DESIGN CRITERIA

BUILDING CODE:	NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION
CONCRETE DESIGN CODE:	ACI 318-08, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
CONCRETE DESIGN METHOD:	EQUIV. RECTANGULAR STRESS BLOCK
STEEL DESIGN CODE:	AISC MANUAL OF STEEL CONSTRUCTION, LRFD, FOURTEENTH EDITION
STEEL DESIGN METHOD:	ELASTIC ANALYSIS, PLASTIC DESIGN

SNOW LOAD

GROUND SNOW LOAD (Pg):	15 PSF
TERRAIN CATEGORY:	C
EXPOSURE FACTOR (Ce):	1.0
THERMAL FACTOR (Ct):	1.0
ROOF SLOPE FACTOR (Cs):	0.8
SNOW IMPORTANCE FACTOR (Is):	1.1
SLOPED ROOF SNOW LOAD (Ps):	10 PSF

WIND LOAD

BASIC WIND SPEED	115 MPH
WIND IMPORTANCE FACTOR	1.0
OCCUPANCY CATEGORY	II
WIND EXPOSURE CATEGORY	B
ANALYSIS PROCEDURE	METHOD 2 - ANALYTICAL PROCEDURE
COMPONENTS & CLADDING PRESSURES	CALCULATED PER ASCE 7-10

SEISMIC LOAD

BUILDING OCCUPANCY CATEGORY	III
SEISMIC IMPORTANCE FACTOR (IE)	1.0
MAPPED SPECTRAL RESPONSE ACCELERATION (SS)	15.2%
MAPPED SPECTRAL RESPONSE ACCELERATION (S1)	7.6%
SITE CLASS	C
DESIGN SPECTRAL RESPONSE ACCELERATION (SDS)	12.2%
DESIGN SPECTRAL RESPONSE ACCELERATION (SD1)	8.6%
SEISMIC DESIGN CATEGORY	C
BASIC SEISMIC FORCE RESISTING SYSTEM	NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR (R)	2
DEFLECTION AMPLIFICATION FACTOR (Cd)	2.5
SYSTEM OVERSTRENGTH FACTOR (Ωo)	1.75
DESIGN BASE SHEAR	
NORTH-SOUTH DIRECTION	198 KIPS
EAST WEST DIRECTION	198 KIPS
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE

LIVE LOADS

TYPICAL SLAB ON GRADE	200 PSF
CORRIDORS	100 PSF
ROOF	20 PSF

FOUNDATIONS

1. THE PRIMARY BUILDING STRUCTURE IS DESIGNED FOR SUPPORT ON SPREAD FOOTINGS WITH A MAXIMUM ALLOWABLE NET SOIL BEARING PRESSURE OF 3500 PSF ON UNDISTURBED SOILS OR COMPACTED FILL. AS PER SUMMIT'S GEOTECH REPORT
2. IF SOIL AT THE SCHEDULED FOOTING ELEVATION IS OF QUESTIONABLE BEARING VALUE, THE ARCHITECT AND STRUCTURAL ENGINEER ARE TO BE NOTIFIED IMMEDIATELY. LOWER FOOTING ELEVATIONS IF REQUIRED BY ARCHITECT AND ENGINEER TO REACH FIRM SOIL.
3. CONTRACTOR IS TO PROVIDE PROPERLY DESIGNED SHEETING AND SHORING AT ALL OPEN EXCAVATIONS, OR LAY BACK THE CUT AT A SLOPE APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER IN ORDER TO ENSURE SAFE WORKING CONDITIONS AND AS NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED BEFORE PLACEMENT OF CONCRETE.

GENERAL NOTES

1. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS.
2. THE CONTRACTOR WILL COORDINATE BETWEEN ALL TRADES. CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND THE DRAWINGS OF OTHERS WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER IN A TIMELY FASHION THAT PERMITS CLARIFICATIONS WITHOUT EFFECTING THE CONSTRUCTION SCHEDULE.
3. THESE DRAWINGS, ALONG WITH ANY SPECIFICATIONS ISSUED, CONSTITUTE THE CONTRACT DESIGN DOCUMENTS FOR THIS PROJECT. ANY DISCREPANCY BETWEEN THE TWO WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR STRUCTURAL ENGINEER FOR CLARIFICATION. FOR ESTIMATING PURPOSES THE CONTRACTOR WILL ASSUME THE MORE COSTLY ALTERNATIVE. NO MATERIALS MAY BE ORDERED, AND NO WORK MAY PROCEED UNTIL THE DISCREPANCY IS RESOLVED BY THE DESIGN PROFESSIONAL.
4. ALTERNATES OR SUBSTITUTIONS TO STRUCTURAL MATERIALS OR DESIGN ARE AT THE SOLE DISCRETION OF THE LICENSED STRUCTURAL ENGINEER OF RECORD. ANY MODIFICATION MUST BE APPROVED IN THE MANNER SET FORTH IN THE "FRONT END" SPECIFICATIONS.
5. ALL STANDARDS REFERENCED WITHIN THESE DOCUMENTS ARE TO BE THE EDITIONS REFERENCED IN CHAPTER THIRTY-FIVE OF THE INTERNATIONAL BUILDING CODE.
6. STRUCTURAL MEMBERS, INCLUDING BEAMS, COLUMNS, JOISTS, TRUSSES, WALLS, SLABS AND BRACING ELEMENTS, ARE DESIGNED FOR THE FINAL DESIGN LOADS GIVEN ON THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING. SHORING IS TO BE DESIGNED TO PRECLUDE THE OVERSTRESSING ANY STRUCTURAL ELEMENT (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ON-SITE SAFETY. AT A MINIMUM, THE CONTRACTOR IS TO RESEARCH AND IMPLEMENT ALL SAFETY REGULATIONS IN FORCE IN THE JURISDICTION OF THIS PROJECT. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR WILL BRING TO THE ATTENTION OF THE STRUCTURAL ENGINEER ANY STRUCTURAL DETAIL THAT WOULD PRODUCE AN UNUSUALLY UNSAFE CONDITION.

