Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201
More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 14932	**Project Address:** 9920 NE Cascades Pkwy
Hearing Date: 4/12/17	**Appellant Name:** Sophia Mekkers
Case No.: B-021	**Appellant Phone:** 503-380-1564
Appeal Type: Building	**Plans Examiner/Inspector:** John Cooley
Project Type: commercial	**Stories:** 5 **Occupancy:** Utility **Construction Type:** 1 and 5
Building/Business Name: Aloft Hotel	**Fire Sprinklers:** Yes - Exterior roof is not sprinkled
Appeal Involves: Alteration of an existing structure	**LUR or Permit Application No.:** 16-292682-CO
Plan Submitted Option: pdf [File 1] [File 2]	**Proposed use:** Unmanned Wireless Facility

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	Code Guide IBC/26/#1 items B7 and B11
Requires	Per the antenna screening guideline provided by the City of Portland, screening utilizing FRP materials cannot exceed the maximum screen height of 10'-0" above the finished flat roof. Additionally, a 5'-0" space is required from FRP screens to mechanical equipment.
Proposed Design	Verizon Wireless intends to install an unmanned wireless communications facility to enhance their wireless network. The proposed project includes the screening of antennas on the rooftop of the Aloft Hotel building. AT&T has already been approved to install antennas on this same rooftop. Verizon Wireless is proposing screening that matches the approved AT&T screening. The roof deck is at 55'-5" AGL. The upper eave of the existing penthouse is 70'-0" AGL. Verizon Wireless proposes to match the height approved for the proposed AT&T antenna screen, which is 68'-4" AGL. The vertical height measurement of the proposed screen is 10'-0". The portion of the penthouse wall that will be cut and replaced with FRP material, textured and painted to match the existing penthouse wall, to conceal the antennas, will be a minimum of 5 feet away from the proposed AT&T equipment platform, as well as the Verizon equipment cabinets proposed to be located within the existing penthouse.
Reason for alternative	The proposed screening meets the screening guidelines for the City of Portland and is designed to match the overall height of screening that has already been approved, by the City, for AT&T. Continuity of design is of critical importance to maintain the aesthetics of the building.

Additionally, the proposed screen wall materials are specified to meet or exceed LARR standard requirements for flammability and flame spread (see attached plans). The proposed screen walls will not block fire access or existing venting, and the existing structure is adequate to support the proposed loading.

APPEAL DECISION

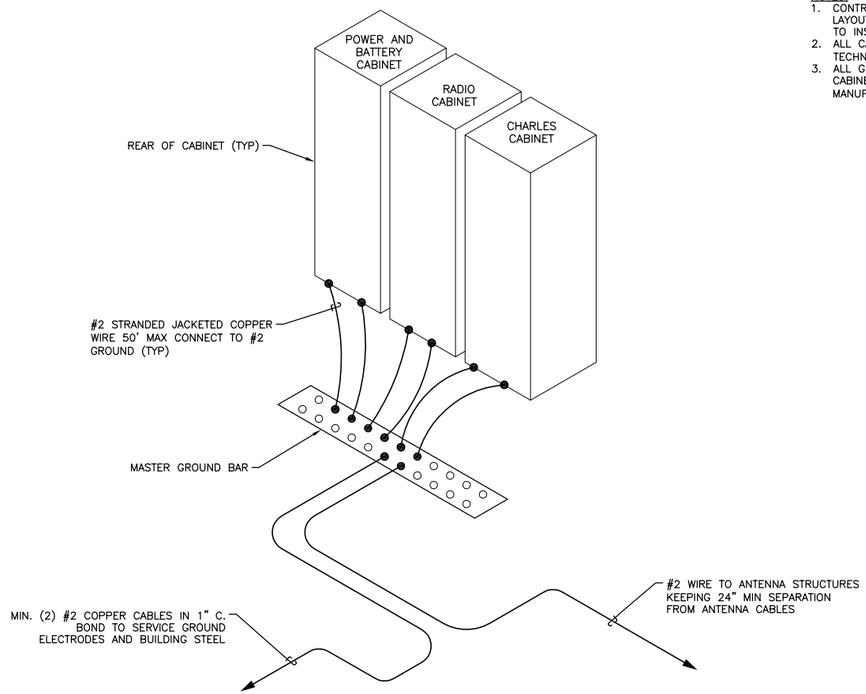
FRP antennae screen height: Granted as proposed.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

1. PROVIDE #2 AWG. STRANDED GREEN JACKET COPPER GROUNDING CONDUCTOR AND RUN FROM ONE SUPPORT FRAME TO THE NEXT. ATTACH TO EACH SUPPORT USING GROUND CLAMP.
2. BOND CABINET TO MASTER GROUND BAR WITH (2) #2 AWG SOLID TINNED COPPER CONDUCTORS.
3. MASTER GROUND BAR (MGB) IN OPEN LOCATION ON EQUIPMENT PLATFORM. CONTRACTOR TO SUPPLY AND INSTALL ADDITIONAL GROUND BARS AS REQUIRED OR AS INDICATED ON DRAWING. BOND TO EXISTING BUILDING SERVICE GROUND ELECTRODES W/ A MIN. OF (2) #2 AWG COPPER CONDUCTORS. EACH IN A 1-1/4" CONDUIT.
4. BOND GPS ANTENNAS, COAX SUPPORT TRAY, AND MISCELLANEOUS METALLIC EQUIPMENT TO MASTER GROUND BAR (MGB).
5. BOND ANTENNA GROUND BAR TO MASTER GROUND BAR (MGB) USING #2 AWG STRANDED GREEN JACKET COPPER CONDUCTOR. REFER TO ARCHITECTURAL DRAWING AND CONTRACTOR TO FIELD VERIFY FOR EXACT LOCATION OF ANTENNA GROUND BAR.
6. EXTEND #2 AWG SOLID TINNED COPPER GROUNDING CONDUCTOR TO ANTENNA LOCATIONS AND BOND TO ANTENNA PIPE MOUNTS. USE AN EXOTHERMIC WELD AT ANTENNA PIPE MOUNT. SUPPORT CONDUCTOR AS REQUIRED EVERY TWO (2) FEET MINIMUM.
7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ANTENNA(S) AND ANTENNA SUPPORT FRAMES.
8. BOND RRU TO ANTENNA GROUND BAR WITH A #2 AWG STRANDED JACKETED COPPER CONDUCTOR.
9. BOND MGB TO EXISTING SERVICE GROUND ELECTRODES AND BUILDING STEEL W/ A MIN. OF (2) #2 AWG COPPER CONDUCTORS IN 1" CONDUIT.

GROUNDING REFERENCE NOTES | 2



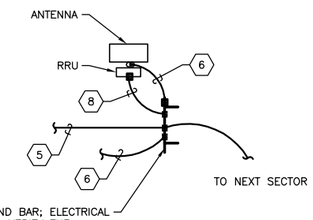
NOTES:
1. CONTRACTOR SHALL CONFIRM LIGHTNING PROTECTION LAYOUT WITH VERIZON WIRELESS PROJECT MANAGER PRIOR TO INSTALLATION
2. ALL CABINETS ARE UL LISTED 1950 INFORMATION TECHNOLOGY EQUIPMENT. ACCESSORY #97B4
3. ALL GROUNDING CONNECTIONS WITHIN THE EQUIPMENT CABINETS SHALL BE PER THE GUIDELINES OF THE MANUFACTURER'S SPECIFICATIONS.

