



## **CHEYENNE VAMC MRI SITE PREP**

Cheyenne, WY

Project # 442-DSI-400

#2086

**DATE: November 13, 2015**

### **ADDENDUM NO. 3**

The following becomes a part of the original Plans and Specifications, just as if printed and bound therein, and takes precedence over any items that may conflict. The bidder shall acknowledge receipt of this Addendum on his bid proposal form, incorporating its provisions in his bid.

#### **GENERAL INFORMATION:**

1. See Attached Narratives
  - a. Structural – Albertson Engineering, Inc. dated November 13, 2015
  - b. IT Connection – Cator Ruma dated November 13, 2015
  - c. Mechanical – FourFront Design, Inc. dated November 13, 2015
  - d. Electrical – See drawing AD1.01
  - f. Architectural – See drawing AD1.01

#### **CHANGES TO DRAWINGS:**

1. See Attached Drawings
  - a. FourFront Design, Inc. drawing AD1.01 (1 page)
  - b. FourFront Design, Inc. drawing E1.00 (1 page)

#### **CHANGES TO SPECIFICATIONS:**

1. Section 05 50 00 Metal Fabrications
  - a. Add attached for changes in railings to specification

#### **PRIOR APPROVALS:**

The following manufacturers/products are approved for bidding on this project subject to all requirements of the Plans and Specifications. Final acceptance is contingent upon receipt and approval of final shop drawings from the successful bidder.

#### **SECTION : 08 5113**

1. Paragraph 2.1A – Manko Windows 4527i Series is acceptable equal.
2. Paragraph 2.3A – Manko Windows 2450 Series is acceptable equal.
3. Paragraph 2.5A – Manko Windows 135H Series is acceptable equal.

**END OF ADDENDUM NO. 3**



**Albertson Engineering Inc.**

ADDENDUM No. 3 - STRUCTURAL ITEMS

PROJECT: Cheyenne VAMC MRI Site Prep  
AEI #2013-253

DATE: November 13, 2015

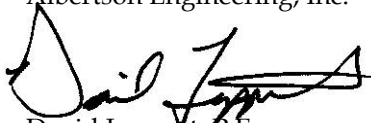
REMARKS:

Please note the following structural addendum items for Addendum No. 3 as follows:

Sheet S1.01 - Roof Framing Plan:

1. Change/Add: Provide for a mechanical roof top unit in the northeast corner of the building as shown on the attached partial plan. Change steel joists to KCS series joists directly below unit. Provide an HSS3x3x1/4 with 7"x3/16" bottom plate (centered on HSS) on all sides of the unit. The north and south HSS curbs shall extend to bear atop bar joists each side of unit. Start/stop decking on each side of HSS curb.

Sincerely,  
Albertson Engineering, Inc.



David Leppert, P.E.

Cc: File

**Albertson Engineering Inc.**

3202 W. Main, Suite C

Rapid City, SD 57702

605-343-9606

605-341-7395 fax



November 13, 2015

There shall be a minimum of (3) 4" conduits stubbed from the new Telecom Room in the MRI building underground and routed to the exterior of the existing building dedicated for Telecommunications backbone cabling. The conduits shall be PVC Schedule 40 and have a mule tape installed in each one. The conduits shall be buried a minimum of 36" below grade with a red warning tape installed a minimum of 12" above the conduits. Once the conduits reaches the exterior of the existing building, they shall run upward along the exterior of the building, turn into the building and penetrate the wall near the existing Telecom Room. Once the conduits enter the building, they shall run to the nearest Telecom Room and stub through wall to existing ladder rack. Provide a pullbox along the conduit run between two 90 degree bends and L-Bends or condulets are not acceptable. The exact locations for the pullboxes have yet to be determined.

One 12 strand multimode and one 6 strand singlemode fiber cable shall be provided in one of the conduits between the two Telecom Rooms terminated on LC style adapter plates mounted in a rack mounted 1U fiber enclosure. The exact locations inside the racks at either end have yet to be determined. The fiber cables shall be indoor/outdoor rated with an armored jacket. Additionally, a 25 pair Cat 3 copper backbone cable shall be provided in a second conduit. The cable shall be outdoor rated and be terminated on a wall mounted lighting protection block at both ends and then cross connected to a wall mounted 100 pair 110 block. The exact location of the protection and 110 blocks has yet to be determined. The third conduit shall be left as a spare for future use. All cabling shall be tested using ANSI/TIA/EIA standards and the test results shall be provided to the VA at project completion as part of the O&M manual. All cables shall be labeled with permeant, typed labels at both ends and the termination points. The contractor shall verify the exact labeling scheme with the VA.

**Matthew Morroni, RCDD**  
**Information Technology Systems Engineer**



**Cator, Ruma & Associates, Co.**  
**Colorado | Wyoming**  
896 Tabor Street, Lakewood, CO 80401  
**P** (303) 232-6200  
**D** (303) 462-8879  
**C** (303) 565-7157  
[www.catorruma.com](http://www.catorruma.com)

## Divisions 22 and 23

General Description: UPS Room A1-321B will be added. Dressing Room A1-321 will be moved west. This will require the plumbing fixtures, diffusers and exhaust grille to be located west of their current location. New exhaust fan and rooftop unit will be added to serve the new UPS room. Boiler and water piping capacity will increase as required to serve rooftop hot water heating coil.

