



LAND USE PRE-APPLICATION CONFERENCE

Thursday, November 17, 2011

City Hall
22500 Salamo Road

Willamette Conference Room

Time: 10:00 am

Add three antennas and associated equipment onto an existing AT&T facility located behind shrouds

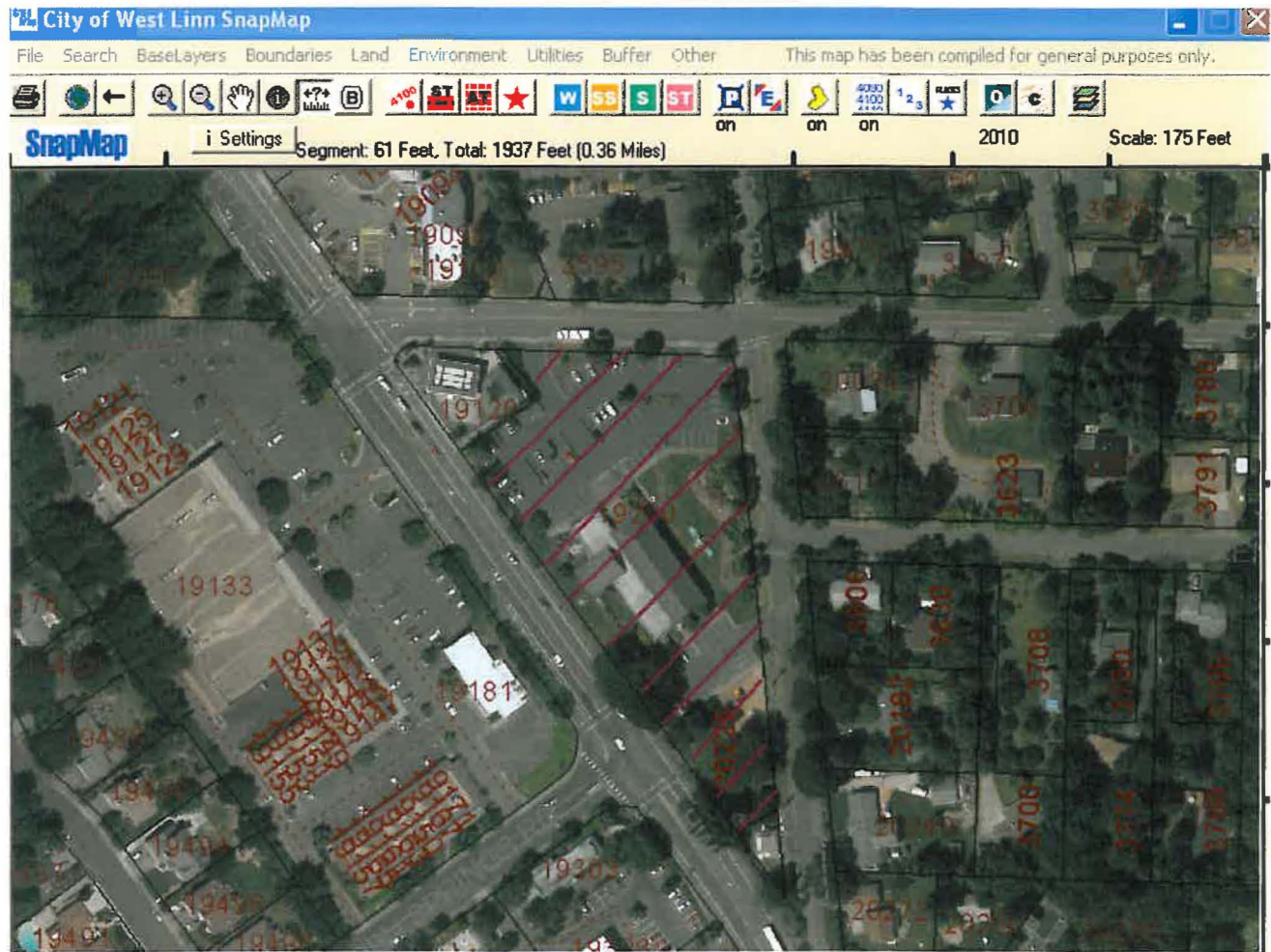
Applicant: Zach Phillips - PTS (on behalf of AT&T)

Subject Property Address: 19200 Willamette Dr

Neighborhood Assn: Robinwood

Planner: Tom Soppe

Project #: PA-11-27





PRE-APPLICATION CONFERENCE

THIS SECTION FOR STAFF COMPLETION		
CONFERENCE DATE: 11-17-11	TIME: 10:00am	PROJECT #: PA-11-27
STAFF CONTACT: Tom Soppe		FEE: 350

Pre-application conferences occur on the first and third Thursdays of each month. In order to be scheduled for a conference, this form including property owner's signature, the pre-application fee, and accompanying materials must be submitted at least 14 days in advance of the conference date. Twenty-four hour notice is required to reschedule.

Address of Subject Property (or map/tax lot): 19200 Willamette Dr.

Brief Description of Proposal: Add 3 antennas and associated equipment onto an existing AT&T facility located behind shrouds.

Applicant's Name: Zach Phillips - PTS (on behalf of AT & T)

Mailing Address: 1001 SE Water Ave., Ste 180 Portland, OR 97214

Phone No: (503) 708-9200 Email Address: zphillips@ptswn.com

Please attach additional materials relating to your proposal including a site plan on paper up to 11 x 17 inches in size depicting the following items:

- North arrow
- Scale
- Property dimensions
- Streets abutting the property
- Conceptual layout, design and/or building elevations
- Access to and from the site, if applicable
- General location of existing trees
- Location of creeks and/or wetlands
- Location of existing utilities (water, sewer, etc.)
- Easements (access, utility, all others)

Please list any questions or issues that you may have for city staff regarding your proposal:

By my signature below, I grant city staff right of entry onto the subject property in order to prepare for the pre-application conference.

Paul M. Quachid 10-18-11
 Property owner's signature Date

19200 Willamette Dr. West Linn
 Property owner's mailing address (if different from above)



at&t

Your world. Delivered.

MARYLHURST UNIVERSITY

PW54 / CROWN : 879625

19200 WILLAMETTE DRIVE,
WEST LINN, OR 97068

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



FINAL
CONSTRUCTION DRAWINGS

07-0H1



EXPIRATION DATE OF THE
LICENSE: 06/30/12

MARYLHURST UNIVERSITY
PW54 / CROWN : 879625

19200 WILLAMETTE DRIVE,
WEST LINN, OR 97068

PROJECT INFORMATION

PROJECT DESCRIPTION:

AT&T PROPOSES TO MODIFY EXISTING UNSTAFFED TELECOMMUNICATION FACILITY BY REPLACING (3) EXISTING ANTENNAS WITH (3) LTE PANEL ANTENNAS; ALONG WITH THE ADDITION OF (6) RRH UNITS, (1) RAYCAP SQUID; MOUNTED AT ANTENNA LEVEL; PLUS ADDITION OF (1) GPS ANTENNA MOUNTED NEXT TO AN EXISTING GPS ANTENNA AND (1) LUCENT 9412 COMPACT ENCLOSURE MOUNTED ON THE SIDE OF AN EXISTING ARGUS TE43 CABINET AT THE EXISTING AT&T EQUIPMENT CONCRETE PAD LEVEL.

APPLICANT:

AT&T MOBILITY
RTC BUILDING 3
18221 NE 72ND WAY
REDMOND, WA 98052

PROPERTY OWNER:

PRESBYTERY OF PORTLAND
19200 WILLAMETTE DR.
WEST LINN, OR 97068

CODE INFORMATION:

ZONING CLASSIFICATION: R-10
BUILDING CODE: 2009 IBC
CONSTRUCTION TYPE: IWB
OCCUPANCY: S-2
JURISDICTION: CITY OF WEST LINN
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

TOWER OWNER:

CROWN CASTLE
8547 154TH AVENUE NE
REDMOND, WA 98052
CONTACT: GINA FLYNT
PHONE: (425) 221-9903

TEAM LEAD:

GOODMAN NETWORKS
8815 122ND AVE NE
KIRKLAND, WA 98033
CONTACT: WENDY LONG
PH: (206) 321-1116

SITE LOCATION: (BASED ON NAD 83):

LATITUDE: 45° 23' 08.7" N
LONGITUDE: -122° 38' 22.2" W
TOP OF STRUCTURE AGL: 90'-0"
BASE OF STRUCTURE AMSL: 186'-6"

SITE ACQUISITION:

PACIFIC TELECOM SERVICES, LLC
568 FIRST AVENUE S., SUITE 650
SEATTLE, WA 98104
CONTACT: MEAGAN DOCKTER
PH: (206) 342-6381

PARCEL NUMBER (S):

21E2488-04800

PERMITTING:

PACIFIC TELECOM SERVICES, LLC
1001 SE WATER AVENUE, SUITE 180
PORTLAND, OR 97214
CONTACT: ZACH PHILLIPS
PH: (503) 232-5213

CONSTRUCTION MANAGER:

PACIFIC TELECOM SERVICES, LLC
568 FIRST AVENUE S., SUITE 650
SEATTLE, WA 98104
CONTACT: PAT HEALY
PH: (425) 471-3553

RF ENGINEER:

AT&T MOBILITY
CONTACT: KUNG-LIANG LIN
PH: (425) 698-7825

GENERAL INFORMATION:

1. PARKING REQUIREMENTS ARE UNCHANGED.
2. TRAFFIC IS UNAFFECTED.

PROJECT TEAM

PROJECT ARCHITECT

RICHARD B. HALL, AIA
PACIFIC TELECOM SERVICES, LLC
568 FIRST AVENUE S., SUITE 650
SEATTLE, WA 98104
CONTACT: ROBERT LEIGHTON
PH: (206) 464-4402
EMAIL: RLEIGHTON@PTSWA.COM

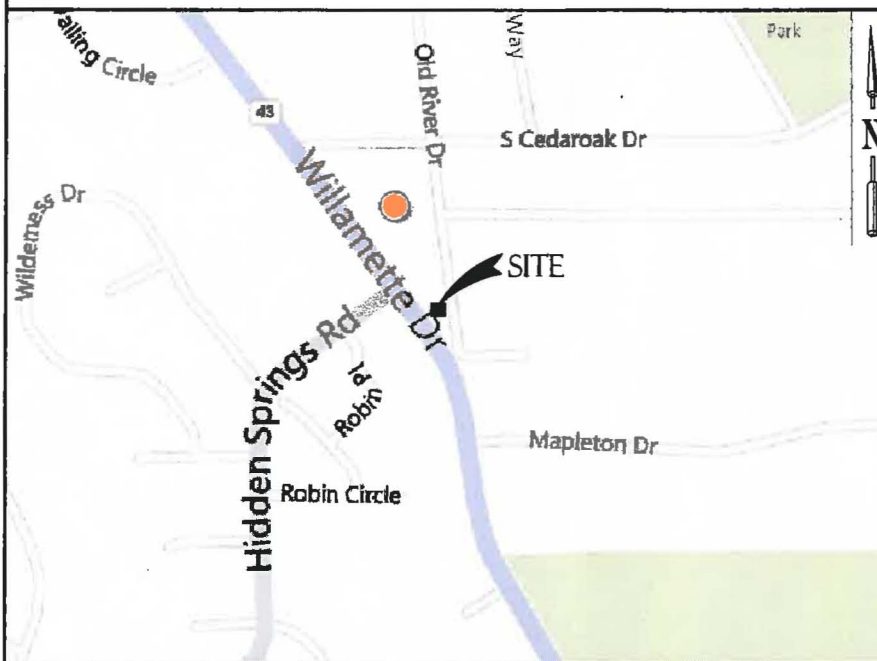
PROJECT CONSULTANT

PACIFIC TELECOM SERVICES, LLC
568 FIRST AVENUE S., SUITE 650
SEATTLE, WA 98104
CONTACT: KATIE KENNEY
PH: (206) 909-9454

PROJECT CONSULTANT

GOODMAN NETWORKS
8815 122ND AVE NE
KIRKLAND, WA 98033
PH: (206) 321-1116

VICINITY MAP



DRIVING DIRECTIONS

START FROM PORTLAND INTERNATIONAL AIRPORT:

