

PLANNING BOARD APPROVAL:

AT A MEETING HELD ON \_\_\_\_\_, 20\_\_\_\_,  
THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN  
AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



SR# NH4125  
SITE NAME: 144 MEADERBORO ROAD

144 MEADERBORO ROAD  
ROCHESTER, NH 03867

FOR MORE INFORMATION ON THIS SITE PLAN  
PLEASE CONTACT NB&C, LLC AT 267-460-0122



Know what's below.  
Call before you dig.

SITE INFORMATION

SITE ADDRESS: 144 MEADERBORO ROAD  
ROCHESTER, NH 03867

LATITUDE (NAD 83): 43° 18' 46.06" N  
LONGITUDE (NAD 83): 71° 03' 15.74" W

GROUND ELEVATION: 532.0' (AMSL)

JURISDICTION: CITY OF ROCHESTER

ZONING DISTRICT: AGRICULTURAL

TAX MAP NUMBER: 232-16-3

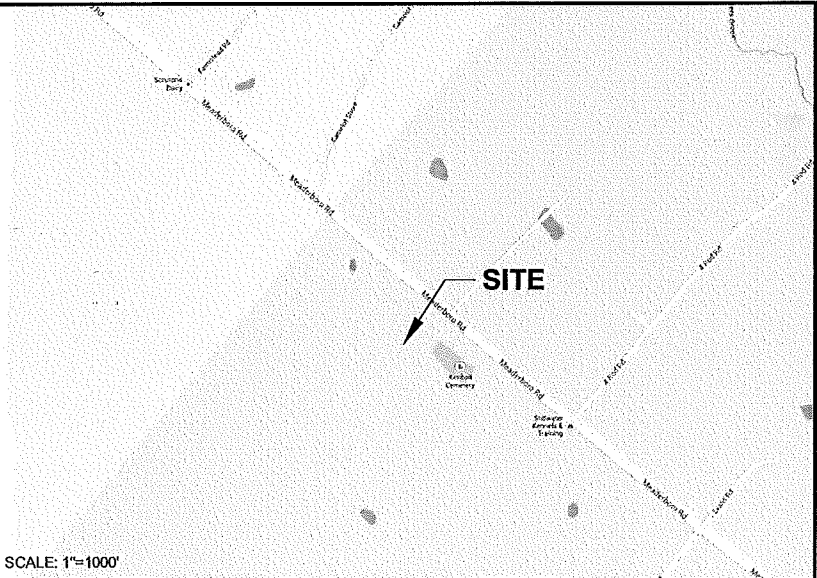
PARCEL AREA: 35.1 ACRES

PARCEL OWNER: MATTHEW G. SCRUTON  
67 CAMELOT SHORE DRIVE  
FARMINGTON, NH 03835

STRUCTURE TYPE: MONOPOLE

STRUCTURE HEIGHT: 140.0' (AGL)

VICINITY MAP



DIRECTIONS

FROM FRAMINGHAM, MA TAKE: I-90 E/MASSPIKE W/SPRINGFIELD/BOSTON. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR INTERSTATE 90 E/INTERSTATE 95/MASSACHUSETTS TURNPIKE/BOSTON AND MERGE ONTO I-90 E/MASSACHUSETTS TURNPIKE. TAKE EXIT 14 FOR I-95 N TOWARD N.H - MAINE. FOLLOW SIGNS FOR I-95 N/WALTHAM/PORTSMOUTH NH AND MERGE ONTO I-95 N. KEEP RIGHT TO STAY ON I-95 N, FOLLOW SIGNS FOR PORTSMOUTH NH. ENTERING NEW HAMPSHIRE, KEEP LEFT TO CONTINUE ON I-95. MERGE ONTO I-95 N. TAKE EXIT 4 ON THE LEFT TO MERGE ONTO NH-16 N/US-4 W TOWARD WHITE MTS. CONTINUE ONTO NH-16 N. TAKE EXIT 13 FOR U.S. 202 W TOWARD ROCHESTER/CONCORD. TURN LEFT ONTO WASHINGTON ST. TURN RIGHT ONTO ESTES RD. CONTINUE ONTO MEADERBORO RD. DESTINATION WILL BE ON THE LEFT

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2011 NATIONAL ELECTRICAL CODE
- 2009 IBC
- 2009 NFPA 101, LIFE SAFETY CODE
- NH STATE FIRE CODE-SAF-C6000
- 2009 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- TIA/EIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

DRAWING INDEX

T-1 TITLE SHEET

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C-1 COMPOUND PLAN & ELEVATION

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A-2 DETAILS

ES-1 EROSION & SEDIMENTATION CONTROL PLAN & DETAILS

ES-2 EROSION & SEDIMENTATION CONTROL DETAILS

ATTACHMENTS:

S-1 ABUTTERS PLAN

S-2 EXISTING CONDITIONS

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	DISAPPROVED/REVISE
PROPERTY OWNER	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SITE ACQUISITION	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONSTRUCTION MANAGER	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ZONING	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RF ENGINEER	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROJECT TEAM

APPLICANT: AT&T MOBILITY CORPORATION  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

PROJECT MANAGEMENT FIRM: NETWORK BUILDING & CONSULTING, LLC.  
1777 SENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 210  
BLUE BELL, PA 19422  
(267) 460-0122

ENGINEERING FIRM: NB&C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 210  
BLUE BELL, PA 19422  
(267) 460-0122

NB+C  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 210  
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NH4125  
144 MEADERBORO ROAD  
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ROCHESTER, NH 03867

REVISIONS

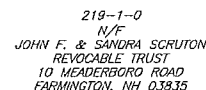
REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY ZDs	DAK



KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

TITLE SHEET

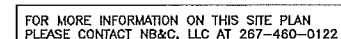
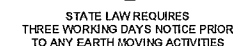
T-1



○	IRON BAR/Pipe FOUND	--- GND ---	--- GND ---	EXISTING GAS
○	CONCRETE MOUNTMENT FOUND	---	---	EXISTING TELEPHONE
○	EXISTING UTILITY POLE	---	---	EXISTING OVERHEAD WIRE
○	EXISTING FIRE HYDRANT	1/2"	1/2"	EXISTING UNDERGROUND WIRE
○	EXISTING TREES	30'	30'	PROPOSED CONTOURS
○	EXISTING MANHOLES	10'	10'	EXISTING CONTOURS
○	PROPERTY LINE	---	---	PROPOSED ELECTRIC
○	ADJACENT PROPERTY LINE	---	---	PROPOSED TELEPHONE
○	PROPERTY SETBACK LINE	---	---	PROPOSED FENCE
○	RIGHT OF WAY	5'	5'	SILT FENCE
○	ZONING DISTRICT LINE	---	---	EXISTING CHAIN LINK FENCE
○	EXISTING DRAINAGE	---	---	EXISTING TREELINE

	ZONING DISTRICT:	AGRICULTURAL DISTRICT
<u>DIMENSION REQUIREMENTS</u>	<u>REQUIRED</u>	<u>PROPOSED</u>
FRONT YARD SETBACK:	65'	N/A
SIDE YARD SETBACK:	25'	±36', 38', 255'
REAR YARD SETBACK:	25'	±181'
MAX. BLDG. HEIGHT:	35'	±10'
MIN. AREA:	2 AC.	±35.1 AC.
TOWER HEIGHT:	N/A	140'
TOWER SETBACK:	N/A	±60', 63', 210', 280'
LOT COVERAGE:	N/A	±9,513 S.F.

1. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, PLANS OF RECORD AND PLANS ENTITLED SR#54125 144 MEADBORO RD. BY NORTHEAST SURVEY CONSULTANTS, DATED 12/20/2013 AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
2. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
3. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, THE MAJOR IMPROVEMENTS ON THIS PROPERTY ARE LOCATED IN AN AREA DESIGNATED AS OTHER FLOOD AREAS ZONE X (UNSHADED): AREA DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. COMMUNITY PANEL NO. 33014C 0195 D EFFECTIVE DATE: MAY 17, 2005.
4. ALL BEARINGS SHOWN HEREON ARE ROTATED TO TRUE NORTH.
5. UNDERGROUND UTILITIES OR IMPROVEMENTS, IF ANY AND NOT VISIBLE AT TIME OF SURVEY ARE NOT SHOWN.
6. THIS SURVEY IS SUBJECT TO THE FINDINGS OF AN UP TO DATE ABSTRACT OF THE TITLE.
7. THIS SURVEY PLAN IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
8. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
9. THERE ARE NO NEW STREETS, CURBS, SIDEWALKS OR WALKWAYS PROPOSED.
10. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.



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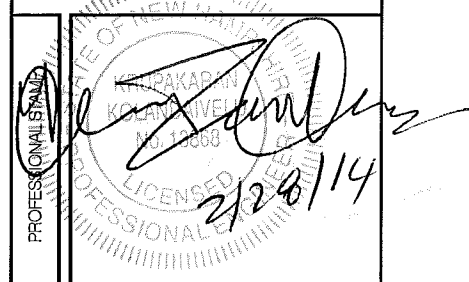
SHEET NUMBER

**NB+C ENGINEERING SERVICES, LLC**  
1777 GENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 230  
BLUE BELL, PA 15022  
(267) 450-0122



NH4125  
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0	12/30/13		PRELIMINARY ZDs		D
REV	DATE		DESCRIPTION		B

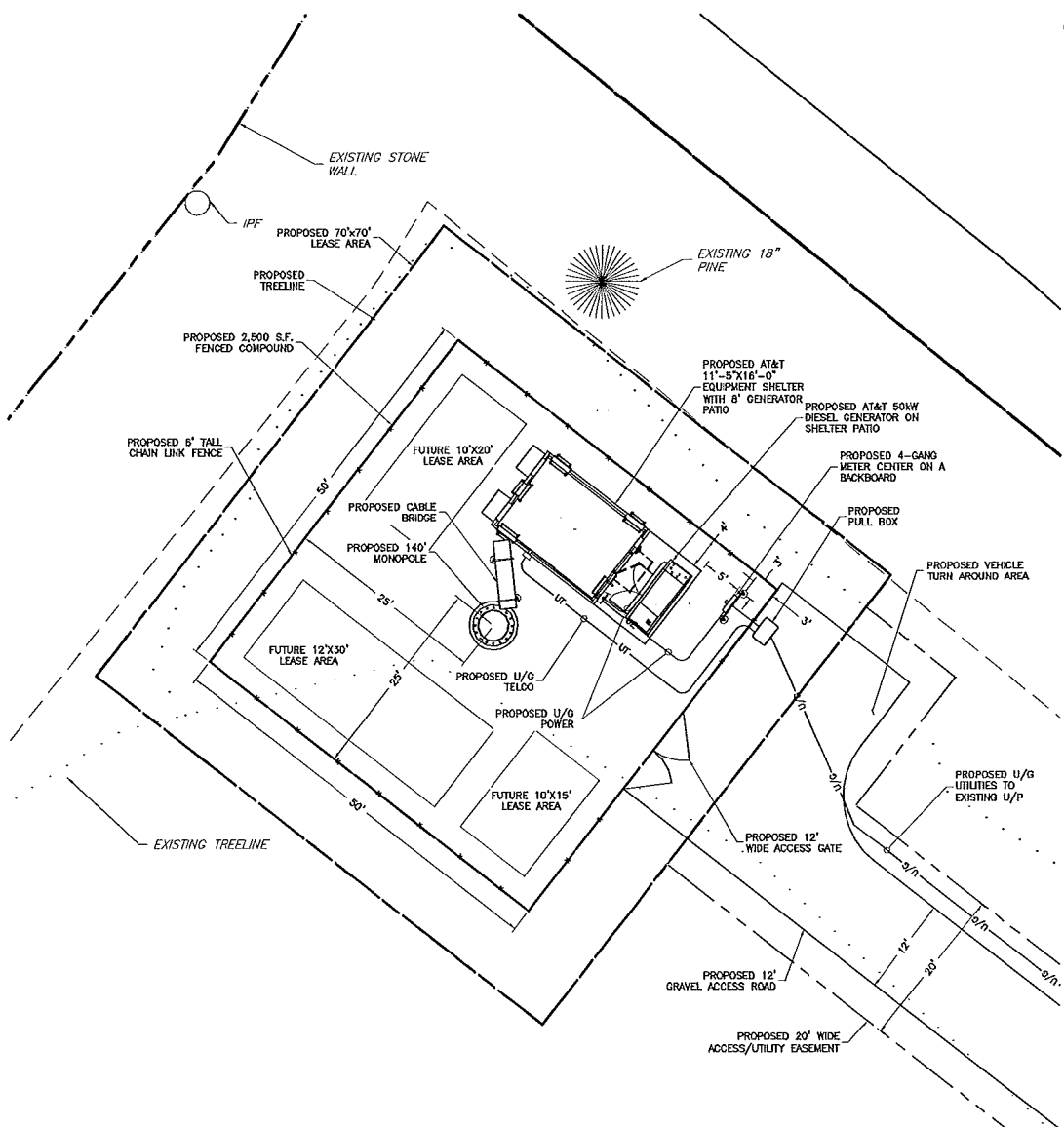


KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13668

IT IS A VIOLATION OF THE LAW FOR ANY PERSON CALLED BY THE AFFECTED UNDERTAKING OR THE DIRECTOR OF A LICENSED PROFESSIONAL EMPLOYER TO ALTER THE DOCUMENTS LESS EXPLICITLY AGREED TO BY THE EMPLOYER IN WRITING. THE EMPLOYER SHALL BE FULLY RESPONSIBLE FOR THE FULFILLMENT OF THE ABOVE OBLIGATIONS.

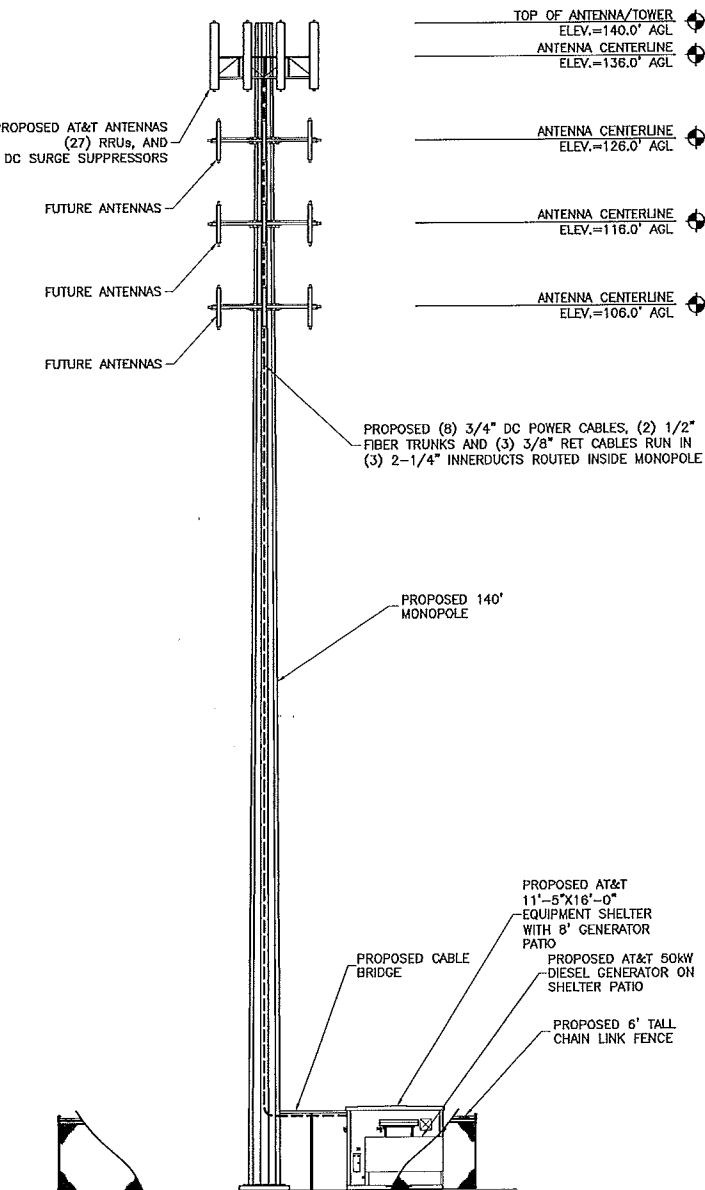
**EXISTING  
CONDITIONS PLAN**

**Z-1**



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1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES AND NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT 1 (800) 962-7962 PRIOR TO EXCAVATION AT SITE.
9. ANY UNDERGROUND UTILITIES OR STRUCTURES THAT EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
10. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
11. ALL EXCAVATION WITHIN 36" OF EITHER SIDE OF UNDERGROUND UTILITIES MUST BE COMPLETED BY HAND EXCAVATION METHODS.
12. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
13. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
14. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
15. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
16. THERE ARE NO COMMERCIAL SIGNS PROPOSED FOR THIS INSTALLATION.
17. RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
18. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
19. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
20. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
21. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING.
22. THE AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITY SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH.
23. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AND COORDINATED WITH THE TOWN.

