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- INTERNATIONAL BUILDING CODE 2012 (IBC)
- INTERNATIONAL EXISTING BUILDING CODE 2012 (IEBC)
- INTERNATIONAL PLUMBING CODE 2012 (IPC)
- INTERNATIONAL MECHANICAL CODE 2012 (IMC)
- NATIONAL ELECTRICAL CODE 2011 (NEC) (NFPA 70)
- INTERNATIONAL FUEL GAS CODE 2012 (IFGC)
- INTERNATIONAL FIRE CODE 2012 (IFC)
- NATIONAL FIRE ALARM CODE 2013 (NFPA 72)
- INSTALLATION OF SPRINKLER SYSTEMS 2013 (NFPA 13)
- NAU FIRE CODE (MOST RECENT EDITION UNLESS OTHERWISE NOTED)
- ARIZONA STATE FIRE CODE
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AS APPROVED BY THE DEPARTMENT OF JUSTICE JULY 26, 2010 (PUBLISHED IN THE FEDERAL REGISTER ON SEPT. 15, 2010) AND ANY MORE RECENT RELATED FEDERAL AND STATE REQUIREMENTS WITH THEIR RELATED STANDARDS AS THEY MAY APPLY.
- ICC/ANSI, A117.1 - 2009, ACCESSIBLE AND USABLE BUILDINGS FACILITIES.
- ARIZONA REVISED STATUTES (ARS)
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS
- NAU MATERIAL SAFETY POLICIES (E.G. PROGRAM MANUALS SUCH AS ASBESTOS, LEAD, PCB, ETC.)
- IAQ GUIDELINES FOR OCCUPIED BUILDINGS UNDER CONSTRUCTION (MOST RECENT)
- NAU DESIGN GUIDELINES AND TECHNICAL STANDARDS (MOST RECENT)
- ALL OUTDOOR LIGHTING SHALL COMPLY WITH FLAGSTAFF LIGHTING CODES STANDARDS (FLAGSTAFF CODE CHAPTER 10-50, DIVISION 10-50.70.

CODE COMPLIANCE



SITE NAME: XXXXXXXX
SITE NUMBER: FS002_006_NAU
PROJECT: CRAN / SMALL CELL / PICO
USID #: XXXXX
FA #: XXXXXX

POLE TYPE: (N) SC STREET LIGHT POLE
POLE ID #: _ _ _ _
SITE ADDRESS: 2100 SOUTH HUFFER LANE, FLAGSTAFF, AZ 86001

- CONSTRUCTION DRAWING**
- ALL DESIGN AND CONSTRUCTION WORK SHALL BE DONE IN SUCH A MANNER THAT THE COMPLETION OF PROJECT IS IN COMPLIANCE WITH THE FOLLOWING CODES AND STANDARDS THE OWNER HAS ADOPTED AS CODE. WHENEVER REFERENCE IS MADE TO "THIS CODE" IT SHALL MEAN ALL THE CODES LISTED IN "CODE COMPLIANCE". IN THE EVENT THERE IS A CONFLICT BETWEEN ANY OF THESE CODES AND STANDARDS, THE MOST RESTRICTIVE CODE SHALL APPLY.
 - COMPLIANCE SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITIONS OF ALL STATE REGULATIONS AND THE VARIOUS CODES WHICH HAVE BEEN ADOPTED BY THE UNIVERSITY AT THE TIME OF SELECTION OF THE DESIGN PROFESSIONAL (OR AT TIME OF BID IF THE UNIVERSITY DOES NOT DESIGNATE A DESIGN PROFESSIONAL), UNLESS OTHERWISE REQUIRED BY FEDERAL OR STATE REGULATION (SUCH AS ADA CODE COMPLIANCE WHICH IS REQUIRED AT TIME OF BID).
 - CONTRACTOR WILL BE HELD TO HAVE EXAMINED AND TO HAVE BECOME FAMILIAR WITH THESE REGULATIONS IN ALL WAYS THEY APPLY TO THE PROJECT.
 - IF A CONFLICT IS FOUND BETWEEN ANY CODE REQUIREMENT AND INFORMATION GIVEN IN WRITTEN OR GRAPHIC SPECIFICATIONS, CONTRACTOR WILL ABIDE BY THE MORE STRINGENT OF THE TWO. SUCH CONFLICT SHALL BE REPORTED IN WRITING TO THE DP AND TO OWNER (NAU FIRE MARSHAL, BUILDING OFFICIAL, AND PM).
 - THE ISSUANCE OF APPROVED PLANS, SPECIFICATIONS, AND COMPUTATIONS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE CODES LISTED IN "CODE COMPLIANCE", THE NAU FIRE PREVENTION MANUAL OR THE NAU DESIGN GUIDELINES AND TECHNICAL STANDARDS.
 - THE ISSUANCE OF APPROVED PLANS, SPECIFICATIONS, AND OTHER DATA SHALL NOT PREVENT OWNER FROM THEREAFTER REQUIRING THE CORRECTION OF ERRORS IN SAID PLANS, SPECIFICATIONS AND OTHER DATA, NOR SHALL ISSUANCE OF SUCH APPROVED PLANS, SPECIFICATIONS, OR OTHER DATA PRECLUDE THE PREVENTION OF BUILDING OPERATIONS BEING CARRIED ON THERE UNDER WHEN IN VIOLATION OF THE CODES LISTED IN "CODE COMPLIANCE".

NAU COMPLIANCE NOTES

SCOPE OF WORK: PICO EQUIPMENT DESIGN
 AT&T PROPOSES TO MODIFY, OPERATE AND MAINTAIN PROPOSED UNMANNED TELECOM FACILITY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL (N) LIGHT POLE MIN. 2' AWAY FROM (E) SIDEWALK
- INSTALL (1) (N) ACE TECHNOLOGY OMNI ANTENNA ON TOP OF (N) SC STREET LIGHT POLE
- (1) (N) AHFB B25 (PCS) RRH, (1) (N) AHIB B66 (AWS) RRH, (1) (N) AZRA B46 (LAA) RRH AND (2) (N) MICROLAB BK-747E PCS/AWS DIPLEXERS, BE INSTALLED WITHIN CHARLES INDUSTRIES 18.3"Ø SHROUD ON TOP OF (N) SC STREET LIGHT POLE
- INSTALL FIBER CABLE
- INSTALL (1) (N) HAND HOLE 24"x36" (FIBER PULL BOX)
- INSTALL POWER DISCONNECT

****CONDUIT PATHS FOR POWER AND TELCO TO BE INSTALLED BY OTHERS****

PROJECT DESCRIPTION

SHEET	DESCRIPTION
T-1	TITLE SHEET
T-2	STREET LIGHTING GENERAL NOTES
T-3	GENERAL NOTES, LEGEND AND ABBREVIATIONS
SS-1	SITE SURVEY (BY OTHERS)
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3 & A-4	ELEVATIONS
D-1	EQUIPMENT DETAILS
D-2	EQUIPMENT DETAILS
E-1	NEW AC PANEL SCHEDULE, POINT OF CONNECTION
G-1	GROUNDING DETAILS
G-2	GROUNDING NOTES AND DETAIL
S-1 - S-3	POLE DETAILS (BY OTHERS)
PM1 & PM2	PHOTOMETRIC ANALYSIS (BY OTHERS)
C2.7	NAU SCHEMATIC DESIGN (BY OTHERS- REFERENCE ONLY)

SHEET INDEX

APPLICANT:

1355 WEST UNIVERSITY DRIVE
 MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
 2601 SOUTH 37th STREET, SUITE 200
 PHOENIX, AZ 85034

CONSULTANT:

FM GROUP INC
 15974 N. 77th STREET
 SCOTTSDALE, AZ 85260

DRAWN BY: SW
 CHECKED BY: MA

REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

REGISTERED ARCHITECT
 CERTIFICATE NO. 22478
 MICHAEL E. STEVESON
 Date Signed: 04/05/2021
 ARIZONA, U.S.A.

PROJECT INFORMATION:

FS002-006-NAU
 2100 S. HUFFER LANE,
 FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
 26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN ARIZONA, CALL ARIZONA 811
 TOLL FREE: 1-800-782-5348 OR www.arizona811.com
 ARIZONA STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

Know what's below. Call before you dig.

PROPERTY OWNER: NAU
 ADDRESS: 2100 SOUTH HUFFER LANE, FLAGSTAFF, AZ 86001

APPLICANT ADDRESS: AT&T
 1355 WEST UNIVERSITY DRIVE, MESA, AZ 85201-5419

LATITUDE: 35° 10' 31.5" N
 35.175417

LONGITUDE: 111° 39' 22.2" W
 -111.656167

LONGITUDE/LATITUDE TYPE: NAD 83

GROUND ELEVATION (NAVD 88): 6884.0' AMSL

APN #: 103-25-003E

ZONING JURISDICTION: NAU

COUNTY: COCONINO

CURRENT ZONING: N/A

PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY

SITE INFORMATION



VICINITY MAP



EXISTING SITE IMAGE

FROM AT&T OFFICE: 1355 WEST UNIVERSITY DRIVE, MESA, AZ 85201-5419:
 CONTINUE TO W UNIVERSITY DR, TAKE AZ-101 LOOP N TO N. I-17, CONTINUE NORTH ON I-17 TO EXIT E. MCCONNELL DR, TURN RIGHT TO E. MCCONNELL DR, TURN RIGHT E. PINE KNOLL DR. ARRIVE AT SITE.

DRIVING DIRECTIONS

SUBCONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
 IF USING 11"x17" PLOT, DRAWINGS WILL BE HALF SCALE

DO NOT SCALE DRAWINGS

PROJECT MANAGER: AT&T Mobility
 1355 WEST UNIVERSITY, FLR.3
 MESA, AZ 85201
 CONTACT: ROBERT MANNINO
 480-570-4500

ENGINEER: Bechtel Infrastructure & Power Corp.
 2601 SOUTH 37th STREET, SUITE 200
 PHOENIX, AZ 85034
 CONTACT: Thomas Burmesch
 623-282-3015
 tburmesch@bechtel.com

SAC/ZONING/PERMITTING: Bechtel Infrastructure & Power Corp.
 2601 SOUTH 37th STREET, SUITE 200
 PHOENIX, AZ 85034
 CONTACT: AMY JULIEN
 925-389-4197
 ajulien@bechtel.com

SENIOR TECHNICAL PROJECT MANAGER: AT&T Mobility
 1355 WEST UNIVERSITY, FLR.3
 MESA, AZ 85201
 CONTACT: Shah Khalid
 480-444-4689
 shah.khalid@att.com

PROJECT TEAM

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STREET LIGHTING GENERAL NOTES:

THE FOLLOWING INFORMATION IS PROVIDED TO EMPHASIZE CRITICAL WORK AND IS INTENDED TO SUPPLEMENT THE SPECIFICATIONS. THE USE OF TERM "STREET LIGHT" IS A GENERIC TERM USED THROUGHOUT AND APPLIES TO ANY (N) OR (E) LIGHT AND LIGHT POLE REFERENCED IN THE DRAWING. THE REFERENCED LIGHTS MAY OR MAY NOT BE AN ACTUAL "STREET LIGHT POLE".

1. THE CONTRACTOR SHALL COMPLY WITH STATE AND CITY STATUTES AND ORDINANCES INCLUDING NAU DESIGN GUIDELINES AND TECHNICAL STANDARDS.
2. PRIOR TO THE SUBMITTAL, THE STREET LIGHT DESIGNER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT THE CONSTRUCTION SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH HE WILL OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THE CONTRACT.
3. THE STREET LIGHT DESIGNER SHOULD VERIFY DIMENSIONS AT THE SITE AND IMMEDIATELY REPORT DIFFERENCES TO THE DEVELOPER'S CONSTRUCTION MANAGER AND NOT PROCEED WITH WORK UNTIL THE CONSTRUCTION MANAGER RENDERS A DECISION.
4. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH ALL LICENSING REQUIREMENTS SET FORTH BY THE STATE REGISTRAR OF CONTRACTORS OFFICE TO PERFORM WORK RELATING TO STREET LIGHT INSTALLATION.
5. DRY UTILITY PERMIT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. LIGHT POLES SHALL BE INSTALLED PLUMB, BE ADJUSTED TO PROVIDE PROPER ALIGNMENT TO THE ROADWAY BEING LIGHTED AND BE PROPERLY GROUNDED WHEN THE INSTALLATION IS COMPLETED AS PER NAU DESIGN GUIDELINES AND TECHNICAL STANDARDS.
7. STREET LIGHTS ARE INSPECTED BY NAU STREET LIGHTING INSPECTOR. METERING MUST BE ONLINE PRIOR TO ENERGIZING. WHEN ACCEPTED AND ENERGIZED THE CONTRACTOR WILL INSTALL POLE NUMBERS PRIOR TO INSPECTION.
8. LUMINAIRES SHALL BE INSTALLED LEVEL AND INCLUDE A LAMP AND PHOTOCELL. THE LUMINAIRES SHALL BE FREE OF DUST, DIRT OR ANYTHING THAT WOULD IMPAIR THE OUTPUT OF THE LIGHT.
9. LUMINAIRES FURNISHED WITH MULTI-TAP DRIVERS SHALL BE IN ACCORDANCE TO THE VOLTAGE SUPPLIED BY THE ELECTRIC UTILITY COMPANY.
10. POLE SHALL BE SET PLUMB IN TWO DIRECTIONS, NINETY (90) DEGREES APART.
11. SURPLUS EXCAVATION SHALL BE DISPOSED OF BY THE CONTRACTOR.
12. WIRING SHALL BE INSTALLED PER SERVING NAU STANDARDS. CONDUIT SHALL BE INSTALLED AT THE DEPTH SPECIFIED ON THEIR PLANS.
13. CONDUIT MUST BE LISTED AND LABELED AND SUITABLE FOR UNDERGROUND USE.
14. CONNECTIONS SHALL BE PER SERVING NAU STANDARDS. EACH POLE SHALL HAVE A 8"x5/8" COPPER CLAD GROUND ROD DRIVEN BENEATH PULL BOX. A #6 BARE COPPER LEAD FROM THE GROUND ROD IN PULL BOX TO LANDING LUG IN STREET LIGHT POLE HAND HOLE IS REQUIRED.
15. EXCAVATION FOR PULL BOXES AND MATERIAL SPECIFICATIONS SHALL BE PER SERVING UTILITY COMPANY STANDARDS.
16. TRENCH SHALL BE INSTALLED PER SERVING UTILITY COMPANY STANDARDS. THE USE OF A COMMON ELECTRIC UTILITY COMPANY TRENCH IS PERMITTED.
17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANY FOR COORDINATION OF THE TRENCHING AND THE INSTALLATION OF CONDUIT.
18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTORE ALL PROPERTY, LANDSCAPING, PAVING AND DRIVEWAYS THAT ARE DISTURBED DURING STREET LIGHT CONSTRUCTION TO THEIR ORIGINAL CONDITION IN CONFORMANCE WITH APPLICABLE NAU SPECIFICATIONS.
19. IF A FIXTURE SHOULD FAIL, IT SHALL BE IMMEDIATELY REPLACED. THE DEVELOPER SHALL BE RESPONSIBLE FOR FURNISHING ALL PERSONNEL AND EQUIPMENT NECESSARY TO SUCCESSFULLY REPAIR THE FIXTURE.
20. THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE BY THE ENGINEERING MANAGER, AGAINST IMPERFECT WORKMANSHIP, FAILURE, MALFUNCTION OF MATERIALS AND/OR EQUIPMENT DUE TO FAULTY OR IMPERFECT WORKMANSHIP.
21. THIS GUARANTEE IS TO BE IN WRITING TO NAU AT THE TIME OF ISSUING FINAL ACCEPTANCE. MATERIALS AND WORKMANSHIP FOUND TO BE DEFECTIVE WITHIN THE WARRANTY PERIOD SHALL BE REPLACED WITHOUT COST TO NAU.


APPLICANT:



AT&T
MOBILITY

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

ENGINEER:



**BECHTEL INFRASTRUCTURE
AND POWER CORPORATION**
2601 SOUTH 37th STREET, SUITE 200
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CONSULTANT:




**FM
GROUP INC**
15974 N. 77th STREET
SCOTTSDALE, AZ 85260

DRAWN BY: SW
CHECKED BY: MA

REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:



22478
MICHAEL E.
STEVESON
Date Signed: 04/05/2021
ARIZONA, U.S.A.

PROJECT INFORMATION:
FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
**STREET LIGHTING
GENERAL NOTES**

SHEET NUMBER:
T-2

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LEGEND

	NEW ANTENNA		GROUT OR PLASTER		WATER LINE		5/8" x 10'-0" CU. GND ROD IN TEST WELL 30" MIN. BELOW GRADE.
	EXISTING ANTENNA		(E) BRICK		SEWER LINE		CHEMICAL GROUND ROD (XIT GROUND ROD)
	GROUND ROD		(E) MASONRY		CONDUIT UNDERGROUND		HALO GROUND CONNECTION
	GROUND BUS BAR		CONCRETE		RIGHT OF WAY		CIRCUIT BREAKER
	MECHANICAL GRND. CONN.		EARTH		TREE		UTILITY METER BASE
	CADWELD		GRAVEL		FUSE, SIZE AND TYPE AS INDICATED.		TRANSFORMER
	GROUND ACCESS WELL		PLYWOOD		SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. H222NRB		STEPDOWN TRANSFORMER
	ELECTRIC BOX		SAND		MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, NEMA 3R ENCLOSURE		RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBEL CATALOG #5362
	TELEPHONE BOX		WOOD CONT.		LIGHTING FIXTURE, FLUORESCENT, 10.94" x 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	LIGHT POLE		WOOD BLOCKING		LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T		TOGGLE SWITCH, 1P-120V-15A, "WP"
	FND. MONUMENT		STEEL		COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC		IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENTEX PART NO. 7100F
	SPOT ELEVATION		CENTERLINE		EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HE6-50-2-R91		POLE
	SET POINT		PROPERTY/LEASE LINE		LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121		(N) POLE MOUNTED XFMR
	REVISION		MATCH LINE		EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #PRB		(E) POLE MOUNTED XFMR
	GRID REFERENCE		WORK POINT		LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-06-1		(N) PAD MOUNTED XFMR
	DETAIL REFERENCE		GROUND CONDUCTOR		LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505		(E) PAD MOUNTED XFMR
	ELEVATION REFERENCE		COAXIAL CABLE		LIGHTING FIXTURE, 1/175W. METAL HALIDE, HUBBELL CAT #MIC-0175H-336		CLEARANCE FOR CABINET
	SECTION REFERENCE		OVERHEAD SERVICE CONDUCTORS		5/8" x 10'-0" CU. GND ROD 30" MIN. BELOW GRADE.		

