City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

PERMIT ISSUED
JUL - 9 2002
CITY OF PORTLAND

Permit No:	Issue Date:	CBL:
02-0734		210A A005001

Location of Construction:	Owner Name:	Owner Address:	Phone:
1050 Westbrook St	Pjh Associates Limited	1050 Westbrook St	775-2200
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Green Mountain Communications	P.O. Box 356 Wolfeboro Falls	6035698601
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Additions - Commercial	AB

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Embassy Suites Hotel/Hospitality	Embassy Suites Hotel/Hospitality	$128.00	$15,000.00	3

FIRE DEPT: ☑ Approved ☐ Denied
Signature:

INSPECTION: Use Group: B Type: NA
Signature: 7/16/02

Proposed Project Description:
Construct a Concrete Pad 5'x5' 6" for Radio Cabinet and a Brick Screen Wall Adjacent to Equipment Shelter.

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)
Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied
Signature: Date:

Permit Taken By:	Date Applied For:
gad	06/28/2002

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: 7/11/02	Date:	Date:

exemption granted 7/5/02

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | DATE | PHONE

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

B... INSPECTION

PERMIT

Permit Number: 020734

Please Read Application And Notes, If Any, Attached

This is to certify that Pjh Associates Limited/Gree... Mountain Co...unications

has permission to Construct a Concrete Pad 5'x ..." for Ra... Cabi... nd a Bri... Screen Wall Adjacent to Equipment Shelter.

AT 1050 Westbrook St ... 210A A005001

provided that the person or persons, ...m or ...ation ...epting this permit shall comply with all of the provisions of the Statutes of M...ine and of th... ...ances of the City of Portland regulating the construction, maintenance and u... of buildings and st... ...tures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

N...fication ... inspec... n must g... n and w... n permis... n procu... b... re this ...ding or ... t thereo... la... d or c... losed-in. H... R NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. ...

Health Dept. ...

Appeal Board ...

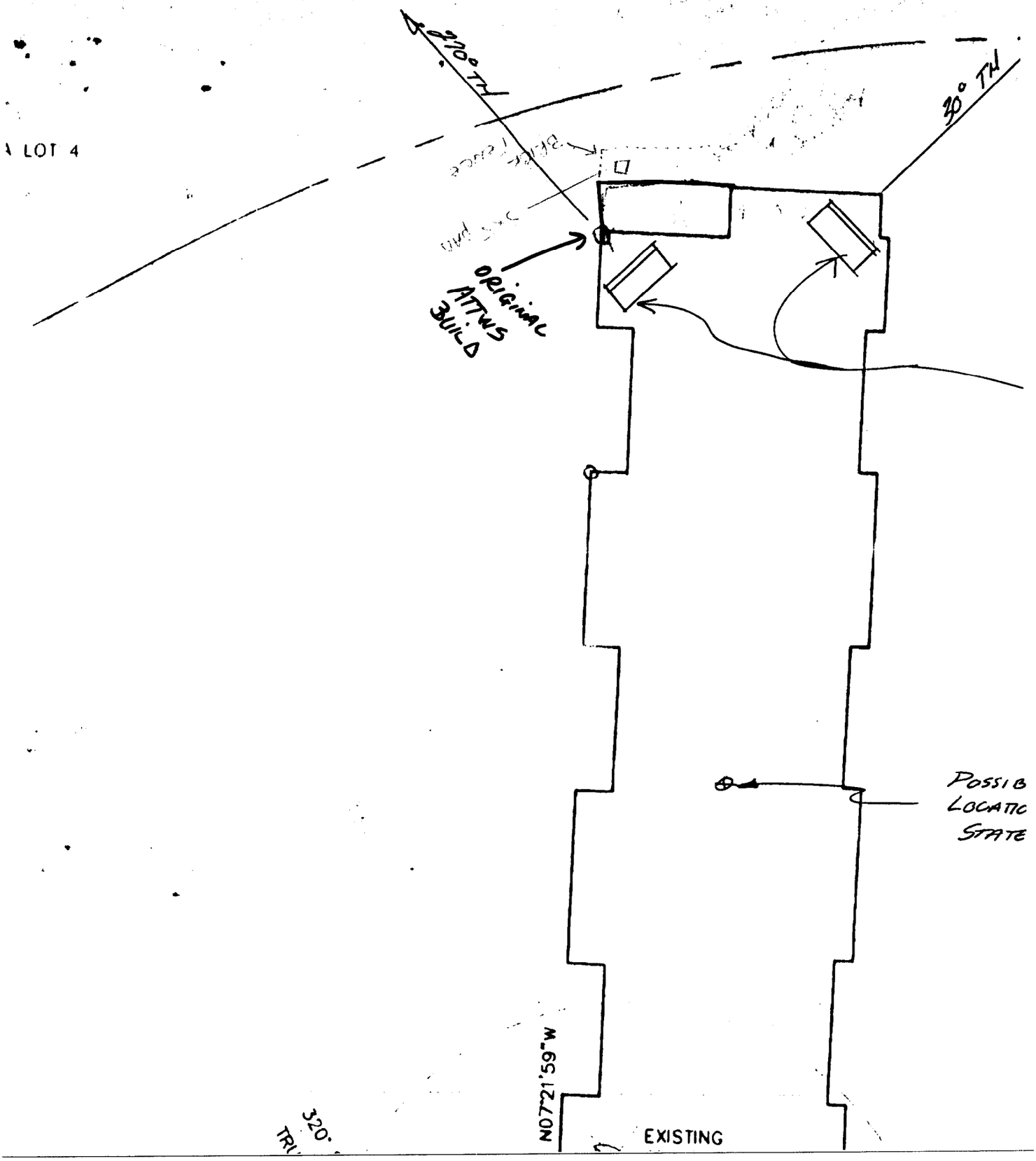
Other ...

Department Name

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

JUN 27 2002


LOT 4
270° TH
30° TH
ORIGINAL
ATTWS
BUILD
POSSIB
LOCATIO
STATE
N07°21'59"W
EXISTING

02-0734

All Purpose Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: Embassy Suites / 1050 Westbrook St. Portland Me 04102		
Total Square Footage of Proposed Structure	Square Footage of Lot: MIN. 200,000	
Tax Assessor's Chart, Block & Lot Chart# MAP 210 A / Block# A / Lot# 5	Owner: P.J.H Associates LLC 1050 Westbrook St. Portland ME	Telephone: 207-775-2200
Lessee/Buyer's Name (If Applicable): AT&T Wireless Services	Applicant name, address & telephone: Green Mountain Comm. P.O. Box 356 Wolfeboro Falls NH 03896	Cost Of Work: $ 15,000 / Fee: $ ~~100.~~ 128.00

Current use: Hospitality

If the location is currently vacant, what was prior use: N/A

Approximately how long has it been vacant: N/A

Proposed use: Same

Project description: Install precast concrete pad 5'-0" x 5'-6" for radio cabinet & brick screen wall adjacent to existing equipment shelter

Contractor's name, address & telephone: Green Mountain Communications Inc. P.O. Box 356 Wolfeboro Falls NH 03896

Who should we contact when the permit is ready: Steve Connor 603-569-8601

Mailing address: P.O. Box 356 Wolfeboro Falls NH 03896

We will contact you by phone when the permit is ready. You must come in and pick up the permit and review the requirements before starting any work, with a Plan Reviewer. A stop work order will be issued and a $100.00 fee if any work starts before the permit is picked up. **PHONE:** 603-569-8601

IF THE REQUIRED INFORMATION IS NOT INCLUDED IN THE SUBMISSIONS THE PERMIT WILL BE AUTOMATICALLY DENIED AT THE DISCRETION OF THE BUILDING/PLANNING DEPARTMENT, WE MAY REQUIRE ADDITIONAL INFORMATION IN ORDER TO APROVE THIS PERMIT.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: [signature] **Date:** 6/28/02

DEPT. OF BUILDING INSPECTION CITY OF PORTLAND, ME
JUN 28 2002
RECEIVED

This is NOT a permit, you may not commence ANY work until the permit is issued.
If you are in a Historic District you may be subject to additional permitting and fees with the Planning Department on the 4th floor of City Hall