SHEET NUMBER

KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
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### COMPOUND PLAN & ELEVATION

# C-1

STRUCTURAL NOTES

1. ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL JURISDICTIONS COVERING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
  1. 2009 IBC
  2. ANSI/EIA/TIA-222-G
  3. NH STATE FIRE CODE --SAF-C60000
  4. NATIONAL ELECTRIC CODE 2011.
  5. LOCAL BUILDING CODE.
  6. CITY/COUNTY ORDINANCES.
2. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
3. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 "STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.
4. STEEL TUBING SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 "PIPE, STEEL, BLACK AND HOT-DIPPED, ZINC-COATED WELDED AND SEAMLESS", TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE MI., OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8" X 1-5/8" X 12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
7. FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE INDICATED. ALL BOLTS FOR STRUCTURAL CONNECTIONS SHALL BE HIGH STRENGTH BOLTS AND CONFORM TO THE LATEST EDITION OF ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS, AND PLAIN HARDENED WASHERS". BOLTS SHALL BE 3/4" INCH DIA. UNLESS OTHERWISE NOTED.
8. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS 1, HILTI KWIK BOLT II, OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE FOUR (4) INCHES.
9. SLEEVE ANCHORS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 3, CLASS 3, AS MANUFACTURED BY HILTI FASTENING SYSTEMS OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE (3) INCHES.
10. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF 1/2" DIAMETER STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS, AN INTERNAL THREADED INSERT, A SCREEN TUBE, AND AN EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI HIT HY-20 SYSTEM OR ENGINEER APPROVED EQUAL WITH 6" MIN. EMBEDMENT.
11. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
12. SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL AND MISCELLANEOUS STEEL TO THE ENGINEER FOR APPROVAL, AND INCORPORATE ALL COMMENTS PRIOR TO FABRICATION.
13. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
14. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO TAKING CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE PRIOR ENGINEER APPROVAL.
15. ALL WORK SHALL BE INSPECTED BY THE ENGINEER DURING, AND AT THE COMPLETION OF CONSTRUCTION.

WELDING

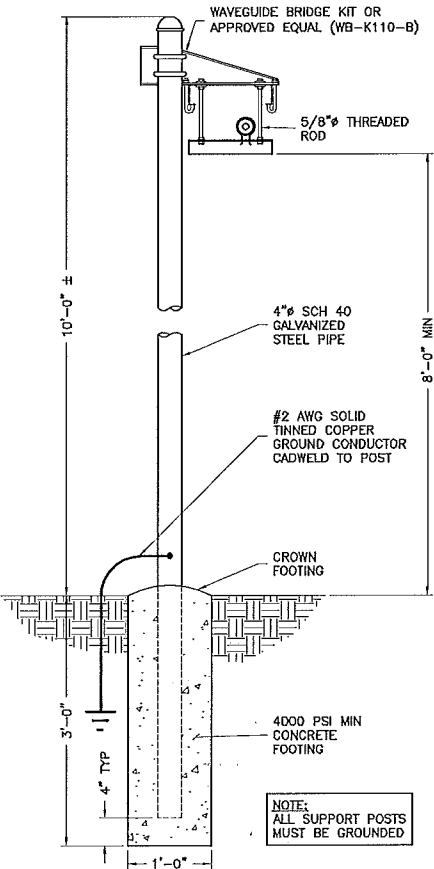
1. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES".
2. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATINGS SHALL BE REPAIRED.

GALVANIZING

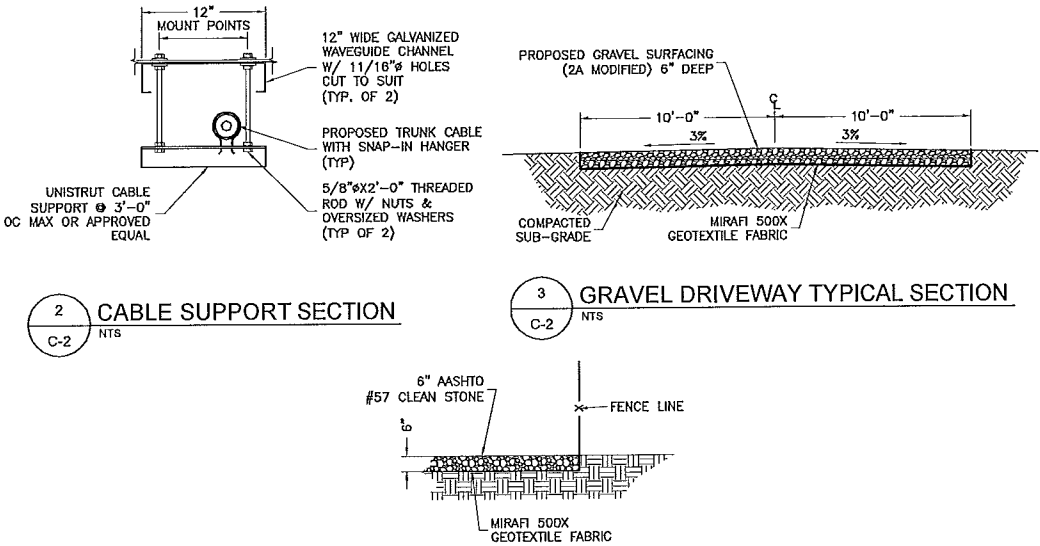
1. ALL STEEL MATERIALS EXPOSED TO WEATHER SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED. ALL BOLTS, ANCHORS, AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
2. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780, UNLESS OTHERWISE NOTED.

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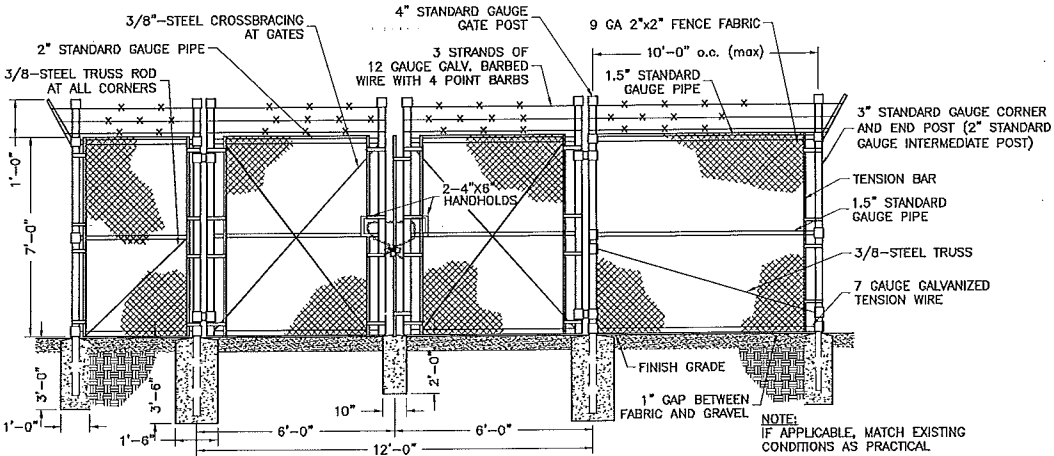


1 CABLE BRIDGE DETAIL  
C-2 NTS

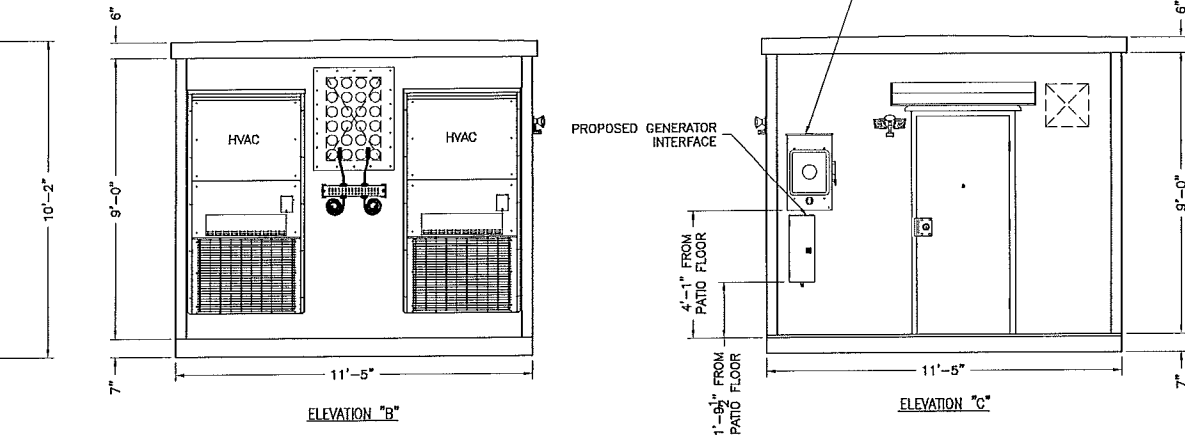


2 CABLE SUPPORT SECTION  
C-2 NTS

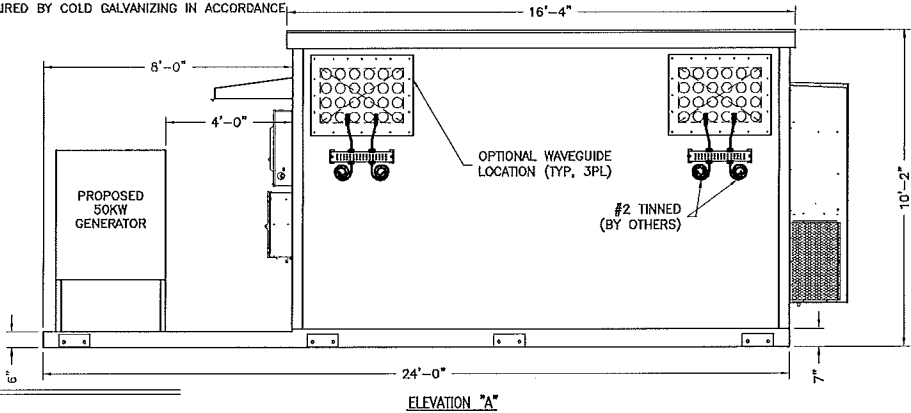
3 GRAVEL DRIVEWAY TYPICAL SECTION  
C-2 NTS



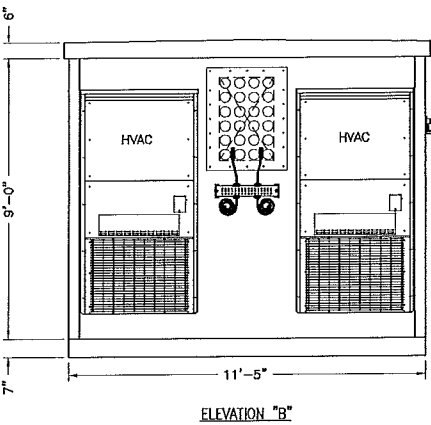
4 GRAVEL COMPOUND DETAIL  
C-2 NTS



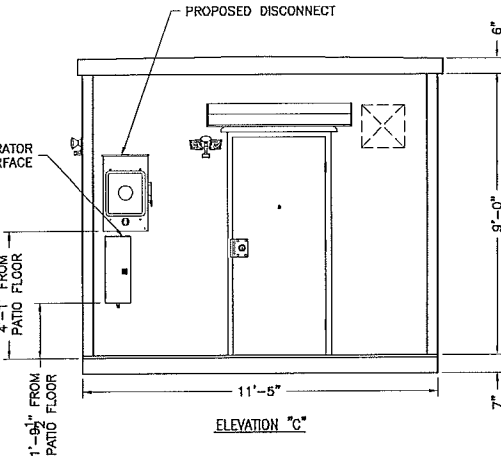
5 TYPICAL FENCE AND GATE DETAIL  
C-2 NTS



ELEVATION "A"



ELEVATION "B"



ELEVATION "C"

FOR MORE INFORMATION ON THIS SITE PLAN  
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NB&C  
TOTALLY COMMITTED.

NB&C ENGINEERING SERVICES, LLC.  
1177 SEVENTH AVENUE WEST  
DUBLIN, MA 01932  
(508) 659-0022



NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

REVISIONS

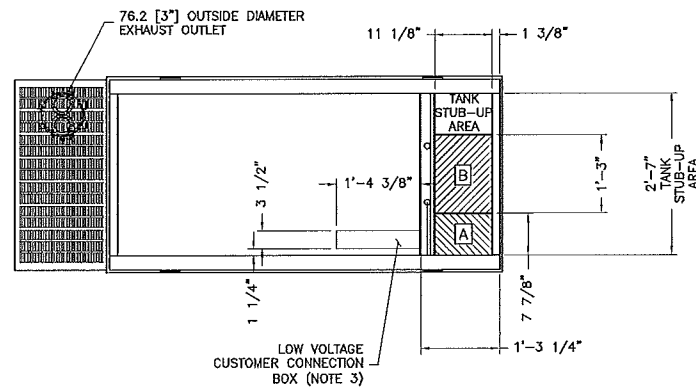
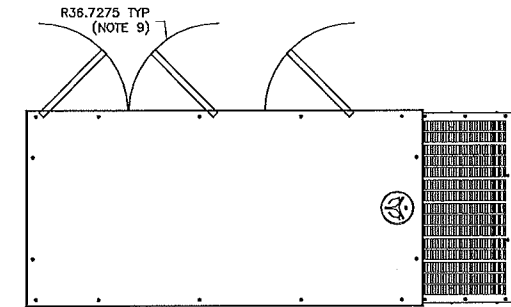
REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY ZDs	DAK

PROFESSIONAL STAMP  
Krupakaran Kolandaivelu P.E.  
2/28/14

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VT PROFESSIONAL ENGINEER LIC. # 018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

