBGRADE IS ACHIEVED INSTALL REALINING SEDIMENT CONTROL

BE SUBGRADE IS ACHIEVED INSTALL THE CORRESPONDING SEDIMENT

CORRESPONDING DETAILS AND AS SHOWN ON SHEET C.-3. AND C.-5. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENT

CONTROL MEASURE.

10. CONSTRUCT THE INFILITATION BASIN AND COULTED PROTECTION. LOAN

SOFT ACHIEVED INSTALL THE CORRESPONDING SEDIMENT

CONTROL MEASURE.

10. CONSTRUCT THE INFILITATION BASIN AND COULTED PROTECTION. LOAN

SOFT ACHIEVED AND AS AND TEMPORARY SEDIMENT CONTROL BARRIER

DEFICIED ON SHEET C.-4.

14. ALL CUT AND FILL SLODES AND LAWN AREAS NOT TO BE PAVED SHALL BE

LOANED AND SECON FOR PERMANENT VECETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VECETATION AND STABILIZATION AS THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL

BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE

ELEVATIONS.

10. HISTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL, IN ORDER TO MOSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL, IN ORDER TO MOSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL IN ORDER TO MOSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL WITH MOSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL WITH MOSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL IN ORDER TO T IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM ERGS BORROW AREAS AND SPONS SHALL BE STABILIZED AS DESCRIBED UNDER "SQULSTICOCKPILE PRACTICES".

1. SLOPES SHALL NOT BE GERATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, ERGSION, SUPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMPSOIL TO REDISE PROFESSION. TO STABLE BE CLEARED, GRUBBED AND STRIPPED OF TOP-SOIL TO REMAIN FREE SECOEMEN OF OST SHAY OF OTHER DELICIONABLE MATERIALS.

11. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOP-SOIL TO REMAIN FREE SECOEMEN OF OST SHAY OF OTHER DELICIONABLE MATERIALS.

12. PLACEMENT OF TOP-SOIL. TOP-SOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BOOK SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR COOSE.

13. ALL FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN HINDOWS. THE CONTRACTOR SHALL RECYBE THE PROJECT FOR COOKERN CONTRACT OF THE PROJECT STRUCK OR HINDOWS. THE PROJECT FOR COOKERN CONTRACT OF THE PROJECT STRUCK OR HINDOWS. THE PROJECT FOR COOKERN CONTRACT, AND OTHER PROJECT STRUCK OR HINDOWS SHALL BROWN REFINISHED ROOSS (LARGER THAN 3/4 THE BEPTH OF THE LIST BEING INSTALLED), LOOS, STUMPS, BUILDING DEBIRS, FROOZEN MARFRIAL AND OTHER PROJECT SOURCE STRUCK OR CONTRACTED LORD FOR HINDOWS. THE PROJECT SOURCE STRUCK SHALL BE PROFESSIONAL ENGINEER FOR T

20. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERRALY THE DESIGN ENGINEER) TO DETERMINE IF ME PROPOSED DISSIGN SHALL BE REMISED TO PROPERLY MANAGE THE CONDITION.

21. MARCHINE STATEMENT OF THE PROPERTY OF THE PROPERTY MANAGE THE CONDITION.

22. MARCHINE STATEMENT OF THE GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULTICH OR OTHER APPROVED METHODS TO STABLUZE ARRAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.

22. ALL ORDOLD ARRAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING

PROJECT COMPLETION AND STABILIZATION:

1. UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GENINATED). THE TEMPORARY SEDIMENT CONTROL
BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. /
DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN
APPROPRIATE MANNER.

APPROPRIATE MANNER.
ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH
BASINS AND THE SEDIMENT FOREBAYS TO THE CRAVEL WETLANDS BASIN

#### WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

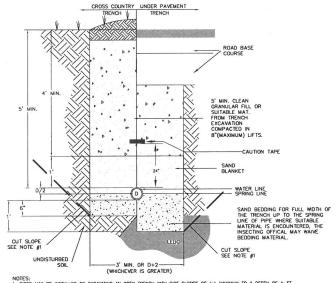
1. MAINTENANCE MEASURES SHALL BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE WINTER PÉRICO. AFTER EACH RAINFAIL, SKOWSTORM, OR PÉRICO OF THAMMIC AND RUNOFF, THE SITE CONTRACTOR SHALL CONDUCT INSPECTION OF ALL INSTALLE EROSION CONTRACTOR SHALL CONDUCT HOSPECTION OF ALL INSTALLE EROSION CONTINUED PLUNCTION PERFORM REPAIRS AS NECEDE TO MISHE THEIR CONTINUED PLUNCTION OF PERFORM REPAIRS AS NECEDED TO MISHE THE CONTINUED PLUNCTION OF THE WINTER SEASON, THE CONTRACTOR SHALL CONDUCT AN INSPECTION IN THE SEPRING TO ASCENTIAN THE CONDITION OF THE VECETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESSED AS REQUIRED TO ACHEVE AN ESTABLISHED VECETATIVE COVER (AT LEAST 85% OF AREA VECETATED WITH HEALTHY, VICOROUS GROWTH.)

CECTATION AND REPAIR ANY DAMAGED LIKE AND THE MANAGED LIKE OF THE MANAGED LIKE AND THE MANAGE

PERMANENT EROSION AND SEDIMENTATION CONTROLS TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH PREPARED FOR:

GRANITE STATE CREDIT UNION APRIL 2021 C-11 2 Continental Blvd., Rochester, N.H. 603-335-3948





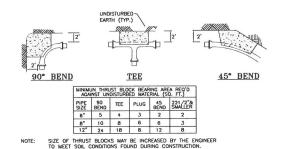
11. PPES MAY BE INSTALLED BY EXCANATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT, INTALATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.

2. PIPE MATERIAS SHALL BE A SPOCIFED ON THE DESCAN PLAN.

3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

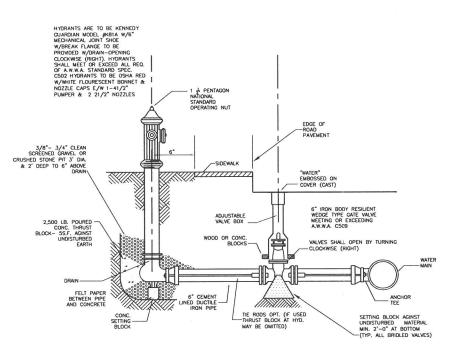
#### WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



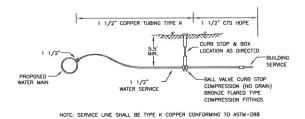
#### WATER MAIN

THRUST BLOCK DETAILS NOT TO SCALE



#### TYPICAL HYDRANT SECTION

NOT TO SCALE



#### TYPICAL DOMESTIC SERVICE CONNECTION

NOT TO SCALE

#### CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYPOGEOLOGICAL 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.

# 4-#4 EQUALLY SPACED

#### GENERAL UTILITY NOTES

- CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888 344-7233) 72 HOURS PRIOR TO THE START OF CONSTRUCTION

- CONTRACTION SHALL WOTHY DIC-SAFE (1-BBS 344-7/233) 72 HOURS PRIOR TO THE STAFT OF CONSTRUCTION.

  ALL EXISTING UILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND ELEVATIONS.

  LOCATIONS AND ELEVATIONS.

  THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THIS PLAN, BUT IN EXISTENCE IS NOT THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THIS PLAN, BUT IN EXISTENCE IS NOT INTENDED OR IMPLIED.

