GENERAL NOTES:

1. REFER TO THE PROJECT MANUAL FOR GOVERNING JOB REQUIREMENTS AND MATERIAL SPECIFICATIONS. THE FOLLOWING NOTES ARE SUPPLEMENTAL TO PROJECT MANUAL.
2. ALL DIMENSIONS TO, OF, AND IN EXISTING STRUCTURES SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
3. DO NOT CHANGE THE SIZE NOR SPACING OF STRUCTURAL ELEMENTS WITHOUT THE APPROVAL OF THE ENGINEER.
4. DETAILS SHOWN ARE TYPICAL APPLY TO SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.
5. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
6. BRACE BUILDING AS REQUIRED FOR CONSTRUCTION AND WIND LOADS UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS:
   FLOOR DECK, ROOF DECK, AND WALLS
7. THE DESIGN IS BASED ON THE 2009 INTERNATIONAL BUILDING CODE.
8. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES.
9. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER 'S APPROVAL.
10. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
11. VERIFY SIZE AND LOCATION OF OPENINGS PRIOR TO BEGINNING WORK. FOR DIMENSIONS NOT SHOWN, SEE MECHANICAL, ELECTRICAL, CIVIL AND ARCHITECTURAL DRAWINGS.
12. VERIFY SIZE AND LOCATION OF EQUIPMENT PADS WITH MECHANICAL AND/OR ELECTRICAL CONTRACTOR AND EQUIPMENT MANUFACTURER.

FOUNDATION AND SOIL PREPARATION NOTES:

1. THE FOUNDATION DESIGN IS BASED ON AN ALLOWABLE END BEARING PRESSURE OF 2,500 POUNDS PER SQUARE FOOT AS RECOMMENDED IN THE GEOTECHNICAL REPORT NO. 11-3661-G BY GS2 ENGINEERING & ENVIRONMENTAL CONSULTANTS, INC. AND DATED OCTOBER 31, 2011. BEARING STRATUM FOR FOOTINGS SHALL BE VERIFIED IN FIELD BY THE GEOTECHNICAL ENGINEER BEFORE PLACING CONCRETE FOOTINGS.
2. PROVIDE POSITIVE DRAINAGE FOR ALL TRENCHES DURING CONSTRUCTION. DO NOT ALLOW ANY PONDING OF WATER DURING CONSTRUCTION.
3. DO NOT PLACE FOOTINGS IN WATER OR ON FROZEN GROUND. DO NOT ALLOW GROUND BENEATH FOOTINGS TO FREEZE.
4. ALL FOOTINGS SHALL BE EXCAVATED AND CONCRETE SHALL BE PLACED THE SAME DAY OR THE FOOTING EXCAVATION IS TO BE COVERED WITH A 2 TO 4 INCH MUD SLAB OF 2000 PSI PER THE GEOTECHNICAL REPORT.
5. BEAR ALL FOOTINGS ON COMPACTED STRUCTURAL FILL SOIL AS APPROVED BY THE GEOTECHNICAL ENGINEER. SOIL BEARING SURFACES, PREVIOUSLY ACCEPTED BY OWNER'S REPRESENTATIVE, WHICH ARE ALLOWED TO BECOME SATURATED, FROZEN OR DISTURBED SHALL BE REWORKED TO SATISFACTION OF OWNER'S REPRESENTATIVE.
6. THE SOIL BENEATH THE BUILDING AND 5 FEET AROUND THE PERIMETER SHALL BE TREATED AS FOLLOWS:
   A. STRIP THE AREA OF ALL VEGETATION AND REMOVE ALL ORGANICS, DEBRIS, ASPHALT DRIVES, AND ANY EXISTING BURIED UTILITIES THAT WOULD INTERFERE WITH FOUNDATIONS.
   B. COMPLETE IN-PLACE SOIL DENSIFICATION USING A LARGE SMOOTH-DRUM VIBRATORY ROLLER BY MAKING SEVERAL PASSES OVER THE AREA IN A CROSSING PATTERN. AFTER ACHIEVING OPTIMAL DENSIFICATION IN ONE DIRECTION, REPEAT THE PROCESS IN THE PERPENDICULAR DIRECTION. CONTINUE DENSIFICATION UNTIL AN SPT N-VALUE OF 13 IS ACHIEVED, WITH A TARGET DENSITY OF 98 PERCENT OF STANDARD PROCTOR.
   C. IF ADEQUATE CONFINEMENT FOR DENSIFICATION CANNOT BE ACHIEVED, OVEREXCAVATION AND REPLACEMENT SHALL BE CONDUCTED. FOR UNDERCUT AND REPLACEMENT, EXCAVATE APPROXIMATELY 3 TO 4 FEET BELOW EXISTING GROUND SURFACE ELEVATION. EXCAVATED SOILS MAY BE USED AS STRUCTURAL FILL PROVIDED THEY MEET THE REQUIREMENTS BELOW. THE RESULTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO DETERMINE IF FURTHER UNDERCUT IS REQUIRED TO PROVIDE A STABLE BASE FOR FILL.
   D. THE FILL REQUIRED TO RAISE THE BUILDING TO BENEATH THE FLOOR SLAB SHALL BE EITHER ON SITE FILL OR SELECT (STRUCTURAL) FILL. THE FILL SHALL HAVE A PLASTICITY INDEX LESS THAN 15, FIBROUS ORGANIC CONTENT LEES THAN 5 PERCENT BY WEIGHT, AND A MAXIMUM DRY DENSITY OF AT LEAST 85 POUNDS PER CUBIC FOOT. PLACE ALL FILL (ON SITE OR SELECT) IN 8-INCH LIFTS AND COMPACT TO AT LEAST 98% OF THE STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT WITHIN –2 AND +2 PERCENTAGE POINTS OF OPTIMUM.
   E. EACH LIFT SHALL BE TESTED FOR MOISTURE CONTENT AND IN PLACE DENSITY AT A RATE OF ONE TEST PER 2,000 SQUARE FEET (MIN OF THREE PER LIFT).

CAST-IN-PLACE CONCRETE NOTES:

1. CONCRETE FOR FOOTINGS SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, 2% TO 4% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, TYPE A OR D WATER REDUCING AGENT AND A 4-5" SLUMP.
2. CONCRETE FOR THE CAST IN PLACE FLOOR SLAB SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, MID OR HIGH RANGE WATER REDUCING AGENT AND A 5-6" SLUMP.
3. CONCRETE FOR THE TOPPING SLAB SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, MID RANGE WATER REDUCING AGENT, 2%-4% AIR CONTENT USING AIR ENTRAINING AGENT, NORMAL WEIGHT CONCRETE WITH A MAXIMUM AGGREGATE SIZE OF 3/8", ONE POUND OF FIBREMESH STEALTH PER CUBIC YARD AND A 5-6" SLUMP.
4. CONCRETE FOR THE CAST IN PLACE FLOOR SLAB OVER METAL DECK SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, MID OR HIGH RANGE WATER REDUCING AGENT, NORMAL WEIGHT CONCRETE WITH A MAXIMUM AGGREGATE SIZE OF 3/4", ONE POUND OF FIBREMESH PER CUBIC YARD AND A 5-6" SLUMP.
5. CONCRETE FOR RETAINING WALLS SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, 3% TO 5% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, HIGH RANGE WATER REDUCING AGENT AND A 8-9" SLUMP.
6. CONCRETE FOR CAST-IN-PLACE ELEVATED SLAB AND BEAMS SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4,000 PSI, A MINIMUM OF 564 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, MID OR HIGH RANGE WATER REDUCING AGENT, 3%-5% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, AND A 5-6" SLUMP.
7. CONCRETE FOR CAST-IN-PLACE COLUMNS SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4,000 PSI, A MINIMUM OF 564 POUNDS OF PORTLAND CEMENT PER CUBIC YARD, MID OR HIGH RANGE WATER REDUCING AGENT AND A 5-6" SLUMP.
8. ALL CONCRETE SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.45.
9. THE AMOUNT OF MID OR HIGH RANGE WATER REDUCER SHALL BE AS RECOMMENDED BY THE ADMIXTURE SUPPLIER TO INCREASE THE SLUMP OF THE CONCRETE BY 50 PERCENT OVER THE SLUMP WITHOUT THE ADMIXTURE. THE SLUMP GIVEN IN THE CONCRETE NOTES ARE AT THE POINT OF DISCHARGE. THIS AMOUNT OF MIDRANGE IS APPROXIMATELY 8-10 OZ PER 100 POUNDS OF CEMENT. HIGH RANGE WATER REDUCER MAY ALSO BE USED WITH THE DOSAGE ADJUSTED FOR THE ABOVE RESULTS.
10. IF THE AIR TEMPERATURE IS GREATER THAN 90 DEGREES WITHIN 24 HOURS AFTER PLACEMENT, HOT WEATHER CONCRETE PROCEDURES SHALL BE USED. THE CONTRACTOR SHALL SUBMIT A PROCEDURE TO THE ENGINEER FOR APPROVAL. THESE PROCEDURES MAY INCLUDE THE FOLLOWING:
    A. PLACING THE CONCRETE IN THE EARLY MORNING HOURS
    B. THE USE OF EVAPORATION REDUCER (SEE BELOW)
    C. THE USE OF MISTING AS A CURING METHOD
    D. THE USE OF WET BLANKETS AS A CURING METHOD
    E. THE USE OF A RETARDING ADMIXTURE (NOT PREFERABLE)
11. FIVE 4X8 CONCRETE CYLINDERS SHALL BE MADE FOR EVERY 75 CUBIC YARDS OR EACH DAYS POUR, TO BE TESTED AT 7, 28, 28, 28 AND ONE TO HOLD. THE CONCRETE SLUMP, TEMPERATURE, AND AIR CONTENT SHALL BE MEASURED EVERY TIME A SET OF FOUR CYLINDERS IS MADE.
12. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE AMERICAN CONCRETE INSTITUTE STANDARDS "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301). SPLICES IN REINFORCEMENT SHALL MEET CLASS B TENSION LAP REQUIREMENTS UNLESS NOTED OTHERWISE.
13. COVER FOR ALL REINFORCEMENT SHALL MEET THE COVERAGE REQUIREMENTS AS SHOWN IN THE LATEST ACI 318, AS NOTED BELOW OR AS SHOWN ON THE DETAILS. COVER DIMENSIONS SHOWN ON THE DETAILS CONTROL OVER THE ACI 318 OR THOSE NOTED BELOW.
    A. AGAINST FORMED SURFACES: 1 1/2"
    B. AGAINST EARTH: 3"
    C. BETWEEN REBAR: 1 1/2"
    D. TOP OF SLAB ON GRADE: 1 1/2"
14. ANY CONCRETE TO BE PLACED FURTHER THAN 16 FEET FROM THE END OF A CONCRETE TRUCK SHALL BE PUMPED WITH A COMMERCIAL CONCRETE PUMPING TRUCK OR OTHER PLACEMENT METHOD APPROVED BY THE ENGINEER. THE CONCRETE TRUCK SHALL NOT BE ALLOWED TO DRIVE OVER THE SUBGRADE OR THE SLAB REINFORCEMENT.
15. REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO A.S.T.M. A-615 GRADE 60. REINFORCEMENT SMALLER THAN #4 BARS SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED IN THE FIELD. REINFORCEMENT GREATER THAN A #4 BAR MAY BE BENT IN THE FIELD WITH HEAT UNLESS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER OTHERWISE.
16. PROVIDE CORNER BARS IN FOOTINGS, THE SAME SIZE AND NUMBER AS CONTINUOUS REINFORCEMENT UNLESS NOTED ON THE PLANS OR TYPICAL DETAILS OTHERWISE.
17. WHERE REQUIRED, STEP NEW FOOTINGS UP OR DOWN IN RATIO OF TWO HORIZONTALS TO ONE VERTICAL TO JOIN EXISTING FOOTINGS. CAST STEPPED FOOTINGS MONOLITHICALLY.
18. DOWEL CONCRETE WALLS AND PIERS INTO FOOTINGS WITH DOWELS THE SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT. EXTEND DOWELS TO WITHIN 3" OF BOTTOM OF FOOTING, TERMINATED WITH ACI STD. 90 DEGREE HOOK, UNLESS NOTED OTHERWISE.
19. PROVIDE A ROUGH CONCRETE SURFACE (1/4" MINIMUM AMPLITUDE) AT THE INTERSECTION OF CONCRETE WALLS, STEM WALLS, AND PILASTERS WITH THE TOP OF FOOTINGS, DO NOT PROVIDE A KEYWAY UNLESS SHOWN OR NOTED ON THE DRAWINGS
20. NO HOLES OR OPENINGS ARE PERMITTED THROUGH CONCRETE SLABS, BEAMS, OR WALLS EXCEPT AS FOLLOWS:
    A. WHERE SHOWN AND AS DETAILED ON DRAWINGS.
    B. MISCELLANEOUS HOLES THROUGH SLABS OR WALLS WHICH DO NOT DISPLACE MORE THAN ONE BAR. THESE DO NOT REQUIRE ADDITIONAL REINFORCEMENT.
21. PLACE INTERMEDIATE HORIZONTAL BARS (#4 AT 12" MAXIMUM) ON EACH VERTICAL FACE OF ALL BEAMS GREATER THAN 36" IN DEPTH UNLESS NOTED OTHERWISE.
22. CAST CONCRETE ON SLOPED SURFACES BEGINNING AT LOWEST ELEVATION AND CONTINUING MONOLITHICALLY TOWARD HIGHER ELEVATIONS UNTIL INTENDED POUR IS COMPLETED.
23. REINFORCING BARS, BAR SUPPORTS, AND SPACERS SHALL BE DETAILED AND PROVIDED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL. USE WIRE-BAR SUPPORTS COMPLYING WITH CRSI SPECIFICATONS. SUPPORTS SHALL NOT BE PLACED FURTHER THAN 4 FEET APART. DAYTON/RICHMOND PRODUCTS (800-745-3703) OR EQUAL UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS:
    A. AT SLABS-ON-GRADE: (SLAB THICKNESS MINUS 1 1/2 INCHES) HIGH, TYPE R21, OR TYPE BBP USE SUPPORTS WITH SAND PLATES OR HORIZONTAL RUNNERS WHERE BASE MATERIAL WILL NOT SUPPORT CHAIR LEGS. CONCRETE BLOCK OR CLAY MASONRY MAY NOT BE USED.
    B. AT FOOTINGS: 3 IN. HIGH, TYPE R21
    C. FOR EXPOSED TO VIEW CONCRETE SURFACES WHERE LEGS OF SUPPORTS ARE IN CONTACT WITH THE FORMS, PROVIDE SUPPORTS WITH LEGS THAT ARE PLASTIC PROTECTED (CRSI, CLASS 1) OR STAINLESS STEEL PROTECTED (CRSI, CLASS 2).
24. APPLY A CONCRETE CURE - SEAL HARDENER TO SEATING BOWL AND CONCOURSE SLAB: ONE OF THE FOLLOWING
    1. "ASHFORD FORMULA", CURECRETE DISTRIBUTION INC.
    2. "SEAL HARD" L&M CONSTRUCTION CHEMICALS, INC.
    3. "SIKAFLOOR PRO SEAL W" SIKA CORPORTATION.
25. SEE ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS FOR EXACT LOCATIONS AND DETAILS OF DEPRESSED SLABS, FLOOR DRAIN LOCATIONS, PLATFORMS, CURBS, AND PADS.
26. DEGUSSA CONFILM OR EUCOBAR EVAPORATION REDUCERS SHALL BE USED AFTER EACH FINISHING OPERATION ON THE CAST IN PLACE CONCRETE FLOOR SLAB UNLESS PRIOR APPROVALFROM THE ENGINEER HAS BEEN OBTAINED TO NOT USE THIS PRODUCT.
27. ADHESIVE ANCHORS WITH REBAR OR THREADED RODS, SHALL BE AS NOTED BELOW. INSTALL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, WHICH INCLUDES CLEANING THE HOLE WITH AIR AND USING A MANUFACTURER APPROVED DISPENSING TOOL WITH MIXING NOZZLE.
    A. INTO CONCRETE OR GROUTED CMU: HILTI HIT 150 MAX OR SIMPSON SET HIGH STRENGTH EPOXY-TIE ANCHORING ADHESIVE
    B. INTO NON-GROUTED CMU: HILTI HIT HY 20
28. NO PIPING OR CONDUITS SHALL BE INSTALLED IN ANY CONCRETE WITHOUT THE APPROVAL OF THE ENGINEER. IN GENERAL, IF APPROVED BY THE ENGINEER, ANY PIPING OR CONDUITS MUST BE LOCATED IN THE MIDDLE OF THE SLAB AND NOT BE OVER ONE INCH IN DIAMETER.
29. ALL WATERSTOPS SHALL BE 6" PVC, CENTER BULB TYPE, SUCH AS GREENSTREAK STYLE 732. BENTONITE STRIP SUCH AS GREENSTREAK SWELLSTOP STYLE 594.
30. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, PIPING, WATERSTOPS, INSERTS, GROUNDS, AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT. FOR EMBEDDED ITEMS AND REQUIRED DETAILS, SEE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. VERIFY SIZE AND LOCATION OF ALL OPENINGS.
31. ALL PIPING AND DUCT PENETRATIONS THROUGH NEW STRUCTURAL SLABS ARE TO BE SLEEVED OR CHASED. NO CORING OF SLAB IS PERMITTED.
32. THE 10 MIL VAPOR RETARDER INDICATED ON THE SECTIONS SHALL BE EITHER STEGO 10 MIL CLASS A VAPOR RETARDER OR VAPOR BLOCK 10 BY RAVEN INDUSTRIES. USE STEGO OR RAVEN TAPE ON ALL LAPS AND AROUND ALL PENETRATIONS.
33. RIGID INSULATION USED AS CONCRETE VOID FILL SHALL BE EXTRUDED POLYSTYRENE WITH MINIMUM COMPRESSIVE STRENGTH OF 5 PSI.

STEEL NOTES:

1. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION.
2. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY.
3. ANY CONNECTIONS WITHOUT WELD SYMBOLS SHALL BE AT A MINIMUM WELDED ALL AROUND WITH THE MINIMUM FILLET OR BUTT WELD SIZE.
4. STRUCTURAL STEEL ANGLES, PLATES, ETC. SHALL CONFORM TO A.S.T.M. A36 REQUIREMENTS (36 KSI). STRUCTURAL STEEL W AND C SHAPES SHALL CONFORM TO A.S.T.M. A992 (50 KSI). STRUCTURAL TUBING AND PIPES SHALL CONFORM TO THE A.S.T.M. A500 GRADE B REQUIREMENTS (46 KSI).
5. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   A. ALL BOLTED CONNECTIONS ARE TO BE 3/4" MINIMUM DIAMETER A325 TYPE N OR SC BOLTS IN STANDARD HOLES UNLESS NOTED OTHERWISE OR AS DETERMINED BY THE CONNECTION DESIGNER OR NOTED ON THE PLANS. DESIGN USING STANDARD HOLES UNLESS OTHERWISE NOTED OR REQUIRED FOR ERECTION.
   B. MINIMUM CAPACITY OF BEAM CONNECTIONS: FOR CONNECTIONS NOT DETAILED, PROVIDE CONNECTION CAPACITY OF AT LEAST THAT REQUIRED BY PART 3 OF THE AISC MANUAL IN THE SECTION "MAXIMUM TOTAL UNIFORM LOAD TABLES" FOR LRFD DESIGN OR "ALLOWABLE LOADS ON BEAMS" FOR ALLOWABLE STRESS DESIGN, FOR THE GIVEN MEMBER AND STEEL SPECIFICATIONS. CONCENTRATED LOADS NEAR SUPPORTS MUST BE ADDED.
   C. THE DESIGN SHEAR FOR EACH CONNECTION UNLESS NOTED ON THE DRAWINGS SHALL BE 110% OF THE REACTION FROM A UNIFORM LOAD OVER THE SPAN WHICH CREATES THE MAXIMUM DESIGN MOMENT FOR ROOF BEAM CONNECTIONS AND 180% FOR COMPOSITE FLOOR CONNECTIONS. THE MINIMUM REACTION SHALL BE 14 KIPS.
   D. INDICATOR BOLTS EQUAL TO TENSION FOR CONTROL BOLTS OF THE LeJEUNE COMPANY OF LAKEVILLE, MINNESOTA (800-872-2658) SHALL BE USED.
   E. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER. USE MINIMUM OF TWO 3/4" DIAMETER A325 BOLTS PER CONNECTION.
7. FRAME ALL OPENINGS IN ROOF DECK 8" OR LARGER WITH A STRUCTURAL STEEL MEMBER ON ALL SIDES EXCEPT WHERE A SIDE MAY BE WITHIN 1'-0" OF ANOTHER FRAMING MEMBER. FRAMING NOT REQUIRED FOR ROOF OPENINGS SMALLER THAN 8"
8. THE CONTRACTOR SHALL VERIFY THAT THE FLOW LINE OF ALL SCUPPERS, INCLUDING OVERFLOW SCUPPERS, IS NO HIGHER THAN 4" ABOVE THE TOP OF THE ROOFING MATERIAL (DISCOUNTING ANY CANT STRIPS OR FLASHING).
9. PROVIDE 3/8" STIFFENER PLATES ON EACH SIDE OF THE WEB OF ALL BEAMS AT ALL SUPPORTS THAT ARE BELOW THE BEAM, AND AT ALL COLUMNS THAT ARE ABOVE THE BEAM, OMITTING WHERE BEAMS INTERSECT.

ROOF DECK NOTES:

1. ROOF DECK SHALL BE TYPE B-22 GAGE AS SPECIFIED BY THE STEEL DECK INSTITUTE AND SHALL BE GALVANIZED. DECK SHALL BE WELDED TO SUPPORTS AT 6 INCHES ON CENTER AT LAPS AND ENDS, AND AT 12 INCHES ON CENTER SUPPORTS BETWEEN LAPS, WITH 3 SIDELAP SCREWS PER SPAN. DECK SHALL BE MODIFIED AS REQUIRED AT EDGE SUPPORTS PARALLEL TO THE RIBS SO THAT THE DECK CAN BE WELDED TO THE SUPPORT AT 24 INCHES ON CENTER. WELDS SHALL BE 5/8" PUDDLE WELDS WITH A MAXIMUM BURN-THROUGH OF 30 PERCENT AND WITH A MAXIMUM OF 10 PERCENT FAILING. ALL SCREWS SHALL BE Teks BY ITW BUILDEX, OR EQUAL. ALL SCREWS IN EXTERIOR WALLS SHALL BE ZINC PLATED WITH A TYPE II ASTM B 633 COATING.
2. PRESS BOX AND TICKED BUILDING ROOF DECK SHALL BE VERSADEK TYPE 2, 22 GAGE AS SPECIFIED BY THE STEEL DECK INSTITUTE AND SHALL BE GALVANIZED. DECK SHALL BE WELDED TO SUPPORTS AT A 24.5/4 PATTERN, WITH SIDELAP SCREWS AT 12" OC PER SPAN. DECK SHALL BE MODIFIED AS REQUIRED AT EDGE SUPPORTS PARALLEL TO THE RIBS SO THAT THE DECK CAN BE WELDED TO THE SUPPORT AT 24 INCHES ON CENTER. WELDS SHALL BE 1/2" PUDDLE WELDS WITH A MAXIMUM BURN-THROUGH OF 30 PERCENT AND WITH A MAXIMUM OF 10 PERCENT FAILING. ALL SCREWS SHALL BE Teks BY ITW BUILDEX, OR EQUAL. ALL SCREWS IN EXTERIOR WALLS SHALL BE ZINC PLATED WITH A TYPE II ASTM B 633 COATING.
3. PROVIDE L3X3X1/4 AROUND ALL ROOF PENETRATIONS NOT SHOWN OVER 8 INCHES FOR METAL DECK SUPPORT.
4. VERIFY SIZE, LOCATION, AND NUMBER OF ROOF OPENINGS WITH MECHANICAL AND ELECTRICAL PLANS AND CONTRACTORS.

FLOOR DECK NOTES (COMPOSITE AND NON COMPOSITE):

1. ALL FLOOR DECK SHALL HAVE A MINIMUM OF 3" BEARING ON CONCRETE OR MASONRY AND SHALL LAP A MINIMUM OF 2 INCHES AT ENDS. CONTRACTOR MAY AT HIS OPTION BUTT ENDS OF DECK OVER STEEL BEAMS AND TAPE JOINTS TO PREVENT SLURRY PENETRATION.
2. METAL DECK SHALL BE CAPABLE OF SUPPORTING DEAD LOAD AND 20 PSF CONSTRUCTION LOAD AS A FORM AND SUPERIMPOSED LOADS INDICATED ON FULL COMPOSTIE SECTION. MAXIMUM LIVE LOAD DEFLECTION OF COMPOSITE SECTION SHALL BE 1/360 OF CLEAR SPAN.
3. THE COMPOSITE FLOOR DECK SHALL BE 22 GAUGE, TYPE 1.5 VL BY VULCRAFT OR EQUAL. THE DECK SHALL BE GALVANIZED. DECK SHALL BE WELDED TO SUPPORTS AT 12 INCHES ON CENTER AT ALL SUPPORTS (INTERMEDIATE AND ENDS). WELDS SHALL BE 5/8" PUDDLE WELDS WITH A MAXIMUM BURN-THROUGH OF 30 PERCENT AND WITH A MAXIMUM OF 10 PERCENT FAILING.
4. FOR STEEL FRAMED FLOORS, PROVIDE ADDITIONAL CONCRETE AS NECESSARY TO FINISH THE FLOORS TO WITHIN THE SPECIFIED TOLERANCES BY ACCOUNTING FOR THE STEEL JOIST, BEAM AND DECK DEFLECTION UNDER THE WET WEIGHT OF THE CONCRETE. IT IS SUGGESTED TO ALLOW FOR AN ADDITIONAL ONE HALF INCH OF CONCRETE PER FLOOR TO COMPENSATE FOR THE DEFLECTION. CONTRACTOR TO USE THE APPROPRIATE PLACEMENT MEASUREMENT METHOD TO ACCOUNT FOR THIS DEFLECTION.
5. FRAME ALL OPENINGS IN SLABS 2'-0" SQUARE OR LARGER WITH A STRUCTURAL STEEL MEMBER ON ALL SIDES EXCEPT WHERE A SIDE MAY BE WITHIN 1'-0" OF ANOTHER FRAMING MEMBER. FRAME OPENINGS WITH C8X11.5 UNLESS NOTED OTHERWISE. PROVIDE TWO #5 BARS, 6'-0" LONG, AT ALL CORNERS AND AT EDGES OF OPENINGS IN SLAB.
6. LOCATE MECHANICAL OPENINGS THROUGH SLABS NO CLOSER THAN 2'-0" TO BEAM CENTERLINE.
7. FOR SLAB OPENINGS GREATER THAN 1'-0" BUT LESS THAN 2'-0" SQUARE, PROVIDE A #4 BY 3'-0" LONG DIAGONAL BAR AT ALL CORNERS OF OPENINGS.

CONCRETE MASONRY UNIT (CMU) WALL NOTES:

1. REFER TO THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS FOR TYPES OF MASONRY OTHER THAN CONCRETE MASONRY, SUCH AS BRICK. THESE NOTES DO NOT APPLY TO 4" VENEER CMU. IF THERE ARE ANY CONFLICTS BETWEEN THE WRITTEN SPECIFICATIONS AND THESE NOTES, THESE NOTES SHALL GOVERN.
2. MORTAR SHALL CONFORM TO TABLE 1 OF ASTM C270, TYPE S. THE MORTAR MIX DESIGN (BY VOLUME) SHALL BE SUBMITTED TO THE ENGINEER BEFORE CONSTRUCTION BEGINS. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 NORMALWEIGHT SPECIFICATIONS WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI. THE SPECIFIED COMPRESSIVE STRENGTH, f'm, IS 1500 PSI.
3. COARSE CONCRETE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A SLUMP OF 8 TO 11 INCHES. GROUT MAY BE EITHER READY MIXED OR JOB MIXED, AND SHALL BE BASED ON A MIX DESIGN (BY VOLUME) APPROVED BY THE ENGINEER. THE AMOUNT OF COARSE AGGREGATE SHALL NOT EXCEED THE AMOUNT OF FINE AGGREGATE. EVIDENCE THAT THE MIX DESIGN SHOULD ACHIEVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI SHALL BE PROVIDED TO THE ENGINEER. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPRESSIVE STRENGTH.
4. WHEN MIXING MORTAR AND GROUT, CONTAINERS OF KNOWN VOLUME SHALL BE USED. MEASUREMENT USING SHOVELS SHALL NOT BE ALLOWED. FOR GROUT, THE SAND AND PEA GRAVEL SHALL BE TAKEN FROM SEPARATE PILES, NOT FROM A PRE-BLENDED PILE. IF MEASUREMENT BY SHOVELING OR USE OF A PRE-BLENDED PILE IS DISCOVERED, THE ENGINEER MAY REQUIRE ALL WALLS BUILT SO FAR TO BE TESTED PER ASTM C 1314 BY CUTTING 3 MASONRY PRISMS AND 3 GROUT CORES OUT OF THE WALL FOR EVERY 5,000 SQUARE FEET OF WALL, AND MAY REQUIRE ANY AREA OF WALL TESTING BELOW 1,500 PSI TO BE REPLACED AT NO COST TO THE OWNER.
5. THREE GROUT PRISMS SHALL BE MADE DURING THE FIRST DAY OF MASONRY WORK AND FOR EVERY 5,000 SF OF WALL (OR LESS) THEREAFTER, WITH ALL THREE PRISMS TESTED AT 28 DAYS. THE ENGINEER MAY REQUIRE ANY AREA OF WALL TESTING BELOW 1,500 PSI TO BE REPLACED AT NO COST TO THE OWNER. EVERY TIME A SET OF GROUT PRISMS IS MADE, THE LABORATORY SHALL VERIFY:
   A. PROPORTIONS OF MORTAR AND GROUT MIXING
   B. REBAR AND JOINT REINFORCEMENT SIZES AND LOCATIONS
   C. PROPER GROUT PLACEMENT AT REBAR
   D. HEADJOINTS ARE FULLY MORTARED
   E. CONTROL JOINTS ARE REINFORCED AND FULLY MORTARED
   F. PROPER COLD AND HOT WEATHER PROCEDURES USED
6. COLD WEATHER AND HOT WEATHER PROCEDURES SHALL BE USED IN ACCORDANCE WITH ACI 530.1/ASCE 6/TMS 602 ARTICLE 1.8C AND 1.8D.
7. REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO A.S.T.M. A-615 GRADE 60.
8. ALL LOAD BEARING CMU WALLS AND WALL AROUND CONCOURSE SHALL BE REINFORCED VERTICALLY WITH #5 BARS, AT 4 FEET ON CENTER, AND HORIZONTALLY WITH 2 #5 BARS, AT 4 FEET ON CENTER. VERTICAL REINFORCEMENT SHALL EXTEND TO THE TOP OF ALL PARAPETS. PROVIDE REINFORCEMENT BARS ALL AROUND ALL OPENINGS, EXTENDING 2 FEET PAST EACH CORNER. REFER TO THE LINTEL SCHEDULE FOR ADDITIONAL REINFORCEMENT. ALL TOP COURSES SHALL HAVE HORIZONTAL REINFORCEMENT. ALL REINFORCEMENT BARS IN CMU WALLS SHALL BE PROVIDED WITH 1" CONCRETE GROUT COVER.
9. ALL INTERIOR NON-LOAD BEARING CMU WALLS SHALL BE REINFORCED HORIZONTALLY WITH STANDARD TRUSS TYPE DUR-O-WALL, AT 16 INCHES ON CENTER. HORIZONTAL BOND BEAMS SHALL BE LOCATED AT THE TOP COURSE OF THE WALL AND ABOVE AND BELOW OPENINGS. HORIZONTAL BEAMS SHALL BE REINFORCED WITH 2 #5 BARS, IN 8 INCH AND 12 INCH WALLS, OR 1 #4 BAR, IN 6 INCH WALLS. PROVIDE 1 #4 BAR VERTICAL REINFORCEMENT ON EACH SIDE OF AN OPENING. EXTEND REINFORCEMENT 2 FEET PAST EACH CORNER OF AN OPENING. REFER TO THE LINTEL SCHEDULE FOR ADDITIONAL REINFORCEMENT. ALL REINFORCEMENT BARS IN CMU WALL SHALL BE PROVIDED WITH 1" CONCRETE GROUT COVER.
10. THE MINIMUM SPLICE LENGTH FOR ALL VERTICAL AND HORIZONTAL REINFORCEMENT IN ALL MASONRY SHALL BE AS FOLLOWS:
    #4 BARS – 2'-0" (MIN)
    #5 BARS – 2'-7" (MIN)
    #6 BARS – 3'-4" (MIN)
    #7 BARS – 4'-0" (MIN)
11. PROVIDE VERTICAL CONTROL JOINTS AT LOCATIONS APPROVED BY THE ARCHITECT, WITH A MAXIMUM SPACING OF 20 FEET. HORIZONTAL BOND BEAM REINFORCEMENT SHALL CONTINUE THROUGH ALL CONTROL JOINTS IN ALL WALLS (BOTH LOAD-BEARING AND NON-LOAD BEARING WALLS). CONTROL JOINTS SHALL CONSIST OF A VERTICAL MASONRY JOINT, RAKED BACK AND CAULKED.
12. DOVETAIL ANCHORS SHALL BE USED AT ALL VENEER TIES ANCHORED INTO CONCRETE.

PRE-ENGINEERED METAL BUILDING NOTES

SPECIAL REQUIREMENTS FOR THE METAL BUILDING DESIGN:

1. BEFORE FABRICATION, SHOP DRAWINGS OF THE METAL BUILDING SHALL BE SUBMITTED TO CHA, FOR REVIEW AND COMMENT.
2. THE METAL BUILDING SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS AND SHALL BE DESIGNED IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE:
   A. MAIN FRAMES: 20 PSF (THIS SHALL NOT BE REDUCED)
   B. COMPONENTS: 20 PSF (THIS SHALL NOT BE REDUCED)
   C. COLLATERAL LOAD: 6 PSF
   D. WIND LOAD PER ASCE 7-05:
      1) 3 SECOND GUST DESIGN WIND SPEED= 95 MPH
      2) EXPOSURE CATEGORY: C
      3) IMPORTANCE FACTOR=1.0
      4) ASSUME ALL WINDOWS AND OH DOORS ARE OPENINGS FOR THE ENCLOSURE CLASSIFICATION, BUT ASSUME THEY ARE CLADDING FOR THE CALCULATION OF LOADS ON SECONDARY FRAMING.
   E. SNOW LOAD: Pg=10 PSF
   F. EARTHQUAKE DESIGN DATA:
      1) SEISMIC IMPORTANCE FACTOR, I: 1.0
      2) MAPPED SPECTRAL RESPONSE ACCELERATIONS:Ss=0.558 S1=0.150
      3) SOIL SITE CLASS: C
      4) SEISMIC DESIGN CATEGORY: C
3. THE LATERAL DEFLECTION OF THE LATERAL FORCE RESISTING SYSTEMS SHALL NOT EXCEED H/400 FOR ANY BUILDING WITH MASONRY VENEER HIGHER THAN 8 FEET ABOVE FINISH FLOOR.
4. ALL COLD-FORMED STEEL SHALL BE DESIGNED BY THE METAL BUILDING ENGINEER PER AISI-NASPEC 2001. THE FOLLOWING ARE ADDITIONAL MINIMUM REQUIREMENTS FOR THE PURLINS AND GIRTS ON THIS PROJECT:
   A. BOTH FLANGES SHALL BE BRACED AT 8 FT OC MAXIMUM.
   B. BRACING LINES SHALL CONSIST OF 16 GAGE STRAPS X 1.5" WITH A #12 SCREW AT EACH FLANGE.
   C. BRACING LINES SHALL BE ANCHORED WITH 2 HORIZONTAL AND 2 DIAGONAL L1.5X1.5X16 GAUGE ANGLES AT EACH END BAY, AT BOTH SIDES OF RIDGES, AND AT 50 FT OC MAXIMUM. HORIZONTAL ANGLES SHALL BE COPED AND ATTACHED TO EACH FLANGE WITH 2 #12 SCREWS. ATTACH DIAGONALS TO HORIZONTALS WITH 2#12 SCREWS.
   D. BRACING STRAPS MAY BE OMITTED ON FLANGES THAT ARE BRACED WITH THROUGH-FASTENED ROOF PANELS OR METAL SIDING.
5. THE METAL BUILDING ENGINEER SHALL DETERMINE THE DIAMETER OF THE ANCHOR BOLTS REQUIRED FOR THE TYPICAL ANCHOR BOLT DETAIL.

DESIGN LOADS:

THE FOLLOWING DESIGN LOADS WERE USED FOR THIS BUILDING BASED ON THE 2009 INTERNATIONAL BUILDING CODE:

FLOOR LIVE LOADS:
CORRIDORS AND STAIRWAYS: 100 PSF
ASSEMBLY AREAS: 100 PSF
LIGHT STORAGE AREAS: 125 PSF
SEATING BOWL: 100 PSF
PRESS BOX: 50 PSF

ROOF LIVE LOAD: 20 PSF

ROOF SNOW LOAD
GROUND SNOW LOAD = 10 PSF
FLAT-ROOF SNOW LOAD = 10 PSF
SNOW EXPOSURE FACTOR = 1.0
SNOW LOAD IMPORTANCE FACTOR, = 1.0
THERMAL FACTOR. = 1.1

WIND DESIGN DATA:
BASIC WIND SPEED (3 SECOND GUST): 95 MPH
WIND IMPORTANCE FACTOR=1.15
WIND EXPOSURE CATEGORY: C
INTERNAL PRESSURE COEFFICIENTS: +/- 0.18
ALL NEW COMPONENTS AND CLADDING NOT DESIGNED BY THE ENGINEER SHALL BE DESIGNED FOR 25 PSF UNLESS OTHERWISE APPROVED BY THE ENGINEER.

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR, I: 1.25
MAPPED SPECTRAL RESPONSE ACCELERATIONS: SS=0.558 S1=0.150
SITE CLASS: C
SEISMIC DESIGN CATEGORY: C
BASIC SEISMIC-FORCE-RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS
INTERMEDIATE REINFORCED CONCRETE MOMENT FRAMES
DESIGN BASE SHEAR: 306 kips
SEISMIC RESPONSE COEFFICIENT: Cs=0.1094
RESPONSE MODIFICATION FACTOR: R=5
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE METHOD

STATEMENT OF SPECIAL INSPECTION

MATERIAL	SUBMITTAL	TESTING		
		REQUIREMENTS	FREQUENCY	AGENCY
SOIL	N/A	1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. 5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE HAS BEEN PREPARED PROPERLY.	1. PERIODIC 2. PERIODIC 3. PERIODIC 4. CONTINUOUS 5. PERIODIC	SPECIAL INSPECTOR
CONCRETE	1. SUBMIT CONCRETE MIX DESIGNS FOR EACH ELEMENT. 2. REINFORCEMENT SHOP DRAWINGS.	1. INSPECTION OF REINFORCING STEEL AND PLACEMENT. 2. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE. 3. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE. 4. VERIFY USE OF REQUIRED DESIGN MIX. 5. AT TIME OF PLACEMENT, MAKE CONCRETE CYLINDERS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND TAKE CONCRETE TEMPERATURE. 6. INSPECTION OF CONCRETE PLACEMENT FOR PROPER TECHNIQUES. 7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE TECHNIQUES. 8. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED.	1. PERIODIC 2. CONTINUOUS 3. PERIODIC 4. CONTINUOUS 5. CONTINUOUS 6. CONTINUOUS 7. PERIODIC 8. PERIODIC	SPECIAL INSPECTOR
STRUCTURAL STEEL	1. SUBMIT MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR HIGH STRENGTH BOLTS, NUTS, AND WASHERS. 2. SUBMIT MANUFACTURER'S MILL TEST REPORTS FOR STRUCTURAL STEEL. 3. SUBMIT MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR WELD FILLER MATERIALS.	1. VERIFY IDENTIFICATION MARKINGS CONFORM TO ASTM STANDARDS FOR HIGH STRENGTH BOLTS, NUTS, AND WASHERS. 2. INSPECTION OF HIGH STRENGTH BOLTING OF SNUG TIGHT JOINTS. 3. INSPECTION OF PRETENSIONED AND SLIP CRITICAL JOINTS. 4. VERIFY STRUCTURAL STEEL IDENTIFICATION MARKINGS CONFORM TO AISC 360. 5. VERIFY OTHER STEEL IDENTIFICATION MARKINGS CONFORM TO ASTM STANDARDS AS SPECIFIED. 6. VERIFY IDENTIFICATION MARKINGS FOR WELD FILLER MATERIALS CONFORM TO AWS SPECIFICATION. 7. INSPECT WELDING OF STRUCTURAL STEEL AND COLD-FORMED DECK AS FOLLOWS: A. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS. B. MULTIPASS FILLET WELDS. C. SINGLE-PASS FILLET WELDS > 5/16" D. PLUG AND SLOT WELDS E. SINGLE-PASS FILLET WELDS < 5/16" F. FLOOR AND ROOF DECK WELDS 8. INSPECTION OF STEEL FRAME JOINT FOR COMPLIANCE WITH PLANS FOR: BRACING AND STIFFENING MEMBERS, MEMBER LOCATIONS, JOINT DETAILS AT EACH CONNECTION.	1. PERIODIC 2. PERIODIC 3. CONTINUOUS (PERIODIC IF TURN-OF-NUT WITH MATHCMARKING, TWIST-OFF, OR DIRECT TENSION INDICATOR BOLTS USED) 4. PERIODIC 5. PERIODIC 6. PERIODIC 7. A) CONTINUOUS B)CONTINUOUS C) CONTINUOUS D) CONTINUOUS E) PERIODIC F) PERIODIC 8. PERIODIC	SPECIAL INSPECTOR
MASONRY	1. SUBMIT TEST DATA ON CMU COMPRESSIVE STRENGTH. 2. SUBMIT GROUT BATCH DESIGN. 3. SUBMIT MORTAR BATCH DESIGN.	1. COMPLIANCE WITH REQUIRED WITH REQUIRED INSPECTION PROVISIONS AND SUBMITTALS AS REQUIRED IN CONSTRUCTION DOCUMENTS. 2. VERIFICATION OF f'm. 3. AS CONSTRUCTION BEGINS VERIFY PROPORTIONS OF SITE-PREPARED MORTAR, CONSTRUCTION OF MORTAR JOINTS, LOCATION OF REINFORCEMENT. 4. DURING CONSTRUCTION VERIFY SIZE AND LOCATION OF STRUCTURAL ELEMENTS; TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS OF OTHER CONSTRUCTION; SIZE, GRADE, AND TYPE OF REINFORCEMENT AND ANCHOR BOLTS; PREPARATION OF MASONRY DURING COLD OR HOT WEATHER. 5. PRIOR TO GROUTING VERIFY: GROUT SPACE IS CLEAN, PLACEMENT OF REINFORCEMENT AND ANCHORAGES, PROPORTIONS OF SITE-PREAPARED GROUT, CONSTRUCTION OF MORTAR JOINTS. 6. VERIFY GROUT PLACEMENT TO ENSURE COMPLIANCE. 7. PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED.	1. PERIODIC 2. PERIODIC 3. PERIODIC 4. PERIODIC 5. PERIODIC 6. CONTINUOUS 7. PERIODIC	SPECIAL INSPECTOR
ANCHORAGE OF ELECTRICAL EQUIPMENT USED FOR EMERGENCY OR STANDBY POWER	1. SUBMIT ANCHOR TYPE AND PRODUCT INFORMATION	1. VERIFY INSTALLATION AS PER MFR. SPECIFICATION	1. PERIODIC	SPECIAL INSPECTOR

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Consulting Inc
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A/E SEAL

No. 29649
BRADLEY J. ISBELL

Brad Isbell
03-16-2012

PROJECT TITLE

UNIVERSITY OF SOUTH CAROLINA

SOFTBALL STADIUM CONSTRUCTION

BID SET

REVISIONS

NO	REVISION	DATE

SHEET INFORMATION

Date	2012-03-16
Project No.	23273
Scale	AS NOTED
Drawn By	KDN
Checked By	JRD
State Project No.	

TITLE

GENERAL NOTES

SHEET NO.

S0.1

FOUNDATION PLAN LOWER LEVEL VISITOR SIDE

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

LEGEND

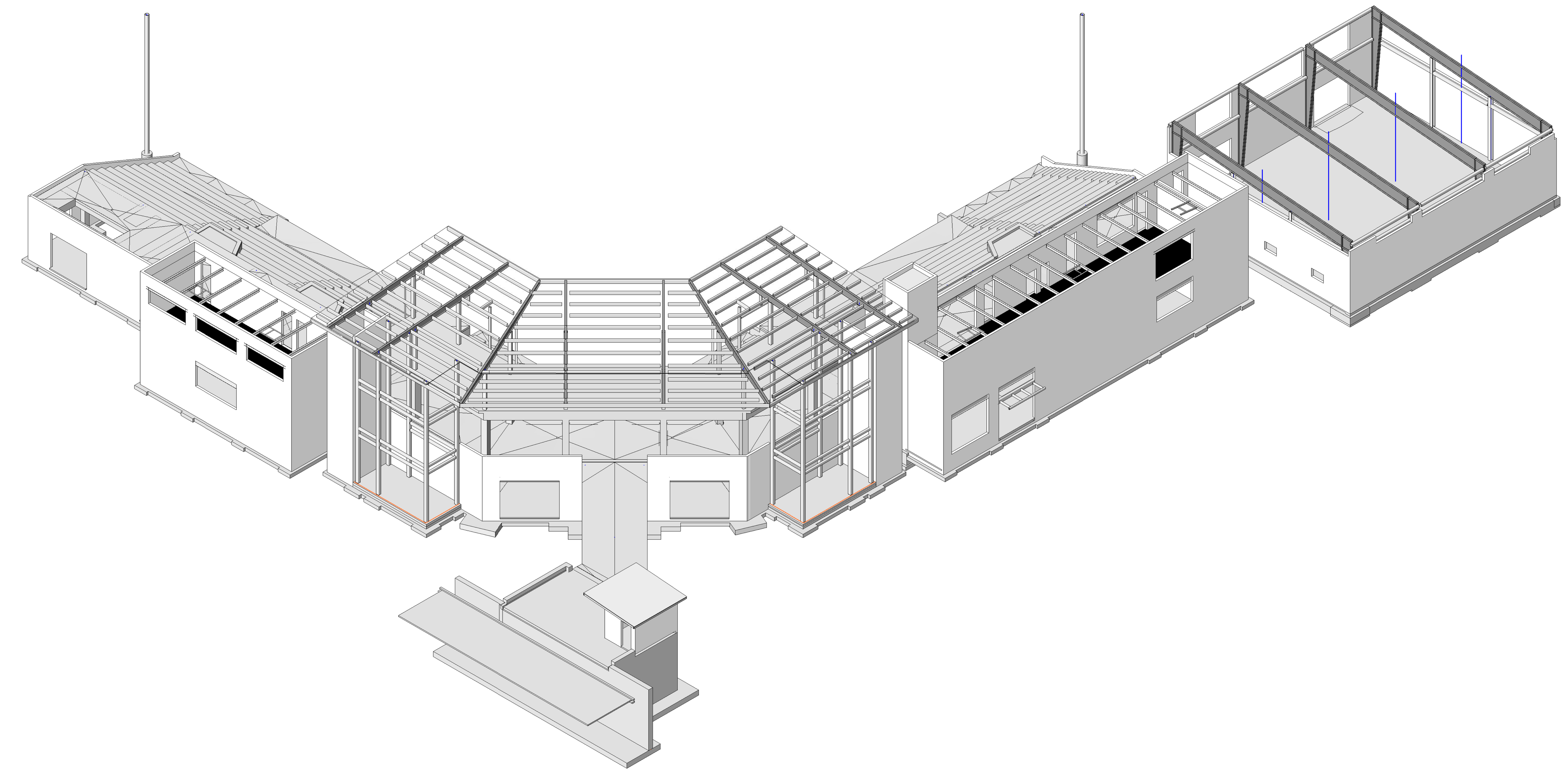
0'-0" — TOP OF FOOTING ELEVATION (FROM ELEVATION 0'-0")

A — FOOTING DESIGNATION SEE FOOTING SCHEDULE

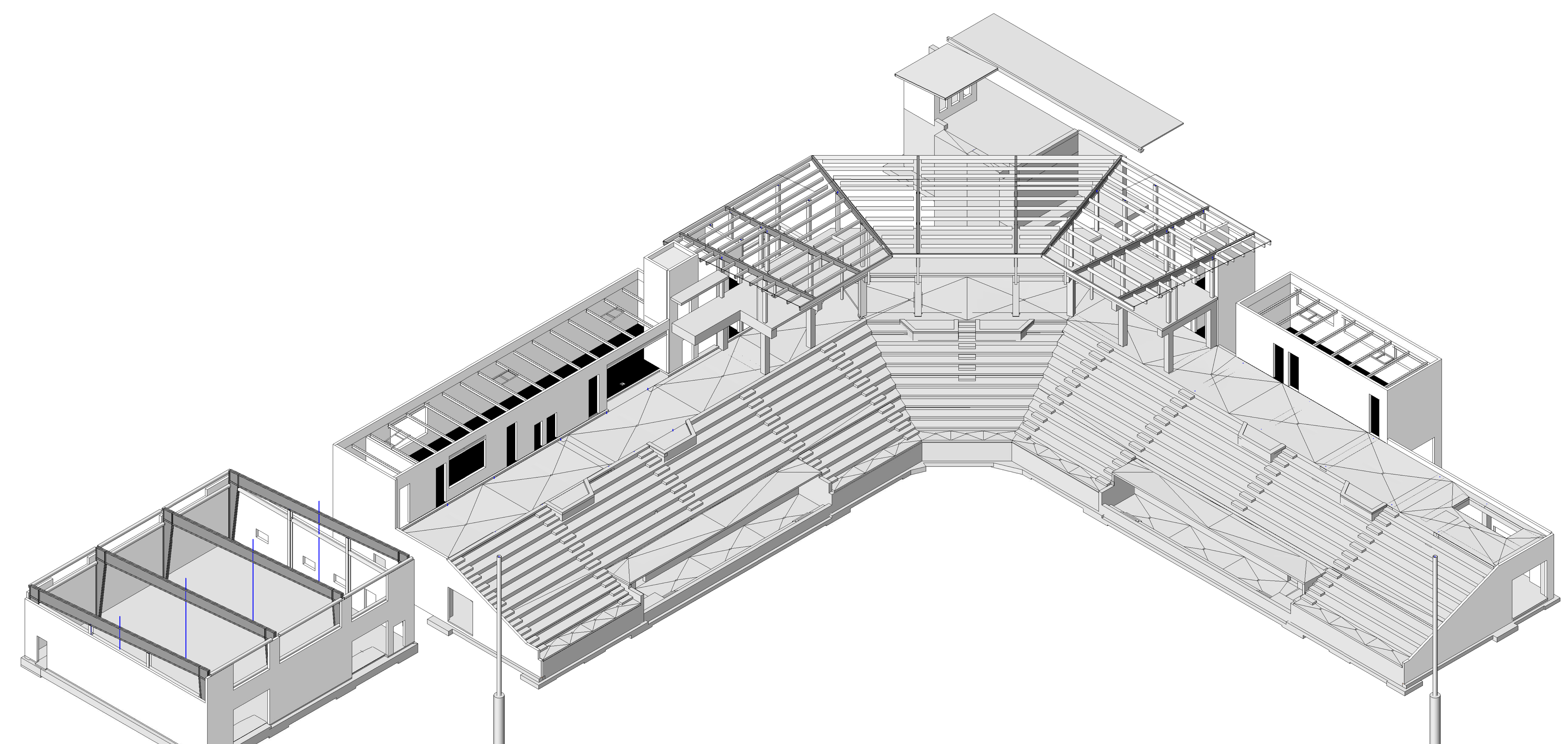
OUTSIDE FACE OF FOOTING / 8" CMU WALL / INSIDE FACE OF FOOTING

OUTSIDE FACE OF FOOTING / CONCRETE CMU WALL / INSIDE FACE OF FOOTING

FOOTING SCHEDULE			
FOOTING MARK	SIZE	DEPTH	REINFORCEMENT
A	5'-0"x5'-0"	1'-0"	(8) #5 EW
B	6'-0"x6'-0"	1'-2"	(6) #6 EW
C	7'-0"x7'-0"	1'-4"	(7) #6 EW
D	8'-0"x8'-0"	1'-4"	(7) #6 EW
E	9'-0"x9'-0"	1'-6"	(8) #6 EW
F	10'-0"x10'-0"	1'-6"	(10) #6 EW
G	6'-6"x6'-6"	2'-6"	(7) #5 EW
H	12'-0"x12'-0"	3'-0"	#8 AT 10" OC EW
J	3'-0"c3'-0"	2'-6"	(3) #5 EW



PERSPECTIVE - ENTRY SIDE



PERSPECTIVE - FIELD SIDE

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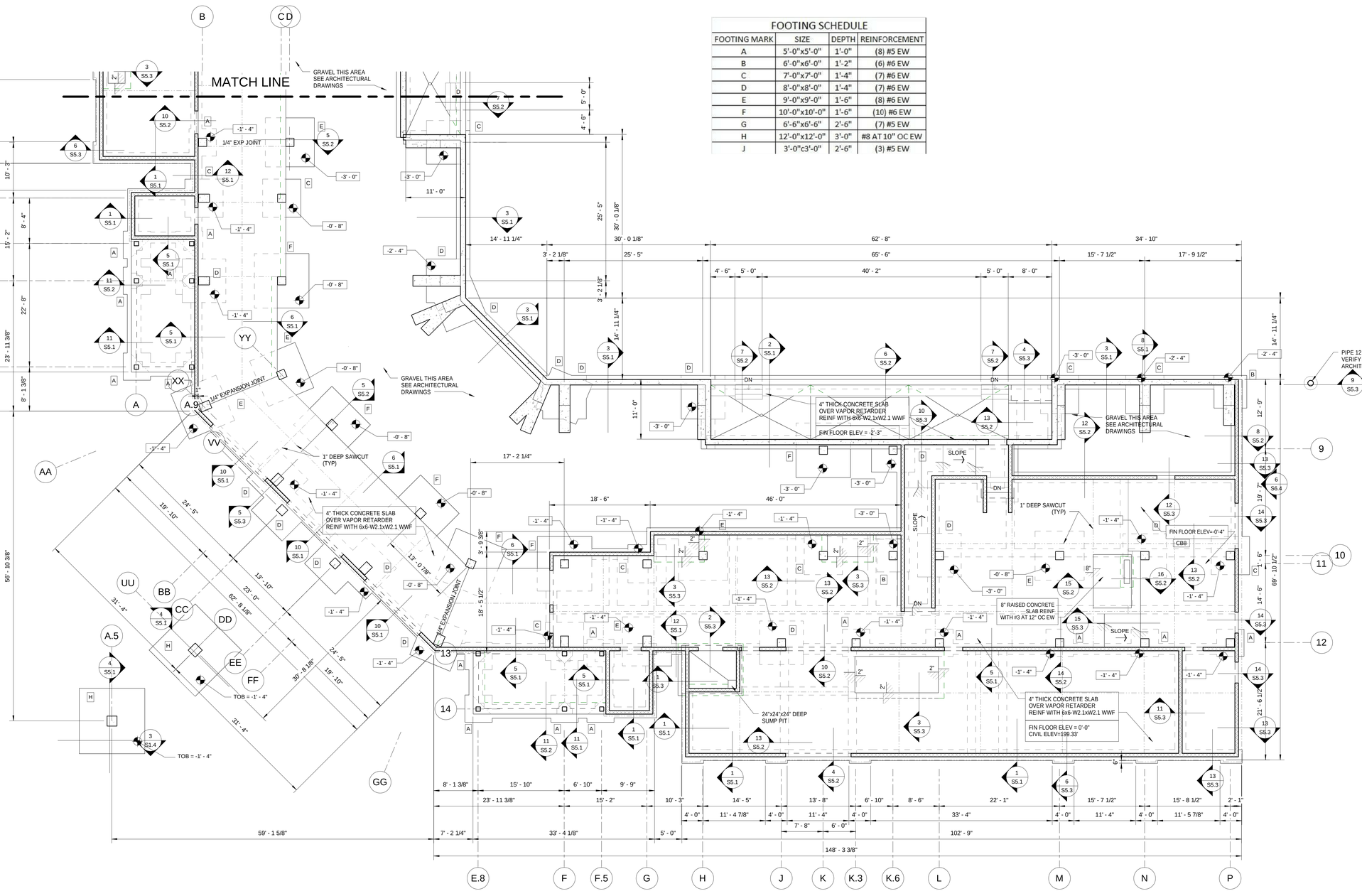
FOUNDATION PLAN LOWER LEVEL VISITOR SIDE

SHEET NO.

S1.1

FOOTING SCHEDULE			
FOOTING MARK	SIZE	DEPTH	REINFORCEMENT
A	5'-0"x5'-0"	1'-0"	(8) #5 EW
B	6'-0"x6'-0"	1'-2"	(6) #6 EW
C	7'-0"x7'-0"	1'-4"	(7) #6 EW
D	8'-0"x8'-0"	1'-4"	(7) #6 EW
E	9'-0"x9'-0"	1'-6"	(8) #6 EW
F	10'-0"x10'-0"	1'-6"	(10) #6 EW
G	6'-6"x6'-6"	2'-6"	(7) #5 EW
H	12'-0"x12'-0"	3'-0"	#8 AT 10" OC EW
J	3'-0"c3'-0"	2'-6"	(3) #5 EW



FOUNDATION PLAN LOWER LEVEL HOME SIDE

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

LEGEND

- 0'-0" — TOP OF FOOTING ELEVATION (FROM ELEVATION 0'-0")
- A — FOOTING DESIGNATION SEE FOOTING SCHEDULE
- OUTSIDE FACE OF FOOTING / 8" CMU WALL / INSIDE FACE OF FOOTING
- OUTSIDE FACE OF FOOTING / CONCRETE CMU WALL / INSIDE FACE OF FOOTING

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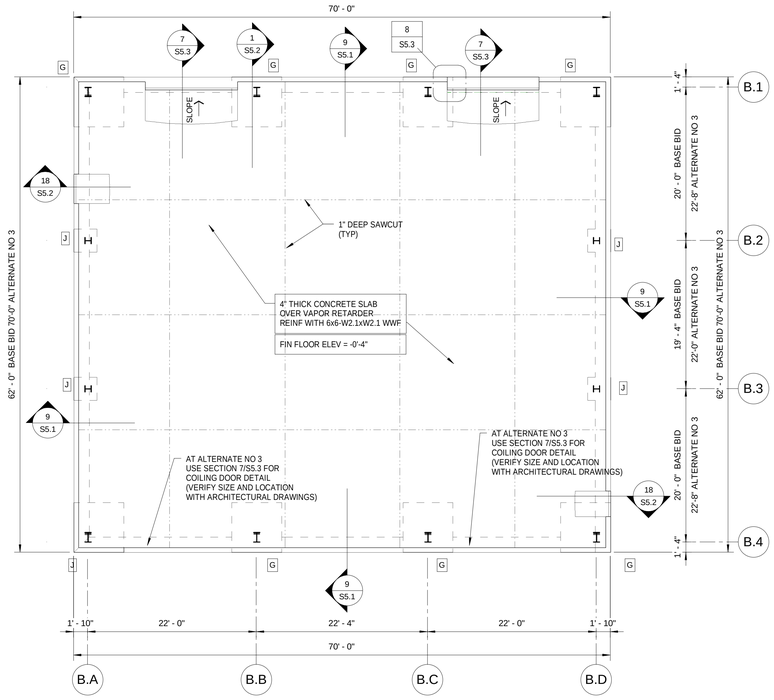
FOUNDATION PLAN LOWER LEVEL HOME SIDE

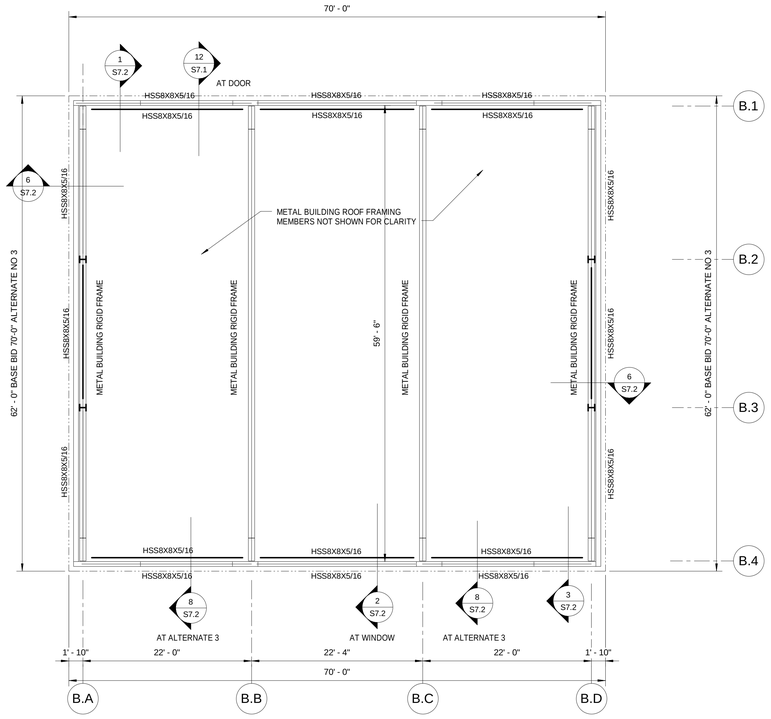
SHEET NO.

S1.2



BATTING CAGE FOUNDATION PLAN (BASE BID AND ALTERNATE)

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



BATTING CAGE ROOF PLAN (BASE BID AND ALTERNATE)

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

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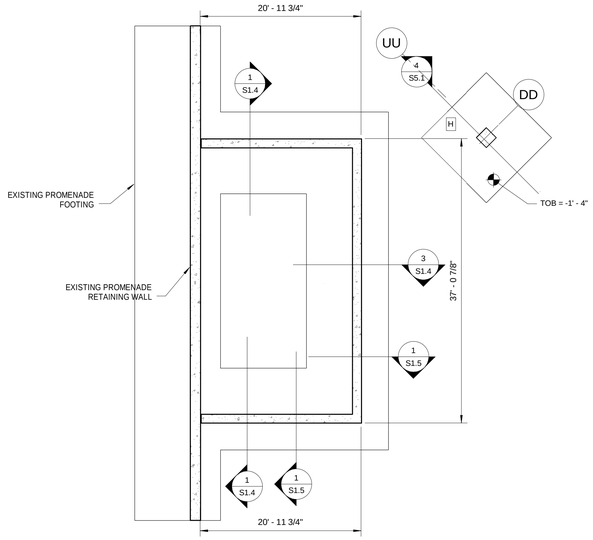
BATTING CAGE FOUNDATION PLAN (BASE BID AND ALTERNATE)

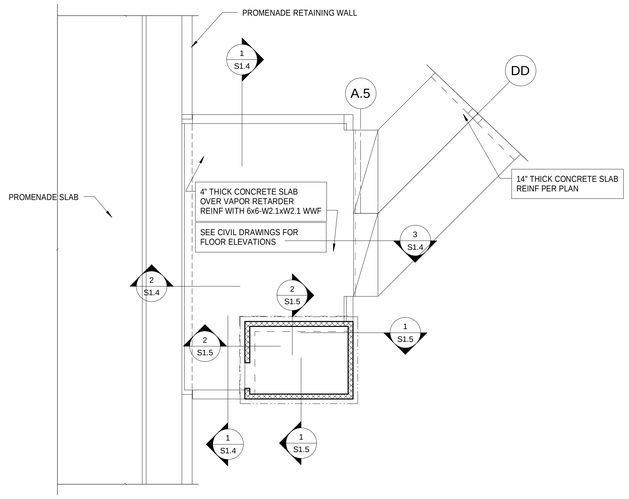
SHEET NO.

S1.3



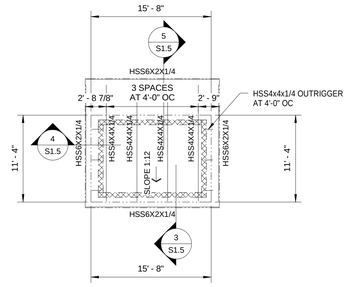
FOUNDATION PLAN LOWER LEVEL ALTERNATE NO2

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



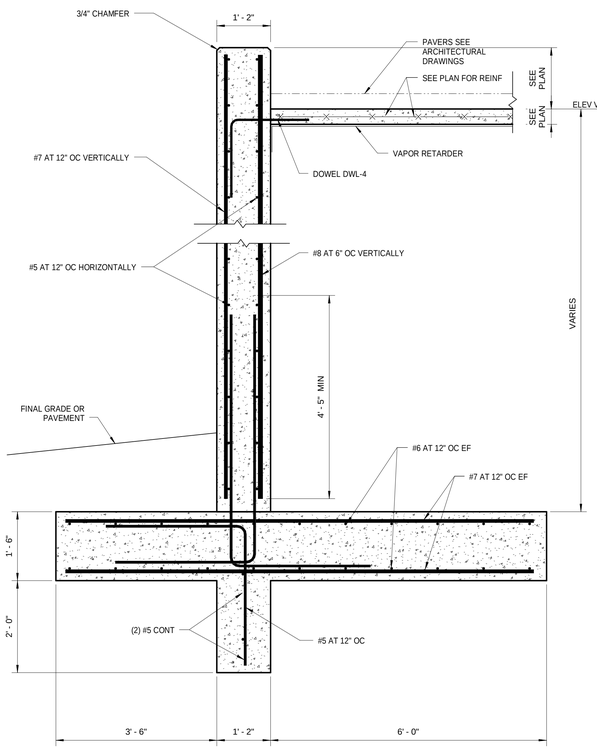
CONCOURSE LEVEL FRAMING PLAN ALTERNATE NO2

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



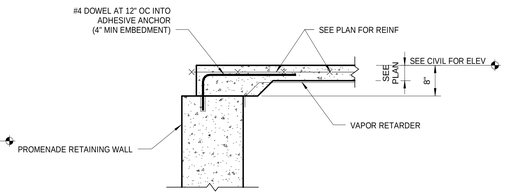
ROOFFRAMING PLAN ALTERNATE NO2

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



1 SECTION

SCALE: 3/4" = 1'-0"



2 SECTION

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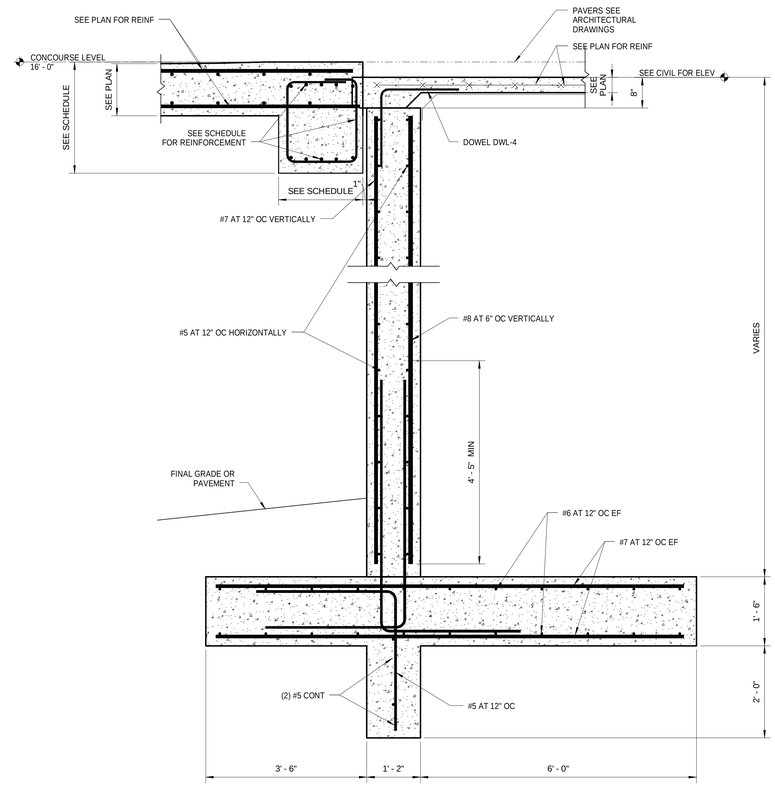

3 SECTION

SCALE: 3/4" = 1'-0"

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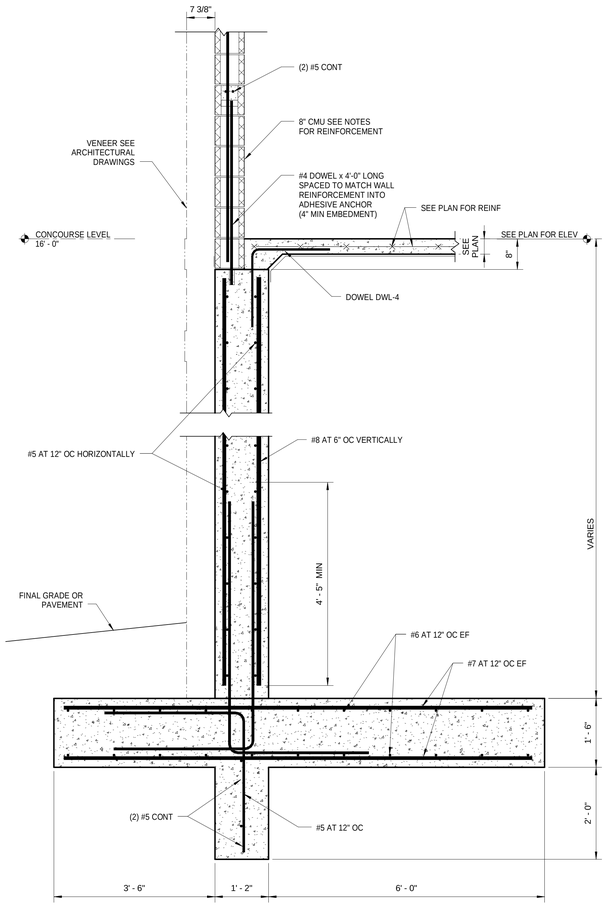
ALTERNATE NO2 PLAZA ENTRANCE

SHEET NO.

S1.4



1 SECTION
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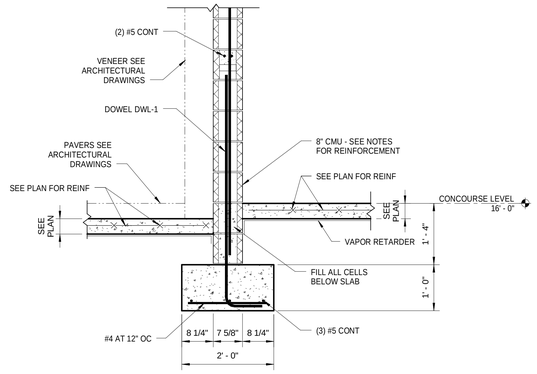

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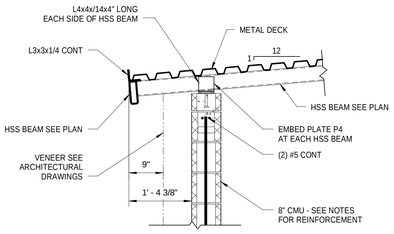
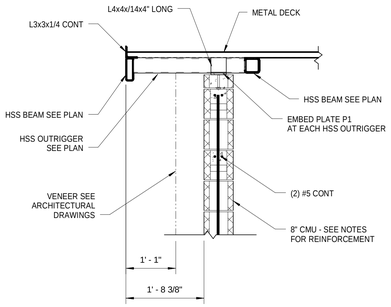
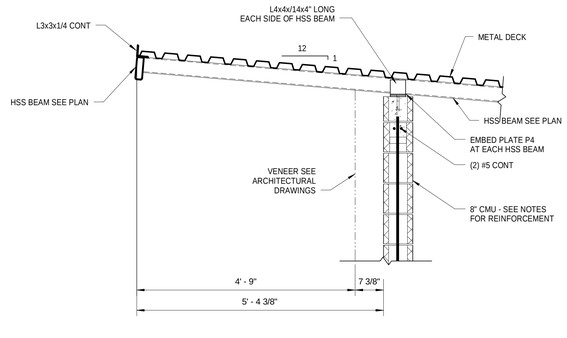


3 SECTION
SCALE: 3/4" = 1'-0"



4 SECTION
SCALE: 3/4" = 1'-0"



5 SECTION
SCALE: 3/4" = 1'-0"

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CORPORATE SEAL

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
CHA Consulting Inc No. 4478

A/E SEAL

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 29649
BRADLEY J. ISELI

Brad Iseli
03-16-2012

PROJECT TITLE

UNIVERSITY OF SOUTH CAROLINA

SOFTBALL STADIUM CONSTRUCTION

BID SET

REVISIONS

NO	REVISION	DATE

SHEET INFORMATION

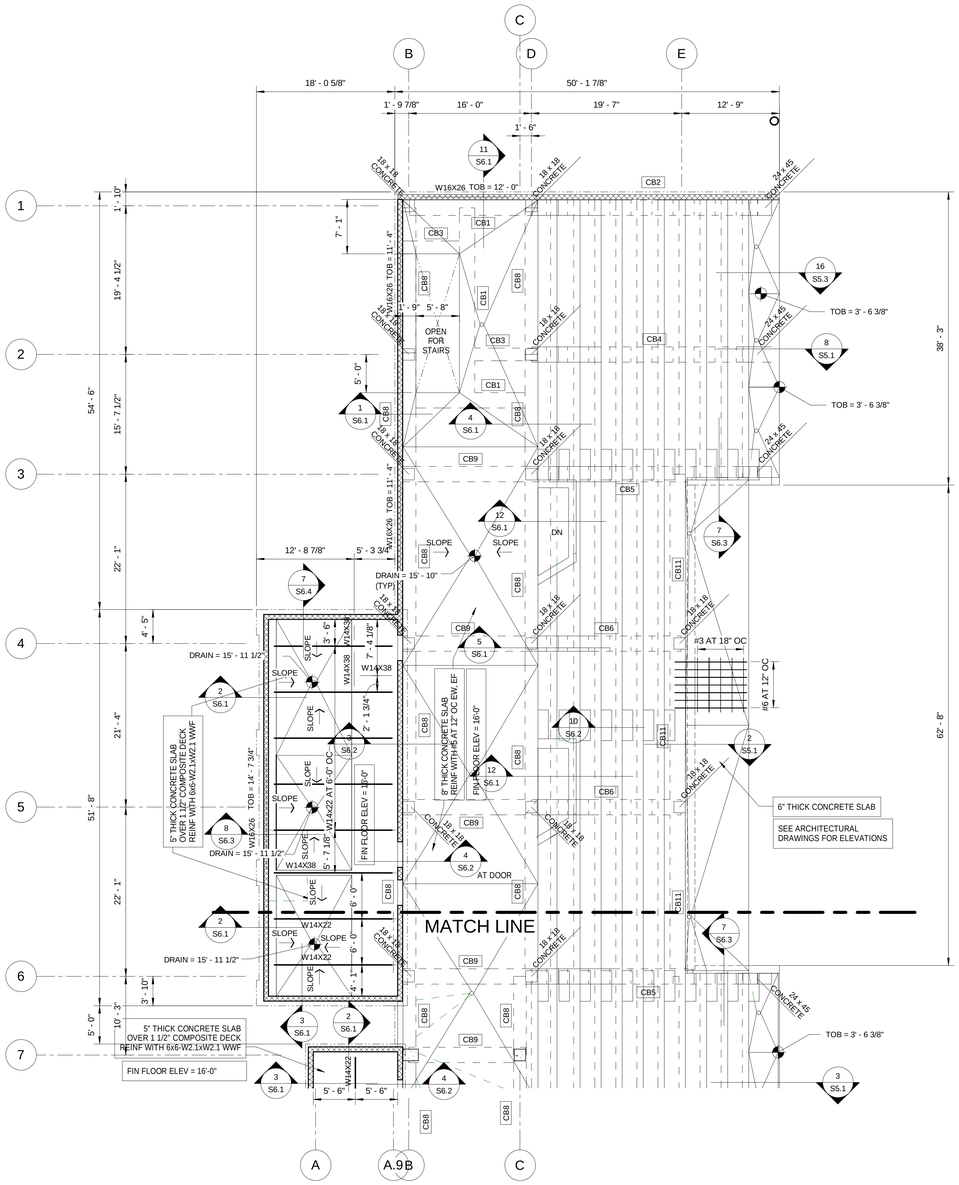
Date	2012-03-16
Project No.	23273
Scale	AS NOTED
Drawn By	KDN
Checked By	JRD
State Project No.	

TITLE

ALTERNATE NO2 SECTIONS

SHEET NO.

S1.5



CONCOURSE LEVELFRAMING PLAN VISITOR SIDE

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

CONCOURSE LEVEL BEAMS

			REINFORCEMENT		STIRRUPS		
BEAM MARK	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	SIZE	ENDS	CENTER
CB1	24	24	6#7	7 #7	#3	4"	10"
CB2	24	36	6 #7	7 #7	#3	4"	16"
CB3	20	24	3 #7	3 #7	#3	4"	10"
CB4	24	42	6#7	8 #8	#3	4"	18"
CB5	24	48	6#7	8 #8	#4	4"	18"
CB6	24	42	5 #7	6 #7	#3	4"	18"
CB7	24	42	7 #7	7 #7	#3	4"	18"
CB8	20	24	5 #7	5 #7	#3	4"	10"
CB9	24	24	5 #7	5 #7	#3	4"	10"
CB10	20	36	6#7	6 #7	#4	4"	10"
CB11	24	36	7 #7	7 #7	#4	4"	4"
CB12	22	28	5 #8	5 #8	#4	9"	9"
CB13	18	30	5 #8	5 #8	#4	10"	10"

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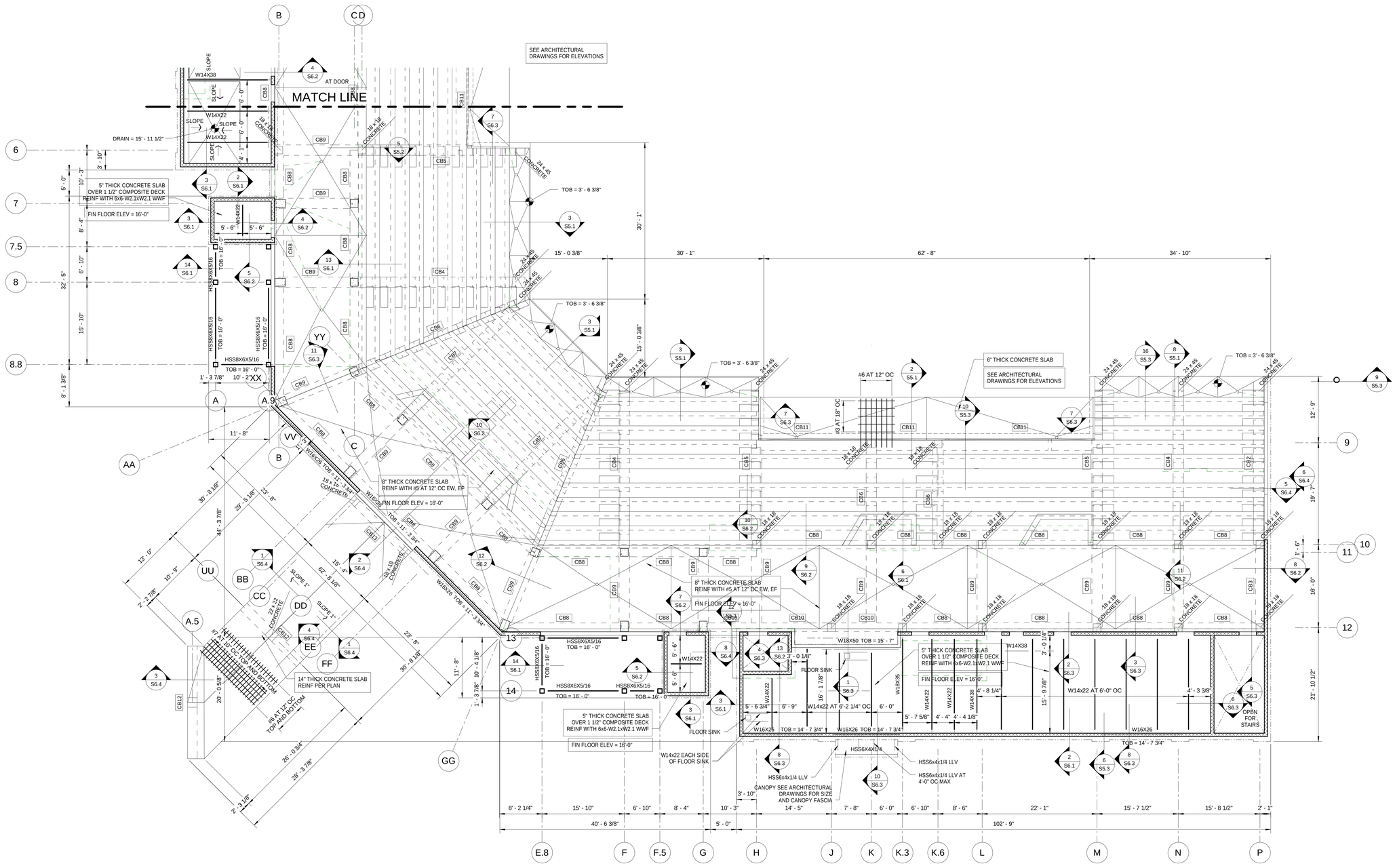
CONCOURSE LEVEL FRAMING PLAN VISITOR SIDE

SHEET NO.

S2.1



CONCOURSE LEVEL FRAMING PLAN HOME SIDE

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

CONCOURSE LEVEL BEAMS

			REINFORCEMENT		STIRRUPS		
BEAM MARK	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	SIZE	ENDS	CENTER
CB1	24	24	6#7	7 #7	#3	4"	10"
CB2	24	36	6 #7	7 #7	#3	4"	16"
CB3	20	24	3 #7	3 #7	#3	4"	10"
CB4	24	42	6#7	8 #8	#3	4"	18"
CB5	24	48	6#7	8 #8	#4	4"	18"
CB6	24	42	5 #7	6 #7	#3	4"	18"
CB7	24	42	7 #7	7 #7	#3	4"	18"
CB8	20	24	5 #7	5 #7	#3	4"	10"
CB9	24	24	5 #7	5 #7	#3	4"	10"
CB10	20	36	6#7	6 #7	#4	4"	10"
CB11	24	36	7 #7	7 #7	#4	4"	4"
CB12	22	28	5 #8	5 #8	#4	9"	9"
CB13	18	30	5 #8	5 #8	#4	10"	10"

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A/E SEAL

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 29649 — BRADLEY J. ISELE

Brad Isele 03-16-2012

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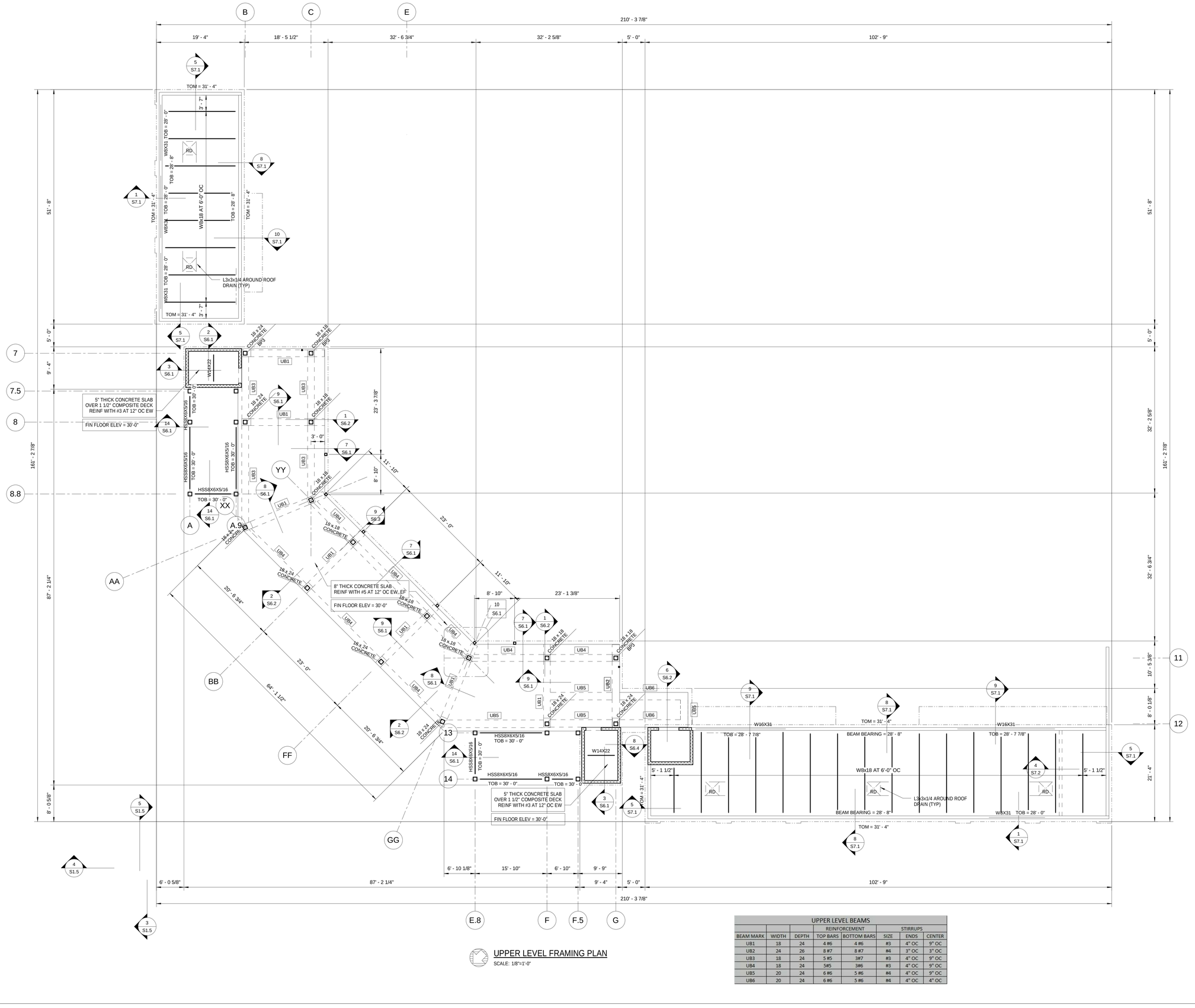
CONCOURSE LEVEL FRAMING PLAN HOME SIDE

SHEET NO.

S2.2



UPPER LEVEL FRAMING PLAN
SCALE: 1/8"=1'-0"

UPPER LEVEL BEAMS							
			REINFORCEMENT		STIRRUPS		
BEAM MARK	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	SIZE	ENDS	CENTER
UB1	18	24	4 #6	4 #6	#3	4" OC	9" OC
UB2	24	26	8 #7	8 #7	#4	3" OC	3" OC
UB3	18	24	5 #5	3#7	#3	4" OC	9" OC
UB4	18	24	5#5	3#6	#3	4" OC	9" OC
UB5	20	24	6 #6	5 #6	#4	4" OC	9" OC
UB6	20	24	6 #6	5 #6	#4	4" OC	4" OC

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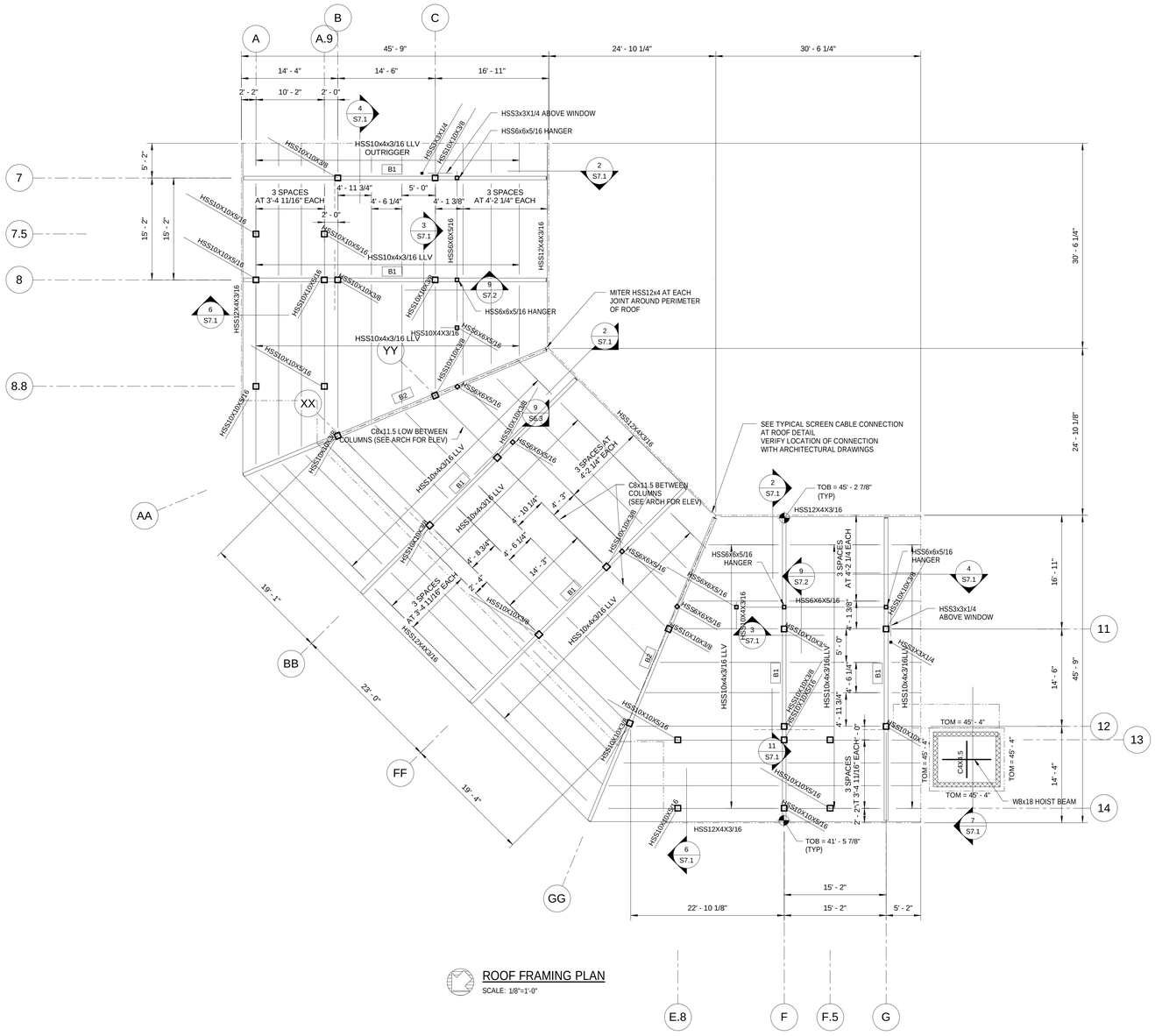
UPPER LEVEL FRAMING PLAN

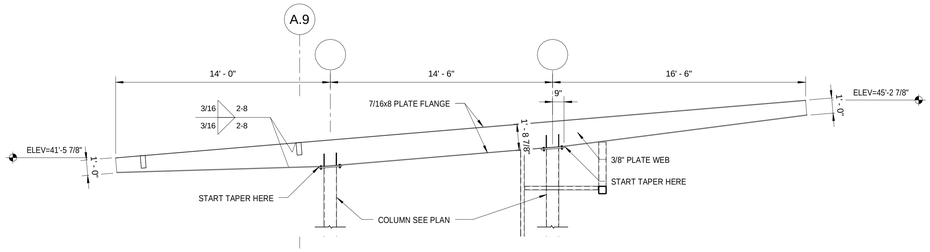
SHEET NO.

S3.1



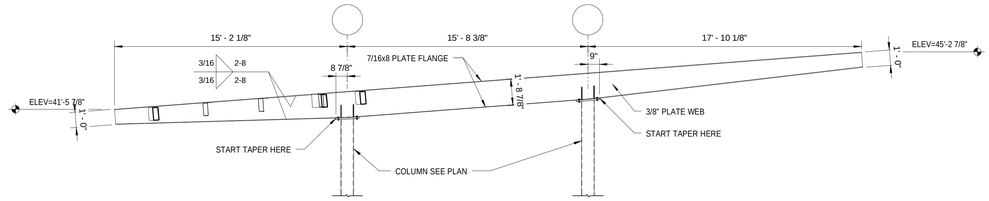
ROOF FRAMING PLAN

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



TYPICAL BEAM B1 ELEVATION

SCALE: 1/4" = 1'-0"



TYPICAL BEAM B2 ELEVATION

SCALE: 1/4" = 1'-0"

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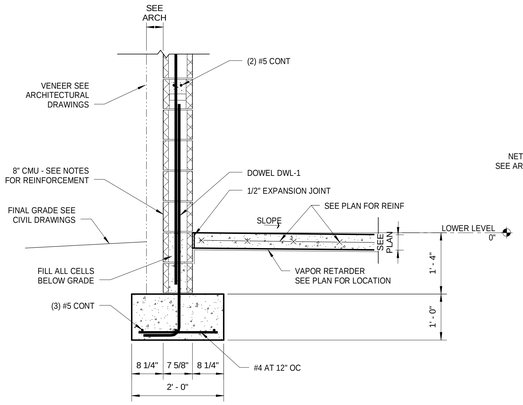
ROOF FRAMING PLAN

SHEET NO.

S4.1



1 SECTION
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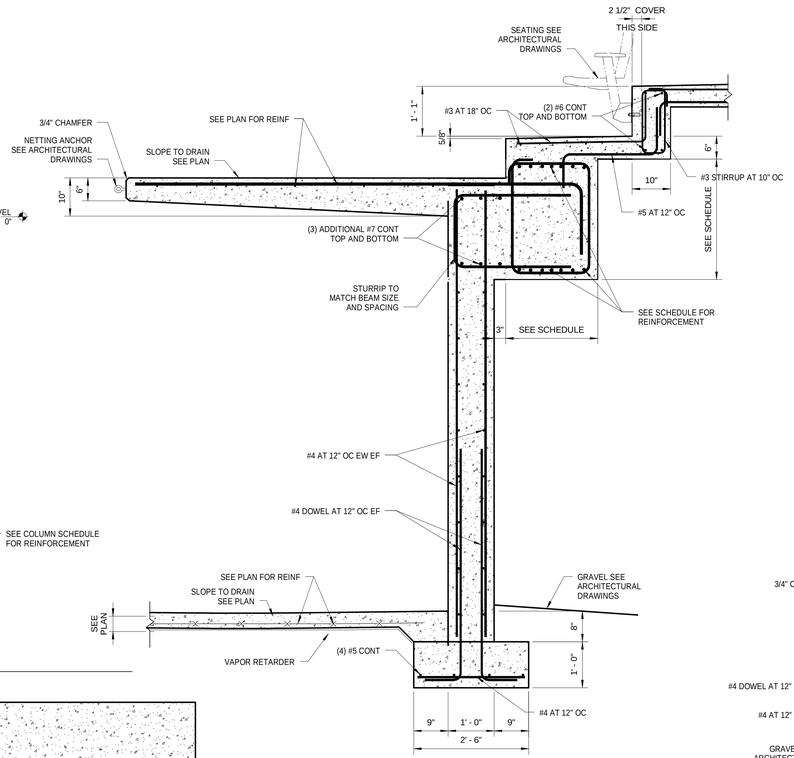
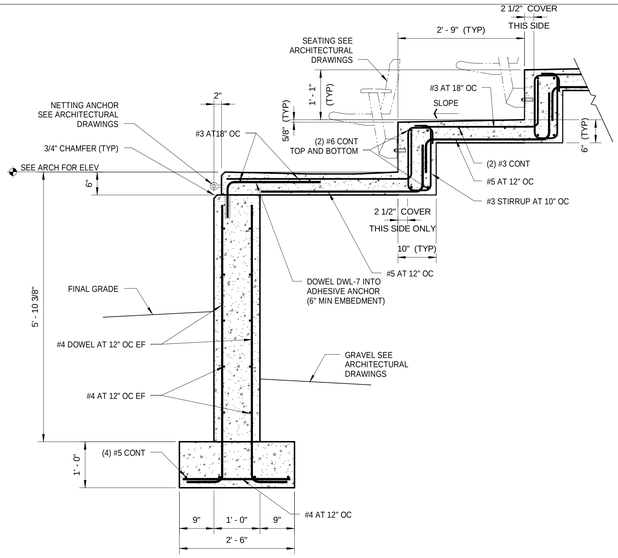
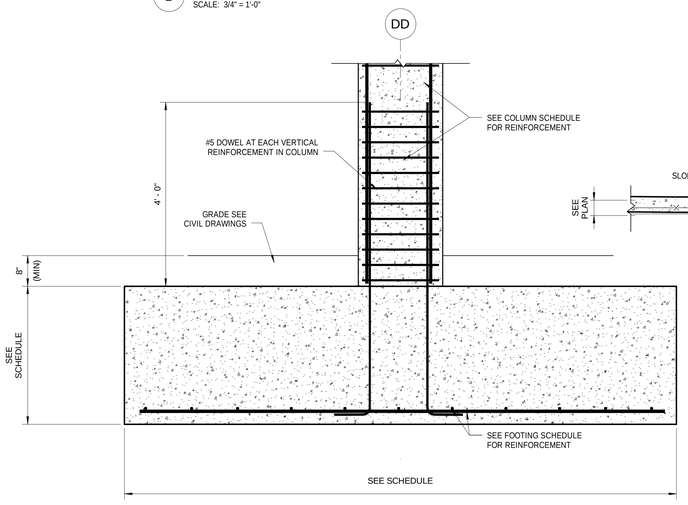


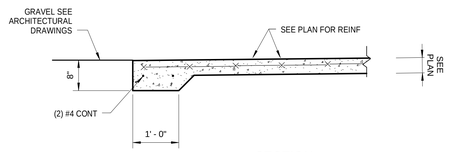
2 SECTION
SCALE: 3/4" = 1'-0"



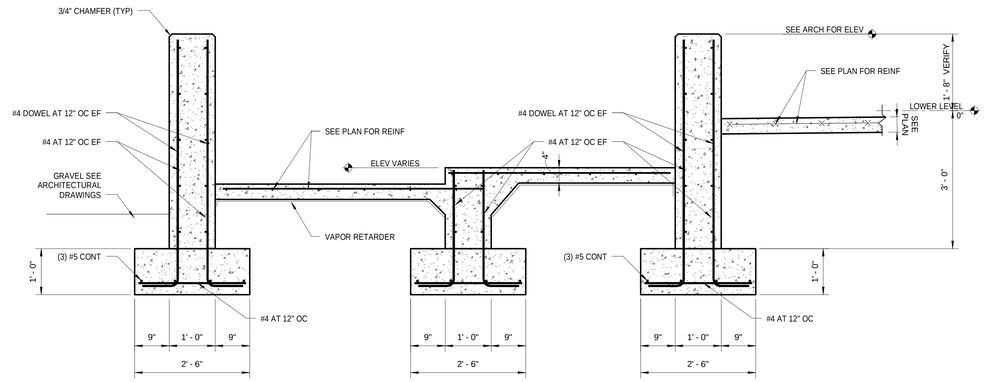
3 SECTION
SCALE: 3/4" = 1'-0"



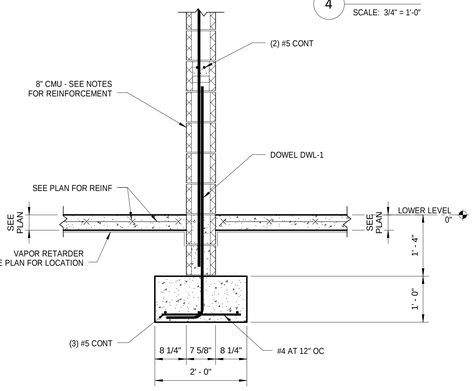
4 SECTION
SCALE: 3/4" = 1'-0"



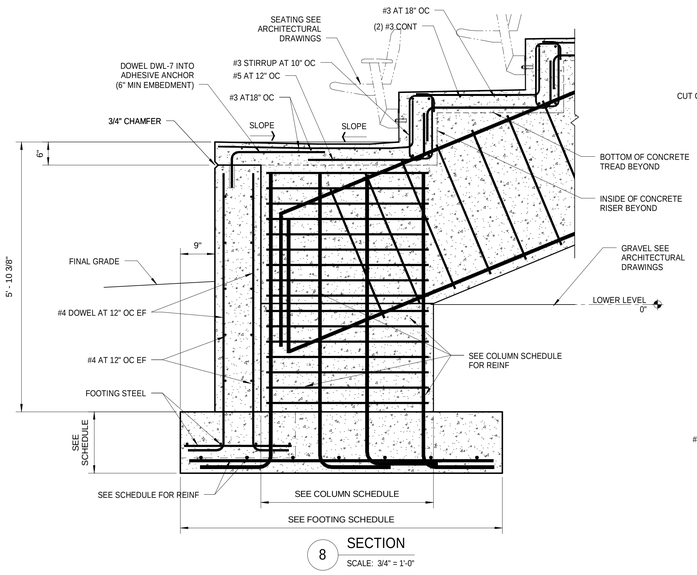
6 SECTION
SCALE: 3/4" = 1'-0"



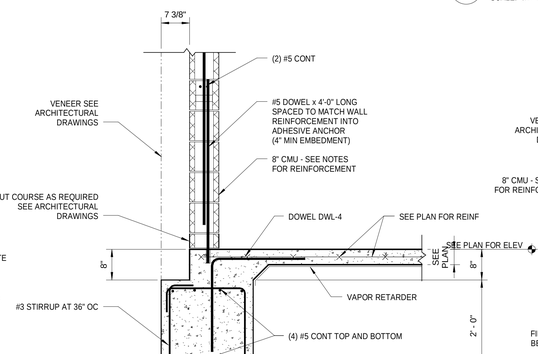
7 SECTION
SCALE: 3/4" = 1'-0"



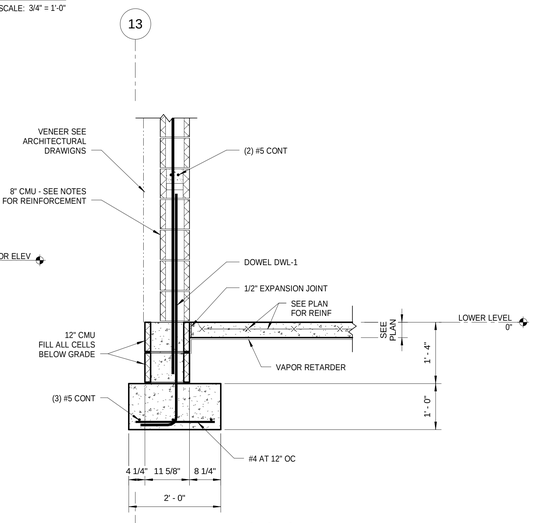
5 SECTION
SCALE: 3/4" = 1'-0"



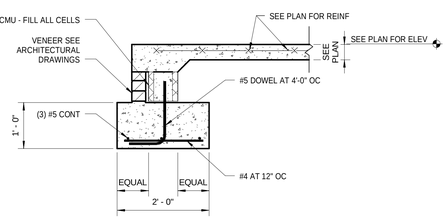
8 SECTION
SCALE: 3/4" = 1'-0"



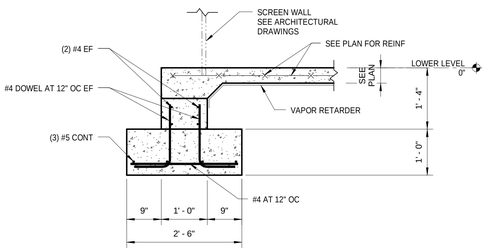
9 SECTION
SCALE: 3/4" = 1'-0"



12 SECTION
SCALE: 3/4" = 1'-0"



10 SECTION
SCALE: 3/4" = 1'-0"



11 SECTION
SCALE: 3/4" = 1'-0"

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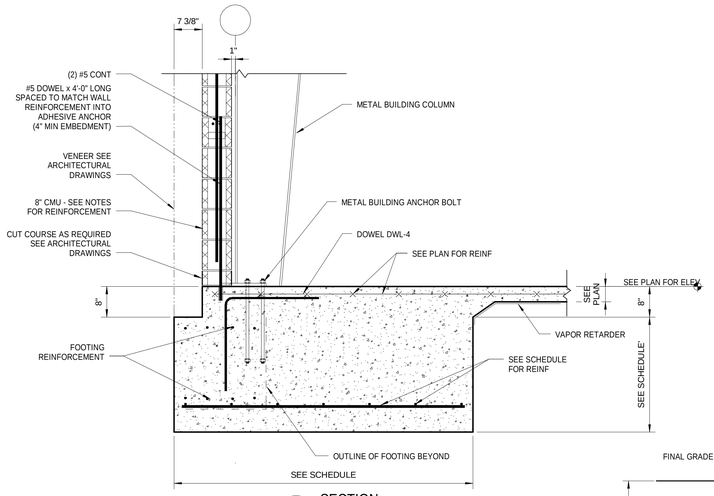
FOUNDATION SECTIONS

SHEET NO.

S5.1



1 SECTION
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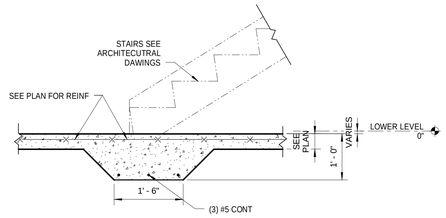

2 SECTION
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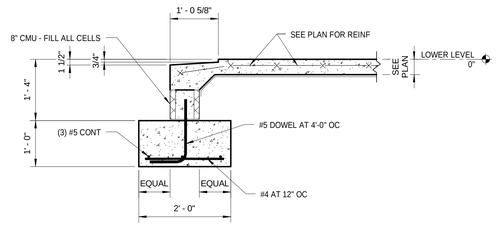

3 SECTION
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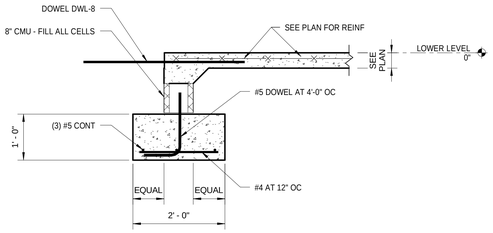
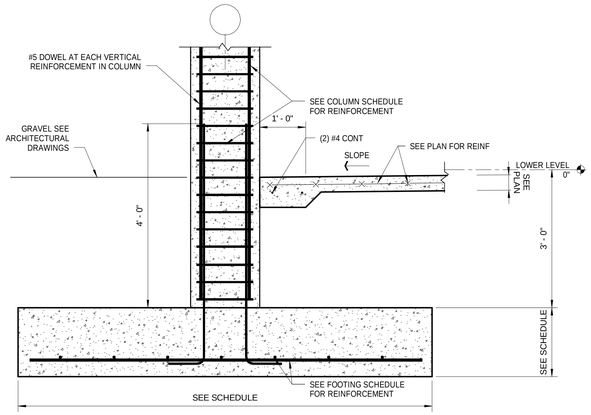
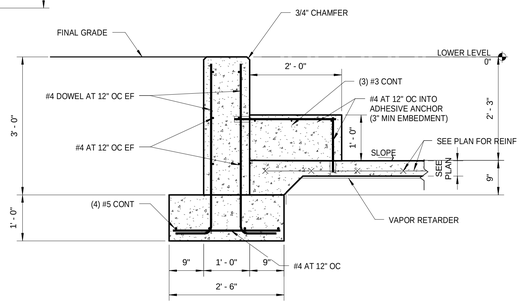


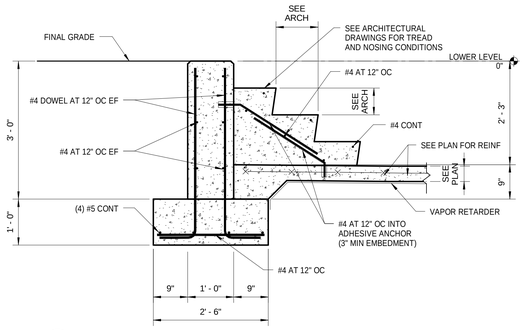
4 SECTION
SCALE: 3/4" = 1'-0"



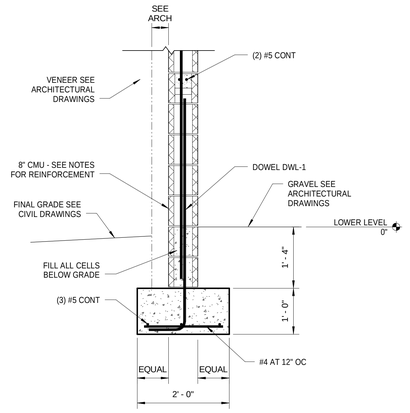
5 SECTION
SCALE: 3/4" = 1'-0"



6 SECTION
SCALE: 3/4" = 1'-0"

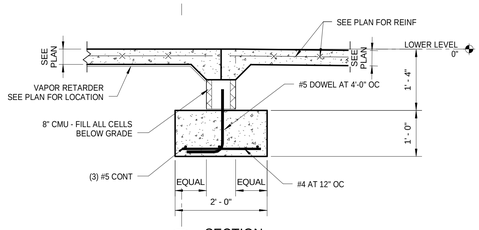


7 SECTION
SCALE: 3/4" = 1'-0"

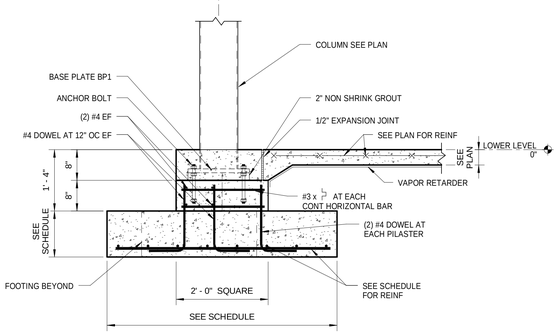


8 SECTION
SCALE: 3/4" = 1'-0"

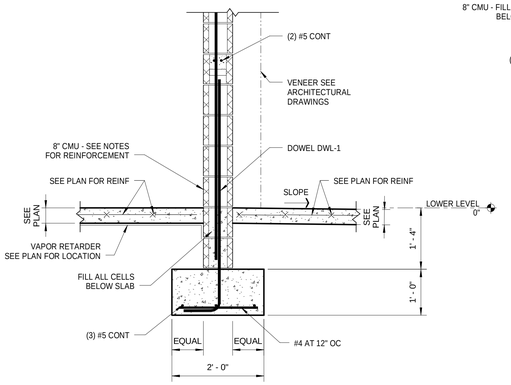
A.9



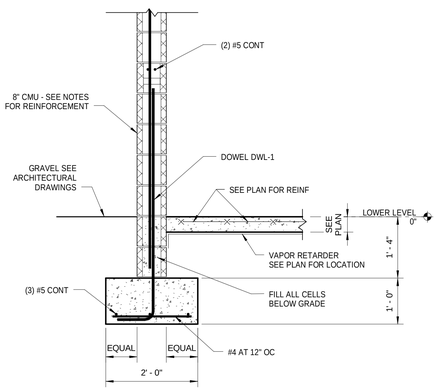
10 SECTION
SCALE: 3/4" = 1'-0"



11 SECTION
SCALE: 3/4" = 1'-0"



9 SECTION
SCALE: 3/4" = 1'-0"



12 SECTION
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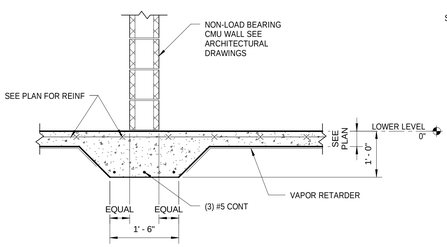
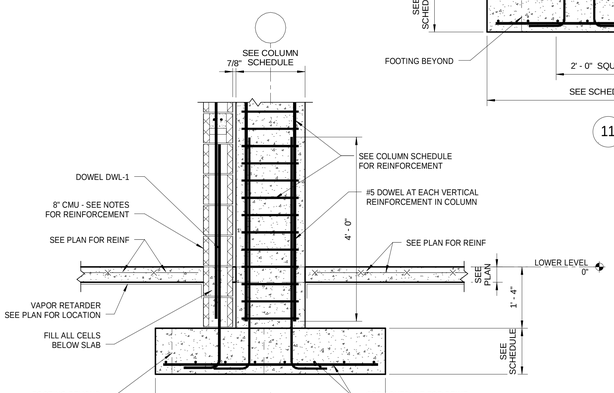
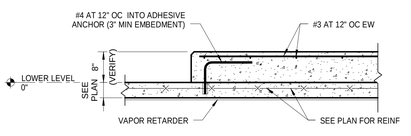


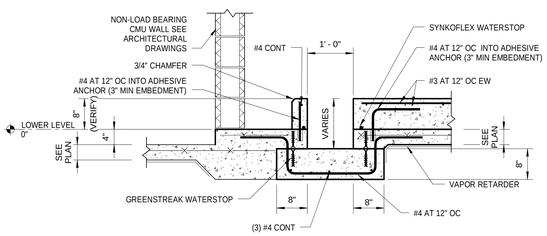
13 SECTION
SCALE: 3/4" = 1'-0"



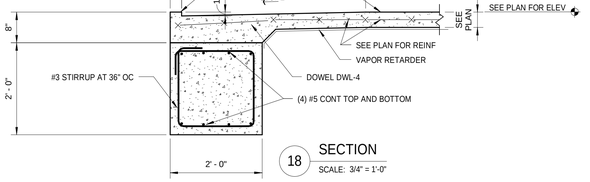
14 SECTION
SCALE: 3/4" = 1'-0"



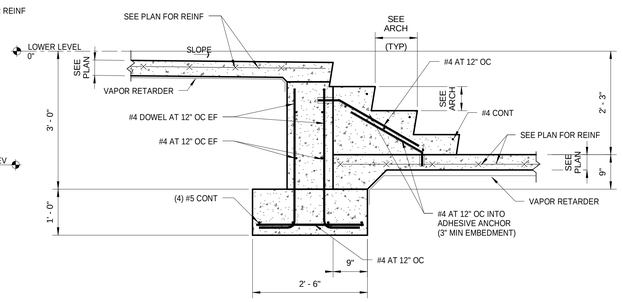
15 SECTION
SCALE: 3/4" = 1'-0"



16 SECTION
SCALE: 3/4" = 1'-0"



18 SECTION
SCALE: 3/4" = 1'-0"



17 SECTION
SCALE: 3/4" = 1'-0"

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CORPORATE SEAL

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
CHA Consulting Inc No. 4478

A/E SEAL

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 29649
BRADLEY J. ISELE

03-16-2012

PROJECT TITLE

UNIVERSITY OF SOUTH CAROLINA

SOFTBALL STADIUM CONSTRUCTION

BID SET

REVISIONS

NO	REVISION	DATE

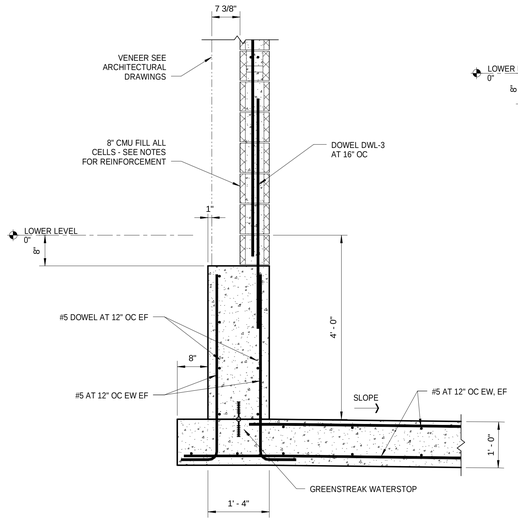
SHEET INFORMATION	
Date	2012-03-16
Project No.	23273
Scale	AS NOTED
Drawn By	KDN
Checked By	JRD
State Project No.	

TITLE

FOUNDATION SECTIONS

SHEET NO.

S5.2



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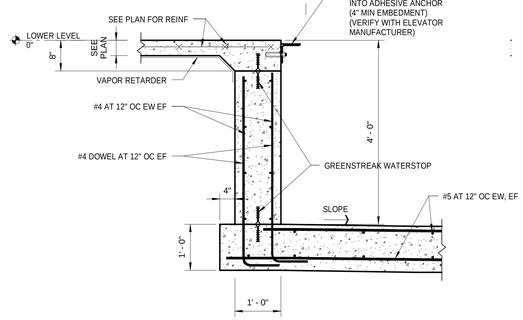

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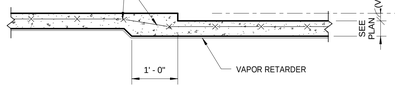

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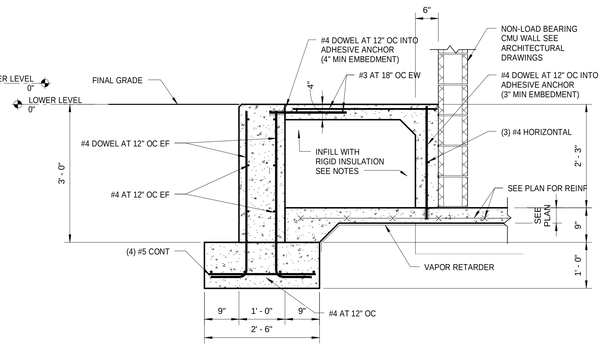

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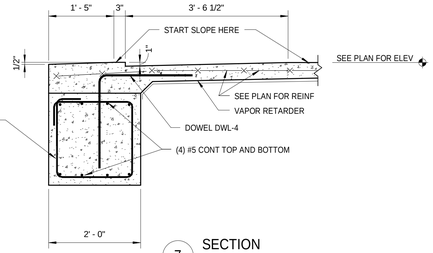

7 SECTION
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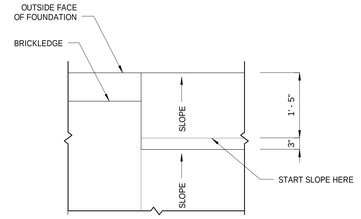

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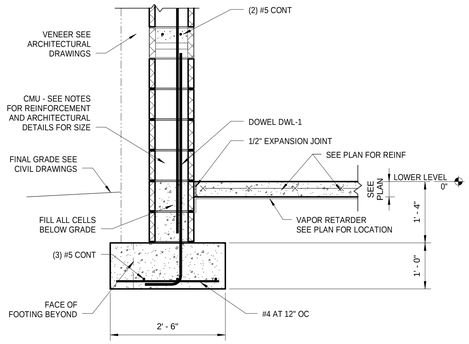

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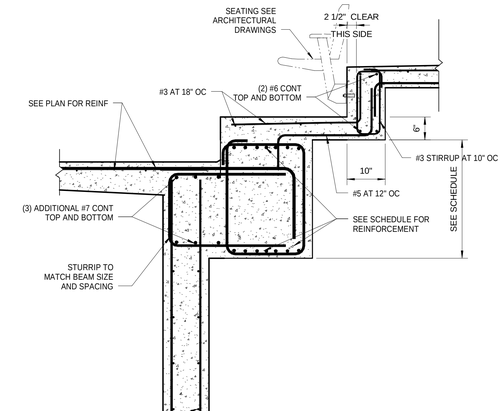

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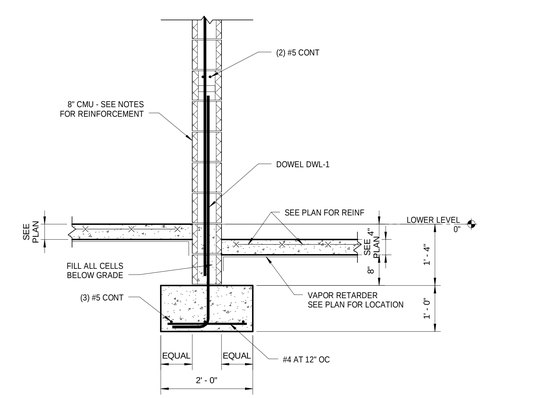

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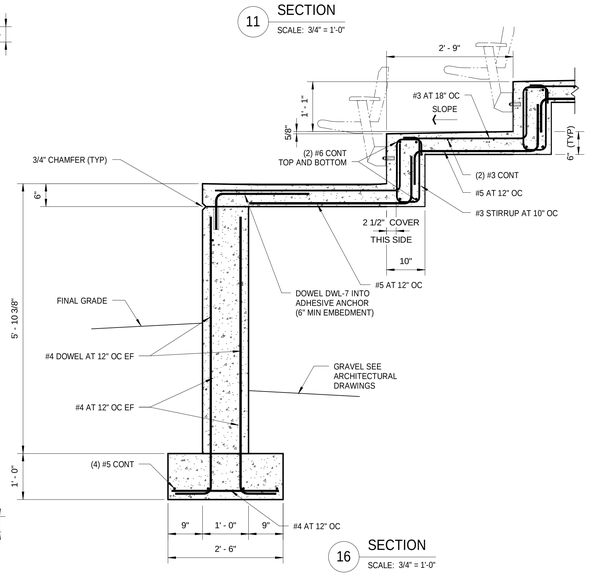

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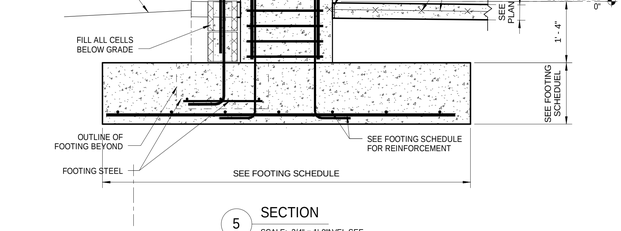

5 SECTION
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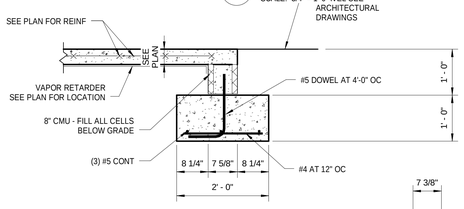

12 SECTION
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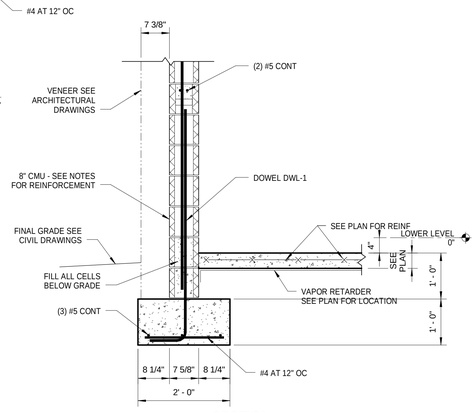

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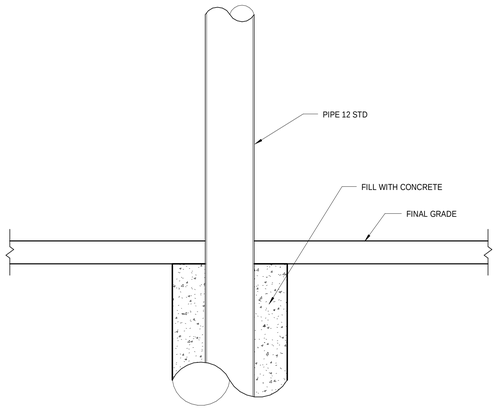

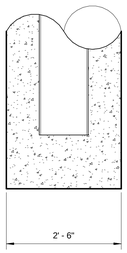

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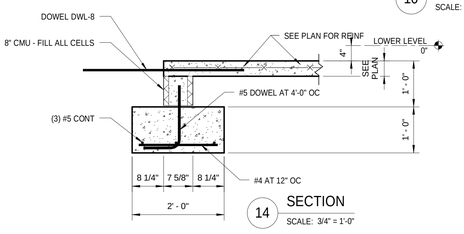

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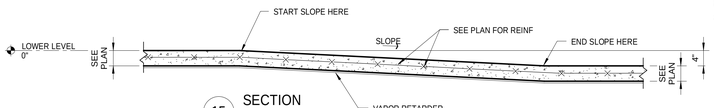

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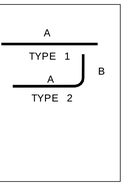
FOUNDATION SECTIONS

SHEET NO.

S5.3

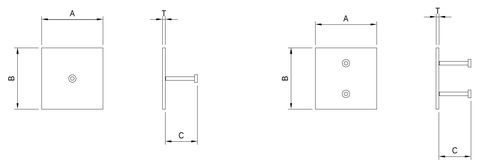
1 DOWEL SCHEDULE

MARK	SIZE	SPACING	TYPE	A	B
DWL-1	#5	4'-0"	2	5'-0"	9"
DWL-2	#5	1'-6"	2	2'-0"	1'-4"
DWL-3	#5	4'-0"	1	5'-0"	
DWL-4	#5	1'-4"	2	2'-0"	2'-0"
DWL-5	#5	1'-6"	2	3'-0"	1'-6"
DWL-6	#5	1'-6"	2	4'-0"	1'-6"
DWL-7	#4	1'-4"	2	2'-0"	9"
DWL-8	#4	1'-0"	1	3'-6"	



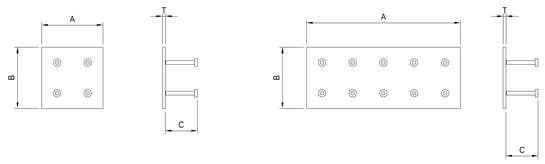
2 EMBED PLATE SCHEDULE

MARK	TYPE	THICKNESS	STUD DIA	A	B	C	D	E
P1	2	3/8"	3/4"	4"	9"	4"		
P2	3	3/4"	3/4"	9"	9"	4"		
P3	4	3/4"	3/4"	16"	9"	4"		
P4	2	3/8/4"	3/4"	4"	16"	4"		



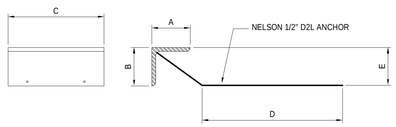
EMBED PLATE TYPE 1

EMBED PLATE TYPE 2

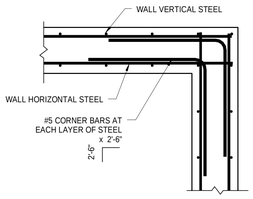


EMBED PLATE TYPE 3

EMBED PLATE TYPE 4

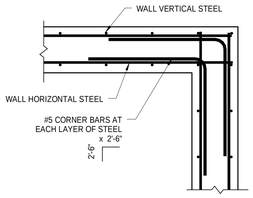


EMBED PLATE TYPE 5



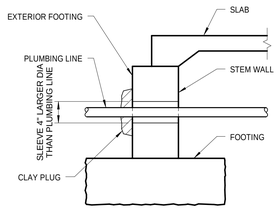
PLAN VIEW (LOOKING DOWN)

3 TYPICAL FOOTING CORNER BAR DETAIL
SCALE: 3/4" = 1'-0"

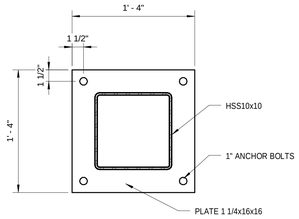


PLAN VIEW (LOOKING DOWN)

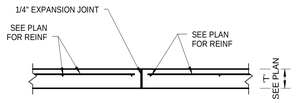
4 TYPICAL WALL CORNER BAR DETAIL
SCALE: 3/4" = 1'-0"



5 TYPICAL PLUMBING LINE PENETRATION DETAIL
SCALE: 3/4" = 1'-0"



7 TYPICAL BASE PLATE BP1
SCALE 1 1/2" = 1'-0"



10 TYPICAL SLAB EXPANSION JOINT DETAIL
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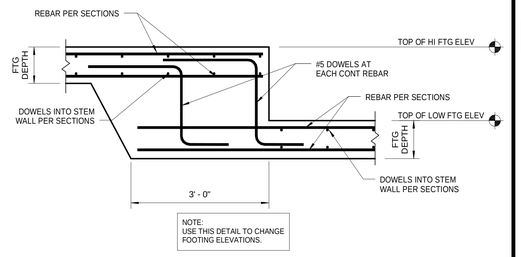

6 TYPICAL FOOTING STEP DETAIL
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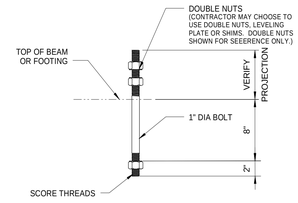
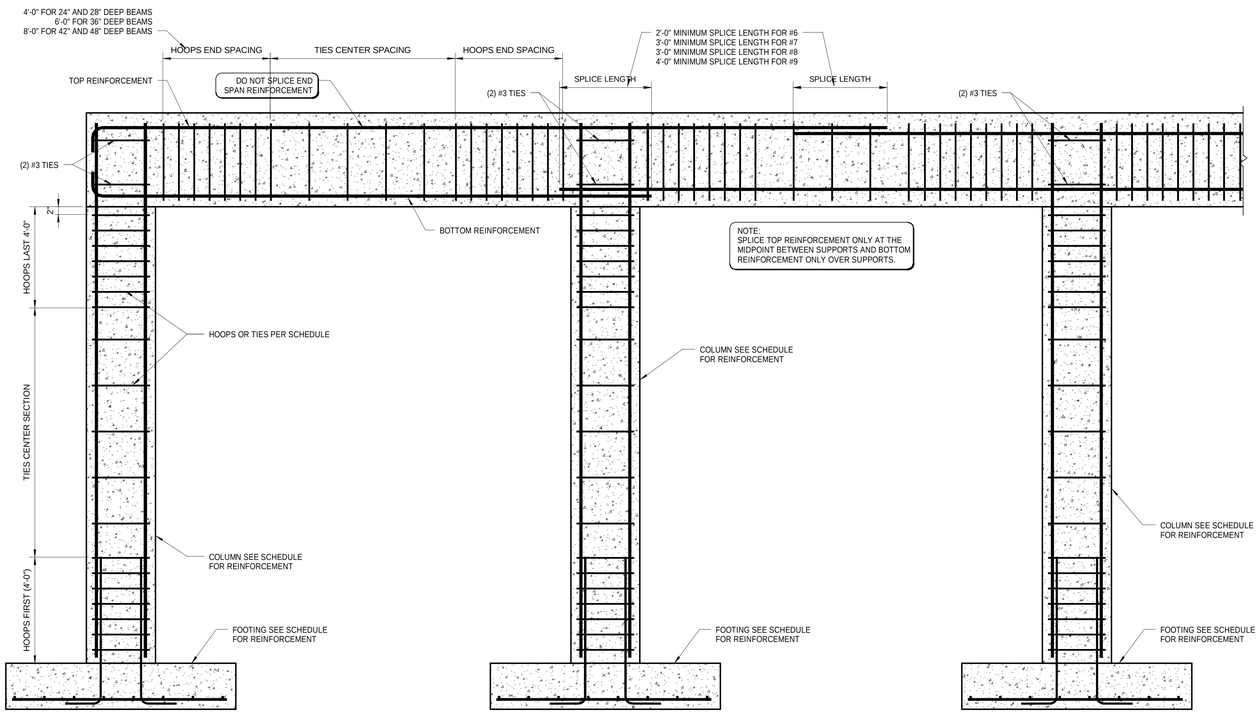


8 TYPICAL 1" ANCHOR BOLT
SCALE 1 1/2" = 1'-0"



9 TYPICAL CONCRETE BEAM AND COLUMN REINFORCEMENT
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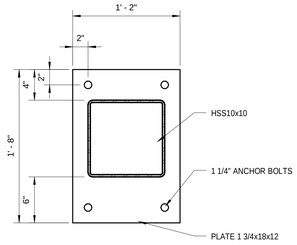
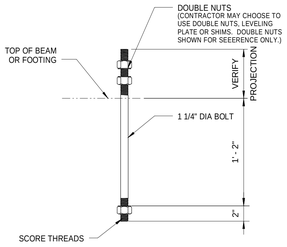
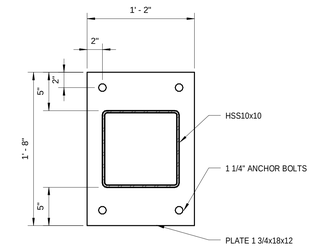


14 TYPICAL BASE PLATE BP3
SCALE 1 1/2" = 1'-0"



15 TYPICAL 1 1/4" ANCHOR BOLT
SCALE 1 1/2" = 1'-0"



13 TYPICAL BASE PLATE BP2
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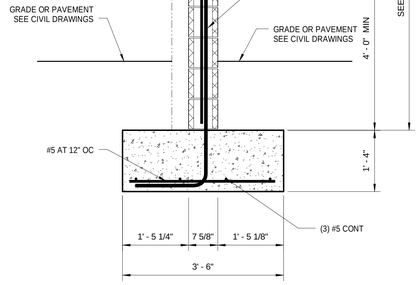

11 TYPICAL SCREEN WALL DETAIL
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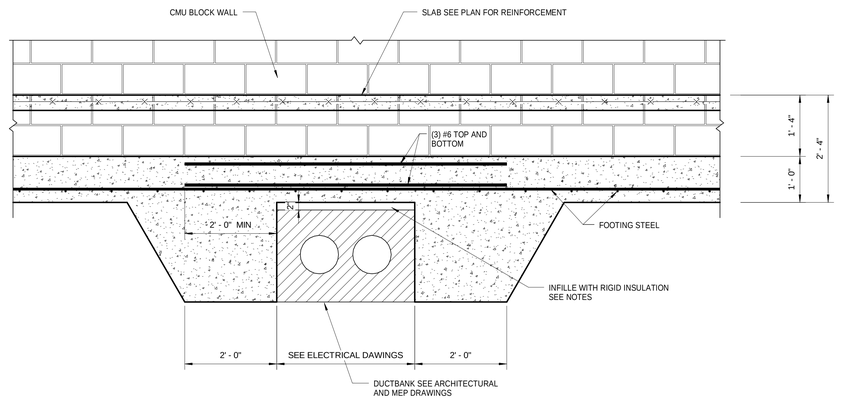

12 TYPICAL TYP DUCT BANK DETAIL
SCALE: 3/4" = 1'-0"

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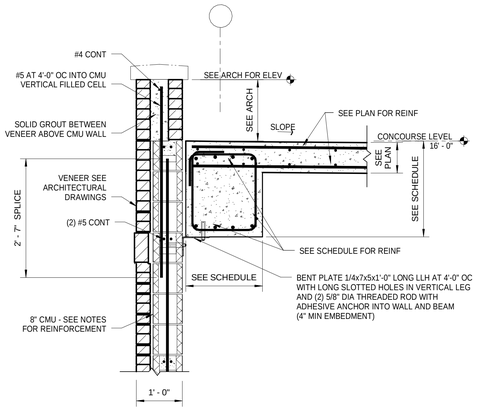
TITLE

TYPICAL FOUNDATION DETAILS

SHEET NO.

S5.4



1 SECTION
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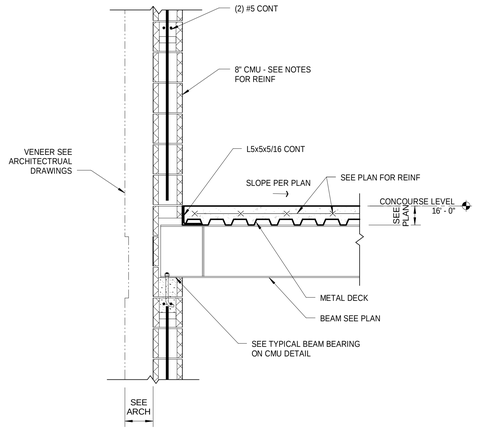

2 SECTION
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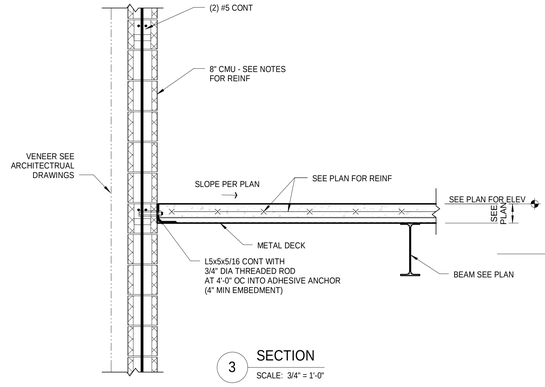

3 SECTION
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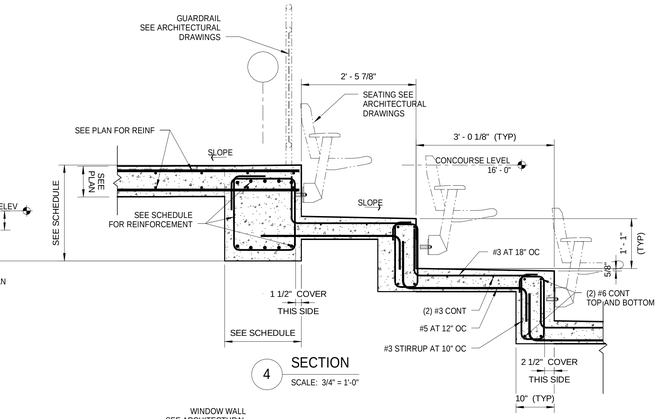

4 SECTION
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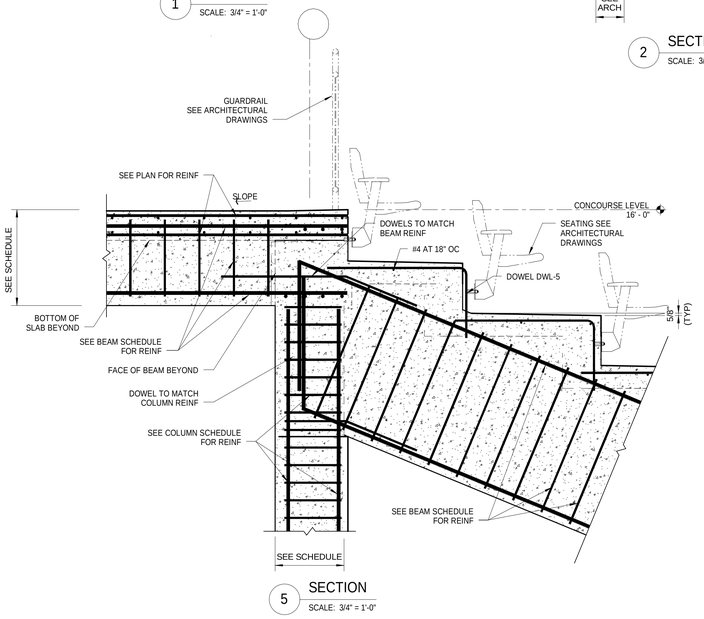
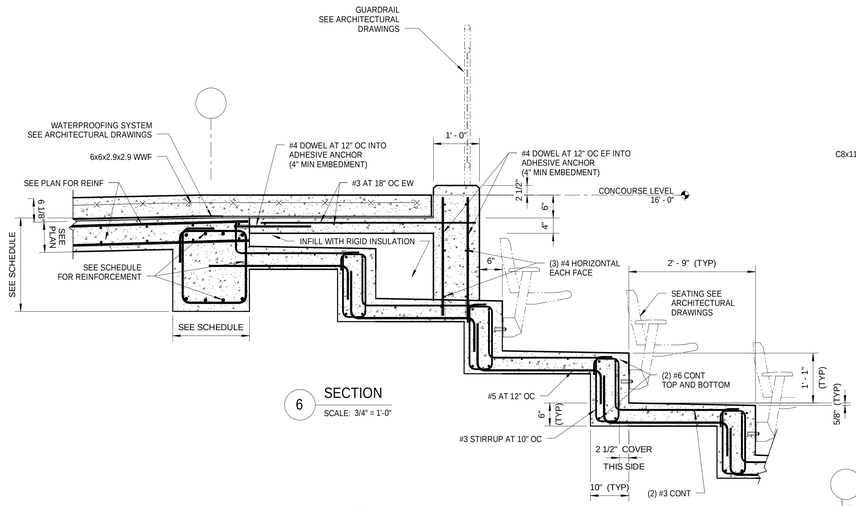
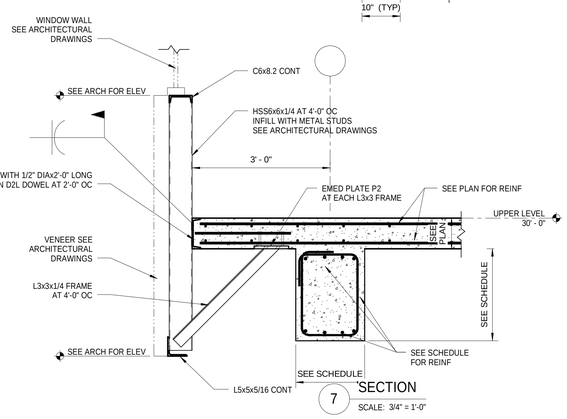


5 SECTION
SCALE: 3/4" = 1'-0"



6 SECTION
SCALE: 3/4" = 1'-0"



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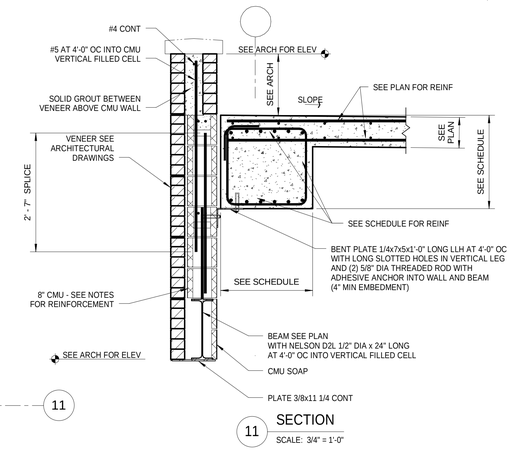

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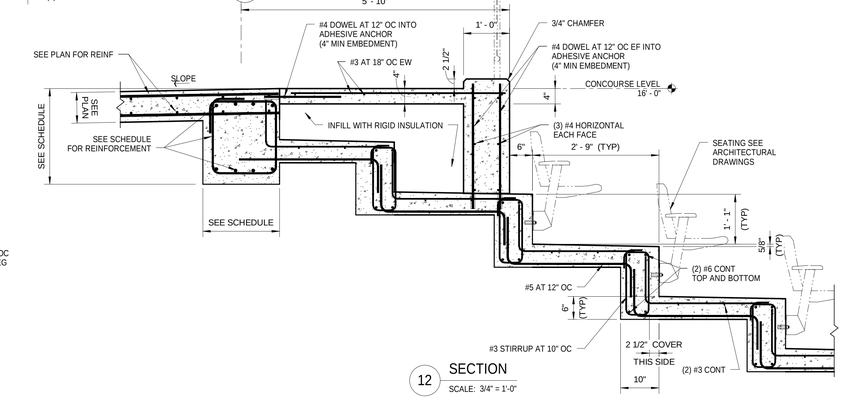

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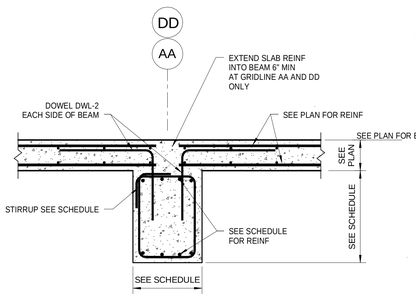

8 SECTION
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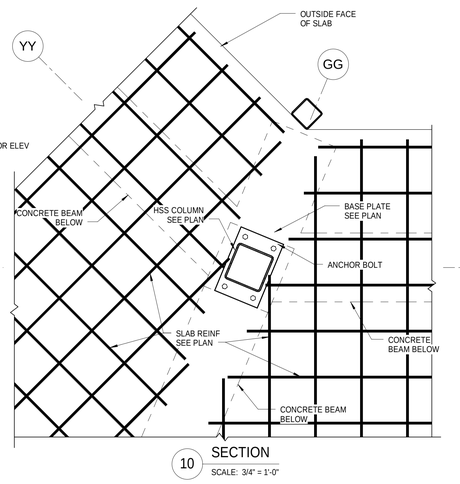
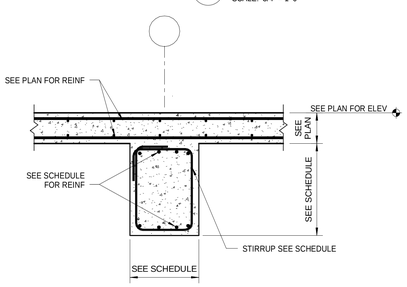


10 SECTION
SCALE: 3/4" = 1'-0"



9 SECTION
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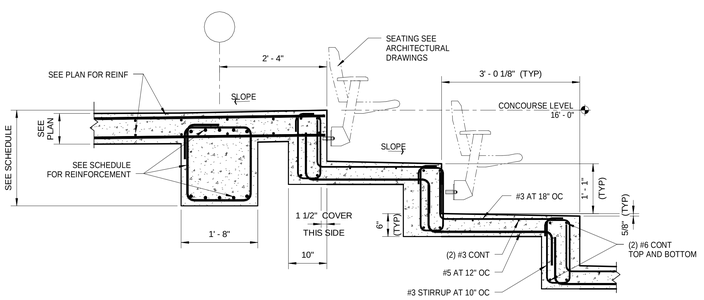
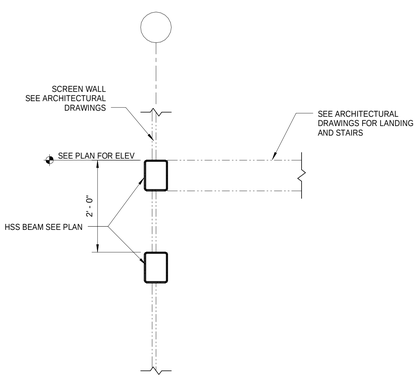


13 SECTION
SCALE: 3/4" = 1'-0"



14 SECTION
SCALE: 3/4" = 1'-0"

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CHA Consulting Inc No. 4478

A/E SEAL

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 29649
BRADLEY J. ISELI

03-16-2012

PROJECT TITLE

UNIVERSITY OF SOUTH CAROLINA

SOFTBALL STADIUM CONSTRUCTION

BID SET

REVISIONS

NO	REVISION	DATE

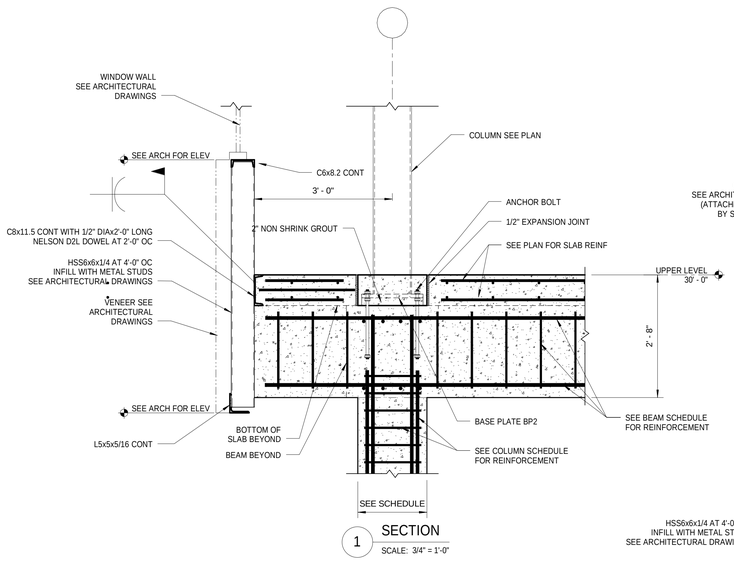
SHEET INFORMATION	
Date	2012-03-16
Project No.	23273
Scale	AS NOTED
Drawn By	KDN
Checked By	JRD
State Project No.	

TITLE

UPPER FLOOR SECTIONS

SHEET NO.

S6.1



1 SECTION
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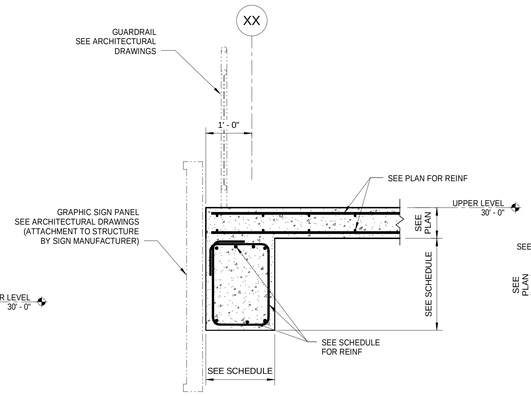

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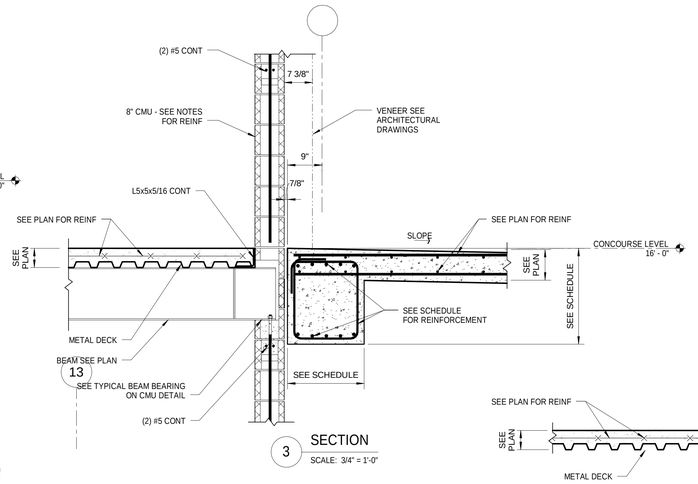
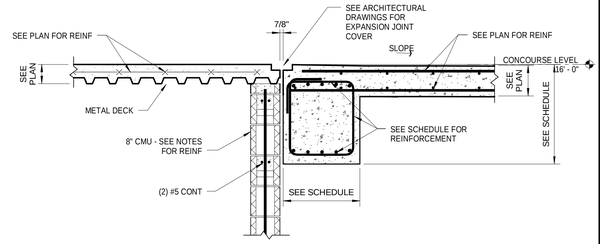


13 SECTION
3 SCALE: 3/4" = 1'-0"



4 SECTION
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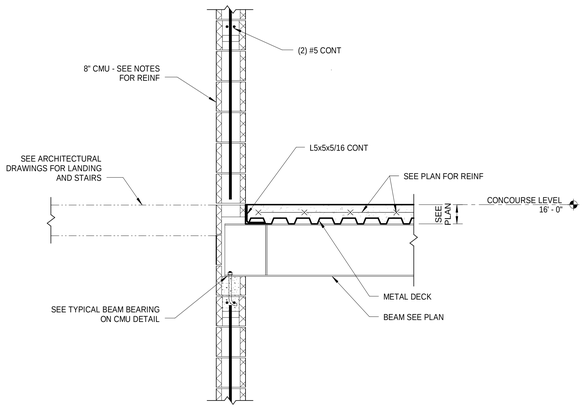

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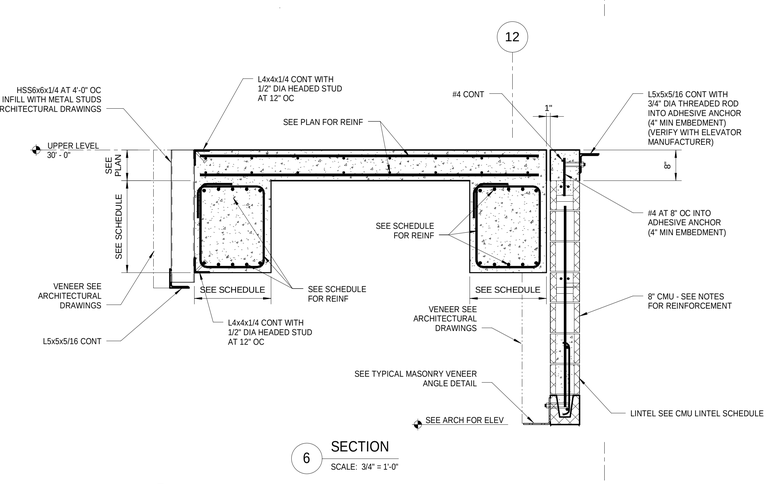
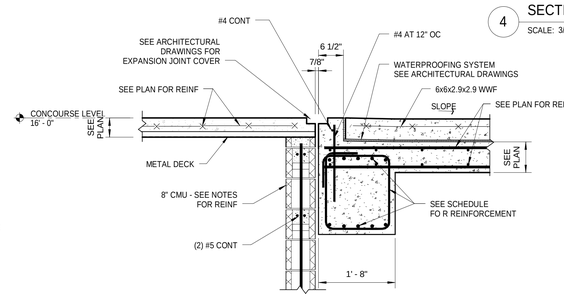


6 SECTION
SCALE: 3/4" = 1'-0"



7 SECTION
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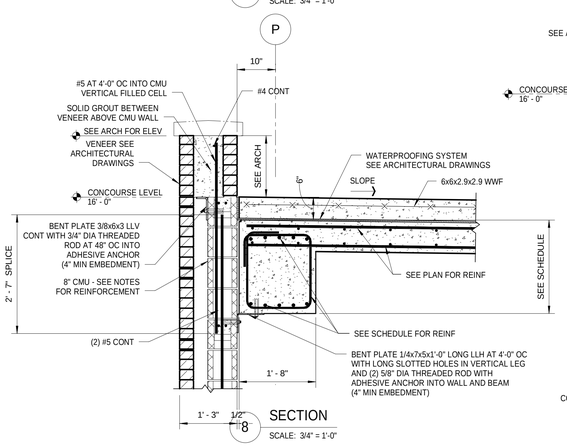
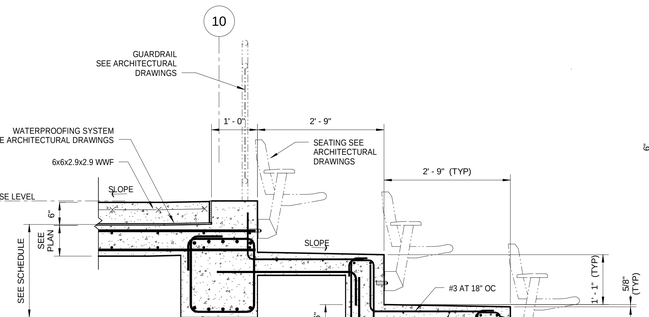


8 SECTION
SCALE: 3/4" = 1'-0"



9 SECTION
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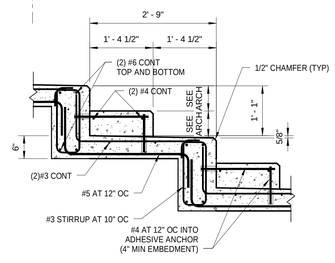

10 SECTION
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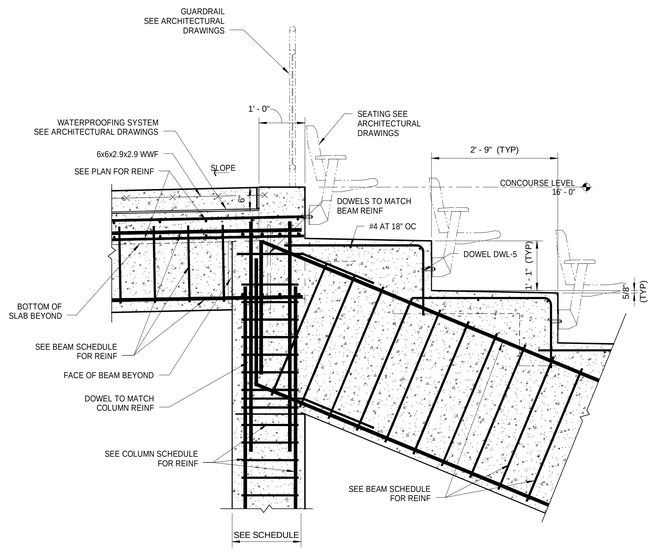

11 SECTION
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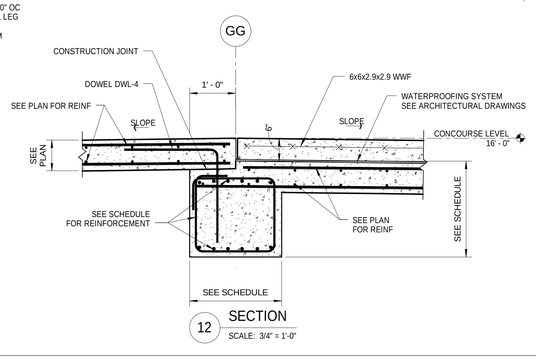
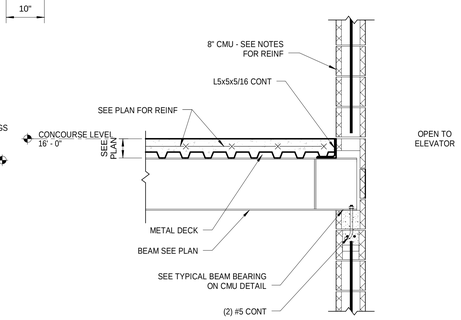


12 SECTION
SCALE: 3/4" = 1'-0"



13 SECTION
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BRADLEY J. ISELI

03-16-2012

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SOFTBALL STADIUM CONSTRUCTION

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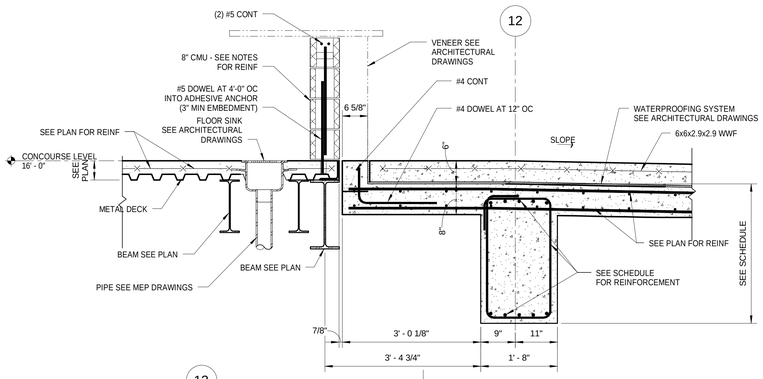
UPPER FLOOR SECTIONS

SHEET NO.

S6.2



1 SECTION
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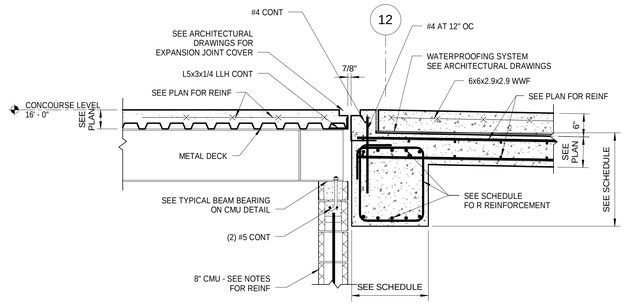

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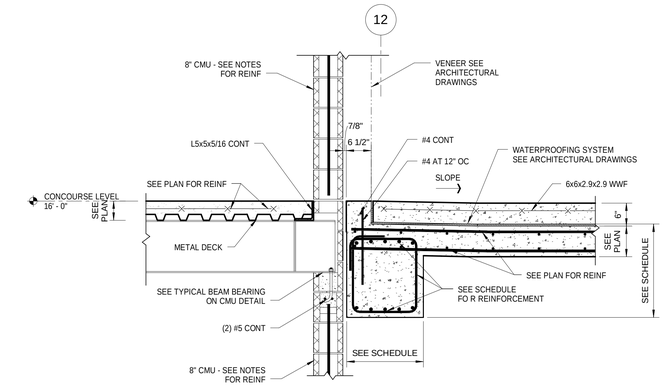

3 SECTION
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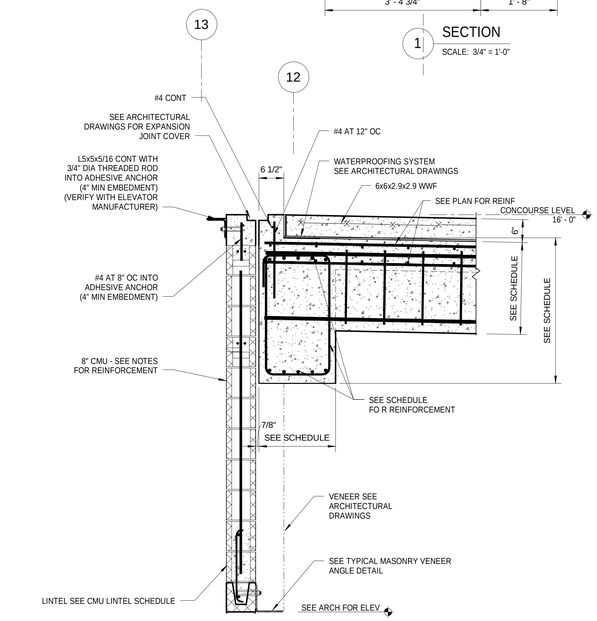

4 SECTION
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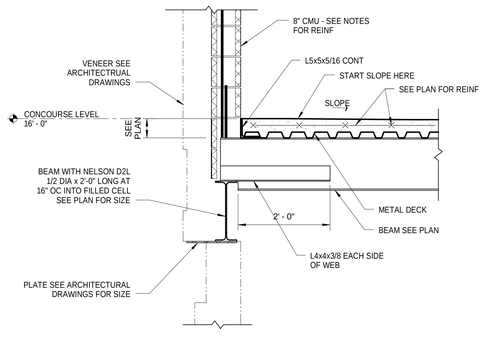

8 SECTION
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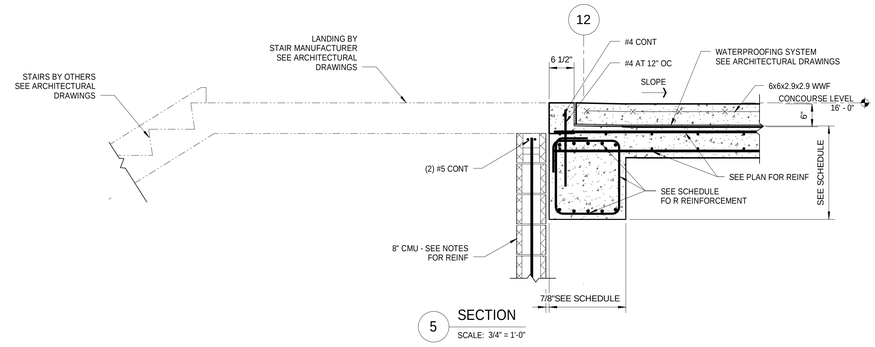

5 SECTION
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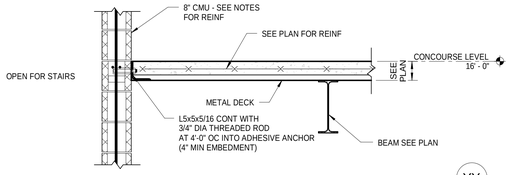

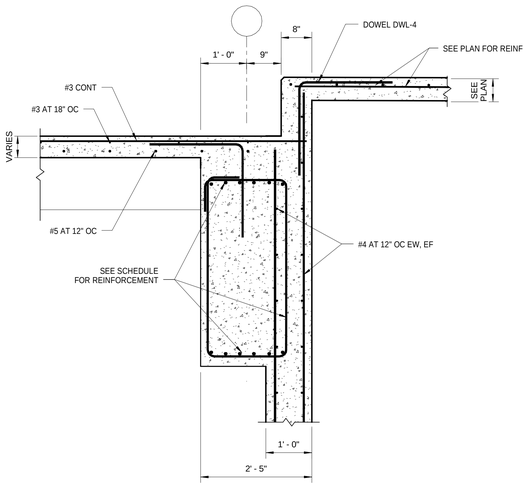

7 SECTION
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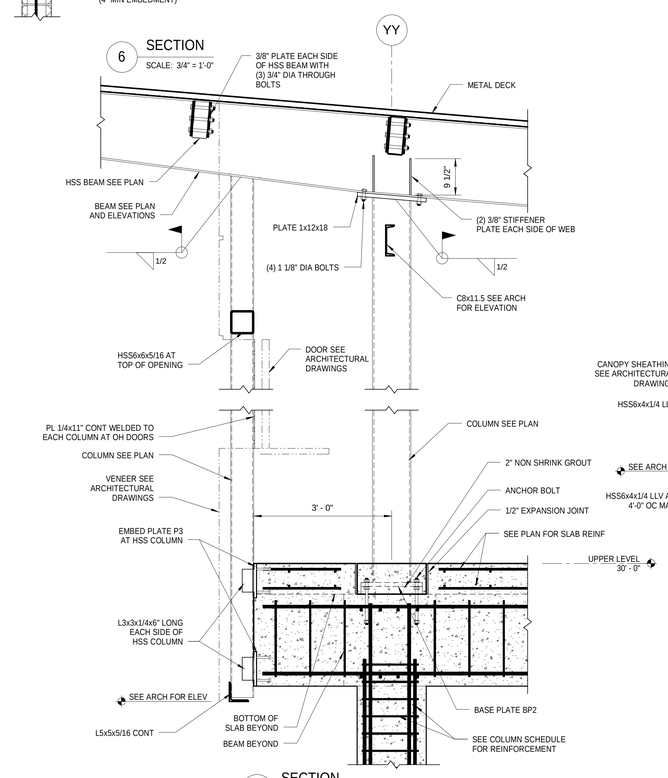

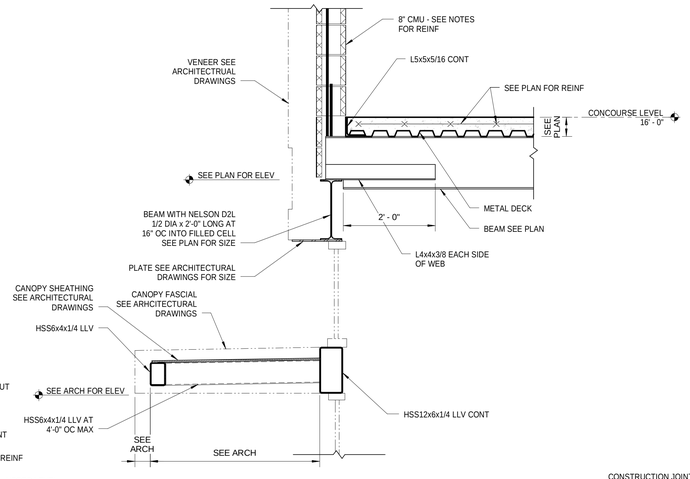

10 SECTION
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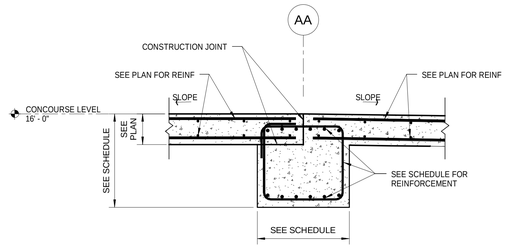

11 SECTION
SCALE: 3/4" = 1'-0"

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03-16-2012

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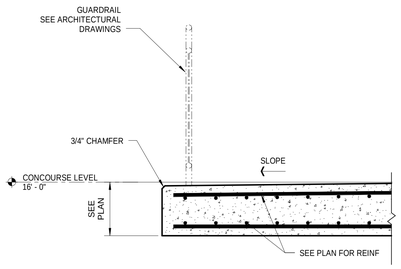
TITLE

UPPER FLOOR SECTIONS

SHEET NO.

S6.3



1 SECTION
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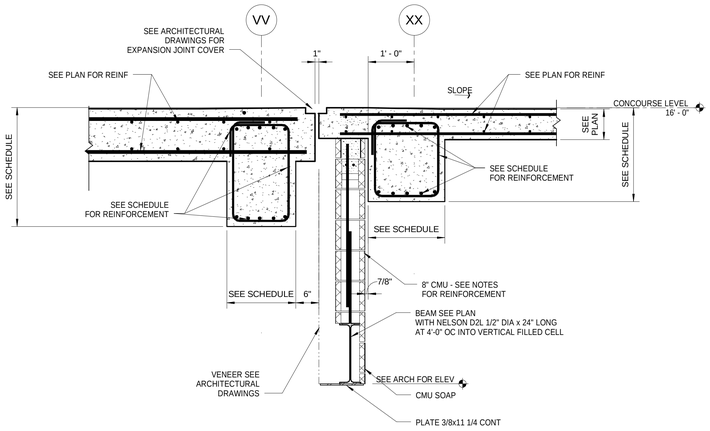

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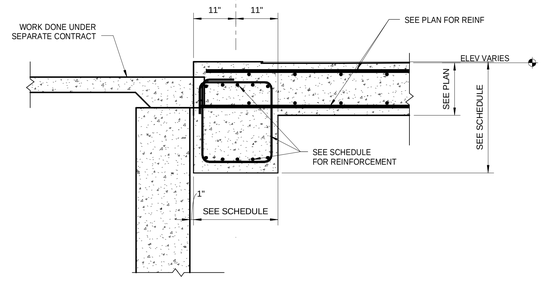

3 SECTION
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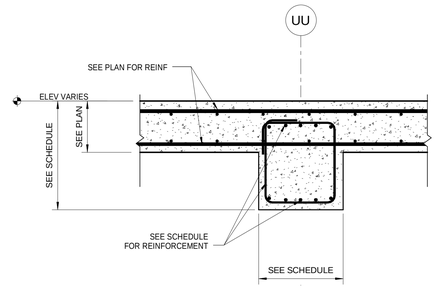

4 SECTION
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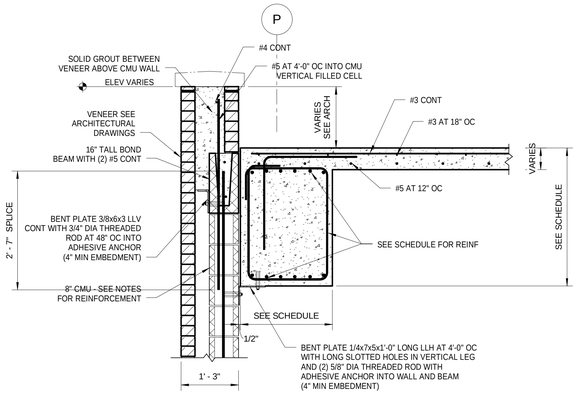

5 SECTION
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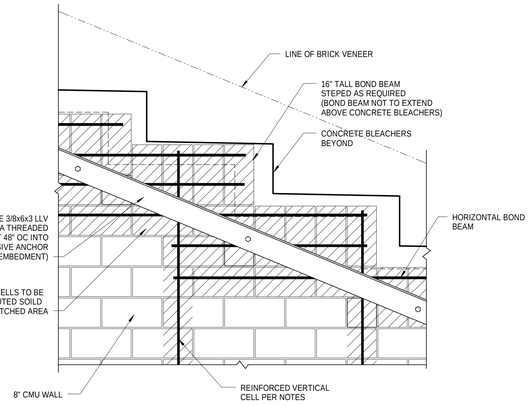

6 SECTION
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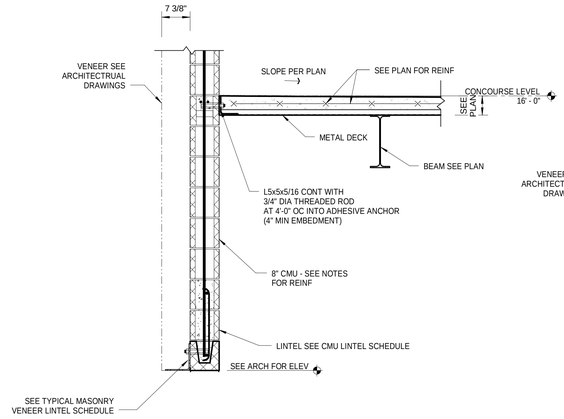

7 SECTION
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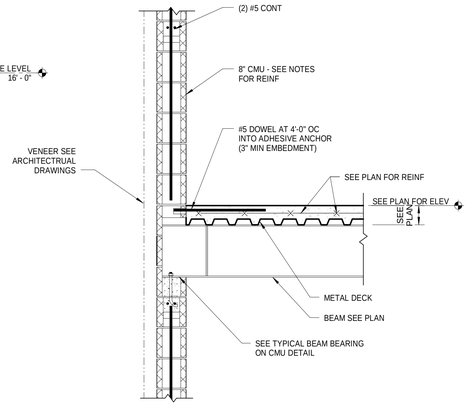

8 SECTION
SCALE: 3/4" = 1'-0"

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Brad Isell 03-16-2012

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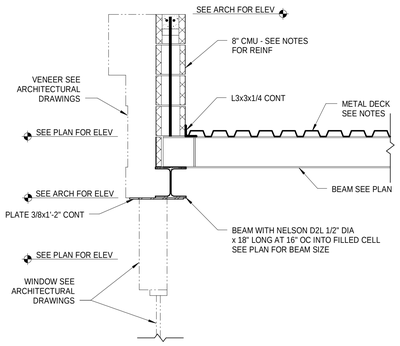
UPPER FLOOR SECTIONS

SHEET NO.

S6.4



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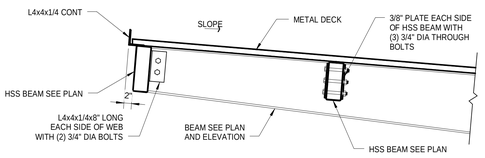

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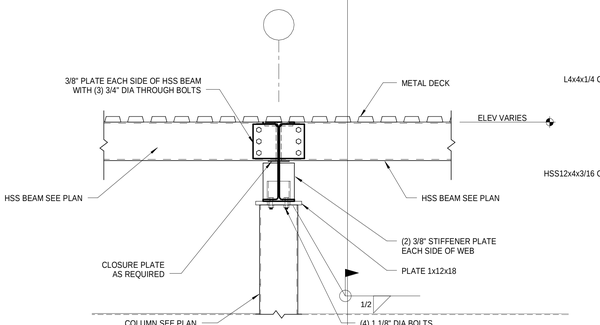

3 SECTION
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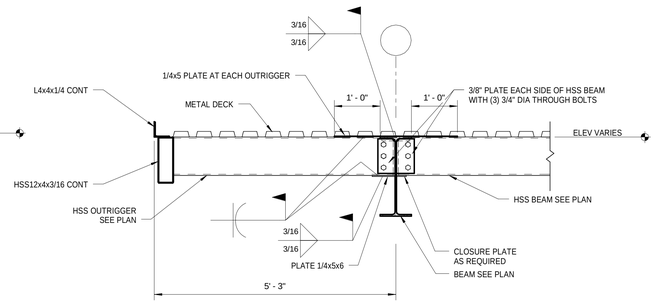
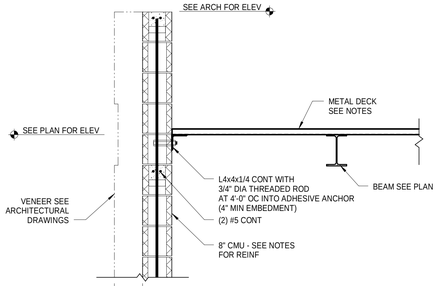


4 SECTION
SCALE: 3/4" = 1'-0"



5 SECTION
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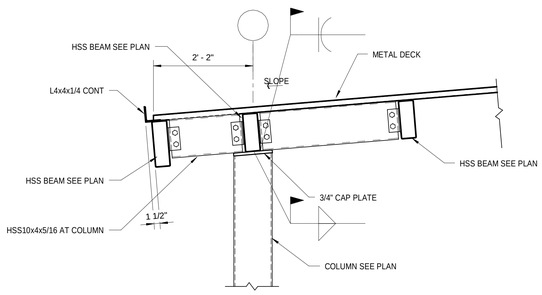
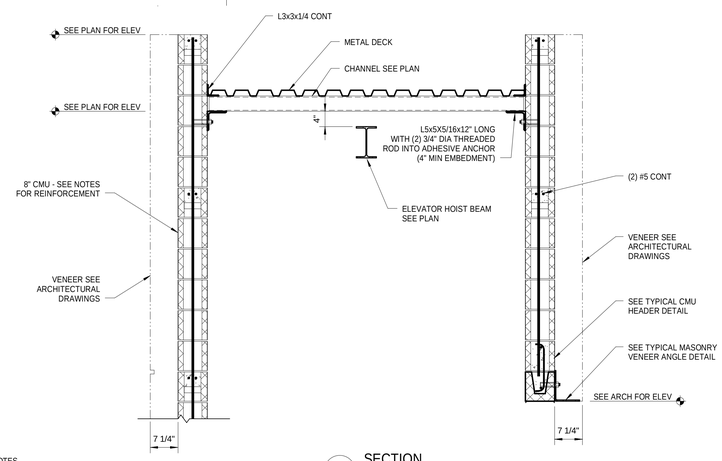


6 SECTION
SCALE: 3/4" = 1'-0"



7 SECTION
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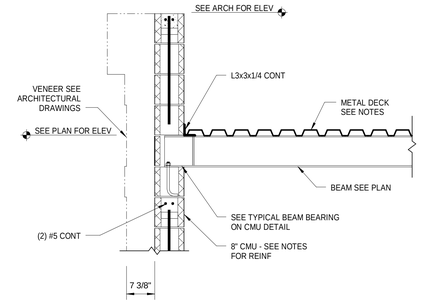

8 SECTION
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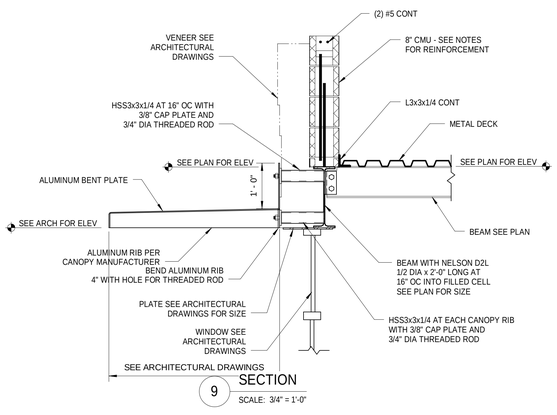

9 SECTION
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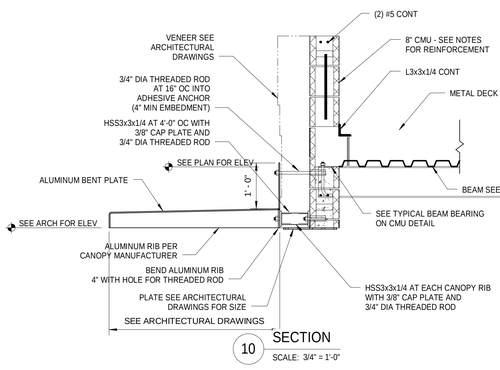

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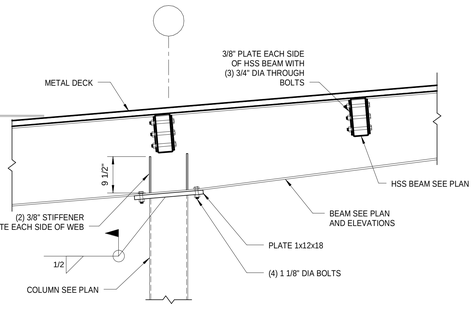

11 SECTION
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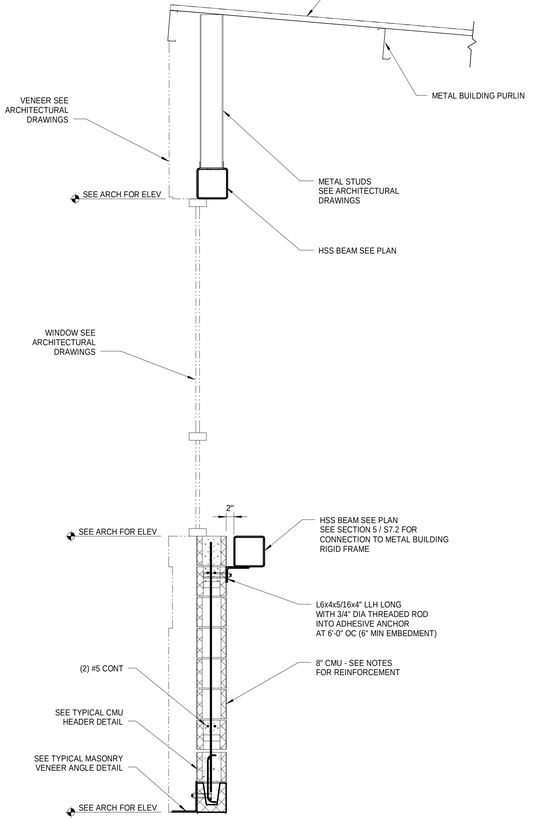

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CHA Consulting Inc No. 4478

A/E SEAL

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 29649
BRADLEY J. ISELI

03-16-2012

PROJECT TITLE

UNIVERSITY OF SOUTH CAROLINA

SOFTBALL STADIUM CONSTRUCTION

BID SET

REVISIONS

NO	REVISION	DATE

SHEET INFORMATION

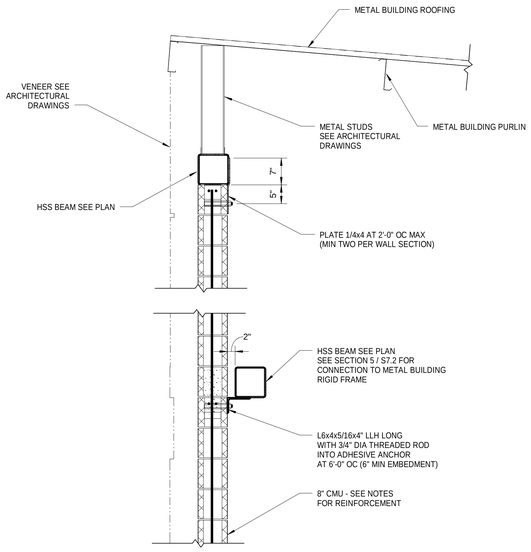
Date	2012-03-16
Project No.	23273
Scale	AS NOTED
Drawn By	KDN
Checked By	JRD
State Project No.	

TITLE

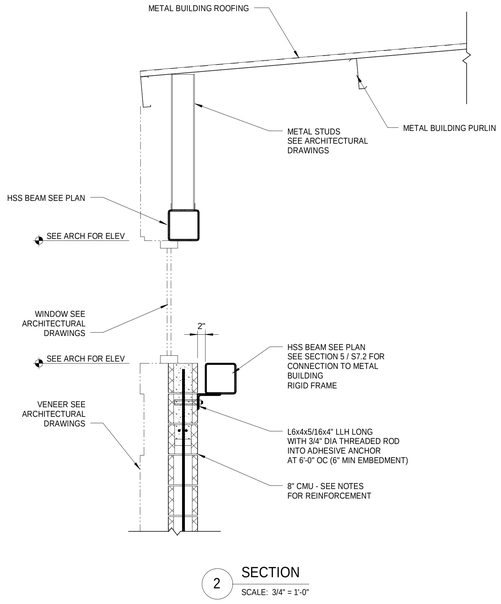
ROOF FRAMING SECTIONS

SHEET NO.

S7.1



1 SECTION
SCALE: 3/4" = 1'-0"



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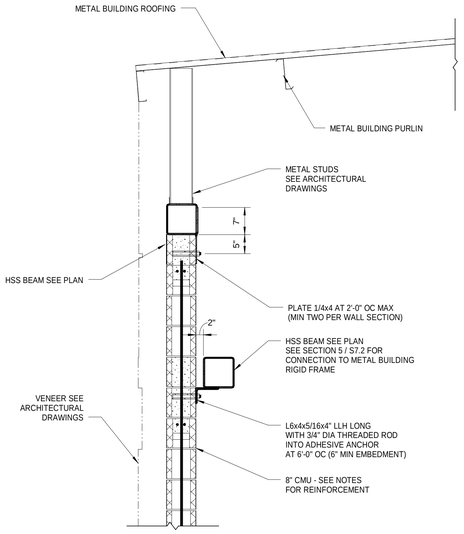
SCALE: 3/4" = 1'-0"



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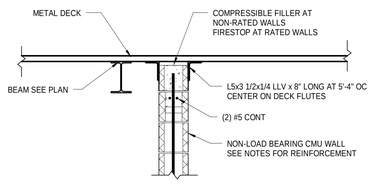
SCALE: 3/4" = 1'-0"



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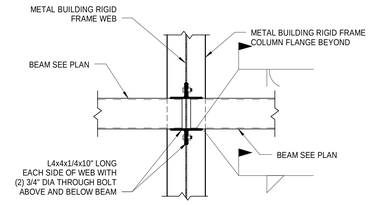

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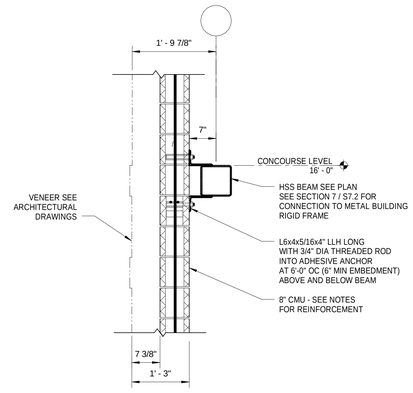
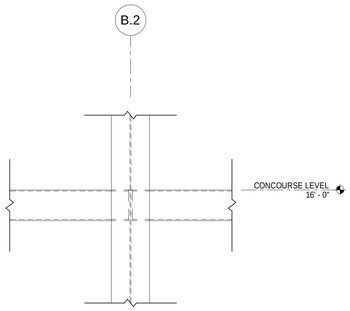
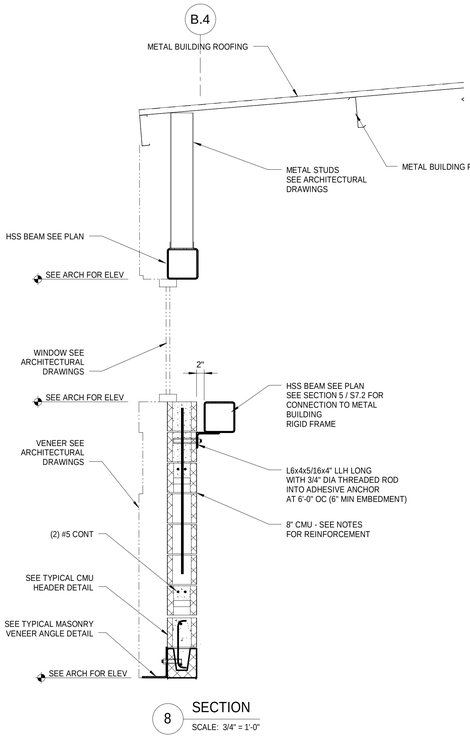


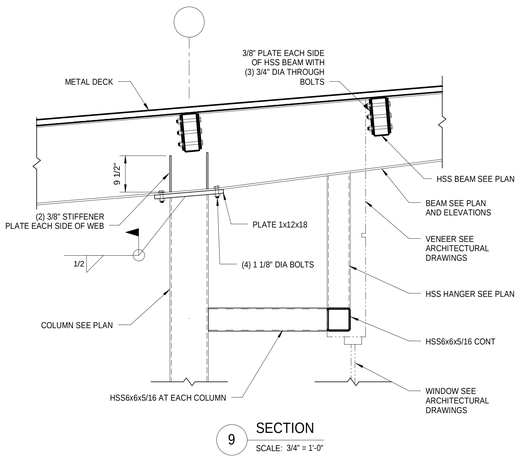
6 SECTION
SCALE: 3/4" = 1'-0"



7 SECTION
SCALE: 3/4" = 1'-0"



8 SECTION
SCALE: 3/4" = 1'-0"



9 SECTION
SCALE: 3/4" = 1'-0"

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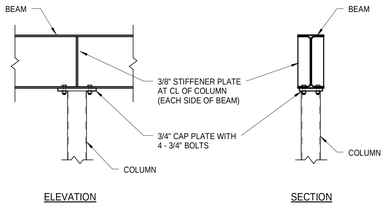
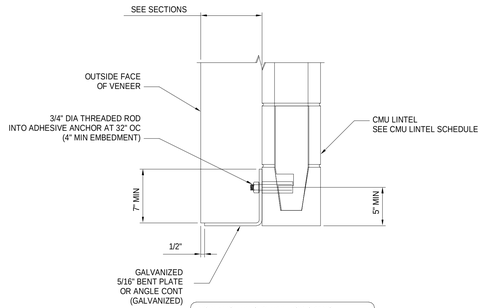
SHEET NO.

S7.2



1 TYPICAL COLUMN TO BEAM DETAIL
SCALE: 3/4" = 1'-0"



NOTE: USE THIS DETAIL FOR SPANS OVER 7'-0". (FOR SPANS LESS THAN 7'-0" SEE MASONRY VENEER LOOSE LINTEL DETAIL)

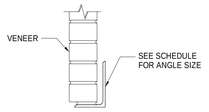
2 TYPICAL MASONRY VENEER ANGLE DETAIL
SCALE: 3/4" = 1'-0"

MASONRY VENEER LOOSE LINTEL SCHEDULE

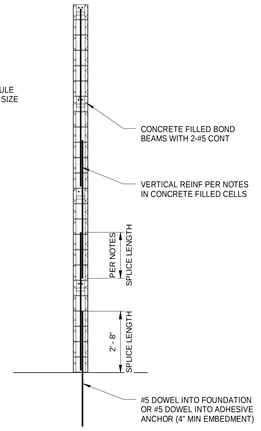
MAX SPAN	ANGLE SIZE
4'-0"	L5x3 1/2x5/16 LLV
8'-0"	L6x4x3/8 LLV

NOTE:
PROVIDE 8" MINIMUM BEARING EACH END

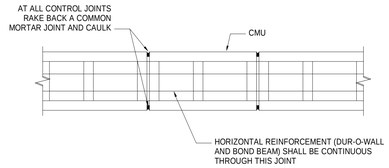
NOTE:
ALL ANGLES TO BE GALVANIZED



3 TYPICAL LOOSE LINTEL DETAIL
SCALE: 3/4" = 1'-0"

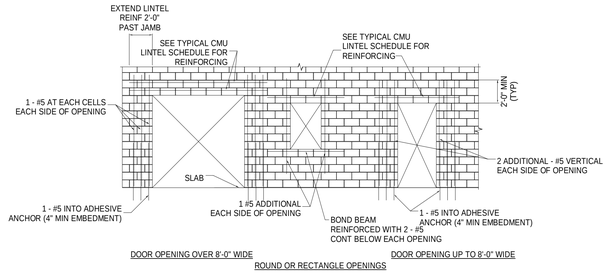


4 TYPICAL CMU REINF DETAIL
SCALE: 3/8" = 1'-0"



NOTE: WHERE THERE IS A CONTROL JOINT IN THE VENEER, A CMU CONTROL JOINT SHALL OCCUR.

5 TYPICAL CMU CONTROL JOINT DETAIL
SCALE: 3/4" = 1'-0"



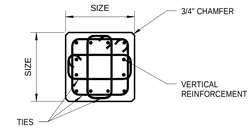
6 TYPICAL CMU OPENING REINFORCEMENT
SCALE: 3/8" = 1'-0"

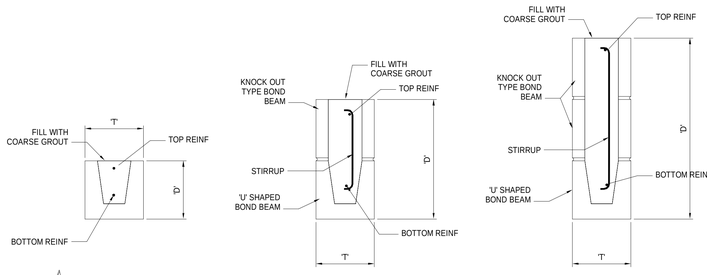
CMU LINTEL SCHEDULE

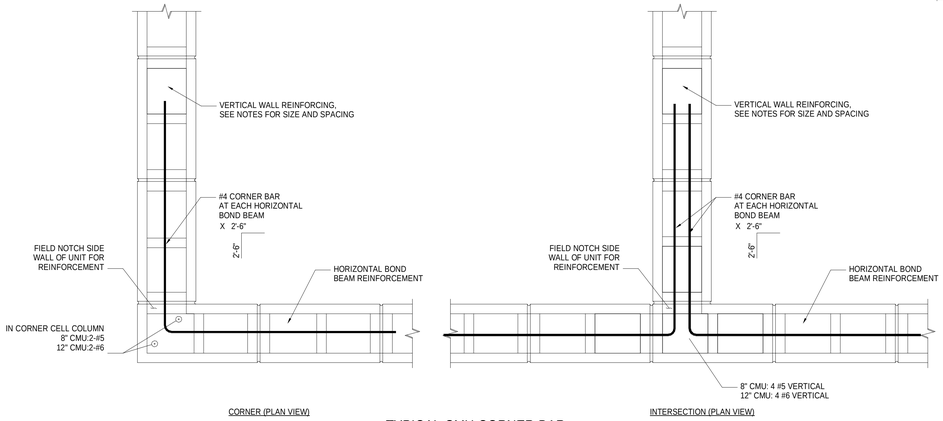
WALL THICKNESS (T)		MAXIMUM UNIFORM LOAD (INCLUDING SELF WEIGHT OF LINTEL)			REINFORCEMENT		
NOMINAL	ACTUAL		MAX CLEAR SPAN	DEPTH (D)	BOTTOM	TOP	STIRRUPS
8"	7 5/8"	1.0 klf	4'-0"	7 5/8"	#5	#5	N/A
8"	7 5/8"	1.1 klf	8'-0"	1'-3 5/8"	2 #6	2 #6	#3 AT 8" OC
8"	7 5/8"	1.4 klf	17'-0"	1'-11 5/8"	2 #6	2 #6	#3 AT 10" OC
10"	9 5/8"	1.0 klf	4'-0"	7 5/8"	#6	#6	N/A
10"	9 5/8"	1.1 klf	8'-0"	1'-3 5/8"	2 #6	2 #6	N/A
10"	9 5/8"	1.4 klf	17'-0"	1'-11 5/8"	2 #6	2 #6	#3 AT 16" OC
12"	11 5/8"	1.0 klf	4'-0"	7 5/8"	2 #6	N/A	N/A
12"	11 5/8"	1.1 klf	8'-0"	1'-3 5/8"	3 #6	3 #6	2-#3 AT 8" OC
12"	11 5/8"	1.5 klf	17'-0"	1'-11 5/8"	3 #6	3 #6	2-#3 AT 16" OC

COLUMN SCHEDULE

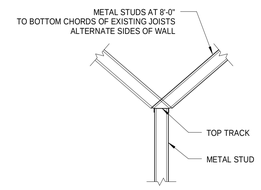
SIZE	VERTICAL REINF	TIES (FIRST AND LAST 4'-0")	TIES (CENTER)
18x18	(12) #6	#4 AT 4" OC	#4 AT 6" OC
18x24	(12) #5	#3 AT 4" OC	#3 AT 6" OC
24x45	(12) #7	#4 AT 4" OC	#4 AT 4" OC
28X28	(16) #8	#4 AT 4" OC	#4 AT 12" OC





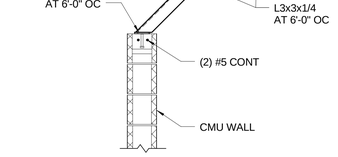


8 TYPICAL CMU CORNER BAR DETAIL
SCALE: 3/4" = 1'-0"



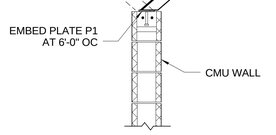
USE WHEN THE UNBRACED WALL LENGTH IS GRATER THAN 10'-0"

9 TYPICAL LIGHT GAUGE NON-LOAD BEARING INTERIOR WALL BRACE DETAIL
SCALE: 3/4" = 1'-0"



NOTE:
USE WHEN THE UNBRACED WALL LENGTH IS GREATER THAN 15 FEET FOR 6" CMU, 24 FEET FOR 8" CMU AND 30 FEET FOR 12" CMU

10 TYPICAL INTERIOR WALL BRACE DETAIL
SCALE: 3/4"=1'-0"



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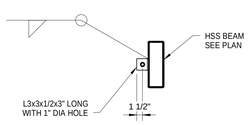
11 TYPICAL INTERIOR WALL BRACE DETAIL
SCALE: 3/4"=1'-0"



12 TYPICAL SCREEN CABLE CONNECTION TO ROOF DETAIL
SCALE: 3/4"=1'-0"

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