



# at&t

**POWDER MOUNTAIN  
UTAH HIGHWAY 158  
EDEN, UTAH 84310  
FA# 12836251**

**NOVA PROJECT ID: WES-MW-94775**



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**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 AT&T WIRELESS IS STRICTLY PROHIBITED.



PREPARED FOR



### SPECIAL INSPECTIONS

1	CONCRETE	13.1	VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT
2	BOLTS INSTALLED IN CONCRETE	13.2	VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH AND BEARING STRATA
3	CONCRETE MOMENT-RESISTING SPACE FRAME	13.3	PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY, BEARING VALUES
4	REINFORCING STEEL AND PRESTRESSING STEEL	13.4	PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATIONS, ON-GRADE FLOOR SLAB DESIGN FOR EACH BUILDING SITE
5.1	ALL STRUCTURAL WELDING	14	SMOKE CONTROL SYSTEM
5.2	WELD TESTING DUCTILE MOMENT-RESISTING STEEL FRAME	15	SPECIAL CASES (DESCRIBE)
6	HIGH-STRENGTH BOLTING	16	OFF-SITE FABRICATION OF BUILDING COMPONENTS
7	STRUCTURAL MASONRY	17	OTHER SPECIAL INSPECTIONS AS REQUIRED BY DESIGNER
8	REINFORCED GYPSUM CONCRETE		
9	INSULATING CONCRETE FILL		
10	SPRAY-APPLIED FIREPROOFING		
11	DEEP FOUNDATIONS (PILING, DRILLED & CAISSONS)		
12	SHOTCRETE		

NO.	DESCRIPTION OF TYPE OF INSPECTION REQUIRED, LOCATION, REMARKS.

### CONSULTANT TEAM

#### CLIENTS REPRESENTATIVE:

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#### ARCHITECT:

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SUITE: 100  
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#### SITE ACQUISITION:

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131 INNOVATION DRIVE  
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### DEVELOPMENT SUMMARY

**APPLICANT:** AT&T MOBILITY  
188 INVERNESS DRIVE WEST, SUITE 400  
ENGLEWOOD, COLORADO 80112

**LAND OWNER:** SUMMIT MOUNTAIN HOLDING GROUP LLC  
883 N YACHT CLUB DR  
EDEN, UTAH 84310

**TOWER OWNER:** AT&T TOWERS

**OTHER ON-SITE TELECOM FACILITIES:** YES

**ASSESSORS PARCEL NUMBER:** 16-001-0009

**LATITUDE:** 41° 22' 10.3" N 41.369517°

**LONGITUDE:** 111° 45' 53.5" W -111.764869°

**LAT/LONG TYPE:** NAD-83

**GROUND ELEVATION:** 8907.0' AMSL

**EXISTING ZONING:** C (COMMERCIAL)

**PROPOSED PROJECT AREA:** NO INCREASE IN S.F.

**EXISTING TYPE OF CONSTRUCTION:** TYPE V-B

**PROPOSED TYPE OF CONSTRUCTION:** TYPE V-B

**EXISTING OCCUPANCY:** U-2

**PROPOSED OCCUPANCY:** U-2

**JURISDICTION:** COUNTY OF WEBER

### SHEET INDEX

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#### APPROVALS

ANITA JEN	05/28/14
90% CDS	DATE
MARK WHITEHOUSE	06/04/14
100% CDS	DATE
100% CDS WITH STRUCTURALS	DATE
ROBERT HUNTER	05/29/14
CONSTRUCTION	DATE
SITE ACQUISITION	DATE

### APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- IBC 2012 UTAH BUILDING CODE
- IBC 2012 UTAH STRUCTURAL CODE
- IPC 2012 UTAH PLUMBING CODE
- IMC 2012 UTAH MECHANICAL CODE
- INEC 2011 UTAH ELECTRIC CODE
- IFC 2012 UTAH FIRE/LIFE SAFETY CODE
- IECC 2009 UTAH ENERGY CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

### PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING UNMANNED WIRELESS COMMUNICATIONS FACILITY. THIS MODIFICATION WILL CONSIST OF THE FOLLOWING:

- INSTALL NEW 4'-0" MICROWAVE ANTENNA AT A 62'-0" RAD CENTER.
- INSTALL NEW (1) RUN OF EW-90 WAVEGUIDE CABLE.

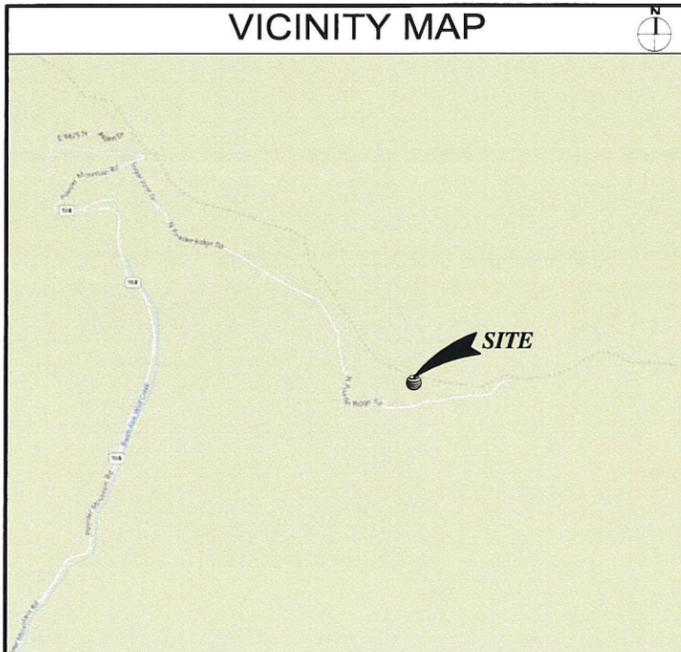
### ACCESSIBILITY DISCLAIMER

THIS PROJECT IS AN UNOCCUPIED WIRELESS PCS TELECOMMUNICATIONS FACILITY AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

### SCALE

THE DRAWING SCALES SHOWN IN THIS SET REPRESENT THE CORRECT SCALE ONLY WHEN THESE DRAWINGS ARE PRINTED IN A 24"x36" FORMAT. IF THIS DRAWING SET IS NOT 24"x36", THIS SET IS NOT TO SCALE.

### VICINITY MAP



**T-1**

## GENERAL SPECIFICATIONS

- THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.
- THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.
- PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS PARTICIPATING SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL FIELD CONDITIONS AFFECTING THE PROPOSED PROJECT INCLUDING DEMOLITION, ELECTRICAL, MECHANICAL AND STRUCTURAL INSTALLATIONS, AS WELL AS WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS AND SHALL CONFIRM THAT THE PROJECT CAN BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. SHOULD ANY ERRORS, OMISSION, OR DISCREPANCIES BE FOUND, THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT IN WRITING. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID, UNLESS SPECIFICALLY DIRECTED OTHERWISE. IF A DISCREPANCY EXISTS AND THE PROJECT MANAGER AND ARCHITECT ARE NOT NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS THAT RESULT.
- DRAWINGS SHALL NOT BE SCALED. THESE DRAWINGS ARE INTENDED TO BE DIAGRAMMATIC ONLY. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CONTRACTOR SHALL CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.
- THE CONTRACTOR SHALL INCLUDE IN HIS OR HER BID ALL MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE THE WORK AS INDICATED OR IMPLIED BY THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER, THE PROPERTY OWNER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.
- EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL VERIFY ALL TELEPHONE & RADIO EQUIPMENT LAYOUTS, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND FINAL LOCATIONS WITH AT&T MOBILITY CONSTRUCTION MANAGER PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ERICSSON RADIO SYSTEMS.
- ALL SYMBOLS & ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO AT&T MOBILITY.
- THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUBCONTRACTORS OR WORKMEN ARE IN THE SITE AND SHALL SUPERVISE AND DIRECT ALL WORK, USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION PRACTICE:
 

NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION O'HARE INTERNATIONAL CENTER 10255 W. HIGGINS ROAD, SUITE 600 ROSEMONT, IL 60018
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION 4201 LAFAYETTE CENTER DRIVE CHATTLY, VA 22021-1209
ITLP	INTERNATIONAL INSTITUTE FOR LATH AND PLASTER 820 TRANSFER ROAD ST. PAUL, MN 55114-1406
- INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGARS OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING THE SAME.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL GIVE ALL NOTICES AND SHALL COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATIONS, LAWS AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
- THE CONTRACTOR SHALL PROTECT THE PROPERTY OWNERS, AND AT&T MOBILITY PROPERTY FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING FINISHES, CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC. SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF AT&T MOBILITY, AND THE PROPERTY OWNER'S REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY, ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK BY AT&T MOBILITY UNDER THIS CONTRACT.
- IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, OR CONTACT AN OUTSIDE AGENCY TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR THE REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY AT&T MOBILITY.

- THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER, AT&T MOBILITY, AND THE CITY OR GOVERNING AGENCY.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION DOCUMENTS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS SHALL BE DONE AFTER THE SITE HAS BEEN AWARDED FINAL INSPECTION BY THE RESPONSIBLE BUILDING AGENCY. ONE SET OF REDLINED DRAWINGS SHALL BE PROVIDED TO THE AT&T MOBILITY CONSTRUCTION MANAGER.
- THE LATEST EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.
- THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILY BASIS, EXCEPT FOR THAT SPECIFIED AS REMAINING THE PROPERTY OF THE BUILDING OR PROPERTY OWNER AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT CONSTRUCTION, INCLUDING FINAL CLEAN-UP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY AND VACUUM CLEAN CONDITION, FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE AT COMPLETION OF WORK.
- THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.
- ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED.
- SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.
- PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-AT0BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA CONSTRUCTION.
- ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES 250 AND 810.
- UPON OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURE.
- UPON COMPLETION OF CONSTRUCTION, AT&T MOBILITY CONSTRUCTION MANAGER SHALL CONDUCT A WALK-THRU WITH PROPERTY OWNER OR REPRESENTATIVE OF PROPERTY OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEM EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY AT&T MOBILITY.
- INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATION TAKE PRECEDENCE.

## ROOFING & WATERPROOFING NOTES

- CONTRACTOR SHALL CONTACT BUILDING OWNER TO DETERMINE IF ROOF IS UNDER WARRANTY. CONTRACTOR SHALL GUARANTEE THAT ANY AND ALL NEW ROOFING WORK MEETS THE SPECIFICATION OF ANY EXISTING ROOFING WARRANTIES SUCH THAT THE WARRANTY IS NOT MADE INVALID AS A RESULT OF THIS WORK. IF IT IS DETERMINED THAT THE ARCHITECT'S DETAILING IS INADEQUATE OR IMPROPER OR IF ANY OTHER DISCREPANCY IS FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE AT&T MOBILITY PROJECT MANAGER IN WRITING. ULTIMATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE ORIGINAL ROOF MANUFACTURER'S SPECIFICATIONS.
- CONTRACTOR SHALL USE METHODS AND MATERIALS SIMILAR AND COMPATIBLE WITH EXISTING MATERIALS & CONDITIONS FOR ROOF PATCHING, NEW PENETRATIONS, ETC.
- THE CONTRACTOR SHALL PROPERLY SEAL ALL NEW ROOF & BUILDING ENVELOPE PENETRATIONS SUCH THAT THE INTEGRITY OF THE ORIGINAL BUILDING ASSEMBLY AND ALL APPLICABLE WARRANTIES ARE MAINTAINED.
- IF IT IS DEEMED NECESSARY TO REMOVE EXISTING FINISHES AND/OR MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONSTRUCTING FINISHES AND MATERIALS TO LIKE-NEW CONDITION. CONTRACTOR SHALL MAINTAIN THE ORIGINAL COLORS, TEXTURES & FINISHES UNLESS SPECIFICALLY NOTED TO THE CONTRARY OR APPROVED BY THE AT&T MOBILITY CONSTRUCTION MANAGER IN ADVANCE.
- AT THE AT&T MOBILITY CONSTRUCTION MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE ROOFTOP WALKPADS TO ALL NEW EQUIPMENT INCLUDING ANTENNAS AND BTS UNITS AND ALONG COAX CABLE ROUTING. ON CONVENTIONAL ROOFING, THE WALK PADS SHALL BE "DUCK BOARDS" AS MANUFACTURED BY APC OR EQUAL. ON SPECIAL ROOFING SYSTEMS SUCH AS SINGLE MEMBRANE ROOF'S WILL REQUIRE A SPECIFIC PRODUCT AS NOTED ON PLANS OR AS REQUIRED BY NOTES 1 & 2 ABOVE.

