

LEYDEN ROCK METROPOLITAN DISTRICT
SPECIAL MEETING
Leyden Rock Clubhouse (17685 W. 83rd Drive, Arvada, CO)
Tuesday, September 27, 2023 at 6:00 P.M.
<https://leydenrocklife.com/>

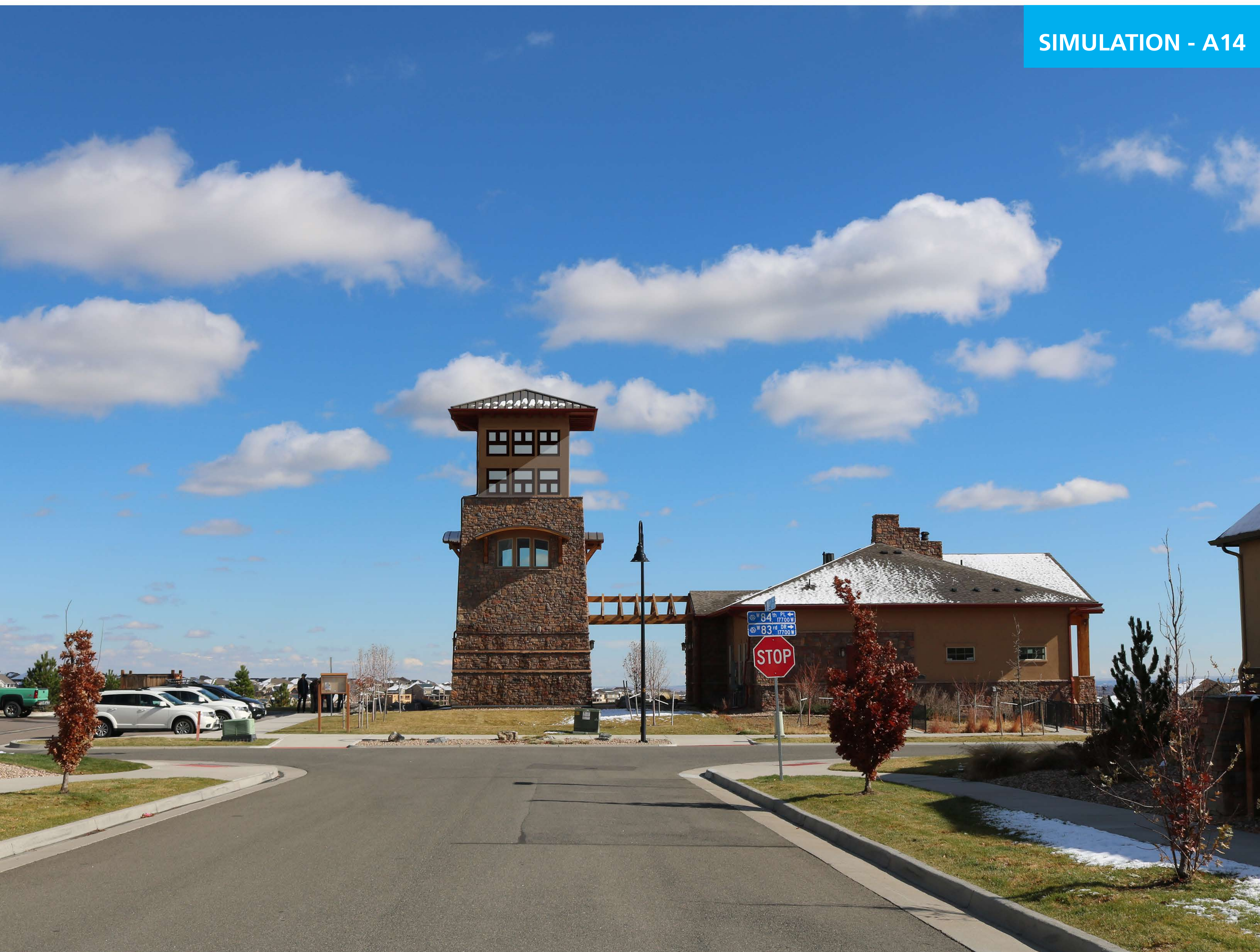
Brett Vernon, President	Term to May 2027
Scott J. Plummer, Secretary	Term to May 2027
Jeff Cunningham, Treasurer	Term to May 2025
Christian Ardita, Assistant Secretary	Term to May 2025
Tanis Batsel Stewart, Assistant Secretary	Term to May 2025

NOTICE OF SPECIAL MEETING AND AGENDA

1. Call to Order/Declaration of Quorum
2. Director Conflict of Interest Disclosures
3. Approval of Agenda
4. Public Comment – Members of the public may express their views to the Board on matters that affect the District on items not otherwise on the agenda. Comments will be limited to three (3) minutes per person.
5. Discussion Regarding Verizon Cell Tower (**enclosure**)
6. Director’s Matters
7. Other Business
8. Adjourn

2023 Regular Meetings

January 17; February 21; March 21; April 18; May 16; June 20; July 18; August 15; September 19; October 17;
November 21; and December 19 at 6:00 p.m. via teleconference.





EXISTING



SIMULATION - C14



verizon

DEN LEYDEN

ROOFTOP

17684 WEST 84TH PLACE ARVADA, CO 80007



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET
SUITE 800
DENVER, COLORADO 80237

PROJECT NO: 197068.0016
DRAWN BY: BTS
CHECKED BY: NCP

REV	DATE	DESCRIPTION
A	09/10/19	ISSUED FOR 90% CDs

NOT TO BE USED FOR CONSTRUCTION

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

DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
TITLE SHEET & PROJECT DATA

SHEET NUMBER
T-1

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

CONSTRUCTION: _____ DATE: _____
 REAL ESTATE: _____ DATE: _____
 ZONING: _____ DATE: _____
 R.F.: _____ DATE: _____
 NETWORK: _____ DATE: _____
 PROPERTY OWNER: _____ DATE: _____

SITE INFORMATION

VERIZON SITE NAME:
DEN LEYDEN

SITE ADDRESS:
17684 WEST 84TH PLACE
ARVADA, CO 80007

COUNTY:
JEFFERSON

LATITUDE (NAD83):
39°50'58.64" N
39.849622

LONGITUDE (NAD83):
105°11'54.36" W
105.198433

AMSL:
5860±

PROPERTY OWNER:
LEYDEN ROCK METROPOLITAN DISTRICT #10
2154 E COMMONS AVE
CENTENNIAL, CO 80122

STRUCTURE TYPE:
ROOFTOP

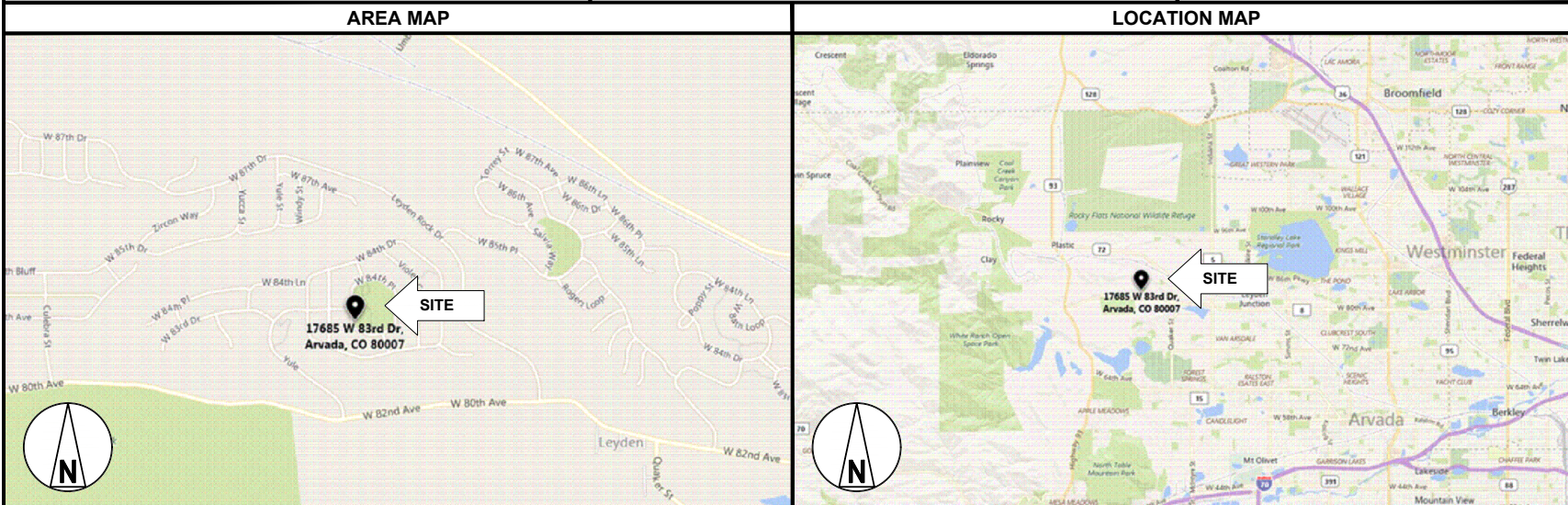
POWER COMPANY:
XCEL ENERGY
(303) 573-4358
2506 W 13TH AVE
DENVER CO, 80204

TELCO COMPANY:
VERIZON WIRELESS
(480) 629-5533
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

SITE ACQUISITION MANAGER:
COLLEEN NEBEL
4600 S. SYRACUSE STREET,
SUITE 800
DENVER, CO 80237
(303) 256-4079
NEBELC@BV.COM

CONTACT ENGINEER:
NATHAN PETRY
(952) 896-0774
PETRYN@BV.COM

APPLICABLE CODES	PROJECT DESCRIPTION	ZONING INFORMATION	DRAWING INDEX																																												
ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES: 2009 INTERNATIONAL BUILDING CODE OR LATEST ADOPTED EDITION 2014 NATIONAL ELECTRIC CODE OR LATEST ADOPTED EDITION TIA/EIA-222-G OR LATEST ADOPTED EDITION IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL	<ul style="list-style-type: none"> INSTALL (1) PROPOSED WOODEN FENCE INSTALL (1) CONCRETE PAD INSTALL (2) PROPOSED CABINETS INSTALL (1) PROPOSED METER INSTALL (1) PROPOSED 200A AC PANEL INSTALL (1) PROPOSED FIBER BOX INSTALL (2) PROPOSED HYBRID CABLES INSTALL (4) PROPOSED RF TRANSPARENT SCREEN WALLS INSTALL (1) PROPOSED ANTENNA FRAME INSTALL (8) PROPOSED ANTENNAS INSTALL (8) PROPOSED RRHS INSTALL (2) PROPOSED OVP BOXES INSTALL (1) PROPOSED 200A SERVICE DISCONNECT 	JURISDICTION: CITY OF ARVADA ZONING CLASS: PUD-R APN: 2026212002 DO NOT SCALE DRAWINGS CONTRACTOR 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.	<table border="1"> <thead> <tr> <th>SHEET NO:</th> <th>SHEET TITLE</th> </tr> </thead> <tbody> <tr><td>T-1</td><td>TITLE SHEET & PROJECT DATA</td></tr> <tr><td>GN-1</td><td>LEGEND AND ABBREVIATIONS</td></tr> <tr><td>GN-2</td><td>GENERAL CONSTRUCTION NOTES</td></tr> <tr><td>GN-3</td><td>GENERAL SITE WORK AND DRAINAGE NOTES</td></tr> <tr><td>GN-4</td><td>GENERAL ELECTRICAL WORK NOTES</td></tr> <tr><td>C-1</td><td>EXISTING OVERALL SITE PLAN</td></tr> <tr><td>C-1.1</td><td>PROPOSED OVERALL SITE PLAN</td></tr> <tr><td>C-2</td><td>PROPOSED EQUIPMENT LAYOUT</td></tr> <tr><td>C-3</td><td>WEST SITE ELEVATIONS</td></tr> <tr><td>C-3.1</td><td>NORTH SITE ELEVATIONS</td></tr> <tr><td>C-3.2</td><td>EAST SITE ELEVATIONS</td></tr> <tr><td>C-4</td><td>TOWER FLOOR PLANS</td></tr> <tr><td>C-4.1</td><td>ANTENNA LAYOUT</td></tr> <tr><td>C-5</td><td>EQUIPMENT DETAILS</td></tr> <tr><td>C-6</td><td>EQUIPMENT DETAILS</td></tr> <tr><td>C-7</td><td>EQUIPMENT DETAILS</td></tr> <tr><td>E-1</td><td>ELECTRICAL NOTES AND PANEL SCHEDULE</td></tr> <tr><td>E-2</td><td>ELECTRICAL AC ONE-LINE DIAGRAM</td></tr> <tr><td>E-3</td><td>ELECTRICAL DC ONE-LINE DIAGRAM</td></tr> <tr><td>G-1</td><td>EQUIPMENT GROUNDING PLAN</td></tr> <tr><td>G-2</td><td>GROUNDING DETAILS</td></tr> </tbody> </table>	SHEET NO:	SHEET TITLE	T-1	TITLE SHEET & PROJECT DATA	GN-1	LEGEND AND ABBREVIATIONS	GN-2	GENERAL CONSTRUCTION NOTES	GN-3	GENERAL SITE WORK AND DRAINAGE NOTES	GN-4	GENERAL ELECTRICAL WORK NOTES	C-1	EXISTING OVERALL SITE PLAN	C-1.1	PROPOSED OVERALL SITE PLAN	C-2	PROPOSED EQUIPMENT LAYOUT	C-3	WEST SITE ELEVATIONS	C-3.1	NORTH SITE ELEVATIONS	C-3.2	EAST SITE ELEVATIONS	C-4	TOWER FLOOR PLANS	C-4.1	ANTENNA LAYOUT	C-5	EQUIPMENT DETAILS	C-6	EQUIPMENT DETAILS	C-7	EQUIPMENT DETAILS	E-1	ELECTRICAL NOTES AND PANEL SCHEDULE	E-2	ELECTRICAL AC ONE-LINE DIAGRAM	E-3	ELECTRICAL DC ONE-LINE DIAGRAM	G-1	EQUIPMENT GROUNDING PLAN	G-2	GROUNDING DETAILS
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GENERAL NOTES	THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.		FOR REFERENCE LS-1 LAND SURVEY LS-2 LAND SURVEY																																												



DRIVING DIRECTIONS

FROM 3131 S. VAUGHN WAY: TAKE I-225 N, I-70 W, I-270 W AND US-36 W TO CO-95 S/SHERIDAN BLVD IN WESTMINSTER. TAKE THE CO-95 S/SHERIDAN BOULEVARD EXIT FROM US-36 W. TAKE THE CO-95 S/SHERIDAN BOULEVARD EXIT TOWARD 92ND AVENUE W. TAKE W 88TH AVE, 86TH PKWY AND W 82ND AVE TO W 83RD DR.

