### ADDENDUM 3

DATE:	November 18, 2016
PROJECT:	MSB First Floor Infill LRC 3 & 4
RFP NO:	744-R1705
OWNER:	The University of Texas Health Science Center at Houston
TO:	Prospective Proposers

This Addendum forms part of and modifies Proposal Documents dated, October 19, 2016, with amendments and additions noted below.

### 2.1 Submittal Deadline

UTHealth will accept proposals submitted in response to this RFP until 2:00PM, Central Standard Time (CST) on **Monday, December 12, 2016** (the **"Submittal Deadline**").

### 2.2 UTHealth Contact Person

University instructs interested parties to restrict all contact and questions regarding this RFP to written communications delivered (i) in accordance with this Section on or before **Wednesday, November 23, 2016 at 5PM CST** (**Question Deadline**), or (ii) if questions relate to Historically Underutilized Businesses, in accordance with **Section 2.5** of this RFP.

University will provide responses as soon as practicable following the Question Deadline. University intends to respond to all timely submitted questions. However, University reserves the right to decline to respond to any question.

### 2.4 Key Events Schedule

Deadline for Questions/Concerns (ref. Section 2.2 of this RFP)	Wednesday, November 23, 2016 5:00PM CST
Submittal Deadline (ref. <b>Section 2.1</b> of this RFP)	Monday, December 12, 2016 at 2:00PM CST
HSP Submittal Deadline (ref. Section 2.5 of this RFP)	Tuesday, December 13, 2016 at 2:00PM CST

### 2.5 Historically Underutilized Businesses

2.5.6 HUB Subcontracting Plans will be evaluated on <u>Tuesday</u>, <u>December 13, 2016 at 2:00PM CST</u>. An email will be sent to all Respondents indicating those plans that passed and failed. At that time, the bids with a passing HUB Subcontracting Plan will be opened. The following questions were submitted before the deadline and the responses are in red:

- Please confirm that this project is to follow the Harris County Building Construction Prevailing Wage Rates (Quarter 4 of 2016) found at <u>http://appsga.harriscountytx.gov/AE/hcpid/prevailingwage.aspx</u> The prevailing wage used for this project can be found in the Special Conditions – Appendix Seven of the RFP documents.
- 2. Please confirm that a full time superintendent is required for the duration of the project. Yes.
- 3. Please confirm that test and balance scope of work will be by the owner. Yes. TAB by owner.
- 4. Will temporary partitions be required on the ground level as well as level 1? We forsee a separating partition being required on the ground floor to separate the occupied area from the construction noise/dust/disruption.
- Will the work beyond the borders of the project as shown on the drawings be required during after-hours? New architectural drawings are addressed within this Addendum.
- 6. Will noisy work be required after hours? Noisy/dusty/disruptive work is only allowed after hours as indicated in our UGC/SC.
- For door type A00, is the frame material hollow metal? No specification was provided for hollow metal. Only a aluminum door and frames specification was provided. Hollow metal, no aluminum frames. Specifications provided within this Addendum – See Section 08 23 13.
- Will door closers need to be provided, as they are not called for in the drawings? Door closers are called out in the specs as provided for doors UNO. No door closers.
- General note D on page DM1.01A states to remove all existing tubing back to the main for any pneumatic terminal units, are there any pneumatic terminal units within out scope of work? If so, where please show on drawing or detail? No General Note D on DM1.01A. Note 1 on DM1.01A clearly notes to remove dashed existing HVAC.
- The room finish schedule calls for 2'x4' ACT, the specifications call for 12"x12" ACT and the reflected ceiling plans show 2'x2' ACT. Please clarify the ACT required for this project. The tile specified within this Addendum.
- Provide interior elevations or dimensions for glazing that is to receive new horizontal louver blinds.
   GC to verify dimensions required.
- 12. Provide fire-safing insulation specifications. UL design included within this Addendum.

- 13. The standard interior floor joint assemblies (Inpro; 316 Series) are not fire rated. If we are to provide a fire rated floor joint assembly, provide more information on the desired assembly. Also, according to the manufacturers' website, the 316 Series is only for joint widths spanning 2"-3". This information conflicts with detail 4/S-200, the only detail found showing an Expansion joint, shows a 1" expansion joint. There is no expansion joint, detail 4 S-200 to be removed as noted within this Addendum.
- 14. Please confirm that the only expansion joint assemblies in our scope of work will be 1" assemblies running parallel to the existing storefront systems we will be removing. There is no gap between existing and new concrete slabs.
- 15. Provide a revised sheet showing exit signs to be replaced in Alternate #3. Addressed within this Addendum.
- Please provide a spec section for the "black-out" window film called out for on detail 16 on A-520.
   Existing spandrel glass, note removed
- Please provide details, 21/A-520, 22/A-520 and 23/A520. They are called out in the partition type schedule but are not shown on sheet A-520.
   Wall type removed, will not be rated
- 18. Please clarify the extent of Alternate #3, what are the boundaries to the replacement of the ceiling tiles at the corridors? As defined within this Addendum
- 19. Please provide a new bid form which incorporates Alternates 1, 2, 3 plus an E1 Alternate. Alternates clarified within this Addendum.

Alternate #1: Removed – Add to base

a. Drawing note #16 on sheet EL1.01AE, "NEW BASE BID 2 X 4 FLUORESCENT LIGHT FIXTURE, TYPE AS NOTED. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1." (Alternate 1 turns a large portion of the new Type A light fixtures to Type A LED light fixtures)

Alternate #2: Removed – Add to base

a. Drawing note #2 on sheet EL1.01AE, "FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. REMOVE AND REINSTALL LIGHT FIXTURES AS REQUIRED TO INSTALL NEW HVAC TERMINAL UNITS AND DUCTWORK. RE: DEL1.01A AND EL1.01 FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.

b. Drawing note #3 on sheet EL1.01AE, "FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. RE: DEL1.01A AND EL1.01 FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.

c. Drawing note #9 on sheet EL1.01AE, "FOR BASE BID, INSTALL FLUORESCENT LIGHT FIXTURES, TYPE AS NOTED, IN THIS ROOM.

ALTERNATE 2, PROVIDE (2) NEW TYPE A LED LIGHT FIXTURES IN THIS ROOM."

d. Notes like these appear on EL1.01AW, several on DEL1.01A and EL1.01A

### Alternate #3: Removed – Add to base

a. Drawing note #5, 6 & 7 on sheet EL1.01A, "BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS A REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE REINSTALLED. ALTERNATE 3, PROVIDE (xx) NEW TYPE A LED LIGHT FIXTURES AND NEW TYPE X1 OR X2 LED EXIT SIGNS TO REPLACE EXISTING EXIT SIGNS IN THIS CORRIDOR. CIRCUIT NEW CORRIDOR LIGHT FIXTURES TO EXISTING NORMALAND EMERGENCY BRANCH CIRCUITS WHISH SERVED EXISTING LIGHTING FIXTURES WHICH ARE BEING REPLACED. CIRCUIT NEW EXIT SIGNS TO EXISTING EMERGENCY CIRCUITS WHICH SERVED THE EXISTING EXIT SIGNS."

b. Drawing note #7 on sheet DEL1.01A, "BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3, REMOVE ALL EXISTING CORRIDOR CEILING/LIGHTING REPLACEMENT. RE: 01/EL1.01A FOR NEW CORRIDOR LIGHTING FIXTURES AND EXIT SIGNS.

c. Drawing note #7 on sheet EP1.01A, "BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3, REMOVE ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES FOR CORRIDOR CEILING REPLACEMENT AND REINSTALL IN NEW CORRIDOR CEILING.

Another alternate, "E1" found on EL1.0GAW.

- 20. Please confirm that UTHSC will not allow propane forklifts in this building. Propane forklifts are not allowed in the building.
- 21. Please confirm what kind of load the first floor can handle as we will need to bring in equipment to lift the beams into place. These areas were designed for a uniformly distributed live load of 100 PSF per WPM
- 22. On drawing A-161 Reflected Ceiling Plans Level 1, does not indicate the need for furr downs for the beams that will be installed. Ceiling grid is shown to be installed at 9'. Please confirm that the beams will be below that elevation. Ceiling will be 8'
- 23. On drawing A-520 Partition Types and Interior Construction Details (Detail 18), detail shows ceiling to tie in to top of window with slot diffuser. The top of existing window is below the 9' ceiling height that is called for on the plans. Please advise. Ceiling heights are now 8' ceilings, furr down will be required. New detail provided within this addendum.

- 24. On drawing A-160 Reflected Ceiling Plans Ground Floor detail 3, states to demo walls 4" above new ceiling. Offices will need to be completely demoed in order to operate crane during steel erection. Please advise. Offices will be demolished and rebuilt
- 25. On drawing 2/A110 & 1/A111 Please advise if fire rated shafts are to be built at the existing concrete columns along column line A (A110) and H (A-111). If so, please update partition type and provide details. No fire rated shaft walls, fire safing to be installed between floors within existing shafts, detail to be provided in Addendum 3
- 26. On drawing A-130 Please advise if blocking will be required for the furniture shown on A-130.
   Yes, check with manufacturer before installing
- 27. On drawing A-540 Please provide VCT 1 color Armstrong Imperial Texture 51810 Washed Linen
- 28. On drawing A-540 Please confirm the notated door color is correct. VT Industries Red Oak Veneer/ Alpine AL07
- On drawing 16/A520 Please provide specifications for the aluminum sill extension shown.
   Included within this Addendum.
- Please confirm all existing furniture and equipment will be removed and reinstalled by owner.
   UTHealth will remove and reinstall all furniture and equipment with the exception of custom millwork.
- 31. On drawing A-160 & A-161 the reflective ceiling plan show 2 x 2 ceiling tile. On drawing A-540 the schedule has ACT 1 and 2. Please confirm where ACT 1 and 2 are needed on the drawing. Only ACT 2 (2'x2') is in the project
- 32. Plans do not indicate any finishes for the offices which are to remain after the interior storefront windows are removed. We assume that the entire office will require repainting, but are any other finishes such as ceiling or floor replacement required? Please clarify. Yes. A540 indicates the updated finish schedule. Also, there are specific notes on demolition sheets that direct ceiling and flooring replacement required.
- 33. Submission of Proposals requires a CD-ROM copy of the proposal. In the event of changes to the proposals just before submission, is it acceptable to submit the CD-ROM when the HUB plan is due? Yes. The CD-ROM may be submitted with the HUB Subcontracting Plan (HSP) on Tuesday, December 13, 2016.

Additional drawings and Section 08 12 13 are below for clarification as noted in many of the questions above.