APPLICATION FOR EXEMPTION FROM SITE PLAN REVIEW

Green Mountain Comm. Inc.
Applicant

P.O. Box 356 Waterboro NH 03896
Applicant's Mailing Address

603-569-8601 Steve Connor
Consultant/Agent/Phone Number

EMBASSY SUITES

Application Date

NEW-0023
Project Name/Description

1050 Westbrook St.
Address of Proposed Site

CBL: 002 013 4

Description of Proposed Development:

Placement of precast 5'-0" x 5'-6" concrete pad for radio equipment - to be surrounded by brick screen wall

Please Attach Sketch/Plan of Proposal/Development	Applicant's Assessment (Yes, No, N/A)	Planning Office Use Only
Criteria for Exemptions:		
See Section 14-523 (4)		
a) Within Existing Structures; No New Buildings, Demolitions or Additions	yes	✓
b) Footprint Increase Less Than 500 Sq. Ft.	yes	✓
c) No New Curb Cuts, Driveways, Parking Areas	yes	✓
d) Curbs and Sidewalks in Sound Condition/ Comply with ADA	N/A	✓
e) No Additional Parking / No Traffic Increase	yes (NO MORE)	✓
f) No Stormwater Problems	N/A	✓
g) Sufficient Property Screening	yes (WILL BE)	✓
h) Adequate Utilities	N/A / yes	✓

Planning Office Use Only:

Exemption Granted _____ Partial Exemption ✓ Exemption Denied _____

FAA sign-off for brick wall screens?

Planner's Signature _____ Date 7/5/02

White - Planning Office Pink - Inspections Yellow - Applicant

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – BECHTEL
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T WIRELESS SERVICES.
2. 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.
3. 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 JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. 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.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. 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 OWNER.
11. 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.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 24623-033-3APS-A00Z-00002, "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AWS 3G SITES."
17. 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.
18. THE EXISTING CELL SITE IS 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.
19. SINCE THE 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 ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

DETAIL 300

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	1050 WESTBROOK STREET PORTLAND, ME 04102
LATITUDE:	43.65138°
LONGITUDE:	-70.31047°
JURISDICTION:	TOWN OF PORTLAND
COUNTY NAME:	SOUTH PORTLAND, ME
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

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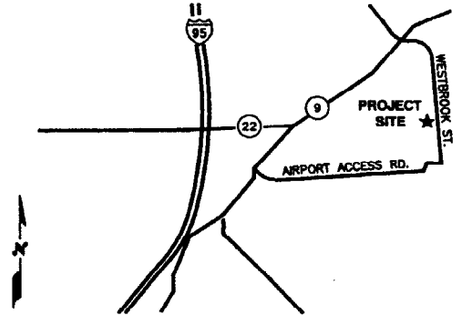
NEW-0023-01	TITLE SHEET	2
NEW-0023-02	EQUIPMENT LAYOUT	1
NEW-0023-03	DETAILS	0
NEW-0023-04	NOTES	0
NEW-0023-05	POWER AND GROUNDING SCHEMATIC	0
NEW-0023-06	ANTENNA SCHEMATIC & BILL OF MATERIALS	0
NEW-0023-07	ANTENNA ELEVATION & DETAILS	0
NEW-0023-08	COAX CABLE COLOR CODING & TAGGING DETAILS	0

SITE TYPE

ANTENNAS ON ROOF WITH OUTDOOR EQUIPMENT ON GROUND

VICINITY MAP

DIRECTION: I-95 MAINE TURNPIKE TO EXIT 7A. FOLLOW AIRPORT ACCESS ROAD TO 4 WAY INTERSECTION. STRAIGHT THROUGH AND ON RIGHT SIDE IS EMBASSY SUITES HOTEL. OUR EQUIPMENT ROOM IS OUTSIDE AND TO THE LEFT OF THE MAIN ENTRANCE NEAREST THE POOL.
SPECIAL NOTE: N/A



STRUCTURAL NOTES

THE ADDITIONAL LOADS ARE INSIGNIFICANT IN COMPARISON WITH THE EXISTING LOADS ALREADY IMPOSED. THEREFORE, NO FURTHER ANALYSIS IS REQUIRED OR HAS BEEN PERFORMED. NO STRUCTURAL MODIFICATIONS ARE REQUIRED.

AT&T

AT&T WIRELESS

SITE NUMBER: NEW-0023
AWS SITE NO: M023
SITE NAME: BRADLEYS CORNER

APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
BUILDING CODE:
BOCA NATIONAL BUILDING CODE 1999
ELECTRICAL CODE:
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 – 99SB, NATIONAL ELECTRICAL CODE
LIGHTNING PROTECTION CODE:
NFPA 780 – 1997, LIGHTNING PROTECTION CODE
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
TELCORDIA GR-1303 COAXIAL CABLE CONNECTIONS
FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

DETAIL 303 / BOS

STATE OF MAINE
TRICHUR A. VENKATARAMAN
No. 9943
REGISTERED PROFESSIONAL ENGINEER

Status		DOCUMENT REVIEW STATUS
1		Issue for Use
2		Receive Comments
3		Resubmit Rev.:

Review does not constitute acceptance or approval of design detail, calculations, analysis, test methods or materials developed or selected by the supplier. It also does not relieve the supplier from fully complying with contractual obligations.

Reviewed By: Date:	Eng					

BAY STATE DESIGN
Bay State Design Associates, Inc.
Architects • Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2487
Fax: 781-932-9771

BRADLEYS CORNER
SITE NO. NEW-0023
1050 WESTBROOK STREET
PORTLAND, ME 04102

AT&T
AT&T WIRELESS SERVICES, INC.
400 BLUE HILL DRIVE, SUITE 100
WESTWOOD, MA 02090

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	06/27/02	REVISED DESIGN, LOCATION & ADDED WALL	BR	AS	RAT
1	04/15/02	ADDED RF SHEETS	BR	JK	RS
0	02/28/02	ISSUED FOR CONSTRUCTION	MJM	JK	RS

SCALE: AS SHOWN | DESIGNED BY: MJM | DRAWN BY: MJM

AT&T WIRELESS
TITLE SHEET
BRADLEYS CORNER
NEW-0023-01 | REV 2

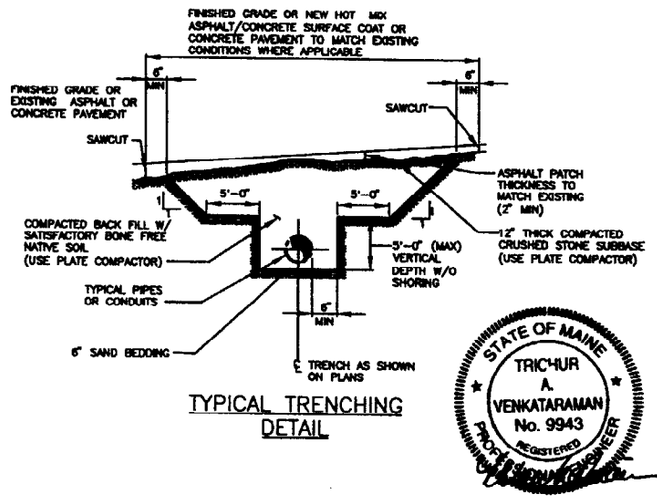
6 5 4 3 2 1

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. 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 HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