### Division 22:

#### Sheet M2.01:

1- Domestic Waste and Vent: Building drain branch and vent branch run north and south serving PF-1, PF-3 and PF-7 will move west. Fixtures will be relocated as shown on architectural sketch. Pipe sizing and general routing will remain as shown on original drawing.

#### 2- Domestic Water Plan:

- Cold, Hot and Recirculation branch run north and south serving PF-1, PF-3 and PF-7 will move west. Fixtures will be relocated as shown on architectural sketch. Pipe sizing and general routing will remain as shown on original drawing. ½" supply line to MRI trailer location will remain as originally shown.
- Provide ¾" cold water line and ¾" reduced pressure zone backflow preventer with isolation valve for connection to B-1.

### Division 23:

#### Sheet M1.01:

#### 1-HVAC Plan:

- Delete branch ductwork to S-1 80 CFM diffuser serving Holding Room A1-320. Move 6" branch ductwork and S-1 100 CFM diffuser to serve Holding Room A1-320.
- Move 8/8 exhaust branch duct to route north on west side of Storage A1-322. Move E-1 50 CFM exhaust grille serving Storage A1-322 near the south wall. Delete two (2) 8/8 fire dampers and add one 6/6 fire damper in branch duct serving Storage A1-322. Move E-1 60 CFM exhaust grille serving Dressing A1-321 to the room's new location. Add branch ductwork as required to route south of skylight in Corr A1-319 and north to its new location. Move branch ductwork and takeoff west as required to serve Dressing A1-321 in its new location.
- Add horizontal 3000 cfm 8-1/2 Ton packaged electric cooling rooftop unit with hot water heating coil, economizer and barometric relief damper on the roof. The unit will sit 14'5" from East Wall and 5' from North Wall. 22" X 22" (internal dimension) exterior ductwork with 4" insulation and UV compatible PVC or aluminum jacket will run exposed and serve the UPS room through one (1) high double deflection supply grille and one (1) low louvered return grille.

- 500 CFM 1/20 HP upblast exhaust fan with extended curb will be mounted on the roof in the center of UPS A1-321B. Ductwork shall include motorized damper with 2" drip pan and will terminate as close as possible to the roof deck allowing enough room for the motorized damper. Provide insect screen all round and 2" water tight pan 2" larger than drop mounted 12" below exhaust duct.
- Provide 24" X 24" extruded aluminum louver with drainable blades, equivalent to Greenheck model ESD-365, on the east wall with insulated thermally broken motorized damper, insulated sheet metal plenum, and differential static pressure sensors.

## 2-HVAC Piping Plan:

- Boiler B-1 in M/E A1-308 capacity will increase. Provide expansion tank, 1-1/4" automatic air valve, provide pressure reducing valve and connection for manual heating water fill. Provide dual check and fill valve for manual fill of glycol downstream of backflow preventer.
- Provide wall brackets for expansion tank.
- HWP-1 & HWP-2 will increase in flow. This will required different pump model.
- Hot water heating main piping shall be increased to 1-1/4" up to and serving VAV-1.
- Hot water heating main piping past VAV-1 shall be increased to 1" and extended to the new rooftop unit.
- Provide autoflow balancing valve and 3 way control valve on rooftop unit.
- Provide a two way control valve on VAV-5 in lieu of 3 way valve originally specified.

## Sheet M4.01:

- Boiler Schedule: Boiler will increase to 60-212 MBH input, 55-194 MBH output boiler at 14.5 GPM, Max Pressure Drop 16 feet. Provide boiler equal to VITODENS 200-W model WB2B-60, other manufactures meeting efficiency, capacity and material quality will be accepted, see specifications. Provide Amtrol expansion tank AX-a5(V) or approved equal. Horizontal tank, tank volume 8.0 gallons, 2.4 Gallon acceptance.
- Pump Schedule: Change HWP-1 to B&G inline Ecocirc XL 55-45 High Head, 14.5 GPM @ 47 Ft with integral BACnet controller and variable speed drive.
- Add rooftop unit schedule: (See schedule attached)
- Exhaust Fan Schedule: Add EF-2, Greenheck Model CUE-085-D Upblast Centrifugal Roof Exhaust fan, 500 CFM, 0.125" SP, 1/20 HP, 1550 RPM, 120 V/1Ph/60 Hz. Provide 36" extended curb and motorized damper.

## Sheet M5.02

### Sequence of operation for RTU-1 (new rooftop unit):

EF-2 and RTU-1 shall run continuously. RTU-1 and EF-2 shall be interlocked. In the event either fan fails a critical alarm shall be sentTo the BMS.

RTU-1 shall continually monitor the UPS room and modulate heating and cooling as required to maintain setpoint. In the event the space is above or below room driftpoint a critical alarm shall be sent to the BMS. If the enthalpy sensor senses that the enthalpy of the outside air is less than return air enthalpy, the compressors shall be locked out and outside air damper shall modulate as required to satisfy space setpoint.

