SITE PREPARATION NOTES

THE OWNER WILL HIRE A SPECIAL INSPECTOR TO MONITOR EARTHWORK OPERATIONS AND PERFORM TESTING. ALL NECESSARY MEASURES SHALL BE TAKEN TO AVOID DAMAGE TO THE EXISTING BUILDINGS. UNDER THE BUILDING AND TO A LINE 5 FEET BEYOND THE BUILDING THE FOLLOWING SITE WORK SHALL BE PERFORMED UNDER THE OBSERVATION OF THE SPECIAL INSPECTOR:

1. STRIP ALL TOPSOIL AND STOCKPILE.
2. REMOVE ALL UNSUITABLE MATERIALS FROM SITE. THIS INCLUDES SURFACE VEGETATION, ORGANIC SURFACE SOILS, PAVEMENT, TREE STUMPS, ROOTS, CONSTRUCTION DEBRIS, EXISTING STRUCTURES AND FOUNDATIONS, UTILITIES AND ANY UNSTABLE SURFACE MATERIALS. THERE ARE EXISTING POORLY COMPACTED FILL SOILS WHICH MUST BE REMOVED AND REPLACED WITH COMPACTED FILL AS SPECIFIED IN NOTE 4. ACCORDING TO THE PROJECT SOILS REPORT, SOILS WILL REQUIRE UNDERCUTTING TO A DEPTH OF APPROXIMATELY 3 TO 4 FEET BELOW EXISTING GRADES.
3. THE ENTIRE SUBGRADE SHALL BE PROOFROLLED USING A PNEUMATIC TIRED ROLLER SUCH AS A LOADED DUMP TRUCK OR GRADING PAN. AREAS WHICH PUMP, RUT OR DEFLECT EXCESSIVELY SHALL BE STABILIZED BY FURTHER COMPACTION OR UNDERCUT AND BACKFILLED AS SPECIFIED IN NOTE 4.
4. PLACE NEW APPROVED FILL MATERIAL IN 10" MAXIMUM LOOSE LIFT THICKNESSES AND COMPACT EACH LIFT TO 95% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-698. FILL MATERIALS, MOISTURE CONTENT, AND COMPACTION EQUIPMENT SHALL COMPLY WITH THE RECOMMENDATIONS IN THE PROJECT SOILS REPORT AND SHALL BE APPROVED BY THE SPECIAL INSPECTOR.
5. ALL FOOTING BOTTOMS SHALL BE COMPACTED USING A MECHANICAL TAMPER.
6. ALL NEW FILL SHALL BE LABORATORY TESTED FOR COMPACTION. PROVIDE ONE COMPACTION TEST FOR EACH 2500 SQUARE FEET OF FILL AREA FOR EACH VERTICAL LIFT OF FILL. LOCATION OF TESTS TO BE AT RANDOM AND AT THE DISCRETION OF THE SPECIAL INSPECTOR. SPECIAL INSPECTOR SHALL VERIFY FOOTING BOTTOMS FOR THE DESIGN BEARING PRESSURE BEFORE CONCRETE IS PLACED.
7. SEE THE EARTHWORK SPECIFICATIONS AND PROJECT SOILS REPORT FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. IN CASE OF DISCREPANCY BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS, CONSULT WITH THE ARCHITECT. FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE THE ARCHITECTURAL DRAWINGS. VERIFY ALL MECHANICAL OPENINGS AND SUPPORTS WITH THE MECHANICAL EQUIPMENT. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS RELATED TO EXISTING CONSTRUCTION.
2. DESIGN CRITERIA
   - A. BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE
   - B. RISK CATEGORY: III
   - C. SEISMIC DESIGN DATA:
     - a. IMPORTANCE FACTOR: 1.25
     - b. S_S = 0.337 S_1 = 0.123
     - c. S_{DS} = 0.343 S_{D1} = 0.189
     - d. SITE CLASS D, SEISMIC DESIGN CATEGORY C
     - e. DESIGN BASE SHEAR: 260 KIPS
     - f. SEISMIC RESPONCE COEFFICIENT: C_S = 0.086
     - g. BASIC SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS. R = 5.0
     - h. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
   - D. WIND VELOCITY 120 MPH, EXPOSURE C, INTERNAL PRESSURE COEFFICIENT +/- 0.18.
   - E. ROOF LIVE LOAD: 20 PSF
   - F. GROUND SNOW LOAD: 10 PSF
   - G. FLOOR LIVE LOADS:
     - a. CORRIDORS: 80 PSF
     - b. CLASSROOMS: 40 PSF
     - c. CORRIDOR CEILING IN EXISTING BUILDING: 20 PSF
     - d. STAIRS: 100 PSF
3. FOUNDATION DESIGN BASED ON A SUBSURFACE INVESTIGATION BY CSRA [illegible]NG & ENG[illegible]RING CO. INC., DATED JANUARY 6, 2019. (CSRA REPORT NO. B-129.18)
   - A. ALLOWABLE BEARING PRESSURE = 2000 PSF
   - B. STEP FOOTINGS AS REQUIRED TO LET UTILITIES PAS[illegible] OVER [illegible]NGS.
4. CONCRETE: 28-DAY COMPRESSIVE STRENGTHS SHALL BE [illegible] FOLLOWS:
   - A. SLABS ON METAL DECK: 3000 PSI, 110[illegible]3 PCF
