

---	PROPERTY LINE / LEASE AREA	[Pattern]	GROUTED OR PLASTER
---	CENTER LINE	[Pattern]	BRICK
---	PWR	[Pattern]	MASONRY
---	FBR	[Pattern]	CONCRETE
---	P/F	[Pattern]	STEEL
---	HYBD	[Pattern]	EARTH
---	COAX	[Pattern]	GRAVEL
---	OHP	[Pattern]	PLYWOOD
---	OHT	[Pattern]	SAND
---	E	[Pattern]	WOOD CONTINUOUS
---	T	[Pattern]	WOOD BLOCKING
---	W	[Pattern]	SPOT ELEVATION
---	S	[Pattern]	REVISION
---	SD	[Pattern]	GRID REFERENCE
---	G	[Pattern]	DETAIL REFERENCE
---	GS	[Pattern]	ELEVATION REFERENCE
---	X	[Pattern]	SECTION REFERENCE


LEGEND 7

A	AMPERE	(E)	EXISTING	LG.	LENGTH	SIM.	SIMILAR
A&E	ARCHITECTURE AND ENGINEERING	EA	EACH	LPS	LOW PRESSURE SODIUM	SIN.	SOLID NEUTRAL SPECIFICATION(S)
A.B.	ANCHOR BOLT	EGR.	EMERGENCY GENERATOR RECEPTACLE	LTE	LONG TERM EVOLUTION	S.N.	SQUARE
ABV.	ABOVE	EL.	ELEVATION	MAS.	MASONRY	S.S.	STAINLESS STEEL
AC	ALTERNATE CURRENT/ AIR CONDITIONER	ELEC.	ELECTRICAL	MAX.	MAXIMUM	STD.	STANDARD
ACCA	ANTENNA CABLE COVER ASSEMBLY	ELEV.	ELEVATOR	M.B.	MACHINE BOLT	STL.	STEEL
ADDL.	ADDITIONAL	EMT.	ELECTRICAL METALLIC TUBING	MECH.	MECHANICAL	STR.	STRUCTURAL
A.F.F.	ABOVE FINISHED FLOOR	EN.	EDGE NAIL	MFR.	MANUFACTURER	SURF.	SURFACE
A.F.G.	ABOVE FINISHED GRADE	ENCL.	ENCLOSURE	MIN.	MINIMUM	SW.	SWITCH
AFC	AMPERE INTERRUPTING CAPACITY	ENG.	ENGINEER	MISC.	MISCELLANEOUS	TEL.	TELEPHONE
ALUM.	ALUMINUM	EQ.	EQUAL	MLO	MAN LUGS ONLY	TEMP.	TEMPORARY
ALT.	ALTERNATE	ESR	EVALUATION SERVICE REPORT	MTD.	MOUNTED	THK.	THICKNESS
ANT.	ANTENNA	EXP.	EXPANSION	MTL.	METAL	TMA	TOWER MOUNTED AMPLIFIER (DC SUPPLY VOLTAGE)
APPROX.	APPROXIMATELY	EXT.	EXTERIOR	MTS.	MANUAL TRANSFER SWITCH	TOE	TOE NAIL
ARCH.	ARCHITECTURAL	FAB.	FABRICATION(OR)	N	NEUTRAL	T.O.A.	TOP OF ANTENNA
AT	AMPERE TRIP	FA.	FACTOR	NI	NEW	T.O.C.	TOP OF CURB
AWG.	AMERICAN WIRE GAUGE	F.F.	FINISH FLOOR	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.	T.O.F.	TOP OF FOUNDATION
BATT.	BATTERY	F.F.	FINISH GRADE	NO (#)	NUMBER	T.O.P.	TOP OF PLATE OR PARAPET
BD	BOARD	F.J.	FLOOR JOIST	N.T.S.	NOT TO SCALE	T.O.R.	TOP OF ROOF
B/D	BUILDING	FIN.	FINISHED	OBIF	OPTICAL BASEBAND INTERFACE	T.O.S.	TOP OF STEEL
BLK.	BLOCK	FLR.	FLOOR	OH	OVERHEAD	T.O.W.	TOP OF WALL
BLG.	BLOCKING	FLUR.	FLOURESCENT	O.C.	ON CENTER	TYP.	TYPICAL
BM	BEAM	FDN.	FOUNDATION	OPNG.	OPENING	U.G.	UNDER GROUND
B.N.	BOUNDARY NAILING	F.O.C.	FACE OF CONCRETE	(P)	PROPOSED	U.L.	UNDERWRITERS LABORATORY INC.
BR.	BRANCH	F.O.M.	FACE OF MASONRY	P	POLE	UMTS	UNIVERSAL MOBIL TECH SYS.
BRKR.	BREAKER	F.O.S.	FACE OF STUD	PIC	PRECAST CONCRETE	UN.O.	UNLESS NOTED OTHERWISE
BTWC.	BARE TINNED COPPER WIRE	F.O.W.	FACE OF WALL	PCS	PERSONAL COMMUNICATION SERVICES	V	VOLT
BTS.	BASE TRANSMISSION SYSTEM	FRP	FIBER REINFORCE POLYMER	PLY	PLYWOOD	VAC	VOLT ALTERNATING CURRENT
B.O.F.	BOTTOM OF FOOTING	F.S.	FINISH SURFACE	PNLBD	PANELBOARD	V.F.F.	VERIFY IN FIELD
BU	BACK-UP CABINET	FT.(F)	FOOT (FEET)	PRC	POWER PROTECTION CABINET	W	WATT OR WIRE
C	CONDUIT	FTG.	FOOTING	PRF	PRIMARY RACK CABINET	WID	WIDE(WIDTH)
CAB.	CABINET	FU	FUSE	PROP.	PROPERTY OR PROPERTY LINE	WO	WITHOUT
CANT.	CANTILEVERED	G	GROUND	PRI	PRIMARY	WOOD	WOOD
CB	CIRCUIT BREAKER	GR	GROWTH (CABINET)	P.S.F.	POUNDS PER SQUARE FOOT	WT	WEATHERPROOF
CDMA	CODE DIVISION MULTIPLE ACCESS	GAU.	GAUGE	P.S.I.	POUNDS PER SQUARE INCH	WTR	WEIR
CDB	CONSOLIDATION DISTRIBUTION UNIT KIT	GALV.	GALVANIZED	P.T.	PRESSURE TREATED	XFMR	TRANSFORMER
CDK	CAST IN PLACE	G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPTER	P.T.D.F.	PRESSURE TREATED DOUGLAS FIR	XLP	CROSS-LINK POLYETHYLENE
CENT.	CENTERLINE	GLB.	GLOBAL POSITIONING SYSTEM	PWR.	POWER		
CLG	CEILING	GRD.	GROUND	QTY.	QUANTITY		
CLR.	CLEAR	GSM	GLOBAL SYSTEM MOBILE	RAD.	RADIATION		
CMU	CONCRETE MASONRY UNIT	HDB	HARD DRAWN COPPER WIRE	RBS	RADIO BASE STATION		
CONC.	CONCRETE	HDR	HEADER	RCPT.	RECEPTACLE		
CONN.	CONNECTION(OR)	HGR.	HANGER	REF.	REFERENCE		
CONSTR.	CONSTRUCTION	HPS	HIGH PRESSURE SODIUM	REINF.	REINFORCEMENT(ING)		
CONT.	CONTINUOUS	HT	HEIGHT	REQD.	REQUIRED		
CONTR.	CONTRACTOR	ICC	INTERNATIONAL CODE COUNCIL	RFD.	RADIO FREQUENCY		
COV.	COVER	ICB.	ISOLATED COPPER GROUND BUS	RFS.	RIGID GALVANIZED STEEL		
DBL.	DOUBLE	IICD	INTEGRATED LEAD CENTER	R.J.	REGISTER		
DC	DIRECT CURRENT	IN.	INCHES	R.R.	ROOF RAFTER		
DEMAND	DEMAND	INT.	INTERIOR	R.R.	REMOTE RADIO UNIT (RADIO TRANSCEIVER)		
DEPT.	DEPARTMENT	INT.	INTERIOR	R/AT	RESEARCH AIR INTERFACE TRAV		
D.F.	DOUGLAS FIR	L	LONGITUDINAL	SAC	SAFETY		
DM	DIAMETER	LAR	LOS ANGELES RESEARCH REPORT	SCH.	SCHEDULE		
DN	DOWN	LAG	LAG BOLTS	SCH.	SCHEDULE		
DIAG.	DIAGONAL	L.F.	LINEAR FEET (FOOT)	SDBC	SOFT DRAWN BARE COPPER SEC SECONDARY SHEET		
DIM.	DIMENSION			SHT	SHEET		
DO	DITO (THE SAME)						
DWG.	DRAWING(S)						
DWL	DOWNWELL(S)						


ABBREVIATIONS 5

- 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. 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 ACTUABLE 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 2-10BC 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 LSI OR SHEET C-1), 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 SLUDGES OF ANY NATURE.
 - PENETRATIONS OF ROOF MEMBRANES SHALL BE PATCHED/FLASHED AND MADE WEATERTIGHT USING LUG MATERIALS IN ACCORDANCE WITH NRCA ROOFING STANDARDS AND DETAILS. CONTRACTOR SHALL OBTAIN DETAILED CLARIFICATION FOR SITE-SPECIFIC CONDITIONS FROM ENGINEER, IF NECESSARY, BEFORE PROCEEDING.
 - 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 PAGER, AND KEEP SAME ON SITE WHENEVER PERSONNEL ARE ON SITE.
 - 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.
 - CONTRACTOR IS TO EXCAVATE 6" BELOW EXISTING GRADE AND SPRAY WITH WEED CONTROL. REPLACE WITH CLASS II AGGREGATE BASE AND CROUSED WASHED ROCK, AS SPECIFIED ON SITE PLAN.
 - CONTRACTOR SHALL PROVIDE TIE FACILITY DURING ALL PHASES OF CONSTRUCTION.
 - 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.
- NOTES FOR EXISTING AT&T CELL SITES:**
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
 - SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
 - THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
 - SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
 - SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
 - SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

GENERAL NOTES 1



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

DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS

REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

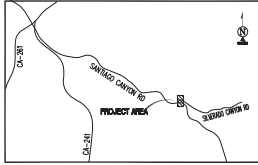
PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE
GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SHEET NUMBER
T-2



VICINITY MAP
N.T.S.

SURVEY DATE
06/28/2024

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA ZONE SIX STATE PLANE COORDINATE SYSTEM BASED ON THE NORTH AMERICAN DATUM OF 1983(2011) (EPOCH 2019.25), DETERMINED BY GLOBAL POSITIONING SYSTEM EQUIPMENT ON THE SMARTNET REFERENCE NETWORK.

BENCHMARK

PROJECT ELEVATIONS ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS BY APPLICATION OF NGS "GEOID 18" MODELLED SEPARATIONS TO ELLIPSOID HEIGHTS DETERMINED BY OBSERVATIONS OF THE "SMARTNET" REAL TIME NETWORK. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD88.

GRID-TO-GROUND SCALE FACTOR NOTE

ALL BEARINGS AND DISTANCES ARE BASED ON THE CALIFORNIA SIX STATE PLANE COORDINATE ZONE GRID. TO DERIVE GROUND DISTANCES DIVIDE BY 0.99993492

FLOOD ZONE

THIS PROJECT APPEARS TO BE LOCATED WITHIN FLOOD ZONE "X", ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S), MAP ID #06059C0306J, DATED 12/3/2009

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 811 AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

TITLE REPORT NOTE

THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. THIS MAP IS SUBJECT TO ALL LEGAL EASEMENTS AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, THAT WOULD BE DISCLOSED IN SUCH TITLE REPORT.

LESSOR'S LEGAL DESCRIPTION (PER TITLE)
TO BE PROVIDED BY TITLE.

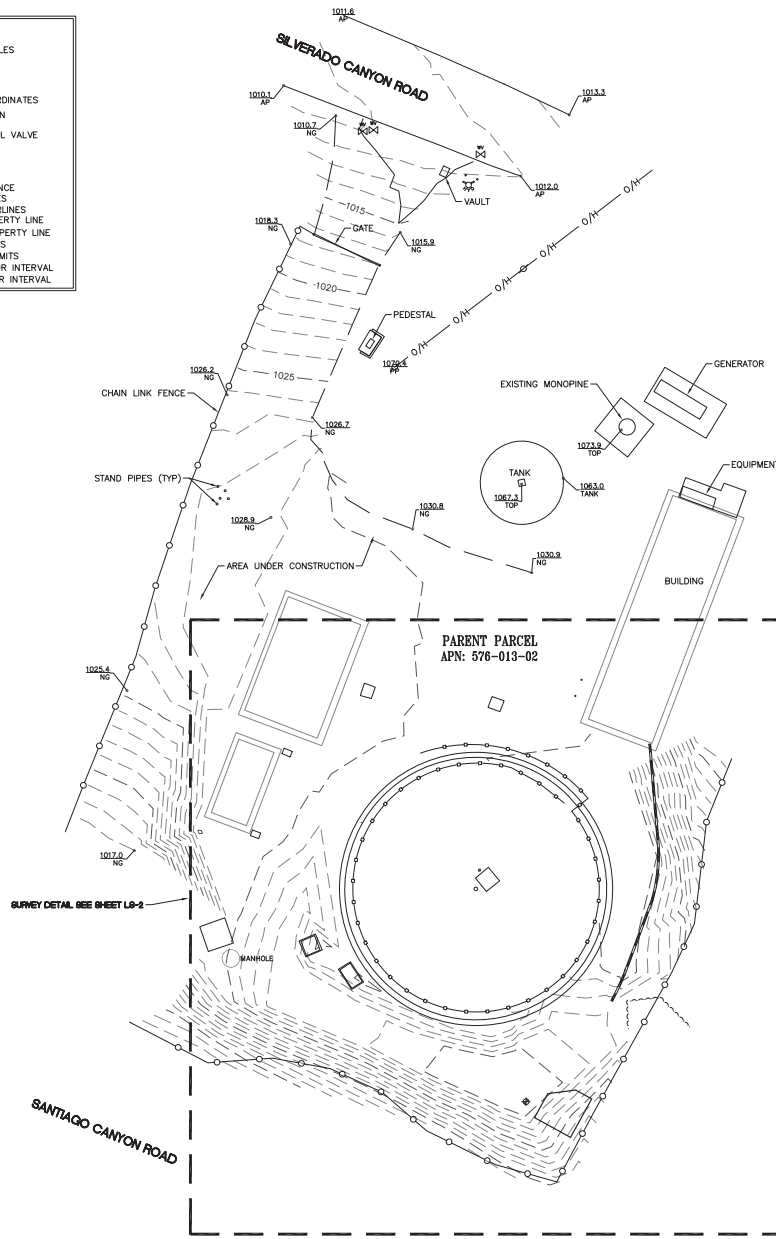
SURVEYOR'S NOTES

CONTOURS DERIVED FROM DIRECT FIELD OBSERVATIONS AND FOLLOW THE CURRENT NATIONAL MAP STANDARDS FOR VERTICAL ACCURACY.

THE BOUNDARY LINES SHOWN HEREON ARE BASED ON MAPS OF RECORD AND DEED INFORMATION AS PROVIDED BY A TITLE REPORT AND A SEARCH OF THE COUNTY RECORDER AND SURVEYOR ONLINE DATABASE. A FIELD SURVEY HAS BEEN PERFORMED AND MONUMENTATION HAS BEEN RECOVERED TO PLACE THE RECORD INFORMATION. RECORD BEARINGS HAVE BEEN ADJUSTED TO THE BASIS OF BEARING STATEMENT SHOWN ON THIS SURVEY. THIS SURVEY DOES NOT MAKE ANY ATTEMPT TO RECONCILE ANY ERRORS IN THE RECORD MAPS OR DEEDS OF RECORD.

ALL DISTANCES SHOWN HEREON ARE GRID DISTANCES.