Motorized damper on wall louver shall open when a pressure differential between the UPS room and the corridor exceeds  $-0.02''$  SP (Adjustable).

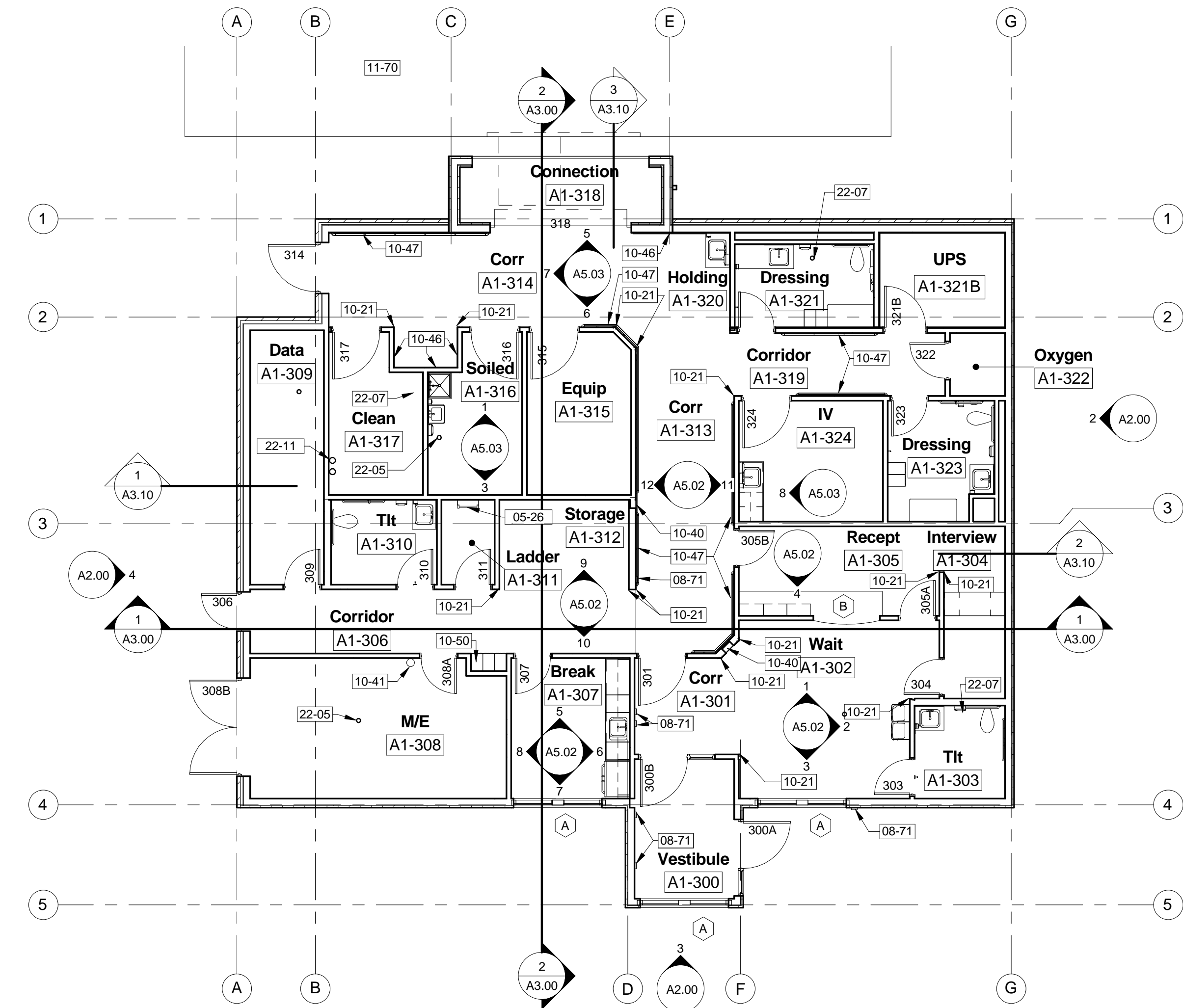
| ROOFTOP UNIT SCHEDULE |       |        |           |        |        |      |            |      |      |         |           |       |          |         |
|-----------------------|-------|--------|-----------|--------|--------|------|------------|------|------|---------|-----------|-------|----------|---------|
| TAG                   | MFG   | MODEL  | NOM. CAP. | VOLUME | ESP    | HP   | ELECTRICAL |      |      | COOLING |           |       |          |         |
|                       |       |        | TONS      | CFM    | IN H2O |      | V/PH/Hz    | MCA  | MFS  | EAT     | LAT DB/WB | TOTAL | SENSIBLE | EER     |
|                       |       |        |           |        |        |      |            | AMPS | AMPS | DB/WB   | DB/WB     | MBH   | MBH      | AT AHRI |
| RTU-1                 | TRANE | THC102 | 8.5       | 3000   | 0.375  | 0.67 | 460/3/60   | 21.6 | 25   | 86/69.5 | 62.8/60.2 | 93.55 | 61.46    | 12.5    |

| HEATING     |    |     |        |     |     |         |        |           |
|-------------|----|-----|--------|-----|-----|---------|--------|-----------|
| MEDIUM      | %  | GPM | SP     | EAT | LAT | TOT CAP | WIEGHT |           |
|             |    |     | FT H2O | DB  | DB  | MBH     | LBS    | OPTIONS   |
| POLYPROLYNE | 30 | 5.5 | < 10   | 50  | 75  | 82500   | 1220   | 1,2,3,4,5 |