11"x17" PLOT WILL BE HALF SCALE UNLESS NOTED

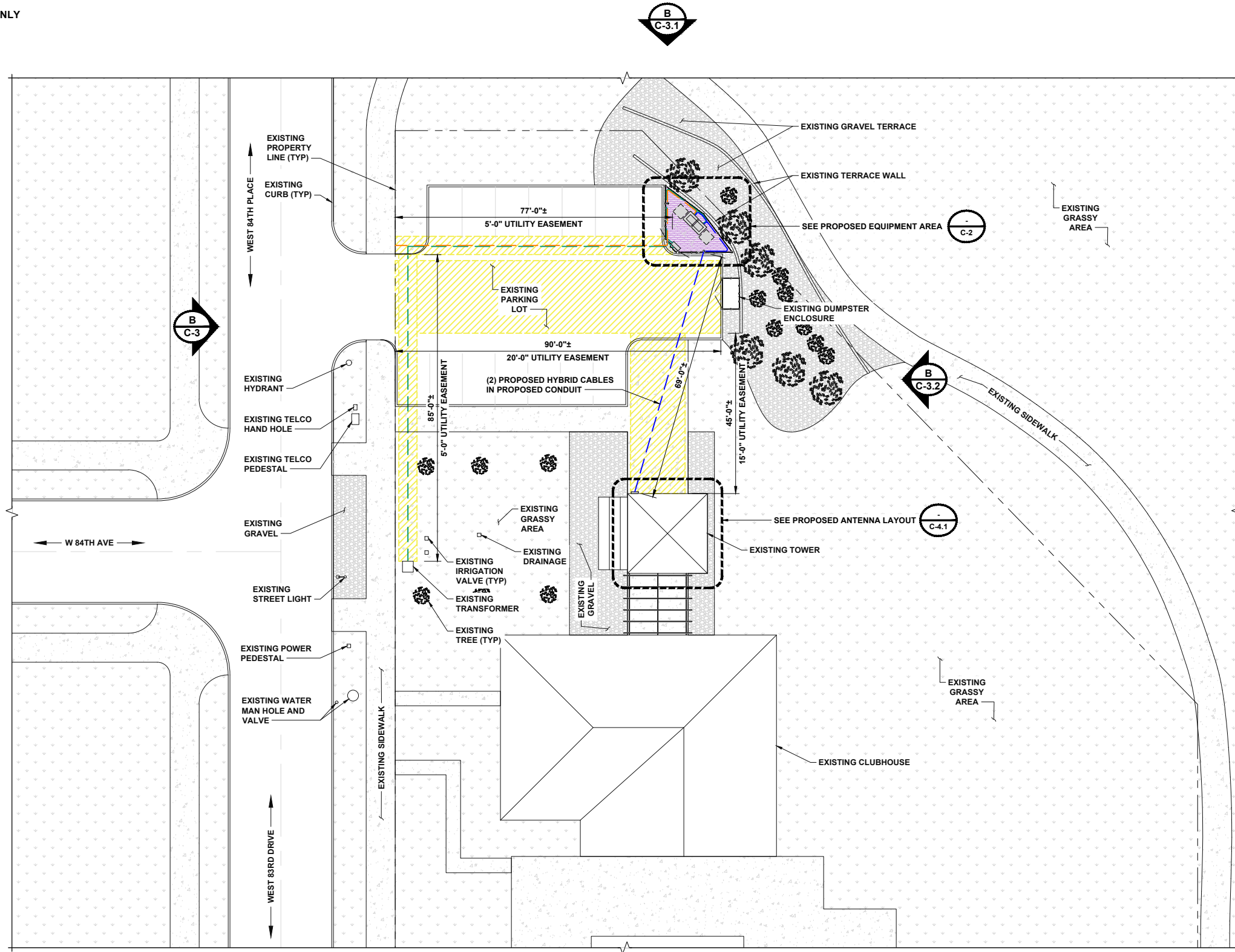
ENGINEER OF RECORD

NATHAN PETRY
PE # 49852
BLACK & VEATCH CORPORATION

CALL BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
 UTILITY NOTIFICATION CENTER OF COLORADO
 811 OR 1-800-922-1987
 3 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

NOTE:
THIS SITE PLAN IS NOT A BOUNDARY SURVEY. PROPERTY LINES ARE APPROXIMATE AND FOR REFERENCE ONLY



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET
SUITE 800
DENVER, COLORADO 80237

PROJECT NO: 197068.0016
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CHECKED BY: NCP

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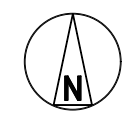
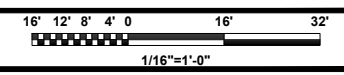
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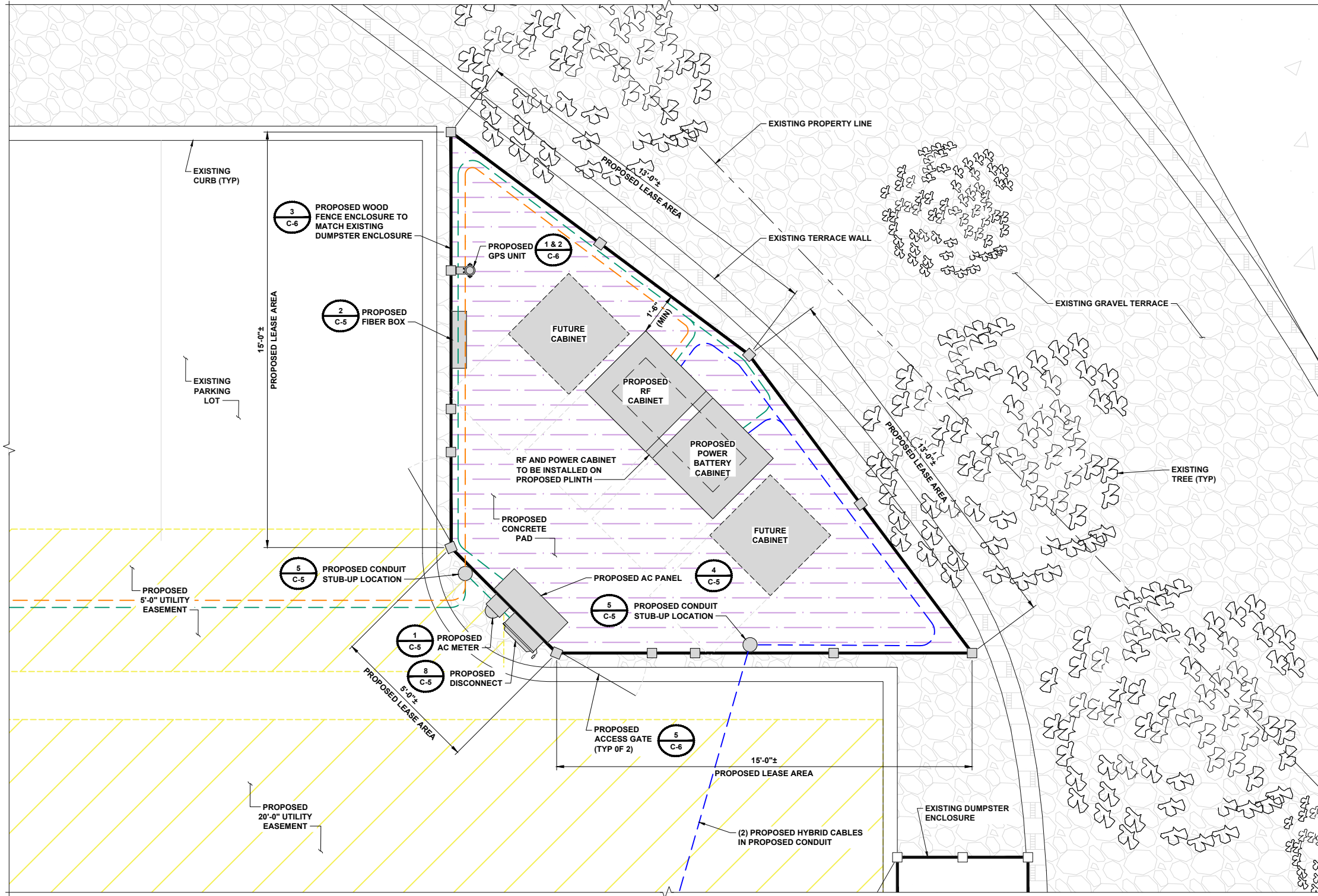
DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
PROPOSED OVERALL SITE PLAN

SHEET NUMBER
C-1.1

PROPOSED OVERALL SITE PLAN





3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

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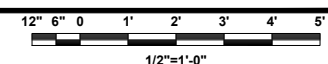
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DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
PROPOSED EQUIPMENT LAYOUT

SHEET NUMBER
C-2

PROPOSED EQUIPMENT LAYOUT





3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET
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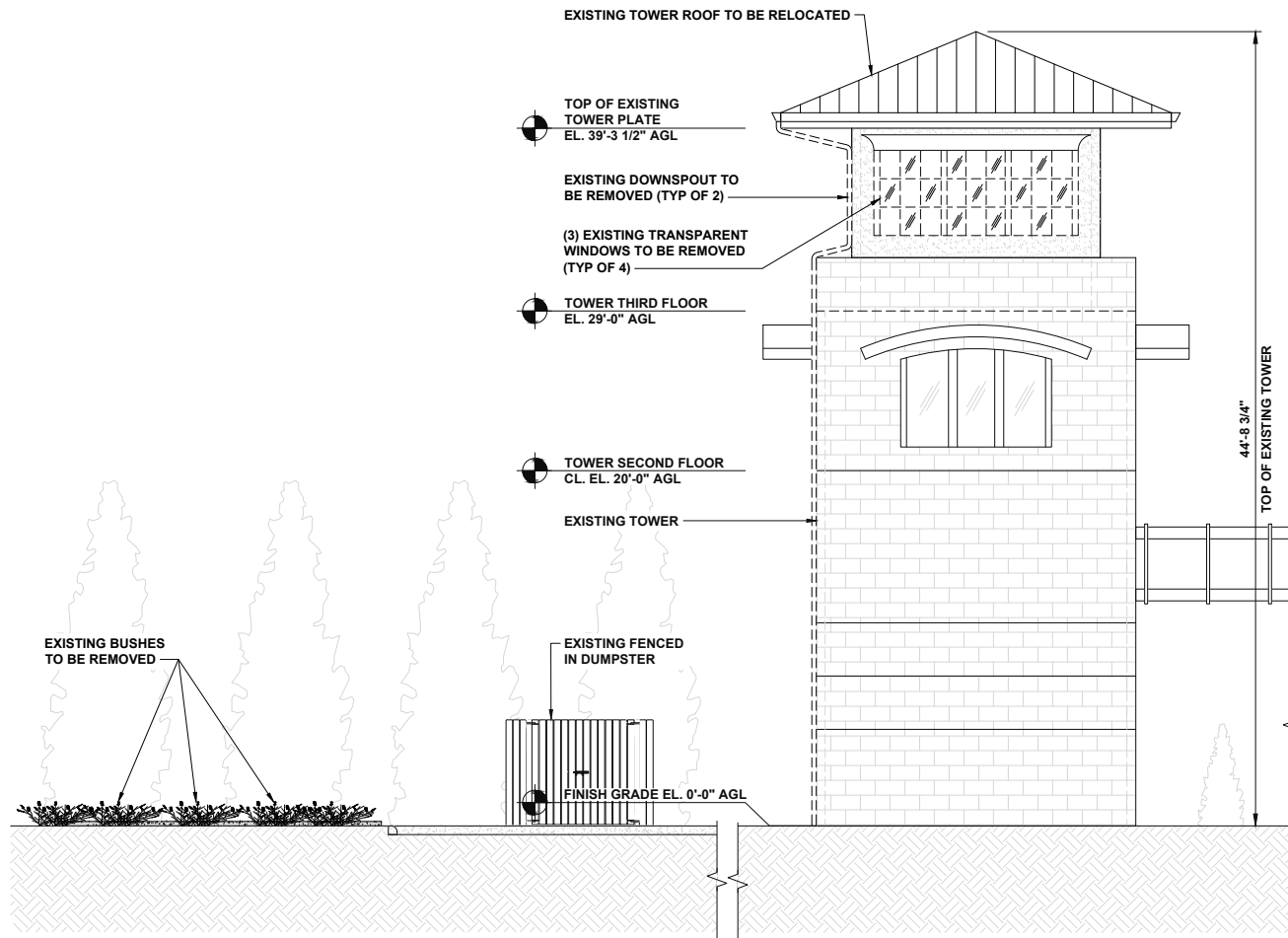
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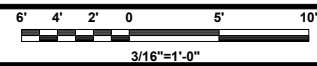
DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
WEST SITE ELEVATIONS