LEGEND			
AP	ASPHALT	○	UTILITY MANHOLES
BLDG	TOP OF BUILDING	○	FIRE HYDRANT
CLF	CHAIN LINK FENCE	○	UTILITY POLE
CMU	CONCRETE MASONRY UNIT	○	POSITION OF GEODETIC COORDINATES
CONC	CONCRETE	○	NATURAL GRADE
NG	NATURAL GRADE	○	SPOT ELEVATION
WALL	TOP OF WALL	○	WATER CONTROL VALVE
P.O.B.	POINT OF BEGINNING	○	PINE TREES
P.O.C.	POINT OF COMMENCEMENT	○	
P.O.T.	POINT OF TERMINUS	○	
—		—	CMU WALLS
—		—	CHAIN LINK FENCE
—		—	OVERHEAD LINES
—		—	STREET CENTERLINES
—		—	SUBJECT PROPERTY LINE
—		—	ADJACENT PROPERTY LINE
—		—	EASEMENT LINES
—		—	LEASE AREA LIMITS
—		—	MAJOR CONTOUR INTERVAL
—		—	MINOR CONTOUR INTERVAL



FOR EXAMINATION ONLY

APPLICANT:

1452 EDINGER AVENUE
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ENGINEER:

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DRAWN BY: CK
CHECKED BY: MF

REVISIONS:		
REV	DATE	DESCRIPTION
A	07/02/24	PRELIMINARY (CK)

428 MAIN STREET
SUITE 206
HUNTINGTON BEACH, CA 92648
PH. (480) 659-4072
www.ambitconsulting.us

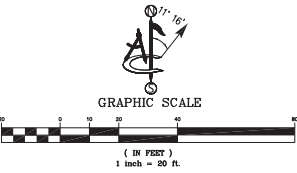
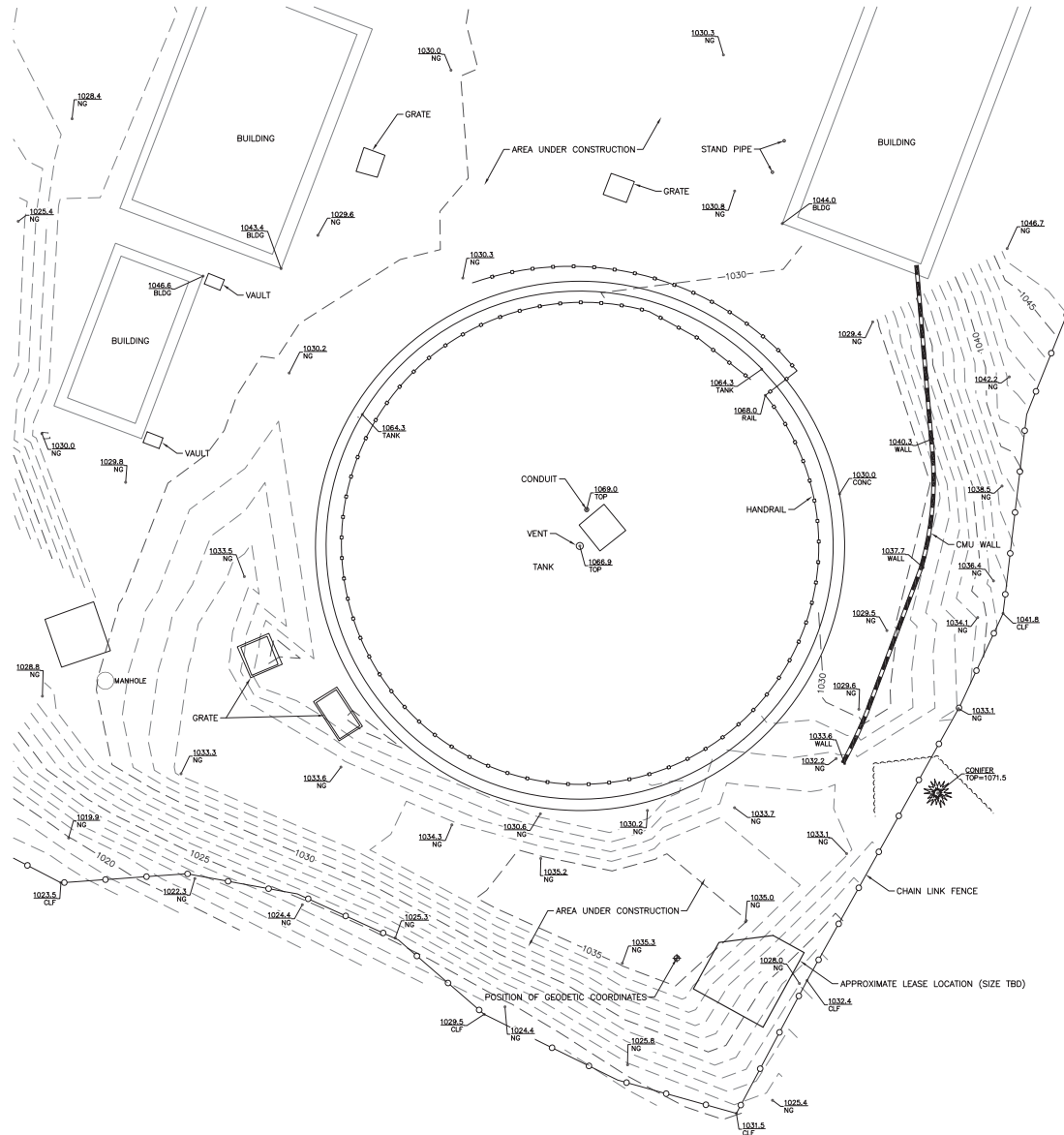
PROJECT INFORMATION:
CLL04972
7431 1/2 SANTIAGO CANYON ROAD
SILVERADO, CA 92676
ORANGE COUNTY

SHEET TITLE:
SITE SURVEY

SHEET NUMBER:
LS-1

LEGEND			
AP	ASPHALT	○	UTILITY MANHOLES
BLDG	TOP OF BUILDING	⊗	FIRE HYDRANT
CLF	CHAIN LINK FENCE	○	UTILITY POLE
CMU	CONCRETE MASONRY UNIT	○	POSITION OF GEODETIC COORDINATES
CONC	CONCRETE	○	SPOT ELEVATION
NG	NATURAL GRADE	○	WATER CONTROL VALVE
WALL	TOP OF WALL	○	PINE TREES
P.O.B.	POINT OF BEGINNING	○	
P.O.C.	POINT OF COMMENCEMENT	○	
P.O.T.	POINT OF TERMINUS	○	
CMU WALLS CHAIN LINK FENCE OVERHEAD LINES STREET CENTERLINES SUBJECT PROPERTY LINE ADJACENT PROPERTY LINE EASEMENT LINES LEASE AREA LIMITS MAJOR CONTOUR INTERVAL MINOR CONTOUR INTERVAL			

POSITION OF GEODETIC COORDINATES
 LATITUDE 33° 44' 53.45" (33.748181°) NORTH (NAD83)
 LONGITUDE 117° 40' 14.87" (117.670797°) WEST (NAD83)
 GROUND ELEVATION @ 1035.0' (NAV88)



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PROJECT INFORMATION:

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7431 1/2 SANTIAGO CANYON ROAD
 SILVERADO, CA 92676

ORANGE COUNTY

SHEET TITLE:

SITE SURVEY

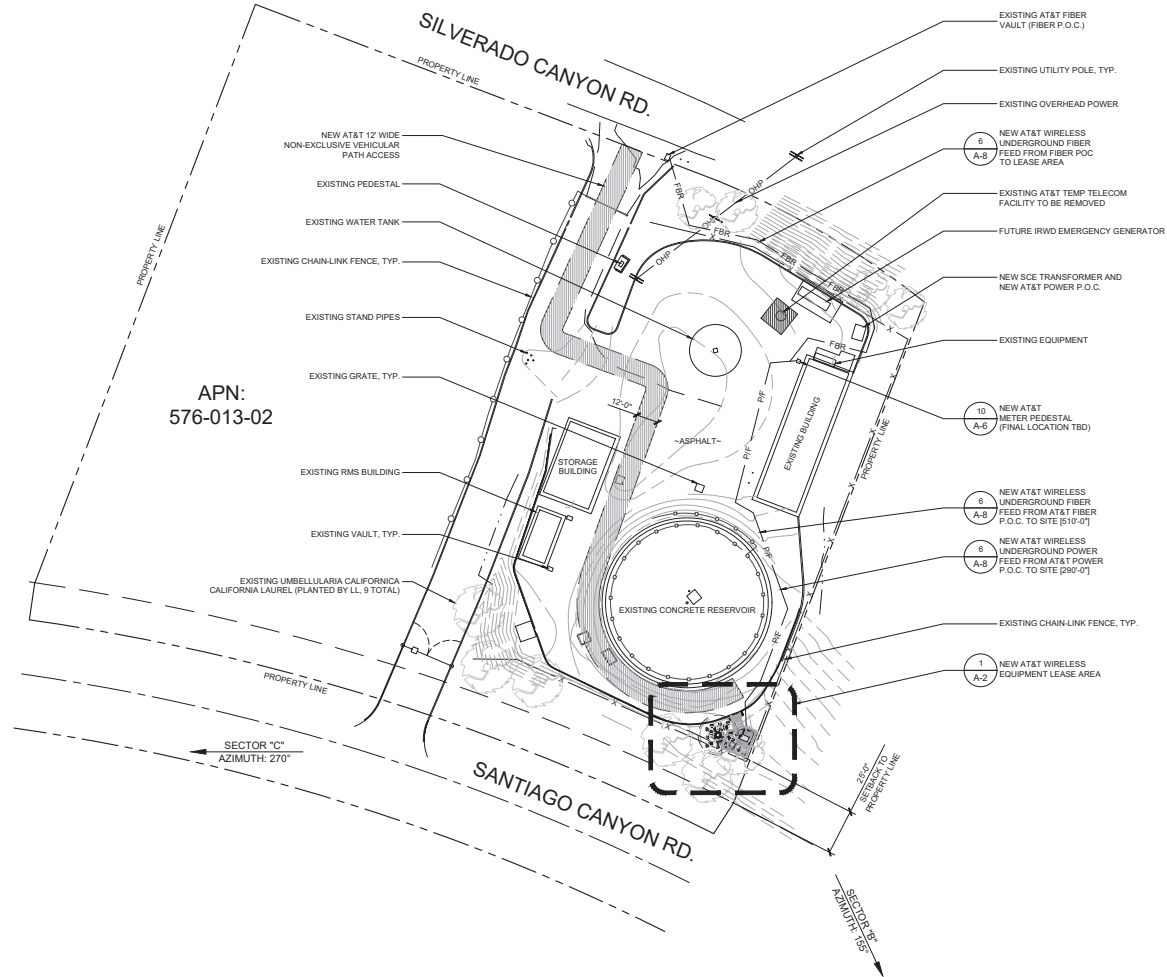
SHEET NUMBER:

LS-2

PATRICK B. DONOHOE
 No. 9332
 STATE OF CALIFORNIA
 P.L.S. No. 9332

NOTES:

1. IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
3. UTILITY DESIGNS AND ROUTES ARE PRELIMINARY PENDING FINAL DESIGN BY UTILITY PROVIDER.
4. THIS SITE PLAN IS NOT INTENDED TO BE A LAND SURVEY.



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DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

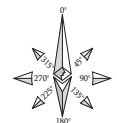
7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

SITE PLAN

SHEET NUMBER

A-1

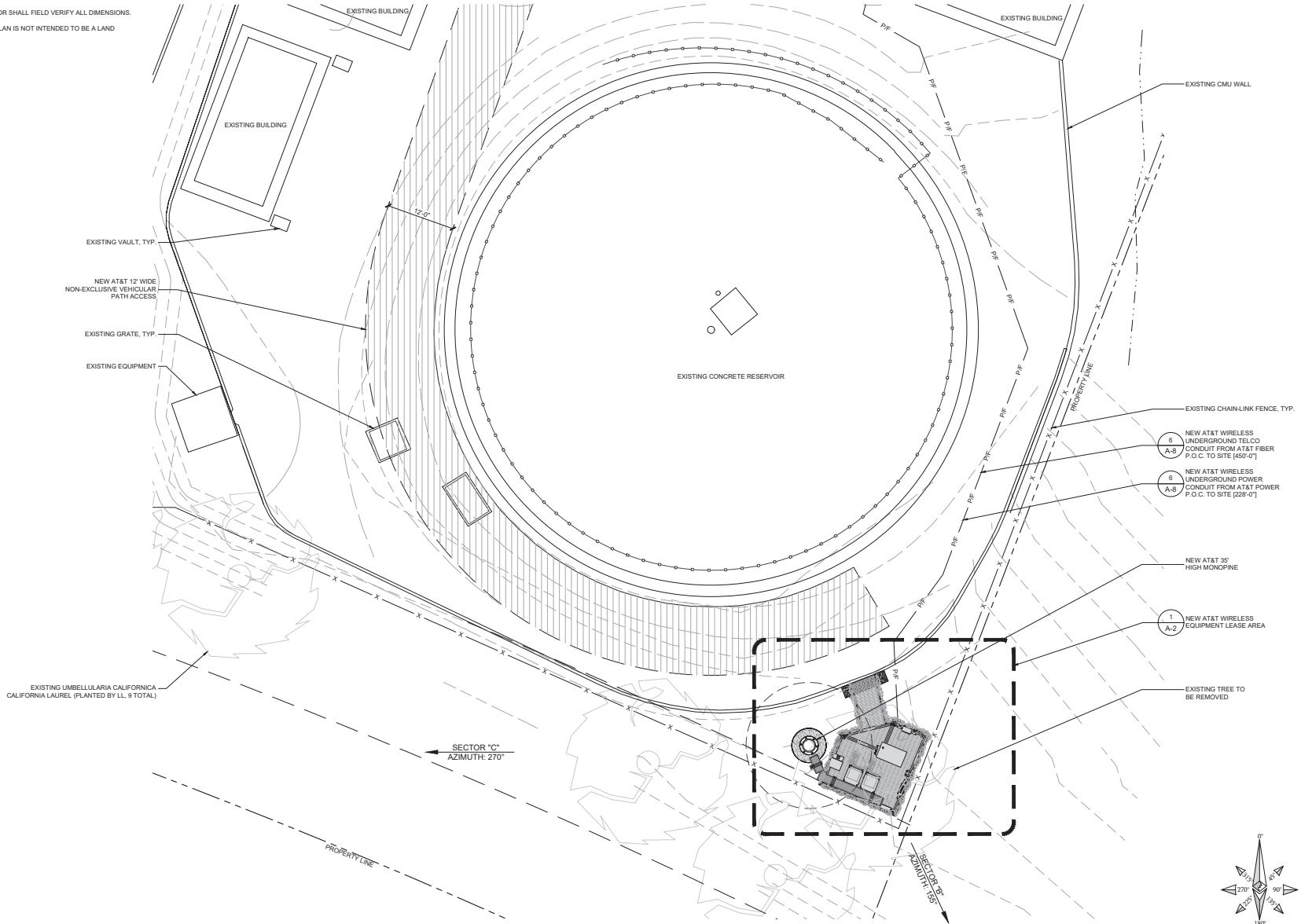


EUKON_AT&T_800D_MONOPOLE_TEMPLATE_V2_11-18-22

SITE PLAN

NOTES:

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TUSTIN, CA 92780



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AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

ENLARGED SITE PLAN

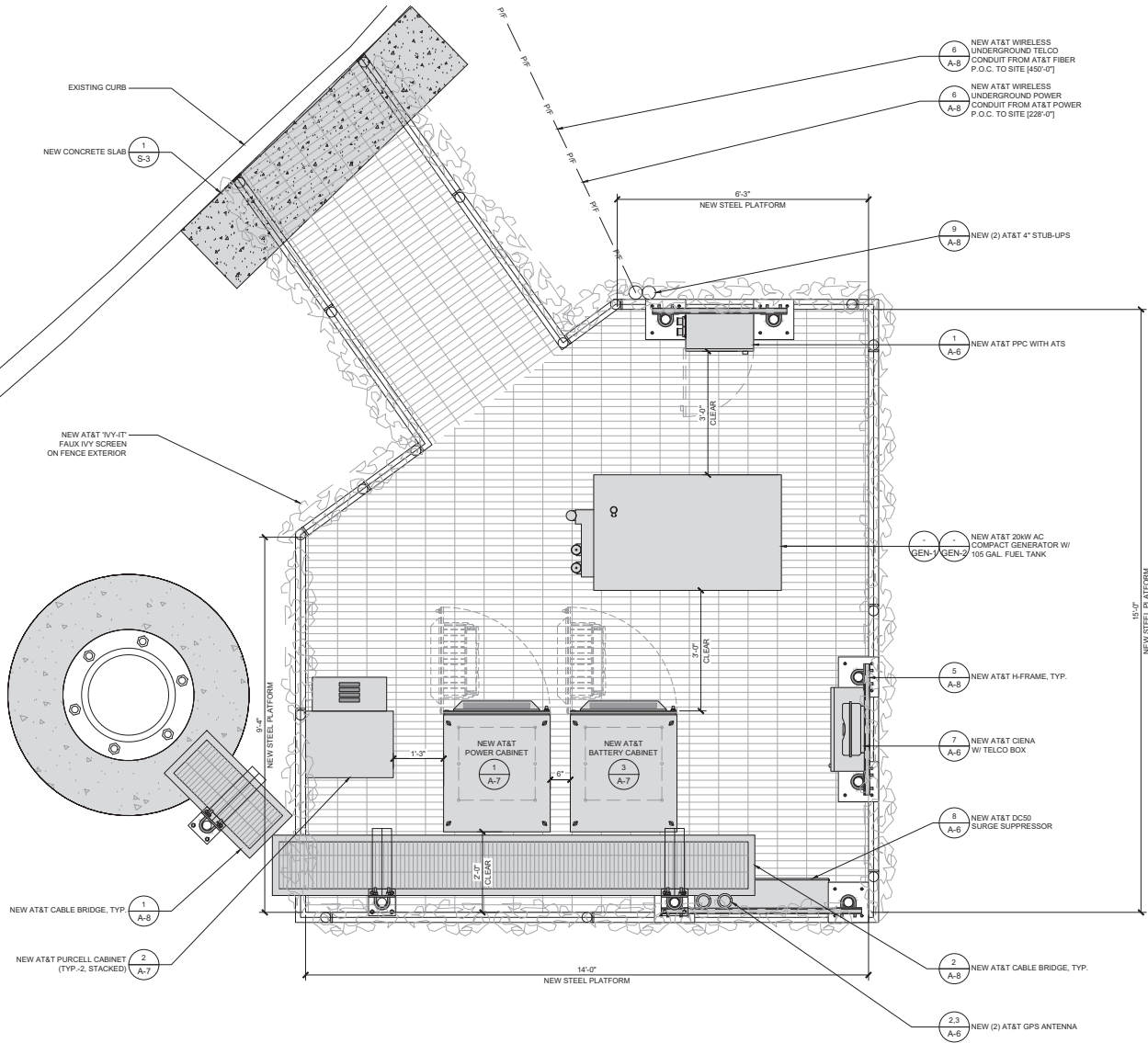
SHEET NUMBER

A-1.1



NOTE:

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- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.