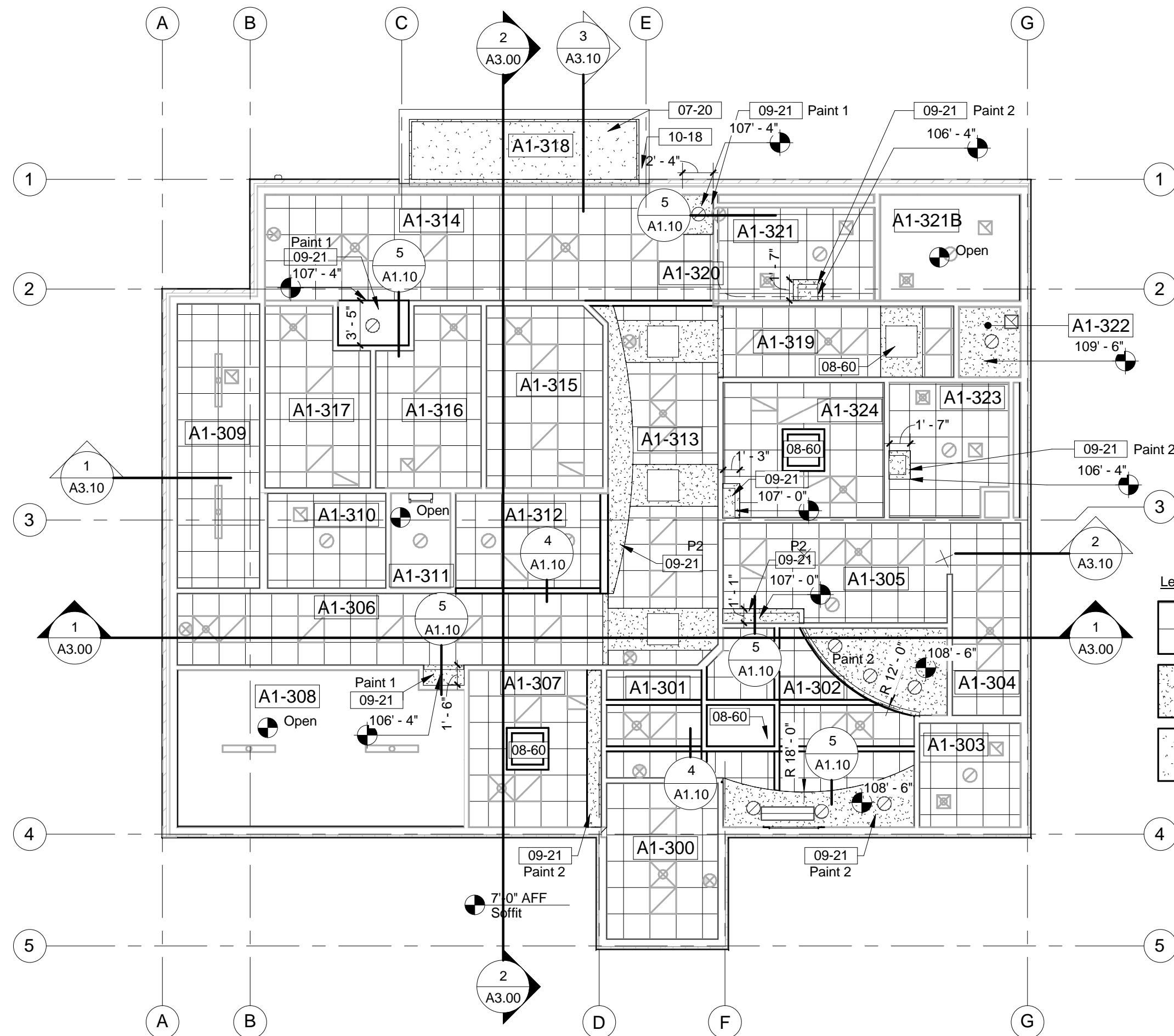
1. DIFFERENTIAL ENTHALPY ECONOMIZER
2. BARAMETRIC RELIEF DAMPER
3. 16" ROOF CURB
4. HORIZONTAL CONFIGURATION
5. HOT WATER HEATING COIL MFG SPECIAL OPTION CONSULT FACTORY
- NOTE: OTHER MANUFACTURES MEETING EFFICIENCY AND MATERIAL QUALITY REQUIREMENTS WILL BE ACCEPTED