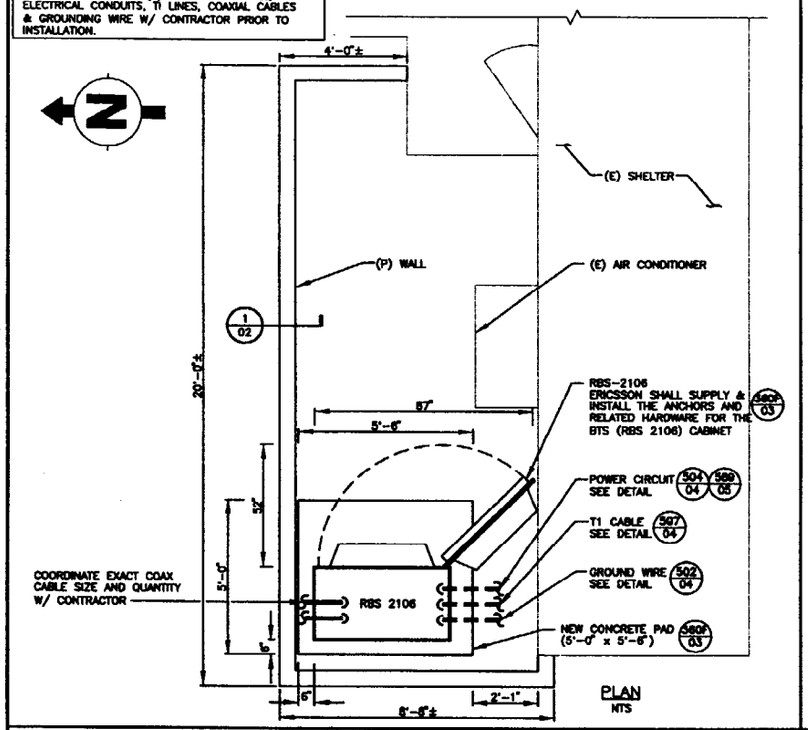
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

CONCRETE AND REINFORCING STEEL NOTES (302/–)

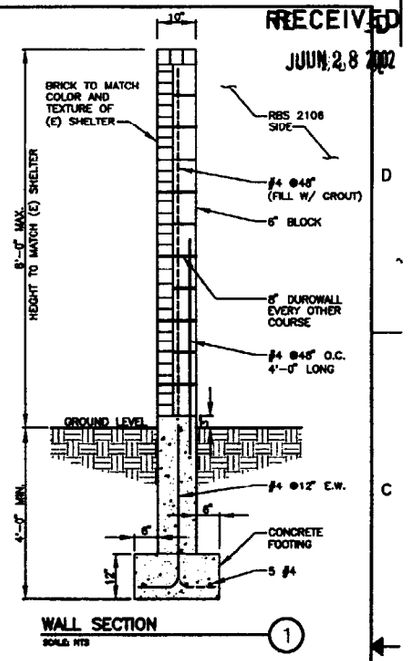


TYPICAL TRENCHING DETAIL

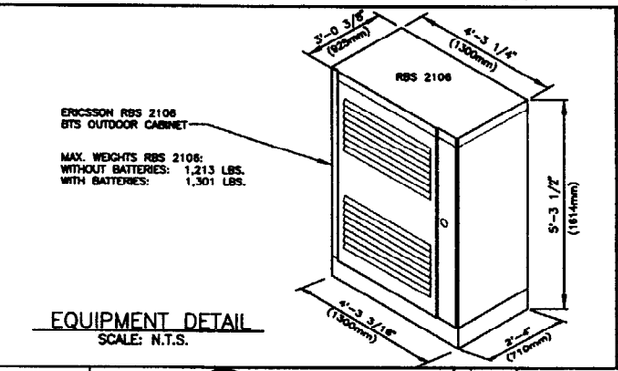
NOTE:
SUBCONTRACTOR SHALL VERIFY LOCATION AND ORIENTATION OF (E) ELECTRICAL PANEL, ELECTRICAL CONDUITS, T1 LINES, COAXIAL CABLES & GROUNDING WIRE W/ CONTRACTOR PRIOR TO INSTALLATION.



PLAN
NTS



WALL SECTION (1)
SCALE: NTS



EQUIPMENT DETAIL
SCALE: N.T.S.

CONSTRUCTION NOTES

1. FIELD VERIFICATION:
   SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, AT&T ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.
2. COORDINATION OF WORK:
   SUBCONTRACTOR SHOULD COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
3. CABLE LADDER RACK:
   SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, ICE BRIDGES AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.
4. ALL COAXIAL CABLES, POWER CIRCUITS, T1 CABLES AND GROUND WIRES SHALL BE SUPPORTED AT A MIN. 3'-0" O.C. SPACING.

DETAIL 301/BOS

LEGEND

- EXIST. EQUIP.
- PROPOSED EQUIP.
- FUTURE EQUIP.
- CONDUCTORS AND RACEWAY TO BE FURNISHED & INSTALLED BY SUBCONTRACTOR

STATE OF MAINE
TRICHUR A. VENKATARAMAN
No. 9943
REGISTERED PROFESSIONAL ENGINEER

BAY STATE DESIGN
Bay State Design Associates, Inc.
Architects • Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2467
Fax: 781-932-9771

BRADLEYS CORNER
SITE NO. NEW-0023
1050 WESTBROOK STREET
PORTLAND, ME 04102

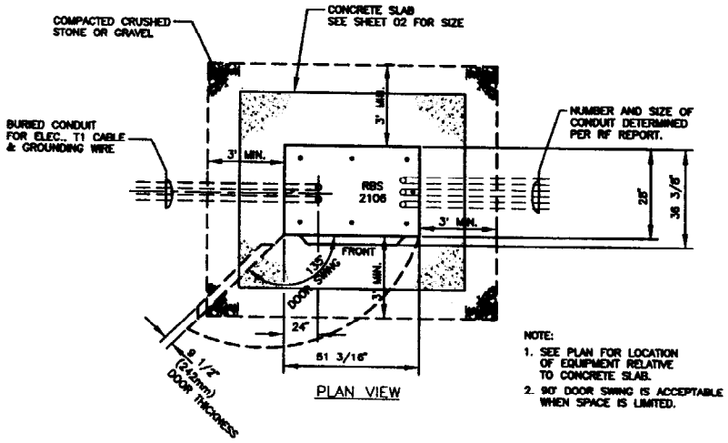
AT&T
AT&T WIRELESS SERVICES, INC.
400 BLUE HILL DRIVE, SUITE 100
WESTWOOD, MA 02090

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	06/27/02	REVISED EQUIP. LOCATION & ADDED WALL	BR	KCS	TAV
0	05/20/02	ISSUED FOR CONSTRUCTION	MAM	JV	BR

SCALE: AS SHOWN | DESIGNED BY: MAM | DRAWN BY: MAM

AT&T WIRELESS
EQUIPMENT LAYOUT
BRADLEYS CORNER
NEW-0023-02 | REV 1

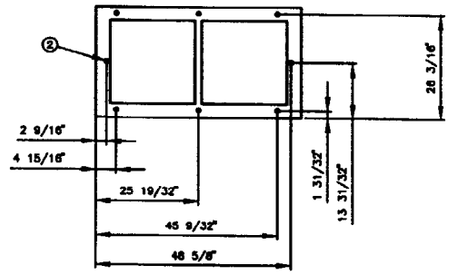
6 5 4 3 2 1



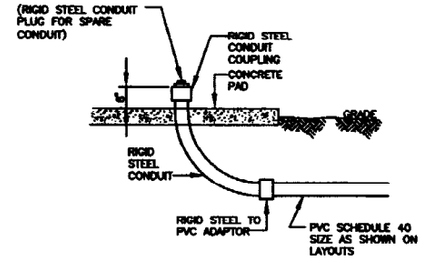
PLAN VIEW

NOTE:
1. SEE PLAN FOR LOCATION OF EQUIPMENT RELATIVE TO CONCRETE SLAB.
2. 90° DOOR SWING IS ACCEPTABLE WHEN SPACE IS LIMITED.

