

ADDENDUM 2

то:	Prospective Bidders	DATE:	September 16, 2019
FROM:	Gabriel Hinojosa, PE, LEED AP Sigma HN Engineers, PLLC 701 S 15th St McAllen, TX 78501	PROJECT:	Brownsville ISD Rivera Early College High School HVAC and Lighting Improvements

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated August 30, 2019 with amendments and additions noted below. The following is a list of changes made to the plans and specifications. The changes are outlined by item number, as well as plan sheet number where applicable.

- 1. Sheet MEP-0.0 & MEP-1.0
 - Revised cover sheet to add structural Engineering Firm Information.
 - Revised Table of Content to add Structural Sheets.
- 2. Existing roof steel joists supporting RTAC-19, RTAC-20 and RTAC-H5 will be reinforced. Refer to Structural engineering drawings and details.

Attachments:

Sheets and Specification sections mentioned above.



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PRESIDENT

- VICE PRESIDENT
- SECRETARY
- ASSISTANT SECRETARY
- MEMBER
- MEMBER
- MEMBER

OWNER

BROWNSVILLE INDEPENDENT SCHOOL DISTRICT 1900 E. PRICE ROAD, SUITE 107 BROWNSVILLE, TEXAS 78521-2417

MEP SIGMA HN ENGINEERS, PLLC 701 S 15TH ST. MCALLEN, TEXAS 78501 (956) 332-3206

STRUCTURAL CLH ENGINEERING, INC. 701 S 15TH ST. MCALLEN, TEXAS 78501 (956) 687-5560

SITE LOCATION MAP



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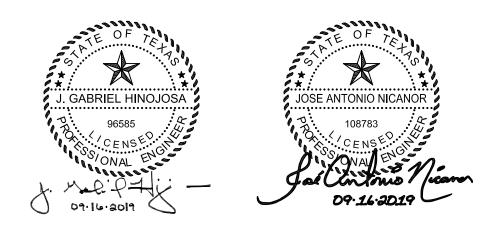
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 WITH LIGHTING INSTALLATIONS AND ARCHITECTURAL REFL MOVE THE DIFFUSER LOCATIONS IF REQUIRED TO AVOID OB DUCTWORK AND LIGHT FIXTURES. COORDINATE RELOCATIO N. VERIFY THE LOCATION OF ALL WALLS, PARTITIONS, DOORS, FROM ACTUAL FIELD MEASUREMENTS. O. PROVIDE SMOKE DETECTOR AND SHUTDOWN CONTROLS OF SUPPLY FANS. SMOKE DETECTORS SHALL BE PROVIDED, INS 	L.	NOTED OTHER WHICH IS SUP CONTRACTOR THE ROOM FI	RWISE THERMOSTATS SHOWN SHALL BE IN COM PLYING AIR TO THE AREA WHERE THE THERMO SHALL COORDINATE THE FINAL LOCATION OF NISHES AND USES. CONTRACTOR SHALL SUPPL
FROM ACTUAL FIELD MEASUREMENTS.O. PROVIDE SMOKE DETECTOR AND SHUTDOWN CONTROLS OF SUPPLY FANS. SMOKE DETECTORS SHALL BE PROVIDED, INS	M.	WITH LIGHTIN MOVE THE DI	IG INSTALLATIONS AND ARCHITECTURAL REFLE FFUSER LOCATIONS IF REQUIRED TO AVOID OB
SUPPLY FANS. SMOKE DETECTORS SHALL BE PROVIDED, INS		FROM ACTUA	L FIELD MEASUREMENTS.
	0.	SUPPLY FANS.	SMOKE DETECTORS SHALL BE PROVIDED, INST

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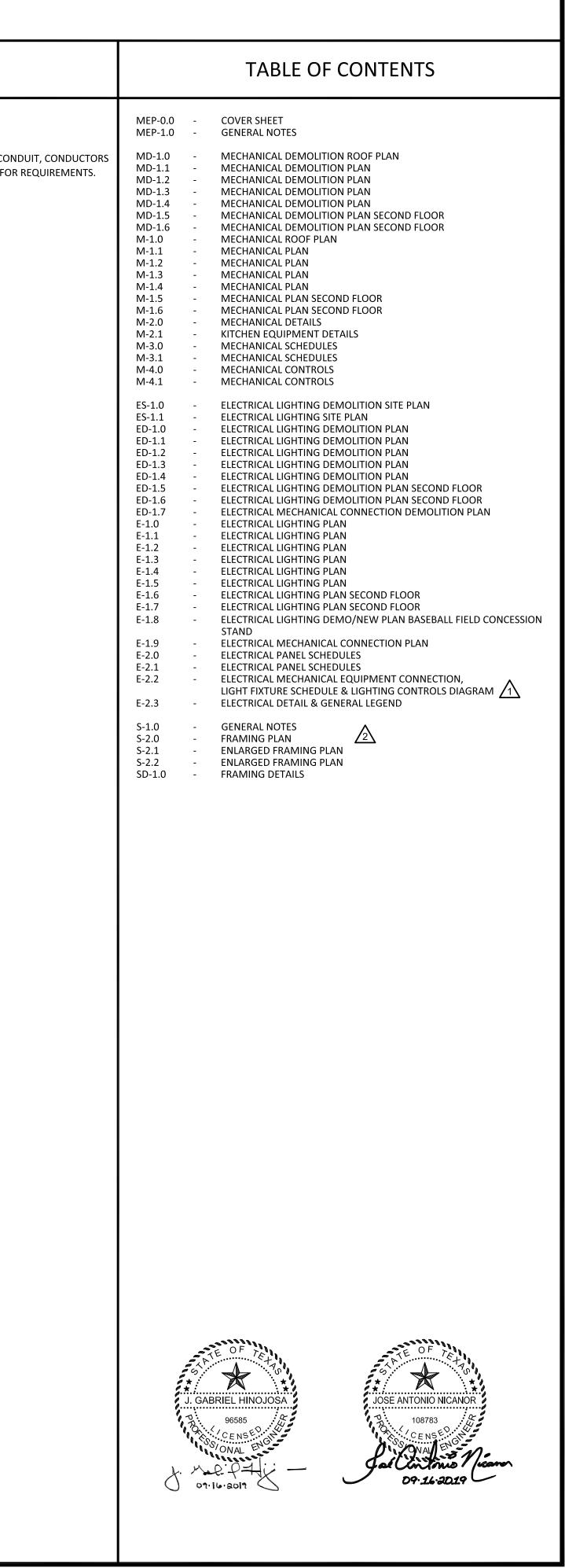
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	GENERAL	LEGEND
MECH	ANICAL	ELECTRICAL
ES:	MECHANICAL GENERAL DEMOLITION NOTES:	GENERAL POWER NOTES:
HALL NOT BE SCALED. THE INATING ALL CONSTRUCTION TINGS AS REQUIRED BY FIELD	A. INFORMATION ON THE PLAN HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND/OR ARCHITECT.	A. ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONE AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR
ONS PRIOR TO COMMENCING DITIONS AND CONSTRUCTION THE ENGINEER AND/OR OWNER. RMING THE WORK IN FULL ND FEDERAL CODES UNDER THIS ETERMINES THAT THE CONTRACT VITH THE APPLICABLE LOCAL NSTRUCTION START FOR THE CONTRACTOR OF HIS AND REWORK SHALL BE AT	 B. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, HE SHALL INFORM THE ARCHITECT PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. AN ASBESTOS SURVEY SHALL BE KEPT ON SITE AT ALL TIMES PER TEXAS DEPARTMENT OF HEALTH REQUIREMENTS. 	
ORK TIGHT WITH THE BUILDING NTRACTOR SHALL COORDINATE ALL ECTRICAL DESIGN. ALL DUCTWORK O FIT AROUND BUILDING NICAL CONTRACTOR SHALL HER TRADES AND PARTICIPATE IN	C. ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE ARCHITECT. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE DESIGNATED AUTHORITY OR CONTRACTING ARCHITECT. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA.	
, INCLUDING FANS AND EXHAUST ATED.	D. GENERAL CONTRACTOR SHALL BE ADVISED OF ALL NEW PROPOSED ROOF OPENINGS BY ANY SUB-CONTRACTOR.	
S AS SHOWN. CONNECT EACH FLEX-DUCT SECTION; CE WITH THE DETAIL SHOWN IN INCLUDE A BUTTERFLY DAMPER TO	E. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS WHICH REQUIRES DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL BUILDING DAMAGE CREATED BY DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ARCHITECT APPROVED PATCHING MATERIALS.	
IRED TO COMPLETE THE HVAC TH SHEET METAL FLANGES. FLANGE IEET METAL STRIPS AND SEALED LS OR CONCRETE FLOORS SHALL BE CTOR SHALL CHECK BUILDING AVOID CUTTING THROUGH OR SHALL INFORM THE ENGINEER IF DPENINGS. CONTRACTOR SHALL GS AND SPECIFICATIONS. PATCH . INSTALL DECORATIVE TRIM AROUND OPENINGS IN FINISHED VITH THE OTHER TRADES. 3 REQUIRING DEMOLITION OF HES, IT SHALL BE THE THE NECESSARY DEMOLITION. ITION WORK. PATCHING SHALL BE ROUNDING AREAS, OR WITH NISHING SHALL BE APPROVED BY ING THE INSTALLATION OF THE AIR ACCESSORIES AND CONTROLS TALLED. ALL INSTALLATION WORK CODES, INCLUDING NFPA 90A AND I SYSTEMS TO ACHIEVE THE AIR HALL INCLUDE ADJUSTMENT OF ALL DNE DAMPERS (IF REQUIRED), LUME DAMPERS (FINAL BALANCING WITH A COMPLETE BALANCING WITH A COMPLETE BALANCING CE AND ZONE VOLUME TOTALS. IF FINISHED FLOOR LEVEL UNLESS EIN CONTROL OF THE ZONE SYSTEM	 F. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE-DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES. G. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW EQUIPMENT PIPING AND DUCTWORK IS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE. H. ALL NEW ROOF PENETRATIONS SHALL BE ROUTED THRU ANY EXISTING OPENING WHEREVER POSSIBLE. LARGER AND NEW OPENINGS SHALL BE KEPT TO A MINIMUM. I. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK. J. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK. J. CONTRACTOR SHALL REMOVE AND RETURN ANY AND ALL EXISTING EQUIPMENT/MATERIAL, ETC SHALL BECOME THE PROPERTY OF THE CONTRACTOR. K. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES. L. CONTRACTOR SHALL KEEP THE	
THERMOSTAT IS LOCATED. ON OF EACH THERMOSTAT WITH L SUPPLY AND INSTALL ALL RMOSTAT INSTALLATION.	 DEMOLITION IS MANDATORY. N. CONTRACTOR SHALL IDENTIFY ALL WATER CONNECTION LINES, NATURAL GAS LINES AND SANITARY SEWER LINES PRIOR TO COMMENCING DEMOLITION WORK. O. CONTRACTOR SHALL REMOVE INTERIOR ACOUSTICAL CEILING GRID, CEILING TILE, 	
AL REFLECTED CEILING PLANS. OID OBSTRUCTIONS FROM DCATION WITH ENGINEER. OORS, CABINETS, AND CEILINGS	AND CEILING INSULATION AS NECESSARY TO MAKE CONNECTIONS AND MODIFICATION TO DUCTWORK. UPON COMPLETION CONTRACTOR SHALL REINSTALL ACOUSTICAL CEILING GRID, CEILING TILE, AND INSULATION TO ORIGINAL CONDITIONS. DAMAGE CEILING TILES SHALL BE REPLACED. FIELD VERIFY EXISTING CONDITIONS.	
ROLS ON AIR HANDLERS AND ED, INSTALLED AND WIRED FOR AND RETURN SIDE DEVICES.		

GENERAL LEGEND

REVISIONS: 🗥

- 1. 19.09.13 ADDENDUM #1. REVISION OF TABLE OF CONTENTS DUE TO CHANGE ON TITLE FOR SHEET E-2.2.
- 2. 19.09.16 ADDENDUME #2. REVISED TABLE OF CONTEST TO ADD STRUCTURAL SHEETS.



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GENERAL

- 1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS WHICH MIGHT BE NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THE COMPLETION OF THE PROJECT.
- 2. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- 3. EQUIPMENT FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO HVAC, PLUMBING, OR ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL OBTAIN APPROVAL OF THE INVOLVED TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN THESE REQUIREMENTS TO BE BORNE BY THE APPROPRIATE CONTRACTOR.
- 4. SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN.
- FOR SLEEVES, CURBS, INSERTS, ETC. NOT SHOWN ON STRUCTURAL DRAWINGS. 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES SHALL
- PROCEEDING WITH ANY WORK. 7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL
- NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. 8. THE STRUCTURAL INTEGRITY OF ANY BUILDING RELIES ON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS, WITH NO PROVISIONS MADE FOR CONDITIONS AND/OR SEQUENCES OF CONSTRUCTION AND THE STRUCTURAL DESIGN IS BASED ON THIS PREMISE. THEREFORE THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING OF SUPERSTRUCTURED DURING CONSTRUCTION.
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR RIGID BRACING OF ALL WALLS, FORMWORK, SHORING AND FALSE WORK DURING CONSTRUCTION. 10. CONTRACTOR SHALL VERIFY ALL DROPS, OFFSETS, BLOCKOUTS, FINISHES, AND
- 11. THE USE OF REPRODUCTION OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, DUE TO ANY ERRORS THAT MAY OCCUR. 12. CONTRACTOR IS RESPONSIBLE FOR ALL METHODS AND PROCEDURES DURING
- TO MAINTAIN INTEGRITY OF STRUCTURE DURING CONSTRUCTION. 13. ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE DRAWINGS, SPECIFICATIONS AND REFERENCE CODE.
- 14. STRUCTURAL MEMBERS HAVE BEEN LOCATED AND DESIGNED TO ACCOMMODATE THE MECHANICAL EQUIPMENT AND OPENINGS SPECIFIED BY THE MECHANICAL CONSULTANT. ANY SUBSTITUTIONS RESULTING IN REVISIONS TO THE STRUCTURE SHALL BE THE RESPONSIBILTY OF THE CONTRACTOR TO COORDINATE WITH THE STRUCTURAL ENGINEER.
- 15. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL DETERMINE THE SCOPE OF THE STRUCTURAL WORK FROM THE CONTRACT DOCUMENTS TAKEN AS A WHOLE INCLUDING ARCHITECTURAL AND MECHANICAL DRAWINGS. THE STRUCTURAL SHALL NOT BE CONSIDERED SEPARATELY FOR THE PURPOSES OF BIDDING THE STRUCTURAL WORK. CONTRACTOR SHALL REVIEW THE ENTIRE DRAWING PACKAGE IN ORDER TO DETERMINE THE SCOPE OF STRUCTURAL WORK INCLUDING NECCESSARY COORDINATION SHOWN IN OTHER CONSULTANT DRAWINGS.
- 16. NOTED SCALES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL NOT SCALE THE DRAWINGS FOR THE PURPOSE OF DETERMINING DIMENSIONAL INFORMATION.
- 17. ANY ALTERNATES ACCEPTED BY THE OWNER, GENERAL CONTRACTOR OF SUBCONTRACTOR SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE.
- 18. PRINCIPAL OPENINGS ARE INDICATED ON THE STRUCTURAL DRAWINGS. OTHER OPENINGS (SLEEVES, BLOCKOUTS, ETC.) ARE SHOWN IN THE ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR SHALL SUBMIT TO ARCHITECT AND ENGINEER A PLAN WITH ALL PROPOSED OPENINGS COORDINATED WITH ALL THE TRADES. ADDITIONAL REINFORCEMENT AND/OR STRUCTURAL MEMBERS MAY BE REQUIRED UPON REVIEW.

COORDINATION

- 1. ONLY LARGER SLEEVE OPENINGS AND FRAMED OPENINGS IN STRUCTURAL FRAMING COMPONENET MEMBERS ARE INDICATED ON THE STRUCTURAL DRAWINGS. HOWEVER, ALL SLEEVES, INSERTS AND OPENINGS, INCLUDING FRAMES AND/OR SLEEVES SHALL BE PROVIDED FOR PASSAGE, PROVISION AND/OR INCORPORATION OF THE WORK OF THE CONTRACT, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND ALIGNMENT, DIMENSIONS, POSITION, LOCATIONS, ELEVATIONS AND GRADES BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- 2. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR FLOOR ELEVATIONS, SLOPES, DRAINS AND LOCATION OF DEPRESSED AND ELEVATED FLOOR AREAS.
- 3. COMPABILITY OF THE STRUCTURE AND PROVISIONS FOR BUILDING EQUIPMENT WITH THE EQUIPMENT FOR WHICH THE STRUCTURE HAS BEEN DESIGNED EQUIPMENT AND FOR STRUCTURAL COMPONENTS. DIFFERENCES SHALL BE NOTED ON THE SUBMITTALS.
- 4. SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL ITEMS AND SUBMITTED FOR REVIEW BY THE ENGINEER. CONTRACT DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. ALL ITEMS DEVIATING FROM THE CONTRACT DRAWINGS OR FROM PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.
- 5. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS.
- BRACES, FALSEWORK, SUPPORTS AND ANCHORS FOR SAFETY LINES, CRIBBING. OR ANY OTHER TEMPORARY ELEMENTS REQUIRED FOR THE EXECUTION OF THE CONTRACT ARE NOT INCLUDED IN THESE DRAWINGS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY SUPPORTS SHALL NOT RESULT IN THE OVERSTRESS OR DAMAGE OF THE

CODES

- 1. BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE WITH CITY OF
- 2. STRUCTURAL CONCRETE: BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AMERICAN CONCRETE INSTITURE, ACI 318.
- 4. ASCE 7-05

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5. REFER TO THE ARCHITECTURAL, MECHANICAL ELECTRICAL AND PLUMBING BE CALLED TO THE ATTENTION OF THE ARCHITECT AND BE RESOLVED BEFORE

DIMENSIONS. WITH ARCHITECTURAL PLANS PRIOR TO PROJECT LAYOUT.

CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECCESSARY PRECAUTIONS

PLUMBING WORK. THIS WORK SHALL INCLUDE THE COORDINATION OF SIZES, AS REQUIRED TO SERVE THE INTENDED PURPOSE. OPENINGS NOT INDICATED ON THE STRUCTURAL DRAWINGS, BUT REQUIRED AS NOTED ABOVE, SHALL

SUPPORTED ON OR FROM STRUCTURAL COMPONENTS SHALL BE VERIFIED AS TO SIZE, DIMENSIONS, CLEARANCES, ACCESSIBILITY, WEIGHTS AND REACTION PRIOR TO SUBMISSION OF SHOP DRAWINGS AND DATA FOR EACH PIECE OF

6. THE DESIGN AND PROVISION OF ALL TEMPORARY SUPPORTS SUCH AS GUYS, ELEMENTS TO BE BRACED NOR ANY ELEMENTS USED AS BRACE SUPPORTS.

BROWNSVILLE, TEXAS AMENDMENTS.

3. STRUCTURAL STEEL: MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, NINITH EDITION.

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GENERAL NOTES

DESIGN CRITERIA

1. FRAMING DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2012.

WELDING

1. REFERENCES: AWS D1.1-86 - "STRUCTURAL WELDING CODE - STEEL"

AWS D1.3-81 - "STRUCTURAL WELDING CODE - SHEET STEEL" 2. ALL WELDING BY AWS QUALIFIED OPERATORS.

STRUCTURAL STEEL CONNECTIONS

1. WELDING SHALL CONFORM TO ANSI/AWS DI.I, LATEST EDITION. 2. BOLTS SHALL CONFORM TO ASTM A325. BOLTS SHALL BE DESIGNED USING VALUES FOR BEARING TYPE BOLTS WITH THREAD ALLOWED IN THE SHEAR PLANE.

- 3. ANCHOR BOLTS SHALL BE: ASTM F1554 GR. 36
- 4. STRUCTURAL STEEL CONNECTION NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF A REGISTERED ENGINEER LICENSED IN THE STATE OF TEXAS. SEALED CALCULATIONS FOR ALL CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SUBMITTED FOR THE ARCHITECT'S FILES.
- 5. BEAM CONNECTIONS SHALL BE DESIGNED AND DETAILED AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
- A. CONNECTION SHALL BE AISC TYPE 2 SIMPLE FRAMING CONNECTIONS. SHEAR TAB CONNECTIONS SHALL NOT BE USED.
- B. IN GENERAL, SHOP CONNECTIONS SHALL BE BOLTED OR WELDED AND FIELD CONNECTIONS SHALL BE BOLTED.
- C. WHERE INDICATED, CONNECTIONS SHALL BE DESIGNED FOR THE SCHEDULED SHEAR FORCE, THE SHEAR FORCE INDICATED ON THE DRAWINGS AS "V=", AND THE HORIZONTAL FORCE INDICATED AS
- D. IF NOT INDICATED ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED FOR 55 PERCENT OF THE TOTAL LOAD CAPACITY FOR THE BEAM SPAN SHOWN IN THE BEAM TABLES IN SECTION 2 OF THE AISC MANUAL, NINTH EDITION.
- E. THE MINIMUM NUMBER OF ROWS OF BOLTS SHALL BE 1/6 OF THE BEAM DEPTH WITH ANY FRACTION BE ROUNDED TO THE NEXT HIGHER NUMBER. F. BOLTS SHALL BE "SNUG TIGHT", U.N.O.
- G. SHORT SLOTTED HOLES SHALL BE PERMITTED PROVIDED WASHERS ARE INSTALLED IN ACCORDANCE WITH AISC REQUIREMENTS. WASHERS SHALL BE HARDENED WHERE A325 BOLTS ARE UTILIZED.
- 6. WIND BRACE CONNECTION SHALL BE DESIGNED AND DETAILED AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS: A. CONNECTIONS SHALL BE WELDED.
- B. CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR THE FORCES SHOWN ON THE DRAWINGS.
- C. IF FORCES ARE NOT INDICATED ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED TO DEVELOP THE FULL TENSILE CAPACITY OF THE MEMBERS.
- 7. FOR CONNECTIONS NOT SPECIFICALLY ADDRESSED BY THESE NOTES OR THE DRAWINGS, PROVIDE FILLET WELDS AT ALL CONTACT SURFACES SUFFICIENT TO DEVELOP THE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT
- 8. MOMENT CONNECTIONS INDICATED ON DRAWINGS SHALL BE WELDED TO DEVELOP THE FULL CAPACITY OF THE MEMBER.
- 9. ROOF EDGE ANGLES SHALL BE CONTINOUS AND SHALL BE SPLICED ONLY AT SUPPORTS. SPLICES SHALL BE BUTT WELDED TO DEVELOP FULL CAPACITY OF THE MEMBER.
- 10. FILLET WELDS WITH NO SIZE SPECIFIED SHALL BE 3/16" OR MINIMUM SIZE REQUIRED BY AISC, WICHEVER IS LARGER.

STRUCTURAL STEEL

TO BE WELDED OR BOLTED.

THE COST OF LABOR.

4. PAINT:

1. MATERIALS: A. STRUCTURAL STEEL: W SECTIONS ASTM- A572 FY= 50 KSI HSS SECTIONS ASTM- A500 GRADE B ALL OTHER SECTIONS ASTM- A36 HIGH STRENGTH BOLTS: ASTM A325 OR A490 ANCHOR BOLTS: ASTM A307 OR A36:

ELECTRODES: SERIES E70 STRUCTURAL PIPES: ASTM A53 OR A501, FY = 35 KSI EXPANSION BOLTS: HILTI "KWIK BOLTS" OR APPROVED EQUAL. 2. SPECIFICATIONS: WELDING PERSONNEL AND PROCEDURES ARE TO BE

QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION AND ERECTION TO BE GOVERNED BY A. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (JUNE 1, 1989).

B. AISC CODE OF STANDARD PRACTICE (SEPTEMBER 1, 1986). C. STRUCTURAL WELDING CODE, AWS D1.1-88 OF THE AMERICAN WELDING SOCIETY. D. SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (NOVEMBER 13, 1985). 3. CONNECTIONS:

A. CONNECTIONS TO BE DESIGNED BY THE FABRICATOR TO DEVELOP FULL STRENGTH OF MEMBER. FOLLOW INSTRUCTIONS ON DRAWINGS FOR GENERAL ARRANGEMENT OR PARTICULAR DETAILS. FIELD CONNECTIONS TO BE BOLTED. SHOP CONNECTIONS

B. FULL PENETRATION AND PARTIAL PENETRATION FIELD WELDS IN MATERIAL OVER 5/16 INCH THICK SHALL BE SUBJECT TO NON-DESTRUCTIVE TESTING (OTHER THAN VISUAL INSPECTION) BY AN INDEPENDENT LABORATORY. C. ALL BOLTS IN BRACED FRAMES AND BOLTS IN SHEAR CONNECTIONS USED IN CONJUNCTION WITH FULL PENETRATION FLANGE WELDS SHALL BE SLIP CRITICAL (FRICTION) TYPE.

A. DO NOT PAINT ANY STEEL WHICH WILL BE CONCEALED FROM VIEW. PAINT ALL VISIBLE STEEL GRAY. 5. GALVANIZING: ALL SHELF ANGLES, LINTELS IN EXTERIOR WALLS, AND ALL EXTERIOR STEEL EXPOSED TO THE ELEMENTS SHALL BE GALVANIZED.

6. MISCELLANEOUS: A. PROVIDE HOLES FOR OTHERS. IF OPENING IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.

B. STEEL SUPPORTING OR CONNECTED TO HVAC AND OTHER EQUIPMENT AND ROOF OPENINGS AS SHOWN ON THE DRAWINGS IS SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL RECONCILE EXACT SIZE AND LOCATION BEFORE PROCEEDING WITH HIS WORK.

C. GROUT UNDER BEARING PLATES, BASE PLATES, AND SETTING PLATES TO BE NON-SHRINKING TYPE. D. STEEL BELOW GRADE TO BE PROTECTED BY A MINIMUM OF 3 INCHES OF CONCRETE. E. PROVIDE 1/4 INCH THICK SETTING PLATES FOR ALL BEAMS BEARING ON

MASONRY WHICH DO NOT REQUIRE A BEARING PLATE. F. PROVIDE SHOP WELDED ANCHORS FOR ATTACHMENTS OF MASONRY. SPACING TO BE 16 INCHES ON COLUMNS AND BEAMS. G. PROVIDE HEAVY WASHER AT ALL ANCHOR BOLTS.

H. FINISH ENDS OF ALL COLUMNS, STIFFENERS AND ALL OTHER MEMBERS IN DIRECT BEARING. I. PROVIDE BOLT HOLES FOR JOISTS BOLTED TO BEAMS AND ATTACHMENT FOR JOINING EXTENDED JOIST BOTTOM CHORDS. MINIMUM BEAM BEARING ON MASONRY = 8 INCHES UNLESS NOTED OTHERWISE.

L. EMBEDMENT LENGTH OF EXPANSION BOLTS INTO SOLID MASONRY OR CONCRETE SHALL BE AS FOLLOWS: 1/2 INCH DIAMETER BOLTS --- 3 1/2 INCHES EMBEDMENT 3/4 INCH DIAMETER BOLTS --- 5 INCHES EMBEDMENT M. PROVIDE 8,000 LBS. OF RED IRON ALLOWANCE. ALLOWANCE SHALL INCLUDE

N. PROVIDE ADEQUATE AND APPROPRIATE STRUCTURAL STEEL FRAMING APPROVED BY THE ENGINEER, FOR THE SUPPORT AND MOUNTING OF MECHANICAL EQUIPMENT ESTING ON, OR SUSPENDED FROM, STEEL JOISTS, MAXIMUM WEIGHT TO BE HUNG OFF JOISTS BETWEEN "PANEL POINTS" (THE JUNCTURES OF CHORDS AND DIAGONAL WEB MEMBERS) IS 50 LBS. LOADS IN EXCESS OF 50 LBS. REQUIRED JOISTS TO BE MODIFIED OR STRENGTHENED TO CARRY SUCH LOADS.

O. STEEL STAIRS TO BE DESIGNED AND DETAILED FOR LL=100 PSF BY STEEL FABRICATOR UNDER DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS TO BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER. P. QUALITY ASSURANCE:

A) INSTALLER QUALIFICATIONS: A QUALIFIED INSTALLER SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH A MINIMUM 5 YEARS DOCUMENTED EXPERIENCE. B) FABRICATOR QUALIFICATIONS: A QUALIFIED FABRICATOR, SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH A MINIMUM OF 10 YEARS DOCUMENTED EXPERIENCE, THAT PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY STD. C) WELDING: QUALITY PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1, "STRUCTURAL WELDING CODE-STEEL."

Q. STRUCTURAL FRAMING CONNECTIONS SHALL BE SEATED COLUMN CAPS, CLIP ANGLES WEB PLATES AS SHOWN ON DETAILS. USE A325 HIGH STRENGTH BOLTS OR WELDS SUFFICIENT TO DEVELOP REACTION CAPACITY SHOWN IN AISC MANUAL (9TH EDITION) AS THE ALLOWABLE UNIFORM LOAD/SPAN DIVIDED BY TWO AS SHOWN IN THE (9TH EDITION) OR THE MAXIMUM TOTAL UNIFORM LOAD/SPAN DIVIDED BY TWO AS SHOWN IN TABLES 3-6 THROUGH 3-9 OF THE 13TH EDITION (ASD).

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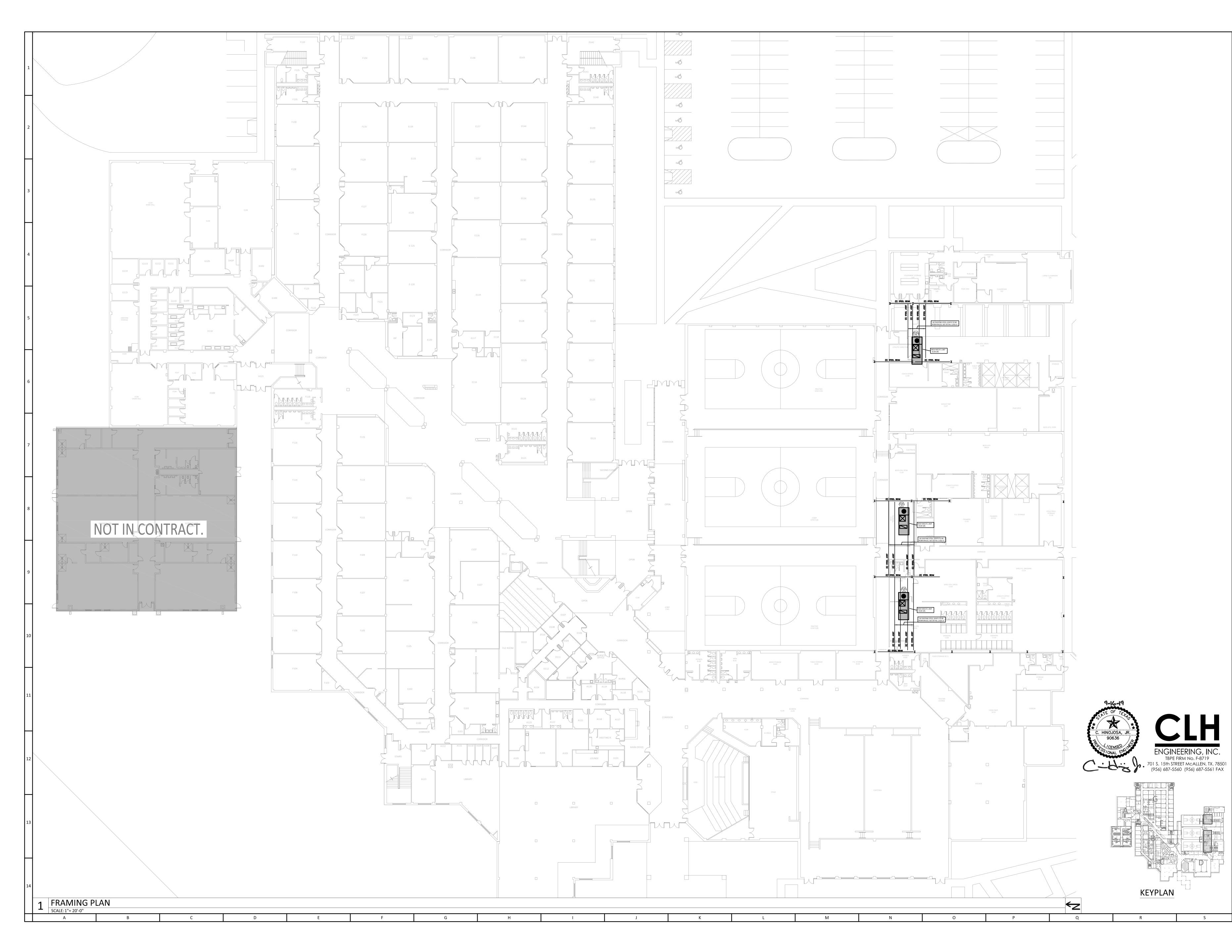
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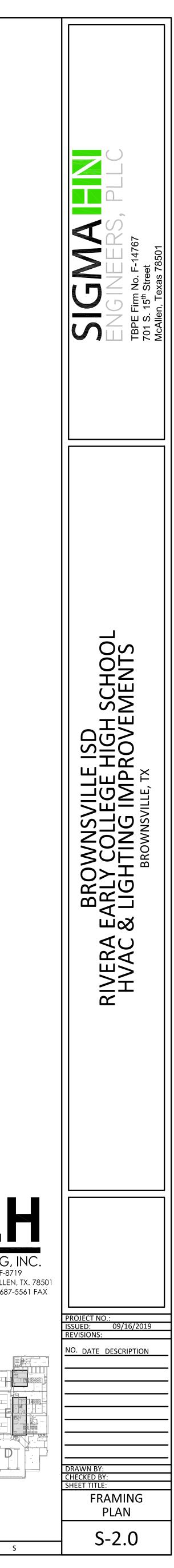


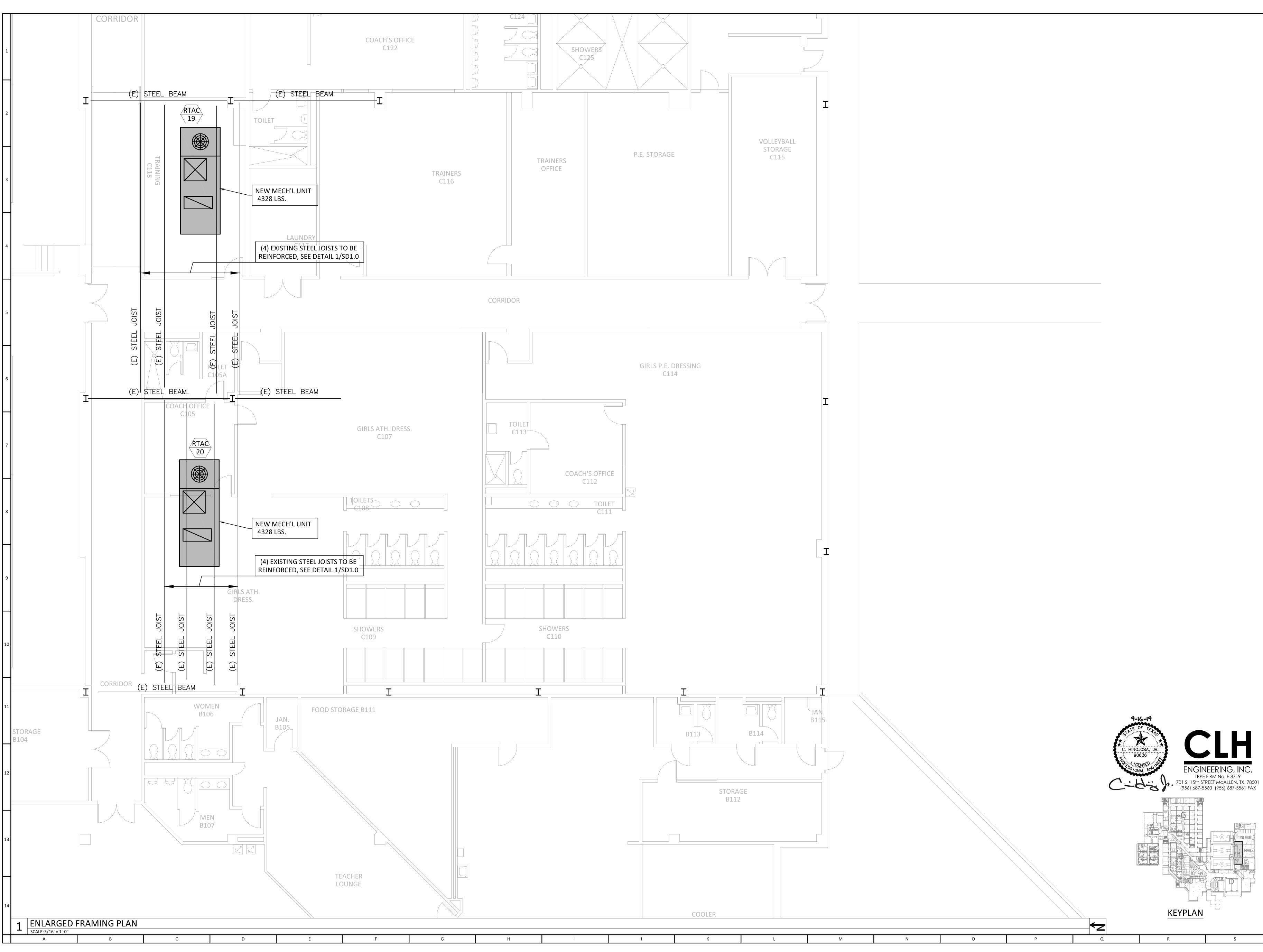
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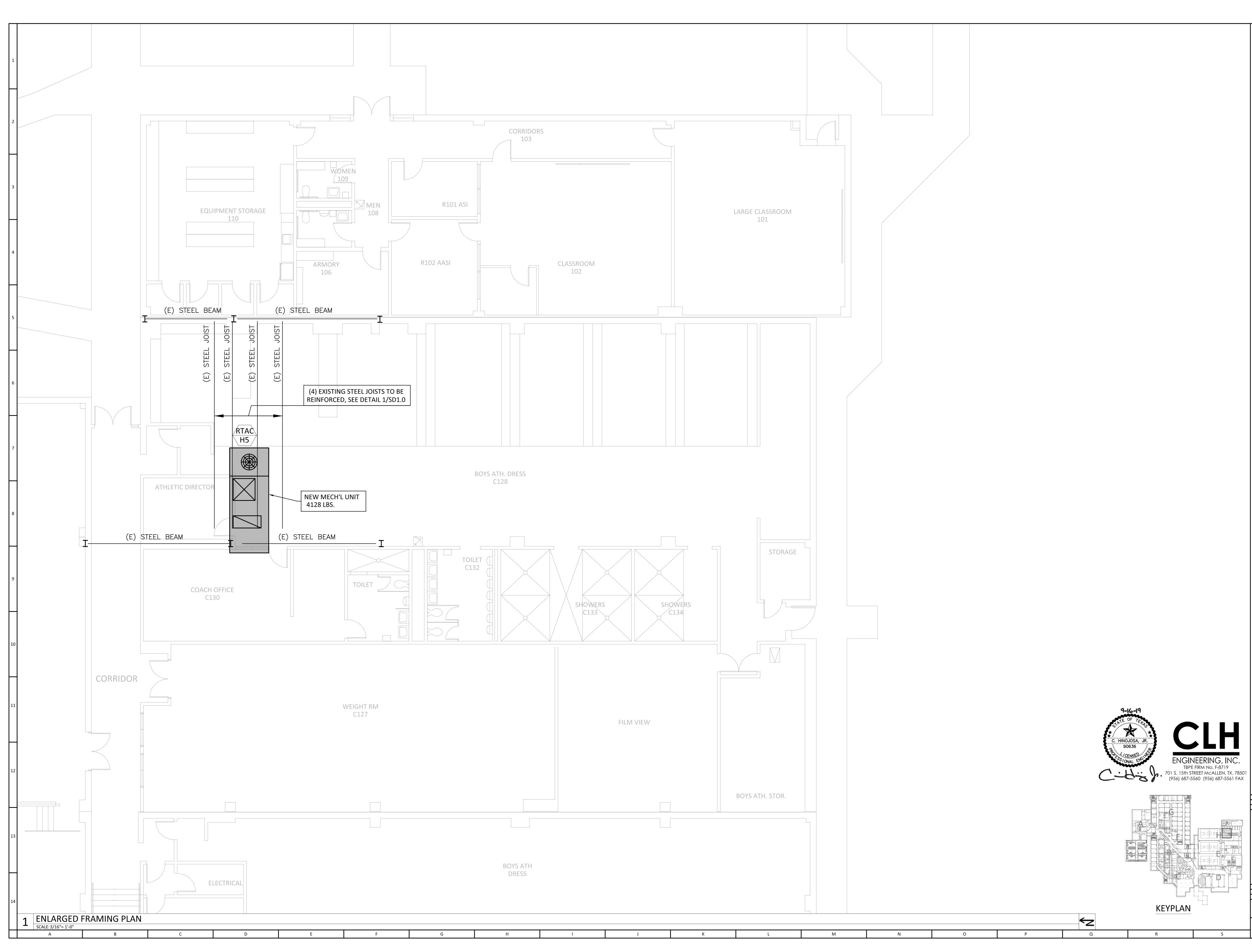




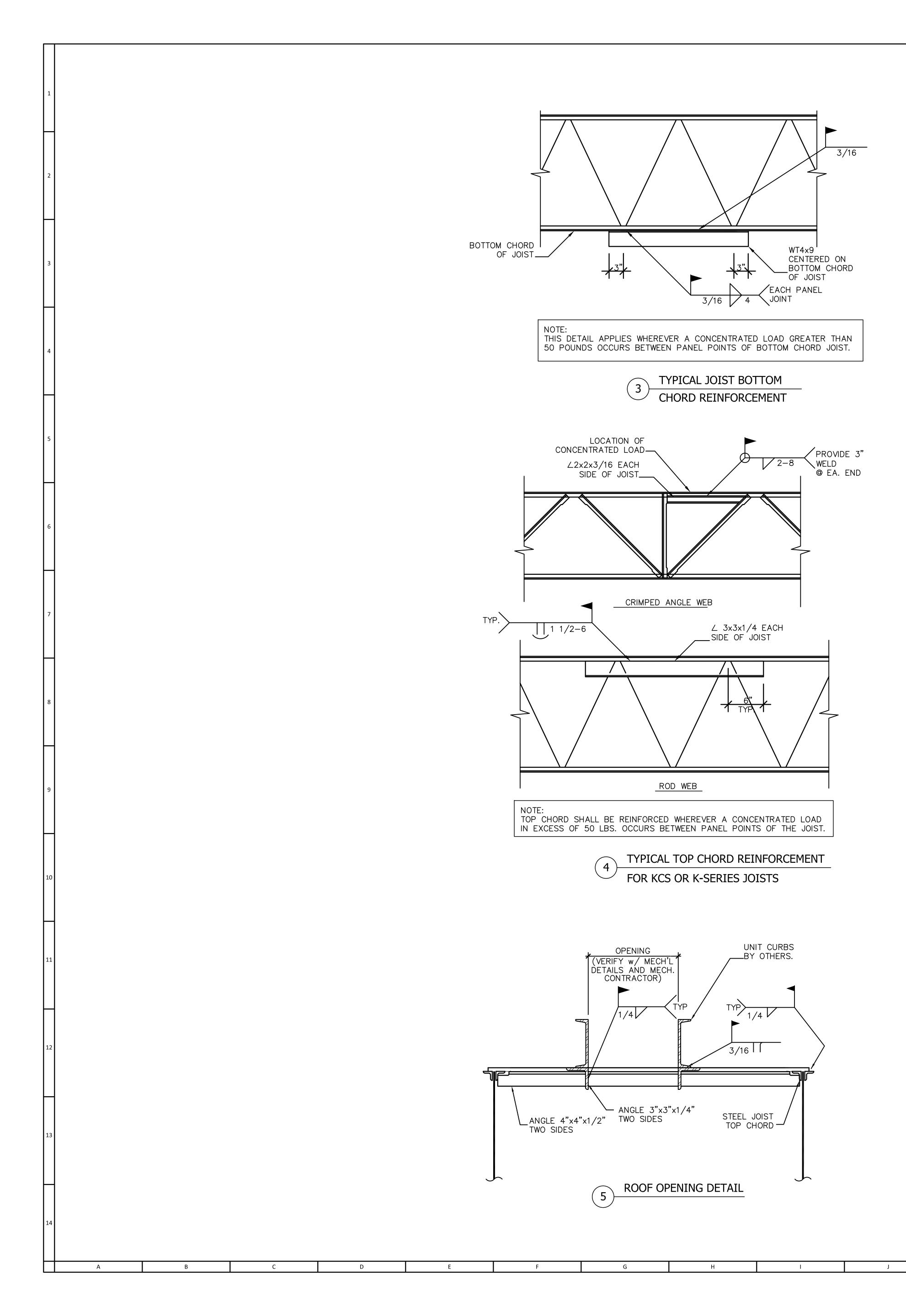


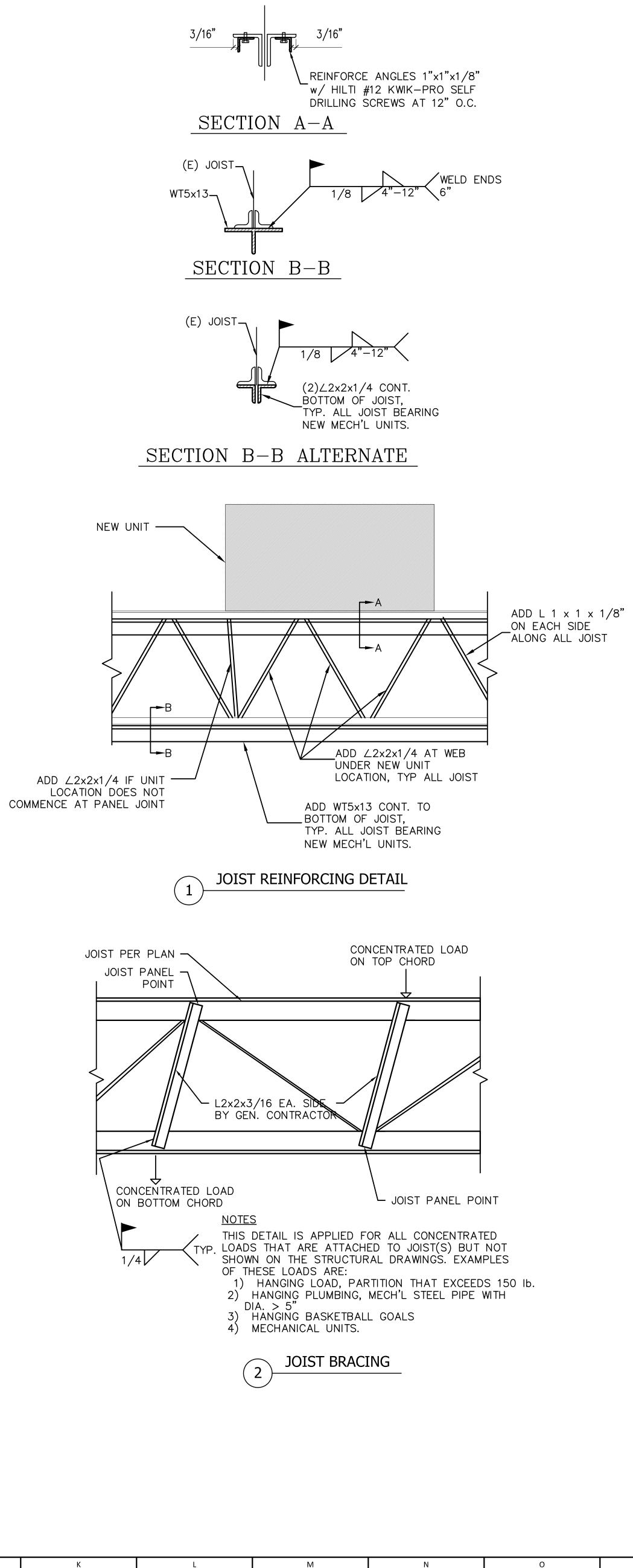


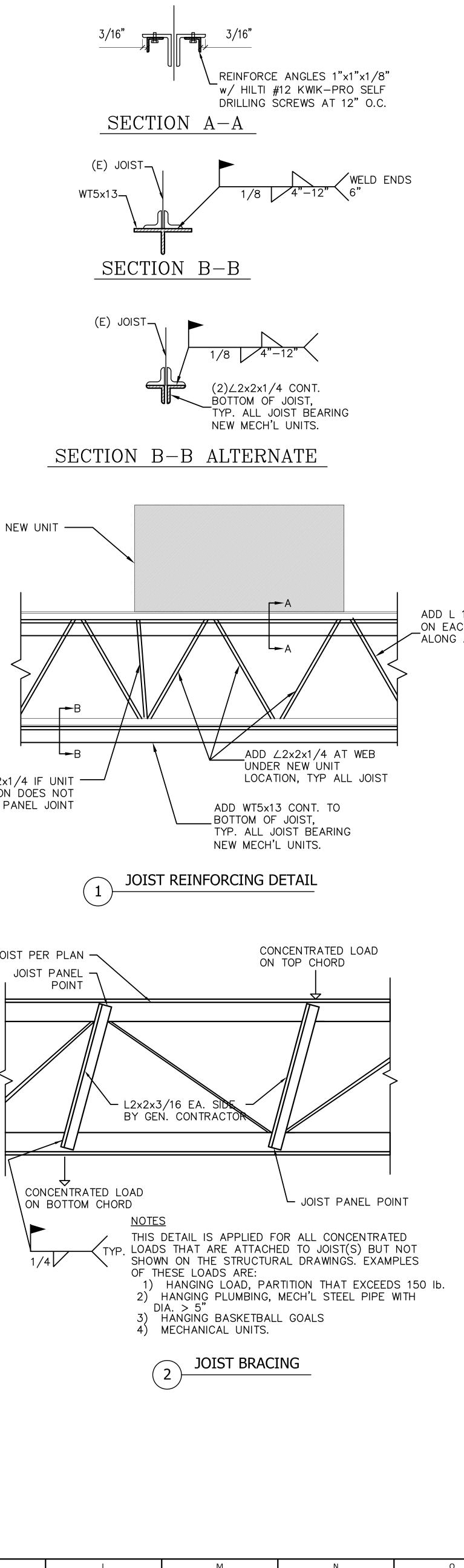


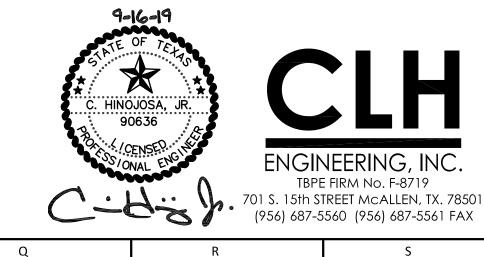












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