

**Part 1 General**

**1.1 ADDENDUM FORM**

- .1 This Addendum forms part of the Contract Documents and modifies the Bidding Documents dated August 20, 2018, with amendments and additions noted below.
- .2 Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder at the Owner's discretion.
- .3 This addendum consists of six (6) pages plus the following list of attached drawings:

No.	Drawing Title	Issue Date
R1	Detail 1/R1 Revised Phasing Plan	23 October 2018
RA1	Demo and New Construction Floor Plan, Elevations	23 October 2018
R2	Room 151 Details	23 October 2018
M2R1	New Construction Plan, Notes and Detail	22 October 2018
M3R1	Mechanical Schedules	22 October 2018
E2R1A	New Main Floor Power Plan	22 October 2018
E2R1B	New Partial Roof Power Plan	22 October 2018
E3R1A	Crawlspace Fire Alarm Systems Plan	22 October 2018
E3R1B	New Attic Space Fire Alarm Systems Plan	22 October 2018
E4R1	New Main Floor Fire Alarm Systems Plan	22 October 2018
E5R1A	Mechanical Equipment Schedule	22 October 2018
E5R1B	New Panelboard Directory "J"	22 October 2018
E6R1	Fire Alarm Riser Diagram	22 October 2018

**1.2 CHANGES TO THE PROJECT MANUAL**

- .1 SECTION 08 00 10 – DOOR SCHEDULE
  - .1 Door D51 – **Revise** to Door Type 3.
- .2 SECTION 08 71 00 – DOOR HARDWARE
  - .1 Item 3.5.4.2 - Door D28
    - .1 **Revise** Lockset to ANSI F15 with lever, keyed on Room 128 side.
  - .2 Item 3.5.7.2 - Door D33
    - .1 **Delete** ANSI F75K from specification.
  - .3 Item 3.5.11 – Doors D37, D39, D40, D42, D44
    - .1 **Add** item 3.5.11.4: "Install door guide rail flush to wall with no coving behind to ensure maximum space between cell door and frame is less than 1/8 inch."
  - .4 Item 3.5.14.5 – Door D46
    - .1 **Revise** to read "Heavy duty closer – install on exterior of Room 146".
- .3 SECTION 09 22 16 – NON-STRUCTURAL METAL FRAMING
  - .1 **Revise** Item 3.2.5 to: "Attach studs to top and bottom track using screws."
- .4 SECTION 10 22 13 – WIRE MESH PARTITIONS
  - .1 **Add** Section 10 22 13 to Project Manual.

- .5 SECTION 10 28 10 – TOILET AND BATH ACCESSORIES
  - .1 **Revise** Item 2.2.4 to read: “Soap dispenser: Surface mounted, Type 304 stainless steel, satin finish; one-piece body, seamless construction, with mounting bracket and concealed wall plate; clear refill indicator window, hinged stainless steel lid, capacity 1.2 litre; moulded plastic push button and spout with stainless steel spring.”
- .6 SECTION 10 44 16 – FIRE EXTINGUISHERS
  - .1 **Delete** Item 2.1.1.4.1, CO2 type fire extinguishers.
- .7 SECTION 12 55 00 – DETENTION FURNITURE
  - .1 **Delete** Items 2.1 – Pedestal Style Desk and 2.2 – Fixed Desk.
  - .2 **Add** Item 2.3 – Floor Mounted Stool.
    - .1 Base: 450 mm high; 62 mm diameter 14 gauge steel tubing, fully welded to 150 x 150 x 6 mm steel mounting plates. Finish: Powder coat paint.
    - .2 Seat: 330 mm diameter, high density, compression moulded composite, scratch and stain resistant; moulded-in threaded inserts for attachment to mounting plate.
    - .3 Mount directly to floor with tamper-proof bolts.

### 1.3 CHANGES TO DRAWINGS

- .1 DRAWING A0.1, Detail 3/A0.1 Area and Phasing Plan
  - .1 Refer to enlarged Detail 1/R1. **Revise** phase 1 and 2 as indicated.
- .2 DRAWING S2 Partial Existing Attic & Roof Framing Plans
  - .1 Refer to the Partial Existing Roof Framing Plan between grids A & B and 2 & 3: **Add** steel deck supports for new mechanical opening in similar configuration to the opening shown in the same grid bays on the 2018/08/20 Issued for Tender drawing. Coordinate exact size of new opening with mechanical and provide deck supports as per plan notes.
- .3 DRAWING RA1 Demo and New Construction Floor Plans, Elevations
  - .1 **Add** secure enclosure with roof in room 131. Ensure 2 meters of clearance is maintained between enclosure and new wall along gridline 2.
  - .2 **Add** metal shelving in Room 125B and Room 127.
  - .3 **Add** corner guards throughout as indicated.
  - .4 Rooms 124 and 125B to be smoke tight. **Revise** wall types as indicated.
  - .5 **Add / Revise** new construction keynotes 33-35 and general construction notes 12-13 as indicated.
- .4 DRAWING R2 Room 151 Details
  - .1 **Add** millwork in Room 151 as indicated.
- .5 DRAWING M2R1 – New Construction Plan, Notes and Detail
  - .1 **Revise** Keynote 8.
  - .2 **Add** EF-10 exhaust fan system and controls for Rm 127.
- .6 DRAWING M3R1 – Mechanical Schedules
  - .1 **Revise** schedule.
- .7 DRAWINGS E2R1A, E2R1B, E3R1A, E3R1B, E4R1, E5R1A, E5R1B, E6R1
  - .1 **Revise** controls of SF-1 and EF-9.
  - .2 **Add** new exhaust fan EF-10.

- .3 **Provide** interconnection to new fire / smoke dampers.
- .4 **Add** new horn / strobes in crawlspace and attic
- .5 **Provide** fire alarm fan shutdown for EF-9, EF-10 and RTU-1.
- .6 **Provide** independent supervisory zone for carbon monoxide detector.

#### 1.4 CLARIFICATION QUESTIONS AND ANSWERS

- .1 Request for equals:  
WC-1 Gerber North Point 1.28/1.6gpf Elongated ADA Top Spud Toilet 25-733  
LAV-1 Gerber Luxoval Self Rimming Lavatory - 12-844  
  
HDK Response: The products are acceptable.
- .2 Regarding the above mentioned project, the spec book indicates Metal Storage Shelving in section 10 56 13, page 174. Can you advise where on the drawings or in which rooms the shelving is located?  
  
RAI Response: Shelving to be located along East and West wall of room 125B. Refer to revised drawings.
- .3 Does Phase 1 have to be completed before moving onto phase 2 or can they be done at the same time?  
  
RAI Response: Phases to be swapped, cells are to be completed in phase 1. Phase 1 will require to be completed by June 30th, 2019. Refer to revised drawings.
- .4 Temporary sea can in room 131, is there any required specifications for this sea can? Would you consider a temporary secure storage area built from steel studs or lumber in lieu of a sea can?  
  
RAI Response: A temporary secure enclosure with ceiling has been included in Room 131.
- .5 I cannot find specifications for the following: Eyewash Station, Wall Mounted Foldable Chair/Bench, Door D51 Frame Type 5.  
  
RAI response:
  - Eyewash station – refer to Drawing Sheet M3, Plumbing Fixture Schedule.
  - Wall mounted foldable chair/bench – refer to Specification Section 10 28 10 – Toilet and Bath Accessories, Item 2.2.9.
  - Door D51 Frame Type 5 – Change to Door Type 3
- .6 Is there any required sequencing for the demolition of the existing block cell walls, installation of the steel beams in the crawlspace, and concrete beams in the attic?  
  
CKP Response: The new concrete beams in the attic per detail 1/S1 can be installed before or after the existing block walls are removed; if the intent is to install the new concrete beams after the existing block walls are removed then temporary shoring of the existing attic concrete slab would be required. The new concrete beams shall be cured for a minimum 7 days before removing the existing block walls or the temporary shoring. The new steel beams in the crawlspace are to be in place prior to the new block walls being constructed.
- .7 Section 01 52 00 1.8 – Security: In the past we never had a security guard after hours during the duration of the project, Can you confirm if this is required?  
  
RAI Response: Yes, security is required after hours.

- .8 CO detector will be an alarm if installed on alarm zone, these are usually supervisory signals on the fire alarm system, please advise.  
HDK Response: Refer to revised drawings.
- .9 Duct smoke should be on its own zone since you cannot use modules on conventional zone.  
HDK Response: Refer to revised drawings.
- .10 Relay module cannot be used on a conventional alarm zone and would have to be hooked to a relay card in the fire alarm panel  
HDK Response: Refer to revised drawings.
- .11 As per note 18 on M2, what type of secure access door are we to supply?  
HDK Response: Install temperature sensor such that it is accessible when secure grille is removed. Secure grille will act as access door to temperature sensor. Additional secure access door is not required.
- .12 As per specification section 09 96 59 High Build Epoxy Coatings Article 2.1 Base Coat trowel-applied for vertical surfaces at 3mm thick, do you know what the basis of design is or a specific product to achieve this thickness?  
RAI response:  
Stonhard Stonglaze VSM for the trowelled mortar base, and Stonhard Stonglaze E4 for the topcoat are an acceptable system.  
Sika Morritex Epoxy Cove Mortar for the trowelled mortar base, and Sika Duroplast-100N for the topcoat are an acceptable system.
- .13 For the showers for Swan River there is no model number identifying which unit.  
HDK response: Refer to Drawing M3R1 as attached to this addendum.
- .14 10 56 13 specified metal storage shelving. However, there is missing information as there are no elevations. We need to know the height of the uprights?  
RAI response: Uprights to be 2440 mm high.
- .15 The number of shelves required including the top and bottom shelf.  
RAI response: Provide six shelves high.
- .16 The width and depth of each unit. (A total length can be scaled from the plans but this could consist of a 1219 unit with a 914 unit attached to it or two 1067mm units for example.)  
RAI response: Width: Divide shelf groupings into evenly divided banks of 2 or 3, with each bank approximately 1000 mm wide. Depth of shelves is to be 450 mm (18 inches).
- .17 Confirm that new shelving is required in Rooms 145, 150, 132 as some is highlighted and we are not sure if this means it is existing.  
RAI response: Refer to A3 and the hatching legend to determine which shelving is client provided and which is GC provided.
- .18 Sway braces and gussets are specified and normally only one or the other is required for bracing. advise if one or the other can be deleted.  
RAI response: Diagonal bracing will suffice.

- .19 2.3.1 calls for powder coated colour selected by Departmental Representative. The standard colour in Gray. Other colours may incur upcharges and longer deliveries. Is standard gray acceptable?  
RAI response: Standard grey is acceptable.
- .20 2.1.1 mentions bases. Does this mean kickplates or is that in reference to the base plates in 2.2.5?  
RAI response: It means the base plates in 2.2.5.
- .21 Toilet tissue dispenser calls for s.s. unit that dispenses two jumbo rolls (which are side by side) as per attached B2892 for example but the drawings appear to show a smaller unit with normal rolls stacked one above the other as per B4288. Which should be quoted?  
RAI response: Provide toilet tissue dispenser as specified in Project Manual.
- .22 A paper towel dispenser is specified 2.2.2 and a waste receptacle 2.2.7 and also a combination paper towel dispenser/waste unit is specified 2.2.3. A paper towel dispenser is drawn on the elevations 11 and 12 on A4 so we expect that this is to be provided and not the combination unit. Please confirm.  
RAI response: Drawing is correct. Provide paper towel dispenser as specified in 2.2.2.
- .23 No waste receptacle is drawn. Is this to be supplied?  
RAI response: No, do not supply waste receptacle.
- .24 The soap dispenser specified 2.2.4 appears to be like a B2111 but this does not dispense soap as foam. We had trouble finding a foam dispenser that held 1 liter of soap. A unit that does this is a B26637 but it does not look like the unit drawn. Please confirm is we should supply the foam dispenser we located that will hold 1 liter of soap as cartridges or with soap poured directly into the plastic container or a unit like the B2111 which dispenser normal liquid soaps?  
RAI response: Maintain drawing. Refer to revision to specification in this addendum.
- .25 There is a napkin disposal specified 2.2.5 but none is drawn. Should this be provided?  
RAI response: Supply napkin disposal as specified. Confirm mounting heights at time of installation.
- .26 With regard to the Fire Extinguisher and Cabinet, there only appears to be one on the drawings, item 32 on sheet A1. However, the specification says to use a CO2 extinguisher if it is near a LAN room or other sensitive area. Rooms are numbered not named so it is impossible to determine this. Do you want a CO2 extinguisher as per 10 44 16 2.1.4.1 or an ABC extinguisher as per 2.1.4.2?  
RAI response: Provide ABC extinguisher as specified.
- .27 Tempered glass 3mm is specified for the fire extinguisher cabinet but this comes 5mm (not scored) or 3mm as plexiglass. Please advise which we are to supply?  
RAI response: 5 mm tempered glass is acceptable.
- .28 The fire extinguisher cabinet comes standard as grey but white is also available. 10 44 16 2.2.4 says colour as selected by Departmental Representative. Would either of these two colours be acceptable? Custom colours are prohibitively expensive. Please advise.  
RAI response: Provide white paint finish.

.29 Corner guards are specified in 10 26 00 but we were not able to locate any on the plans. Are any required and if so, how many?

RAI response: Yes, these are required. Refer to drawing revisions.

**END OF ADDENDUM NUMBER NO. 1**

**Part 1        General**

**1.1            SUBMITTALS**

- .1        Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Product Data:
  - .1        Submit manufacturer's printed product literature for wire mesh partitions or components, specifications and datasheets; include product characteristics, performance criteria, physical size, finish, and limitations.
  - .2        Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures.
- .3        Shop Drawings: Indicate partition panel modules and types, materials, gauges, finishes, door, hardware, fastening methods to adjacent structure, ceiling details, and assembly methods.

