

**TOWN OF SUNAPEE  
PLANNING BOARD AGENDA  
For THURSDAY FEBRUARY 8, 2024  
7:00 PM at the at the TOWN MEETING ROOM  
23 EDMONT ROAD**

Join Zoom Meeting:

<https://us06web.zoom.us/j/85959487995?pwd=7yhAawr1aP4PoHoohIxbxUDZuhuxoa.1>

Passcode: 364142

**NEW CASES**

Case # SPR 23-09 Parcel ID: 0138-0037-0000	Current site plan approved for existing tower located at referenced property. American Tower Corp. seeking to install an 80-kw generator to serve needs of current and future tenants at the tower location.
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*15 Stagecoach Lane  
Dennis & Lynne Wiggins  
American Tower Corporation – Agent  
Residential District*

Case # SPR 24-02 Parcel ID: 0232-0023-0000	Use current residential building as offices. Erect a shop building on site for storage of project related materials.
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*Jared & Laura Raymond  
Jim Bruss – Agent  
60 Route 103  
Sunapee, NH 03782  
Mixed-Use District*

**CONSULTATION**

Parcel ID: 0130-0034-0000	Installation of New Biomass boiler to be installed at the Sunapee Middle High School.
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*Sunapee Middle High School  
10 North Road  
Sunapee, NH 03782  
Residential District*

Review of Farmers Market Site Plan  
Burkehaven Hill Road  
Town of Sunapee, Ben Mere Park

**OTHER BUSINESS:**

Review of Dewey Field  
Advertisement Sign Request  
Parcel ID: 0123-0021-0000  
706 Route 11  
Town of Sunapee

**MISCELLANEOUS:**

Review Minutes from Previous Meeting(s).

**\*NOTE: Any and all submissions must be provided 5 days prior to the meeting**

**\*NOTE:** In the event the meeting is canceled, the agenda will be continued to the next scheduled Planning Board meeting.



December 5, 2023

Via email to [frontdesk@town.sunapee.nh.us](mailto:frontdesk@town.sunapee.nh.us) and US Mail

Ms. Allyson Traeger, Land Use and Assessing Coordinator  
Town of Sunapee  
23 Edgemont Rd  
Sunapee, NH 03782

Re: 15A Stagecoach Lane, Sunapee, NH  
Parcel Number: 000138\_000037\_00000  
Generator installation – existing cell tower

Dear Ms. Traeger:

Please see enclosed Site Plan Review Application to the Sunapee Planning Board with required attachments for amendment to the current site plan approval for the existing cell tower located at the referenced property. SAI Group, as agent for the tower owner, American Tower Corporation, is seeking to install an 80kw generator to serve the needs of the current and future tenants at the tower location.

Hard copies of the attached and checks for Application fees and Advance Postage Due are being prepared and will be forwarded to your attention under separate cover.

Please do not hesitate to contact me with any questions or concerns or if you require anything further; I can be reached at [mshine@saigrp.com](mailto:mshine@saigrp.com) or (973) 454-0302.

Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Michael E. Shine".

Michael E. Shine  
Sr. Site Acquisition Manager  
Agent for American Tower Corporation



December 5, 2023

Via email to [frontdesk@town.sunapee.nh.us](mailto:frontdesk@town.sunapee.nh.us) and US Mail

RECEIVED  
DEC 08 2023  
TOWN OF SUNAPEE

Ms. Allyson Traeger, Land Use and Assessing Coordinator  
Town of Sunapee  
23 Edgemont Rd  
Sunapee, NH 03782

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Thank you.

Sincerely,

Michael E. Shine  
Sr. Site Acquisition Manager  
Agent for American Tower Corporation

**TOWN OF SUNAPEE**  
**APPLICATION FOR SITE PLAN REVIEW**  
**(PDF OF SITE PLAN MUST BE INCLUDED WITH APPLICATION)**

1. Landowner(s) Name(s) Dennis & Lynne Wiggins c/o American Tower  
Address 10 Presidential Way, Woburn, MA 01801  
(Mailing) \_\_\_\_\_  
Phone (508) 326-5522
2. Zoning District RS-Residential
3. Project Location: 15A Stagecoach Lane, Sunapee, NH
4. Parcel ID: 000138\_000037\_00000
5. Complete description of current use of property:  
Telecommunications facility leased to American Tower with Multiple Tenants

6. Does this project require a special exception or variance by the ZBA as outlined in the Sunapee Zoning Regulations? Yes \_\_\_ No X (If yes, complete the Zoning Board of Adjustment application, and Land Use Questionnaire.)

7. Complete description of proposed project (Include area dimensions, use, # of employees, # of dwelling units, etc.)  
Install a 80kw standby generator with 300 gallon above ground integrated storage tank and add auto transfer switch from proposed generator to existing T-Mobile cabinets.

8. Certification/Permission for inspection. To the best of my knowledge, the above is true and accurate. I hereby grant permission for site inspection to Planning Board official(s). I also understand that it is my responsibility for providing a complete application. I realize that any of the application requirements, which are assumed waivable during the initial review, may still be required at the time of review by the Planning Board.

Lynne M Wiggins  
Signature(s) of Landowner(s)

\_\_\_\_\_  
Date

Date of Application:

Phase I \_\_\_\_\_ Phase II \_\_\_\_\_  
Phase III \_\_\_\_\_ Major Site Plan \_\_\_\_\_  
Home Business \_\_\_\_\_  
Fee Paid \_\_\_\_\_ Method of Payment \_\_\_\_\_



## FINAL HEARING CHECKLIST

The following items must be submitted in accordance with the attached meeting and deadline schedule for the Planning Board meeting you wish to attend:

- \_\_\_\_\_ Completed Application
- \_\_\_\_\_ Fees
- \_\_\_\_\_ Two (2) copies of plans for review (with required information per Article V)
- \_\_\_\_\_ List of abutters, including mailing addresses
- \_\_\_\_\_ PDF of Site Plan emailed to [frontdesk@town.sunapee.nh.us](mailto:frontdesk@town.sunapee.nh.us)

The Planner will review the plans to determine if the appropriate information has been provided on the plans. If the submission is deemed complete, notices will be sent (14) calendar days prior to the hearing. The following items must be included on the plan per Article V:

- \_\_\_\_\_ Plan at a scale of 1" = 20' or less
- \_\_\_\_\_ Perimeter boundary survey
- \_\_\_\_\_ Title of drawing with name of applicant
- \_\_\_\_\_ Parcel ID
- \_\_\_\_\_ Name and mailing addresses of abutting property owners
- \_\_\_\_\_ Signature block for Water & Sewer Commission, Police Chief, Road Agent & Conservation Commission
- \_\_\_\_\_ Site location map
- \_\_\_\_\_ North point, bar scale, appropriate dates
- \_\_\_\_\_ Name, address, and seal of person preparing map
- \_\_\_\_\_ Location and shape of existing and proposed buildings
- \_\_\_\_\_ Square footage for each use designated on plan
- \_\_\_\_\_ Existing and proposed contours at an interval or no more than 5'. Spot elevations for level lot.
- \_\_\_\_\_ Streams, wetlands, and other water bodies
- \_\_\_\_\_ Width, location, and grades of existing and proposed streets and driveways
- \_\_\_\_\_ Layout and size of parking spaces
- \_\_\_\_\_ Sewage disposal facilities for property including mains and service lines
- \_\_\_\_\_ Water supply for property including mains and services lines
- \_\_\_\_\_ Proposed landscaping plan
- \_\_\_\_\_ Existing and proposed electric lines
- \_\_\_\_\_ Existing and proposed telephone lines

\_\_\_\_\_ Exterior lighting plan

Article V requirements (cont.):

\_\_\_\_\_ Proposed signs-size and location

\_\_\_\_\_ Locations of retaining walls, fences, and outside storage areas

\_\_\_\_\_ Location of fire alarms and sprinklers

The Planning Board may waive the following items if it is determined, the project's impact will be minor, and otherwise, each item will be required:

\_\_\_\_\_ Drainage design, including drainage structures, culverts, ditches, and storm sewer lines

\_\_\_\_\_ Drainage calculations

\_\_\_\_\_ Plans for toxic waste storage

\_\_\_\_\_ Location of hazardous materials storage

State of New Hampshire Permits:

\_\_\_\_\_ Department of Transportation (Highway/Access)

\_\_\_\_\_ NHWSPCD (Septic Systems)

\_\_\_\_\_ Water Supply Division

\_\_\_\_\_ Site Specific (Department of Environmental Services)

\_\_\_\_\_ Wetlands Board



March 29, 2023

Town of Sunapee  
23 Edgemont Road  
Sunapee, NH 03782  
Attn: Zoning Administrator

RE: **Landlord Consent for American Tower Corporation to File Permit(s) to include an 80KW Standby Generator at 15 Stagecoach Lane, Sunapee, NH (Parcel 000138\_000037\_00000).**  
American Tower Site Name: **SUNAPEE SOUTH NH PCS GEN1**

To Whom it May Concern:

The Undersigned is the owner ("Landowner") of real property known as 15 Stagecoach lane, Sunapee, NH 03782 ("Subject Property").

Please be advised that Landlord has entered into a lease with Verizon Wireless, who assigned this lease to American Tower Corporation ("Applicant") to install wireless communications equipment on a portion of the Subject Property. Permission is hereby granted to Applicant to apply for Zoning, Planning, Building, or any other Land Use or Regulatory Permit(s) required to effectuate the installation of an 80KW Standby Generator and fuel tank on the Subject Property.

The Applicant or its agent is hereby authorized to execute the required application(s) at their sole cost and expense. Permission is also granted for public officials and any Sunapee Board or Commission Members, as required, to enter upon the Subject Property for the limited purpose of inspecting the specific portion of the Subject Property that is the subject of Applicant's proposed installation as outlined herein.

Sincerely,

*Landlord*  
By: *Lynne M Wiggins*

Name: Dennis or Lynne Wiggins

Title: Underlying Landlord

Date: 11-5-23



# 200 foot Abutters List Report

Tri Town, NH  
December 01, 2023

## Subject Property:

Parcel Number: Sun-0138-0037-0000  
CAMA Number: Sun-0138-0037-0000  
Property Address: 15 STAGECOACH LN

Mailing Address: WIGGINS SR., DENNIS R & LYNNE  
PO BOX 144  
SUNAPEE, NH 03782

## Abutters:

Parcel Number: Sun-0132-0003-0000  
CAMA Number: Sun-0132-0003-0000  
Property Address: EDGEMONT RD

Mailing Address: TOWN OF SUNAPEE  
23 EDGEMONT ROAD  
SUNAPEE, NH 03782

Parcel Number: Sun-0132-0022-0000  
CAMA Number: Sun-0132-0022-0000  
Property Address: 35 WINN HILL RD

Mailing Address: GOYETTE, CHARLES & FRANCOISE C/O  
CHARLES GOYETTE  
3116 12TH ST SOUTH  
ARLINGTON, VA 22204

Parcel Number: Sun-0138-0020-0000  
CAMA Number: Sun-0138-0020-0000  
Property Address: 69 WINN HILL RD

Mailing Address: FIELD, JAMES J & JANICE B  
69 WINN HILL RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0021-0000  
CAMA Number: Sun-0138-0021-0000  
Property Address: 73 WINN HILL RD

Mailing Address: GARCEAU, RONALD E & SUSAN L  
73 WINN HILL RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0026-0000  
CAMA Number: Sun-0138-0026-0000  
Property Address: 108 STAGECOACH RD

Mailing Address: WYMAN, RONALD  
PO BOX 388  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0031-0000  
CAMA Number: Sun-0138-0031-0000  
Property Address: 64 STAGECOACH RD

Mailing Address: WHITE FAMILY REVOC TRUST  
PO BOX 1702  
NEW LONDON, NH 03257

Parcel Number: Sun-0138-0032-0000  
CAMA Number: Sun-0138-0032-0000  
Property Address: 52 STAGECOACH RD

Mailing Address: COUSENS, STEPHEN & PATRICIA  
52 STAGECOACH RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0033-0000  
CAMA Number: Sun-0138-0033-0000  
Property Address: 7 STAGECOACH LN

Mailing Address: GROSS, NICHOLAS & CAROLINE  
PO BOX 122  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0034-0000  
CAMA Number: Sun-0138-0034-0000  
Property Address: 9 STAGECOACH LN

Mailing Address: STOCKER, BRENT A & LAURA A  
PO BOX 2  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0035-0000  
CAMA Number: Sun-0138-0035-0000  
Property Address: 11 STAGECOACH LN

Mailing Address: GRANT, NICHOLAS & HANNAH  
3 MESSER RD  
SUNAPEE, NH 03782



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12/1/2023

Page 1 of 2





# 200 foot Abutters List Report

Tri Town, NH  
December 01, 2023

Parcel Number: Sun-0138-0036-0000  
CAMA Number: Sun-0138-0036-0000  
Property Address: 13 STAGECOACH LN

Mailing Address: WIGGINS SR., DENNIS R & LYNNE  
PO BOX 144  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0038-0000  
CAMA Number: Sun-0138-0038-0000  
Property Address: 15 STAGECOACH LN

Mailing Address: WIGGINS SR., DENNIS R & LYNNE  
PO BOX 144  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0039-0000  
CAMA Number: Sun-0138-0039-0000  
Property Address: STAGECOACH LN

Mailing Address: WIGGINS, SR., DENNIS & LYNNE M  
PO BOX 144  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0040-0000  
CAMA Number: Sun-0138-0040-0000  
Property Address: STAGECOACH LN

Mailing Address: WIGGINS, SR., DENNIS & LYNNE M  
PO BOX 144  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0041-0000  
CAMA Number: Sun-0138-0041-0000  
Property Address: 17 STAGECOACH LN

Mailing Address: ROONEY, CAROLINE C & JOHN C  
PO BOX 298  
WALPOLE, NH 03608

Parcel Number: Sun-0138-0042-0000  
CAMA Number: Sun-0138-0042-0000  
Property Address: 21 STAGECOACH LN

Mailing Address: NANGERONI, PAUL E & MARYANN  
69 RYDER CORNER RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0043-0000  
CAMA Number: Sun-0138-0043-0000  
Property Address: 22 STAGECOACH LN

Mailing Address: LAMARE, RUSSELL S & CHRISTINE  
22 STAGECOACH LN  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0044-0000  
CAMA Number: Sun-0138-0044-0000  
Property Address: 10 STAGECOACH LN

Mailing Address: WHITE, PETER C & JULIA  
10 STAGECOACH LN  
SUNAPEE, NH 03782

Parcel Number: Sun-0138-0047-0000  
CAMA Number: Sun-0138-0047-0000  
Property Address: 6 STAGECOACH RD