DEPART FROM PORTLAND INTERNATIONAL AIRPORT, OR	0.2 MI
BEAR RIGHT ONTO NE AIRPORT WAY	2.2 MI
TAKE RAMP RIGHT FOR I-205 SOUTH / VETERANS MEMORIAL HWY TOWARD SALEM / PORTLAND	15.8 MI
TAKE RAMP RIGHT	0.2 MI
BEAR RIGHT ONTO OR-43 / WILLAMETTE DR	2.3 MI
TURN RIGHT ONTO S CEDAROK DR	0.1 MI
TURN RIGHT ONTO OLD RIVER DR	0.1 MI

ARRIVE AT 19200 WILLAMETTE DR, WEST LINN, OR 97068-2009 ON THE RIGHT

APPROVAL	DATE	SIGNATURE	APPROVAL	DATE	SIGNATURE
RF ENGINEER:			LANDLORD:		
RF MANAGER:			SITE ACQUISITION:		
OPPS MANAGER:			ZONING AGENT:		
CONSTR MANAGER:			PROJECT MANAGER:		
NSB MANAGER:			CONSTR MANAGER:		
TRANSPORT:					
EQUIP ENGINEER:					
COMPLIANCE:					

REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED

DRAWING INDEX

SHEET DESCRIPTION

T-1	TITLE SHEET
G-1	GENERAL NOTES & SYMBOLS
A-1	SITE PLAN
A-2	EXISTING ENLARGED SITE PLAN
A-3	PROPOSED ENLARGED SITE PLAN
A-4	EXISTING & PROPOSED WEST ELEVATION
A-5	EQUIPMENT DETAILS
RF-1	EXISTING & PROPOSED ANTENNA CONFIGURATIONS
RF-2	RF DETAILS
E-1	SCHEMATIC GROUNDING PLAN
E-2	GROUNDING DETAILS

LEGAL DESCRIPTION

TBD

ABBREVIATIONS

A/C	AIR CONDITIONING	HORZ	HORIZONTAL	PLYWD	PLYWOOD
AGL	ABOVE GROUND LEVEL	HR	HOUR	PROJ	PROJECT
APPROX	APPROXIMATELY	HT	HEIGHT	PROP	PROPERTY
		HVAC	HEATING	PT	PRESSURE TREATED
BLDG	BUILDING		VENTILATION	REQ	REQUIRED
BLK	BLOCKING		AIR CONDITIONING	RM	ROOM
		ID	INSIDE DIAMETER	RO	ROUGH OPENING
CLG	CEILING	IN	INCH		
CLR	CLEAR	INFO	INFORMATION	SHT	SHEET
CONC	CONCRETE	INSUL	INSULATION	SIM	SIMILAR
CONST	CONSTRUCTION	INT	INTERIOR	SPEC	SPECIFICATION
CONT	CONTINUOUS	IBC	INTERNATIONAL BUILDING CODE	SF	SQUARE FOOT
				SS	STAINLESS STEEL
DBL	DOUBLE			STL	STEEL
DIA	DIAMETER	LBS	POUNDS	STRUCT	STRUCTURAL
DIAG	DIAGONAL			STD	STUD
DN	DOWN	MAX	MAXIMUM	SUSP	SUSPENDED
DET	DETAIL	MECH	MECHANICAL		
DWG	DRAWING	MTL	METAL	THRU	THROUGH
		MFR	MANUFACTURE	TNNG	TINNED
EA	EACH	MGR	MANAGER	TYP	TYPICAL
ELEV	ELEVATION	MIN	MINIMUM		
ELEC	ELECTRICAL	MISC	MISCELLANEOUS	UNO	UNLESS NOTED OTHERWISE
EQ	EQUAL				
EQUIP	EQUIPMENT	NA	NOT APPLICABLE	VERT	VERTICAL
EXT	EXTERIOR	NIC	NOT IN CONTRACT	VIF	VERIFY IN FIELD
		NTS	NOT TO SCALE		
FIN	FINISH			W/	WITH
FLUOR	FLOUORESCENT	OC	ON CENTER	W/O	WITHOUT
FLR	FLOOR	OD	OUTSIDE DIAMETER	WP	WATER PROOF
FT	FOOT				
		GA	GAUGE		
		GALV	GALVANIZED		
		GC	GENERAL CONTRACTOR		
		GRND	GROUND		
		GYP	GYP SUM WALL BOARD		

REVISIONS				
NO.	DATE	DESCRIPTION	INITIAL	
A	06/14/2011	ISSUED FOR PCD REVIEW	BF	
O	07/01/11	ISSUED FOR FINAL CONSTRUCTION	BF	

