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BOS0087A

WESTON MANOR SOMERVILLE

15 WESTON AVENUE
SOMERVILLE, MA 02144
MIDDLESEX COUNTY

SITE TYPE: BACKHAUL INSTALLATION - ROOF TOP

SITE INFORMATION:

PROPERTY OWNER: SOMERVILLE HOUSING AUTHORITY
30 MEMORIAL ROAD
SOMERVILLE, MA 02145

APPLICANT: MetroPCS MASSACHUSETTS, LLC
285 BILLERICA ROAD, THIRD FLOOR
CHELMSFORD, MA 01824
(978) 244-7000

SITE ADDRESS: 15 WESTON AVENUE
SOMERVILLE, MA 02144

COUNTY: MIDDLESEX

LATITUDE: N 42.403805°

LONGITUDE: W -71.126313°

ZONING CLASSIFICATION: RB (RESIDENCE B)

ZONING JURISDICTION: CITY OF SOMERVILLE

TAX ID PARCEL NUMBER: MAP 9 BLOCK B LOT 3

ARCHITECT / ENGINEER: CHAPPELL ENGINEERING ASSOCIATES, LLC
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 301
MARLBOROUGH, MA 01752

POWER COMPANY: NSTAR
ONE NSTAR WAY
WESTWOOD, MA 02090
(800) 592-2000

TELEPHONE COMPANY: VERIZON
185 FRANKLIN STREET
BOSTON, MA 02107
(800) 941-9900

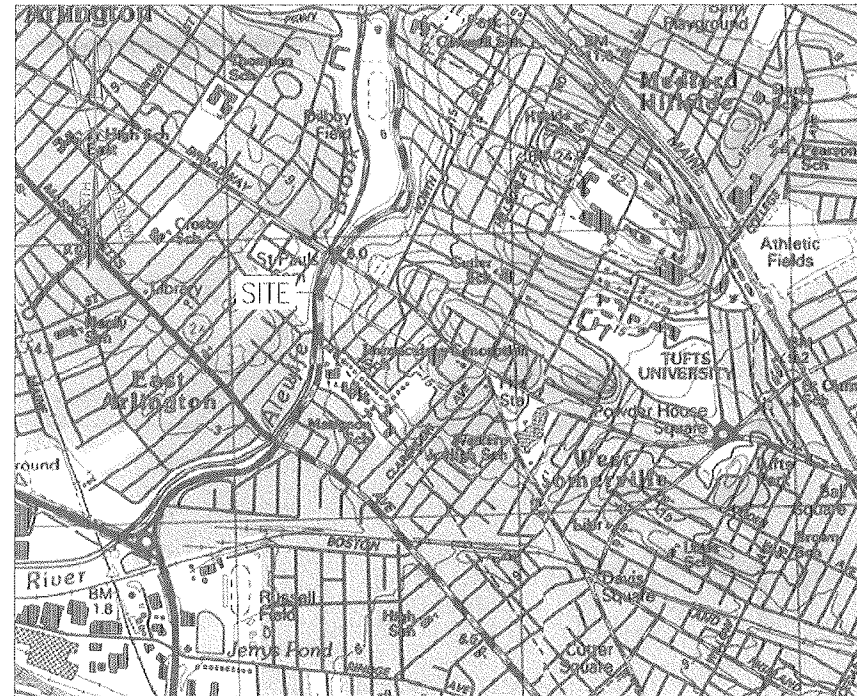
SITE ACQUISITION MANAGER: KELLIE DUNN
(978) 244-7200

CONSTRUCTION MANAGER: DAVE BEAN
(978) 244-7200

OPERATIONS MANAGER: MIKE WILBANKS
(978) 244-7200

VICINITY MAP

SCALE: 1"=1000'



DRIVING DIRECTIONS

START OUT GOING SOUTHEAST ON BILLERICA RD TOWARD ELLIOTT ST. 0.4 MI. MERGE ONTO US-3 S TOWARD BURLINGTON/BOSTON. 9.0 MI. MERGE ONTO I-95 S/MA-128 S VIA EXIT 25B TOWARD PROVIDENCE RI. 4.9 MI. MERGE ONTO MA-2 E/CONCORD TURNPIKE VIA EXIT 29A TOWARD ARLINGTON/CAMBRIDGE. 6.8 MI. TAKE THE US-3 N/RT-16 E EXIT ON THE LEFT TOWARD ARLINGTON/MEDFORD. 0.1 MI. TURN SLIGHT LEFT ONTO US-3 N/MA-16 E/ALEWIFE BROOK PKWY. CONTINUE TO FOLLOW MA-16 E/ALEWIFE BROOK PKWY. 0.8 MI. TURN RIGHT ONTO BROADWAY. 0.3 MI. TURN RIGHT ONTO WESTON AVE. 0.0 MI. END AT 15 WESTON AVE SOMERVILLE, MA 02144-1784

APPROVALS

LANDLORD: APPROVED
By David Robinson on 05/15/12, Aug 14, 2012

FIELD CONST. MGR: APPROVED
By David Robinson on 05/15/12, Aug 14, 2012

RF ENGINEER: APPROVED
By David Robinson on 05/15/12, Aug 14, 2012

SITE ACQUISITION AGENT: APPROVED
By David Robinson on 05/15/12, Aug 14, 2012

ZONING MANAGER:

ERICSSON:

SHEET INDEX

| DWG. | DESCRIPTION | REV. |
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| GN-1 | GENERAL NOTES | 0 |
| C-1 | PROPERTY PLAN | 0 |
| A-1 | ROOF PLAN | 0 |
| A-2 | ELEVATION | 0 |
| S-1 | ANTENNA & SITE DETAILS | 0 |
| E-1 | WIRING & GROUNDING DETAILS | 0 |