CONSTRUCTION  
DETAILS & NOTES

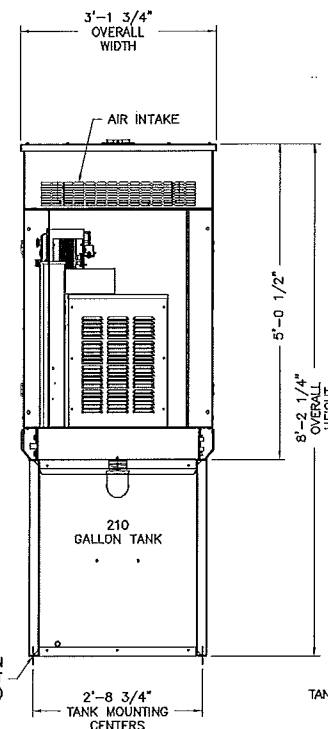
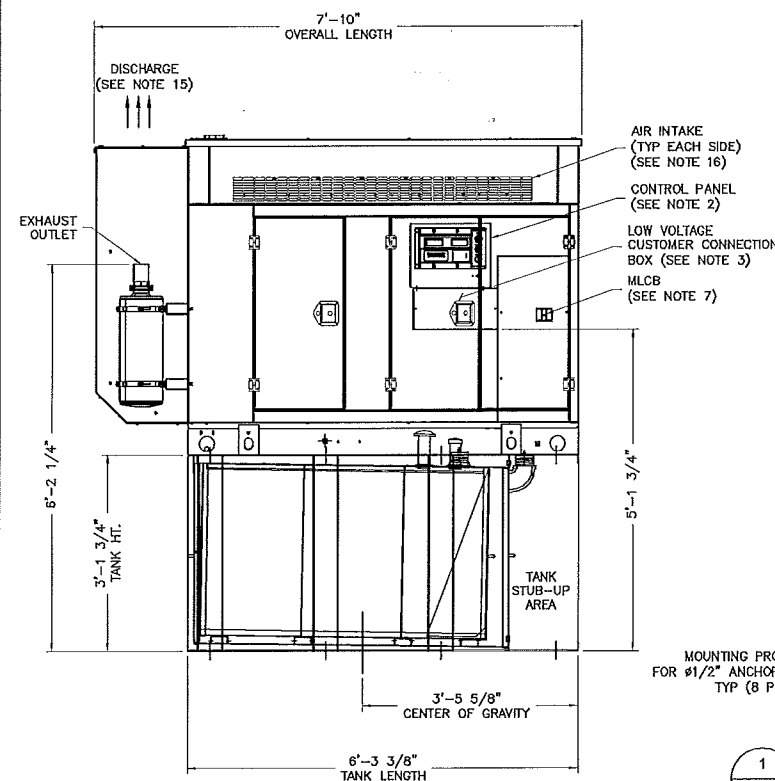
C-2



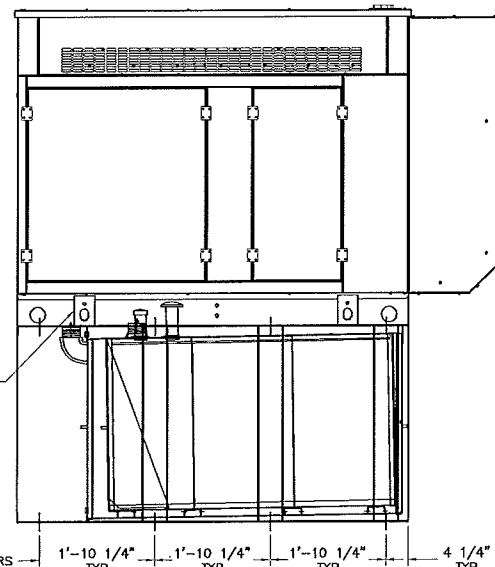
RECOMMENDED ELECTRICAL STUB-UPS (SEE TOP VIEW)	
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT GLAND AREA	A
1) LOW VOLTAGE CUSTOMER CONNECTION BOX FOR 120VAC GFCI OUTLET, (STANDARD BLOCK HEATER, BATTERY CHARGER AND OTHER 120 VAC OPTIONS).	B SEE NOTE 3
2) TRANSFER SWITCH/ COMMUNICATION CONDUITS, COMMUNICATIONS AND 2-WIRE START MUST NOT BE RUN IN CONDUIT WITH AC WIRING.	

- NOTES:
1. THE LEFT SIDE OF THE GENERATOR IS SERVICE ACCESSIBLE.
  2. 10 AMP BATTERY CHARGER ENCLOSED WITHIN CONTROL PANEL.
  3. CONNECTION POINTS FOR CONTROL WIRES. BOTTOM OF LOW VOLTAGE CUSTOMER CONNECTION BOX HAS KNOCKOUTS FOR 1/2" AND 3/4" CONDUIT FITTINGS.
  4. GENERATOR MUST BE GROUNDED.
  5. 12 VOLT NEGATIVE GROUND SYSTEM.
  6. OPTIONAL REMOTE EMERGENCY STOP SHIPPED LOOSE WITH GENERATOR.
  7. MAIN LINE CIRCUIT BREAKER (MLCB), AC LOAD LEAD CONNECTION AND AUXILIARY 120/240V CONNECTION.
  8. LEVEL 2A SOUND ATTENUATED ENCLOSURE STANDARD WITH GENERATOR. 9. DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED. DOORS ARE LOCATED ON THE LEFT SIDE OF THE GENERATOR ONLY.
  10. STUB-UPS: BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
  11. 'A' IS THE STUB UP AREA FOR THE MLCB AND NEUTRAL CONNECTION. 12. SEE DRAWING 003850 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER.
  13. 120VAC ENGINE BLOCK HEATER.
  14. 210 GALLON USEABLE CAPACITY BASETANK STANDARD WITH GENERATOR. 15. MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS. 16. MUST ALLOW FREE FLOW OF INTAKE AIR. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  17. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS.

WEIGHT DATA: (INCLUDES WOODEN SHIPPING SKID)  
ENCLOSED GENERATOR WITH EMPTY FUEL TANK - 1700kg (3750 lbs)



LIFTING BRACKETS  
40 X 60 SLOT  
[1.58 X 2.36"]  
(4 PLACES)



1 DIESEL GENERATOR DETAIL  
C-3 NTS

#### PLANNING BOARD APPROVAL:

AT A MEETING HELD ON \_\_\_\_\_, 20\_\_\_\_,  
THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN  
AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FOR MORE INFORMATION ON THIS SITE PLAN  
PLEASE CONTACT NB+C, LLC AT 267-460-0122

ENGINEER

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
177 SEBRING PARKWAY WEST  
DUBLIN HILL, SUITE 210  
BLUE BELLS, PA 19022  
(267) 460-0122

APPLICANT



SITE INFORMATION

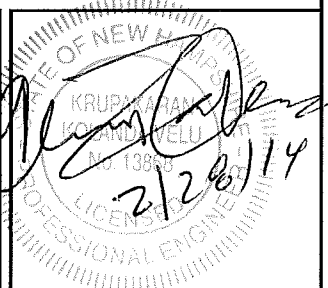
NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03607

DESIGN RECORD

#### REVISIONS

REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY ZDS	DAK

PROFESSIONAL STAMP



ENGINEER

KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0066971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

SHEET TITLE

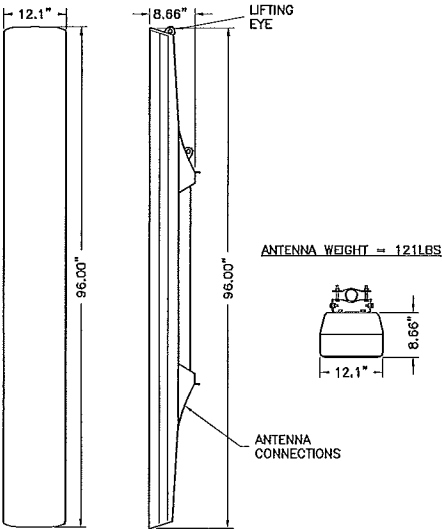
**GENERATOR  
DETAILS**

SHEET NUMBER

**C-3**

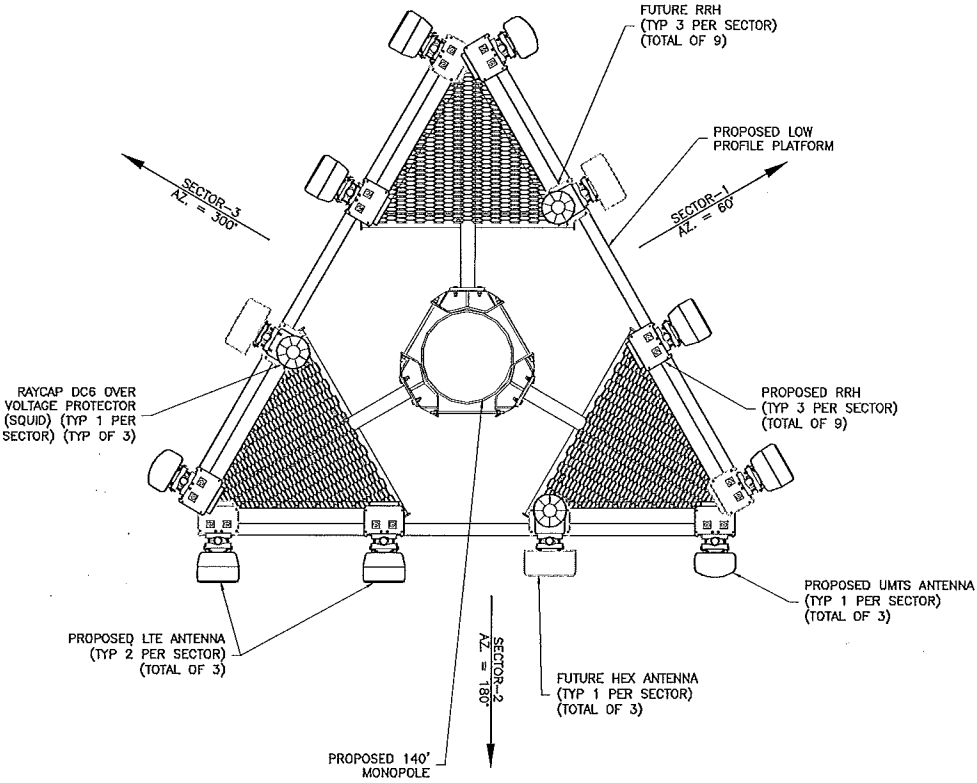
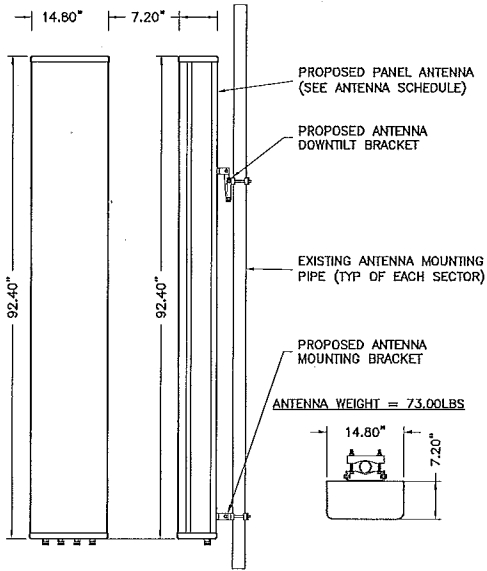
GENERAL ANTENNA NOTES

- ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH RF ENGINEER.
- ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'.
- CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
- CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
- CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH AT&T REPRESENTATIVE.
- CONTRACTOR SHALL INSTALL A BRASS IDENTIFICATION TAG 1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS. INSTALL TAGS AT PORT CONNECTION NEAR THE END OF JUMPER AND ONE ON THE END NEAR THE RADIO EQUIPMENT. EACH TAG SHALL BE STAMPED WITH "AT&T" AND THE PORT IDENTIFICATION NUMBER. TAG SHALL BE ATTACHED WITH CORROSION PROOF WIRE SUCH AS STAINLESS SEIZING WIRE.
- PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES. THE OWNER'S AGENT SHALL FURNISH A CERTIFICATION LETTER SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THIS STRUCTURAL ANALYSIS WAS PREPARED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.



PLANNING BOARD APPROVAL:

AT A MEETING HELD ON \_\_\_\_\_, 20\_\_\_\_,  
THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN  
AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL.

1 ERICSSON KRC118 048/1 PANEL ANTENNA DETAIL  
A-1 NTS

3 ANTENNA MOUNTING PLAN  
A-1 NTS

2 HPA-65R-BUU-H8 ANTENNA DETAIL  
A-1 NTS

NOTE:  
CONTRACTOR SHALL OBTAIN THE RF SHEET PRIOR TO CONSTRUCTION.

FOR MORE INFORMATION ON THIS SITE PLAN  
PLEASE CONTACT NB&C, LLC AT 287-460-0122

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
1777 SENeca PARKWAY WEST  
DUBLIN, MA 01820  
BLUE BELL, PA 19002  
(287) 423-0122



**at&t**  
mobility corp.  
500 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

REVISIONS

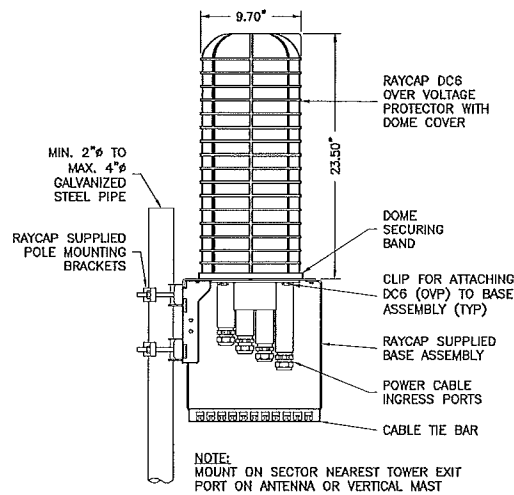
REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY ZDs	DAK



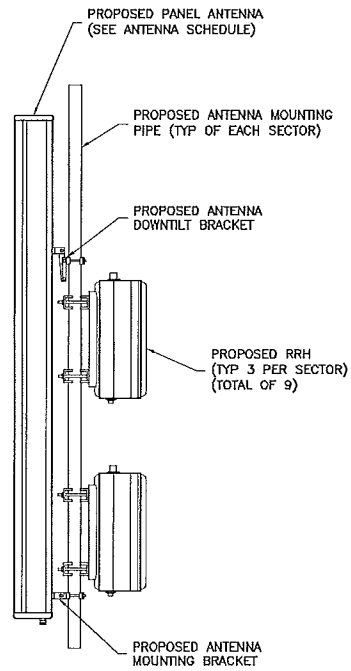
KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018,008,697  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

**ANTENNA  
MOUNTING PLAN  
& DETAILS**

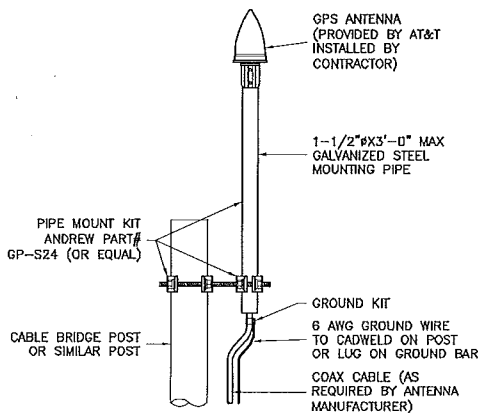
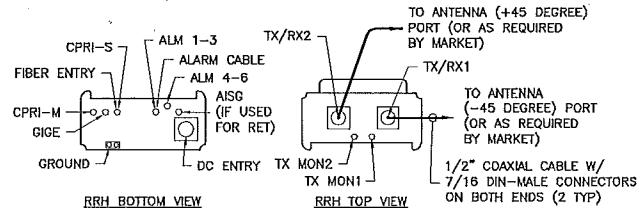
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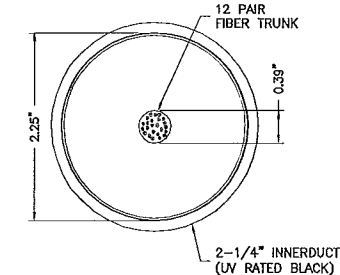
1 RAYCAP DC6-48-60-18-8F (SQUID)  
A-2 NTS



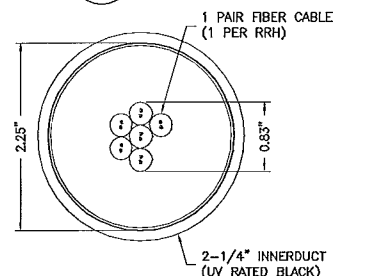
2 RRH MOUNTING DETAIL  
A-2 NTS



SINGLE FIBER 7MM/0.28"
USE GROMMET ROSENBERGER: CX603-HA0711 ANT: 13854 WITH 7/8" SNAPSTACK SNAP-INS
SINGLE PAIR DC POWER 15.4MM/0.61"
USE GROMMET ROSENBERGER: CX604-HA1117 ANT: 13853 WITH 7/8" SNAPSTACK SNAP-INS



4 FIBER TRUNK SECTION  
A-2 NTS



7 6 SINGLE 1 PAIR FIBER SECTION  
A-2 NTS

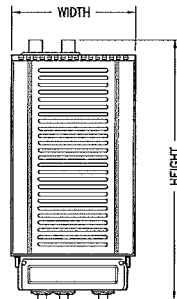
SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRH 700 MHz 2X40 (80W)	12.2"	10.8"	21.0"	51 LBS
RRH AWS 2X40 (80W)	12.0"	9.0"	25.0"	43 LBS (W/O SOLAR SHIELD)

NOTE: DIMENSIONS INCLUDE MOUNTING BRACKET, SOLAR SHIELD AND CONNECTORS.