No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION
2	11/14/2016	ADDENDUM NO.3
	1	1

214-198R S-20C	Commission Number	Sneet Number
	214-198R	S-200



Reflected Ceiling Plan	
¢	Surface mounted incandescent, compact fluorescent or LED of
0	Recessed incandescent, compact fluorescent or LED downlight
÷	Recessed wall washer - shading indicates direction
	Lay-in or recessed fluorescent light troffers - prismatic lense
	Lay-in or recessed fluorescent light troffers - parabolic lense
	Lay-in or recessed direct and indirect fluorescent light
	Suspended fluorescent strip fixture
0 0	Suspended architectural flourescent strip fixture
	Wall mounted architectural fixture
$\succ - \dashv$	Under cabinet fluourescent light fixture
S	Speaker
$\bigcirc_{sd}$	Smoke detector
$\square$	Supply air grille
	Return/exhaust air grille
$\odot$	Sprinkler head
Te	Ceiling/wall mtd. exit sign - arrow/line indicates direction
Floorplans	

Height	110V, 20A duplex outlet (Height indicated if not standard)
$\overset{Height}{\bigoplus}_{D}$	110V, 20A duplex dedicated outlet (Height indicated if not standard)
${\displaystyle \bigoplus}^{{\scriptstyle Height}}$	220V, 30A duplex outlet (Height indicated if not standard)
Height	110V, 20A quadplex outlet (Height indicated if not standard)
$\bigcirc$	110V, 20A flush floor mounted duplex outlet
	Flush floor mounted telephone outlet
Height	Telephone outlet (RJ11) (Height indicated if not standard)
Height	Computer data outlet (RJ45) (Height indicated if not standard
Height	Combined telephone/computer data outlet (Height indicated if not standard)
Ū	Electrical/communications junction box
FAS ▽	Fire Alarm Strobe
	Fire Alarm Pull
Т	Thermostat
РВ	Door operator push button
CR	Card reader
NCAP	Nurse call alarm panel
\$	Single pole switch
\$ <sub>3</sub>	3-way switch
\$ <sub>D</sub>	Dimmer switch
FEC	Fire extinguisher cabinet
<b>FE</b> ♀	Fire extinguisher on bracket
	Zone valve
evations	
EVD %	Electrical, voice, data, voice/data outlets in elevation
V O W N S	Medical gases/Lab gas outlets (Air, Vacuum, Oxygen, Waste Anes Vac, Nitrogen, Slide
Notes:	
1 See the individual drawings for	additional symbol legends for symbols not shown

1. See the individual drawings for additional symbol, legends for symbols not shown.
2. Refer to the Construction Specifications Institute's (CSI) publication TD-2-6, Standard
Reference Symbols, 10/91 Edition, for additional building element symbols not shown
here or elsewhere in the Drawings.
3. See additional legends located in the specific discipline drawings (Structural, MEP, etc.) for

Note: Refer to the Specifications for abbreviations

A/C Air Conditioning INSUL Insulation A/W Air/Water IPS Inside Pipe Size ACOUS Acoustical ADJ Adjustable JT(S) Joint(s) AFF Above Finish Floo ALUM Aluminum KSI Kips Per Square Inch AMP Ampers AMS Automated ANOD Anodized ATTN Attenuation, Attention LL AUX Auxiliary BLDG Building BLK Black BTU British Thermal Units BTUH Btu Per Hour С Celsius C.I. Cast Iron C.O. Clean Out CFM Cubic Feet Per Minute CJ Construction Joint CKT Circuit CLOS Closet CLR Clear CMU Concrete Masonry Unit COL Column CONC Concrete COND Condensing, Condition CONN Connection CONT Continuous CTR Center CW Cold Water D Depth DESCR Description DET Detail DIA Diameter DIM Dimension DL Dead Load DN Down DWG Drawing E.C. Electrical Contractor EA Each EDF Electronic Drinking Fountain EF Exhaust Fan Elevation, Elevator FI ELEC Electrical EMER Emergency EQ Equal EQUIP Equipment EXT Exterior F Farenheit FACP Fire Alarm Control Panel FD Floor Drain FEC Fire Extinguisher Cabinet FIN Finish STD FLUOR Fluorescent STL FURN Furnish, Furniture G.C. General Contractor GA MTL Galvanized Metal GALV Galvanized GFI Ground Fault Interupter GND Ground GYP BD Gypsum Board H Height H.M. Hollow Metal HARDWD Hardwood HDW Hardware HPDL High Pressure Decorative Laminate HORIZ Horizontal HT Height HVAC Heating, Ventilation, & A/C HW Hot Water HZ Hertz IG Isolated Ground IN Inch

KW Kilowatt LAM Laminate Live Load LTS Lights LPDL Low Pressure Decorative Laminate M.O. Masonry Opening MANUF Manufacturer MAX Maximum MECH Mechanical MED Medium, Medical MIN Minimum MISC Miscellaneous MTG Mounting, Meeting MTL Metal, Material N.C. Normally Closed N.O. Normally Opened N/A Not Applicable NO Number O.C. On Center O.D. Overflow Drain, Outside Dimension O/A Outside Air PART Partition PB Push Button PLAS LAM Plastic Laminate PLMBG Plumbing PLYWD Plywood PSF Pounds Per Square Foot PSI Pounds Per Square Inch PTD Painted PVC Poly Vinyl Chloride R.D. Roof Drain R/A Return Air RE Refer To REF Reference REINF Reinforced REQ'D Required RH Relative Humidity RO Rough Opening RPM Revolutions Per Minute RTU Roof Top Unit S/A Supply Air SC WD Solid-core Wood SCHED Schedule SIM Similar SPST Single Pole, Single Throw Standard Steel STOR Storage STRUCT Structure, Structural SYS System TEMP Tempered, Temperature THK Thick TTB Telephone Terminal Board TYP Typical UNO Unless Noted Otherwise VAC Volt Alternative Current VDC Volt Direct Current VTR Vent Through Roof W Width W/ With WB Wet Bulb WD Wood WWF Welded Wire Fabric WWM Welded Wire Mesh

Standard Abbreviations

of trade association names.



6431 Fannin Street

	10		Houston, Texas 77030	-
roject Location Map	10	Project Vicinity Map		5
Applicable Codes and Standards 1. International Building Code (IBC) 2009		Cover Sheet	Cover Sheet	
<ol> <li>Life Safety Code, NFPA 101, 2009 Edition</li> <li>Texas Department of Licensing and Regulation (TDLR) - Texas Accessibility</li> </ol>		G-100	General Information	
Standards of the Architectural Barriers Act, 2012 4. NFPA 10 - Fire Extinguishers (Referenced by IBC)		G-102 G-103	Fire Resistive Assemblies Design Reference	
5. NFPA 13 - Installation of Sprinkler Systems (Referenced by IBC) 6. NEPA 70 - National Electrical Code (Referenced by IBC)		G-110	Fire Safety Plan	
7. NFPA 72 - National Fire Alarm Code (Referenced by IBC)		S-000	General Notes	
8. NFPA 220 - Standard on Types of Building Construction (Referenced by NFPA 101)		S-100	Level 1 and Level 2 New Floor Infill Framing	
Occupancy Classification Business, Group B (302.1 IBC)		S-200 S-201	Sections and Details Typical Details	
New Business (6.1.11 NFPA 101)				
Construction Classification		A-110 A-111	Floor Plan East Floor Plan West	
Туре II (222) (NFPA 220)		A-130	Equipment and Furniture Plan	
Fire Protection		A-161 A-162	Demolition Reflected Ceiling Plan - Ground Level Reflected Ceiling Plans -Ground Level	
<ol> <li>Existing sprinkler system shall be modified to fully sprinkle new construction, in conformance to NFPA 13 (IBC).</li> </ol>		A-163	Demolition Reflected Ceiling Plan - Level 1	
<ol><li>A manual fire alarm system and automatic fire detection system is required. An electrically supervised, automatic smoke detection system is required in corridors.</li></ol>		A-104 A-520	Partition Types and Interior Construction Details	
and waiting areas that are open to corridors.		A-540	Door and Window Details	
any point. (NFPA 10)		MEP0.0	Mechanical/Electrical/Plumbing Symbols/Abbreviations/General Notes	
5. Maximum allowable area per fire extinguisher: 11, 250 Sq.Ft.		MEP0.1 M1.0GAE	Mechanical/Electrical/Plumbing Schedules And Details Mechanical Demolition and Alteration Plans Ground Floor East	
Occupant Load and Egress (IBC Table 1004.1.1)		M1.0GAW	Mechanical Demolition and Alteration Plans Ground Floor West	
1. Occupant Load (IBC, NFPA): Existing Assembly Areas (4,152 Sq.Ft./7 Sq.Ft. per Person) 594		DM1.01A M1.01A	Mechanical Demolition Plan First Floor North Mechanical Alteration Plan First Floor North	
Existing Business Areas (69,875 Sq.Ft./100 Sq.Ft. per Person) 699 New Business Area (2,170 Sq.Ft./100 Sq.Ft. per Person) 22		M1.01AE	Mechanical Demolition and Alteration Plans First Floor East	
Total: 1315		M1.01AW	Mechanical Demolition and Alteration Plans First Floor West	
Exit Width Required (0.2 In./Person) (NFPA): 263 inches		EL1.0GAE	Electrical Lighting Demolition and Alteration Plans Ground Floor East	
3. Arrangement of Exits:     398 inches		EL1.0GAW EP1.0GAE	Electrical Lighting Demolition and Alteration Plans Ground Floor West Electrical Power Demolition and Alteration Plans Ground Floor East	
Minimum Number of Exits Required (IBC):3Number of Exits Provided:10		EP1.0GAW	Electrical Power Demolition and Alteration Plans Ground Floor East	
Minimum Separation Permitted (1/2 Diagonal Dimension of Building): 258 feet		EL1.01A	Electrical Lighting Demolition Plan First Floor North Electrical Lighting Alteration Plan First Floor North	
Actual Separation Provided: 399 feet		EL1.01AE	Electrical Lighting Demolition and Alteration Plans First Floor East	
200 Ft., Any Point to Exit		EP1.01A	Electrical Power Alteration Plan First Floor North	
		EP1.01AE	Electrical Power Demolition and Alteration Plans First Floor East	
Finishes 1. Walls and Ceilings: ASTM E 84 Class A or B (NFPA, IBC)			Electrical Fower Demonstration and Alteration Flans First Floor West	
Exception: May be Class C in rooms with capacity less than 4. (NFPA, IBC) Exception: Class C wainscot less than 1,000 sq. ft. permitted in lobby.		P1.0GAE P1.0GAW	Plumbing Demolition and Alteration Plans Ground Floor East	
		P1.01AE	Plumbing Demolition and Alteration Plans First Floor East	
		P1.01AW	Plumbing Demolition and Alteration Plans First Floor West	
uilding Code Information 1/4" = 1'-0"	7	Drawing Index		2
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		1.100 - 1.136 1.022A 1.105	1.160 1.150	
	1.0E2	1.107		
		1.022 1.302	1.502 1.502 1.154 1.150G 1.150F	
1.244 HERE 1.2M3 1.610 1.6H1 1.2M2 1.416 1.2M1 1.2M1		0E 1.0M1		
		1.30		
	1.006			
	1.006A	1.195 1.191 1.306		
		1.0H1 1.195 - 1.164 1.195 - 1.164		
		1.001J 1.196 1.194 1.192 1.190	1.180 1.178 1.174 1.171 1.170 1.166 1.164 1.164	
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Sector Project Area				—)
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1010 Lamar St Houston, TX 77002 (P) 713-580-8800

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Drawing Name

1" = 50'-0"

1st Floor - Key Plan



Structural Engineer Walter P. Moore 1301 McKinney, Suite 1100 Houston, TX 77010 (P) 713-630-7300 MEP Engineer E&C Engineers and Consultants

No.	Date	Description
1	07/08/2016	Issue for Construction
2	11/14/2016	Addendum 3

# MSB 1st Floor Infill LRC 3 & 4



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Print Date / Time: 11/16/2016 8:35:09 PM

P&W Commission Number	Sheet Number
214-198R	G-100

fasteners 24 in. OC max.

floor and ceiling with fasteners 24 in. OC. max.

DMFCWBS L L C - ProTRAK

MBA METAL FRAMING - ProTRAK

RAM SALES L L C - Ram ProTRAK

1C. Framing Members\* - Floor and Ceiling Runner - Not Shown - In lieu of Item 1 - For use with Item 2C, proprietary channel shaped runners, min 3-1/2 in. wide with 1-1/4 in. long legs fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. TELLING INDUSTRIES L L C - Viper20<sup>th</sup> Track

1D. Framing Members\* - Floor and Ceiling Runners - (Not Shown) - As an alternate to Item 1 - For use with Item 2D, channel shaped, min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners 24 in. OC. max. TELLING INDUSTRIES L L C - TRUE-TRACK\*\*

assembly height

CALIFORNIA EXPANDED METAL PRODUCTS CO - Viper2014

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper2014

2B. Framing Members\* - Steel Studs - As an alternate to Item 2 - For use with Item 1B, channel shaped studs, min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. CLARKDIETRICH BUILDING SYSTEMS - CD ProSTUD

DMFCWBS L L C -- ProSTUD

MBA METAL FRAMING - ProSTUD

RAM SALES L L C - Ram ProSTUD

STEEL STRUCTURAL PRODUCTS L L C - Tri-S ProSTUD

2C. Framing Members\* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1C, proprietary channel shaped steel studs, 1-1/4 in. deep by min 3-1/2 in. min width fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 to 3/4 in. less in length than assembly height. TELLING INDUSTRIES L L C - Viper20<sup>TH</sup>

2D. Framing Members\* - Steel Studs - As an alternate to Item 2 - For use with Item 1D, channel shaped studs, min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. TELLING INDUSTRIES L L C - TRUE-STUDTH

2E. Framing Members\* - Steel Studs - As an alternate to Item 2 - For use with Item 1A (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. MARINO/WARE, DIV OF WARE INDUSTRIES INC - StudRite"

Gypsum Board

3A. Gypsum Board\* - (As an alternate to 5/8 in. Type FSW in Item 3) - Nom. 5/16 in. thick gypsum panels applied vertically. Two layers of 5/16 in. for every single layer of 5/8 in. gypsum board described in Item 4. Horizontal joints on the same side need not be staggered. Inner layer of each double 5/16 in. layer attached with fasteners, as described in item 4, spaced 24 in. OC. Outer layer of each double 5/16 in. layer attached per Item

NATIONAL GYPSUM CO - Type FSW

4. Fasteners - (Not Shown) - For base layer, 1-1/8 in. Type S screws used to attach panels to studs, spaced 8 in. OC. around perimeter and 12 in. OC. in field. Second layer, 1-5/8 in. long Type S screws spaced 12 in. OC. around perimeter and 12 in. OC. in field. Second layer screws staggered 6 in. OC. from base layer. Face layer, 2-1/4 in. Type S screws spaced 8 in. OC. around perimeter and 12 in. OC. in field. Face layer perimeter screws staggered 1 in. OC. from second layer and staggered 6 in. OC. in field. 5. Joint Tape and Compound - Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints. of outer panels.

Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

## Design No. X732

May 13, 2015

Ratings - 3/4, 1, 1-1/2, 2, 3 and 4 Hr. \* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL



1. Spray-Applied Fire Resistive Materials\* - See table below for appropriate thickness. Prepared by mixing with water according to instructions on each bag of mixture. Mixture can be spray or trowel applied in one or more coats to steel surfaces. Min avg density of 55 pcf with min ind value of 50 pcf. For method of density determination, see Design Information Section, Sprayed Material. Surface of material may be lightly finished with a trowel

Rating Hr	Min Thkns In.
3/4	7/16
1	9/16
1-1/2	13/16
2	1
3	1-3/8
4	1-3/4

CARBOLINE CO - Type 241, Type 241 HD. Investigated for exterior use.

CARBOLINE KOREA LTD — Type 241, Type 241 HD. Investigated for exterior use.

CARBOLINE (INDIA) PVT LTD — Type 241, Type 241 HD. Investigated for exterior use.

STONCOR MIDDLE EAST L L C - Type 241, Type 241 HD. Investigated for exterior use.

STONCOR SOUTH CONE S A - Type 241, Type 241 HD. Investigated for exterior use.

Steel Column — Min size of column, Type W10x49.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



STEEL STRUCTURAL PRODUCTS L L C - Tri-S ProTRAK

2. Steel Studs - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, 3-1/2 in. min width, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than

2A. Framing Members\* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1A, proprietary channel shaped steel studs, 1-1/4 in. deep by min 3-1/2 in. min width fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 to 3/4 in. less in length than assembly height.

3. Gypsum Board\* - 5/8 in. thick, 4 ft. wide with beveled, square or tapered edges. Applied vertically with joints centered over studs and staggered between layers. NATIONAL GYPSUM CO - 5/8 in. thick Type FSK, FSL, FSW, FSW-3, FSW-8, FSMR-C, SoundBreak XP Type X

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Fire Resistive Mtl Thkns on Beam In.
1	1	1	9/16
1-1/2	1	1	9/16
1-1/2	1-1/2	1-1/2	7/8
2	1	1	9/16
2	2	2	1-3/16
3	1-1/2	1-1/2	7/8
3	3	3	1-3/4

Spray Applied Fire Resistive Mtl Thkns on Beam In. Restrained Assembly Rating Hr Unrestrained Assembly Rating Hr Unrestrained Beam Rating Hr +Thickness applied to beams' lower flange edge to be 1/4 in. min. The thickness of material required on the steel joist for the various ratings are shown in the following table pray Applied Fire Resistive Mtl Thkns on Joist & Bridging In.

Unrestrained Assembly Rating Hr nrestrained Beam Rating Hr ARABIAN VERMICULITE INDUSTRIES - Type MK-5. WR GRACE & CO - CONN - Types MK-4, MK-5, MK-6/HY, MK-6s, RG, Monokote Acoustic 1

GRACE KOREA INC - Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1

PYROK INC - Type LD. SOUTHWEST FIREPROOFING PRODUCTS CO - Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP,

Alternate Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in one or more is to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose e and oil. When fluted steel deck is used the area between the steel deck and the beams top flange shall be sprayed mir and min ind density of 19/18 pcf, respectively for Types 7GP, 7HD, 105. Min avg and min ind density of 22/19 pcf, vectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information ion.					
	Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.	
	1	1	1	1/2	

1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Fire Resistive Mtl Thkns on Beam In.
1	1	1	7/16
1-1/2	1	1	7/16
1-1/2	1-1/2	1-1/2	3/4
2	1	1	7/16
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-5/16

The thickness of material required on the steel joist for the various Ratings are shown in the following table: Bastwined Carry Applied

or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Type of Concrete Slab	Fire Resistive Mtl Thkns In. Joist & Bridging
1	1	NW or LW	1-1/8
1-1/2	1-1/2	NW or LW	1-3/4
2	2	NW or LW	2-1/4
3	3	NW or LW	2-7/8
R GRACE & CO - CONN - Types Z	- 105, Z-106, Z-106/G, Z-:	106/HY, Monokot	e Acoustic 5.

GRACE KOREA INC - Types Z-106, Z-106/G, Z-106/HY, Monokote Acoustic 5.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 7GP, 7HD.

## 48. Alternate Spray-Applied Fire Resistive Materials — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. The thicknesses shown in the table below are applicable to beams supporting all fluted floor or form units. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementibus mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Concrete Type	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1, 1-1/2, 2	LW	9/16
1-1/2	1, 1-1/2, 2, 3	LW	7/8
1	1, 1-1/2, 2	LW	3/4
1-1/2	1, 1-1/2, 2, 3	LW	1

WR GRACE & CO - CONN - Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC investigated for exterior use . Shear-Connector Studs — Optional — Studs 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long or 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through 6. Electrical Inserts – (Not shown) Classified as "Outlet Boxes and Fittings Classified for Fire Resistance.

CENTRIA — Preset Inserts

For use with 2-1/2 in. lightweight concrete topping over QL-WKX steel floor units. Installed over factory-punched holes in floor units per accompanying installation instructions. Spacing shall not be more than one insert in each 14 sq ft. of floor area with spacing along floor units not less than 48 in. OC. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam. than wire. Restrained Assembly Rating is 3/4 hr with Tapmate II-FS-1 and 1 hr with Tapmate II-FS-2 inserts. CENTRIA — Tapmate II-FS-1, II-FS-2; Series KEB.

(2) Wiremold Co. – After set Inserts. Single-service after set inserts installed per accompanying installation instructions in 2-1/2 in. diam hole core-drilled through min 3-1/4 in. thick concrete topping to top of cell of any min 3 in. deep cellular steel floor unit specified under Item 3. Spacing shall be no more than one insert in each 10 sq ft of floor area in each span with a min center to center spacing of 16 in. If the high potential and low potential raceways of the cellular steel floor unit are separated by a valley filed with concrete, the center to center spacing of the high potential and low potential single-service after set inserts may be reduced to a min of 7-1/2 in. Restrained Assembly Rating is 2 hr or less with internally protected type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.

GRACE KOREA INC - Type Z-146 investigated for exterior use

WIREMOLD CO - Internally protected Type 436 after set insert with Type M4-, M6- or M8- Series single-service

7. Mineral and Fiber Boards\* – (Optional, not shown). Applied over concrete floor with no restriction on board thickness. See Mineral and Fiber Board (CERZ) category for names of manufacturers. Roof Covering Materials\* — (Optional, not shown)Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings. See Built-Up Roof Covering Materials in Building Materials Directory. 9. Insulating Concrete - (not shown) Optional. Various types of insulating concrete prepared and applied in the thickness

A. Vermiculite Concrete — (not shown) Optional. 1. Blend 6 to 8 cu. ft. of Vermiculite Aggregate\* to 94 lb. Portland Cement

> and air entraining agent. Min thickness of 2 in. as measured to the top surface of the structural concrete or foamed plastic (Item 10) when it is ELASTIZELL CORP OF AMERICA

SIPLAST INC

VERMICULITE PRODUCTS INC Blend 3.5 cu. ft. of Type NVC Concrete Aggregate\* or Type NVS Vermiculite Aggregate\* coat, 1/8 in. thickness beneath foamed plast (Item 10) when used, 1 in. min topping thickness.

SIPLAST INC VERMICULITE PRODUCTS INC

Vermiculite concrete may be covered with Roof Covering Materials (Item B. Cellular Concrete - Roof Topping Mixture\* - concentrate mixed with water and Portland

cement per manufacturers specifications. Min. thickness of 2-in. as measured to the top surface o the structural concrete or foamed plastic (Item 10A) when used. Cast dry density and 28— day min. compressive strength of 190 psi as determined with ASTM C495— 66. **CELCORE INC** — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

CELLULAR CONCRETE L L C - Cast dry density of 37 (+ or -) 3.0 pcf. ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

C. Cellular Concrete-Roof Topping Mixture\* — Concentrate mixed with water and Portland cement per manufacturers specifications. 28-day min. compressive strength of 190 psi as determined with ASTM C495-66. LITE-CRETE INC — Cast dry density of 29 (+ or -) 3.0 pcf.

SIPLAST INC - Mix No. 1 or 2. Cast dry density of 32+3 (Mix No. 1) or 36+3 (Mix No. 2) pcf.

D. Perite Concrete -6 cut ft. of Perite Aggregate\* to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min. thickness 2 in, as measured to the top surface of structural concrete or foamed plastic (Item 10A) when it is used. See Perlite Aggregate (CFFX) in Fire Resistance Directory for names of manufacturers. E. Cellular Concrete — Roof Topping Mixture\* — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculte Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.

CELLULAR CONCRETE L L C - Mix No. 3.

F. Floor Topping Mixture\* – (Optional, not shown) – Approx 4.5 gal of water to 41 lbs of NVS Premix floor topping mixture. Slurry coat 1/8 in. thickness beneath foamed plastic (Item 10) when used , 1 in. min topping thickness. SIPLAST INC

Floor Topping Mixture may be covered with Built-Up or Single Membrane Roof Covering. 10. Foamed Plastic\* – (optional – Not Shown) For use only with vermiculite (Item 9A) or cellular (Item 9C) concre Rigid polystyrene foamed plastic insulation having slots and/or holes sandwiched between vermiculite concrete slurry which s applied to the normal or lightweight concrete surface and vermiculite concrete topping (item 9A).

SIPLAST INC VERMICULITE PRODUCTS INC

\*Bearing the UL Classification Mark

Last Updated on 2013-10-23

SIPLAST INC - Mix No. 3.

See Foamed Plastic (CCVW) category for list of manufacturers.





System No. CW-D-2042

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) structural concrete. Perimeter of floor assembly to be provided with min 3 by 3 by 1/4 in. (76 by 76 by 6 mm) thick cast-in-place structural steel angle for weld-attachment of mullion mounting clips (Item

2. Curtain Wall Assembly — The curtain wall assembly shall incorporate the following construction features:

A. Mullion Mounting Clips — Min 4 in. (102 mm) long angles with one nom 4 in. (102 mm) leg for attachment to edge of floor assembly and with one leg approx 4 in. (102 mm) longer than distance to nearest face of mullion. Clips to be formed of min 1/4 in. (6 mm) thick steel. Clips welded to steel angle at edge of floor assembly (Item 1) on each side of vertical mullion (Item 2B) at each floor level. Each clip to be provided with elongated holes to accommodate designed amount of movement. Top edge of each clip to be recessed min 1/2 in. (13 mm) below top surface of floor.