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CONSTRUCTION DRAWINGS

SUBMITTALS		
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PROJECT INFORMATION

CLL04972
7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

EQUIPMENT PLAN

SHEET NUMBER

A-2

EUKON AT&T 800D MONOPOLE TEMPLATE V2: 11-18-22

EQUIPMENT PLAN



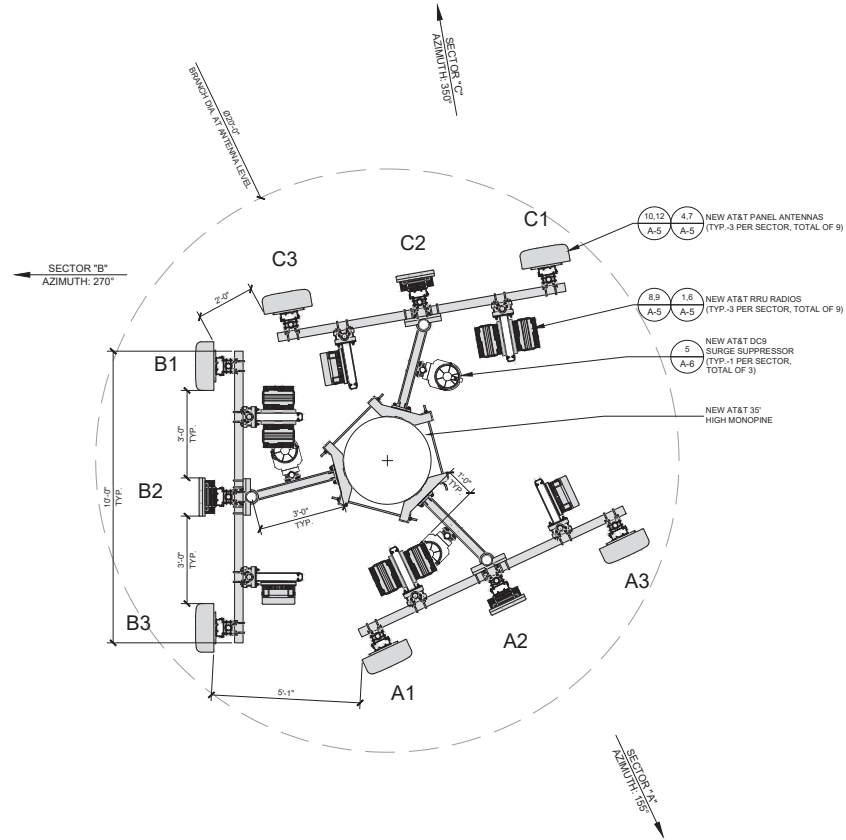
ANTENNA SCHEDULE (VERIFY WITH CURRENT RFDS)							
SECTOR	TECHNOLOGY	ANTENNA MODEL	ANTENNA SIZE	ANTENNA AZIMUTH	RAD CENTER	TRANSMISSION CABLE LENGTH QTY.	
ALPHA SECTOR	A1	LTE	CC1 TPA65R-BUGDA-K	6'-0"	155°	28'-0"	45' 1 FIBER + 3 DC POWER
	A2	C-BAND	ERICSSON AIR 6449 N77	2'-7"	155°	29'-9"	
	A3	LTE	QUINTEL QD6612-7	6'-0"	155°	28'-0"	
	A4						
	A5						
BETA SECTOR	B1	LTE	CC1 TPA65R-BUGDA-K	6'-0"	270°	28'-0"	45' 1 FIBER + 3 DC POWER
	B2	C-BAND	ERICSSON AIR 6449 N77	2'-7"	270°	29'-9"	
	B3	LTE	QUINTEL QD6612-7	6'-0"	270°	28'-0"	
	B4						
	B5						
GAMMA SECTOR	C1	LTE	CC1 TPA65R-BUGDA-K	6'-0"	350°	28'-0"	45' 1 FIBER + 3 DC POWER
	C2	C-BAND	ERICSSON AIR 6449 N77	2'-7"	350°	29'-9"	
	C3	LTE	QUINTEL QD6612-7	6'-0"	350°	28'-0"	
	C4						
	C5						

- NOTES TO CONTRACTOR:**
- CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
 - CABLE LENGTHS WERE DETERMINED BASED ON A VISUAL INSPECTION DURING SITE WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
 - CONTRACTOR TO USE ROSENBERGER FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).
 - CONTRACTOR TO USE CABLES SPECIFIED (OR ENGINEER APPROVED EQUAL).

- NOTE:**
- IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
 - ANTENNA AND MW AT&T SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.

REMOTE RADIO UNIT SCHEDULE				
SECTOR	RRU TYPE	RRU LOCATION (DISTANCE FROM ANTENNA)	MINIMUM CLEARANCES	
			ABOVE	BELOW SIDES
ALPHA SECTOR	A1	RRUS 4449 B5/B12 (LTE)	±15'	16" 8" 0"
	A1	RRUS 8843 B2/B66A (LTE)	±15'	16" 8" 0"
	A2			
	A3	RRUS 4478 B14 (LTE)	±15'	16" 8" 0"
	A4			
BETA SECTOR	B1	RRUS 4449 B5/B12 (LTE)	±15'	16" 8" 0"
	B1	RRUS 8843 B2/B66A (LTE)	±15'	16" 8" 0"
	B2			
	B3	RRUS 4478 B14 (LTE)	±15'	16" 8" 0"
	B4			
GAMMA SECTOR	C1	RRUS 4449 B5/B12 (LTE)	±15'	16" 8" 0"
	C1	RRUS 8843 B2/B66A (LTE)	±15'	16" 8" 0"
	C2			
	C3	RRUS 4478 B14 (LTE)	±15'	16" 8" 0"
	C4			

SURGE SUPPRESSION SYSTEM SCHEDULE				
SYSTEM	MFR.	PART NUMBER	QTY	LOCATION
	RAYCAP	DC50-48-60-96-50F	1	MOUNTED IN NEW STEEL PLATFORM
	RAYCAP	DC9-48-60-24-9C-EV	3	MOUNTED ON NEW MONOPINE



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CONSTRUCTION DRAWINGS

SUBMITTALS	
REV	DATE DESCRIPTION
A	08/06/24 90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

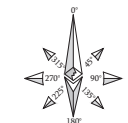
SHEET TITLE

ANTENNA PLAN AND SCHEDULE

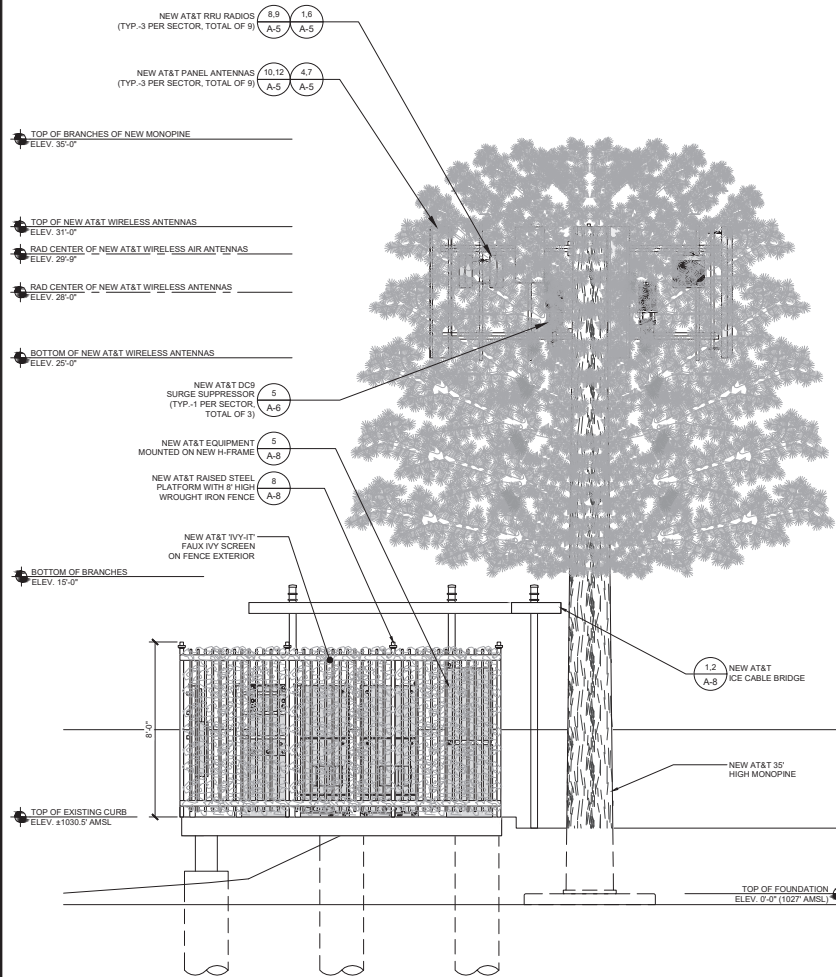
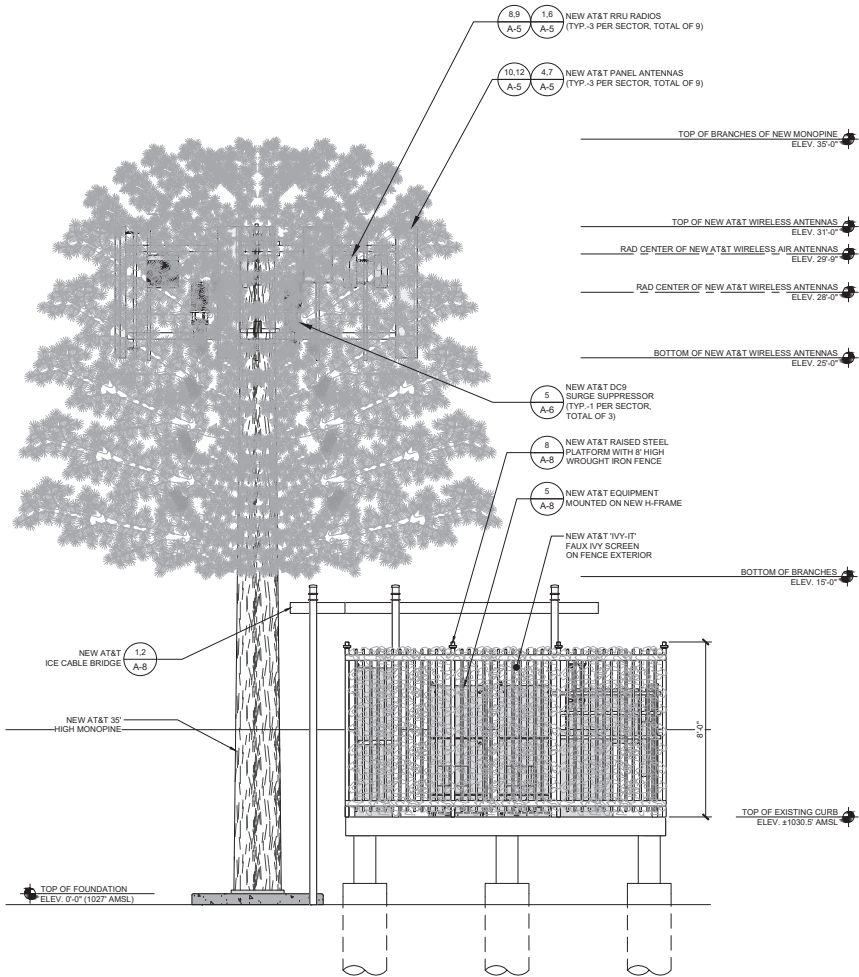
SHEET NUMBER

A-3

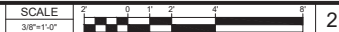
EUKON_AT&T_800D_MONOPOLE_TEMPLATE_V2_11-18-22



- NOTE:**
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 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.



NEW SOUTHWEST ELEVATION



NEW NORTHEAST ELEVATION



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CONSTRUCTION DRAWINGS

SUBMITTALS	
REV	DESCRIPTION
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PROJECT INFORMATION

CLL04972
7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

ELEVATIONS

SHEET NUMBER

A-4

EUKON_AT&T_800D_MONOPOLE_TEMPLATE_V2_11-18-22

CCI - TPA65RBU6DAK
 DIMENSIONS (LxWxD): 71.2 x 20.7 x 7.7 INCHES (1808 x 525 x 197 mm)
 SURVIVAL WIND SPEED: 150mph (241kph)
 WEIGHT: 63.8 lbs (31.0 kg)
 EQUIVALENT FLAT PLATE AREA: 12.7 ft² (1.2 m²)
 WIND LOAD @ 100 mph: FRONT: 1446N (325 lbs) SIDE: 642N (144 lbs)
 PACKAGE DIMENSIONS: 81.4 x 25.2 x 13.9 INCHES (2067 x 641 x 354 mm)
 PACKAGE WEIGHT: 116.8 lbs (53.0 kg)

NOTES:
 1. INSERT SCISSOR BRACKETS BETWEEN THE UPPER ANTENNA MOUNTING BRACKET AND THE UPPER POLE ADAPTER BRACKET. SECURE USING 1/2 INCH HARDWARE PROVIDED.
 2. TO SET THE DEGREE OF DOWNTILT, ALIGN THE DESIRED HOLES ON THE SCISSOR BRACKETS AND SECURE USING 5/16 INCH HARDWARE PROVIDED.
 3. THE NUMBER OF CONNECTORS WILL VARY BASED ON ANTENNA TYPE.

ITEM	QTY	DESCRIPTION
1	1	ADAPTER, POLE, LOWER
2	1	BRACKET, DOWNTILT, POLE
3	1	BRACKET, DOWNTILT, ANTENNA
4	6	1/2 x 1 HEX HEAD BOLT
5	6	1/2 SPLIT WASHER
6	2	5/16 x 1 HEX HEAD BOLT
7	2	5/16 SPLIT WASHER
8	4	1/2" THREADED ROD
9	8	1/2" SPLIT WASHER
10	12	1/2" NUT

QUINTEL - QD6612-7
 DIMENSIONS (LxWxD): 72.0m x 18.1in x 9.6in (1826mm x 460mm x 245mm)
 WEIGHT WITH MOUNTING: 121.7 lbs (55.2 kg)
 NO. OF CONNECTORS: 12x 4.3-10.0 DIN FEMALE LONG NECK
 MAX WIND SPEED: 150mph (67 m/s)
 FRONT WIND LOAD : 882 N (198 lbs)
 SIDE WIND LOAD: 284 N (64 lbs)

ERICSSON - AIR6449 N77D
 DIMENSIONS (LxWxD): 31 x 15.9 x 10.6 in
 NET WEIGHT (WITHOUT MOUNTING): 63.8 lbs

ANTENNA MOUNTING SCALE NONE 12

ANTENNA SPECS SCALE NONE 10

ANTENNA SPECS SCALE NONE 7

NOT USED SCALE NONE 3

ERICSSON - AIR6449 N77 MOUNTING

TYPE NO.	85010070
NAME	AIR CLAMP KIT 55-115 mm
STATUS	BESTSELL
SUITABLE MAST DIAMETER	55-115 mm
ANTENNA - MAST DISTANCE F	128-132 mm
NUMBER OF PIECES	2 CLAMPS
MATERIAL:	HOT DIPPED GALV. STL.
CLAMP	HOT DIPPED GALV. STL. / STAINLESS STEEL
SCREWS	STAINLESS STEEL
NUTS	STAINLESS STEEL
WEIGHT	4.3 KG.