   - B. ALL OTHER CONCRETE: [illegible], NOR[illegible] WEIGHT
5. CONCRETE REINFORCING STEEL
   - A. ASTM A615, GRADE 60, EXCEPT WH[illegible]RE REINFORCING [illegible] TO BE WELDED, USE ASTM A706 WELDABLE REINFORCING. DO NOT [illegible]ELD OR TACKWELD [illegible]EINFORCING NOT SHOWN ON THE DRAWINGS TO BE WELDED.
   - B. DETAIL IN ACCORDANCE WITH ACI D[illegible]LING MAN[illegible]AL, LATEST EDITION.
   - C. LAP ALL BARS [illegible] CLASS B SPLICES [illegible]ED OTHERWISE.
   - D. PROVIDE [illegible]S OF SAME SIZE [illegible]CING AS HORIZONTAL REINFORCING AT ALL WALLS AND FOO[illegible]ING INTERSECTIONS. LAP WITH CLASS B SPLICES.
6. STRUCTURAL ST[illegible]EL
   - A. MATERIA[illegible]
     - a. PI[illegible] A[illegible]M A53, GRADE B
     - b. TUB[illegible] [illegible]TM A500, GRADE C
     - c. WIDE [illegible] AND TEES: ASTM A992, GRADE 50
     - d. [illegible]THER: ASTM A36
   - B. FABRI[illegible]N SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS.
   - C. BOLTED [illegible]ONNECTIONS: ASTM A325. 3/4" DIAMETER, SNUG-TIGHTENED, BEARING TYPE CONNECTIONS WITH THREADS IN THE SHEAR PLANE UNLESS NOTED OTHERWISE.
   - D. [illegible]ELDED CONNECTIONS: E70XX ELECTRODES. ELECTRODES USED FOR WELDING A992 STEEL SHALL BE LOW HYDROGEN ELECTRODES.
7. COMPOSITE STEEL BEAMS
   - A. ALL BEAMS SUPPORTING SLABS ON METAL DECK ARE COMPOSITE BEAMS AND RECEIVE STUDS @ 12" OC THROUGHOUT THE BEAM LENGTH UNLESS NOTED OTHERWISE.
   - B. STUDS: 3/4" DIAMETER X 4 1/2" LONG HEADED STUDS FIELD WELDED THROUGH DECK.
   - C. EXCEPT WHERE NOTED OTHERWISE, BEAMS ARE DESIGNED TO BE UNSHORED WHEN CONCRETE IS PLACED. SOME DEFLECTIONS WILL OCCUR AND MUST BE COMPENSATED FOR DURING SCREEDING. TOP SURFACE OF SLAB SHALL BE FLAT AND LEVEL. SLAB WILL NOT NECESSARILY BE UNIFORM THICKNESS.
8. STEEL JOISTS
   - A. JOISTS SHALL BE INSTALLED AND BRIDGED IN ACCORDANCE WITH SJI SPECIFICATIONS. IN ADDITION TO STANDARD SJI BRIDGING, PROVIDE A SINGLE LINE OF BOTTOM CHORD BRIDGING FOR UPLIFT AT THE FIRST BOTTOM CHORD PANEL POINT AT EACH END OF ROOF JOISTS.
   - B. ALL JOISTS SHALL BE DESIGNED FOR THE ADDITIONAL BENDING STRESSES RESULTING FROM A 300 POUND CONCENTRATED LOAD LOCATED AT ANY LOCATION ALONG THE TOP AND BOTTOM CHORD. THE 300 POUND LOAD IS ALREADY ACCOUNTED FOR IN THE JOIST DESIGNATIONS SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE AND SHALL BE APPLIED CONCURRENTLY WITH THE BALANCE OF THE STANDARD SJI SERVICE LOAD.
   - C. ALL ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 20 PSF.
   - D. JOISTS SHALL BE DESIGNED FOR ANY SPECIAL LOADS SHOWN ON THE DRAWINGS.
9. STEEL DECK
   - A. ROOF DECK SHALL BE 1 1/2" 22 GAGE TYPE B (WIDE RIB) GALVANIZED STEEL DECK IN 36" WIDE SHEETS. MINIMUM SECTION MODULUS = 0.186 $INCHES^3$.
   - B. FLOOR DECK SHALL BE 3" 20 GAGE GALVANIZED COMPOSITE STEEL DECK. MINIMUM SECTION MODULUS = 0.574 $INCHES^3$, MINIMUM MOMENT OF INERTIA = 0.964 $INCHES^4$.
10. LIGHT GAGE METAL FRAMING
    - A. LIGHT GAGE FRAMING SHALL BE 18 GAGE MINIMUM GALVANIZED STUDS WITH 1 5/8" FLANGES. FRAMING SHALL BE DESIGNED BY A ENGINEER REGISTERED IN SOUTH CAROLINA FOR THE DESIGN CRITERIA IN GENERAL NOTE 2 ABOVE. SHOP DRAWINGS AND CALCULATIONS FOR LIGHT GAGE METAL FRAMING AND ITS CONNECTIONS SHALL BE PREPARED AND SUBMITTED UNDER THE SEAL OF AN ENGINEER REGISTERED IN SOUTH CAROLINA.
    - B. SEE SPECIFICATION 054000 FOR ITEMS TO BE DESIGNED AND PROVIDED BY LIGHT GAGE FRAMING CONTRACTOR.
11. REINFORCED MASONRY: SEE DRAWING S4.02.
12. POST INSTALLED ANCHORS INSTALLED IN MASONRY OR HARDENED CONCRETE SHALL BE SHOWN IN THE TABLES ON THIS DRAWING.