## PENETRATION AT FIRE RATED ASSEMBLIES

- AT THE AT&T MOBILITY PROJECT MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILTI" HIGH PERFORMANCE FIRESTOP SYSTEM #FS601 AT ALL FIRE RATED PENETRATIONS INSTALLED PER MANUFACTURER'S LATEST INSTALLATION SPECIFICATIONS.
- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.

## PAINTING NOTES & SPECIFICATIONS

- GENERAL
  - ALL PAINT PRODUCT LINES SHALL BE SHERWIN WILLIAMS UNLESS SPECIFICALLY NOTED OTHERWISE.
  - CONTRACTOR SHALL PREPARE ALL SURFACES AND APPLY ALL FINISHES PER LATEST EDITION OF MANUFACTURER'S SPECIFICATIONS.
  - COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS REGARDING SUFFICIENT DRYING TIME BETWEEN COATS WITH PROVISIONS AS RECOMMENDED BY MANUFACTURER FOR EXISTING WEATHER CONDITIONS.
  - FINISH COLOR AND TEXTURE OF ALL PAINTED SURFACES SHALL MATCH EXISTING ADJACENT SURFACES UNLESS OTHERWISE NOTED.
  - ALL PAINT MATERIAL DATA SHEETS SHALL BE PROVIDED TO THE AT&T MOBILITY CONSTRUCTION MANAGER.
  - PREPARE PREVIOUSLY PAINTED SURFACE BY LIGHT SANDING WITH 400 GRIT SANDPAPER AND NON-HYDROCARBON WASH. PREPARE GALVANIZED SURFACES BY ACID ETCH OR SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SP1.
  - FURNISH DROP CLOTHES, SHIELDS, MASKING AND PROTECTIVE METHODS TO PREVENT SPRAY OR DROPPINGS FROM DAMAGING ADJACENT SURFACES AND FACILITIES.
  - APPLY PAINT BY AIRLESS SPRAY, SANDING LIGHTLY BETWEEN EACH SUCCEEDING ENAMEL COAT ON FLAT SURFACES. APPLY MATERIAL TO ACHIEVE A COATING NO THINNER THAN THE DRY FILM THICKNESS INDICATED.
  - APPLY BLOCK FILTER TO CONCRETE BLOCK CONSTRUCTION AT A RATE TO ENSURE COMPLETE COVERAGE WITH PORES COMPLETELY FILLED.
  - CONTRACTOR SHALL CORRECT RUNS, SAGS, MISSES AND OTHER DEFECTS INCLUDING INADEQUATE COVERAGE AS DIRECTED BY THE AT&T MOBILITY CONSTRUCTION MANAGER. REPAIR AS NECESSARY TO ACHIEVE SURFACES WHICH ARE SMOOTH, EVENLY COATED WITH UNIFORM SHEEN AND FREE FROM BLEMISHES.

- PAINTING SCOPE
  - PAINT THE FOLLOWING MATERIALS AND SYSTEMS CHECKED BELOW WITH THE COATING SYSTEM INDICATED.

PAINTING SCOPE					
SURFACE TO BE PAINTED	COATING SYSTEM	PAINT	DO NOT PAINT	N/A	
BTS UNIT					
ALL EQUIPMENT & CABINETS OTHER THAN THE BTS UNIT					
ANTENNA COVERS, TVI BRACKETS, MOUNTING BRACKETS AND ASSOCIATED HARDWARE. CABLE AND CABLE COVERS EXPOSED TO WEAR, EXPOSED CONDUIT AND WIRING, ETC.					
FLASHING UNITS, METAL TRIM AND OTHER METAL SURFACES					
STUCCO, CONCRETE, CONCRETE BLOCK AND EXTERIOR TYPE FINISH SYSTEMS					
WOOD, LUMBER AND ROOF TRIM INCLUDING THE BACK SIDE OF ALL SCREENWALLS					
CONCRETE POLES					
METAL POLES AND METAL POLE STAND-OFF					

- COATING SYSTEM SPECIFICATIONS
  - DTM ACRYLIC COATING (SERIES B66) BY SHERWIN WILLIAMS CO. 1MIL DFT PER COAT APPLIED IN TWO COATS OVER DTM BONDING PRIMER (B66A50).
  - 100% ACRYLIC, LATEX COATING EQUIVALENT TO A-100 (SERIES A-82) BY SHERWIN WILLIAMS CO. 1 MIL DFT PER COAT APPLIED IN TWO COATS OVER SPECIFIED PRIMER
- PAINT & PRIMER
  - ANTENNAS
    - PRIMER - KEM AQUA E61-W525
    - TOPCOAT - COROTHANE II B65W200/B60V2
  - BTS CABINET
    - PRIMER - KEM AQUA E61-W525
    - TOPCOAT - COROTHANE II B65W200/B60V2
  - COAXIAL JUMPER CABLES
    - PRIMER - AS REQUIRED FOR ADHESION. APPLY ONE COAT OF KEM AQUA WATER REDUCIBLE PRIMER E61W25 REDUCED 25%
    - TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2
  - RAW STEEL
    - PRIMER - KEM BOND HS B50W24, DMT ACRYLIC PRIMER
    - TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2
  - GALVANIZED METAL
    - ACID ETCH WITH COMMERCIAL ETCH OR VINEGAR PRIMER COAT AND FINISH COAT (GALVITE HIGH SOLIDS OR DTM PRIMER/FINISH)
  - STAINLESS STEEL
    - PRIMER - DTM WASH PRIMER, B71Y1
    - TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2
  - PRE-PRIMED STEEL
    - TOUCH UP ANY RUST OR UN-PRIMED STEEL WITH KEM BOND HS, S50W24
  - ALUMINUM & COPPER
    - PRIMER - DTM WASH PRIMER, B71Y1
    - TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2
  - CONCRETE MASONRY
    - PRIMER - PRO MAR EXTERIOR BLOCK FILLER
    - TOPCOAT - 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH
  - CONCRETE STUCCO(EXISTING)
    - 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH
  - STUCCO
    - PRIMER - PRO MAR MASONRY CONDITIONER B-46-W21000
    - TOPCOAT - SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS
  - WOOD
    - PRIMER - A-100 EXTERIOR ALKYD W009D PRIMER Y-24W20
    - TOPCOAT - 2 COATS A-100 LATEX HOUSE & TRIM SHEEN TO MATCH ADJACENT SURFACES
  - GLU-LAM BEAMS
    - PRIMER - A-100 EXTERIOR ALKYD WOOD PRIMER Y-24W20
    - TWO COATS SHOP APPLIED PER GLU-LAM MANUFACTURER'S SPECIFICATIONS
    - TOPCOAT - SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS
    - TWO COATS SHOP OR FIELD APPLIED AT CONTRACTOR'S OPTION
  - FIELD CUTS/DAMAGE(PRIOR TO PRIME & PAINT)
    - FIRST & SECOND COAT - CUPRINOL CLEAR WOOD PRESERVATIVE #158-0356
    - ALL PENETRATIONS INTO FINISHED CLU-LAMS SHALL BE CAULKED WITH "SIKAFLEX" SEALANT
  - STEEL TOUCH UP
    - STEEL THAT HAS BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZED PAINT

## STRUCTURAL SPECIFICATIONS

- GENERAL
 

PRECEDENCE: UNLESS OTHERWISE SHOWN OR SPECIFIED, THE FOLLOWING GENERAL NOTES SHALL APPLY. INFORMATION ON THESE DRAWINGS SHALL HAVE THE FOLLOWING PRECEDENCE.

    - ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
    - NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
    - MATERIAL NOTES AND SPECIFICATIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE SPECIFICATIONS.
  - OTHER TRADES: SEE THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.
  - GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
  - SHORING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ALL TEMPORARY BRACING AND SHORING TO INSURE THE SAFETY OF THE WORK UNTIL IT IS IN ITS COMPLETED FORM. THIS INCLUDES UNDERPINNING EXISTING FOOTINGS WHERE APPLICABLE.
  - SAFETY: THESE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
  - WATERPROOFING: WATERPROOFING AND DRAINAGE, DETAILS AND SPECIFICATIONS, ALTHOUGH SOMETIMES SHOWN ON STRUCTURAL DRAWING ARE OF GENERAL INFORMATION PURPOSES ONLY. WATERPROOFING AND DRAINAGE ARE SOLELY THE DESIGN RESPONSIBILITY OF THE ARCHITECT.
  - EMBEDDED ITEMS: CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER GREATER THAN 1/4 THE THICKNESS OF THE SLAB. CONDUIT SHALL NOT BE EMBEDDED IN A SLAB THAT IS LESS THAN 3-1/2" THICK, UNLESS SLAB IS LOCALLY THICKENED. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE SIX INCHES.
  - ANCHORING: ALL ANCHOR BOLTS, REINFORCING STEEL, DOWELS, INSERTS, ETC., SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. NO REPOSITIONING DURING CONCRETE POUR IS ALLOWED.
  - CURING: SLABS SHALL BE SPRAYED WITH A CURING COMPOUND IMMEDIATELY AFTER FINISHING. CURING COMPOUNDS USED ON CONCRETE WHERE TILE OR FLOOR COVERING IS TO BE BONDED TO THE CONCRETE SURFACE SHALL BE APPROVED BY THE TILE OR FLOOR COVERING MANUFACTURER. KEEP SLAB WET FOR 7 DAY MINIMUM PERIOD.
  - CONSOLIDATION: ALL CONCRETE SHALL BE VIBRATED AS IT IS BEING PLACED WITH ELECTRICALLY OPERATED VIBRATING EQUIPMENT.
  - TIMBER
    - ALL FRAMING LUMBER FOR 4X AND LARGER BEAMS SHALL BE NO. 1 GRADE DOUGLAS FIR., S45, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
    - ALL FRAMING LUMBER FOR 2X RAFTERS AND JOISTS SHALL BE NO.2 GRADE DOUGLAS FIR, S45, UNLESS NOTED OTHERWISE ON DRAWINGS
    - STRIPPING, BLOCKING, BACKING AND OTHER NON-STRUCTURAL LUMBER SHALL BE NO. 2 OR STD & BTR GRADE DOUGLAS FIR, S45. 2X4 STUD WALLS SHALL BE D.F. STANDARD & BTR.
    - ALL BEAMS, JOISTS AND RAFTERS SHALL BE INSTALLED WITH CROWN SIDE UP.
    - ROOF PLYWOOD SHALL MATCH EXISTING PLYWOOD SHEATHING WITH A SPAN INDEX RATIO 32/16. EDGE NAIL WITH 8d AT 6" O.C. UNLESS NOTED OTHERWISE ON PLANS. FGIELD NAIL WITH 8d AT 12" O.C.
    - PLYWOOD SHEETS SHALL BE LAID WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS AND WITH THE EDGES STAGGERED, UNLESS NOTED OTHERWISE ON THE PLANS.
    - PLYWOOD SHALL BE GRADE MARKED BY DFPA, TECO, OR PTL AND SHALL CONFORM TO PS 1-83.
    - THE MAXIMUM MOISTURE CONTENT OF ALL LUMBER SHALL NOT EXCEED 24% AT THE TIME OF INSTALLATION.
    - MINIMUM NAILING SHALL COMPLY WITH TABLE 23-1-a OF BUILDING CODE. ALL NAILS SHALL BE COMMON WIRE NAILS.
    - ALL BOLTS SHALL HAVE STANDARD CUT WASHERS UNDER HEADS AND/OR NUTS WHERE IN CONTACT WITH WOOD.
    - LAG BOLTS SHALL BE SCREWED INTO PLACE, NOT DRIVEN. LAG BOLTS SHALL BE INSTALLED IN PRE-DRILLED HOLES WITH A DIAMETER EQUAL TO 75% DIAMETER OF BOLT.
    - CONNECTORS: ALL SHEET METAL FRAMING CONNECTORS SHOWN IN THE PLANS SHALL BE STRONG CONNECTORS AS MANUFACTURED BY THE SAMSON COMPANY. SUBSTITUTIONS MAY BE MADE WHEN APPROVED BY THE STRUCTURAL ENGINEER.
    - ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE WOLMANIZED PRESSURE TREATED LUMBER OR A NATURALLY DECAY RESISTANT LUMBER SUCH AS REDWOOD OR CEDAR.
    - ALASKAN YELLOW CEDAR GLUE-LAMINATED BEAMS
      - LUMBER SPECIES: ALASKAN YELLOW CEDAR (A.C.) CONFORMING TO 20F-V12
    - STRENGTH PROPERTIES:
      - F<sub>b</sub> BOTTOM FIBER BENDING STRESS 2000psi MIN.
      - F<sub>t</sub> TOP FIBER BENDING STRESS 1000psi MIN.
      - F<sub>v</sub> SHEAR STRESS 190psi MIN.
      - F<sub>c</sub> COMPRESSION STRESS PERPENDICULAR TO GRAIN 560psi MIN.
      - E-MODULUS ELASTICITY 1400ksi MIN.
      - CAMBER TO RADIUS OF 1600' U.O.N.
    - ALL GLB'S SHALL BE FABRICATED WITH EXTERIOR GLUE.
    - MANUFACTURE OF GLB'S SHALL CONFORM TO THE UBC.
    - GLU-LAM MATERIAL SHALL BE IN ACCORDANCE WITH ANSI/AITC A190.1 AND ASTM D3737.
- FOUNDATION & SLABS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150.
  - FOUNDATIONS & SLABS 9" OR LESS: 3/4" GRAVEL
  - PIER/CAISSON FOOTING: 1" GRAVEL.
- WATER: SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNT OF ACIDS, ALKALIS, ORGANIC MATERIALS AND SHALL BE SUITABLE FOR HUMAN CONSUMPTION.



