



## RESOLUTION

APPROVING A FIRST AMENDMENT TO THE SITE LEASE AGREEMENT WITH SPRINT SPECTRUM REALTY COMPANY, L.P. (SUCCESSOR-IN-INTEREST TO SPRINT SPECTRUM, L.P.) TO RELOCATE THE LESSEE'S COMMUNICATION EQUIPMENT LOCATED AT WHIPPLE STREET, MINES FALL PARK TO THE NEW REPLACEMENT TOWER

### *CITY OF NASHUA*

*In the Year Two Thousand and Fifteen*

**RESOLVED** by the Board of Aldermen of the City of Nashua that the attached First Amendment to the Site Lease Agreement between Sprint Spectrum Realty Company, L.P. (successor-in-interest to Sprint Spectrum, L.P.) and the City of Nashua for the leased premises (cell tower and ground space) located at Whipple Street, Mines Fall Park, Nashua, New Hampshire is approved.

**LEGISLATIVE YEAR 2015**

**RESOLUTION:** R-15-175

**PURPOSE:** Approving a First Amendment to the Site Lease Agreement with Sprint Spectrum Realty Company, L.P. (Successor-In-Interest to Sprint Spectrum, L.P.) to relocate the Lessee's communication equipment located at Whipple Street, Mines Fall Park to the new replacement tower

**ENDORSERS:** Mayor Donnalee Lozeau

**COMMITTEE  
ASSIGNMENT:**

**FISCAL NOTE:** None.

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**ANALYSIS**

This resolution approves the First Amendment to the Site Lease Agreement between Sprint Spectrum Realty Company, L.P. (successor-in-interest to Sprint Spectrum, L.P.) and the City of Nashua for the leased premises (cell tower and ground space) located at Whipple Street, Mines Fall Park, Nashua, New Hampshire. This amendment authorizes the relocation of Sprint's communication equipment from the existing tower to the newly constructed replacement tower at the same location. This resolution should be referred to the Board of Public Works.

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**Approved as to form:** Office of Corporation Counsel

By: 

Date: 9-15-15

## FIRST AMENDMENT TO SITE LEASE AGREEMENT

THIS FIRST AMENDMENT TO SITE LEASE AGREEMENT ("**Amendment**"), dated as of the latter of the signatures below, is by and between the City of Nashua, a municipality incorporated in the State of New Hampshire, having a mailing address of 229 Main Street, PO Box 2019, Nashua, New Hampshire 03061, (hereinafter referred to as "**Lessor**") and Sprint Spectrum Realty Company, L.P. successor in interest to Sprint Spectrum L.P, a limited liability company formed in the State of Delaware 4900 Main Street, Kansas City, Missouri 64112 (hereinafter referred to as "**Lessee**").

WHEREAS, Lessor and Lessee entered into a Site Lease Agreement dated on April 21, 2000, whereby Lessor leased to Lessee certain Premises, therein described, that are a portion of the Lessor's property located off Whipple Street, Mines Fall Park, Nashua, NH ("**Lease**"); and,

WHEREAS, Lessor is replacing the Existing Tower to which Lessee's communication equipment is attached; and,

WHEREAS, Lessor and Lessee, in their mutual interest, wish to amend the Lease as set forth below accordingly.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee agree as follows:

1. **Tower Replacement.** The Existing Tower will be decommissioned and removed from Lessor's property. A new tower ("Replacement Tower") will be constructed and Lessee's wireless communications equipment now installed on the Existing Tower will be migrated to the Replacement Tower and attached as set forth in the Lease. The cost of migrating Lessee's communications equipment from the Existing Tower to the Replacement Tower shall be borne by Lessee.
2. **Expansion of Lessee's Facilities.** Should Lessee elect to increase its tower load on Replacement Tower (an increase will be determined based upon the Lessee's current tower load on the Existing Tower), it shall be subject to an increase in the base rent for any such increased tower load.

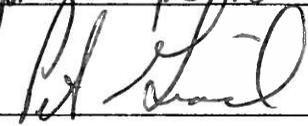
3. **Other Terms and Conditions Remain.** In the event of any inconsistencies in the Lease and this First Amendment, the terms of this amendment shall control. Except as expressly set forth in this First Amendment, the Lease otherwise is unmodified and remains in full force and effect. Each reference in the Lease to its self shall be deemed also to refer to this First Amendment.
4. **Capitalized Terms.** All capitalized terms used but not defined herein shall have the same meanings as defined in the Lease.

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this First Amendment on the dates set forth below.

**"LESSOR"**

\_\_\_\_\_  
By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**"LESSEE"**

Sprint Spectrum LP  
By:   
Name: Peter Guard  
Title: New England Site Dev Mgr  
Date: 9/11/15

TENANT ACKNOWLEDGEMENT

STATE OF New Hampshire  
COUNTY OF Hillsborough

On the 11<sup>th</sup> day of September, 2015 before me personally appeared Peter Guard, and acknowledged under oath that he is the authorized agent of Spent Spectrum Realty Company, the Lessee named in the attached instrument, and as such is authorized to execute this instrument on behalf of the Lessee.

FLORENCE NICOLAS  
NOTARY PUBLIC  
State of New Hampshire  
My Commission Expires  
January 28, 2020 

Notary Public:  
My Commission Expires: \_\_\_\_\_

LANDLORD ACKNOWLEDGEMENT

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2015 by \_\_\_\_\_ of the \_\_\_\_\_ a \_\_\_\_\_, on behalf of the \_\_\_\_\_.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_



FOR CONSTRUCTION



# NASHUA 4 NH (MINES FALLS PARK)

**WHIPPLE ST.  
NASHUA, NH 03060**

**HDG**  
Hudson  
Design Group, Inc.

160 OSGOOD STREET  
NASHUA, NH 03060 TEL: (603) 535-5353  
FAX: (603) 535-5338

PREPARED BY:



**REMARKS FROM WESTBOROUGH, MA TO SITE:**  
GET ON I-93 E IN FRAMINGHAM FROM MA-30 E/W MAIN ST. SLIGHT LEFT TOWARD MA-9 E CONTINUE ONTO MA-9 E MERGE ONTO I-93 NB TAKE RAMP TO LOWELL TAKE EXIT 33 FOR COUNTY ROUTE 4 N TOWARD N CHELSEA/TURN LEFT ONTO MA-4 N TURN LEFT TO STAY ON MA-4 N (BOND) FOR US-3 N) MERGE ONTO US-3 N VIA THE RAMP TO NASHUA NH ENTERED NEW HAMPSHIRE TAKE EXIT 5 FOR NH-11 TOWARD NASHUA/PEPPERELL MA/NEW HAMPSHIRE 111A TAKE EXIT 5A FOR SIMON ST. THEN LEFT ONTO WHIPPLE ST.

CONSULTANT TEAM	
<b>PROJECT ENGINEER</b>	HUDSON DESIGN GROUP LLC 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 N. ANDOVER, MA 01845 TEL: (978) 537-3553 FAX: (978) 336-5586
<b>MEP ENGINEER</b>	CSI ENGINEERING, LLC 999 BROADWAY SUITE 208 SAUGUS, MA 01908 TEL: 1-(781)-233-4808 FAX: 1-(781)-233-4848

PROJECT SUMMARY	
<b>SITE NAME:</b>	NASHUA 4 NH MINES FALLS PARK
<b>SITE ADDRESS:</b>	WHIPPLE STREET NASHUA, NH 03063
<b>APPLICANT:</b>	400 FRIBERG PARKWAY WESTBOROUGH, MA 01581 (508) 330-3330 TEL
<b>ZONING DISTRICT:</b>	RB - URBAN RESIDENCE
<b>ZONING JURISDICTION:</b>	CITY OF NASHUA
<b>LATITUDE:</b>	N 42° 45' 50.40"
<b>LONGITUDE:</b>	W 71° 29' 32.80"
<b>PARCEL ID:</b>	E-1487
<b>PROPERTY OWNER:</b>	CITY OF NASHUA, NH 229 MAIN STREET NASHUA, NH 03060

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	PLOT PLAN
C-2	ABUTTERS LIST
A-1	COMPOUND PLAN
A-2	ELEVATION & PROPOSED MONOPOLE LOADING CHART
A-3	ANTENNA PLAN & DETAILS
A-4	SHELTER FOUNDATION DETAILS
A-5	FENCE & ROADWAY DETAILS
E-1	ELECTRICAL ONE-LINE PLAN & NOTES
E-2	GROUNDING RISER DIAGRAM
E-3	ELECTRICAL DETAILS

TITLE SHEET			
REV	DATE	DESCRIPTION	BY
0	08/17/14	FOR CONSTRUCTION	MS
1	10/29/15	FOR CONSTRUCTION	MS

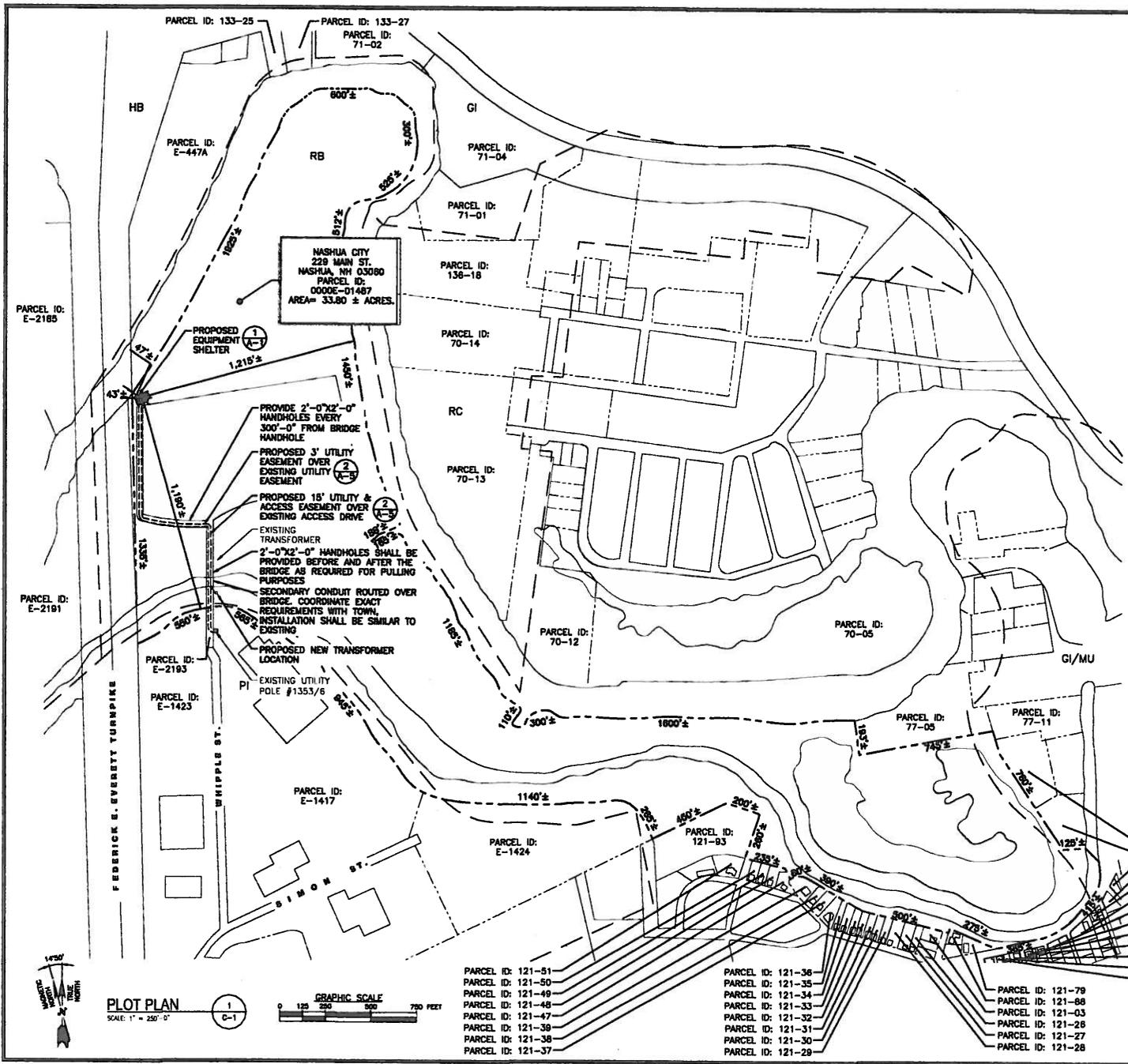
STATE OF NEW HAMPSHIRE

DARRYL P. IVY  
PLANNING COMMISSIONER  
NASHUA, NH 03103

NASHUA, NH  
(MINES FALLS PARK)  
WHIPPLE ST.  
NASHUA, NH 03060

*Daniel J. Ivay*

T-1



**TOWN NOTES**

- 1.) IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE SHOWN ON THIS PLAN OR ANY "KEY" WATERWAY, OR CONVERT OF ALTER AND STRUCTURE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE CITY.
- 2.) FUTURE BUILDING CONSTRUCTION SHALL INCORPORATE FOUNDATION DRAINAGE SYSTEMS EXCEPT WHERE AN INSPECTION ESTABLISHES THAT SPECIFIC BUILDING SITES ARE LOCATED IN WELL DRAINED SOILS AND THAT SUCH SYSTEMS ARE NOT REQUIRED.
- 3.) PRIOR TO ANY WORK BEING CONDUCTED A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE PLANNING STAFF AND OTHER CITY DEPARTMENTS AS NECESSARY TO REVIEW WORK PROPOSED.
- 4.) SITE IS NOT IN TOWN HISTORIC DISTRICT.
- 5.) SITE IS NOT IN WETLANDS.

APPROXIMATE LAT: N42° 45' 50.40"N  
TOWER COORDINATES: LONG: W71° 28' 32.60"W

**SITE SPECIFIC NOTES**

1. SITE SURVEY HAS NOT BEEN CONDUCTED BY HUDSON DESIGN GROUP, LLC FOR THIS PROJECT. ALL BENCHMARKS SHOWN ARE TAKEN FROM THE CORNERS OF PROPOSED EQUIPMENT TO PROPERTY LINES AND ARE APPROXIMATE.
2. VERIFY ADJUSTS W/ RF ENGINEER.
3. PROPERTY LINE INFORMATION IS OBTAINED FROM ASSESSORS PLAN AND RECORDED RECORDS AND IS NOT TO BE CONSIDERED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY HAS NOT BEEN PERFORMED.

**SOURCES**

LOT LINES COMPILED FROM THE CITY OF NASHUA, NH ASSESSORS AND GIS MAPS

**LEGEND**

- PROPERTY LINE - SUBJECT PARCEL
- PROPERTY LINE - ADJUTERS
- ZONING BOUNDARY LINE
- EXISTING BUILDING

**ZONING**

RB	URBAN RESIDENCE
HB	HIGHWAY BUSINESS
GI	GENERAL INDUSTRIAL
RC	URBAN RESIDENCE
PI	PARK INDUSTRIAL
GI/MU	GENERAL INDUSTRIAL/MIXED USE

**ZONING INFORMATION**

JURISDICTION: CITY OF NASHUA, NH

ZONING DISTRICT TYPE: RB - URBAN RESIDENCE

TRANSITION AREA REQUIREMENTS:	REQUIRED ± (FT)	PROPOSED (FT) FROM PROPOSED EQUIPMENT
FRONT YARD SETBACK:	10'	1,180'±
SIDE YARD SETBACK:	10'	43'± & 1,215'±
REAR YARD SETBACK:	20'	47'

(ALL MEASUREMENTS ARE IN FEET & UNLESS OTHERWISE NOTED)

**FOR CONSTRUCTION**



PREPARED BY:

**PLOT PLAN**

DATE	DESCRIPTION	BY	CHECKED
10/27/13	FOR CONSTRUCTION		

STATE OF NEW HAMPSHIRE  
DANIEL P. HALL  
NOV 10 3 2013  
NASHUA, NH  
NAMES WALLS PARK  
WHIPPLE ST.  
NASHUA, NH 03080

**C-1**

ABUTTERS LIST

PARCEL ID:	OWNER	ADDRESS
PARCEL ID: 70-05	PICARILLO, KATHLEEN & JONIS, DOUGLAS A.	18 BITURNAS STREET, NASHUA, NH 03064
PARCEL ID: 70-12	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 70-13	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: 70-14	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: 71-01	FIMBEL DOOR CORPORATION	17 BROADVIEW AVENUE, NASHUA, NH 03064
PARCEL ID: 71-02	CITY OF NASHUA & ROW/NH-DOT	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 71-04	CITY OF NASHUA & STATE OF NH DOT-D. WINTERLE	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 77-03	CITY OF NASHUA	22 KEHOE AVENUE, NASHUA, NH 03060
PARCEL ID: 77-05	NASHUA MILLIARD ASSOCIATES, INC.	P.O. BOX 788, NASHUA, NH 03081
PARCEL ID: 77-06	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 77-08	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 77-11	RIVERSIDE PROPERTIES OF NASHUA, INC.	22 KEHOE AVENUE, NASHUA, NH 03060
PARCEL ID: 85-23	LOVEJOY, THERESA L.	74 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-27	THERREN, IRENA	72 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-28	BC-AD PROPERTIES, LLC.	447 MAIN DUNSTABLE ROAD, NASHUA, NH 03062
PARCEL ID: 85-29	FIGARO, JAY	68 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-36	BYRD, WILLIAM J. & ABRAIL A.	11 SHADY LANE, NASHUA, NH 03062
PARCEL ID: 85-50	ALEX, ARLIN C.	64 CHERRYWOOD DRIVE, NASHUA, NH 03062
PARCEL ID: 85-87	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-78	LEDGE/MCLAREN LTD PARTNERSHIP CO, FINLAY MANAGEMENT, INC.	1102 AIA N STE 206, PONTE VEDRA, FL 32082
PARCEL ID: 85-81	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 85-93	ROBERTS, JOSEPH F REV TRUST	P.O. BOX 414, NASHUA, NH 03061
PARCEL ID: 85-101	LEITH, ROBERT W.	19 BURGESS STREET, NASHUA, NH 03064
PARCEL ID: 121-03	JOHNSON, FRANCIS E. & GEORGETTE	1 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-26	HEMENWAY, KRISTINE S. & JEFFEREY B.	3 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-27	MATARAZZO, ANTHONY	530 BROAD STREET, NASHUA, NH 03063
PARCEL ID: 121-28	SHELDON, FREDRICK W.	7 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-29	GAGNON, SANDRA	9 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-30	LAPINSKI, VIRGINIA	11 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-31	WARD, CHARLES M.	13 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-32	FORCHER, EDWARD C LIVING TRUST	3 KIRKWOOD DRIVE, NASHUA, NH 03064
PARCEL ID: 121-33	CLEMONS, JODI L.	17 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-34	PATACCHOLA, DAVID	101 MIDDLESEX TRKE STE 6, BURLINGTON, MA 01803
PARCEL ID: 121-35	FARLAND, BEATRICE REV TRUST	21 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-36	ROY, ADAM E.	1 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-37	GARNER, CHRISTOPHER J. & DIXIE L.	73 CONCORD STREET, NASHUA, NH 03064
PARCEL ID: 121-38	CAMIRAND REV LIVING TRUST & CAMIRAND, SUSAN E. TRUSTEE	7 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-39	BOUCHER, JOSEPH JR & DEBERAL	9 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-47	GIROUARD, MICHAEL & DANIELLE MAHON	13 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-48	BIGLEY, MARY A.	15 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-49	PAPPAS, ATHENA & JAMIE	17 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-50	TOURLITIS, NICHOLAS & MARIA	17 WOODCREST DRIVE, HUDSON, NH 03061
PARCEL ID: 121-51	BISSONNETTE, L REV TRUST & BISSONNETTE, ROGER T REV TRUST	17C DINSWOOD POINT ROAD, GILFORD, NH 03249
PARCEL ID: 121-79	VERRY, RAYMOND T.	73 SOUTH ROAD, LONDONDERRY, NH 03033
PARCEL ID: 121-86	CARRIER, THERESA G.	2 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-93	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 133-25	DCL PROPERTIES, LLC.	88-1/2 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 133-27	HIGHLAND GROUP, LLC.	88 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 134-16	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: E-447A	STATE OF NEW HAMPSHIRE & DOT JOHN O. MORTON BUILDING	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: E-1417	LIBERTY SIMON STREET, LLC. CO. LIBERTY COMPANIES	3 NEWTON EXECUTIVE OK STE 102, NEWTON, MA 02462
PARCEL ID: E-1423	BT-NEWYO, LLC.	P.O. BOX 28606, ATLANTA, GA 30356
PARCEL ID: E-1424	GRACE FELLOWSHIP OF NASHUA, INC.	8 FRANKLIN STREET, NASHUA, NH 03064
PARCEL ID: E-2195	VICKERRY REALTY CO TRUST, CO. BRIAN MORISSEAU TRUSTEE	25 ORCHARD VIEW DRIVE, LONDONDERRY, NH 03053
PARCEL ID: E-2191	CITY OF NASHUA CO. EAGLECREEK R E. LLC.	P.O. BOX 167, 116 STATE STREET, NESHKORD, WI 54980
PARCEL ID: E-2193	CITY OF NASHUA CO. P.O. BOX 2019	P.O. BOX 2019, NASHUA, NH 03061

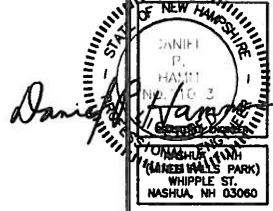
FOR CONSTRUCTION



PREPARED BY:

DATE	DESCRIPTION	BY	CHK APP'D
07/19/13	FOR CONSTRUCTION	BT	
07/29/13	FOR CONSTRUCTION	BT	

ABUTTERS LIST



C-2

FOR CONSTRUCTION



40 WESTWALL PARKWAY  
WESTPORT, NH 07591  
(603) 350-3300 TEL



140 W. GORHAM STREET  
BELLINGHAM, WA 98201  
TEL: (360) 835-5858  
FAX: (360) 835-5858

PREPARED BY:

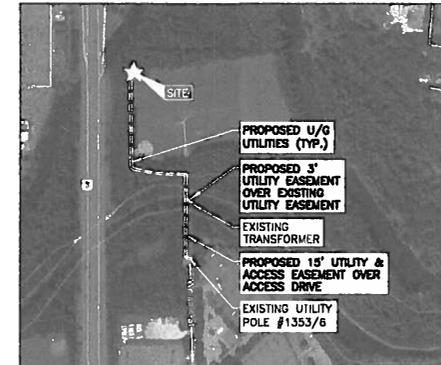
COMPOUND PLAN

KEY	DATE	DESCRIPTION	BY	CHECKED
1	07/15/14	FOR CONSTRUCTION		
2	07/29/15	FOR CONSTRUCTION		

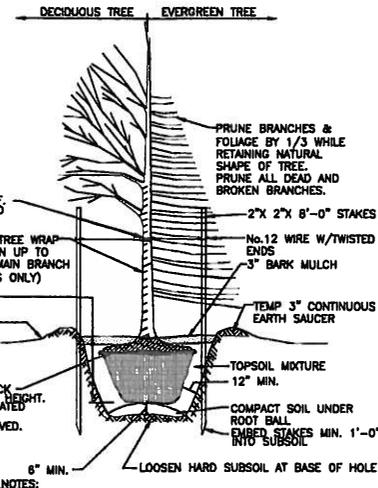


DANIEL J. HAM  
71013  
NASHUA, NH 03060

A-1



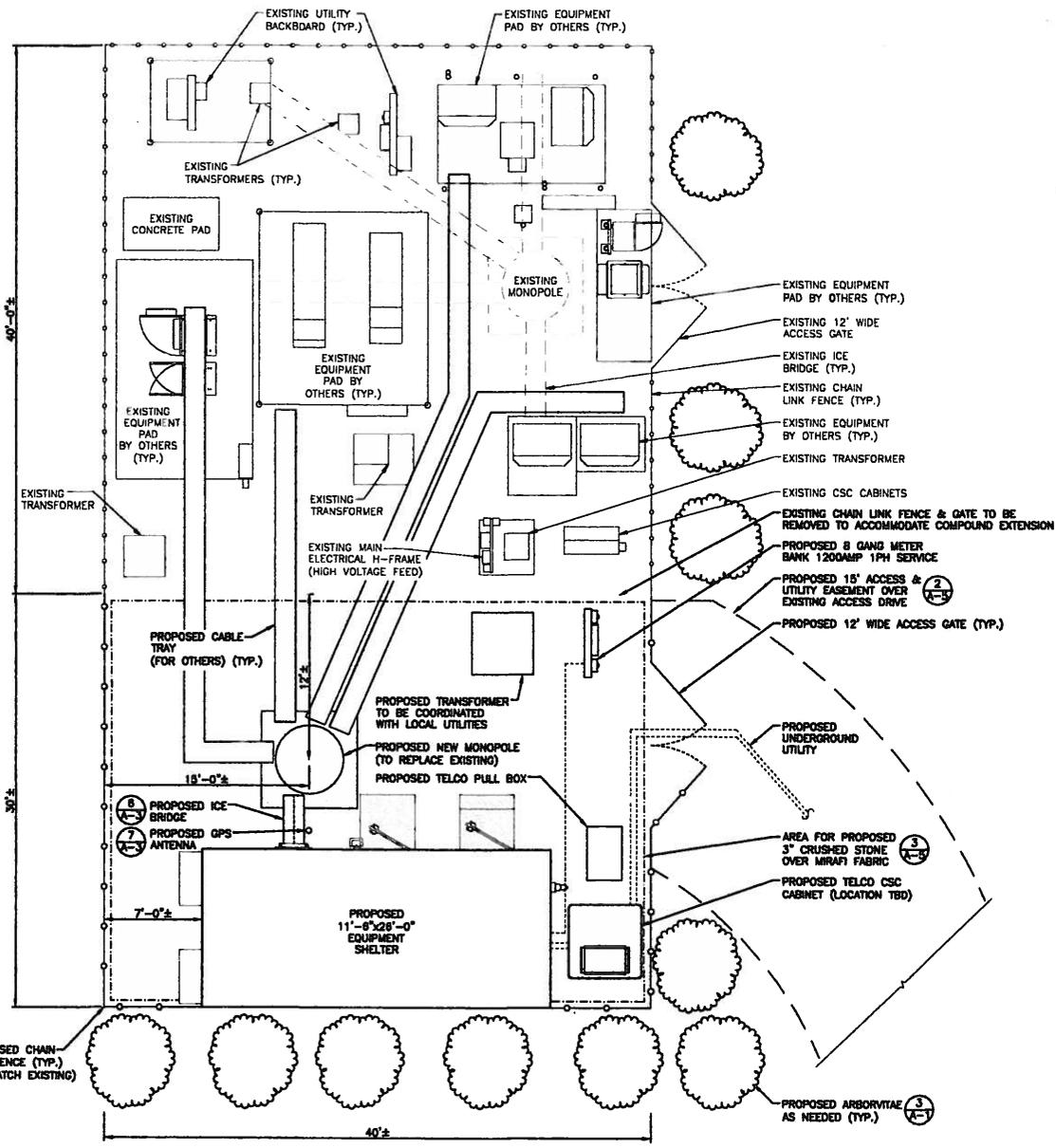
KEY PLAN  
SCALE: N.T.S.



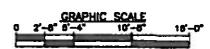
PLANTING DETAIL  
SCALE: N.T.S.

APPROXIMATE TOWER COORDINATES: LAT: N42° 45' 50.40" N  
LONG: W71° 29' 32.80" W

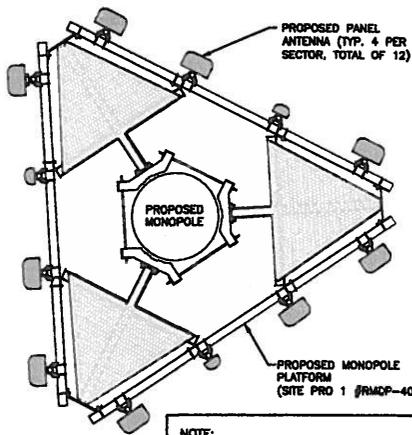
NOTE:  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.



COMPOUND PLAN  
SCALE: 3/16" = 1'-0"



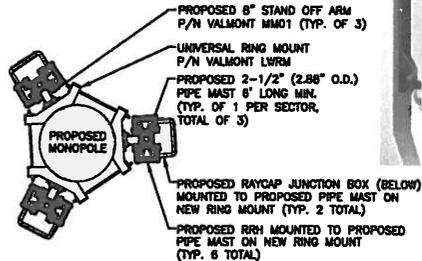
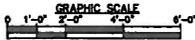




NOTE: CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF RRH'S & JUNCTION BOXES AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

ANTENNA, RRH & JUNCTION BOX PLAN

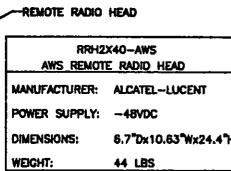
SCALE: 1/2"=1'-0"



RRH MOUNT SHALL BE MOUNTED AS CLOSE TO THE RAD CENTER AS POSSIBLE

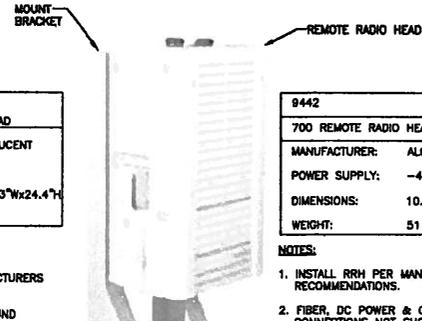
AWS REMOTE RADIO HEAD

SCALE: N.T.S.



NOTES:

1. INSTALL RRH PER MANUFACTURERS RECOMMENDATIONS.
2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

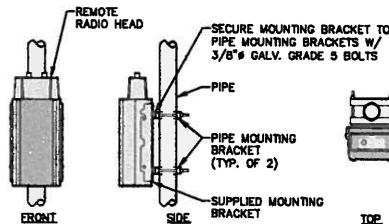


NOTES:

1. INSTALL RRH PER MANUFACTURERS RECOMMENDATIONS.
2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

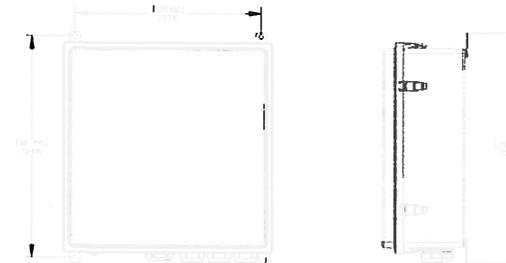
700 REMOTE RADIO HEAD

SCALE: N.T.S.



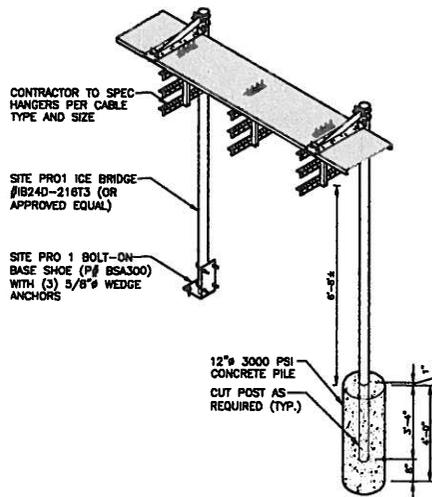
REMOTE RADIO HEAD

SCALE: N.T.S.



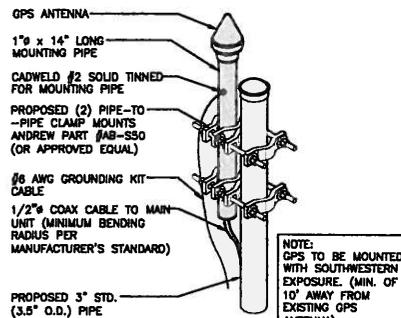
RAYCAP JUNCTION BOX

SCALE: N.T.S.



COAX ICE BRIDGE

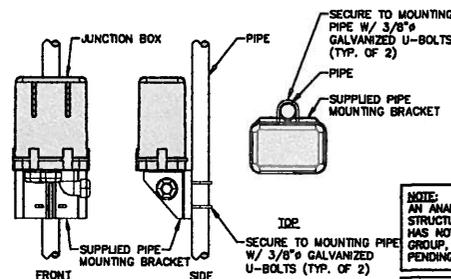
SCALE: N.T.S.



NOTE: GPS TO BE MOUNTED WITH SOUTHWESTERN EXPOSURE. (MIN. OF 10' AWAY FROM EXISTING GPS ANTENNA)

GPS ANTENNA MOUNTING DETAIL

SCALE: N.T.S.



JUNCTION BOX

SCALE: N.T.S.

NOTE: AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

NOTES:

1. VERIFY AZIMUTHS W/ RF ENGINEER.
2. EQUIPMENT SHELTER DESIGN PROVIDED BY OTHERS.

FOR CONSTRUCTION



PREPARED BY:

ANTENNA PLAN & DETAILS

REV	DATE	DESCRIPTION	BY	CHECK
0	08/15/13	FOR CONSTRUCTION	BT	BT
1	07/29/13	FOR CONSTRUCTION	BT	BT

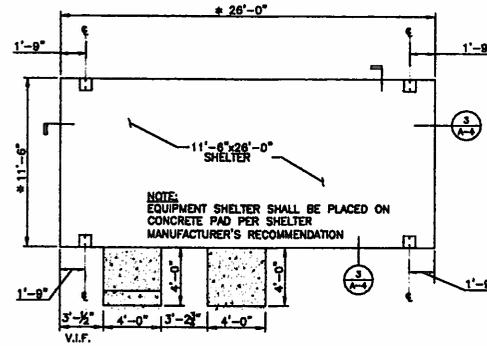
STATE OF NEW HAMPSHIRE  
 DANIEL H. STAMPA  
 REGISTERED PROFESSIONAL ENGINEER  
 LICENSE NO. 0000000000  
 100 WINDHAM AVENUE  
 (MORRIS HILLS PARK)  
 WHIPPLE ST.  
 NASHUA, NH 03080

A-3

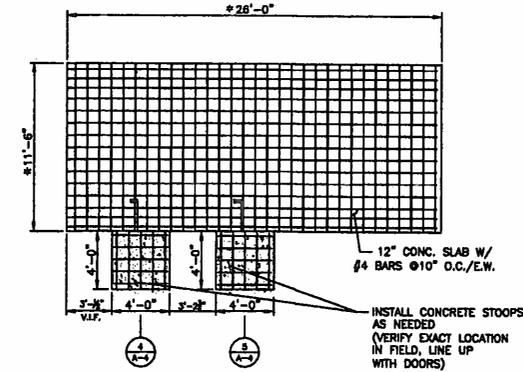
**FOUNDATION NOTES & CONCRETE SPECIFICATIONS**

- FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDGE AND ALL OTHER EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE.
- UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.
- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH ( $f'_c$ )=4000 psi. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT TO BE 6% (PLUS OR MINUS 2%).
- REINFORCING BAR TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.
- COORDINATE WITH MANUFACTURER OF PREFABRICATED SHELTER FOR LOCATION OF ATTACHMENTS TO BASE SLAB.
- ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS.
- ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.

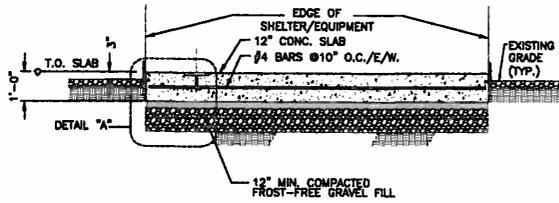
\* GC TO VERIFY EXACT SHELTER SIZE ORDERED AND MAKE SLAB EXACT SIZE AS SHELTER.



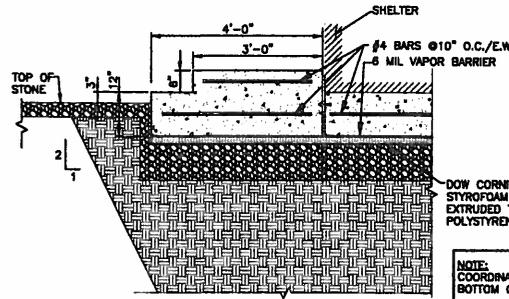
**SHELTER PLAN**  
SCALE: 1/4"=1'-0"



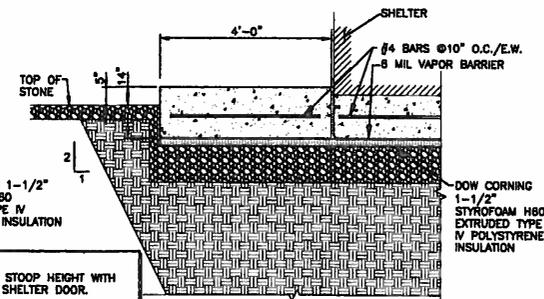
**FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"



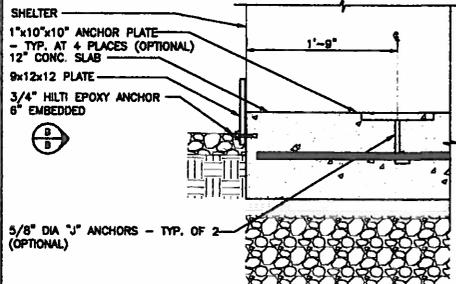
**SECTION**  
SCALE: N.T.S.



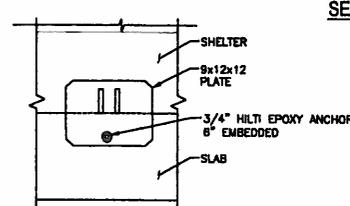
**SECTION @ GENERATOR DOOR**  
SCALE: 3/4"=1'-0"



**SECTION @ EQUIPMENT DOOR**  
SCALE: 3/4"=1'-0"



**DETAIL "A"**  
SCALE: N.T.S.



**TIE-DOWN PLATE "B - B"**  
SCALE: N.T.S.

**FOR CONSTRUCTION**



PREPARED BY:

REV	DATE	DESCRIPTION	BY	CHECKED
0	07/25/14	FOR CONSTRUCTION		
1	10/25/14	FOR CONSTRUCTION		

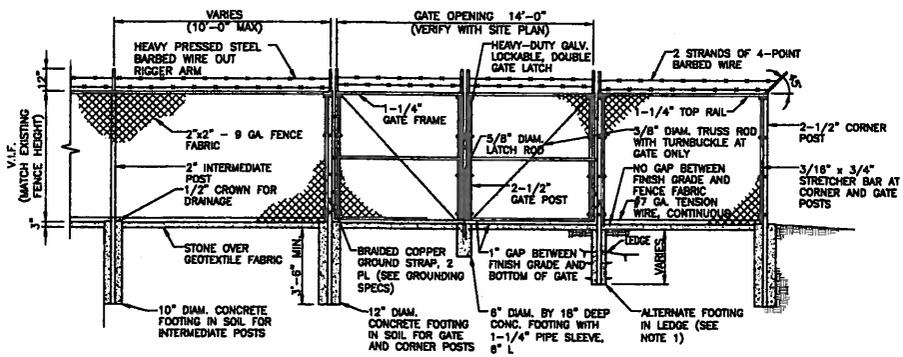
STATE OF NEW HAMPSHIRE  
 DANIEL P. HAMM  
 No. 103  
 JONAS W. HAN  
 (GREEN HILLS PARK)  
 WHIPPLE ST.  
 NASHUA, NH 03060

**A-4**

**FENCE NOTES**

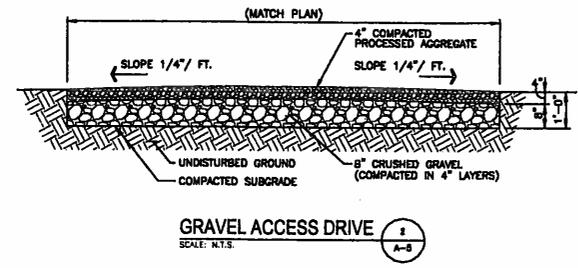
1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6". CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE. CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.

2. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.

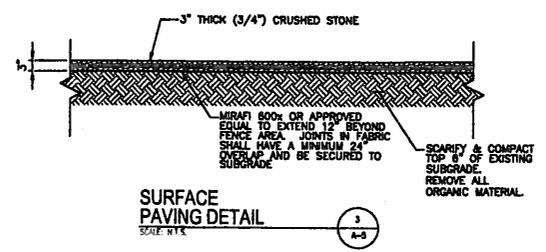


**CHAIN LINK FENCE DETAIL 1**  
SCALE: N.T.S.

CRUSHED GRAVEL		PROCESSED AGGREGATE	
SIEVE	% PASSING BY WEIGHT	SIEVE	% PASSING BY WEIGHT
5"	100	2 1/4"	100
3 1/2"	90-100	2"	95-100
1 1/2"	55-85	3/4"	90-75
1/4"	25-80	1/4"	25-45
#10	15-45	#40	5-20
#40	5-25	#100	2-12
#100	0-10		
#200	0-5		



**GRAVEL ACCESS DRIVE 2**  
SCALE: N.T.S.



**SURFACE PAVING DETAIL 3**  
SCALE: N.T.S.

**FOR CONSTRUCTION**

**verizon wireless**  
100 BIRCH LAKEWAY  
WESTBOROUGH, MA 01581  
(800) 333-3300 IL

**Hudson**  
Design Products

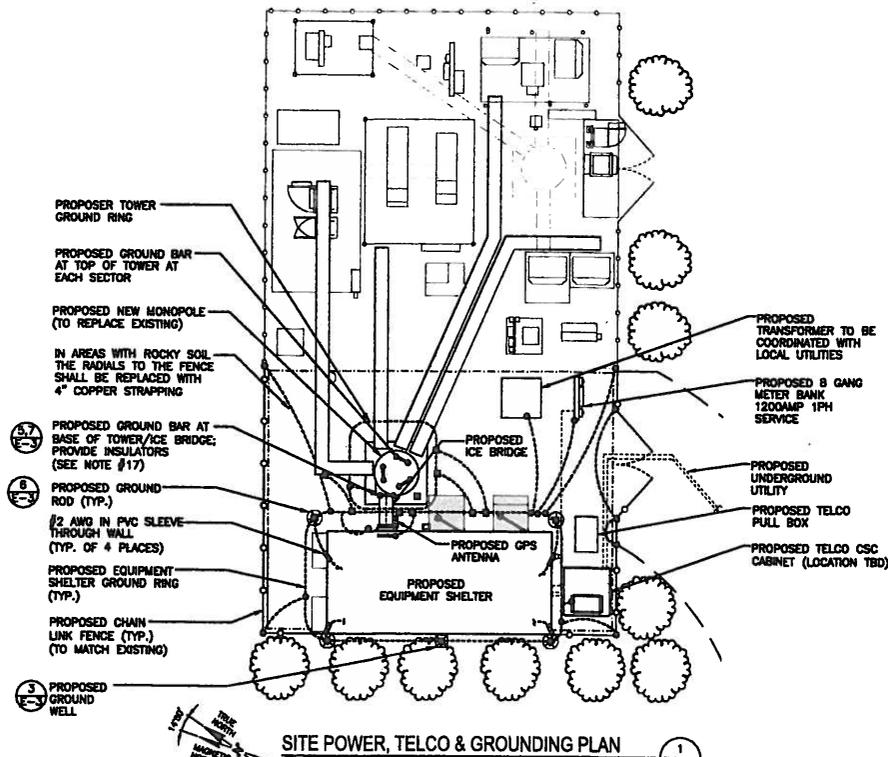
PREPARED BY:  
LEES LEE  
1793 33A-335A  
TEL: (781) 333-3350  
FAX: (781) 333-3350

**FENCE AND ROADWAY DETAILS**

REV	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	07/20/11	FOR CONSTRUCTION			
2	07/20/11	FOR CONSTRUCTION			

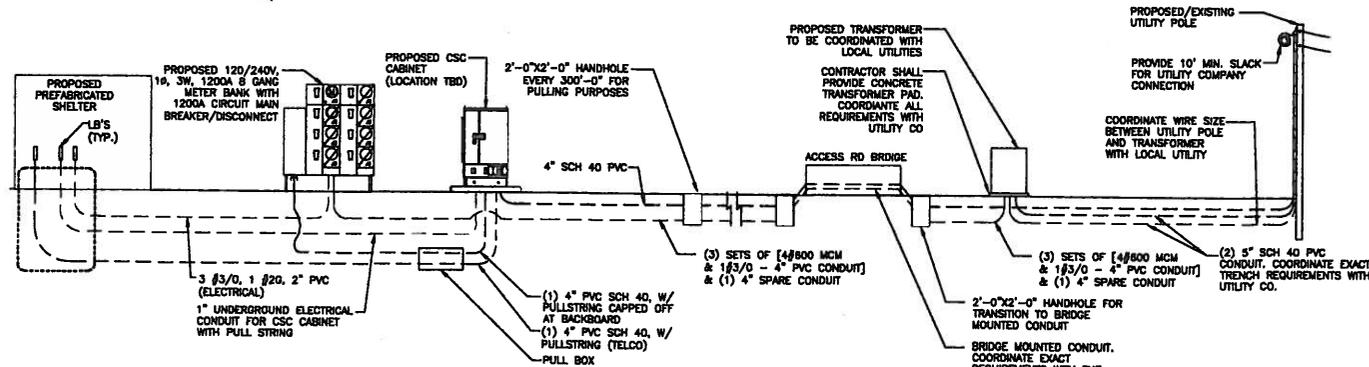
STATE OF NEW HAMPSHIRE  
JANET L. HATHORN  
GOVERNOR  
DANIEL J. HARRIS  
COMMISSIONER  
TOWN OF HAMMILL  
(MANSFIELD PARK)  
WHIPPLE ST.  
NASHUA, NH 03060

A-5



**SITE POWER, TELCO & GROUNDING PLAN**

1 E-1



- NOTES:**
1. ALL UTILITY RUNS SHALL BE COORDINATED WITH VERIZON CONSTRUCTION MANAGER AND RESPECTIVE UTILITY COMPANIES AND COMPLY WITH THE LATEST EDITION OF THE NEC ALONG WITH ANY LOCAL REQUIREMENTS.
  2. INSTALL (2) PULL STRINGS AND CAP THE TELCO CONDUITS INSIDE THE VAULT AND MESA CABINET TO AVOID WATER/ICE FILL UP.
  3. REFER TO C-1 FOR SITE LOCATION OF ALL EQUIPMENT SHOWN ABOVE.

**POWER & TELEPHONE RISER DIAGRAM**

2 E-1

**ELECTRICAL NOTES**

1. UTILITY SERVICES SHOWN ARE PROPOSED, THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, PULL BOXES, ROUTING AND ASSOCIATED REQUIREMENTS WITH LOCAL UTILITY COMPANIES.
2. VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO LICENSEE. COMMENCEMENT OF WORK SHALL BE CONSIDERED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
3. ALL EXISTING UNDERGROUND LINES ON SITE SHALL BE LOCATED PRIOR TO CONSTRUCTION.
4. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORIZED STATE AGENCIES.
5. PERFORM WORK AS REQUIRED BY SOCA AND PER LOCAL LAWS.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH LOCAL UTILITY COMPANIES AND FIELD CONSTRUCTION MANAGER.
7. ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
8. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, AND IEEE, ADA & OSM APPROVED FOR INTENDED SERVICE. INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
9. ALL ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.C.I.
10. ALL NEW WIRING SHALL BE TYPE THHN RATED 75C, 600 VOLT, WET OR DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG SOLID COPPER.
11. ALL METALLIC CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE LICENSEE PROJECT MANAGER AT JOB COMPLETION.
13. PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.
14. GUARANTEE WORK IN WRITING FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
15. CONTRACTOR SHALL CONTACT "DIO SAFE" (1-888-00-SAFE) PRIOR TO COMMENCEMENT OF WORK.

