



# CITY OF EDINBURG FIRE STATION HVAC IMPROVEMENTS

OWNER: CITY OF EDINBURG  
415 W. University Drive  
Edinburg, Texas 78539

CONSULTANTS: SIGMA HN ENGINEERS, PLLC  
701 S. 15th St.  
McAllen, Texas 78501

CLH ENGINEERING, INC.  
701 S. 15th St.  
McAllen, Texas 78501

## SITE LOCATION MAP



**SIGMA HN**  
ENGINEERS, PLLC  
TBPE Firm No. F-14767  
701 S. 15th Street  
McAllen, Texas 78501

CITY OF EDINBURG FIRE STATION  
HVAC IMPROVEMENTS  
EDINBURG, TX

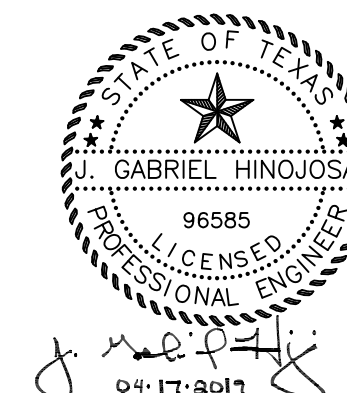
PROJECT NO.: 19011  
ISSUED: 04/17/2019  
REVISIONS:

NO.	DATE	DESCRIPTION
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SHEET TITLE:

MEP  
COVER PAGE

MEP-0.0

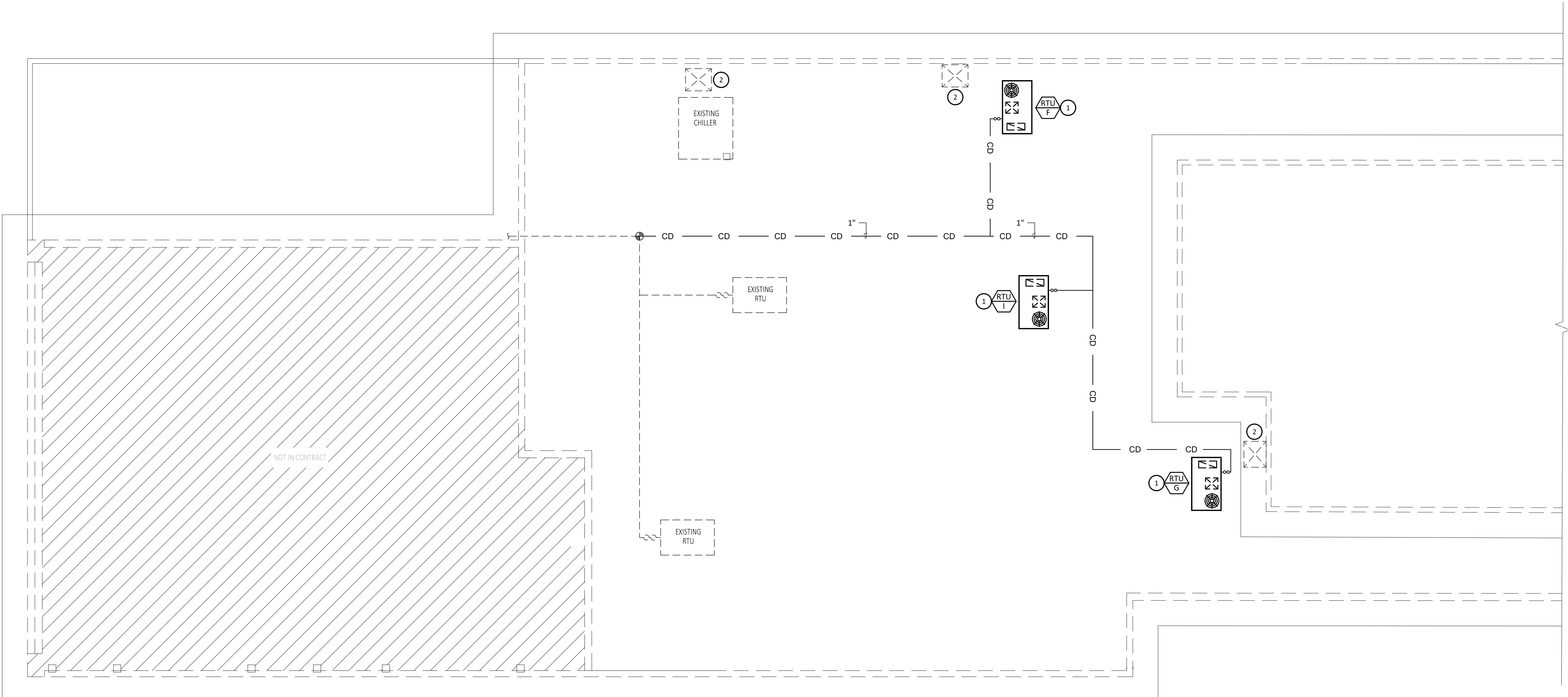








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- GENERAL NOTES:**
- REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.
  - PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL RTU SUPPLY AND RETURN DUCT CONNECTIONS.
  - CONTRACTOR SHALL MAKE ALL ROOF REPAIRS ASSOCIATED WITH THIS PROJECT WITH MATERIALS TO MATCH EXISTING. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND WORK WITH THE ROOFING MANUFACTURER HOLDING THE BOND AND/OR WARRANTY ON THE EXISTING ROOF. ANY MODIFICATIONS OR ALTERATIONS MADE TO THE ROOF WILL NEED TO BE COMPLETED BY ROOFING MANUFACTURER HOLDING THE BOND AND/OR WARRANTY.
  - CONTRACTOR SHALL REMOVE INTERIOR ACOUSTICAL CEILING GRID AND TILE AS NECESSARY TO MAKE REVISIONS, CONNECTIONS, AND MODIFICATIONS TO DUCTWORK. UPON COMPLETION, CONTRACTOR SHALL REINSTALL ACOUSTICAL CEILING GRID AND TILE TO ORIGINAL CONDITION. DAMAGED CEILING TILES SHALL BE REPLACED. FIELD VERIFY EXISTING CONDITIONS.
  - DELEGATED DESIGN: PROVIDE DELEGATED DESIGN SUBMITTAL FOR ALL MATERIAL AND EQUIPMENT ATTACHMENTS ON THE ROOF WHERE NECESSITATED BY WINDSTORM REQUIREMENTS, INCLUDING RTU TO CURB AND CURB TO EXISTING STRUCTURE. INCLUDE COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED BELOW:
    - BUILDING CLASSIFICATION: GROUP B
    - RISK CATEGORY: IV
    - EXPOSURE CATEGORY: B
    - ULTIMATE DESIGN WIND SPEED, 3 SEC GUST: 140 MPH.

- KEY NOTES:** (1)
- FULL SIZE COPPER CONDENSATE DRAIN LINE. INSULATE LINE ABOVE ROOF DECK WITH 1" FLEXIBLE ELASTOMERIC INSULATION. SLOPE PIPING 1/8" PER FOOT. PROVIDE PIPE HANGER SUPPORTS MAXIMUM 5'-0" O.C. SPACING. CONTRACTOR SHALL CONNECT FULL SIZE CONDENSATE PIPE TO EXISTING DRAIN. FIELD VERIFY EXISTING CONDITIONS.
  - EXISTING OUTSIDE AIR INTAKE HOOD TO REMAIN. CONTRACTOR SHALL SEAL DUCT/OPENING AIR TIGHT.

