

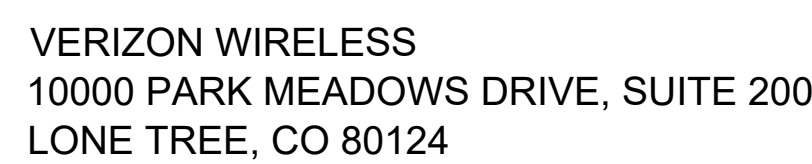


TBD S HELENA ST
AURORA, CO 80017

LATITUDE: 39.682415 LONGITUDE: -104.807835

Kimley»Horn

KIMLEY HORN AND ASSOCIATES, INC.
6200 SOUTH SYRACUSE WAY, SUITE #300
GREENWOOD VILLAGE, CO 80111
ATTN: MATT FLECK - (720) 647-6159



RF ENGINEER:
HAMAD MUNEEB
HAMAD.MUNEEB@VERIZONWIRELESS.COM

CONSTRUCTION:
MARK WILSON
CONSTRUCTION ENGINEER
MARK.WILSON2@VERIZONWIRELESS.COM

VZW REAL ESTATE:
MAUREEN LOPEZ
MAUREEN.LOPEZ@VERIZONWIRELESS.COM

SITE ACQUISITION:
KELLY HARRISON
KAPPA CONSULTING
KHARRISON@YMAIL.COM

JURISDICTION:	CITY OF AURORA
ZONING:	R-1 LOW DENSITY SINGLE FAMILY RESIDENTIAL
PARCEL NUMBER:	1975-20-3-00-013
ELEVATION:	(NAVD 88) ±5540.0'
STRUCTURE TYPE:	XCEL TRANSMISSION TOWER
STRUCTURE HEIGHT:	99'-3"
ANTENNA RAD CENTER:	±46'-0" (TIP AT LEAST 15' BELOW TRANSMISSION LINE)
APPLICANT:	VERIZON WIRELESS
ENGINEER:	KIMLEY-HORN AND ASSOCIATES, INC.
ENGINEERING CONTACT:	MATT FLECK 6200 SOUTH SYRACUSE WAY, SUITE #300 GREENWOOD VILLAGE, CO 80111 (720) 647-6159

BUILDING CODE:	IBC 2021
ELECTRICAL CODE:	NEC 2023
FIRE SAFETY CODE:	IFC 2021
USE GROUP:	U-UTILITY
CONSTRUCTION TYPE:	IIB



NAME	DESCRIPTION	NAME	DESCRIPTION
T-1	TITLE SHEET		
Z-1	OVERALL SITE PLAN		
Z-2	SITE PLAN		
Z-3	ENLARGED SITE PLAN		
Z-4	ELEVATION		
Z-5	ANTENNA PLAN		
Z-6	BATTERY DETAILS AND QUANTITY		
Z-7	BATTERY DETAILS		



THIS PROJECT CONSISTS OF THE INSTALLATION OF:

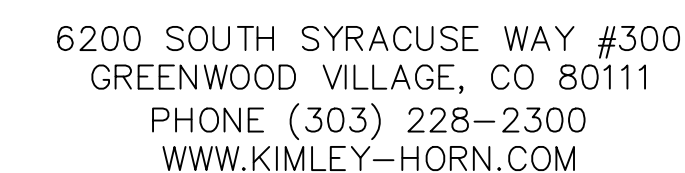
- INSTALL (3) ANTENNA MOUNTS ON EXISTING XCEL TOWER
- INSTALL (3) NHH-65C-R2B, (3) NHHSS-65C-R2BT4 ANTENNAS
- INSTALL (3) AIR 6419 ANTENNAS
- INSTALL (1) NEW EQUIPMENT COMPOUND WITH 4 CABINETS
- INSTALL NEW CEDAR FENCE COMPOUND
- RUN NEW FIBER, ELECTRIC CABLES, AND OTHER ASSOCIATED UTILITIES TO THE PROJECT SITE AND PROPOSED MOUNTS LOCATION

REFERENCED DOCUMENTS:
 RFDS: 07/12/2023 EME: N/A MACRO CALC: N/A
 VERIFY THE MOST CURRENT DOCUMENTS PRIOR TO CONSTRUCTION

- START FROM 10000 PARK MEADOWS DRIVE LONE TREE, CO 80124
- DEPART AND TURN LEFT ONTO PARK MEADOWS DRIVE
- TURN RIGHT ONTO S YOSEMITE ST
- TURN RIGHT ONTO CHESTER ST
- TURN RIGHT ONTO E COUNTY LINE RD
- USE THE RIGHT 2 LANES TO TAKE THE RAMP ONTO I-25 N
- MERGE ONTO I-25 N
- USE THE RIGHT LANE TO TAKE EXIT 200 FOR I-225 N TOWARD I-70/AIRPORT/AURORA/LIMON
- KEEP LEFT TO CONTINUE TOWARD I-225 N
- CONTINUE ONTO I-225 N
- USE THE RIGHT 2 LANES TO TAKE EXIT 5 FOR ILIFF AVENUE
- KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR BLACKHAWK ST AND MERGE ONTO E ILIFF AVE
- MERGE ONTO E ILIFF AVE
- TURN LEFT ONTO S IDALIA ST
- TURN LEFT ONTO S IVORY ST
- TURN LEFT ONTO S IVORY WAY
- TURN LEFT ONTO E JEWELL PL
- TURN RIGHT ONTO S HELENA ST
- SITE WILL BE ON THE LEFT AFTER 200 FEET