PROJECT DESCRIPTION

- THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
- THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY.
- NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
- NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
- NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
- METRO PCS MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

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ENGINEER/LAND SURVEYOR DATE:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

REVISIONS

| REV. # | DATE | DESCRIPTION |
|--------|----------|--------------------------|
| 0 | 06/09/12 | ISSUED FOR ZONING/CONST. |

| PROJECT NO. | DESIGNED BY: | CHK: | SCALE: |
|-------------|--------------|------|----------|
| 1216.034 | DRW: GC | CHK: | AS SHOWN |
| | CHECK'D BY: | JMT | |

SITE NAME:
**BOS0087A
WESTON MANOR
SOMERVILLE**

SITE ADDRESS:
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:
TITLE SHEET

DRAWING NO:
T-1

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - METRO PCS
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - METRO PCS
OEM - ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND HELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION WEARS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL METRO PCS STANDARDS AND SPECIFICATIONS.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST 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 TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING ITEMS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, SHUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE METRO PCS SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A186, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL BARS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH.....3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER
#6 AND LARGER2 IN.
#5 AND SMALLER & WRT1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER
OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS1½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, BOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL. WHEN DRILLING HOLES IN CONCRETE, SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TESTS ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (ACI 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER:
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS FOUNDED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND METRO PCS SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION"
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL.
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELLED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.
- AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E), AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

- HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR

CONSTRUCTION NOTES:

- FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, METRO PCS ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

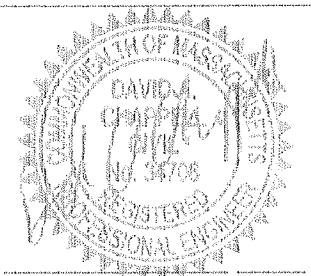
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND ILLINOIS.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLEING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND ILLINOIS.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOD PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOD PLASTIC LABELS.
- ALL THE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID THINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET, LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENGAGED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD, SHALL BE PADMOUNT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.



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ENGINEER/LAND SURVEYOR DATE
IF IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

| REVISIONS | | |
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| REV. # | DATE | DESCRIPTION |
| 0 | 06/09/12 | ISSUED FOR ZONING/CONST. |

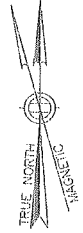
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|-------------------------|--|--------------------|
| PROJECT NO. 1216.034 | DESIGNED BY: JAF DRAWN BY: DMC CHECKED BY: JAF | SCALE: AS SHOWN |
|-------------------------|--|--------------------|

SITE NAME:
**BOS0087A
WESTON MANOR
SOMERVILLE**

SITE ADDRESS:
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:
GENERAL NOTES

DRAWING NO:
GN-1



GENERAL NOTES:

- FIELD SURVEY DATE: JUNE 27, 2012
- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
- HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
- SITE CONTROL POINT: CENTER OF BUILDING
LATITUDE: N 42.403605° (NAD 83)
LONGITUDE: W -71.129313° (NAD 83)
- OWNER: SOMERVILLE HOUSING AUTHORITY
30 MEMORIAL ROAD
SOMERVILLE, MA 02145
- SITE NAME: WESTON MANOR SOMERVILLE
- SITE ADDRESS: 15 WESTON AVENUE
SOMERVILLE, MA 02144
- APPLICANT: metroPCS MASSACHUSETTS, LLC
285 BILLERICA ROAD, 3RD FLOOR
CHELMSFORD, MA 01824
- JURISDICTION: CITY OF SOMERVILLE
- PID: MAP 9 BLOCK B LOT 3
- DIED REFERENCE: N/A
- PLAN REFERENCES: CITY OF SOMERVILLE ASSESSOR/GIS MAPS
- ZONING JURISDICTION: RB (RESIDENCE B)
- ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITY SHOULD BE LOCATED IN THE FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. CALL DISSAFE 1-888-344-7233 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
- THE PROPERTY LINES SHOWN WERE COMPILED UTILIZING TOWN/CITY ASSESSOR'S PLANS, GIS, RECORDED DEEDS AND PLANS OF REFERENCE AS INDICATED.
- BEARING SYSTEM OF THIS PLAN IS BASED ON TRUE NORTH. TRUE NORTH WAS ESTABLISHED FROM EXIST. PLAN REFERENCE. IT IS NOT INTENDED TO BE AN EXACT REPRESENTATION OF TRUE NORTH.

LEGEND

| | |
|-----|---------------------------|
| --- | PROPERTY LINE |
| --- | ABUTTING PROPERTY LINE |
| --- | EXIST. EASEMENT |
| --- | EXIST. CHAIN LINK FENCE |
| --- | EXIST. STOCKADE FENCE |
| --- | EXIST. EDGE OF PAVEMENT |
| --- | EXIST. OVERHEAD UTILITIES |
| --- | PROP. OVERHEAD UTILITIES |
| --- | PROP. UTILITIES |
| --- | EXIST. UTILITY POLE |
| --- | ZONING BOUNDARY |

ZONING DISTRICT LEGEND

| | |
|----|-----------------------|
| NB | NEIGHBORHOOD BUSINESS |
| RA | RESIDENCE A |
| RB | RESIDENCE B |
| RC | RESIDENCE C |