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100% CDS	DATE
100% CDS WITH STRUCTURALS	DATE
CONSTRUCTION	DATE
SITE ACQUISITION	DATE

PROJECT NAME  
**MICROWAVE UPGRADE**

SITE NAME  
**POWDER MOUNTAIN**

FA NUMBER  
**12836251**

UTAH HIGHWAY 158  
 EDEN, UTAH 84310

DRAWING DATES

05/28/14 90% CD REVIEW (P1-B1)

SHEET TITLE

## SPECIFICATIONS AND NOTES

**T-2**

OVERALL SITE PLAN KEYNOTES

1 (E) AT&T LEASE AREA WITHIN (E) AT&T TOWERS COMPOUND; SEE SHEET A-1.1.



1



OVERALL SITE PLAN

SCALE:  
1"=200' 0 50' 100' 200'

1



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05/28/14 90% CD REVIEW (P1-B1)

SHEET TITLE

**OVERALL SITE PLAN**

**A-0**

OVERALL SITE PLAN KEYNOTES

1 (E) AT&T LEASE AREA WITHIN (E) AT&T TOWERS COMPOUND WITH NEW MICROWAVE ANTENNA; SEE SHEET A-1.1.



1



ENLARGED SITE PLAN

SCALE:  
1"=30'



1



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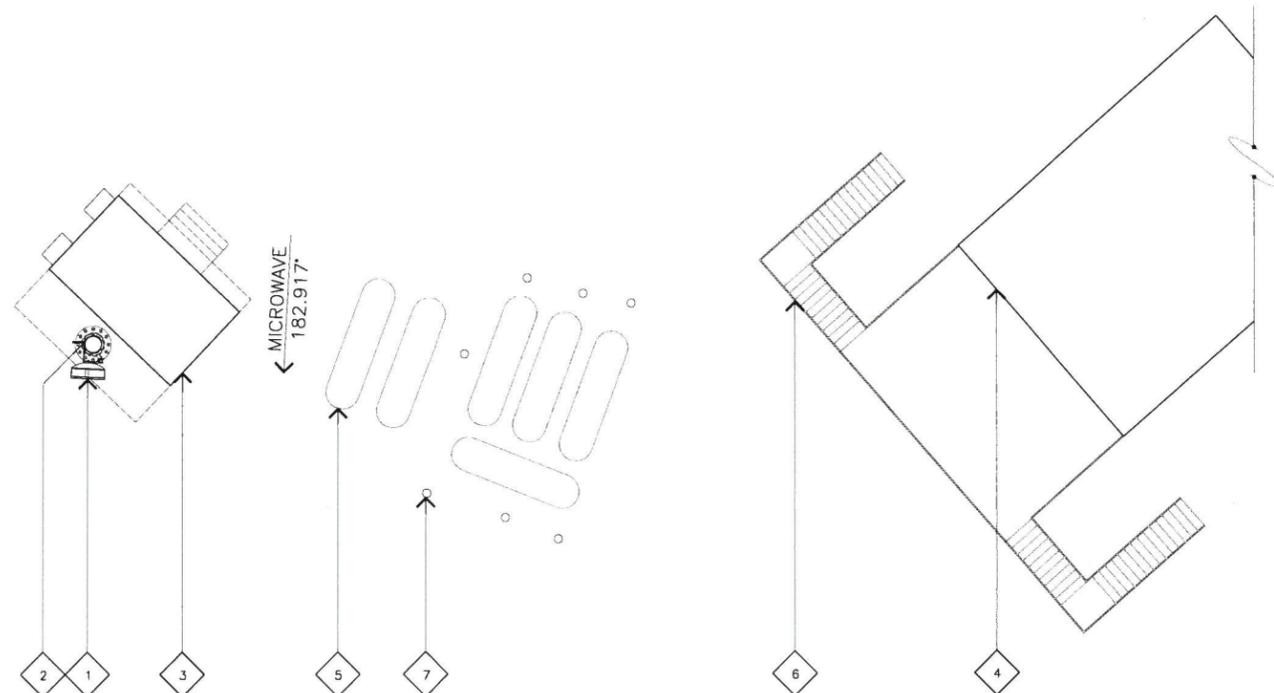
SHEET TITLE

**OVERALL SITE PLAN**

**A-1**

ENLARGED SITE PLAN KEYNOTES

- 1 (N) AT&T 4'-0" MICROWAVE ANTENNA MOUNTED TO (E) MONOPOLE; SEE DETAIL 2/A-3.
- 2 (E) MONOPOLE.
- 3 (E) AT&T EQUIPMENT SHELTER; SEE DETAIL 1/A-1.1.
- 4 (E) BUILDING.
- 5 (E) PROPANE TANKS, TYP.
- 6 (E) STAIRS.
- 7 (E) BALLARDS, TYP.



ENLARGED SITE PLAN GENERAL NOTES

- A. OTHER CARRIER ANTENNAS NOT SHOWN FOR CLARITY.
- B. GROUND ALL (N) EQUIPMENT AND COAX PER DETAIL 4/A-3.
- C. OTHER CARRIER ANTENNAS NOT SHOWN FOR CLARITY.
- D. CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL COAX, RETS AND ANTENNAS.
- E. OPTIMA TO PROVIDE ALL COAX, CONNECTORS, ANCILLARY EQUIPMENT (INCLUDING WEATHER STRIPPING, GROUND KITS, ETC.).
- F. CONTRACTOR TO COLOR CODE ALL COAX. COLORED BANDS OF TAPE ON COAX IDENTIFY SECTOR, FREQUENCY, TECHNOLOGY, AND TRANSMIT GROUP AS FOLLOWS ON ALL COAX MODIFIED OR INSTALLED ONLY.
- G. WHEN ANTENNA LINES ARE DIPLEXED, THE COLOR CODE OF THE HIGHEST FREQUENCY PREVAILS (I.E. UMTS DIPLEXED WITH TDMA SHOULD HAVE COLOR 4 BANDS).
- H. ALL ANTENNAS AND ANTENNA CABLE SHALL BE FURNISHED BY OPTIMA INC. AND INSTALLED BY ANTENNA INSTALLATION CONTRACTOR.
- I. PRIOR TO PLACEMENT OF ANTENNA POLE MOUNTS, THE CONTRACTOR SHALL VERIFY THAT THE AZIMUTH AND DIMENSIONS SHOWN ON THE PLANS MATCH ACTUAL FIELD CONDITIONS. ALLOWABLE TOLERANCE: HORIZONTAL ALIGNMENT = ±5'; VERTICAL ALIGNMENT = ±1'.
- J. ANTENNA INSTALLATION CONTRACTOR SHALL PROVIDE ALL CONDUIT, CABLE TRAY, GROUNDS, ETC. FOR COMPLETE INSTALLATION OF ANTENNAS AND CABLES SHOWN AND INTENDED AS REQUIRED FOR A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH OPTIMA INC. STANDARDS.
- K. IN NO CASE SHALL THERE BE ANY MORE THAN TWO (2) 90° TURNS (OR EQUIVALENT) IN ANY CONTINUOUS LENGTH OF CONDUIT BETWEEN PULL BOXES OR SIMILAR FEATURES.
- L. ANTENNA CONDUIT SHALL ONLY INCLUDE FACTORY-MADE LARGE RADIUS SWEEPS AT ALL CHANGES IN DIRECTION. SWEEP RADIUS SHALL BE 18" MINIMUM ABOVE GROUND AND 36" MINIMUM BELOW GROUND.
- M. CONDUIT SHALL BE 3" MINIMUM. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT ABOVE GRADE LEVEL SHALL BE IMC OR RIGID GALVANIZED. ALL EXPOSED CONDUIT PROTECTED IN A BUILDING OR ON A ROOF SHALL BE EMT OR UV STABILIZED PAINTED SCHEDULE 80 PVC.
- N. IN HIGH TRAFFIC AREAS OR WHERE SUSCEPTIBLE TO DAMAGE CONTRACTOR SHALL PROVIDE FORMED 14 GA. GALVANIZED SHEET METAL COVER OVER COAXIAL CABLE ROUTES. WHERE CABLE IS RUN ON THE WALL, ATTACH UNISTRUT TO WALL AND COVER WITH 14 GA. GALVANIZED FORMED SHEET METAL COVER OR MATERIAL AS DIRECTED BY OPTIMA INC. CONSTRUCTION MANAGER.
- O. VERIFY ROUTE AND LENGTH OF CABLE PRIOR TO CUTTING. ADJUST INDICATED ROUTE AS REQUIRED TO CLEAR (E) EQUIPMENT AT FACILITIES.
- P. MAXIMUM LENGTH OF 7/8" COAX CABLE SHALL BE 140'-0". MAXIMUM LENGTH OF 1-1/4" COAX CABLE SHALL BE 190'-0". MAXIMUM LENGTH OF 1-5/8" COAX CABLE SHALL BE 235'-0".
- Q. VERIFY MODEL NUMBERS OF ANTENNAS WITH OPTIMA INC. SERVICES.
- R. THE CONTRACTOR SHALL PROVIDE TESTING OF ANTENNAS AND SHALL PROVIDE DOCUMENTATION TO THE OPTIMA INC. PROJECT MANAGER.
- S. GENERAL CONTRACTOR TO VERIFY ALL TORQUE TOLERANCES PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.