CONCRETE

1. ALL CONCRETE WORK SHALL COMPLY WITH THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI-301 AND THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI-318(EDITIONS IN FORCE).
2. CONCRETE MIX DESIGNS ARE REFERENCED IN THE PROJECT SPECIFICATIONS. FOR EACH DESIGN A SUBMITTAL WILL BE MADE BY THE CONTRACTOR AS OUTLINED IN THE SPECIFICATIONS.
3. ALL REINFORCING STEEL IS TO BE TIED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. TACK WELDING OF REINFORCEMENT STEEL IS PROHIBITED.
4. THE CONTRACTOR WILL SUBMIT A COMPLETE LIST OF ACCESSORIES AND PLACING DETAILS WITH SHOP DRAWINGS.
5. ALL REINFORCING STEEL IS TO BE CONTINUOUS. LAP BARS 40 DIAMETERS FOR BARS #6 AND SMALLER OR 48 DIAMETERS FOR BARS #7 AND LARGER AT SPLICE UNLESS NOTED OTHERWISE ON SCHEDULES OR DETAILS.
6. THE LOCATION OF ALL LAP SPLICES WILL BE SHOWN ON SHOP DRAWINGS.
7. NO CONCRETE ELEMENT MAY BE CORED TO PLACE THROUGH ITEMS (ie PIPES, ELECTRICAL LINES, ETC.). ALL THROUGH ITEMS PENETRATING HORIZONTAL SURFACES ARE TO BE PLACED IN SCHEDULE 40, STEEL, PIPE SLEEVES OF A DIAMETER SUFFICIENT TO ACCOMMODATE THE THROUGH ITEM. AT PENETRATIONS IN THE VERTICAL PLANE OF ELEMENTS THE PIPE SLEEVE DIAMETER WILL BE INCREASED BY AN AMOUNT TO PROVIDE 1 1/2" CLEAR DIMENSION AROUND THE THROUGH ITEM.
8. REFER TO ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING OF CONCRETE BELOW GRADE.
9. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED IN CONCRETE ELEMENTS. LOCATE VERTICAL CONSTRUCTION JOINTS AT THE MIDDLE THIRD OF THE SPAN. PROVIDE 2x4, CONTINUOUS, BEVELED KEYWAYS AT SLABS AND (ONE MINIMUM) AND 2X8 BEVELED KEYWAY AT BEAMS. SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL.
10. ALL INTERSECTING BEAMS, WALLS, AND FOOTINGS SHALL HAVE CORNER BARS. REFER TO TYPICAL DETAILS.
11. TYPICAL REINFORCING CLEAR COVER SHALL CONFORM TO ACI 318 (EDITIONS IN FORCE), U.N.O.

STEEL

1. DIMENSIONS GIVEN ON THE STRUCTURAL DRAWINGS ARE PROVIDED AS A CONVENIENCE AND ARE SOLELY TO CONVEY THE QUANTITY AND NATURE OF THE STRUCTURAL STEEL LAYOUT. ALL FINAL DIMENSIONS ARE TO BE COORDINATED BY THE CONTRACTOR WITH THE PROJECT ARCHITECT BEFORE MATERIAL IS ORDERED OR FABRICATIONS HAS BEGUN.
2. UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS, SHEAR CONNECTIONS ARE TO BE DESIGNED USING THE AISC ALLOWABLE STRESS DESIGN METHOD FOR THE MINIMUM SERVICE LOAD REACTIONS PROVIDED ON THE FRAMING PLANS. ADDITIONALLY, SINGLE ANGLE CONNECTIONS ARE PROHIBITED AND MEMBERS WILL BE FURNISHED WITH A MINIMUM NUMBER OF WEB BOLT ROWS AS FOLLOWS:

MEMBER DEPTH	MIN. NUMBER OF WEB BOLT ROWS
W4 - W10	2 BOLTS
W12 OR GREATER	3 BOLTS

3. GENERALLY, 3/4" DIA., ASTM A-325-N BOLTS ARE TO BE USED FOR ALL BOLTED SHEAR CONNECTIONS UNLESS OTHERWISE INDICATED. THE FABRICATOR MAY USE OTHER DIAMETER BOLTS WHERE AISC RECOMMENDATIONS REQUIRE A SMALLER BOLT FOR GAGE OR BLOCK SHEAR REASONS OR WHERE STRENGTH REASONS REQUIRE LARGER DIAMETER BOLTS. THE PROVIDER OF BOLTS WILL PAINT THE HEADS OF THE NONSTANDARD BOLTS WITH IDENTIFYING COLORS UNIQUE TO A PARTICULAR DIAMETER OF BOLT AND WILL STRIPE THE FRAMING MEMBER AT THE CONNECTION SITE OUTSIDE THE FAYING SURFACE WITH THE CORRESPONDING COLOR.
4. FULLY TENSION ALL BOLTS WHERE DESIGNATED ON STRUCTURAL DRAWINGS AND AT MOMENT CONNECTIONS, INCLUDING BOLTS RESISTING ONLY GRAVITY LOADS. PROVIDE ASTM A-325-SC BOLTS AT CONNECTIONS WHERE INDICATED ON DRAWINGS. PREPARE FAYING SURFACES AT SUCH CONDITIONS PER AISC REQUIREMENTS.
5. SINGLE PLATE SHEAR CONNECTION IS THE PREFERRED METHOD OF ATTACHMENT BETWEEN BEAMS AND GIRDERS AND WHERE HORIZONTAL FRAMING MEMBERS ATTACH TO COLUMNS AT ANGLES OTHER THAN 90°.
6. COLD BENDING OF PLATE MATERIAL IS NOT PERMITTED FOR USE IN SKEWED CONNECTIONS. HEAT MEMBER OR BUILD UP FROM TWO PLATES AS REQUIRED AND FULLY TEST ANGLE FOR WELD DEFECTS.
7. ALL COPES AND CUTS IN STRUCTURAL MEMBERS ARE TO BE MADE FREE OF NOTCHES OR OTHER STRESS CONCENTRATORS. COPES ARE TO BE CUT AT A MINIMUM RADIUS OF 1/2".
8. ALL ROLLED STEEL MEMBERS ARE TO FABRICATED WITH MILL CAMBER UP.
9. COLUMN SPLICES ARE NOT ANTICIPATED ON THIS PROJECT. THE FABRICATOR MAY REQUEST COLUMN SPLICES SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD. ALTHOUGH THE ACTUAL TYPE OF SPLICE WILL BE DETERMINED ON AN INDIVIDUAL BASIS, AISC TYPE VIIID COLUMN SPLICES MAY BE ASSUMED FOR PRICING PURPOSES.
10. ALL WELDS ARE TO CONFORM WITH ANSI/AWS D1.1 STANDARD AND ARE TO BE MADE BY CERTIFIED WELDERS.
11. ALL FULL AND PARTIAL PENETRATION WELDS IN MOMENT CONNECTIONS ARE TO MEET CYCLICAL LOADING STANDARDS.
12. A WELD SCHEDULE FOR ALL FIELD WELDS WILL BE FURNISHED BY THE ERECTOR. THIS SCHEDULE IS TO BE PREPARED BY A COMPETENT DESIGNER OF WELDS AND WILL INDICATE AT A MINIMUM PREHEAT, THE WELD FILLER MATERIAL, THE PROPER WELD DEPOSITION RATE AND THE WELDING MACHINE SETTINGS.
13. THE TOP FLANGES OF ALL FLOOR BEAMS AND GIRDERS ARE TO REMAIN UN-PRIMED AND UNPAINTED UNLESS EXPOSED TO VIEW. ADDITIONALLY, MEMBERS TO RECEIVE SPRAY APPLIED FIRE PROOFING OR MEMBERS EMBEDDED OR ENCASED IN CONCRETE ARE TO REMAIN UN-PRIMED AND UNPAINTED.
14. ALL STEEL ELEMENTS AND CONNECTIONS WHICH WILL BE PERMANENTLY EXPOSED TO EXTERIOR CONDITIONS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

ELEVATED METAL DECKS

1. PROVIDE ACCESSORIES INCLUDING CELL, Z AND COLUMN CLOSURES, POUR STOPS, AND BEAM FILLERS (IF REQUIRED) FOR A COMPLETE INSTALLATION. INDICATE ALL REQUIRED ACCESSORIES ON SHOP DRAWINGS.
2. WELDING TO GAGE METAL POUR-STOPS IS NOT PERMITTED IN ANY CIRCUMSTANCE. PENETRATIONS THROUGH THE POUR STOPS ARE PERMITTED.
3. THE CONTRACTOR WILL ERECT AND ANCHOR THE DECKING IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE STANDARD SPECIFICATIONS OF THE STEEL DECK INSTITUTE.
4. NO MECHANICAL, ELECTRICAL, PLUMBING, ARCHITECTURAL OR MISCELLANEOUS ELEMENT MAY BE HUNG FROM THE STEEL DECK UNDER ANY CIRCUMSTANCES. **THIS NOTE WILL TAKE PRIMACY OVER ANY AND ALL INFORMATION TO THE CONTRARY.**