  ANY UTILITY POLES THAT NEED TO BE RELOCATED SHALL BE COORDINATED WITH EVERSOURCE OR VERIZON, WHOM EVER HAS CONTROL OVER THEM.

  PROPOSED UTILITES ARE TO BE UNDERGROUND. COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFORMER PADS WITH PSNH AND OTHER PERTINENT UTILITY COMPANIENT.

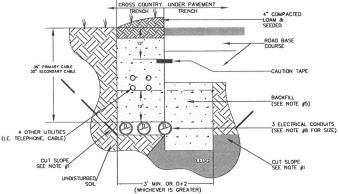
  WATER AND SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10-FT APART HORIZONTALLY.

  WHERE SEWER AND MATER LINES MUST GROSS, SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM 9-FT HORIZONTALLY FROM THE WATER LINE AND A VERTICAL SEPARATION OF 18-INCHES SHALL BE MAINTAINED. SEWER IPPE JOINTS SHALL BE LESTED WITH ZERO LEAKAGE AT 25 POUNDS PER SOURCE INCH FOR GRAWITY SEWER AND AT 1-1/2 TIMES WORKING PRESSURE FOR ALL FORCE MAINS.
- SEWER AND AT 1-1/2 TIMES WORKING PRESSURE FOR ALL FORCE MAINS.

  3. MALTERINE CONSTRUCTIONS:
  A.) ALL PROPOSED WATER LINE MATERIAL USED SHALL MEET ROCHESTER WATER DEPARTMENT AND ROCHESTER ENDIMERING DEPARTMENT SPECIFICATIONS. WATER LINES SHALL BE A.W.W.A. C 151, CLASS 52, CEMENT LINED, DUCTILE IRON PIPE.
  B.) PROPOSED WATER GATE VALVES SHALL BE MANUFACTURED BY KENNEDY OF AMERICAN FLOW CONTROL, RESILIENT SEAT TYPE.
  C.) ALL WATER LINES SHALL BE BURIED A MINIMUM OF 5.
  D.) IF 5 OF COVER IS NOT AVAILABLE WATER LINE SHALL BE INSULATED AS SHOWN IN THE "SHALLOW COVER TRENCH DETAIL FOR INSULATED WATER PIPE.
  E.) ALL WATER TITINGS SHALL BE CLASS 52.
  F.) PROPOSED WATER GATE VALVE SHANN SECURES (RIGHT).
  D.) WORK TO COMITCE THIS THANKER OR SEVER MAINS REQUIRES A PERMIT FROM THE ROCHESTER PUBLIC WORKS DEPARTMENT. CONTRACTORS ARE TO BE PRE—QUALIFIED.

#### POLE MOUNTED LIGHT DETAIL

NOT TO SCALE



THE CONTRACTOR. THE EVERSOURCE SUPERVISOR MUST BE NOTIFIED 2 BUSINESS DAYS PRICK TO BACKFILLING THE TRENCH. IN THE EVENT THAT A CABLE CANNOT BE SUCCESSFULLY PULLED THROUGH THE COMPLETED CONDITION TSTEM OUT OF A CONSTRUCTION EPROR, IT WILL BE HECK CONTRACTOR RESPONDENCY TO LOCATE AND REPART THE WOULVED CONDUIT. THE CONTRACTOR WILL BE RESPONSELLE FOR ALL RESLATING EVENENES. SECONDARY OUTLOOK CABLES, \*\*INFOLIT OF BINGE PHASE PRIMARY NO. SECONDARY OUTLOOK CABLES, \*\*INFOLIT OF BINGE PHASE PRIMARY NO. SECONDARY OUTLOOK CABLES, \*\*INFOLIT OF BINGE PHASE PRIMARY NO. SECONDARY OUTLOOK CABLES, \*\*INFOLIT OF BINGE PHASE CONCOUNTS OUT OF THE PHASE CONCOUNTS OUT OF THE PHASE PHA

**ELECTRICAL & UNDERGROUND UTILITY** 

TRENCH INSTALLATION DETAIL NOT TO SCALE

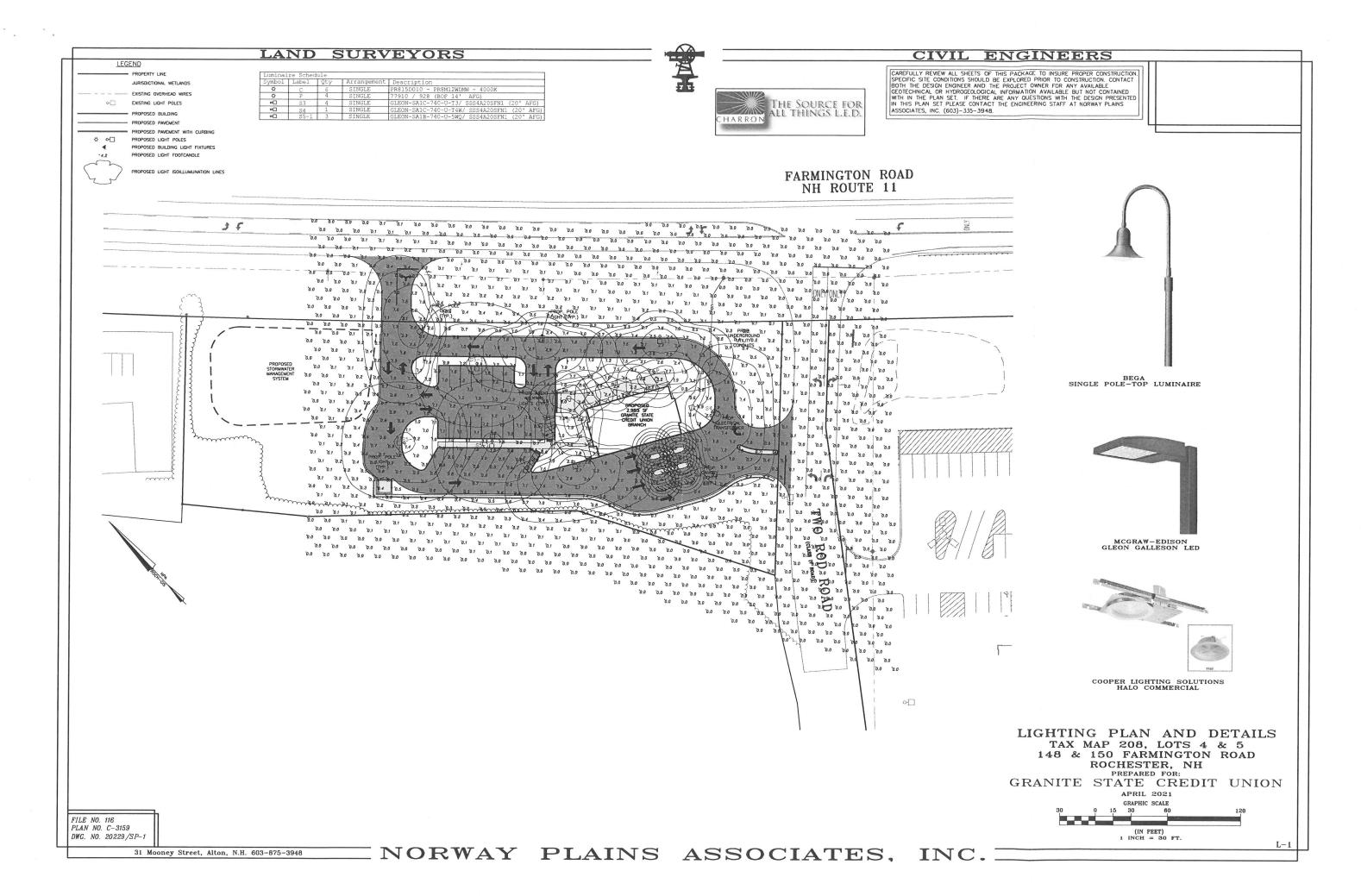
UTILITY DETAILS TAX MAP 208, LOTS 4 & 5 148 & 150 FARMINGTON ROAD ROCHESTER, NH PREPARED FOR:

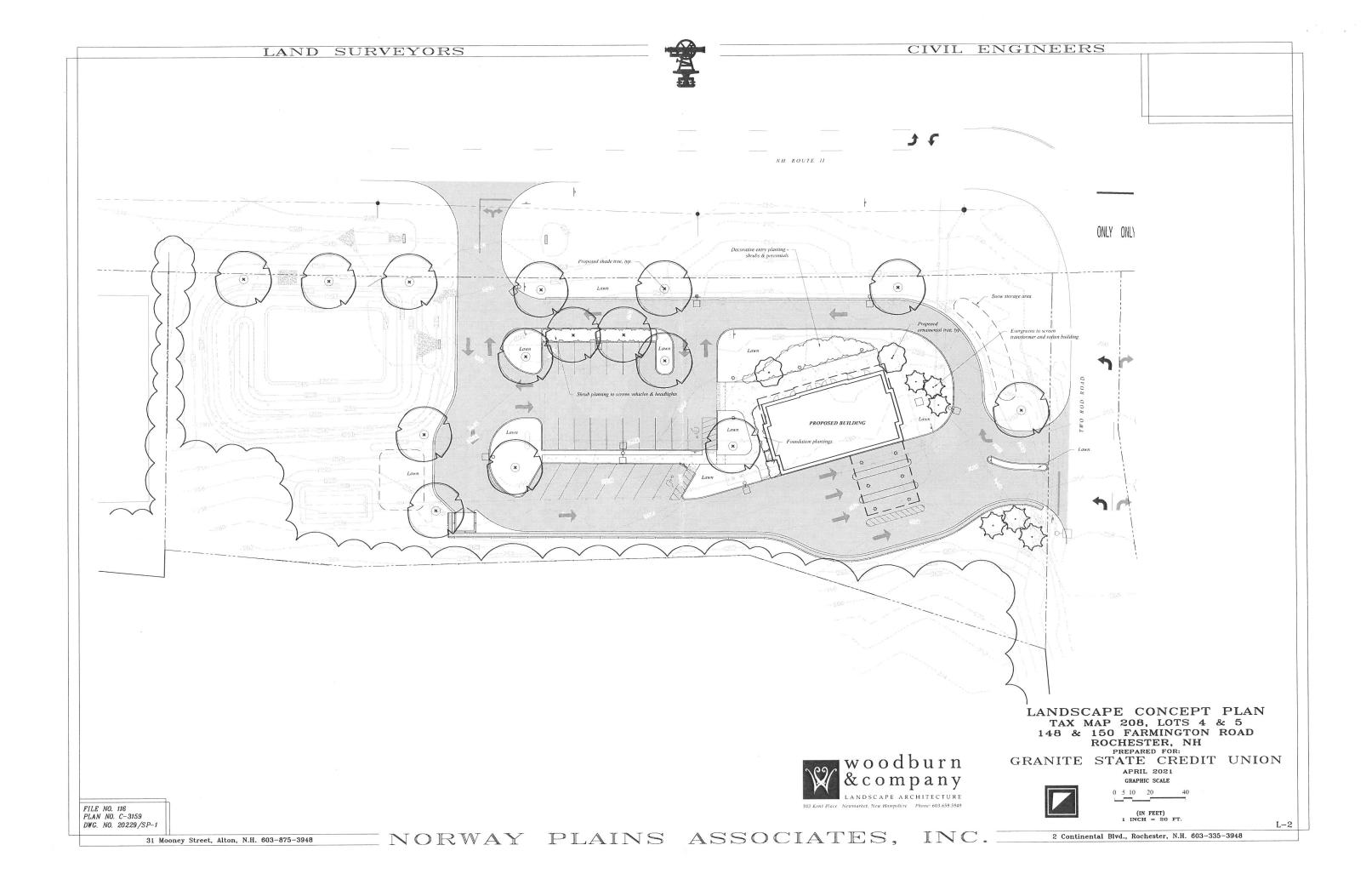
GRANITE STATE CREDIT UNION

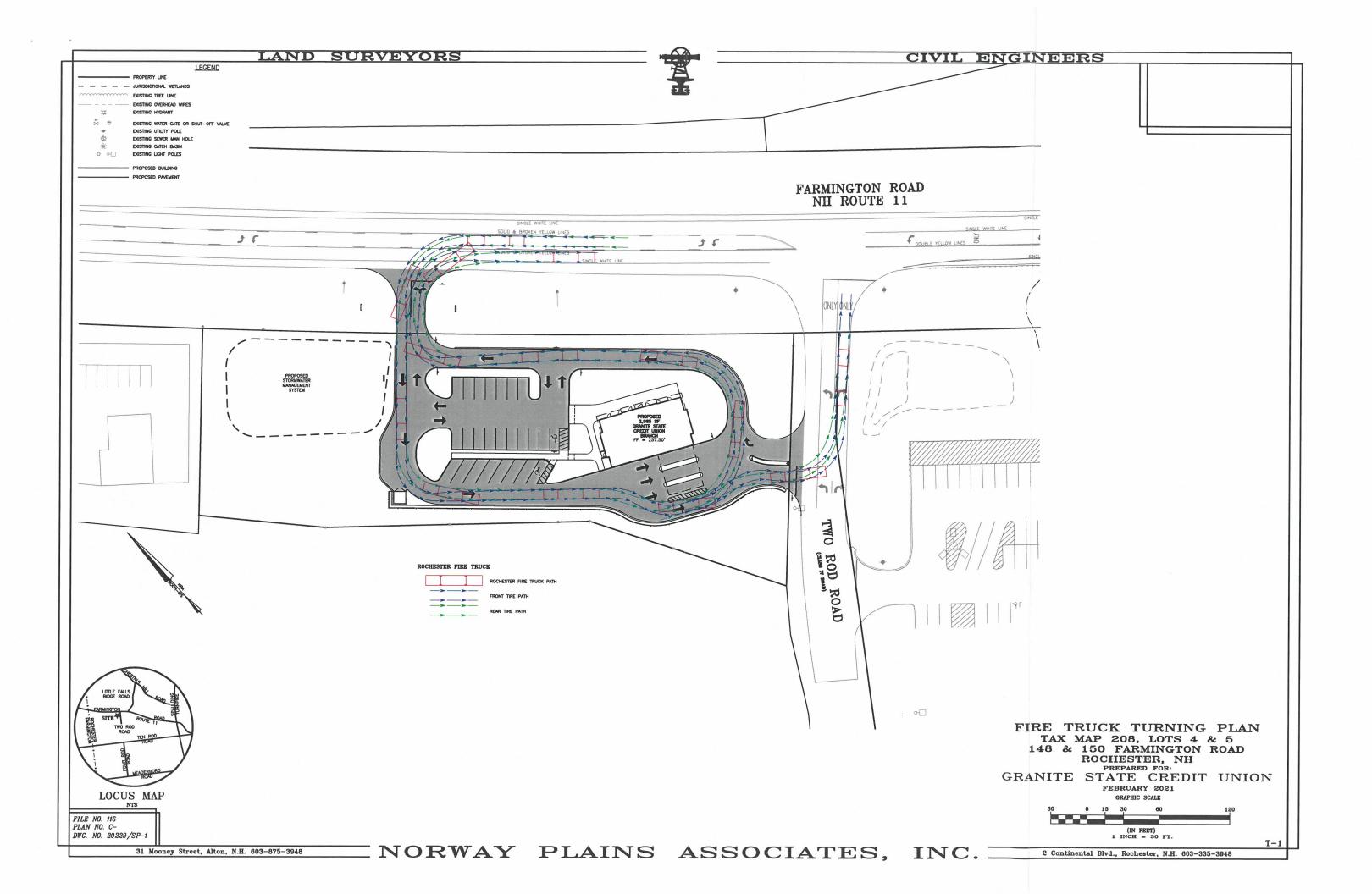
APRIL 2021

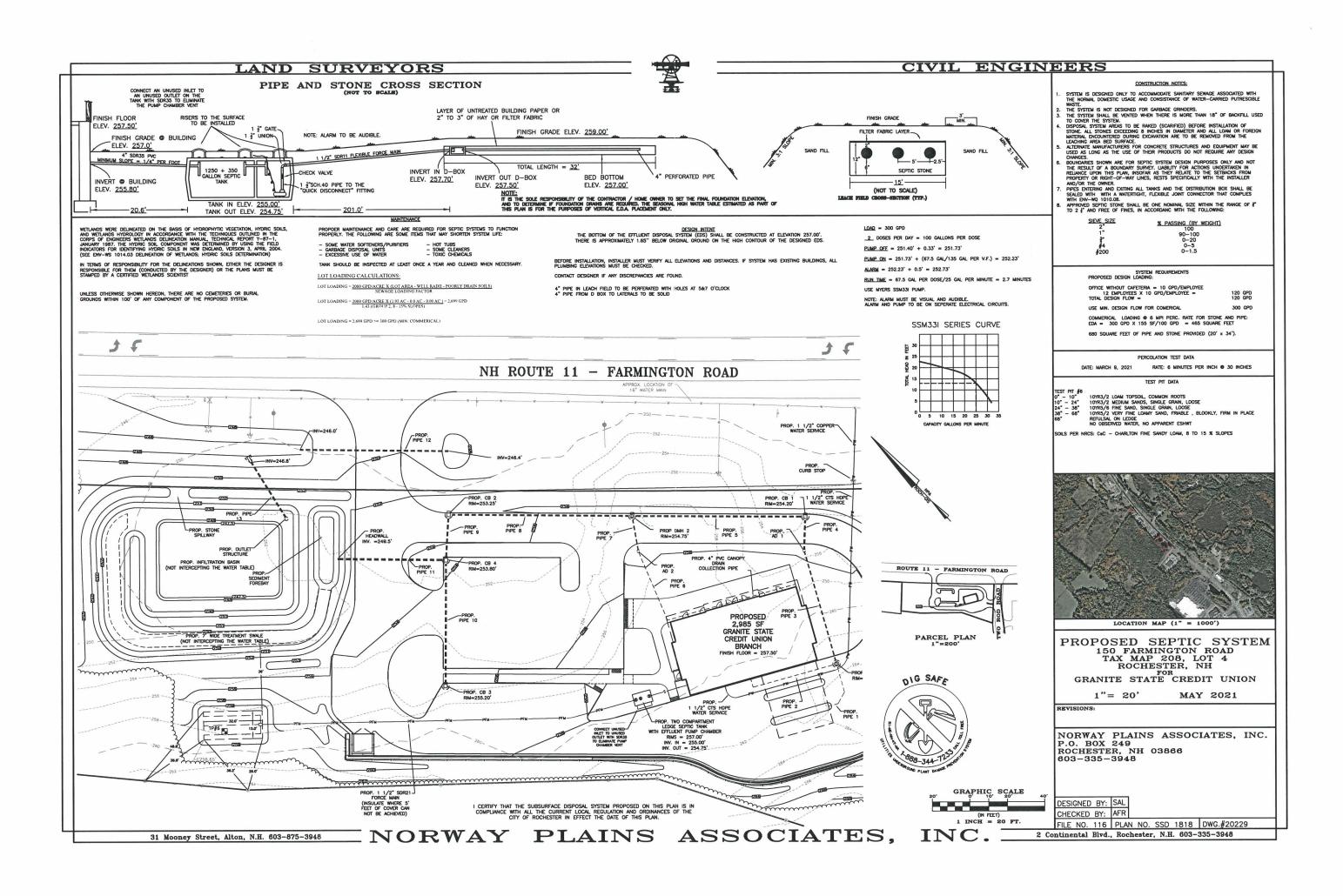
PLAN NO. C-3159 DWG. NO. 20229 /SP-1

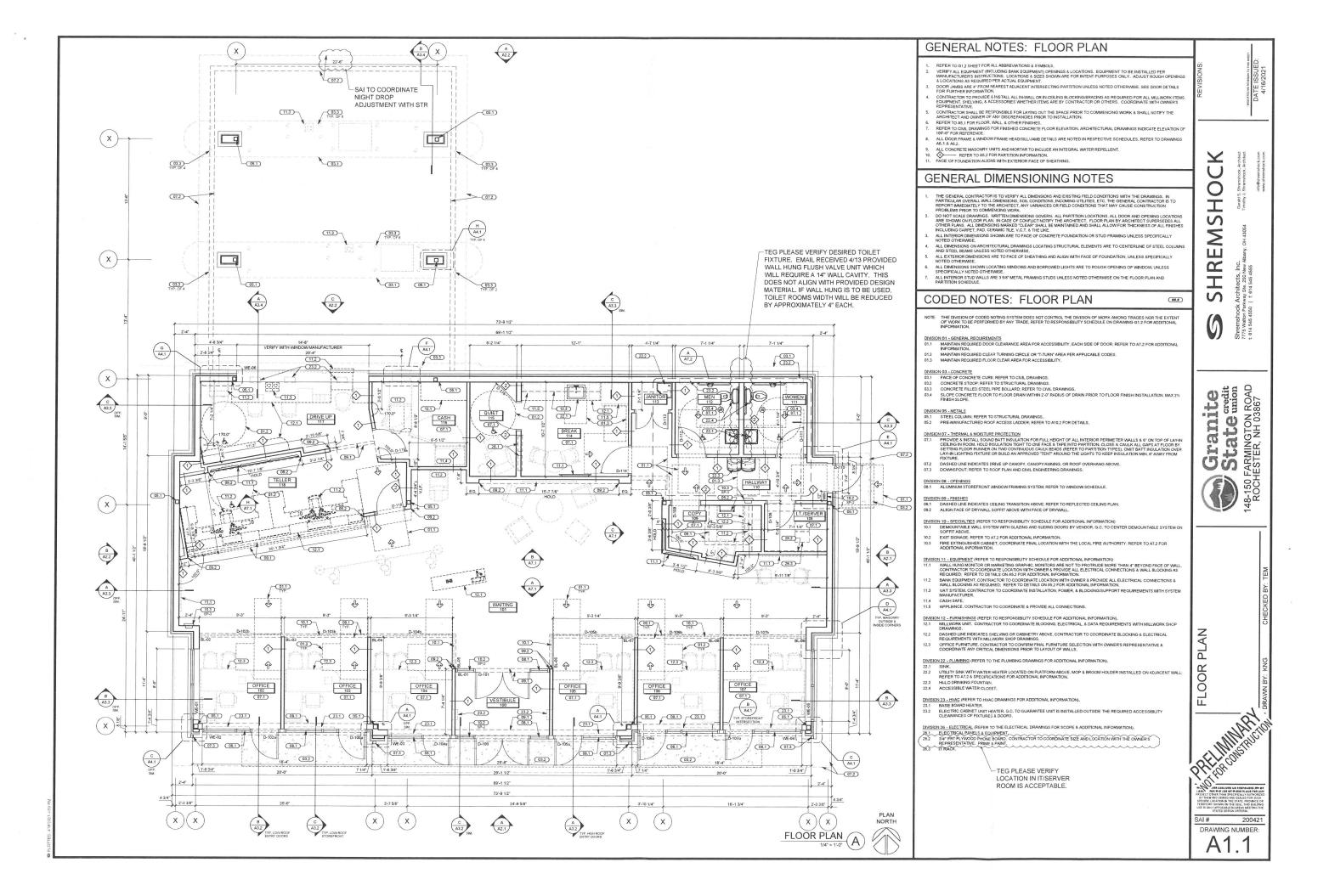
FILE NO. 116

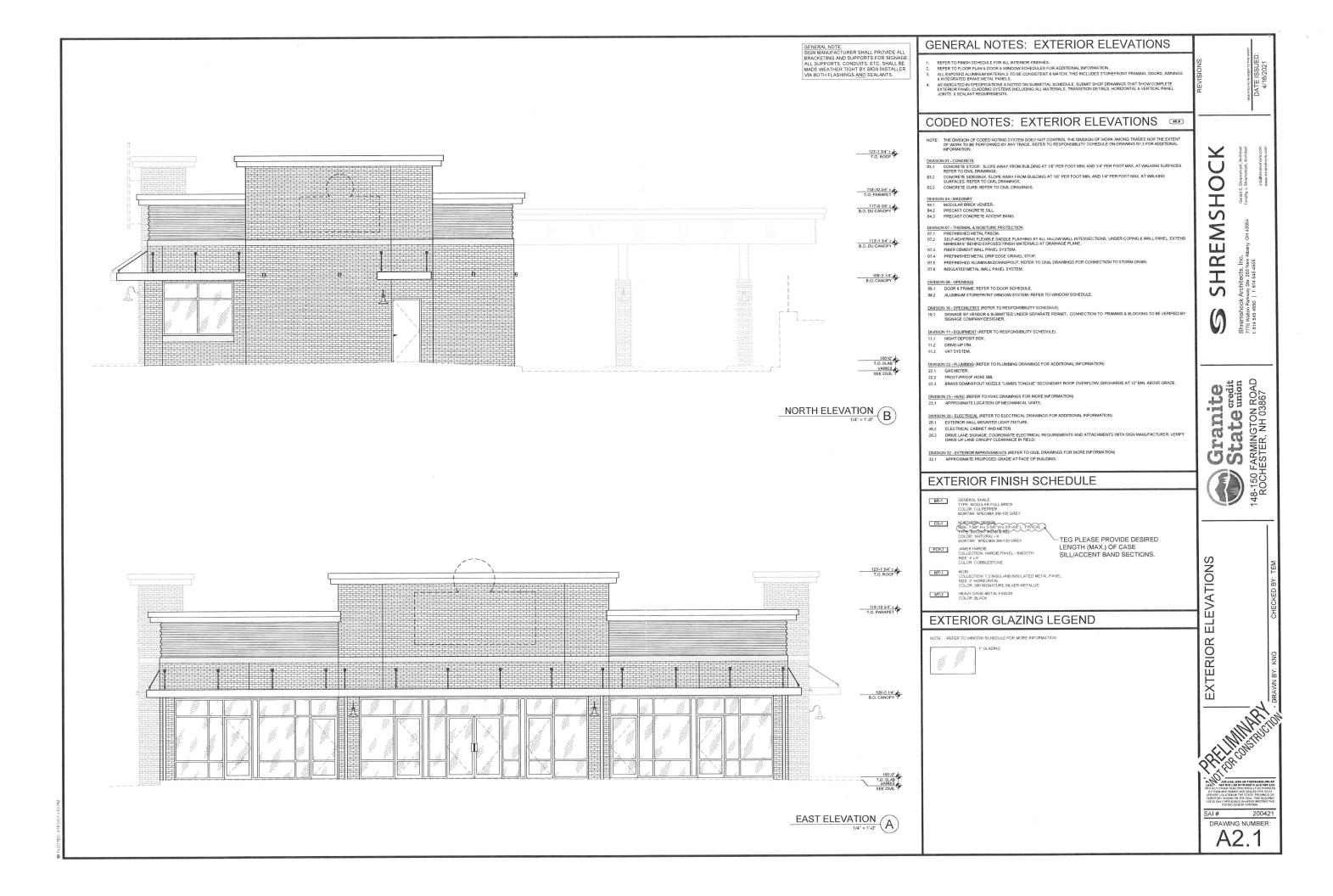


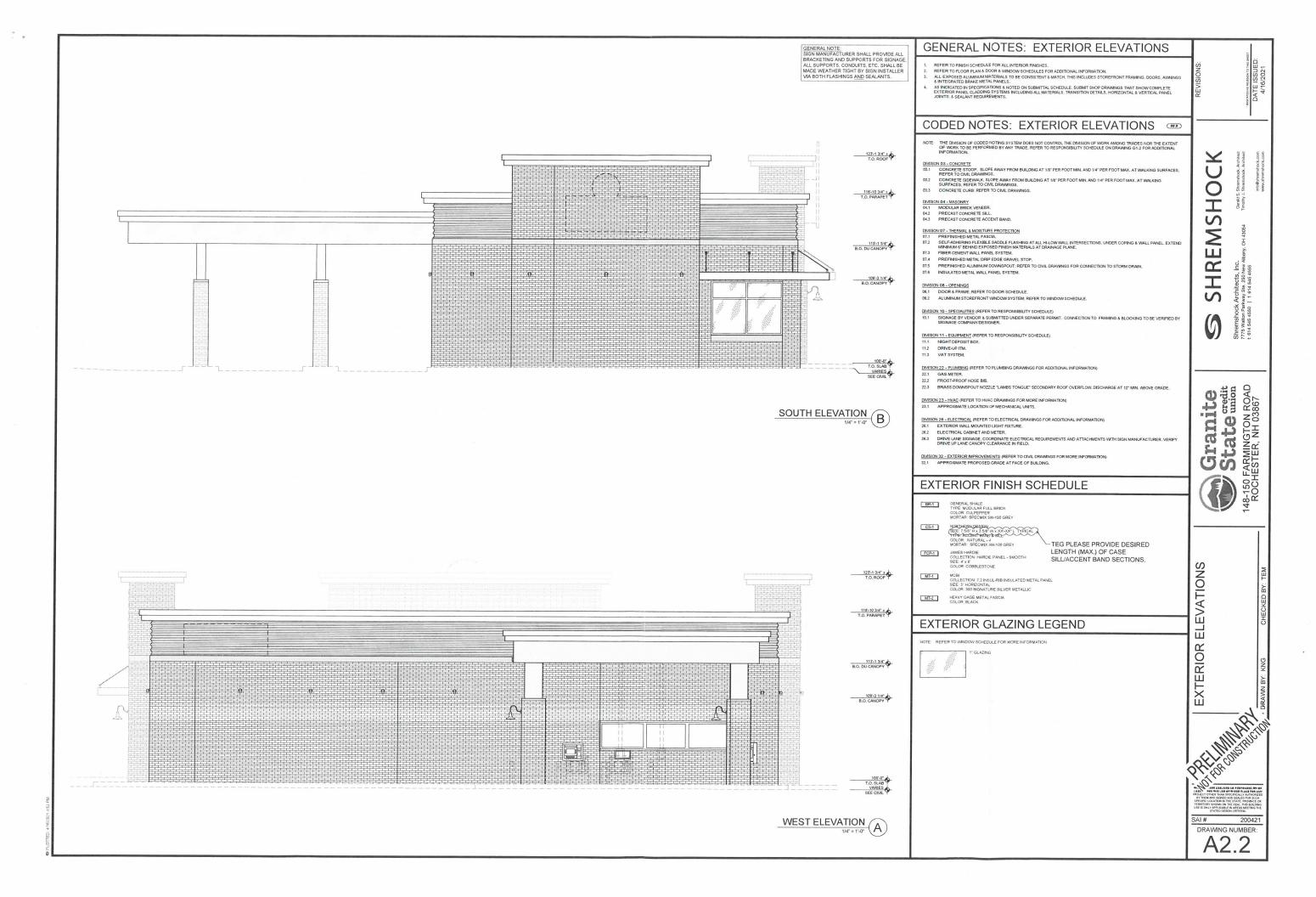












		15 12 "

## Stephen G. Pernaw & Company, Inc.

P.O. Box 1721 • Concord, NH 03302 tel: (603) 731-8500 • fax: (866) 929-6094 • sgp@ pernaw.com

Transportation: Engineering • Planning • Design

#### MEMORANDUM

Ref: 2061A

To: Scott A. Lawler, P.E.

Norway Plains Associates, Inc.

From: Stephen G. Pernaw, P.E., PTOE

Subject: Proposed Credit Union

Rochester, New Hampshire

Date: April 20, 2021

As requested by representatives of the Granite State Credit Union, Pernaw & Company, Inc. has conducted a trip generation analysis