**BID PREPARATION**

**BASE BID:**  
 BASE BID SHALL INCLUDE ALL BUILDING TRADES WORK ASSOCIATED WITH THE REPLACEMENT OF FAN COIL UNIT, FC-I, WITH PACKAGED DX ROOFTOP UNIT, RTU-I.

**ALTERNATE #1:**  
 ALTERNATE #1 SHALL INCLUDE ALL BUILDING TRADES WORK ASSOCIATED WITH THE REPLACEMENT OF FAN COIL UNIT, FC-F, WITH PACKAGED DX ROOFTOP UNIT, RTU-F.

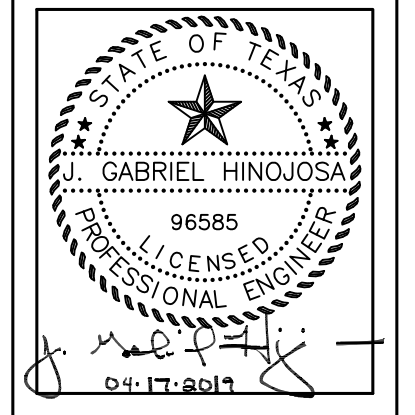
**ALTERNATE #2:**  
 ALTERNATE #2 SHALL INCLUDE ALL BUILDING TRADES WORK ASSOCIATED WITH THE REPLACEMENT OF FAN COIL UNIT, FC-G, WITH PACKAGED DX ROOFTOP UNIT, RTU-G.

**LEGEND**

---	NEW EQUIPMENT
---	NEW DUCT
---	EXISTING TO REMAIN

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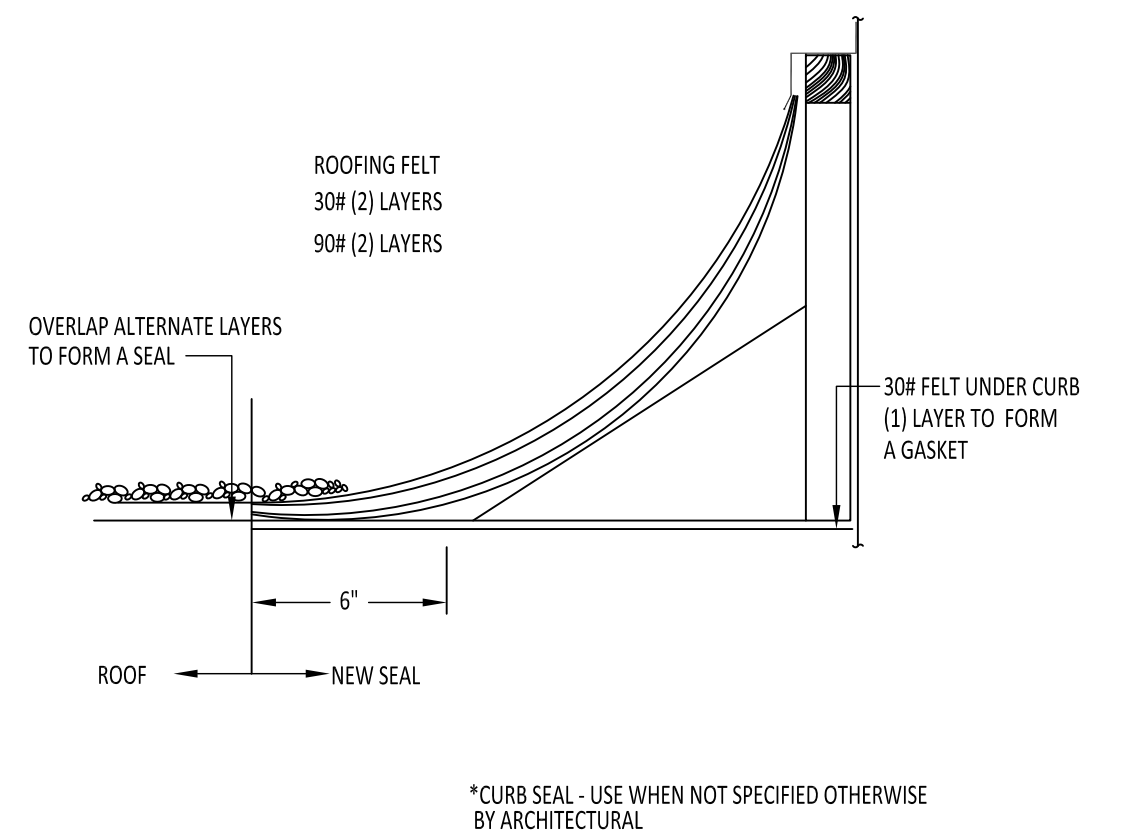
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**1 MECHANICAL PLAN**  
 SCALE: 1/8"=1'-0"