① ALL DIMENSIONS TO BE FIELD VERIFIED.
② RECOMMENDED CABINET MOUNTING ANCHORS ARE HILTI KWIK BOLT II 5/8" HOLE DIAMETER AT A MIN. 2.75" EMBED.
③ FOR SIZE AND THICKNESS OF CONCRETE SLAB SEE DETAIL 360F —
④ FOR CONCRETE NOTES SEE DETAIL 302/02

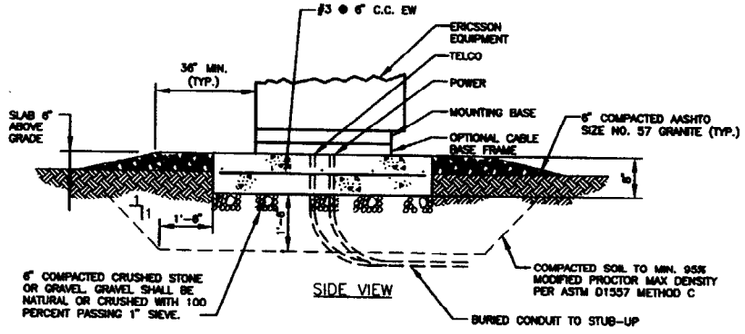


BASE FRAME FOOTPRINT
SCALE: N.T.S.



UNDERGROUND CONDUIT STUB-UP

DETAIL 566 — NTS



SIDE VIEW

CONCRETE EQUIPMENT PAD/ SLAB ON GRADE

ERICSSON RBS 2106 DIMENSIONS	
CABINET	HEIGHT x WIDTH x DEPTH
RBS 2106	63 5/8"Hx51 3/16"Wx36 3/8"D (1616.5mm x 1300mm x 925mm)
FOOTPRINT (INCLUDING INSTALLATION FRAME)	63 5/8"Hx51 3/16"Wx28"D (1616.5mm x 1300mm x 710mm)

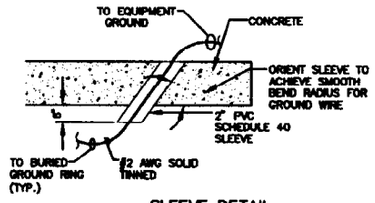
ERICSSON RBS 2106 WEIGHT & FLOOR LOADING		
CABINET	APPROX. MAX. WEIGHT	MAX. FLOOR LOADING
RBS 2106	1213 LBS (WEIGHT WITHOUT BATTERIES)	1301 LBS (WEIGHT WITH BATTERIES)

CABINET ANCHORING BY ERICSSON SHALL BE BASED ON A PEAK ACCELERATION VALUE OF 0.12G.

NOTE:
STANDARD HEIGHT SHOWN ON THE TABLE INCLUDES MOUNTING BASE FRAME (56.5mm H) PROVIDED BY ERICSSON. OPTIONAL CABLE BASE FRAME (150mm H) IS NOT INCLUDED.

ERICSSON RBS 2106 MINIMUM CLEARANCES	
DIRECTION	USB 2001 2 BAY MINIMUM CLEARANCE
CABINET FRONT	52"
CABINET REAR	2"
CABINET RIGHT	0"
CABINET LEFT	0" (3" MIN. FOR 135° DOOR SWING)
ABOVE THE CABINET	–

DETAIL 360F BOS — NTS



SLEEVE DETAIL
IF REQUIRED TO ROUTE GROUND WIRE THROUGH SLAB (REQUIRED FOR LARGER CONCRETE SLAB)

EQUIPMENT ON SLAB ON GRADE
FOR ORIENTATION SEE PLAN

DETAIL 569F BOS — NTS

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NO.	DATE	REVISIONS	BY	CHK	APP'D
0	05/30/08	ISSUED FOR CONSTRUCTION	MAH	DPF	TV

SCALE: AS SHOWN | DESIGNED BY: MAH | DRAWN BY: MAH

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DETAILS
BRADLEYS CORNER
NEW-0023-03 | 0

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ELECTRICAL INSTALLATION METHODS AND MATERIALS

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MAXIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.

5. 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 & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID 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., PANEL BOARD AND CIRCUIT ID'S).

8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND 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.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG AND LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG AND 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.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75 °C (90 °C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. 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.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECTLY BURIED, NOT ENCASED IN CONCRETE.

21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES, AND WIRE WAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

24. CABINETS, BOXES, AND WIRE WAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIRE WAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR APPROVED); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. 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

27. 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.

28. 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.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. 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.

DETAIL 504

TRANSPORT (T1) LINES

1. ALL RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8.

2. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G., OUTDOORS, INDOORS-OCCUPIED, INDOORS-UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC.

3. METALLIC CONDUIT OR TUBING FOR T1 LINES SHALL BE BONDED TO GROUND AT BOTH ENDS. THE OWNER WILL PERFORM TESTING AND ACCEPTANCE OF T1 LINES.

4. ERICSSON SHALL BE NOTIFIED FOR T1 CABLE LENGTH GREATER THAN 50' (LENGTH IS BETWEEN TELCO PANEL AND ERICSSON SUPPLIED RBS).

5. ERICSSON WILL SUPPLY AND CONNECT T1 CABLE AT NIU AND BTS CABINET.

DETAIL 507

TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)

1. TVSS DEVICES FOR AC POWER, T1, AND RF COAX SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.

2. SURGE SUPPRESSION AND PROTECTION DEVICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) ART 250, 280, AND CHAPTER 8, AS APPLICABLE.

3. EACH EXISTING AC POWER SERVICE DISCONNECT SHALL HAVE AN INTEGRATED COMMON MODE TVSS MODULE. THE TVSS MODULE SHALL BE EITHER CUTLER-HAMMER, CLIPPER POWER SYSTEM, MODEL CPS-SX, 120 KA (WITH THE BASIC DIAGNOSTIC PACKAGE AND FORM-C ALARM CONTACTS) OR (FOR AWS SITES WITHOUT THE INTEGRATED CUTLER-HAMMER PANEL BOARD) INNOVATIVE TECHNOLOGIES MODEL ORN (OR OWNER APPROVED EQUAL).

4. THE AC POWER COMMON MODE SURGE SUPPRESSOR SHALL BE CONNECTED TO THE COMMERCIAL POWER INPUT SIDE OF THE MANUAL TRANSFER SWITCH.

5. EACH T1 LINE SHALL HAVE A TVSS (ATLANTIC SCIENTIFIC, ZONE BARRIER SERIES, PART NO. 90700, OR OWNER APPROVED EQUAL) AT THE LOCAL EXCHANGE CARRIER (LEC) NETWORK INTERFACE UNIT (NIU).

6. SEE DETAILS 505 AND 527 FOR ADDITIONAL RF COAXIAL TVSS REQUIREMENTS

DETAIL 506

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

4. EACH INDOOR BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG OR LARGER.

5. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

6. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

7. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

DETAIL 502 BOS

SYMBOLS

- S/G — SOLID GROUND BUS BAR
- S/N — SOLID NEUTRAL BUS BAR
- #_ #_ — SUPPLEMENTAL GROUND CONDUCTOR
- 2-POLE THERMAL-MAGNETIC MINIATURE CIRCUIT BREAKER
- SINGLE-POLE THERMAL-MAGNETIC MINIATURE CIRCUIT BREAKER

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL
BTS	BASE TRANSCEIVER STATION
(E)	EXISTING
(P)	PROPOSED
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
REF.	REFERENCE
RF	RADIO FREQUENCY
T.B.D.	TO BE DETERMINED
T.B.R.	TO BE RESOLVED
TYP	TYPICAL
REQ.	REQUIRED
EGR	EQUIPMENT GROUND RING
AWG	AMERICAN WIRE GAUGE
MGB	MASTER GROUND BUS
EG	EQUIPMENT GROUND

ABBREVIATIONS & SYMBOLS 500 BOS

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0	02/20/03	ISSUED FOR CONSTRUCTION	MM	VV	MM