ENLARGED SITE PLAN

SCALE: 3/32"=1'-0" 0 3' 6' 12'

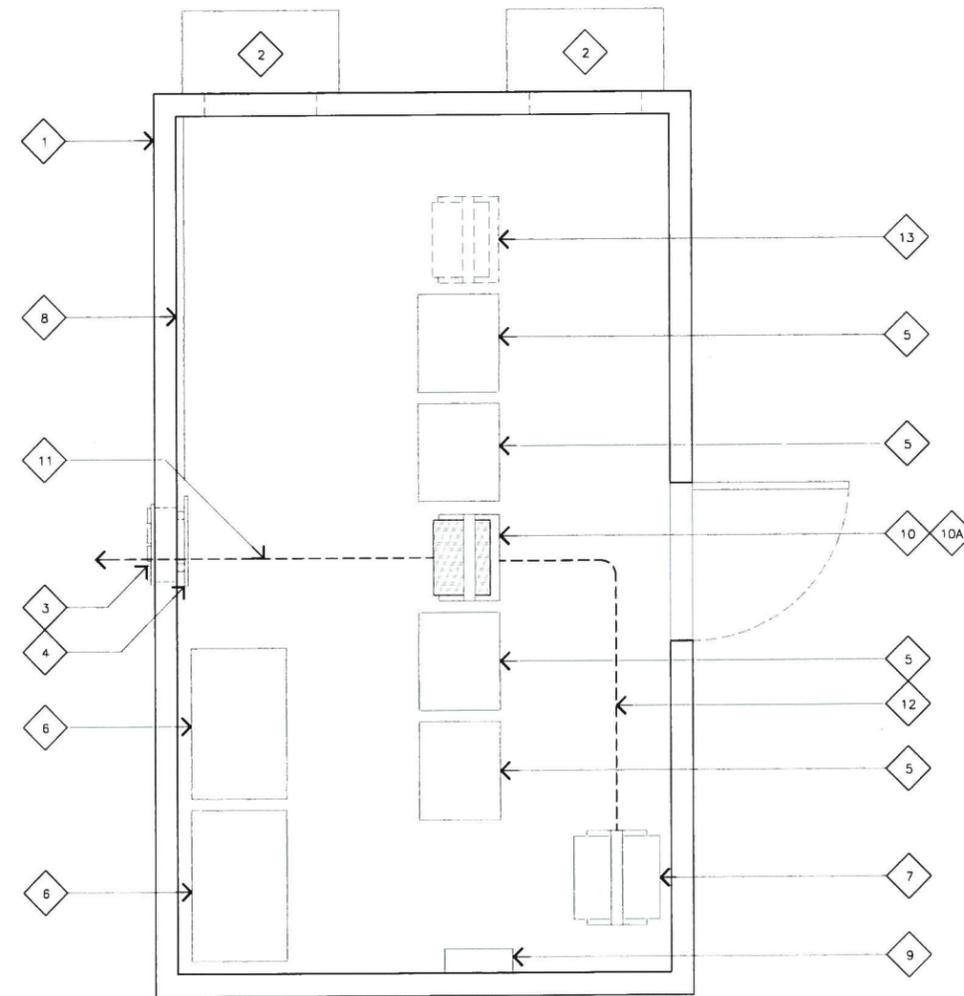
2

EQUIPMENT PLAN KEYNOTES

- 1 (E) AT&T EQUIPMENT SHELTER.
- 2 (E) AT&T EXTERIOR MOUNTED HVAC UNITS.
- 3 (E) AT&T CABLE ENTRY PORT WITH (E) AND (N) CABLES FROM EQUIPMENT TO ANTENNAS.
- 4 (E) AT&T MAIN GROUND BUS BAR (MGB).
- 5 (E) AT&T EQUIPMENT CABINETS, TYP.
- 6 (E) AT&T BATTERIES.
- 7 (E) AT&T DC POWER CABINET.
- 8 (E) AT&T TELCO BACKBOARD.
- 9 (E) AT&T ELECTRICAL PANEL.
- 10 (N) AT&T MICROWAVE RADIO MOUNTED IN (E) DATA RACK. IF INSUFFICIENT SPACE, MOUNT IN (N) 19" DATA RACK AS SHOWN.
- 10A (N) AT&T 24VDC TO -48VDC CONVERTER IN (E) DATA RACK, IF REQUIRED.
- 11 (N) (1) RUN OF AT&T WAVEGUIDE CABLE; SEE DETAIL 1/A-4.
- 12 (N) AT&T DC CABLE FROM (E) 24VDC POWER CABINET TO (N) -48VDC CONVERTER, IF REQUIRED.
- 13 (N) AT&T 19" DATA RACK, IF REQUIRED.

GENERAL KEYNOTES

A. VERIFY EQUIPMENT LAYOUT. SITE NOT YET BUILT.



EQUIPMENT PLAN

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

1



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100% CDS WITH STRUCTURALS	DATE
ROBERT HUNTER	05/29/14
CONSTRUCTION	DATE
SITE ACQUISITION	DATE

PROJECT NAME  
**MICROWAVE UPGRADE**  
 SITE NAME  
**POWDER MOUNTAIN**  
 FA NUMBER  
**12836251**  
 UTAH HIGHWAY 158  
 EDEN, UTAH 84310

DRAWING DATES

05/28/14	90% CD REVIEW (P1-B1)
06/04/14	100% FINAL CDS (P1-B2)

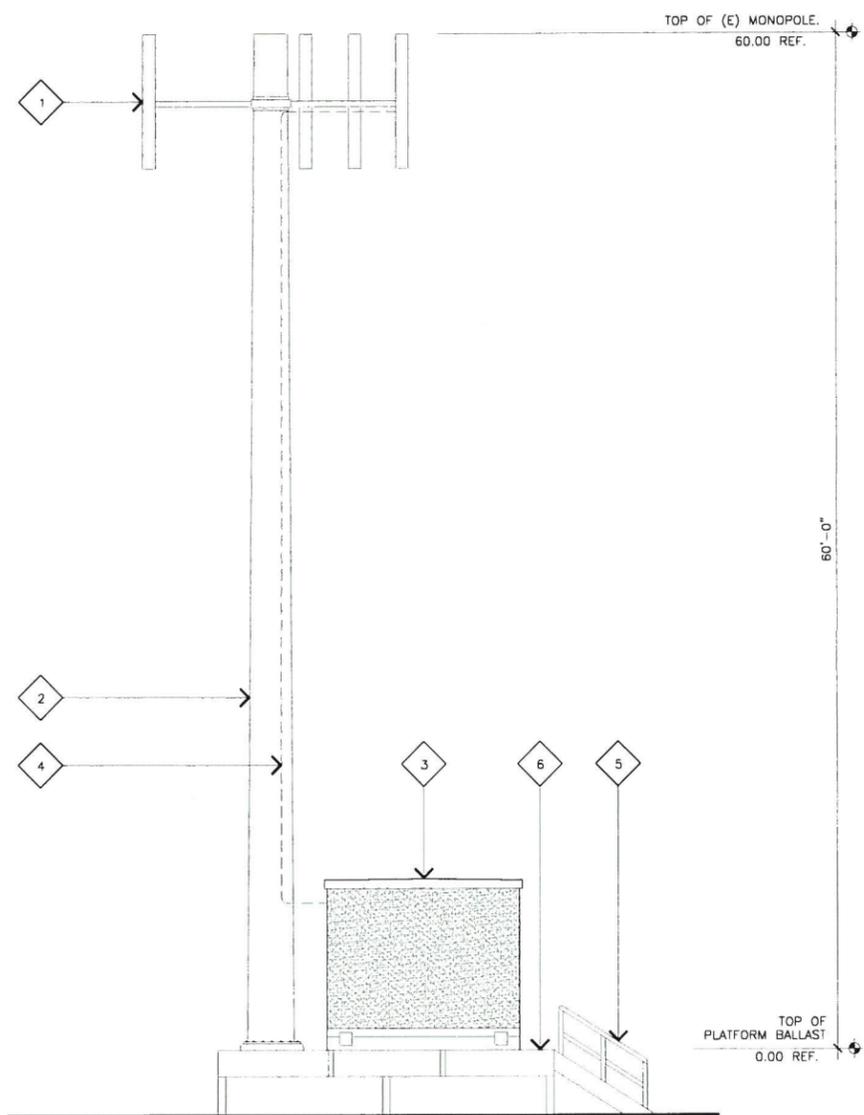
SHEET TITLE  
**ENLARGED SITE AND  
 EQUIPMENT PLAN**

**A-1.1**

JRA JOB NUMBER: 141039

**EXISTING ELEVATION KEYNOTES**

- 1 (E) AT&T PANEL ANTENNAS MOUNTED TO (E) MONOPOLE.
- 2 (E) MONOPOLE.
- 3 (E) AT&T EQUIPMENT SHELTER.
- 4 (E) AT&T COAX CABLE RUNS MOUNTED WITHIN (E) MONOPOLE.
- 5 (E) STAIRS.
- 6 (E) PLATFORM.