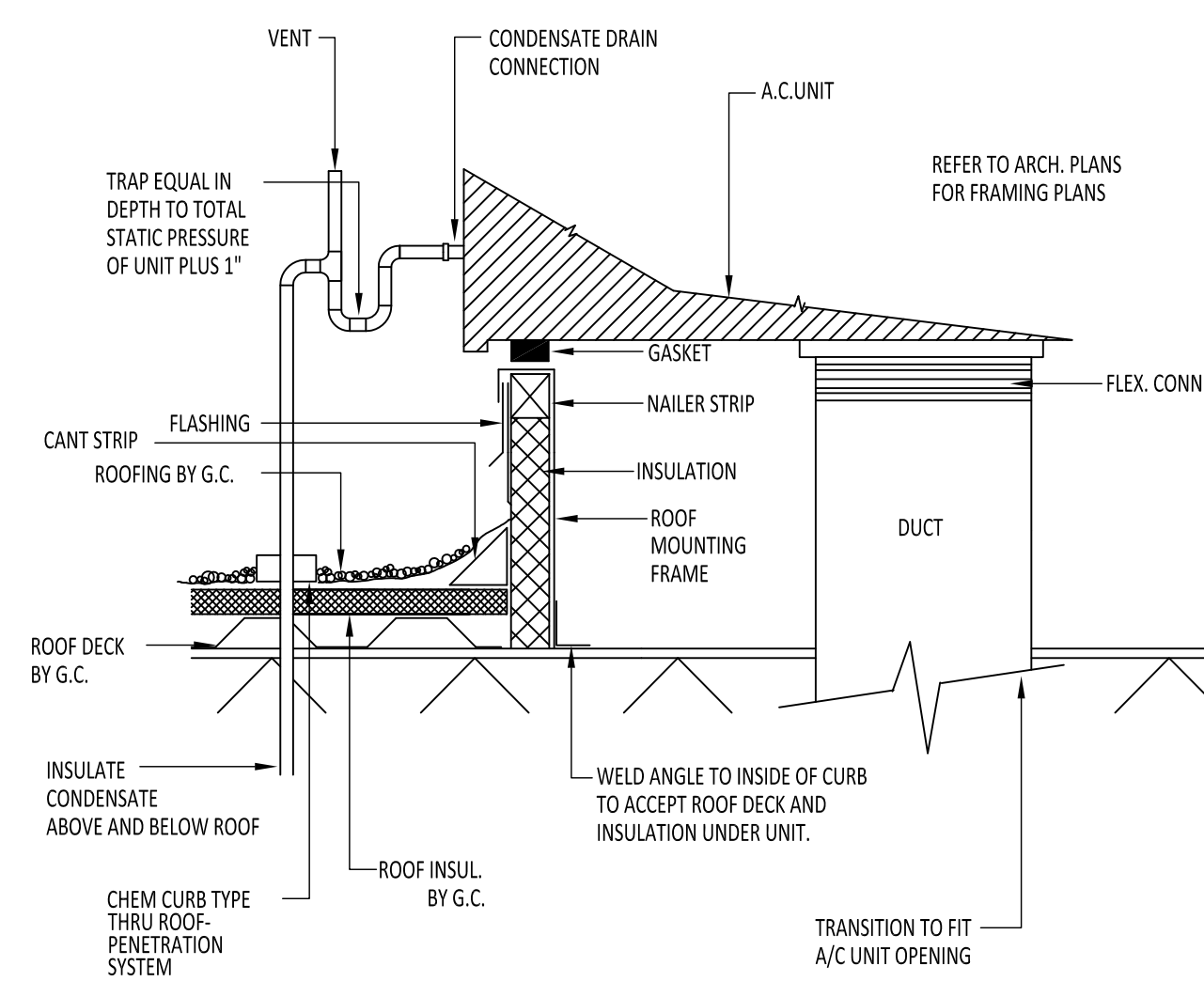
**MECHANICAL  
 ROOF PLAN**  
 M-1.0

A B C D E F G H I J K L M N O P

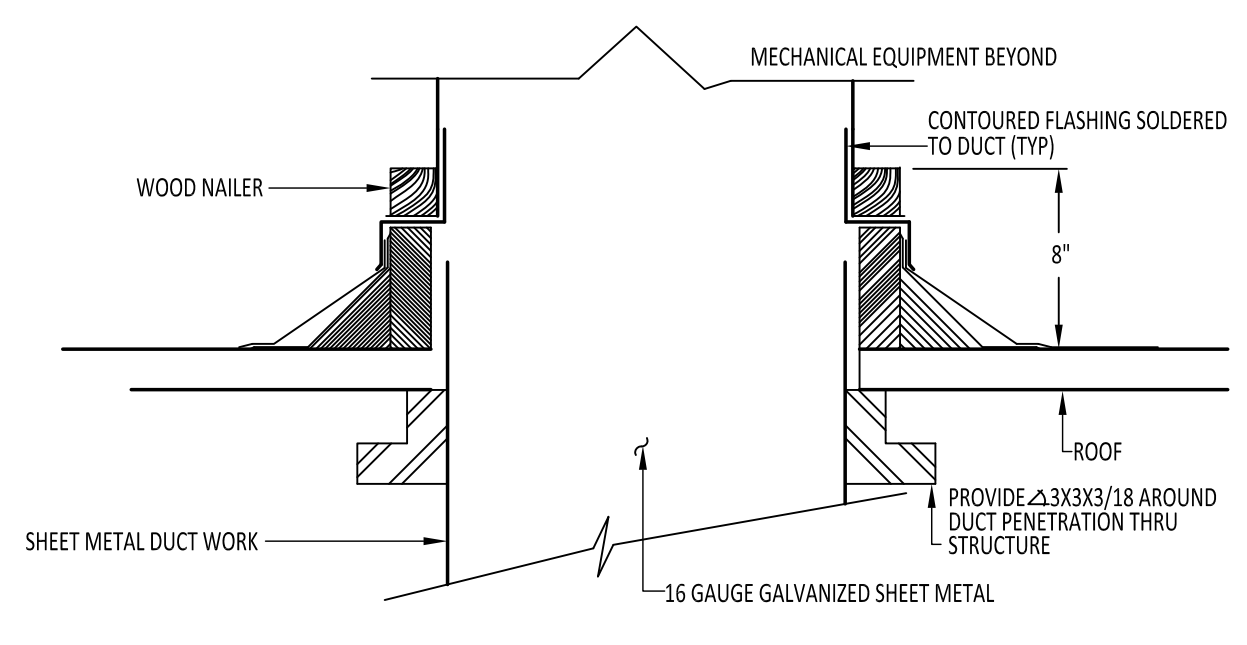




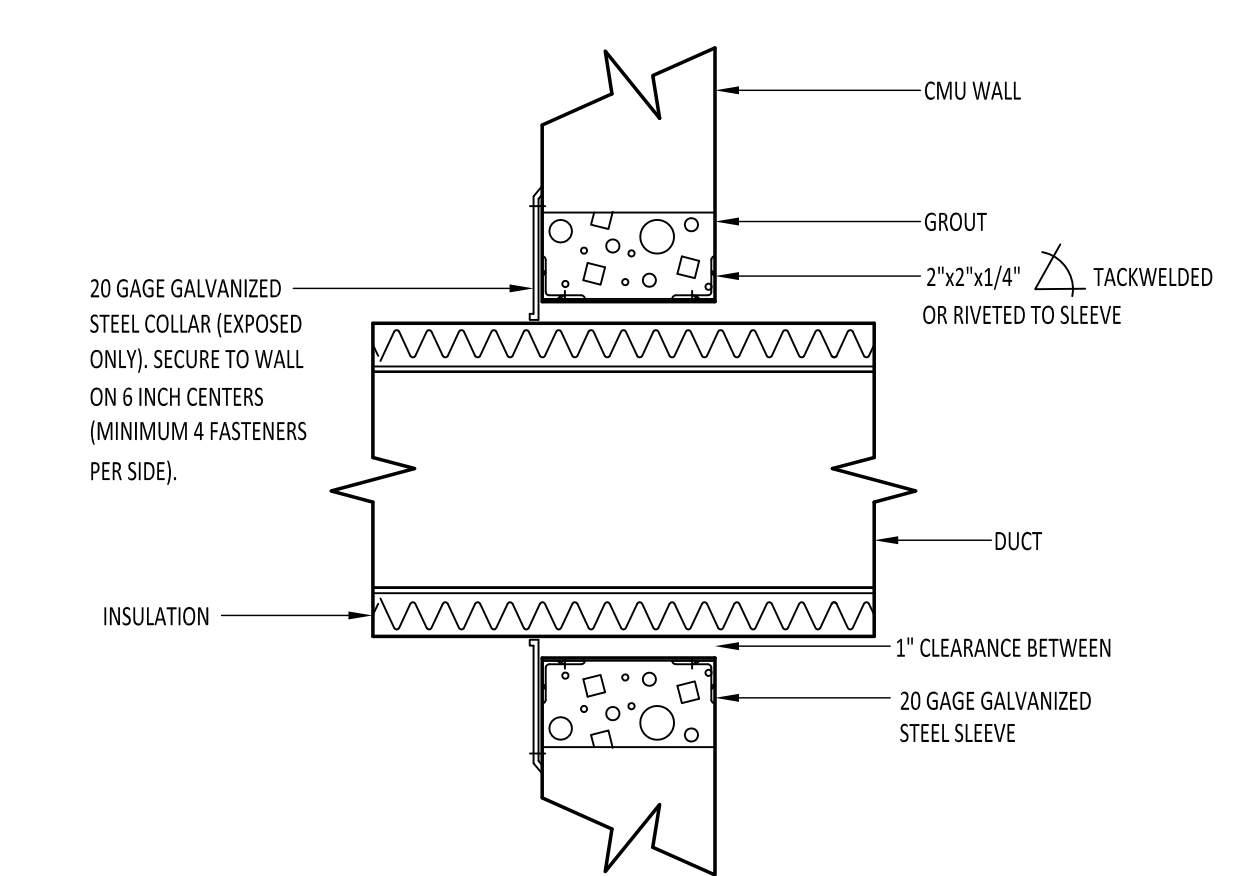
**1 CURB SEAL**  