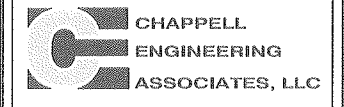
ZONING INFORMATION

| DESCRIPTION | REQUIRED | EXISTING | PROPOSED |
|--------------------|----------|-------------|----------|
| MIN. LOT AREA: | N/A | 23,612 S.F. | N/A |
| MIN. LOT FRONTAGE: | N/A | 218'± | N/A |
| PROPERTY SETBACKS | | | |
| FRONT | 10' | 18.8'± | 40.5'± |
| SIDE | 15' | 26.1'± | 66.8'± |
| REAR | 10' | 11.6'± | 32.3'± |
| MAX. HEIGHT | N/A | 67.7'± | 94.0'± |

- NOTE:
- PLOT PLAN BASED ON CITY OF SOMERVILLE ASSESSORS MAPS AND FIELD VISIT BY CHAPPELL ENGINEERING ASSOCIATES, LLC. ON 06/27/12.
 - SETBACKS ARE TAKEN FROM THE CLOSEST POINT OF EQUIPMENT/ANTENNAS TO PROPERTY LINES.



285 BILLERICA ROAD
THIRD FLOOR
CHELMSFORD, MA 01824
TEL (978) 244-7000
FAX (978) 244-7240



R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 301
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



ENGINEER/LAND SURVEYOR DATE
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REVISIONS

| REV. # | DATE | DESCRIPTION |
|--------|----------|--------------------------|
| 0 | 06/09/12 | ISSUED FOR ZONING/CONST. |

PROJECT NO. 1216.034
DESIGNED BY: JMT
DRAWN BY: CMC
CHECK'D BY: JMT
SCALE: 1" = 64'

SITE NAME:
**BOS0087A
WESTON MANOR
SOMERVILLE**

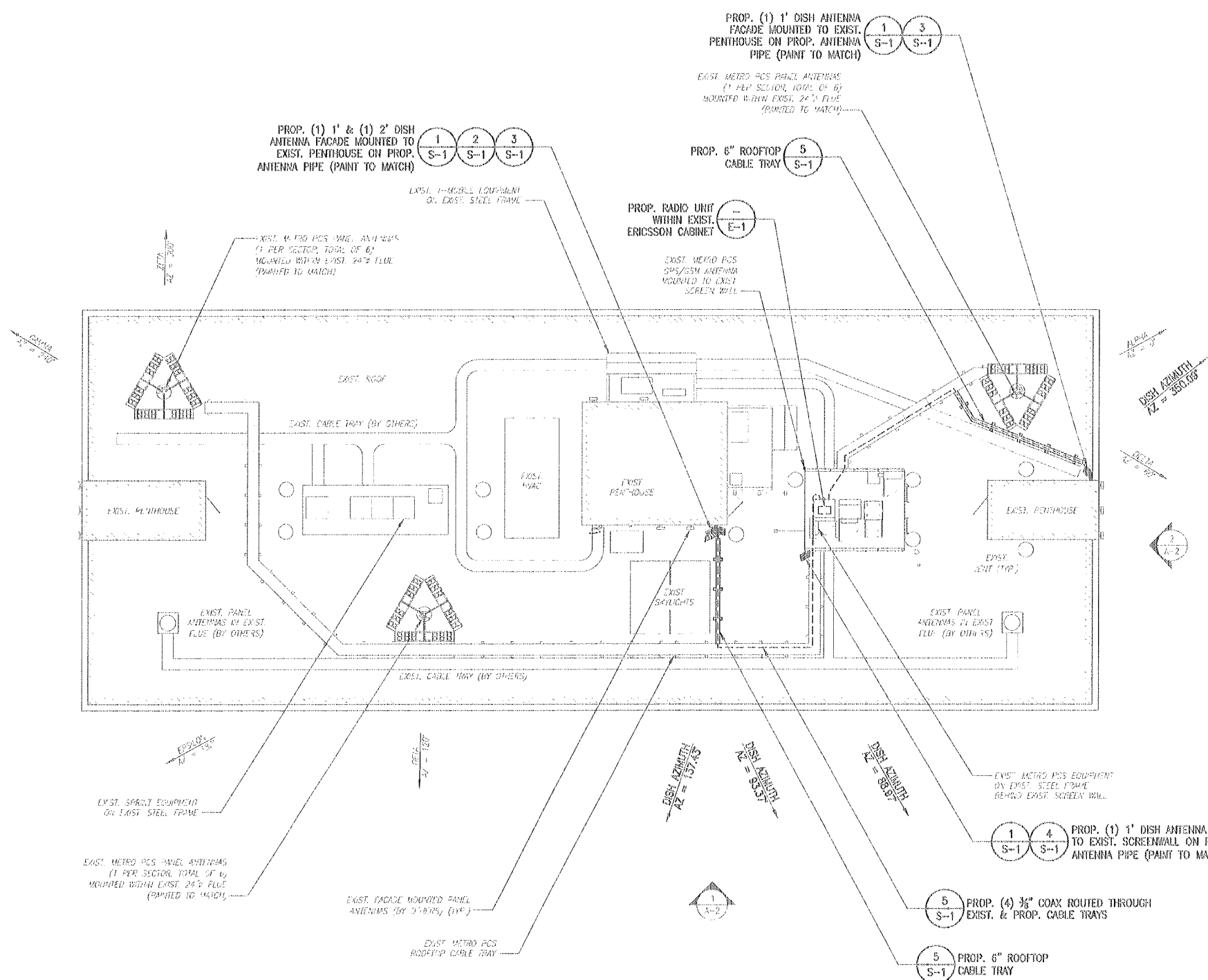
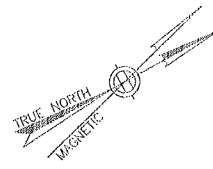
SITE ADDRESS:
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:
PROPERTY PLAN

DRAWING NO:
C-1

NOTE:
PROPERTY PLAN REFERENCED FROM EXISTING CONSTRUCTION DRAWINGS BY ADVANCED ENGINEERING GROUP, P.C., DATED 04/30/2010.