Mailing Address: WIGGINS SR, JOHN W & DOROTHY E  
PO BOX 453  
SUNAPEE, NH 03782

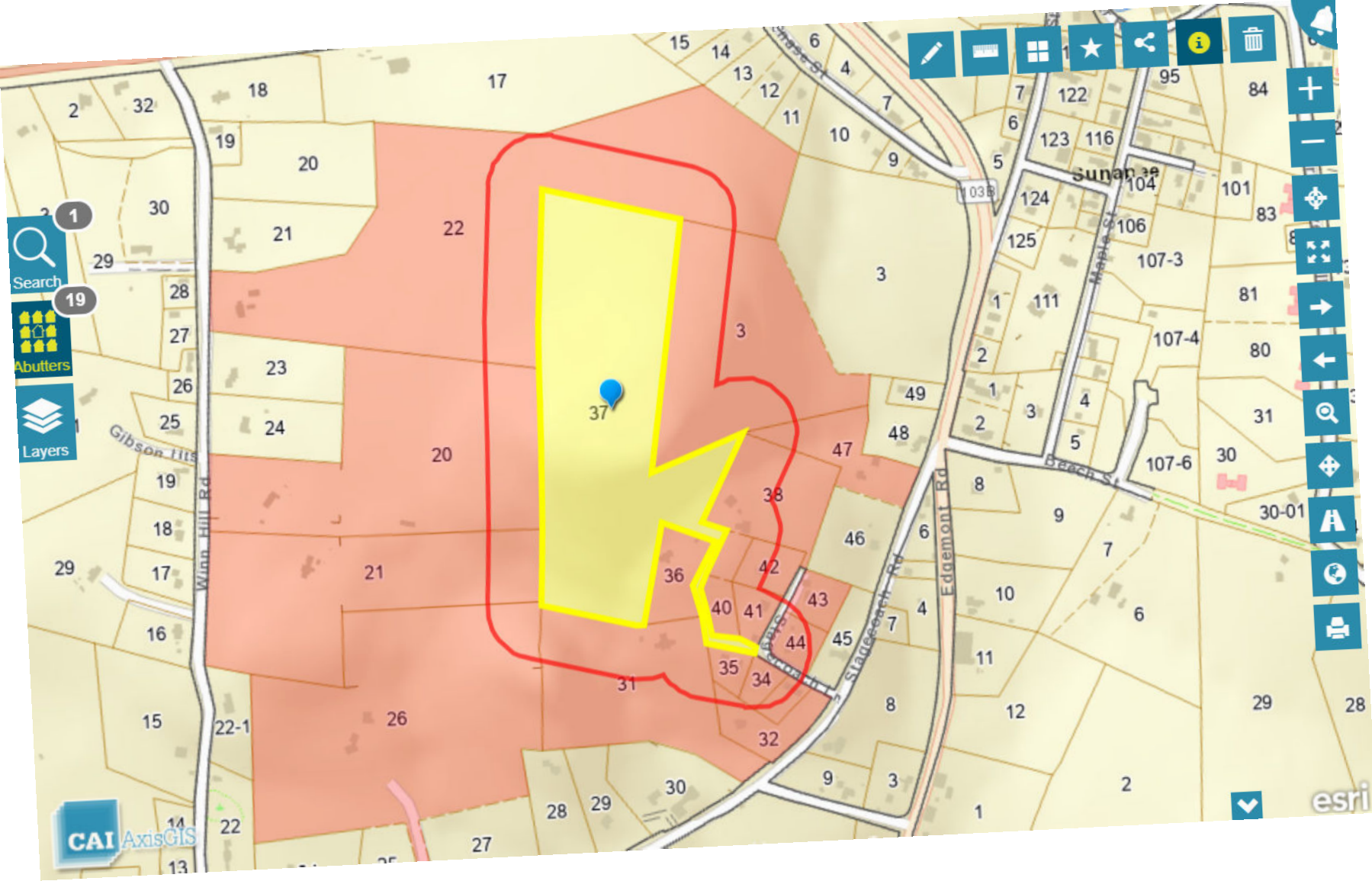


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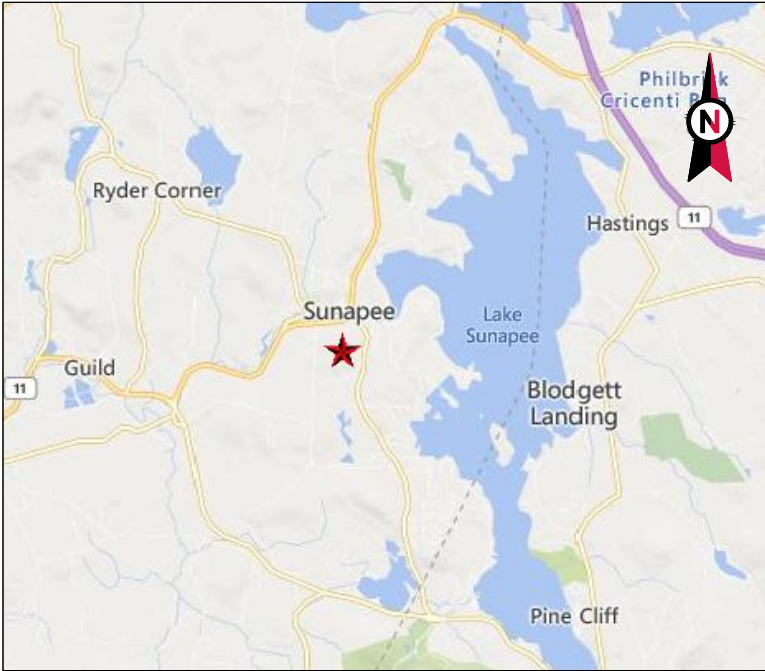
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12/1/2023

Page 2 of 2







VICINITY MAP




AMERICAN TOWER®


ATC SITE NAME: SUNAPEE SOUTH, NH PCS  
NH  
SITE NUMBER: 414895  
SITE ADDRESS: 15 STAGECOACH LANE  
SUNAPEE, NH 03782



LOCATION MAP

SHARED GENERATOR PROGRAM  
ANCHOR TENANT

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
<p>ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.</p> <p>1. INTERNATIONAL BUILDING CODE (IBC)</p> <p>2. NATIONAL ELECTRIC CODE (NEC)</p> <p>3. LOCAL BUILDING CODE</p> <p>4. CITY/COUNTY ORDINANCES</p>	<p><u>SITE ADDRESS:</u></p> <p>15 STAGECOACH LANE SUNAPEE, NH 03782 COUNTY: SULLIVAN</p> <p><u>GEOGRAPHIC COORDINATES:</u></p> <p>LATITUDE: 43.38102752 LONGITUDE: -72.0898554 GROUND ELEVATION: 1380' AMSL</p> <p><u>ZONING INFORMATION:</u></p> <p>JURISDICTION: SUNAPEE</p> <p>PARCEL NUMBER: M: 000138; B: 000037; L 000000</p>	<p>THE PROPOSED PROJECT INSTALLS A CONCRETE PAD, AN OPTIONAL STANDBY GENERATOR SYSTEM, AUTOMATIC TRANSFER SWITCH, GENERATOR AUXILIARY POWER DISTRIBUTION, AND REMOTE MONITORING COMMUNICATIONS CIRCUITRY FOR A COMMUNICATION TOWER TENANT.</p>	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
			G-001	TITLE SHEET	1	12/05/23	FER
			G-002	GENERAL NOTES	0	02/03/23	FER
			C-001	OVERALL SITE PLAN	1	12/05/23	FER
			C-101	SITE PLAN	0	02/03/23	FER
			C-501	CONCRETE PAD DETAILS	0	02/03/23	FER
			E-601	ELECTRICAL ONE-LINE AND WIRING DETAILS	0	02/03/23	FER
			R-601	SUPPLEMENTAL			
			R-602	SUPPLEMENTAL			
			R-603	SUPPLEMENTAL			
<p><b>PROJECT TEAM</b></p> <p><u>ATC REGIONAL NETWORK DEVELOPMENT PROJECT MANAGER:</u></p> <p>MICHAEL JOYCE (508) 326-5522</p> <p><u>ATC NETWORK OPERATIONS CENTER:</u> (877) 518-6937</p> <p><u>TOWER OWNER:</u></p> <p>AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801</p> <p><u>PROPERTY OWNER:</u></p> <p>DENNIS WIGGINS 15 STAGECOACH LANE SUNAPEE, NH 03782</p> <p><u>ENGINEERED BY:</u></p> <p>ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518</p>	<p>1. THE FACILITY IS UNMANNED.</p> <p>2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.</p> <p>3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.</p> <p>4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.</p> <p>5. HANDICAP ACCESS IS NOT REQUIRED.</p> <p>6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).</p>	<p><b>PROJECT LOCATION DIRECTIONS</b></p> <p>I-93 N VIA EXIT 40B TOWARD CONCORD NH MERGE ONTO I-89 N TAKE THE RT-11 W EXIT- EXIT 12- TOWARD NEW LONDON/SUNAPEE. (0.17 MILES) TURN LEFT ONTO NEWPORT RD/NH-11. CONTINUE TO FOLLOW NH-11. (5.24 MILES) TURN LEFT ONTO NH-103B/EDGEMONT RD. (0.47 MILES) TURN SLIGHT RIGHT ONTO STAGECOACH RD. (0.20 MILES TAKE NEXT RIGHT STAGECOACH LN GO STRAIGHT ONTO DIRT DRIVEWAY FOLLOW TO END ACCESS ROAD IS ON THE LEFT UP HILL.</p>	<div>APPROVALS </div>				
			THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION AS DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & ANY CHANGES OR MODIFICATIONS THEY MAY IMPOSE				
			APPROVAL:	SIGNATURE:		DATE:	
			WATER & SEWER COMMISSION				
			POLICE CHIEF				
			ROAD AGENT				
			CONSERVATION COMMISSION				



Know what's below.  
Call before you dig.



**AMERICAN TOWER®**  
ATC TOWER SERVICES, LLC  
3500 REGENCY PARKWAY  
SUITE 100  
CARY, NC 27518  
PHONE: (919) 468-0112  
01571

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
	FOR CONSTRUCTION	FER	02/03/23
	ABUTTER INFO & SIGNATURES	FER	12/05/23

ATC SITE NUMBER:  
414895

ATC SITE NAME:  
SUNAPEE SOUTH, NH PCS NH

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782

SEAL:



DRAWN BY:	FER
DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/ITIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ATC CM PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE ATC CM PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE ATC CM, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE ATC CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE ATC CONSTRUCTION MANAGER IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH ATC WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH ATC CM TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH ATC CONSTRUCTION MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY ATC. ALL REQUIRED PERMITS NOT OBTAINED BY ATC MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH ATC SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ATC FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO ATC SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY ATC CM A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS

- REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE ATC CM. ANY WORK FOUND BY THE ATC CM TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY ATC CM PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-5" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT: ASTM C150, TYPE 2

REINFORCEMENT: ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED

NORMAL WEIGHT AGGREGATE: ASTM C33

WATER: ASTM C 94/C 94M

ADMIXTURES:

-WATER-REDUCING AGENT: ASTM C 494/C 494M, TYPE A

-AIR-ENTERING AGENT: ASTM C 260/C 260M

-SUPERPLASTICIZER: ASTM C494, TYPE F OR TYPE G

-RETARDING: ASTM C 494/C 494M, TYPE B
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ATC CM APPROVAL WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. DO NOT ALLOW REINFORCEMENT, CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 DAYS AFTER PLACEMENT.
14. FOR COLD-WEATHER(ACI 306) AND HOT-WEATHER(ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
15. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
16. UNLESS OTHERWISE NOTED:

A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615/A 615M/A-996, GRADE 60.

B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
17. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
18. REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE

DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.

19. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
20. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
21. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
22. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
23. BAR SUPPORTS SHALL BE ALL-GALVINIZED METAL WITH PLASTIC TIPS.
24. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
25. SLAB ON GROUND:

A. COMPACT SUBGRADE AND ENSURE THERE IS PLACE 6" GRAVEL BENEATH SLAB.

B. PROVIDE VAPOR BARRIER BENEATH SLAB ON GROUND.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE

B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.

C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)

D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS

E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:

A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.

C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.

D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.

E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.

F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.

G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.



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REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	FER	02/03/23
△			
△			
△			
△			
△			

ATC SITE NUMBER:  
414895

ATC SITE NAME:  
SUNAPEE SOUTH, NH PCS NH

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782

SEAL:



Digitally Signed: 2023-12-07



DRAWN BY:	FER
DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 0
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NOTES:

1. BOUNDARY LINES OBTAINED FROM DATATREE ONLINE GIS.

N/F  
CHARLES GOYETTE / FRANCOISE GOYETTE  
PARCEL #: SUNA M:132 B:22

N/F  
DENNIS R WIGGINS / LYNNE WIGGINS  
PARCEL #: M:138 B:37

N/F  
JAMES J FIELD / JANICE B FIELD  
PARCEL #: SUNA M:138 B:20

N/F  
RONALD E GARCEAU / SUSAN L GARCEAU  
PARCEL #: SUNA M:138 B:21

N/F  
RONALD WYMAN  
PARCEL #: SUNA M:138 B:26

N/F  
WHITE FAMILY RET  
PARCEL #: SUNA M:138 B:31

N/F  
DENNIS WIGGINS / LYNNE M WIGGINS  
PARCEL #: SUNA M:138 B:40

N/F  
DENNIS R WIGGINS / LYNNE WIGGINS  
PARCEL #: SUNA M:138 B:38

N/F  
JOHN W WIGGINS / DOROTHY E WIGGINS  
PARCEL #: SUNA M:138 B:47

N/F  
DWIGHT D CHURCHILL / HELENE S CHURCHILL  
PARCEL #: SUNA M:138 B:48

N/F  
DENNIS WIGGINS / LYNNE M WIGGINS  
PARCEL #: SUNA M:138 B:39

N/F  
JOHN W WIGGINS / DOROTHY E WIGGINS  
PARCEL #: SUNA M:138 B:46

N/F  
PAUL E NANGERONI / MARYANN NANGERONI  
PARCEL #: SUNA M:138 B:42

N/F  
PETER C WHITE / JULIA WHITE  
PARCEL #: SUNA M:138 B:44

N/F  
CAROLINE C ROONEY / JOHN C ROONEY  
PARCEL #: SUNA M:138 B:41

1  
C-101  
PROPOSED  
BUP GEN.  
AND GEN. PAD

240'±

178'±

665'±

STAGECOACH RD

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA
- EXISTING EASEMENT
- EXISTING WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING METAL FENCE
- EXISTING GUARD RAIL
- EXISTING CHAINLINK FENCE
- EXISTING ROAD (DIRT)
- EXISTING ROAD (STONE)
- EXISTING ROAD (PAVED)

1  
OVERALL SITE PLAN



SCALE: 1"=200' (11X17)  
1"=100' (22X34)



AMERICAN TOWER®  
ATC TOWER SERVICES, LLC  
3500 REGENCY PARKWAY  
SUITE 100  
CARY, NC 27518  
PHONE: (919) 468-0112  
01571

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	02/03/23
1	ABUTTER INFO & SIGNATURES	FER	12/05/23

ATC SITE NUMBER:  
414895  
  
ATC SITE NAME:  
SUNAPEE SOUTH, NH PCS NH

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782

SEAL:



Digitally Signed: 2023-12-07

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DRAWN BY:	FER
DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	1

SITE PLAN NOTES:

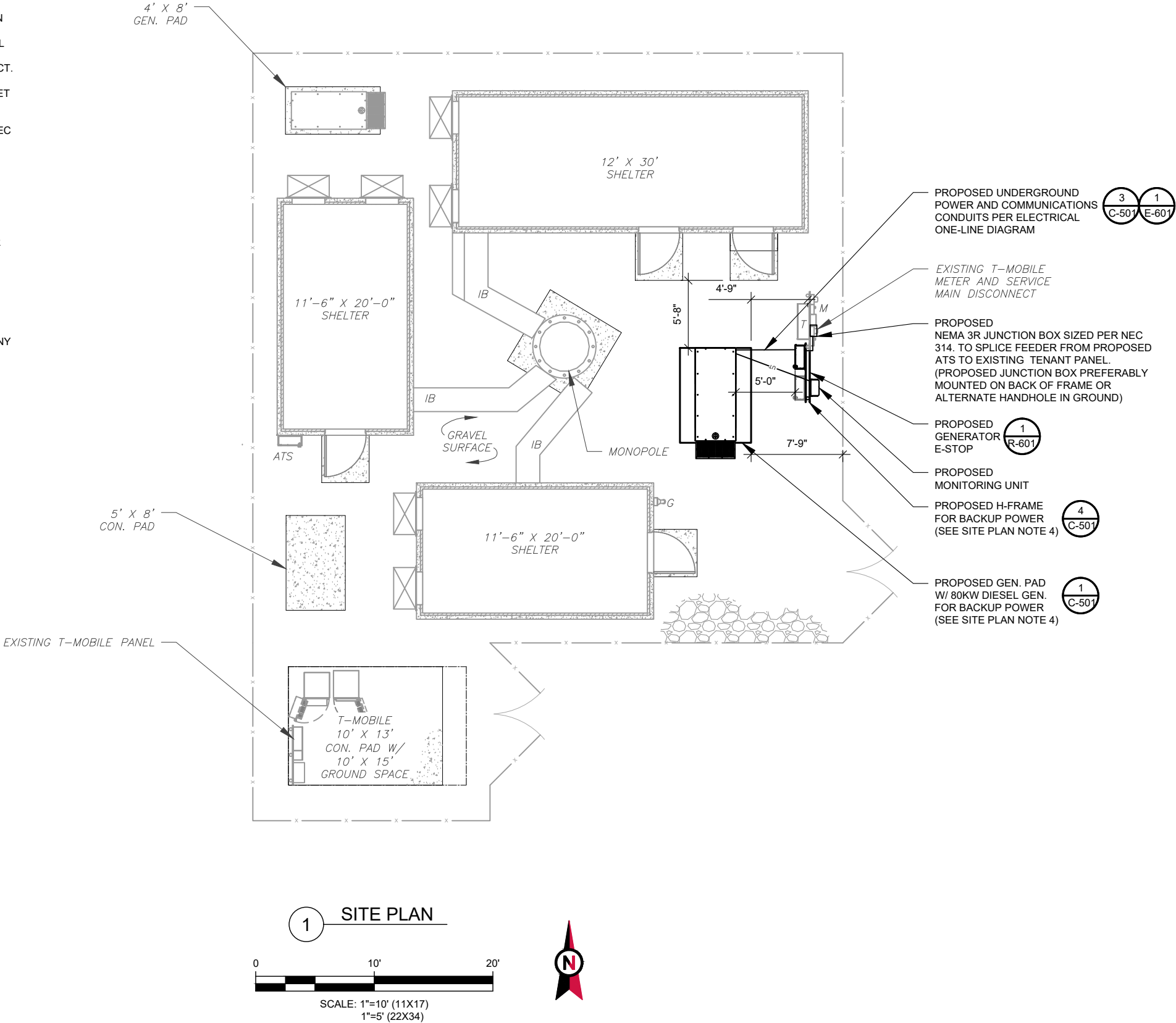
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ATC CONSTRUCTION MANAGER AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
4. CONTRACTOR SHALL INSURE THAT ALL WORKING SPACE REQUIREMENTS ARE MET PER APPLICABLE CODES AND MANUFACTURER SPECIFICATIONS.
5. ABOVE GROUND CONDUITS NEED TO BE SUPPORTED/FASTENED PER NEC 344, NEC 352, AND PER ATC CONSTRUCTION SPECIFICATIONS.
6. THE FOLLOWING SIGNS SHALL BE INSTALLED AT TENANT SERVICE MAIN DISCONNECT PER NEC 702.7.
- 6.1. "CAUTION: TWO SOURCES OF SUPPLY STANDBY GENERATOR LOCATED OUTDOORS"
- 6.2. "WARNING: SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE IS ENERGIZED"

