

VA FORM 08-6231

(314) 436-9492

RIVERFRONT HEALTH & SAFETY

INDUSTRIAL HYGENIST

1139 OLIVE STREET,

ST. LOUIS, MO 63101

25219 MADISON AVENUE, SUITE 100

HEALTHCARE PLANNER INNOVA GROUP 3196 N. SWAN ROAD TUCSON, AZ 85712 (520) 886-8650

ROOF/PENTHOUSE FRAMING NOT INCLUDED IN LATERAL SYSTEM 50 FT ROOF/PENTHOUSE LATERAL FRAME RESPONSE SYSTEM 50 FT ALLOWABLE SOIL BEARING CAPACITY (AT SUITABLE DEPTH BELOW EXISTING GRADE,



2a = 20'-6"	
a = 10'-3"	

OSS PRESSURES, ILY (PSF)				
CTIVE WIND AREA ft ²				
50 ft ²	100 ft ²			
+/- 35 +/- 35				
+/- 55	+/- 50			
+/- 70	+/- 65			
+/- 85	+/- 75			

WIND ON

20 ft²

+/- 35

+/- 55

-+/-1805

+/- 105

EFFE

1. DURING CONSTRUCTION, GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND SLABS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE BUILDING

- 2. DOWNSPOUTS FROM ROOF DRAINS AND GUTTERS SHALL BE COLLECTED AND PIPED AWAY FROM THE BUILDING. WHEN WATER IS NOT PIPED WAY FROM THE BUILDING, DOWNSPOUTS SHALL DUMP ONTO A CAST IN PLACE 4" THICK X 3'-0" WIDE CONCRETE SWALE REINFORCED WITH #4 AT 12" ON CENTER EACH WAY AND EXTENDING 10'-0" OUT FROM THE BUILDING.
- 3. FINAL SITE GRADING SHALL BE IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE SECTION 1804.4. PERVIOUS SURFACES ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM BUILDING AT 5% MINIMUM FOR AT LEAST 10 FEET, IMPERVIOUS SURFACES ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM BUILDING AT 2% MINIMUM FOR AT LEAST 5 FEET.
- 5. IRRIGATE VEGETATION AND SOILS ADJACENT TO THE BUILDING (NO MORE THAN 15 MINUTES
- THREE TIMES A WEEK) ON AN AS NEEDED BASIS TO MAINTAIN UNIFORM SOIL MOISTURE CONDITIONS AROUND THE PERIMETER OF THE BUILDING FOLLOWING CONSTRUCTION.

1. WHERE CONSTRUCTION DOCUMENT REQUIREMENTS DIFFER FROM THE PROJECT SPECIFIC GEOTECHNICAL REPORT, THE MORE STRINGENT OF THE TWO SHALL GOVERN.

- 2. SITE PREPARATION FOR THE BUILDING PAD SHALL CONSIST OF THE REMOVAL OF EXISTING PAVEMENT, VEGETATION, ORGANIC MATTER AND ANY ADDITIONAL MATERIAL AS NECESSARY TO
- 3. DURING THE GEOTECHNICAL EXPLORATION, EXISTING FILL MATERIALS WERE ENCOUNTERED FROM 2 TO 6 FEET BELOW EXISTING GRADE. ADDITIONAL FILL SHOULD BE EXPECTED TO OCCUR ACROSS THE SITE, POSSIBLY AT GREATER DEPTHS. THE EXISTING FILL IS NOT SUITABLE FOR THE BUILDING ADDITION AND SHALL BE REMOVED. DUE TO THE VARIABILITY OF THE EXISTING FILL DEPTH, THE EXACT AMOUNT OF FILL TO BE REMOVED CANNOT BE PREDICTED.

4. THE EXISTING FILL WHICH IS TO BE REMOVED CAN BE REUSED AS NEW CONTROLLABLE FILL BELOW THE LOW VOLUME CHANGE (LVC) ZONE, PROVIDED IT IS PROPERLY MOISTURE

- 5. THE SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, RUBBER-TIRED VEHICLE (STATIC WEIGHT OF AT LEAST 20 TONS AND WITH TIRE PRESSURES OF AT LEAST 90 PSI). THE CONTRACTOR SHALL MAKE AT LEAST TWO COMPLETE PASSES OVER THE AREA WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. AREAS OF THE SUBGRADE THAT ARE OBSERVED TO BE SOFT OR WEAK SHALL BE OVEREXCAVATED AND REPLACED WITH PROPERLY COMPACTED SELECT
- 6. SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO AN SIX (6) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500
- 7. SELECT FILL MATERIAL FOR THE BUILDING PAD SHALL MEET THE FOLLOWING REQUIREMENTS:

ACCEPTABLE PARAMETERS
> 24 INCHES BELOW BUILDING ADDITION FINISHED SUBGRADE
> 24 INCHES BELOW BUILDING ADDITION FINISHED SUBGRADE
> 24 INCHES BELOW BUILDING ADDITION FINISHED SUBGRADE
ALL LOCATIONS AND ELEVATIONS
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8. SELECT FILL SHALL BE PLACED IN NINE (9) INCH LOOSE LIFTS WITH HEAVY, SELF-PROPELLED COMPACTION EQUIPMENT AND SIX (6) INCH LOOSE LIFTS WITH HAND-GUIDED EQUIPMENT AND COMPACTED TO BETWEEN 98 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE AS OUTLINED BELOW. PROVIDE A MINIMUM OF (4) FIELD DENSITY TESTS ON EACH LIFT OF SELECT FILL

ACCEPTABLE MOISTURE CONTENT
CENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT VALUE RD PROCTOR TEST AT TIME OF PLACEMENT AND COMPACTION
CENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT VALUE RD PROCTOR TEST AT TIME OF PLACEMENT AND COMPACTION
M MOISTURE CONTENT VALUE AS BY STANDARD PROCTOR TEST AT TIME OF PLACEMENT AND COMPACTION
CENTAGE POINTS BELOW OPTIMUM MOISTURE CONTENT VALUE RD PROCTOR TEST AT TIME OF PLACEMENT AND COMPACTION
WORKABLE MOISTURE LEVELS

9. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER DAY.

- 10. CONTRACTOR SHALL MAINTAIN A CLEAN EXCAVATION THAT IS FREE OF WATER 100 PERCENT OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL
- 11. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING PAD DURING BUILDING PAD INSTALLATION AND WHEN THE BUILDING PAD AND BUILDING ARE COMPLETED.
- 12. PLUMBING AND UTILITY TRENCHES WITHIN THE BUILDING PAD SHALL HAVE PIPING BEDDED ON 6" MINIMUM OF CEMENT STABILIZED SAND WITH 4" MINIMUM ALL AROUND. BACKFILL IN UTILITY TRENCHES SHALL CONSIST OF COMPACTED SELECT FILL. PROVIDE A BENTONITE PLUG FOR THE FULL DEPTH AND WIDTH OF THE UTILITY TRENCH TO A MINIMUM OF 1'-0" ABOVE THE BOTTOM OF THE FOUNDATION AT THE EXTERIOR FACE OF BUILDING FOUNDATIONS WHERE UTILITY TRENCHES ENTER THE BUILDING.
- 13. PROVIDE A MINIMUM SIX (6) INCH CLAY CAP FOR A MINIMUM OF 5'-0" AROUND THE PERIMETER OF THE BUILDING. THE CAP SHALL EXTEND AS REQUIRED TO COVER THE LIMITS OF THE EXCAVATION AND SELECT FILL BUILDING PAD MATERIALS.