**1.2            DELIVERY, STORAGE AND HANDLING**

- .1        Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2        Waste Management and Disposal: Remove waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**Part 2        Products**

**2.1            MATERIALS**

- .1        Welded mesh: Steel, opening size 51 x 51 mm (2 x 2 inch), 3.4 mm (10 gauge) wire.
- .2        Steel sections and plates:
  - .1        Posts: Hollow steel tubing, 51 x 51 mm (2 x 2 inch), square section, welded construction, minimum wall thickness 3 mm.
  - .2        Base plates: 152 x 152 mm x 3 mm thick (6 x 6 inches x ¼ inch thick).
  - .3        Angle frame: 32 x 32 x 2.66 mm (1-1/4 x 1-1/4 inches x 12 gauge).
  - .4        Bar steel: Size and profile as specified.
- .3        Bolts, fasteners and fastening hardware: Manufacturer's standard to suit design and application.

**2.2            FABRICATION**

- .1        Panels:
  - .1        Fabricate roof and wall panels consisting of wire mesh welded at 150 mm on centre to angle frame.

- .2 Notch or mitre and seam weld frame corners.
- .3 Provide 12.7 mm (1/2 inch) round bars across panels at third points on 2400 mm dimension.
- .2 Posts:
  - .1 2400 mm high with floor plates for fixing.
  - .2 Include wall, door, corner, and other special posts to manufacturer's standard.
- .3 Swing door:
  - .1 Size as indicated.
  - .2 Construct door and transom above of angle frame and wire mesh, same as panels.
  - .3 Reinforce door with 32 x 3 mm or equivalent flat bar centre rail and two 12.7 mm (1/2 inch) round bars mounted diagonally.
- .4 Swing door hardware:
  - .1 Equip door with stops, keeper, and hasp for padlock.
  - .2 Equip door with 1 pair of 12.7 mm (1/2 inch) steel pin hinges.

### **2.3 FINISHES**

- .1 After fabrication, clean and paint components with powder coat paint finish.
  - .1 Colour: As selected by Departmental Representative from manufacturer's standard range.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

### **3.2 ERECTION**

- .1 Install mesh enclosures and door in accordance with manufacturer's printed instructions.
- .2 Erect enclosures plumb, level, straight, rigidly supported, and securely fastened to abutting surfaces, free from superimposed loads.
- .3 Fix to masonry and concrete using lag bolts and shields; to hollow walls using bolts and toggle type anchors; to steel supports with bolts in threaded holes or spot welds.
  - .1 Locate fasteners on interior side where possible for maximum security.
- .4 Install doors and adjust for proper closing, locking and smooth operation.



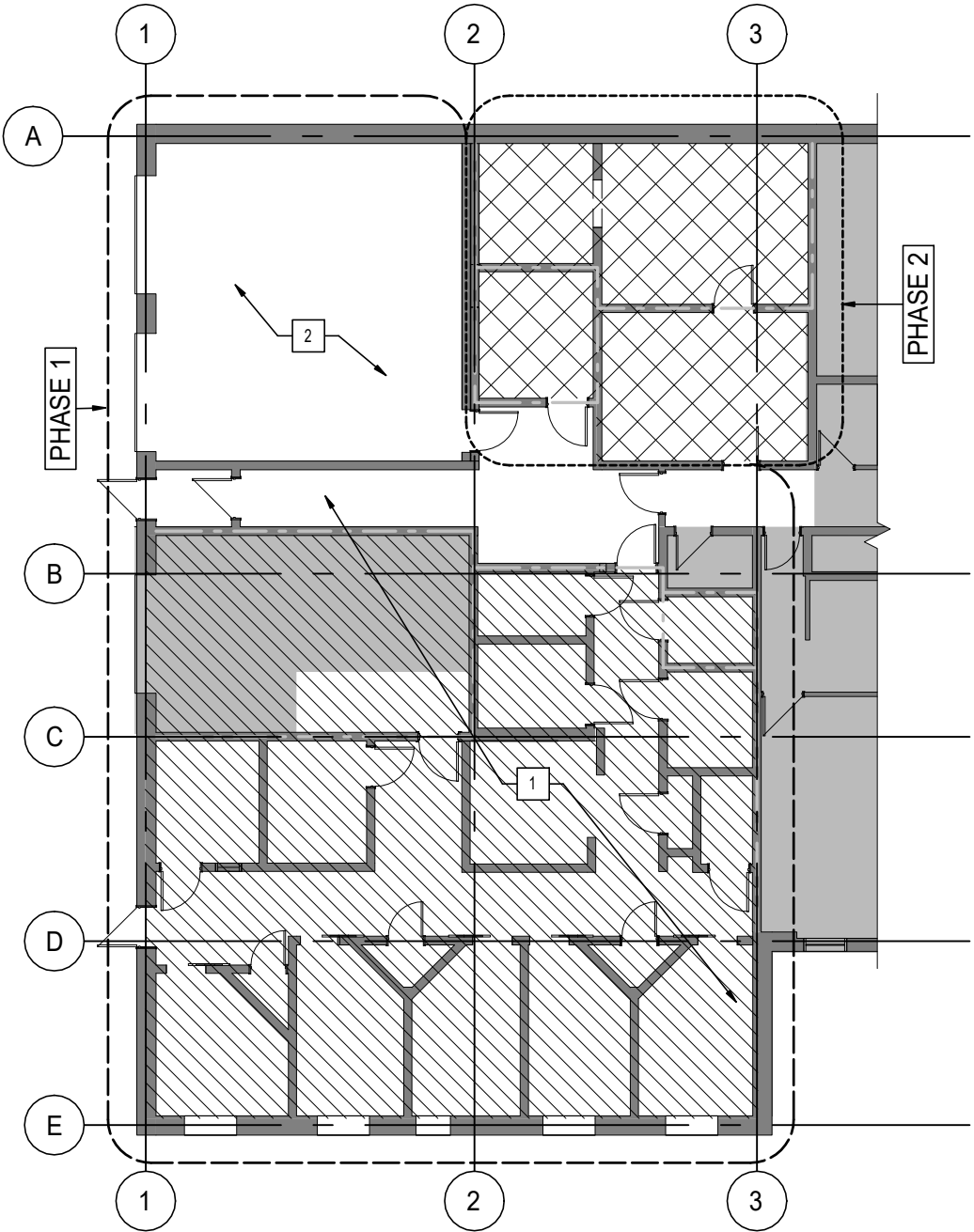
- .1 Mount doors for outside swing.

**3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**

# NOT FOR CONSTRUCTION



**LEGEND**

PHASE 1  
 PHASE 2

1

**AREA AND PHASING PLAN**  
 1 : 150

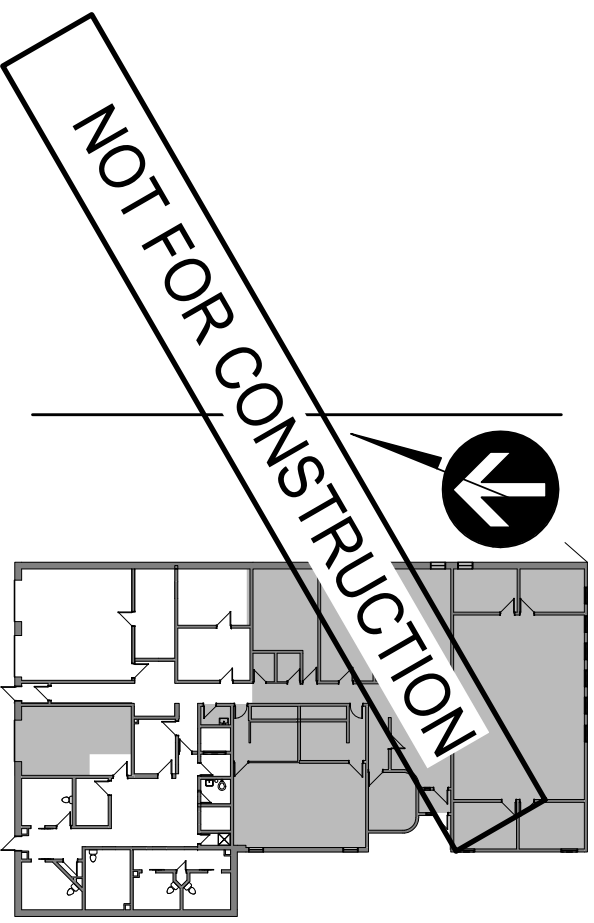
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PROJECT INTERIOR RENOVATIONS  
 CONTENTS REVISED PHASING PLAN

PROJECT NUMBER PROJECT 286  
 DATE 10/23/2018

SHEET NUMBER  
R1



KEY PLAN

This drawing is property of the Architect and cannot be reproduced or used without the consent of the Architect. The contractor is responsible for checking and verifying all levels and dimensions and shall report all discrepancies to the Architect and obtain clarification prior to commencing work.

ISSUES / REVISIONS

1.	2018/02/16 PRELIMINARY 50% CONSTRUCTION DRAWINGS
2.	2018/03/05 CLASS B ESTIMATE DRAWINGS
3.	2018/03/19 50% CONSTRUCTION DRAWINGS FOR REVIEW
4.	2018/04/15 99% CLASS A ESTIMATE DRAWINGS
5.	2018/07/05 99% CONSTRUCTION DRAWINGS FOR REVIEW
6.	2018/08/20 100% TENDER DOCUMENTS
7.	2018/10/23 ISSUED FOR ADDENDUM 1