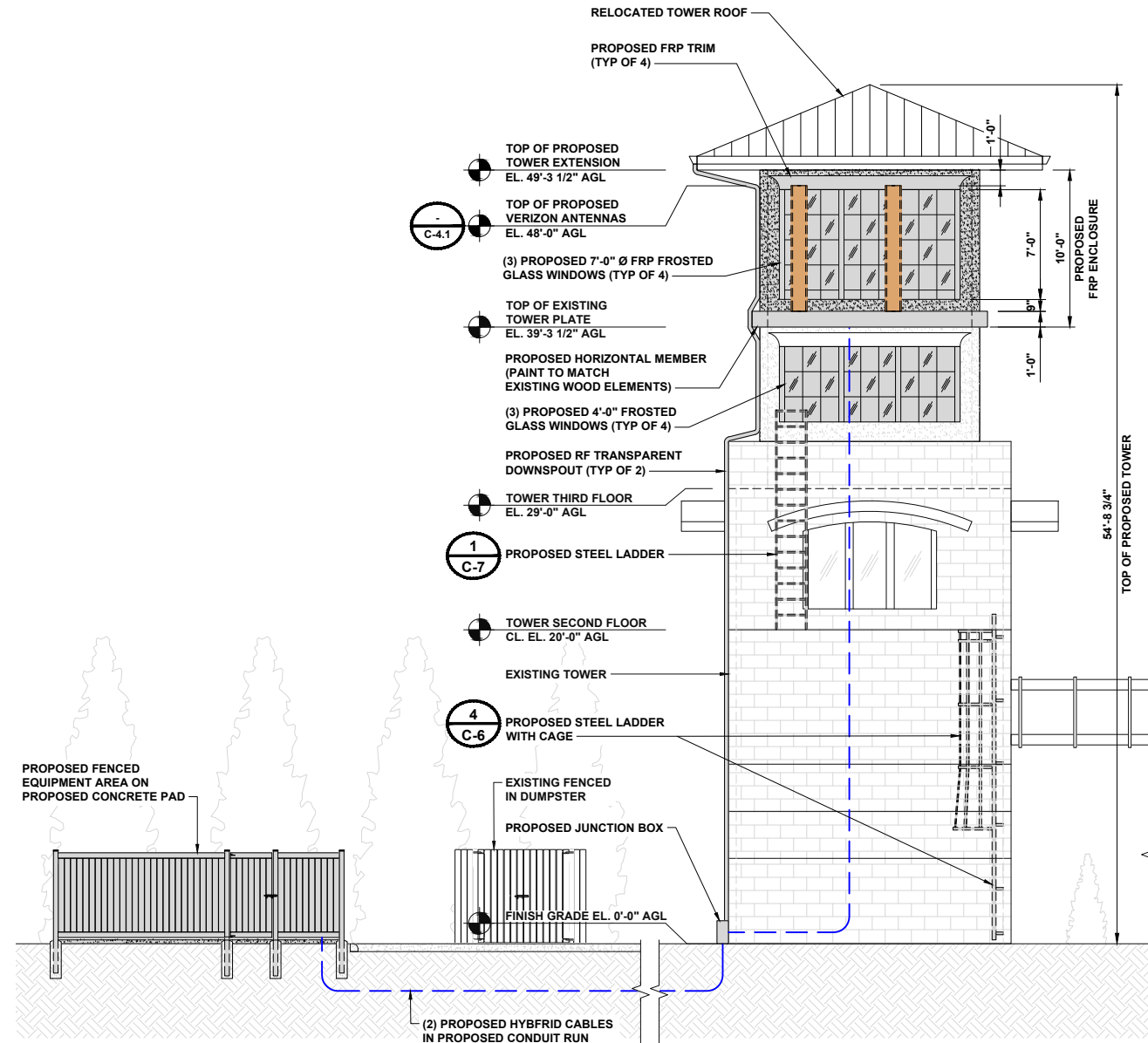
SHEET NUMBER
C-3



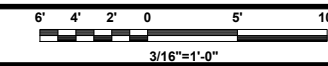
EXISTING WEST SITE ELEVATION



A



PROPOSED WEST SITE ELEVATION



B



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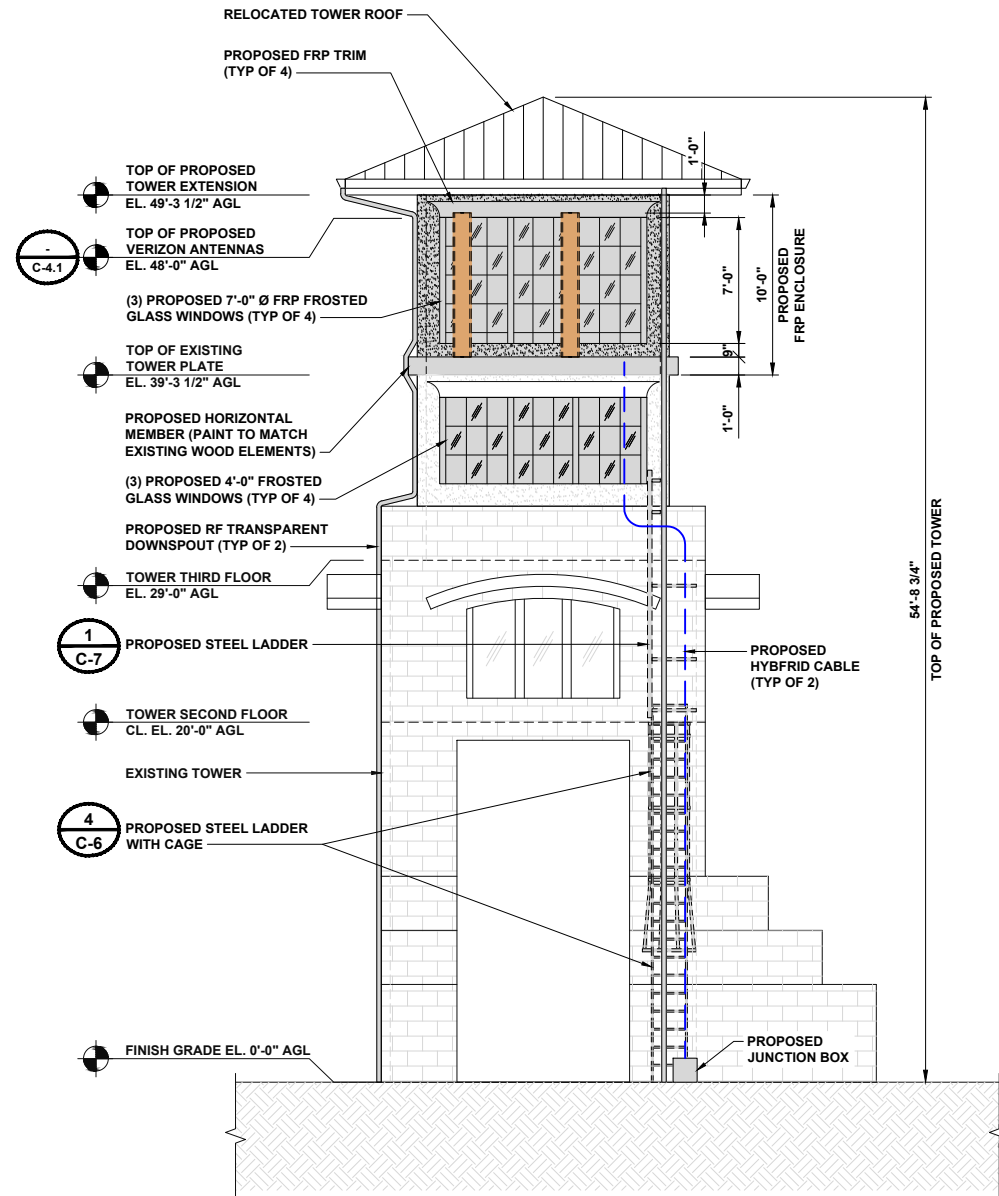
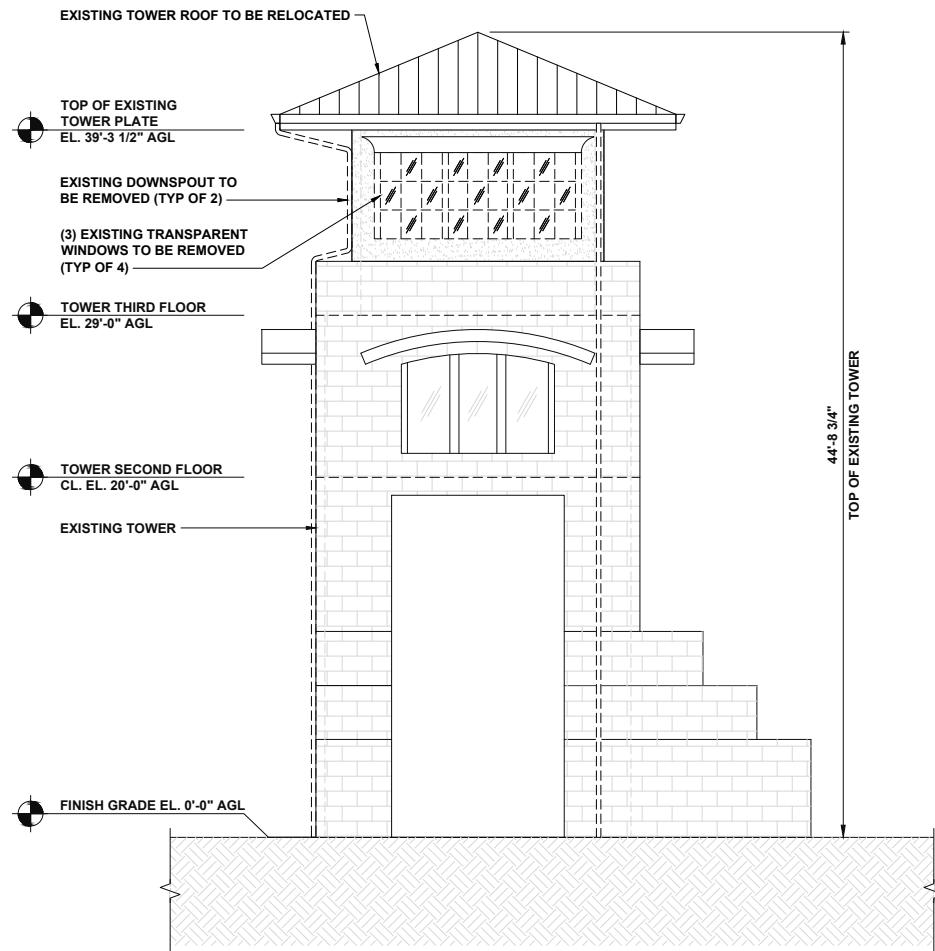
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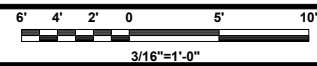
DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
NORTH SITE ELEVATIONS

SHEET NUMBER
C-3.1

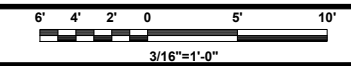


EXISTING NORTH SITE ELEVATION



A

PROPOSED NORTH SITE ELEVATION



B



REV	DATE	DESCRIPTION
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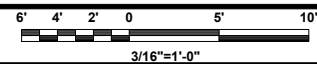
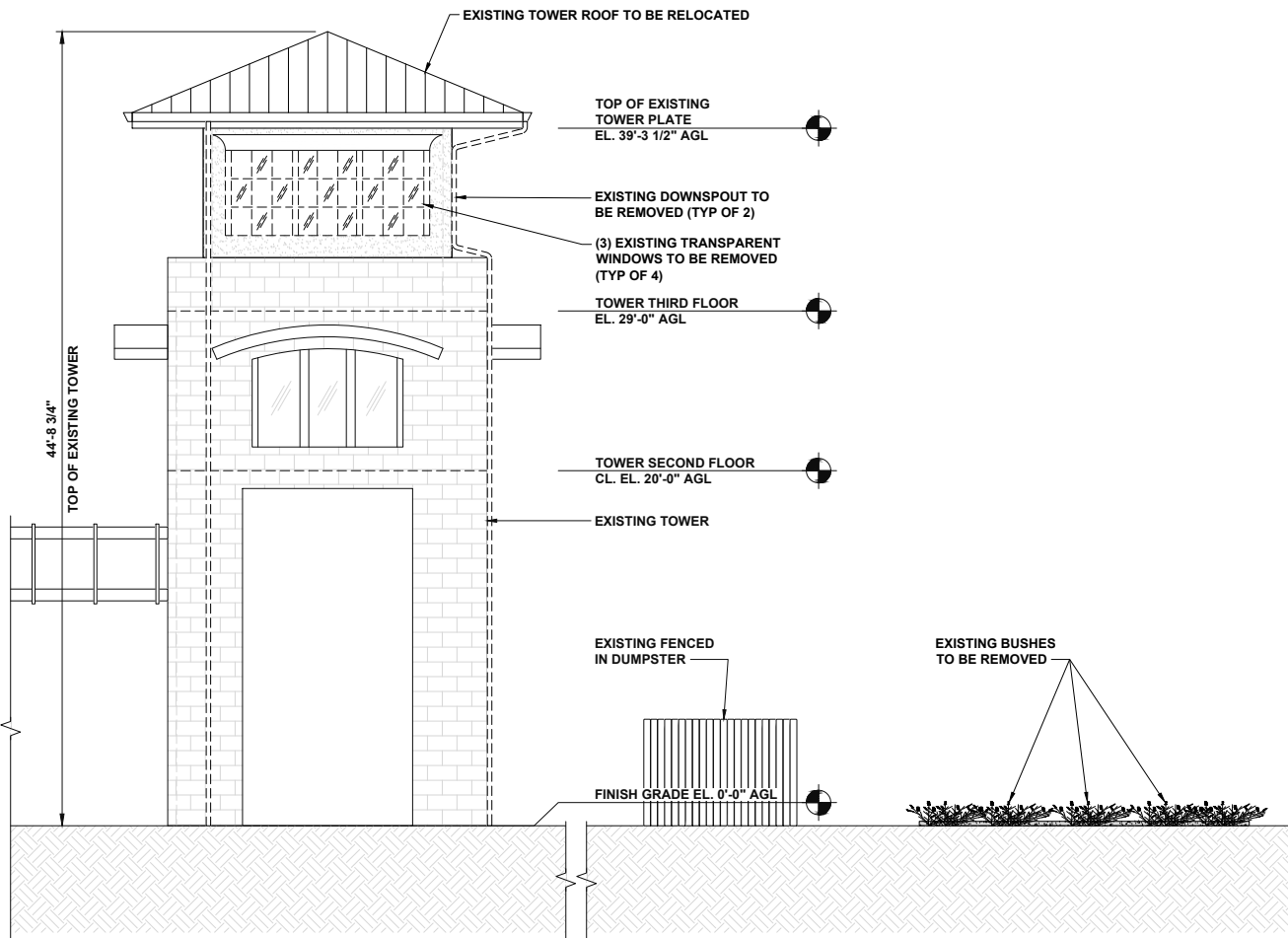
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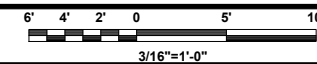
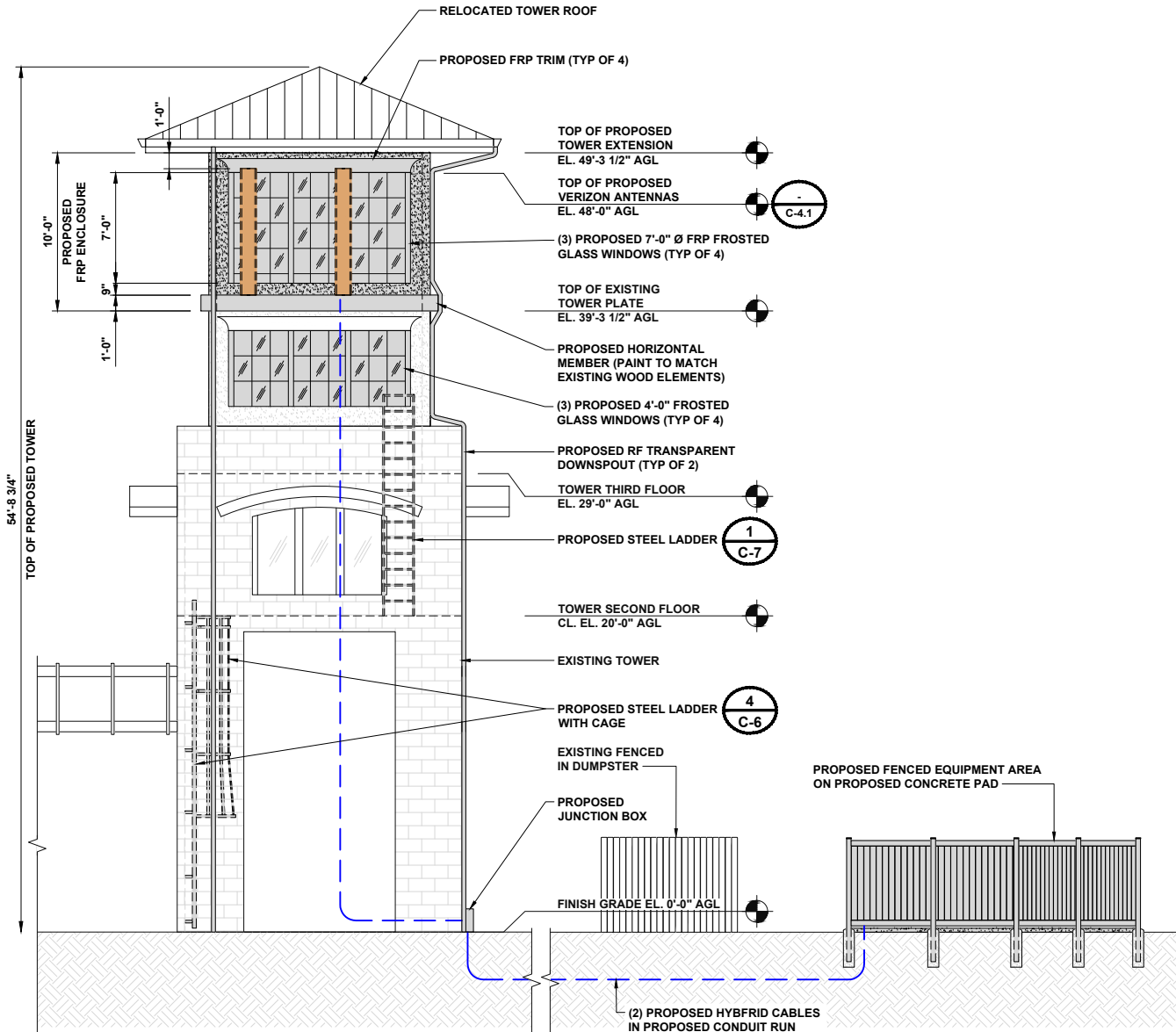
**DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD**

SHEET TITLE
**EAST SITE
ELEVATIONS**

SHEET NUMBER
C-3.2



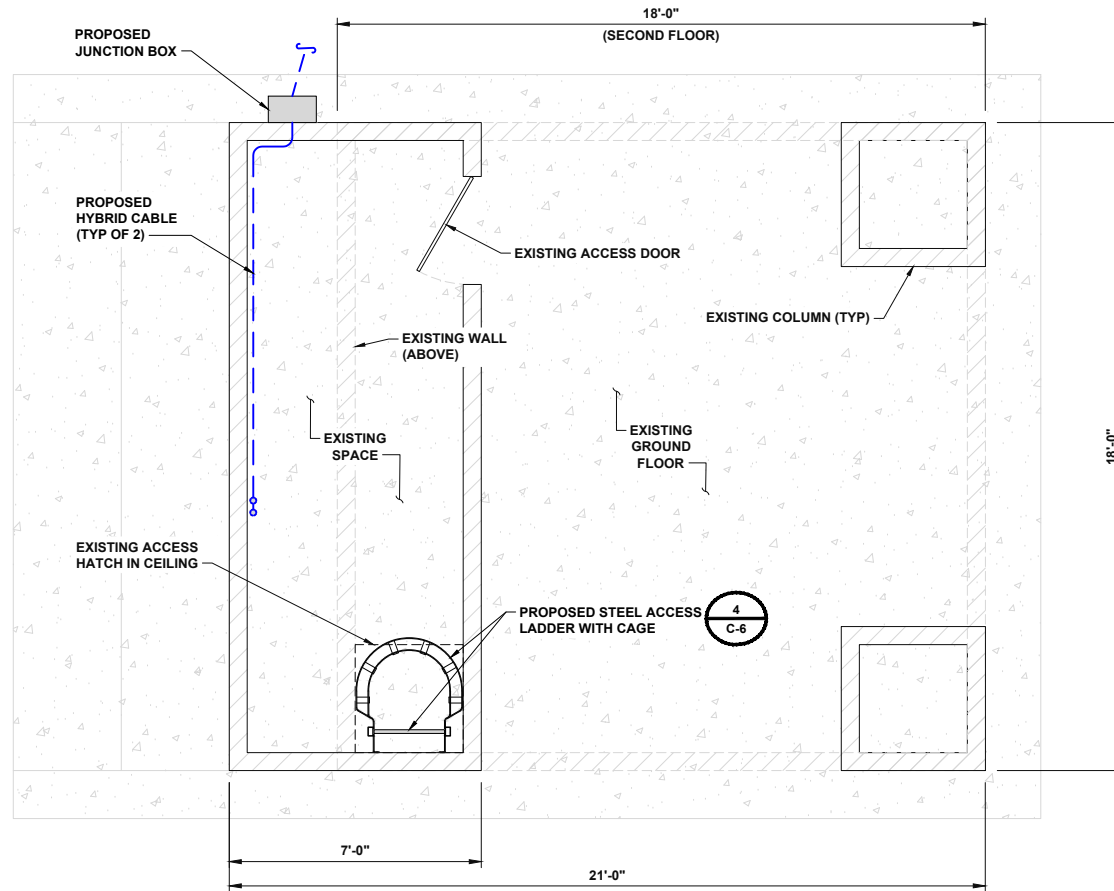
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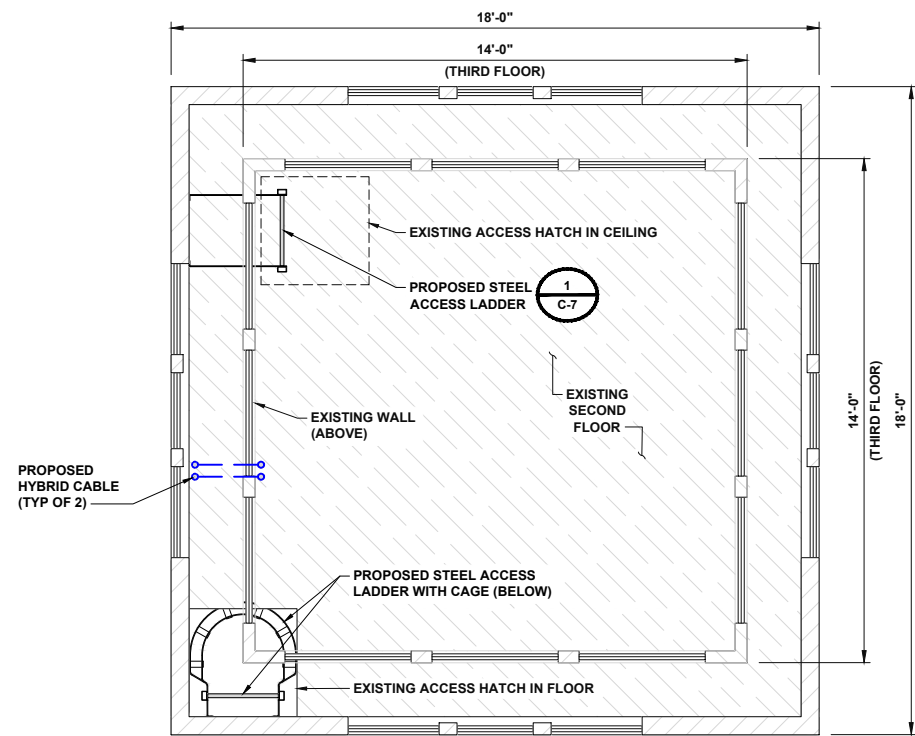
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EXISTING EAST SITE ELEVATION