NOT FOR CONSTRUCTION UNLESS
LABELED AS CONSTRUCTION SET

SHEET TITLE
TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTIFY TOWER NETWORK CARRIER OF ANY ERRORS, OMISSIONS, OR INCONSISTENCIES AS THEY MAY BE DISCOVERED IN PLANS, DOCUMENTS, NOTES, OR SPECIFICATIONS PRIOR TO STARTING CONSTRUCTION INCLUDING, BUT NOT LIMITED BY, DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERROR, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF TOWER NETWORK CARRIER CONSTRUCTION PROJECT MANAGER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE MEANS OF CORRECTING ANY ERROR SHALL FIRST BE APPROVED BY TOWER NETWORK CARRIER CONSTRUCTION PROJECT MANAGER.
2. PRIOR TO THE SUBMISSION OF BIDS, CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. CONTRACTORS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR HAVING BEEN AWARDED THIS PROJECT SHALL VISIT THE CONSTRUCTION SITE WITH THE CONSTRUCTION CONTRACT DOCUMENTS TO VERIFY FIELD CONDITIONS AND CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER VERBALLY AND IN WRITING.
3. FOR COLLOCATION SITES: CONTACT TOWER OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.
4. NOT USED
5. THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
6. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCE. TOWER NETWORK CARRIER IS NOT RESPONSIBLE FOR ANY ERRORS RESULTING FROM THIS PRACTICE WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS.
7. OWNER, CONTRACTOR, AND TOWER NETWORK CARRIER CONSTRUCTION PROJECT MANAGER SHALL MEET JOINTLY TO VERIFY ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION.
8. THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
9. THE CONTRACTOR SHALL PERFORM WORK DURING OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.
10. THE CONTRACTOR SHALL PROVIDE TOWER NETWORK CARRIER PROPER INSURANCE CERTIFICATES NAMING TOWER NETWORK CARRIER AS ADDITIONAL INSURED, AND TOWER NETWORK CARRIER PROOF OF LICENSE(S) AND PE & PD INSURANCE.
11. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
12. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
13. ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.
14. NOT USED
15. A COPY OF GOVERNING AGENCY IS APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW, SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. THE ORIGINAL PERMIT SET PLANS ARE NOT TO BE USED BY THE WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION AS GOVERNING AGENCY APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS, IN GOOD CONDITION, COMPLETE WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES UNDER THE DIRECT CARE OF THE SUPERINTENDENT. THE CONTRACTOR SHALL SUPPLY TOWER NETWORK CARRIER CONSTRUCTION PROJECT MANAGER, WITH A COPY OF ALL REVISIONS, ADDENDA, AND/OR CHANGE ORDERS AT THE CONCLUSION OF THE WORK AS A PART OF THE AS-BUILT DRAWING RECORDS.
16. THE STRUCTURAL COMPONENTS OF ADJACENT CONSTRUCTION OR FACILITIES ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.
17. THE CONTRACTOR SHALL STUDY THE STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING PLANS AND CROSS CHECK THEIR DETAILS, NOTES, DIMENSIONS, AND ALL REQUIREMENTS PRIOR TO THE START OF ANY WORK.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT AND SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
19. THE CONTRACTOR HAS THE RESPONSIBILITY OF LOCATING ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR, OR SUBCONTRACTOR AS SPECIFIED IN THE AGREEMENT BETWEEN SUBCONTRACTOR AND CONTRACTOR, SHALL BEAR THE EXPENSES OF REPAIR AND/OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGE BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK.
20. THE REFERENCES ON THE DRAWINGS ARE FOR CONVENIENCE ONLY AND SHALL NOT LIMIT THE APPLICATION OF ANY DRAWING OR DETAIL.
21. ALL DIMENSIONS ON THE PLANS ARE TO FACE OF STUD (F.O.S.) UNLESS NOTED OTHERWISE (U.N.O.).
22. ALL EXISTING CONSTRUCTION, EQUIPMENT, AND FINISHES NOTED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE WITH THE FOLLOWING EXCEPTIONS:
 - A. PROPERTY NOTED TO BE RETURNED TO THE OWNER.
 - B. PROPERTY NOTED TO BE REMOVED BY THE OWNER.
23. THE GOVERNING AGENCIES, CODE AUTHORITIES, AND BUILDING INSPECTORS SHALL PROVIDE THE MINIMUM STANDARDS FOR CONSTRUCTION TECHNIQUES, MATERIALS, AND FINISHES USED THROUGHOUT THE PROJECT. TRADE STANDARDS AND/OR PUBLISHED MANUFACTURERS SPECIFICATIONS MEETING OR EXCEEDING DESIGN REQUIREMENTS SHALL BE USED FOR INSTALLATION.
24. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER ROUGH FRAMED FLOORS OR ROOFS SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING AND/OR BRACING IS TO BE PROVIDED WHERE THE STRUCTURE HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
25. PRIOR TO THE POURING OF ANY NEW SLAB OVER AN EXISTING SLAB THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, CHASES, AND EQUIPMENT WHICH ARE TO BE IMPLEMENTED INTO THE NEW WORK. ALL ITEMS DESIGNATED TO BE ABANDONED SHALL BE NOTED AND DISCUSSED WITH THE OWNER AND TOWER NETWORK CARRIER CONSTRUCTION PROJECT MANAGER AS PART OF THE AS-BUILT DRAWING PACKAGE.
26. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF APPLICABLE TO THIS FACILITY AND OR PROJECT SITE.
27. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING, CONSTRUCTION, AND ANY OTHER PROJECT EFFORT AS MANDATED BY THE GOVERNING AGENCY.
28. CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
29. THE PROJECT, WHEN COMPLETED, SHALL COMPLY WITH LOCAL SECURITY CODES AND TITLE-24 ENERGY CONSERVATION REQUIREMENTS. (TITLE-24 WHEN APPLICABLE)
30. ALL GLASS AND GLAZING IS TO COMPLY WITH CHAPTER 54 OF THE U.S. CONSUMER SAFETY COMMISSION - SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS (42 FR 1426, CFR PART 1201) AND LOCAL SECURITY REQUIREMENTS.
31. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
32. CONTRACTOR SHALL KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. CONTRACTOR SHALL REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
33. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL MATCH IN FORM, TEXTURE, FINISH, AND IN MATERIALS EXCEPT AS NOTED IN THE PLANS AND SPECIFICATIONS.
34. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BACKING, BLOCKING, AND/OR SLEEVES REQUIRED FOR THE INSTALLATION OF FIXTURES, MECHANICAL EQUIPMENT, PLUMBING, HARDWARE, AND FINISH ITEMS TO INSURE A PROPER AND COMPLETE JOB.
35. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A PROJECT LEVEL, STRAIGHT, AND TRUE ACCORDING TO THE PLANS. THE CONTRACTOR SHALL COMPARE THE LINES AND LEVELS OF THE EXISTING CONDITIONS WITH THOSE SHOWN ON THE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. TOWER NETWORK CARRIER SHALL BE NOTIFIED OF ANY ERRORS, OMISSIONS, OR INCONSISTENCIES PRIOR TO ANY CONSTRUCTION.
36. THE CONTRACTOR IS TO PROVIDE PROTECTION FOR ADJOINING PROPERTIES FROM PHYSICAL HARM, NOISE, DUST, DIRT, AND FIRE AS REQUIRED BY THE GOVERNING AGENCIES.
37. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AND/OR REVISIONS AVAILABLE AS REQUIRED BY THE GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.
38. THE CONTRACTOR IS RESPONSIBLE FOR THE STORAGE OF ALL MATERIALS AND SHALL NOT DO SO ON PUBLIC PROPERTY WITHOUT A PERMIT TO DO SO FROM THE GOVERNING AGENCIES FOR THIS PURPOSE.
39. GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
40. TRADES INVOLVED IN THE PROJECT SHALL BE RESPONSIBLE FOR THEIR OWN CUTTING, FITTING, PATCHING, ETC., SO AS TO BE RECEIVED PROPERLY BY THE WORK OF OTHER TRADES.
41. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT PREMISES AND SHALL BE LEFT IN A CLEAN (BROOM FINISH) CONDITION AT ALL TIMES BY EACH TRADE AS THEY PERFORM THEIR OWN PORTION OF THE WORK.
42. TOWER NETWORK CARRIER DOES NOT GUARANTEE ANY PRODUCTS, FIXTURES, AND/OR ANY EQUIPMENT NAMED BY A TRADE OR MANUFACTURER, GUARANTEE OR WARRANTY THAT MAY BE IN EFFECT IS DONE SO THROUGH THE COMPANY OR MANUFACTURER PROVIDING THE PRODUCT, FIXTURE, AND/OR EQUIPMENT ONLY. UNLESS SPECIFIC RESPONSIBILITY IS ALSO PROVIDED BY THE CONTRACTOR/SUBCONTRACTOR IN WRITTEN FORM.
43. CAUTION! CALL BEFORE YOU DIG! BURIED UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE ONE-CALL UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. 1-800-227-2600.
44. CONTRACTOR TO REPLACE AND/OR REROUTE ANY EXISTING UNDERGROUND UTILITIES ENCOUNTERED DURING TRENCHING AND GENERAL CONSTRUCTION.
45. WHEN APPLICABLE, CONTRACTOR IS RESPONSIBLE TO CALL, COORDINATE AND MAKE ARRANGEMENTS FOR ROW AND/ OR PRIVATE PROPERTY LOCATE MODIFICATION CONSTRUCTION; BASED ON SPECIFIC SITE REQUIREMENTS.
46. SEE CIVIL DRAWINGS FOR ADDITIONAL SITE INFORMATION.
47. CONTRACTORS TO DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS AND SUBMIT TO TOWER NETWORK CARRIER ALONG WITH REDLINED CONSTRUCTION SET.
48. CONTRACTOR SHALL DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP (REDLINING) THE APPROVED CONSTRUCTION SET AND SUBMITTING THE REDLINED ALONG WITH PHOTOGRAPHS PER NETWORK CARRIER REQUIREMENTS.
49. GENERAL CONTRACTOR IS TO COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED. CONTRACTOR TO REPORT POWER INSTALLATION COORDINATION SOLUTION(S) TO NETWORK CARRIER REPRESENTATIVE, PROJECT CONSTRUCTION MANAGER AND ARCHITECT.
50. ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY TOWER NETWORK CARRIER CONSTRUCTION MANAGER.
51. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REMEDY ALL FAULTY, INFERIOR, AND/OR IMPROPER MATERIALS, DAMAGED GOODS, AND/OR FAULTY WORKMANSHIP FOR ONE (1) YEAR AFTER THE PROJECT IS COMPLETE AND ACCEPTED UNDER THIS CONTRACT, UNLESS NOTED OTHERWISE IN THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR. (EXCEPTION) THE ROOFING SUBCONTRACTOR SHALL FURNISH A MAINTENANCE AGREEMENT FOR ALL WORK DONE, COSIGNED BY THE GENERAL CONTRACTOR, TO MAINTAIN THE ROOFING IN A WATERTIGHT CONDITION FOR A PERIOD OF TWO (2) YEARS STARTING AFTER THE DATE OF SUBSTANTIAL COMPLETION OF THE PROJECT, UNLESS OTHERWISE WRITTEN IN THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR.
52. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR THE SAFETY OF THE OWNER'S EMPLOYEES, WORKMEN, AND ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT.
53. THE CONTRACTOR SHALL BE REQUIRED TO PAY FOR ALL NECESSARY PERMITS AND/OR FEES WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR HIS REPRESENTATIVE. CONTRACTOR SHALL OBTAIN PERMIT AND MAKE FINAL PAYMENT FOR SAID DOCUMENT.
54. NOT USED
55. TOWER NETWORK CARRIER WILL REVIEW AND APPROVE SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH DESIGN CONCEPT. TOWER NETWORK CARRIER PROJECT APPROVAL OF A SEPARATE ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY IN WHICH THE ITEM FUNCTIONS.
56. ALL ANTENNAS MOUNTED ON ROOF SUPPORT FRAMES TO BE PROVIDED BY TOWER NETWORK CARRIER COMMUNICATIONS.
57. CONTRACTOR TO PROVIDE TRENCH AS REQUIRED TO INSTALL BOTH ELECTRICAL AND TELEPHONE UNDERGROUND CONDUITS (#40 PVC) PER S.C.E. WORKORDER. BACKFILL WITH CLEAN SAND AND COMPACT TO THE SATISFACTION OF THE DISTRICTS INSPECTOR. REPLACE FINISH GRADE WITH MATCHING MATERIALS (GRASS, ASPHALT, CONCRETE, ETC.)
58. CONTRACTOR TO PROVIDE HEAVY STEEL PLATES AT OPEN TRENCHES FOR SAFETY AND TO PROTECT EXISTING GROUND SURFACES FROM HEAVY EQUIPMENT UTILIZED DURING CONSTRUCTION.
59. CONTRACTOR TO PATCH AND REPAIR ALL GROUND SURFACES WITHIN THE CONSTRUCTION AREA AS NECESSARY TO PROVIDE A UNIFORM SURFACE AND MAINTAIN EXISTING SURFACE DRAINAGE SLOPES.
60. CONTRACTOR TO REPLACE LANDSCAPE VEGETATION THAT WAS DAMAGED DUE TO CONSTRUCTION, AND TO MODIFY REMAINING IRRIGATION LINES TO OPERATING CONDITION, PROVIDING FULL COVERAGE TO IMPACTED AREAS.
61. IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE PENETRATION OF EXISTING ROOFING MATERIALS OCCUR, THE GENERAL CONTRACTOR SHALL COORDINATE WITH BUILDING OWNER AND BUILDING ROOFING CONTRACTOR OF RECORD FOR INSTALLATION, PATCH, REPAIR OR ANY AUGMENTATION TO THE ROOF, AND HAVE THE WORK GUARANTEED UNDER THE ROOFING CONTRACTOR'S WARRANTY FOR MOISTURE PENETRATION AND OTHER FUTURE BREACH OF ROOFING INTEGRITY.
62. IN THE CASE OF ROOFTOP SOLUTIONS WITH THE INSTALLATION OF ANTENNAS WITHIN CONCEALED (SHROUDED) SUPPORT FRAMES OR TRIPODS, THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE FRP DESIGNER/FABRICATOR TO ENSURE THAT THE FINAL FRP SHROUD IS SIMULATING (IN APPEARANCE) DESIGNATED EXISTING EXTERIOR BUILDING FACADE MATERIALS, TEXTURES, AND COLORS. THE CONTRACTOR SHALL FURTHERMORE ENSURE THE USE OF COUNTERSUNK FASTENERS IN ALL FRP CONSTRUCTION. WHEN PHOTOSIMULATIONS ARE PROVIDED, THE CONTRACTOR SHALL ENSURE THAT FINAL CONSTRUCTION REPRESENTS WHAT IS INDICATED IN PHOTOSIMULATION. SHOP DRAWINGS SHALL BE PROVIDED TO THE GENERAL CONTRACTOR, CONSTRUCTION COORDINATOR, AND ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.
63. IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE ANCHORING TO A CONCRETE ROOF SLAB IS REQUIRED, CONTRACTORS SHALL CONFIRM (PRIOR TO SUBMITTING BID) WITH CONSULTING CONSTRUCTION COORDINATOR AND ARCHITECT THE PRESENCE OF POST TENSION TENDONS WITHIN THE ROOF SLAB - RESULTING FROM AN UNDOCUMENTED DESIGN CHANGE IN THE EXISTING BUILDING "AS-BUILT DRAWING SET" - HAVING INDICATED AN ORIGINAL DESIGN SOLUTION OF REINFORCED CONCRETE W/ EMBEDDED STEEL REBAR. IN THE EVENT POST TENSION SLAB SOLUTION IS PRESENT, CONTRACTOR SHALL INCLUDE PROVISIONS FOR X-RAY PROCEDURES (INCLUDED IN BID) FOR ALL PENETRATION AREAS WHERE ANCHORING OCCURS.
64. GENERAL & SUB CONTRACTORS SHALL USE STAINLESS STEEL METAL LOCKING TIES FOR ALL CABLE TRAY TIE DOWNS AND ALL OTHER GENERAL TIE DOWNS (WHERE APPLICABLE). PLASTIC ZIP TIES SHALL NOT BE PERMITTED FOR USE ON TOWER NETWORK CARRIER PROJECTS. RECOMMENDED MANUFACTURE SHALL BE: PANDUIT CORP. METAL LOCKING TIES MODEL NO. MLT4S-CP UNDER SERIES-304 (OR EQUAL). PANDUIT PRODUCT DISTRIBUTED BY TRIARC.
65. NOT USED.