CLIENT FEDERAL BUILDING

PROJECT INTERIOR RENOVATIONS

CONTENTS  
DEMO AND NEW CONSTRUCTION FLOOR PLAN, ELEVATIONS

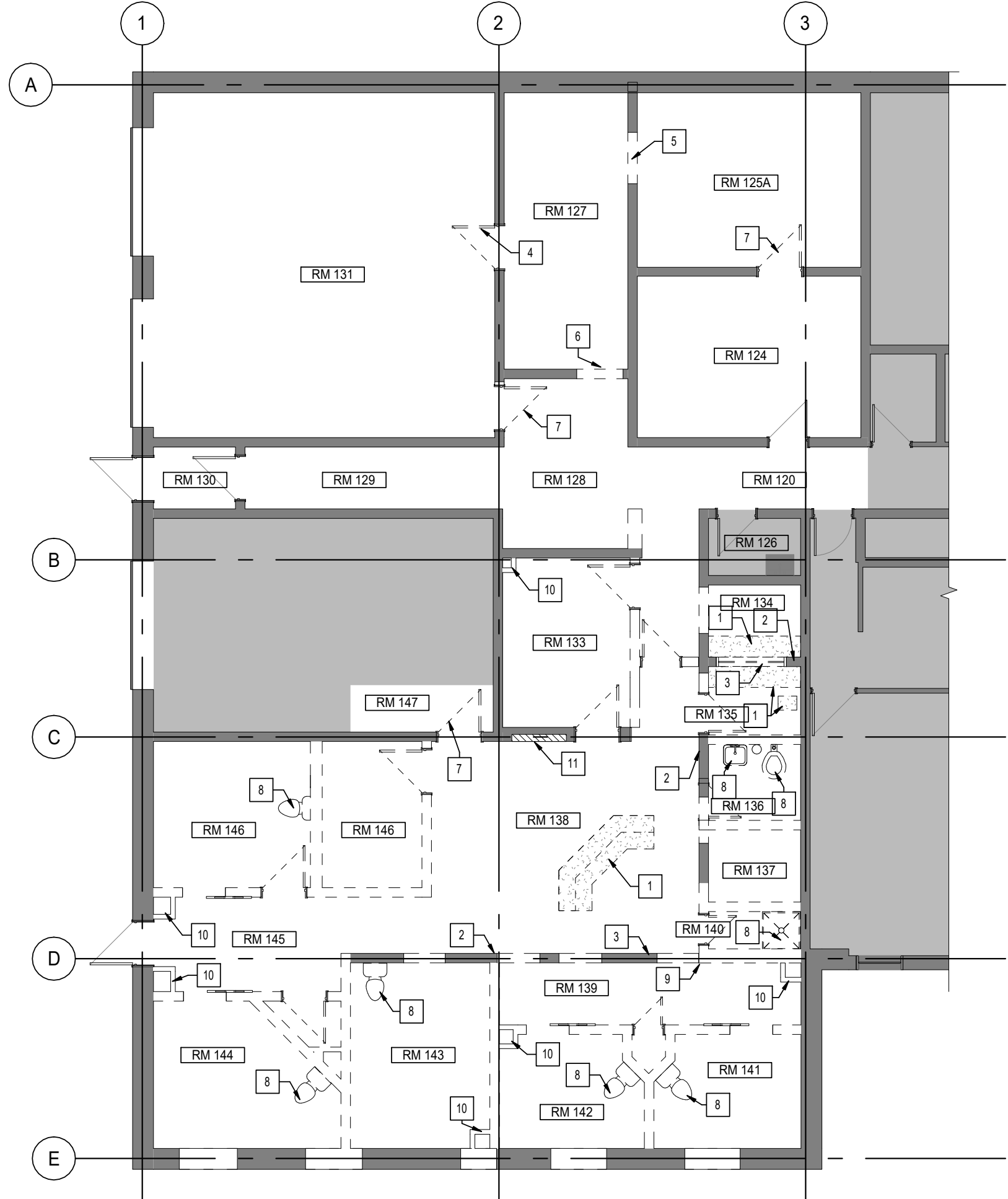
PROJECT NUMBER PROJECT 286	SHEET NUMBER R.A1
DATE 10/23/2018	

**GENERAL CONSTRUCTION NOTES**

- PATCH AND REPAIR ANY SYSTEMS, WALLS, CEILING, SURFACES OR FLOORS DAMAGED DURING CONSTRUCTION.
- ALL EXISTING EPOXY FLOORING AND BASE TO BE DEMOLISHED WITHIN CELL BLOCK AREA OF CONSTRUCTION UNLESS OTHERWISE INDICATED. PATCH, REPAIR AND PREP TO ACCEPT NEW EPOXY.
- INSTALL NEW EPOXY FLOORS CW 100mm EPOXY BASE THROUGHOUT CELL BLOCK UNLESS OTHERWISE INDICATED. REFER TO FINISHES PLAN.
- WHERE FIRE SEPARATIONS AND FIRE PROTECTION ARE DAMAGED SO AS TO AFFECT THEIR INTEGRITY, THEY SHALL BE REPAIRED SO THAT THE INTEGRITY OF THE FIRE SEPARATION IS MAINTAINED.
- ALL WALL MOUNTED EQUIPMENT, MILLWORK, ETC. INCLUDING FUTURE AND NIC ITEMS INDICATED ON DRAWINGS, TO HAVE APPROPRIATE BLOCKING WITHIN WALLS PRIOR TO FINISHING WALL CONSTRUCTION.
- OFFSET DOOR OPENINGS 100MM FROM ADJACENT WALL UNLESS OTHERWISE NOTED.
- 2 PART EPOXY GROUT TO BE USED AROUND ALL LIGHTS AND TOILETS IN RMs 131, 136, 140, 142 AND 144.
- PROTECT ALL SURFACES, SYSTEMS, AND EQUIPMENT FROM DAMAGE, DEBRIS, AND DUST THROUGHOUT DEMOLITION AND CONSTRUCTION.
- SECURITY SCREWS SUCH AS TORX WITH PIN, OR HEX HEAD WITH PIN, MUST BE USED. SNAKE EYE SCREWS ARE NOT APPROVED. SECURITY SCREWS MAY REQUIRE THE APPLICATION OF REMOVABLE OR NON-REMOVABLE LOCCTITE.
- ALL FIXTURES MUST BE STAMPED WITH MANUFACTURER AND MODEL NUMBER ON THE FACEPLATE OF THE FIXTURE.
- ALL WALL MOUNTED SWITCHES AND THERMOSTATS WITHIN OPEN AREA RM 136 AND RM 148 TO RECEIVE TAMPERPROOF COVER. REFER TO MECH AND ELEC.
- INSTALL FIRE DAMPERS AT ALL DUCTWORK PENETRATING FIRE RATED SEPARATIONS AND SMOKE SEPARATIONS.
- FIRE RATED DOORS WITH DOOR VIEWERS SHALL HAVE THE OPENINGS PREPARED BY THE DOOR MANUFACTURER OR THE DOOR MANUFACTURER SHALL PROVIDE WRITTEN PERMISSION FOR THE MODIFICATION TO BE DONE ON SITE.

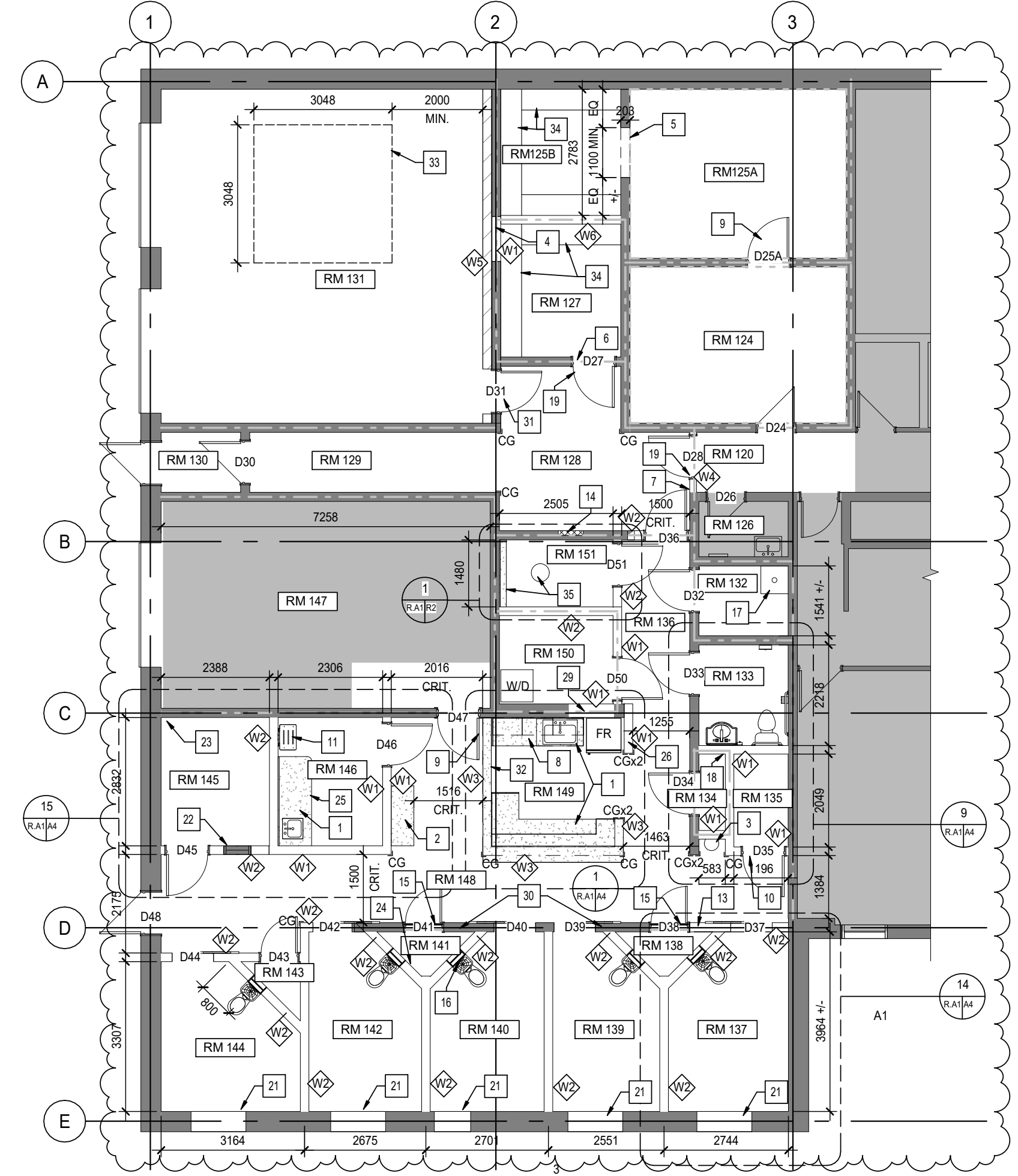
**DEMO AND NEW CONSTRUCTION LEGEND**

- EXISTING WALLS TO REMAIN
- NEW WALLS
- 1 HR FIRE SEPARATION
- SMOKE TIGHT SEPARATION
- EXISTING WALLS TO BE DEMOLISHED
- NEW PARTIAL HEIGHT WALL @ 1600mm AFF
- EXISTING DOORS TO REMAIN
- EXISTING DOORS TO BE DEMOLISHED
- NEW DOORS
- NEW SLIDING DOORS
- MILLWORK TO BE DEMOLISHED
- NEW MILLWORK
- AREA NOT IN CONTRACT
- CORNER GUARD



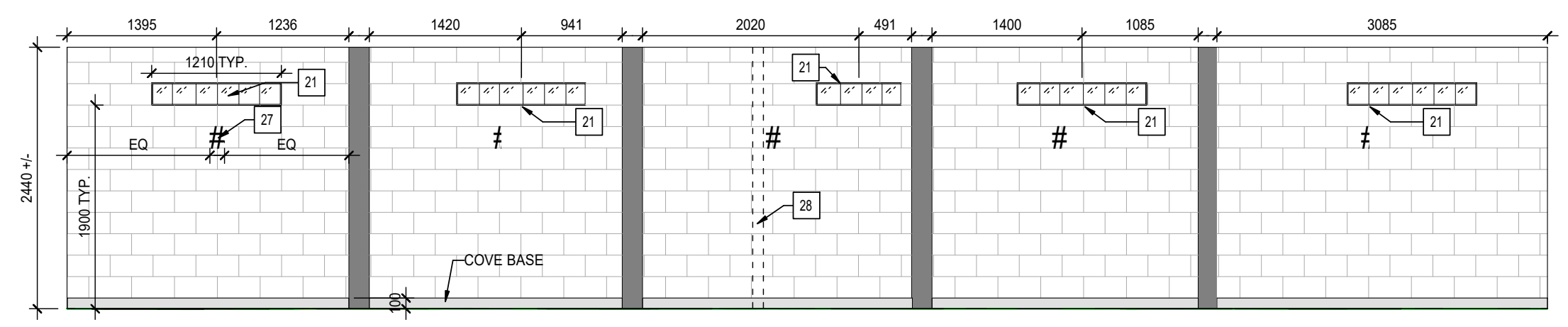
1 EXISTING & DEMOLITION PLAN  
RA1 1:100

- DEMOLITION PLAN KEYNOTES**
- DEMOLISH EXISTING MILLWORK
  - MAINTAIN EXISTING WALL.
  - DEMOLISH EXISTING WINDOW.
  - DEMOLISH EXISTING DOOR AND PREP TO INFILL WALL. REFER TO CONSTRUCTION PLAN.
  - DEMOLISH PORTION OF WALL TO CREATE NEW 1100MM WIDE OPENING. REFER TO CONSTRUCTION PLAN.
  - DEMOLISH PORTION OF WALL TO PREP FOR INSTALLATION OF NEW DOOR. REFER TO CONSTRUCTION PLAN.
  - REMOVE EXISTING DOOR. PREP FOR INSTALLATION OF NEW DOOR AND FRAME IN EXISTING OPENING.
  - DEMOLISH EXISTING FIXTURE. REUSE OR REROUTE PLUMBING WHERE POSSIBLE FOR NEW FIXTURE.
  - DEMOLISH PORTION OF EXISTING WALL WHERE CMU JUTS OUT WITH INCREASED WIDTH.
  - DEMOLISH EXISTING CHASE.
  - DEMOLISH EXISTING HOSE REEL.

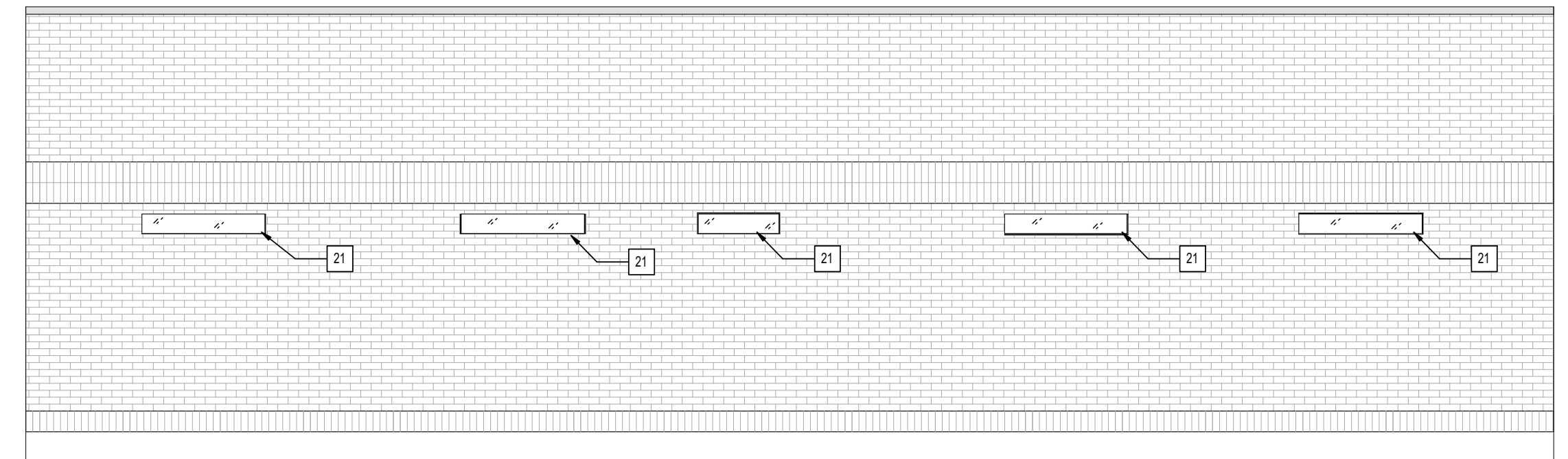


2 NEW CONSTRUCTION PLAN  
RA1 1:100

- NEW CONSTRUCTION KEY NOTES**
- NEW MILLWORK INCLUDING NEW FAUCET AND SINK WHERE INDICATED. ALL CABINETS LOCKABLE.
  - NEW SECURE BENCH.
  - NEW EYEWASH STATION.
  - INFILL OPENINGS.
  - ALTER WALL TO CREATE NEW 1100mm MINIMUM WIDE OPENING. CUT OPENING AT MORTAR LINES AND LOCATE AS CLOSE TO CENTRE AS POSSIBLE. NOTIFY ARCHITECT OF ANY MAJOR DISCREPANCIES IN OPENING LOCATION.
  - NEW DOOR AND FRAME. ENSURE SMOOTH FINISHED FACE ON ALL SIDES.
  - CONSTRUCT NEW WALL CW DOOR AND FRAME. ALIGN WITH EXISTING CORRIDOR WALL.
  - NEW MILLWORK CW WALL HUNG CABINETS AS INDICATED. ALL CABINETS LOCKABLE. INCLUDE NEW SINK AND FAUCET.
  - NEW DOOR AND FRAME IN EXISTING OPENING.
  - UNDERCUT DOOR D35 FOR EXHAUST AIR MAKE-UP.
  - NEW WALL MOUNTED FOLDABLE CHAIR.
  - CONSTRUCT NEW WALL IN EXISTING LOCATION. WALL TO BE FLUSH WITH EXISTING WALL TO REMAIN. FURR OUT AS REQUIRED.
  - NEW RECESSED SECURE GUN LOCKER. CONFIRM EXACT LOCATION WITH DEPARTMENT REP.
  - NEW 51mm CONCRETE CURB AT DOORWAY CW EPOXY TO MATCH FLOORING.
  - TYPICAL NEW COMBINATION LAVATORY / TOILET FIXTURE CW SECURITY SLEEVE - GROUT IN FRAME.
  - NEW MOP SINK.
  - SHOWER CONTROL VALVES.
  - DOOR TO INCLUDE CARD ACCESS. REFER TO ELECTRICAL.
  - NEW GLASS BLOCK WINDOW IN EXISTING EXTERIOR WALL. SCAN WALL PRIOR TO PROCEEDING. PROVIDE WINDOW MOCK-UP AS PER SPECIFICATIONS.
  - NEW VISION CONTROL ACOUSTIC WINDOW WITH SOUND RATED FRAME.
  - NEW CONVEX MIRROR. CONFIRM EXACT LOCATION WITH DEPARTMENT REP.
  - NEW WALL MOUNTED HOSE REEL. REFER TO MECHANICAL.
  - SERVER TO BE SECURED IN LOCKABLE CABINETRY.
  - CONCEAL COLUMN WITHIN WALL. SITE CONFIRM EXACT LOCATION.
  - TYP CELL NUMBER PAINTED IN CONTRASTING COLOUR. 150MM HIGH DIGIT. CONFIRM EXACT LETTERING AND LOCATION WITH DEPARTMENT REP.
  - EXISTING COLUMN CONCEALED WITHIN EXTERIOR WALL TO BE SITE CONFIRMED.
  - INFILL EXISTING OPENING AND MISSING CONCRETE BLOCK TO MATCH EXISTING WALL. ENSURE FLUSH FINISH.
  - INFILL EXISTING OPENINGS AS REQUIRED TO MATCH EXISTING WALL CONSTRUCTION.
  - NEW DOOR AND FRAME. ENSURE FRAME WIDTH ACCOMMODATES NEW WALL.
  - NEW SEM-RECESSED DIRT EXTINGUISHER CABINET.
  - TEMPORARY EXHIBIT STORAGE. SECURE ENCLOSURE TO CEILING.
  - NEW SHELVING. METAL WITH 457mm SHELVES. 6 HIGH.
  - NEW MILLWORK COUNTER AND FLOOR-BOLTED STOOL.