PLANS PREPARED BY:



REV: _____ DATE: _____ DESCRIPTION: _____ BY: _____

B	04/10/24	REVISED: BATTERY UPDATE	WSD
A	08/01/23	DEN HAILEN B ZDs	MAH

DRAWN BY: _____ CHECKED BY: _____

MAK

MFF

KHA PROJECT NUMBER: _____

196015076.1.300

ENGINEER SEAL: _____

DEN HAILEN

TBD S HELENA ST
AURORA, CO 80017
ARAPAHOE COUNTY

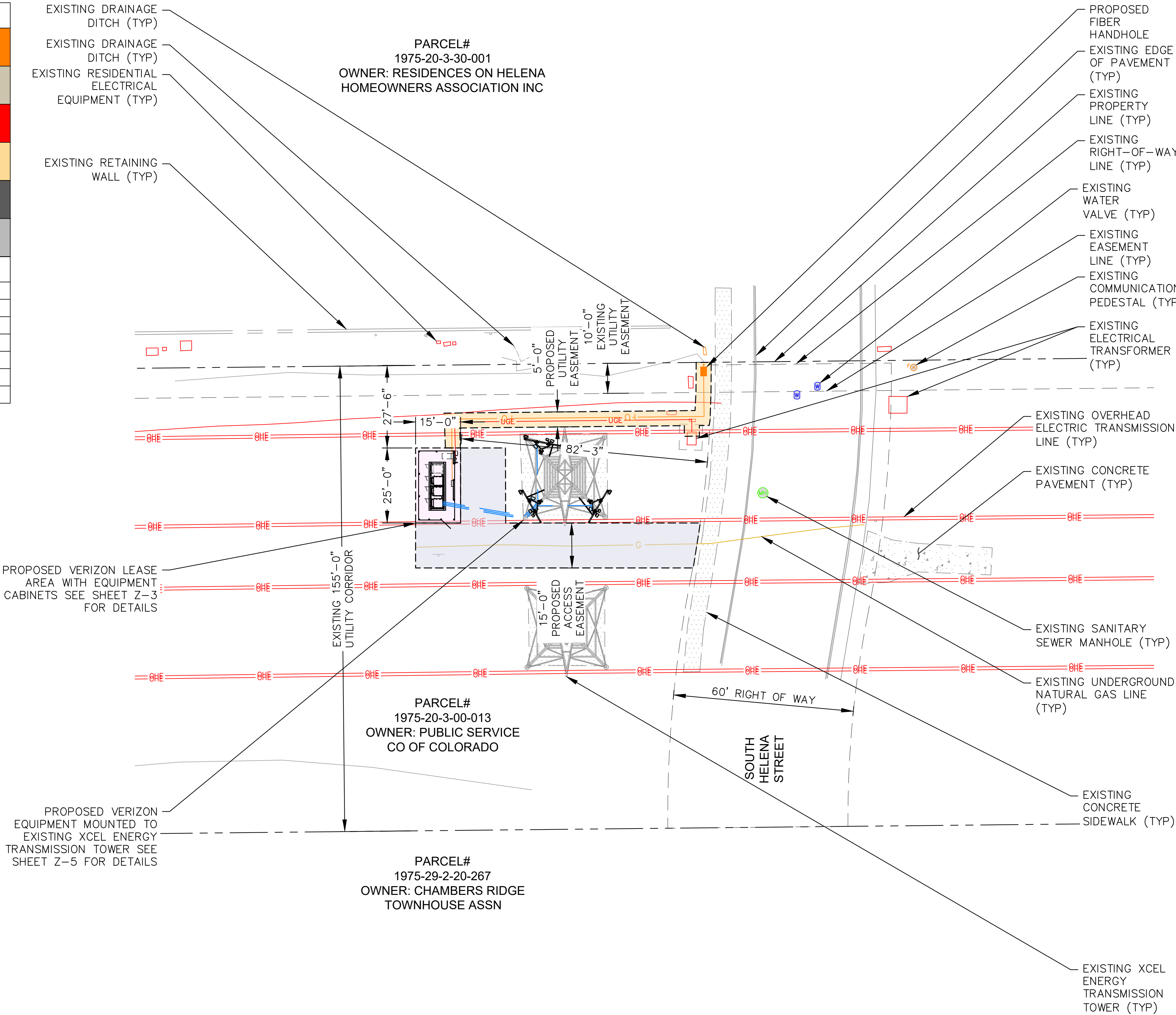
SHEET TITLE: _____

TITLE SHEET

SHEET NUMBER: _____

T-1

COLOR STANDARDS			
GRAY #1 (E) EASEMENT		ORANGE FIBER	
PURPLE (P) LEASE AREA		TAN ANTENNAS	
BLUE GRAY ACCESS/UTILITY		RED PENETRATIONS	
BLUE #1 HYBRID CABLES/COAX		UMBER (P) UTILITY EASEMENT	
BLUE #2 RRHs		GRAY #2 WALL HATCH	
GREEN DC POWER		GRAY #3 EXISTING	
LEGEND			
GAS LINE		UG ELECTRIC	
FIBER LINE		ELECTRIC	
OH ELECTRIC		TELCO FIBER VAULT	
FENCE		POWER POLE	
RIGHT OF WAY		ELECTRIC TRANSFORMER	
PROPERTY LINE		TREE	
MAJOR CONTOUR LINE		MINOR CONTOUR LINE	