RODENT CONTROL AROUND GENERATOR ENVELOPE:

1. INSTALL ALL PROVIDED SEALS, PLUGS, COVERS, ETC. IN GENERATOR AND FUEL TANK ENVELOPE. SEAL ALL REMAINING OPENINGS (EXCEPT NORMAL VENTING) WITH RODENT FOAM SEALANT. NO OPENING SHALL BE LARGER THAN 1/4 INCH ANY DIMENSION.
2. SEAL ALL CONDUITS ENTERING GENERATOR STUB UP AREA WITH RODENT RESISTANT CONDUIT SEALANT.
3. SEAL ALL CONDUIT ACCESS OPENINGS THROUGH CONCRETE PAD WITH CONCRETE.
4. SLOPE GRAVEL BASE AT CONCRETE PAD PERIMETER FROM ABOVE PAD BASE TO EXISTING GRADE LEVEL TYPICAL ALL PERIMETER SIDES.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
— x —	CHAINLINK FENCE

APPROXIMATE TRENCH DISTANCES	
3'	POWER CONDUIT TRENCH



**AMERICAN TOWER®**  
**ATC TOWER SERVICES, LLC**  
3500 REGENCY PARKWAY  
SUITE 100  
CARY, NC 27518  
PHONE: (919) 468-0112  
01571

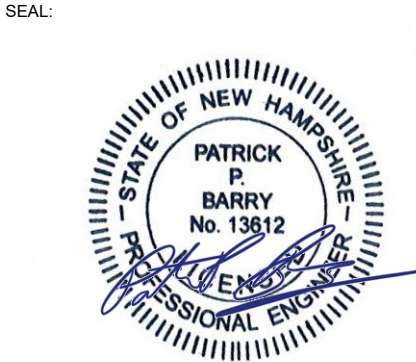
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	02/03/23
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:  
**414895**

ATC SITE NAME:  
**SUNAPEE SOUTH, NH PCS NH**

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782



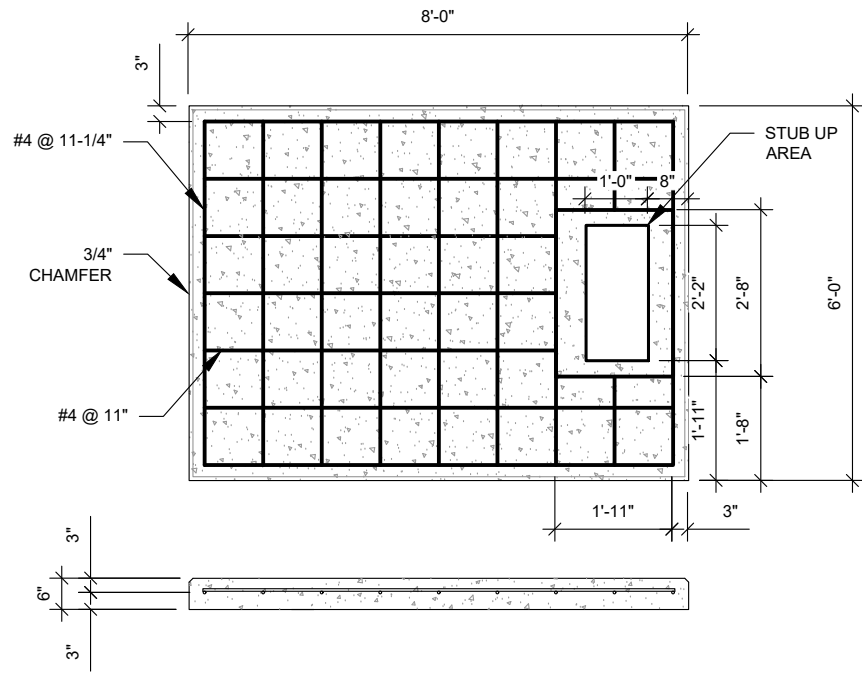
Digitally Signed: 2023-12-07

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DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

SITE PLAN

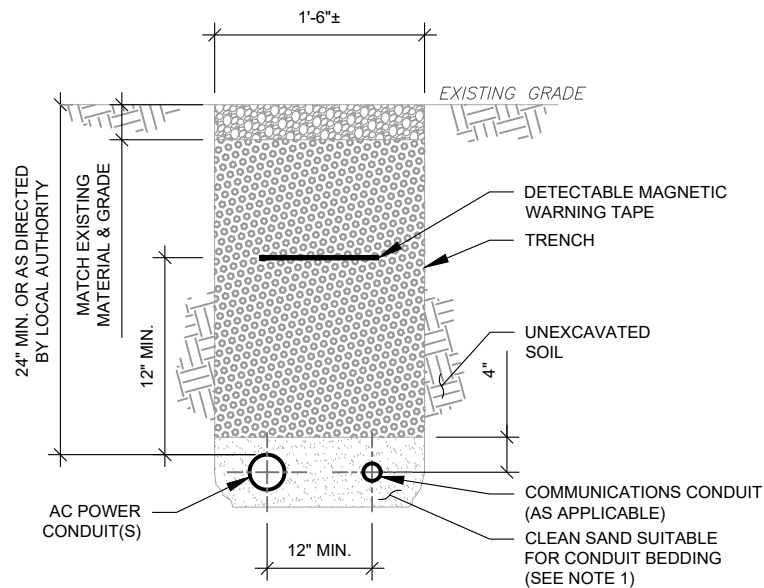
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<b>C-101</b>	<b>0</b>



PAD NOTES:

- PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
- PADS SHALL HAVE A MIN 28 DAY COMPRESSIVE STRENGTH AS SPECIFIED ON G-002, CONCRETE AND REINFORCING STEEL NOTES #3
- REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC CONSTRUCTION SPECIFICATION 033000 FOR CAST-IN-PLACE PADS.
- STUB UP AREA SHALL BE FILLED WITH QUIKRETE, OR APPROVED EQUAL, PRIOR TO FINAL SET OF GENERATOR ON PAD.
- AFTER FINAL SET OF GENERATOR ON PAD, GROUT ALL EXTERIOR OPENINGS AT PAD INTERFACE SO THAT FINISHED MAXIMUM OPENING SHALL BE 1/4 INCH.
- GROUT SHALL BE PER ATC CONSTRUCTION SPECIFICATION DIVISION 03, CONCRETE.

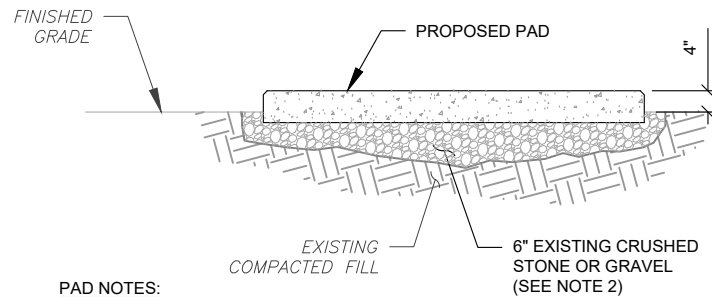
1 REINFORCED PAD LAYOUT  
SCALE: N.T.S.



TRENCH NOTES:

- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL.
- COMPACT IN 8" LIFTS USING A MECHANICAL PLATE TAMPER, MIN 3 PASSES. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING. SEE ATC CONSTRUCTION SPECIFICATION 312000 SECTION 3.15.
- IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
- CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

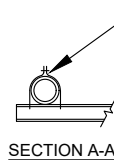
3 CONDUIT TRENCH DETAILS  
SCALE: N.T.S.



PAD NOTES:

- SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
- MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER USING A MECHANICAL PLATE TAMPER, MIN 3 PASSES. SEE ATC CONSTRUCTION SPECIFICATION 312000 ACCESS ROAD AND EARTH WORK.
- USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
- FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

2 GRAVEL PREPARATION  
SCALE: N.T.S.



H-FRAME NOTES:

- IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST SHALL BE REQUIRED.
- PROPOSED UNISTRUTS TO BE FIELD CUT AND SHALL NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
- SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
- UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
- ALL PROPOSED HARDWARE TO BE MOUNTED AND GROUNDED PER MANUFACTURERS SPECS
- ALL ITEMS ARE PROPOSED UNLESS OTHERWISE NOTED.
- LAYOUT H-FRAME & PROPOSED EQUIPMENT EXACTLY AS SHOWN TO ALLOW FOR FUTURE EQUIPMENT. ANY DEVIATIONS MUST BE APPROVED BY ATC CM, IN WRITING, NO EXCEPTIONS.
- FOOTINGS SHALL BE ONE OF THE FOLLOWING: USS POLECRETE STABILIZER SYSTEM, PRECAST CONCRETE (WHERE ALLOWED BY JURISDICTION) OR CAST IN PLACE. FOR PRECAST FOOTINGS, CONTRACTORS SHALL THOROUGHLY COMPACT THE PERIMETER (2' MIN) OF FOOTING WITH MECHANICAL PLATE TAMPER.

4 H-FRAME  
SCALE: N.T.S.



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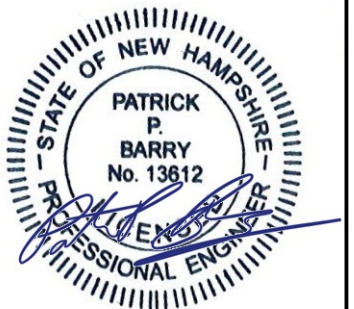
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	02/03/23

ATC SITE NUMBER:  
414895

ATC SITE NAME:  
SUNAPEE SOUTH, NH PCS NH

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782

SEAL:



Digitally Signed: 2023-12-07

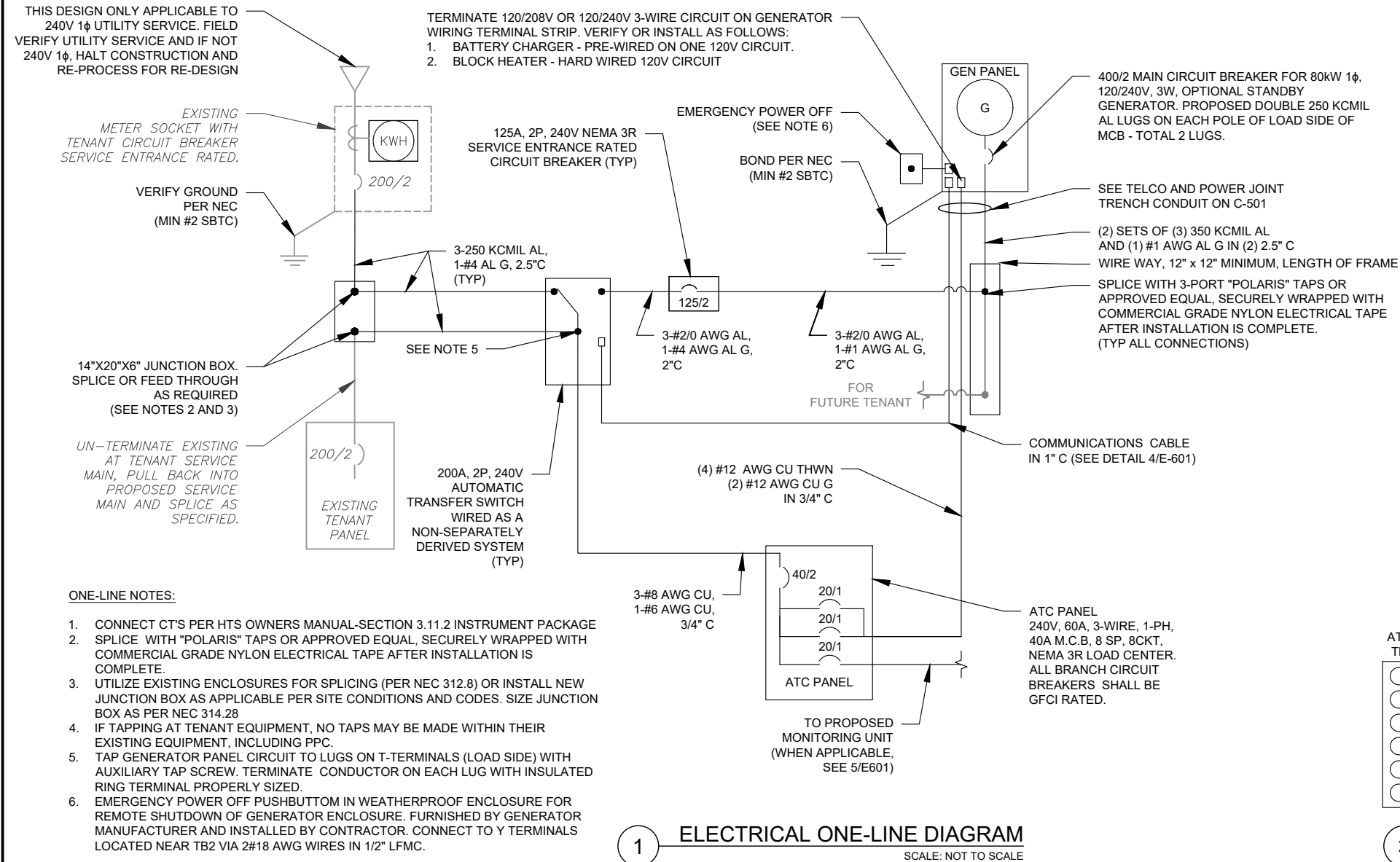
T-Mobile

DRAWN BY:	FER
DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

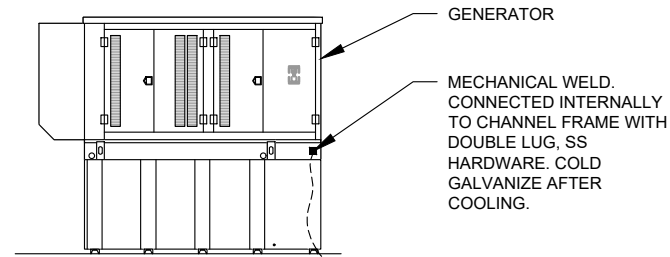
CONCRETE PAD  
DETAILS

SHEET NUMBER:	REVISION:
C-501	0





1 ELECTRICAL ONE-LINE DIAGRAM  
SCALE: NOT TO SCALE

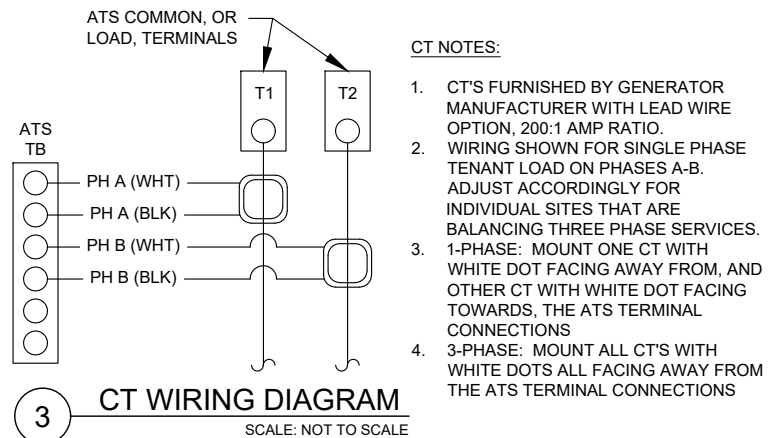


GENERATOR INSTALLATION NOTE:

INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.