B. Framing — The rectangular tubing mullions (vertical members) and transoms (horizontal members) shall be min 2-1/2 in. (64 mm) wide by 5 in. (127 mm) deep and shall be formed from min 0.085 in. (2.2 mm) thick aluminum. Mullions spaced max 60 in. (152 cm) OC and secured to mullion mounting clips (Item 2A) at each floor level with two 3/8-16 by 4 in. (102 mm) long hex head steel bolts in conjunction with Steel nuts and washers. Interior face of mullions to be max 8 in. (204 mm) from edge of floor assembly. Transoms to be spaced min 36 in. (91 cm) OC. The minimum height from the top of the floor to the bottom of the vision panel sill is 6 in. (152 mm). C. Spandrel Panels — The spandrel panels shall consist of one of the following types:

a. Glass Panels — Nom 1/4 in. (6 mm) thick opaque heat-strengthened glass or nom 1 in. (25 mm) thick insulated glass units with two layers of nom 1/4 in. (6 mm) thick heat-strengthened glass separated by a 1/2 in. (25 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.

b. Aluminum Panels — Nom 1/8 in. (3 mm) thick aluminum panels with 1/4 in. (6 mm) thick edges. Each panel secured in position with aluminum pressure plates in conjunction with gaskets and steel

c. Stone Panels — Nom 1-3/16 in. (46 mm) thick polished granite spandrel panels with 1 in. (25 mm) thick gauged edges. Each panel secured in position with aluminum pressure plates in conjunction with gaskets and steel screws.

D. Vision Panels — Nom 1/4 in. (6 mm) thick transparent heat-strengthened glass or nom 1 in. (25 mm) thick insulated glass units with two layers of nom 1/4 in. (6 mm) thick transparent heat-strengthened glass separated by a 1/2 in. (25 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws

E. Spandrel Panel Perimeter Angles — Nom 1-1/2 by 1-1/2 in. (38 by 38 mm) No. 22 gauge (0.031 in. or 0.79 mm thick) galvanized steel angles installed around entire perimeter of each spandrel panel. Angles recessed from interior face of framing as necessary to accommodate thickness of curtain wall insulation (Item 2G). Angles cut to be discontinuous at mullion mounting clips (Item 2A). Angles screw-attached to mullions and transom along sides and top of each spandrel panel with No. 8 by 1 in. (25 mm) long self-drilling, self-tapping steel screws spaced max 12 in. (305 mm) OC. Angle along bottom of each spandrel panel to be screw-attached to leg of angle on mullion at each end without any direct attachment to transom. At mullion mounting clips, a length of steel angle shall be installed to bridge between the perimeter angles over the mullion mounting clip. The "bridge" shall be cut approx 6 in. (152 mm) longer than the clear space between angles and shall be secured to the perimeter angles with one No. 8 by 1 in. (25

F. Stiffener Tee — Two nom 1-1/2 by 1-1/2 in. (38 by 38 mm) No. 20 gauge (0.038 in. or 0.97 mm thick) galv steel angles secured together, back-to-back, to form stiffener tee for installation in each horizontal seam of the curtain wall insulation (Item 2G) . The angle legs forming the stem of the tee shall be secured together using No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws spaced max 8 in. (204 mm) OC. The tee shall be installed with a clearance of 1/8 to 1/4 in. (3 to 6 mm) at each end and shall be screwattached to the spandrel panel perimeter angles (Item 2E) with No. 10 by 3/4 in. (19 mm) long self-drilling, self-tapping steel screws, with steel washers, through two predrilled 1/4 in. (6 mm) diam holes at each end. One stiffener tee shall be located with its stem at an elevation 2 in. (51 mm) below the top plane of the floor at each floor level.

G. Curtain Wall Insulation\* — Min 2 in. (51 mm) thick mineral wool batt insulation faced on one side with aluminum foil/scrim vapor retarder, supplied in min 36 in. (914 cm) wide batts. Insulation batts to be installed with no vertical seams. Insulation panels tightly-fitted between vertical mullions and between the stem of the stiffener tee (Item 2F) and the transom, flush with the interior surface of framing. Insulation panels secured to spandrel panel perimeter angles and to each stiffener tee with cup head weld pins (Item 2I) or 2-1/2 in. (64 mm) long steel screws with min 1-1/2 in. (38 mm) diameter galv steel clinch shields spaced max 12 in. (305 mm) OC. The horizontal seam between insulation panels shall be located 2 in. (51 mm) below the top plane of the floor at each floor level. THERMAFIBER INC — FIRESPAN 90

H. Framing Covers - Curtain Wall Insulation\* - Min 8 in. (204 mm) wide strips cut from the same min 2 in. (51 mm) thick mineral wool batt insulation used for the curtain wall insulation (Item 2G). Framing covers to be centered over mullions and secured to the spandrel panel perimeter angles with cup head weld pins (Item 2I) or 4-1/2 in. (114 mm) long steel screws with min 1-1/2 in. (38 mm) diameter galv steel clinch shields spaced max 12 in. (305 mm) OC. Where more than one spandrel panel (Item 2C) occurs between vertically separated vision panels, the horizontal transom between spandrel panels shall also be covered with an 8 in. (204 mm) wide framing cover in the same manner as on the vertical mullions. Framing covers on mullions to abut the mineral wool batt safing material (Item 3A) above and below floor.

THERMAFIBER INC — FIRESPAN 90 I. Weld Pin — In lieu of steel screws, No. 12 gauge (2 mm diam) galv steel weld pin with nom 1-3/16 in. (30 mm) diam galv steel cup head. Cup head weld pins provided in two lengths. One length to be equal to thickness of curtain wall insulation (Item 2G) and second length to be equal to thickness of curtain wall insulation plus thickness of framing cover (Item 2H). Cup head weld pins inserted through curtain wall nsulation and mullion covers and welded to spandrel panel perimeter angles max 12 in. (305 mm) OC.

J. Light Gauge Framing\* - Spiral Anchor — (Not Shown) - As an alternate to the weld pins (Item 2I), galv steel wire spiral anchors may be used to secure the framing covers (Item 2H) to the curtain wall insulation (Item 2G) on each side of the mullion. Nom length of spiral anchors to be equal to thickness of curtain wall insulation plus thickness of framing cover. Spiral anchors driven through mullion covers and into curtain wall insulation and spaced max 12 in. OC. THERMAFIBER INC

3. Safing System — Max separation between edge of floor assembly and face of framing members (at time of nstallation) is 8 in. (204 mm). The safing system is designed to accommodate vertical shear movement up to a max

of 5 percent of its installed width. The safing system shall incorporate the following construction features: A. Forming Material\* — Nom 4 pcf (64 kg/m3) density mineral wool batt insulation. Batt sections cut to a min 4 in. (102 mm) width and stacked to a thickness which is min 25 percent greater than the width of linear

gap between the curtain wall insulation and the edge of the concrete floor slab. The stacked forming material is compressed 20 percent in the thickness direction and inserted cut-edge-first into the linear gap such that its top surface is flush with the top surface of the floor assembly. A max of one tightly-butted seam is permitted between mullions. Additional pieces of forming material to be friction-fit into spaces between mullion mounting clips at each mullion location. THERMAFIBER INC — SAF

B. Fill, Void or Cavity Material\* — Min 1/8 in. (3 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray-applied over top of forming material and lapping min 1/2 in. (13 mm) onto the top surface of the floor and onto the curtain wall insulation and framing covers. SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray or SpecSeal Fast Tack Spray

Structural Engineer Walter P. Moore 1301 McKinney, Suite 1100 Houston, TX 77010 (P) 713-630-7300 MEP Engineer E&C Engineers and Consultants 1010 Lamar St Houston, TX 77002 (P) 713-580-8800

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Fire Resistive Assemblies **Design Reference** 



P&W Comr

1 - 1/2

to the beams' lower flange edges is reduced by 1/2 that shown in the table:

1-1/2

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied

13/16

1-9/16



visio	าร	
	Date	Description
	11/14/2016	Addendum 3

# MSB 1st Floor Infill LRC 3 & 4



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No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION
2	11/14/2016	ADDENDUM NO.3
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214-198R S-20C	Commission Number	Sneet Number
	214-198R	S-200



**Demolition First Level - East** 

1/4" = 1'-0"

mission Number	Sheet Number
214-198R	A-110



VISIO	ıs	
	Date	Description
	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3





visio	15	
	Date	Description
	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3
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	Date	Description
	11/14/2016	Addendum 3

# Ceiling Plan - Ground Level



VISIO	ns	
	Date	Description
	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3
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visior	ıs	
	Date	Description
	11/14/2016	Addendum 3

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VISIOI	ns	
	Date	Description
	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3

![](_page_16_Figure_0.jpeg)

Design Diagram	В	CE		Р		
Structure -					 	
Coiling						
Cennig						
Eleor -						
FIOOI	Partition Braced Above Finished Ceiling	Partition to Structure see Schedule for fire ratings) Partition to Structure (2-Hour)		Gyp. Bd. One Side Only, Braced Above Fin. Ceiling		

	Partition Type Schedule													
			Stud/	Stud			Fire I	Fire Rating		Details				
Туре			Block	Thickness	Stud	Limiting		Design		Section		Ceiling/	Design	
Mark	Description	Thickness	Size	(mil)	Spacing	Height	Rating	No.	STC	at Floor	Plan	Structure	Test	Notes
B2S	Partition to 4" above ceiling	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	47	11 A-520	12 A-520	15 A-520	-	
С	Stud Wall to structure	5"												
C2	Partition to structure (non-rated)	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	40	11 A-520	12 A-520	13 A-520	-	
C2S	Partition to structure (non-rated)	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	47	11 A-520	12 A-520	13 A-520	-	
E2	Partition to structure (2-Hour rated)	6 1/8"	3 5/8"	30	1' - 4"	15' - 8"	2-Hour	UL U411	48	16 A-540	17 A-540	18 A-540	-	
P1	One-sided partition to 4" above ceiling	3 1/8"	2 1/2"	18	1' - 4"	0"	-	-	N/A	11 A-520	12 A-520	15 A-520	-	
P2	One-sided partition to 4" above ceiling	4 1/4"	3 5/8"	18	2' - 0"	0"	-	-	N/A	11 A-520	12 A-520	15 A-520	-	

![](_page_17_Figure_1.jpeg)

![](_page_17_Figure_2.jpeg)

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		Finish Mater	ial Schedule		
Type Mark	< Description	Manufacturer	Pattern/Line	Color	Note
Floors					
CPT1	Carpet	Interface Flooring	Furrows II	9214 Georgia Clay	3
VCT1	Vinyl composition tile	Armstrong	Imperial Texture	51810 Washed Linen	5
Base		······	·······································	·······································	
RBC	Rubber base, cove	Roppe		P193 Black/Brown	
Walls				$\sim$	$\sim$
PT1	Paint	$\langle  $ Sherwin Williams	Semi-gloss	SW 7043 Worldly Gray	5
Ceilings ACT2	Acoustical ceiling tile, 2' X 2'	Armstrong			
Misc/Trim	hunn	<u> </u>	·······································	2	
-	NO MATERIAL				
Millwork					
-	NO MATERIAL				
Doors					
Doors WV	Wood Veneer	VT Industries	Red Oak Veneer	Alpine AL07	
Doors WV Frames	Wood Veneer	VT Industries	Red Oak Veneer	Alpine AL07	

Finish Material Schedule

Room Finish Type Schedule									
Finish Type Mark	Floor	Base	Wall	Ceiling	Misc/Trim	Door	Frame	Notes	
F1	CPT1	RBC	PT1	ACT2	-	WV	FPT1		
<sup>E2</sup>	VCI1	RBC	PT1	ACT2					
F13	CPT2	RBS	PT1	ACT2		WV / /	FPT1	8	
F14 Def	ault Floor	RBS	PT1	ACT2	-	WV	FPT1	8	

Room Finish Type Schedule

Scheduled Width

Door Type Schedule														
	Door Frame						Fire							
					Elev.					Sill		Head	Rating	
Туре	Description	Width	Height	Thick.	No.	Mat'l	Finish	Mat'l	Finish	Detail	Jamb Detail(s)	Detail	(min.)	Notes
A00	Interior flush door	3' - 0"	7' - 0"	1 3/4"	1	Wood	DPL1	Steel	FPT1	11 A-540	12 A-540	13 A-540	-	
N04e	Interior double egress narrow lite doors	7' - 4"	7' - 0"	1 3/4"	12	Wood	DPL1	Steel	FPT1	16 A-540	18 A-540	17 A-540	-	
General Notes														