**GROUNDING NOTES**

1. ALL GROUND WIRE SHALL BE BARE COPPER #2 AWG UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH ORIGINAL EDGES AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
4. EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MIB) WITH #2 AWG INSULATED STRANDED COPPER WIRE. EQUIPMENT CABINETS SHALL EACH HAVE CO CONNECTIONS.
5. PROVIDE DEDICATED #2 AWG COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CIBS (TYPICAL FOR FOUR MOUNTING PIPES PER SECTOR).
6. ANTENNA GROUND NTS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. COORDINATE NEW LICENSEE GROUND SYSTEM WITH EXISTING SITE GROUND SYSTEM.
8. EACH SECTION OF CABLE TRAY, ICE BRIDGE AND ICE SHIELD SHALL BE CONNECTED IN A FASHION TO PROVIDE A CONTINUOUS GROUND.
9. AT ALL TERMINATIONS AT EQUIPMENT ENCLLOSURES, PANELS AND FRAMES OF EQUIPMENT, AND WIRE EXPOSED FOR GROUNDING, CONDUCTOR TERMINATION SHALL BE PERFORMED UTILIZING TWO HOLE BOLTED TORQUE COMPRESSION TYPE WITH STAINLESS STEEL SELF-LAPPING SCREWS.
10. ALL CLAMPS AND SUPPORTS USED TO SUPPORT THE GROUNDING SYSTEM CONDUCTORS AND PVC CONDUITS SHALL BE PVC TYPE (NON CONDUCTIVE). DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR.
11. ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHIELD ANTI-CORROSION AGENT SUCH AS TAB KOPR SHIELD. VERIFY PRODUCT WITH LICENSEE PROJECT MANAGER.
12. ALL BELTS, WRENCHES AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
13. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND SEAL TO THE EQUIPMENT GROUND BUS IN THE PANELBOARD.
14. GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
15. GROUND CONDUIT SHIELD AT BOTH ENDS USING MANUFACTURER'S GUIDELINES.
16. REINFORCEMENT IN EQUIPMENT RIBS TO BE WELDED AND REINFORCEMENT TO BE BONDED TO GROUNDING RING.
17. ALL GROUND BARS SHALL BE GALVANIZED WITH AWR-TRETT HARDWARE.

**GROUNDING LEGEND**

- ⊖ DIOTHERMIC TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- #2 SOLID THINED COPPER WIRE (UNLESS OTHERWISE NOTED)
- ⊗ 5/8" x 10'-0" COPPER CLAD GROUND ROD
- ⊠ GROUND WELL

**FOR CONSTRUCTION**

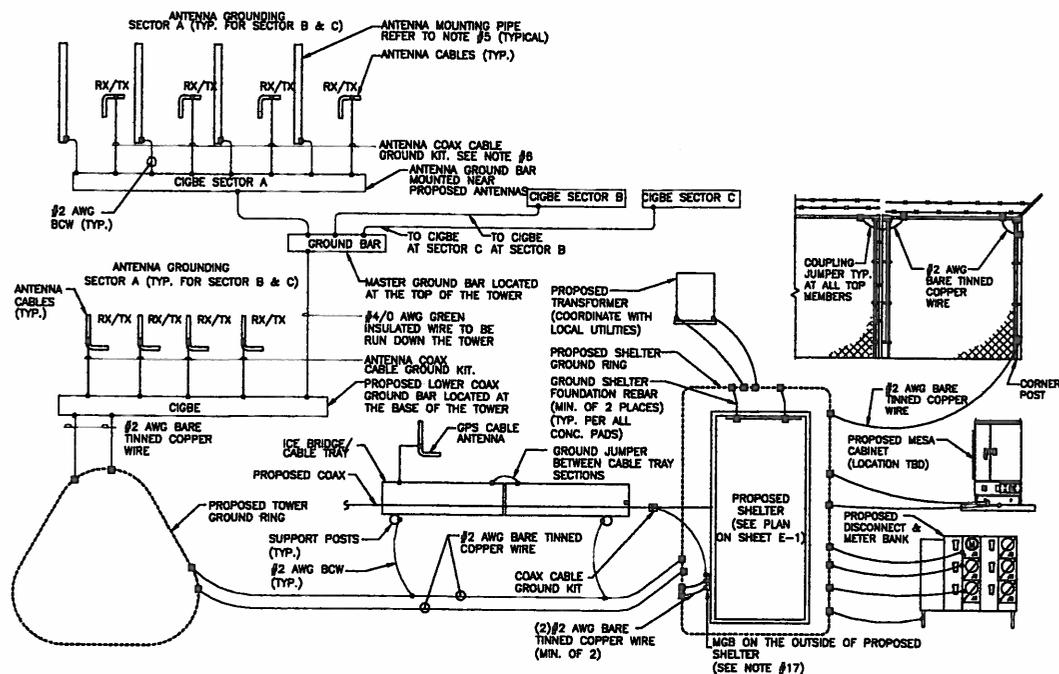


**ELECTRICAL ONE-LINE PLAN & NOTES**

NO.	DATE	DESCRIPTION	BY	CHKD	APP'D
1	07/28/15	FOR CONSTRUCTION			

STATE OF NEW HAMPSHIRE  
 DANIEL P. HANCOCK  
 REGISTERED PROFESSIONAL ENGINEER  
 LICENSE NO. 11111  
 11111 MAIN STREET  
 NASHUA, NH 03080

**E-1**



GROUNDING  
RISER DIAGRAM  
SCALE: N.T.S.

1  
E-2

FOR CONSTRUCTION



100 BRIDGE PLAZA  
WESTBOROUGH, MA 01581  
(508) 336-3300 TEL



100 GOSPOD STREET  
BURLINGTON, MA 01803  
TEL: (978) 336-5588

PREPARED BY:

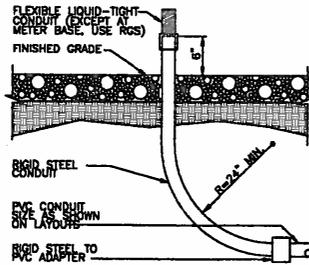
GROUNDING RISER DIAGRAM

REV	DATE	DESCRIPTION	BY	CHKD	APP'D
1	10/24/18	FOR CONSTRUCTION			

STATE OF NEW HAMPSHIRE  
JAN 11  
-1-11-18  
2018  
Daniel J. Hagan  
Professional Engineer  
No. 10000

100 WHEELER AVENUE  
(MADEIRA PARK)  
WHIPPLE ST.  
NASHUA, NH 03080

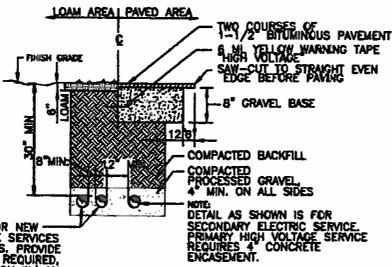
E-2



**CONDUIT STUB-UP**

SCALE: NTS

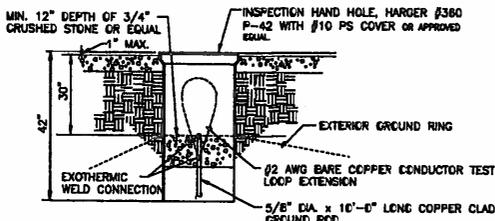
1  
E-3



**TYPICAL DIRECT JOINT SERVICE BURIED CONDUIT DETAIL**

SCALE: NTS

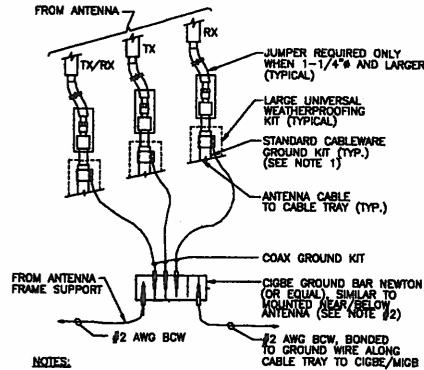
2  
E-3



**GROUND WELL DETAIL**

SCALE: NTS

3  
E-3



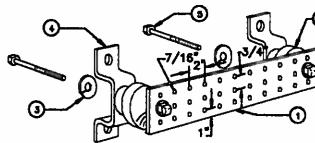
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**STANDARD DETAIL CONNECTION OF GROUND WIRES TO GROUND BAR (CIGBE)**

SCALE: NTS

4  
E-3



LEGEND

- GALVANIZED STEEL GROUND BAR, 3/4" X 4" X 20" OR OTHER LENGTH AS REQUIRED, HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
- 5/8" LOCKWASHERS OF EQUAL
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056 OR EQUAL
- 5/8"-11 X 1" H.H.C.S. BOLTS

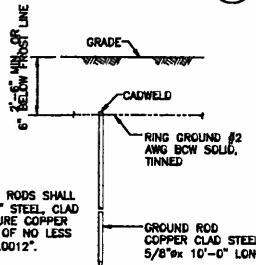
NOTES:

- ALL BOLTS, NUTS, WASHERS AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**GROUNDING - STANDARD DETAIL GROUND BAR**

SCALE: NTS

5  
E-3

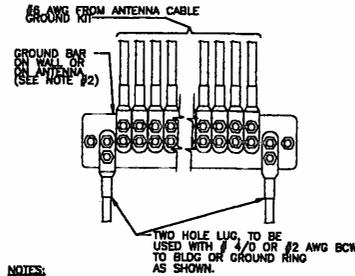


NOTE: COPPER RODS SHALL BE 5/8" STEEL CLAD WIRE PURE COPPER JACKET OF NO LESS THAN 0.0012".

**TYPICAL GROUND ROD DETAIL**

SCALE: NTS

6  
E-3



NOTES:

- CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) ON ALL LUG CONNECTIONS.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**GROUNDING-STANDARD DETAIL INSTALLATION OF GROUND WIRE TO GROUND BAR**

SCALE: NTS

7  
E-3

FOR CONSTRUCTION



400 BEEBING PARKWAY  
WESTBOROUGH, MA 01581  
5081 253-3811

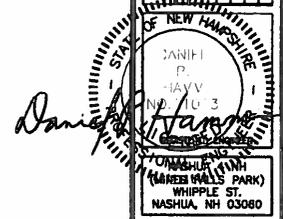


100 BROADWAY, SUITE 300  
NEWTON, MA 02459  
TEL: (781) 552-5553  
FAX: (781) 552-5558

PREPARED BY:

REV	DATE	DESCRIPTION	BY	CHK	APP
0	08/21/14	FOR CONSTRUCTION			
1	10/28/15	FOR CONSTRUCTION			

ELECTRICAL DETAILS



**E-3**

## FIRST AMENDMENT TO SITE LEASE AGREEMENT

THIS FIRST AMENDMENT TO SITE LEASE AGREEMENT ("**Amendment**"), dated as of the latter of the signatures below, is by and between the City of Nashua, a municipality incorporated in the State of New Hampshire, having a mailing address of 229 Main Street, PO Box 2019, Nashua, New Hampshire 03061, (hereinafter referred to as "**Lessor**") and Sprint Spectrum Realty Company, L.P. successor in interest to Sprint Spectrum L.P, a limited liability company formed in the State of Delaware 4900 Main Street, Kansas City, Missouri 64112 (hereinafter referred to as "**Lessee**").

WHEREAS, Lessor and Lessee entered into a Site Lease Agreement dated on April 21, 2000, whereby Lessor leased to Lessee certain Premises, therein described, that are a portion of the Lessor's property located off Whipple Street, Mines Fall Park, Nashua, NH ("**Lease**"); and,

WHEREAS, Lessor is replacing the Existing Tower to which Lessee's communication equipment is attached; and,

WHEREAS, Lessor and Lessee, in their mutual interest, wish to amend the Lease as set forth below accordingly.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee agree as follows:

1. **Tower Replacement.** The Existing Tower will be decommissioned and removed from Lessor's property. A new tower ("Replacement Tower") will be constructed and Lessee's wireless communications equipment now installed on the Existing Tower will be migrated to the Replacement Tower and attached as set forth in the Lease. The cost of migrating Lessee's communications equipment from the Existing Tower to the Replacement Tower shall be borne by Lessee.
2. **Expansion of Lessee's Facilities.** Should Lessee elect to increase its tower load on Replacement Tower (an increase will be determined based upon the Lessee's current tower load on the Existing Tower), it shall be subject to an increase in the base rent for any such increased tower load.

3. **Other Terms and Conditions Remain.** In the event of any inconsistencies in the Lease and this First Amendment, the terms of this amendment shall control. Except as expressly set forth in this First Amendment, the Lease otherwise is unmodified and remains in full force and effect. Each reference in the Lease to its self shall be deemed also to refer to this First Amendment.
4. **Capitalized Terms.** All capitalized terms used but not defined herein shall have the same meanings as defined in the Lease.

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this First Amendment on the dates set forth below.

**"LESSOR"**

\_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**"LESSEE"**

*Spect Spectrum L.P*  
\_\_\_\_\_

By: *P. Gard*  
\_\_\_\_\_

Name: *Peter Gard*  
\_\_\_\_\_

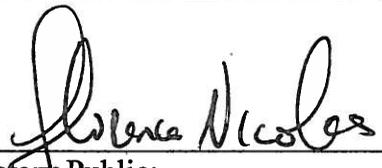
Title: *New England Site Dev Mgr*  
\_\_\_\_\_

Date: *9/4/15*  
\_\_\_\_\_

TENANT ACKNOWLEDGEMENT

STATE OF New Hampshire  
COUNTY OF Hillsborough

On the 11<sup>th</sup> day of September 2015 before me personally appeared Peter Gined, and acknowledged under oath that he is the authorized agent of Sprint Spectrum Realty Company of \_\_\_\_\_, the Lessee named in the attached instrument, and as such is authorized to execute this instrument on behalf of the Lessee.



Notary Public:  
My Commission Expires: **FLORENCE NICOLAS**  
**NOTARY PUBLIC**  
**State of New Hampshire**  
**My Commission Expires**  
**January 28, 2020**

LANDLORD ACKNOWLEDGEMENT

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2015 by \_\_\_\_\_ of the \_\_\_\_\_ a \_\_\_\_\_, on behalf of the \_\_\_\_\_.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_



FOR CONSTRUCTION



# NASHUA 4 NH (MINES FALLS PARK)

**WHIPPLE ST.  
NASHUA, NH 03060**

**Hudson**  
Design Group, LLC

100 DAVIS STREET, SUITE 300  
NASHUA, NH 03060  
TEL: (978) 557-5553  
FAX: (978) 557-5555

PREPARED BY:



**DIRECTIONS FROM WESTBOROUGH, MA TO SITE:**  
GET ON I-90 E IN FRAMMINGHAM FROM MA-30 E/E MAIN ST. SLIGHT LEFT TOWARD MA-3 E AND CONTINUE ONTO MA-3 E MERGE ONTO I-93 VIA THE RAMP TO LOWELL TAKE EXIT 33 FOR COUNTY ROUTE 4 N TOWARD N CHELSEA/TOWN TURN LEFT ONTO MA-4 N TURN LEFT TO STOP ON MA-4 N (LOOK FOR US-3 TO MERGE ONTO US-3 N VIA THE RAMP TO NASHUA NH ENTERING NEW HAMPSHIRE TAKE EXIT 5 FOR I94-11 TOWARD NASHUA/PEPPERELL MA/NEW HAMPSHIRE 111A TAKE EXIT 5A FOR SMOON ST. TURN LEFT ONTO WHIPPLE ST.

CONSULTANT TEAM	
<b>PROJECT ENGINEER</b>	HUDSON DESIGN GROUP LLC 1800 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 N. ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 338-5588
<b>MEP ENGINEER</b>	CSI ENGINEERING, LLC 999 BROADWAY SUITE 208 SAUGUS, MA 01906 TEL: 1-(781)-233-4808 FAX: 1-(781)-233-4848

PROJECT SUMMARY	
<b>SITE NAME:</b>	NASHUA 4 NH MINES FALLS PARK
<b>SITE ADDRESS:</b>	WHIPPLE STREET NASHUA, NH 03063
<b>APPLICANT:</b>	400 FRIBERG PARKWAY WESTBOROUGH, MA 01581 (508) 330-3330 TEL
<b>ZONING DISTRICT:</b>	RB - URBAN RESIDENCE
<b>ZONING JURISDICTION:</b>	CITY OF NASHUA
<b>LATITUDE:</b>	N 42° 48' 50.40"
<b>LONGITUDE:</b>	W 71° 29' 32.60"
<b>PARCEL ID:</b>	E-1487
<b>PROPERTY OWNER:</b>	CITY OF NASHUA, NH 229 MAIN STREET NASHUA, NH 03060

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	PLOT PLAN
C-2	ABUTTERS LIST
A-1	COMPOUND PLAN
A-2	ELEVATION & PROPOSED MONOPOLE LOADING CHART
A-3	ANTENNA PLAN & DETAILS
A-4	SHELTER FOUNDATION DETAILS
A-5	FENCE & ROADWAY DETAILS
E-1	ELECTRICAL ONE-LINE PLAN & NOTES
E-2	GROUNDING RISER DIAGRAM
E-3	ELECTRICAL DETAILS

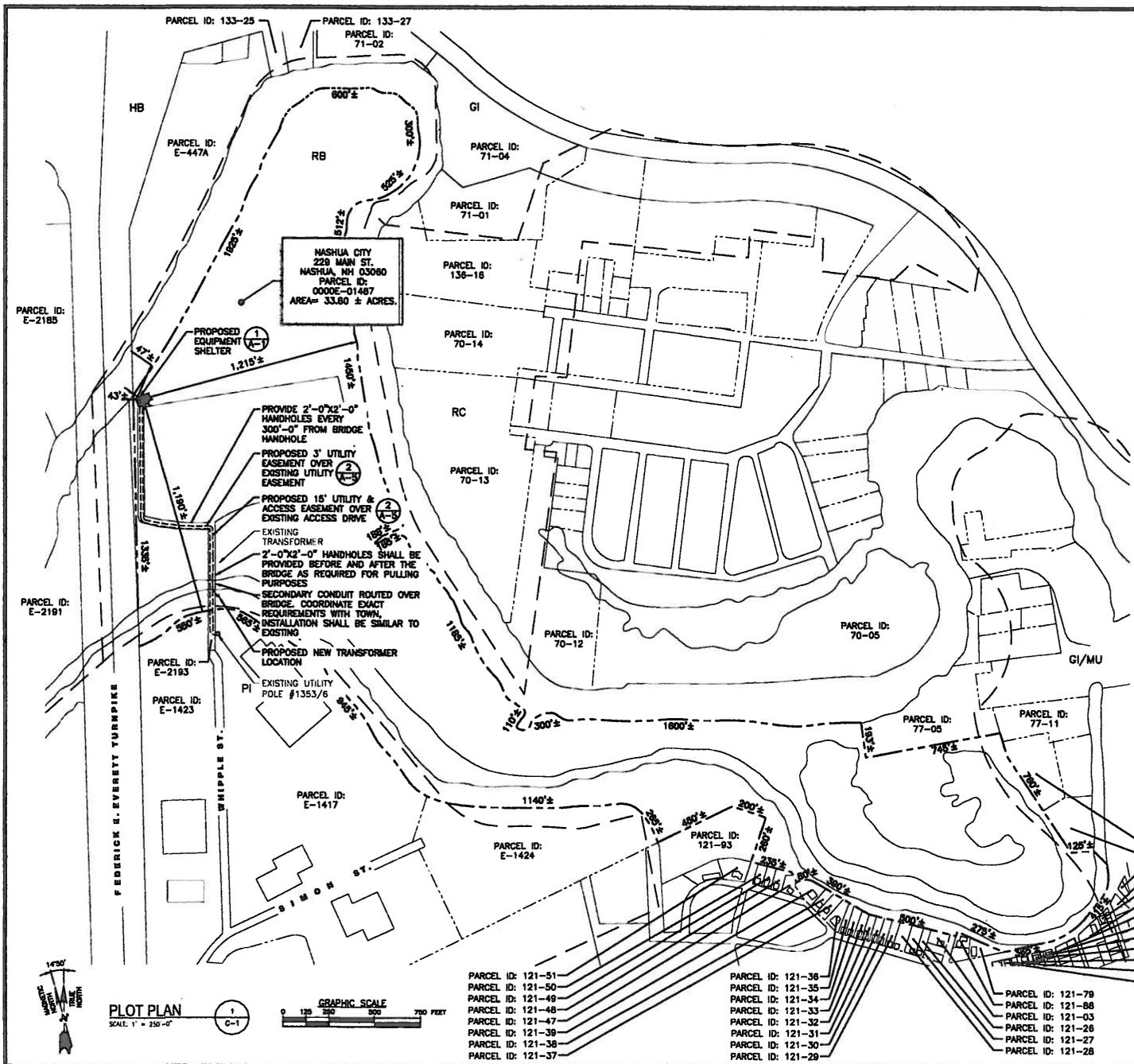
**TITLE SHEET**

DATE	DESCRIPTION	BY	CHKD
07/25/13	FOR CONSTRUCTION	DP	DP

STATE OF NEW HAMPSHIRE  
JANIE P. HAY  
NOV 2013  
*Daniel Pittman*

NASHUA, NH  
(MINES FALLS PARK)  
WHIPPLE ST.  
NASHUA, NH 03060

**T-1**



- TOWN NOTES:**
- IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE SHOWN ON THIS PLAN OR ANY NOT SHOWN, OR CONVEY OF ALTER AND STRUCTURE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE CITY.
  - FUTURE BUILDING CONSTRUCTION SHALL INCORPORATE FOUNDATION DAMAGE SYSTEMS EXCEPT THOSE AS PREVIOUSLY ESTABLISHED THAT SPECIFIC BUILDING SITES ARE LOCATED IN WELL DRAINED SOILS AND THAT SUCH SYSTEMS ARE NOT REQUIRED.
  - PRIOR TO ANY WORK BEING CONDUCTED A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE PLANNING STAFF AND OTHER CITY DEPARTMENTS AS NECESSARY TO REVIEW THIS PROPOSAL.
  - SITE IS NOT IN TOWN HISTORIC DISTRICT.
  - SITE IS NOT IN WETLANDS.

APPROXIMATE TOWER COORDINATES: LAT: N42° 45' 50.40"N LONG: W71° 29' 32.60"W

- SITE SPECIFIC NOTES:**
- SITE SURVEY HAS NOT BEEN CONDUCTED BY HUCSON DESIGN GROUP, LLC FOR THIS PROJECT. ALL SETBACKS SHOWN ARE TAKEN FROM THE CORNERS OF PROPOSED EQUIPMENT TO PROPERTY LINES AS APPROXIMATE.
  - VERIFY ADJACENT W/ RF ENGINEER.
  - PROPERTY LINE INFORMATION IS COMPILED FROM ASSESSORS PLAN AND RECORD DOCUMENTS AND IS NOT TO BE CONSIDERED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.