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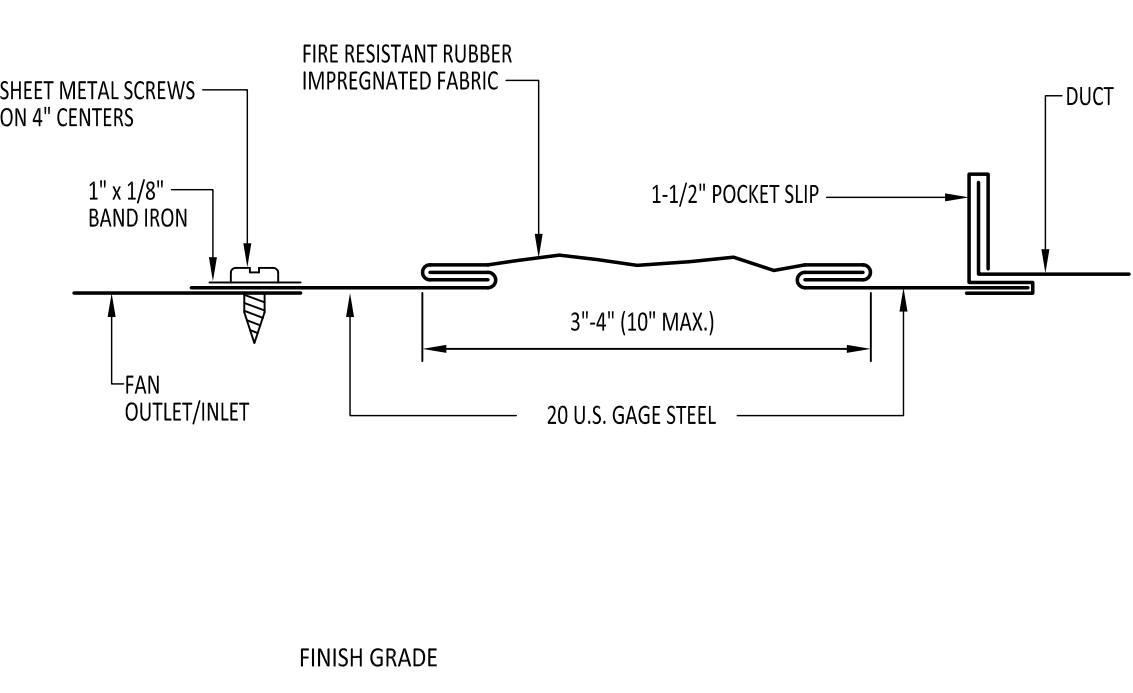
**2 ROOF TOP UNIT MOUNTING**  
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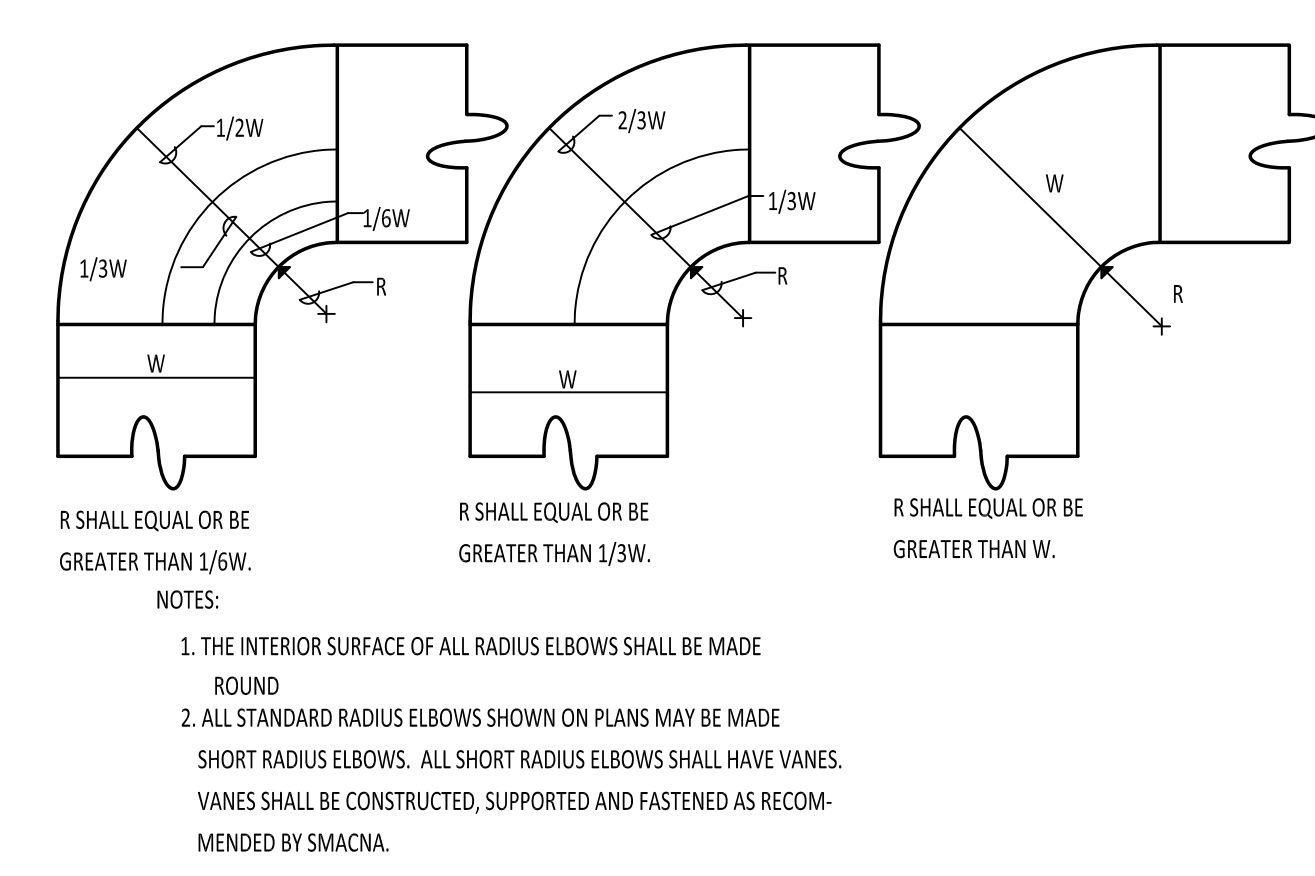
**3 DUCT ROOF PENETRATION**  
SCALE: N.T.S.