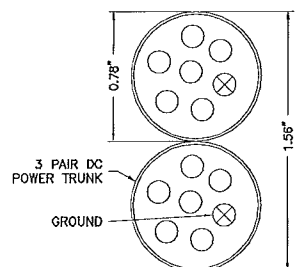
MINIMUM CLEARANCE TABLE

RRH CABINET	CLEARANCES (INCHES)	COMMENTS
FRONT	36.0"	INSTALLATION ACCESS
REAR	2.0"	ZERO REAR CLEARANCE IS ALLOWED USING SUPPLIED MOUNTING BRACKETS
RIGHT	4.0"	AIR FLOW
LEFT	4.0"	AIR FLOW
TOP	12.0"	AIR FLOW
BOTTOM	12.0"	CONDUIT ROUTING

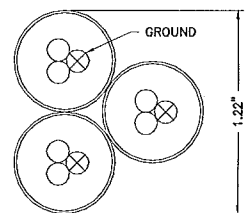


5 ERICSSON RRUS 11 REMOTE RADIO HEAD (RRH)  
A-2 NTS

6 GPS ANTENNA MOUNTING DETAIL  
A-2 NTS



8 3 PAIR DC POWER SECTION  
A-2 NTS



9 1 PAIR POWER SECTION  
A-2 NTS

PLANNING BOARD APPROVAL:

AT A MEETING HELD ON \_\_\_\_\_, 20\_\_\_\_  
THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN  
AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL.

FOR MORE INFORMATION ON THIS SITE PLAN  
PLEASE CONTACT NB&C, LLC AT 267-480-0122

**NB+C**  
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
1177 CENTRY PARKWAY WEST  
DUBLIN, PA 15001  
BLUE BELT, PA 15022  
(412) 459-0122



NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

## REVISIONS

REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY 2D	DAK

PROFESSIONAL STAMP  
KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. #018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868  
2/28/14

ENGINEER  
KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. #018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

SHEET TITLE  
DETAILS

SHEET NUMBER  
A-2



## CONSTRUCTION SEQUENCE

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 WORKING DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE NEW HAMPSHIRE DIG SAFE SYSTEM INCORPORATED AT 1-888-344-7233 FOR BURIED UTILITIES LOCATIONS.

EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

1. MOBILIZATION
2. CONSTRUCT TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES
3. COMMENCE CLEARING AND GRUBBING, ROUGH GRADE SITE
4. CONSTRUCT AND MAINTAIN TEMPORARY COVER TO STABILIZE DISTURBED AREAS
5. INSTALL UTILITIES
6. STABILIZE PROPOSED ACCESS ROAD W/ STONE SUB-BASE & PLACE STONE WITHIN COMPOUND AREA

7. COLLECT SILT AND SEDIMENT AND PLACE BACK ON SITE
8. ESTABLISH PERMANENT COVER
9. REMOVE EROSION AND CONTROL MEASURES

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.

## GENERAL EROSION & SEDIMENT CONTROL PROCEDURES

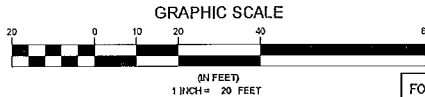
1. THE OPERATOR/RESPONSIBLE PERSON (O/RP) SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
2. THE EROSION AND SEDIMENT CONTROL PLAN IS TO BE USED FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY. IT SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION RELATED ITEMS.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
4. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
5. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
6. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CONSERVATION DISTRICT.
7. THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE RELEVANT AUTHORITIES, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
8. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF VERMONT DEC LOW RISK SITE HANDBOOK FOR FOR EROSION PREVENTION AND SEDIMENT CONTROL.
9. THE RELEVANT AUTHORITY OR ITS DESIGNEE MAY INSPECT ALL PHASES OF THE CONSTRUCTION, OPERATIONS, MAINTENANCE AND ANY OTHER IMPLEMENTATION OF STORMWATER BMPs.
10. DURING ANY STAGE OF THE REGULATED EARTH DISTURBANCE ACTIVITIES, IF THE RELEVANT AUTHORITIES OR ITS DESIGNEE DETERMINES THAT ANY BMPs ARE NOT BEING IMPLEMENTED IN ACCORDANCE WITH THIS ORDINANCE, THE RELEVANT AUTHORITIES MAY SUSPEND OR REVOKE ANY EXISTING PERMITS OR OTHER APPROVALS UNTIL THE DEFICIENCIES ARE CORRECTED.
11. WHEN REQUIRED, ADEQUATE PROVISIONS SHALL BE MADE FOR DUST CONTROL MEASURES AS ARE DEEMED ACCEPTABLE BY THE MUNICIPAL ENGINEER.
12. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS. NO SEDIMENT OR SEDIMENT LADEN WATER IS ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING PROPERLY FILTERED.
13. DISTURBED AREAS ON WHICH EARTH MOVING ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE STABILIZED IMMEDIATELY, EITHER TEMPORARILY OR PERMANENTLY, INCLUDING THE RESTORATION OF DRIVEWAYS, STOCKPILES, OFF-SITE UNDERGROUND UTILITY LINES AND GRADED PERIMETER AREAS. DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION.
14. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, IN SWALES AND AREAS OF CONCENTRATED FLOWS AND STEEP SLOPES.
15. CONTRACTOR SHALL NOTIFY THE RELEVANT AUTHORITIES OF DISPOSAL METHOD AND LOCATION OF MATERIALS (IF ANY) TO BE REMOVED FROM SITE.
16. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEC'S SOLID WASTE REGULATIONS, AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.
17. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.
18. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
19. REFER TO THE SITE / RECORD PLAN FOR ADDITIONAL NOTES.
23. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE VERMONT DEC LOW RISK SITE HANDBOOK FOR FOR EROSION PREVENTION AND SEDIMENT CONTROL.

## SEEDING/ STABILIZATION SPECIFICATIONS

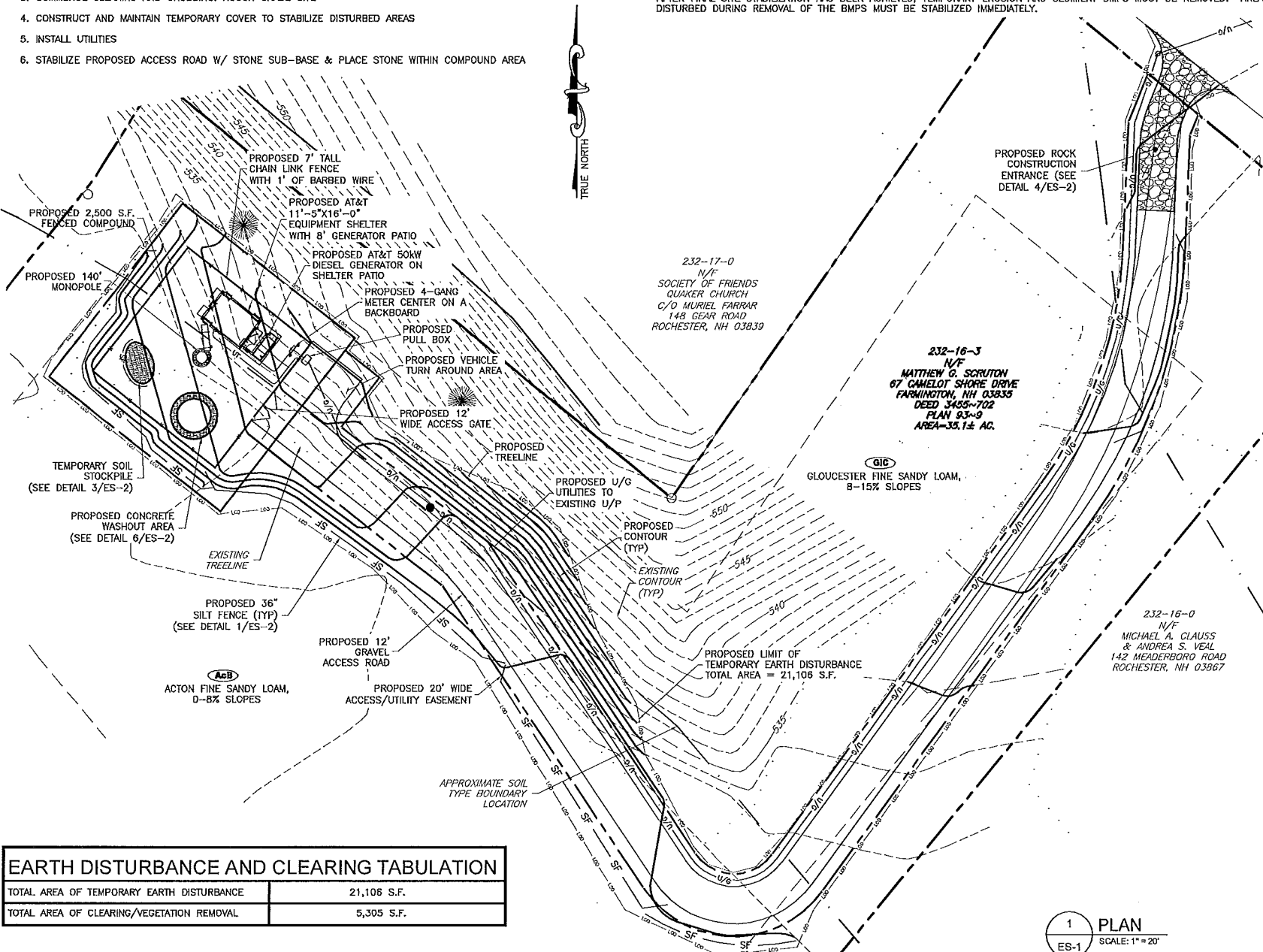
1. TOPSOIL STOCKPILE PROTECTION
  - A. APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SQ.FT.
  - B. APPLY FERTILIZER (10-20-10) AT A RATE 11 LBS. PER 1000 SQ.FT.
  - C. APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ.FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ.FT.
  - D. MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 138 LBS. PER 1000 SQ.FT.
  - E. PROPERLY ENTRENCH A SILT FENCE AT THE BOTTOM OF THE STOCKPILE.
18. TEMPORARY STABILIZATION SPECIFICATIONS
  - A. APPLY GROUND LIMESTONE AT A RATE OF 184 LBS. PER 1000 SQ.FT.
  - B. APPLY FERTILIZER (10-20-10) AT A RATE 11 LBS. PER 1000 SQ.FT.
  - C. APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ.FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ.FT.
  - D. MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 138 LBS. PER 1000 SQ.FT.
  - E. APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
19. PERMANENT STABILIZATION SPECIFICATIONS
  - A. APPLY TOPSOIL TO A DEPTH OF 5 INCHES (UNSETTLED)
  - B. APPLY GROUND LIMESTONE AT A RATE OF 184 LBS. PER 1000 SQ.FT. AND WORK FOUR INCHES INTO SOIL
  - C. APPLY FERTILIZER (10-20-10) AT A RATE 11 LBS. PER 1000 SQ.FT.
  - D. APPLY COMMON WHITE CLOVER SEED AT 0.2 LBS. PER 1000 SQ.FT. AND TALL FESCUE SEED AT 0.25 LBS. PER 1000 SQ.FT. AND PERENNIAL RYEGRASS SEED AT 0.25 LBS. PER 1000 SQ.FT.
  - E. MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 2-4 LBS. PER 1000 SQ.FT.
  - F. APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

### NOTE:

CONSTRUCTION OF SITE WILL TAKE BETWEEN 30 AND 60 DAYS. SILT FENCE WILL BE INSPECTED DAILY AND IF ANY REPAIR OR REPLACEMENT IS REQUIRED IT WILL BE DONE IMMEDIATELY.



FOR MORE INFORMATION ON THIS SITE PLAN  
PLEASE CONTACT NB&C, LLC AT 267-460-0122



## EARTH DISTURBANCE AND CLEARING TABULATION

TOTAL AREA OF TEMPORARY EARTH DISTURBANCE	21,106 S.F.
TOTAL AREA OF CLEARING/VEGETATION REMOVAL	5,305 S.F.

## LEGEND

○	IRON BAR/PIPE FOUND	---	EXISTING GAS
□	CONCRETE FOUNDATION FOUND	---	EXISTING TELEPHONE
+	EXISTING UTILITY POLE	---	EXISTING OVERHEAD WIRE
+	EXISTING FIRE HYDRANT	---	EXISTING UNDERGROUND WIRE
+	EXISTING TREES	---	PROPOSED CONTOURS
+	EXISTING MANHOLES	---	PROPOSED CONTOURS
---	PROPERTY LINE	---	PROPOSED ELECTRIC
---	ADJACENT PROPERTY LINE	---	PROPOSED TELEPHONE
---	PROPERTY SETBACK LINE	---	PROPOSED FENCE
---	RIGHT OF WAY	---	SILT FENCE
---	ZONING DISTRICT LINE	---	EXISTING CHAIN LINK FENCE
---	EXISTING ELECTRIC	---	EXISTING TREELINE
---		---	LIMIT OF TEMP EARTH DISTURBANCE

## PLANNING BOARD APPROVAL:

AT A MEETING HELD ON 20  
THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN  
AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL.



Know what's below.  
Call before you dig.



STATE LAW REQUIRES  
THREE WORKING DAYS NOTICE PRIOR  
TO ANY EARTH MOVING ACTIVITIES

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.