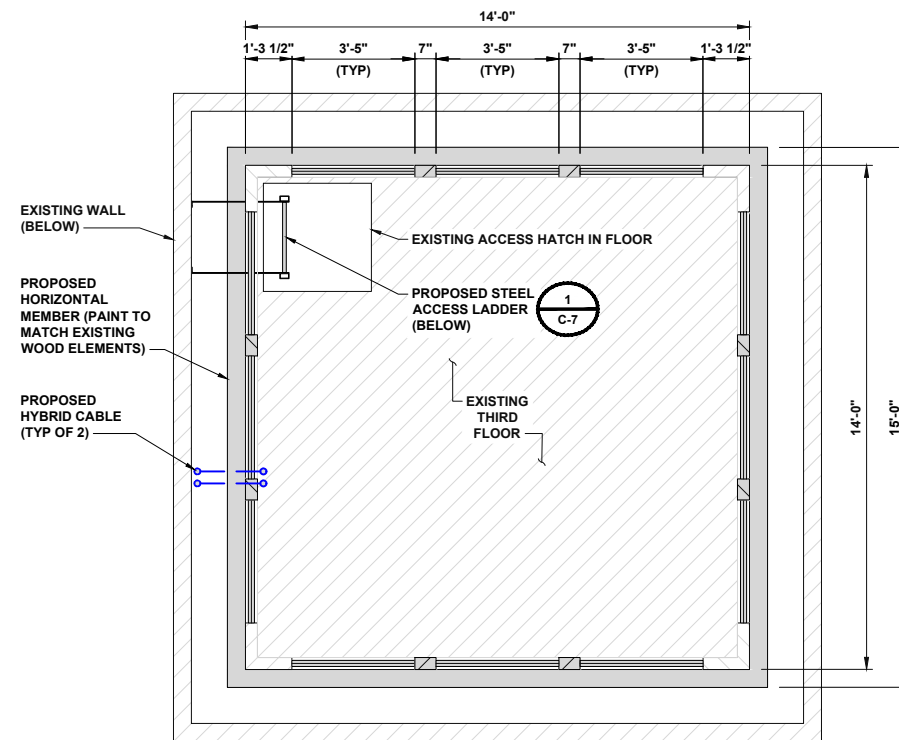
PROPOSED EAST SITE ELEVATION



TOWER GROUND FLOOR PLAN

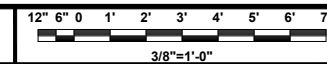


TOWER SECOND FLOOR PLAN



TOWER THIRD FLOOR PLAN

TOWER FLOOR PLANS



verizon

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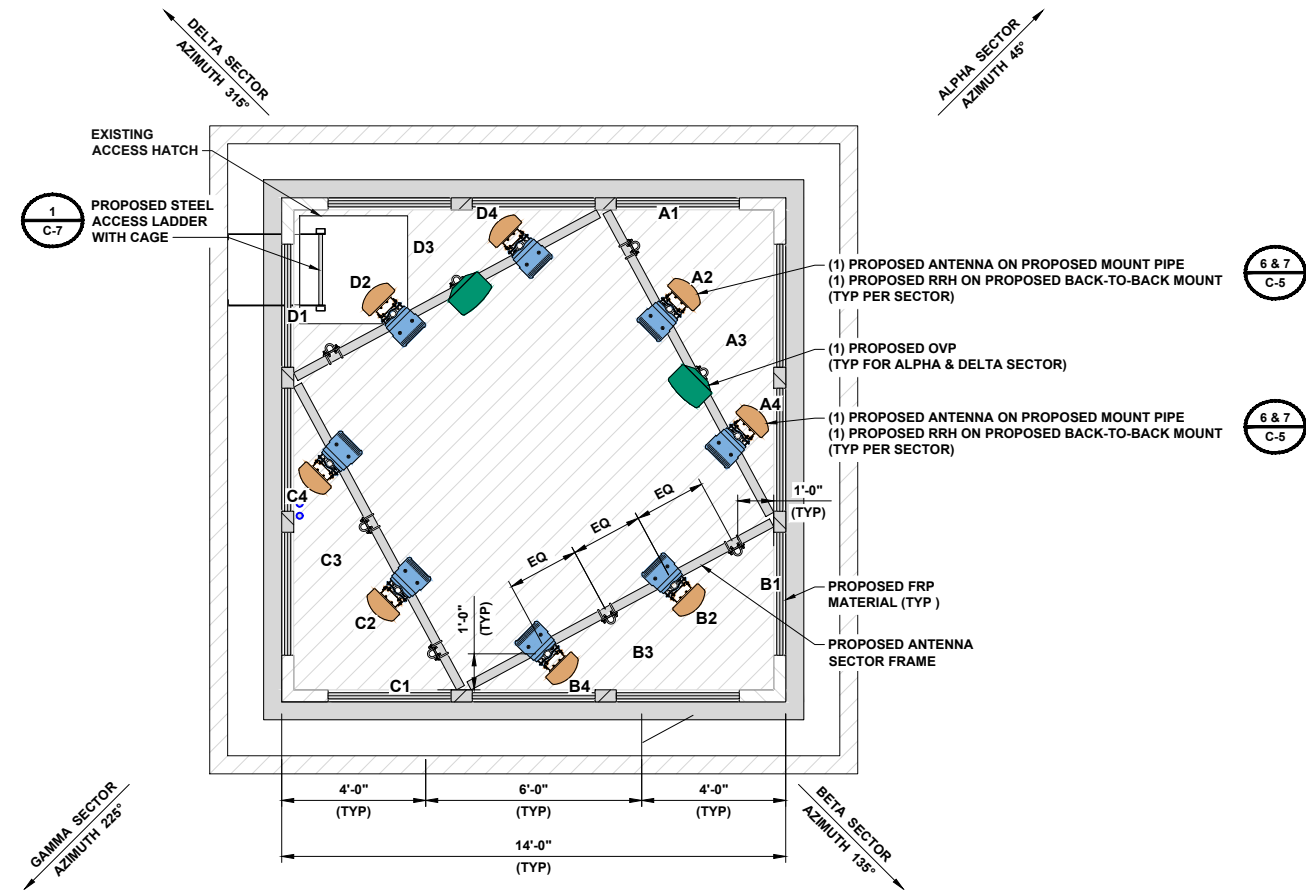
SHEET TITLE
TOWER FLOOR PLANS

SHEET NUMBER
C-4

ANTENNA REQUIREMENTS (VERIFY WITH CURRENT RFDS)						
SECTOR	TECHNOLOGY	ANTENNA	ANTENNA AZMUTH	ANTENNA SIZE	RRH's	OVP
	PROPOSED		PROPOSED	PROPOSED	PROPOSED	
A1	-	-	-	-	(2) RRH's	(1) PROPOSED OVP
A2	LTE	PROPOSED	45°	8'-0"		
A3	-	-	-	-		
A4	LTE	PROPOSED	45°	8'-0"		
B1	-	-	-	-	(2) RRH's	-
B2	LTE	PROPOSED	135°	8'-0"		
B3	-	-	-	-		
B4	LTE	PROPOSED	135°	8'-0"		
C1	-	-	-	-	(2) RRH's	-
C2	LTE	PROPOSED	225°	8'-0"		
C3	-	-	-	-		
C4	LTE	PROPOSED	225°	8'-0"		
D1	-	-	-	-	(2) RRH's	(1) PROPOSED OVP
D2	LTE	PROPOSED	315°	8'-0"		
D3	-	-	-	-		
D4	LTE	PROPOSED	315°	8'-0"		

ANTENNA TABLE

A



PROPOSED ANTENNA LAYOUT

B



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

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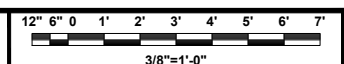
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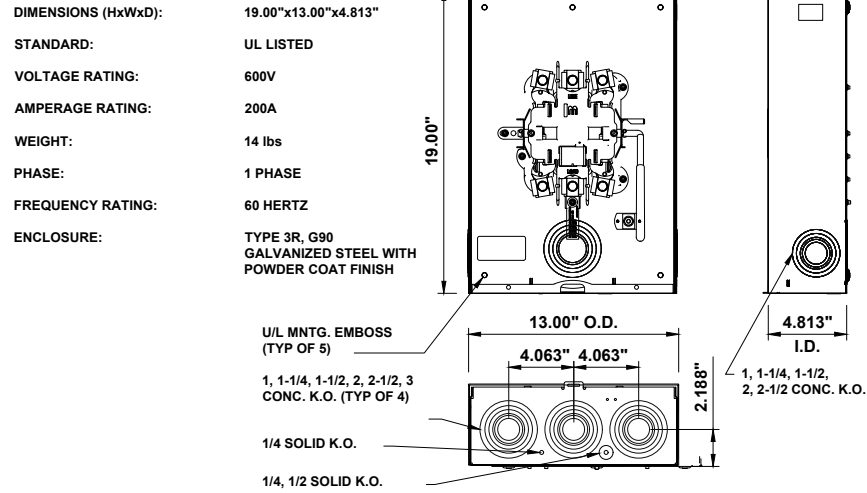
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ANTENNA LAYOUT

SHEET NUMBER
C-4.1

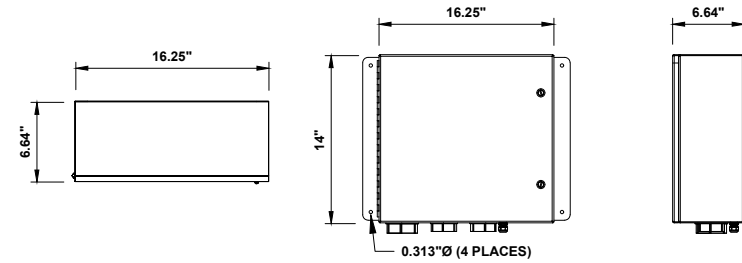


**MILBANK RINGLESS METER SOCKET U4801-XL-5T9
(OR UTILITY APPROVED ALTERNATE)**



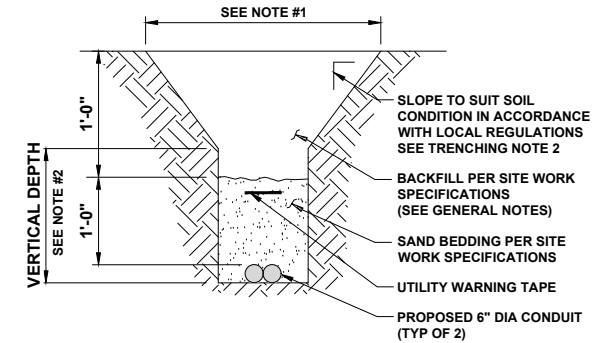
RAYCAP FC12-PC6-10E

DIMENSIONS, WxDxH:	16.25"x6.64"x14"
TOTAL WEIGHT:	20.35 LBS
WIND LOADING:	150 MPH SUSTAINED (179 lbs) 195 MPH GUST (302 lbs)
INPUT SIZE QUANTITY & SIZE:	(1) 2.5", (3) 2"
ENCLOSURE TYPE:	NEMA 4



TRENCHING NOTES:

- CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
- TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
- ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE 2008 NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET
SUITE 800
DENVER, COLORADO 80237

PROJECT NO:	197068.0016
DRAWN BY:	BTS
CHECKED BY:	NCP

REV	DATE	DESCRIPTION
A	09/10/19	ISSUED FOR 90% CDs

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DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-5

METER SPECIFICATIONS

NO SCALE 1

DC POWER AND FIBER JUNCTION BOX DETAIL

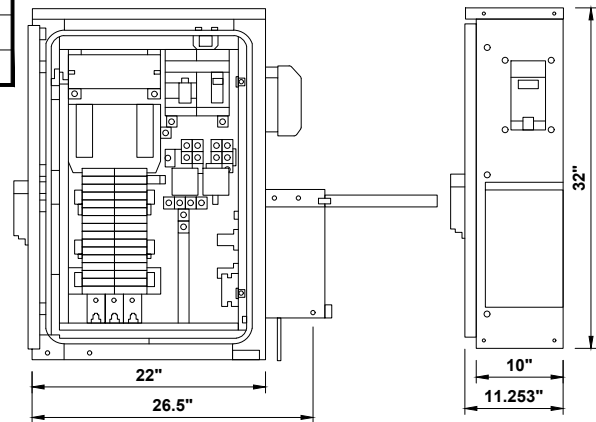
NO SCALE 2

TYPICAL UNDERGROUND TRENCH

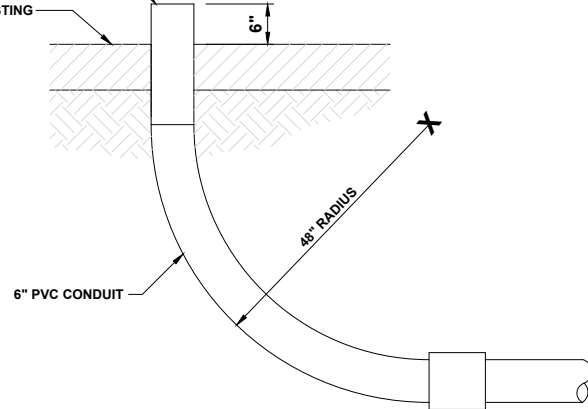
NO SCALE 3

INTERSECT PTLC-12200-CL

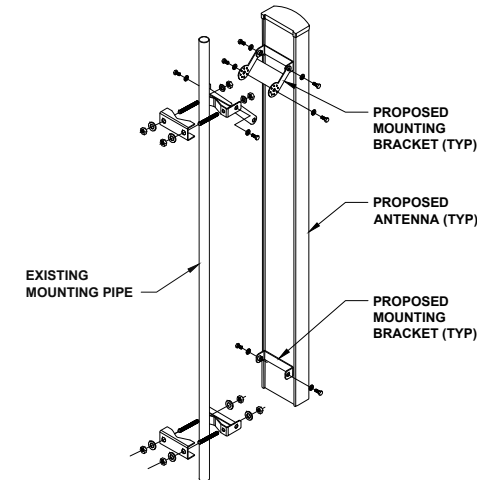
MAXIMUM AMPERAGE:	200A
VOLTAGE:	120/240V
NUMBER OF CIRCUITS:	30
PHASE:	1
WEIGHT:	100 LBS



COORDINATE STUB-UP LOCATIONS WITH PLAN FILL WITH FOAM SEALANT
FINISH GRADE - MATCH SLOPE, THICKNESS AND TYPE OF EXISTING



NOTE:
INSTALL 200# TENSILE PULL WIRE (TRUE-TAPE) CALIBRATED IN FEET INSIDE EMPTY CONDUITS AND TIE OFF AT EACH END.