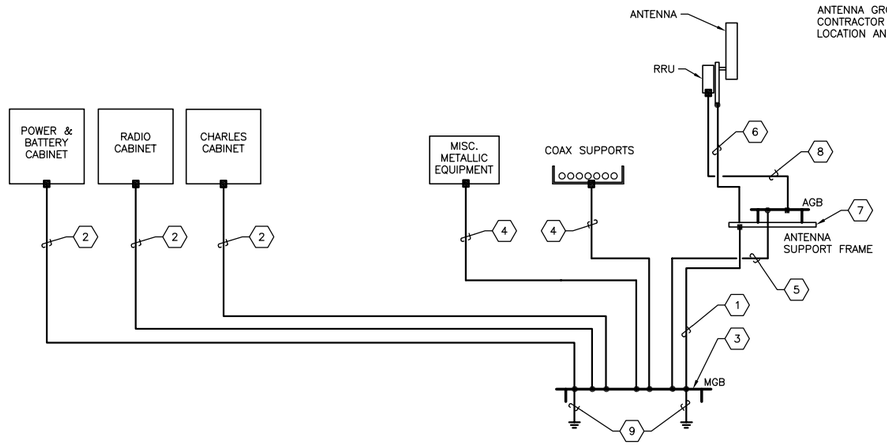
22"x34" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

ELECTRICAL LPS DETAIL | 2

NOTE:
EQUIPMENT GROUNDING SHOWN IS SCHEMATIC IN NATURE. REFER TO ARCHITECTURAL SITE PLAN DRAWING FOR EXACT LOCATION, ORIENTATION AND SIZE OF EQUIPMENT. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR INTERIOR INSTALLATION OF EQUIPMENT.

NOTE: USE (2) TWO HOLE CONNECTORS FOR CABINET GROUNDING. (BURNDY CRIMP ON CONNECTORS OR EQUIVALENT MECHANICAL. CONNECTORS ARE ACCEPTABLE).





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SCHEMATIC GROUNDING PLAN | 1

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BLACK ROCK

A&E Team:

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Drawing Title:

GROUNDING PLAN AND NOTES

Project Number:	Start Date:
7150038	01/06/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: E-4

POWER CABINET PANEL SCHEDULE (PANEL PP-1)

BUS VA A	BUS VA B	LOAD	WIRE	GND	COND	AMPS	BUS A	BUS B	AMPS	COND	GND	WIRE	LOAD	BUS VA A	BUS VA B
2792		ANDREW PDU/BATT CABINET	#6	#8	2"	40	1	2	60	1"	#10	#6	SURGE ARRESTOR	0	
	2792	RECTIFIERS **					3	4							0
2792		ANDREW PDU/BATT CABINET	#6	#8	2"	40	5	6	20	1/2"	#12	#12	TELCO GFI RECEPTACLE	180	
	2792	RECTIFIERS **					7	8	20	1/2"	#12	#12	TELCO CABINET FAN		180
–		SPACE	–	–	–	–	9	10	20	1/2"	#12	#12	EXTERIOR LIGHT	332	
	–	SPACE	–	–	–	–	11	12	20	1/2"	#12	#12	GENERATOR BLOCK HEATER		1200
–		SPACE	–	–	–	–	13	14	20	1/2"	#12	#12	GENERATOR BATTERY CHARGER	1000	
	–	SPACE	–	–	–	–	15	16	–	–	–	–	SPACE		–
1210		CHARLES INDUSTRIES PM63912JN1	#3	#8	1-1/2"	100	17	18	–	–	–	–	SPACE	–	
	1210	CABINET AC PANEL					19	20	–	–	–	–	SPACE		–
180		RECEPTACLE INSIDE PDU CABINET **	#10	#10	2"	20	21	22	–	–	–	–	SPACE	–	
	180	RECEPTACLE INSIDE BATTERY CABINET **	#10	#10	2"	20	23	24	–	–	–	–	SPACE		–
–		SPACE	–	–	–	–	25	26	–	–	–	–	SPACE	–	
	–	SPACE	–	–	–	–	27	28	–	–	–	–	SPACE		–
–		SPACE	–	–	–	–	29	30	–	–	–	–	SPACE	–	
	–	SPACE	–	–	–	–	31	32	–	–	–	–	SPACE		–
–		SPACE	–	–	–	–	33	34	–	–	–	–	SPACE	–	
	–	SPACE	–	–	–	–	35	36	–	–	–	–	SPACE		–
–		SPACE	–	–	–	–	37	38	–	–	–	–	SPACE	–	
	–	SPACE	–	–	–	–	39	40	–	–	–	–	SPACE		–
–		SPACE	–	–	–	–	41	42	–	–	–	–	SPACE	–	

TOTAL VA: BUS A 8486 BUS B 8354 CONNECTED VA: 16840 AMPERES: BUS A 71 BUS B 70 TOTAL 70

RATED VOLTAGE: ☐ 120/208 ■ 120/240 ☐ 277/480 1 PHASE, 3 WIRE BRANCH POLES ☐ 12 ☐ 18 ☐ 20 ☐ 24 ☐ 30 ☐ 36 ■ 42

RATED AMPS: ☐ 100 ■ 200 ☐ 400 CABINET: ■ SURFACE ☐ FLUSH

FULL NEUTRAL BUS ■ GROUND BUS ■ HINGED DOOR ■ KEYED DOOR LATCH ENCLOSURE TYPE NEMA-3R

BRANCH DEVICES ☐ FUSED ■ CIRCUIT BREAKER

☐ MAIN LUGS ONLY MAIN 200A ■ BREAKER ☐ FUSED SWITCH

ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT CURRENT OF MINIMUM 42,000 AMPS SYMMETRICAL.

ACCEPTABLE MANUFACTURER/MODEL: INTERSECT MODEL: DJ00L

NOTES:
PANEL PP-1 IS INCORPORATED INTO THE INTEGRATED LOAD CENTER (ILC).

ALL BREAKER POSITIONS TO BE POPULATED AS SHOWN ABOVE INCLUSIVE CIRCUIT BREAKERS INTENDED FOR OPTIONAL EQUIPMENT. ALL UNUSED BREAKERS TO BE LABELED "SPARE"

(**) CIRCUITS ROUTED INSIDE SAME CONDUIT

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A&E Team:
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7150038	01/06/16
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Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: E-5

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NOT USED | 4

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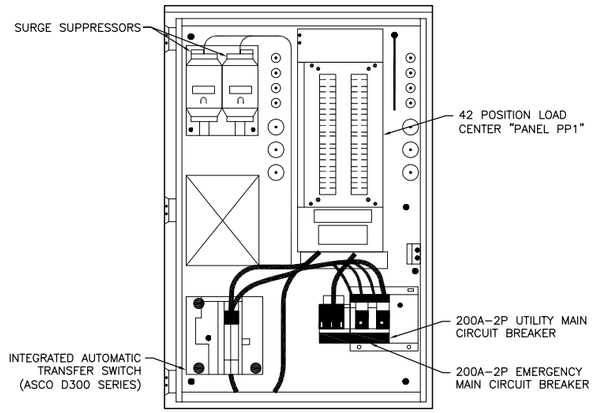
POWER TRANSFER INTEGRATED LOAD CENTER DETAIL | 3



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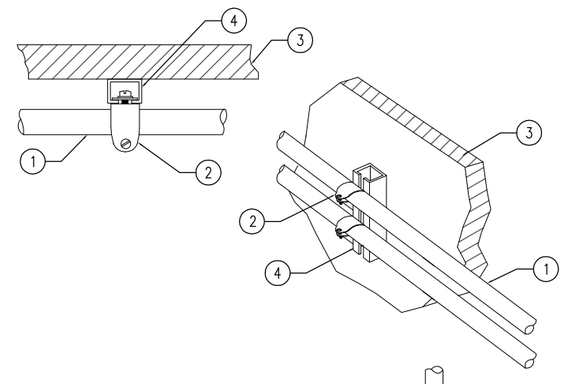
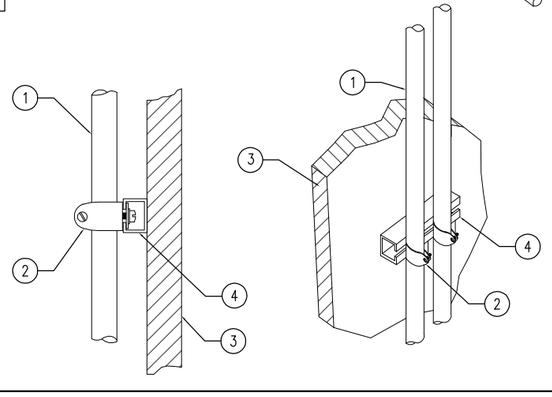
WALL MOUNT CABLE SUPPORT | 2