1
Z-1
OVERALL SITE PLAN
SCALE: 1" = 10'
SCALE BASED ON 24"X36" ONLY



10000 PARK MEADOWS DRIVE,
SUITE 200, LONE TREE, CO 80124

PLANS PREPARED BY:



6200 SOUTH SYRACUSE WAY #300
GREENWOOD VILLAGE, CO 80111
PHONE (303) 228-2300
WWW.KIMLEY-HORN.COM

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OVERALL SITE PLAN

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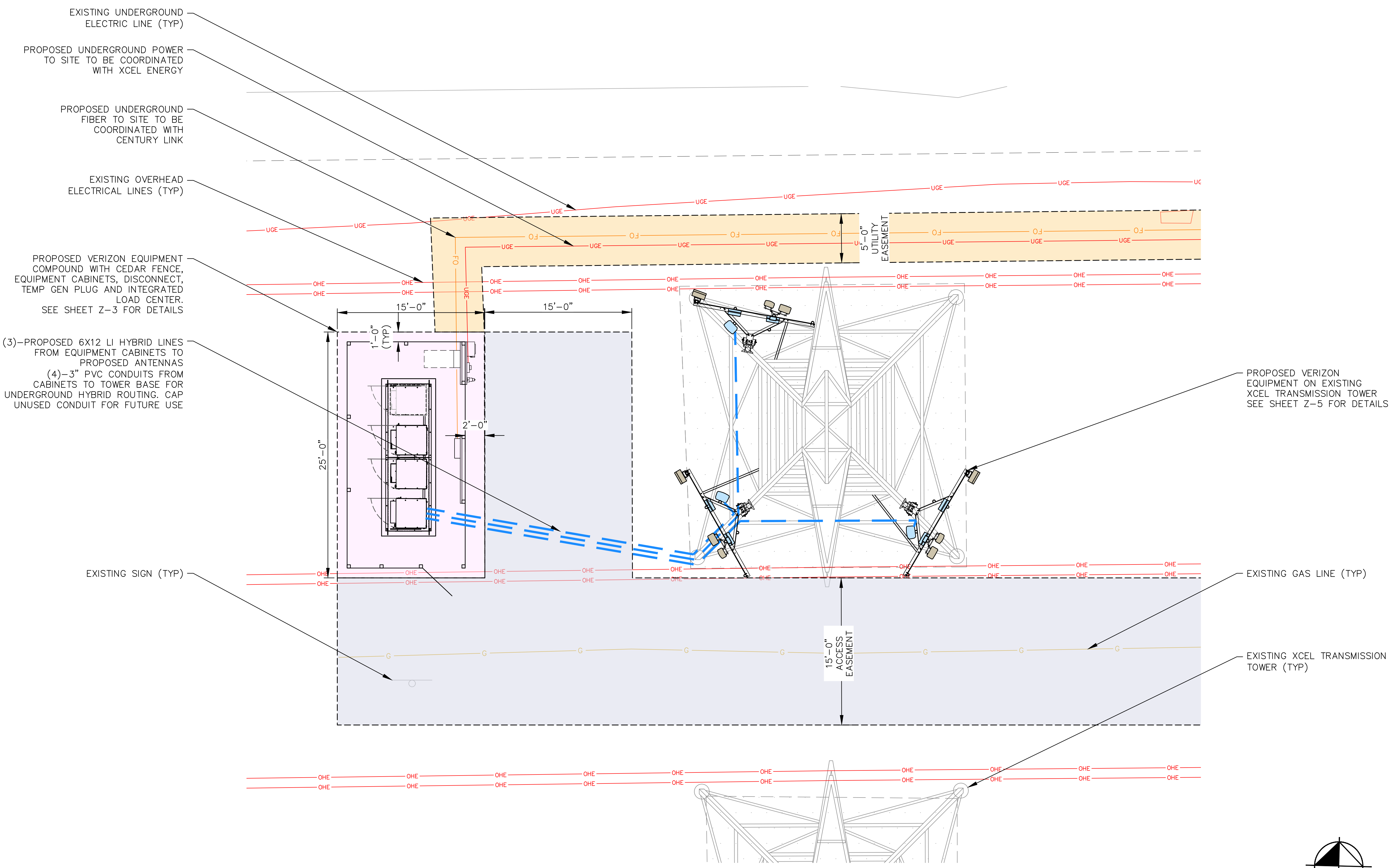
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AURORA, CO 80017
ARAPAHOE COUNTY

SHEET TITLE:

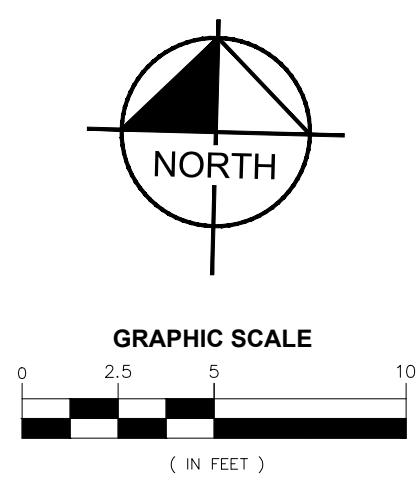
SITE PLAN

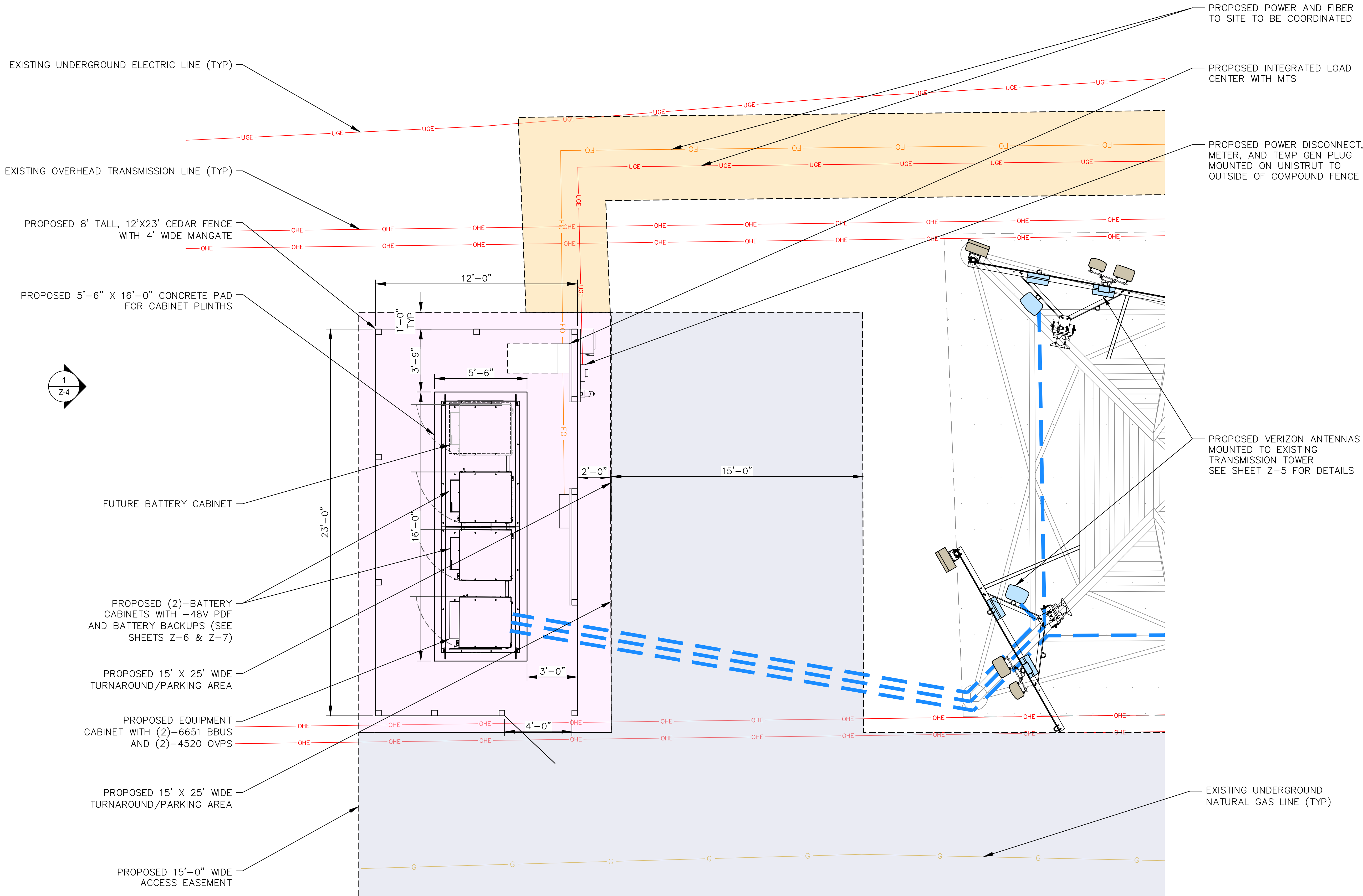
SHEET NUMBER:

Z-2



1 Z-2 SITE PLAN
SCALE: 1" = 5'
SCALE BASED ON 24"X36" ONLY



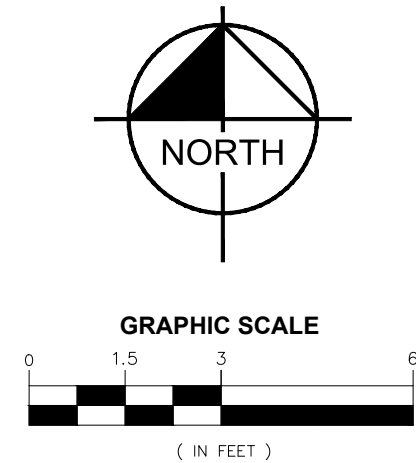


1
Z-3

ENLARGED SITE PLAN

SCALE: 1" = 3'

