DESIGN CRITERIA

1. THE CONSTRUCTION DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS FROM THE AUTHORITY HAVING JURISDICTION.
   A. BUILDING CODE VERSION:..... 2021 INTERNATIONAL BUILDING CODE W. LOCAL AKJ AMENDMENTS
   B. AUTHORITY HAVING JURISDICTION:..... CITY OF BRYAN, TX
   C. RISK CATEGORY:..... II
2. DEAD LOADS:
   A. DEAD LOADS ARE BASED UPON THE ACTUAL WEIGHTS OF MATERIALS OF CONSTRUCTION AND FIXED SERVICE EQUIPMENT. ASSUMPTIONS FOR WALL AND ROOF ASSEMBLIES ARE SHOWN BELOW:
      a. METAL PANELS - 3 PSF
      b. CURTAIN WALLS - 10 PSF
      c. STONE / BRICK VENEER - 40 PSF
      d. ADHERED STONE/BRICK - 10 PSF
      e. SINGLE PLY MEMBRANE ROOF WITH INSULATION ASSEMBLY - 10 PSF
   B. EQUIPMENT
      a. ASSUMED LOADS FOR KNOWN EQUIPMENT ARE INDICATED ON THE STRUCTURAL DRAWINGS. ANY CHANGES IN THE TYPE, SIZE, LOCATION OR WEIGHT OF EQUIPMENT SHALL BE REPORTED TO THE EOR FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE SUBMISSION OF SHOP DRAWINGS.
      b. ASSUMED EQUIPMENT WEIGHTS INCLUDE THE WEIGHT OF CONCRETE PADS OR CURBS (IF APPLICABLE)
      c. FOR EQUIPMENT NOT INDICATED ON THE STRUCTURAL DRAWINGS IN WHICH THE WEIGHT OF THE EQUIPMENTS DIVIDED BY ITS SURFACE AREA EXCEEDS THE INDICATED LIVE LOAD FOR THE LOCATION, THE CONTRACTOR SHALL NOTIFY THE EOR PRIOR TO SUBMISSION OF SHOP DRAWINGS.
   C. HANGING CEILING AND MECHANICAL LOADS: AN ALLOWANCE OF 5 PSF HAS BEEN MADE FOR HANGING CEILING AND MECHANICAL EQUIPMENTS SUCH AS DUCT WORK AND SPRINKLER PIPES.
3. LIVE LOADS:
   A. BALCONIES AND DECKS:..... 1.5 x SAME AS OCCUPANCY SERVED
   B. PRIVATE ROOMS AND CORRIDORS SERVING THEM:..... 40 PSF
   C. PUBLIC ROOMS AND CORRIDORS SERVING THEM:..... 100 PSF
   D. STAIRS AND EXITS:..... 100 PSF | 300 LB
4. ROOF LIVE LOAD
   a. ORDINARY, FLAT, PITCHED AND CURVED UNOCCUPIED ROOFS: ..... 20 PSF, 300 LB
5. SNOW LOAD:
   A. GROUND SNOW LOAD, Pg:..... 5 PSF
6. WIND:
   A. ULTIMATE DESIGN WIND SPEED Vult:..... 115 MPH (3-SEC PEAK GUST)
   B. NOMINAL DESIGN WIND SPEED, Vasd:..... 89 MPH (3-SEC PEAK GUST)
   C. WIND EXPOSURE CATEGORY:..... II
   D. INTERNAL PRESSURE COEFFICIENT:..... ±0.18
   E. COMPONENTS AND CLADDING PRESSURES:..... SEE SCHEDULE
   F. MAIN WIND FORCE RESISTING SYSTEM:..... WOOD SHEAR WALLS
7. RAIN
   A. 100-YEAR RAINFALL INTENSITY (IN/HR):..... 3.82"
   B. MAXIMUM ROOF RAIN LOAD:..... 20 PSF
   C. MAXIMUM RAINWATER LEVEL - PONDING (STATIC + HYDRAULIC HEAD):..... 6"
   D. IF THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IF THE TOTAL RAIN WATER LEVEL EXCEEDS THE DESIGNED RAIN ROOF LOAD.
8. SEISMIC:
   MAPPED SPECTRAL RESPONSE VALUES, DESIGN SPECTRAL RESPONSE VALUES, AND AS SITE CLASS, HAVE BEEN PROVIDED BY :
   A. GEOTECHNICAL COMPANY AND REPORT NO:..... PADGETT REPORT NO.G-20720
   B. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_s & S_1:..... 0.066 & 0.45
   C. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_{DS} & S_{D1}:..... 0.107 & 0.040
   D. SITE CLASS:..... D
   E. SEISMIC DESIGN CATEGORY, SDC:..... A
   F. DESIGN BASE SHEAR:..... 1% SEISMIC WEIGHT

C&C - GROSS ULTIMATE WIND PRESSURES

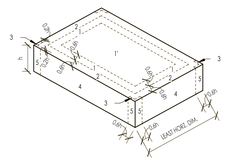
Cladding Type	Location	Effective Area (sf)	Coefficients +GCp	Coefficients -GCp	Wind pressures +p (psf)	Wind pressures -p (psf)
Wall	Interior	10	0.90	-0.99	+30.6	-33.2
		40	0.80	-0.89	+27.9	-30.5
		50	0.79	-0.88	+27.5	-30.0
		100	0.74	-0.83	+26.1	-28.7
		500	0.63	-0.72	+23.0	-25.5
Wall	Edge	10	0.90	-1.26	+30.6	-40.8
		40	0.80	-1.07	+27.9	-35.4
		50	0.79	-1.04	+27.5	-34.5
		100	0.74	-0.94	+26.1	-31.8
		500	0.63	-0.72	+23.0	-25.5
Roof	Interior	10	0.30	-1.00	+13.6	-33.5
		40	0.24	-0.94	+11.9	-31.8
		50	0.23	-0.93	+11.6	-31.5
		100	0.20	-0.90	+10.8	-30.6
		341	0.20	-0.90	+10.8	-30.6
Roof	Edge	10	0.90	-1.80	+30.6	-56.2
		40	0.80	-1.38	+27.9	-44.2
		50	0.79	-1.31	+27.5	-42.3
		100	0.74	-1.10	+26.1	-36.3
		500	0.63	-1.10	+23.0	-36.3
Overhang	Interior & Edge	10	0.00	-1.70	+10.0	-48.2
		40	0.00	-1.64	+10.0	-46.5
		50	0.00	-1.63	+10.0	-46.2
		100	0.00	-1.60	+10.0	-45.4
		500	0.00	-1.10	+10.0	-31.2
Overhang	Corner	10	0.00	-1.70	+10.0	-48.2
		40	0.00	-1.64	+10.0	-46.5
		50	0.00	-1.63	+10.0	-46.2
		100	0.00	-1.60	+10.0	-45.4
		500	0.00	-1.10	+10.0	-31.2
Parapet	Interior	10	2.70	-1.89	+76.6	-53.6
		40	2.18	-1.70	+61.9	-48.2
		50	2.10	-1.67	+59.6	-47.3
		100	1.84	-1.57	+52.2	-44.6
		500	1.73	-1.35	+49.1	-38.3
Parapet	Edge	10	2.70	-2.16	+76.6	-61.3
		40	2.18	-1.87	+61.9	-53.1
		50	2.10	-1.83	+59.6	-51.8
		100	1.84	-1.68	+52.2	-47.7
		500	1.73	-1.35	+49.1	-38.3

a = MINIMUM OF (10% OF LEAST HORIZONTAL DIMENSION OR 0.4h) BUT NOT LESS THAN 4% OF LEAST HORIZONTAL DIMENSION OR 3FT

h = MEAN ROOF HEIGHT OF A BUILDING, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR ROOF ANGLES LESS THAN OR EQUAL TO 10° (~2:12 ROOF PITCH)

MEAN ROOF HEIGHT = THE AVERAGE OF THE ROOF EAVE HEIGHT AND HEIGHT TO THE HIGHEST POINT ON THE ROOF SURFACE.

COMPONENTS AND CLADDING ZONES	
DESCRIPTION	ZONE
ROOF INTERIOR	1
ROOF EDGE	2
ROOF CORNER	3
WALL INTERIOR	4
WALL EDGE	5



FLAT /HIP/ GABLE ROOF - h ≤ 60
0° (0:12) < SLOPE ≤ 7° (1.5:12)

FOUNDATION DESIGN CRITERIA

1. GEOTECHNICAL REPORT: THIS FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS PROVIDED IN SITE-SPECIFIC GEOTECHNICAL REPORT. IN DESIGNING THE FOUNDATION FOR THE PROPOSED STRUCTURE, THE FOUNDATION DESIGN ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF THE GEOTECHNICAL ENGINEER'S REPORT OR ANY INFORMATION CONTAINED THEREIN. INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT(S) REFLECTS CONDITIONS AS FOUND AT THE LOCATION OF THE BORINGS. ACTUAL CONDITIONS AT LOCATIONS BETWEEN AND SURROUNDING THE BORINGS MAY DIFFER FROM THE SOIL STRATIGRAPHY DEPICTED BY THE BORINGS. IF THERE ARE ANY CONDITIONS DIFFERING FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT, OR IF ANY CHANGES HAVE BEEN IMPOSED ON THE SOILS IN QUESTION SINCE THE REPORT WAS WRITTEN, THEN THE DESIGN ENGINEER OF RECORD SHOULD BE NOTIFIED IN WRITING PRIOR TO CONSTRUCTION OF THE FOUNDATION IN ORDER TO REVIEW THE EFFECTS ON THE PERFORMANCE OF THE DESIGNED FOUNDATION.
   A. GEOTECHNICAL ENGINEER: ESCENLEY
   B. REPORT NUMBER: **22-00109**
   C. REPORT DATE: **APRIL 27, 2022**
   D. THE FOUNDATION DESIGN PARAMETERS PROVIDED WILL NOT ELIMINATE POST-CONSTRUCTION FOUNDATION MOVEMENT, AS SUCH, MEASURES SHALL BE TAKEN TO INCREASE THE TOLERANCE OF THE STRUCTURE SUPPORTED BY THE FOUNDATION. MEASURES INCLUDE BUT ARE NOT LIMITED TO: FREQUENT CONTROL JOINTS FOR MASONRY/BRICK/STONE/STUCCO EXTERIOR VENEER (15'-0 MAXIMUM), VERTICALLY SLOTTED CLIPS TO ATTACH ROOF TRUSSES TO NON-LOAD BEARING WALLS, ETC.
2. **ABNORMAL CONDITIONS:** IF THE FOUNDATION IS INSTALLED DURING A DRY OR WET PERIOD, WHICH IS CONSIDERED EXTREME OR ABNORMAL, THEN THE BUILDER SHALL NOTIFY THE GEOTECHNICAL ENGINEER AND FOUNDATION ENGINEER PRIOR TO CONSTRUCTION FOR POSSIBLE SOIL CONDITIONING OR FOUNDATION RE-DESIGN.
3. **FOUNDATION MOVEMENT:** THE FOUNDATION HAS BEEN DESIGNED WITH THE ASSUMPTION THAT MOVEMENT CAN BE TOLERATED WITHIN A STANDARD PERFORMANCE LIMIT:
   A. STANDARD PERFORMANCE DEFLECTION LIMIT: **L/360**
   B. STANDARD PERFORMANCE TILT LIMIT: **1%**
4. **SOIL MOISTURE LEVEL:** A REASONABLY UNIFORM SOIL MOISTURE LEVEL IS MAINTAINED AROUND THE FOUNDATION FOR THE LIFE OF THE STRUCTURE.
5. **FOUNDATION MAINTENANCE:** POSITIVE DRAINAGE AWAY FROM THE STRUCTURE SHALL BE MAINTAINED FOR THE LIFE OF THE STRUCTURE AND THE CONTRACTOR SHALL CONVEY THIS REQUIREMENT TO THE OWNER. THE INITIAL AND ALL SUBSEQUENT OWNERS MAINTAIN THE FOUNDATION IN ACCORDANCE WITH THE LATEST REVISION OF DOCUMENT NO. FP-A-SC-07, "FOUNDATION MAINTENANCE AND INSPECTION GUIDE FOR RESIDENTIAL AND OTHER LOW-RISE BUILDINGS", AVAILABLE ON THE FOUNDATION PERFORMANCE ASSOCIATION'S WEBSITE: WWW.FOUNDATIONPERFORMANCE.ORG. CONTRACTOR SHALL PROVIDE THIS DOCUMENT TO OWNER.
6. **EXPIRATION:** PLANS ARE VALID FOR 6-MONTHS FROM THE DATE THE PLANS ARE ISSUED OR REVISED BY THE ENGINEER. CONTACT ENGINEER FOR REVIEW IF PLANS HAVE EXPIRED OR IF CONSTRUCTION OF THE FOUNDATION HAS NOT COMMENCED WITHIN THIS TIME FRAME.