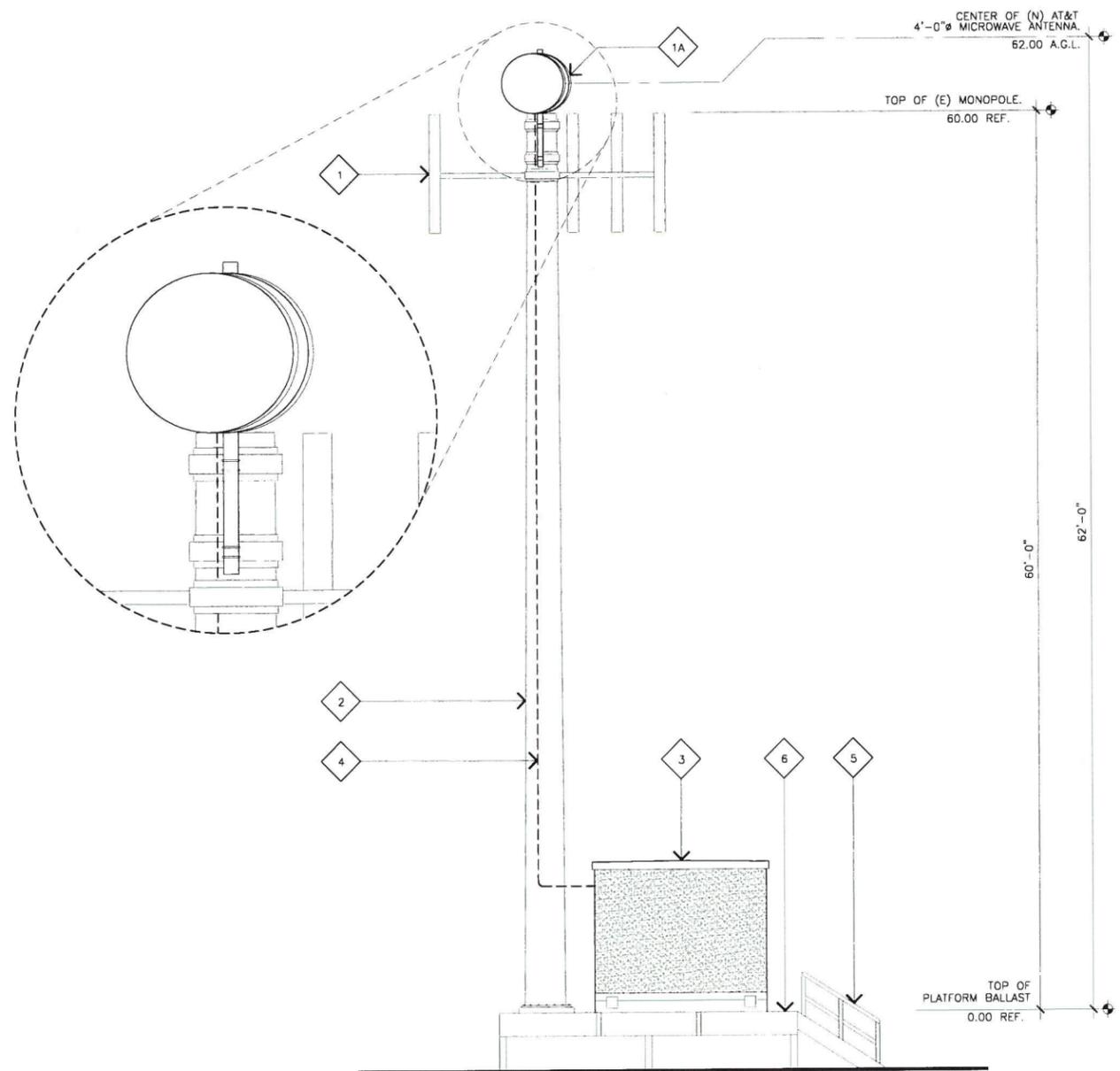
**EXISTING SOUTHEAST ELEVATION**

SCALE: 3/16"=1'-0" 0 3' 6"

**2**

**PROPOSED ELEVATION KEYNOTES**

- 1 (E) AT&T PANEL ANTENNAS MOUNTED TO (E) MONOPOLE.
- 1A (N) AT&T 4'-0" MICROWAVE ANTENNA MOUNTED TO (E) MONOPOLE; SEE SHEET A-4.
- 2 (E) MONOPOLE.
- 3 (E) AT&T EQUIPMENT SHELTER.
- 4 (N) AT&T WAVEGUIDE CABLE RUNS MOUNTED WITHIN (E) MONOPOLE.
- 5 (E) STAIRS.
- 6 (E) PLATFORM.



**PROPOSED SOUTHEAST ELEVATION**

SCALE: 3/16"=1'-0" 0 3' 6"

**1**



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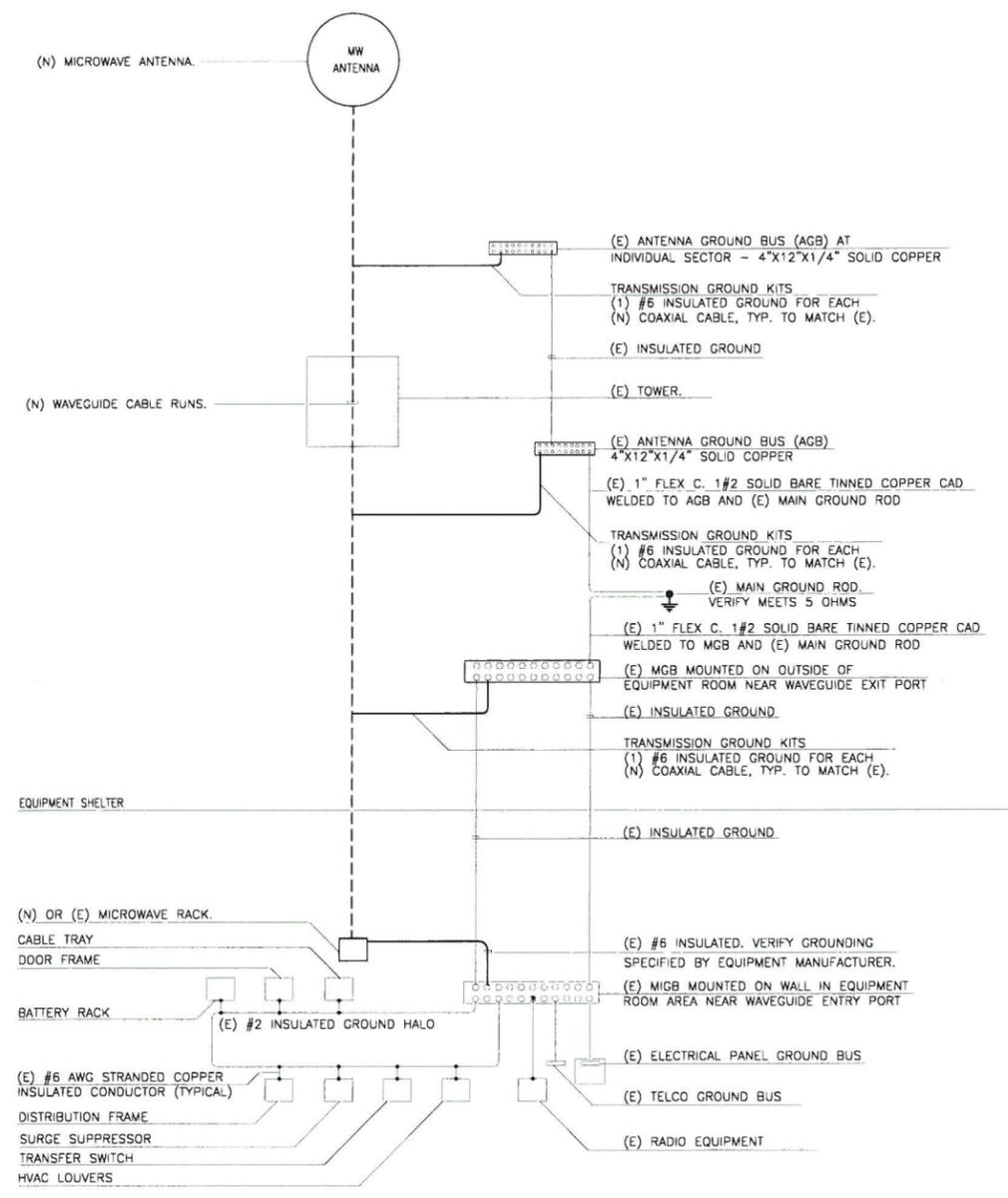
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DRAWING DATES

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06/04/14	100% FINAL CDS (P1-B2)

SHEET TITLE  
**EXISTING & PROPOSED ELEVATIONS**

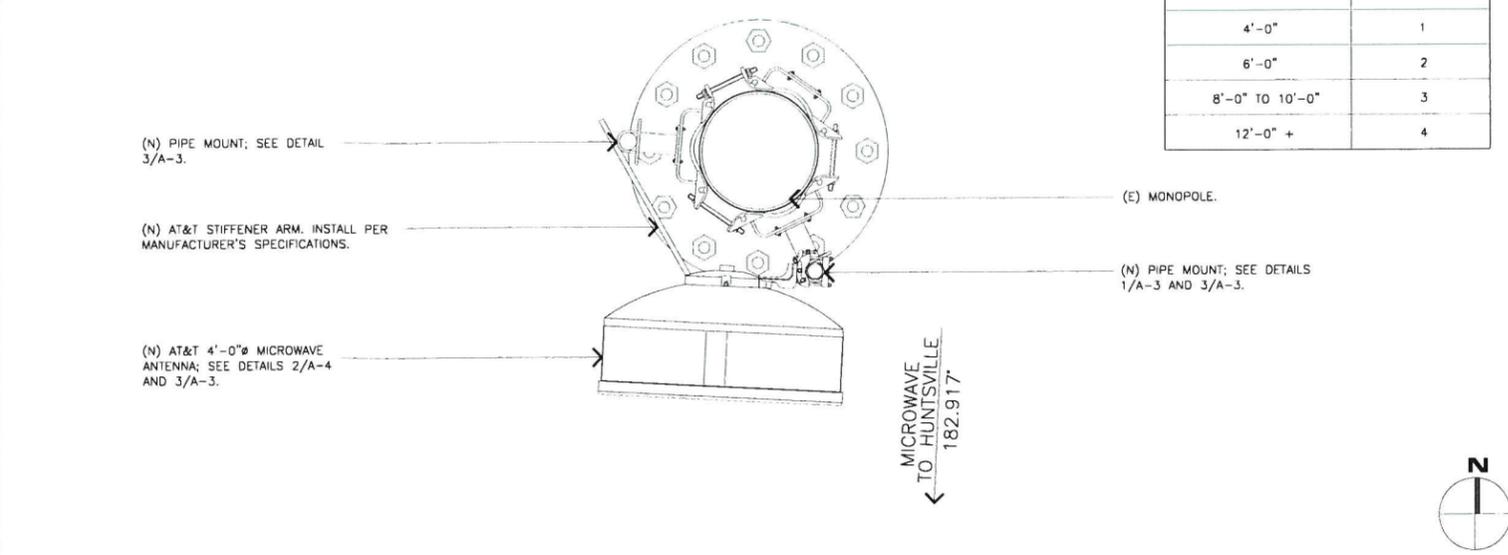
**A-2**



- GENERAL NOTES:**
1. SPLICE GROUND CONNECTIONS.
  2. FOLLOW COAXIAL CABLE MANUFACTURER'S RECOMMENDATIONS (TYPICAL)
  3. ALL INSULATED GROUND WIRES TO BE STRANDED, AWG WIRE UNLESS NOTED OTHERWISE.
  4. THIS IS TYPICAL FOR ONE SECTOR OF ANTENNAS. SEE PLANS FOR NUMBER OF SECTORS.
  5. NUMBER OF COAX IS DIAGRAMATIC.
  6. EXISTING DIPLXER'S AND EXISTING TMA'S NOT SHOWN FOR CLARITY.