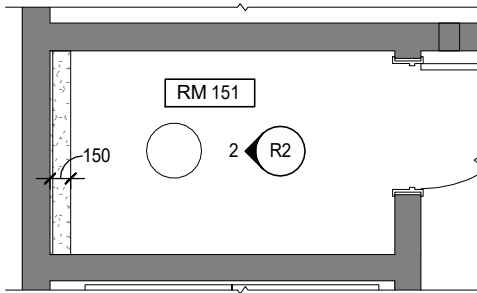


4 BLOCK WINDOW LOCATIONS  
RA1 1:50

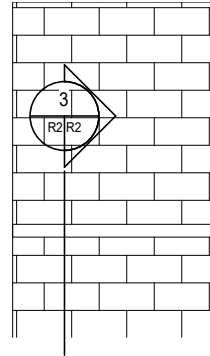


3 EXISTING EXTERIOR WALL ELEVATION  
RA1 1:50

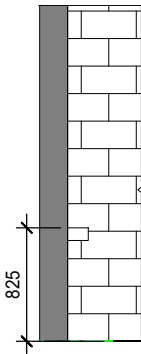
# NOT FOR CONSTRUCTION



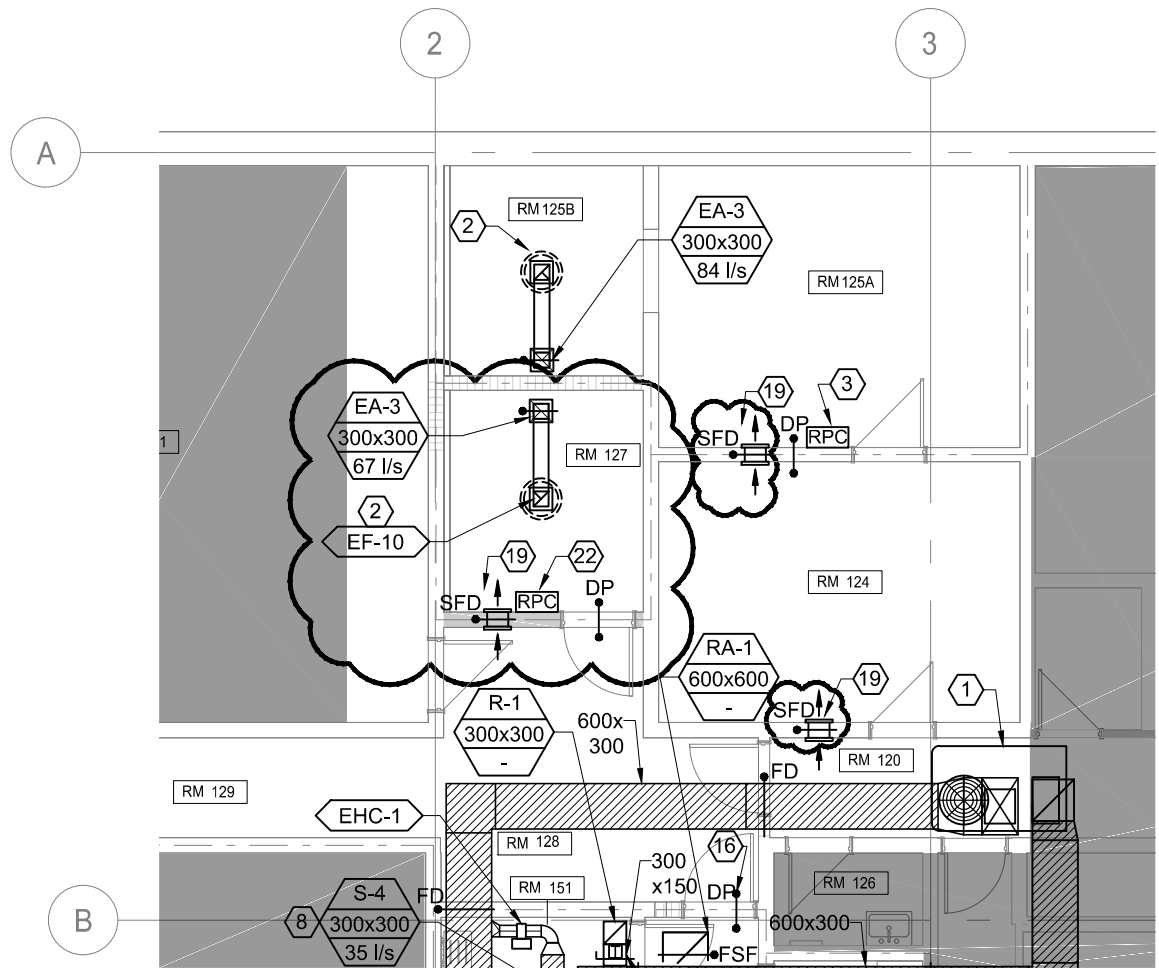
**1**  
R.A1|R2  
**ENLARGED ROOM 151**  
1 : 50



**2**  
R2|R2  
**ROOM 151 NORTH ELEVATION**  
1 : 50



**3**  
R2|R2  
**COUNTER SECTION**  
1 : 50



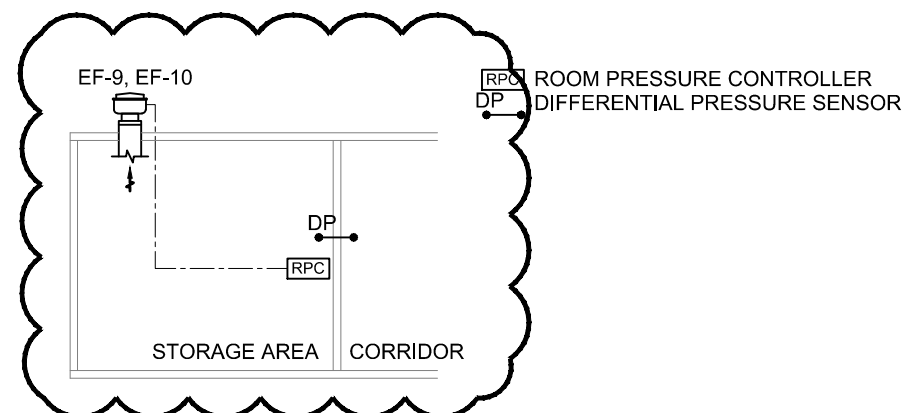
**2 NEW CONSTRUCTION HVAC PLAN**  
M2 1:100

**SYMBOL LEGEND:**

SFD ● — COMBINATION SMOKE AND FIRE DAMPER

**# NEW HVAC NOTES:**

- 8. DUCTS TO BE EQUIPPED WITH CROSS-TALK SILENCER TO PREVENT SOUND TRANSMISSION.
- 19. PROVIDE 300x300 AIR TRANSFER. PROVIDE SECURE MESH COVERING ON BOTH SIDES OF OPENING WITH 3mmx50mm STEEL BORDER SECURED WITH LAG BOLTS. REFER TO ARCHITECTURAL DETAILS.
- 20. R-1 GRILLE ON BOTTOM SIDE OF RETURN DUCT.
- 21. DUCT HUMIDISTAT FOR CONTROL OF SHOWER EF-1.
- 22. DIFFERENTIAL PRESSURE (DP) SENSOR AND ROOM PRESSURE CONTROLLER (RPC) TO CONTROL ROOM TO -0.05 IN. W.C. STATIC PRESSURE. MODULATE EF-10 VARIABLE SPEED MOTOR TO MAINTAIN NEGATIVE PRESSURE.



**STORAGE AREA EXHAUST SEQUENCE OF OPERATIONS**

EF-9 AND EF-10 TO RUN CONTINUOUSLY. MODULATE ECM MOTOR ON EF-9 TO MAINTAIN NEGATIVE PRESSURE DIFFERENTIAL BETWEEN STORAGE AREA AND ADJACENT ROOM. MAINTAIN DIFFERENTIAL OF -0.05 IN. W.C., ADJUSTABLE VIA ROOM PRESSUR CONTROLLER.

**5 STORAGE AREA EXHAUST AIR CONTROLS**  
M2 NTS

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NO.	DESCRIPTION	DATE	BY
01	ISSUED WITH ADDENDUM M02	10/22/2018	DH

**NEW CONSTRUCTION PLAN, NOTES AND DETAIL**  
SHEET TITLE

IS \_\_\_\_\_ DH \_\_\_\_\_  
DRAWN \_\_\_\_\_ APPVD \_\_\_\_\_  
10/22/2018  
DATE

FEDERAL BUILDING INTERIOR RENOVATIONS  
PROJECT ADDRESS  
PROJECT TITLE

**M2R1**  
DRAWING NUMBER



DIFFUSER AND GRILLE SCHEDULE		
TAG	MODEL	REMARKS
S-1	VIRTUCOM METALS SCO (WALL)	REFER TO DRAWING FOR FACE SIZE
S-2	VIRTUCOM METALS SCO (CEILING)	REFER TO DRAWING FOR FACE SIZE
R-1	VIRTUCOM METALS SCO (CEILING)	REFER TO DRAWING FOR FACE SIZE
EA-1	VIRTUCOM METALS SCO (WALL)	REFER TO DRAWING FOR FACE SIZE
EA-2	VIRTUCOM METALS SCO (CEILING)	REFER TO DRAWING FOR FACE SIZE

**NOTES:**

- PROVIDE SECURITY CAULKING AROUND ALL GRILLES AND DIFFUSERS, REFER TO ARCHITECTURAL SPECIFICATIONS.
- ALL HARDWARE TO BE TAMPER PROOF, TORX TYPE.

ACCEPTABLE MANUFACTURERS: SECURE GRILLES AND DIFFUSER SHALL BE LIMITED TO VIRTUCOM SCO SECURITY, ENEROUND SECURITY, SIMPSON MODEL V-2 OR CHUBB OP-20V. NO OTHER SUBSTITUTIONS WILL BE PERMITTED.

ELECTRIC HEATING COIL SCHEDULE (Based on Price)												
TAG	ROOM SERVED	AIR SIDE						HEATING OUTPUT		NOTES		
		FLOW RATE (L/s)	PRESS. DROP (Pa)	ENT. TEMP. (C)	LVG. TEMP. (F)	(C)	(F)	(KW)	(MBH)			
EHC-1	151	35	74	25	0.10	12.8	55.0	60.0	140.0	2.0	6.8	1.2
EHC-2	150	45	95	25	0.10	12.8	55.0	60.0	140.0	2.6	8.8	1.2
EHC-3	146	75	159	25	0.10	12.8	55.0	60.0	140.0	4.3	14.6	1.2
EHC-4	145	60	127	25	0.10	12.8	55.0	60.0	140.0	3.4	11.7	1.2
EHC-5	144	42	89	25	0.10	12.8	55.0	60.0	140.0	2.4	8.2	1.3
EHC-6	142	42	89	25	0.10	12.8	55.0	60.0	140.0	2.4	8.2	1.3
EHC-7	140	42	89	25	0.10	12.8	55.0	60.0	140.0	2.4	8.2	1.3
EHC-8	139	42	89	25	0.10	12.8	55.0	60.0	140.0	2.4	8.2	1.3
EHC-9	137	42	89	25	0.10	12.8	55.0	60.0	140.0	2.4	8.2	1.3
EHC-10	MAKE UP AIR	42	1,152	25	0.10	-30.0	-22.0	15.6	60.0	29.9	102.0	1.3

**NOTES:**

- SCR CONTROL WITH MODULATING STAGES OF HEAT, PROVIDE AIR FLOW PROVING SWITCH AND HIGH LIMIT.
- ROOM THERMOSTAT WITH SECURE METAL COVER.
- DUCT MOUNTED THERMOSTAT.