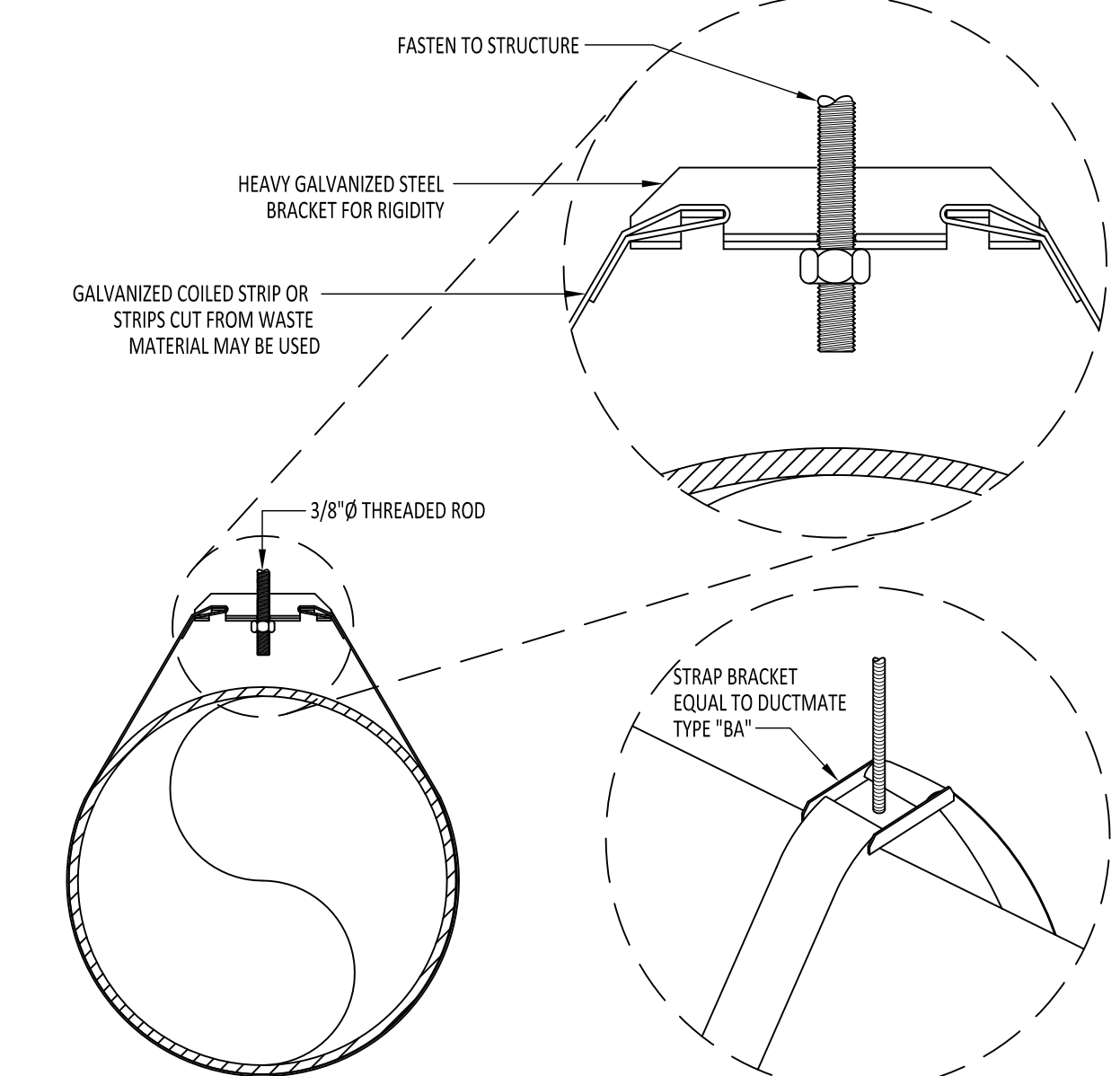
**4 DUCT PENETRATION THRU WALL**  
SCALE: N.T.S.