1. See detail 5 A-540 for stud framing around door opening.

HW SET: 01 Office									
Each to	have:								
-3 EA	Hinge	4 1/2"x4 1/2" TA2714	652	MCK					
-1 EA	Entrance Lock	93K7AB14DS3-626		BES					
-1 EA	FSIC Core Only								
-1 EA	Door Stop	406	630	RCK					
-3 EA	Silencers	609	Grey	RCK					

Door Type Schedule

No.	Date	Description
1	07/08/2016	Issue for Construction
2	11/14/2016	Addendum 3

# MSB 1st Floor Infill LRC 3 & 4

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Drawing Name

Door and Window Details

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P&W Commission Number Sheet Number A-540

![](_page_18_Figure_0.jpeg)

<u>DOUBLE DUCT TERMINAL</u>	<u>. UNIT</u>	S		$\sim$	$\sim$	
Plan Designation						<u>Дп</u>
Manufacturer						<u>-</u> K_
<u>Model/Series</u>	<u> </u>		<b>_</b>			_K_
Size						<u> </u>
Terminal_Unit Maximum Airflow	<u> </u>					<u> </u>
Terminal Unit Minimum Airflow	<u> </u>		L			<u> </u>
Design_Cooling Airflow	<u> </u>		<b>_</b>			_Ŋ_
Minimum Cooling Airflow	<u>}</u>		<b>_</b>			_D_'
Cooling Inlet Size	<b>`}</b>		L			_2_
Cooling Flex Duct_Size	<b>`</b> [		<b>_</b>			_ <b>k</b> _
<u> Maximum Heating Airflow</u>	<u> </u>		<b>_</b>			_K_
Minimum Heating Airflow	<u> </u>		<b>_</b>			_K_
Heating Inlet Size	<u> </u>		<b>_</b>			<u> </u>
Heating Flex Duct Size	· <u>}</u>		<b>_</b>			<u> </u>
Outlet Size	<b>}</b>		<b>_</b>			<u> </u>
Minimum Inlet Static Pressure	}		<b>_</b>			_D_
Max. Terminal Pressure Drop						. <b>.</b> .
<u>Max. Room Noise Criteria (NC)</u>	<b>(</b>		<b>_</b>			_ <b>k</b>
Control Type	[]		<b> </b>			_ <b>K</b> _
Control Sequence						KR
						Ľ
(1) - Coordinate Metasys Terminal Unit	Designat	ion with UTH	SC-H Project Ma	nager.		
(2) - With UT Spec Construction and Te	sting, So	lid Metal Line	r, Bottom Access	s Door, 🛛 🖊	2	
Integral Sound Attenuator and Mixi	ing Baffle	s.				
(3) - Provide terminal unit with DDC Cor	ntrols, Re	: Specificatio	ns.			

(4) - Provide new DDC controls and actuators for reused existing terminal unit, Re: Specifications.

					JULE			
	MANUFACTURER	CATALOG NUMBER	LAMP TYPE	BALLAST/DRIVER TYPE				
	,		4000 LM 4000 K					2' x 4' HIGH EFFICIENCY LED TROFFER WITH DIMMING
A (c)	CREE	ZR24-40L-40K-CMA	90 CRI LED	DRIVER	120/277 V	44 VV	LAY-IN	DRIVER AND SMARTCAST INTEGRAL MOTION AND AMBI SENSORS AND WIRELESS COMMUNICATIONS. (f)
τ1	LITECONTROL		(1) F54 T5HO - 4100K	<10% THD PROGRAM START ELECTRONIC BALLAST	277 V	54 W	PENDANT	8' MATTE WHITE INDIRECT PENDANT LIGHT FIXTURE WI AIRCRAFT CABLE PENDANT MOUNTS AND >10% THD PROGRAM START BALLAST. PROVIDE FIXTURES WITH I CAPS, FIXTURE DISCONNECTSUL LISTED CANOPY POXI AND OTHER ACCESSORIES AS REQUIRED FOR A COMP INSTALLATION TO MATCH EXISTING INSTALLESION. FIX MOUNTING AND LAMP COLOR TO MATCH EXISTING FIXT IN THE ROOM.
X1	PHILLIPS/CHLORIDE	55L 3 R OR APPROVED EQUAL (e)	2.5 W RED LED	INTEGRAL LED DRIVER	120/277 V	2.5 W	SURFACE	SINGLE FACE LED EXIT SIGN TO MATCH EXISTING WITH BRUSHED ALUMINUM FACE AND BLACK HOUSING, RED LETTERS, ARROWS AS INDICATED.
X2	PHILLIPS/LIGHTOLIER	55L 3 R OR APPROVED EQUAL (e)	5 W RED LED	INTEGRAL LED DRIVER	120/277 V	5 W	SURFACE	DOUBLE FACE LED EXIT SIGN TO MATCH EXISTING WITH BRUSHED ALUMINUM FACE ANDBLACK HOUSING, RED LETTERS, ARROWS AS INDICATED.

NOTE (d) - CONFIRM VISUAL COMPATIBILITY WITH EXISTING PENDANT LIGHTING IN THE AREA PRIOR TO ORDERING NOTE (e) - CONFIRM VISUAL COMPATIBILITY WITH EXISTING EXIT SIGNS IN THE AREA PRIOR TO ORDERING. NOTE (f) - PROVIDE (1) CCT-CWC-1 OR EQUAL CONFIGURATION TOOL. 

<u>/2</u>

<u>DB-01-05 (5) DDB-01-06 (5) DDB-01-07 (5) DDB-01-08 (5) DDB-01-09 (5) DDB-01-10 (5)</u> 
 Nailor
 D3230 (2)
 D '\_\_\_\_ \_\_\_\_\_ 845 cfm 0 cfm 790 cfm 10 cfm ------\_\_\_\_\_ 0 cfm 0 cfm 0 cfm 0 cfm 10 " \_\_\_\_ \_\_\_\_\_ 10 \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ --------\_\_\_\_\_ - - - - - - - - ------\_ \_ \_ \_ \_ \_ \_ \_\_\_\_ - – – – – – – – – – – –  $-\frac{4}{2}$   $-\frac{6}{2}$   $-\frac{6}{2}$   $-\frac{10}{2}$   $-\frac{10}{$ -----\_\_\_\_\_ \_ \_ \_ \_ \_ \_ \_ 6 " 10 " 4 " \_\_10\_"\_\_\_\_ \_\_\_\_<u>8/8"\_\_\_\_\_8/8"\_\_\_\_</u> 1.0 "wc 1.0 "wc 0.5 "wc 0.5 "wc 8/8" 8/8" \_10/10"\_\_\_ 8/8" <u>1.0 "wc</u> 0.5 "wc 1.0 "wc 1.0 "wc 0.5 "wc 0.5 "wc 0.5 "wc  $-\frac{30}{DDC(3)}$ <u>\_\_\_30</u>\_\_\_ <u>30</u> \_\_\_30\_\_\_\_ \_\_\_<u>30</u>\_ \_\_\_\_| \_ \_ \_ \_ \_ \_ \_ \_ ------ 
 DDC (3)
 DDC (3)
 DDC (3)
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 DDC (3)

 Re: UTHSC-H
 Re: UTHSC-H
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 Re: UTHSC-H
 Re: UTHSC-H
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(5) - As-built record drawings and field identification tags for all HVAC terminal units shall clearly note the actual BAS syste name for the terminal unit using the UT naming convention with VAVFloor Number\_AHU Serving Terminal Unit\_Sequential Number (example 🗆 eV01\_01\_01).

![](_page_18_Figure_8.jpeg)

		AIR DISTR	<b>IBUTION DEV</b>	ICES	
Plan Designation	А	В	С		
Manufacturer	Titus	Titus	Titus		
Model/Series	OMNI-AA	OMNI-AA	FLOWBAR		[
Function	Supply	Return	Supply		
Device Type	Ceiling	Ceiling	Ceiling		
	Plaque	Plaque	Slot	I	 I
Face Size (inches)	24" x 24"	24" x 24"	48" Long		 
Neck Size (inches)	Re: Dwgs	15" Rnd	Re: Dwgs		 
Maximum NC	30	30	30		
Border Type	TYPE 3	TYPE 3	TYPE 22		
Material	Aluminum	Aluminum	Aluminum		
Exterior Finish	White	White	Black		
Interior Finish	White	White	Black		
Mounting Type	Lay-in	Lay-in	Lay-in		
Accessories					 
Remarks					

DDB-01-17 (5)	DDB-01-18 (5)	DDB-01-19 (5)	DDB-01-20 (5)	DDB-01-21 (5)	DDB-01-22 (5)	DDB-01-23 (5)			
Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	>		
D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	·	T	
6	6			6	<u>10</u>	6			
340 cfm	250 cfm	700 cfm	425 cfm	250 cfm	730 cfm	<b>2</b> 50 cfm	\$		
170 cfm	125 cfm	350 cfm	213 cfm	125 cfm	365 cfm	<b>5</b> 125 cfm	•		
340 cfm	250 cfm	700 cfm	425 cfm	250 cfm	730 cfm	<b>L</b> 250 cfm	•		
0 cfm	0 cfm	0 cfm	0 cfm	0 cfm	0 cfm	0 cfm 7	<b>}</b>		
- the second	6"	8"	8"	6"	10 "	٦-حيمر-			
<b>6</b> " <b>(</b>	6"	8"	8"	6"	10 "	δ"			
340 cfm	250 cfm	700 cfm	425 cfm	250 cfm	730 cfm	250 cfm	•		
0 cfm	0 cfm	0 cfm	0 cfm	0 cfm	0 cfm		>	+	
<b>C</b> "	6"	8"	8"	6"	10 "		·		
6"	6"	8"	8"	6"	10 "	2 6"			
8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"			
1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	>		
0.5 "wc	0.5 ''wc	0.5 "wc	0.5 "wc	0.5 ''wc	0.5 "wc	0.5 "wc	>		
30	30	30	30	30	30	30	•		
DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)		+	
Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re UTHSC-H	Re: UTHSC-H	Re. UTHSC-H	Re UTHSC-H		+	

![](_page_18_Picture_13.jpeg)

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WILLIAM C CLIFFORD	THE SAA ATTENENG ON THIS DRAWING WAS AUTHORIZED R: William C. Clifford 2016.11.15 15:57:54-06'00' E&C Engineers & Consultants Inc.
	Texas Firm Registration No: F-003068

Issues / Revisio	ns	
No.	Date	Description
1	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_18_Figure_19.jpeg)

Mechanical/Electrical/ Plumbing Schedules And Details

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&W Commission Number	Sheet Number
3339.00	MEP0.1

![](_page_19_Figure_0.jpeg)

## GENERAL NOTES:

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- COORDINATE EXACT DEMOLITION SCOPE WITH EXISTING Β. CONDITIONS AND NOTIFY THE ENGINEER FOR DIRECTION IF EXISTING CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS.
- TEMPORARILY CAP EXISTING DUCTWORK DURING DEMOLITION AS C. REQUIRED TO ALLOW THE OFFICE AIR HANDLING UNITS TO REMAIN IN OPERATION.
- WHERE EXISTING PNEUMATIC TERMINAL UNITS ARE REMOVED, D. REMOVE ALL EXISTING TERMINAL UNIT PNEUMATIC TUBING BACK TO THE MAIN SUPPLY TRUNK LINE AND CAP TAP AT MAIN. DRAWING NOTES:
- REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT, AIR DEVICES AND ASSOCIATED PNEUMATIC TUBING AND THERMOSTATS. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNITS, RE: 01/MI.01A, NOTE I. EXISTING DDC DOUBLE DUCT TERMINAL UNIT TO REMAIN AND BE (2)REUSED. RE: RE: OI/MI.OIA FOR REBALANCING OF EXISTING TERMINAL UNITS.