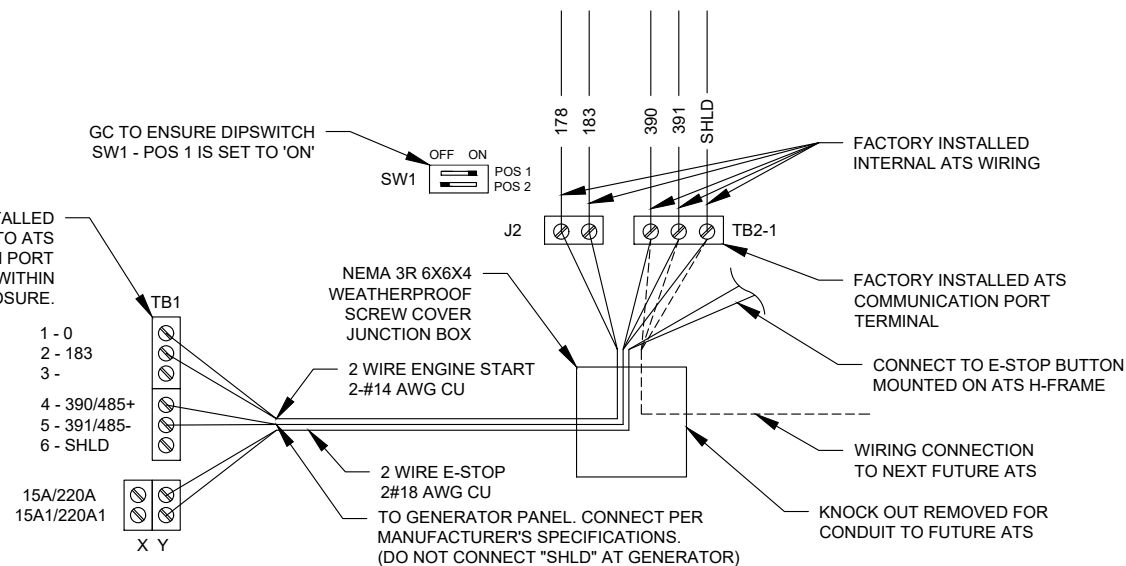
2 GENERATOR GROUNDING  
SCALE: NOT TO SCALE

DEMAND LOAD CALCULATION	
GENERATOR LOADS	2.5 KW
TENANT PANEL DEMAND LOADS	25.0 KW
TOTAL DEMAND LOADS (KW)	27.5 KW
TOTAL DEMAND CURRENT (A)	114.5 A
AT 120/240V, 1PH, 3W	



NOTES:

- INSTALL NETWORK OPERATING CENTER (NOC) MONITORING COMMUNICATION SYSTEM (RMC-700) ON MAIN UTILITY H-FRAME. THE RMC-700 IS FURNISHED BY ATC, COMPLETE WITH MOUNTING BRACKETS.
- INSTALL EXTERNAL ANTENNA KIT (FURNISHED BY ATC). ANTENNA MOUNTS TO KENTROX ENCLOSURE OR MOUNTED TO H-FRAME. FEED CABLE THROUGH RMC-700 ENTRY PORT #3 AND CONNECT TO ANTENNA PORT TX/RX. HAND TIGHTEN ONLY. LEAVE POWER AND DATA CABLES IN RMC-700 UNCONNECTED FOR COMMISSIONING TEAM
- BRANCH CIRCUIT WIRING FOR MONITORING DEVICE SHALL BE 2-#12 AWG CU, 1-#12 AWG CU G, IN 3/4" C.



5 PROPOSED MONITORING  
SCALE: NOT TO SCALE



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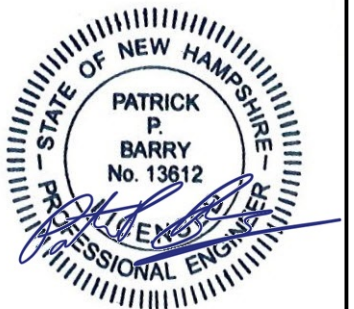
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	02/03/23
1			
2			
3			
4			
5			

ATC SITE NUMBER:  
414895

ATC SITE NAME:  
SUNAPEE SOUTH, NH PCS NH

SITE ADDRESS:  
15 STAGECOACH LANE  
SUNAPEE, NH 03782

SEAL:



Digitally Signed: 2023-12-07

T-Mobile

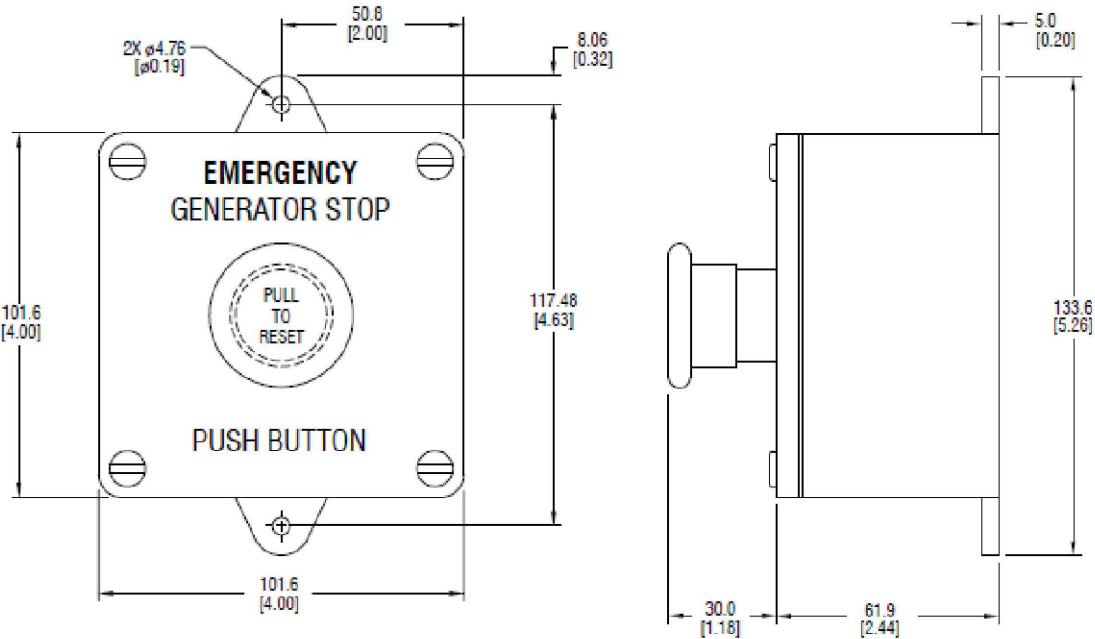
DRAWN BY:	FER
DATE DRAWN:	02/03/23
ATC JOB NO:	14146007_M4

ELECTRICAL ONE-LINE  
AND WIRING DETAILS

SHEET NUMBER:	REVISION:
E-601	0



REMOTE EMERGENCY STOP SWITCH  
SURFACE MOUNT, H-PANEL



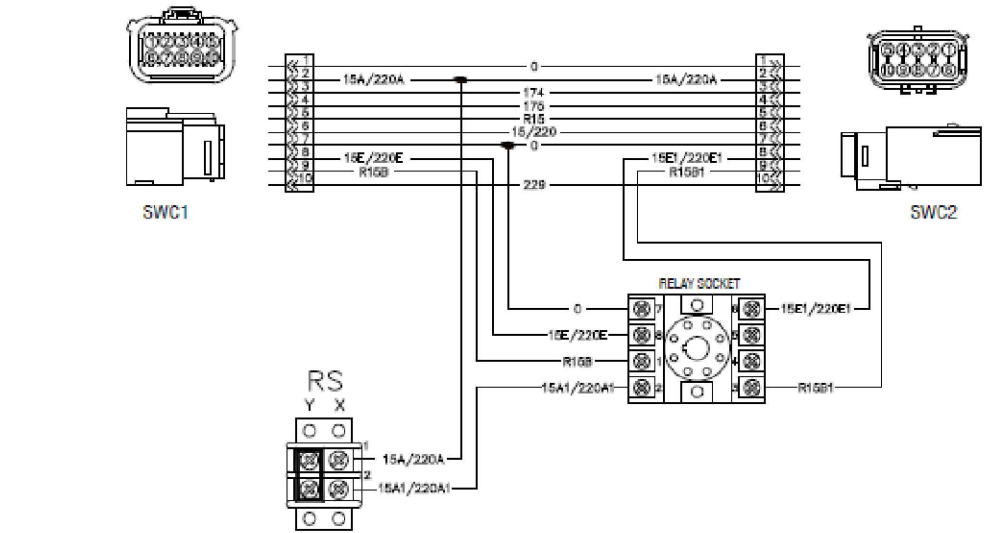
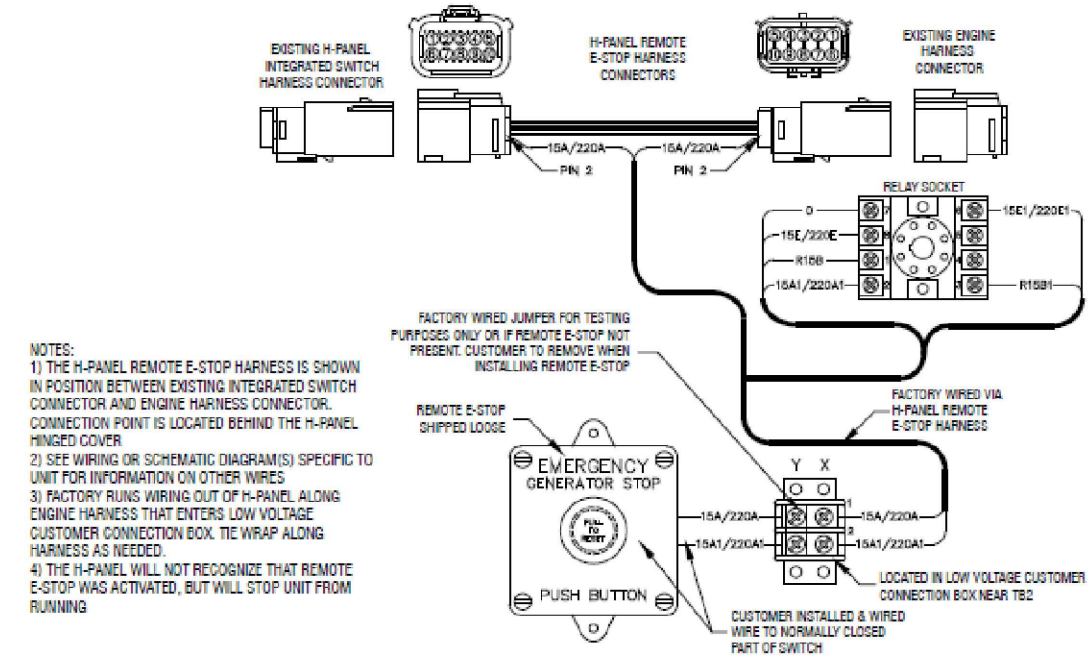
- MANUFACTURER: PILLA ELECTRICAL PRODUCTS, INC.
- MODEL SG120
- GENERAC PART NUMBER 061120E
- SURFACE MOUNT, NEMA 4X
- NONMETALLIC BACKBOX

DIMENSIONS: mm [INCHES]

GENSET CONTROLS

1 OF 2

REMOTE EMERGENCY STOP SWITCH  
SURFACE MOUNT, H-PANEL



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Part No. 0L6260  
Rev A 10/15/15

GENSET CONTROLS

2 OF 2

SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

0

SD080 | 4.5L | 80 kW  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



STANDBY POWER RATING  
80 kW, 100 kVA, 60 Hz

PRIME POWER RATING\*  
72 kW, 90 kVA, 60 Hz



\*Built in the USA using domestic and foreign parts

\*EPA Certified Prime ratings are not available in the U.S. or its Territories.

\*\*Certain options or customization may not hold certification valid.

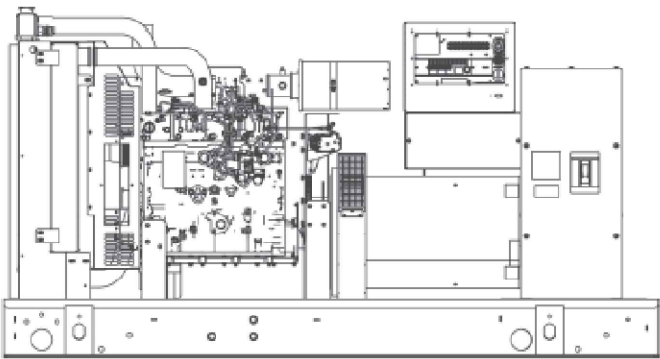


Image used for illustration purposes only

CODES AND STANDARDS

Generac products are designed to the following standards:

UL UL2200, UL508, UL142, UL498

NFPA NFPA70, 99, 110, 37

nec NEC700, 701, 702, 708

ISO ISO9001, 8528, 3046, 7637, Pluses #2b, 4

NEMA NEMA ICS10, MG1, 250, ICS6, AB1

ANSI American National Standards Institute ANSI C62.41

POWERING AHEAD

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

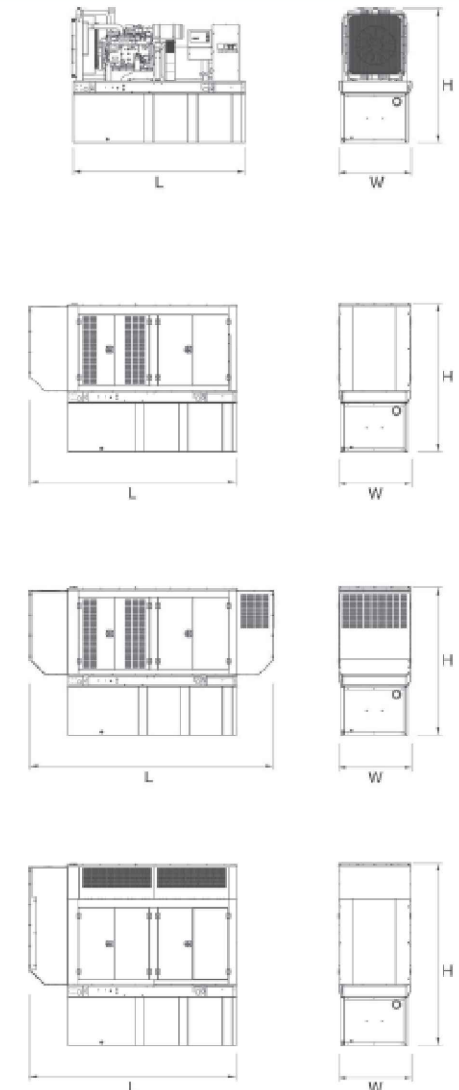
Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD080 | 4.5L | 80 kW  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS\*



YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

OPEN SET

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Tank & Open Set	
NO TANK	-	93 (2362.2) x 40 (1016) x 49 (1244.6)	2425 (1100)	
13	79 (299)	93 (2362.2) x 40 (1016) x 62 (1574.8)	2947 (1201)	
30	189 (715.4)	93 (2362.2) x 40 (1016) x 74 (1879.6)	3183 (1444)	
48	300 (1135.6)	93 (2362.2) x 40 (1016) x 86 (2184.4)	3407 (1545)	
56	350 (1325)	110 (2794) x 40 (1016) x 86 (2184.4)	NA	
81	510 (1930.5)	117 (2971.8) x 47 (1193.8) x 86 (2184.4)	3790 (1719)	
93	589 (2229.6)	128 (3251.2) x 49 (1244.6) x 86 (2184.4)	4269 (1936)	

STANDARD ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	112 (2844.8) x 41 (1041.4) x 56 (1422.4)	425 (193)	155 (70)
13	79 (299)	112 (2844.8) x 41 (1041.4) x 69 (1752.6)		
30	189 (715.4)	112 (2844.8) x 41 (1041.4) x 81 (2057.4)		
48	300 (1135.6)	112 (2844.8) x 41 (1041.4) x 93 (2362.2)		
56	350 (1325)	112 (2844.8) x 41 (1041.4) x 93 (2362.2)		
81	510 (1930.5)	117 (2971.8) x 47 (1193.8) x 93 (2362.2)		
93	589 (2229.6)	128 (3251.2) x 49 (1244.6) x 93 (2362.2)		

LEVEL 1 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	130 (3302) x 41 (1041.4) x 66 (1627.4)	450 (204)	285 (129)
13	79 (299)	130 (3302) x 41 (1041.4) x 69 (1752.6)		
30	189 (715.4)	130 (3302) x 41 (1041.4) x 81 (2057.4)		
48	300 (1135.6)	130 (3302) x 41 (1041.4) x 93 (2362.2)		
56	350 (1325)	130 (3302) x 41 (1041.4) x 93 (2362.2)		
81	510 (1930.5)	130 (3302) x 47 (1193.8) x 93 (2362.2)		
93	589 (2229.6)	130 (3302) x 49 (1244.6) x 93 (2362.2)		

LEVEL 2 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	112 (2844.8) x 41 (1041.4) x 69 (1752.6)	625 (284)	395 (180)
13	79 (299)	112 (2844.8) x 41 (1041.4) x 82 (2082.8)		
30	189 (715.4)	112 (2844.8) x 41 (1041.4) x 94 (2387.6)		
48	300 (1135.6)	112 (2844.8) x 41 (1041.4) x 106 (2692.4)		
56	350 (1325)	112 (2844.8) x 41 (1041.4) x 106 (2692.4)		
81	510 (1930.5)	117 (2971.8) x 47 (1193.8) x 106 (2692.4)		
93	589 (2229.6)	128 (3251.2) x 49 (1244.6) x 106 (2692.4)		

\*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

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Part No. DK5092  
Rev. F 01/26/17

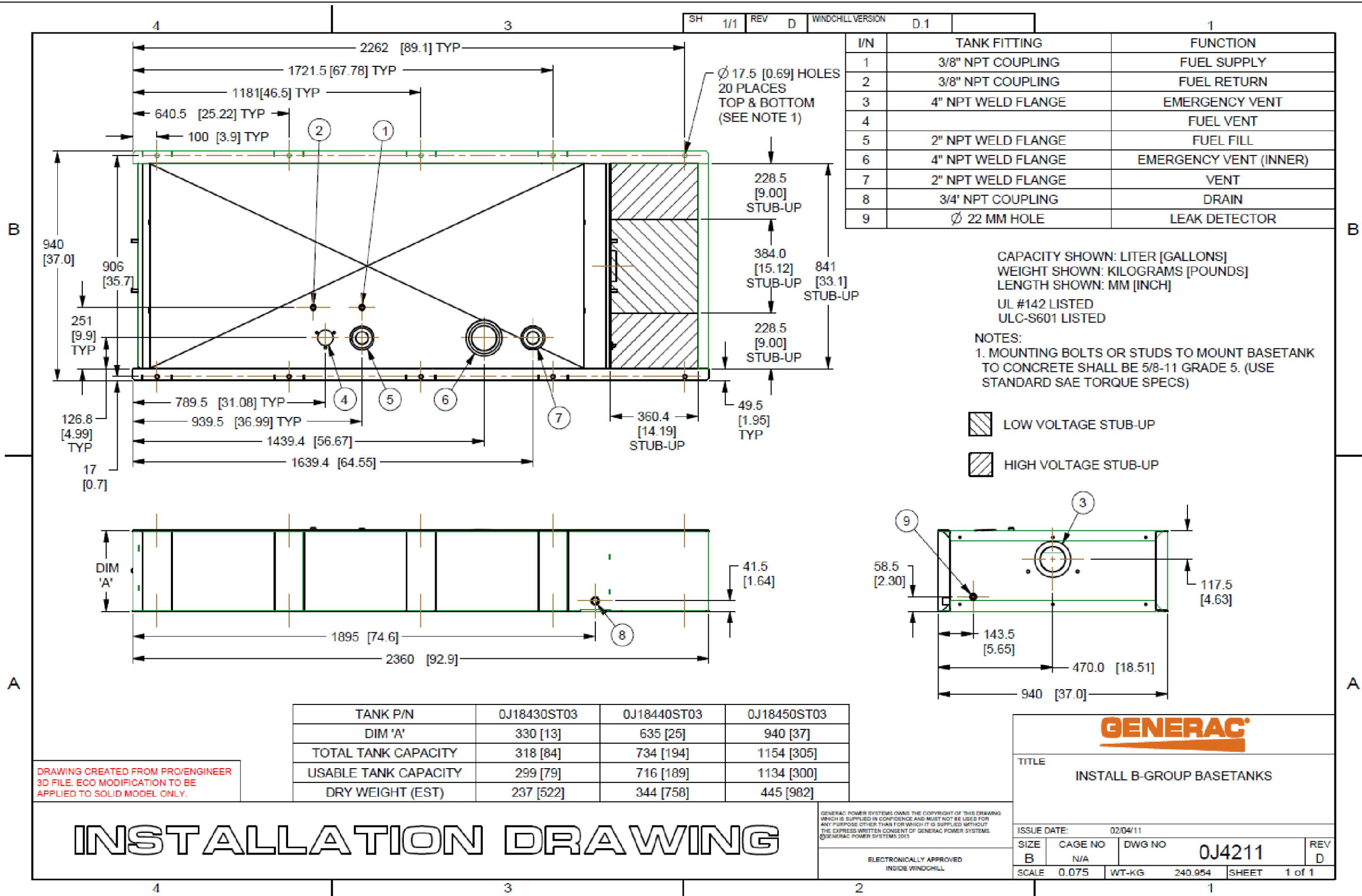
SPEC SHEET

1 OF 6

SPEC SHEET

6 OF 6





COUSENS, STEPHEN & PATRIC  
52 STAGECOACH RD  
SUNAPEE, NH 03782

TOWN OF SUNAPEE  
23 EDMONT ROAD  
SUNAPEE, NH 03782

FIELD, JAMES J & JANICE B  
69 WINN HILL RD  
SUNAPEE, NH 03782

WHITE FAMILY REVOC TRUST  
PO BOX 1702  
NEW LONDON, NH 03257

GARCEAU, RONALD E & SUSAN  
73 WINN HILL RD  
SUNAPEE, NH 03782

WHITE, PETER C & JULIA  
10 STAGECOACH LN  
SUNAPEE, NH 03782

GOYETTE, CHARLES & FRANCO  
C/O CHARLES GOYETTE  
3116 12TH ST SOUTH  
ARLINGTON, VA 22204

WIGGINS SR, JOHN W & DORO  
PO BOX 453  
SUNAPEE, NH 03782

GRANT, NICHOLAS & HANNAH  
3 MESSER RD  
SUNAPEE, NH 03782

WIGGINS SR., DENNIS R &  
PO BOX 144  
SUNAPEE, NH 03782

GROSS, NICHOLAS & CAROLIN  
PO BOX 122  
SUNAPEE, NH 03782

WIGGINS SR., DENNIS R & L  
PO BOX 144  
SUNAPEE, NH 03782

DUPLICATE LETTERS NOT REQUIRED

LAMARE, RUSSELL S & CHRIS  
22 STAGECOACH LN  
SUNAPEE, NH 03782

WIGGINS, SR., DENNIS & LY  
PO BOX 144  
SUNAPEE, NH 03782

NANGERONI, PAUL E & MARYA  
69 RYDER CORNER RD  
SUNAPEE, NH 03782

WYMAN, RONALD  
PO BOX 388  
SUNAPEE, NH 03782

REID LIVING TRUST, BETTY  
BETTY J REID, TRUSTEE  
PO BOX 681  
SUNAPEE, NH 03782

STOCKER, BRENT A & LAURA  
PO BOX 2  
SUNAPEE, NH 03782

1

ABUTTERS MAILING LIST



SUPPLEMENTAL

SHEET NUMBER:

R-604

REVISION:

1



RECEIVED

JAN 12 2024

RECEIVED

JAN 12 2024

TOWN OF  
SUNAPEE

## TOWN OF SUNAPEE

## APPLICATION FOR SITE PLAN REVIEW

(PDF OF SITE PLAN MUST BE INCLUDED WITH APPLICATION)

1. Landowner(s) Name(s) Jared + Laura Raymond  
 Address 276 Mountain Rd, Newbury, NH 03255  
 (Mailing) Same  
 Phone 603 - 344 - 1552
2. Zoning District Mixed Use 1
3. Project Location: 60 Route 103
4. Parcel ID: 000232 - 000023
5. Complete description of current use of property:

Office Building + Parking

6. Does this project require a special exception or variance by the ZBA as outlined in the Sunapee Zoning Regulations? Yes \_\_\_ No ☒ (If yes, complete the Zoning Board of Adjustment application, and Land Use Questionnaire.)

7. Complete description of proposed project (Include area dimensions, use, # of employees, # of dwelling units, etc.)

Erect a shop building on site for storage of project related materials

8. Certification/Permission for inspection. To the best of my knowledge, the above is true and accurate. I hereby grant permission for site inspection to Planning Board official(s). I also understand that it is my responsibility for providing a complete application. I realize that any of the application requirements, which are assumed waivable during the initial review, may still be required at the time of review by the Planning Board.

JB As Agent

Signature(s) of Landowner(s)

1/12/24

Date

Date of Application:

Phase I \_\_\_\_\_ Phase II \_\_\_\_\_

Phase III \_\_\_\_\_ Major Site Plan \_\_\_\_\_

Home Business \_\_\_\_\_

Fee Paid \_\_\_\_\_ Method of Payment \_\_\_\_\_

## FINAL HEARING CHECKLIST

The following items must be submitted in accordance with the attached meeting and deadline schedule for the Planning Board meeting you wish to attend:

- ☒ Completed Application
- ☒ Fees.
- ☒ Two (2) copies of plans for review (with required information per Article V)
- ☒ List of abutters, including mailing addresses
- ☒ PDF of Site Plan emailed to [zoning@town.sunapee.nh.us](mailto:zoning@town.sunapee.nh.us)

The Planner will review the plans to determine if the appropriate information has been provided on the plans. If the submission is deemed complete, notices will be sent (14) calendar days prior to the hearing. The following items must be included on the plan per Article V:

- ☒ Plan at a scale of 1" = 20' or less
- ☒ Perimeter boundary survey
- ☒ Title of drawing with name of applicant
- ☒ Parcel ID
- ☒ Name and mailing addresses of abutting property owners
- ☒ Signature block for Water & Sewer Commission, Police Chief, Road Agent & Conservation Commission
- ☒ Site location map
- ☒ North point, bar scale, appropriate dates
- ☒ Name, address, and seal of person preparing map
- ☒ Location and shape of existing and proposed buildings
- ☒ Square footage for each use designated on plan
- ☒ Existing and proposed contours at an interval or no more than 5'. Spot elevations for level lot.
- ☒ Streams, wetlands, and other water bodies
- ☒ Width, location, and grades of existing and proposed streets and driveways
- ☒ Layout and size of parking spaces
- ☒ Sewage disposal facilities for property including mains and service lines
- ☒ Water supply for property including mains and services lines
- ☒ Proposed landscaping plan
- ☒ Existing and proposed electric lines
- ☒ Existing and proposed telephone lines

☒ Exterior lighting plan

Article V requirements (cont.):

☒ Proposed signs-size and location

☒ Locations of retaining walls, fences, and outside storage areas

☒ Location of fire alarms and sprinklers

The Planning Board may waive the following items if it is determined, the project's impact will be minor, and otherwise, each item will be required:

☒ Drainage design, including drainage structures, culverts, ditches, and storm sewer lines

☒ Drainage calculations

☒ Plans for toxic waste storage

☒ Location of hazardous materials storage

State of New Hampshire Permits:

☒ Department of Transportation (Highway/Access)

☒ NHWSPCD (Septic Systems)

☒ Water Supply Division

☒ Site Specific (Department of Environmental Services)

☒ Wetlands Board





# 200 foot Abutters List Report

Tri Town, NH

January 12, 2024

## Subject Property:

Parcel Number: Sun-0232-0023-0000  
CAMA Number: Sun-0232-0023-0000  
Property Address: 60 ROUTE 103

Mailing Address: RAYMOND, JARED S & LAURA A  
276 MOUNTAIN RD  
NEWBURY, NH 03255

## Abutters:

Parcel Number: Sun-0225-0013-0000  
CAMA Number: Sun-0225-0013-0000  
Property Address: 9 YOUNGS HILL RD

Mailing Address: KANGAS, WESLEY A.  
9 YOUNGS HILL RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0225-0013-0100  
CAMA Number: Sun-0225-0013-0100  
Property Address: YOUNGS HILL RD Unit 100

Mailing Address: KANGAS, WESLEY  
9 YOUNGS HILL RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0225-0036-0000  
CAMA Number: Sun-0225-0036-0000  
Property Address: 36 ROUTE 103

Mailing Address: MCDONOUGH FAMILY PROPERTIES, L  
1567 SUMMER ST  
BRISTOL, NH 03222

Parcel Number: Sun-0232-0001-0000  
CAMA Number: Sun-0232-0001-0000  
Property Address: YOUNGS HILL RD

Mailing Address: JOHNSON 2014 TRUST, JOLYON  
JOLYON JOHNSON, TRUSTEE  
PO BOX 596  
SUNAPEE, NH 03782

Parcel Number: Sun-0232-0016-0000  
CAMA Number: Sun-0232-0016-0000  
Property Address: 52 DEPOT RD

Mailing Address: INTREAL LTD, INC  
PO BOX 798  
SUNAPEE, NH 03782

Parcel Number: Sun-0232-0016-0000  
CAMA Number: Sun-0232-0016-0001  
Property Address: 54 DEPOT RD Unit 1

Mailing Address: INTREAL LTD, INC  
PO BOX 798  
SUNAPEE, NH 03782

Parcel Number: Sun-0232-0017-0000  
CAMA Number: Sun-0232-0017-0000  
Property Address: ROUTE 103

Mailing Address: ZORNIO, IDA C/O PETER ZORNIO  
9301 PRINCE WILLIAM  
AUSTIN, TX 78730

Parcel Number: Sun-0232-0018-0000  
CAMA Number: Sun-0232-0018-0000  
Property Address: 46 DEPOT RD

Mailing Address: LANDLADIES 46 LLC.  
276 MOUNTAIN ROAD  
NEWBURY, NH 03255

Parcel Number: Sun-0232-0020-0000  
CAMA Number: Sun-0232-0020-0000  
Property Address: 40 DEPOT RD

Mailing Address: JACKSON, GARY L  
40 DEPOT RD  
SUNAPEE, NH 03782

Parcel Number: Sun-0232-0022-0000  
CAMA Number: Sun-0232-0022-0000  
Property Address: 39 DEPOT RD

Mailing Address: INTREAL LTD, INC.  
PO BOX 798  
SUNAPEE, NH 03782



www.cai-tech.com

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1/12/2024

Page 1 of 1





William Cass, P.E.  
Commissioner

**THE STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION**

District 2 Office, 8 Eastman Hill Rd., Enfield, NH 03748 (603) 448-2654



David Rodrigue, P.E.  
Assistant Commissioner

**DRIVEWAY PERMIT**

To: Jared Raymond  
PO Box 289  
Newbury, NH 03255

City/Town: Sunapee  
Route/Road: Depot Rd (N4350041)  
Patrol Section: 213  
Tax Map: 232  
Lot: 23  
Development:

Permit #: **02-435-0039**  
District: 02  
Permit Date 10/19/2023

Permission is hereby granted to construct (alter) a driveway, entrance, exit or approach adjoining Depot Rd (N4350041), pursuant to the location and specifications as described below. Failure to adhere to the standards and engineering drawings previously approved shall render this instrument null and void. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Access Rules. Facilities constructed in violation of the permit specifications or the rules, shall be corrected immediately upon notification by a Department representative. Any cost by the State to correct deficiencies shall be fully borne by the landowner. The landowner shall defend, indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.

