GENERAL STRUCTURAL NOTES

GENERAL REQUIREMENTS:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER PROJECT DRAWINGS BY OTHER DISCIPLINES. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODES LISTED BELOW.
2. THE GENERAL CONTRACTOR SHALL COMPARE AND COORDINATE THE CONSTRUCTION DOCUMENTS OF ALL DISCIPLINES PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR BEGINNING CONSTRUCTION IN THE AFFECTED AREAS. THIS COMPARISON/COORDINATION SHALL INCLUDE, BUT NOT BE LIMITED TO, DIMENSIONS, EVALUATIONS, EMBEDDED ITEMS, ANCHORED OR OTHERWISE SUPPORTED ITEMS, FLOOR, ROOF, AND WALL OPENINGS, ETC. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES ALONG WITH THE APPLICABLE DOCUMENT REFERENCES.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONDITIONS BY MAKING FIELD SURVEYS AND MEASUREMENTS PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION.
4. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS USED WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTY. THIS REQUIREMENT IS PARTICULARLY IMPORTANT DURING FOUNDATION INSTALLATION.
5. THE GENERAL CONTRACTOR IS ADVISED TO CONSIDER PERFORMING PHOTOGRAPHIC SURVEYS AND OTHER DOCUMENTATION OF THE CONDITION OF ADJACENT BUILDINGS AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION.
6. THE GENERAL CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS, INCLUDING ALL ADDENDA, AND PROVIDE THE RELEVANT PORTIONS TO ALL SUB-CONTRACTORS AND SUPPLIERS PRIOR TO PREPARATION AND SUBMITTAL OF SHOP DRAWINGS AND FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
7. PARTIAL PLANS, ELEVATIONS, SECTIONS, DETAILS, AND SCHEDULES LABELED "TYPICAL" SHALL APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SEE DETAIL TITLES FOR APPLICABILITY OF A PARTICULAR PARTIAL PLAN, ELEVATION, SECTION OR DETAIL. TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE SPECIFICALLY REFERENCED AT EACH LOCATION. THE STRUCTURAL ENGINEER OF RECORD SHALL HAVE FINAL AUTHORITY TO DETERMINE APPLICABILITY OF TYPICAL DETAILS.
8. WHERE CONFLICTS EXIST BETWEEN STRUCTURAL DOCUMENTS THE STRICTEST REQUIREMENTS, AS INDICATED BY THE STRUCTURAL ENGINEER, SHALL GOVERN.
9. DELEGATED ENGINEER REQUIREMENTS: THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS HAS ISSUED STATEMENTS ON RESPONSIBILITIES OF PROFESSIONAL ENGINEERS, PURSUANT TO CHAPTERS 61G15-30 AND 61G15-31 OF THE FLORIDA ADMINISTRATIVE CODE. CERTAIN COMPONENTS OF THE STRUCTURE REQUIRE THE WORK OF DELEGATED ENGINEERS FOR THE DESIGN OF THOSE COMPONENTS. ALL RELEVANT PROCEDURES PRESENTED IN THE FLORIDA ADMINISTRATIVE CODE SHALL APPLY TO THIS PROJECT.
10. DESIGN OF STEEL STAIRS, HANDRAILS, CURTAIN WALL OR WINDOW WALL SYSTEMS, COLD FORMED STEEL FRAMING (CFS), STEEL BAR JOISTS, PRECAST CONCRETE OR OTHER SPECIALTY ENGINEERED ITEMS NOT FULLY DETAILED OR PROVIDED FOR IN THE CONSTRUCTION DOCUMENTS SHALL BE DESIGNED, DETAILED, FURNISHED AND INSTALLED WITH ALL THE PROVISIONS OF THE CONSTRUCTION DOCUMENTS SPECIFIED HERE AND ELSEWHERE.
11. THE STRUCTURAL ENGINEER OF RECORD (SER) SHALL REVIEW AND RESPOND TO STRUCTURAL REQUESTS FOR INFORMATION (RFI'S) AS REQUIRED DURING THE COURSE OF THE PROJECT. ANY RESPONSE BY THE SER SHALL NOT BE AN AUTHORIZATION TO PROCEED IF THE RESPONSE REQUIRES ADDITIONAL COST OR TIME. PROCEEDING WITH THE WORK IS ACKNOWLEDGEMENT THERE WILL BE NO CHANGE IN COST OR TIME. IF ANY RFI RESPONSE REQUIRES A CHANGE IN COST OR TIME, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL SUCH TIME AS THE CHANGE IS DOCUMENTED AND APPROVED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
12. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

CONSTRUCTION RESPONSIBILITY:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE, AND ARE NOT INTENDED TO INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES, AND FOR JOB SAFETY.
2. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS 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.
3. PERIODIC SITE OBSERVATION VISITS MAY BE PROVIDED BY THE STRUCTURAL ENGINEER. THE SOLE PURPOSE OF THESE OBSERVATIONS IS TO REVIEW THE GENERAL CONFORMANCE OF THE CONSTRUCTION WITH THE STRUCTURAL CONTRACT DOCUMENTS. THESE LIMITED OBSERVATIONS SHOULD NOT BE CONSTRUED AS CONTINUOUS OR EXHAUSTIVE TO VERIFY THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.

PRIMARY CODES AND SPECIFICATIONS:

1. GENERAL BUILDING CODE:
   A. FLORIDA BUILDING CODE, SIXTH EDITION, 2017.
2. DESIGN LOADS:
   A. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, (WITH ERRATA DATED JANUARY 11, 2011).
3. CONCRETE CODES:
   A. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
   B. ACI 301-10 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
   C. CRSI 2009 MANUAL OF STANDARD PRACTICE.
4. MASONRY CONSTRUCTION:
   A. ACI 530-13/ASCE 5-13/TMS 402-13 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
   B. ACI 530.1-13/ASCE 6-13/TMS 602-13 SPECIFICATIONS FOR MASONRY STRUCTURES.
5. STRUCTURAL STEEL CODES:
   A. AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
   B. AISC 303-10 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
   C. AISC 341-10 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.
6. OPEN WEB STEEL JOISTS:
   A. SJI K-10 STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES.
   B. SJI COSP-2010 CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS.
   C. SJI-10 STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS.
7. STEEL DECK:
   A. AISI S100-12 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS.
   B. SDI DDM-03 SDI DIAPHRAGM DESIGN MANUAL.
   C. SDI RDDM SDI ROOF DECK DESIGN MANUAL.
   D. SDI/ANSI RD1.0-10 STANDARD FOR STEEL ROOF DECK.
   E. SDI COSP 2014 CODE OF STANDARD PRACTICE.
8. COLD FORMED STEEL FRAMING:
   A. AISI S100-12 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS.
   B. AISI S200-12 NORTH AMERICAN STANDARD FOR COLD FORMED STEEL FRAMING- GENERAL PROVISIONS.
   C. AISI S211-07/S1-12 (2012) NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL FRAMING-WALL STUD DESIGN, 2007 INCLUDING SUPPLEMENT 1 DATED 2012.
   D. AISI S212-07 (2012) NORTH AMERICAN STANDARD FOR COLD FORMED STEEL FRAMING-HEADER DESIGN, 2007.

DESIGN LOADS:

1. SUPERIMPOSED DEAD LOADS:
   A. ROOFS:
      MINIMUM (COMBINED w/ WIND UPLIFT LOADINGS)..... 5 PSF
      MAXIMUM ALLOWANCE .....30 PSF
      SEE ROOF PLANS FOR OTHER CONCENTRATED LOADS
2. LIVE LOADS:
   A. ROOF LIVE LOADS:
      UNIFORMLY DISTRIBUTED LIVE LOAD ON HORIZONTAL PROJECTION..... 20 PSF
      SEE ROOF FRAMING PLAN FOR OTHER CONCENTRATED EQUIPMENT LOADS.
   B. UNIFORMLY DISTRIBUTED FLOOR LIVE LOADS*:
      MECHANICAL ROOMS,..... 125 PSF
      SLAB ON GRADE,..... 100 PSF
      STAIRS,..... 100 PSF
   C. LIVE LOAD REDUCTION:
      FOR LIVE LOADS OF 100 LBS/SQ. FT. OR LESS, THE DESIGN LOADS MAY BE REDUCED PER THE BUILDING CODE.
3. WIND LOADS:
   A. ULTIMATE DESIGN WIND SPEED, 3 SECOND GUST, Vult..... 140 MPH
      NOMINAL DESIGN WIND SPEED, 3 SECOND GUST, Vasd..... 108 MPH
      HURRICANE PRONE REGION..... YES
      WINDBORNE DEBRIS REGION..... NO
      BUILDING RISK CATEGORY..... III
      WIND EXPOSURE CATEGORY..... B
      WIND TOPOGRAPHIC FACTOR (Kzt)..... 1.0
      ENCLOSURE CATEGORY..... ENCLOSED
      INTERNAL PRESSURE COEFFICIENT..... +/- 0.18
      MEAN ROOF HEIGHT..... 15 FEET
      WIND DIRECTIONALITY FACTOR, Kd..... 0.85
      VELOCITY PRESSURE COEFFICIENT (Kh)..... 0.575
      ULTIMATE VELOCITY PRESSURE (qh[ult])..... 25 PSF
      NOMINAL VELOCITY PRESSURE (qh[nom])..... 15 PSF
   B. SEE LOADING NOTES, TABLES AND DIAGRAMS FOR DESIGN FORCES FOR COMPONENTS DESIGNED BY DELEGATED ENGINEERS.
4. SEISMIC: EXEMPT PER EXCEPTION 2 OF FLORIDA BUILDING CODE SECTION 101.2.
5. GROUND SNOW LOADS: EXEMPT PER EXCEPTION 2 OF FLORIDA BUILDING CODE SECTION 101.2.

LATERAL LOAD RESISTING SYSTEM:

1. HORIZONTAL LATERAL LOAD SYSTEM OF COMPLETED STRUCTURE:
   A. ROOF LEVELS:
      STEEL ROOF DECK SERVES AS A FLEXIBLE DIAPHRAGM THAT DISTRIBUTES THE HORIZONTAL LATERAL LOADS TO THE VERTICAL LATERAL LOAD SYSTEM.
2. VERTICAL LATERAL LOAD SYSTEM OF THE COMPLETED STRUCTURE:
   A. ALL DIRECTIONS:
      CONCRETE MASONRY SHEAR WALLS

FUTURE BUILDING GROWTH:

1. THE BUILDING HAS NOT BEEN DESIGNED FOR ANY FUTURE VERTICAL OR HORIZONTAL GROWTH.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT:
   NUMBER: 1631220
   BY: UNIVERSAL ENGINEERING SERVICES
   AND DATED: DECEMBER 14, 2018
   THE GENERAL CONTRACTOR MAY REVIEW A COPY OF THE GEOTECHNICAL REPORT AT THE OFFICE OF THE ARCHITECT.
2. ALL VEGETATION, TOPSOILS, ROOTS AND ORGANIC ZONES SHALL BE STRIPPED AND REMOVED FROM THE CONSTRUCTION AREA FOR A DISTANCE OF AT LEAST 5 FEET BEYOND THE EXTERIOR OF BUILDING FOUNDATION LIMITS. THE DEPTH OF STRIPPING SHALL BE THAT REQUIRED TO REMOVE SIGNIFICANT ROOT ZONES, SMALL TREE STUMPS AND OTHER UNACCEPTABLE MATERIALS, BUT IN NO CASE LESS THAN 6 INCHES.
3. EXCAVATIONS FOR LARGE STUMPS, ABANDONED UTILITIES, UNDERGROUND TANKS, ETC. SHALL BE BACKFILLED IN LAYERS WITH COMPACTION AND TESTING OF EACH LAYER AS DESCRIBED FOR PLACEMENT AND COMPACTION OF FILL MATERIAL. USE LOOSE BACKFILL LAYER THICKNESS APPROPRIATE FOR THE SIZE OF COMPACTOR BEING USED.
4. AFTER THE SITE HAS BEEN CLEARED, THE SITE SHALL BE PROOF-ROLLED UNDER THE DIRECT OBSERVATION OF THE PROJECT GEOTECHNICAL REPRESENTATIVE. PROVIDE A MINIMUM OF 8 OVERLAPPING COVERAGES IN EACH DIRECTION (16 TOTAL) WITH A MINIMUM OF 30% OVERLAP. REMOVE AND REPLACE ALL UNSUITABLE MATERIALS TO A DEPTH OF AT LEAST 2'-0" BELOW THE BOTTOM OF THE FOUNDATIONS AND THE SLAB-ON-GRADE.
5. AFTER THE SITE HAS BEEN CLEARED AND PROOF-ROLLED, THE EXPOSED SOILS AT THE STRIPPED SURFACE WITHIN AND TO A POINT 5 FEET OUTSIDE THE BUILDING CONSTRUCTION AREA SHALL BE COMPACTED WITH OVERLAPPING PASSES WITH A MEDIUM WEIGHT VIBRATORY DRUM ROLLER HAVING A TOTAL OPERATING STATIC WEIGHT OF AT LEAST 3 TONS AND A MINIMUM DRUM DIAMETER OF 3 FEET. DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) SHALL BE UNIFORMLY OBTAINED TO A DEPTH OF AT LEAST 24 INCHES BELOW THE COMPACTED SURFACE. REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF EIGHT COMPLETE COVERAGES SHALL BE MADE WITHIN THE BUILDING AREA. THE ROLLER COVERAGES SHALL BE DIVIDED EVENLY INTO TWO PERPENDICULAR DIRECTIONS. THE CONTRACTOR IS ADVISED NOT TO USE THE VIBRATORY MODE OF COMPACTORS WITHIN 50 FT OF EXISTING STRUCTURES. THE CONTRACTOR SHALL COORDINATE COMPACTION EFFORTS AND FOUNDATION INSTALLATIONS TO INSURE THAT NO DAMAGE OCCURS TO ADJACENT STRUCTURES.
6. AFTER COMPLETION OF DENSIFICATION OF EXISTING SOILS, STRUCTURAL FILL SHALL THEN BE PLACED IN LIFTS NOT EXCEEDING 12 INCHES IN LOOSE THICKNESS WHEN USING THE ROLLER PREVIOUSLY DESCRIBED. EACH LIFT SHALL BE THOROUGHLY COMPACTED WITH THE VIBRATORY ROLLER UNTIL DENSITIES EQUIVALENT TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY ARE UNIFORMLY OBTAINED. STRUCTURAL FILL SHALL CONSIST OF AN INORGANIC, NON-PLASTIC, GRANULAR SOIL CONTAINING LESS THAN 10 PERCENT MATERIAL PASSING THE NO. 200 MESH SIEVE, A RELATIVELY CLEAN SAND WITH A UNIFIED SOIL CLASSIFICATION OF SP OR SP-SM.
7. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2500 PSF. THE UPPER 12 INCHES OF SANDY BEARING SOILS IN THE FOOTING EXCAVATION BOTTOMS SHALL BE COMPACTED TO DENSITIES EQUIVALENT TO 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. COMPACTION, OR RECOMPACTION OF THE FOOTING EXCAVATION BEARING LEVEL SOILS LOOSENED BY THE EXCAVATION PROCESS, SHALL BE ACHIEVED BY MAKING SEVERAL PASSES WITH A RELATIVELY LIGHTWEIGHT, WALK-BEHIND VIBRATORY SLED OR ROLLER COMPACTOR.
8. UNLESS NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER COLUMNS, PIERS AND WALLS.
9. SLAB-ON-GRADE CONSTRUCTION SHALL BE SUPPORTED ON SUBGRADE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) TO A DEPTH OF AT LEAST 12 INCHES. INTERIOR SLABS-ON-GRADE SHALL BE CAST OVER A VAPOR RETARDER. SEE SPECIFICATIONS.
10. SEE SPECIFICATIONS FOR SURFACE AND GROUND WATER CONTROL.
11. RETAINING WALLS HAVE BEEN DESIGNED FOR AN ASSUMED LATERAL EARTH PRESSURE OF 110 PSF PER FOOT OF DEPTH AND AN ASSUMED SURCHARGE OF 100 PSF. DESIGN ASSUMES WELL GRADED AND DRAINED BACKFILL.

CAST-IN-PLACE CONCRETE:

1. THE LATEST EDITION OF THE FOLLOWING ACI STANDARDS APPLY:

ACI 318 (CODE)	ACI 304 (PLACING)
ACI 306 (WINTER CONCRETING)	ACI 315 (DETAILING)
ACI 305 (HOT WEATHER CONCRETING)	ACI 347 (FORMWORK)
ACI 211.1 (MIX PROPORTIONING)	ACI 301 (SPECIFICATIONS)

2. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF), WITH MIXES DESIGNED TO MEET THE FOLLOWING CRITERIA FOR USE IN VARIOUS ELEMENTS OF THE STRUCTURE AS FOLLOWS:

STRUCTURAL ELEMENT	28-DAY COMPRESSIVE STRENGTH (PSI)	MAX. SIZE AGGREGATE	MAX. W/C RATIO	SLUMP RANGE (IN)
A. FOOTINGS & SPREAD FOUNDATIONS	3000	1"	0.55	3-6
B. CONCRETE WALLS & COLUMNS	4000	3/4"	0.50	3-5
C. SLAB-ON-GRADE	3500	3/4"	0.50	2-4

3. CONCRETE SLUMP IS TAKEN AT POINT OF PLACEMENT INTO STRUCTURE.
4. WATER REDUCING AND AIR ENTRAINING AGENTS SHALL BE INCLUDED IN DESIGN MIXES. SUPERPLASTICIZERS MAY BE USED AT THE CONTRACTOR'S OPTION.
5. A CONCRETE MIX DESIGN FOR EACH UNIQUE COMBINATION OF STRENGTH, COARSE AGGREGATE GRADATION AND WATER CEMENT RATIO SPECIFIED SHALL BE PREPARED BY THE SUPPLIER OR AN INDEPENDENT TESTING LABORATORY AND BE SUBMITTED FOR REVIEW PRIOR TO CASTING ANY CONCRETE. MIXES THAT WILL BE TRANSPORTED AT THE PROJECT SITE BY PUMPING SHALL BE SPECIFICALLY DESIGNED FOR PUMPING.
6. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. SLABS ON GRADE: UNLESS NOTED OTHERWISE, CONCRETE SLABS ON GRADE SHALL BE A MINIMUM OF 4" THICK, REINFORCED WITH 6x6 W1.4Xw1.4 WWF PLACED 1-1/2" CLEAR FROM THE TOP OF THE SLAB. SLABS SHALL BE PLACED OVER PROPERLY COMPACTED EARTH.
8. CONCRETE TIE BEAMS: UNLESS NOTED OTHERWISE, CONCRETE TIE BEAMS SHALL BE A MINIMUM OF 16" DEEP BY THE SUPPORTING WALL WIDTH, REINFORCED WITH 2 #5 CONTINUOUS TOP AND BOTTOM AND #3 TIES AT 24" O.C.

REINFORCING STEEL:

1. REINFORCING STEEL: ASTM A615, GRADE 60.
2. REINFORCING STEEL TO BE WELDED: ASTM A706
   (AS REQUIRED FOR DEFORMED BAR ANCHORS USED IN EMBED PLATE CONNECTION ASSEMBLES ETC.).
3. WELDED WIRE FABRIC: ASTM A1064, FLAT SHEETS.
4. MINIMUM REINFORCING STEEL CLEAR COVER (U.N.O.):
   A. CONCRETE CAST DIRECTLY AGAINST EARTH .....3"
   B. FOUNDATION AND EXTERIOR WALLS.....2"
   C. EXTERIOR BEAMS, COLUMNS & PEDESTALS .....2" TO STIRRUPS OR TIES
   D. SLABS ON GRADE .....1-1/2" FROM TOP
5. WHERE REINFORCING BARS ARE NOTED AS CONTINUOUS, THE FOLLOWING SHALL BE COMPLIED WITH:
   A. THE TERMINATION OF ALL CONTINUOUS REINFORCING BAR RUNS SHALL BE A STANDARD HOOK UNLESS NOTED OTHERWISE.
   B. SPLICES IN CONTINUOUS TOP BARS, IF REQUIRED, SHALL OCCUR OVER PARALLEL WALLS OR AT THE CENTER OF THE OPENING SPAN.
   C. SPLICES IN CONTINUOUS BOTTOM BARS, IF REQUIRED, SHALL OCCUR OVER WALLS OR CENTERED OVER COLUMNS.
6. WHERE SPLICE LENGTHS ARE NOT SPECIFIED, USE 48 BAR DIAMETERS.
7. REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL SPLICES ARE NOT PERMITTED,
8. LAP ALL WELDED WIRE FABRIC A MINIMUM DISTANCE OF ONE CROSS WIRE SPACING PLUS 2 INCHES.
9. ALL REINFORCING STEEL SHALL BE SUPPORTED ON STANDARD ACCESSORIES, HELD RIGIDLY AND ACCURATELY IN PLACE, AND PROTECTED AGAINST DISPLACEMENT BEFORE AND DURING PLACEMENT OF CONCRETE. SUPPORTING ACCESSORY LEGS THAT REST ON CONCRETE SURFACES THAT WILL BE EXPOSED IN THE FINISHED STRUCTURE SHALL BE FABRICATED OF STAINLESS STEEL.
10. DOWELS AND OTHER MISCELLANEOUS STEEL EMBEDDED ITEMS SHALL BE LOCATED AND HELD IN SPECIFIED POSITION PRIOR TO PLACEMENT OF CONCRETE AND SHALL NOT BE PUSHED INTO CONCRETE FOLLOWING CONCRETE PLACEMENT.
11. FOUNDATION, GRADE BEAM AND SLAB ON GRADE REINFORCING SHALL BE SUPPORTED ON PRECAST BLOCKS OR 3000 PSI CONCRETE BRICK OF THE PROPER THICKNESS.

CONCRETE FORMWORK:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. ALL FORMWORK SHALL BE DESIGNED, ERECTED, SUPPORTED, BRACED, AND MAINTAINED ACCORDING TO ACI 347, RECOMMENDED STANDARD PRACTICE FOR CONCRETE FORMWORK.
3. RESPONSIBILITY: THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL FORMS, SHORES, BACKSHORES, FALSEWORK, BRACING, AND OTHER TEMPORARY SUPPORTS SHALL BE ENGINEERED TO SUPPORT ALL LOADS IMPOSED INCLUDING THE WET WEIGHT OF CONCRETE, CONSTRUCTION EQUIPMENT, LIVE LOADS, LATERAL LOADS DUE TO WIND AND WET CONCRETE IMBALANCE. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS.
4. TOLERANCES: UNLESS SPECIFIED OTHERWISE, ALL TOLERANCES FOR CONCRETE FORMWORK SHALL CONFORM TO ACI STANDARD 117, STANDARD TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS. THE CONTRACTOR SHALL ENGAGE A LICENSED SURVEYOR TO VERIFY THAT WORK IS WITHIN SPECIFIED TOLERANCES UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM THE ARCHITECT TO PROVIDE TOLERANCE CONTROL USING THE CONTRACTOR'S OWN FORCES PRIOR TO BEGINNING WORK.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED WHERE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
6. PLUMBING SLEEVE SPACING SHALL BE THE LARGER OF THREE (3) DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE, OR 6" CLEAR BETWEEN SLEEVES. SUBMIT SLEEVE LOCATIONS AND SIZES TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
7. PENETRATIONS SHALL NOT BE PERMITTED IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS WITHOUT THE WRITTEN REVIEW OF THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW INDICATING ANY CONCENTRATION OF PIPES, OPENINGS OR PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE PLACEMENT.

GENERAL STRUCTURAL NOTES CONTINUES ON DRAWING S002.

STRUCTURAL DRAWING INDEX

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THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MARK A. MILLER, PE ON 01/10/2020 USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MARK A. MILLER, P.E.
FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
CHECKED BY: MAM

BID DOCUMENTS PHASE

SHEET TITLE

GENERAL STRUCTURAL NOTES AND STRUCTURAL DRAWING INDEX

SHEET NUMBER

S001

GENERAL STRUCTURAL NOTES (CONTINUED)

CONCRETE MASONRY:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. CONCRETE MASONRY UNITS SHALL BE LOAD BEARING TYPE CONFORMING TO ASTM C-90 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI (NET AREA).
3. MORTAR SHALL CONFORM TO ASTM C-270 TYPE S.
4. PLAIN END TWO CELLED UNITS SHALL BE USED FOR BLOCKS THAT ARE TO HAVE CELLS REINFORCED AND FILLED. WEB SHELLS ADJACENT TO CELLS THAT ARE TO BE FILLED ARE TO BE BEDDED IN MORTAR.
5. FILL CELLS AS NOTED ON DRAWINGS WITH 3000 PSI GROUT, OR GROUT CONFORMING TO ASTM C-476, SPECIFICALLY DESIGNED FOR FILLING OF CELLS.
6. IN SPLICING VERTICAL BARS, LAP ENDS, PLACE IN CONTACT AND WIRE-TIE TOGETHER OR USE BAR POSITIONERS. LAP BARS SIDE BY SIDE IN THE PLANE OF THE WALL TO MAINTAIN PROPER COVER.
7. SEE PRIMARY CODES, SPECIFICATIONS AND DRAWINGS FOR GROUTING PROCEDURES.
8. INSTALLATION OF CONCRETE MASONRY SHALL BE COMPATIBLE WITH ALL APPLIED FINISHES SUCH AS STUCCO OR PAINT. DO NOT SPONGE WALLS WITHOUT PROPER CLEANING COMPATIBLE WITH FINISHES.
9. PROVIDE GALVANIZED WIRE TYPE HORIZONTAL JOINT REINFORCING AT 16" O.C. (MAX) AND AS INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE HOT DIP GALVANIZED HJR ON ALL EXTERIOR WALLS. IN ADDITION TO SCHEDULED OR DETAILED LINTEL AND SILL REINFORCING, PROVIDE TWO LAYERS OF HJR AT 8 INCHES ON CENTER ABOVE AND BELOW ALL LINTELS AND SILLS WHICH SPAN MORE THAN 12 INCHES. EXTEND ADDED HJR 24 INCHES BEYOND THE OPENING JAMBS EXCEPT AT WCJ.
10. MASONRY BOND BEAMS AND CONCRETE TIE BEAMS CAST ON MASONRY WALLS SHALL BE CONSTRUCTED SO AS TO KEY AND BOND INTO BLOCK CELLS. THE USE OF BUILDING PAPER OR SHEET PLASTIC TO CLOSE VOIDS BELOW BEAMS IS NOT ALLOWED DUE TO BREAKAGE OF MORTAR BOND.
11. SEE ARCHITECT'S DRAWINGS FOR THE EXTENT AND EXACT LOCATION OF MASONRY WALLS.
12. WALL CONTROL JOINTS (WCJ):
    A. WALL CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION AT LOCATIONS INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS BUT UNLESS NOTED OTHERWISE AT A SPACING NOT GREATER THAN 24' O.C.
    B. HORIZONTAL JOINT REINFORCING SHALL BE INTERRUPTED EACH SIDE OF WALL CONTROL JOINTS.
    C. WALL CONTROL JOINTS SHALL NOT BE PLACED OVER OPENINGS OR WITHIN AN OPENING JAMB WIDTH. SEE PLANS AND/OR JAMB REINFORCING SCHEDULE FOR MINIMUM JAMB WIDTHS.
    D. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT WALL CONTROL JOINTS.
    E. SEE THESE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
13. MASONRY WALLS SHALL BE BRACED EITHER BY OTHER INTERSECTING WALLS OR BY ANCHORAGE OR BRACING TO THE STRUCTURE ABOVE, OR TO ADJACENT WALLS, AS DETAILED ON THE STRUCTURAL DRAWINGS.
14. BLOCK LINTELS SHALL BE SPECIALLY FORMED U-SHAPED LINTEL OR LOW WEB LINTEL UNITS WITH REINFORCING BARS, OR PRECAST UNITS DESIGNED FOR THE WEIGHT OF MASONRY ABOVE AND OTHER APPLIED LOADS.
15. ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY BRACE THE WALLS FOR VERTICAL AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF LATERAL SUPPORT BY CONNECTIONS AT FLOORS OR ROOF FRAMING LEVELS.
16. QUALITY ASSURANCE: ALL REINFORCED MASONRY SHALL BE TESTED/INSPECTED IN CONFORMANCE WITH THE REFERENCED ACI 530/ASCE 5/TMS 402 CODES AND THE PROJECT SPECIFICATIONS. QUALITY ASSURANCES SHALL MEET THE REQUIREMENTS OF SECTION 1.6, TABLE 4 LEVEL B, UNLESS MORE RESTRICTIVE REQUIREMENTS ARE SPECIFIED ELSEWHERE IN THESE DOCUMENTS
17. TYPICAL SCHEDULED VERTICAL WALL REINFORCING SIZE AND SPACING SHALL ALSO BE CONTINUED ABOVE AND BELOW ALL OPENINGS.

STRUCTURAL STEEL:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. MATERIALS:

W-SHAPES & WT-SHAPES	ASTM A992
C-SHAPES & MC-SHAPES	ASTM A36
ANGLES & PLATES	ASTM A36
STEEL PIPE	ASTM A53, GRADE B
HSS SHAPES	ASTM A1085, GRADE A OR ASTM A500, GRADE C
HIGH STRENGTH BOLTS	GROUP A - ASTM F3125, GRADE A325 OR F1852, UNO GROUP B - ASTM F3125, GRADE A490 OR F2280, WHERE SPECIFIED
ANCHOR RODS	ASTM F1554, GRADE 55 TYPE S1(UNO)
MACHINE BOLTS	ASTM A307, GRADE A
WELDED HEADED STUDS	ASTM A108
DEFORMED BAR ANCHORS	ASTM A496
WELDING ELECTRODES	AWS D1.1, E70 SERIES

3. SUBMIT FOR REVIEW SHOP DRAWINGS OF STEEL DETAILS PRIOR TO FABRICATING STRUCTURAL STEEL.
4. THE DESIGN OF ALL STEEL FRAMING AND CONNECTIONS IS TO BE BASED ON FACTORED LOADS WITH THE USE OF LRFD METHOD. END REACTIONS ARE SHOWN ON THE CONSTRUCTION DOCUMENTS. THE DETAILING OF FRAMING CONNECTIONS INCLUDED IN THE CONSTRUCTION DOCUMENTS ARE CATEGORIZED INTO THE FOLLOWING TWO OPTIONS IN ACCORDANCE WITH AISC 303-10, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES:

    A. OPTION 1 CONNECTIONS ARE COMPLETELY DETAILED ON THE STRUCTURAL CONSTRUCTION DOCUMENTS. THE STEEL SUPPLIER SHALL DETAIL CONNECTIONS AS SHOWN AND CLEARLY IDENTIFY ADDITIONAL INFORMATION NECESSARY AND/OR REQUIRED DEVIATIONS ON THE SHOP DRAWINGS FOR REVIEW AND APPROVAL.

    B. OPTION 2 CONNECTIONS ARE TO BE DESIGNED AND DETAILED BY THE FABRICATOR'S DELEGATED DESIGN PROFESSIONAL. ALL DELEGATED DESIGN CONNECTIONS SHALL HAVE CLEARLY ORGANIZED SIGNED & SEALED DESIGN CALCULATIONS AND DETAILS PREPARED BY THE SUPPLIER'S DELEGATED DESIGN PROFESSIONAL SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. PRIOR TO THE SUBMITTAL OF THE PROJECT CALCULATIONS, THE FABRICATOR SHALL SUBMIT IN WRITING SAMPLES OF REQUIRED SUBSTANTIATING CONNECTION INFORMATION TO THE SER FOR REVIEW AND ACCEPTANCE. CONNECTION TYPES REQUIRING DELEGATED DESIGN ARE INDICATED ON THE CONSTRUCTION DOCUMENTS.

5. NON-SHRINK, NON-METALLIC GROUT WITH A MINIMUM 28 DAY STRENGTH OF 5000 PSI SHALL BE USED UNDER BASE PLATES AND SHALL CONFORM TO CORPS OF ENGINEERS CRD-C621, FACTORY PREMIX GROUT. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.
6. ENGINEER SHALL BE CONTACTED FOR APPROVAL OF ANY FIELD MODIFICATIONS OF ANCHOR BOLTS OR RODS AND COLUMN BASE PLATES (PER OSHA).
7. TEMPORARY BRACING OF STRUCTURAL STEEL ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURAL STABILITY SHALL BE MAINTAINED AT ALL TIMES DURING THE ERECTION PROCESS.

   CONTRACTOR MUST PROVIDE NOTIFICATION TO THE ERECTOR THAT, BY TESTING, THE FOUNDATION AND SUPPORTING WALLS HAVE ATTAINED SUFFICIENT STRENGTH TO SUPPORT THE STEEL TO BE ERECTED BEFORE ERECTING STRUCTURAL STEEL.

STRUCTURAL STEEL CONTINUED):

8. PROVIDE ONE SHOP COAT OF PRIMER (TT-P-636) ON ALL STEEL EXCEPT FOR ITEMS TO BE HOT DIPPED GALVANIZED OR SPRAY FIREPROOFED. DO NOT PAINT PORTIONS EMBEDDED IN CONCRETE.
9. ALL WELD OPERATORS SHALL BE CURRENTLY AWS QUALIFIED.
10. DURING THE ERECTION OF STEEL BEAMS AND DIAGONAL BRACING, ALL BOLTING AND FIELD WELDING SHALL BE COMPLETE BEFORE RELEASING HOISTING CABLES.
11. THE SHOP PLACEMENT OF SHEAR CONNECTORS, WELDABLE REINFORCING BARS, DEFORMED ANCHORS, OR THREADED STUDS IS PROHIBITED WHERE THEY WOULD OBSTRUCT THE WALKING SURFACE OF THE BEAMS OR JOISTS.
12. STEEL COLUMNS, BASE PLATES AND ALL STEEL BELOW GRADE SHALL HAVE A MINIMUM 3" CONCRETE COVER PROTECTION.
13. MEMBERS NOTED AS "CONTINUOUS" SHALL BE FULLY WELDED AT ALL BUTT SPLICES OR CONNECTIONS SHALL BE DETAILED TO PROVIDE CONTINUITY.
14. ALL BRICK SHELF ANGLES SHALL BE HOT DIPPED GALVANIZED.
15. ALL EXTERIOR ELEMENTS AND THOSE ELEMENTS NOTED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AFTER SANDBLAST CLEANING PER SSPC-SP10. USE ASTM A325 BOLTS HOT DIPPED GALVANIZED WITH GALVANIZED HARDENED WASHERS AND GALVANIZED HEAVY HEX NUTS FOR BOLTING OF GALVANIZED ITEMS.

STEEL JOISTS:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. THE MANUFACTURER OF THE JOISTS SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.
3. PROVIDE ONE SHOP COAT OF PRIMER (TT-P-636) EXCEPT ITEMS TO RECEIVE SPRAY FIREPROOFING.
4. SEE GENERAL NOTES FOR SPRINKLER PIPE SUPPORT.
5. REFER TO DETAILS FOR SPECIAL TREATMENT OF:
   SLOPED JOIST SEATS
   NON STANDARD DEPTH JOIST SEATS
   JOISTS SUPPORTING CONCENTRATED LOADS
6. JOISTS SHALL BE DESIGNED FOR THE FOLLOWING NET UPLIFT LOADS UNDER WIND LOADING IN ACCORDANCE WITH LRFD METHOD. REFER TO WIND LOAD PRESSURE DIAGRAMS FOR ZONE EXTENTS:

   ROOF JOISTS IN WIND ZONE 1: ..... -25 PSF
   ROOF JOISTS IN WIND ZONE 2: ..... -36 PSF
   ROOF JOISTS IN WIND ZONE 3: ..... -60 PSF
   ROOF JOISTS IN WIND ZONE 2OH: ..... -62 PSF
   ROOF JOISTS IN WIND ZONE 3OH:..... -106 PSF

7. CONNECT JOIST BEARING PLATES TO JOIST TOP CHORD FOR 6000 LB ULTIMATE LOAD, UNO.
8. JOISTS AT OR NEAR COLUMNS AND JOISTS SPANNING OVER 40 FT MUST BE BOLTED TO THE SUPPORT (PER OSHA).
9. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10. SUBMIT FOR REVIEW SHOP DRAWINGS OF JOIST DETAILS FOR FABRICATION AND ERECTION PRIOR TO FABRICATING JOISTS.
11. SUPPLIER SHALL VERIFY THAT JOIST SIZES INDICATED ON FRAMING PLANS WHERE JOISTS ARE FRAMED ON A SLOPE WILL CARRY A DEAD LOAD OF 30 PSF AND A LIVE LOAD OF 20 PSF.
12. PROVIDE HORIZONTAL OR DIAGONAL TYPE BRIDGING FOR ALL JOISTS AS REQUIRED BY SJI SPECIFICATION AND AS INDICATED ON THE DRAWINGS. THE ENDS OF ALL BRIDGING LINES TERMINATING AT BEAMS SHALL BE ANCHORED THERETO AT TOP AND BOTTOM CHORDS. PROVIDE ALL REQUIRED BRIDGING ANCHORS.
13. ALL JOISTS SHALL BE DESIGNED FOR A SINGLE CONCENTRATED TRAVELING PROVISIONAL NOMINAL LIVE LOAD OF 300 POUNDS ALONG THE TOP CHORD AND 100 POUNDS ALONG THE BOTTOM CHORD APPLIED BETWEEN PANEL POINTS.
14. JOIST DIAGONAL MEMBERS LOCATED IN THE MIDDLE QUARTER OF THE SPAN SHALL BE DESIGNED FOR A MINIMUM SHEAR, IN COMPRESSION, OF 15 PERCENT OF THE END REACTION. THIS MINIMUM DESIGN LOAD SHALL BE TO ACCOUNT FOR THE POSSIBILITY OF SHEAR REVERSAL DUE TO UNBALANCED LOADING.
15. JOIST SEATS SHALL HAVE THE CAPACITY TO RESIST A LATERAL LOAD APPLIED TO THE TOP CHORD, PERPENDICULAR TO THE SPAN (ROLLOVER). PROVIDE A MINIMUM ULTIMATE ROLLOVER FORCE OF 3,000 POUNDS FOR SEATS UP TO 3 1/2 INCHES DEEP AND 1,800 POUNDS FOR SEAT OVER 3 1/2 INCHES DEEP.

STEEL ROOF DECK:

1. ROOF DECK SHALL BE 1-1/2" DEEP, WIDE-RIB IN ACCORDANCE WITH SDI SPECIFICATIONS. SEE ROOF PLAN OR SCHEDULE FOR SPECIFIC GAGE AND PROFILE DESIGNATION.
2. STEEL ROOF DECK SHALL CONFORM TO ASTM A653 SQ GRADE 33 (Fy = 33,000 PSI) AND SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING DESIGNATION G90 CONFORMING TO ASTM A924.
3. ROOF DECK SHALL BE PLACED SO AS TO COVER AT LEAST TWO SPANS. NO SINGLE SPAN CONDITIONS SHALL BE USED.
4. PROVIDE A MINIMUM END BEARING OF 2" OVER SUPPORTS. END LAPS OF SHEETS SHALL BE A MINIMUM OF TWO INCHES AND SHALL OCCUR OVER SUPPORTS.
5. ROOF DECK SHALL BE FABRICATED SO THAT DECK RUNS CONTINUOUSLY OVER OPENINGS. THE OPENINGS IN THE DECK SHALL NOT BE CUT UNTIL THE OPENING IS NEEDED (PER OSHA).
6. THE CONTRACTOR SHALL COORDINATE ALL TRADE REQUIREMENTS AND CONFIRM THE SIZE AND LOCATION OF ALL OPENINGS. OPENINGS LARGER THAN 12", AND AS DETAILED, SHALL HAVE STEEL FRAMING SUPPORTING ALL EDGES. SEE TYPICAL OPENING FRAMING DETAILS.
7. NO HANGING LOADS SHALL BE APPLIED OR SUPPORTED BY ROOF DECK.
8. SEE ROOF PLAN AND DETAILS FOR ROOF DECK ATTACHMENT AND FORCES IMPOSED DUE TO UPLIFT AND DIAPHRAGM SHEAR UNDER WIND LOADING. SEE SPECIFICATIONS FOR INSPECTION AND REPORTING REQUIRED ON ROOF DECK ATTACHMENT.
9. STEEL MEMBERS SUPPORTING STEEL DECK AT THE PERIMETER OF THE BUILDING SHALL BE CONTINUOUS, BUTT WELD PIECES WHERE SPLICES OCCUR.

COLD FORMED STEEL (CFS) FRAMING:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. ALL EXTERIOR WALLS, LINTELS, BEAMS, TRUSSES, ETC. AS WELL AS ALL INTERIOR BEARING WALLS, LINTELS, BEAMS, ETC. SHALL BE DESIGNED, SIGNED AND SEALED BY THE SUPPLIER'S DELEGATED ENGINEER REGISTERED IN THE STATE OF FLORIDA.
3. ALL MEMBERS SHALL BE FORMED FROM HOT-DIPPED GALVANIZED STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A653 SQ GRADE 33 (Fy = 33,000 PSI). GALVANIZED COATING SHALL CONFORM TO ASTM A924 WITH COATING DESIGNATION G60.
4. EXTERIOR CFS STEEL WALL FRAMING:
   A. THE COLD FORMED STEEL WALL FRAMING CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF EXTERIOR CFS FRAMED WALLS. SHOP DRAWINGS SHOWING PLANS, ELEVATIONS, SECTIONS, AND DETAILS SHALL BE SUBMITTED WITH CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF FLORIDA.
   B. THE MINIMUM CFS WALL STUD/MEMBER SIZES AND SPACING SHALL BE AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
   C. DO NOT CUT OR OTHERWISE DAMAGE LOAD BEARING STUDS DURING INSTALLATION OF WORK BY OTHER TRADES.

SUBMITTALS:

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL. SUBMITTAL WITHOUT CONTRACTOR REVIEW WILL RESULT IN DELAYS. THE CONTRACTOR SHALL CONFIRM THAT SHOP DRAWINGS HAVE BEEN COMPLETED AND CHECKED BY THE SUPPLIER PRIOR TO SUBMISSION.
2. CONTRACTOR IS TO PROVIDE ELECTRONIC COPIES (PDF) OF CONTRACTOR REVIEWED AND STAMPED SHOP DRAWINGS FOR A/E REVIEW AND PROCESSING.
3. SHOP DRAWING SUBMITTAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL SPECIFICATIONS. CHANGES OR ADDITIONS MADE ON RESUBMITTED SHOP DRAWINGS SHALL BE CLEARLY INDICATED, AND THE PURPOSE OF THE RESUBMITTAL SHALL BE NOTED ON THE TRANSMITTAL. REVIEW OF RESUBMITTED SHOP DRAWINGS SHALL BE LIMITED SPECIFICALLY TO THE ITEMS NOTED FOR CORRECTION ON THE PREVIOUS SUBMITTAL.
4. THE GENERAL CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:

   CONCRETE MIX DESIGNS
   CURTAIN WALL (a, c)
   COLD FORMED STEEL FRAMING(a)
   REINFORCING STEEL
   STEEL JOISTS (b)
   STEEL ROOF DECK
   STRUCTURAL STEEL

   THE NOTATIONS FOLLOWING SUBMITTAL ITEMS INDICATE THE FOLLOWING:

   (a) CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

   (b) INCLUDE A CERTIFICATE OF COMPLIANCE WITH CONTRACT DOCUMENTS SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA RESPONSIBLE FOR THE DESIGN.

   (c) SUBMIT ONE COPY FOR INFORMATION AND RECORD ONLY.

5. MANUFACTURER'S LITERATURE: SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
6. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS FOR GENERAL CONFORMANCE OF THE DESIGN CONCEPT. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTALS THAT IS ACCEPTABLE TO BOTH CONTRACTOR AND ENGINEER. AFTER THE CONTRACTOR HAS REVIEWED THE SHOP DRAWINGS, PROMPT REVIEW BY THE ENGINEER WILL BE MADE OF ALL SUBMITTALS. FOR LARGE SUBMITTALS, REASONABLE REVIEW TIME SHALL BE ALLOWED AND MAY EXCEED TWO WEEKS. THE CONCURRENT SUBMITTAL OF MULTIPLE SHOP DRAWINGS ("DUMPING") WILL FURTHER EXTEND THE REVIEW PROCESS AND TIME FRAME NECESSARY TO PROPERLY REVIEW EACH SUBMITTAL.
7. REPRODUCTION OF THESE CONTRACT DOCUMENTS BY ANYONE FOR USE IN SHOP DRAWINGS SHALL SIGNIFY THEIR ACCEPTANCE OF ALL INFORMATION SHOWN AS BEING CORRECT. STRUCTURAL ENGINEERS GROUP, INC. SHALL BE INDEMNIFIED AND HELD HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES, EXPENSES OR LIABILITIES OF ANY KIND, INCLUDING ATTORNEYS FEES. THE CONTRACTOR IS RESPONSIBLE FOR PROPER CHECKING AND COORDINATING OF DETAILS, DIMENSIONS, SIZES AND QUANTITIES AS REQUIRED TO FACILITATE COMPLETE AND ACCURATE FABRICATION AND ERECTION.

BUILDING DEFLECTIONS:

1. THE BUILDING HAS BEEN DESIGNED TO COMPLY WITH APPLICABLE BUILDING CODES AND VERTICAL DEFLECTION ALLOWANCES. THE CONTRACTOR SHOULD ANTICIPATE AND CONSIDER SOME VERTICAL MOVEMENT DURING PERFORMANCE OF HIS WORK.
2. ROOF BEAMS SHALL BE ASSUMED TO DEFLECT AN AMOUNT EQUAL TO THE SPAN LENGTH IN INCHES DIVIDED BY 360 (L/360), BUT NOT LESS THAN 3/8" AFTER SUPERIMPOSED LOADS ARE APPLIED.

BUILDING MAINTENANCE:

1. THE BUILDING OWNER SHALL BE AWARE THAT ALL BUILDINGS AND STRUCTURES REQUIRE ROUTINE AND PERIODIC MAINTENANCE. THIS MAINTENANCE IS ESPECIALLY IMPORTANT FOR ALL ELEMENTS EXPOSED TO THE ATMOSPHERE, SALT ENVIRONMENTS OR HARSH CHEMICALS. THE OWNER SHALL ESTABLISH A MAINTENANCE PROGRAM IN ORDER TO PREVENT DAMAGE TO THE STRUCTURE WHICH WILL SHORTEN THE LIFESPAN. ROUTINE MAINTENANCE ITEMS WOULD INCLUDE CLEANING, PAINTING, PRESSURE WASHING, SEALANT REPLACEMENT AND REPAIR OF ANY CRACKED OR SPALLED CONCRETE.

POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD (SER) PRIOR TO USING POST-INSTALLED ANCHORS OR ADHESIVE ANCHORING SYSTEM FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS AND/OR REINFORCING DOWELS.
2. ALL POST-INSTALLED ANCHOR INSTALLATION SHALL BE BY A QUALIFIED PERSONNEL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
3. EXISTING REINFORCING BARS IN THE CONCRETE/MASONRY STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE REQUIRED ANCHORS BY GPR, X-RAY, CHIPPING, HILTI FERROSCAN, OR OTHER MEANS. THE CONTRACTOR SHALL NOTIFY THE SER SHOULD ANCHOR LOCATIONS ENCOUNTER REINFORCING BARS AT THE REQUIRED ANCHOR LOCATIONS, UNLESS IT IS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS THAT THE CONFLICTING REINFORCING BARS CAN BE CUT TO INSTALL THE ANCHOR(S).
4. POST-INSTALLED ANCHOR CAPACITY IS DEPENDANT UPON THE SPECIFIED EMBEDMENT, SPACING BETWEEN ADJACENT ANCHORS, AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE OR ON THE STRUCTURAL DRAWINGS. EMBEDMENT SHALL BE THE MINIMUM SPECIFIED ON THE STRUCTURAL DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS.
5. SPECIAL INSPECTION BY AN APPROVED TESTING AGENCY OR THRESHOLD INSPECTOR SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE SER AND THE THRESHOLD INSPECTION PLAN WHERE APPLICABLE. INDEPENDENT ON-SITE PROOF LOAD TESTING SHALL BE PERFORMED AS REQUIRED BY THE SER. CONTACT SER FOR THE NUMBER OF ANCHORS REQUIRED TO BE TESTED AND REQUIRED PROOF LOAD MAGNITUDE.
6. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE SER WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH SUBMITTAL PACKAGE. THE ACCEPTANCE OF THE PRODUCT WILL BE AT THE SER'S DISCRETION.
7. MINIMUM REQUIREMENTS FOR POST-INSTALLED ANCHORS AT TIME OF INSTALLATION:

   A. MINIMUM COMPRESSIVE STRENGTH OF BASE MATERIAL:
      GROUTED MASONRY..... 1500 PSI
      NORMAL-WEIGHT CONCRETE..... 2500 PSI

8. ANCHOR PRODUCTS APPROVED FOR USE ON THIS PROJECT ARE LISTED BELOW (UNO):

   A. MECHANICAL ANCHORS INTO CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI "KWIK BOLT-TZ" EXPANSION ANCHOR (ICC-ES ESR-1917)
         B. HILTI "HUS EZ" SCREW ANCHOR (ICC-ES ESR-3027)
         C. SIMPSON STRONG-TIE "STRONG-BOLT 2" WEDGE ANCHOR (ICC-ES ESR-3037)
         D. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
      2. THE FOLLOWING HEAVY DUTY ANCHORS SHALL ONLY BE USED WHERE SPECIFICALLY REQUIRED ON THE CONSTRUCTION DOCUMENTS:
         A. HILTI "HDA" UNDERCUT ANCHOR (ICC-ES ESR-1546)
         B. HILTI "HSL-3" EXPANSION ANCHOR (ICC-ES ESR-1545)
         C. SIMPSON STRONG TIE "TORQ-CUT" UNDERCUT ANCHOR (ICC-ES ESR-2705)

   B. MECHANICAL ANCHORS INTO GROUT FILLED MASONRY LINTELS OR GROUT FILLED CELLS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC01 OR ICC-ES AC106:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI "KWIK BOLT 3" EXPANSION ANCHOR (ICC-ES ESR-1385)
         B. SIMPSON STRONG-TIE "STRONG-BOLT 2" WEDGE ANCHOR (IAPMO-ES ER240)
      2. THE FOLLOWING HEAVY DUTY ANCHORS SHALL ONLY BE USED WHERE SPECIFICALLY REQUIRED ON THE CONSTRUCTION DOCUMENTS:
         A. HILTI "HUS EZ" SCREW ANCHOR (ICC-ES ESR-3056)
         B. SIMPSON STRONG-TIE "TITEN HD" (ICC-ES ESR-1056)
         C. SIMPSON STRONG TIE "WEDGE-ALL" (ICC-ES ESR-1396)

   C. ADHESIVE ANCHORS INTO CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI "HIT-HY 200" ADHESIVE WITH HILTI HIT-Z STEEL ROD (ICC-ES ESR-3187)
         B. HILTI "HIT-HY 200" ADHESIVE WITH HILTI HAS-E STEEL THREADED ROD (ICC-ES ESR-3187)
         C. HILTI "HIT-RE 500 V3" ADHESIVE WITH HILTI HAS-E STEEL THREADED ROD (ICC-ES ESR-3814)
         D. SIMPSON STRONG-TIE "SET-XP" EPOXY ADHESIVE WITH ASTM A193 Gr B7 STEEL THREADED ROD, UNO (ICC-ES ESR-2508)
         E. SIMPSON STRONG-TIE "SET-3G" EPOXY ADHESIVE ASTM A193 Gr B7 STEEL THREADED ROD,UNO (ICC-ES ESR-4057)

   D. ADHESIVE ANCHORS INTO MASONRY LINTELS OR GROUT FILLED CELLS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC58:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI HIT-HY 70 MASONRY ADHESIVE HILTI HAS-E STEEL THREADED ROD (ICC-ES ESR-PENDING)
         B. SIMPSON STRONG-TIE "SET" WITH ASTM A193 Gr B7 STEEL THREADED ROD, UNO (ICC-ES ESR-1772)
         C. SIMPSON STRONG TIE "SET-XP" WITH ASTM A193 Gr B7 STEEL THREADED ROD, UNO (IAPMO UES ER-265)

   E. STEEL REINFORCING BARS ANCHORED INTO CONCRETE WITH ADHESIVE ANCHORING SYSTEM SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ADHESIVE ANCHORING SYSTEMS ARE ACCEPTABLE FOR USE ONLY WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR APPROVED BY THE SER:
         A. HILTI "HIT-HY 200" ADHESIVE (ICC-ES ESR-3187)
         B. HILTI "HIT-RE 500 V3" ADHESIVE (ICC-ES ESR-3814)
         C. SIMPSON STRONG-TIE "SET-XP" EPOXY ADHESIVE (ICC-ES ESR-2508)
         D. SIMPSON STRONG-TIE "SET-3G" EPOXY ADHESIVE (ICC-ES ESR-4057)

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PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
CHECKED BY: MAM

BID DOCUMENTS PHASE

SHEET TITLE

GENERAL STRUCTURAL NOTES

SHEET NUMBER

S002

COMPONENT & CLADDING DESIGN WIND LOAD INFORMATION

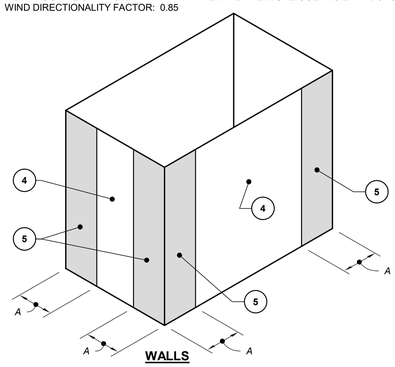
COMPONENTS & CLADDING NOMINAL (ASD) WIND LOAD DESIGN PRESSURE SCHEDULE

COMPONENT	ZONE	EFFECTIVE WIND AREA (SF)	DESIGN PRESSURE (PSF) POSITIVE	NEGATIVE
ROOF ELEMENTS	1	10	12	-19
		20	11	-19
		50	10	-18
		>100	10	-17
	2	10	12	-33
		20	11	-31
		50	10	-27
		>100	10	-25
	2OH	10	12	-42
		20	11	-42
		50	10	-42
		>100	10	-42
	3	10	12	-49
		20	11	-46
		50	10	-42
		>100	10	-39
	3OH	10	12	-69
		20	11	-63
		50	10	-54
		>100	10	-48
EXTERIOR WALL ELEMENTS, WINDOWS, DOORS AND CURTAIN WALLS	4	10	21	-23
		20	20	-22
		50	19	-21
		100	18	-20
		>500	16	-17
	5	10	21	-28
		20	20	-26
		50	19	-24
		100	18	-22
		>500	16	-17

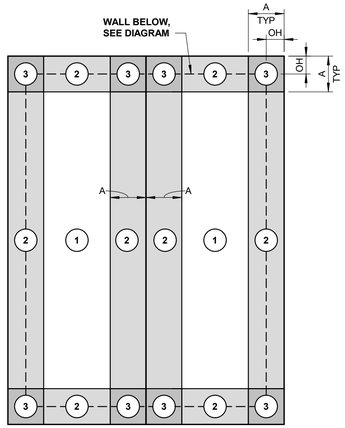
NOTES:
1. DESIGN WIND PRESSURES SHALL BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS COMPRISING THE BUILDING ENVELOPE.
2. REFER TO THE WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM EACH COMPONENT SURFACE.
4. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREAS MAY BE USED TO OBTAIN THE REQUIRED COMPONENT AND CLADDING DESIGN WIND PRESSURE.
5. VALUES FOR OVERHANGS INCLUDE PRESSURE CONTRIBUTIONS FROM BOTH UPPER AND LOWER SURFACES.
6. DIMENSION A = 5'-0"
7. NOMINAL WIND SPEED: 108 MPH
8. VELOCITY PRESSURE, qh: 17.78 PSF

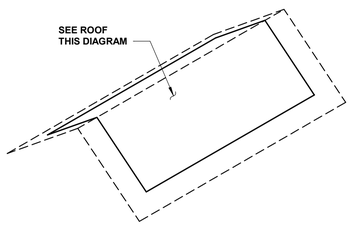
WIND CRITERIA

HURRICANE PRONE REGION: Yes
RISK CATEGORY: III
WIND EXPOSURE CATEGORY: B
MEAN ROOF HEIGHT: 15'-0"
WIND DIRECTIONALITY FACTOR: 0.85
VELOCITY PRESSURE COEFFICIENT, Kh: 0.70
TOPOGRAPHIC FACTOR, Kzt: 1.00
ENCLOSURE CLASSIFICATION: ENCLOSED
INTERNAL PRESSURE COEFFICIENT: +/-0.18



WALLS





GABLE ROOF

COMPONENTS & CLADDING ULTIMATE WIND LOAD DESIGN PRESSURE SCHEDULE

COMPONENT	ZONE	EFFECTIVE WIND AREA (SF)	DESIGN PRESSURE (PSF) POSITIVE	NEGATIVE
ROOF ELEMENTS	1	10	20	-32
		20	19	-31
		50	16	-30
		>100	16	-29
	2	10	20	-56
		20	19	-52
		50	16	-46
		>100	16	-41
	2OH	10	20	-71
		20	19	-71
		50	16	-71
		>100	16	-71
	3	10	20	-83
		20	19	-78
		50	16	-71
		>100	16	-65
	3OH	10	20	-116
		20	19	-105
		50	16	-91
		>100	16	-80
EXTERIOR WALL ELEMENTS, WINDOWS, DOORS AND CURTAIN WALLS	4	10	35	-38
		20	34	-37
		50	32	-35
		100	30	-33
		>500	26	-29
	5	10	35	-47
		20	34	-44
		50	32	-40
		100	30	-37
		>500	26	-29

NOTES:
1. DESIGN WIND PRESSURES SHALL BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS COMPRISING THE BUILDING ENVELOPE.
2. REFER TO THE WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM EACH COMPONENT SURFACE.
4. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREAS MAY BE USED TO OBTAIN THE REQUIRED COMPONENT AND CLADDING DESIGN WIND PRESSURE.
5. VALUES FOR OVERHANGS INCLUDE PRESSURE CONTRIBUTIONS FROM BOTH UPPER AND LOWER SURFACES.
6. DIMENSION A = 5'-0"
7. ULTIMATE WIND SPEED: 140 MPH
8. VELOCITY PRESSURE, quh: 29.88 PSF

AKEL ☐ LOGAN ☐ SHAFER
ARCHITECTS AND PLANNERS

704 Rosselle Street / Jacksonville, Florida 32204
Telephone (904) 356-2654 / Fax (904) 356-4010
AAC002135

CONSULTANTS

Miller Engineering, LLC
10818 Birchard Lane | Jacksonville, FL 32257
Tel: 904.322.1970 | FL CA #33399

MARK A. MILLER, P.E.
FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
CHECKED BY: MAM

BID DOCUMENTS PHASE

SHEET TITLE

WIND LOAD DESIGN INFORMATION

SHEET NUMBER

S003

ABBREVIATIONS

A/C	-	AIR CONDITIONING
A/E	-	ARCHITECT AND/OR ENGINEER
AB	-	ANCHOR BOLT
ACI	-	AMERICAN CONCRETE INSTITUTE
AFF	-	ABOVE FINISHED FLOOR
AHU	-	AIR HANDLING UNIT
AISC	-	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	-	AMERICAN IRON AND STEEL INSTITUTE
AITC	-	AMERICAN INSTITUTE FOR TIMBER CONSTRUCTION
ALT	-	ALTERNATE
ALUM	-	ALUMINUM
AMT	-	AMOUNT
ANCH	-	ANCHOR, ANCHORAGE
ANSI	-	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	-	APPROXIMATE
AR	-	ANCHOR ROD
ARCH	-	ARCHITECT, ARCHITECTURAL
ASCE	-	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	-	ALLOWABLE STRESS DESIGN
ASTM	-	AMERICAN SOCIETY OF TESTING & MATERIALS
AVG	-	AVERAGE
AWS	-	AMERICAN WELDING SOCIETY
B	-	BEAM MARK
BB	-	BOND BEAM
BLDG	-	BUILDING
BLK	-	BLOCK
BLKG	-	BLOCKING
BM	-	BEAM
BOS	-	BOTTOM OF STEEL
BOTT	-	BOTTOM
BRDG	-	BRIDGE, BRIDGING
BRG	-	BEARING
BS	-	BOTH SIDES
BTWN	-	BETWEEN
BUR	-	BUILT-UP ROOF
C	-	STEEL CHANNEL SHAPE, COLUMN MARK
CAD	-	CADMIUM
CANT	-	CANTILEVER
CAP	-	CAPACITY
CB	-	CORNER BAR
CC	-	CENTER TO CENTER
CCF	-	COMBINED COLUMN FOOTING
CF	-	CUBIC FEET, COLUMN FOOTING
CFS	-	COLD FORMED STEEL
CHKD	-	CHECKERED
CI	-	CAST IRON
CIP	-	CAST-IN-PLACE
CJ	-	CONSTRUCTION JOINT
CL	-	CENTERLINE
CLG	-	CEILING
CLR	-	CLEARANCE, CLEAR
CM	-	CONSTRUCTION MANAGER
CMU	-	CONCRETE MASONRY UNIT
CO	-	CUT OFF
COL	-	COLUMN
COMP	-	COMPOSITE, COMPRESSOR, COMPRESSIVE
CONC	-	CONCRETE
CONN	-	CONNECTION, CONNECT
CONSTR	-	CONSTRUCTION
CONT	-	CONTINUOUS
CONTR	-	CONTRACTOR
CRSI	-	CONCRETE REINFORCING STEEL INSTITUTE
CS	-	COMPOSITE SLAB
CSK	-	COUNTERSINK
CTR	-	CENTER
CTRD	-	CENTERED
CW	-	CONCRETE WALL MARK, CURTAIN WALL, CURTAINWALL
CY	-	CUBIC YARD
DBA	-	DEFORMED BAR ANCHOR
DBL	-	DOUBLE
DEG	-	DEGREES
DEMO	-	DEMOLITION
DEPT	-	DEPARTMENT
DET	-	DETAIL
DIA	-	DIAMETER
DIAG	-	DIAGONAL
DIAPH	-	DIAPHRAGM
DIM	-	DIMENSION
DL	-	DEAD LOAD
DN	-	DOWN
DO	-	DITTO
DS	-	DRILLED SHAFT
DSC	-	DRILLED SHAFT CAP
DT	-	DOUBLE TEES
DWG	-	DRAWING
DWL	-	DOWEL
E	-	EAST
EA	-	EACH
EE	-	EACH END
EF	-	EACH FACE
EJ	-	EXPANSION JOINT
EL	-	ELEVATION
ELEC	-	ELECTRICAL
ELEV	-	ELEVATOR
ENCL	-	ENCLOSURE
ENGR	-	ENGINEER
EOD	-	EDGE OF DECK
EOR	-	ENGINEER OF RECORD
EOS	-	EDGE OF SLAB
EQ	-	EQUAL
EQPT	-	EQUIPMENT
ES	-	EACH SIDE
EST	-	ESTIMATED
ETC	-	AND OTHERS
EW	-	EACH WAY
EXIST	-	EXISTING
EXP	-	EXPANSION
EXP JT	-	EXPANSION JOINT
EXT	-	EXTERIOR
F	-	FAHRENHEIT
f'c	-	MINIMUM 28-DAY CONCRETE STRENGTH
f'm	-	SPECIFIED MASONRY STRENGTH
FB	-	FLAT BAR
FBC	-	FLORIDA BUILDING CODE
FD	-	FLOOR DRAIN
FDN	-	FOUNDATION
FF	-	FINISHED FLOOR
FIN	-	FINISH, FINISHED
FLR	-	FLOOR
FOS	-	FACE OF STUD
FRPF	-	FIREPROOF
FRT	-	FIRE RETARDANT
FS	-	FAR SIDE
FT	-	FOOT, FEET
FTG	-	FOOTING
FW	-	FOUNDATION WALL
Fy	-	YIELD STRENGTH OF MATERIAL
GA	-	GAGE
GALV	-	GALVANIZED
GC	-	GENERAL CONTRACTOR
GCL	-	GRANULAR CAPILLARY LAYER
GEN	-	GENERAL
GLB	-	GLULAM BEAM
GR	-	GRADE
GRND	-	GROUND
GWB	-	GYPSUM WALLBOARD
GYP	-	GYPSUM
HC	-	HOLLOW CORE
HCA	-	HEADED CONCRETE ANCHOR
HD	-	HEAVY DUTY, HEAD
HDG	-	HOT DIPPED GALVANIZED
HDR	-	HEADER
HEX	-	HEXAGONAL
HGR	-	HANGER
HGT	-	HEIGHT
HJR	-	HORIZONTAL JOINT REINFORCING
HK	-	HOOK
HORIZ	-	HORIZONTAL
HP	-	STEEL BEARING PILE
HS	-	HIGH STRENGTH
HSK	-	HOUSEKEEPING, HOUSEKEEPING SLAB MARK
HSS	-	SQUARE, RECTANGULAR OR ROUND HOLLOW STRUCTURAL SECTION
HWH	-	HEX WASHER HEAD
IBC	-	INTERNATIONAL BUILDING CODE
ICF	-	INSULATED CONCRETE FORM
ID	-	INSIDE DIAMETER
IF	-	INSIDE FACE
IN	-	INCHES
INFO	-	INFORMATION
INSUL	-	INSULATION
INT	-	INTERIOR
JST	-	JOIST
JT	-	JOINT
K	-	KIPS (1000 LBS.)
KB	-	KNEE BRACE
KD	-	KILN DRIED
KO	-	KNOCK OUT
KSF	-	KIPS PER SQUARE FOOT
KSI	-	KIPS PER SQUARE INCH
L	-	STEEL ANGLE, LENGTH, LINTEL MARK
LAM	-	LAMINATED
LB	-	LINTEL BEAM
LBS	-	POUNDS
Leh	-	HORIZONTAL BOLT/ROD EDGE DISTANCE
Lev	-	VERTICAL BOLT/ROD EDGE DISTANCE
LF	-	LINEAL FEET
LL	-	LIVE LOAD
LLBB	-	LONG LEG BACK TO BACK
LLH	-	LONG LEG HORIZONTAL
LLO	-	LONG LEG OUTSTANDING
LLV	-	LONG LEG VERTICAL
LRFD	-	LOAD AND RESISTANCE FACTOR DESIGN
LSH	-	LONG SIDE HORIZONTAL
LSL	-	LONG SLOTTED
LSV	-	LONG SIDE VERTICAL
LT	-	LIGHT
LW	-	LIGHTWEIGHT, LONG WAY
M	-	STEEL SHAPE
MACH	-	MACHINE
MAS	-	MASONRY
MATL	-	MATERIAL
MAX	-	MAXIMUM
MB	-	MACHINE BOLT, MASONRY BEAM
MBM	-	METAL BUILDING MANUFACTURER
MBR	-	MEMBER
MC	-	MISCELLANEOUS STEEL CHANNEL, MOMENT CONNECTION
MECH	-	MECHANICAL
MED	-	MEDIUM
MEMB	-	MEMBRANE
MEZZ	-	MEZZANINE
MF	-	MAT FOUNDATION
MFR	-	MANUFACTURER
MID	-	MIDDLE
MIN	-	MINIMUM
MISC	-	MISCELLANEOUS
MO	-	MASONRY OPENING
MTL	-	METAL, MATERIAL
MULL	-	MULLION
MW	-	MASONRY WALL
N	-	NORTH
NCS	-	NON-COMPOSITE SLAB
NGVD	-	NATIONAL GEODETIC VERTICAL DATUM
NIC	-	NOT IN CONTRACT
No.	-	NUMBER
NOM	-	NOMINAL
NS	-	NEAR SIDE
NTS	-	NOT TO SCALE
OA	-	OVERALL
OC	-	ON CENTER
OD	-	OUTSIDE DIAMETER
OF	-	OUTSIDE FACE
OPNG	-	OPENING
OPP	-	OPPOSITE
OPPH	-	OPPOSITE HAND
OSHA	-	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OVS	-	OVERSIZED
OZ	-	OUNCE
P	-	STEEL PIPE, PEDESTAL MARK, PANEL MARK
PAF	-	POWDER ACTUATED FASTENER
PC	-	PRECAST, PILE CAP, PIECE
PCF	-	POUNDS PER CUBIC FOOT
PCI	-	PRESTRESSED CONCRETE INSTITUTE
PE	-	PROFESSIONAL ENGINEER
PED	-	PEDESTAL
PEMB	-	PRE-ENGINEERED METAL BUILDING
PERP	-	PERPENDICULAR
PL	-	PLATE
PLF	-	POUNDS PER LINEAL FOOT
PMF	-	PILE MAT FOUNDATION
PNL	-	PANEL
PP	-	PANEL POINT
PREFAB	-	PREFABRICATED
PRELIM	-	PRELIMINARY
PREP	-	PREPARATION
PSC	-	PRESTRESSED CONCRETE
PSF	-	POUNDS PER SQUARE FOOT
PSI	-	POUNDS PER SQUARE INCH
PT	-	PRESSURE TREATED
PTC	-	POST TENSIONED CONCRETE
PTD	-	PAINTED
PVMT	-	PAVEMENT
PW	-	PARTITION WALL
QA	-	QUALITY ASSURANCE
QC	-	QUALITY CONTROL
QTR	-	QUARTER
QTY	-	QUANTITY
R	-	RISER, REACTION, RADIUS
R/W	-	RIGHT OF WAY
RD	-	ROOF DECK MARK, ROOF DRAIN
REF	-	REFERENCE
REINF	-	REINFORCED, REINFORCING
REM	-	REMAINDER
REQD	-	REQURIED
RET	-	RETURN
REV	-	REVISION
RFG	-	ROOFING
RFS	-	RAISED FLOOR SLAB
RM	-	ROOM
RO	-	ROUGH OPENING
RTU	-	ROOF TOP UNIT
S	-	SOUTH, STANDARD BEAM, SLAB MARK
SBC	-	STANDARD BUILDING CODE
SC	-	SLIP CRITICAL
SCHED	-	SCHEDULE
SDI	-	STEEL DECK INSTITUTE
SE	-	STRUCTURAL ENGINEER
SECT	-	SECTION
SER	-	STRUCTURAL ENGINEER OF RECORD
SF	-	SQUARE FEET
SGL	-	SINGLE
SHT	-	SHEET
SIM	-	SIMILAR
SJ	-	SAWED CONTROL JOINT
SJI	-	STEEL JOIST INSTITUTE
SLBB	-	SHORT LEG BACK TO BACK
SLO	-	SHORT LEG OUTSTANDING
SLOT	-	SLOTTED
SLP	-	SLOPE
SLV	-	SHORT LEG VERTICAL
SOG	-	SLAB ON GRADE
SPA	-	SPACED, SPACING, SPACES
SPEC	-	SPECIFICATION
SQ	-	SQUARE
SS	-	STAINLESS STEEL
SSL	-	SHORT SLOTTED
SSPC	-	STEEL STRUCTURES PAINTING COUNCIL
ST	-	STANDARD FLANGE, STRUCTURAL TEE
STD	-	STANDARD
STIFF	-	STIFFENER
STIR	-	STIRRUP
STL	-	STEEL
STRUCT	-	STRUCTURAL
SUSP	-	SUSPENDED
SW	-	SHORT WAY, SHEAR WALL
SY	-	SQUARE YARD
SYM	-	SYMMETRICAL
SYP	-	SOUTHERN YELLOW PINE
SYS	-	SYSTEM
T	-	TREAD
T&B	-	TOP & BOTTOM
T&G	-	TONGUE & GROOVE
TB	-	TIE BEAM
TEMP	-	TEMPORARY, TEMPERATURE
THK	-	THICK
THRD	-	THREADED
TOC	-	TOP OF CONCRETE
TOCOL	-	TOP OF COLUMN
TOF	-	TOP OF FOOTING
TOGB	-	TOP OF GRADE BEAM
TOHC	-	TOP OF HOLLOWCORE SLAB
TOJ	-	TOP OF JOIST
TOM	-	TOP OF MASONRY
TOMF	-	TOP OF MAT
TOPC	-	TOP OF PILE CAP
TOPD	-	TOP OF PEDESTAL, PIER
TOPG	-	TOPPING
TOPL	-	TOP OF PLATE
TOS	-	TOP OF STEEL
TOSL	-	TOP OF SLAB
TOW	-	TOP OF WALL
TPL	-	TRIPLE
TW	-	TIMBER WALL
TYP	-	TYPICAL
UNO	-	UNLESS NOTED OTHERWISE
VERT	-	VERTICAL
VOL	-	VOLUME
W	-	STEEL WIDE FLANGE SHAPE, WEST
W/	-	WITH
W/O	-	WITHOUT
WC	-	WALL COLUMN
WCJ	-	WALL CONTROL JOINT
WD	-	WOOD
WEJ	-	WALL EXPANSION JOINT
WF	-	WALL FOOTING
WFD	-	WOOD FLOOR DECK
WGT	-	WEIGHT
WL	-	WIND LOAD
WP	-	WORKING POINT, WATERPROOF
WPFG	-	WATERPROOFING
WRD	-	WOOD ROOF DECK
WS	-	WATERSTOP
WT	-	WIDE FLANGE STRUCTURAL TEE, WATER TABLE, WALL TYPE
WWF	-	WELDED WIRE FABRIC
XS	-	EXTRA STRONG
XXS	-	DOUBLE EXTRA STRONG
YD	-	YARD

SYMBOL LEGEND

VIEW REFERENCES

- # / S# — DETAIL NUMBER / SHEET WHERE DRAWN
- # / S# — SECTION NUMBER / SHEET WHERE DRAWN
- MATCHLINE — S# — SHEET TO MATCH

PLAN SYMBOLS

- NORTH ARROW
- COL — COLUMN LINE
- COL — EXISTING COLUMN LINE
- ELEVATION
- SPAN DIRECTION (SLAB, DECK, GRATING, ETC.)
- SLAB DEPRESSION
- FOOTING STEP
- MOMENT CONNECTION
- PARTIAL MOMENT FLANGE CONNECTION
- SHEAR CONNECTION TYPES
- KNEE-BRACE/KICKER BRACE

REFERENCE SYMBOLS & TAGS

- CLOUD INDICATES LIMITS OF REVISION
- # — REVISION NUMBER
- # — PLAN NOTE

SYMBOLS & TAGS FOR SCHEDULED FOUNDATION ELEMENTS: (CF5.0, WF3.0, MF1, DS2)
- "CF#.#" DENOTES COLUMN FOOTING MARK
- "CCF#" DENOTES COMBINED COLUMN FOOTING MARK
- "WF#.#" DENOTES WALL FOOTING MARK
- "MF#" DENOTES MAT FOUNDATION MARK
- "#PC" DENOTES PILE CAP MARK
- "DS#" DENOTES DRILLED SHAFT MARK

SYMBOLS & TAGS FOR SCHEDULED WALL ELEMENTS: (FW1, CW2, MW3, TW4, SW5)
- "FW#" DENOTES FOUNDATION WALL MARK
- "CW#" DENOTES CONCRETE WALL MARK
- "MW#" DENOTES MASONRY WALL MARK
- "TW#" DENOTES TIMBER/WOOD WALL MARK
- "SW#" DENOTES SHEARWALL MARK
- "PW#" DENOTES FIXED PARTITION WALL MARK

SYMBOL FOR SCHEDULED WALL PANELS: (# / X)
- PANEL NUMBER
- PANEL TYPE/MARK

SYMBOLS & TAGS FOR SCHEDULED COLUMN ELEMENTS: (P1, C2, WC3)
- "P#" DENOTES CONCRETE PIER/PEDESTAL MARK
- "C#" DENOTES CONCRETE COLUMN MARK
- "MC#" DENOTES MASONRY COLUMN MARK
- "WC#" DENOTES CONCRETE WALL COLUMN MARK

SYMBOLS & TAGS FOR SCHEDULED SLAB & DECK ELEMENTS: (S1, CS2, NCS3, RFS4, RD5)
- "SOG#" DENOTES CONCRETE SLAB ON GRADE MARK
- "S#" DENOTES CONCRETE SLAB MARK
- "CS#" DENOTES COMPOSITE SLAB MARK
- "NCS#" DENOTES NON-COMPOSITE SLAB MARK
- "RFS#" DENOTES RAISED FLOOR SLAB MARK
- "RD#" DENOTES ROOF DECK MARK
- "WFD#" DENOTES WOOD FLOOR DECK MARK
- "WRD#" DENOTES WOOD ROOF DECK MARK

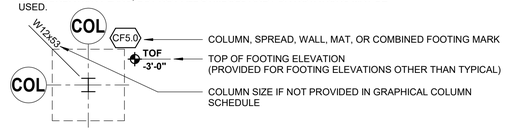
TAGS FOR SCHEDULED FRAMING ELEMENTS (UNO): (B1, TB2, LB3, H4)
- "B#" DENOTES BEAM MARK
- "TB#" DENOTES TIE BEAM MARK
- "LB#" DENOTES LINTEL BEAM MARK
- "H#" DENOTES HANGER MARK

MATERIAL DESIGNATIONS

- CAST-IN-PLACE CONCRETE
- PRECAST CONCRETE OR PRECAST PRESTRESSED CONCRETE
- NON-SHRINK GROUT
- GROUT FILL
- BRICK
- STRUCTURAL STEEL
- COMPACTED EARTH
- CONCRETE MASONRY UNIT
- WOOD OR TIMBER IN SECTION
- LAMINATED WOOD MEMBER
- PLYWOOD

TYPICAL FOUNDATION PLAN ANNOTATION STYLES: (UNO)

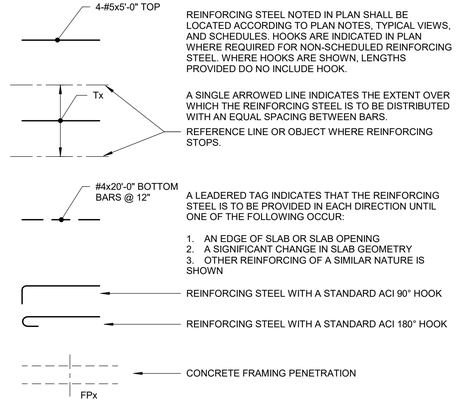
THE FOLLOWING EXAMPLES OF TYPICAL STRUCTURAL ANNOTATION MAY APPEAR ON FOUNDATION PLANS, BUT NOT ALL SYMBOLS AND / OR NOTATIONS MAY BE USED.



- COLUMN, SPREAD, WALL, MAT, OR COMBINED FOOTING MARK
- TOP OF FOOTING ELEVATION (PROVIDED FOR FOOTING ELEVATIONS OTHER THAN TYPICAL)
- COLUMN SIZE IF NOT PROVIDED IN GRAPHICAL COLUMN SCHEDULE

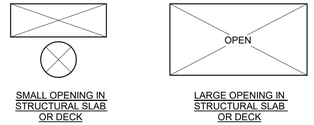
TYPICAL CONCRETE PLAN ANNOTATION STYLES (UNO)

THE FOLLOWING EXAMPLES OF TYPICAL STRUCTURAL ANNOTATIONS MAY APPEAR ON CONCRETE FRAMING PLANS, BUT NOT ALL SYMBOLS AND / OR NOTATIONS MAY BE USED.



- REINFORCING STEEL NOTED IN PLAN SHALL BE LOCATED ACCORDING TO PLAN NOTES, TYPICAL VIEWS, AND SCHEDULES. HOOKS ARE INDICATED IN PLAN WHERE REQUIRED FOR NON-SCHEDULED REINFORCING STEEL. WHERE HOOKS ARE SHOWN, LENGTHS PROVIDED DO NO INCLUDE HOOK.
- A SINGLE ARROWED LINE INDICATES THE EXTENT OVER WHICH THE REINFORCING STEEL IS TO BE DISTRIBUTED WITH AN EQUAL SPACING BETWEEN BARS.
- REFERENCE LINE OR OBJECT WHERE REINFORCING STOPS.
- A LEADERED TAG INDICATES THAT THE REINFORCING STEEL IS TO BE PROVIDED IN EACH DIRECTION UNTIL ONE OF THE FOLLOWING OCCUR:
  1. AN EDGE OF SLAB OR SLAB OPENING
  2. A SIGNIFICANT CHANGE IN SLAB GEOMETRY
  3. OTHER REINFORCING OF A SIMILAR NATURE IS SHOWN
- REINFORCING STEEL WITH A STANDARD ACI 90° HOOK
- REINFORCING STEEL WITH A STANDARD ACI 180° HOOK
- CONCRETE FRAMING PENETRATION

TYPICAL STRUCTURAL SLAB/WALL OR DECK OPENINGS:

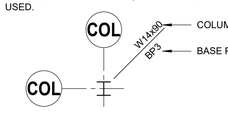


SMALL OPENING IN STRUCTURAL SLAB OR DECK

LARGE OPENING IN STRUCTURAL SLAB OR DECK

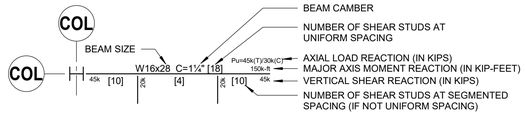
TYPICAL STEEL FRAMING PLAN ANNOTATION STYLES (UNO)

THE FOLLOWING EXAMPLES OF TYPICAL STRUCTURAL ANNOTATIONS MAY APPEAR ON STEEL FRAMING PLANS, BUT NOT ALL SYMBOLS AND / OR NOTATIONS MAY BE USED.



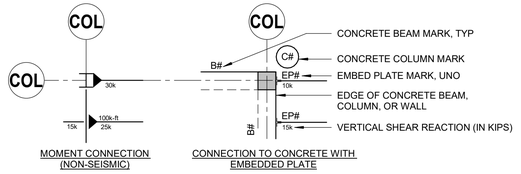
- COLUMN SIZE, COLUMN MARK, IF PROVIDED
- BASE PLATE MARK, IF PROVIDED

THE FOLLOWING STRUCTURAL ANNOTATION MAY APPEAR ON THE STEEL FRAMING PLANS. ALL LOADS INDICATED ARE FACTORED:



- BEAM CAMBER
- NUMBER OF SHEAR STUDS AT UNIFORM SPACING
- AXIAL LOAD REACTION (IN KIPS)
- MAJOR AXIS MOMENT REACTION (IN KIP-FEET)
- VERTICAL SHEAR REACTION (IN KIPS)
- NUMBER OF SHEAR STUDS AT SEGMENTED SPACING (IF NOT UNIFORM SPACING)

COMPOSITE / NON-COMPOSITE STEEL BEAM PLAN ANNOTATION



- CONCRETE BEAM MARK, TYP
- CONCRETE COLUMN MARK
- EMBED PLATE MARK, UNO
- EDGE OF CONCRETE BEAM, COLUMN, OR WALL
- VERTICAL SHEAR REACTION (IN KIPS)

MOMENT CONNECTION (NON-SEISMIC)

CONNECTION TO CONCRETE WITH EMBEDDED PLATE

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MARK A. MILLER, P.E.
FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
CHECKED BY: MAM

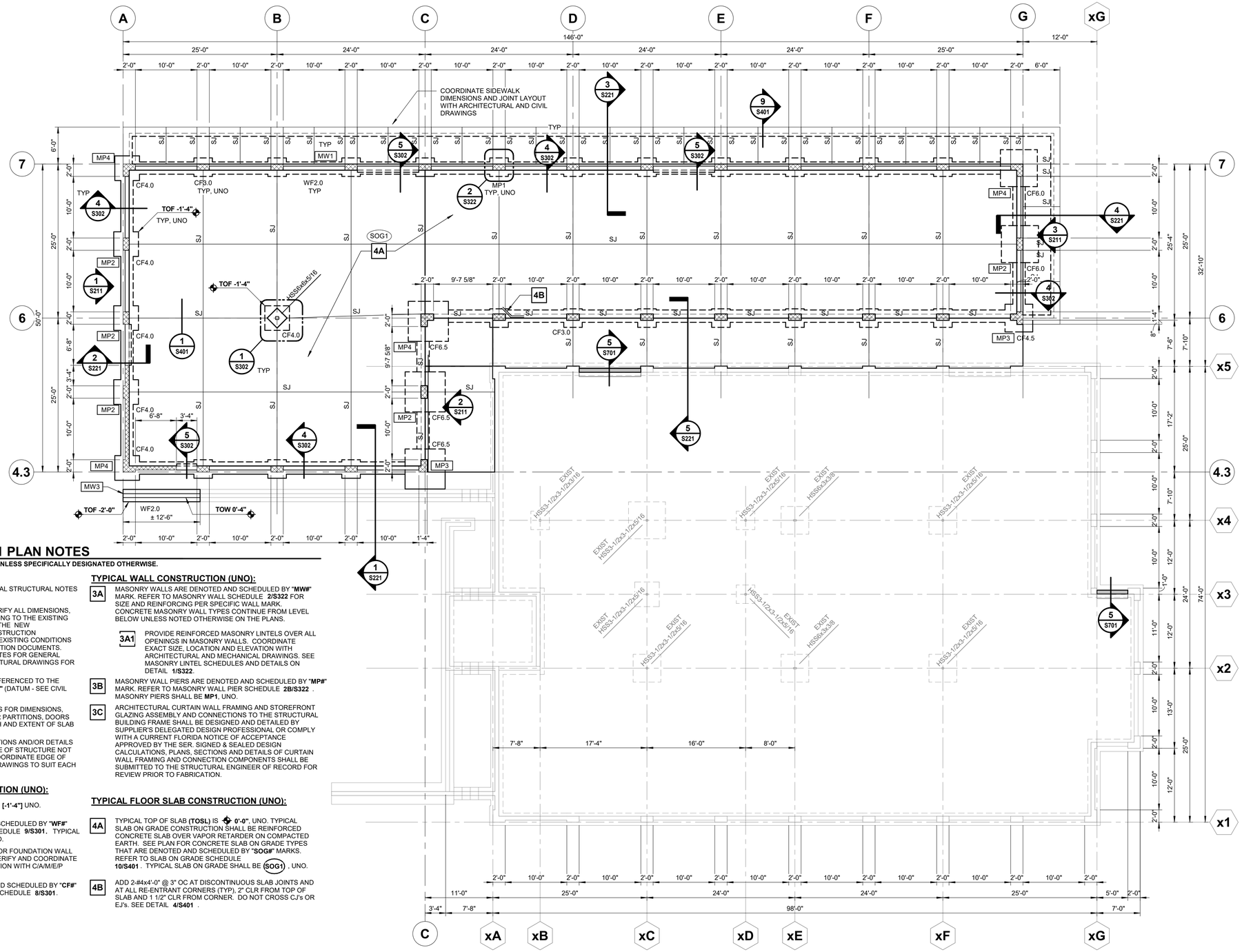
BID DOCUMENTS PHASE

SHEET TITLE

ABBREVIATIONS & SYMBOL LEGEND

SHEET NUMBER

S004



FOUNDATION & LEVEL 01 PLAN NOTES

PLAN NOTES ARE TYPICAL FOR THIS DRAWING UNLESS SPECIFICALLY DESIGNATED OTHERWISE.

GENERAL INFORMATION:

1A REFER TO DRAWING S001 FOR GENERAL STRUCTURAL NOTES AND STRUCTURAL DRAWING INDEX.

1B CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS RELATING TO THE EXISTING STRUCTURE THAT INTERFACES WITH THE NEW CONSTRUCTION SHOWN ON THE CONSTRUCTION DOCUMENTS. NOTIFY THE SER WHEN EXISTING CONDITIONS VARY FROM THE PROJECT CONSTRUCTION DOCUMENTS. REFER TO GENERAL STRUCTURAL NOTES FOR GENERAL REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.

1C ALL LEVELS AND ELEVATIONS ARE REFERENCED TO THE LEVEL 01 TOP OF SLAB **(TOSL)** ⌖ **0'-0"** (DATUM - SEE CIVIL DWGS).

1D REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, DETAILS AND LOCATIONS OF INTERIOR PARTITIONS, DOORS AND WINDOWS, AND TO VERIFY DEPTH AND EXTENT OF SLAB DEPRESSIONS.

1E REFER TO PARTIAL PLANS, WALL SECTIONS AND/OR DETAILS FOR STRUCTURAL FRAMING AND EDGE OF STRUCTURE NOT INDICATED ON PLANS. VERIFY AND COORDINATE EDGE OF STRUCTURE WITH ARCHITECTURAL DRAWINGS TO SUIT EACH TYPE OF ARCHITECTURAL FINISH.

TYPICAL FOUNDATION CONSTRUCTION (UNO):

2A TYPICAL TOP OF FOOTING **(TOF) IS** ⌖ **[-1'-4"]** UNO.

2B WALL FOOTINGS ARE DENOTED AND SCHEDULED BY **"WF#"** MARK. REFER TO WALL FOOTING SCHEDULE **9/S301**. TYPICAL WALL FOOTINGS SHALL BE **WF2.0**, UNO.

2B1 REFER TO DETAIL **4/S301** FOR FOUNDATION WALL FOOTING STEPS, TYPICAL. VERIFY AND COORDINATE STEP LOCATION AND ELEVATION WITH C/A/M/E/P DRAWINGS.

2C COLUMN FOOTINGS ARE DENOTED AND SCHEDULED BY **"CF#"** MARK. REFER TO COLUMN FOOTING SCHEDULE **8/S301**.

TYPICAL WALL CONSTRUCTION (UNO):

3A MASONRY WALLS ARE DENOTED AND SCHEDULED BY **"MW#"** MARK. REFER TO MASONRY WALL SCHEDULE **2/S322** FOR SIZE AND REINFORCING PER SPECIFIC WALL MARK. CONCRETE MASONRY WALL TYPES CONTINUE FROM LEVEL BELOW UNLESS NOTED OTHERWISE ON THE PLANS.

3A1 PROVIDE REINFORCED MASONRY LINTELS OVER ALL OPENINGS IN MASONRY WALLS. COORDINATE EXACT SIZE, LOCATION AND ELEVATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. SEE MASONRY LINTEL SCHEDULES AND DETAILS ON DETAIL **1/S322**.

3B MASONRY WALL PIERS ARE DENOTED AND SCHEDULED BY **"MP#"** MARK. REFER TO MASONRY WALL PIER SCHEDULE **2B/S322** . MASONRY PIERS SHALL BE **MP1**, UNO.

3C ARCHITECTURAL CURTAIN WALL FRAMING AND STOREFRONT GLAZING ASSEMBLY AND CONNECTIONS TO THE STRUCTURAL BUILDING FRAME SHALL BE DESIGNED AND DETAILED BY SUPPLIER'S DELEGATED DESIGN PROFESSIONAL OR COMPLY WITH A CURRENT FLORIDA NOTICE OF ACCEPTANCE APPROVED BY THE SER. SIGNED & SEALED DESIGN CALCULATIONS, PLANS, SECTIONS AND DETAILS OF CURTAIN WALL FRAMING AND CONNECTION COMPONENTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.

TYPICAL FLOOR SLAB CONSTRUCTION (UNO):

4A TYPICAL TOP OF SLAB **(TOSL)** IS ⌖ **0'-0"**, UNO. TYPICAL SLAB ON GRADE CONSTRUCTION SHALL BE REINFORCED CONCRETE SLAB OVER VAPOR RETARDER ON COMPACTED EARTH. SEE PLAN FOR CONCRETE SLAB ON GRADE TYPES THAT ARE DENOTED AND SCHEDULED BY **"SOG#"** MARKS. REFER TO SLAB ON GRADE SCHEDULE **10/S401** . TYPICAL SLAB ON GRADE SHALL BE (SOG1) , UNO.

4B ADD 2-#4x4'-0" @ 3" OC AT DISCONTINUOUS SLAB JOINTS AND AT ALL RE-ENTRANT CORNERS (TYP), 2" CLR FROM TOP OF SLAB AND 1 1/2" CLR FROM CORNER. DO NOT CROSS CJ's OR EJ's. SEE DETAIL **4/S401** .

FOUNDATION & LEVEL 01 PLAN

1/8" = 1'-0"

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MARK A. MILLER, P.E.
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PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION
1		

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
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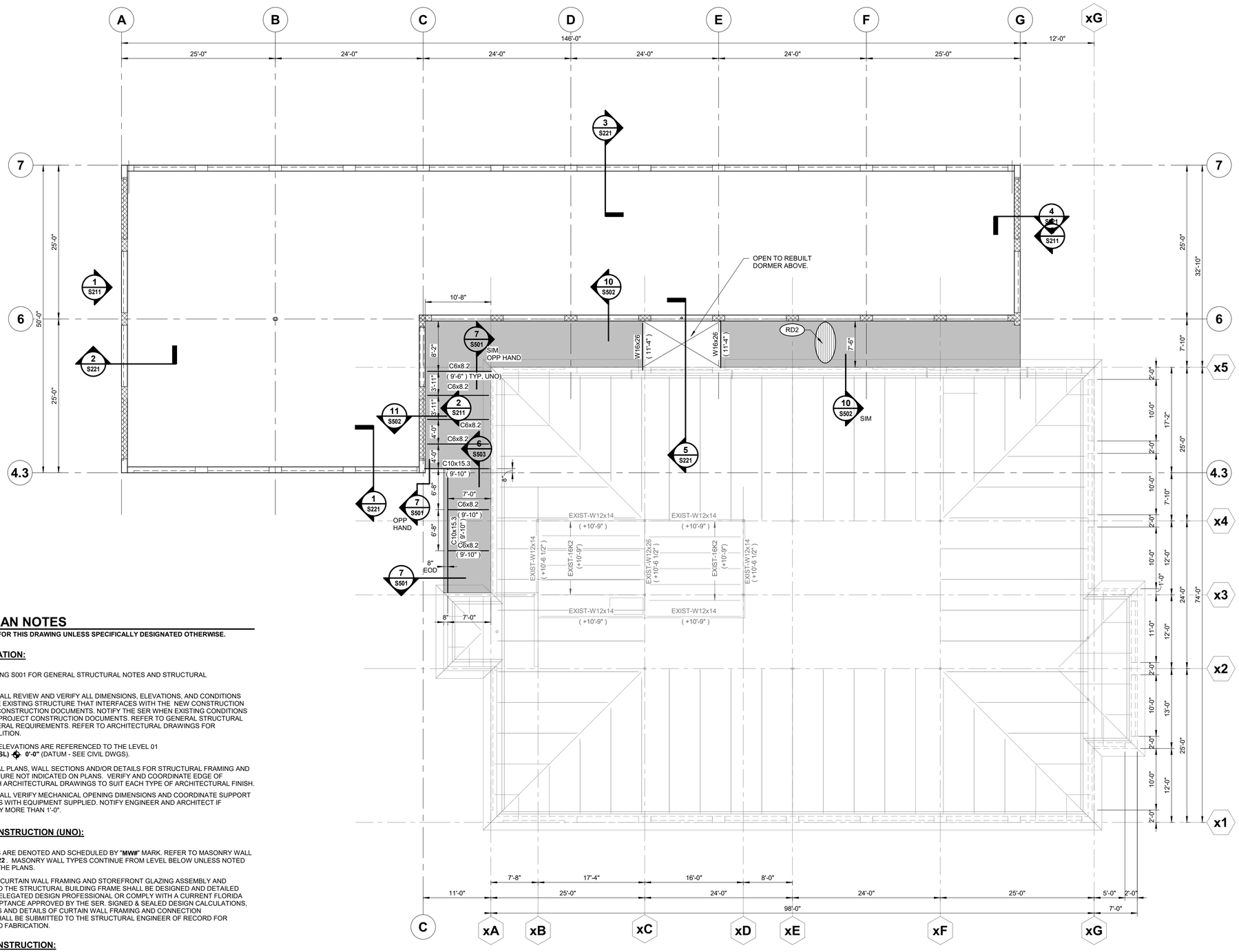
SHEET TITLE

FOUNDATION & LEVEL 01 PLAN

SHEET NUMBER

S110



LOW ROOF FRAMING PLAN

1/8" = 1'-0"

LOW ROOF PLAN NOTES

PLAN NOTES ARE TYPICAL FOR THIS DRAWING UNLESS SPECIFICALLY DESIGNATED OTHERWISE.

GENERAL INFORMATION:

1A REFER TO DRAWING S001 FOR GENERAL STRUCTURAL NOTES AND STRUCTURAL DRAWING INDEX.

1B CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS RELATING TO THE EXISTING STRUCTURE THAT INTERFACES WITH THE NEW CONSTRUCTION SHOWN ON THE CONSTRUCTION DOCUMENTS. NOTIFY THE SER WHEN EXISTING CONDITIONS VARY FROM THE PROJECT CONSTRUCTION DOCUMENTS. REFER TO GENERAL STRUCTURAL NOTES FOR GENERAL REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.

1C ALL LEVELS AND ELEVATIONS ARE REFERENCED TO THE LEVEL 01 TOP OF SLAB **(TOSL) ⌖ 0'-0"** (DATUM - SEE CIVIL DWGS).

1D REFER TO PARTIAL PLANS, WALL SECTIONS AND/OR DETAILS FOR STRUCTURAL FRAMING AND EDGE OF STRUCTURE NOT INDICATED ON PLANS. VERIFY AND COORDINATE EDGE OF STRUCTURE WITH ARCHITECTURAL DRAWINGS TO SUIT EACH TYPE OF ARCHITECTURAL FINISH.

1E CONTRACTOR SHALL VERIFY MECHANICAL OPENING DIMENSIONS AND COORDINATE SUPPORT STEEL LOCATIONS WITH EQUIPMENT SUPPLIED. NOTIFY ENGINEER AND ARCHITECT IF DIMENSIONS VARY MORE THAN 1'-0".

TYPICAL WALL CONSTRUCTION (UNO):

2A MASONRY WALLS ARE DENOTED AND SCHEDULED BY "**MW#**" MARK. REFER TO MASONRY WALL SCHEDULE **2/S322** . MASONRY WALL TYPES CONTINUE FROM LEVEL BELOW UNLESS NOTED OTHERWISE ON THE PLANS.

2B ARCHITECTURAL CURTAIN WALL FRAMING AND STOREFRONT GLAZING ASSEMBLY AND CONNECTIONS TO THE STRUCTURAL BUILDING FRAME SHALL BE DESIGNED AND DETAILED BY SUPPLIER'S DELEGATED DESIGN PROFESSIONAL OR COMPLY WITH A CURRENT FLORIDA NOTICE OF ACCEPTANCE APPROVED BY THE SER. SIGNED & SEALED DESIGN CALCULATIONS, PLANS, SECTIONS AND DETAILS OF CURTAIN WALL FRAMING AND CONNECTION COMPONENTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.

TYPICAL ROOF CONSTRUCTION:

3A TYPICAL ROOF DECK SHALL BE GALVANIZED 3" TYPE N, WIDE RIB STEEL ROOF DECK OR APPROVED EQUAL, CONFORMING TO SDI SPECIFICATIONS. SEE PLAN FOR ROOF DECK TYPES THAT ARE DENOTED AND SCHEDULED BY "**RD#**" MARK. REFER TO ROOF DECK SCHEDULE **5/S501** FOR DECK GAGE AND ATTACHMENT REQUIREMENTS PER SPECIFIC DECK MARK. TYPICAL ROOF DECK SHALL BE (RD2), UNO.

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MARK A. MILLER, P.E.
FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

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PROJECT NO.: 1809
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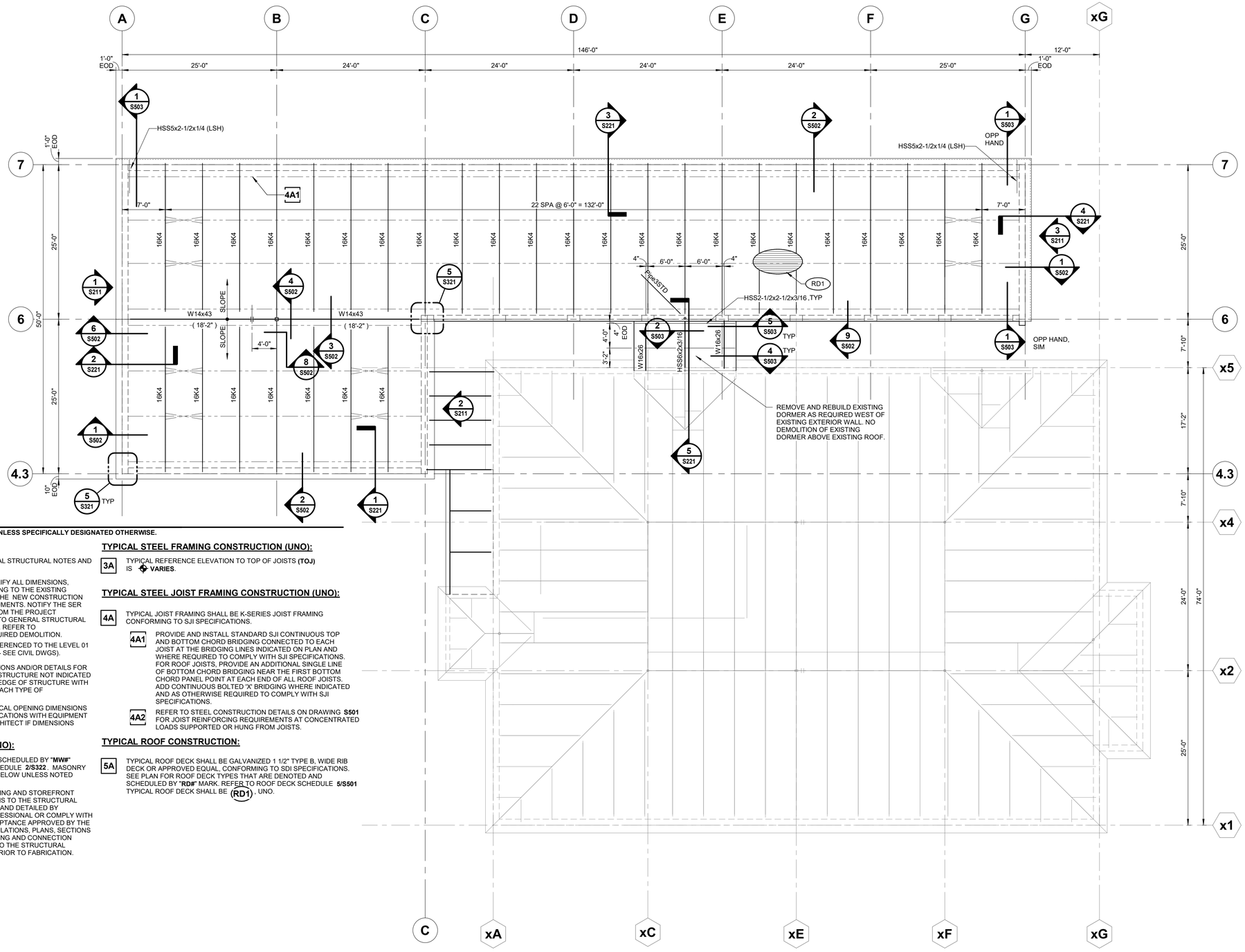
SHEET TITLE

LOW ROOF FRAMING PLAN

SHEET NUMBER

S120



ROOF PLAN NOTES

PLAN NOTES ARE TYPICAL FOR THIS DRAWING UNLESS SPECIFICALLY DESIGNATED OTHERWISE.

GENERAL INFORMATION:

1A REFER TO DRAWING S001 FOR GENERAL STRUCTURAL NOTES AND STRUCTURAL DRAWING INDEX.

1B CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS RELATING TO THE EXISTING STRUCTURE THAT INTERFACES WITH THE NEW CONSTRUCTION SHOWN ON THE CONSTRUCTION DOCUMENTS. NOTIFY THE SER WHEN EXISTING CONDITIONS VARY FROM THE PROJECT CONSTRUCTION DOCUMENTS. REFER TO GENERAL STRUCTURAL NOTES FOR GENERAL REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.

1C ALL LEVELS AND ELEVATIONS ARE REFERENCED TO THE LEVEL 01 TOP OF SLAB **(TOSL)** ◆ **0'-0"** (DATUM - SEE CIVIL DWGS).

1D REFER TO PARTIAL PLANS, WALL SECTIONS AND/OR DETAILS FOR STRUCTURAL FRAMING AND EDGE OF STRUCTURE NOT INDICATED ON PLANS. VERIFY AND COORDINATE EDGE OF STRUCTURE WITH ARCHITECTURAL DRAWINGS TO SUIT EACH TYPE OF ARCHITECTURAL FINISH.

1E CONTRACTOR SHALL VERIFY MECHANICAL OPENING DIMENSIONS AND COORDINATE SUPPORT STEEL LOCATIONS WITH EQUIPMENT SUPPLIED. NOTIFY ENGINEER AND ARCHITECT IF DIMENSIONS VARY MORE THAN 1'-0".

TYPICAL WALL CONSTRUCTION (UNO):

2A MASONRY WALLS ARE DENOTED AND SCHEDULED BY **"MW#"** MARK. REFER TO MASONRY WALL SCHEDULE **2/S322** . MASONRY WALL TYPES CONTINUE FROM LEVEL BELOW UNLESS NOTED OTHERWISE ON THE PLANS.

2B ARCHITECTURAL CURTAIN WALL FRAMING AND STOREFRONT GLAZING ASSEMBLY AND CONNECTIONS TO THE STRUCTURAL BUILDING FRAME SHALL BE DESIGNED AND DETAILED BY SUPPLIER'S DELEGATED DESIGN PROFESSIONAL OR COMPLY WITH A CURRENT FLORIDA NOTICE OF ACCEPTANCE APPROVED BY THE SER. SIGNED & SEALED DESIGN CALCULATIONS, PLANS, SECTIONS AND DETAILS OF CURTAIN WALL FRAMING AND CONNECTION COMPONENTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.

TYPICAL STEEL FRAMING CONSTRUCTION (UNO):

3A TYPICAL REFERENCE ELEVATION TO TOP OF JOISTS **(TOJ)** IS ◆ **VARIES**.

TYPICAL STEEL JOIST FRAMING CONSTRUCTION (UNO):

4A TYPICAL JOIST FRAMING SHALL BE K-SERIES JOIST FRAMING CONFORMING TO SJI SPECIFICATIONS.

4A1 PROVIDE AND INSTALL STANDARD SJI CONTINUOUS TOP AND BOTTOM CHORD BRIDGING CONNECTED TO EACH JOIST AT THE BRIDGING LINES INDICATED ON PLAN AND WHERE REQUIRED TO COMPLY WITH SJI SPECIFICATIONS. FOR ROOF JOISTS, PROVIDE AN ADDITIONAL SINGLE LINE OF BOTTOM CHORD BRIDGING NEAR THE FIRST BOTTOM CHORD PANEL POINT AT EACH END OF ALL ROOF JOISTS. ADD CONTINUOUS BOLTED 'X' BRIDGING WHERE INDICATED AND AS OTHERWISE REQUIRED TO COMPLY WITH SJI SPECIFICATIONS.

4A2 REFER TO STEEL CONSTRUCTION DETAILS ON DRAWING **S501** FOR JOIST REINFORCING REQUIREMENTS AT CONCENTRATED LOADS SUPPORTED OR HUNG FROM JOISTS.

TYPICAL ROOF CONSTRUCTION:

5A TYPICAL ROOF DECK SHALL BE GALVANIZED 1 1/2" TYPE B, WIDE RIB DECK OR APPROVED EQUAL, CONFORMING TO SDI SPECIFICATIONS. SEE PLAN FOR ROOF DECK TYPES THAT ARE DENOTED AND SCHEDULED BY **"RD#"** MARK. REFER TO ROOF DECK SCHEDULE **5/S501** TYPICAL ROOF DECK SHALL BE (RD1) , UNO.

ROOF FRAMING PLAN

1/8" = 1'-0"

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MARK A. MILLER, P.E.
FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
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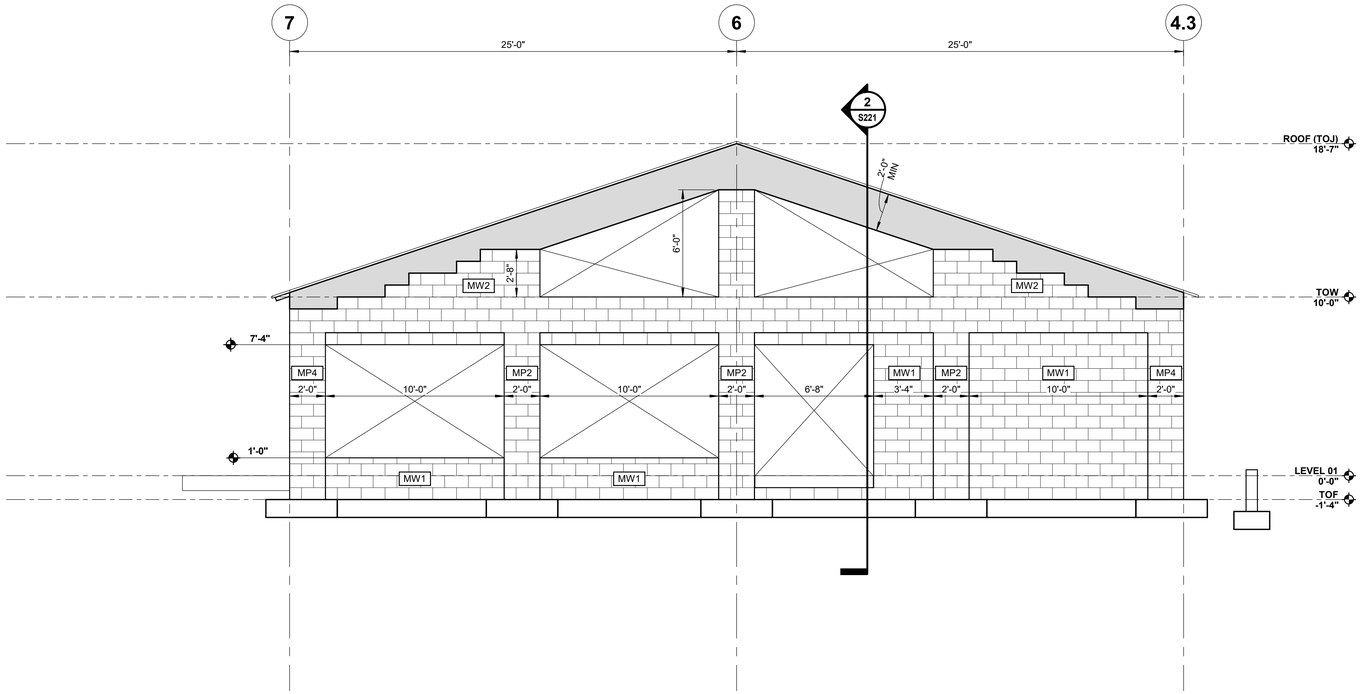
SHEET TITLE

ROOF FRAMING PLAN

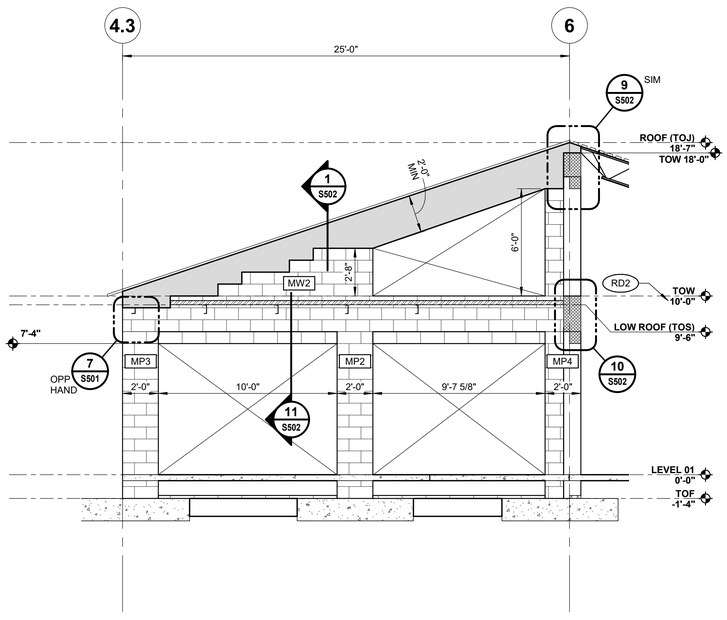
SHEET NUMBER

S130



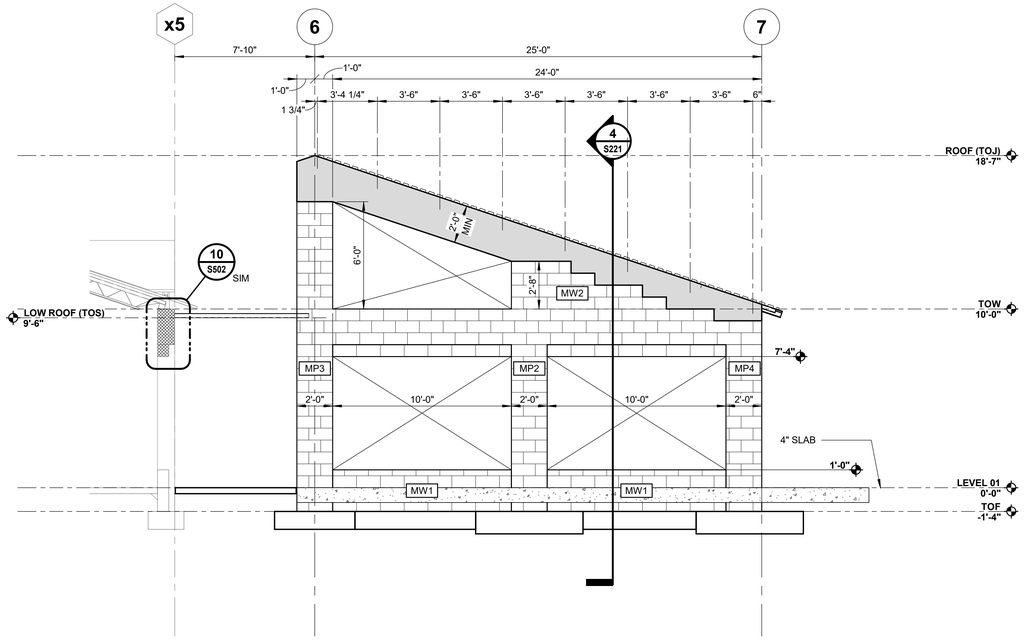
1 SOUTH BUILDING ELEVATION @ COLUMN LINE A

1/4" = 1'-0"



2 NORTH BUILDING ELEVATION @ COLUMN LINE C

1/4" = 1'-0"



3 NORTH BUILDING ELEVATION @ COLUMN LINE G

1/4" = 1'-0"

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RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
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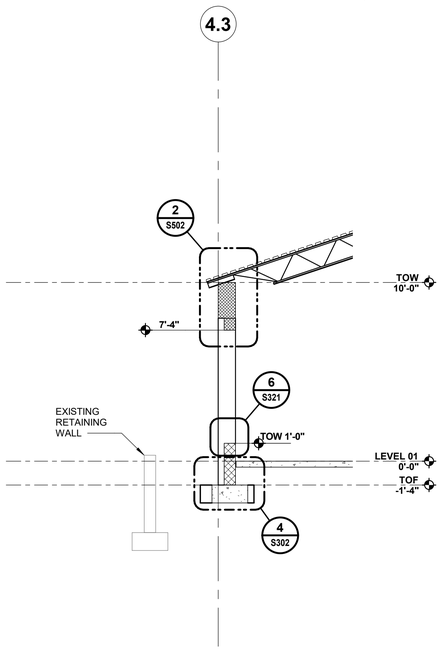
BID DOCUMENTS PHASE

SHEET TITLE

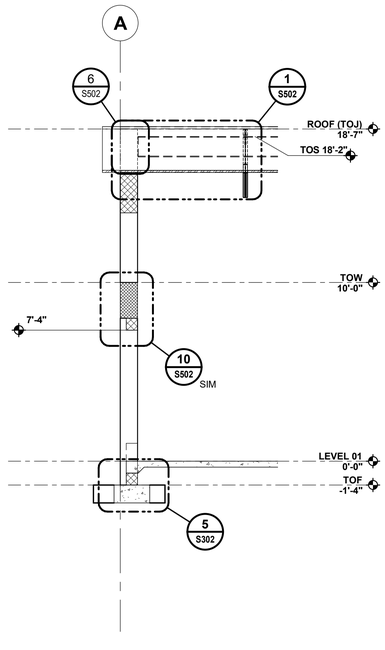
BUILDING ELEVATIONS

SHEET NUMBER

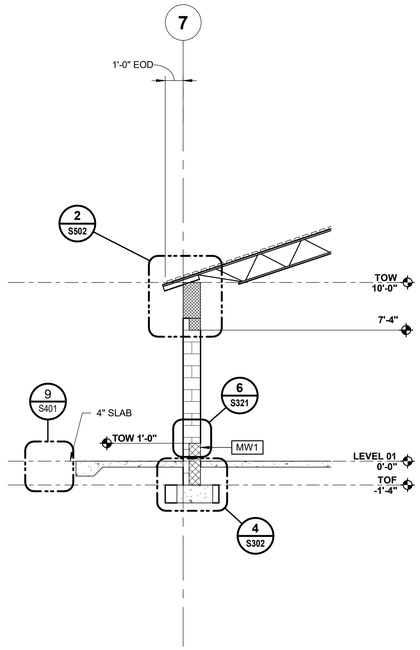
S211



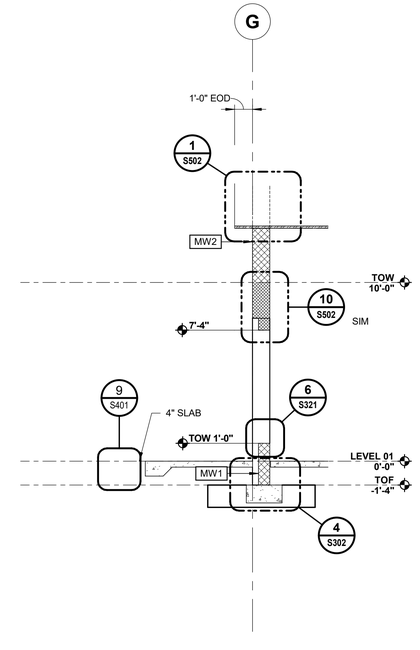
1 SECTION
S221 | 1/4" = 1'-0"



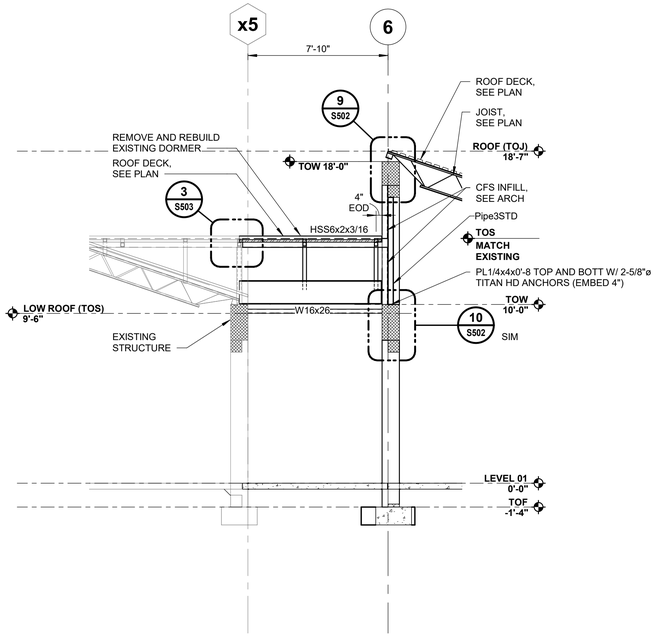
2 SECTION
S221 | 1/4" = 1'-0"



3 SECTION
S221 | 1/4" = 1'-0"



4 SECTION
S221 | 1/4" = 1'-0"



5 SECTION
S221 | 1/4" = 1'-0"

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FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
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CHECKED BY: MAM

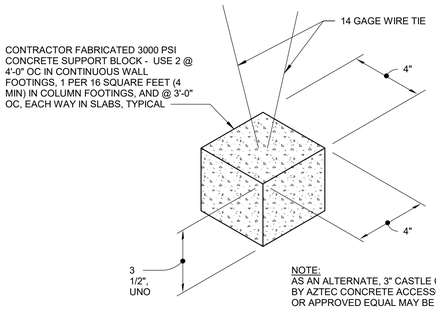
BID DOCUMENTS PHASE

SHEET TITLE

WALL SECTIONS

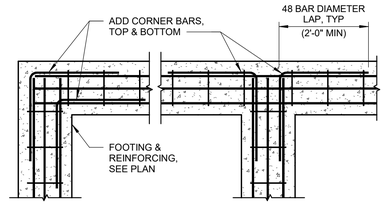
SHEET NUMBER

S221



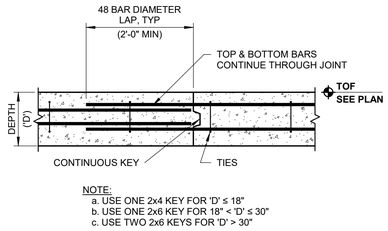
1 CONCRETE SUPPORT BLOCK DETAIL

S301 | NO SCALE



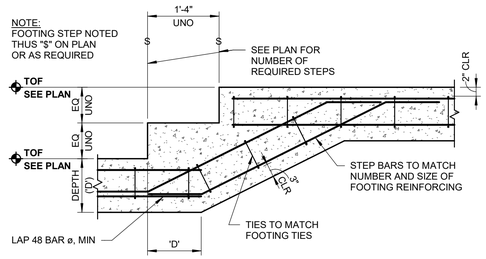
CONTINUOUS FOOTING 2 CORNER BARS PLAN DETAIL

S301 | NO SCALE



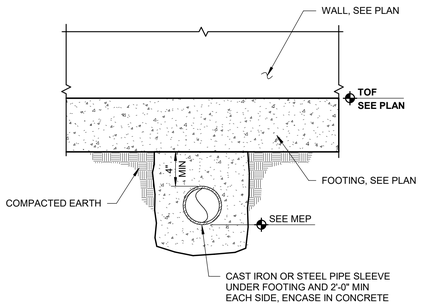
WALL FOOTING 3 CONSTRUCTION JOINT DETAIL

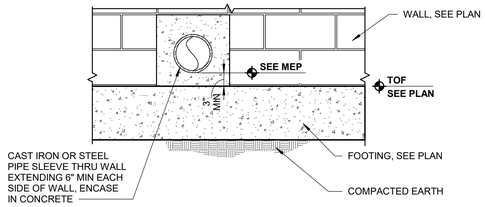
S301 | NO SCALE

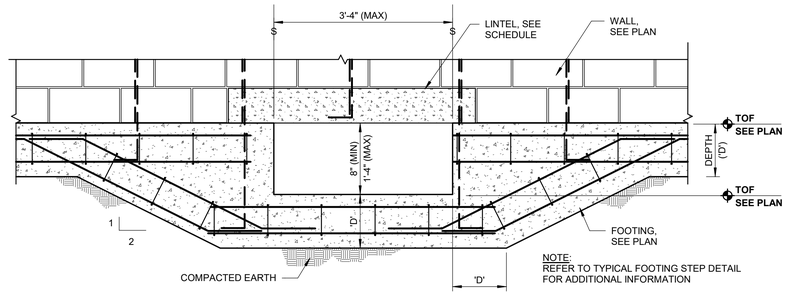


4 TYPICAL WALL FOOTING STEP DETAIL

S301 | NO SCALE

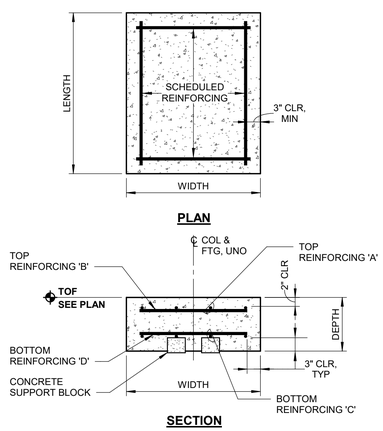






TYPICAL PIPE SLEEVE 5 BENEATH FOOTING DETAIL

S301 | NO SCALE



NOTES:

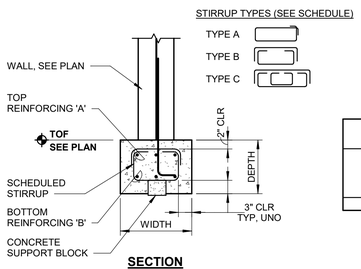
1. COLUMN IS CENTERED ON FOOTING, UNO.
2. REFER TO COLUMN DETAILS FOR ADDITIONAL INFORMATION.
3. REFER TO CONCRETE SUPPORT BLOCK DETAIL.

TYPICAL PIPE SLEEVE PENETRATION 6 THRU CMU FOUNDATION WALL DETAIL

S301 | NO SCALE

7 TYPICAL MECHANICAL OPENING THRU WALL FOOTING DETAIL

S301 | NO SCALE



NOTES:

1. WALL IS CENTERED ON FOOTING, UNO.
2. REFER TO CONCRETE SUPPORT BLOCK DETAIL.
3. LAP ALL CONTINUOUS REINFORCING 48 BAR DIAMETERS (2'-0" MIN).
4. EXTEND WALL FOOTING REINFORCING THROUGH COLUMN FOOTING OR 48 BAR DIAMETERS (2'-0" MIN) INTO COLUMN FOOTING.
5. PROVIDE REINFORCING DOWELS OF SIZE AND SPACING SPECIFIED BY WALL AND/OR SLAB CONSTRUCTION. DOWELS SHALL BE POSITIONED IN THE PROPER LOCATION PRIOR TO CONCRETE PLACEMENT.

COLUMN FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING				REMARKS
				TOP		BOTTOM		
	LENGTH	WIDTH	DEPTH	BAR 'A'	BAR 'B'	BAR 'C'	BAR 'D'	
CF3.0	3'-0"	3'-0"	1'-0"	4-#4	4-#4	4-#4	4-#4	
CF4.0	4'-0"	4'-0"	1'-0"	4-#5	4-#5	4-#5	4-#5	
CF4.5	4'-6"	4'-6"	1'-0"	4-#5	4-#5	5-#5	5-#5	
CF6.0	6'-0"	6'-0"	1'-3"	7-#5	7-#5	7-#5	7-#5	
CF6.5	6'-6"	6'-6"	1'-3"	7-#5	7-#5	7-#5	7-#5	

WALL FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCING		STIRRUPS			REMARKS
	WIDTH	DEPTH	TOP BAR 'A'	BOTTOM BAR 'B'	TYPE	SIZE	SPACING	
WF2.0	2'-0"	12"	3-#4	3-#4	B	#3	18"	

8 COLUMN FOOTING SCHEDULE & DETAIL

S301 | NO SCALE

9 WALL FOOTING SCHEDULE & DETAIL

S301 | 3/4" = 1'-0"

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BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

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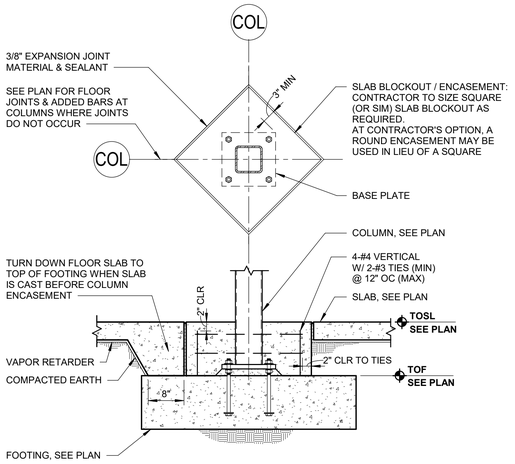
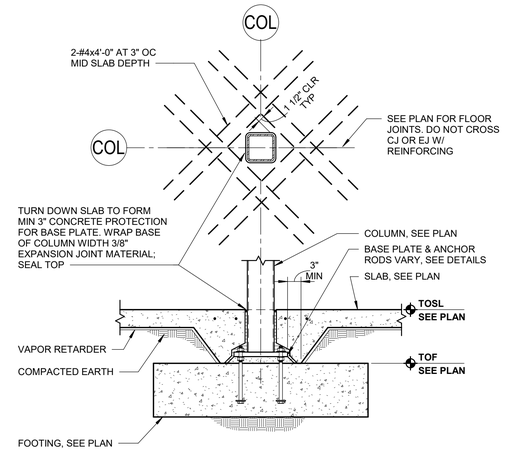
FOUNDATION SCHEDULES & DETAILS

SHEET NUMBER

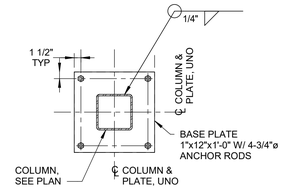
S301



1 DETAIL
S302 | NO SCALE



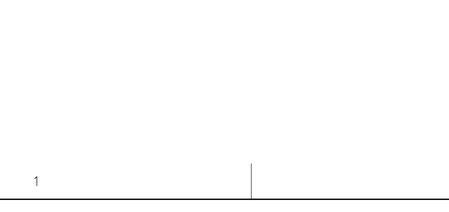
2 DETAIL
S302 | NO SCALE



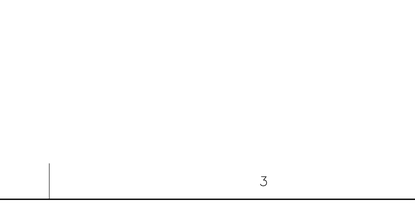
3 HSS COLUMN BASE PLATE SCHEDULE & DETAILS
S302 | NO SCALE

HSS COLUMN BASE PLATES

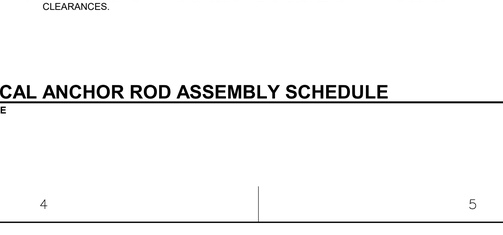
NOTE:
FOR ADDITIONAL ANCHOR ROD AND BASE PLATE INFORMATION REFER TO ANCHOR ROD SCHEDULE AND DETAIL.



4 DETAIL
S302 | NO SCALE



5 DETAIL
S302 | NO SCALE



ANCHOR ROD SCHEDULE

ANCHOR ROD SIZE	MIN EDGE DISTANCE	BASE PL HOLE DIA	MIN WASHER SIZE	MIN WASHER THICK	WELD 'W' SIZE	MIN PROJ ABOVE BASE PL	NOMINAL GROUT THICKNESS	MINIMUM EMBEDMENT (UNO)	BOTTOM WASHER REQUIRED
3/4"ø	1 1/2"	1 5/16"	2"	1/4"	1/8"	3"	2"	9"	

ANCHOR ROD ASSEMBLY NOTES:

1. ANCHOR ROD SHALL BE HEAVY HEX ASTM 1554 GRADE 55, TYPE S1 (UNO).
2. SEE COLUMN SCHEDULE AND BASE PLATE DETAILS FOR BASE PLATE AND ANCHOR ROD LAYOUT PATTERNS, SIZES AND EMBEDMENTS.
3. REFER TO ANCHOR ROD SCHEDULE FOR ROD PROJECTIONS, WASHERS AND BASE PLATE HOLE SIZES.
4. WHERE WELD 'W' IS NOT SCHEDULED, TACK WELD AS REQUIRED FOR ERECTION.
5. USE OF EITHER SQUARE OR ROUND WASHERS IS ACCEPTABLE.
6. DEEPEN FOUNDATION AT ANCHOR BOLTS WHERE REQUIRED TO MAINTAIN SPECIFIED CLEARANCES.

6 TYPICAL ANCHOR ROD ASSEMBLY SCHEDULE
S302 | NO SCALE

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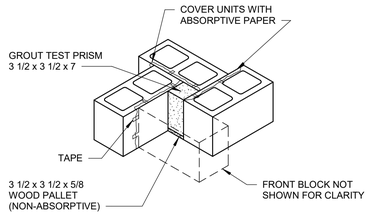
FOUNDATION DETAILS

SHEET NUMBER

S302

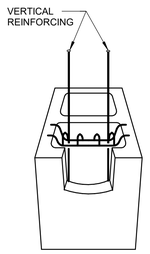


NOTES:

1. TEST PER ASTM C1019.
2. SEE SPECIFICATIONS FOR FREQUENCY REQUIREMENTS.

1 CASTING OF GROUT TESTING PRISMS DETAIL

S321 | NO SCALE



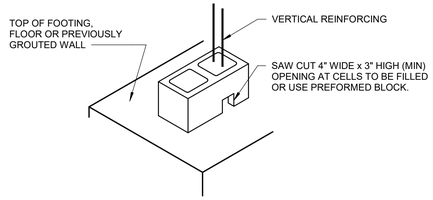
USE SPACERS OR WIRE TIES TO HOLD REINFORCING IN PROPER POSITION. SPACE AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS OR 10'-0".

NOTES:

1. SEE PLAN AND / OR SCHEDULE FOR REINFORCING SIZE, AND SPACING.
2. BED WEBS AS WELL AS FACE SHELLS ADJACENT TO CELLS TO BE FILLED TO PREVENT GROUT LEAKAGE TO ADJACENT CELLS UNLESS ADJACENT CELLS ARE ALSO TO BE FILLED.
3. SEE SPECIFICATIONS AND GENERAL NOTES FOR GROUT REQUIREMENTS.
4. ALL REINFORCING SHALL BE TIED OR SUPPORTED SECURELY IN POSITION. INSPECT REINFORCING AND CELL CONTINUITY PRIOR TO CLOSING CLEAN-OUTS.
5. GROUTING SHALL NOT COMMENCE UNTIL 8 HOURS HAS ELAPSED SINCE THE SECTION OF THE WALL TO BE GROUTED HAS BEEN COMPLETED TO ITS FULL HEIGHT.
6. A GROUT PUMP SHALL BE USED TO PLACE GROUT FOR HE HIGH LIFT METHOD.
7. PLACE THE FIRST LIFT OF GROUT FOR A SECTION OF WALL TO MAXIMUM HEIGHT OF 5'-4", VIBRATING THE GROUT IN EACH FILLED CELL WITHIN 10 MINUTES OF PLACEMENT.
8. PLACE THE NEXT SUCCESSIVE LIFT NOT LESS THAN 30 MINUTES NOR MORE THAN 60 MINUTES LATER AND VIBRATE 12 INCHES INTO THE PREVIOUSLY PLACED LIFT.
9. CONTINUE PLACING SUCCESSIVE LIFTS UNTIL GROUTING OF SECTION OF WALL IS COMPLETED TO THE TOP.
10. SEE CMU WALL REINFORCING SCHEDULE FOR REQUIRED SPLICE LENGTHS.
11. SEE DETAIL A.
12. MAXIMUM GROUT POUR HEIGHT = 12'-8" COMPOSED OF GROUT LIFTS NOT EXCEEDING 5'-4".

2 HIGH LIFT GROUTING PROCEDURES AND DETAILS

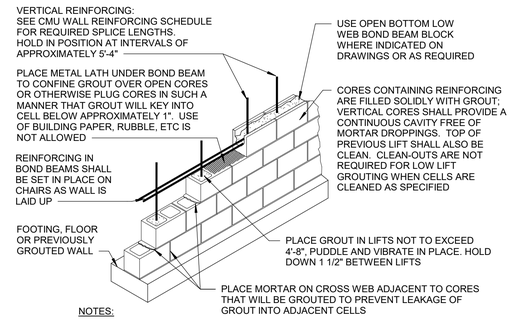
S321 | NO SCALE



NOTES:

1. CLEAN OUT MORTAR DROPPINGS AT MIDDAY AND AT THE END OF EACH WORKING DAY. PLACE AND POSITION CELL REINFORCING AFTER FINAL CLEANOUT.
2. PLACE REINFORCING IN CELLS AFTER LAYING MASONRY.
3. SEE GENERAL NOTES AND SPECIFICATIONS FOR INSPECTION & ADDITIONAL REQUIREMENTS.

DETAIL A

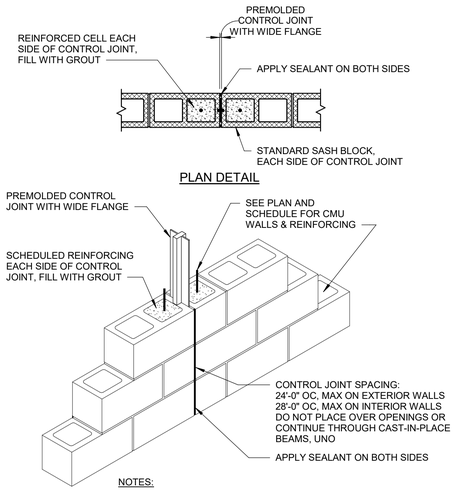


NOTES:

1. CONSTRUCT WALL IN LIFTS, GROUTING CELLS AND HORIZONTAL BOND BEAMS PRIOR TO LAYING BLOCK ABOVE.
2. BOND BEAMS MAY NOT OCCUR IN ALL LIFTS. REFER TO PLANS AND WALL SECTIONS FOR BOND BEAM LOCATIONS.

3 LOW LIFT GROUTING PROCEDURES (5'-4" MAXIMUM LIFT) & DETAIL

S321 | NO SCALE



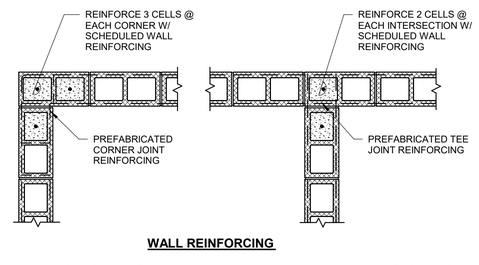
PLAN DETAIL

NOTES:

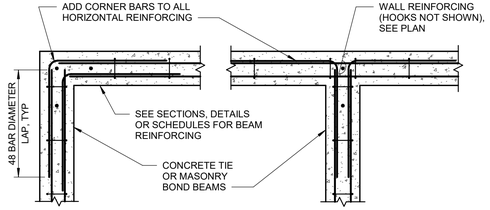
1. SEE PLAN FOR LOCATIONS. NOTE MAXIMUM SPACING LISTED ABOVE.
2. INTERRUPT HORIZONTAL JOINT REINFORCING & CMU BOND BEAM REINFORCING AT CONTROL JOINT SPACING.

4 WALL CONTROL JOINT (WCJ) CONSTRUCTION DETAIL

S321 | NO SCALE



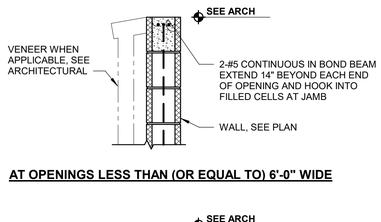
WALL REINFORCING



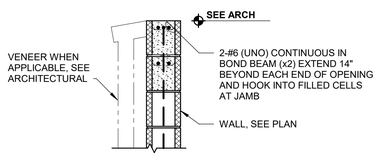
BEAM REINFORCING

5 CORNER INTERSECTION PLAN DETAILS

S321 | NO SCALE



AT OPENINGS LESS THAN (OR EQUAL TO) 6'-0" WIDE



AT OPENINGS BETWEEN 6'-0" AND 10'-0" WIDE

6 TYPICAL WINDOW SILL DETAILS

S321 | NO SCALE

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SHEET TITLE

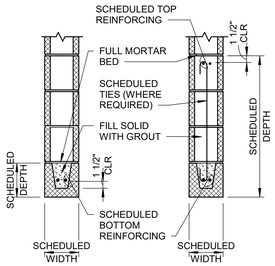
MASONRY SECTIONS AND DETAILS

SHEET NUMBER

S321

REINFORCED CMU LINTEL SCHEDULE

MASONRY OPENING WIDTH	NOMINAL CMU WIDTH						MINIMUM END BEARING	STIRRUP SIZE & SPACING
	6"		8"		12"			
	NOMINAL DEPTH	REINFORCING	NOMINAL DEPTH	REINFORCING	NOMINAL DEPTH	REINFORCING		
UP TO 4'-0"	8"	1-#4 B	8"	2-#4 B	8"	2-#4 B	8"	
UP TO 6'-0"	16"	1-#5 B & T	16"	2-#4 B & T	16"	2-#4 B & T	8"	
UP TO 8'-0"	16"	1-#5 B & T	16"	2-#4 B & T	16"	2-#4 B & T	8"	
UP TO 10'-0"			24"	2-#5 B & T	24"	2-#6 B & T	16"	
UP TO 12'-0"			24"	2-#5 B & T	24"	2-#6 B & T	16"	#3@8"OC
UP TO 14'-0"			32"	2-#5 B & T	32"	2-#6 B & T	16"	#3@12"OC
UP TO 16'-0"			32"	2-#5 B & T	32"	2-#6 B & T	16"	#3@12"OC



DETAILS

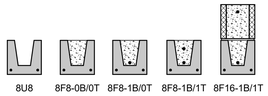
REINFORCED CMU LINTEL SCHEDULE NOTES:

1. MASONRY DIMENSIONS INDICATED ARE NOMINAL RATHER THAN ACTUAL DIMENSIONS.
2. MINIMUM MASONRY STRENGTH f'm SHALL BE 1500 PSI (UNLESS NOTED OTHERWISE).
3. GROUT FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS OR MEET ASTM C476.
4. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATIONS OF OPENINGS IN MASONRY WALLS REQUIRING LINTELS.
5. TOP AND BOTTOM REINFORCING SHALL EXTEND A MINIMUM OF 14" OVER SUPPORT AT EACH END.
6. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS SHALL BE USED.
7. EXTEND VERTICAL REINFORCING THROUGH LINTEL AT BEARINGS WHERE END VERTICAL CELL IS REINFORCED.
8. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL AND HOOK OR 48 BAR DIAMETERS, WHICHEVER IS LESS.
9. HORIZONTAL JOINT REINFORCING:
   A. PROVIDE STANDARD LADDER REINFORCING AT 16" OC IN LINTEL SPANS UP TO 6'.
   B. PROVIDE STANDARD LADDER REINFORCING AT 8" OC IN LINTEL SPANS UP TO 12'.
   C. PROVIDE HEAVY (W2.8) LADDER REINFORCING AT 8" OC IN LINTEL SPANS OVER 12'.
10. FOR CONTINUOUS LINTEL REINFORCING WHERE SPLICES ARE REQUIRED, SPLICE TOP BARS AT MID-SPAN OF OPENINGS AND BOTTOM BARS AT PIERS OR SUPPORT LOCATIONS.
11. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR COLUMN AT EACH END.
12. TYPICAL LINTELS SHOWN ARE TO BE USED WHERE NO SPECIFIC LINTEL OR CAST-IN-PLACE CONCRETE BEAM HAS BEEN DETAILED AND ARE FOR SUPPORT OF WALL LOADS ONLY (UNO).
13. WHEN OPENING IS SHOWN ADJACENT TO CAST IN PLACE COLUMN, USE CAST IN PLACE CONCRETE LINTEL DETAILS AND SCHEDULE.

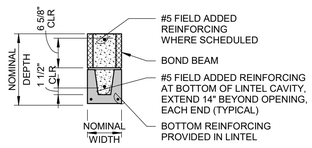
REINFORCED CONCRETE MASONRY UNIT (CMU) LINTELS

PRECAST CONCRETE LINTEL SCHEDULE

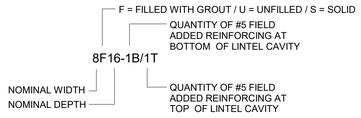
MASONRY OPENING WIDTH	NOMINAL CMU WIDTH			MINIMUM END BEARING	STIRRUP SIZE & SPACING
	6"	8"	12"		
UP TO 2'-0"	6U8	8U8	12U8	8"	
UP TO 4'-0"	6F8-1B/0T	8F8-1B/0T	12F8-2B/0T	8"	
UP TO 6'-0"	6F16-1B/1T	8F16-1B/1T	12F8-2B/0T	8"	
UP TO 8'-0"	6F16-1B/1T	8F16-1B/1T	12F16-2B/2T	8"	
UP TO 10'-0"	6F24-1B/1T	8F24-1B/1T	12F24-2B/2T	16"	
UP TO 12'-0"		8F24-1B/1T	12F24-2B/2T	16"	#3@8"OC
UP TO 14'-0"		8F24-1B/1T	12F24-2B/2T	16"	#3@12"OC
UP TO 16'-0"		8F32-1B/1T	12F32-2B/2T	16"	#3@12"OC



EXAMPLES FOR 8" CMU

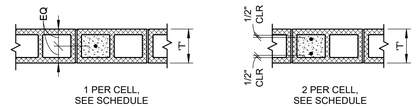


DETAIL



NOTE:
LINTELS SHALL BE "CAST-CRETE" OR APPROVED EQUAL.

PRECAST CONCRETE LINTELS



PLAN VIEW

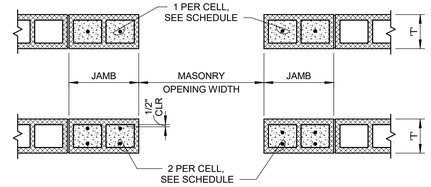
NOTES:

1. VERTICAL REINFORCING SHALL RUN FROM FOOTING TO 4" CLEAR FROM TOP OF UPPERMOST SUPPORTED BEAM (ROOF BEAM OR OPENING LINTEL). VERTICALS MAY BE LAP SPLICED AS REQUIRED FOR EASE OF BLOCK INSTALLATION. PROVIDE HOOKED DOWEL FROM FOOTING OR SUPPORT BEAM AT EACH FILLED BLOCK CELL. PROVIDE HOOK AT TOP OF VERTICAL. EACH POUR OF GROUT SHALL BE STOPPED AT LEAST 1 1/2" BELOW THE TOP OF THE LAST COURSE OF BLOCK LAID (EXCEPT AT PRECAST LINTELS).
2. SEE TYPICAL DETAILS AND CODE REQUIREMENTS FOR CLEAN-OUTS.
3. SEE SEPARATE DETAILS / SCHEDULES FOR JAMB AND PIER REINFORCING.
4. SEE DIAGRAMMATIC MASONRY WALL ELEVATIONS FOR ADDITIONAL INFORMATION.

MASONRY WALL SCHEDULE

MARK	WALL THICKNESS 'T'	VERTICAL REINFORCING			REMARKS
		SIZE	MAXIMUM SPACING	SPLICE LENGTH	
MW1	7 5/8"	#6	32"	36"	
MW2	11 5/8"	#6	32"	36"	
MW3	7 5/8"	#5	48"	30"	

TYPICAL WALL REINFORCING WITH 1 BAR OR 2 BARS PER FILLED CELL

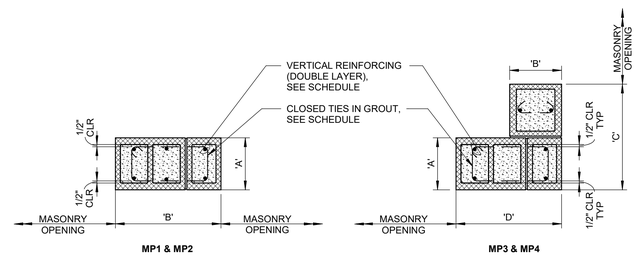


PLAN VIEW

JAMB REINFORCING SCHEDULE

MASONRY OPENING WIDTH	NUMBER OF REINFORCED CELLS PER JAMB			SPLICE LENGTH
	WALL THICKNESS 'T'	OPENING IN EXTERIOR WALL	OPENING IN INTERIOR WALL	
UP TO 3'-4"	8" OR 12"	1-#6 PER CELL IN 2 CELLS	1-#6 PER CELL IN 1 CELL	36"
UP TO 6'-8"	8" OR 12"	1-#6 PER CELL IN 3 CELLS	1-#6 PER CELL IN 2 CELLS	36"

JAMB REINFORCING SCHEDULE & DETAIL



PLAN VIEW

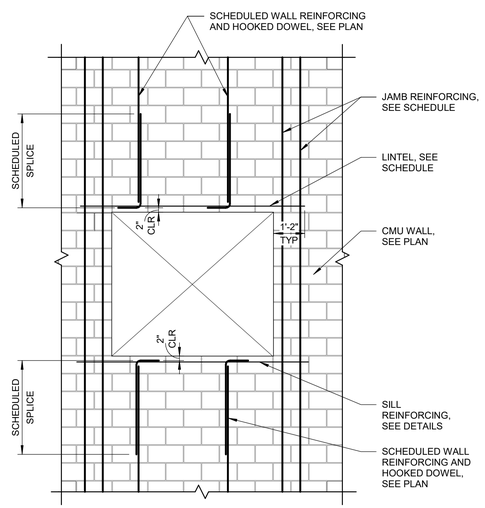
MASONRY PIER SCHEDULE

MARK	DIMENSIONS				REINFORCING					REMARKS
	'A'	'B'	'C'	'D'	VERTICALS			TIES		
					No. BARS	SIZE	SPLICE LENGTH	SIZE	SPACING	
MP1	11 5/8"	1'-11 5/8"			6	#5	30	#2	8"	
MP2	11 5/8"	1'-11 5/8"			6	#7	42	#2	8"	
MP3	11 5/8"	11 5/8"	1'-11 5/8"	1'-4 5/8"	6	#7	42	#2	8"	
MP4	11 5/8"	11 5/8"	1'-11 5/8"	1'-11 5/8"	6	#7	42	#2	8"	

1 LINTEL SCHEDULES & DETAILS
S322 | NO SCALE

2 MASONRY WALL REINFORCING SCHEDULES & DETAILS
S322 | NO SCALE

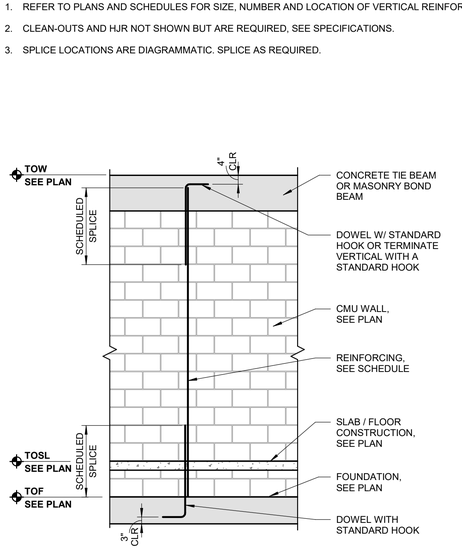
3 DIAGRAMMATIC MASONRY WALL CONSTRUCTION ELEVATIONS
S322 | NO SCALE



TYPICAL WINDOW OPENING IN CMU WALL (DOOR SIMILAR)

NOTES:

1. REFER TO PLANS AND SCHEDULES FOR SIZE, NUMBER AND LOCATION OF VERTICAL REINFORCING.
2. CLEAN-OUTS AND HJR NOT SHOWN BUT ARE REQUIRED, SEE SPECIFICATIONS.
3. SPLICE LOCATIONS ARE DIAGRAMMATIC. SPLICE AS REQUIRED.



AT SINGLE STORY WALL

TYPICAL CMU WALL VERTICAL REINFORCING

AKEL ☐ LOGAN ☐ SHAFER
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MARK A. MILLER, P.E.
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PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION
1		

ISSUE: JAN 22, 2020
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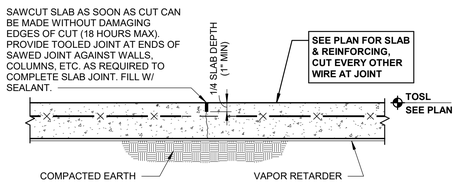
SHEET TITLE

MASONRY SCHEDULES AND DETAILS

SHEET NUMBER

S322



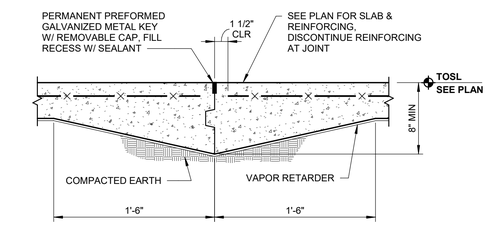
NOTES:

1. WHERE POSSIBLE, PLACE SAWED CONTROL JOINT (SJ) AT COLUMN CENTERLINES, UNO.
2. REFER TO ARCHITECTURAL/CIVIL SPECIFICATIONS FOR ALL EXTERIOR SLABS, ETC.
3. COORDINATE LOCATIONS W/ ARCHITECTURAL REQUIREMENTS.
4. MAXIMUM SPACING - 20'-0" OC, UNO.

NOTED AS 'SJ'

1 TYPICAL SLAB SAWED CONTROL JOINT DETAIL

S401 | NO SCALE

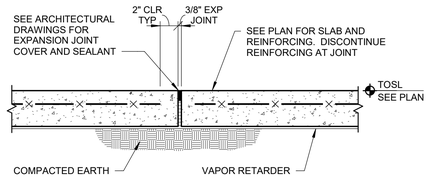


NOTE:
SPACING OF CONSTRUCTION JOINTS (CJ) SHOULD BE 100'-0", MAX UNLESS ALTERNATE LOCATIONS ARE APPROVED BY THE ENGINEER.

NOTED AS 'CJ'

2 TYPICAL SLAB CONSTRUCTION JOINT DETAIL

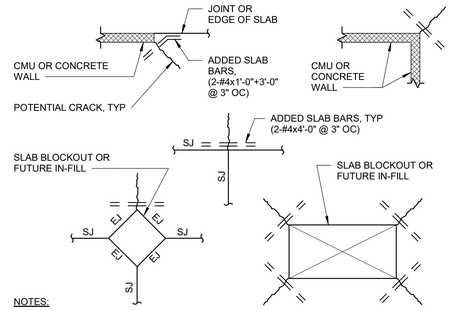
S401 | NO SCALE



NOTED AS 'EJ'

3 TYPICAL SLAB EXPANSION JOINT DETAIL

S401 | NO SCALE

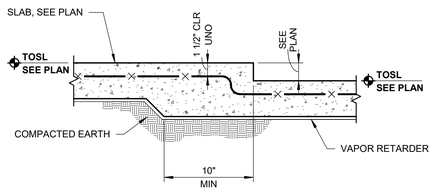


NOTES:

1. A RE-ENTRANT CORNER IS ANY SLAB CORNER WHICH MIGHT INDUCE A CRACK IN THE SLAB.
2. ADDED SLAB BAR REINFORCING IS REQUIRED AT ALL RE-ENTRANT CORNER LOCATIONS.
3. NOT ALL LOCATIONS ARE SHOWN ON PLANS.
4. PLACE ADDED SLAB BARS BENEATH AND TIED TO WWF, 2" FROM TOP OF SLAB, MAX & 1 1/2" FROM CORNERS.

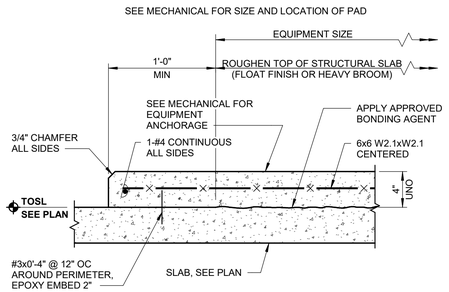
4 TYPICAL SLAB RE-ENTRANT CORNER REINFORCING PLANS

S401 | NO SCALE



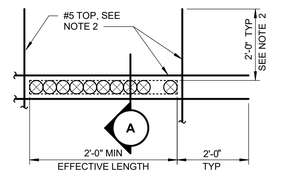
5 TYPICAL SLAB STEP DETAIL

S401 | NO SCALE

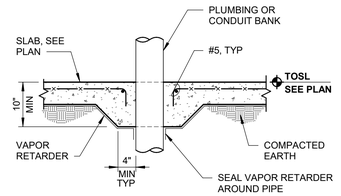


6 TYPICAL EQUIPMENT HOUSEKEEPING PAD DETAIL

S401 | NO SCALE



PLAN



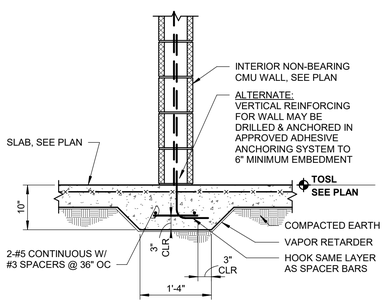
SECTION 'A'

NOTES:

1. IF THE EFFECTIVE LENGTH OF AN OPENING IS GREATER THAN 2'-0", 10" MINIMUM THICKENED SLAB WITH ADDED REINFORCING IS REQUIRED.
2. THESE CONDITIONS REQUIRE #5 TOP AROUND EFFECTIVE OPENING WITH 2'-0" EMBEDMENT PAST THE OPENING EDGE, OR PROVIDE STANDARD 90 ACI HOOK WHERE ADJACENT SLAB EDGES OCCUR.

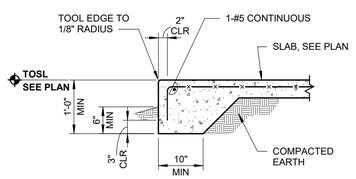
7 TYPICAL SLAB PENETRATION DETAIL

S401 | NO SCALE



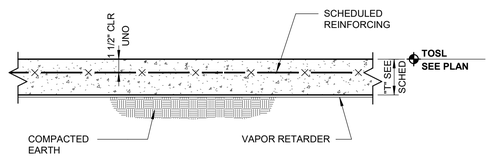
8 TYPICAL SLAB SUPPORT DETAIL AT INTERIOR NON-BEARING CMU WALL

S401 | NO SCALE



9 TYPICAL EXTERIOR SLAB EDGE DETAIL

S401 | NO SCALE



SLAB ON GRADE SCHEDULE

MARK	DEPTH	REINFORCING	REMARKS
SOG1	4"	6x6-W1.4xW1.4 WWF	

NOTES:
1. REFER TO GENERAL NOTES FOR REQUIRED CONCRETE STRENGTH.
2. REFER TO GENERAL NOTES FOR MINIMUM REINFORCING SPLICE REQUIREMENTS.
3. SEE PLAN FOR SLAB JOINT TYPE AND LOCATIONS. REFER TO SEPARATE DETAILS FOR SLAB JOINTS.
4. COORDINATE SLAB DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.
5. REFER TO ARCHITECTURAL/CIVIL SPECIFICATIONS FOR ALL EXTERIOR SLABS, ETC.

10 SLAB ON GRADE SCHEDULE & DETAIL

S401 | NO SCALE

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PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

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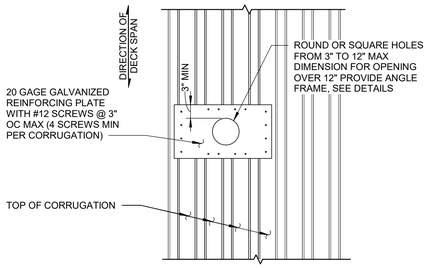
SLAB ON GRADE SCHEDULE AND DETAILS

SHEET NUMBER

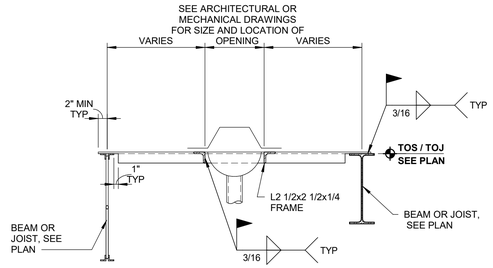
S401



NOTE:
DECK OPENINGS ARE TO BE FABRICATED SO THAT DECKING RUNS CONTINUOUSLY OVER OPENING. THE OPENINGS IN THE DECK ARE NOT TO BE CUT UNTIL OPENING IS NEEDED (PER OSHA) AND REINFORCING PLATE HAS BEEN INSTALLED.

1 TYPICAL REINFORCEMENT DETAIL AT SMALL OPENINGS IN ROOF DECK

S501 | NO SCALE

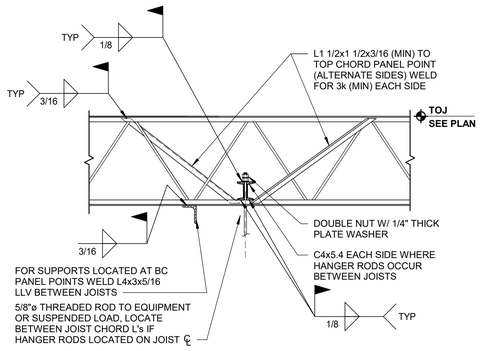


NOTES:

1. DECK OPENINGS ARE TO BE FABRICATED SO THAT DECKING RUNS CONTINUOUSLY OVER OPENINGS. THE OPENINGS IN THE DECK ARE NOT TO BE CUT UNTIL OPENING IS NEEDED (PER OSHA)
2. WELD DECK TO FRAME W/ 5/8"ø PUDDLE WELDS @ 6" OC. DECK NOT SHOWN FOR CLARITY.
3. ANCHOR ROOF DRAIN TO FRAME.

2 TYPICAL ROOF DRAIN OPENING FRAME DETAIL

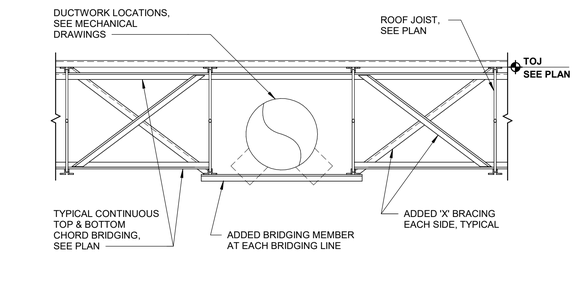
S501 | NO SCALE



NOTE:
USE THIS DETAIL WHEN SUPPORTING MISCELLANEOUS MINOR CONCENTRATED LOADS, OR FOR LOADS SHOWN ON FRAMING PLANS, FROM JOIST BOTTOM CHORDS.

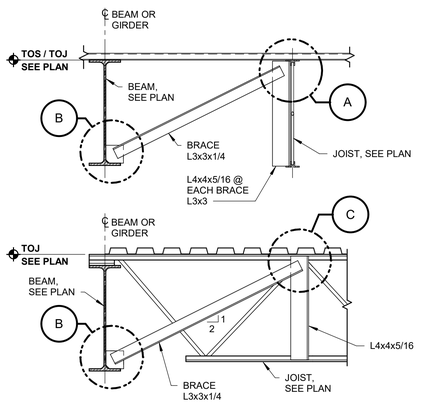
3 JOIST BOTTOM CHORD REINFORCEMENT DETAIL @ CONCENTRATED LOAD

S501 | NO SCALE



4 INTERRUPTED JOIST BRIDGING DETAIL

S501 | NO SCALE

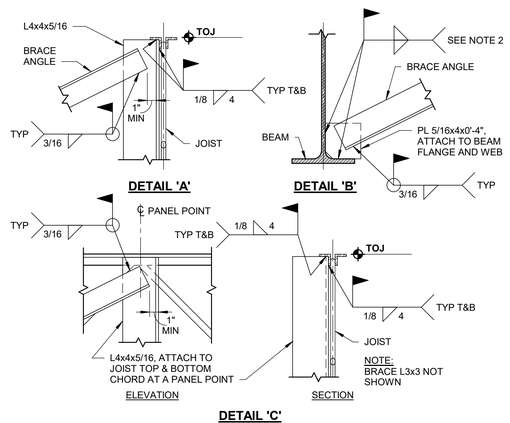


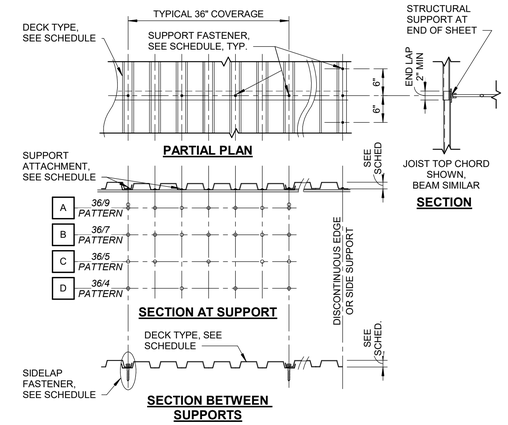
NOTES:

1. SEE PLANS AND DETAILS FOR LOCATIONS OF ANGLE BRACES.
2. FIELD WELDING OF 5/16" CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
3. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS.
4. SEE GENERAL STRUCTURAL NOTES FOR DECK CONSTRUCTION.
5. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.

6 BEAM BOTTOM FLANGE BRACE DETAIL

S501 | NO SCALE





ROOF DECK NOTES:

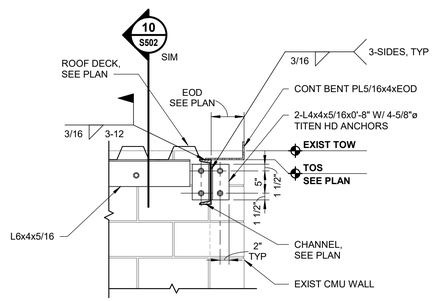
1. SEE PLAN FOR SCHEDULED ROOF DECK MARKS. ROOF DECK SHALL BE GALVANIZED STEEL CONFORMING TO SDI SPECIFICATIONS.
2. ROOF DECK LAYOUT SHALL BE CONFIGURED SUCH THAT TWO OR THREE DECK SPAN FRAMING CONDITIONS ARE ACHIEVED. SINGLE SPAN DECK CONFIGURATIONS SHALL BE CLEARLY SHOWN ON THE SHOP SUBMITTALS.
3. FASTEN DECK TO ALL SUPPORTS, SIDE LAP SUPPORTS, AND INTERMEDIATE RIBS WITH THE SCHEDULED FASTENER TYPE AT THE SCHEDULED ATTACHMENT PATTERN OR SPACING SHOWN.
4. PROVIDE SCHEDULED FASTENERS AT 6" OC TO SIDE SUPPORTS, DISCONTINUOUS EDGES AND AROUND DECK OPENINGS
5. CONNECT SIDE LAPS BETWEEN SUPPORTS WITH THE SCHEDULED SELF-DRILLING, SELF-TAPPING (SDS) HEX HEAD SCREWS AT THE SCHEDULED SPACING.
6. INTERLOCKED STANDING SIDE LAPS ARE NOT ACCEPTABLE.
7. AT CONTRACTOR'S OPTION, POWDER ACTUATED DECK FASTENERS BY HILTI MAY BE USED IN LIEU OF WELDS FOR DECK ATTACHMENT. SUBMIT AS A SHOP DRAWING THE FASTENING SYSTEM AND DESIGN OF EQUAL OR GREATER CAPACITY OF SPECIFIED PROJECT FASTENER SYSTEM FOR REVIEW.
8. IF ROOF DECKS ARE SCHEDULED TO BE VENTED, COORDINATE VENTED AREA (NOT TO EXCEED 1.5%) WITH ARCHITECTURAL REQUIREMENTS.
9. USE PUDDLE WELDS TO ATTACH TO STRUCTURAL STEEL AND #12 TEK SDS SCREWS TO ATTACH TO COLD-FORMED STEEL FRAMING.

STEEL ROOF DECK SCHEDULE

MARK	DECK TYPE	SUPPORT FASTENERS			SIDELAP FASTENERS			REMARKS
		SIZE/TYPE	ATTACHMENT PATTERN	MAX. SPACING	TYPE	#/SPAN	MAX. SPACING	
RD1	1.5B20	5/8ø	36/7	6"	#10 TEK	4	12"	
RD2	3N20							

5 ROOF DECK SCHEDULE AND DETAIL

S501 | NO SCALE



7 DETAIL

S501 | NO SCALE

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FOR

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SHEET TITLE

ROOF FRAMING SECTIONS AND DETAILS

SHEET NUMBER

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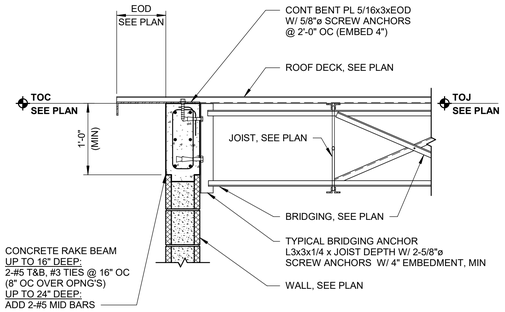

1 SECTION
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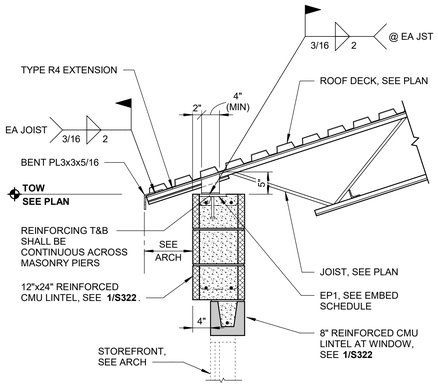

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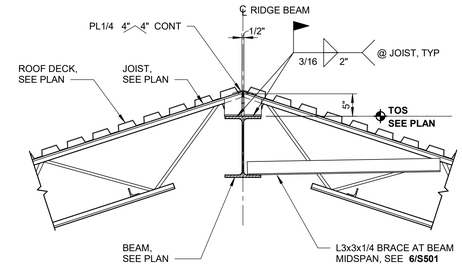

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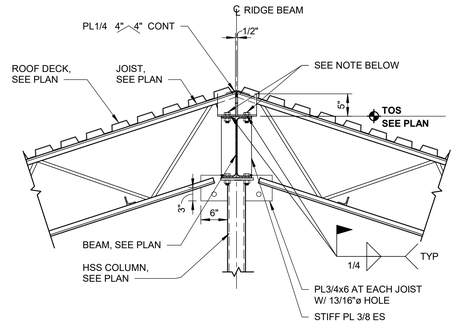
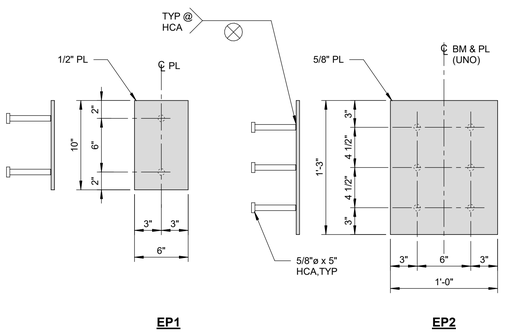


NOTE:
JOISTS SUPPORTED ON OR NEAREST TO COLUMNS AND JOISTS SPANNING OVER 40 FEET MUST BE BOLTED TO THE SUPPORT. STABILIZER PLATE MUST BE 6"x6" AND EXTEND 3" BELOW JOISTS BOTTOM CHORD AND W/ 13/16"ø HOLE FOR ATTACHING GUYING OR PLUMBING CABLES. DO NO WELD JOISTS TO STABILIZER PLATE.

4 SECTION
S502 | NO SCALE



EP1 EP2

5 EMBED PLATE DETAILS
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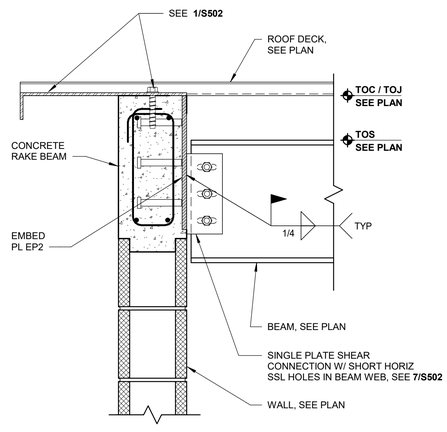

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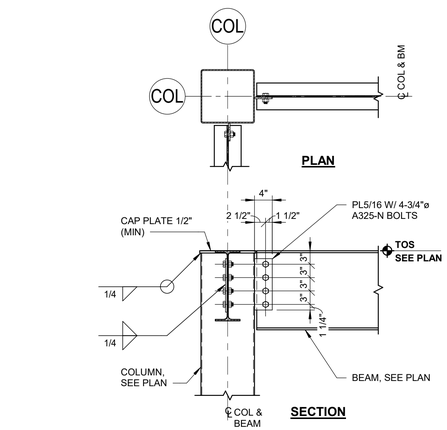
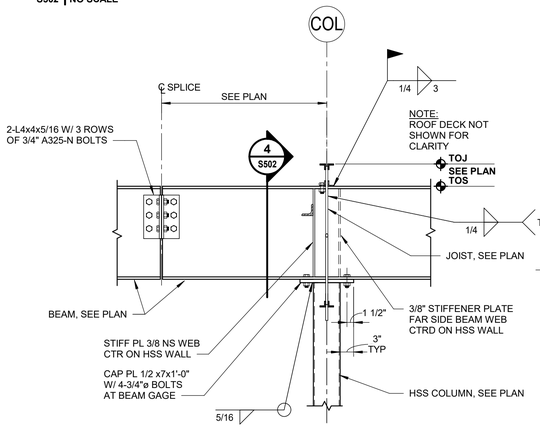


7 TYPICAL FRAMING CONNECTION TO HSS COLUMN DETAIL
S502 | NO SCALE



8 DETAIL
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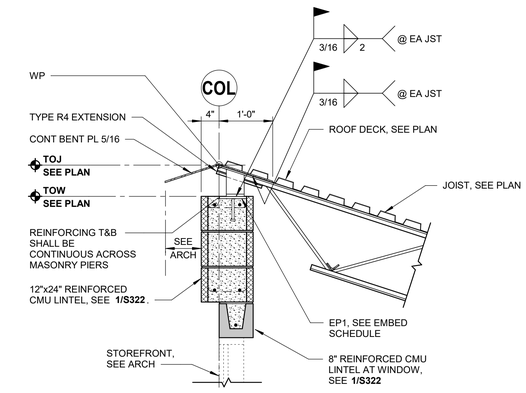

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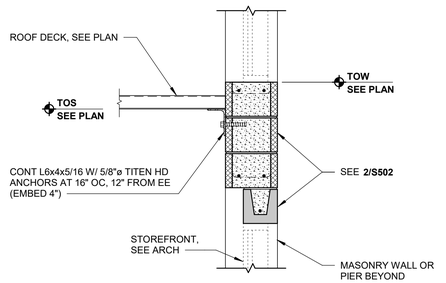

10 SECTION
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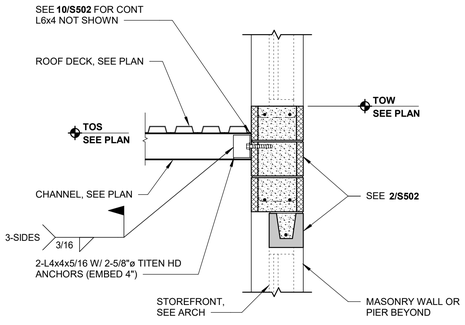

11 SECTION
S502 | NO SCALE

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FLORIDA P.E. #45319

PROJECT

BID NUMBER: BID-SJR-05-2019

RENOVATION WITH ADDITION TO BUILDING V

ST. AUGUSTINE CAMPUS

FOR

ST. JOHNS RIVER STATE COLLEGE

MARK	DATE	DESCRIPTION

ISSUE: JAN 22, 2020
PROJECT NO.: 1809
CAD DWG FILE:
DRAWN BY: PHI
CHECKED BY: MAM

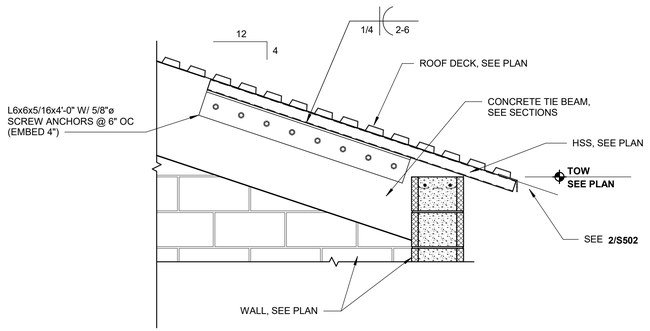
BID DOCUMENTS PHASE

SHEET TITLE

ROOF FRAMING SECTIONS AND DETAILS

SHEET NUMBER

S502



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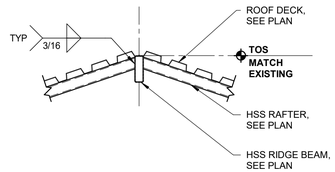

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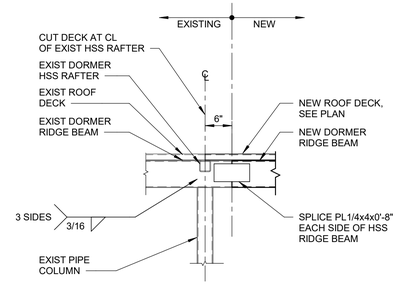
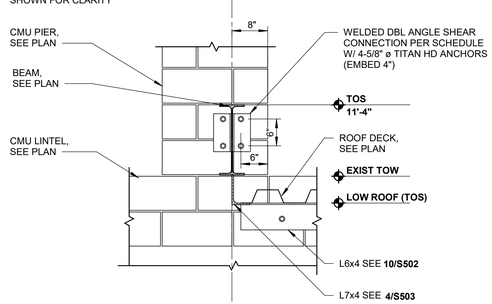


3 DETAIL
S503 | NO SCALE

4 DETAIL
S503 | NO SCALE



5 DETAIL
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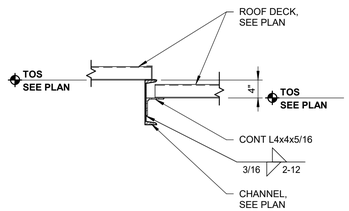

6 DETAIL
S503 | NO SCALE

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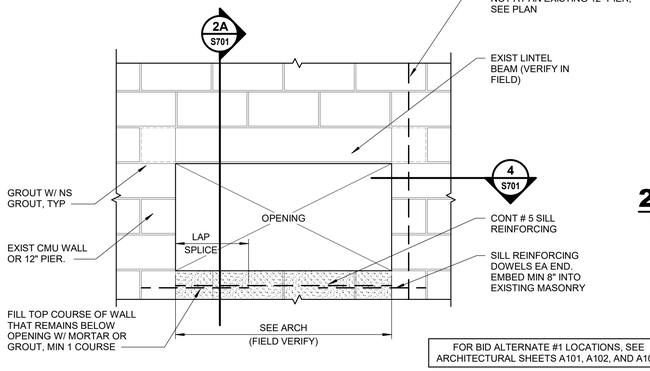
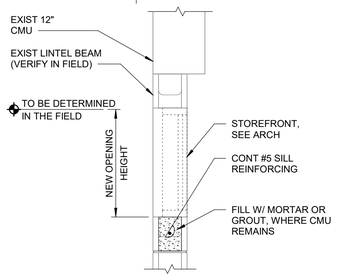
S503



FOR BID ALTERNATE #1 LOCATIONS, SEE ARCHITECTURAL SHEETS A101, A102, AND A103.

1 ELEVATION
S701 | NO SCALE



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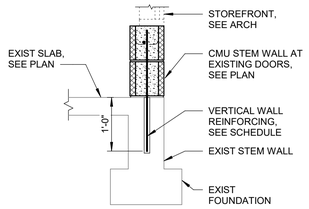

2B SECTION
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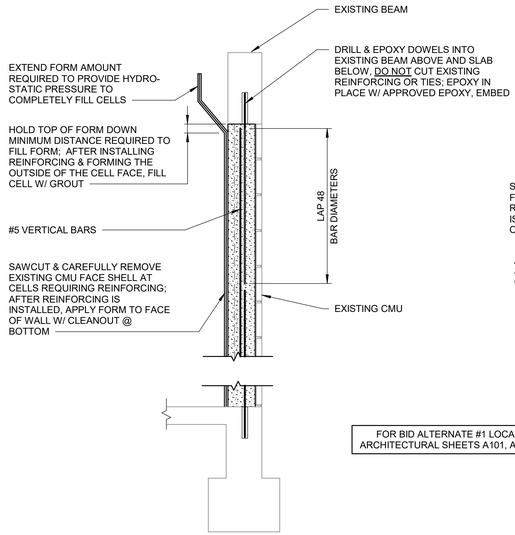
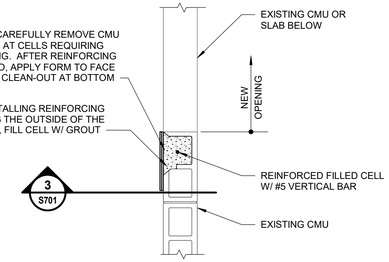


FOR BID ALTERNATE #1 LOCATIONS, SEE ARCHITECTURAL SHEETS A101, A102, AND A103.

3 SECTION
S701 | NO SCALE



NOTE:
SEE **1/S701** FOR HEADER SUPPORT OVER NEW OPENING

4 PLAN DETAIL
S701 | NO SCALE

5 SLAB INFILL AT NEW DOORS
S701 | NO SCALE

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DETAILS AT EXISTING

SHEET NUMBER

S701