GENERAL NOTES

- THE FACILITY IS AN UNOCCUPIED DIGITAL TELECOMMUNICATION FACILITY.
- PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL WORK PERFORMED 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 REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE IMPLEMENTATION ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
- 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 THE PROJECT AREA DURING CONSTRUCTION.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING (SHEET SS-1 OR SHEET SS-2), SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ENGINEER.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, VEGETATION, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF AT&T.
- KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE.
- BEFORE ORDERING AND/OR BEFORE FABRICATING/CONSTRUCTING/INSTALLING ANY ITEMS, VERIFY THE TYPES AND QUANTITIES.
- CONTRACTOR SHALL PROVIDE SITE FOREMAN WITH A CELLULAR PHONE AND KEEP SAME ON SITE WHENEVER PERSONNEL ARE ON SITE.
- PAINT COLOR OF GROUND EQUIPMENT MUST SPECIFICALLY IDENTIFY WHAT WILL BE MATCHED. REFERENCE TO "GROUND COVERING" IS NOT ACCEPTABLE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE SITE AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
- CONTRACTOR TO PROVIDE COMPLETE SET OF AS BUILT DRAWINGS WITHIN 10 WORKING DAYS OF PROJECT COMPLETION.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OR THE FABRICATION OF MATERIALS TO BE INSTALLED AT THE SITE, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS INCLUDING AS-BUILT DIMENSIONS OF EXISTING STRUCTURES OR STRUCTURAL ELEMENTS HAVING A BEARING ON THE SCOPE OF THE WORK TO BE PERFORMED. IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE DIMENSIONS OR CONDITIONS FOUND TO BE EXISTING IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OBTAIN DESIGN RESOLUTION PRIOR TO PROCEEDING WITH THE PORTION(S) OF THE WORK AFFECTED. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO SO NOTIFY THE ENGINEER AND OBTAIN RESOLUTION BEFORE PROCEEDING.

APPLICANT:

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

ENGINEER:

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CONSULTANT:

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SCOTTSDALE, AZ 85260

DRAWN BY: SW
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REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

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PROJECT INFORMATION:

FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

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26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
GENERAL NOTES, LEGEND AND ABBREVIATIONS

SHEET NUMBER:
T-3

ABBREVIATIONS

A AMPERE	EMT. ELECTRICAL METALLIC TUBING	MTD. MOUNTED MOUNTING	TEL. TEMP. TELEPHONE TEMPORARY	THK. THICK(NESS)
A.B. ANCHOR BOLT	ENCL. ENCLOSURE	MTL. METAL	TMAS TOWER MOUNTED AMPLIFIER (DC SUPPLY VOLTAGE)	T.N. TOP OF ANTENNA
ABV. ABOVE	ENG. ENGINEER	M.TS. MANUAL TRANSFER SWITCH	T.O.C. TOP OF CURB	T.O.F. TOP OF FOUNDATION
AC ALTERNATE CURRENT/AIR CONDITIONER	EQ. EQUAL	N. NEUTRAL	T.O.P. TOP OF PLATE (PARAPET)	T.O.S. TOP OF STEEL
ACCA ADD'L ANTENNA CABLE COVER ASSEMBLY	EXST. OR (E) EXISTING	(N) NATIONAL ELECTRICAL MANUFACTURERS ASSOC.	T.O.W. TOP OF WALL	TYP. TYPICAL
ADD'L ADDITIONAL	EXT. EXTERIOR	NO.(#) NUMBER	U.G. UNDER GROUND	U.L. UNDERWRITERS LABORATORY INC.
A.F.F. ABOVE FINISHED FLOOR	F. FUTURE	N.T.S. NOT TO SCALE	UMTS UNIVERSAL MOBIL TECH. SYS. (3G MOBILE TECH.)	U.N.O. UNLESS NOTED OTHERWISE
A.F.G. ABOVE FINISHED GRADE	FAB. FABRICATION(OR)	OBIF OPTICAL BASEBAND INTERFACE	V VOLT	V.I.F. VERIFY IN FIELD
A.G.L. ABOVE GROUND LEVEL	FAC. FACTOR	OH OVERHEAD	W WATT OR WIRE	WD WIDE(WIDTH)
AIC AMPERE INTERRUPTING CAPACITY	F/A FIBER/POWER RUN	ON CENTER	W/O WITHOUT	W.P. WEATHERPROOF
ALUM. ALUMINIUM	FIN. FINISH GRADE	OPNG. OPENING	WT. WEIGHT	XFMR TRANSFORMER
ALT. ALTERNATE	FLR. FLOOR	P. PROPOSED	XFMR TRANSFORMER	XLPE CROSS-LINK POLYETHYLENE
ANT. ANTENNA	FLUOR. FLUORESCENT	P/C PRECAST CONCRETE	Y CENTERLINE	PLATE, PROPERTY LINE
APPROX. APPROXIMATE(LY)	FDN. FOUNDATION	PCS PERSONAL COMMUNICATION SERVICES		
ARCH. ARCHITECT(URAL)	F.O.C. FACE OF CONCRETE	PH. PHASE		
AT. AMPERE TRIP	F.O.M. FACE OF MASONRY	PLY. PLYWOOD		
AWG. AMERICAN WIRE GAUGE	F.O.S. FACE OF STUD	PANELBOARD		
BATT. BATTERY	F.O.W. FACE OF WALL	PPC POWER PROTECTION CABINET		
BD. BOARD	F.S. FINISH SURFACE	PRC PRIMARY RADIO CABINET		
BLDG. BUILDING	FT.(') FOOT (FEET)	PRI. PRIMARY		
BLK. BLOCK	FTG. FOOTING	P.S.F. POUNDS PER SQUARE FOOT		
BLKG. BLOCKING	FU. FUSE	P.S.I. POUNDS PER SQUARE INCH		
BM. BEAM	G. GROUND	P.T. PRESSURE TREATED		
B.N. BOUNDARY NAILING	GR. GROWTH (CABINET)	PUE PUBLIC UTILITY EASEMENT		
BR. BRANCH	GA. GAUGE	POWER (CABINET)		
BRKR. BREAKER	GEN. GENERATOR	QUANTITY		
BTOW. BARE TINNED COPPER WIRE	GI. GALVANIZE(D)	RADIUS		
BTS. BASE TRANSMISSION SYSTEM	G.F.C. I. GROUND FAULT CIRCUIT INTERRUPTER	RADIO BASE STATION (BASE STATION 3G NETWORKS)		
B.O.F. BOTTOM OF FOOTING	GLB. (GLU-LAM) GLUE LAMINATED BEAM	RECEPTACLE		
B/U. BACK-UP CABINET	GND. GROUND	REFERENCE		
C. CONDUIT	G.P.S. GLOBAL POSITIONING SYSTEM	REINFORCMENT(ING)		
CAB. CABINET	GRND. GROUND	REQUIRED		
CANT. CANTILEVER(ED)	GSM. GLOBAL SYSTEM MOBILE (2G+ MOBILE TECH.)	RIGID GALVANIZED STEEL		
CB. CIRCUIT BREAKER	HDR. HARD DRAWN COPPER WIRE	REMOTE RADIO HEAD (RADIO TRANSCIVER)		
CDMA CODE-DIVISION MULTIPLE ACCESS (2G & 3G)	HDR. HEADER	RECEIVER AIR INTERFACE TRAY		
CDUK CONSOLIDATION DISTRIBUTION UNIT KIT	HGR. HANGER	SAFETY		
C.I.P. CAST IN PLACE	HPS. HIGH PRESSURE SODIUM	SCHEDULE		
CKT. CIRCUIT	HU. ISOLATED COPPER GROUND BUS	SMALL CELL		
CLG. CEILING	IN.(") INCH(ES)	SOFT DRAWN BARE COPPER		
CLR. CLEAR	INT. INTERIOR	SECONDARY		
CNU. CONCRETE MASONRY UNIT (JAMB BLOCKS)	I.L.C. INTEGRATED LOAD CENTER	SHEET		
COL. COLUMN	LAG BOLTS	SIM. SIMILAR		
CONC. CONCRETE	L.F. LINEAR FEET (FOOT)	SOLID NEUTRAL		
CONN. CONNECTION(OR)	L.G. LENGTH	SPECIFICATION(S)		
CONST. CONSTRUCTION	L.L.C. LONG(TUDINAL)	SQUARE		
CONT. CONTINUOUS	LPS. LOW PRESSURE SODIUM	STAINLESS STEEL		
d. DOUBLE	LTE. LONG TERM EVOLUTION (4G MOBILE TECH.)	STANDARD		
DBL. PENNY (NAILS)	LTD. MASONRY	STEEL		
DC. DIRECT CURRENT	LTD. MASONRY	STRUCTURAL		
DEM. DEMAND	MAX. MAXIMUM	SURFACE		
DEPT. DEPARTMENT	M.B. MACHINE BOLT	SWITCH		
D.F. DOUGLAS FIR	MECH. MECHANICAL			
DIA. DIAMETER	MFR. MANUFACTURER			
DIAG. DIAGONAL	MIN. MINIMUM			
DWG. DRAWING(S)	MISC. MISCELLANEOUS			
DWL. DOWEL(S)	ML. MONUMENT LINE			
EA. EACH	MLO. MAIN LUGS ONLY			
EGR. EMERGENCY GENERATOR RECEPTACLE				
EL. ELEVATION				
ELEC. ELECTRICAL				
ELEV. ELEVATOR				

2

3

1



STREET LIGHT POLE DETAIL
N.T.S.

LESSOR'S LEGAL DESCRIPTION

CITY OF FLAGSTAFF, CONTAINED WITHIN COCONINO COUNTY ASSESSOR PARCEL NUMBER 103-250-03E.

SURVEYOR'S NOTES

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT.

THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

ALL DISTANCES SHOWN HEREON ARE GRID DISTANCES.

FIELD INVESTIGATION NOTES

1) NO FURTHER CONFLICTS NOTED IN FIELD PER BLUESTAKE MARKINGS.

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM ARIZONA STATE PLANE CENTRAL ZONE, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

PROJECT ELEVATIONS ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS BY APPLICATION OF NGS 'GEOID 12A' MODELED SEPARATIONS TO ELLIPSOID HEIGHTS DETERMINED BY GPS RTK OBSERVATIONS. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD88 DATUM.

FLOOD ZONE

THIS PROJECT APPEARS TO BE LOCATED WITHIN FLOOD ZONE "AE" ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S), MAP ID #04005C6817G, DATED 09/03/2010.

SHEET INDEX

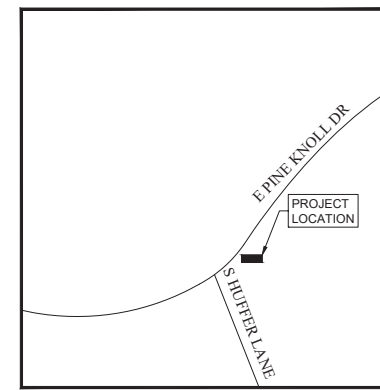
SHEET SS-1 COVER SHEET, NOTES, SITE VIEW, AND POLE AREA DETAIL

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS ARE DEFINITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT BLUE STAKE AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEY DATE

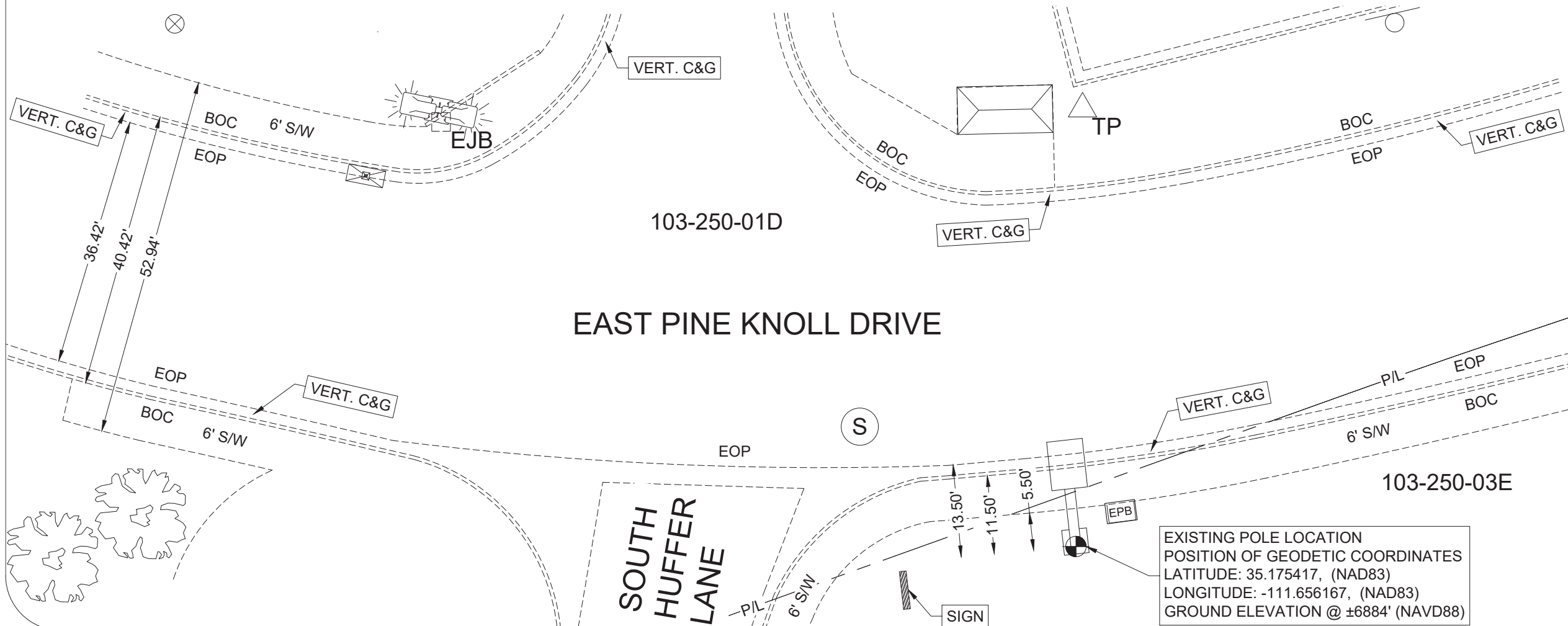
07/23/2020



VICINITY MAP
N.T.S.

LEGEND

- BOC - BACK OF CURB
- EOP - EDGE OF PAVEMENT
- CL - CENTERLINE
- R/W - RIGHT OF WAY
- BLDG - BUILDING
- ⊕ - FIRE HYDRANT
- ⊞_{EJB} - ELECTRIC J-BOX
- ⊞_{WM} - WATER METER
- ⊞ - WATER VALVE
- ⊞_{CPB} - COMMUNICATIONS PULLBOX
- ⊞_{MANHOLE} - MANHOLE STORM DRAIN
- ⊙ - POSITION OF GEODETIC COORDINATES
- ⊞ - STREET LIGHT
- ⊞ - STREET SIGN
- ⊞_{EPB} - ELECTRIC PULL BOX
- ⊞_{TRANS PAD} - TRANSFORMER
- ⊞ - BUS STOP
- ==== - CURBLINES/EDGE OF PAVEMENT
- UGE — - UNDERGROUND ELECTRIC
- S — S — - SEWER
- W — W — - WATER
- - - - - PARCEL LINE
- COM — - COMMUNICATION



EXISTING POLE LOCATION
POSITION OF GEODETIC COORDINATES
LATITUDE: 35.175417, (NAD83)
LONGITUDE: -111.656167, (NAD83)
GROUND ELEVATION @ ±6884' (NAVD88)

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201

PLANS PREPARED BY:

SCALE

No.	Revision/Issue	Date
1	REVISION	10/26/20
0	FINAL	08/22/20
A	PRELIMINARY	07/28/20

CONSULTANT:
DMS SURVEY, LLC
15582 W SHANGRI LA RD
FAX: 623-975-3516
EMAIL:
DMSLANDSURVEY@GMAIL.COM

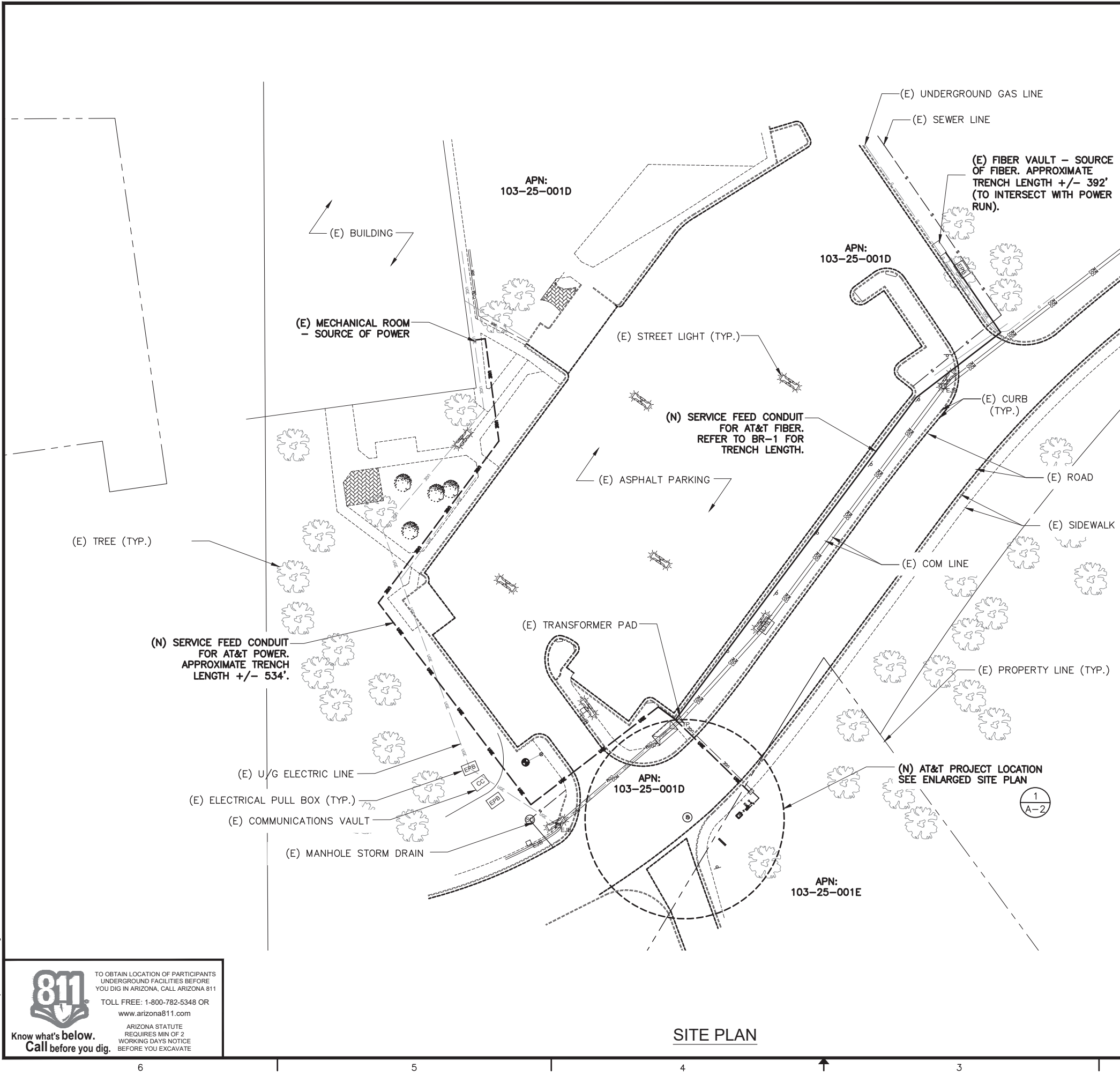
DRAWN BY:	CHK:	APV:
GS	RU	

Project Name and Address:
FS002-006-NAU
2100 SOUTH HUFFER LANE
FLAGSTAFF, AZ 86001
COCONINO COUNTY

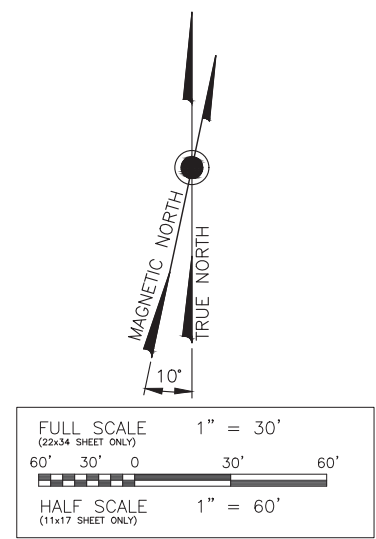
SEC 28 T 21 N R 07 E

Project:	Sheet:
FS002-006-NAU	SS-1
Date: 07/28/2020	
Scale: 1"=8'	