PLUMBING FIXTURE SCHEDULE		
Label	Fixture	Specification
LTC-1	Lavatory-Toilet Comby	PENAL-WARE 18" WIDE LAVATORY/TOILET COMBINATION, FLOOR MOUNTED CABINET WITH TOILET WALL WASTE OUTLET CONNECTION AND LAVATORY WALL OUTLET WASTE CONNECTION, FABRICATED FROM 14 GAGE TYPE 304 STAINLESS STEEL AND POLISH SATIN FINISH, BLOW JET TYPE WITH A MINIMUM FLUSH OF 25 PSI (175 kPa) FLOW PRESSURE, 1.28 GPF (6.0 LPF), 3-1/2" TRAP SEAL AND FULLY ENCLOSED, CONCEALED FLUSH VALVE WITH 1-1/2" NPT CONNECTION REAR MOUNT WASTE OUTLET CONNECTION, TOILET ORIENTATION CENTERED (CT), PROVIDE AIR CONTROL SINGLE TEMP METERING VALVE WITH BARRIER-FREE COMPLIANT PUSH BUTTON AND PENAL HEMISPHERICAL BUBBLER, VALVE TO BE LEAD FREE, PROVIDE ELECTRONIC FLUSH VALVE. PROVIDE MOUNTING HARDWARE. ACCEPTABLE MANUFACTURERS ARE ACORN 1440 AND WILLOUGHBY 1806.
WC-1	Water Closet-Barrier-Free Design	KOHLER HIGHLINE TOILET BOWL K-4405 VITREOUS CHINA LOW CONSUMPTION (4.8 LPF/1.28GPF) 17-1/8" (435mm) RIM HEIGHT, ELONGATED BOWL, FULLY GLAZED 2-1/4" (57mm) TRAPWAY WITH 2" (51mm) BALL PASS, 1-1/2" INLET TOP SPUD. SLOAN ECOS #111-1.6/1.1 HW-CP, EXPOSED FLUSHOMETER FOR TOP SPUD TOILET, CHROME PLATED, 4.2 L FLUSH FACTORY SET FLOW, QUIET ACTION 'PERMEX' DIAPHRAGM TYPE WITH LINEAR FILTERED BY-PASS AND VORTEX CLEANSING ACTION, INFRARED SENSOR WITH MULTIPLE-FOCUSED LOBULAR SENSING FIELDS FOR HIGH AND LOW TARGET SENSING, COURTESY FLUSH OVER-RIDE BUTTON, V.P. SMOOTH DESIGN STOP CAP ON BAK-CHEK ANGLE STOP (SCREWDRIER OPERATED), FLUSH TUBE FOR 292 MM ROUGH-IN, HIGH PRESSURE VACUUM BREAKER, PATENTED 'ISOLATED OPERATOR' FOR SUPERIOR PERFORMANCE UNDER A HEAVY DUTY METAL STYLISH COVER WITH PLASTIC OPTICAL FACE, 4 VA POWER REQUIRED PER UNIT. SLOAN #EL-451, BOX MOUNT HARD WIRED TRANSFORMER, 120 VAC INPUT/ 6 VAC OUTPUT, 50/60 HZ (25 VA). WILL OPERATE UP TO 6 'ECOS' FLUSH VALVE UNITS. PROVIDE WALL FLANGE, (SAME MATERIAL AS THE CONNECTING PIPE DRAIN), WITH ALL BRASS BOLTS AND WITH RUBBER GASKET, CENTOCO #1500STSCC.001 TOILET SEAT, EXTRA HEAVY DUTY, FOR ELONGATED BOWL, OPEN FRONT, WHITE SOLID PLASTIC, LESS COVER, STAINLESS STEEL CHECK HINGES, METAL FLAT WASHERS STAINLESS STEEL POSTS AND NUTS. ACCEPTABLE MANUFACTURERS ARE AMERICAN STANDARD AND CONTRAC.
LAV-1	Lavatory Barrier-Free Design	KOHLER BRYANT BATHROOM SINK K-2699-4, VITREOUS CHINA 19" WIDE x 15" x 6-7/8" DEEP BOWL, FRONT OVERFLOW, DROP-IN, SUPPLIED WITH MOUNTING KIT, FAUCET LEDGE, 4" (102mm) CENTRES. KOHLER FAUCET JULY BATHROOM SINK FAUCET CAST BRASS SINGLE CONTROL, CERMIC CARTRIDGE WITH TEMPERATURE LIMIT STOP, 4" (102mm) CENTRESET LESS POP-UP, STATIONARY SPOUT, CHROME FINISH, VANDAL RESISTANT OUTLET 1.2 GPM (4.5 LPM), McGUIRE P-TRAP CHROME PLATED CAST BRASS SLIP NUTS, GRID DRAIN LESS OVERFLOW TO BE McGUIRE WITH 17 GAUGE 1-1/4" x 6" SEAMLESS BRASS TAILPIECE, BRASS LOCKNUT, HEAVY RUBBER BASIN WASHER AND FIBER FRICTION WASHER. QUARTER TURN STANDARD STOP WITH BRAIDED STAINLESS STEEL LAVATORY SUPPLY. ACCEPTABLE MANUFACTURERS ARE AMERICAN STANDARD AND CONTRAC.
SK-1	Kitchenette Sink	FRANKE COMMERCIAL LBS7808P-1 SINGLE BOWL COUNTERTOP MOUNT SINK, 765mm (30-1/8") x 559mm (20") x 203mm (8") DEEP, COUNTER MOUNTED, WITH LEDGE, MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, FACTORY APPLIED RIM SEAL. AMERICAN STANDARD #4101.100 ARCH SINGLE CONTROL KITCHEN FAUCET WITH SWIVEL PULL-OUT SPRAY, TOGGLE BUTTON ACTIVATION DECK MOUNTED, CHROME PLATED SOLID CAST BRASS LEAD-FREE BODY, SINGLE LEVER, 1/4 TURN CERAMIC DISC VALVE CARTRIDGES, WITH PRESSURE COMPENSATING 5.7 LPM (1.5GPM) AERATOR OUTLET, OPEN GRID DRAIN, CHROME PLATED CAST BRASS ONE PIECE TOP, 17 GA. (1.5mm) TUBULAR 32mm (1-1/4") TAILPIECE, FAUCET SUPPLIES, CHROME PLATED POLISHED BRASS, HEAVY DUTY ANGLE STOPS, 10mm (3/8") I.P.S. INLET x 76mm (3") LONG RIGID HORIZONTAL NIPPLES, V.P. LOOSE KEYS, ESCUTCHEONS AND FLEXIBLE COPPER RISER, P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 32mm (1-1/4") SIZE, SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL BEND. ACCEPTABLE MANUFACTURERS ARE KOHLER AND AMERICAN STANDARD FOR SINK AND DELTA FAUCET AND KOHLER FOR SINK FAUCET.
SK-2	Breathalyzer Room Sink	FRANKE COMMERCIAL LBS6808-1 SINGLE BOWL COUNTERTOP MOUNT SINK, 508mm (20") x 521mm (20 1/2") x 203mm (8") DEEP, COUNTER MOUNTED, WITH LEDGE, MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, FACTORY APPLIED RIM SEAL. AMERICAN STANDARD #4175.501.F15 COLONY SOFT SINGLE CONTROL FAUCET WITH LOW PROFILE SWIVEL SPOUT, CHROME PLATED SOLID CAST BRASS LEAD-FREE BODY, SINGLE LEVER, 1/4 TURN CERAMIC DISC VALVE CARTRIDGES, WITH PRESSURE COMPENSATING 5.7 LPM (1.5GPM) AERATOR OUTLET, OPEN GRID DRAIN, CHROME PLATED CAST BRASS ONE PIECE TOP, 17 GA. (1.5mm) TUBULAR 32mm (1-1/4") TAILPIECE, FAUCET SUPPLIES, CHROME PLATED POLISHED BRASS, HEAVY DUTY ANGLE STOPS, 10mm (3/8") I.P.S. INLET x 76mm (3") LONG RIGID HORIZONTAL NIPPLES, V.P. LOOSE KEYS, ESCUTCHEONS AND FLEXIBLE COPPER RISER, P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY WITH SLIP NUT, 32mm (1-1/4") SIZE, SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL BEND. ACCEPTABLE MANUFACTURERS ARE KOHLER AND AMERICAN STANDARD FOR SINK AND DELTA FAUCET AND KOHLER FOR SINK FAUCET.
SHO-1	Shower Barrier-Free Design	WRS-BF-2HD SERIES REAR MOUNTED RECESSED HANDICAP SHOWER PANEL W/ (2) FIXED SHOWER HEADS, RECESSED OR EQUIVALENT TO THE DOCUMENTS. PENAL-WARE BARRIER-FREE WALL SHOWER, SHOWER PANEL SHOULD BE FABRICATED FROM 14 GAGE, TYPE 304 STAINLESS STEEL AND SHALL HAVE A SATIN FINISH. VALVE BODY AND SHOWER HEAD SHALL BE SOLID BRASS WITH ALL EXPOSED TRIMS TO BE CHROME PLATED BRASS, FIXTURE SHALL BE FURNISHED WITH A FIXED VANDAL-RESISTANT SHOWER HEAD WITH ON/OFF PUSHBUTTON, VACUUM BREAKER 1.5 GPM (5.6 LPM) FLOW CONTROL, MOUNTING BRACKET. AIR-CONTROL SINGLE TEMP METERING VALVE. ASSE 1016 COMPLIANT TEMPERATURE/PRESSURE BALANCING MIXING VALVE. SHOWER DRAIN, DURA-COATED CAST IRON BODY, CLAMP COLLAR, ADJUSTABLE PVC HEAD AND SECURED STAINLESS STEEL STRAINER C/W LOCTITE LIQUID THREAD LOCKER, SERIES 262 MIL-SPEC S-46163A TYPE II GRADE 0 (NO EQUIVALENT). PROVIDE P-TRAP. ACCEPTABLE MANUFACTURERS ARE ACORN AND WILLOUGHBY.
EW-1	Emergency Eye Wash	GUARDIAN G1814BC WALL MOUNT BARRIER-FREE EYE WASH, STAINLESS STEEL BOWL AND COVER, WHEN ACTIVATED COVER IS RACED AUTOMATICALLY WHEN FLAG HANDLE IS ACTIVATED. 1-1/2" O.D. DRAIN CONNECTION. 1/2" NPT FEMALE INLET. ACCEPTABLE MANUFACTURERS ARE HAWSCO AND BRADLEY.
FD-1	Floor Drain	ZURN Z355 DURA-COATED CAST IRON BODY WITH SIDE OUTLET, INTEGRAL TRAP, ANCHOR FLANGE AND ADJUSTABLE NICKEL BRONZE SLOTTED STRAINER, SECURED WITH SPANNER TYPE VANDAL-PROOF SCREWS, PROVIDE LOCTITE LIQUID THREAD LOCKERS, SERIES 262 MIL-SPEC S-46163A TYPE II GRADE 0 (NO EQUIVALENT). ACCEPTABLE MANUFACTURER'S ARE ZURN, JAY R. SMITH AND WADE.
HR-1	Hose Reel in Cabinet	FIXED HOSE REEL FOR WALL MOUNTING, MADE OF GALVANIZED STEEL, OIL RESISTANT, ANTISTATIC RUBBER HOSE WITH WORKING PRESSURE OF 20 BAR, INTEGRATED AUTOMATIC STOP VALVE, QUICK-DISCONNECT COUPLING, WATER SUPPLY THROUGH THE CENTER OF THE REEL. JET/SPRAY/SHUT-OFF NOZLE, SWINGING ARM WITH INTERNAL WATERWAYS, CENTRE PARTS MADE OF BRASS, ADJUSTABLE BRAKE. FURNISHED WITH 25MMØ AND 30 METERS LONG HOSE. ACCEPTABLE MANUFACTURERS ARE NOHA, KIDDIE, STOPFIRE.

ROOF TOP UNIT SCHEDULE (TRANE)		
TAG	RTU-1	
MODEL	YSC048G3EHA	
SERVICE	CELL AREA	
SUPPLY FAN		
AIR FLOW RATE (L/s / CFM)	755	1,600
E.S.P. (Pa / in.WC)	199	0.80
ECONOMIZER		
TYPE	SINGLE ENTHALPY, BAROMETRIC	
HEATING		
TYPE	GAS	
CAPACITY INPUT (KW / MBH)	35	120
CAPACITY OUTPUT (KW / MBH)	29	100
CAPACITY CONTROL METHOD	1 STAGE	
COOLING		
NOMINAL CAPACITY INPUT (KW / MBH)	14	48
CAPACITY CONTROL	SINGLE STAGE	
REFRIGERANT	R-410A	
VENTILATION DATA		
MIN. O.A. FLOW RATE (L/s / CFM)	NA	NA
PHYSICAL DATA		
WEIGHT (kg / lbs)	223	492
LENGTH (mm / in.)	1778	70.00
WIDTH (mm / in.)	13	44.00
HEIGHT (mm / in.)	12	41.00

**NOTES:**

- UNIT SHALL BE MANUFACTURED BY TRANE AND SHALL BE CAPABLE OF BEING INSTALLED ON THE EXISTING ROOF CURB WITH OUT MODIFICATION OR THE NEEDED FOR ROOF CURB ADAPTIONS.
- OUTSIDE AIR TO BE PROVIDED BY SF-1. MINIMUM DAMPER POSITION TO BE 0% UNLESS IN FREE COOLING MODE.