CONCRETE

- ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT WHERE NOTED. NO. 3 BARS SHALL CONFORM TO ASTM A615, GRADE 40. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GR 70.
- 2. ALL WELDED WIRE FABRIC SHALL BE SMOOTH WIRE FABRIC CONFORMING TO ASTM A1064, AND SHALL BE FURNISHED IN FLAT SHEETS ONLY. ROLLED WIRE FABRIC WILL BE REJECTED. 3. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE SAND AND CRUSHED CARBONATE AGGREGATE CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT, FLYASH CONFORMING TO ASTM C618, CLASS 'C' UP TO 20 PERCENT REPLACEMENT BY VOLUME AND THE FOLLOWING DESIGNATED
- COMPRESSIVE STRENGTH (f'c) IN 28 DAYS: FOOTINGS ------ 4000 PSI (w/c = 0.50 MAX)
 - SLABS ON GRADE ------ 4000 PSI (w/c = 0.50 MAX) ALL OTHER CONCRETE ---- 4000 PSI (w/c = 0.50 MAX)
 - CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.
- 4. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS; SEE SEC. 20.5 ACI 318, LATEST EDITION FOR CONDITIONS NOT NOTED, PROVIDE CHAIR SUPPORTS (AZTEC CASTLE CHAIR, WHC SERIES 'B' OR EQUAL) TO ADEQUATELY SUPPORT BARS FOR PROPER CLEARANCE AS RECOMMENDED BY THE AMERICAN CONCRETE INSTITUTE AND THE CONCRETE REINFORCING STEEL INSTITUTE. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT 45-INCH MAXIMUM INTERVALS OR EVERY THIRD BAR. FOOTINGS ---- 3 IN.
 - GRADE BEAMS ---- 3 IN. BOT., 2 IN. SIDE (3" EARTH FORMED), 2 IN. TOP SLAB ON GRADE ---- 1 IN. TOP
- 5. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315, LATEST EDITION. ALL HOOKED BARS SHOWN IN DETAILS SHALL HAVE STANDARD HOOKS UNLESS NOTED OTHERWISE.
- 6. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301, LATEST EDITION.
- 7. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE NOTED. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.
- 8. REINFORCING BARS SHALL NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. 9. CONTINUOUS BOTTOM REINFORCING BARS SHALL BE SPLICED AT SUPPORTS AND CONTINUOUS
- TOP REINFORCING BARS SHALL BE SPLICED AT MID-SPAN, UNO. 10. ALL CONTINUOUS REINFORCEMENT SHALL HAVE CLASS B LAP AT SPLICES. PROVIDE (1)-#6 X 6'-0" TOP AND BOTTOM (TWO 36" LEGS WITH 90 DEGREE BEND) AT EACH FACE OF GRADE BEAMS AT
- CORNERS AND INTERSECTIONS, AND AT 18" ON CENTER VERTICALLY AT WALLS. 11. CONDUITS ARE NOT ALLOWED IN SLABS, BEAMS, WALLS OR COLUMNS. ALL CONDUITS SHALL BE SUSPENDED FROM OR ATTACHED TO THE CONCRETE STRUCTURE.
- 12, ALL BASE PLATES AND ANCHOR RODS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR RODS SHALL BE FABRICATED FROM FULL BODIED STEEL RODS CONFORMING TO ASTM F1554 GR.36, WASHERS CONFORMING TO ASTM F844 AND NUTS CONFORMING TO ASTM A194 OR A563 AND HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.
- 13. PROVIDE (1)-#5 X 4'-0" AT RE-ENTRANT CORNERS AND AROUND RECTANGULAR HOLES IN SLABS UNLESS NOTED OTHERWISE. PLACE BAR DIAGONAL TO CORNER WITH 1" CLEARANCE FROM TOP AND THE SIDE OF THE SLAB AT THE CORNER.
- 14. WHERE FRESH CONCRETE IS DEPOSITED AGAINST HARDENED CONCRETE (GREATER THAN 8 HOURS OLD), CLEAN EXISTING SURFACE OF LAITANCE AND FOREIGN MATERIAL AND DAMPEN THE EXISTING SURFACE. IF REQUIRED, ROUGHEN EXISTING CONCRETE TO 1/4" AMPLITUDE.
- 15. SAW CUT JOINTS OR KEYED CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL BE SPACED TO DIVIDE THE SLAB INTO PANELS NOT TO EXCEED 225 SQUARE FEET. THE LONGER DIMENSION OF EACH PANEL SHALL NOT EXCEED THE SHORTER DIMENSION BY MORE THAN 20%. JOINTS SHALL BE LOCATED AT COLUMN CENTERLINES WHERE POSSIBLE. CONTRACTOR SHALL SUBMIT JOINT LAYOUT TO ARCHITECT FOR APPROVAL.

FOUNDATIONS

- 1. PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH A 15 MIL WATER VAPOR BARRIER MEETING THE REQUIREMENTS OF ASTM E 1745 (LATEST EDITION), CLASS A OR BETTER WITH MAXIMUM WATER PERMEANCE OF 0.1 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE WATER VAPOR BARRIER SHALL BE INSTALLED AND LAPPED AND TAPED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 1643 (LATEST EDITION). PENETRATIONS SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- 2. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A FOUNDATION DESIGN SPECIFIED IN THE SOIL REPORT COMPLETED BY TERRACON CONSULTANTS, INC., REPORT NO. 01215004, DATED MAY 21, 2021. THE RECOMMENDATIONS CONTAINED IN THE SOIL REPORT SHALL NOT SUPERCEDE THE REQUIREMENTS SHOWN ON THE DESIGN DRAWINGS OR IN THE SPECIFICATIONS WHEN THE REQUIREMENTS SHOWN IN THE DRAWINGS ARE GREATER THAN THOSE SHOWN IN THE GEOTECHNICAL REPORT. THE CONTRACTOR IS REQUIRED TO SECURE A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND HAVE A COPY ON THE JOB SITE AT ALL TIMES FOR THEIR USE AND REFERENCE.
- 3. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON SELECT FILL MATERIAL (PER EARTHWORK GENERAL NOTE #7) BENEATH THE FLOOR SLAB.
- 4. ALL BACKFILL FOR BURIED PIPES AND CONDUIT WITHIN THE BUILDING PAD AND EXTENDING OUT MINIMUM 5'-0" BEYOND THE BUILDING SHALL BE BACKFILLED WITH SELECT FILL BACKFILL. DO NOT USE SAND BACKFILL. A BENTONITE PLUG SHALL BE PROVIDED FOR THE FULL DEPTH AND WIDTH OF ALL UTILITY TRENCHES TO A MINIMUM OF 1'-0" ABOVE THE BOTTOM OF THE FOUNDATION AT THE EXTERIOR FACE OF THE BUILDING FOUNDATION.
- 5. CONDUITS SHALL NOT BE PLACED IN THE CONCRETE SLAB. CONDUITS SHALL BE PLACED IN THE SELECT FILL MATERIAL BENEATH THE VAPOR BARRIER. ALL PENETRATIONS OF THE VAPOR RETARDER SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- 6. FOUNDATION WALL BACKFILL SHALL NOT BE UNBALANCED BY MORE THAN TWO (2) FEET ON EITHER SIDE AT ANY TIME. BASEMENT WALL AND RESTRAINED RETAINING WALL BACKFILL SHALL NOT BE PLACED UNLESS THE WALL IS ADEQUATELY BRACED. RETAINING WALL AND BASEMENT WALL BACKFILL SHALL BE FREE DRAINING GRANULAR BACKFILL ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
- 7. CONTRACTOR SHALL HAND TAMP BOTTOM OF EXCAVATIONS TO A HARD SURFACE BEFORE PLACING REINFORCING STEEL.
- 8. FOUNDATION CONTRACTOR TO ENSURE PROPER ANCHOR BOLT PROJECTION AND THAT ANCHOR BOLTS ARE HELD SECURELY IN POSITION PRIOR TO CONCRETE PLACEMENT. STRUCTURAL STEEL COLUMN ANCHOR BOLTS SHALL BE SET WITH A TEMPLATE
- 9. SOIL BEARING TESTS SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER PRIOR TO INSTALLING FOOTINGS TO ENSURE DESIGN ALLOWABLE BEARING VALUES ARE MET. IF ACTUAL SITE CONDITIONS DO NOT SATISFY THESE REQUIREMENTS, COORDINATE ADJUSTMENTS WITH ARCHITECT/ENGINEER/GEOTECHNICAL ENGINEER.