V	<b>h</b> Vi	ike
	F	Partnership
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MEP Engin <b>E&amp;C [</b> TX Firm 1010 Lat Houstor (P) 713-	Registration mar St 580-8800	and Consultants No. F-003068
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	11/14/2016	Addendum 3

![](_page_19_Figure_9.jpeg)

![](_page_19_Figure_10.jpeg)

Mechanical Demolition Plan First Floor

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P&W Commission Number Sheet Number DM1.01A 3339.00

![](_page_20_Figure_0.jpeg)

![](_page_20_Figure_1.jpeg)

O1 FIRST FLOOR - MECHANICAL ALTERATION PLAN SCALE: 1/8"=1'-0"

## GENERAL NOTES:

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- AS-BUILT RECORD DRAWINGS AND FIELD IDENTIFICATION TAGS FOR ALL\_HVAC TERMINAL UNITS SHALL CLEARLY NOTE THE ACTUAL BAS SYSTEM NAME FOR THE TERMINAL UNIT USING THE UT NAMING CONVENTION WITH VAVFLOOR NUMBER AHU SERVING TERMINAL UNIT SEQUENTIAL NUMBER (EXAMPLE VAVOI OI OI).

![](_page_20_Figure_7.jpeg)

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	1127 Suite Hous (832 www	75 S. Sar e 200 ston, Te ) 554-12 w.pwarc	n Houston xas 77031 130 h.com	Parkway W	
Consultants					
Structural	Engineer	aro			
1301 M Houstor (P) 713-	cKinney, Suite n, TX 77010 630-7300	e 1100			
MEP Engir	ieer				
<b>E&amp;C</b> TX Firm 1010 La Houstor (P) 713-	Engineers Registration mar St n, TX 77002 580-8800	s and No. F-00	Consul	tants	
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_20_Figure_12.jpeg)

Mechanical Alteration Plan First Floor

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P&W Commission Number Sheet Number M1.01A 3339.00

![](_page_21_Figure_1.jpeg)

![](_page_21_Figure_2.jpeg)

O1 FIRST FLOOR EAST - MECHANICAL DEMOLITION PLAN SCALE: 1/4'=1'-0'

## GENERAL NOTES:

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- AS-BUILT RECORD DRAWINGS AND FIELD IDENTIFICATION TAGS Β. FOR ALL HVAC TERMINAL UNITS SHALL CLEARLY NOTE THE ACTUAL BAS SYSTEM NAME FOR THE TERMINAL UNIT USING THE UT NAMING CONVENTION WITH VAVFloor Number AHU Serving Terminal Unit Sequential Number (example VAVOI OI OI).

DRAWING NOTES:

- REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT AND AIR DEVICES. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE CUDT TERMINAL UNITS, RE OI/MI.OIAE, NOTE ?
- 2 EXISTING HOT AND COLD TRUNK DUCT TAPS WHICH SERVED DOUBLE DUCT TERMINAL UNIT WHICH IS BEING REPLACED SHALL BE REUSED TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. EXTEND NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS FROM EXISTING TAPS TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. LOCATE REPLACEMENT DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
- 3 NEW REPLACEMENT DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO AIRFLOW INDICATED.
- (4) NEW DDC SPACE TEMPERATURE SENSOR WITH CONTROL WIRING TO TERMINAL UNIT INDICATED.
- 5 NEW HOT AND COLD TRUNK DUCT TAPS WITH NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS TO SERVE THE NEW DOUBLE DUCT TERMINAL UNIT. LOCATE NEW DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW I-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
- 6 NEW DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO CFM INDICATED.
- ONEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.
- 8 NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY GRILL.
- 9 NEW SUPPLY AIR GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED. IF CFM INDICATED DIFFERS FROM FIELD VERIFIED EXISTING CFM, CONTACT ENGINEER FOR DIRECTION.
- (1) NEW RETURN AIR GRILL, TYPE AS INDICATED.
- (1) NEW DEEP STRUCTURAL BEAM, RE: STRUCTURAL.

![](_page_21_Picture_20.jpeg)

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Issues / Revisio	ns	
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No.	Date	Description
1	07/08/2016	Issue for Construction
2	11/14/2016	Addendum 3
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_21_Figure_26.jpeg)

Mechanical Demolition and Alteration Plans First Floor East

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P&W Commission Number Sheet Number M1.01AE 3339.00

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_2.jpeg)

![](_page_22_Figure_4.jpeg)

<u>GENERAL NOTES</u>:

A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.

AS-BUILT RECORD DRAWINGS AND FIELD IDENTIFICATION TAGS FOR ALL HVAC TERMINAL UNITS SHALL CLEARLY NOTE THE ACTUAL BAS SYSTEM NAME FOR THE TERMINAL UNIT USING THE UT NAMING CONVENTION WITH VAVFloor Number AHU Serving Terminal Unit Sequential Number (example VAVOL OL OL).

DRAWING NOTES:

- REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, ()DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT AND AIR DEVICES. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNITS, RE: OI/MI.OIAW, NOTE 2.
- 2 EXISTING HOT AND COLD TRUNK DUCT TAPS WHICH SERVED DOUBLE DUCT TERMINAL UNIT WHICH IS BEING REPLACED SHALL BE REUSED TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. EXTEND NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS FROM EXISTING TAPS TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. LOCATE REPLACEMENT DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW I-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
- (3) NEW REPLACEMENT DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO AIRFLOW INDICATED.
- (4) NEW DDC SPACE TEMPERATURE SENSOR WITH CONTROL WIRING TO TERMINAL UNIT INDICATED.
- (5) NEW HOT AND COLD TRUNK DUCT TAPS WITH NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS TO SERVE THE NEW DOUBLE DUCT TERMINAL UNIT. LOCATE NEW DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW I-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
- 6 NEW DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO CFM INDICATED.
- NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.
- 8 NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY GRILL.
- (9) NEW SUPPLY AIR GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED. IF CFM INDICATED DIFFERS FROM FIELD VERIFIED EXISTING CFM, CONTACT ENGINEER FOR DIRECTION.
- (1) NEW RETURN AIR GRILL, TYPE AS INDICATED.
- (1) NEW DEEP STRUCTURAL BEAM, RE: STRUCTURAL.

![](_page_22_Picture_20.jpeg)

![](_page_22_Picture_21.jpeg)

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WILLIAM C CLIFFORD WILLIAM C CLIFFORD WILLIAM C CLIFFORD WILLIAM C CLIFFORD WILLIAM C CLIFFORD	THE SAL ATTRACKING ON THIS DRAWING WAS AUTHORIZED DF: William C. Clifford 2016.11.15 16:38:39-06'00' E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003068

issues / Revisions		
No	Date	Description
1	07/08/2016	Issue for Construction
$\overline{\mathbb{A}}$	11/14/2016	Addendum 3
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## UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_22_Figure_27.jpeg)

Mechanical Demolition and Alteration Plans First Floor West

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Print Date / Time: 11/15/2016 4:35:25 PM

&W Commission Number	Sheet Number
3339.00	M1.01AW

![](_page_23_Figure_1.jpeg)

![](_page_23_Figure_2.jpeg)

![](_page_23_Figure_3.jpeg)

O1 GROUND FLOOR WEST - ELECTRICAL LIGHTING DEMOLITION PLAN SCALE: 1/4"=1'-0"

![](_page_23_Figure_5.jpeg)

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE ALARM SYSTEM SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

![](_page_23_Figure_8.jpeg)

- REMOVE EXISTING PENDANT LIGHT FIXTURE AND ASSOCIATED (1)BRANCH CIRCUIT WIRING AND CONDUIT. STORE REMOVED LIGHT FIXTURE AS DIRECTED BY OWNER. RE: RE: 02/ELI.OGAW, NOTES 13 AND 15 FOR REUSE OF EXISTING BRANCH CIRCUITS AND LIGHTING CONTROL RELAY AND OVERRIDE SWITCHES TO SERVE NEW LIGHT
- (2) REMOVE EXISTING STUDY ROOM LIGHT FIXTURES AND ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT IN ROOM CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. EXISTING BRANCH CIRCUIT SERVING STUDY ROOM LIGHTING TO BE REUSED TO SERVE NEW STUDY TOOM LIGHTING RE: 02/ELI.OGAW. REMOVE EXISTING OCCUPANCY SENSING SWITCH AND DIMMER (3)
- CONTROLLING EXISTING STUDY ROOM LIGHTING ASSOCIATED SWITCH BRANCH CIRCUIT WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE.
- (4)EXISTING RELAY CONTROLLED LIGHT FIXTURE ON NORMAL POWER TO REMAIN AND BE REUSED.
- EXISTING UNSWITCHED LIGHT FIXTURE ON EMERGENCY POWER TO (5)REMAIN AND BE REUSED.
- 6 EXISTING WALL MOUNTED EXIT SIGN TO REMAIN AND BE REUSED.
- $\overline{)}$ EXISTING CEILING MOUNTED EXIT SIGN TO REMAIN AND BE REUSED.
- 8 EXISTING WALL MOUNTED SECURITY CAMERA TO REMAIN AND BE REUSED.
- (9) EXISTING CEILING MOUNTED FIRE ALARM STROBE TO REMAIN AND BE BELISED
- $\bigcirc$ REMOVE EXISTING WALL MOUNTED FIRE ALARM SPEAKER/STROBE AND ASSOCIATED FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. RE: 02/ELI.OGAW FOR REINSTALLATION. (1)REMOVE EXISTING WALL MOUNTED FIRE ALARM STROBE AND
- ASSOCIATED FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. RE: 02/ELI.OGAW FOR REINSTALLATION.
- (12) NEW LED LIGHT FIXTURE, TYPE AS INDICATED. (3) CIRCUIT NEW LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT AND LIGHTING CONTROL RELAY PACK AND OVERRIDE SWITCHES WHICH SERVED THE EXISTING PENDANT LIGHT FIXTURES WHICH WERE REMOVED.
- (14)INDICATES REUSED EXISTING BRANCH CIRCUIT TO PANEL GHA CIRCUIT 5 VIA EXISTING LIGHTING CONTROL RELAY a' AND EXISTING a' OVERRIDE SWITCHES.
- (5) CIRCUIT NEW LIGHT FIXTURE UNSWITCHED TO REUSED EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT. (6) INDICATES REUSED EXISTING EMERGENCY BRANCH CIRCUIT TO
- PANEL CHXA CLBCULT LO
- NEW LED STUDY ROOM LIGHT FIXTURE, TYPE AS INDICATED. CIRCUIT TO EXISTING BRANCH CIRCUIT WHICH SERVED EXISTING STUDY ROOM LIGHTING. (18) NEW CREE NO. CFP-I-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.
- REINSTALLED EXISTING/NEW FIRE ALARM SPEAKER/STROBE WITH NEW FIRE ALARM WIRING AND CONDUIT AS REQUIRED TO SUIT CURRENT CODES. RE: GENERAL NOTE B FOR ADDITIONAL INFORMATION.
- REINSTALLED EXISTING/NEW FIRE ALARM STROBE WITH NEW FIRE ALARM WIRING AND CONDUIT AS REQUIRED TO SUIT CURRENT CODES. RE: GENERAL NOTE B FOR ADDITIONAL INFORMATION. ······

![](_page_23_Picture_28.jpeg)

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WILLIAM C CLIFFORD 44368	THE SAL APPENDING ON THIS DEMONIC WAS AUTHORIZED DF: William C. Clifford 2016.11.15 15:48:01-06'00' E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003068

Issues / Revisions		
No.	Date	Description
1	07/08/2016	Issue for Construction
$\overline{\mathbb{A}}$	11/14/2016	Addendum 3
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_23_Figure_34.jpeg)

Electrical Lighting Demolition and Alteration Plans Ground Floor West

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W Commission Number	Sheet Number
3339.00	EL1.0GAW

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

![](_page_24_Figure_3.jpeg)

![](_page_24_Figure_5.jpeg)

A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES. DRAWING NOTES: EXISTING RECEPTACLE AND BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.

GENERAL NOTES:

- 2 EXISTING VOICE/DATA OUTLET AND RELATED VOICE/DATA WIRING AND CONDUIT TO REMAIN AND BE REUSED.
- 3 RELOCATE EXISTING ABOVE CEILING CONDUIT AND WIRING AS REQUIRED TO ALLOW THE NEW INFILL STRUCTURE AND RELATED CONSTRUCTION TO BE INSTALLED.
- REMOVE AND REINSTALL OR RELOCATE EXISTING WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED AND THE NEW INFILL STRUCTURE AND RELATED CONSTRUCTION TO BE 4 INSTALLED.