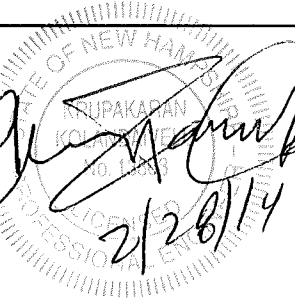
NB+C ENGINEERING SERVICES, LLC.  
1777 CENTURY PARKWAY WEST  
DUBLIN, PA 15001-2200  
BLUE BELT, PA 15422  
(412) 450-0122



NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

## REVISIONS

REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY 2D's	DAK

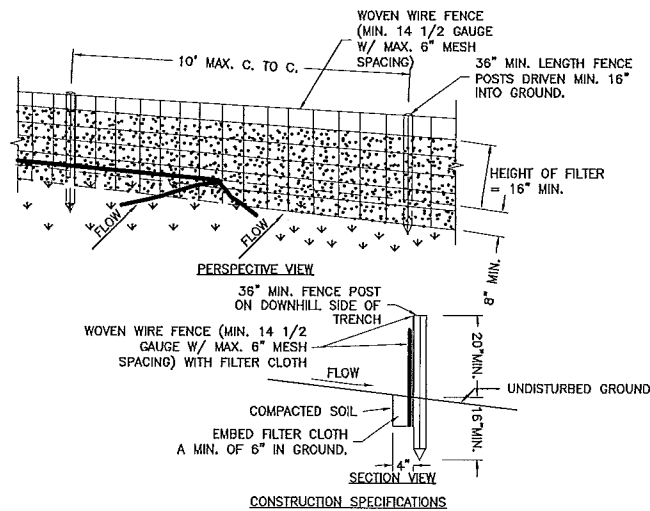


KRUPAKARAN KOLANDAVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0088971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

## EROSION & SEDIMENTATION CONTROL PLAN & DETAILS

**ES-1**

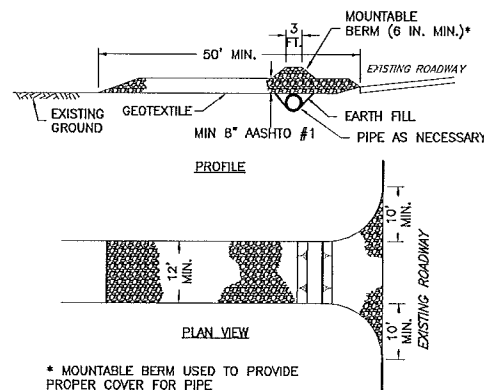




- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- REMOVE ACCUMULATED DEIMENT BEFORE IT IS HALFWAY UP THE FENCE.
- ENSURE THAT SILT FENCE IS TRENCHED IN GROUND AND THERE ARE NO GAPS

#### 1 FILTER FABRIC FENCE (SILT FENCE)

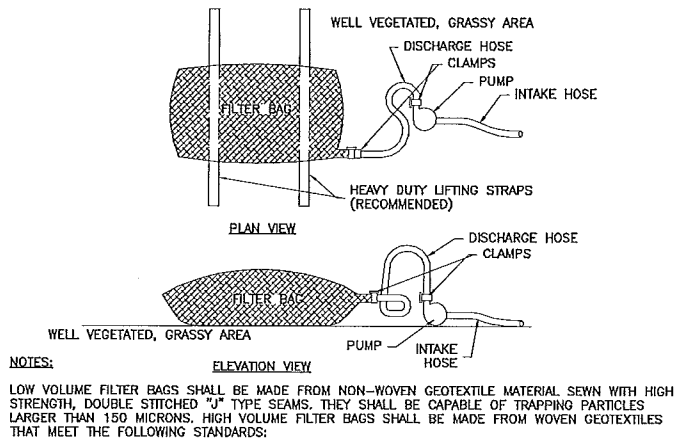
ES-2 NTS



- NOTES:**
- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
  - RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
  - MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
  - MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

#### 4 ROCK CONSTRUCTION ENTRANCE

ES-2 NTS - STANDARD CONSTRUCTION DETAIL #3-1

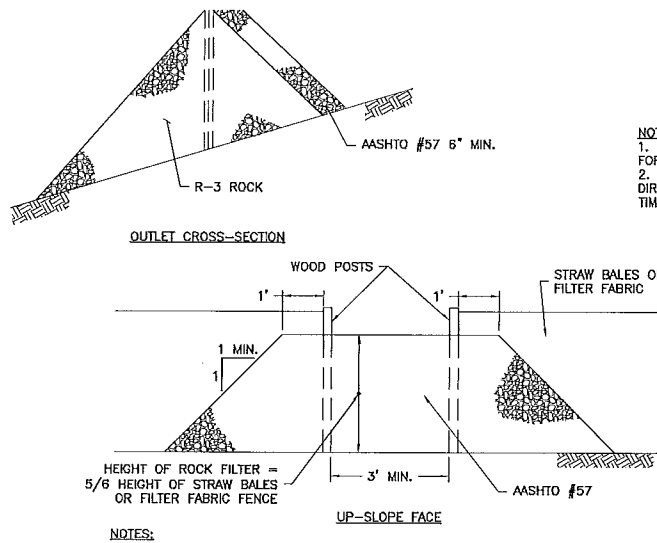


PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4832	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

- A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
- BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
- NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
- THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
- THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
- FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

#### 2 PUMPED WATER FILTER BAG

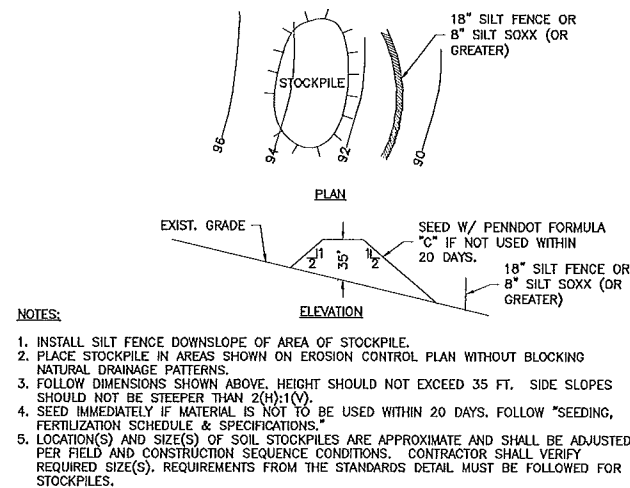
ES-2 NTS - STANDARD DETAIL #3-16



- NOTES:**
- A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.
  - SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

#### 5 ROCK FILTER OUTLET

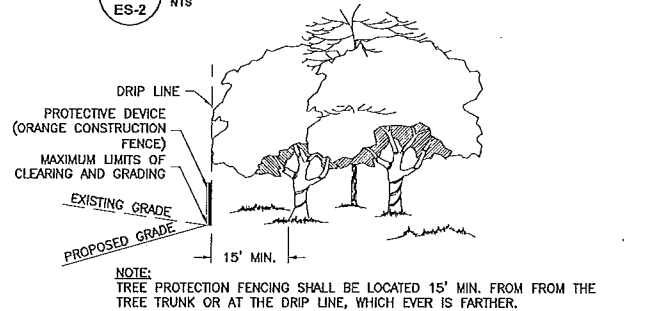
ES-2 NTS



- NOTES:**
- INSTALL SILT FENCE DOWNSLOPE OF AREA OF STOCKPILE.
  - PLACE STOCKPILE IN AREAS SHOWN ON EROSION CONTROL PLAN WITHOUT BLOCKING NATURAL DRAINAGE PATTERNS.
  - FOLLOW DIMENSIONS SHOWN ABOVE. HEIGHT SHOULD NOT EXCEED 35 FT. SIDE SLOPES SHOULD NOT BE STEEPER THAN 2(H):1(V).
  - SEED IMMEDIATELY IF MATERIAL IS NOT TO BE USED WITHIN 20 DAYS. FOLLOW "SEEDING, FERTILIZATION SCHEDULE & SPECIFICATIONS".
  - LOCATION(S) AND SIZE(S) OF SOIL STOCKPILES ARE APPROXIMATE AND SHALL BE ADJUSTED PER FIELD AND CONSTRUCTION SEQUENCE CONDITIONS. CONTRACTOR SHALL VERIFY REQUIRED SIZE(S). REQUIREMENTS FROM THE STANDARDS DETAIL MUST BE FOLLOWED FOR STOCKPILES.

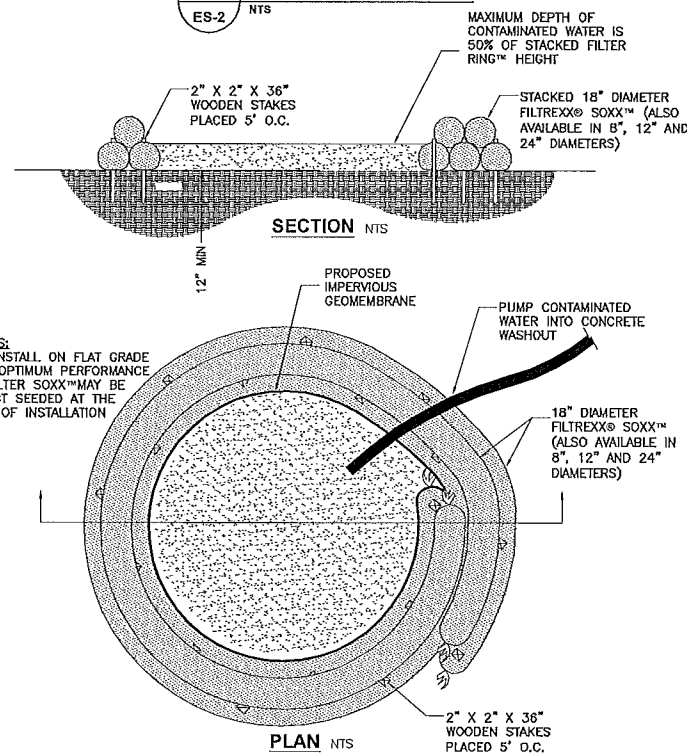
#### 3 TOPSOIL STOCKPILE AND MAINTENANCE

ES-2 NTS



#### 6 TREE PROTECTION

ES-2 NTS



- NOTES:**
- INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
  - FILTER SOCKS MAY BE DIRECT SEED AT THE TIME OF INSTALLATION

#### 7 FILTREXX CONCRETE WASHOUT DETAIL

ES-2 NTS

FOR MORE INFORMATION ON THIS SITE PLAN PLEASE CONTACT NB&C, LLC AT 267-460-0122

PLANNING BOARD APPROVAL:

AT A MEETING HELD ON THE 20th DAY OF MAY 2014 AT THE CITY OF ROCHESTER PLANNING BOARD REVIEWED AND APPROVED THIS PLAN AND A COPY OF THE REVIEW COMMENTS IS ON FILE AT CITY HALL

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
DUBLIN, VA 22026-2100  
BLUE BELT, PA 15022  
(717) 400-0122

**at&t**  
mobility corp.  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

NH4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

#### REVISIONS

REV	DATE	DESCRIPTION	BY
0	12/30/13	PRELIMINARY ZDS	DAK

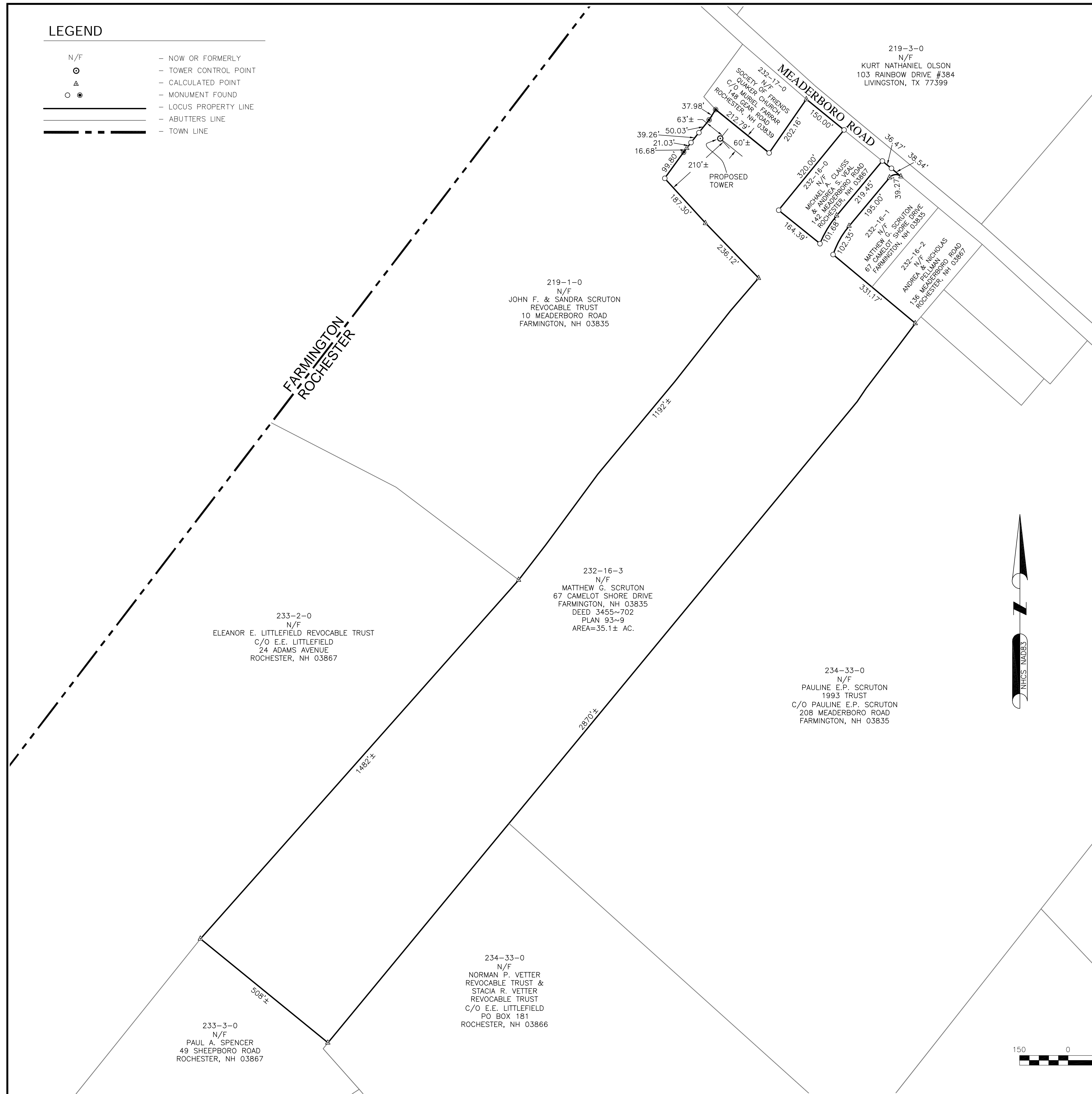
STATE OF NEW HAMPSHIRE  
Krupakaran Kolanaiyvelu P.E.  
No. 018.0086971  
2/28/14

KRUPAKARAN KOLANDAIYVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.0086971  
ME PROFESSIONAL ENGINEER LIC. #12979  
NH PROFESSIONAL ENGINEER LIC. #13868

#### EROSION & SEDIMENTATION CONTROL DETAILS

**ES-2**

N/F	- NOW OR FORMERLY
⊙	- TOWER CONTROL POINT
△	- CALCULATED POINT
○ ⊙	- MONUMENT FOUND
_____	- LOCUS PROPERTY LINE
_____	- ABUTTERS LINE
_____	- TOWN LINE



12-20-2013  
DATE

1. FIELD WORK WAS PERFORMED BY EDM TOTAL STATION.
2. THE HORIZONTAL DATUM IS VERMONT STATE PLANE NAD83 & THE VERTICAL DATUM IS NAVD88, BOTH ARE BASED ON A POST-PROCESSED DUAL FREQUENCY GPS SURVEY.
3. ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO COMMENCEMENT OF ALL SITE WORK. CALL DIGSAFE 1-800-344-7233 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
4. **THIS IS NOT A BOUNDARY SURVEY.**
5. PROPERTY LINES ARE COMPILED FROM PLANS OF RECORD & THE TOWN OF ROCHESTER ASSESSORS MAPS.
6. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, THE MAJOR IMPROVEMENTS ON THIS PROPERTY ARE LOCATED IN AN AREA DESIGNATED AS OTHER FLOOD AREA ZONE X (UNSHADED): AREA DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN.