PLANT PRECAST STRUCTURAL CONCRETE

1. THE DESIGN, FABRICATION, AND ERECTION OF ALL PRECAST/ PRESTRESSED CONCRETE (P/C) SHALL BE THE RESPONSIBILITY OF THE P/C MANUFACTURER.
2. P/C MEMBERS SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH NORTH CAROLINA STATE BUILDING CODE, 2012 EDITION, ACI 318 AND PCI FOR THE LOADS INDICATED PER THE "DESIGN CRITERIA NOTES", MECHANICAL EQUIPMENT LOADS, ROOF SCREEN POST LOADS INDICATED AS WELL AS FOR ALL HANDLING AND ERECTION LOADINGS.
3. THE P/C MANUFACTURER SHALL COORDINATE MECHANICAL EQUIPMENT LOADS AND OPENINGS IN PRECAST SOLID SLABS AND HOLLOW CORE SLABS WITH MECHANICAL DRAWINGS. ADDITIONAL REINFORCEMENT AT OPENINGS SHALL BE PROVIDED AS REQUIRED BY THE P/C MANUFACTURER. ALL OPENINGS THROUGH PRECAST HOLLOW CORE SLABS FOR MECHANICAL DUCTWORK, PIPING AND PLUMBING SHALL BE INDICATED AND DIMENSIONED BY PRECAST MANUF'R ON SHOP DRAWINGS PRIOR TO THEIR SUBMITTAL.
4. THE P/C MANUFACTURER SHALL BE A PCI CERTIFIED PLANT AND SHALL MAINTAIN DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES.
5. THE P/C MANUFACTURER SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS, BEARING THE SIGNED AND DATED SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA, FOR P/C MEMBERS. THE SHOP DRAWINGS SHALL INCLUDE ALL INSERTS, BEARING PADS, BEARING PLATES, OPENINGS, AND ANCHORS.
6. ALL P/C CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI. MINIMUM COMPRESSIVE STRENGTH AT TRANSFER OF PRESTRESSING FORCE SHALL BE 3500 PSI. CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER SHALL BE AIR-ENTRAINED TO 5% (±1%) WITH ADMIXTURE THAT CONFORMS TO ASTM C 260.
7. ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7500 PSI AND SHALL CONFORM TO ASTM C 1107.
8. ALL CONCRETE TOPPINGS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS OTHERWISE REQUIRED BY P/C MANUFACTURER. CONCRETE TOPPING SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1/4 INCH.
9. THE WELDED WIRE FABRIC (WWF) INDICATED ON THE DRAWINGS IS INTENDED FOR CRACK CONTROL PURPOSES ONLY. THE P/C MANUFACTURER SHALL PROVIDE ADDITIONAL WWF OR REBARS IN THE TOPPING OR P/C MEMBER AS REQUIRED FOR STRUCTURAL LOADINGS.
10. THE P/C MANUFACTURER SHALL PROVIDE MINIMUM CLEAR COVER TO THE REINFORCING IN ACCORDANCE WITH ACI 318.
11. CONNECTION DETAILS SHOWN ARE SCHEMATIC ONLY. ALL CONNECTION DETAILS SHALL BE DESIGNED BY THE P/C MANUFACTURER TO ACCOMMODATE THE SPECIFIED LOADINGS. ALL CONNECTIONS SHALL ACCOUNT FOR THERMAL MOMENT, SHRINKAGE AND CREEP OF THE P/C MEMBERS.
12. ALL WELD PLATES, INSERTS. ANCHOR BOLTS, WELDING, LIFTING HARDWARE, GROUT SLEEVES, ETC. SHALL BE DESIGNED AND PROVIDED BY THE P/C MANUFACTURER. ALL CONNECTIONS EXPOSED TO EARTH OR WEATHER SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 153, UNLESS NOTED OTHERWISE.
13. OPENINGS FOR MECHANICAL AND ELECTRICAL PIPING AND CONDUIT SHALL BE. CORE DRILLED THROUGH HOLLOW CELLS ONLY, IN ACCORDANCE WITH THE H/C MANUFACTUTER'S RECOMMENDATIONS. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AS REQUIRED BY THE H/C MANUFACTURER.
14. ALL H/C UNITS SUPPORTED BY MASONRY OR CONCRETE SHALL BEAR ON 1/8 INCH CONTINUOUS STRIPS OF HARDBOARD TEMPERED MASONITE.
15. THE CONTRACTOR SHALL PROVIDE HOLES OR OTHER PROTECTIVE MEANS TO ALLOW THE HOLLOW CELLS TO DRAIN ANY WATER ACCUMULATION THAT MAY OCCUR DURING THE CONSTRUCTION PROCESS.
16. UNLESS GREATER STRENGTH IS REQUIRED BY THE P/C MANUFACTURER, ALL REINFORCING MATERIALS SHALL CONFORM TO THE FOLLOWING:

REINFORCING	ASTM	MIN. STRENGTH
PRESTRESSING STRAND	A 416	250 KSI (ULT. UNCOATED, 7 WIRE, LOW RELAXATION)
REINFORCING BARS	A 615	60 KSI
WELDED WIRE FABRIC	A 185	70 KSI