![](_page_24_Picture_12.jpeg)

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🖇 WILLIAM C CLIFFORD 🖇 

William C. Clifford 2016.11.15 15:49:58-06'00' E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003068

Na	Data	Description
10.	Date	Description
1	07/08/2016	Issue for Construction
/2\	11/14/2016	Addendum 3

# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_24_Figure_20.jpeg)

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P&W Commission Number Sheet Number EP1.0GAW 3339.00

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![](_page_25_Figure_1.jpeg)

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## 02 FIRST FLOOR EAST - ELECTRICAL POWER ALTERATION PLAN

O1 FIRST FLOOR EAST - ELECTRICAL POWER DEMOLITION PLAN SCALE: 1/4"=1'-0"

![](_page_25_Picture_5.jpeg)

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||\\_1\_46\||

A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES. DRAWING NOTES:

- () EXISTING ELECTRICAL TO REMAIN AND BE REUSED.
- 2 REMOVE EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING. RECONNECT BRANCH CIRCUIT AS REQUIRED TO MAINTAIN CONTINUITY.
- 3 REMOVE EXISTING VOICE/DATA OUTLET. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- (4) EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.
- (5) EXISTING OFFICE VOICE/DATA OUTLET TO REMAIN. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- 6 RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.
- (7) NEW OVERHEAD STRUCTURAL BEAM(S), RE: STRUCTURAL DRAWINGS.
- 8 NEW OFFICE RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES THIS OFFICE.
- 9 NEW CORRIDOR RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES ADJACENT CORRIDOR RECEPTACLES.
- (1) NEW NEMA 5-15R FOURPLEX RECEPTACLE AT 18" AFF.
- () NEW NEMA 5-15R DUPLEX RECEPTACLE AT 18" AFF.
- (12) NEW VOICE/DATA OUTLET ROUGH-IN AT 18' AFF. PROVIDE A SINGLE GANG DRY-WALL RING WITH TWO PULLCORDS VIA A GROMMET IN THE PARTITION TOP PLATE TO AN ACCESSIBLE CEILING SPACE. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- (13) NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/IP CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EPI.01A FOR APPROXIMATE PANEL LOCATION.
- (14) DISCONNECT AND REMOVE EXISTING ACCESS CONTROLS AND ELECTRICAL ASSOCIATED WITH DOUBLE EGRESS DOOR AND PARTITIONS WHICH ARE BEING TEMPORARILY REMOVED FOR CONSTRUCTION ACCESS AND STORE FOR REINSTALLATION.
   (15) REINSTALL EXISTING ACCESS CONTROLS AND ELECTRICAL ASSOCIATED WITH DOUBLE EGRESS DOOR AND PARTITIONS TO MATCH THE ORIGINAL INSTALLATION.

![](_page_25_Picture_21.jpeg)

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WILLIAM C CLIFFORD	<b>THE SEAL ATTEMENT; ON THIS DEAMING WAS AUTHORIZED D:</b> William C. Clifford 2016.11.15 15:51:01-06'00'
CONCISTER CONT	E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003068

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1	07/08/2016	Issue for Construction
	11/14/2016	Addendum 3

# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_25_Figure_26.jpeg)

Electrical Power Demolition and Alteration Plans First Floor East

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![](_page_26_Figure_0.jpeg)

![](_page_26_Figure_1.jpeg)

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Image: Construction of the second of the
Issues / Revisions

<u> </u>	Date	Description
1	07/08/2016	Issue for Construction
$\Delta$	11/14/2016	Addendum 3

# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_26_Figure_7.jpeg)

Electrical Lighting Demolition Plan First Floor - North

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P&W Commission Number Sheet Number DEL1.01A 3339.00

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No.	Date	Description
1	07/08/2016	Issue for Construction
$\overline{\lambda}$	11/14/2016	Addendum 3
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_27_Figure_5.jpeg)

Electrical Lighting Alteration Plan First Floor - North

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P&W Commission Number 3339.00 Sheet Number EL1.01A

![](_page_28_Figure_1.jpeg)

![](_page_28_Figure_3.jpeg)

![](_page_28_Figure_5.jpeg)

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- B. THE BUILDING FIRE ALARM SYSTEM SHALL BE PREPARED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.
- C. FIRE ALARM DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE FOR GENERAL COORDINATION PURPOSES ONLY. A STATE LICENSED FIRE ALARM CONTRACTOR SHALL DESIGN THE FIRE ALARM SYSTEM/SYSTEM MODIFICATIONS FOR THE SPACE AS SPECIFIED WITH ALL FIRE ALARM DEVICES AND FUNCTIONS, INCLUDING DEVICES AND FUNCTIONS IN ADDITION TO THOSE SHOWN ON THIS DRAWING. AS REQUIRED BY THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS AND THE AHJ.
- D. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR LAMP TYPE, LAMP COLOR, PULSE DURATION, INTENSITY, AND FLASH RATE. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR THE CEILING HEIGHT THEY ARE MOUNTED IN. THE MAXIMUM ALLOWABLE SOUND LEVEL OF THE CEILING MOUNTED DEVICE SHALL BE NO MORE THAN IIODB AT THE MINIMUM HEARING DISTANCE FROM THE DEVICE.
- E. ALL FIRE ALARM WIRING SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES AND SHALL IN GENERAL FOLLOW THE SAME PATH AS THE NEW VOICE/DATA CABLING. NEW AND EXISTING FIRE ALARM WIRING SHALL BE SUPPORTED ON J HOOKS OR ATTACHED TO CEILING SUPPORT WIRES USING APPROVED CLIPS. NEW AND EXISTING FIRE ALARM WIRING SHALL NOT BE SUPPORTED ON THE CEILING GRID OR TILE.

### DRAWING NOTES:

		RE: ELI.OGAE FOR REMOVAL OF EXISTING PENDANT LIGHT		
2	2	REMOVE EXISTING LIGHT FIXTURES IN ROOM, RE: 02/ELI.OIW FOR NEW LIGHT FIXTURES IN ROOM. REMOVE/RELOCATE EXISTING ABOVE CEILING BRANCH CIRCUIT CONDUIT AND WIRING AS REQUIRED TO INSTALL NEW CONSTRUCTION.		
	3	REMOVE EXISTING CORRIDOR LIGHT FIXTURES AND EXIT SIGNS IN THIS AREA IN ROOM, RE: O2/ELI.OIW FOR NEW CORRIDOR LIGHT FIXTURES AND EXIST SIGNS REMOVE/RELOCATE EXISTING ABOVE CEILING BRANCH CIRCUIT CONDUIT AND WIRING AS REQUIRED TO INSTALL NEW CONSTRUCTION.		
	4	NOTE NOT USED.		
	5	REMOVE EXISTING LIGHT SWITCH AND DIMMER. RE: 02/ELI.OIW FOR NEW LIGHT SWITCH TO CONTROL NEW LIGHT FIXTURES IN ROOM.		
	6)	REMOVE EXISTING LIGHT SWITCH. RE: 02/ELI.01W FOR NEW LIGHT SWITCH TO CONTROL NEW LIGHT FIXTURES IN ROOM.		
	7	RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.		
	8	NEW OVERHEAD STRUCTURAL BEAM, RE: STRUCTURAL DRAWINGS.		
2	9	REMOVE AND REINSTALL EXISTING CORRIDOR LIGHT FIXTURES, EXIT SIGNS AND BRANCH CIRCUIT CONDUIT AND WIRING AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM AND OTHER ABOVE CEILING CONSTRUCTION TO BE INSTALLED.		
		PROVIDE A NEW CREE NO. CFP-I-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING. REUSE EXISTING SWITCH BOX, CONDUIT AND WIRING AS APPLICABLE.		
Ę		NEW LED CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, CIRCUITED ON NORMAL POWER.		
	(2)	CIRCUIT TO EXISTING BRANCH CIRCUIT/LIGHTING CONTROLS SERVING EXISTING CORRIDOR NORMAL POWER LIGHT FIXTURES. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.		
2		NEW LED CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, CIRCUITED ON EMERGENCY POWER.		
		NEW LED EXIT SIGN, TYPE AS NOTED.		
	(15)	CIRCUIT UNSWITCHED TO EXISTING BRANCH CIRCUIT SERVING EXISTING CORRIDOR EMERGENCY POWER LIGHT FIXTURES AND EXIT SIGNS. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.		
2	16	NEW LED OFFICE LIGHT FIXTURE, TYPE AS NOTED.		
ζ		NEW CREE NO. CFP-I-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.		
		NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/IP CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EPI.01A FOR APPROXIMATE PANEL LOCATION.		
	(19)	CIRCUITRY NEW ROOM LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT WHICH SERVED EXISTING OFFICE FLUORESCENT LIGHTING.		

PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER/STROBE, RE: GENERAL NOTES B-G. PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER RE: GENERAL NOTES B-G. 20 PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER RE: GENERAL NOTES B-G.

![](_page_28_Picture_14.jpeg)

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![](_page_28_Picture_17.jpeg)

William C. Clifford 2016.11.15 15:48:58-06'00' E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003068

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1	07/08/2016	Issue for Construction
$\wedge$	11/14/2016	Addendum 3
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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_28_Figure_22.jpeg)

Electrical Lighting Demolition and Alteration Plans First Floor East

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![](_page_29_Picture_1.jpeg)

![](_page_29_Figure_2.jpeg)

![](_page_29_Picture_3.jpeg)

O1 FIRST FLOOR WEST - ELECTRICAL LIGHTING DEMOLITION PLAN SCALE: 1/4"=1'-0"

## GENERAL NOTES:

A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.

- THE BUILDING FIRE ALARM SYSTEM SHALL BE PREPARED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.
- C. FIRE ALARM DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE FOR GENERAL COORDINATION PURPOSES ONLY. A STATE LICENSED FIRE ALARM CONTRACTOR SHALL DESIGN THE FIRE ALARM SYSTEM/SYSTEM MODIFICATIONS FOR THE SPACE AS SPECIFIED WITH ALL FIRE ALARM DEVICES AND FUNCTIONS, INCLUDING DEVICES AND FUNCTIONS IN ADDITION TO THOSE SHOWN ON THIS DRAWING, AS REQUIRED BY THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS AND THE AHJ.
- ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR LAMP TYPE, LAMP COLOR, PULSE DURATION, INTENSITY, AND FLASH RATE. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR THE CEILING HEIGHT THEY ARE MOUNTED IN. THE MAXIMUM ALLOWABLE SOUND LEVEL OF THE CEILING MOUNTED DEVICE SHALL BE NO MORE THAN IIODB AT THE MINIMUM HEARING DISTANCE FROM THE DEVICE.
- ALL FIRE ALARM WIRING SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES AND SHALL IN GENERAL FOLLOW THE SAME PATH AS THE NEW VOICE/DATA CABLING. NEW AND EXISTING FIRE ALARM WIRING SHALL BE SUPPORTED ON J HOOKS OR ATTACHED TO CEILING SUPPORT WIRES USING APPROVED CLIPS. NEW AND EXISTING FIRE ALARM WIRING SHALL NOT BE SUPPORTED ON THE CEILING GRID OR TILE.