VERTICAL UNISTRUT MOUNTING CHART	
WALL CONSTRUCTION TYPE	USE
HOLLOW	3/8"øTOGGLE BOLT
HOLLOW, AT STUD	3/8"ø LAG SCREW
CONCRETE BLOCK (HOLLOW)	3/8"ø HILTI HY–20 WITH SCREEN, MINIMUM EMBEDMENT 2–1/2"
CONCRETE (SOLID)	3/8"øHILTI HY–150 WITH SCREEN, MINIMUM EMBEDMENT 2–1/2"

NOTE:
USE STANDARD GALVANIZED HARDWARE FOR WALL MOUNT AND CONNECTION OF CHANNELS. SPACE UNITS @ 5'–0" ON CENTER





1. INNERDUCT/HYBRID CABLE/ELECTRICAL AND FIBER CONDUITS (COORDINATE WITH LIGHTSQUARED CONSTRUCTION MANAGER)
2. FIMO OR BUTTERFLY CLAMP AS REQUIRED
3. EXISTING WALL/CEILING
4. VERTICAL "UNISTRUT" P1000 'T' SERIES LENGTH BASED ON NUMBER OF CONDUIT TO BE MOUNTED

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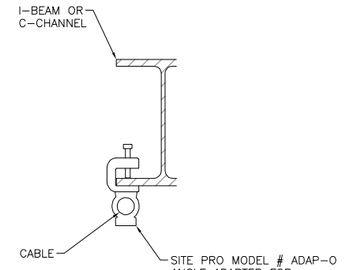
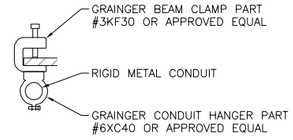
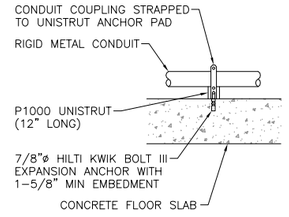
TYPICAL CONDUIT SUPPORT DETAILS | 1

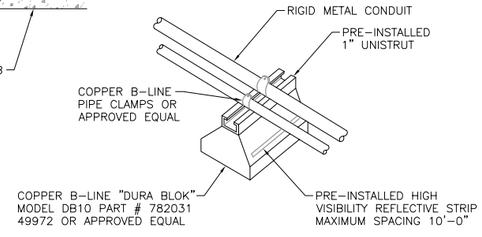


PART #	CABLE SIZE
12SS–A	1/2"
78SS–A	7/8"
114SS–A	1–1/4"
158SS–A	1–5/8"

NOTE:
COPPER B–LINE "DURA BLOK" HAS A FIRE RATING OF ASTM D573







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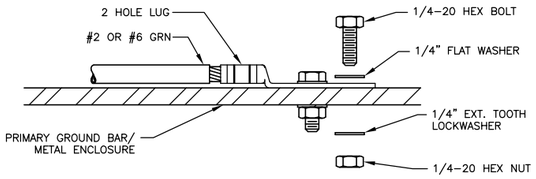
7150038	01/06/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: E–6



NOTES:

1. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
2. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
3. APPLY ANTI–OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND.
4. USE SOLID COPPER WIRE AND MECHANICAL 2–HOLE LUG FOR ALL EXTERIOR GROUNDING.

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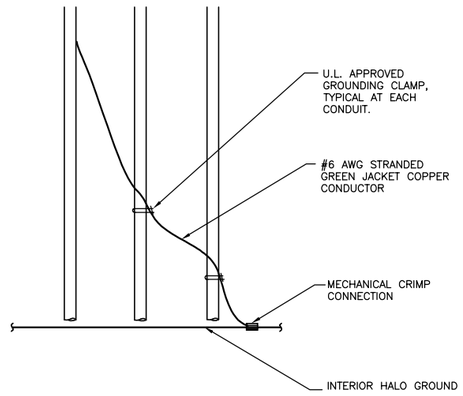
GROUND CONNECTION DETAIL | 5



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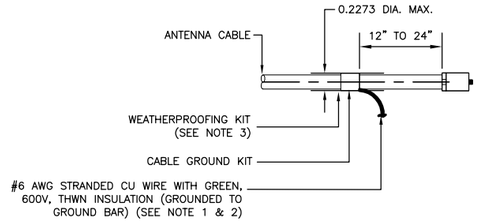
MULTIPLE CONDUIT GROUNDING | 4



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

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ANTENNA CABLE GROUND | 3

SECTION "P" - SURGE PRODUCERS

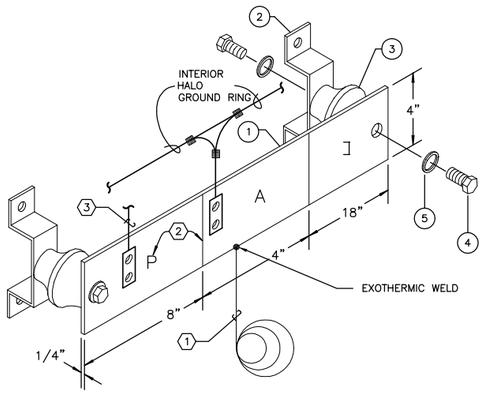
(ELC) CABLE ENTRY PORTS (HATCHPLATES)
(ELC) TELCO GROUND BAR
(ELC) COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND
(VERIZON) CELL SITE+24V POWER SUPPLY RETURN BAR
(VERIZON) CELL SITE–48V POWER SUPPLY RETURN BAR
(ELC) GENERATOR FRAMEWORK (IF AVAILABLE)

SECTION "A" - SURGE ABSORBERS

(ELC) INTERIOR HALO GROUND RING
(ELC) EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING/STEEL SUPPORT FRAME)
(ELC) METALLIC COLD WATER PIPE (IF AVAILABLE)
(ELC) BUILDING STEEL (IF AVAILABLE)

SECTION "I" - ISOLATED GROUND ZONE

(VERIZON) ALL COMMUNICATIONS EQUIPMENT FRAMES. DO NOT BOND –48V AND +24V RECTIFIER FRAMES TO GROUND BAR. BOND RECTIFIER FRAMES TO INTERIOR HALO GROUND RING.



DETAIL REFERENCE NOTES

1. EXOTHERMICALLY WELD 1–#2AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO LIGHTNING PROTECTION DOWNLEAD AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.
3. EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SECTION SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY IT'S ORIGIN AND DESTINATION.

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x30"	SOLID GND. BAR
2	2	A–6056	WALL MTG. BRKT.
3	2	3061–4	INSULATORS
4	4	3012–1	5/8"–11x1"H.H.C.S.
5	4	3015–8	5/8 LOCKWASHER

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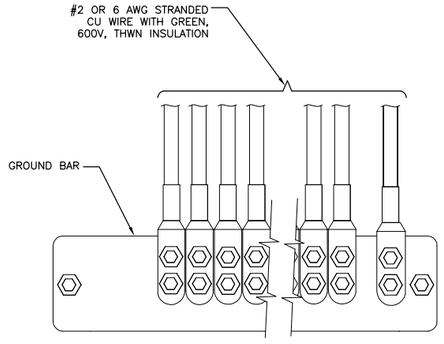
GROUND BAR DETAIL | 2



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INSTALLATION OF GROUND WIRE TO GROUND BAR | 1

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verizon

POR FLYOVER

ROOFTOP ENCLOSURE

LOCATION:

9920 NE CASCADES PKWY
PORTLAND, OR 97220
MULTNOMAH COUNTY

DRAWING INDEX

SPECIAL INSPECTIONS:

1. STEEL FABRICATION SHALL BE DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.
2. NO FIELD WELDING SHALL BE PERMITTED
3. THE FOLLOWING SPECIAL INSPECTIONS SHALL BE REQUIRED PER CHAPTER 17 OF THE 2012 IBC:

- PERIODIC SPECIAL INSPECTION OF HIGH-STRENGTH BOLTING

STRUCTURAL OBSERVATION:

NO STRUCTURAL OBSERVATION IS REQUIRED.