SYMBOLS:

- GRID REFERENCE
- DETAIL REFERENCE
- ELEVATION REFERENCE
- SECTION REFERENCE
- CENTERLINE
- PROPERTY/LEASE LINE
- MATCH LINE
- WORK POINT
- GROUND CONDUCTOR
- TELEPHONE CONDUIT
- ELECTRICAL CONDUIT
- COAXIAL CABLE
- OVERHEAD SERVICE CONDUCTORS
- GROUT OR PLASTER
- (E) BRICK
- (E) MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONTINUOUS
- WOOD BLOCKING
- STEEL
- (N) NEW
- (E) EXISTING
- NEW ANTENNA
- EXISTING ANTENNA
- GROUND ROD
- GROUND BUS BAR
- MECHANICAL GRND. CONN.
- CADWELD
- GROUND ACCESS WELL
- ELECTRIC BOX
- TELEPHONE BOX
- LIGHT POLE
- FND. MONUMENT
- SPOT ELEVATION
- SET POINT
- REVISION



EXPIRATION DATE OF THE LICENSE: 06/30/12

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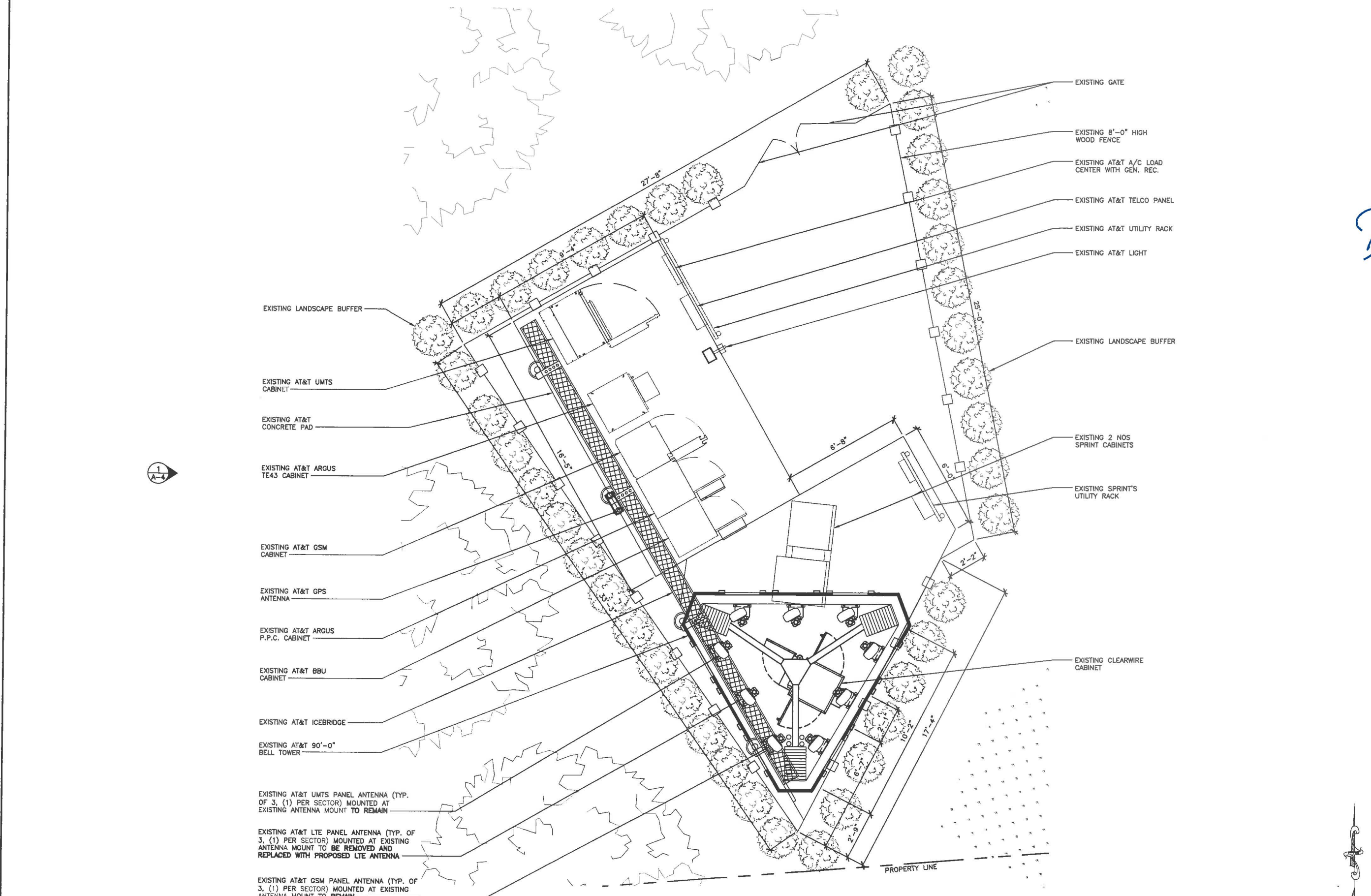
19200 WILLAMETTE DRIVE,
WEST LINN, OR 97068

REVISIONS			
NO.	DATE	DESCRIPTION	INITIAL
A	06/14/2011	ISSUED FOR PCD REVIEW	BF
0	07/01/11	ISSUED FOR FINAL CONSTRUCTION	BF

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SHEET TITLE
GENERAL NOTES & SYMBOLS

SHEET NUMBER
G-1



REGISTERED ARCHITECT
 RICHARD B. HALL
Richard B. Hall
 SEATTLE, WA
 5008
 STATE OF OREGON
 EXPIRATION DATE OF THE LICENSE: 06/30/12

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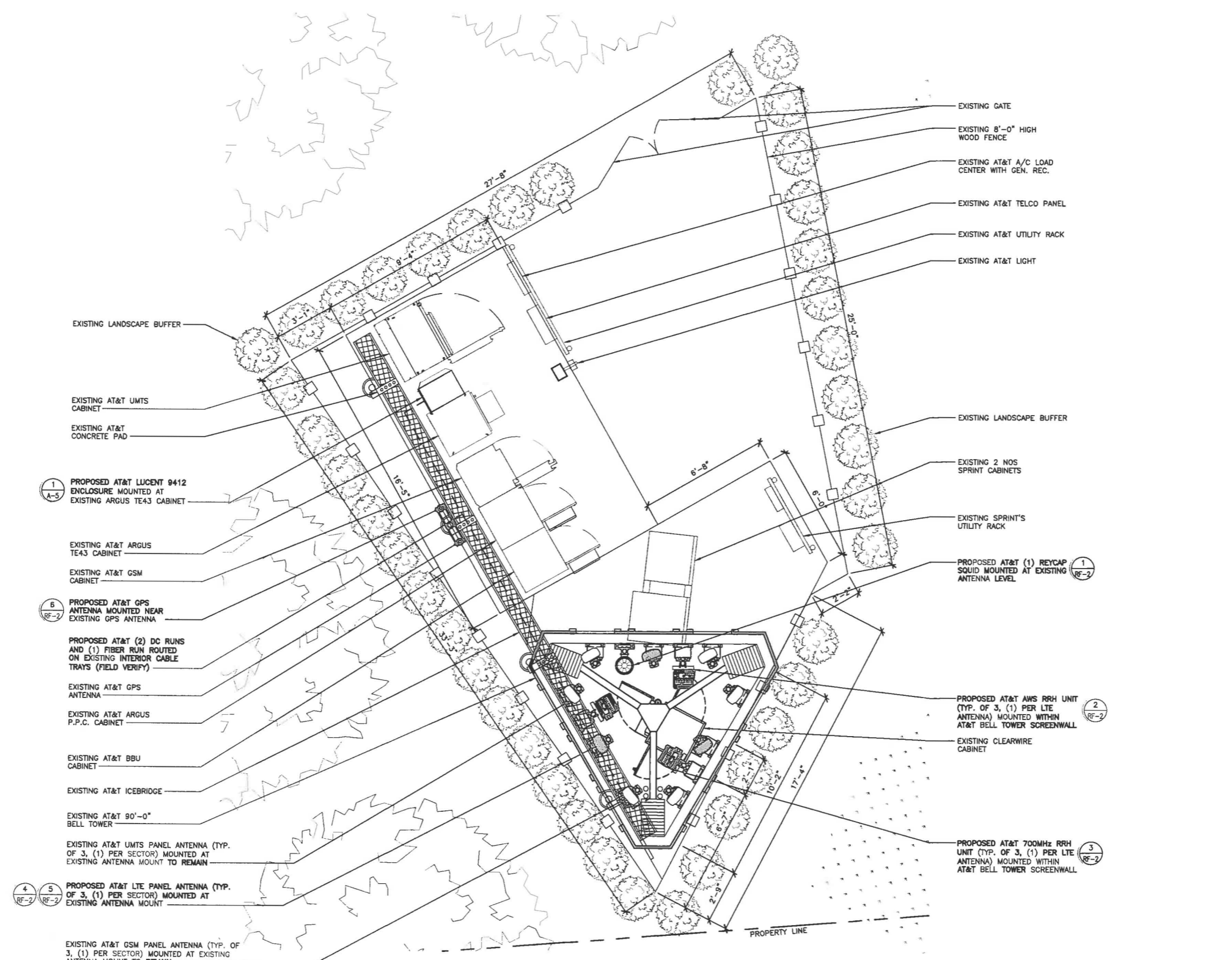
SHEET TITLE
 EXISTING ENLARGED SITE PLAN

SHEET NUMBER
 A-2

24"x36" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0"
 2' 1' 0" 2'

EXISTING ENLARGED SITE PLAN | 1

NOTE:
DC/FIBER POWER RUN TO BE
ROUTED WITH EXISTING COAX
(FIELD VERIFY).



- EXISTING LANDSCAPE BUFFER
- EXISTING AT&T UMTS CABINET
- EXISTING AT&T CONCRETE PAD
- 1 A-5 PROPOSED AT&T LUCENT 9412 ENCLOSURE MOUNTED AT EXISTING ARGUS TE43 CABINET
- 2 A-4 EXISTING AT&T ARGUS TE43 CABINET
- EXISTING AT&T GSM CABINET
- 6 RF-2 PROPOSED AT&T GPS ANTENNA MOUNTED NEAR EXISTING GPS ANTENNA
- PROPOSED AT&T (2) DC RUNS AND (1) FIBER RUN ROUTED ON EXISTING INTERIOR CABLE TRAYS (FIELD VERIFY)
- EXISTING AT&T GPS ANTENNA
- EXISTING AT&T ARGUS P.P.C. CABINET
- EXISTING AT&T BBU CABINET
- EXISTING AT&T ICEBRIDGE
- EXISTING AT&T 90'-0" BELL TOWER
- EXISTING AT&T UMTS PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN
- 4 RF-2 5 RF-2 PROPOSED AT&T LTE PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT
- EXISTING AT&T GSM PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN

- EXISTING GATE
- EXISTING 8'-0" HIGH WOOD FENCE
- EXISTING AT&T A/C LOAD CENTER WITH GEN. REC.
- EXISTING AT&T TELCO PANEL
- EXISTING AT&T UTILITY RACK
- EXISTING AT&T LIGHT
- EXISTING LANDSCAPE BUFFER
- EXISTING 2 NOS SPRINT CABINETS
- EXISTING SPRINT'S UTILITY RACK
- 1 RF-2 PROPOSED AT&T (1) REYCAP SQUID MOUNTED AT EXISTING ANTENNA LEVEL
- 2 RF-2 PROPOSED AT&T AWS RRH UNIT (TYP. OF 3, (1) PER LTE ANTENNA) MOUNTED WITHIN AT&T BELL TOWER SCREENWALL
- EXISTING CLEARWIRE CABINET
- 3 RF-2 PROPOSED AT&T 700MHz RRH UNIT (TYP. OF 3, (1) PER LTE ANTENNA) MOUNTED WITHIN AT&T BELL TOWER SCREENWALL



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SHEET TITLE
PROPOSED ENLARGED SITE PLAN

SHEET NUMBER
A-3

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2" 1" 0" 2"

NOTE:
DC/FIBER POWER RUN TO BE
ROUTED WITH EXISTING COAX
(FIELD VERIFY).

TOP OF EXISTING BELL TOWER
90'-0" A.G.L.

RAD CENTER OF PROPOSED AT&T PANEL ANTENNAS
80'-0" A.G.L.