**SOURCE:**  
LOT LINES COMPILED FROM THE CITY OF NASHUA, NH ASSESSORS AND GIS MAPS

**LEGEND**

- PROPERTY LINE - SUBJECT PARCEL
- - - PROPERTY LINE - ADJUTERS
- - - TOWN BOUNDARY LINE
- EXISTING BUILDING

**ZONES**

RB	URBAN RESIDENCE
HB	INDUSTRY BUSINESS
GI	GENERAL INDUSTRIAL
RC	URBAN RESIDENCE
PI	PARK INDUSTRIAL
GI/MU	GENERAL INDUSTRIAL/MAJOR USE

**ZONING INFORMATION**

JURISDICTION: CITY OF NASHUA, NH  
ZONING DISTRICT TYPE: RB - URBAN RESIDENCE  
TRANSFORMER SPEC REQUIREMENTS: REQUIRED ± (FT) PROPOSED ± (FT) FROM PROPOSED EQUIPMENT

FRONT YARD SETBACK:	10'	1,100'±
SIDE YARD SETBACK:	10'	45' ± & 1,215'±
REAR YARD SETBACK:	20'	47'

(ALL MEASUREMENTS ARE IN FEET & UNLESS OTHERWISE NOTED)

- PARCEL ID: 77-03
- PARCEL ID: 77-08
- PARCEL ID: 85-87
- PARCEL ID: 85-81
- PARCEL ID: 85-50
- PARCEL ID: 85-78
- PARCEL ID: 85-38
- PARCEL ID: 85-29
- PARCEL ID: 85-28
- PARCEL ID: 85-27
- PARCEL ID: 85-23
- PARCEL ID: 85-101
- PARCEL ID: 85-93

- PARCEL ID: 121-51
- PARCEL ID: 121-50
- PARCEL ID: 121-49
- PARCEL ID: 121-48
- PARCEL ID: 121-47
- PARCEL ID: 121-39
- PARCEL ID: 121-38
- PARCEL ID: 121-37

- PARCEL ID: 121-36
- PARCEL ID: 121-35
- PARCEL ID: 121-34
- PARCEL ID: 121-33
- PARCEL ID: 121-32
- PARCEL ID: 121-31
- PARCEL ID: 121-30
- PARCEL ID: 121-29

- PARCEL ID: 121-79
- PARCEL ID: 121-88
- PARCEL ID: 121-03
- PARCEL ID: 121-28
- PARCEL ID: 121-27
- PARCEL ID: 121-28

**FOR CONSTRUCTION**



**PLOT PLAN**

DATE	DESCRIPTION	BY	CHK	APP
07/29/14	FOR CONSTRUCTION	DL	DL	DL
07/29/14	FOR CONSTRUCTION	DL	DL	DL

STATE OF NEW HAMPSHIRE  
DANIEL P. HAMM  
PLANNING & ZONING  
COMMISSIONER  
MINNER PARK  
WHIPPLE ST.  
NASHUA, NH 03080

**C-1**

ABUTTERS LIST

PARCEL ID:	OWNER	ADDRESS
PARCEL ID: 70-05	PICARILLO, KATHLEEN & JONIS, DOUGLAS A.	18 BITURNAS STREET, NASHUA, NH 03064
PARCEL ID: 70-12	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 70-13	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATEL LOOP, HERNANDO, FL 34442
PARCEL ID: 70-14	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATEL LOOP, HERNANDO, FL 34442
PARCEL ID: 71-01	FIMBEL DOOR CORPORATION	17 BROADVIEW AVENUE, NASHUA, NH 03064
PARCEL ID: 71-02	CITY OF NASHUA & ROW/NH-DOT	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 71-04	CITY OF NASHUA & STATE OF NH DOT-D. WINTERLE	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 77-03	CITY OF NASHUA	22 KEDGE AVENUE, NASHUA, NH 03060
PARCEL ID: 77-05	NASHUA MILLIYARD ASSOCIATES, INC.	P.O. BOX 786, NASHUA, NH 03061
PARCEL ID: 77-08	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 77-09	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 77-11	RIVERSIDE PROPERTIES OF NASHUA, INC.	22 KEDGE AVENUE, NASHUA, NH 03060
PARCEL ID: 85-23	LOVEJOY, THERESA L.	74 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-27	THERRIEN, IRENA	72 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-28	BC-AD PROPERTIES, LLC.	447 MAIN DUNSTABLE ROAD, NASHUA, NH 03062
PARCEL ID: 85-29	FIGARO, JAY	68 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-30	BYRD, WILLIAM J. & ABIGAIL A.	11 SHADY LANE, NASHUA, NH 03062
PARCEL ID: 85-50	ALEX, ARUN G.	64 CHERRYWOOD DRIVE, NASHUA, NH 03062
PARCEL ID: 85-67	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 85-78	LEDGE/MCLAREN LTD PARTNERSHIP CO. FINLAY MANAGEMENT, INC.	1102 A1A N STE 206, PONTE VEDRA, FL 32082
PARCEL ID: 85-81	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 85-83	ROBERTS, JOSEPH F REV TRUST	P.O. BOX 414, NASHUA, NH 03061
PARCEL ID: 85-101	LEITH, ROBERT W.	19 BURGESS STREET, NASHUA, NH 03064
PARCEL ID: 121-03	JOHNSON, FRANCIS E. & GEORGETTE	1 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-26	HEMENWAY, KRISTINE S. & JEFFEREY B.	3 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-27	MATARAZZO, ANTHONY	530 BROAD STREET, NASHUA, NH 03063
PARCEL ID: 121-28	SHELDON, FREDRICK W.	7 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-29	GAGNON, SANDRA	9 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-30	LAPINSKI, VIRGINIA	11 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-31	WARD, CHARLES M.	13 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-32	FORCHER, EDWARD C LIVING TRUST	3 KIRKWOOD DRIVE, NASHUA, NH 03064
PARCEL ID: 121-33	CLEMONS, JODI L.	17 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-34	PATACCHIOLA, DAVID	101 MIDDLESEX TPKE STE 6, BURLINGTON, MA 01803
PARCEL ID: 121-35	FARLAND, BEATRICE REV TRUST	21 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-36	ROY, ADAM E.	1 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-37	GARNER, CHRISTOPHER J. & DIXIE L.	73 CONCORD STREET, NASHUA, NH 03064
PARCEL ID: 121-38	CAMBRAND REV LIVING TRUST & CAMBRAND, SUSAN E. TRUSTEE	7 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-39	BOUCHER, JOSEPH JR & DEBERAL	9 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-47	GROUARD, MICHAEL & DANIELLE MAHON	13 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-48	BIGLEY, MARY A.	15 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-49	PAPPAS, ATHENA & JAMIE	17 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-50	TOURLITIS, NICHOLAS & MARIA	17 WOODCREST DRIVE, HUDSON, NH 03051
PARCEL ID: 121-51	BISSONNETTE, L REV TRUST & BISSONNETTE, ROGER T REV TRUST	17C DINSMOOR POINT ROAD, GILFORD, NH 03249
PARCEL ID: 121-79	VERRY, RAYMOND T.	73 SOUTH ROAD, LONDONDERRY, NH 03053
PARCEL ID: 121-86	CARRIER, THERESA G.	2 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-93	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 133-26	DCL PROPERTIES, LLC	88-1/2 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 133-27	HIGHLAND GROUP, LLC.	88 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 134-16	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATEL LOOP, HERNANDO, FL 34442
PARCEL ID: E-447A	STATE OF NEW HAMPSHIRE & DOT JOHN O. MORTON BUILDING	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: E-1417	LIBERTY SIMON STREET, LLC. CO. LIBERTY COMPANIES	3 NEWTON EXECUTIVE OK STE 102, NEWTON, MA 02462
PARCEL ID: E-1423	ET-NHWYO, LLC.	P.O. BOX 28806, ATLANTA, GA 30358
PARCEL ID: E-1424	GRACE FELLOWSHIP OF NASHUA, INC.	8 FRANKLIN STREET, NASHUA, NH 03064
PARCEL ID: E-2185	VICKERRY REALTY CO TRUST, CO. BRIAN MORISSEAU TRUSTEE	25 ORCHARD VIEW DRIVE, LONDONDERRY, NH 03063
PARCEL ID: E-2191	CITY OF NASHUA, CO. EAGLECREEK R E, LLC.	P.O. BOX 167, 116 STATE STREET, NESHKORO, WI 54980
PARCEL ID: E-2193	CITY OF NASHUA CO. P.O. BOX 2019	P.O. BOX 2019, NASHUA, NH 03061

FOR CONSTRUCTION



PREPARED BY:

DATE	DESCRIPTION	BY	CHKD
01/27/13	FOR CONSTRUCTION	JD	
01/27/13	FOR CONSTRUCTION	JD	

ABUTTERS LIST

*Daniel P. Hampe*



COMMISSION EXPIRES 12/31/15

1000 WHEELS PARK  
WHIPPLE ST.  
NASHUA, NH 03060

C-2

**FOR CONSTRUCTION**



450 BROADWAY  
WESTPORT, MA 01581  
(508) 330-3300 TEL



1450  
NEW BEDFORD STREET  
BELLINGHAM, WA 98201  
TEL: (360) 835-5354  
FAX: (360) 835-5354

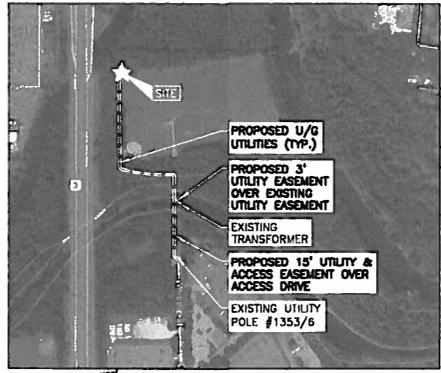
PREPARED BY:

COMPOUND PLAN

STATE OF NEW HAMPSHIRE  
JANIE L  
PLANNING  
NOV 013  
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT

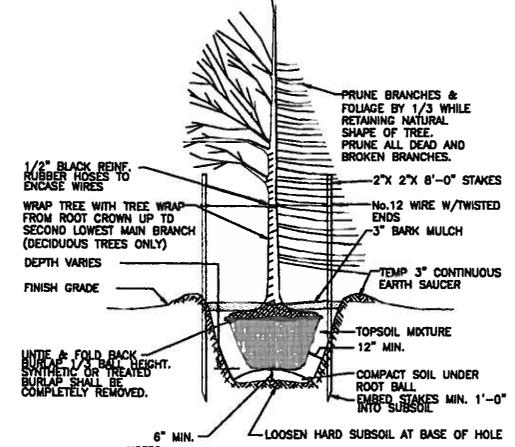
CONASHILL (MINNIE WALLS PARK)  
WHIPPLE ST.  
NASHUA, NH 03060

**A-1**



**KEY PLAN**  
SCALE: N.T.S.

DECIDUOUS TREE    EVERGREEN TREE

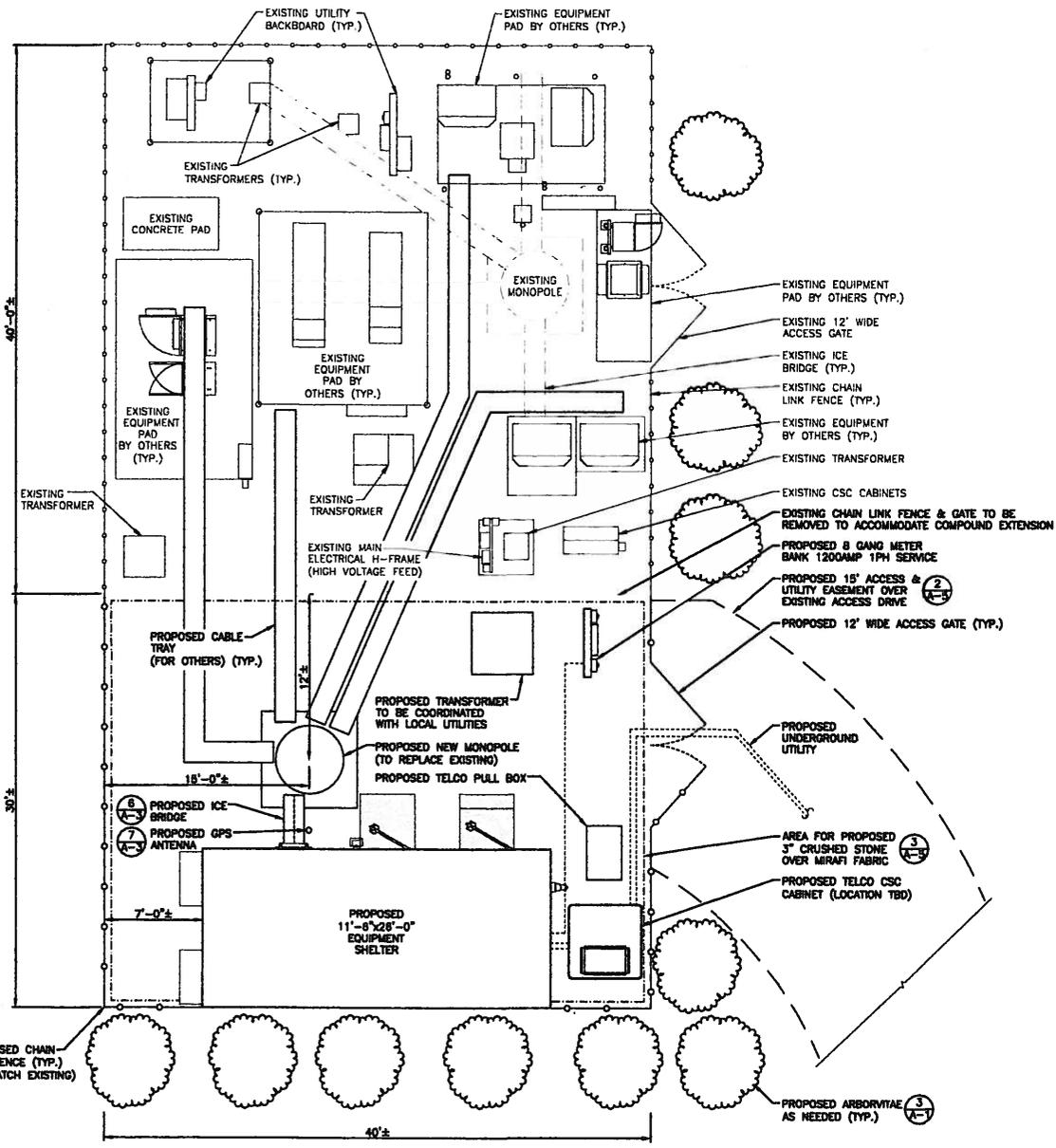


- NOTES:**
- LANDSCAPE TREES SHALL BE A MINIMUM OF 6'-0" IN HEIGHT WHEN PLANTED.
  - SPECIES PROPOSED THALIA OCCIDENTALIS PYRAMIDAL (PYRAMIDAL ARBORVITAE)

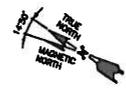
**PLANTING DETAIL**  
SCALE: N.T.S.

APPROXIMATE TOWER COORDINATES: LAT: N42° 45' 50.40" N  
LONG: W71° 29' 32.80" W

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.



**COMPOUND PLAN**  
SCALE: 3/16" = 1'-0"

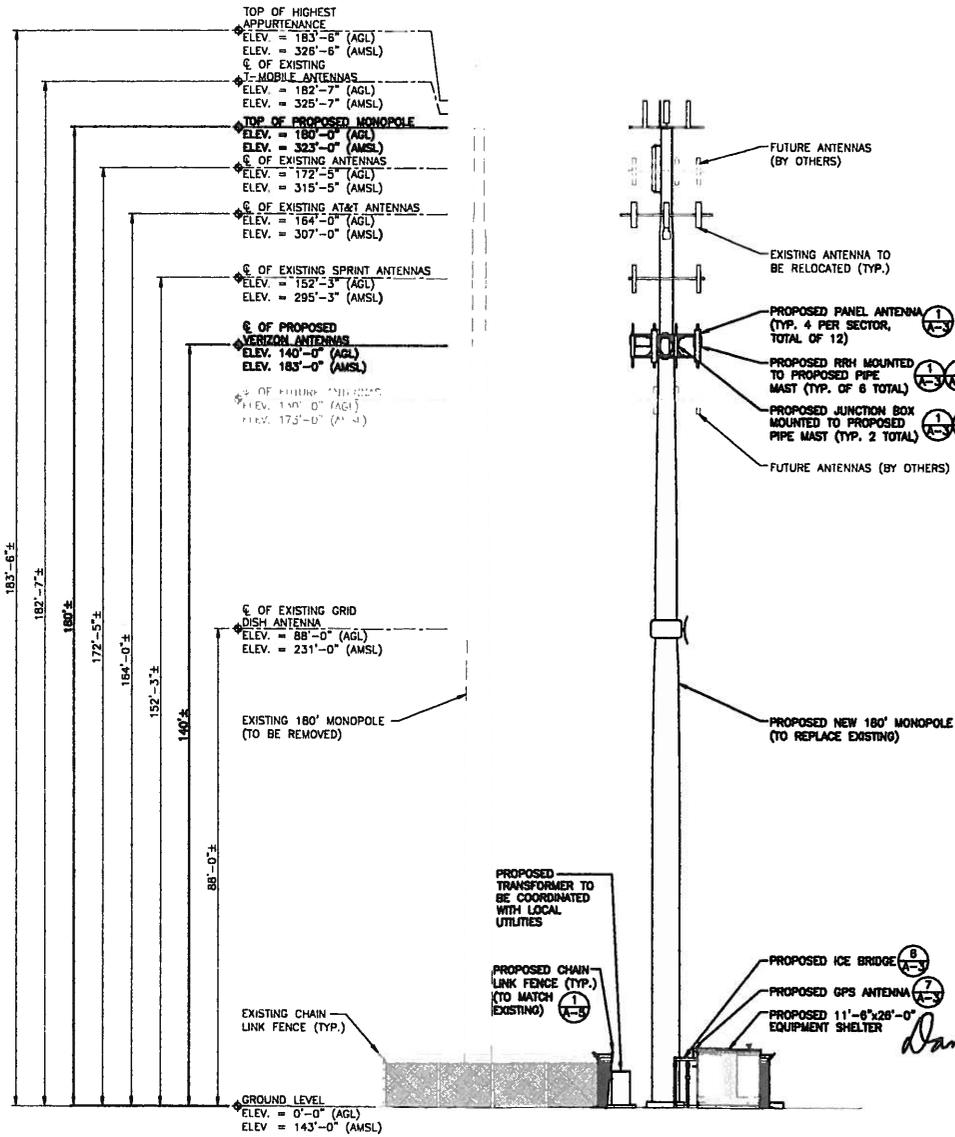


Carrier	Rad Center	PROPOSED MOUNT	Mine Falls Park (Proposed Monopole and Relocation)	Coax
Lightning Rod	183.5'	Valmont RQSMSP-472 or approved equal	Lightning rod	
T Mobile	182.7'	Valmont RQSMSP-472 or approved equal	(6) RR90-18-000P Antennas (3) APX180WV 160WVS Antennas (3) Ericsson RRY 112 71/2	(12) 1-5/8" coax (1) 1 5/8" Hybrid Cable
Unknown	172.5'	Chain Mount 2 Standoff	(1) Amphphenol 20/508	(1) 1-5/8" coax
AT&T	164'	Valmont RQSMSP-472 or approved equal	(12) HPA-65R-BUU-H8 K (4) Raycap DC-48 GO-18-8F surge arrestors (9) Ericsson RRU5-11 remote radio heads (6) Ericsson RRU5-12 remote radio heads (3) Ericsson RRU5-32 remote radio heads (3) Ericsson RRU5-E2 remote radio heads (6) A2 Module (mounted to the back of the RRU5-12's) (6) CCI Twin TMAs, model D1MABP7819/G12A	(3) 1.34" Fiber cable (8) 0.645" DC cables (3) 0.50" RFI cables (12) runs of 2-1/4" coax
Sprint	152.3'	Valmont RQSMSP-472 or approved equal	(3) APXV5PP18 Antennas (3) RRH-800 (3) RRH-1900 (3) APXVTM14 (2.5) Antennas (3) RRH8x20-2s (2.5)	(6) 1-5/8" coax
Verizon	140'	Valmont RQSMSP-472 or approved equal	Verizon (3) BXA-70063-BCF Antennas Verizon (3) BXA-70063-BCF Antennas Verizon (6) BXA-171063-BCF (9) ALLU-RRH2x40 AWS 130.50' Collar Mount (3) 700 RRHs 130.50' Collar Mount RAYCAP RDC-6276-PP-48 130.50' Collar Mount	(18) 1-5/8" coax (2) 1-5/8" fiber cables
Grid Dish	88'	flush mount	Grid dish LA3/222159-021	(1) 1/2"

NEW TOWER SHALL BE DESIGNED TO ACCOMMODATE FUTURE LOAD OF (2) ADDITIONAL CARRIERS WITH LOADING EQUAL TO AT&T LOADING (LARGEST LOADING) AT ELEVATION 172'-5" & 130'.

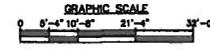
PROPOSED MONOPOLE LOADING CHART

SCALE: 1/4" = 1'-0"



NORTH ELEVATION

SCALE: 3/32" = 1'-0"



NOTE:  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

FOR CONSTRUCTION

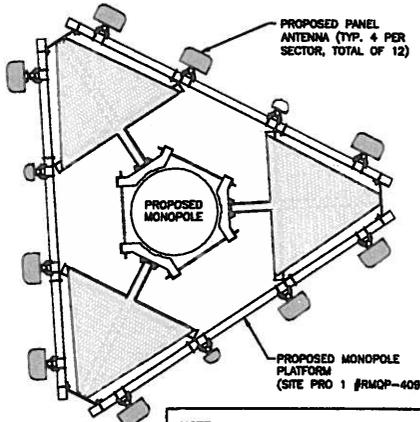


PREPARED BY:

NO.	DATE	DESCRIPTION	BY	CHKD
1	07/27/13	FOR CONSTRUCTION	DA	DA
2	07/28/13	FOR CONSTRUCTION	DA	DA

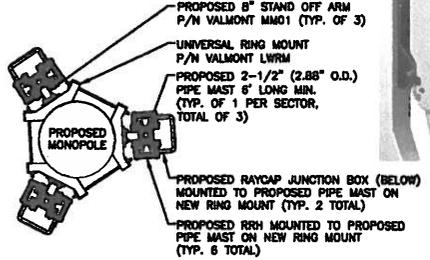
STATE OF NEW HAMPSHIRE  
DANIEL P. HAMM  
LICENSE # 013  
Professional Engineer  
100 WASHINGTON ST.  
MINER FALLS PARK  
WHIPPET ST.  
NASHUA, NH 03060

A-2

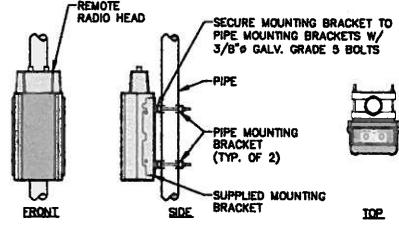


**NOTE:**  
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF RRH'S & JUNCTION BOXES AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

**ANTENNA, RRH & JUNCTION BOX PLAN**



RRH MOUNT SHALL BE MOUNTED AS CLOSE TO THE RAD CENTER AS POSSIBLE



**REMOTE RADIO HEAD**

SCALE: N.T.S.

RRH2X40-AWS  
AWS REMOTE RADIO HEAD

MANUFACTURER: ALCATEL-LUCENT

POWER SUPPLY: -48VDC

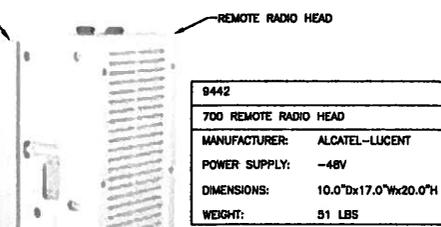
DIMENSIONS: 6.7"Dx10.63"Wx24.4"H

WEIGHT: 44 LBS

- NOTES:**
1. INSTALL RRH PER MANUFACTURERS RECOMMENDATIONS.
  2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

**AWS REMOTE RADIO HEAD**

SCALE: N.T.S.



