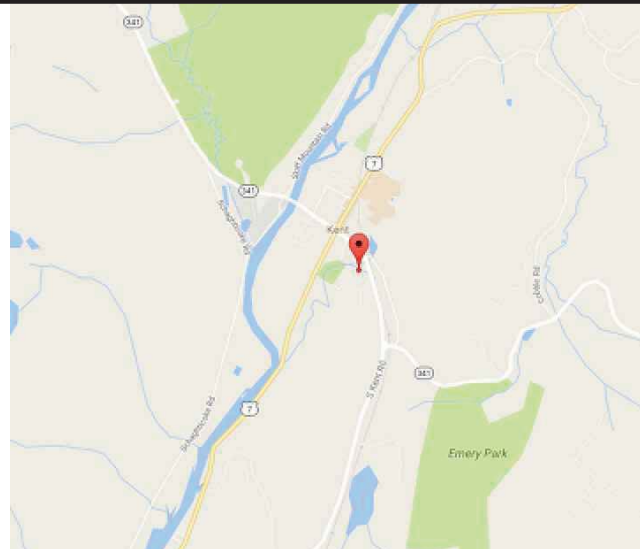


GENERAL NOTES

1. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTORS SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
2. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
3. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
4. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
5. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
6. THE SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
7. THE SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
8. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWING MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. ALL SAFETY PRECAUTIONS MUCH BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

LOCATION MAP



HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED.

PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER



2016 INFILL/ROB/GREENFIELD
T-MOBILE SITE NUMBER
CTNH542A
150' MONOPOLE
ATC SITE NUMBER
413783
SITE ADDRESS
38 MAPLE STREET
KENT, CT 06757
CONFIGURATION 707C

SITE SUMMARY

SITE TYPE: PROPOSED EQUIPMENT INSTALLATION
TECHNOLOGY TYPE: U1900/L2100/L700
SITE ADDRESS: 38 MAPLE STREET, KENT, CT 06757
SITE LATITUDE: 41° 43' 18.754" N
SITE LONGITUDE: 73° 28' 30.048" W
JURISDICTION: TOWN OF KENT
POWER COMPANY: EVERSOURCE
TELEPHONE COMPANY: AT&T
TOWER OWNER: AMERICAN TOWER, 116 HUNTINGTON AVE, 11TH FLOOR, BOSTON, MA 02116, CONTACT: CUSTOMER SERVICE, PHONE: 877-518-6937
TOWER MANAGER: NORTHEAST SITE SOLUTIONS, LLC, 199 BRICKYARD ROAD, FARMINGTON, CT 06032, SHELDON FREINCLE, (201) 776-8521
WIRELESS CARRIER: T-MOBILE, 35 GRIFFIN RD S, BLOOMFIELD, CT 06002, OFFICE: 860-692-7100, FAX: 860-692-7159
ENGINEER: SMW ENGINEERING, 158 BUSINESS CENTER DRIVE, BIRMINGHAM, AL 35244, PHONE: 205-252-6985, ALVIN A. KRAFT, PE

BUILDING CODES

- ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE (AS ADOPTED BY LOCAL JURISDICTION):
- 2016 CONNECTICUT BUILDING CODE
 - 2012 INTERNATIONAL BUILDING CODE W/AMENDMENTS
 - 2009 ICC/ANSI A117.1 W/AMENDMENTS
 - 2012 INTERNATIONAL EXISTING BUILDING CODE W/AMENDMENTS
 - 2012 INTERNATIONAL PLUMBING CODE WITH AMENDMENTS
 - 2012 INTERNATIONAL MECHANICAL CODE W/AMENDMENTS
 - 2012 INTERNATIONAL ENERGY CONSERVATION CODE W/AMENDMENTS
 - 2014 NFPA 70, NATIONAL ELECTRICAL CODE W/AMENDMENTS
 - 2012 INTERNATIONAL RESIDENTIAL CODE W/AMENDMENTS

APPROVALS

DEPARTMENT	NAME/SIGNATURE	DATE
DEVELOPMENT MANAGER		
PROPERTY/TOWER OWNER		
SITE ACQUISITION MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		
OPERATIONS MANAGER		

PROJECT SCOPE

THE PROPOSED PROJECT SCOPE WILL CONSIST OF CONSTRUCTING A NEW TELECOMMUNICATIONS BASE STATION INSTALLATION ON AN EXISTING TOWER SITE. THE PROPOSED CONSTRUCTION WILL INCLUDE THE INSTALLATION OF ANTENNA, RADIOS, CABLES AND RELATED EQUIPMENT ON THE TOWER AS WELL AS THE RADIOS, CABINETS, UTILITIES AND ANCILLARY EQUIPMENT ON THE GROUND.

SHEET INDEX

T-1	TITLE SHEET
C-1	OVERALL SITE PLAN
C-2	TOWER ELEVATION & ANTENNA PLAN
C-3	TOWER TOP EQUIPMENT SCHEDULE
C-4	GROUND EQUIPMENT DETAIL
C-5	ICE BRIDGE DETAILS
C-6	FOUNDATION DETAILS & NOTES
E-1	ONE-LINE DIAGRAM
E-2	ELECTRICAL UTILITY PLAN
E-3	GROUNDING PLAN
E-4	EQUIPMENT SCHEMATIC
E-5	ELECTRICAL & GROUNDING DETAILS

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OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:



TOGETHER PLANNING A BETTER TOMORROW



12/15/16

SITE INFORMATION:

CTNH542A
38 MAPLE STREET
KENT, CT 06757

#	DATE	DESCRIPTION:
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1	10/25/16	REISSUED FOR CLIENT REV.
2	11/10/16	ISSUED FOR CONSTRUCTION
3	12/02/16	REISSUED FOR CONSTRUCTION
4	12/15/16	REISSUED FOR CONSTRUCTION

T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

SHEET NAME:

TITLE SHEET

SMW #: 16-2557

DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:
T-1

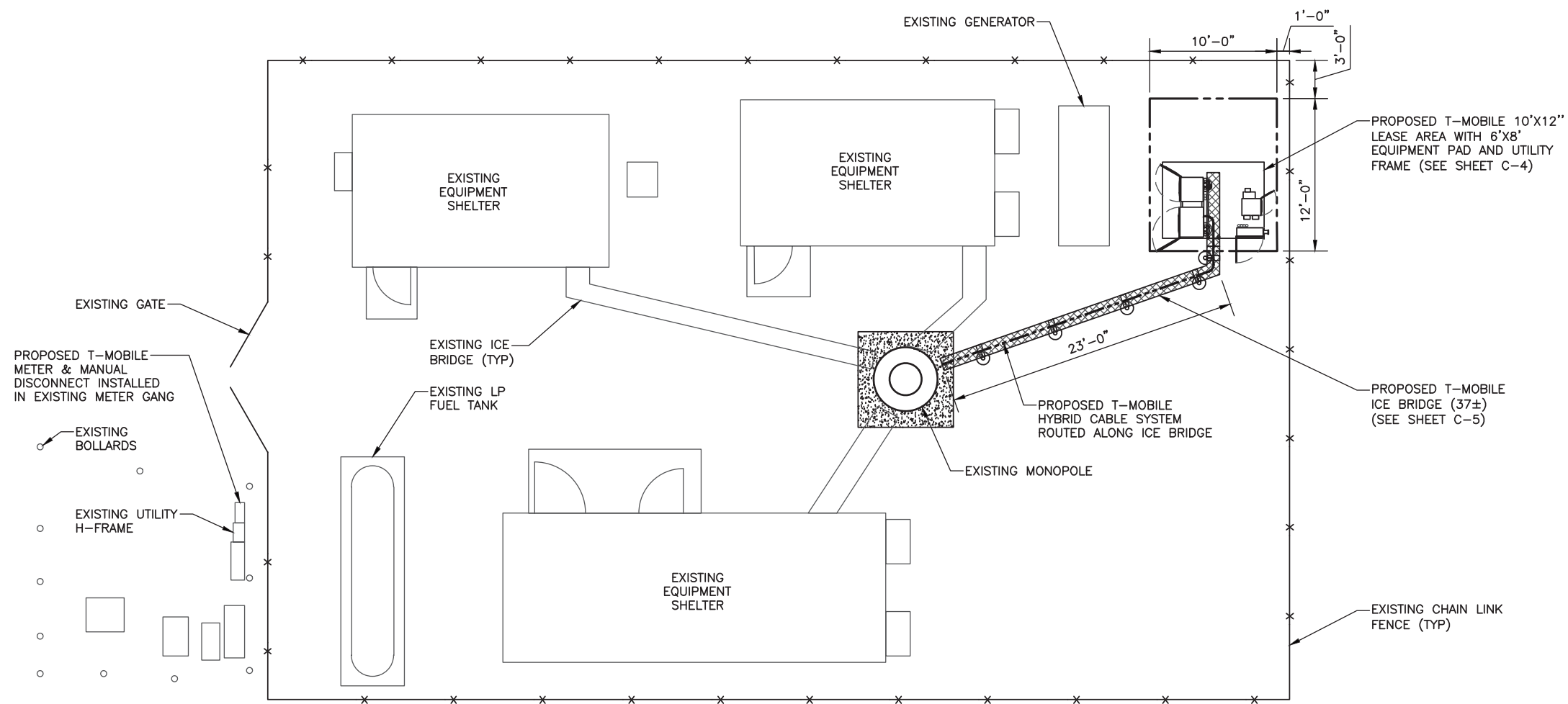
NOTE TO CONTRACTORS:
DIGGING AND/OR TRENCHING INSIDE
COMPOUND, MUST BE DONE BY HAND.