COMMUNITY PANEL NO. 33014C 0195 D  
EFFECTIVE DATE: MAY 17, 2005

DIMENSION	REQUIREMENTS:	REQUIRED	PROPOSED±
TOWER	HEIGHT	—	
MAX.	BUILDING HEIGHT:	35'	
FRONT	YARD SETBACK:	65'	
SIDE	YARD SETBACK:	25'	
REAR	YARD SETBACK	25'	
MINIMUM	LOT FRONTAGE	90'	
MIN.	AREA	2 ACRES	

APPLICANT: AT&T MOBILITY CORP.  
5841 BRIDGE STREET  
EAST SYRACUSE, NY 13057

OWNER: MATTHEW G. SCRUTON  
67 CAMELOT SHORE DRIVE  
FARMINGTON, NH 03835

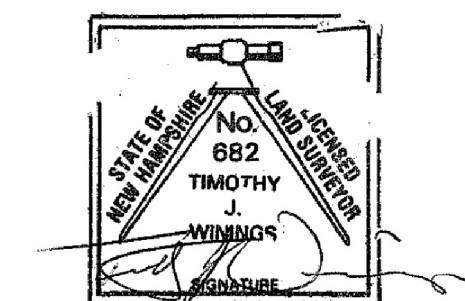
ZONING DISTRICT: AGRICULTURAL

JURISDICTION: CITY OF ROCHESTER

NB+C ENGINEERING SERVICES, LLC  
1777 SENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 210  
BLUE BELL, PA 19422  
(267) 460-0122



0	12/20/13	SUBMITTED FOR REVIEW	BCR
REV	DATE	DESCRIPTION	BY



TIMOTHY J. WININGS, NHLS #682  
LICENSED LAND SURVEYOR

KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.00869

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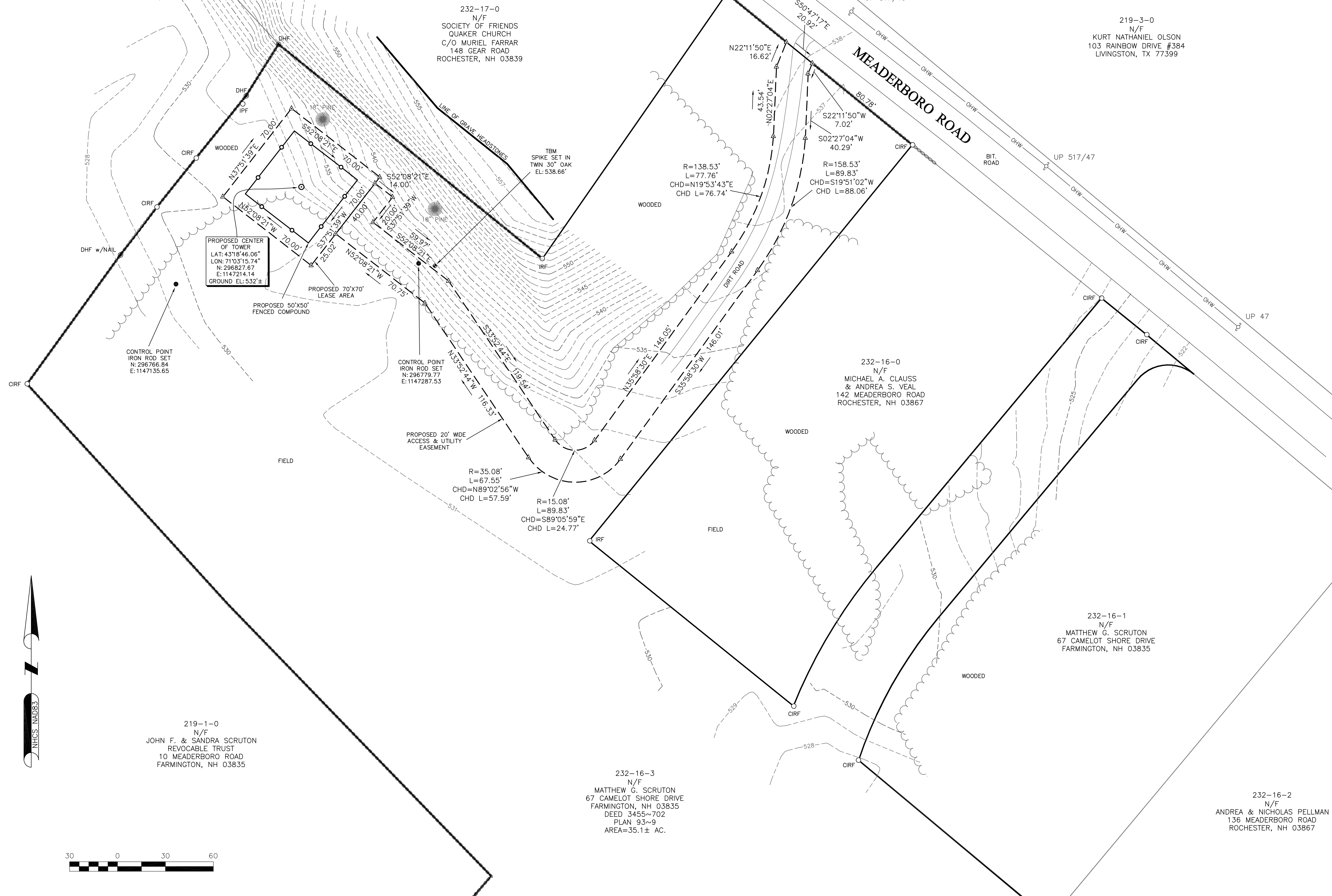
**ABUTTERS  
PLAN**

**C-1**



LEGEND

- N/F  
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△  
○ ●  
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- NOW OR FORMERLY  
— TOWER CONTROL POINT  
— CALCULATED POINT  
— MONUMENT FOUND FOUND  
— UTILITY POLE  
— LOCUS PROPERTY LINE  
— ABUTTERS LINE  
— PROPOSED EASEMENT LINE  
— TREELINE  
— STONE WALL  
— OVERHEAD WIRES



ENGINEER



NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
DUBLIN HALL, SUITE 210  
BLUE BELL, PA 19422  
(267) 460-0122

APPLICANT



SITE INFORMATION

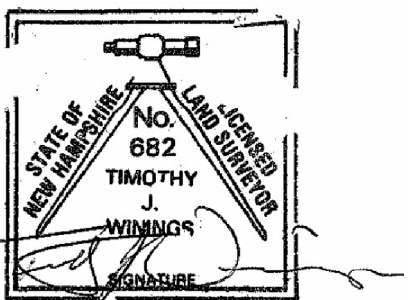
SR# S4125  
144 MEADERBORO ROAD  
144 MEADERBORO ROAD  
ROCHESTER, NH 03867

DESIGN RECORD

REVISIONS

0	12/20/13	SUBMITTED FOR REVIEW	BCF
REV	DATE	DESCRIPTION	BY

PROFESSIONAL STAMP



TIMOTHY J. WININGS, N.H.S. #682  
LICENSED LAND SURVEYOR

ENGINEER

KRUPAKARAN KOLANDAIVELU P.E.  
VT PROFESSIONAL ENGINEER LIC. # 018.008697  
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SHEET TITLE

EXISTING  
CONDITIONS

SHEET NUMBER

C-2

# Radio Frequency Report

## **Proposed 154 Meaderboro Rd., Rochester, NH PCS Facility**

(Site S4125)



March 31, 2014

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2. AT&T's Proposed Facility.....	3
3. Coverage and Capacity Objectives.....	4
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## ATTACHMENTS

**RF Exhibit 1:** Current 1900 LTE Coverage

**RF Exhibit 2:** Current-Upcoming 1900 LTE Coverage

**RF Exhibit 3:** Current-Upcoming-Proposed 1900 LTE Coverage

## 1. Overview

AT&T Mobility (herein referred to as AT&T) is providing the following information in support of their application to the Planning Board and, if and to the extent necessary, the Zoning Board of Appeals, to construct and operate a ground mounted, wireless telecommunications facility in Rochester for its Personal Communication Services. This report addresses AT&T's need for the proposed facility and confirms that there are no suitable existing towers, other wireless facilities or structures that meet AT&T's coverage objectives for this area. The proposed site, on 154 Meaderboro Road in Rochester, NH, is needed to provide improved coverage along Walnut Street, Crown Point Road, Sheepboro Road, 10 Rod Road, 4 Rod Road, Sampson Road and surrounding areas, as discussed in this report.

Included in this report are: a brief summary of the Site's objectives, Radio Frequency Coverage Plots showing the predicted propagation of specific sites relative to their available antenna mounting heights, and alternate candidates considered.

## 2. AT&T's Proposed Facility

As shown on the plans submitted with the zoning application, AT&T proposes to construct, operate and maintain a telecommunications tower and facility (collectively the "Facility") consisting principally of the following elements:

- 1) A 140' high, multi-carrier monopole tower within a fenced equipment compound area;
- 2) Initially, (4) panel antennas on a low profile antenna platform mounted at a centerline elevation of 136' above ground level on the monopole tower;
- 3) Fiber cables running from the antennas, down the monopole tower, across an ice bridge, to AT&T's radio and electronic equipment housed in a prefabricated 16' x 11'5" equipment shelter located within the fenced equipment compound at the base of the monopole tower;
- 4) A proposed 80 KW outdoor diesel generator on a 4' X 8' pad for back-up power;
- 5) Electric and telephone utilities, a meter board and a telephone cabinet within the fenced equipment compound, together with a pad mounted transformer outside of the fenced area;



### 3. Coverage and Capacity Objectives

AT&T provides digital cellular communications service using UMTS (referred to as 3G) and LTE (also referred to as 4G). AT&T is in the process of expanding and enhancing its network throughout New Hampshire and specifically in Rochester, which currently has coverage gap in the area.

AT&T determined that coverage gap exists in Rochester along portions of Walnut Street, Crown Point Road, Sheepboro Road, 10 Rod Road, 4 Rod Road, Sampson road and surrounding areas. The purpose of the proposed facility is to address this gap, referred to herein as the “Targeted Coverage Objective”.

Annual Average Daily Traffic (AADT) statistics from the State of NH DOT, show traffic counts for 4 Rod Road counts reached 900 for 2013 and for Walnut Street counts reached 4700 for 2013. The proposed facility will provide much needed coverage for residential customers living, working and commuting in the “Target Area” of Rochester as noted above. These areas currently have coverage gap.

In addition to the areas mentioned above, there are several other surrounding residential neighborhoods currently lacking coverage suitable for in-building usage. Wireless communications is no longer limited to just providing mobility for voice services. It has evolved into a wider range of advanced services to include wide-area voice, video calls, and broadband wireless data, all in a mobile environment. In order for AT&T to offer these competitive services to more residents, businesses and commuters traveling in and through Rochester, they need to first improve the quality of their coverage by filling in as many of the marginal coverage as possible with signal strengths conducive to in-building and in-vehicle usage, and to provide the capacity and bandwidth requirements to meet the increasing demand on their network.

There are three key objectives of this (S4125) site:

- 1) Provide our customers in-vehicle or better service along major traffic corridors in as much of the “Targeted Coverage Objective” as possible.
- 2) Provide competitive in-building wireless service to as many of our customers that live or work in Rochester as possible.
- 3) Provide collocation opportunities for interested carriers, thereby attempting to minimize the number of towers required in Rochester and the surrounding communities.

## 4. Site Search and Selection Process/Candidate Evaluation

To find a site that provides acceptable service and fills coverage gap, computer modeling is used to define a search ring. The search ring is designed such that a site located within the ring would have a high probability of completing coverage in the target areas (assuming that sufficient height is used).

Once the search ring is determined, AT&T's real estate department searches within the defined area for existing buildings or tower structures of sufficient height that would improve coverage gap within the network. AT&T was unable to locate an existing tower, other wireless facility or structure capable of providing the required coverage (see Table 2 below).

Other than the proposed site, AT&T also found 3 other candidates in Rochester, NH.

Site Name	Longitude (W)	Latitude (N)	Gnd. Elev (ft)	Distance from Proposed (mi)	Structure Type	Comments
S4125A	-71.054058	43.314285	538'	0.136	Lot	Backup-1
S4125B	-71.05114	43.311766	515'	0.118	Lot	Backup-2
S4125C	-71.03681	43.322621	413'	1.091	Lot	Rejected

**Table 1: Alternate Site Analysis**

Address	City	State	Longitude	Latitude	Height (ft)	Structure	Distance (mi)	Remarks
103 WALNUT ST	ROCHESTER	NH	-70.998794	43.308078	140'	Lattice	2.77'	Existing AT&T site.
80 DRY HILL ROAD	ROCHESTER	NH	-71.025555	43.278333	170'	Monopole	2.74'	Existing AT&T site.
TEN ROD ROAD	FARMINGTON	NH	-71.071396	43.3544	306'	Guyed	3.12'	Existing AT&T site.

**Table 2: Existing Towers**

Thus, I have evaluated existing wireless communications structures from which AT&T is currently providing service and other existing wireless communication structures located in Rochester and in adjoining communities. For each such structure, this report confirms the following:

- For each such wireless communications structure from which AT&T is currently providing service, AT&T's facility on the structure is not capable of providing coverage to the Town of Rochester in the Targeted Coverage Objective; and
- For each other such wireless communications structure from which AT&T is not currently providing service, the structure is not located and/or designed to enable AT&T to provide service to the area of the Targeted Coverage Objective even if AT&T could co-locate on or in the structure at the highest existing available height.

I have limited information concerning such other wireless communications structures because AT&T is not privy to the coverage plans and coverage information of other FCC-licensed carriers

and/or tower companies. However, I have undertaken good faith steps to identify other existing tower locations in Rochester and adjoining communities, including review of sites shown on an existing tower mapping program to which I have access. These sites are listed in Table 2 above

Despite good faith efforts made by its site acquisition representatives, AT&T has also been unable to identify any other suitable existing tall non-residential structures in Rochester, such as buildings, water towers, and utility stanchions, which would enable AT&T to provide service to the Targeted Coverage Objective.

Based on the above information, I have determined that the proposed facility is necessary to meet the coverage objective described in this report. There are no existing wireless communications structures or non-residential structures on which AT&T could co-locate its equipment and that are suitably located and of sufficient height to fill AT&T's coverage gaps in the Targeted Coverage Objective.

## 5. Pertinent Site Data

Table 3 below details the site-specific information used to generate the coverage plots.

Site ID	Site Name	Longitude (W)	Latitude (N)	Site Status
NHL02424	DOVER PARSONS LANE	-70.918333	43.240556	On-Air
NHL05200	DOVER ABBEY SAWYER MEMORIAL HIGHWAY	-70.870559	43.209678	On-Air
NHL05201	FARMINGTON TEN ROD ROAD	-71.071396	43.3544	On-Air
NHL05208	SOMERSWORTH GRAND STREET	-70.869458	43.259303	On-Air
MEL05068	BERWICK LITTLE HARBOR ROAD	-70.868889	43.294955	On-Air
MEL05323	LEBANON OAK HILL ROAD	-70.943889	43.34944	On-Air
NHL05202	BARRINGTON GARNETT ROAD	-71.037781	43.215236	On-Air
NHL05203	ROCHESTER WALNUT STREET	-70.998794	43.308078	On-Air
NHL02422	ROCHESTER DRY HILL ROAD	-71.025555	43.278333	On-Air

**Table 3: Existing Sites Used in Analysis**

## 6. Coverage Plots

The plots provided in this report shows coverage for the 1900 MHz frequency range for LTE, based on the site licensing for this market, and were produced using computer-generated models, based on actual drive tests. Areas shown on the plots in green represent current 1900 LTE coverage, areas shown on the plots in yellow represent upcoming 1900 LTE coverage and the areas shown in blue represent proposed coverage. UMTS is currently propagating on all existing sites and LTE is propagating on some areas but is planned to be deployed on all areas as well. GSM (2G) however is propagating only on older sites but will not be deployed anymore for upcoming sites.

- **RF Exhibit 1** entitled “Current 1900 LTE Coverage” shows current 1900 LTE coverage being provided from AT&T’s existing sites in Rochester.
- **RF Exhibit 2** entitled “Current-Upcoming 1900 LTE Coverage” shows current and upcoming 1900 LTE coverage being provided from AT&T’s existing sites in Rochester.
- **RF Exhibit 3** entitled “Current-Upcoming-Proposed Coverage 1900 LTE Coverage in Rochester, NH” shows how the proposed facility addresses coverage gaps.

## 7. Summary

No other existing AT&T sites, or other existing towers, other wireless facilities or structures are available to provide the coverage requirements needed for this area. The location and the minimum height selected were chosen to achieve an optimal balance between meeting coverage objectives, minimizing the aesthetic impact to the community, and future collocation. Without this site in this area, at the height requested, significant gaps in service will exist within the Town of Rochester; therefore AT&T anticipates that Rochester will look favorably upon the proposed facility.