NOTE:
 ROOF PLAN REFERENCED FROM EXISTING
 CONSTRUCTION DRAWINGS BY ADVANCED
 ENGINEERING GROUP, P.C., DATED 04/30/2010.

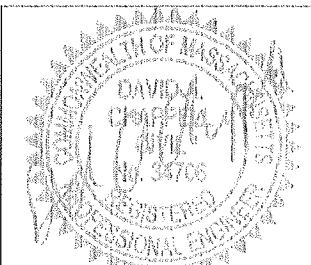
ROOF PLAN
 SCALE: 1/8" = 1'-0"
 0 4 8 16 24

metroPCS
 Unlimit Yourself.

285 BILLERICA ROAD
 THIRD FLOOR
 CHELMSFORD, MA 01824
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**CHAPPELL
 ENGINEERING
 ASSOCIATES, LLC**

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ENGINEER/LAND SURVEYOR DATE

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REVISIONS

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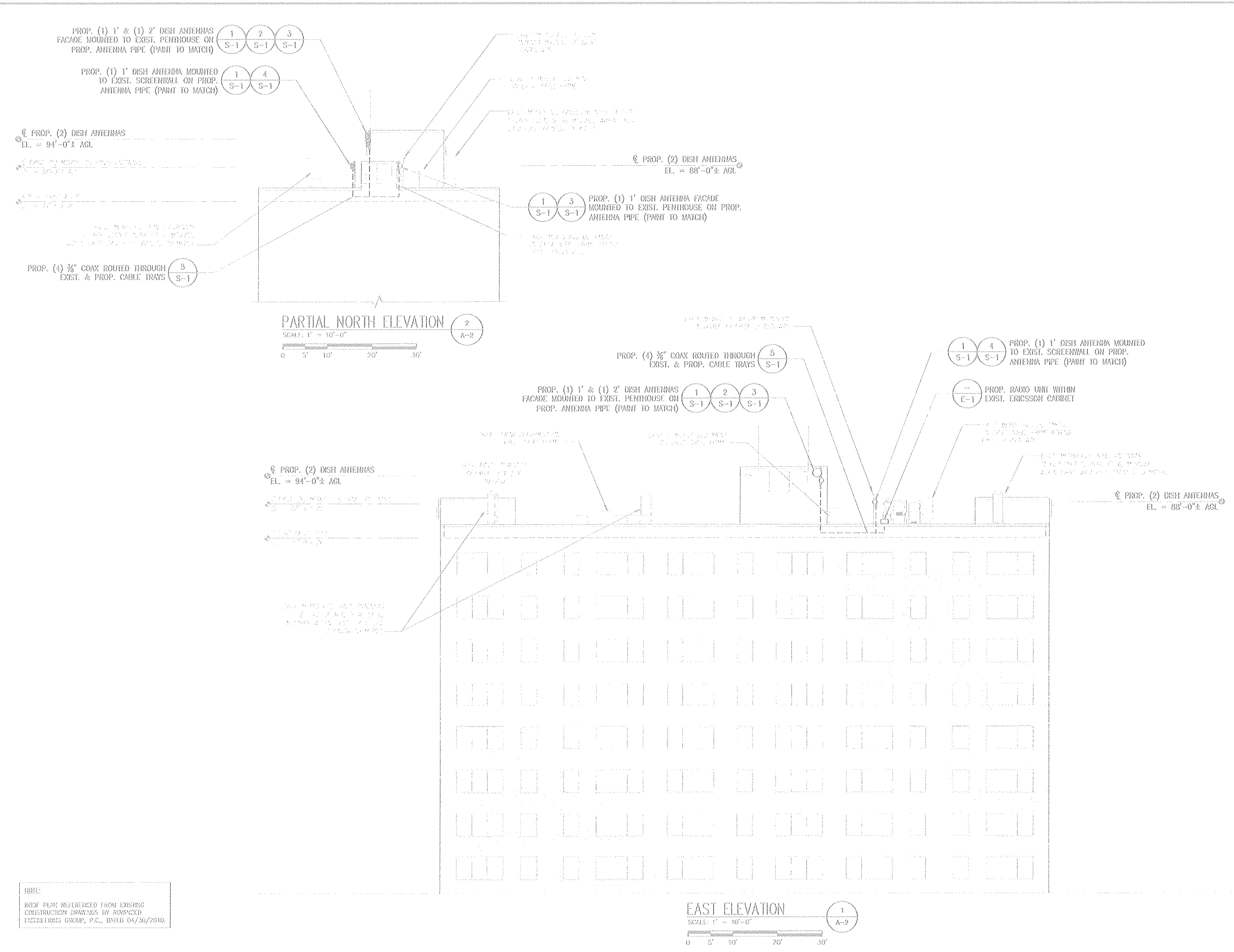
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|-------------------------|--|-------------------|
| PROJECT NO. 1216.034 | DESIGNED BY: JAF DRAWN BY: CMS CHECK'D BY: JAF | SCALE: 1" = 8' |
|-------------------------|--|-------------------|

SITE NAME:
 BOS0087A
 WESTON MANOR
 SOMERVILLE

SITE ADDRESS:
 15 WESTON AVENUE
 SOMERVILLE, MA 02144

DRAWING TITLE:
 ROOF PLAN

DRAWING NO.:
 A-1



NOTE:
 ROOF PLAN REFERENCED FROM EXISTING
 CONSTRUCTION DRAWINGS BY ADVANCED
 ENGINEERING GROUP, P.C., DATED 04/30/2010.