SUBJECT PROPERTY IS LOCATED IN PANEL #
0901860007B, DATED (MARCH 4, 1980) AND
IS IN THE BASE FLOOD ZONE "C" AND IS
NOT IN A SPECIAL FLOOD HAZARD AREA.

UTILITY NOTE:
THERE ARE NOT ANY EXISTING STORM OR
SANITARY SEWER LINES OR BURIED UTILITIES
ON THE PARENT TRACK WITHIN THE VICINITY
OF THE PROPOSED CONSTRUCTION.

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PLANS PREPARED BY:

NSS NORTHEAST
SITE SOLUTIONS
Northeast Site Solutions, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677-1999

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T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

SHEET NAME:
**OVERALL
SITE PLAN**

SMW #:
16-2557

DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

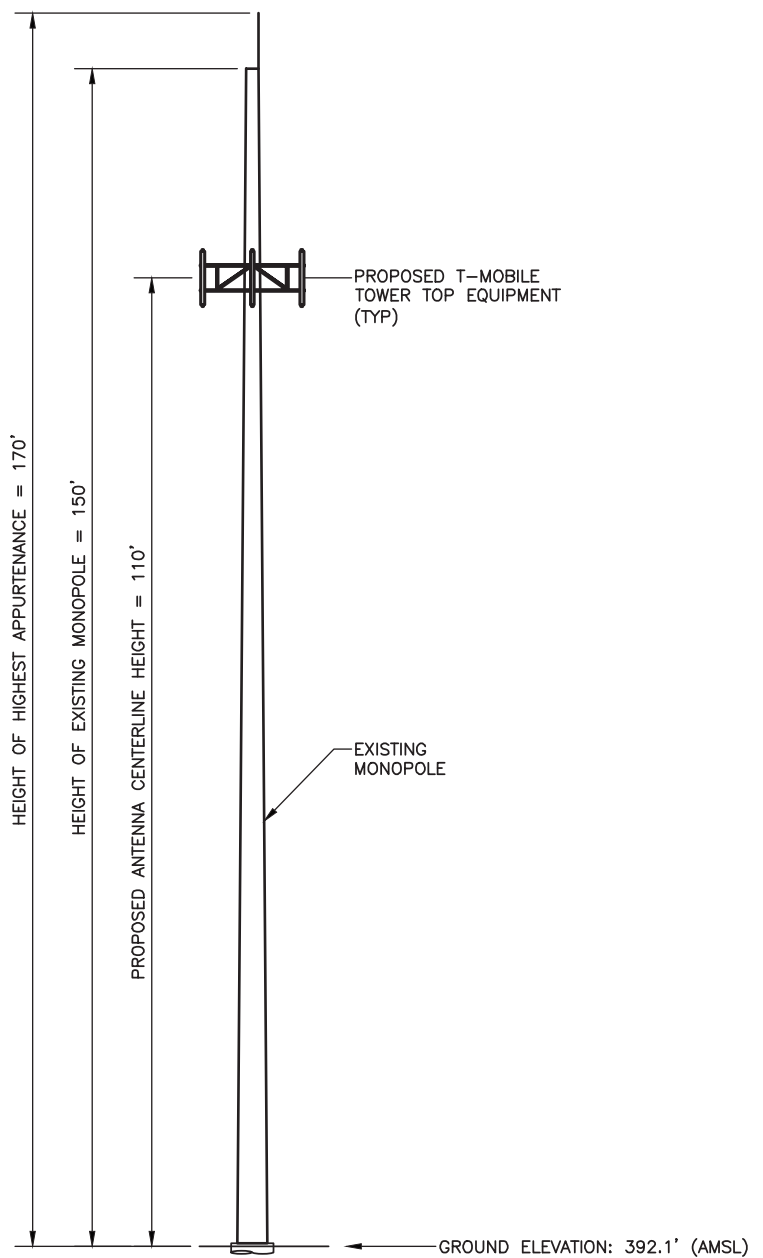
SHEET NUMBER:
C-1



0' 10' 20' 30'
1" = 10' (11"x17")

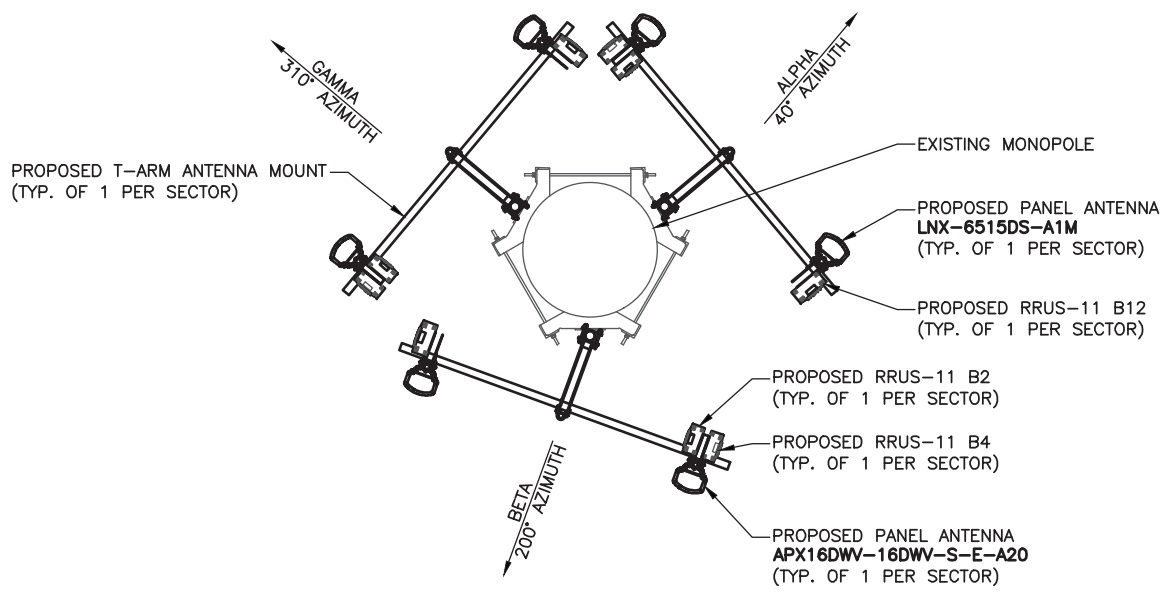
0' 5' 10' 15'
1" = 5' (24"x36")

1 OVERALL SITE PLAN
C-1

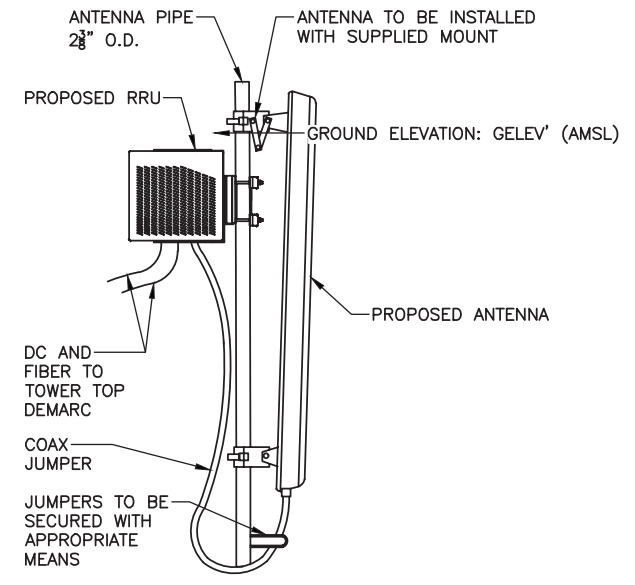


- NOTES:
- SMW HAS NOT PERFORMED A STRUCTURAL ANALYSIS OF THE EXISTING TOWER OR PROPOSED ANTENNA MOUNT. REFER TO STRUCTURAL ANALYSIS OR STRUCTURAL LETTER BY OTHERS FOR ADDITIONAL INFORMATION.
 - IF THE TOWER STRUCTURAL ANALYSIS SHOWS THE NEED FOR TOWER REINFORCEMENT REFER TO TOWER REINFORCEMENT DESIGN PRIOR TO THE INSTALLATION OF ANY PROPOSED EQUIPMENT.
 - REFER TO TOWER STRUCTURAL ANALYSIS FOR PROPOSED CABLE ROUTING AND ATTACHMENT DETAILS.
 - TOWER ELEVATION SHOWN IS NOT DRAWN TO SCALE AND IS INTENDED ONLY FOR REFERENCE PURPOSES. REFER TO ORIGINAL TOWER DESIGN FOR ADDITIONAL INFORMATION.