AC PANEL DETAIL

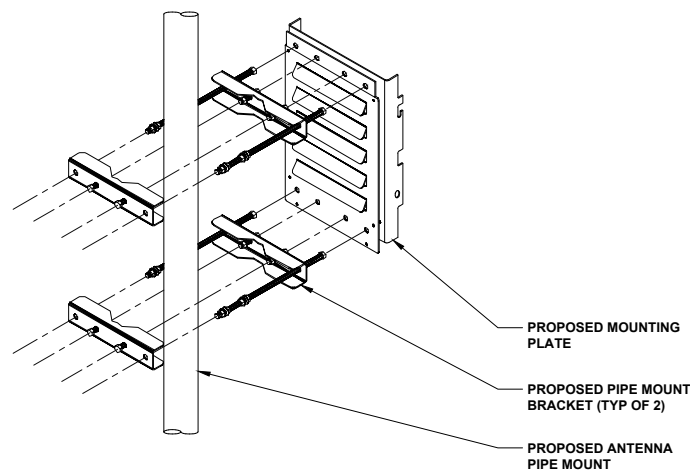
NO SCALE 4

STUB UP DETAIL

NO SCALE 5

ANTENNA MOUNTING DETAIL

NO SCALE 6

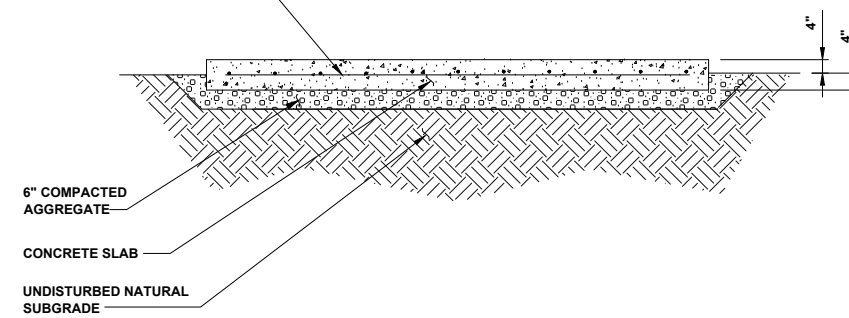


SQUARE D H224NRB HEAVY DUTY SAFETY SWITCHES

VOLTAGE RATING:	240VAC
AMPERE RATING:	200A
ENCLOSURE:	NEMA 3R GALV. STEEL
BLADES-SWITCHABLE POLES:	2P
FUSE CONFIGURATION	FUSIBLE
WEIGHT:	42.92 LBS
DIMENSIONS (HxW) :	29.25"x17.13"



#4 @ 12" OC EW



RRH MOUNTING PLATE

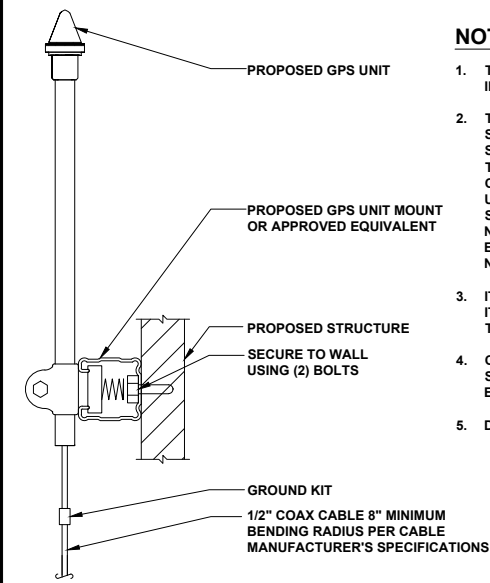
NO SCALE 7

SERVICE DISCONNECT DETAIL

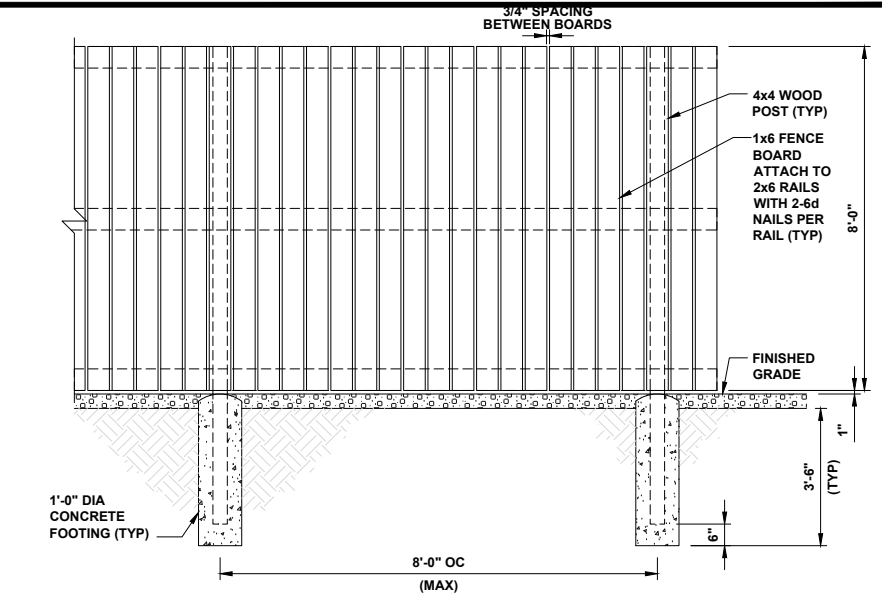
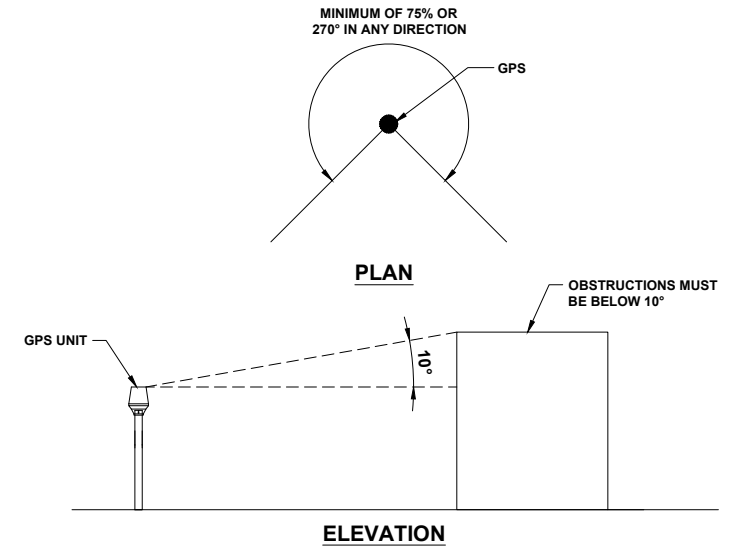
NO SCALE 8

CONCRETE PAD DETAIL

NO SCALE 9



- NOTES**
1. THE ELEVATION AND LOCATION OF THE GPS UNIT SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
 2. THE GPS UNIT MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" DIAMETER, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE UNIT MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE REAMED AND EDGES SMOOTHED IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE UNIT MOUNT.
 3. IT IS CRITICAL THAT THE GPS UNIT IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE UNIT IS WITHIN 2 DEGREES OF LEVEL.
 4. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED LTE GPS UNIT, EXISTING GPS UNITS AND TRANSMITTING ANTENNAS.
 5. DO NOT SWEEP TEST GPS UNIT.



GPS MOUNTING TO PROPOSED WALL

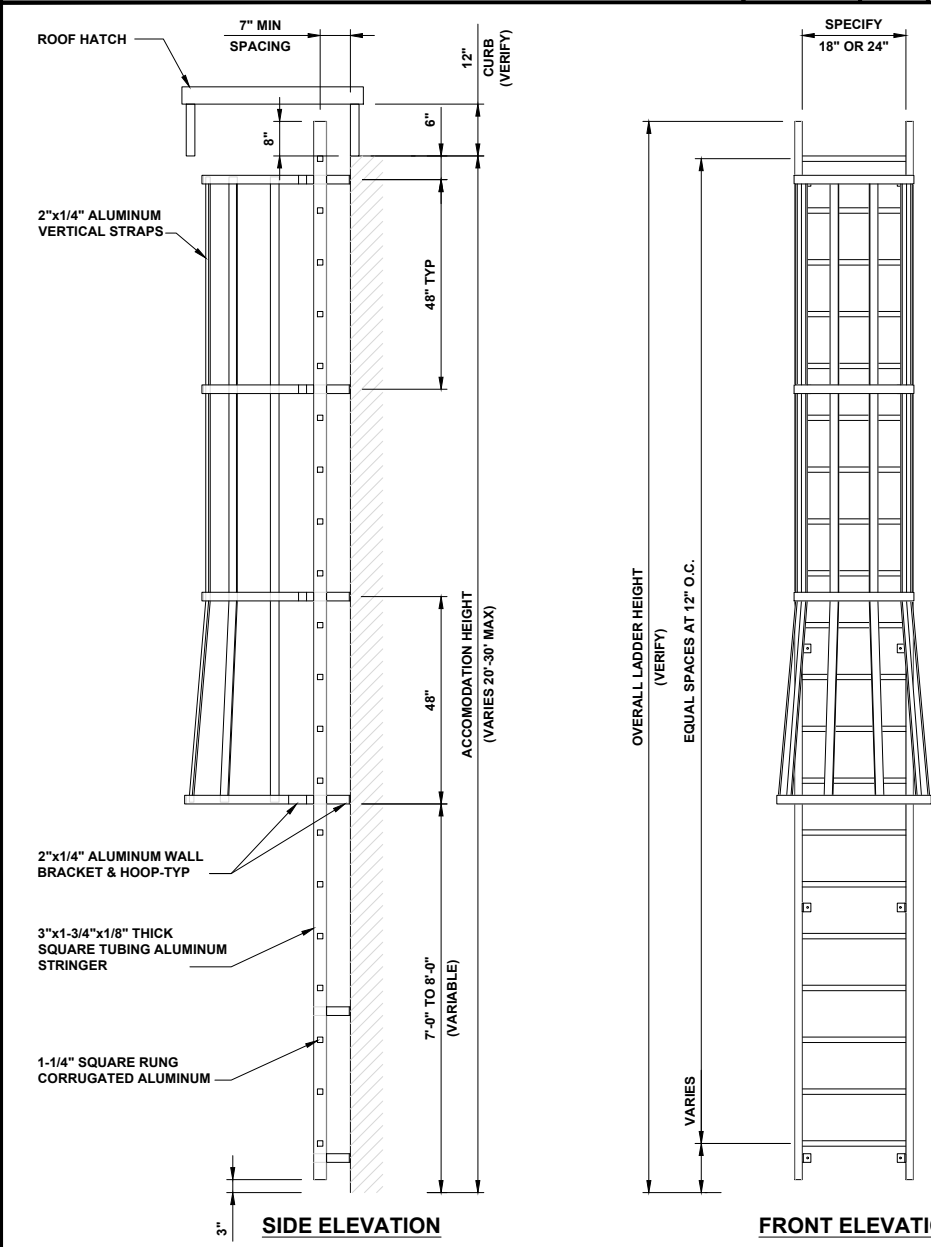
NO SCALE **1**

GPS MINIMUM SKY VIEW REQUIREMENTS

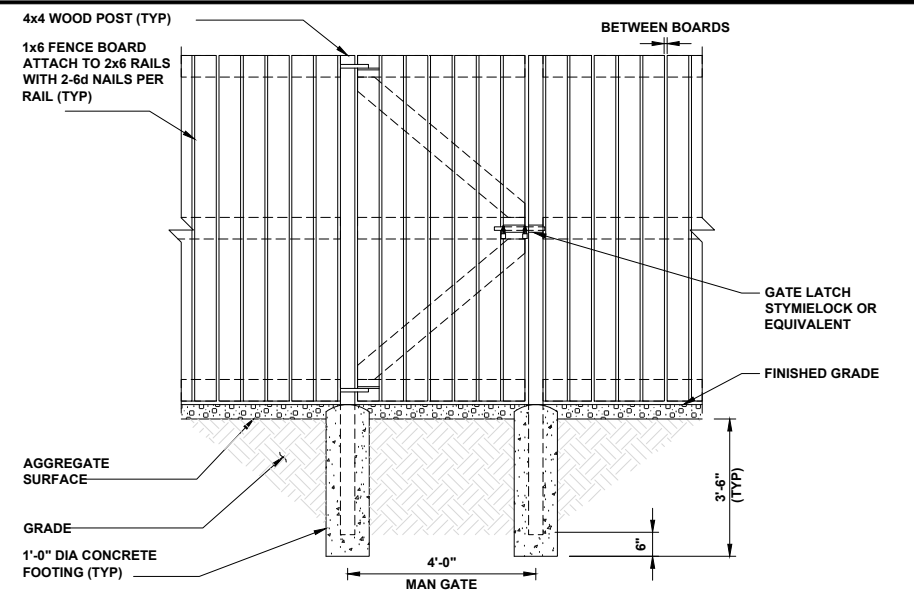
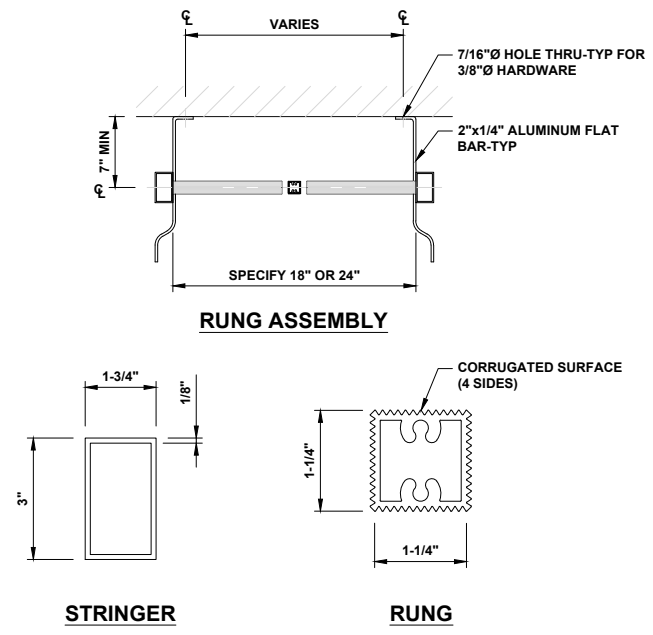
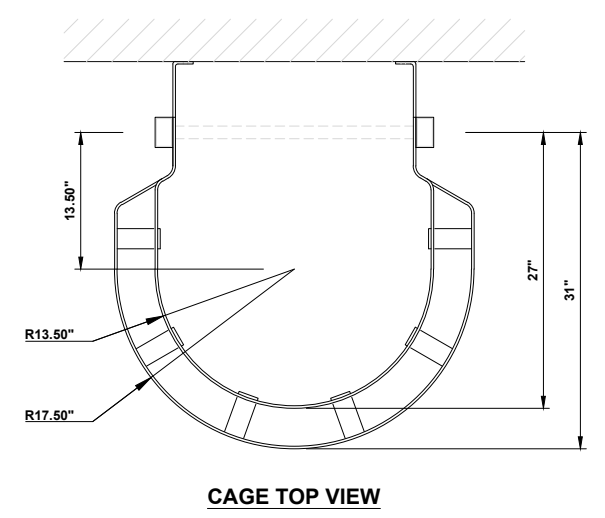
NO SCALE **2**

WOODEN FENCE ELEVATION DETAIL

NO SCALE **3**



PROPOSED HEAVY DUTY HATCH ACCESS WITH SAFETY CAGE UPNOVR U-300



WOODEN GATE ELEVATION DETAIL

NO SCALE **5**

NO SCALE **4**

NOT USED

NO SCALE **6**



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BLACK & VEATCH

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DEN LEYDEN
 17684 WEST 84TH PLACE
 ARVADA, CO 80007
 NEW SITE BUILD

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-6

Site Name:	VERIZON NSB - DEN LEYDEN		MODEL NUMBER:	NOTHERN TECHNOLOGIES			
SITE NUMBER:			PHASE:	1	WIRE:	3	
VOLTAGE:	240 /120	Volts AC	BUSS RATING:	200	AMPS	AIC:	22K
MAIN BREAKER:	200 AMPS						
MOUNT:	SURFACE						
ENCLOSURE TYPE:	NEMA 3R						
PANEL STATUS:	PROPOSED						

CKT	LOAD DESCRIPTION	BREAKE R AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	Demand Factor	USAGE FACTOR	PHASE A VA	PHASE B VA	USAGE FACTOR	Demand Factor	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT		
1	RECTIFIER #1 & 2	30	2	NEW	2100	1.00	1.00	3300		1.00	1.00	1200	NEW	1	15	EMERSON PANEL	2		
3					2100	1.00	1.00		2280	1.00	1.00	180	NEW	1	15	EMERSON GFCI	4		
5	RECTIFIER #3 & 4	30	2	NEW	2100	1.00	1.00	2200		1.00	1.00	100	NEW	1	20	LIGHT	6		
7					2100	1.00	1.00		2280	1.00	1.00	180	NEW	1	20	GFCI RECEPTACLE	8		
9	RECTIFIER #5 & 6	30	2	NEW	2100	1.00	1.00	2100									10		
11					2100	1.00	1.00		2100										12
13	RECTIFIER #7 & 8	30	2	NEW	2100	1.00	1.00	2100									14		
15					2100	1.00	1.00		2100										16
17	RECTIFIER #9 & 10	30	2	NEW	2100	1.00	1.00	2100									18		
19					2100	1.00	1.00		2100										20
21								0									22		
23								0									24		
25								0									26		
27								0									28		
29								0									30		
								PHASE A	PHASE B										
								11800	10860	VA									
								TOTAL		KVA	22.66								
										AMPS	94.42								
																	≤ 80% OF MAIN BREAKER		

LOAD CENTER SCHEDULE

NO SCALE 1

- CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
- LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
- CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
- CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
- CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
- ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
- PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
- CONTRACTOR MAY INSTALL #6 AWG ON NEW HVAC CIRCUITS 1 & 2 IF ALL TERMINATIONS ARE LISTED AT 75 DEGREES C.