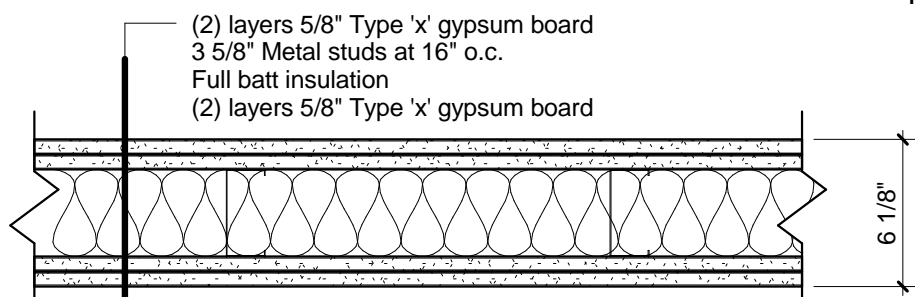
11/13/2015 12:54:43 PM  
one eighth inch = one foot  
one quarter inch = one foot  
one half inch = one foot  
one inch = one foot  
three inches = one foot



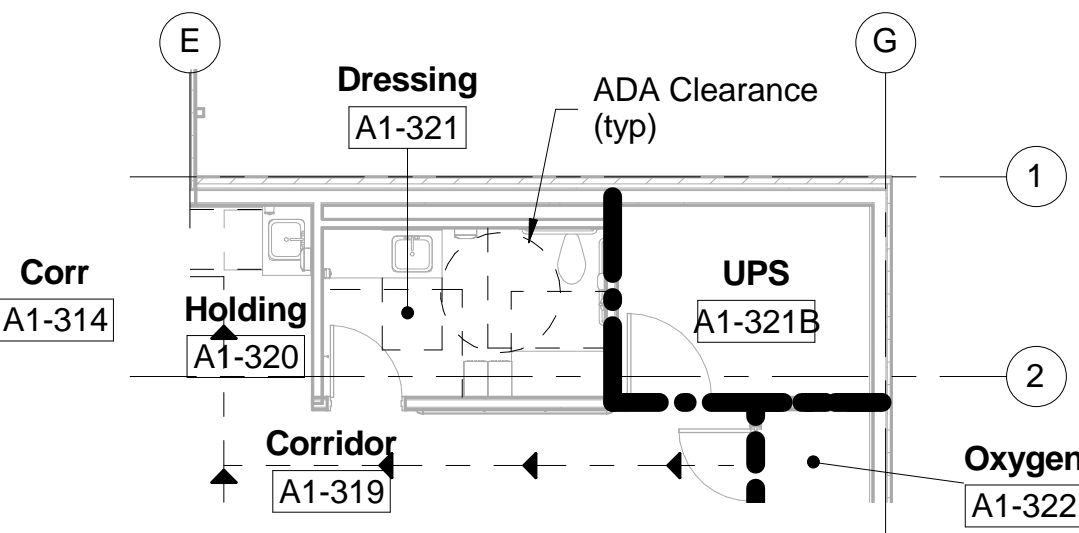
2 Floor Plan  
1/8" = 1'-0"



3 Reflected Ceiling Plan  
1/8" = 1'-0"



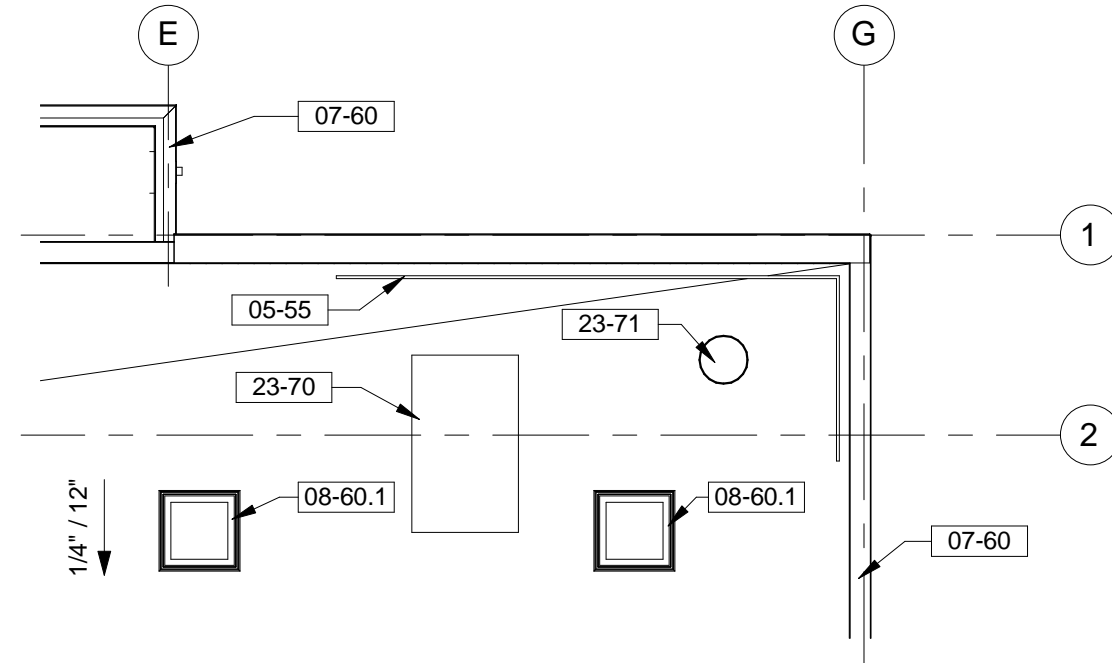
M3D 2 Hour Fire Wall - Metal studs and gypsum board extend to roof structure