**Drive 1**

Location: Approximately 0.034 miles west of NH Route 103 on the north side of Depot Rd (N4350041).  
SLD Station: 180 (right) GPS: 43.369677 N 72.122711 W.

Specifications: This permit authorizes a gravel access to be used as a Commercial drive. Any change in use, increase in use or reconstruction of the driveway requires reapplication.

The right-of-way line is located 24.75 feet from and parallel to the centerline of the highway.  
The entrance shall be graded so that the surface of the drive drops 2 inches at a point 4 feet from Depot Rd (N4350041) edge of pavement to create a drainage swale.

The driveway shall not exceed 12 feet in width. The entrance of the drive may be flared; typically the flare radius is one half the driveway width.

The intent of this permit is to record the change in use of the driveway from residential to commercial and approve the reconstruction of the existing driveway at 60 Route 103 in Sunapee.

**Other Conditions:**

No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over or under the Highway Right of Way.

No parking, catering or servicing shall be conducted within the Highway Right of Way.

The applicant shall comply with all applicable ordinances and regulations of the municipality or other State Agencies.

The Department has relied on the title and subdivision information provided by the landowner. The Department has not performed additional title research and makes no warranty or representation concerning landowner's legal right to access. In the event of a dispute about the landowner's legal right to the access provided herein, the landowner will defend and indemnify the Department.

All excavated topsoil, or in the absence of topsoil the top 6 inches of soil, within the limits of state ROW shall be properly re-used within the limits of the state ROW. All temporary stockpiles of the re-use material shall be located within the state ROW, or as otherwise approved by the District Engineer.

The Contractor shall be solely responsible for the handling, transport and disposal of any surplus material generated by their project and shall comply with all federal, state and local laws, ordinances and rules in doing so.



I/We, the contractor/Owner, certify that the property will not have any illicit unauthorized drainage connections to the NHDOT storm water drainage system. An illicit discharge is any direct or indirect discharge to the NHDOT drainage system that is not composed entirely of storm water. Illicit discharges include, without limitation, sewage, process wastewater, or wash water and any connections from floor drains, sinks, or toilets.

Property Owner shall pre-post the approved and signed NHDOT District 2 Driveway Permit at a location so that it is readily visible from the accessing State roadway during the construction of the driveway.

Property Owner shall grade the driveway limits so that, including during construction, no stormwater runoff flows onto the State of New Hampshire roadway or shoulders. Site drainage shall not be permitted to cause ponding, ice or ice build-up in the right-of-way.

Property Owner shall not flare the end of the driveway onto the abutting properties.

Property Owner shall install the necessary erosion and sediment control measures during the construction and use of the driveway. All erosion and sediment control measures shall be maintained and remain in place until substantial vegetation growth has occurred.

Upon completion of the construction of the permitted driveway and other priority permanent features, Property Owner shall fine grade the adjacent areas to manage stormwater runoff, apply loam and seed or otherwise permanently stabilize all disturbed surface side areas.

Property Owner, for daily temporary traffic control, shall install the necessary roadway warning signage in accordance with the 2009 MUTCD Part 6, and at least one certified flagger shall be utilized while working or maneuvering along the NH State Road, including for during delivery of construction materials. Property Owner shall erect black on orange "Trucks Entering" signs, 36 inches by 36 inches dimension, to both approaches to the driveway (500 feet advance warning).

The permitted driveway is for an access only. Establishing a landing area and/or loading trucks within the highway right-of-way is strictly prohibited. Parking or storing any supplies, equipment and/or vehicles in the State right-of-way shall be prohibited.

Property Owner shall be responsible for maintaining the driveway permanently and also accomplish and maintain all necessary removal of vegetation including clearing of brush, trees, etc., snow, or other vision obstructing materials, so that the 400 feet minimum sight distances in both directions are not inhibited when entering/exiting the driveway. Property Owner shall not place/store any snow within the State right-of-way.

Property Owner shall be responsible for the maintenance of ditches, side slopes and other permanent structures or surface features, and establishing satisfactory adjacent drainage away from the State road. Disturbance, wetting, silting or damage to the roadway is prohibited, including for seasonal factors.

Copies: District, Town, Patrolman

James Bruss  
PO Box 289  
Newbury, NH 03255

Approved



Assistant District Engineer  
For Director of Administration





William Cass, P.E.  
Commissioner

**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**

District 2 Office, 8 Eastman Hill Rd., Enfield, NH 03748 (603) 448-2654



David Rodrigue, P.E.  
Assistant Commissioner

**DRIVEWAY PERMIT**

To: Jared Raymond  
PO Box 289  
Newbury, NH 03255

City/Town: Sunapee  
Route/Road: NH 103 (S0000103)  
Patrol Section: 213  
Tax Map: 232  
Lot: 23  
Development:

Permit #: **02-435-0038**  
District: 02  
Permit Date 10/19/2023

Permission is hereby granted to construct (alter) a driveway, entrance, exit or approach adjoining NH 103 (S0000103), pursuant to the location and specifications as described below. Failure to adhere to the standards and engineering drawings previously approved shall render this instrument null and void. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Access Rules. Facilities constructed in violation of the permit specifications or the rules, shall be corrected immediately upon notification by a Department representative. Any cost by the State to correct deficiencies shall be fully borne by the landowner. The landowner shall defend, indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.

**Drive 1**

Location: Approximately 0.006 miles south of Youngs Hill Road on the west side of NH 103 (S0000103).  
SLD Station: 1793 (right) GPS: 43.370033 N 72.122526 W.

Specifications: This permit authorizes a paved access to be used as a Commercial drive. Any change in use, increase in use or reconstruction of the driveway requires reapplication.

The right-of-way line is located 50 feet from and parallel to the centerline of the highway.  
The entrance shall be graded so that the surface of the drive drops 3 inches at a point 6 feet from NH 103 (S0000103) edge of pavement to create a drainage swale.

The driveway shall not exceed 22 feet in width. The entrance of the drive may be flared; typically the flare radius is one half the driveway width.

The intent of this permit is to record the change in use of the driveway from residential to commercial and approve the reconstruction and paving of the existing driveway at 60 Route 103 in Sunapee. The gravel base material shall be regraded so that the finished grade of the driveway pavement is flush with the highway pavement to ensure positive drainage to the swale at the beginning of the driveway.

**Other Conditions:**

No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over or under the Highway Right of Way.

No parking, catering or servicing shall be conducted within the Highway Right of Way.

The applicant shall comply with all applicable ordinances and regulations of the municipality or other State Agencies.

The Department has relied on the title and subdivision information provided by the landowner. The Department has not performed additional title research and makes no warranty or representation concerning landowner's legal right to access. In the event of a dispute about the landowner's legal right to the access provided herein, the landowner will defend and indemnify the Department.

All excavated topsoil, or in the absence of topsoil the top 6 inches of soil, within the limits of state ROW shall be properly re-used within the limits of the state ROW. All temporary stockpiles of the re-use material shall be located within the state ROW, or as otherwise approved by the District Engineer.

The Contractor shall be solely responsible for the handling, transport and disposal of any surplus material generated by their project and shall comply with all federal, state and local laws, ordinances and rules in doing so.



I/We, the contractor/Owner, certify that the property will not have any illicit unauthorized drainage connections to the NHDOT storm water drainage system. An illicit discharge is any direct or indirect discharge to the NHDOT drainage system that is not composed entirely of storm water. Illicit discharges include, without limitation, sewage, process wastewater, or wash water and any connections from floor drains, sinks, or toilets.

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Property Owner shall be responsible for maintaining the driveway permanently and also accomplish and maintain all necessary removal of vegetation including clearing of brush, trees, etc., snow, or other vision obstructing materials, so that the 400 feet minimum sight distances in both directions are not inhibited when entering/exiting the driveway. Property Owner shall not place/store any snow within the State right-of-way.

Property Owner shall be responsible for the maintenance of ditches, side slopes and other permanent structures or surface features, and establishing satisfactory adjacent drainage away from the State road. Disturbance, wetting, silting or damage to the roadway is prohibited, including for seasonal factors.

Copies: District, Town, Patrolman

Relax & Co.  
James Bruss  
PO Box 289  
Newbury, NH 03255

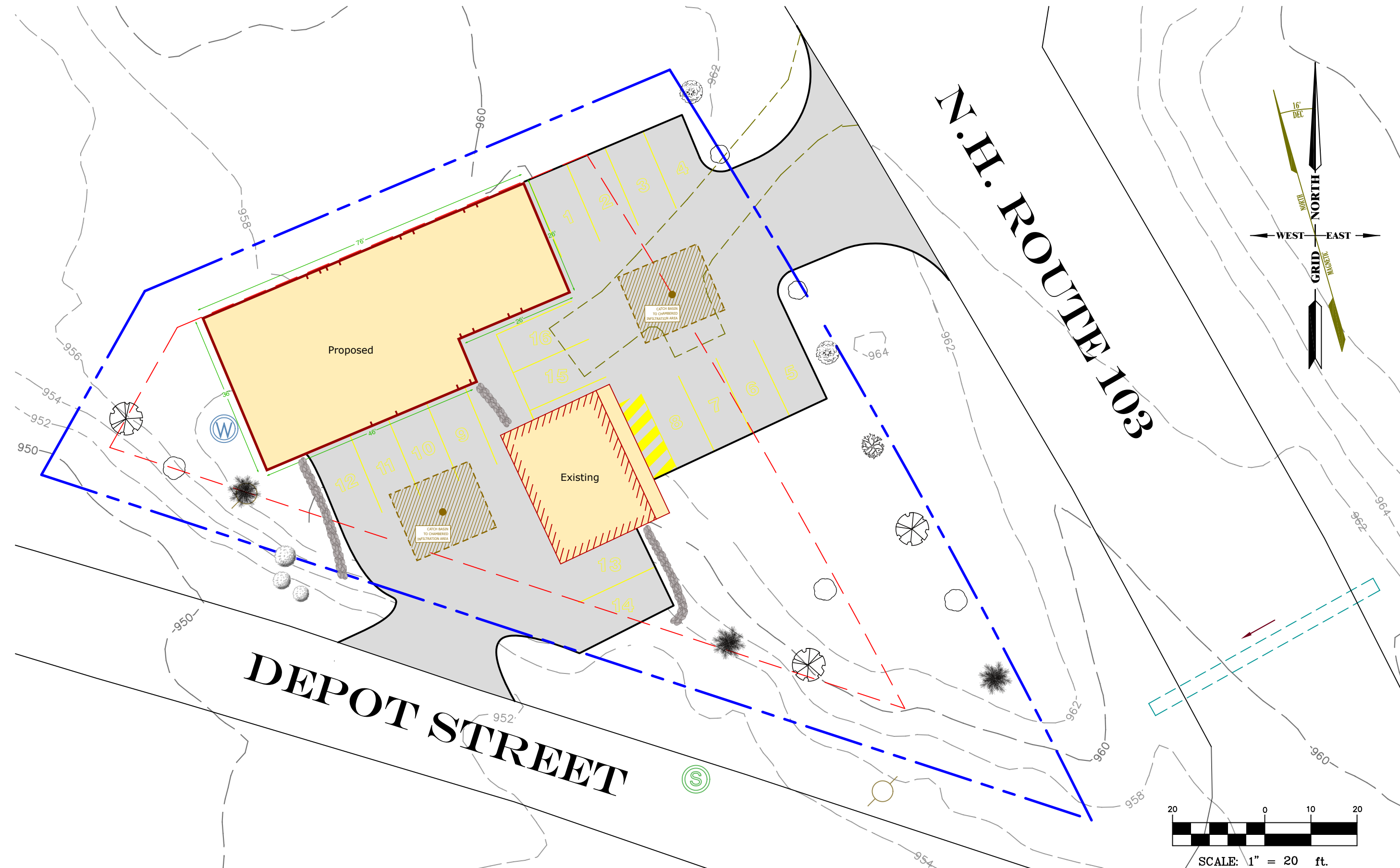
Approved



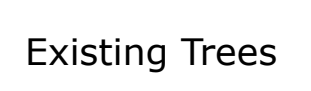
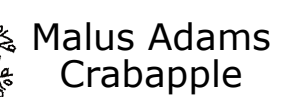
Assistant District Engineer  
For Director of Administration

All Aisles = 24'

8166 / 17,076



---

[illegible]60 Route 103  
Sunapee, NH

DESCRIPTION:

Relax and Company  
Offices

AWINGS PROVIDED BY:

Relax and Company

DATE:

1/04/24

SCALE:

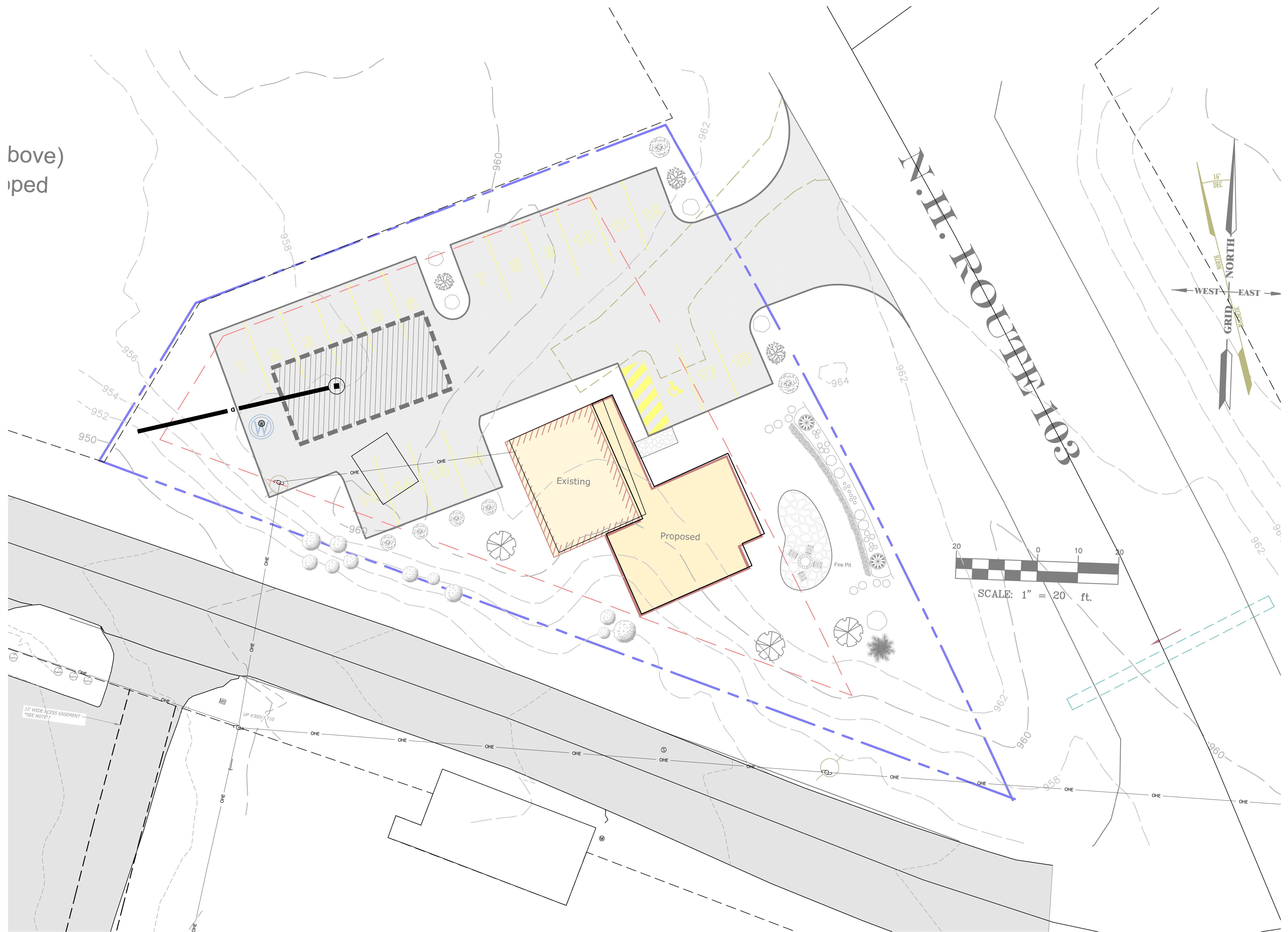
$$1'' = 20'$$

SHEET:

**S-1**



bove)  
oped





# **STORMWATER MANAGEMENT NARRATIVE**

for

**Relax & Company  
60 Rt. 103, Sunapee, NH**

## **Project Description**

The subject property is located at 60 Rt. 103 and is within the Mixed Use 1 (M1) zoning district. The subject property contains one existing structure, gravel driveway, and native vegetation. The property is serviced by a private well and septic system. Overhead utilities are also currently provided to the site from Depot Road. The subject property slopes from east to west and eventually drains to an adjacent road side ditch and then to a wetland area.