**WAVEGUIDE & GROUNDING SYSTEM SCHEMATIC**

SCALE: NONE  
**4**

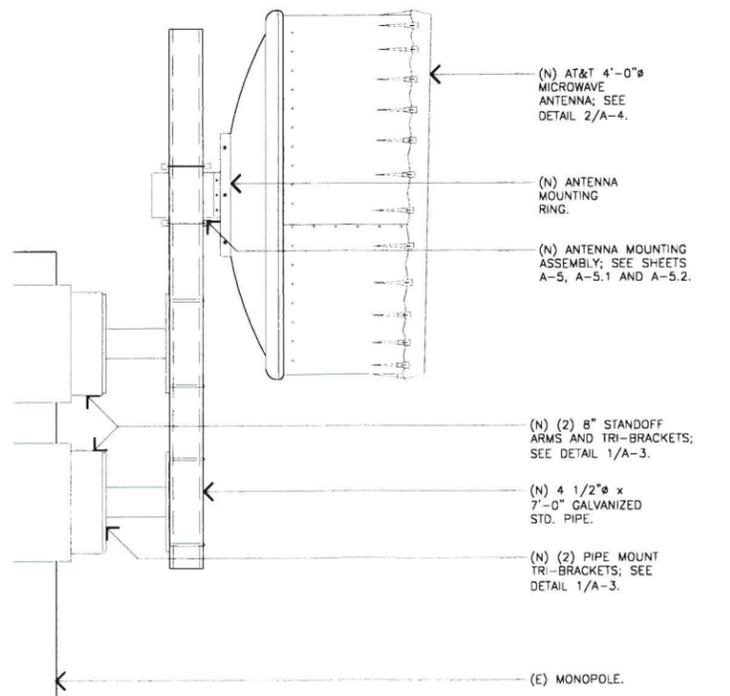


**STIFFENER ARM SCHEDULE**

SIZE OF MICROWAVE ANTENNA	NUMBER OF STIFFENER ARMS
1'-0" TO 3'-0"	NONE
4'-0"	1
6'-0"	2
8'-0" TO 10'-0"	3
12'-0" +	4

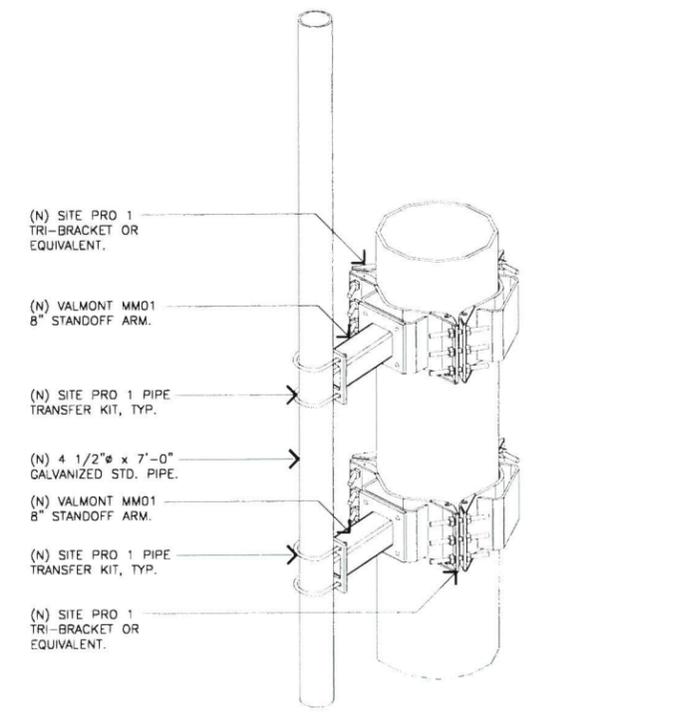
**ANTENNA PLAN**

SCALE: NONE  
**2**



**MICROWAVE ANTENNA DETAIL**

SCALE: NONE  
**3**



**ATTACHMENT DETAIL**

SCALE: NONE  
**1**

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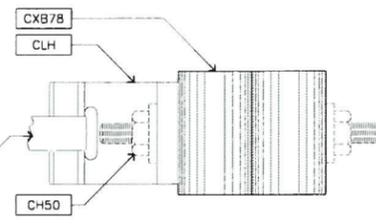
DRAWING DATES  
05/28/14 90% CD REVIEW (P1-B1)

SHEET TITLE  
**ANTENNA DETAILS**

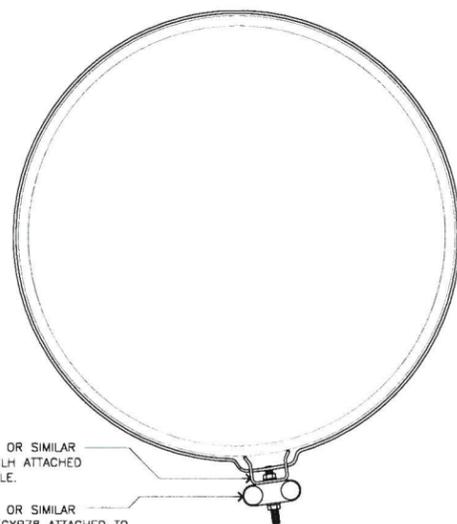
**A-3**

DESIG	MARK	DESCRIPTION	QTY
---	CLH	CLAMP HEAD	1
---	CXB78	COAX BLOCKS	1
---	CH50	COAX BLOCK HARDWARE	1
---	BA206	STAINLESS BANDING	1

3/4" STAINLESS BANDING BA206  
 STAINLESS BANDING BUCKLE BU256-25  
 HEAVY DUTY BANDING TOOL T001



ELEVATION



(N) SITE PRO 1 OR SIMILAR BANDING #BA206 ATTACHED TO (E) MONOPOLE.

(N) SITE PRO 1 OR SIMILAR CLAMP HEAD #CLH ATTACHED TO (E) MONOPOLE.

(N) SITE PRO 1 OR SIMILAR COAX BLOCKS #CXB78 ATTACHED TO (N) CLAMP HEAD WITH COAX BLOCK HARDWARE #CH50; SEE ELEVATION. LOCATE ADJACENT TO (E) COAX BLOCKS.

PLAN VIEW

SITE PRO 1 COAX SUPPORT KIT

SCALE:  
NONE

2

NOT USED

SCALE:  
NONE

1



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SHEET TITLE

DETAILS

**A-3.1**

# Product Specifications

COMMSCOPE®



VHLPX4-11W

1.2 m | 4 ft ValuLine® High Performance Low Profile Antenna.

## General Specifications

Antenna Type	VHLPX - ValuLine® High Performance Low Profile Antenna.
Diameter, nominal	1.2 m   4 ft

## Mechanical Specifications

Fine Azimuth Adjustment	±15°
Fine Elevation Adjustment	±15°
Mounting Pipe Diameter	11.5 mm   4.5 in
Net Weight	40 kg   88 lb
Side Struts, Included	1 inboard
Side Struts, Optional	1 inboard
Wind Velocity Operational	200 km/h   124 mph
Wind Velocity Survival Rating	250 km/h   155 mph

## Wind Forces At Wind Velocity Survival Rating

Axial Force (FA)	5326 N   1197 lbf
Side Force (FS)	2638 N   593 lbf
Twisting Moment (MT)	2370 N•m
Weight with 1/2 in (12 mm) Radial Ice	75 kg   165 lb
Zcg with 1/2 in (12 mm) Radial Ice	310 mm   12 in
Zcg without Ice	210 mm   8 in

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TALLEY®

You Connect the World. We Make It Easy.

# Product Specifications



EW90

EW90, HELIAX® Standard Elliptical Waveguide



## CHARACTERISTICS

### Construction Materials

Jacket Material	PE
Conductor Material	Corrugated copper
Jacket Color	Black

### Dimensions

Cable Volume	334.0 L/km   3.6 ft³/kft
Cable Weight	0.48 kg/m   0.32 lb/ft
Diameter Over Jacket (E Plane)	33.50 mm   1.32 in
Diameter Over Jacket (H Plane)	20.30 mm   0.80 in

### Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)

### General Specifications

Brand	HELIAX®
-------	---------

### Mechanical Specifications

Maximum Twist	6.00 %/m   2.00 %/ft
Minimum Bend Radius, Multiple Bends (E Plane)	180.00 mm   7.00 in
Minimum Bend Radius, Multiple Bends (H Plane)	480.00 mm   19.00 in
Minimum Bend Radius, Single Bend (E Plane)	150.00 mm   6.00 in

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page 1 of 2  
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ROBERT HUNTER	05/29/14
CONSTRUCTION	DATE
SITE ACQUISITION	DATE

PROJECT NAME  
**MICROWAVE UPGRADE**

SITE NAME  
**POWDER MOUNTAIN**  
FA NUMBER  
**12836251**

UTAH HIGHWAY 15B  
EDEN, UTAH 84310

### DRAWING DATES

05/28/14	90% CD REVIEW (P1-B1)
06/04/14	100% FINAL CDS (P1-B2)

SHEET TITLE

**SPECIFICATIONS**

**A-4**

ANTENNA SPECIFICATIONS

SCALE:  
NONE

**2**

WAVEGUIDE CABLE SPECIFICATIONS

SCALE:  
NONE

**1**

JRA JOB NUMBER: 141039

# Installation Instructions

COMMSCOPE®

on the go

Title Line 1



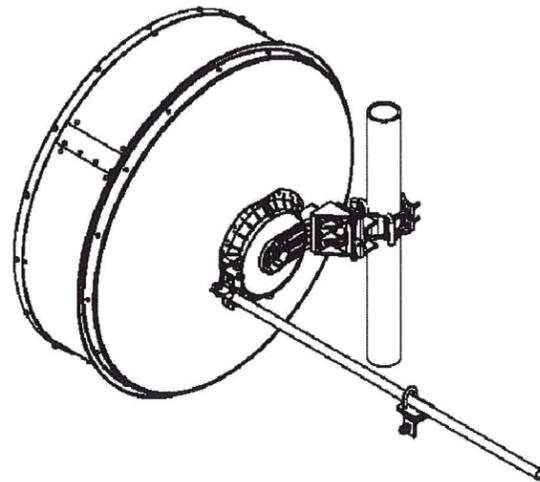
Bulletin 7628916

Version 03 Status RE Rev 0

Model Version 01 Status RE Rev B

Title Line 2

This document is for the following:  
VHLP(X)4-\*\*\* 1.2m ANTENNA



## SAFETY

**ANTENNA INSTALLATION, MAINTENANCE OR REMOVAL MUST BE PERFORMED BY QUALIFIED EXPERIENCED INSTALLER.**

It is essential that all appropriate national and local safety regulations be strictly observed to ensure the safety of personnel and to prevent damage to the equipment. CommScope cannot accept responsibility for accidents resulting from non-compliance with such regulations.

The Antenna is designed to attach to a vertical tower pipe of diameter 115mm  
The mount provides adjustment ranges of  $\pm 15^\circ$  fine elevation and  $\pm 180^\circ$  ( $\pm 15^\circ$  Fine) azimuth.

Always read the entire manual before commencing installation.

## WARNING

Do not use any installation components (screws, nuts, etc) other than with the equipment or recommended by the supplier

Andrew Solutions

Customer Service 24 hours  
U.S.A., Canada, Mexico: 1-800-255-1479  
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Aviso: Andrews no acepta ninguna obligación ni responsabilidad como resultado de prácticas incorrectas o peligrosas de instalación, inspección, mantenimiento o retiro.  
Avis: Andrew decline toute responsabilité pour les conséquences de procédures d'installation, d'inspection, d'entretien ou de retrait incorrectes ou dangereuses.  
Hinweis: Andrew lehnt jede Haftung oder Verantwortung für Schäden ab, die aufgrund unsachgemäßer Installation, Überprüfung, Wartung oder Demontage auftreten.  
Atenção: Andrew abdica do direito de toda responsabilidade pelos resultados de práticas inadequadas e sem segurança de instalação, inspeção, manutenção ou remoção.  
Avvertenza: Andrew declina eventuali responsabilità derivanti dall'esecuzione di procedure di installazione, ispezione, manutenzione e smontaggio improprie e poco sicure.