ERICSSON B14 4478 RRH
 DIMENSIONS, WxDxH: 15" x 13.2" x 7.4"
 POWER CONSUMPTION: 4 x 40W FOR 4T4R OR 2 SECTORS AT 2x40W FOR 2T2R
 WEIGHT: 60 LBS.
 STANDARD: UL62368-1, UL50E, UL60950-22

ERICSSON - RADIO 8843

MECHANICAL SPECIFICATIONS
 CAPACITY: 4 ANTENNA PORTS 4TX4RX
 DIMENSIONS (WxDxH): 18" x 13.2" x 11.3"
 WEIGHT: 75 LBS.
 MOUNTING: WALL AND POLE MOUNT
 ALARM: 2 EXTERNAL ALARMS

ELECTRICAL SPECIFICATIONS:
 POWER SUPPLY: -48 VDC OR 100-250 VAC
 POWER OUTPUT: 320 WATTS
 MAX HEAT DISSIPATION: 1.2 kW
 MINIMUM AC FUSE RATING: 12 AMP
 STANDARDS: UL62368-1, UL50E, UL60950-22

ERICSSON - RADIO 4449

MECHANICAL SPECIFICATIONS
 CAPACITY: 4 ANTENNA PORTS 4TX4RX
 DIMENSIONS (WxDxH): 15" x 13.2" x 9.3"
 WEIGHT: 70 LBS.
 MOUNTING: WALL AND POLE MOUNT
 ALARM: 2 EXTERNAL ALARMS

ELECTRICAL SPECIFICATIONS:
 POWER SUPPLY: -48 VDC OR 100-250 VAC
 POWER OUTPUT: 320 WATTS
 MAX HEAT DISSIPATION: 1.2 kW
 MINIMUM AC FUSE RATING: 12 AMP
 STANDARDS: UL62368-1, UL50E, UL60950-22

ANTENNA MOUNTING SCALE NONE 11

RADIO SPECS SCALE NONE 8

NOT USED SCALE NONE 5

RADIO MOUNTING SCALE NONE 1

ANTENNA MOUNTING SCALE NONE 4

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CONSTRUCTION DRAWINGS

SUBMITTALS	
REV	DESCRIPTION
A	08/06/24 90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION
 CLL04972
 7431 1/2 SANTIAGO CANYON RD. SILVERADO, CA 92676

EQUIPMENT DETAILS

SHEET NUMBER
A-5

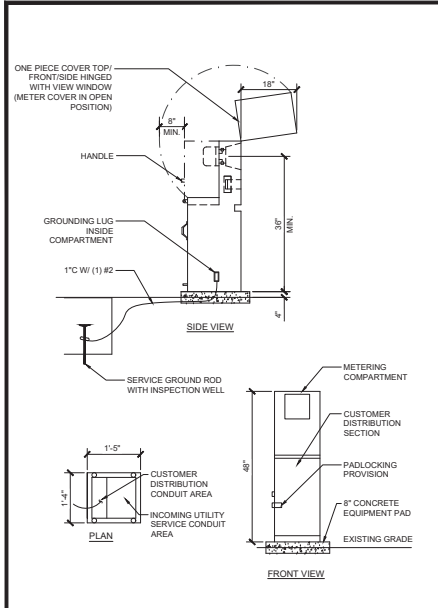
ERICSSON - AIR6449 N77D
 DIMENSIONS (LxWxD): 31 x 15.9 x 10.6 in
 NET WEIGHT (WITHOUT MOUNTING): 63.8 lbs

NOTE: ANTENNAS, RF EQUIPMENT AND HARDWARE TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

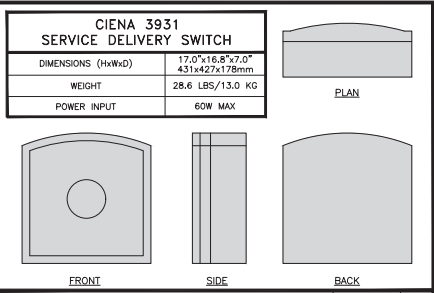
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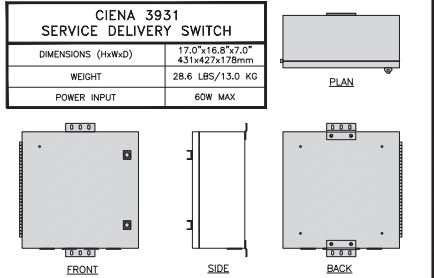
EUKON_A15T_800D_MONOPOLE_TEMPLATE_V2_11-18-22



METER PEDESTAL SPEC SCALE NONE 10



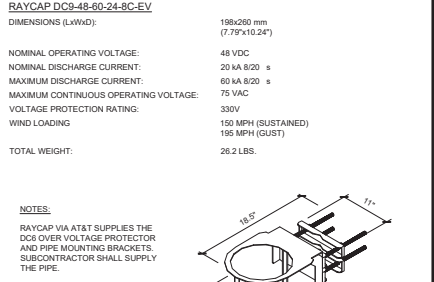
CIENA CABINET DETAIL SCALE NONE 7



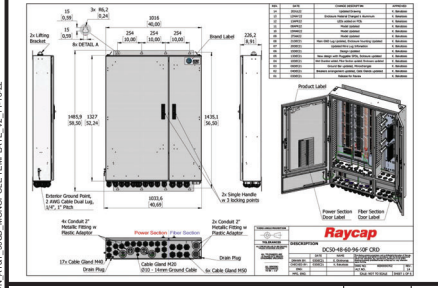
CIENA CABINET DETAIL SCALE NONE 7



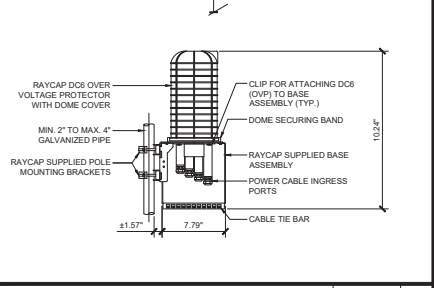
NOT USED SCALE NONE 9



NOT USED SCALE NONE 9



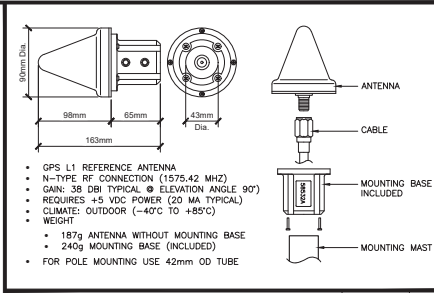
SURGE SUPPRESSOR SPEC SCALE NONE 8



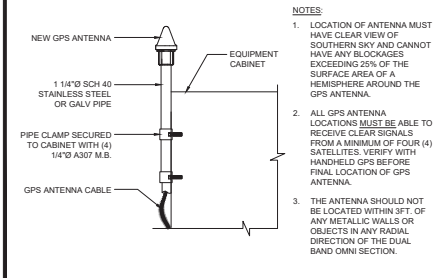
SURGE SUPPRESSOR SPEC SCALE NONE 8



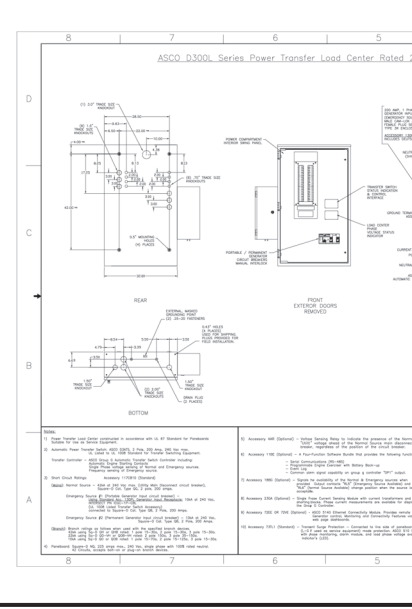
PPC / ATS WITH CAMLOCK SCALE NONE 5



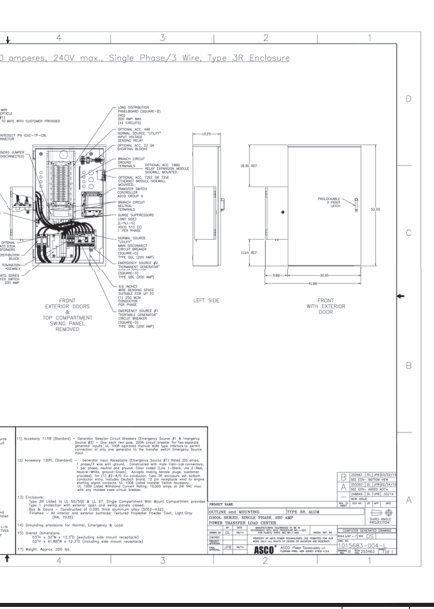
GPS ANTENNA MOUNTING SCALE NONE 2



GPS ANTENNA MOUNTING SCALE NONE 2



PPC / ATS WITH CAMLOCK SCALE NONE 5



PPC / ATS WITH CAMLOCK SCALE NONE 5



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CONSTRUCTION DRAWINGS

SUBMITTALS	
REV	DESCRIPTION
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PROJECT INFORMATION
CLL04972
7431 1/2 SANTIAGO CANYON RD. SILVERADO, CA 92676


EQUIPMENT DETAILS

SHEET NUMBER
A-6

ERICSSON BASEBAND - 5216


MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 1.22'H x 11.02'D x 13.75'W

TECHNICAL SPECIFICATIONS:
 BBU 5216 CONTAINS BUILT-IN CELL SITE ROUTER FUNCTIONALITY & IS EQUIPPED WITH ETHERNET PORTS FOR TRANSPORT, WHICH CAN BE USED FOR RESILIENCY OR FOR CONNECTING SITE EQUIPMENT.
 TN A: 1X GIGE (Gbps) ELECTRICAL ETHERNET; RJ45 ETHERNET PORT
 TN B AND TN C: 2X 10Gbps ELECTRICAL/OPTICAL ETHERNET (SFP+)
 6X 2.5G TO 10G SFP/SFP+ CPRI PORTS
 2X IDLE PORTS
 BBU 5216 SUPPORTS 2.5 GB, 5 GB AND 10 CPRI CONNECTIONS.



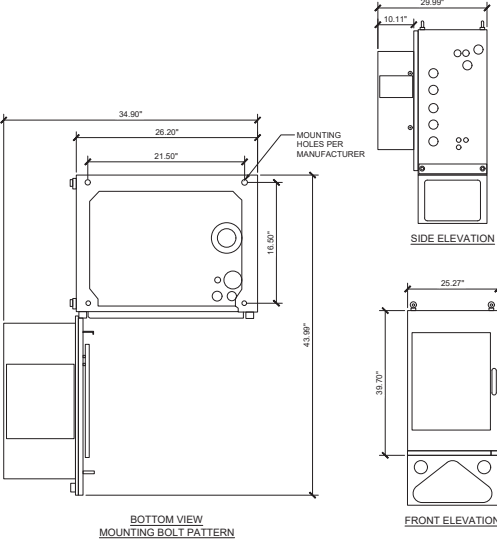
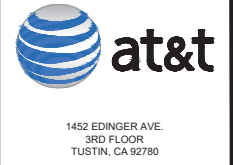
ERICSSON BASEBAND - 6630

MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 1.75'H x 13.78'D x 19'W
 OPERATING TEMPERATURE: 32°F TO 121°F (0°C TO 55°C)
 RELATIVE HUMIDITY: 5 TO 95%
 ABSOLUTE HUMIDITY: 1.29 G/M³



PURCELL CABINET - 66010D FLX21

MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 39.70'H x 25.27'W x 30'D
 FINISH: ULTRA-LIGHT GRAY POLYESTER POWDER COAT FINISH
 MOUNTING OPTIONS: 4" & 12" RISER PLINTHS, PAD, POLE, HFRAME, WALL, UNISTRUT, STACKING
 WEIGHT: 145 LBS EMPTY, 250 LBS FULL
 SAFETY: ENCLOSURE: UL508A
ENVIRONMENTAL:
 OPERATING TEMPERATURE: -40°F TO 115°F (-40°C TO 45°C) CONTINUOUS OPERATIONS
 HUMIDITY: 0% TO 95% RELATIVE HUMIDITY, NON-CONDENSING
THERMAL SOLUTIONS:
 POWER CHAMBER: 1600 WATTS

NOT FOR CONSTRUCTION

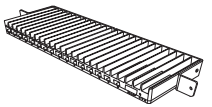
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BASEBAND UNIT SPECS SCALE NONE 7

ERICSSON BASEBAND R503 XMU - BASEBAND AUXILIARY MULTIPLEXING UNIT

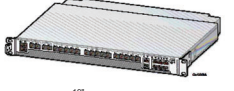
MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 1.22'H x 11'D x 13.8'W
 WEIGHT: 5 LBS
 HEAT DISSIPATION: 50 WATTS

TECHNICAL SPECIFICATIONS:
 PLATFORM FOR CPRI MULTIPLEXING AND DE-MULTIPLEXING
 -16x SFP+ PORTS
 PLUGGABLE OPTICAL TRANSCEIVERS
 DIRECT ATTACH CABLES
 -48V DC POWERING
 -FANLESS
 TARGET RELEASE - L148
 -2x (100Gbps - 4x 2.5 Gbps)



ERICSSON BASEBAND - 6675

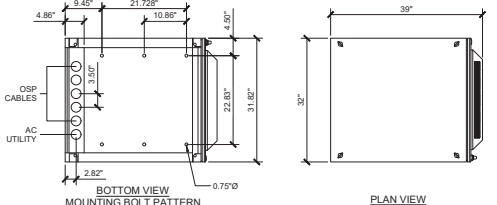
MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 1.75'H x 13.78'D x 19'W
 OPERATING TEMPERATURE: 32°F TO 121°F (0°C TO 55°C)
 RELATIVE HUMIDITY: 5 TO 95%
 ABSOLUTE HUMIDITY: 1.29 G/M³



BASEBAND UNIT SPECS SCALE NONE 6

VERTIV NETXTEND - FLEX BATTERY CABINET

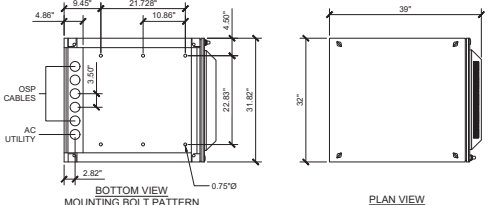
TECHNICAL SPECIFICATIONS:
 BATTERY SHELVES: (5) SHELVES (+24V DC - 12 STRING MAX -48V DC - 6 STRING MAX)
ENVIRONMENTAL:
 OPERATING TEMPERATURE: -40°F TO 115°F (-40°C TO 45°C) CONTINUOUS OPERATIONS
 HUMIDITY: 0% TO 95% RELATIVE HUMIDITY, NON-CONDENSING
THERMAL SOLUTIONS:
 BATTERY CHAMBER: FAN COOLED, FRESH AIR VENTILATION
EQUIPMENT:
 GROUND BAR: 100 POSITIONS
 TERMINAL BLOCK: 12 POSITION PHOENIX ALARM BLOCK
SAFETY:
 ENCLOSURE: TBD



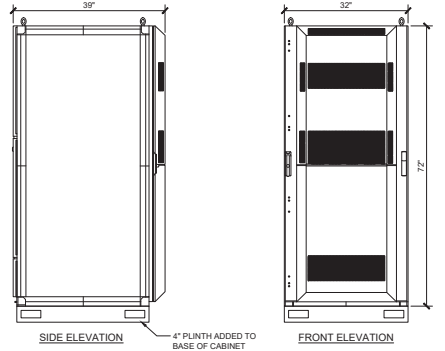
BASEBAND UNIT SPECS SCALE NONE 4

VERTIV NETSURE - 512 DC POWER SYSTEM

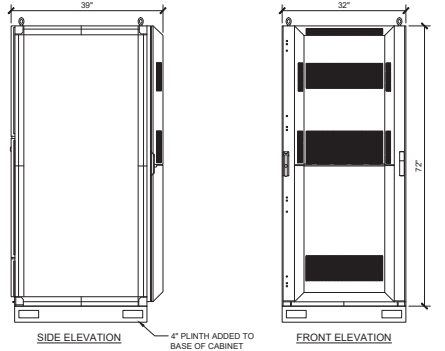
DC POWER SYSTEM FEATURES:
 NOMINAL SYSTEM VOLTAGE: -48 VDC or +24 VDC
 CONTROL: MICROPROCESSOR (ACU+)
RATED OUTPUT CAPACITY - MAX CONFIGURATION:
 SYSTEM: 525A @ -48V DC PLUS REDUNDANCY, 400A @ +24V DC PLUS REDUNDANCY
 RECTIFIER: 2000 WATTS (41.7A)
 CONVERTER: 1200 WATTS (50A), -48V DC TO +24V DC
 DISTRIBUTION PANEL TOP SECTION: WIRED FOR (18) +24V AND (13) -48V BULLET POSITIONS
 BOTTOM SECTION: (30) -48V BULLET POSITIONS
ENVIRONMENTAL:
 OPERATING TEMPERATURE: -40°F TO 115°F (-40°C TO 45°C) CONTINUOUS OPERATIONS
 HUMIDITY: 0% TO 95% RELATIVE HUMIDITY, NON-CONDENSING
THERMAL SOLUTIONS:
 POWER CHAMBER: 2500 WATT DOOR-MOUNTED HEAT EXCHANGER, 2 RU AVAILABLE SPACE FOR SURGE PROTECTION
 BATTERY CHAMBER: FAN COOLED, FRESH AIR VENTILATION, HOLDS UP TO (5) BATTERY STRINGS
EQUIPMENT:
 GROUND BAR: 10 POSITIONS
 TERMINAL BLOCK: 12 POSITION PHOENIX ALARM BLOCK, 32 POSITION PHOENIX ALARM BUNCHING BLOCK
SAFETY:
 DC POWER SYSTEM: UL 1801 LISTED (US & CANADA) NEBS LEVEL 3
 ENCLOSURE: GR-487, UL 60950, AND SEISMIC ZONE 4 COMPLIANT
MECHANICAL SPECIFICATIONS:
 DIMENSIONS: 72"H x 32"W x 39"D
 WEIGHT: 752 LBS.