FAN SCHEDULE															
TAG	ROOM SERVED	MANUFACTURER	TYPE	MODEL	RPM	AIR FLOW RATE				E.S.P.		MOTOR		ACCESSORIES	
						MAXIMUM (L/s)	MINIMUM (L/s)	(CFM)	(CFM)	(Pa)	(in.WC)	(W)	(HP)		SONES
SF-1	CELL AREA	GREENHECK	I	SQ-100-VG	943	513	1,087	312	661	62	0.25	186	1/4	3.9	VG
EF-1	135	GREENHECK	R	CUE-070-VG	1,725	67	142	48	102	37	0.15	75	1/10	1.2	VG
EF-2	137	GREENHECK	R	CUE-065-VG	1,725	59	125	42	89	37	0.15	75	1/10	2.4	VG
EF-3	139	GREENHECK	R	CUE-065-VG	1,725	59	125	42	89	37	0.15	75	1/10	2.4	VG
EF-4	140	GREENHECK	R	CUE-065-VG	1,725	59	125	42	89	37	0.15	75	1/10	2.4	VG
EF-5	142	GREENHECK	R	CUE-065-VG	1,725	59	125	42	89	37	0.15	75	1/10	2.4	VG
EF-6	144	GREENHECK	R	CUE-070-VG	1,725	67	142	48	102	37	0.15	75	1/10	1.2	VG
EF-7	146	GREENHECK	R	CUE-070-VG	1,725	67	142	48	102	37	0.15	75	1/10	1.2	VG
EF-8	132/133	GREENHECK	R	CUBE-099	725	76	161	-	-	50	0.20	186	1/4	3.6	VG
EF-9	125/125B	GREENHECK	R	CUE-070-VG	1,725	67	142	48	102	37	0.15	75	1/10	1.2	VG
EF-10	127	GREENHECK	R	CUE-070-VG	1,725	84	125	60	89	37	0.15	75	1/10	2.4	VG

**FAN TYPES:**

C CENTRIFUGAL R ROOF I IN-LINE CE CEILING EXHAUST CU CENTRIFUGAL UP BLAST  
TA TUBE AXIAL W WALL MF MIXED FLOW P PROPELLER CF CEILING FAN

**ABBREVIATIONS:**

BG BELT GUARD MT MANUAL RESET TIMER SD SCROLL DRAIN  
AS ADJUSTABLE SHEAVES NSW NON-SPARKING WHEEL FC FACTORY CURB  
SC SOLID STATE SPEED CONTROL SH SPRING HANGERS BS BIRDSCREEN  
IG INLET GRILLE VP VIBRATION PADS MC MOUNTING COLLAR  
BD BACKDRAFT DAMPER SM SPRING MOUNT WH WEATHERPROOF HOUSING  
F FILTER WC WALL CAP RC ROOF CAP  
E EPOXY COATING DS DISCONNECT SWITCH AD ACCESS DOOR  
IH INLET HOOD MDW MOTION DETECTOR, WALL MTD. GN GOOSENECK  
PC PRESSURE CONTOLLER VG VARI-GREEN ECM VARIABLE SPEED MOTOR

**NOTES:**

- EF-1 TO 7 SHALL OPERATE ON TWO SPEEDS VIA 7 SEPARATE SWITCHES LOCATED AT THE GUARDS DESK. SF-1 SHALL MODULATE TO MAINTAIN SPACE STATIC PRESSURE AT NEGATIVE PRESSURE (0.05 IN WC) AS COMPARED TO CORRIDOR, ADJUSTABLE. PROVIDE A SYSTEM OF PACKAGED CONTROLS TO PERFORM STATIC PRESSURE CONTROLS.
- EF-8 TO OPERATE VIA ON/OFF SWITCH AT GUARDS DESK.
- EF-1 TO 8 AND SF-1 SHALL BE PERMITTED TO OPERATE WHILE RTU-1 FAN IS RUNNING ONLY. RTU FAN TO RUN CONTINUOUSLY. IF RTU FAN IS TURNED, INTERLOCK EF-1 TO 8 AND SF-1 SUCH THAT THEY ARE DISABLED.
- EF-09 TO 10 SHALL OPERATE VIA PACKAGED PRESSURE CONTROL SYSTEM FROM FAN MANUFACTURER. MODULATE TO MAINTAIN SPACE STATIC PRESSURE AT NEGATIVE PRESSURE (0.05 IN WC) AS COMPARED TO ADJACENT ROOM, ADJUSTABLE.

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ISSUES / REVISIONS  
1. 2018/02/16 50% CONSTRUCTION DRAWINGS  
2. 2018/07/05 95% CONSTRUCTION DRAWINGS  
3. 2018/08/20 100% CONSTRUCTION DRAWINGS

CLIENT FEDERAL BUILDING

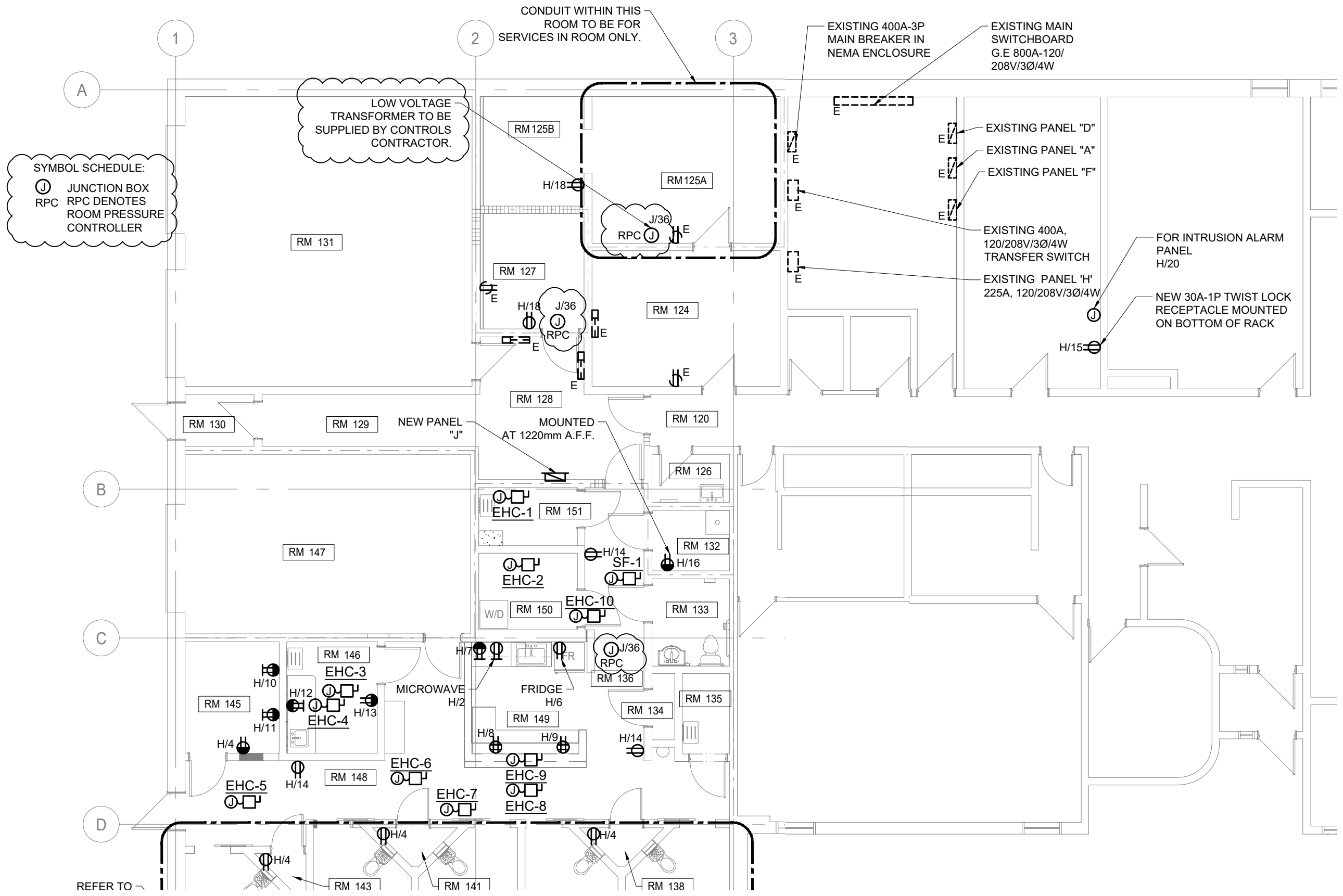
PROJECT INTERIOR RENOVATIONS

CONTENTS MECHANICAL SCHEDULES

PROJECT NUMBER 17180 SHEET NUMBER M3R1

DATE 10/22/2018





SYMBOL SCHEDULE:  
 (J) JUNCTION BOX  
 (RPC) RPC DENOTES ROOM PRESSURE CONTROLLER

**2** NEW MAIN FLOOR POWER PLAN  
 E2R1A 1:100

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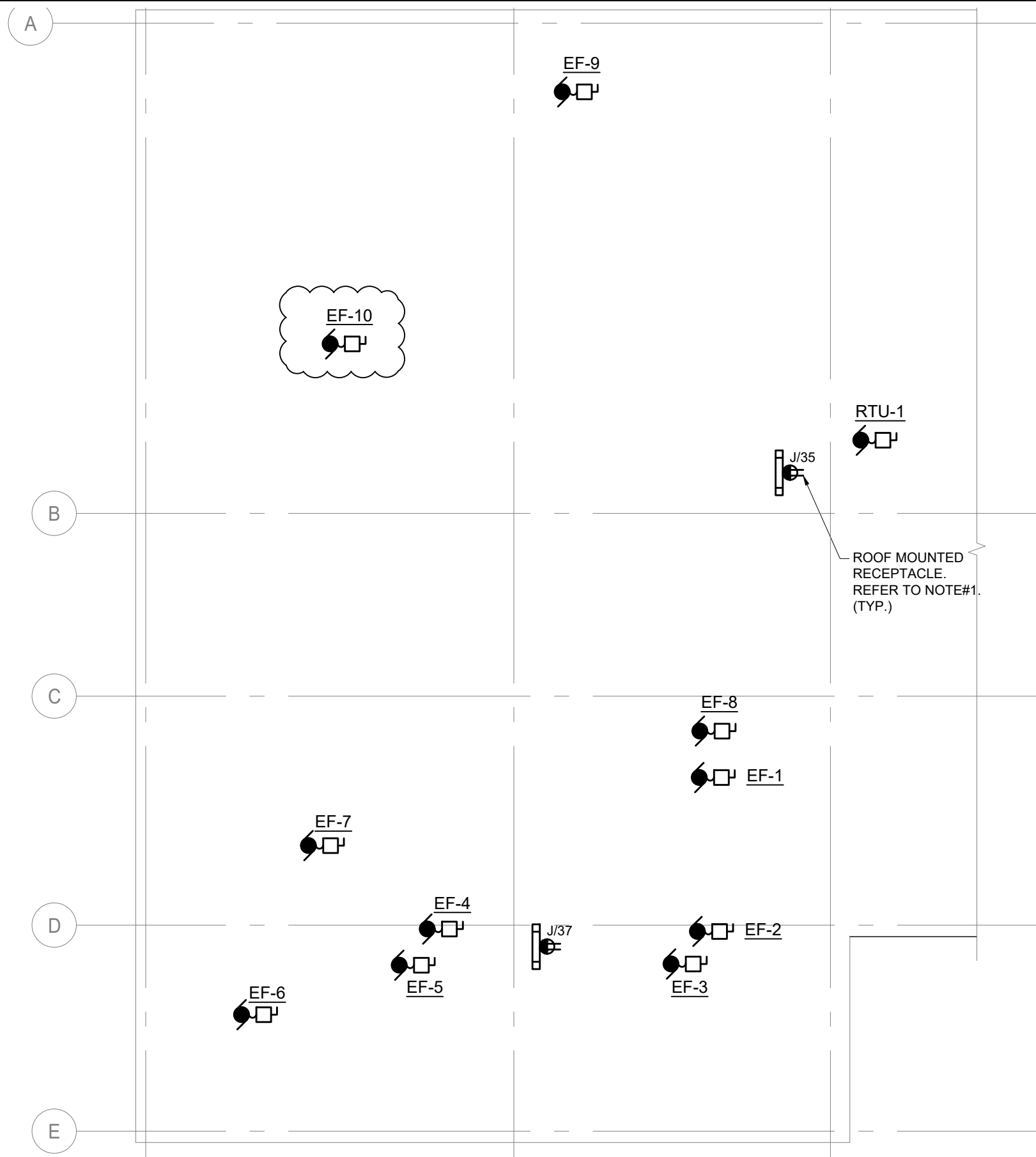
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01	ISSUED WITH ADDENDUM #1	10/22/2018	HCC