9442

700 REMOTE RADIO HEAD

MANUFACTURER: ALCATEL-LUCENT

POWER SUPPLY: -48V

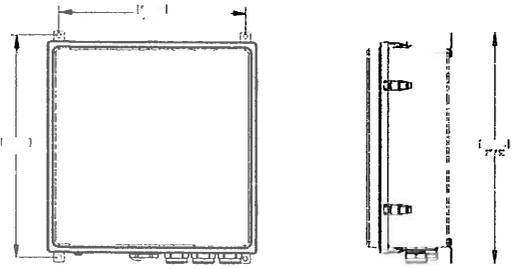
DIMENSIONS: 10.0"Dx17.0"Wx20.0"H

WEIGHT: 51 LBS

- NOTES:**
1. INSTALL RRH PER MANUFACTURERS RECOMMENDATIONS.
  2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

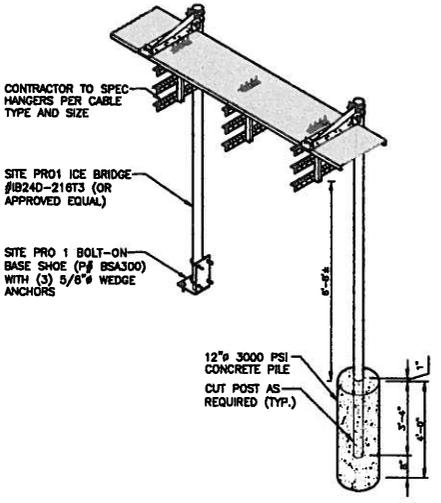
**700 REMOTE RADIO HEAD**

SCALE: N.T.S.



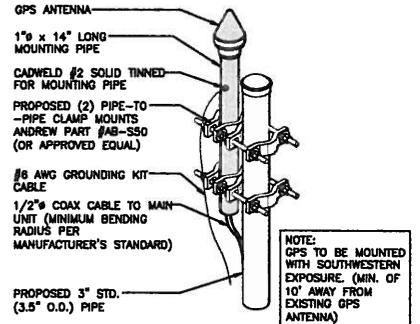
**RAYCAP JUNCTION BOX**

SCALE: N.T.S.



**COAX ICE BRIDGE**

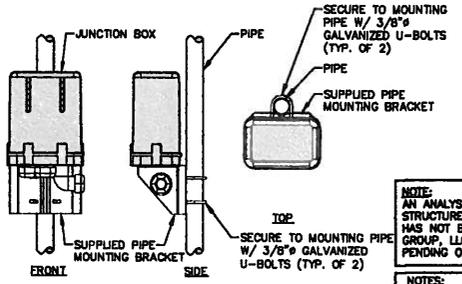
SCALE: N.T.S.



**NOTE:**  
GPS TO BE MOUNTED WITH SOUTHWESTERN EXPOSURE. (MIN. OF 10' AWAY FROM EXISTING GPS ANTENNA)

**GPS ANTENNA MOUNTING DETAIL**

SCALE: N.T.S.



**JUNCTION BOX**

SCALE: N.T.S.

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

- NOTES:**
1. VERIFY AZIMUTHS W/ RF ENGINEER.
  2. EQUIPMENT SHELTER DESIGN PROVIDED BY OTHERS.

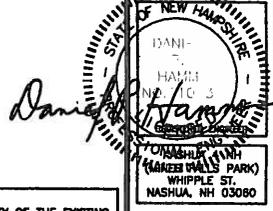
**FOR CONSTRUCTION**



**ANTENNA PLAN & DETAILS**

DATE	BY	CHKD BY
08/25/13	JDC	JDC
07/22/13	JDC	JDC
07/22/13	JDC	JDC

PREPARED BY: JDC

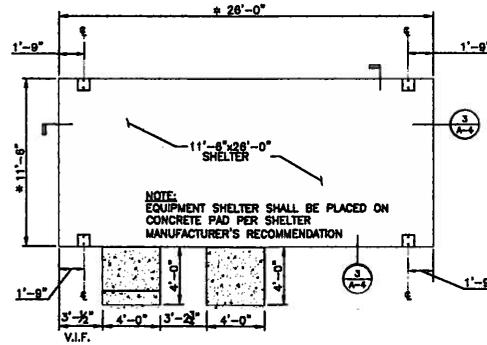


**A-3**

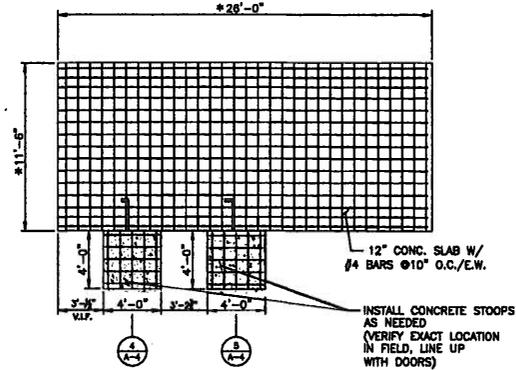
**FOUNDATION NOTES & CONCRETE SPECIFICATIONS**

- FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDEGE AND ALL OTHER EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 8 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE.
- UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.
- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH ( $f'_c$ )=4000 psi. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT TO BE 6% (PLUS OR MINUS 2%).
- REINFORCING BAR TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.
- COORDINATE WITH MANUFACTURER OF PREFABRICATED SHELTER FOR LOCATION OF ATTACHMENTS TO BASE SLAB.
- ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS.
- ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.

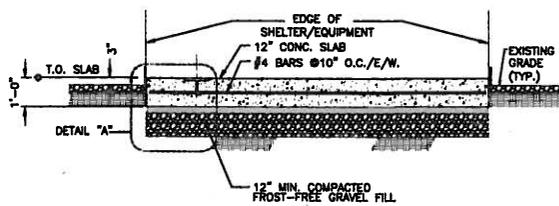
\* GO TO VERIFY EXACT SHELTER SIZE ORDERED AND MAKE SLAB EXACT SIZE AS SHELTER.



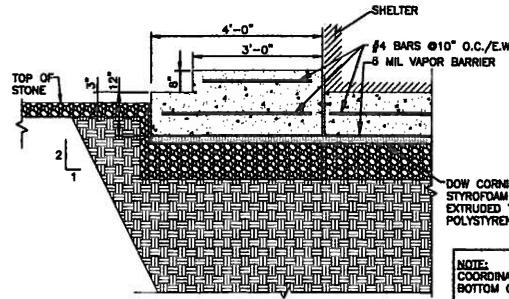
**SHELTER PLAN**  
SCALE: 1/4"=1'-0"



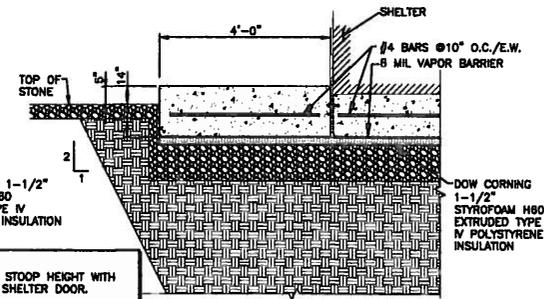
**FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"



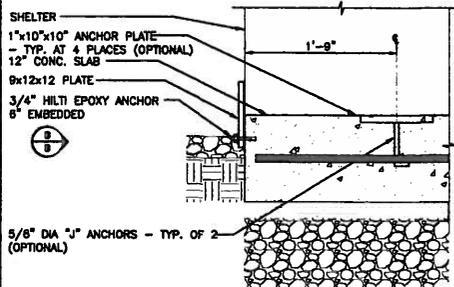
**SECTION**  
SCALE: N.T.S.



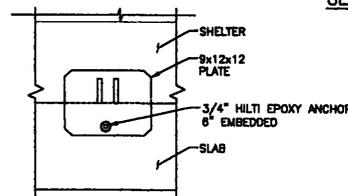
**SECTION @ GENERATOR DOOR**  
SCALE: 3/4"=1'-0"



**SECTION @ EQUIPMENT DOOR**  
SCALE: 3/4"=1'-0"



**DETAIL "A"**  
SCALE: N.T.S.



**TIE-DOWN PLATE "B - B"**  
SCALE: N.T.S.

**FOR CONSTRUCTION**



400 RIVERSIDE PARKWAY  
WESTBOROUGH, MA 01581  
(508) 300-5000 EXT.



400 RIVERSIDE PARKWAY  
WESTBOROUGH, MA 01581  
TEL: (508) 335-5553  
FAX: (508) 335-5555

PREPARED BY:

SHELTER FOUNDATION DETAILS			
DATE	DESCRIPTION	BY	CHK
07/25/13	FOR CONSTRUCTION		

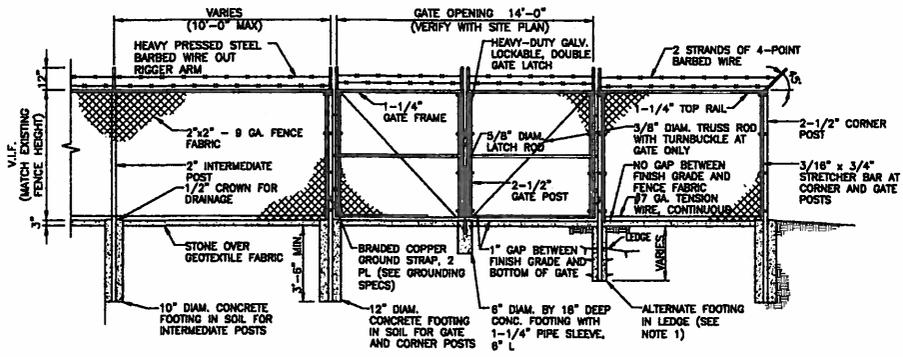
STATE OF NEW HAMPSHIRE  
DANIEL P. HAYES  
NOV 10 3  
DANIEL P. HAYES  
COMMISSIONER  
SEAL  
NASHUA, NH 03060

**A-4**

**FENCE NOTES**

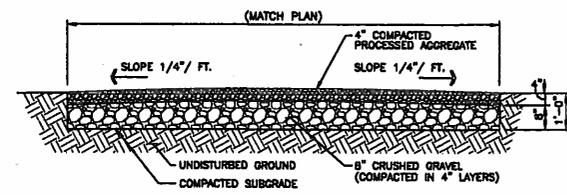
1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE, CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.

2. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.

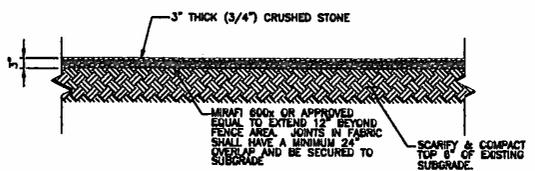


**CHAIN LINK FENCE DETAIL 1**  
SCALE: N.T.S.

CRUSHED GRAVEL		PROCESSED AGGREGATE	
SIEVE	% PASSING BY WEIGHT	SIEVE	% PASSING BY WEIGHT
3"	100	2 1/4"	100
3 1/2"	90-100	2"	93-100
1 1/2"	55-85	3/4"	50-75
1/4"	25-60	1/4"	25-45
#10	15-45	#40	5-20
#40	5-25	#100	2-12
#100	0-10		
#200	0-5		



**GRAVEL ACCESS DRIVE 2**  
SCALE: N.T.S.



**SURFACE PAVING DETAIL 3**  
SCALE: N.T.S.

**FOR CONSTRUCTION**



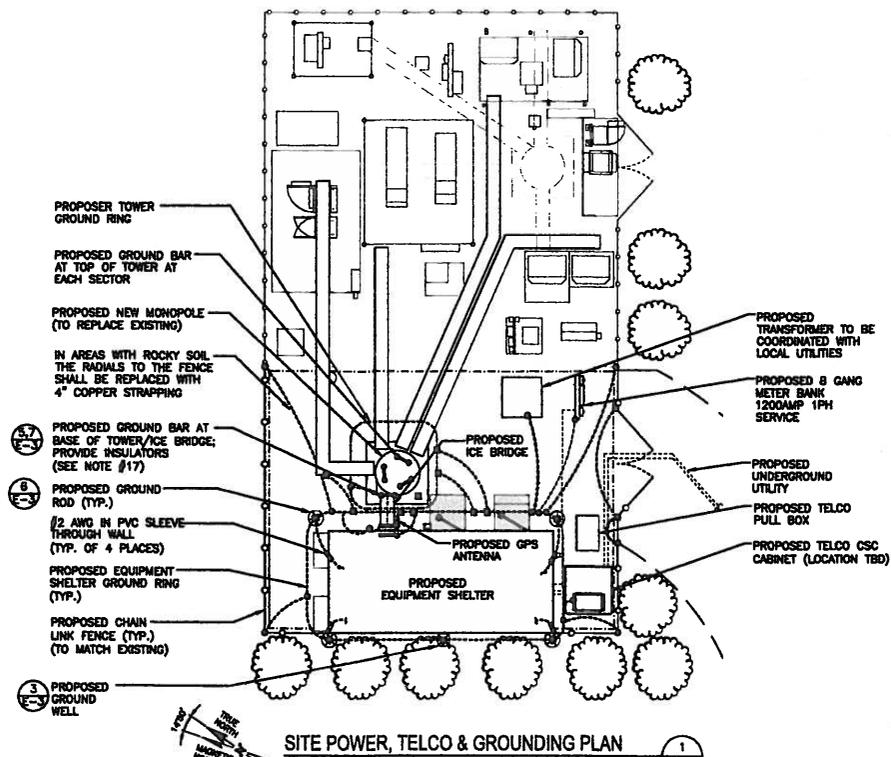
**Hudson**  
Design Group  
400 GORHAM STREET, SUITE 300  
NASHUA, NH 03060  
TEL: (603) 542-5553  
FAX: (603) 534-0300

**FENCE AND ROADWAY DETAILS**

DATE	DESCRIPTION	BY	CHKD BY
07/24/14	FOR CONSTRUCTION		
07/29/13	FOR CONSTRUCTION		

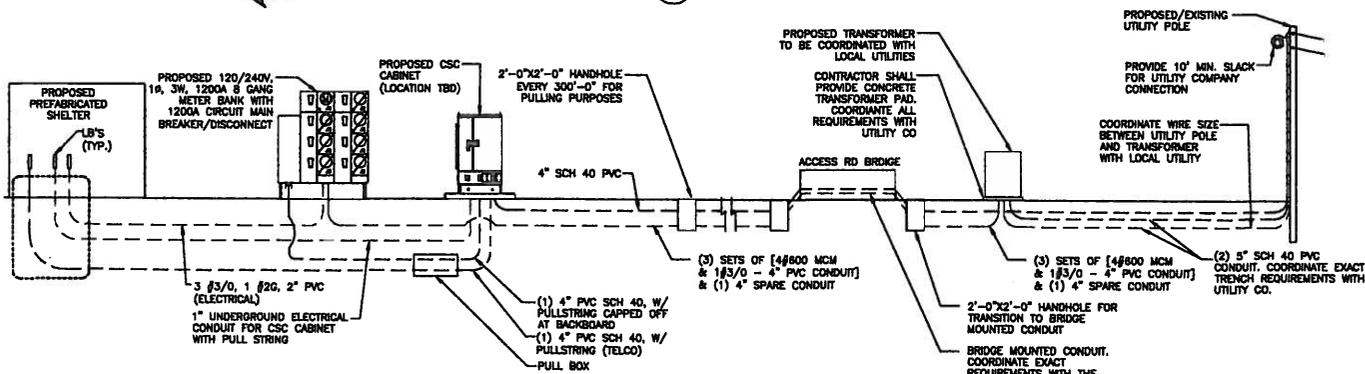
STATE OF NEW HAMPSHIRE  
DANIEL P. HAMM  
NASHUA, NH 03060  
DANIEL P. HAMM  
REGISTERED PROFESSIONAL ENGINEER  
NASHUA, NH 03060

**A-5**



**SITE POWER, TELCO & GROUNDING PLAN**

1 E-1



**POWER & TELEPHONE RISER DIAGRAM**

2 E-1

- NOTES:**
1. ALL UTILITY RUNS SHALL BE COORDINATED WITH VERIZON CONSTRUCTION MANAGER AND RESPECTIVE UTILITY COMPANIES AND COMPLY WITH THE LATEST EDITION OF THE NEC ALONG WITH ANY LOCAL REQUIREMENTS.
  2. INSTALL (2) FULL STRINGS AND CAP THE TELCO CONDUITS INSIDE THE VAULT AND MESA CABINET TO AVOID WATER/ICE FILL UP.
  3. REFER TO C-1 FOR SITE LOCATION OF ALL EQUIPMENT SHOWN ABOVE.

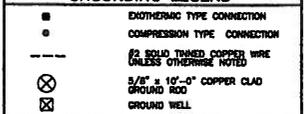
**ELECTRICAL NOTES**

1. UTILITY SERVICES SHOWN ARE PROPOSED. THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, FULL BOXES, ROUTING AND ASSOCIATED REQUIREMENTS WITH LOCAL UTILITY COMPANIES.
2. VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO LICENSEE. COMMENCEMENT OF WORK SHALL BE CONSIDERED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
3. ALL EXISTING UNDERGROUND LINES ON SITE SHALL BE LOCATED PRIOR TO CONSTRUCTION.
4. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
5. PERFORM WORK AS REQUIRED BY BOCA AND PER LOCAL LAWS.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH LOCAL UTILITY COMPANIES AND FIELD CONSTRUCTION MANAGER.
7. ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
8. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & OSM APPROVED FOR INTENDED SERVICE. INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
9. ALL ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
10. ALL NEW WIRING SHALL BE TYPE THHN RATED 75°C, 600 VOLT, USE OF DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG SOLID COPPER.
11. ALL METALLIC CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE LICENSEE PROJECT MANAGER AT JOB COMPLETION.
13. PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.
14. GUARANTEE WORK IN WRITING FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED BY WORKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
15. CONTRACTOR SHALL CONTACT "DO SAFE" (1-888-00-SAFE) PRIOR TO COMMENCEMENT OF WORK.

**GROUNDING NOTES**

1. ALL GROUND WIRE SHALL BE BARE COPPER #2 AWG UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH MINIMAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
4. EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE WATER ISOLATION GROUND BAR (WIGB) WITH #2 AWG INSULATED STRANDED COPPER WIRE. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS.
5. PROVIDE DEDICATED #2 AWG COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CORE (TYPICAL FOR FOUR MOUNTING PIPES PER SECTOR).
6. ANTENNA GROUND KITS SHALL BE FURNISHED AND RETAILED BY ELECTRICAL CONTRACTOR.
7. COORDINATE NEW LICENSEE GROUND SYSTEM WITH EXISTING SITE GROUND SYSTEM.
8. EACH SECTION OF CABLE TRAY, ICE BRIDGE AND ICE SHIELD SHALL BE CONNECTED IN A FASHION TO PROVIDE A CONTINUOUS GROUND.
9. AT ALL TERMINATIONS AT EQUIPMENT ENCLOSURES, PANELS AND FRAMES OF EQUIPMENT, AND WIRES EXPOSED FOR GROUNDING, CONDUCTOR TERMINATION SHALL BE PERFORMED UTILIZING TWO HOLE BOLTED TONGUE COMPRESSION TYPE WITH STAINLESS STEEL SELF-TAPPING SCREWS.
10. ALL CLAMPS AND SUPPORTS USED TO SUPPORT THE GROUNDING SYSTEM CONDUCTORS AND PVC CONDUITS SHALL BE PVC TYPE (NON CONDUCTIVE). DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR.
11. ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHIELD ANTI-CORROSION AGENT SUCH AS TBS ZEPH SHIELD. VERIFY PRODUCT WITH LICENSEE PROJECT MANAGER.
12. ALL BOLTS, WASHERS, AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
13. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUS IN THE PANELBOARD.
14. GROUND ANTENNA BASES, FRAMES, CABLE BACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
15. GROUND CORRAL SHIELD AT BOTH ENDS USING MANUFACTURER'S GUIDELINES.
16. REINFORCEMENT IN EQUIPMENT SEAL TO BE WELDED AND REINFORCEMENT TO BE BOND TO GROUNDING RING.
17. ALL GROUND BARS SHALL BE GALVANIZED WITH ANI-TREY HARDWARE.