LATERAL LOAD RESISTING SYSTEM

1. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IS PROVIDED EXCLUSIVELY BY VERTICAL LATERAL LOAD RESISTING SYSTEM. THE HORIZONTAL DIAPHRAGMS DISTRIBUTE THE LATERAL WIND AND SEISMIC FORCES HORIZONTALLY TO THE VERTICAL LATERAL LOAD RESISTING SYSTEM.
   A. VERTICAL LATERAL LOAD RESISTING SYSTEM: WOOD-FRAMED SHEAR WALLS
   B. HORIZONTAL LATERAL LOAD RESISTING SYSTEM: WOOD STRUCTURAL PANEL ROOF DECK

STAIR, HANDRAILS, RESTROOM ACCESSORIES AND GUARDRAIL SPECIFICATIONS:

1. ALL STAIRS, GUARDRAILS AND HANDRAILS SHALL BE DESIGNED BY A REGISTERED STRUCTURAL ENGINEER BASED ON THE FOLLOWING DESIGN CRITERIA:
   A. STAIRS:
      a. STAIR STRINGERS, TREADS AND RISERS SHALL BE DESIGNED TO SUPPORT 100 PSF LIVE LOAD.
      b. INDIVIDUAL STAIR TREADS SHALL BE DESIGNED TO SUPPORT A 300 LB CONCENTRATED LOAD PLACED IN A POSITION THAT WOULD CAUSE THE MAX STRESS.
   B. HANDRAIL AND GUARDS:
      a. GUARD TOP RAIL AND HANDRAILS: THE TOP RAIL OF GUARDRAILS AND HANDRAILS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 50 PLF APPLIED HORIZONTALLY AT RIGHT ANGLES, OR A 200 LB CONCENTRATED LOAD IN ANY DIRECTION.
      b. INTERMEDIATE RAILS, PANEL FILLER AND THEIR CONNECTIONS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 50 PSF APPLIED HORIZONTALLY AT RIGHT ANGLES OVER THE ENTIRE TRIBUTARY AREA, INCLUDING OPENINGS AND SPACES BETWEEN RAILS.
   C. RESTROOM ACCESSORIES:
      a. GRAB BARS, TUB AND SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES SHALL BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 250 POUNDS AT ANY LOCATION AND IN ANY DIRECTION.

STRUCTURAL DEFERRED SUBMITTALS:

1. STRUCTURAL DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH REQUIRE STRUCTURAL ENGINEERING THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION BUT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL AT A LATER DATE. DEFERRED SUBMITTALS SHALL BE SUBMITTED TO AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION OF ANY SUCH WORK.
2. COMPLETE STRUCTURAL SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE STRUCTURAL ENGINEER-OF-RECORD (EOR) AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A SPECIALTY STRUCTURAL ENGINEER (SSE) WHO IS A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS BEING CONSTRUCTED WHO IS QUALIFIED TO PERFORM SAID WORK. A SEAL BY A LICENSED PROFESSIONAL ENGINEER IS NOT REQUIRED FOR EITHER PRODUCTS WHICH HAVE BEEN TESTED AND CERTIFIED BY AN APPROVED AGENCY SUCH AS THE ICC NOR FOR COMPONENTS WHICH ARE FABRICATED BY A FABRICATOR THAT IS CERTIFIED BY AN APPROVED AGENCY IN WHICH THE AGENCY SPECIFIES THAT SEALING OF THE SHOP DRAWINGS IS NOT REQUIRED (I.C.C. ESR), (OST INSTITUTE IN REGARDS TO OPEN WEB STEEL JOISTS)
3. THE SPECIALTY STRUCTURAL ENGINEER (SSE) SHALL SPECIFICALLY INDICATE IN A COVER PAGE AT THE FRONT OF THE SHOP DRAWING THAT THEY ARE THE STRUCTURAL ENGINEER IN RESPONSIBLE CHARGE FOR THE DEFERRED SUBMITTAL AND THAT THEY HAVE REVIEWED THE SHOP DRAWING TO ENSURE COMPLIANCE WITH THEIR DESIGN AND CALCULATIONS.
4. ALL STRUCTURAL DEFERRED SUBMITTALS SHALL BE REVIEWED BY THE SSE AND MARKED AS EITHER NO EXCEPTIONS OR EXCEPTION NOTED, PRIOR TO SUBMITTING TO THE 'FOR CONSTRUCTION' VERSION TO THE AUTHORITY HAVING JURISDICTION (AHJ) AND PRIOR TO RELEASE FOR FABRICATION.
5. STRUCTURAL DEFERRED SUBMITTALS ON THIS PROJECT INCLUDE:
   A. STAIRS, GUARDRAIL, HANDRAILS, GRAB BARS, LADDERS, ETC. (NOT REQUIRED IF USING CERTIFIED AND TESTED PRODUCTS/ASSEMBLIES)
   B. CURTAINWALL, STOREFRONT, WINDOWS (NOT REQUIRED IF USING CERTIFIED AND TESTED PRODUCTS/ASSEMBLIES)
   C. METAL PLATE CONNECTED WOOD TRUSSES

GENERAL CONDITIONS

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR QUALITY CONTROL, INCLUDING WORKMANSHIP AND MATERIALS FURNISHED BY SUBCONTRACTORS AND SUPPLIERS.
3. REFER TO DRAWINGS OTHER THAN STRUCTURAL FOR COMPLETE INFORMATION REGARDING: SLEEVES, CURBS, INSERTS, DEPRESSIONS, OPENINGS, ETC..
4. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST REVISIONS/ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS OR MATERIAL PROCUREMENT.
5. THE USE OR REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
6. ALL WORK SHALL CONFORM TO OSHA STANDARDS.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL CODES AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
8. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCIES BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
9. FRAMING LAYOUTS ARE PROVIDED TO REPRESENT DESIGN PROVISIONS AND SPECIFIC CONSTRUCTION. THE CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE FOR MATERIAL QUANTITIES AND ANY AND ALL UNSPECIFIED COMPONENTS REQUIRED FOR CONSTRUCTION.
10. WHERE MEMBER LOCATIONS ARE NOT SPECIFICALLY DIMENSIONED, MEMBERS ARE EITHER LOCATED ON COLUMN LINES OR ARE EQUALLY SPACED BETWEEN THE LOCATED MEMBERS.
11. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN OR SPECIFIED IN SIMILAR CONDITIONS.
12. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
13. THE FLOOR DESIGN LIVE LOAD FOR EACH PORTION OF STRUCTURE OR PORTION THEREOF THAT EXCEEDS 50 POUNDS PER SQUARE FOOT (PSF) SHALL BE STATED ON DURABLE SIGNS AND CONSPICUOUSLY POSTED BY THE OWNER IN THE APPLICABLE AREA(S) OF THE BUILDING.
14. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFESPAN 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 SUCH ITEMS AS, BUT NOT LIMITED TO, PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATING FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
15. THE STRUCTURAL ENGINEER'S ROLE DURING CONSTRUCTION
   A. THE ENGINEER SHALL NOT HAVE CONTROL NOR 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.
   B. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF THE STRUCTURAL ENGINEER IS SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK COMPLETED AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN A MANNER INDICATING THAT THE WORK, WHEN FULLY COMPLETED, WILL BE IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THE LIMITED SITE OBSERVATIONS SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
16. WATERPROOFING OF BUILDING ENVELOPE IS OF CRITICAL IMPORTANCE TO LONG-TERM STRUCTURAL PERFORMANCE. WATERPROOFING DESIGN SHALL BE THE RESPONSIBILITY OF THE ARCHITECT/CONTRACTOR AND SHALL BE IN ACCORDANCE WITH BEST PRACTICES FOR THE LOCALITY AND THE PARTICULAR ASSEMBLY.

CONTRACTOR QUALIFICATION

1. WORK SHALL BE PERFORMED BY A QUALIFIED CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR EXPERIENCED IN THIS TYPE OF WORK. SUCH KNOWLEDGE SHALL INCLUDE MAKING ALLOWANCES FOR PERFORMING WORK OF THIS NATURE FOLLOWING GOOD WORKMANSHIP STANDARDS OF CARE.
2. THE CONSTRUCTION CONTRACTOR AND SUBCONTRACTORS SHALL UNDERSTAND THE NATURE OF DRAWING PRODUCTION AND COORDINATION BETWEEN CONSULTANTS AND SHALL NOT ENTER INTO A CONTRACT BASED ON DRAWINGS THAT ARE BELIEVED TO CONTAIN DISCREPANCIES OR ARE OTHERWISE INCOMPLETE UNLESS PROPER ALLOWANCES HAVE BEEN MADE FOR COST IMPLICATIONS THAT MAY ARISE DUE TO FUTURE DRAWING CHANGES MADE IN PREPARATION OF FINAL CONSTRUCTION DOCUMENTS.
3. IN THE COURSE OF PRODUCING AND ISSUING DRAWINGS, VARIOUS STAGES OF COMPLETION ARE DEVELOPED. THE CONSTRUCTION CONTRACTOR AND SUBCONTRACTORS SHALL UNDERSTAND THE PURPOSE AND CONTENT CONTAINED IN PRINT, PRICING, AND CONSTRUCTION DRAWINGS. COST IMPLICATIONS AND CONTRACTIBILITY ARE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR AND SUBCONTRACTORS UNLESS PROPER ARRANGEMENTS HAVE BEEN MADE WITH THE OWNER.

FUTURE EXPANSION

1. NO PROVISIONS FOR ANY FUTURE EXPANSION HAVE BEEN MADE IN THE STRUCTURAL DESIGN.

SUBSTITUTIONS:

1. ALL REQUESTS FOR SUBSTITUTIONS OF MATERIALS OR DETAILS SHOWN IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED FOR APPROVAL DURING THE BIDDING PERIOD. ONCE BIDS ARE ACCEPTED, PROPOSED SUBSTITUTIONS WILL BE CONSIDERED ONLY WHEN THEY ARE OFFICIALLY SUBMITTED WITH AN IDENTIFIED SAVINGS TO BE DEDUCTED FROM THE CONTRACT.

REQUEST FOR INFORMATION (RFI)

1. RFIS MUST INCLUDE A TRANSMITTAL SHEET THAT INDICATES THE FOLLOWING:
   A. RFI NUMBER
   B. RFI CATEGORY:
      a. REQUEST FOR SUBSTITUTION
      b. CORRECTIVE REPAIR
      c. ADDITIONAL INFORMATION REQUIRED
      d. DISCREPANCY BETWEEN CONSTRUCTION DOCUMENTS
   C. DATE SUBMITTED
   D. DATE RESPONSE NEED BY
   E. SUBMITTED BY (INCLUDE EMAIL AND PHONE NUMBER)
   F. RFI DESCRIPTION INCLUDING:
      a. SHEET NUMBER, DETAIL AND/OR SPECIFICATION NUMBER IF APPLICABLE
      b. SKETCHES IF APPLICABLE
      c. PHOTOS IF APPLICABLE.

SUBMITTALS

1. SUBMITTAL LIST AND SCHEDULE
   A. THE GENERAL CONTRACTOR SHALL PREPARE A DETAILED LIST AND SCHEDULE OF ALL SUBMITTAL ITEMS TO BE SENT TO THE STRUCTURAL ENGINEER PRIOR TO THE START OF CONSTRUCTION. THIS LIST SHALL BE UPDATED AND REVISED AS THE JOB PROGRESSES.
2. SUBMITTAL REQUIREMENTS:
   A. ALL SUBMITTALS MUST BE REVIEWED AND ELECTRONICALLY STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE DESIGN TEAM AS NO EXCEPTIONS.
   B. ALL SUBMITTALS MUST INCLUDE A TRANSMITTAL SHEET WHICH INDICATES:
      a. SUBMITTAL NUMBER PER THE FOLLOWING FORMAT: E.G. 03 30 00-01.00 (DIVISION, SUBMITTAL # FOR DIVISION. ISSUE # - THE EXAMPLE INDICATES THE FIRST SUBMITTAL, FIRST ISSUE OF A CONCRETE SUBMITTAL)
      b. BRIEF DESCRIPTION OF SUBMITTAL CONTENTS
      c. DATE ISSUED
      d. REQUESTED RETURN DATE
      e. ISSUING PARTY INCLUDING NAME, PHONE NUMBER AND EMAIL
   C. CONTRACTOR SHALL PROVIDE THE SUBMITTAL IN ELECTRONIC (PDF) FORMAT. SUBMITTALS SHALL NOT BE SCANNED COPIES OF PRINTED DOCUMENTS.
   D. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIALS REQUIRED BY THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER SHOWN OR COMMENTED ON IN THE SHOP DRAWING.
   E. THE CONTRACTOR MUST ALLOW A MINIMUM OF 14 DAYS FOR STRUCTURAL REVIEW OF ALL SUBMITTALS. THE CONTRACTOR CAN REQUEST AN EXPEDITED REVIEW AT AN AGREED UPON FEE WITH THE STRUCTURAL ENGINEER.
   F. STRUCTURAL STEEL SUBMITTALS MUST BE ACCOMPANIED BY THE SDS/2 OR TEKLA MODEL WHICH WILL BE USED BY THE DESIGN TEAM AS A VISUAL AID TO THE SHOP DRAWINGS.
3. REFER TO THE SPECIFICATIONS FOR A LIST OF ALL THE REQUIRED SUBMITTALS.
4. ENGINEER REVIEW STAMP DESIGNATIONS: ALL DESIGNATIONS ARE INDICATIVE OF A REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.
   A. NO EXCEPTIONS
      a. NO ITEMS WERE FOUND TO BE IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS, NO 'FOR REVIEW' RESUBMITTAL REQUIRED.
   B. EXCEPTIONS NOTED
      a. ITEMS WERE FOUND IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS AND NEED TO BE REVISED PRIOR TO SUBMITTING 'FOR CONSTRUCTION' SUBMITTAL.
   C. REVISE AND RESUBMIT
      a. SIGNIFICANT ITEMS WERE FOUND IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS. THE SUBMITTAL NEEDS TO BE RESUBMITTED 'FOR REVIEW'.
   D. NOT REVIEWED
      a. THE SUBMITTAL WAS NOT STRUCTURAL.
   E. FOR INFORMATION ONLY
      a. THE SUBMITTAL DID NOT REQUIRE REVIEW BUT HAS BEEN FILED FOR THE RECORD.
   F. IMPACT TO STRUCTURE
      a. THE SUBMITTAL HAS BEEN REVIEWED FOR THE STRUCTURALLY IMPACT TO THE STRUCTURE ONLY.

INSPECTIONS:

1. CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL AND SUCH CONSTRUCTION OR WORK SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED. REQUIRED TESTING INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
   A. FOOTING AND FOUNDATION INSPECTIONS SHALL BE MADE AFTER EXCAVATIONS FOR FOOTINGS ARE COMPLETE AND ANY REQUIRED REINFORCING STEEL IS IN PLACE. FOR CONCRETE FOUNDATIONS, ANY REQUIRED FORMS SHALL BE IN PLACE PRIOR TO INSPECTION. MATERIALS FOR THE FOUNDATION SHALL BE ON THE JOB, EXCEPT WHERE CONCRETE IS READY MIXED IN ACCORDANCE WITH ASTM C94, THE CONCRETE NEED NOT BE ON THE JOB.
   B. CONCRETE SLAB AND UNDER-FLOOR INSPECTION:
      a. CONCRETE SLAB AND UNDER-FLOOR INSPECTIONS SHALL BE MADE AFTER IN-SLAB OR UNDER-FLOOR REINFORCING STEEL AND BUILDING SERVICE EQUIPMENT, CONDUIT, PIPING ACCESSORIES AND OTHER ANCILLARY EQUIPMENT ITEMS ARE IN PLACE, BUT BEFORE ANY CONCRETE IS PLACED OR FLOOR SHEATHING INSTALLED, INCLUDING THE SUBFLOOR.
   C. FRAME INSPECTION:
      a. FRAMING INSPECTIONS SHALL BE MADE AFTER THE ROOF DECK OR SHEATHING, ALL FRAMING, FIREBLOCKING AND BRACING ARE IN PLACE AND PIPES, CHIMNEYS AND VENTS TO BE CONCEALED ARE COMPLETE AND THE ROUGH ELECTRICAL, PLUMBING, HEATING WIRES, PIPES AND DUCTS ARE APPROVED.
2. SPECIAL INSPECTIONS - REFER TO THE STATEMENT OF SPECIAL INSPECTION FOR REQUIRED STRUCTURAL SPECIAL INSPECTIONS
3. ADDITIONAL INSPECTIONS REQUIRED BY STRUCTURAL ENGINEER: REFERENCE SPECIFICATIONS

DRAWING INTERPRETATION:

1. DRAWING VIEWS LABELED AS TYPICAL

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS & TESTING

1. SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS. (SEE IBC CHAPTER 17).
2. THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL. DUDLEY ENGINEERING CAN BE SOLICITED TO PROVIDE SPECIAL INSPECTIONS. WE RECOMMEND THAT THE PROJECT GEOTECHNICAL ENGINEER BE SOLICITED TO PROVIDE SPECIAL INSPECTIONS FOR THE SOILS AND TESTING FOR THE SOIL AND CONCRETE.
3. DUTIES OF THE SPECIAL INSPECTOR:
   A. THE SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED BELOW FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AND THE IBC.
   B. THE SPECIAL INSPECTOR SHALL FURNISH SPECIAL INSPECTION REPORTS TO THE EOR, CONTRACTOR, OWNER AND BUILDING OFFICIAL ON A WEEKLY BASIS, OR MORE FREQUENTLY AS REQUIRED BY THE BUILDING OFFICIAL. ALL ITEMS NOT IN COMPLIANCE SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF UNCORRECTED, TO THE EOR AND THE BUILDING OFFICIAL.
   C. ONCE CORRECTIONS HAVE BEEN MADE BY THE CONTRACTOR, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AS WELL AS THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.
4. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
   A. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK, IN ACCORDANCE WITH IBC 1704.4, THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED WITHIN THIS "STATEMENT OF SPECIAL INSPECTIONS".
   B. THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
   C. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED BY THE SPECIAL INSPECTOR.
5. PLEASE SEE THE "SPECIAL INSPECTION SCHEDULE" FOR THE TYPES, EXTENTS AND FREQUENCY OF SPECIFIC ITEMS REQUIRING SPECIAL INSPECTIONS AND STRUCTURAL TESTS AS PART OF THIS PROJECT.
6. REFER TO ARCHITECTURAL AND/OR MEP DRAWINGS FOR ADDITIONAL SPECIAL INSPECTION REQUIRED. DUDLEY ENGINEERING HAS LISTED THE STRUCTURAL SPECIAL INSPECTIONS AND TESTING.

WIND-RESISTING COMPONENTS (1705.11.3)

PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FASTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:
1. ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS.
2. EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING

REQUIRED VERIFICATION AND INSPECTION OF GRADING AND DRAINAGE FOR FOUNDATIONS ON EXPANSIVE SOILS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, FINAL GRADES SHALL BE VERIFIED TO DOCUMENT REQUIRED DRAINAGE	-	X	YES
AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, DOWNSPOUTS SHALL BE INSPECTED TO CONFIRM CONFORMANCE.	-	X	YES
GRADES AROUND THE STRUCTURE SHALL BE PERIODICALLY INSPECTED AND ADJUSTED AS PART OF THE BUILDING'S MAINTENANCE PROGRAM	-	X	YES
PLUMBING LEAK "HYDROSTATIC" TEST PERFORMED BY A LICENSED PLUMBER. TEST TO OCCUR AFTER ROUGH PLUMBING INSTALL	-	X	YES
WHERE PAVING/FLATWORK ABUT THE FOUNDATION, A MAINTENANCE PROGRAM SHALL BE ESTABLISHED TO EFFECTIVELY SEAL AND MAINTAIN JOINTS AND PREVENT SURFACE WATER INFILTRATION.	-	X	YES

REQUIRED VERIFICATION AND INSPECTION OF SOILS (TABLE 1706.6)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X	YES
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS	-	X	YES
PERFORM CLASSIFICATION AND TESTING OF COMPACTED MATERIALS	-	X	YES
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	-	YES
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THE SITE HAS BEEN PREPARED PROPERLY	-	X	YES

REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION (§1705.5)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
PREFABRICATED WOOD STRUCTURAL ELEMENTS (METAL PLATE CONNECTED WOOD TRUSSES) FABRICATION AND IMPLEMENTATION PROCEDURES (NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION	-	X	YES
HIGH-LOAD DIAPHRAGMS A. INSPECT GRADE AND THICKNESS OF WOOD STRUCTURAL PANEL SHEATHING. B. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAILS OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREES WITH THE APPROVED BUILDING PLANS	-	X	NO
METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FT OR GREATER A. VERIFY THAT TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAIN/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE	-	X	NO
INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING COMPONENTS WITHIN THE SEISMIC / MAIN WIND FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, SHEAR WALLS AND HOLD-DOWNS.	-	X	YES
MOISTURE CONTENT OF LOAD BEARING WOOD FRAMING: • MOISTURE CONTENT JUST PRIOR TO INSTALLING SHEET ROCK SHOULD BE AT OR BELOW 15%. SPECIAL ATTENTION SHALL BE PAID TO MEMBERS ORIENTED WITH THEIR VERTICAL AXIS PERPENDICULAR TO THE VERTICAL PLANE (PLATES, JOISTS, TRUSS CHORDS, ETC.)	-	X	YES

REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION (§1705.2.1)

STRUCTURAL STEEL - GENERAL

THE SPECIAL INSPECTOR SHALL INSPECT THE FABRICATED OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAIL SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.

STRUCTURAL STEEL - ANCHOR RODS / EMBED PLATES

THE SPECIAL INSPECTOR SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENT SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR RODS OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF CONCRETE.

STRUCTURAL STEEL - WELDS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
INSPECTION TASKS PRIOR TO WELDING (AISC 360 TABLE N5.4-1)			
WELDING PROCEDURE SPECIFICATION(WPS'S) AVAILABLE	X	-	YES
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X	-	YES
MATERIAL IDENTIFICATION (TYPE / GRADE)	-	X	YES
WELDER IDENTIFICATION SYSTEM	-	X	YES
FIT-UP GROOVE WELDS	-	X	NO
CONFIGURATION AND FINISH OF ACCESS HOLES	-	X	NO
FIT-UP FILLET WELDS	-	X	YES
CHECK WELDING EQUIPMENT	-	X	YES
INSPECTION TASKS DURING WELDING (AISC 360 TABLE N5.4-2)			
USE OF QUALIFIED WELDERS	-	X	YES
CONTROL AND HANDLING OF WELDING CONSUMABLES	-	X	YES
NO WELDING OVER CRACKED TACK WELDS	-	X	YES
ENVIRONMENTAL CONDITIONS (WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE	-	X	YES
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE / FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/ MAX) • PROPER POSITION (F, V, H, OH)	-	X	YES
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEET QUALITY REQUIREMENTS	-	X	YES
WELDS CLEANED	-	X	YES
SIZE, LENGTH AND LOCATION OF WELDS	X	-	YES
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD / BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	X	-	YES
ARC STRIKES	X	-	YES
k-AREA	X	-	YES
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X	-	YES
REPAIR ACTIVITIES	X	-	YES
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER	X	-	YES
	X	-	YES
NON-DESTRUCTIVE TESTING OF WELDED JOINTS			
FILLET WELDS:			
MT TEST A MINIMUM OF 10% OF THE LENGTH OF EACH FILLET WELD EXCEEDING 5/16".	-	X	YES
PERIODIC MT TESTING OF REPRESENTATIVE FILLET WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH.	-	X	YES
INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS.	X	-	YES
PARTIAL JOINT PENETRATION (PJP) WELDS INCLUDING FLARE BEVEL WELDS			
MT TEST A MINIMUM OF 25% OF THE LENGTH OF EACH PJP WELD EXCEEDING 5/16" EFFECTIVE THROAT.	-	X	YES
PERIODIC MT TESTING OF REPRESENTATIVE PJP WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH.	-	X	YES
INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS	X	-	YES
COMPLETE JOINT PENETRATION (CJP) WELDS			
ALL CJP WELDS EXCEEDING 5/16" THICKNESS SHALL BE 100% UT TESTED PER AWS D1.1 CLAUSE 6 PART F. THE TESTING LABORATORY SHALL REVIEW THE CJP JOINTS TO DETERMINE WHERE GEOMETRY OR ACCESSIBILITY PRECLUDES THE USE OF STANDARD SCANNING PATTERNS PER AWS D1.1 CLAUSE 6 PART F. AT THESE LOCATIONS THE TESTING LABORATORY SHALL DEVELOP AND SUBMIT FOR APPROVAL A WRITTEN TESTING PROCEDURE IN ACCORDANCE WITH AWS D1.1 ANNEX S.	X	-	YES
PERIODIC MT TESTING OF REPRESENTATIVE CJP WELDS 5/16" AND LESS NOT TO EXCEED 10% OF ALL SUCH WELDS.	-	X	YES
INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS.	X	-	YES

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (TURN-OF-NUT)

TURN-OF-NUT PRETENSIONING: THE INSPECTOR SHALL OBSERVE THE PRE-INSTALLATION VERIFICATION TESTING REQUIRED IN SECTION 8.2. SUBSEQUENTLY, IT SHALL BE ENSURED BY ROUTINE OBSERVATION THAT THE BOLTING CREW PROPERLY ROTATES THE TURNED ELEMENT RELATIVE TO THE UNTURNED ELEMENT BY THE AMOUNT SPECIFIED IN TABLE 8.2, ALTERNATIVELY, WHEN FASTNER ASSEMBLIES ARE MATCH-MARKED AFTER THE INITIAL FIT-UP OF THE JOINT BUT PRIOR TO PRETENSIONING, VISUAL INSPECTION AFTER PRETENSIONING IS PERMITTED IN LIEU OF ROUTINE OBSERVATION. NO FURTHER EVIDENCE OF CONFORMITY IS REQUIRED. A PRETENSION THAT IS GREATER THAN THE VALUE SPECIFIED IN TABLE 8.1 SHALL NOT BE CAUSE FOR REJECTION. A ROTATION THAT EXCEEDS THE REQUIRED VALUES, INCLUDING TOLERANCE, SPECIFIED IN TABLE 8.2 SHALL NOT BE CAUSE FOR REJECTION.

TABLE 8.2: NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING

BOLT LENGTH	DISPOSITION OF OUTER FACES OF BOLTED PARTS		
	BOTH FACE NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS
LENGTH ≤ $4d_b$	1/3 TURN	1/2 TURN	2/3 TURN
$4d_b$ < LENGTH ≤ $8d_b$	1/2 TURN	2/3 TURN	5/6 TURN
$8d_b$ < LENGTH ≤ $12d_b$	2/3 TURN	5/6 TURN	1 TURN

a. NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR ALL REQUIRED ROTATIONS, THE TOLERANCE IS PLUS 60° AND MINUS 30°
b. APPLICABLE TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (SNUG-TIGHT) - INSPECTION TASKS PRIOR TO BOLTING

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
DOCUMENTATION AND ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	-	X	YES

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (SNUG-TIGHT) - INSPECTION TASKS DURING BOLTING

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REQUIRED
DOCUMENTATION OF ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	-	X	YES

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Madison, WI 53703
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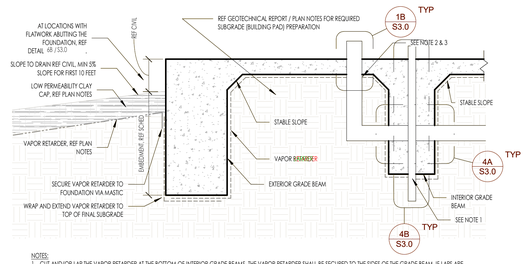
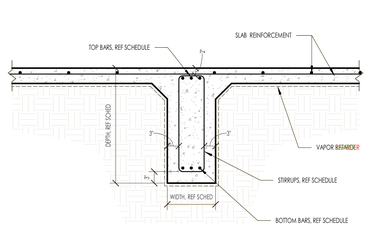
Date	Description

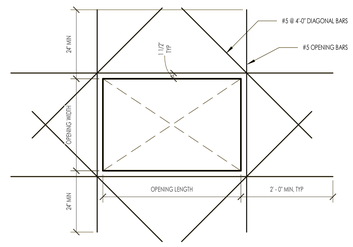


NOTES:
1. CUT AND/OR LAP THE VAPOR RETARDER AT THE BOTTOM OF INTERIOR GRADE BEAMS. THE VAPOR RETARDER SHALL BE SECURED TO THE SIDES OF THE GRADE BEAM. IF LAPS ARE REQUIRED ON TOP OF THE SLAB, THEY MUST BE TAPED PER MFR RECOMMENDATIONS.
2. ALL PIPE, DUCTING, REBAR, WIRE PENETRATIONS AND BLOCK OUTS SHOULD BE SEALED USING MFR RECOMMENDED WRAP, TAPE AND/OR MASTIC.
3. IN THE EVENT THAT THE VAPOR RETARDER IS DAMAGED DURING OR AFTER INSTALLATION, REPAIRS MUST BE MADE. FOR HOLES, CUT A PIECE OF VAPOR RETARDER TO A SIZE AND SHAPE THAT COVERS ANY DAMAGE BY A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS. CLEAN ALL ADHESION AREAS OF DUST, DIRT, MOISTURE, AND FROST. TAPE DOWN ALL EDGES USING MFR RECOMMENDED TAPE.

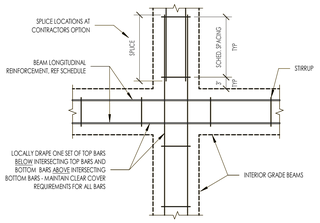
4D TYPICAL SUBGRADE AND VAPOR RETARDER PREPARATION
NOT TO SCALE



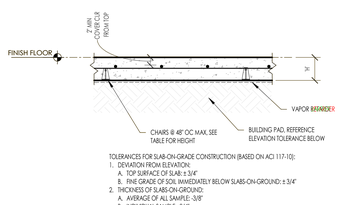
2D TYPICAL INTERIOR GRADE BEAM
NOT TO SCALE



1D TYPICAL REINFORCEMENT AT SLAB BLOCKOUT
NOT TO SCALE

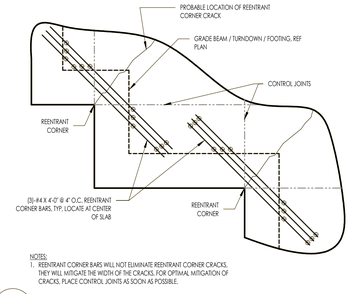


6C TYPICAL INTERIOR BEAM INTERSECTION
NOT TO SCALE



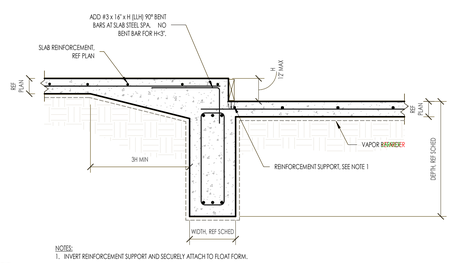
TOLERANCES FOR SLAB-ON-GRADE CONSTRUCTION (BASED ON ACI 117-10):
1. DEVIATION FROM ELEVATION:
   A. TOP SURFACE OF SLAB: ± 3/4"
   B. FINE GRADE OF SOIL IMMEDIATELY BELOW SLABS-ON-GROUND: ± 3/4"
2. THICKNESS OF SLABS-ON-GROUND:
   A. AVERAGE OF ALL SAMPLE: -3/8"
   B. INDIVIDUAL SAMPLE: -3/4"

5C TYPICAL SLAB-ON-GRADE SECTION
NOT TO SCALE



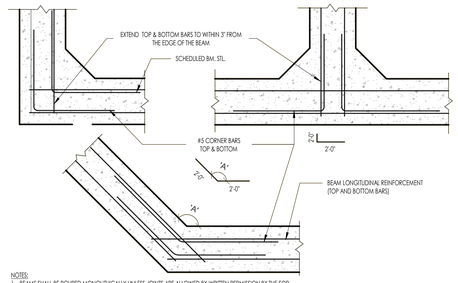
NOTES:
1. REENTRANT CORNER BARS WILL NOT ELIMINATE REENTRANT CORNER CRACKS. THEY WILL MITIGATE THE WIDTH OF THE CRACKS. FOR OPTIMAL MITIGATION OF CRACKS, PLACE CONTROL JOINTS AS SOON AS POSSIBLE.

4C TYPICAL REENTRANT CORNER BARS
NOT TO SCALE



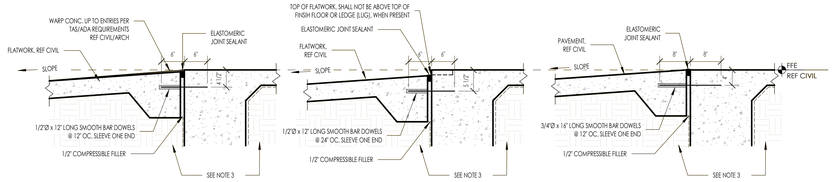
NOTES:
1. INVERT REINFORCEMENT SUPPORT AND SECURELY ATTACH TO FLOAT FORM.

3C TYPICAL SLAB DROP AT GRADE BEAM
NOT TO SCALE



NOTES:
1. BEAMS SHALL BE POURED MONOLITHICALLY. UNLESS JOINTS ARE ALLOWED BY WRITTEN PERMISSION BY THE EOR.
2. UNLESS DETAILED OTHERWISE, ALL BEAM CORNERS AND INTERSECTIONS REQUIRE BENT DOWEL CORNER BARS TOP AND BOTTOM, AS SHOWN IN THIS DETAIL.

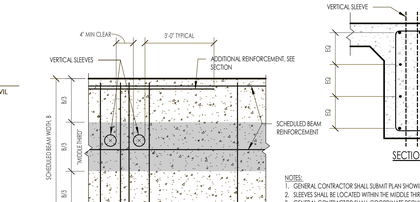
1C TYPICAL CORNER BARS
NOT TO SCALE



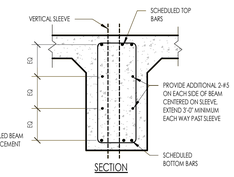
FLATWORK AT ENTRY DOOR | FLATWORK **NOT** AT ENTRY DOOR | AT PAVEMENT (DRIVE-IN)

NOTES:
1. CONTRACTOR TO SUBMIT TO OWNER, ARCHITECT, AND ENGINEER THE PRODUCT DATA FOR THE ELASTOMERIC JOINT SEALANT WHICH MUST INCLUDE A RECOMMENDED MAINTENANCE PROGRAM FOR THE SEALANT.
2. REFERENCE ARCHITECTURE / CIVIL FOR ADA REQUIREMENTS, TOP OF FLATWORK / PAVEMENT.
3. BUILDING PAD SUBGRADE IMPROVEMENT TO CONTINUE FOR A MINIMUM OF 5' OUTSIDE THE FOUNDATION UNDER FLATWORK / PAVEMENT.

6B TYPICAL FLATWORK/PAVEMENT DOWELS AT BUILDING
NOT TO SCALE



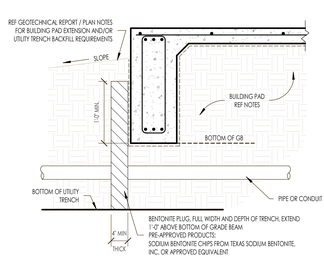
PLAN



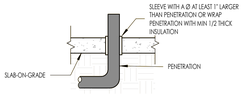
SECTION

NOTES:
1. GENERAL CONTRACTOR SHALL SUBMIT PLAN SHOWING LAYOUT OF ALL SLEEVES WITH FORMWORK SHOP DRAWING SUBMITTAL.
2. SLEEVES SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SCHEDULED BEAM WIDTH.
3. GENERAL CONTRACTOR SHALL COORDINATE REQUIRED BEAM SLEEVES WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. REQUIRED SLEEVES MAY OR MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS.
4. CONTINUOUS BEAM REINFORCEMENT MAY BE SLIGHTLY DEFLACED (3" MAXIMUM) OR ADJACENT BARS BUNDLED (2 BAR BUNDLES MAXIMUM) TO FACILITATE SLEEVE INSTALLATION. DO NOT CUT, OFFSET, OR BEND REINFORCEMENT.
5. SLEEVES OCCURRING ON OPPOSITE SIDES OF A COLUMN MUST BE IN LINE.
6. THE OUTSIDE DIAMETER OF A SLEEVE MAY NOT EXCEED 20% OF THE SCHEDULED WIDTH OF THE BEAM THROUGH WHICH IT MUST PASS.
7. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD WHEN A SLEEVE SIZE OR LOCATION DOES NOT MEET THE ABOVE CONDITIONS.
8. SCHEDULED BEAM STIRRUPS NOT SHOWN FOR CLARITY.

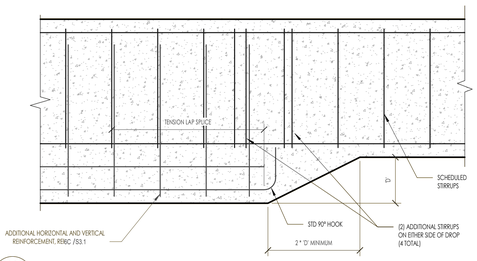
4B 4D S3.0 TYPICAL VERTICAL PENETRATION IN GRADE BEAM
NOT TO SCALE



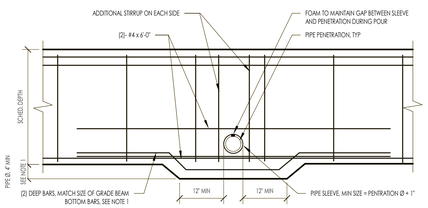
2B TYPICAL UTILITY TRENCH UNDER BUILDING PAD BENTONITE PLUG AT EXTERIOR BEAM
NOT TO SCALE



1B 4D S3.0 VERTICAL PENETRATION THOUGH SLAB-ON-GRADE
NOT TO SCALE



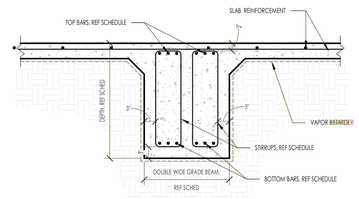
6A TYPICAL DROP TRANSITION IN GRADE BEAM - VERTICAL MOISTURE BARRIER
NOT TO SCALE



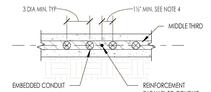
NOTES:
1. DEPTH INCREASE AND DEEP BARS NOT REQUIRED IF PENETRATION OCCURS IN MIDDLE THIRD OF GRADE BEAM DEPTH

ELEVATION

4A 4D S3.0 TYPICAL HORIZONTAL PENETRATION IN BEAM
NOT TO SCALE



2A TYPICAL DOUBLE WIDE INTERIOR GRADE BEAM
NOT TO SCALE



NOTES:
1. EMBEDDED CONDUIT MUST BE PVC OR OTHER PRE-APPROVED PRODUCT THAT WILL NOT CHEMICALLY REACT WITH THE CONCRETE.
2. EMBEDDED CONDUIT MUST BE CHAIRED AND RESTRAINED @ 48" OC MAX IN ORDER TO PREVENT FLOATING OF THE CONDUIT DURING POURING.
3. PLACE ALL CONDUIT WITHIN THE MIDDLE THIRD OF THE OVERALL SLAB DEPTH.
4. DO NOT PLACE CONDUIT ADJACENT TO NOR TIE CONDUIT TO PARALLEL REINFORCEMENT.

1A TYPICAL CONDUITS EMBEDDED IN SLAB-ON-GRADE
NOT TO SCALE

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AMC ENGINEERS
MEP: AMC Engineers
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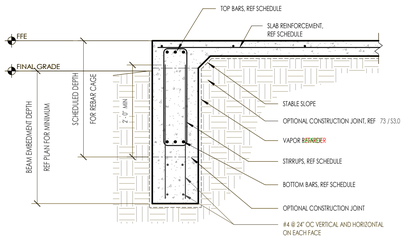
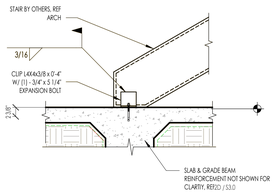
Date	Description
	REV. 1

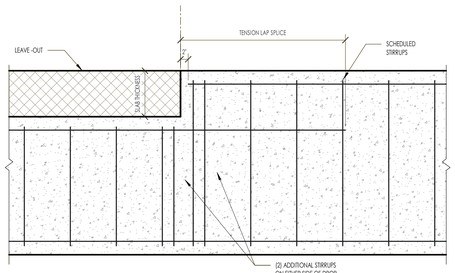
FOUNDATION DETAILS

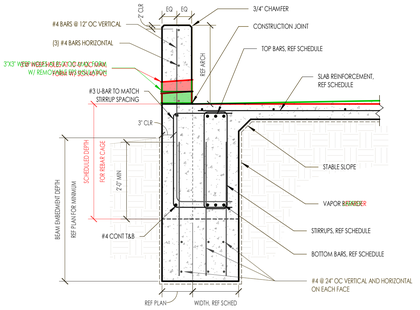
MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT 6 | BRYAN, TX 77803

S3.0

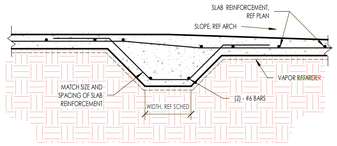


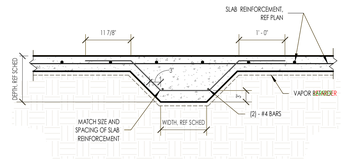




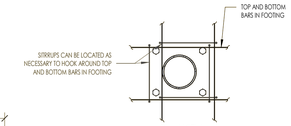


1D TYPICAL EXTERIOR WIDENED GRADE BEAM AT CURB - VERTICAL MOISTURE BARRIER
NOT TO SCALE

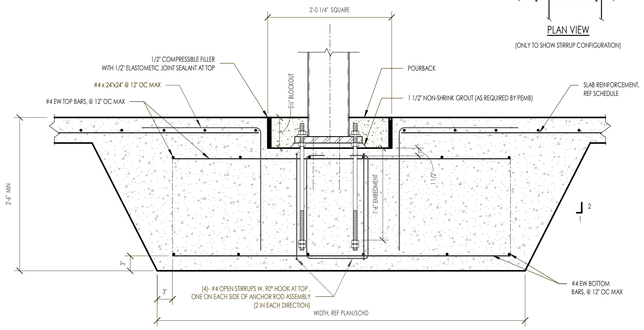




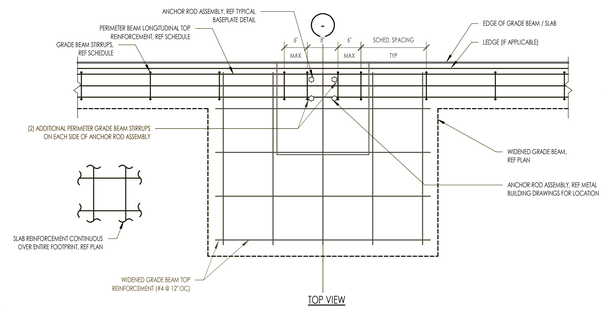
1C TYPICAL TURN DOWN BEAM
NOT TO SCALE



2C CSOG - TURN DOWN AT SLAB DROP
NOT TO SCALE

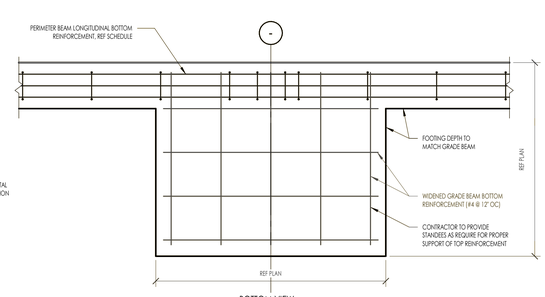


6C TYPICAL EXTERIOR GRADE BEAM - VERTICAL MOISTURE BARRIER
NOT TO SCALE



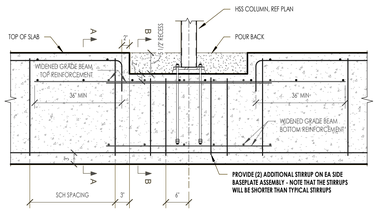
TOP VIEW

5C TYPICAL GRADE BEAM AT STEEL STAIRS
NOT TO SCALE

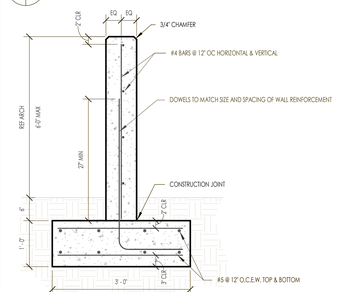


BOTTOM VIEW
REFERENCE TOP VIEW FOR INFORMATION NOT SHOWN

4C TYPICAL DROP TRANSITION IN GRADE BEAM TOP REINFORCEMENT AT SLAB LEAVE-OUT
NOT TO SCALE



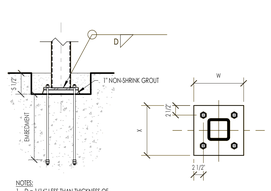
6B TYPICAL WIDENED FOOTING AT COLUMN - EMBEDDED BASE PLATE
NOT TO SCALE



6A TYPICAL MOMUMENT SIGN FOUNDATION
NOT TO SCALE

BASE PLATE & ANCHOR BOLT SCHEDULE

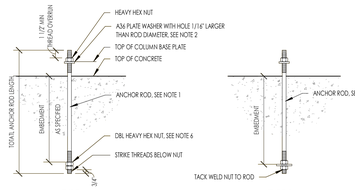
COLUMN	BASE PLATE DIMENSIONS			CONDITION	ANCHOR BOLTS		
	X	W	T		NO./TYPE	DIA.	EMBEDMENT
HSS5.5X5.5	11"	13"	13"	INTERIOR	4/A	1"	1'-0"
HSS8X8	14"	16"	16"	INTERIOR	4/A	1"	1'-0"



NOTES:
1. D = 1/16" LESS THAN THICKNESS OF COLUMN

SECTION INTERIOR COLUMN

5A TYPICAL BASEPLATE DETAIL
NOT TO SCALE



TYPE A TYPE B

3A TYPICAL ANCHOR ROD
NOT TO SCALE

ANCHOR ROD DIAMETER	HOLE DIAMETER	SQUARE PLATE WASHER SIZE	PLATE WASHER THICKNESS	TYPE B ANCHOR PLATE
5/8"	1 3/16"	1½"	1/4"	PLT"X"X0-4"
3/4"	1 5/16"	2"	1/4"	PLT"X"X0-4"
7/8"	1 9/16"	2½"	5/16"	PLT"X"X0-4"
1"	1 13/16"	3"	3/8"	PLT½"X5"X0-5"
1 1/2"	2 5/16"	3½"	1/2"	PLT½"X5"X0-5"

NOTES:
1. ALL TYPE A ANCHOR RODS SHALL BE F1554 GRADE 36.
2. ALL TYPE B ANCHOR RODS SHALL BE F1554 GRADE 55 51
3. PLATE WASHERS MUST BE WELDED TO THE BASE PLATE WITH MINIMUM 3/16" FILLET WELD ALL-AROUND
4. EMBEDMENT DEPTHS ARE PRELIMINARY. FINAL EMBEDMENT TO BE PROVIDED AFTER REVIEW OF METAL BUILDING REACTIONS.
5. ALL ANCHOR ROD HOLES SHALL ADHERE TO AISC DESIGN GUIDE 01- TABLE 2.3
6. THE DOUBLE NUT MAY BE OMITTED IF THE NUT IS TACK WELDED TO THE ROD.

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Date	Description

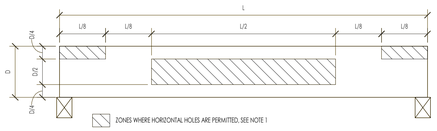
FOUNDATION DETAILS

S3.1

TYPICAL FASTENING SCHEDULE			
CONNECTION ID	**CONNECTION TYPE**	**FASTENING**	**FASTENING ORIENTATION**
1	JOIST TO SILL OR GIRDER	(3) - 0.131"Ø X 3"	TOENAIL
2	SOLE PLATE TO JOIST OR BLOCKING	0.148"Ø X 3¼" NAILS @ 12" OC NAILS	FACE NAIL
3	TOP PLATE TO STUD	(3) - 0.131"Ø X 3" NAILS	END NAIL
4	STUD TO SOLE PLATE - OPTION 1	(2) - 16d COMMON | (3) - 0.131"Ø X 3" NAILS	END NAIL
5	STUD TO SOLE PLATE - OPTION 2	(4) 0.131"Ø X 3" NAILS	TOENAIL
6	DOUBLE/MULTIPLE STUDS	REFERENCE DETAIL 6A/S4.1	FACE NAIL
7	DOUBLE TOP PLATES	0.131"Ø X 3" NAILS @ 12" OC	FACE NAIL
8	DOUBLE TOP PLATE SPLICE	REFERENCE DETAIL 3A/S4.1	FACE NAIL
9	BLOCKING BETWEEN JOISTS/RAFTERS TO TOP PLATE	(3) - 0.131"Ø X 3" NAILS	TOENAIL
10	RIM JOIST TO TOP PLATE	0.131"Ø X 3" NAILS @ 6" OC	TOENAIL
11	CEILING JOIST TO TOP PLATE	(3) - 0.131"Ø X 3" NAILS	TOENAIL
12	CEILING JOIST LAP OVER PARTITIONS	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
13	CEILING JOIST TO PARALLEL RAFTERS	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
14	RAFTER TO TOP PLATE	(3) - 0.131"Ø X 3" NAILS	TOENAIL
15	BUILT-UP CORNER STUDS	0.131"Ø X 3" NAILS @ 16" OC	FACE NAIL
16	BUILT-UP BEAMS	REFERENCE DETAIL 2A/S4.0	FACE NAIL
17	COLLAR TIE TO RAFTER	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
18	JACK RAFTER TO HIP	(4) - 0.131"Ø X 3" NAILS	TOENAIL
19	RAFTER TO RIDGE BOARD/BEAM	(3) - 0.131"Ø X 3" NAILS	TOENAIL
20	BLOCKING B/T STUDS	(3) -0.131"Ø X 3" NAILS EACH SIDE	TOENAIL

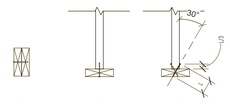
NOTES:
1. THESE CONNECTIONS ARE TO BE APPLIED UNLESS NOTED OTHERWISE IN PLAN, SECTION, ELEVATION OR DETAIL VIEWS.

6D TYPICAL WOOD FASTENING SCHEDULE
NOT TO SCALE

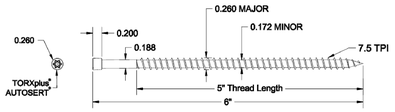


NOTES:
1. HOLE SIZE: THE HOLE DIAMETER SHALL NOT EXCEED 1¼" OR D/10, WHICHEVER IS SMALLEST.
2. VARIANCE: FOR LARGER HOLE DIAMETERS OR FOR HOLES OUTSIDE OF THE PERMITTED ZONES, WRITTEN PERMISSION MUST BE OBTAINED FROM THE EOR.
3. LIMITATIONS: THE ABOVE CRITERIA ONLY APPLY TO SIMPLY SUPPORTED, UNIFORMLY LOADED GLUE LAMINATED BEAMS. FOR BEAMS THAT ARE EITHER CONTINUOUS ACROSS MULTIPLE SPANS OR THAT ARE SUPPORTING NON-UNIFORM LOADS, WRITTEN PERMISSION MUST BE OBTAINED FROM THE EOR.

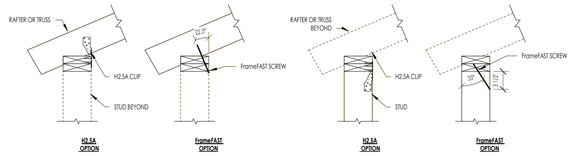
4E ALLOWABLE HORIZONTAL HOLE LOCATIONS IN GLUE LAMINATED TIMBER BEAMS
NOT TO SCALE



4D TYPICAL NAILING CONFIGURATIONS
NOT TO SCALE

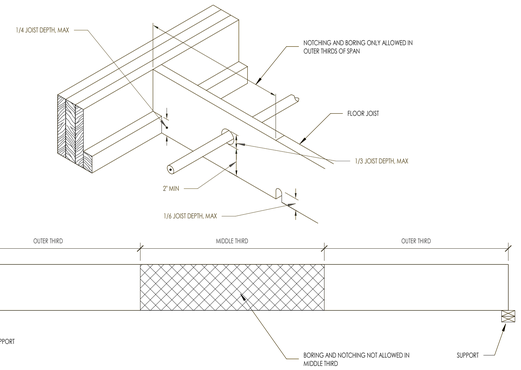


FastenMaster FrameFAST STRUCTURAL WOOD SCREWS (FrameFAST FASTENERS)

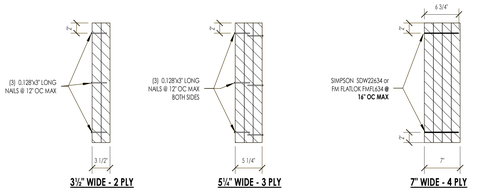


NOTES:
1. FastenMaster FrameFAST STRUCTURAL WOOD SCREWS (FrameFAST FASTENERS) MAY BE SUBSTITUED 1 FOR 1 WITH H2.5A CLIPS.

4C ALLOWABLE SUBSTITION OF H2.5A CLIPS WITH FrameFAST SCREWS - UPLIFT LOAD PATH
NOT TO SCALE



6C ALLOWABLE NOTCHING AND BORING OF FLOOR JOISTS
NOT TO SCALE



2C TYPICAL LVL MULTIPLE PLY FASTENING REQUIREMENTS
NOT TO SCALE

FASTENER SCHEDULE - TO BEAM TOP FLANGE

t_f [in]	PAF FASTENER†	BOLT / ROD*
≤ 0.35	X-U 47 @ 12" OC	1/2"Ø @ 24" OC
0.35 < t_f ≤ 0.44	DS 47 @ 12" OC	1/2"Ø @ 24" OC
t_f > 0.44	N/A	1/2"Ø @ 12" OC

FASTENER SCHEDULE - TO BEAM WEB / BOTTOM FLANGE

t_w [in]	PAF FASTENER†	BOLT / ROD*
≤ 0.35	(3) - X-U 47 @ 12" OC	(2) - 1/2"Ø @ 24" OC
0.35 < t_w ≤ 0.44	(3) - DS 47 @ 12" OC	(2) - 1/2"Ø @ 24" OC
t_w > 0.44	N/A	(2) - 1/2"Ø @ 12" OC

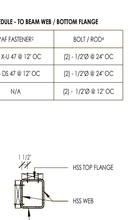
NAILER SCHEDULE - TO BEAM FLANGE

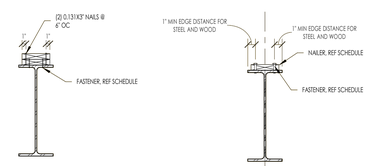
b [in]	NAILER SIZE
≤ 5.5	2x4
5.5 < b ≤ 7.25	2x6
b > 7.25	2x8

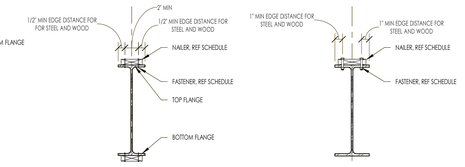
NAILER SCHEDULE - TO BEAM WEB

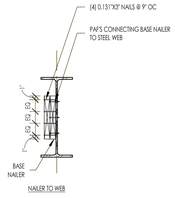
d [in]	NAILER SIZE
≤ 5	2x4
5 < d ≤ 6.75	2x6
6.75 < d ≤ 8.75	2x8
8.75 < d ≤ 10.75	2x10
10.75 < d ≤ 15	(2) - 2X8
15 < d ≤ 19	(2) - 2x10
19 < d ≤ 23	(2) - 2x12
d > 23	(3) - 2x8

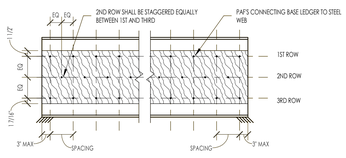
NOTES:
1. ALL FASTENERS SHALL BE STAGGERED.
2. FASTENER DESCRIPTIONS. ALL FASTENERS ARE POWDER-ACTUATED FASTENERS MFR'D BY HILTI, INC.:
   A. X-U 47
      a. UNIVERSAL KNURLED SHANK FASTENER WITH A SHANK DIAMETER OF 0.157" AND A SHANK LENGTH OF 47 mm (1.85").
   B. DS 47
      a. HEAVY DUTY SMOOTH SHANK FASTENER WITH A SHANK DIAMETER OF 0.177" AND A SHANK LENGTH OF 47 mm (1.85")
3. FASTENER INSTALLATION SHALL FOLLOW ALL SPECIFICATIONS PER THE MFR.
4. THROUGH BOLTS SHALL BE GALVANIZED ASTM A307 BOLTS. THREADED ROD SHALL BE GALVANIZED ASTM F1554 GR.36.

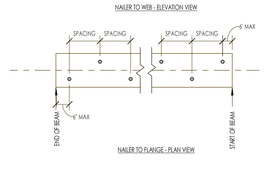




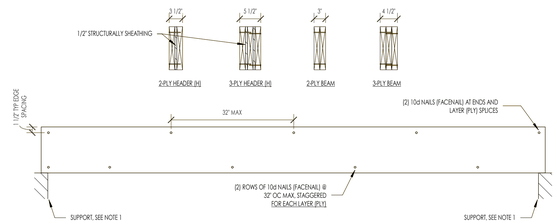








6A WOOD NAILER TO TOP OF STRUCTURAL STEEL
NOT TO SCALE



NOTES:
1. UNLESS NOTED OTHERWISE ON PLAN, REFER TO THE FOLLOWING DETAILS FOR THE SUPPORT FRAMING:
   A. SUPPORT FOR HEADERS IN EXTERIOR WALLS: 4C / S4.1
   B. SUPPORT FOR HEADERS IN INTERIOR WALLS: 5B / S4.1
   C. SUPPORT FOR BEAMS & GIRDERS SUPPORTED BY WALL - REFERENCE BEAM SCHEDULE

2A TYPICAL NAILING BUILT UP BEAMS, GIRDERS & HEADERS
NOT TO SCALE

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Structural: Dudley
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MEP: AMC Engineers
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Burnet, TX 78611
info@amcengineers.com

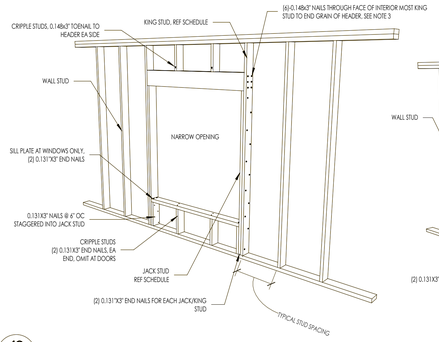
Architect: OpeningDesign
17 S Fairchild | FL 7
Madison, WI 53703
ryan@openingdesign.com | 773.425.6456

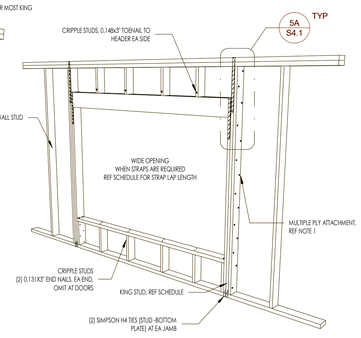
Date	Description

TYPICAL WOOD FRAMING DETAILS

MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & THE EAST 8 FEET OF LOT 2 - BRYAN, BRAZOS COUNTY, TEXAS

S4.0





4C TYPICAL EXTERIOR OPENING FRAMING
NOT TO SCALE

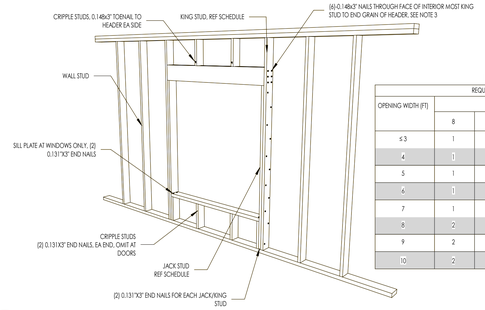
2X4 STUD WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS: PLATE HEIGHT (FT) 8	9	10	11	12	NO. JACK STUDS	STRAP LAP LENGTH* (IN)
≤ 3	1	1	1	2	2	1	N/R
4	1	1	2	2	2	1	N/R
5	2	2	2	3	3	1	N/R
6	2	2	3	3	3	1	N/R
7	2	2	3	3	4X6	1	N/R
8	3	3	3	4X6	4X6	2	8
9	3	3	4X6	4X6	4X6	2	8
10	3	3	4X6	4X6	4X6	2	8

2X6 STUD WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS: PLATE HEIGHT (FT) 8	9	10	11	12	NO. JACK STUDS	STRAP LAP* (IN)
≤ 3	1	1	1	1	1	1	N/R
4	1	1	1	1	1	1	N/R
5	1	1	1	1	2	1	N/R
6	1	1	1	2	2	1	N/R
7	1	1	2	2	2	1	N/R
8	1	1	2	2	2	2	8
9	1	2	2	2	2	2	8
10	1	2	2	2	3	2	8

NOTES:
1. MULTIPLE PLIES MUST BE ATTACHED PER THE MECHANICALLY LAMINATED BUILT-UP COLUMN, NAILED DETAIL.
2. TABLE IS BASED OFF A HORIZONTAL WIND PRESSURE OF 20 PSF AND GRAVITY LOADING OF 200 PLF.
3. NAILS MUST BE CENTERED ON THE INDIVIDUAL PLIES OF THE HEADER.
4. N/R = NOT REQUIRED. IF N/R, THEN REFERENCE NARROW OPENING DIAGRAM FOR CONNECTION REQUIREMENTS, OTHERWISE REFERENCE THE WIDE OPENING DIAGRAM.



5B TYPICAL INTERIOR OPENING FRAMING
NOT TO SCALE

LOAD BEARING WALL

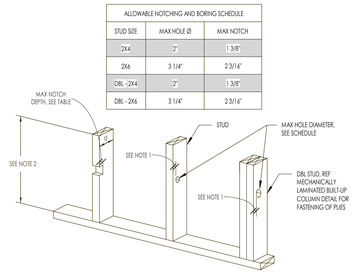
OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS: PLATE HEIGHT (FT) 8	9	10	11	12	NO. JACK STUDS
≤ 3	1	1	1	1	1	1
4	1	1	1	1	1	1
5	1	1	1	2	2	1
6	1	1	2	2	2	1
7	1	1	2	2	3	1
8	2	2	2	3	3	2
9	2	2	3	3	3	2
10	2	2	3	3	3	2

NON-LOAD BEARING WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS: PLATE HEIGHT (FT) 8	9	10	11	12	NO. JACK STUDS	HEADER SIZE: 2X4 STUD WALL	2X6 STUD WALL
≤ 3	1	1	1	1	1	1	2-2X4	3-2X4
4	1	1	1	1	1	1	2-2X4	3-2X4
5	1	1	1	2	2	1	2-2X4	3-2X4
6	1	1	2	2	2	1	2-2X4	3-2X4
7	1	1	2	2	3	1	2-2X4	3-2X4
8	2	2	2	3	3	1	2-2X10	3-2X10
9	2	2	3	3	3	1	2-2X10	3-2X10
10	2	2	3	3	3	1	2-2X10	3-2X10

NOTES:
1. LOAD BEARING WALLS AND ASSOCIATED HEADERS ARE INDICATED ON PLAN.

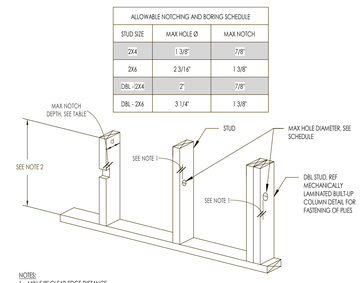
ALLOWABLE NOTCHING AND BORING SCHEDULE		
STUD SIZE	MAX HOLE Ø	MAX NOTCH
2X4	2"	1 3/8"
2X6	3 1/4"	2 3/16"
DBL - 2X4	2"	1 3/8"
DBL - 2X6	3 1/4"	2 3/16"



NOTES:
1. MIN 5/8" CLEAR EDGE DISTANCE
2. NOTCHES IN EITHER SIDE OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
3. NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.

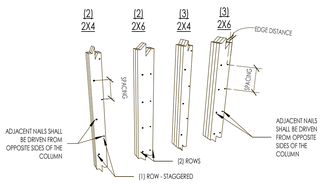
2B ALLOWABLE STUD NOTCHING AND BORING IN INTERIOR NON-LOAD BEARING WALLS
NOT TO SCALE

ALLOWABLE NOTCHING AND BORING SCHEDULE		
STUD SIZE	MAX HOLE Ø	MAX NOTCH
2X4	1 3/8"	7/8"
2X6	2 3/16"	1 3/8"
DBL - 2X4	2"	7/8"
DBL - 2X6	3 1/4"	1 3/8"



NOTES:
1. MIN 5/8" CLEAR EDGE DISTANCE
2. NOTCHES IN EITHER SIDE OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
3. NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.

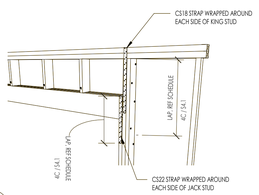
1B ALLOWABLE STUD NOTCHING AND BORING IN EXTERIOR & LOAD BEARING WALLS
NOT TO SCALE



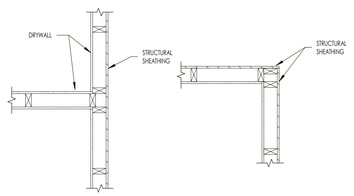
BUILT-UP SECTION	NAIL SIZE	SPACING	NO. ROWS	NOTES
(2) - 2X4	0.131 x 3"	6"	1	STAGGERED
(2) - 2X6	0.131 x 3"	8"	2	
(3) - 2X4	0.131 x 4"	6"	1	STAGGERED
(3) - 2X6	0.131 x 4"	8"	2	

NOTES:
1. END DISTANCE: THE FIRST FASTENERS SHALL BE LOCATED 2" FROM THE END OF THE COLUMN ON EACH END.
2. EDGE DISTANCE: 3/4"= EDGE DISTANCE ≥ 7/16"

6A MECHANICALLY LAMINATED BUILT-UP COLUMN (STUD PACK) -NAILED
NOT TO SCALE

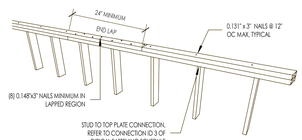


5A TYPICAL STRAP AT WIDE EXTERIOR OPENINGS
4C S4.1 NOT TO SCALE

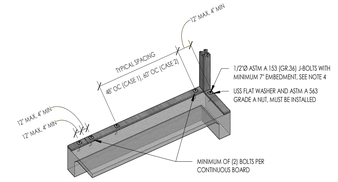


INTERSECTING WALLS OUTSIDE CORNER WALLS

4A TYPICAL CORNER AND INTERSECTION WALL STUDS (NOT AT SHEAR WALL)
NOT TO SCALE



3A TYPICAL LOAD BEARING / SHEAR WALL DOUBLE TOP PLATE SPLICE
NOT TO SCALE



NOTES:
1. CASE 1 = EXTERIOR WALLS THAT ARE NOT SHEAR WALLS.
2. CASE 2 = INTERIOR LOAD BEARING WALLS THAT ARE NOT SHEAR WALLS.
3. FOR WALLS THAT ARE INDICATED TO BE SHEAR WALLS, REFER TO THE SHEAR WALL SCHEDULE FOR ANCHORAGE REQUIREMENTS.
4. SIMPSON 1/2"X7" TITEN-HD SCREW ANCHORS ARE AN ACCEPTABLE ALTERNATIVE TO THE J-BOLTS.

2A TYPICAL BOTTOM PLATE ANCHORAGE
NOT TO SCALE

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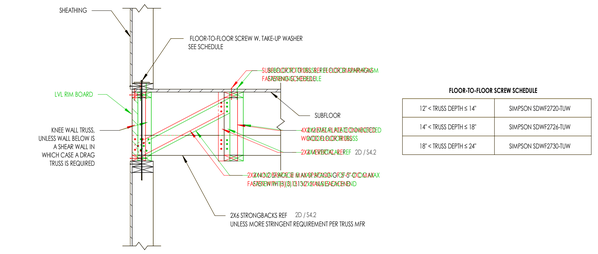
Date	Description

TYPICAL WOOD FRAMING WALL DETAILS

MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & THE EAST 1/2 OF LOT 6 - BRYAN, TEXAS

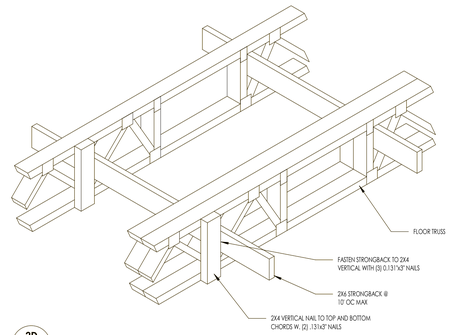


FLOOR-TO-FLOOR SCREW SCHEDULE

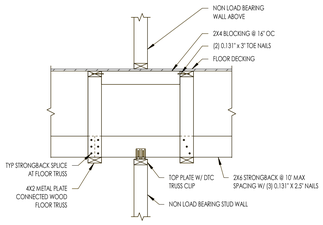
12" < TRUSS DEPTH ≤ 14"	SIMPSON SDWF27220-TUW
14" < TRUSS DEPTH ≤ 18"	SIMPSON SDWF27226-TUW
18" < TRUSS DEPTH ≤ 24"	SIMPSON SDWF27230-TUW

NOTES:
1. REFERENCE GENERAL NOTES FOR WOOD SHRINKAGE NOTES AND SPECIFICATIONS. IF THE FRAMING HAS A M.C. HIGHER THAN 15% WHEN THE SHEATHING IS APPLIED, IT MAY LEAD TO BUCKLING OF THE SHEATHING AND/OR THE CLADDING. CONTRACTOR TO QC FRAMING M.C. PRIOR TO INSTALLING WALL SHEATHING.

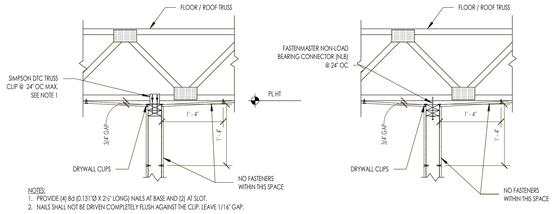
4D TYPICAL FLOOR TRUSS PARALLEL TO EXTERIOR WALL - MULTI-STORY
NOT TO SCALE



2D TYPICAL TRUSS STRONGBACK
NOT TO SCALE



5C TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES
NOT TO SCALE

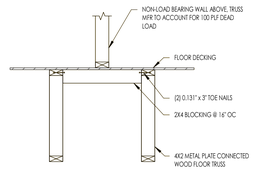


NOTES:
1. PROVIDE (4) 8d (0.131"Ø X 2½" LONG) NAILS AT BASE AND (2) AT SLOT.
2. NAILS SHALL NOT BE DRIVEN COMPLETELY FLUSH AGAINST THE CLIP, LEAVE 1/16" GAP.

OPTION 1 - SIMPSON DTC CLIP

OPTION 2 - NLB CONNECTOR

4C TYPICAL NON-LOAD BEARING WALL ATTACHMENT TO PERPENDICULAR FLOOR TRUSS
NOT TO SCALE



2C TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSS
NOT TO SCALE

NOTES:
1. IF WALL ABOVE OR BELOW IS A SHEARWALL, THEN A SHEAR PANEL IS REQUIRED.

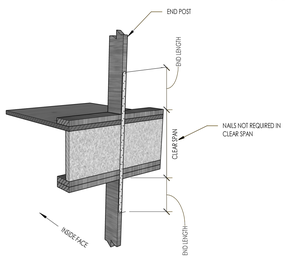
1C TYPICAL LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES
NOT TO SCALE

1B TYPICAL TRIMMABLE TRUSS STIFFENING AT INTERIOR SUPPORT
NOT TO SCALE

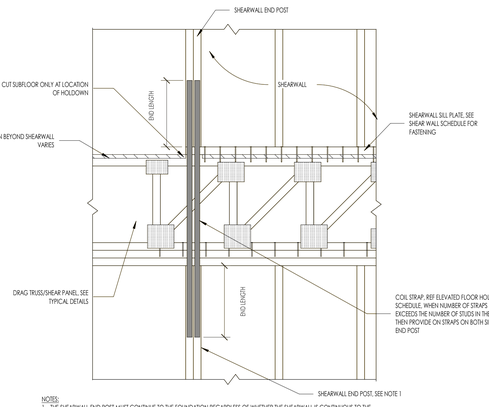
3B TYPICAL LOAD BEARING WALL PERP. TO FLOOR TRUSS
NOT TO SCALE

NOTES:
1. IF WALL ABOVE IS A SHEARWALL, THEN A FLOOR DRAG TRUSS IS REQUIRED.

2B TYPICAL LOAD BEARING HEADER PARALLEL TO FLOOR TRUSSES
NOT TO SCALE



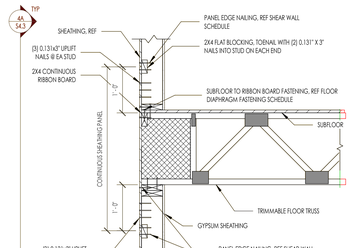
HOLDOWN AT EXTERIOR SHEAR WALL



NOTES:
1. THE SHEARWALL END POST MUST CONTINUE TO THE FOUNDATION REGARDLESS OF WHETHER THE SHEARWALL IS CONTINUOUS TO THE FOUNDATION.

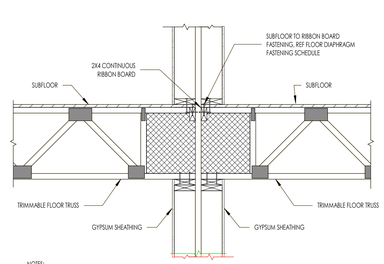
HOLDOWN AT INTERIOR SHEAR WALL

6A TYPICAL SHEARWALL HOLDOWN AT ELEVATED FLOOR
NOT TO SCALE



NOTES:
1. REFERENCE GENERAL NOTES FOR WOOD SHRINKAGE NOTES AND SPECIFICATIONS. IF THE FRAMING HAS A M.C. HIGHER THAN 15% WHEN THE SHEATHING IS APPLIED, IT MAY LEAD TO BUCKLING OF THE SHEATHING AND/OR THE CLADDING. CONTRACTOR TO QC FRAMING M.C. PRIOR TO INSTALLING WALL SHEATHING.

3A 061760 FLOOR - TRIMMABLE TRUSS BOTTOM CHORD BEARING ON EXTERIOR WALL
NOT TO SCALE



NOTES:
1. REFERENCE GENERAL NOTES FOR WOOD SHRINKAGE NOTES AND SPECIFICATIONS. IF THE FRAMING HAS A M.C. HIGHER THAN 15% WHEN THE SHEATHING IS APPLIED, IT MAY LEAD TO BUCKLING OF THE SHEATHING AND/OR THE CLADDING. CONTRACTOR TO QC FRAMING M.C. PRIOR TO INSTALLING WALL SHEATHING.

2A TYPICAL INTERIOR BOTTOM CHORD BEARING AT PARTY WALL
NOT TO SCALE

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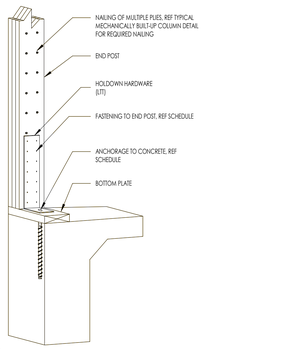
Date	Description

TYPICAL WOOD FLOOR TRUSS DETAILS

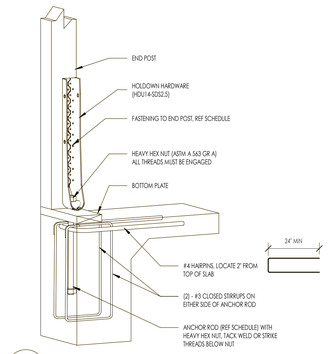
MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & THE EAST 20' OF LOT 6 - BRYAN, TEXAS

S4.2

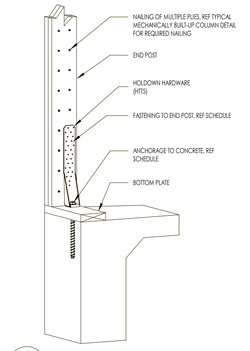
PRELIMINARY - NOT FOR CONSTRUCTION



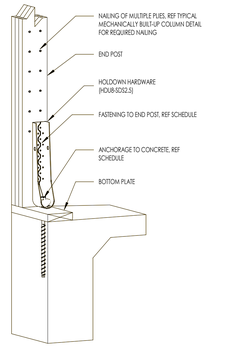
5D LTT HOLDOWN
NOT TO SCALE



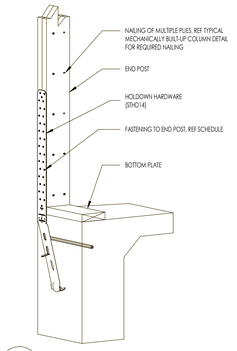
4D HDU14-SDS2.5 HOLDOWN
NOT TO SCALE



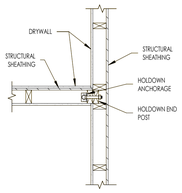
3D HTS HOLDOWN
NOT TO SCALE



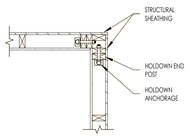
2D HDU8-SDS2.5 HOLDOWN
18|54.3 NOT TO SCALE



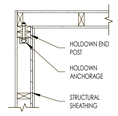
1D STHD14 HOLDOWN
NOT TO SCALE



INTERSECTING SHEAR WALLS

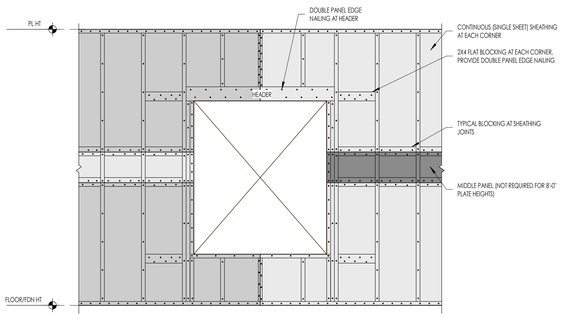


OUTSIDE CORNER SHEAR WALLS



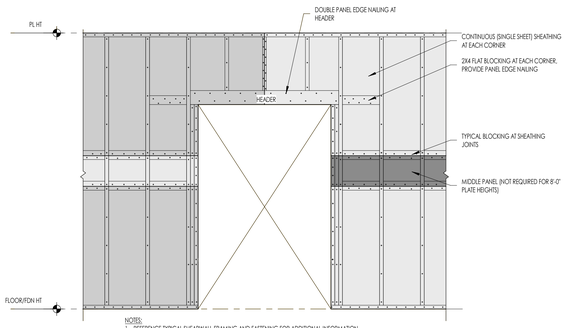
INTERIOR SHEAR WALL INTERSECTION WITH NON-SHEAR WALL

6C SHEAR WALL - END POST CONFIGURATIONS
NOT TO SCALE



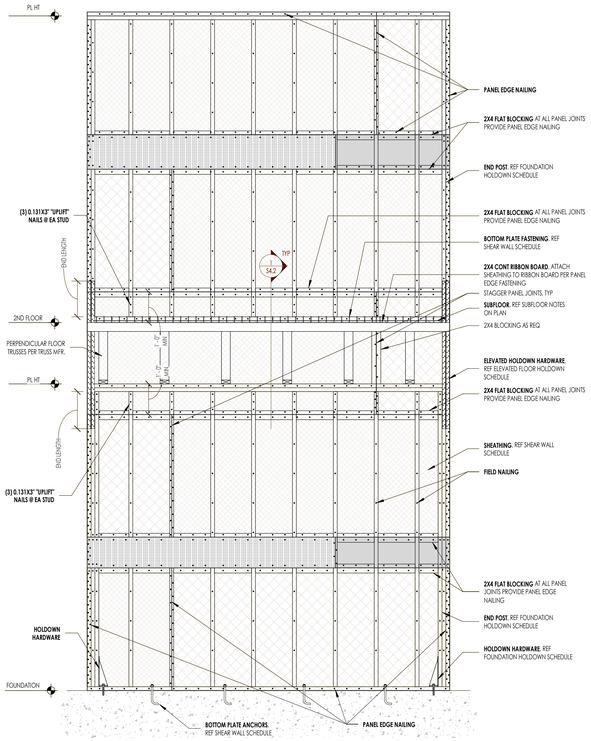
NOTES:
1. REFERENCE TYPICAL SHEARWALL FRAMING AND FASTENING FOR ADDITIONAL INFORMATION.

6B SHEARWALL - FORCE TRANSFER AROUND OPENING
NOT TO SCALE



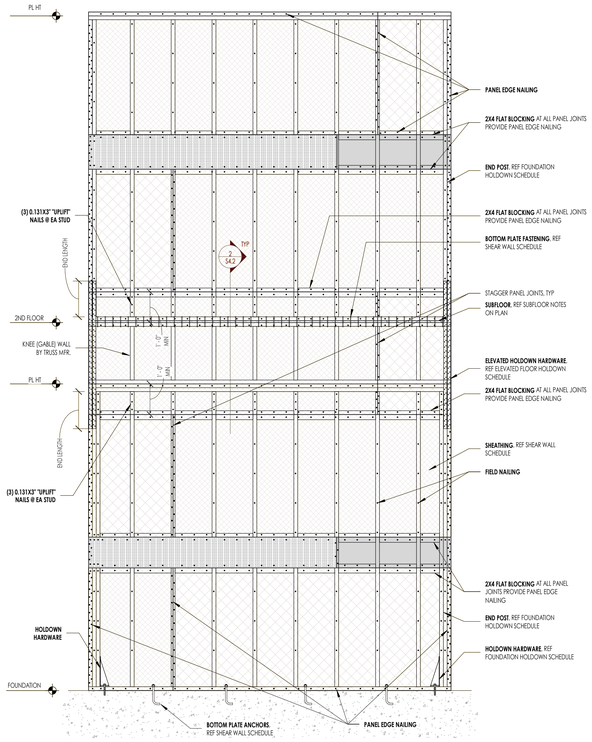
NOTES:
1. REFERENCE TYPICAL SHEARWALL FRAMING AND FASTENING FOR ADDITIONAL INFORMATION.

6A SHEARWALL - FORCE TRANSFER AROUND OPENING (DOOR)
NOT TO SCALE



NOTES:
1. ALL FASTENERS SHALL HAVE A MINIMUM 3/8" EDGE DISTANCE.

4A TYPICAL MULTIPLE STORY SHEARWALL FRAMING AND FASTENING_TRUSSES PERPENDICULAR
1|54.2 NOT TO SCALE



NOTES:
1. ALL FASTENERS SHALL HAVE A MINIMUM 3/8" EDGE DISTANCE.

2A TYPICAL MULTIPLE STORY SHEARWALL FRAMING AND FASTENING_TRUSSES PARALLEL
2|54.2 NOT TO SCALE

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lisa@lkbarchitecture.com | 713.425.3076

Structural: Dudley
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College Station, TX 77845
(979) 777-0720

MEP: AMC Engineers
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Burnet, TX 78611
info@amcengineers.com

Architect: OpeningDesign
17 S Fairchild | FL 7
Madison, WI 53703
ryan@openingdesign.com | 773.425.6456

Date	Description

TYPICAL WOOD FRAMING LATERAL DETAILS

MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & THE EAST 8' OF LOT 2 - BRYAN, TEXAS

S4.3

Owner: Renovation Wranglers
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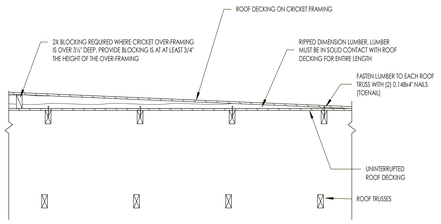
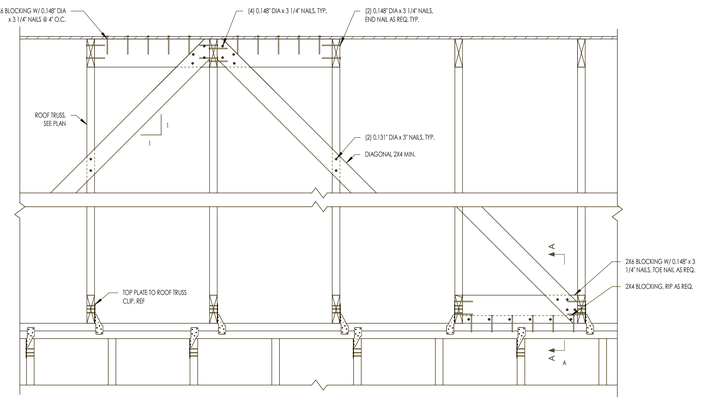
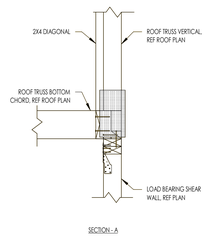


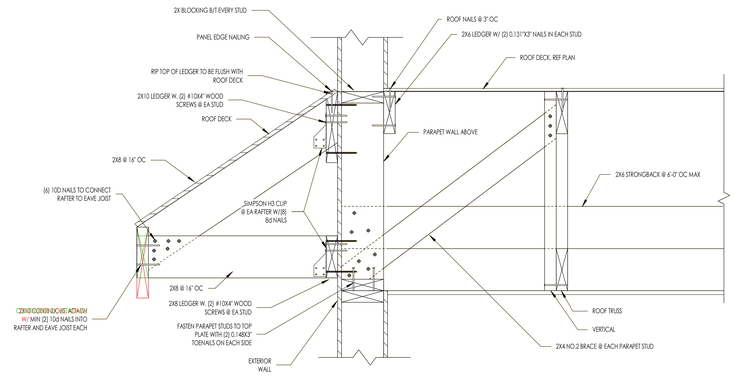
6A TYPICAL CRICKET FRAMING AT ROOF
NOT TO SCALE



5A 061760 ROOF - BRACING AT INTERIOR SHEAR WALL
NOT TO SCALE



SECTION - A

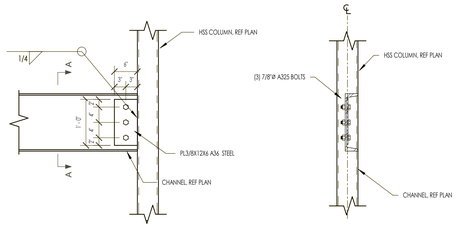


2A ROOF -RAFTER ATTACHMENT INTO WALL
NOT TO SCALE

TYPICAL WOOD ROOF TRUSS DETAILS

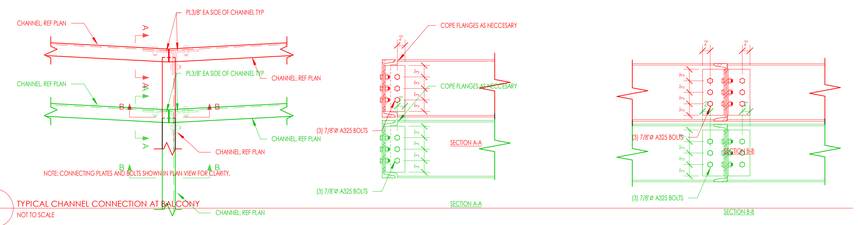
MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 GREATEST PROJECT EVER – BRYAN, TX 77803

S4.4



SECTION A-A

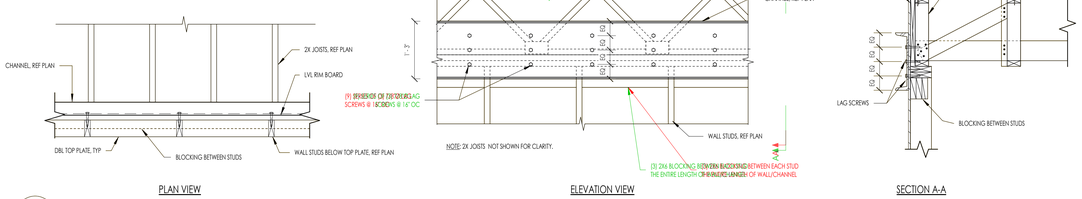
1C CHANNEL TO HSS COLUMN CONNECTION - ALIGNED
NOT TO SCALE



6B TYPICAL CHANNEL CONNECTION AT BALCONY
NOT TO SCALE

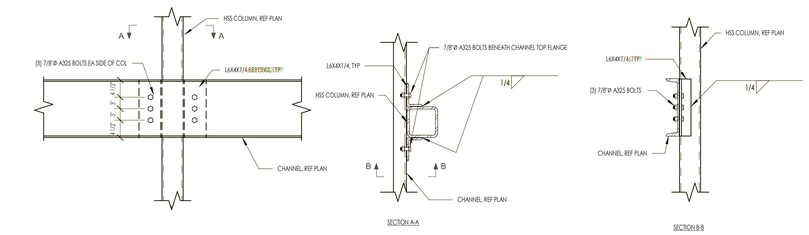
NOTE: CONNECTING PLATES AND BOLTS SHOWN IN PLAN VIEW FOR CLARITY.

6B TYPICAL CHANNEL CONNECTION AT BALCONY 1
NOT TO SCALE



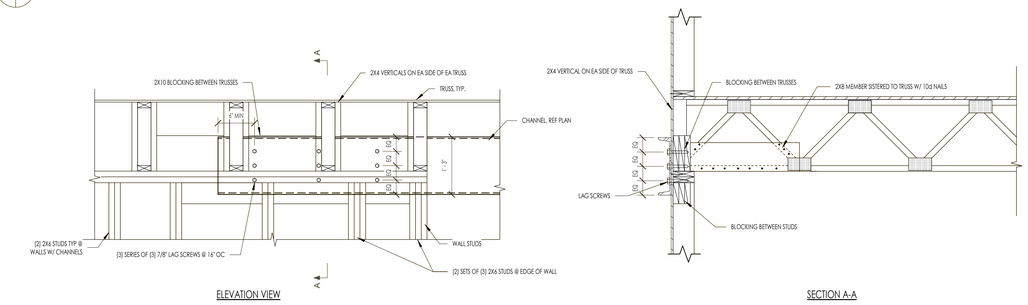
PLAN VIEW ELEVATION VIEW SECTION A-A

6A TYPICAL CHANNEL TO WALL STUD CONNECTIONX
NOT TO SCALE



SECTION A-A SECTION B-B

3B CHANNEL TO HSS COLUMN CONNECTION - ECCENTRIC
NOT TO SCALE



ELEVATION VIEW SECTION A-A

3A TYPICAL CHANNEL TO WALL STUD CONNECTION
NOT TO SCALE

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Date	Description

TYPICAL STEEL DETAILS

MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT. LOT 2

S4.5