**NEW MAIN FLOOR POWER PLAN**  
 SHEET TITLE

RD PL/HCC  
 DRAWN APPVD  
 10/22/2018  
 DATE

FEDERAL BUILDING  
 INTERIOR RENOVATIONS  
 PROJECT ADDRESS  
 PROJECT TITLE

**E2R1A**  
 DRAWING NUMBER



**3** NEW PARTIAL ROOF POWER PLAN  
E2R1B 1:100

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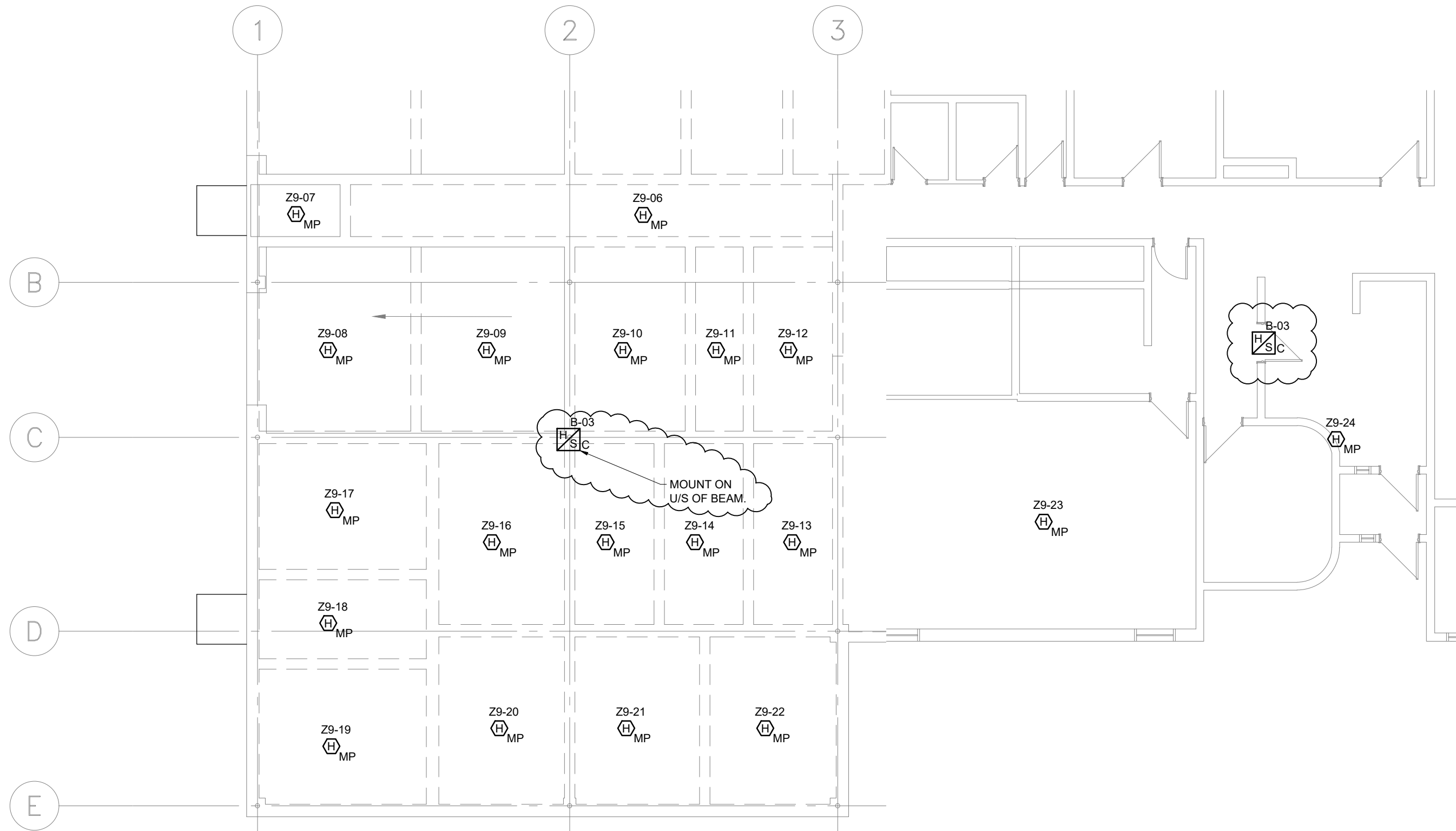
NEW PARTIAL ROOF POWER PLAN  
SHEET TITLE

RD PL/HCC  
DRAWN APPVD  
10/22/2018  
DATE

FEDERAL BUILDING INTERIOR RENOVATIONS  
PROJECT ADDRESS  
PROJECT TITLE

**E2R1B**  
DRAWING NUMBER





**1 CRAWLSPACE FIRE ALARM SYSTEMS PLAN**  
 E3R1A 1:100

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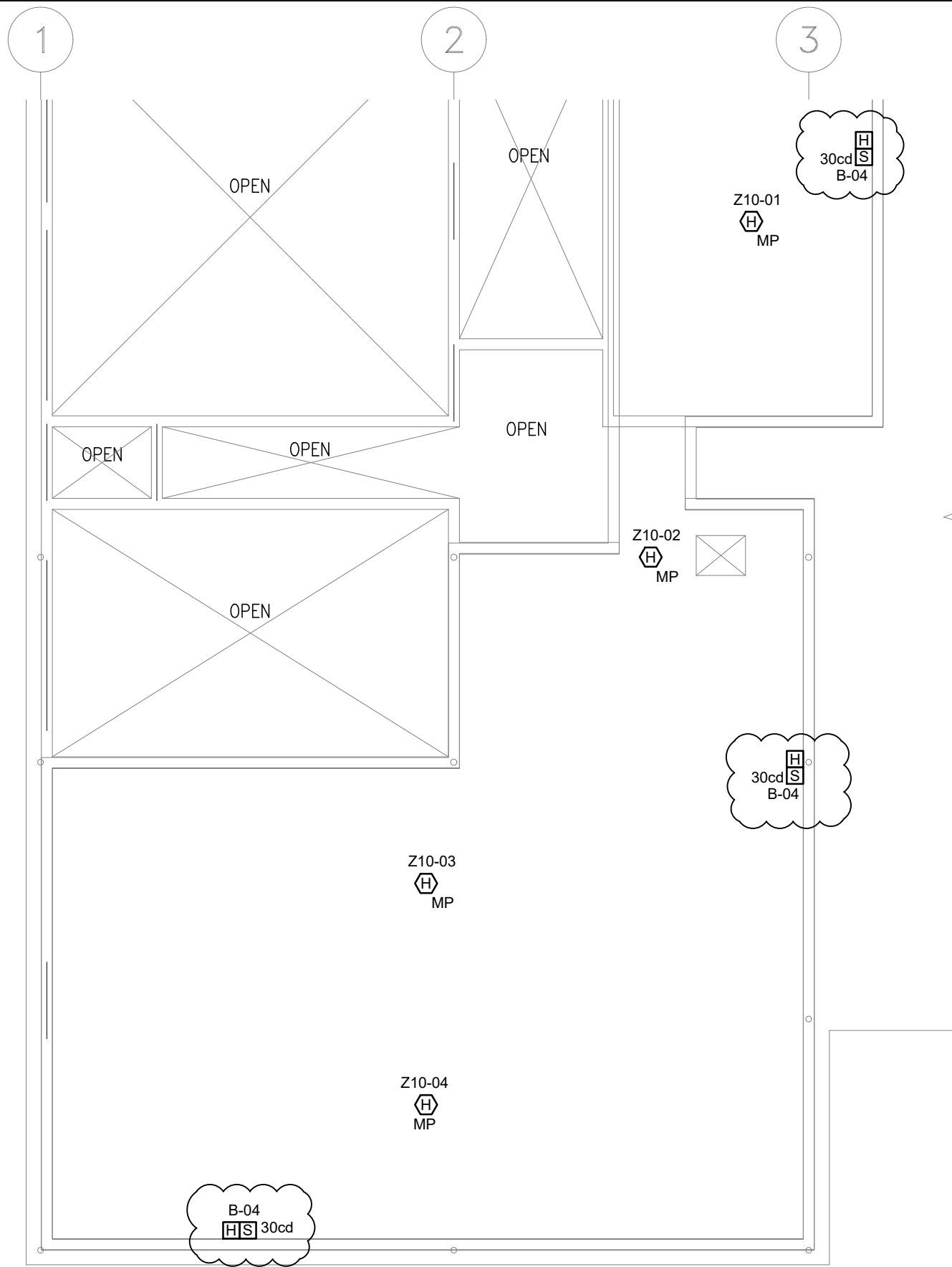
NO.	DESCRIPTION	DATE	BY
01	ISSUED WITH ADDENDUM #1	10/22/2018	HCC

**CRAWLSPACE FIRE ALARM SYSTEMS PLAN**  
 SHEET TITLE

RD PL/HCC  
 DRAWN APPVD  
 10/22/2018  
 DATE

**FEDERAL BUILDING INTERIOR RENOVATIONS**  
 PROJECT ADDRESS  
 PROJECT TITLE

**E3R1A**  
 DRAWING NUMBER

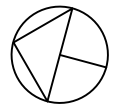


B

C

D

E



**3** NEW ATTIC SPACE FIRE ALARM SYSTEMS PLAN  
 E3R1B 1:100

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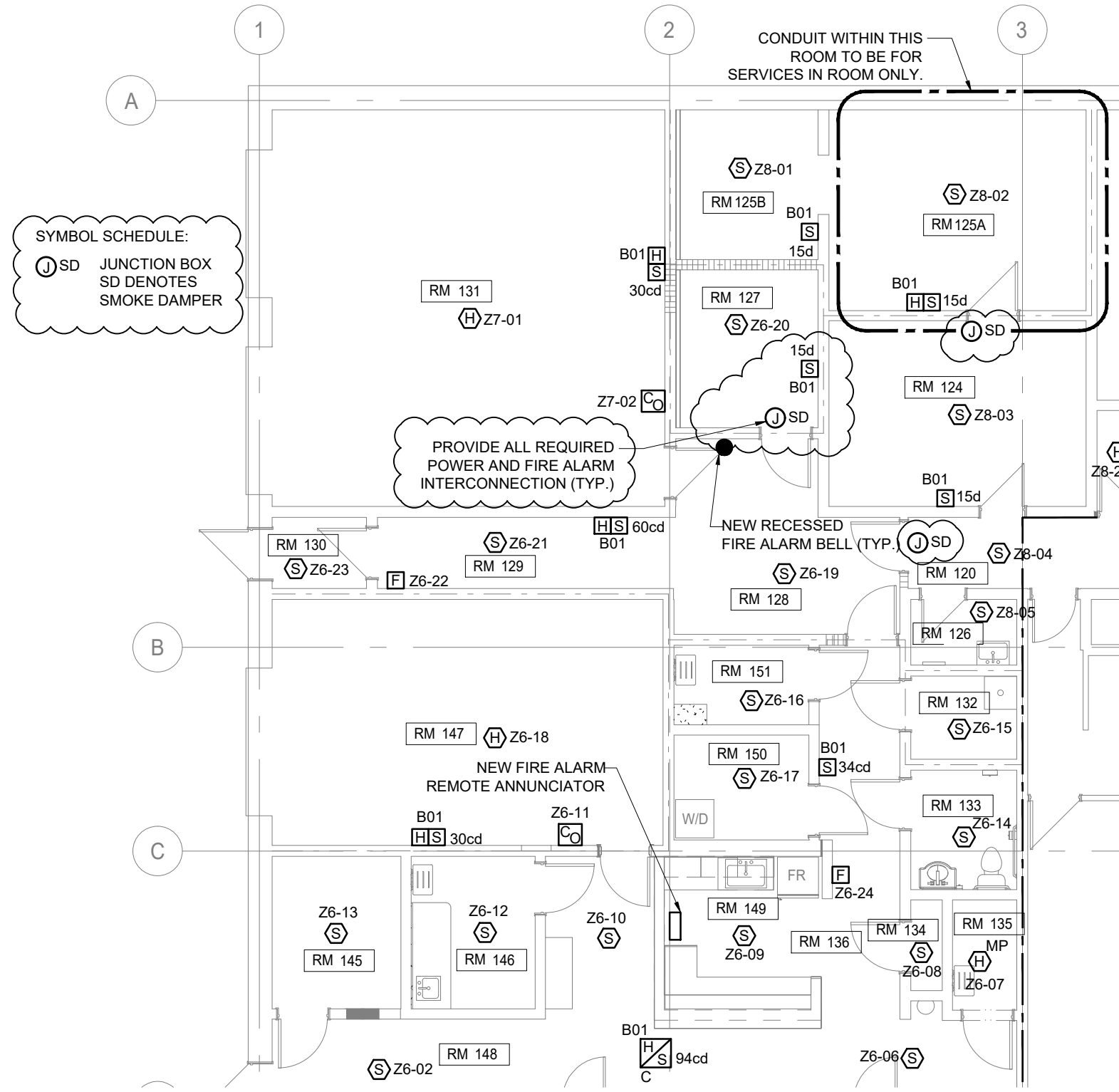
NO.	DESCRIPTION	DATE	BY
01	ISSUED WITH ADDENDUM #1	10/22/2018	HCC

NEW ATTIC SPACE FIRE ALARM SYSTEMS PLAN  
 SHEET TITLE

RD PL/HCC  
 DRAWN APPVD  
 10/22/2018  
 DATE

FEDERAL BUILDING INTERIOR RENOVATIONS  
 PROJECT ADDRESS  
 PROJECT TITLE

**E3R1B**  
 DRAWING NUMBER



SYMBOL SCHEDULE:  
 (J) SD JUNCTION BOX  
 SD DENOTES SMOKE DAMPER

PROVIDE ALL REQUIRED POWER AND FIRE ALARM INTERCONNECTION (TYP.)

CONDUIT WITHIN THIS ROOM TO BE FOR SERVICES IN ROOM ONLY.

NEW FIRE ALARM REMOTE ANNUNCIATOR

NEW RECESSED FIRE ALARM BELL (TYP.)

**2** NEW MAIN FLOOR FIRE ALARM SYSTEMS PLAN  
 E4R1 1:100

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**E4R1**  
 DRAWING NUMBER

# MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENT			ELECTRICAL CHARACTERISTICS			PACKAGED UNIT	CONTROLS				F.A SHUT DOWN	CIRCUITRY INFORMATION				NOTES
ITEM	DESCRIPTION	LOCATION	HP/KW	AMPS	VOLTS/Ø		TYPE	SUPPLIED BY	INSTALLED BY	WIRED BY		PANEL-CCT #	O.C.P.	WIRE	CONDUIT	
EHC-1	ELECTRIC HEATING COIL	ROOM 151	2.0KW	9.60	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/1, 3	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-2	ELECTRIC HEATING COIL	ROOM 150	2.6KW	12.50	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/2, 4	20A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-3	ELECTRIC HEATING COIL	ROOM 146	4.30KW	20.7	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/5, 7	30A, 2P	2 #10 AWG RW 90 Cu. + GRD	21mm	
EHC-4	ELECTRIC HEATING COIL	ROOM 146	3.40KW	16.3	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/6, 8	30A, 2P	2 #10 AWG RW 90 Cu. + GRD	21mm	
EHC-5	ELECTRIC HEATING COIL	ROOM 148	2.4KW	11.5	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/9, 11	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-6	ELECTRIC HEATING COIL	ROOM 148	2.4KW	11.5	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/10, 12	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-7	ELECTRIC HEATING COIL	ROOM 148	2.4KW	11.5	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/13, 15	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-8	ELECTRIC HEATING COIL	ROOM 148	2.4KW	11.5	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/14, 16	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-9	ELECTRIC HEATING COIL	ROOM 148	2.4KW	11.5	208V/1Ø		T-STAT	MECH	MECH	ELEC.		J/17, 19	15A, 2P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EHC-10	ELECTRIC HEATING COIL	ROOM 136	30.0KW	83.3KW	208V/3Ø		T-STAT	MECH	MECH	ELEC.		J/27, 29, 31	110A, 3P	3 #2 AWG RW 90 Cu. + GRD	41mm	
RTU-1	ROOF TOP UNIT	ROOF	-	25.4MCA	208V/3Ø	X		MECH.	MECH.	MECH.	X	J/21, 23, 25	35A-3P	3 #8 AWG RW 90 Cu. + GRD	27mm	
SF-1	SUPPLY FAN	ROOM 136	1/4HP	5.8FLA	120V/1Ø		RPC	MECH.	MECH.	ELEC.		J/33	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-1	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/18	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-2	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/20	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-3	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/22	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-4	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/24	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-5	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/26	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-6	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/28	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-7	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/30	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-8	EXHAUST FAN	ROOF	1/4HP	5.8FLA	120V/1Ø		MS	MECH.	MECH.	ELEC.		J/32	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-9	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		RPC	MECH.	MECH.	ELEC.		J/34	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	
EF-10	EXHAUST FAN	ROOF	FRAC	-	120V/1Ø		RPC	MECH.	MECH.	ELEC.		J/38	15A-1P	2 #12 AWG RW 90 Cu. + GRD	21mm	