DISCLAIMERS:

ALL STRUCTURAL COMPONENTS TO BE CONNECTED TOGETHER SHALL BE COMPLETELY FIT UP ON THE GROUND OR OTHERWISE VERIFIED FOR COMPATIBILITY PRIOR TO LIFTING ANY COMPONENT INTO PLACE. REPAIRS REQUIRED DUE TO FIT-UP OR CONNECTION COMPATIBILITY PROBLEMS AFTER PARTIAL ERECTION ARE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.

VECTOR ENGINEERS
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VERIZON
5430 NE 122ND AVE.
PORTLAND, OR 97230

TITLE SHEET

POR FLYOVER
ROOFTOP ENCLOSURE
9920 NE CASCADES PKWY
PORTLAND, OR 97220

1-5-2017

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
78178PE
OREGON
MAY 16, 2006
ROGER ALWORTH
EXPIRES 12/31/2017

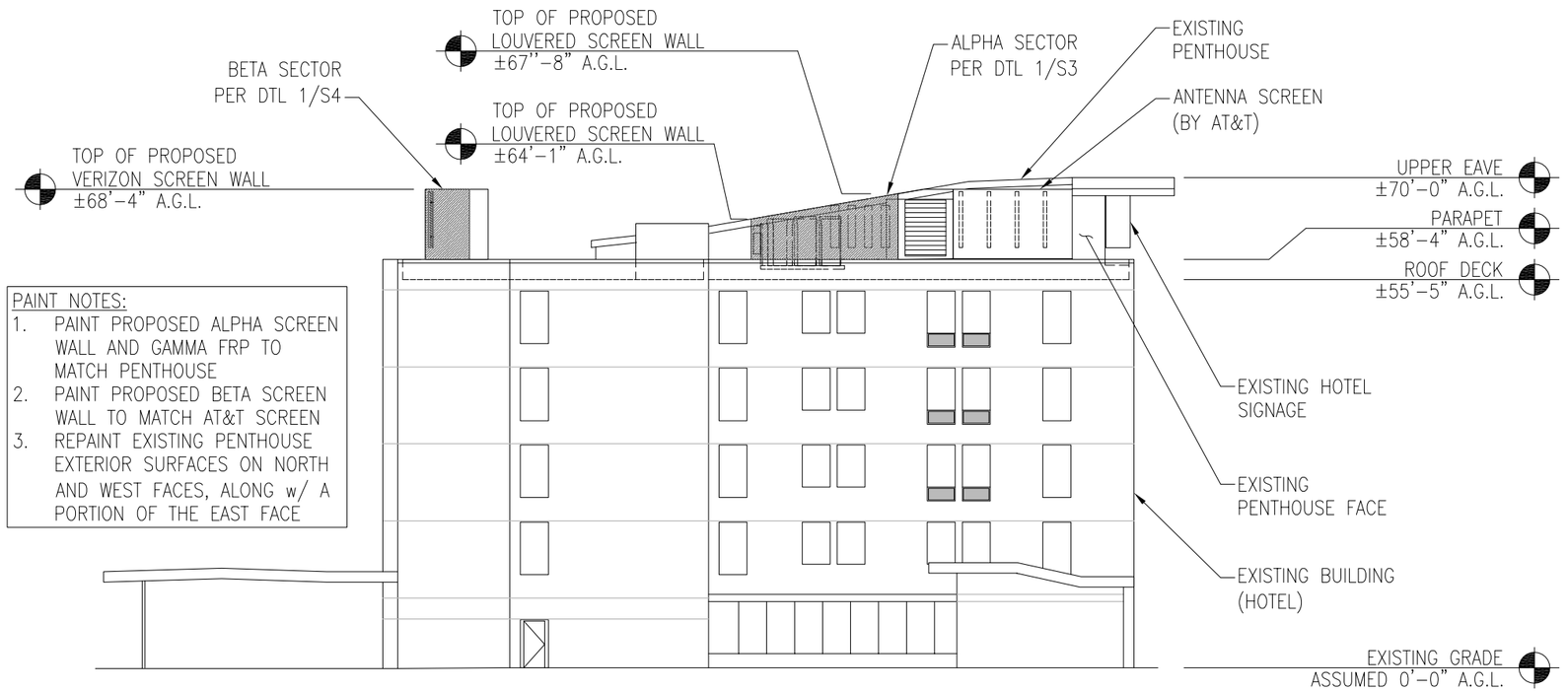
DATE: 5/6/16	DESIGNED: CMP	DRAFTER: DKF

REVISIONS

DATE	DESCRIPTION

U1133-196-161

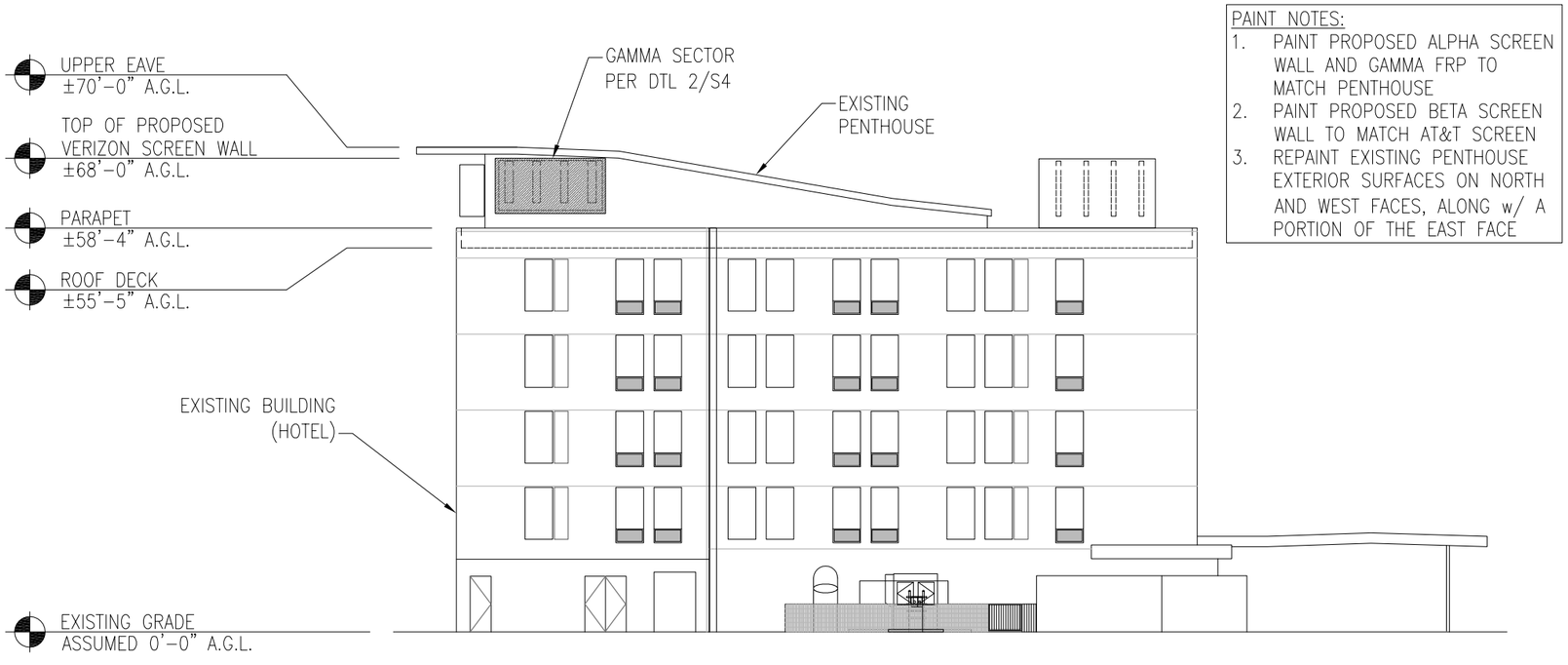
T1 REV 0



SOUTHEAST ELEVATION

N.T.S.