NOTES

NO SCALE 2



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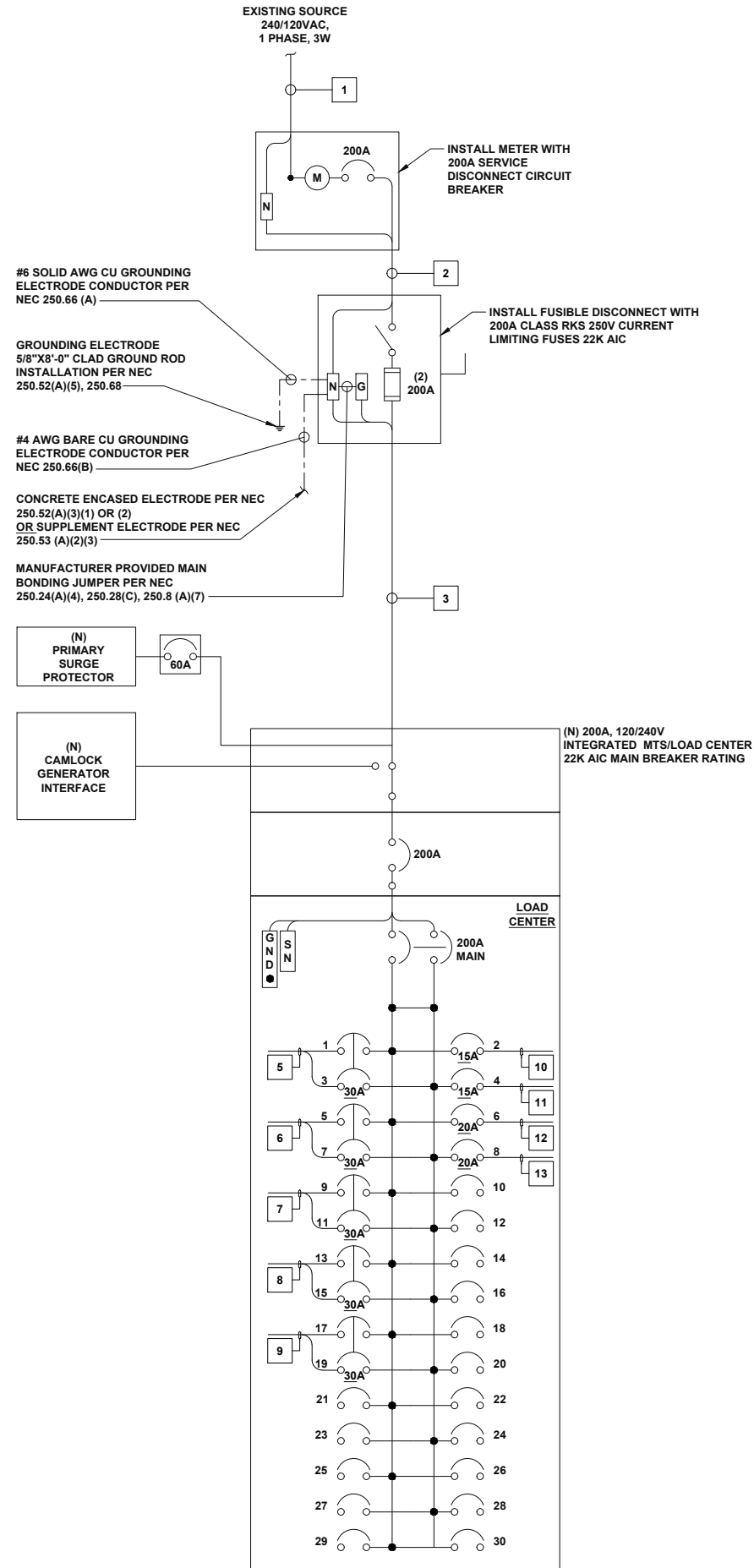
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DEN LEYDEN
 17684 WEST 84TH PLACE
 ARVADA, CO 80007
 NEW SITE BUILD

SHEET TITLE
ELECTRICAL NOTES AND PANEL SCHEDULE

SHEET NUMBER
E-1



AC ONE-LINE SCHEMATIC

NO SCALE

1

CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	EXISTING SOURCE	METER	BY UTILITY
2	METER	SERVICE DISCONNECT	(3) 3/0 CU THWN-2, 2" C
3	SERVICE DISCONNECT	MTS/ LOAD CENTER	(3) 3/0 CU THWN-2 (1) #4 CU EGC, 2" C
4	GENERATOR INTERFACE	MTS/ LOAD CENTER	(3) 3/0 CU THWN-2 (1) #4 CU EGC, 2" C
5	MTS/ LOAD CENTER	RECTIFIER #1 & 2	(2) #10 CU THHN/THWN-2, (1) #10 CU EGC
6	MTS/ LOAD CENTER	RECTIFIER #3 & 4	(2) #10 CU THHN/THWN-2, (1) #10 CU EGC
7	MTS/ LOAD CENTER	RECTIFIER #5 & 6	(2) #10 CU THHN/THWN-2, (1) #10 CU EGC
8	MTS/ LOAD CENTER	RECTIFIER #7 & 8	(2) #10 CU THHN/THWN-2, (1) #10 CU EGC
9	MTS/ LOAD CENTER	RECTIFIER #9 & 10	(2) #10 CU THHN/THWN-2, (1) #10 CU EGC
10	MTS/ LOAD CENTER	EMERSON PANEL	(2) #12 CU THHN/THWN-2, (1) #12 CU EGC
11	MTS/ LOAD CENTER	EMERSON GFCI	(2) #12 CU THHN/THWN-2, (1) #12 CU EGC
12	MTS/ LOAD CENTER	LIGHTS	(2) #12 CU THHN/THWN-2, (1) #12 CU EGC, 3/4" C
13	MTS/ LOAD CENTER	GFCI RECEPTACLES	(2) #12 CU THHN/THWN-2, (1) #12 CU EGC, 3/4" C

NOTE:
CIRCUIT #5 - 7 TO BE RUN TOGETHER IN MINIMUM 1 1/2" CONDUIT
CIRCUIT #8 - 11 TO BE RUN TOGETHER IN MINIMUM 1 1/2" CONDUIT

AC CIRCUIT SCHEDULE

NO SCALE

2

NOT USED

NO SCALE

3



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

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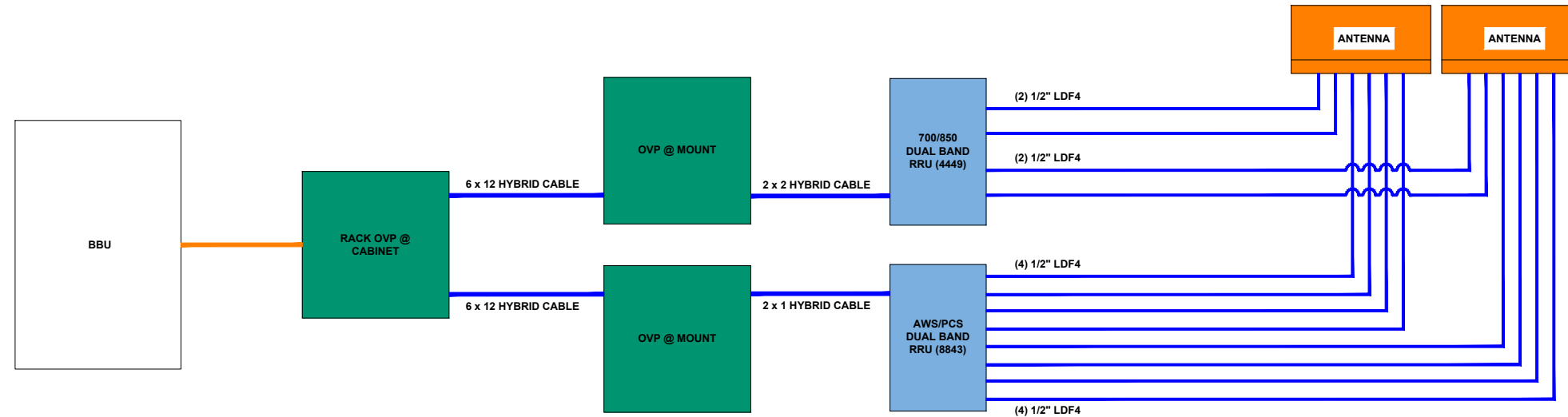
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DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
**ELECTRICAL AC
ONE-LINE DIAGRAM**

SHEET NUMBER
E-2



TYPICAL ALL SECTORS

NO SCALE 1

SECTOR	RACK OVP @ CABINET TO MAIN OVP @ ANTENNAS				MAIN OVP TO RRH CONNECTION				
	RACK OVP @ CABINET	6x12 HYBRID CABLE		MAIN OVP @ ANTENNAS	1x1 HYBRID CABLE	700/850	AWS/PCS		
	QTY	LENGTH	QTY	TOTAL WEIGHT	QTY	LENGTH	QTY	QTY	QTY
A	1	132'-0"	2	-	1	5'-0"	2	1	1
B	1				-	5'-0"	2	1	1
C	1				-	5'-0"	2	1	1
D	-				1	5'-0"	2	1	1

OVP SCHEDULE

NO SCALE 2



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DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
ELECTRICAL DC ONE-LINE DIAGRAM

SHEET NUMBER
E-3

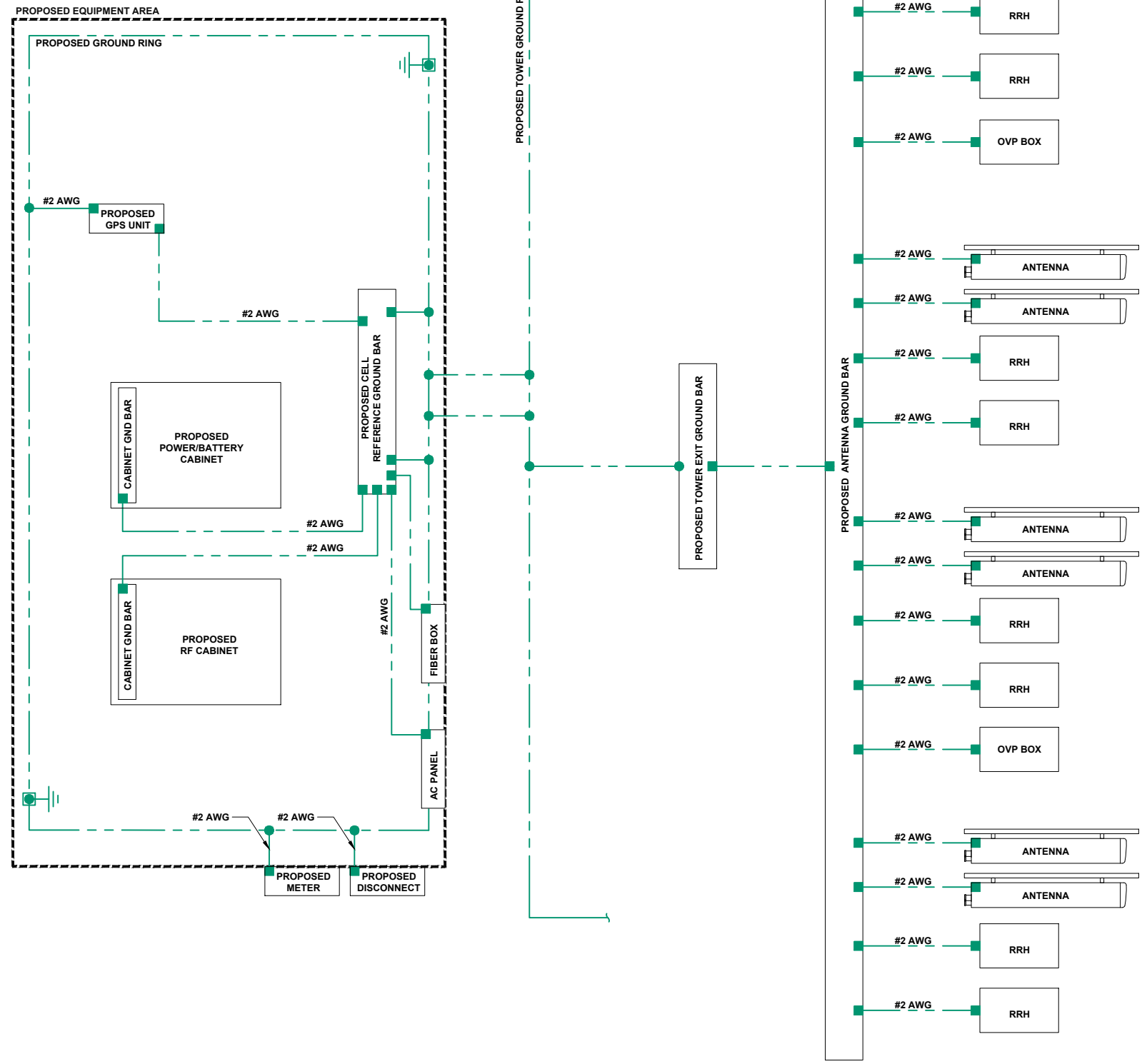


LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND AT&T GROUNDING AND BONDING REQUIREMENTS (ATT-TP-76416) AND MANUFACTURER'S SPECIFICATIONS.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

NOTES

- (A) EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- (B) TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
- (C) INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
- (D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
- (E) GROUND ROD: UL LISTED COPPER CLAD STEEL, MINIMUM 5/8" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
- (F) CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
- (G) HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.
- (H) EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
- (J) TOWER EXIT GROUND BAR: #2 AWG SOLID TINNED COPPER BOND TO THE TOWER GROUND RING.
- (K) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR AND EXTERIOR GROUND RING.
- (L) FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK. BOND THE FRAME GROUND TO THE "I" SECTION OF THE CELL REFERENCE GROUND BAR OR SUPPLEMENTARY CONDUCTOR.
- (M) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.
- (N) FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
- (P) EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING.
- (Q) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
- (R) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR (CRGB) PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.
- (S) OUTDOOR GROUNDING CONDUCTORS: GROUNDING CONDUCTORS INSTALLED OUTDOORS AND RUN ENTIRELY ABOVE GRADE SHALL BE TINNED STRANDED COPPER AND BE SUNLIGHT RESISTANT.



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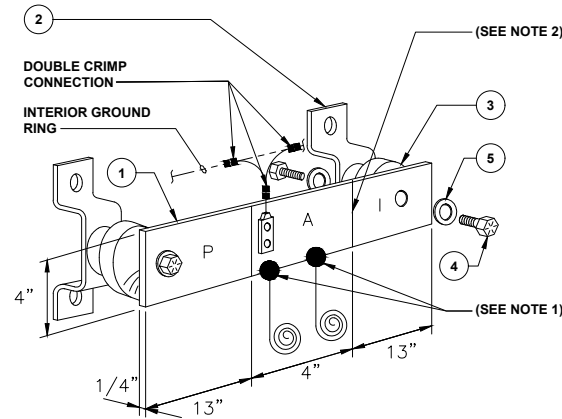
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ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
EQUIPMENT GROUNDING PLAN

SHEET NUMBER
G-1

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO	REQUIRED	PART NUMBER	DESCRIPTION
1	1	1/4"x4"x30"	SOLID GROUND BAR
2	2	A-6056	WALL MOUNTING BRACKET
3	2	3061-4	INSULATORS
4	4	3012-1	5/8"-11x1" H.H.C.S.
5	4	3015-8	5/8" LOCKWASHER



EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION

SECTION "P" - SURGE PROTECTORS

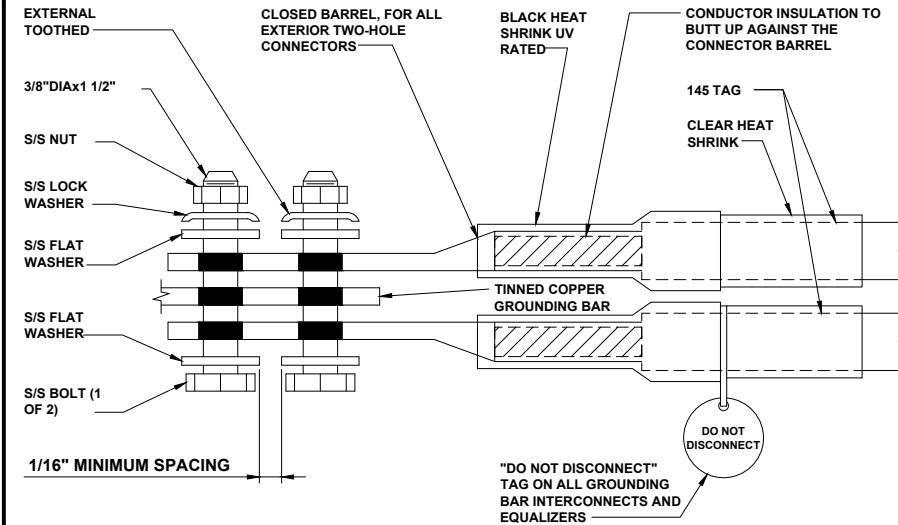
- (EC) CELL REFERENCE GROUND BAR (IF COLLOCATED)
- (EC) GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- (EC) TELCO GROUND BAR (#2 AWG)
- (EC) COMMERCIAL POWER COMMON NEUTRAL/GROUNDING BOND (3/0)
- (EC) FIBER GROUND BAR (#2 AWG)
- (EC) POWER ROOM REFERENCE GROUND BAR (#2 AWG)
- RECTIFIER FRAMES