注意: Andrew 公司申明對於不恰當或不安全的安裝、檢驗、維修或拆卸操作所導致的後果不負任何法律責任

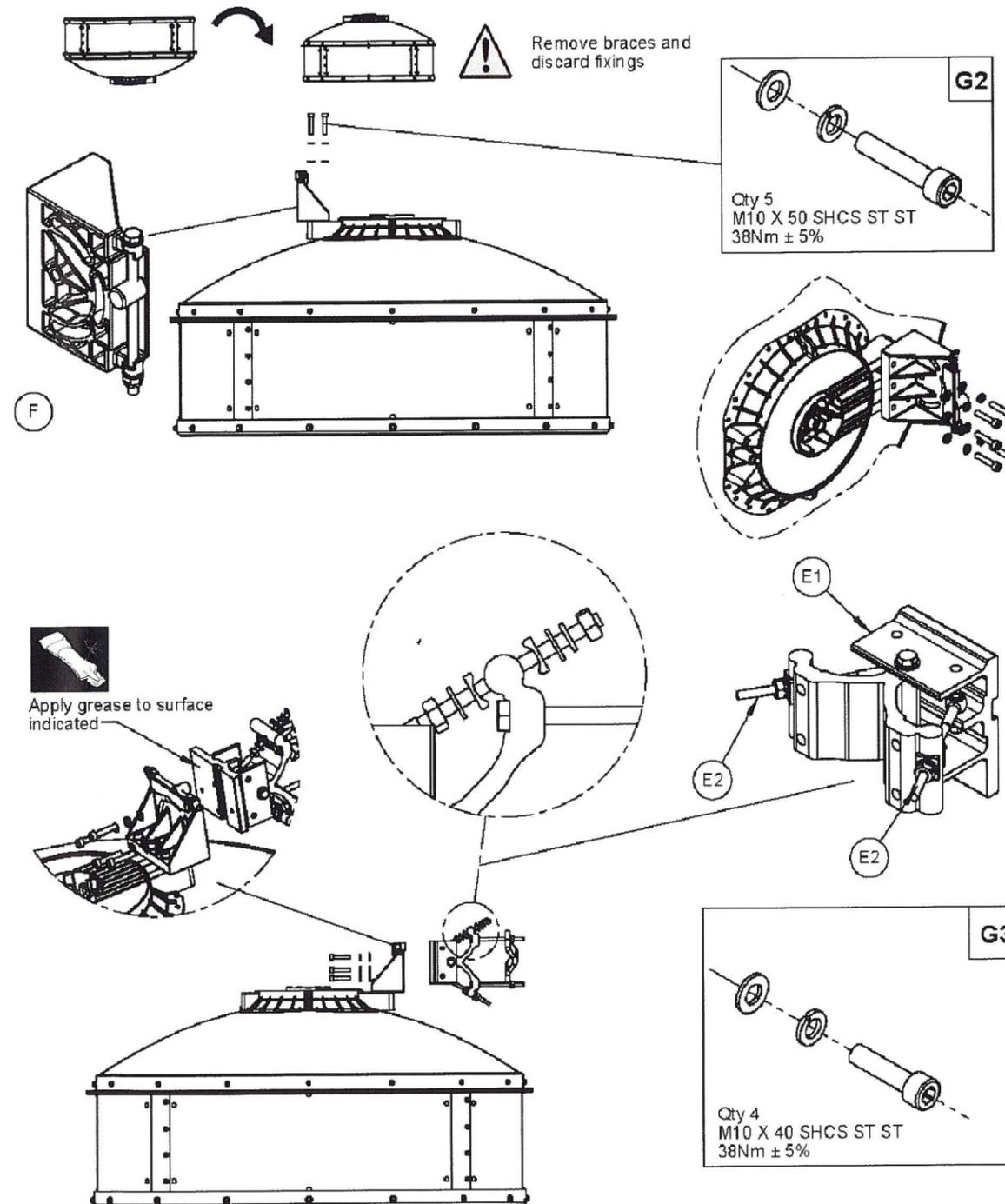


## INSTALLATION INSTRUCTIONS

## SECTION 8

7628916

### MOUNT ATTACHMENT AND ALIGNMENT



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SITE NAME  
**POWDER MOUNTAIN**

FA NUMBER  
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06/04/14 100% FINAL CDS (P1-B2)

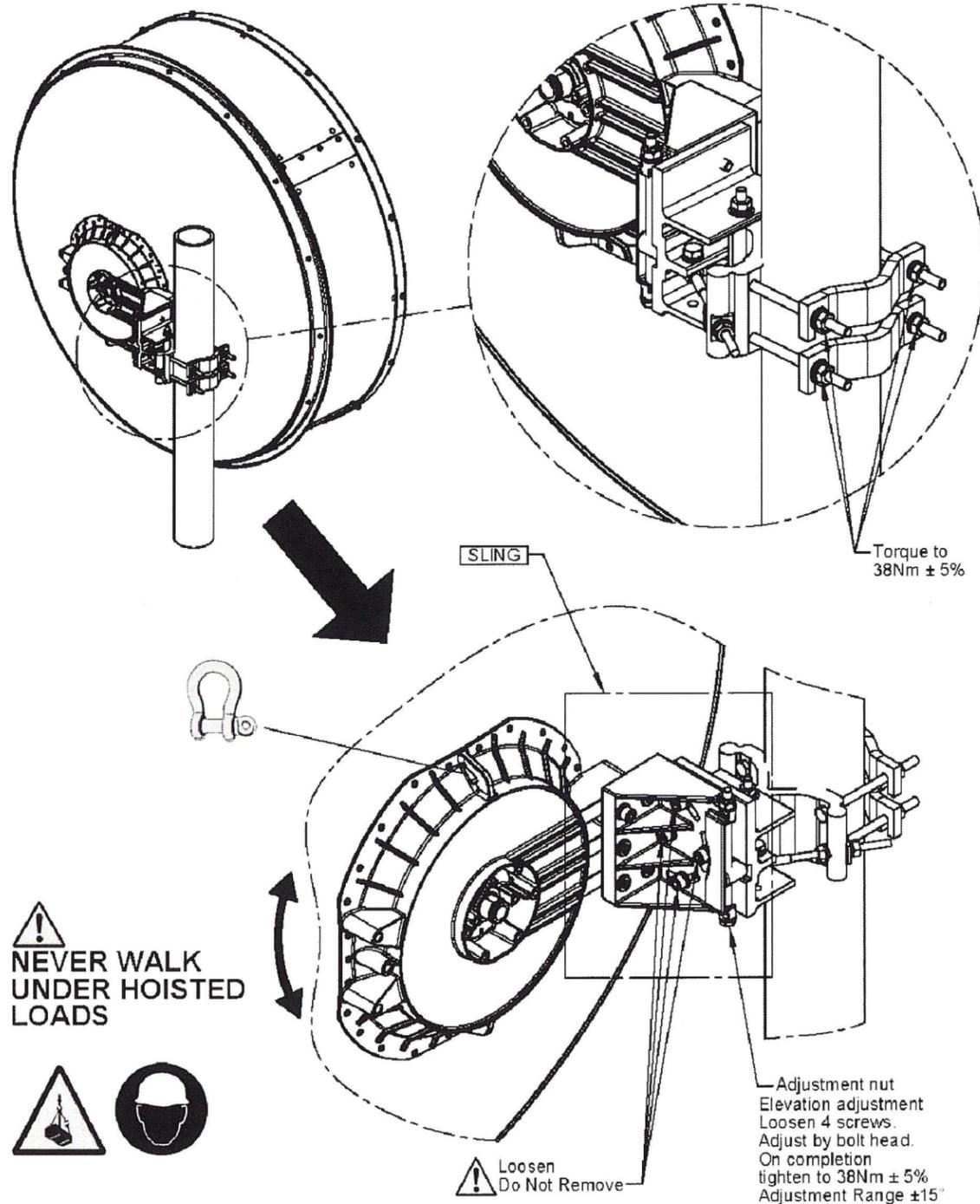
SHEET TITLE  
**ANTENNA MOUNTING DETAILS**

**A-5**

**INSTALLATION INSTRUCTIONS**

**SECTION 8**  
MOUNT ATTACHMENT AND ALIGNMENT

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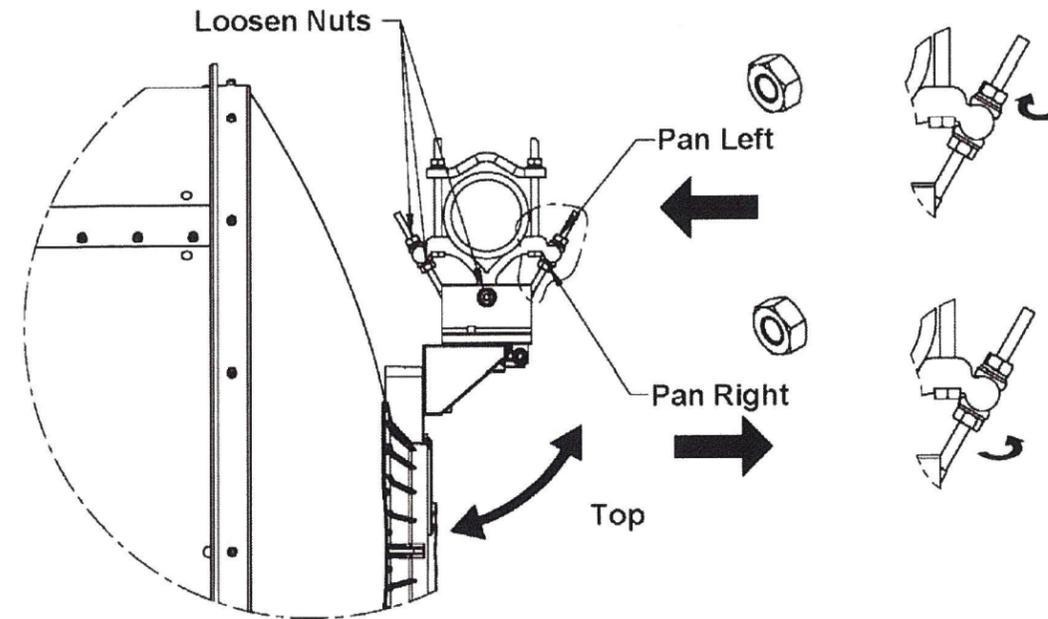
**NEVER WALK UNDER HOISTED LOADS**



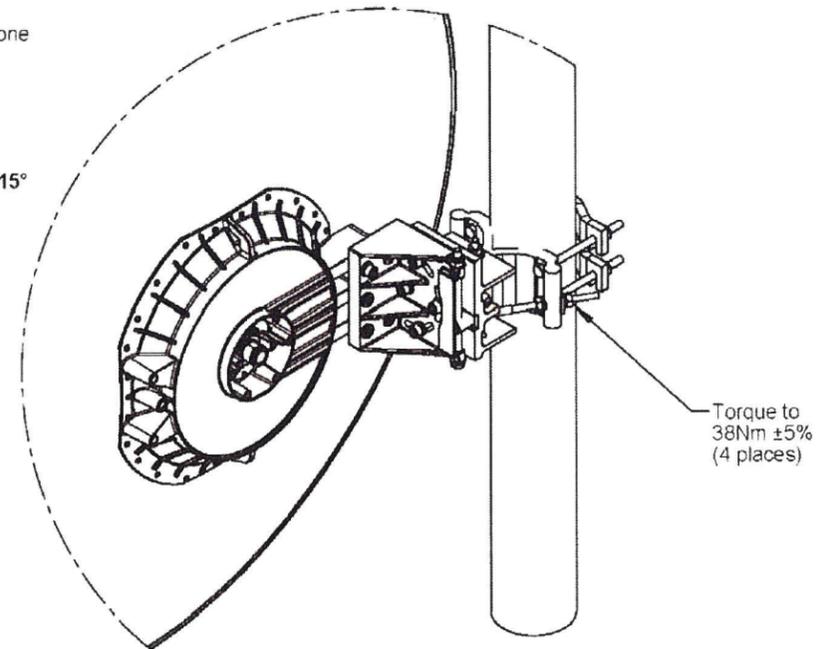
**INSTALLATION INSTRUCTIONS**

**SECTION 8**  
MOUNT ATTACHMENT AND ALIGNMENT

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**Azimuth adjustment**  
Loosen link screw on one side giving room for adjustment. Adjust with remaining link screw. On completion tighten to 38Nm ± 5%  
**Adjustment Range ±15°**



