GENERAL CONDITIONS AND STATEMENTS

1. THESE NOTES SHALL APPLY UNLESS INDICATED OTHERWISE BY DRAWINGS OR SPECIFICATIONS. IN THE EVENT THAT CONFLICTS OCCUR BETWEEN THESE NOTES, DRAWINGS OR SPECIFICATIONS NOTIFY THE STRUCTURAL ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
2. STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH THE SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT.
3. SUBMIT SHOP DRAWINGS ON ALL STRUCTURAL MATERIALS FOR APPROVAL BEFORE FABRICATION. CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMISSION.
4. THE STRUCTURE INDICATED BY THE DRAWINGS AND SPECIFICATIONS IS STRUCTURALLY STABLE ONLY IN ITS COMPLETED FORM. THE CONSTRUCTION IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, SEQUENCES AND OPERATIONS OF CONSTRUCTION AND SHALL PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
5. ALL DETAILS, SECTIONS, AND NOTES INDICATED ON THE DRAWINGS SHALL APPLY AT ALL LOCATIONS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY THE DETAIL, SECTION, OR NOTE.
6. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DATA FILES.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE STRUCTURAL WORK WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND ALL OTHER RELEVANT TRADES. IN CASE OF CONFLICT BETWEEN STRUCTURAL WORK AND DRAWINGS RELATED TO OTHER TRADES THE CONTRACTOR SHALL MAKE IN THEIR BID ALLOWANCE FOR THE MORE SEVERE REQUIREMENTS. CONFLICTS BETWEEN THE STRUCTURAL WORK AND THE DRAWINGS OF OTHER TRADES SHALL NOT BE A REASON FOR ANY ADDITIONAL COST OR DELAY IN EXECUTION OF THE WORK.
8. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

ABBREVIATIONS

ADDL	ADDITIONAL	EJ	EXPANSION JOINT	LLV	LONG LEG VERTICAL
ADH	ADHESIVE	EL	ELEVATION	LSH	LONG SIDE HORIZONTAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	ELEC	ELECTRICAL	LSV	LONG SIDE VERTICAL
		ELEV	ELEVATOR	LW	LIGHT WEIGHT
AFF	ABOVE FINISHED FLOOR	EOD	EDGE OF DECK	MAX	MAXIMUM
ALT	ALTERNATE	EOS	EDGE OF SLAB	MECH	MECHANICAL
ARCH	ARCHITECT	EQ	EQUAL	MFR	MANUFACTURER
B/	BOTTOM OF	EQUIP	EQUIPMENT	MIN	MINIMUM
BCB	BOTTOM CHORD BRACING	EW	EACH WAY	MOW	MIDDLE OF WALL
BCX	BOTTOM CHORD EXTENSION	EXP	EXPANSION	NTS	NOT TO SCALE
BFF	BELOW FINISHED FLOOR	EXT	EXTERIOR	NW	NORMAL WEIGHT
BLDG	BUILDING	EXIST; E	EXISTING	OC	ON CENTER
BOTT	BOTTOM	FFE	FINISHED FLOOR ELEVATION	OH	OPPOSITE HAND
BP	BASE PL	FIN	FINISHED	OPNG	OPENING
BRG	BEARING	FLR	FLOOR	PAF	POWDER/ POWER ACTUATED FASTENER
BTWN	BETWEEN	FOB	FACE OF BRICK		
CIP	CAST IN PLACE	FOM	FACE OF MASONRY	PC	PRECAST or PILE CAP
CJ	CONTRACTION OR CONSTRUCTION JOINT	FOS	FACE OF STUD	PJF	PRE-MOLDED JOINT FILLER
		FTG	FOOTING	PL	PLATE
CL	CENTERLINE	GA	GAGE	PLBG	PLUMBING
CLR	CLEAR	GALV	GALVANIZED	PT	PRESSURE TREATED or POST TENSIONED
CMU	CONCRETE MASONRY UNIT	GB	GRADE BEAM		
COL	COLUMN	GC	GENERAL CONTRACTOR	QTY	QUANTITY
CONC	CONCRETE	GLB	GLULAM BEAM	REINF	REINFORCEMENT
CONN	CONNECTION	HD	HEADED	REF	REFERENCE
CONT	CONTINUOUS	HORIZ; H	HORIZONTAL	REQD	REQUIRED
COORD	COORDINATE	INT	INTERIOR	SCHD	SCHEDULE
CTR	CENTER	JBE	JOIST BEARING ELEVATION	SIM	SIMILAR
DBA	DEFORMED BAR ANCHOR	JT	JOINT	SOG	SLAB ON GRADE
DCJ	DOWELED CONSTRUCTION JOINT	K	KIPS	SPEC	SPECIFICATIONS
		KLF; PLF	KIPS/POUNDS PER LINEAR FOOT	STD	STANDARD
DEFL	DEFLECTION			T/	TOP OF
DEMO	DEMOLISH or DEMOLITION	KSI; PSI	KIPS/POUND PER SQUARE INCH	TCX	TOP CHORD EXTENSION
DIA; Ø	DIAMETER			TYP	TYPICAL
DIM	DIMENSION	KSF; PSF	KIPS/POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING			VERT; V	VERTICAL
DWL	DOWEL	LB	POUND	VIF	VERIFY IN FIELD
EA	EACH	LG	LONG	w/	WITH
EF	EACH FACE	LLH	LONG LEG HORIZONTAL	WP	WORK POINT
				WWF	WELDED WIRE FABRIC

DESIGN CRITERIA

DESIGN CODES

1.	BUILDING CODE	2012 NORTH CAROLINA STATE BUILDING CODE BASED ON THE 2009 IBC
2.	DESIGN LOADS	ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
3.	STEEL	AISC 360-05 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
4.	CONCRETE	ACI 318-08 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
5.	CONCRETE MASONRY	ACI 530-08 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

DESIGN LOADS

1.	BUILDING OCCUPANCY GROUP	II	
2.	ROOF LIVE LOAD		20 PSF
		GROUND SNOW LOAD	15 PSF
		Is	1.0
		Ct	1.0
		Ce	1.0
		Pf	15 PSF
3.	FLOOR LIVE LOAD	1ST LEVEL	100 PSF
		2ND LEVEL	80 PSF
		3RD LEVEL	80 PSF
		STAIRS/RAMP	100 PSF
4.	WIND LOAD	WIND SPEED	95 MPH
		EXPOSURE	C
		Iw	1.0
		COMPONENTS AND CLADDING PRESSURES IN ACCORDANCE WITH ASCE7	
		NO CHANGES TO EXISTING LATERAL LOADS OR LATERAL SYSTEM	
5.	SEISMIC LOAD	Ie	1.0
		NO CHANGES TO EXISTING LATERAL LOADS OR LATERAL SYSTEM	

SELECTIVE DEMOLITION

1. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE MEANS OF DEMOLITION AND THE INTEGRITY AND STABILITY OF THE EXISTING STRUCTURE DURING DEMOLITION AND THROUGHOUT CONSTRUCTION UNTIL THE WORK IS COMPLETED.
2. EXISTING CONDITIONS AND STRUCTURAL MEMBERS INDICATED ARE FOR REFERENCE ONLY AND SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR. NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN CONDITIONS INDICATED AND THOSE FOUND AT THE SITE PRIOR TO THE START OF DEMOLITION OF EXISTING STRUCTURAL MEMBERS.
3. PRIOR TO THE START OF DEMOLITION WORK VERIFY THAT ANY ELECTRICAL SYSTEM, MECHANICAL SYSTEM, PLUMBING SYSTEM, OR UTILITY EMBEDDED IN THE EXISTING STRUCTURE IS NOT DAMAGED OR DISRUPTED BY THE DEMOLITION WORK UNLESS IT IS REQUIRED BY THE WORK AND ADEQUATE MEASURES ARE TAKEN TO PRESERVE THE SYSTEM OR UTILITY BEYOND THE AREA OF DEMOLITION.
4. WHERE NEW OPENINGS ARE INDICATED TO BE CUT THROUGH EXISTING CONCRETE MEMBERS, THE CONTRACTOR SHALL CORE DRILL ALL CORNERS OF THE OPENING AND SAW CUT OPENING EDGES BETWEEN CORE DRILLED HOLES. DO NOT CUT BEYOND HOLES. CUT AND CHIP CORNER HOLES TO PRODUCE SQUARE OPENING CORNERS AS REQUIRED.

EXISTING CONDITIONS

1. EXISTING DRAWINGS WERE NOT AVAILABLE FOR ALL AREAS THIS PROJECT. ALL EXISTING DIMENSIONS, CONNECTION DETAILS, MEMBER SIZES, FRAMING CONFIGURATION, ETC. HAVE BEEN ASSUMED. THE GENERAL CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION OR PREPARING SHOP DRAWINGS. NOTIFY THE ARCHITECT AND ENGINEER OF ANY AREA WHERE THE EXISTING CONDITIONS DO NOT MATCH THE CONDITIONS ASSUMED ON THESE DRAWINGS.

DELEGATED DESIGN / DEFERRED SUBMITTALS

THE FOLLOWING ITEMS SHALL BE DESIGNED BY A SPECIALTY ENGINEER FOR THE CONTRACTOR. DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW, SEALED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.

1. STEEL STAIRS, HANDRAILS, AND GUARDRAILS

SOIL AND SUBSURFACE CONDITIONS

1. A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED FOR THIS PROJECT, THEREFORE SOIL PARAMETERS SHALL BE VERIFIED AT TIME OF CONSTRUCTION BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. IF ANY OF THE FOLLOWING PARAMETERS ARE LESS THAN INDICATED THE STRUCTURAL ENGINEER SHALL BE NOTIFIED AND FOUNDATION DESIGN WILL BE REVISED. IF NECESSARY:

MINIMUM BEARING CAPACITY	1500 PSF
SATURATED UNIT WEIGHT	130 PCF
FRICTION ANGLE	26 DEGREES
AT-REST EARTH PRESSURE COEFFICIENT (Ko)	0.56
ACTIVE COEFFICIENT EARTH PRESSURE (Ka)	0.39
PASSIVE EARTH PRESSURE COEFFICIENT (Kp)	2.56
MOIST UNIT WEIGHT OF BACKFILL	130 PCF
FRICTION COEFFICIENT BETWEEN FOUNDATION AND SOIL	0.33

2. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL WITHIN 10'-0" OF THE BUILDING FOUNDATION PERIMETER SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR. THE TOP 12" BELOW FLOOR SLABS AND FOOTINGS SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR.
3. FOOTING BEARING ELEVATIONS SHALL BE ADJUSTED AT TIME OF EXCAVATION TO ACHIEVE THE REQUIRED BEARING CAPACITY IF SO REQUIRED.
4. BACKFILLING OF RETAINING WALLS SHALL BE PLACED SO THAT EQUAL LOADING SHALL BE MAINTAINED ON EACH SIDE OF WALL UNTIL THE LOWER GRADE IS REACHED.
5. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS BOTH DURING CONSTRUCTION AND PERMANENTLY.
6. MAINTAIN STABILITY OF EXCAVATIONS UNTIL PROPERLY BACKFILLED. KEEP EXCAVATIONS FREE OF LOOSE MATERIAL. DEWATER EXCAVATIONS AND REMOVE ANY WET MATERIAL PRIOR TO PLACING CONCRETE.
7. PLACE A 3" THICKNESS "MUDMAT" OF CONCRETE IN THE BOTTOM OF FOOTINGS THAT WILL BE EXPOSED TO RAIN OR LEFT OPEN OVER NIGHT.
8. HEAVY EQUIPMENT USED FOR PLACING OR COMPACTING BACKFILL SHALL NOT BE OPERATED WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE BACKFILL ABOVE THE TOP OF FOOTING, (1 HORIZONTAL TO 1 VERTICAL). HAND OPERATED COMPACTION EQUIPMENT SHALL BE USED FOR COMPACTION OPERATIONS IN THIS AREA.
9. GRADE SHALL BE SLOPED SO THAT THE FINISHED GRADE OF ANY FOUNDATION OR SLAB ON GRADE IS NOT REDUCED BY MORE THAN 5% OF THAT INDICATED.
10. EXCAVATION BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION BRACING SHALL BE DESIGNED FOR LATERAL LOADING RESULTING FROM AN EQUIVALENT FLUID PRESSURE OF 60 PCF AND A SURFACE SURCHARGE OF 250 PSF.