10. ALL FOOTINGS SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.

STRUCTURAL STEEL

- REINFORCING BARS SHALL COMPLY TO THE AMERICAN WELDING SOCIETY AWS D.1.4. SHORT CIRCUIT TRANSFER FOR THE GAS METAL ARC WELDING PROCESS IS NOT PERMITTED.
- LBS AT -20 DEGREES FAHRENHEIT.
- INDICATED IN DETAILS. SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.
- 7. TYPICAL CONNECTIONS ARE INDICATED ON THE DRAWINGS. 8. THE DESIGN OF ALL STEEL CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE
- OR BOLTED AND THAT FIELD CONNECTIONS BE BOLTED, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- ON ONLY ONE SIDE OF A GIRDER.
- BEAM REACTIONS FOR COMPOSITE BEAMS SHALL HAVE THE STANDARD AISC CAPACITY INCREASED BY 35 PERCENT.
- WELDED ALL AROUND.
- ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.
- APPROVAL OF THE STRUCTURAL ENGINEER. SACRIFICIAL SPLINES. HEX NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM
- TO ASTM F436. MEMBERS AND ASSEMBLIES.
- THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED.
- PUDDLE WELDS TO SUPPORTING MEMBERS AT 1'-0" ON CENTER AT END LAPS AND AT
- 8" ON CENTER.
- WELDED WIRE FABRIC LAPPED ONE MESH AT SPLICES.
- WELDED WIRE FABRIC LAPPED ONE MESH AT SPLICES.
- WIDTH.
- BE GROUND SMOOTH AND TOUCHED UP WITH ZINC RICH PAINT.

FIRE PROTECTION ENGINEER POOLE FIRE PROTECTION, INC. 19910 WEST 161ST STREET OLATHE, KANSAS 66062 (913) 829-8690 PHYSCIAL SECURITY

FORCE PROTECT 3210 GULF BLVD, UNIT 304 BELLEAIR, FL 33786 (502) 836-4232

ARCHITECT:

DESIGN

SPUR DESIGN, LLC 312 SW 25TH STREET Oklahoma City, OK 73109 (405) 842-6100

KS ARCH REG. NO. A-930, EXP. 12/31/2021 KS ENGR REG. NO. E-2586, EXP. 12/31/2021



11. FOOTINGS SHALL BE POURED IMMEDIATELY UPON COMPLETION OF EXCAVATION (I.E., NOT ALLOWED TO REMAIN OPEN) AND CLEANING OF FOOTING BEARING SURFACE. ALL SPOILS FROM THE FOOTING EXCAVATIONS SHALL BE REMOVED FROM THE BUILDING PAD.

1. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO LOAD RESISTANCE FACTOR DESIGN (LRFD) ACCORDING TO THE LATEST AISC SPECIFICATION. 2. ALL WELDING SHALL CONFORM TO THE STANDARDS OF THE LATEST EDITION OF THE STEEL CONSTRUCTION MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STRUCTURAL WELDING CODE-STEEL. WELDING OF

3. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX. ELECTRODES FOR MOMENT CONNECTIONS SHALL BE CLASS E7018 WITH A CHARPY TOUGHNESS OF AT LEAST 20 FT-

4. ALL STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A992, AND ALL ANGLES, BARS, CHANNELS AND PLATES SHALL CONFORM TO ASTM A36. ALL SQUARE AND RECTANGULAR TUBE (Fy 46KSI) SHALL CONFORM TO ASTM A500 GRADE B AND ROUND PIPES (Fy 36KSI) SHALL CONFORM TO ASTM A53 GR B. ALL COLD-FORMED GIRTS AND PURLINS SHALL CONFORM TO ASTM A570M GR. 55. 5. HEADED ANCHOR RODS: ASTM F1554 GRADE 36 OR GRADE 55 ANCHOR AND HEAVY HEX NUT, AS

6. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF AISC. DOUBLE CONNECTIONS THROUGH COLUMN WEBS, BEAMS THAT FRAME OVER THE TOP OF COLUMNS, AND BEAM TO BEAM CONNECTIONS SHALL HAVE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO

PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED, EMPLOYED BY THE FABRICATOR. CALCULATIONS SEALED BY THE FABRICATOR'S PROFESSIONAL ENGINEER MUST BE SUBMITTED IF REQUESTED. 9. IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS THAT SHOP CONNECTIONS BE WELDED

10. ALL TYPICAL BEAM SIMPLE CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE OR SINGLE ANGLE FRAMED BEAM CONNECTIONS. SHEAR TAB CONNECTIONS MAY BE USED AT LOCATIONS WHERE DOUBLE ANGLE CONNECTIONS ARE NOT POSSIBLE. SEATED BEAM CONNECTIONS SHALL NOT BE USED UNLESS INDICATED ON THE DRAWINGS. PROVIDE FULL DEPTH SHEAR TAB IF BEAM FRAMES

11. BEAM REACTIONS SHALL BE AS FOLLOWS UNLESS NOTED ON DRAWINGS: BEAM REACTIONS USED SHALL BE ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD GIVEN IN TABLE 3-6 THROUGH 3-9 IN PART 3 OF THE AISC STEEL CONSTRUCTION MANUAL. ADD TO THE REACTION LISTED ABOVE, ANY LOADS OR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM WITHIN THREE FEET OF BEAM END AND THE VERTICAL COMPONENTS OF FORCES IN BRACE MEMBERS FRAMING INTO THE BEAMS.

12. ALL MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE MINIMUM SIZE FILLET ALL AROUND IN ACCORDANCE WITH AISC 360. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED. COLUMN BASE PLATES, CAP PLATES AND STIFFENER PLATES SHALL BE

13. PROVIDE ALL NECESSARY HOLES IN MISCELLANEOUS STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF NON-STRUCTURAL ITEMS (IE: HOLES FOR WINDOW HEAD ANCHORS), SEE

14. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR 15. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO ASTM F3125, GRADE A325. TYPE 1 EXCEPT WHERE NOTED OTHERWISE, MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER UNLESS NOTED OTHERWISE. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F3125, GRADE F1852 WITH HARDENED WASHERS UNDER THE NUT AND

16. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 7-15 AND 7-16 OF THE FIFTEENTH EDITION OF THE AISC STEEL CONSTRUCTION MANUAL. ALL STEEL MEMBERS AND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL

17. ALL GROUT USED UNDER STEEL COLUMN BASE PLATES SHALL BE OF NON-SHRINKABLE TYPE CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD-C-621 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI. 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS

18. ROOF SYSTEM OVER COLD FORMED METAL JOISTS SHALL BE RIGID INSULATION BOARD ON 1 1/2" DEEP, 20 GAGE, TYPE B GALVANIZED (CONFORMING TO ASTM A924-94, WITH MINIMUM COATING CLASS OF G90 AS DEFINED IN ASTM A653-94) DECK FROM COLD ROLLED STEEL CONFORMING TO ASTM A653-99 OR ASTM A611 WITH Fy=50 KSI, AND HAVING A MINIMUM MOMENT OF INERTIA OF 0.217 INCH TO THE FOURTH PER FOOT OF WIDTH. SIDELAPS SHALL BE FASTENED WITH #10 TEKS AT THIRD POINTS OR 1'-0" ON CENTER MAX. (3 MIN. PER SPAN). DECK ATTACHMENT SHALL BE HILTI X-EDNK22 THQ12 (1/8"-1/4" INCLUSIVE), X-EDN19 THQ12 (3/16"-3/8" INCLUSIVE), OR X-ENP19 (1/4" OR THICKER) AS RECOMMENDED BY THE MANUFACTURER OR WELD DECK THROUGH 5/8" DIAMETER INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS OR DECK SUPPORT ANGLES AND FOR A 10'-0" SQUARE AREA AT CORNERS WELD DECK TO ALL SUPPORTS AT 6" ON CENTER.