SCALE BASED ON 24"X36" ONLY



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DEN HAILEN

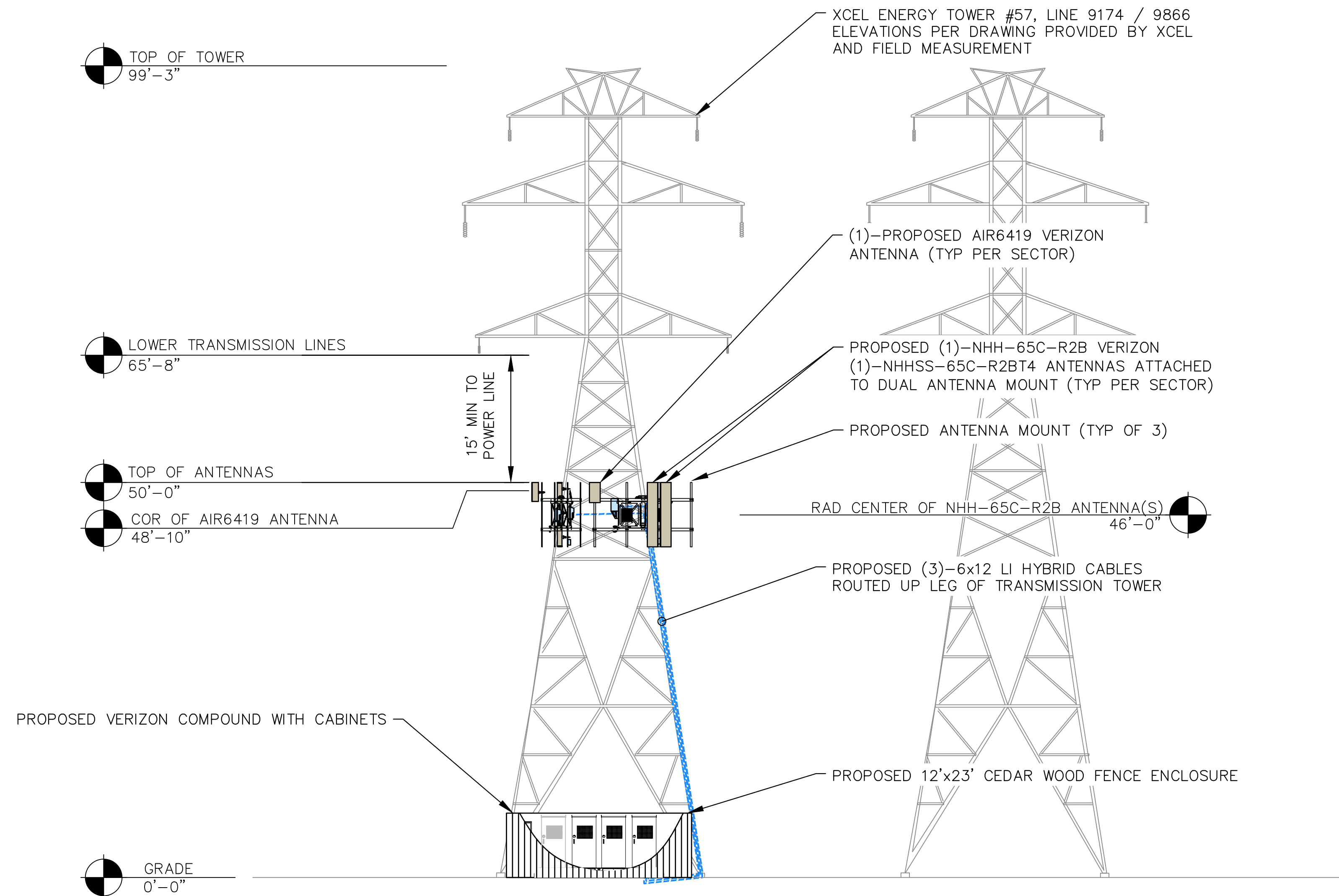
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ARAPAHOE COUNTY

SHEET TITLE:

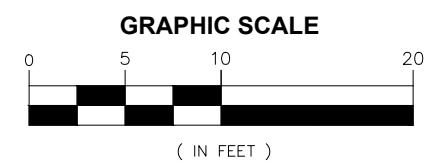
ENLARGED
SITE PLAN

SHEET NUMBER:

Z-3



1
Z-4
PROPOSED ELEVATION
SCALE: 1" = 10'
SCALE BASED ON 24"X36" ONLY



verizon

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SUITE 200, LONE TREE, CO 80124

