

# IDEA PUBLIC SCHOOLS

## SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

### SAN ANTONIO, TEXAS

NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO



DATE: OCTOBER 10, 2024  
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**COVER**

**DATE OF ISSUE**  
 OCTOBER 10, 2024

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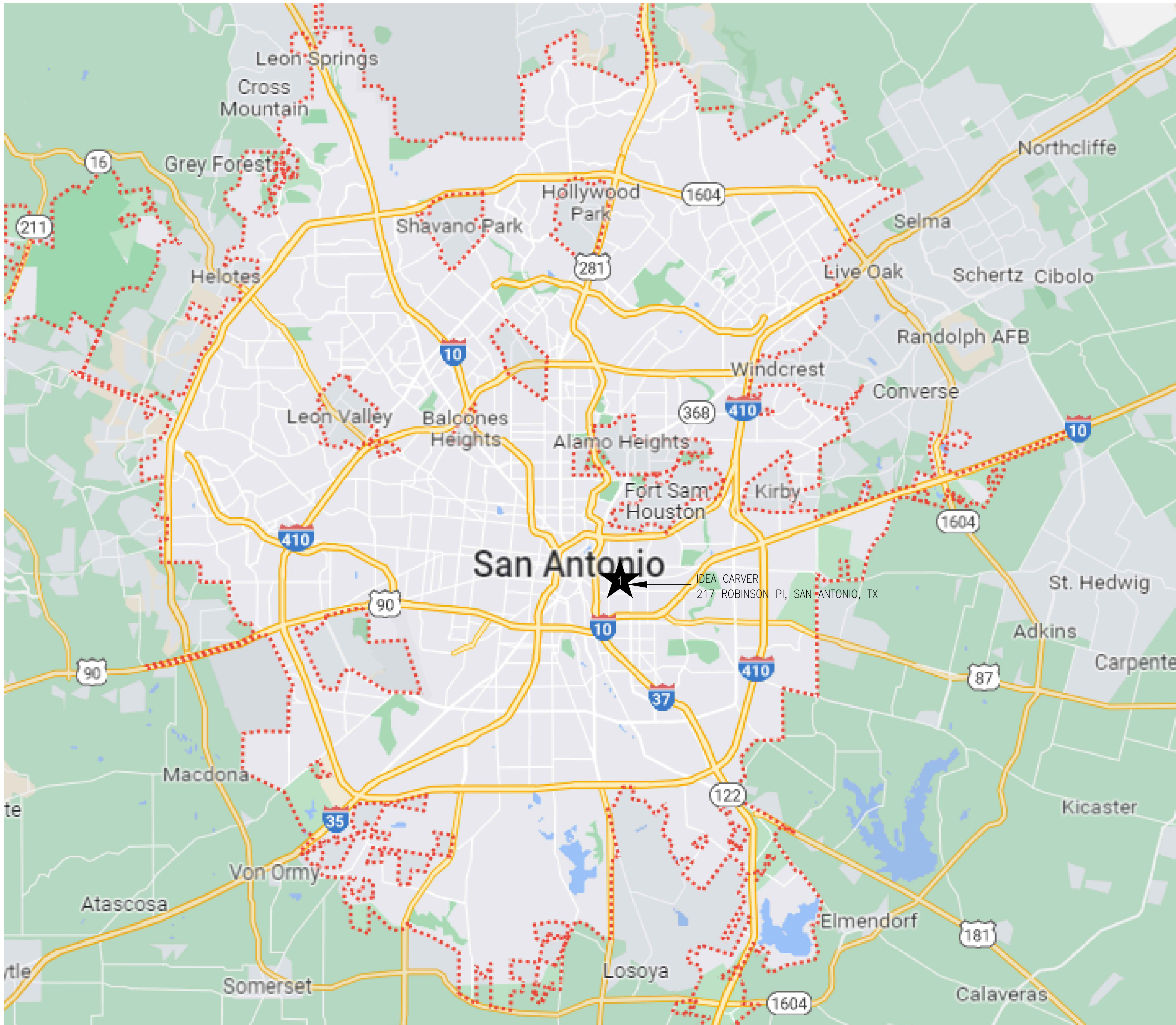
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VICINITY MAP - SAN ANTONIO



## EQUIPMENT:

- EQUIPMENT INSPECTION:
  - FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
  - ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY EQUIPMENT CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
  - EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
- EQUIPMENT ACCESS:
  - MAKE ALL VALVES ACCESSIBLE, INCLUDING MANUAL SHUTOFF VALVES AND AUTOMATIC VALVES. VALVES SHOULD BE CLOSE TO THE UNIT BEING SERVED AND REACHABLE BY A 5'-6" PERSON STANDING ON THE FLOOR NEARBY, WITHOUT NEED FOR A LADDER. WHERE SHUTOFF VALVES SERVE AN ABOVE-CEILING UNIT ACCESSIBLE ONLY BY LADDER, THE SHUTOFF VALVES SHOULD BE CLOSE ENOUGH TO THE UNIT SO THAT MAINTENANCE PERSONNEL CAN SHUT THE VALVES AND ACCESS THE CONTROL PANEL WITHOUT HAVING TO RELOCATE THE LADDER. WHERE PIPING CONFIGURATION MAKES IT IMPOSSIBLE TO LOCATE SHUTOFF VALVES IN THE MANNER DESCRIBED ABOVE, OBTAIN APPROVAL FROM OWNER AND/OR ENGINEER FOR ALTERNATE LOCATION.
  - FOR EQUIPMENT WHICH MAY REQUIRE PERIODIC SERVICING (SUCH AS AIR HANDLERS & VAVs) AND WHICH IS LOCATED ABOVE A SUSPENDED CEILING, CONTRACTOR IS TO PROVIDE A MARKER ON CEILING GRID WHICH CLEARLY INDICATES WHICH CEILING TILE IS TO BE REMOVED TO MOST CONVENIENTLY ACCESS EQUIPMENT SIDE NEEDING SERVICING. THE MARKER IS TO BE ROUND DOT OF HEAVY DUTY COLORED PAPER, WITH DIRECTION INDICATION, WITH ADHESIVE BACKING. OBTAIN ARCHITECT APPROVAL FOR COLOR, SIZE, AND TYPE PRIOR TO INSTALLATION.
  - PROVIDE MANUFACTURER RECOMMENDED AND CODE ENFORCED CLEARANCES AROUND EQUIPMENT. MAINTAIN 36" CLEAR IN FRONT OF EFF CONTROLLER, ELECTRIC HEATERS, ETC.
  - INSTALL ALL VALVES, CONTROLS, DAMPERS, FANS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE ADEQUATELY SIZED ACCESS DOORS WHERE REQUIRED.
- EQUIPMENT INSTALLATION:
  - PROVIDE SPRING HANGER TYPE VIBRATION ISOLATORS TO SUPPORT SUSPENDED AHUS, FANS AND OTHER POWERED VIBRATING EQUIPMENT. PROVIDE FLEXIBLE DUCT CONNECTORS.
  - AFFIX ID TAGS TO ALL MECHANICAL EQUIPMENT PER SPECIFICATIONS.
- EQUIPMENT INSULATION:
  - INSULATE ALL SURFACES OF THAT ARE CAPABLE OF BECOMING COLD AND COLLECTING CONDENSATE. THIS INCLUDES SUPPLY DIFFUSERS AND CONNECTING DUCTWORK / TRANSITION PIECES.
- ELECTRICAL:
  - CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ELECTRICAL CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
  - DUE TO VARIATIONS IN EQUIPMENT CHARACTERISTICS BY DIFFERENT EQUIPMENT SUPPLIERS, MECHANICAL EQUIPMENT ULTIMATELY PROVIDED MAY DIFFER IN HORSEPOWER OR AMPERAGE REQUIREMENTS FROM THAT SPECIFIED IN THESE DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BIDDING, AND PRIOR TO SUBMITTALS AND ORDERING EQUIPMENT, TO ENSURE THAT EQUIPMENT ELECTRICAL REQUIREMENTS ARE CONVEYED TO ELECTRICAL CONTRACTOR. IT IS SOLELY CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPATIBILITY ISSUES ARE COORDINATED.

## DEMOLITION GENERAL NOTES:

- ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
- PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF MECHANICAL EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
- ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
- CONTRACTOR SHALL NOT DAMAGE STRUCTURAL INTEGRITY OF BUILDING ELEMENTS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER, CONTRACTOR SHALL GAIN CONSENT OF ENGINEER PRIOR TO COMPROMISING INTEGRITY OF STRUCTURAL BEAMS, IN WORK ASSOCIATED WITH BOTH DEMOLITION AND INSTALLATION.
- OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.

## ABBREVIATIONS

A	AMPS	ENT.	ENTERING	NO	NORMALLY OPEN
ACCU	AIR COOLED CONDENSING UNIT	EXT.	EXTERNAL OR EXTERIOR	NTS	NOT TO SCALE
ACT	ACTUATOR	FCU	FAN COIL UNIT	OA	OUTSIDE AIR
AFF	ABOVE FINISHED FLOOR	FD	FIRE DAMPER	PH	PHASE
AHU	AIR HANDLING UNIT	FM	FLOW METER	RA	RETURN AIR
B.	BOTTOM	FS	FLOW SWITCH	RAG/RG	RETURN AIR GRILLE
BAS	BUILDING AUTOMATION SYSTEM	FPI	FINS PER INCH	RD	ROOF DRAIN
BOP	BOTTOM OF PIPE	G.	GROUND	RM.	ROOM
BOTT.	BOTTOM	GA.	GAGE	RPZ	REDUCED PRESSURE ZONE
C.	CONDUIT OR COMMON	GALV.	GALVANIZED	SA	SUPPLY AIR
CHR	CHILLED WATER RETURN	GPM	GALLONS PER MINUTE	SD	SUPPLY AIR DIFFUSER
CHS	CHILLED WATER SUPPLY	GRND.	GROUND	SS	STAINLESS STEEL
CHW	CHILLED WATER	HB	HOSE BIBB	SZ	SINGLE ZONE
CHWP	CHILLED WATER PUMP	HP	HORSEPOWER	TAB	TESTING & BALANCING
CR	CONDENSER WATER RETURN	HS	HUMIDITY SENSOR	T.O.L.	TOP OF LOUVER
CS	CONDENSER WATER SUPPLY	HVAC	HEATING, VENTILATION, & AIR CONDITIONING	TS	TEMPERATURE SENSOR
CLG.	CEILING OR COOLING			TSTAT	THERMOSTAT
COMB.	COMBINATION	LVG.	LEAVING	UG	UNDERGROUND
CONC.	CONCRETE	MECH	MECHANICAL	UNO	UNLESS OTHERWISE NOTED
COND.	CONDUIT	MOT. STRTR.	MOTOR STARTER	V	VOLTS
CT	COOLING TOWER	MS	MOTOR STARTER	VAV	VARIABLE AIR VOLUME
CU.	COPPER	MZ	MULTI-ZONE	VFD	VARIABLE FREQUENCY DRIVE
CW	CITY WATER	NC	NORMALLY CLOSED	W	WIRE
DDC	DIRECT DIGITAL CONTROLS				
DMPR.	DAMPER				
DISC.	DISCONNECT				
EAG/EG	EXHAUST AIR GRILLE				
EMS	ENERGY MANAGEMENT SYSTEM				

## COORDINATION:

- GENERAL:
  - CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND MECHANICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
  - IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR. COORDINATE MECHANICAL WITH OTHER TRADES SUCH AS PLUMBING, ELECTRICAL AND STRUCTURAL WORK. COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
  - TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING STAGE.
  - PROVIDE COORDINATION DRAWINGS OF REFLECTED CEILING PLAN AND SECTION ABOVE CEILING SHOWING WORK OF ALL AFFECTED TRADES. DO NOT PROCEED WITH FABRICATION WORK UNTIL COORDINATION DRAWINGS HAVE BEEN APPROVED BY A/E.
  - CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.
  - WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE PROJECT AND RESPONSIBILITY OF CONTRACTOR ONCE ALLOWANCE IS APPROVED.
- SITE:
  - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE CONDITIONS IN ORDER TO MAKE ANY NECESSARY ADJUSTMENTS, PRIOR TO ORDERING MATERIALS OR COMMENCING INSTALLATION. CHANGE ORDERS WILL NOT BE APPROVED FOR DIMENSIONAL VERIFICATIONS REQUIRING MINOR ADJUSTMENTS NEEDED TO COMPLETE INSTALLATION.
- SPATIAL COORDINATION:
  - COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
  - SPACES ABOVE CEILING ARE CONGESTED. DESIGN INTENT IS THAT UTILITIES BE INSTALLED TIGHT AGAINST CEILING STRUCTURE TO EXTENT POSSIBLE, WHILE RETAINING ADEQUATE MAINTENANCE ACCESS PER CODES.
  - IN CASE OF CONFLICTS, ITEMS SHALL BE ARRANGED ACCORDING TO THE FOLLOWING PRIORITIES: LIGHTING, FIRE PROTECTION, HVAC. PROVIDE OFFSETS/RISES/DROPS REQUIRED TO RESOLVE CONFLICTS WITH OTHER UTILITIES, AND TO ACCOMMODATE ALL UTILITIES ABOVE CEILINGS.
  - IN GENERAL, REROUTE SMALLER DUCTS/PIPES THROUGH JOISTS TO RESOLVE CONFLICTS WITH LARGER. PERFORM REROUTING IN MOST EFFICIENT MANNER POSSIBLE, AND IN ACCORDANCE WITH INDUSTRY STANDARDS.
  - PROVIDE COORDINATION DRAWINGS OF REFLECTED CEILING PLAN AND SECTION ABOVE CEILING SHOWING WORK OF ALL AFFECTED TRADES. DO NOT PROCEED WITH FABRICATION WORK UNTIL COORDINATION DRAWINGS HAVE BEEN APPROVED BY A/E.
  - SEE ELECTRICAL PLANS FOR EXACT LOCATION OF ELECTRICAL PANELS TO AVOID DUCTWORK AND PIPING RUNNING OVER THESE AREAS. COORDINATE WITH ELECTRICAL CONTRACTOR.
  - LOCATE AIR DEVICES AS SHOWN. COORDINATE WITH OTHER TRADES TO AVOID CONFLICT AND ADJUST LOCATION IF NEEDED WITHOUT COMPROMISING AIR DEVICES PERFORMANCE.

## GENERAL NOTES:

- TEST & BALANCE:
  - TEST AND BALANCE CONTRACTOR SHALL BE RETAINED BY THE PRIME CONTRACTOR AND NOT UNDER THE MECHANICAL CONTRACTOR. ALL SUB-CONTRACTORS SHALL COORDINATE ACTIVITIES AND ASSIST TEST AND BALANCE CONTRACTOR AS NEEDED.
  - TEST & BALANCE TO COORDINATE MINIMUM AND MAXIMUM OUTSIDE AIR DAMPER SETTINGS WITH DDC CONTROLS AND ENGINEER. PROVIDE TIME ALLOTMENT FOR MULTIPLE DAMPER SETTINGS IN SOME CASES.

## CODES & ORDINANCES:

- GENERAL:
  - UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS, PERFORM ALL WORK PER APPLICABLE VERSION OF INTERNATIONAL BUILDING CODES, AND LOCAL CODES AND ORDINANCES.
  - PRIOR TO SUBMITTING PROPOSAL, NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
- PERMITS:
  - CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
  - CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
- APPROVALS AND INSPECTIONS:
  - OBTAIN APPROVAL FROM CITY FIRE DEPARTMENT AND BUILDING AND SAFETY DEPARTMENT PRIOR TO INSTALLATION OF ANY FIRE RELATED ITEMS.
  - COORDINATE PRESSURE TESTS, INSPECTIONS AND APPROVAL FOR ALL SYSTEMS WITH PERMITTING OFFICER, OWNER AND ENGINEER.

## INSULATION:

- FIBERGLASS INSULATION MAY NOT BE USED ON ANY COLD PIPING SURFACES; ONLY CLOSED CELL INSULATION IS ACCEPTABLE.
- PROVIDE INSULATION ON ALL SURFACES CAPABLE OF CREATING CONDENSATION.

## DUCTWORK:

- DUCTWORK GENERAL:
  - DRAWINGS ARE DIAGRAMMATIC IN NATURE. FOR CLARITY SAKE, MOST DUCT OFFSETS/RISES/DROPS ARE NOT SHOWN, WHERE DUCTS PENETRATE WALLS, INSTALL THEM PERPENDICULAR TO WALL.
  - RECTANGULAR AND ROUND DUCTWORK SHALL BE GALVANIZED STEEL. SIZES SHOWN ARE INSIDE CLEAR DIMENSION, UNLESS NOTED OTHERWISE.
  - VERIFY BOTTOM OF DUCT ELEVATION AND COORDINATE WITH OTHER TRADES.
  - CONSTRUCT AND LEAKAGE TEST ALL DUCTWORK BASED ON SPECIFICATIONS AND SMACNA REQUIREMENTS, WHICHEVER IS MORE STRINGENT. COORDINATE PRESSURE CLASSES WITH EQUIPMENT SCHEDULES.
- DUCTWORK INSULATION:
  - WRAP ALL OUTSIDE AIR, SUPPLY AND RETURN DUCTWORK UNLESS NOTED OTHERWISE.
  - INSULATION ON DUCT SHOULD TO BE PROPERLY TAPED AND MASTICS MUST BE APPLIED ON SEAMS AND JOINTS AND AT ENDS ADJACENT TO DUCT FLANGES AND FITTINGS. FOR DUCT SIDES WITH DIMENSIONS LARGER THAN 18 INCHES, APPLY ADDITIONAL PINS AND CLIPS TO HOLD INSULATION TIGHTLY AGAINST SURFACE AT CROSS BRACING.
- DUCT FITTINGS:
  - WHERE RECTANGULAR TEE FITTINGS ARE SHOWN, PROVIDE FITTING WITH ADJUSTABLE DIVIDER SHEET AND TURNING VANES.
  - WHERE RECTANGULAR MAIN AND BRANCH CONNECTIONS ARE SHOWN, PROVIDE EXTRACTOR VANES. NOT APPLICABLE TO DUCTWORK DOWNSTREAM OF VAV BOXES.
  - PROVIDE TURNING VANES IN ALL ELBOWS PER SPECS.

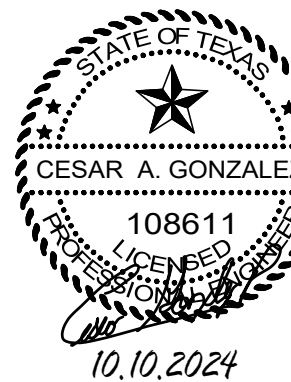
## ELECTRICAL:

- ALL ELECTRICAL WORK SHALL BE UNDER THE MASTER ELECTRICIAN WHO PULLED THE PERMIT AND ITS JOURNEYMAN ELECTRICIANS.
- PERFORM ALL WORK PER ADOPTED N.E.C. AND APPLICABLE STATE STANDARDS, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
- UNLESS NOTED OTHERWISE, MINIMUM POWER CIRCUIT IS TO BE #12 THWN WITH #12 GROUND IN 3/4" CONDUIT, WITH THE EXCEPTION THAT ANY CIRCUIT LONGER THAN 100 FEET SHALL BE MINIMUM #10 AWG WITH #10 GROUND WIRE. CIRCUIT LONGER THAN 200 FEET SHALL BE MINIMUM #8 AWG WITH #10 GROUND WIRE MINIMUM.
- ALL EXISTING ID NAMETAGS AND CIRCUIT IDENTIFICATION MUST BE REVISED TO REFLECT CURRENT CONDITIONS FOR ALL EQUIPMENT WHICH IS NEW, REPLACED, OR DEMOLISHED. REMOVE ID NAMETAGS FOR DEMOLISHED EQUIPMENT. REPLACE EXISTING NAMETAGS WITH NEW FOR REPLACED EQUIPMENT. IF REPLACEMENT EQUIPMENT HAS DIFFERENT NAME. PROVIDE NEW NAMETAGS FOR ALL NEW EQUIPMENT. ALL CIRCUIT BREAKER DIRECTORIES FOR PANELS IN WHICH NEW WORK TAKES PLACE ARE TO BE REPLACED WITH NEW DIRECTORIES WHICH LIST EXISTING CIRCUITS AND NEW. ALL UNUSED CIRCUITS ARE TO BE MARKED AS "SPARE" IN THE DIRECTORIES. DIRECTORIES ARE TO BE COMPUTER GENERATED; NO HAND WRITTEN DIRECTORIES ARE ACCEPTABLE.
- HAND-WRITTEN CIRCUIT BREAKER DIRECTORIES WILL NOT BE ACCEPTED. DIRECTORIES MUST BE COMPUTER GENERATED AND PRINTED TO REFLECT FINAL INSTALLED CONDITIONS.
- MARK ALL J-BOXES WITH INDELEIBLE INK, INDICATING POWER CIRCUITRY INFORMATION. LABEL ALL EQUIPMENT ITEMS PER SPECIFICATIONS.
- ALL EXTERIOR RACEWAYS ABOVE GROUND SHALL BE RIGID GALVANIZED.
- UNDER NO CIRCUMSTANCES SHALL MORE THAN THREE CIRCUITS SHARE THE SAME NEUTRAL, AND SUCH CIRCUITS MUST BE SEPARATE PHASE.
- SINCE ELECTRICAL CHARACTERISTIC OF EQUIPMENT (SUCH AS HORSEPOWER, KW, AMPERAGE, VOLTAGE, ETC.) SUBMITTED MAY DIFFER FROM THOSE SPECIFIED IN DRAWINGS, CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND OTHER CONTRACTORS TO ENSURE COMPATIBILITY BETWEEN ELECTRICAL AND MECHANICAL EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
- USE LONG-SWEEPS FOR ALL CHANGES IN DIRECTION ON CONDUIT RUNS.
- ALL INTERIOR RACEWAYS SHALL BE EMT.
- FIELD VERIFY PROJECT SITE EXISTING CONDITIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK.
- PHASING AND SEQUENCE OF CONSTRUCTION SHALL BE PER DRAWINGS AND SPECIFICATIONS.
- ALL MATERIALS AND LABOR, WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT, WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM SHALL BE FURNISHED BY THIS CONTRACTOR. INCLUDE ALL COSTS OF CHANGES, IF/AS REQUIRED IN BID PROPOSAL.
- ELECTRICAL WIRING SHALL NOT BE SPLICED BELOW GRADE.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
- CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
- NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
- COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
- SEAL AROUND ELECTRICAL RACEWAYS AT ALL WALLS AND WALL LOUVER PENETRATIONS WITH FIREPROOF CAULKING. RE. SPECS. PROVIDE FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.
- CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND ELECTRICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
- MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
- AFFIX ID TAGS TO ALL DIVISION 26 EQUIPMENT.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND PLUMBING CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
- FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
- ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
- EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
- SLEEVE ALL EXTERIOR WALL PENETRATIONS.
- PRIOR TO ANY DEMOLITION, CONTRACTOR SHALL CONDUCT A DETAILED INSPECTION OF EXISTING CONDITIONS AND COMPARE AGAINST DEMOLITION DRAWINGS. CONTRACTOR SHALL REQUEST CLARIFICATION AS TO THE REMOVAL OF ANY ELECTRICAL COMPONENTS FOUND IN THE FIELD THAT ARE NOT SPECIFICALLY NOTED TO BE DEMOLISHED.
- THE DESIGN INTENT IS TO REUSE TO EXTENT POSSIBLE EXISTING ELECTRICAL AND SAFETY SYSTEMS INCLUDING CIRCUIT BREAKERS, WIRING AND CONDUITS, SAFETY AND OTHER HARD WIRED INTERLOCKS, ETC. EXISTING SYSTEMS TO BE REUSED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. SEE PLANS
- PROVIDE ADDITIONAL SPARE MATERIALS DESCRIBED BELOW. PROVIDE PROTECTIVE COVERING FOR STORAGE & IDENTIFIED WITH LABELS DESCRIBING THE CONTENTS. INCLUDE THE INSTALLATION COST, FITTINGS AND SUPPORTS IN THE BASE BID PROPOSAL:
  - 1000 LINEAR FEET - 3/4"-2#10 & #10G

## MECHANICAL SYMBOLS LEGEND

12x12	DUCT SIZE: FIRST FIGURE IS SIDE SHOWN		THERMOSTAT
(12x12)	BELOW DUCT SIZE: FIRST FIGURE IS SIDE SHOWN		SPACE HUMIDITY SENSOR
	DIRECTION OF FLOW-RETURN		DUCT HUMIDITY SENSOR
	DIRECTION OF FLOW-SUPPLY		SPACE CARBON DIOXIDE SENSOR
			STATIC PRESSURE SENSOR
	FIRE DAMPER		DUCT CARBON DIOXIDE SENSOR
	FLEXIBLE DUCT		CHILLED WATER RETURN
	EXHAUST AIR GRILLE		CHILLED WATER SUPPLY
	RETURN AIR/TRANSFER AIR GRILLE		CONDENSATE PIPING
	SUPPLY AIR DIFFUSER		BUTTERFLY VALVE
			MANUAL VALVE
			AUTOMATIC VALVE
	BACKDRAFT DAMPER		CHECK VALVE
	AUTO-FLOW REGULATOR		PRESSURE GAUGE & COCK
	DRAIN VALVE		TEMPERATURE SENSOR
	BALL VALVE		THERMOMETER WELL





**CEILING DEMO GENERAL NOTES:**

1. PRIOR TO DEMOLITION, IN CEILINGS SCHEDULED TO BE REMOVED, PREPARE REFLECTED CEILING PLAN SKETCH SHOWING LOCATIONS OF ALL CEILING COMPONENTS AND DEVICES TO BE RE-USED INCLUDING BUT NOT LIMITED TO: EXISTING LIGHT FIXTURES, SPEAKERS, FIRE ALARM DEVICES, EMERGENCY LIGHTING, ETC. IF ANY OF THE ABOVE ITEMS ARE IN NON-WORKING CONDITION, SUBMIT A WRITTEN REPORT TO OWNER/ENGINEER.
2. CONTRACTOR TO EVALUATE CEILING GRID PRIOR TO DEMOLITION AND DOCUMENT ALL BROKEN, CRACKED, MISSING TILES, ETC. AND PROVIDE REPORT TO OWNER AND ENGINEER.

**CEILING DEMO KEYNOTES:**

- ① TEMPORARILY REMOVE EXISTING CEILING TILES/GRID, LIGHT FIXTURES, FIRE ALARM DEVICES, SENSORS, ETC. AS NECESSARY FOR DEMOLITION AND PROVISION OF NEW EXHAUST FANS, WORK TO BE PERFORMED ON EXISTING EXHAUST FANS, DUCTWORK MODIFICATIONS, AND OTHER ASSOCIATED MEP SYSTEMS (FIRE DAMPERS, ELECTRICAL CONDUITS, ETC.). RE-INSTALL AFTER WORK ABOVE CEILING HAS BEEN COMPLETED.

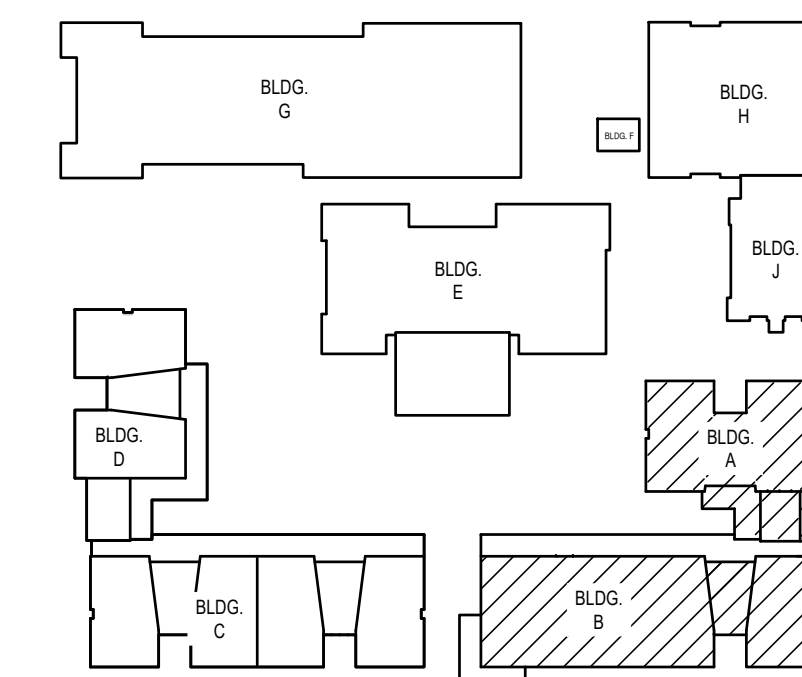
**MECHANICAL KEYED NOTES:**

- 1 DEMOLISH EXISTING EXHAUST FAN AND CONTROLS IN THIS APPROXIMATE LOCATION. COORDINATE WITH CONTROLS CONTRACTOR PRIOR TO DEMOLITION.

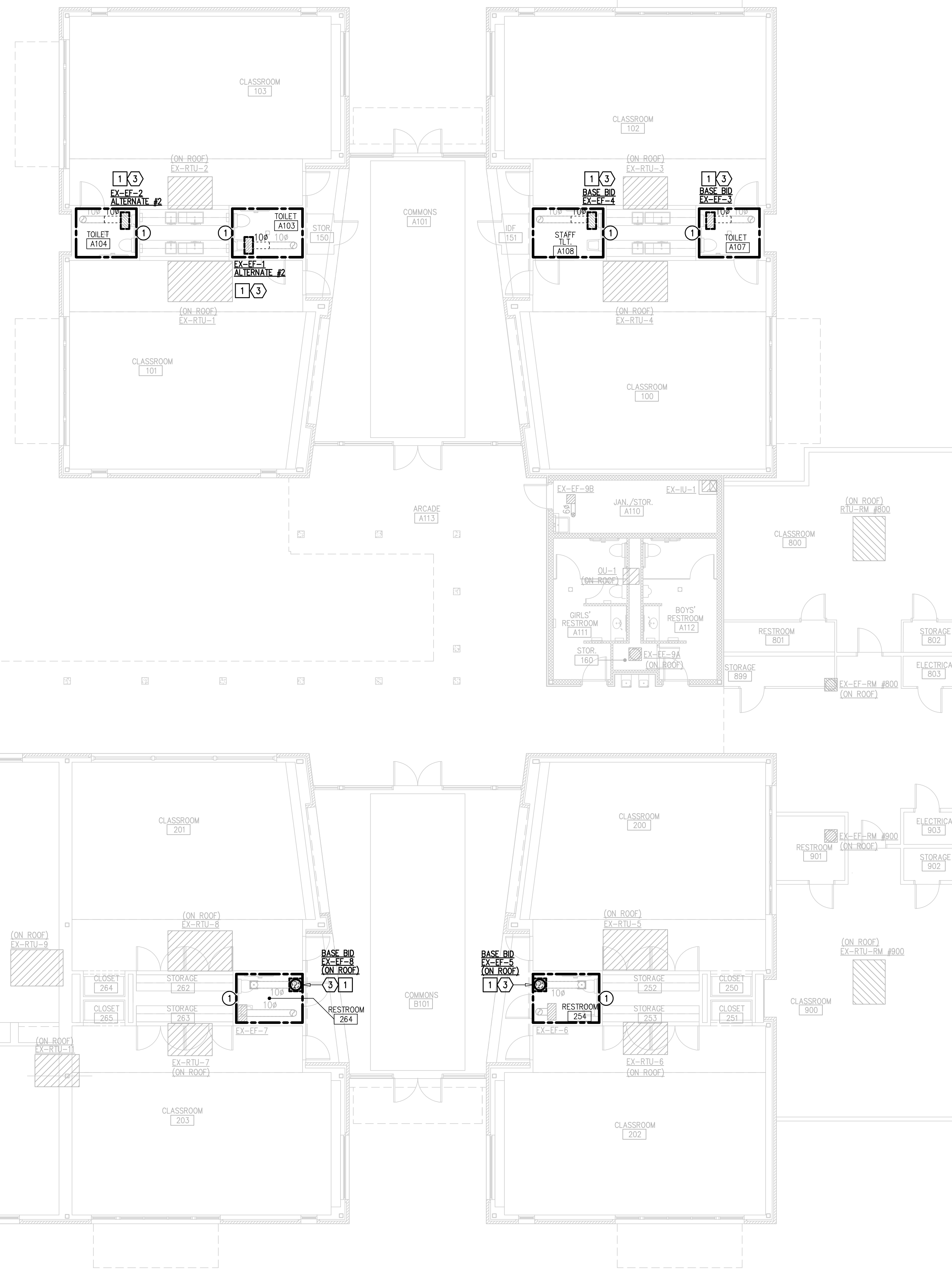
**ELECTRICAL KEYED NOTES:**

- ① APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING HVAC EQUIPMENT.
- ② APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING EF.
- ③ TEMPORARILY DISCONNECT EXISTING EF FOR INSTALLATION OF A NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.
- ④ APPROXIMATE LOCATION OF EXISTING SIEMENS MXL-10 FIRE ALARM CONTROL PANEL.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED
	PIPING TO BE DEMOLISHED
	CEILING TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	EXISTING DUCTWORK TO BE DEMOLISHED



IDEA CARVER ACADEMY  
KEYPLAN



IDEA CARVER  
MECHANICAL & ELECTRICAL DEMOLITION FLOOR PLAN (BUILDING A & B)  
01 SCALE: 1/8" = 1'-0"





IDEA CARVER  
MECHANICAL & ELECTRICAL DEMOLITION FLOOR PLAN (BUILDING C & D)  
SCALE: 3/32" = 1'-0"



### CEILING DEMO GENERAL NOTES

- PRIOR TO DEMOLITION, IN CEILINGS SCHEDULED TO BE REMOVED, PREPARE REFLECTED CEILING PLAN SKETCH SHOWING LOCATIONS OF ALL CEILING COMPONENTS AND DEVICES TO BE RE-USED INCLUDING BUT NOT LIMITED TO: EXISTING LIGHT FIXTURES, SPEAKERS, FIRE ALARM DEVICES, EMERGENCY LIGHTING, ETC. IF ANY OF THE ABOVE ITEMS ARE IN NON-WORKING CONDITION, SUBMIT A WRITTEN REPORT TO OWNER/ENGINEER.
- CONTRACTOR TO EVALUATE CEILING GRID PRIOR TO DEMOLITION AND DOCUMENT ALL BROKEN, CRACKED, MISSING TILES, ETC. AND PROVIDE REPORT TO OWNER AND ENGINEER.

### CEILING DEMO KEYNOTES:

- TEMPORARILY REMOVE EXISTING CEILING TILES/GRID, LIGHT FIXTURES, FIRE ALARM DEVICES, SENSORS, ETC. AS NECESSARY FOR DEMOLITION AND PROVISION OF NEW RTU'S AND ASSOCIATED MEP SYSTEMS (DUCTWORK, FIRE DAMPERS, WATER PIPING, ELECTRICAL CONDUITS, ETC.) AND RE-INSTALL AFTER WORK ABOVE CEILING HAS BEEN COMPLETED.

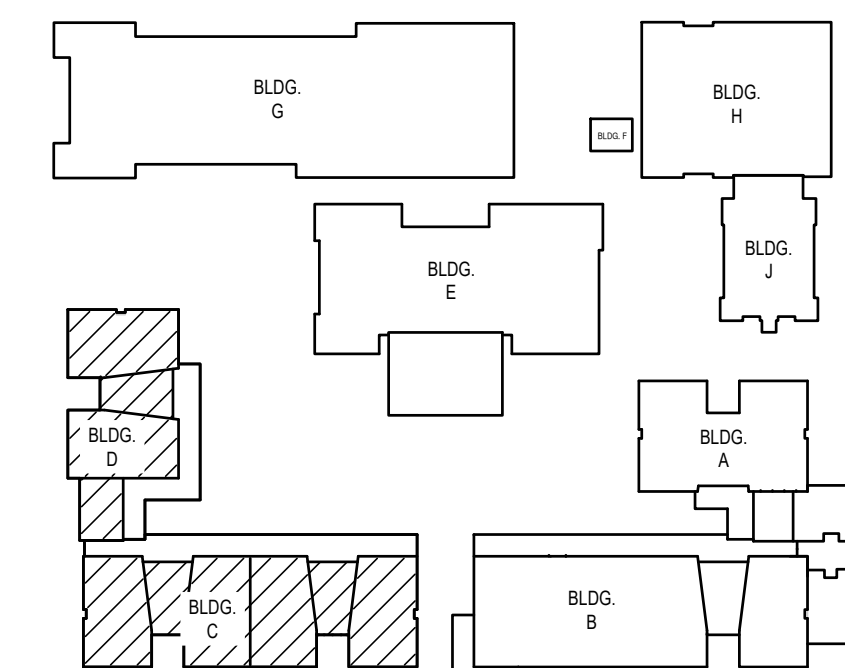
### MECHANICAL KEYED NOTES:

- DEMOLISH EXISTING DUCTWORK, TRANSITIONS, FITTINGS, AND FLEX CONNECTORS AS SHOWN UNDERNEATH THE EXISTING RTU AND WITHIN THE EXISTING CURB OPENING AS NECESSARY TO ACCOMMODATE NEW UNIT.
- DEMOLISH ALL EXISTING PIPING ASSOCIATED WITH THE ROOFTOP UNITS. SEE RENOVATION ROOF PLAN. (TYPICAL)
- RETAIN AND REUSE EXISTING DUCTWORK AS SHOWN. SEE RENOVATION PLAN.
- DEMOLISH EXISTING EXHAUST FAN AND CONTROLS IN THIS APPROXIMATE LOCATION. COORDINATE WITH CONTROLS CONTRACTOR PRIOR TO DEMOLITION.
- DEMOLISH EXISTING DUCT MOUNTED BACKDRAFT DAMPER SERVING EXHAUST FAN. EXHAUST FAN TO BE RETAINED AND REUSE AS MEANS OF BUILDING OVERPRESSURIZATION RELIEF. REFER TO RENOVATION PLANS FOR MORE INFORMATION.

### ELECTRICAL KEYED NOTES:

- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING HVAC EQUIPMENT.
- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING EF.
- TEMPORARILY DISCONNECT EXISTING EF FOR INSTALLATION OF A NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.
- DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED
	PIPING TO BE DEMOLISHED
	CEILING TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	EXISTING DUCTWORK TO BE DEMOLISHED
	EXISTING SUPPLY DIFFUSER
	EXISTING THERMOSTAT TO DEMOLISHED



IDEA CARVER ACADEMY  
KEYPLAN

NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO



1126 SOUTH COMMERCE ST.  
HARLINGEN, TX  
PHONE: 361-230-3425  
TEXAS REGISTERED  
ENGINEERING FIRM  
F-15998

DATE: OCTOBER 10, 2024  
CHECKED BY: C.A.G.  
DRAWN BY: B.B./D.A.G.  
PROJECT NO.: 23v79  
CAD FILE:  
SHEET:

ME2.2



**CEILING DEMO GENERAL NOTES**

- PRIOR TO DEMOLITION, IN CEILINGS SCHEDULED TO BE REMOVED, PREPARE REFLECTED CEILING PLAN SKETCH SHOWING LOCATIONS OF ALL CEILING COMPONENTS AND DEVICES TO BE RE-USED INCLUDING BUT NOT LIMITED TO: EXISTING LIGHT FIXTURES, SPEAKERS, FIRE ALARM DEVICES, EMERGENCY LIGHTING, ETC. IF ANY OF THE ABOVE ITEMS ARE IN NON-WORKING CONDITION, SUBMIT A WRITTEN REPORT TO OWNER/ENGINEER.
- CONTRACTOR TO EVALUATE CEILING GRID PRIOR TO DEMOLITION AND DOCUMENT ALL BROKEN, CRACKED, MISSING TILES, ETC. AND PROVIDE REPORT TO OWNER AND ENGINEER.

**CEILING DEMO KEYNOTES:**

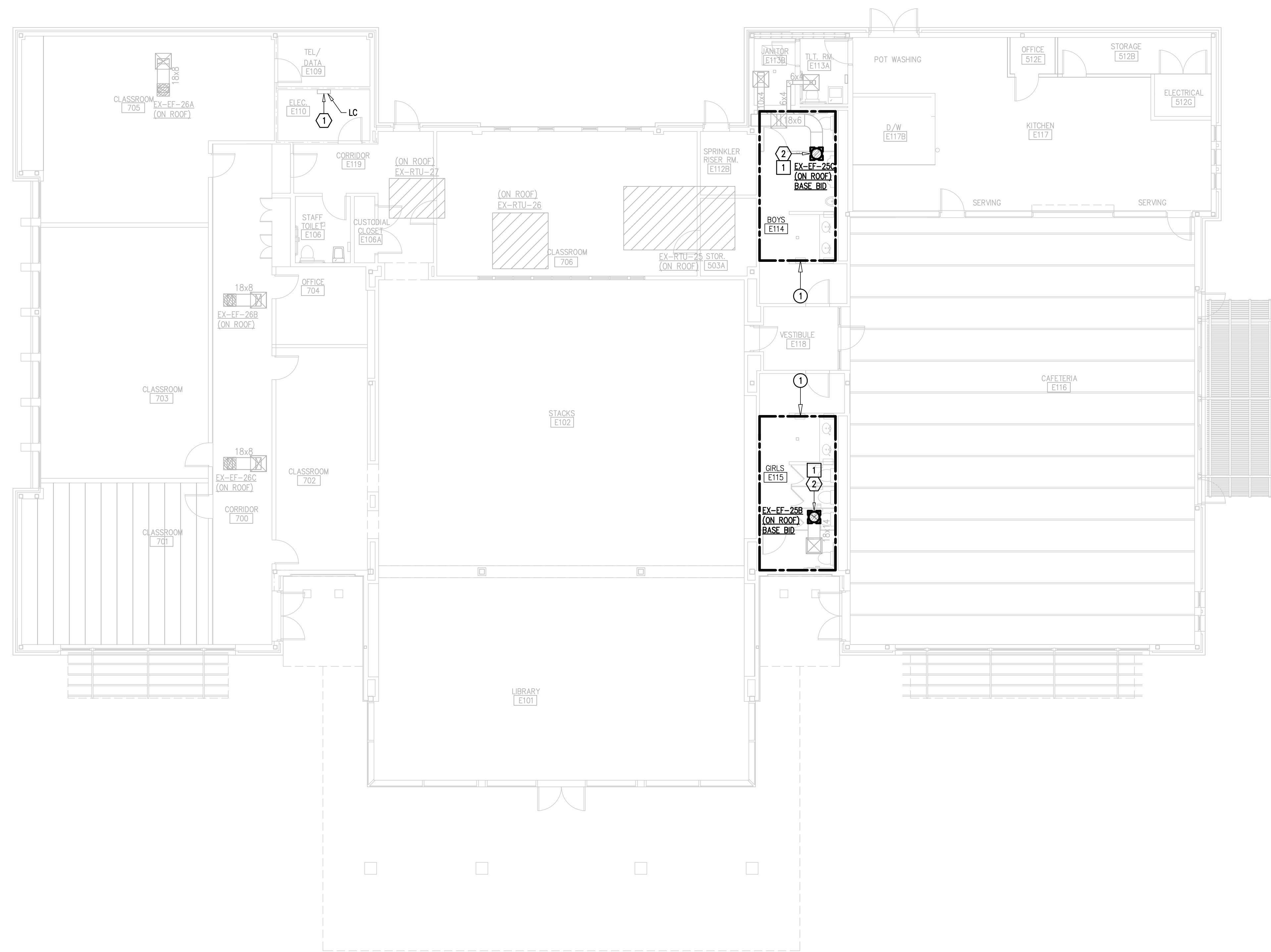
- TEMPORARILY REMOVE EXISTING CEILING TILES/GRID, LIGHT FIXTURES, FIRE ALARM DEVICES, SENSORS, ETC. AS NECESSARY FOR DEMOLITION AND PROVISION OF NEW EXHAUST FANS AND ASSOCIATED MEP SYSTEMS (DUCTWORK, FIRE DAMPERS, WATER PIPING, ELECTRICAL CONDUITS, ETC.) AND RE-INSTALL AFTER WORK ABOVE CEILING HAS BEEN COMPLETED.

**MECHANICAL KEYED NOTES:**

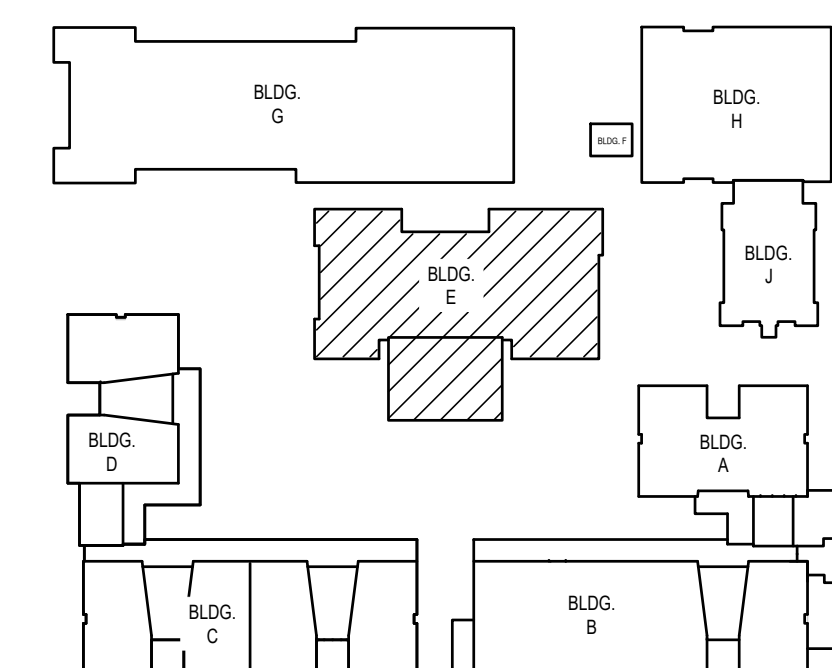
- DEMOLISH EXISTING EXHAUST FAN IN THIS APPROXIMATE LOCATION. COORDINATE WITH CONTROLS CONTRACTOR PRIOR TO DEMOLITION.

**ELECTRICAL KEYED NOTES:**

- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING EF.
- TEMPORARILY DISCONNECT EXISTING EF FOR INSTALLATION OF A NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.

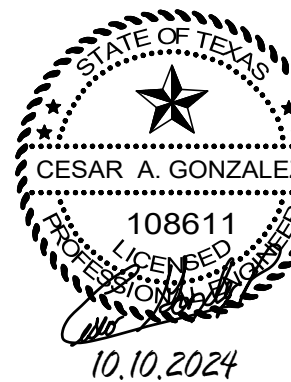


LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED
	CEILING TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	EXISTING DUCTWORK TO BE DEMOLISHED



IDEA CARVER ACADEMY  
KEYPLAN

IDEA CARVER  
 01 MECHANICAL & ELECTRICAL DEMOLITION FLOOR PLAN (BUILDING E)  
 SCALE: 1/8" = 1'-0"



**DEMOLITION GENERAL NOTES:**

1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
2. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF MECHANICAL EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
3. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
4. CONTRACTOR SHALL NOT DAMAGE STRUCTURAL INTEGRITY OF BUILDING ELEMENTS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER. CONTRACTOR SHALL GAIN CONSENT OF ENGINEER PRIOR TO COMPROMISING INTEGRITY OF STRUCTURAL BEAMS, IN WORK ASSOCIATED WITH BOTH DEMOLITION AND INSTALLATION.
5. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.
6. COORDINATE CUTTING AND PATCHING OF ARCHITECTURAL ELEMENTS LIKE WALLS, FLOORS, ROOFS WITH OWNER/ENGINEER. PATCH UNUSED ROOF AND WALL PENETRATIONS, AND FINISH TO MATCH EXISTING ARCHITECTURAL ELEMENTS.

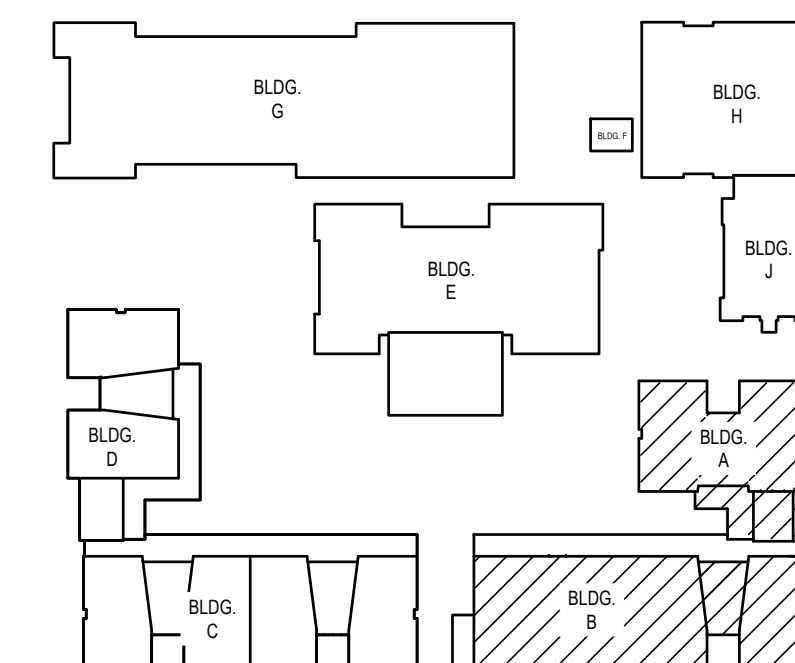
**MECHANICAL KEYED NOTES:**

- 1 DEMOLISH EXISTING EXHAUST FAN AND CONTROLS IN THIS APPROXIMATE LOCATION. COORDINATE WITH CONTROLS CONTRACTOR PRIOR TO DEMOLITION.

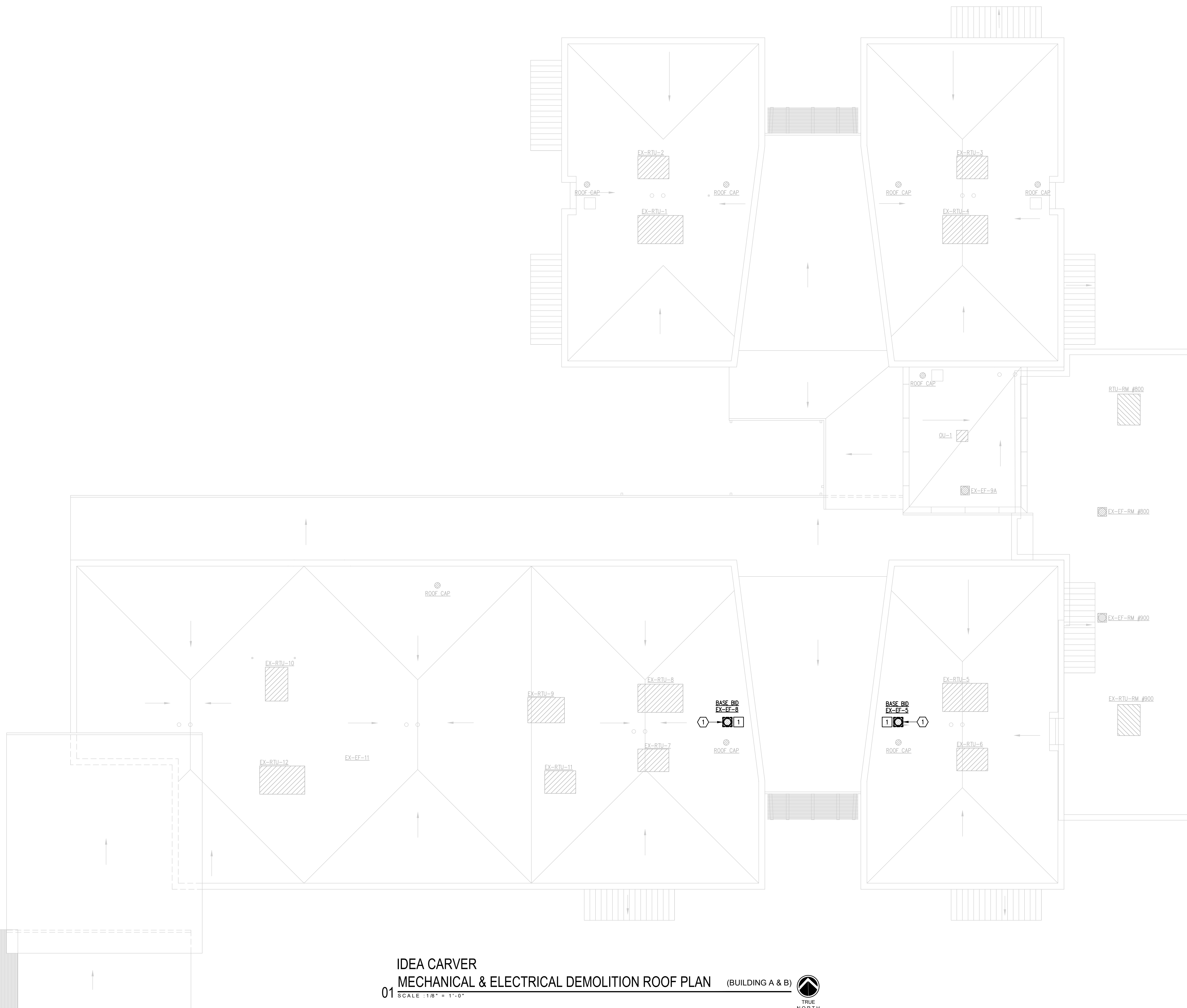
**ELECTRICAL KEYED NOTES:**

- 1 TEMPORARILY DISCONNECT EXISTING EF FOR INSTALLATION OF A NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED
	PIPING TO BE DEMOLISHED

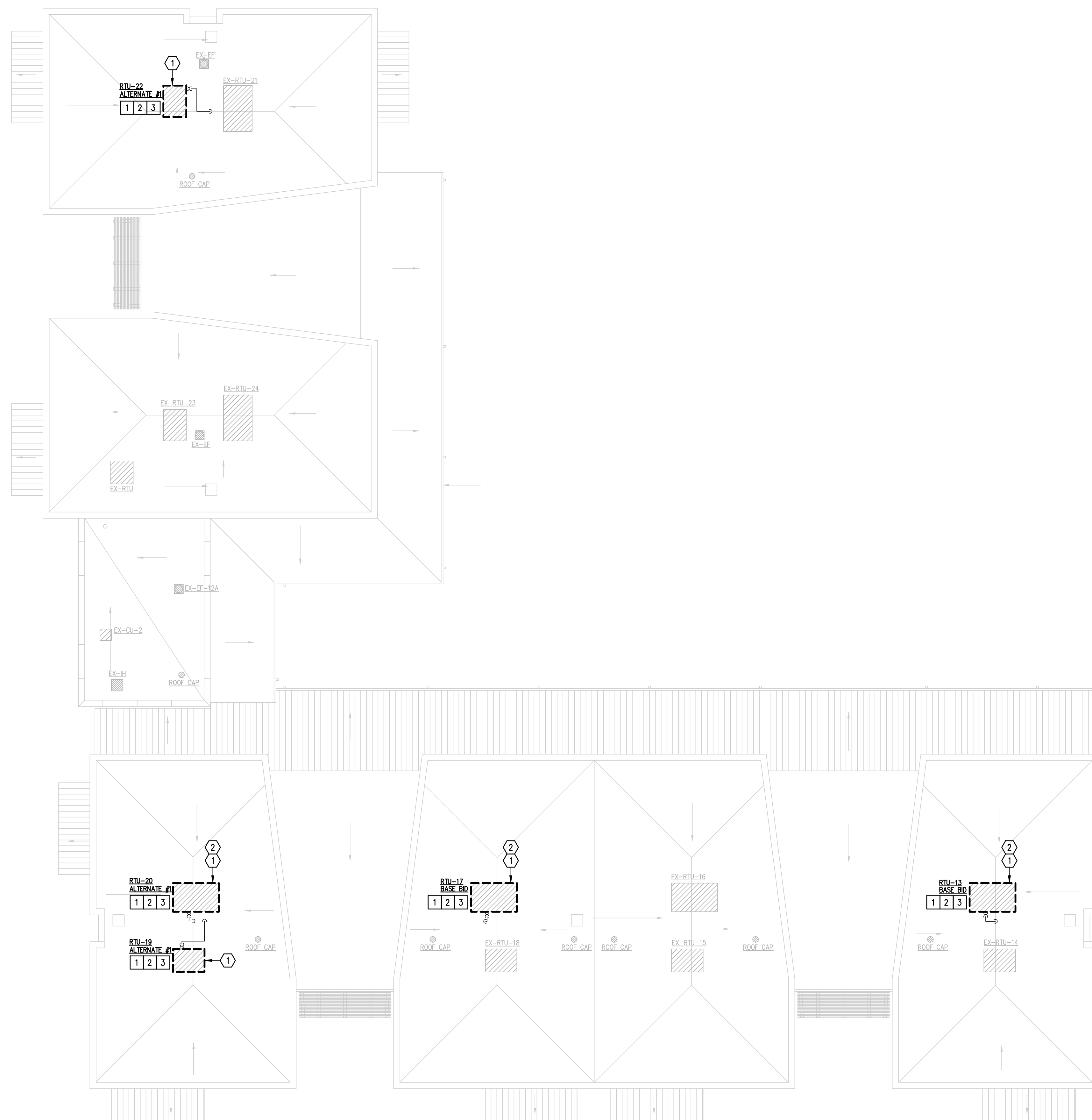


IDEA CARVER ACADEMY  
KEYPLAN



IDEA CARVER  
MECHANICAL & ELECTRICAL DEMOLITION ROOF PLAN (BUILDING A & B)  
01 SCALE: 1/8" = 1'-0"





IDEA CARVER  
MECHANICAL & ELECTRICAL DEMOLITION ROOF PLAN (BUILDING C & D)  
01 SCALE: 3/32" = 1'-0"



**DEMOLITION GENERAL NOTES:**

1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES, INCLUDING THOSE PUBLISHED BY OSHA.
2. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF MECHANICAL EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
3. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
4. CONTRACTOR SHALL NOT DAMAGE STRUCTURAL INTEGRITY OF BUILDING ELEMENTS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER. CONTRACTOR SHALL GAIN CONSENT OF ENGINEER PRIOR TO COMPROMISING INTEGRITY OF STRUCTURAL BEAMS, IN WORK ASSOCIATED WITH BOTH DEMOLITION AND INSTALLATION.
5. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.
6. COORDINATE CUTTING AND PATCHING OF ARCHITECTURAL ELEMENTS LIKE WALLS, FLOORS, ROOFS WITH OWNER/ENGINEER. PATCH UNUSED ROOF AND WALL PENETRATIONS, AND FINISH TO MATCH EXISTING ARCHITECTURAL ELEMENTS.

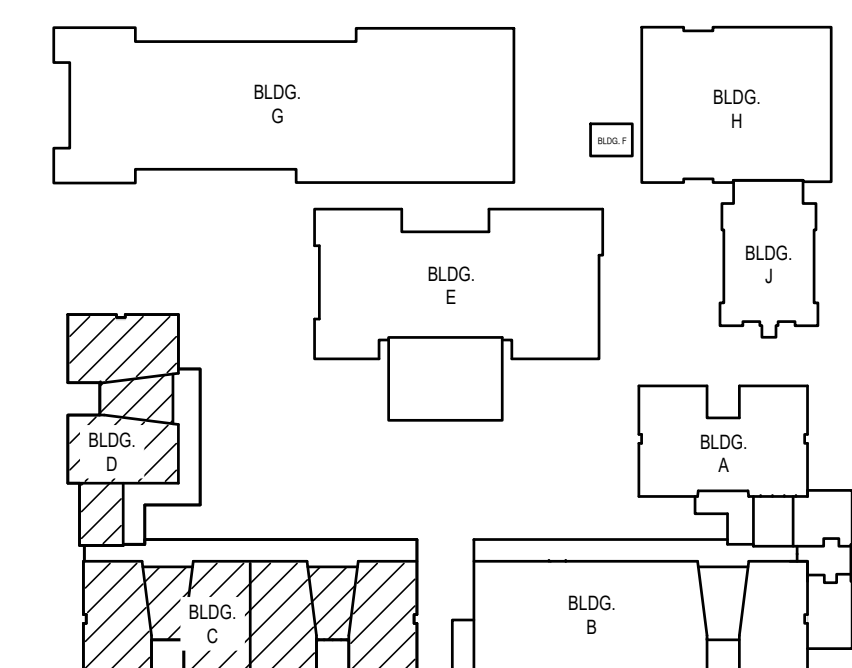
**MECHANICAL KEYED NOTES:**

- 1 DEMOLISH EXISTING ROOF TOP UNIT (RTU) AND ASSOCIATED CURB, CURB ADAPTER, AND CONTROLS WIRING INCLUDING SENSORS, IN THIS APPROXIMATE LOCATION. REFER TO ELECTRICAL NOTES FOR WORK RELATED TO DISCONNECTS, CONDUITS, WIRING, ETC.
- 2 DEMOLISH EXISTING DUCTWORK, TRANSITIONS, FITTINGS AND FLEX CONNECTORS UNDERNEATH THE EXISTING RTU AND WITHIN THE EXISTING CURB OPENING AS NECESSARY TO ACCOMMODATE NEW UNIT.
- 3 DEMOLISH ALL EXISTING PIPING ASSOCIATED WITH THE ROOFTOP UNITS. SEE RENOVATION ROOF PLAN. (TYPICAL)

**ELECTRICAL KEYED NOTES:**

- 1 DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
- 2 DISCONNECT EXISTING HVAC DUCT SMOKE DETECTORS, WIRING & CONTROLS. FIRE ALARM SYSTEM WORK SHALL BE DONE BY A FACTORY AUTHORIZED CONTRACTOR OF THE EXISTING SYSTEM.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED
	PIPING TO BE DEMOLISHED



IDEA CARVER ACADEMY  
KEYPLAN

NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO



1126 SOUTH COMMERCE ST.  
HARLINGEN, TX  
PHONE: 361-230-3425  
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DATE: OCTOBER 10, 2024

CHECKED BY: C.A.G.

DRAWN BY: B.B. / D.A.G.

PROJECT NO.: 23v79

CAD FILE:

SHEET:

ME2.5



**DEMOLITION GENERAL NOTES:**

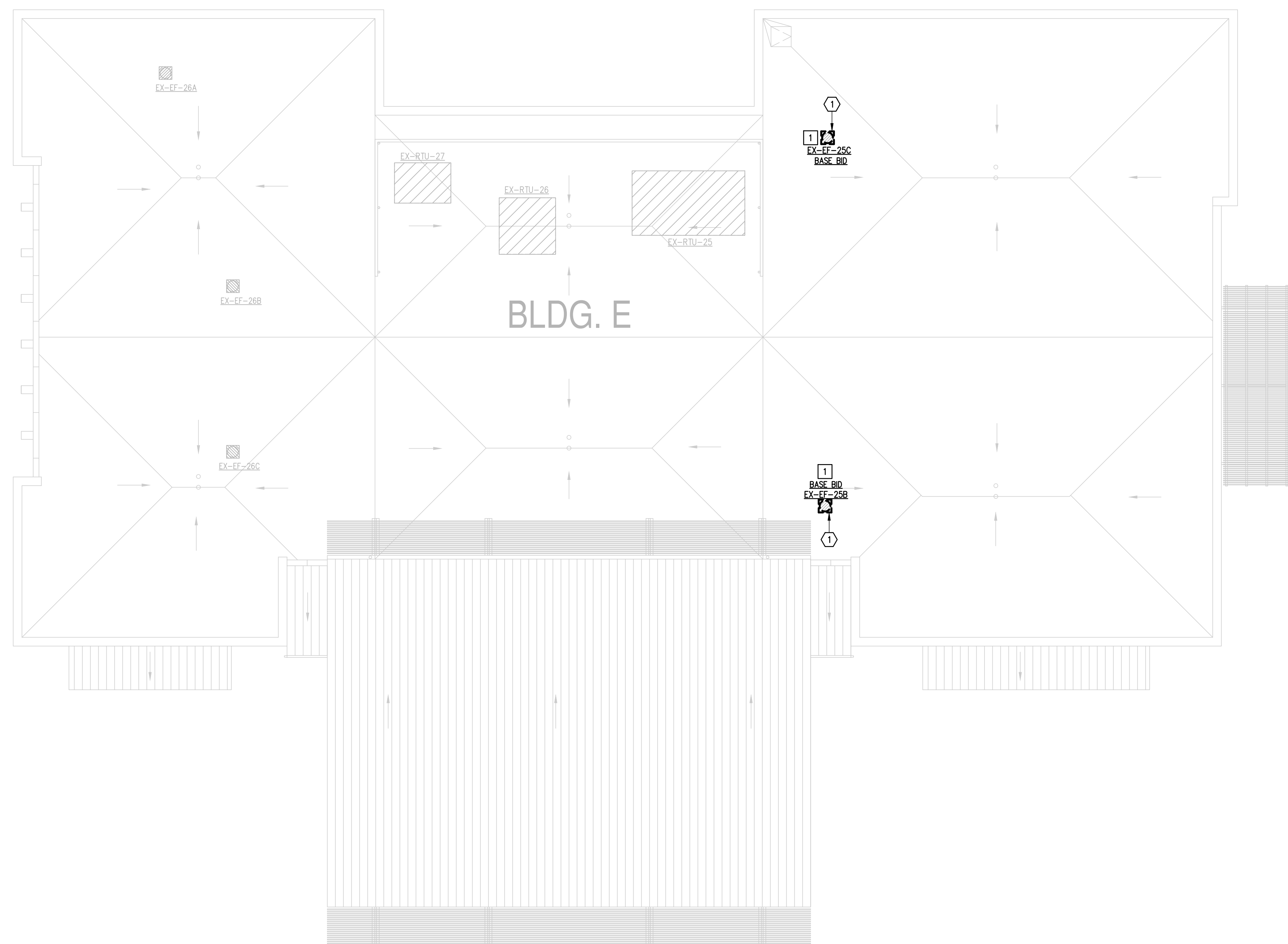
1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
2. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF MECHANICAL EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
3. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
4. CONTRACTOR SHALL NOT DAMAGE STRUCTURAL INTEGRITY OF BUILDING ELEMENTS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER. CONTRACTOR SHALL GAIN CONSENT OF ENGINEER PRIOR TO COMPROMISING INTEGRITY OF STRUCTURAL BEAMS, IN WORK ASSOCIATED WITH BOTH DEMOLITION AND INSTALLATION.
5. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.
6. COORDINATE CUTTING AND PATCHING OF ARCHITECTURAL ELEMENTS LIKE WALLS, FLOORS, ROOFS WITH OWNER/ENGINEER. PATCH UNUSED ROOF AND WALL PENETRATIONS, AND FINISH TO MATCH EXISTING ARCHITECTURAL ELEMENTS.

**MECHANICAL KEYED NOTES:**

- 1 DEMOLISH EXISTING EXHAUST FAN AND CONTROLS IN THIS APPROXIMATE LOCATION. COORDINATE WITH CONTROLS CONTRACTOR PRIOR TO DEMOLITION.

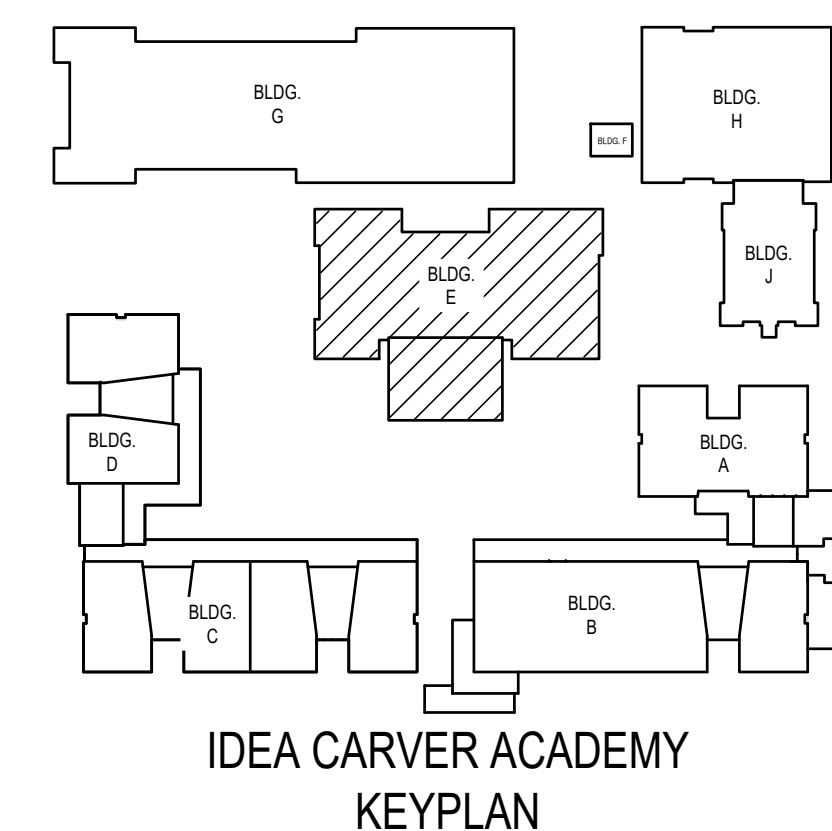
**ELECTRICAL KEYED NOTES:**

- 1 TEMPORARILY DISCONNECT EXISTING EF FOR INSTALLATION OF A NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.



LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE DEMOLISHED

IDEA CARVER  
MECHANICAL & ELECTRICAL DEMOLITION ROOF PLAN (BUILDING E)  
01 SCALE: 1/8" = 1'-0" TRUE NORTH



IDEA CARVER ACADEMY  
KEYPLAN





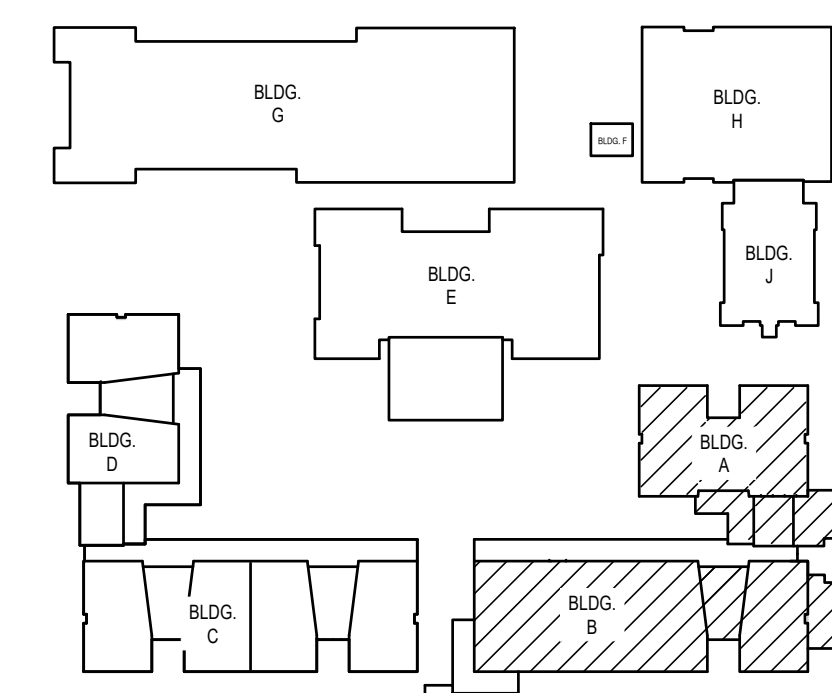
**MECHANICAL KEYED NOTES:**

- 1 PROVIDE NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCTWORK TRANSITIONS TO EXISTING DUCTWORK AND RECONFIGURE AS SHOWN. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 2 TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.
- 3 EXHAUST FANS EF-5, 8, 25B, AND 25C: PROVIDE LINE-ITEM COST THAT INCLUDES THE LABOR AND MATERIAL NEEDED TO REPLACE AND INSTALL NEW EXHAUST FANS AS PER DETAIL SHOWN ON THE CONSTRUCTION DOCUMENTS. THIS COST SHALL INCLUDE EXHAUST FANS, WELDING, SHEET METAL PLENUM, ROOF CURB, INSULATION, ETC. CONTRACTOR IS RESPONSIBLE FOR TESTING THE FUNCTIONALITY OF EXISTING EXHAUST FAN AND CONTROLS AND PROVIDE WRITTEN REPORT TO OWNER AND ENGINEER. IF IT IS DETERMINED AFTER SUCH REPORT THAT THE REPLACEMENT OF EXHAUST FANS IS NOT NECESSARY, THIS LINE ITEMIZED COST SHALL BE CREDITED BACK TO THE OWNER AS APPLICABLE. REFER TO BID FORM.

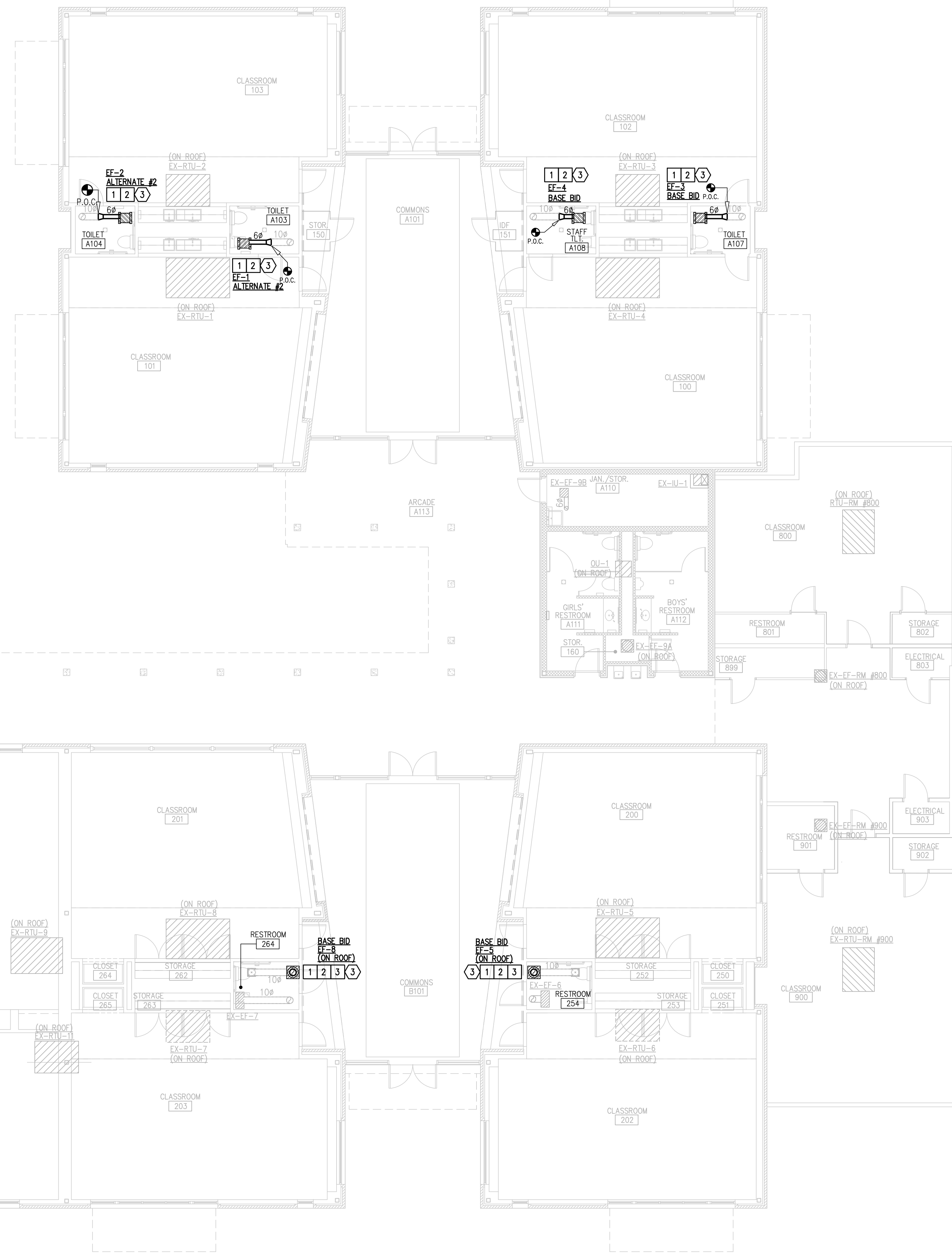
**ELECTRICAL KEYED NOTES:**

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW HVAC EQUIPMENT.
- 2 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW EF.
- 3 CONNECT NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.
- 4 APPROXIMATE LOCATION OF EXISTING SIEMENS MXL-IQ FIRE ALARM CONTROL PANEL.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN



IDEA CARVER ACADEMY  
KEYPLAN



IDEA CARVER  
MECHANICAL & ELECTRICAL RENOVATION FLOOR PLAN (BUILDING A & B)  
01 SCALE: 1/8" = 1'-0"



TRUE NORTH



IDEA CARVER  
MECHANICAL & ELECTRICAL RENOVATION FLOOR PLAN (BUILDING C & D)  
SCALE: 3/32" = 1'-0"  
TRUE NORTH

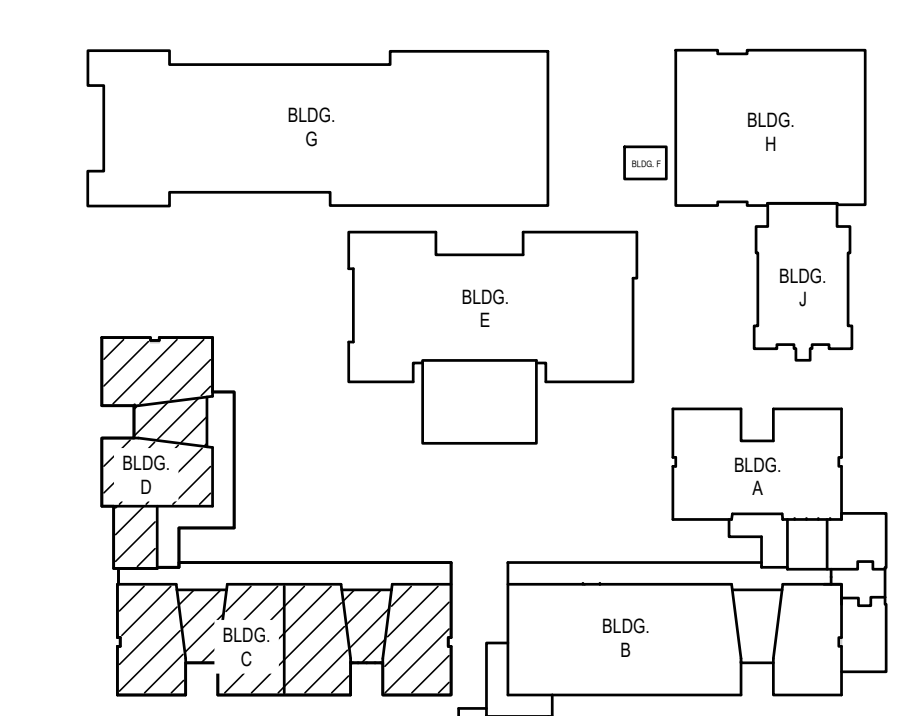
**MECHANICAL KEYED NOTES:**

- 1 PROVIDE RETURN AIR DUCT MOUNTED RH AND CO2 SENSORS. COORDINATE WITH CONTROLS CONTRACTOR.
- 2 CONNECT NEW DUCTWORK INTO EXISTING IN THIS APPROXIMATE LOCATION. (TYPICAL)
- 3 DUCTWORK ROUTING SHOWN IS DIAGRAMMATIC IN NATURE. FIELD-VERIFY STRUCTURE AND SPACE AVAILABILITY PRIOR TO SUBMITTING SHOP DRAWINGS. COORDINATE WITH ENGINEER IN CASE OF CONFLICTS. (TYPICAL)
- 4 PROVIDE BAROMETRIC RELIEF DAMPER EQUAL TO GREENHECK MODEL BR-30 VERTICAL MOUNT. UNDER THE EXISTING EXHAUST FAN. INTENT IS TO REUSE THE EXISTING HOUSING AS MEANS TO RELIEF EXCESS AIR PRESSURE FROM THE BUILDING.
- 5 PROVIDE MOTORIZED DAMPER WITH STEP DOWN TRANSFORMER. INTERLOCK DAMPER OPERATIONS WITH ASSOCIATED RTU. REFER TO SEQUENCES OF OPERATION FOR MORE INFORMATION. FIELD VERIFY DUCT SIZES PRIOR TO ORDERING
- 6 PROVIDE NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCTWORK TRANSITIONS TO EXISTING DUCTWORK AND RECONFIGURE AS SHOWN. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 7 TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.
- 8 CODE AND WORKING CLEARANCE FOR ELECTRICAL PANELS. DO NOT ROUTE DUCT OR PIPING DIRECTLY ABOVE ELECTRICAL EQUIPMENT FOOTPRINT.
- 9 SLEEVE ALL PENETRATIONS PER SPECIFICATIONS. SEAL AROUND PIPING WITH FIRE PROOF CALKING. PROVIDE ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK.
- 10 SUPPLY AND RETURN DUCTWORK UP TO EXISTING ROOF OPENINGS. TRANSITION AS NECESSARY.
- 11 PROVIDE THERMOSTAT AND CO2 SENSORS WHERE INDICATED. INSTALL 48" A.F.F. COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
- 12 BALANCE THE EXISTING DIFFUSERS TO THE SCHEDULED AND SHOWN CFM. COORDINATE WITH TAB CONTRACTOR. (TYPICAL)

**ELECTRICAL KEYED NOTES:**

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NE HVAC EQUIPMENT.
- 2 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING EXISTING EF.
- 3 CONNECT NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.
- 4 CONNECT MOTORIZED DAMPER LABELED "MD". CONNECT TO NEAREST 120V NON-GFCI CIRCUIT. VERIFY LOAD PRIOR TO ANY NEW CONNECTION - TYPICAL

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK TO BE INSTALLED
	NEW SUPPLY DIFFUSER
	NEW T-STAT AND CO2 SENSORS TO BE INSTALLED



IDEA CARVER ACADEMY  
KEYPLAN

NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO



DATE: OCTOBER 10, 2024  
CHECKED BY: C.A.G.  
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**ME3.2**



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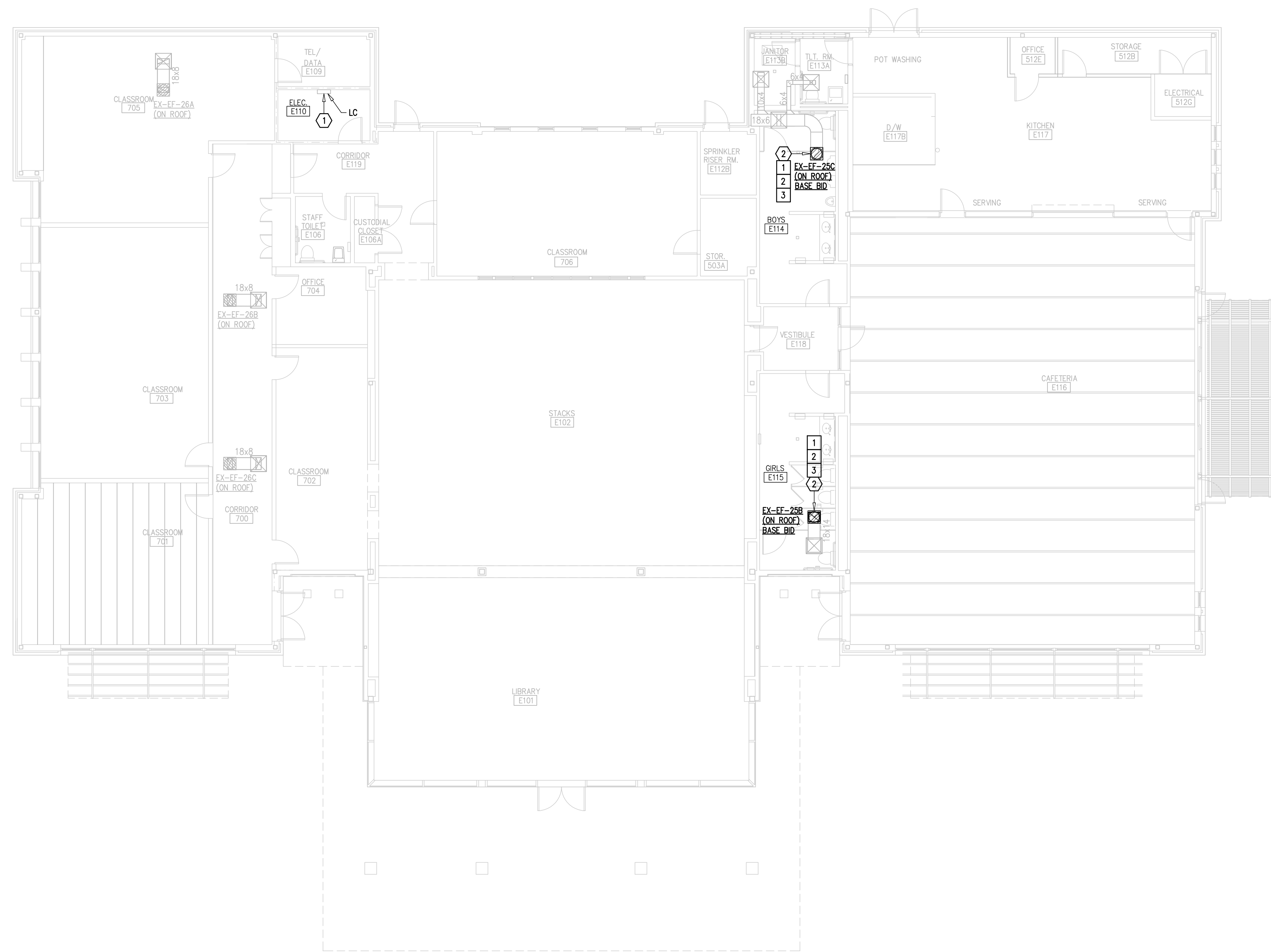
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CAD FILE:  
SHEET:

**MECHANICAL KEYED NOTES:**

- 1 PROVIDE NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCTWORK TRANSITIONS TO EXISTING DUCTWORK AND RECONFIGURE AS SHOWN. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 2 TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.
- 3 EXHAUST FANS EF-5, 8, 25B, AND 25C: PROVIDE LINE-ITEM COST THAT INCLUDES THE LABOR AND MATERIAL NEEDED TO REPLACE AND INSTALL NEW EXHAUST FANS AS PER DETAIL SHOWN ON THE CONSTRUCTION DOCUMENTS. THIS COST SHALL INCLUDE EXHAUST FANS, WELDING, SHEET METAL PLENUM, ROOF CURB, INSULATION, ETC. CONTRACTOR IS RESPONSIBLE FOR TESTING THE FUNCTIONALITY OF EXISTING EXHAUST FAN AND CONTROLS AND PROVIDE WRITTEN REPORT TO OWNER AND ENGINEER. IF IT IS DETERMINED AFTER SUCH REPORT THAT THE REPLACEMENT OF EXHAUST FANS IS NOT NECESSARY, THIS LINE ITEMIZED COST SHALL BE CREDITED BACK TO THE OWNER AS APPLICABLE. REFER TO BID FORM.

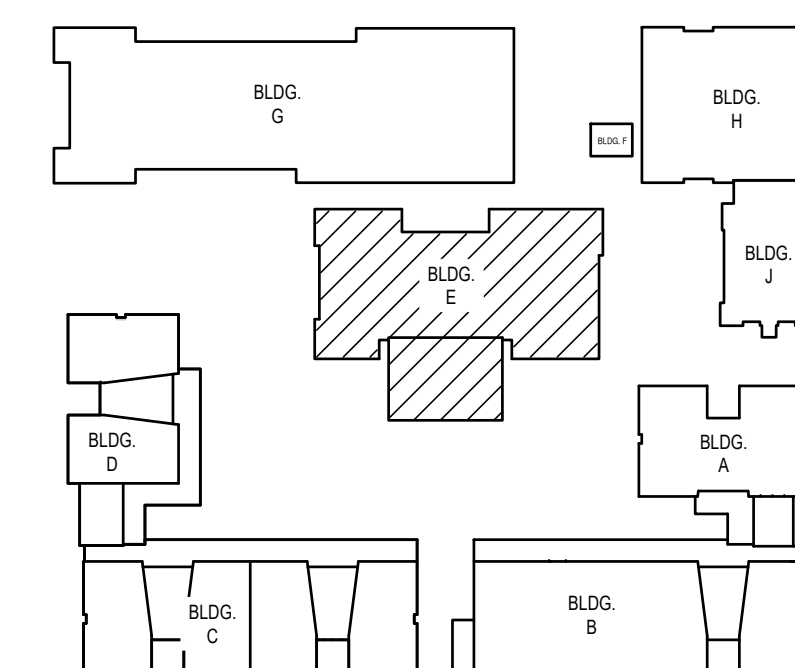
**ELECTRICAL KEYED NOTES:**

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING NEW EF.
- 2 CONNECT NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.



LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK TO BE INSTALLED

01 IDEA CARVER  
MECHANICAL & ELECTRICAL RENOVATION FLOOR PLAN (BUILDING E)  
SCALE: 1/8" = 1'-0"



IDEA CARVER ACADEMY  
KEYPLAN

**MECHANICAL KEYED NOTES:**

- 1 PROVIDE NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCTWORK TRANSITIONS TO EXISTING DUCTWORK AND TRANSITION AS NECESSARY. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.

**ELECTRICAL KEYED NOTES:**

- 1 CONNECT NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.

NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

**SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER**

SAN ANTONIO



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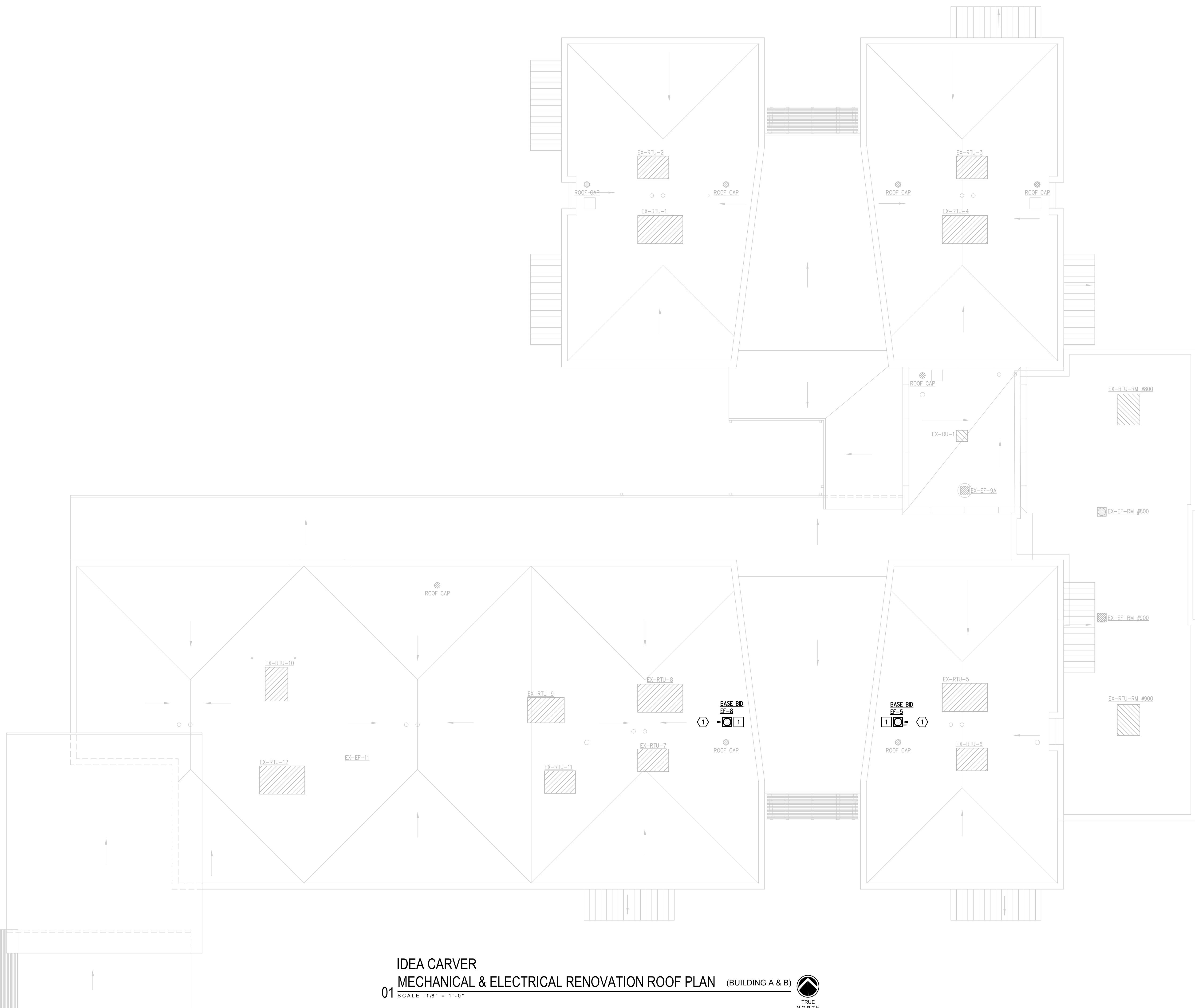
DRAWN BY: B.B. / D.A.G.

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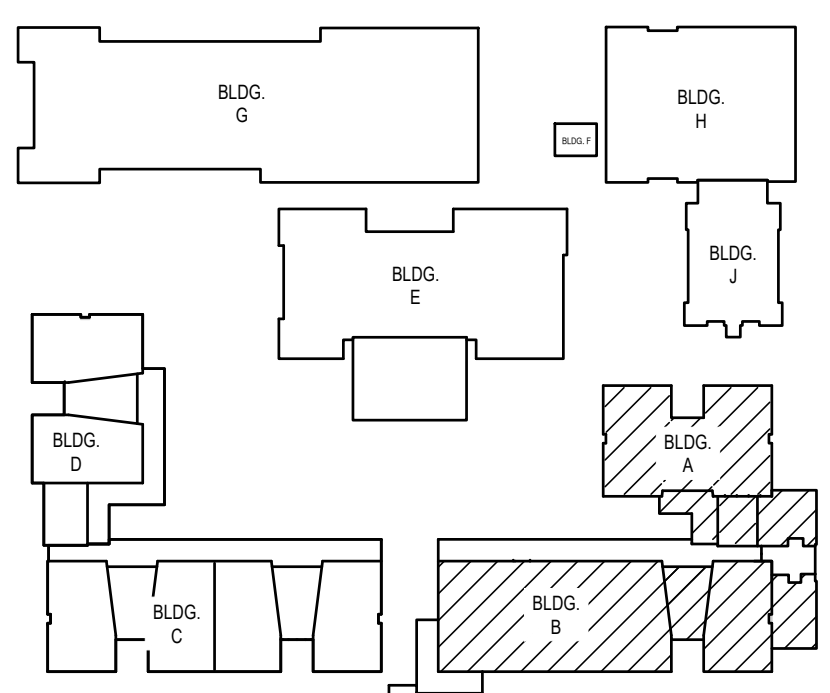
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SHEET:

**ME3.4**



LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

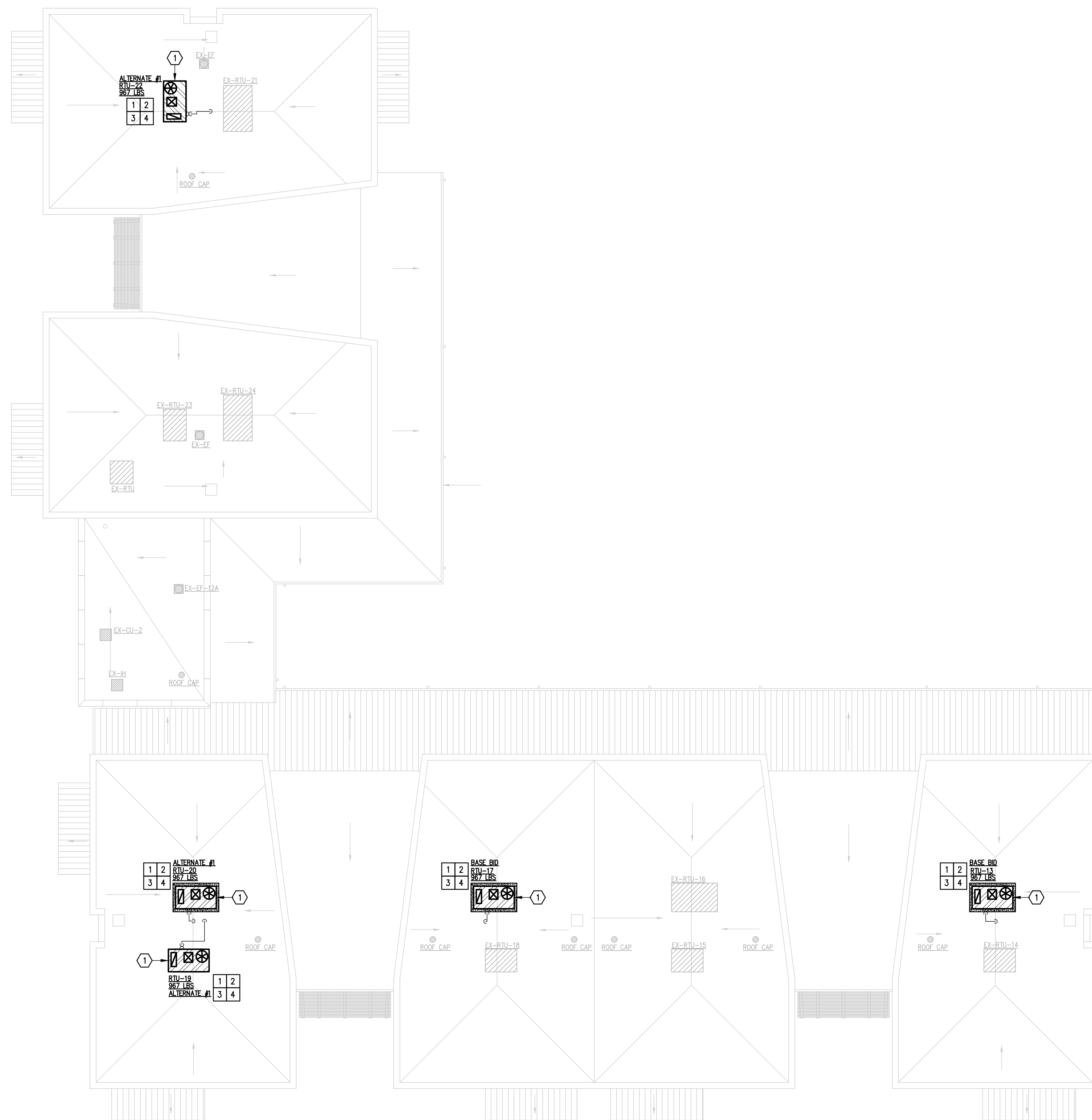


IDEA CARVER ACADEMY  
KEYPLAN

**IDEA CARVER  
MECHANICAL & ELECTRICAL RENOVATION ROOF PLAN (BUILDING A & B)**

01 SCALE: 1/8" = 1'-0"





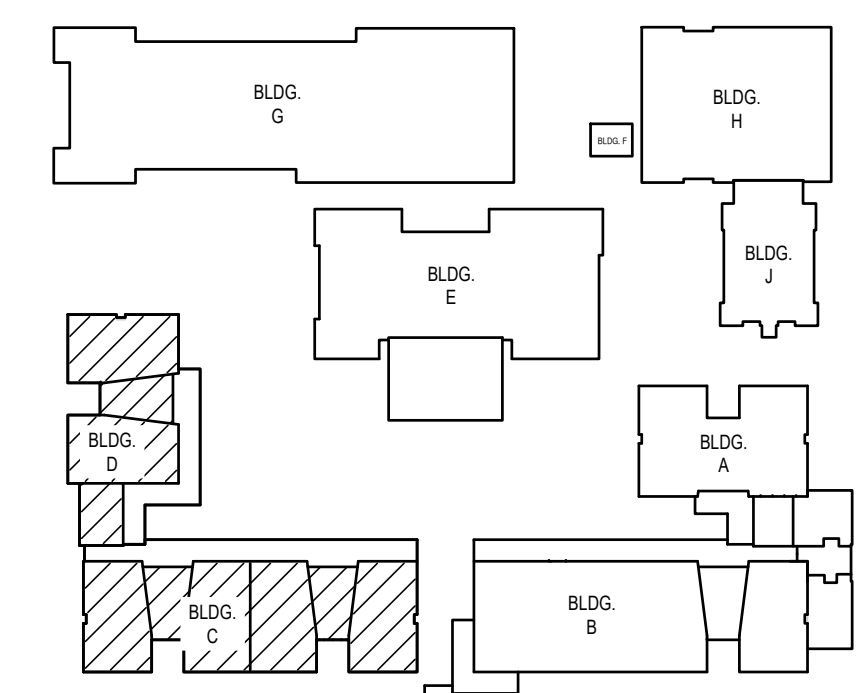
**MECHANICAL KEYED NOTES:**

- 1 PROVIDE NEW RTU ON NEW ROOF CURB AS SCHEDULED. ORIENT RTU'S TO OPTIMIZE CONNECTION TO EXISTING DUCTWORK. SEAL ALL OPENINGS AND ENSURE THAT INSTALLATION IS WEATHER-TIGHT. PROVIDE COPPER CONDENSATE DRAIN LINES WITH P-TRAPS AND ROUTE TO NEAREST ROOF DRAIN AS SHOWN. PROVIDE PIPING SUPPORTS AS DETAILED. PROVIDE NEW ROOF CURB TO INSTALL EQUIPMENT ON ROOF. SECURE EQUIPMENT TO ROOF CURB AND TO ROOF STRUCTURE AS PER DIV. 7 SPECIFICATIONS. ATTACHMENTS SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES. PROVIDE NEW DDC CONTROLS FOR RTU AS SCHEDULED. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- 2 PROVIDE CONVENIENCE ELECTRICAL OUTLET AT INDICATED RTU. COORDINATE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 3 CONNECT EXISTING FULL SIZE DUCT WORK FROM CEILING SPACE BELOW TO NEW RTU SA AND RA OPENINGS. TRANSITION AS NECESSARY.
- 4 ROUTE FULL SIZE CONDENSATE TO EXISTING ROOF DRAIN. SEE ASSOCIATED DETAIL. COORDINATE INSTALLATION WITH PLUMBING CONTRACTOR. PROVIDE COPPER CONDENSATE PIPING ON ROOF AND PROVIDE SUPPORTS AS PER DETAIL. REFER TO DETAIL SHEET. (TYPICAL)

**ELECTRICAL KEYED NOTES:**

- 1 CONNECT NEW HVAC EQUIPMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED
	PIPING TO BE INSTALLED
	ROOF PATCHING AREA



IDEA CARVER  
MECHANICAL & ELECTRICAL RENOVATION ROOF PLAN (BUILDING C & D)  
01 SCALE: 3/32" = 1'-0"



NO. REVISION: BY:

RFP #30-SAMCU-0524



TEXAS

SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO



1126 SOUTH COMMERCE ST.  
HARLINGEN, TX  
PHONE: 361-230-3425  
TEXAS REGISTERED  
ENGINEERING FIRM  
F-15998

DATE: OCTOBER 10, 2024  
CHECKED BY: C.A.G.  
DRAWN BY: B.B. / D.A.G.  
PROJECT NO.: 23v79  
CAD FILE:  
SHEET:

ME3.5

IDEA CARVER ACADEMY  
KEYPLAN

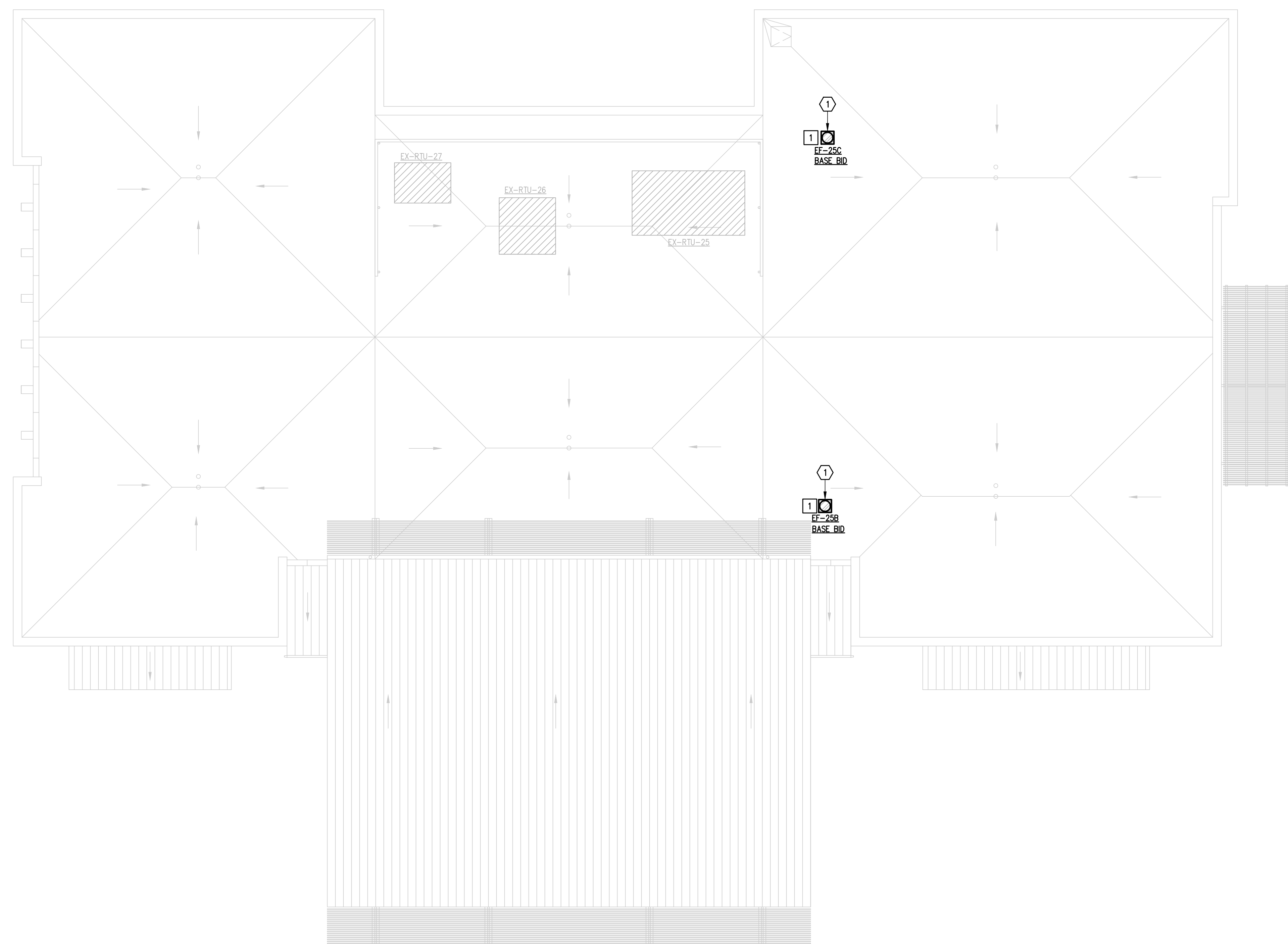


**MECHANICAL KEYED NOTES:**

- 1 PROVIDE NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCTWORK TRANSITIONS TO EXISTING DUCTWORK AND TRANSITION AS NECESSARY. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.

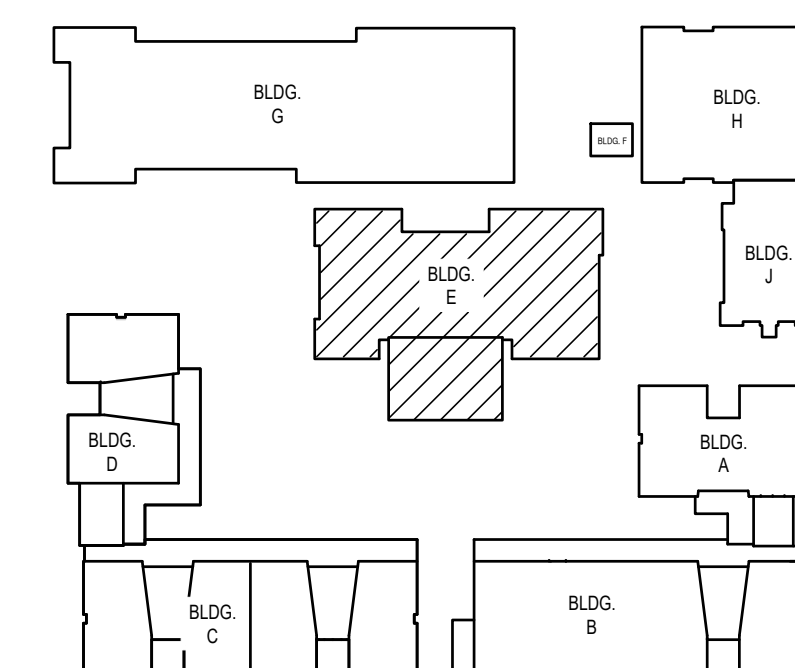
**ELECTRICAL KEYED NOTES:**

- 1 CONNECT NEW EF. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.



LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT TO BE INSTALLED

01 **IDEA CARVER**  
**MECHANICAL & ELECTRICAL RENOVATION ROOF PLAN (BUILDING E)**  
 SCALE: 1/8" = 1'-0"



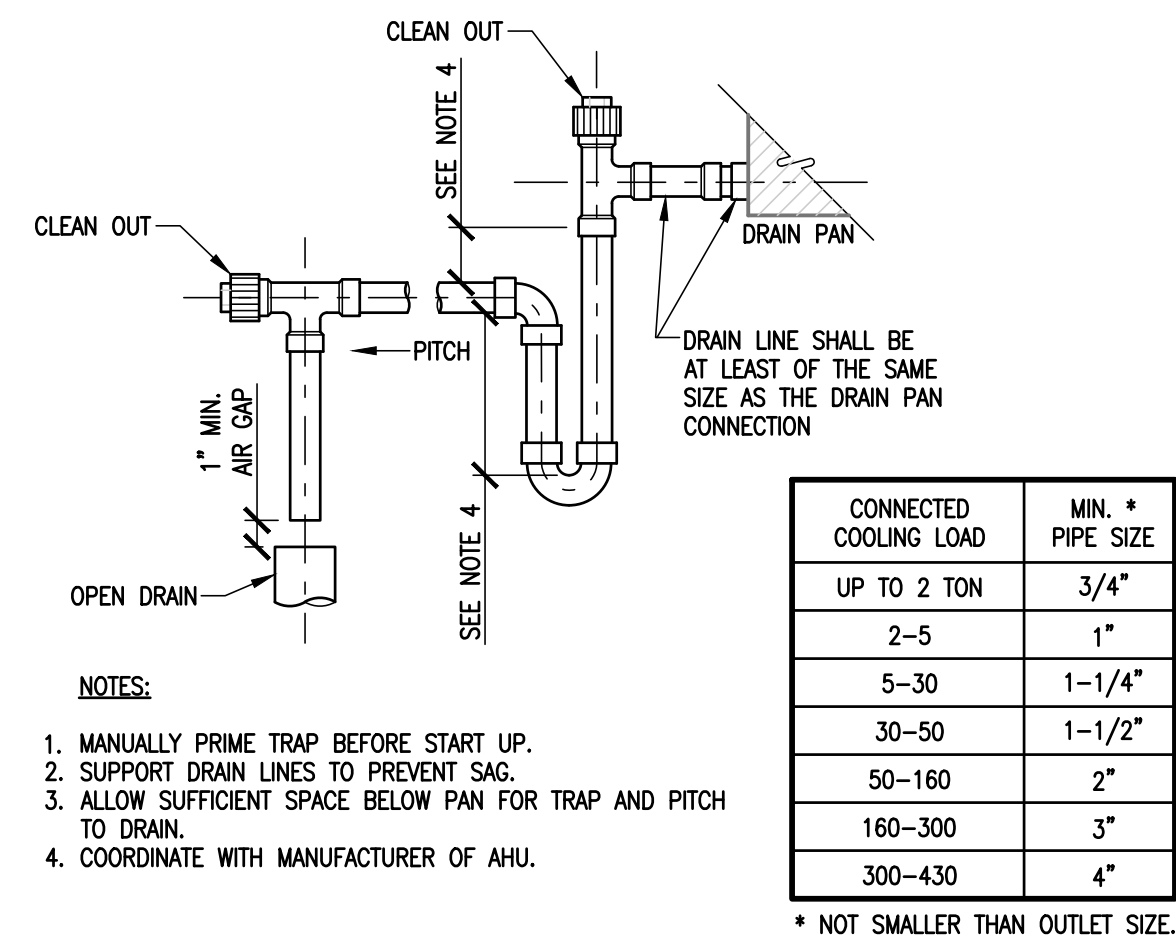
**IDEA CARVER ACADEMY**  
 KEYPLAN



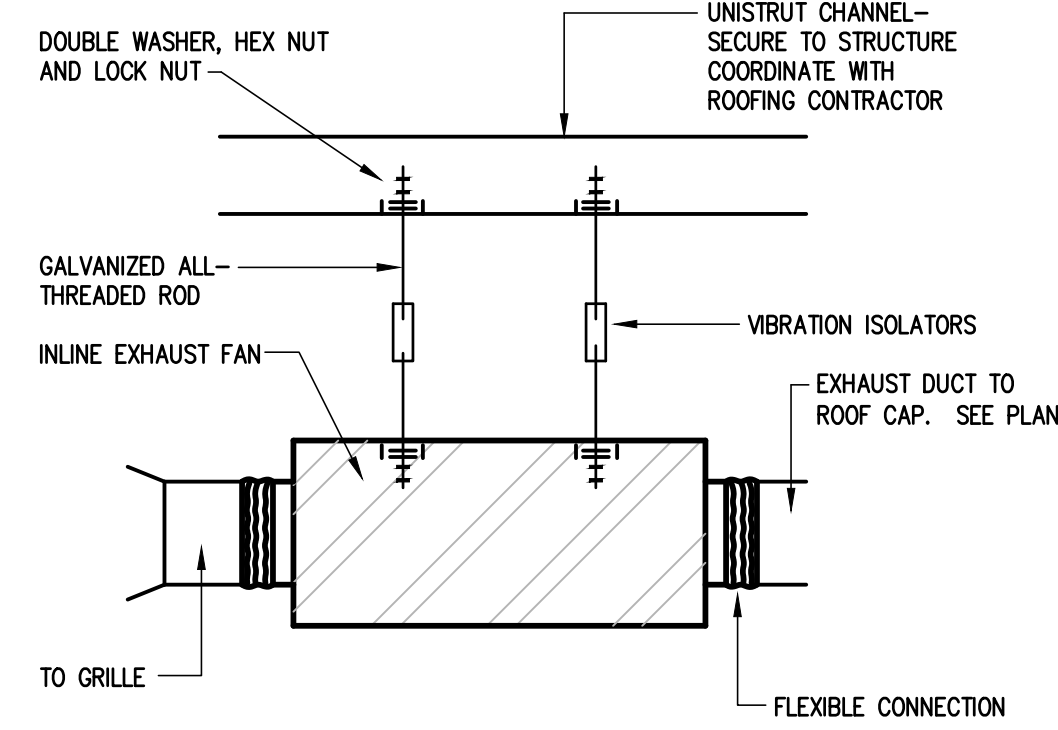
DATE: OCTOBER 10, 2024  
 CHECKED BY: C.A.G.  
 DRAWN BY: B.B. / D.A.G.  
 PROJECT NO.: 23v79  
 CAD FILE:  
 SHEET:

**ME3.6**

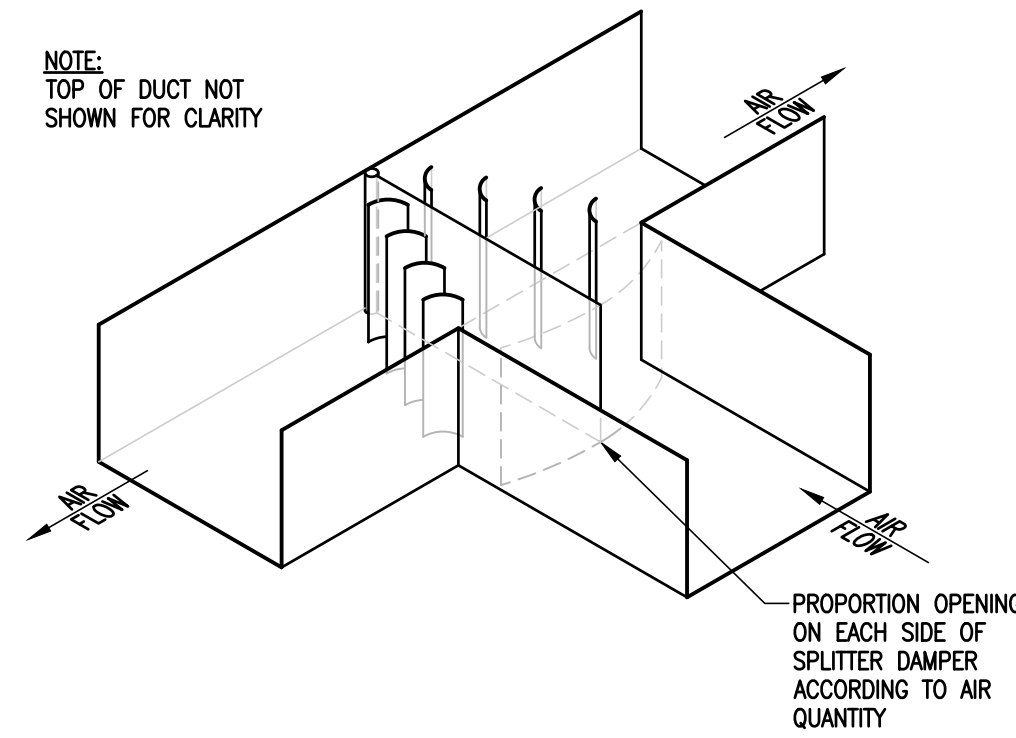




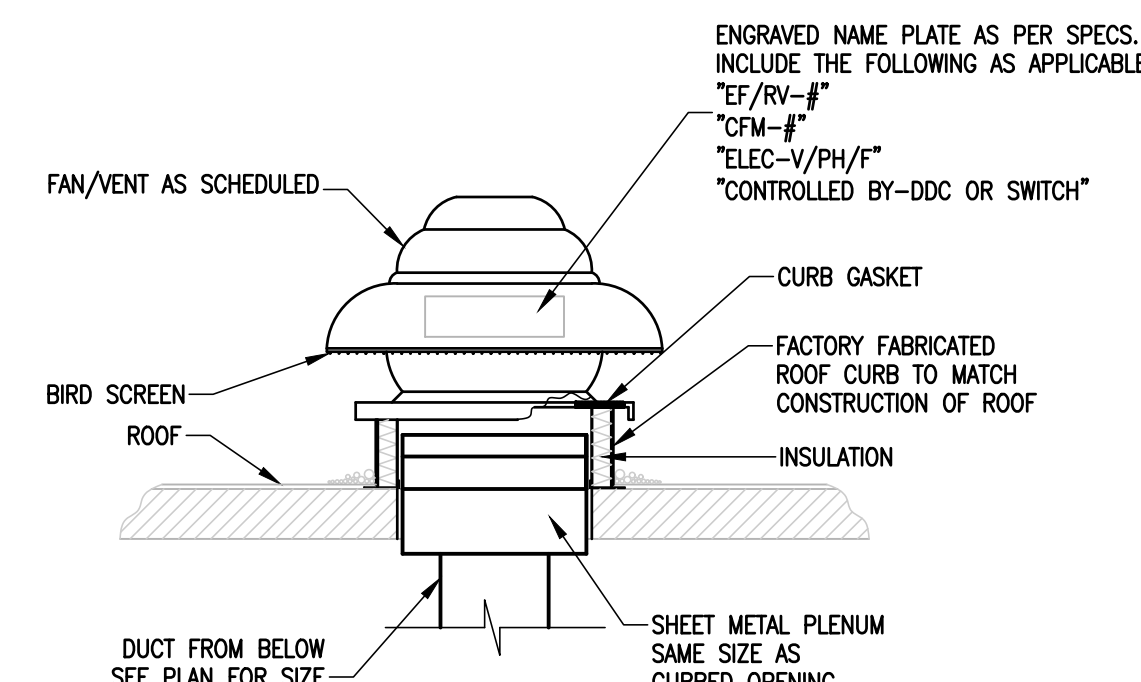
01 CONDENSATE DRAIN TRAP PIPE  
SCALE: NONE



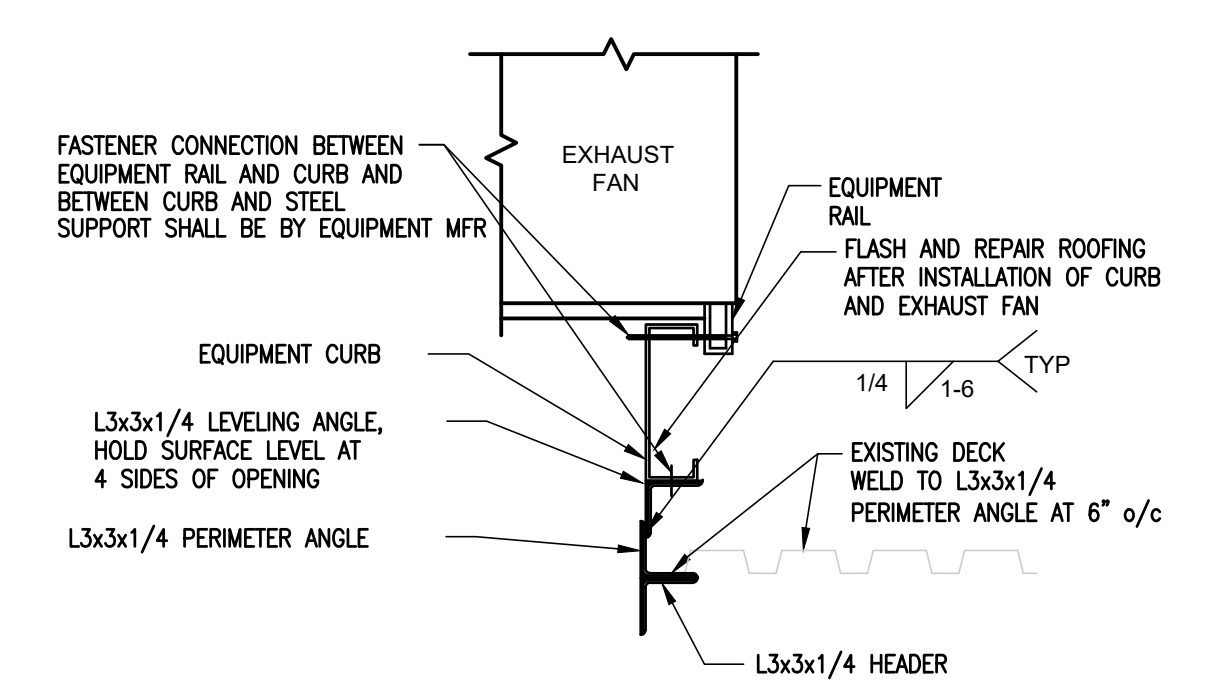
02 INLINE EXHAUST FAN DETAIL  
SCALE: NONE



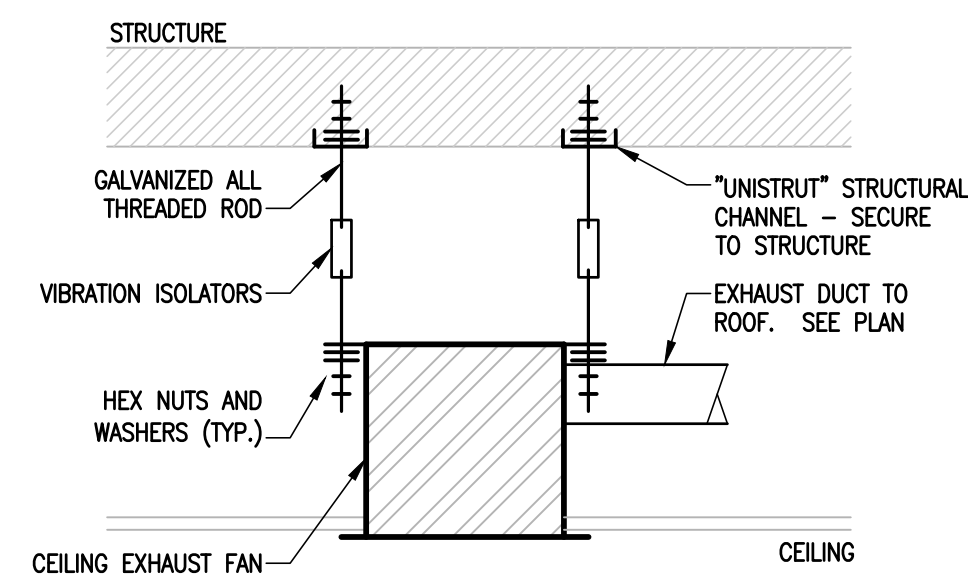
03 TYPICAL SPLITTER DAMPER  
SCALE: NONE



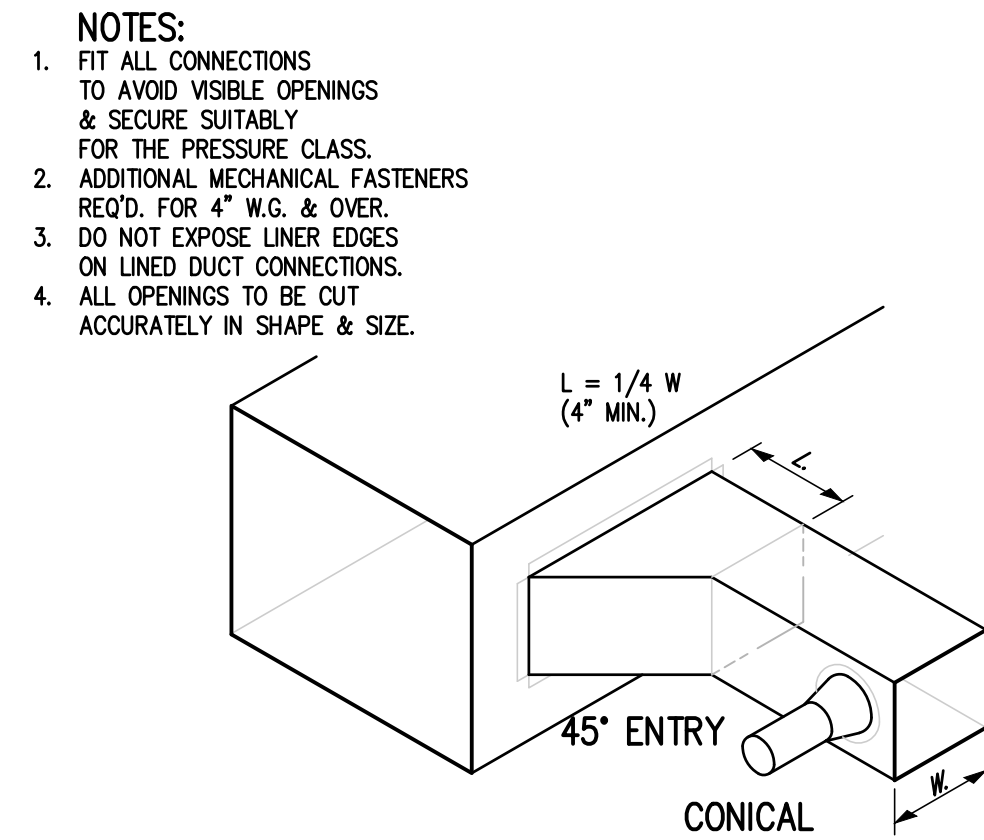
04 ROOF EXHAUST FAN DETAIL  
SCALE: NONE



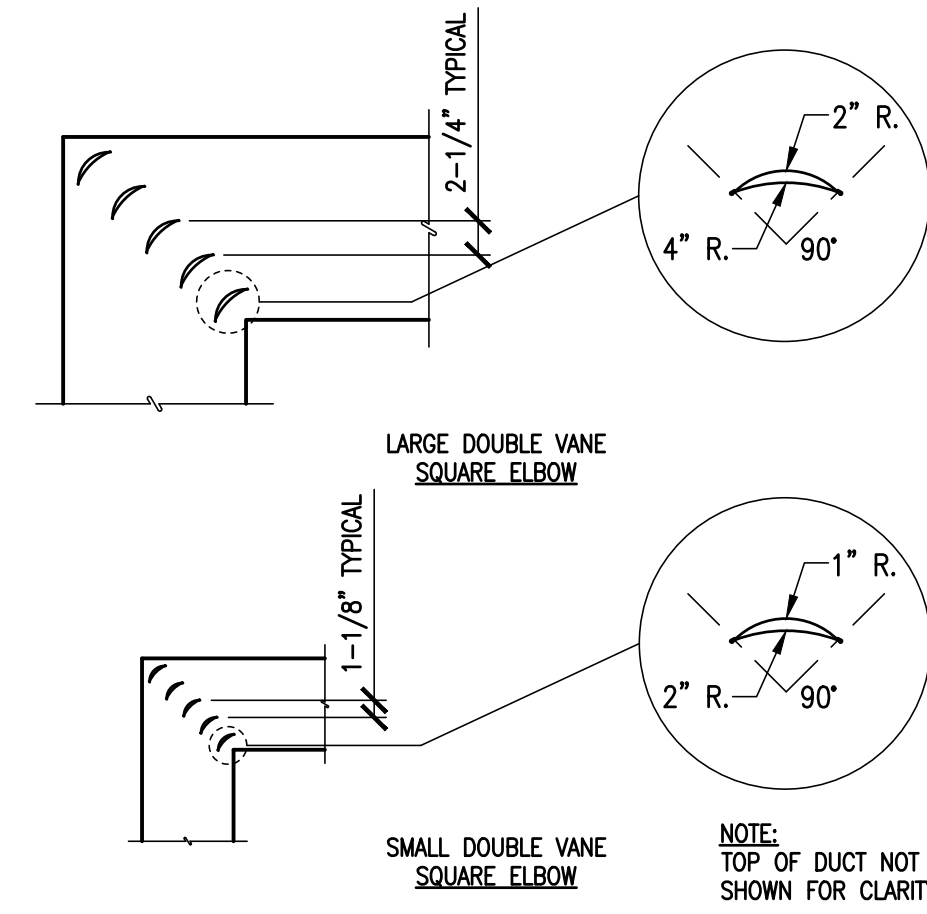
05 TYPICAL EXHAUST FAN SUPPORT DETAIL (EF-5, 8, 25B, & 25C)  
SCALE: NOT TO SCALE



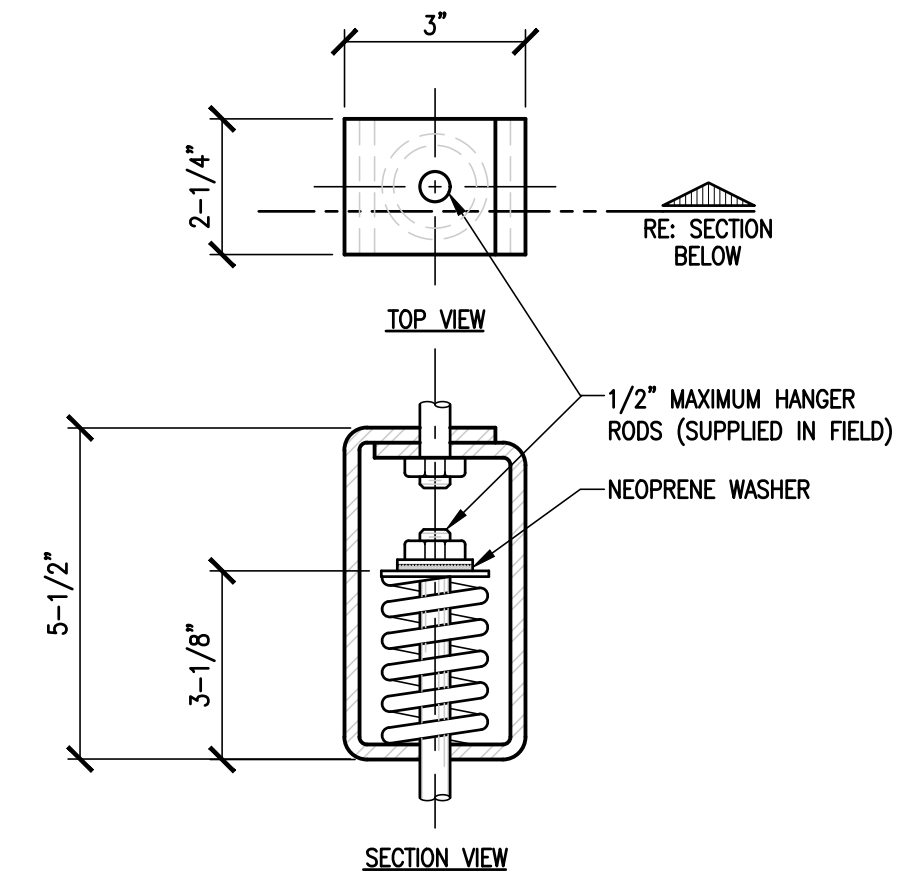
06 CEILING EXHAUST FAN FAN MOUNTING DETAIL  
SCALE: NONE



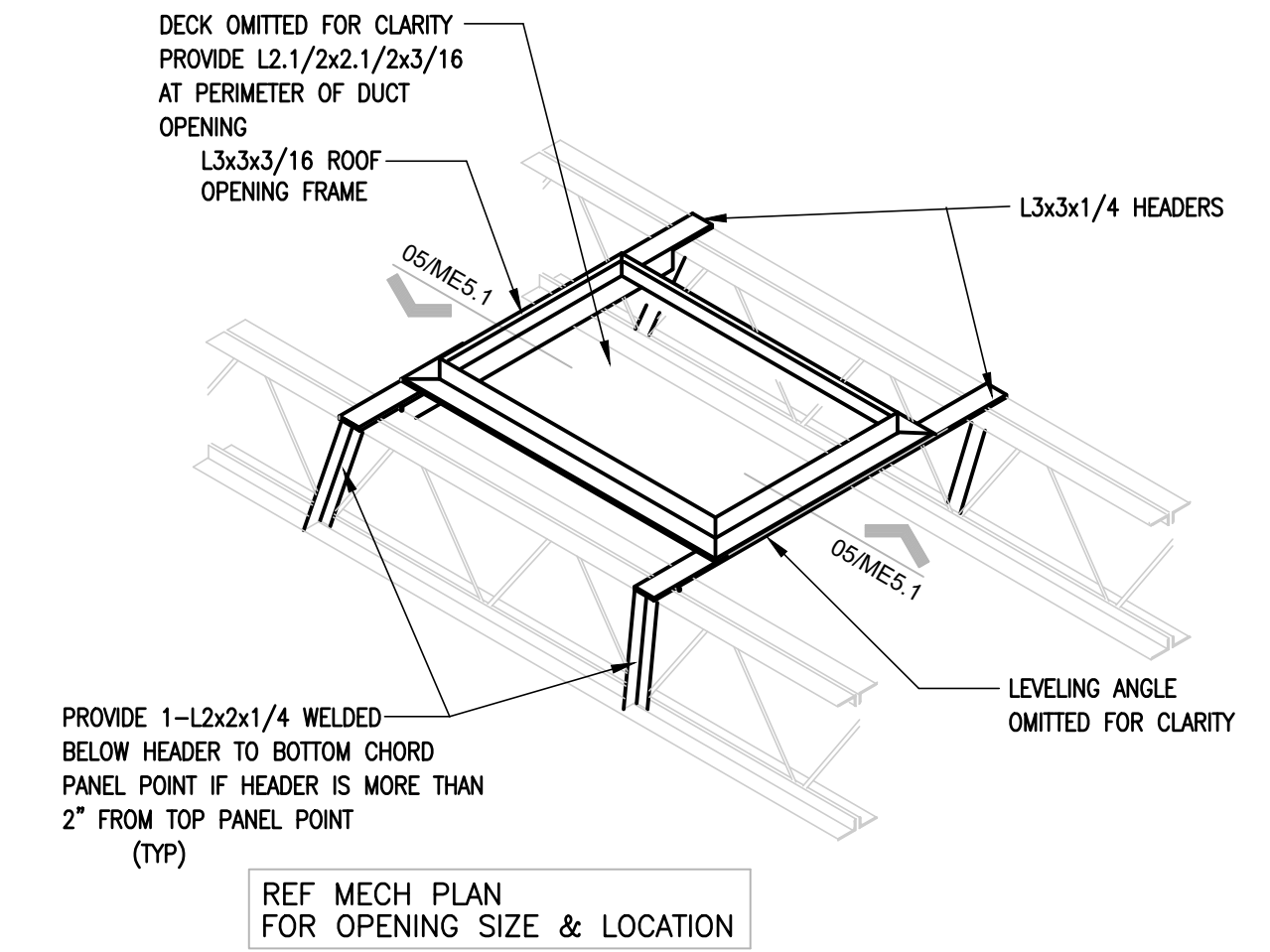
07 BRANCH CONNECTION DETAIL  
SCALE: NONE



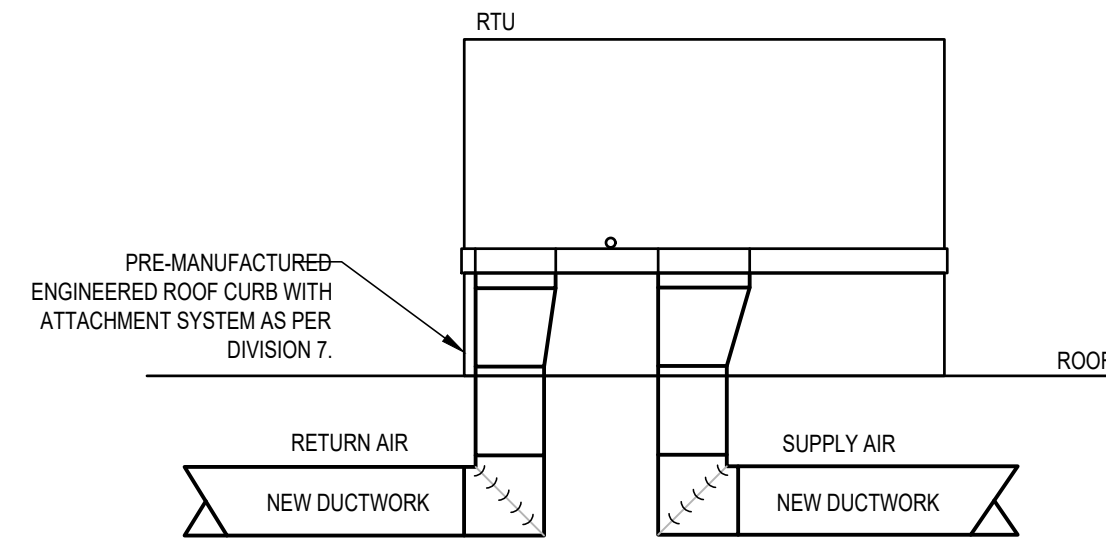
08 TYPICAL VANED DUCT ELBOWS  
SCALE: NONE



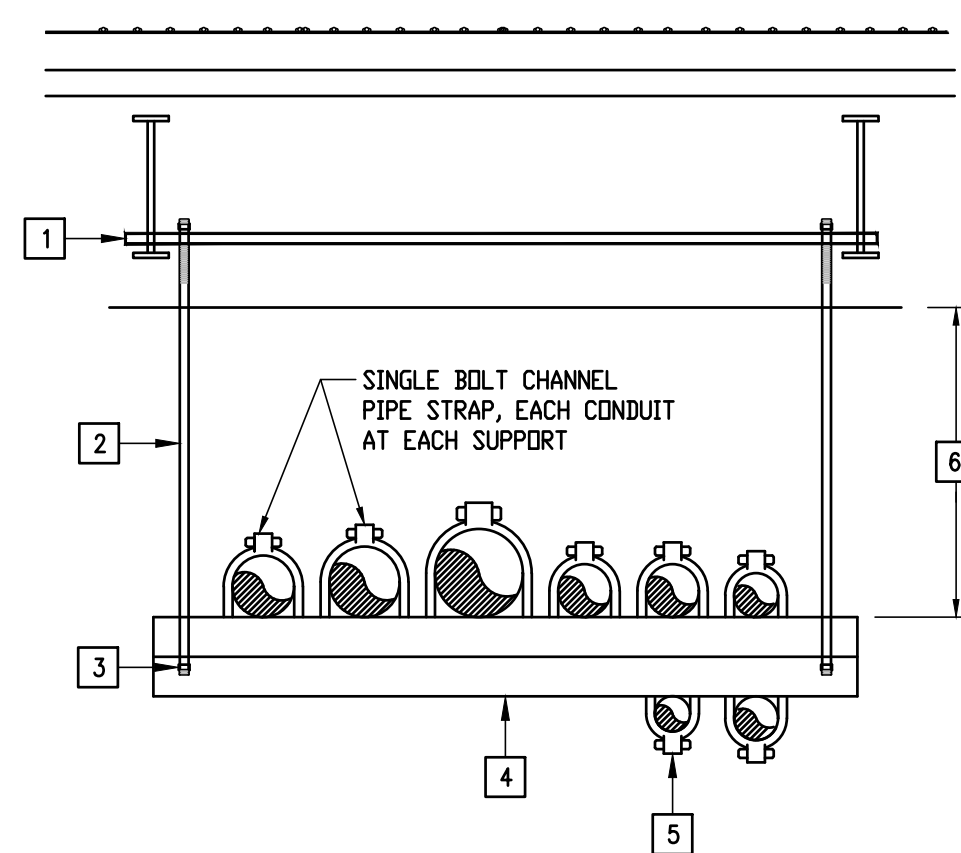
09 SPRING ISOLATION HANGER  
SCALE: NONE



10 TYPICAL EXHAUST FAN ROOF OPENING DETAIL (EF-5, 8, 25B, & 25C)  
SCALE: NOT TO SCALE



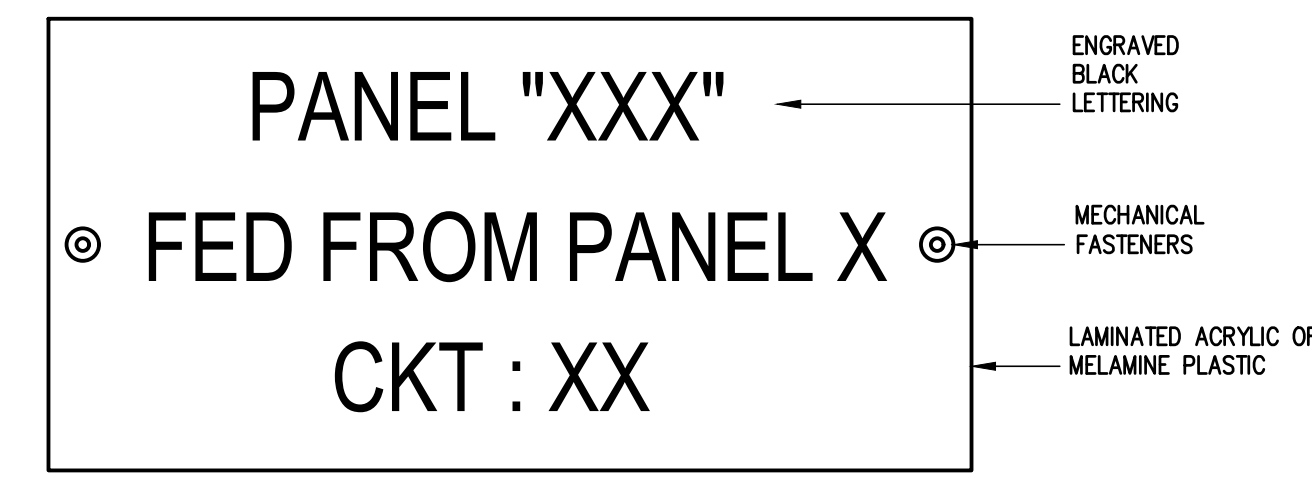
11 ROOF TOP UNIT DETAIL  
SCALE: NOT TO SCALE



12 HORIZONTAL RACEWAYS SUPPORT DETAIL  
SCALE: NOT TO SCALE

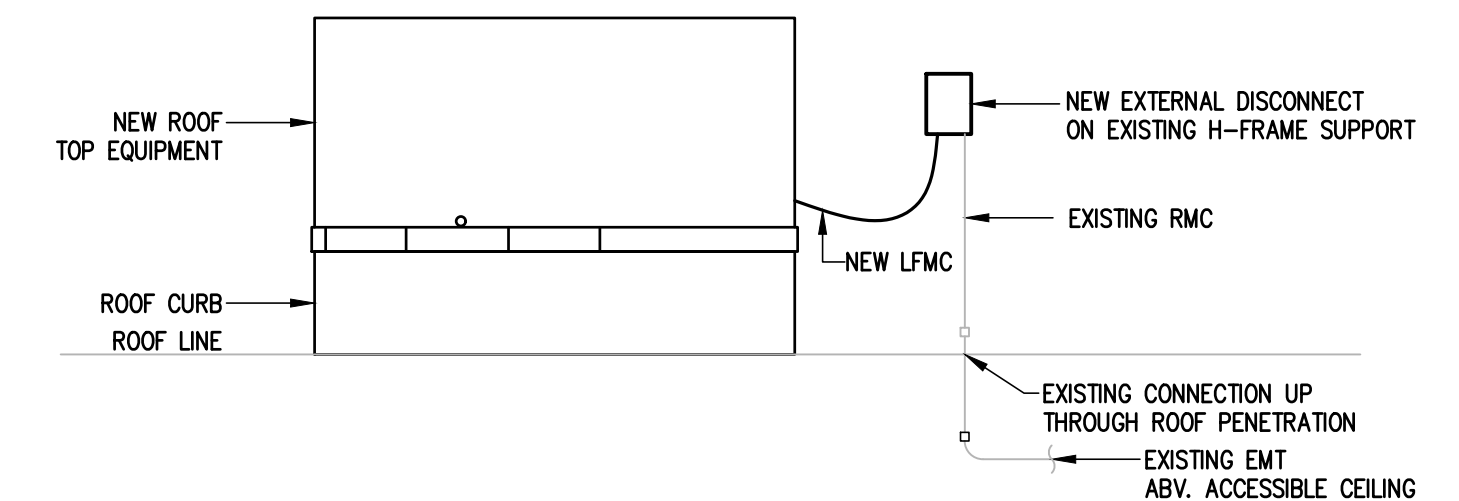
KEYED NOTES:

- 1 PROVIDE UNISTRUT STRUCTURAL CHANNEL SECURED TO JOIST AT BOTH ENDS.
- 2 PROVIDE 1/2" GALVANIZED ROD MINIMUM.
- 3 PROVIDE LOCKNUT.
- 4 PROVIDE GALVANIZED UNISTRUT 8'-0" O/C MAXIMUM.
- 5 0'-1" MAXIMUM SIZE ON BOTTOM OF UNISTRUT.
- 6 VARIES.



NOTE: ATTACH NAMEPLATES TO ALL ELECTRICAL GEAR AS NOTED ON SPECIFICATIONS

13 EQUIPMENT IDENTIFICATION LABEL DETAIL  
SCALE: NOT TO SCALE

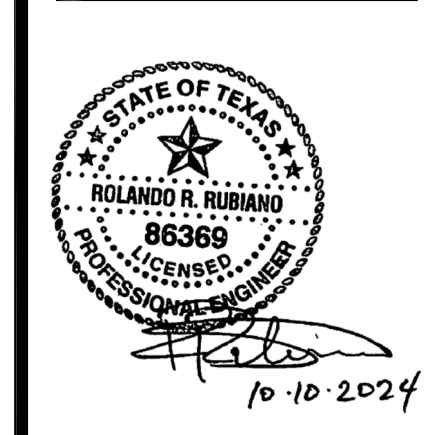


14 ROOF TOP UNIT RTU CONNECTION DETAIL  
SCALE: NOT TO SCALE









TEXAS

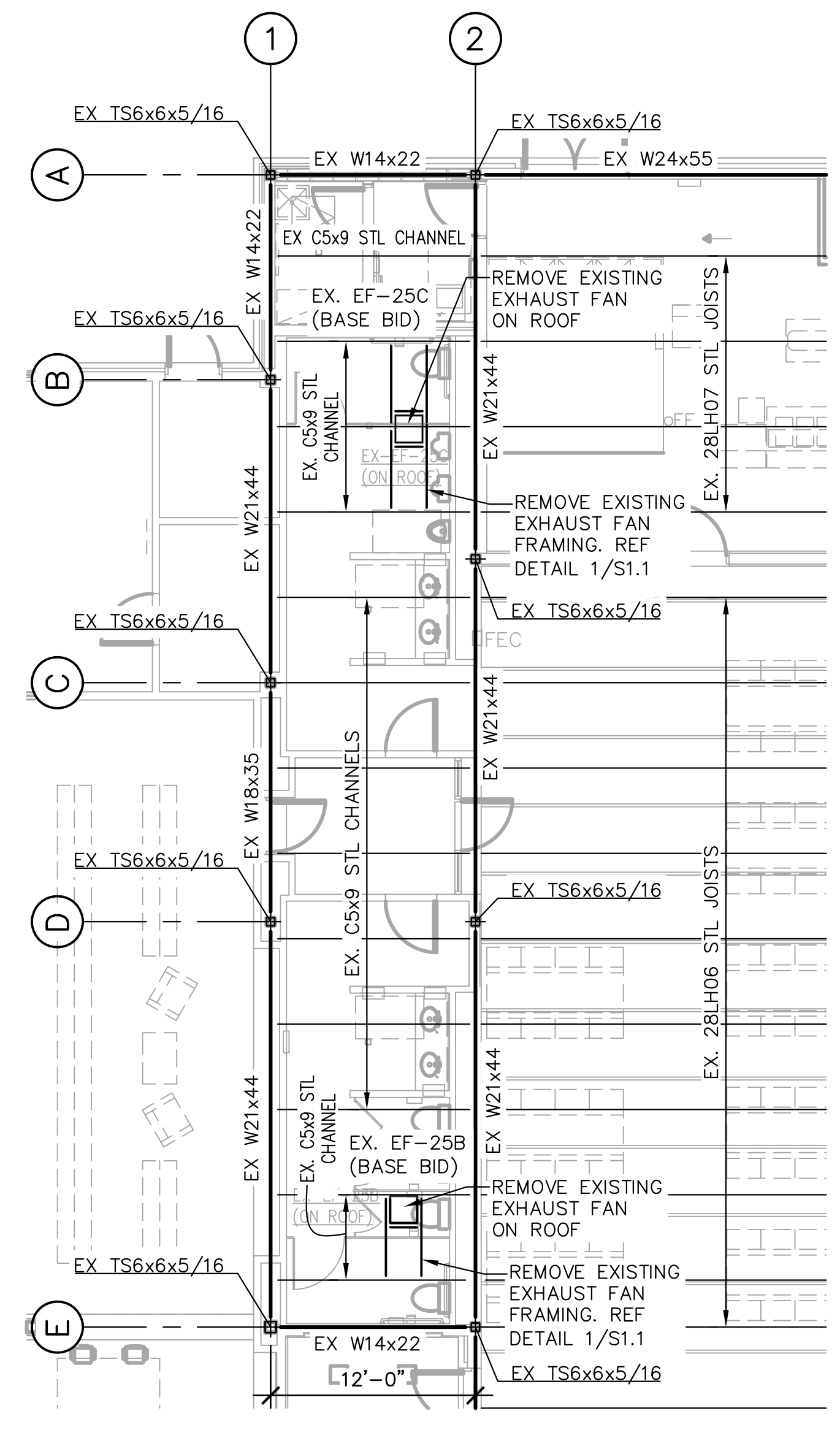
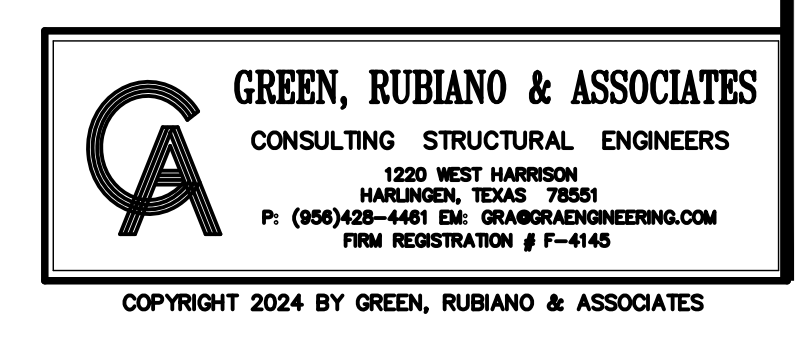
SAN ANTONIO MECHANICAL UPGRADES - IDEA CARVER

SAN ANTONIO

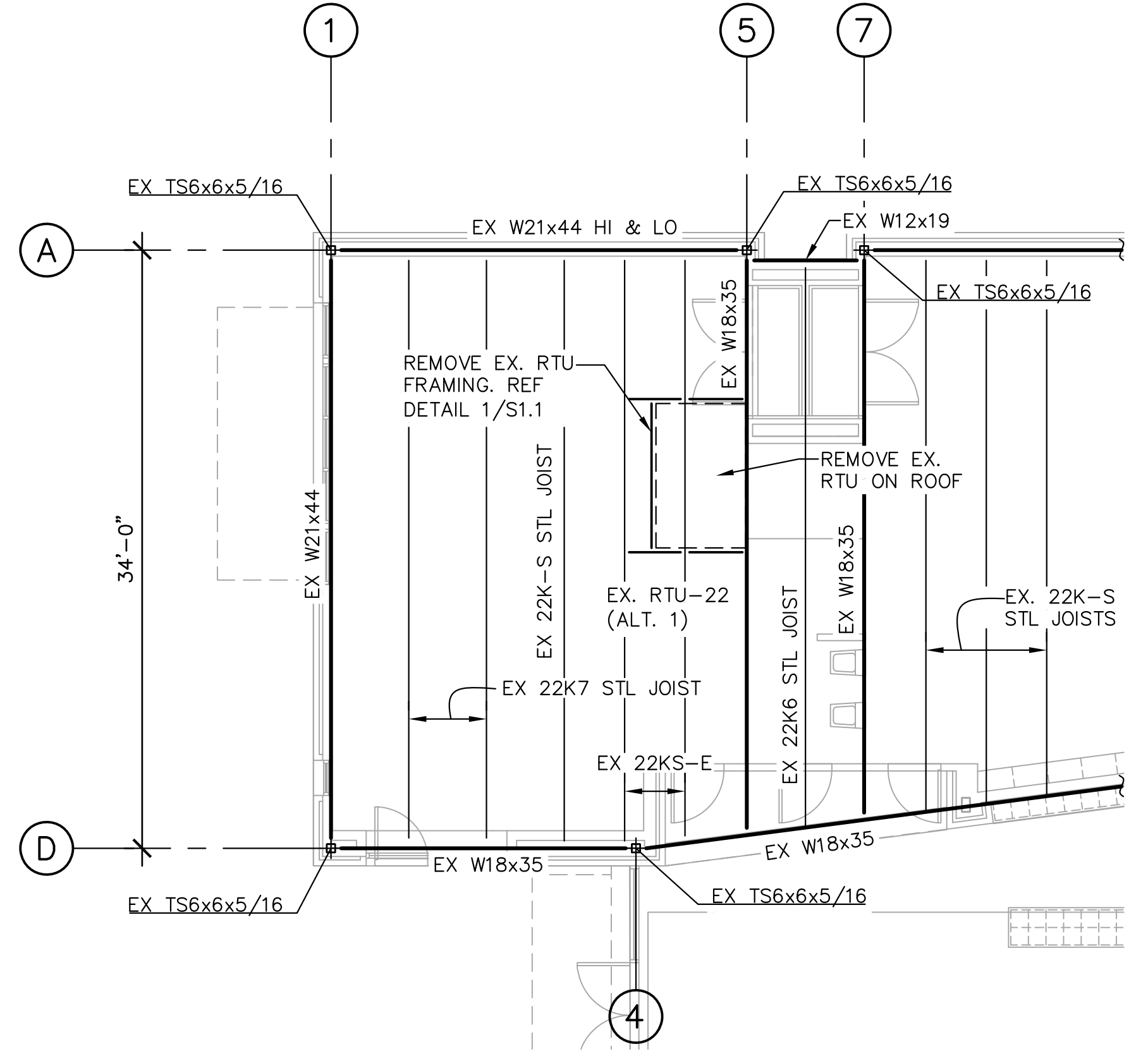


DATE: OCTOBER 10, 2024  
 CHECKED BY: R.P.  
 DRAWN BY: H.R.  
 PROJECT NO.: 1178-45  
 CAD FILE:  
 SHEET:

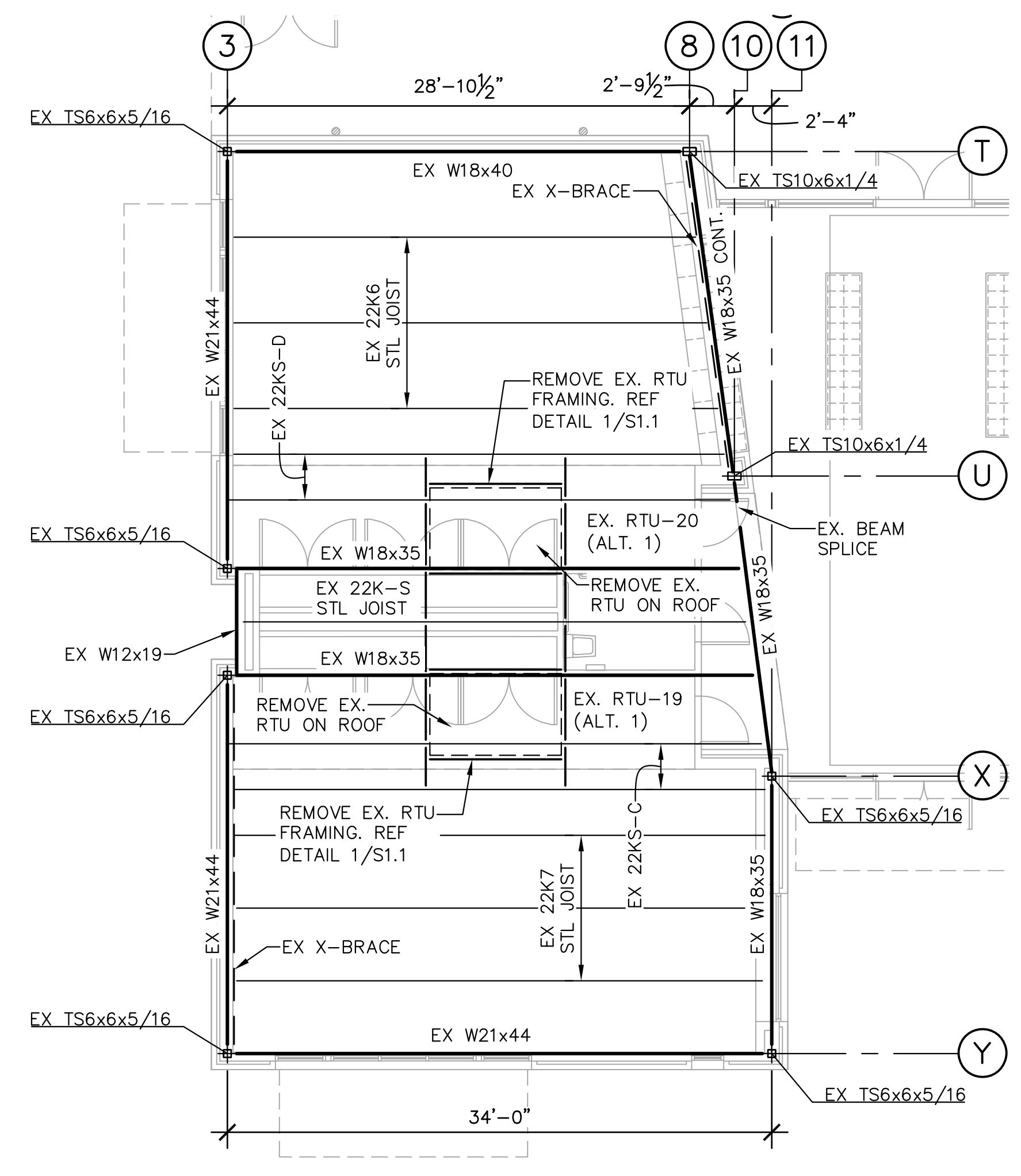
**DS3.1**



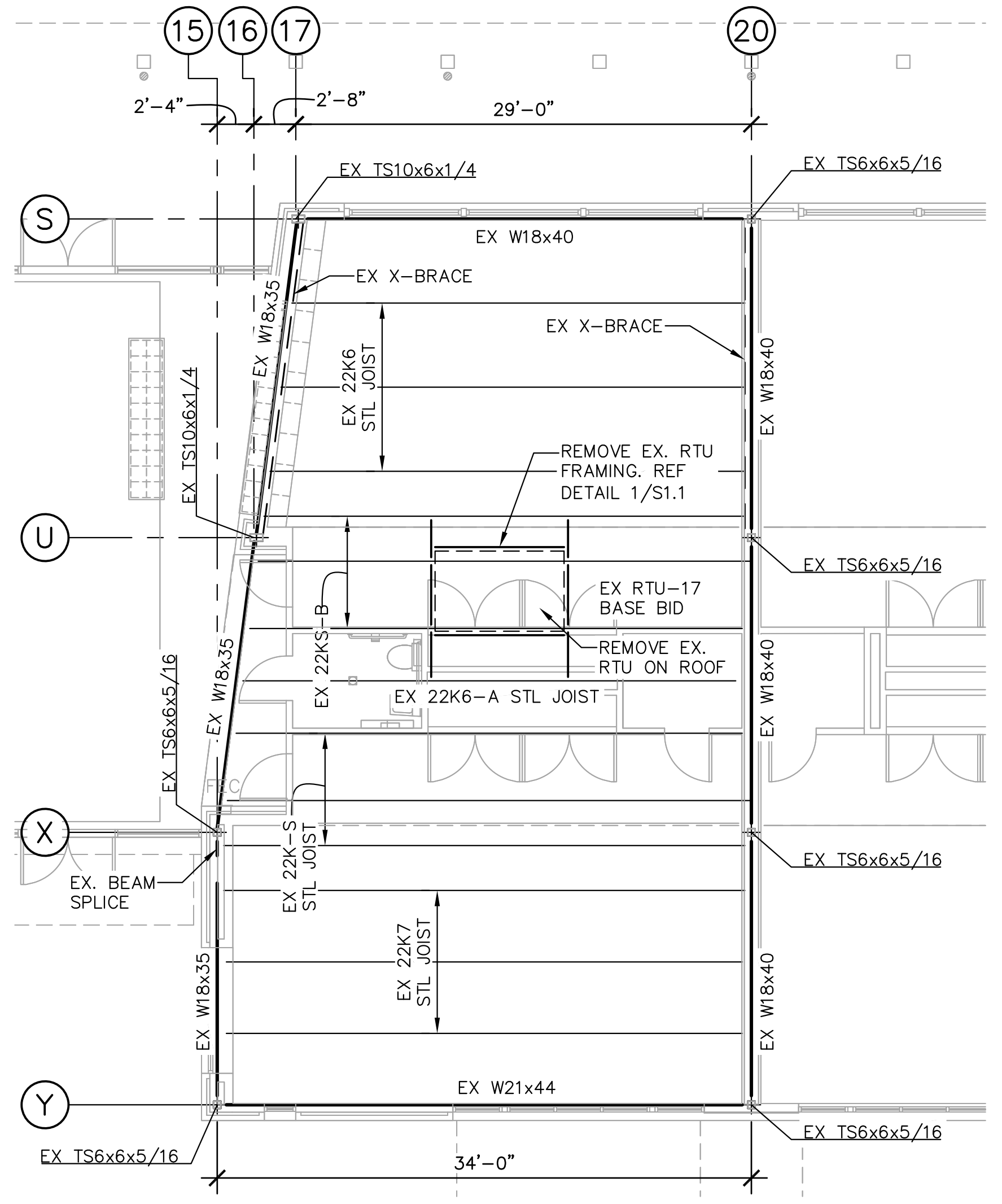
**1** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" BASE BID  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES



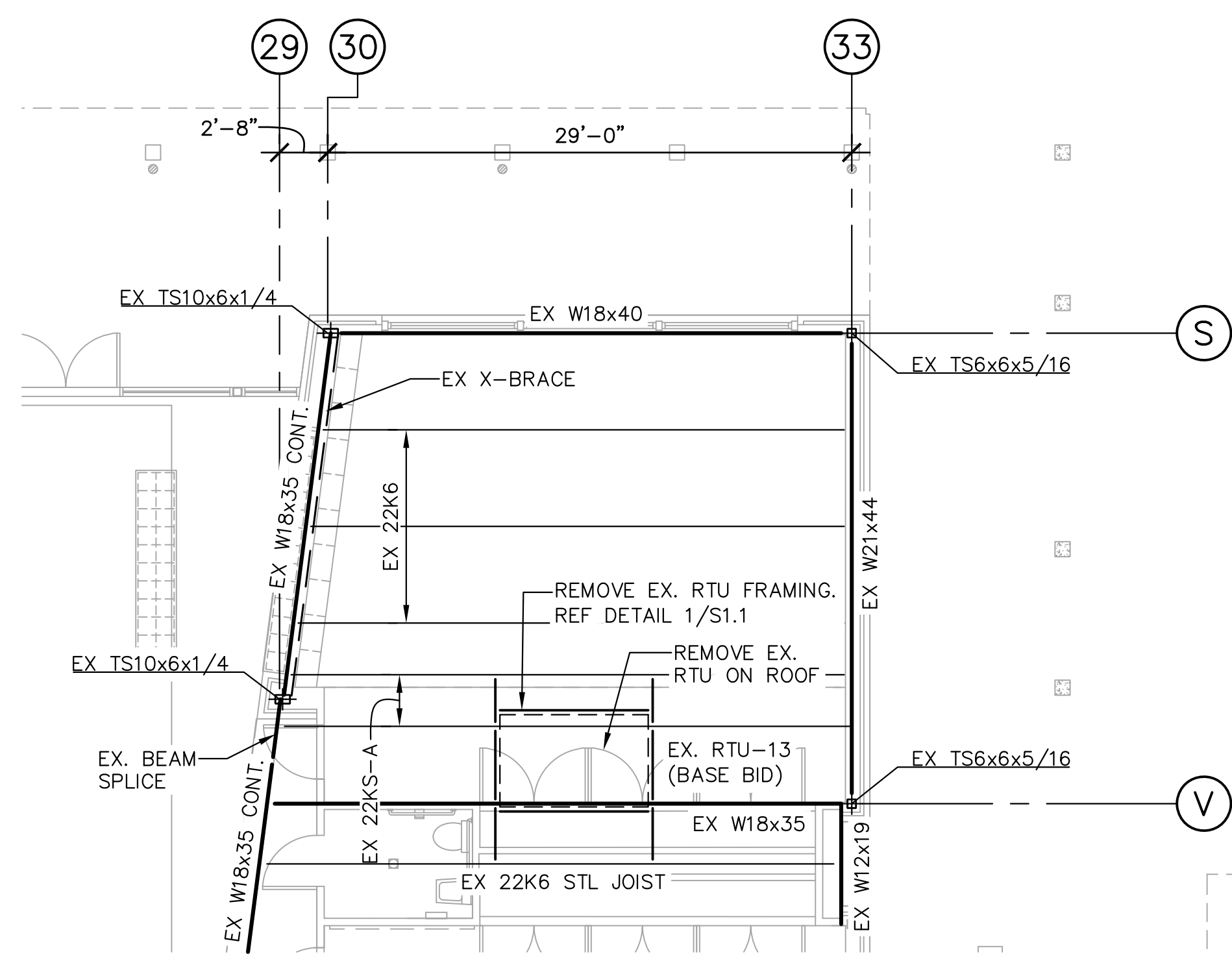
**2** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" ALTERNATE #1  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES



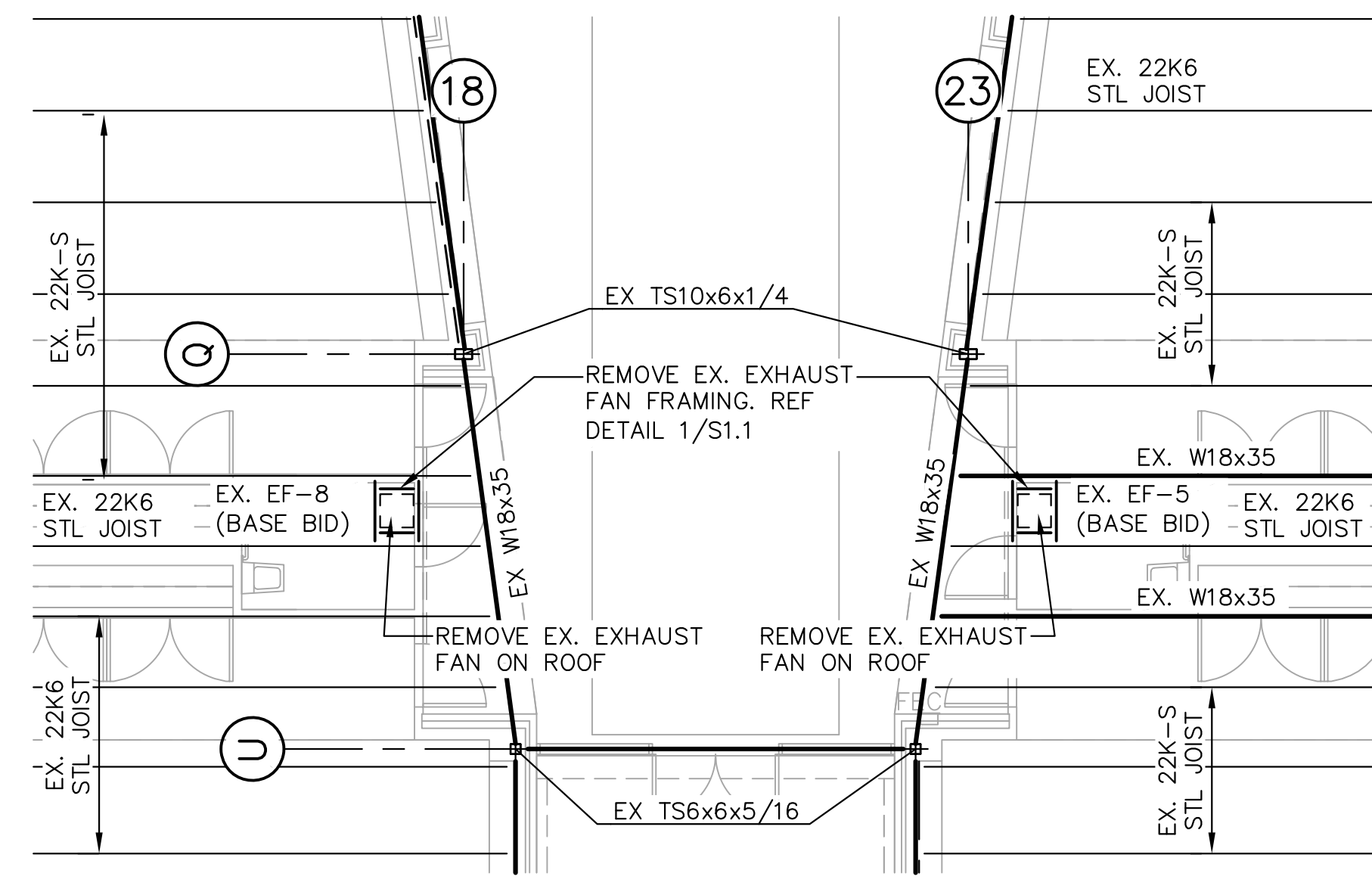
**3** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" ALTERNATES 1  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES



**4** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" BASE BID  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES



**5** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" BASE BID  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES

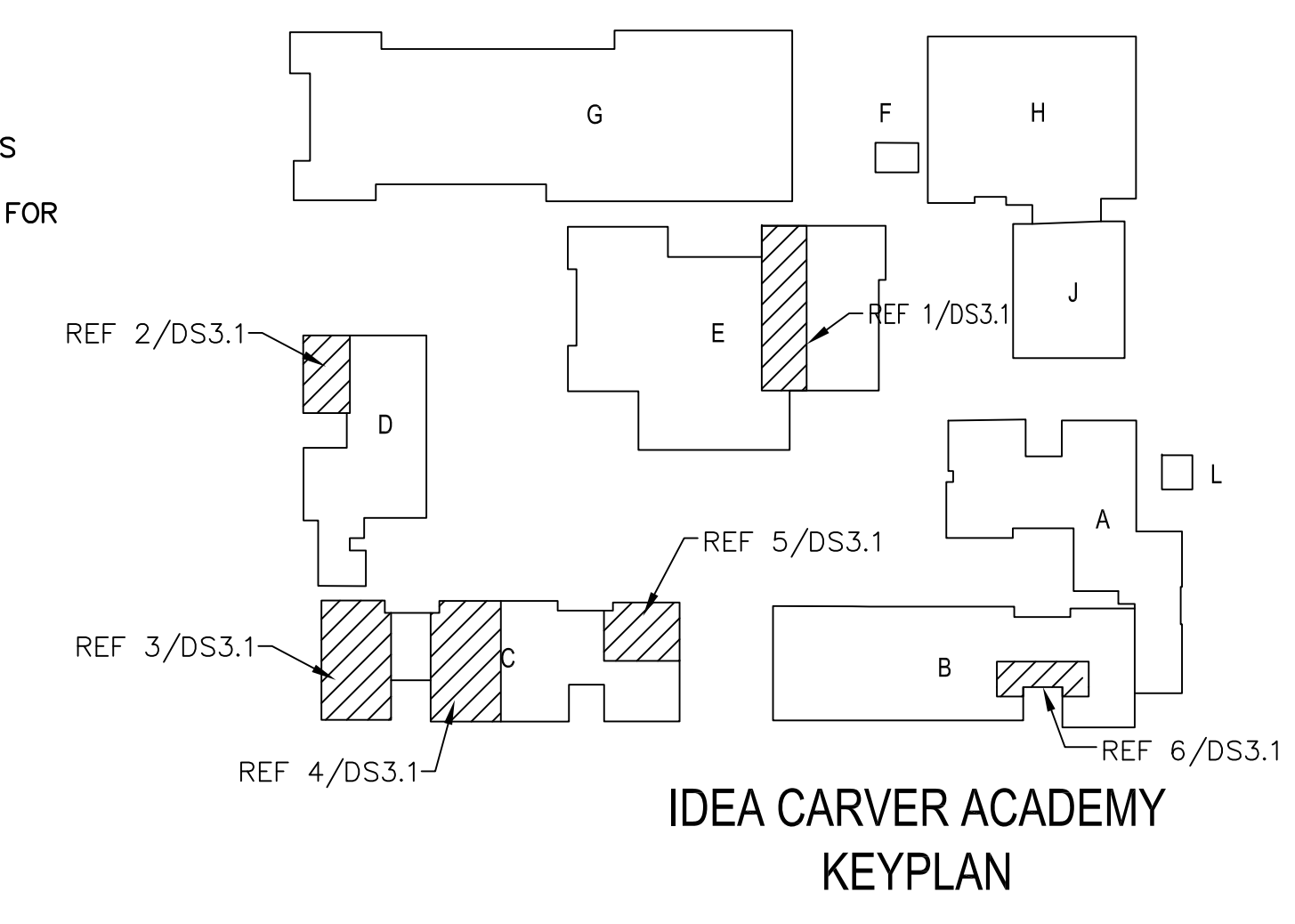


**6** STRUCTURAL DEMOLITION FRAMING PLAN  
 1/8" = 1'-0" BASE BID  
 PLAN NORTH  
 NOTES:  
 1. REFERENCE DS3.1 FOR TYPICAL DEMOLITION NOTES

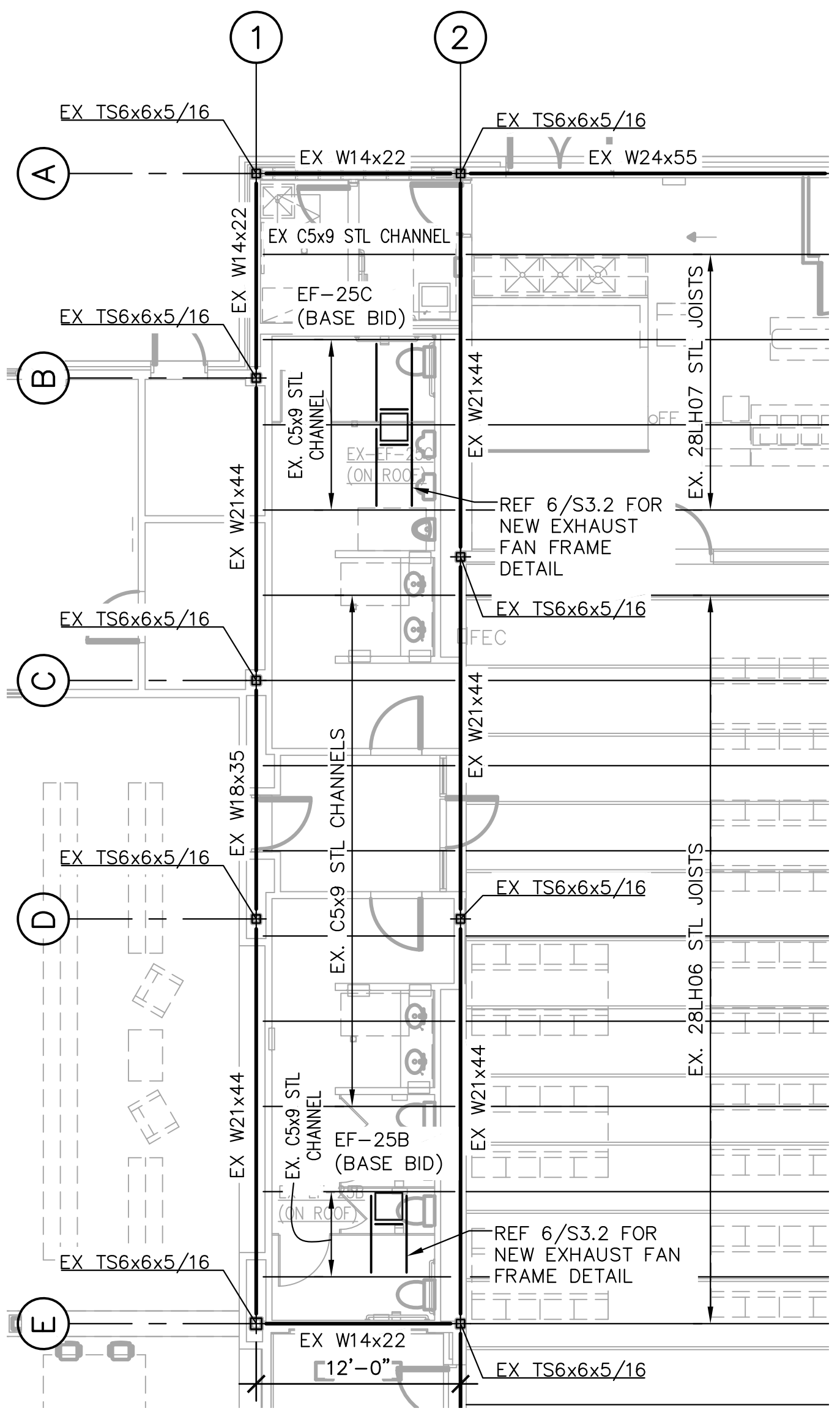
**STRUCTURAL DEMOLITION NOTES**

- NOTES:
- SCOPE OF DEMOLITION WORK:
    - A. REMOVE EXISTING CEILING GRID TO EXPOSE EXISTING RTU FRAME.
    - B. REMOVE EXISTING RTU ON ROOF.
    - C. REMOVE EXISTING RTU FRAME REFERENCE DETAIL 7/DS3.1.
  - REFERENCE MEP FOR ADDITIONAL DEMOLITION SCOPE.
  - EXISTING FRAMING PLANS WERE DEVELOPED BASED ON STRUCTURAL RECORD DRAWINGS TITLED "CARVER COMPLEX" SHEETS S-1.00 TO S-4.03 DATED 04/31/00 BY CUTLER-GALLAWAY SERVICES, INC. CONTRACTOR SHALL REFER TO RECORD DRAWINGS FOR ADDITIONAL INFORMATION REQUIRED.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



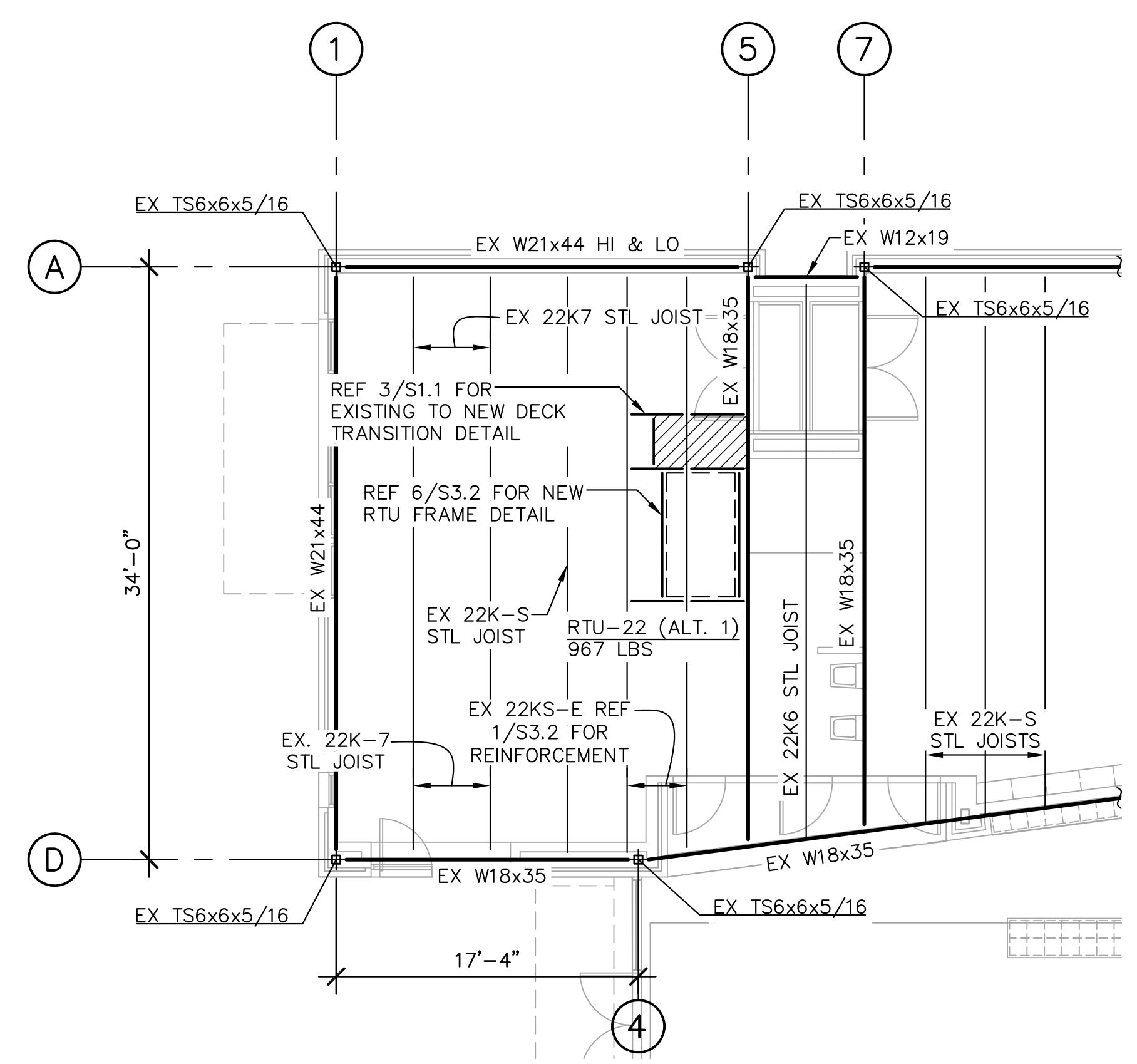
IDEA CARVER ACADEMY KEYPLAN



**1** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" BASE BID

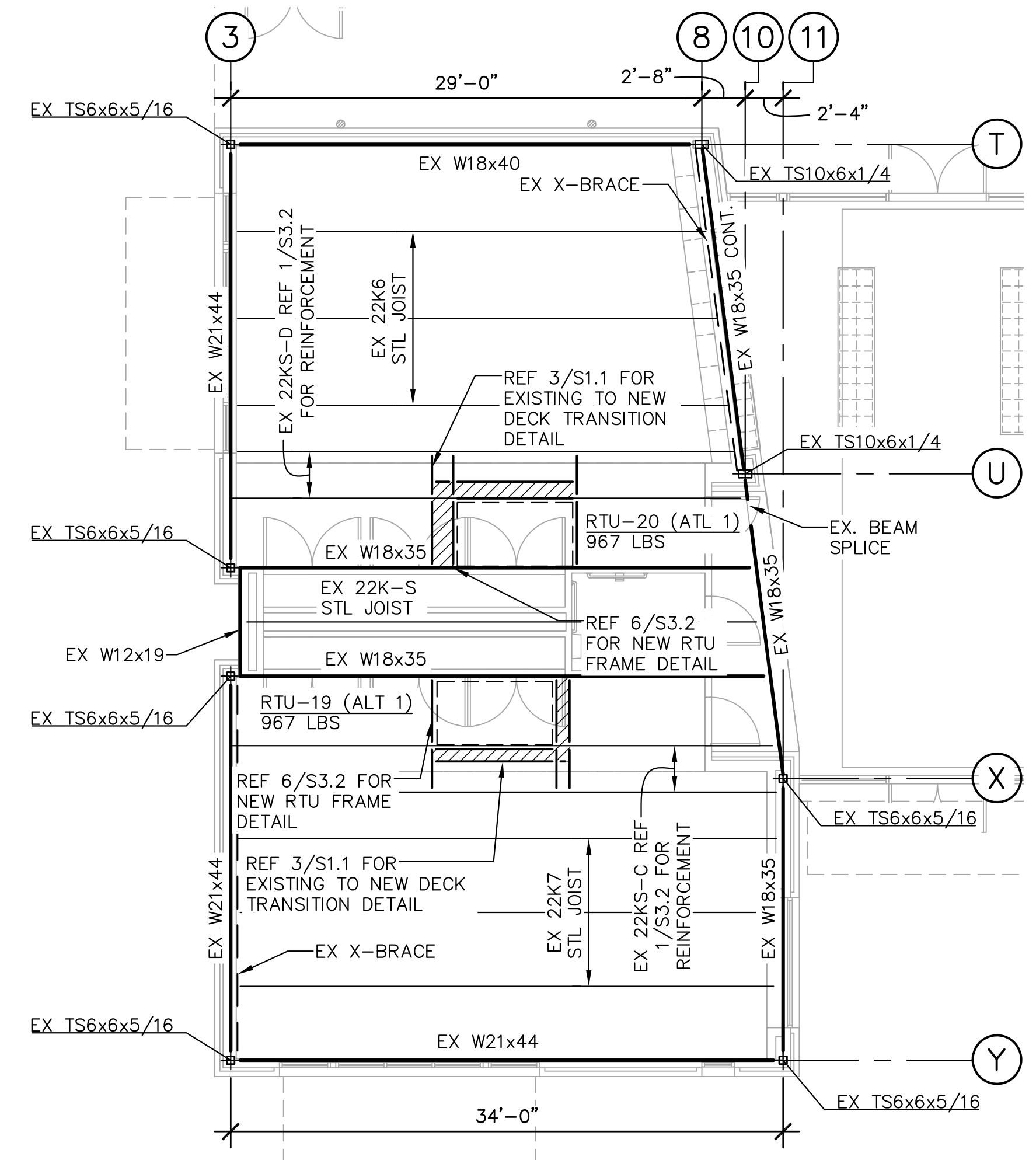
NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES



**2** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" ALTERNATE #1

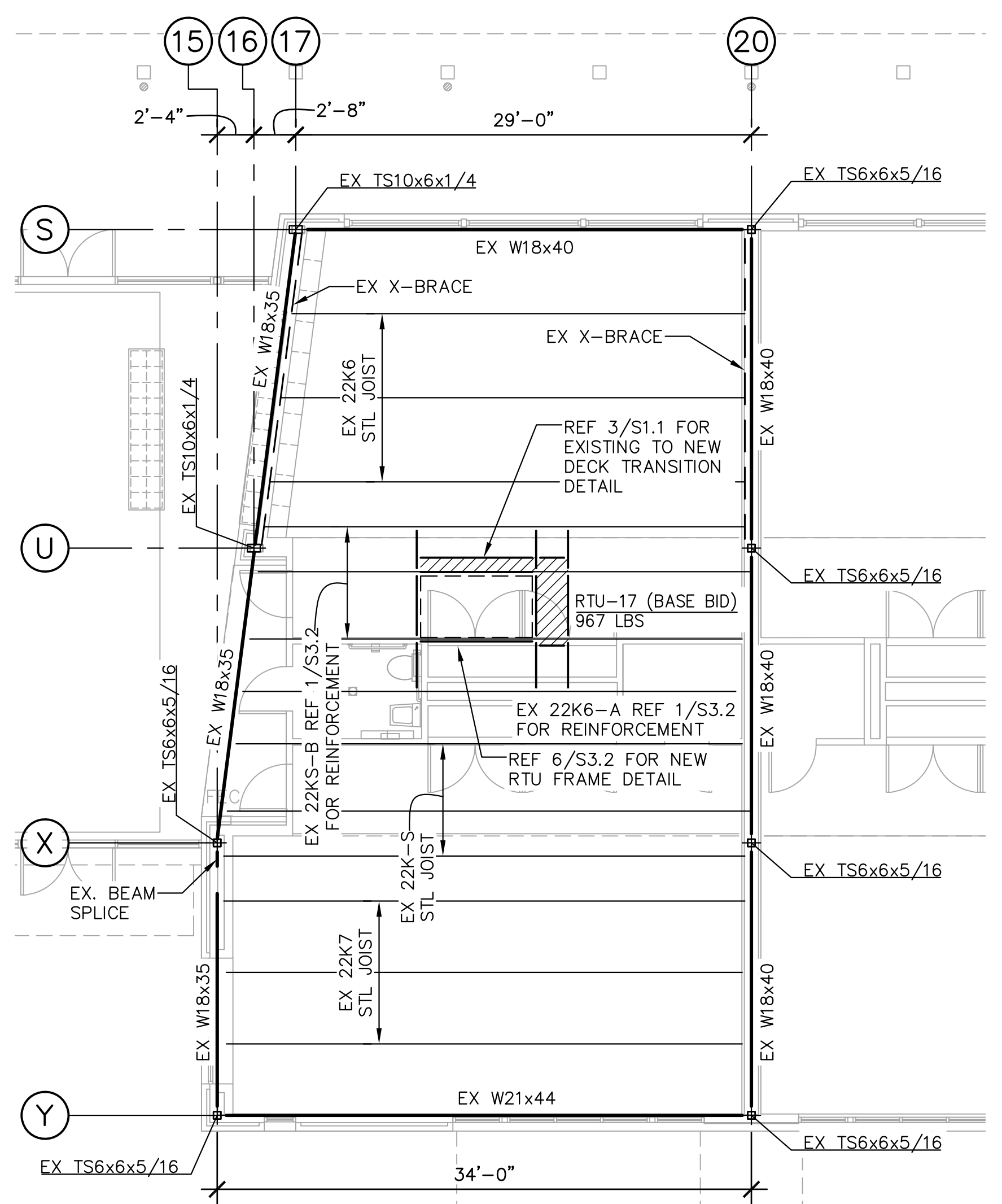
NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES



**3** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" ALTERNATES 1

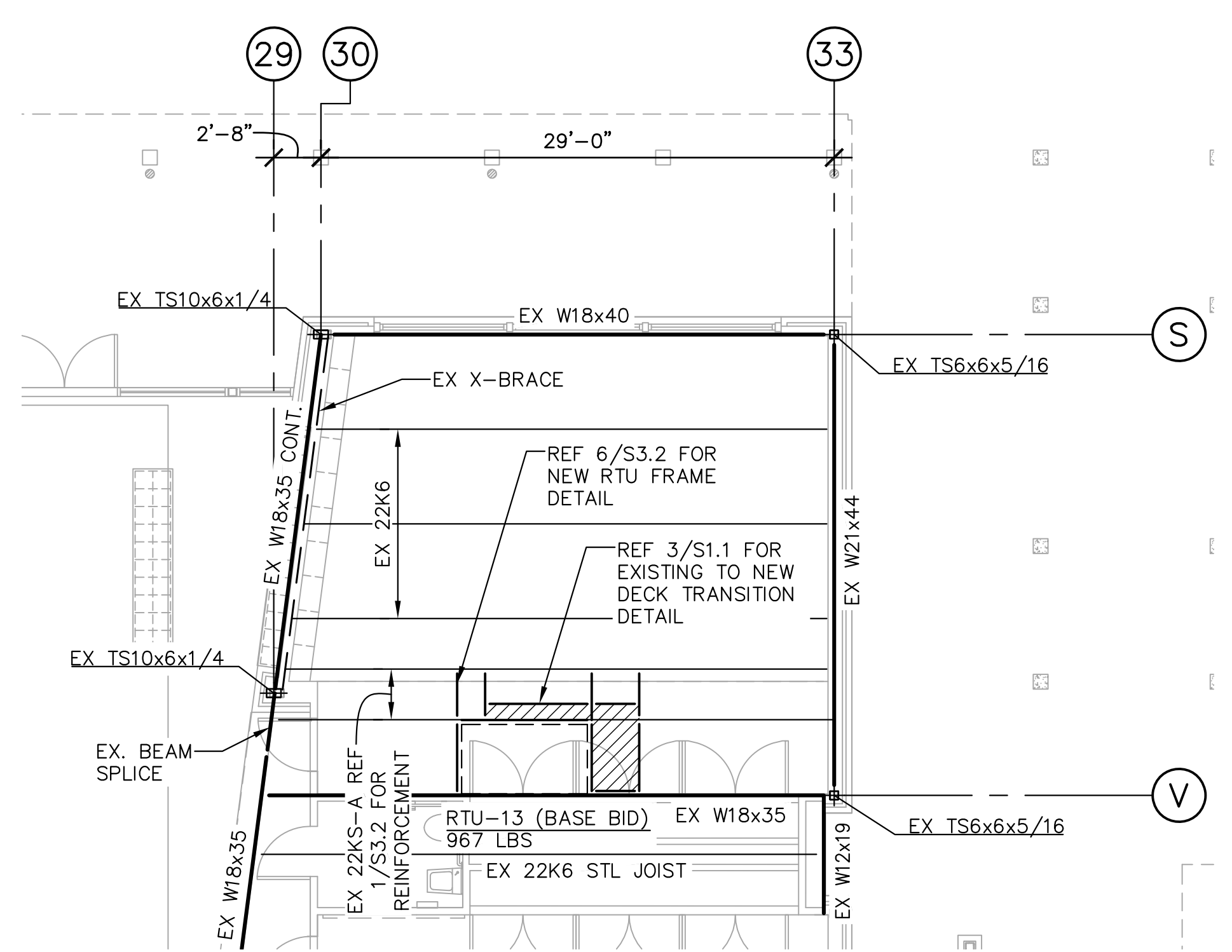
NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES



**4** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" BASE BID

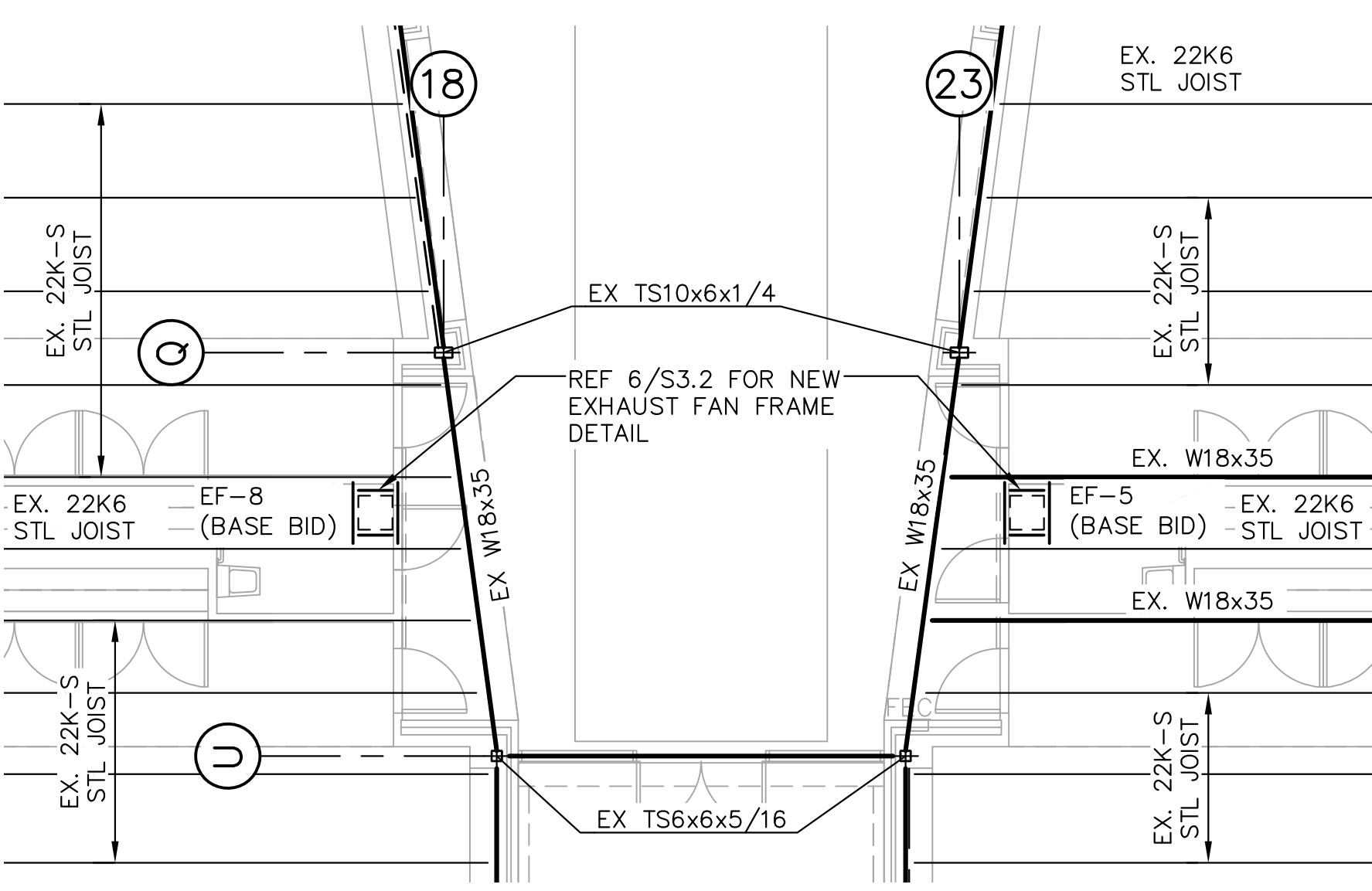
NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES



**5** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" BASE BID

NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES



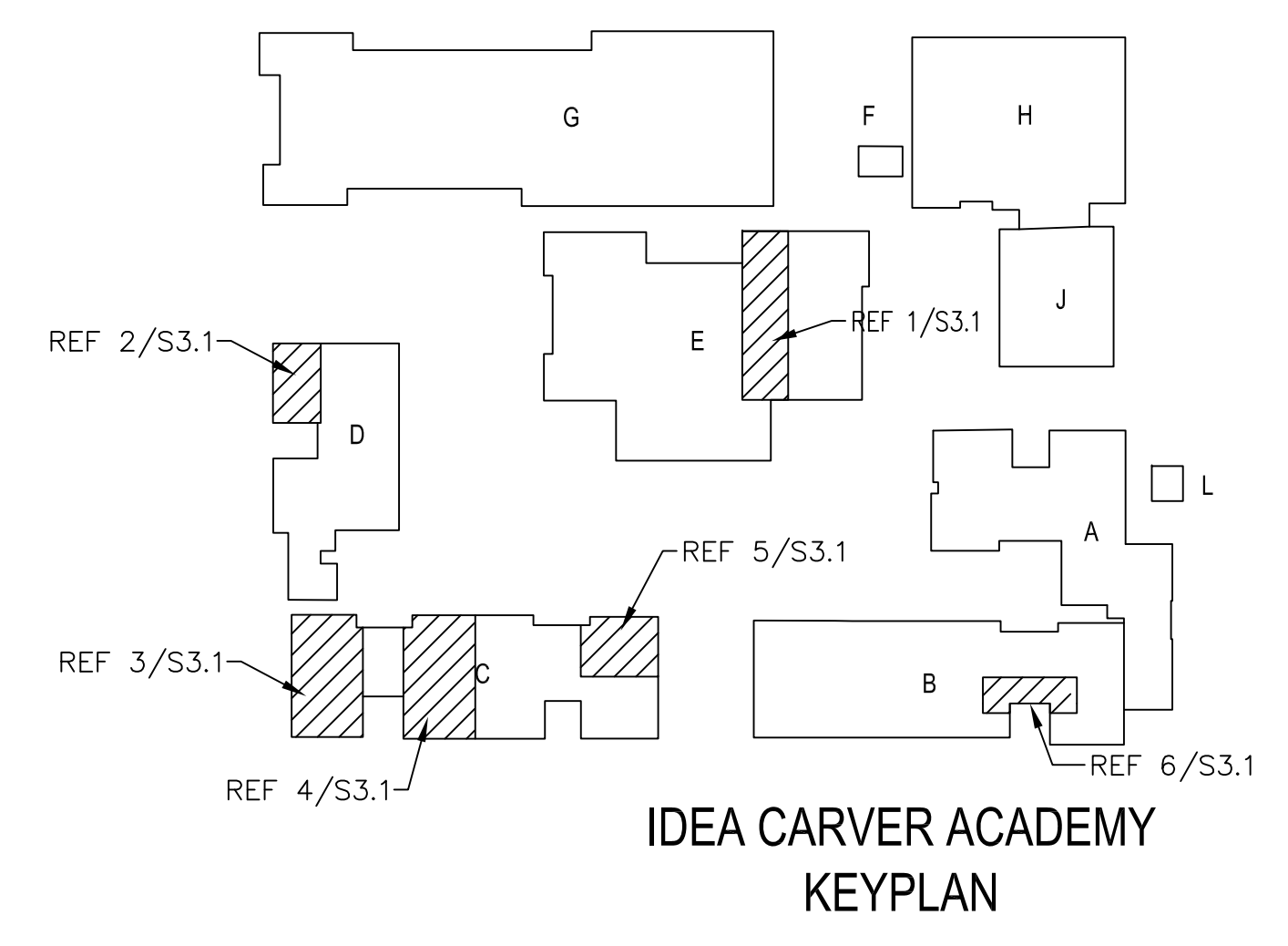
**6** STRUCTURAL RENOVATION FRAMING PLAN

1/8" = 1'-0" BASE BID

NOTES:  
 1. REFERENCE S3.1 FOR TYPICAL RENOVATION NOTES

**STRUCTURAL RENOVATION NOTES**

- NOTES:
- SCOPE OF WORK:
    - A - MODIFY EXISTING ROOF OPENING FRAME AS REQUIRED TO INSTALL NEW FRAME FOR NEW OPENING SIZE.
    - B - INSTALL NEW ROOF OPENING FRAME PER DETAIL 6/S3.2.
    - C - INSTALL NEW METAL ROOF DECK AS REQUIRED TO CLOSE-OFF AREAS BETWEEN NEW AND EXISTING ROOF OPENINGS.
    - D - INSTALL NEW ROOFING INTEGRATED WITH EXISTING ROOF AND ONTO NEW RTU CURBS AS REQUIRED FOR A COMPLETE WATERPROOF INSTALLATION (BY OTHERS).
  - NEW ROOF DECK SHALL BE 1.5B 22GA GALV DECK BY VULCRAFT OR APPROVED EQUAL. (P=0.155 IN<sup>2</sup>/FT; S<sub>p</sub>=0.186 IN<sup>3</sup>/FT; I<sub>n</sub>=0.183 IN<sup>4</sup>/FT; S<sub>n</sub>=0.192 IN<sup>3</sup>/FT; F<sub>y</sub>=33KSI). ATTACH DECK TO SUPPORTS USING 5/8" PUDDLE WELDS ON A 36/7 PATTERN AND 7-#10 TEK SCREW SIDE LAP FASTENERS.
  - PRIOR TO INSTALLATION OF MECHANICAL EQUIPMENT, NOTIFY ENGINEER IF EQUIPMENT WEIGHTS OR LOCATIONS VARY FROM THAT SHOWN ON PLAN TO ALLOW VERIFICATION OF STRUCTURAL CAPACITY OF FRAMING MEMBERS.
  - REFER TO MECHANICAL AND MANUFACTURER'S DRAWINGS FOR FASTENING OF THE ROOF CURB AND HVAC UNITS TO RTU SUPPORT FRAMES.
  - EXISTING FRAMING PLANS WERE DEVELOPED BASED ON STRUCTURAL RECORD DRAWINGS TITLED "CARVER COMPLEX" SHEETS S-1.00 TO S-4.03 DATED 04/31/00 BY CULTER-GALLAWAY SERVICES, INC. CONTRACTOR SHALL REFER TO RECORD DRAWINGS FOR ADDITIONAL INFORMATION REQUIRED.
  - ALL STRUCTURAL STEEL NOTED ON FRAMING PLAN IS EXISTING UNLESS NOTED OTHERWISE.
  - INDICATES AREAS WHERE NEW 1.5B 22GA GALV ROOF DECK WILL NEED TO BE INSTALLED AT EXISTING ROOF OPENINGS. REFERENCE DETAIL 3/S1.1 FOR EXISTING TO NEW DECK TRANSITION DETAIL.

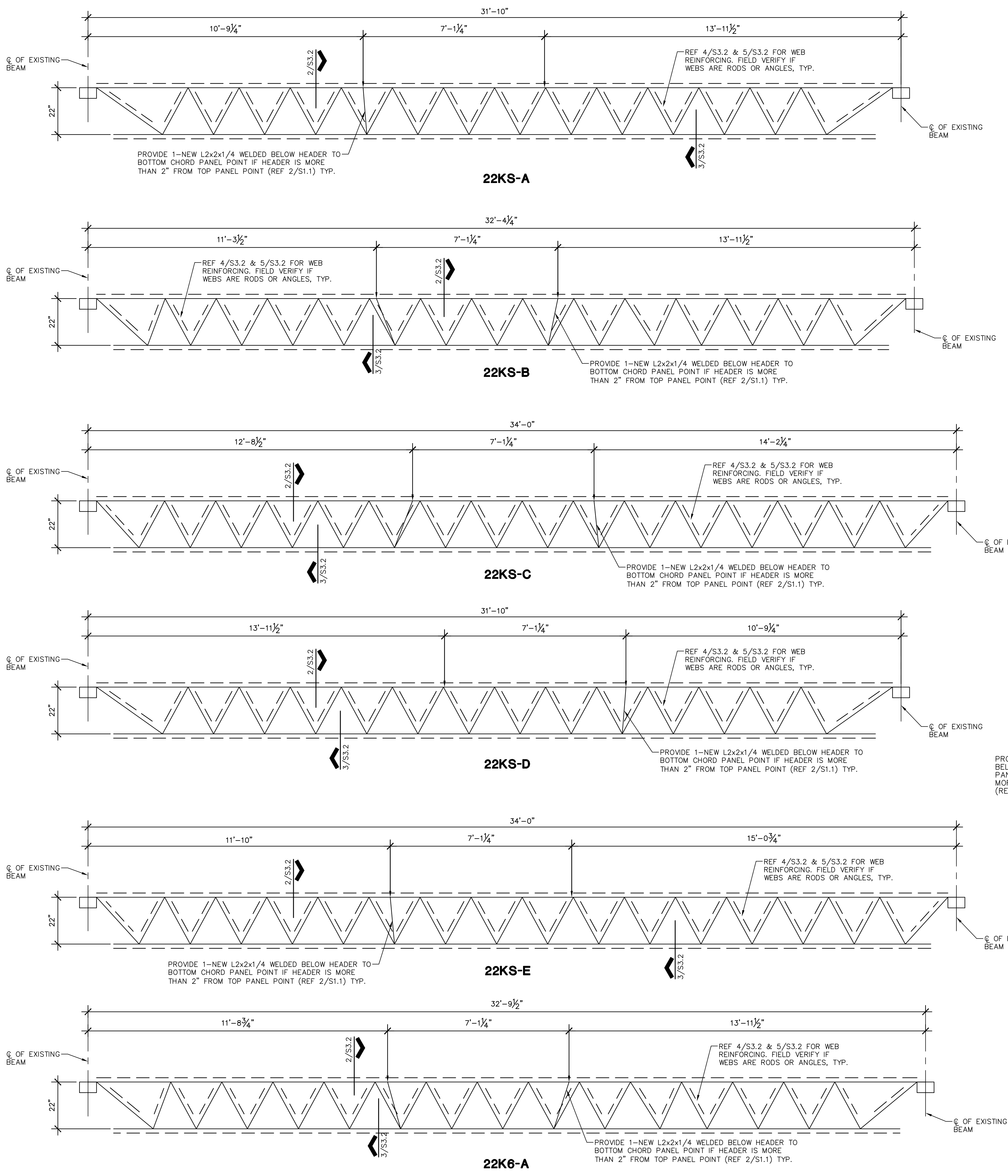


CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.

**GREEN, RUBIANO & ASSOCIATES**  
 CONSULTING STRUCTURAL ENGINEERS

1025 WEST HAWTHORN  
 HARLINGEN, TEXAS 77557  
 P: (361) 293-3435 FAX: (361) 293-3436  
 TEXAS REGISTERED ENGINEERING FIRM # F-4145

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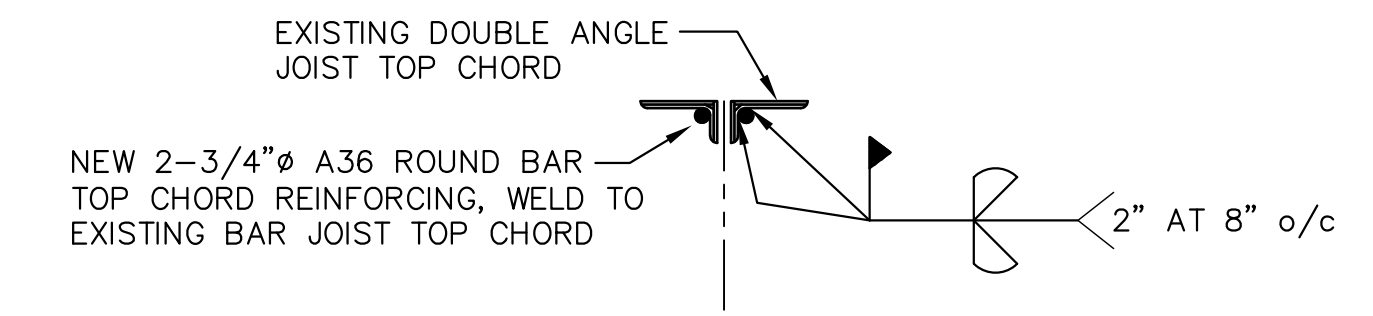


**1 EXISTING JOIST REINFORCING PROFILES**

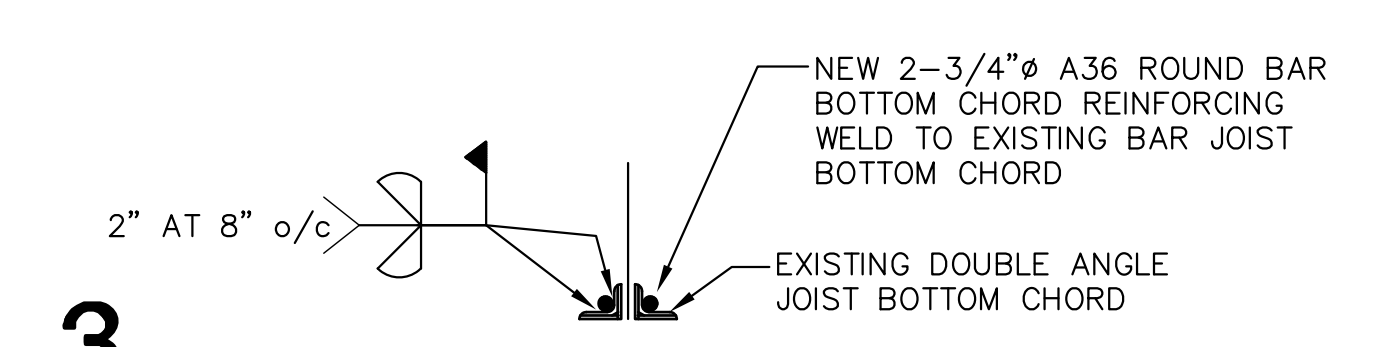
1/2" = 1'-0"

NOTES:

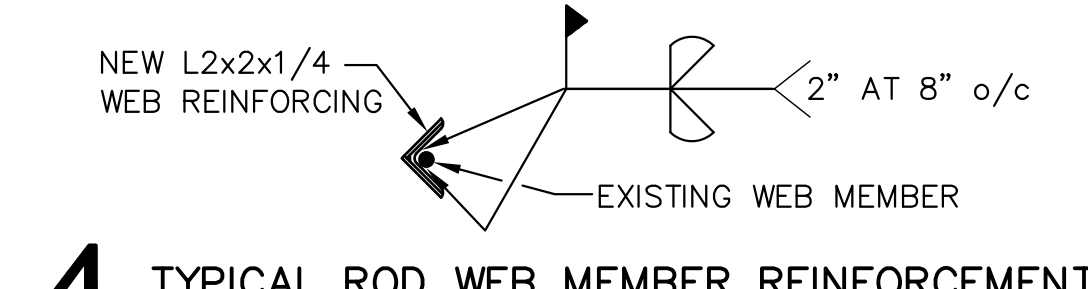
1. ALL EXISTING JOIST REINFORCEMENT PROFILES ARE SCHEMATIC AND PROVIDED FOR PRICING PURPOSES. ALL DIMENSIONS AND JOIST WEB LAYOUTS WILL NEED TO BE FIELD VERIFIED AFTER EXISTING JOIST ARE EXPOSED IN THE FIELD.
2. GENERAL CONTRACTOR WILL NEED TO CONTACT GRA TO SCHEDULE FIELD OBSERVATIONS TO OBSERVE EXISTING BAR JOIST AT NEW RTU LOCATIONS. CONTRACTOR WILL NEED TO PROVIDE A LIFT OR LADDERS ON SITE TO BE USED AS DIRECTED BY GRA PERSONNEL TO GAIN ACCESS TO EXISTING BAR JOIST.
3. ONCE GRA HAS ANALYZED THE EXISTING BAR JOIST, THE JOIST REINFORCEMENT JOIST PROFILES ON 1/S3.2 WILL BE REVISED AS REQUIRED, INCORPORATING REPAIR DETAILS 2-5/S3.2.
4. REFERENCE PLAN FOR DEDUCTIVE ALTERNATES. CONTRACTOR TO REFER TO BID PROPOSAL FOR FURTHER INSTRUCTIONS.



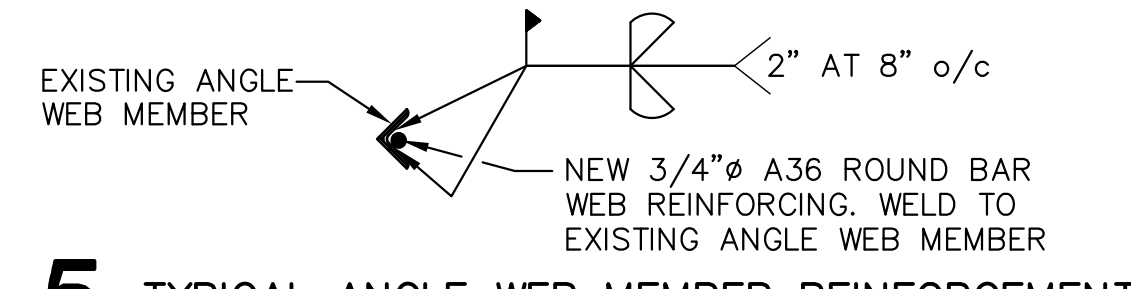
**2 TYPICAL TOP CHORD REINFORCEMENT**



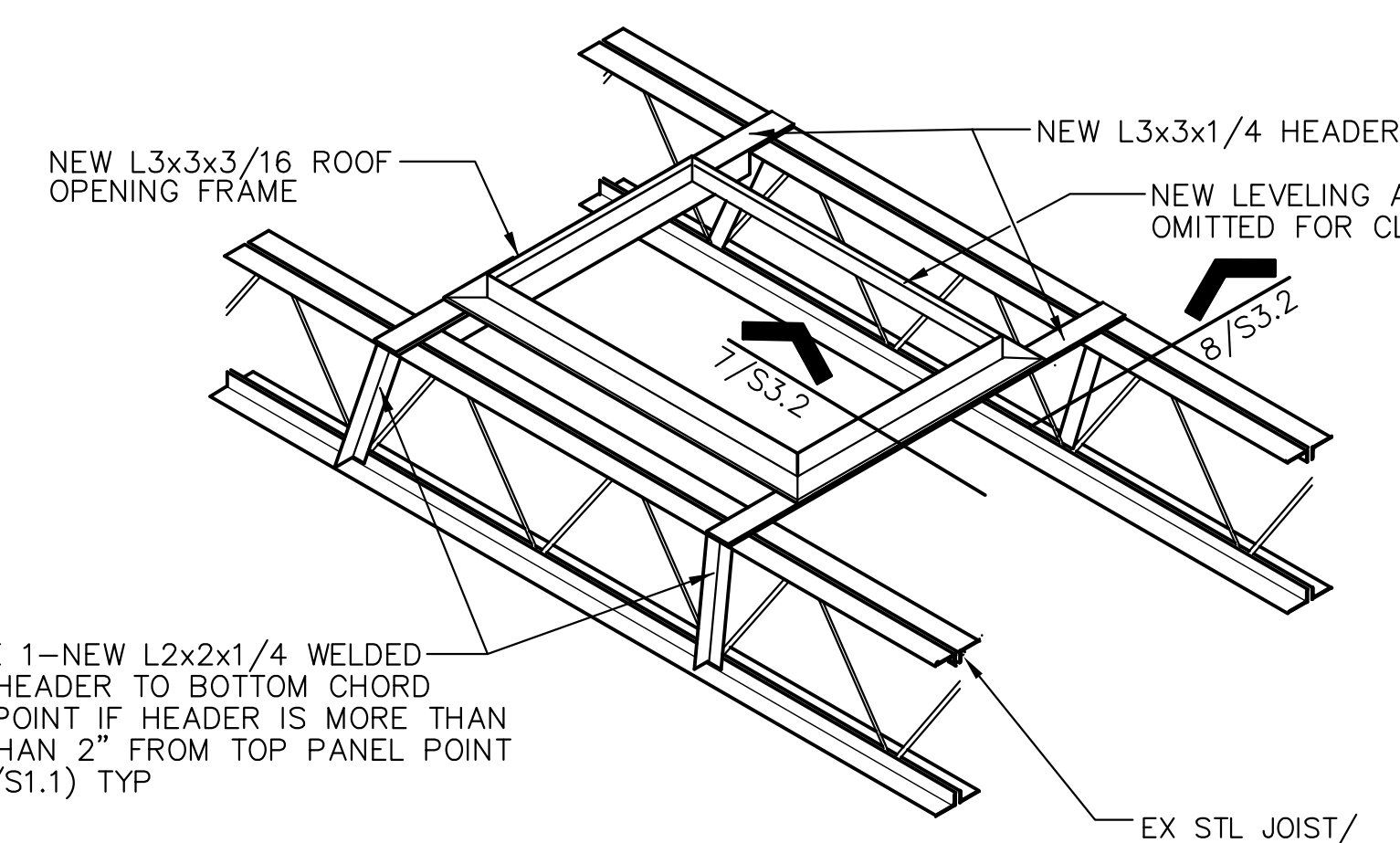
**3 TYPICAL BOTTOM CHORD REINFORCEMENT**



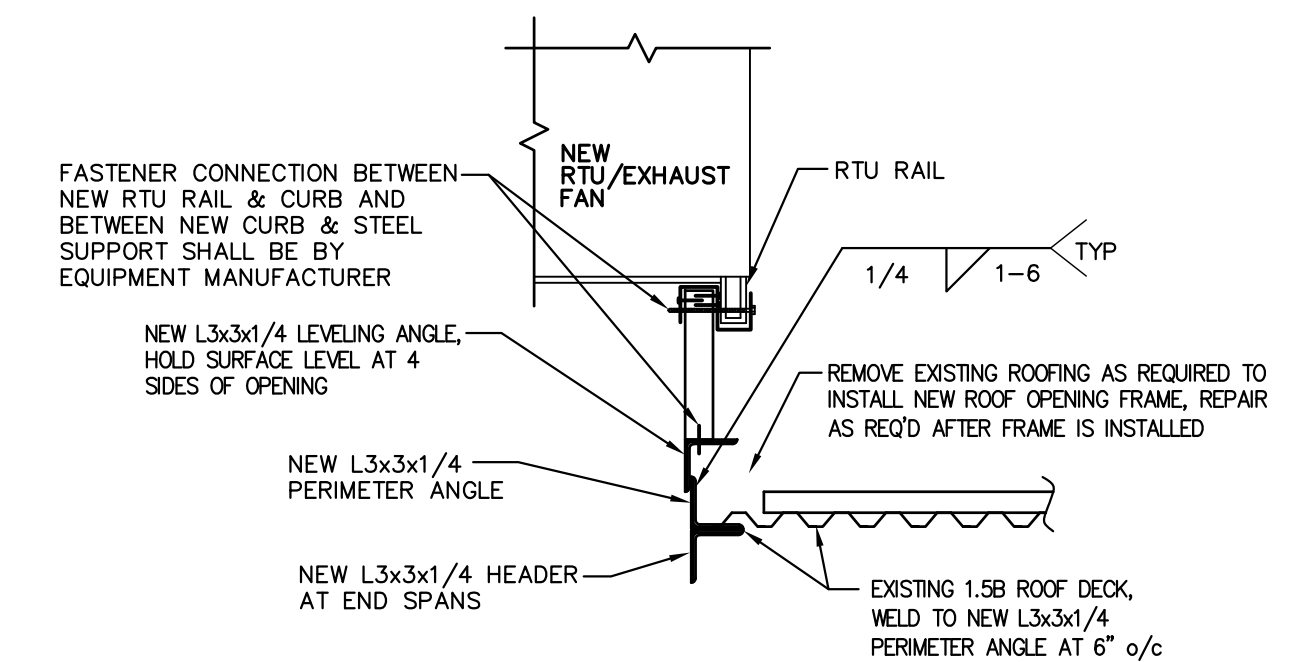
**4 TYPICAL ROD WEB MEMBER REINFORCEMENT**



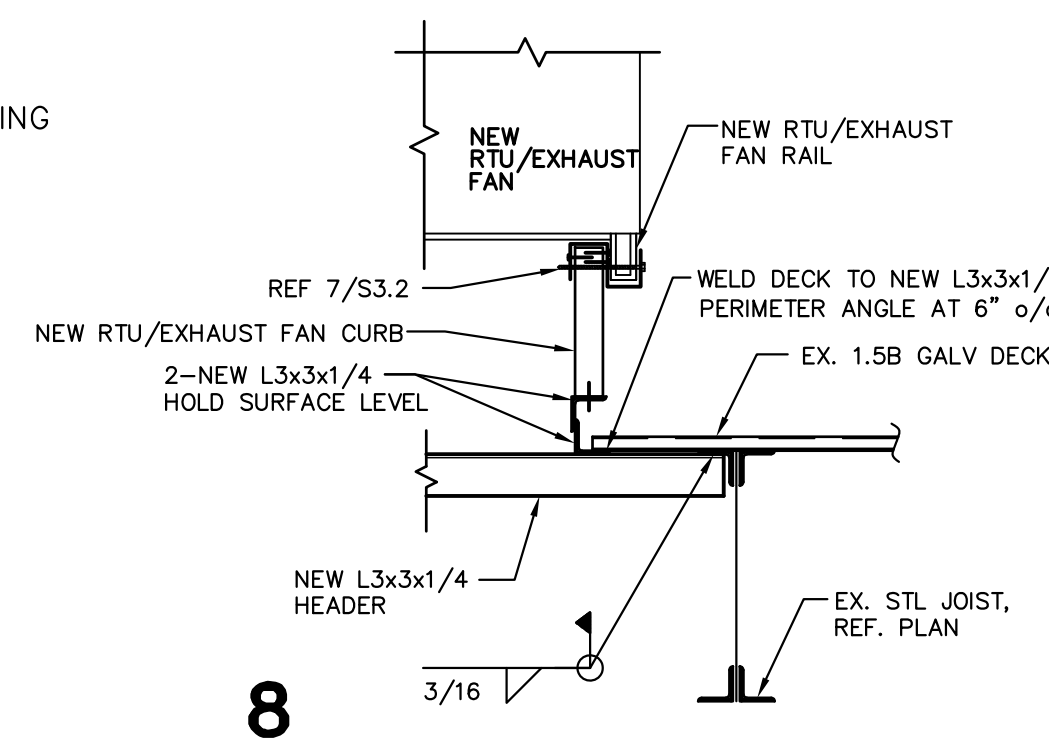
**5 TYPICAL ANGLE WEB MEMBER REINFORCEMENT**



**6 RTU AND EXHAUST FAN OPENING FRAME DETAIL**



**7 NEW RTU/EXHAUST FAN SUPPORT FRAME**



**8**