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AT&T WIRELESS

NOTES
BRADLEYS CORNER

NEW-0023-04 | D

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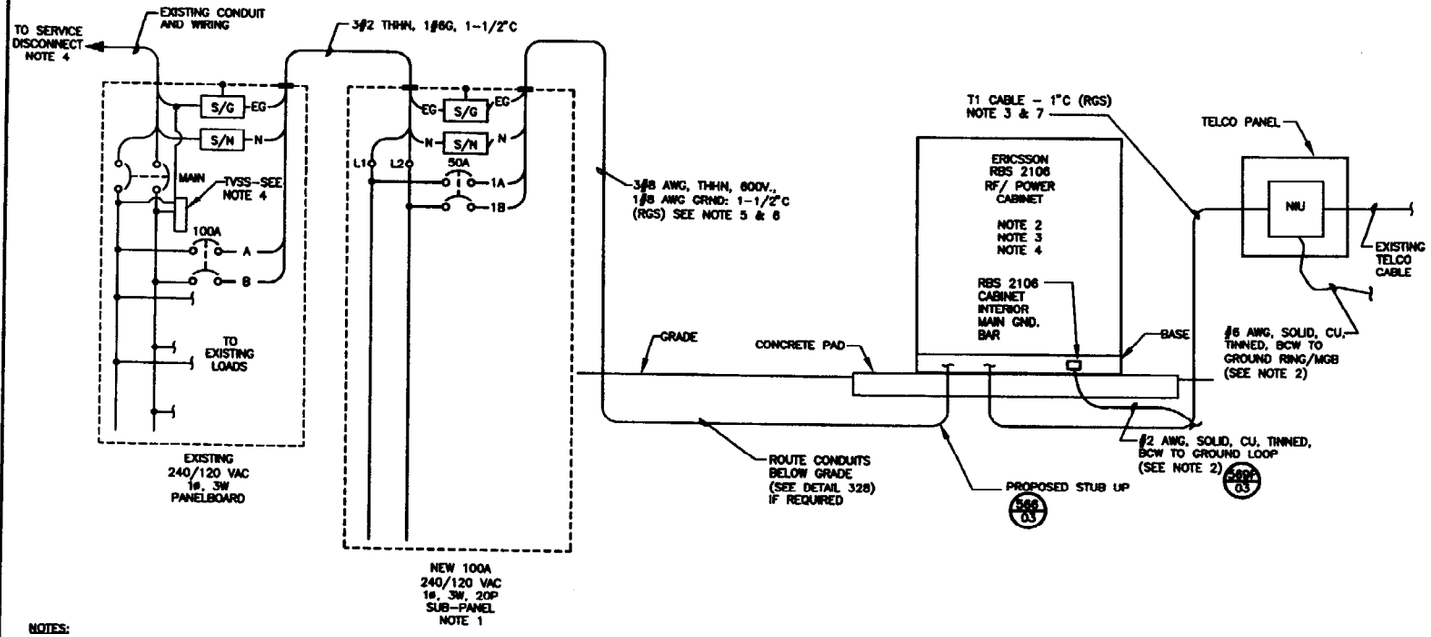


NOTES:

1. SUBCONTRACTOR SHALL CONFIRM THE AVAILABILITY OF POWER TO SUPPORT THE NEW LOAD. THE SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR A LOAD CALCULATION SHOWING THAT THE PANEL HAS ADEQUATE CAPACITY FOR THE ADDITIONAL LOADS. ALL EXISTING LOADS ON THE MAIN PANEL SHALL BE INCLUDED IN THE ANALYSIS. ALL ELECTRICAL WORK SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NEC AND ALL LOCAL CODES. SUBCONTRACTOR SHALL PROVIDE PADLOCK ACCESSORIES ON NEW CIRCUIT BREAKER HANDLES.

CASE #1
THE MAIN POWER PANEL HAS SUFFICIENT CAPACITY TO ACCOMMODATE THE ADDITIONAL LOAD, BUT HAS NO SPARE BREAKERS.

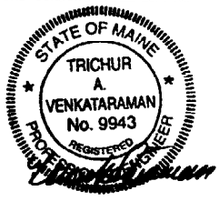
THE SUBCONTRACTOR SHALL EVALUATE THE EXISTING LOADS ON THE MAIN PANEL AND REMOVE EITHER (2) 1-P BREAKER SLOTS, OR (1) 2-P BREAKER SLOT, AND INSTALL A 2-POLE, 100-AMP., 240V BREAKER IN THE NOW OPENED UP SLOTS. FURNISH AND INSTALL A 100A, 240/120VAC, 1PH, 3W, 20-POLE PANEL BOARD (SQUARE D CLASS 1630, NQOD, OR EQUAL, WITH QOB BREAKERS) ADJACENT TO THE SPACE RESERVED FOR ERICSSON 3G, BTS EQUIPMENT. REINSTALL THE BREAKERS FROM THE DISCONNECTED LOAD IN THE SUB-PANEL AND RETERMINATE THE REASSIGNED LOAD. THE FEEDER SIZE FROM THE MAIN PANEL TO THE SUB-PANEL SHOULD BE 3#2 THHN, 1#6G, 1-1/2" CONDUIT. THE BTS EQUIPMENT SHALL BE FED FROM THE SUB-PANEL.

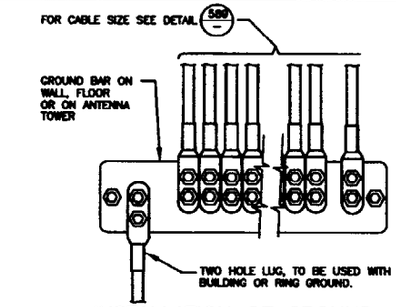
CASE #2
THE MAIN PANEL DOES NOT HAVE ADEQUATE CAPACITY TO ACCOMMODATE THE ADDITIONAL LOAD.

THE SUBCONTRACTOR SHALL EVALUATE THE MAIN PANEL SIZE AND THE POWER SOURCE FEEDING THE PANEL TO ASCERTAIN IF THE MAIN PANEL COULD BE UPGRADED TO THE NEXT LEVEL TO ACCOMMODATE THE ADDITIONAL LOAD. THE SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AFTER ASCERTAINING WHETHER THE EXISTING PANEL WILL BE UPGRADED OR A NEW PANEL WITH A DIFFERENT POWER SOURCE WILL BE REQUIRED. THE PANEL SPECIFICATIONS, METERING, ETC. SHALL BE AS DIRECTED BY THE CONTRACTOR. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY AS REQUIRED.

2. ROUTE #2 AWG BCW EQUIPMENT GROUND CONDUCTORS TO BOTTOM OF ERICSSON CABINETS. CUT, COIL, AND TAPE TEN FOOT PIGTAIL FOR FUTURE CONNECTION BY ERICSSON. THE GROUND CONDUCTORS SHALL BE CONNECTED TO THE MGB BY USING TWO HOLE LUGS PER DETAIL 508A.
3. SUBCONTRACTOR SHALL INSTALL THE T1 TRANSPORT CABLE FURNISHED BY ERICSSON. SEE DETAIL 507 FOR ADDITIONAL INFORMATION.
4. FURNISH AND INSTALL NEW TVSS DEVICE AT SERVICE DISCONNECT IN ACCORDANCE WITH DETAIL 506. IF NEEDED.
5. CONTRACTOR SHALL COIL AND TAPE AN ADDITIONAL 5'-0" OF WIRING FOR CONNECTIONS TO ERICSSON EQUIPMENT.
6. TOP ENTRY ONLY IF PANEL IS LOCATED INDOORS OTHERWISE: BOTTOM OR SIDE ENTRY ONLY.
7. ALL OUTSIDE CONDUITS SHALL BE RGS. ALL UNDERGROUND CONDUITS SHALL BE PVC.