## **Existing Site Conditions**

In the construction area, slopes range from 1% to more than 20%, with most slopes in the construction area around 7%.

The soil types in the proposed disturbance area (per NRCS Web Soil Survey) are Deerfield Loamy Fine Sand and Windsor Loamy Sand, designated with hydrologic ratings of soil Group A. These soils have a medium infiltration rate, with a Ksat value of 1.4 to 99.9 inches/hour. The site is mostly woods, with the exception of the existing buildings and adjacent gravel access and parking areas..

Currently the subject parcel contains roughly 1,600 square feet of impervious cover between roofs and gravel surface.

## **Proposed Site Conditions**

In the proposed conditions, the size and shape of the subcatchment areas are not altered due to the placement of new site features. The single study points remain the same.

An underground infiltration system consisting of a stone reservoir, 2,400 cubic feet of crushed stone (20' x 40' x 3') is proposed to handle the increase in impervious area on site. This system collects most of the new driveway, parking area and the new roof area, equaling just more than 8,200 square feet of impervious surfaces. The underground system provides a level of detention along with treatment for the area that is collected, infiltrating a majority of the stormwater that is directed there.

Overall, the increase in impervious cover on the site from pre-development to post-Development is 6,500 square feet. The underground system proposed provides treatment and detention for more than this amount.

## **Study Methodology**

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development. Times of concentration and runoff curve number calculations have been determined using the method described in the Natural Resource Conservation Service (NRCS) Technical Release 55, (TR-55). Time of concentration calculations have been amended where the values given by the TR-55 method is less than five minutes. In these cases a standard minimum value of five minutes has been used to keep this parameter within the acceptable working range of the model. Each Tc path and corresponding length and slope is identified in the pre and post development drainage area plan. The TR-20 based HydroCAD (version 10.0) modeling software has been utilized to perform the complex runoff and routing calculations.

## **Calculation Results**

### **Preface**

Existing-development and post-development calculations have been calculated for the 2-, 10-, 25-, and 50-year storm frequency in accordance with Town of Newmarket's Development Regulations. The SCS TR-20 method was used with a Type III 24-hour storm. The Time of Concentration (Tc) is calculated using the Lag Method. Two Study Points (**SP-1 AND SP-2**) were used for comparison of post-development runoff values with those from existing conditions.

### **Results**

#### ***Peak Rate (cfs)***

	<b><i>2 Yr.</i></b>	<b><i>10 Yr.</i></b>	<b><i>25 Yr.</i></b>
<b><i>SP-1</i></b>			
Existing	0.0	0.0	0.1
Proposed	0.0	0.0	0.1

## **Summary**

There is a reduction in peak flow and volume of stormwater runoff at the analysis point for all the design storm events. This is due to the underground infiltration system.

Per Appendix B of the New Hampshire Stormwater Manual infiltration BMP's remove 90% TSS, 60% total nitrogen and 60% total phosphorous.

This will help reduce the runoff generated from the site, increase the groundwater recharge, and further protect the water quality of the downstream areas.

In addition to collecting and treating nearly 150% of the increase of impervious area on site all of the disturbed areas will be loamed and seeded to provide an additional level of erosion control and stormwater retention.

## **PRE-DEVELOPMENT MODEL OUTPUT**

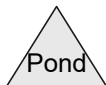
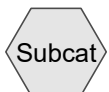




Study Point #1



S1 - Ex. Cond



**Routing Diagram for 230764 PRE\_RT103**

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HydroCAD® 10.20-2g s/n 01179 © 2022 HydroCAD Software Solutions LLC

## **Project Notes**

Rainfall events imported from "NRCS-Rain.txt" for 6516 NH Merrimack East

Rainfall events imported from "NRCS-Rain.txt" for 6522 NH Sullivan Other

**230764 PRE\_RT103**

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Page 3

**Rainfall Events Listing (selected events)**

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NRCC 24-hr	C	Default	24.00	1	2.65	2
2	10-Year	NRCC 24-hr	C	Default	24.00	1	3.85	2
3	25-Year	NRCC 24-hr	C	Default	24.00	1	4.77	2



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Page 4

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.230	49	50-75% Grass cover, Fair, HSG A (S1)
0.021	96	Gravel surface, HSG A (S1)
0.016	98	Unconnected roofs, HSG A (S1)
0.117	36	Woods, Fair, HSG A (S1)
<b>0.383</b>	<b>50</b>	<b>TOTAL AREA</b>

**230764 PRE\_RT103**

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Page 5

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.383	HSG A	S1
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
<b>0.383</b>		<b>TOTAL AREA</b>

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**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.230	0.000	0.000	0.000	0.000	0.230	50-75% Grass cover, Fair	S1
0.021	0.000	0.000	0.000	0.000	0.021	Gravel surface	S1
0.016	0.000	0.000	0.000	0.000	0.016	Unconnected roofs	S1
0.117	0.000	0.000	0.000	0.000	0.117	Woods, Fair	S1
<b>0.383</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.383</b>	<b>TOTAL AREA</b>	



**230764 PRE\_RT103***NRCC 24-hr C 2-Year Rainfall=2.65"*

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Page 7

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS1: S1 - Ex. Cond**

Runoff Area=16,700 sf 4.19% Impervious Runoff Depth&gt;0.02"

Flow Length=50' Slope=0.0500 '/' Tc=8.8 min UI Adjusted CN=49 Runoff=0.00 cfs 0.001 af

**Link SP1: Study Point #1**

Inflow=0.00 cfs 0.001 af

Primary=0.00 cfs 0.001 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.001 af Average Runoff Depth = 0.02"**  
**95.81% Pervious = 0.367 ac 4.19% Impervious = 0.016 ac**

**Summary for Subcatchment S1: S1 - Ex. Cond**

Runoff = 0.00 cfs @ 20.00 hrs, Volume= 0.001 af, Depth> 0.02"  
 Routed to Link SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NRCC 24-hr C 2-Year Rainfall=2.65"

Area (sf)	CN	Adj	Description
700	98		Unconnected roofs, HSG A
900	96		Gravel surface, HSG A
10,000	49		50-75% Grass cover, Fair, HSG A
5,100	36		Woods, Fair, HSG A
16,700	50	49	Weighted Average, UI Adjusted
16,000			95.81% Pervious Area
700			4.19% Impervious Area
700			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	50	0.0500	0.09		<b>Sheet Flow, A-B Sheet</b> Woods: Light underbrush n= 0.400 P2= 3.00"

**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 4.19% Impervious, Inflow Depth > 0.02" for 2-Year event  
 Inflow = 0.00 cfs @ 20.00 hrs, Volume= 0.001 af  
 Primary = 0.00 cfs @ 20.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**230764 PRE\_RT103**

NRCC 24-hr C 10-Year Rainfall=3.85"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS1: S1 - Ex. Cond**

Runoff Area=16,700 sf 4.19% Impervious Runoff Depth&gt;0.20"

Flow Length=50' Slope=0.0500 '/' Tc=8.8 min UI Adjusted CN=49 Runoff=0.03 cfs 0.006 af

**Link SP1: Study Point #1**

Inflow=0.03 cfs 0.006 af

Primary=0.03 cfs 0.006 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.006 af Average Runoff Depth = 0.20"**  
**95.81% Pervious = 0.367 ac 4.19% Impervious = 0.016 ac**



**Summary for Subcatchment S1: S1 - Ex. Cond**

Runoff = 0.03 cfs @ 12.35 hrs, Volume= 0.006 af, Depth> 0.20"  
 Routed to Link SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NRCC 24-hr C 10-Year Rainfall=3.85"

Area (sf)	CN	Adj	Description
700	98		Unconnected roofs, HSG A
900	96		Gravel surface, HSG A
10,000	49		50-75% Grass cover, Fair, HSG A
5,100	36		Woods, Fair, HSG A
16,700	50	49	Weighted Average, UI Adjusted
16,000			95.81% Pervious Area
700			4.19% Impervious Area
700			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	50	0.0500	0.09		<b>Sheet Flow, A-B Sheet</b> Woods: Light underbrush n= 0.400 P2= 3.00"

**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 4.19% Impervious, Inflow Depth > 0.20" for 10-Year event  
 Inflow = 0.03 cfs @ 12.35 hrs, Volume= 0.006 af  
 Primary = 0.03 cfs @ 12.35 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**230764 PRE\_RT103**

NRCC 24-hr C 25-Year Rainfall=4.77"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS1: S1 - Ex. Cond**

Runoff Area=16,700 sf 4.19% Impervious Runoff Depth&gt;0.46"

Flow Length=50' Slope=0.0500 '/' Tc=8.8 min UI Adjusted CN=49 Runoff=0.13 cfs 0.015 af

**Link SP1: Study Point #1**

Inflow=0.13 cfs 0.015 af

Primary=0.13 cfs 0.015 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.015 af Average Runoff Depth = 0.46"**  
**95.81% Pervious = 0.367 ac 4.19% Impervious = 0.016 ac**

**Summary for Subcatchment S1: S1 - Ex. Cond**

Runoff = 0.13 cfs @ 12.20 hrs, Volume= 0.015 af, Depth> 0.46"  
 Routed to Link SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NRCC 24-hr C 25-Year Rainfall=4.77"

Area (sf)	CN	Adj	Description
700	98		Unconnected roofs, HSG A
900	96		Gravel surface, HSG A
10,000	49		50-75% Grass cover, Fair, HSG A
5,100	36		Woods, Fair, HSG A
16,700	50	49	Weighted Average, UI Adjusted
16,000			95.81% Pervious Area
700			4.19% Impervious Area
700			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	50	0.0500	0.09		<b>Sheet Flow, A-B Sheet</b> Woods: Light underbrush n= 0.400 P2= 3.00"

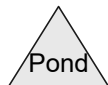
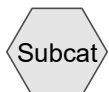
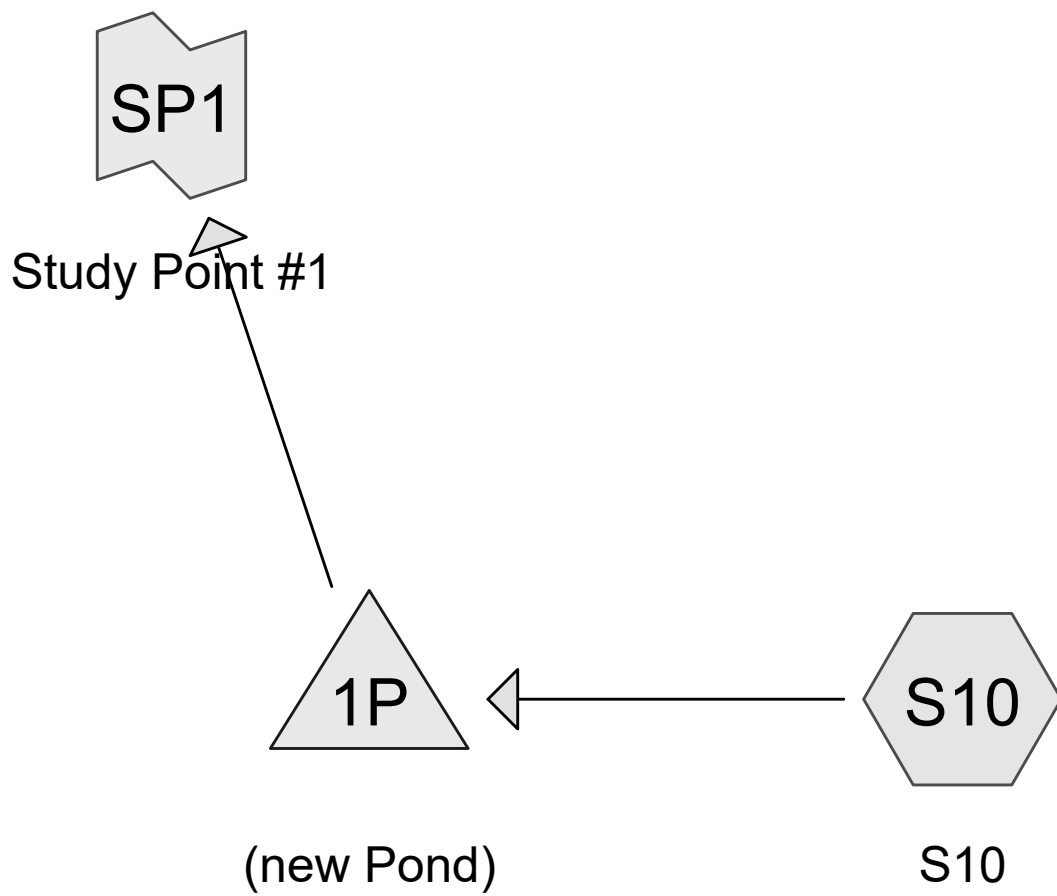
**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 4.19% Impervious, Inflow Depth > 0.46" for 25-Year event  
 Inflow = 0.13 cfs @ 12.20 hrs, Volume= 0.015 af  
 Primary = 0.13 cfs @ 12.20 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



## **POST-DEVELOPMENT MODEL OUTPUT**



**Routing Diagram for 230764 POST\_RT103**

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## **230764 POST\_RT103**

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Page 2

### **Project Notes**

Rainfall events imported from "NRCS-Rain.txt" for 6516 NH Merrimack East

Rainfall events imported from "NRCS-Rain.txt" for 6522 NH Sullivan Other

**230764 POST\_RT103**

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Page 3

**Rainfall Events Listing (selected events)**

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NRCC 24-hr	C	Default	24.00	1	2.65	2
2	10-Year	NRCC 24-hr	C	Default	24.00	1	3.85	2
3	25-Year	NRCC 24-hr	C	Default	24.00	1	4.77	2



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Page 4

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.149	39	>75% Grass cover, Good, HSG A (S10)
0.149	98	Paved parking, HSG A (S10)
0.039	98	Unconnected roofs, HSG A (S10)
0.046	36	Woods, Fair, HSG A (S10)
<b>0.383</b>	<b>68</b>	<b>TOTAL AREA</b>

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Page 5

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.383	HSG A	S10
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
<b>0.383</b>		<b>TOTAL AREA</b>

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Page 6

**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.149	0.000	0.000	0.000	0.000	0.149	>75% Grass cover, Good	S10
0.149	0.000	0.000	0.000	0.000	0.149	Paved parking	S10
0.039	0.000	0.000	0.000	0.000	0.039	Unconnected roofs	S10
0.046	0.000	0.000	0.000	0.000	0.046	Woods, Fair	S10
<b>0.383</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.383</b>	<b>TOTAL AREA</b>	

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Page 7

**Pipe Listing (all nodes)**

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	1P	937.50	937.00	50.0	0.0100	0.012	0.0	12.0	0.0



**230764 POST\_RT103***NRCC 24-hr C 2-Year Rainfall=2.65"*

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Page 8

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS10: S10**

Runoff Area=16,700 sf 49.10% Impervious Runoff Depth>0.39"  
Tc=6.0 min CN=68 Runoff=0.17 cfs 0.012 af