STRUCTURAL MASONRY

1. U.N.O. HOLLOW MASONRY UNITS SHALL CONFORM TO ASTM C90, LIGHTWEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH F'M = 1500 PSI ON THE NET BLOCK AREA.
2. MORTAR SHALL CONFORM TO ASTM C270 CEMENT-JME TYPE M OR S. MINIMUM COMPRESSIVE STRENGTH TO BE 1800 PSI.
3. COURSE MASONRY GROUT SHALL CONFORM TO ASTM C476 WITH MAXIMUM AGGREGATE SIZE OF 3/8". MINIMUM COMPRESSIVE STRENGTH SHALL BE 3000 PSI AT 28 DAYS. PROVIDE CLEAN OUT OPENINGS WHERE GROUT LIFT EXCEEDS 4'-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.
   WORK SHALL BE SAMPLED AND TESTED.
   MORTAR: 2X4 CYLINDERS OR 2 INCH CUBES PER ASTM C780. 1 TEST OF 3 CYLINDERS OR CUBES PRIOR TO CONSTRUCTION, 1 TEST OF 3 CYLINDERS OR CUBES ON EACH OF THE FIRST DAYS OF CONSTRUCTION AND 1 TEST OF 3 CYLINDERS OR CUBES FOR EACH 5000 SF OF WALL AREA OR PER WEEK WHICHEVER OCCURS FIRST.
   GROUT: TEST 3 X 3 X 6 SAMPLE CAST BETWEEN BLOCK UNITS (SEE NCMA TEK - 23A) CAP PER ASTM C617 AND TEST PER ASTM C39. TAKE 2 SPECIMENS PER TEST EACH 30 CUBIC YARDS OF GROUT OR FRACTION THEREOF PLACED EACH DAY AND WHEN MIX PROPORTIONS ARE CHANGED.
5. BOND BEAMS SHALL BE REINFORCED WITH 2 #5 CONTINUOUS (1 TOP AND 1 BOTTOM) FOR 8 INCH "U" BLOCKS, 2 #5 BOTTOM FOR 12 INCH "U" BLOCKS. PROVIDE CORNER BARS AT WALL CORNERS AND INTERSECTIONS.
6. PROVIDE DOWELS TO MATCH VERTICAL WALL REINFORCING TO SLABS OR FOUNDATIONS AT THE BASE OF ALL WALLS. PROVIDE LAP SPLICE WITH VERTICAL WALL REINF. PER SCHEDULE (SEE NOTE 9).
7. SEE PLANS AND MASONRY WALL REINFORCING SCHEDULE ON S3101 FOR MASONRY WALL REINFORCING.
8. CONTRACTOR SHALL COORDINATE SECURITY WALL LOCATIONS AND REINFORCING WITH GENERAL AND ARCHITECTURAL DRAWINGS. INSTALL ADDITIONAL REINFORCING AT SECURITY WALLS AS REQUIRED BY ARCHITECTURAL AND GENERAL DRAWINGS.
9. LAP VERICAL AND HORIZONTAL REINFORCING IN MASONRY WALLS AT ALL SPLICES. SEE S3101 FOR LAP SCHEDULE.

MATERIALS

STEEL	
WIDE FLANGE MEMBERS	ASTM A992, Fy = 50KSI
ANGLES & CHANNELS	ASTM A36, Fy = 36KSI
PLATES & BARS (GENERAL)	ASTM A36, Fy = 36KSI
PLATES & BARS (MOMENT CONNECTIONS)	ASTM A572, Fy = 50KSI
HOLLOW STRUCTURAL SECTIONS (RECTANGULAR)	ASTM A500 GRADE B, Fy = 46KSI
MISCELLANEOUS PIPES	ASTM A53, Fy = 35KSI
BOLTS (FRAMING MEMBERS)	ASTM A325-N
ANCHOR RODS	ASTM F1554 GRADE 36
ROOF DECKING	ASTM A653SQ, GRADE 33 GALV.
COMPOSITE FLOOR DECKING	ASTM A653SQ, GRADE 50 GALV.
2. REINFORCING STEEL	
GENERAL REINFORCING	ASTM A615, Fy = 60KSI
WELDED WIRE FABRIC	ASTM A185, IN FLAT SHEETS
3. WELD ELECTRODES	
GENERAL - ROLLED OR FORMED MEMBERS	E70xx ELECTRODES, CVN = 20#-FT AT 40 DEG.
DECKING TO FRAME WELDS	E70xx OR E60xx
4. CONCRETE	
FOOTINGS	MIX F'c = 3000 PSI NORMAL WEIGHT
SLABS ON GRADE	MIX F'c = 4000 PSI NORMAL WEIGHT
ELEVATED SLABS ON METAL DECK	MIX F'c = 3000 PSI LIGHT WEIGHT (110 PCF MAX)
5. PRECAST CONCRETE	
SEE SECTION ABOVE	
6. STRUCTURAL MASONRY	
SEE SECTION ABOVE	

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GENERAL NOTES

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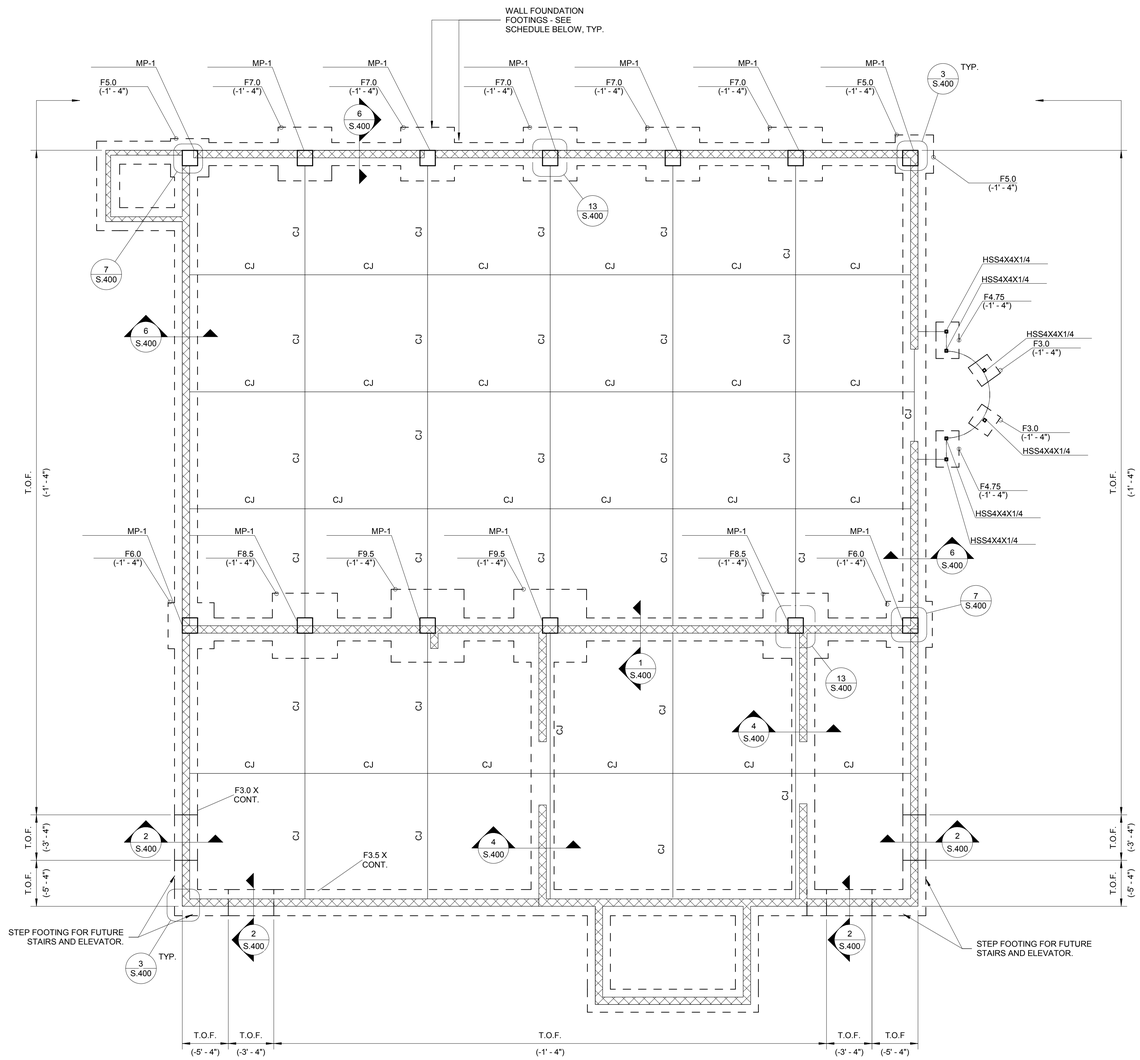

SPREAD FOOTING SCHEDULE					
MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT	COMMENTS
F3.0	3' - 0"	3' - 0"	12"	(3) #5 E.W. BOT	
F3.0 X CONT.		3' - 0"			
F3.5 X CONT.		3' - 5"			
F4.75	4' - 9"	3' - 0"	12"	(5) #5 E.W. LONG, (3) #5 SHORT	
F5.0	5' - 0"	5' - 0"	18"	(5) #5 E.W. BOT	
F6.0	6' - 0"	6' - 0"	18"	(6) #6 E.W. BOT	
F7.0	7' - 0"	7' - 0"	18"	(7) #6 E.W. BOT	
F8.5	8' - 6"	8' - 6"	18"	(8) #6 E.W. BOT	
F9.5	9' - 6"	9' - 6"	18"	(8) #7 E.W. BOT	

1 FOUNDATION PLAN
1/8" = 1'-0"

NOTES:
1. TOP OF SLAB REFERENCE ELEVATION = 0'-0".
2. U.N.O., TYPICAL SLAB CONSTRUCTION CONSISTS OF 4" CONCRETE SLAB ON GRADE PLACED OVER 6MIL POLY VAPOR BARRIER ON 4" STONE SUB-BASE. TYPICAL REINFORCEMENT CONSISTS OF W.W.F. 6X6 W1.4XW1.4. SEE SECTION 9/S.400 FOR TYPICAL SLAB ON GRADE DETAIL.
3. "T.O.F." REFERS TO TOP OF FOOTING ELEVATION AS MEASURED FROM FIRST FLOOR REFERENCE ELEVATION AND IS NOTED (-X'-X") ON PLAN.
4. "C.J." ON PLAN DENOTES A SLAB CONTROL JOINT. REFER TO DETAIL 11/S.400 FOR ADDITIONAL INFORMATION.
5. SEE 10/S.400 FOR TYPICAL FOOTING DETAIL.
6. SEE ARCHITECTURAL FOR DIMENSIONED EDGE OF SLAB PLAN.
7. 2.5" CHAIRS UNDER W.W.F. ARE TO BE USED TO PROVIDE ADEQUATE COVER DURING CONSTRUCTION OF SLAB ON GRADE.
8. SEE DETAIL 2/S.400 FOR STEP IN WALL FOOTING.
9. 2.5" CHAIRS REQUIRED FOR W.W.F.
10. MP-X DENOTES X/SX.X MASONRY PILASTER.

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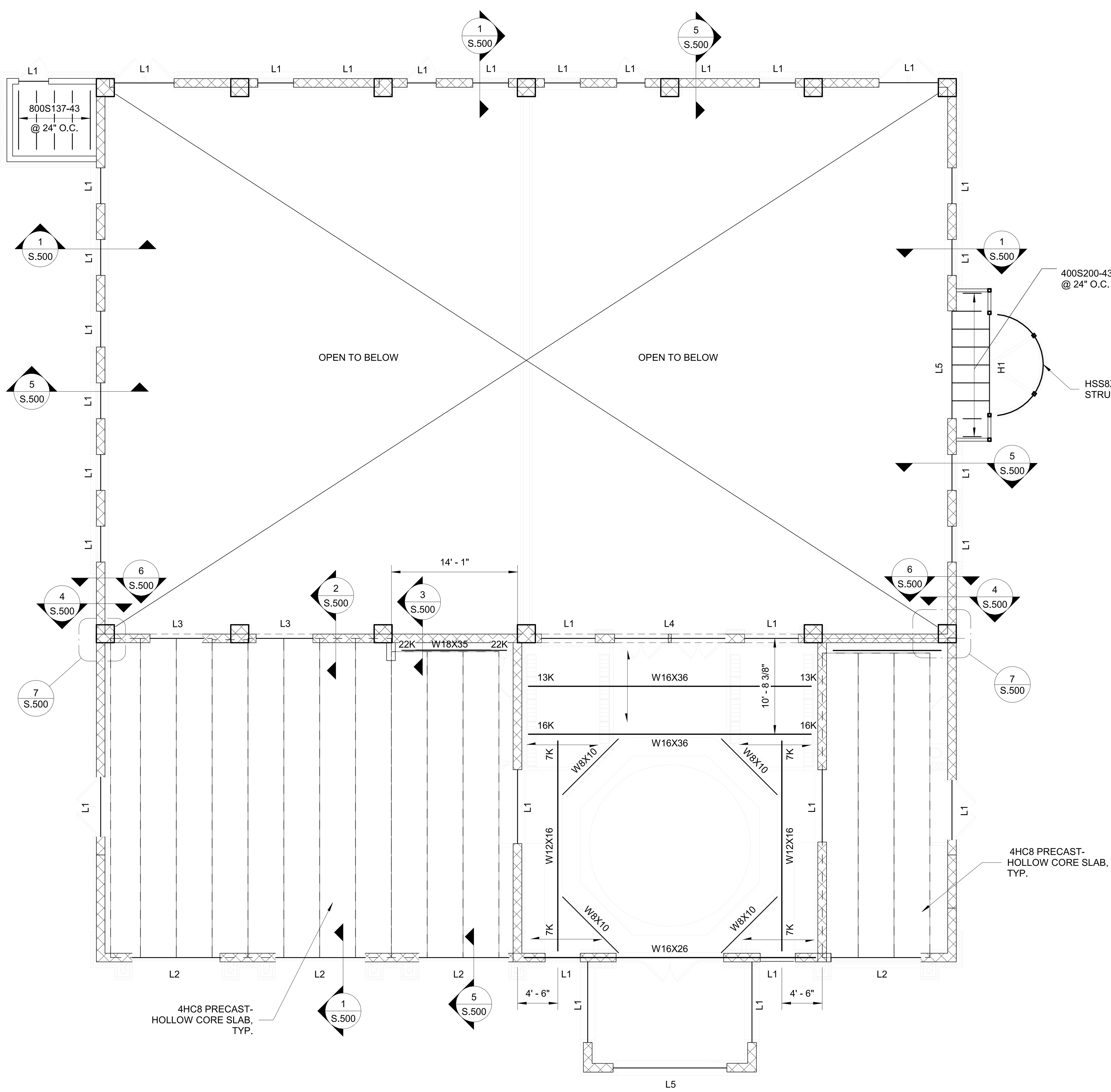
Drawn By SDH
Drawing FOUNDATION PLAN
File Name
Sheet S.100

07 SHEETS

HEADER SCHEDULE		
MARK	TYPE	QTY.
H1	600S137-43	(2)

LINTEL SCHEDULE

LINTEL TYPE	MAXIMUM OPENING WIDTH	4" CMU VENEER LINTEL ANGLE	WALL DIMENSIONS & REINFORCING		
			GROUT FILLED CMU BOND BEAM		STIRRUPS
			BEAM DEPTH	REINFORCEMENT	
L1	12'-0"	.	16"	(2) #5 BOTTOM	-
L2	10'-0"	HSS8X6X1/4 (LLH)	8"	-	-
L3	6'-8"	W8X10	8"	-	-
L4	12'-0"	W16X26	16"	-	-
L5	12'-6"	-	24"	(2) #5 BOTTOM	-



1 LOW ROOF FRAMING PLAN
1/8" = 1'-0"

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
2. FINISHED FLOOR REFERNCE ELEVATION = 945'-10".
3. +X'-X" DENOTES ELEVATION ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
4. 8" H.C. INDICATED 8" THICK PRECAST PRESTRESSED HOLLOW CORE SLAB.
5. TYPICAL TOPPING SLAB TO BE 2" THICK CAST IN PLACE W/ W.W.F. 6X6W1.4XW1.4
6. STEEL BEAM NOTATION: 18k W18x65 18k (ASSUME 6K WHERE REACTION IS NOT SHOWN)
   - RIGHT END REACTION (SERVICE)
   - BEAM SIZE
   - BEAM SIZE

NOTE: IF NO END REACTION IS PROVIDED, ASSUME A MINIMUM END REACTION OF 6k

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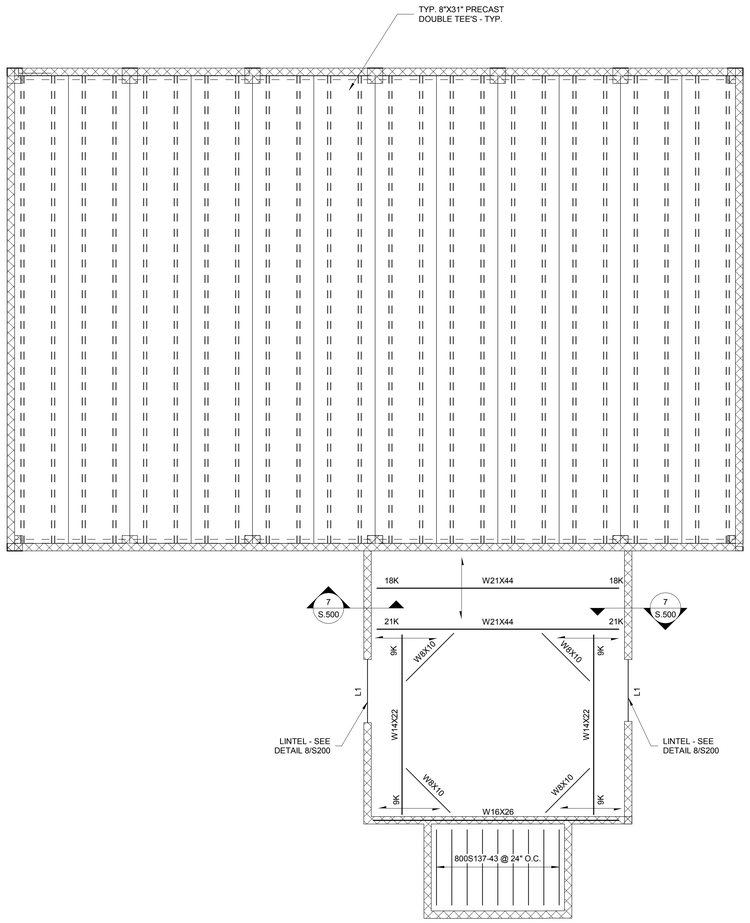
NEW CULTURAL CENTER FOR IABAT
2200 SOUTH MIAMI BLVD. DURHAM, NC. 27703

Project No.	18-0290
Date:	12/31/2018
Checked By	UO
Drawn By	Author
Drawing	LOW ROOF FRAMING PLAN
File Name	
Sheet	S.200

OF 07 SHEETS

LINTEL SCHEDULE					
LINTEL TYPE	MAXIMUM OPENING WIDTH	4" CMU VENEER LINTEL ANGLE	WALL DIMENSIONS & REINFORCING		
			GROUT FILLED CMU BOND BEAM		STIRRUPS
			BEAM DEPTH	REINFORCEMENT	
L1	12'-0"	.	16"	(2) #5 BOTTOM	-
L2	10'-0"	HSS8X6X1/4 (LLH)	8"	-	-
L3	6'-8"	W8X10	8"	-	-
L4	12'-0"	W16X26	16"	-	-
L5	12'-6"	-	24"	(2) #5 BOTTOM	-



1 HIGH ROOF FRAMING PLAN
1/8" = 1'-0"

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
2. FINISHED FLOOR REFERNCE ELEVATION = 945'-10"
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   - 18k — RIGHT END REACTION (SERVICE)
   - W18x65 — BEAM SIZE
   - 18k — BEAM SIZE

NOTE: IF NO END REACTION IS PROVIDED, ASSUME A MINIMUM END REACTION OF 6k

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Issued	Date	By

Project No. 18-0290
Date 12/31/2018
Checked By UO
Drawn By Author
Drawing HIGH ROOF FRAMING PLAN
Cut Sheet
Sheet S.300

07 SHEETS