MASONRY POST INSTALLED ANCHOR TABLE

TYPE	MANUFACTURER	PRODUCT	BASE MATERIAL	DIAMETER/SIZE	
SCREW ANCHOR	HILTI	KWIK HUS-EZ	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	POWERS	WEDGE-BOLT+ w/ WEDGE BIT	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	SIMPSON	TITEN HD	GROUTED CONCRETE BLOCK	3/8" TO 3/4"	
EXPANSION ANCHOR	HILTI	KWIK BOLT 3	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	POWERS	POWER-STUD + SD1	GROUTED CONCRETE BLOCK	3/8" TO 5/8"	
	SIMPSON	WEDGE ALL	GROUTED CONCRETE BLOCK	3/8" TO 3/4"	
ADHESIVE ANCHOR	HILTI	HIT-HY 70	GROUTED CONCRETE BLOCK	ALL THREAD ROD	1/4" TO 3/4"
		HIT-HY 70	HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	ALL THREAD ROD	3/4"
				REBAR	#4 TO #6
	POWERS	T308+	FULLY GROUTED	ALL THREAD ROD	3/4"
			HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	ALL THREAD ROD	3/4"
				REBAR	#5 , #6
	SIMPSON	SET	FULLY GROUTED	ALL THREAD ROD	1/2" TO 3/4"
			HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	ALL THREAD ROD	5/8" AND 3/4"
		ET-HP	FULLY GROUTED	ALL THREAD ROD	3/8" TO 3/4"
			HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	ALL THREAD ROD	1/2" TO 3/4"

NOTES:
1. THIS SELECTION TABLE SHALL BE USED WHEN ANCHOR RODS OR REBARS WITH ANCHOR ADHESIVE, EXPANSION ANCHORS OR SCREW ANCHORS ARE CALLED OUT ON THE DRAWINGS. THE ADHESIVES SHOWN SHALL ALSO BE USED WHERE THE TERM "EPOXY IS USED ON THE STRUCTURAL DRAWINGS.
2. ADHESIVE ANCHORS HOLES SHALL BE CLEANED PER THE MANUFACTURER RECOMMENDATIONS INCLUDING USING A BRUSH AND 100 PSI MINIMUM OR THE MANUFACTURERS REQUIRED COMPRESSED AIR.
3. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S PRINTED INSTALLATION INSTRUCTIONS. (MP11)
4. SCREW AND EXPANSION ANCHORS SHALL MEET THE EMBEDMENT DEPTHS AS SPECIFIED IN THE DRAWINGS BUT NOT LESS THAN THE MINIMUM OF 7 TIMES THE ANCHOR DIAMETER
5. ADHESIVE ANCHORS SHALL MEET THE EMBEDMENT DEPTHS AS SPECIFIED IN THE DRAWINGS. IF NO EMBEDMENT IS SPECIFIED, EMBED 12 TIMES THE ANCHOR DIAMETER.
6. CONTACT THE ENGINEER OF RECORD FOR APPROVAL OF ANY OTHER ANCHOR TYPE OR DIAMETER PRIOR TO INSTALLATION

CONCRETE POST INSTALLED ANCHOR TABLE

TYPE	MANUFACTURER	PRODUCT	DIAMETER/SIZE	
SCREW ANCHOR	HILTI	KWIK HUS-EZ (KH-EZ)	1/4" TO 3/4"	
	POWERS	WEDGE-BOLT+ w/ WEDGE BIT	3/8" TO 3/4"	
	SIMPSON	TITEN HD	3/8" TO 3/4"	
ROD ANCHOR	HILTI	KWIK HUS-EZ -1	3/8" TO 1/2"	
	POWERS	VERTIGO + w/ WEDGE BIT	1/4" TO 1/2"	
		SNAKE +	3/8" TO 1/2"	
	SIMPSON	TITEN HD ROD HANGER	3/8", 1/2"	
EXPANSION ANCHOR	HILTI	KWIK BOLT TZ	3/8" TO 3/4"	
	POWERS	POWER-STUD + SD1	3/8" TO 1"	
	SIMPSON	STRONG-BOLT 2	3/8" TO 5/8"	
ADHESIVE ANCHOR	HILTI	HIT-HY 200 SAFE SET	ALL THREAD ROD	3/8" TO 1 1/4"
			REBAR	#3 TO #8
		HIT-RE 500-SD	ALL THREAD ROD	3/8" TO 1 1/4"
			REBAR	#3 TO #10
	POWERS	PE1000+	ALL THREAD ROD	1/2" TO 7/8"
			REBAR	#3 TO #7
	SIMPSON	SET-XP	ALL THREAD ROD	3/8" TO 1 1/4"
			REBAR	#3 TO #10
		AT-XP	ALL THREAD ROD	3/8" TO 1 1/4"
			REBAR	#3 TO #10

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6. CONTACT THE ENGINEER OF RECORD FOR APPROVAL OF ANY OTHER ANCHOR TYPE OR DIAMETER PRIOR TO INSTALLATION

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9-26-19

SOUTH CAROLINA Johnson & King Engineers No. 0165 CERTIFICATE OF AUTHORIZATION

ISSUE	DATE
BID DOCUMENTS	10.24.19

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GENERAL NOTES

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