CAST IN PLACE STRUCTURAL CONCRETE

1. SUBMIT MIX DESIGNS FOR EACH TYPE OF CONCRETE SPECIFIED.
2. SUBMIT DATA FOR ALL ADMIXTURES, CURING COMPOUNDS AND HARDENERS THAT ARE INTENDED FOR USE.
3. TESTING LABORATORY SHALL SAMPLE AND TEST CONCRETE AS FOLLOWS:
   TAKE SAMPLES IN ACCORDANCE WITH ASTM C172. SAMPLE 4 CYLINDERS FOR EACH 100 CUBIC YARDS, 5000 SF OF SURFACE AREA OR FOR EACH PLACEMENT OF EACH TYPE OF CONCRETE PLACED IN ANY ONE DAY.
4. TEST WHEN SAMPLES ARE TAKEN FOR AIR CONTENT AND SLUMP IN ACCORDANCE WITH ASTM C143.
   TEST CYLINDERS FOR COMPRESSIVE STRENGTH IN ACCORDANCE WITH ASTM C39.
   TEST 1 CYLINDER AT 7 DAYS
   TEST 2 CYLINDERS AT 28 DAYS
   HOLD ONE CYLINDER IN RESERVE AND BREAK AT 56 DAYS IF THE 28 DAY CYLINDERS DO NOT SATISFY ACI CRITERIA FOR THE SPECIFIED STRENGTH.
5. TEST REPORTS SHALL BE SENT TO THE STRUCTURAL ENGINEER AND SHALL BE AVAILABLE AT THE JOBSITE
6. CONCRETE SHALL HAVE THE MINIMUM 28 DAY COMPRESSIVE STRENGTH AND WEIGHTS:

LOCATION	28 DAY STRENGTH	UNIT WEIGHT
FOUNDATIONS/SLAB ON GRADE/WALLS	3,000 PSI	145 PCF
ELEVATED SLAB ON DECK	3,000 PSI	145 PCF

7. CONCRETE WORK SHALL CONFORM TO ACI 318.
8. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60.
9. REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706 GRADE 60.
10. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185. PROVIDE MATERIAL IN SHEETS. LAP ALL WELDED WIRE FABRIC ONE FULL SQUARE PLUS 2" AT ALL SHEET EDGES.
11. SLAB ON GRADE DOWELS SHALL BE SMOOTH RODS CONFORMING TO ASTM A36 WITH ENDS SMOOTH CUT.
12. REINFORCING BAR SUPPORT DEVICES SHALL CONFORM TO CRSI MANUAL OF STANDARD PRACTICE.
13. CONCRETE CLEAR COVER ON EMBEDDED REINFORCING SHALL BE AS FOLLOWS:

LOCATION	BAR SIZE	MINIMUM CLEAR COVER
FOOTINGS	ALL	3" BOTTOM AND SIDES, 2" TOP
CONCRETE EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER	1 1/2"
	#6 THROUGH #18	2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER		
SLABS, WALLS AND JOISTS	#11 AND SMALLER	3/4"
	#14 AND #18	1 1/2"
BEAMS AND COLUMNS PRIMARY REINFORCING, STIRRUPS AND TIES	ALL	1 1/2"

14. ALL CONTINUOUS BARS SHALL HAVE A CLASS B TENSION LAP SPLICE AT ALL SPLICES UNO. PROVIDE CORNER BARS FOR ALL DISCONTINUOUS BARS AT ALL FOUNDATION AND WALL CORNERS AND INTERSECTIONS. LAP CORNER BARS 48 BAR DIAMETERS EACH END.
15. PROVIDE (2) #5 x4'-0" LONG TOP DIAGONAL BARS AT ALL REENTRANT CORNERS IN ALL SLABS ON GRADE AND ELEVATED SLABS.
16. PROVIDE DOWELS TO FOOTINGS TO MATCH ALL WALL, PIER AND COLUMN VERTICAL REINFORCING UNO. EMBED DOWELS IN FOOTING WITH HOOK TO WITHIN 3" OF BOTTOM OF FOOTING. EXTEND DOWELS ABOVE FOOTING FOR 48 BAR DIAMETER LAP SPLICE WITH VERTICAL REINFORCING UNO.
17. CONSTRUCTION OR CONTRACTION JOINTS SHALL BE INSTALLED IN SLABS ON GRADE AT A SPACING NOT TO EXCEED 12'-0" OC EACH DIRECTION UNO ON FOUNDATION PLAN. ASPECT RATIO OF SLAB AREAS BETWEEN JOINTS (RATIO OF LONG SIDE TO SHORT SIDE) SHALL NOT EXCEED 1.5. SAW CUT JOINTS SHALL BE MADE AS SOON AS SLABS WILL SUPPORT MEN AND EQUIPMENT. EMBEDDED EDGE ANGLES SHALL BE DISCONTINUOUS AT SLAB JOINT LOCATIONS.
18. CONSTRUCTION AND CONTRACTION JOINTS IN WALLS SHALL BE LOCATED AT 100'-0" OC MAXIMUM AND 25'-0" MAXIMUM FROM WALL CORNERS. ALIGN JOINTS IN WALLS WITH JOINTS IN SLABS AT LOCATIONS WHERE SLABS ARE CONNECTED TO WALLS.
19. CONFORM TO ACI 306 FOR COLD WEATHER CONCRETE AND ACI 305 FOR HOT WEATHER CONCRETE WORK WHEN ANY COMBINATION OF TEMPERATURE, HUMIDITY OR WIND SPEED RESULTS IN CONDITIONS THAT WOULD IMPAIR THE QUALITY OF CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 90 DEGREES F OR ABOVE.
20. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNO. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EMBEDDED ITEMS IN CONCRETE WORK. COORDINATE WITH THE FOLLOWING: CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, PRECAST SHOP DRAWINGS, MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT AND FIXTURE REQUIREMENTS

CONCRETE MASONRY

1. UNO HOLLOW MASONRY UNITS SHALL CONFORM TO ASTM C90, LIGHTWEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH F'm = 1,500 PSI ON THE NET BLOCK AREA.
2. MORTAR SHALL CONFORM TO ASTM C270 CEMENT-LIME TYPE M OR S. MINIMUM COMPRESSIVE STRENGTH TO BE 1,800 PSI.
3. COURSE MASONRY GROUT SHALL CONFORM TO ASTM C476 WITH MAXIMUM AGGREGATE SIZE OF 3/8". MINIMUM COMPRESSIVE STRENGTH SHALL BE 2,000 PSI AT 28 DAYS. PROVIDE CLEAN OUT OPENINGS WHERE GROUT POUR EXCEEDS 5'-0".
4. CONCRETE MASONRY QUALITY CONTROL:
   WORK IN PROGRESS SHALL BE INSPECTED FOR CONFORMANCE WITH SPECIFIED MATERIALS AND THAT WORKMANSHIP AND CONSTRUCTION IS IN COMPLIANCE WITH PLANS, SPECIFICATIONS AND INDUSTRY STANDARDS.
   4.1 MORTAR: INSPECT PROPORTIONING OF MORTARS IN ACCORDANCE WITH ASTM C780. VERIFY ALL MATERIALS ARE AS APPROVED FOR THE PROJECT.
   4.2 GROUT TEST 3"x3" PRISMS IN ACCORDANCE WITH ASTM C1019. TEST (2) PRISMS FOR EACH 30 CUBIC YARDS OR FRACTION THEREOF PLACED EACH DAY AND WHEN MIX PROPORTIONS ARE CHANGED.
5. PROVIDE MINIMUM REINFORCING FOR ALL CONCRETE MASONRY WALLS UNO ON PLANS:
   PROVIDE W1.7 HORIZONTAL JOINT REINFORCING AT 16" OC WITH FORMED "L" AND "T" SECTIONS AT WALL CORNERS AND INTERSECTIONS. REINFORCE VERTICALLY WITH 1 #5 CENTERED IN GROUT FILLED CELL FULL HEIGHT OF WALL WITH DOWEL TO FOUNDATION AT WALL CORNERS, ENDS, INTERSECTIONS, OPENING JAMBS, EACH SIDE OF CONTROL JOINTS AND SPACED AT 48" OC MAXIMUM. LAP VERTICAL REINFORCING 52 BAR DIAMETER AT ALL SPLICES UNO.
6. MINIMUM MASONRY WALL FOOTINGS SHALL PROJECT 4" MINIMUM ON EACH SIDE OF WALL AND BE 12" DEEP WITH (2) #5 CONTINUOUS.
7. BOND BEAMS SHALL BE REINFORCED WITH (2) #5 CONTINUOUS. LAP 32" AT ALL SPLICES. PROVIDE CORNER BARS AT ALL WALL CORNERS AND INTERSECTIONS.
8. PROVIDE DOWELS TO MATCH VERTICAL BARS AT THE BASE OF ALL WALLS. LAP 52 BAR DIAMETERS MINIMUM WITH VERTICAL BARS UNO.

METAL ROOF DECK

1. THE DESIGN, MANUFACTURE AND ERECTION OF STEEL ROOF DECK AND ITS ANCHORAGE SHALL BE IN ACCORDANCE WITH THE ANSI/SDI "STANDARD FOR STEEL ROOF DECK".
2. PROVIDE ROOF DECK OF TYPE, DEPTH AND MINIMUM THICKNESS INDICATED.
3. INSTALL ROOF DECK WITH A MINIMUM END BEARING LENGTH OF 1 1/2".
4. ROOF DECK SHALL BE FASTENED TO SUPPORTS AS INDICATED ON THE DRAWINGS. FASTEN TO SUPPORTS AT DECK PERIMETER WITH A MINIMUM OF 5/8" DIAMETER WELDS SPACED AT 6" OC.