5 Code Plan  
1/8" = 1'-0"

#### Code Plan Legend:

|                           |     |
|---------------------------|-----|
| Path of travel            | --- |
| 1-HR separation required  | --- |
| 2-HR fire wall required   | --- |
| Fire extinguisher         | FE  |
| Fire extinguisher cabinet | FEC |



4 Roof Plan  
1/8" = 1'-0"

#### Keynotes:

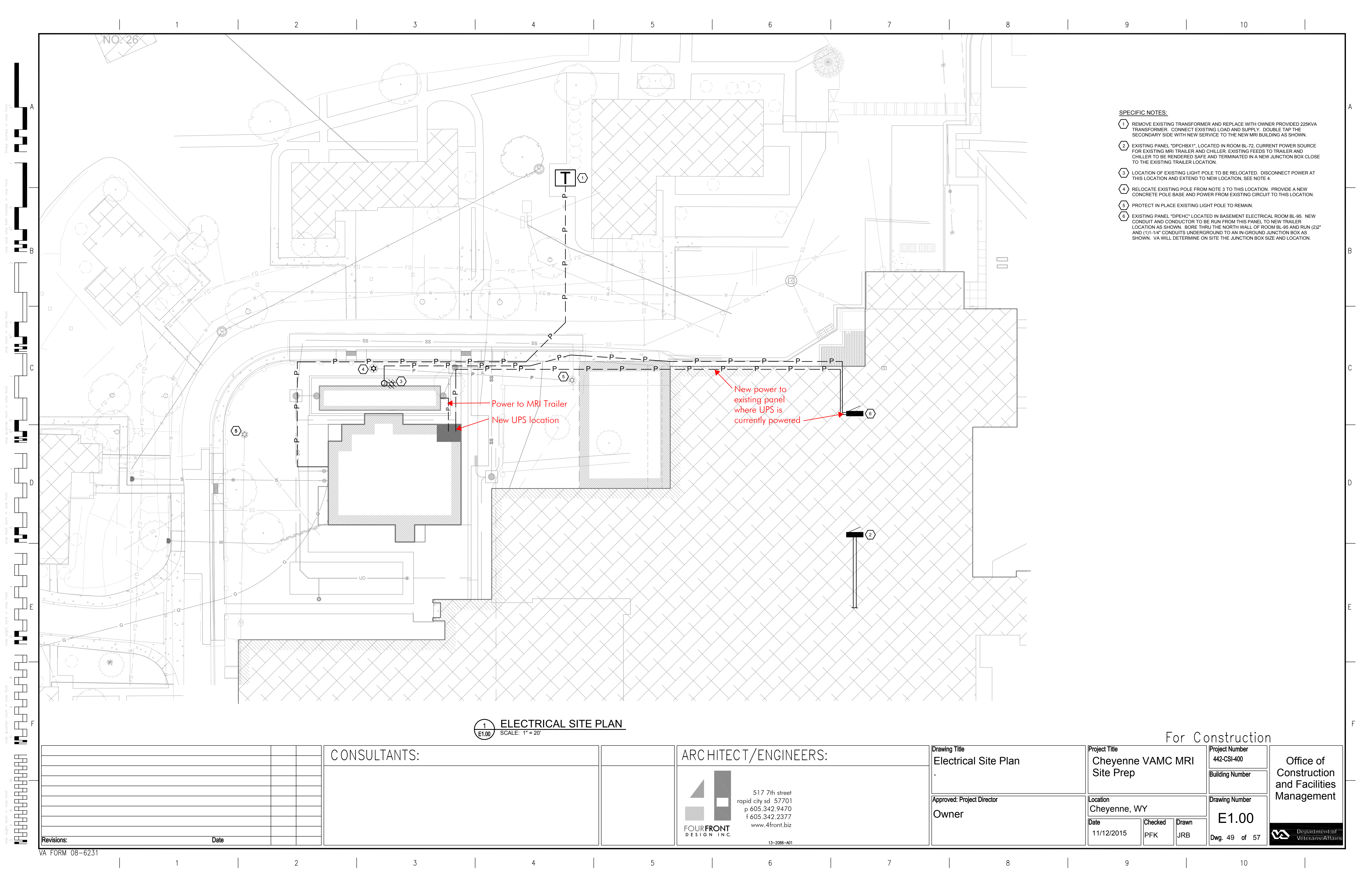
|         |   |
|---------|---|
| 05-26   | Roof access ladder - paint  |
| 05-55   | 1 1/2" Pipe guardrail paint   |
| 07-20   | Exterior insulation and finish system (EIFS)                              |
| 07-60   | Prefinished metal parapet cap   |
| 07-72   | Roof hatch  |
| 08-60   | Unit skylight 37"x37", verify size with manufacturer.                     |
| 08-60.1 | Unit skylight 46"x70", verify size with manufacturer.                     |
| 08-60.2 | Door operator   |
| 08-71   | Gypsum board soffit, paint  |
| 09-21   | Privacy curtain and track   |
| 10-18   | Corner guard  |
| 10-21   | 36" Grab bar  |
| 10-24   | Mirror  |
| 10-26   | Recessed/semi recessed mounted toilet paper dispenser                     |
| 10-27   | Paper towel dispenser, Provided by VA, Installed by contractor            |
| 10-29   | Recessed/ semi recessed feminine napkin disposal                          |
| 10-34   | Robe hook   |
| 10-35   | Soap dispenser, Provided by VA, Installed by contractor                   |
| 10-37   | Fire extinguisher cabinet   |
| 10-40   | Fire extinguisher bracket   |
| 10-41   | Crashrail   |
| 10-46   | Handrail & crashrail  |
| 10-47   | Lockers   |
| 10-50   | ADA bench   |
| 10-52   | MRI trailer, provided and moved by owner (Ref. Mechanical and Electrical) |
| 11-70   | Solid Surface countertop, integral sink, back/side splash and apron, typ. |
| 12-33   | Solid Surface countertop, back/side splash and apron, SS sink by mech.    |
| 12-41   | Floor drain (Ref. Mechanical)   |
| 22-05   | Clean out (Ref. Mechanical)   |
| 22-07   | Roof drain (Ref. Mechanical)  |
| 22-11   | Roof drain and overflow drain (Ref. Mechanical)                           |
| 22-12   | Air handling unit (Ref. Mechanical)                                       |
| 23-70   | Exhaust fan unit (Ref. Mechanical)  |
| 23-71   |   |