**GROUNDING LEGEND**

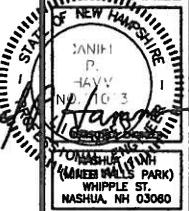


**FOR CONSTRUCTION**

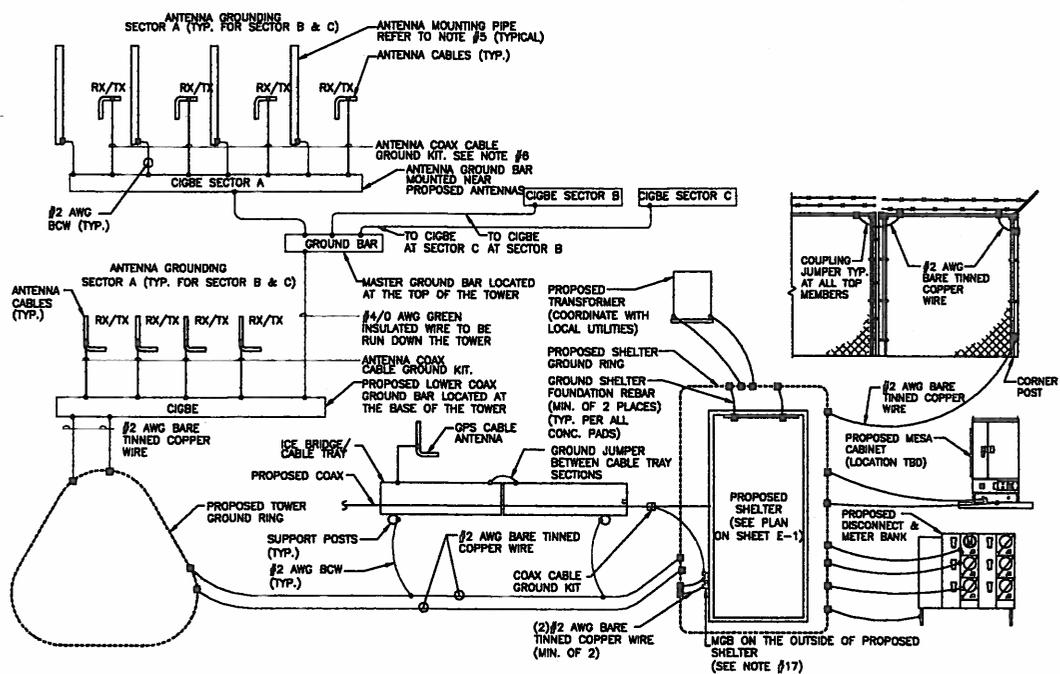


PREPARED BY:

DATE	DESCRIPTION	BY	CHKD
07/29/13	FOR CONSTRUCTION		



**E-1**



GROUNDING RISER DIAGRAM  
SCALE: NTS

FOR CONSTRUCTION



400 FRANKS PARKWAY  
WESTBOROUGH, MA 01581  
(508) 333-5333 TEL



100 WASHINGTON STREET, SUITE 300  
WESTBOROUGH, MA 01581  
TEL: (508) 333-5333  
FAX: (508) 333-5333

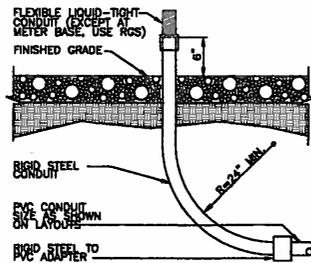
PREPARED BY:

GROUNDING RISER DIAGRAM

NO.	DATE	DESCRIPTION
1	10/25/10	FOR CONSTRUCTION

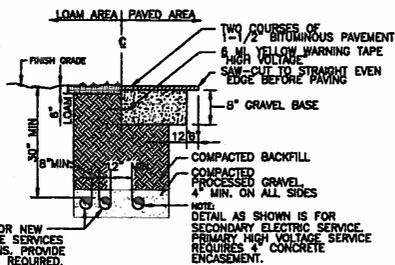
STATE OF NEW HAMPSHIRE  
JANIE P. HAYV  
NOV 10 2010  
DANIEL P. STAMPA  
REGISTERED PROFESSIONAL ENGINEER  
100 WASHINGTON STREET, SUITE 300  
WESTBOROUGH, MA 01581  
TEL: (508) 333-5333  
FAX: (508) 333-5333

E-2



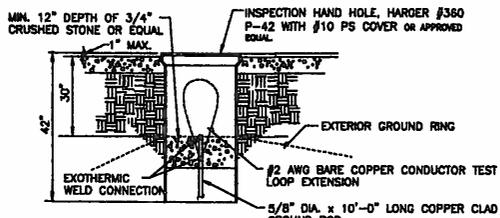
1 CONDUIT STUB-UP

SCALE: N.T.S. E-3



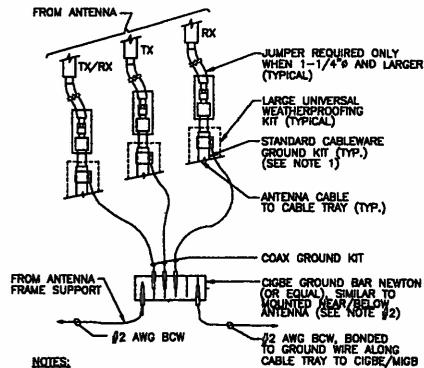
2 TYPICAL DIRECT JOINT SERVICE BURIED CONDUIT DETAIL

SCALE: N.T.S. E-3



3 GROUND WELL DETAIL

SCALE: N.T.S. E-3

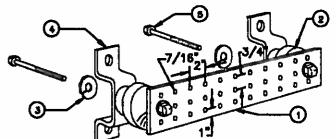


NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

4 STANDARD DETAIL CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE)

SCALE: N.T.S. E-3



LEGEND

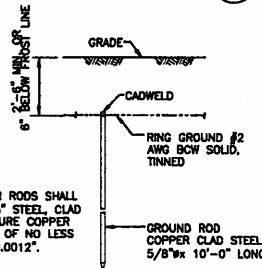
- GALVANIZED STEEL GROUND BAR, 1/2" x 4" x 20", OR OTHER LENGTH AS REQUIRED, HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3081-4 OR EQUAL
- 5/8" LOCKWASHERS OF EQUAL
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-8056 OR EQUAL
- 5/8"-11 x 1" H.H.C.S. BOLTS

NOTES:

- ALL BOLTS, NUTS, WASHERS AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

5 GROUNDING - STANDARD DETAIL GROUND BAR

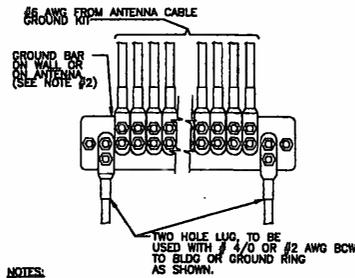
SCALE: N.T.S. E-3



NOTE: COPPER RODS SHALL BE 5/8" STEEL CLAD WIRE. PURE COPPER JACKET OF NO LESS THAN 0.0012".

6 TYPICAL GROUND ROD DETAIL

SCALE: N.T.S. E-3



NOTES:

- CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) ON ALL LUG CONNECTIONS.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

7 GROUNDING-STANDARD DETAIL INSTALLATION OF GROUND WIRE TO GROUND BAR

SCALE: N.T.S. E-3

FOR CONSTRUCTION



H D G

Hudson Design Group  
 420 PEBBLE PARKWAY  
 WESTBOROUGH, MA 01581  
 (508) 853-5555  
 TEL: (978) 557-5555  
 FAX: (978) 557-5556

PREPARED BY:

ELECTRICAL DETAILS

NO.	DATE	DESCRIPTION	BY	CHECKED
1	01/28/13	FOR CONSTRUCTION		
2	02/14/14	FOR CONSTRUCTION		

STATE OF NEW HAMPSHIRE  
 DANIEL P. HAYV  
 No. 10-3  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
 100 WASHINGTON ST.  
 NASHUA, NH 03060

*Daniel P. Hayv*

E-3

## FIRST AMENDMENT TO SITE LEASE AGREEMENT

THIS FIRST AMENDMENT TO SITE LEASE AGREEMENT ("**Amendment**"), dated as of the latter of the signatures below, is by and between the City of Nashua, a municipality incorporated in the State of New Hampshire, having a mailing address of 229 Main Street, PO Box 2019, Nashua, New Hampshire 03061, (hereinafter referred to as "**Lessor**") and Sprint Spectrum Realty Company, L.P. successor in interest to Sprint Spectrum L.P, a limited liability company formed in the State of Delaware 4900 Main Street, Kansas City, Missouri 64112 (hereinafter referred to as "**Lessee**").

WHEREAS, Lessor and Lessee entered into a Site Lease Agreement dated on April 21, 2000, whereby Lessor leased to Lessee certain Premises, therein described, that are a portion of the Lessor's property located off Whipple Street, Mines Fall Park, Nashua, NH ("**Lease**"); and,

WHEREAS, Lessor is replacing the Existing Tower to which Lessee's communication equipment is attached; and,

WHEREAS, Lessor and Lessee, in their mutual interest, wish to amend the Lease as set forth below accordingly.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee agree as follows:

1. **Tower Replacement.** The Existing Tower will be decommissioned and removed from Lessor's property. A new tower ("Replacement Tower") will be constructed and Lessee's wireless communications equipment now installed on the Existing Tower will be migrated to the Replacement Tower and attached as set forth in the Lease. The cost of migrating Lessee's communications equipment from the Existing Tower to the Replacement Tower shall be borne by Lessee.
2. **Expansion of Lessee's Facilities.** Should Lessee elect to increase its tower load on Replacement Tower (an increase will be determined based upon the Lessee's current tower load on the Existing Tower), it shall be subject to an increase in the base rent for any such increased tower load.

3. **Other Terms and Conditions Remain.** In the event of any inconsistencies in the Lease and this First Amendment, the terms of this amendment shall control. Except as expressly set forth in this First Amendment, the Lease otherwise is unmodified and remains in full force and effect. Each reference in the Lease to its self shall be deemed also to refer to this First Amendment.
  
4. **Capitalized Terms.** All capitalized terms used but not defined herein shall have the same meanings as defined in the Lease.

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this First Amendment on the dates set forth below.

"LESSOR"

\_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

"LESSEE"

Sprint Spectrum LP

By: 

Name: Peter Grand

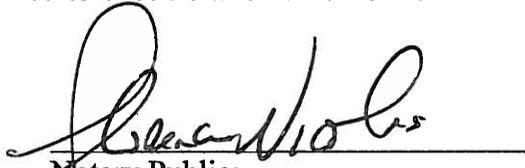
Title: New England State Dev. Mgr.

Date: 9/11/15

TENANT ACKNOWLEDGEMENT

STATE OF New Hampshire  
COUNTY OF Hillsborough

On the 11<sup>th</sup> day of September, 2015 before me personally appeared Peter Guard, and acknowledged under oath that he is the authorized agent of Spent Spectrum Realty Company of \_\_\_\_\_, the Lessee named in the attached instrument, and as such is authorized to execute this instrument on behalf of the Lessee.



Notary Public:

My Commission Expires:

**FLORENCE NICOLAS**  
NOTARY PUBLIC  
State of New Hampshire  
My Commission Expires  
January 28, 2020

LANDLORD ACKNOWLEDGEMENT

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2015 by \_\_\_\_\_ of the \_\_\_\_\_ a \_\_\_\_\_, on behalf of the \_\_\_\_\_.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_



**verizon**wireless

FOR CONSTRUCTION



# NASHUA 4 NH (MINES FALLS PARK)

WHIPPLE ST.  
NASHUA, NH 03060



**DIRECTIONS FROM WESTBOROUGH, MA TO SITE:**  
GET ON I-90 E IN FRAMINGHAM FROM MA-30 E/E MAIN ST. SLIGHT LEFT TOWARD MA-9 E CONTINUE ONTO MA-9 E BEAR LEFT ONTO I-495 VIA THE RAMP TO LOWELL. TAKE EXIT 33 FOR COUNTY ROUTE 4 N TOWARD N OSGOOD TURN LEFT ONTO MA-4 N TURN LEFT TO STAY ON MA-4 N (BURNS FOR US-3 N) BEAR LEFT ONTO US-3 N VIA THE RAMP TO NASHUA NH ENTERING NEW HAMPSHIRE TAKE EXIT 8 FOR I-94-11 TOWARD NASHUA/PEPPERELL MA/NEW HAMPSHIRE 111A TAKE EXIT 5A FOR SIMON ST. TURN LEFT ONTO WHIPPLE ST.

CONSULTANT TEAM	
<b>PROJECT ENGINEER</b>	HUDSON DESIGN GROUP LLC 1800 OSGOOD STREET BUILDING 20 NORTH, SUITE 3080 N. ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586
<b>MEP ENGINEER</b>	CSI ENGINEERING, LLC 999 BROADWAY SUITE 206 SAUGUS, MA 01908 TEL: 1-(781)-233-4806 FAX: 1-(781)-233-4848

PROJECT SUMMARY	
<b>SITE NAME:</b>	NASHUA 4 NH MINES FALLS PARK
<b>SITE ADDRESS:</b>	WHIPPLE STREET NASHUA, NH 03063
<b>APPLICANT:</b>	400 FRIBERG PARKWAY WESTBOROUGH, MA 01581 (508) 330-3330 TEL
<b>ZONING DISTRICT:</b>	RB - URBAN RESIDENCE
<b>ZONING JURISDICTION:</b>	CITY OF NASHUA
<b>LATITUDE:</b>	N 42° 45' 50.40"
<b>LONGITUDE:</b>	W 71° 28' 32.60"
<b>PARCEL ID:</b>	E-1487
<b>PROPERTY OWNER:</b>	CITY OF NASHUA, NH 229 MAIN STREET NASHUA, NH 03060

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	PLOT PLAN
C-2	ABUTTERS LIST
A-1	COMPOUND PLAN
A-2	ELEVATION & PROPOSED MONOPOLE LOADING CHART
A-3	ANTENNA PLAN & DETAILS
A-4	SHELTER FOUNDATION DETAILS
A-5	FENCE & ROADWAY DETAILS
E-1	ELECTRICAL ONE-LINE PLAN & NOTES
E-2	GROUNDING RISER DIAGRAM
E-3	ELECTRICAL DETAILS

PREPARED BY:



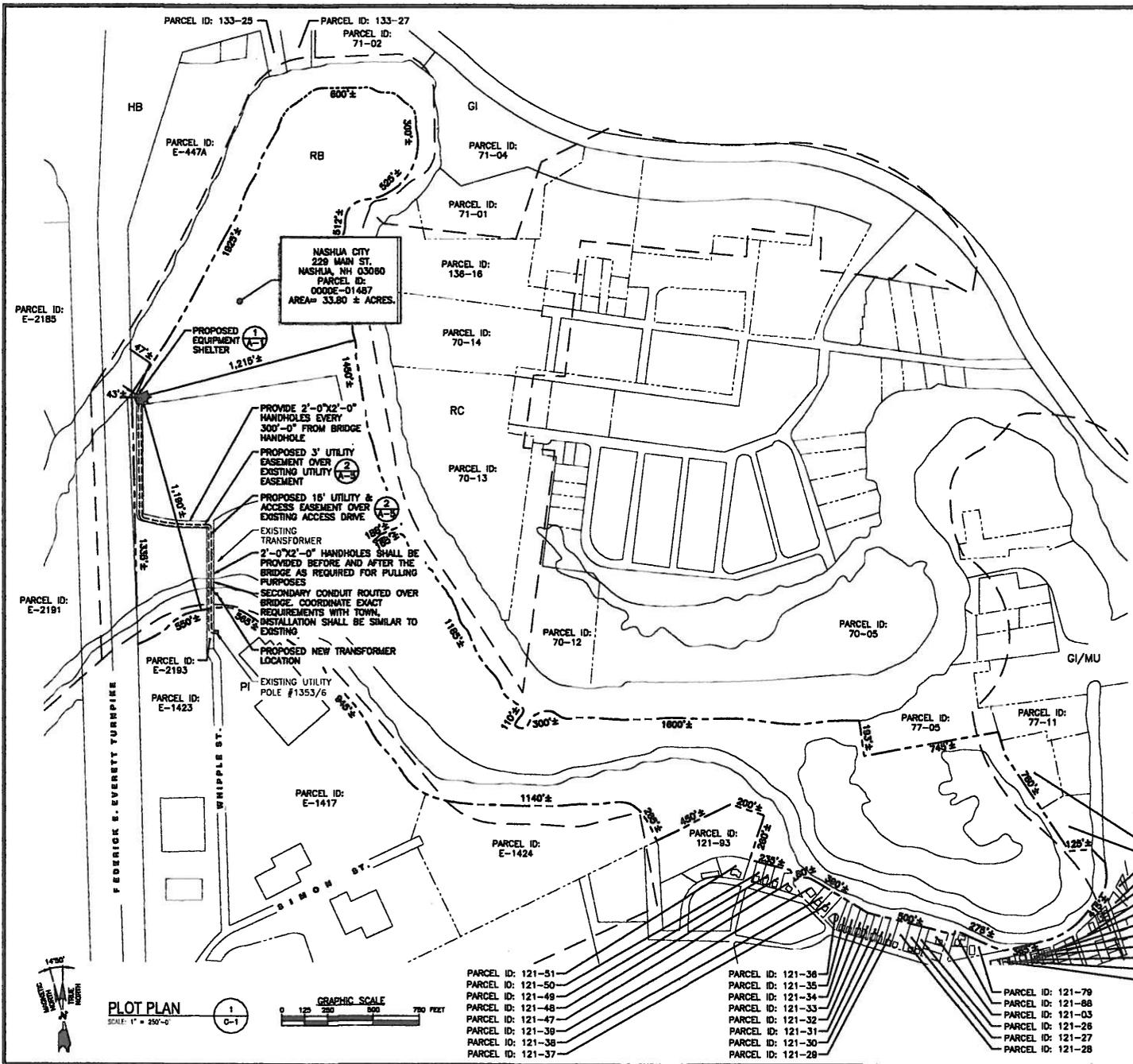
**Hudson**  
Design Group

180 OSGOOD STREET  
ANDOVER, MASSACHUSETTS 01810  
TEL: (978) 557-5553  
FAX: (978) 336-5586

TITLE SHEET		
REV	DATE	DESCRIPTION
0	08/15/11	FOR CONSTRUCTION
1	01/25/12	FOR CONSTRUCTION

Daniel P. Harvey  
Professional Engineer  
State of New Hampshire  
License No. 11111  
Mechanical Engineering

**T-1**



- NOTE:**
- 1.) IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE SHOWN ON THIS PLAN IN ANY WAY UNLESS, OR CONVERT OR ALTER AND STRUCTURE SHOWN ON THIS SITE PLAN OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE CITY.
  - 2.) FUTURE BUILDING CONSTRUCTION SHALL INCORPORATE FOUNDATION DAMAGE SYSTEMS EXCEPT WHERE AN INVESTIGATION ESTABLISHES THAT SPECIFIC BUILDING SITES ARE LOCATED IN WELL DRAINED SOILS AND THAT SUCH SYSTEMS ARE NOT REQUIRED.
  - 3.) PRIOR TO ANY WORK BEING CONDUCTED A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE PLANNING STAFF AND OTHER CITY DEPARTMENTS AS NECESSARY TO REVIEW WORK PROPOSED.
  - 4.) SITE IS NOT IN TOWN HISTORIC DISTRICT.
  - 5.) SITE IS NOT IN WETLANDS.

APPROXIMATE TOWER COORDINATES: LAT: N42° 45' 50.40"N LONG: W71° 29' 32.60"W

- SITE SPECIFIC NOTES:**
1. SITE SURVEY HAS NOT BEEN CONDUCTED BY HUDSON DESIGN GROUP, LLC FOR THIS PROJECT. ALL EXISTING SHOWS ARE TAKEN FROM THE RECORDS OF PROPOSED EQUIPMENT TO PROPERTY LINES AND ARE APPROPRIATE.
  2. VERIFY ADJACENT W/ R/ ENGINEER.
  3. PROPERTY LINE INFORMATION IS COMPILED FROM ASSESSORS PLAN AND RECORD DOCUMENTS AND IS NOT TO BE CONSIDERED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL ACCURATE SURVEY HAS NOT BEEN PERFORMED.

**SOURCE:**  
LOT LINES COMPILED FROM THE CITY OF NASHUA, NH ASSESSORS AND GIS MAPS

- LEGEND:**
- PROPERTY LINE - SUBJECT PARCEL
  - PROPERTY LINE - ADJUTERS
  - - - ZONING BOUNDARY LINE
  - ▭ EXISTING BUILDING

**ZONES:**

RB	URBAN RESIDENCE
HB	HIGHWAY BUSINESS
GI	GENERAL INDUSTRIAL
RC	URBAN RESIDENCE
PI	PARK INDUSTRIAL
GI/MU	GENERAL INDUSTRIAL/MIXED USE

**ZONING INFORMATION:**

JURISDICTION: CITY OF NASHUA, NH  
ZONING DISTRICT TYPE: RB - URBAN RESIDENCE

TERRITORY LINE REQUIREMENTS:	REQUIRED: (FT)	PROPOSED: (FT) FROM PROPOSED EQUIPMENT
FRONT YARD SETBACK:	10'	1,100'±
SIDE YARD SETBACK:	10'	43'± & 1,216'±
REAR YARD SETBACK:	20'	47'

(ALL MEASUREMENTS ARE IN FEET & UNLESS OTHERWISE NOTED)



**PLOT PLAN**

DATE	DESCRIPTION	BY	SCALE
01/11/11	FOR CONSTRUCTION	DAVID P. HANDE	AS SHOWN
01/22/11	FOR CONSTRUCTION	DAVID P. HANDE	AS SHOWN

FOR CONSTRUCTION

STATE OF NEW HAMPSHIRE  
 DANIEL P. HANDE  
 LICENSE NO. 1003  
 CIVIL ENGINEER  
 100 W. WALLS PARK  
 WHIPPLE ST.  
 NASHUA, NH 03060

C-1

ABUTTERS LIST

PARCEL ID:	OWNER	ADDRESS
PARCEL ID: 70-05	PICARILLO, KATHLEEN & JONIS, DOUGLAS A.	18 BITIRNAS STREET, NASHUA, NH 03064
PARCEL ID: 70-12	CITY OF NASHUA	228 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 70-13	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: 70-14	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: 71-01	FIMBEL DOOR CORPORATION	17 BROADMEW AVENUE, NASHUA, NH 03064
PARCEL ID: 71-02	CITY OF NASHUA & ROW/NHDOT	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 71-04	CITY OF NASHUA & STATE OF NH DOT-D, WINTERLE	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: 77-03	CITY OF NASHUA	22 KEHOE AVENUE, NASHUA, NH 03060
PARCEL ID: 77-05	NASHUA MILLYARD ASSOCIATES, INC.	P.O. BOX 788, NASHUA, NH 03061
PARCEL ID: 77-08	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 77-09	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 77-11	RIVERSIDE PROPERTIES OF NASHUA, INC.	22 KEHOE AVENUE, NASHUA, NH 03060
PARCEL ID: 89-23	LOVEJOY, THERESA L.	74 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 89-27	THERRIEN, IRENA	72 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 89-28	BC-AD PROPERTIES, LLC.	447 MAIN DUNSTABLE ROAD, NASHUA, NH 03062
PARCEL ID: 89-29	FIGARO, JAY	68 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 89-38	BYRD, WILLIAM J. & ABIGAIL A.	11 SHADY LANE, NASHUA, NH 03062
PARCEL ID: 89-50	ALEX, ARUN C.	84 CHERRYWOOD DRIVE, NASHUA, NH 03062
PARCEL ID: 89-67	FORRENCE MILLHOUSE, LLC.	11 LEDGE STREET, NASHUA, NH 03060
PARCEL ID: 89-78	LEDGE/MCLAREN LTD PARTNERSHIP CO, FINLAY MANAGEMENT, INC.	1102 AIA N STE 208, PONTE VEDRA, FL 32082
PARCEL ID: 89-81	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 89-83	ROBERTS, JOSEPH F REV TRUST	P.O. BOX 414, NASHUA, NH 03061
PARCEL ID: 89-101	LEITH, ROBERT W.	19 BURGESS STREET, NASHUA, NH 03064
PARCEL ID: 121-03	JOHNSON, FRANCIS E. & GEORGETTE	1 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-26	HEMENWAY, KRISTINE S. & JEFFEREY B.	3 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-27	MATARAZZO, ANTHONY	530 BROAD STREET, NASHUA, NH 03063
PARCEL ID: 121-28	SHELDON, FREDRICK W.	7 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-29	GAGNON, SANDRA	8 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-30	LAPINSKI, VIRGINIA	11 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-31	WARD, CHARLES M.	13 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-32	FORCIER, EDWARD C LIVING TRUST	3 KIRKWOOD DRIVE, NASHUA, NH 03064
PARCEL ID: 121-33	CLEMENS, JODI L.	17 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-34	PATACCHIO, DAVID	101 MIDDLESEX TPKE STE 6, BURLINGTON, MA 01803
PARCEL ID: 121-35	FARLAND, BEATRICE REV TRUST	21 GRAND AVENUE, NASHUA, NH 03060
PARCEL ID: 121-36	ROY, ADAM E.	1 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-37	GARNER, CHRISTOPHER J. & DIXIE L.	73 CONCORD STREET, NASHUA, NH 03064
PARCEL ID: 121-38	CAMIRAND REV LIVING TRUST & CAMIRAND, SUSAN E. TRUSTEE	7 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-39	BOUCHER, JOSEPH JR & DEBERAL	9 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-47	GROUARD, MICHAEL & DANIELLE MAHON	13 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-48	BIGLEY, MARY A.	15 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-48	PAPPAS, ATHENA & JAMIE	17 PERRY AVENUE, NASHUA, NH 03060
PARCEL ID: 121-50	TOURLITS, NICHOLAS & MARIA	17 WOODCREST DRIVE, HUDSON, NH 03051
PARCEL ID: 121-51	BISSONNETTE, L REV TRUST & BISSONNETTE, ROGER T REV TRUST	17C DINSMOOR POINT ROAD, GILFORD, NH 03249
PARCEL ID: 121-79	VERRY, RAYMOND T.	73 SOUTH ROAD, LONDONDERRY, NH 03053
PARCEL ID: 121-88	CARRIER, THERESA G.	2 NORTH 2ND STREET, NASHUA, NH 03060
PARCEL ID: 121-83	CITY OF NASHUA	229 MAIN STREET, NASHUA, NH 03060
PARCEL ID: 133-25	DCL PROPERTIES, LLC	88-1/2 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 133-27	HIGHLAND GROUP, LLC.	88 BROAD STREET, NASHUA, NH 03064
PARCEL ID: 134-16	KEAN, WARREN W. TRUSTEE OF THE CHESTER REALTY TRUST	842 W. COCKATIEL LOOP, HERNANDO, FL 34442
PARCEL ID: E-447A	STATE OF NEW HAMPSHIRE & DOT JOHN O. MORTON BUILDING	P.O. BOX 483, CONCORD, NH 03302
PARCEL ID: E-1417	LIBERTY SIMON STREET, LLC. CO. LIBERTY COMPANIES	3 NEWTON EXECUTIVE OK STE 102, NEWTON, MA 02462
PARCEL ID: E-1423	BT-NEWYD, LLC.	P.O. BOX 28808, ATLANTA, GA 30358
PARCEL ID: E-1424	GRACE FELLOWSHIP OF NASHUA, INC.	8 FRANKLIN STREET, NASHUA, NH 03064
PARCEL ID: E-2189	VICKERRY REALTY CO TRUST, CO. BRIAN MORRISSEAU TRUSTEE	25 ORCHARD VIEW DRIVE, LONDONDERRY, NH 03053
PARCEL ID: E-2191	CITY OF NASHUA, CO. EAGLECREEK R E, LLC.	P.O. BOX 167, 116 STATE STREET, NESHKORO, WI 54960
PARCEL ID: E-2183	CITY OF NASHUA CO. P.O. BOX 2019	P.O. BOX 2019, NASHUA, NH 03061