1



NORTHWEST ELEVATION

N.T.S.

2

GENERAL DESIGN NOTES

DESIGN NOTES AND MATERIAL REQUIREMENTS:

1. THE DESIGN CRITERIA FOR THIS STRUCTURE IS AS FOLLOWS:
   A. STANDARDS AND DESIGN CODES:
      BUILDING CODE: 2014 OREGON STRUCTURAL SPECIALTY CODE
      (INTERNATIONAL BUILDING CODE, 2012 EDITION)
   B. DESIGN:
      OCCUPANCY CATEGORY: II
      WIND:
      120 MPH (3-SECOND GUST)
      EXPOSURE: C
      IMPORTANCE FACTOR: 1.00
      SEISMIC:
      IMPORTANCE FACTOR: 1.00
      S_S = 0.967g S_1 = 0.400g
      SITE CLASS: D
      S_{DS} = 0.718g S_{D1} = 0.427g
      SEISMIC DESIGN CATEGORY: D
2. GENERAL STRUCTURAL NOTES:
   A. ALL MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:
      STEEL:

SCREWS:	SAE GR. 5 (OR EQUIVALENT)
BOLTS:ASTM A325	
STEEL SHAPES/PLATES:	ASTM A36
PIPES:	ASTM A53 GR. B (35 ksi)
SQUARE HSS:	ASTM A500 GR. B (46 ksi)

      FRP:
      PULTRUDED SHAPES & BOLTS: FIBERGRATE DYNAFORM LARR#25536. THE SUPPLY AND DESIGN OF THE FASTENERS CONNECTING THE BASE PLATES TO THE SUPPORTING STRUCTURE IS THE RESPONSIBILITY OF OTHERS.
      PANELS: FIBERGRATE PANEL OR EQUIVALENT

   B. VERIFICATION OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE REACTIONS SHOWN WITHIN THIS SET OF PLANS IS THE RESPONSIBILITY OF OTHERS.

GENERAL NOTES

1) CONTRACTOR SHALL FIELD VERIFY SITE OR LAYOUT RESTRICTIONS, SITE CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF STEELHEAD, INC. PRIOR TO BEGINNING PROJECT. ALL WORK SHALL BE PERFORMED USING ACCEPTED CONSTRUCTION PRACTICES.
2) NO FIELD MODIFICATIONS MAY BE MADE TO SCI FIBER CELL PANELS WITHOUT THE EXPRESS WRITTEN CONSENT FROM THE ENGINEER OF RECORD. STEELHEAD, INC. AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THE STRUCTURE IF ALTERATIONS AND/OR ADDITIONS ARE MADE TO THE DESIGN AS SHOWN IN THESE DRAWINGS.
3) THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
4) THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK TO THE BEST OF HIS/HER ABILITY AND SKILL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
5) THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING SAME, WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, FORMWORK, ETC., AND SHALL CONFORM TO ALL NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, IN ORDER TO SAFELY EXECUTE ALL STAGES OF WORK TO COMPLETE THIS PROJECT.
6) IT IS THE INTENT OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION OF THE STRUCTURE SHOWN.
7) CONTRACTOR ASSUMES RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THIS REQUIREMENT APPLIES CONTINUOUSLY, AND IS NOT LIMITED TO NORMAL WORKING HOURS.
8) CONTRACTOR TO HOLD ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
9) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN. THE CONTRACTOR IS FINANCIALLY RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK ON THIS PROJECT.
10) WEATHER PROOFING AND/OR FLASHING TO BE PROVIDED BY CONTRACTOR AS REQUIRED.

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ELEVATION VIEW AND NOTES

POR FLYOVER
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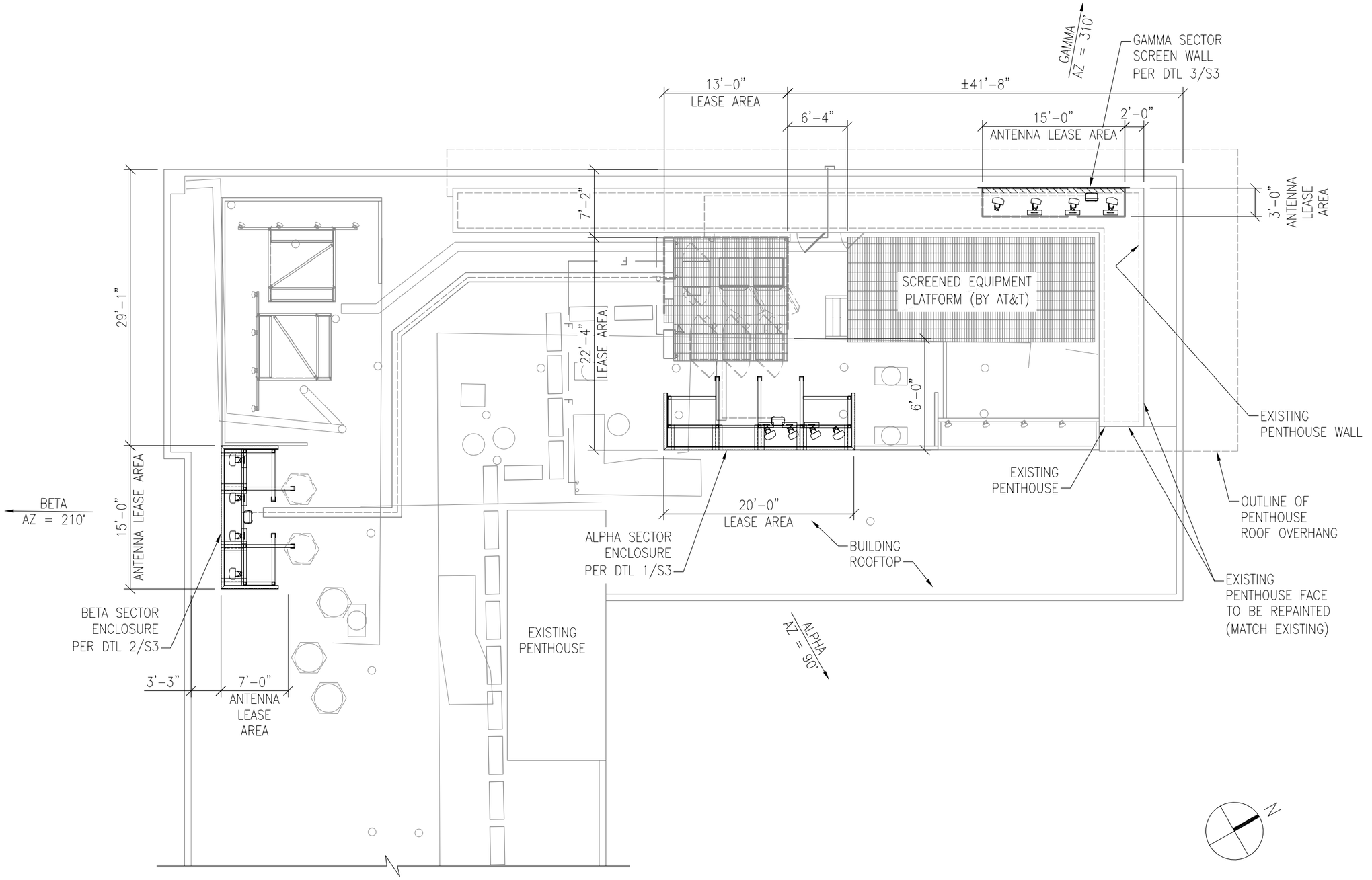
S1

REV 0



OVERALL PLAN VIEW

N.T.S.