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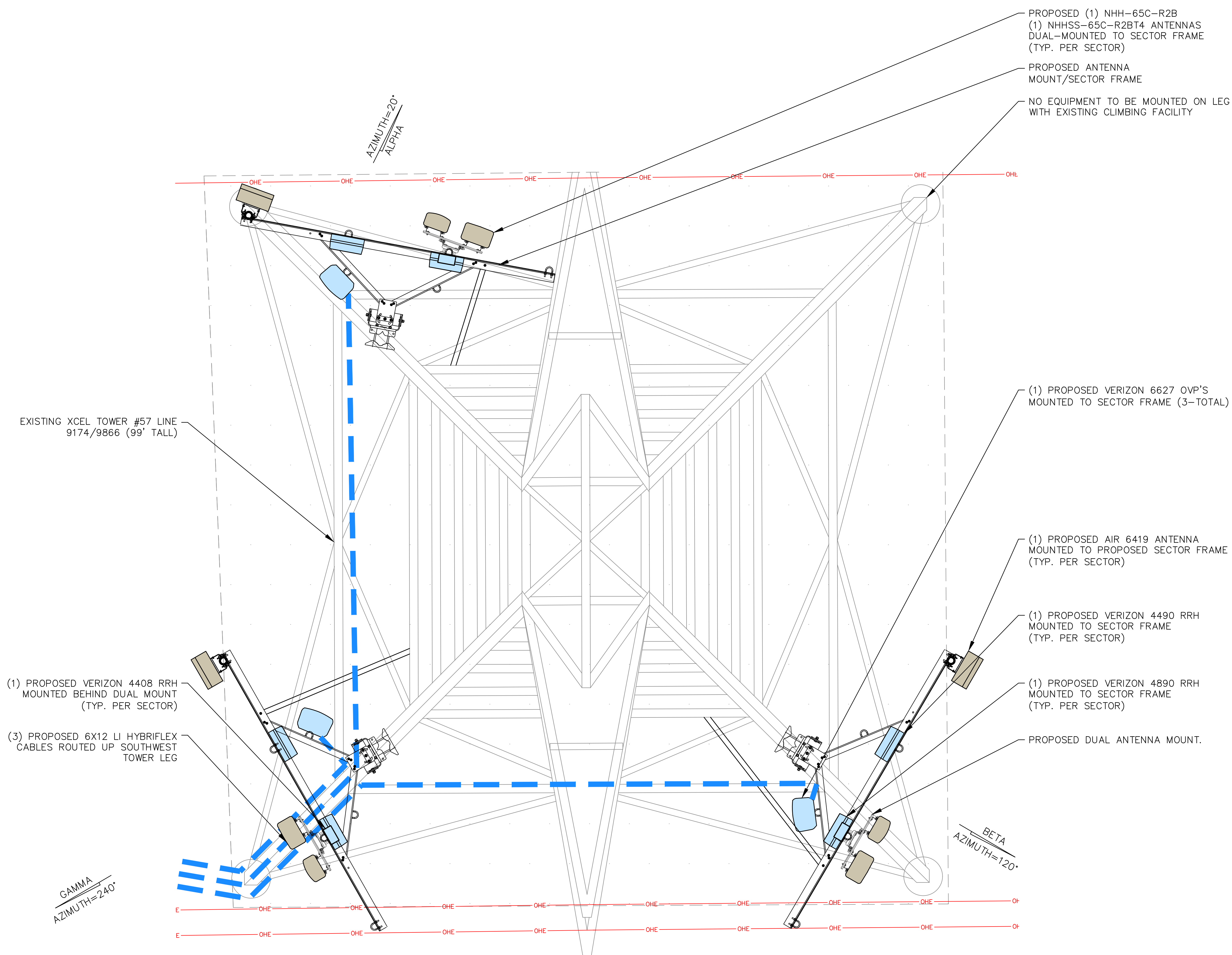
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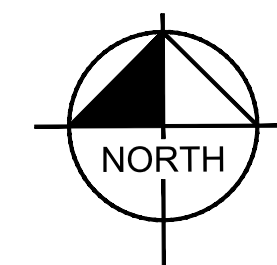
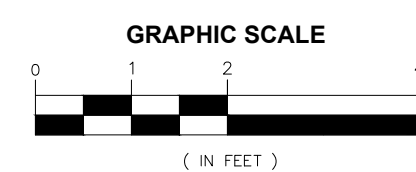
**PROPOSED
ELEVATION**

SHEET NUMBER:

Z-4



1 Z-5
ANTENNA PLAN
SCALE: 1" = 2'
SCALE BASED ON 24"X36" ONLY



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MAK **MFF**

KHA PROJECT NUMBER:

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ENGINEER SEAL:



PROJECT INFORMATION:

DEN HAILEN

TBD S HELENA ST
AURORA, CO 80017
ARAPAHOE COUNTY

SHEET TITLE:

**ANTENNA
LAYOUT**

SHEET NUMBER:

Z-5

SOME LIKE IT HOT



HT200ET

- Helios™ Additive reduces float current up to 75% enhancing high temperature life
- THT™ Plastic specifically formulated heat resistant plastic case and cover optimizes compression
- Microcat® Catalyst lowers float current, mitigates thermal buildup and cell dryout
- Exclusive IPF® Technology optimizes power capacity, cell consistency, and long-term reliability
- TempX™ Alloy inhibits corrosion under the highest temperature extremes
- Advanced AGM technology for superior power
- Puncture resistant micro-porous glass mat separators extend life
- Front access design for easy installation and maintenance
- Reinforced case resists bulging and meets safety requirements (UL 94 V-0)
- Case & cover heat sealed and 100% tested to prevent leaks
- Epoxy-sealed posts eliminate leaks
- Flame arresting, low pressure, self-sealing valves are 100% factory tested
- Computer-aided design and manufacturing control processes and standards to ensure quality products
- All batteries meet or exceed IEEE recommended practices
- Battery design and construction meet UL recognition requirements