FOR CONSTRUCTION



PREPARED BY:

DATE	REVISION	BY	DATE	BY
07/25/11	FOR CONSTRUCTION	BT		
11/07/20/11	FOR CONSTRUCTION	BT		

STATE OF NEW HAMPSHIRE  
 DANIEL D. HANSEN  
 JAN 19 2013  
 COMMISSIONER  
 SEALS  
 70 NASHUA AVENUE  
 (MANEY WALLS PARK)  
 WHIPPLE ST.  
 NASHUA, NH 03060

C-2

**FOR CONSTRUCTION**



400 FREDERICK PARKWAY  
WEBSTER, NH 03081  
(603) 888-3333



300 GOSWICK DRIVE  
FRENCH SPRING, NH 03050  
TEL: (603) 527-5533  
FAX: (603) 524-5500

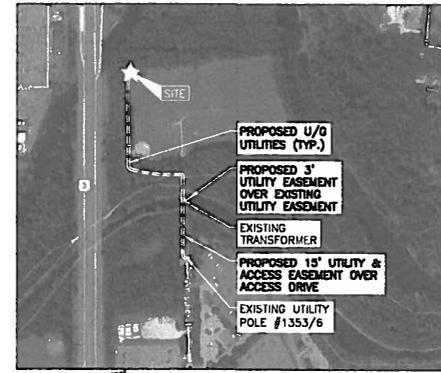
PREPARED BY:

**COMPOUND PLAN**

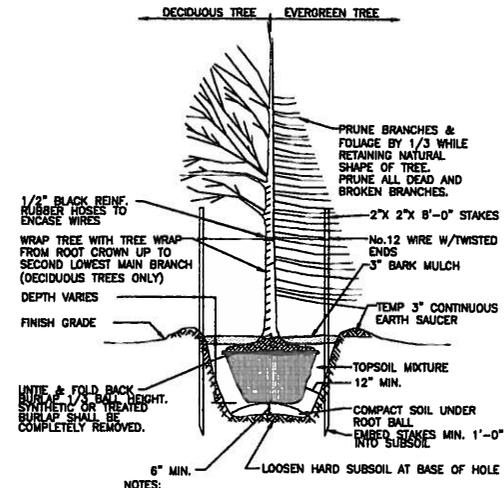
NO.	DATE	DESCRIPTION	BY	SCALE	APP'D.
1	01/20/11	FOR CONSTRUCTION			

STATE OF NEW HAMPSHIRE  
DANIEL J. HANCOCK  
PLANNING COMMISSION  
JAN 19 2013  
SEAL  
SEAL OF THE STATE OF NEW HAMPSHIRE  
1700 WASHINGTON  
NASHUA, NH 03080

**A-1**



**KEY PLAN**  
SCALE: N.T.S.

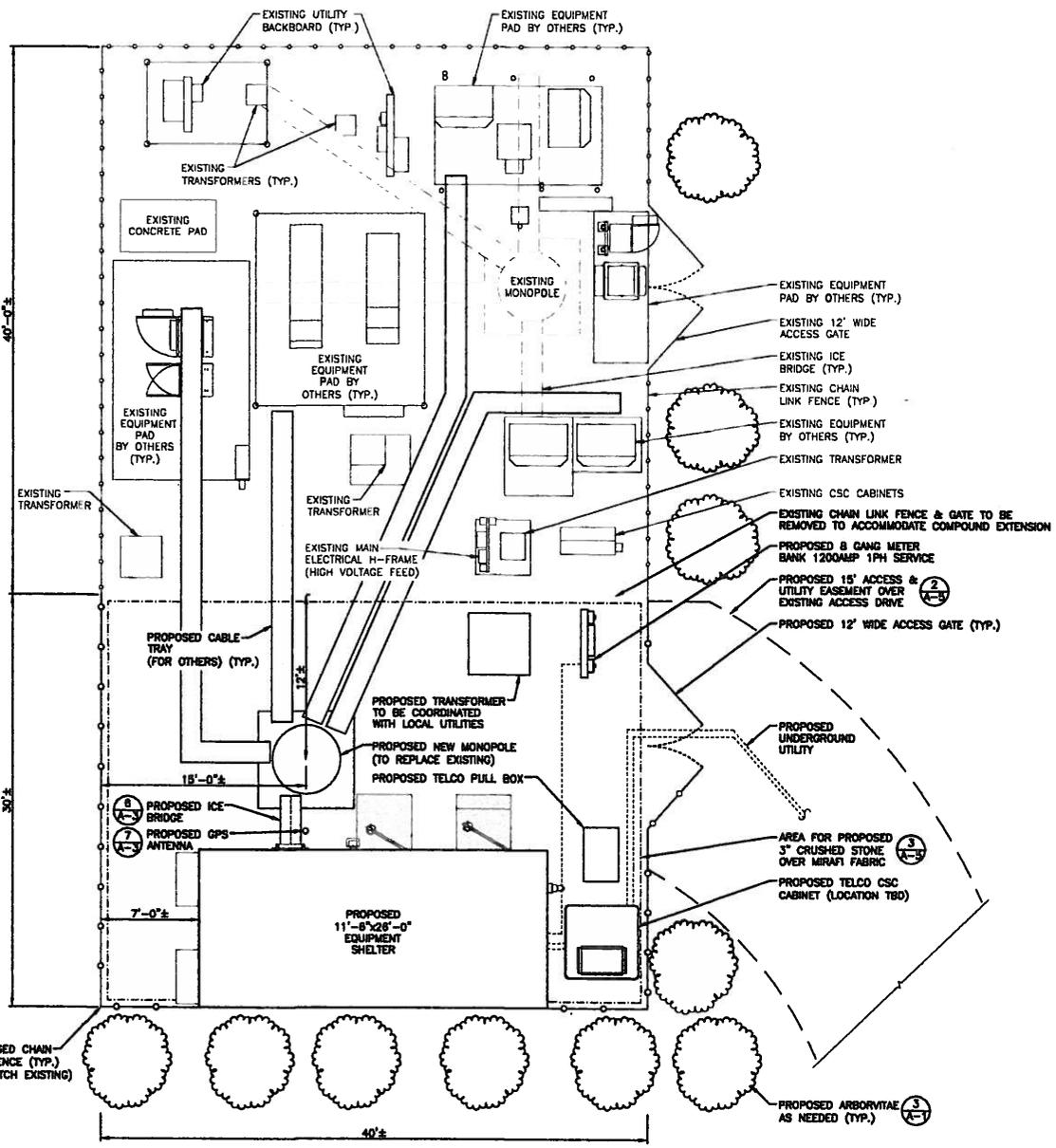


- NOTES:**
- LANDSCAPE TREES SHALL BE A MINIMUM OF 8'-0" IN HEIGHT WHEN PLANTED.
  - SPECIES PROPOSED THUJA OCCIDENTALIS PYRAMIDAL (PYRAMIDAL ARBORVITAE)

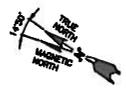
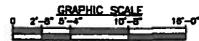
**PLANTING DETAIL**  
SCALE: N.T.S.

APPROXIMATE LAT: N42° 45' 50.40" N  
TOWER COORDINATES: LONG: W71° 29' 32.60" W

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.



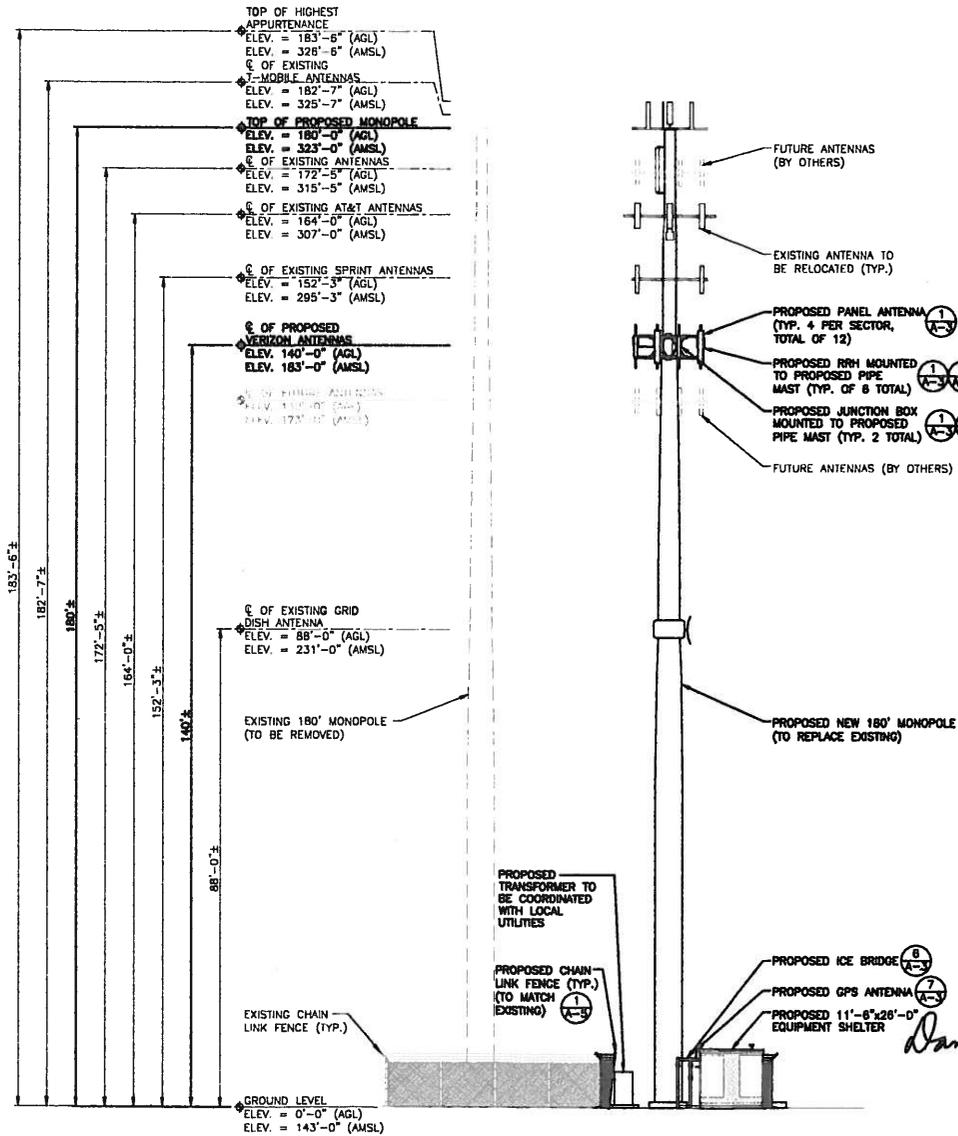
**COMPOUND PLAN**  
SCALE: 3/16" = 1'-0"



Carrier	Rad Center	PROPOSED MOUNT	Mine Falls Park [Proposed Monopole and Relocation]	Coax
Lightning Rod	183.5'	Valmont #QSMSP 4/2 or approved equal	Lightning rod	
T Mobile	182.7'	Valmont #QSMSP 4/2 or approved equal	(6) RR90-18 OODP Antennas (3) APX16DWV-16DWVS Antennas (3) Ericsson KRY 112 71/2	(12) 1-5/8" Coax (1) 1-5/8" Hybrid Cable
Unknown	172.5'	Chain Mount 2' Standoff	(1) Amy/henel 207/508	(1) 1-5/8" coax
A1&T	164'	Valmont #QSMSP 4/2 or approved equal	(12) HPA-65R BUJ H8 K (4) Raycap DC-48 60-18 8F surge arrestors (9) Ericsson RRLUS-11 remote radio heads (6) Ericsson RRLUS-12 remote radio heads (3) Ericsson RRLUS-32 remote radio heads (3) Ericsson RRLUS E2 remote radio heads (6) A2 Module (mounted to the back of the RRLUS-12's) (6) CCI Twin TMAs, model DTMABP/819/G12A	(3) 1.34" Fiber cable (8) 0.645" DC cables (3) 0.50" RFI cables (12) runs of 2-1/4" coax
Sprint	152.3'	Valmont #QSMSP 4/2 or approved equal	(3) APXVSP18 Antennas (3) RRH-800 (3) RRH-1900 (3) APXV1M14 (2.5) Antennas (3) RRHb-20-25 (2.5)	(6) 1-5/8" coax
Verizon	140'	Valmont #QSMSP 4/2 or approved equal	Verizon (3) BXA-70063-BCF Antennas Verizon (3) BXA-70063-6CF Antennas Verizon (6) BXA-171063-BCF (9) ALL-RRH2x40 AWS 130.50' Collar Mount (3) 700 RRHs 130.50' Collar Mount RAYCAP RDC-4276-PF-48 130.50' Collar Mount	(18) 1-5/8" coax (2) 1-5/8" fiber cables
Grid Dish	88'	flush mount	Grid dish L43722159-021	(1) 1/2"

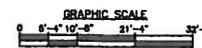
NEW TOWER SHALL BE DESIGNED TO ACCOMMODATE FUTURE LOAD OF (2) ADDITIONAL CARRIERS WITH LOADING EQUAL TO AT&T LOADING (LARGEST LOADING) AT ELEVATION 172'-5" & 130'.

PROPOSED MONOPOLE  
LOADING CHART  
SCALE: NTS



NORTH ELEVATION

SCALE: 3/32" = 1'-0"



NOTE:

AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

FOR CONSTRUCTION



400 BIRMGHAM PARKWAY  
WESTBOROUGH, MA 01581  
(508) 366-3000



PREPARED BY:  
Hudson Design Group, Inc.  
100 WASHINGTON STREET, SUITE 300  
WESTBOROUGH, MA 01581  
TEL: (508) 366-3000  
FAX: (508) 366-3001

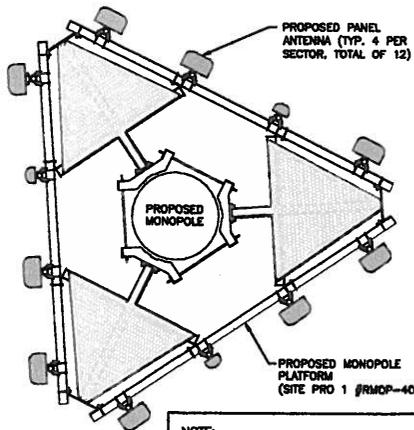
PREPARED BY:

ELEVATION & MONOPOLE LOADING CHART

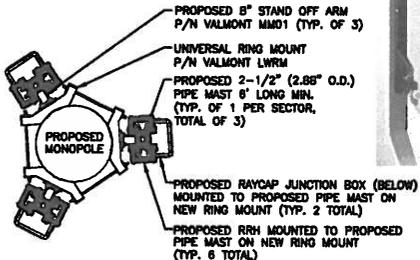
NO.	DESCRIPTION	DATE	BY	CHKD BY
1	FOR CONSTRUCTION	07/28/13	NT	NT

STATE OF NEW HAMPSHIRE  
DANIEL J. LAMM  
PLANNING COMMISSIONER  
100 MARKET STREET  
NASHUA, NH 03080

A-2

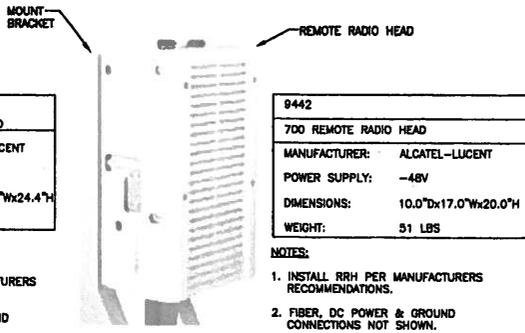


**NOTE:**  
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF RRH'S & JUNCTION BOXES AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.



RRH MOUNT SHALL BE MOUNTED AS CLOSE TO THE RAD CENTER AS POSSIBLE

**AWS REMOTE RADIO HEAD** (2) A-3  
SCALE: N.T.S.

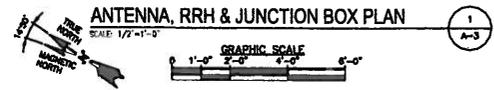


RRH2X40-AWS AWS REMOTE RADIO HEAD	
MANUFACTURER:	ALCATEL-LUCENT
POWER SUPPLY:	-48VDC
DIMENSIONS:	6.7"Dx10.63"Wx24.4"H
WEIGHT:	44 LBS

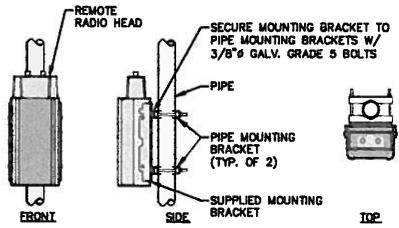
9442 700 REMOTE RADIO HEAD	
MANUFACTURER:	ALCATEL-LUCENT
POWER SUPPLY:	-48V
DIMENSIONS:	10.0"Dx17.0"Wx20.0"H
WEIGHT:	51 LBS

- NOTES:**
1. INSTALL RRH PER MANUFACTURERS RECOMMENDATIONS.
  2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

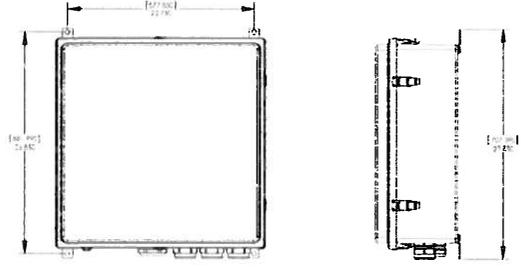
**700 REMOTE RADIO HEAD** (3) A-2  
SCALE: N.T.S.



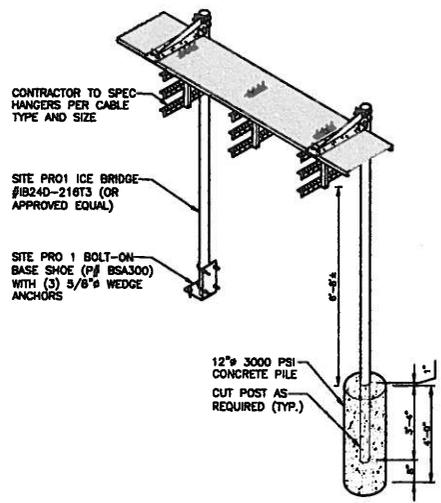
**ANTENNA, RRH & JUNCTION BOX PLAN** (1) A-3  
SCALE: 1/2"=1'-0"



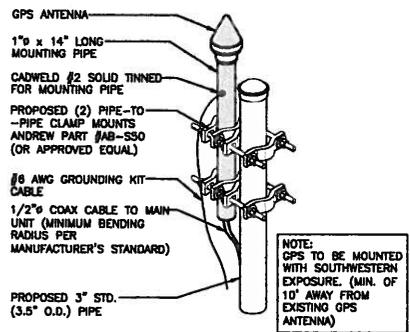
**REMOTE RADIO HEAD** (4) A-3  
SCALE: N.T.S.



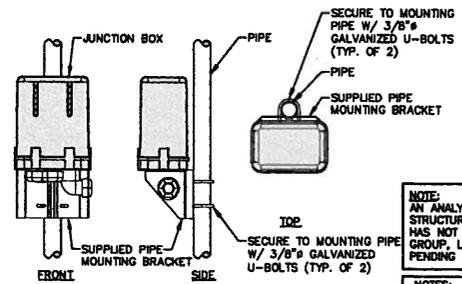
**RAYCAP JUNCTION BOX** (5) A-3  
SCALE: N.T.S.



**COAX ICE BRIDGE** (6) A-3  
SCALE: N.T.S.



**GPS ANTENNA MOUNTING DETAIL** (7) A-3  
SCALE: N.T.S.



**JUNCTION BOX** (8) A-3  
SCALE: N.T.S.

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

- NOTES:**
1. VERIFY AZIMUTHS W/ RF ENGINEER.
  2. EQUIPMENT SHELTER DESIGN PROVIDED BY OTHERS.

**FOR CONSTRUCTION**

**verizon wireless**  
400 FIBERGIC PARKWAY  
WESTBOROUGH, MA 01581  
800.333.3333

**Hudson Design Group**  
100 WASHINGTON STREET, SUITE 300  
NASHUA, NH 03080  
TEL: (603) 882-5553  
FAX: (603) 882-5554

**ANTENNA PLAN & DETAILS**

DATE	BY	DESCRIPTION
10/27/14	JD	ISSUED FOR CONSTRUCTION
11/20/14	JD	FOR CONSTRUCTION

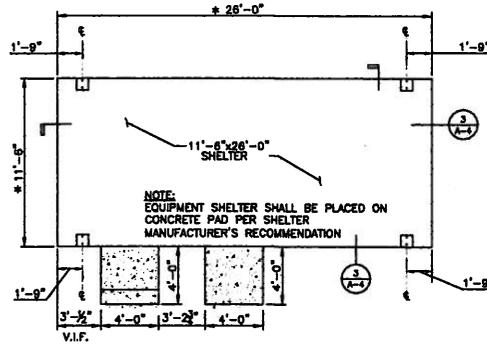
STATE OF NEW HAMPSHIRE  
DANIEL HANCOCK  
REGISTERED PROFESSIONAL ENGINEER  
NO. 1013  
70 WASHUETA AVENUE  
(MADEIRA HILLS PARK)  
WHIPPLE ST.  
NASHUA, NH 03080

**A-3**

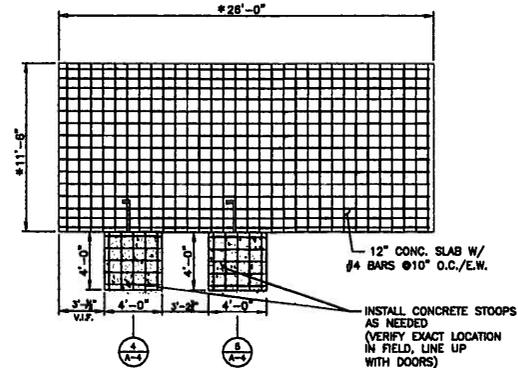
**FOUNDATION NOTES & CONCRETE SPECIFICATIONS**

- FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDGE AND ALL OTHER EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE.
- UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.
- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH ( $f'_c$ )=4000 PSI. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT TO BE 8% (PLUS OR MINUS 2%).
- REINFORCING BAR TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.
- COORDINATE WITH MANUFACTURER OF PREFABRICATED SHELTER FOR LOCATION OF ATTACHMENTS TO BASE SLAB.
- ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS.
- ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.