#### Addendum #3 Notes:

- Add UPS room A1-321B to floor plan as shown, moving Dressing A1-321 and Holding A1-320 over to allow space for the UPS room.
- Adjust ceilings per new floor plan. UPS room A1-321B to be open to structure.
- UPS Room to be concrete floor, rubber base and walls to be paint 4.
- Add door 321B, 3'-6"x7'-0", 2 hour rated, panel WD-F, frame HM-001, hardware HW-2.
- Add 1 1/2" pipe guardrail 42" high on North and East sides of the roof as shown on the roof plan. Guardrail to be mounted to the roof, 6" inside the parapet wall. Color to be selected by architect.
- Provide (3) AC outlets, (1) Data outlet in UPS room A1-321B.
- Provide (2) explosion proof chain hung T5 lights in UPS room A1-321B.
- UPS to connect to existing panel/circuit.
- Provide new feeders to UPS.
- UPS to remain in existing location and operational until new building is complete.
- Relocation of UPS to be coordinated with VA staff.
- Electrical contractor to provide connection to new air handling unit.

#### Addendum No. 3

|              |  |  |  |   |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
|--------------|--|--|--|---|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|
| CONSULTANTS: |  |  |  | ARCHITECT/ENGINEERS:  |  |  |  | Drawing Title<br>Floor Plan, Reflected Ceiling Plan and Roof Plan |  |  |  | Project Title<br>Cheyenne VAMC MRI Site Prep |  |  |  | Office of Construction and Facilities Management |  |  |  |
| Revisions:   |  |  |  | 517 7th street<br>rapid city sd 57701<br>p 605.342.9470<br>f 605.342.2377<br>www.4front.biz |  |  |  | Approved: Project Director  |  |  |  | Location<br>Cheyenne, WY                     |  |  |  | Drawing Number<br>AD1.01                         |  |  |  |
| Date         |  |  |  | FOURFRONT DESIGN INC.   |  |  |  | Owner   |  |  |  | Date<br>11/13/2015                           |  |  |  | Dwg. of  |  |  |  |
|              |  |  |  |   |  |  |  |   |  |  |  | Checked<br>Checker                           |  |  |  | Department of Veterans Affairs                   |  |  |  |
|              |  |  |  |   |  |  |  |   |  |  |  | Drawn<br>Author                              |  |  |  |  |  |  |  |