1

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PLAN VIEWS

POR FLYOVER
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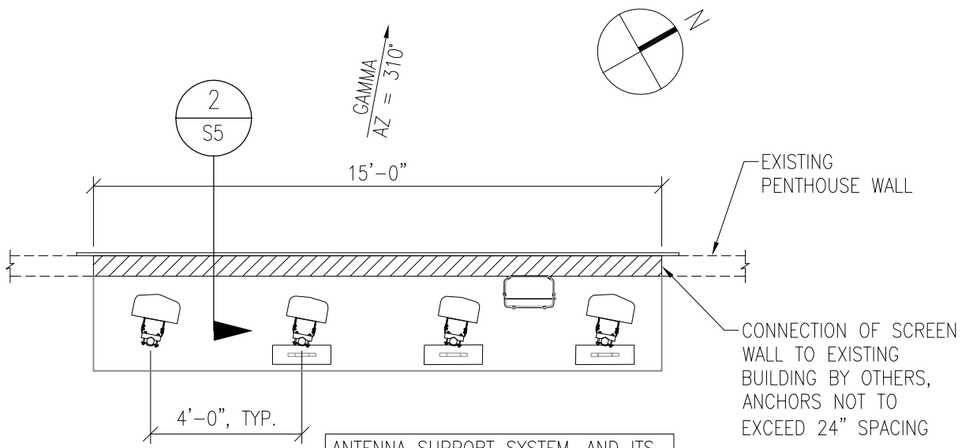
S2

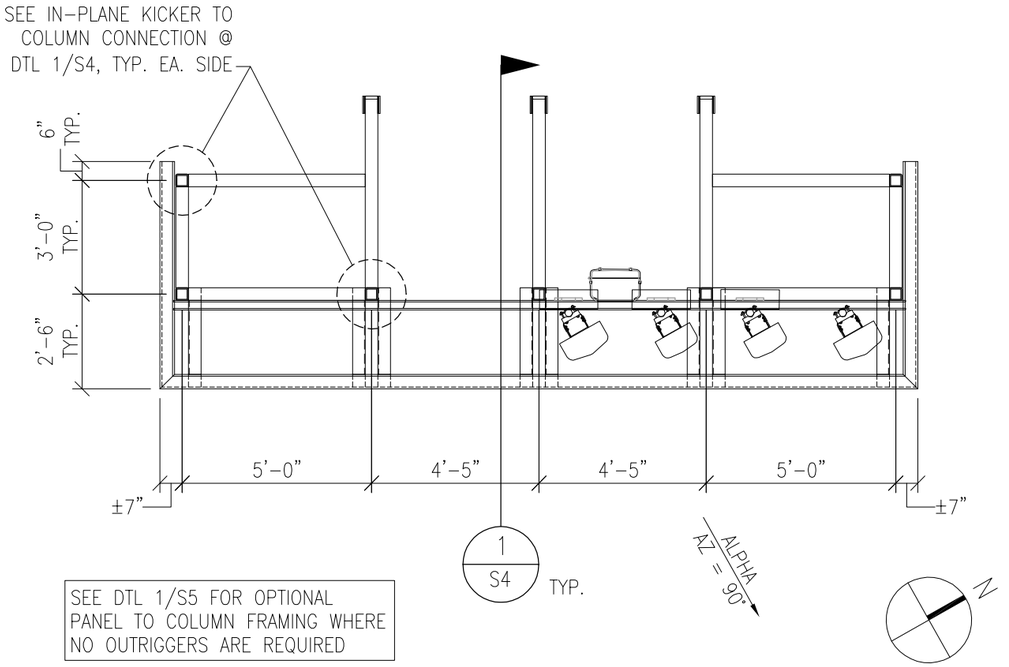
REV 0



ANTENNA LAYOUT – GAMMA

N.T.S.

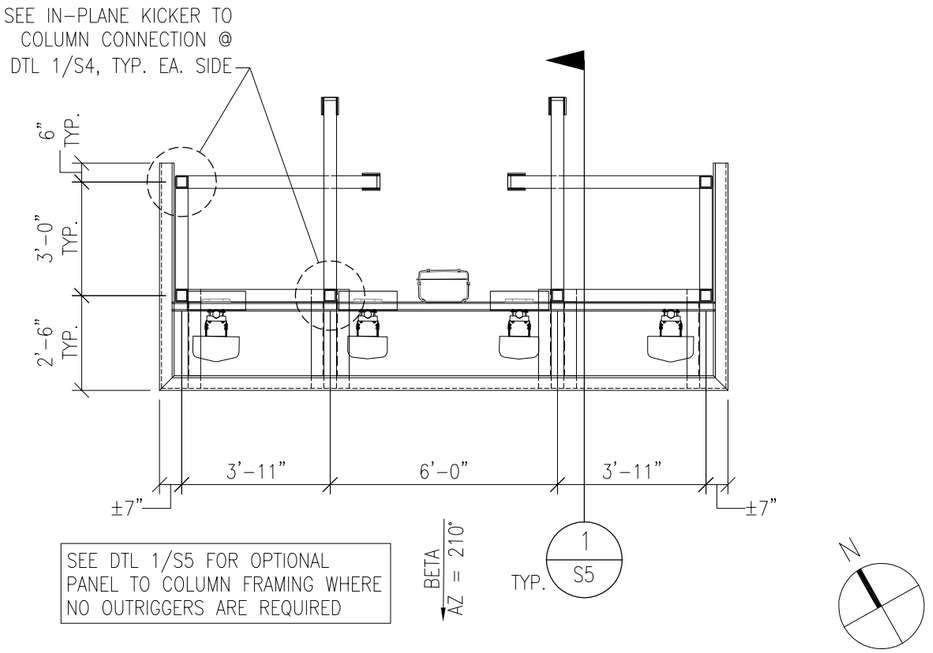
3



ANTENNA LAYOUT – ALPHA

N.T.S.

1



ANTENNA LAYOUT – BETA

N.T.S.

2

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ANTENNA LAYOUTS

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S3

REV 0

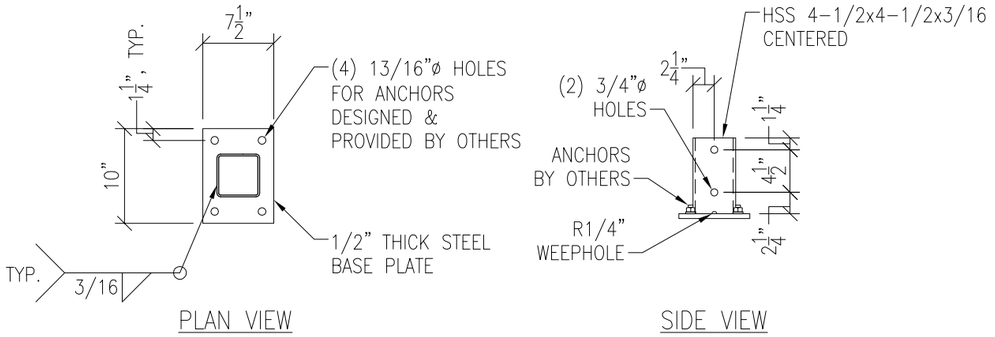
DESIGN REACTIONS (ASD):