for the proposed credit union branch located at the southwest corner of the NH Route 11/Two Rod Road intersection in Rochester, New Hampshire. The purpose of this memorandum is to summarize the results of the trip generation analyses, as well as our research of available traffic count data for this area. To summarize:

<u>Proposed Development</u> – According to the plan entitled "Overall Site Plan," prepared by Norway Plains Associates, Inc. (see Attachment 1) the proposed development would involve the construction of a single-story credit union branch building (2,985 sf) at 148 & 150 Farmington Road. NH11 provides one through lane in each direction, along with a center turn lane. The speed limit is posted at 40 mph on this section of NH11.

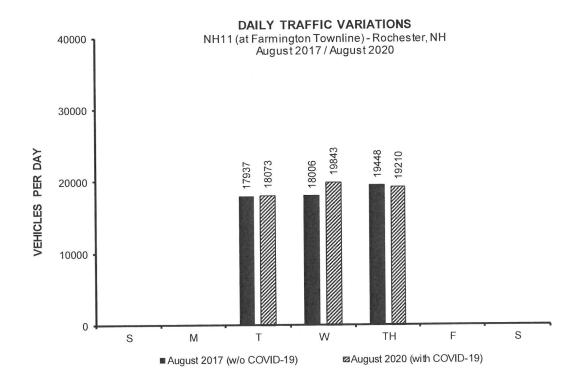