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- GENERAL NOTES:**
- IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.
 - UTILITY DESIGN AND RUNS ARE PRELIMINARY, PENDING FINAL DESIGN FROM UTILITY PROVIDERS.
 - PULL BOXES AND LIDS SHALL BE SPECIFIED AS CONCRETE OR APPROVED EQUAL.
 - REMOVE EXISTING SC STREET LIGHTS AND LIGHT BASE AS REQUIRED AND DISPOSE OF PROPERLY. REPLACE PARKWAY AND/OR SIDEWALK, IN KIND.
 - CONTRACTOR TO PROTECT IN PLACE ALL SEWER AND WATER LATERALS WHICH CROSS UNDER/OVER THE PROPOSED ELECTRICAL TRENCHING.
 - GENERAL CONTRACTOR SHALL RE-LOCATE ANY SIGNS ON EXISTING LIGHT POLES TO A NEW SIGN POST, OR TO THE NEW POLE AS DIRECTED BY THE JURISDICTION.
 - EDGE OF NEW ASPHALT PATCH IS A MINIMUM OF 1' FROM THE EDGE OF THE TRENCH ON BOTH SIDES. NEW ASPHALT SHALL BE PLACED 1" MORE THAN THE EXISTING ASPHALT AND A MINIMUM OF 4" THICK. REPLACE IN KIND.
 - WHERE THE EDGE OF NEW ASPHALT PATCH IS WITHIN 2' OF THE EDGE OF GUTTER, ALL EXISTING ASPHALT FROM THE EDGE OF GUTTER TO THE EDGE OF TRENCH SHOULD BE REMOVED AND REPLACED. IN THE FIELD THIS IS REFERRED TO AS A 2 FOOT FLOATER.
 - CONTRACTOR TO VERIFY SUBSTRUCTURE LOCATIONS PRIOR TO ANY EXCAVATION.
 - ALL CONDUCTORS/WIRES & CONDUIT SHALL BE INSTALLED IN A NEAT AND TIDY FASHION. ALL EXCESS WIRE SLACK IS TO BE REMOVED AND HIDDEN AS MUCH AS POSSIBLE.
 - ALL NEWLY INSTALLED EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE, OR SURROUNDINGS, UNLESS PROHIBITED BY MANUFACTURER.
 - ANY EXISTING VEGETATION THAT IS DISTURBED OR DESTROYED AS A RESULT OF THIS CONSTRUCTION SHALL BE REPLACED WITH A LIKE SIZE AND SPECIES.
 - RESTORE DISTURBED GRAVEL AREAS WITH 4" DEPTH 1" DIAMETER 'ROCK SPRINGS CHOCOLATE,' NO FABRIC. ALL LANDSCAPE AREAS, INCLUDING GRAVEL, TO BE FREE OF CONSTRUCTION DEBRIS, ROCK AND SOIL.



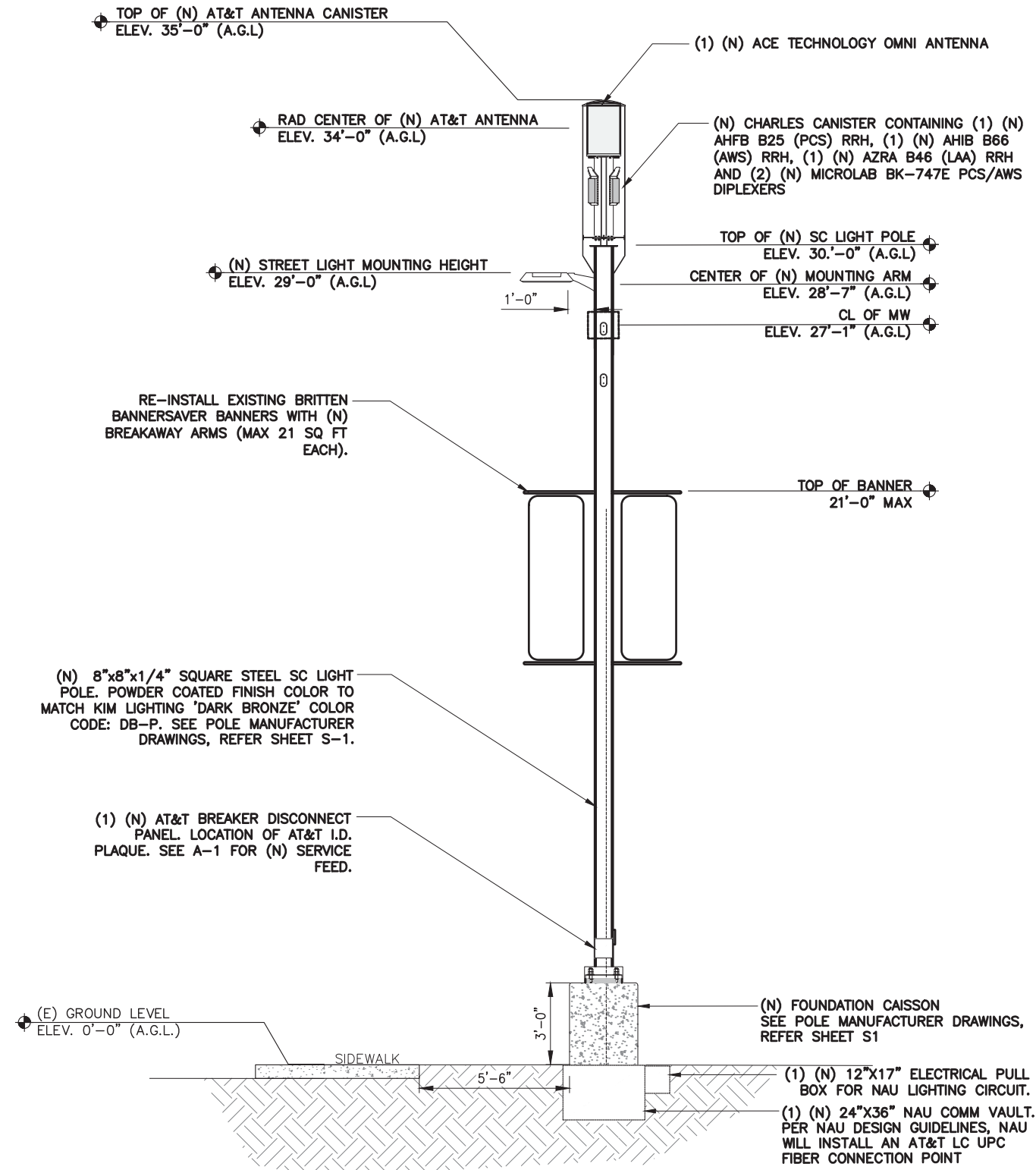
SITE PLAN

APPLICANT:			
 1355 WEST UNIVERSITY DRIVE MESA, AZ 85201-5419			
ENGINEER:			
 BECHTEL INFRASTRUCTURE AND POWER CORPORATION 2601 SOUTH 37th STREET, SUITE 200 PHOENIX, AZ 85034			
CONSULTANT:			
 15974 N. 77th STREET SCOTTSDALE, AZ 85260			
DRAWN BY: SW		CHECKED BY: MA	
REVISIONS:			
0	04/05/21	FINAL DRAWINGS	SW
REV	DATE	DESCRIPTION	BY
LICENSER:			
 REGISTERED ARCHITECT CERTIFICATE NO. 22478 MICHAEL E. STEVESON Date Signed: 04/05/2021 ARIZONA, U.S.A.			
PROJECT INFORMATION:			
FS002-006-NAU 2100 S. HUFFER LANE, FLAGSTAFF, AZ 86001			
BECHTEL DRAWING NUMBER			
26134-627-C02-0000-XXXX-XXX			
SHEET TITLE:			
SITE PLAN			
SHEET NUMBER:			
A-1			

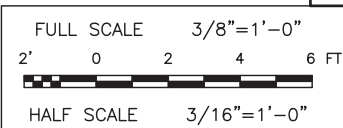
811
 TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN ARIZONA, CALL ARIZONA 811
 TOLL FREE: 1-800-782-5348 OR
 www.arizona811.com
 ARIZONA STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE
Know what's below. Call before you dig.

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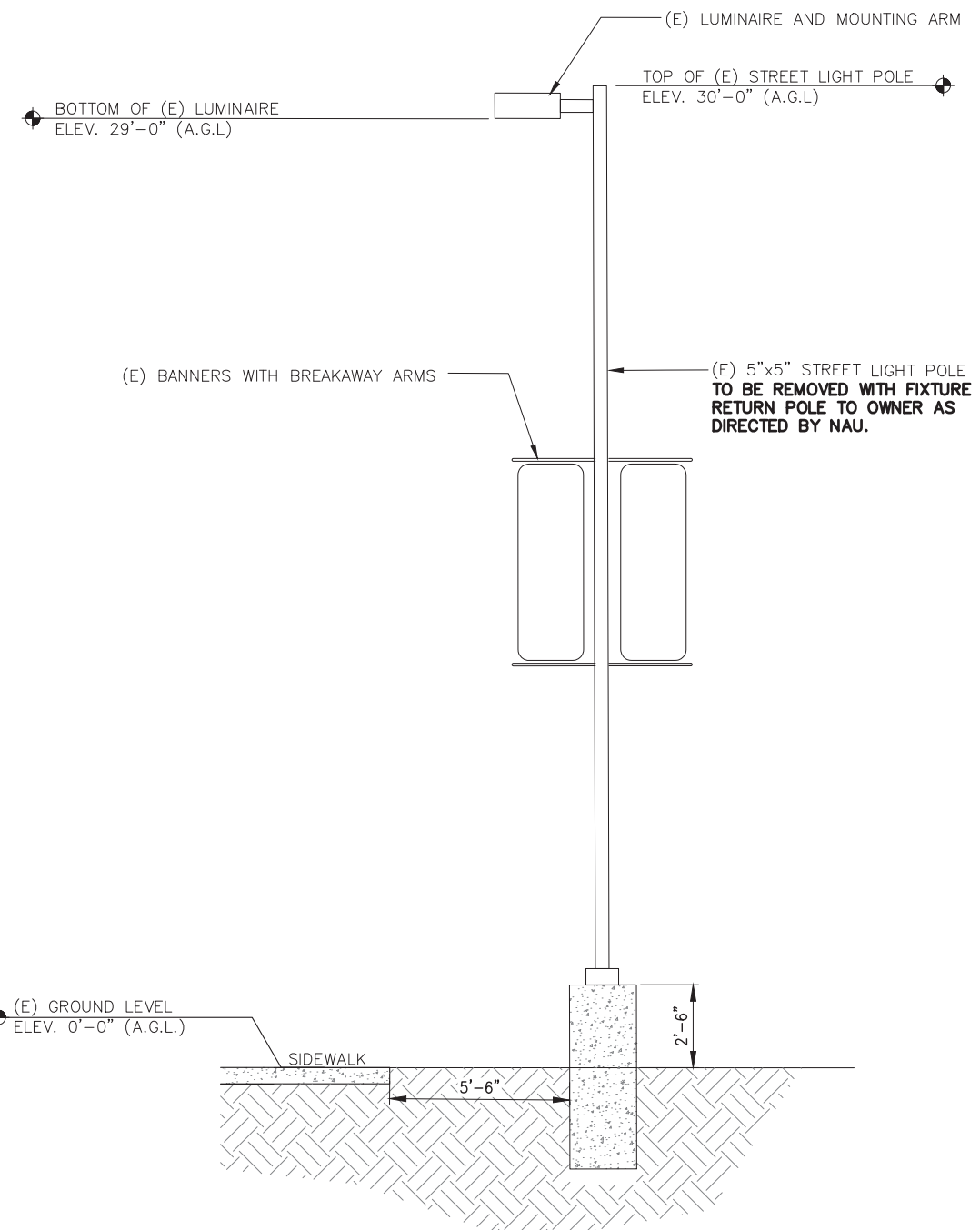
NOTE:
 1. (N) LIGHT POLE AND ANTENNA CANISTER TO BE PAINTED MATCH THE NEAREST ADJACENT (E) LIGHT POLE.
 2. (N) METER PEDESTAL SHALL BE PAINTED TO MATCH THE (N) LIGHT POLE.
 3. SITE IDENTIFICATION PLAQUE SHALL BE CENTERED ON THE EAST FACE OF METER PEDESTAL 4" FROM TOP.



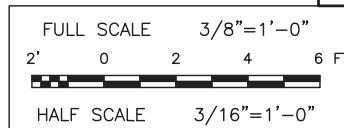
PROPOSED SOUTHWEST ELEVATION



2



EXISTING SOUTHWEST ELEVATION



1

APPLICANT:

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
 2601 SOUTH 37th STREET, SUITE 200
 PHOENIX, AZ 85034

CONSULTANT:

15974 N. 77th STREET
SCOTTSDALE, AZ 85260

DRAWN BY: SW
 CHECKED BY: MA

REVISIONS:			
REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:
FS002-006-NAU
 2100 S. HUFFER LANE,
 FLAGSTAFF, AZ 86001

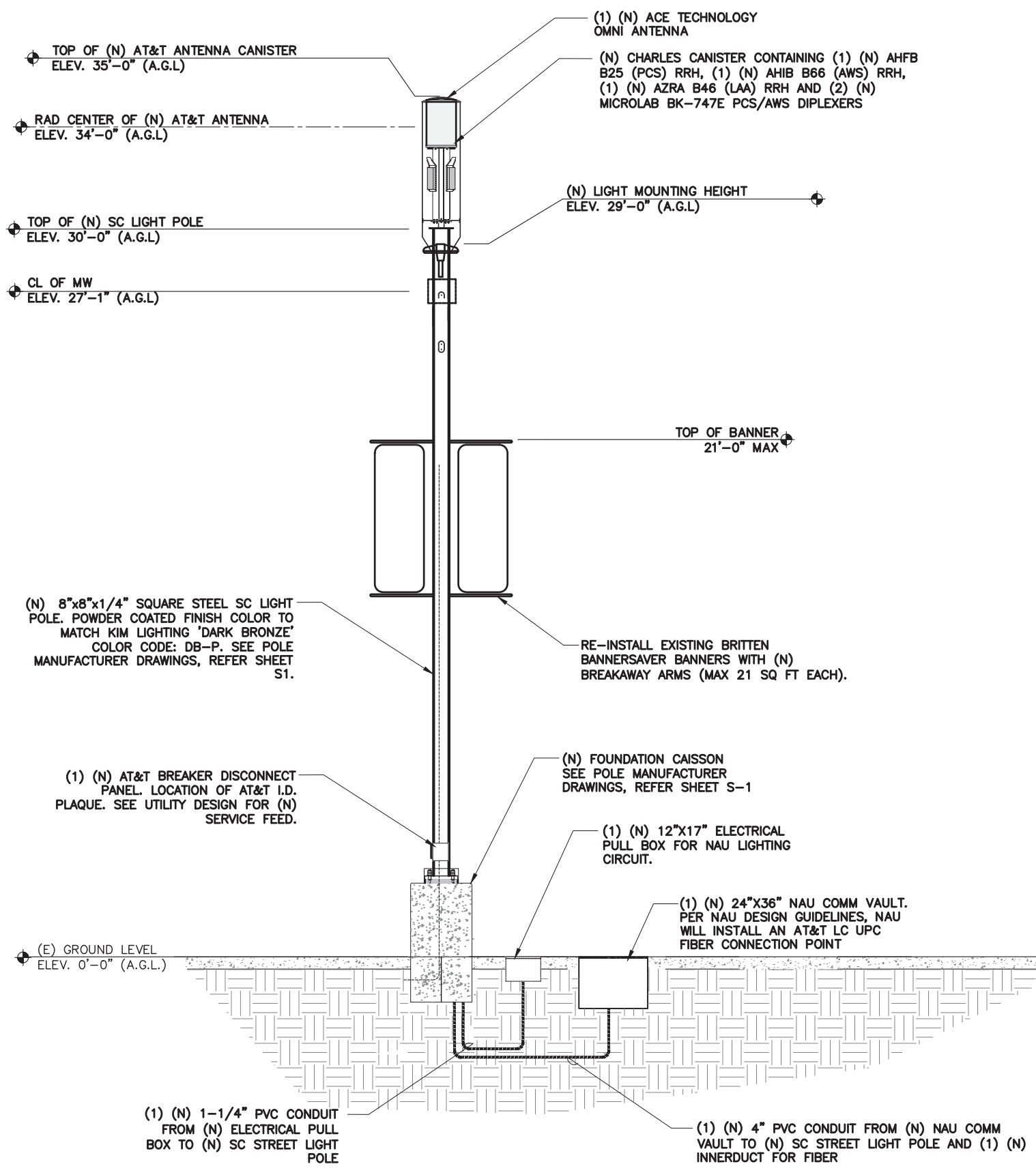
BECHTEL DRAWING NUMBER
 26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-3

22 x 34" SIZE
 PSC=

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PROPOSED NORTHWEST ELEVATION

CONSTRUCTION NOTES:

- ADJUST PHOTO EYE TO FACE NORTH.
- A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED.

ENGINEERING NOTES:

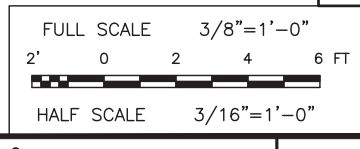
- THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINARIES WHEN DOUBLE ARM SPECIFIED.
- SEE SPEC 8130-8131 FOR IN-LINE FUSE FOR UNDERGROUND FEEDS.
- INSTALL (2) #12 THHN/THWN FROM LUMINAIRE TO FUSE HOLDER IN POLE. INSTALL UTILITY PULL BOX ADJACENT POLE WITH 1" FLEX CONDUIT TO POLE PER UTILITY SPECIFICATIONS AND REQUIREMENTS. ALL WIRING, FUSING AND GROUNDING PER UTILITY DETAILS AND SPECIFICATIONS.

NOTES:

- ALL POLE MOUNTED SIGNAGE REMOVAL AND REPLACEMENT SHALL BE COORDINATED WITH NAU PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL CONTACT NAU FOR SIGNAGE REMOVAL AND REPLACEMENT.
- REPLACEMENT STREET LIGHT POLES SHALL BE PAINTED THE SAME COLOR AS THE (E) LIGHT POLE (IF PAINTED) OR AS DIRECTED BY NAU STAFF.
- ALL ANTENNA MOUNTING BRACKETS AND HARDWARE, ANTENNA MOUNTING POSTS, CABLES, SHROUDS AND ALL OTHER EQUIPMENTS MOUNTED ON A NEW OR REPLACEMENT UNPAINTED GALVANIZED POLE SHALL BE PAINTED A 5X PRIMER SATIN GRANITE COLOR OR EQUIVALENT, UNLESS SPECIFIED OTHERWISE BY NAU.
- ALL ANTENNA MOUNTING BRACKETS AND HARDWARE, ANTENNA MOUNTING POSTS, CABLES, SHROUDS AND ALL OTHER EQUIPMENTS MOUNTED ON A PAINTED, NEW OR REPLACEMENT POLE SHALL BE PAINTED A COLOR SPECIFIED BY THE NAU.
- INSTALL POLE NUMBERS ON EACH REPLACEMENT POLE (TO MATCH THE NUMBER ON THE (E) LIGHT POLE BEING REPLACED).