BATTERY CABINET SCALE NONE 3



POWER PLANT CABINET SCALE NONE 1



DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

EQUIPMENT DETAILS

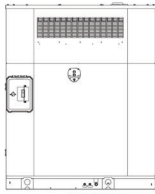
SHEET NUMBER

A-7

SDC020 | 2.2L | 20 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



Standby Power Rating
20 kW, 25 kVA, 60 Hz



*EPA Certified Prime ratings are not available in the US or its territories

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489, UL142
- CSA C22.2, ULC S601
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- ISO 3046, 7637, 8526, 9001
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engine power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SDC020 | 2.2L | 20 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Engine Coolant Heater

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- 100% Over-Resistant Hours
- Factory-Installed Radiator
- Radiator Drain Extension
- SFSO Elyx™ Hybrid Antifreeze

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class F1 Insulation Material
- 2.5 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood

ENCLOSURE

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material
- Gasketed Doors
- Aluminum Enclosure
- Level 2 Sound Attenuated
- Twist-Lock Handle
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC 5001
- Double Wall
- Normal and Emergency Vents
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve in Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Power Zone® 410 Controller

- Features**
- Programmable Auto Crank
 - Selectable Low Speed Exercise
 - RS-232-C
 - RS-485-x2
 - 3-Phase Setting Digital Voltage Regulator
 - Time
 - Date
 - On/Off Manual Switch
 - Not in Auto Flashing Light
 - Emergency Stop
 - Modbus® RTU

Remote Ports

- CANBus
- Full Range Standby Operation
- 3-Phase AC Volts
- 3-Phase Amps
- kW
- Power Factor
- Ruptured Tank Detection
- Auxiliary Shutdown Switch
- Remote Communications
- Compatible with NEMA 110, Level 1 or 2 (When Optional Module Selected)
- Line Power/Gen Power
- PT Function for Full Generator Protection

Full System Status Display

- Multilingual 128x64 Graphical Display with Heater
- Easy Status View LED Screen
- Full System Status
- Run Hours
- Service Reminders
- Fault History (Alarm Log)
- Oil Pressure
- Oil Temperature (Optional/When Equipped)
- Oil Level (Optional/When Equipped)
- Output for Fuel Level High/Low Warning
- Water Temperature
- Water Level
- Fuel Pressure/Level
- Engine Speed
- Battery Voltage
- Alternator Frequency

Alarms and Warnings

- Common Alarm Output

SDC020 | 2.2L | 20 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Fluid Containment Pan
- Coolant Heater Isolation Ball Valves

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- IGA UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Auto-Combination Heater
- Tropical Coating

GENERATOR SET

- Certified Factory Testing
- Pad Vibration Isolators

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- Remote Relay Assembly (8 or 16)
- Electronic Trip Breakers

ENCLOSURE

- Up to 100 MPH Wind Load Rating (Contact Factory for Availability)
- ACOG Enclosure Lighting Kit
- Door Open Alarm Switch

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NEMA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch
- Remote E-Stop Break Glass-Type, Surface Mount
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciation
- 120V GFCI and 240V Outlets
- 10A Engine Run Relay

FUEL TANKS (Size On Last Page)

- Overfill Protection Valve
- Spill Box Return Hose
- 2.5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12" Vent System
- Fire Rated Stainless Steel Fuel Hose

ENGINEERED OPTIONS

GENERATOR SET

- Special Testing

FUEL TANKS

- UL2085 Tank
- Stainless Steel Tanks
- Special Fuel Tanks



1452 EDINGER AVE.
3RD FLOOR
TUSTIN, CA 92780



65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566
www.eukongroup.com

NOT FOR CONSTRUCTION

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

DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

GENERATOR SPECS

SHEET NUMBER

GEN-1

GENERAL NOTES

ALL TRADES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST CALIFORNIA BUILDING CODE WITH AMENDMENTS AS ADOPTED BY THE LOCAL JURISDICTION. CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS WHICH ARE PROVIDED SEPARATELY.
- BUILDING SHALL NOT BE OCCUPIED DURING REMODEL WORK. (A) THE BUILDING STRENGTH IS SUBSTANTIALLY WEAKENED AT ANY POINT DURING THE REMODEL WORK. (B) REQUIRED EXITS ARE NOT AVAILABLE OR ARE OBSTRUCTED. (C) REQUIRED FIRE SAFETY DEVICES SUCH AS SPRINKLERS, STAND PIPE OR ALARM SYSTEMS ARE NOT OPERATIONAL.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION, WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY PROJECT ENGINEER OF RECORD.
- CONCRETE, MASONRY, AND STRUCTURAL STEEL WORK SHALL BE INSPECTED BY AN INSPECTOR LICENSED BY THE LOCAL JURISDICTION.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOOR OR ROOF. LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD WHICH IS:
FLOORS 50 PSF (REDUCIBLE)
ROOFS 20 PSF (REDUCIBLE)
- CONTRACTOR SHALL ERECT NECESSARY BARRIERS, PROTECTION FENCES AND/OR CANOPIES PRIOR TO STARTING CONSTRUCTION.
- NECESSARY PERMITS SHALL BE SECURED AND NECESSARY BARRIERS, PROTECTION FENCES AND/OR CANOPIES SHALL BE ERECTED ALONG WALKWAYS PRIOR TO STARTING CONSTRUCTION.
- WORKMANSHIP SHALL NOT CAUSE DAMAGE TO EXISTING CONSTRUCTION.
- ALL DEBRIS SHALL BE REMOVED FROM THE SITE, LEAVING THE SITE DAILY IN A BROOM-CLEAN CONDITION.
- THE CONTRACTOR SHALL EXERT EVERY EFFORT TO PREVENT DUST AND CONSTRUCTION DEBRIS FROM CONTAMINATING THE WORK AREA. THESE EFFORTS SHALL INCLUDE PROVIDING A DUST SUPPRESSANT DAILY CLEAN-UP OF THE CONSTRUCTION AREA AND PROVIDE PLASTIC SHEETING OVER EXISTING EQUIPMENT IF ANY. CONTRACTOR SHALL REFER TO THE PROJECT DETAILED SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- PATCH, REBUILD AND RESTORE CEILING, PARTITIONS, PLASTER, PAINT, FINISHES, ETC. REMOVE OR DEMOLISHED DURING CONSTRUCTION ACTIVITY. REFINISH SURFACES TO MATCH ADJACENT FINISH. FOR CONTINUOUS SURFACES, REFINISH TO NEAREST INTERSECTION OR CORNER BREAK. FOR AN ASSEMBLY, REFINISH ENTIRE UNIT. RESTORE WORK WITH NEW PRODUCTS.
- PROVIDE PROTECTION FROM WEATHER AND DUST TO AREAS EXPOSED DUE TO CUTTING AND UNCOVERING OF EXISTING SURFACES.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING CONSTRUCTION.
- ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF EUKON GROUP BEFORE PROCEEDING WITH THE WORK INVOLVED.
- SHOP DRAWINGS AND WORKING DRAWINGS REQUIRED BY THE SPECIFICATIONS OR GENERAL NOTES SHALL BE SUBMITTED TO EUKON GROUP FOR REVIEW 10 WORKING DAYS BEFORE START OF WORK REQUIRING APPROVALS.
- REVIEW OF SHOP DRAWINGS BY STRUCTURAL ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS AND SHALL NOT BE CONSTRUED AS ACCEPTING RESPONSIBILITY FOR SAFE CONSTRUCTION PRACTICES.
- SHOP DRAWINGS ARE AN AID FOR THE FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS. THE CONTRACTORS RESPONSIBILITY ALSO INCLUDES BUT IS NOT LIMITED TO DIMENSIONS BEING CONFIRMED AND CORRELATED AT THE JOB SITE. EUKON GROUP SHALL BE NOTIFIED IN WRITING IF ANY DISCREPANCIES ARE FOUND.
- NO CHANGES SHALL BE MADE TO THE DESIGN, UNLESS APPROVED BY THE ENGINEER OF RECORD. DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE REQUESTED IN WRITING PRIOR TO SUBMITTING SHOP DRAWINGS. APPROVED DEVIATIONS SHALL BE CLEARLY HIGHLIGHTED ON SHOP DRAWINGS SUBMITTED FOR REVIEW.
- USE OF AN APPROVED ALTERNATE MATERIAL UNDER AN ICBM MUST INCORPORATE ALL THE SPECIFIED PROCEDURES, CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION INSTRUCTIONS ON THE PLANS.
- THE OWNER SHALL RETAIN THE SERVICES OF A TESTING LABORATORY AND INSPECTION AGENCY AS SPECIFIED HEREIN AND AS REQUIRED BY THE CBC.

STRUCTURAL WOOD

- ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (LVL) #1 GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WCA, WMPA, OR WCLB).
- PLYWOOD SHEATHING SHALL BE DOUGLAS FIR CONFORMING TO "PRODUCT STANDARD PS1-95" AND SHALL BE GRADE MARKED BY APA.
- CUTTING, NOTCHING OR DRILLING OF BEAMS OR JOISTS TO BE PERMITTED ONLY AS DETAIL OR APPROVED BY THE ENGINEER OF RECORD.
- ALL BOLTS FOR WOOD CONNECTIONS SHALL BE A307, GRADE A.

- CONNECTOR DESIGNATIONS REFER TO STRONG-TIE CONNECTORS BY SIMPSON COMPANY, BREA, CALIFORNIA, UNLESS NOTED OTHERWISE. THE MINIMUM NAILING REQUIREMENTS ARE AS FOLLOWS:
(A) USE COMMON WIRE NAILS FOR ALL CONNECTIONS, UNLESS NOTED OTHERWISE. CONSUMER NAILS ARE NOT ALLOWED. SEE HANGER MANUFACTURER FOR NAIL SIZES AND QUANTITY.
(B) SHORT NAILS SHALL NOT BE USED TO NAIL CONNECTORS THROUGH PLYWOOD.
- SILLS AND PLATES RESTING IN CONCRETE OR MASONRY SHALL BE UNDER PRESSURE TREATED DOUGLAS FIR. BOLTS SHALL BE 5/8" MINIMUM DIAMETER DATED AT LEAST 3 INCHES INTO THE CONCRETE OR MASONRY AND SPACED NOT MORE THAN 4 FEET APART. THERE SHALL BE A MINIMUM OF 2 BOLTS PER PIECE WITH 1 BOLT LOCATED WITHIN 9 INCHES OF EACH END OF EACH PIECE.
- PREDRILL ALL HOLES FOR 20# NAILS AND LAG BOLTS.
- BOLTS, HEADS AND NUTS BEARING ON WOOD SHALL HAVE METAL WASHERS. BOLT HOLES IN WOOD SHALL BE DRILLED 1/32" TO 1/16" DIAMETER LARGER THAN NOMINAL BOLT DIAMETER.
- LAG BOLTS SHALL HAVE LEAD HOLES BORED BEFORE DRIVING. HOLE DIAMETERS TO BE AS FOLLOWS:
(A) SHANK PORTION - SAME DIAMETER AND LENGTH AS SHANK.
(B) THREAD PORTION - 0.60 TO 0.75 DIAMETER OF THREAD AND SAME LENGTH.
- NAIL ALL 2X DOUBLE STUDS WITH 16# NAILS AT 12 INCHES ON CENTER, STAGGERED. UNLESS NOTED OTHERWISE.
- ALL BREAKS IN DOUBLE PLATES FOR VENTS, DUCTS AND PLUMBING SHALL BE STRONG-TIE AS PER TYPICAL DETAIL.
- FASTENING SCHEDULE SHALL FOLLOW TABLE 2303.8.1 OF 2010 CBC UNLESS NOTED OTHERWISE ON THE CONSTRUCTION PLAN.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION" AND CONFORM TO:
(A) STRUCTURAL SHAPES AND PLATES: ASTM A36 & ASTM 592
(B) TUBES: ASTM A500, GRADE B, P. Y = 48 KSI
(C) ELECTRODES: AWS D1.1, CLASS E70XX
(D) STRUCTURAL FASTENERS:
HIGH STRENGTH BOLTS: ASTM A325 OR A490 AS INDICATED MACHINE BOLTS: ASTM A307
- ANCHOR BOLTS CAST IN CONCRETE:
(A) THROUGH BOLTS: ASTM A36
(B) ANCHOR BOLTS: ASTM A307
- SHEAR STUDS: ASTM A108 GRADE 1015 (AISC MANUAL)
- STEEL FABRICATOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. STEEL FABRICATOR TO COORDINATE WITH MECHANICAL SUBCONTRACTOR FOR THE SIZE, LOCATION AND DIMENSIONS OF THE MECHANICAL UNITS AND OPENINGS.
- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS.
- ALL STEEL SHALL BE FABRICATED AND ERECTED BY A CITY APPROVED AND ICC LICENSED STEEL FABRICATOR.
- ALL WELDING SHALL BE DONE BY AMERICAN WELDING SOCIETY (AWS) AND CITY CERTIFIED WELDERS USING AN ELECTRIC ARC PROCESS. CONTINUOUS INSPECTION IS REQUIRED FOR ALL FIELD WELDING.
- MILL REPORTS SHALL BE FURNISHED TO THE CITY FOR ALL STRUCTURAL STEEL MEMBERS OR OTHER RECORDS ATTESTING THAT THE SPECIFIC GRADE CONFORMS TO CALIFORNIA BUILDING CODE STANDARD 27.1. OTHERWISE, TESTING OF MATERIALS WILL BE REQUIRED.
- HIGH STRENGTH BOLTS INSTALLED AS BEARING BOLTS (A1923) SHALL BE TORQUED TO SLIP CRITICAL TENSION REQUIREMENTS AS DEFINED BY THE LATEST PUBLICATION OF "RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS" SECTION 8.3.
- HIGH STRENGTH BOLTS REQUIRED TO BE SLIP CRITICAL (A325 OR A490) CAN BE INSTALLED BY USE OF DIRECT TENSION INDICATOR IN CONFORMANCE WITH ASTM F959-95, OR CAN BE TENSION SET. CONTINUOUS INSPECTION IS REQUIRED DURING ALL SLIP CRITICAL HIGH STRENGTH BOLT INSTALLATIONS AND TIGHTENING OPERATIONS. INSTALLATION SHALL BE CHECKED BY TORQUE WRENCH, CALIBRATED IN THE FIELD BY A DEVICE CAPABLE OF MEASURING DIRECT TENSION BOLTS.
- ALL STRUCTURAL STEEL ERECTED WITH ANCHOR BOLTS SHALL BE PLUMBED AND LEVELLED TO FINAL POSITION WITH DOUBLE NUTS. NO LEVELING PLATES SHALL BE USED.
- ALL STRUCTURAL STEEL SURFACES TO BE WELDED OR HIGH STRENGTH BOLTED TO BE ENCASED IN CONCRETE. TO RECEIVE SPRAY APPLIED FIREPROOFING, OR TO BE ENCLOSED BY FINISH MATERIALS, SHALL BE LEFT UNPAINTED.
- ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO WEATHER, I.E. MECHANICAL PLATING AND TOP EQUIPMENT PROTECTORS, SHALL BE HOT DIPPED GALVANIZED. ANY WELDING PERFORMED ON GALVANIZED MEMBERS SHALL BE TOUCHED UP WITH ZINC RICH PAINT IN THE FIELD.
- ALL OTHER STRUCTURAL STEEL SHALL HAVE A SHOP COAT OF APPROVED PAINT.
- ALL NEW STEEL SHALL BE CLEANED FREE OF RUST, LOOSE MILL SCALE AND OIL AFTER FABRICATION, THEN GIVEN ONE SHOP COAT OF RUST INHIBITIVE PRIMER. ALL UNPAINTED SURFACES AND SURFACES WHERE PAINT HAS BEEN DAMAGED AND/OR MARKED SHALL BE GIVEN A FIELD TOUCH-UP COAT OF PRIMER USED FOR THE SHOP COAT.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.