Access to the site is proposed via one new full-access driveway on NH11 located over 300-feet west of the Two Rod Road intersection, and one new full-access driveway located on Two Rod Road approximately 180-feet south of NH11. The existing houses, garage, and sheds on the subject properties will be razed.

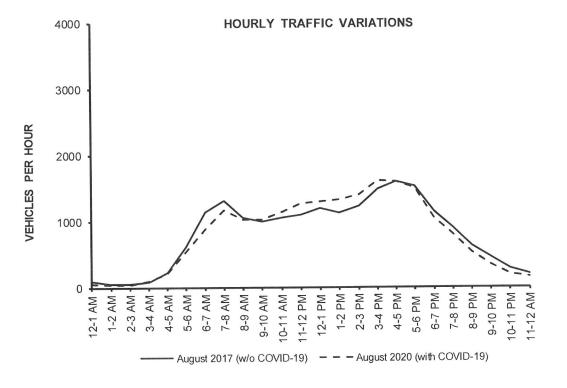
Existing Traffic Volumes – Research at the NHDOT revealed that there is a short-term Automatic Traffic Recorder (ATR) count station on NH11 at the Farmington line, located approximately 0.5 miles to the west. This count was conducted in August of 2020. According to the NHDOT reports, this section of NH11 carried an estimated Annual Average Daily Traffic volume of approximately 16,453 vehicles per day (vpd) in 2020, down from 16,928 vpd in 2019 (see Attachment 2).

This data shows that traffic volumes in the area typically reach peak levels during the morning and late afternoon on weekdays; thus reflecting typical