SECTION "A" - SURGE ABSORBERS

- (EC) INTERIOR GROUND RING (#2 AWG)
- (EC) EXTERNAL EARTH GROUNDING FIELD (BURIED GROUND RING) (#2 AWG)
- (EC) METALLIC COLD WATER PIPE (IF AVAILABLE) (1/0 AWG)
- (EC) BUILDING STEEL (IF AVAILABLE) (1/0 AWG)

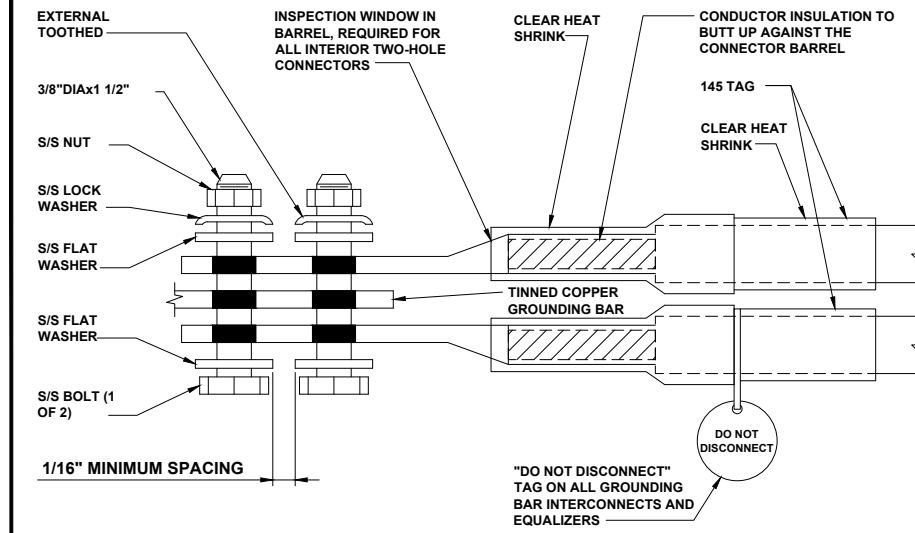
SECTION "I" - ISOLATED GROUNDING ZONE

- ALL ISOLATED GROUNDING REFERENCE
- GROUND WINDOW BAR



EXTERIOR TWO HOLE LUG

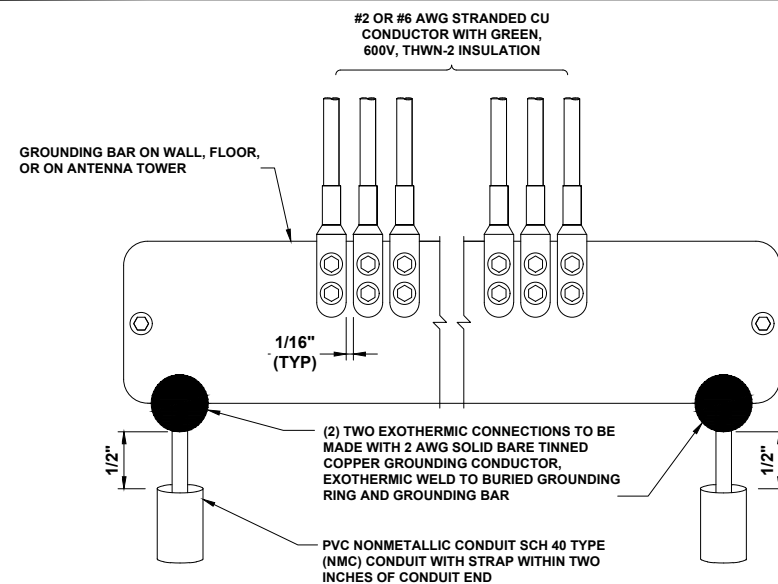
NO SCALE **2**



INTERIOR TWO HOLE LUG

NO SCALE **3**

- EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- ALL GROUND BARS SHALL BE STAMPED IN TO THE METAL "IF STOLEN DO NOT RECYCLE." THE CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.
- ALL HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUNDING TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
- ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED, PROVIDING 50% SPARE CONNECTION POINTS.
- ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).



INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

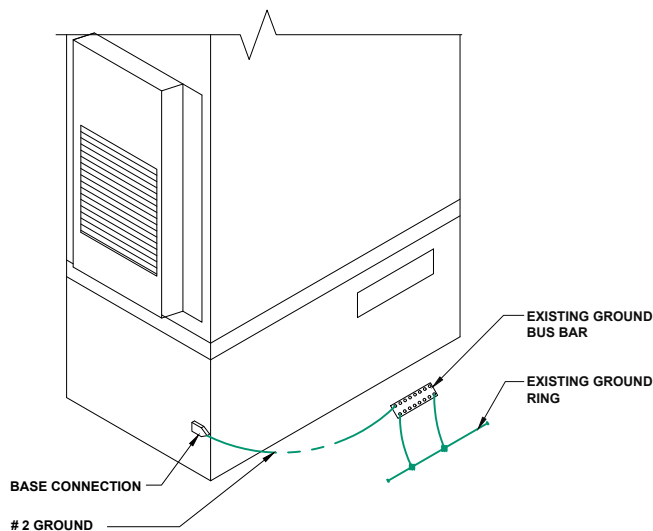
NO SCALE **4**

GROUNDING NOTES

NO SCALE **5**

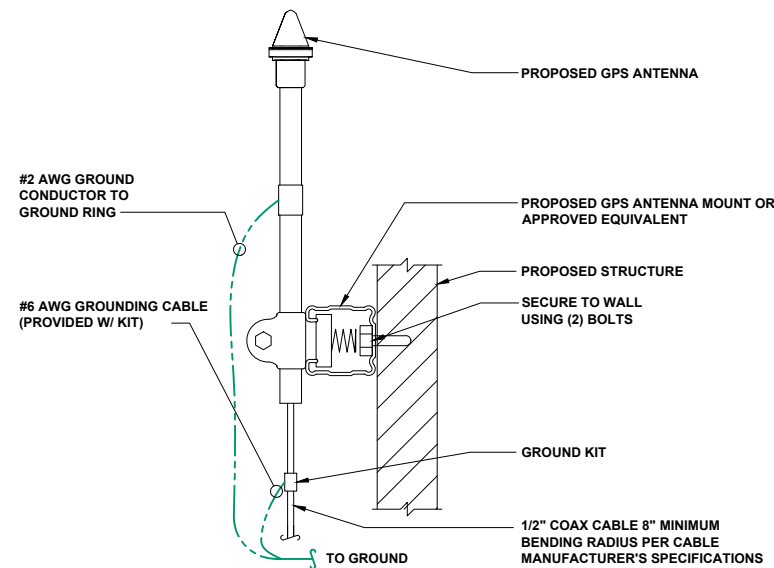
(MGB) REFERENCE GROUND BAR

NO SCALE **1**



PROPOSED CABINET GROUNDING

NO SCALE **6**



GPS UNIT GROUNDING

NO SCALE **7**

NOT USED

NO SCALE **8**



3131 S. VAUGHN WAY, SUITE 550,
AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET
SUITE 800
DENVER, COLORADO 80237

PROJECT NO: 197068.0016
DRAWN BY: BTS
CHECKED BY: NCP

REV	DATE	DESCRIPTION
A	09/10/19	ISSUED FOR 90% CDs

NOT TO BE USED FOR CONSTRUCTION

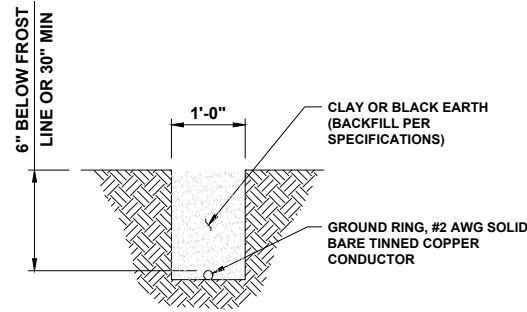
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2

NOTE
1. NO GEOTECHNICAL REPORT WAS ISSUED FOR THIS SITE. ALL DESIGN WORK IS BASED ON ASSUMED SITE CONDITIONS.

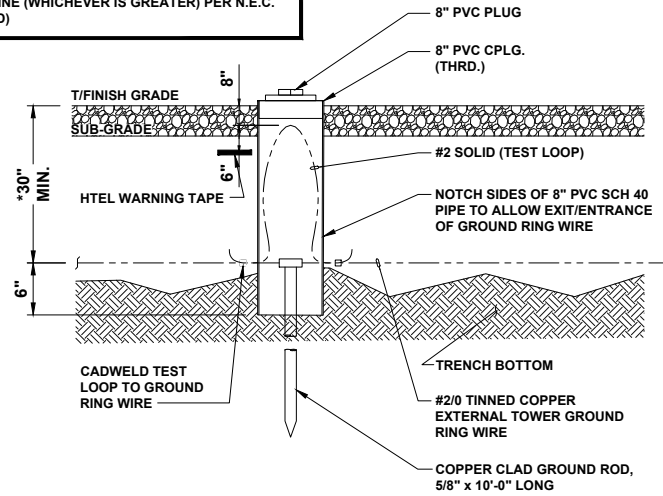


GROUNDING RING TRENCH DETAIL

NO SCALE

1

NOTE
GROUND RODS SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE (WHICHEVER IS GREATER) PER N.E.C. ARTICLE 250-50(D)

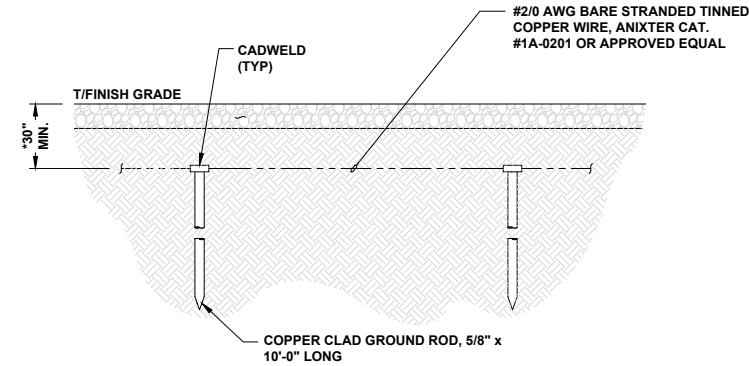


INSPECTION PORT DETAIL

NO SCALE

2

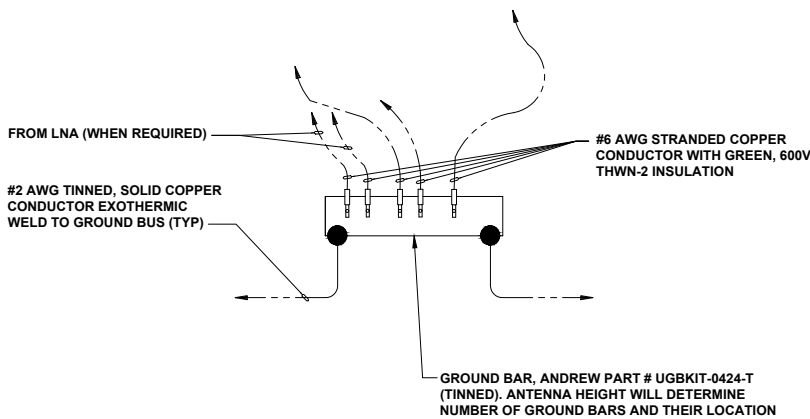
NOTE
GROUND RODS SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE (WHICHEVER IS GREATER) PER N.E.C. ARTICLE 250-50(D)



GROUND ROD DETAIL

NO SCALE

3



DOWN CONDUCTOR STANDARD FOR ANTENNA AND LINE GROUNDING

NO SCALE

4

NOT USED

NO SCALE

5

NOT USED

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

8

NOT USED

NO SCALE

9



3131 S. VAUGHN WAY, SUITE 550, AURORA, CO 80014



BLACK & VEATCH

4600 SOUTH SYRACUSE STREET SUITE 800 DENVER, COLORADO 80237

PROJECT NO: 197068.0016
DRAWN BY: BTS
CHECKED BY: NCP

REV	DATE	DESCRIPTION
A	09/10/19	ISSUED FOR 90% CDs

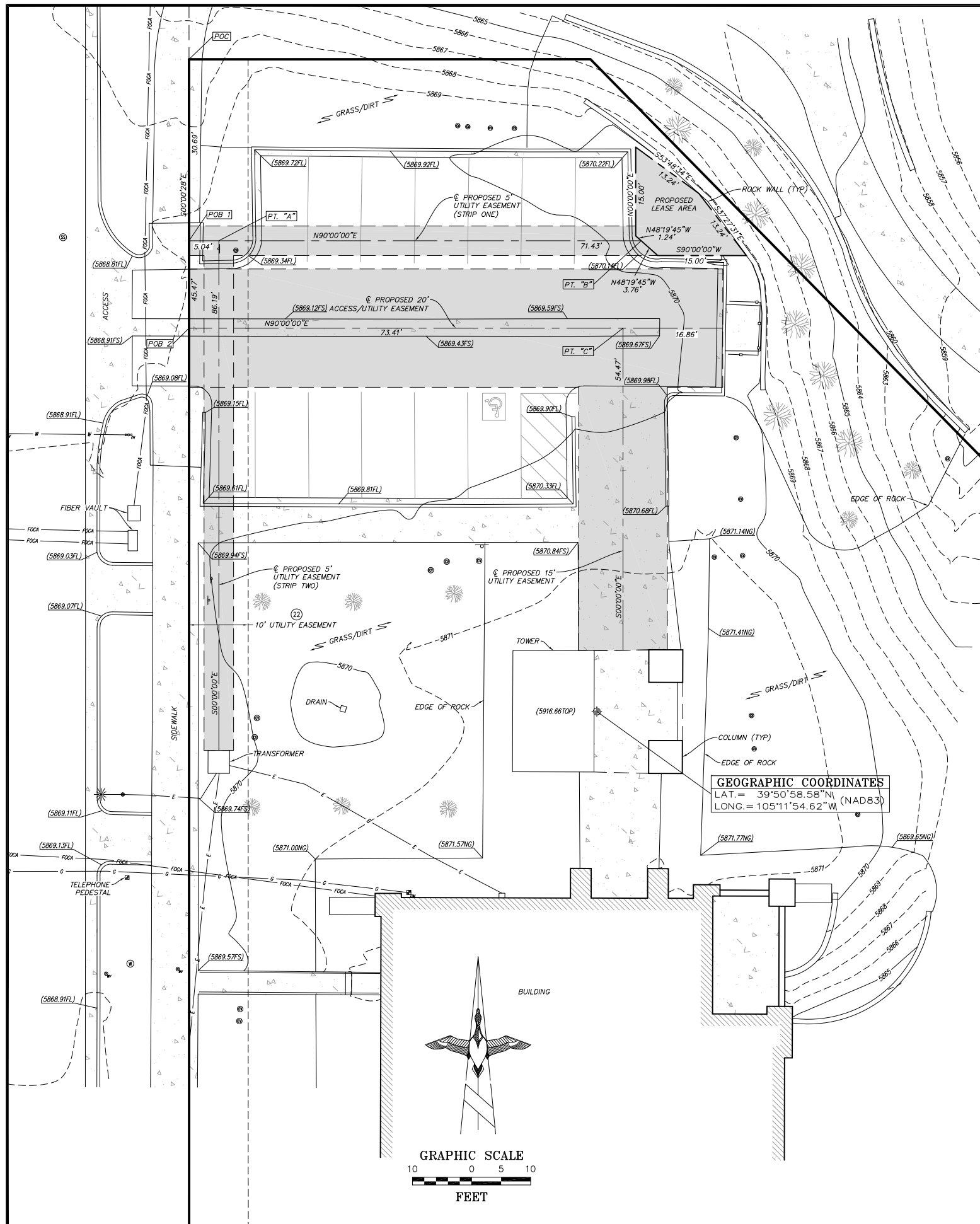
NOT TO BE USED FOR CONSTRUCTION

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

DEN LEYDEN
17684 WEST 84TH PLACE
ARVADA, CO 80007
NEW SITE BUILD

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-3



Line Legend

	= SUBJECT PARCEL BOUNDARY LINES
	= SECTION LINES
	= ADJOINING PARCEL BOUNDARY LINES
	= EASEMENT LINES
	= RIGHT OF WAY LINES
	= FLOOD PLANE LINES
	= BARBED WIRE FENCE
	= CHAINLINK FENCE
	= UNDERGROUND ELECTRIC LINES
	= UNDERGROUND GAS LINES
	= OVERHEAD ELECTRIC LINES
	= UNDERGROUND SANITARY SEWER LINES
	= UNDERGROUND TELEPHONE LINES
	= UNDERGROUND WATER LINES

Date of Survey

APRIL 23, 2019

Basis of Bearings

THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD83).
 CLASSIFICATION MINIMUM GEOMETRIC ACCURACY STANDARD
 THIRD 5.0 cm + 1: 10,000

Bench Mark

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM AS DERIVED UTILIZING LEICA SMARTNET RTK REFERENCE NETWORK.