1
C-2 TOWER ELEVATION
NOT TO SCALE



2
C-2 PROPOSED ANTENNA ORIENTATION PLAN
NOT TO SCALE



3
C-2 ANTENNA MOUNT DETAIL
NOT TO SCALE



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SITE SOLUTIONS
Northeast Site Solutions, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677-1999

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TOGETHER PLANNING A BETTER TOMORROW



12/15/16

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KENT, CT 06757

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T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

SHEET NAME:
TOWER ELEVATION & ANTENNA PLAN

SMW #: 16-2557
DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:
C-2

707C_TOWER_1QP_1DP / U1900/L2100/L700 -- TOWER TOP EQUIPMENT SCHEDULE							
ANTENNA SECTOR	ANTENNA MARK	ANTENNA AZIMUTH	ANTENNA MODEL	RRU MODEL	TMA MODEL	TOWER TOP COVP MODEL	ANTENNA CABLE DESCRIPTION
ALPHA	A1	40°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	(1) 1 5/8" HYBRID CABLE SYSTEM (P)
	A2	40°	--	--	--	--	--
	A3	40°	LNx-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--
BETA	B1	200°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	(1) 1 5/8" HYBRID CABLE SYSTEM (R)
	B2	200°	--	--	--	--	--
	B3	200°	LNx-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--
GAMMA	C1	310°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	--
	C2	310°	--	--	--	--	--
	C3	310°	LNx-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--

NOTE:
(P) DENOTES PROPOSED EQUIPMENT
(R) DENOTES RESERVED EQUIPMENT
(E) DENOTES EXISTING EQUIPMENT

- NOTE:
1. THE HYBRID CABLE LENGTH SHOWN IS ONLY AN ESTIMATE AND SHOULD NOT BE USED FOR ORDERING MATERIALS. CONFIRM THE REQUIRED HYBRID CABLE LENGTH WITH T-MOBILE PRIOR TO ORDERING OR INSTALLATION.
 2. THE CONTRACTOR SHALL TEST THE OPTICAL FIBER AFTER INSTALLATION IN ACCORDANCE WITH T-MOBILE STANDARDS AND SUPPLY THE RESULTS TO T-MOBILE.
 3. THE CONTRACTOR SHALL CONFIRM THE TOWER TOP EQUIPMENT LIST ABOVE WITH THE FINAL T-MOBILE RFDS PRIOR TO INSTALLATION.
 4. ALL EXISTING AND PROPOSED ANTENNA CABLES SHALL BE COLOR CODED PER T-MOBILE MARKET STANDARDS.
 5. REFER TO MANUFACTURERS INSTALLATION STANDARDS FOR ADDITIONAL INFORMATION.
 6. REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION NOT LISTED ABOVE.

TOWER LOADING SUMMARY		
EQUIPMENT TYPE	ADD QUANTITY	TOTAL QUANTITY
PANEL ANTENNA	6	6
COAX CABLE	0	0
RRUS	9	9
HYBRID CABLE	2	2
COVP	0	0

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PLANS PREPARED BY:



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(860) 677-1999



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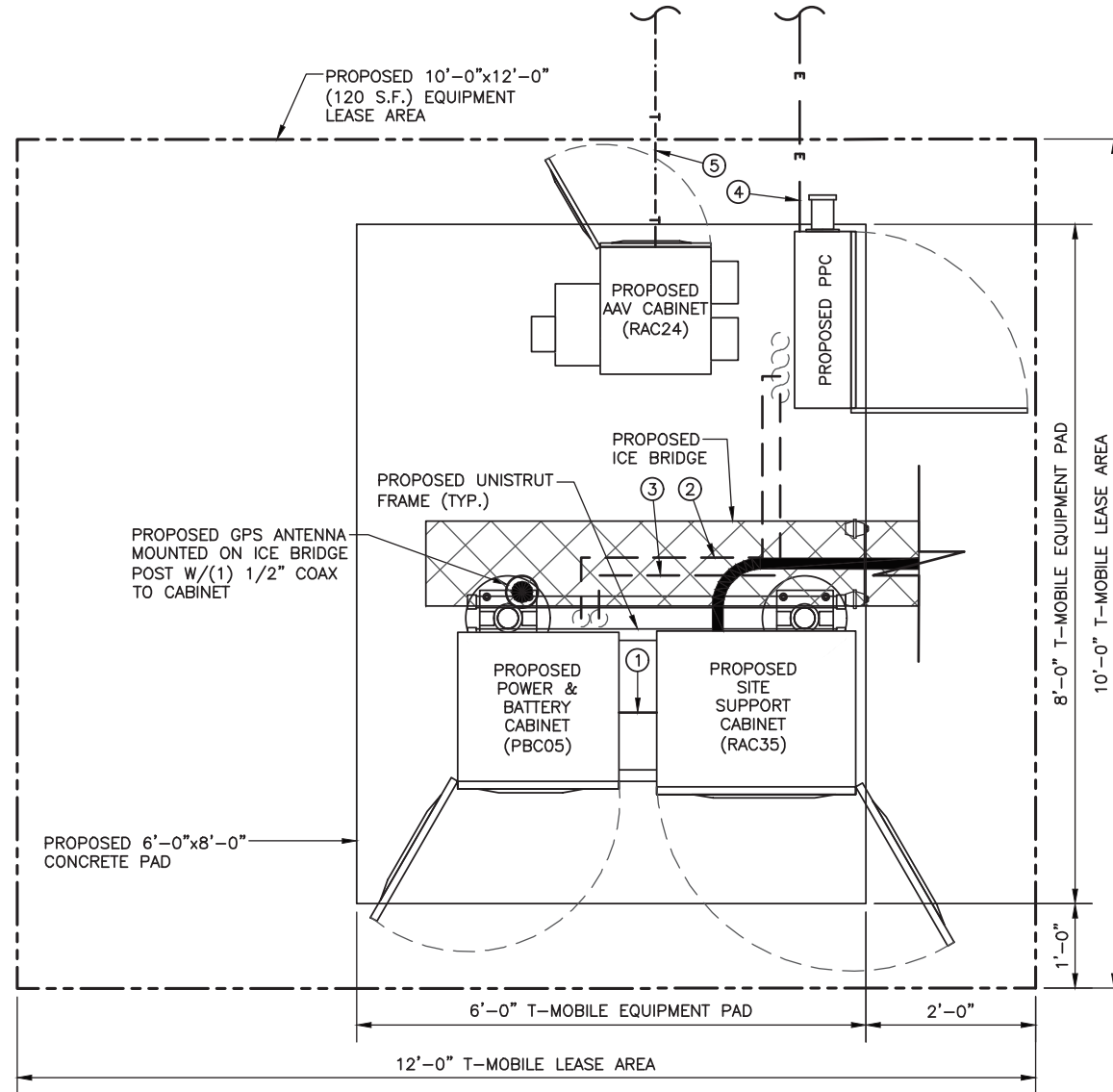
SHEET NAME:
**TOWER TOP
EQUIPMENT SCHEDULE**

SMW #:
16-2557

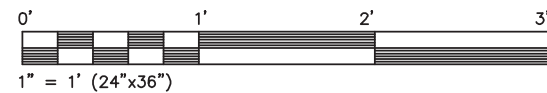
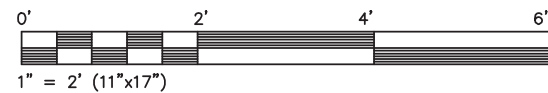
DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:
C-3

- ① 2"Ø CONDUIT (ABOVE SLAB)
- ② 2"Ø U/G CONDUIT (UNDER CONCRETE) FROM PROPOSED PPC TO PROPOSED PBC CABINETS
- ③ 2"Ø U/G CONDUIT (UNDER CONCRETE) FROM PROPOSED PPC DAISY-CHAINING SSC CAGINETS
- ④ 2"Ø PVC CONDUIT WITH (3) 3/0 + #4G FROM PROPOSED METER TO PPC CABINET. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
- ⑤ 2"Ø PVC CONDUIT WITH PULLSTRING FOR TELCO FROM PROPOSED AAV CABINET TO EXISTING TELCO SERVICE. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.