commuting patterns. The diagrams on Page 2 graphically show the daily and hourly variations in traffic demand at this location. The detail sheets pertaining to these counts are attached (see Attachments 3 and 4). The raw data collected in August 2020 reflects the influence of the Covid-19 pandemic, when compared to the data collected in August 2017.

2061A









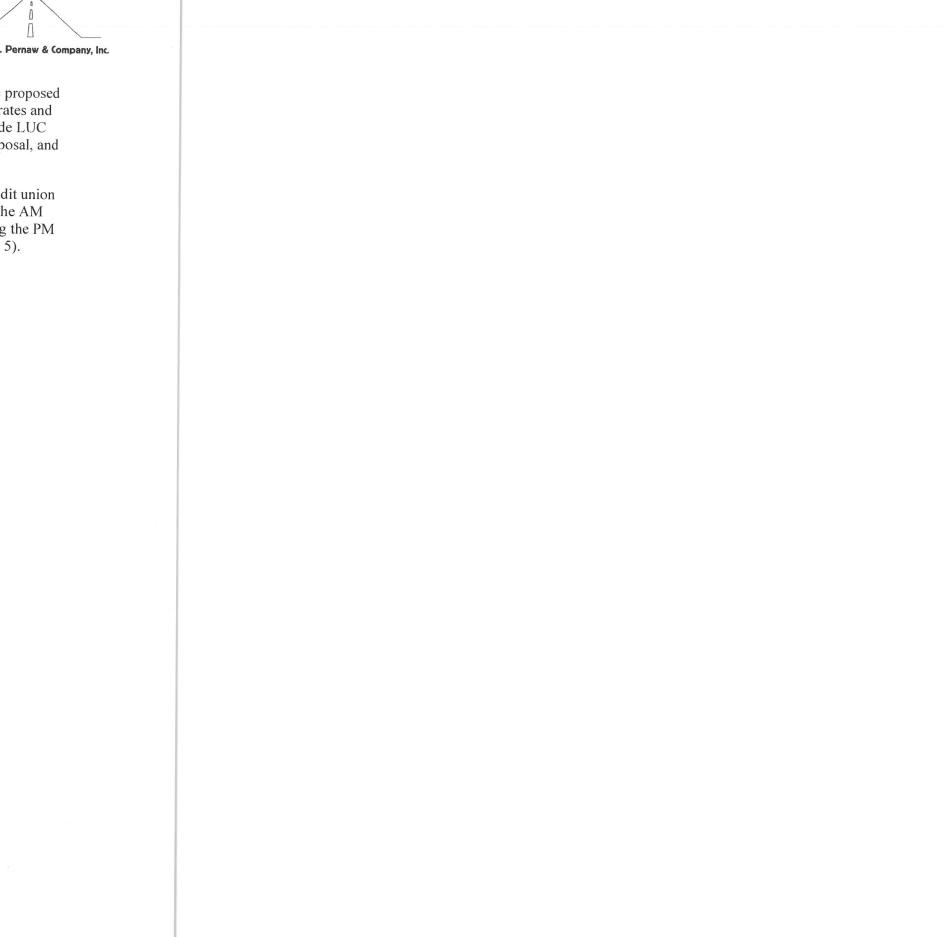
<u>Trip Generation</u> - To estimate the quantity of vehicle-trips that will be produced by the proposed credit union branch, Pernaw & Company, Inc. considered the standard trip generation rates and equations published by the Institute of Transportation Engineers<sup>1</sup> (ITE). Land Use Code LUC 912 (Drive-In Bank) is the most applicable land use category for this development proposal, and the gross floor area of the building was utilized as the independent variable.