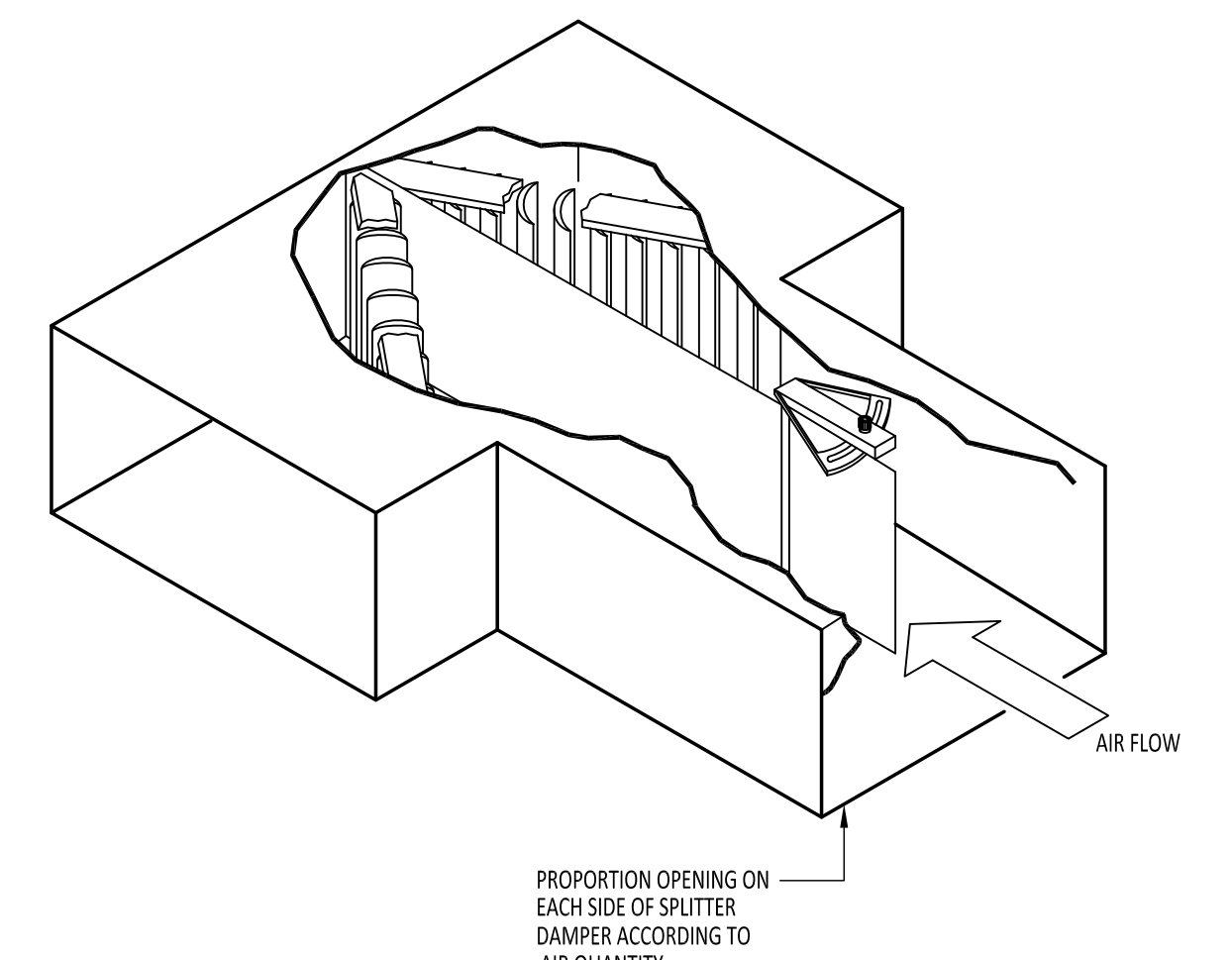
**5 FLEXIBLE CONNECTION DETAILS**  
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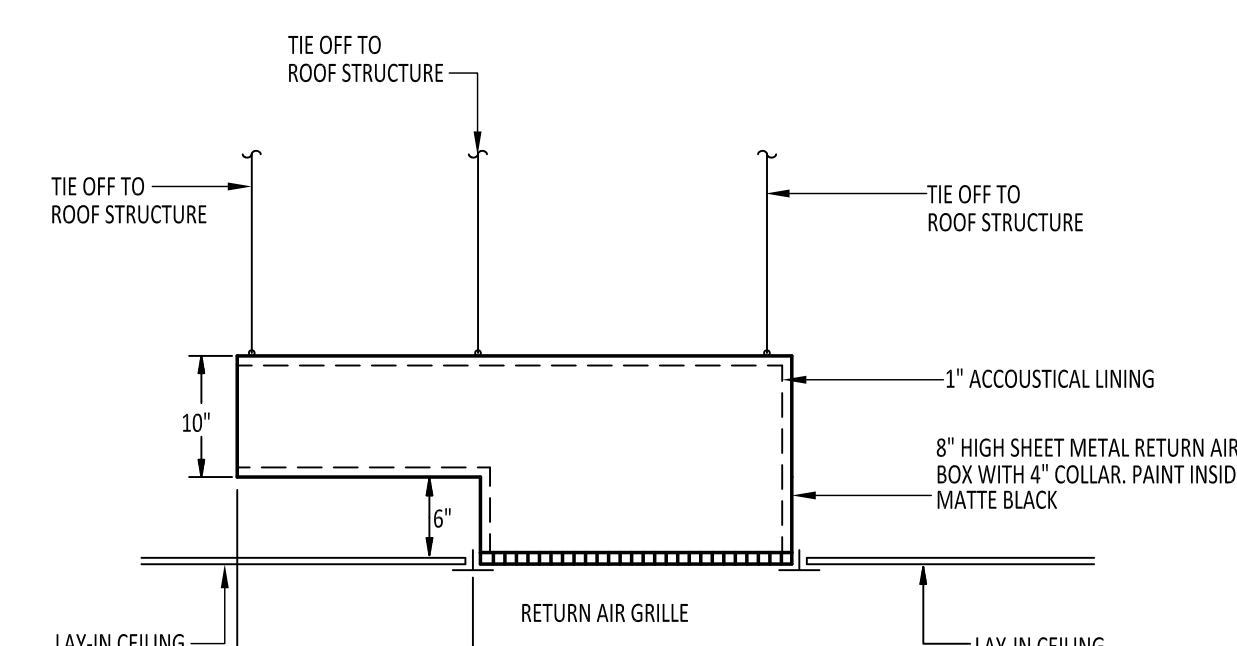
**6 RADIUS DUCT ELBOW DETAIL**  
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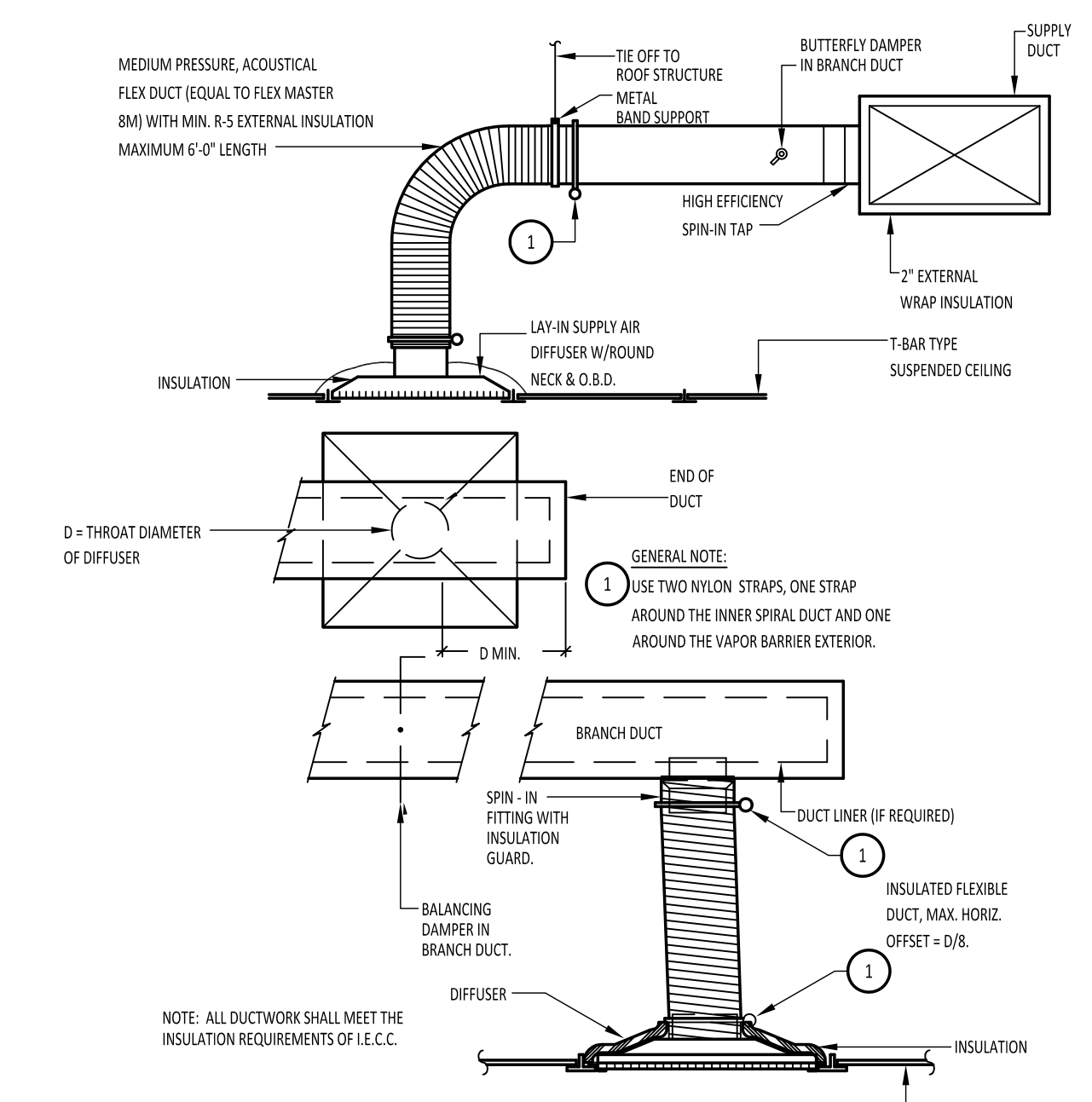