FIBER REINFORCED PLASTIC (FRP)

- THIS SECTION INCLUDES THE FOLLOWING FRP PRODUCTS AND FABRICATIONS:
1. FRP STRUCTURAL SHAPES
2. FRP GRATING AND FRAMES
3. FRP FOAM CORE BUILDING PANELS
B. FRP WALL PANEL SYSTEMS ARE TO MEET THE FOLLOWING REQUIREMENTS:
1. ALL FRP PRODUCTS TO BE FIBERGLASS IN ACCORDANCE WITH LOS ANGELES CITY RESEARCH REPORT 2998
2. PANELS ARE TO MATCH THE EXISTING BUILDING COLOR AND TEXTURE TO THE SATISFACTION OF EUKON GROUP, LEASE OWNER AND LANDLORD (OR OWNER).
3. PANEL SYSTEM MUST BE ABLE TO SPAN BETWEEN SUPPORTS PROVIDED AND RESIST A DESIGN WIND LOAD OF 25 POUNDS PER SQUARE FOOT PERPENDICULAR TO THE PANEL SURFACE WITH A MAXIMUM DEFLECTION RATIO OF L/80.
4. ACCEPTABILITY OF THE PANEL FRP TRANSPARENCY IS SUBJECT TO THE APPROVAL OF LEASE OWNER.
5. REFER TO PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
C. ALL FRP PRODUCTS SPECIFIED IN THESE DESIGN DRAWINGS SHALL BE AS FOLLOWS:
1. STRUCTURAL SHAPES AND PLATE: FIBERGLASS D'NYOMER. ALL STRUCTURAL SHAPES SHALL BE REINFORCED POLYESTER OR VINYL ESTER RESIN MATRIX. REINFORCED POLYESTER OR VINYL ESTER RESIN MATRIX, APPROXIMATELY 50% RESIN TO GLASS RATIO. GLASS STRAND ROVING SHALL BE USED IN THE LONGITUDINAL DIRECTION AND CONTINUED STRAND MATS SHALL BE USED FOR TRANSVERSE REINFORCEMENT.
2. FASTENERS: WHERE SPECIFIED AS FRP FASTENERS SHALL BE FIBERGLASS THREADED ROD AND NUTS, TYPICALLY BOLTS WITHIN THE AREA OF THE ANTENNA SIGNAL TO BE FRP. ALL OTHER BOLTS TO BE ASTM A307.
3. ALL FRP PRODUCTS SHALL BE MANUFACTURED USING THE PULTRUDED PROCESS UTILIZING EITHER AN ISOPHTHALIC POLYESTER OR VINYL ESTER RESIN WITH FLAME RETARDANT AND ULTRAVIOLET (UV) INHIBITOR ADDITIVES. A SYNTHETIC SURFACE VUL SHALL BE THE OUTERMOST LAYER COVERING THE EXTERIOR SURFACE.
B. THE CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO INSTALL THE FRP PRODUCTS AS SPECIFIED HEREIN.
C. SHOP DRAWINGS OF ALL FRP STRUCTURAL MEMBERS SHALL BE SUBMITTED TO EUKON GROUP FOR REVIEW. ALL SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING:
a. DIMENSIONS
b. ERECTION INSTRUCTIONS AND SECTIONAL ASSEMBLIES
c. LOCATION AND IDENTIFICATION MARKS
d. SIZE AND TYPE OF SHORING OR TEMPORARY SUPPORT
e. MATERIAL SPECIFICATIONS AND SUPPORTING DATA AS NECESSARY
D. CONTRACTOR MAY BE REQUIRED TO SUBMIT SAMPLES OF SPECIFIC PRODUCTS FOR APPROVAL PRIOR TO INSTALLATION AND PLACEMENT OF PURCHASE ORDERS.
E. ALL CUT ENDS, HOLES AND ABRASIONS OF FRP SHAPES AND MEMBERS SHALL BE SEALED WITH A COMPATIBLE RESIN COATING TO PREVENT INTRUSION OF MOISTURE AND PREMATURE FRAYING.
F. FRP CONNECTION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
3. FOAM CORE PANEL CONNECTIONS: PANELS SHALL BE DESIGNED FOR TONGUE-IN-GROOVE JOINT CONNECTIONS ON TWO PARALLEL SIDES PER PANEL. PANELS CAN BE PASTED TO THE STRUCTURE WITH A COMPATIBLE EPOXY ADHESIVE AND/OR STAINLESS STEEL OR FIBERGLASS FASTENERS AS APPROPRIATE.
4. STRUCTURAL MEMBER CONNECTIONS:
A. ALL FIBERGLASS NUTS AND STUDS ARE TO BE LUBRICATED WITH EITHER A LIGHT OIL, DRY LUBRICANT OR SILICONE SPRAY.
B. ALL CONNECTIONS TO BE TORQUED TO THE FOLLOWING REQUIREMENTS:
3/8" BOLT ---- 4 FT-LBS
1/2" BOLT ---- 16 FT-LBS
5/8" BOLT ---- 16 FT-LBS
3/4" BOLT ---- 24 FT-LBS
1" BOLT ---- 50 FT-LBS
C. ALL BOLTS TO BE TORQUED USING A CALIBRATED TORQUE WRENCH.
D. FIBERGLASS STUD/NUT ASSEMBLIES SHALL BE BONDED TO INSURE THAT THE NUTS DO NOT LOOSEN. THIS CAN BE ACCOMPLISHED BY APPLYING A THICK LAYER OF ADHESIVE OR RESIN TO OVER THE EXPOSED ASSEMBLY.
E. STRUCTURAL CONNECTION UNLESS OTHERWISE NOTED IN THE DESIGN DRAWINGS RELY ON A COMBINATION OF BOLT BEARING AND ADHESIVE BONDING. EPOXY ADHESIVES RECOMMENDED FOR CONNECTIONS ARE SHELK 828 EPOXY RESIN, DOW D.E.R. 331 EPOXY RESIN OR FIBERGLASS EPOXY ADHESIVE. SAND MATING SURFACES WITH 120 GRIT SANDPAPER TO REMOVE POLYESTER SURFACING VEIL AND CLEAN JOINTING SURFACES WITH A COMPATIBLE SOLVENT PRIOR TO BONDING. NUTS SHOULD BE PROPERLY CLAMPED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND HELD IN POSITION FOR AT LEAST 48 HOURS AT 70 DEGREES, REFER TO MANUFACTURER TO OTHER TEMPERATURES) BEFORE DESIGN LOAD CAN BE APPLIED.
F. MINIMUM EDGE DISTANCE TO THE SIDE OF FASTENERS SHALL BE ONE AND A HALF DIAMETERS AND TWO DIAMETERS TO THE MEMBER END OR MINIMUM OF 1.5" MINIMUM BOLT SPACING TO BE FOUR DIAMETERS.

PROCEDURE FOR MAKING STRUCTURAL EPOXY JOINTS:

- MATERIALS USED:
STRONGWELL EPOXY ADHESIVE BASE
STRONGWELL EPOXY ADHESIVE HARDENER
SAND MAX COATED PAPER CUP FOR MIXING
CLEAN WOODEN OR FRP STICK FOR MIXING
120 GRIT SANDPAPER
CLAMPS FOR HOLDING EPOXY JOINTS DURING CURE
CLEAN CLOTH
- SURFACE PREPARATION
- SAND MATING SURFACES WITH 120 GRIT SANDPAPER UNTIL THE SURFACE GLOSS HAS BEEN REMOVED. THE SURFACING VEIL MUST BE GROUND OFF TO EXPOSE THE GLASS REINFORCEMENT. SAND BLASTING EQUIPMENT CAN ALSO BE USED.
- REMOVE ALL DUST WITH A CLEAN CLOTH. AIR BLASTING EQUIPMENT MAY ALSO BE USED. AVOID RECONTAMINATION OF THE SURFACE FROM HANDLING.
- MIXING OF EPOXY:
MIX EQUAL VOLUME PORTIONS OF THE BASE AND HARDENER IN A SMALL WAX COATED PAPER CUP WITH A CLEAN STICK UNTIL A UNIFORM GRAY COLOR IS ATTAINED AND ALL MARBLED APPEARANCE IS GONE.
NOTE: OTHER ADHESIVE SYSTEMS COMPATIBLE WITH FIBERGLASS CAN BE UTILIZED AND THE MANUFACTURER'S MIXING INSTRUCTIONS FOR THESE SYSTEMS SHOULD BE FOLLOWED.
- APPLICATION AND CURE
A. APPLY THE MIXED EPOXY UNIFORM TO ALL SURFACES TO BE JOINED. A THIN APPLICATION IS OFTEN MORE BENEFICIAL THAN A THICK APPLICATION.
B. AVOID INTRODUCING MOISTURE INTO THE JOINT.
C. JOIN THE SURFACE TO BE BONDED. THE POT LIFE AT 77°F FOR A 1:1 MIXTURE OF EQUAL VOLUMES OF BASE AND HARDENER IS 25 HOURS.
D. SECURE THE JOINT WITH CLAMPS (OR RIVETS OR BOLTS) AND ALLOW 24 HOURS FOR A FULL CURE. THE ASSEMBLY CAN THEN BE FINISHED WITH THE SAME FINISH AS THE SURFACE TO WHICH THE STRUCTURE SHOULD NOT BE REQUIRED TO SUPPORT ITS DESIGN LOAD UNTIL AT LEAST 48 HOURS (AT 70°F) AFTER BONDING. LOWER TEMPERATURES REQUIRE A LONGER CURE.
E. AFTER SECURING THE JOINT, WIPE AWAY EXCESS EPOXY.

WELDING

- ALL STRUCTURAL STEEL WELDING SHALL BE AS PER LATEST EDITION OF THE AMERICAN WELDING CODE (AWS) D11. ELECTRODE TO BE USED IS E 70XX. WELD LENGTHS SHOWN ARE EFFECTIVE LENGTH PER THE LATEST EDITION OF THE AWS CODE. UNLESS OTHERWISE NOTED SHOWN, THE WELD SHALL BE FULL LENGTH OF JOINT.
- ALL WELDING OF REINFORCING STEEL SHALL BE PER THE LATEST EDITION OF AWS D1.4.
- CONTINUOUS INSPECTION IS REQUIRED FOR ALL WELDING. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING CURRENT CERTIFICATIONS FOR ALL WELDS AND THE CITY FOR WELDING OF STRUCTURAL STEEL.
- ALL FULL PENETRATION WELDS SHALL BE TESTED BY NONDESTRUCTIVE METHODS (ULTRASONIC OR RADIOGRAPHIC TESTING). ALL RADIOGRAPHIC OPERATIONS SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 17 - HEALTH, RADIATION CONTROL REGULATIONS. COORDINATION WITH OWNER RADIATION SAFETY OFFICER SHALL BE REQUIRED PRIOR TO COMMENCEMENT OF ANY RADIOGRAPHIC OPERATIONS. A COPY OF ALL RADIATION SAFETY SURVEY/MONITORING LOSS LOG SHALL BE FURNISHED TO OWNER.
- REMOVE EXISTING PAINT ON EXISTING STEEL ELEMENTS BEFORE WELDING TO EXISTING STEEL.
- THE CONTRACTOR SHALL COMPLY WITH ALL FIRE REGULATIONS DURING WELDING OPERATIONS WHERE FLAMMABLE ELEMENTS EXIST AND SHALL ALSO PROVIDE TEMPORARY PROTECTIVE SHIELDS OF ACCEPTABLE NON-FLAMMABLE MATERIALS AS REQUIRED TO PROTECT THE EXISTING BUILDING ELEMENTS FROM FIRE. IN ORDER TO AVOID ANY FIRE HAZARD, REMOVE TEMPORARILY ALL EXISTING WOOD ELEMENTS IN THE CLOSE VICINITY OF THE NEW WELDING OPERATIONS AND REINSTALL THEM AFTERWARDS TO THE ORIGINAL CONDITION. CONTRACTOR MUST OBTAIN A WELD OR BURN PERMIT FROM THE OWNERS REPRESENTATIVE AT BEGINNING OF EACH WORK SHIFT.

INSPECTIONS

- CONTRACTOR SHALL KNOW AND COMPLY WITH REQUIREMENTS OF COVERING AGENCY BY INFORMING BUILDING DEPARTMENT WHEN REQUIRED INSPECTIONS ARE TO TAKE PLACE.
- INSPECTIONS ARE REQUIRED FOR:
• ALL STRUCTURAL STEEL WORK
• ALL CONCRETE WORK
• ALL MASONRY WORK
• ALL REINFORCING STEEL
• ALL EXCAVATIONS
- SPECIAL INSPECTIONS
A. THE OWNERS SHALL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE ADDITIONAL INSPECTIONS DURING CONSTRUCTION IN ACCORDANCE WITH CBC CHAPTER 17.
B. ALL SPECIAL INSPECTIONS SHALL BE ESTABLISHED BY AN INSPECTOR AND CERTIFIED INSPECTOR FROM AN ESTABLISHED TESTING AGENCY, LICENSED AND APPROVED BY THE BUILDING DEPARTMENT.
C. ALL INSPECTIONS SHALL BE CONTINUOUS, UNLESS OTHERWISE NOTED.
D. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTIONS REPORTS DIRECTLY TO THE ARCHITECT, EUKON GROUP, AND BUILDING DEPARTMENT.

- ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND EUKON GROUP FOR PROPER ACTION.
- TYPE OF WORK LISTED BELOW REQUIRES CONTINUOUS SPECIAL INSPECTION U.N.O.:
CONCRETE:
CONCRETE PLACEMENT.....CONTINUOUS
REBAR PLACEMENT.....CONTINUOUS
FINAL PLACEMENT
REBAR WELDING.....CONTINUOUS
REBAR COUPLING.....10% WITH TORQUE WRENCH
GUNITES/SHOTCRETE PLACEMENT.....CONTINUOUS
BATCH PLANT INSPECTIONS.....PERIODIC
WELDED ANCHORS OR STUDS.....CONTINUOUS
EXPANSION ANCHOR INSTALLATION.....CONTINUOUS
EPOXY ANCHOR INSTALLATION.....CONTINUOUS
MASONRY:
UNIT LAYUP.....PERIODIC
GROUT PLACEMENT.....CONTINUOUS
REBAR PLACEMENT.....PERIODIC
STRUCTURAL STEEL:
FILLET WELD FIELD WELDING.....CONTINUOUS
FULL PENETRATION FIELD WELDING.....CONTINUOUS
PARTIAL PENETRATION FIELD WELDING.....CONTINUOUS
HIGH STRENGTH BOLTING.....CONTINUOUS
WELDED ANCHORS OR STUDS.....CONTINUOUS
METAL DECK WELDING.....CONTINUOUS
MASONRY:
LUMBER:
FLOOR / ROOF SHEATHING NAILING.....PERIODIC
SHEAR WALL SHEATHING NAILING.....PERIODIC
GUE/LAMINATED BEAM/COLUMNS.....PERIODIC
WOOD JOISTS AND O.W. JOISTS.....FABRICATION
PRECASTED TRUSSES.....PER CBC
ANCHOR BOLTS/HOLD-DOWNS.....PER CBC
METAL STRAP PLACEMENT.....PER CBC
- A COMPLETE RECORD OF INSPECTION REPORTS SHALL BE RETAINED BY THE INSPECTOR FOR AT LEAST 2 YEARS AFTER COMPLETION OF THE PROJECT AND MADE AVAILABLE FOR INSPECTION DURING THE PROGRESS OF THE WORK.

SUBMITTALS

- THE FOLLOWING SUBMITTALS SHALL BE COORDINATED WITH ARCHITECT FOR SUBMITTAL TO EUKON GROUP FOR REVIEW 10 WORKING DAYS BEFORE START OF WORK REQUIRING SUBMITTALS.
A. SHOP DRAWINGS.
B. MIX DESIGN OF CONCRETE.
C. MIX DESIGN OF MASONRY GROUT.
D. DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS.
E. MATERIAL SPECIFICATIONS INCLUDING BUT NOT LIMITED TO NON-SHRINKING GROUT, CURING COMPOUND, ANCHOR BOLTS, ETC.
F. TEST REPORTS INCLUDING BUT NOT LIMITED TO TEST RESULTS OF CONCRETE, EPOXY ANCHORS TO EXISTING CONCRETE AND ULTRASONIC TESTING FOR FULL PENETRATION WELDS SHALL BE SUBMITTED TO OWNER WITHIN 3 DAYS OF COMPLETION OF WORK.
G. WELDING PROCEDURE SPECIFICATIONS (WPS).

GENERAL CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 308, ASTM A84, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE ON PLANS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "S" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH 3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:
#4 AND LARGER 2 IN.
#5 AND SMALLER & WVF 1 1/2 IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL 3/4 IN.
BEAMS AND COLUMNS 1 1/2 IN.
- A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE. UNO IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/SHRINK ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMMET/REDHEAD OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. SPECIAL INSPECTIONS, WHEN PERFORMED BY GOVERNMENT AGENCIES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.