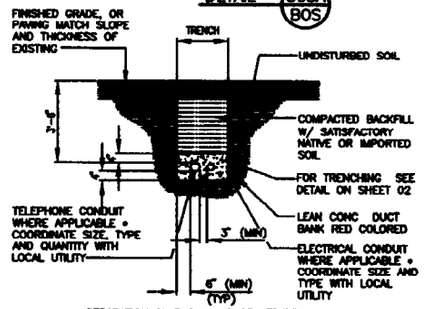
DETAIL 589 BOS





INSTALLATION OF GROUND WIRE TO GROUND BAR

DETAIL 508A BOS



* SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

CONCRETE DUCT BANK ELECT/ TELEPHONE

DETAIL NTS 328 BOS

MATERIALS	MFG.	MODEL	QUANTITY	PROVIDED BY
TVSS (AC POWER)	---	PER NOTE 5 DETAIL 589	AS REQ'D.	SUBCONTRACTOR
50A, 2P, 120/240V BREAKER	---	MATCH EXISTING PANELBOARD	AS REQ'D.	SUBCONTRACTOR
CONDUIT, POWER & GROUND CONDUCTORS	TO SUIT	MATCH EXISTING CONDUIT PER DETAIL 504/04 & 502/04	TO SUIT	SUBCONTRACTOR
CABLE TRAY	---	MATCH EXISTING TRAY	AS REQ'D.	SUBCONTRACTOR
T1 CABLE AND CONNECTIONS	---	ERICSSON	AS REQ'D.	ERICSSON

BILL OF MATERIALS

RECORD DOCUMENT

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NO.	DATE	REVISIONS	BY	CHK	APP'D
0	05/30/02	ISSUED FOR CONSTRUCTION	MAN		

SCALE: AS SHOWN | DESIGNED BY: MAN | DRAWN BY: MAN

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POWER AND GROUNDING SCHEMATIC
BRADLEYS CORNER
NEW-0023-05 | 0

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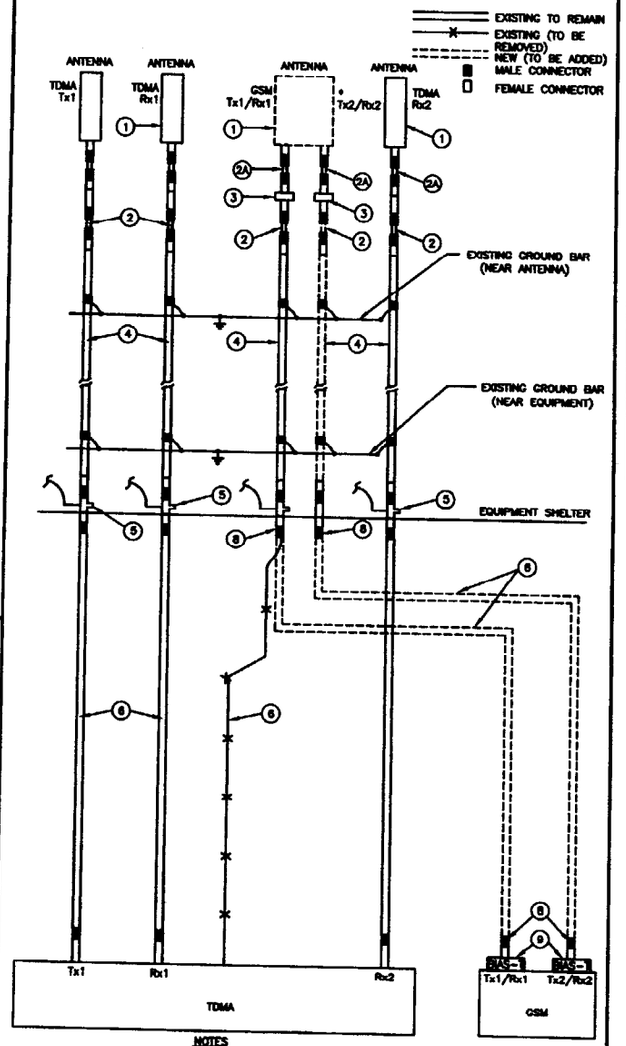


NOTES
1. GSM DUPLEXER INTEGRATED INTO GSM BTS.
2. Tx2> – (GSM) ONLY WHEN APPLIES

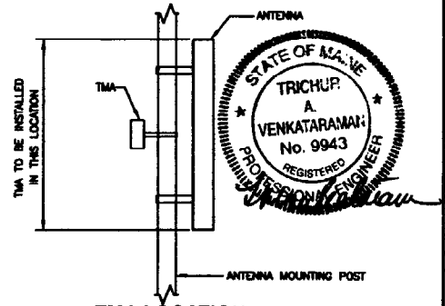
ANTENNA CONFIGURATION: 4/5 VDP - SECTORS: A, B & C

ITEM NO.	ITEM DESCRIPTION	SYS.	ALPHA SECTOR – A AZIMUTH 30°					ALPHA SECTOR – B AZIMUTH 150°					ALPHA SECTOR – C AZIMUTH 270°					TOTAL QUANTITY	SUPPLIED BY
		TDMA	TX1	RX1	RX2	——		TX1	RX1	RX2	——		TX1	RX1	RX2	——			
		GSM	——	——	——	TX1/RX1	TX2/RX2	——	——	——	TX1/RX1	TX2/RX2	——	——	——	TX1/RX1	TX2/RX2		
1	ANTENNA		USE EXISTING	USE EXISTING	USE EXISTING	ALLGON 7282.01		USE EXISTING	USE EXISTING	USE EXISTING	ALLGON 7282.01		USE EXISTING	USE EXISTING	USE EXISTING	ALLGON 7282.01		3	BECHTEL
	MECHANICAL DOWNTILT		USE EXISTING	USE EXISTING	USE EXISTING	4°		USE EXISTING	USE EXISTING	USE EXISTING	4°		USE EXISTING	USE EXISTING	USE EXISTING	4°		——	——
2	ANTENNA JUMPER		USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	1	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	1	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	1	3	BECHTEL
2A	ANTENNA JUMPER L4A-P09BM-3 (ANDREW)		USE EXISTING	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	USE EXISTING	1	1	6	BECHTEL
3	TMA KRY-112-71/2 (SEE NOTE 12)		USE EXISTING	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	USE EXISTING	1	1	6	BECHTEL
4	MAIN COAX		USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	85 FT (7/8)	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	345 FT (1 5/8)	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	85 FT (7/8)	180 FT (7/8) 345 FT (1 5/8)	BECHTEL
5	COAX SURGE ARRESTOR (ANDREW) (SEE NOTES 1 & 2)		USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	——	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	——	USE EXISTING	USE EXISTING	USE EXISTING	USE EXISTING	——	——	BECHTEL
6	JUMPER FSJ4-50B (ANDREW) (SEE NOTES 3,4,5 & 6)		USE EXISTING	USE EXISTING	USE EXISTING	30 FT	30 FT	USE EXISTING	USE EXISTING	USE EXISTING	30 FT	30 FT	USE EXISTING	USE EXISTING	USE EXISTING	30 FT	30 FT	180 FT	BECHTEL
7	ANTENNA SHARING KIT (ERICSSON) (SEE NOTE 7)		——					——					——					——	BECHTEL
8	UNATTACHED DIN CONNECTOR F4PDMM2-C (ANDREW)		USE EXISTING	USE EXISTING	USE EXISTING	2	2	USE EXISTING	USE EXISTING	USE EXISTING	2	2	USE EXISTING	USE EXISTING	USE EXISTING	2	2	12	BECHTEL
9	BIAS TEE (SEE NOTE 8)		——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	ERICSSON
10	UNATTACHED CONNECTORS		——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	BECHTEL
	ID TAG (SEE NOTES 4, 5 & 6)		ALPHA (A1)	ALPHA (A2)	ALPHA (A3)	ALPHA (A4)	ALPHA (A5)	ALPHA (A1)	ALPHA (A2)	ALPHA (A3)	ALPHA (A4)	ALPHA (A5)	ALPHA (A1)	ALPHA (A2)	ALPHA (A3)	ALPHA (A4)	ALPHA (A5)	AS REQUIRED	G.C.
	COLOR CODE		SEE NOTES 4, 5 & 6					SEE NOTES 4, 5 & 6					SEE NOTES 4, 5 & 6					AS REQUIRED	G.C.