① GROUND EQUIPMENT DETAIL
C-4



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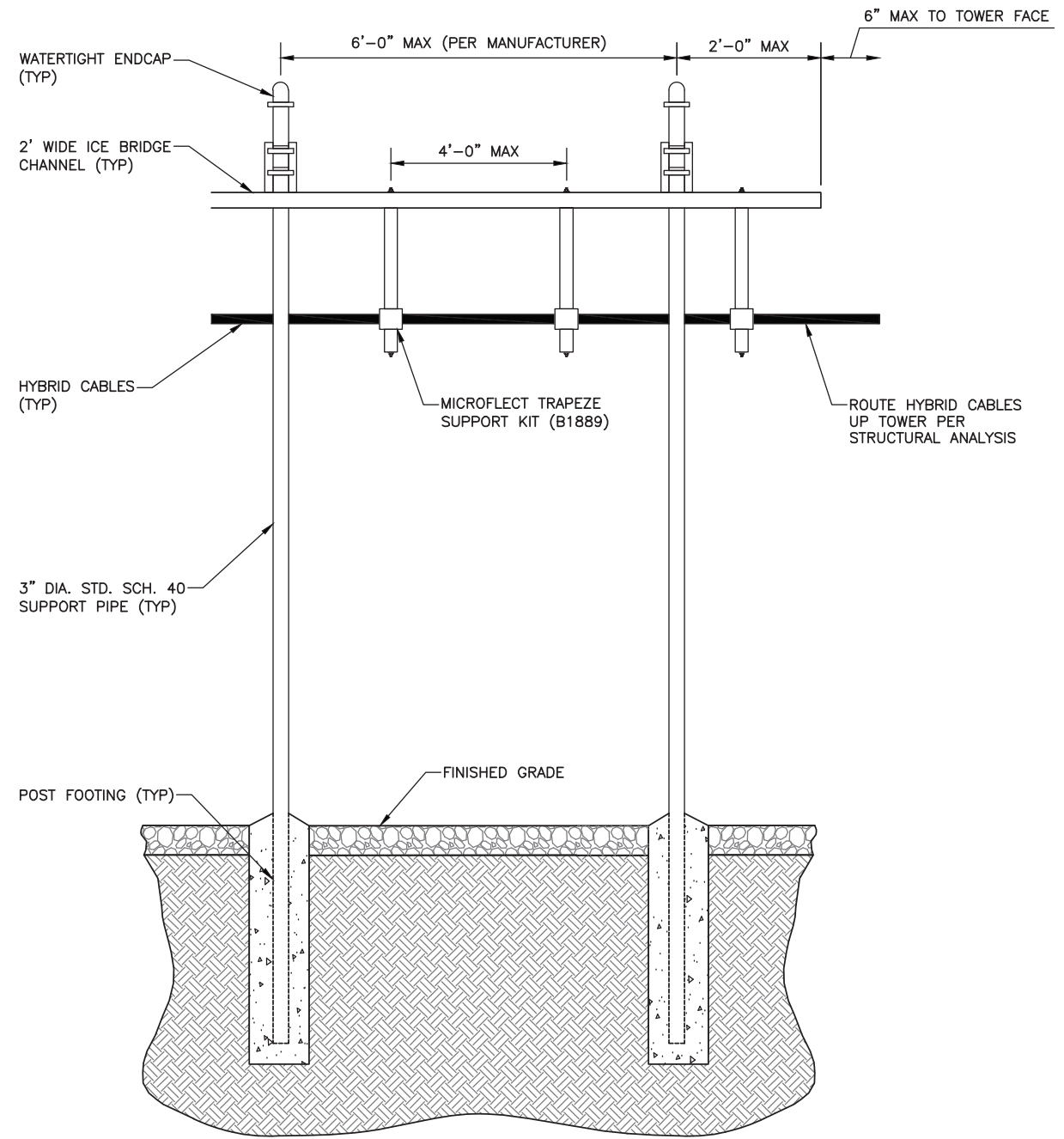
GROUND EQUIPMENT
DETAIL

SMW #: 16-2557

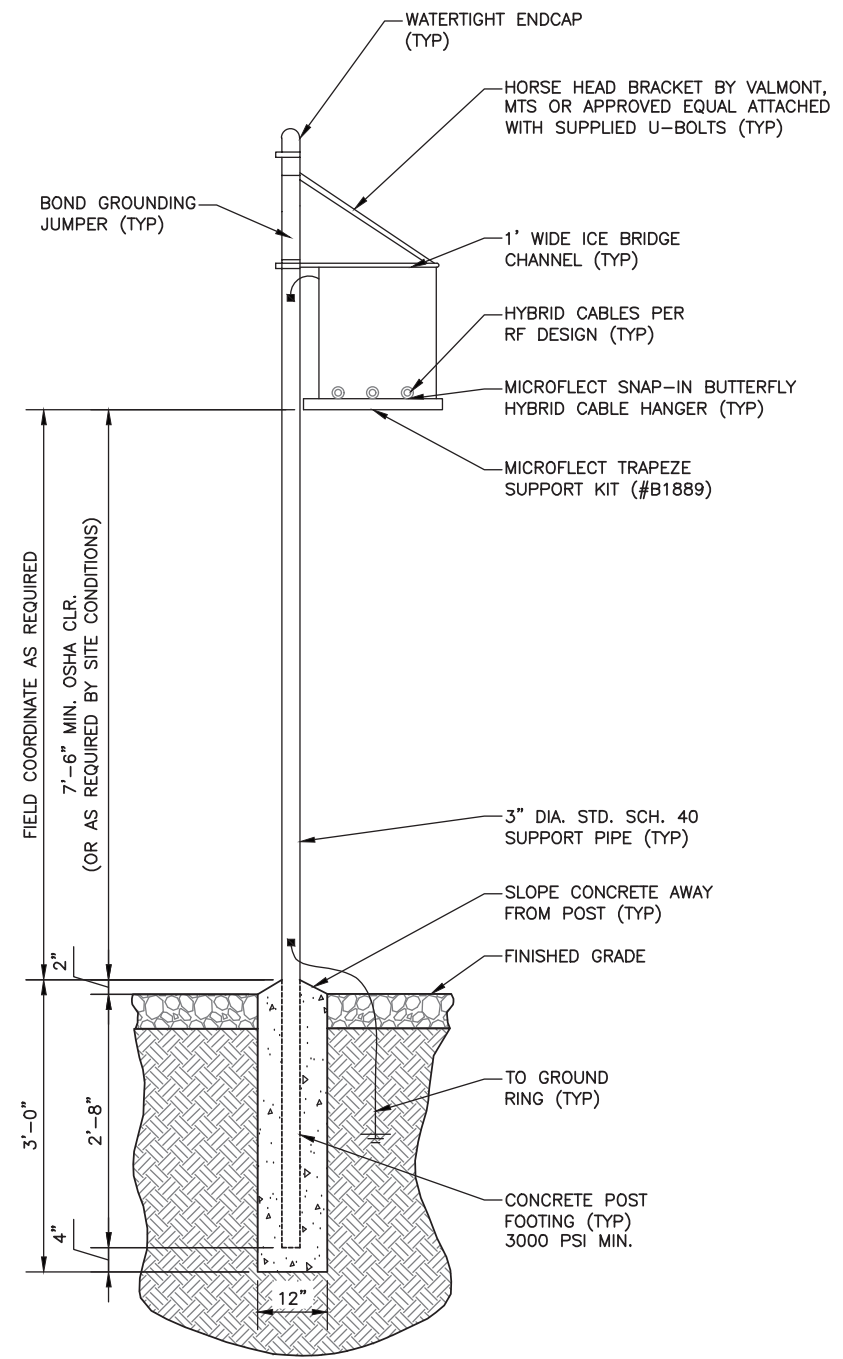
SHEET NUMBER:

DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

C-4



1 ICE BRIDGE ELEVATION
C-5 NOT TO SCALE



2 ICE BRIDGE SECTION (WITH 1 SUPPORT POST)
C-5 NOT TO SCALE

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 SITE SOLUTIONS
 Tandem #Radio/Development
 NORTHEAST SITE SOLUTIONS, LLC
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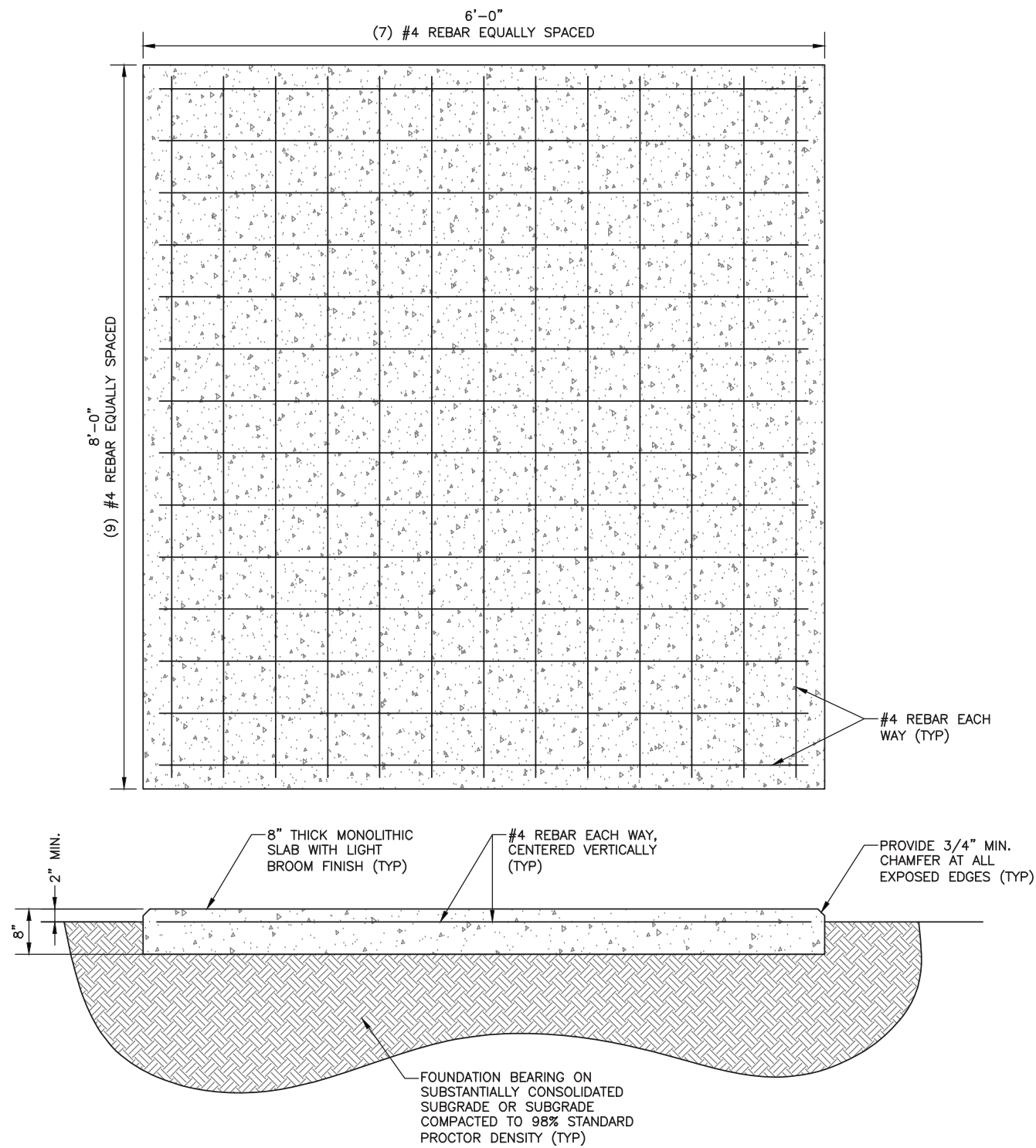
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T-MOBILE SITE ID: **CTNH542A** ATC SITE ID: **413783**

SHEET NAME:
**ICE BRIDGE
 DETAILS**

SMW #: **16-2557** SHEET NUMBER: **C-5**
 DESIGNER: **BMD**
 CHECKED BY: **RTB**
 ENGINEER: **JDS**



1 MONOLITHIC EQUIPMENT SLAB DETAIL
C-6 NOT TO SCALE

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF CAST-IN-PLACE CONCRETE, AND WHERE CODES CONFLICT THE MORE STRINGENT NATIONAL OR LOCAL CODE SHALL GOVERN.
2. SITECAST CONCRETE FOR SLABS AND POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.

SLUMP - 4" MIN. / 6" MAX.
AIR ENTRAINMENT - 2% TO 3% BY VOLUME

CLASSES OF CONCRETE				
CLASS	28 DAY STRENGTH (PSI)	MAX WATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE I	3000	0.55	SLABS & POST FOOTINGS	NORMAL WEIGHT
TYPE II*	5000	0.45	SLABS & POST FOOTINGS	HIGH EARLY STRENGTH

*IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE III HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8", UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 CONCRETE CAST AGAINST EARTH.....3"
 CONCRETE EXPOSED TO EARTH OR WEATHER
 #6 AND LARGER.....2"
 #5 AND SMALLER & W.W.F.....1-1/2"
5. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4"
6. INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
7. THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION AND CONSULT THE ENGINEER ACCORDINGLY.
8. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.

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FAX: 860-692-7159

PLANS PREPARED BY:

NSS NORTHEAST
SITE SOLUTIONS
Northeast Site Solutions, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677-1999

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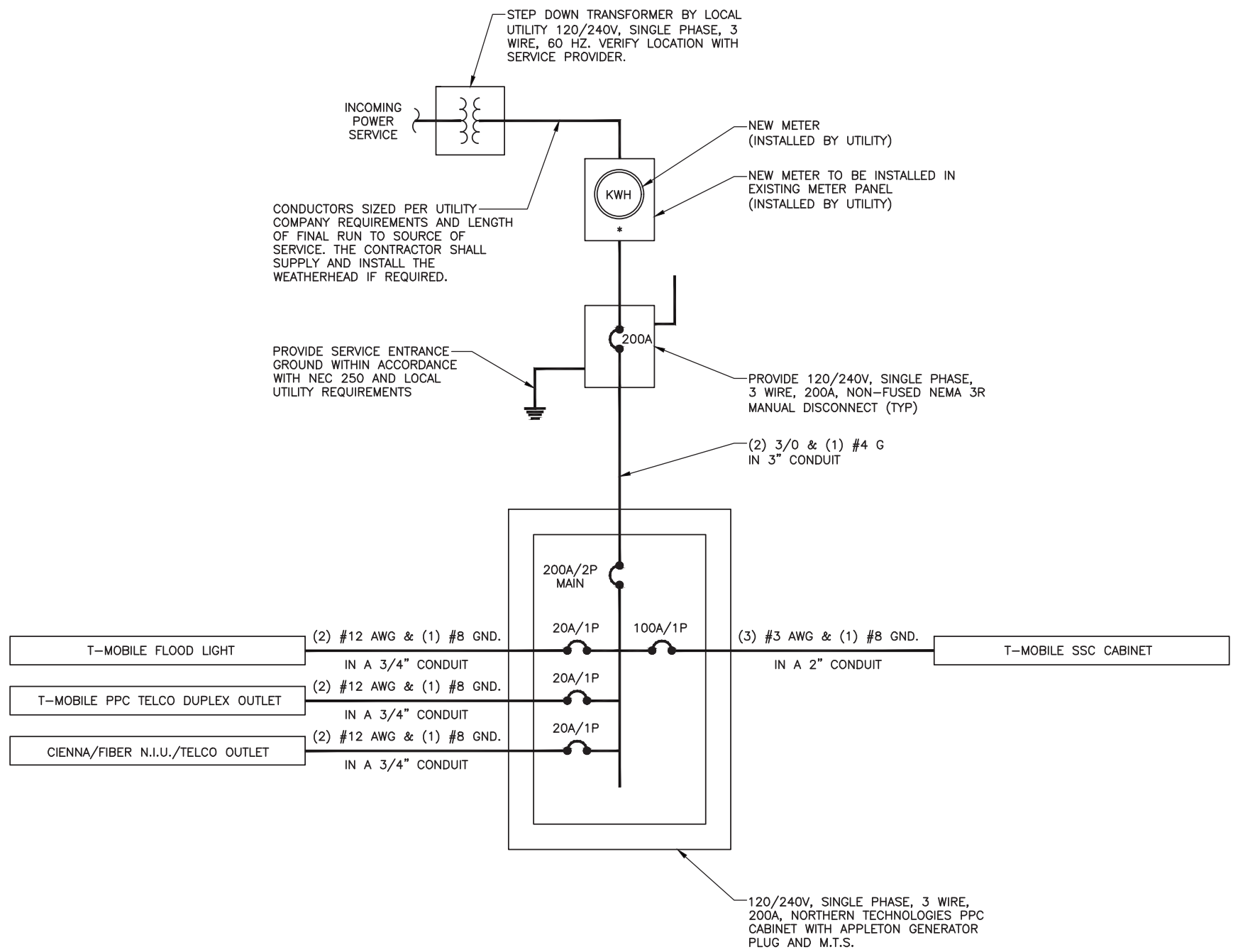
FOUNDATION
DETAILS & NOTES