The trip generation analysis is summarized on Table 1 and shows that the proposed credit union branch will generate approximately 28 vehicle-trips (16 arrival, 12 departures) during the AM peak hour period, and approximately 61 vehicle-trips (31 arrivals, 30 departures) during the PM peak hour period on an average weekday basis, when in full operation (see Attachment 5).

Table 1	Trip Generation Summary (Proposed Credit Union)
Weekday Total (24 Hrs)	Proposed Credit Union <sup>1</sup> (2,985 sf)
Enteri Exitino Total	
Weekday AM Peak Hour	
Enteri Exitinç Total	
Weekday PM Peak Hour	
Enterii Exiting Total	

<sup>1</sup>ITE Land Use Code 912 - Drive-In Bank (AM & PM -Rate Method, Weekday-Equation Method)

<sup>&</sup>lt;sup>1</sup> Institute of Transportation Engineers, *Trip Generation*, 10<sup>th</sup> Edition (Washington, D.C., 2017) 2061A





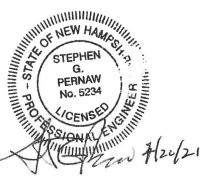
#### Findings & Conclusions

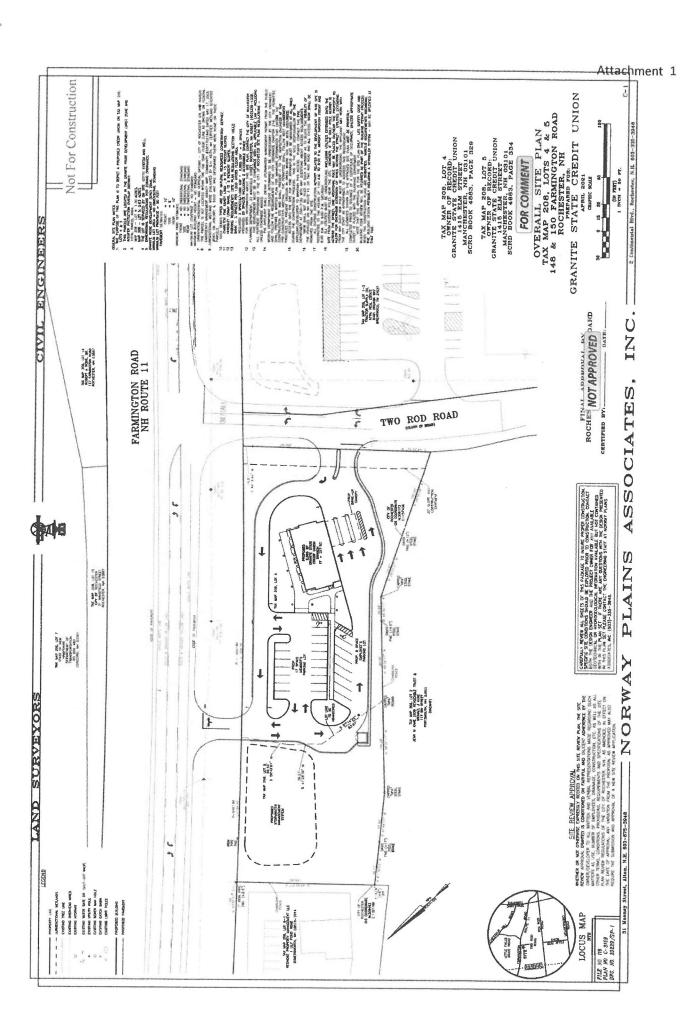
- 1. The most recent traffic count conducted on NH11 by the NHDOT occurred in August 2020 at the Rochester-Farmington municipal boundary. This section of roadway carried an estimated Annual Average Daily Traffic (AADT) volume of 16,453 vehicles per day in 2020, down slightly from 16,928 in 2019. The raw traffic count data shows than the highest hourly traffic volumes occurred from 7:00 to 8:00 AM and from 3:00 to 4:00 or 4:00 to 5:00 PM on weekdays. The raw data collected in August 2020 is affected to a certain extent by the Covid-19 pandemic, when compared to the data collected in August 2017.
- 2. The trip generation analysis indicates that the proposed credit union branch will generate approximately 28 vehicle-trips during the AM peak hour (16 arrival, 12 departures) and 61 vehicle-trips during the PM peak hour (31 arrivals, 30 departures) when open.
- 3. The appropriate forms of traffic control at the NH11/Proposed Site Driveway intersection and the Two Rod Road/Proposed Site Driveway intersection include the installation of STOP sign control (MUTCD R1-1) on the minor approaches, and a 12-24-inch white stop line with a short section of four-inch double-yellow centerline pavement marking to separate inbound and outbound vehicles. The raised median island on the Two Rod Road driveway should have KEEP RIGHT signs (MUTCD R4-7) installed at both ends of the island, facing approaching vehicles.
- 4. The proposed site driveway on NH11 is located over 300-feet west of Two Rod Road, which provides adequate separation for simultaneous left-turns (and right-turns) from both minor approaches to NH11.
- 5. The horizontal alignment of NH11 (relatively straight), combined with a flat terrain results in excellent sight distances looking left and right from the proposed driveway approach to NH11; exceeding the NHDOT 400-foot guideline by a considerable margin.

From a traffic engineering standpoint, sites that generate fewer than 500 vehicle-trips per day are considered to be "low" traffic generators. Clearly, the proposed credit union is <u>not</u> a major traffic generator. The proposed site driveway on NH11 is expected to operate safely and efficiently from a transportation engineering standpoint, for the size and type of use that is proposed. This memorandum should be submitted to NHDOT-District Six, along with a signed Driveway Permit Application and the site plan. A second application, signed by the City, may be required by District Six to cover the anticipated "change in use" of Two Rod Road.