R1 = ±1,650 LBS (1.0D+0.6W) V1 = 400 LBS (0.6W), ANY HORIZ. DIRECTION

R2 = ±1,750 LBS (1.0D+0.6W) V2 = 1,650 LBS (0.6W), ANY HORIZ. DIRECTION

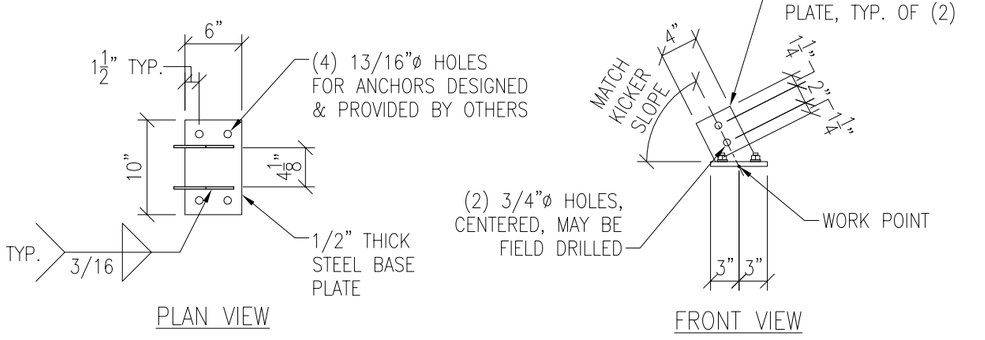
APPROXIMATE WEIGHT OF ENCLOSURE STRUCTURE (EXCLUDES ANTENNAS AND MOUNT FRAMES): 2300 LBS

THE DESIGN REACTIONS LISTED ABOVE ARE TYPICAL AT ALL COLUMN & KICKER CONNECTIONS TO THE BUILDING. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THE ADEQUACY OF THE BUILDING TO SUPPORT THE RFTRANSPARENT™ ENCLOSURES AND THE DESIGN REACTIONS LISTED ABOVE.



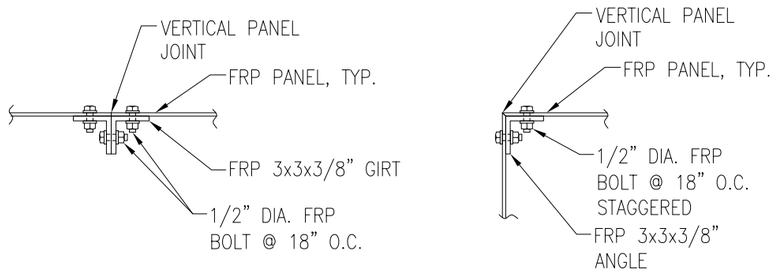
COLUMN BASE

N.T.S. (2)



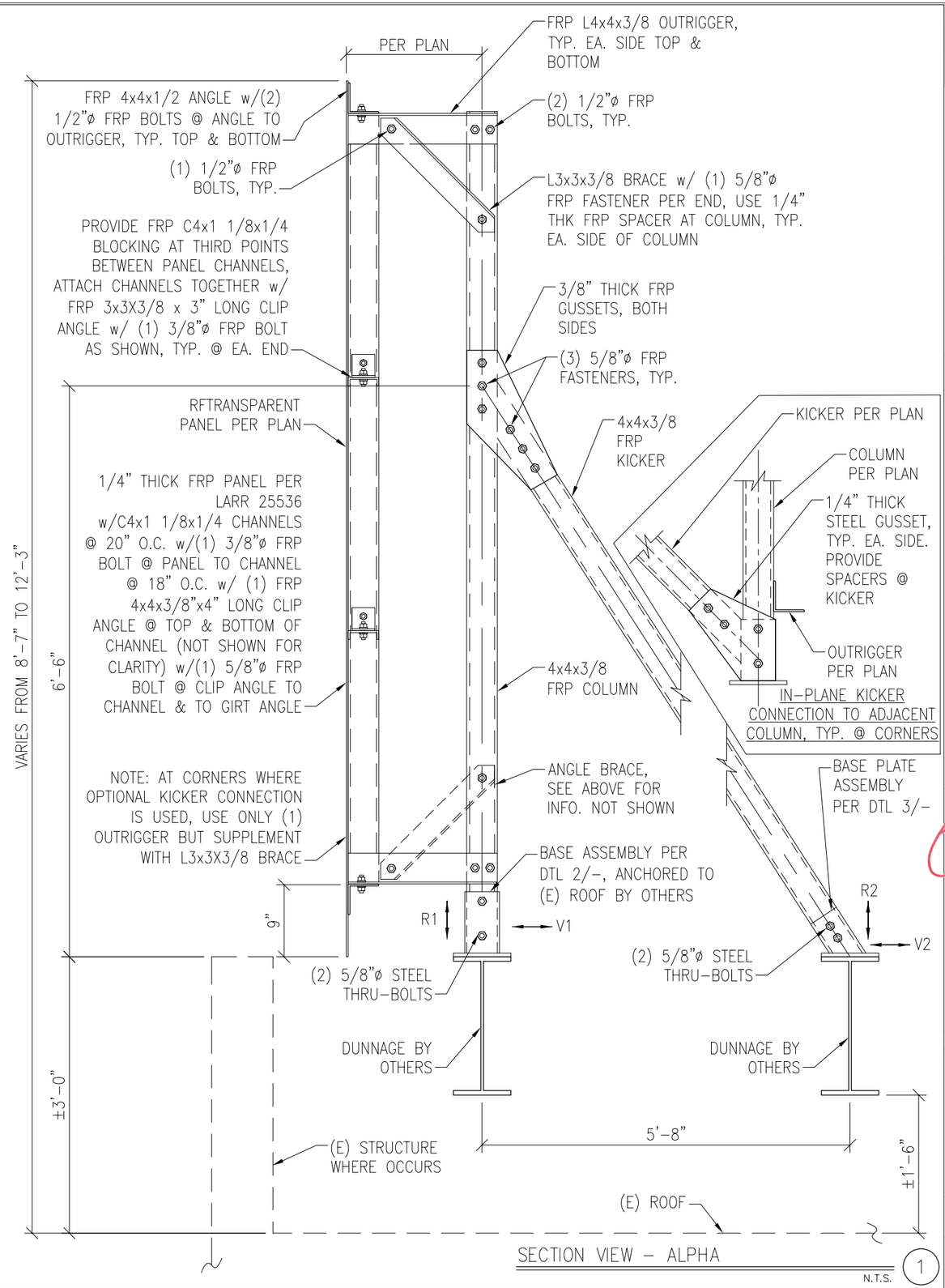
KICKER BASE

N.T.S. (3)



PANEL JOINTS

N.T.S. (4)



SECTION VIEW – ALPHA

N.T.S. (1)