**7 ROUND DUCT STRAP BRACKET**  
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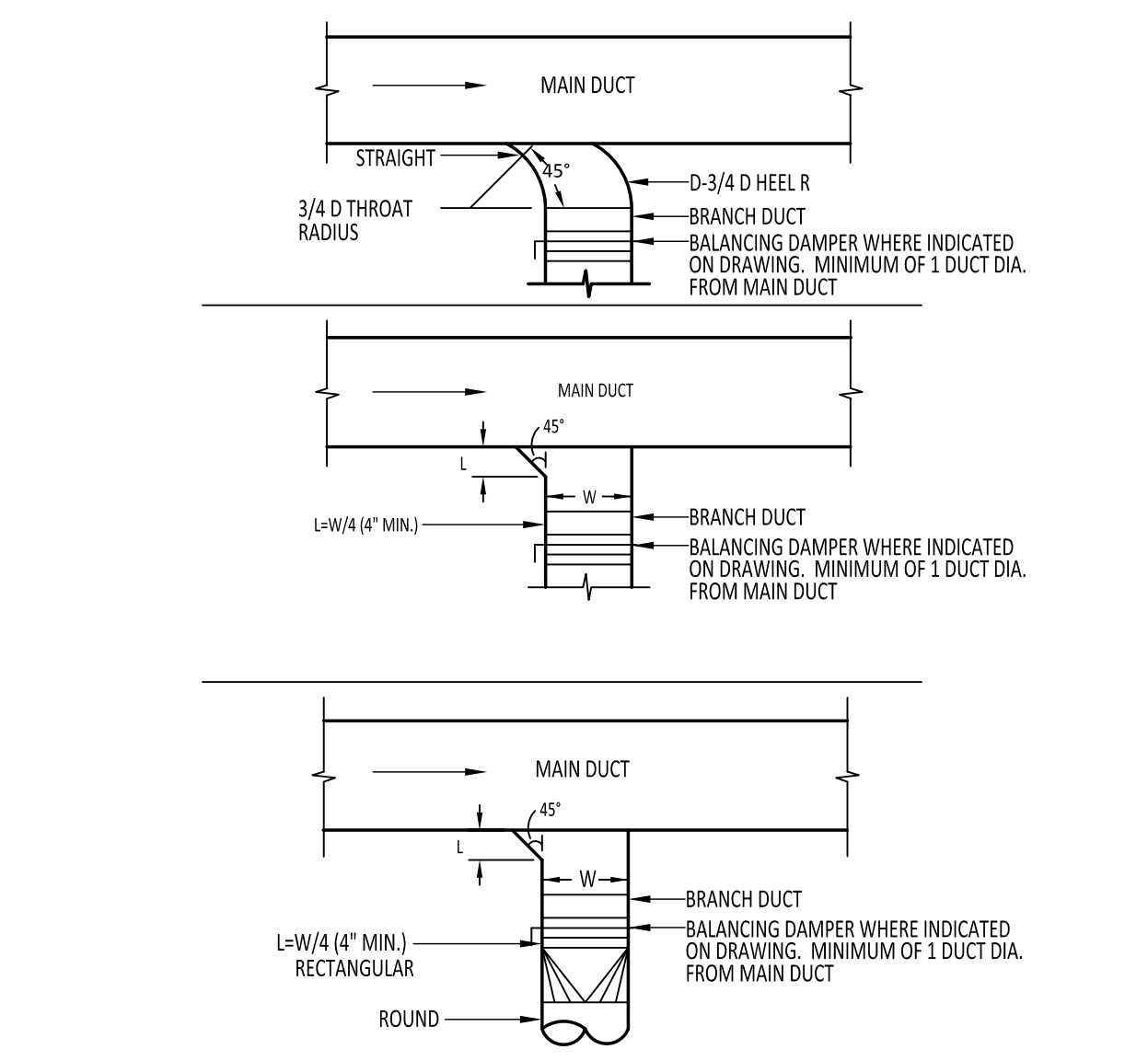
**8 TYPICAL SPLITTER DAMPER**  
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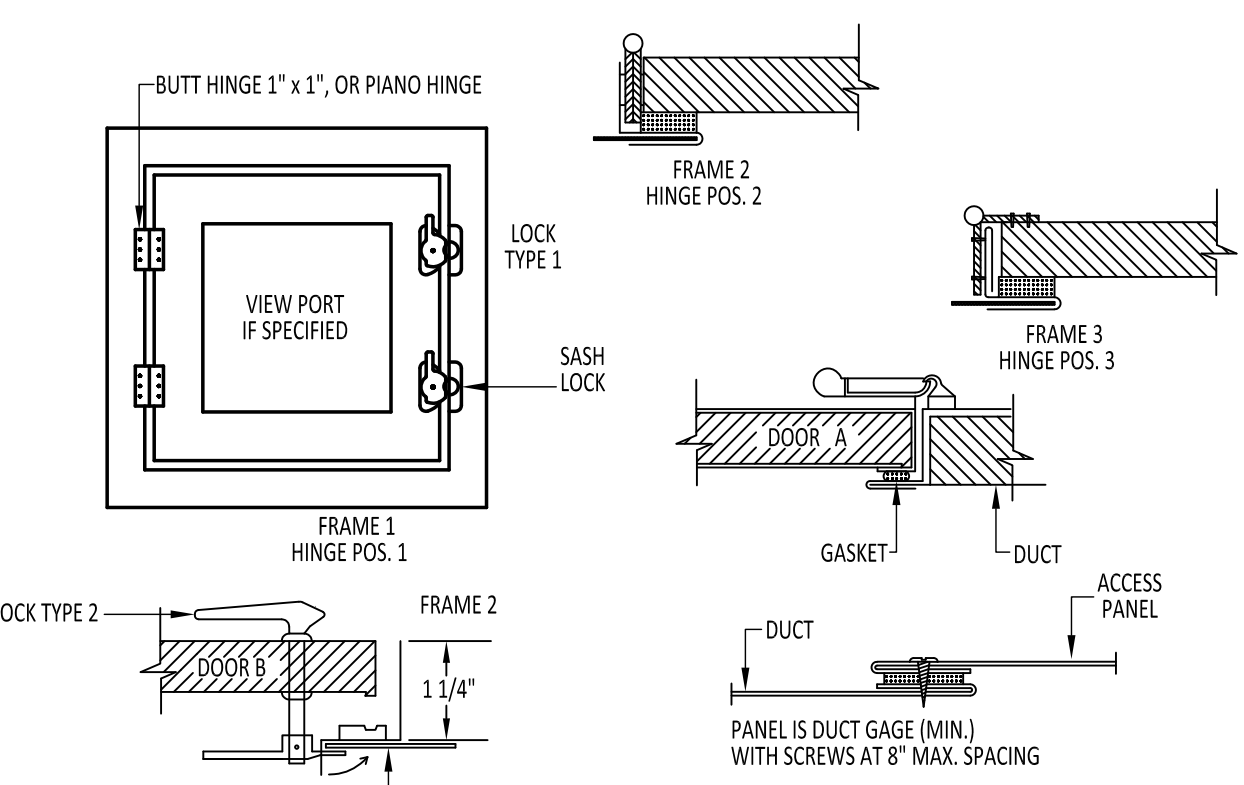
**9 RETURN AIR BOOT DETAIL**  
SCALE: N.T.S.