19. ROOF DECK SHALL BE 3" DEEP, 18 GAGE, TYPE 3N DECK CONFORMING TO ASTM A653 WITH Fy=40 KSI. DECK SHALL BE GALVANIZED, CONFORMING TO ASTM A924, WITH A MINIMUM ZINC COATING CLASS OF G90 (LW FILL) OR G60 (RIGID BOARD). DECK SHALL HAVE A MINIMUM MOMENT OF INERTIA OF 1.123 INCH TO THE FOURTH PER FOOT OF WIDTH. FASTEN SIDELAPS WITH #10 TEK SCRES; ONE AT MIDSPAN OR 3'-0" ON CENTER MAX. WELD DECK THROUGH 5/8" DIAMETER PUDDLE WELDS (OR EQUIVALENT SCREWS) TO EACH STRUCTURAL SUPPORTING MEMBER AT 1'-4" ON CENTER AT END LAPS AND AT INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS AND DECK SUPPORT ANGLES, AND FOR A 10'-0" SQUARE AREA AT ROOF CORNERS, THE DECK SHALL BE WELDED TO ALL SUPPORTS AT

20. FLOOR DECK AT THE FIRST FLOOR SHALL BE CORRUGATED DECK CONFORMING TO ASTM A653 WITH Fy=60 KSI. DECK SHALL BE GALVANIZED, CONFORMING TO ASTM A924, WITH A MINIMUM ZINC COATING CLASS OF G60. DECK SHALL BE 20 GAGE METAL FORMS, 1 1/2" DEEP AND SHALL HAVE A MINIMUM MOMENT OF INERTIA OF 0.217 INCH TO THE FOURTH PER FOOT OF WIDTH. WELD DECK THROUGH WELD WASHERS TO EACH STRUCTURAL SUPPORTING MEMBER AT EVERY OTHER CORRUGATION AT END LAPS, AND 2'-0" ON CENTER AT INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS AND DECK SUPPORT ANGLES, THE DECK SHALL BE WELDED TO ALL SUPPORTS AT 6" ON CENTER. THE SLAB SHALL BE 5 1/2" NORMAL WEIGHT CONCRETE REINFORCED WITH 4x4-W2.9xW2.9

21. FLOOR DECK AT THE PENTHOUSE SHALL BE CORRUGATED DECK CONFORMING TO ASTM A653 WITH Fy=60 KSI. DECK SHALL BE GALVANIZED, CONFORMING TO ASTM A924, WITH A MINIMUM ZINC COATING CLASS OF G60. DECK SHALL BE 20 GAGE METAL FORMS, 5/8" DEEP AND SHALL HAVE A MINIMUM MOMENT OF INERTIA OF 0.023 INCH TO THE FOURTH PER FOOT OF WIDTH. WELD DECK THROUGH WELD WASHERS TO EACH STRUCTURAL SUPPORTING MEMBER AT EVERY OTHER CORRUGATION AT END LAPS, AND 2'-0" ON CENTER AT INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS AND DECK SUPPORT ANGLES, THE DECK SHALL BE WELDED TO ALL SUPPORTS AT 6" ON CENTER. THE SLAB SHALL BE 3 1/2" NORMAL WEIGHT CONCRETE REINFORCED WITH 4x4-W2.9xW2.9

22. STEEL DECK SHALL ALWAYS BE INSTALLED WITH DIRECTION OF FLUTES PERPENDICULAR TO STEEL FRAMING MEMBERS. DECK SHALL BE CUT TO INSURE A MINIMUM OF THREE SPANS PER DECK

23. ALL STRUCTURAL STEEL WHICH IS OUTSIDE THE BUILDING ENVELOPE SHALL BE HOT DIPPED GALVANIZED. ZINC COATING SHALL MEET THE REQUIREMENTS OF ASTM 123-73, WITH A MINIMUM COATING GRADE OF GR60 AND SHALL BE APPLIED AFTER FABRICATION. ALL FIELD WELDS SHALL

24. STEEL COLUMNS SHALL BE SPLICED A MINIMUM OF 4'-0" ABOVE THE FINISH FLOOR IN STORIES WHERE SPLICES OCCUR. COLUMNS SHALL BE SPLICED EVERY TWO LEVELS. COLUMNS SHALL HAVE HOLES FOR ³/₄" DIAMETER SAFETY CABLES OR PLATES WITH A HOLE WELDED TO THE COLUMN. PROVIDE AN L3x3x1/4" DECK SUPPORT ANGLE ON ALL SIDES OF THE COLUMN.

- 25. THE GENERAL CONTRACTOR AND THEIR SUBCONTRACTOR'S SHALL COMPLY TO OSHA 29 CFR 1926 SUBPART R, SAFETY STANDARDS FOR STEEL ERECTION.
- 26. AS SCOPE AND PERFORMANCE DOCUMENTS, THE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE OR DESCRIBE ALL OF THE WORK REQUIRED FOR THE PERFORMANCE AND COMPLETION OF THIS WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL MISCELLANEOUS METAL ITEMS INDICATED, DESCRIBED, OR IMPLIED ON THE STRUCTURAL AND/OR THE ARCHITECTURAL DRAWINGS. MISCELLANEOUS STEEL ITEMS, WITHIN AN ASSEMBLY AND NOT ATTACHED TO THE STRUCTURE, ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS WHETHER THEY ARE SHOWN OR NOT SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS. SUCH ASSEMBLIES INCLUDE BUT ARE NOT LIMITED TO, EXTERIOR AND INTERIOR WALL ASSEMBLIES, CEILING ASSEMBLIES, PARTITION ASSEMBLIES, SHELF AND CABINET ASSEMBLIES AND ALL OTHER SIMILAR ASSEMBLIES. ANY MISCELLANEOUS METAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN

ON STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF L4x4x1/2", C7x9.8, 3/8" PLATE OR HSS4x4x3/8" UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER. COLD ROLLED STEEL SPECIFICATIONS (SSMA)