**NOTES:**

1. ELECTRICAL CONTRACTOR TO CONFIRM FINAL LOCATION OF ALL EQUIPMENT WITH MECHANICAL DRAWINGS PRIOR TO ROUGHING IN OF CONDUIT. CONFIRM FINAL EQUIPMENT RATINGS WITH MECHANICAL PRIOR TO ROUGHING-IN OF CONDUIT, WIRING AND CIRCUIT BREAKERS. SIZE OVERLOADS ACCORDINGLY. CONFIRM FINAL RATINGS WITH EQUIPMENT NAMEPLATES. INFORM ENGINEER OF ANY DISCREPANCIES AND OR DEVIATIONS PRIOR TO ROUGHING IN OF EQUIPMENT. MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROLS/LOW VOLTAGE WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LINE VOLTAGE POWER.
2. ALL LOW VOLTAGE CONTROL WIRING TO BE BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS. ALL CONDUIT AND 120V CIRCUITING REQUIRED FOR MECHANICAL AND ELECTRICAL CONTROLS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
3. ALL STARTERS TO BE SUPPLIED, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE INDICATED.
4. PROVIDE DISCONNECTS FOR ALL EQUIPMENT AS REQUIRED.
5. ELECTRICAL CONTRACTOR TO CONFIRM EQUIPMENT RATINGS PRIOR TO ROUGH-IN.

**FIRE ALARM SHUTDOWN**  
 FIRE ALARM SHUTDOWN C/W HOA AT FIRE ALARM PANEL  
 DUCT DETECTOR AND SHUTDOWN ON SEPARATE ZONE.

**CONTROLS**

- T\*STAT. = THERMOSTAT
- H\*STAT. = HUMIDISTAT
- EMCS = ENERGY MANAGEMENT CONTROL SYSTEM
- TC = TIME CLOCK
- MT = MANUAL TIMER
- MS = MANUAL SWITCH
- VSC = VARIABLE SPEED CONTROL
- APS = AIR PROVING SWITCH
- COD = CARBON MONOXIDE DETECTOR
- FA = FIRE ALARM INTERLOCK
- AUTO = INTEGRAL AUTO SWITCH ACTIVATION
- FLOAT = FLOAT SWITCH
- RPC = ROOM PRESSURE CONTROLLER



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**MECHANICAL EQUIPMENT SCHEDULE**  
SHEET TITLE

RD PL/HCC  
DRAWN APPVD  
10/22/2018  
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**FEDERAL BUILDING INTERIOR RENOVATIONS**  
PROJECT ADDRESS  
PROJECT TITLE

**E5R1A**  
DRAWING NUMBER

## NEW PANELBOARD DIRECTORY "J"

ITEM	LOAD (kW)	OCP	C	C	ITEM	LOAD (kW)	OCP
EHC-1	1.00	15A, 2P	1	2	EHC-2	1.30	20A, 2P
	1.00		3	4		1.30	
EHC-3	2.15	30A, 2P	5	6	EHC-4	1.70	30A, 2P
	2.15		7	8		1.70	
EHC-5	1.20	15A, 2P	9	10	EHC-6	1.20	15A, 2P
	1.20		11	12		1.20	
EHC-7	1.20	15A, 2P	13	14	EHC-8	1.20	15A, 2P
	1.20		15	16		1.20	
EHC-9	1.20	15A, 2P	17	18	EF-1	0.10	15A
	1.20		19	20	EF-2	0.10	15A
RTU-1	3.05	35A, 2P	21	22	EF-3	0.10	15A
	3.05		23	24	EF-4	0.10	15A
	3.05		25	26	EF-5	0.10	15A
EHC-10	10.0	110A, 3P	27	28	EF-6	0.10	15A
	10.0		29	30	EF-7	0.10	15A
	10.0		31	32	EF-8	0.10	15A
SF-1	0.7	15A	33	34	EF-9	0.10	15A
ROOF MOUNT RECEPTACLE	1.00	20A	35	36	RPC (x3)	1.00	15A
ROOF MOUNT RECEPTACLE	1.00	20A	37	38	EF-10	0.10	15A
SPARE		15A	39	40	SPACE		
SPARE		15A	41	42	SPACE		
SPARE		15A	43	44	SPACE		
SPARE		15A	45	46	SPACE		
SPARE		15A	47	48	SPACE		
SPARE		15A	49	50	SPACE		
SPARE		15A	51	52	SPACE		
SPACE			53	54	SPACE		
SPACE			55	56	SPACE		
SPACE			57	58	SPACE		
SPACE			59	60	SPACE		
SPACE			61	62	SPACE		
SPACE			63	64	SPACE		
SPACE			65	66	SPACE		

NOTES:	MOUNTING: SURFACE RATING: 225A, 120/208V/3Ø/4W
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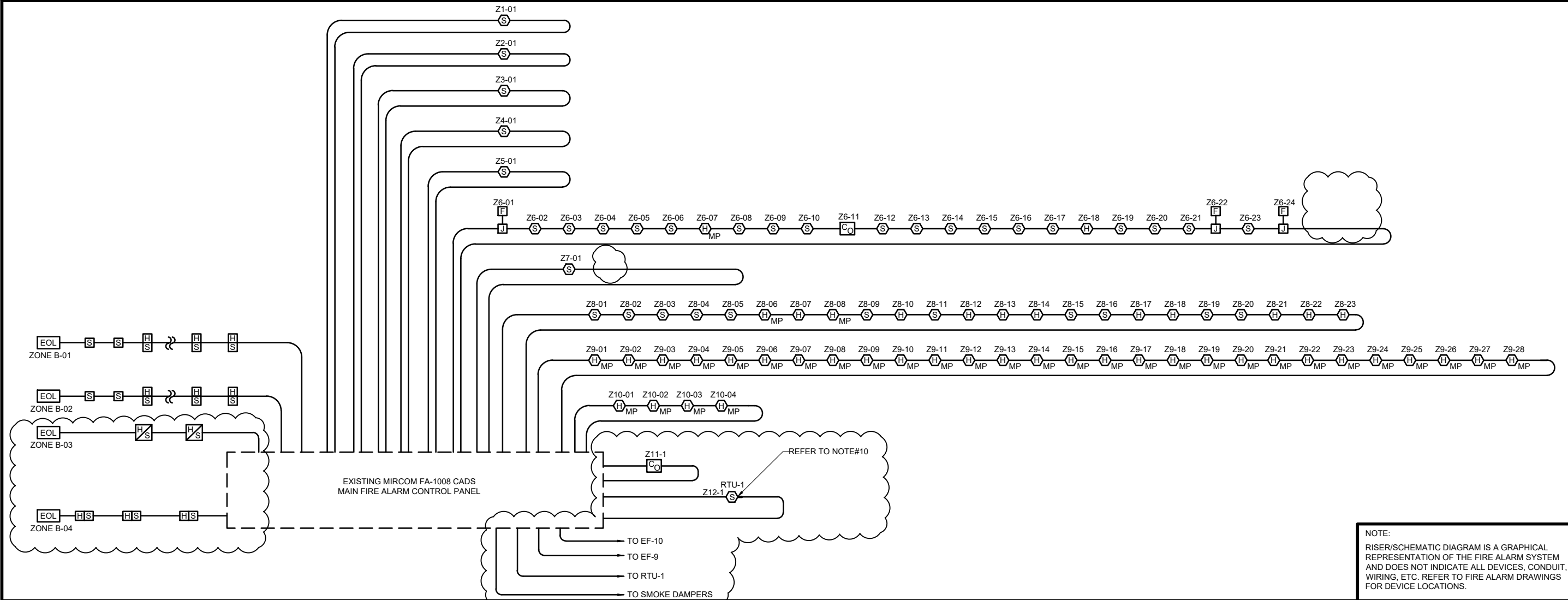
**NEW PANELBOARD  
 DIRECTORY "J"**  
 SHEET TITLE

RD DRAWN	PL/HCC APPVD
10/22/2018 DATE	

**FEDERAL BUILDING  
 INTERIOR RENOVATIONS**  
 PROJECT ADDRESS  
 PROJECT TITLE

**E5R1B**  
 DRAWING NUMBER

# FIRE ALARM RISER DIAGRAM



**NOTE:**  
RISER/SCHEMATIC DIAGRAM IS A GRAPHICAL REPRESENTATION OF THE FIRE ALARM SYSTEM AND DOES NOT INDICATE ALL DEVICES, CONDUIT, WIRING, ETC. REFER TO FIRE ALARM DRAWINGS FOR DEVICE LOCATIONS.

**NOTES:**

1. ELECTRICAL CONTRACTOR TO PROVIDE 10 LOOPS AS INDICATED:
 

1- ROOM 137	9- CRAWLSPACE
2- ROOM 139	10- ATTIC
3- ROOM 140	11- CO DETECTOR
4- ROOM 142	12- RTU-1 SMOKE DUCT
5- ROOM 144	13- SPARE
6-	14- SPARE
7- ROOM B1	15- SPARE
8- OFFICE AREA	16- SPARE

2. ALL WIRING FOR NOTIFICATION DEVICES TO BE WIRED IN CONDUIT WITH FAS105 CABLE IN CLASS A CONFIGURATION. PROVIDE SEPARATE CONDUIT SYSTEM FOR EACH LOOP.
3. ALL FIRE ALARM WIRING TO BE FAS 105, RUN IN MINIMUM OF 21mm EMT.
4. ELECTRICAL CONTRACTOR TO PROVIDE FAULT ISOLATION MODULES WHEN ENTERING AND LEAVING EACH FIRE ALARM ZONE PER NATIONAL BUILDING CODE OR A LESSER NUMBER WHERE RECOMMENDED BY THE MANUFACTURER. THIS DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADDITIONAL MODULES AS REQUIRED WHETHER SHOWN OR NOT IN ORDER TO ACCOMMODATE THE ACTUAL NUMBER OF DEVICES AND ROUTING OF WIRING. EACH MODULES TO BE CLEARLY LABELED WITH A RIVETED LAMACOID AND READILY ACCESSIBLE FOR INSPECTION. MODULES ARE NOT BE INSTALLED ABOVE SUSPENDED CEILINGS. AS-BUILT DRAWINGS TO REFLECT THE LOCATION OF EACH ISOLATION MODULE.
5. THE OPERATION OF ANY MANUAL PULL STATION OR DETECTION TYPE DEVICE TO TRIP THE FIRE ALARM CONTROL PANEL CAUSING IT TO GO INTO ALARM. ALL FIRE ALARM SIGNALLING DEVICES TO SOUND CONTINUOUSLY UNTIL THE SYSTEM IS MANUALLY RESET AT THE CONTROL PANEL.
6. ELECTRICAL CONTRACTOR TO INCLUDE ALL COSTS ASSOCIATED WITH SETTING-UP, TESTING AND THE VERIFICATION OF THE FIRE ALARM SYSTEM. THE MANUFACTURER WITH THE ASSISTANCE OF THE ELECTRICAL CONTRACTOR AND THE OWNER'S REPRESENTATIVE TO PERFORM A COMPLETE FIRE ALARM VERIFICATION AFTER THE INSTALLATION HAS BEEN COMPLETE. A CERTIFICATE OF VERIFICATION AND A COMPLETE REPORT SHALL BE SENT TO THE OWNER AND ENGINEER REPRESENTATIVE FOR REVIEW. THE ENTIRE FIRE ALARM SYSTEM AND INSTALLATION SHALL CARRY A ONE (1) YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
7. THE ENTIRE INSTALLATION TO BE THE FULL SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
8. DIVISION 28 TO SUPPLY AND INSTALL SMOKE DUCT DETECTOR TO ROOF TOP UNIT SUPPLY DUCT, INSTALL IN STRAIGHT SECTION OF DUCT.
9. DIVISION 28 TO WIRE AND CONNECT ROOF TOP UNIT TO FIRE ALARM PANEL FOR FAN SHUTDOWN.
10. PROVIDE RELAY CARD FOR RTU-1 SHUTDOWN.
11. PROVIDE RELAY CARD FOR EF-9 SHUTDOWN.
12. INTERCONNECT SMOKE DAMPERS TO FIRE ALARM. DAMPERS CLOSE UPON ACTIVATION OF FIRE ALARM.
13. PROVIDE RELAY CARD FOR EF-10 SHUTDOWN.

**SYMBOL SCHEDULE:**

	SMOKE DETECTOR
	HEAT DETECTOR
	MP DENOTES MOISTURE PROOF
	JUNCTION BOX
	MANUAL PULL STATION
	CARBON MONOXIDE DETECTOR
	HORN/STROBE
	STROBE
	END OF LINE DEVICE
	RELAY MODULE (OUTPUT)
	DUCT SMOKE DETECTOR
	MONITOR MODULE
	DUCT DETECTOR REMOTE TEST STATION
	MOTOR

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**FIRE ALARM RISER DIAGRAM**  
SHEET TITLE

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**FEDERAL BUILDING INTERIOR RENOVATIONS**  
PROJECT ADDRESS  
PROJECT TITLE

**E6R1**  
DRAWING NUMBER