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| REVISIONS | | |
|-----------|----------|---------------------------|
| REV. # | DATE | DESCRIPTION |
| 1 | 11/02/12 | ZONING/CONSTRUCTION FINAL |
| 0 | 08/09/12 | ISSUED FOR ZONING/CONST. |

| | | |
|-------------|-------------|----------|
| PROJECT NO. | DESIGNED BY | SCALE |
| 1216 034 | JMI | 1" = 10' |
| | CHECKED BY | |
| | PMC | |
| | PH | |

SITE NAME:
**BOS0087A
 WESTON MANOR
 SOMERVILLE**

SITE ADDRESS:
 15 WESTON AVENUE
 SOMERVILLE, MA 02144

DRAWING TITLE:
ELEVATIONS 1

DRAWING NO.
A-2



ENGINEER/LAND SURVEYOR DATE

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REVISIONS

| REV. # | DATE | DESCRIPTION |
|--------|----------|---------------------------|
| 1 | 11/02/12 | ZONING/CONSTRUCTION FINAL |
| 0 | 08/08/12 | ISSUED FOR ZONING/CONST. |

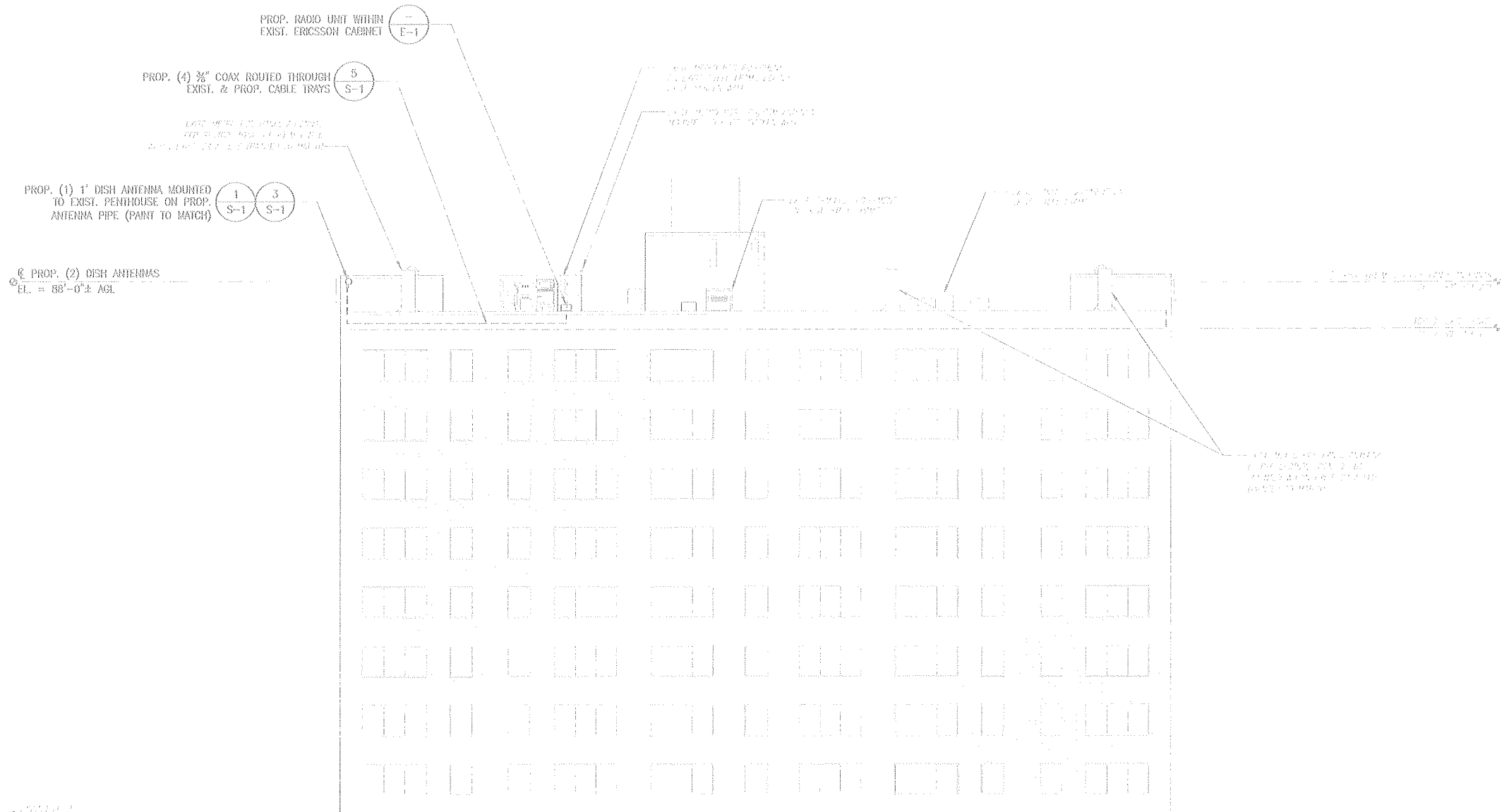
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|------------|-------------|----------|----------|
| PROJECT NO | DESIGNED BY | DATE | SCALE |
| 1216.034 | BRNBY | 08/08/12 | 1" = 10' |
| | CHECKED BY | | |