**10 SUPPLY AIR DIFFUSER**  
SCALE: N.T.S.



**11 TYPICAL BRANCH CONNECTION**  
SCALE: N.T.S.

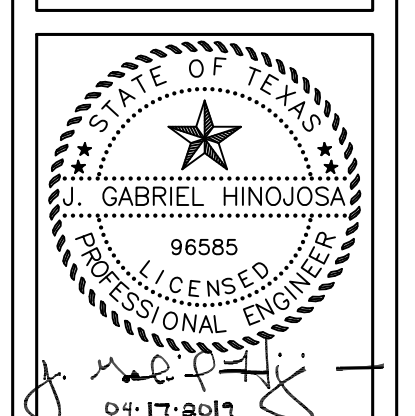


**12 DUCT ACCESS DOOR DETAIL**  
SCALE: N.T.S.

DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
			FRAME	DOOR	BACK
2\"/>					

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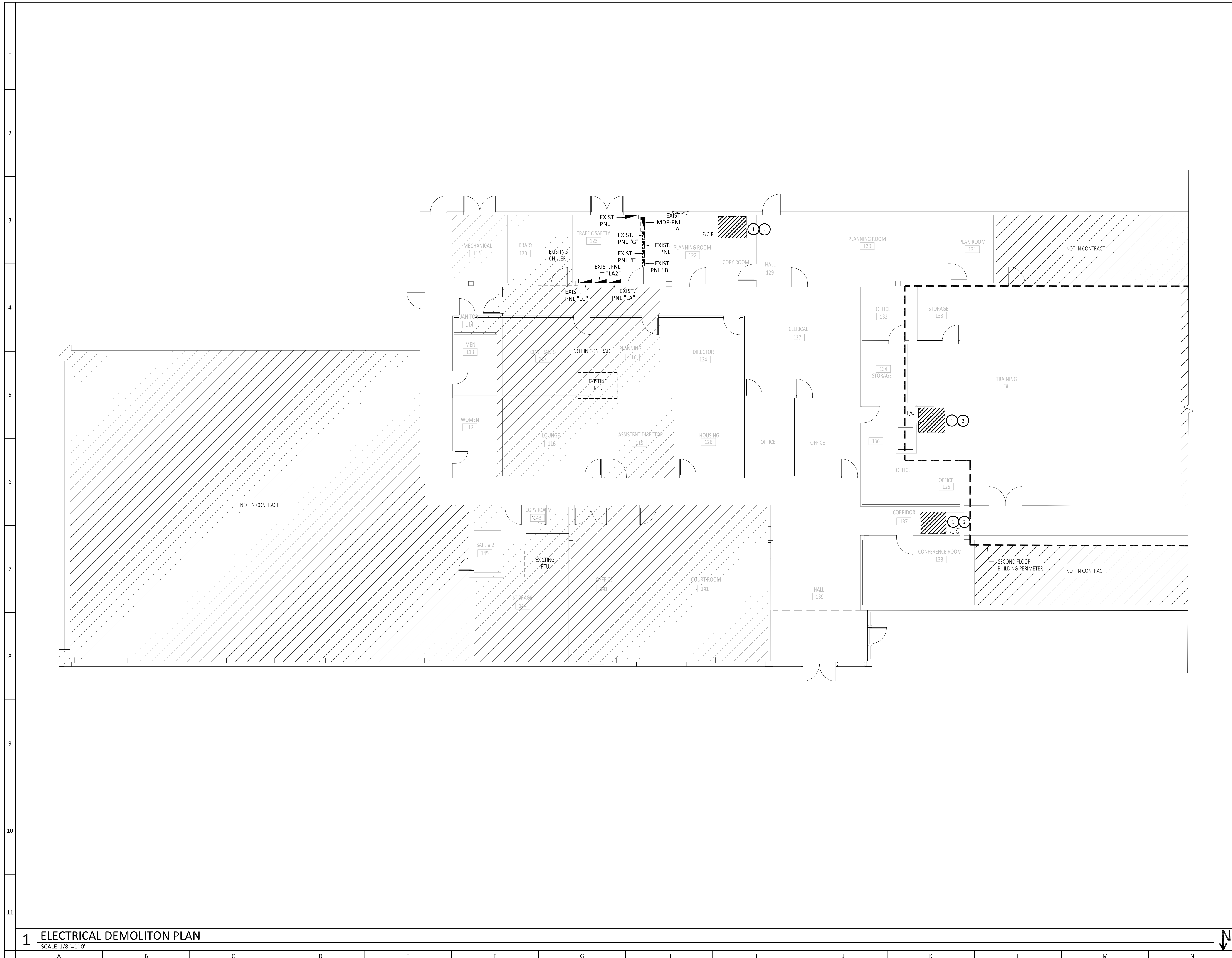
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SHEET TITLE:

**MECHANICAL  
DETAILS**

**M-2.0**







- GENERAL NOTES:**
- A. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.
  - B. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO SEAL ALL ROOF PENETRATIONS WHERE HVAC EQUIPMENT WILL BE COMPLETELY DEMOLISHED. SEAL WITH VAPOR BARRIER WEATHER TIGHT SEALANT.
  - C. REFER TO PANEL SCHEDULES FOR EQUIPMENT BRANCH CIRCUITS.
  - D. EXISTING ELECTRICAL PANEL TO REMAIN.
  - E. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO DISCONNECT EXISTING AIR HANDLING UNIT. REFER TO MECHANICAL CONNECTION SCHEDULE FOR REQUIREMENTS.

- KEY NOTES:** ①
- 1. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO REPLACE EXISTING SMOKE DETECTORS. RETURN TO OWNER OR DISCARD AT THE OWNER'S REQUEST.
  - 2. CONTRACTOR SHALL REMOVE EXISTING FEEDERS SERVING POWER TO EXISTING AIR HANDLING UNITS FROM THE UNIT ALL THE WAY TO THE ELECTRICAL PANEL WHERE IT IS BEING CONNECTED FROM. UPDATE-TYPED EXISTING PANEL CIRCUIT DIRECTORY TO IDENTIFY CIRCUIT MODIFICATIONS DONE UNDER THIS CONTRACT AND EXISTING CIRCUIT CONDITIONS.

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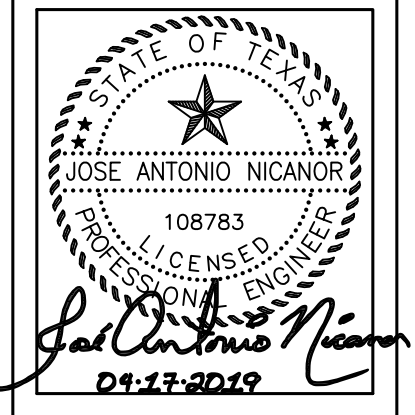
**DEMOLITION LEGEND**

////// DEMOLISH TO BE REPLACED

----- EXISTING TO REMAIN

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DRAWN BY: KA  
 CHECKED BY: JAN  
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**ELECTRICAL DEMOLITION PLAN**  
 ED-1.0

**1 ELECTRICAL DEMOLITION PLAN**  
 SCALE: 1/8"=1'-0"