Respectfully Submitted,

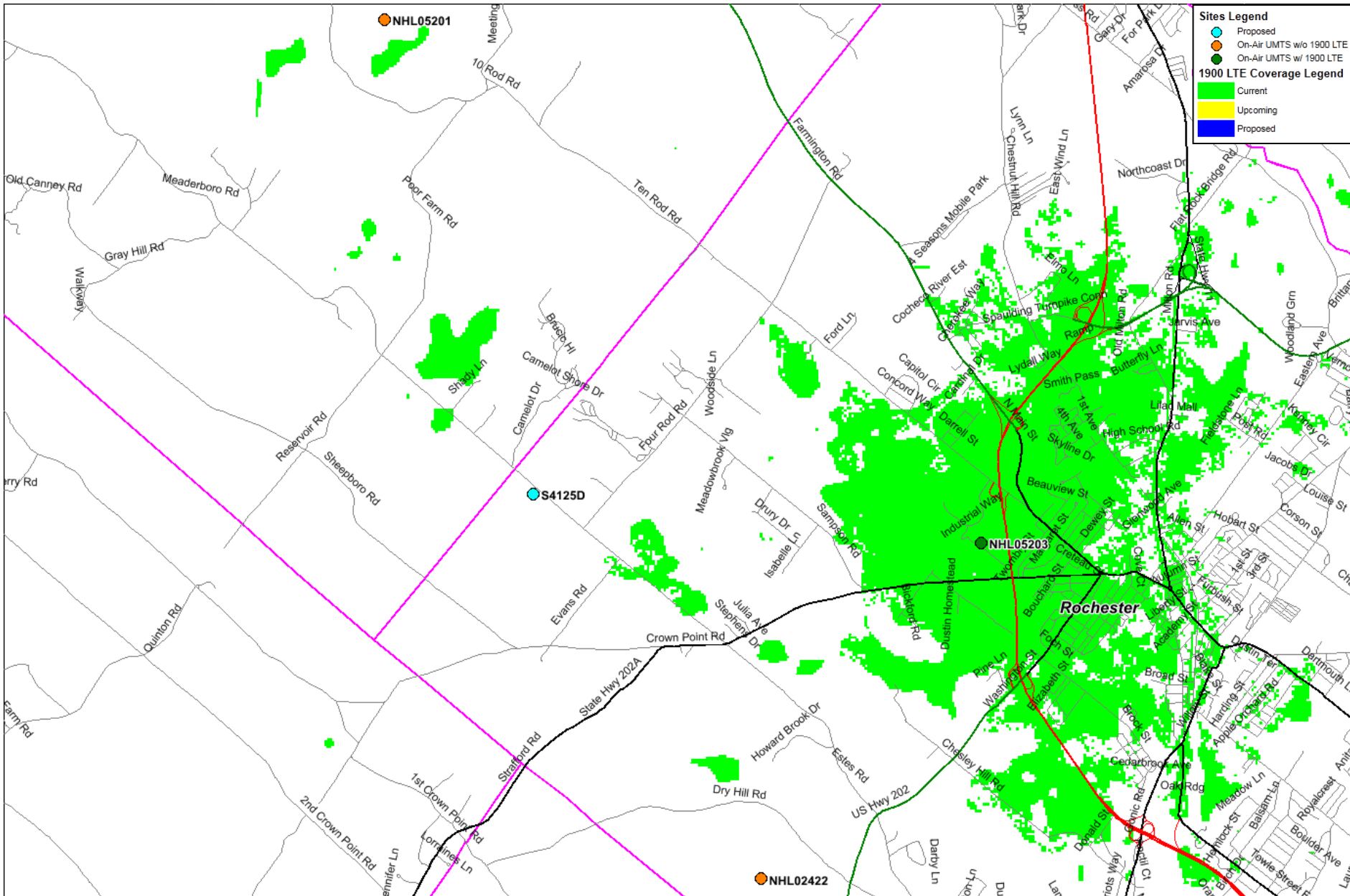


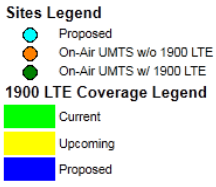
---

Ernesto Chua Jr.  
RF Engineering  
AT&T Mobility  
550 Cochituate Road  
Framingham, MA 01701  
Phone: (508) 271-8321  
Email: [ec7095@att.com](mailto:ec7095@att.com)

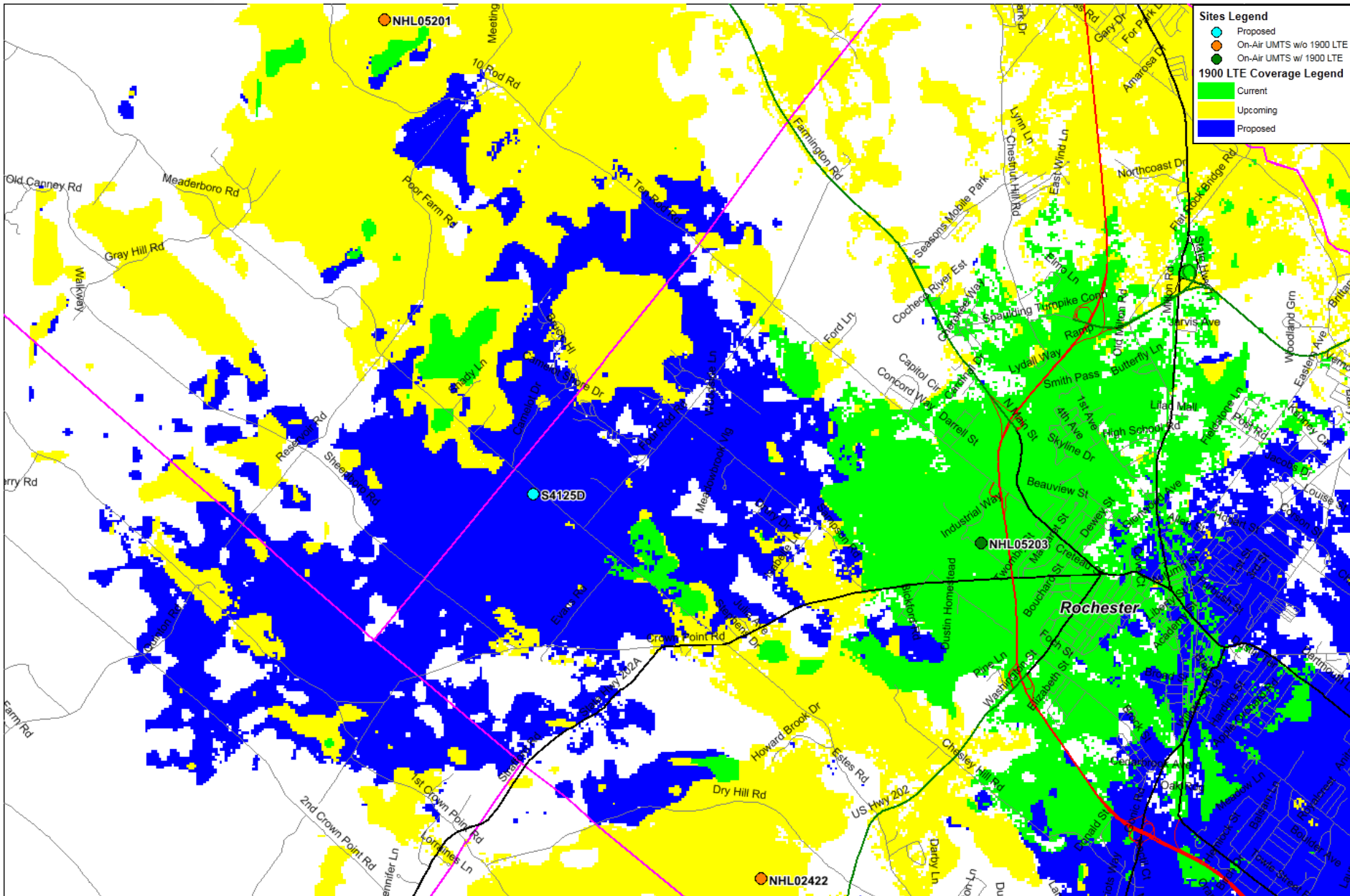


# Current 1900 LTE Coverage









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## **Alternatives Analysis**

**AT&T Wireless Communication Facility**  
144 Meaderboro Road, Rochester, NH  
(AT&T Site Number 2474)

Prepared on behalf of New Cingular Wireless PCS, LLC (“AT&T”)



---

February 28, 2014

Submitted by:

---

Kristen LeDuc  
*Site Acquisition Specialist*  
NETWORK BUILDING + CONSULTING  
153 Northboro Road  
Suite 19  
Southborough, MA 01772

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## **1. Introduction**

New Cingular Wireless PCS, LLC (“AT&T”) has applied to the Town of Rochester Zoning Board of Adjustment (“Zoning Board”) and Planning Board for approval of a proposed wireless communications facility, including without limitation, a 140-foot monopole, associated panel and GPS antennas, cabling, radio communications equipment, and related hardware and equipment, all as more fully depicted on the plans submitted with the application (the “Facility”) at the property located at 144 Meaderboro Road, Rochester, NH (the “Property”).

This report explains the process by which AT&T determined that site is a feasible, available alternative to address its significant gap in coverage in this area of Rochester. In particular, this report discusses the process and criteria by which AT&T identified and evaluated the Property, and the process and criteria by which AT&T considered but rejected other potential alternatives as technically inadequate or unavailable to serve the relevant area of Rochester.

## **2. Qualifications and Overview**

I am a Site Acquisition Consultant for Network Building + Consulting (“NB+C”), a company that provides wireless communication facility site acquisition, leasing and permitting services to federally-licensed wireless communication service providers such as New Cingular Wireless PCS, LLC (“AT&T”). NB+C is AT&T’s agent with regard to AT&T’s proposed expansion of its Federal Communications Commission (“FCC”) licensed network into the Town of Rochester, NH.

I have extensive experience providing site identification, evaluation, leasing, zoning and permitting support to AT&T in connection with its installation of wireless communication facilities in New Hampshire. For example, upon obtaining designated search areas (called “search rings”) from AT&T, I have used databases containing information about existing communications towers, topographical and tax maps and other tools to identify potentially appropriate wireless communication facility sites within these search rings, and provided candidate sites to AT&T for radio frequency (“RF”) engineering evaluation. When AT&T’s RF engineers have confirmed that a property is suitable for an AT&T wireless communication facility of sufficient height, I have approached the property owner to determine whether the owner is interested in allowing such a facility on the owner’s property. I have negotiated the terms of leases, licenses and other agreements between AT&T and property owners for a variety of sites to allow AT&T to locate its facilities on the owners’ properties. I have also attended and testified at zoning, planning and other hearings and meetings required for the permitting of these facilities, and I have attended site visits, balloon tests and crane tests to evaluate the potential visibility of these facilities.

On behalf of AT&T, I am providing this Alternatives Analysis in connection with AT&T’s applications to the Zoning Board and the Planning Board to install, operate and maintain the Facility at the Property.

## **3. AT&T’s Site Search and Selection Process/Candidate Evaluations – Overview**

To locate a site that will be capable of accommodating a necessary wireless communication facility that can provide acceptable service and address an identified significant coverage gap within AT&T's network, AT&T's RF engineers use computer modeling to identify and define a search ring. The search ring is located such that a site within the ring would have a reasonable probability of completing coverage in the targeted coverage area (assuming the site is available, otherwise feasible, and AT&T can install its facility at a sufficient height at the site).

Once the search ring is identified by AT&T and assigned to me by NB+C, I first review the zoning ordinance(s) of the Town(s) within the search ring to understand the Town's preferences and requirements for siting wireless communications facilities. Typically, zoning ordinances express a preference for a carrier to co-locate its new wireless communication facility on an existing tower, building or other tall structure to avoid the need to build a new tower. From AT&T's perspective, co-location is ordinarily the most efficient and cost-effective way to site and install a new facility because it avoids the need to design, obtain approvals for and construct a new tower and access drive, thereby saving significant time and capital costs. Co-location also enjoys certain regulatory preferences at the federal level, such as streamlined historic preservation approval under existing Programmatic Agreements and streamlined consideration of Federal Aviation Administration ("FAA") marking and lighting requirements because the existing support structure already exists.

As a result, it is my standard practice to begin my search within the defined area for any existing tall structures – such as existing wireless communication towers, water tanks, electric utility stanchions and tall buildings – where AT&T could co-locate its antennas and equipment as an alternate to constructing a new tower. Specifically, I look for existing structures that are of a substantial height and suitably located such that co-location will likely enable AT&T to address its identified coverage needs by providing the necessary quality and extent of coverage to address the targeted coverage area. I use various public and private information sources – including both generally available and proprietary communication facility tower databases (such as the FCC's Antenna Structure Registration database and the Crown Castle International CCIsites™ tower location database), topographical maps and municipal assessor and tax maps – to identify potentially appropriate wireless communication facility sites within a search ring. I also travel the search ring area by car and, where necessary, on foot to identify existing buildings and other existing structures of sufficient height. In the event that I am unable to locate an existing building or structure of sufficient height and in a suitable location within the search ring, I examine the area for a suitable property on which AT&T could propose a new tower that is consistent with local zoning requirements.

Once I identify a potential site to address the significant gap AT&T's RF engineer has identified in its wireless network coverage, I provide information concerning the candidate site to AT&T's RF engineering group, which evaluates whether a facility at the proposed location can provide sufficient signal strength to provide suitable in-building and in-vehicle wireless coverage in the targeted coverage area. AT&T's RF engineer that is assigned to the area determines this by preparing RF coverage maps using a RF propagation computer modeling program that takes into account such factors as the geographical features of an area, the location and height of the proposed AT&T facility, the antenna model(s), and RF transmitting power.

If AT&T's RF engineers approve a potential candidate site, I then attempt to negotiate a lease or other appropriate agreement with the owner of the property or the existing tower or structure in question. If these negotiations are successful, AT&T begins its title and environmental due diligence process, the facility design process, and the permitting process.

#### **4. AT&T's Site Search and Selection Process/Candidate Evaluations in Rochester**

As part of their network expansion and enhancement in Massachusetts and elsewhere in the Country, the 4G LTE network rollout will build on the existing 3G data services that utilize UMTS technology. In Strafford County and the Rochester area of New Hampshire, AT&T is licensed by the FCC to provide digital communications voice and data services using 3<sup>rd</sup> Generation (3G) UMTS technology in the 800 MHz and 1900 MHz frequency band, and is in the midst of deploying advanced 4<sup>th</sup> Generation (4G) services over LTE technology in both the 700 MHz and 1900 MHz frequency bands, as allocated by the FCC.

Due to the terrain characteristics and the distance between the targeted coverage area in Rochester and the existing sites, AT&T's options are quite limited to address the existing coverage gaps within the city of Rochester.

AT&T is in the process of expanding its network within Rochester. As part of this process, AT&T's RF engineering group has identified significant coverage gaps in Rochester along substantial portions of the Meaderboro Road, NH Route 202A, and the surrounding areas (collectively, the "Targeted Coverage Area"). AT&T is seeking to site a proposed wireless communication facility in Rochester to address these gaps and connect with coverage both from AT&T's existing and planned facilities in the area. *See Report of Radio Frequency Engineer submitted with the application.*

Given the Ordinance's and AT&T's preference for co-location, I began my search in the Rochester area for existing tall structures where AT&T could co-locate its proposed new wireless communication facility as an alternative to constructing a new tower. As described above, I started with communication facility tower databases, topographical maps and municipal assessor and tax maps.

During my search, I identified the Meaderboro Community Church located at 151 Meaderboro Road (the "Church Property"). The building on the Church Property is only 2 ½ stories and approximately 35 feet above ground level ("AGL"). AT&T's RF engineers determined that the building did not have enough height, nor could it reasonably be modified to achieve the necessary height, in order to be suitable to address the Targeted Coverage Area. Due to its relatively small size, and the availability of other more suitable parcels for a new tower that would better comply with the Zoning Ordinance, the Church Property was rejected as a candidate for a new tower. Therefore, AT&T determined that the Church Property is not a feasible alternative to the Property for the proposed Facility.