SMW #: 16-2557

DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:

C-6



1 ONE-LINE DIAGRAM
E-1 NOT TO SCALE

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PLANS PREPARED BY:

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SITE SOLUTIONS
Norwalk Field Development
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ATC SITE ID: 413783

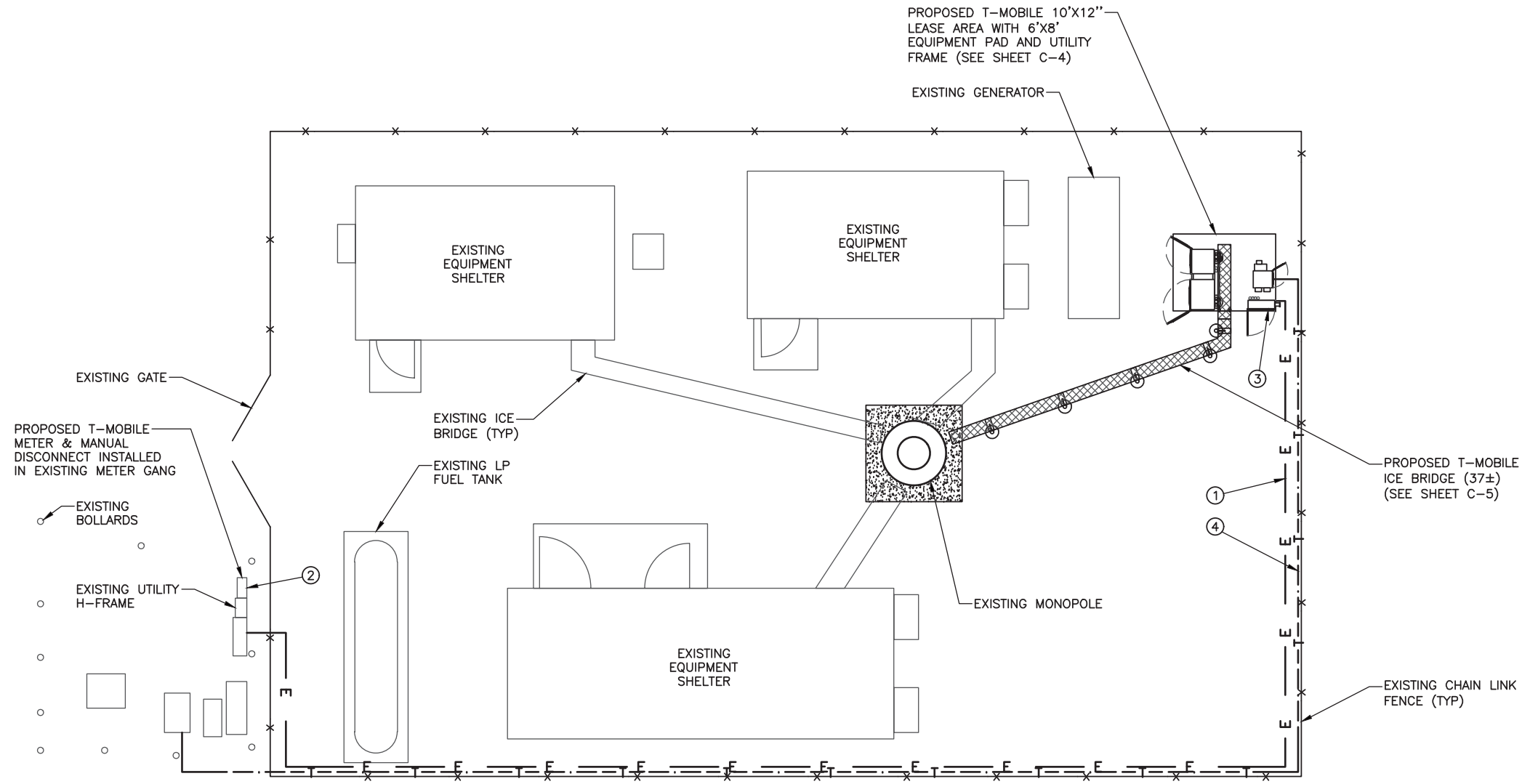
SHEET NAME:
ONE-LINE DIAGRAM

SMW #: 16-2557
DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:
E-1

ELECTRICAL KEY NOTES:

- ① PROPOSED 2" PVC CONDUIT WITH (3) 3/0 + #4G FROM PROPOSED METER TO PPC CABINET. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
- ② PROPOSED METER & 200A MANUAL DISCONNECT. COORDINATE WITH LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
- ③ PROPOSED 200A NORTHERN TECHNOLOGIES PPC CABINET WITH INTEGRATED 200A APPLETON GENERATOR BACKUP PLUG.
- ④ PROPOSED 2" PVC CONDUIT WITH PULLSTRING FOR TELCO FROM PROPOSED AAV CABINET TO EXISTING TELCO SERVICE. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.



① ELECTRICAL UTILITY PLAN
E-2

T-Mobile

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PLANS PREPARED BY:
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Norwalk (Hous) Development
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FARMINGTON CT 06032
(860) 677-1999

SMW
ENGINEERING GROUP, INC.
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12/15/16

SITE INFORMATION:
CTNH542A
38 MAPLE STREET
KENT, CT 06757

#	DATE	DESCRIPTION:
0	10/07/16	ISSUED FOR CLIENT REV.
1	10/25/16	REISSUED FOR CLIENT REV.
2	11/10/16	ISSUED FOR CONSTRUCTION
3	12/02/16	REISSUED FOR CONSTRUCTION
4	12/15/16	REISSUED FOR CONSTRUCTION