EXISTING AT&T UMS PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN

PROPOSED AT&T AWS RRH UNIT (TYP. OF 3, (1) PER LITE ANTENNA) MOUNTED WITHIN AT&T BELL TOWER SCREENWALL (2) RF-2

PROPOSED AT&T LTE PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT (4) RF-2 (5) RF-2

EXISTING AT&T GSM PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN

PROPOSED AT&T 700MHz RRH UNIT (TYP. OF 3, (1) PER LITE ANTENNA) MOUNTED WITHIN AT&T BELL TOWER SCREENWALL (3) RF-2

EXISTING ANTENNAS BY OTHERS

PROPOSED AT&T (2) DC RUNS AND (1) FIBER RUN ROUTED ON EXISTING INTERIOR CABLE TRAYS (FIELD VERIFY)

EXISTING AT&T 90'-0" BELL TOWER

EXISTING AT&T GPS ANTENNA

(6) PROPOSED AT&T OPS ANTENNA MOUNTED NEAR EXISTING GPS ANTENNA RF-2

EXISTING AT&T BBU CABINET

EXISTING AT&T ARGUS P.P.C. CABINET

EXISTING AT&T GSM CABINET

EXISTING AT&T ARGUS TE43 CABINET

(1) PROPOSED AT&T LUCENT 9412 ENCLOSURE MOUNTED AT EXISTING ARGUS TE43 CABINET A-5

EXISTING AT&T UMS CABINET

EXISTING AT&T ICEBRIDGE

EXISTING 8'-0" HIGH WOOD FENCE

GRADE
0'-0" A.G.L.

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"

PROPOSED WEST ELEVATION 2

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"

TOP OF EXISTING BELL TOWER
90'-0" A.G.L.

RAD CENTER OF EXISTING AT&T PANEL ANTENNAS
80'-0" A.G.L.

EXISTING AT&T UMS PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN

EXISTING AT&T LTE PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO BE REMOVED AND REPLACED WITH PROPOSED LTE ANTENNA

EXISTING AT&T GSM PANEL ANTENNA (TYP. OF 3, (1) PER SECTOR) MOUNTED AT EXISTING ANTENNA MOUNT TO REMAIN

EXISTING ANTENNAS BY OTHERS

EXISTING AT&T 90'-0" BELL TOWER

EXISTING AT&T GPS ANTENNA

EXISTING AT&T BBU CABINET

EXISTING AT&T ARGUS P.P.C. CABINET

EXISTING AT&T GSM CABINET

EXISTING AT&T ARGUS TE43 CABINET

EXISTING AT&T UMS CABINET

EXISTING AT&T ICEBRIDGE

EXISTING 8'-0" HIGH WOOD FENCE

GRADE
0'-0" A.G.L.

EXISTING WEST ELEVATION 1



PACIFIC TELECOM SERVICES, LLC



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19200 WILLAMETTE DRIVE,
WEST LINN, OR 97068

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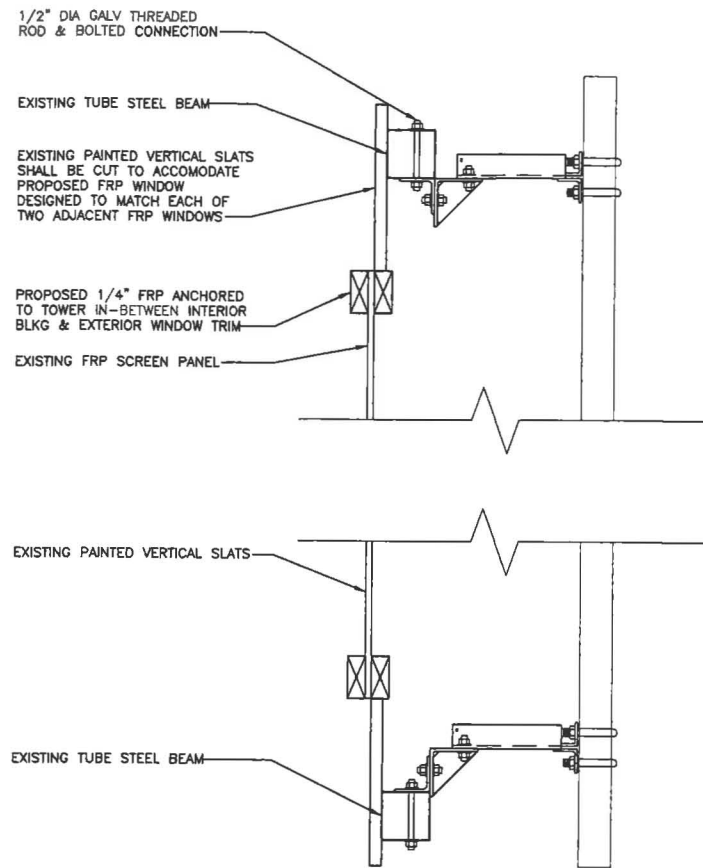
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SHEET TITLE
EXISTING & PROPOSED WEST ELEVATION

SHEET NUMBER

A-4

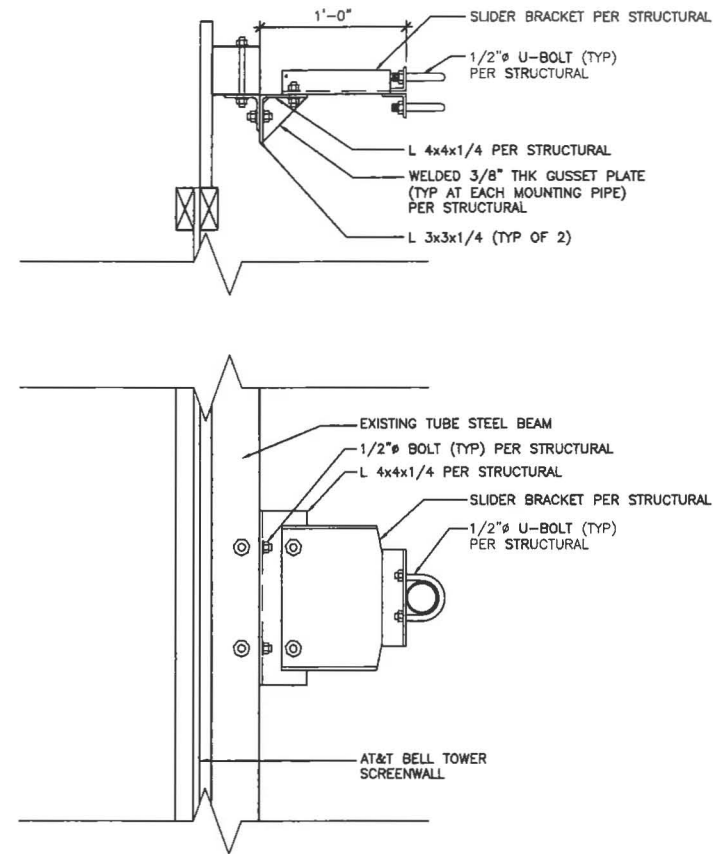


AS-BUILT CONTITION NOTE:
STRUCTURAL ENGINEER SHALL DETERMINE CAPABILITY OF EXISTING MOUNTING HARDWARE ALONG WITH DETERMINING IF NEW PROPOSED HARDWARE IS REQUIRED BASE ON AS-BUILT INFORMATION PROVIDED BY GC

NOTE:
GC SHALL DETERMINE DIMENSIONS OF PROPOSED FRP SCREEN WINDOW

ANTENNA MOUNTING DETAIL 4

24"x36" SCALE: 1 1/2"=1'
11"x17" SCALE: 3/4"=1'

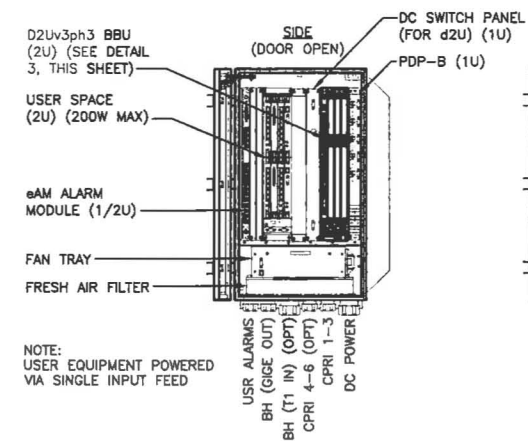


AS-BUILT CONTITION NOTE:
STRUCTURAL ENGINEER SHALL DETERMINE CAPABILITY OF EXISTING MOUNTING HARDWARE ALONG WITH DETERMINING IF NEW PROPOSED HARDWARE IS REQUIRED BASE ON AS-BUILT INFORMATION PROVIDED BY GC

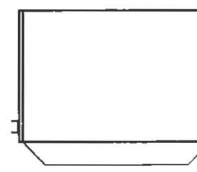
SLIDER BRACKET MOUNTING DETAIL 3

24"x36" SCALE: 1 1/2"=1'
11"x17" SCALE: 3/4"=1'

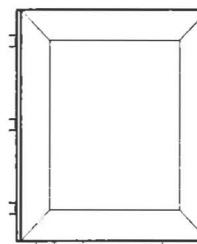
MANUFACTURER: ALCATEL-LUCENT
MODEL: LTE 9412 eNodeB
COMPACT ENCLOSURE
HEIGHT: 31"
WIDTH: 20"
DEPTH: 24"
WEIGHT: 143 LBS



NOTE:
USER EQUIPMENT POWERED VIA SINGLE INPUT FEED



TOP



FRONT

NOT USED 2

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

LTE 9412 eNodeB DETAIL 1

24"x36" SCALE: 1"=1'-0"
11"x17" SCALE: 1/2"=1'-0"