SUBJ. NAME:
**BOS0087A
WESTON MANOR
SOMERVILLE**

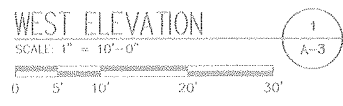
SITE ADDRESS:
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:
ELEVATION 2

DRAWING NO:
A-3

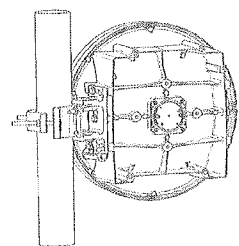


NOTE:
ROOF PLAN REFERENCED FROM EXISTING
CONSTRUCTION DRAWINGS BY ADVANCED
ENGINEERS GROUP, P.C., DATED 04/30/2010

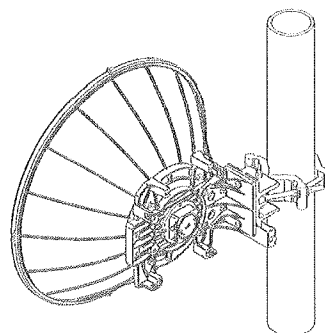


RF SYSTEM SCHEDULE

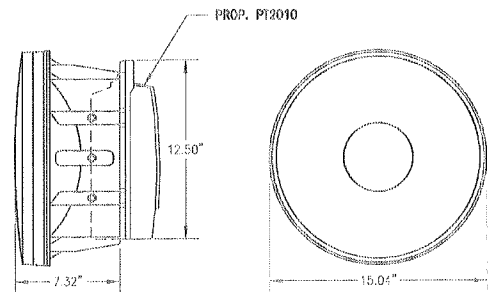
| DISH ANTENNA INFORMATION | | | | | MAIN FEEDLINE | | | | | | |
|--------------------------|---------|----------------|----------|---------------------|---------------|------------|------|----------|--------|-------|--|
| DISH | AZIMUTH | RAD. CTR. AGL. | MAKE | MODEL | FEED | CABLE | SIZE | MFG | LENGTH | COLOR | |
| 1 | 88.97° | 88°-0'± | ERICSSON | AN12 0.3 2B HP (TR) | REAR | NIM-203-98 | 3/8" | ERICSSON | 15'± | TBD | |
| 2 | 93.37° | 94°-0'± | ERICSSON | AN12 0.6 2B HP (TR) | REAR | NIM-203-98 | 3/8" | ERICSSON | 65'± | TBD | |
| 3 | 137.43° | 94°-0'± | ERICSSON | AN12 0.3 2B HP (TR) | REAR | NIM-203-98 | 3/8" | ERICSSON | 65'± | TBD | |
| 4 | 350.09° | 88°-0'± | ERICSSON | AN12 0.3 2B HP (TR) | REAR | NIM-203-98 | 3/8" | ERICSSON | 55'± | TBD | |



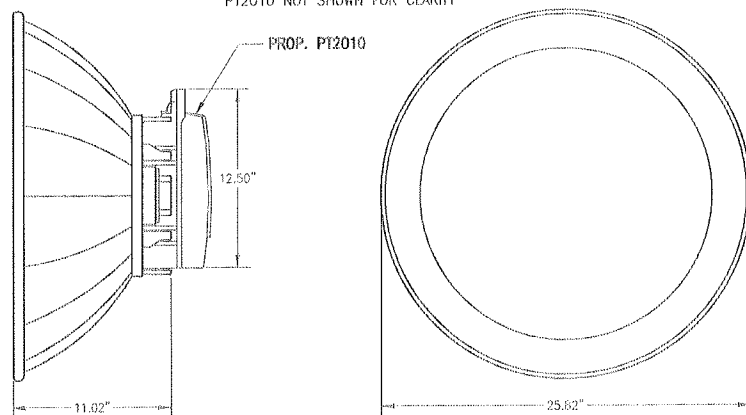
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PT2010 NOT SHOWN FOR CLARITY