T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

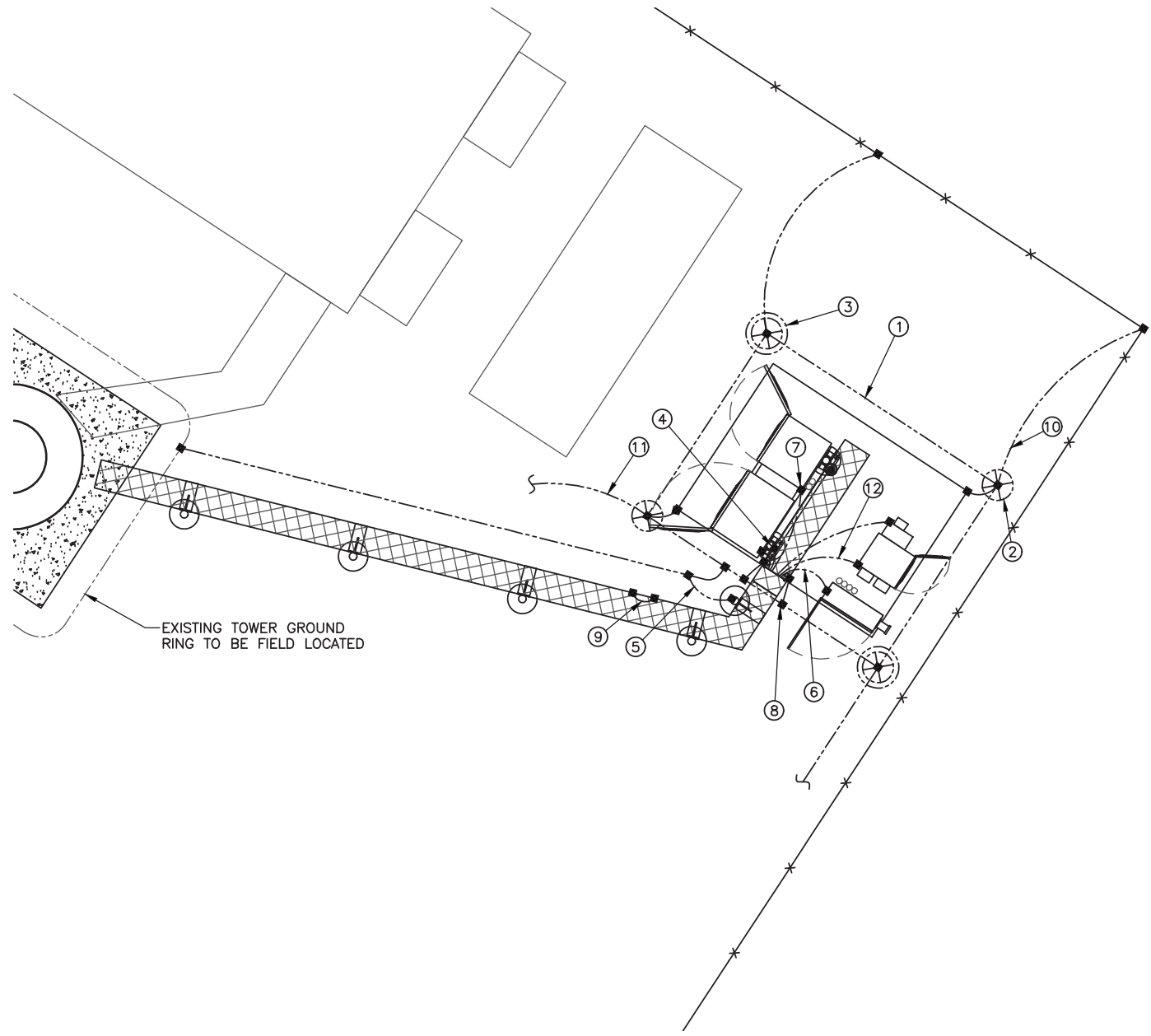
SHEET NAME:
ELECTRICAL UTILITY PLAN

SMW #: 16-2557
DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS
SHEET NUMBER:
E-2

GROUNDING KEY NOTES:

- ① PROPOSED #2 BARE TINNED SOLID COPPER GROUND RING (TYP)
- ② PROPOSED 5/8" DIA. X 8' LONG STEEL SHAFT COPPER CLAD GROUND ROD (TYP)
- ③ PROPOSED GROUND ROD WITH COVERED PVC TEST WELL (TYP)
- ④ GROUND PROPOSED UTILITY FRAME POST WITH CADWELD CONNECTION TO BASE PLATE (TYP)
- ⑤ GROUND PROPOSED ICE BRIDGE POST WITH CADWELD CONNECTION TO BASE (TYP)
- ⑥ GROUND PROPOSED PPC POWER PANEL PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP)
- ⑦ GROUND PROPOSED SSC CABINET MAIN GROUND BAR WITH 2-HOLE LUG CONNECTION (TYP)
- ⑧ PROVIDE 12 POSITION MAIN EQUIPMENT COLLECTOR GROUND BAR ATTACHED TO UNISTRUT FRAME WITH STANDOFF INSULATORS, GROUND WITH (2) CADWELDED CONNECTIONS, 1 PER SITE (TYP)
- ⑨ GROUND ICE BRIDGE CHANNEL SECTIONS WITH 2-HOLE LUG CONNECTION. BOND ADJOINING CHANNEL SECTIONS TOGETHER WITH 2-HOLE LUG JUMPERS (TYP)
- ⑩ GROUND TO ALL METALLIC OBJECTS WITHIN 6' OF THE PROPOSED EQUIPMENT AND BURIED GROUND RING (TYP)
- ⑪ GROUND PROPOSED T-MOBILE BURIED EQUIPMENT GROUND RING TO EXISTING SITE GROUND RING. CONDUCT GROUNDING SYSTEM TEST AND INCLUDE IN THE CLOSEOUT PACKAGE TO T-MOBILE. ADDITIONAL GROUNDING MAY BE REQUIRED PENDING THE RESULTS OF THE GROUNDING SYSTEM TEST (TYP x2)
- ⑫ CADWELD CONNECTION (SEE SHEET E-6)

NOTE TO CONTRACTORS:
DIGGING AND/OR TRENCHING INSIDE COMPOUND, MUST BE DONE BY HAND.



EXISTING TOWER GROUND RING TO BE FIELD LOCATED



1 GROUNDING PLAN
E-3 NOT TO SCALE

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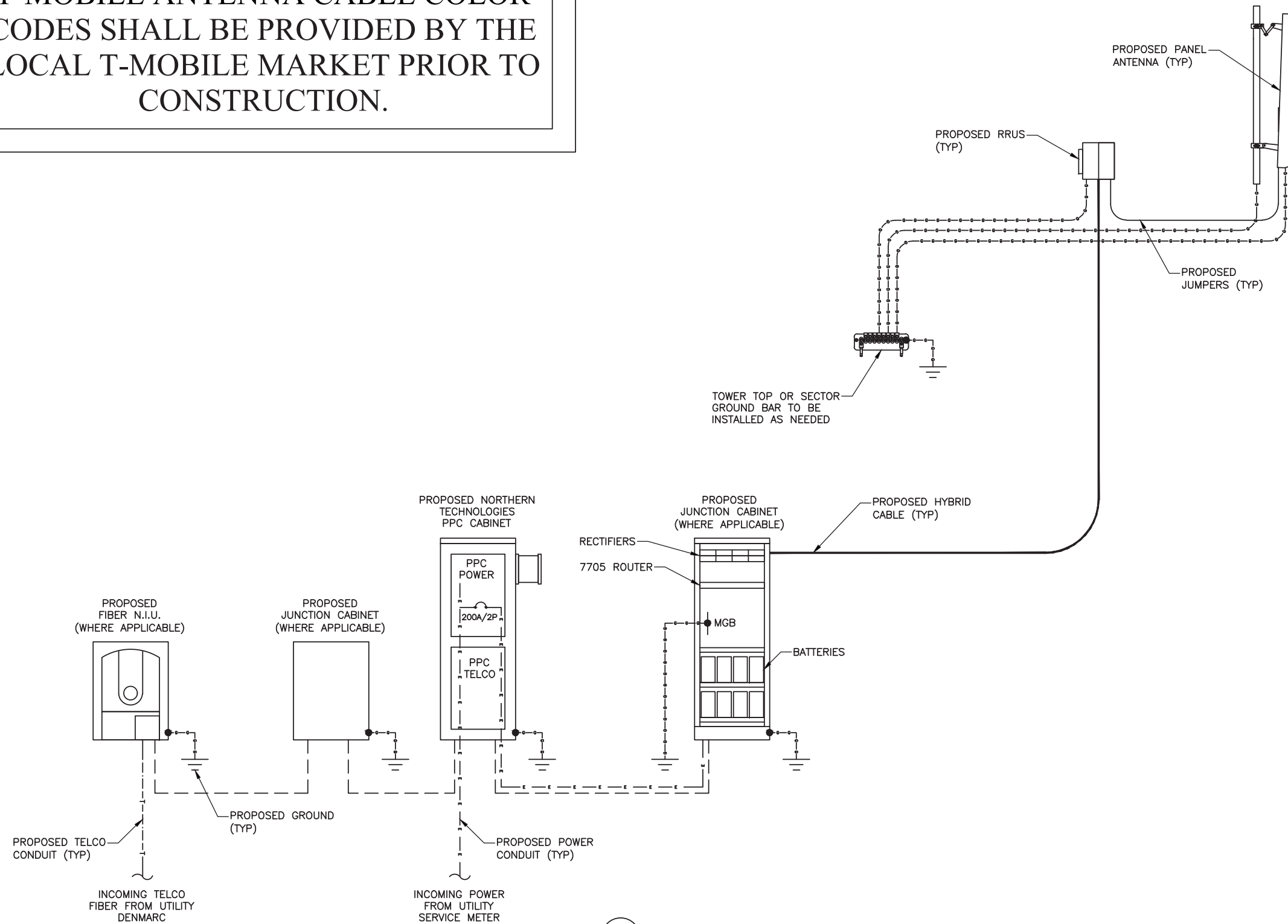
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T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

SHEET NAME:
GROUNDING PLAN

SMW #: 16-2557
DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS
SHEET NUMBER:
E-3

T-MOBILE ANTENNA CABLE COLOR CODES SHALL BE PROVIDED BY THE LOCAL T-MOBILE MARKET PRIOR TO CONSTRUCTION.