NOTES:

1. EXISTING SURGE ARRESTORS MUST PASS 25 VOLT DC TEST. IF IT FAILS THE TEST, THEN REMOVE AND DO NOT REPLACE SURGE ARRESTOR.
2. CABLE SHIELDS, AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER, WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF TOWERS THAT ARE BETWEEN 150 FEET AND 300 FEET HIGH, AND AT INTERVALS OF 150 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 300 FEET.
3. SUBCONTRACTOR SHALL VERIFY THE REQUIRED LENGTH IN FIELD BEFORE CUTTING THE JUMPER AND ATTACHING THE UNATTACHED CONNECTORS. THE CONNECTIONS TO GSM BTS WILL BE MADE BY ERICSSON.
4. FOLLOW THE EXISTING SCHEME FOR COLOR CODING AND CABLE TAGGING NEW JUMPERS WHEN ALL OF THE FOLLOWING CONDITIONS ARE MET:
   - EXISTING ANTENNAS AND/OR TOP JUMPERS ARE NOT MODIFIED OR REPLACED
   - NO WORK OF ANY KIND IS PERFORMED AT OR NEAR THE ANTENNA END(S) OF EXISTING MAIN FEEDLINE(S)
   - NO WORK IS PERFORMED ON EXISTING MAIN FEEDLINE COMPONENTS SUCH AS CONNECTORS, GROUND KITS, CABLE SUPPORTS, WEATHERPROOFING, ETC
5. FOLLOW STANDARD DETAIL 600 AND THE AWS DOCUMENT NO. WNS–00217, REVISION 1.2, TOWER/ANTENNA CABLE MARKING GUIDELINE FOR COLOR CODING AND TAGGING ALL (TDMA AND GSM) COAX CABLES WHEN ANY OF THE FOLLOWING CONDITIONS ARE MET:
   - EXISTING ANTENNAS ARE MODIFIED OR REPLACED
   - WORK OF ANY KIND IS PERFORMED AT OR NEAR THE ANTENNA END(S) OF EXISTING MAIN FEEDLINE(S).
   - MAIN FEEDLINE COMPONENTS SUCH AS CONNECTORS, GROUND KITS, CABLE SUPPORTS, WEATHERPROOFING, ETC. ARE INSTALLED, MODIFIED OR REPLACED.
6. COMPLETE A CABLE PORT DIAGRAM PER DETAIL 601 AND POST ONE COMPLETED COPY AND TWO BLANK COPIES OF THE DIAGRAM IN A PROTECTIVE PLASTIC SLEEVE IN THE SHELTER.
7. USE THE REQUIRED LENGTH OF JUMPERS DEPENDING UPON FIELD CONDITIONS. THE END CONNECTIONS WILL BE MADE BY ERICSSON.
8. BIAS TEE IS REQUIRED WHEN A TMA IS INSTALLED. IT IS BUILT INTO THE BTS CABINET.
9. ALL FEEDER LINE AND JUMPER CONNECTORS FOR 3G GSM SHALL BE 7/16 DIN STANDARD CABLE CONNECTORS.
10. WHEN MODIFYING EXISTING 2G TDMA COAXIAL CABLES AND ANTENNAS, REMOVE ALL EXISTING N TYPE CONNECTORS AND REPLACE WITH NEW 7/16 DIN STANDARD CONNECTORS.
11. ANTENNA CIRCUIT SWEEP TESTING SHALL BE PERFORMED AND REPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS PROCEDURE DOCUMENT NO. WNS–00284, LATEST REVISION. CONTRACTOR WILL NOT ACCEPT A RADIO SIGNAL CABLE INSTALLATION WITH UNSATISFACTORY SWEEP TEST RESULTS.
12. MOUNT TMA BEHIND THE ANTENNA ON THE ANTENNA MOUNTING POST SO THAT THE TMA IS FULLY SHIELDED BY THE ANTENNA AS SHOWN IN THE TMA LOCATION DETAIL ON THIS SHEET. IF IT IS NOT POSSIBLE, NOTIFY THE CONTRACTOR IMMEDIATELY FOR DIRECTION.

DETAIL 505 BOS



TMA LOCATION
(COAX CABLES AND MOUNTING DETAILS ARE NOT SHOWN FOR CLARITY)
(USE WHEN APPLICABLE)

NOTE: THE DESIGN IS BASED ON RF DATA SHEET REV 2 APPROVED 01/30/02

RF BILL OF MATERIALS

BAY STATE DESIGN
Bay State Design Associates, Inc.
Architects - Engineers
70 Tower Office Park
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BRADLEYS CORNER
SITE NO. NEW-0023
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PORTLAND, ME 04102

AT&T
AT&T WIRELESS SERVICES, INC.

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SCALE: AS SHOWN | DESIGNED BY: BR | DRAWN BY: BR

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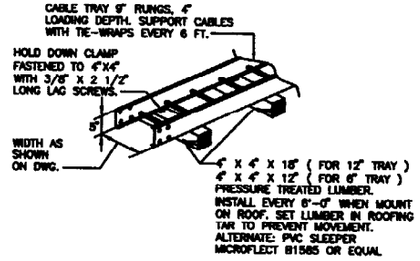
ANTENNA SCHEMATIC & BILL OF MATERIALS
BRADLEYS CORNER
NEW-0023-06 | 0

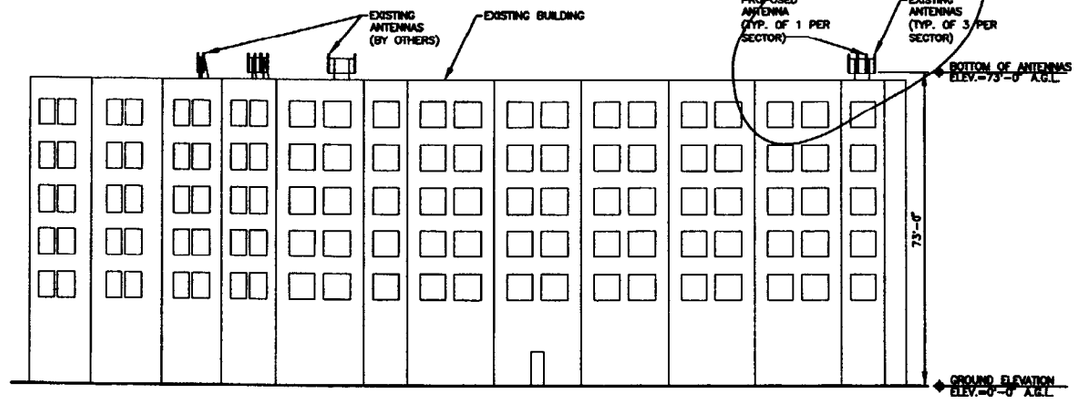


OPTION: USE MICROFLECT ROOF MOUNTED BRIDGE KITS CONSISTING OF SLEEPER AND COVER.

NOTE:
WHEN CABLE TRAY COVERS ARE SPECIFIED, THEY SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS FOR "HIGH WIND CONDITIONS". THIS INCLUDES CONNECTOR TYPE AND SPACINGS.

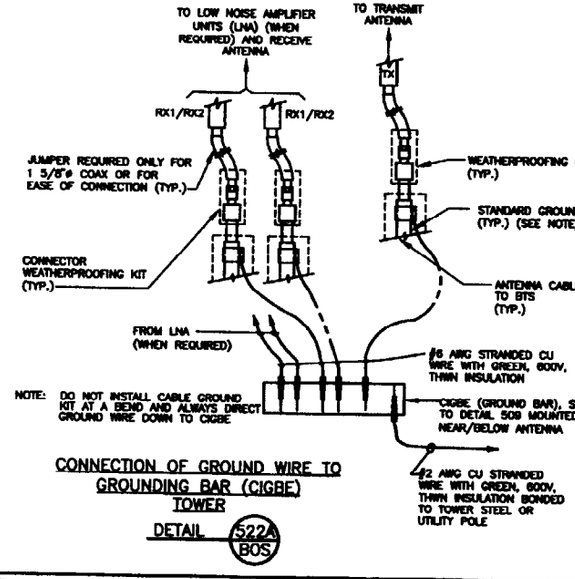
ROOF MOUNTED CABLE TRAY DETAIL (3)

SCALE: NTS

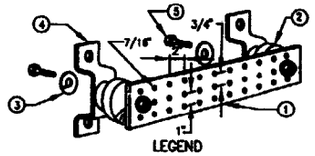


BUILDING ELEVATION (1)