SC STREET LIGHT POLE & LUMINAIRE SPECIFICATION

TYPE OF STREET	TBD
QUANTITY	1
MOUNTING HEIGHT	29'-0"
MASTARM	1
APPROVED POLE & ARM MANUFACTURERS	CEM-TEC-ATFLNAUBSQ30P-MMW KIM LIGHTING - ALT60
LUMEN	TBD
TYPE	TBD
WATTAGE	TBD
VOLTAGE	120/208/240/277 AS POWER CO. REQUIRES
LUMINAIRE STYLE	TBD
APPROVED LUMINAIRE MANUFACTURERS	KIM LIGHTING



APPLICANT:

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MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
2601 SOUTH 37th STREET, SUITE 200
PHOENIX, AZ 85034

CONSULTANT:

15974 N. 77th STREET
SCOTTSDALE, AZ 85260

DRAWN BY: SW
CHECKED BY: MA

REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

22478
MICHAEL E. STEVESON
Date Signed: 04/05/2021
ARIZONA, U.S.A.

PROJECT INFORMATION:

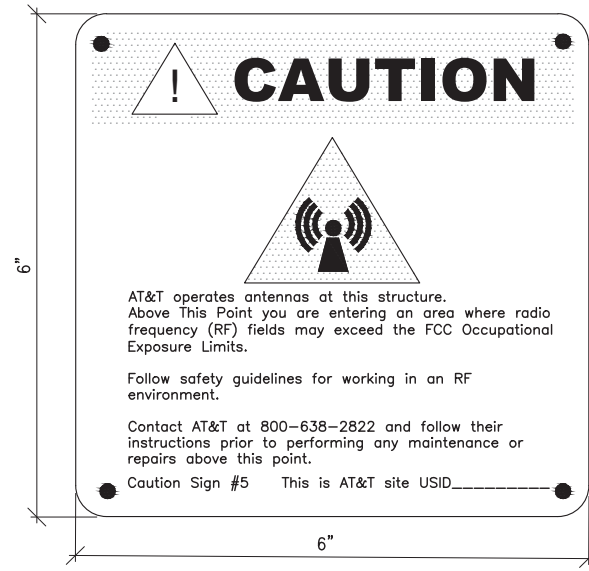
FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-4

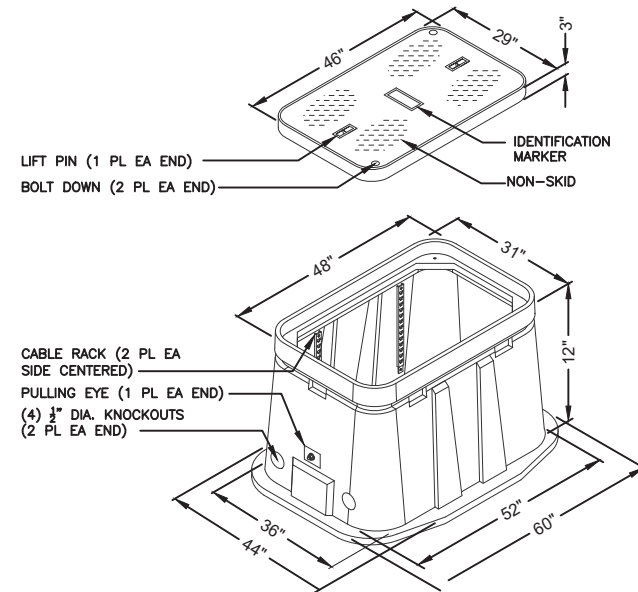
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- NOTES:
- RF RADIATION SAFETY SIGNS SHALL BE POSTED ONLY WHEN REQUIRED BY RF ENGINEERING OR LOCAL JURISDICTIONAL REQUIREMENTS. RF ENGINEERING SHALL INDICATE THE TYPE AND LOCATION OF RF RADIATION SAFETY SIGNS THAT SHALL BE POSTED WHEN REQUIRED AT A SITE. "AT&T" SHALL BE NOTIFIED IF A SIGN IS REQUIRED TO BE INSTALLED AT A SITE.
 - RF RADIATION NOTICE SAFETY SIGN SYMBOLS AND COLORING MUST CONFORM TO THE ANSI STANDARD Z535.3 FOR RADIO FREQUENCY ENERGY AND CURRENT FLOW SYMBOLS.

RF NOTICE SIGNAGE

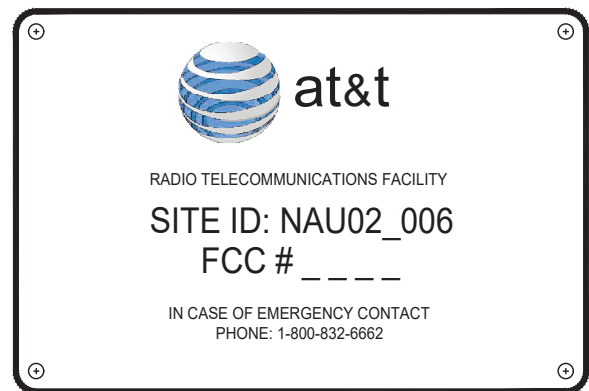
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VAULT DETAIL

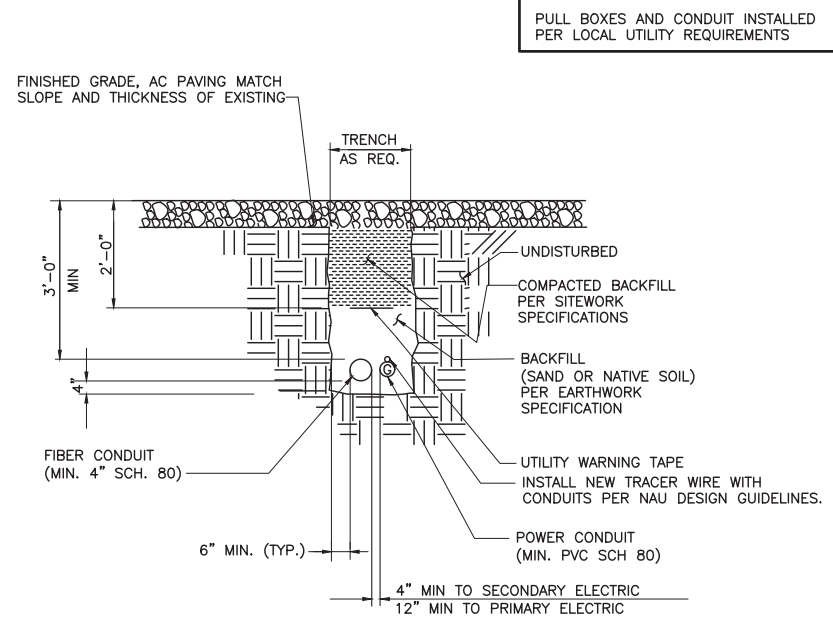
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- NOTES:
- CABINET / SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
 - TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER AT&T CONSTRUCTION MANAGER RECOMMENDATIONS.
 - CONTRACTOR TO PROCURE FCC NUMBER FROM COMPLIANCE COORDINATOR PH: (425) 895-7000
 - FOR AT&T LOGO SEE AT&T DESIGN SPECIFICATIONS (PROVIDED BY AT&T)
 - ALL TEXT FONT IS ARIAL U.N.O.



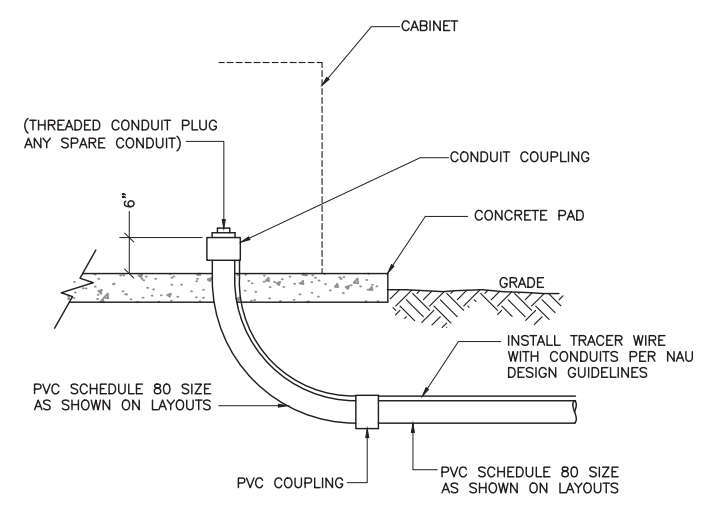
IDENTIFICATION PLAQUE DETAIL

1



CONDUIT TRENCH DETAIL

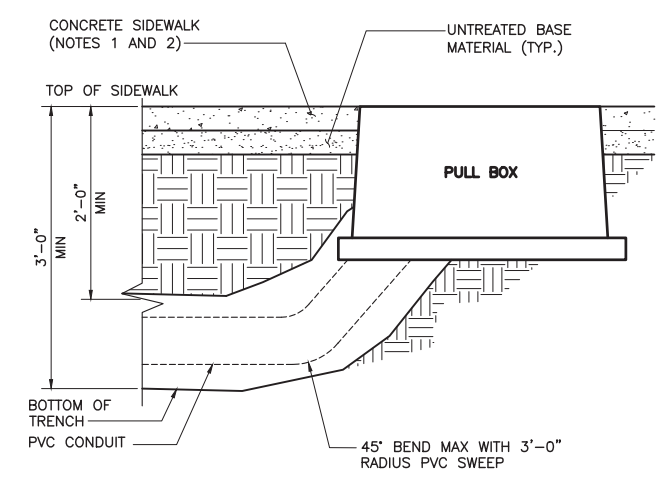
6



CONDUIT STUB-UP DETAIL

4

APS/SRP: USE DB120 PVC FOR ALL STRAIGHT CONDUIT, 36" RADIUS SCHEDULE 80 PVC SWEEPS FOR ALL ELBOWS. NO REDUCERS ARE ALLOWED IN CONDUIT SYSTEM, NO COUPLINGS OR BELL ENDS ARE ALLOWED AT EQUIPMENT LOCATIONS. ALL CONDUITS WITHIN ROAD RIGHT OF WAY OR P.U.E. MUST BE RED.



CONDUIT STUB-UP/TRENCH DETAIL

2

- NOTES:
- NO CUTS THROUGH THE (E) CONCRETE SHALL BE MADE. CONTRACTOR SHALL REMOVE/REPAIR THE (E) SQUARE CUT SECTIONS. ALONG THE PROPOSED TRENCH.
 - TOP OF PULL BOX TO BE FLUSH WITH THE CONCRETE WALKWAY.

APPLICANT:

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
2601 SOUTH 37th STREET, SUITE 200
PHOENIX, AZ 85034

CONSULTANT:

15974 N. 77th STREET
SCOTTSDALE, AZ 85260

DRAWN BY:	SW
CHECKED BY:	MA

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:

FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

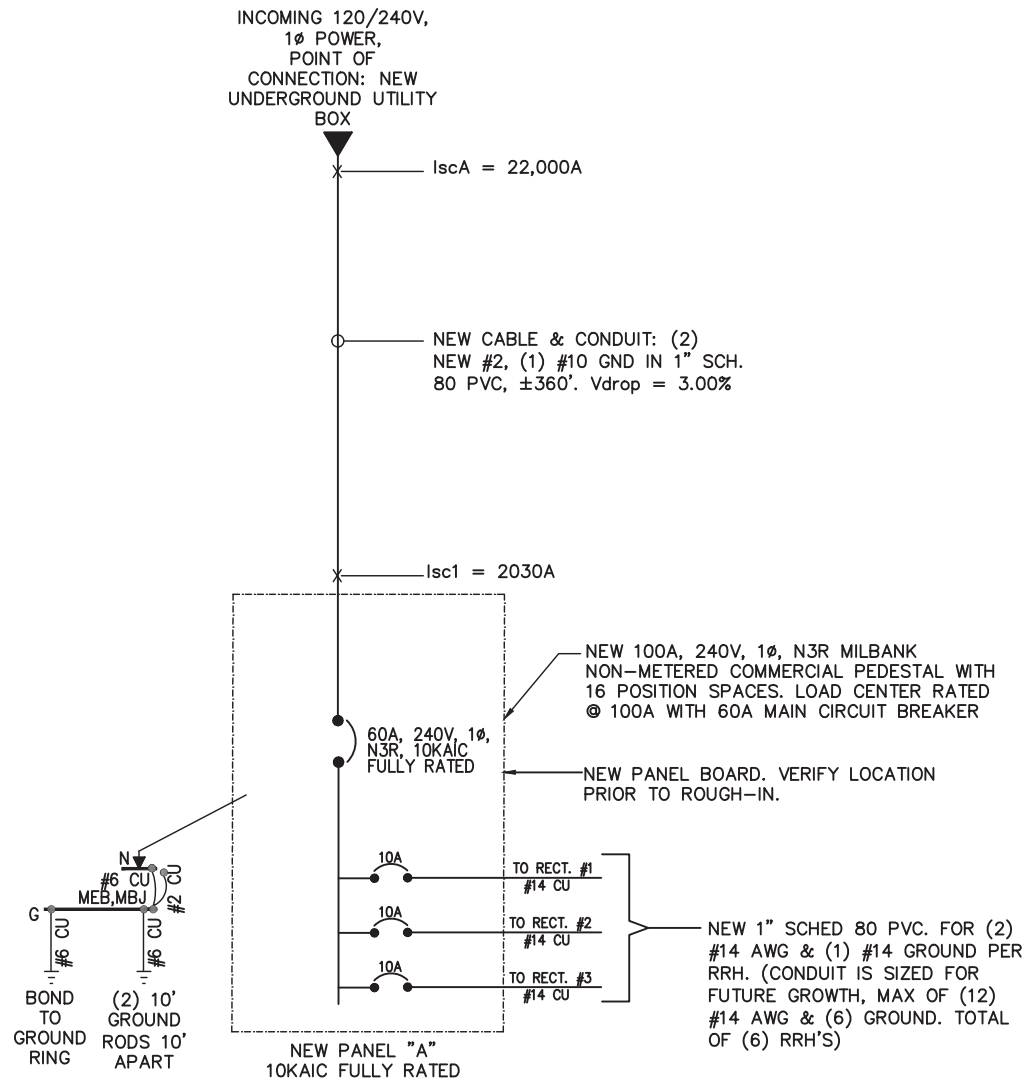
SHEET TITLE:

EQUIPMENT DETAILS

SHEET NUMBER:

D-2

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ONE-LINE DIAGRAM

AC POWER PANEL No. 001 (Main Panel)											
120/240 VOLTS, 1-PHASE, 3-WIRE, 100A											
MAIN BREAKER RATING (A):				60		SYSTEM VOLTAGE (V):					240
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
MAIN DISCONNECT			60	1	0		2				BLANK
				3		0	4				BLANK
RECTIFIER PCS RRH*	150	c	10	5	150		6				BLANK
RECTIFIER AWS RRH*	150	c	10	7		150	8				BLANK
RECTIFIER LAA RRH*	90	c	10	9	90		10				BLANK
BLANK				11			12				BLANK
PHASE TOTALS (VA):					240	150					
CURRENT PER PHASE (A):					3	2	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					390	Legend: c = continuous, nc = non-continuous					
PANEL CAPACITY (kVA):			14.4		CONNECTED LOAD (kVA): 0.4						
PANEL LOADING (100% non-cont. load) (kVA):			0.0								
PANEL LOADING (125% continuous load) (kVA):			0.5								
PANEL LOADING (TOTAL) (kVA):			0.5								
SPARE CAPACITY (kVA):			13.9								

NEW PANEL BOARD, 100A BUSS WITH 60A MAIN BREAKER

PANEL SCHEDULE

2

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PLANELOAD AND CIRCUIT ID'S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS WHERE PERMITTED SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES. USE LOW PROFILES TIE WRAPS.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR 2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
13. POWER WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

ELECTRICAL INSTALLATION NOTES

1

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MESA, AZ 85201-5419

ENGINEER:

**BECHTEL INFRASTRUCTURE
AND POWER CORPORATION**
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CONSULTANT:

**EM
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CHECKED BY: MA

REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:
FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

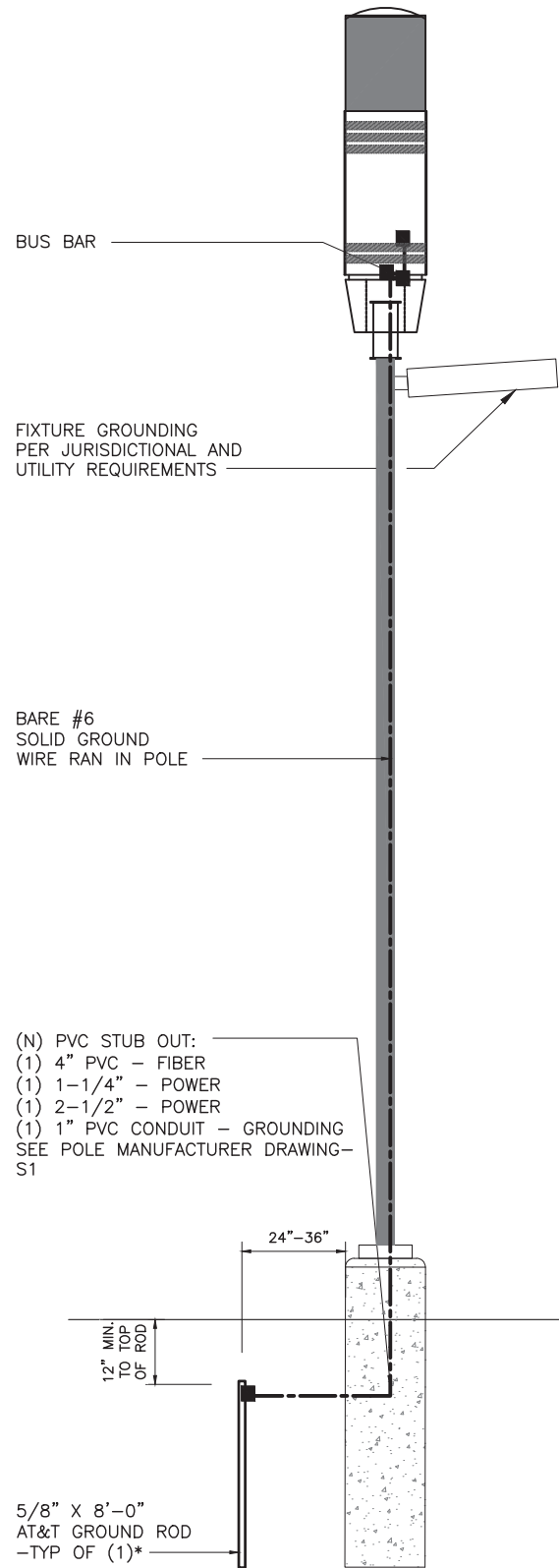
BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
**ELECTRICAL ONE-LINE
DIAGRAM INSTALLATION
NOTES**

SHEET NUMBER:
E-1

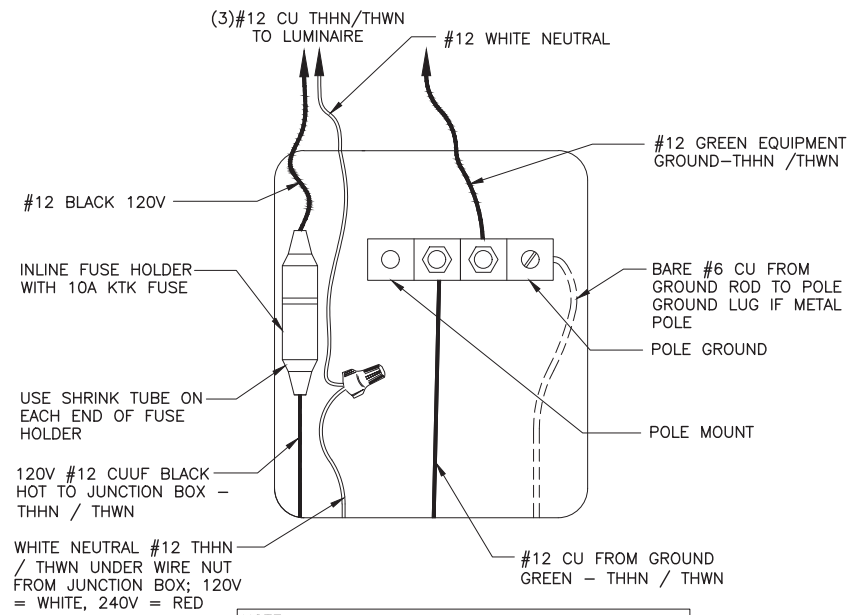
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NOTE:
SEE STREET LIGHT STANDARDS PAGE FOR GROUNDING OF
FIXTURE AND POLE DETAILS AND REQUIREMENTS.