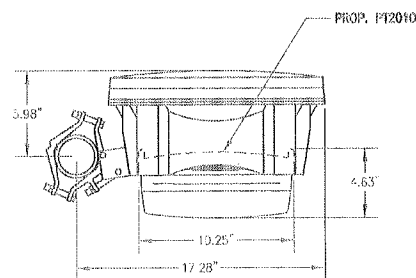
ISOMETRIC
PT2010 NOT SHOWN FOR CLARITY



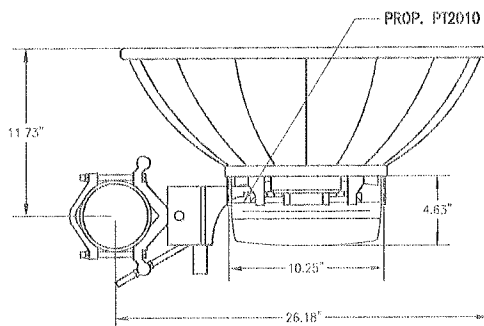
SIDE ELEVATION FRONT ELEVATION



SIDE ELEVATION FRONT ELEVATION



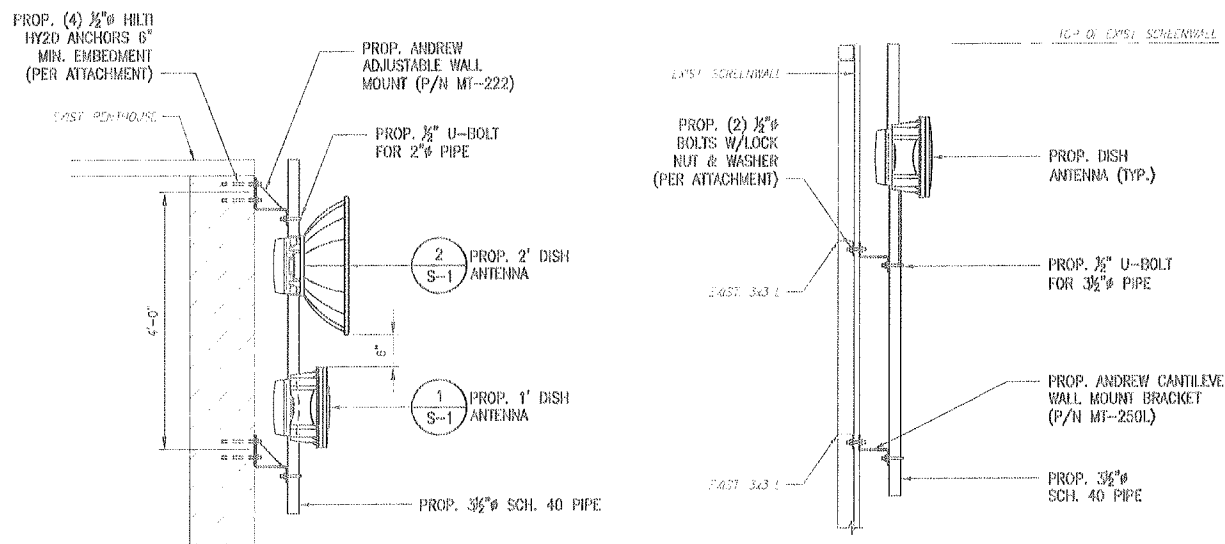
ANTENNA PLAN



ANTENNA PLAN

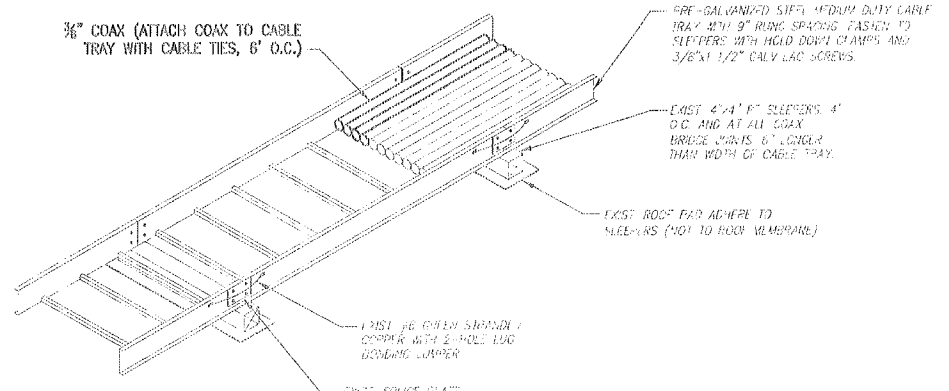
1'-0" DISH ANTENNA
SCALE: NOT TO SCALE

2'-0" DISH ANTENNA
SCALE: NOT TO SCALE

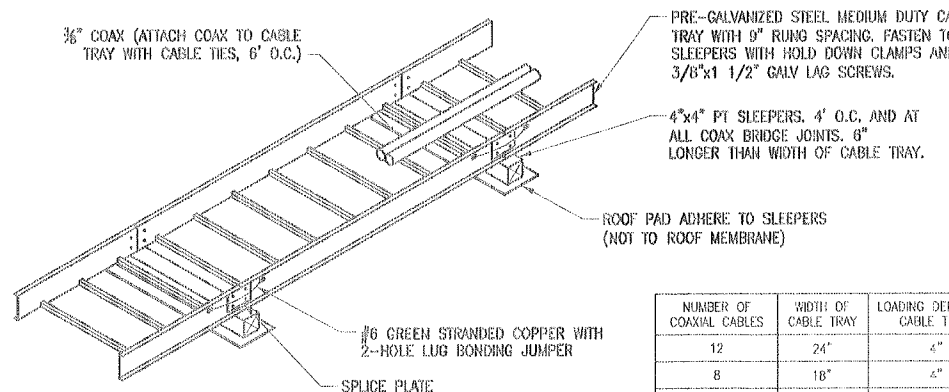


ANTENNA WALL MOUNTING DETAIL
SCALE: 3/4" = 1'-0"

ANTENNA SCREENWALL MOUNTING DETAIL
SCALE: 3/4" = 1'-0"



EXISTING CABLE TRAY



PROPOSED CABLE TRAY

| NUMBER OF COAXIAL CABLES | WIDTH OF CABLE TRAY | LOADING DEPTH OF CABLE TRAY |
|--------------------------|---------------------|-----------------------------|
| 12 | 24" | 4" |
| 8 | 18" | 4" |
| 4 | 12" | 4" |
| 1 | 6" | 4" |

CABLE TRAY DETAIL
SCALE: NOT TO SCALE

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TEL (978) 244-7000
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ENGINEER/LAND SURVEYOR DATE

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PROJECT NO. 1216.034
DESIGNED BY: JMT
DRAWN BY: CMC
CHECK'D BY: JMT
SCALE: AS SHOWN

SITE NAME:
**BOS0087A
WESTON MANOR
SOMERVILLE**

SITE ADDRESS:
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:
**ANTENNA &
SITE DETAILS**

DRAWING NO:
S-1

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| | | |
|-------------------------|--|-------------------|
| PROJECT NO. 1216.034 | DESIGNED BY: JMF DRAWN BY: OMC CHECK'D BY: JMF | SCALE AS SHOWN |
|-------------------------|--|-------------------|