MARYLHURST UNIVERSITY

PW54 / CROWN : 879625

19200 WILLAMETTE DRIVE,
WEST LINN, OR 97068

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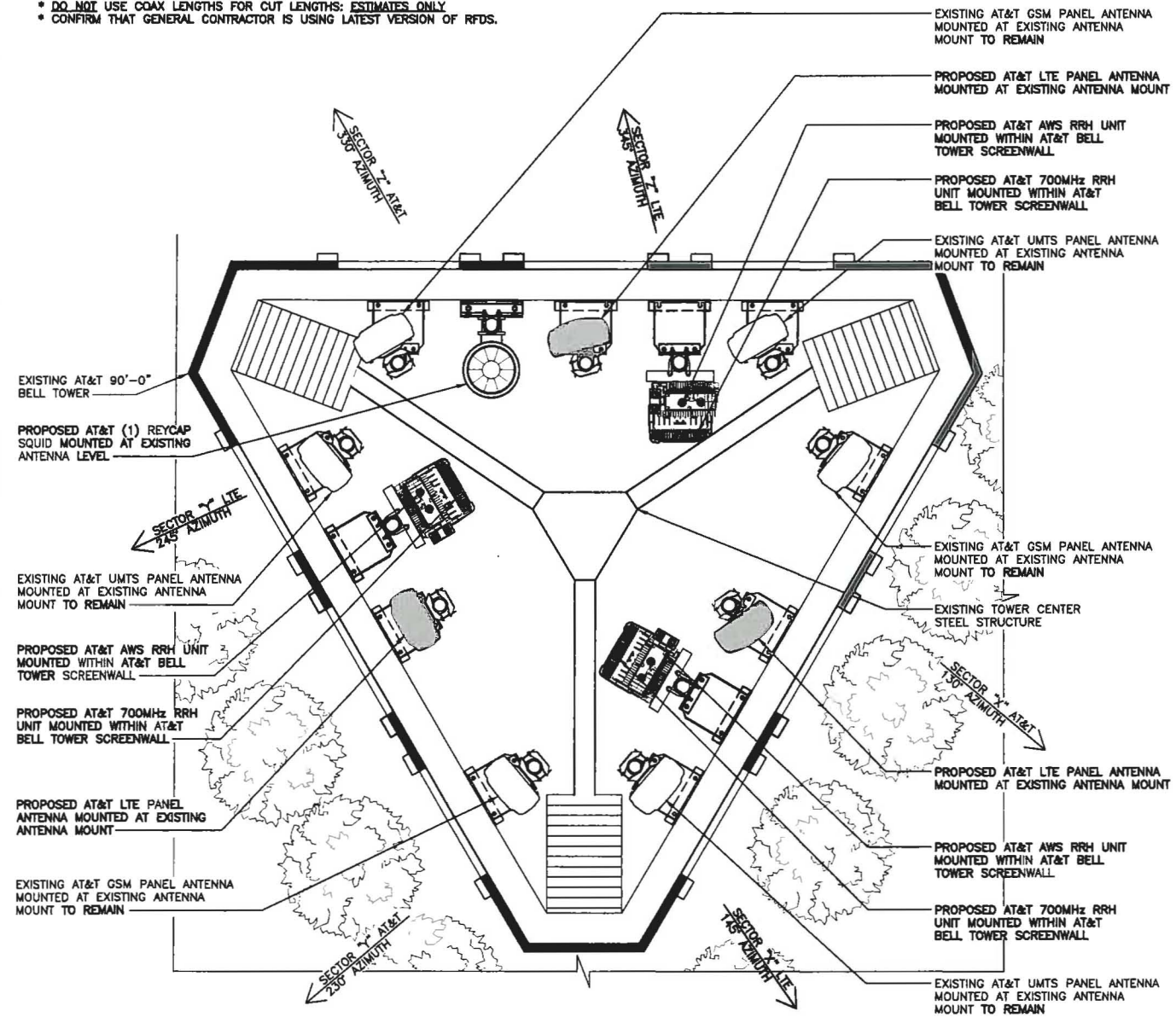
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

A-5

PROPOSED COAX CONFIGURATION AND SCHEDULE													
SECTOR X	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	130°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	130°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700	145°	80'-0"	1	KMW	AM-X-CD-18-65-00T	13'	2'	YES	-	0	FIBER	100'-0"	NO
SECTOR Y	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	230°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	230°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700	245°	80'-0"	1	KATHREIN	80010764	7'	2'	YES	-	0	FIBER	100'-0"	NO
SECTOR Z	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	330°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	330°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700	345°	80'-0"	1	KMW	AM-X-CD-18-65-00T	14'	0'	YES	-	0	FIBER	100'-0"	NO

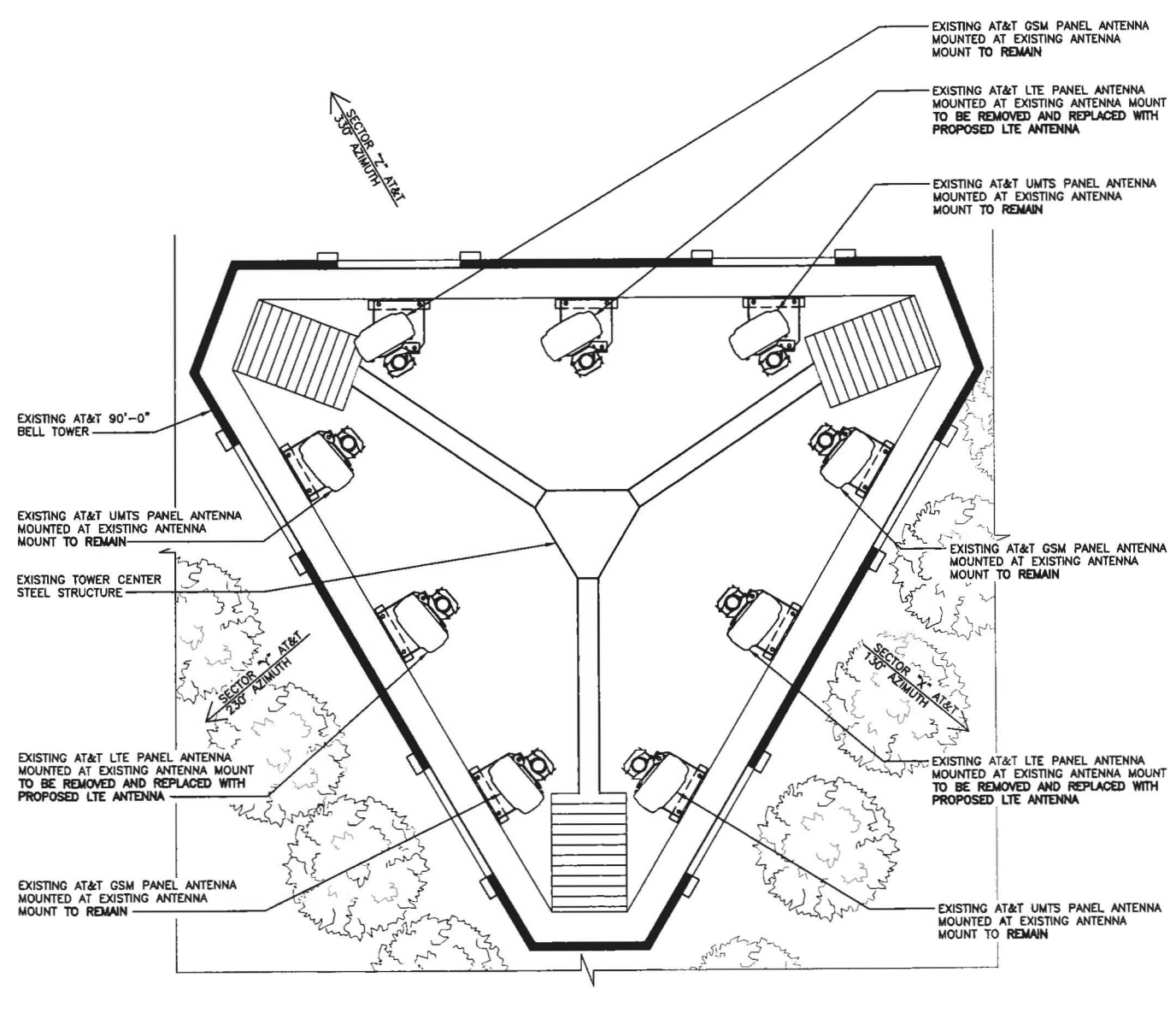
NOTES:
 * DO NOT USE COAX LENGTHS FOR CUT LENGTHS: ESTIMATES ONLY
 * CONFIRM THAT GENERAL CONTRACTOR IS USING LATEST VERSION OF RFDS.



24"x36" SCALE: 3/4" = 1'-0"
 11"x17" SCALE: 3/8" = 1'-0"

PROPOSED ANTENNA CONFIGURATION 2

EXISTING COAX CONFIGURATION AND SCHEDULE													
SECTOR X	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	130°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	130°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700 (OFF)	130°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	NONE	-	-	100'-0"	-
SECTOR Y	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	230°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	230°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700 (OFF)	230°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	NONE	-	-	100'-0"	-
SECTOR Z	AZIMUTH	RADCENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF COAX	COAX #	COAX LENGTH	DIPLEXED
GSM 850	330°	80'-0"	1	KATHREIN	80010765	2'	0'	YES	NONE	2	7/8"	100'-0"	YES G8 G9
GSM 1900						0'	0'	YES	(2) TT19-08BP111-001				
UMTS 850						2'	0'	YES	NONE				
UMTS 1900	330°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	TT19-08BP111-001	2	7/8"	100'-0"	YES U8 U9 U9_1
UMTS 1900_1						0'	0'	YES					
LTE 700 (OFF)	330°	80'-0"	1	KATHREIN	80010765	0'	0'	YES	NONE	-	-	100'-0"	-



24"x36" SCALE: 3/4" = 1'-0"
 11"x17" SCALE: 3/8" = 1'-0"

EXISTING ANTENNA CONFIGURATION 1



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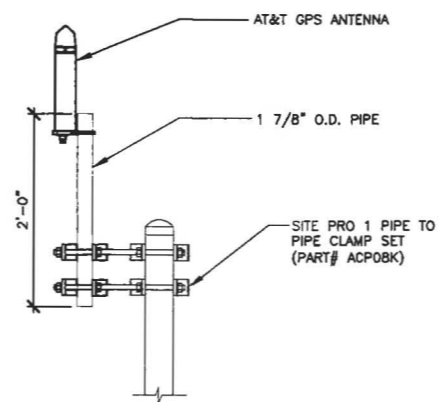
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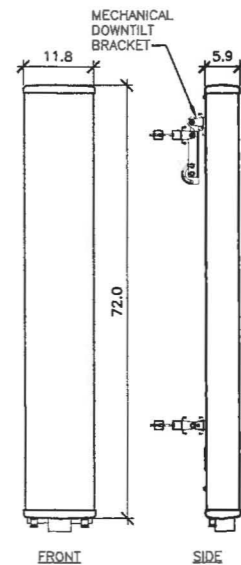
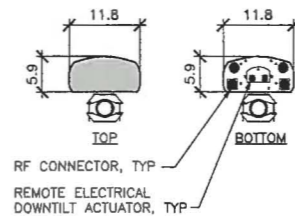
SHEET TITLE
 EXISTING & PROPOSED ANTENNA CONFIGURATIONS

SHEET NUMBER
RF-1



- NOTES:
1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
 2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

MANUFACTURER: KMW COMMUNICATIONS
MODEL: AM-X-CD-16-85-00T-RET (72")
WEIGHT: 48.5 LBS
DIMENSIONS: 11.8" X 5.9" X 72.0"
FREQUENCY: REFER TO RF DATA SHEET

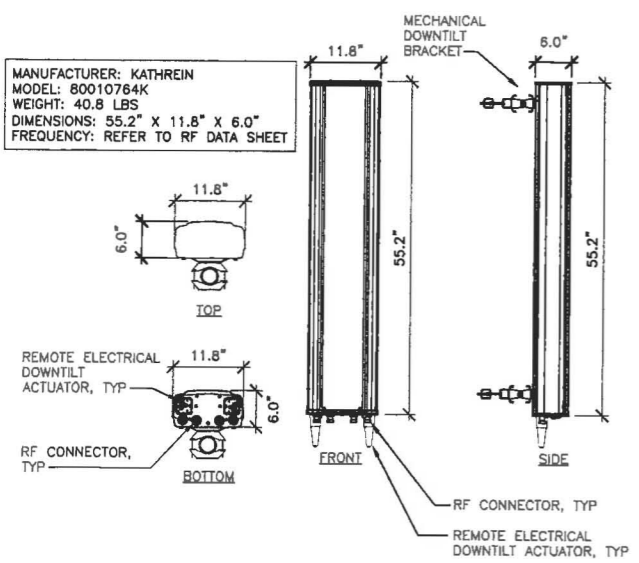


NOT USED
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

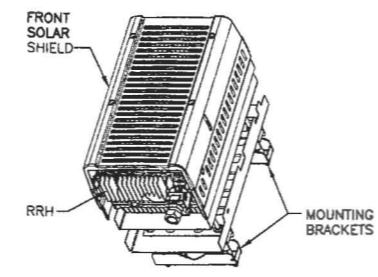
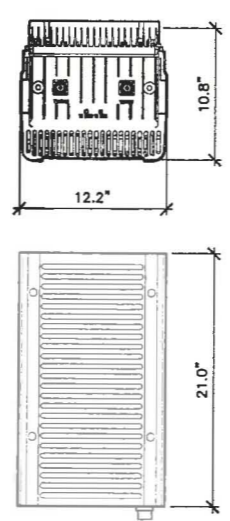
GPS MOUNTING DETAIL
24"x36" SCALE: 1"=1'-0"
11"x17" SCALE: 1/2"=1'-0"