Legend

	CONCRETE PAVEMENT		NATURAL GROUND
	CONIFEROUS TREE		PARKING BOLLARD
	DIAMETER		POINT OF BEGINNING
	DECIDUOUS TREE		POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
	FINISHED FLOOR		POWER POLE
	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT		RIGHT OF WAY
	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER		TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Title Report

PREPARED BY: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
 ORDER NO.: 01-18056800-01-T
 EFFECTIVE DATE: OCTOBER 18, 2018

Legal Description

TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO RECORDED AT RECEPTION NO. 2012078338.

Assessor's Parcel No.

20-262-12-002

Easements

SEE SHEET LS2

Lease Area/Access & Utility Easements

5' UTILITY EASEMENTS

BEING TWO STRIPS OF LAND 5.00 FEET IN WIDTH LYING WITHIN A PORTION OF TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, LYING 2.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINES:

(STRIP ONE)

COMMENCING AT THE NORTHWEST CORNER OF SAID TRACT D; THENCE ALONG THE WEST LINE OF SAID TRACT, S00°00'28"E, 30.69 FEET TO THE POINT OF BEGINNING; THENCE N90°00'00"E, 5.04 FEET TO A POINT HERINAFTER REFERRED TO AS POINT "A"; THENCE CONTINUING N90°00'00"E, 71.43 FEET TO A POINT HERINAFTER REFERRED TO AS POINT "B" AND THE END OF SAID STRIP OF LAND.

(STRIP TWO)

BEGINNING AT POINT "A" AS DESCRIBED ABOVE; THENCE S00°00'00"E, 86.19 FEET TO THE END OF SAID STRIP OF LAND.

ACCESS/UTILITY EASEMENT

BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE NORTHWEST CORNER OF SAID TRACT D; THENCE ALONG THE WEST LINE OF SAID TRACT, S00°00'28"E, 345.47 FEET TO THE POINT OF BEGINNING; THENCE N90°00'00"E, 73.41 FEET TO A POINT HERINAFTER REFERRED TO AS POINT "C" THENCE CONTINUING N90°00'00"E, 16.86 FEET TO THE END OF SAID STRIP OF LAND.

UTILITY EASEMENT

BEING A STRIP OF LAND 15.00 FEET IN WIDTH LYING WITHIN A PORTION OF TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, LYING 7.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT POINT "C" AS DESCRIBED ABOVE; THENCE S00°00'00"E, 54.47 FEET TO THE END OF SAID STRIP OF LAND.

LEASE AREA

BEING A TELECOMMUNICATIONS LEASE PARCEL LYING WITHIN A PORTION OF TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT POINT "B" AS DESCRIBED ABOVE; THENCE N48°19'45"W, 1.24 FEET; THENCE N00°00'00"E, 15.00 FEET; THENCE S53°48'34"E, 13.24 FEET; THENCE S37°27'31"E, 13.24 FEET; THENCE S90°00'00"W, 15.00 FEET; THENCE N48°19'45"W, 3.76 FEET TO THE POINT OF BEGINNING.

CONTAINING 190 SQ. FT. OR 0.004 ACRES MORE OR LESS.

Certificate of Survey

THIS IS TO CERTIFY THAT THIS TOPOGRAPHIC MAP AND IMPROVEMENTS SHOWN ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JESUS A. LUGO, PLS 38081

THIS DOES NOT REPRESENT A MONUMENTED SURVEY. REFERENCE IS MADE TO A COMMITMENT FOR TITLE INSURANCE, NUMBER 01-18056800-01-T, ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, AND HAVING AN EFFECTIVE DATE OF OCTOBER 18, 2018. THIS SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. THE LESSOR'S LEGAL DESCRIPTION AND RECORD BOUNDARY ARE SHOWN HEREON FOR REFERENCE ONLY. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE LESSOR'S PROPERTY.



10950 GRANDVIEW DRIVE
 OVERLAND PARK, KANSAS 66210
 (913) 458-2000

PROJECT NO: 19097

DRAWN BY: JT

CHECKED BY: JAL

REV	DATE	DESCRIPTION
1	5/6/19	ADDED LEASE AREA
0	4/26/19	SUBMITTAL



6950 S. Tucson Way, Unit C
 Centennial, CO 80112
 Phone: (720) 488-1303
 Fax: (720) 488-1306

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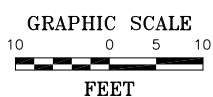
DEN LEYDEN
 17864 W. 84TH PL.
 ARVADA, CO. 80007
 CO-LO MONOPOLE

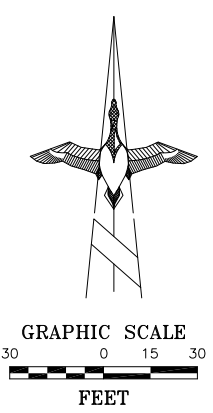
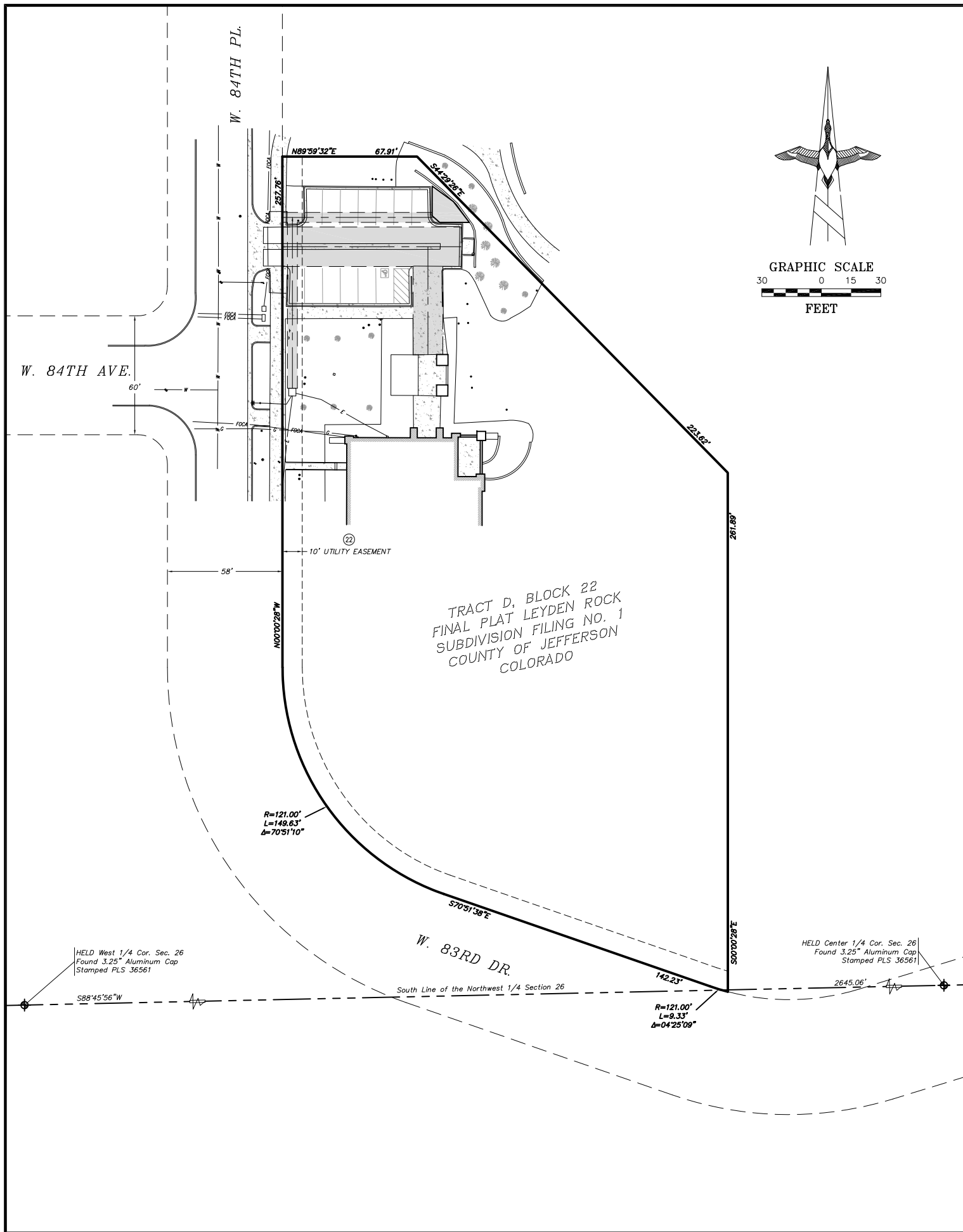
SHEET TITLE

LAND SURVEY

SHEET NUMBER

LS-1





Line Legend

	= SUBJECT PARCEL BOUNDARY LINES
	= SECTION LINES
	= ADJOINING PARCEL BOUNDARY LINES
	= EASEMENT LINES
	= RIGHT OF WAY LINES
	= FLOOD PLANE LINES
	= BARBED WIRE FENCE
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	= UNDERGROUND GAS LINES
	= OVERHEAD ELECTRIC LINES
	= UNDERGROUND SANITARY SEWER LINES
	= UNDERGROUND TELEPHONE LINES
	= UNDERGROUND WATER LINES

Lease Area/Access & Utility Easements
SEE SHEET LS1

Date of Survey
APRIL 23, 2019

Basis of Bearings
THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD83).
CLASSIFICATION THIRD MINIMUM GEOMETRIC ACCURACY STANDARD
5.0 cm + 1: 10,000

Bench Mark
ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM AS DERIVED UTILIZING LEICA SMARTNET RTK REFERENCE NETWORK.

Legend

	CONCRETE PAVEMENT		NATURAL GROUND
	CONIFEROUS TREE		PARKING BOLLARD
	DIAMETER		POINT OF BEGINNING
	DECIDUOUS TREE		POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
	FINISHED FLOOR		POWER POLE
	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT		RIGHT OF WAY
	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER		TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Title Report

PREPARED BY: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
ORDER NO.: 01-18056800-01-T
EFFECTIVE DATE: OCTOBER 18, 2018

Legal Description

TRACT D BLOCK 22, LEYDEN ROCK SUBDIVISION FILING NO. 1, CITY OF ARVADA, COUNTY OF JEFFERSON, STATE OF COLORADO RECORDED AT RECEPTION NO. 2012078338.

Assessor's Parcel No.

20-262-12-002

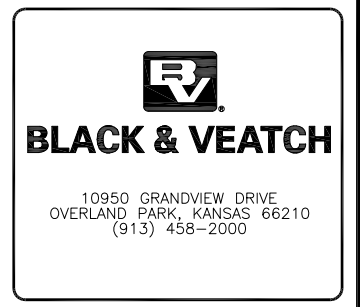
Easements

- SUBJECT TO THE RESERVATION SET FORTH IN THE DEED, RECORDED 03/25/1880, IN BOOK 26, PAGE 531, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- SUBJECT TO THE RIGHT OF THE UNITED STATES OF AMERICA, AS RECITED IN THE PATENT, RECORDED 03/19/1890, IN BOOK 32, PAGE 258, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- SUBJECT TO THE RIGHT OF THE UNITED STATES OF AMERICA, AS RECITED IN THE PATENT, RECORDED 10/13/1892, IN BOOK 32, PAGE 340, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- DEED FOR RAILWAY PURPOSES, RECORDED 06/24/1903, IN BOOK 121, PAGE 290, OF THE JEFFERSON COUNTY RECORDS. **(NOT A PLOTTABLE ITEM).**
- SUBJECT TO RIGHT OF WAY AND CONDEMNATION IN ORDER, RECORDED 12/02/1903, IN BOOK 141, PAGE 24, OF THE JEFFERSON COUNTY RECORDS. **(NOT A PLOTTABLE ITEM).**
- SUBJECT TO THE RIGHT OF THE UNITED STATES OF AMERICA, AS RECITED IN THE PATENT, RECORDED 03/06/1904, IN BOOK 119, PAGE 362, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- SUBJECT TO THE RIGHT OF THE UNITED STATES OF AMERICA, AS RECITED IN THE PATENT, RECORDED 02/08/1904, IN BOOK 119, PAGE 360, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- DEED CONVEYING COAL RIGHTS, RECORDED 11/06/1908, IN BOOK 127, PAGE 553, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- DEED FOR RIGHT OF WAY PURPOSES IN FAVOR OF THE DENVER AND NORTHWESTERN RAILWAY COMPANY, RECORDED 03/24/1914, IN BOOK 173, PAGE 417, OF THE JEFFERSON COUNTY RECORDS. **(DOES NOT AFFECT SUBJECT PROPERTY).**
- SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT OF STANLEY PARK, RECORDED IN PLAT BOOK 3, PAGE 64 OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- SUBJECT TO THE RESERVATIONS SET FORTH IN THE DEED, RECORDED 07/31/1950, IN BOOK 683, PAGE 375, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ANNEXATION AGREEMENT, RECORDED 04/19/1967, AS DOCUMENT NO. 234227, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ORDER OF COURT, RECORDED 10/23/1967, AS DOCUMENT NO. 257039, OF THE JEFFERSON COUNTY RECORDS. **(DOES NOT AFFECT SUBJECT PROPERTY).**
- SUBJECT TO THE RESERVATION SET FORTH IN THE DEED, RECORDED 06/12/1970, AS DOCUMENT NO. 376107, OF THE JEFFERSON COUNTY RECORDS. **(DOES NOT AFFECT SUBJECT PROPERTY).**
- SUBJECT TO THE RESERVATIONS SET FORTH IN THE DEED, RECORDED 04/14/1971, AS DOCUMENT NO. 414641, OF THE JEFFERSON COUNTY RECORDS.

NOTE: RELEASE AND QUIT CLAIM DEED, RECORDED 11/23/1998, AS DOCUMENT NO. F0741256, OF THE JEFFERSON COUNTY RECORDS. **(DOES NOT AFFECT SUBJECT PROPERTY).**

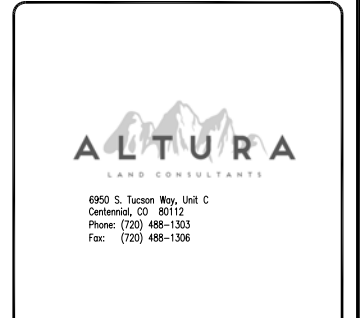
- SUBJECT TO THE RESERVATION SET FORTH IN THE DEED, RECORDED 11/09/1993, AS DOCUMENT NO. 93184796, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ORDER OF INCLUSION, RECORDED 12/03/1998, AS DOCUMENT NO. F0748350, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT, RECORDED 05/16/2002, AS DOCUMENT NO. F1483935, OF THE JEFFERSON COUNTY RECORDS. **(DOES NOT AFFECT SUBJECT PROPERTY).**
- QUIT CLAIM DEED OF THE OIL, COAL, GAS, ROCK, CLAY AND OTHER AGGREGATES AND ALL OTHER MINERALS TO THE CITY OF ARVADA, COLORADO, RECORDED 01/27/2005, AS DOCUMENT NO. F2164505, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ORDER CHANGING NAME OF DISTRICT, RECORDED 10/25/2007, AS DOCUMENT NO. 2007120785, OF THE JEFFERSON COUNTY RECORDS. **(NOT A PLOTTABLE ITEM).**

- SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT OF LEYDEN ROCK SUBDIVISION FILING NO. 1, RECORDED AS DOCUMENT NO. 2012078338, OF THE JEFFERSON COUNTY RECORDS. **(PLOTTED HEREON).**
- DEVELOPMENT AGREEMENT, RECORDED 07/27/2012, AS DOCUMENT NO. 2012078339, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ORDER DISSOLVING LEYDEN ROCK METROPOLITAN DISTRICT NOS. 1-9, RECORDED 11/13/2017, AS DOCUMENT NO. 2017116377, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**
- ORDER NAME CHANGE TO LEYDEN ROCK METROPOLITAN DISTRICT, RECORDED 02/02/2018, AS DOCUMENT NO. 2018010607, OF THE JEFFERSON COUNTY RECORDS. **(BLANKET IN NATURE).**



PROJECT NO:	19097
DRAWN BY:	JT
CHECKED BY:	JAL

REV	DATE	DESCRIPTION
1	5/6/19	ADDED LEASE AREA
0	4/26/19	SUBMITTAL



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

DEN LEYDEN
17864 W. 84TH PL.
ARVADA, CO. 80007
CO-LO MONOPOLE

SHEET TITLE
LAND SURVEY

SHEET NUMBER
LS-2