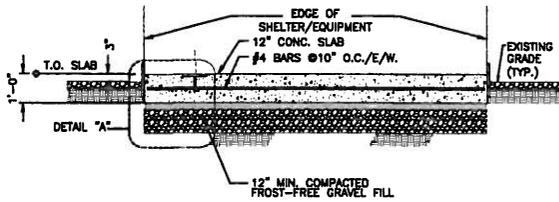
\* GC TO VERIFY EXACT SHELTER SIZE ORDERED AND MAKE SLAB EXACT SIZE AS SHELTER.



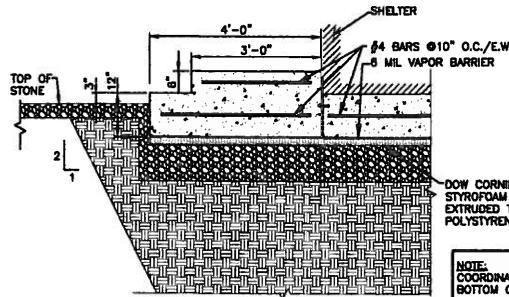
**SHELTER PLAN**  
SCALE: 1/4"=1'-0"



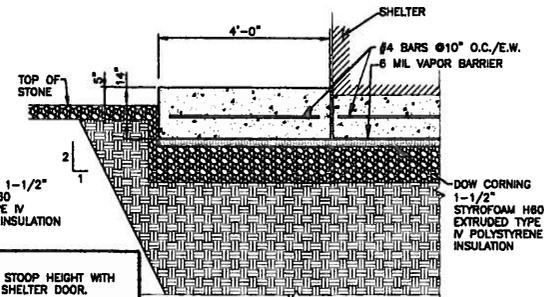
**FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"



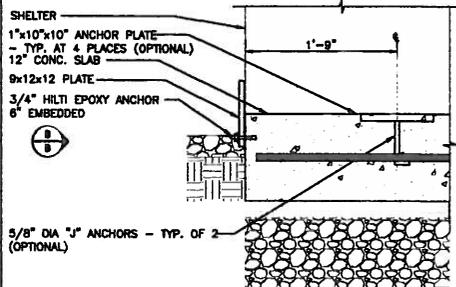
**SECTION**  
SCALE: NTS



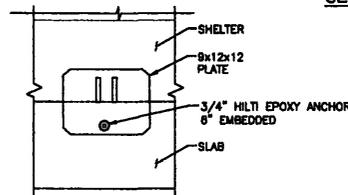
**SECTION @ GENERATOR DOOR**  
SCALE: 3/4"=1'-0"



**SECTION @ EQUIPMENT DOOR**  
SCALE: 3/4"=1'-0"



**DETAIL "A"**  
SCALE: NTS



**TIE-DOWN PLATE "B - B"**  
SCALE: NTS

**FOR CONSTRUCTION**



400 FERRIS PARKWAY  
WESTBOROUGH, MA 01581  
(508) 366-3300 TEL



100 JACO TO MARKET BLVD 3RD  
WESTBOROUGH, MA 01581  
TEL: (978) 336-0888

PREPARED BY:

**SHELTER FOUNDATION DETAILS**

NO.	DATE	DESCRIPTION	BY	CHK
1	07/20/11	REV. CONSTRUCTION		
2	08/16/11	REV. CONSTRUCTION		
3	08/16/11	REV. CONSTRUCTION		
4	08/16/11	REV. CONSTRUCTION		
5	08/16/11	REV. CONSTRUCTION		

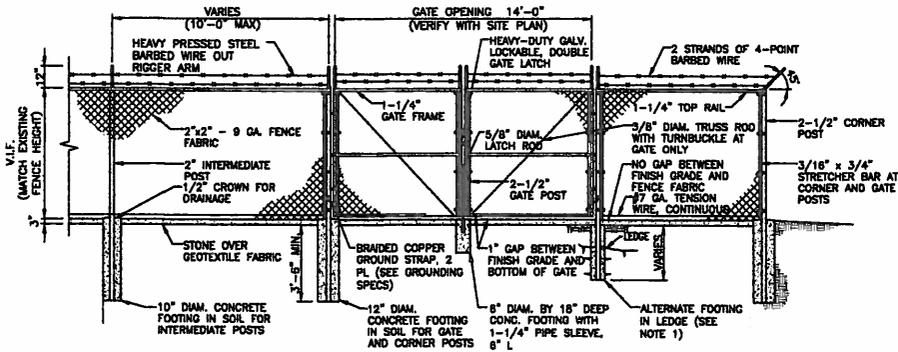
STATE OF NEW HAMPSHIRE  
DANIEL P. HAMM  
NOV 16 2011  
SEAL  
COMMISSIONER OF SEALS  
100 MARKET LANE  
(MINER WALLS PARK)  
WHIPPLE ST.  
NASHUA, NH 03060

**A-4**

**FENCE NOTES**

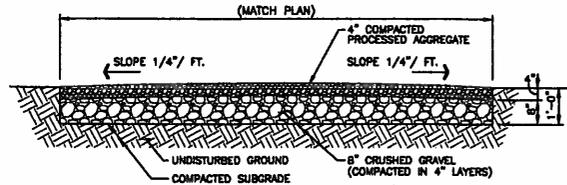
1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE, CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.

2. ATTACH EACH GATE WITH 1-1/2" PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.

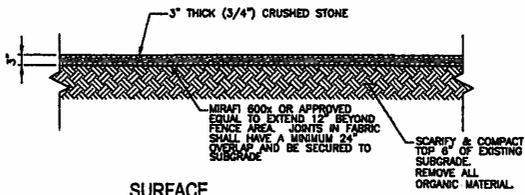


**CHAIN LINK FENCE DETAIL** 1  
SCALE: N.T.S. A-5

CRUSHED GRAVEL		PROCESSED AGGREGATE	
SIEVE	% PASSING BY WEIGHT	SIEVE	% PASSING BY WEIGHT
5"	100	2 1/4"	100
3 1/2"	90-100	2"	85-100
1 1/2"	55-85	3/4"	50-75
1/4"	25-80	1/4"	25-45
#10	15-45	#40	5-20
#40	5-25	#100	2-12
#100	0-10		
#200	0-5		



**GRAVEL ACCESS DRIVE** 2  
SCALE: N.T.S. A-5



**SURFACE PAVING DETAIL** 3  
SCALE: N.T.S. A-5

**FOR CONSTRUCTION**

**verizon wireless**  
400 FERRIS PARKWAY  
WESTPORT, NH 03081  
(603) 305-3300

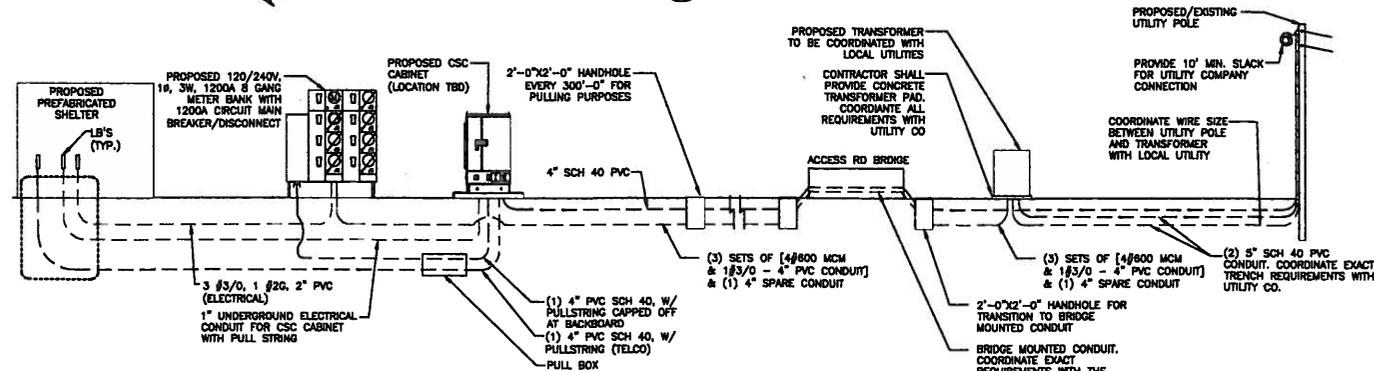
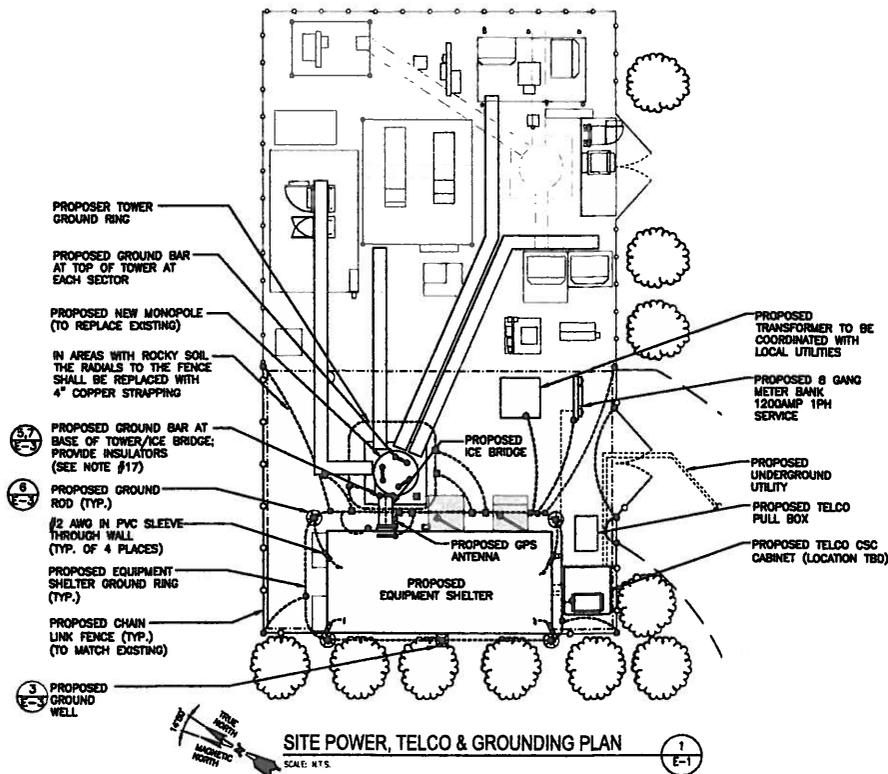
**Hudson**  
Design Group, Inc.  
100 W. MAIN ST., SUITE 300  
NASHUA, NH 03001  
TEL: (603) 567-5553  
FAX: (603) 533-5558

**FENCE AND ROADWAY DETAILS**

NO.	DATE	DESCRIPTION	BY	CHKD.
1	07/20/13	FOR CONSTRUCTION		

STATE OF NEW HAMPSHIRE  
DANIEL P. HANCOCK  
GOVERNOR  
JANUARY 11, 2013  
COMMISSIONER  
TOMASULLO, LANN  
MANE WALLS PARK  
WHIPPLE ST.  
NASHUA, NH 03080

A-5



- NOTES:**
1. ALL UTILITY RUNS SHALL BE COORDINATED WITH VERIZON CONSTRUCTION MANAGER AND RESPECTIVE UTILITY COMPANIES AND COMPLY WITH THE LATEST EDITION OF THE NEC ALONG WITH ANY LOCAL REQUIREMENTS.
  2. INSTALL (2) PULL STRINGS AND CAP THE TELCO CONDUITS INSIDE THE VAULT AND MESA CABINET TO AVOID WATER/ICE FILL UP.
  3. REFER TO C-1 FOR SITE LOCATION OF ALL EQUIPMENT SHOWN ABOVE.

**POWER & TELEPHONE RISER DIAGRAM**

SCALE: NTS

2  
E-1

**ELECTRICAL NOTES**

1. UTILITY SERVICES SHOWN ARE PROPOSED. THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, PULL BOXES, ROUTING AND ASSOCIATED REQUIREMENTS WITH LOCAL UTILITY COMPANIES.
2. VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO LICENSEE. COMMENCEMENT OF WORK SHALL BE CONSIDERED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
3. ALL EXISTING UNDERGROUND LINES ON SITE SHALL BE LOCATED PRIOR TO CONSTRUCTION.
4. GET NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND SIGN CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
5. PERFORM WORK AS REQUIRED BY BOCA AND PER LOCAL LAWS.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH LOCAL UTILITY COMPANIES AND FIELD CONSTRUCTION MANAGER.
7. ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
8. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSL, IEEE, ADA & CEM APPROVED FOR INTENDED SERVICE. INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
9. ALL ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
10. ALL NEW WIRING SHALL BE TYPE THHN RATED 75°C, 600 VOLT, WET OR DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG SOLID COPPER.
11. ALL METALLIC CONDUITS SHALL BE PROVIDED WITH BENDING BUSHINGS.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE LICENSEE PROJECT MANAGER AT JOB COMPLETION.
13. PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.
14. GUARANTEE WORK IN WRITING FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
15. CONTRACTOR SHALL CONTACT "DO SAFE" (1-888-DO-SAFE) PRIOR TO COMMENCEMENT OF WORK.

**GROUNDING NOTES**

1. ALL GROUND WIRE SHALL BE BARE COPPER #2 AND UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PIVOT TO GROUND WITH MINIMAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHIPPY BENT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RINGS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
4. EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MIG) WITH #2 AND ISOLATED STRANDED COPPER WIRE. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS.
5. PROVIDE DESIGNATED #2 AND COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CIGRE (TYPICAL FOR FOUR MOUNTING PIPES PER SECTOR).
6. ANTENNA GROUND KITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. COORDINATE NEW LICENSEE GROUND SYSTEM WITH EXISTING SITE GROUND SYSTEM.
8. EACH SECTION OF CABLE TRAY, ICE BRIDGE AND ICE SHIELD SHALL BE CONNECTED IN A FASHION TO PROVIDE A CONTINUOUS GROUND.
9. AT ALL TERMINATIONS AT EQUIPMENT ENCLLOSURES, PANELS AND FRAMES OF EQUIPMENT, AND WHERE EXPOSED FOR GROUNDING, CONDUCTOR TERMINATION SHALL BE PERFORMED UTILIZING TWO HOLE BOLTED TONGUE COMPRESSION TYPE WITH STAINLESS STEEL SELF-TAPPING BOLTS.
10. ALL CLAMPS AND SUPPORTS USED TO SUPPORT THE GROUNDING SYSTEM CONDUCTORS AND PVC CONDUITS SHALL BE PVC TYPE (NON CONDUCTIVE). DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR.
11. ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHALED ANTI-CORROSION AGENT SUCH AS TAG KOPR SHALED. VERIFY PRODUCT WITH LICENSEE PROJECT MANAGER.
12. ALL BOLTS, WASHERS, AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
13. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUS IN THE PANELS/BOXES.
14. GROUND ANTENNA BASES, FRAMES, CABLE BACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO ISOLATED SURFACE MOUNTED GROUND BASE. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
15. GROUND CONDUIT SHALL BE BOND TO BOTH ENDS USING MANUFACTURER'S GUIDELINES.
16. REINFORCEMENT IN EQUIPMENT SLAB TO BE WELDED AND REINFORCEMENT TO BE BONDED TO GROUNDING RING.
17. ALL GROUND BARS SHALL BE GALVANIZED WITH AHD-THEFT HARDWARE.

**GROUNDING LEGEND**

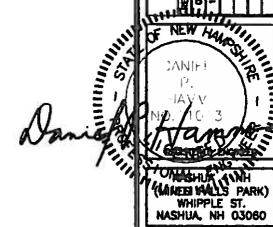
- ⊞ EXOTHERMIC TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- #2 SOLID THINNED COPPER WIRE UNLESS OTHERWISE NOTED
- ⊗ 5/8" & 10'-0" COPPER CLAD GROUND ROD
- ⊠ GROUND WELL

**FOR CONSTRUCTION**



**ELECTRICAL ONE-LINE PLAN & NOTES**

REV	DATE	DESCRIPTION	BY	CHKD	APP'D
1	07/27/15	FOR CONSTRUCTION			
2	07/27/15	FOR CONSTRUCTION			



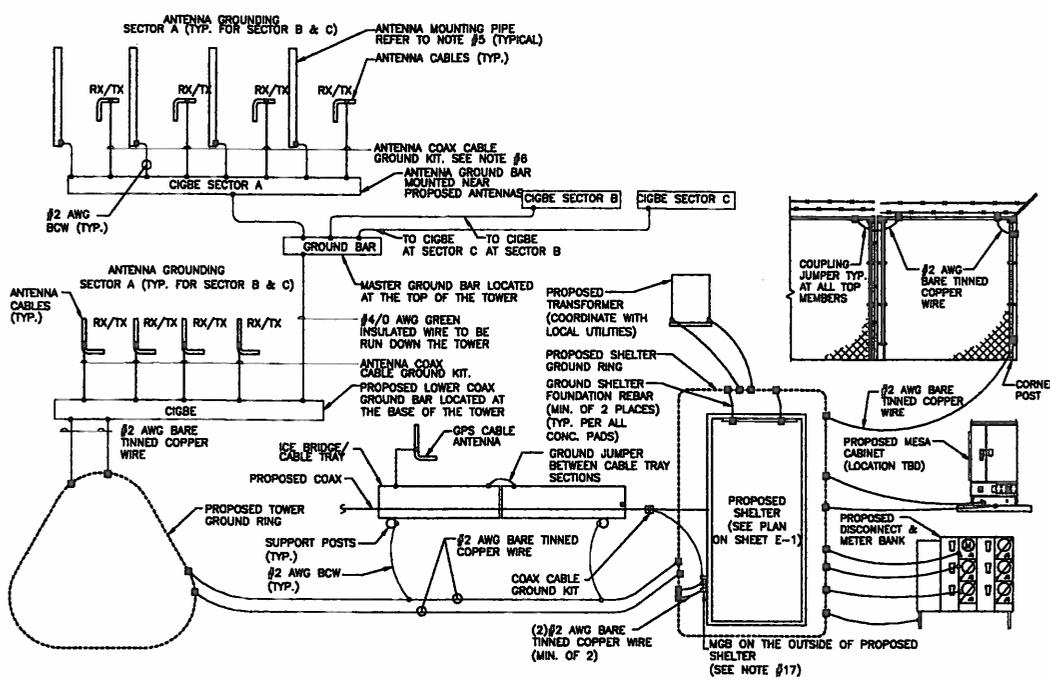
**E-1**

FOR CONSTRUCTION



PREPARED BY:  
 DATE: 08/14/11  
 BY: [Signature]  
 FOR CONSTRUCTION

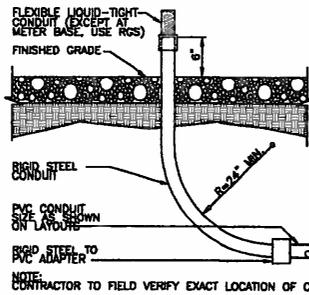
NO.	DATE	DESCRIPTION
1	08/14/11	FOR CONSTRUCTION
2	07/28/11	FOR CONSTRUCTION



GROUNDING RISER DIAGRAM  
 SCALE: NTK  
 1  
 E-2

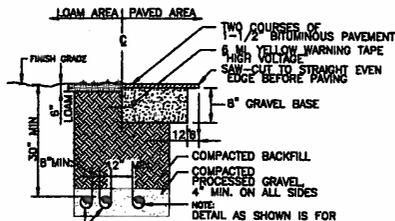
STATE OF NEW HAMPSHIRE  
 DANIEL P. HAYY  
 No. 10-3  
 [Signature]  
 70 MADISON AVENUE  
 (LAKE WILLS PARK)  
 WHIPPLE ST.  
 NASHUA, NH 03060

E-2



**CONDUIT STUB-UP**  
SCALE: NTS

1  
E-3

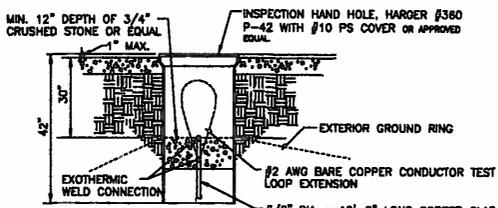


SCHEDULE 40 CONDUITS FOR NEW ELECTRICAL AND TELEPHONE SERVICES. SEE UTILITY AND SITE PLANS. PROVIDE APPROVED PULL BOXES AS REQUIRED, AND COORDINATE INSTALLATION W/ ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH PULL ROPES (TYP.).

**TYPICAL DIRECT JOINT SERVICE BURIED CONDUIT DETAIL**

SCALE: NTS

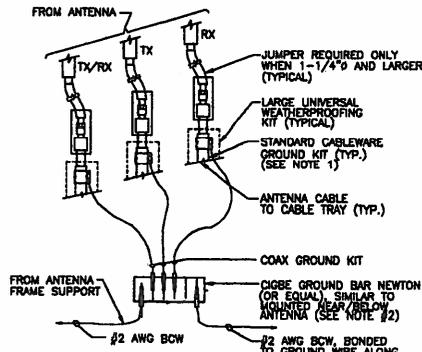
2  
E-3



**GROUND WELL DETAIL**

SCALE: NTS

3  
E-3



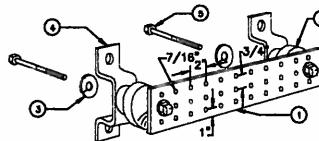
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**STANDARD DETAIL CONNECTION OF GROUND WIRES TO GROUND BAR (CIGBE)**

SCALE: NTS

4  
E-3



LEGEND

- GALVANIZED STEEL GROUND BAR, 1/2" x 4" x 20", OR OTHER LENGTH AS REQUIRED, HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
- 5/8" LOCKWASHERS OF EQUAL
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056 OR EQUAL
- 5/8"-11 x 1" H.H.C.S. BOLTS

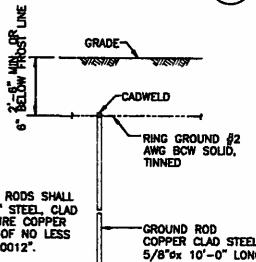
NOTES:

- ALL BOLTS, NUTS, WASHERS AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**GROUNDING - STANDARD DETAIL GROUND BAR**

SCALE: NTS

5  
E-3

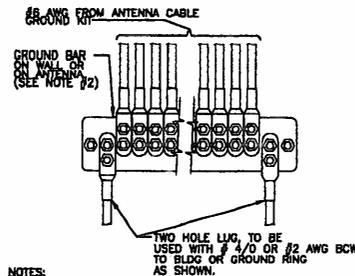


NOTE: COPPER RODS SHALL BE 5/8" STEEL, CLAD WIRE PURE COPPER JACKET OF NO LESS THAN 0.0012".

**TYPICAL GROUND ROD DETAIL**

SCALE: NTS

6  
E-3



NOTES:

- CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) ON ALL LUG CONNECTIONS.
- ALL GROUND BARS SHALL BE GALVANIZED WITH ANTI-THEFT HARDWARE.

**GROUNDING-STANDARD DETAIL INSTALLATION OF GROUND WIRE TO GROUND BAR**

SCALE: NTS

7  
E-3

FOR CONSTRUCTION

**verizon wireless**  
40 RIVERS PARKWAY  
WESTBOROUGH, MA 01581  
(978) 336-3300

**Hudson**  
Design Group  
100 RIVERS PARKWAY  
WESTBOROUGH, MA 01581  
(978) 336-3300

PREPARED BY:

NO.	DATE	DESCRIPTION	BY	CHK	APP
1	10/20/13	FOR CONSTRUCTION			

STATE OF NEW HAMPSHIRE  
DANIEL P. HAYES  
GOVERNOR  
SEAN W. WASHBURN  
COMMISSIONER  
NASHUA, NH 03800

**E-3**