KMW ANTENNA SPECIFICATIONS
24"x36" SCALE: 3/4"=1'-0"
11"x17" SCALE: 3/8"=1'-0"

MANUFACTURER: KATHREIN
MODEL: 80010784K
WEIGHT: 40.8 LBS
DIMENSIONS: 55.2" X 11.8" X 6.0"
FREQUENCY: REFER TO RF DATA SHEET

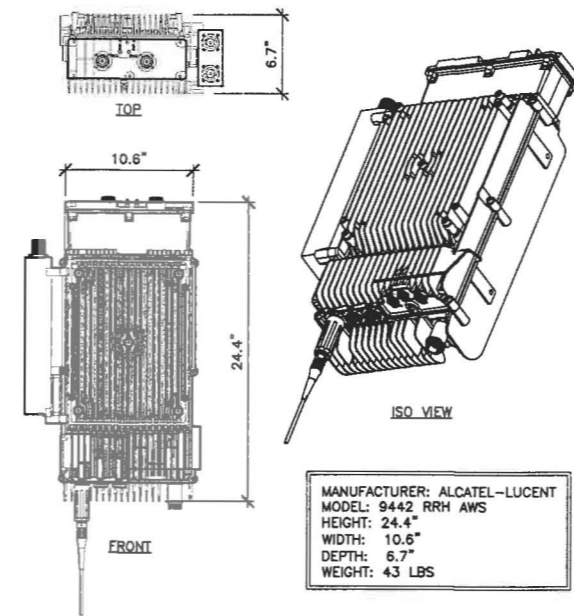


NOTE:
RRH'S TO BE MOUNTED PER
MANUFACTURE SPECIFICATOINS

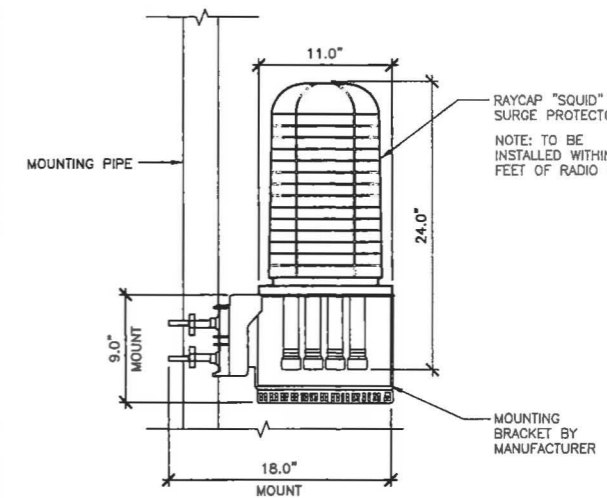


MANUFACTURER: ALCATEL-LUCENT
MODEL: 9442 RRH 700MHz_15.5 (Lower Band)
HEIGHT: 21"
WIDTH: 12.2"
DEPTH: 10.8"
WEIGHT: 51 LBS

NOTE:
RRH'S TO BE MOUNTED PER
MANUFACTURE SPECIFICATOINS



MANUFACTURER: ALCATEL-LUCENT
MODEL: 9442 RRH AWS
HEIGHT: 24.4"
WIDTH: 10.6"
DEPTH: 6.7"
WEIGHT: 43 LBS



MANUFACTURER: RAYCAP
MODEL: DC6-48-60-18-8F "SQUID"

KATHREIN ANTENNA SPECIFICATIONS
24"x36" SCALE: 3/4"=1'-0"
11"x17" SCALE: 3/8"=1'-0"

RRH 700MHZ DETAIL
24"x36" SCALE: 1 1/2"=1'-0"
11"x17" SCALE: 3/4"=1'-0"

RRH AWS DETAIL
24"x36" SCALE: 1 1/2"=1'-0"
11"x17" SCALE: 3/4"=1'-0"

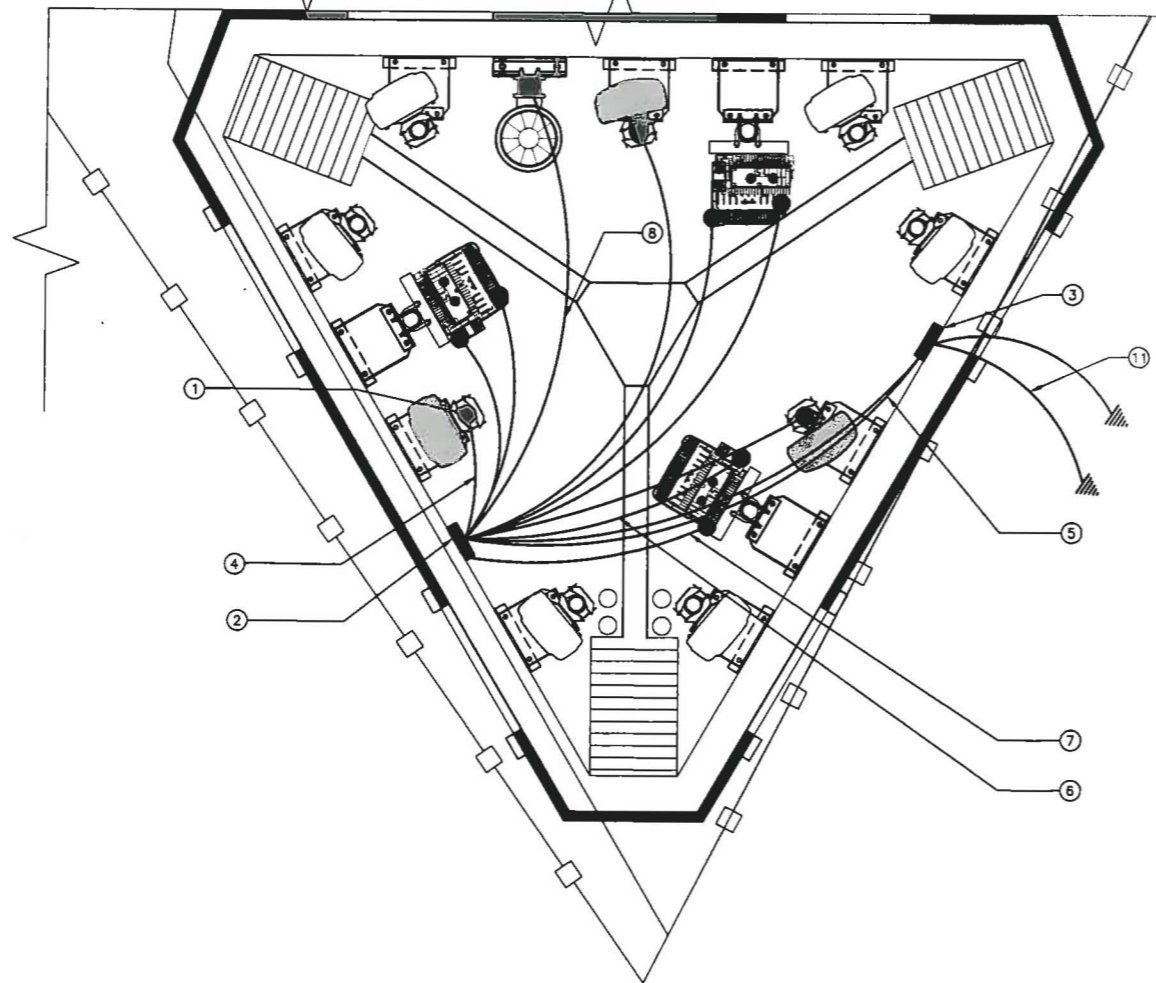
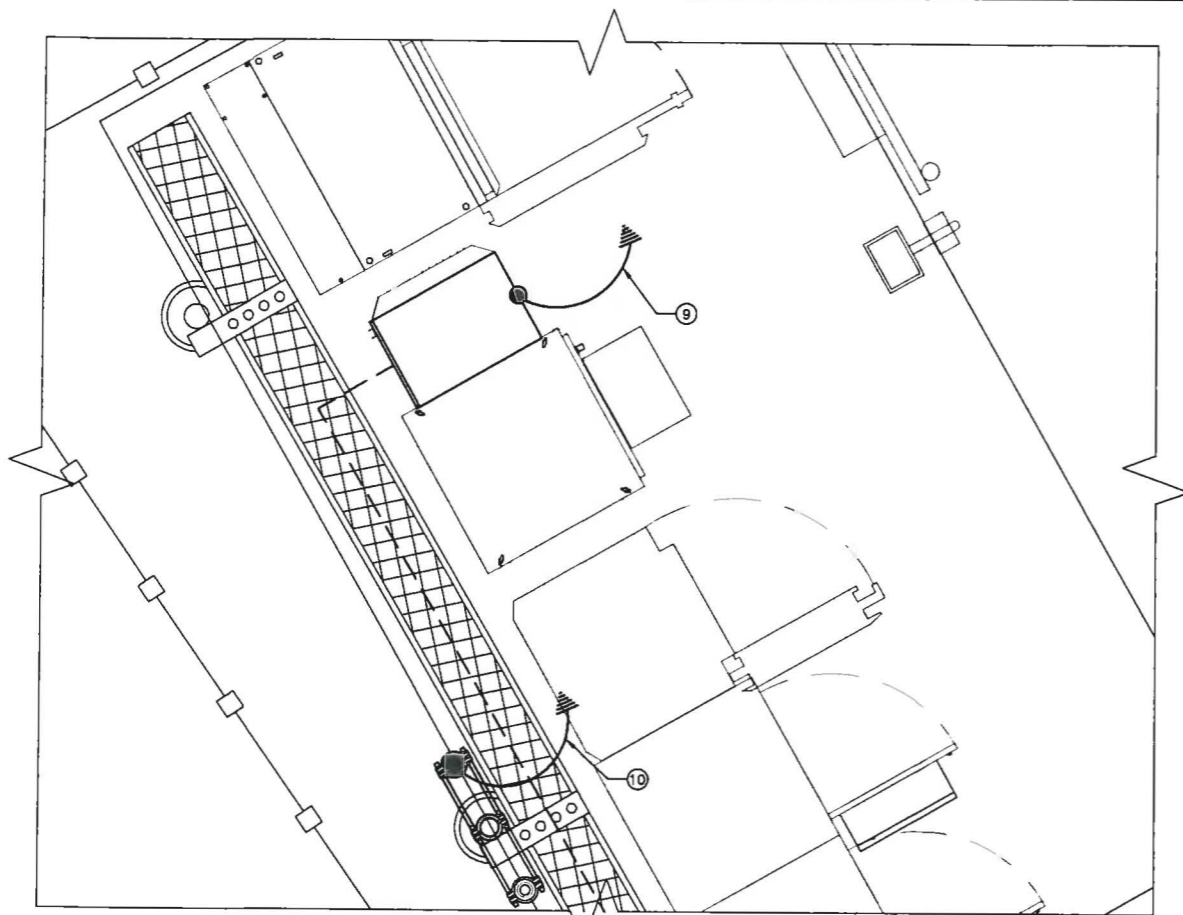
REYCAP SQUID DETAIL
24"x36" SCALE: 1 1/2"=1'-0"
11"x17" SCALE: 3/4"=1'-0"