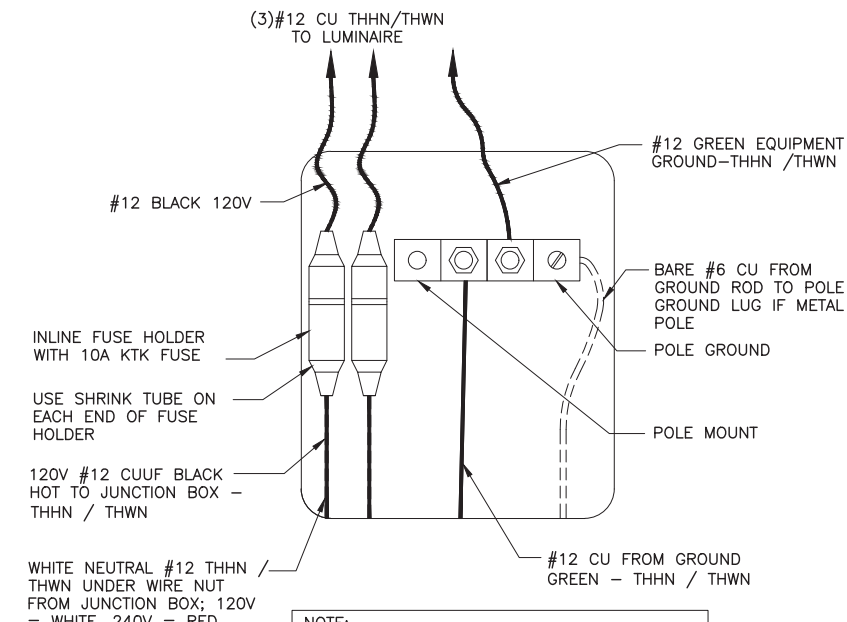


TYPICAL ANTENNA & POLE GROUNDING

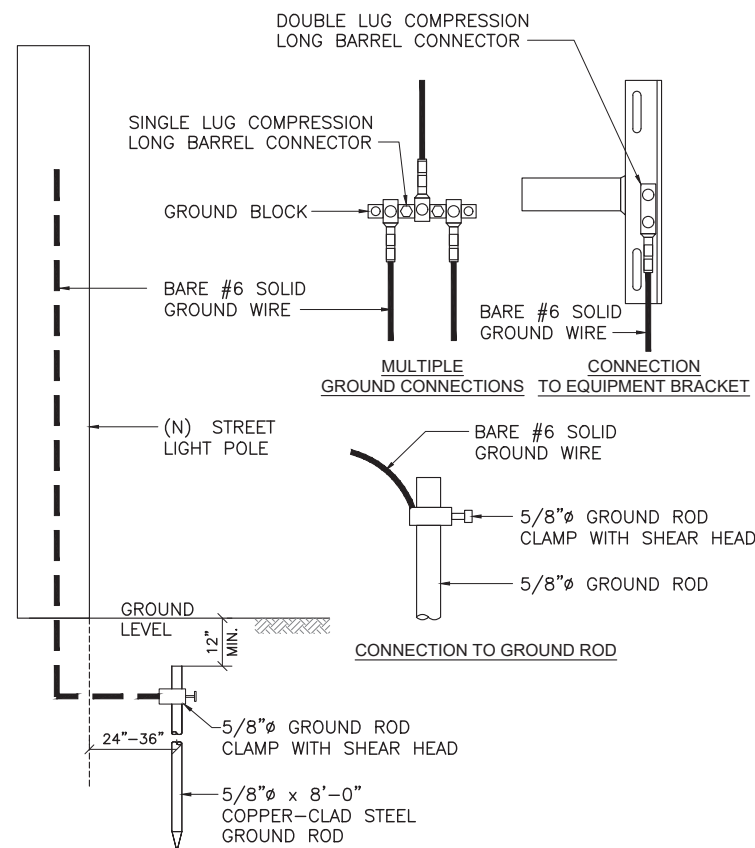
3



POLE HAND HOLE - 110V FUSING AND GROUNDING DETAIL



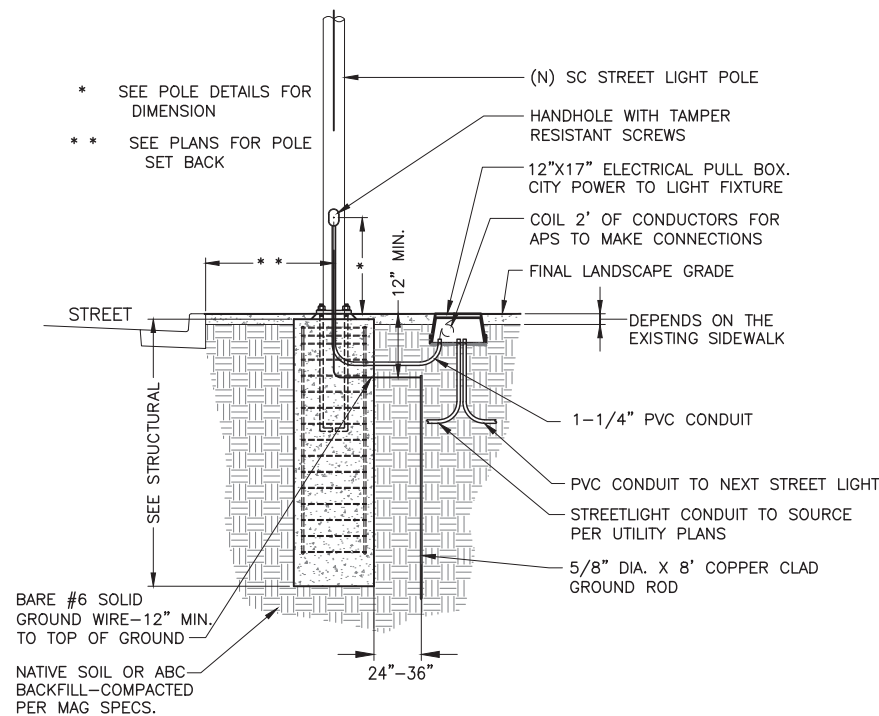
POLE HAND HOLE - 240V FUSING AND GROUNDING DETAIL



NOTE:
IF A SINGLE GROUND ROD DOES NOT HAVE A RESISTANCE TO GROUND OF 25 OHMS OR LESS, IT SHALL BE SUPPLEMENTED BY AN ADDITIONAL GROUND ROD. SEPARATION BETWEEN GROUND RODS MUST BE AT A MIN. DISTANCE OF 6'.

GROUNDING ON POLE

2



POLE GROUNDING DETAIL

1

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MESA, AZ 85201-5419

ENGINEER:

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CHECKED BY:	MA

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:

FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
GROUNDING DETAILS

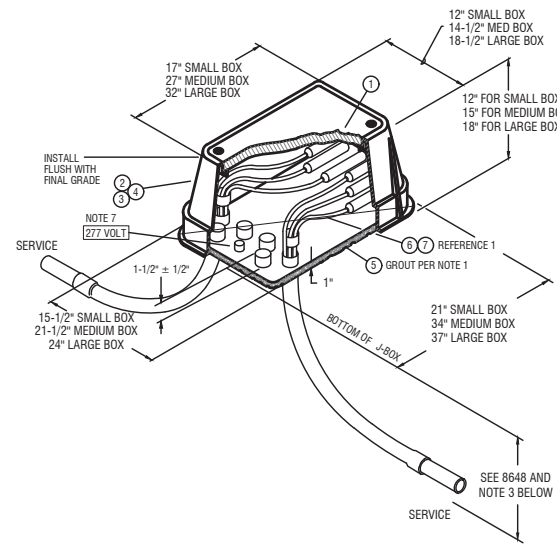
SHEET NUMBER:
G-1

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CODE	JUNCTION BARS
A	THREE-POSITION MOLDS
B	FIVE-POSITION MOLDS
C	EIGHT-POSITION MOLDS
D	TWO-POSITION GEL PACKS
N	NO CONNECTORS

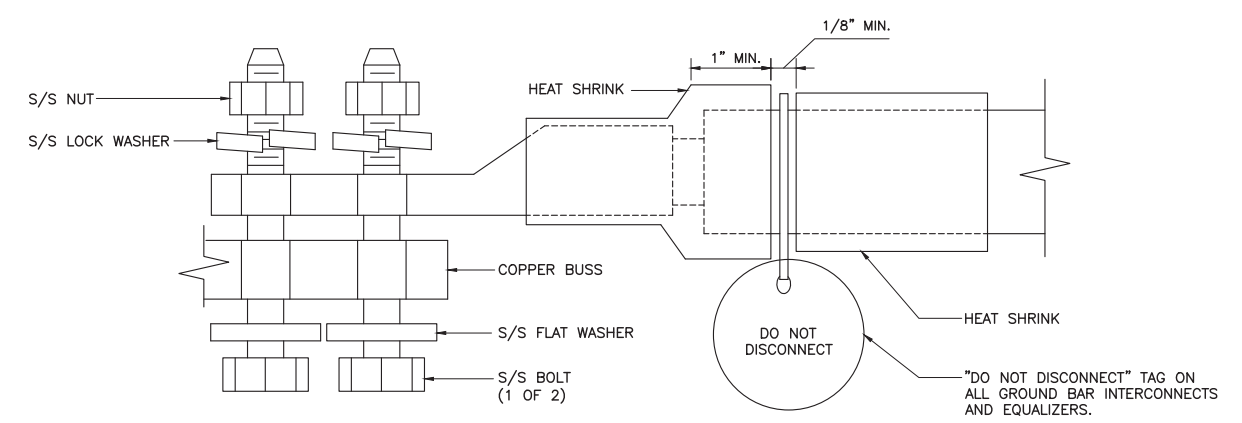
- 8655.** SEE NOTE 10 AND 11
SMALL BOX
- 8656.** SEE NOTE 10 AND 12
MEDIUM BOX
- 8657.** SEE NOTE 13
LARGE BOX
- IF APPLICABLE
G = APS GROUT PROVIDED
- IF APPLICABLE
L = LIGHTS
D = DUSK-TO-DAWN
- SECONDARY WIRE CODES
JUNCTION BARS

- NOTES:**
- CONCRETE GROUT SHALL BE PREMIX, APN 71301280 OR EQUIVALENT.
 - PENTA-HEAD BOLTS SHALL BE INSTALLED PRIOR TO ENERGIZING NEW UNDERGROUND SYSTEMS. LOST OR MISPLACED PENTA-HEAD BOLTS SHALL BE REPLACED WITH APN 71402608.
 - BRINGING ALL CABLE/CONDUITS AND GROUND ROD INTO THE SAME END OF THE BOX TO ENABLE CABLES TO BE RAISED AND LOWERED EASILY. CONDUIT SWEEPS SHALL BE POSITIONED AND ALIGNED SO THAT WHEN TWO AND FOUR POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "A". WHEN SIX POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "B".
 - COMPACTION BENEATH AND AROUND JUNCTION BOX SHALL BE A MINIMUM OF 85 PERCENT.
 - REPLACEMENT LID FOR MEDIUM PLASTIC JUNCTION BOX IS 33100981. PENTAHEAD BOLTS AND EMS MARKER MUST BE REUSED FROM OLD LID.
 - ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
 - ON 277 VOLT STREET LIGHT CIRCUITS, INSTALL "277 VOLT" RED MICARTA TAG (APN 00080796) PROVIDED BY SPEC 8129.
 - TORQUE BOLTS TO 5 FT - LBS (60 IN - LBS).

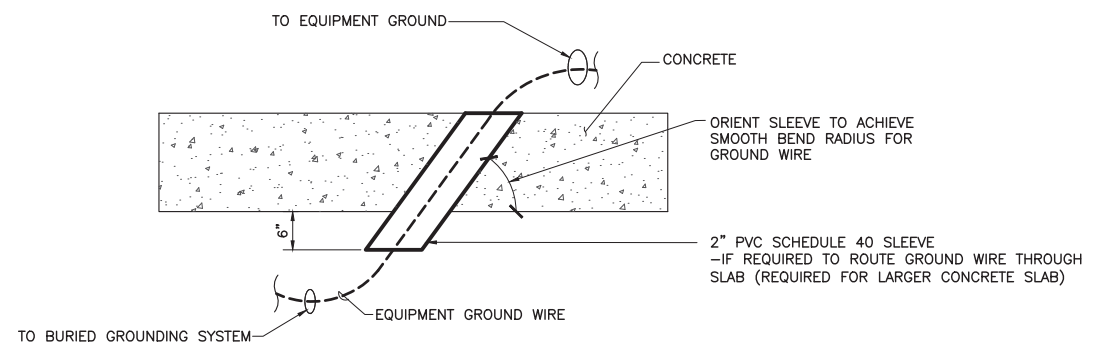


GROUNDING DETAIL

2



- NOTE:**
- ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH ANTI-OXIDANT COMPOUND BEFORE MATING.
 - ALL HARDWARE SHALL BE S/S 3/8" Ø OR LARGER
 - FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH ANTI-OXIDANT COMPOUND BEFORE MATING.



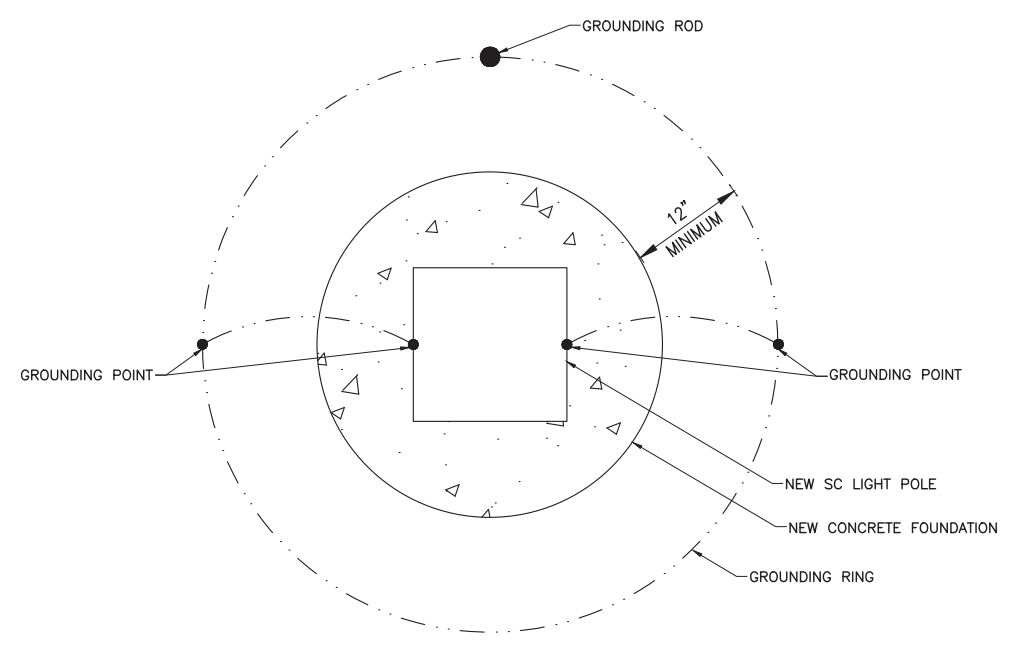
TWO LUG GROUND

1

- THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC(AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH 25471-000-3PS-EG00-0001, DESIGN & TESTING OF FACILITY GROUNDING FOR CELL SITES.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED WITH STAINLESS STEEL HARDWARE TO THE BRIDGE AND THE TOWER GROUND BAR.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222. FOR TOWERS BEING BUILT TO REV H OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE CHANGED FROM 2 AWG TO 2/0 AWG. IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM 8 FEET TO 10 FEET.

GROUNDING NOTES

3



GROUNDING COIL DETAIL

4

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REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/05/21	FINAL DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:

FS002-006-NAU
2100 S. HUFFER LANE,
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:

GROUNDING NOTES AND DETAIL

SHEET NUMBER:

G-2

22 x 34" SIZE
PSC =

GENERAL STRUCTURAL NOTES

BUILDING CODE

2018 EDITION OF THE INTERNATIONAL BUILDING CODE

LOADS

WIND
WIND SPEED (ULTIMATE 3-SEC GUST), $V_{ult} = 115$ MPH
WIND EXPOSURE CATEGORY = C
RISK CATEGORY = II

SEISMIC
 $S_{ps} = 0.375g$ (MAX)
 $S_{D1} = 0.190g$ (MAX)
SITE SOIL CLASS = D
SEISMIC DESIGN CATEGORY = B
SEISMIC FORCE RESISTING SYSTEM = STEEL TELECOMMUNICATIONS POLE (R = 1.5)

THESE DRAWINGS ARE ISSUED FOR MULTI-USE WITHIN FLAGSTAFF, ARIZONA. THE LOAD CRITERIA LISTED ABOVE IS EXPECTED TO BE SUFFICIENT FOR TYPICAL CONDITIONS ON FLAT OPEN TERRAIN BUT DOES NOT TAKE INTO ACCOUNT LOCATIONS ON HILLS, CLIFFS, SUDDEN CHANGES IN TOPOGRAPHY AND/OR OTHER SPECIAL CONDITIONS. CONTACT EOR WITH QUESTIONS OR SPECIAL CONDITIONS.

FOUNDATIONS

DRILLED PIER FOUNDATIONS ARE BASED ON THE PRESUMPTIVE SOIL BEARING VALUES PROVIDED IN TABLE 1806.2, SOIL CLASS 5 AND HAVE BEEN INCREASED BY A FACTOR OF TWO PER 1806.3.4.
ALLOWABLE LATERAL BEARING PRESSURE = $100 \text{ PSF/FT} \times 2 = 200 \text{ PSF/FT}$.

CONCRETE

ALL CONCRETE WORK SHALL COMPLY WITH THE LATEST EDITION OF THE ACI. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. PLACEMENT OF PLUMBING, CONDUITS, OR OTHER MATERIALS WITHIN CONCRETE FOUNDATIONS OR STRUCTURAL ELEMENTS IS PROHIBITED EXCEPT WHERE SHOWN.