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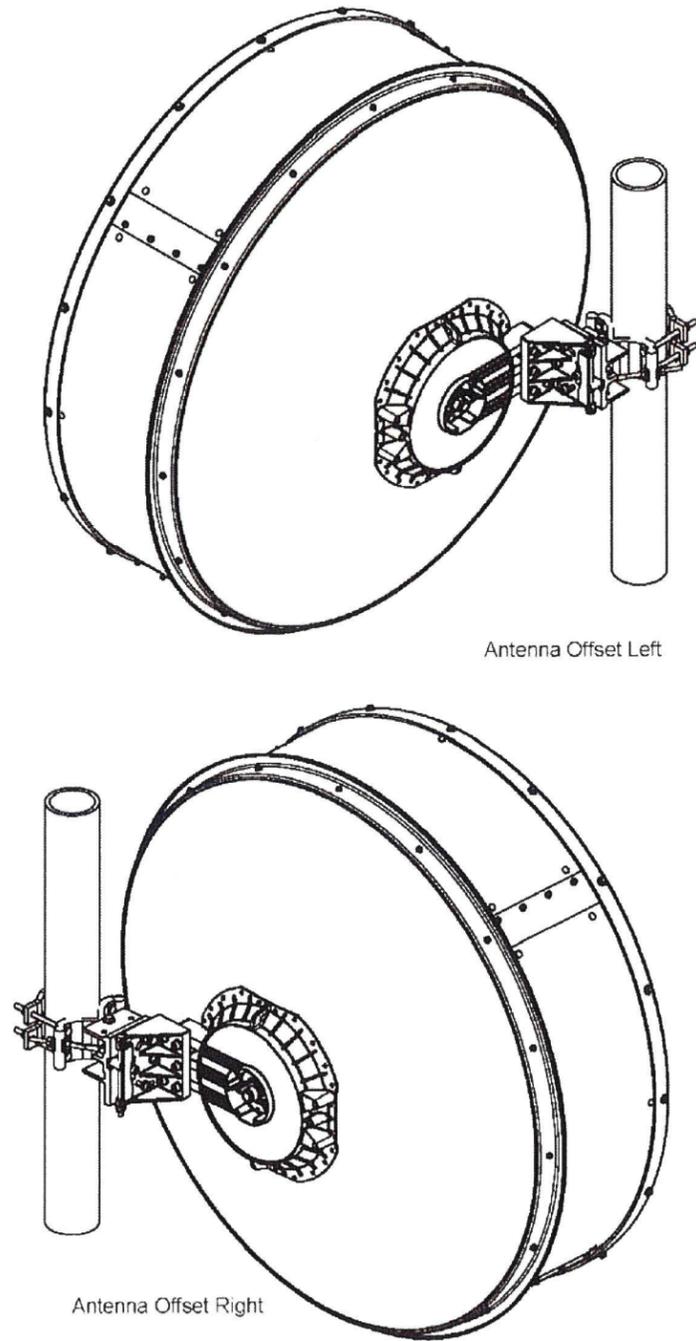
SHEET TITLE

**ANTENNA MOUNTING DETAILS**

INSTALLATION  
INSTRUCTIONS

SECTION 8  
MOUNT ATTACHMENT AND ALIGNMENT

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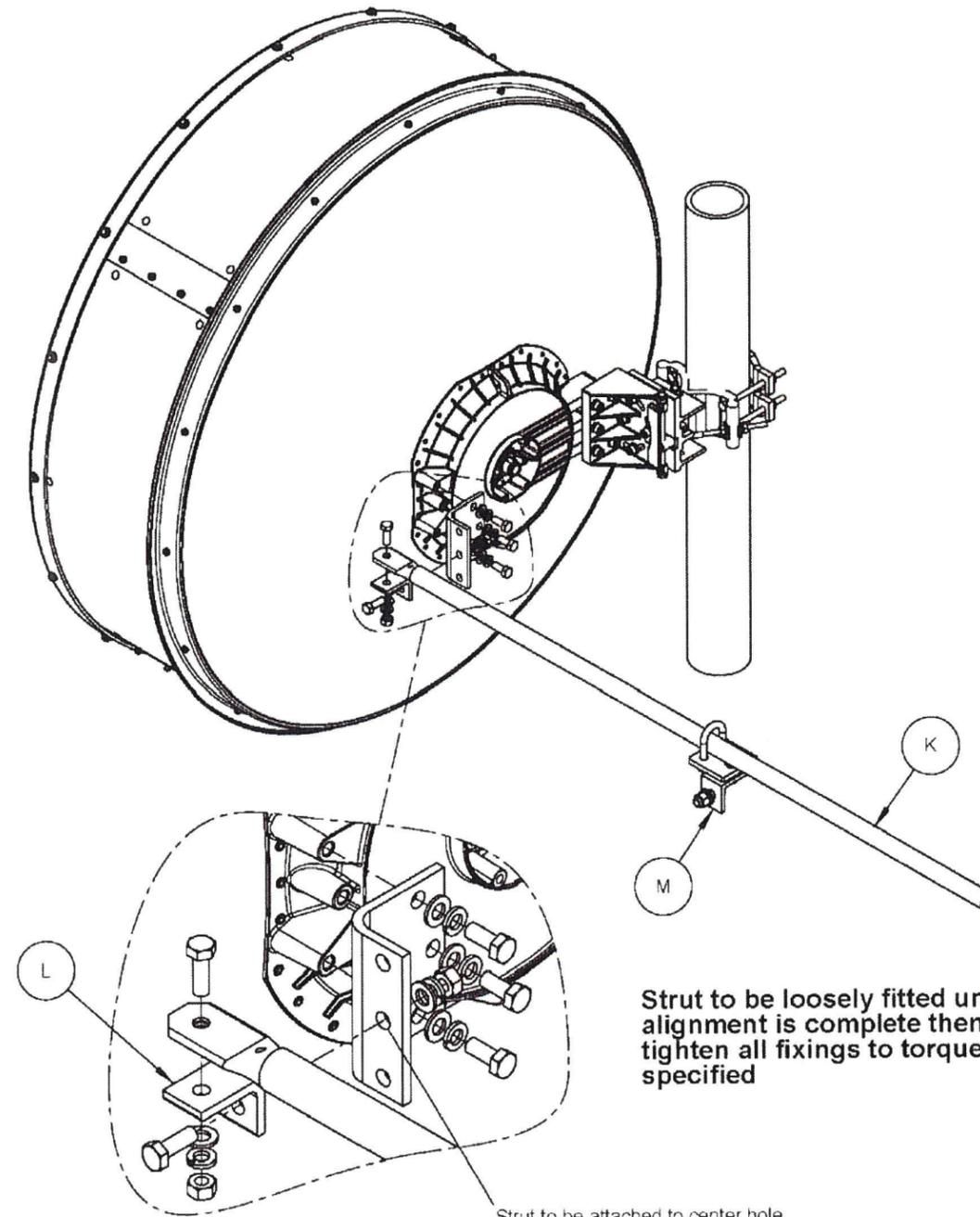
Antenna Offset Left

Antenna Offset Right

INSTALLATION  
INSTRUCTIONS

SECTION 8  
MOUNT ATTACHMENT AND ALIGNMENT

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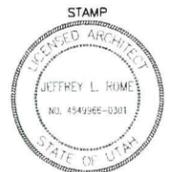
Strut to be loosely fitted until alignment is complete then tighten all fixings to torque specified

Strut to be attached to center hole. Tighten all hardware to a torque of 38Nm ±5%



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ANTENNA MOUNTING DETAILS

**A-5.2**

Microwave Path Data Sheet  
COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147  
(858)232-4372 [www.comsearch.com](http://www.comsearch.com)

PCN Date: 12/30/2013  
Job Number: 131230COMSSL06

New Path  
RCN Number: 13123029

<b>Administrative Information</b>	<b>HUNTSVILLE UT</b>	<b>POWDER MTN UT</b>
City/County	WEBER	WEBER
Status / License Basis	Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign		
Licensee Code	ATTWUT	ATTWUT
Licensee Name	New Cingular Wireless PCS LLC-Utah	New Cingular Wireless PCS LLC-Utah
Radio Service / Station Class	CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
<b>Site Information</b>		
Latitude (NAD 83)	41° 16' 16.4" N	41° 22' 10.3" N
Longitude (NAD 83)	111° 46' 17.4" W	111° 45' 53.5" W
Ground Elevation (m/ft-AMSL)	1520.05 / 4989.0	2714.85 / 8907.0
Antenna Structure Registration #		
Path Azimuth (°)	2.912	182.917
Path Length (km / miles)		10.932 / 6.793
<b>Transmit Antenna</b>	77186A	77186A
Manufacturer	Commscope	Commscope
Model	VHLPX4-11W	VHLPX4-11W
Gain(dBi) / Beamwidth(°) / Tilt(°)	40.8 / 1.50 / 6.17	40.8 / 1.50 / -6.24
Centerline (m / ft - AGL)	24.38 / 80.0	18.29 / 60.0
<b>Receive Antenna</b>	Same As Transmit	
Manufacturer		
Model		
Gain (dBi) / Beamwidth (°)		
Centerline (m / ft - AGL)		
<b>Diversity Receive Antenna</b>		
Manufacturer		
Model		
Gain (dBi) / Beamwidth (°)		
Centerline (m / ft - AGL)		
<b>Radio Information</b>	TEOH62	TEOH62
Manufacturer	Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model	95MPR11-H128F40-214	95MPR11-H128F40-214
Model Description	9500 MPT-HL Fixed Modulation	9500 MPT-HL Fixed Modulation
Emission Designator / Modulation	40MOD7W 128 QAM	40MOD7W 128 QAM
Loading	1 CH DIG 213900.000	1 CH DIG 213900.000
Stability (%)	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	29.0	29.0
Received Level (dBm)	-36.8	-36.8
EIRP (dBm)	62.9	63.5
Fixed Loss: Tx / Common (dB)	0.0 / 6.9	0.0 / 6.3
Free Space Loss (dB)		134.2
<b>Transmit Frequencies (MHz)</b>	10895.0000V(5)	11385.0000V(5)

MW Data Sheet



Date	1/8/2014	MW Engineer Name	Arnel Madela	
MW Link (Site A-Site Z)	HUNTSVILLE - POWDER MOUNTAIN	Contact #	972-965-1824	
New or Existing Link	(Check One)	New	X Existing	
WES-MW-94775	Drain Site (A) Info	End Site (Z) Info		
Site ID	SITE NAME	UTSLKC-HUNTSVILLE		
	USID	11186		
	FA CODE	10088492		
Coordinate	Lat	41° 16' 16.4" N	41° 22' 10.30" N	
	Long	111° 46' 17.4" W	111° 45' 53.50" W	
Address	7305 EAST 730 NORTH	UTAH HIGHWAY 158		
City	HUNTSVILLE	EDEN		
Affected Sites				
PCN Required (Y/N)	Y	Compliance Assessment Required (Y/N)	Y Field Study Required Y	
Circuitry (Transport) Requirement	TDM for GSM and Ethernet for UMTS/LTE			
Scope of Work (SOW) Summary	NEW MICROWAVE PATH. Install antenna, radio and waveguide.			
Detailed Design information				
	Site A		Site Z	
	Existing	Change to	Existing	Change to
Dish Model	NA	VHLPX4-11W-6GR	NA	VHLPX4-11W-6GR
Dish Size	NA	4 ft	NA	4 ft
# of Dishes	NA	1	NA	1
Azimuth	NA	2.912°	NA	182.917°
Rad Center	NA	80 ft	NA	60 ft
Frequency	NA	10895.0000V	NA	11385.0000V
Radio Type	NA	95MPR11-H128F40-214	NA	95MPR11-H128F40-214
# of Radios	NA	1	NA	1
Cable Type	NA	EW90	NA	EW90
Cable length (ft)	NA	120 ft	NA	100 ft
Transport Drop (DS1, ENET, DS3, DS3c)	NA	DS1/ENET	NA	DS1/ENET



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05/28/14 90% CD REVIEW (P1-B1)

SHEET TITLE

PCN AND MICROWAVE  
DATA SHEET

A-6