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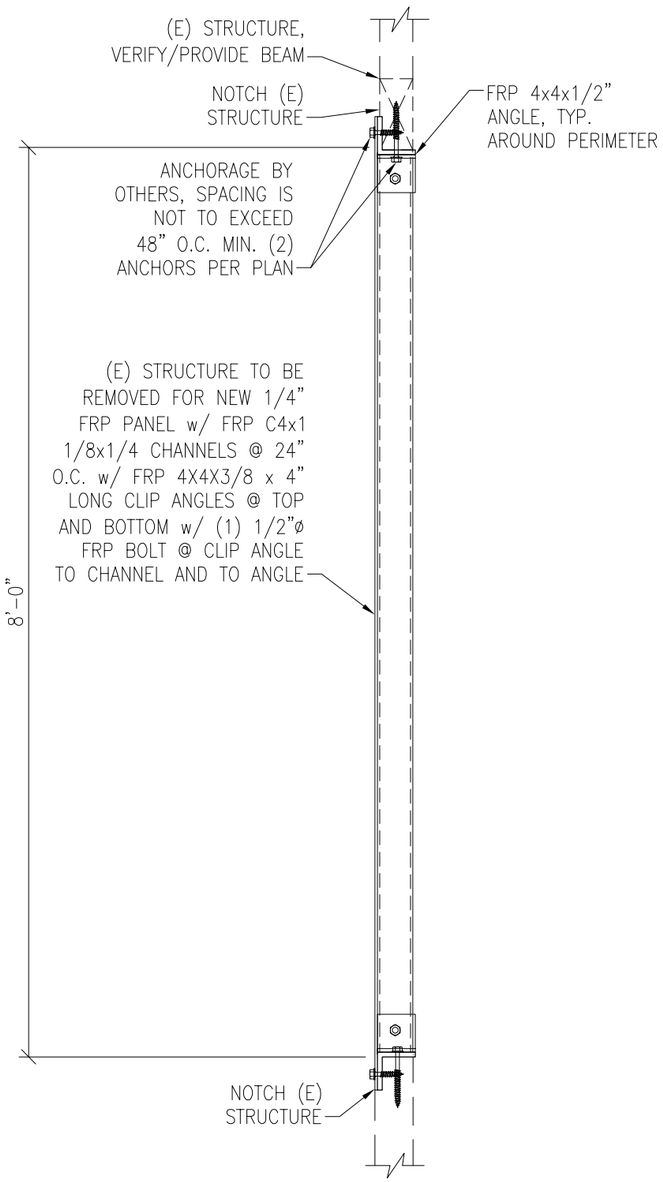
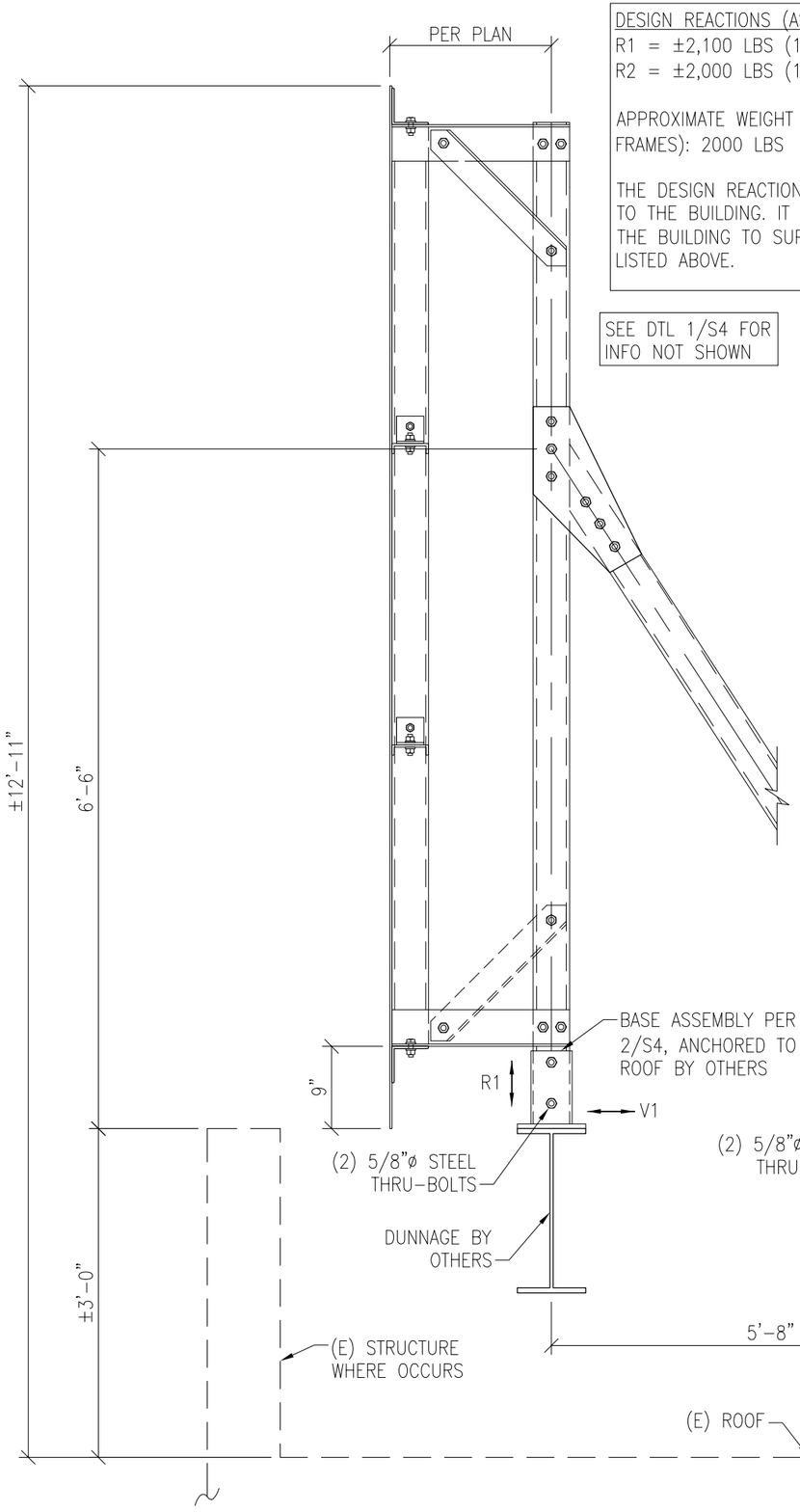
S4 REV 0

DESIGN REACTIONS (ASD):
WIND PRESSURE ON PANEL = 44.5 psf (0.6 WIND)
PANEL WEIGHT = 3 psf (1.0 DEAD)
APPROXIMATE SCREEN WEIGHT: 600 lbs

THE DESIGN REACTIONS LISTED ABOVE ARE TYPICAL AT ALL CONNECTIONS TO THE BUILDING. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THE ADEQUACY OF THE BUILDING TO SUPPORT THE RFTRANSPARENT™ ENCLOSURES AND THE DESIGN REACTIONS LISTED ABOVE.



SECTION VIEW – GAMMA
N.T.S.
2



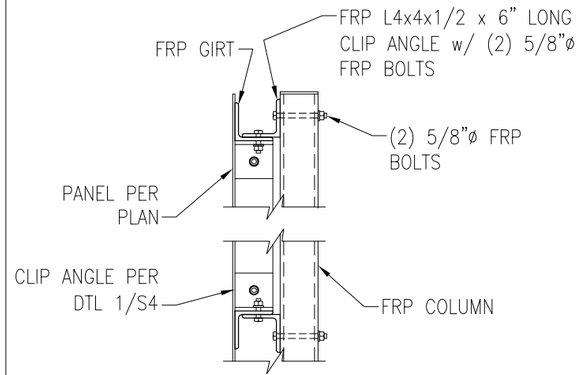
SECTION VIEW – BETA
N.T.S.
1

SEE DTL 1/S4 FOR INFO NOT SHOWN

DESIGN REACTIONS (ASD):
R1 = ±2,100 LBS (1.0D+0.6W)
R2 = ±2,000 LBS (1.0D+0.6W)
V1 = 350 LBS (0.6W), ANY HORIZ. DIRECTION
V2 = 1,900 LBS (0.6W), ANY HORIZ. DIRECTION

APPROXIMATE WEIGHT OF ENCLOSURE STRUCTURE (EXCLUDES ANTENNAS AND MOUNT FRAMES): 2000 LBS

THE DESIGN REACTIONS LISTED ABOVE ARE TYPICAL AT ALL COLUMN & KICKER CONNECTIONS TO THE BUILDING. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THE ADEQUACY OF THE BUILDING TO SUPPORT THE RFTRANSPARENT™ ENCLOSURES AND THE DESIGN REACTIONS LISTED ABOVE.



OPTIONAL PANEL COLUMN FRAMING WHERE NO OUTRIGGERS ARE REQUIRED

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REV 0