SPECIFIED MINIMUM 28 DAY STRENGTH AS FOLLOWS:

DRILLED PIER CONCRETE: $f'_c = 3,000$ PSI MIN (CLASS "A" MAG 725)

REINFORCING STEEL (REBAR)

ALL REINFORCING SHALL COMPLY WITH ACI AND CRSI SPECIFICATIONS. FOR #5 BARS AND LARGER USE ASTM A615 GRADE 60 DEFORMED BARS ($F_y = 60$ KSI). FOR #4 BARS AND SMALLER USE ASTM A615 GRADE 40 DEFORMED BARS ($F_y = 40$ KSI). ASTM A615 BARS ARE NOT TO BE WELDED. NO WELDING OF REINFORCING BARS IS PERMITTED FOR THIS PROJECT.

CLEAR DISTANCE FROM THE EDGE OF REINFORCING BAR TO THE EDGE OF CONCRETE SHALL BE PER ACI 318 AND IS AS FOLLOWS:

CONCRETE AGAINST EARTH = 3" CLR
CONCRETE AGAINST AIR = 1-1/2" CLR (FOR NO. 5 & SMALLER)

REINFORCING STEEL SHALL BE PLACED AS SHOWN IN THE PLANS AND MUST NOT BE MORE OR LESS THAN 3/8" OF THE DIMENSIONS SPECIFIED. THIS INCLUDES MINIMUMS AND CLEAR DISTANCES. ENSURE REINFORCING IS KEPT DRY AND IS PROPERLY SUPPORTED WITH CLEAR DISTANCES FROM SOILS.

ANCHOR RODS (ANCHOR BOLTS)

ANCHORAGE TO THE CONCRETE FOUNDATION IS ACHIEVED VIA A DOUBLE-NUT MOMENT JOINT. ANCHOR RODS SHALL BE TENSIONED TO THE SPECIFICATIONS BELOW. ANCHOR RODS SHALL BE THREADED AND NUTTED. CONTRACTOR SHALL ENSURE NUTS DO NOT SPIN OFF DURING VIBRATION OF CONCRETE BY PROVIDING AN ACCEPTABLE LOCKING MECHANISM OR BY TACK WELDING THE NUT TO ANCHOR ROD. NUTS AND ANCHOR RODS ARE TO BE GALVANIZED IN SAME PROCESS TO ENSURE WORKABLE THREADS.

ANCHOR BOLT GRADE: F1554 Gr 55

TIGHTENING

ANCHOR RODS SHALL BE LUBRICATED BEFORE TIGHTENING. TIGHTENING SHALL BE PERFORMED IN A STAR PATTERN. TOP NUTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION THEN LEVELING NUTS SHALL BE MADE SNUG TIGHT. CONFIRM TORQUE AT TOP NUT IS WITHIN THE INITIAL TORQUE SHOWN IN TABLE BELOW. MARK BOLTS AFTER INITIAL TORQUE IS ACHIEVED.

TOP NUTS SHALL THEN BE TENSIONED USING THE TURN OF THE NUT METHOD BY ROTATING THE NUT A TOTAL OF 1/3 TURN PAST INITIAL TORQUE. IT IS RECOMMENDED THAT THE TOTAL 1/3 TURN BE COMPLETED USING A MINIMUM OF (2) INCREMENTAL STEPS WITH STAR PATTERN TIGHTENING. USING A CALIBRATED TORQUE WRENCH, VERIFY THAT THE VERIFICATION TORQUE HAS BEEN REACHED.

AFTER AT LEAST 48 HOURS, THE CONTRACTOR SHALL RE-VISIT THE SITE AND CONFIRM THAT A TORQUE OF AT LEAST 110% OF THE VERIFICATION TORQUE CAN BE REACHED TO ENSURE BOLTS WILL REMAIN TENSIONED AND HAVE NOT RELAXED. INSTALL SECOND NUT OR JAMB NUT ON TOP OF ASSEMBLY AND TIGHTEN JAMB NUT TO BE SNUG TIGHT.

DO NOT OVER TIGHTEN. CONTACT EOR WITH ANY EXCESSIVE TIGHTENING, STRIPPED THREADS, OR OTHER CONCERNS.

TORQUE VALUES (FT-LBS)			
FOR: 1-1/4" DIA. F1554 Gr 55	INITIAL TORQUE	VERIFICATION TORQUE ($T_v = 0.12d_n T_m$)	110% x T_v (48 HOURS LATER)
	110 - 165	550	600

STRUCTURAL STEEL

ALL STRUCTURAL STEEL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL AND ASTM STANDARDS. ALL STRUCTURAL STEEL MATERIAL MUST BE MILL CERTIFIED. ALL STRUCTURAL MEMBERS ARE TO BE HOT DIPPED GALVANIZED ACCORDING TO THE APPROPRIATE ASTM STANDARD. THE FOLLOWING STEEL GRADES SHALL APPLY UNLESS NOTED OTHERWISE.

SQUARE HSS: ASTM A500 ($F_y = 46$ KSI MIN)
BASE PLATE: ASTM A572-50 ($F_y = 50$ KSI MIN)
MISC STEEL: ASTM A36 ($F_y = 36$ KSI)

WELDING:

ALL WELDING SHALL COMPLY WITH THE LATEST EDITION OF THE AWS STANDARD. ALL WELDING SHALL UTILIZE TYPE E70 RODS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. THESE PLANS DO NOT INDICATE WHETHER WELDING MUST BE DONE IN SHOP OR FIELD. CONTRACTOR CAN PROVIDE SHOP OR FIELD WELDING AT CONTRACTORS DISCRETION AS BEST SUITS THE PROJECT'S MEANS AND METHODS.

BOLTS:

ALL THRU-BOLT TYPE CONDITIONS SHALL UTILIZE A WASHER AT EACH SIDE OF THE CONNECTION AND TIGHTENED TO A SNUG TIGHT CONDITION. SEE DETAILS FOR BOLT SIZE AND GRADE.

GENERAL NOTES

ALL WORK PRESENTED WITHIN THESE DRAWINGS AND DETAILS SHALL ONLY BE PERFORMED BY A CONTRACTOR THAT IS EXPERIENCED AND KNOWLEDGEABLE IN THE TYPE OF WORK BEING PERFORMED AND HAS A HISTORY OF COMPLETING SIMILAR PROJECTS. ONLY A CONTRACTOR THAT IS LICENSED AND REGISTERED IN THE STATE WHERE THE WORK IS TO BE PERFORMED SHALL BE PERMITTED TO PERFORM THE WORK.

CONTRACTOR MUST CONFORM TO THE CITY STANDARDS, SPECIFICATIONS, & AMENDMENTS TO THE MAG/ADOT STANDARDS. SEE CITY SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION & NOTIFY THE BUILDING OFFICIAL AND EOR OF ANY DISCREPANCIES. ADDITIONALLY, CONTRACTOR MUST BE FAMILIAR WITH THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE STRUCTURAL PLANS AND DETAILS DEPICT THE REQUIREMENTS FOR THE FINISHED STRUCTURAL ELEMENTS. THESE PLANS DO NOT PROVIDE DIRECTION FOR ELECTRICAL, MECHANICAL, OR OTHER SCOPES. THE PLANS AND DETAILS DO NOT PROVIDE THE CONTRACTOR WITH "MEANS AND METHODS" OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL REQUIRED MEASUREMENTS AND INFORMATION IN ORDER TO MEET THE STRUCTURAL REQUIREMENTS OF THESE PLANS. ANY ADDITIONAL INFORMATION NEEDED FROM THE ENGINEER OF RECORD (EOR) CAN BE OBTAINED WITH A FORMAL REQUEST FOR INFORMATION (RFI).

THE PLANS AND DETAILS DO NOT PROVIDE ENGINEERING FOR ANY SHORING, TEMPORARY BRACING, SCAFFOLDING, OR OTHERWISE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A SAFE WORK ENVIRONMENT AND TO OBTAIN ANY ADDITIONAL ENGINEERING SERVICES THAT ARE NEEDED IN ORDER TO SUPPORT TEMPORARY LOADS OR LOADS DUE TO CONSTRUCTION ACTIVITIES. THE ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE SEQUENCING, PROCEDURES, OR TECHNIQUES USED BY THE CONTRACTOR.

SPECIAL STRUCTURAL INSPECTIONS

THE SPECIAL INSPECTIONS LISTED BELOW ARE REQUIRED PER CH. 17 OF THE INTERNATIONAL BUILDING CODE.

DRILLED PIER CONSTRUCTION

1. CONTINUOUS INSPECTION OF DRILLING OPERATIONS.
2. VERIFICATION OF SOIL STRATA CONFORMANCE TO PRESUMPTIVE SOIL CLASS.
3. VERIFICATION OF DRILLED SHAFT SIZE AND CONFORMANCE TO FOUNDATION DETAIL.

CONCRETE CONSTRUCTION

1. NO CONCRETE INSPECTION & TESTING OF SPECIMENS IS REQUIRED FOR PLACEMENT OF PIER FOUNDATION CONCRETE. FOUNDATION DESIGN IS BASED ON $f'_c = 2,500$ PSI. ($f'_c = 3,000$ PSI CONCRETE TO BE PROVIDED PER CONCRETE SECTION OF GSN).

STEEL REINFORCING

1. IN-PLACE REINFORCING IN FOUNDATIONS PRIOR TO CONCRETE PLACEMENT.
2. VERIFICATION OF CONFORMANCE TO SPECIFICATIONS AND DETAILS.

ANCHOR BOLTS

1. VERIFICATION OF PROPER MATERIAL SPECIFICATIONS AND CONFORMANCE TO DETAILS.
2. VERIFICATION OF PROPER LUBRICATING AND TIGHTENING OF BOLTS.

WELDING

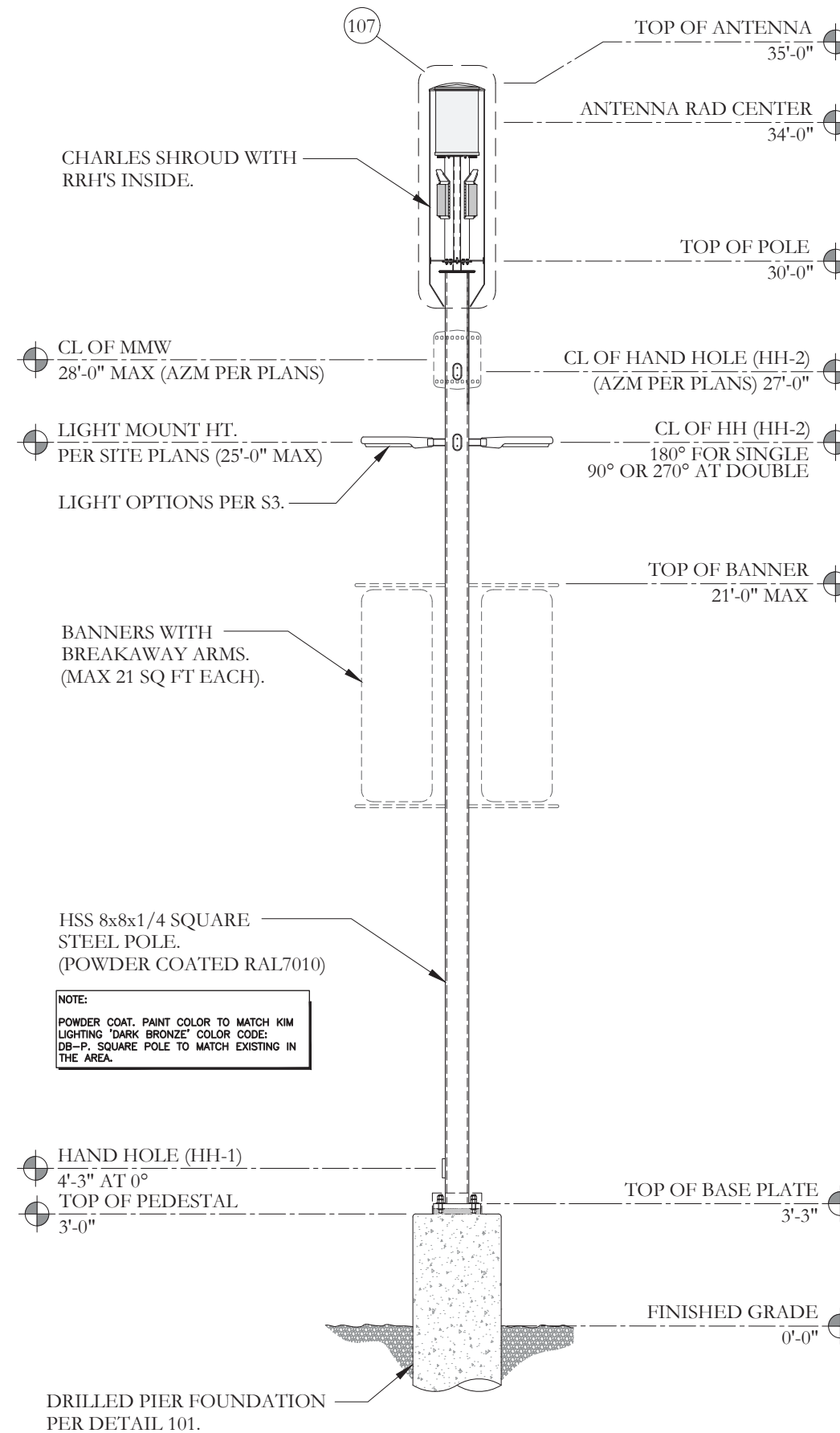
1. PERIODIC INSPECTION OF ALL FIELD WELDS.
2. CONTINUOUS INSPECTION AS REQUIRED BELOW:
 - 2.a. NO PJP, CJP, OR MULTI-PASS FILLET WELDS ARE SPECIFIED FOR THIS PROJECT.

RESPONSIBILITIES OF THE CONTRACTOR

1. ANY DEVIATIONS MUST BE APPROVED IN WRITING FROM THE EOR AND MUST BE ORIGINATED IN WRITING BY THE CONTRACTOR WITH A REQUEST FOR INFORMATION.
2. WHERE THE WORK IS REQUIRED TO BE COMPLETED IN THE PRESENCE OF THE SPECIAL INSPECTOR, THE CONTRACTOR SHALL BE SURE TO PERFORM THE WORK UNDER THE OBSERVANCE OF THE SPECIAL INSPECTOR.
3. AREAS TO BE INSPECTED BY THE SPECIAL INSPECTOR ARE TO BE MADE SAFELY ACCESSIBLE FOR INSPECTION.
4. FOR ANY QUESTIONS REGARDING SPECIAL INSPECTIONS, CONTACT THE EOR.

RESPONSIBILITIES OF THE SPECIAL INSPECTOR

1. THE SPECIAL INSPECTOR SHALL VISIT THE SITE AND ENSURE THE WORK PERFORMED CONFORMS TO THE DETAILS AND SPECIFICATIONS SHOWN ON THE PLANS.
2. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE OR SUGGEST ANY DEVIATIONS FROM WHAT IS SHOWN ON THE PLANS.
3. THE SPECIAL INSPECTOR MUST BE KNOWLEDGEABLE IN THE WORK BEING PERFORMED, KNOW THE MANUFACTURER REQUIREMENTS AND UNDERSTAND ITEMS REQUIRING INSPECTION AND OBSERVATION.
4. THE SPECIAL INSPECTOR MUST PROVIDE WRITTEN INSPECTION REPORTS TO BOTH THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL.
5. ANY DISCREPANCIES REQUIRING CORRECTION MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF LEFT UNCORRECTED, THE DISCREPANCIES MUST BE MADE KNOWN TO THE EOR AND BUILDING OFFICIAL.



A POLE ELEVATION NTS



ATFLNAU8SQ30P-MMW
SMALL CELL LIGHT POLE
MULTI USE DESIGN
FLAGSTAFF, AZ

REV	ISSUED	DATE
0	ISSUED FOR PERMIT	08.24.20
1	PEDESTAL ADDED	08.27.20

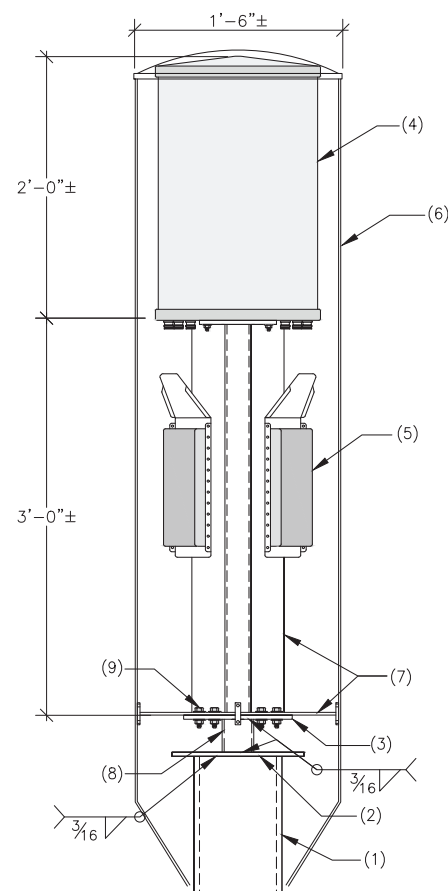


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JOB: 20-S144 | ENG: MEN

GSN & ELEVATION

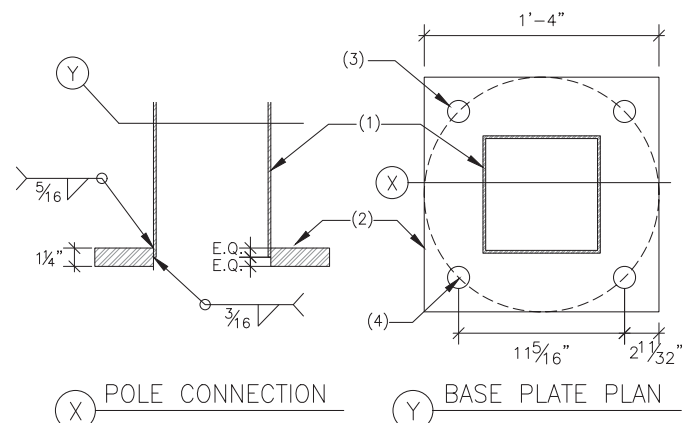
S1 | 1



1. STEEL POLE.
2. POLE TOP PLATE PER DETAIL 105.
3. MATE PLATE PER DETAIL 106
4. ANTENNA.
5. RADIO EQUIPMENT.
6. SHROUD BY CHARLES INDUSTRIES.
7. MOUNT & PLATE ASSEMBLY PROVIDED BY CHARLES INDUSTRIES.
8. 2-1/2" STD PIPE (2-7/8" OD) x 3" LONG.
9. (6) 3/8" DIA. A307 THRU-BOLTS WITH WASHER EACH SIDE. ALIGN (6) HOLES WITH HOLES PROVIDED BY CHARLES SHROUD AND BOLT DOWN. OTHER (6) HOLES ARE FOR ANTENNA ROTATIONAL ADJUSTMENTS.

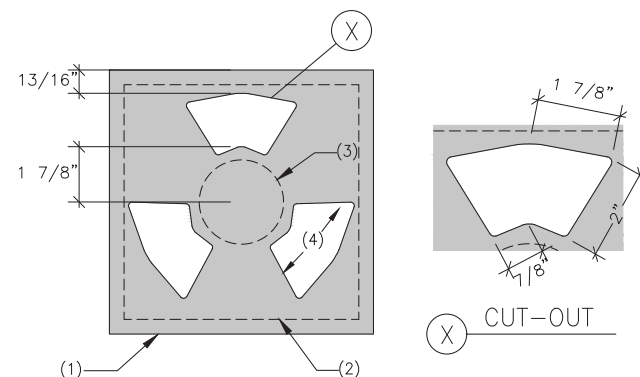
ANTENNA ATTACHMENT SUPPLIED BY CHARLES SHROUD. CONTRACTOR TO COORDINATE ANTENNA WITH CORRESPONDING CHARLES SHROUD ASSEMBLY.