- 1. ALL STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS." LATEST EDITION.
- 2. ALL STUDS AND/OR JOISTS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE, AND SPACING SHOWN ON THE DRAWINGS. 3. ALL STUDS, RUNNERS, JOISTS, AND TRUSSES SHALL BE FORMED FROM GALVANIZED STEEL,
- CORRESPONDING TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 50 KSI FOR 0.097, 0.068, 0.054 THICK MEMBERS AND 33 KSI FOR 0.043 AND 0.033 THICK MEMBERS AND FLAT STRAP BRACING.
- 4. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY BRACING FOR COLD-FORMED TRUSSES
- 5. PLANS AND DETAILS FOR FRAMING ARE SCHEMATIC REPRESENTATION OF THE FRAMING AT VARIOUS LOCATIONS AND CONDITIONS ON THIS PROJECT. THE CONTRACTOR SHALL NOT SCALE OR COUNT FRAMING MEMBERS SHOWN AS A SUBSTITUTE FOR SHOP DRAWINGS AND AN ACCURATE QUANTITY TAKEOFF. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FRAMING NECESSARY TO COMPLETELY FRAME THE PROJECT AND PROVIDE FOR ALL CONDITIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 6. PROVIDE TRIPLE STUDS AT ALL CORNERS AND AT ALL BEAM BEARINGS THROUGH TO THE FOUNDATION UNLESS NOTED OTHERWISE.
- 7. PRIOR TO FABRICATION THE CONTRACTOR SHALL SUBMIT ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR APPROVAL.
- 8. PREFABRICATED PANELS SHALL BE SQUARE, WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING. HANDLING AND LIFTING SHALL BE DONE IN A MANNER SO AS NOT TO CAUSE DISTORTION IN ANY MANNER.
- 9. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
- 10. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THAT THEIR ENDS ARE POSITIONED AGAINST THE INSIDE OF TRACK WEB PRIOR TO FASTENING.
- 11. FASTENING OF COMPONENTS SHALL BE SELF-DRILLING SCREWS OR WELDS. SCREWS OR WELDS SHALL BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH
- 12. RUNNERS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE, PROPOSED CONNECTION TO BE SUBMITTED FOR APPROVAL.
- 13. ABUTTING LENGTHS OF TRACK SHALL EACH BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, BUTT-WELDED, OR SPLICED.
- 14. STUDS SHALL BE PLUMB, ALIGNED AND SECURELY ATTACHED TO FLANGES OF BOTH UPPER AND LOWER TRACKS.
- 15, JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADERS, AND WHERE NEEDED TO FURNISH SUPPORT, AND SHALL BE SECURELY ATTACHED TO CONNECTING MEMBERS.
- 16. RESISTANCE TO MINOR AXIS BENDING AND ROTATION SHALL BE PROVIDED BY GYPSUM BOARD OR GYPSUM SHEATHING AND HORIZONTAL STRAP AND BLOCKING OR COLD-ROLLED CHANNEL BRACING AT THIRD POINTS.
- 17. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED. 18. PROVIDE A MINIMUM OF (3) #12 SCREWS FOR ALL STUD TO STUD CONNECTIONS.
- 19. BRIDGING SHALL BE INSTALLED IMMEDIATELY AFTER JOISTS ARE ERECTED AND BEFORE CONSTRUCTION LOADS ARE APPLIED TO PREVENT FLANGES IN COMPRESSION. BRIDGING SHALL CONSIST OF SOLID BLOCKING PLUS STRAP BRACING OR 1 1/2" COLD-ROLLED CHANNELS SCREW ATTACHED OR WELDED TO BOTTOM JOIST FLANGES. BRIDGING SHALL BE INSTALLED AT MID SPAN FOR SPANS 16'-0" OR LESS AND AT 6'-0" O.C. MAX FOR SPANS GREATER THAN 16'-0" U.N.O. SOLID BLOCKING, OF FIELD-CUT TRACK OR JOIST SECTION, SHALL BE PROVIDED, WELDED, OR SCREW-ATTACHED BETWEEN OUTER JOISTS, OVER ALL INTERIOR SUPPORTS AND ADJACENT TO OPENINGS AT 10'-0" O.C. MAX. COLD-ROLLED CHANNELS OR STRAP BRACING OF 1 1/2 X 33 MIL (0.033") CORROSION-RESISTANT STEEL SHALL BE SCREW-ATTACHED TO BOTTOM JOIST FLANGE BETWEEN
- SOLID BLOCKING. REFERENCE MANUFACTURER INSTALLATION INSTRUCTIONS. 20. PROVIDE HORIZONTAL BRIDGING IN ALL STUD SYSTEMS AT FOUR FEET ON CENTER VERTICALLY FOR AXIALLY LOADED STUDS AND AT SIX FEET ON CENTER FOR NON-LOAD BEARING STUDS UNLESS NOTED OTHERWISE. WELD AT EACH STUD INTERSECTION.
- 21. SSMA STEEL FRAMING CARRIES A FOUR PART CODE THAT IDENTIFIES THE WEB SIZE, STYLE, FLANGE WIDTH, AND STEEL THICKNESS:

WEB S	362 SIZE: _	S L _{STYLE}	162-43 L FLANGE WIDTH	STEEL THICKNESS (MIL)
250-2 1/2" 350-3 1/2" 362-3 5/8" 400-4" 550-5 1/2"	600-6" 800-8" 1000-10" 1200-12" 1400-14"	S-STUD J-JOIST T-TRACK	125-1 1/4" 137-1 3/8" 162-1 5/8" 200-2" 250-2 1/2"	33 43 54 68 97

- 1. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C90, TYPE 1 AND THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
- 2. ALL CONCRETE MASONRY SHALL HAVE LIGHTWEIGHT MASONRY UNITS WITH A DRY DENSITY OF NOT MORE THAN 105 POUNDS PER CUBIC FOOT.
- 3. ALL MASONRY UNITS SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 2500 PSI AND A MINIMUM NET TENSILE STRENGTH OF NOT LESS THAN 125 PSI, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
- 4. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.
- 5. ALL MASONRY UNITS SHALL HAVE A MAXIMUM LINEAR SHRINKAGE OF .065 OF 1% FROM THE SATURATED TO THE OVEN DRY CONDITION, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
- 6. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO OF 1 PART PORTLAND CEMENT, 1/2 PART MINIMUM TO 1/2 PART MAXIMUM LIME PUTTY OR HYDRATED LIME, DAMP LOOSE SAND NOT LESS THAN 2-1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENT AND LIME USED, AND SHALL CONFORM TO ASTM C270, TYPE 'S'.

7. GROUT FOR POURING SHALL BE OF FLUID CONSISTENCY AND MIXED IN THE RATIO BY VOLUMES, 1 PART PORTLAND CEMENT, 2 ¼ PARTS MINIMUM TO 3 PARTS MAXIMUM DAMP LOOSE SAND, 1 PART MINIMUM TO 2 PARTS MAXIMUM PEA GRAVEL, AND 0 TO 1/10 PART MAXIMUM HYDRATED LIME. MIX GROUT HEIGHT SHALL BE 4'-0".

- APPROVAL.
- 10. ALL CELLS WITH REINFORCING BARS SHALL BE GROUTED SOLID.
- 11. ALL CELLS SHOWN TO HAVE DRILLED EXPANSION ANCHORS, EMBEDDED HEADED STUDS OR OTHER EMBEDDED ANCHORS SHALL BE GROUTED SOLID.
- SIDE RODS AND 9 GAGE FOR TRUSS RODS.
- BRICK.
- PLACE OF BOND BEAM BLOCKS.
- BEAMS AT 16" ON CENTER HORIZONTALLY OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE DRAWINGS. MASONRY TIES TO WALL STUDS SHALL BE A HECKMANN NO. 316 TRIANGULAR TIE NEOPRENE WASHER.
- ON CENTER AND FOUR (4) FEET MAXIMUM FROM CORNERS. COORDINATE THE LOCATION OF 16" ON CENTER VERTICALLY AT CONCRETE MASONRY UNITS OR APPROVED EQUAL.
- UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- NOTED OTHERWISE ON THE DRAWINGS.
- 19. PROVIDE HOHMANN AND BARNARD RB-8 (OR EQUAL) REBAR POSITIONERS AT EVERY THIRD COURSE AND AT SPLICE LOCATIONS.
- EDITION AND ACI 530, LATEST EDITION.