STRUCTURAL STEEL

1. STRUCTURAL STEEL CONSTRUCTION DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING STANDARDS:

WIDE FLANGE SHAPES	ASTM A992
ANGLE, CHANNELS AND PLATES	ASTM A36
ANCHOR RODS <= 3/4"Ø	ASTM F1554 GRADE 36
ANCHOR RODS >= 7/8"Ø	ASTM F1554 GRADE 55
PIPE	ASTM A53
RECTANGULAR HSS	ASTM A500 GRADE C, 50 ksi

3. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.
4. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER FOR THE LOCATION AND TYPE OF SPLICE.
5. CAMBER BEAMS WHERE INDICATED. WHERE NO CAMBER IS INDICATED, BEAMS SHALL BE FABRICATED SO THAT AFTER ERECTION, ANY NATURAL CAMBER IS UPWARD.
6. ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES SHALL BE INDICATED ON THE SHOP DRAWINGS AT TIME OF SUBMITTAL FOR REVIEW.
7. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
8. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL STEEL AND SHALL INDICATE COMPLETE CONNECTION INFORMATION, BOTH SHOP AND FIELD.
9. PROVIDE A SHOP COAT OF FABRICATOR'S STANDARD RUST INHIBITIVE PRIMER TO ALL STEEL UNO.
10. SEE ARCHITECTURAL DRAWINGS FOR FIRE PROTECTIVE MATERIAL APPLIED TO STRUCTURAL STEEL. DO NOT PRIME STEEL WHICH IS TO RECEIVE SPRAY APPLIED FIRE PROTECTIVE MATERIAL. DO PRIME STEEL WHICH IS TO RECEIVE INTUMESCENT FIRE PROTECTIVE COATING.
11. FILL SOLID WITH NON-SHRINK GROUT UNDER ALL BASE AND BEARING PLATES.
12. CONNECTION NOTES:
   A. STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT MEMBER REACTION INDICATED. REACTIONS INDICATED ARE SERVICE LOAD FORCES (ASD) FOR APPLICABLE LOAD COMBINATIONS. WHERE NO REACTION IS INDICATED PROVIDE A CONNECTION DESIGNED TO SUPPORT A VERTICAL SHEAR OR REACTION OF 80% OF THE MAXIMUM TOTAL UNIFORM LOAD FOR THE APPROPRIATE BEAM SECTION AND SPAN AS DETERMINED PER THE MAXIMUM TOTAL UNIFORM LOAD TABLES IN THE AISC MANUAL.
   B. CONNECTION MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

ANGLES	ASTM A36
WT	ASTM A992
PLATES	ASTM A36
BOLTS	ASTM A325 OR ASTM A490
NUTS	ASTM A563
WASHERS	ASTM F436
WELDING ELECTRODES	E70XX

   C. STANDARD SHEAR CONNECTIONS SHALL BE DETAILED AS DOUBLE ANGLE OR SINGLE PLATE CONNECTIONS IN ACCORDANCE WITH THE CONNECTION TABLES IN THE AISC "MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRESS DESIGN". BOLTED CONNECTIONS SHALL BE DETAILED USING TYPE N BOLTS INSTALLED IN SNUG TIGHTENED JOINTS UNO.
   D. PROVIDE STIFFENERS, CONTINUITY PLATES, DOUBLER PLATES OR OTHER ADDITIONAL MEMBER LOCAL STRENGTHENING MEASURES AS REQUIRED FOR THE CONNECTION DESIGN.
   E. BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF (2) 3/4"Ø BOLTS AND HAVE A MINIMUM SHEAR CAPACITY OF 10 KIPS.
   F. BOLTED CONNECTIONS SHALL CONFORM TO THE PROVISIONS OF THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."
   G. WELDED CONNECTIONS SHALL BE MADE WITH CONTINUOUS FILLET WELDS UNO. MINIMUM WELD SIZE SHALL BE 1/4" OR AS REQUIRED BY AISC SPECIFICATION, WHICHEVER IS LARGER. MINIMUM WELD LENGTH SHALL BE 2".
   H. ALL WELDS SHALL BE MADE BY CERTIFIED WELDERS.
13. WHEN NOT SPECIFIED, PROVIDE LOOSE LINTEL PER SCHEDULE.
   LINTEL SCHEDULE NOTES:
   A. USE SCHEDULE AT OPENINGS IN MASONRY WALLS AND MASONRY VENEER WHERE LINTELS ARE NOT INDICATED ON PLANS.
   B. PROVIDE 8" MINIMUM BEARING AT EACH END FOR STEEL ANGLES.
   C. ALL LINTELS TO BE HOT DIPPED GALVANIZED.

MANUFACTURED STEEL STAIRS

1. SEE ARCHITECTURAL DRAWINGS FOR STEEL STAIR LOCATIONS AND DIMENSIONS.
2. STEEL STAIR STRUCTURE AND CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED BY A PROJECT STATE STRCUTURAL ENGINEER. DESIGN STAIRS FOR UNIFORM LOADS AND CONCENTRATED LOADS IN ACCORDANCE WITH THE REQUIREMENTS OF NC STATE BUILDING CODE SECTION 1607.
3. RAILINGS, POSTS AND THEIR CONNECTIONS SHALL BE DESIGNED FOR UNIFORM AND CONCENTRATED LOADS IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE BUILDING CODE SECTION 1607.7.4.
4. SUBMIT SHOP DRAWINGS FOR STAIRS INDICATING ALL STAIR MEMBER SIZES, CONNECTIONS AND CONNECTIONS TO THE BUILDING STRUCTURE. SHOP DRAWINGS SHALL INDICATE STAIR TREAD AND LANDING CONCRETE FILL THICKNESS AND REINFORCING REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE STAIR OPENING DIMENSIONS AND CONNECTION MATERIAL EMBEDDED IN THE BUILDING STRUCTURE WITH THE STAIR MANUFACTURER.

POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.
   A. ANCHORAGE TO CONCRETE
      a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         - HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD PER ICC ESR-3187.
         - HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 150/300 VACUUM (VC 150 OR VC 300) SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187
         - HILTI HIT-RE 500-v3 SAFE SET EPOXY ADHESIVE ANCHORING SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 150/300 VACUUM (VC150 OR VC 300) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR SLOW CURE APPLICATIONS.
         - HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES
      b. MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         - HILTI KWIK HUS-EZ AND KWIK HUS EZ-1 SCREW ANCHORS PER ICC ESR-3027
         - HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-1917
         - HILTI KWIK-BOLT 3 EXPANSION ANCHORS (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302
      c. HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         - HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546
         - HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR 1545
   B. REBAR DOWELING INTO CONCRETE
      a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         - HILTI HY-200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC150/300 VACUUM (VC105 OR VC 300) SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187
         - HILTI HIT-RE 500-v3 SAFE SET EPOXY ANCHORING SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC150/300 VACUUM (VC 150 OR VC 300) SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814
         - HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814 IN DIAMOND CORED HOLES.
   C. ANCHORAGE TO SOLID GROUTED MASONRY
      a. ADHESIVE ANCHORS USE:
         - HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM (ICC PENDING)
         - STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
      b. MECHANICAL ANCHORS USE:
         - HILTI KWIK BOLT-3 EXPANSION ANCHORS PER ICC ESR-1385
   D. ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY
      a. ADHESIVE ANCHORS USE:
         - HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM PER

STATEMENT OF SPECIAL INSPECTIONS

Project: Campbell University Day Hall renovations
Location: 200 Day Dorm Rd, Lillington, NC 27546
Owner's Representative:
Owner's Address:
Architect of Record: Shane Webster, AIA
Structural Engineer of Record: David Blankfard, PE, SE

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection requirements (Chapter 17) of the International Building Code. The Statement includes a Schedule of Special Inspections applicable to this project as well as the required qualifications for the Special Inspector and Agents of the Special Inspector to perform on this project.

The Special Inspector shall keep records of all inspections, furnish inspection reports, and identify discrepancies as detailed by project specifications and RFP.

A Final Report of Special Inspections, documenting the completion of all required Special Inspections and confirming the correction of any discrepancies, will be submitted prior to issuance of a Certificate of Use and Occupancy.

The Special Inspections program does not relieve the Contractor of his or her responsibilities. Job Site safety and means and methods of construction are solely the responsibility of the Contractor.

SCHEDULE OF SPECIAL INSPECTION

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- ☒ Soils
- ☐ Special Foundations
- ☐ Cast-in-Place Concrete
- ☐ Structural Load Bearing Precast Concrete
- ☐ Post Tensioned Concrete
- ☐ Structural Masonry – Level 1
- ☐ Wood Shear Walls
- ☐ Structural Steel
- ☒ Site Retaining Walls
- ☐ Cold-Formed Steel Framed "X" Bracing / Seismic
- ☐ Resisting Systems
- ☐ Wall Panels and Veneers
- ☐ Sprayed Fire Resistant Materials
- ☐ Exterior Insulation & Finish System (EIFS)
- ☐ Progressive Collapse
- ☐ Blast Resistance
- ☐ Quality Assurance for Progressive Collapse

Seismic Design Category:
Basic Wind Speed:
Wind Exposure Category:

Statement of Special Inspections Prepared by (Structural Engineer of Record):

Signature Date

Owner's Authorization Accepted for the Building Official by:

Signature Date Signature Date

QUALIFICATIONS OF INSPECTORS AND AGENTS OF SPECIAL INSPECTORS

The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official. The credentials of all inspectors shall be provided if requested. When the Structural Engineer of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation will appear on the Schedule of Special Inspections.

The Special Inspector (SI) shall be a licensed Professional Engineer with a minimum of 3 years of experience as a Special Inspector.

1.	SE	Structural Engineer: A licensed PE or SE specializing in the design of building structures.
2.	GE	Geotechnical Engineer: A licensed PE specializing in soil mechanics and foundations.
3.	S-EIT	Structural Engineer-in-Training: A graduate engineer who has passed the Fundamentals of Engineering examination, with experience in the design of building structures and working under the supervision of a licensed structural PE or SE.
4.	G-EIT	Geotechnical Engineer-in-Training: A graduate engineer who has passed the Fundamentals of Engineering examination, with experience in soil mechanics and foundations and working under the supervision of a licensed geotechnical PE or SE.
5.	G-TECH 1	Geotechnical Technician 1: An experienced technician with National Institute for Certification in Engineering Technologies: Level 2 – Soils certification.
6.	G-TECH 2	Geotechnical Technician 2: An experienced technician with National Institute for Certification in Engineering Technologies: Level 2 – Geotechnical Engineering certification.
7.	C-TECH 1	Concrete Technician 1: An experienced technician with American Concrete Institute – Grade I Concrete Field Testing Technician or Grade I Concrete Laboratory Testing Technician certification.
8.	C-TECH 2	Concrete Technician 2: An experienced technician with American Concrete Institute – Grade II Concrete Laboratory Testing Technician or ICBO Reinforced Concrete Special Inspector certification.
9.	S-TECH 1	Steel Technician 1: An experienced American Welding Society – Certified Associate Welding Inspector (CAWI) or Non-destructive Testing Technician ASNT-TC-1A Level I.
10.	S-TECH 2	Steel Technician 2: An experienced American Welding Society – Certified Welding Inspector (CWI) or Non-destructive Testing Technician ASNT-TC-1A Level II or ICBO Certified Structural Steel and Bolting Special Inspector.
11.	S-TECH 3	Steel Technician 3: An technician who is an American Welding Society – Certified Welding Inspector (CWI) with a minimum of 10 years of weld inspection experience or a Non-destructive Testing Technician AST-TC-1A Level III or ICBO Certified Structural Welding Special Inspector.
12.	SMSI	Structural Masonry Special Inspector: An experienced masonry inspector who is an ICBO Certified Structural Masonry Special Inspector.
13.	SFSI	ICBO Certified Spray-Applied Fireproofing Special Inspector.
14.	PCSI	ICBO Certified Prestressed Concrete Special Inspector.
15.	PTI	Concrete technician with Post Tensioning Institute – Level 2 Certification.
16.	SCSI	Inspection/Testing company with fire protection engineering experience, mechanical engineering experience, and certification as air balancers.

SOILS

(Special Inspection of soils is only required for subgrade and fill placement under structures requiring Special Inspections.)

Item	Qualifications	Scope

1. Site Preparation	SI, G-TECH, S-EIT, G-EIT, GE, SE	• Collect testing agency's field and laboratory test reports during site preparation and verify the following complies with the project specifications/geotechnical report:
		  ▪ Site stripping and subgrade preparation
		  ▪ Fill material (on-site and/or imported) classification
		  ▪ Fill material placement (lift thickness, moisture content and compaction)
		  ▪ Allowable bearing capacity for footings and foundations
		• Periodic inspection of testing of fill material placement including periodic observation of testing agency's density testing methods and frequency of testing to verify compliance with project specifications/geotechnical report.
		• Continuous inspection of density and lift thicknesses during placement and compaction of controlled fills within the building footprint.
		• Continuous verification for the use of proper fill materials during placement within the building footprint.