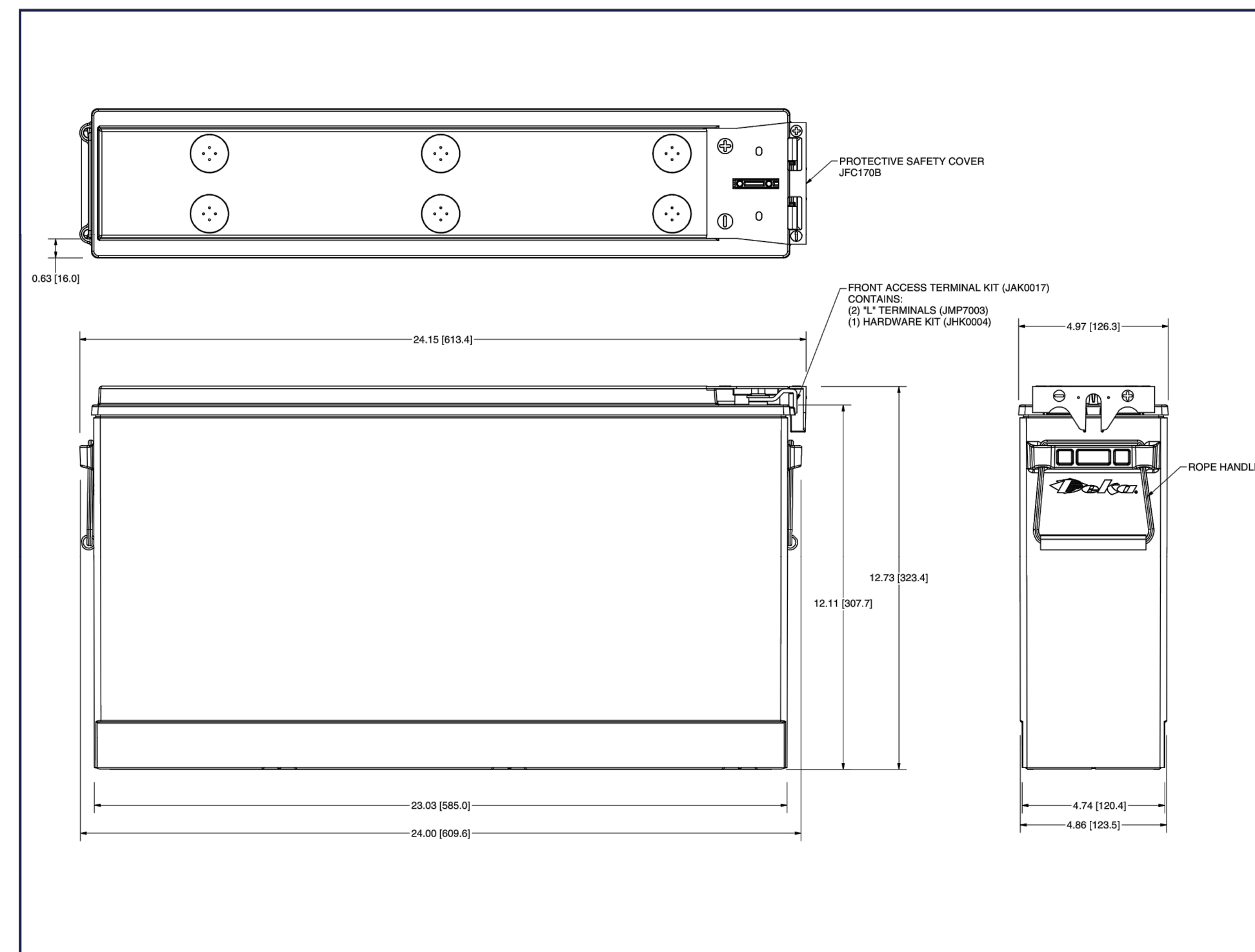
SPECIFICATIONS

Nominal Voltage: 12-Volts
Rating: 190 Ampere-Hours @ 8 hr. rate to 1.75 V.P.C.
Positive Plate: >98% Pure lead with tin-calcium alloy
Negative Plate: Pure lead, calcium alloy
Post Seal: Epoxy-sealed
Terminal: Front access, 1/4" – 20 threaded insert
Case/Cover: Flame-retardant, THT™ – UL 94 V-0/>39% L.O.I.
Catalyst: Microcat®
Safety Vent: Low positive pressure, self-sealing w/ flame arrestor
Float Voltage: 2.25 V.P.C. ± 0.01 V.P.C. @ 77°F (25°C) Range: (13.44V to 13.56V per battery)
Design life: 12 years in float applications @ 77°F (25°C)
Dimensions: Length - 24.15" (613.4 mm) Width - 4.97" (126.3 mm) Height - 12.74" (323.5 mm)
Weight: 151 lbs. (68.5 kg)

DISCHARGE RATE IN AMPS @ 77°F (25°C)[†]

Volts per Cell (V.P.C.)	1 HR.	2 HR.	3 HR.	4 HR.	5 HR.	8 HR.	12 HR.	20 HR.	24 HR.
1.75	144	82.0	57.3	44.4	36.4	23.8	16.3	10.1	8.4
1.80	136	79.1	55.4	43.1	35.4	23.2	16.0	9.9	8.3
1.85	124	73.1	51.9	40.6	33.5	22.1	15.2	9.4	7.9
1.88	113	68.0	48.7	38.3	31.7	21.0	14.5	9.0	7.6
1.90	105	63.9	46.2	36.4	30.1	20.0	13.9	8.6	7.2

[†]Subject to change without notice.