1452 ENDINGER AVE.
3RD FLOOR
TUSTIN, CA 92780



65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566
www.eukongroup.com

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DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972
7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

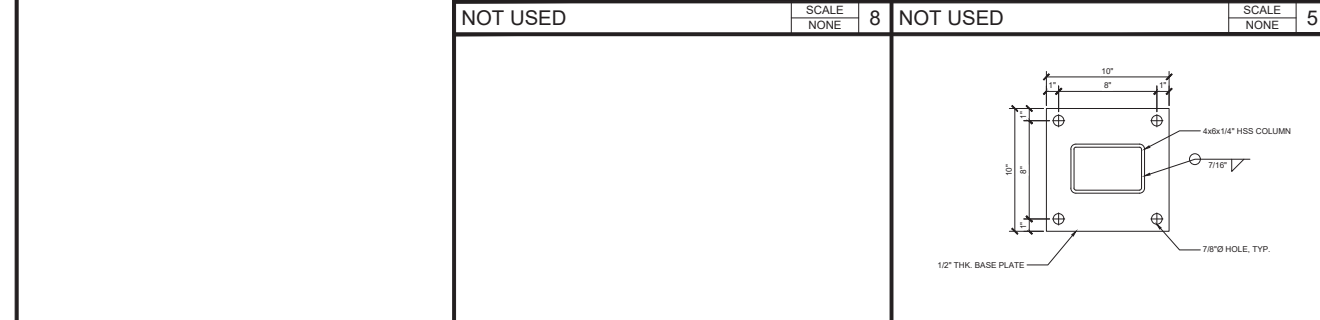
SHEET TITLE

STRUCTURAL NOTES

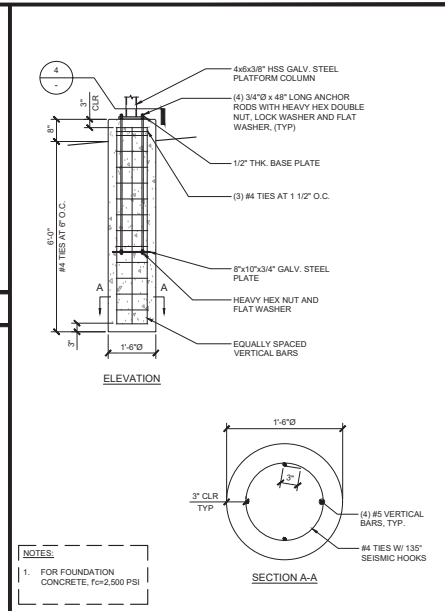
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S-1

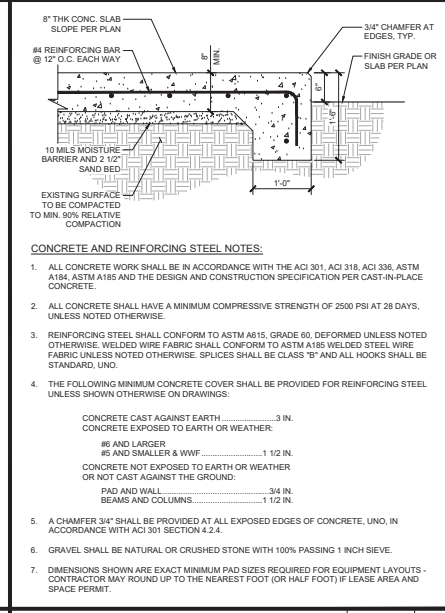
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PLATFORM FOUNDATION	SCALE NONE	2
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CONCRETE SLAB DETAIL	SCALE NONE	1
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SHEET TITLE

STRUCTURAL DETAILS

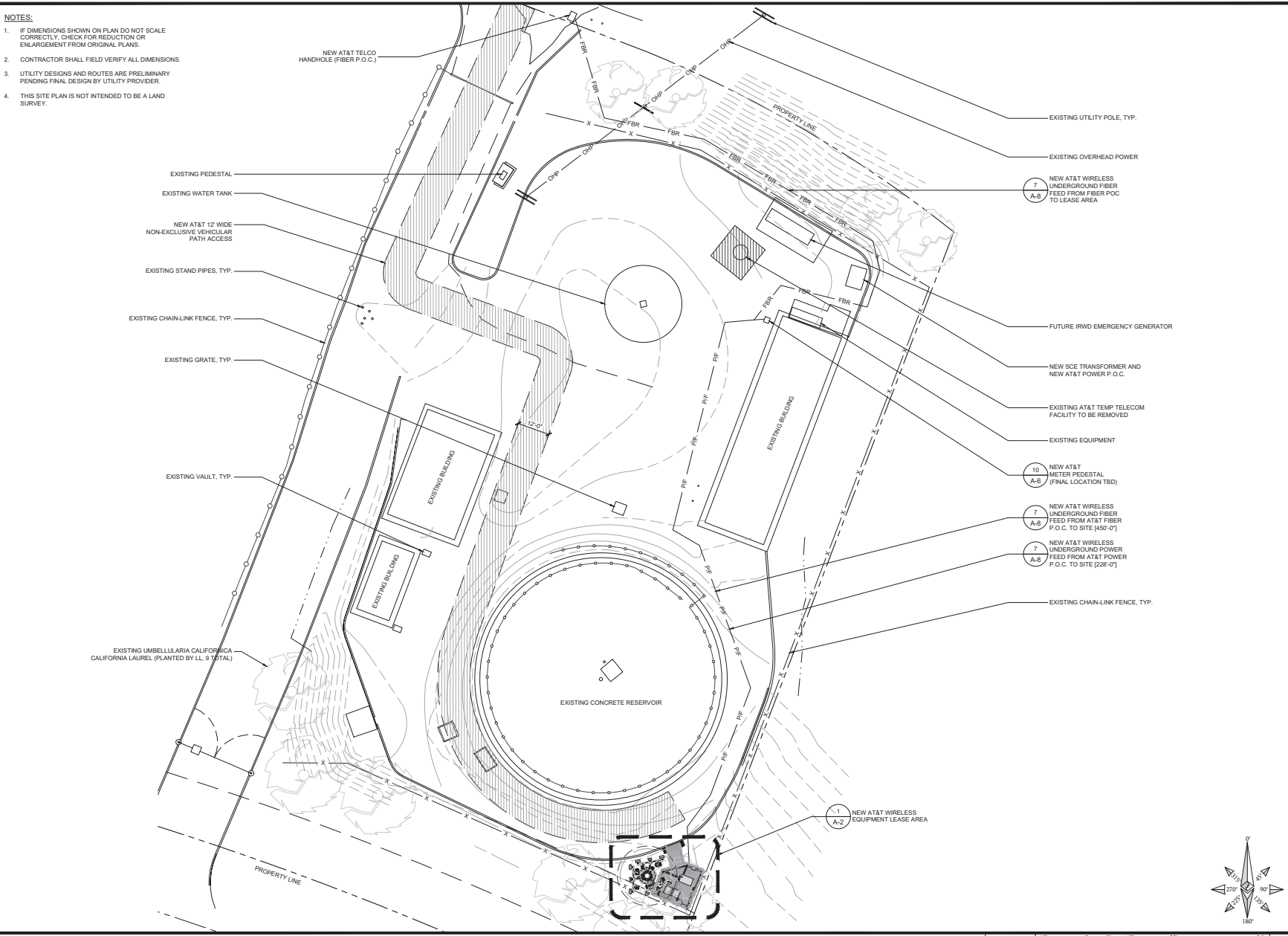
SHEET NUMBER

S-3

EUKON_A131_800D_MONOPOLE_TEMPLATE_V2_11-18-22

NOTES:

1. IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
3. UTILITY DESIGNS AND ROUTES ARE PRELIMINARY PENDING FINAL DESIGN BY UTILITY PROVIDER.
4. THIS SITE PLAN IS NOT INTENDED TO BE A LAND SURVEY.



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CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
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PROJECT INFORMATION

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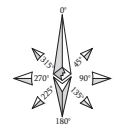
7431 1/2 SANTIAGO CANYON RD.
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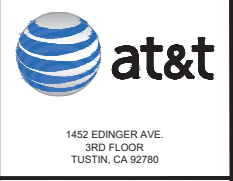
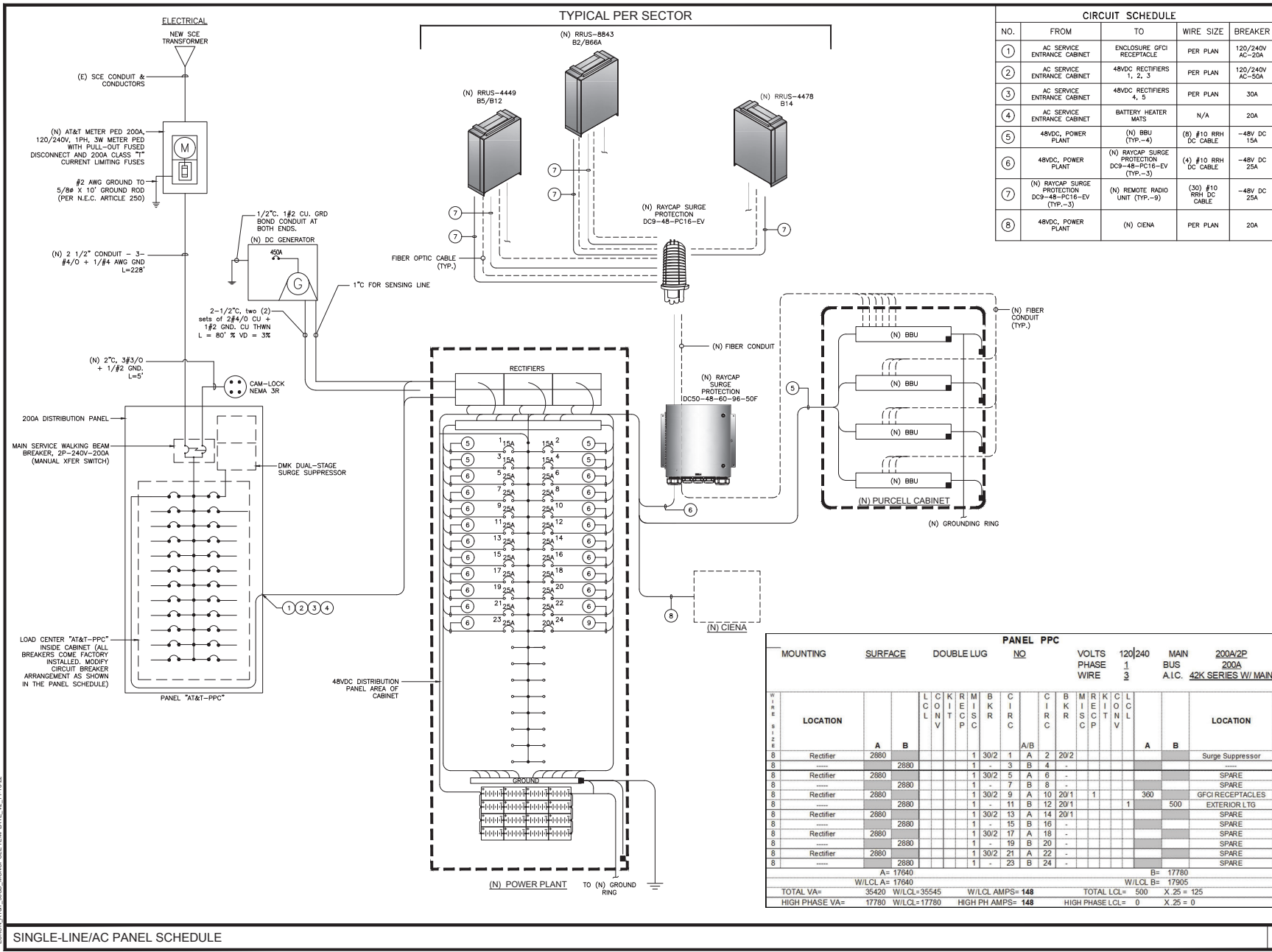
ELECTRICAL SITE PLAN

SHEET NUMBER

E-1



EUKON_AT&T_800D_MONOPOLE_TEMPLATE_V2_11-18-22



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CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
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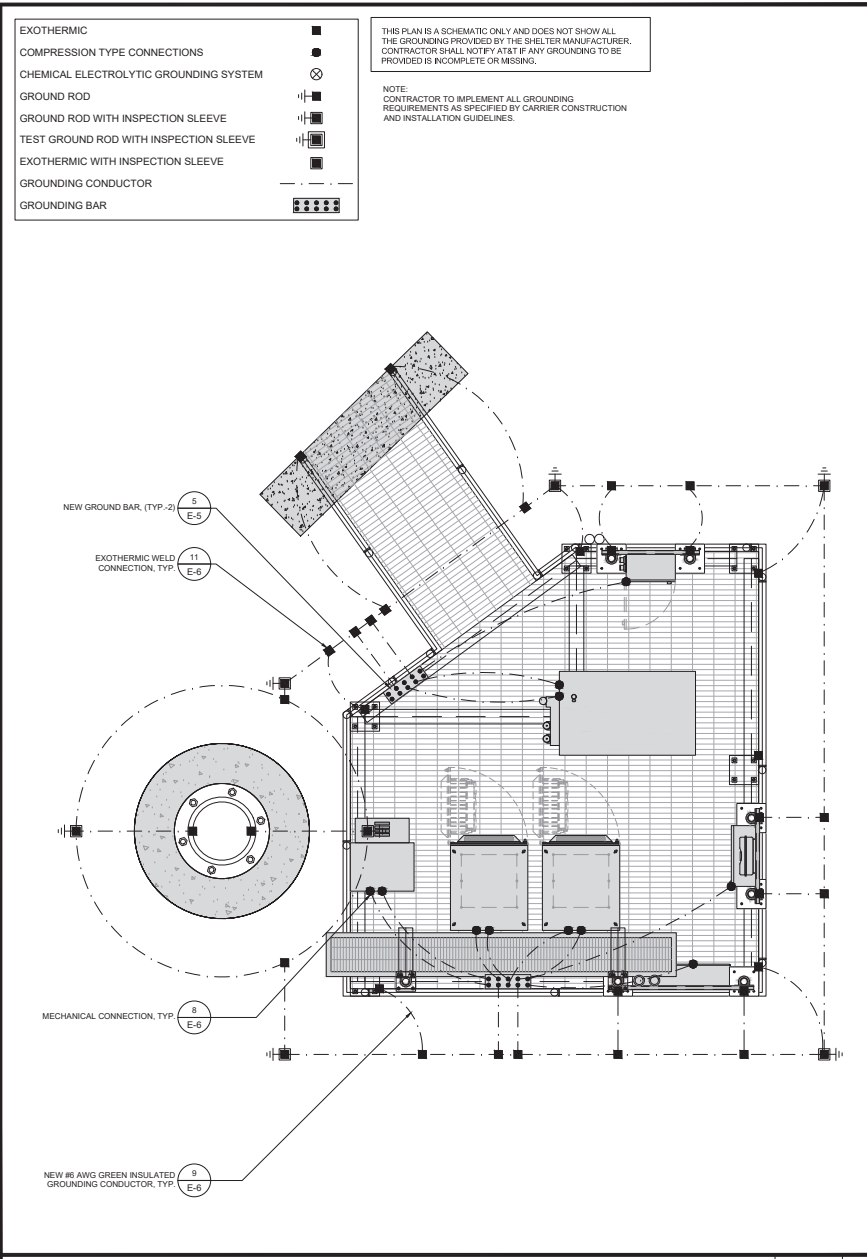
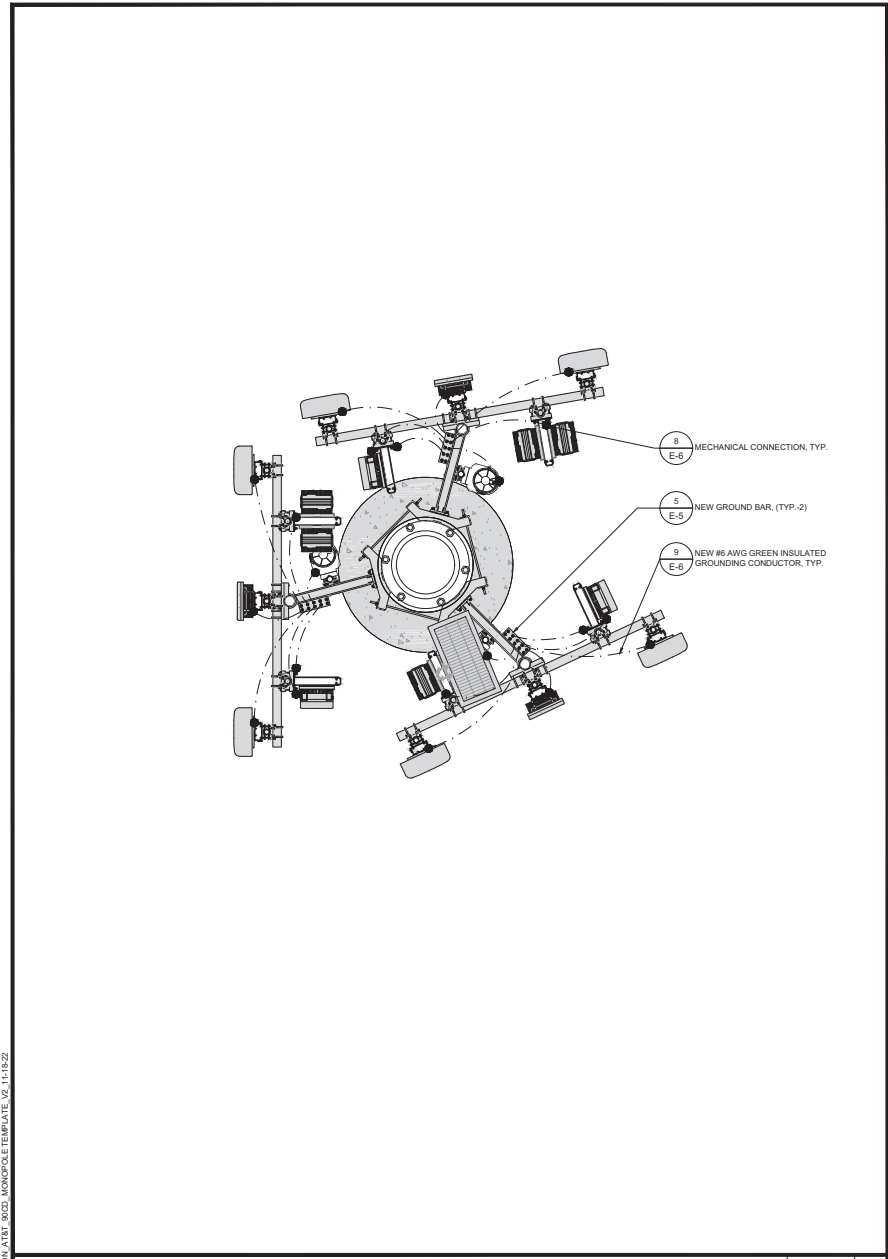
SINGLE LINE DIAGRAM / PANEL SCHEDULE

SHEET NUMBER

E-2

EUKON_AT&T_BOD_MONOPOLE_TEMPLATE_V2_11-19-22

SINGLE-LINE/AC PANEL SCHEDULE



- EXOTHERMIC
- COMPRESSION TYPE CONNECTIONS
- CHEMICAL ELECTROLYTIC GROUNDING SYSTEM
- GROUND ROD
- GROUND ROD WITH INSPECTION SLEEVE
- TEST GROUND ROD WITH INSPECTION SLEEVE
- EXOTHERMIC WITH INSPECTION SLEEVE
- GROUNDING CONDUCTOR
- GROUNDING BAR

THIS PLAN IS A SCHEMATIC ONLY AND DOES NOT SHOW ALL THE GROUNDING PROVIDED BY THE SHELTER MANUFACTURER. CONTRACTOR SHALL NOTIFY AT&T IF ANY GROUNDING TO BE PROVIDED IS INCOMPLETE OR MISSING.