### DRAWING NOTES:

() RE: ELI.OGAW FOR REMOVAL OF EXISTING PENDANT LIGHT ~ FIXIURES

- 2 REMOVE EXISTING LIGHT FIXTURES IN ROOM, RE: 02/ELI.01W FOR NEW LIGHT FIXTURES IN ROOM. REMOVE/RELOCATE EXISTING ABOVE CEILING BRANCH CIRCUIT CONDUIT AND WIRING AS REQUIRED TO INSTALL NEW CONSTRUCTION. (3) REMOVE EXISTING CORRIDOR LIGHT FIXTURES AND EXIT SIGNS
- IN THIS AREA IN ROOM, RE: 02/ELI.OIW FOR NEW CORRIDOR LIGHT FIXTURES AND EXIST SIGNS REMOVE/RELOCATE EXISTING ABOVE CEILING BRANCH CIRCUIT CONDUIT AND WIRING AS REQUIRED TO INSTALL NEW CONSTRUCTION.
- (4) NOTE NOT USED. 5 NOTE NOT USED.
- 6 REMOVE EXISTING LIGHT SWITCH. RE: 02/ELI.OIW FOR NEW LIGHT SWITCH TO CONTROL NEW LIGHT FIXTURES IN ROOM.
- RELUCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS  $\bigcirc$ REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED. 8 NEW OVERHEAD STRUCTURAL BEAM, RE: STRUCTURAL DRAWINGS.
- NOTE NOT USED.. (9) (10) PROVIDE A NEW CREE NO. CFP-I-WH OR APPROVED EQUAL WALL
- SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING. REUSE EXISTING SWITCH BOX, CONDUIT AND WIRING AS APPLICABLE.
- (I) NEW LED CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, CIRCUITED ON NORMAL POWER.
- (12) CIRCUIT TO EXISTING BRANCH CIRCUIT/LIGHTING CONTROLS SERVING EXISTING CORRIDOR NORMAL POWER LIGHT FIXTURES. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.
- NEW LED CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, CIRCUITED ON EMERGENCY POWER.
- (14) NEW LED EXIT SIGN, TYPE AS NOTED. (15) CIRCUIT UNSWITCHED TO EXISTING BRANCH CIRCUIT SERVING EXISTING CORRIDOR EMERGENCY POWER LIGHT FIXTURES AND EXIT SIGNS. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY
- FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING. (6) NEW LED OFFICE LIGHT FIXTURE, TYPE AS NOTED.
- (17) NEW CREE NO. CFP-I-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.
- NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/IP CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: OI/EPI.OIA FOR APPROXIMATE PANEL LOCATION.
- (9) CIRCUIT NEW ROOM LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT WHICH SERVED EXISTING OFFICE FLUORESCENT LIGHTING.
- ② PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER/STROBE, RE: GENERAL NOTES B-G.
- (2) PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER RE: GENERAL NOTES B-G.

![](_page_29_Picture_31.jpeg)

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E&C Engineers & Consultants Inc. Texas Firm Registration No: F-003066

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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_29_Figure_37.jpeg)

**Electrical Lighting** Demolition and **Alteration Plans** First Floor West

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P&W Commission Number Sheet Number EL1.01AW 3339.00

![](_page_30_Figure_0.jpeg)

GENERAL NOTES:

A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

- TOGGLE SWITCH DISCONNECT AND 120 VOLT POWER CONNECTION TO NEW HVAC TERMINAL UNIT.
- NEW BRANCH CIRCUIT HOMERUN TO NEW 20A/IP CIRCUIT BREAKER INSTALLED IN PANEL INDICATED. (2)
- APPROXIMATE LOCATION OF EXISTING 277/480V, 3P-4W PANEL IHA. INSTALL A NEW 20A/IP CIRCUIT BREAKER AT CIRCUIT 15. (3)UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
- (4) APPROXIMATE LOCATION OF EXISTING 120/208V, 3P-4W PANEL ILA. INSTALL NEW 20A/IP CIRCUIT BREAKERS AT CIRCUITS I. 2. 3 AND 4. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
- (5) APPROXIMATE LOCATION OF EXISTING 277/480V, 3P-4W PANEL IHB. INSTALL A NEW 20A/IP CIRCUIT BREAKER AT CIRCUIT 17. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
- 6 APPROXIMATE LOCATION OF EXISTING 120/208V, 3P-4W PANEL ILB. INSTALL NEW 20A/IP CIRCUIT BREAKERS AT CIRCUITS 28 AND 30. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
- (7)BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3 REMOVE ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES FOR CORRIDOR CEILING REPLACEMENT AND REINSTALL IN NEW CORRIDOR CEILING.
- REMOVE AND REINSTALL EXISTING CEILING MOUNTED (8) ELECTRICAL DEVICES IN CORRIDOR AS REQUIRED TO ALLOW NEW STRUCTURAL FRAMING TO BE INSTALLED.

![](_page_30_Picture_14.jpeg)

![](_page_30_Figure_15.jpeg)

![](_page_30_Figure_16.jpeg)

Electrical Power Alteration Plan First Floor - North

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P&W Commission Number Sheet Number EP1.01A 3339.00

![](_page_31_Figure_0.jpeg)

![](_page_31_Figure_1.jpeg)

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## 02 FIRST FLOOR EAST - ELECTRICAL POWER ALTERATION PLAN

O1 FIRST FLOOR EAST - ELECTRICAL POWER DEMOLITION PLAN SCALE: 1/4"=1'-0"

![](_page_31_Picture_5.jpeg)

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A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES. DRAWING NOTES:

- () EXISTING ELECTRICAL TO REMAIN AND BE REUSED.
- 2 REMOVE EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING. RECONNECT BRANCH CIRCUIT AS REQUIRED TO MAINTAIN CONTINUITY.
- 3 REMOVE EXISTING VOICE/DATA OUTLET. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- (4) EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.
- (5) EXISTING OFFICE VOICE/DATA OUTLET TO REMAIN. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- 6 RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.
- (7) NEW OVERHEAD STRUCTURAL BEAM(S), RE: STRUCTURAL DRAWINGS.
- 8 NEW OFFICE RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES THIS OFFICE.
- 9 NEW CORRIDOR RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES ADJACENT CORRIDOR RECEPTACLES.
- (1) NEW NEMA 5-15R FOURPLEX RECEPTACLE AT 18" AFF.
- () NEW NEMA 5-15R DUPLEX RECEPTACLE AT 18" AFF.
- (12) NEW VOICE/DATA OUTLET ROUGH-IN AT 18' AFF. PROVIDE A SINGLE GANG DRY-WALL RING WITH TWO PULLCORDS VIA A GROMMET IN THE PARTITION TOP PLATE TO AN ACCESSIBLE CEILING SPACE. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
- (13) NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/IP CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EPI.01A FOR APPROXIMATE PANEL LOCATION.
- (14) DISCONNECT AND REMOVE EXISTING ACCESS CONTROLS AND ELECTRICAL ASSOCIATED WITH DOUBLE EGRESS DOOR AND PARTITIONS WHICH ARE BEING TEMPORARILY REMOVED FOR CONSTRUCTION ACCESS AND STORE FOR REINSTALLATION.
   (15) REINSTALL EXISTING ACCESS CONTROLS AND ELECTRICAL ASSOCIATED WITH DOUBLE EGRESS DOOR AND PARTITIONS TO MATCH THE ORIGINAL INSTALLATION.

![](_page_31_Picture_21.jpeg)

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# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_31_Figure_26.jpeg)

Electrical Power Demolition and Alteration Plans First Floor East

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P&W Commission Number 3339.00 Sheet Number EP1.01AE

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![](_page_32_Figure_1.jpeg)

![](_page_32_Figure_2.jpeg)

![](_page_32_Figure_3.jpeg)

![](_page_32_Picture_4.jpeg)

GENERAL NOTES:

- A. RE: MEPO.O FOR ADDITIONAL GENERAL NOTES.
- B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE PROTECTION AND FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR/RME IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. THE FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATION AND ADDITION SCOPE SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATIONS AND ADDITIONS REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

- REMOVE EXISTING FIRE SPRINKLER PIPING AND SPRINKLER HEADS TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. STORE REMOVED PIPING AND SPRINKLER HEADS FOR REINSTALLATION, RE: 02/PI.OGAW, NOTE 4.
- (2) REMOVE EXISTING FIRE SPRINKLER MAIN UP TO FIRST FLOOR FIRE SPRINKLERS ABOVE AND CAP EXISTING FIRE SPRINKLER MAIN TO REMAIN.
- ③ EXISTING SPRINKLER PIPING AND SPRINKLER HEADS IN THIS AREA TO REMAIN. RELOCATE EXISTING SPRINKLER HEADS AND SPRINKLER PIPING AS REQUIRED TO ALLOW NEW LIGHTING AND OTHER CEILING MOUNTED DEVICES TO BE INSTALLED.
- AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL EXISTING FIRE SPRINKLER PIPING AND SPRINKLER HEADS TO MATCH ORIGINAL EXISTING INSTALLATION.
- 5 AFTER THE NEW INFILL SLAB IS INSTALLED, EXTEND EXISTING GROUND FLOOR FIRE SPRINKLER PIPING AND INSTALL NEW FIRE SPRINKLER HEADS IN THIS NEW INFILL AREA.

![](_page_32_Picture_14.jpeg)

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![](_page_32_Figure_17.jpeg)

William C. Clifford 2016.11.15 15:46:49-06'00' E&C Engineers & Consultants Inc. Texas Firm Registration Nat F-003068

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Project

# UT Health MSB 1st Floor Infill LRC 3 & 4

![](_page_32_Figure_22.jpeg)

Plumbing Demolition and Alteration Plans Ground Floor West

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P&W Commission Number 3339.00 Sheet Number P1.0GAW

### SECTION 08 12 13 HOLLOW METAL FRAMES

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal frames for non-hollow metal doors.

### 1.02 RELATED REQUIREMENTS

- A. Section 08 14 16 Flush Wood Doors: Non-hollow metal door for hollow metal frames.
- B. Section 08 71 00 Door Hardware: Hardware, silencers, and weatherstripping.
- C. Section 09 91 23 Interior Painting: Field painting.

### 1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ANSI/ICC A117.1 American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2009.
- C. ANSI/SDI A250.8 Specifications for Standard Steel Doors and Frames (SDI-100); 2014.
- D. ANSI/SDI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.
- E. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- F. ASTM A1008/A1008M Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2015.
- G. ASTM A1011/A1011M Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2014.
- H. ICC A117.1 Accessible and Usable Buildings and Facilities; 2009.
- I. NAAMM HMMA 830 Hardware Selection for Hollow Metal Doors and Frames; 2002.
- J. NAAMM HMMA 831 Hardware Locations for Hollow Metal Doors and Frames; 2011.
- K. NAAMM HMMA 840 Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; 2007.

### 1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.
- D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- E. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Maintain at the project site a copy of all reference standards dealing with installation.

### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with applicable requirements and in compliance with standards and/or custom guidelines as indicated.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Hollow Metal Frames with Integral Casings:
  - 1. Republic Doors: www.republicdoor.com.
  - 2. Steelcraft, an Allegion brand: www.allegion.com/us.
  - 3. Substitutions: Not permitted.

### 2.02 DESIGN CRITERIA

- A. Refer to Door Type Schedule on the drawings for frame sizes, fire ratings, sound ratings, finishing, door hardware to be installed, and other variations, if any.
- B. Door Frame Type: Provide hollow metal door frames with integral casings.
- C. Steel used for fabrication of frames shall comply with one or more of the following requirements; Galvannealed steel conforming to ASTM A653/A653M, cold-rolled steel conforming to ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel conforming to ASTM A1011/A1011M, Commercial Steel (CS) Type B for each.
- D. Accessibility: Comply with ICC A117.1 and ADA Standards.
- E. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturers standard.
- F. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior frame that is also indicated as being sound-rated must comply with the requirements specified for exterior frames and for sound-rated frames; where two requirements conflict, comply with the most stringent.
- G. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- H. Mullions for Pairs of Doors: Fixed, except where removable is indicated, with profile similar to jambs.
- I. Frames Installed Back-to-Back: Reinforce with steel channels anchored to floor and overhead structure.
- J. Frames Wider than 48 Inch: Reinforce with steel channel fitted tightly into head of frame, flush with top.

### 2.03 HOLLOW METAL DOOR FRAMES WITH INTEGRAL CASINGS

- A. Interior Door Frames, Non-Fire Rated: Knock-down type.
  - 1. Grade: Comply with frame requirements in ANSI/SDI A250.8 (SDI-100); Level 2 Heavy-Duty, 16 gage, 0.053 inch, minimum frame steel thickness.
  - 2. Terminated Stops: Provide at interior non-fire rated doors in patient care areas; closed end stop terminated 6 inch above floor at 45 degree angle.

### 2.04 ACCESSORIES

- A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.
- B. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.
- C. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

### 2.05 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

### PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

### 3.02 INSTALLATION

- A. Install frames in accordance with manufacturer's instructions and related requirements of specified frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Coordinate installation of hardware.
- D. Coordinate installation of electrical connections to electrical hardware items.

### 3.03 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated.
- B. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

### 3.04 SCHEDULE

A. Refer to Door Type Schedule on the drawings.

### END OF SECTION