After the elimination of the Church Property for RF coverage reasons, I continued the search but was unable to locate another suitable existing building or structure in a different location capable of providing the required coverage. I then began to evaluate various "raw land" candidates as



potential locations for a new monopole wireless communication facility. I identified the following properties as potential candidates:

- 154 Meaderboro Road in Rochester, NH, owned by John Scruton (the “Scruton Property”);
- Grandview Campground at 51 Four Rod Road in Farmington, New Hampshire, owned by Robert Williams (“Grandview Campground”); and
- The subject Property at 144 Meaderboro Road owned by Matthew Scruton.

AT&T’s RF engineers determined that the Grandview Campground is located at an elevation that is too low and is located too far away to provide adequate coverage to the Targeted Coverage Area. Therefore, AT&T Grandview Campground determined that the Grandview Campground is not a feasible alternative to the Property for the proposed Facility.

I approached each of the owners of 154 Meaderboro Road and the Property. After reviewing the available locations on both 154 Meaderboro Road and the Property and providing the information to AT&T’s RF engineers, AT&T determined that the proposed location on the Property is the most suitable location and best meets the intent and purpose of the Ordinance. The available locations on the Scruton Property are located near the rear of the property and at a lower elevation than the proposed Facility. Due to the lower elevation of the available area of the Scruton Property and existing wetlands, AT&T determined that the Property is the most suitable location for the proposed Facility. As a result, I successfully negotiated a lease for the Property.

## **5. Summary**

AT&T has completed a systematic and thorough evaluation of Rochester and the surrounding area concerning the availability and feasibility of potential alternative locations for a wireless communication facility to address the Targeted Coverage Area. For the foregoing reasons, including my review of the Ordinance, my personal knowledge of the area, the location of AT&T’s existing and proposed facilities, and analysis provided by AT&T’s radio frequency expert, none of the potential alternative candidates located within allowed zoning districts are reasonably feasible alternatives to the proposed Facility on the Property. In addition, based on my experience, in my professional opinion, the Property is the least intrusive and available alternative to provide adequate coverage to this significant gap in AT&T’s wireless network coverage. Accordingly, the proposal currently before the Board provides the only feasible alternative for AT&T to provide adequate coverage to its significant gap in reliable network coverage.



## Antenna Structure Registration

[FCC](#) > [WTB](#) > [ASR](#) > [Online Systems](#) > TOWAIR

[FCC Site Map](#)

### TOWAIR Determination Results

[? HELP](#)
[New Search](#) [Printable Page](#)

#### \*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

#### DETERMINATION Results

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.**

#### Your Specifications

##### NAD83 Coordinates

Latitude	43-18-46.0 north
Longitude	071-03-15.7 west

##### Measurements (Meters)

Overall Structure Height (AGL)	42.7
Support Structure Height (AGL)	42.7
Site Elevation (AMSL)	163.7

##### Structure Type

MTOWER - Monopole

#### [Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

#### ASR Help

[ASR License Glossary](#) - [FAQ](#) - [Online Help](#) - [Documentation](#) - [Technical Support](#)

#### ASR Online Systems

[TOWAIR](#) - [CORES](#) - [ASR Online Filing](#) - [Application Search](#) - [Registration Search](#)

#### About ASR

[Privacy Statement](#) - [About ASR](#) - [ASR Home](#)



## Antenna Structure Registration

[FCC](#) > [WTB](#) > [ASR](#) > [Online Systems](#) > TOWAIR

[FCC Site Map](#)

### TOWAIR Determination Results

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Longitude	071-03-15.7 west

##### Measurements (Meters)

Overall Structure Height (AGL)	42.7
Support Structure Height (AGL)	0
Site Elevation (AMSL)	163.7

##### Structure Type

MTOWER - Monopole

#### [Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

#### ASR Help

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[Help](#) | [Tech Support](#)

Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Phone: 1-877-480-3201  
TTY: 1-717-338-2824  
[Submit Help Request](#)

**Cellular License - KNKA452 - NEW CINGULAR WIRELESS PCS, LLC**

Call Sign	KNKA452	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

**Market**

Market	CMA156 - Portsmouth-Dover-Rochester, NH	Channel Block	A
Submarket	0	Phase	2

**Dates**

Grant	11/06/2007	Expiration	10/01/2017
Effective	02/13/2014	Cancellation	

**Five Year Buildout Date**

10/08/1992

**Control Points**

None

**Licensee**

FRN	0003291192	Type	Limited Liability Company
-----	------------	------	---------------------------

**Licensee**

NEW CINGULAR WIRELESS PCS, LLC 3300 E. Renner Road, B3132 Richardson, TX 75082 ATTN Reginald Youngblood	P: (855)699-7073 F: (972)907-1131 E: FCCMW@att.com
--	--

**Contact**

AT&T MOBILITY LLC Michael P Goggin 1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P: (202)457-2055 F: (202)457-3073 E: michael.p.goggin@att.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

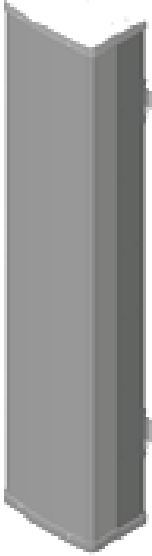
Race

Ethnicity

Gender

## HexPORT Multi-Band ANTENNA

### Model HPA-65R-BUU-H6



The CCI Hexport Multi-Band Antenna Array is an industry first 6-port antenna with full WCS Band Coverage. With four high band ports and two low band ports, our hexport antenna is ready for 4X4 high band MIMO.

Modern networks demand high performance, consequently CCI has incorporated several new and innovative design techniques to provide an antenna with excellent side-lobe performance, sharp elevation beams, and high front to back ratio.

Multiple networks can now be connected to a single antenna, reducing tower loading and leasing expense, while decreasing deployment time and installation cost.

Full band capability for 700 MHz , Cellular 850 MHz, PCS 1900 MHz, AWS 1710/2170 MHz and WCS 2300 MHz coverage in a single enclosure.

### Hexport Multi-Band Antenna Array

#### Benefits

- ◆ Includes WCS Band
- ◆ Reduces tower loading
- ◆ Frees up space for tower mounted E-nodes
- ◆ Single radome with six ports
- ◆ All Band design simplifies radio assignments
- ◆ Sharp elevation beam eases network planning

#### Features

- ◆ High Band Ports include WCS Band
- ◆ Four High Band ports with two Low Band ports in one antenna
- ◆ Sharp elevation beam
- ◆ Excellent elevation side-lobe performance
- ◆ Excellent MIMO performance due to array spacing
- ◆ Excellent PIM Performance
- ◆ A multi-network solution in one radome

#### Applications

- ◆ 4x4 MIMO on High Band and 2x2 MIMO on Low Band
- ◆ Adding additional capacity without adding additional antennas
- ◆ Adding WCS Band without increasing antenna count



# HexPORT Multi-Band ANTENNA

## Model HPA-65R-BUU-H6

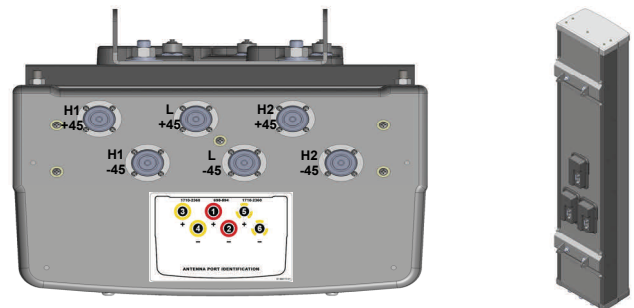
### HPA-65R Multi-Band Antenna

#### Electrical Specifications

Frequency Range	2 X Low Band Ports which cover the full range from 698-894 MHz		4 X High Band Ports which cover the full range from 1710-2360 MHz			
	698-806 MHz	824-894 MHz	1850-1990 MHz	1710-1755/2110-2170 MHz	2305-2360 MHz	
Gain	14.1 dBi	14.8 dBi	16.9 dBi	16.3 dBi	17.2 dBi	17.4 dBi
Azimuth Beamwidth (-3dB)	66°	65°	61°	66°	62°	57°
Elevation Beamwidth (-3dB)	12.5°	10.5°	5.7°	6.3°	5.1°	4.5°
Electrical Downtilt	0° to 10°	0° to 10°	0° to 8°	0° to 8°	0° to 8°	0° to 8°
Elevation Sidelobes (1st Upper)	< -17 dB	< -19 dB	< -19 dB	< -18 dB	< -18 dB	< -17 dB
Front-to-Back Ratio @180°	> 30 dB	> 30 dB	> 30 dB	> 30 dB	> 30 dB	> 30 dB
Front-to-Back Ratio over ± 20°	> 30 dB	> 30 dB	> 30 dB	> 30 dB	> 30 dB	> 30 dB
Cross-Polar Discrimination (at Peak)	> 25 dB	> 20 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross-Polar Discrimination (at ± 60°)	> 17 dB	> 14 dB	> 17 dB	> 17 dB	> 17 dB	> 17 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 26 dB	> 25 dB	> 26 dB	> 26 dB
VSWR	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc	≤ -150dBc
Input Power	500 Watts CW	500 Watts CW	300 Watts CW	300 Watts CW	300 Watts CW	300 Watts CW
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

#### Mechanical Specifications

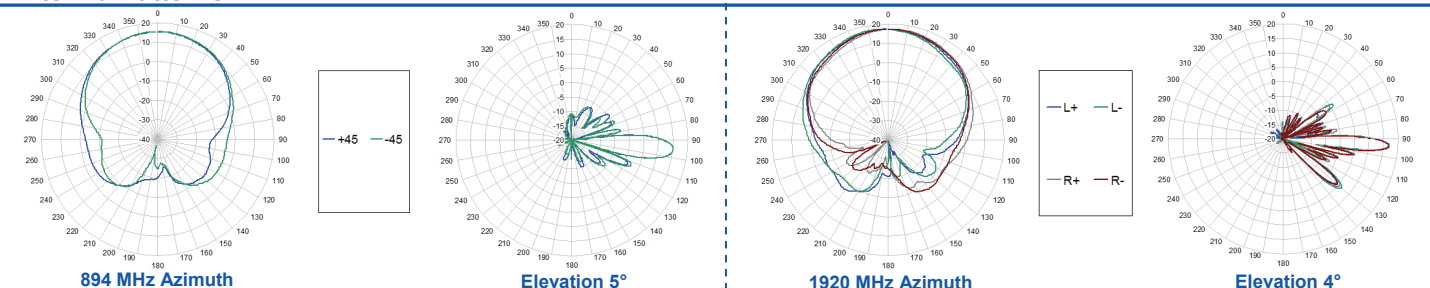
Dimensions (LxWxD)	72.0 x 14.8 x 9.0 inches (1828 x 376 x 229 mm)
Survival Wind Speed	> 150 mph
Front Wind Load	247 lbs (1099 N) @ 100 mph (161 kph)
Side Wind Load	165 lbs (735 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	9.7 ft <sup>2</sup> (0.90 m <sup>2</sup> )
Weight (without Mounting)	51 lbs (23 kg)
RET System Weight	5.0 lbs (2.3 kg)
Connector	6; 7-16 DIN female long neck
Mounting Pole	2-5 inches (5-12 cm)



#### Antenna Patterns\*

#### Bottom View

#### Rear View



\*Typical antenna patterns. For detail information on antenna pattern, please contact us at [info@ccipproducts.com](mailto:info@ccipproducts.com). All specifications are subject to change without notice.



# HexPORT Multi-Band ANTENNA

## Model HPA-65R-BUU-H6

### RET [Remote Electrical Tilt] System

#### General Specification

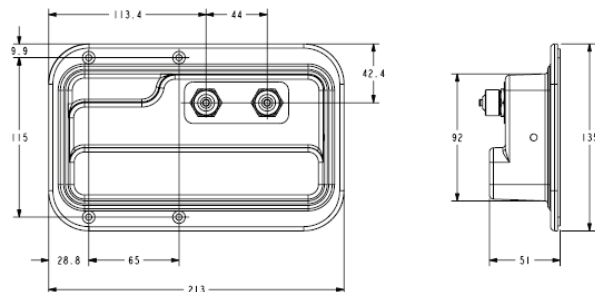
Part Number	BSA-RET200
Protocols	AISG 2.0
Adjustment Cycles	>10,000 cycles
Tilt Accuracy	±0.1°
Temperature Range	-40°C to +70°C

#### Electrical Specification

Interface Signal	Data   dc
Input Voltage Range	10-30 Vdc, Specifications at +24 VDC
Current consumption during tilting	120mA at Vin = 24V
Current consumption idle	55mA at Vin=24V
Hardware Interface	AISG - RS 485 A/B
Input Connector	1x8-pin Daisy Chain In Male
Output Connector	1x8-pin Daisy Chain Out Female

#### Mechanical Specification and Dimensions

Housing Material	ASA / ABS / Aluminum
Dimensions (H x W x D)	8 x 5 x 2 inches (213 x 135 x 51 mm)
Weight	1.5 lbs (0.68 kg)



#### Standards Compliance

Safety	EN 60950-1, UL 60950-1
Emission	EN 55022
Immunity	EN 55024
Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC 60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-2-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN60529 IP24

#### Regulatory Certification

AISG, FCC Part 15 Class B, CE, CSA US



March 11, 2014

Zoning Board of Adjustment  
City of Rochester  
31 Wakefield Street  
Rochester, NH 03867

RE:    Applicant:            New Cingular Wireless PCS, LLC ("AT&T")  
      Property Owner:        Matthew G. Scruton  
      Property:              144 Meaderboro Road, Rochester, New Hampshire  
                                 Parcel ID 232-16-3 (the "Property")

Dear Board Members:

New Cingular Wireless PCS, LLC ("AT&T") is applying for zoning relief to construct and operate a telecommunications tower and facility to be located on the Property. Section 42.24A(a)(9) of the City of Rochester Zoning Ordinance (the "Ordinance") provides as follows:

**9) Abandoned or Unused Wireless Communications Facilities.**

**Abandoned or unused antennas and structures shall be removed as follows:**

- (A)    An agreement between the facility owner (and successors in interest), property owner (and successors in interest), and the City of Rochester which incorporates the provisions (B) through (E) of this section shall be submitted at the time of application.**
- (B)    A copy of the relevant portions of a signed lease (except in cases where the land is owned by the provider) which requires the applicant to remove the antenna, support structure, and associated facilities upon cessation of operations at the site shall be submitted at the time of the application.**
- (C)    All abandoned wireless communications facilities shall be removed within 180 days of the cessation of operations at the site unless a time extension is approved by the Planning Department.**
- (D)    Unused portions of support structures above a manufactured connection shall be removed within 180 days of the time of antenna relocation. The replacement of portions of a support structure previously removed will require a new approval.**

- (E) **In the event that these elements are not removed within 180 days of the cessation of operations at a site, the City of Rochester (in addition to other remedies) may remove the antenna, structure, and associated facilities and assess the cost of removal against the property or if the City must enforce the agreement required by (A) through legal measures, the landowner and facility owner shall reimburse the City for legal costs.**

Pursuant to Section 42.24A(a)(9)(B) of the Ordinance, attached to this letter is a copy of the relevant portions of AT&T's signed lease with the Property Owner which requires A&T& to remove its communications facility from the site upon expiration or termination of the lease.

Subject to the foregoing lease provision, pursuant to Section 42.24A(a)(9)(A) of the Ordinance, please accept this letter as AT&T's written agreement to abide by provisions (B) through (E) of Ordinance Section 42.24A(a)(9) with respect to the removal of its abandoned wireless communications facility within 180 days of the cessation of operations at the site, unless a time extension is approved by the Planning Board.

This commitment is, of course, premised on AT&T obtaining all applicable governmental permits and approvals for the facility and on the facility being built pursuant thereto and subject to the Telecommunications Act of 1996, 47 U.S.C. §332(c), the Wireless Facilities Deployment Law, 47 U.S.C. §1455, enacted as Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, and any other federal law.

Sincerely,

Kevin Mason  
Area Manager – Construction and Engineering  
Site Acquisition for the New England Market

ACCEPTED AND AGREED:

  
Matthew Scruton

ACCEPTED AND AGREED:

\_\_\_\_\_  
City of Rochester