107 TOP OF POLE ASSEMBLY NTS



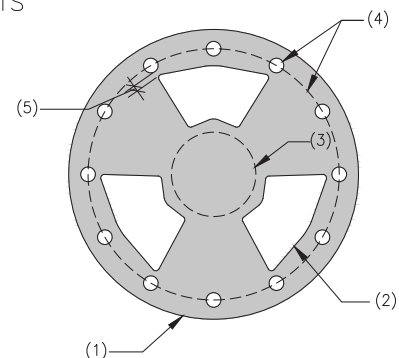
1. STEEL POLE BASE.
2. 16x16x1-1/4 STEEL BASE PLATE. A572-50 (Fy = 50 KSI).
3. 1-1/2" DIA. HOLES FOR ANCHOR BOLTS.
4. 16" DIA. BOLT CIRCLE.

104 BASE PLATE & BASE PLATE CONNECTION NTS



1. 9x9x3/8 THICK STEEL PLATE.
2. LINE OF OUTSIDE OF MONOPOLE (BELOW).
3. LINE OF OUTSIDE OF PIPE (ABOVE).
4. CUT-OUT PER DIMENSIONS SHOWN.

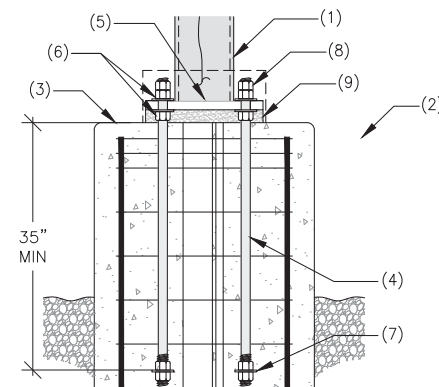
105 POLE TOP PLATE NTS



1. 9 7/8" DIA. x 3/8" THICK STEEL PLATE.
2. CUT OUT PER DETAIL 105.
3. LINE OF OUTSIDE OF PIPE (BELOW).
4. (12) 1/2" DIA. HOLES ON 8-9 1/16" BOLT CIRCLE.
5. MAINTAIN 1/4" CLEAR FROM BOLT HOLES.

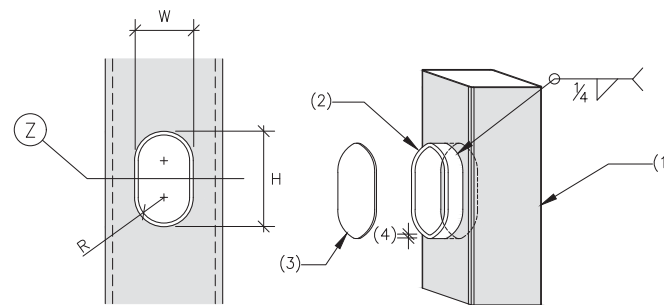
ALIGN (6) HOLES WITH (6) HOLES IN CHARLES SHROUD. OTHER HOLES ARE FOR ANTENNA ADJUSTMENTS.

106 LOWER ASSEMBLY MATE PLATE NTS

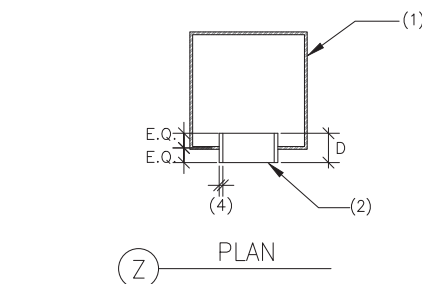


1. STEEL POLE.
2. FINISHED GRADE.
3. DRILLED PIER PER DETAIL 101.
4. (4) 1-1/4" DIA. x 44" LONG ANCHOR RODS. LEAVE 6" PROJECTION ABOVE PIER.
5. BASE PLATE AND CONNECTION TO POLE PER DETAIL 104.
6. HEAVY HEX NUT W/ STRUCTURAL WASHER AT EACH SIDE OF PLATE - TIGHTEN PER GSN.
7. MIN 3x3x1/4 PLATE WASHER W/ HEAVY HEX NUT EACH SIDE. ENSURE NO SPIN OFF PER GSN.
8. AFTER TENSIONING ROD - INSTALL SECOND NUT SNUG TIGHT.
9. AFTER TIGHTENING - PLACE 5,000 PSI NON-SHRINK GROUT.

102 BASE ANCHORAGE TO DRILLED PIER NTS



X ELEVATION Y ISOMETRIC

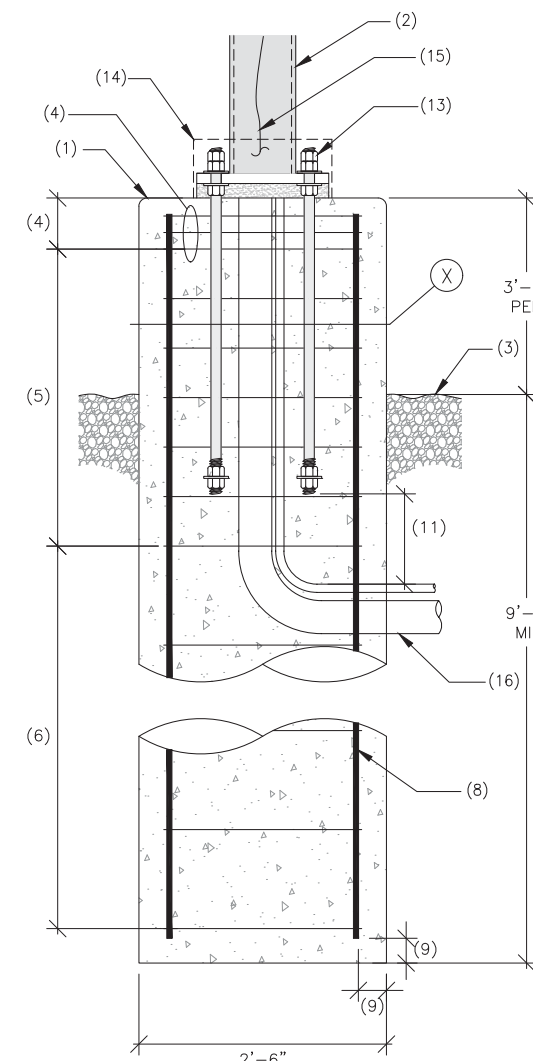


Z PLAN

1. STEEL POLE PER ELEVATION.
2. HAND HOLE - SEE POLE ELEVATION FOR LOCATION AND MARK. SEE SCHEDULE BELOW FOR CORRESPONDING SIZE.
3. PROVIDE COVER PLATE ASSEMBLY AT HAND HOLES.
4. THICKNESS PER 't' IN THE TABLE BELOW.

HAND HOLE SCHEDULE					
MARK	HEIGHT (H)	WIDTH (W)	DEPTH (D)	RADIUS (R)	THICK (t)
HH-1	6 1/2 IN	4 IN	2 IN	2 IN	3/8 IN
HH-2	5 1/2 IN	3 IN	2 IN	1 1/2 IN	1/4 IN

103 HAND HOLE SCHEDULE NTS



1. CONCRETE DRILLED PIER.
2. STEEL POLE PER ELEVATION.
3. FINISHED GRADE.
4. (3) #3 TIES IN TOP 5" OF CONCRETE PIER.
5. #3 TIES AT 6" O.C. - CONTINUED PAST ANCHOR BOLT EMBEDMENT.
6. #3 TIES AT 12" O.C MAX FOR REMAINDER OF PIER DEPTH.
7. LAP TIES 12" MIN. STAGGER LAPS 180°.
8. (8) #6 LONGITUDINAL BARS EQUALLY SPACED.
9. MIN 3" CLR PER GSN.
10. CONTRACTOR TO BIND VERTICAL RUN OF CONDUIT TOGETHER SUCH THAT BOUND CONDUIT RUN DOES NOT EXCEED 7" DIA CICLE. PLACE VERTICAL RUN IN CENTER OF DRILLED PIER.
11. 12" MIN.
12. ALTERNATE CONDUIT APPROACH.
13. ANCHOR RODS AND ANCHORAGE PER DETAIL 102.
14. SQUARE BASE COVER.
15. GROUND PER CITY REQUIREMENTS.
16. CONDUIT SIZE AND QUANTITY PER AT&T AND CITY STANDARDS. VERIFY WITH CURRENT AT&T AND CITY REQUIREMENTS.

101 DRILLED PIER FOUNDATION NTS



ATFLNAU8SQ30P-MMW
SMALL CELL LIGHT POLE
MULTI USE DESIGN
FLAGSTAFF, AZ

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1	PEDESTAL ADDED	08.27.20



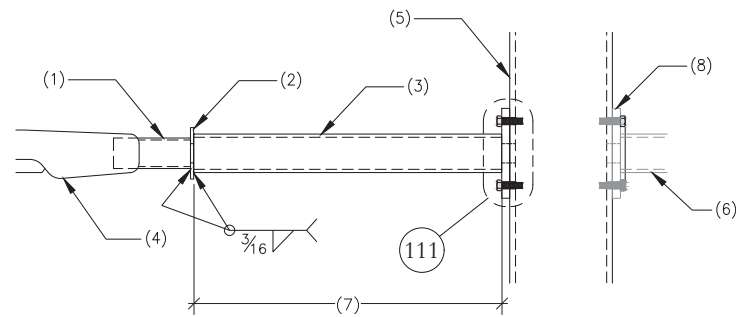
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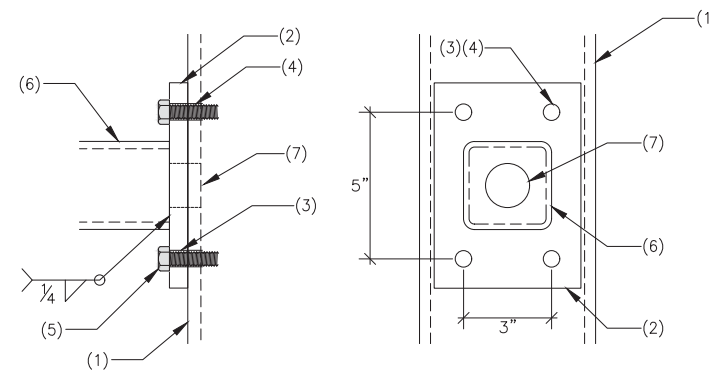
POLE DETAILS

S2 1



1. 2" STD PIPE (2-3/8" OD) TENON - 6" LONG.
2. 4"x4"x1/4" CAP PLATE WITH 1-1/2" DIA. HOLE AT CENTER.
3. HSS 3x3x3/16 SQUARE STEEL TUBE.
4. LIGHT - INSTALL PER MFR. MODEL NO.: HSF-ALT-P35-60L-2K-277-*RAL7010*-A25-7-SF.
5. POLE PER ELEVATION.
6. HAND HOLE PER ELEVATION AND HAND HOLE SCHEDULE.
7. MAST ARM OPTIONS:
 OPTION C: 2'-0" LONG
 OPTION D: 4'-0" LONG
8. OPTIONAL SECOND LIGHT ARM. AT SECOND LIGHT - MOVE HAND HOLE TO AVAILABLE POLE FACE.

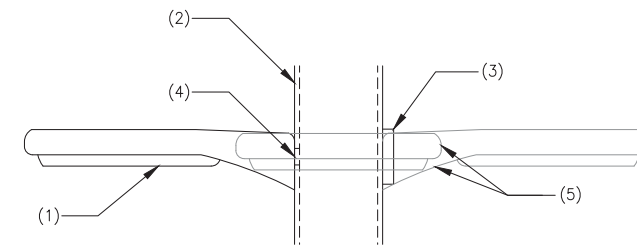
110 OPTION C & D - 2 FT & 4 FT MAST ARM
NTS



X SIDE VIEW
Y FRONT VIEW

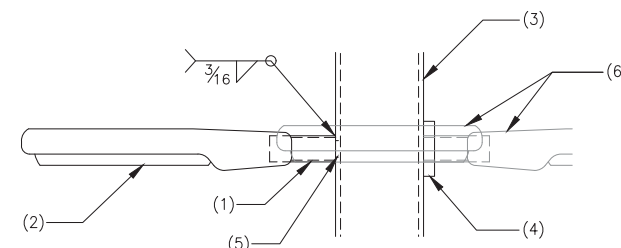
1. STEEL POLE PER ELEVATION.
2. 7x5x5/8 STEEL PLATE W/ 1-1/2" DIA. HOLE IN THE CENTER.
3. 9/16" DIA. HOLES IN STEEL PLATE.
4. DRILL AND TAP WALL OF STEEL POLE IN ORDER TO RECEIVE 1/2" DIA. A307 OR GR5 BOLTS (MATCH SUPPLIED BOLT).
5. 1/2" DIA. A307 OR GR5 BOLTS (MATCH TAPPED HOLES).
6. MAST ARM.
7. 1-1/2" DIA. HOLE IN STEEL POLE & PLATE.

111 MAST ATTACHMENT TO POLE
NTS



1. SIDE (FLUSH) MOUNTED LIGHT. FIELD DRILL & INSTALL PER LIGHT MFR. MODEL NO.: 1SA-ALT-P35-60L-2K-277-*RAL7010*-A25-7-SF
2. POLE PER ELEVATION.
3. HAND HOLE PER ELEVATION AND HAND HOLE SCHEDULE.
4. 1-1/2" DIA. HOLE.
5. OPTIONAL SECOND LIGHT AT 180° OR 90° TO SINGLE LIGHT. AT DOUBLE LIGHT, MOVE HAND HOLE TO AN AVAILABLE FACE.

108 OPTION A - SIDE MOUNT (NO TENON)
NTS



1. 2" STD PIPE (2-3/8" OD) TENON - 6" LONG.
2. LIGHT - INSTALL PER MFR. MODEL NO.: HSF-ALT-P35-60L-2K-277-*RAL7010*-A25-7-SF.
3. POLE PER ELEVATION.
4. HAND HOLE PER ELEVATION AND HAND HOLE SCHEDULE.
5. 1-1/2" DIA. HOLE.
6. OPTIONAL SECOND LIGHT AT 90° OR 180° TO SINGLE LIGHT. AT SECOND LIGHT, MOVE HAND HOLE TO AVAILABLE POLE FACE.

109 OPTION B - 6" TENON (NO MAST ARM)
NTS



ATFLNAU8SQ30P-MMW
 SMALL CELL LIGHT POLE
 MULTI USE DESIGN
 FLAGSTAFF, AZ

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0	ISSUED FOR PERMIT	08.24.20
1	PEDESTAL ADDED	08.27.20

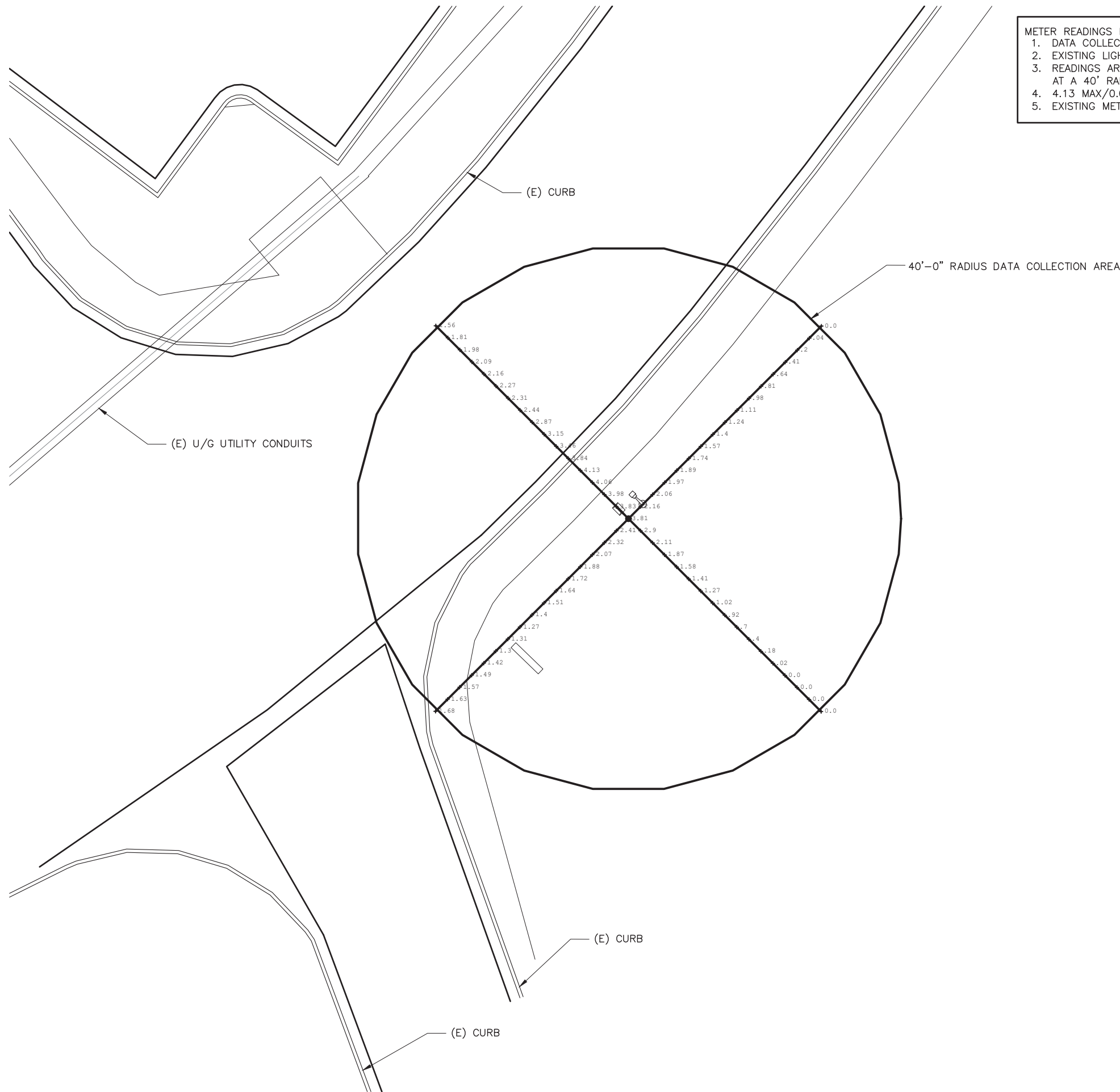


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LUMINAIRE DETAILS


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METER READINGS FROM EXISTING LUMINAIRE:
 1. DATA COLLECTED ON MARCH 5TH 2021 BY ARIZONA LIGHTING SALES
 2. EXISTING LIGHT SOURCE IS HPS (HIGH PRESSURE SODIUM)
 3. READINGS ARE TAKEN ON EACH AXIS AT 2.5' INTERVALS AT A 40' RADIUS FROM CENTER OF POLE
 4. 4.13 MAX/0.0 MIN
 5. EXISTING METER READINGS TAKEN WITH AMPROBE MODEL# LM-120 AT GRADE

APPLICANT:

AT&T
 MOBILITY
 1355 WEST UNIVERSITY DRIVE
 MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
 2601 SOUTH 37th STREET, SUITE 200
 PHOENIX, AZ 85034


CONSULTANT:

FM GROUP INC
 15974 N. 77th STREET
 SCOTTSDALE, AZ 85260

DRAWN BY: SW
 CHECKED BY: MA

REVISIONS:

REV	DATE	DESCRIPTION	BY
0	04/02/21	FINAL CONSTRUCTION DRAWINGS	SW

LICENSER:

 Date Signed: 04/05/2021
 ARIZONA, U.S.A.