NOTE: CONTRACTOR TO IMPLEMENT ALL GROUNDING REQUIREMENTS AS SPECIFIED BY CARRIER CONSTRUCTION AND INSTALLATION GUIDELINES.



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CONSTRUCTION DRAWINGS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

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SILVERADO, CA 92676

SHEET TITLE

GROUNDING PLANS

SHEET NUMBER

E-4

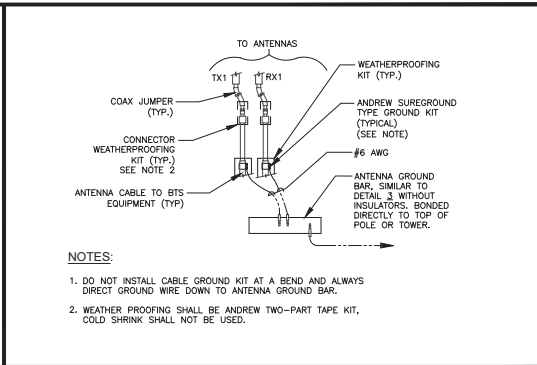
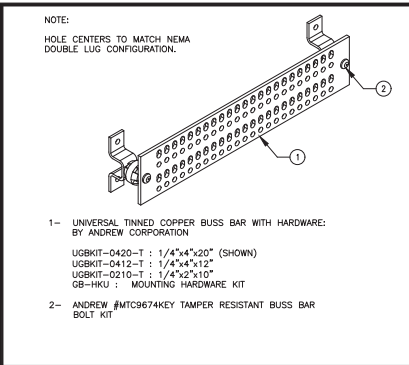
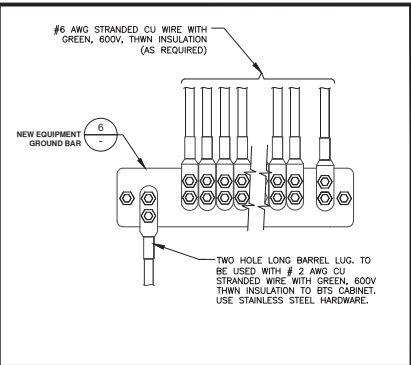
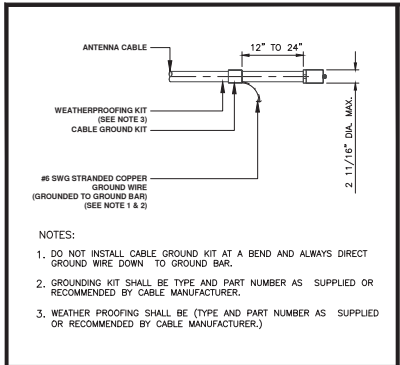
ANTENNA AND RRUS GROUNDING PLAN

EQUIPMENT GROUNDING PLAN

SCALE NONE 2

SCALE NONE 1

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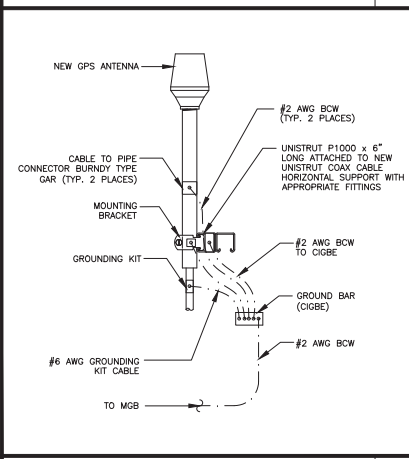
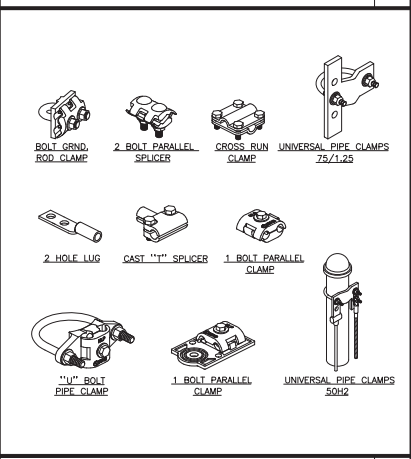
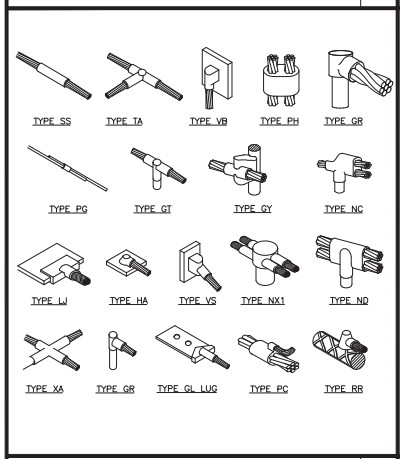
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CONN. OF CABLE GND KIT TO ANT. 12

INSTALLATION OF GND WIRE TO GND BAR 9

GROUND BAR DETAIL 6

CONN. OF GRND WIRE TO GRND BAR, TOWER 3



NOTES

- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUNDING BAR AS REQUIRED, PROVIDING 50% SPARE CONNECTION POINTS.
- DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUNDING CONDUCTOR DOWN TO GROUNDING BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- PROVIDE GROUNDING KIT 6' BEFORE TURN TRANSITION FROM TOWER TO ICE BRIDGE.
- WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER, THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BARS TO THE TOWER.
- EXTEND TWO (2) #2 AWG TINNED CU CONDUCTOR FROM BURIED GROUNDING RING AND CONNECT TO THE NEW TOWER. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR GROUNDING CONNECTIONS TO THE TOWER. (APPLICABLE TO NEW TOWERS ONLY.)
- BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOF-TOP, TOWERS, AND WATER TALLERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 AWG COPPER, ROOF-TOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY), SEE AT&T GROUNDING AND BONDING STANDARDS 76416 SPECIFICATION 6.5.2.2.
- FLEX CONDUIT TO BE INSTALLED ON NEW COPPER CONDUCTOR UP TO GROUNDING BAR AND, SEALED AT ENDS TO PROTECT FROM OUTSIDE MOISTURE AND DEBRIS.

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CONSTRUCTION DRAWINGS

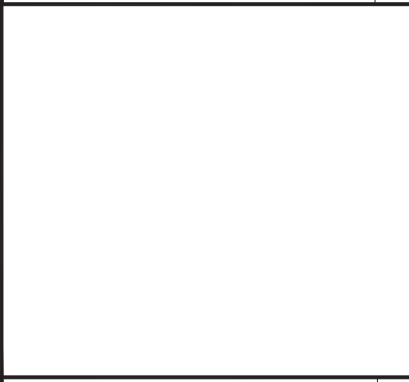
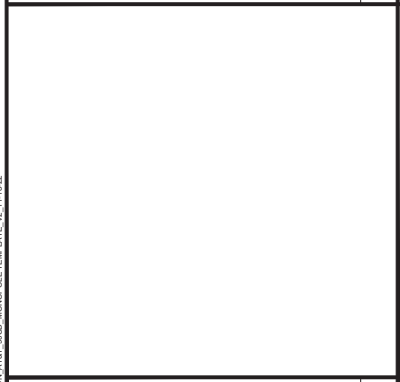
SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/06/24	90% CONSTRUCTION DRAWINGS

EXOTHERMIC WELD CONNECTION 11

MECHANICAL CONNECTION 8

GPS ANTENNA GROUNDING 5

GROUNDING NOTES 2



GROUNDING NOTES

NOT USED 10

NOT USED 7

NOT USED 4

NOT USED 1

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
SILVERADO, CA 92676

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

E-6

EUKON_A13T_800D_MONOPOLE_TEMPLATE_V2_11-18-22

PYL12V185FT

12V 185Ah-8Hr

Proven in the real world, the PVL Series of telecom batteries provides security and long life in extreme climates where other VRLA batteries just don't survive. The PVL technology utilizes proprietary lead alloys and active material additives. The PVL Series is the most cost effective battery solution over the total life cycle and for initial installation in your network.

- Primary lead for Long Life
- UL94 V-0 flame retardant case
- High temperature, long life design
- AGM and spill-proof construction
- Harnesses/connecting bars available

- No maintenance required
- 10+ years design life
- GR-4228 compliant
- UL recognized
- ABS plastic case for durability

SPECIFICATIONS

* Maximum Charge Current is 25% of the 8 Hr. Rate.

Nominal Voltage (V)	Rated Capacity Rate in Ah (8 Hr)	Ambient Temperature Range	Outer Dimensions										Terminal
			L	W	H	L	W	H	L	W	H	L	
12	185 Ah	-18 to 50°C (0 to 122°F)	356	218	126	4.9	317	12.5	317	12.5	60.7	133.8	Front/MS Bolt

Amperes to Final voltage: 1.75V per cell @ 25°C (77°F)

DISCHARGE TIME (hrs)										
2	3	4	5	6	7	8	9	10	12	20
71.2	52.0	41.3	34.4	30.0	26.0	23.1	21.0	19.3	17.7	10.2

Watts to Final voltage: 1.75V per cell @ 25°C (77°F)

DISCHARGE TIME (hrs)										
2	3	4	5	6	7	8	9	10	12	20
820	609	487	407	351	315	275	250	232	215	123

PYL12V185FT 12V 185Ah-8Hr

Rev. 10-20-2012

- Float Charge Voltage: 13.65V +/- 0.15V
- Temperature Compensation: The recommended compensation factor is -3mV/°C/cell. The standard center point for temperature compensation is 25°C.
- Internal Resistance: Approximately 3.5 mΩ measured with 1kHz AC bridge
- Terminal Torque: 90 in.lbs. (13mm, top); 43.5 in.lbs. (10mm, front)

Temperature and Discharge Capacity

Self-Discharge Characteristics

Charging Characteristics (2.25V/Cell)

GS Battery (U.S.A.), Inc.
 1150 Northmeadow Parkway, Suite 110
 Roswell, GA 30076
 800-472-2870
www.gsbattery.com

International Certification
 (1) ISO 9001, TS 16949
 (2) UL approval, Code: M112576

FIRE DEPARTMENT NOTES

- GENERAL**
- 1.0 ADDRESS NUMBERS:
- A. APPROVED ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION SHALL BE PLACED IN A POSITION THAT PLAINLY LEGIBLE AND VISIBLE FROM THE STREET, ROAD, ALLEY, AND WALKWAYS GIVING ACCESS TO AND WITHIN THE PROPERTY.
- 2.0 FIRE EXTINGUISHERS:
- A. PROVIDE A FIRE EXTINGUISHER (MINIMUM 2A-10BC) WITHIN A RECESSED OR SEMI-RECESSED CABINET WITHIN 75 FEET TRAVEL DISTANCE FROM ALL POINTS IN THE OCCUPANCY. THE EXTINGUISHER SHALL BE MOUNTED ON A HOOK WITHIN THE CABINET (ELEVATED OFF CABINET FLOOR); THE TOP OF THE EXTINGUISHER SHALL BE NO HIGHER THAN 48 INCHES (1219 mm) ABOVE THE FLOOR; EXTINGUISHER SHALL BE PLACED IN A EASILY ACCESSIBLE LOCATIONS WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE.
- 3.0 DOOR OPERATIONS:
- A. ALL EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT KEY, SPECIAL KNOWLEDGE, OR EFFORT. THE UNLATCHING OF ANY EXIT DOOR SHALL NOT REQUIRE MORE THAN ONE OPERATION.
- 4.0 ADDITIONAL PERMIT:
- A. PRIOR TO THE FINAL INSPECTION, OBTAIN A HAZARDOUS MATERIALS PERMIT FROM THE FIRE DEPARTMENT. CONTACT THE ENVIRONMENTAL MANAGEMENT CENTER AT (916) 455-8200
- 5.0 REQUIRED INSPECTIONS:
- A. THE FIRE DEPARTMENT INSPECTION FOR THIS PROJECT INCLUDE THE FOLLOWING:
 1. HAZARDOUS MATERIALS FINAL INSPECTION;
 2. FIRE PREVENTION BUREAU FINAL INSPECTION - CONTRACTOR MUST REQUEST A SEPARATE INSPECTION. INSPECTION INCLUDES, BUT IS NOT LIMITED TO: FIRE EXTINGUISHERS; SIGNAGE; DOOR HARDWARE AND MEANS OF EGRESS; EMERGENCY/EXIT LIGHTING; ETC.
- NOTE: TO SCHEDULE INSPECTIONS: CALL OFFICE OF STATE FIRE MARSHALL AT (916-445-8200) AT LEAST 48 HOURS IN ADVANCE.

NOTES

1. PER CFC 2019 SECTION 1206.2 "STATIONARY STORAGE BATTERY SYSTEMS HAVING CAPACITIES EXCEEDING THE VALUES SHOWN IN TABLE 1206.2.1 SHALL COMPLY WITH SECTION 1206.2.1 THROUGH 1206.2.12.6, AS APPLICABLE". SINCE THE TOTAL CAPACITY OF THE LEAD-ACID-TYPE BATTERY SYSTEM IS LESS THAN 70kWh THIS MODIFICATION IS EXEMPT FROM CFC 2019 SECTION 1206. CAPACITY CALCULATION:
 (16 BATTERIES x 185Ah x 12V) / 1000 = 35.52kWh
2. DEFINITIONS PER CFC 2019 SECTION 1202.1:
LEAD-ACID BATTERY:
 A STORAGE BATTERY THAT IS COMPRISED OF LEAD ELECTRODES IMMERSER IN SULPHURIC ACID ELECTROLYTE.
CORROSION:
 A CHEMICAL THAT CAUSES VISIBLE DESTRUCTION OF, OR IRREVERSIBLE ALTERATIONS IN, LIVING TISSUE BY CHEMICAL ACTION AT THE POINT OF CONTACT; A CHEMICAL SHALL BE CONSIDERED CORROSIVE IF, WHEN TESTED ON THE INTACT SKIN OF ALBINO RABBITS BY THE METHOD DESCRIBED IN BOTH 40 CFR 173.157, SUCH CHEMICAL DESTROYS OR CHANGES IRREVERSIBLY THE STRUCTURE OF THE TISSUE AT THE POINT OF CONTACT FOLLOWING AN EXPOSURE PERIOD OF 4 HOURS. THIS TERM DOES NOT REFER TO ACTION ON INANIMATE SURFACES.
HAZARDOUS MATERIALS:
 THESE CHEMICALS OR SUBSTANCES WHICH ARE PHYSICAL HAZARDS OR HEALTH HAZARDS AS DEFINED AND CLASSIFIED IN THIS CHAPTER, WHETHER THE MATERIALS ARE IN USABLE OR WASTE CONDITION.
HEALTH HAZARD:
 A CLASSIFICATION OF A CHEMICAL FOR WHICH THERE IS STATISTICALLY SIGNIFICANT EVIDENCE THAT ACUTE OR CHRONIC HEALTH EFFECTS ARE CAPABLE OF OCCURRING IN EXPOSED PERSONS. THE TERM "HEALTH HAZARD" INCLUDES CHEMICALS THAT ARE TOXIC, HIGHLY TOXIC AND CORROSIVE.
PHYSICAL HAZARD:
 A CHEMICAL FOR WHICH THERE IS EVIDENCE THAT IT IS A COMBUSTIBLE LIQUID, CRYOGENIC FLUID, EXPLOSIVE, FLAMMABLE (SOLID, LIQUID OR GAS), ORGANIC PEROXIDE (SOLID OR LIQUID), OXIDIZER (SOLID OR LIQUID), OXIDIZING GAS, PYROPHORIC (SOLID, LIQUID OR GAS), UNSTABLE (REACTIVE) MATERIAL (SOLID, LIQUID OR GAS) OR WATER-REACTIVE MATERIAL (SOLID OR LIQUID).

BATTERY TYPE	ELECTROLYTE WEIGHT (lbs.)	ELECTROLYTE VOLUME (gal.)	ACID WEIGHT (lbs.)	ACID VOLUME (gal.)	LEAD (lbs.)	LEAD OXIDE (lbs.)	TOTAL # OF BATTERIES	ELECTROLYTE TOTAL WEIGHT (lbs.)	ELECTROLYTE TOTAL VOLUME (gal.)	TOTAL ACID (gal.)
* MARATHON "M12V180FT"	27.27	2.47	11.44	0.74	92.6	20	8	218.16	19.76	5.92



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NOT FOR CONSTRUCTION

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

DRAWN BY:	UTILITIES CHECKED BY:	A&E CHECKED BY:
AS	-	RB

CONSTRUCTION DRAWINGS

SUBMITTALS	
REV	DESCRIPTION
A	90% CONSTRUCTION DRAWINGS

PROJECT INFORMATION

CLL04972

7431 1/2 SANTIAGO CANYON RD.
 SILVERADO, CA 92676

SHEET TITLE
 FIRE DEPARTMENT NOTES AND BATTERY SPECIFICATIONS

SHEET NUMBER

FD-1