INSTALLATION AND OPERATING INSTRUCTIONS

<http://www.eastpennmanufacturing.com/wp-content/uploads/Fahrenheit-10-Manual-2100.pdf>

PROPOSITION 65 WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **WASH HANDS AFTER HANDLING.**



East Penn Manufacturing Co. Lyon Station, PA 19536-0147 Phone: 610-682-3263 Fax: 610-682-0891 e-mail: reservepowersales@dekabatteries.com

www.dekabatteries.com

QUALITY SYSTEM
CERTIFIED
ISO 9001
IATF 16949
ENVIRONMENTAL
SYSTEM CERTIFIED
ISO 14001



E.P.M. Form No. 2201 2/20

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10000 PARK MEADOWS DRIVE,
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PLANS PREPARED BY:

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DRAWN BY: CHECKED BY:

MAK MFF

KHA PROJECT NUMBER:

196015076.1.300

ENGINEER SEAL:



PROJECT INFORMATION:

DEN HAILEN

TBD S HELENA ST
AURORA, CO 80017
ARAPAHOE COUNTY

SHEET TITLE:

BATTERY DETAILS
AND QUANTITY

SHEET NUMBER:

Z-6

TOTAL BATTERY QUANTITIES

CABINET/RACK	STRINGS	BATTERIES PER STRING	TOTAL	ELECTROLYTE PER BATTERY (GAL/BAT)	ELECTROLYTE (GAL)	ELECTROLYTE (LB)
(1)–PROPOSED CMC 74-36B (2)–EXISTING CABINETS	8	4	32	2.59	82.88	724.8

0

3

2

W

DANGER

LEAD ACID BATTERIES

CORROSIVE LIQUIDS (ELECTROLYTE)

ENERGIZED ELECTRICAL CIRCUITS

NO SMOKING

1

Z-7

VRLA CHEMICAL HAZARD IDENTIFICATION SIGNAGE

SCALE: N.T.S.

DEKA

FAHRENHEIT HT200ET

BATTERY STRINGS: 8 STRINGS

ELECTRICAL RATING

VOLTAGE: −48V

CURRENT: 144 AMPS

ENERGY STORAGE CAPACITY: 63.8 KWH

NOTE:
–EXTERIOR SIGNAGE ON THE CABINET SHALL IDENTIFY THE MANUFACTURER & MODEL NUMBER OF THE SYSTEM & ELECTRICAL RATING (VOLTAGE & CURRENT) OF THE CONTAINED BATTERY SYSTEM
–INTERIOR SIGNAGE ON THE CABINET SHALL INDICATE THE RELEVANT ELECTRICAL AND CHEMICAL HAZARDS PER 2015 IFC CHAPTER 6 SECTION 608 OR THE 2021 IFC CHAPTER 12.

2

Z-7

BATTERY MANUFACTURER SIGNAGE

SCALE: N.T.S.

ENVIRGUARD

Global Compliance Solutions

HAWK™ SYSTEM

Liner-Based for Cabinets, VRLA & NiCd Battery Applications



Part Number: HAWK-WW-LLL

Features

- Fast and easy installation
- Non-metallic components
- Minimal floor preparation necessary
- Corrosive-resistant liner with Class 1 fire rating (NFPA 101)
- Can be configured to fit most applications
- Optional floor anchors for easy installation on computer floors
- Quick-slip barrier walls for easy battery access
- Spill containment for stationary lead-acid battery systems
- Available in gray
- UL Listed

Part Number

HAWK - WW-LLL
(i.e. HAWK 30-120) WW=Width in inches, LLL=Length in inches

Regulations In Compliance With

- NFPA
- International Fire Code (IFC)
- OSHA
- Underwriters Laboratories (UL)

Specifications

- 4" x 1/2" Polypropylene Barriers
- 80 mil Polymeric Liner
- System includes 12"x12" Neutralization and Absorption Pads (VRLAPADs)
- KOH VRLAPADs substituted for NiCd Battery Applications

Recommended Products



Battery Room Aisle Mat



Compliance Package

UL LISTED

RA

Protecting Mission-Critical Facilities Since 1993.™

5534 Olive Street, Montclair, CA 91763 • 800.206.9884 Fax 909.624.1772 • www.EnviroGuard.com

EnviroGuard is an ISO 9001-2008 Certified Manufacturer of UL Listed and UL Recognized products

NEBS

UL

ISO 9001-2008 CERTIFIED



S-SC-V-HWK

Rev B 06/10

NOTE:
UTILIZE ABOVE MENTIONED POLYMERIC LINER AND VRLAPADS AS THEY FIT WITHIN PROPOSED AND EXISTING CABINETS.

3

Z-7

PROPOSED HAWKGUARD SPILL PROTECTION

SCALE: N.T.S.

verizon

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ARAPAHOE COUNTY

SHEET TITLE: **BATTERY DETAILS**

SHEET NUMBER: **Z-7**