SCALE: NTS



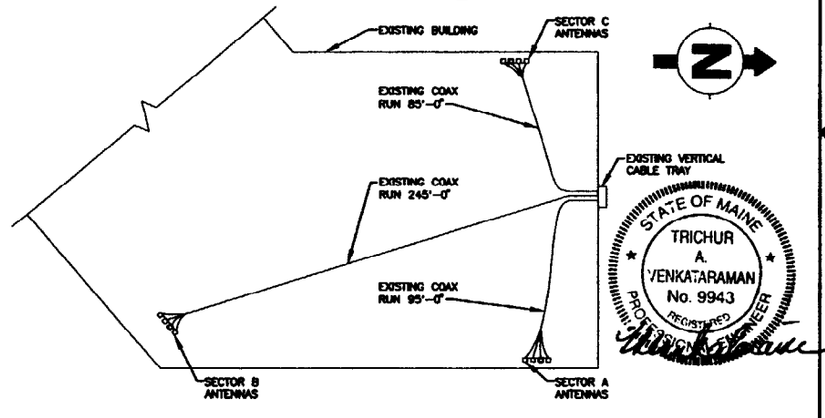
CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) TOWER DETAIL 522A BOS



LEGEND

1- COPPER GROUND BAR, 1/2" X 4" X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-6
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

GROUND BAR DETAIL 509



NOTES
1. USE EXISTING ROOF TOP CABLE TRAY IF IT HAS ADEQUATE SPACE TO ROUTE THE PROPOSED COAX CABLES. IF THE EXISTING TRAY HAS INSUFFICIENT SPACE, INSTALL 6" TRAY (SEE ROOF MOUNTED CABLE TRAY DETAIL ON THIS SHEET) TO ACCOMMODATE PROPOSED 3 COAX CABLES. GROUND THE PROPOSED CABLES AT THE ANTENNA LOCATIONS AND AT THE RBS CABINET. ROUTE THE PROPOSED CABLES ALONG THE ROUTE OF THE EXISTING CABLES TO THE OUTDOOR RBS CABINET LOCATED AT GROUND LEVEL.
2. ALL NEW EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING STRUCTURE.

ROOFTOP PLAN (2)

SCALE: NTS

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AT&T
AT&T WIRELESS SERVICES, INC.

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DRAWING NUMBER: NEW-0023-07
REV: 0

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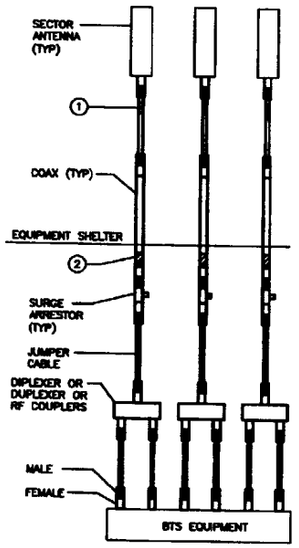
D C B A

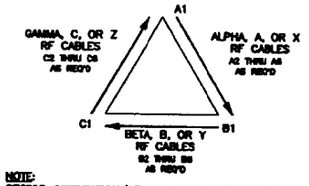


CABLE MARKING LOCATIONS DIAGRAM

ALL RF CABLE SHALL BE MARKED AS PER CABLE MARKING LOCATIONS TABLE BELOW:

CABLE MARKING LOCATIONS			
NO.	TAPE	TAG	LOCATIONS
1.	X		END OF THE MAIN COAX RUN WHERE THE COAXIAL CABLE AND JUMPER TO THE ANTENNA ARE CONNECTED.
2.	X	X	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.

DETAIL 600 BOS NTS



NOTE:
SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SPECIFIC SITE TO DETERMINE THE SECTOR ORIENTATION.

ANTENNA SECTOR AND CABLE DEFINITION

CABLE MARKING COLOR CONVENTION TABLE						
SECTOR ALPHA, A, X	CABLE A1	CABLE A2	CABLE A3	CABLE A4	CABLE A5	CABLE A6
	ONE RED	TWO RED	THREE RED	FOUR RED	FIVE RED	SIX RED
SECTOR B BETA, B, Y	CABLE B1	CABLE B2	CABLE B3	CABLE B4	CABLE B5	CABLE B6
	ONE BLUE	TWO BLUE	THREE BLUE	FOUR BLUE	FIVE BLUE	SIX BLUE
SECTOR GAMMA, C, Z	CABLE C1	CABLE C2	CABLE C3	CABLE C4	CABLE C5	CABLE C6
	ONE GREEN	TWO GREEN	THREE GREEN	FOUR GREEN	FIVE GREEN	SIX GREEN
SECTOR DELTA, D, W	CABLE D1	CABLE D2	CABLE D3	CABLE D4	CABLE D5	CABLE D6
	ONE YELLOW	TWO YELLOW	THREE YELLOW	FOUR YELLOW	FIVE YELLOW	SIX YELLOW

NOTE:

1. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE" (EXAMPLE SECTOR ALPHA, CABLE A3 WOULD BE THREE RED BANDS).
2. THE STANDARD CABLE MARKING TAPE IS BASED ON THE "4 NEMA" COLORED TAPES – RED, BLUE, GREEN AND YELLOW.
3. ON EXISTING SITE THE COLOR CODING SHALL FOLLOW THE EXISTING MARKET COLOR CODING.
4. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, OR WHEN INSTALLING NEW COAXIAL CABLES THE GUIDELINE IS TO BE IMPLEMENTED AT THE SITE REGARDLESS OF TECHNOLOGY.

TDMA LINE TAG

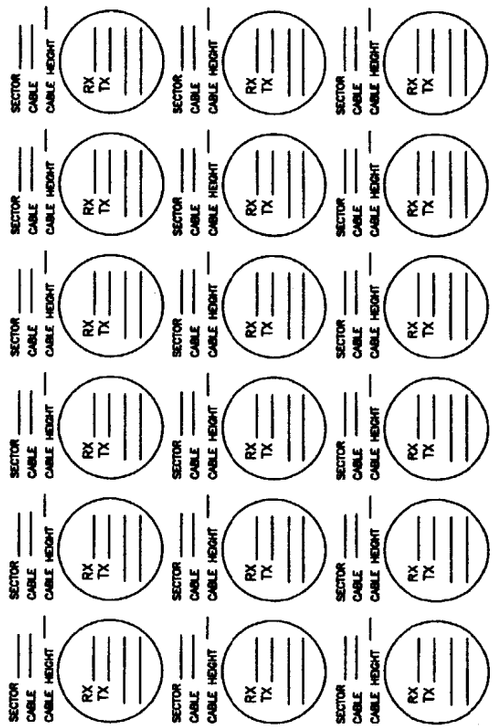
GSM LINE TAG

TO PROVIDE ADDITIONAL IDENTIFICATION EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, CABLE NUMBER, AND "ATTWS" TO IDENTIFY AT&T WIRELESS CABLES. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE. PREFERRED TAG LABELING SHOULD BE AS SHOWN ABOVE "TDMA LINE TAG" AND "GSM LINE TAG".

CABLE MARKING TAGS

CABLE PORT DIAGRAM

CAUTION: HARMFUL RF ENERGY EXISTS ON THESE LINES



DESIGNERS/ ENGINEERS NOTE:

1. CABLE PORT DIAGRAM WILL BE AFFIXED TO THE INTERIOR SHELTER WALL NEAR THE CABLE ENTRY PORT TO AID IN CABLE IDENTIFICATION. THE CHART IS INTENDED TO BE USED TO RECORD THE FUNCTION (Rx, Tx1, ETC.) OF EACH ANTENNA AND RF CABLE AT THE TIME OF INSTALLATION.
2. ONE COMPLETED COPY PLUS TWO BLANK COPIES OF THE CHART SHOULD BE POSTED IN THE SHELTER IN A PROTECTIVE PLASTIC SLEEVE.

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COAX CABLE COLOR CODING & TAGGING DETAILS
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