SITE NAME:

**BOS0087A
WESTON MANOR
SOMERVILLE**

SITE ADDRESS:

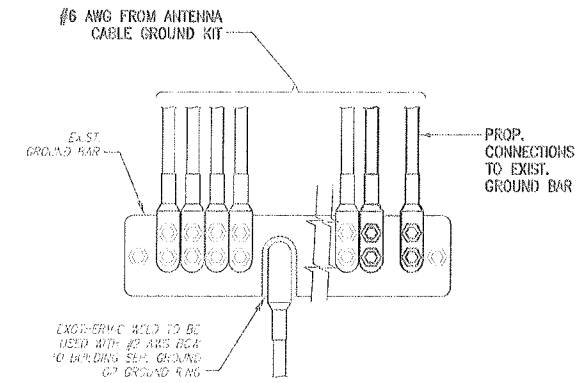
15 WESTON AVENUE
SOMERVILLE, MA 02144

DRAWING TITLE:

**WIRING & GROUNDING
DETAILS**

DRAWING NO:

E-1

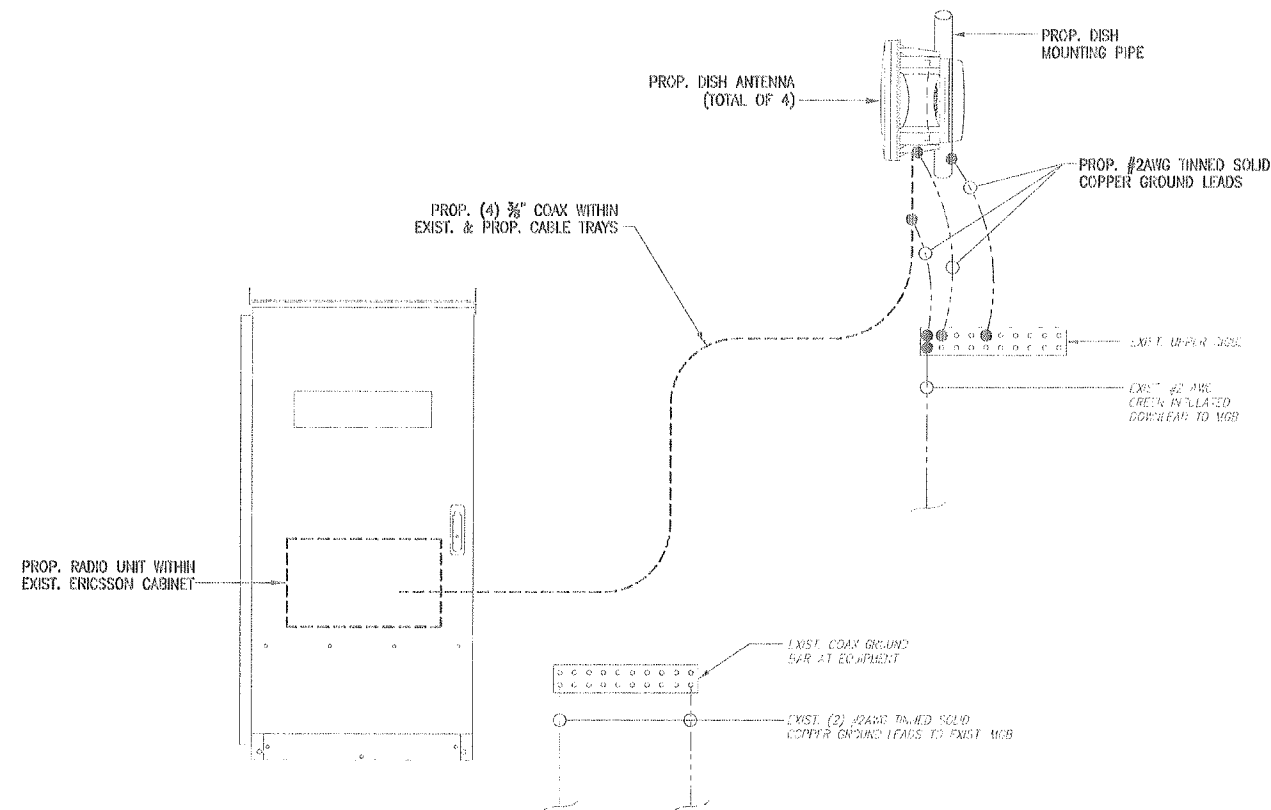


GROUND BARS AT THE BOTTOM OF TOWERS/MONOPOLES SHALL ONLY USE EXOTHERMIC WELDS.

INSTALLATION OF GROUND WIRE TO GROUND BAR

SCALE: NOT TO SCALE

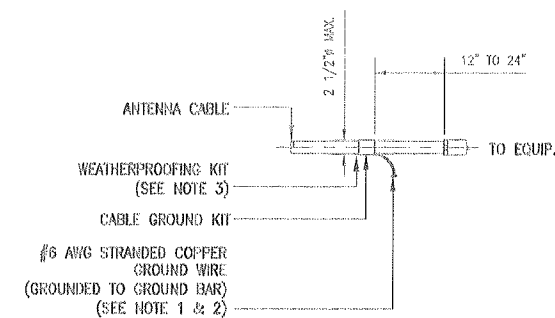
2
E-1



DISH ANTENNA WIRING SCHEMATIC

SCALE: NOT TO SCALE

1
E-1



NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.

CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

SCALE: NOT TO SCALE

3
E-1