REVISIONS				
NO.	DATE	DESCRIPTION	INITIAL	
A	08/14/2011	ISSUED FOR PCD REVIEW	BF	
0	07/01/11	ISSUED FOR FINAL CONSTRUCTION	BF	

NOT FOR CONSTRUCTION UNLESS
LABELED AS CONSTRUCTION SET

SHEET TITLE
RF DETAILS

SHEET NUMBER
RF-2



GROUNDING KEYED NOTES:

- ① CAD WELD (TYP). SEE DETAIL 2/E-2.
- ② EXISTING ANTENNA GROUND BUS BAR NEAR AT TOP OF TOWER WITH COAX GROUND KIT. SEE DETAIL 9/E-2 FOR GROUND BAR CONSTRUCTION, SEE DETAIL 7/E-2 FOR GROUND WIRE CONNECTIONS, AND SEE DETAIL 6/E-2 FOR COAX GROUNDING.
- ③ EXISTING TOWER GROUND BUS BAR AT BASE OF TOWER. SEE DETAIL 9/E-2 FOR GROUND BAR CONSTRUCTION, SEE DETAIL 7/E-2 FOR GROUND WIRE CONNECTIONS, AND SEE DETAIL 6/E-2 FOR COAX GROUNDING.
- ④ #6 AWG ANTENNA MOUNT GROUND TO ANTENNA GROUND BUS BAR (TYP OF 3) SEE DETAIL 7/E-2.
- ⑤ EXISTING GROUND FROM ANTENNA GROUND BUS BAR TO TOWER GROUND BUS BAR (TYP OF (2) PLACES). SEE DETAIL 7/E-2.
- ⑥ #6 AWG AWS RRH UNIT GROUND TO ANTENNA GROUND BUS BAR (TYP OF 3) SEE DETAIL 7/E-2.
- ⑦ #6 AWG 700MHZ RRH UNIT GROUND TO ANTENNA GROUND BUS BAR (TYP OF 3) SEE DETAIL 7/E-2.
- ⑧ #6 AWG RAYCAP SQUID GROUND TO ANTENNA GROUND BUS BAR (TYP OF 3) SEE DETAIL 7/E-2.
- ⑨ #6 AWG LTE EQUIPMENT CABINET TO TIE INTO EXISTING SYSTEM GROUND RING.
- ⑩ #6 AWG GPS ANTENNA TO TIE INTO EXISTING SYSTEM GROUND RING.
- ⑪ GC SHALL VERIFY EXISTING CONDITIONS W/ PROVISIONS FOR (2) #2 AWG BARE TINNED GROUND LEADS FROM TOWER MGB TO EXISTING TOWER GROUND RING.



MARYLHURST UNIVERSITY
 PW54 / CROWN : 879625
 19200 WILLAMETTE DRIVE,
 WEST LINN, OR 97068

GROUNDING NOTES & LEGEND

GENERAL GROUNDING NOTES

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING GROUND WIRES AND CONNECT TO SURFACE MOUNTED BUS BARS. FOLLOW ANTENNA AND BTS MANUFACTURERS PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS AND EXIT FROM TOWER OR POLE USING MFR'S PRACTICES.
3. ALL GROUND CONNECTIONS SHALL BE CADWELD. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE GREEN INSULATED WIRE ABOVE GROUND.
4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE. GROUNDING AND OTHER OPERATIONAL TESTING WILL BE WITNESSED BY AT&T WIRELESS, LLC. REPRESENTATIVE.
5. REFER TO DIVISION 16 GENERAL ELECTRIC; GENERAL ELECTRICAL PROVISION AND COMPLY WITH ALL REQUIREMENTS OF GROUNDING STANDARDS.
6. ELECTRICAL CONTRACTOR TO PROVIDE DETAILED DESIGN OF GROUNDING SYSTEM, AND RECEIVE APPROVAL OF DESIGN BY AUTHORIZED AT&T MOBILITY REPRESENTATIVE. PRIOR TO INSTALLATION OF GROUNDING SYSTEM. PHOTO DOCUMENT ALL CADWELDS AND GROUND RING
7. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

GROUNDING ROD NOTES (WHERE APPLICABLE)

ELECTRICAL CONTRACTOR SHALL ORDER GROUND RESISTANCE TESTING ONCE THE GROUND SYSTEM HAS BEEN INSTALLED; A QUALIFIED INDIVIDUAL, UTILIZING THE FALL OF POTENTIAL METHOD, SHOULD PERFORM THE TEST. THE REPORT WILL SHOW THE LOCATION OF THE TEST AND CONTAIN NO LESS THAN 9 TEST POINTS ALONG THE TESTING LINE, GRAPHED OUT TO SHOW THE PLATEAU.

2 POINT GROUND TEST OR 3 POINT 82% TESTS WILL NOT BE ACCEPTED AS ALTERNATIVES TO THE AFORE MENTIONED GROUND TESTS. TEST SHALL BE PERFORMED WHILE THE COUNTERPOISE IS ISOLATED FROM THE A/C SYSTEM GRIDS AND EXISTING COMMUNICATIONS FACILITY.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
⊗	COPPER GROUND ROD	⊗	TEST WELL
●	CADWELD CONNECTION	■	GROUND BAR
■	SIDE SPLICE CADWELD	— —	FIELD VERIFY & TIE INTO EXISTING GROUNDING SYSTEM

24"x36" SCALE: 3/4" = 1'-0"
 11"x17" SCALE: 3/8" = 1'-0"

SCHEMATIC GROUNDING PLAN | 1

REVISIONS			
NO.	DATE	DESCRIPTION	INITIAL
A	04/02/11	ISSUED FOR PCD REVIEW	BF
0	07/01/11	ISSUED FOR FINAL CONSTRUCTION	BF

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
GROUNDING DETAILS

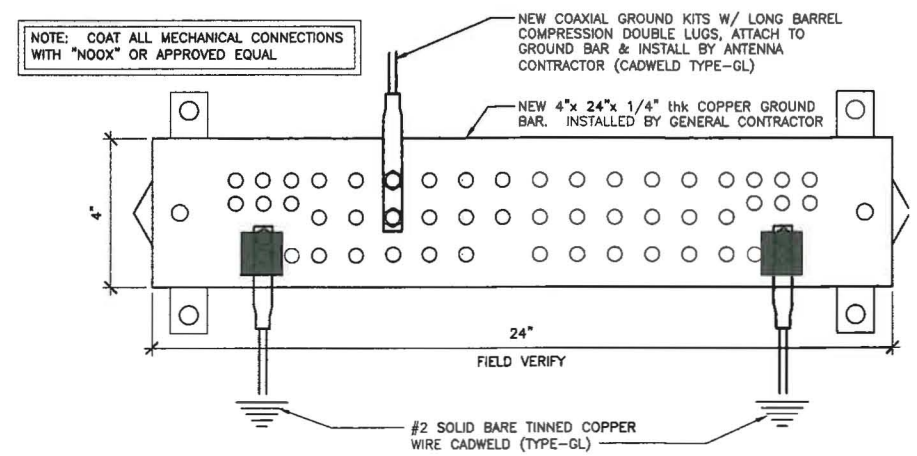
SHEET NUMBER
E-2

NOT USED 12
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11"x17" SCALE: NOT TO SCALE

NOT USED 13
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11"x17" SCALE: NOT TO SCALE

NOT USED 14
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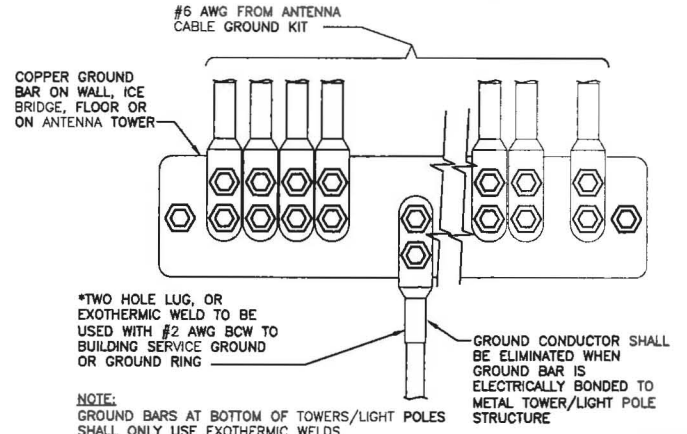
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GROUND BAR 9
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

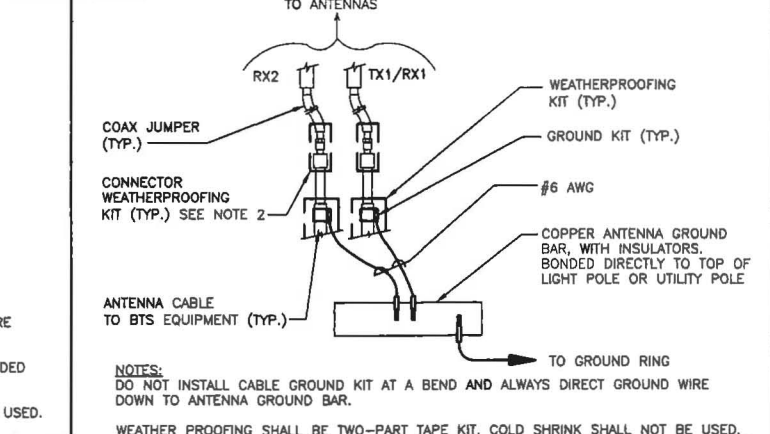
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NOT USED 11
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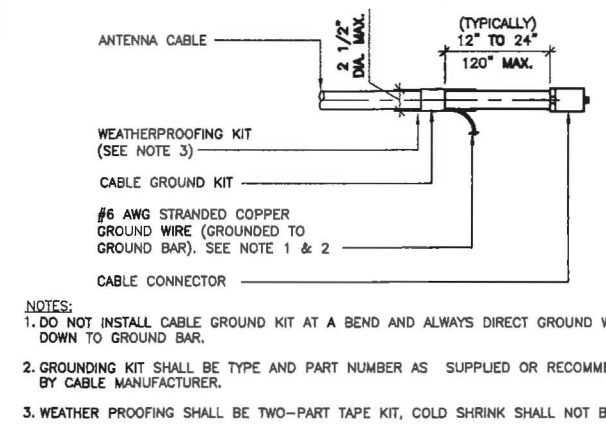


GROUND WIRE INSTALLATION 7
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

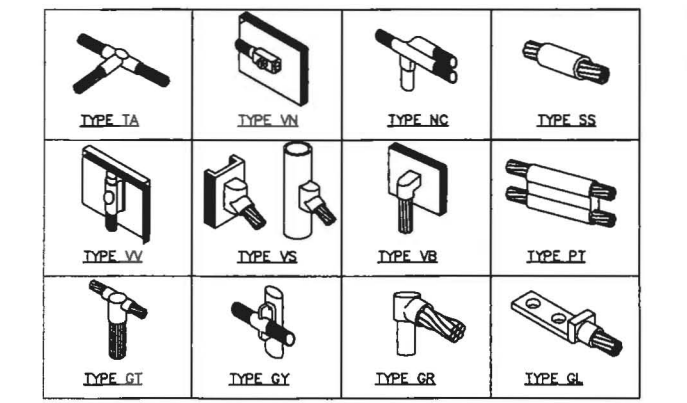
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11"x17" SCALE: NOT TO SCALE



GROUND CABLE CONNECTION 5
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE



CABLE GROUND KIT CONNECTION 6
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE



CADWELD GROUNDING CONNECTIONS 2
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOT USED 3
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOT USED 4
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE