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. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONDITIONS BY MAKING FIELD SURVEYS AND MEASUREMENTS PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION.

3. 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.

4. 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.

5. 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 SUBMITTAL OF SHOP DRAWINGS AND FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.

6. THE GENERAL CONTRACTOR SHALL COMPARE AND COORDINATE THE DRAWINGS OF ALL DISCIPLINES AND REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS TO THE ARCHITECT AND ENGINEER.

7. DETAILS 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 DETAIL. TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE SPECIFICALLY KEYED AT EACH LOCATION. THE ENGINEER 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. THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.

11. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

12. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANCHORED, EMBEDDED OR SUPPORTED ITEMS. NOTIFY THE ARCHITECT | ENGINEER OF ANY DISCREPANCIES.

SPECIAL INSPECTIONS:
1. THIS BUILDING IS CLASSIFIED AS A "THRESHOLD BUILDING". SPECIAL INSPECTION OF THE CONSTRUCTION IS REQUIRED BY THE STATE OF FLORIDA IN ACCORDANCE WITH CHAPTERS 471 AND 553 OF THE FLORIDA STATUTES. THE COST OF THESE SPECIAL INSPECTION SERVICES SHALL BE PAID BY THE OWNER.

2. SUBMIT DOCUMENTATION TO THE STRUCTURAL ENGINEER CERTIFYING THAT THE SPECIAL INSPECTOR AND HIS AUTHORIZED REPRESENTATIVE(S) COMPLY WITH THE MINIMUM QUALIFICATIONS UNDER THE FLORIDA STATUTES AND THOSE LISTED IN THE STRUCTURAL INSPECTION PLAN. DOCUMENTATION SHALL INCLUDE A LIST OF THE NAMES OF PERSONS PERFORMING THRESHOLD INSPECTION SERVICES AND PROOF THAT THE SPECIAL INSPECTOR IS REGISTERED IN THE STATE OF FLORIDA WHEN AUTHORIZED REPRESENTATIVES ARE USED. SUBMIT DOCUMENTATION THAT THEY ARE QUALIFIED BY LICENSURE AS A PROFESSIONAL ENGINEER OR ENGINEER INTERN, OR REGISTRATION AS A BUILDING INSPECTOR OR GENERAL CONTRACTOR.

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, 2007 EDITION WITH 2009 SUPPLEMENT.

2. CONCRETE CODES:
   A. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-05).
   B. SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).
   C. LATEST EDITION OF THE CRSI MANUAL OF STANDARD PRACTICE WITH ALL SUPPLEMENTS.

3. STRUCTURAL STEEL CODES:
   A. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, MARCH 9,2005 (AISC 360-05).
   B. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, ADOPTED EFFECTIVE MARCH 18, 2005 (AISC 303-05).

5. OPEN WEB STEEL JOISTS:
   A. STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES (K-1.1-05).
   B. CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS, EFFECTIVE MAY 03, 2005.
   C. STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS (SJI-02).
   D. STANDARD SPECIFICATIONS FOR LONGSPAN STEEL JOISTS, LH SERIES AND DEEP LONGSPAN JOISTS, DLH SERIES (LH/DLH-1.1-05).
   E. STANDARD SPECIFICATION FOR JOIST GIRDERS (JG-1.1-05).

6. MASONRY CONSTRUCTION:
   A. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-05/ASCE 5-05/TMS 402-05).
   B. SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-05/ASCE 6-05/TMS 602-05).

7. STEEL DECK:
   A. NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS, INCLUDING 2004 SUPPLEMENT (NAS-01).
   B. SDI DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS.

8. COLD FORMED METAL FRAMING:
   A. NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS, INCLUDING 2004 SUPPLEMENT (NAS-01).

DESIGN LOADS:
1. ROOF LIVE LOADS:
   A. UNIFORMLY DISTRIBUTED LIVE LOAD ON HORIZONTAL PROJECTION....................................... 20 PSF
   B. SEE ROOF FRAMING PLAN FOR OTHER CONCENTRATED EQUIPMENT LOADS.

2. FLOOR LIVE LOADS:
   A. UNIFORMLY DISTRIBUTED LIVE LOADS:
      TREATMENT ROOM FLOOR............................ 150 PSF
   B. CONCENTRATED FLOOR LIVE LOADS:
      GANTRY VERTICAL LOAD........................ 24,500 LBS.
      GANTRY HORIZONTAL LOAD AT 7'–10½"
      ABOVE TOP OF FOUNDATION...................... 7,300 LBS.

3. SUPERIMPOSED DEAD LOADS:
   A. TYPICAL FLOORS.................................. 25 PSF

4. WIND LOADS:
   A. LOADS BASED ON ASCE 7-05 WIND LOAD CRITERIA.
      BASIC WIND SPEED, 3 SECOND GUST.................. 120 MPH
      HURRICANE PRONE REGION.......................... YES
      WINDBORNE DEBRIS REGION......................... NO
      BUILDING CLASSIFICATION CATEGORY................. III
      IMPORTANCE FACTOR................................ 1.15
      INTERNAL PRESSURE COEFFICIENT.................... +/- 0.18
      WIND EXPOSURE CATEGORY........................... B
      WIND TOPOGRAPHIC FACTOR, Kzt...................... 1.0
   B. SEE LOADING NOTES, TABLES AND DIAGRAMS FOR DESIGN FORCES FOR COMPONENTS DESIGNED BY DELEGATED ENGINEERS.

5. SEISMIC: NOT CONTROLLING.

FOUNDATIONS:
1. FOUNDATION DESIGN IS BASED ON THE INFORMATION PROVIDED ON THE STRUCTURAL DRAWINGS FOR THE ORIGINAL STRUCTURE BY TK&A ARCHITECTS AND DATED 2/28/03.

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 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 LIGHT WEIGHT VIBRATORY DRUM ROLLER. 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 IN CLOSE PROXIMITY TO EXISTING STRUCTURES. THE CONTRACTOR SHALL COORDINATE COMPACTION EFFORTS AND FOUNDATION INSTALLATIONS TO INSURE THAT NO DAMAGE OCCURS TO ADJACENT STRUCTURES.

5. AFTER THE EXISTING CONCRETE SLAB HAS BEEN REMOVED, THE EXPOSED SOILS AT THE STRIPPED SURFACE WITHIN THE NEW GANTRY PIT CONSTRUCTION AREA SHALL BE COMPACTED WITH OVERLAPPING PASSES WITH A WALK-BEHIND VIBRATORY COMPACTOR. 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 12 INCHES BELOW THE COMPACTED SURFACE. REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF EIGHT COMPLETE COVERAGES SHALL BE MADE WITHIN THE PIT AREA. THE COMPACTOR COVERAGES SHALL BE DIVIDED EVENLY INTO TWO PERPENDICULAR DIRECTIONS. 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 6 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 AND MAT HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 4000 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. RETAINING WALLS HAVE BEEN DESIGNED FOR AN ASSUMED LATERAL EARTH PRESSURE OF 110 PSF PER FOOT OF DEPTH AND AN ASSUMED SURCHARGE OF 200 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 (148 PCF DRY DENSITY, MIN), 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 (WALL & MAT)	4000	3/4"	0.45	3-5
B. FOUNDATION WALLS	4000	4/4"	0.45	3-5
C. SLAB-ON-GRADE	3000	3/4"	0.50	3-5
D. ELEVATED FLOORS & BEAMS	4000	3/4"	0.45	3-5

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. 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.

7. 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 A 615, GRADE 60.

2. WELDED WIRE FABRIC: ASTM A 185 (FLAT SHEETS), MINIMUM YIELD STRENGTH OF 70,000 PSI.

3. MINIMUM REINFORCING STEEL CLEAR COVER (U.N.O.):
   A. CONCRETE CAST DIRECTLY AGAINST EARTH .. 3"
   B. INTERIOR SLABS .... 1"
   C. INTERIOR BEAMS .... 1-1/2" TO TIES
   D. SLABS ON GRADE .... 1-1/2" FROM TOP

4. 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 CMU WALLS OR AT THE CENTER OF THE OPENING SPAN.
   C. SPLICES IN CONTINUOUS BOTTOM BARS, IF REQUIRED, SHALL OCCUR OVER CMU WALLS OR CENTERED OVER COLUMNS.

5. WHERE SPLICE LENGTHS ARE NOT SPECIFIED, USE 48 BAR DIAMETERS IN MASONRY AND 40 BAR DIAMETERS IN CAST CONCRETE.

6. REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL SPLICES ARE NOT PERMITTED

7. LAP ALL WELDED WIRE FABRIC A MINIMUM DISTANCE OF ONE CROSS WIRE SPACING PLUS 2 INCHES.

8. 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.

9. 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 POUR.

10. FOUNDATION AND GRADE BEAM REINFORCING SHALL BE SUPPORTED ON SPECIALLY CAST 3-1/2 INCH HIGH CONCRETE BLOCKS CAST IN ACCORDANCE WITH DETAILS FURNISHED ON DRAWINGS. SLAB-ON-GRADE REINFORCING, INCLUDING WIRE FABRIC, SHALL BE SUPPORTED ON PRECAST BLOCKS OR 3000 PSI CONCRETE BRICK OF THE PROPER THICKNESS.

11. SOFT METRIC BAR SIZES VS. INCH POUND BAR SIZES:

METRIC	INCH-POUND
#10	#3
#13	#4
#16	#5
#19	#6
#22	#7
#25	#8
#29	#9
#32	#10
#36	#11
#43	#14

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 POURS.

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 1900 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
S-SHAPES, M-SHAPES, HP-SHAPES	ASTM A36
ST-SHAPES & MT-SHAPES	ASTM A36
C-SHAPES & MC-SHAPES	ASTM A36
ANGLES & PLATES	ASTM A36
HSS SHAPES	ASTM A500, GRADE B
STEEL PIPE	ASTM A53 (TYPE E OR S), GRADE B
HIGH STRENGTH BOLTS	ASTM A325
MACHINE BOLTS	ASTM A307
ANCHOR RODS	ASTM F1554, GRADE 55 TYPE S1(UNO)
WELDED HEADED STUDS	ASTM A108
DEFORMED BAR ANCHORS	ASTM A496
WELDING ELECTRODES	AWS D1.1, E70 SERIES

3. NON-SHRINK, NON-METALLIC GROUT WITH A 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.

4. ENGINEER SHALL BE CONTACTED FOR APPROVAL OF ANY FIELD MODIFICATIONS OF ANCHOR BOLTS OR RODS AND COLUMN BASE PLATES (PER OSHA).

5. 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.

6. 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.

7. FRAMING CONNECTIONS NOT DETAILED, OR CONNECTIONS THAT ARE MODIFIED FROM THOSE DETAILED, SHALL BE DESIGNED BY SUPPLIER FOR THE END REACTION SHOWN ON THE PLAN. IF NO REACTION IS PROVIDED, DESIGN FOR 1/2 THE BEAM MAXIMUM UNIFORM LOAD PER AISC MANUAL FOR STEEL CONSTRUCTION. SUBMIT SIGNED AND SEALED CALCULATIONS.

8. ALL WELD OPERATORS SHALL BE CURRENTLY AWS QUALIFIED.

9. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED. USE 3/16" FILLET WELD MINIMUM.

10. FIELD CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED AS DETAILED. NO FIELD WELDING OF HOT DIPPED GALVANIZED MEMBERS WILL BE ALLOWED. USE 3/16" FILLET WELD MINIMUM.

11. DURING THE ERECTION OF STEEL BEAMS AND DIAGONAL BRACING, ALL BOLTING AND FIELD WELDING SHALL BE COMPLETE BEFORE RELEASING HOISTING CABLES.

12. SUBMIT FOR REVIEW SHOP DRAWINGS OF STEEL DETAILS PRIOR TO FABRICATING STRUCTURAL STEEL.

13. 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.

14. STEEL COLUMNS, BASE PLATES AND ALL STEEL BELOW GRADE SHALL HAVE A MINIMUM 3" CONCRETE COVER PROTECTION.

15. MEMBERS NOTED AS "CONTINUOUS" SHALL BE FULLY WELDED AT ALL BUTT SPLICES OR CONNECTIONS SHALL BE DETAILED TO PROVIDE CONTINUITY.

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:
   SUPPORTING CONCENTRATED LOADS

6. JOISTS SHALL BE DESIGNED TO RESIST A NET UPLIFT AS SHOWN ON LOADING DIAGRAMS.

7. CONNECT JOIST BEARING PLATES TO JOIST TOP CHORD FOR 4K.

8. SUBMIT FOR REVIEW SHOP DRAWINGS OF JOIST DETAILS FOR FABRICATION AND ERECTION PRIOR TO FABRICATING JOISTS.

9. 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.

10. ALL JOISTS SHALL BE DESIGNED FOR A SINGLE CONCENTRATED TRAVELING PROVISIONAL LOAD OF 300 POUNDS ALONG THE TOP CHORD AND 100 POUNDS ALONG THE BOTTOM CHORD APPLIED BETWEEN PANEL POINTS.

11. 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.

12. JOIST SEATS SHALL HAVE THE CAPACITY TO RESIST A LATERAL LOAD APPLIED TO THE TOP CHORD, PERPENDICULAR TO THE SPAN (ROLLOVER). PROVIDE A MINIMUM ROLLOVER FORCE OF 2,000 POUNDS FOR SEATS UP TO 3 1/2 INCHES DEEP AND 1,200 POUNDS FOR SEAT OVER 3 1/2 INCHES DEEP.

STEEL ROOF DECK:
1. ROOF DECK SHALL BE 1-1/2" DEEP. SEE ROOF PLAN FOR GAGE AND PROFILE DESIGNATION.

2. ROOF DECK SHALL BE PLACED SO AS TO COVER AT LEAST TWO SPANS. NO SINGLE SPAN CONDITIONS SHALL BE USED.

3. 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).

4. STEEL DECK SHALL CONFORM TO ASTM A653 SQ GRADE 33 (Fy = 33,000 PSI).

5. STEEL DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING TO ASTM A924, WITH COATING DESIGNATION G90.

6. 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.

7. 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.

8. 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 ANGLE FRAMING DETAILS.

9. STEEL MEMBERS SUPPORTING STEEL DECK AT THE PERIMETER OF THE BUILDING SHALL BE CONTINUOUS, BUTT WELD PIECES WHERE SPLICES OCCUR.

COLD FORMED METAL 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 METAL WALL STUDS:
   A. THE COLD FORMED METAL STUD FRAMING CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF EXTERIOR METAL STUDS. SHOP DRAWINGS SHOWING PLANS, ELEVATIONS, AND SECTIONS SHALL BE SUBMITTED WITH CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF FLORIDA.
   B. THE MINIMUM SIZE AND SPACING SHALL BE AS DESCRIBED 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 1 REPRODUCIBLE AND 2 COPIES OF SHOP DRAWINGS. THE 2 COPIES WILL BE RETAINED BY THE ARCHITECT AND ENGINEER AND THE REPRODUCIBLE WILL BE RETURNED TO THE CONTRACTOR. ADDITIONAL COPIES WILL BE RETURNED UNMARKED. CONTRACTOR SHALL MAKE ANY OTHER ADDITIONAL REQUIRED COPIES FROM THE MARKED-UP REPRODUCIBLES. PREFERRED ALTERNATE: 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
   LIGHT GAGE METAL 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.

POST-INSTALLED ANCHORS:
1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD (EOR) PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSINGS OR MISPLACED ANCHORS.

2. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REINFORCING WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. 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.

3. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE EOR. INDEPENDENT ON-SITE PROOF LOAD TESTING SHALL BE PERFORMED AS REQUIRED BY THE EOR. CONTACT EOR FOR NUMBER OF ANCHORS REQUIRED TO BE TESTED AND REQUIRED PROOF LOAD MAGNITUDE.

4. UNLESS NOTED OTHERWISE ON DOCUMENTS, ACCEPTABLE PRODUCTS SHALL BE AS LISTED BELOW:
   A. MECHANICAL ANCHORS INTO CONCRETE:
      1. USE THE FOLLOWING (UNO):
         A. HILTI KWIK BOLT TZ CARBON AND STAINLESS STEEL ANCHORS (ICC-ES ESR1917)
         B. RED HEAD TRUBOLT + WEDGE ANCHORS (ICC-ES ESR2427)
         C. SIMPSON STRONG-TIE STRONG-BOLT (STB) (ICC-ES ESR1771)(FL8668)
      2. USE THE FOLLOWING ONLY WHERE SPECIFICALLY CALLED OUT ON THE DOCUMENTS:
         A. HILTI HDA (ICC-ES ESR1546)
         B. HILTI HSL-3 ANCHOR (ICC-ES ESR1545)
         C. SIMPSON STRONG-TIE TITEN HD (THD) (ICC-ES ESR2713)(FL2304)
   B. MECHANICAL ANCHORS INTO MASONRY LINTELS OR GROUT FILLED CELLS:
      1. USE THE FOLLOWING (UNO):
         A. HILTI KWIK BOLT 3 MASONRY ANCHORS (ICC-ES ESR1385)
         B. SIMPSON STRONG-TIE WEDGE-ALL ANCHOR(WA) (ICBO-ES ER-3631) (FL5415)
      2. USE THE FOLLOWING ONLY WHERE SPECIFICALLY CALLED OUT ON THE DOCUMENTS:
         A. HILTI HUS-H SCREW ANCHOR (ICC-ES ESR2369)
         B. SIMPSON STRONG-TIE TITEN HD (THD) (ICC-ES ESR1056)(FL2304)
   C. ADHESIVE ANCHORS INTO CONCRETE:
      1. USE THE FOLLOWING (UNO):
         A. HILTI HIT-RE 500-SD ADHESIVE (ICC-ES ESR2322)
         B. RED HEAD EPCON G5 ADHESIVE (ICC-ES ESR1137)(FL6582)
         C. SIMPSON STRONG-TIE SET-XP EPOXY-TIE ADHESIVE (SETXP) (ICC-ES ESR2508)
      2. USE THE FOLLOWING ONLY WHERE SPECIFICALLY CALLED OUT ON THE DOCUMENTS:
         A. HILTI HIT HY 150 MAX ADHESIVE (ICC-ES ESR2262)
   D. ADHESIVE ANCHORS INTO MASONRY LINTELS OR GROUT FILLED CELLS:
      1. USE THE FOLLOWING (UNO):
         A. HILTI HIT HY-150 MAX ADHESIVE (ICC-ES ESR1967)
         B. SIMPSON STRONG-TIE SET EPOXY-TIE ADHESIVE (SET) (ICC-ES ESR1772)(FL5550)

STRUCTURAL DRAWING INDEX

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S104	PARTIAL ROOF FRAMING PLAN
S201	PARTIAL BUILDING SECTIONS
S301	MASONRY SECTIONS AND DETAILS
S302	FOUNDATION SECTIONS AND DETAILS
S303	CONCRETE SECTIONS AND DETAILS
S401	FRAMING SECTIONS AND DETAILS

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Revisions

Project
UF UNIVERSITY of FLORIDA

Proton Therapy LINAC Addition
Shands Jacksonville Campus
UF LM-4985

Project Phase
100% Construction Documents

Sheet Title
GENERAL NOTES AND DRAWING INDEX

Scale

Drawn By: CSH

Date: 09 DEC 2011

Checked By: RWG

AEI Project No.
11662-00

Sheet No.
S001

ABBREVIATIONS

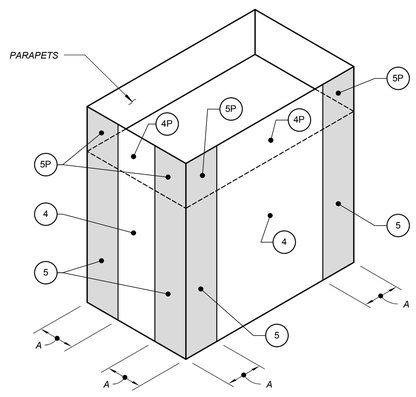
A/C	AIR CONDITIONING
A/E	ARCHITECT AND/OR ENGINEER
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE FOR TIMBER CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
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
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
CAD	CADMIUM
CANT	CANTILEVER
CAP	CAPACITY
CB	CORNER BAR
CC	CENTER TO CENTER
CF	CUBIC FEET, COLUMN FOOTING
CFMF	COLD FORMED METAL FRAMING
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
CSK	COUNTERSINK
CTR	CENTER
CTRD	CENTERED
CW	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
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
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
Fy	YIELD STRENGTH OF STEEL
GA	GAUGE
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
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
LAM	LAMINATED
LBS	POUNDS
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
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL, MATERIAL
MULL	MULLION
N	NORTH
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	OPPH
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OVS	OVERSIZED
OZ	OUNCE
P	STEEL PIPE
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
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
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QTR	QUARTER
QTY	QUANTITY
R	RISER, REACTION, RADIUS
R/W	RIGHT OF WAY
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED, REINFORCING, REINFORCEMENT
REM	REMAINDER
REQD	REQURIED
REV	REVISION
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RTN	RETURN
RTU	ROOF TOP UNIT
S	SOUTH, STANDARD BEAM
SBC	STANDARD BUILDING CODE
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDI	STEEL DECK INSTITUTE
SE	STRUCTURAL ENGINEER
SECT	SECTION
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
TOF	TOP OF FOOTING
TOGB	TOP OF GRADE BEAM
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOPC	TOP OF PILE CAP
TOPG	TOPPING
TOPL	TO OF PLATE
TOS	TOP OF STEEL
TOSL	TOP OF SLAB
TOW	TOP OF WALL
TPL	TRIPLE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VOL	VOLUME
W	STEEL WIDE FLANGE SHAPE, WEST
W/	WITH
W/O	WITHOUT
WCJ	WALL CONTROL JOINT
WD	WOOD
WEJ	WALL EXPANSION JOINT
WF	WALL FOOTING
WGT	WEIGHT
WL	WIND LOAD
WP	WORKING POINT, WATERPROOF
WPFG	WATERPROOFING
WS	WATERSTOP
WT	WIDE FLANGE STRUCTURAL TEE, WATER TABLE, WALL TYPE
WWF	WELDED WIRE FABRIC
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG
YD	YARD

WIND LOAD INFORMATION

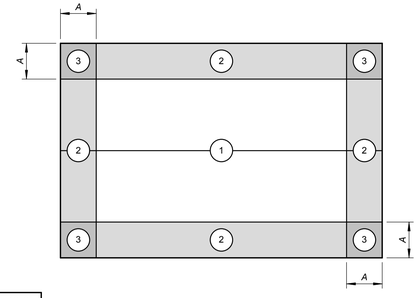
COMPONENTS & CLADDING
WIND LOAD DESIGN PRESSURE SCHEDULE

COMPONENT	ZONE	EFFECTIVE WIND AREA (SF)	DESIGN PRESSURE (PSF) POSITIVE	DESIGN PRESSURE (PSF) NEGATIVE
ROOF ELEMENTS	1	10	12	-30
		20	11	-29
		50	10	-28
		>100	10	-27
	2	10	12	-50
		20	11	-45
		50	10	-38
		>100	10	-32
	3	10	12	-75
		20	11	-62
		50	10	-45
		>100	10	-32
EXTERIOR WALL ELEMENTS, WINDOWS, DOORS AND CURTAIN WALLS	4	10	27	-30
		20	26	-28
		50	24	-27
		100	23	-26
		>500	22	-23
	4P	10	72	--
		20	65	--
		50	56	--
		100	46	--
		>500	46	--
	5	10	27	-36
		20	26	-34
		50	24	-31
		100	23	-28
		>500	22	-23
	5P	10	98	--
		20	83	--
		50	64	--
		100	48	--
		>500	46	--

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 = 12' - 0"



WALLS



A = 12'-0"

ROOF

JOIST NET UPLIFT SCHEDULE

ZONE	EFFECTIVE WIND AREA (SF)	DESIGN PRESSURE (PSF)
1	10	-21
	20	-20
	50	-19
	>100	-18
2	10	-41
	20	-36
	50	-29
	>100	-23
3	10	-66
	20	-53
	50	-36
	>100	-23

NOTES:
1. JOISTS SHALL BE CLASSIFIED AS COMPONENTS AND SHALL BE DESIGNED USING THE NET PRESSURES LISTED IN THE TABLE.
2. REFER TO THE WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. NEGATIVE PRESSURES ACT AWAY FROM EACH COMPONENT SURFACE.
4. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREAS MAY BE USED TO OBTAIN THE REQUIRED COMPONENT DESIGN NET UPLIFT PRESSURE.

WIND PRESSURE DIAGRAMS
REFER TO 'COMPONENTS & CLADDING WIND LOAD DESIGN PRESSURE SCHEDULE' ON THIS SHEET

SYMBOL LEGEND

- DETAIL NUMBER / SHEET WHERE DRAWN
- SECTION NUMBER / SHEET WHERE DRAWN
- ELEVATION
- SPAN DIRECTION (SLAB, DECK, ETC.)
- SLAB DEPRESSION
- KEYED PLAN NOTE
- COLUMN LINE
- EXISTING COLUMN LINE
- FOOTING STEP
- MOMENT CONNECTION
- SHEAR CONNECTION
- CAST-IN-PLACE CONCRETE
- PRECAST CONCRETE OR PRECAST PRESTRESSED CONCRETE
- NON-SHRINK GROUT
- GROUT FILL
- BRICK
- STRUCTURAL STEEL
- EARTH
- CONCRETE MASONRY UNIT
- WOOD OR TIMBER IN SECTION
- LAMINATED WOOD MEMBER
- PLYWOOD
- REVISION NUMBER - CLOUD INDICATES LIMIT OF REVISION
- MARKS FOR SCHEDULED ELEMENTS SUCH AS SLABS OR FOOTINGS OR MARKS FOR DETAILED ELEMENTS SUCH AS TILT-UP PANELS
- COMBINED SCHEDULE OF DETAILED INFORMATION

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Sheet Title
ABBREVIATIONS, SYMBOLS & WIND LOADS

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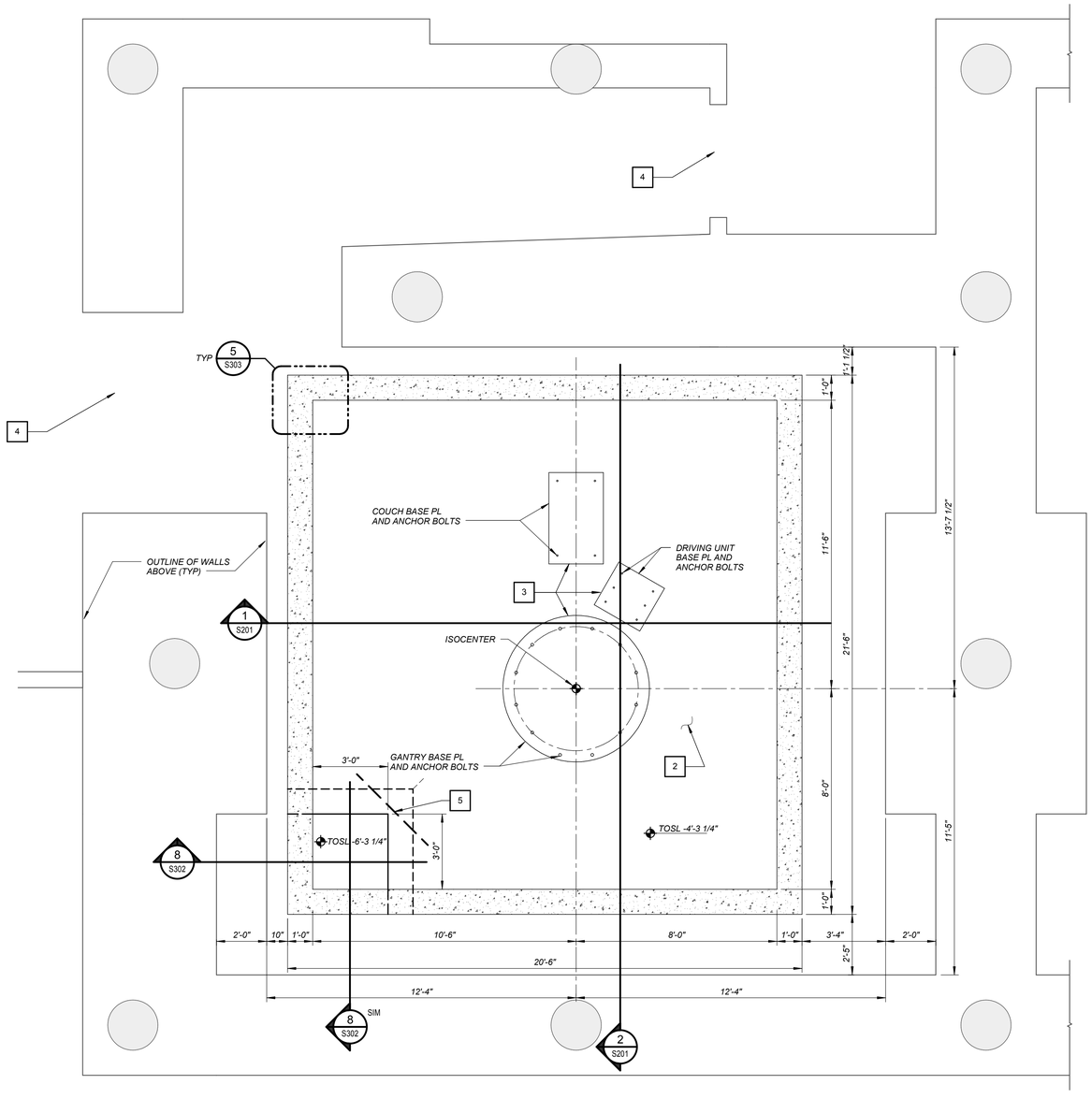
Sheet No.
S002



MACHINE PIT PLAN

SCALE: 3/8" = 1'-0"

PLAN NOTES

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

1. *REFER TO DRAWING S001 FOR STRUCTURAL DRAWING INDEX.*
2. *18" FOUNDATION MAT / SLAB OVER VAPOR RETARDER AND COMPACTED EARTH; REINFORCE W/ #7 @ 12" OC EACH WAY TOP AND BOTTOM. ELEVATION TOP OF SLAB= -4'-3 1/4".*
3. *VERO TO SUPPLY AND INSTALL ALL BASE PLATES AND ANCHOR BOLTS.*
4. *REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION (TYP).*
5. *ADD 2-#6x4'-0" T&B AT ALL RE-ENTRANT CORNERS. PLACE IN INNER SLAB REINFORCING LAYER, 2" CLEAR FROM CORNER.*

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MACHINE PIT PLAN

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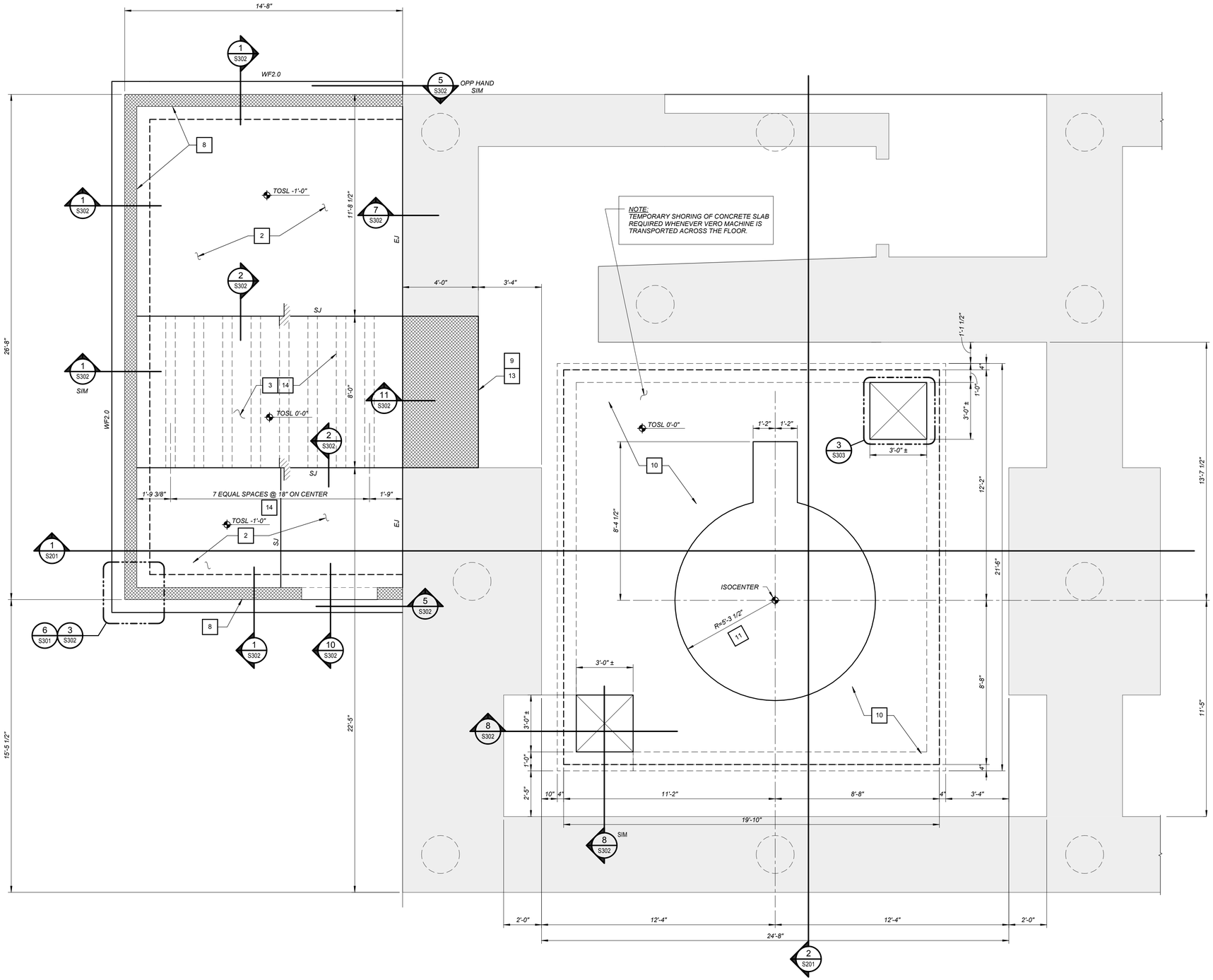

LEVEL 1 SLAB PLAN

SCALE: 3/8" = 1'-0"

PLAN NOTES

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

1. *REFER TO DRAWING S001 FOR STRUCTURAL DRAWING INDEX.*
2. *6" CONCRETE SLAB OVER VAPOR RETARDER AND COMPACTED EARTH; REINFORCE W/ 6x6-W2.9xW2.9 WWF, 1 1/2" CLEAR FROM TOP OF SLAB.*
3. *18" CONCRETE SLAB OVER VAPOR RETARDER AND COMPACTED EARTH; REINFORCE W/ #6 @ 12" EW, T&B. ELEVATION TO TOP OF SLAB = ⌖ 0'-0" (DATUM) MATCH EXISTING CONCRETE.*
4. *REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, DETAILS AND LOCATIONS OF INTERIOR PARTITIONS, DOORS AND WINDOWS, AND TO VERIFY DEPTH AND EXTENT OF SLAB DEPRESSIONS.*
5. *ADD 2 #4x4'-0" @ 3" OC AT AT ALL RE-ENTRANT CORNERS (TYP), PLACE ON INNER LAYER 1 1/2" CLR FROM CORNER.*
6. *WALL FOOTINGS ARE DESIGNATED BY "WF".*
7. *REFERENCE ELEVATION TOP OF FOOTINGS (TOF) ⌖ -2-0" UNO.*
8. *ALL EXTERIOR 8" CMU WALLS SHALL BE WT1, UNO.*
9. *INFILL OPENING CUT IN EXISTING WALL W/ SOLID HEAVY WEIGHT CMU BLOCK.*
10. *8" CONCRETE SLAB; REINFORCE W/ #6 @ 6" OC EACH WAY TOP AND BOTTOM. ELEVATION TOP OF SLAB= ⌖ 0'-0" (DATUM) MATCH EXISTING CONCRETE.*
11. *CONTRACTOR SHALL COORDINATE EDGE OF STRUCTURE WITH ARCHITECTURAL DRAWINGS TO SUIT EACH TYPE OF ARCHITECTURAL FINISH.*
12. *REFER TO DRAWING S101 FOR DIMENSIONS NOT SHOWN ON THIS PLAN.*
13. *REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION (TYP).*
14. *6" DIAMETER PVC CONDUIT PIPE CAST IN MID SLAB DEPTH SPACED AT 18" OC.*

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LEVEL 1 SLAB PLAN

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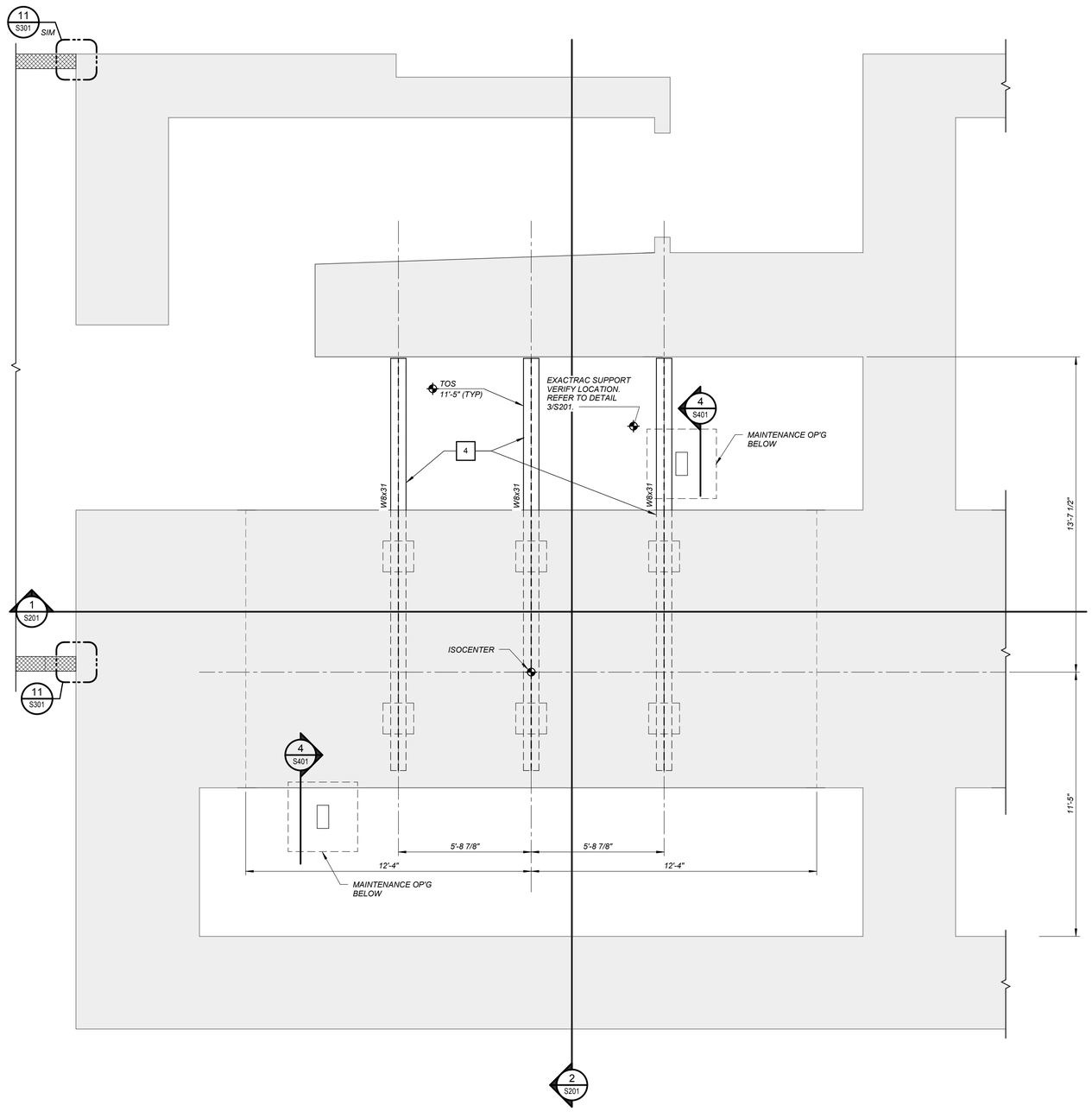

PARTIAL STRUCTURAL CEILING PLAN

NO SCALE

N

PLAN NOTES

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

1. *REFER TO DRAWING S001 FOR STRUCTURAL DRAWING INDEX.*
2. *REFERENCE ELEVATION TO TOP OF STEEL BEAMS (TOS) IS ⌖ 11'-5"*
3. *REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, DETAILS AND LOCATIONS OF INTERIOR PARTITIONS, DOORS AND WINDOWS, AND TO VERIFY DEPTH AND EXTENT OF SLAB DEPRESSIONS.*
4. *LIFT CAPACITY = 11,000# (MINIMUM).*

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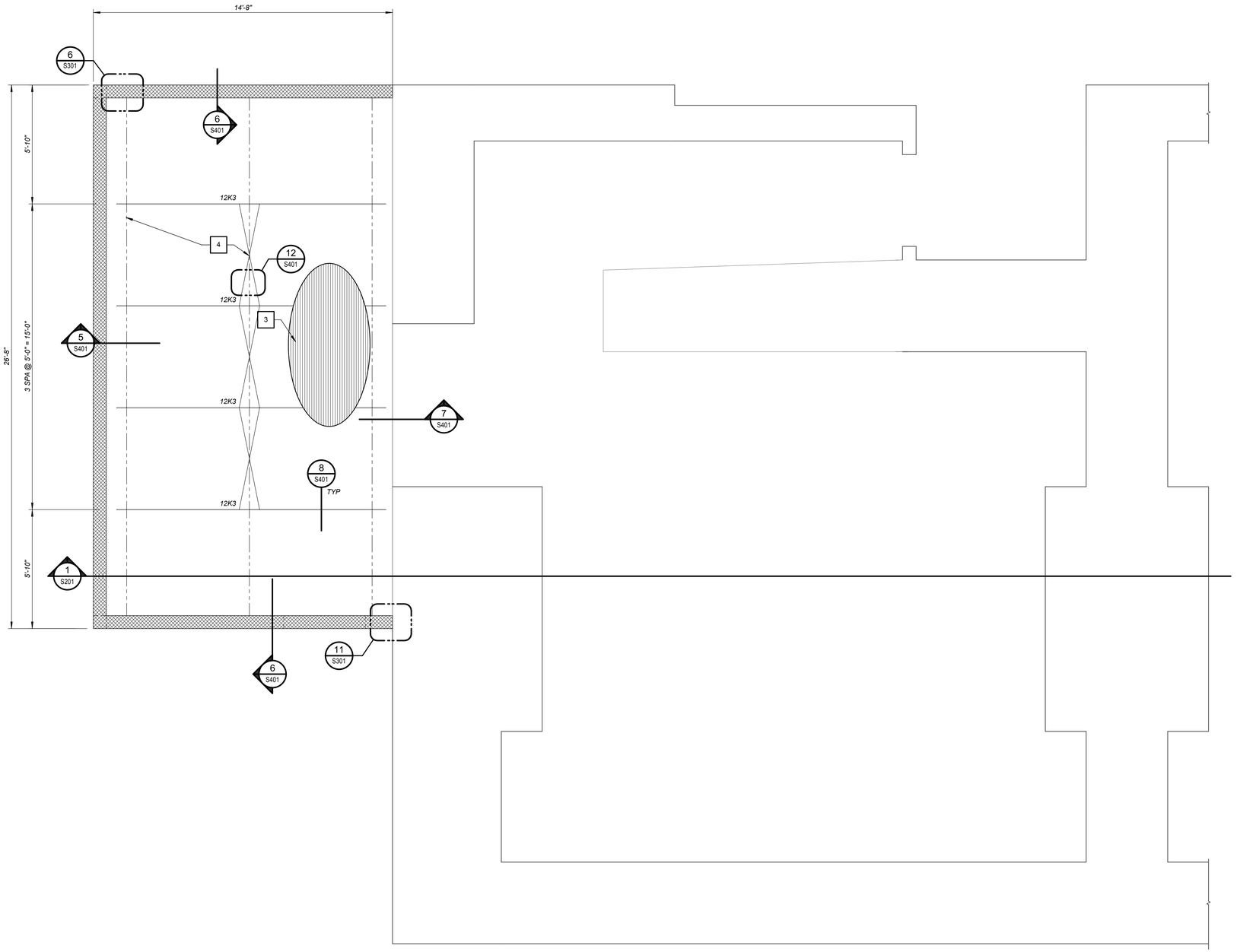

PLAN NOTES

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

1. *REFER TO DRAWING S001 FOR STRUCTURAL DRAWING INDEX.*
2. *REFERENCE ELEVATION TO TOP OF STEEL JOISTS IS ⌖ 16'-2 1/2". FOR TOP OF JOISTS OR BEAMS AT OTHER ELEVATIONS, TOP OF STEEL IS NOTED THUS (-2 1/2") IN RELATION TO THE REFERENCE ELEVATION.*
3. *ROOF DECK SHALL BE GALVANIZED 1.5B20 STEEL ROOF DECK OR APPROVED EQUAL CONFORMING TO SDI SPECIFICATIONS. REFER TO ROOF DECK DETAILS FOR ATTACHMENT PATTERN:* A 2
4. *USE STANDARD SJI CONTINUOUS TOP AND BOTTOM CHORD BRIDGING AT BRIDGING LINES INDICATED. FOR ROOF JOISTS, PROVIDE AN ADDITIONAL SINGLE LINE OF BOTTOM CHORD BRIDGING NEAR THE FIRST BOTTOM CHORD PANEL POINT AT EACH END OF ALL JOISTS. ADD CONTINUOUS BOLTED 'X' BRIDGING WHERE INDICATED AND AS OTHERWISE REQUIRED TO COMPLY WITH SJI.*
5. *CONTRACTOR SHALL VERIFY MECHANICAL OPENING DIMENSIONS WITH EQUIPMENT SUPPLIED. NOTIFY ENGINEER AND ARCHITECT IF DIMENSIONS VARY MORE THAN 1'-0".*
6. *EXTERIOR MASONRY WALLS SHALL BE WT1, UNO. MASONRY WALL TYPES CONTINUE FROM FLOOR PLAN BELOW UNLESS NOTED OTHERWISE ON THE PLANS. IF NOT MARKED OR CONTINUED FROM THE LOWER FLOOR, WALLS SHALL BE WT1.*
7. *PROVIDE PRE-CAST 'U' LINTELS OVER ALL OPENINGS IN MASONRY WALLS. COORDINATE EXACT SIZE, LOCATION AND ELEVATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. SEE MASONRY SCHEDULES AND DETAILS.*

PARTIAL ROOF FRAMING PLAN

SCALE: 3/8" = 1'-0"

N

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PARTIAL ROOF FRAMING PLAN

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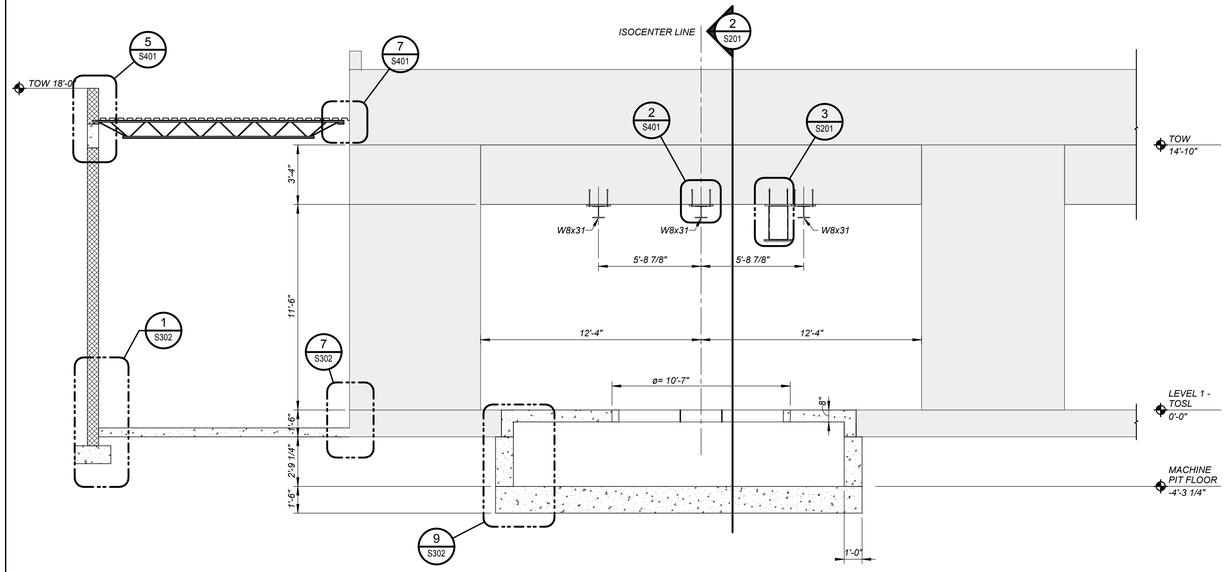
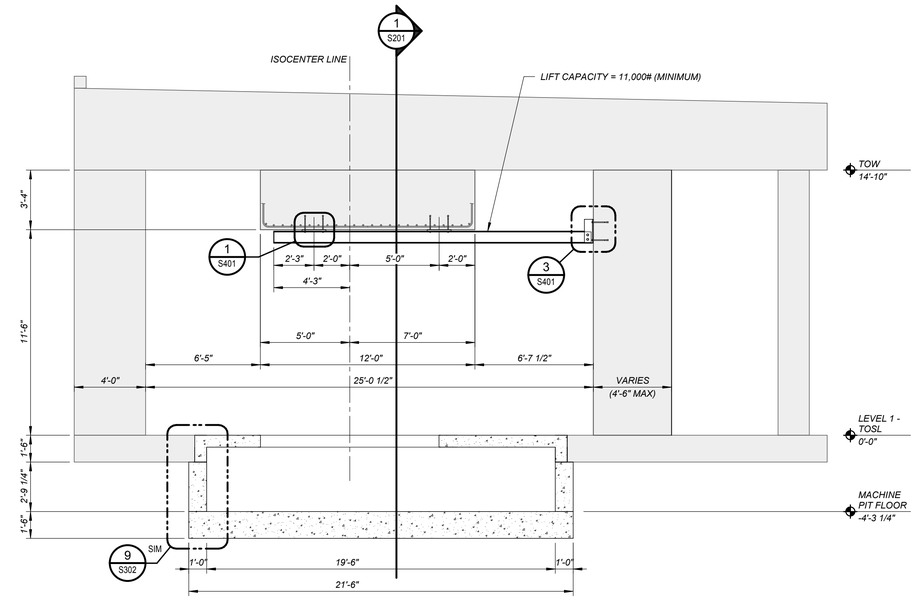


1 SECTION

S201 | NO SCALE



2 SECTION

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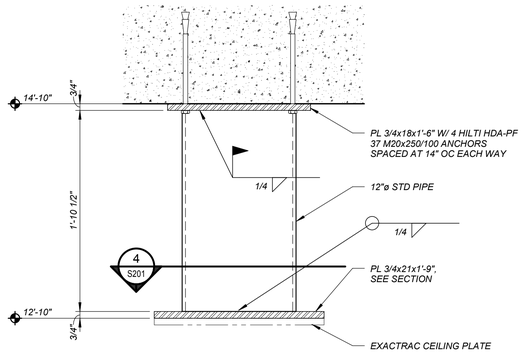
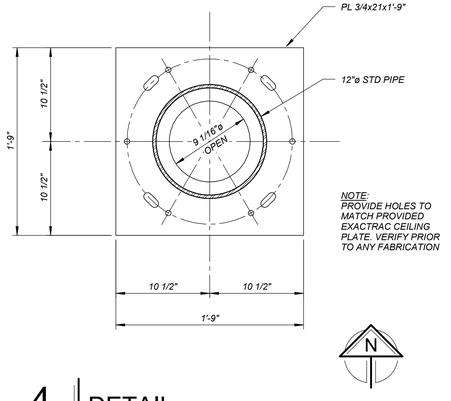


3 DETAIL

S201 | NO SCALE



4 DETAIL

S201 | NO SCALE

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PARTIAL BUILDING SECTIONS

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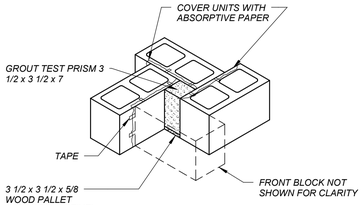
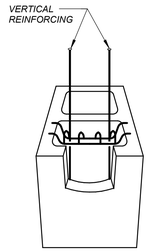


NOTES:
1. TEST PER ASTM C1019.
2. SEE SPECIFICATIONS FOR FREQUENCY REQUIREMENTS.

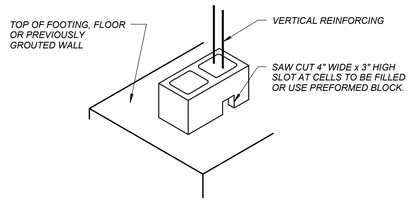
METHOD OF CASTING GROUT TESTING PRISMS



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

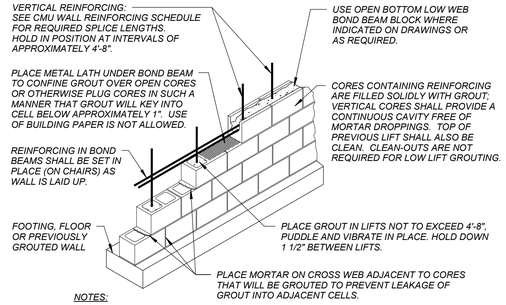
NOTES:
1. SEE PLAN & SCHEDULE FOR FILLED CELL LOCATIONS, REINFORCING SIZE, AND SPACING.
2. BED WEBS AS WELL AS FACE SHELLS ADJACENT TO CELLS TO BE FILLED TO PREVENT GROUT LEAKAGE TO ADJACENT CELLS UNLESS ADJACENT CELLS ARE ALSO TO BE FILLED.
3. SEE SPECIFICATIONS AND GENERAL NOTES FOR GROUT REQUIREMENTS.
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 48 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 THE HIGH LIFT METHOD.
7. PLACE THE FIRST LIFT OF GROUT FOR A SECTION OF WALL TO MAXIMUM HEIGHT OF 5 FEET, 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.

METHOD OF HIGH LIFT GROUTING



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.

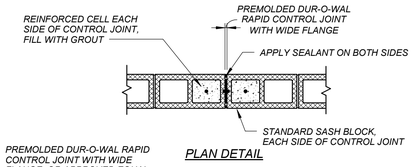
CLEAN-OUT OPENINGS AT FILLED CELLS REQUIRED WHERE HIGH LIFT GROUTING IS USED



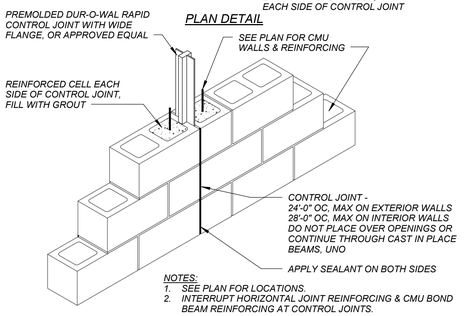
NOTES:
1. CONSTRUCT WALL IN LIFTS, GROUTING CELLS AND HORIZONTAL BOND BEAMS PRIOR TO LAYING BLOCK ABOVE.
2. BOND BEAMS MAY NOT OCCUR IN ALL LIFTS. REFER TO PLANS AND WALL SECTIONS FOR BOND BEAM LOCATIONS.

METHOD OF LOW LIFT GROUTING (4'-8" MAXIMUM LIFT)

1 DETAIL
S301 NO SCALE



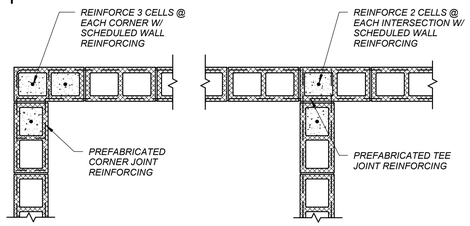
PLAN DETAIL



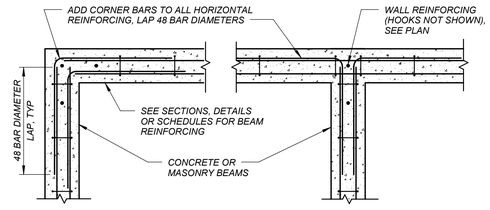
NOTES:
1. SEE PLAN FOR LOCATIONS.
2. INTERRUPT HORIZONTAL JOINT REINFORCING & CMU BOND BEAM REINFORCING AT CONTROL JOINTS.

METHOD OF WALL CONTROL JOINT (WCJ) CONSTRUCTION

2 DETAIL
S301 NO SCALE

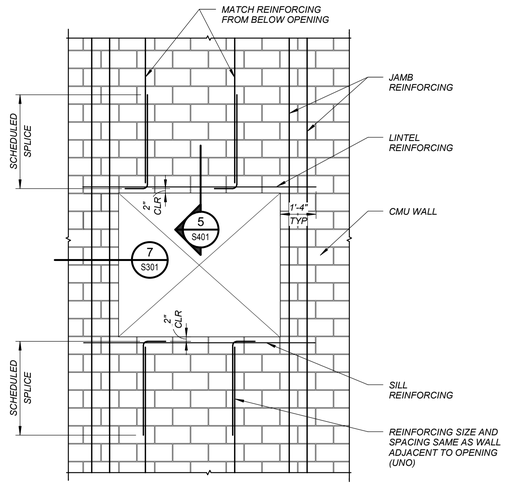


WALL REINFORCING AT CORNERS / INTERSECTIONS



BEAM REINFORCING AT CORNERS / INTERSECTIONS

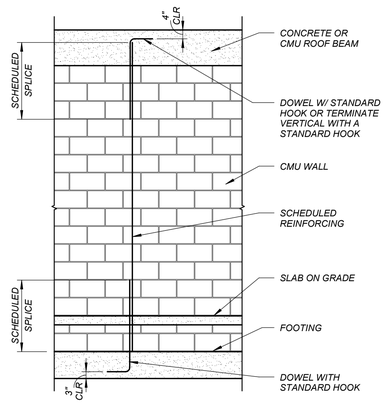
3 DETAIL
S301 NO SCALE



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.

DIAGRAMMATIC ELEVATION WINDOW OPENING IN CMU (DOOR SIMILAR)

4 DETAIL
S301 NO SCALE

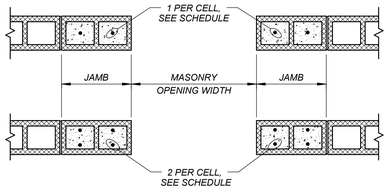


NOTES:
1. REFER TO PLANS AND SCHEDULES FOR SIZE, NUMBER AND LOCATION OF VERTICAL REINFORCING.
2. CLEAN-OUTS AND HJR NOT SHOWN BUT ARE REQUIRED, SEE SPECIFICATIONS.
3. SPLICE LOCATIONS ARE DIAGRAMMATIC. SPLICE AS REQUIRED.

AT SINGLE STORY WALL

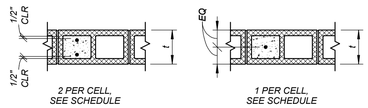
DIAGRAMMATIC ELEVATION TYPICAL CMU WALL VERTICAL REINFORCING

5 DETAIL
S301 NO SCALE



MASONRY WALL JAMB REINFORCING SCHEDULE				
WALL TYPE	MASONRY OPENING WIDTH	NUMBER OF REINFORCED CELLS PER JAMB		SPLICE LENGTH
		OPENING IN EXTERIOR WALL	OPENING IN INTERIOR WALL	
WT1	UP TO 3'-4"	1-#6 PER CELL IN 2 CELLS	1-#6 PER CELL IN 1 CELL	42"
	UP TO 6'-8"	2-#6 PER CELL IN 2 CELLS	1-#6 PER CELL IN 2 CELLS	42"

6 DETAIL
S301 NO SCALE



MASONRY WALL REINFORCING SCHEDULE						
WALL TYPE	WALL THICKNESS "t"	VERTICAL REINF.	MAXIMUM SPACING	SPLICE LENGTH	HJR SPACING	REMARKS
WT1	7 5/8"	#6	16"	42"	16"	

*SEE SEPARATE DETAIL/SCHEDULE FOR JAMB REINFORCING.

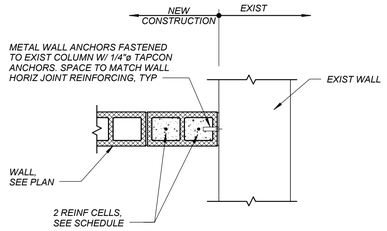
NOTES:
1. VERTICAL REINFORCING SHALL RUN FROM FOOTING TO 4" CLEAR FROM TOP OF UPPERMOST SUPPORTED BEAM (ROOF BEAM OR OPENING LINTEL). VERTICALS MAY BE LAP SPLICED AS REQUIRED FOR EASE OF BLOCK INSTALLATION. PROVIDE HOOKED DOWEL FROM FOOTING OR SUPPORT BEAM AT EACH FILLED BLOCK CELL. PROVIDE HOOK AT TOP 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.

TYPICAL FILLED CELLS WITH 1 BAR OR 2 BARS PER CELL

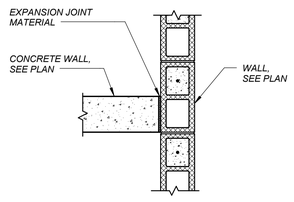
7 DETAIL & SCHEDULE
S301 NO SCALE

8 DETAIL & SCHEDULE
S301 NO SCALE

9 ELEVATION
S301 NO SCALE



10 ELEVATION
S301 NO SCALE



11 DETAIL
S301 NO SCALE

12 DETAIL
S301 NO SCALE

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Sheet Title
MASONRY SECTIONS AND DETAILS

Scale	Drawn By
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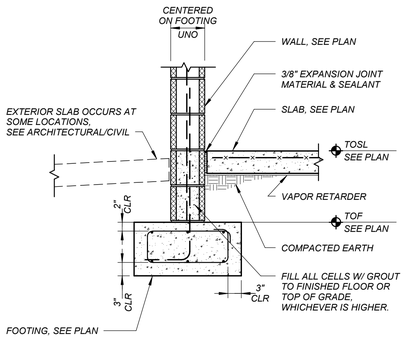
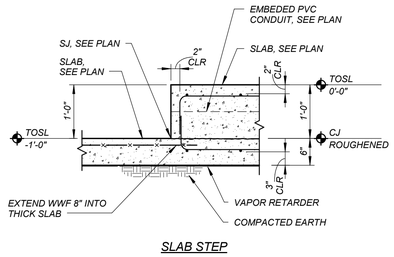
S301



1 SECTION

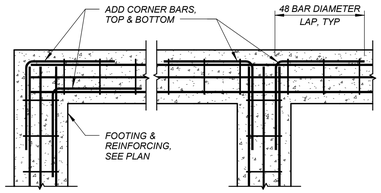
S302 NO SCALE



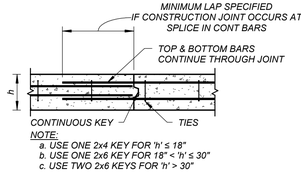
SLAB STEP

2 DETAIL

S302 NO SCALE



CONTINUOUS FOOTING CORNER BARS

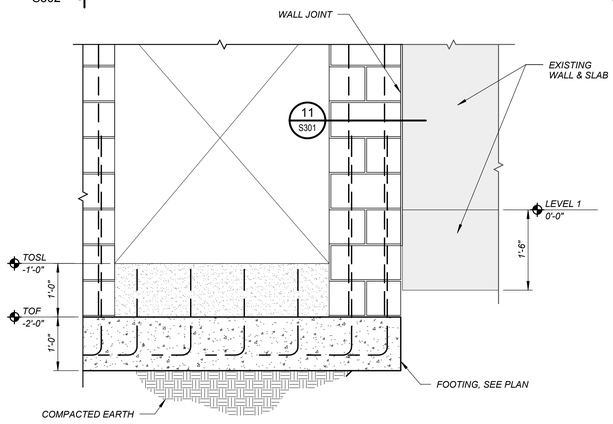


NOTE:
a. USE ONE 2x4 KEY FOR 'h' ≤ 18"
b. USE ONE 2x6 KEY FOR 18" < 'h' ≤ 30"
c. USE TWO 2x6 KEYS FOR 'h' > 30"

WALL FOOTING CONSTRUCTION JOINT

3 DETAIL

S302 NO SCALE



5 SECTION

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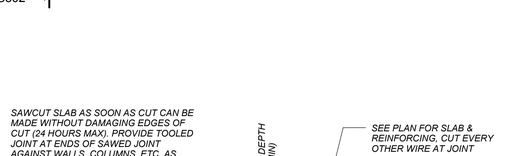
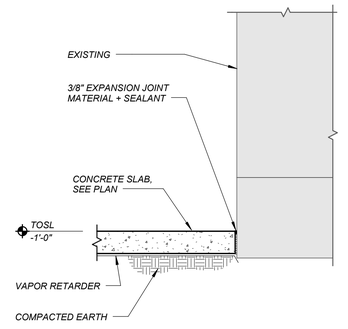


TYPICAL SAWED CONTROL JOINT (SJ)

6 DETAIL

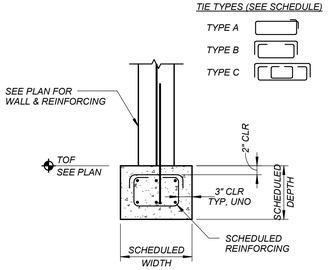
S302 NO SCALE



7 SECTION

S302 NO SCALE

TIE TYPES (SEE SCHEDULE)



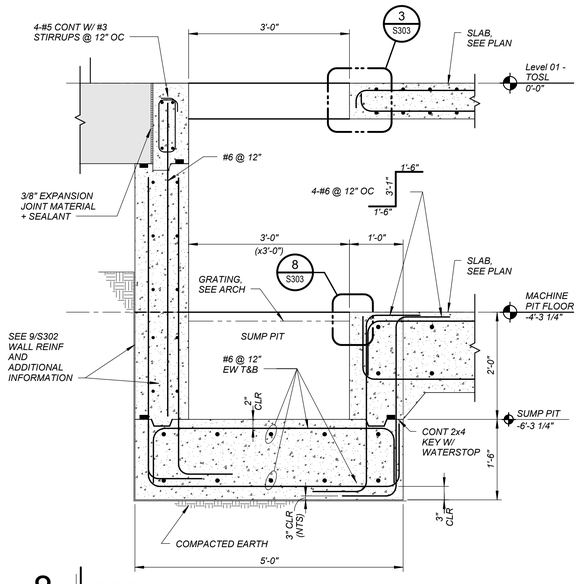
NOTES:
1. WALL IS CENTERED ON FOOTING, UNO.
2. DOWELS SHALL BE TIED IN THE PROPER LOCATION PRIOR TO CONCRETE PLACEMENT.
3. EXTEND WALL FOOTING REINFORCING THROUGH COLUMN FOOTING OR 40 BAR DIAMETERS (2'-0" MIN) INTO COLUMN FOOTING.
4. LAP ALL CONTINUOUS REINFORCING 40 BAR DIAMETERS (2'-0" MIN).
5. REFER TO CONCRETE SUPPORT BLOCK DETAIL FOR ADDITIONAL INFORMATION.
6. ALL FOOTING MARKS MAY NOT BE USED ON THIS PROJECT.

WALL FOOTING SCHEDULE

MARK	WIDTH	DEPTH	TOP BARS	BOTT. BARS	TIES TYPE	TIES SIZE	TIES SPACING	REMARKS
WF2.0	2'-0"	1'-0"	3-#4	3-#4	B	#3	12"	

4 SCHEDULE & DETAIL

S302 NO SCALE



8 DETAIL

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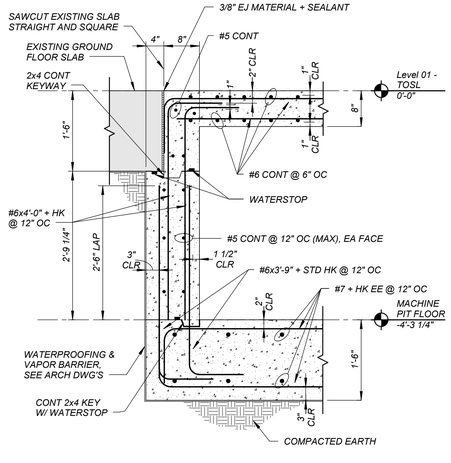

9 DETAIL

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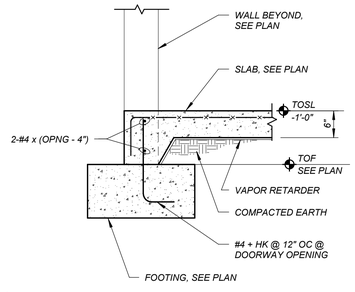

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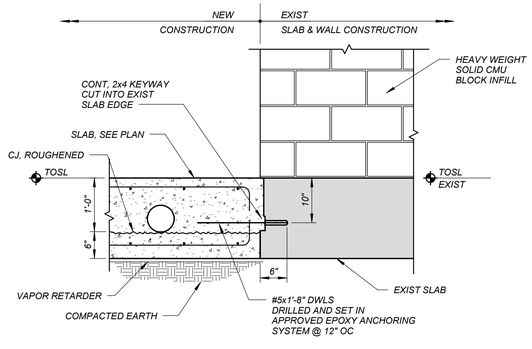

11 SECTION

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FOUNDATION SECTIONS AND DETAILS

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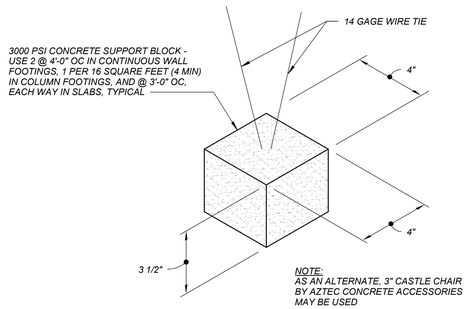
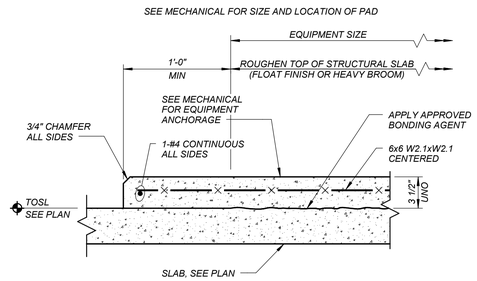


CONTRACTOR FABRICATED CONCRETE SUPPORT BLOCK

1 DETAIL

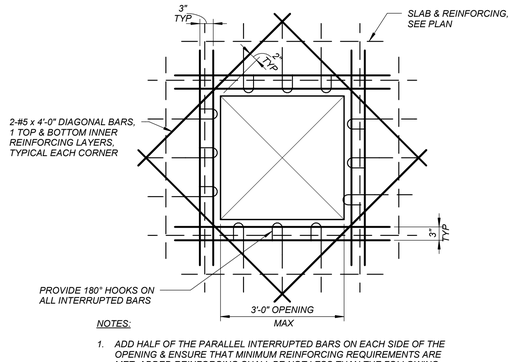
S303 | NO SCALE



TYPICAL EQUIPMENT PAD

2 DETAIL

S303 | NO SCALE



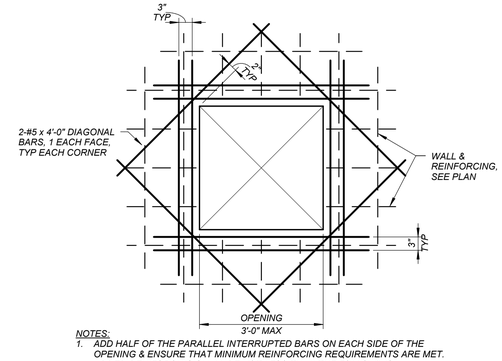
NOTES:

1. ADD HALF OF THE PARALLEL INTERRUPTED BARS ON EACH SIDE OF THE OPENING & ENSURE THAT MINIMUM REINFORCING REQUIREMENTS ARE MET. ADDED REINFORCING SHALL BE NOT LESS THAN THE FOLLOWING:
   a. 2-#5 MIN @ SLABS ≤ 10" THICK, (1 TOP & BOTTOM, EACH WAY)
   b. 2-#7 MIN @ SLABS > 10" THICK, (1 TOP & BOTTOM, EACH WAY)
2. EXTEND REINFORCING 48 BAR DIAMETERS BEYOND THE OPENING OR PROVIDE A STANDARD HOOK AT THE SLAB EDGES AROUND THE OPENING.

TYPICAL SMALL SLAB OPENING

3 PLAN DETAIL

S303 | NO SCALE



NOTES:

1. ADD HALF OF THE PARALLEL INTERRUPTED BARS ON EACH SIDE OF THE OPENING & ENSURE THAT MINIMUM REINFORCING REQUIREMENTS ARE MET. ADDED REINFORCING SHALL BE NOT LESS THAN THE FOLLOWING.
   a. 2-#5 MIN @ WALLS ≤ 12" THICK, (1 EACH FACE, EACH WAY)
   b. 2-#7 MIN @ WALLS > 12" THICK, (1 EACH FACE, EACH WAY)
2. EXTEND REINFORCING 48 BAR DIAMETERS BEYOND THE OPENING OR PROVIDE A STANDARD HOOK AT THE WALL EDGES AROUND THE OPENING.

TYPICAL SMALL WALL OPENING ELEVATION

4 DETAIL

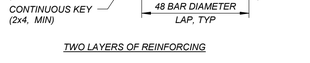
S303 | NO SCALE

TYPICAL WALL CORNER

NOTE:
SEE SECTIONS, DETAILS, ETC FOR REINFORCING LAYERING REQUIREMENTS, TYPICAL

5 PLAN DETAIL

S303 | NO SCALE



TYPICAL WALL CONSTRUCTION JOINTS

6 PLAN DETAIL

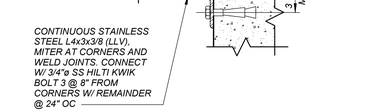
S303 | NO SCALE

TYPICAL WALL FOOTING STEP

NOTED THUS "S" ON PLAN

7 DETAIL

S303 | NO SCALE



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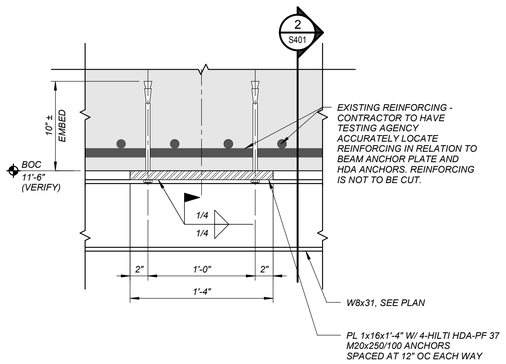

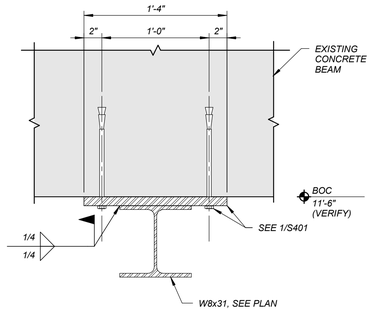

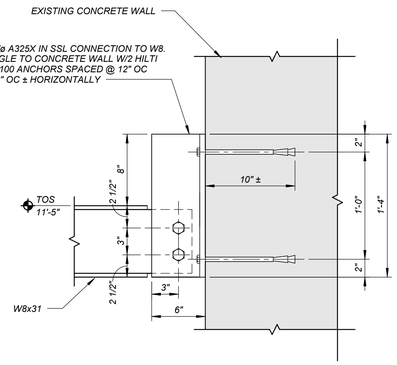

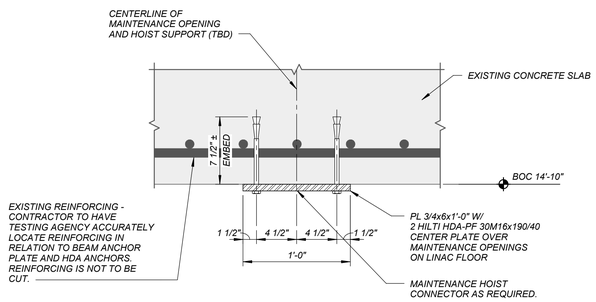

1 DETAIL
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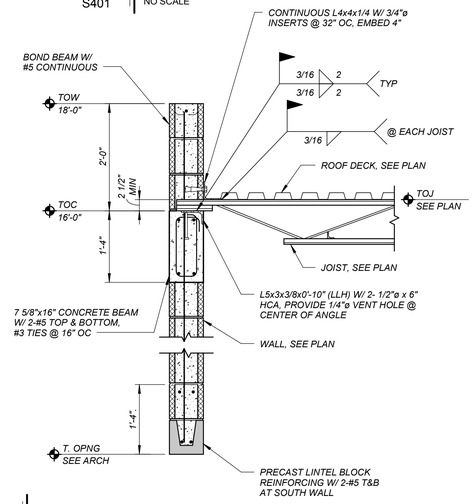

2 DETAIL
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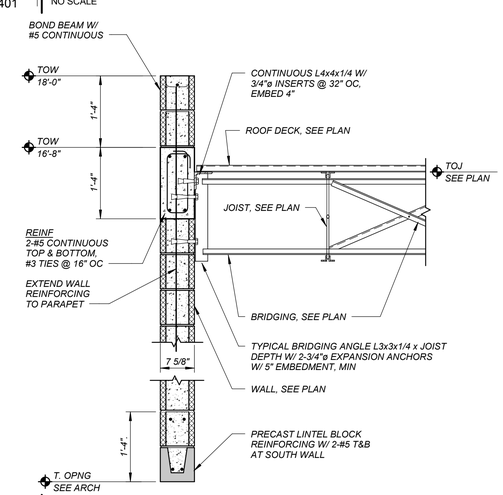

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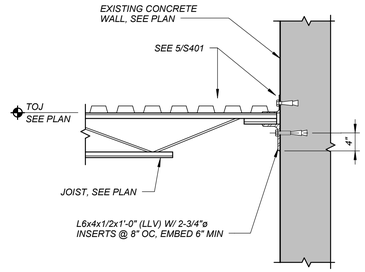

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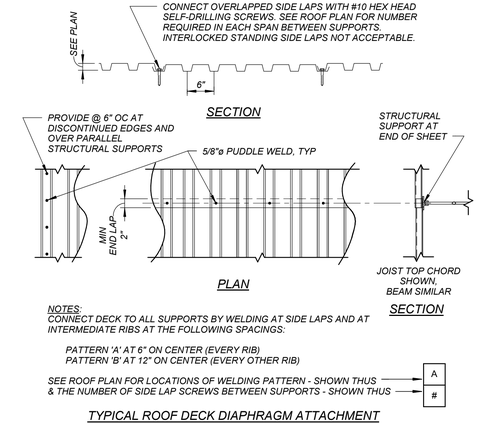


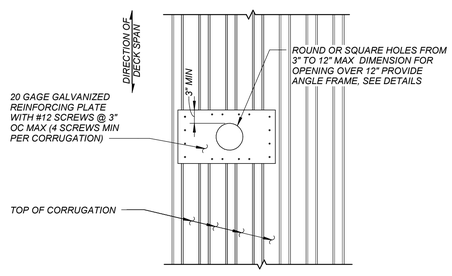
NOTES:
CONNECT DECK TO ALL SUPPORTS BY WELDING AT SIDE LAPS AND AT INTERMEDIATE RIBS AT THE FOLLOWING SPACINGS:

PATTERN 'A' AT 6" ON CENTER (EVERY RIB)
PATTERN 'B' AT 12" ON CENTER (EVERY OTHER RIB)

SEE ROOF PLAN FOR LOCATIONS OF WELDING PATTERN - SHOWN THUS A
& THE NUMBER OF SIDE LAP SCREWS BETWEEN SUPPORTS - SHOWN THUS #

TYPICAL ROOF DECK DIAPHRAGM ATTACHMENT

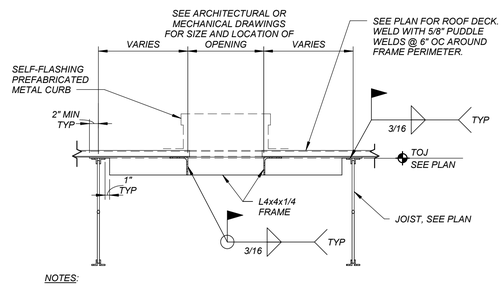
5 SECTION
S401 NO SCALE



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.

TYPICAL REINFORCEMENT AT SMALL OPENINGS IN ROOF DECK

6 SECTION
S401 NO SCALE

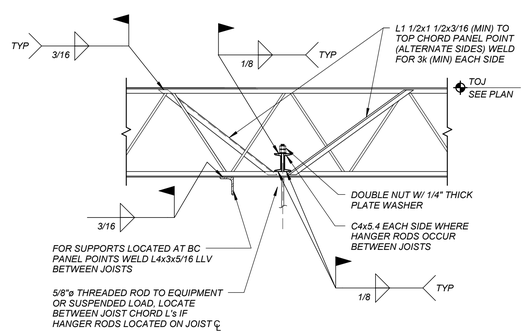


NOTES:

1. PROVIDE JOIST TOP CHORD SUPPORT FOR LOADS BETWEEN JOIST PANEL POINTS. SEE DETAILS.
2. 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).

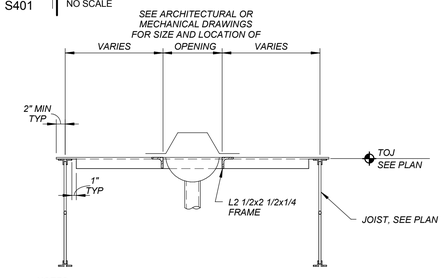
TYPICAL ROOF OPENING FRAME

7 SECTION
S401 NO SCALE



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

8 DETAIL
S401 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.

TYPICAL ROOF DRAIN OPENING FRAME

9 DETAIL
S401 NO SCALE

10 DETAIL
S401 NO SCALE

11 DETAIL
S401 NO SCALE

12 DETAIL
S401 NO SCALE

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ENGINEER OF RECORD
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Revisions

Project
UF UNIVERSITY of FLORIDA

Proton Therapy LINAC Addition

Shands Jacksonville Campus

UF LM-4985

Project Phase
100% Construction Documents

Sheet Title

FRAMING SECTIONS AND DETAILS

Scale	Drawn By
As indicated	CSH
Date	Checked By
09 DEC 2011	RWG

AEI Project No.
11662-00

Sheet No.
S401