1 EQUIPMENT POWER, TELCO & GROUNDS SCHEMATIC
E-4 NOT TO SCALE

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SHEET NAME:

EQUIPMENT SCHEMATIC

SMW #: 16-2557

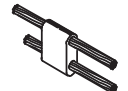






DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

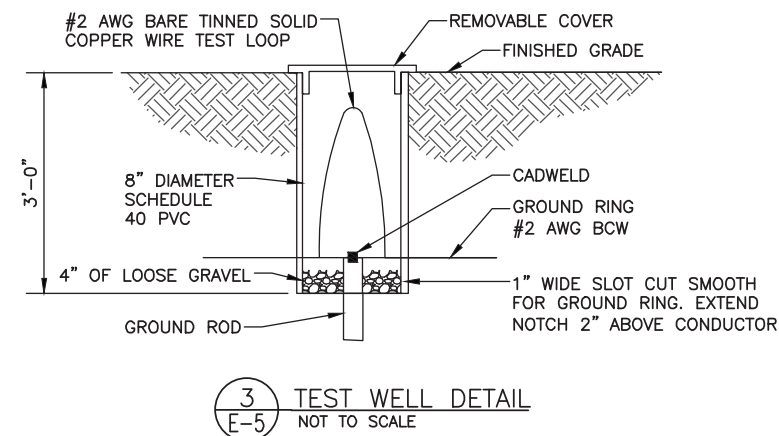
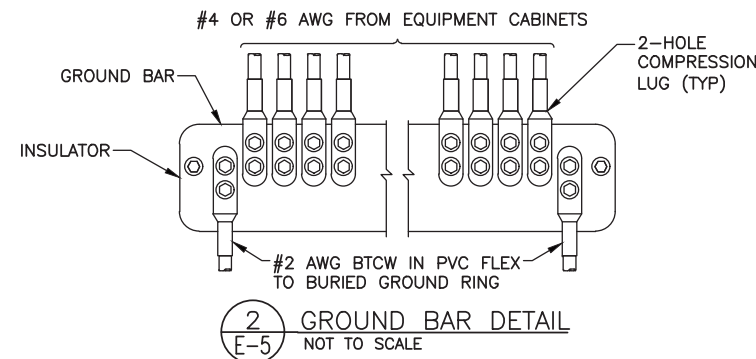
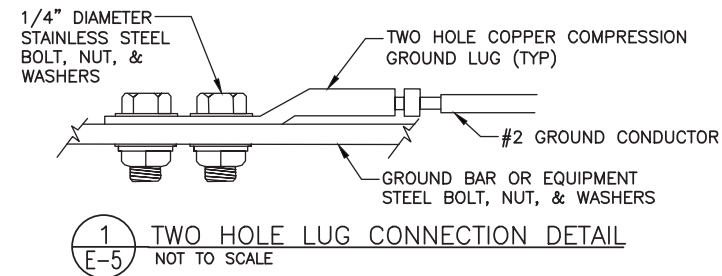
SHEET NUMBER:

E-4

- ALL WORK IS TO COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC) AND ANY LOCAL ORDINANCES, CODES, AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL PERMITS AND RELATED FEES.
- ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE UNDERWRITERS LABORATORIES (U.L.) LISTED, NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL, OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.
- ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. CONTRACTOR SHOULD AVOID DAMAGE TO EXISTING UTILITIES WHEREVER POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, AND SHALL RESTORE ALL EXISTING LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS, WIRING, PIPING, ETC. DAMAGED BY THE ELECTRICAL WORK TO MATCH EXISTING CONDITIONS.
- ELECTRICAL WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ELECTRICAL POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANELBOARDS, CONDUIT, CONTROL WIRING, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS AND/OR AS REQUIRED BY GOVERNING CODES.
- PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB, AND BY REFERENCE TO ENGINEERING AND EQUIPMENT SUPPLIERS' DRAWINGS. SHOULD THERE BE ANY QUESTION OR PROBLEM CONCERNING THE NECESSARY PROVISIONS TO BE MADE. PROPER DIRECTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH ANY WORK.
- PROVIDE POWER AND TELEPHONE TO SERVICE POINTS PER UTILITY COMPANY REQUIREMENTS. CONTRACTOR SHALL CONTACT UTILITY SERVICE PLANNERS AND OBTAIN ALL SERVICE REQUIREMENTS AND INCLUDE COSTS FOR SUCH IN THEIR BID.
- SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT WITHSTAND RATING EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL ON THE UTILITY TRANSFORMER SECONDARY, THE INSULATION SHALL BE FREE FROM ANY SHORT CIRCUITS AND GROUNDS. CONTRACTOR TO OBTAIN THE AVAILABLE SHORT CIRCUIT CURRENT FROM THE ELECTRICAL SERVICE PROVIDER.
- ALL WIRES SHALL BE STRANDED COPPER WITH THHN/THWN AND 600 VOLTS INSULATION. ALL GROUND CONDUCTORS TO BE PROPERLY SIZED COPPER. (STRANDED OR SOLID)
- IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL.
- SERVICE CONDUITS SHALL HAVE NO MORE THAN (4) -50° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS. PULL WIRES AND CAPS SHALL BE PROVIDED AT ALL SPARE CONDUITS FOR FUTURE USE.
- ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO WITHSTAND LOCAL WIND SPEED REQUIREMENTS AND DESIGNED FOR OUTDOOR EXPOSURE.
- ALL COAX, POWER AND TELEPHONE SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" SCH. 80 PVC RADIUS SWEEPS TO EQUIPMENT, PULLBOXES, GUY, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES.
- FUSE TYPE SHALL BE BUSSMAN RKI LOW PEAK FUSE (LPN-RK-140).
- UPON COMPLETION OF THE JOB, THE CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE OWNER.
- GENERAL GROUNDING CRITERIA
1ST STEP: GROUND TO EXISTING BUILDING STRUCTURAL STEEL AND TO THE EXISTING COLD WATER METAL PIPE LINE. (WHERE APPLICABLE) THEN TEST GROUNDING RESISTANCE FOR 5 OHMS OR LESS OVERALL GROUND RESISTANCE. WHERE THE EFFECTIVE RESISTANCE DOES NOT MEET THIS CRITERIA, PROVIDE SUPPLEMENTAL GROUNDING AND RE-TEST UNTIL GROUND RESISTANCE FALLS BELOW THIS LEVEL.
- SUPPLEMENTAL GROUND MAY CONSIST OF ONE OR MORE OF THE FOLLOWING:
COUNTERPOISE, USER GROUND, GROUND ROD AND/OR GROUND WELL IN EXTREMELY ADVERSE SOIL CONDITIONS. WHERE THE EXISTING BUILDING STEEL DOES NOT PROVIDE AN EFFECTIVE GROUND RESISTANCE, THEN THE CONTRACTOR SHALL PROVIDE A SEPARATE GROUND CONDUCTOR FROM ROOF MOUNTED BTS EQUIPMENT LOCATIONS EITHER DOWN THROUGH THE INSIDE OF THE BUILDING OR DOWN THE OUTSIDE OF THE BUILDING, DEPENDING UPON OWNER PREFERENCE. WHERE THE GROUND CONDUCTOR FROM THE ROOF MOUNTED EQUIPMENT IS ROUTED IN CONDUIT, THE CONDUIT SHALL BE EFFECTIVELY GROUNDED TO THE GROUND CONDUCTOR AT BOTH ENDS OF THE CONDUIT. (GUY INSTALLATIONS):

FOR INSTALLATIONS WHERE WOODEN STRUCTURES, TOWERS, CONCRETE SILOS ETC. ARE ENCOUNTERED A PARATE DOWNLEAD SHALL BE PROVIDED FROM THE 3 ANTENNAS SEPARATED BY A MINIMUM OF 12 INCHES FROM THE COAXIAL CABLES. THE GROUND CONDUCTOR SHALL BE SECURELY FASTENED TO THE EXTERIOR OF OUTSIDE STRUCTURES WITH NONMETALLIC GROUND STRAPS EVERY 10 FEET. AGAIN, AS FOR TENANT IMPROVEMENT PROJECTS, TEST THE GROUND RESISTANCE FOR GUY INSTALLATIONS AND PROCEED PER THE ABOVE STEPS.
- CONTRACTOR TO COLOR PHASE CONDUCTORS BLACK (B PHASE), RED (A PHASE), WHITE (NEUTRAL), AND GREEN (GROUND).
- CONTRACTOR TO PROVIDE GUTTER TAP.
- THERE SHALL BE A MINIMUM CLEARANCE OF 48" BETWEEN FRONT OF ELECTRICAL EQUIPMENT AND ANY WALL OR OBSTRUCTION.

CADWELD CONNECTIONS OR APPROVED EQUAL		BURNDY CONNECTIONS OR APPROVED EQUAL	
 PARALLEL HORIZONTAL CONDUCTORS PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT	 HORIZONTAL STEEL SURFACE TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS	 VERTICAL PIPE CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS	 BOND JUMPER FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2-YA-2
 THROUGH CABLE TO GROUND ROD THROUGH CABLE TO TOP OF GROUND ROD TYPE GT	 VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS	 COPPER LUGS TWO HOLE - LONG BARREL LENGTH TYPE YA-2	



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T-MOBILE SITE ID: CTNH542A
ATC SITE ID: 413783

SHEET NAME:

**ELECTRICAL &
GROUNDING DETAILS**

SMW #:
16-2557

DESIGNER: BMD
CHECKED BY: RTB
ENGINEER: JDS

SHEET NUMBER:

E-5