FRP (FIBER REINFORCED POLYMER) REINFORCEMENT STRENGTHENING ENGINEER WORKING FOR THE REPAIR CONTRACTOR.

- REQUIREMENTS:
- PROPERTIES IS NOT ALLOWED):

4.3.1. TENSILE STRENGTH: 155 KSI 4.3.2. MODULUS OF ELASTICITY: 14,000 KSI 4.3.3. ELONGATION AT BREAK: 1.1%

5. REQUIRED SUBMITTALS FOR FRP:

- 5.1. PRODUCT DATA SHEETS 5.2. CURRENT ICC-ES LISTING REPORT
- 5.3. QUALITY CONTROL INSPECTION AND TESTING PROGRAM
- THE MANUFACTURER'S FRP COMPOSITE SYSTEM.
- PERFORMED.
- 6. INSTALL FRP SYSTEM FOLLOWING THE PROCEDURES BY THE FRP MANUFACTURER.
- FABRIC SHALL NOT BE PERMITTED.
- THE MANUFACTURER OF THE FRP SYSTEM.
- SOLUTIONS AT THE COMPLETION OF THE PROJECT.
- 10. CONDUCT DIRECT TENSION ADHESION TESTING PER ASTM D7522 or ASTM D4541. ON THE PROJECT.
- PROJECT
- 14. THE FRP DESIGN DRAWINGS SHALL INDICATE THE FOLLOWING:
- (NSM) BAR. 14.3. NUMBER OF PLIES AND BARS AN
- 14.4. LOCATION OF SPLICES AND LAP 14.5. MATERIAL PROPERTIES OF THE

Drawing Title STRUCTURAL GENERAL NOTES	S Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS		Project Number 589-704 Building Number 26		
VA Health Care System Approval:	Location 5500 EAST KELI WICHITA, KANS	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		Drawing Number	
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 15 OF 190	

ND THE SEQUENCE OF	INSTALLATION.
LENGTH.	
FRP LAMINATES.	
FULL	Y SPRINKLERED
NNº/	
	Veterans
	Health
	Administration
	VA U.S. Department of Veterans Affairs

14.1. LOCATION OF THE FRP SYSTEM RELATIVE TO THE EXISTING STRUCTURE. 14.2. DIMENSIONS AND ORIENTATION OF EACH PLY, LAMINATE, OR NEAR-SURFACE-MOUNTED

13. PLANS SHOWING FRP LOCATIONS ARE SCHEMATIC REPRESENTATIONS OF THE FRP SYSTEM. THIS DOES NOT REPRESENT THE ACTUAL AND/OR FINAL LOCATION OF THE FRP SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FRP STRENGTHENING TO COMPLETE THE

11. PROVIDE LABORATORY TESTING PER ASTM D3039 FOR EACH BATCH OF FIBER AND EPOXY USED 12. FRP STRENGTHENED ELEMENTS SHALL BE FIREPROOFED TO ACHIEVE A 2-HOUR RATING.

FRP LAYOUT VARIATIONS TO ADDRESS FIELD CONDITIONS SHALL BE COORDINATED BY GENERAL CONTRACTOR WITH THE FRP DESIGNER TO ENSURE CONFORMANCE WITH THE DESIGN INTENT. SUBMIT AS-BUILT DRAWINGS INCLUDING FINAL LAYOUT OF THE STRENGTHENING

7. FRP FABRIC SHALL BE SATURATED USING A SATURATING MACHINE. MANUAL SATURATION OF FRP 8. FRP SYSTEMS SHALL BE INSTALLED BY AN EXPERIENCED AND TRAINED APPLICATOR CERTIFIED BY

WITH THE MANUFACTURER'S FRP COMPOSITE SYSTEM IN THE PAST 2 YEARS. THE LIST SHOULD INCLUDE PROJECT NAME, DATE OF WORK, AMOUNT OF FRP AND TYPE OF WORK

5.4. A LIST OF 15 FRP STRENGTHENING PROJECTS DESIGNED BY THE FRP ENGINEER WITH 5.5. A LIST OF 15 FRP STRENGTHENING PROJECTS COMPLETED BY THE FRP CONTRACTOR

4.1. DESIGN OF THE FRP REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 440.2R-17. 4.2. MINIMUM FRP DESIGN PROPERTIES (LAMINATE PROPERTIES – USE OF DRY FIBER

4. DESIGN OF FRP STRENGTHENING SHALL BE BASED ON THE FOLLOWING PERFORMANCE

RESULTING FROM THE ADDITIONAL LOADING INDICATED ON THE STRUCTURAL DOCUMENTS. 3. SUBMIT FOR REVIEW AND APPROVAL DESIGN DETAILS AND CALCULATIONS PREPARED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.

2. FRP STRENGTHENING SHALL SATISFY THE DESIGN REQUIREMENTS INDICATED ON PROJECT DRAWINGS. THE FRP ENGINEER SHALL PROVIDE RESULTS OF ANALYSIS BASED ON THE SPECIFIED LOADING FOR NEW EQUIPMENT. FRP SHALL BE DESIGNED TO SATISFY THE DESIGN FORCES

1. FIBER REINFORCED POLYMER (FRP) COMPOSITE STRENGTHENING SHALL BE DESIGNED BY A FRP

20. ALL MASONRY DESIGN IS BASED ON CHAPTER 21 OF INTERNATIONAL BUILDING CODE, LATEST

18. PROVIDE A MINIMUM OF #4 AT 48" ON CENTER VERTICAL WALL REINFORCING AND DOWELS IN FULLY GROUTED CELLS AT ALL EXTERIOR AND INTERIOR WALLS UNLESS A GREATER REINFORCING IS SHOWN ON THE PLANS OR IN THE DETAILS. PROVIDE A ½" DIAMETER DEFORMED BAR ANCHORS AT 48" ON CENTER WELDED TO STRUCTURAL MEMBERS SUPPORTING MASONRY ABOVE UNLESS

JOINTS WITH THE ARCHITECT. PROVIDE HECKMANN NO. 351 CONTROL JOINT ANCHORS AT 16" ON CENTER VERTICALLY AT BRICK MASONRY AND HECKMANN NO. 350 CONTROL JOINT ANCHORS AT 17. AT FREE VERTICAL EDGES OF WALLS PROVIDE 1-#5 VERTICAL IN GROUT FILLED END CORE.

WITH A HECKMANN NO. 315-C SCREW ON ANCHOR STRAP OR HECKMANN #77 WING NUT POS-I-TIE ANCHOR SPACED 16" (15" AT KING SIZE BRICK) ON CENTER HORIZONTALLY AND 16" ON CENTER VERTICALLY OR APPROVED EQUAL. AT ALL CORNERS AND INTERSECTIONS PROVIDE TWO VERTICAL ROWS OF ANCHORS SPACED 16" APART AND 16" ON CENTER VERTICALLY. TRIANGULAR TIES SHALL EXTEND ¾" FROM FACE OF MASONRY. ANCHOR STRAPS SHALL BE ATTACHED TO METAL STUDS WITH TWO (2) #10-16x 1 1/2" CADMIUM PLATED HEX HEAD SHEET METAL SCREWS WITH 16. MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT APPROXIMATELY SIXTEEN (16) FEET

FELT OR FLASHING IS PROVIDED TOP AND BOTTOM OF LINTEL ANGLE WHERE ANGLE BEARS ON 14. LINTEL BLOCKS SHALL BE "U" SHAPED UNITS WITH SOLID BOTTOMS AND ARE TO BE USED OVER WINDOW AND DOOR OPENINGS. BOND BEAM BLOCKS SHALL BE OPEN BOTTOM UNITS AND ARE TO BE USED AT THE TOPS OF WALLS AND AT THE MID-HEIGHT OF WALL OR AT 8'-0" ON CENTER VERTICALLY MAXIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS. PROVIDE 2-#4 BARS IN A SOLID GROUTED BOND BEAM UNLESS NOTED OTHERWISE. LINTEL BLOCKS SHALL NOT BE USED IN 15. ALL MASONRY TIES TO BACKUP STRUCTURE SHALL BE HOT DIPPED GALVANIZED. PROVIDE A HECKMANN NO. 315 ANCHOR WITH NO. 316 TRIANGULAR TIE ON COLUMNS AT 16" (15" AT KING SIZE BRICK) ON CENTER VERTICALLY AND A HECKMANN NO. 191 OR 192 ANCHOR ON EACH SIDE ALL

12. HORIZONTAL JOINT REINFORCEMENT SPACED AT 16" O.C. MAX. VERTICALLY SHALL CONFORM TO ASTM A951 WITH A MINIMUM YIELD STRENGTH OF 70,000 PSI AND A MINIMUM SIZE OF 9 GAGE FOR 13. OPENINGS IN MASONRY WALL SHALL HAVE EITHER MASONRY OR STEEL LINTELS AS DETAILED ON THE DRAWINGS. WHEN NO LINTEL IS DETAILED A MINIMUM OF 2-#4 BARS IN A SOLID GROUTED LINTEL BLOCK SHALL BE INSTALLED. THE BARS SHALL EXTEND A MINIMUM OF EIGHT INCHES BEYOND THE EDGE OF THE OPENING AND THE JAMB AT EACH SIDE OF THE OPENING SHALL BE GROUTED SOLID FOR A DISTANCE OF EIGHT INCHES WITH A #5 VERTICAL MINIMUM AT EACH JAMB. LAP BARS 2'-0" MIN. OR 40 BAR DIAMETERS AT SPLICES, INTERSECTIONS AND CORNERS. STEEL LINTELS SHALL BEAR 8" MINIMUM AT EACH END ON FLASHING ABOVE AND BELOW THE ANGLE. VERTICAL CONTROL JOINTS SHALL EXTEND UP FROM THE END OF THE STEEL LINTEL, UNLESS 15#

8. GROUT FOR PUMPING SHALL BE OF FLUID CONSISTENCY AND SHALL HAVE NOT LESS THAN 7 SACKS OF CEMENT IN EACH CUBIC YARD OF GROUT. THE MIX SHALL BE SUBSTITUTED FOR 9. THE COMPRESSIVE STRENGTH OF THE MASONRY (fm) SHALL BE 1900 PSI.

SHALL CONFORM TO ASTM C 476 WITH A 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI. MAXIMUM



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(520) 886-8650

STRUCTURAL TESTING AND INSPECTIONS

SPECIAL INSPECTIONS

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER OF RECORD'S SCOPE OF SERVICES. PER IBC CHAPTER 17, THE OWNER IS RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. PER DIVISION 1 OF THE SPECIFICATIONS, THE OWNER IS REQUIRING THE CONTRACTOR TO INCLUDE THE COST OF THE SERVICES FOR THE SPECIAL INSPECTOR AND TESTING LABORATORY WITHIN THEIR SCOPE OF WORK, BUT ALL REPORTING OF TEST AND INSPECTION RESULTS SHALL BE DELIVERED DIRECTLY TO THE OWNER NOT THE CONTRACTOR. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR APPROVED BY THE BUILDING AUTHORITY OR BY THE ENGINEER OF RECORD. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER IF SPECIAL INSPECTIONS ARE REQUIRED ON THE APPROVED PERMIT DRAWINGS AND FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER PRIOR TO PROCEEDING WITH CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE. THE STRUCTURAL ENGINEER WILL NOT PROVIDE A FINAL LETTER OF COMPLIANCE AFTER THE WORK IS COMPLETE UNLESS THEY HAVE PERFORMED THE SPECIAL INSPECTIONS.

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS

INCLUDED HERE ARE SPECIAL INSPECTIONS REQUIRED FOR THE STRUCTURAL ELEMENTS FOR THIS PROJECT. REFERENCE STATEMENT OF SPECIAL INSPECTIONS BY ARCHITECT AND OTHER CONSULTANTS FOR SPECIAL INSPECTION DETAILS OF NON-STRUCTURAL ITEMS REQUIRED BY IBC AND PROVIDED IN THE SPECIFICATIONS.

PER IBC 1704.2.4, THE STRUCTURAL SPECIAL INSPECTOR SHALL KEEP RECORDS OF ALL STRUCTURAL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE OWNER AND THE STRUCTURAL REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (SRDP). DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE SRDP. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES.

A FINAL REPORT OF SPECIAL INSPECTION DOCUMENTING COMPLETION OF ALL SPECIAL INSPECTIONS. TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND THE SRDP PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND USE.

CONTRACTOR RESPONSIBILITY

PER IBC 1704.4, EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

STRUCTURAL SCHEDULE OF SPECIAL INSPECTIONS

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE OWNER. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED TO THE SPECIAL INSPECTOR FOR THEIR RECORDS.

KEY FOR MINIMUM QUALIFICATION OF INSPECTION AGENTS

WHEN THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OR SPECIAL INSPECTOR OF RECORD DEEMS APPROPRIATE THAT THE INDIVIDUAL PERFORMING THE STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION, LICENSE OR EXPERIENCE AS INDICATED BELOW. SUCH REQUIREMENT SHALL BE LISTED BELOW AND SHALL BE CLEARLY IDENTIFIED WITHIN THE SCHEDULE UNDER THE AGENT QUALIFICATION DESIGNATION.

- PE/SE STRUCTURAL ENGINEER A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF **BUILDING STRUCTURES**
- PE/GE GEOTECHNICAL ENGINEER A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS
- EIT ENGINEER IN TRAINING A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAM
- ETT EXPERIENCED TESTING TECHNICIAN AN EXPERIENCED TESTING TECHNICIAN WITH A MINIMUM OF 5 YEARS EXPERIENCE WITH THE STIPULATED TEST OR INSPECTION AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION

ACI-CFTT CONCRETE FIELD TESTING TECHNICIAN – GRADE 1

- ACI-CCI CONCRETE CONSTRUCTION INSPECTOR ACI-LTT LABORATORY TESTING TECHNICIAN – GRADE 1&2
- ACI-STT STRENGTH TESTING TECHNICIAN AMERICAN WELDING SOCIETY (AWS) CERTIFICATION
- AWS-CWI CERTIFIED WELDING INSPECTOR
- AWS/AISC-SSICERTIFIED STRUCTURAL STEEL INSPECTOR

PERIODIC, CONTINUOUS, OBSERVE, PERFORM, AND DOCUMENT ARE DEFINED AS IN THE SPECIFIC REFERENCE STANDARD.

SPECIAL CASES

PER IBC 1705.1.1, SPECIAL INSPECTIONS AND TESTS SHALL BE REQUIRED FOR PROPOSED WORK THAT IS, IN THE OPINION OF THE BUILDING OFFICIAL, UNUSUAL IN ITS NATURE SUCH AS:

- A. MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN IBC OR IN STANDARDS REFERENCED BY IBC.
- B. UNUSUAL DESIGN APPLICATIONS OF MATERIALS DESCRIBED IN IBC.
- C. CONSTRUCTION MATERIALS AND SYSTEMS THAT ARE ALTERNATIVES TO MATERIALS AND SYSTEMS PRESCRIBED BY THIS CODE.

