

GENERAL REQUIREMENTS

- A. THE GENERAL STRUCTURAL NOTES EMPLOY THE FOLLOWING DEFINITIONS AND ABBREVIATIONS:
1. CONTRACT DOCUMENTS – THE LATEST SET OF DRAWINGS, SPECIFICATIONS, AND RECORDED ADDENDA AND AMENDMENTS ISSUED FOR BID OR CONSTRUCTION.
 2. LICENSED PROFESSIONAL (STRUCTURAL) ENGINEER – AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND QUALIFIED TO PERFORM THE WORK REQUIRED.
 3. STRUCTURAL ENGINEER OF RECORD – LICENSED PROFESSIONAL ENGINEER WHO IS IN RESPONSIBLE CHARGE FOR THE PREPARATION, SIGNING, DATING, SEALING, AND ISSUING OF STRUCTURAL ENGINEERING DOCUMENTS FOR ENGINEERING SERVICE OR CREATIVE WORK.
 4. DELEGATED ENGINEER – A LICENSED PROFESSIONAL ENGINEER WHO PROVIDES SERVICES OR CREATIVE WORK REGARDING A PORTION OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT. TYPICALLY, DELEGATED ENGINEERS FALL INTO ONE OF THE FOLLOWING CATEGORIES:
 - a. AN INDEPENDENT CONSULTANT
 - b. AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR
 - c. AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR
 5. DELEGATED ENGINEERING DOCUMENTS – ENGINEERING DOCUMENTS THAT ARE PREPARED BY A DELEGATED ENGINEER.
 6. DESIGN TEAM – DESIGN PROFESSIONALS INCLUDING THE ARCHITECT, STRUCTURAL ENGINEER, CIVIL ENGINEER, MEP ENGINEER, AND ANY OTHER CONSULTANT THAT ISSUES CONTRACT DOCUMENTS.
 7. CONTRACTOR – GENERAL CONTRACTOR, CONSTRUCTION MANAGER, DESIGN BUILDER, OR ANY OTHER ENTITY CONTRACTED BY THE OWNER TO PERFORM THE WORK.
 8. SHOP DRAWINGS – DRAWINGS DEPICTING INSTALLATION MEANS AND METHODS AND CATALOG INFORMATION ON STANDARD PRODUCTS. SHOP DRAWINGS SHALL BE PREPARED BASED ON ENGINEERING DIRECTION CONTAINED IN CONTRACT DOCUMENTS BY A CONTRACTOR, FABRICATOR, MANUFACTURER, OR LICENSED PROFESSIONAL ENGINEER, FOR INCORPORATION INTO THE PROJECT.
 9. ESTABLISHED CHANNELS – AT THE ONSET OF THE PROJECT, ARCHITECT, OWNER, AND CONTRACTOR SHALL ESTABLISH DESIRED LINES OF COMMUNICATION BETWEEN ALL PROJECT PARTIES. THESE AGREED UPON LINES OF COMMUNICATION ARE THE ESTABLISHED CHANNELS.
- B. GENERAL STRUCTURAL NOTES ARE APPLICABLE TO THE DESIGN AND CONSTRUCTION OF THE ENTIRE PROJECT AND THIS ARE APPLICABLE TO EVERY SHEET WITHIN THIS SET.
- C. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION, OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS, UNLESS NOTED OTHERWISE.
- D. ISOMETRIC VIEWS ARE FOR VISUALIZATION PURPOSES ONLY AND DO NOT CONVEY ALL OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- E. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE DRAWINGS AND ANY OTHER CONTRACT DOCUMENT OR APPLICABLE CODE OR STANDARD OF PRACTICE DURING BIDDING, THE PROVISION RESULTING IN THE GREATER COST APPLIES. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT DURING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR CLARIFICATION TO THE DESIGN TEAM, WHO WILL PROVIDE A WRITTEN RESPONSE IN RETURN.
- F. SPECIFICATIONS HAVE BEEN ISSUED ON THIS PROJECT BY THE STRUCTURAL ENGINEER OF RECORD AND ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS.
- G. SEE SPECIFICATIONS FOR MATERIALS TESTING REQUIREMENTS.
- H. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES OR PROCEDURES, PROJECT SAFETY, THE ACTS AND OMISSIONS OF THE CONTRACTOR, OR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- I. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH OTHER TRADES INCLUDING, BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, AND MEP FOR FLOOR SLAB STEPS, SLOPES AND CURBS, FLOOR SLAB FINISH, OPENINGS IN STRUCTURAL FLOORS, ROOFS AND WALLS, ETC.
- J. THE BUILDING HAS BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD TO RESIST THE CODE REQUIRED VERTICAL AND LATERAL FORCES IN ITS FULLY COMPLETED CONDITION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING, SHORING, AND OTHER CONSTRUCTION SUPPORTS NECESSARY TO ENSURE THE BUILDING'S STABILITY AND SAFETY THROUGHOUT THE DURATION OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PROVIDE THE ANALYSIS AND DESIGN NECESSARY TO DETERMINE POTENTIALLY OVERLOADED, UNSTABLE, OR HAZARDOUS CONDITIONS THAT MAY OCCUR AT ANY STAGE DURING CONSTRUCTION.
- K. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS.
- L. THE CONTRACTOR SHALL NOT EMPLOY CONSTRUCTION MEANS OR METHODS THAT MAY DAMAGE UTILITIES, ADJACENT BUILDINGS, OR PROPERTY. DOCUMENTATION OF ADJACENT CONDITIONS PRIOR TO CONSTRUCTION IS RECOMMENDED. FURTHER, THE CONTRACTOR SHALL EITHER ADEQUATELY CONFINE THE SITE OR PROTECT ADJACENT PROPERTY FROM DAMAGE.
- M. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROJECT SAFETY AND OSHA REQUIREMENTS. SHOULD THE STRUCTURAL ENGINEER OF RECORD NOTIFY THE CONTRACTOR OF A POTENTIALLY UNSAFE CONDITION, IT IS SOLELY AS A COURTESY FROM ONE PROFESSIONAL TO ANOTHER. IT SHOULD NOT BE INTERPRETED AS THE STRUCTURAL ENGINEER OF RECORD ASSUMING ANY RESPONSIBILITY FOR PROJECT SAFETY.
- N. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFE SPAN AND ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE, BUT NOT BE 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 A SALINE OR OTHER HARSH CHEMICAL ENVIRONMENT.
- O. THE USE OF DE-ICING CHEMICALS ON ANY EXPOSED STRUCTURAL ELEMENT IS DISCOURAGED AND WILL ACCELERATE DETEIORATION OF STRUCTURAL ELEMENTS.
- P. THE BUILDING OWNER SHALL NOT ALTER OR MODIFY ANY STRUCTURAL ELEMENT WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER. FURTHER, BUILDING OWNER SHALL NOT RENOVATE, REPAIR, ADD-ON TO, OR OTHERWISE MODIFY THE EXISTING STRUCTURAL SYSTEMS WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER.
- Q. CONTRACT DRAWINGS SHOW MAJOR OPENINGS IN FLOORS AND WALLS AND DO NOT NECESSARILY SHOW ALL OPENINGS REQUIRED. THE CONTRACTOR SHALL COORDINATE ALL OPENING SIZES AND LOCATIONS BETWEEN ALL DISCIPLINES AND TRADES. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR REQUIREMENTS WITHIN THE CONTRACT DOCUMENTS. OPENINGS REQUIRED, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- R. THE CONTRACTOR SHALL COORDINATE PIPING AND CONDUIT EMBEDDED IN OR ATTACHED TO SLABS, SLABS-ON-DECK, BEAMS, AND COLUMNS. ANY REQUIRED MODIFICATIONS TO STRUCTURAL MEMBERS OR THEIR REINFORCEMENT AS A RESULT OF EMBEDMENT OR ATTACHMENT SHALL BE SUBMITTED TO THE DESIGN TEAM FOR THEIR REVIEW. SEE GENERAL STRUCTURAL NOTES SECTION "DESIGN CRITERIA" FOR LIMITATIONS OF MEP LOADING ON STRUCTURAL SYSTEMS.
- S. THE STRUCTURAL ENGINEER OF RECORD'S ROLE DURING CONSTRUCTION
1. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT ASSUME CONTROL OF, OR RESPONSIBILITY FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, PROJECT SAFETY, THE ACTS AND OMISSIONS OF THE CONTRACTOR, OR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 2. STRUCTURAL ENGINEER OF RECORD SHALL NOT HAVE AUTHORITY TO STOP THE WORK OR AUTHORIZE CHANGES TO ANY CONTRACT SUM.
 3. PERIODIC SITE VISITS BY REPRESENTATIVES OF THE STRUCTURAL ENGINEER OF RECORD ARE SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS AND THAT OBSERVATIONS ARE QUALITATIVE. NOT QUANTITATIVE. THIS LIMITED INFORMATION WILL BE USED TO ADVISE THE OWNER/CONTRACTOR/ARCHITECT OF POTENTIAL DEFICIENCIES.
- T. CLARIFICATION OF POSITION OF STRUCTURALLY FRAMING ELEMENTS
1. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS, DO NOT SCALE ANY DIMENSIONS.
 2. IF NOT INDICATED ON DRAWINGS, ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS.
 3. CENTER LINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTION, UNLESS NOTED OTHERWISE.
 4. CENTER LINES OF FOOTINGS, GRADE BEAMS, AND WALLS SHALL COINCIDE WITH CENTER LINES OF FOUNDATIONS, UNLESS NOTED OTHERWISE.
 5. CENTER LINES OF FRAMING MEMBERS SHALL COINCIDE WITH COLUMN CENTER LINES, UNLESS NOTED OTHERWISE.
 6. ELEVATIONS SHOWN ARE TO TOP OF FOUNDATIONS, SLABS, OR BEAMS, UNLESS NOTED OTHERWISE.
- U. SEE ARCHITECTURAL, RELV, MEP, AND VERTICAL TRANSPORTATION CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:
1. CIVIL
 - a. SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS
 - b. SITE PREPARATION
 - c. BACKFILLING MATERIALS AND REQUIREMENTS INCLUDING DRAINAGE ADJACENT TO RETAINING WALLS
 - d. SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE
 - e. NEW AND EXISTING SITE UTILITIES
 2. ARCHITECTURAL
 - a. PLAN DIMENSIONS AND PROJECT DATUM
 - b. SLAB EDGE DIMENSIONS AND FINISH ELEVATIONS
 - c. WATERPROOFING AND DAMP PROOFING DETAILS
 - d. SLAB SLOPES, STEPS AND DEPRESSIONS, RAMPS, TRENCHES
 - e. EMBEDMENTS, INSERTS, BLOCKOUTS, ETC.
 - f. CONCRETE FINISHES AND TOPPING SLABS
 - g. CONCRETE CURBS AND HOUSEKEEPING PADS
 - h. INTERIOR NON-STRUCTURAL MASONRY PARTITIONS
 - i. LIFE SAFETY, FIRE RATING
 - j. METAL PAN STAIRS AND SUPPORTS
 - k. OPERABLE PARTITIONS
 3. MEP
 - a. PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION
 - b. FLOOR DRAINS
 - c. UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS
 - d. EQUIPMENT CURBS
 - e. CONDUITS AND EMBEDMENTS IN WALLS AND SLABS
- THIS BUILDING DOES NOT QUALIFY AS A THRESHOLD BUILDING PER CHAPTER 563.71 OF THE FLORIDA STATUTES. HOWEVER, VARIOUS INSPECTIONS ARE REQUIRED TO BE PERFORMED BY THE ENFORCING AGENCY. FOR THIS PROJECT, STRUCTURAL SYSTEMS REQUIRING INSPECTION INCLUDE:
1. REINFORCED CONCRETE
 2. STRUCTURAL PRECAST & CONNECTIONS
 3. REINFORCED MASONRY
 4. STRUCTURAL STEEL & CONNECTIONS

ELECTRONIC DATA/REPRODUCTION

- A. ALL INFORMATION CONTAINED IN THE ELECTRONIC FILES OF THE CONTRACT DOCUMENTS ARE INSTRUMENTS OF SERVICE OF THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD AND SHALL NOT BE USED FOR OTHER PROJECTS, ADDITIONS TO THE PROJECT, OR THE COMPLETION OF THE PROJECT BY OTHERS. ELECTRONIC FILES OF THE STRUCTURAL DOCUMENTS REMAIN THE PROPERTY OF JEZERINAC GROUP AND IN NO CASE SHALL THEIR TRANSFER BE CONSIDERED A SALE.
- B. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREIN. THE USE OF ELECTRONIC FILES DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROPER CHECKING AND COORDINATION OF DIMENSIONS, DETAILS, SIZE, AND QUANTITIES.
- C. DIMENSIONS AND ELEMENT SIZES AND LOCATIONS IN THE ELECTRONIC FILES MAY NOT BE PRECISE AND, IN SOME CASES, HAVE BEEN INTENTIONALLY ALTERED FOR PRESENTATION PURPOSES. DO NOT SCALE DIMENSIONS ELECTRONICALLY OR OTHERWISE.
- D. WHEN USED FOR THE PREPARATION OF SHOP DRAWINGS, ALL INFORMATION NOT APPLICABLE TO THE SUBCONTRACT SHALL BE REMOVED FROM THE DRAWINGS, INCLUDING, BUT NOT LIMITED TO: SHEET NUMBERS, SECTION MARKS, TITLE BLOCKS, AND REFERENCES TO THE CONTRACT DOCUMENTS.

SUBMITTALS

- A. REFER TO DIVISION 01 OF SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND REQUIREMENTS. REFER TO THE APPLICABLE SPECIFICATION SECTIONS FOR TECHNICAL CONTENT.
- B. SUBMIT SPECIFIC COMPONENTS SUCH AS COLUMNS, FOUNDATIONS, ETC. IN A SINGLE PACKAGE. SUBMIT SIMILAR FLOORS TOGETHER.
- C. TEN WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT, FOR REVIEW AND COMMENT BY THE STRUCTURAL ENGINEER OF RECORD, A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER OF RECORD. THE STRUCTURAL ENGINEER OF RECORD SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER OF RECORD WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
- D. THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
1. THE SUBMITTAL IS REQUESTED.
 2. THE SUBMITTAL IS BASED ON THE LATEST DESIGN.
 3. THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL THE DIFFERENCES FROM THE CONTRACT DOCUMENTS ON THE FIRST SUBMITTAL.
 4. THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL CHANGES AND ADDITION FROM PREVIOUS SUBMITTAL.
 5. THE ARCHITECTS AND STRUCTURAL ENGINEER OF RECORD'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
 6. THE WORK IS COORDINATED AMONGST ALL CONSTRUCTION TRADES.
 7. THE SUBMITTAL IS COMPLETE.
 8. THE SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, AND SPECIFICATION SECTION NUMBER FOR THE SUBMITTAL.
- E. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT.
- F. THE STRUCTURAL ENGINEER OF RECORD SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS.
- G. FOR THE COMPONENTS REVIEWED BY A DELEGATED ENGINEER, PROVIDE SHOP DRAWINGS, DESIGN CALCULATIONS, AND A COVER LETTER SIGNED AND SEALED BY THE DELEGATED ENGINEER. LETTER SHALL INDICATE THAT THE SHOP DRAWINGS ARE IN CONFORMANCE WITH THE DELEGATED ENGINEER'S CALCULATIONS. REFER TO APPLICABLE SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
- H. DEFERRED SUBMITTALS ARE MANUFACTURER OR CONTRACTOR DESIGNED COMPONENTS PER THE CONTRACT DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN TEAM HAS REVIEWED AND THE BUILDING OFFICIAL HAS APPROVED. SEE BELOW FOR THE LIST OF DEFERRED SUBMITTALS.
- I. THE FOLLOWING SUBMITTALS ARE REQUIRED TO BE SUBMITTED FOR STRUCTURAL ENGINEER OF RECORD REVIEW AS OUTLINED IN THE SPECIFICATIONS:

031000	CONCRETE FORMWORK	(SS, CALC)
032000	CONCRETE REINFORCEMENT LAYOUT	(S)
033000	CONCRETE MIX DESIGNS	(CALC, TA)
033000	CONCRETE CONSTRUCTION JOINT LAYOUT	(S)
034100	STRUCTURAL PRECAST CONCRETE ELEMENT	(DF, SS, CALC)
034100	STRUCTURAL PRECAST CONCRETE CONNECTION	(DF, SS, CALC)
042200	MASONRY REINFORCEMENT LAYOUT	(S)
051200	STRUCTURAL STEEL	(DF, S, CALC)
051200	STRUCTURAL STEEL CONNECTIONS	(S)
051200	SHEAR STUD LAYOUT	(S)
051400	STRUCTURAL ALUMINUM FRAMING	(DF, SS, CALC)
052100	STEEL JOISTS, BRIDGING, AND CONNECTIONS	(DF, SS, CALC)
053100	STEEL COMPOSITE DECK	(S)
053100	STEEL FORM DECK	(S)
053100	STEEL ROOF DECK	(S)
054000	COLD-FORMED METAL FRAMING USED FOR EXTERIOR	(SS, CALC) (SEE ARCH)
	EXTERIOR CLADDING SYSTEM	(SS, CALC, REC)
	SHORING AND RESHORING	(DF, SS, CALC)
	HANDRAIL, GUARDRAIL, RAILING	(SS, CALC, REC)
312319	DEWATERING	(GEO, REC)

S =	SHOP DRAWING REQUIRED
DF =	DEFERRED SUBMITTAL
SS =	SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
CALC =	SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
REC =	ITEMS SUBMITTED FOR RECORD ONLY AND WILL NOT HAVE STRUCTURAL ENGINEER OF RECORD SHOP DRAWING STAMP AFFIXED.
GEO =	ITEMS SUBMITTED TO CONSTRUCTION GEOTECHNICAL ENGINEER FOR THEIR REVIEW.
TA =	ITEMS SUBMITTED TO OWNER'S TESTING AGENCY FOR THEIR REVIEW.

GOVERNING CODES & STANDARDS

BUILDING CODE:	FBC 2023	FLORIDA BUILDING CODE, BUILDING
STANDARDS:	ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
	ACI 318	AMERICAN CONCRETE INSTITUTE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
	TMS 402	THE MASONRY SOCIETY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
	AISC 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
	AWS D1.1	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - STEEL
	AWS D1.3	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - SHEET STEEL
	AWS D14	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - REINFORCING STEEL
	AISI S100	AMERICAN IRON AND STEEL INSTITUTE: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS

DESIGN CRITERIA

- A. STRUCTURE LOCATION:
LONGITUDE: -80.351
LATITUDE: 27.317
- B. LOADING:
1. SUPERIMPOSED DEAD & LIVE LOADS:
ALL DEAD LOADS LISTED BELOW ARE IN ADDITION TO THE STRUCTURE'S SELF-WEIGHT.
- | | DEAD LOAD | LIVE LOAD |
|----------------------|-----------|--|
| ROOF: | | |
| TYPICAL | 10 PSF | 20 PSF REDUCIBLE |
| FLOOR: | | |
| OFFICE | 10 PSF | 50 PSF REDUCIBLE + 15 PSF PARTITION LOAD |
| PUBLIC AREAS | 20 PSF | 100 PSF NON-REDUCIBLE |
| MECHANICAL EQUIPMENT | SEE PLAN | N/A |
2. RAIN LOAD:
DESIGN RAINFALL: 4.39"/HOUR (100-YEAR, 1-HOUR RAINFALL)
RAINWATER AT LOWEST POINT OF ROOF SHALL NOT POND DURING DESIGN RAINFALL OR EXCEED 3.75" DURING DESIGN RAINFALL
DESIGN RAIN LOAD, R: 20 PSF
 3. SNOW LOAD:
GROUND SNOW LOAD, P_g: 0 PSF
 4. WIND LOAD:
ULTIMATE DESIGN WIND SPEED, V_{ult}: 159 MPH
NOMINAL DESIGN WIND SPEED, V_{ref}: 123 MPH
RISK CATEGORY: I
WIND EXPOSURE CATEGORY: C
ENCLOSURE CLASSIFICATION: ENCLOSED
INTERNAL PRESSURE COEFFICIENT: +/- 0.18
COMPONENT & CLADDING DESIGN PRESSURES: SEE WIND PRESSURE DIAGRAMS
BUILDING IS EXEMPTED FROM DESIGN FOR TORNADO LOADS PER ASCE 7-22 SECTION 32.1.1 AND FBC 2023 SECTION 1609.5, BECAUSE IT IS RISK CATEGORY II.
 5. SEISMIC LOAD:
RISK CATEGORY: II
SEISMIC IMPORTANCE FACTOR, I_e: 1.0
SITE CLASS: D
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_e: 0.049 g
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S₁: 0.027 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{0.05}: 0.053 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{0.1}: 0.044 g
SEISMIC DESIGN CATEGORY: A
SEISMIC FORCE RESISTING SYSTEM: NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
- C. HANDRAIL AND GUARDRAIL LOADS:
CONCENTRATED AND DISTRIBUTED LOADS ARE TO BE APPLIED AT THE HANDRAIL OR TOP RAIL IN ANY DIRECTION. CONCENTRATED AND DISTRIBUTED LOADS ARE NOT TO BE APPLIED CONCURRENTLY.
- | | CONCENTRATED LOAD | DISTRIBUTED LOAD |
|--|-------------------|------------------|
| | 200 LB | 50 PLF |
- D. FUTURE EXPANSION:
NO PROVISIONS HAVE BEEN MADE FOR FUTURE VERTICAL OR HORIZONTAL EXPANSION OF THE STRUCTURE.
- E. SERVICEABILITY:
1. DEFLECTION LIMITS: TOTAL LOAD DEFLECTION ONLY APPLIES TO THE DEFLECTION DUE TO THE CREEP COMPONENT OF LONG-TERM DEAD LOAD DEFLECTION PLUS THE SHORT-TERM DEFLECTION. LONG-TERM DEFLECTION OF WOOD STRUCTURAL MEMBERS SHALL BE CALCULATED IN ACCORDANCE WITH THE AWC NDS. IT IS PERMITTED TO ESTIMATE THE CREEP-COMPONENT OF THE LONG-TERM DEFLECTION AS THE IMMEDIATE DEAD LOAD DEFLECTION.
 - a. ROOF MEMBERS
 - i. TOTAL LOAD DEFLECTION: L/180
 - ii. TRANSITORY LOAD DEFLECTION: L/240
 - b. FLOOR MEMBERS
 - i. TOTAL LOAD DEFLECTION: L/240
 - ii. LIVE LOAD DEFLECTION: L/360
 - c. EXTERIOR WALLS & CLADDING
 - i. WIND LOAD DEFLECTION: L/360
 - d. INTERIOR PARTITIONS
 - i. LIVE LOAD DEFLECTION: L/360
 2. DRIFT LIMITS
 - a. INTERSTORY DRIFT: H/600
 - b. TOTAL STRUCTURE DRIFT: H/600

EARTHWORK & FOUNDATIONS

- A. GEOTECHNICAL INVESTIGATION REPORT
1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS FOLLOWS:
 - a. REPORT TITLE: SUBSURFACE SOIL EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION
PORT ST. LUCIE LIBRARY
180 SW PRIMA VISTA BOULEVARD
PORT ST. LUCIE, FLORIDA
WORK AUTHORIZATION No. 03
 - b. PREPARED BY: ARDAMAN & ASSOCIATES, INC. 8008 S. ORANGE AVENUE, ORLANDO, FL
 - c. DATED: SEPTEMBER 16, 2022
 2. THE GEOTECHNICAL INVESTIGATION REPORT IS AVAILABLE TO THE CONTRACTOR UPON REQUEST TO THE OWNER. THE INFORMATION HEREIN MAY BE USED BY THE CONTRACTOR FOR HIS GENERAL REFERENCE ONLY. THE GEOTECHNICAL INVESTIGATION REPORT RECOMMENDATIONS SHALL SUPERSEDE THE MINIMUM CRITERIA STATED IN THE STRUCTURAL GENERAL NOTES.
- B. SHALLOW FOUNDATIONS:
1. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
 2. FOUNDATION SIZES AND REINFORCEMENT ARE BASED ON AN ALLOWABLE BEARING PRESSURE OF 2500 PSF PER THE GEOTECHNICAL INVESTIGATION REPORT.
 3. FOUNDATIONS SHALL BEAR A MINIMUM OF 2'-0" BELOW ADJACENT EXTERIOR GRADE.
 4. FOUNDATIONS SHALL BEAR ON COMPACTED STRUCTURAL FILL, NATURAL SOILS, OR ROCK PREPARED PER THE GEOTECHNICAL INVESTIGATION REPORT.
 5. PRIOR TO PLACEMENT OF CONCRETE, A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY SOILS CONFORMANCE TO THE RECOMMENDATIONS AND ASSUMPTIONS IN THE GEOTECHNICAL INVESTIGATION REPORT. ALL ADVERSE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD.
 6. SOILS BELOW FOUNDATIONS NOT MEETING DESIGN BEARING PRESSURE SHALL BE REMEDIATED PER THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FOUNDATIONS.
 7. CENTER ALL FOUNDATIONS UNDER THEIR RESPECTIVE COLUMNS OR WALLS, UNLESS NOTED OTHERWISE.
 8. TOP OF FOUNDATION ELEVATIONS PROVIDED ON THE CONTRACT DRAWINGS ARE FOR PURPOSE OF THE CONTRACT AND SHALL BE ADJUSTED, AS REQUIRED, AT THE TIME OF EXCAVATION TO BEAR ON PROPERLY PREPARED SUPPORT SUBGRADE (PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS).
- C. EARTHWORK AND EXCAVATION
1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING, BUT NOT LIMITED TO: LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS.
 2. EXCAVATION SHALL NOT OCCUR WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROTECTED AGAINST SETTLEMENT.
 3. THE EXTENT OF SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 5'-0" BEYOND THE BUILDING PERIMETER.
 4. THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB-ON-GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 5. UNLESS NOTED IN THE GEOTECHNICAL INVESTIGATION REPORT, COMPACT FILL TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR ASTM D-1557. EACH LAYER SHALL NOT EXCEED 8" LOOSE THICKNESS. COMPACT PRIOR TO THE PLACEMENT OF THE NEXT LAYER. COMPACTION SHALL MEET ALL RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT.
 6. PLACEMENT OF FILL AND COMPACTON SHALL BE MONITORED AND ACCEPTED BY A RETAINED TESTING AGENCY. PERFORM A MINIMUM OF ONE FIELD DENSITY TEST (ASTM D-1556 OR D-8938) FOR EVERY 2,500 SQUARE FEET OF EACH LAYER. THE TESTING AGENCY SHALL RANDOMLY SELECT TEST LOCATIONS.
 7. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF THE CONSTRUCTION DEWATERING SYSTEMS REQUIRED FOR THE EXCAVATION. AT A MINIMUM, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE.
 8. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION DEWATERING PLAN TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO BEGINNING EXCAVATION.
 9. THE CONTRACTOR SHALL INSTALL ALL NECESSARY DEWATERING SYSTEMS.

SLAB-ON-GROUND

- A. THE SLAB-ON-GROUND HAS BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- B. SLAB THICKNESSES AND REINFORCEMENT ARE BASED ON A MODULUS OF SUBGRADE REACTION OF AN ASSUMED VALUE OF 50 PCF.
- C. SUBGRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- D. FOR INTERIOR SLABS, PLACE A 10-MIL (MINIMUM) VAPOR RETARDER BETWEEN THE SOIL AND BOTTOM OF SLAB. SEE CAST-IN-PLACE CONCRETE SPECIFICATIONS FOR APPROVED VAPOR RETARDER PRODUCTS/MANUFACTURERS. DO NOT USE VAPOR RETARDERS AT EXTERIOR SLABS. SEE ARCHITECTURAL CONTRACT DOCUMENTS FOR PROJECT SPECIFIC REQUIREMENTS.
- E. IF THE SLAB-ON-GROUND HAS BEEN DESIGNATED AS A STRUCTURAL SLAB-ON-GROUND IN THE CONTRACT DOCUMENTS, NO SAW CUTTING OF THE SLAB IS PERMITTED.
- F. CONTROL JOINTS SHALL BE CUT INTO THE SURFACE OF THE SLAB. IN EACH DIRECTION, SEE THE TYPICAL SAW CUT JOINT DETAIL FOR TIME, DEPTH, AND SPACING OF JOINT REQUIREMENTS UNLESS NOTED OTHERWISE. CONTROL JOINTS SHALL BE CONSTRUCTED SUCH THAT THE AREA CONTAINED BY THE CONTROL JOINTS HAS A MAXIMUM RATIO OF LONG SIDE TO SHORT SIDE OF 1.5 TO 1 UNLESS NOTED OTHERWISE. DO NOT CONSTRUCT CONTROL JOINTS SUCH THAT L-SHAPED SLAB PANELS ARE CREATED.
- G. COLUMN ISOLATION JOINTS SHALL BE CONSTRUCTED PER THE TYPICAL COLUMN ISOLATION JOINT DETAIL IN ORDER TO PROVIDE ADEQUATE SPACE FOR COLUMN INSTALLATION.
- H. CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. SLAB CONSTRUCTION JOINTS SHALL BE DOWELED.
- I. WHERE SPECIFIED ON PLAN, WELDED WIRE REINFORCEMENT SHALL BE INSTALLED. WELDED WIRE REINFORCEMENT SHALL BE PROPERLY CHAIRED SUCH THAT IT IS LOCATED AT A DEPTH OF 1 1/2" FROM THE TOP OF SLAB.
- J. REFERENCE ARCHITECTURAL AND MEP DOCUMENTS FOR SLAB FINISHES AND SLOPES NOT REFERENCED ON THE STRUCTURAL DOCUMENTS. THE MINIMUM SLAB THICKNESS SPECIFIED IN THE CONTRACT DOCUMENTS MUST BE MAINTAINED.
- K. REFERENCE ARCHITECTURAL DOCUMENTS FOR VAPOR RETARDER AND SLAB AND CONTROL JOINT SEALANT REQUIREMENTS.
- L. CONDUITS SHALL NOT BE PLACED WITHIN THE SLAB. CONDUITS SHALL BE PLACED BENEATH THE SLAB.

CONCRETE REINFORCEMENT

- A. ALL CONCRETE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
- B. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
- C. WHERE WELDS ARE INDICATED FOR REINFORCING STEEL ON THE DRAWINGS, REINFORCING STEEL SHALL BE A706, GRADE 60 UNLESS OTHERWISE NOTED.
- D. WELDED WIRE REINFORCEMENT SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF ASTM A1064.
- E. ALL 90°, 135°, AND 180° HOOKED REINFORCEMENT SPECIFIED AND GRAPHICALLY DEPICTED IN THE CONTRACT DOCUMENTS SHALL BE DETAILED IN ACCORDANCE WITH ACI 318 STANDARD HOOK GEOMETRY FOR DEFORMED BARS IN TENSION AND FOR STRIPS, TIES, AND HOOPS.
- F. FOR EVERY VERTICAL OR HORIZONTAL BAR DISCONTINUED BY AN OPENING, ONE BAR (MINIMUM OF 2 BARS) SHALL BE ADDED AT SIDE OF OPENING (HALF TO EACH SIDE, TYPICAL).
- G. FOR CONCRETE CLEAR COVER TO REINFORCEMENT SEE SCHEDULE ON SHEET S.003 UNLESS NOTED OTHERWISE. CLEAR COVER IN PARENTHESES () DENOTES CLEAR COVER WHEN THE AS-BUILT APPLICATION IS EXPOSED TO WEATHER.
- H. ALL LAP SPLICES SHALL BE CLASS B TENSION LAP SPLICES IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE. SEE LAP SPLICE SCHEDULE ON SHEET S.003 FOR LAP SPLICE LENGTHS. UNLESS NOTED AS CONTINUOUS, REINFORCEMENT SHALL ONLY BE SPLICED AT LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS. SPLICES AT NON-SPECIFIED LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- I. A MINIMUM LAP SPLICE OF 8" SHALL BE PROVIDED AT ALL END AND SIDE LAP CONDITIONS FOR WELDED WIRE REINFORCEMENT UNLESS NOTED OTHERWISE.
- J. MECHANICAL SPLICES ARE REQUIRED WHERE SPECIFIED ON THE CONTRACT DOCUMENTS. MECHANICAL SPLICES ARE ALSO REQUIRED TO SPLICE #14 AND #18 BARS. MECHANICAL SPLICES MAY ALSO BE USED AT THE CONTRACTOR'S OPTION, PROVIDED THE MECHANICAL SPLICES HAVE A CURRENT ICC-ES REPORT DEMONSTRATING THEY CAN DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION OR COMPRESSION. MECHANICAL SPLICES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- K. THE USE OF WELDED SPLICES IS PROHIBITED UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL SUBMIT THE LOCATIONS OF WELDED SPLICES TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. IF APPROVED, WELDED SPLICES SHALL MEET THE REQUIREMENTS OF AWS D1.
- L. DOWELS SHALL MATCH SIZE AND SPACING OF PRIMARY REINFORCEMENT UNLESS NOTED OTHERWISE.
- M. SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS AND PENETRATIONS.
- N. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCEMENT BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.

CONCRETE

- A. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
- B. FOR CONCRETE MIXTURE REQUIREMENTS SEE SCHEDULE ON SHEET S.003.
- C. THE USE OF RECYCLED CONCRETE IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- D. NORMAL WEIGHT CONCRETE SHALL BE USED FOR ALL CONCRETE MEMBERS UNLESS NOTED OTHERWISE. NORMAL WEIGHT CONCRETE SHALL HAVE A CURED DENSITY OF 145 PCF ± 5 PCF. WHERE LIGHT WEIGHT CONCRETE IS SPECIFIED THE CURED DENSITY SHALL BE 112 PCF ± 3 PCF.
- E. EACH MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER AND THE INTENDED LOCATION OF PLACEMENT ON THE SPECIFIC PROJECT SHALL BE CLEARLY STATED.
- F. ALL PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS OR BY WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD. FOR MLD REINFORCED MEMBERS, CONSTRUCTION JOINTS SHALL OCCUR WITHIN THE MIDDLE THIRD OF A MEMBER'S SPAN. ALL APPROVED CONSTRUCTION JOINTS SHALL BE INDICATED, DIMENSIONED, AND DETAILED ON THE CONCRETE REINFORCEMENT SHOP DRAWINGS.
- G. ORDERS, BEAMS, HAUNCHES, DROP PANELS, DROP CAPS, AND CAPITALS SHALL BE POURED MONOLITHICALLY AS PART OF THE SLAB SYSTEM UNLESS NOTED OTHERWISE.
- H. PROVIDE A ¾" INCH CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
- I. CONCRETE CURING AND INSTALLATION OF DRILLED ANCHORS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- J. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE BETWEEN THE ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS TO FURNISH DIMENSIONED DRAWINGS THAT LOCATE AND SIZE ALL SLAB EDGES, OPENINGS, AND PENETRATIONS. THESE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- K. EMBEDDED CONDUITS, PIPES, AND SLEEVES
1. THE OUTSIDE DIAMETER OF CONDUITS, PIPES, AND SLEEVES SHALL NOT EXCEED ONE-THIRD THE THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED. EMBEDMENTS SHALL NOT SIGNIFICANTLY REDUCE THE CAPACITY OF THE MEMBERS THEY PENETRATE.
 2. THE MINIMUM CLEAR COVER FOR CONDUITS, PIPES, AND SLEEVES SHALL BE 1 ½" FOR CONCRETE EXPOSED TO EARTH OR WEATHER AND ¾" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER.
 3. ALUMINUM EMBEDMENTS AND EMBEDMENTS MADE OF ANY OTHER MATERIAL HARMFUL TO THE CONCRETE OR REINFORCEMENT ARE PROHIBITED.
 4. EMBEDMENTS NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED TO RESIST THE EFFECTS OF MATERIAL, PRESSURE, AND TEMPERATURE THAT THEY WILL BE SUBJECTED TO. THE WORK SHALL BE COORDINATED AMONGST ALL CONSTRUCTION TRADES.
 5. THE CONTENTS OF EMBEDDED PIPES SHALL NOT FLOW UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED DESIGN STRENGTH.
 6. CONDUITS, PIPES, AND SLEEVES SHALL BE PLACED BETWEEN TOP AND BOTTOM LAYERS OF REINFORCEMENT IN SLABS AND BETWEEN INNER AND OUTER LAYERS OF REINFORCEMENT IN WALLS.
 7. EMBEDDED ITEMS SHALL BE FABRICATED AND INSTALLED SUCH THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED.

STRUCTURAL DRAWING LIST

SHEET NUMBER	SHEET NAME
S.001	GENERAL NOTES
S.002	GENERAL NOTES
S.003	WIND PRESSURE DIAGRAMS AND SCHEDULES
S.101	FOUNDATION PLAN
S.102	MEZZANINE FRAMING PLAN
S.103	ROOF FRAMING PLAN
S.301	FOUNDATION SECTIONS & DETAILS
S.302	FOUNDATION SECTIONS & DETAILS
S.411	COMPOSITE STEEL SECTIONS & DETAILS
S.412	COMPOSITE STEEL SECTIONS & DETAILS
S.501	ROOF FRAMING SECTIONS & DETAILS
S.502	ROOF FRAMING SECTIONS & DETAILS



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TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND MATERIAL SPECIFICATIONS.

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PRECAST PRESTRESSED CONCRETE

- A. THE PRECAST CONCRETE ENGINEER SHALL BE A LICENSED STRUCTURAL ENGINEER AND SHALL BE RESPONSIBLE FOR DESIGN AND DETAILING OF ALL PRECAST PRESTRESSED CONCRETE ELEMENTS.
- B. DESIGN, DETAILING, AND MANUFACTURING OF PRECAST PRESTRESSED ELEMENTS SHALL FOLLOW THE RECOMMENDATION OF THE CURRENTLY ADOPTED EDITION OF THE PRECAST CONCRETE INSTITUTE (PCI) MANUAL MNL-120 AND MNL-116, AND THE PROJECT SPECIFICATIONS.
- C. DESIGN PRECAST PRESTRESSED CONCRETE WALLS FOR THE LOADS AND DEFLECTION CRITERIA LISTED IN DESIGN CRITERIA (OR THE PROVIDED LOADING DIAGRAM). LIVE LOAD REDUCTION IS NOT PERMITTED.
- D. DESIGN CONNECTIONS BETWEEN PRECAST ELEMENTS, BETWEEN PRECAST CONCRETE ELEMENTS AND FOUNDATIONS, AND EMBED PLATES FOR THE CONNECTION OF ROOF FRAMING TO THE PRECAST CONCRETE WALLS FOR THE LOADS INDICATED ON THE CONTRACT DOCUMENTS.
- E. REFER TO MEP AND ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF OPENINGS IN PRECAST CONCRETE ELEMENTS.
- F. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE-RESISTANCE RATING REQUIREMENTS.
- G. ALL PRECAST ELEMENTS SHALL HAVE A MINIMUM CONCRETE COMPRESSIVE STRENGTH (f_c) OF 5000 PSI AT 28 DAYS.
- H. THE PRECAST CONCRETE ENGINEER SHALL INSPECT THE FABRICATION OF THE PRECAST UNITS AND SHALL PROVIDE A SIGNED AND SEALED LETTER STATING THAT "TO THE BEST OF MY KNOWLEDGE THE FURNISHED PRODUCTS WERE FABRICATED IN SUBSTANTIAL ACCORDANCE WITH PROJECT ACCEPTED SHOP DRAWINGS." THE LETTER SHALL BE PROVIDED TO THE SPECIAL INSPECTOR, ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.

POST-INSTALLED ANCHORS

- A. POST-INSTALLED ANCHORS SHALL INCLUDE MECHANICAL, SCREW, AND ADHESIVE ANCHORS OF SIZE, NUMBER, AND SPACING AS SHOWN ON THE STRUCTURAL DRAWINGS. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE STRUCTURAL DRAWINGS.
- B. MECHANICAL ANCHORS (EXPANSION BOLTS) INTO EXISTING CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK BOLT T2 ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. STRONG-BOLT 2 ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
- C. POWER-STUD-SD2 ANCHORS MANUFACTURED BY DEWALT
- D. MECHANICAL ANCHORS (EXPANSION BOLTS) INTO EXISTING CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK BOLT 3 ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. WEDGE-ALL ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. POWER-STUD-SD1 ANCHORS MANUFACTURED BY DEWALT
- E. SCREW ANCHORS INTO EXISTING CONCRETE AND CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK HUS EZ ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. TITEN HD ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. SCREW-BOLT-1 ANCHORS MANUFACTURED BY DEWALT
- F. ADHESIVE ANCHORS (EPOXY ANCHORS/DRILL & EPOXY) INTO EXISTING CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING ADHESIVE PRODUCTS:
1. HIT-HY200 EPOXY ADHESIVE WITH HAS ROD MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. AT-XP ADHESIVE MANUFACTURED BY SIMPSON STRONGTIE COMPANY WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
 3. PURE110+ EPOXY ADHESIVE MANUFACTURED BY DEWALT WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
- G. ADHESIVE ANCHORS (EPOXY ANCHORS/DRILL & EPOXY) INTO EXISTING CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING ADHESIVE PRODUCTS:
1. HIT-HY70 INJECTION ADHESIVE WITH HAS ROD MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. AT-XP ADHESIVE MANUFACTURED BY SIMPSON STRONGTIE COMPANY WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
 3. ACT100+ GOLD MANUFACTURED BY DEWALT WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
- H. THE GENERAL CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- I. SUBSTITUTION REQUESTS FOR ALTERNATIVE PRODUCTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER. CALCULATIONS SHALL SHOW THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE REFERENCED BUILDING CODE.
- J. ALTERNATIVE PRODUCTS SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL SHALL HAVE A VALID RESEARCH REPORT, ALSO KNOWN AS EVALUATION REPORT, INDICATING COMPLIANCE WITH APPROPRIATE ACCEPTANCE CRITERIA REQUIRED BY THE REFERENCED BUILDING CODE FOR THE INTENDED LOAD TYPE AND USE (E.G. WIND, SEISMIC, SUSTAINED TENSION, ETC). ALTERNATIVE PRODUCTS SUBMITTED SHALL INDICATE THAT THE ANCHOR IS PERMITTED FOR RESISTING LOADS IN CRACKED CONCRETE. RESEARCH REPORTS SHALL BE ISSUED BY A SOURCE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- K. LOCATE, BY NON-DESTRUCTIVE MEANS, ALL EXISTING REINFORCEMENT, AND AVOID DURING INSTALLATION OF ANCHORS. IF EXISTING REINFORCEMENT LAYOUT PROHIBITS THE INSTALLATION OF ANCHORS AS INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD IMMEDIATELY.
- L. HOLES SHALL BE DRILLED AND CLEANED, AND ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. DEFECTIVE OR ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT OR AN INJECTABLE ADHESIVE MATCHING THE ADJACENT CONCRETE'S COMPRESSIVE STRENGTH.
- M. NOT DIPPED GALVANIZED STEEL ANCHORS SHALL BE USED AT ALL EXTERIOR LOCATIONS AND WHERE SPECIFICALLY INDICATED ON THE DRAWINGS.
- N. MASONRY ANCHORS SHALL NOT BE INSTALLED IN HOLLOW CORE MASONRY. IF INSTALLATION INTO HOLLOW CORE MASONRY IS DESIRED, SUBMIT ALTERNATIVE PRODUCT FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- O. MASONRY ANCHORS SHALL NOT BE INSTALLED IN HEAD JOINTS.
- P. IN ADDITION TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE FOLLOWING GUIDELINES SHALL BE FOLLOWED FOR INSTALLATION OF ADHESIVE ANCHORS:
1. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT THE TIME OF INSTALLATION UNLESS HIGHER STRENGTH IS REQUIRED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
 2. ADHESIVE ANCHORS SHALL BE INSTALLED IN DRY CONCRETE, AND DURING DRY CONDITIONS.
 3. ADHESIVE ANCHORS SHALL BE INSTALLED IN HOLES PREDRILLED WITH A CARBIDE TIPPED DRILL BIT.
 4. ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE RANGE SPECIFIED IN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, BUT NOT OUTSIDE OF THE DESIGN TEMPERATURE RANGE. LOADS SHALL NOT BE APPLIED TO ADHESIVE ANCHORS UNTIL THE FULL CURING TIME ASSOCIATED WITH THE INSTALLATION TEMPERATURE HAS ELAPSED.
- Q. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE AICRCSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT.
- R. IN THE EVENT OF FAILURE TO ACHIEVE PROOF OF LOAD OR EXCESSIVE DISPLACEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO THE CONCRETE.
- S. HOLE DRILLING AND INSTALLATION OF ADHESIVE ANCHORS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE INSTALLED IN CONCRETE DRY CONDITION.

STRUCTURAL STEEL

- A. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE ON THE CONTRACT DOCUMENTS:
1. ROLLED SHAPES AND CHANNELS: ASTM A572 OR A992, MIN. YIELD STRENGTH 50 KSI
 2. ANGLES FOR TRUSSES AND BRACES: ASTM A36 MIN YIELD STRENGTH 36 KSI
 3. MISCELLANEOUS ANGLES: ASTM A36
 4. HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE C, MIN YIELD STRENGTH 46 KSI FOR ROUND AND 50 KSI FOR RECTANGULAR HSES
- B. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
1. ANGLES: ASTM A36
 2. WTS: ASTM A992
 3. PLATES: ASTM A572, MIN YIELD STRENGTH 50 KSI
 4. BOLTS: ASTM A325
 5. NUTS: ASTM A563
 6. WASHERS: ASTM F436
 7. ANCHOR RODS: ASTM F1554 GRADE 55 WITH WELDABILITY SUPPLEMENT S1
 8. WELD ELECTRODES: MATCH FILLER METAL TO BASE METAL PER AWS D1.1
- C. WHERE NO CAMBER IS INDICATED, FABRICATE BEAMS SO THAT ANY NATURAL CAMBER IS UPWARD AFTER ERECTION.
- D. CANTILEVERED BEAMS WITH NATURAL MILL CAMBER SHALL BE ERECTED SUCH THAT THE CAMBER IS ORIENTED DOWNWARD (OR CONCAVE UP).
- E. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE SER IN WRITING.
- F. FOR STEEL MEMBERS AND EMBEDMENTS EXPOSED TO WEATHER, PROVIDE HOT-DIPPED GALVANIZED FINISH.
- G. PROVIDE HOLES IN ALL STEEL AS REQUIRED TO PREVENT ANY ACCUMULATION OF WATER. ALL PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1 1/8" DIA. AND SHALL BE GROUND SMOOTH. THESE DRAINS MUST BE KEPT CLEAN AND OPEN.
- H. SHOW ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- I. FIELD MODIFICATIONS OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
- J. WHERE BEAM SHEAR IS NOT NOTED, DESIGN FOR 10K.
- K. ALL CONNECTIONS SHALL BE DESIGNED FOR THE SPECIFIED SHEAR, MOMENT, AND AXIAL LOADS ON THE DRAWINGS. THE CONNECTIONS SHALL BE DESIGNED FOR LOAD REVERSAL. ALL CONNECTIONS FORCES SPECIFIED ON PLAN ARE ULTIMATE LEVEL FORCES UNLESS NOTED OTHERWISE.
- L. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, AND FABRICATION OF ALL STEEL FRAMING CONNECTIONS UNLESS SPECIFICALLY NOTED AS "COMPLETELY DESIGNED" ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, WHO SHALL DESIGN THE CONNECTIONS, SUBMIT SIGN AND SEALED CALCULATIONS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO STARTING FABRICATION.

CONNECTION DESIGN SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATIONS AND THE BUILDING CODE. CONNECTIONS SHALL BE CAPABLE OF RESISTING VERTICAL AND HORIZONTAL LOADS LISTED ON THE DRAWINGS. CONNECTION DESIGN SHALL PROVIDE AN ADEQUATE LOAD PATH TO TRANSFER THE LOADS FROM EACH MEMBER, THROUGH THE CONNECTION, INTO THE SUPPORTING MEMBER, AND SHALL CONSIDER THE EFFECTS OF THE FORCES ON EACH MEMBER. PROVIDE SMOOTH PLATES, FLANGE CONTINUITY PLATES, ETC, AS REQUIRED. MEMBERS SHOWN ON THE DRAWINGS HAVE NOT BEEN SIZED FOR LOCAL EFFECTS AT CONNECTIONS.

STEEL CONNECTION DETAILS SHOW GENERAL CRITERIA FOR DESIGN AND DETAILING, AND ARE NOT INTENDED TO SHOW COMPLETE CONNECTION CONFIGURATIONS OR OTHER SPECIFIC INFORMATION THAT ARE THE RESPONSIBILITY OF THE CONNECTION DESIGN ENGINEER. ALTERNATIVE CONNECTION CONFIGURATION MAY BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. CONNECTIONS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS ARE TO FABRICATED AS SHOWN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS THAT INCLUDE, BUT ARE NOT LIMITED TO ERECTION ANCHORS, LIFT HOLES, AND OTHER AIDS.

STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS AT THE MAXIMUM DECK SPAN LOCATION UNLESS NOTED OTHERWISE. MINIMUM CONNECTIONS SHALL BE A TWO-BOLT CONNECTION USING 3/4 INCH-DIAMETER A325 BOLTS IN SINGLE SHEAR UNLESS NOTED OTHERWISE. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED, AND INSPECTED IN ACCORDANCE WITH THE RSCC. BOLTS IN CONNECTIONS SHALL BE INSTALLED WITH FULL PRETENSION EXCEPT WHERE "SNUG-TIGHT" INSTALLATION IS SPECIFICALLY PERMITTED ON THE DRAWINGS. WHERE CONNECTIONS ARE NOTED AS SNUG-TIGHT, THE CONTRACTOR MAY INSTALL PER THE CRITERIA FOR SNUG-TIGHT BOLTS. BOLTS IN SLIP-CRITICAL CONNECTIONS SHALL BE INSTALLED USING TURN-OF-NUT PRETENSIONING, TWIST-OFF TYPE TENSION CONTROL BOLT PRETENSIONING, OR DIRECT-TENSION-INDICATOR (DTI) PRETENSIONING. ALL BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.

WELDING

- A. ALL WELDING SHALL BE PERFORMED IN STRICT ADHERENCE TO A WRITTEN WELDING PROCEDURE SPECIFICATION PER AMERICAN WELDING SOCIETY D1.1. ALL WELDING PARAMETERS SHALL BE WITHIN THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS. WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW BEFORE STARTING FABRICATION OR ERECTION. COPIES OF THE WELDING PROCEDURE SPECIFICATION SHALL BE ON SITE AND AVAILABLE TO ALL WELDERS AND THE SPECIAL INSPECTOR.
- B. ALL WELDS SHALL BE MADE USING LOW HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH PER AWS D1.1 (MINIMUM 70 KSI).
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATIONS AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, TAPERS, AND TRANSITIONS OF UNEQUAL PARTS.
- D. WELDING SHALL BE DONE BY WELDERS WITH CURRENT AMERICAN WELDING SOCIETY CERTIFICATION.
- E. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AMERICAN WELDING SOCIETY D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.
- F. ALL WELD SIZES SHALL BE THE LARGER OF: THE SIZE REQUIRED BY THE CONNECTION FORCES, MINIMUM SIZE PER ANSI/AWS D1.1 OR 3/16 INCH MINIMUM FILLET WELD, UNLESS NOTED OTHERWISE.
- G. PROVIDE FILLET WELDS AT CONTACT POINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE FORCE OF THE SMALLER MEMBER AT THE JOINT, UNLESS NOTED OTHERWISE.
- H. ALL FILLET WELDS SHALL BE VISUALLY INSPECTED BY THE TESTING FIRM.
- I. GROOVE WELDS SHALL BE FULL PENETRATION, UNLESS NOTED OTHERWISE.
- J. ALL COMPLETE JOINT PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED UPON COMPLETION OF THE CONNECTION, EXCEPT PLATES LESS THAN OR EQUAL TO 1/4-INCH-THICK SHALL BE MAGNETIC PARTICLE TESTED. REDUCTION IN TESTING MAY BE MADE IN ACCORDANCE WITH THE BUILDING CODE WITH APPROVAL OF THE ENGINEER.
- K. A RUN-OFF TAB SHALL BE USED AT ALL BEVEL AND FULL PENETRATION WELDS. RUN-OFF TABS SHALL BE REMOVED BY NEAT CUTS AFTER WELD IS COMPLETED. GRIND SMOOTH WHERE REQUIRED BY DETAIL.
- L. WHERE REQUIRED BY DETAIL, REMOVE WELD BACKING BARS AND GRIND SMOOTH AFTER WELD IS COMPLETED.
- M. WHERE NECESSARY, REMOVE GALVANIZING OR PRIMER PRIOR TO WELDING.
- N. STEEL USING COMPLETE JOINT PENETRATION GROOVE WELDS THAT FUSE THROUGH THE THICKNESS OF THE FLANGE OR WEB SHALL HAVE A MINIMUM CHARRY V-NOTCH IMPACT TESTING VALUE AS FOLLOWS:
1. ASTM A6/AM HOT-ROLLED SHAPES WITH A FLANGE THICKNESS EXCEEDING 2 INCHES AND BUILT-UP HEAVY SHAPES WITH PLATES EXCEEDING 2 INCHES IN THICKNESS: 20 FT-LB AT 70° FAHRENHEIT.
 2. REGARDLESS OF THICKNESS, ALL TRUSSES, LATERAL SYSTEM MEMBERS (INCLUDING COLUMNS, WIND GIRDERS, BRACES, ETC): 20 FT-LB AT 70° FAHRENHEIT.
 3. STEEL EXPOSED TO TEMPERATURES IN SERVICE BELOW 50° FAHRENHEIT: 20 FT-LB AT SERVICE TEMPERATURE + 20° FAHRENHEIT; 40° FAHRENHEIT MAXIMUM.
 4. WELD METAL: 20 FT-LB AT -20° FAHRENHEIT AND 40 FT-LB AT 70° FAHRENHEIT.
 5. TESTING IS TO BE IN ACCORDANCE WITH ASTM A6/AM, SUPPLEMENTARY REQUIREMENT S30, CHARRY V-NOTCH IMPACT TEST FOR STRUCTURAL SHAPES - ALTERNATE CORE LOCATION, AT ROLLED SHAPES AND ASTM A673 FOR PLATES, AT ANY PERMITTED LOCATIONS. WELD METAL SHALL BE TESTED IN ACCORDANCE WITH ASTM E23, STANDARD METHODS FOR NOTCHED BAR IMPACT TESTING OF METALLIC MATERIALS FOR WELD METAL.

STEEL JOISTS

- A. MANUFACTURE AND ERECT ALL STRUCTURAL STEEL, JOISTS, JOIST GIRDERS, AND BRIDGING IN ACCORDANCE WITH SPECIFICATION SECTION 052100, SPECIFICATIONS OF THE STEEL JOIST INSTITUTE AND ALL OSHA REQUIREMENTS.
- B. JOIST MANUFACTURER SHALL DESIGN JOISTS PER LISTED DESIGN CRITERIA AND ANY ADDITIONAL LOADING SHOWN ON PLAN OR IN DETAILS. AT A MINIMUM, JOIST SHALL BE DESIGNED PER STEEL JOIST INSTITUTE (SJI) LOAD TABLES.
- C. JOISTS SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES OR OTHER SPECIFICALLY LOCATED FRAMING MEMBERS UNLESS NOTED OTHERWISE.
- D. STEEL JOISTS, JOIST GIRDERS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED FOR NET UPLIFT (NEGATIVE PRESSURE) AS INDICATED IN THE STRUCTURAL DRAWINGS. REFER TO THE APPLICABLE BUILDING CODE LISTED IN DESIGN CRITERIA FOR LOAD COMBINATIONS.
1. DEAD LOAD (MIN) = 10 PSF
- E. STEEL JOISTS, JOIST GIRDERS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED FOR ADDITIONAL DOWN FORCE RESULTING FROM WIND (POSITIVE PRESSURE) AS INDICATED IN THE STRUCTURAL DRAWINGS.
1. DEAD LOAD (MAXIMUM) = 20 PSF
- F. JOIST MANUFACTURER SHALL DESIGN AND DETAIL ALL BRIDGING PER SJI REQUIREMENTS AND CLEARLY INDICATE LOCATION ON STEEL, JOIST ERECTION DRAWINGS.
1. BRIDGING SHALL BE DESIGNED TO FULLY BRACE TOP CHORD OF JOISTS UNDER SERVICE LOADS FOR JOISTS NOT BRACED BY STEEL ROOF DECK.
2. BOTTOM CHORD OF ROOF JOISTS SHALL BE DESIGNED FOR NET UPLIFT SHOWN ON DIAGRAM ON S.003, UNLESS NOTED OTHERWISE.
3. BOTTOM CHORD OF ROOF JOIST GIRDERS SHALL BE DESIGNED FOR NET UPLIFT SHOWN ON DIAGRAM ON S.003.
4. PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING AS REQUIRED FOR NET UPLIFT SHOWN ON DIAGRAM ON S.003, FOR ROOF FRAMING.
- G. AN ALLOWABLE STRESS INCREASE FOR LOAD COMBINATIONS INCLUDING WIND IS NOT PERMITTED.
- H. JOIST MANUFACTURER SHALL CAMBER JOISTS PER SJI CRITERIA.
- I. PROVIDE MINIMUM BEARING PER SJI REQUIREMENTS AND CONNECT TO STEEL SUPPORT AS FOLLOWS:
1. K-SERIES: 3/16" x 1" FILLET WELD EACH SIDE
 2. LH AND DLH SERIES: 1/4" x 2" FILLET WELD EACH SIDE
- J. PROVIDE STANDARD DEPTH OF BEARING FOR ALL JOISTS AS SHOWN BELOW UNLESS NOTED IN DRAWINGS:
1. K-SERIES - 2 1/4"
 2. LH - 5"
 3. JOIST GIRDER - 7 1/2"
 4. WHERE STEEL JOIST OR JOIST GIRDER SLOPE EXCEEDS 1/4 INCH PER FOOT, PROVIDE SLOPED BEARING AS NOTED IN SLOPED SEAT REQUIREMENTS OF SJI.
- K. JOIST MANUFACTURER SHALL DESIGN AND DETAIL FIELD BOLTING FOR ERECTION PER SJI REQUIREMENTS.

STEEL DECK GENERAL REQUIREMENTS

- A. ALL STEEL DECK SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE DIVISION 05 SPECIFICATIONS.
- B. STEEL DECK SHALL BE SUPPORTED BY A MINIMUM OF FOUR SUPPORT LOCATIONS (THREE SPAN CONDITION), UNLESS NOTED OTHERWISE.
- C. THE CONTRACTOR SHALL COORDINATE SLAB/DECK OPENING SIZES AND LOCATIONS PER ARCHITECTURAL AND MEP CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE OPENING SUPPORT FRAMING AND/OR REINFORCEMENT AS REQUIRED PER TYPICAL DETAILS AND SUBMIT PROPOSED SLAB/DECK OPENINGS FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.
- D. SHOP DRAWINGS SHALL BE SUBMITTED INDICATING:
1. MATERIAL STRENGTH
 2. SECTION PROPERTIES
 3. DECK GAGE, LAYOUT
 4. FASTENER TYPE
 5. CONNECTION PATTERN
 6. CLOSURE ANGLES
- E. THE CAPACITY OF THE DECK SHALL BE BASED ON CURRENT ICC-ES EVALUATION REPORTS.

COMPOSITE STEEL FLOOR DECK

- A. COMPOSITE STEEL FLOOR DECK SHALL BE A MINIMUM YIELD STRENGTH OF 50 KSI AND SHALL CONFORM TO ASTM A653 WITH G90 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE.
- B. WHERE COMPOSITE BEAM DESIGNATIONS OCCUR ON FRAMING PLANS THROUGH THE CALLING OUT OF A NUMBER OF REQUIRED STEEL HEADED STUD ANCHORS, FLOOR AND BEAM ARE DESIGNED TO ACT COMPOSITELY BY USE OF SHEAR STUDS ON THE BEAM TOP FLANGE.
1. SEE DISTRIBUTED STEEL HEADED STUD ANCHOR PLACEMENT DETAIL FOR PLACEMENT REQUIREMENTS.
 2. IF LONGITUDINAL STEEL HEADED STUD ANCHOR SPACING EXCEEDS 12 INCHES, PLUG WELD DECK TO BEAM BETWEEN STUDS.
- C. COMPOSITE STEEL FLOOR DECK SHALL BE ATTACHED TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS:
1. AT BUTT ENDS: AT 12 INCHES ON CENTER
 2. AT PERIMETER EDGES OF BUILDING: AT 12 INCHES ON CENTER
 3. INTERMEDIATE SUPPORTS: AT 12 INCHES ON CENTER
 4. SIDE LAPS: AT MID-SPAN OR AT 3'-0" ON CENTER, WHICHEVER IS SMALLER. HEX HEAD SCREWS, SIZE #10, OR CRIMPING (BUTTON PUNCHING) MAY BE USED AT SIDE LAP CONNECTIONS.
- D. CONCRETE BONDING-TYPE UNITS SHALL BE FORMED WITH DEFORMATIONS TO PROVIDE AN INTERLOCK BETWEEN THE CONCRETE AND STEEL.
- E. DESIGN AND PROVIDE FLASHING AND CLOSURE PLATES AT WALL ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CLOSURE. COORDINATE ALL CLOSURES WITH ELEVATOR, STAIR, ESCALATOR, AND OTHER ARCHITECTURAL DETAILS.
- F. SHEAR CONNECTORS / SHEAR STUDS SHALL BE TYPE B AND CONFORM TO AWS D1.1, ASTM A108, AND ASTM A29 SPECIFICATIONS FOR 1010 THROUGH 1020 MILD STEELS. MINIMUM YIELD STRENGTH = 51 KSI AND MINIMUM ULTIMATE TENSILE STRENGTH = 65 KSI.
- G. ALL STEEL HEADED STUD ANCHORS SHALL BE 3/4 INCH DIAMETER x (FLUTE HEIGHT + 1 1/2 INCH) AFTER WELDING, UNLESS NOTED OTHERWISE. MINIMUM CLEARANCE FROM TOP OF STUD TO TOP OF SLAB IS 1 INCH.
- H. DISTRIBUTE STEEL HEADED STUD ANCHORS UNIFORMLY OVER BEAM SPAN UNLESS NOTED OTHERWISE ON PLAN. MAXIMUM SPACING OF 3/4 INCH HEADED STUD ANCHORS SHALL NOT EXCEED 12 INCHES ON CENTER (ONE STUD PER FOOT) UNLESS NOTED OTHERWISE ON PLAN.
- I. THE COMPOSITE STEEL FLOOR DECK INSTALLATION, WHEN COMPLETE, SHOULD BE READY TO RECEIVE CONCRETE. THE COMPOSITE STEEL FLOOR DECK HAS BEEN DESIGNED TO SUPPORT CONSTRUCTION LOADS UNSHORED, UNLESS NOTED OTHERWISE. IF ANY SHORING IS USED, IT SHALL BE DESIGNED AND SUPPLIED BY THE CONTRACTOR AND SHALL BE SHOWN ON THE SHOP DRAWINGS. SHORING SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.
- J. COMPOSITE STEEL FLOOR DECKS ARE TO BE POURED LEVEL TO COLUMNS OR AS INDICATED ON THE DRAWINGS.
- K. MAINTAIN INDICATED MINIMUM SLAB THICKNESS OVER BEAMS THROUGHOUT SPAN. ELEVATED SLAB SHALL BE PLACED WITH MINIMUM THICKNESS THROUGHOUT WITH NO MORE THAN 1/2" OF ADDITIONAL THICKNESS IN ANY LOCATION TO HELP WITH THE LEVELING OF THE SLAB.
- L. COMPOSITE STEEL FLOOR DECK HANGER TAB LOADS SHALL NOT EXCEED 60 POUNDS PER HANGER TAB. IN ADDITION, LOADS ON HANGER TABS SHALL BE DISTRIBUTED IN SUCH A MANNER THAT THE TRIBUTARY LOADS FOR EACH HANGER TAB SHALL NOT EXCEED 5 POUNDS PER SQUARE FOOT. DO NOT HANG MEP EQUIPMENT AND PIPING DIRECTLY FROM STEEL DECK.

STEEL ROOF DECK

- A. STEEL ROOF DECK SHALL BE A MINIMUM YIELD STRENGTH OF 33 KSI, UNLESS NOTED OTHERWISE. ALL INTERIOR STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, FACTORY PRIMED FOR PAINT. ALL EXPOSED STEEL ROOF DECK SHALL CONFORM TO ASTM A653 WITH G90 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR EXTENTS.
- B. STEEL ROOF DECK SHALL BE ATTACHED TO STEEL SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS AND TO COLD-FORMED METAL FRAMING WITH #12 SELF-DRILLING SCREWS UNLESS NOTED OTHERWISE. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS SPECIFIED IN THE DECK ATTACHMENT SCHEDULE.
- C. WHERE STEEL MEMBERS ARE PARALLEL TO THE DECK FLUTES AND AT THE SAME ELEVATION OF THE BOTTOM OF THE DECK, ADJUST DECK LAYOUT AND WELD DECK TO STEEL WITH SAME WELDING AS REQUIRED FOR SIDE BOUNDARIES.
- D. ERECT STEEL DECK CLOSURES AND OTHER LIGHT GAGE MATERIAL REQUIRED TO PRODUCE A COMPLETED INSTALLATION.
- E. FLAT, RIDGE, AND VALLEY PLATES: UNLESS NOTED OTHERWISE, CONTRACTOR SHALL PROVIDE FLAT PLATES (20 GAGE MINIMUM) AT ALL LOCATIONS WHERE ROOF DECK CHANGES DIRECTION AND RIDGE OR VALLEY PLATES (20 GAGE MINIMUM) AT ALL LOCATIONS WHERE ROOF SLOPE EXCEEDS 1/4 INCH PER FOOT.
- F. DO NOT HANG CEILINGS, DUCTS, LIGHT FIXTURES, EQUIPMENT, OR OTHER ITEMS FROM THE ROOF DECK WITHOUT PRIOR APPROVAL FROM THE DECK SUPPLIER AND REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
- G. SEE ARCHITECTURAL DRAWINGS FOR FINAL ROOF SLOPES. WHERE STRUCTURAL FRAMING DOES NOT CREATE THE SPECIFIED ROOF SLOPE, IT SHALL BE CREATED WITH RIGID INSULATION ABOVE THE DECK.

COLD-FORMED STEEL

- A. DESIGN, FABRICATION, AND ERECTION OF COLD-FORMED STEEL SHALL CONFORM TO AISI S100.
- B. ALL STUDS, JOISTS, TRACK, BRIDGING, END CLOSURES, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF AISI S100.
- C. THE CONTRACTOR'S DELEGATED ENGINEER SHALL DESIGN ALL COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR REQUIRED COLD-FORMED STEEL.
- D. ALL EXTERIOR COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED PER 'DESIGN CRITERIA' AND 'COMPONENTS AND CLADDING WIND PRESSURES' LISTED IN THE STRUCTURAL DOCUMENTS.
- E. ALL INTERIOR COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED PER 'DESIGN CRITERIA' LISTED IN THE GENERAL STRUCTURAL NOTES AND A MINIMUM OF 5 PSF INTERNAL PRESSURE NORMAL TO THE STRONG AXIS OF FRAMING MEMBER IN ADDITION TO DEAD LOAD.
- F. ALL EXTERIOR COLD-FORMED STEEL SHALL HAVE A MINIMUM G90 GALVANIZED COATING. ALL INTERIOR COLD-FORMED STEEL SHALL HAVE A MINIMUM G60 GALVANIZED COATING.
- G. ALL STUDS SHALL BE DESIGNED TO A MINIMUM GAUGE OF 43 MILS. STUD SPACING SHALL NOT EXCEED 24" ON CENTER.
- H. ALL COLD-FORMED STEEL, 54 MIL AND THICKER SHALL HAVE A MINIMUM YIELD STRENGTH (F_y) OF 50 KSI.
- I. ALL WELDING SHALL MEET REQUIREMENTS OF AWS D1.3 AND THE AISI STANDARD.
- J. ALL SCREWS OR PINS SHALL BE NON-CORROSIVE NO. 8-18 (Ø = 0.125") OR LARGER, UNLESS NOTED OTHERWISE. DO NOT USE STAINLESS STEEL OR COPPER-COATED FASTENERS.
- K. TRACKS SHALL BE THE SAME DEPTH AS STUDS OR JOISTS AND OF EQUAL OR THICKER GAUGE THAN STUDS OR JOISTS. UNLESS NOTED OTHERWISE, TRACKS SHALL BE CONNECTED IN ORDER TO SUPPORT STUDS OR JOISTS AT 24" ON CENTER, MAXIMUM. STUDS AND JOISTS SHALL BE CONNECTED TO TRACKS AT EACH SIDE.
- L. INSTALLATION OF CURTAIN WALL FRAMING SHALL ACCOMMODATE VERTICAL DISPLACEMENT OF THE PRIMARY STRUCTURE.
- M. DESIGN OF SLIP TRACKS SHALL CONFORM TO GUIDELINES ESTABLISHED IN STEEL STUD MANUFACTURER'S ASSOCIATION TECHNICAL NOTE NO. 1, PUBLISHED JANUARY 2000.
- N. PROVIDE THE STANDARD TRACK, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED AND AS NEEDED TO PROVIDE A COMPLETE FRAMING SYSTEM. INSTALL THE FRAMING SYSTEM IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.
- O. MATCH FILLER METAL TO BASE METAL PER AWS D1.3 FOR WELDING STEEL STUDS. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS PROCEDURES. CONSULT MANUFACTURER FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. TOUCH UP WELDED AREAS WITH A ZINC RICH PAINT.
- P. STUD-TO-STUD CONNECTIONS SHALL BE A MINIMUM OF (4) #8 TEK SCREWS AT EACH CONNECTION, UNLESS NOTED OTHERWISE.
- Q. RESISTANCE TO MINOR AXIS BENDING AND ROTATION SHALL BE PROVIDED BY GYPSUM BOARD, GYPSUM SHEATHING, PLYWOOD, HORIZONTAL BRACING, OR CHANNEL SHAPED COLD-FORMED STEEL FRAMING BLOCKING.
- R. SHOP DRAWINGS, INCLUDING CALCULATIONS, SHALL BE SIGNED AND SEALED BY A DELEGATED ENGINEER AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD AND ARCHITECT FOR REVIEW.
- S. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL FRAMING SIZES, CONNECTIONS, AND BRACING. IF FRAMING DEPTH IS NOT INDICATED IN THE CONTRACT DOCUMENTS, THE MOST ECONOMICAL MEMBER AND CONNECTION MEETING THE DESIGN CRITERIA SHALL BE PROVIDED.
- T. CALCULATIONS SHALL CLEARLY INDICATE DESIGN LOADING, FRAMING SIZE, SPACING, ASSUMPTIONS, AND FORCES IMPOSED ONTO BUILDING STRUCTURE FROM CONNECTIONS.
- U. STEEL STUD MANUFACTURERS ASSOCIATION FOUR PART NOMENCLATURE IDENTIFIES MEMBER DEPTH, TYPE, FLANGE WIDTH AND GAUGE.

EXAMPLE: 600S162-54
600 = DEPTH (INCHES)
S = MEMBER TYPE (STUD)
162 = FLANGE WIDTH (INCHES)
54 = GAUGE (MILS x 1/1000 INCHES)

MEMBER TYPES ARE AS FOLLOWS:
S = STUD OR C-SHAPED CHANNEL MEMBER
T = TRACK
SLT = SLIP-TRACK

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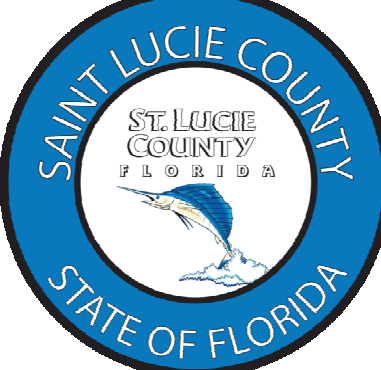
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Key Plan :

REVISION	DATE

Date : 02/28/2024

S+A Project No : 22026

Owner/Project No :

Drawn By : JAB

Checked By : APT

Phase :

BID DOCUMENTS

Sheet Title :

GENERAL NOTES

Sheet # :

S.002

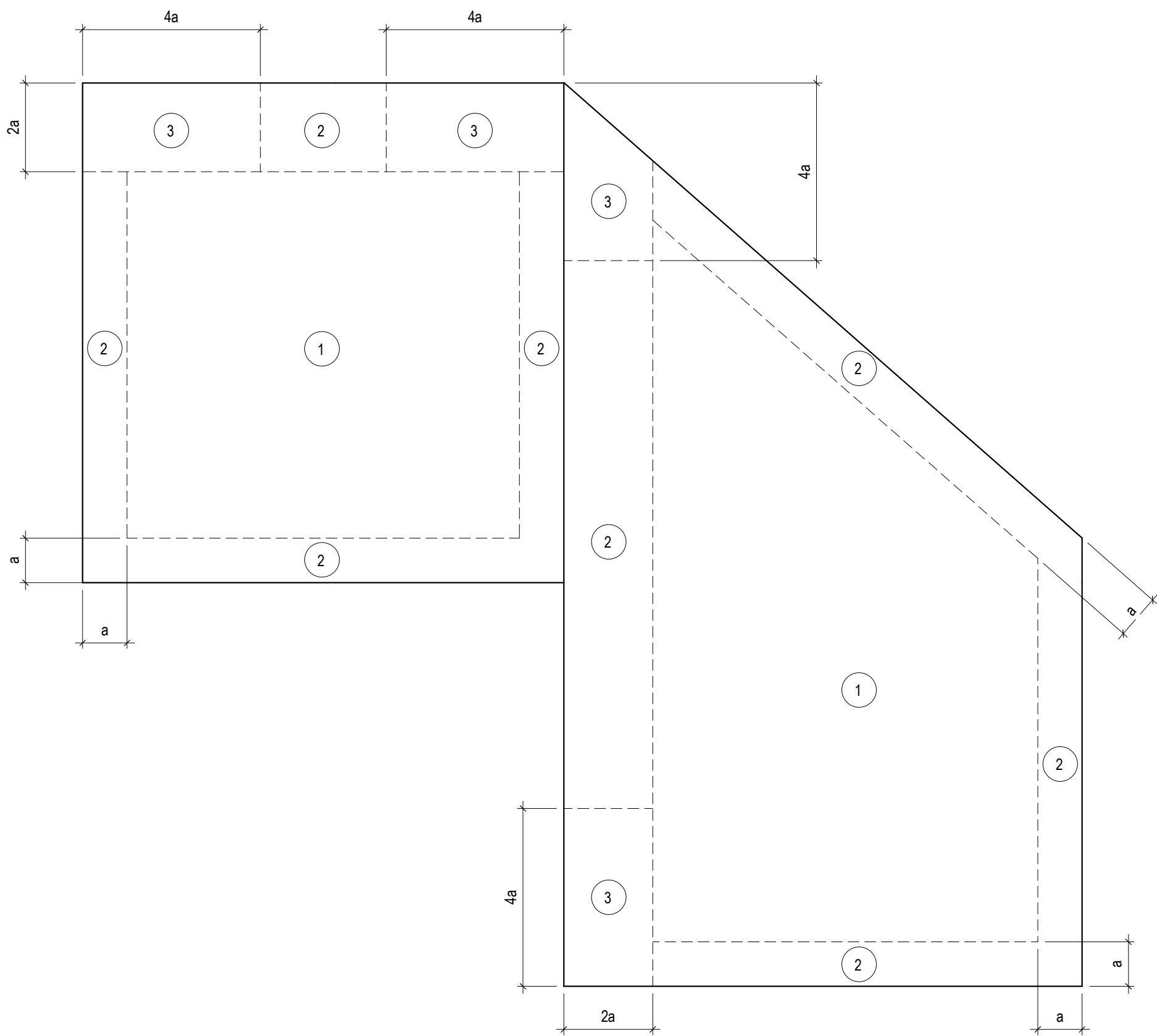


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TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND MATERIAL SPECIFICATIONS.

CONCRETE MIXTURE REQUIREMENTS								
APPLICATION	EXPOSURE CLASS	f _c	TEST AGE	MODULUS OF ELASTICITY	MAXIMUM W/C	AIR CONTENT	NOMINAL MAXIMUM AGGREGATE	MAXIMUM CONCRETE WEIGHT
FOOTINGS	F0	3000 PSI	28 DAYS	3122 KSI	SEE NOTE 2	SEE NOTE 3	1"	150 PCF
EXTERIOR SLAB-ON-GROUND	F0	4500 PSI	28 DAYS	3824 KSI	0.55	4.5% ± 1.5%	1"	150 PCF
SLAB-ON-GROUND	F0	3000 PSI	28 DAYS	3122 KSI	SEE NOTE 2	SEE NOTE 3	1"	150 PCF
ELEVATED SLABS ON METAL DECK	F0	4000 PSI	28 DAYS	3605 KSI	SEE NOTE 2	SEE NOTE 3	3/4"	145 PCF
PRECAST	F0	SEE PRECAST GENERAL NOTES	28 DAYS	SEE PRECAST GENERAL NOTES	SEE NOTE 2	SEE NOTE 3	SEE PRECAST GENERAL NOTES	SEE PRECAST GENERAL NOTES
NOTES:								
1. EXPOSURE CATEGORIES AND CLASSES FOR SULFATES, PERMEABILITY, AND CORROSION PROTECTION OF REINFORCEMENT IS CLASS ZERO UNLESS NOTED OTHERWISE.								
2. WATER/CEMENT RATIO SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX DESIGN. THERE IS NO MAXIMUM WATER/CEMENT RATIO REQUIREMENT FOR THE EXPOSURE CLASSIFICATION ASSOCIATED WITH THIS APPLICATION. MAXIMUM WATER/CEMENT RATIO IS NOT APPLICABLE FOR DURABILITY REQUIREMENTS IN LIGHTWEIGHT CONCRETE.								
3. THERE IS NO MANDATORY TARGET AIR CONTENT FOR THIS APPLICATION. THE CONTRACTOR MAY CHOOSE TO ADD AIR ENTRAINMENT TO IMPROVE THE WORKABILITY AND FINISHING PROPERTIES OF THE MIX. AIR CONTENT SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX.								

COMPONENTS & CLADDING EXTERNAL PRESSURE LOADS (PSF)						
EFFECTIVE WIND AREA (FT²)	LOCATION PER ASCE 7-22: FIGURE 30.3-1, 30.3-5B					
	1	2	3	4	5	
<10	28 -73	28 -87	28 -151	58 -83	58 -77	
20	27 -69	27 -80	27 -137	55 -60	55 -73	
50	25 -66	25 -73	25 -119	52 -57	52 -66	
>100	24 -63	24 -68	24 -107	50 -54	50 -60	
>500				43 -48	43 -48	



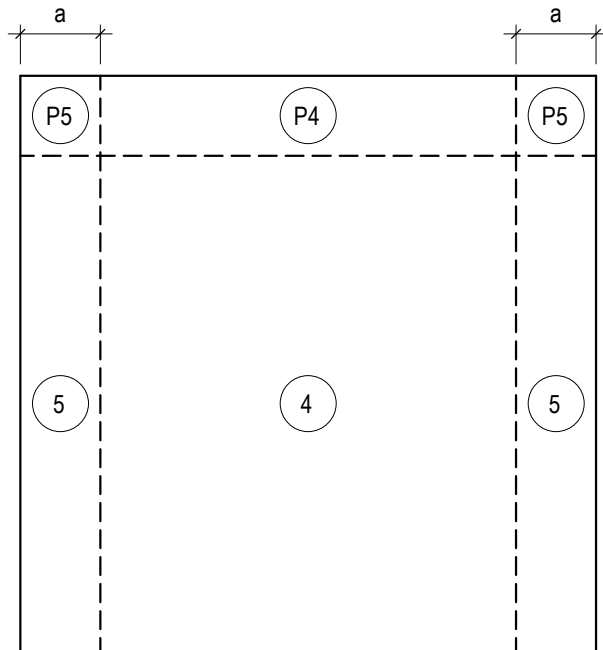
3 ROOF WIND PRESSURE DIAGRAM

1/16" = 1'-0"

CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) CLEAR COVER SCHEDULE			
APPLICATION	BOTTOM	TOP	SIDES
FOUNDATIONS	3"	2"	3"
SLAB-ON-GROUND	SEE DETAILS	SEE DETAILS	3"
RETAINING WALLS	N/A	N/A	2"
WALLS	N/A	N/A	3/4" (2")
COLUMNS	N/A	N/A	1 1/2" (2")
ELEVATED SLABS	3/4" (2")	3/4" (2")	3/4" (2")
BEAMS	1 1/2" (2")	1 1/2" (2")	1 1/2" (2")

NOTES:

- FOR COMPONENTS HAVING EFFECTIVE AREAS IN BETWEEN TABULATED VALUES, DESIGN LOADS MAY BE INTERPOLATED. OTHERWISE DESIGN LOAD SHALL BE TAKEN FROM THE NEXT LOWEST TABULATED EFFECTIVE AREACH
- DESIGN VALUES SHOWN IN THIS TABLE ARE ULTIMATE VALUES FOR USE WITH LRFD DESIGN. VALUES MAY BE MULTIPLIED BY 0.6 FOR USE WITH SERVICE LEVEL OR ASD DESIGN. REFER TO THE BUILDING CODE FOR APPLICABLE LOAD COMBINATIONS.
- $a = 6'-0"$. SEE ROOF PLAN MAP BELOW FOR LOCATION OF a -ZONES. WALL a -ZONE LOCATIONS TO MATCH ROOF a -ZONES.
- POSITIVE PRESSURE VALUES REFER TO FORCES ACTING TOWARDS BUILDING OR COMPONENT FACE. NEGATIVE PRESSURE VALUES REFER TO FORCES ACTING AWAY FROM BUILDING OR COMPONENT FACE.
- EACH COMPONENT AND ITS CONNECTION SHALL BE DESIGNED FOR MAXIMUM POSITIVE AND NEGATIVE FORCES.
- PARAPET COMPONENTS AND CLADDING ARE THOSE ELEMENTS WHICH EXIST ABOVE THE HORIZONTAL PLANE OF THE ROOF AND SHALL BE DESIGNED FOR:
 - POSITIVE AND NEGATIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON OUTSIDE FACE.
 - POSITIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - NEGATIVE PRESSURES 2 OR 3 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - P4/5 SHALL BE APPLIED TO THE DESIGN OF THE STRUCTURAL ELEMENT OF THE PARAPET AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE PARAPET.
- A DESIGN WIND PRESSURE HORIZONTAL VALUE OF 93 PSF AND VERTICAL VALUE OF 74 PSF SHALL BE APPLIED TO COMPONENTS WHICH ARE EITHER ROOFTOP STRUCTURES OR ROOFTOP APPURTENANCES AND THEIR CONNECTION. EXAMPLES OF THIS ARE RTUs, AHUs, AND SCREEN WALLS.
- ROH# - DENOTES DESIGN WIND PRESSURE VALUES WHICH SHALL BE APPLIED AT ROOF OVERHANGS TO TOP SURFACE CLADDING OR SHEATHING AND ITS CONNECTION. SOFFIT CLADDING OR SHEATHING SHALL BE DESIGNED FOR SIMILAR PRESSURE TO THE ADJACENT WALL PRESSURE. A COMBINATION OF THESE FORCES SHALL BE APPLIED TO THE STRUCTURAL ELEMENT OF THE OVERHANG AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE OVERHANG.
- ALL DOORS TO BE RATED TO RESIST DESIGN WIND PRESSURES SPECIFIED.



WALL ELEVATION

ABBREVIATIONS		ABBREVIATIONS	
ADDL	ADDITIONAL	KSI	KIPS PER SQUARE INCH
ADJ	ADJACENT		
AFF	ABOVE FINISHED FLOOR	L	LENGTH
ALT	ALTERNATE	LB(S)	POUND(S)
APPROX	APPROXIMATE	LL	LIVE LOAD
ARCH	ARCHITECT OR ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
ASD	ALLOWABLE STRESS DESIGN	LLV	LONG LEG VERTICAL
		LONG	LONGITUDINAL
B/	BOTTOM OF	LRFD	LOAD RESISTANCE FACTORED DESIGN
B/B	BACK-TO-BACK	LSH	LONG SIDE HORIZONTAL
BLDG	BUILDING	LSV	LONG SIDE VERTICAL
BLKG	BLOCKING	LTS	LAP TENSION SPLICE
BP	BASE PLATE	LW	LIGHT WEIGHT
BRG	BEARING	LWC	LIGHT WEIGHT CONCRETE
BOT	BOTTOM		
BTWN	BETWEEN	M	MOMENT
		MAX	MAXIMUM
C	COMPRESSION	MC	MOMENT CONNECTION(S)
CFS	COLD-FORMED STEEL	MECH	MECHANICAL
CIP	CAST-IN-PLACE	MEP	MECHANICAL, ELECTRICAL, PLUMBING,
CJ	CONTROL JOINT		FIRE PROTECTION
CJP	COMPLETE JOINT PENETRATION	MFR	MANUFACTURER
CL	CENTER LINE	MID	MIDDLE
CLR	CLEAR OR CLEARANCE	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS
COL	COLUMN		
CONC	CONCRETE	NIC	NOT IN CONTRACT
CONN(S)	CONNECTION(S)	NS	NEAR SIDE
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS	NWC	NORMAL WEIGHT CONCRETE
COORD	COORDINATE		
		OC	ON CENTER
D&E	DRILL & EPOXY	OD	OUTSIDE DIAMETER
db	REINFORCING BAR DIAMETER	OF	OUTSIDE FACE
DBA	DEFORMED BAR ANCHOR	OH	OPPOSITE HAND
DCW	DEMAND CRITICAL WELD	OPNG(S)	OPENING(S)
°	DEGREE(S)	OPP	OPPOSITE
Ø	DIAMETER	OSL	OUTSTANDING LEG
DIAG	DIAGONAL		
DIM(S)	DIMENSION(S)	PAF	POWDER ACTUATED FASTENER
DL	DEAD LOAD	PERP	PERPENDICULAR
DWG(S)	DRAWING(S)	PJF	PREFORMED JOINT FILLER
		PJP	PARTIAL JOINT PENETRATION
EA	EACH	PL	PLATE
EF	EACH FACE	PLF	POUNDS PER LINEAL FOOT
EJ	EXPANSION JOINT	PCST	PRECAST
EL	ELEVATION	PREFAB	PRE-FABRICATED
ELEV	ELEVATOR	PSF	POUNDS PER SQUARE FOOT
EOS	EDGE-OF-SLAB	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	PT	POST-TENSIONED
EQUIP	EQUIPMENT		
EW	EACH WAY	REF	REFERENCE
EXIST	EXISTING	REINF	REINFORCE(D) (ING) OR (MENT)
EXP	EXPANSION	REQ(D)	REQUIRE(D)
EXT	EXTERIOR	REV	REVISION
		RTU	ROOF TOP UNIT
F/F	FACE-TO-FACE	SCHED	SCHEDULE(D)
FD	FLOOR DRAIN	SDL	SUPERIMPOSED DEAD LOAD
FF	FINISH FLOOR	SER	STRUCTURAL ENGINEER OF RECORD
FND	FOUNDATION	SF	SQUARE FOOT (FEET)
FS	FAR SIDE	SIM	SIMILAR
FT	FEET	SLRS	SEISMIC LOAD RESISTING SYSTEM
FTG	FOOTING	SOG	SLAB-ON-GROUND
		SP	SPACE
GA	GAGE, GAUGE	SPEC(S)	SPECIFICATION(S)
GALV	GALVANIZED	SS	STAINLESS STEEL
GB	GRADE BEAM	STD	STANDARD
GC	GENERAL CONTRACTOR	STIFF	STIFFENER
GDR	GIRDER	STR	STRUCTURE OR STRUCTURAL
GEN	GENERAL	SYM	SYMMETRICAL
GYP	GYPSUM		
		T	TENSION
HCA	HEADED CONCRETE ANCHORS	T&B	TOP AND BOTTOM
HORIZ	HORIZONTAL	T&G	TONGUE & GROOVE
HSS	HOLLOW STRUCTURAL SECTION	TI	TOP OF
		TEMP	TEMPERATURE OR TEMPORARY
ID	INSIDE DIAMETER	TYP	TYPICAL
IF	INSIDE FACE		
IN	INCH		
INFO	INFORMATION	UNO	UNLESS NOTED OTHERWISE
INT	INTERIOR		
ICC-ES	INTERNATION CODE COUNCIL - EVALUATION SERVICE	V	SHEAR
		VERT	VERTICAL
		VIF	VERIFY IN FIELD
JST(S)	JOIST(S)	W/	WITH
K	KIPS (1,000 POUNDS)	W/O	WITHOUT
KLF	KIP PER LINEAL FOOT	WP	WORK POINT
KSF	KIP PER SQUARE FOOT	WWR	WELDED WIRE REINFORCEMENT



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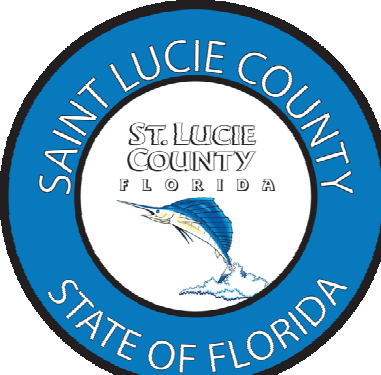
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Key Plan :

REVISION	DATE

Date : 02/28/2024

S+A Project No : 220206

Owner Project No :

Drawn By : JAB

Checked By : APT

Phase :

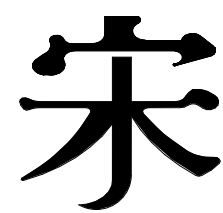
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Sheet Title :

WIND PRESSURE
DIAGRAMS AND
SCHEDULES

Sheet # :

S.003



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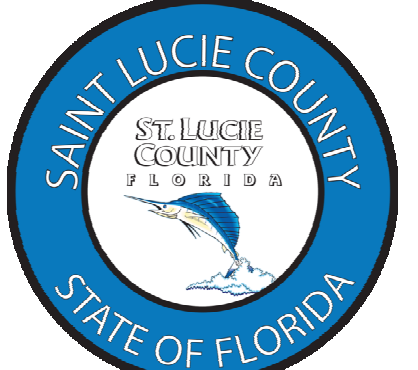
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Date : 02/28/2024

S+A Project No : 22026

Owner Project No :

Drawn By : JAB

Checked By : APT

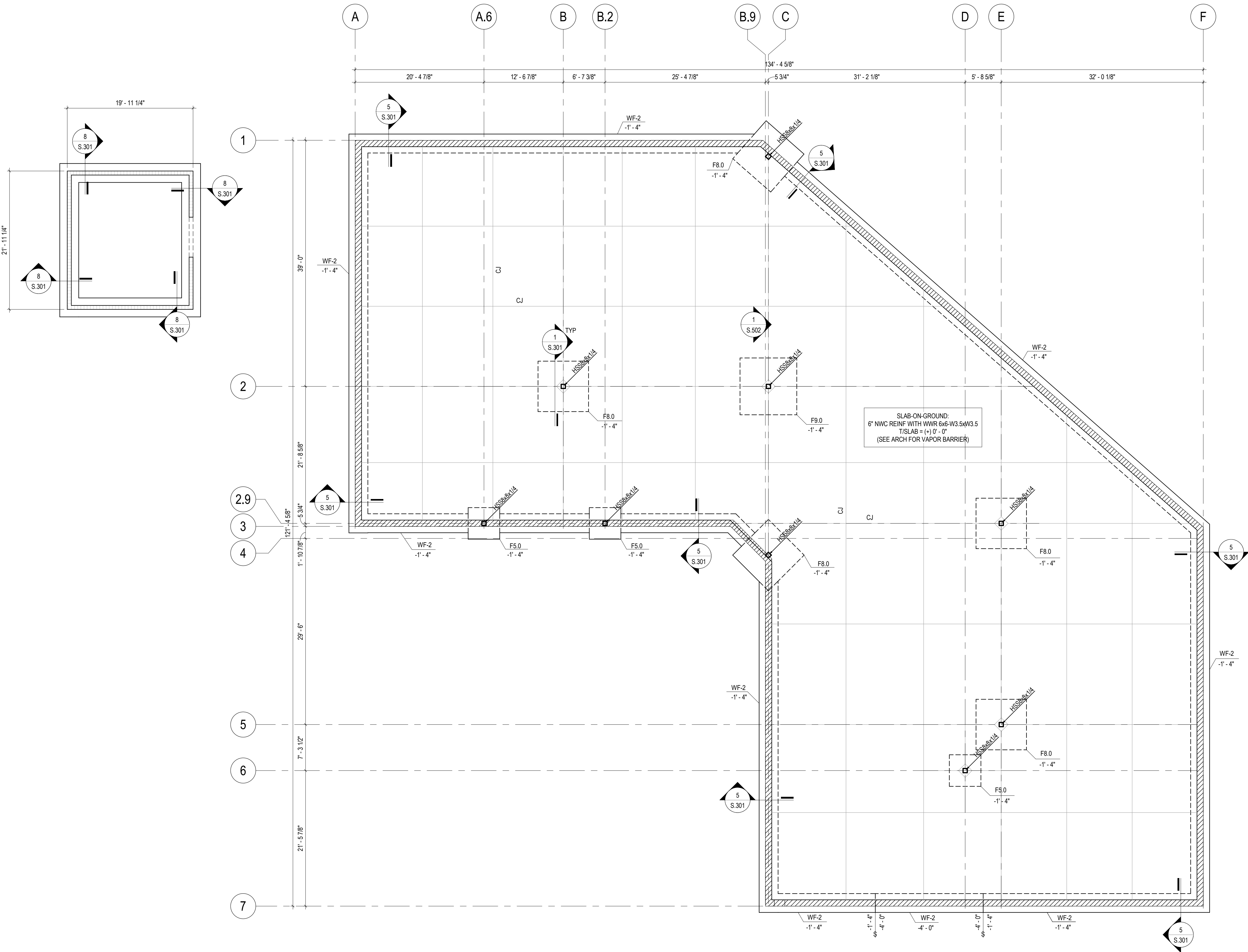
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Sheet Title :

FOUNDATION
PLAN

Sheet # :

S.101



FOUNDATION PLAN

1/8" = 1'-0"

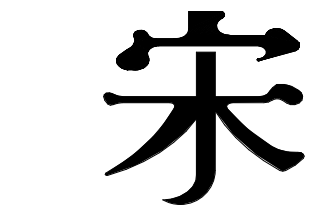
NOTES:

- VERIFY ALL DIMENSIONS, ELEVATIONS, AND SLAB FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DEPRESSIONS, DROPS, AND DRAIN LOCATIONS IN SLAB. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- 12" CONCRETE PRECAST WALL.
- 7 5/8" CONCRETE MASONRY UNIT WALL.
- F#: DENOTES FOOTING MARK (SEE SCHEDULE ON 5/ S.301).
- WF#: DENOTES WALL FOOTING MARK (SEE SCHEDULE ON 1/ S.301).
- CJ: DENOTES SLAB-ON-GROUND CONTROL JOINT. SPACING SHALL NOT EXCEED 15' - 0" OC.
- DENOTES WALL FOOTING STEP (SEE 11/ S.301).



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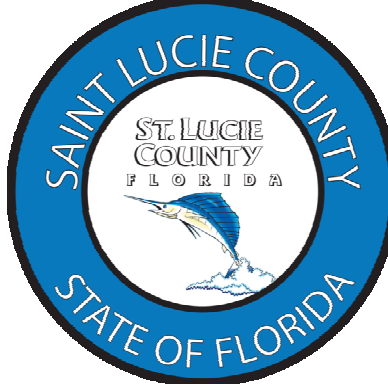
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Key Plan :

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Date : 02/28/2024

S+A Project No : 22026

Owner Project No :

Drawn By : JAB

Checked By : APT

Phase :

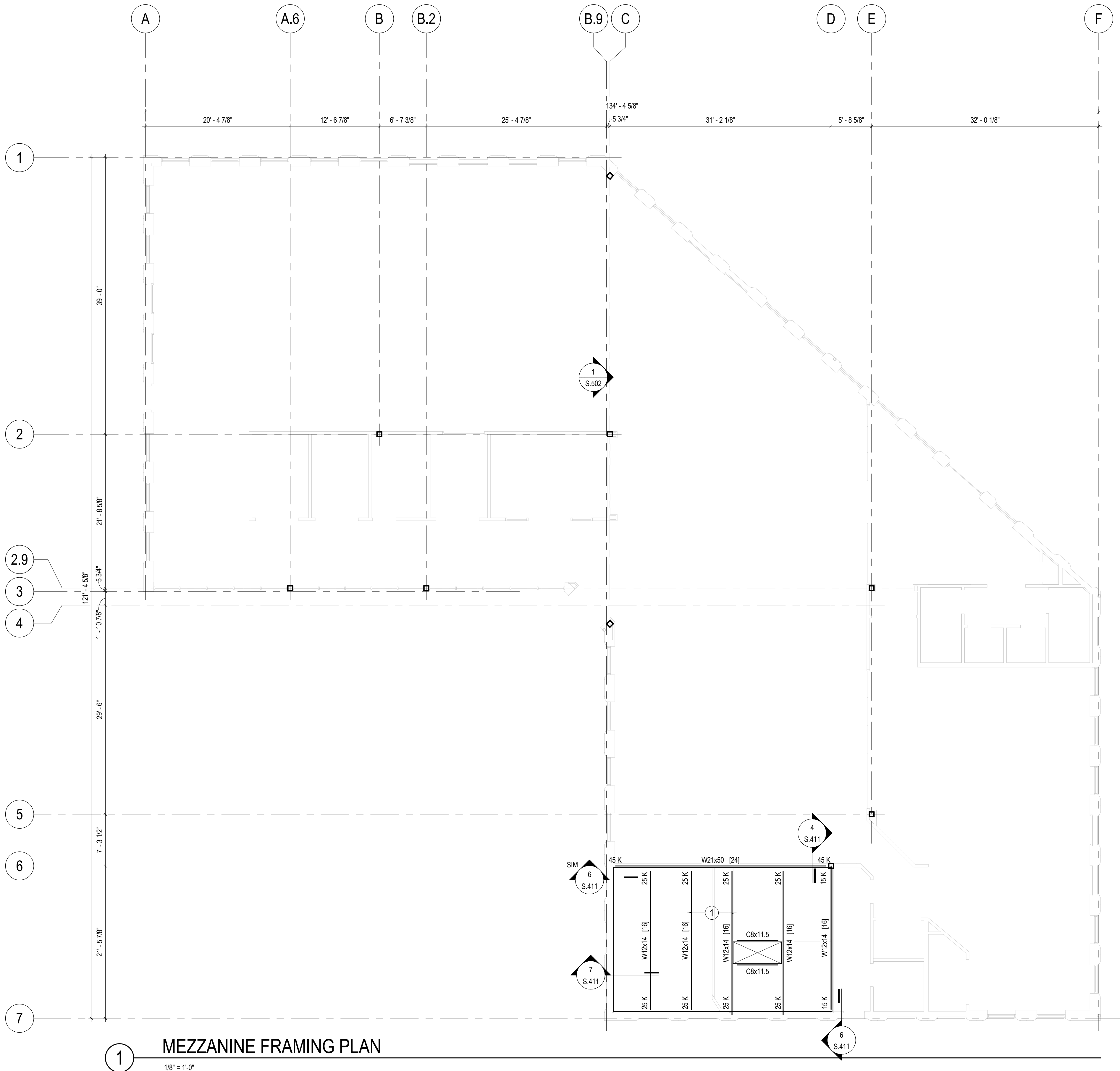
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Sheet Title :

MEZZANINE
FRAMING PLAN

Sheet # :

S.102

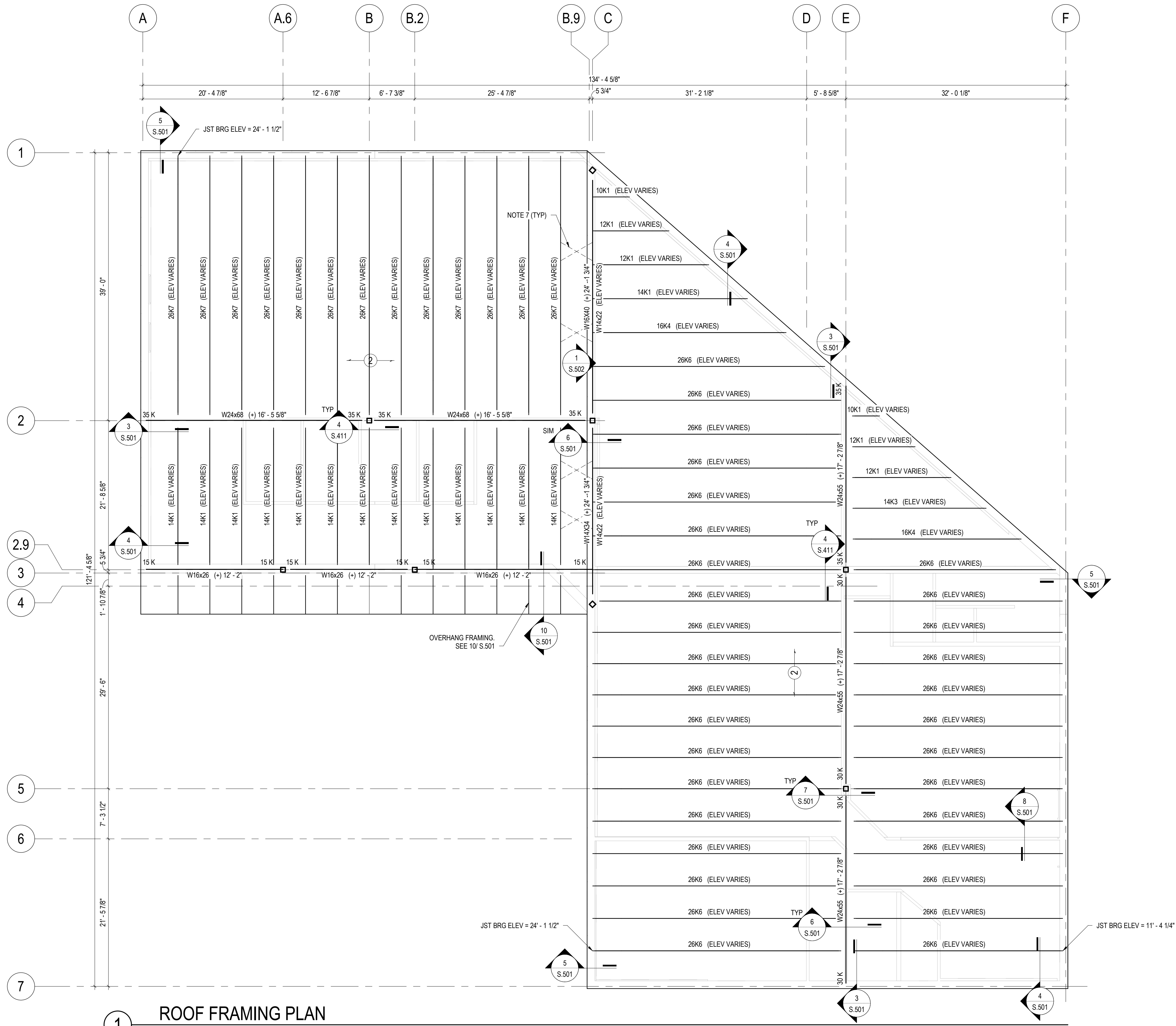


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ROOF FRAMING PLAN

1/8" = 1'-0"

NOTES:

1. VERIFY ALL DIMENSIONS, ELEVATIONS, AND SLAB FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE BEGINNING CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DEPRESSIONS, DROPS, AND DRAIN LOCATIONS IN SLAB. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
2.  DENOTES 20 GAUGE 1 1/2" B WIDE RIB METAL ROOF DECK WITH STANDING SEAM ROOFING.
3. TOP OF STEEL ELEVATIONS = SEE PLAN.
4. OPEN WEB JOIST SPACING SHALL NOT EXCEED 5' - 0" OC TYPICAL UNLESS NOTED OTHERWISE.
5. STEEL DECK ATTACHMENT PER DETAIL 1/ S.501.
6. FOR TOP OF WALL PANEL ELEVATION, SEE ARCHITECTURAL.
7. DENOTES CROSS-BRACING AT 1/3 POINTS OF LOW ROOF STEEL BEAM. SIM 9/ S.501.



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Owner Project No :

Drawn By : JAB

Checked By : APT

Phase :

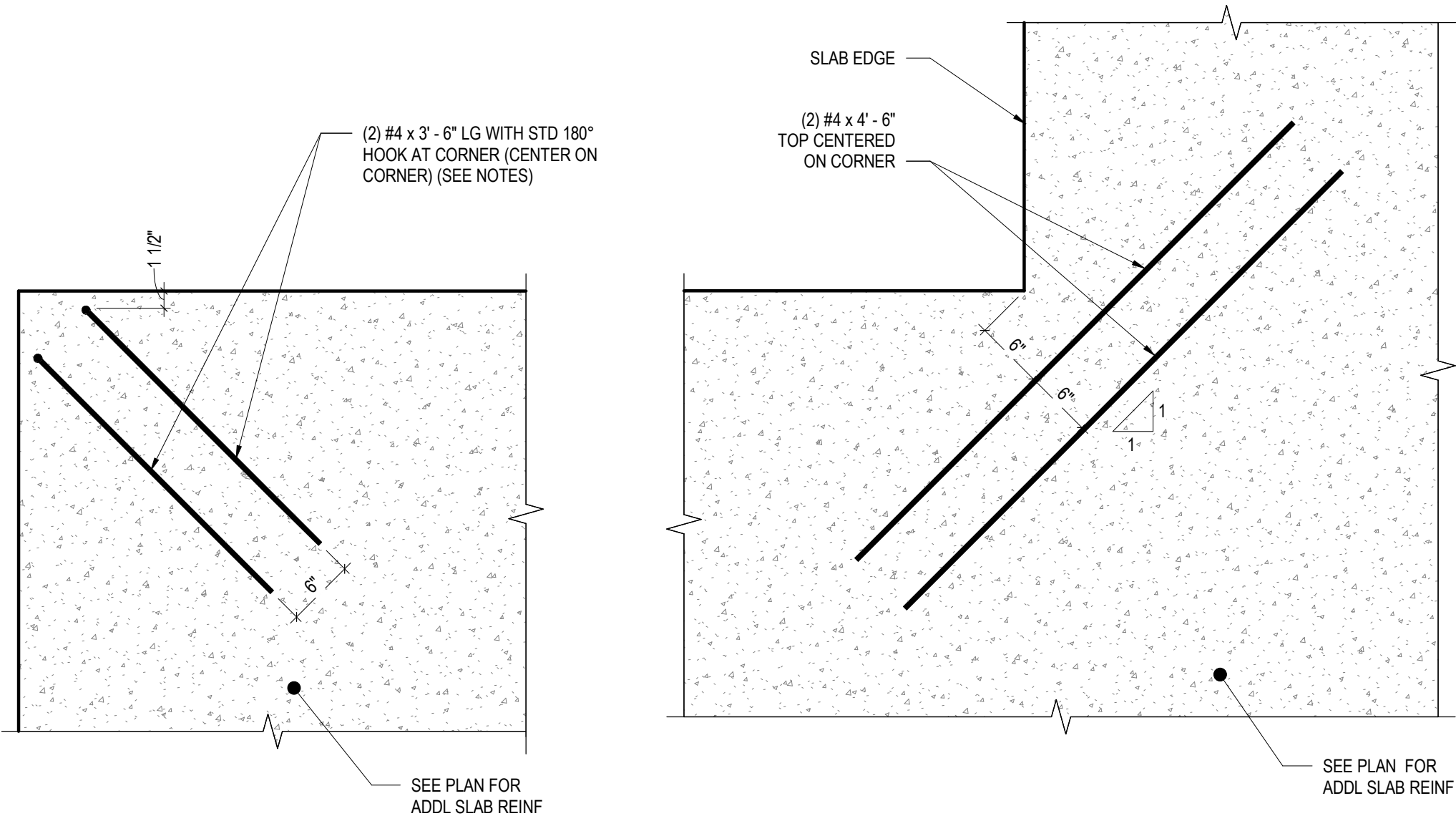
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Sheet Title :

FOUNDATION
SECTIONS &
DETAILS

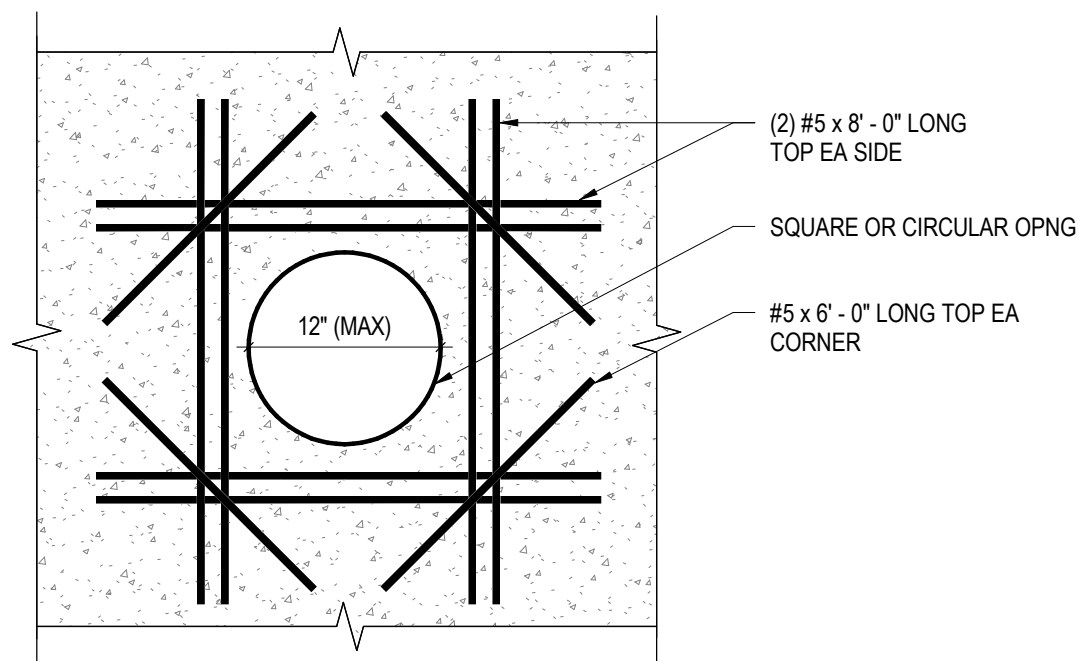
Sheet # :

S.302

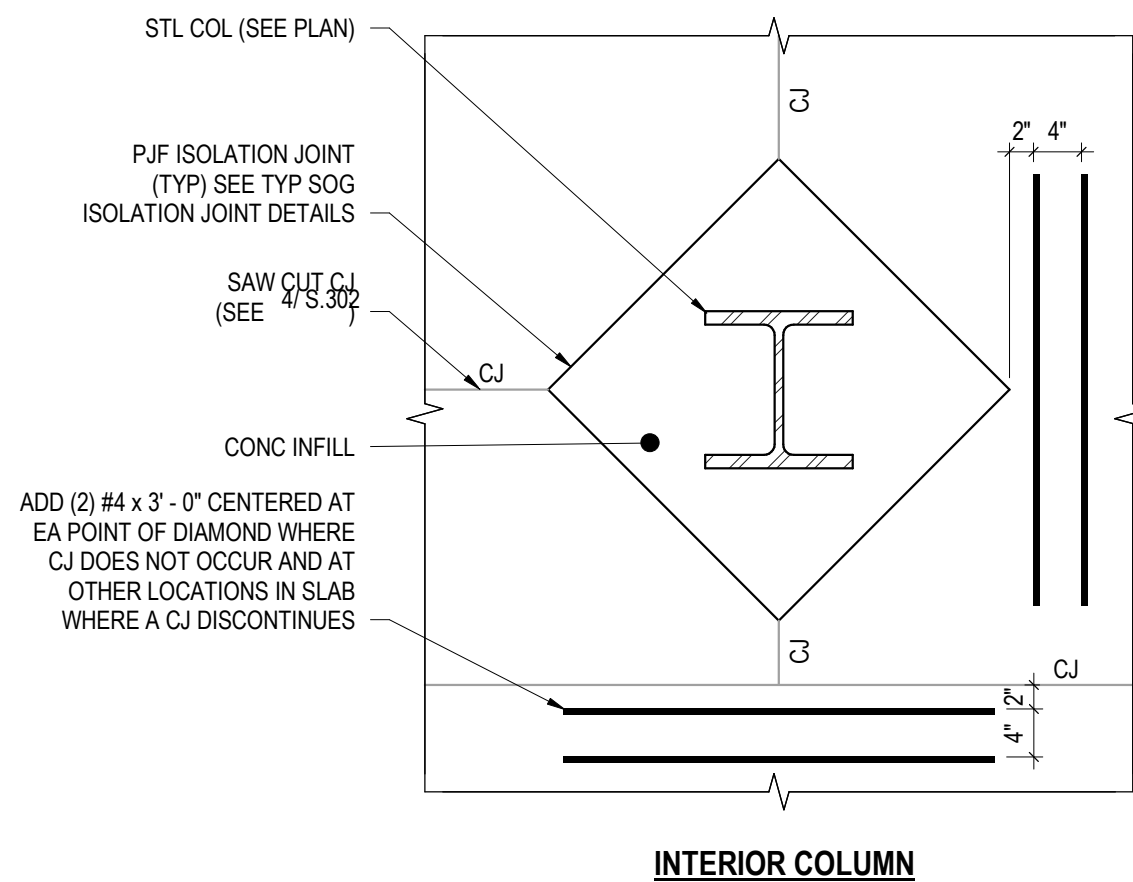


NOTES:

1. INSTALL BELOW TOP LAYER OF SLAB REINFORCING.



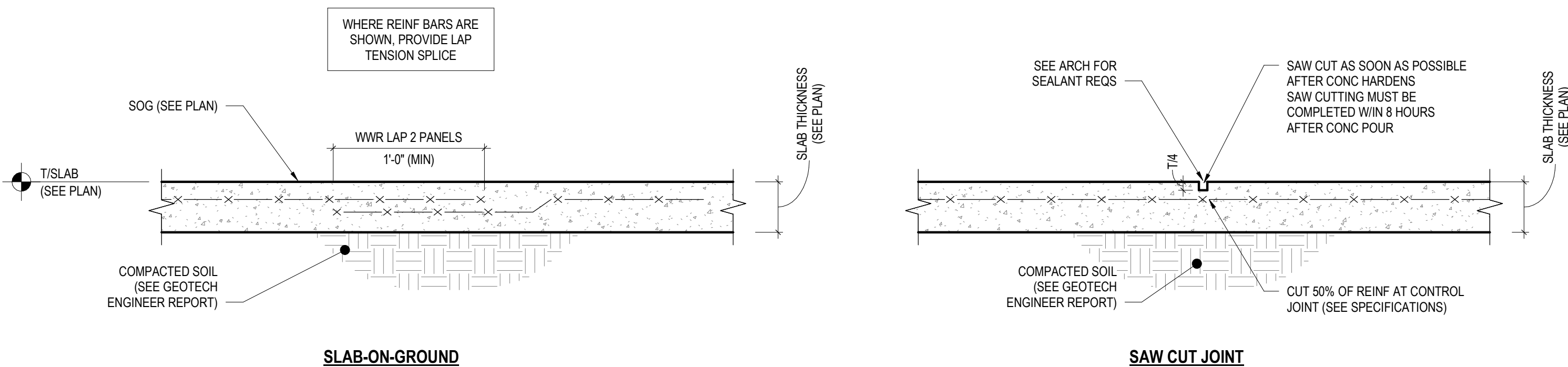
TYPICAL REINFORCEMENT AT PIPE PENETRATIONS



NOTES:

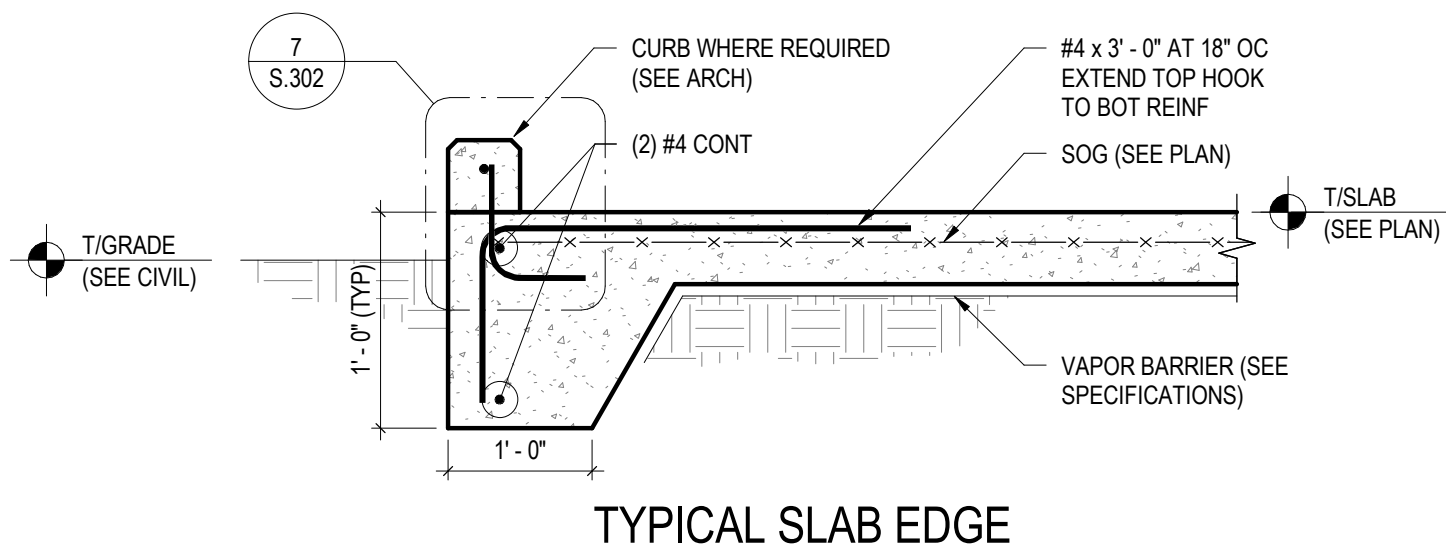
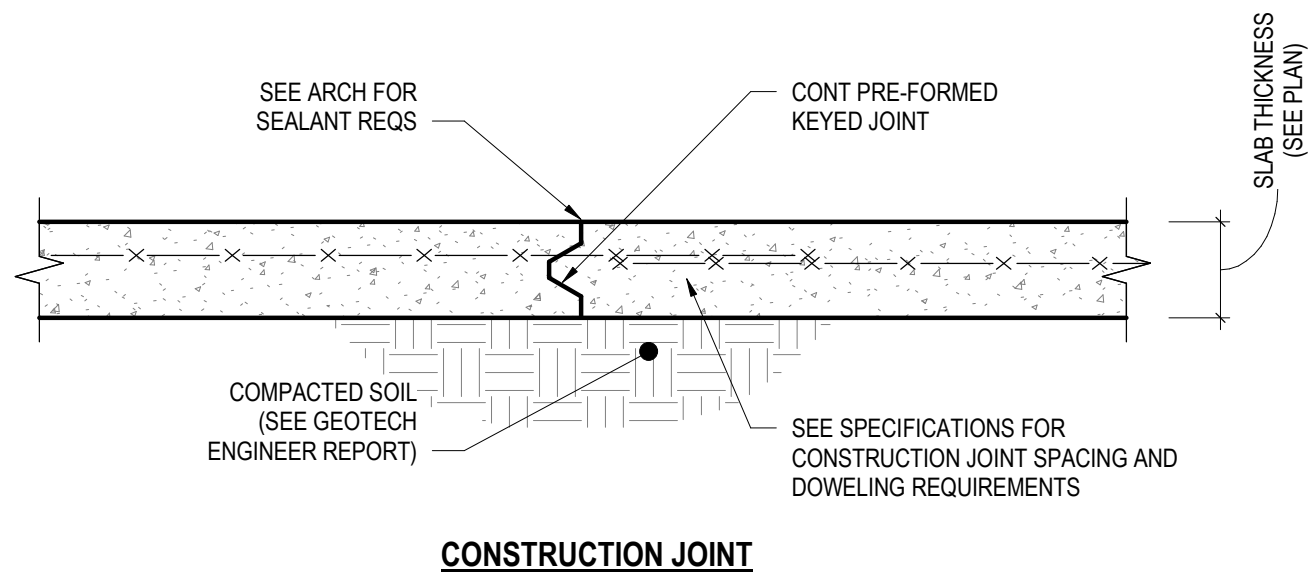
1. SEE TYPICAL SLAB-ON-GROUND DETAILS FOR JOINT SPACING REQUIREMENT.
2. CONCRETE INFILL BETWEEN COLUMN AND ISOLATION JOINT TO BE POURED AFTER 24 HOURS OF APCI (100% NOTED BY THE ARCHITECT) HAS BEEN PROVIDED.

TYPICAL SLAB-ON-GROUND ISOLATION/CONTROL JOINT



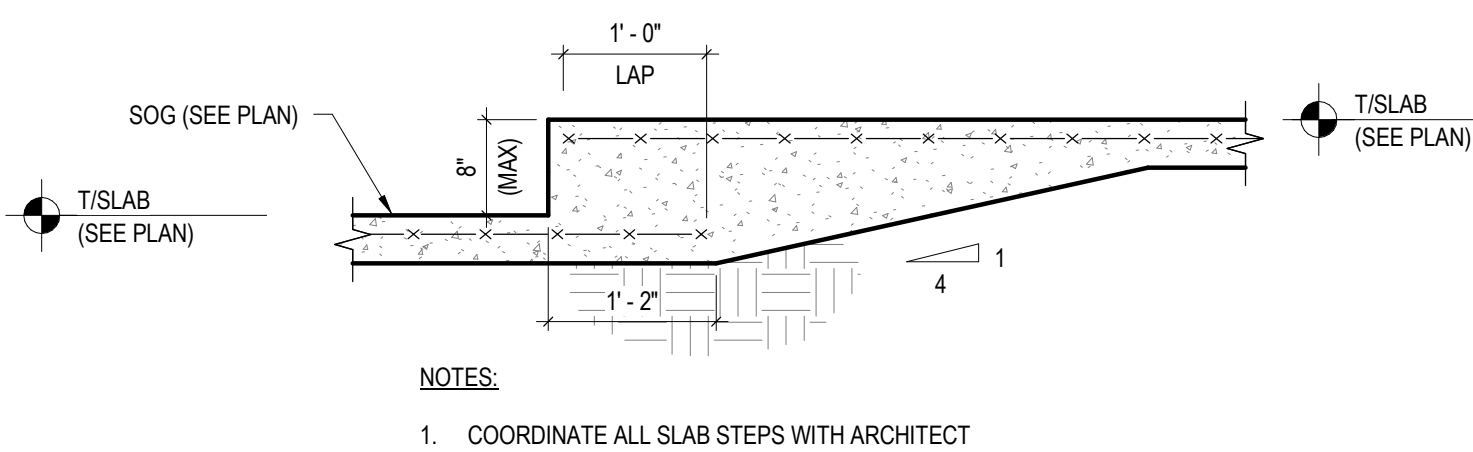
NOTES:

1. WHERE NOT INDICATED ON PLAN PROVIDE JOINTS AT COLUMN CENTER LINES AND BETWEEN COLUMN CENTER LINES WITH SPACING OF JOINTS NOT TO EXCEED 36 TIMES THE SLAB THICKNESS



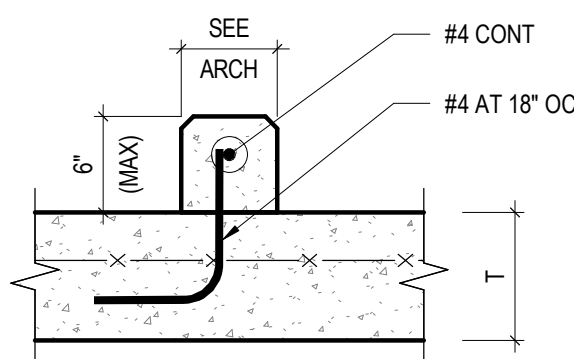
4 TYPICAL SLAB-ON-GROUND DETAILS

5 DETAIL

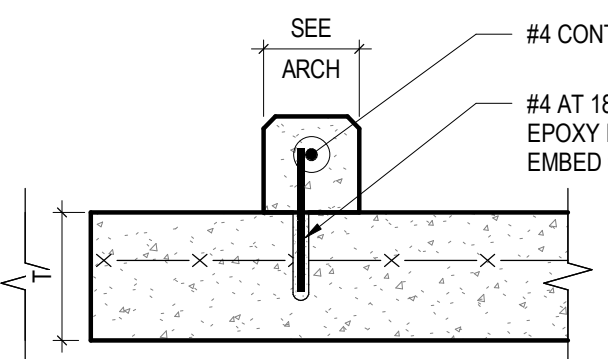


NOTES:

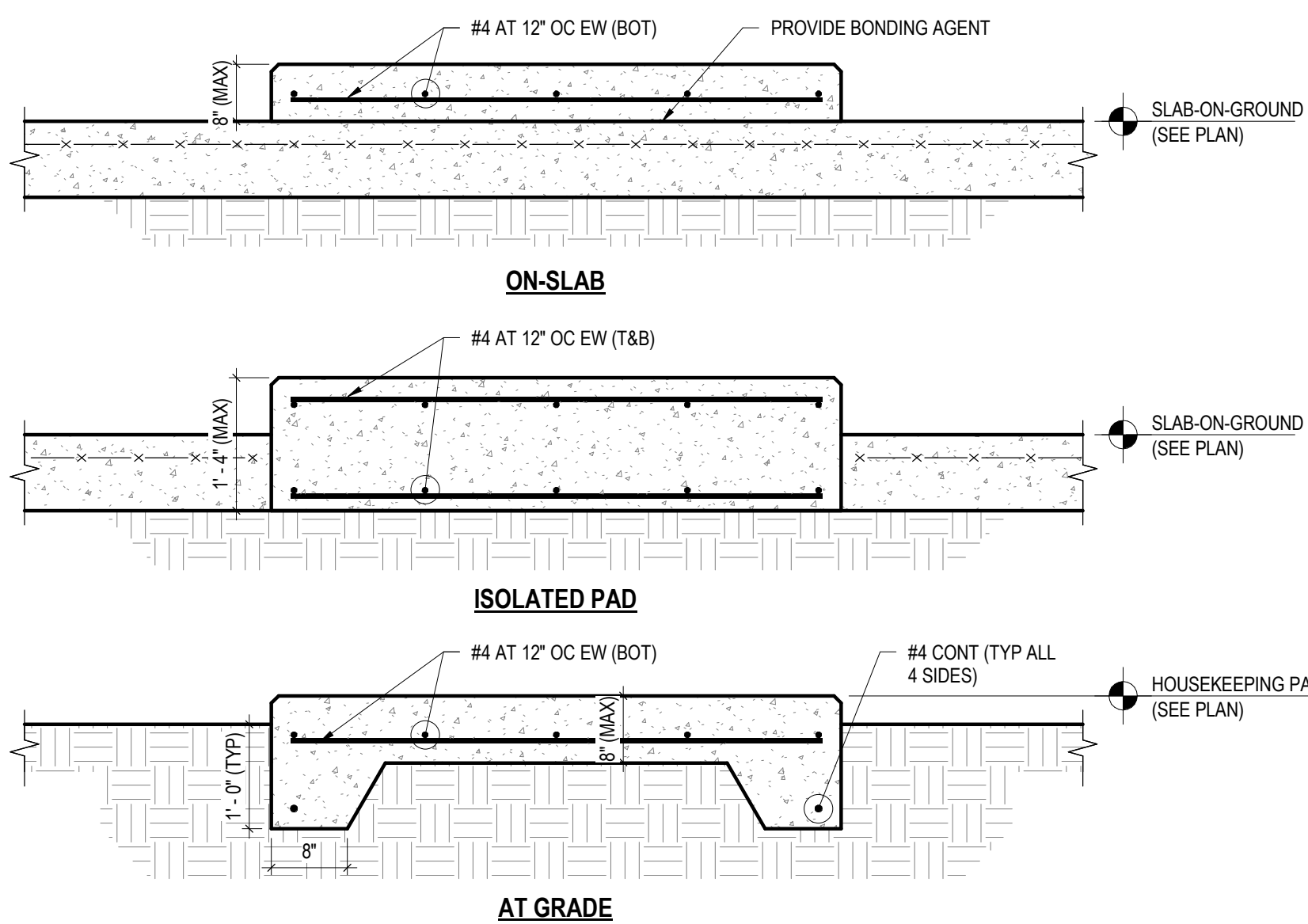
1. COORDINATE ALL SLAB STEPS WITH ARCHITECT



CURB DETAIL



POST-INSTALLED CURB DETAIL



NOTES:

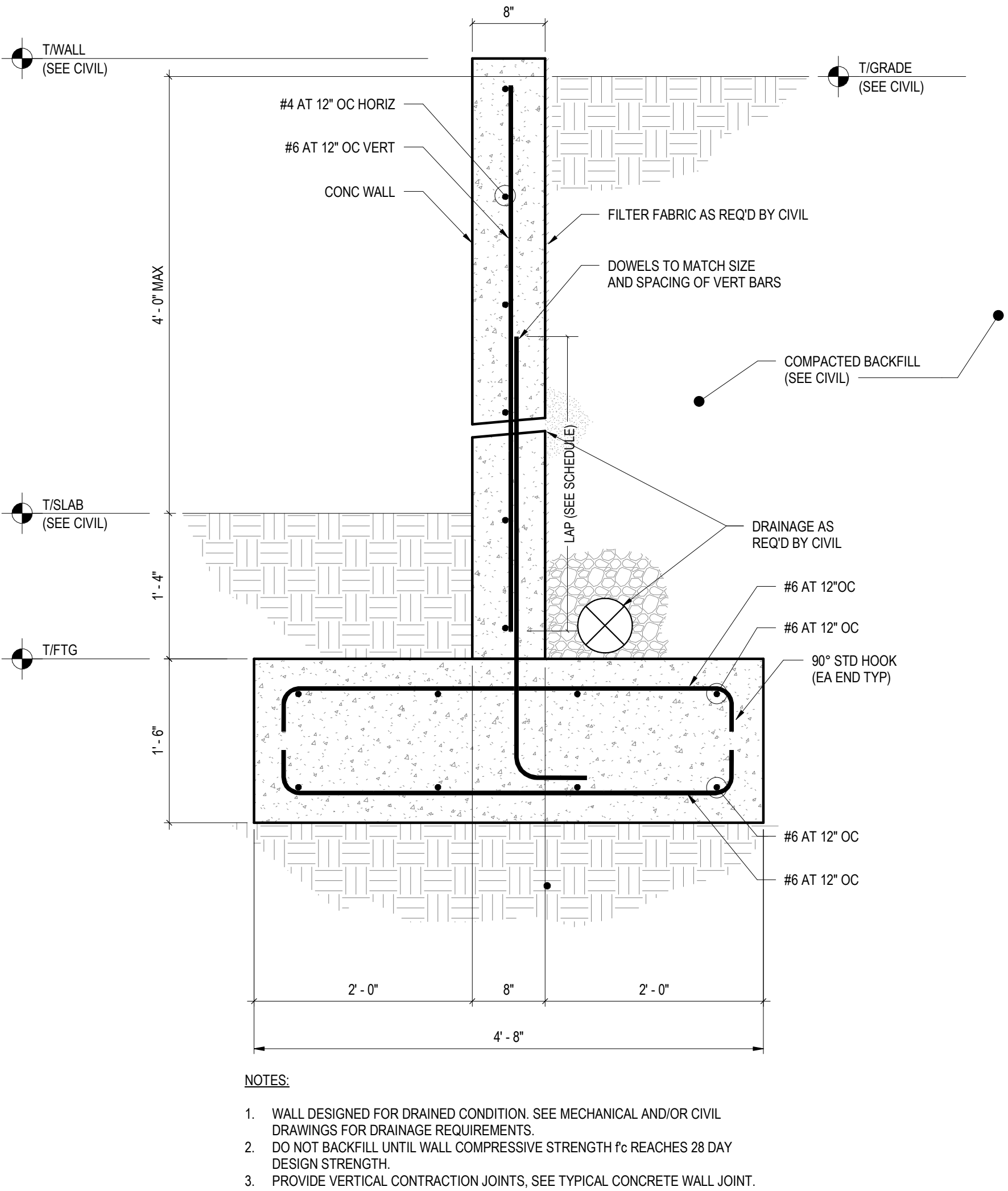
1. SEE ARCHITECTURAL AND MEP DRAWINGS FOR SIZE AND LOCATION OF HOUSEKEEPING PADS.



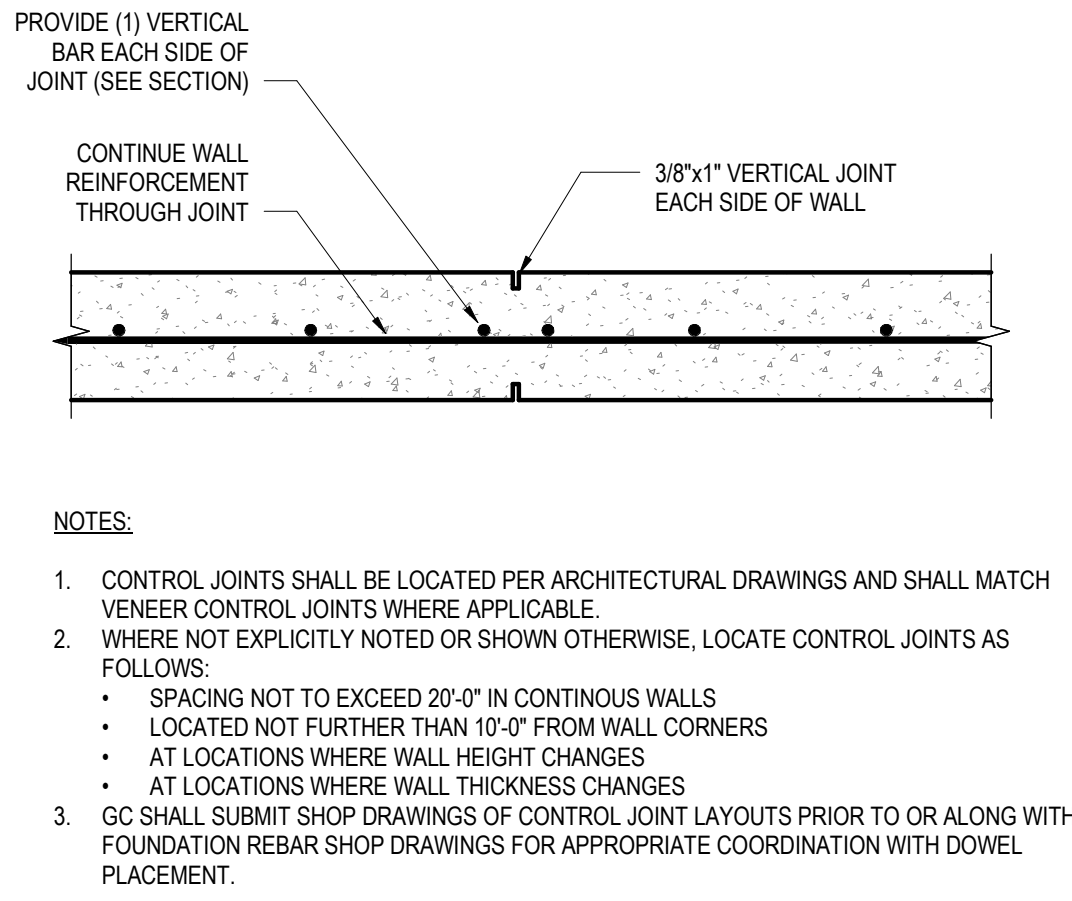
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DATE: 2/28/2024 2:10:31 PM



1 TYPICAL CANTILEVER RETAINING WALL
1" = 1'-0"



2 CONCRETE WALL CONTROL JOINTS
1" = 1'-0"

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ADDENDUM	5/10/24

Date : 02/28/2024
S+A Project No : 22026
Owner Project No :
Drawn By : APT
Checked By : RMJ
Phase :
BID DOCUMENTS

Sheet Title :
FOUNDATION SECTIONS & DETAILS

Sheet # :
S.303

REVISION	DATE

Date : 02/28/2024

S+A Project No : 22026

Owner Project No :

Drawn By : Author

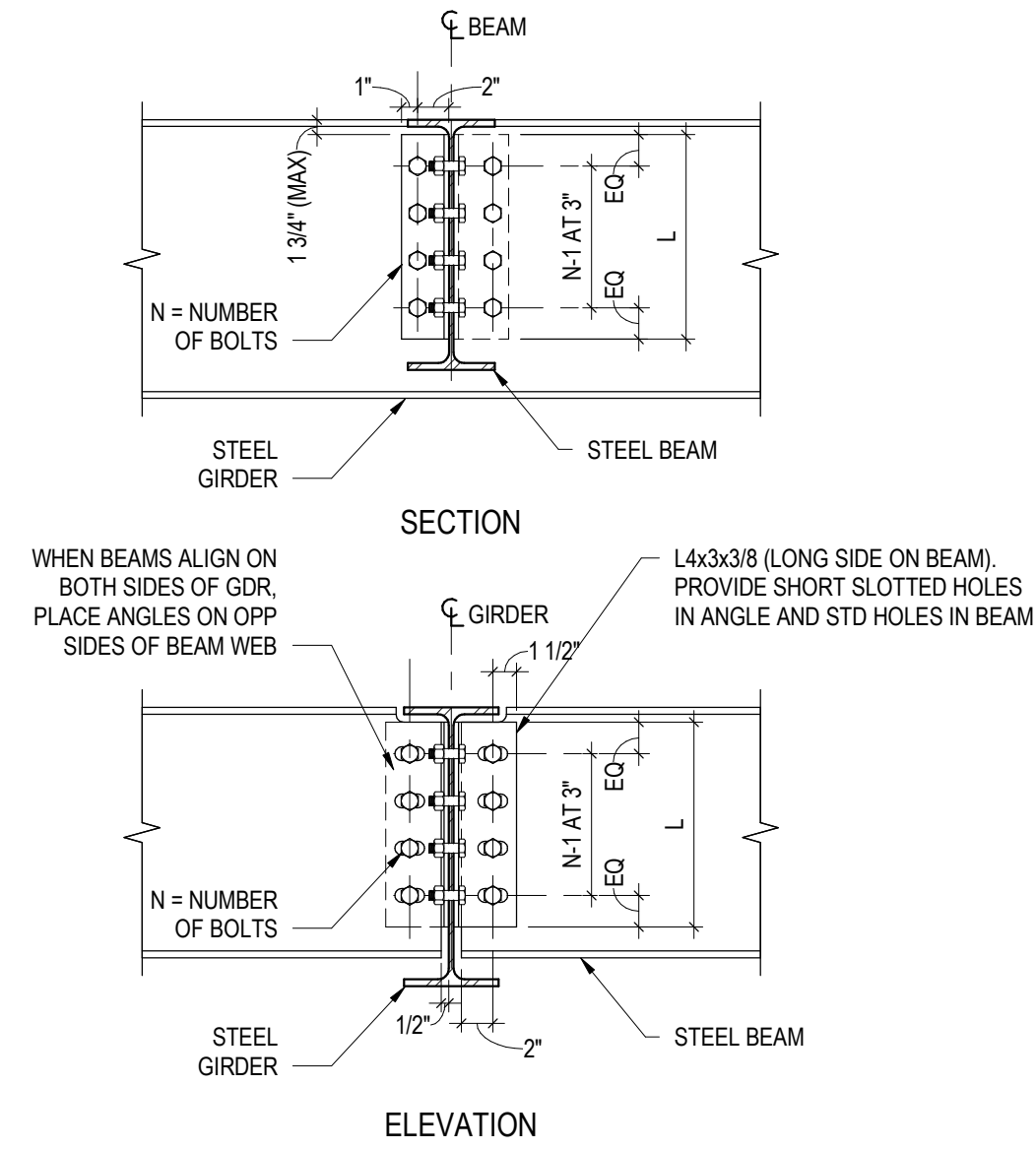
Checked By : Checker

Phase :
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Sheet Title :

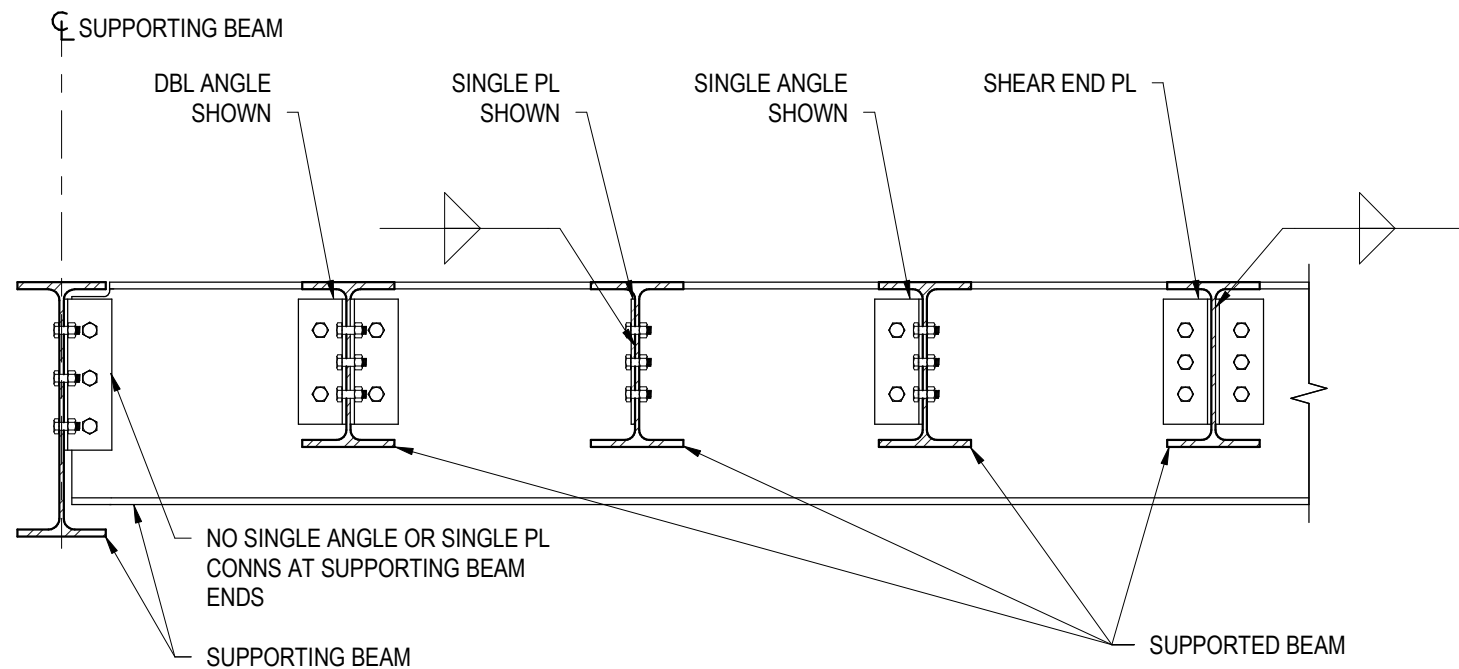
COMPOSITE
STEEL SECTIONS
& DETAILS

Sheet # :



1 BEAM TO GIRDER SINGLE ANGLE SHEAR CONNECTION (BOLTED-BOLTED)

1" = 1'-0"

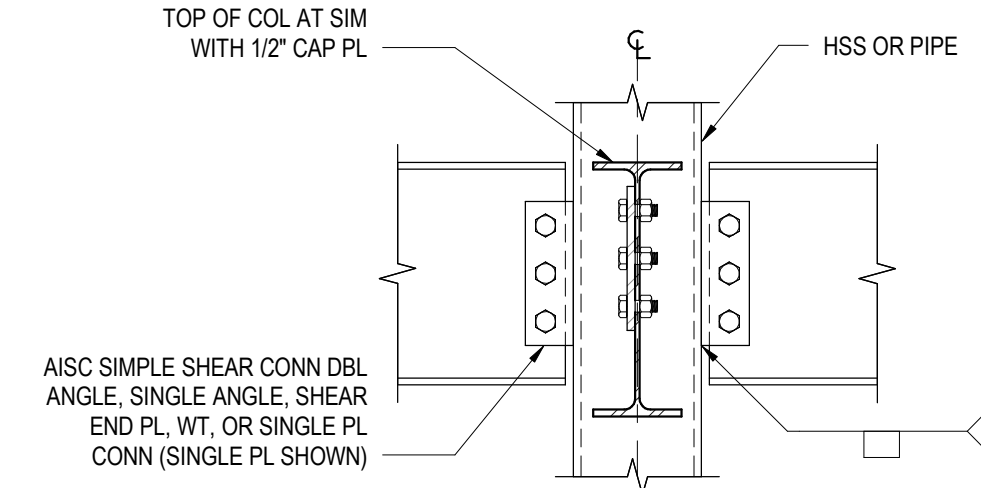


NOTES:

1. SUPPORTED BEAMS PRIMARILY SUPPORT DISTRIBUTED LOADS FROM SLABS OR DECKING.
2. SUPPORTING BEAMS SUPPORT SIGNIFICANT POINT LOADS FROM ONE OR MORE SUPPORTED BEAMS OR FROM COLUMNS BEING TRANSFERRED. SUPPORTING BEAMS MAY BE SUPPORTED BY COLUMNS OR BY OTHER SUPPORTING BEAMS.
3. FOR AISC SIMPLE SHEAR CONNECTIONS AT SUPPORTED BEAM ENDS, DOUBLE ANGLE, SINGLE PLATE, SINGLE ANGLE, OR SHEAR END PLATE MAY BE USED UNLESS NOTED OTHERWISE.

2 TYPICAL SHEAR CONNECTION BEAM-TO-BEAM

1" = 1'-0"

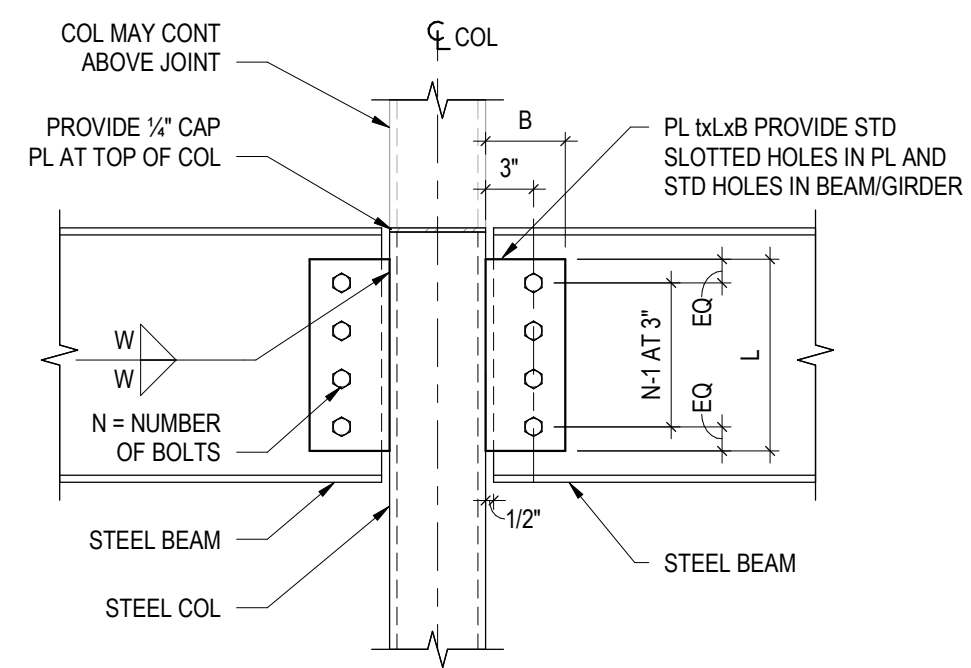


NOTE:

1. CONTRACTOR'S CALCULATIONS SHALL VERIFY HSS/PIPE WALL THICKNESS IS ADEQUATE FOR CONNECTION TYPE CHOSEN (PER AISC).

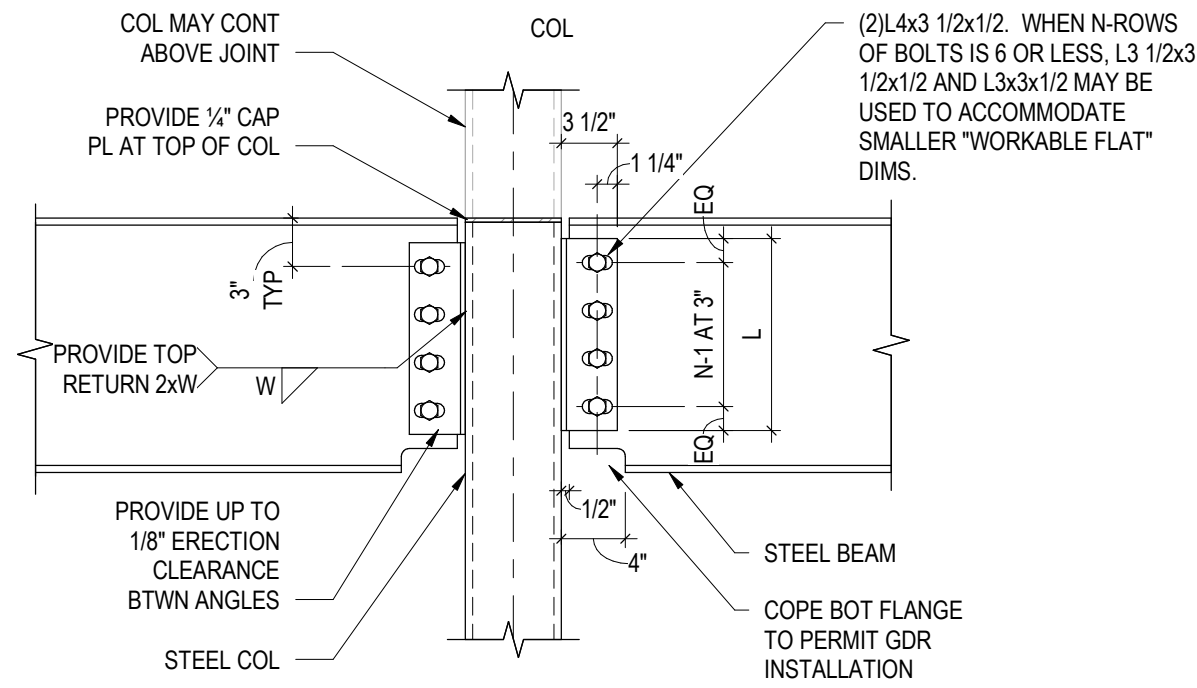
3 TYPICAL SHEAR CONNECTION

1" = 1'-0"



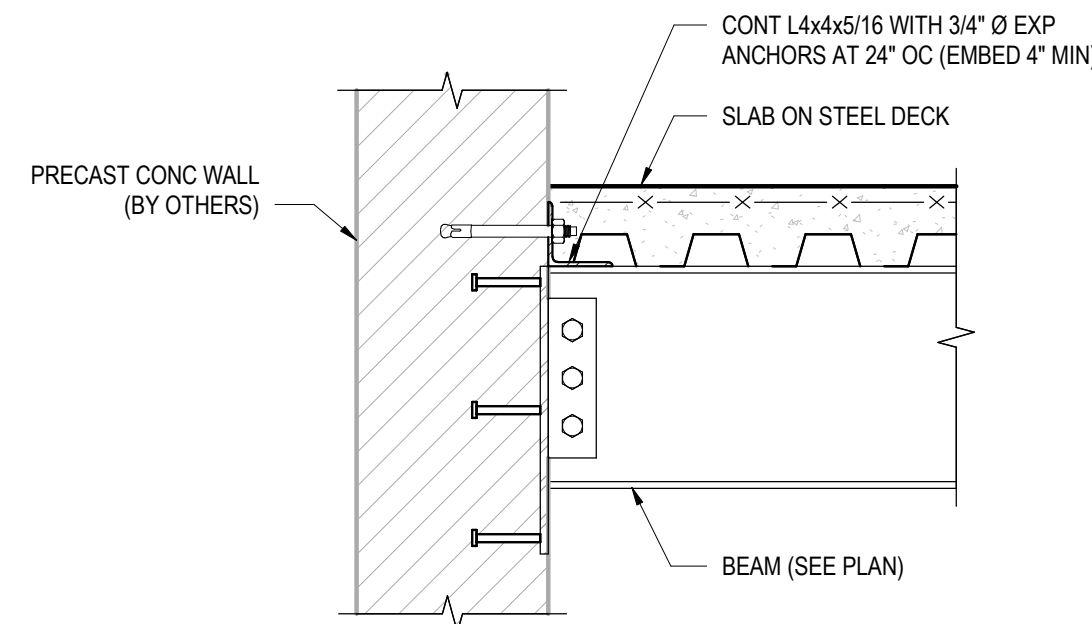
4 BEAM TO HSS COLUMN SINGLE PLATE SHEAR CONNECTION (BOLTED-WELDED)

1" = 1'-0"



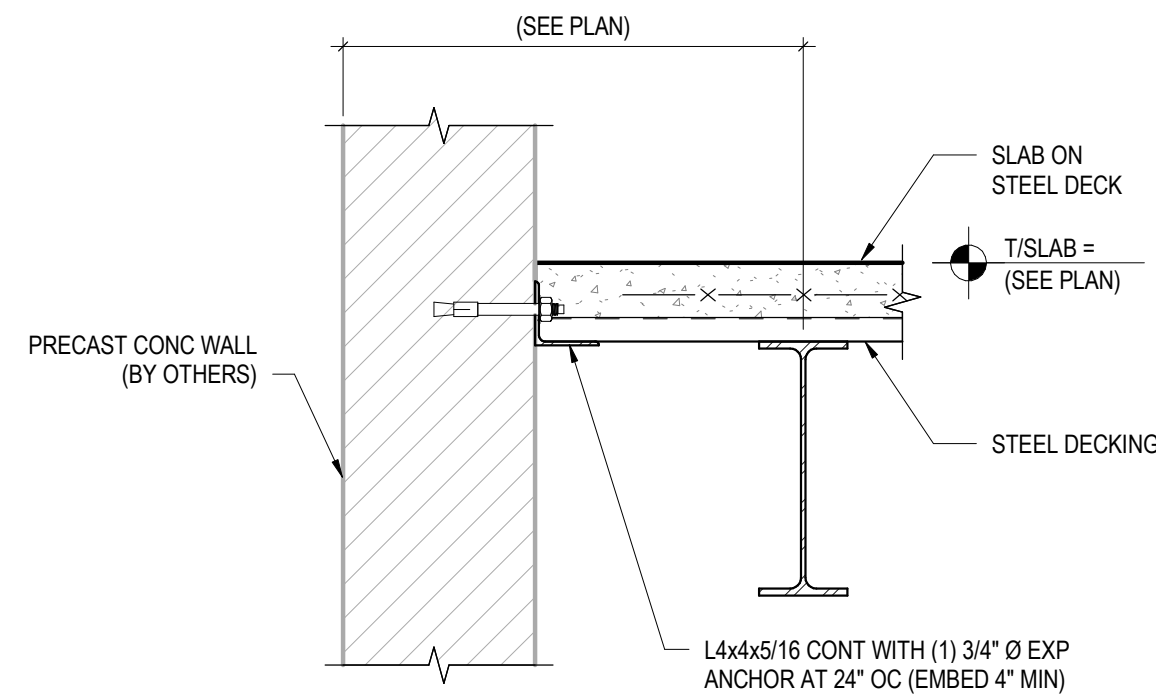
5 BEAM TO HSS COLUMN DOUBLE ANGLE SHEAR CONNECTION (BOLTED-WELDED)

1" = 1'-0"



6 FLOOR FRAMING AT PRECAST CONCRETE WALL

1" = 1'-0"



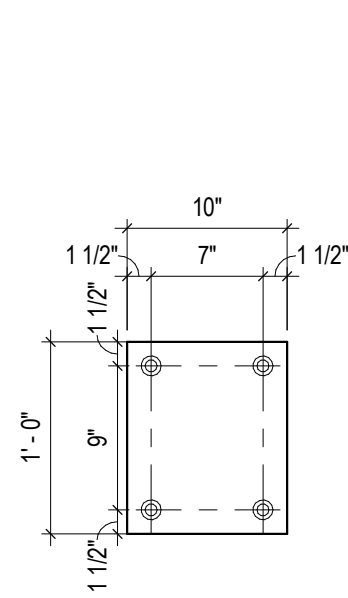
NOTES:

1. SEE TYPICAL COMPOSITE STEEL DECK DETAIL FOR NOTES AND REINFORCEMENT NOT SHOWN

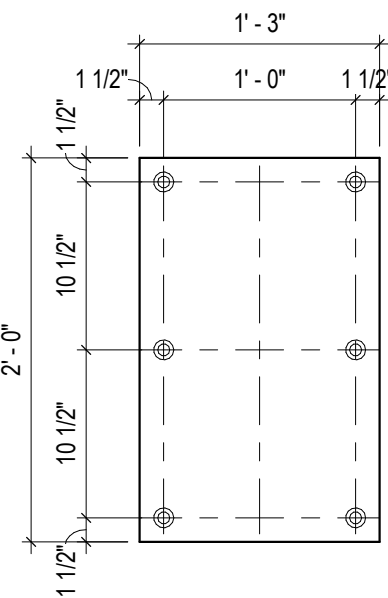
7 STEEL DECKING TO PRECAST CONCRETE WALL

1" = 1'-0"

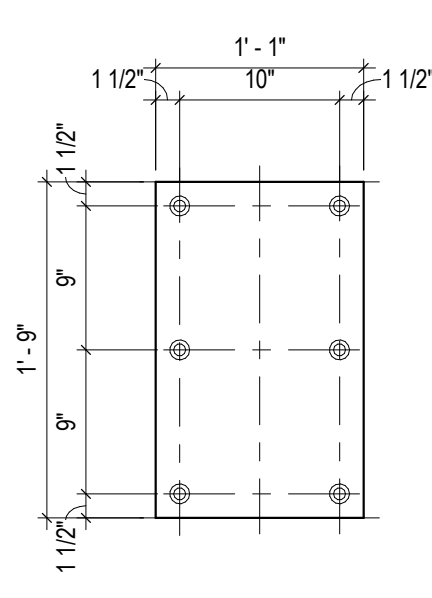
EMBED PLATE SCHEDULE - SHEAR ONLY						
MAXIMUM ULTIMATE VERTICAL BEAM SHEAR REACTION (KIPS)	EMBED PL SIZE I(N) X B(N) X D(N)	No STUD COLUMNS	No STUD ROWS	SUPPLEMENTAL REINFORCEMENT	COMMENTS	
25	1/2 X 10 X 12	2	2	NA		
35	1/2 X 15 X 24	2	3	NA		
45	1/2 X 13 X 21	2	3	NA		



TYPE "A"
PL 1/2"x10"x12" WITH
(4) 1/2"x6" HCA



TYPE "B"
PL 1/2"x15"x24"
WITH (6) 1/2"x6" HCA

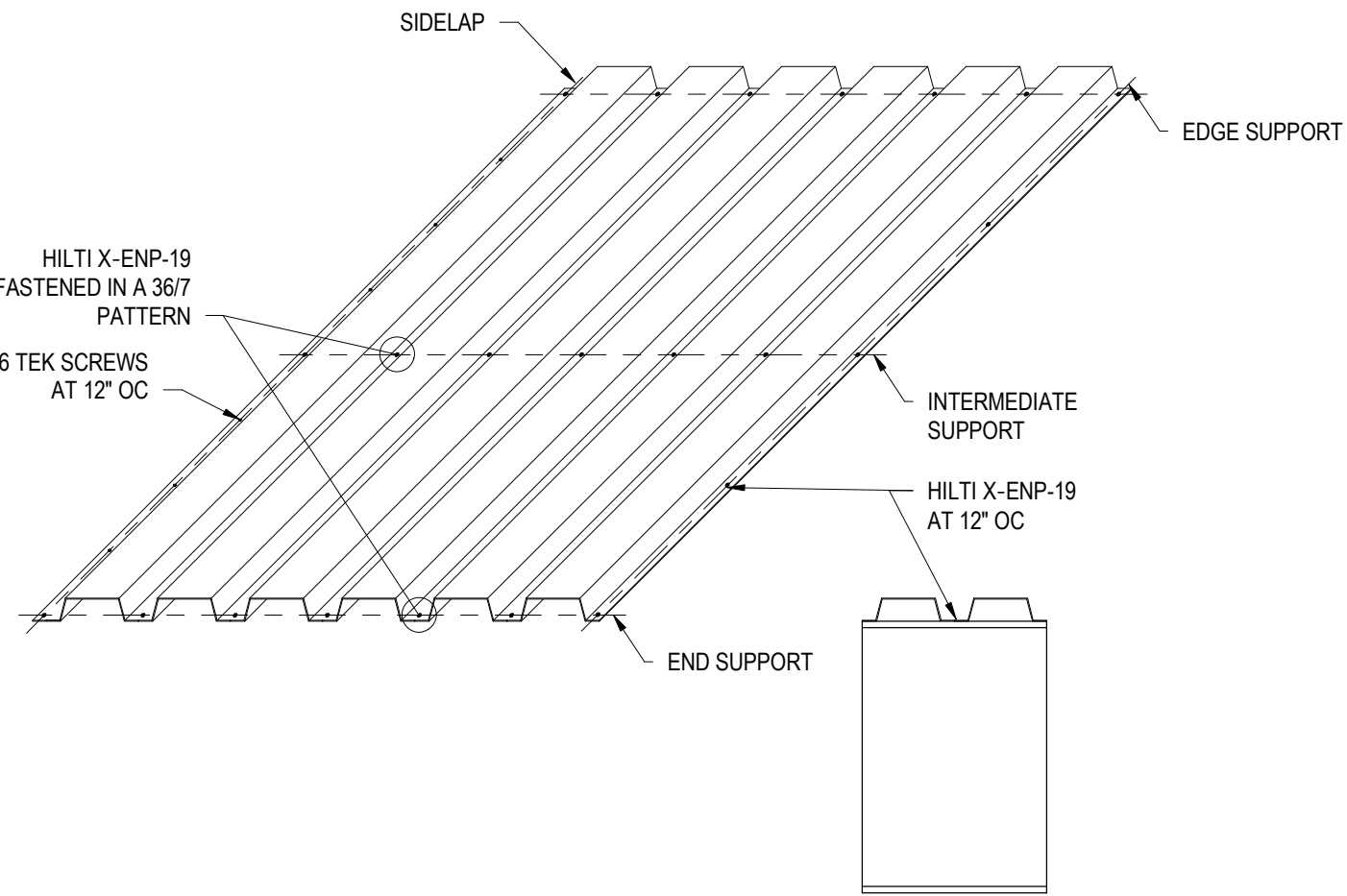


TYPE "C"
PL 1/2"x13"x21"
WITH (6) 1/2"x6" HCA

8 EMBED TYPES

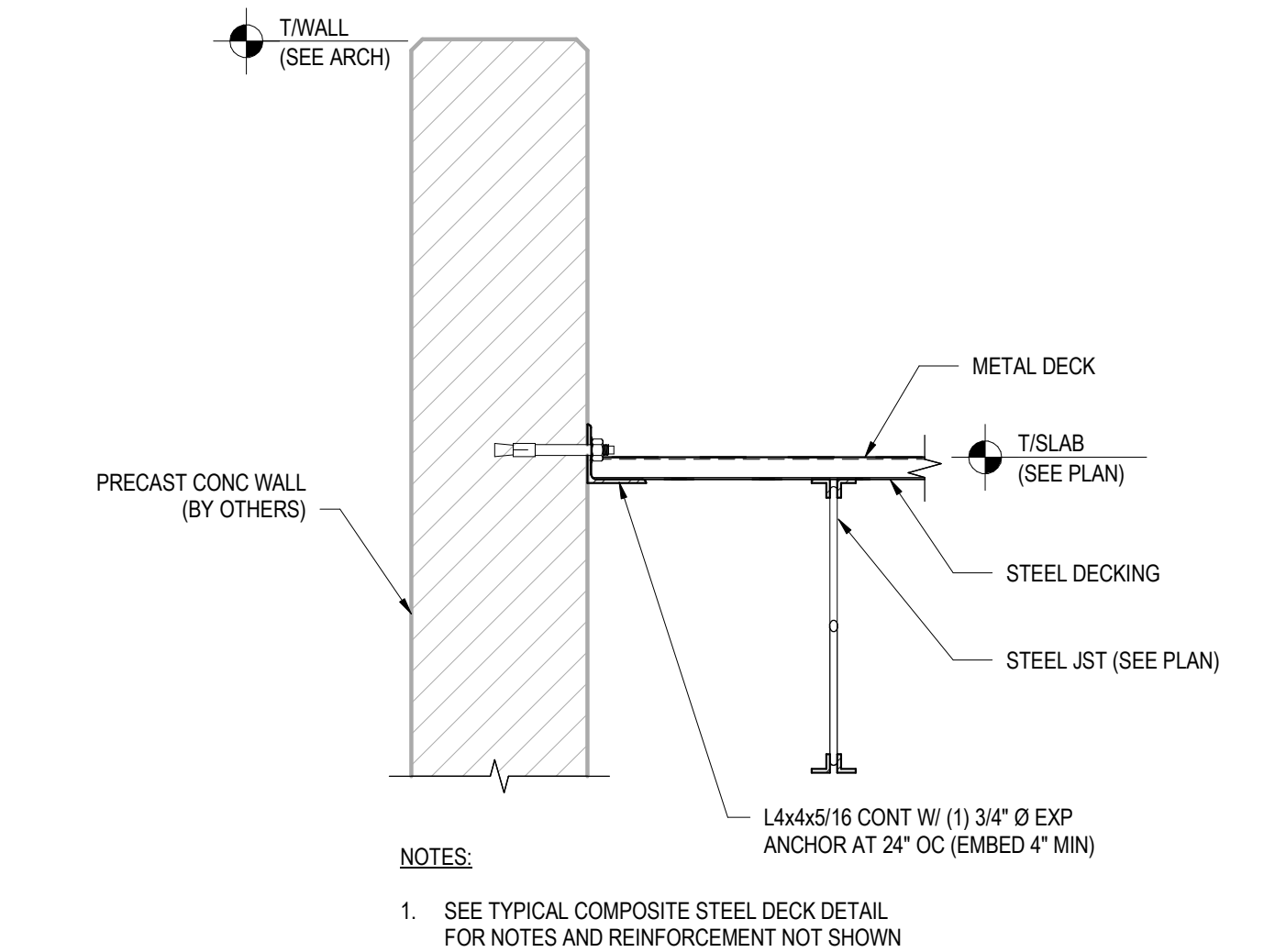
1" = 1'-0"

STEEL DECK CONNECTION SCHEDULE		
LEVEL(S)	DECK CONNECTION	COMMENTS
2	HILTI X-ENP-19-L15 IN 36/4 PATTERN WITH S-SLC 01 M HHV SIDELAP CONNECTORS AT 12" OC	
ROOF	HILTI X-HSN 24 IN 36/5 PATTERN WITH S-SLC 01 M HHV SIDELAP CONNECTORS AT 12" OC	



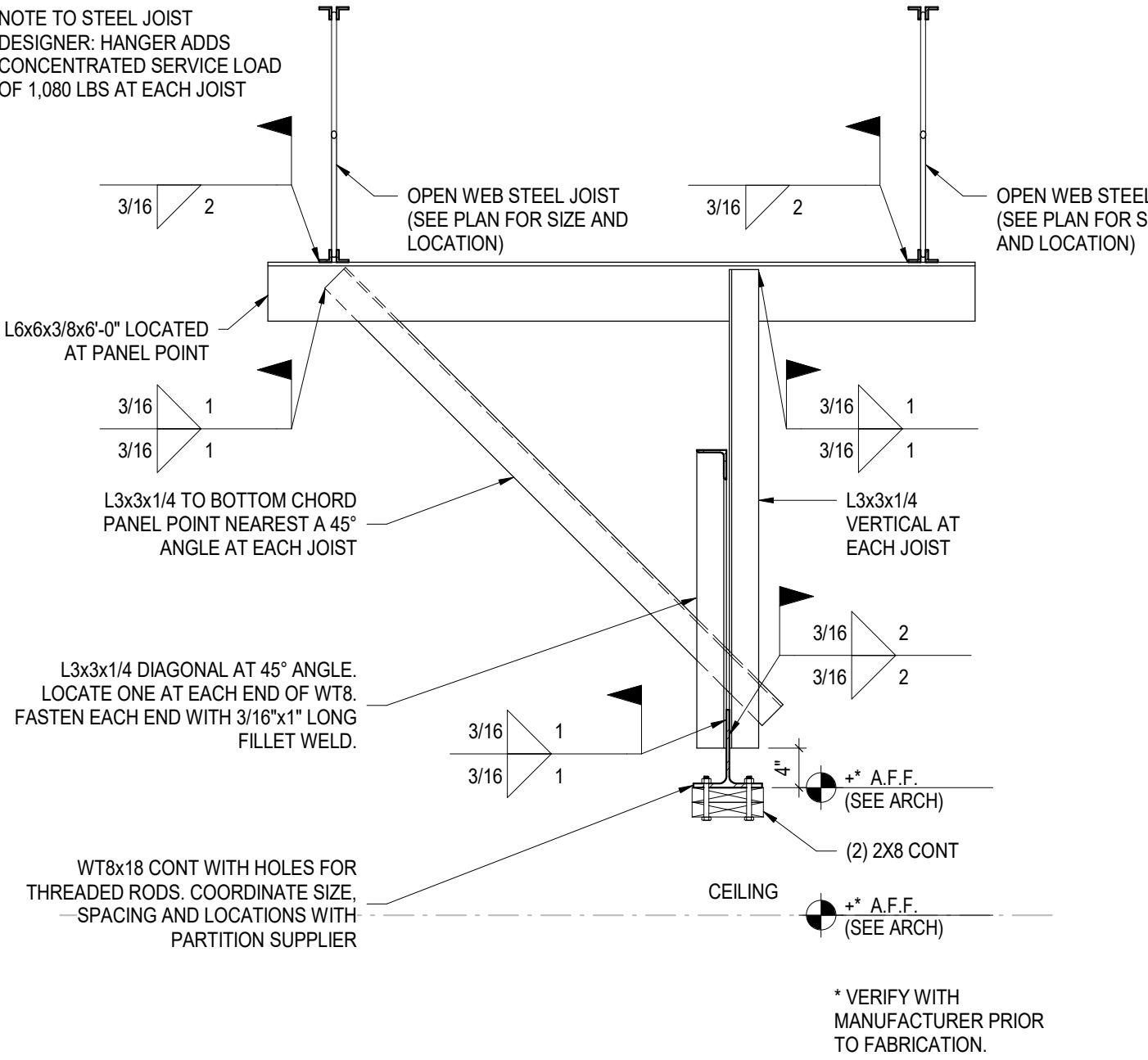
TYPICAL ROOF DECK ATTACHMENT

1" = 1'-0"



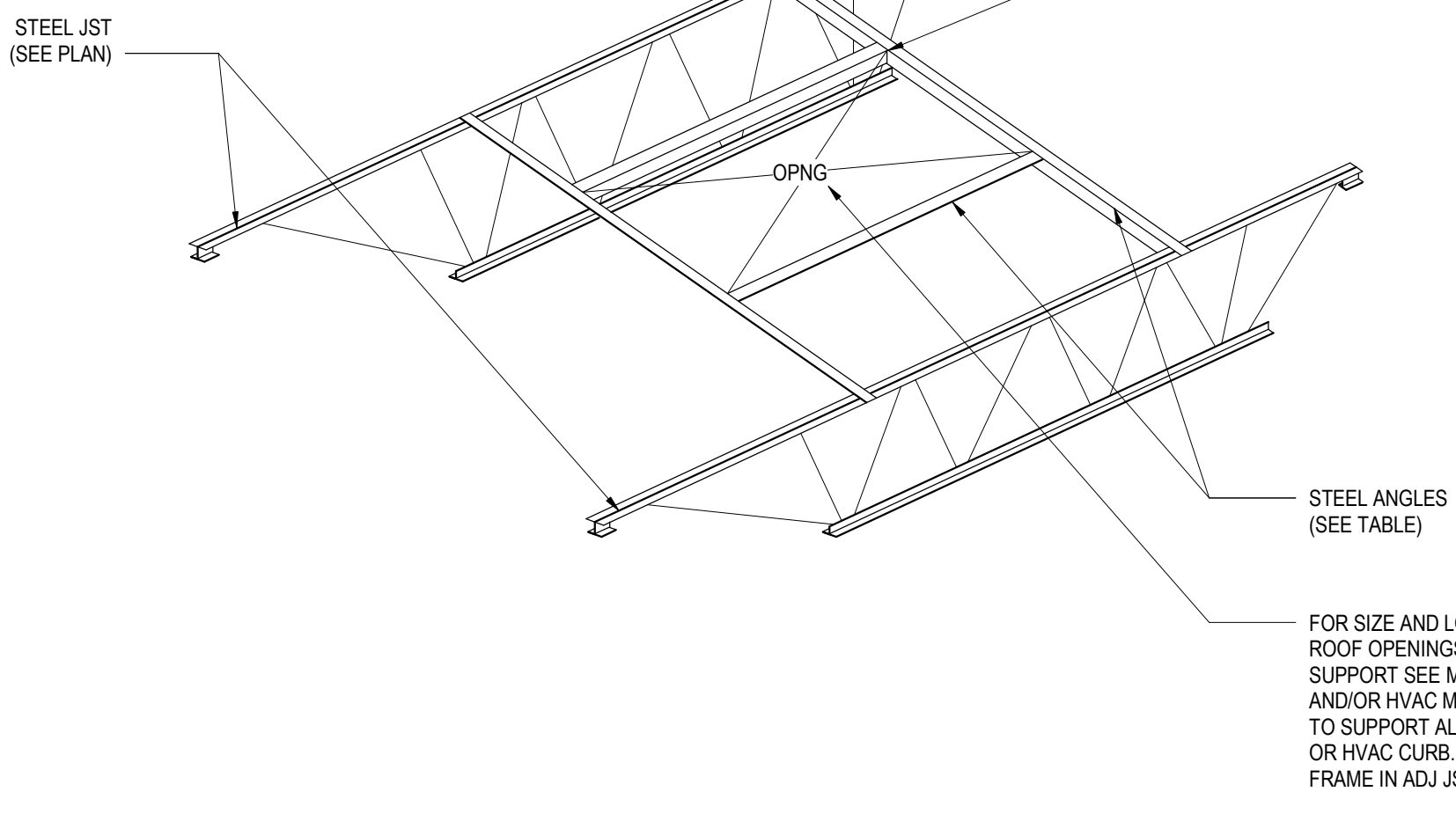
STEEL DECKING TO PRECAST CONCRETE WALL

1" = 1'-0"



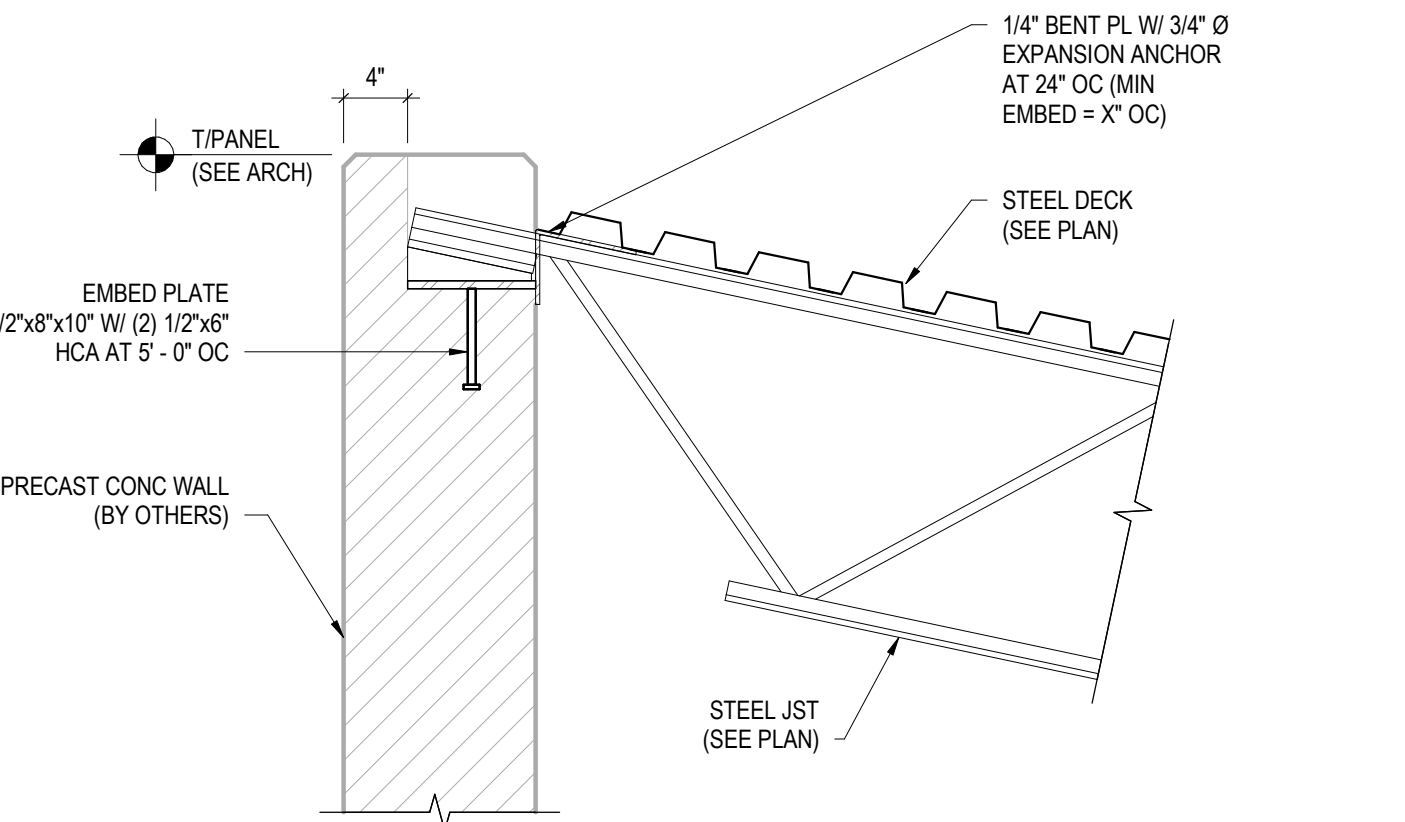
OPERABLE PARTITION SUPPORT

3/4" = 1'-0"



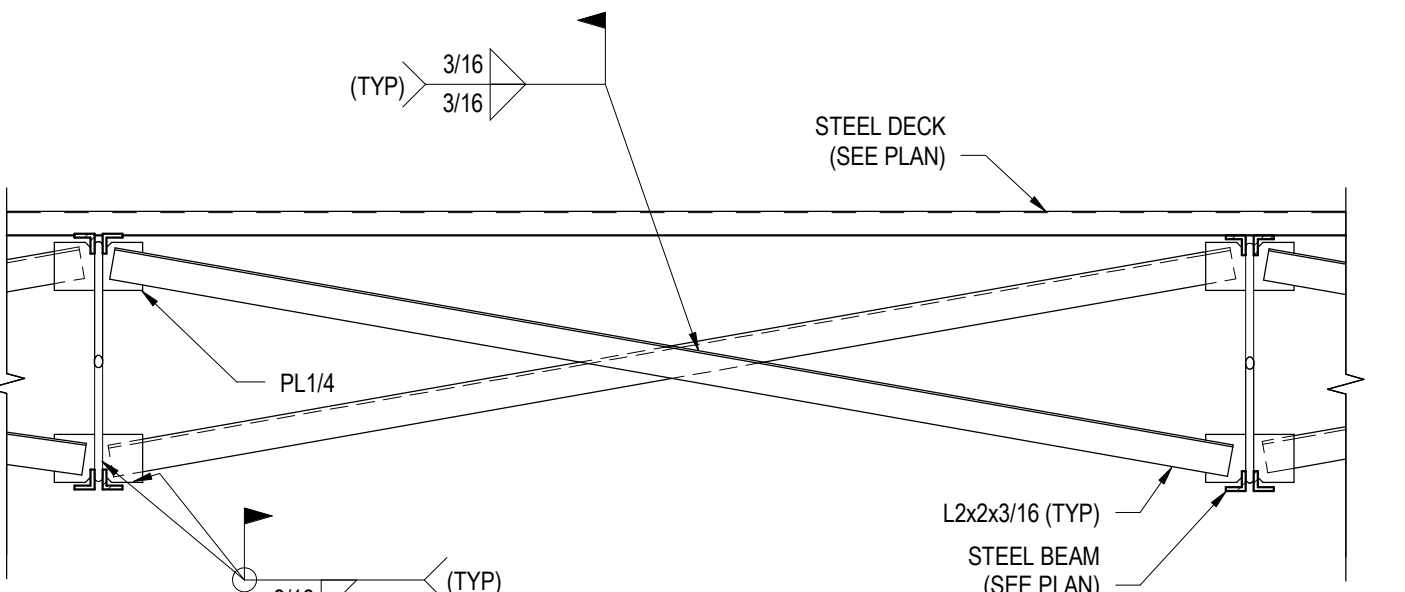
TYPICAL ROOF OPENING/HVAC SUPPORT FRAMING

1/2" = 1'-0"



JOIST TO PRECAST CONCRETE PANEL

1" = 1'-0"



CONTINUOUS CROSS BRIDGING DETAIL

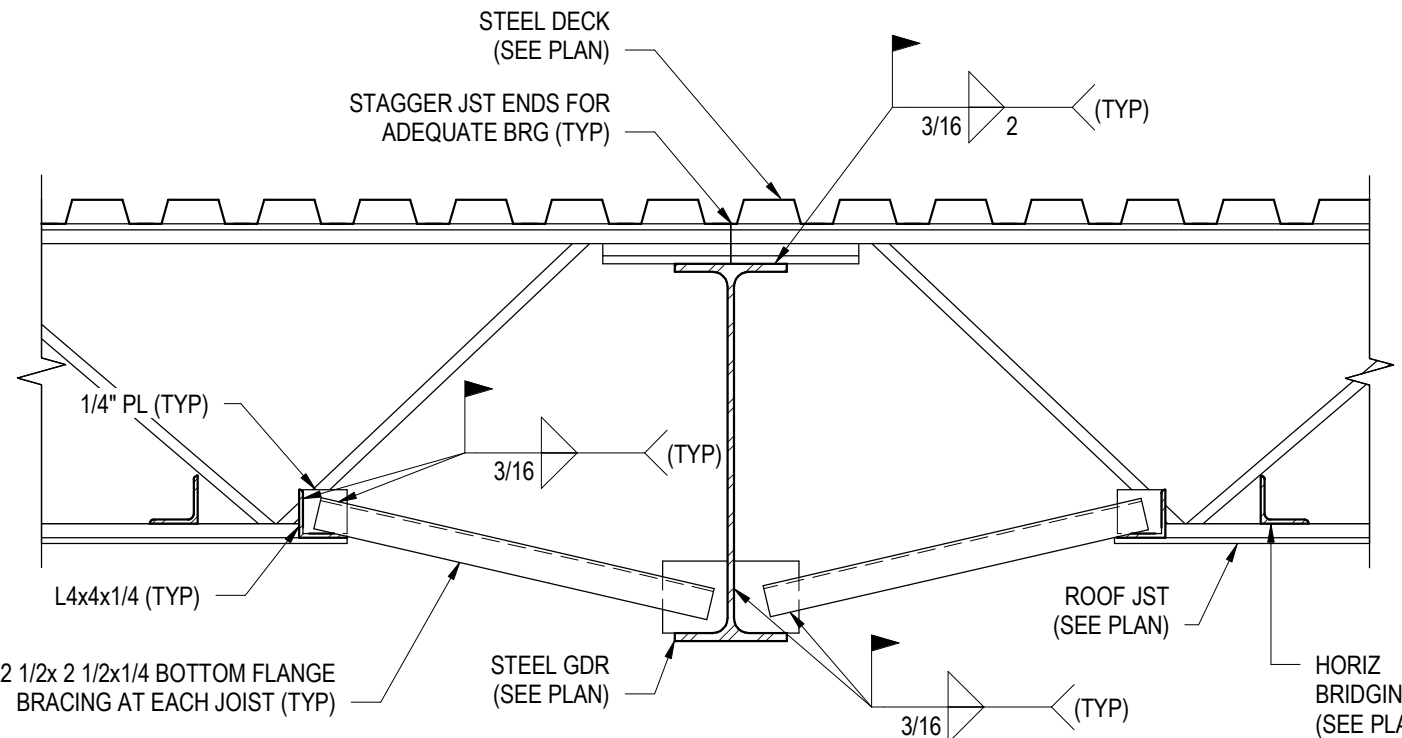
1" = 1'-0"

- NOTES:
1. PROVIDE SIMILAR FRAMING AT ROOF DRAINS.
 2. WELD/CONNECT DECK TO ALL FRAMING AT 6" OC MAXIMUM SPACING. COORDINATE WITH ENGINEER FOR SPECIAL DETAILS REQUIRED TO CONNECT ANGLES TO EXISTING DECK IN AN INSTALLATION OF NEW UNIT ON EXISTING ROOF FRAMING.
 3. IN AN INSTALLATION OF NEW UNIT ON EXISTING ROOF FRAMING, INSTALL L3x3x1/4 VERTICAL ANGLE WITHIN WEB OF EXISTING JOIST AND WELD END OF UNIT/OPENING SUPPORT ANGLE TO VERTICAL ANGLE WITH 4" OF 3/16" FIELD FILLET WELD. SEE TYPICAL JOIST WEB REINFORCING DETAIL FOR REINFORCING FOR POINT LOADS NOT AT JOIST CHORD PANEL POINT LOCATIONS.
 4. WHEN JOIST BRIDGING CONFLICTS WITH ROOF OPENING FRAMES, STOP BRIDGING AT EACH SIDE OF OPENING. PROVIDE CROSS BRIDGING AT LAST BRIDGING SPACE EACH SIDE OF OPENING AND CONNECT ENDS OF BRIDGING TO OPENING FRAMING. ADD ADDITIONAL BRIDGING AND CROSS BRIDGING ON EACH SIDE OF OPENING ON EACH SIDE OF CUT BRIDGING AREA WITH BRIDGING EXTENDED ONE BAY BEYOND EACH SIDE OF OPENING.
 5. ANCHOR EQUIPMENT AND CURB TO MISCELLANEOUS FRAMING SHOWN AS REQUIRED FOR WIND AND/OR SEISMIC FORCES. COORDINATE WITH EQUIPMENT/CURB MANUFACTURER (CONNECTION DESIGN BY OTHERS).

SPAN	ANGLE SIZE
UP TO 4' - 0"	L3X3X3/16
4' - 1" TO 6' - 0"	L4X3X1/4 (LLV)
6' - 1" TO 8' - 0"	L5X3X1/4 (LLV)
8' - 1" TO 10' - 0"	L6X4X5/16 (LLV)
HVAC UNIT SUPPORT	L6X4X5/16 (LLV)

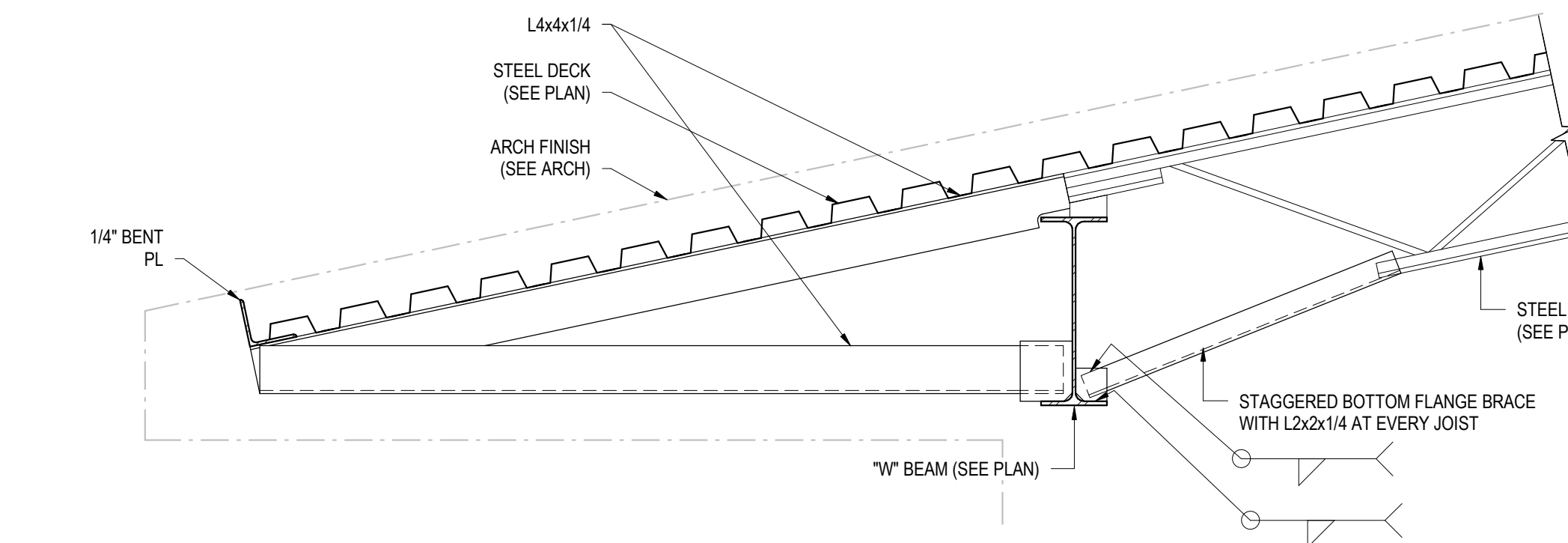
NOTE:

1. COPE VERTICAL LEG OF BEARING ANGLE 3" (TYPICAL)



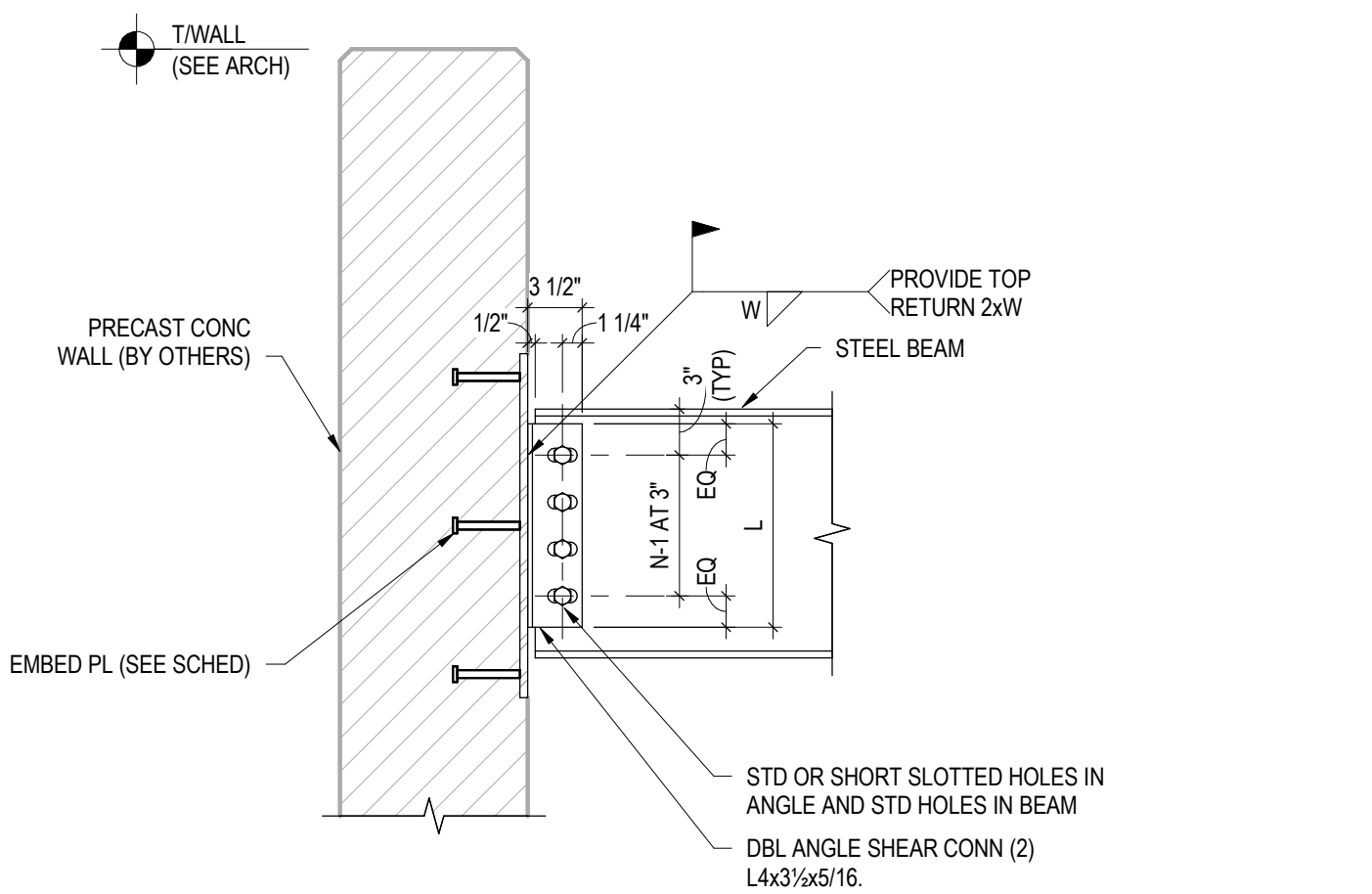
ROOF JOIST TO STEEL BEAM

1" = 1'-0"



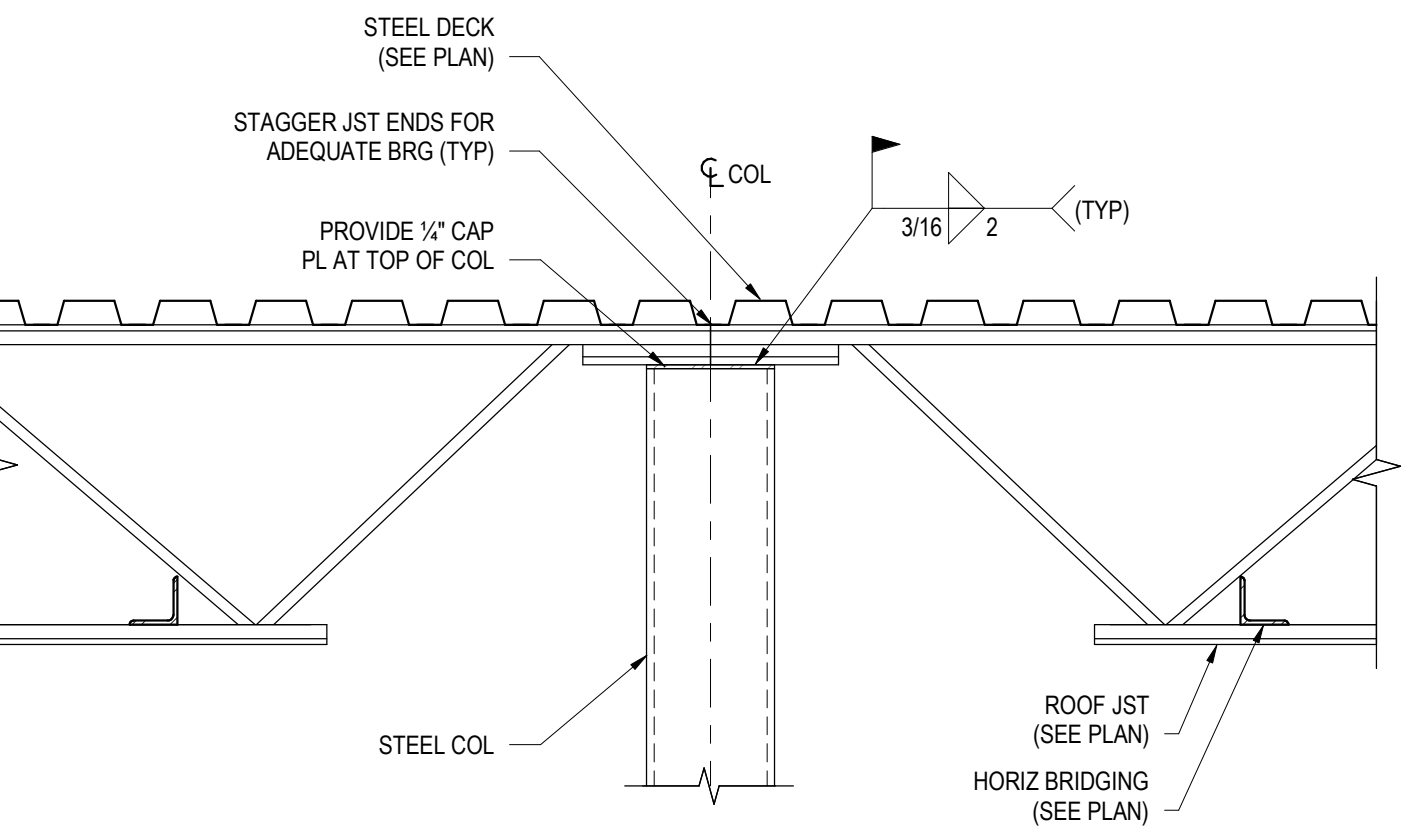
ROOF OVERHANG FRAMING DETAIL

1" = 1'-0"



BEAM TO CONCRETE DOUBLE ANGLE SHEAR CONNECTION (BOLTED-WELDED)

1" = 1'-0"



ROOF JOISTS TO HSS COLUMN

1" = 1'-0"



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CERTIFICATE OF AUTHORIZATION FL #30785
JG Project #: 22.08.019

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Name :

License # :

Consultants :

ST. LUCIE COUNTY -
PORT ST. LUCIE BRANCH
LIBRARY



180 NW PRIMA VISTA
BLVD.
PORT ST. LUCIE, FL
34983

Key Plan :

REVISION	DATE

Date : 02/28/2024

S+A Project No : 220206

Owner Project No :

Drawn By : JAB

Checked By : APT

Phase :

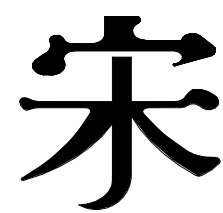
BID DOCUMENTS

Sheet Title :

ROOF FRAMING
SECTIONS &
DETAILS

Sheet # :

S.501



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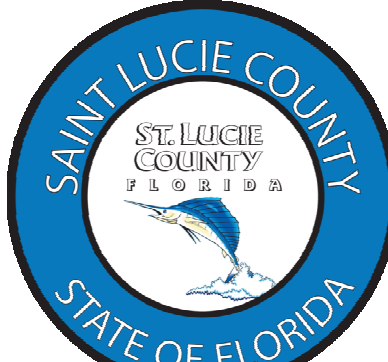
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PORT ST. LUCIE, FL
34983

Key Plan :

REVISION	DATE

Date : 02/28/2024

S+A Project No : 22026

Owner Project No :

Drawn By : JAB

Checked By : APT

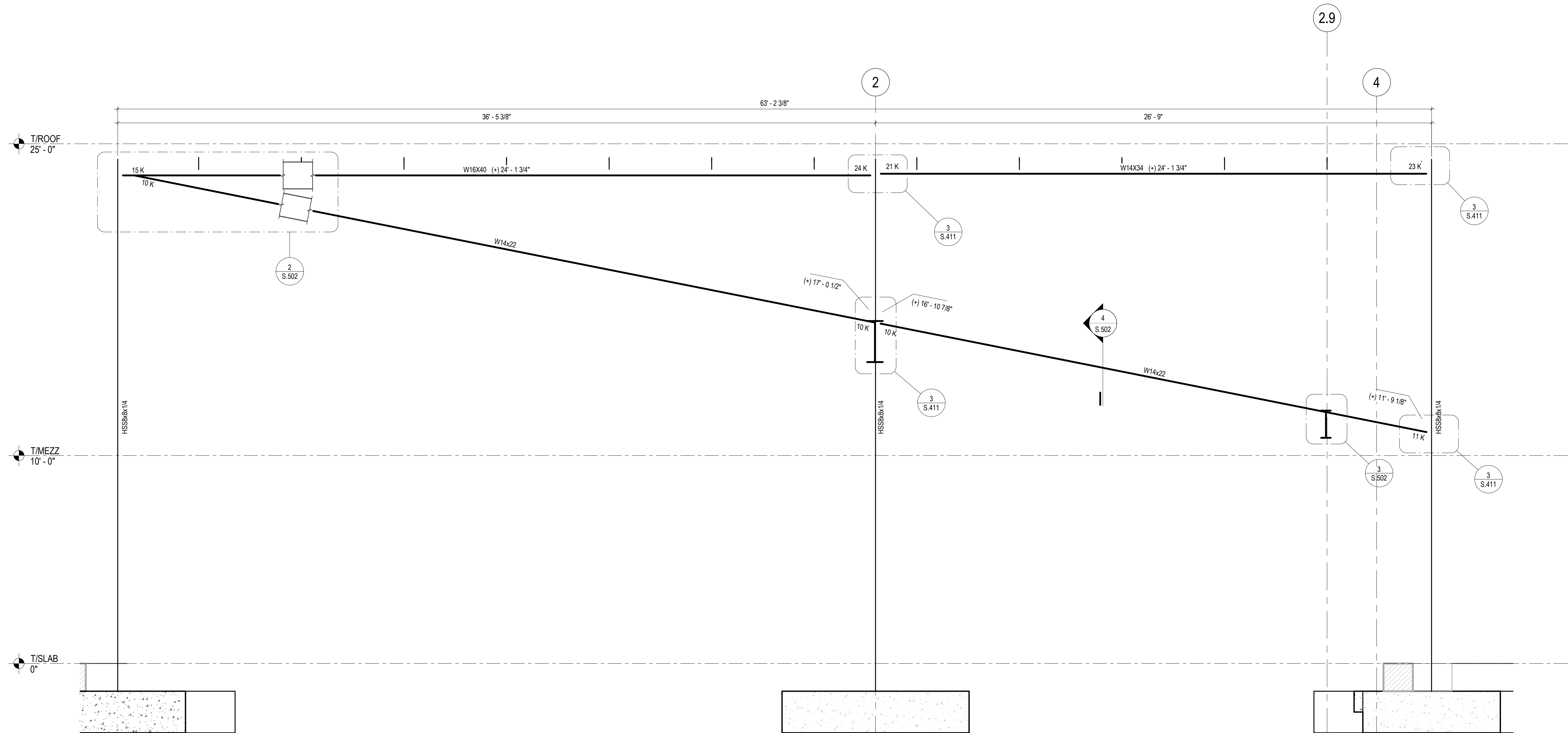
Phase :
BID DOCUMENTS

Sheet Title :

ROOF FRAMING
SECTIONS &
DETAILS

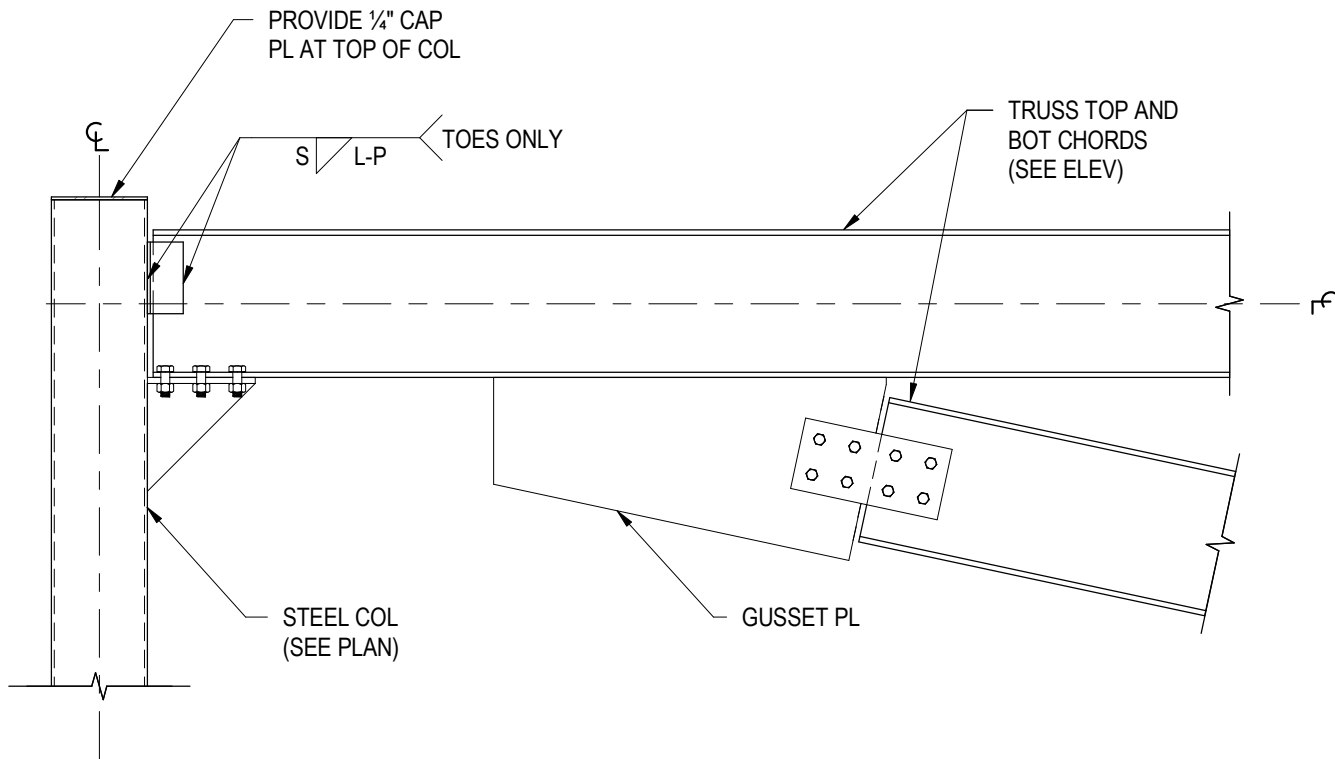
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S.502



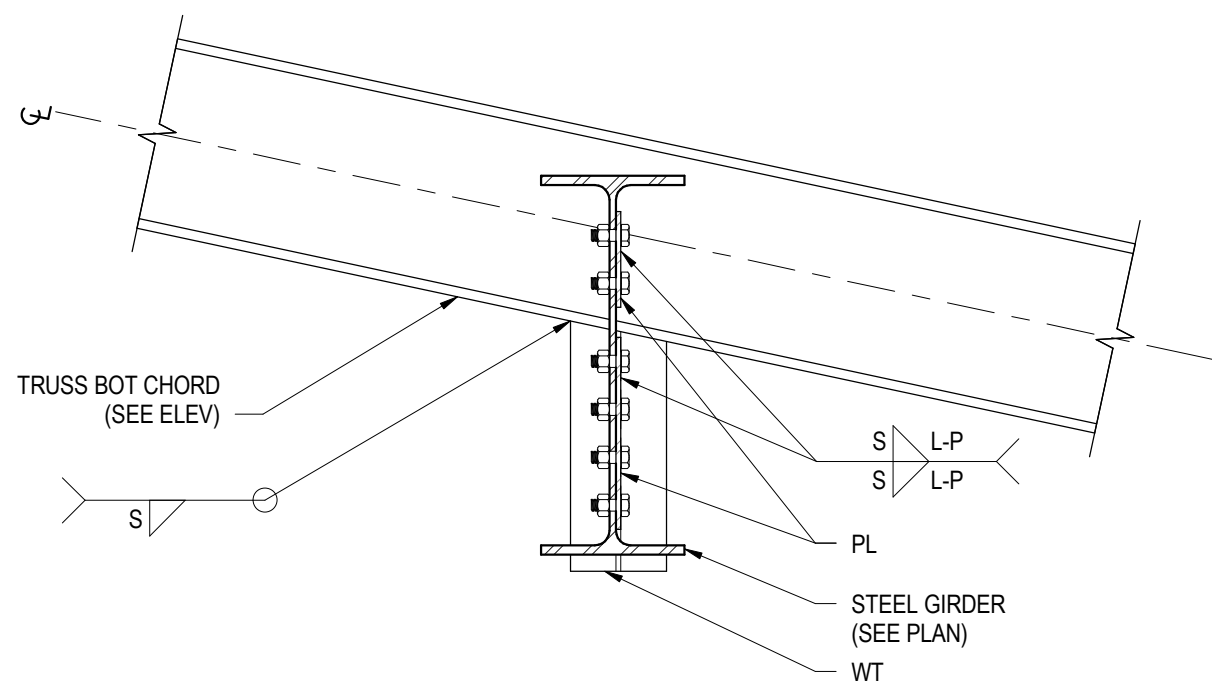
1 TRUSS - ELEVATION

3/8" = 1'-0"



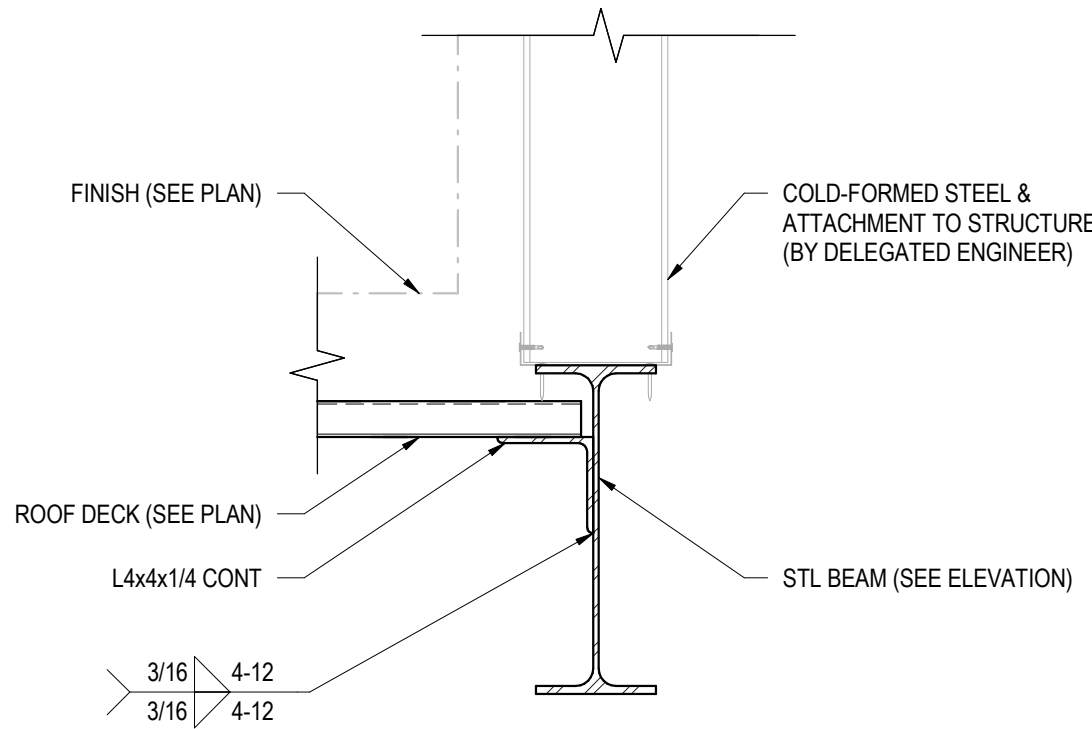
2 BEAM TO NORTH COLUMN CONNECTION

3/4" = 1'-0"



3 PERPENDICULAR CONNECTION AT GIRDER

1" = 1'-0"



4 SECTION

1 1/2" = 1'-0"



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DATE: 2/28/2024 2:10:46 PM