- SPECIFIC NOTES:**
- 1 REMOVE EXISTING TRANSFORMER AND REPLACE WITH OWNER PROVIDED 225KVA TRANSFORMER. CONNECT EXISTING LOAD AND SUPPLY. DOUBLE TAP THE SECONDARY SIDE WITH NEW SERVICE TO THE NEW MRI BUILDING AS SHOWN.
  - 2 EXISTING PANEL "DPCHBX1", LOCATED IN ROOM BL-72, CURRENT POWER SOURCE FOR EXISTING MRI TRAILER AND CHILLER. EXISTING FEEDS TO TRAILER AND CHILLER TO BE RENDERED SAFE AND TERMINATED IN A NEW JUNCTION BOX CLOSE TO THE EXISTING TRAILER LOCATION.
  - 3 LOCATION OF EXISTING LIGHT POLE TO BE RELOCATED. DISCONNECT POWER AT THIS LOCATION AND EXTEND TO NEW LOCATION, SEE NOTE 4.
  - 4 RELOCATE EXISTING POLE FROM NOTE 3 TO THIS LOCATION. PROVIDE A NEW CONCRETE POLE BASE AND POWER FROM EXISTING CIRCUIT TO THIS LOCATION.
  - 5 PROTECT IN PLACE EXISTING LIGHT POLE TO REMAIN.
  - 6 EXISTING PANEL "DPEHC" LOCATED IN BASEMENT ELECTRICAL ROOM BL-95. NEW CONDUIT AND CONDUCTOR TO BE RUN FROM THIS PANEL TO NEW TRAILER LOCATION AS SHOWN. BORE THRU THE NORTH WALL OF ROOM BL-95 AND RUN (2)2" AND (1)1-1/4" CONDUITS UNDERGROUND TO AN IN-GROUND JUNCTION BOX AS SHOWN. VA WILL DETERMINE ON SITE THE JUNCTION BOX SIZE AND LOCATION.

**1 ELECTRICAL SITE PLAN**  
SCALE: 1" = 20'

CONSULTANTS:

ARCHITECT/ENGINEERS:



Drawing Title  
Electrical Site Plan

Approved: Project Director

Owner

Project Title  
Cheyenne VAMC MRI  
Site Prep

Location  
Cheyenne, WY

Date  
11/12/2015

Checked  
PFK

Drawn  
JRB

Project Number  
442-CSI-400

Building Number

Drawing Number

E1.00

Dwg. 49 of 57

Office of  
Construction and Facilities  
Management



**SECTION 05 50 00  
METAL FABRICATIONS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies items and assemblies fabricated from structural steel shapes and other materials as shown and specified.
- B. Items specified.
  - 1. Railings:

**1.2 RELATED WORK**

- A. Railings attached to Metal Roof Decking: Section 05 31 00, STEEL DECK.
- B. Colors, finishes, and textures: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Prime and finish painting: Section 09 91 00, PAINTING.

**1.3 QUALITY ASSURANCE**

- A. Each manufactured product shall meet, as a minimum, the requirements specified, and shall be a standard commercial product of a manufacturer regularly presently manufacturing items of type specified.
- B. Each product type shall be the same and be made by the same manufacturer.
- C. Assembled product to the greatest extent possible before delivery to the site.
- D. Include additional features, which are not specifically prohibited by this specification, but which are a part of the manufacturer's standard

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Structural Steel: ASTM A36.
- B. Steel Pipe: ASTM A53.
  - 1. Galvanized for exterior locations.
  - 2. Type S, Grade A unless specified otherwise.
  - 3. NPS (inside diameter) as shown.
- C. Primer Paint: As specified in Section 09 91 00, PAINTING.
- D. Finish:
  - 1. Steel and Iron: NAAMM AMP 504.
    - a. Zinc coated (Galvanized): ASTM A123, G90 unless noted otherwise.
    - b. Surfaces exposed in the finished work:
      - 1) Finish smooth rough surfaces and remove projections.
      - 2) Fill holes, dents and similar voids and depressions with epoxy type patching compound.

## **2.2 RAILINGS**

- A. In addition to the dead load design railing assembly to support live load specified.
- B. Fabrication General:
  - 1. Provide continuous welded joints, dressed smooth and flush.
  - 2. Standard flush fittings, designed to be welded, may be used.
  - 3. Exposed threads will not be approved.
  - 4. Form handrail brackets to size and design shown.
  - 5. Exterior Post Anchors.
    - a. Fabricate tube or pipe sleeves with closed ends or plates as shown.
    - b. Where inserts interfere with reinforcing bars, provide flanged fittings welded or threaded to posts for securing to concrete with expansion bolts.
    - c. Provide heavy pattern sliding flange base plate with set screws at base of pipe or tube posts.
- C. Steel Pipe Railings:
  - 1. Fabricate of steel pipe with welded joints.
  - 2. Number and space of rails as shown.
  - 3. Space posts for railings not over 1800 mm (6 feet) on centers between end posts.
  - 4. Form handrail brackets from malleable iron.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION OF SUPPORTS**

- A. Anchorage to structure.
  - 1. Secure angles or channels and clips to overhead structural steel by continuous welding unless bolting is shown.
  - 2. Secure supports to concrete inserts by bolting or continuous welding as shown.
  - 3. Secure supports to mid height of concrete beams when inserts do not exist with expansion bolts and to slabs, with expansion bolts unless shown otherwise.
  - 4. Secure steel plate or hat channels to studs as detailed.

### **3.2 RAILINGS**

- A. Handrails:
  - 1. Anchor brackets for metal handrails as detailed.

2. Install brackets within 300 mm (12 inches) of return of walls, and at evenly spaced intermediate points not exceeding 1200 mm (4 feet) on centers unless shown otherwise.
3. Expansion bolt to concrete or solid masonry.
4. Toggle bolt to installed supporting frame wall and to hollow masonry unless shown otherwise.

- - - E N D - - -