PROJECT INFORMATION:
FS002-006-NAU
 FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
 26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
EXISTING FIXTURE PHOTOMETRIC ANALYSIS

SHEET NUMBER:
PM-1



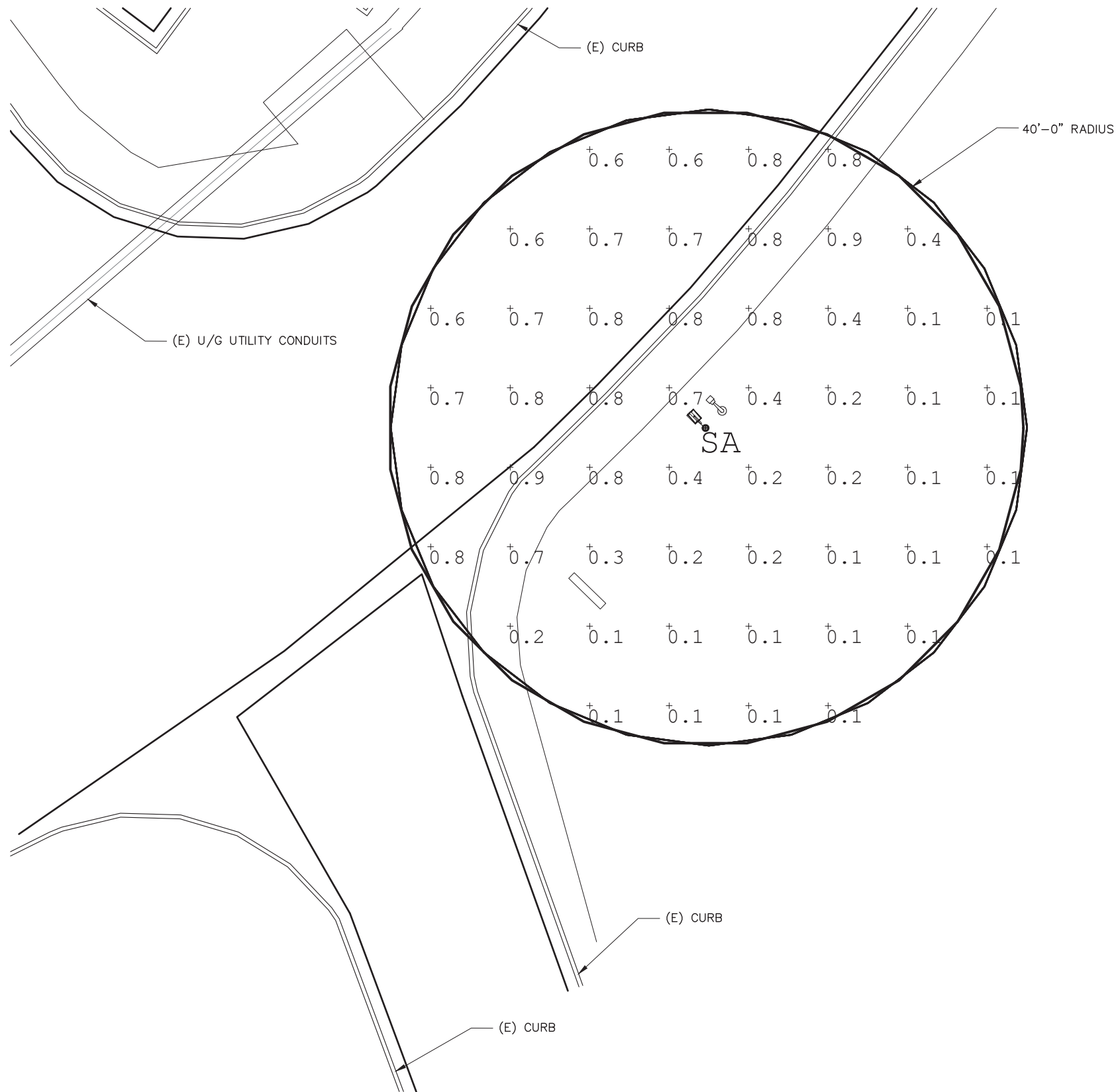
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Luminaire Schedule								
Qty	Label	Symbol	Description	Mtg Height	LLF	Lumens	Watts	Total Watts
1	SA		ALT3-168L-350-AM-4W	29'	1.000	7558	348	348

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	
Site_Area	Illuminance	Fc	0.43	0.9	0.1	4.30	9.00	

NOTES PROPOSED LIGHTING:

1. PROPOSED FIXTURE IS USING SINGLE SPECTRUM (590nm ±5nm) AMBER LED CHIP
2. MAINTAIN ILLUMINATION AVG NOT TO EXCEED 0.6Fc
3. PART# ALT3-168L-350-AM-4-UNV-A46-DB-7PR-SC
4. LUMINAIRE WILL ACCOMMODATE A 7-PIN PHOTOCELL VIA SOCKET ON TOP
5. LUMINAIRE MOUNTED AT 29' AFG
6. AVERAGE ILLUMINATION IS .43Fc
7. MAX ILLUMINATION IS 0.9Fc/MIN ILLUMINATION IS 0.1 WITHIN THE 40' RADIUS



APPLICANT:

1355 WEST UNIVERSITY DRIVE
MESA, AZ 85201-5419

ENGINEER:

BECHTEL INFRASTRUCTURE AND POWER CORPORATION
2601 SOUTH 37th STREET, SUITE 200
PHOENIX, AZ 85034

CONSULTANT:

15974 N. 77th STREET
SCOTTSDALE, AZ 85260

DRAWN BY:	SW
CHECKED BY:	MA

REVISIONS:			
REV	DATE	DESCRIPTION	BY
0	04/02/21	FINAL CONSTRUCTION DRAWINGS	SW

LICENSER:

PROJECT INFORMATION:

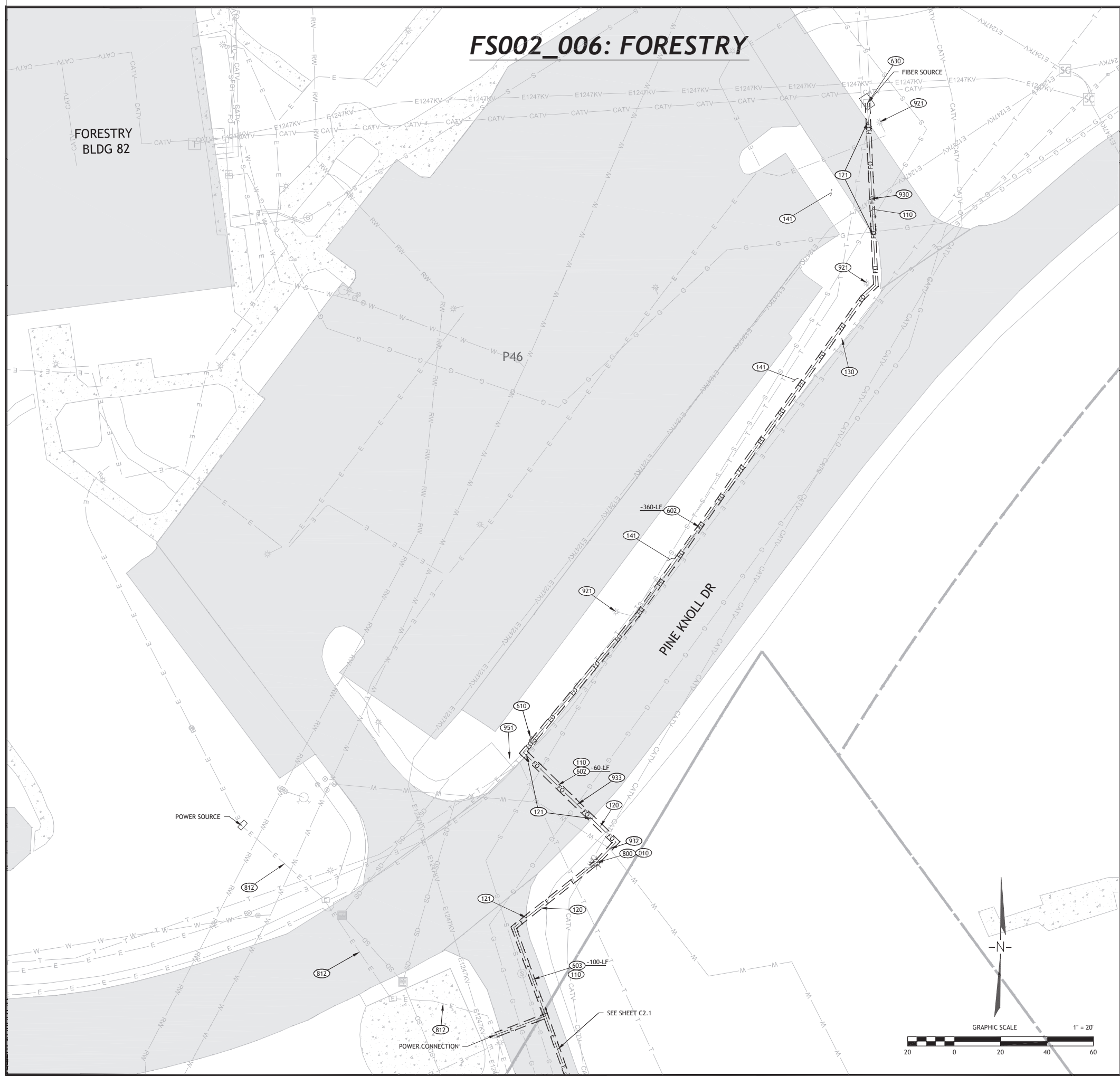
FS002-006-NAU
FLAGSTAFF, AZ 86001

BECHTEL DRAWING NUMBER
26134-627-C02-0000-XXXX-XXX

SHEET TITLE:
PHOTOMETRIC ANALYSIS

SHEET NUMBER:
PM-2

FS002_006: FORESTRY



CONSTRUCTION NOTES

- CONSTRUCTION NOTES
- NOTES:
DESIGN IS SCHEMATIC; QUANTITIES SHOWN ARE APPROXIMATE AND ROUNDED UP TO THE NEAREST 20-FT.
- REMOVALS (000)**
- 001 REMOVE & DISPOSE TREE.
 - 010 REMOVE & DISPOSE UTILITY POLE & JUNCTION BOX.
 - 011 REMOVE & DISPOSE LIGHT FIXTURE HEAD.
 - 020 REMOVE & DISPOSE RIGID CONDUIT BETWEEN VAULT & LIGHT POLE.
- REPLACEMENTS, RELOCATIONS & ADJUSTMENTS (100)**
- 100 REMOVE & REPLACE EX. FENCE AS REQUIRED.
 - 101 REMOVE & REPLACE GUARD RAIL/CABLE BARRIER/FUTS RAIL, AS REQUIRED.
 - 110 REMOVE & REPLACE EX. ASPHALT PER TRENCH DETAILS ON SHEET C1.2.
 - 120 REMOVE & REPLACE EX. CONCRETE/CURB RAMP PER DETAILS A, B, C, SHEET C1.2. REPLACE CONCRETE TO THE NEAREST JOINT.
 - 121 REMOVE & REPLACE EX. CURB OR CURB & GUTTER, MATCH CURB CONFIGURATION. REPLACE CONCRETE TO THE NEAREST JOINT.
 - 130 REMOVE & REPLACE SIGN.
 - 140 RESTORE EX. LANDSCAPE ROCK.
 - 141 REMOVE & REPLACE ALL EX. LANDSCAPE ROCK WITHIN THE CURB ISLAND WITH 4"-6" RIPRAP. COLOR: ROCK SPRINGS CHOCOLATE OR TABLE MESA BROWN.
 - 142 RESTORE EX. LANDSCAPE MULCH, PLANTING & IRRIGATION TO PRE-CONSTRUCTION CONDITIONS. PROVIDE PHOTOS OF LANDSCAPE AREA PRIOR TO CONSTRUCTION.
 - 143 RESTORE EX. SOD & IRRIGATION TO PRE-CONSTRUCTION CONDITIONS. PROVIDE PHOTOS OF LANDSCAPE AREA PRIOR TO CONSTRUCTION.
 - 144 RESTORE EX. FOREST/PINE NEEDLE DUFF/NATIVE GRASSES TO PRE-CONSTRUCTION CONDITIONS.
- NEW CONSTRUCTION (600)**
- 600 TWO 4" DATA CONDUITS AND TWO 1" POWER CONDUIT PER DETAIL A SHEET C1.2.
 - 601 ONE 4" DATA CONDUITS AND ONE 1" POWER CONDUIT PER DETAIL B SHEET C1.2.
 - 602 TWO 4" DATA CONDUITS PER DETAIL C SHEET C1.2.
 - 603 TWO 1" POWER CONDUITS PER DETAIL D SHEET C1.2.
 - 604 ONE 1" DATA CONDUIT PER DETAIL E SHEET C1.2.
 - 605 ONE 4" POWER CONDUIT PER DETAIL F SHEET C1.2.
 - 610 FIBER OPTIC PULL BOX (36" X 24") WITH TRAFFIC RATED LID.
 - 611 ELECTRICAL PULL BOX (12" X 8") WITH TRAFFIC RATED LID.
 - 630 FIELD EVALUATE SIZE OF EXISTING VAULT WITH A REPRESENTATIVE FROM NAU IT. REPLACE VAULT & LID WITH NEW PRECAST CONCRETE DATA VAULT & RECONNECT EX. CONDUIT INTO VAULT. EXISTING VAULT SIZE IS UNKNOWN, ESTIMATED SIZE 4' X 6'. PROVIDE MATERIAL SUBMITTAL FOR NEW VAULT LARGE ENOUGH TO ACCOMMODATE EXISTING FIBER CONDUIT PATHWAYS. RELOCATE STEEL PLATE TO NAU FACILITIES SERVICES AS DIRECTED BY NAU'S PROJECT MANAGER.
 - 631 FIELD EVALUATE EXISTING VAULT WITH A REPRESENTATIVE FROM NAU IT. REPAIR VAULT: REMOVE SEDIMENT & DEBRIS, AND WATERPROOF CONCRETE. CONNECT EX. 1" RIGID CONDUIT WEST OF THE VAULT (MOUNTED TO THE BOTTOM OF THE PED BRIDGE) TO THE VAULT.
 - 632 (ADDITIVE ALTERNATE) FIELD EVALUATE EXISTING VAULT WITH NAU IT. REMOVE AND REPLACE VAULT WITH PRECAST CONCRETE VAULT; ESTIMATED VAULT SIZE: 4' X 4'.
 - 633 TWO 2" RIGID DATA CONDUITS FROM DATA VAULT TO CELL TOWER J-BOX. ATTACH CONDUIT TO BOTTOM OF RAILING.
- APS INFRASTRUCTURE (700)**
- APS INFRASTRUCTURE IS SHOWN FOR COORDINATION PURPOSES. LOCATIONS ARE APPROXIMATE. INFRASTRUCTURE GENERALLY REFLECT ANTICIPATED SERVICE CONFIGURATION. SEE APS PLANS AND GENERAL DESIGN GUIDELINES FOR DESIGN AND INSTALLATION REQUIREMENTS. COORDINATE WITH CHAD BROOKS, (928) 231-3242.
- FS002_001: SKYDOME
- 700 INFRASTRUCTURE FOR POWER SERVICE: CONDUIT, JUNCTION BOX, & METER PEDESTAL. INSTALLATION: DROP FROM APS POLE TO GROUND; TRENCH CONDUIT FROM APS POLE TO NEW APS JUNCTION BOX, TRENCH CONDUIT FROM JUNCTION BOX TO NEW METER PEDESTAL (SES).
 - 710 INFRASTRUCTURE FOR POWER SERVICE: CONDUIT, TRANSFORMER, & METER PEDESTAL. INSTALLATION: TRENCH CONDUIT FROM EX. APS SWITCH TO NEW APS TRANSFORMER; TRENCH CONDUIT FROM TRANSFORMER TO NEW METER PEDESTAL (SES).
 - 720 INFRASTRUCTURE FOR POWER SERVICE: CONDUIT, JUNCTION BOX, & METER PEDESTAL. INSTALLATION: DROP FROM APS POLE TO GROUND; TRENCH CONDUIT FROM APS POLE TO NEW APS JUNCTION BOX, TRENCH CONDUIT FROM JUNCTION BOX TO NEW METER PEDESTAL (SES).
- CONSTRUCTION BY OTHERS (800)**
- CELL TOWERS/LIGHT POLES & ELECTRICAL ROUTING ARE SHOWN FOR COORDINATION PURPOSES, SEE BECHTEL PLANS.
- 800 CELL TOWER & PULL BOXES PER AT&T PLANS. REMOVE AND DISPOSE EX. POLE.
 - 810 PULL ELECTRICAL WIRING FROM SOURCE THROUGH TUNNEL PER AT&T PLANS.
 - 811 ELECTRICAL CONNECTION & WIRING PER AT&T PLANS.
 - 812 PULL ELECTRICAL WIRING FROM SOURCE THROUGH EXISTING CONDUIT PER AT&T PLANS.
 - 813 OVERHEAD ELECTRICAL WIRE FEED PER AT&T PLANS.
 - 814 RUN WIRING FROM SOURCE THROUGH BUILDING BASEMENT TO TUNNEL PER AT&T PLANS.
 - 820 PULL FIBER FROM SOURCE THROUGH TUNNEL BY NAU.
 - 821 PULL FIBER FROM SOURCE THROUGH EX. CONDUIT BY NAU.
 - 830 FIBER ROUTING & CONDUIT INSIDE EXISTING VAULT BY NAU.
 - 840 POLE DROP PER AT&T PLANS.
- OTHER ITEMS INCIDENTAL TO CONSTRUCTION (900)**
- 902 FIELD FIT CONDUIT ALIGNMENT TO AVOID TREES.
 - 903 PROTECT TREES.
 - 910 TUNNEL PENETRATION FOR CONTINUATION.
 - 911 BUILDING PENETRATION FOR CONTINUATION.
 - 912 VAULT PENETRATION FOR CONTINUATION.
 - 920 APS POLE, PROTECT POLE.
 - 921 PROTECT POWER/LIGHT POLE/CELL TOWER.
 - 930 PROTECT UNDERGROUND ELECTRIC AND/OR COMMUNICATION LINES.
 - 931 PROTECT TUNNEL.
 - 932 PROTECT WATERLINE/RECLAIMED WATERLINE/STEAM LINE/CHILLED WATERLINE.
 - 933 PROTECT GASLINE.
 - 934 PROTECT SEWER LINE.
 - 940 PROTECT STORM DRAIN.
 - 950 PROTECT CAMPUS SIGN/SURVEY MONUMENT.
 - 951 PROTECT TRASH CAN(S).
 - 960 PROTECT ATHLETIC FIELDS & TRENCH DRAIN.
 - 961 PROTECT ATHLETIC FIELDS & IRRIGATION.



928-523-9441

DATE	DESCRIPTION	REVISION

201 E. Birch Ave., Suite 3
Flagstaff, AZ 86001
(928) 774-4046



preliminary
Not For
Construction

**NORTHERN ARIZONA UNIVERSITY
AT&T SMALL CELL ON LIGHT POLES
FS002_006: FORESTRY**

BY: CAL/CIW
CHECKED: CAL

JOB NO: 21NAU01
DATE: MARCH 2021

C2.7

**SCHEMATIC DESIGN
NAU PROJECT NO. 08.040.202**