CAST-IN-PLACE CONCRETE

Item	Qualifications	Scope
1. Mix Design Verification	SI, C-TECH 1, C-TECH 2, S-EIT, SE	• Collect accepted mix designs and verify appropriate mix is used during specific installation

2. Reinforcement Installation	SI, C-TECH 2, S-EIT, SE	• Periodic inspection of reinforcing steel and welded wire fabric to confirm size, spacing and details conform to contract documents at the following minimum frequency, distributed throughout construction:
		  ▪ Footings and foundations – 75%
		  ▪ Foundation walls and basement walls – 75%
		  ▪ Slabs on metal deck – 50%
		  ▪ Elevated slabs, joists, and beams – 75%

3. Concrete Placement/Monitoring Fresh Concrete, Sampling & prep of test samples	SI, C-TECH 2, S-EIT, SE	• Continuous inspection of cast-in-place concrete placement • Continuous monitoring of sampling of fresh concrete, slump test, air content test, temperature of concrete and creation of strength test specimens • Periodic (min. 10%, distributed throughout construction) inspection of formwork for shape location and dimensions of the concrete member being formed
4. Bolting	SI, C-TECH 2, S-EIT, SE	• Continuous inspection of bolts placed or cast into concrete • Periodic (min. 20%, distributed throughout construction) inspection of expansion anchor installation or other type anchor • Periodic (min.75%, distributed throughout construction) inspection of epoxy anchor installation
5. Curing & Protection	SI, C-TECH 2, S-EIT, SE	• Periodic inspections of curing techniques • Periodic inspections of cold and hot weather concreting techniques
6. Concrete Strength Verification	SI, C-TECH 2, S-EIT, SE	• Verify with testing agency reports in-situ concrete strength of elevated beams and slabs prior to removal of shares and forms

SITE RETAINING WALLS

Item	
1.	All site retaining walls retaining more than 5'-0" require special inspections. This includes footings and walls. See appropriate material Special Inspection schedules for specific requirements.

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NORTH CAROLINA PROFESSIONAL SEAL 27108 ENGINEER DAVID G. BLANKFARD

9/11/2018

ISSUE FOR
PERMIT SET

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REVISIONS

NO.	REASON	DATE

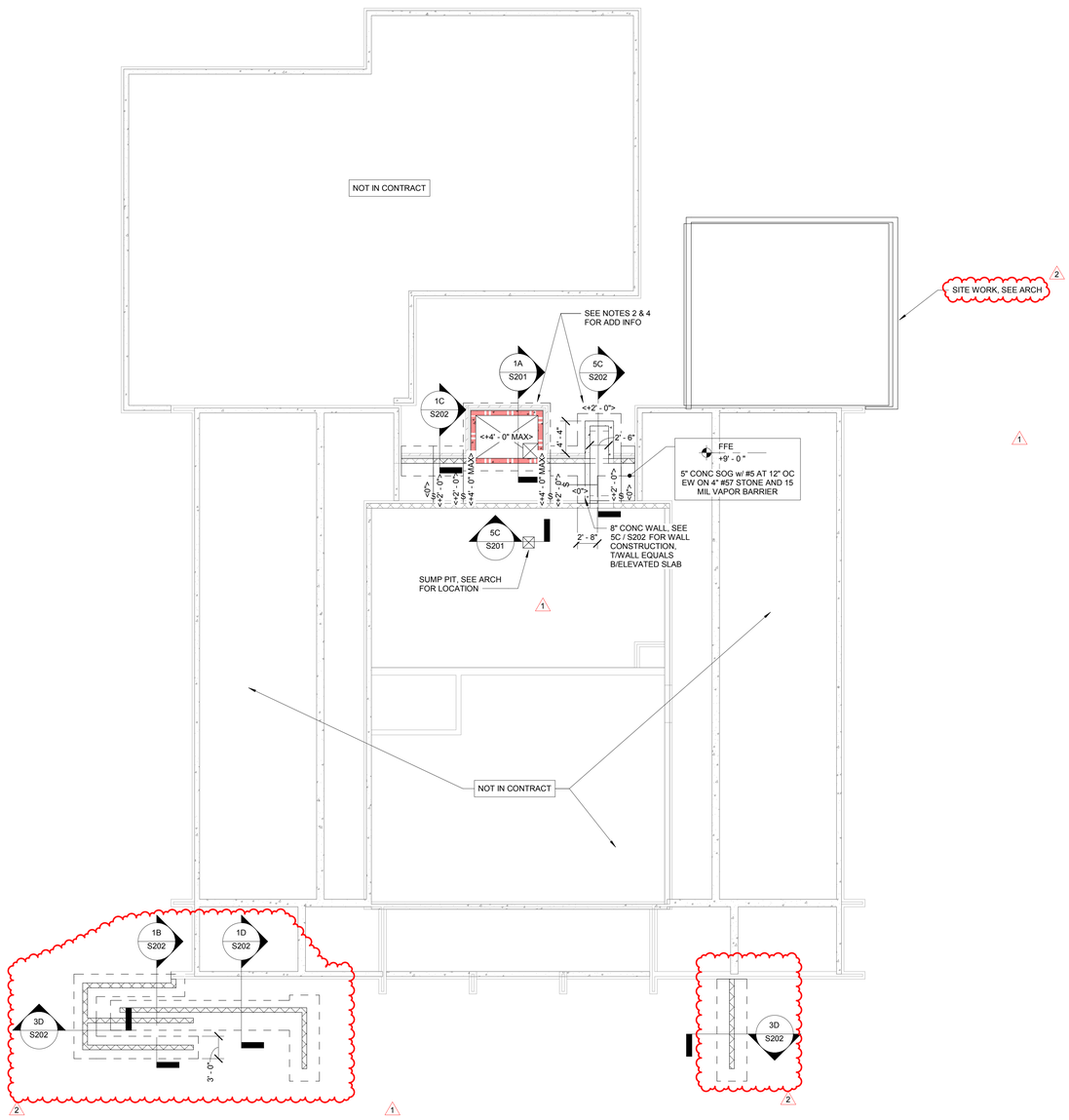
PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
STATEMENT OF
SPECIAL INSPECTIONS

SHEET NUMBER
S002



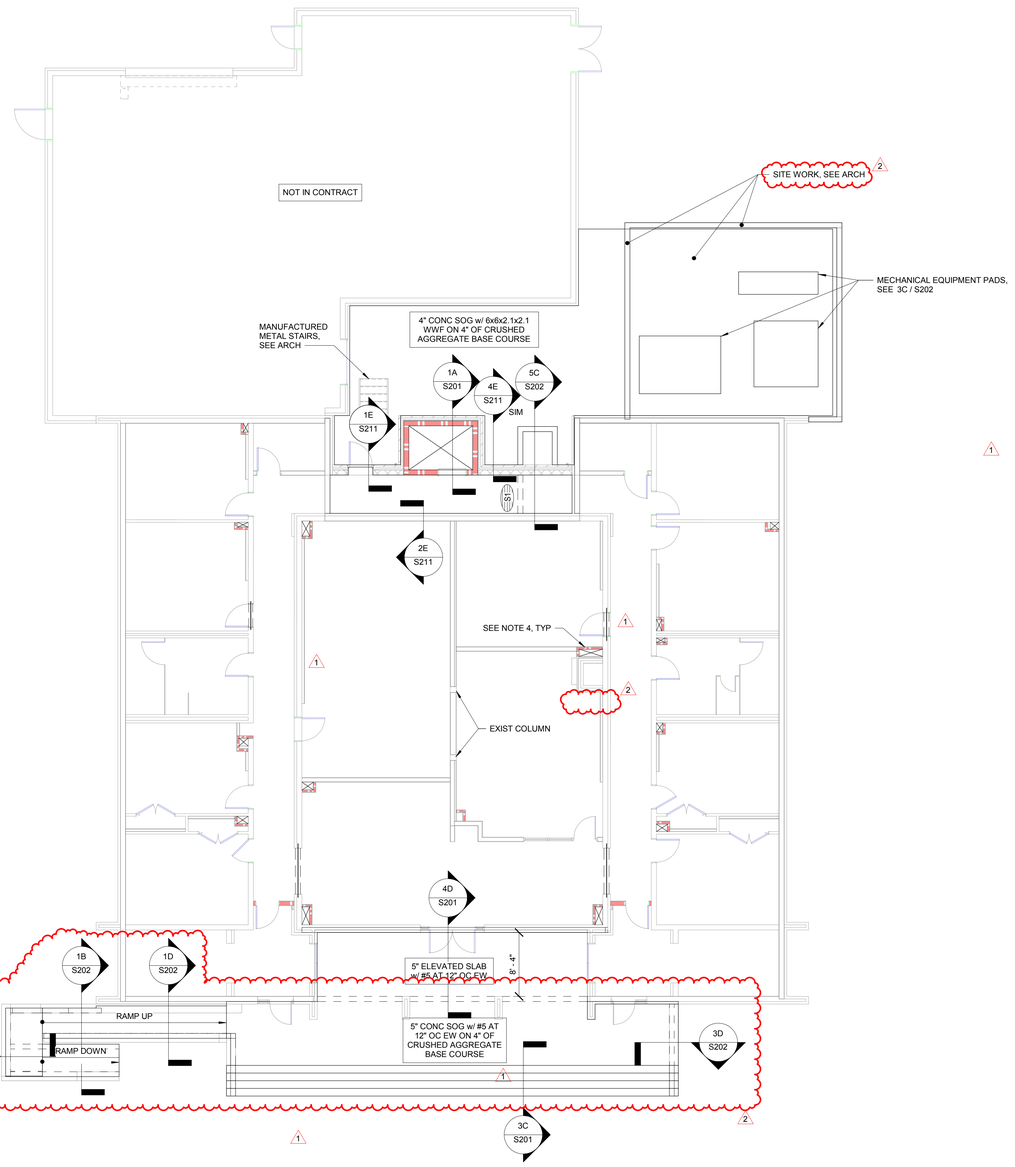
1A LEVEL 0 FOUNDATION PLAN

S101

1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. REFERENCE ELEVATION 0'-0" INDICATES ELEVATION OF EXISTING FOOTINGS, FIELD VERIFY ELEVATION.
3. ⟋ INDICATES STEP IN WALL FOOTING, SEE 1D / S201 .
4. <4'-0" MAX> INDICATES STEP FOOTING TO COURSING DIMENSION RELATIVE TO FIRST FINISHED FLOOR, COORDINATE WITH ARCH.
5. SEE S201 FOR TYPICAL SLAB CONSTRUCTION DETAILS.
6. SEE ARCHITECTURAL DRAWINGS FOR DMENSIONS NOT NOTED.



4A LEVEL 1 FRAMING PLAN

S101

1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION TO MATCH EXISTING ELEVATION. DATUM FOR EACH LEVEL TO MATCH EXISTING FLOOR ELEVATION, UNO.
3. SEE S211 FOR TYPICAL FLOOR FRAMING DETAILS.
4. ⟋ INDICATES SLAB PENETRATION, SEE 2A / S211. SLAB PENETRATIONS TO AVOID ALL EXISTING JOISTS AND BEAMS.
5. ⟋ INDICATES LINTEL. SEE 2D / S211 FOR CMU LINTEL AND 4D / S211 FOR BRICK LINTEL.