Attachments

CC: Dean Bowen, The Element Group





3/24/2021

Transportation Data Management System





#### **MS2**

#### Transportation Data Management System

Lis	st View	All DIRs								
Reco	rd <b>H4</b>	144	<b>▶</b> ₩	of 5	744 Goto	Record	g	0		
Loc	ation ID	22389051					N	MPO ID		
		SPOT					HF	MS ID		
		No					On	HPMS Y	'es	
		S0000011					LRS	Loc Pt.		
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	F Group					-	T	Route N	NH 11	
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Loc (	On Alias	NH 11 (FARM	INGTON R	D) AT FA	ARMINGTOR	A IT (FB-AA	B) (21389	120-2130	9129)	
More D	otail •									
STAT	ION DAT	Ά							***************************************	
AAD	<b>Year</b> 2020	<b>AADT</b> 16,453	<b>DHV-30</b> 1,679	<b>K</b> %			<b>PA</b> 4 (94%)	959 (6	6%)	Src
	2019	16,928 <sup>3</sup>	10 59 15,50				5 (92%)	1,423	/ \Q \U/_ \	Grown om 2018
	2018	16,727 <sup>3</sup>		10	59	59 15,423 (92%) 1,304 (8%) from 20			Grown om 201	
	2017	16,399	1,600	Grown						
	2016	17,860 <sup>3</sup>				16,28	9 (91%)	1,571	<sup>(9%)</sup> fr	om 201
<u>I</u> KK		> >>	1-5 of 2	23						
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	Model Year	Model AADT	AM PHV	AM PP	V MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PP
VOLL	IME CO	UNT				VALUE	ETREN	(4)		
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40	7	Thu 8/27/2020		60	19,210	2020			-3%	
100		Ved 8/26/2020		60	19,843	2019			1%	
40		Tue 8/25/2020		60	18,073	2018			2%	
10		TI - 0/04/2047 60 10 449				1.50 (00) (00)			-8%	
200		2017						2%		
100		Tue 8/29/2017		60	17,937	2016				
40		Ved 8/20/2014		60	19,563	2015			3%	
40	***************************************	Tue 8/19/2014		60	19,474	2014			2%	
40		Mon 8/18/2014		60	19,421	2011			0%	
40		Thu 6/23/2011		60	17,278	2008			5%	
-,		- parameter parameters	4.40		,=	2005			-2%	
		> >>	1-10 of 83	orrowing .	1 1 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Tes !	>	>>	1-10 of	22

https://nhdot.ms2soft.com/tcds/tsearch.asp?loc=nhdot







**Transportation Data Management System** 

#### A IX

#### Excel Version

leekly Volume Re	port		
Location ID:	22389051	Type:	SPOT
Located On:	Farmington Rd	:	
Direction:	2-WAY		
Community:	ROCHESTER	Period:	Mon 8/28/2017 - Sun 9/3/2017
AADT:	16399		

Start Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Avg	Graph
12:00 AM		75	60	86				74	
1:00 AM		46	41	48				45	0.2%
2:00 AM	***************************************	43	41	46				43	
3:00 AM	***************************************	89	99	85				91	14
4:00 AM	***************************************	218	225	222				222	
5:00 AM		580	596	605				594	3.2%
6:00 AM	***************************************	1205	1133	1132		***************************************		1,157	ļ—————————————————————————————————————
7:00 AM		(1218)	(1260)	(1304)		***************************************		1,261	6.8%
8:00 AM		1022	1017	1050				1,030	
9:00 AM	***************************************	1006	923	988				972	
10:00 AM		1011	1006	1056				1,024	
11:00 AM		1107	1007	1099				1,071	5.8%
12:00 PM	***************************************	1035	1076	1194		***************************************		1,102	
1:00 PM	***************************************	1073	1069	1125				1,089	
2:00 PM		1174	1175	1229				1,193	
3:00 PM		1228	1367	1481				1,359	
4:00 PM		(1499)	(1517)	(1600)		-		1,539	
5:00 PM		1424	1409	1519				1,451	7.9%
6:00 PM	***************************************	988	967	1143				1,033	5.6%
7:00 PM	***************************************	736	752	888				792	4.3%
8:00 PM	***************************************	471	507	618				532	2.9%
9:00 PM	***************************************	334	366	457				386	2.1%
10:00 PM		217	238	279				245	1.3%
11:00 PM		138	155	194		***************************************		162	0.9%
Total	0	17,937	18,006	19,448	0	0	0		
24hr Total		17937	18006	19448				18,464	
AM Pk Hr		7:00	7:00	7:00					
AM Peak		1218	1260	1304				1,261	
PM Pk Hr		4:00	4:00	4:00					
PM Peak		1499	1517	1600				1,539	
% Pk Hr		8.36%	8.42%	8.23%				8.34%	

#### Attachment 4





#### Transportation Data Management System



#### Excel Version

Location ID:	22389051	Type:	SPOT
Located On:	Farmington Rd	:	
Direction:	2-WAY		
Community:	ROCHESTER	Period:	Mon 8/24/2020 - Sun 8/30/2020
AADT:			

Start Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Avg	Graph
12:00 AM		54	56	56				55	0.3%
1:00 AM		32	35	43				37	0.2%
2:00 AM		35	38	40				38	0.2%
3:00 AM		81	80	88				83	0.4%
4:00 AM		188	221	201				203	1.1%
5:00 AM		519	500	529				516	2.7%
6:00 AM		902	903	885				897	4.7%
7:00 AM		(1171	(1169)	(1161)				1,167	6.1%
8:00 AM		1026	1091	1023				1,047	5.5%
9:00 AM		1024	1155	1026				1,068	5.6%
10:00 AM		1076	1365	1137				1,193	6.3%
11:00 AM		1173	1322	1267				1,254	6.6%
12:00 PM		1203	1400	1299				1,301	6.8%
1:00 PM		1223	1369	1326				1,306	6.9%
2:00 PM		1364	1414	1400				1,393	7.3%
3:00 PM		1452	1555	(1604)				1,537	8.1%
4:00 PM		(1593)	(1679)	1597				1,623	8.5%
5:00 PM		1413	1555	1498				1,489	7.8%
6:00 PM		953	1059	1043				1,018	5.3%
7:00 PM		578	744	793				705	3.7%
8:00 PM	<del> </del>	449	500	520				490	2.6%
9:00 PM	<b>4</b>	300	310	334				315	1.79
10:00 PM	+	158	194	196				183	1.0%
11:00 PM	-	106	129	144				126	0.79
Total	-	+	<del> </del>	19,210	0	0	0		
24hr Total	<b> </b>	18073	19843	19210				19,042	
AM Pk Hr		11:00		<b></b>					
AM Peak		1173	1365	1267				1,268	
PM Pk Hr		4:00	4:00	3:00					
PM Peak		1593	1679	1604				1,625	
% Pk Hr		8.81%	8.46%	8.35%				8.54%	

# Trip Generation Summary

Open Date: 3/25/2021 Analysis Date: 3/25/2021

Alternative: Alternative 1 Phase:

Project:

2061A Gen

	>	Weekday Average Daily Trips	erage Daily	/ Trips		Weekday AM Peak Hour of Adjacent Street Traffic	eekday AM Peak Hour Adjacent Street Traffic	our of ffic		Weekday PM Peak Hour of Adjacent Street Traffic	eekday PM Peak Hour Adjacent Street Traffic	ur of fic	
ITE Land Use	*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total	
912 BANKDRIVEIN 1		183	182	365		16	12	28		31	30	61	
2.99 1000 Sq. Ft. GFA										į	3		
Unadjusted Volume		183	182	365		16	12	28		31	30	61	
Internal Capture Trips		0	0	0		0	0	0		0	0	0	
Pass-By Trips		0	0	0		4	4	œ		<del></del>	<del></del>	22	
Volume Added to Adjacent Streets		183	182	365		12	ø	20		20	19	39	

Attachment\_5

Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition TRIP GENERATION 10, TRAFFICWARE, LLC

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent