

STRUCTURAL NOTES

1000 GENERAL NOTES:

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. THESE DRAWINGS SHALL BE USED TO DETERMINE DIMENSIONS, EQUIPMENT WEIGHTS AND LOCATIONS, EMBEDDED ITEMS AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- NO STRUCTURAL MEMBER OR COMPONENT SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS INCURRED BY THE ENGINEER OF RECORD FOR REVIEW OF ANY SUCH DEVIATIONS.
- DO NOT SCALE DRAWINGS.
- THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEEDURE AND SEQUENCE. SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION, THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.
- DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE DRAWINGS CAN BE DETERMINED BY THE TITLE OF DETAIL. SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE REFERENCED AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER OF RECORD.
- THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCIES BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE STRUCTURAL ENGINEER'S OBLIGATIONS TO REVIEW SHOP DRAWINGS AND OTHER SUBMITTALS AND TO RETURN THEM IN A TIMELY MANNER ARE CONDITIONED UPON THE PRIOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS OR SUBMITTALS BY THE CONTRACTOR AS REQUIRED IN THE CONSTRUCTION CONTRACT AND THE CONTRACTOR'S SUBMITTAL OF THE SHOP DRAWINGS AND OTHER SUBMITTALS IN ACCORDANCE WITH A WRITTEN SCHEDULE DISTRIBUTED IN ADVANCE TO THE ENGINEER IDENTIFYING THE DATES FOR THE SUBMITTAL OF THE VARIOUS SHOP DRAWINGS AND SUBMITTALS.
- PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF TLC ENGINEERING FOR ARCHITECTURE IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSIDERED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK.
- ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXCEED LIFE SPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE OWNER. THIS PROGRAM SHALL INCLUDE ITEMS SUCH AS, BUT NOT LIMITED TO, PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
- STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OF STEEL STAIRS, HANDRAILS, CURTAIN WALL/WINDOW WALL SYSTEMS, COLD-FORMED STEEL FRAMING, OR OTHER SYSTEMS NOT SHOWN IN THE STRUCTURAL DOCUMENTS. SUCH SYSTEMS SHALL BE DESIGNED, FURNISHED, AND INSTALLED AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT DOCUMENTS.
- IN THE PROFESSIONAL OPINION OF TLC ENGINEERING FOR ARCHITECTURE, URAI CONTRACT DOCUMENTS FOR THIS PROJECT HAVE BEEN PREPARED IN ACCORDANCE WITH THE DESIGN CRITERIA AS SET FORTH IN THE FLORIDA BUILDING CODE, 2010 EDITION.
- NO PROVISIONS HAVE BEEN MADE FOR VERTICAL OR HORIZONTAL EXPANSION EXCEPT AS SHOWN ON CONTRACT DOCUMENTS.
- FINISH FLOOR ELEVATION (FIRST FLOOR) OF 100'-0" IS USED AS A REFERENCE ELEVATION. SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION.
- THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS AND USE OF CAD FILES BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF ORIGINAL SET OF SHOP DRAWINGS SIGNIFY HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
- IN THE EVENT THAT THE STRUCTURAL CONTRACTS' DRAWINGS AND SPECIFICATIONS CONFLICT ON INFORMATION, THE STRUCTURAL CONTRACT DRAWINGS SHALL SUPERSEDE THE SPECIFICATIONS.

1060 DESIGN LOADS:

- THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2010 EDITION, AND AS SUPPLEMENTED BY LOCAL AMENDMENTS.
2. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:
- | | |
|---|--------|
| 1. DEAD LOADS | |
| ROOF STRUCTURE | 15 PSF |
| ROOF STRUCTURE W/ LT. WTC. INSULATION | 25 PSF |
| ME/P LOADS | 5 PSF |
| CEILING | 5 PSF |
| STEEL STUDS W/ GYP. BOARD PARTITIONS | 10 PSF |
| 2. LIVE LOADS | |
| ROOF | 20 PSF |
| FLOOR (CLASSROOM) | 40 PSF |
| 3. WIND LOADS: PER FLORIDA BUILDING CODE, SECTION 1609. SEE WIND PRESSURE DIAGRAM FOR COMPONENTS AND CLADDING PRESSURES | |
| ULTIMATE DESIGN WIND SPEED, V_{ult} = 130 MPH (3 SEC. GUST) | |
| NOMINAL DESIGN WIND SPEED, V_{asd} = 101 MPH (3 SEC. GUST) | |
| RISK CATEGORY III | |
| EXPOSURE C | |
| IMPACT RESISTANT GLASS OR FBC APPROVED ALTERNATIVE IS NOT REQUIRED. | |

1330 SHOP DRAWING REVIEW:

- SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS.
- SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND MARKED "APPROVED" PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. NON-CONFORMING DRAWING SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
- SHOP DRAWING SUBMITTALS SHALL INCLUDE, AT A MINIMUM, ONE GOOD QUALITY REPRODUCIBLE AND THREE SETS OF BLUEPRINTS. ONE SET OF PRINTS MUST BE RETAINED BY THE ARCHITECT, ONE BY THE ARCHITECT, ONE BY THE LOCAL BUILDING DEPARTMENT (WHERE REQUIRED) AND THE CONTRACTOR SHALL MAKE PRINTS FROM THE REPRODUCIBLE AS REQUIRED FOR DISTRIBUTION.
- THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER OF RECORD.
- CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS SHALL BE CLEARLY NOTED ON THE LETTER OF RE-SUBMITTAL. ARCHITECT/ENGINEER OF RECORD REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL. CONTRACTOR IS RESPONSIBLE FOR COSTS CAUSED BY MULTIPLE RE-SUBMITTALS (MORE THAN ONE) AT ARCHITECT/ENGINEERS' CURRENT HOURLY RATES.

1331 SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:

- THE FOLLOWING SYSTEMS AND COMPONENTS AS A MINIMUM REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER:
 - LIGHT GAGE STEEL TRUSSES
 - OPEN WEB STEEL JOISTS
- SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND DRAWINGS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.
- SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
- SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED SET FOR THEIR RECORDS.
- DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS) AND REQUIRING NO ENGINEERING, DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
- SUBMITTALS FOR STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
- REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
 - THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
 - THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
 - THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS CONSIDERED THE SPECIFIED STRUCTURAL CRITERIA. NO DETAILED CHECK OF CALCULATIONS WILL BE MADE.
 - THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.
- SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED AND WILL BE RETURNED.

1333 SUBMITTALS

- ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
- THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
 - STRUCTURAL STEEL
 - REINFORCING STEEL
 - METAL ROOF DECK
 - LIGHT GAGE STEEL TRUSSES (*)
 - LIGHT GAGE/STEEL FRAMING
- CONCRETE MIX DESIGN SHALL MEET BOTH THE MINIMUM COMPRESSIVE STRENGTH AND MAXIMUM WATER/CEMENT RATIOS LISTED ABOVE.
- CONCRETE MIX DESIGN SHALL MEET BOTH THE MINIMUM COMPRESSIVE STRENGTH AND MAXIMUM WATER/CEMENT RATIOS LISTED ABOVE.
- CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.
- CONCRETE SHALL BE CONSTRUCTED WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE.
- CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.
- THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1 1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.
- SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE I-CLASS D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
- CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
- CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.
- CONDUITS, PIPES AND SLEEVES SHALL BE PLACED AND SPACED IN ACCORDANCE WITH ACI 318.
- CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.
- ALL COLUMNS AND BEAMS INTEGRATED IN CMU WALLS ARE 8" AND 12" NOMINAL AND 7'-8" AND 11'-8" ACTUAL DIMENSIONS.
- CONCRETE SLABS ON GRADE SHALL BE REINFORCED WITH MACRO-SYNTHETIC FIBERS AT A MINIMUM RATE OF 3.0 LBS/CY, OR AS RECOMMENDED BY THE FIBER MANUFACTURER FOR CONTROL OR TEMPERATURE OR SHRINKAGE/CRACKING, WHICHEVER IS GREATER.
- WHEN WATER-BASED ADHESIVE ARE BEING USED ON CONCRETE SURFACES, THE CONTRACTOR SHALL VERIFY THAT THE WATER CONTENT OF THE CONCRETE IS WITHIN THE ALLOWABLE RANGE BEFORE INSTALLATION.

1334 REQUEST FOR INTERPRETATION (RFI)

- RFI SHALL ORIGINATE WITH CONTRACTOR AND SHALL BE SUBMITTED IN THE FORM SPECIFIED WITHIN CONTRACT DOCUMENTS. RFI SHALL BE SUBMITTED IN A PROMPT MANNER AS TO AVOID DELAYS IN CONTRACTORS WORK.
- RFI SHALL BE SUBMITTED AS SPECIFIED WITHIN THE CONTRACT DOCUMENTS AND SHALL BE FORWARDED TO THE ENGINEER VIA THE ARCHITECT OR DIRECTLY TO THE ENGINEER BY THE CONTRACTOR WHEN APPROVED BY THE ARCHITECT.
- ENGINEER SHALL TAKE UP TO 5 BUSINESS DAYS TO REVIEW AND RETURN RFI'S. HOWEVER, THE ENGINEER WILL ATTEMPT TO EXPEDITE THE REVIEW OF ALL RFI'S WITHIN A REASONABLE TIME FRAME.
- RFI RESPONSES ARE NOT INTENDED TO AUTHORIZE ANY INCREASE IN CONSTRUCTION COST, SCHEDULE OR TIME EXTENSIONS, OR CONSTRUCTION IN CONFLICT WITH ANY APPLICABLE CODES OR SPECIFIED DESIGN STANDARDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGN TEAM IMMEDIATELY OF ANY PERCEIVED SCOPE, SCHEDULE, OR COST IMPACTS OR ADJUSTMENTS. IF CONTRACTOR REQUESTS ANY ADDITIONAL COST, INCREASE IN SCHEDULE OR ADJUSTMENT IN SCOPE, THE CONTRACTOR SHALL NOT PROCEED WITH ADDITIONAL WORK UNTIL APPROVED IN WRITING BY THE CONSTRUCTION ADMINISTRATOR.

2210 DEMOLITION NOTES:

- THE CONTRACTOR IS REQUIRED TO PROVIDE ALL TEMPORARY SCAFFOLDING, PLATFORMS, BARRICADES, RAILINGS, SCREENING, ETC. NECESSARY TO PROTECT EXISTING FACILITIES, STRUCTURES AND THE PUBLIC DURING DEMOLITION AND ERECTION OF THE NEW CONSTRUCTION, AS WELL AS FOR JOB SAFETY. CONSTRUCTION AND DEMOLITION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS TO MINIMIZE VIBRATION, NOISE, DUST AND DEBRIS IN ALL AREAS ADJACENT TO AREAS OF DEMOLITION.
- THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE OWNER FOR THE TEMPORARY SUSPENSION OF USE OF ANY FACILITY OR PORTION THEREOF, AND THE ASSOCIATED BARRICADING REQUIREMENTS WITHIN A MINIMUM OF 7 DAYS PRIOR TO COMMENCING WORK.
 - THE CONTRACTOR IS REQUIRED TO PERFORM HIS WORK IN A MANNER, WHICH WILL NOT CONFLICT WITH ANY OPERATION, WHICH IS TO REMAIN FUNCTIONAL DURING THE COURSE OF THE PROJECT, UNTIL SUCH OPERATION IS SCHEDULED TO BE SHUT DOWN.
 - THE CONTRACTOR IS REQUIRED TO COORDINATE WITH OWNER FOR THE TEMPORARY SUSPENSION OF USE OF ANY UTILITY SYSTEM, A MINIMUM OF 3 DAYS PRIOR TO COMMENCING WORK.
 - AT ALL LOCATIONS WHERE NEW CONSTRUCTION WILL INTERFACE WITH EXISTING ELEMENTS, CUT THROUGH EXISTING STRUCTURE IN STRAIGHT AND TRUE LINES TO INSURE A NEAT INTERFACE.
 - AT ALL LOCATIONS WHERE THE DEMOLITION OF A CONCRETE MEMBER LEAVES THE ENDS OF REINFORCING STEEL EXPOSED, PROVIDE THE FOLLOWING:
 - CHIP CONCRETE FROM AROUND THE STEEL TO A DEPTH OF 1".
 - CUT OFF REINFORCING STEEL, NOT LESS THAN 3/4" BELOW THE CONCRETE SURFACE.
 - FILL THE CAVITY FLUSH WITH A HIGH MODULUS GEL EPOXY. SEE SPECIFICATION FOR ACCEPTED MANUFACTURERS.
 - BEFORE DEMOLISHING ANY STRUCTURAL ELEMENT, INSTALL ALL REQUIRED TEMPORARY AND/OR PERMANENT BRACING AND SUPPORTS.
 - PROVIDE TEMPORARY CLOSURE OF ALL ROOF FASCIA, WALL AND OTHER OPENINGS TO PROTECT BUILDING FROM EXPOSURE TO UNDESIRABLE ELEMENTS UNTIL NEW CONSTRUCTION IS WEATHERPROOFED, AT WHICH TIME SUCH TEMPORARY CONSTRUCTION SHALL BE REMOVED. ALL TEMPORARY EXTERIOR WALLS THAT ARE SUBJECT TO WIND LOADS ARE TO BE DESIGNED BY A DELEGATED ENGINEER.
 - UPON COMPLETION OF NEW CONSTRUCTION UNDER EACH PHASE, ALL DEMOLISHED AREAS SHALL BE RESTORED TO ACCEPTABLE AVAILABILITY ACCORDING TO THE CONTRACT DOCUMENTS AS DETERMINED BY THE A/E.
 - REMOVE COMPLETELY FROM THE SITE AND LEGALLY DISPOSE ALL DEBRIS GENERATED BY THE DEMOLITION WORK AS THE WORK PROGRESSES. STOCKPILING OF DEBRIS AND BURNING OF DEBRIS ON THE PREMISES IS STRICTLY PROHIBITED.

2220 EXISTING STRUCTURE:

- INFORMATION SHOWN FOR THE EXISTING STRUCTURE ON THESE DRAWINGS WAS TAKEN FROM FIELD OBSERVATIONS BY TLC AND RZK PERSONNEL, AND THE ORIGINAL CONSTRUCTION DRAWINGS AS PREPARED BY: CLEMONS, RUTHERFORD AND ASSOCIATES (ARCHITECT) AND NORMAN, HOUGH, WILKIE AND LANE ENGINEERING, INC (STRUCTURAL ENGINEER) ENTITLED: SUWANNEE HIGH SCHOOL
- DATED: 06/09/93
- WORK SHOWN ON THESE DRAWINGS ASSUMES THAT THE ORIGINAL CONSTRUCTION WAS PERFORMED IN ACCORDANCE WITH THE ABOVE INDICATED ORIGINAL DRAWINGS INCLUDING (BUT NOT LIMITED TO) DIMENSIONS, ELEVATIONS, MEMBER SIZES, MATERIALS, DETAILS, ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF THE INFORMATION SHOWN ON THE STRUCTURE AND TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.

2300 FOUNDATIONS - W/O SOIL REPORTS:

- IN THE ABSENCE OF ANY GEOTECHNICAL RECOMMENDATIONS, THE FOUNDATIONS ARE DESIGNED FOR AN ANTICIPATED ALLOWABLE SOIL BEARING OF 2000 PSF ON COMPACTED FILL, FOR PRELIMINARY PRICING PURPOSES ONLY, BEFORE CONSTRUCTION COMMENCES. SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY.
- ADDITIONAL INFORMATION AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS, ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.
- REGARDLESS OF WHETHER OR NOT A GEOTECHNICAL INVESTIGATION IS PERFORMED, NO WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY TLC FOR THE PERFORMANCE OF THE FOUNDATION.
- AT A MINIMUM, SITE PREPARATION WORK SHALL INCLUDE:
 - STRIPPING AND GRUBBING OF THE BUILDING FOOTPRINT PLUS A MARGON OF 5 FEET AROUND THE BUILDING, REMOVING ALL ORGANIC MATERIALS.
 - PROOF ROLLING THE BUILDING SITE TO LOCATE ANY UNFORESEEN SOFT AREAS. ANY SOFT AREAS SHALL BE EXCAVATED AND REPLACED WITH CLEAN FILL. A DENSITY OF AT LEAST 95% FOR A DEPTH OF 2 FEET IS REQUIRED UNDER THE BUILDING FOOTPRINT.
 - ALL FILL SHALL BE CLEAN SAND AND FREE OF ORGANIC MATERIALS. COMPACT FILL IN 12 INCH (UNCOMPACTED THICKNESS) LIFTS TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE.
 - EXCAVATIONS FOR FOUNDATIONS SHALL BE COMPACTED TO 95% FOR A DEPTH OF AT LEAST 2 FEET BELOW THE BOTTOM OF THE FOUNDATION.
 - DEWATERING MAY BE REQUIRED TO ACHIEVE THE REQUIRED COMPACTION VALUES, AND IF USED, SHOULD DRAW DOWN THE WATER LEVEL TO AT LEAST 2 FEET BELOW THE BOTTOM OF THE EXCAVATION.
- SLABS ON GRADE SHALL BE PLACED OVER A 15 MIL. CLASS "A" VAPOR RETARDER. VAPOR RETARDER SHALL BE LAPPED A MINIMUM OF 6", OR AS RECOMMENDED BY THE MANUFACTURER (WHICHEVER IS GREATER) AND TAPED AT ALL JOINTS. ALL PUNCTURES IN THE VAPOR RETARDER SHALL BE REPAIRED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ALL PENETRATIONS THROUGH THE VAPOR RETARDER (COLUMNS, PLUMBING, CONDUITS, ETC) SHALL BE SEALED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. VAPOR RETARDER SHALL BE CONTINUOUS UNDER WALL FOUNDATIONS OR SEALED TO EXTERIOR WALLS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

3302 CONCRETE:

- SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

	STRENGTH	SLUMP	AGGREGATE	W/C RATIO
A. MAX COMPRESSIVE				
FOUNDATIONS	3000 PSI	4-6"	1"	0.50
SLABS ON GRADE	4000 PSI	4-6"	3/4"	0.48
- CONCRETE MIXES SHALL MEET BOTH THE MINIMUM COMPRESSIVE STRENGTH AND MAXIMUM WATER/CEMENT RATIOS LISTED ABOVE.
- CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.
- CONCRETE SHALL BE CONSTRUCTED WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE.
- CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.
- THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1 1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.
- SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE I-CLASS D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
- CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
- CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.
- CONDUITS, PIPES AND SLEEVES SHALL BE PLACED AND SPACED IN ACCORDANCE WITH ACI 318.
- CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.
- ALL COLUMNS AND BEAMS INTEGRATED IN CMU WALLS ARE 8" AND 12" NOMINAL AND 7'-8" AND 11'-8" ACTUAL DIMENSIONS.
- CONCRETE SLABS ON GRADE SHALL BE REINFORCED WITH MACRO-SYNTHETIC FIBERS AT A MINIMUM RATE OF 3.0 LBS/CY, OR AS RECOMMENDED BY THE FIBER MANUFACTURER FOR CONTROL OR TEMPERATURE OR SHRINKAGE/CRACKING, WHICHEVER IS GREATER.
- WHEN WATER-BASED ADHESIVE ARE BEING USED ON CONCRETE SURFACES, THE CONTRACTOR SHALL VERIFY THAT THE WATER CONTENT OF THE CONCRETE IS WITHIN THE ALLOWABLE RANGE BEFORE INSTALLATION.

3310 REINFORCING STEEL:

- SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
- PROVIDE CONCRETE COVER OVER PRIMARY REINFORCEMENT, TIES, AND STIRRUPS, AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION AND CONDITION	MINIMUM COVER
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	ALL BARS 3"
B. CONCRETE EXPOSED TO EARTH OR WEATHER	#6 OR GREATER 2"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	#5 OR SMALLER 1.5"
1. SLABS, WALLS, AND JOISTS	#11 OR SMALLER 3/4"
2. BEAMS AND COLUMNS	ALL BARS 1.5"
- SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.
- PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS OF ALL TOP BARS.
- WHERE REINFORCING IS SHOWN CONTINUOUS, SPLICE BOTTOM BARS OVER SUPPORTS AND TOP BARS AT CENTER OF SPAN. ALL OTHER LAP SPLICES SHALL BE IN ACCORDANCE WITH SPLICE TABLES AND DETAILS SHOWN ON DRAWINGS.
- PROVIDE DOWELS INTO FOOTINGS, PIPE CAPS, SUPPORT BEAMS, ETC. TO MATCH VERTICAL BARS WITH CLASS B TENSION LAP SPLICES, U.N.O.
- LENGTH OF LAP SPLICES AND BAR EMBEDMENT SHALL BE AS SHOWN IN TABLE, UNLESS OTHERWISE NOTED:

	BAR SIZE	3000 PSI	4000 PSI	5000 PSI
T < 12"	#6 OR LESS	57db	49db	44db
	#7 OR MORE	71db	65db	59db
	#8 OR MORE	81db	75db	69db
T > 12"	#6 OR LESS	74db	65db	57db
	#7 OR MORE	81db	79db	72db
	#8 OR MORE	91db	81db	74db

WHERE "T" IS DEPTH OF CONCRETE UNDER BARS AND "db" IS BAR DIAMETER.

UTILIZE CLASS "B" SPLICE FOR ALL SPLICES, U.N.O. ON PLANS OR DETAILS.

- AT CHANGES IN DIRECTION OF CONCRETE WALLS AND THE BEAMS, PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL STEEL.

3400 CONCRETE TESTING:

- AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:
 - ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE"
 - ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:

2 AT 7 DAYS
2 AT 28 DAYS
- ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28-DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

3601 CHEMICAL (ADHESIVE) ANCHORS:

- SHALL BE A TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS HILTI HIT HY150, HILTI RE500, OR SIMPSON SET ADHESIVE SYSTEM, OR ENGINEER APPROVED SUBSTITUTE.
- EPOXY TYPES AND BRANDS VARY IN THEIR BOND STRENGTH AND SUITABILITY OF USE, DEPENDING ON TYPE OF LOADING, ANCHOR SPACING, ETC. WHEN A PARTICULAR TYPE OF EPOXY IS SPECIFIED IN THESE DRAWINGS, A UNIQUE CALCULATION HAS BEEN MADE BASED ON THE PROPERTIES OF THAT SPECIFIC TYPE OF EPOXY FOR THE SPECIFIC CONDITION SHOWN IN THE DETAIL. SUBSTITUTION OF EPOXY TYPE IS NOT ALLOWED WHERE DETAIL SPECIFIES ONLY ONE TYPE OF EPOXY, WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD. NOT ALL EPOXY BRANDS OR TYPES WILL BE ALLOWED AS SUBSTITUTES.
- SUBSTITUTION OF EPOXIES IN ONE CONDITION SHALL NOT BE CONSTRUED AS APPROVAL TO MAKE SIMILAR SUBSTITUTION OF EPOXIES IN OTHER DIFFERING CONDITIONS. EACH SUBSTITUTION MUST RECEIVE PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD.
- INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL HOLE ANCHORS, SUBSTITUTIONS ARE FULLY COMPLETED BY THE INSTALLERS PRIOR TO INJECTING EPOXY INTO THE HOLES.
- NO LOAD SHALL BE APPLIED TO THE EPOXY ANCHORS UNTIL THE EPOXY HAS FULLY CURED AND HAS ACHIEVED ITS SPECIFIED STRENGTH.
- CLEARANCE SHALL BE MAINTAINED TO THE ENGINEER'S REQUIREMENTS. IT IS IMPERATIVE THAT ANY EXCESS EPOXY IS CLEANED UP FROM AROUND THE ANCHOR ROD, SO THAT IT DOES NOT INTERFERE WITH ADJUSTABILITY OF ANCHOR ROD IN SLOTTED HOLE.

3602 MECHANICAL ANCHORS:

- SHALL BE EITHER HEAVY DUTY CONCRETE SCREW ANCHOR (SUCH AS POWERS WEDGE-BOLT, SIMPSON TITEN HD, OR HILTI HUS-H) OR WEDGE TYPE ANCHOR (SUCH AS HILTI HIT CH3 AS POWERS POWER-STUD, SIMPSON WEDGE-ALL, OR HILTI KWIK BOLT 3).
- TYPE OF ANCHOR SHALL BE AS SPECIFIED ON THE DRAWINGS, WHILE BRAND AND MODEL OF ANCHOR MAY BE SELECTED FROM THE ABOVE LISTED ALTERNATIVES. SUBSTITUTION OF ANCHORS SHALL BE APPROVED BY THE ENGINEER FOR REVIEW AND APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE.
- IN SOME CASES OF CRITICAL LOADING OR GEOMETRIC CONDITIONS, ONLY SPECIFIC ANCHORS WILL BE ALLOWED, AS NOTED ON THE DRAWINGS. IN THESE CASES, THE SPECIFIED BRAND AND MODEL OF ANCHOR MUST BE USED.
- INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.

4810 MASONRY WALLS:

- ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530/ASCE 5/TMS 402 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1/ASCE 6/TMS 602 "SPECIFICATION FOR MASONRY STRUCTURES", LATEST EDITION.
- MASONRY UNITS SHALL MEET ASTM C-90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 PSI ON THE NET AREA (f'm = 1500 PSI). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C-270.
- GROUT JOINTS SHALL BE 3000 PSI MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476 AND HAVE A SLUMP BETWEEN 8" AND 11" WITH WATER CM RATIO OF 0.55 MAXIMUM AND WITH 3/8" MAXIMUM AGGREGATE.
- PROVIDE HOOKED DOWELS IN FOUNDATIONS FOR VERTICAL REINFORCING ABOVE. LAP SPLICES TO BE 48 BAR DIAMETERS (U.N.O.).
- BLOCK CELLS SHALL BE FULL FILLED WITH VERTICAL REINFORCING BARS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS AND AS SHOWN ON THE DRAWINGS.
- DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW. UNLESS NOTED OTHERWISE.
- USE METAL LATH, MORTAR OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA AS REQUIRED.
- MASONRY SHALL BE LAID IN RUNNING BOND PATTERN UNLESS NOTED OTHERWISE. AT FILLED CELLS LAY UNITS WITH FILLED JOINTS AROUND CELLS.
- PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. LADDER TYPE IS RECOMMENDED WITH REINFORCED FILLED CELLS. PROVIDE PREFABRICATED "TEE" OR CORNER SECTIONS AT WALL INTERSECTIONS.
- CONTROL JOINTS SHALL BE CONSTRUCTED IN CONCRETE MASONRY CONSTRUCTION AT A MAXIMUM HORIZONTAL SPACING BETWEEN JOINTS OF 25'-0" AND NOT MORE THAN 126" FROM CORNERS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. CONSTRUCT INTERIOR CONTROL JOINTS AT A MAXIMUM HORIZONTAL SPACING OF 32'-0" OR 16'-0" FROM CORNERS. NO JOINTS SHALL BE LOCATED WITHIN 2'-0" OF STEEL BEAM BEARINGS. HORIZONTAL WALL REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINTS. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS.
- SUBMIT GROUT MIX DESIGNS FOR REVIEW PRIOR TO USE. MIX NUMBER OR OTHER POSITIVE IDENTIFICATION SHALL UNIQUELY IDENTIFY MIX.
- USE OF SUPERPLASTICIZER IS PROHIBITED.
- CELLS TO BE GROUT FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL GROUT PLACEMENT.
- CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF CELLS TO BE GROUT FILLED IN EACH POUR IN EXCESS OF 5 FEET IN HEIGHT. AFTER INSPECTION AND BEFORE GROUTING, THE REBAR SHALL BE TIED AT THE CLEANOUTS AND THE CLEANOUTS AND SHALL BE SEALED.
- ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS.
- VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS.
- CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. SAMPLE AND TEST GROUT PER ASTM C1019.
- GROUT SHALL BE POURED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. GROUT SHALL BE CONSOLIDATED IMMEDIATELY AFTER PLACING BY VIBRATING RODS AND RECONSOLIDATED LATER BY VIBRATING BEFORE PLASTICITY IS LOST.
- WHEN TOTAL GROUT POUR EXCEEDS 5 FEET IN HEIGHT, (HIGH LIFT GROUTING), THE GROUT SHALL BE PLACED IN 4-FOOT LIFTS WITH A MINIMUM OF A 30 MINUTE DELAY BETWEEN LIFTS. MINIMUM CELL DIMENSION SHALL BE IN ACCORDANCE WITH TABLE 5 OF ACI 530.1 (3' X 3' FOR COARSE GROUT, 12 FT. MAXIMUM POUR HEIGHT).
- WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE MADE BY STOPPING THE POUR OF GROUT NOT LESS THAN 1-1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.
- WHERE CONCRETE BEAMS ARE INSTALLED IN CONCRETE MASONRY WALL, SUPPORT CONCRETE WITH 6" SIDE CONTINUOUS STRIPS OF 1/8 SQUARE MESH SOFFIT SCREENING OR FUR-O-STOP OF EQUAL CENTERED OVER BLOCK WORK. USE OF ROOFING FELT STRIPS WILL NOT BE PERMITTED.
- PROVIDE DOVETAIL ANCHORS AT 16" C/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.

4814 TIE BEAMS:

- BEAMS WITH THE PREFIX "TB" SHALL BE OF CONCRETE, POURED AFTER THE MASONRY WALLS BELOW ARE IN PLACE.
- CONCRETE SHALL BE CONTINUOUS THROUGH THE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS.
- USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH ACI 530.1 (SOLID METAL OR FELT CAVITY CAPS ARE PROHIBITED).

5120 STRUCTURAL STEEL:

- STEEL WORK SHALL BE NEW AND CONFORM TO THE ANSI/AISC 360-05 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
- MATERIAL SHALL BE IN ACCORDANCE WITH THE FOLLOWING, EXCEPT AS NOTED:

WIDE FLANGE SHAPES	ASTM A992 (Fy=50 KSI)
S AND M SHAPES	ASTM A36 (Fy=36 KSI)
HP SHAPES	ASTM A572 (Fy=50 KSI)
ANGLES, CHANNELS AND PLATES	ASTM A36 (Fy=36 KSI)
PIPE	ASTM A53, GRADE B (Fy=35 KSI)
RECTANGULAR HSS	ASTM A500, GRADE B (Fy=46 KSI)
ROUND HSS	ASTM A500, GRADE B (Fy=42 KSI)
HIGH STRENGTH BOLTS	ASTM A325 OR A490
TWIST-OFF TENSION CONTROL BOLTS	ASTM F1582
THREADED RODS	ASTM A36 (Fy=36 KSI)
HEAVY HEX NUTS	ASTM A563
HARDENED STEEL WASHERS	ASTM F436
ANCHOR RODS	ASTM F1554 GR. 36 (Fy=36 KSI)
SHEAR STUD CONNECTORS	ASTM A108 (F6=65 KSI)
- CONNECTIONS:
- BOLTS SHALL BE HIGH-STRENGTH, BEARING TYPE IN SNUG TIGHT CONDITION, U.N.O. TIGHTEN BY AN AISI APPROVED METHOD.
- WELDING ELECTRODES SHALL BE PER AWS D1.1. RETURN FILLET WELDS FOR FRAMED CONNECTIONS 1/2" AT EACH END.
- FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS NOTED OTHERWISE.
- DETAIL IS PROVIDED. DETAIL CONNECTION TO DEVELOP THE FULL TENSION CAPACITY OF THE DIAGONAL BRACING MEMBER.
- DETAIL MOMENT CONNECTIONS AS SHOWN IN THE DETAILS. IF NO DETAIL IS PROVIDED, DETAIL MOMENT CONNECTION USING FULL PENETRATION WELDS AT BEAM FLANGES.
- HIGH TENSION BOLTS IN BEARING CONDITION SUPPORTING SIMPLE SPAN BEAMS NOT SUBJECT TO AXIAL LOADS MAY BE INSTALLED TO "SNUG TIGHT" CONDITION IF NORMAL, OR SHORT SLOTTED HOLES ARE USED. THE ENGINEER OF RECORD WILL BE THE ULTIMATE AUTHORITY IN THE USE OF "SNUG TIGHT" BOLTS. IF LONG SLOTTED OR OVERSIZED HOLES ARE USED, BOLTS MUST BE FULLY PRETENSIONED AND SLIP CRITICAL. PROPER SURFACE PREPARATION IS REQUIRED FOR SLIP CRITICAL BOLTS, INCLUDING OMISSION OF PRIMER OR FIRE PROOFING, AS APPROPRIATE.
- BOLTS SHARING LOAD WITH WELDS IN A CONNECTION SHALL BE FULLY PRETENSIONED AND SLIP CRITICAL.
- WHERE FULLY PRETENSIONED OR SLIP CRITICAL BOLTS ARE REQUIRED, TIGHTENING SHALL BE ACHIEVED USING EITHER TWIST-OFF TENSION CONTROL BOLTS OR DIRECT TENSION INDICATING WASHERS.
- ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR CONDITIONS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND ALL FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A15

STRUCTURAL NOTES (CONTINUED)

5210 STEEL JOISTS:

1. SHALL BE THE SIZE AND SPACING AS SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE DESIGNED, FABRICATED, INSTALLED AND BRIDGED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS, LATEST EDITION.

2. ENDS OF BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED THERETO AT TOP AND BOTTOM CHORDS. MINIMUM JOIST BRIDGING TERMINATION CONNECTIONS TO MASONRY SHALL BE 1/2"x1/4"x3" LONG WITH (1) 1/2" DIAMETER ANCHOR BOLT OR 1/4"x4x1/4x0'-3" WITH (1) 1/2"x5" ANCHOR BOLT TO CONCRETE.

3. BRIDGING SHALL BE WELDED OR BOLTED AT POINTS OF CONTACT. WELD SHALL NOT DAMAGE THE JOIST. CROSS BRIDGING SHALL BE WELDED OR BOLTED AT ITS CENTER POINT. BRIDGING SHALL BE STRAIGHT FROM JOIST TO JOIST. CHANGES IN SLOPE OR DIRECTION SHALL BE MADE AT A JOIST, NOT BETWEEN JOISTS.

4. LH-SERIES JOISTS SHALL BEAR A MINIMUM OF 4" ON STEEL BEAMS AND 6" ON CONCRETE BEAMS. JOIST BEARING PLATES TO BE MINIMUM 3/8" X 6" X 9" WITH (2) 1/2" DIAMETER X 5" SHEAR STUD CONNECTORS. BEARING PLATES FOR BACK TO BACK SINGLE JOISTS SHALL BE MINIMUM 3/8" X 9" X 11'-5/8" WITH (4) 1/2" DIAMETER X 5" SHEAR STUD CONNECTORS. BEARING PLATES SHALL BE CAST INTEGRALLY WITH THE CONCRETE BEAM. WELD JOISTS TO BEARING PLATE WITH A MINIMUM OF (2) 1/4" FILLET WELDS, UNLESS NOTED OTHERWISE. BACK-TO-BACK JOISTS SHALL BE OFFSET IF CONCRETE BEAM IS LESS THAN 12" NOMINAL WIDTH OR STEEL BEAM IS LESS THAN 8" WIDE.

5. HANGERS FOR SUPPORT OF EQUIPMENT, OR MEMBERS SUPPORTING SUCH HANGERS, SHALL BE LOCATED AT PANEL POINTS OF JOISTS, AND SHALL BE HUNG FROM THE TOP CHORD OF THE JOIST.

6. ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE AS SHOWN ON DRAWINGS.

7. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWING SUBMITTAL SHALL INCLUDE LAYOUT, COMPONENT DESIGNATION, BRIDGING, AND PERTINENT SECTIONS AND DETAILS.

8. SUBMITTALS FOR JOISTS, OTHER THAN STANDARD SJI CATALOG SELECTIONS WHICH HAVE BEEN VERIFIED BY SJI, SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

9. JOISTS SHALL BE DESIGNED TO SUPPORT THE LOADS LISTED IN SECTION 1609, THOSE INDICATED ON PLANS AND AN ADDITIONAL CONCENTRATED DEAD LOAD NOT TO EXCEED 500# TO BE PLACED AT ANY PANEL ALONG THE LENGTH OF THE JOIST. DEAD LOADS SHALL BE IN ACCORDANCE WITH THE MATERIALS SHOWN WITHIN THE CONTRACT DOCUMENTS AND SHALL BE NOTED ON THE SHOP DRAWING SUBMITTAL BY THE JOIST MANUFACTURER.

10. JOIST BOTTOM CHORDS SHALL BE DOUBLE ANGLE.

11. JOISTS ARE TO BE DESIGNED TO ALLOW 1" MAXIMUM DIFFERENCE IN CAMBER BETWEEN ADJACENT PARALLEL JOISTS.

12. WHERE JOIST SPANS EXCEED 30'-0", THE 3 JOISTS CLOSEST TO THE PERIMETER OF THE BAY SHALL BE DESIGNED TO LIMIT LIVE LOAD DEFLECTION TO 1".

13. WHERE JOISTS SUPPORT A MOVEABLE PARTITION, ALL JOISTS SHALL BE SIZED TO PROVIDE A MAXIMUM 1" DEFLECTION AT THE CENTER OF THE SPAN AND AT THE LOCATION OF THE STORED PARTITION.

14. ALL STEEL JOISTS GREATER THAN FORTY FEET IN LENGTH REQUIRE A ROW OR BOLTED BRIDGING TO BE IN PLACE PRIOR TO SLACKENING OF HOIST LINES. (U.I.O.)

15. JOIST MANUFACTURER SHALL COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL LOADS DUE TO EQUIPMENT TO BE SUPPORTED BY ROOF STRUCTURE. ALL ADDITIONAL LOADS SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS. SUBMITTALS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

16. WHERE ROOF JOISTS ARE USED TO BRACE STEEL ROOF BEAMS (AS SHOWN ON PLANS AND DETAILS), DESIGN JOISTS TO RESIST A 500 LB AXIAL BRACE LOAD AT EACH BRACE. THIS LOAD SHALL ACT CONCURRENTLY WITH ALL WIND LOAD CASES AND COMBINATIONS.

5212 JOIST BEARING:

1. WHERE STEEL BEAMS SUPPORT JOISTS FRAMING FROM ONE SIDE ONLY, OR WHERE JOISTS FROM ONE SIDE ARE 30% LONGER THAN THE JOISTS ON THE OPPOSITE OF THE BEAM, JOISTS SHALL BEAR FULL WIDTH OF THE STEEL BEAM OR 5'-1/2" WHICH EVER IS LESS.

2. CONTRACTOR SHALL COORDINATE JOIST SEAT HEIGHTS AND TOP OF STRUCTURAL STEEL SUPPORTS TO ENSURE PROPER DECK ELEVATIONS.

5312 STEEL ROOF DECK:

1. SHALL BE GALVANIZED (G90), TYPE "B" STEEL ROOF DECK OF GAGE AND DEPTH INDICATED ON DRAWINGS, AND SHALL CONFORM TO THE PROVISIONS OF THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR STEEL ROOF DECK.

2. DECK SHALL BE VENTED IN AREAS TO RECEIVE LIGHT WEIGHT INSULATING FILL, IF REQUIRED BY THE INSULATION MANUFACTURER. COORDINATE VENTING AREA REQUIREMENTS WITH INSULATION MANUFACTURER.

3. DECK CENTERING SHALL BE PLACED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CONTINUOUS OVER AT LEAST 3 SPANS.

4. WELD PATTERN SHALL BE AS INDICATED ON ROOF DECK FASTENING DIAGRAM.

5. METAL DECK MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE AND ALL DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS.

6. DO NOT HANG MEP SYSTEMS (DUCTWORK, ROOF DRAIN OR FIRE PROTECTION PIPING, ETC) FROM ROOF DECK. ALL EQUIPMENT IS TO BE HUNG FROM ROOF JOISTS. SEE SECTION 5210 FOR ROOF JOIST REQUIREMENTS.

5400 STRUCTURAL COLD-FORMED STEEL (CFS) FRAMING:

1. ALL COLD FORMED STEEL FRAMING SHALL CONFORM TO THE AISI/COFS/NASPEC 2001 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, THE AISI MANUAL COLD-FORMED STEEL DESIGN (2002 EDITION), AISI CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL STRUCTURAL FRAMING (2006 EDITION), AISI/COFS/GP-2004 STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS (2004 EDITION) AND COLD-FORMED STEEL ENGINEERS INSTITUTE (CFSEI) PUBLICATIONS, AS MODIFIED OR CLARIFIED HEREIN.

2. STEEL STUDS, JOISTS, LINTELS, AND RUNNER TRACK MEMBERS SHALL BE OF TYPE SHOWN ON THE DRAWINGS AND SPECIFICATIONS CONFORMING TO ASTM A-446 GRADE C WITH HOT DIPPE GALVANIZED COATING CONFORMING TO ASTM A525 (CLASS G90).

3. MINIMUM STEEL GRADES (FY): 12 GA (97 MILS), 14 GA (68 MILS), 16 GA (54 MILS) STUDS AND TRACK; 50 KSI; 18 GA (43 MILS), 20 GA (33 MILS) STUDS AND TRACK; 33 KSI.

4. STRUCTURAL LIGHT GAGE CFS FRAMING AND THEIR CONNECTIONS SHALL BE AS SHOWN ON THE DRAWINGS AND DETAILS.

5. ATTACHMENTS, CLOSURES, HARDWARE, ETC., SHALL BE AS SHOWN AND/OR IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

6. SUBMIT PROPOSED LIGHT GAGE CFS MANUFACTURERS DATA AND LOAD TABLES FOR REVIEW.

7. TOLERANCES TO COMPLY WITH ASTM C955.

8. WELDING TO COMPLY WITH COLD-FORMED STEEL ENGINEERS INSTITUTE TECH NOTE 5606-1 - WELDING COLD-FORMED STEEL.

9. REPAIR DAMAGED OR UNCOATED GALVANIZED COATINGS PER ASTM A780.

10. FRAMING MEMBERS SHALL BE CUT SQUARELY OR AT AN ANGLE AS REQUIRED TO FIT SQUARELY AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN PLACE UNTIL PROPERLY JOINED.

11. JOINING OF STRUCTURAL MEMBERS SHALL BE MADE WITH SELF-DRILLING SCREWS OR WELDING.

12. WIRE TYING OF FRAMING MEMBERS IN STRUCTURAL APPLICATIONS SHALL NOT BE PERMITTED.

13. ATTACHMENT OF COLLATERAL MATERIALS TO STEEL MEMBERS SHALL BE MADE WITH SELF-DRILLING SCREWS OR HARDENED SHANK POWER ACTUATED FASTENERS (PAFS).

14. STUDS SHALL SIT SQUARELY IN THE TOP AND BOTTOM RUNNER TRACK WITH FIRM ABUTMENT AGAINST TRACK WEBS. STUDS SHALL BE ALIGNED OR PLUMBED AND SECURELY FASTENED TO THE FLANGES OF BOTH TOP AND BOTTOM RUNNER TRACK.

15. BRIDGING TO BE SUPPLIED AND INSTALLED PER CFS STUD MANUFACTURER RECOMMENDATIONS (5'-0" O.C. MAX AND WITHIN 1'-0" OF DEFLECTION TRACKS).

16. LATERAL BRACING SHALL BE PROVIDED BY USE OF PLYWOOD SHEATHING, GYPSUM SHEATHING, OR BY HORIZONTAL STRAPS OR COLD-ROLLED CHANNELS. BRACING SHALL CONFORM TO SECTION D3 OF THE AISI SPECIFICATIONS.

17. LIGHT GAGE FRAMING CONNECTORS SPECIFIED BY PART NUMBER OR MODEL NAME ARE STANDARD CONNECTORS FABRICATED BY THE STEEL NETWORK (TSN), RALEIGH, N.C. 888-474-4876. CONNECTORS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE LIGHT STEEL FRAMING CONNECTIONS CATALOG (LATEST EDITION) BY THE STEEL NETWORK, USING THE NUMBER/SIZE OF FASTENERS SHOWN IN THESE DRAWINGS. WHERE NUMBER/SIZE IS NOT SHOWN IN THESE DRAWINGS, USE THE FASTENERS SPECIFIED IN THE CATALOG TO OBTAIN THE MAXIMUM CAPACITY OF THE SPECIFIED CONNECTOR. SUBSTITUTION OF GENERIC BENT PLATE LIGHT GAGE CONNECTORS IS NOT ALLOWED WITHOUT DESIGN CALCULATIONS SHOWING EQUAL OR BETTER CAPACITY TO THE SPECIFIED TSN CONNECTOR, PREPARED AND SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER EXPERIENCED IN LIGHT GAGE STEEL CONNECTION DESIGN.

5404 COLD-FORMED STEEL (CFS) TRUSSES:

1. DESIGN DOCUMENTS INCLUDE A SYSTEM OF CUSTOM ENGINEERED TRUSS COMPONENTS, ASSEMBLIES AND CONNECTIONS IN ACCORDANCE WITH AISI CODE OF STANDARD PRACTICE FOR CFS STRUCTURAL FRAMING (2006 EDITION) AND THE STATE OF FLORIDA DEPARTMENT OF PROFESSIONAL REGULATION GUIDELINES (FLORIDA ADMINISTRATIVE CODE 61S15). THE ENTIRE SYSTEM, INCLUDING ALL TRUSSES, CONNECTIONS, BRIDGING, TEMPORARY AND PERMANENT BRACING SHALL BE DESIGNED BY A DELEGATED SPECIALTY PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

2. THE COLD-FORMED STEEL TRUSSES SHALL BE DESIGNED BY TRUSS SUPPLIER USING COLD-FORMED STEEL SHAPES. CHORD MEMBERS TO COMPLY WITH ASTM A653 WITH MINIMUM STRENGTH OF 50 KSI, AND MINIMUM 22 GAGE (28 MILS). WEB MEMBERS TO COMPLY WITH ASTM A500 WITH MINIMUM STRENGTH OF 45 KSI AND MINIMUM 20 GAGE (33 MILS).

3. ALL CFS TRUSS ELEMENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF AISI/COFS TRUSS-2004 AND OTHER APPLICABLE CODES AND SPECIFICATIONS.

4. THE CFS TRUSS SUPPLIER SHALL SUBMIT FOR REVIEW AND APPROVAL, DETAILED SHOP DRAWINGS AND DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA. FABRICATION OF CFS TRUSSES SHALL NOT BEGIN UNTIL THE SHOP DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND RETURNED APPROVED. REFER TO CONTRACT SPECIFICATIONS FOR APPROVED MANUFACTURERS. MANUFACTURERS NOT PRE-APPROVED, MUST HAVE QUALIFICATIONS MEETING CONTRACT SPECIFICATIONS APPROVED PRIOR TO BIDDING.

5. DELEGATED ENGINEER CALCULATIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

A. ENGINEERING ANALYSIS SHOWING LOADING, MEMBER STRESSES AND DEFLECTIONS FOR EACH DIFFERENT TRUSS DESIGN BASED ON DESIGN LOADS LISTED ON THE DRAWINGS.

B. ALL TRUSS MEMBERS, PITCH, SPAN, CAMBER, BEARING, CONFIGURATION, TYPE, LOCATION, SPACING AND LAYOUT OF TRUSSES.

C. ALL BRIDGING AND BRACING FOR LOADS INDICATED INCLUDING WIND DIAPHRAGM, CONSTRUCTION, AND ALL OTHERS, TEMPORARY AND PERMANENT LOADS.

D. ALL TRUSS TO TRUSS CONNECTIONS, TRUSS TO STEEL BEAM, TRUSS TO CONCRETE BEAM, TRUSS TO MASONRY, JOISTS, TRACK, GUSSET PLATES, FASTENERS, BRIDGING AND RELATED ACCESSORIES TO BE DESIGNED AND DETAILED FOR ALL LOADING CONDITIONS INCLUDING NET WIND UPLIFT AND REACTIONS FROM HORIZONTAL WIND DIAPHRAGM ACTION.

E. ALL TRUSS MEMBER AND BRACING SIZES, PROPERTIES, AND ANY YIELD STRENGTH.

F. SPACING AND LAYOUT OF TRUSSES MEETING REQUIREMENTS INDICTED ON THE DRAWINGS.

G. NOTE ANY PROPOSED TRUSS LAYOUT CHANGES THAT WOULD EFFECT THE LOCATION OF BEARING WALLS OR FOUNDATION DESIGN OR CONSTRUCTION.

H. WIND TRUSSES DESIGNED TO TRANSFER THE HORIZONTAL WIND LOADS AS AS NOTED ON THE DRAWINGS.

I. GENERAL CONTRACTOR SHALL COORDINATE TRUSS REQUIREMENTS WITH MEP, HVAC AND DUCT WORK REQUIREMENTS, INCLUDING HORIZONTAL AND VERTICAL CHASES, ATTIC/ACCESS SPACE REQUIREMENTS, INCLUDING SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN DOCUMENTS.

J. SUBMIT FULL TRUSS SYSTEM DESIGN AND ERECTION DRAWINGS PREPARED BY DELEGATED SPECIALTY ENGINEER FOR APPROVAL. THESE DRAWINGS SHALL INCLUDE:

A. PLACING DRAWINGS FOR STEEL AND TRUSS SYSTEM SHOWING MEMBERS, PITCH, SPAN, CAMBER, CONFIGURATION, TYPE, LOCATIONS, AND SPACING OF ALL MEMBERS. ALL ATTACHMENTS, BEARINGS, AND ANCHORAGE SHALL BE CLEARLY DETAILED ON DRAWINGS. INDICATE SUPPLEMENTAL STRAPPING, BRACING, CLIPS & OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION, MEETING DESIGN CRITERIA OUTLINED.

B. CROSS SECTIONS, DRAWINGS AND ELEVATIONS DEPICTING COMPONENT LOCATIONS.

C. CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, MAXIMUM VERTICAL AND HORIZONTAL ALLOWABLE LOADS, WELD LENGTHS AND LOCATIONS OR OTHER RELATED FASTENER REQUIREMENTS. ALL CONNECTIONS SHALL MEET OUTLINED DESIGN CRITERIA.

D. DETAILED TRUSS SYSTEM DRAWINGS OUTLINING PROPOSED PERMANENT AND TEMPORARY BRACING, CONNECTIONS, AND PROPOSED REACTIONS TO ADJACENT STRUCTURAL SYSTEMS IF UTILIZED AS BRACING RESTRAINT.

E. THE CFS TRUSSES SHALL BE SHOP FABRICATED BY THE TRUSS SUPPLIER. FIELD FABRICATION OF TRUSSES IS NOT PERMITTED. THE DELEGATED SPECIALTY ENGINEER FOR THE STEEL TRUSSES SHALL INSPECT ALL FABRICATED TRUSSES AND SHALL PROVIDE A SIGNED AND SEALED LETTER CERTIFYING THAT THE TRUSSES ARE FABRICATED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND WILL SUSTAIN THE DESIGN LOADS SPECIFIED IN THE CONTRACT DOCUMENTS.

F. THE TRUSS SUPPLIER SHALL SUBMIT FOR REVIEW DESIGN DATA FOR ALL SHOP OR FIELD SELF-DRILLING FASTENERS USED FOR CONSTRUCTION OF TRUSSES. PROVIDE CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, AND OTHER RELATED FASTENER REQUIREMENTS, INCLUDING MAXIMUM VERTICAL AND HORIZONTAL ALLOWABLE LOADS.

G. DESIGN LOADS FOR TRUSSES:

A. DESIGN TRUSSES PER FLORIDA BUILDING CODE AS SELF-SUPPORTING CANTILEVERED FROM THE NEW MASONRY WALL, WITHOUT SUPPORTING OR IMPOSING ANY LOADS ON THE CANTILEVER JOIST EXTENSIONS ABOVE, FOR THE FOLLOWING MINIMUM LOADS:

WIND LOADS: SEE WIND LOAD DIAGRAM FOR NOMINAL C&C LOADS

TOP CHORD:

LIVE LOAD = 5 PSF

DEAD LOAD = 5 PSF

BOTTOM CHORD:

LIVE LOAD = 5 PSF

DEAD LOAD = 5 PSF

VERTICAL FACE:

DEAD LOAD = 5 PSF

B. DESIGN TRUSS MEMBERS FOR CONCENTRATED LOADS OF PIPING, EQUIPMENT, AND OTHER COLLATERAL MECHANICAL LOADS. SEE MECHANICAL DRAWINGS.

C. SEE PLANS FOR SPECIAL CONCENTRATED AND UNIFORM.

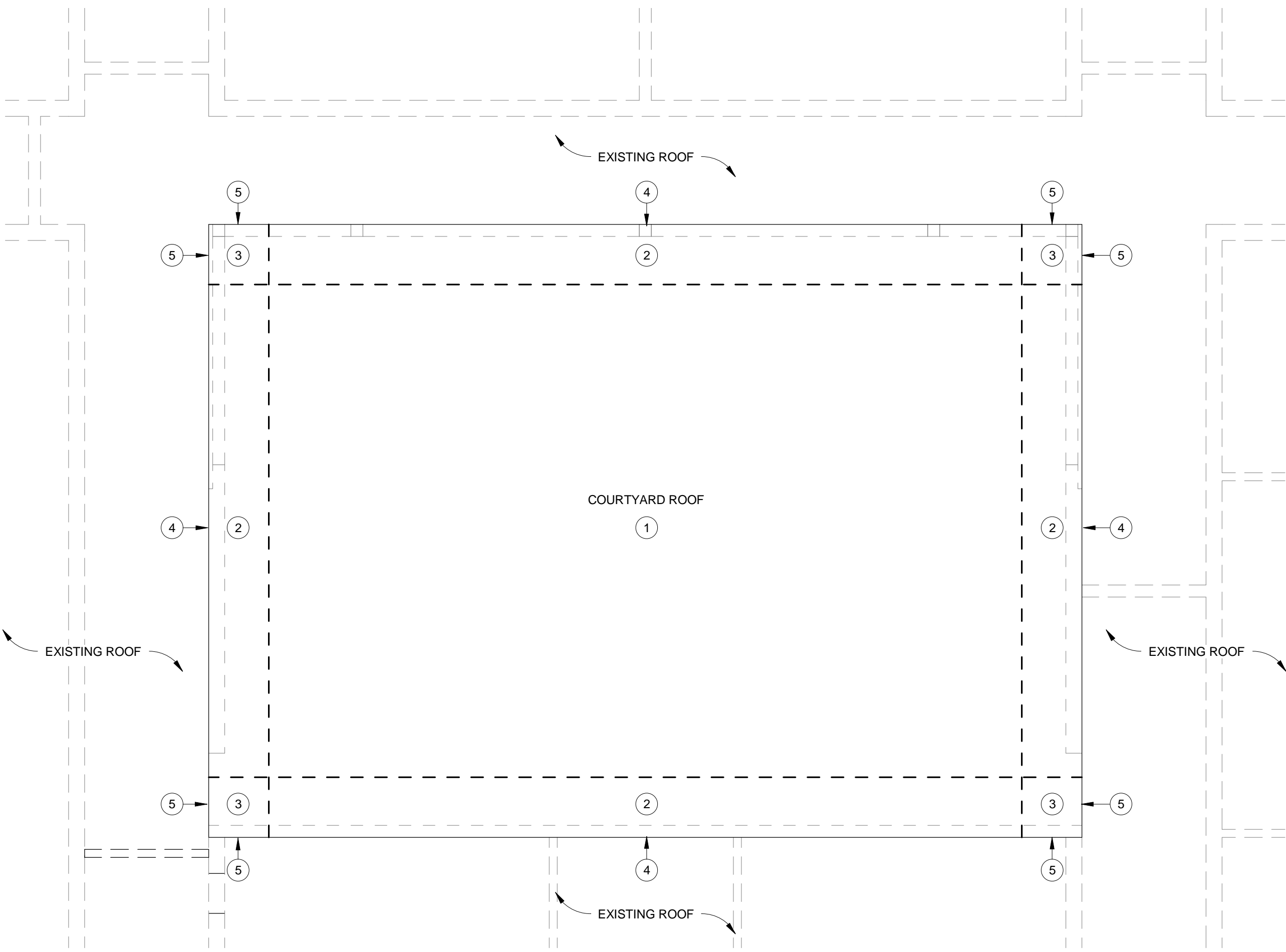
D. THE ACTUAL IN-SERVICE DEAD LOAD OF SPRINKLER AND MECHANICAL PIPING SHOULD BE USED FOR THE DESIGN OF TRUSSES. THE SPRINKLER AND MECHANICAL CONTRACTOR SHALL SUBMIT ACTUAL SIZE, LOCATION AND WEIGHT OF ALL PIPING TO BE USED. THE GENERAL CONTRACTOR SHALL SUPPLY THIS INFORMATION TO THE TRUSS SUPPLIER TO BE USED FOR FINAL TRUSS DESIGN. MECHANICAL PIPING SUPPORTS SHALL BEAR ON TRUSS BOTTOM CHORDS. THE BOTTOM CHORD MEMBER SHALL BE CAPABLE OF SUPPORTING THIS LOAD.

E. THE BOTTOM CHORD SHALL NOT BE ASSUMED TO BE LATERALLY SUPPORTED BY THE CEILING CONSTRUCTION. BOTTOM CHORD BRACING SHALL BE DESIGNED AND FURNISHED BY THE LIGHT GAGE STEEL TRUSS SUPPLIER.

F. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY BRACING OF THE STRUCTURE DURING ERECTION. THE STRUCTURE IS NOT STABLE UNTIL ALL ELEMENTS ARE CONNECTED IN PLACE. DO NOT PLACE ANY LOAD ON TRUSSES UNTIL ALL BRACING IS INSTALLED AS DETAILED ON APPROVED SHOP DRAWINGS. BRACING AND BRIDGING SHALL BE COORDINATED WITH THE LOCATIONS OF MECHANICAL PIPING AND DUCTWORK IN THE ATTIC SPACE BY THE TRUSS SUPPLIER AND THE CONTRACTOR. DO NOT STORE OR STAGE MATERIALS ON ROOF TRUSSES WITHOUT PRIOR WRITTEN APPROVAL OF TRUSS SYSTEM SPECIALTY ENGINEER. LIFTING AND STAGING OF TRUSSES TO COMPLY WITH SUPPLIERS - FIELD INSTALLATION GUIDE FOR CFS TRUSSES AND CFSEI TECH NOTE 551 d AND e.

G. PERMANENT CFS TRUSS BRACING DESIGN AND CONSTRUCTION TO COMPLY WITH CFSEI TECH NOTE 551e. THE ROOF DECK CAN BE RELIED ON TO SERVE AS TOP CHORD LATERAL BRACING ONCE FULLY INSTALLED PER CONTRACT DOCUMENTS FOR CFSEI TECH NOTE 558 b-1.

H. TEMPORARY CFS TRUSS BRACING DESIGN AND CONSTRUCTION TO COMPLY WITH TECH NOTE 551d. PROVIDE GROUND BRACING AS REQUIRED PER CFSEI TECH NOTE 556 a-6.



2 WIND LOAD DIAGRAM
1/8" = 1'-0"

NOMINAL C&C WIND PRESSURES (ASCE 7-10)									
BUILDING	a (FT)	Vult (MPH)	Vasd (MPH)	A (SF)	ZONE (1) (PSF)	ZONE (2) (PSF)	ZONE (3) (PSF)	ZONE (4) (PSF)	ZONE (5) (PSF)
COURTYARD ROOF	5	130	101	<10	+16.0 -23.0	+16.0 -38.5	+16.0 -58.0	+21.0 -22.8	+21.0 -28.0
				20	+16.0 -22.4	+16.0 -34.4	+16.0 -48.0	+20.1 -21.8	+20.1 -26.2
				50	+16.0 -21.6	+16.0 -29.0	+16.0 -34.9	+18.9 -20.6	+18.9 -23.7
				100+	+16.0 -21.0	+16.0 -24.9	+16.0 -24.9	+17.9 -19.7	+17.9 -21.8

NOMINAL C&C WIND PRESSURE PLAN NOTES:

- PRESSURES SHOWN ABOVE ARE NOMINAL COMPONENTS AND CLADDING PRESSURES, CONVERTED FROM ULTIMATE PRESSURES USING A 0.6 MULTIPLIER FACTOR. NO FURTHER REDUCTION IS ALLOWED.

A - INDICATES TRIBUTARY AREA IN S.F.
a - INDICATES END ZONE WIDTH IN FT.
Vult - INDICATES ULTIMATE DESIGN WIND SPEED IN MPH
Vasd - INDICATES NOMINAL DESIGN WIND SPEED IN MPH
- GROSS PRESSURES ARE FOR JOISTS, WINDOWS, DOORS, VENEER, LIGHT GAGE METAL FRAMING, METAL DECK ATTACHMENTS, ROOFING, ROOFING ACCESSORIES AND OTHER BUILDING COMPONENTS AND CLADDING.
- GROSS PRESSURES SHALL BE LINEARLY INTERPOLATED FOR (A) NOT SHOWN IN TABLE.
- POSITIVE PRESSURES INDICATE PRESSURES ACTING TOWARD A PROJECTED SURFACE. NEGATIVE PRESSURES INDICATE PRESSURES ACTING AWAY FROM A PROJECTED SURFACE.
- ROOF AND ZONES 1 THRU 3
- WALL ZONES 4 AND 5
- NET DESIGN ROOF PRESSURES SHALL BE CALCULATED USING THE SELFWEIGHT (DEAD LOAD) OF THE MATERIALS. HOWEVER, THE MAXIMUM REDUCTION OF WIND UPLIFT PRESSURES SHALL BE LIMITED TO THE SELFWEIGHT OF THE ROOF SYSTEM PLUS 5 PSF FOR SUPERIMPOSED DEAD LOADS.
- INTERNAL PRESSURE COEFFICIENT FOR ENCLOSED BUILDING EQUALS +0.18 AND -0.18
- ROOF TOP EQUIPMENT SHALL BE DESIGNED FOR A LATERAL PRESSURE OF 60 PSF AND A SIMULTANEOUS UPLIFT PRESSURE OF 30 PSF (ROOF TOP EQUIPMENT PER FBC SECTION 1609.8)

REVISIONS AND UPDATES

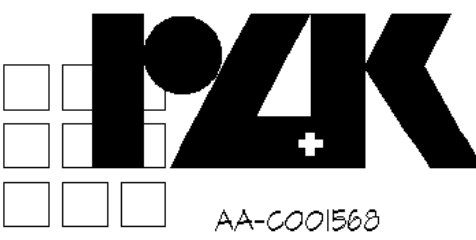
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04/01/13	100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION

1314 PINE AVE., SW LIVE OAK, FLORIDA

STRUCTURAL NOTES & WIND LOAD DIAGRAM

drawn MFS checked AL approved GCK



AA-0001563

job no.

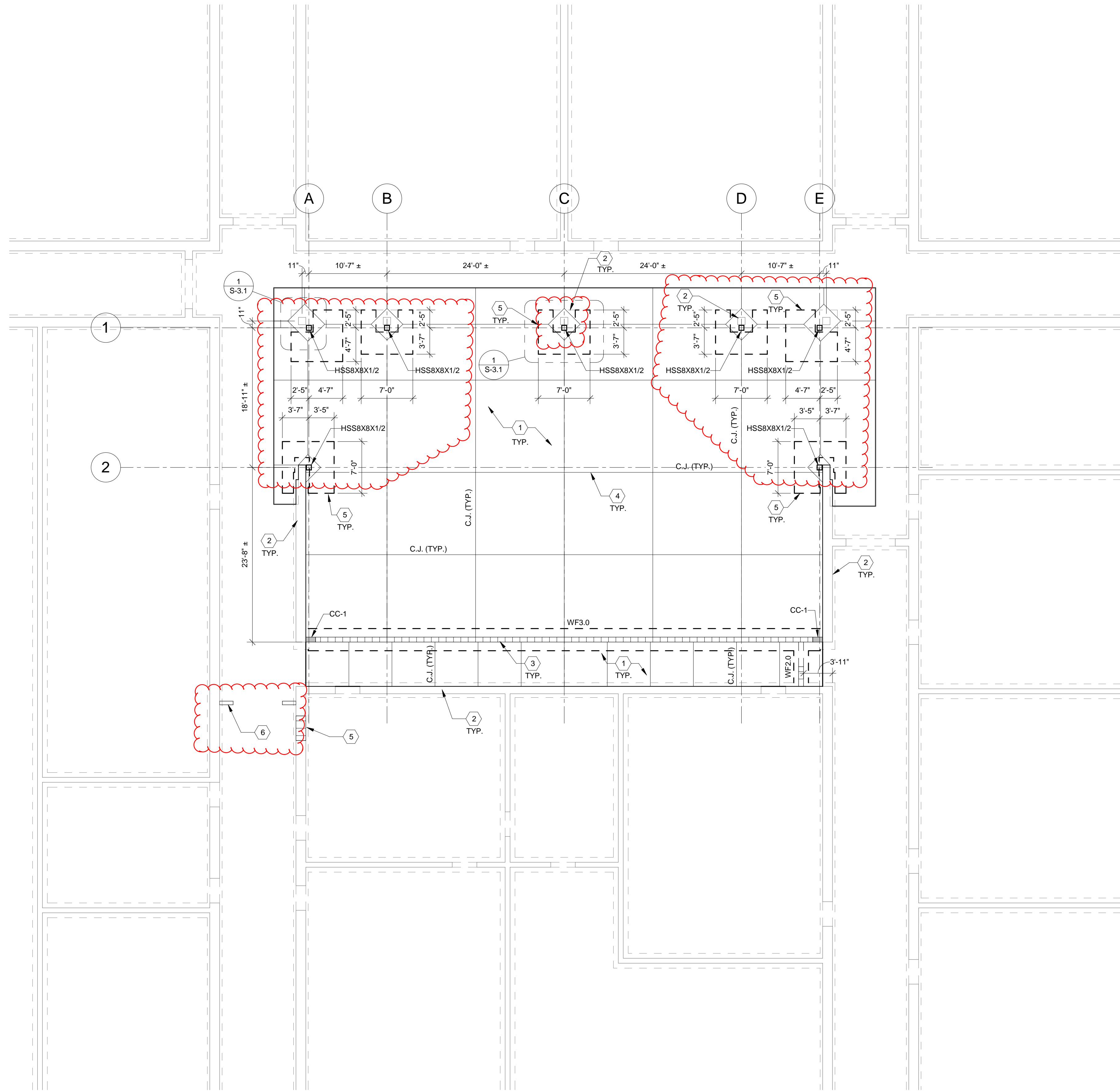
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Florida License #40788

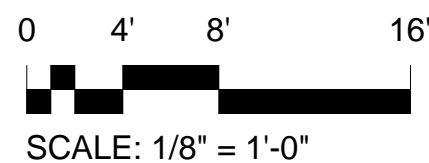
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- FOUNDATION PLAN NOTES**
- 4" CONCRETE SLAB R/W MACRO-SYNTHETIC FIBERS ON 15 MIL CLASS A VAPOR BARRIER ON COMPACTED SUBGRADE.
 - EXISTING STRUCTURE, FIELD VERIFY. SEE ARCH DWGS FOR DEMO PLAN.
 - 8" CMU LOAD BEARING WALL REINFORCED WITH #5 @ 32" O.C. AND AT WALL CORNERS, TERMINATIONS, DOOR JAMBS AND INTERSECTIONS IN GROUT FILLED CELLS.
 - PROVIDE SAW CUT CONTROL JOINTS (C.J.) AT LOCATIONS INDICATED ON PLANS THROUGHOUT ENTIRE SLAB ON GRADE. SEE TYPICAL SLAB ON GRADE CONTROL JOINT DETAIL FOR REQUIREMENTS.
 - NEW COLUMN FOUNDATION, POURED UP AGAINST EXISTING FOUNDATION. CLEAN AND ROUGHEN SIDES OF EXISTING FOUNDATIONS, AND BOND TO NEW FOUNDATION USING AN EPOXY BONDING AGENT. DRILL AND EPOXY DOWELS FROM NEW INTO EXISTING FOUNDATION. NEW FOUNDATION SHALL BE AT LEAST 16" THICK, MATCH EXISTING IF THICKER. NEW FOUNDATIONS SHALL BE REINFORCED WITH #6 BARS @ 12" O.C. EACH WAY, TOP AND BOTTOM. SEE DETAILS FOR MORE INFORMATION.
 - NEW METAL STUD WALL AND DOOR, SEE ARCH FOR DETAILS



FOUNDATION PLAN
1/8" = 1'-0"
T/ FOUNDATION EL. 98'-0"± MATCH EXISTING
T/ SLAB EL. 100'-0" (REF) MATCH EXISTING



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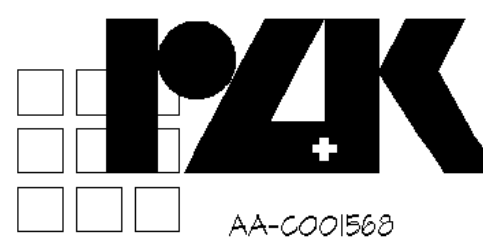
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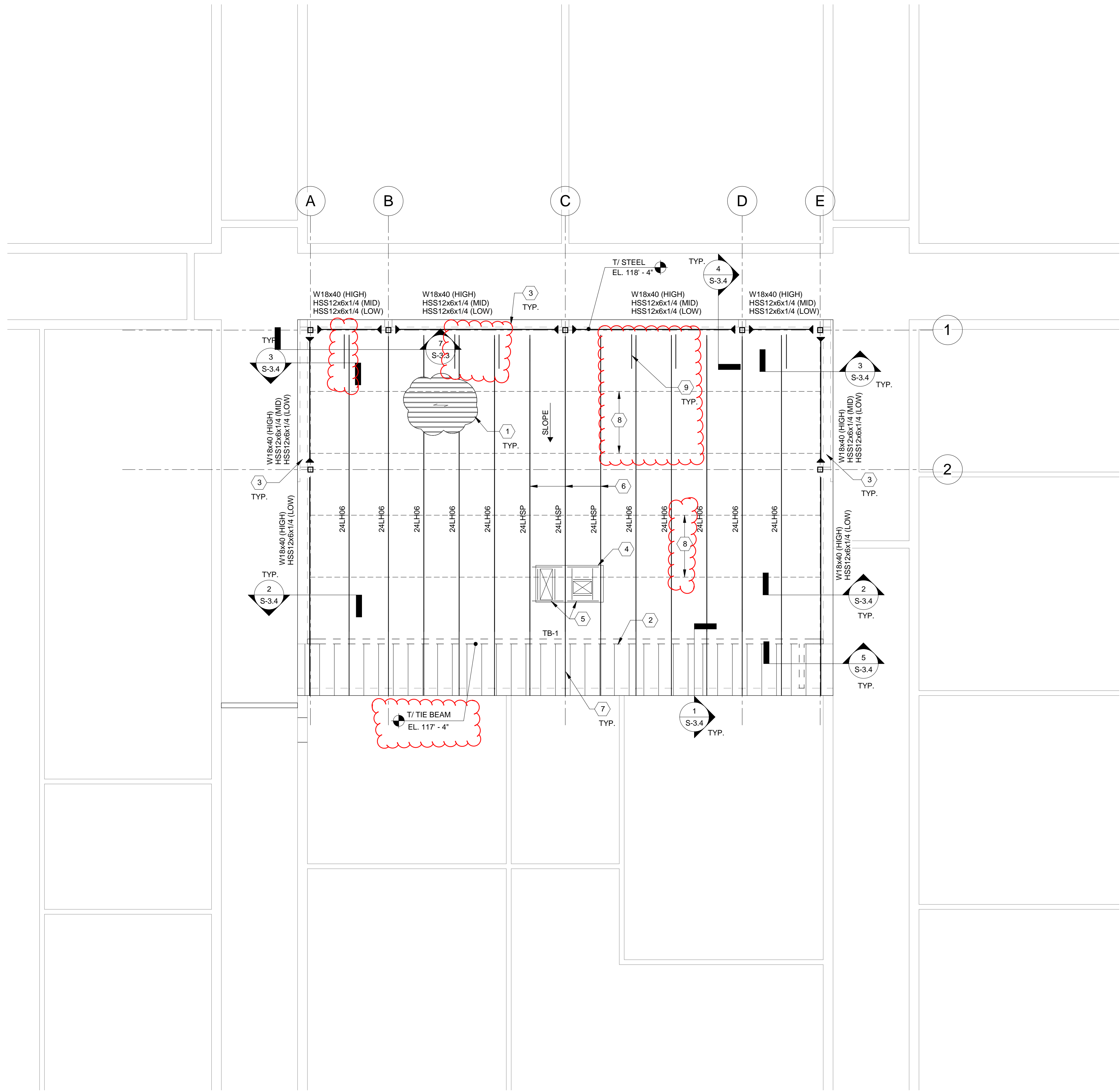
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FOUNDATION PLAN

drawn MFS checked AL approved GCK



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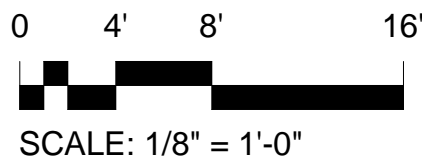
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- ROOF FRAMING PLAN NOTES**
- 1 1/2" 20 GA TYPE "B" ROOF DECK FASTENED TO STRUCTURE W/ 5/8" DIA. PUDDLE WELDS IN A 36/4 PATTERN W/ (3)-#10 TEKS AT SIDELAPS.
 - 2 8" CMU WALL BELOW. SEE FOUNDATION PLAN FOR REINFORCING REQUIREMENTS.
 - 3 EXISTING CONCRETE TIE BEAM
 - 4 ROOF TOP UNIT, SEE MECH'L. ASSUMED WEIGHT OF RTU AND CURB IS 3000 LB. COORDINATE DIMENSIONS AND WEIGHT OF EQUIPMENT SELECTED WITH STEEL FRABRICATOR. ANCHOR CURB TO SUPPORT FRAMING USING 1/2"Ø BOLTS @ 24" O.C. AROUND PERIMETER OF CURB.
 - 5 SUPPLEMENTAL FRAMING UNDER RTU CURB AND AROUND DUCT PENETRATIONS THROUGH ROOF DECK. SEE TYPICAL DETAILS.
 - 6 DESIGN 24" DEEP LH JOIST TO SUPPORT TYPICAL 24LH06 LOADING, PLUS WEIGHT OF RTU.
 - 7 FULL-DEPTH JOIST END EXTENSION, DESIGNED FOR SAME LOADING AS TYPICAL 24LH06
 - 8 JOIST BRIDGING, INCLUDING UPLIFT BRIDGING, PER SJI STANDARDS
 - 9 BOTTOM FLANGE BRACE, SEE TYPICAL DETAIL



ROOF FRAMING PLAN
1/8" = 1'-0"



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

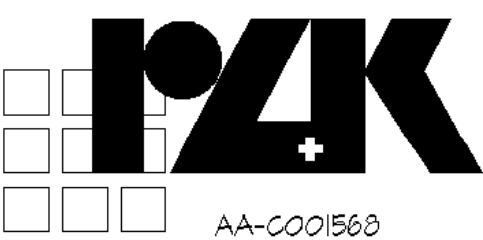
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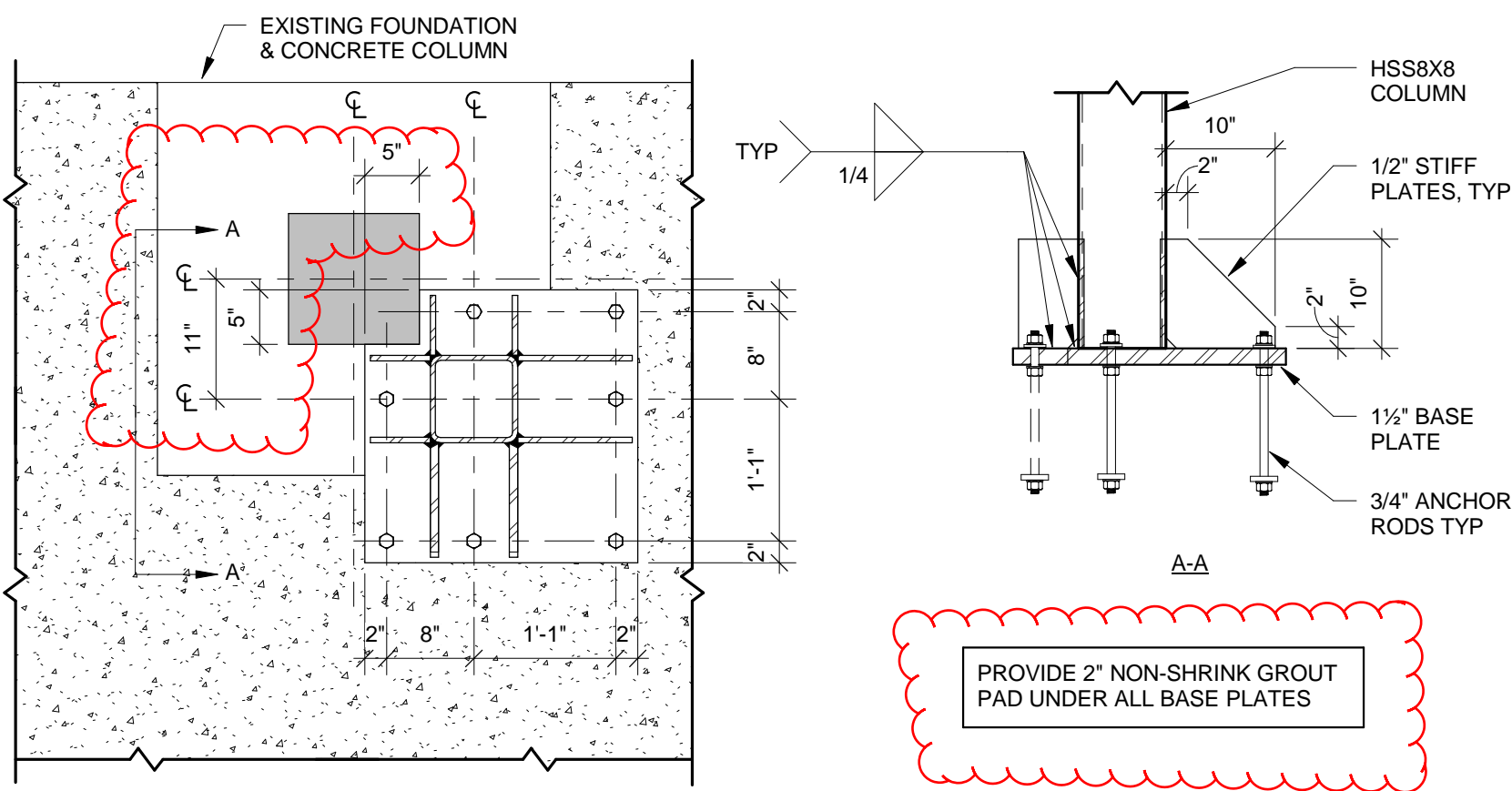
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ROOF FRAMING PLAN

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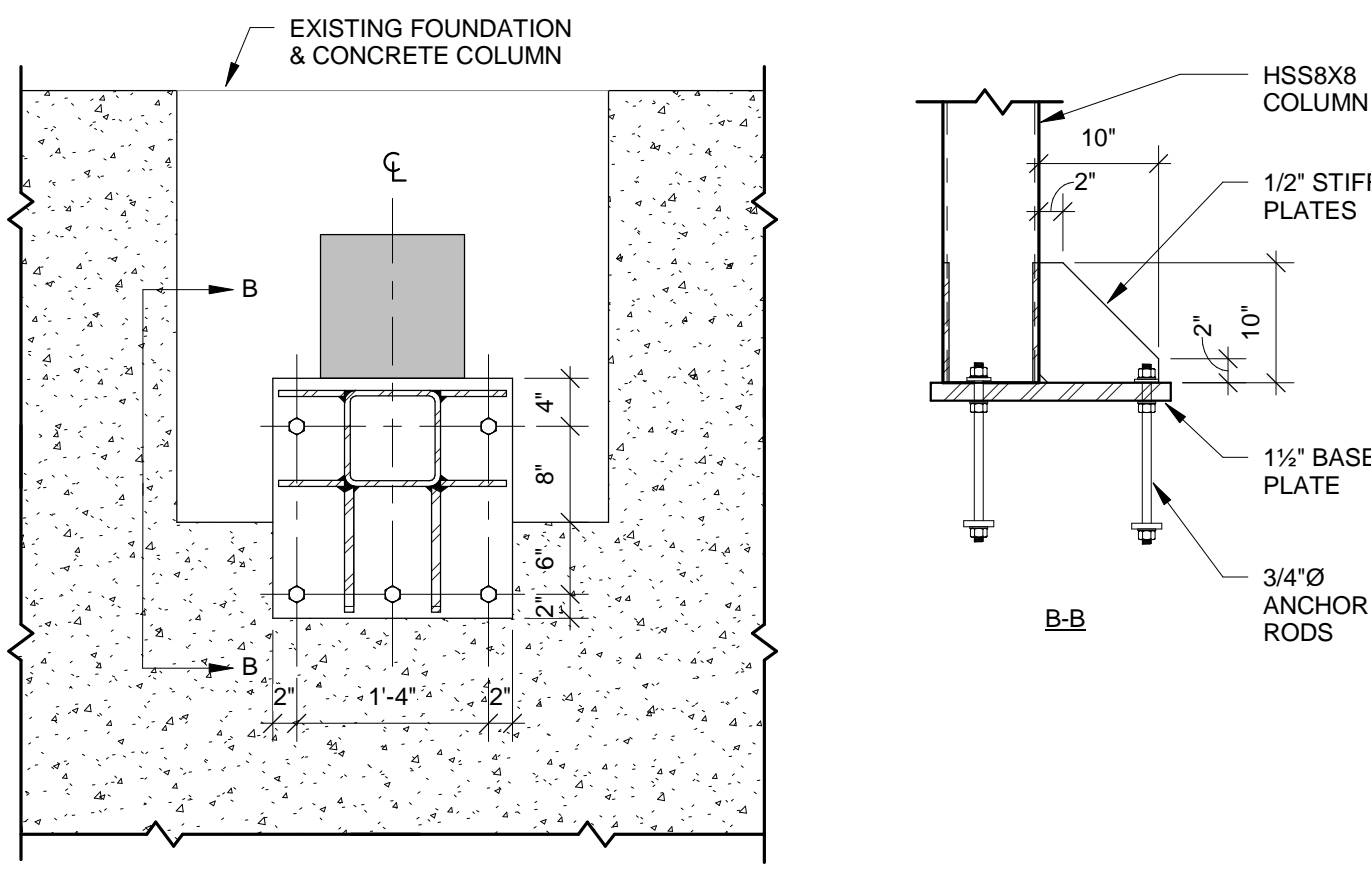


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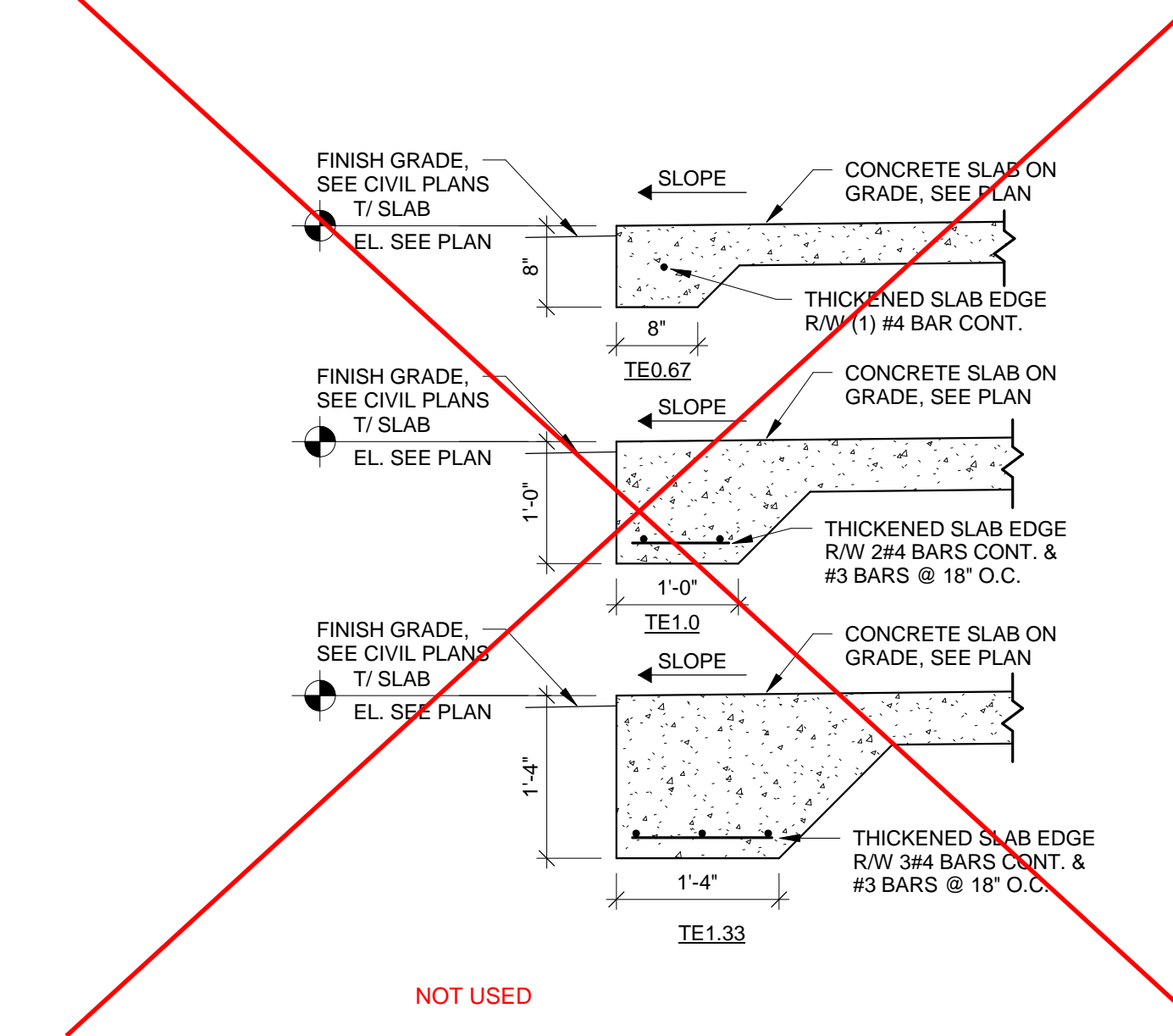


TYPICAL HSS8x8 COLUMN BASE PLATE AT CORNER COLUMNS

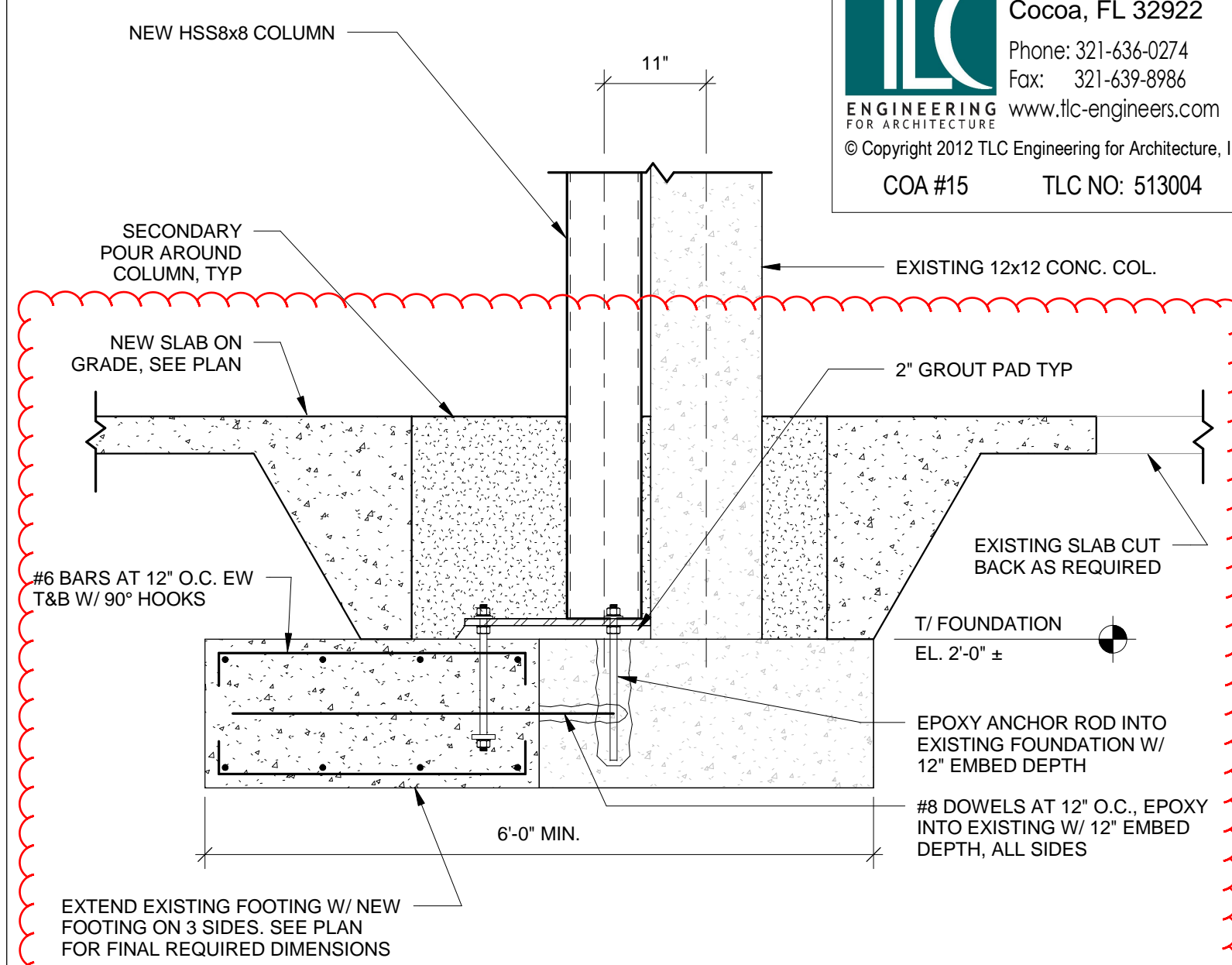


TYPICAL HSS8x8 COLUMN BASE PLATE AT INTERMEDIATE COLUMNS

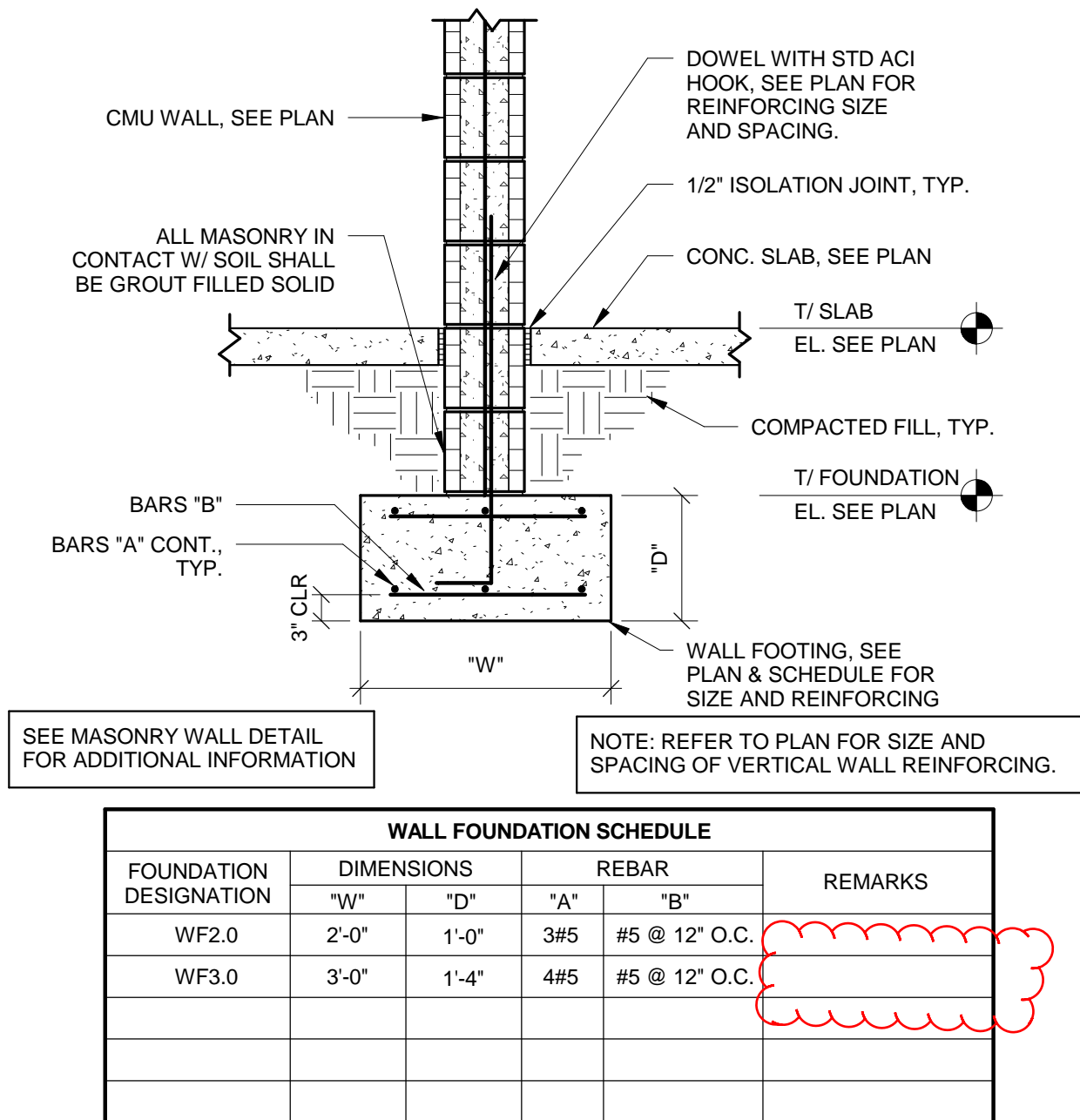
1 TYPICAL BASE PLATE DETAILS
3/4" = 1'-0"



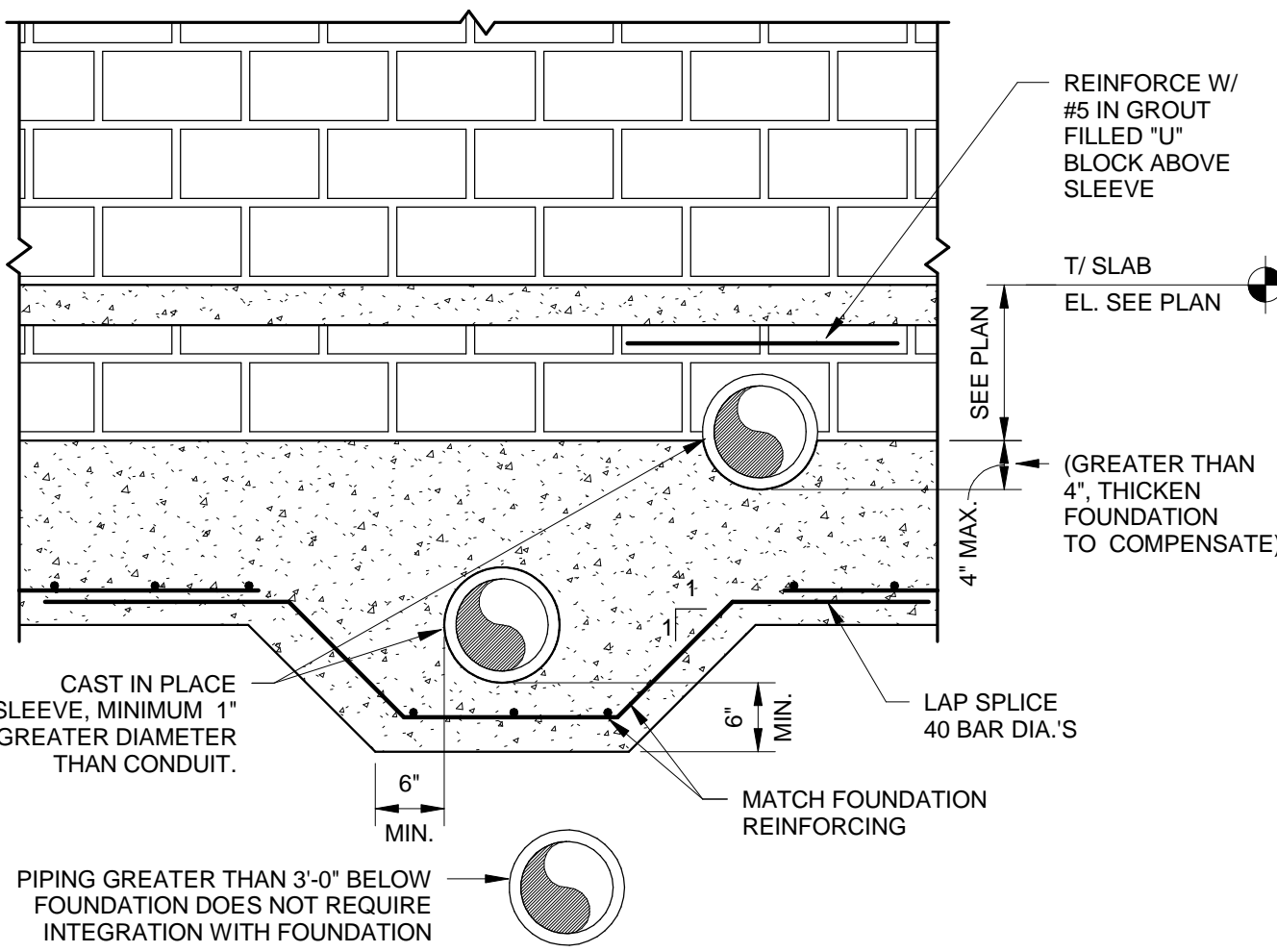
2 THICKENED SLAB EDGE DETAIL (TE0.67 & TE1.0)
3/4" = 1'-0"



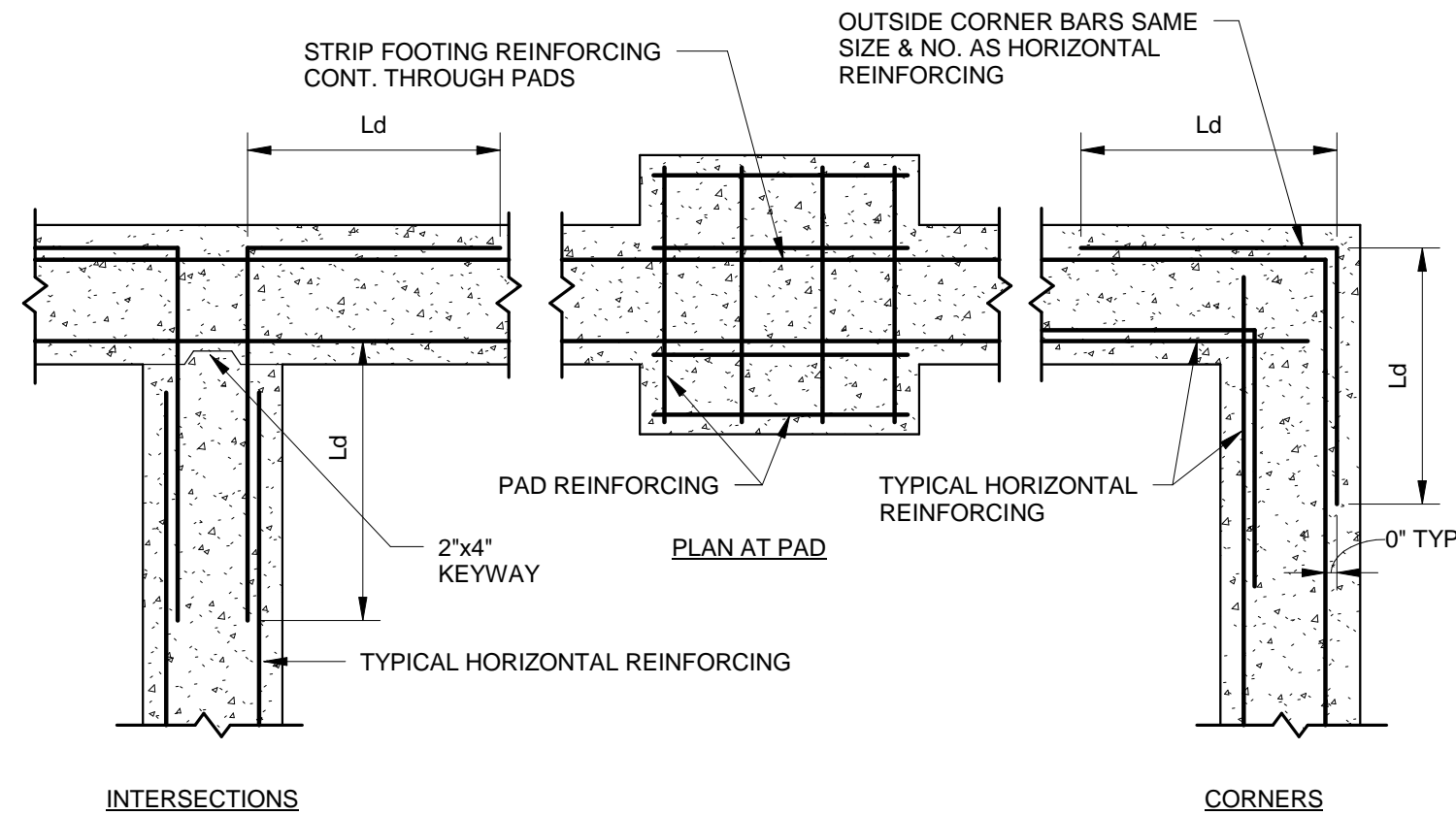
3 SECTION AT COLUMN FOUNDATION
3/4" = 1'-0"



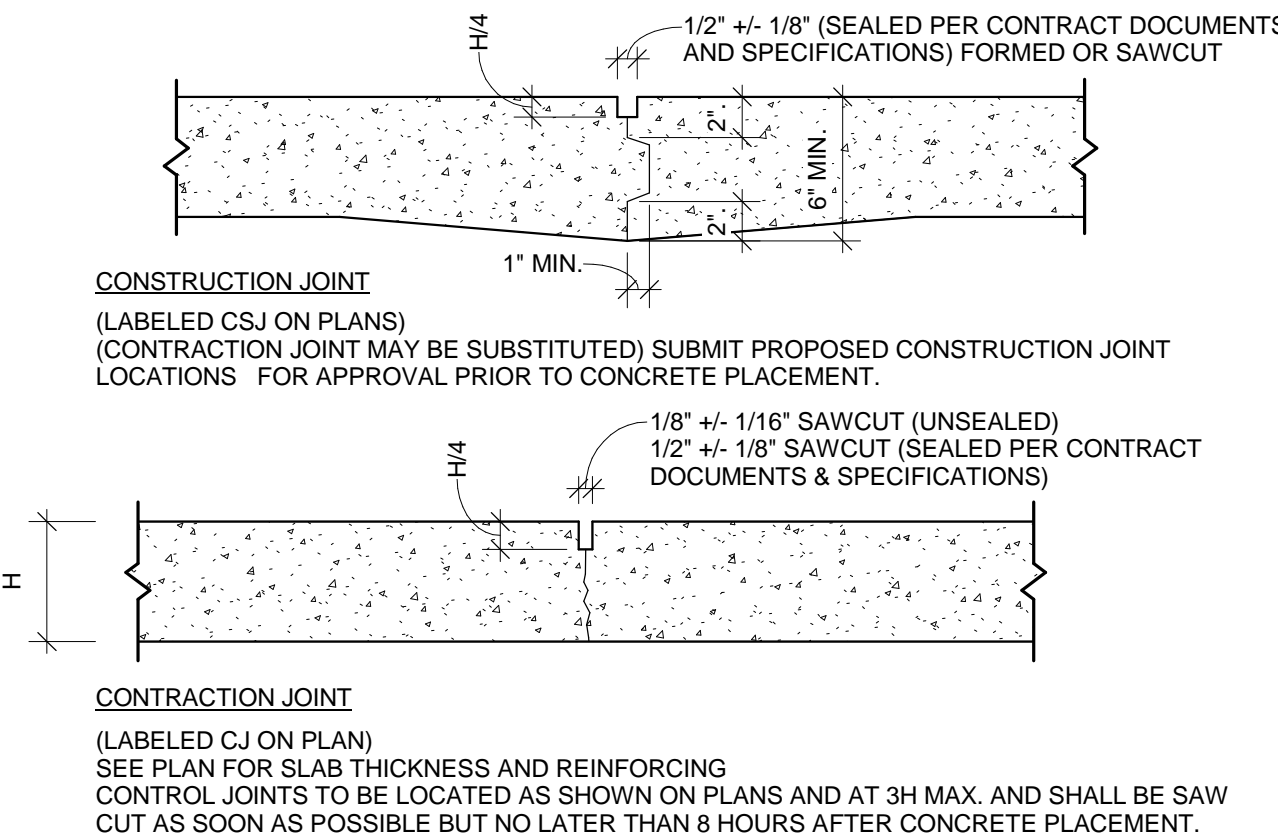
4 TYPICAL SECTION AT INTERIOR CMU WALL FOUNDATION
3/4" = 1'-0"



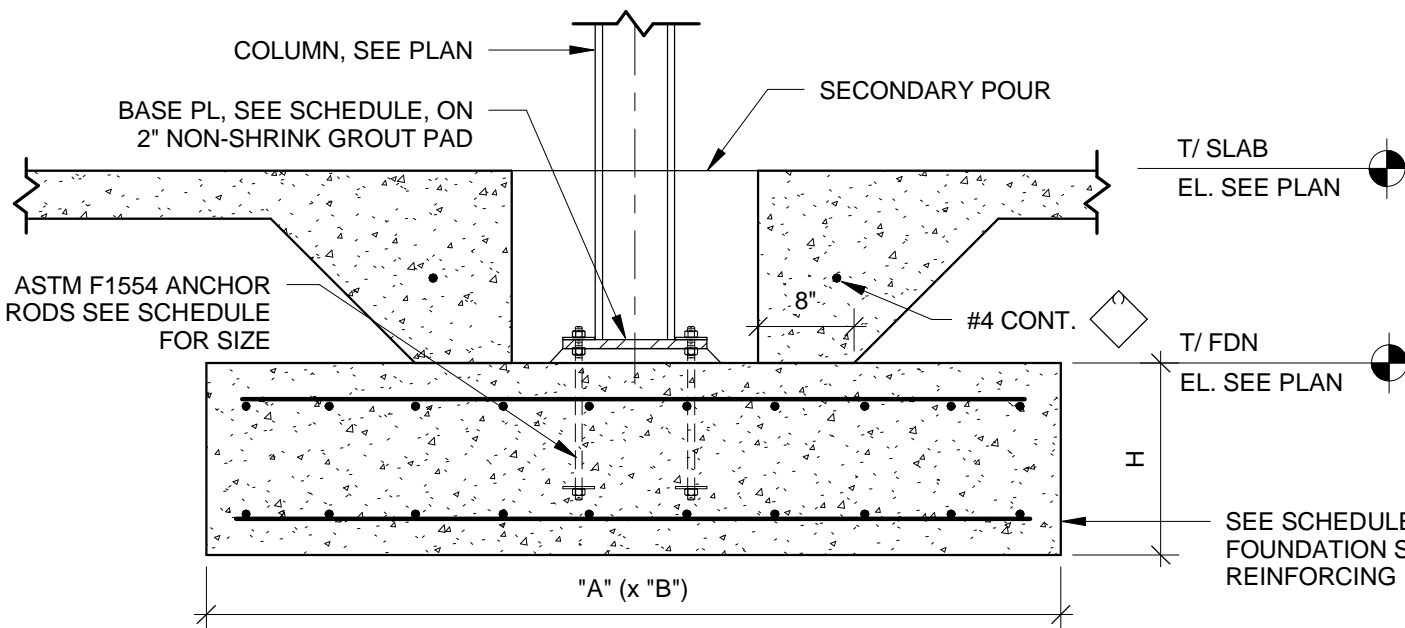
5 TYPICAL FOUNDATION CONDUIT SLEEVE
3/4" = 1'-0"



6 TYPICAL HORIZ. REINF. - CONC. BEAMS AND FOUNDATIONS
3/4" = 1'-0"

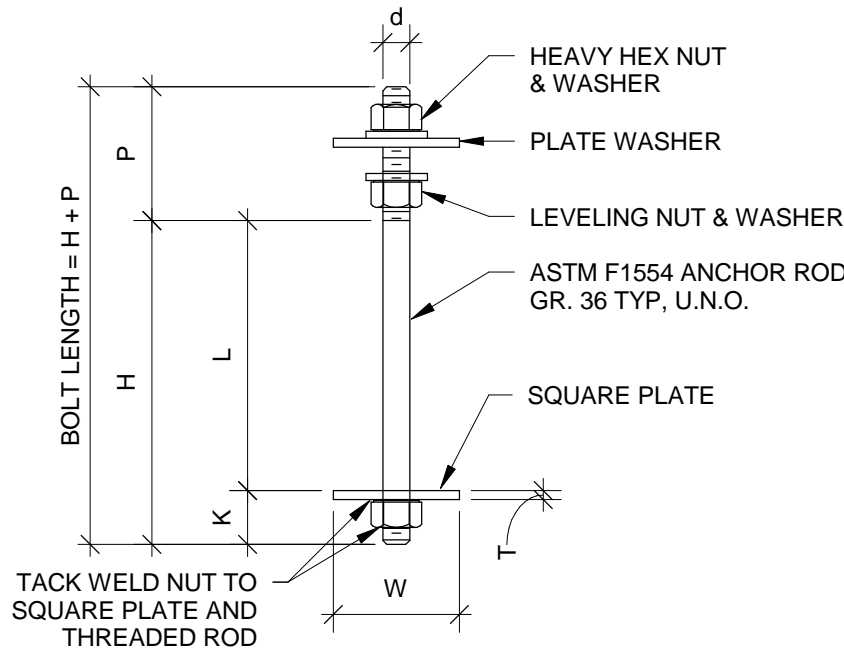
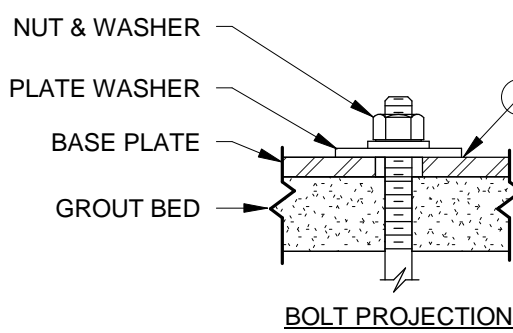


7 TYPICAL SLAB ON GRADE CONTROL JOINTS
3/4" = 1'-0"



8 TYPICAL STEEL COLUMN SPREAD FOUNDATION
3/4" = 1'-0"

LETTERED DIMENSIONS	ANCHOR ROD DIAMETER (F1554 GR. 36)							
	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4
BASE PL. HOLE DIA.	1	1 1/8	1 5/16	1 9/16	1 13/16	2 1/16	2 5/16	2 3/4
SQUARE PLATE	W	2	2	2 1/2	2 3/4	3	4 1/4	5 1/2
	T	1/2	1/2	1/2	3/4	3/4	1	1
HOLE DIA.	5/8	3/4	7/8	1	1 1/8	1 3/8	1 5/8	1 7/8
L	5 1/2	7 1/2	12	14	15	16	16	16
H	7	9	14	16	17	18 1/2	19	19 1/2
K	1 1/2	1 1/2	2	2	2	2 1/2	3	3 1/2
P (MIN)	5			6			8	
PLATE WASHER	1/4"x2"x2"			1/4"x3"x3"			1/4"x4"x4"	
HOLE DIAMETER	9/16	11/16	13/16	15/16	1 1/16	1 5/16	1 9/16	1 13/16



ALL ANCHOR RODS, NUTS, WASHERS AND PLATES SHALL BE HOT DIP GALVANIZED AND SHIPPED AS COMPLETE ASSEMBLIES BY THE FABRICATOR.

GARY CARL KRUEGER, P.E.
Florida License #40788

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REVISIONS AND UPDATES

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SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
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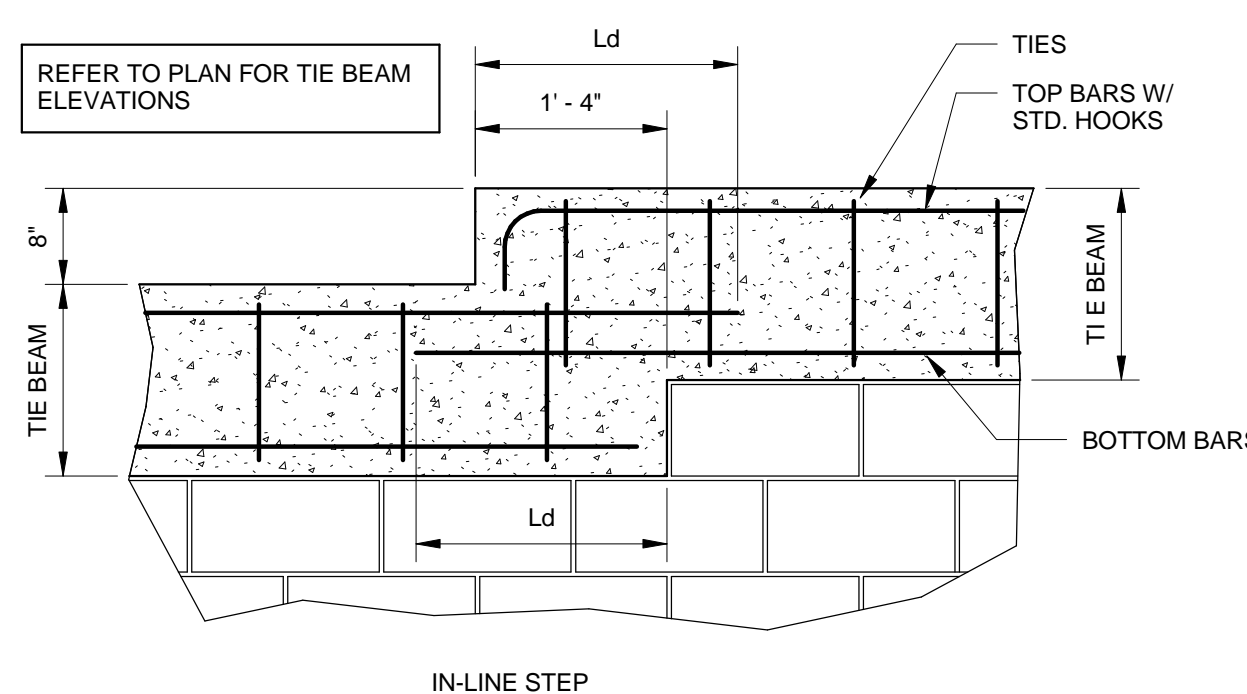
SECTIONS AND DETAILS

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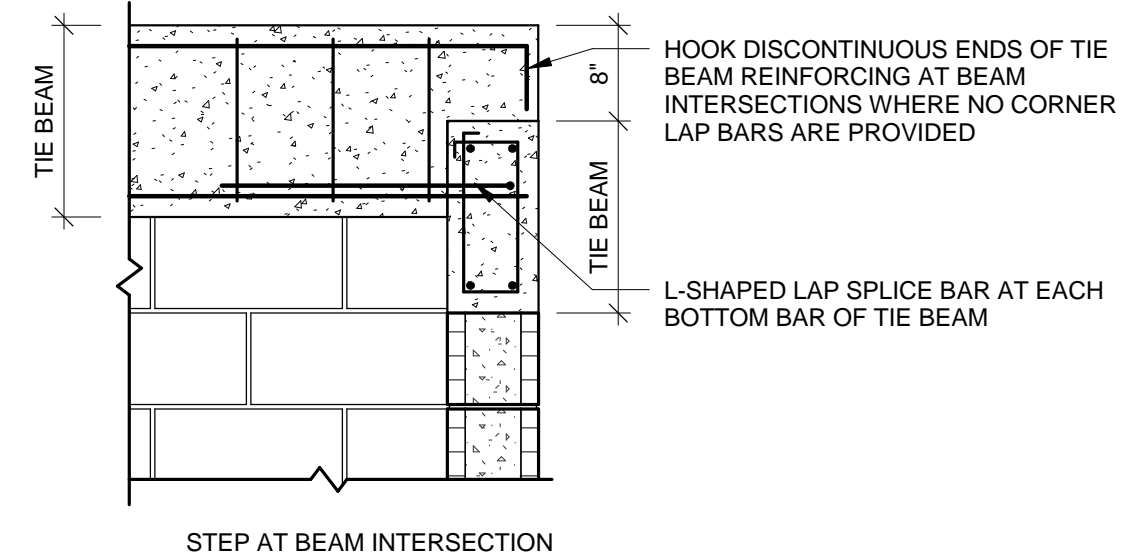


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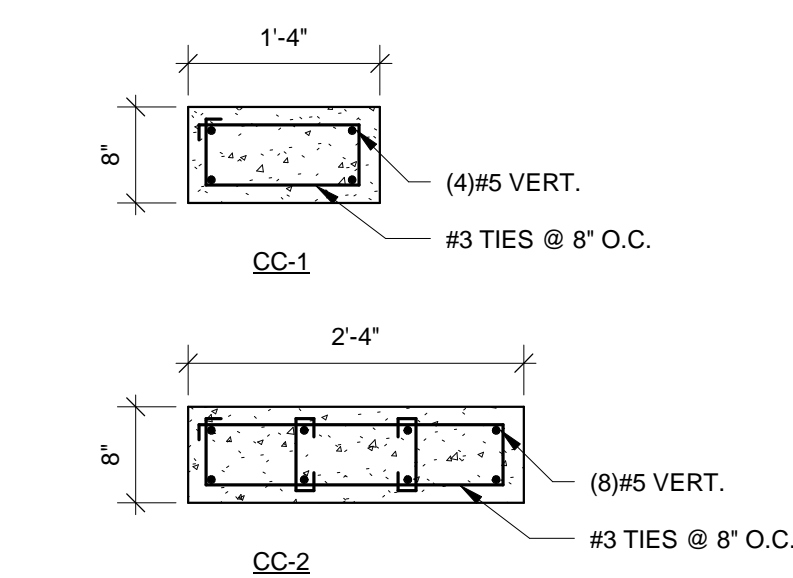
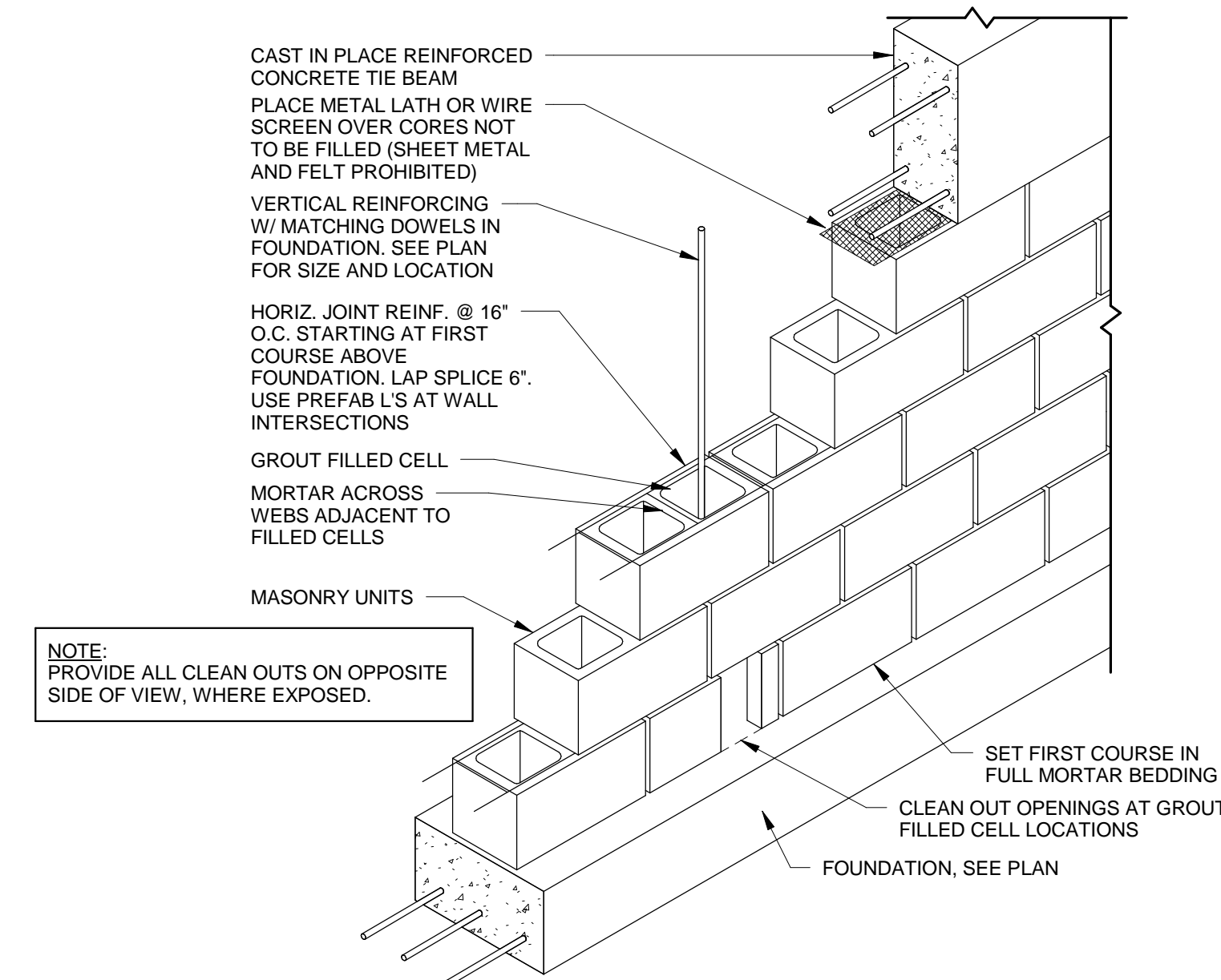
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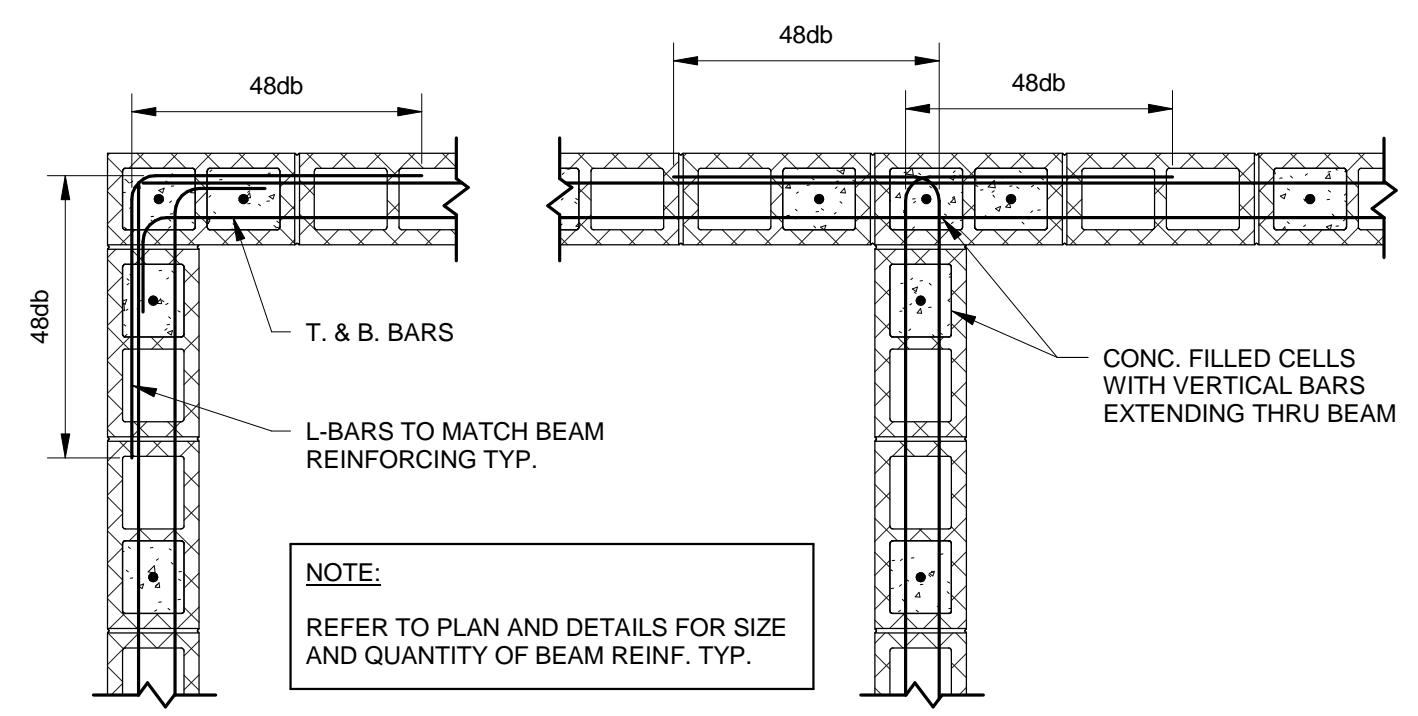
1 TYPICAL STEPPED TIE BEAM DETAIL
3/4" = 1'-0"



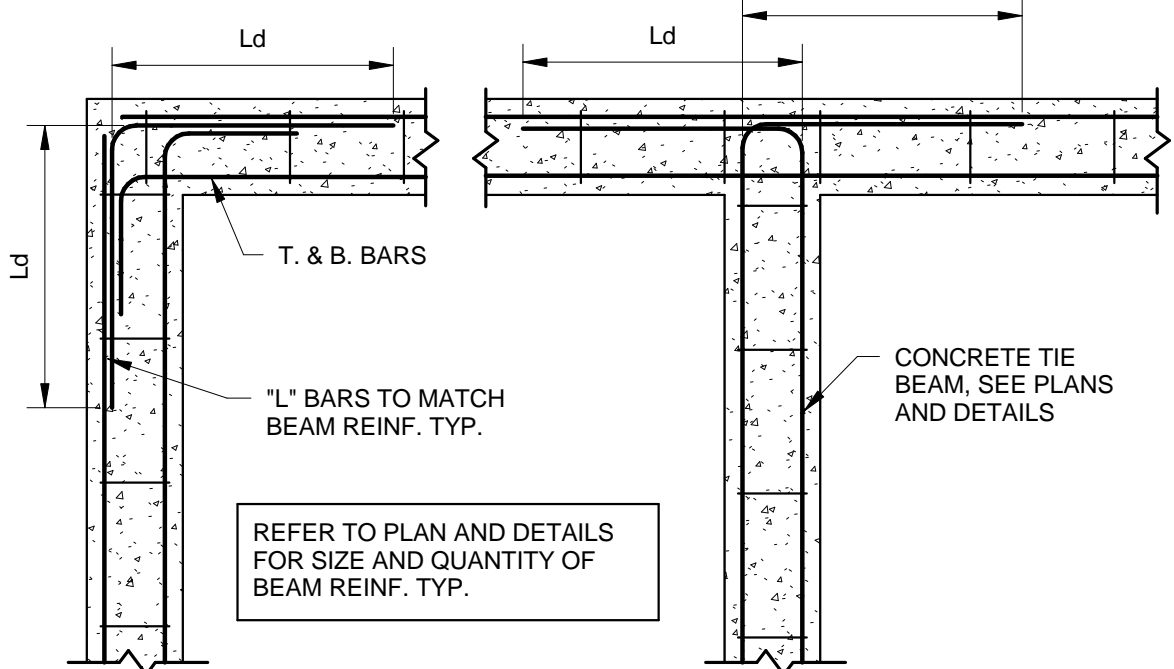
2 TYPICAL MASONRY WALL CONSTRUCTION
3/4" = 1'-0"



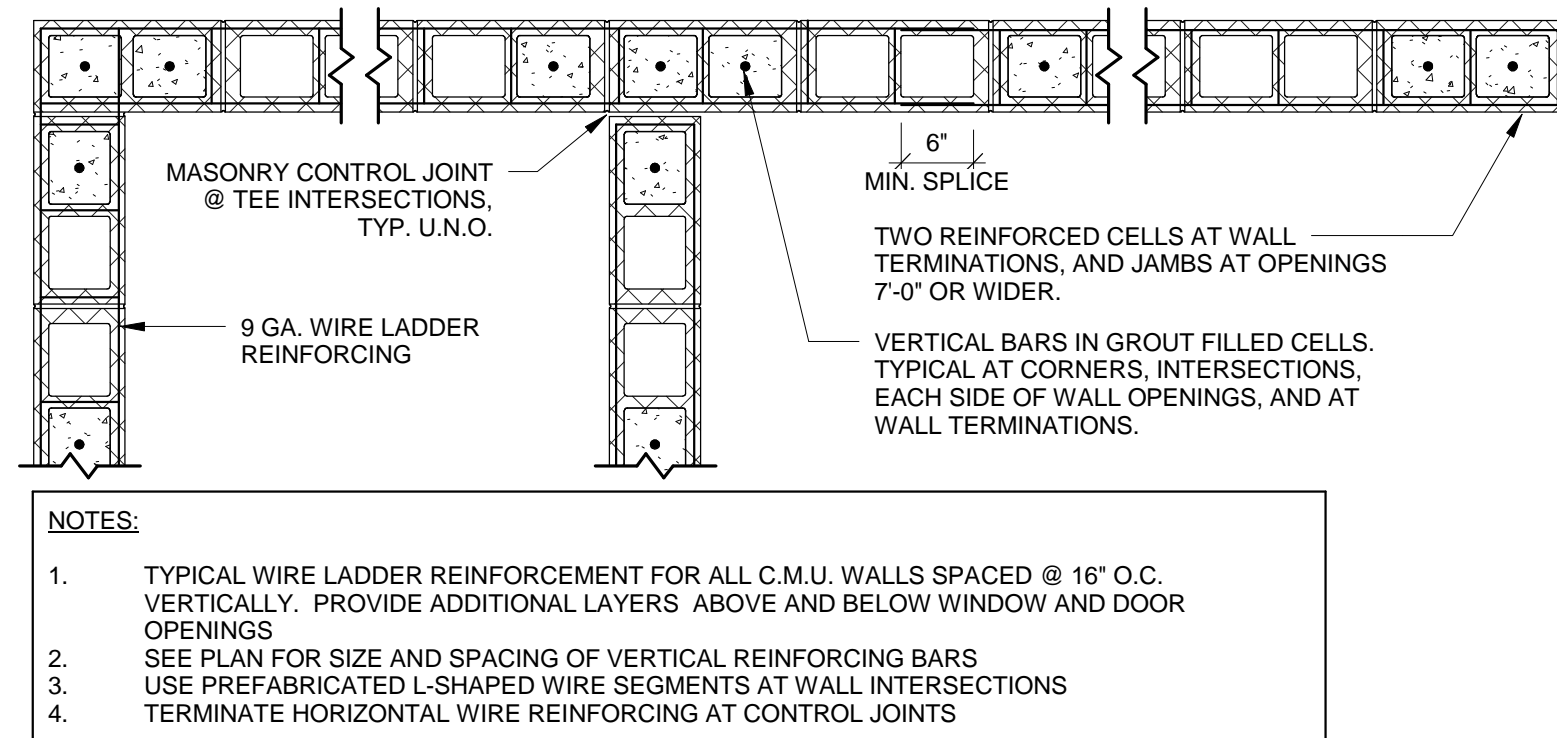
22 CONCRETE COLUMN DETAIL
3/4" = 1'-0"



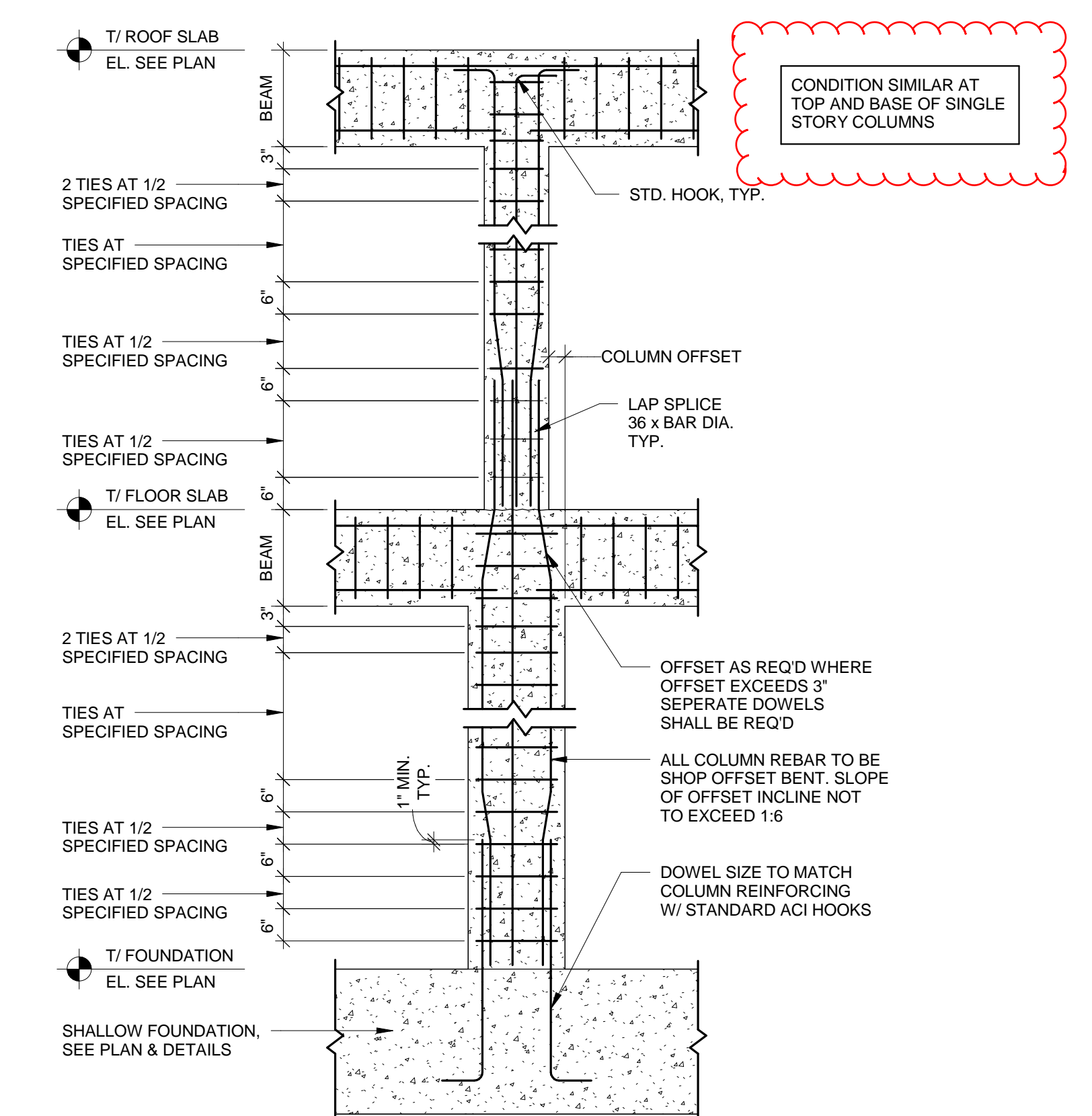
4 TYPICAL BOND BEAM AND CORNER REINFORCING
3/4" = 1'-0"



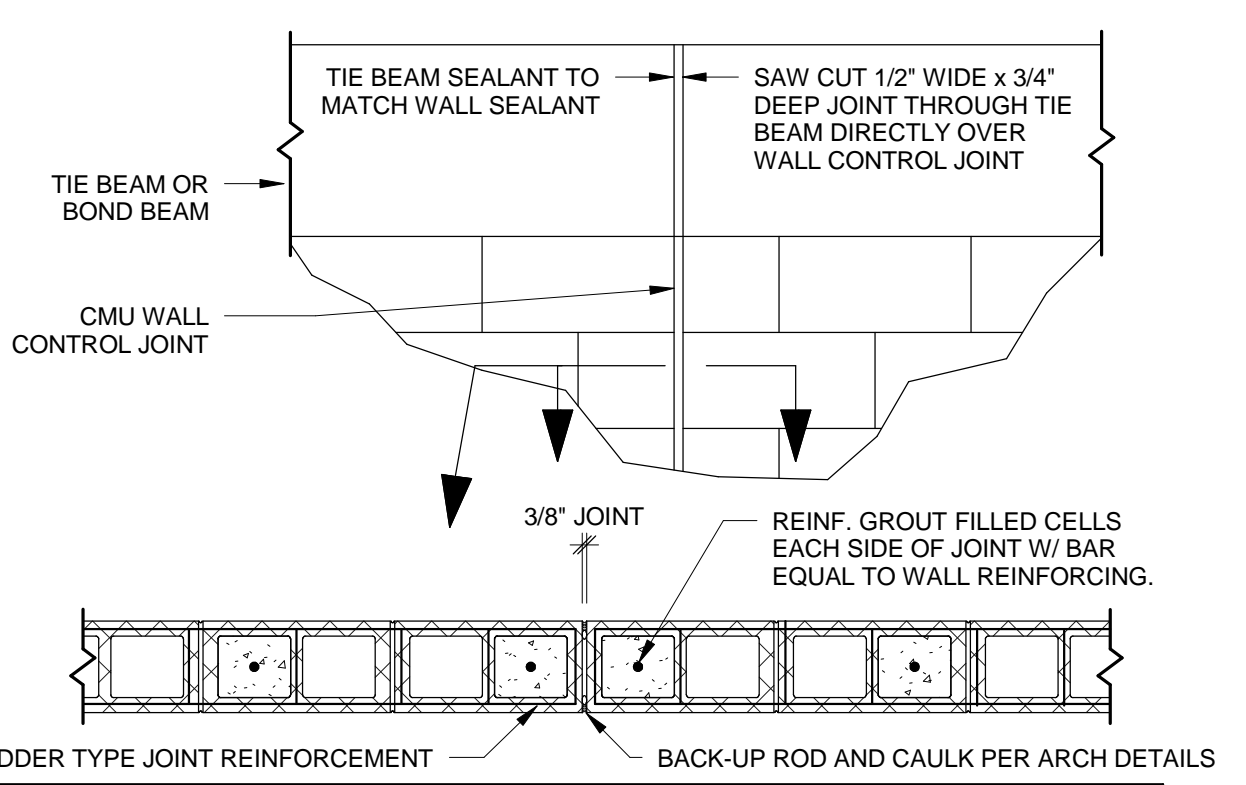
5 TYPICAL CONC. TIE BEAM CORNER REINF.
3/4" = 1'-0"



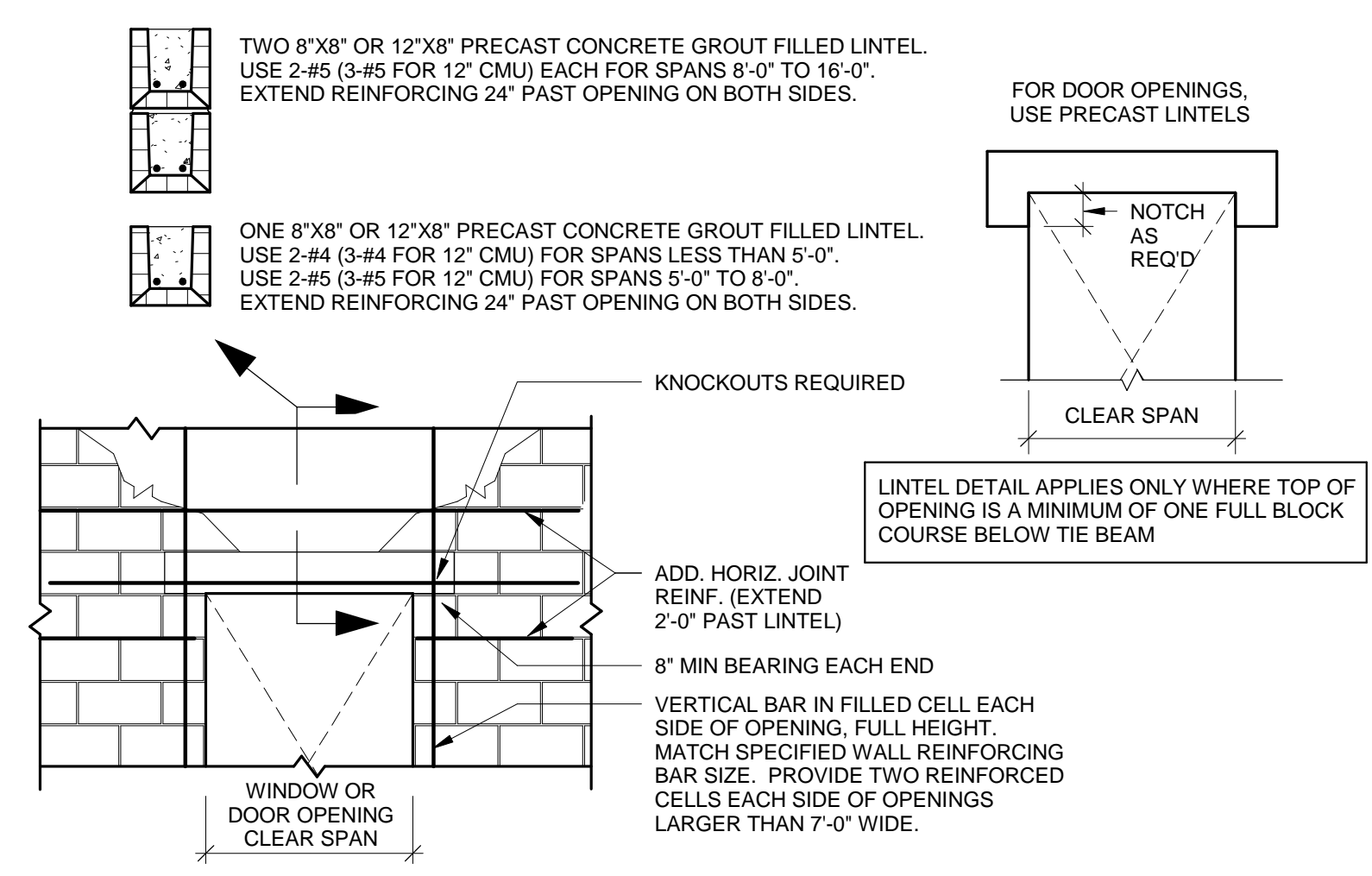
6 TYPICAL HORIZONTAL WALL REINFORCING / VERTICAL CORNER REINFORCING
3/4" = 1'-0"



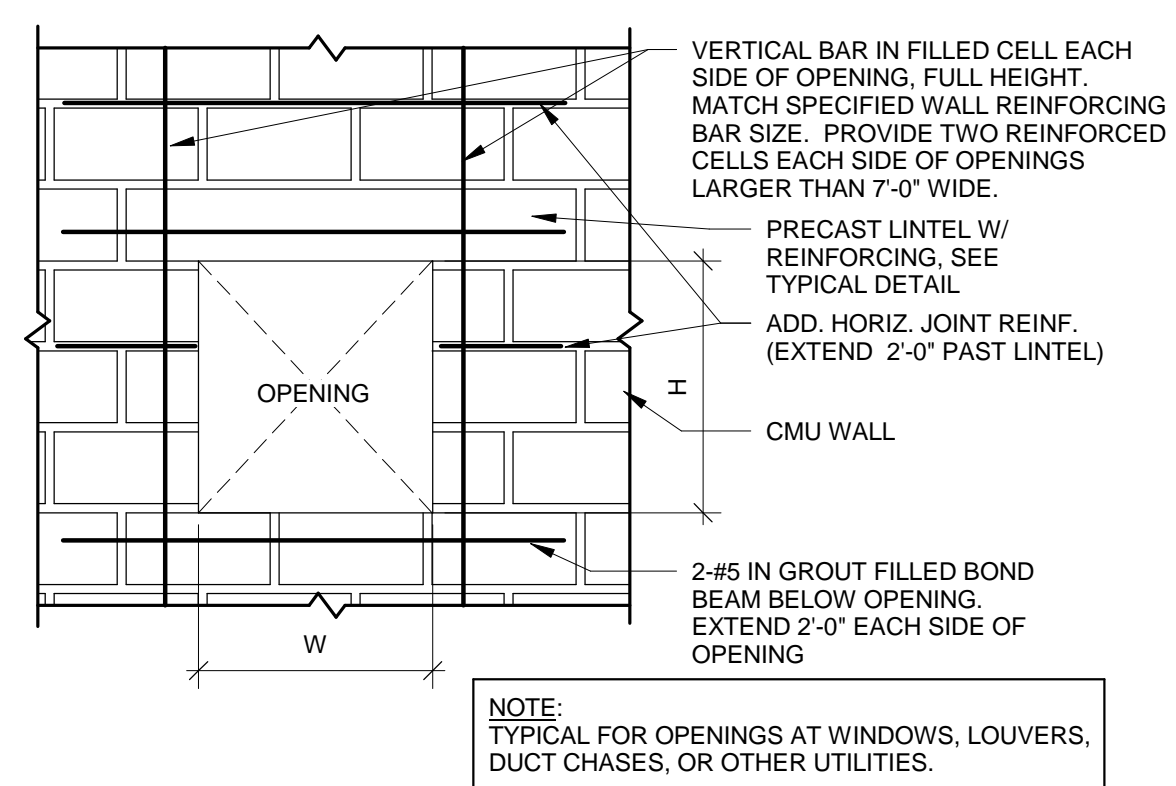
7 TYPICAL 2 STORY CONCRETE COLUMN
3/4" = 1'-0"



8 TYPICAL MASONRY CONTROL JOINT
3/4" = 1'-0"



9 TYPICAL MASONRY WALL OPENING LINTEL DETAIL
3/4" = 1'-0"



10 TYPICAL MASONRY WALL OPENING REINFORCING
3/4" = 1'-0"

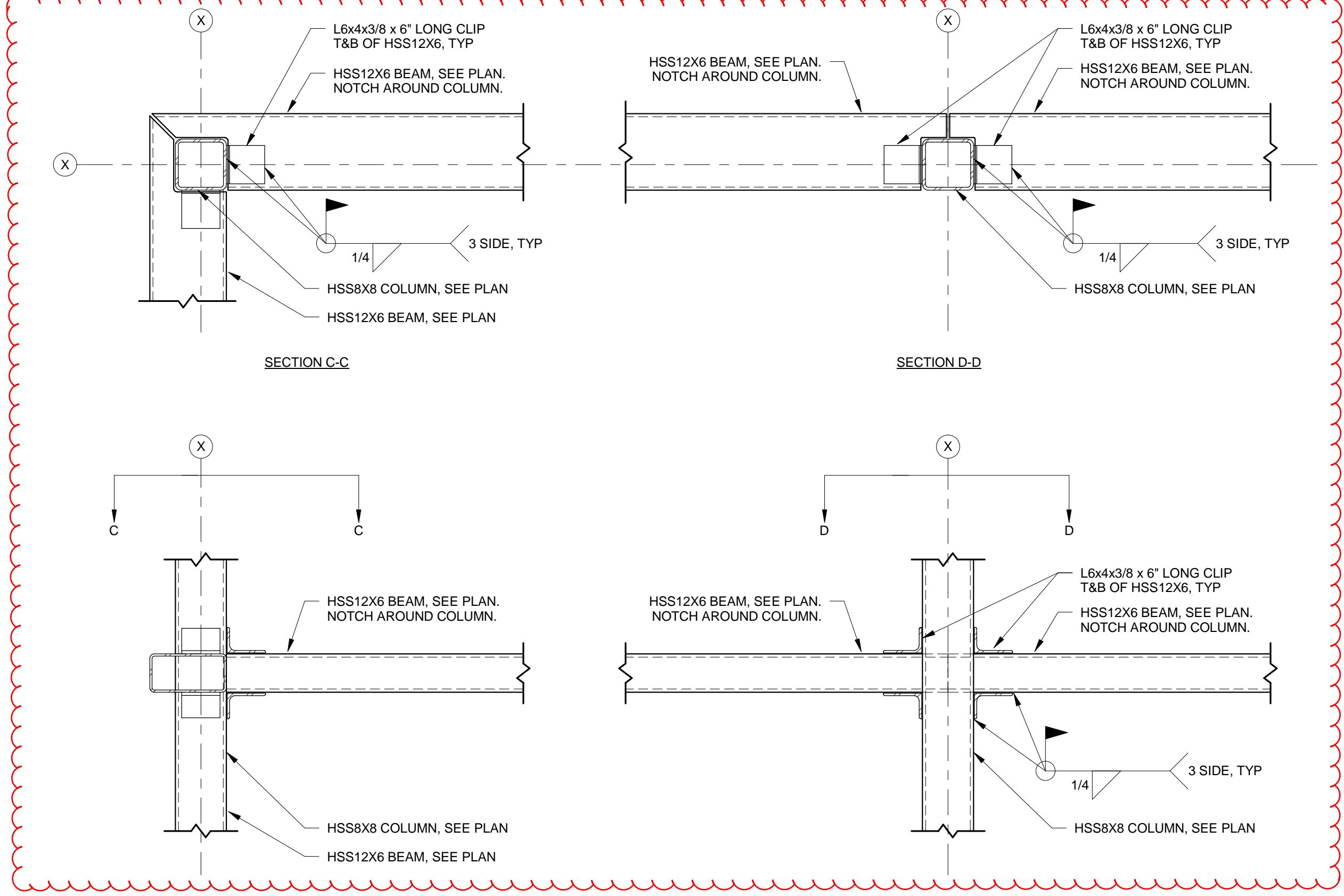
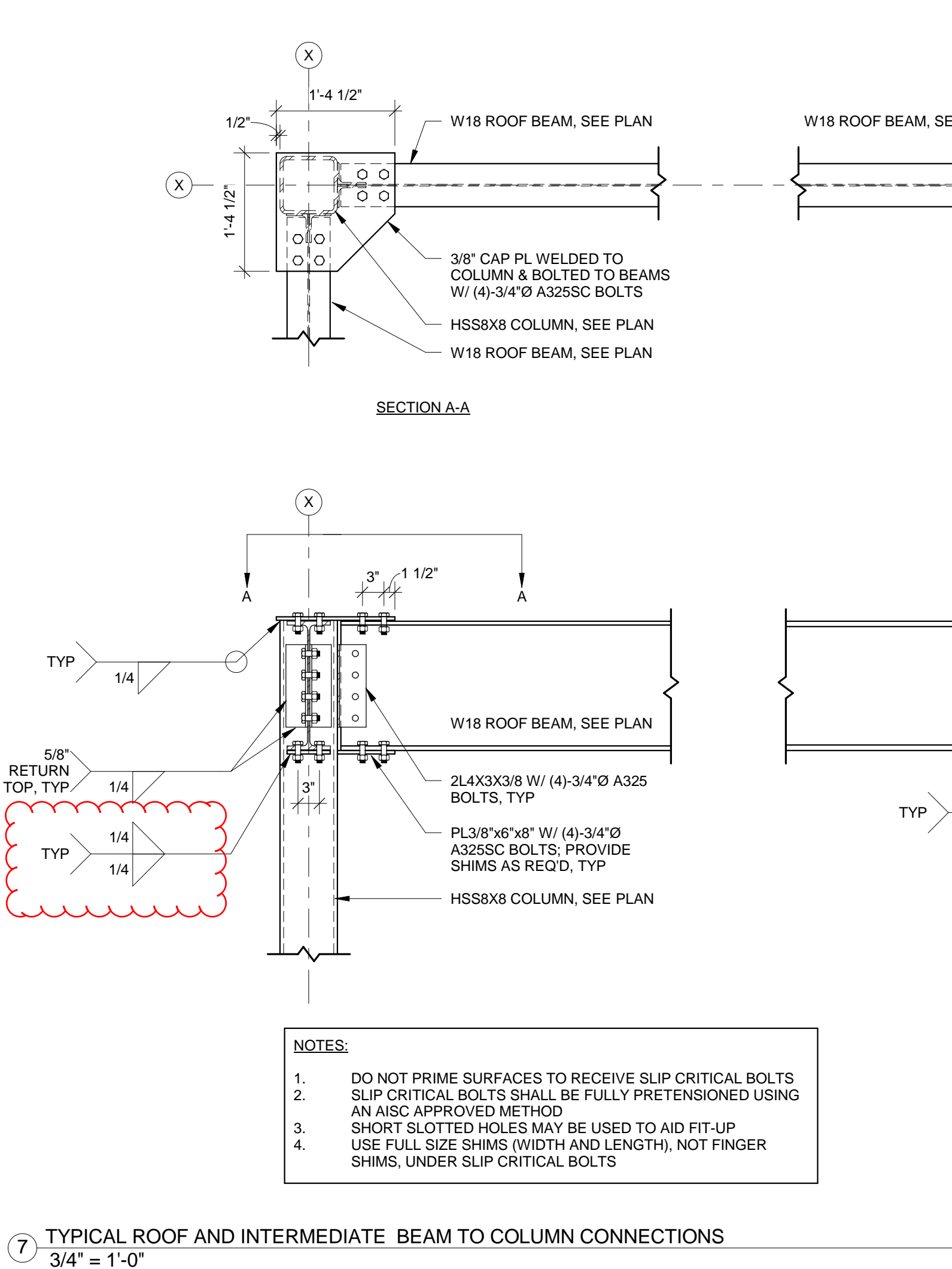
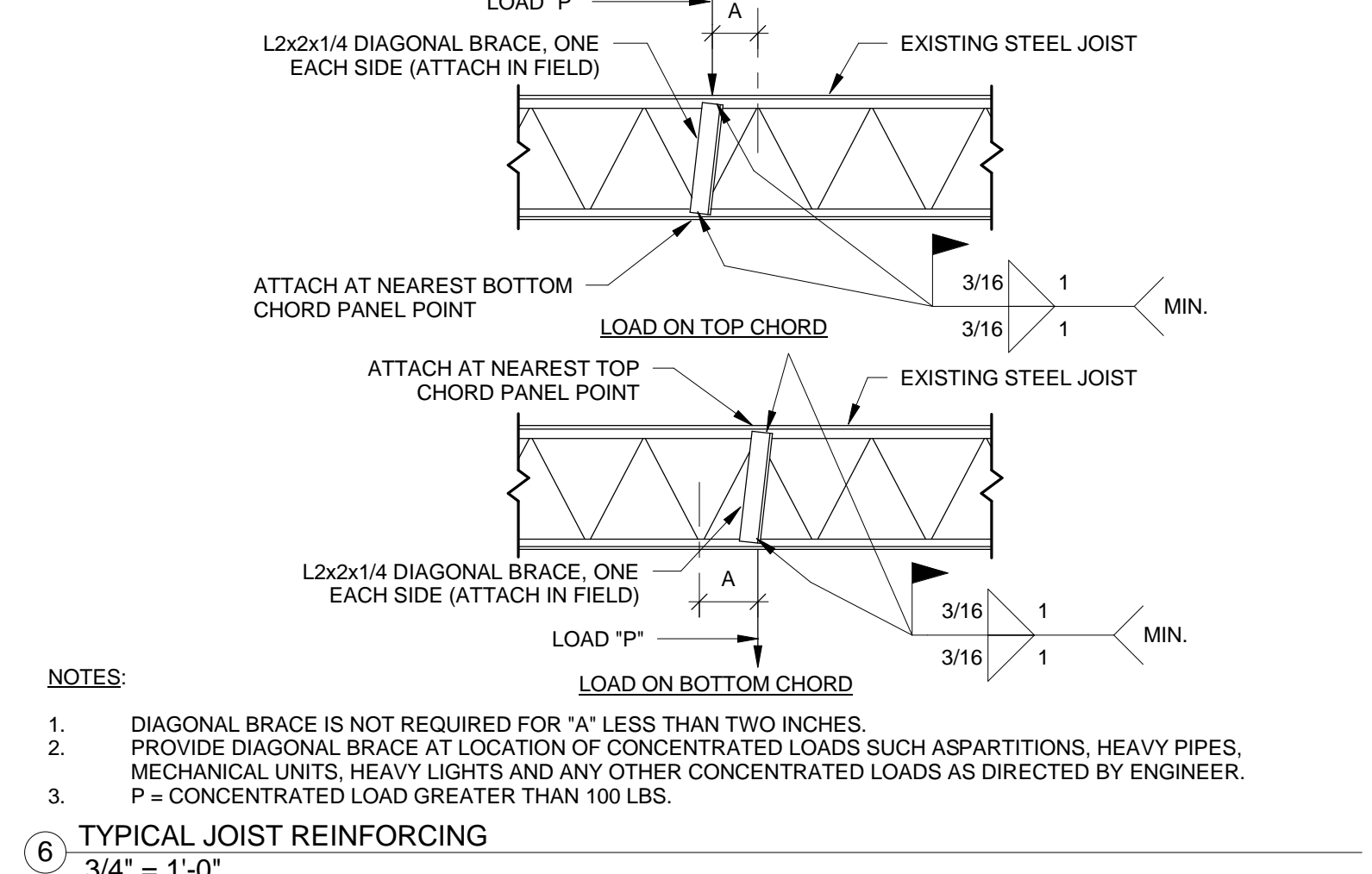
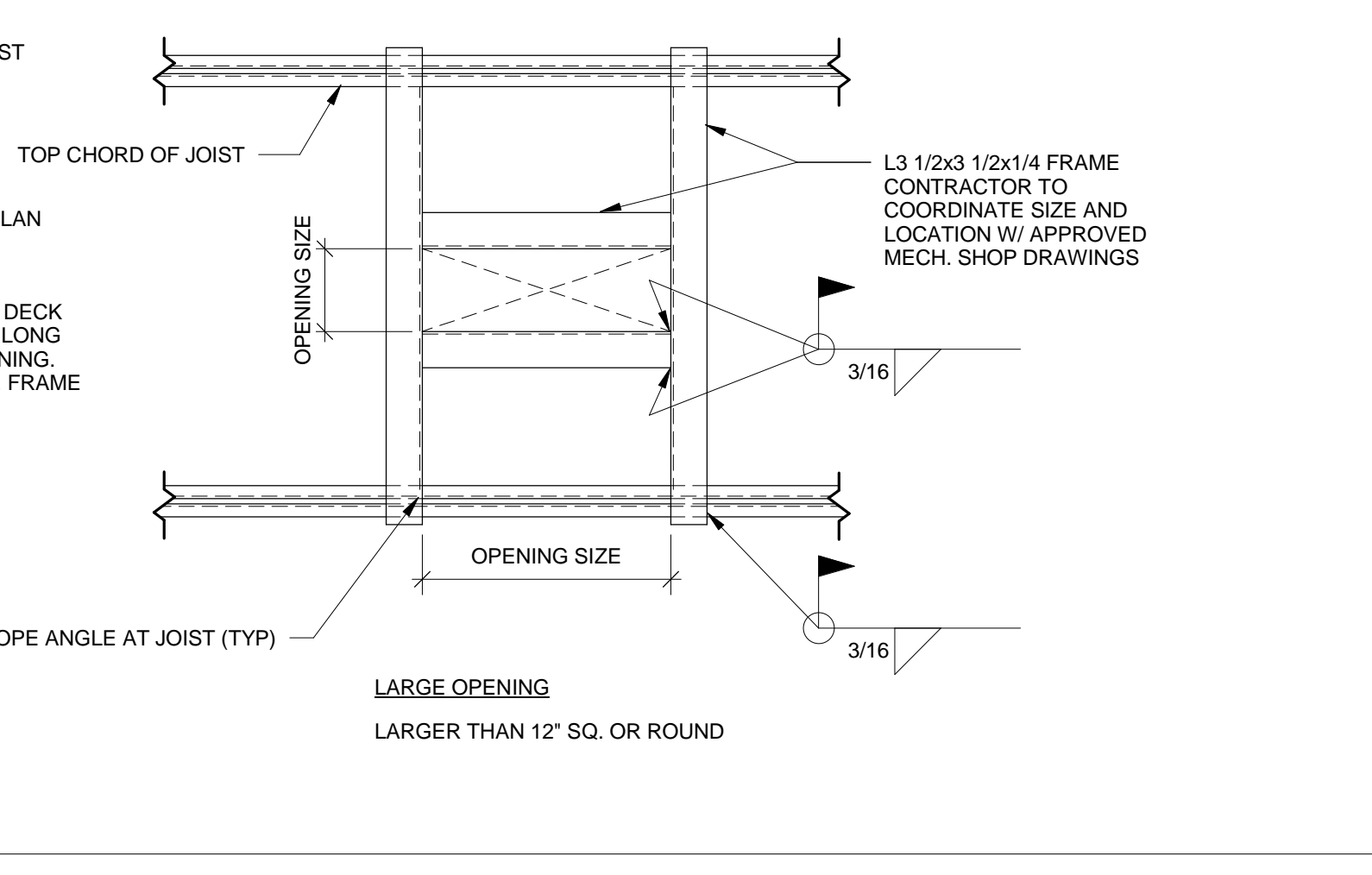
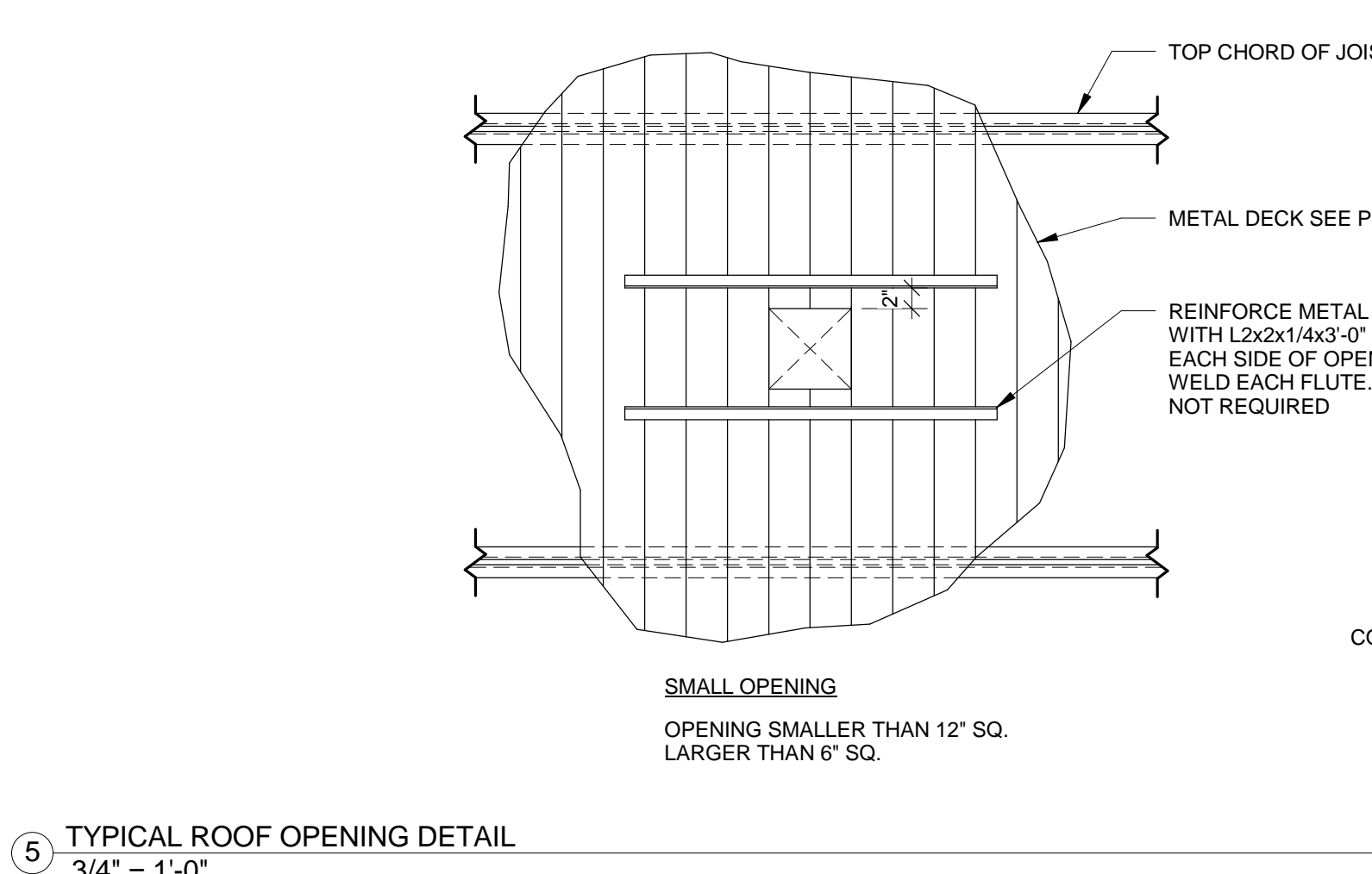
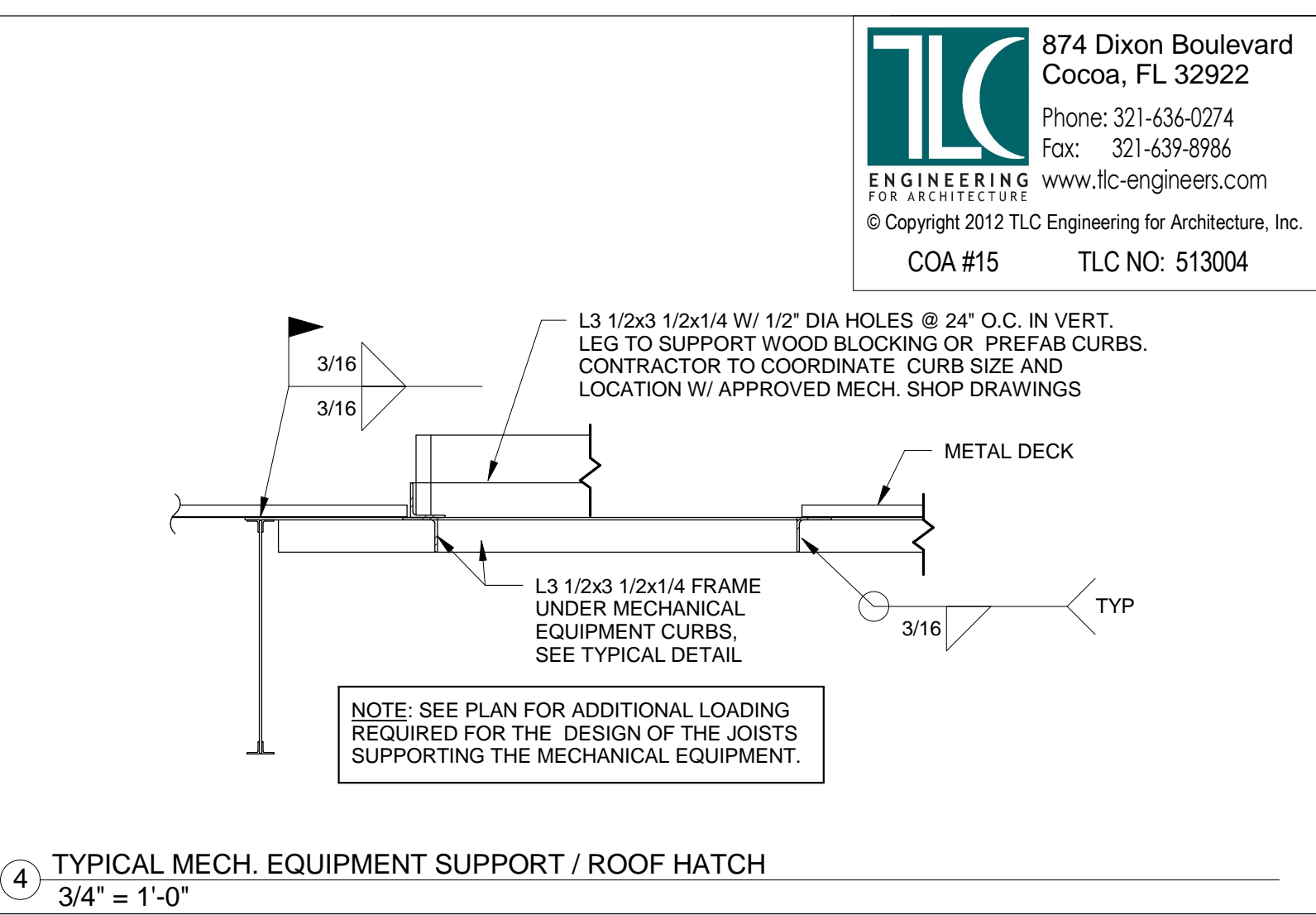
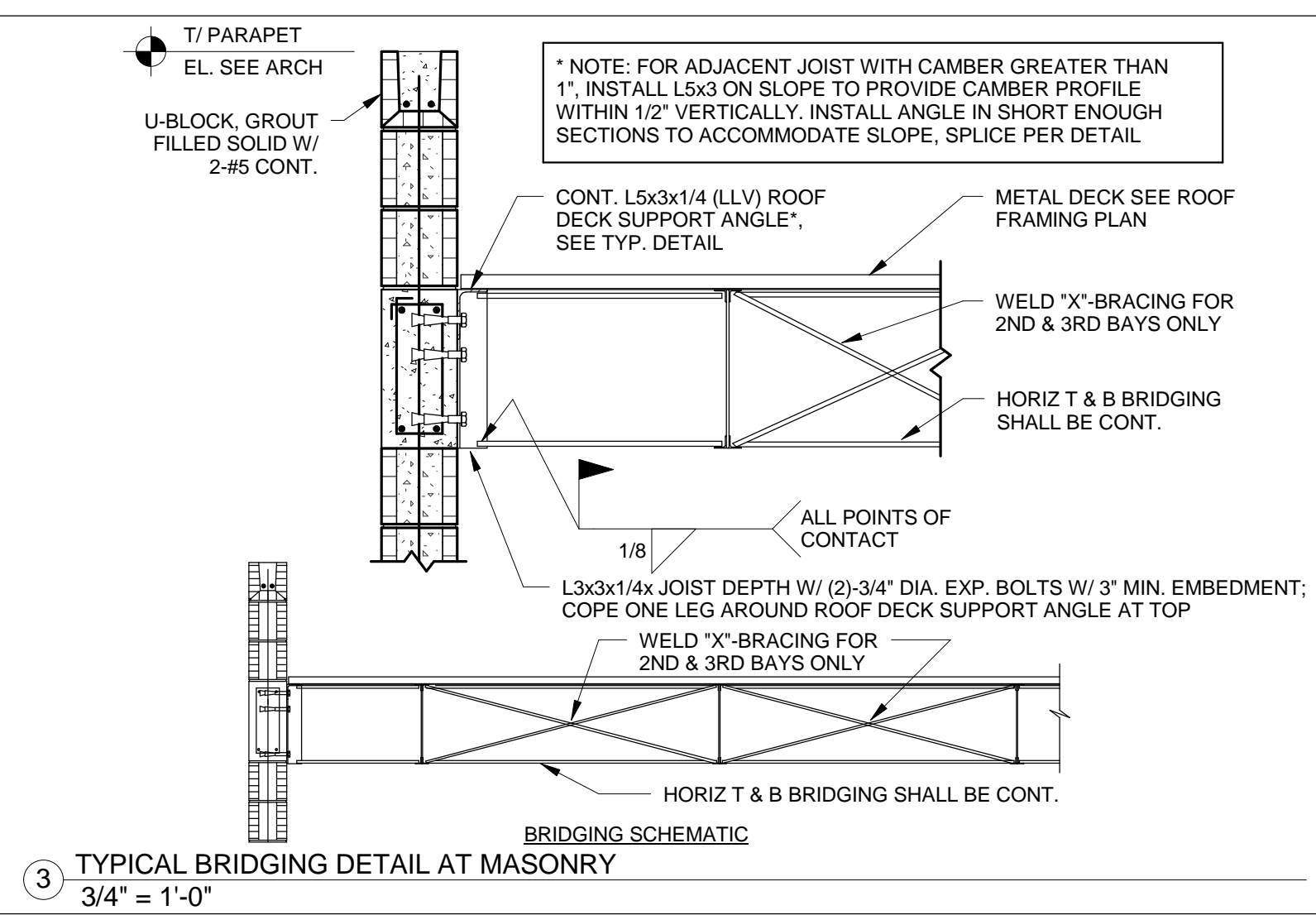
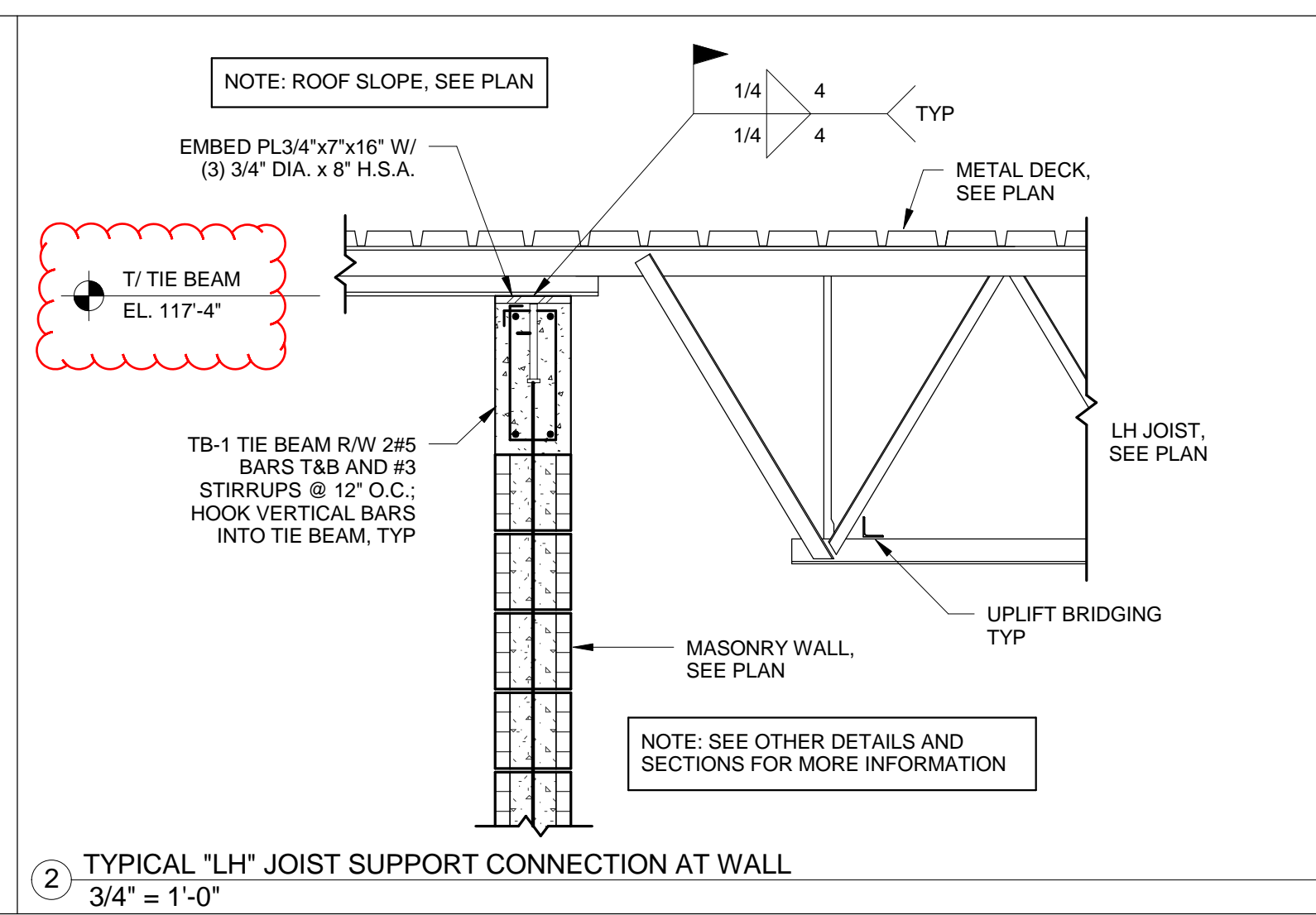
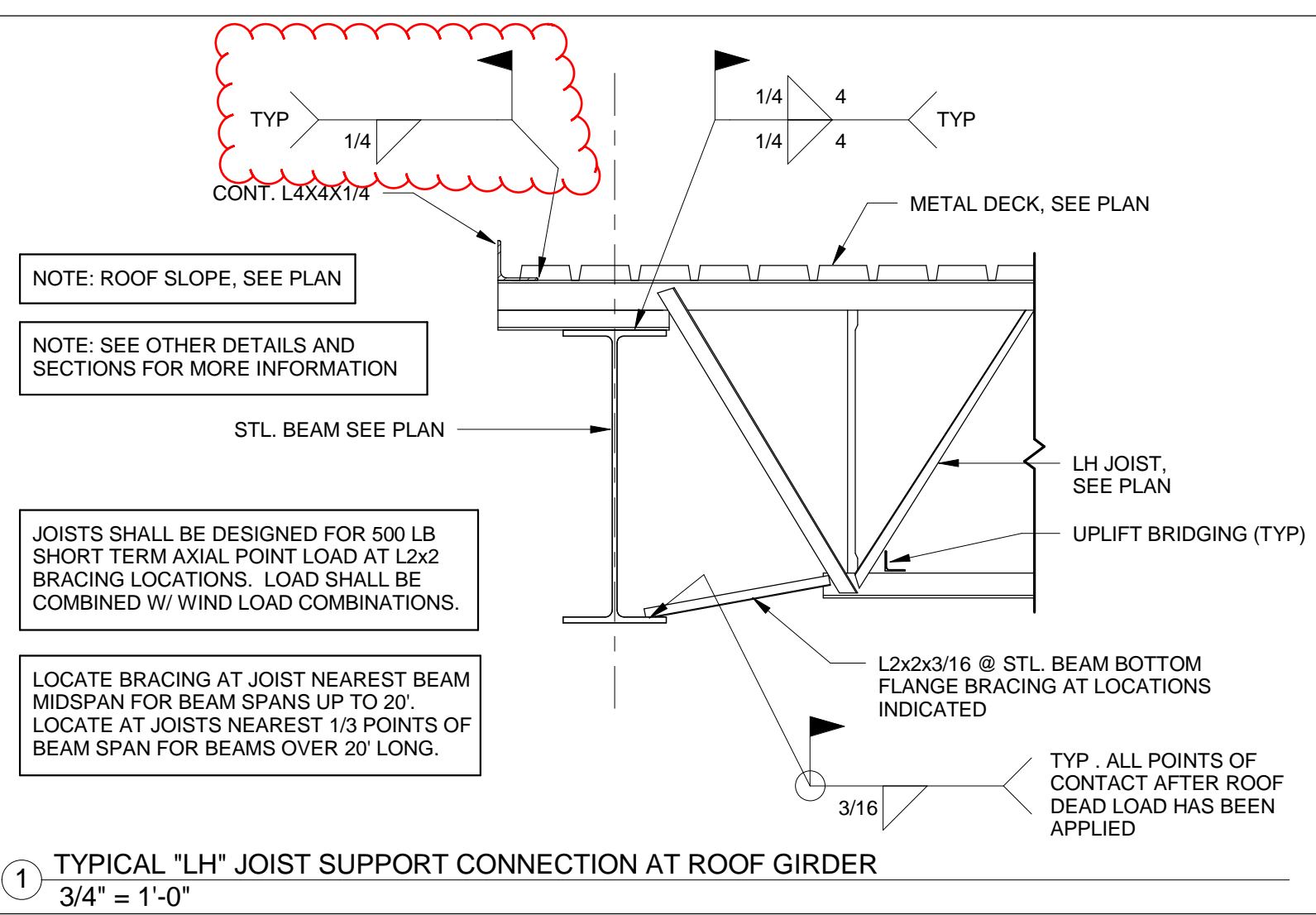
REVISIONS AND UPDATES		
04.29.13		REVISED FOR BID ADDENDUM #01
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW
LIVE OAK, FLORIDA

ARCHITECTS IN ASSOCIATION RODD, ZWICK & KERR
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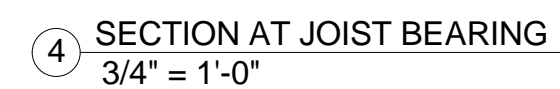
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