S1 :INDICATES SPAN DIRECTION OF 5" CONCRETE (2" COMPOSITE DECK + 3" NW CONCRETE), SEE 1B / S211

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NORTH CAROLINA PROFESSIONAL SEAL 27198 ENGINEER DAVID G. BLANKFARD

9/11/2018

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REVISIONS

NO.	REASON	DATE
1	AV Revisions by Owner and Quality Control	08.20.18
2	Revisions by Owner	09.11.18

PROJECT TEAM

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PROJECT MANAGER
SHANE WEBSTER, AIA

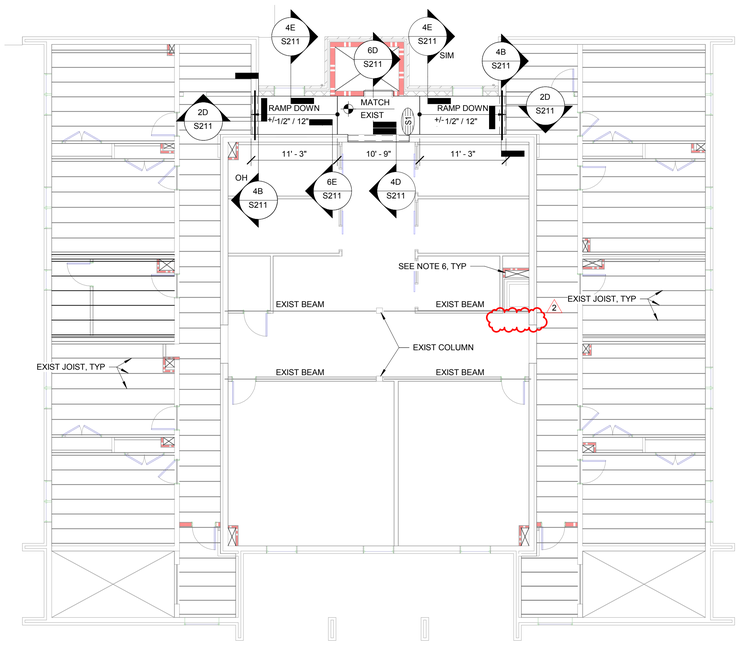
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
FLOOR PLANS - LEVELS 0 AND 1

SHEET NUMBER
S101



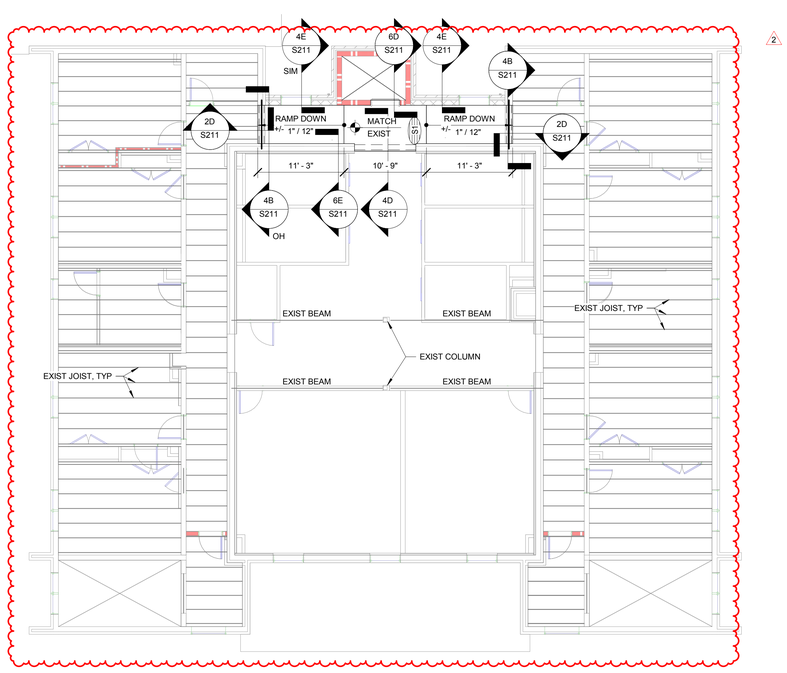
1A LEVEL 2 FRAMING PLAN

S102 1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION TO MATCH EXISTING ELEVATION. DATUM FOR EACH LEVEL TO MATCH EXISTING FLOOR ELEVATION, UNO.
3. SEE S211 FOR TYPICAL FLOOR FRAMING DETAILS.
4. INDICATES SLAB PENETRATION, SEE 2A / S211. SLAB PENETRATIONS TO AVOID ALL EXISTING JOISTS AND BEAMS.
5. INDICATES LINTEL. SEE 2D / S211 FOR CMU LINTEL AND 4D / S211 FOR BRICK LINTEL.
6. CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING PRIOR TO SLAB PENETRATION FOR SLAB REINFORCING

S1 :INDICATES SPAN DIRECTION OF 5" CONCRETE (2" COMPOSITE DECK + 3" NW CONCRETE), SEE 1B / S211



4A LEVEL 3 FRAMING PLAN

S102 1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION TO MATCH EXISTING ELEVATION. DATUM FOR EACH LEVEL TO MATCH EXISTING FLOOR ELEVATION, UNO.
3. SEE S211 FOR TYPICAL FLOOR FRAMING DETAILS.
4. INDICATES SLAB PENETRATION, SEE 2A / S211. SLAB PENETRATIONS TO AVOID ALL EXISTING JOISTS AND BEAMS.
5. INDICATES LINTEL. SEE 2D / S211 FOR CMU LINTEL AND 4D / S211 FOR BRICK LINTEL.

S1 :INDICATES SPAN DIRECTION OF 5" CONCRETE (2" COMPOSITE DECK + 3" NW CONCRETE), SEE 1B / S211

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NORTH CAROLINA PROFESSIONAL SEAL 27108 ENGINEER DAVID G. BLANKFARD

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REVISIONS

NO.	REASON	DATE
2	Revisions by Owner	09.11.18

PROJECT TEAM

PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA

PROJECT MANAGER
SHANE WEBSTER, AIA

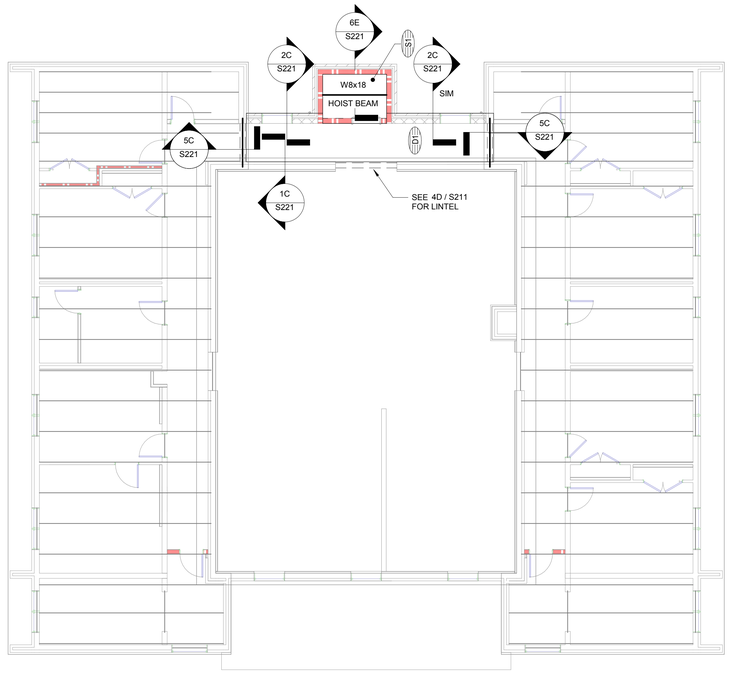
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
FLOOR PLANS -LEVELS 2 AND 3

SHEET NUMBER
S102



1A ROOF FRAMING PLAN

S103

1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. SEE S221 FOR TYPICAL ROOF FRAMING DETAILS.
3. ═══ INDICATES LINTEL. SEE 2D / S211FOR CMU LINTEL AND 4D / S211FOR BRICK LINTEL

D1 :METAL ROOF DECK, 1 1/2" TYPE "B", 20 GA, GALV G60 FINISH, SEE 2E / S221 FOR ATTACHMENT

S1 :INDICATES SPAN DIRECTION OF 5" CONCRETE (2" COMPOSITE DECK + 3" NW CONCRETE), SEE 1B / S211

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PROJECT TEAM

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PROJECT MANAGER
SHANE WEBSTER, AIA

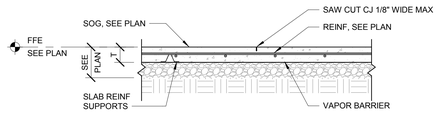
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

PROJECT NO.
513.9660.00

SHEET TITLE
ROOF FRAMING PLAN

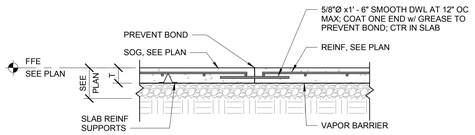
SHEET NUMBER
S103



1E SLAB ON GRADE CONTRACTION JOINT DETAIL

S201 3/4" = 1'-0"

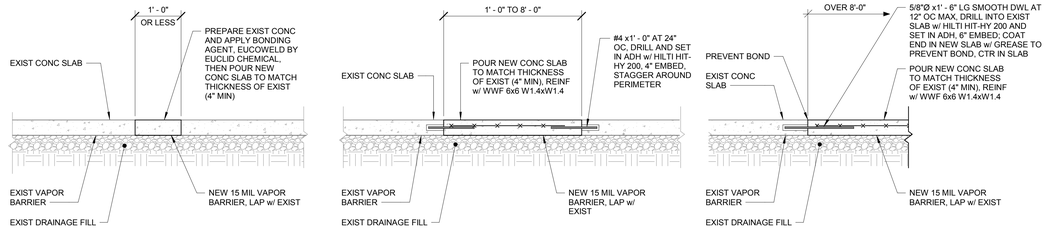
NOTES:
1. STOP AND START EVERY OTHER BAR WHERE CONTRACTION JOINTS ARE TO BE CUT.
2. SAW CUT SLAB WITHIN 8 HOURS OF CONCRETE POUR.



3E SLAB ON GRADE CONSTRUCTION JOINT DETAIL

S201 3/4" = 1'-0"

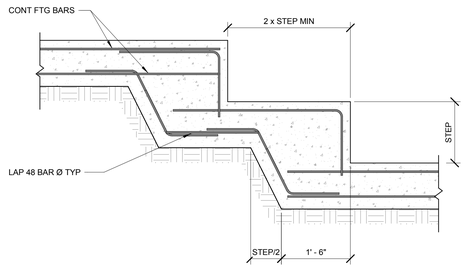
NOTES:
1. DO NOT RUN REINF THROUGH CONSTRUCTION JOINT.



4E SLAB ON GRADE REPAIR DETAILS

S201 NOT TO SCALE

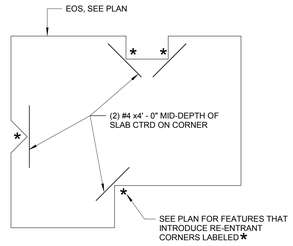
NOTES:
1. PROVIDE A CONTRACTION JOINT AT ANY EXISTING CONTRACTION JOINT IN THE ADJACENT SLAB AND AT 12' - 0" OC MAX IN ANY DIRECTION.



1D TYPICAL FOOTING STEP DETAIL

S201 3/4" = 1'-0"

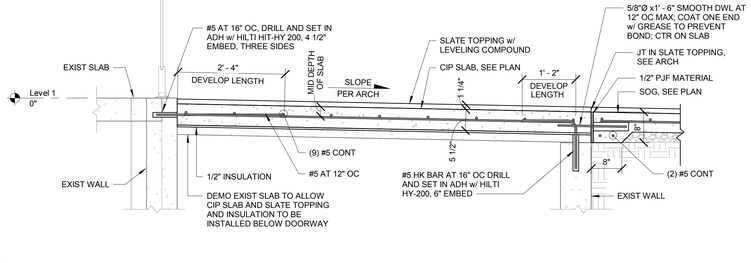
NOTES:
1. GENERAL CONTRACTOR TO COORDINATE / VERIFY THE LOCATION OF FOOTING STEPS WITH THE FINISHED GRADING PLAN.
2. PROVIDE 1'-4" MINIMUM COVER ABOVE TOP OF FOOTING.
3. ADDED BARS TO BE THE SAME SIZE AND QUANTITY AS CONTINOUS BARS.



3D SLAB RE-ENTRANT CORNER REINFORCING

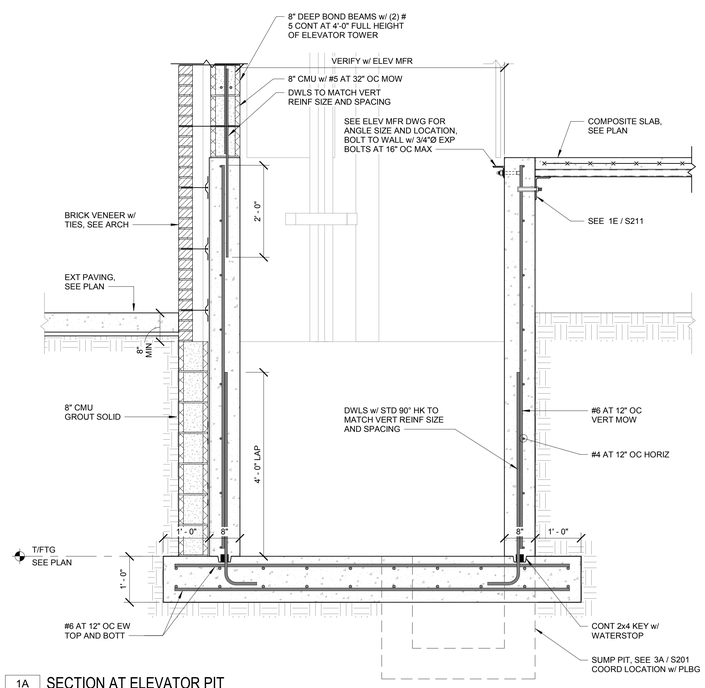
S201 NOT TO SCALE

NOTES:
1. WHERE SLAB CONTRACTION JOINT INTERSECTS RE-ENTRANT CORNER ADDED SLAB REINFORCING IS NOT REQUIRED. SEE PLAN FOR JOINT LOCATIONS.



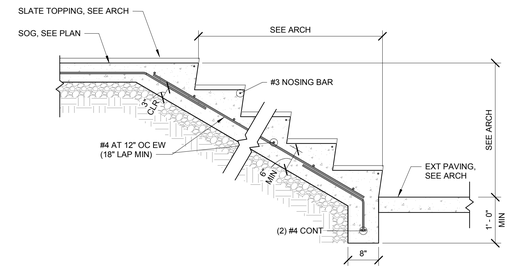
4D SECTION

S201 3/4" = 1'-0"



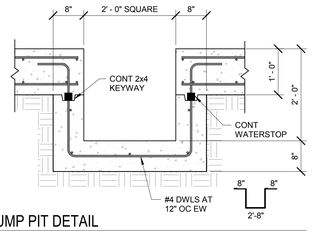
1A SECTION AT ELEVATOR PIT

S201 3/4" = 1'-0"



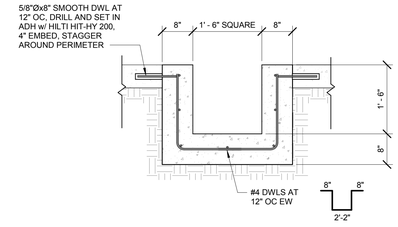
3C SECTION THRU STEPS

S201 3/4" = 1'-0"



3A SUMP PIT DETAIL

S201 3/4" = 1'-0"



5C SECTION AT SUMP PIT IN EXIST SLAB

S201 3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 27108 ENGINEER DAVID G. BLANKFARD

9/11/2018

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REVISIONS

NO.	REASON	DATE

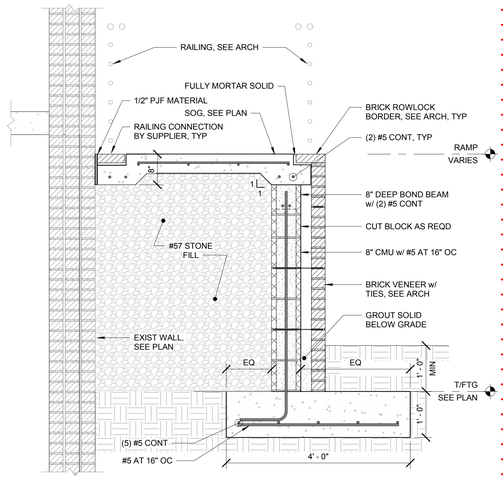
PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

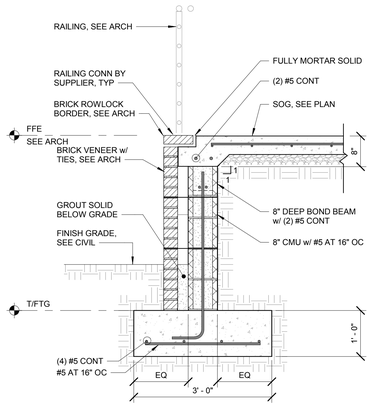
PROJECT NO.
513.9660.00

SHEET TITLE
FOUNDATION DETAILS

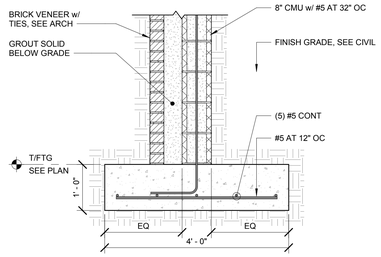
SHEET NUMBER
S201



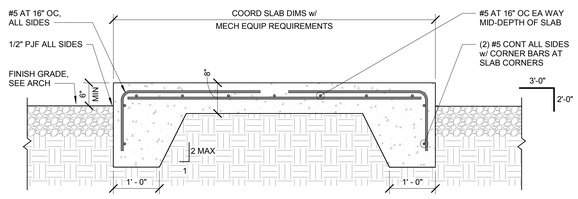
1D SECTION
S202 3/4" = 1'-0"



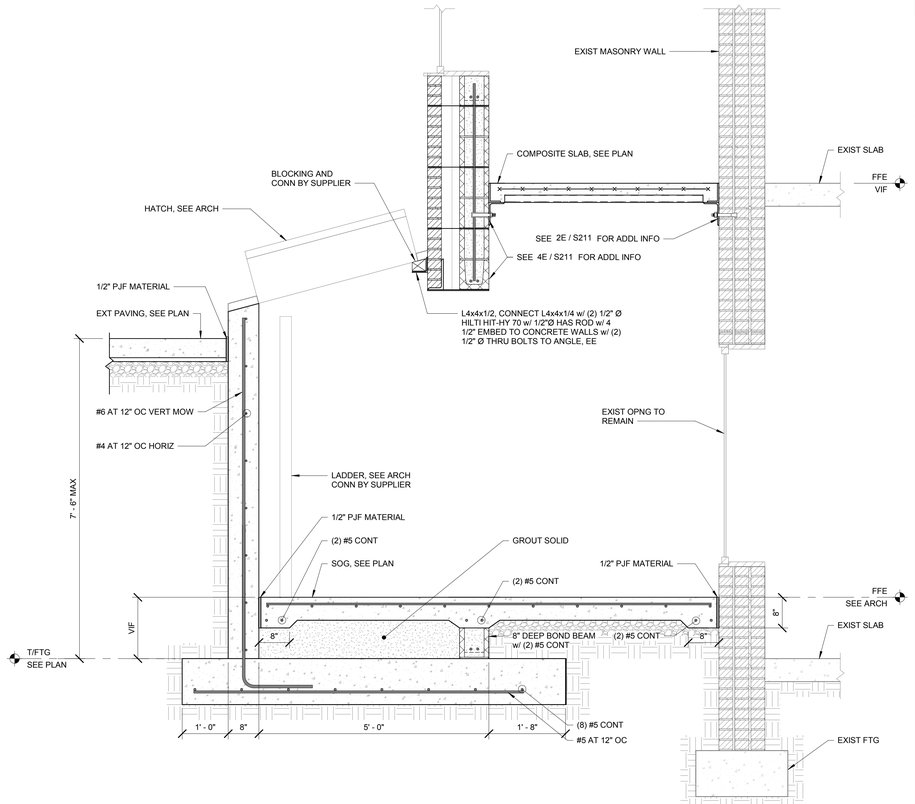
3D SECTION
S202 3/4" = 1'-0"



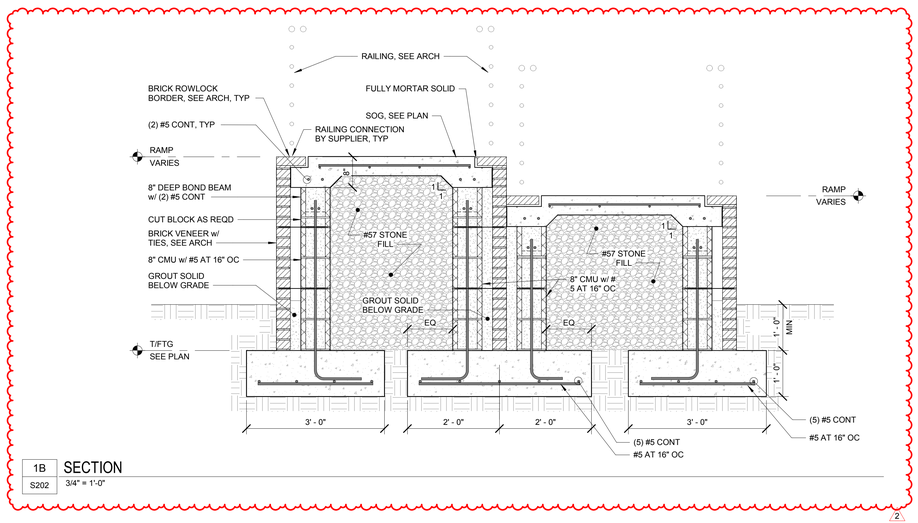
1C SECTION
S202 3/4" = 1'-0"



3C EXTERIOR MECHANICAL EQUIPMENT PAD
S202 3/4" = 1'-0"



5C SECTION
S202 3/4" = 1'-0"



1B SECTION
S202 3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 27108 ENGINEER DAVID G. BLANKFARD

9/11/2018

ISSUE FOR
PERMIT SET

ISSUE DATE
09.11.2018

REVISIONS

NO.	REASON	DATE
1	AV Revisions by Owner and Quality Control	08.20.18
2	Revisions by Owner	09.11.18

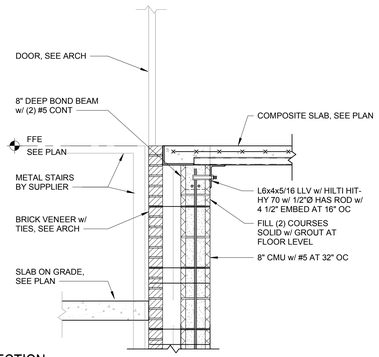
PROJECT TEAM
PRINCIPAL IN CHARGE
ROB KLINEDINST, AIA
PROJECT MANAGER
SHANE WEBSTER, AIA
DESIGN TEAM
DAVID BLANKFARD, PE

PROJECT NAME
CAMPBELL UNIVERSITY
DAY HALL RENOVATIONS

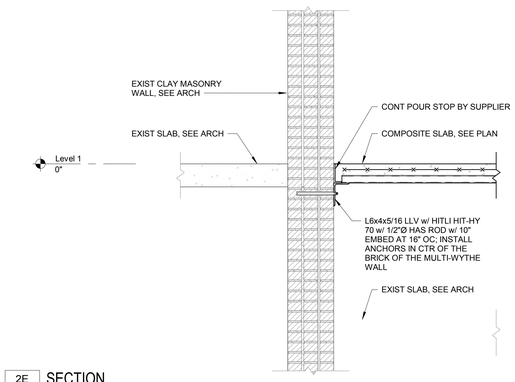
PROJECT NO.
513.9660.00

SHEET TITLE
FOUNDATION DETAILS

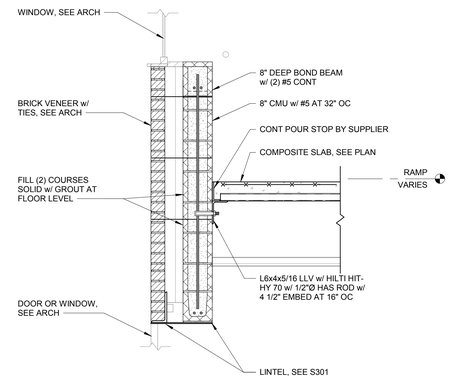
SHEET NUMBER
S202



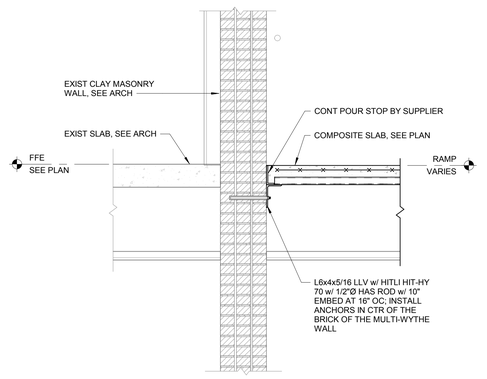
1E SECTION
S211 3/4" = 1'-0"



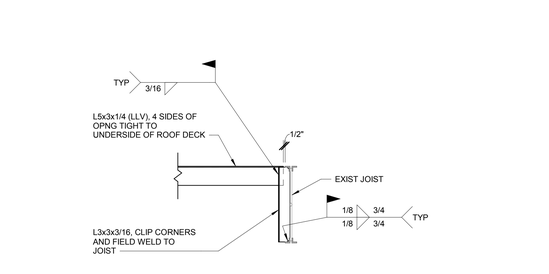
2E SECTION
S211 3/4" = 1'-0"
NOTES:
1. SLOPE ANGLE TO MEET RAMP REQUIREMENTS. SLAB THICKNESS TO REMAIN CONSTANT.



4E SECTION
S211 3/4" = 1'-0"
NOTES:
1. AT SIMILAR, NO WINDOW OR DOOR OPENING.
2. SLOPE ANGLE TO MEET RAMP REQUIREMENTS. SLAB THICKNESS TO REMAIN CONSTANT.



6E SECTION
S211 3/4" = 1'-0"
NOTES:
1. SLOPE ANGLE TO MEET RAMP REQUIREMENTS. SLAB THICKNESS TO REMAIN CONSTANT.



2D SECTION
S211 3/4" = 1'-0"

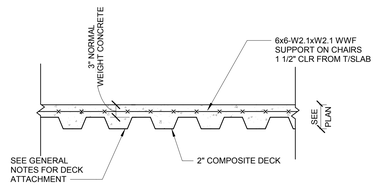
4D SECTION
S211 3/4" = 1'-0"

6D SECTION
S211 3/4" = 1'-0"

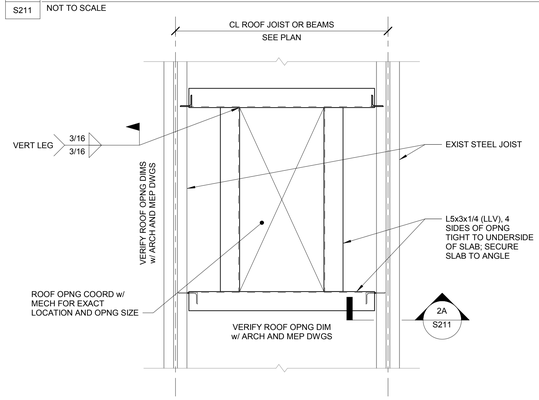
4B SECTION
S211 3/4" = 1'-0"

2" COMPOSITE DECK PROPERTIES

DECK TYPE.....VLI
DECK GUAGE.....20 GA
Ip.....0.409 in4/ft
Sp.....0.341 in3/ft
In.....0.406 in4/ft
Sn.....0.346 in3/ft
Va.....2698 lbs/ft
Fy.....50 ksi



1B COMPOSITE SLAB
S211 NOT TO SCALE



1A NEW FLOOR OPENING IN EXISTING
S211 NOT TO SCALE
NOTES:
1. FRAME ALL ROOF OPENINGS GREATER THAN 12".
2. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR NEW ROOF OPENINGS.

2A SECTION AT NEW ROOF FRAME
S211 NOT TO SCALE
NOTES:
1. ROOF DECK NOT SHOWN FOR CLARITY.

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DAVID BLANKFARD, PE

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PROJECT NO.
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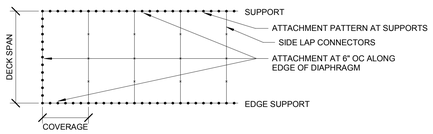
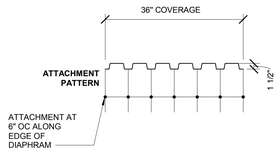
FLOOR FRAMING DETAILS

SHEET NUMBER
S211



1E PLAN VIEW OF DECK ATTACHMENT

S221 NOT TO SCALE



DECKING ATTACHMENT

DECK TYPE.....B	Ip = 0.201 IN⁴/FT
DECK GAGE.....20 GA	In = 0.186 IN³/FT
DECK FINISH.....GALVANIZED	Sp = 0.183 IN³/FT
	Fy = 30 KSI

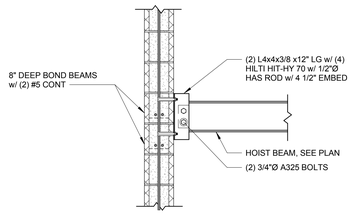
PROVIDE ATTACHMENT PATTERN AT 6" OC ALONG EDGE SUPPORTS WITH 5/8"Ø PUDDLE WELDS

PROVIDE (4) SIDELAP CONNECTORS (AT 12" OC) PER DECK SPAN BETWEEN SUPPORTS WITH #10 TEK SCREWS

NOTE: CONTRACTOR OPTION TO USE HILTI MECHANICAL FASTENERS. WHERE WELDS ARE INDICATED, CONTRACTOR MUST PROVIDE SUBMITTAL SHOWING EQUIVALENT CAPACITY. USE HILTI MECHANICAL DECK FASTENER X-HSN24 WHERE THE STEEL BASE MATERIAL THICKNESS IS 1/8"<tf<3/8" OR X-ENP-19 L15 WHERE THE STEEL BASE MATERIAL THICKNESS IS tf>1/4". THE ACTUAL BASE MATERIAL THICKNESS SHALL BE VERIFIED ON-SITE PRIOR TO INSTALLING THE FASTENERS.

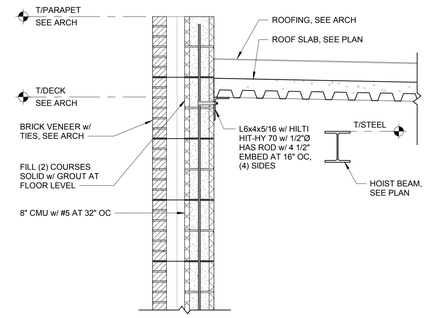
2E ROOF DECK ATTACHMENT SCHEDULE

S221 NOT TO SCALE



5E HOIST BEAM CONNECTION DETAIL

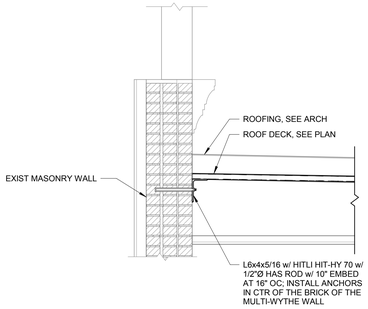
S221 3/4" = 1'-0"



6E SECTION

S221 3/4" = 1'-0"

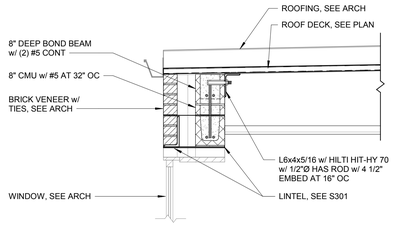
NOTES:
1. SLOPE ANGLE TO MATCH DRAINAGE REQUIREMENTS, SEE ARCH.
2. SEE 5E / S221 FOR HOIST BEAM CONNECTION



1C SECTION

S221 3/4" = 1'-0"

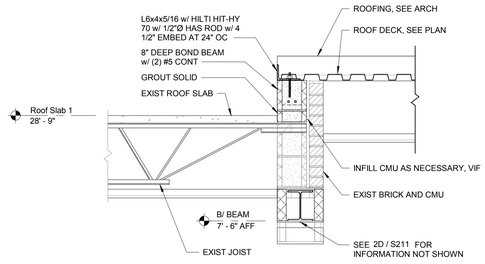
NOTES:
1. SLOPE ANGLE TO MATCH DRAINAGE REQUIREMENTS, SEE ARCH.



2C SECTION

S221 3/4" = 1'-0"

NOTES:
1. AT SIMILAR, NO WINDOW OPENING.
2. SLOPE ANGLE TO MATCH DRAINAGE REQUIREMENTS, SEE ARCH.



5C SECTION

S221 3/4" = 1'-0"

NOTES:
1. SLOPE ANGLE TO MATCH DRAINAGE REQUIREMENTS, SEE ARCH.

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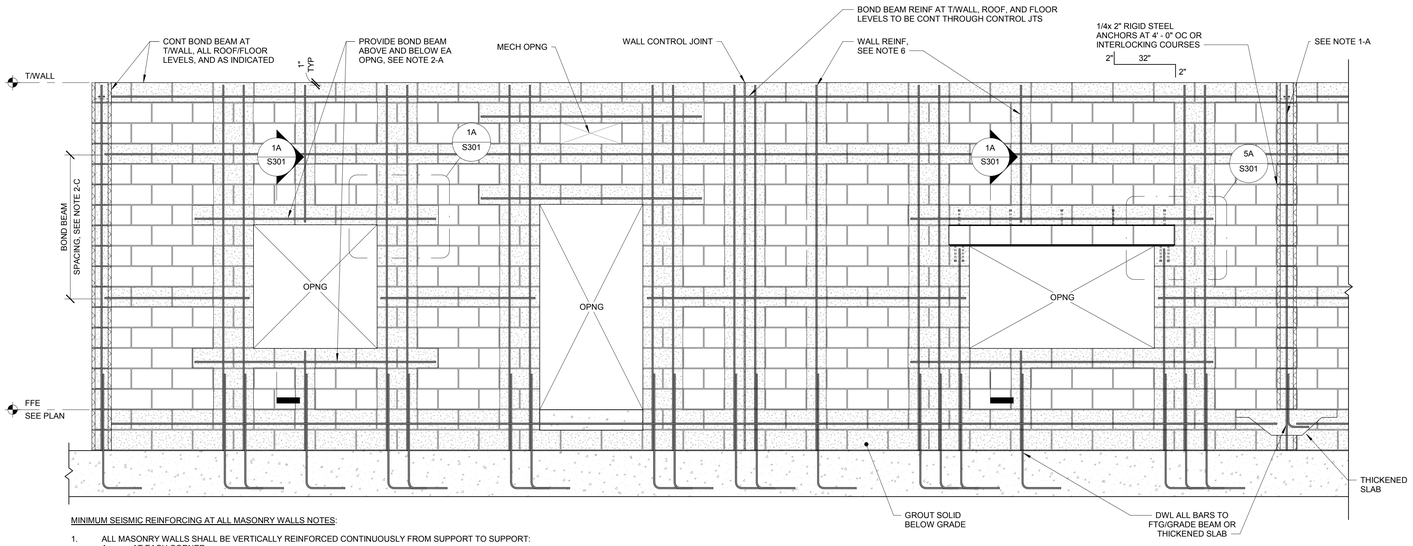
SHEET TITLE
ROOF FRAMING DETAILS

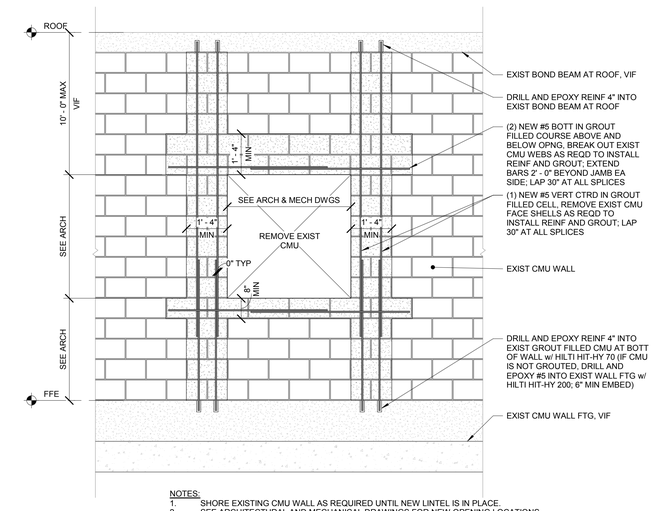
SHEET NUMBER
S221



MINIMUM SEISMIC REINFORCING AT ALL MASONRY WALLS NOTES:

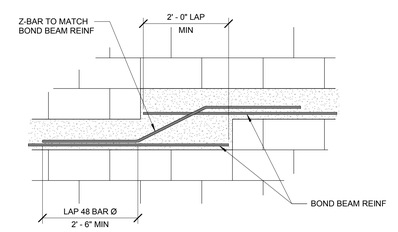
1. ALL MASONRY WALLS SHALL BE VERTICALLY REINFORCED CONTINUOUSLY FROM SUPPORT TO SUPPORT:
   A. AT EACH CORNER
   B. AT EACH SIDE OF EACH OPENING
   C. AT WALL ENDS WALLS SHALL BE REINFORCED WITH #5 BARS AT THESE LOCATIONS UNLESS OTHERWISE NOTED IN OTHER SECTIONS AND DETAILS.
2. HORIZONTAL BOND BEAMS REINFORCED AS NOTED IN SECTIONS OR LINTEL SCHEDULE SHALL BE FURNISHED:
   A. AT THE TOP AND BOTTOM OF ALL WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 2'-0" PAST THE FACE OF OPENING OR STEEL LINTEL BEARING.
   B. CONTINUOUSLY AT STRUCTURALLY CONNECTED ROOF AND FLOOR LEVELS AND AT THE TOP OF ALL WALLS.
3. ALL VERTICAL BARS SHALL BE GROUTED IN 5'-0" MAX LIFTS.
4. WHERE DETAILS SHOWN ON OTHER SHEETS NOTE REINFORCING OF GREATER SIZE AND/OR CLOSER SPACING, THE REINFORCING REQUIREMENT IN SAID DETAIL SHALL GOVERN. THE SEISMIC REINFORCING NOTED AT WALL OPENINGS, CORNERS AND ENDS SHALL BE IN ADDITION TO REINFORCING NOTED IN OTHER DETAILS.
5. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AT 16"OC, MAX VERTICAL SPACING. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
6. SEE PLANS AND DETAILS FOR WALL REINFORCING.
7. WALL CONTROL JOINTS IN CMU AND BRICK VENEER TO BE LOCATED PER ARCHITECTURAL DRAWINGS AND AT 30'-0" OC MAX.

1D TYPICAL CMU WALL REINFORCING DIAGRAM
S301 NOT TO SCALE

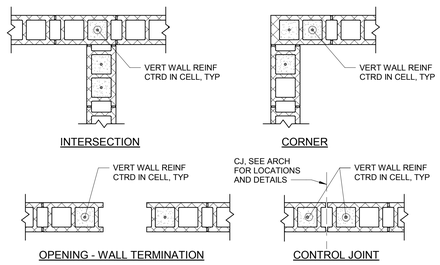


NOTES:
1. SHORE EXISTING CMU WALL AS REQUIRED UNTIL NEW LINTEL IS IN PLACE.
2. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR NEW OPENING LOCATIONS.

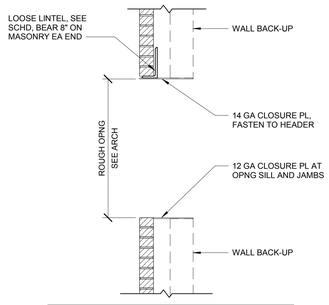
5D NEW OPENING IN EXISTING CMU WALL
S301 NOT TO SCALE



1C TYPICAL STEP IN CMU BOND BEAM
S301 3/4" = 1'-0"



2C TYPICAL CMU WALL REINFORCING
S301 NOT TO SCALE

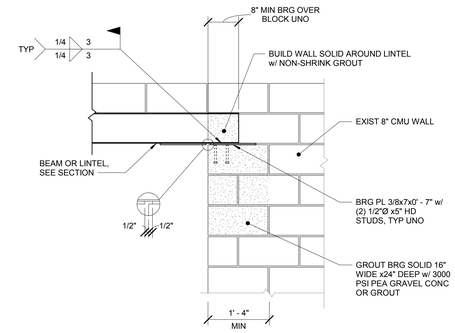


MASONRY VENEER LOOSE LINTEL SCHEDULE

MAX CLEAR SPAN	LINTEL ANGLE
0' - 5' - 0"	L4x4x3/8
5' - 1" - 8' - 0"	L6x4x3/8 (LLV)
8' - 1" - 10' - 0"	L7x4x3/8 (LLV)
10' - 1" - 13' - 4"	L8x4x1/2 (LLV)

NOTES:
1. USE THIS SCHEDULE AT OPENINGS IN MASONRY VENEER WHERE LINTELS ARE NOT INDICATED ON PLANS OR DETAILS.
2. BEAR LINTEL ANGLES 8" MINIMUM ON MASONRY EACH END.
3. ALL EXTERIOR LINTELS TO BE HOT-DIPPED GALVANIZED.
4. SEE ARCHITECTURAL DRAWINGS FOR OPENING LOCATIONS AND DIMENSIONS.

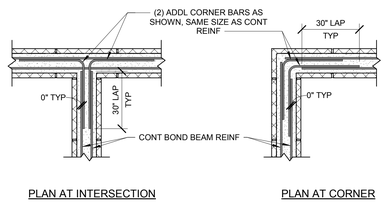
4B MASONRY VENEER LOOSE LINTEL SCHEDULE
S301 NOT TO SCALE



5B LINTEL AT EXISTING CMU WALL
S301 3/4" = 1'-0"

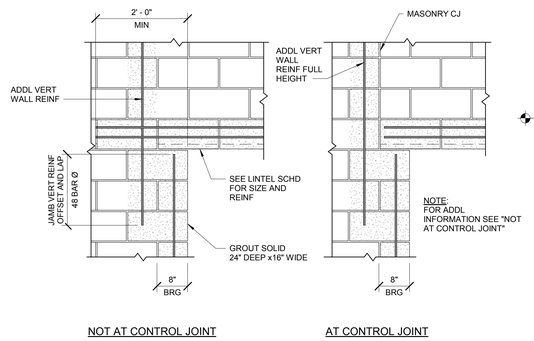
CMU WALL REINFORCING LAP SPLICE SCHEDULE

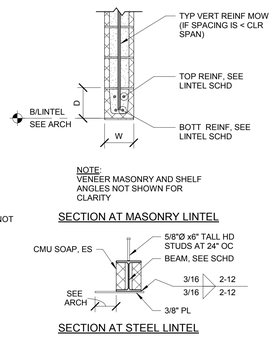
BAR SIZE	LAP SPLICE LENGTH (INCHES)			
	8" CMU		12" CMU	
	1 BAR/CELL CTRD	2 BARS/CELL CLR 3"	1 BAR/CELL CTRD	2 BARS/CELL CLR 3"
#3	19"	19"	19"	19"
#4	25"	30"	25"	25"
#5	31"	49"	31"	39"
#6	57"		53"	75"
#7	79"		61"	104"



1B TYPICAL BOND BEAM CORNERS AND INTERSECTIONS
S301 NOT TO SCALE

2B MASONRY LAP SPLICE SCHEDULE
S301 NOT TO SCALE

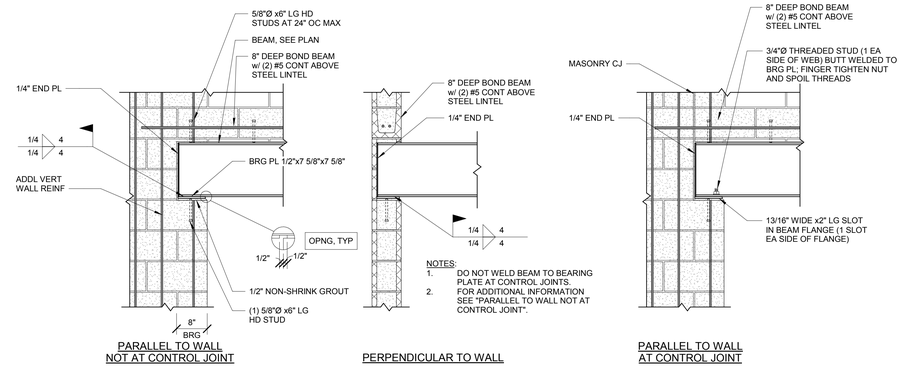




LINTEL SCHEDULE

CLEAR SPAN OPENING SIZE	4"x8"	6"x8"	6"x16"	8"x8"	8"x16"	12"x8"	12"x16"	STEEL
3' - 4"	(1)#3	(1)#3	N/A	(1)#3	N/A	(2)#4	N/A	N/A
4' - 0"	(1)#3	(1)#4	N/A	(2)#3	N/A	(2)#4	N/A	N/A
4' - 8"	(1)#4	(1)#4	N/A	(2)#4	N/A	(2)#4	N/A	N/A
5' - 4"	(1)#4	(2)#4	N/A	(2)#4	N/A	(2)#5	N/A	N/A
6' - 0"	(1)#5	(2)#4	(1)#4	(2)#4	(2)#4	(2)#5	(2)#4	N/A
6' - 8"	N/A	N/A	(1)#5	N/A	(2)#4	N/A	(2)#4	N/A
7' - 4"	N/A	N/A	(1)#5	N/A	(2)#4	N/A	(2)#5	N/A
8' - 0"	N/A	N/A	(1)#6	N/A	(2)#4	N/A	(2)#5	N/A
8' - 8"	N/A	N/A	(1)#6	N/A	(2)#5	N/A	(2)#6	N/A
9' - 4"	N/A	N/A	(1)#7	N/A	(2)#5	N/A	(2)#6	N/A
9' - 4" - 13' - 0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	W8x28

1A TYPICAL BOND BEAM LINTEL
S301 3/4" = 1'-0"



5A TYPICAL STEEL BEAM OR LINTEL BEARING ON MASONRY
S301 3/4" = 1'-0"

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