**Pond 1P: (new Pond)**

Peak Elev=936.22' Storage=63 cf Inflow=0.17 cfs 0.012 af  
Discarded=0.06 cfs 0.012 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.012 af

**Link SP1: Study Point #1**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.012 af Average Runoff Depth = 0.39"**  
**50.90% Pervious = 0.195 ac 49.10% Impervious = 0.188 ac**

**Summary for Subcatchment S10: S10**

Runoff = 0.17 cfs @ 12.15 hrs, Volume= 0.012 af, Depth> 0.39"

Routed to Pond 1P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
NRCC 24-hr C 2-Year Rainfall=2.65"

Area (sf)	CN	Description
1,700	98	Unconnected roofs, HSG A
0	96	Gravel surface, HSG A
6,500	98	Paved parking, HSG A
6,500	39	>75% Grass cover, Good, HSG A
2,000	36	Woods, Fair, HSG A
16,700	68	Weighted Average
8,500		50.90% Pervious Area
8,200		49.10% Impervious Area
1,700		20.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, DE</b>

**Summary for Pond 1P: (new Pond)**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth > 0.39" for 2-Year event  
 Inflow = 0.17 cfs @ 12.15 hrs, Volume= 0.012 af  
 Outflow = 0.06 cfs @ 12.10 hrs, Volume= 0.012 af, Atten= 63%, Lag= 0.0 min  
 Discarded = 0.06 cfs @ 12.10 hrs, Volume= 0.012 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
 Routed to Link SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 936.22' @ 12.37 hrs Surf.Area= 700 sf Storage= 63 cf

Plug-Flow detention time= 5.7 min calculated for 0.012 af (100% of inflow)  
 Center-of-Mass det. time= 5.2 min ( 856.8 - 851.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	840 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) 2,100 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
936.00	700	0	0
939.00	700	2,100	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	937.50'	<b>12.0" Round Culvert</b> L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 937.50' / 937.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	938.50'	<b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)
#3	Discarded	936.00'	<b>4.000 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.06 cfs @ 12.10 hrs HW=936.06' (Free Discharge)  
 ↑ **3=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=936.00' (Free Discharge)  
 ↑ **1=Culvert** ( Controls 0.00 cfs)  
 ↑ **2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth = 0.00" for 2-Year event

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



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NRCC 24-hr C 10-Year Rainfall=3.85"

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Page 12

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS10: S10**

Runoff Area=16,700 sf 49.10% Impervious Runoff Depth>0.99"  
Tc=6.0 min CN=68 Runoff=0.50 cfs 0.031 af

**Pond 1P: (new Pond)**

Peak Elev=937.54' Storage=432 cf Inflow=0.50 cfs 0.031 af  
Discarded=0.06 cfs 0.031 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.031 af

**Link SP1: Study Point #1**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.031 af Average Runoff Depth = 0.99"**  
**50.90% Pervious = 0.195 ac 49.10% Impervious = 0.188 ac**

**Summary for Subcatchment S10: S10**

Runoff = 0.50 cfs @ 12.14 hrs, Volume= 0.031 af, Depth> 0.99"  
 Routed to Pond 1P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NRCC 24-hr C 10-Year Rainfall=3.85"

Area (sf)	CN	Description
1,700	98	Unconnected roofs, HSG A
0	96	Gravel surface, HSG A
6,500	98	Paved parking, HSG A
6,500	39	>75% Grass cover, Good, HSG A
2,000	36	Woods, Fair, HSG A
16,700	68	Weighted Average
8,500		50.90% Pervious Area
8,200		49.10% Impervious Area
1,700		20.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, DE</b>

**Summary for Pond 1P: (new Pond)**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth > 0.99" for 10-Year event  
 Inflow = 0.50 cfs @ 12.14 hrs, Volume= 0.031 af  
 Outflow = 0.06 cfs @ 11.90 hrs, Volume= 0.031 af, Atten= 87%, Lag= 0.0 min  
 Discarded = 0.06 cfs @ 11.90 hrs, Volume= 0.031 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
 Routed to Link SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 937.54' @ 13.07 hrs Surf.Area= 700 sf Storage= 432 cf

Plug-Flow detention time= 57.2 min calculated for 0.031 af (100% of inflow)  
 Center-of-Mass det. time= 56.5 min ( 883.7 - 827.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	840 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) 2,100 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
936.00	700	0	0
939.00	700	2,100	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	937.50'	<b>12.0" Round Culvert</b> L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 937.50' / 937.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	938.50'	<b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)
#3	Discarded	936.00'	<b>4.000 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.06 cfs @ 11.90 hrs HW=936.04' (Free Discharge)  
 ↑ **3=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=936.00' (Free Discharge)  
 ↑ **1=Culvert** ( Controls 0.00 cfs)  
 ↑ **2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth = 0.00" for 10-Year event  
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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NRCC 24-hr C 25-Year Rainfall=4.77"

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Page 16

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentS10: S10**

Runoff Area=16,700 sf 49.10% Impervious Runoff Depth>1.54"  
Tc=6.0 min CN=68 Runoff=0.80 cfs 0.049 af

**Pond 1P: (new Pond)**

Peak Elev=938.55' Storage=713 cf Inflow=0.80 cfs 0.049 af  
Discarded=0.06 cfs 0.045 af Primary=0.13 cfs 0.004 af Outflow=0.19 cfs 0.049 af

**Link SP1: Study Point #1**

Inflow=0.13 cfs 0.004 af  
Primary=0.13 cfs 0.004 af

**Total Runoff Area = 0.383 ac Runoff Volume = 0.049 af Average Runoff Depth = 1.54"**  
**50.90% Pervious = 0.195 ac 49.10% Impervious = 0.188 ac**

**Summary for Subcatchment S10: S10**

Runoff = 0.80 cfs @ 12.14 hrs, Volume= 0.049 af, Depth> 1.54"  
 Routed to Pond 1P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NRCC 24-hr C 25-Year Rainfall=4.77"

Area (sf)	CN	Description
1,700	98	Unconnected roofs, HSG A
0	96	Gravel surface, HSG A
6,500	98	Paved parking, HSG A
6,500	39	>75% Grass cover, Good, HSG A
2,000	36	Woods, Fair, HSG A
16,700	68	Weighted Average
8,500		50.90% Pervious Area
8,200		49.10% Impervious Area
1,700		20.73% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, DE</b>



**Summary for Pond 1P: (new Pond)**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth > 1.54" for 25-Year event  
 Inflow = 0.80 cfs @ 12.14 hrs, Volume= 0.049 af  
 Outflow = 0.19 cfs @ 12.52 hrs, Volume= 0.049 af, Atten= 76%, Lag= 22.8 min  
 Discarded = 0.06 cfs @ 11.70 hrs, Volume= 0.045 af  
 Primary = 0.13 cfs @ 12.52 hrs, Volume= 0.004 af  
 Routed to Link SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 938.55' @ 12.52 hrs Surf.Area= 700 sf Storage= 713 cf

Plug-Flow detention time= 98.1 min calculated for 0.049 af (100% of inflow)  
 Center-of-Mass det. time= 97.7 min ( 914.2 - 816.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	936.00'	840 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) 2,100 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
936.00	700	0	0
939.00	700	2,100	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	937.50'	<b>12.0" Round Culvert</b> L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 937.50' / 937.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	938.50'	<b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)
#3	Discarded	936.00'	<b>4.000 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.06 cfs @ 11.70 hrs HW=936.03' (Free Discharge)  
 ↑ **3=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=0.12 cfs @ 12.52 hrs HW=938.54' (Free Discharge)  
 ↑ **1=Culvert** (Passes 0.12 cfs of 2.79 cfs potential flow)  
 ↑ **2=Sharp-Crested Rectangular Weir** (Weir Controls 0.12 cfs @ 0.68 fps)

**Summary for Link SP1: Study Point #1**

Inflow Area = 0.383 ac, 49.10% Impervious, Inflow Depth = 0.13" for 25-Year event  
Inflow = 0.13 cfs @ 12.52 hrs, Volume= 0.004 af  
Primary = 0.13 cfs @ 12.52 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

# **SOIL REPORT**



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Sullivan County, New Hampshire**



# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# Contents

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<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Sullivan County, New Hampshire.....	13
HeB—Hermon sandy loam, 3 to 8 percent slopes.....	13
MaB—Marlow fine sandy loam, 3 to 8 percent slopes.....	14
Na—Naumburg loamy sand.....	16
<b>References</b> .....	18

# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



# Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:610 if printed on A landscape (11" x 8.5") sheet.

0 5 10 20 30 Meters


0 25 50 100 150 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

# Custom Soil Resource Report


## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)


### Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sullivan County, New Hampshire  
Survey Area Data: Version 29, Aug 22, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 27, 2020—Sep 16, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HeB	Hermon sandy loam, 3 to 8 percent slopes	1.2	62.8%
MaB	Marlow fine sandy loam, 3 to 8 percent slopes	0.7	36.2%
Na	Naumburg loamy sand	0.0	1.0%
<b>Totals for Area of Interest</b>		<b>1.9</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Sullivan County, New Hampshire

### HeB—Hermon sandy loam, 3 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2w9r8

*Elevation:* 0 to 950 feet

*Mean annual precipitation:* 31 to 65 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Hermon and similar soils:* 90 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Hermon

##### Setting

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainbase, interfluve, base slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Sandy and gravelly supraglacial meltout till derived from granite and gneiss

##### Typical profile

*Ap - 0 to 9 inches:* sandy loam

*Bs1 - 9 to 16 inches:* very gravelly sandy loam

*Bs2 - 16 to 32 inches:* extremely gravelly loamy sand

*C - 32 to 65 inches:* very gravelly coarse sand

##### Properties and qualities

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(1.42 to 14.17 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 3.9 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2s

*Hydrologic Soil Group:* A

*Ecological site:* F144BY601ME - Dry Sand

*Hydric soil rating:* No

## Minor Components

### Monadnock

*Percent of map unit:* 4 percent  
*Landform:* Mountains, hills  
*Landform position (two-dimensional):* Summit, shoulder, backslope  
*Landform position (three-dimensional):* Mountainbase, interfluve, base slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

### Skerry

*Percent of map unit:* 4 percent  
*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Mountainbase, interfluve, base slope  
*Microfeatures of landform position:* Closed depressions, closed depressions  
*Down-slope shape:* Concave, convex  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* No

### Tunbridge

*Percent of map unit:* 2 percent  
*Landform:* Mountains, hills  
*Landform position (two-dimensional):* Summit, shoulder, backslope  
*Landform position (three-dimensional):* Mountainbase, interfluve, base slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

## MaB—Marlow fine sandy loam, 3 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 2ty5f  
*Elevation:* 590 to 1,710 feet  
*Mean annual precipitation:* 31 to 95 inches  
*Mean annual air temperature:* 27 to 52 degrees F  
*Frost-free period:* 90 to 160 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Marlow and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Marlow

#### Setting

*Landform:* Hills, mountains  
*Landform position (two-dimensional):* Summit, shoulder, backslope



## Custom Soil Resource Report

*Landform position (three-dimensional):* Mountainbase, interfluve, nose slope, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy lodgment till derived from granite and/or loamy lodgment till derived from mica schist and/or loamy lodgment till derived from phyllite

### Typical profile

*Ap - 0 to 4 inches:* fine sandy loam

*E - 4 to 6 inches:* fine sandy loam

*Bs1 - 6 to 10 inches:* fine sandy loam

*Bs2 - 10 to 15 inches:* fine sandy loam

*Bs3 - 15 to 20 inches:* fine sandy loam

*BC - 20 to 24 inches:* fine sandy loam

*Cd - 24 to 65 inches:* fine sandy loam

### Properties and qualities

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* 20 to 39 inches to densic material

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.01 to 1.42 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 3.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C

*Ecological site:* F144BY501ME - Loamy Slope (Northern Hardwoods)

*Hydric soil rating:* No

### Minor Components

#### Peru

*Percent of map unit:* 7 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Closed depressions, closed depressions

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Hydric soil rating:* No

#### Pillsbury

*Percent of map unit:* 3 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Footslope, toeslope

*Landform position (three-dimensional):* Mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Closed depressions, closed depressions

*Down-slope shape:* Concave

*Across-slope shape:* Concave

## Custom Soil Resource Report

*Hydric soil rating:* Yes

### **Monadnock**

*Percent of map unit:* 3 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainbase, interfluve, nose slope, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* No

### **Tunbridge**

*Percent of map unit:* 2 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainbase, interfluve, nose slope, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* No

## **Na—Naumburg loamy sand**

### **Map Unit Setting**

*National map unit symbol:* 9d4x

*Elevation:* 150 to 1,800 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 37 to 45 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Naumburg and similar soils:* 75 percent

*Minor components:* 25 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Naumburg**

#### **Setting**

*Landform:* Outwash terraces

*Parent material:* Sandy outwash derived mainly from granite, gneiss and schist

#### **Typical profile**

*H1 - 0 to 7 inches:* loamy sand

*H2 - 7 to 33 inches:* sand

*H3 - 33 to 60 inches:* sand

#### **Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

## Custom Soil Resource Report

*Drainage class:* Poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)

*Depth to water table:* About 0 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 3.7 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Hydrologic Soil Group:* A/D

*Ecological site:* F144BY303ME - Acidic Swamp

*Hydric soil rating:* Yes

### **Minor Components**

#### **Croghan**

*Percent of map unit:* 10 percent

*Hydric soil rating:* No

#### **Not named wet**

*Percent of map unit:* 10 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Not named wet**

*Percent of map unit:* 5 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

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60 Route 103 & 46 Depot Road - Typical Day Parking Numbers																										1/2/23
60 Depot Road -Office	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	
Precon PM									1	1	1	1	1	1	1	1	1	1	1							
Estimator					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1			
Sr. PM			1	1	1	1							1	1	1	1	1	1	1			1	1	1	1	
PM 1			1	1	1	1																1	1	1	1	
PM 2			1	1	1	1																1	1	1	1	
Const. Exec.						1	1	1	1	1	1	1				1	1	1	1	1	1	1	1	1		
Const. Admin			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Visitors																										
Electrical Div Manager			1	1	1	1					1	1	1	1	1	1	1					1	1	1	1	
Electrical Div Admin							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Master Electricians			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
Journeyman Electrician			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
Apprentice Electrician			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
Other Employee Visits			3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	1	
Total Cars Parked Office		0	0	14	13	14	15	12	12	13	13	14	14	13	13	14	14	14	13	13	11	9	10	8	5	0
46 Depot	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	
Landscape Foreman			1	1														1	1							
Landscape Crew Lead 1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Landscape Crew 1																										
Landscape Crew 1																										
Landscape Crew Lead 2					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Landscape Crew 2																										
Landscape Crew 2																										
Landscape Crew Lead 3					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Landscape Crew3																										
Landscape Crew 3																										
Landscape Crew Lead 4					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Landscape Crew 4																										
Landscape Crew 4																										
Handyman Crew					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Handyman Crew					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Handyman Crew					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Mow Crew 1 Lead			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Mow Crew 1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Mow Crew 2 Lead			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Mow Crew 2			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 1					1																1					
Clean Crew 1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 2					1																					
Clean Crew 2					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 3					1																1					
Clean Crew 3					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 4					1																					
Clean Crew 4					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 5					1																1					
Clean Crew 5					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 6					1																1					
Clean Crew 6					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Clean Lead 7					1																					
Clean Crew 7					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Com. Cleaner																						1	1	1	1	
Facilities Manager											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Livery Drivers	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	4	4	4	4	4	4	4	
Runner			2	2													2	2								
Shop Carpenter 1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1								
Shop Carpenter 2		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1								
Tenant -Works @ Main Office	1	1	1	1																			1	1	1	
46 Depot Totals		5	7	14	14	31	24	24	24	24	25	25	23	23	23	23	23	25	28	31	12	19	20	13	13	
Total Both Properties		5	7	28	27	45	39	36	36	37	38	39	37	36	36	37	37	39	41	44	23	28	30	21	18	
60 Rt. 103 Available Parking	16																									
Inside Spaces	12																									
46 Depot St. Available Parking	29																									
Inside Spaces	12																									
Total Spaces	69																									
Anticipated Future Position included above - Not currently existing	13																									