STRUCTURAL STEEL TESTING

- 1. PER IBC 1705.2, SPECIAL INSPECTIONS AND TESTS OF STEEL CONSTRUCTION SHALL BE PERFORMED.
- 2. CERTIFY WELDERS FOR THE WELD TYPES IN THE PROJECT AND CONDUCT INSPECTIONS AND TESTS AS REQUIRED, AS A MINIMUM, WELDERS SHALL BE AISC CERTIFIED. RECORD TYPES AND LOCATIONS OF DEFECTS FOUND IN WORK. RECORD WORK REQUIRED AND PERFORMED TO CORRECT DEFICIENCIES.
- 3. VISUALLY INSPECT 100% OF ALL FILLET WELDS.
- 4. ALL WELDS THAT FAIL SHALL BE REWELDED AND RETESTED UNTIL THEY PASS THE TEST. TEST TWO ADDITIONAL WELDS AT THE CONTRACTOR'S EXPENSE FOR EVERY WELD FAILURE.
- 5. BOLTS SHALL BE VISUALLY INSPECTED WHEN TWIST-OFF SPLINES ARE USED, OTHERWISE BOLTS SHALL BE SNUG TIGHT.
- 6. WHERE A COLD-FORMED STEEL TRUSS CLEAR SPAN IS 60 FEET OR GREATER. THE SPECIAL INSPECTOR SHALL VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.
- 7. AFTER INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS ARE PERFORMED, THE REPORTS AND CERTIFICATES SHALL BE SUBMITTED BY THE OWNER OR OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.

CONCRETE TESTING

PERFORMED. 2. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW INDICATING CONFORMANCE WITH

1. PER IBC 1705.3, SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION SHALL BE

- ACI 318, LATEST EDITION.
- 3. SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN AT THE POINT OF DISCHARGE AT THE SAME RATE AS NOTED BELOW IN NOTE NUMBER 6.
- 4. AIR CONTENT TESTS CONFORMING TO ASTM C173, VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; SHALL BE TAKEN FOR EACH DAY'S POUR OF EACH TYPE OF AIR-ENTRAINED CONCRETE.
- 5. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN AIR TEMPERATURE IS 40 DEG F (4 DEG C) AND BELOW, WHEN 80 DEG F (27 DEG C) AND ABOVE, AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS IS MADE.
- 6. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
- 7. IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN THE LATEST EDITION OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN THE LATEST EDITION OF ACI
- 8. VERIFY CONCRETE IS BEING CONSOLIDATED IN ACCORDANCE WITH THE RECOMMENDATIONS OF ACI 318 AND ACI 309R, LATEST EDITION.
- 9. VERIFY THAT POST INSTALLED ANCHORS ARE AS SPECIFIED AND THAT ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- 10. PER IBC 1705.5.4. REPORTS OF PRECONSTRUCTION TESTS FOR SHOTCRETE IN ACCORDANCE WITH IBC SECTION 1908.5, SHALL BE SUBMITTED BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.
- 11. SPECIAL INSPECTIONS AND TESTS SHALL NOT BE REQUIRED FOR:
- A. ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE AND THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
- B. CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREES STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE:
- a. THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION
- b. THE FOOTINGS ARE DESIGNED IN ACCORDANCE WITH IBC TABLE 1809.7 c. THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON THE SPECIFIED COMPRESSIVE STRENGTH fc, NOT MORE THAN 2,500 POUNDS PER SQUARE INCH (PSI), REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS OR USED IN THE FOOTING CONSTRUCTION.
- C. NONSTRUCTURAL CONCRETE SLABS SUPPORTED DIRECTLY ON THE GROUND, INCLUDING PRESTRESSED SLABS ON GRADE, WHERE THE EFFECTIVE PRESTRESS IN THE CONCRETE IS LESS THAN 150 PSI.
- D. CONCRETE FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH IBC TABLE 1807.1.6.2.
- E. CONCRETE PATIOS, DRIVEWAYS, AND SIDEWALKS, ON GRADE.

SOIL SPECIAL INSPECTIONS

- . PER IBC 1705.6, SPECIAL INSPECTIONS AND TESTS OF EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD-BEARING REQUIREMENTS SHALL BE PERFORMED.
- 2. DURING FILL PLACEMENT, VERIFY THAT PROPER MATERIALS AND PROCEDURES ARE USED IN

ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.

3. WHERE IBC SECTION 1803 DOES NOT REQUIRE REPORTING OF MATERIALS AND PROCEDURES FOR FILL PLACEMENT, VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D1557.

REINFORCING STEEL INSTALLATION

- 1. DURING THE CAST-IN-PLACE CONCRETE STRUCTURAL MEMBER REINFORCING PLACEMENT OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. INSPECT REINFORCING UTILIZING ACI 311.4R "GUIDE FOR CONCRETE INSPECTION" AS A GUIDE. SERVICES PROVIDED SHALL INCLUDE:
 - a. VERIFY TYPE AND GRADE OF ALL REINFORCING STEEL.
 - b. VERIFY REBAR IS FREE OF OIL, DIRT, EXCESSIVE RUST AND FROM DAMAGE IN SHIPMENT TO SITE.
 - c. VERIFY REINFORCING IS ADEQUATELY TIED, CHAIRED AND SUPPORTED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. VERIFY MINIMUM AND MAXIMUM CLEAR DISTANCES BETWEEN BARS AND MINIMUM STRUCTURAL DISTANCE TO OUTSIDE OF CONCRETE. VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT. VERIFY MINIMUM CONCRETE COVER IS MAINTAINED BETWEEN REBAR AND SURFACE OF CONCRETE.
 - d. VERIFY SIZE AND PLACEMENT OF REBAR. VERIFY LAP LENGTHS, LOCATIONS AND STAGGERS AND VERIFY BENDS FOR MINIMUM DIAMETER, SLOPE AND LENGTH. VERIFY HOOKED BAR LENGTHS AND LOCATIONS.

EARTHWORK TESTING

1. DURING EARTHWORK OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:

- a. OBSERVE STRIPPING OPERATIONS AND EVALUATE THE REQUIRED STRIPPING DEPTH DURING THESE OPERATIONS.
- b. OBSERVE PROOFROLLING OPERATIONS AFTER SITE STRIPPING. DETERMINE IF ANY SOFT SPOTS NEED TO BE UNDERCUT TO FIRM SOILS, REPLACED WITH SELECT FILL AND RECOMPACTED.
- c. VERIFY THAT THE SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO AN EIGHT (8) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
- d. STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED. SELECT FILL MATERIAL SHALL BE AN INORGANIC SANDY CLAY WITH LIQUID LIMIT OF 26 AND PLASTICITY INDEX BETWEEN 10 AND 20.
- e. SELECT FILL SHALL BE PLACED IN SIX (6) INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEXT (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. VERIFY THAT SELECT FILL MATERIAL EXTENDS TO 5'-0" BEYOND THE BUILDING PERIMETER.
- f. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
- q. OBSERVE THE EXCAVATION DAILY AND ENSURE THAT THE CONTRACTOR MAINTAINS A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR
- SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES. h. OBSERVE GRADING OPERATIONS TO ENSURE THAT PROPER DRAINAGE AWAY FROM
- THE BUILDING PAD IS PROVIDED.

FIRE PROTECTION ENGINEER POOLE FIRE PROTECTION, INC. 19910 WEST 161ST STREET OLATHE, KANSAS 66062 (913) 829-8690 PHYSCIAL SECURITY

FORCE PROTECT 3210 GULF BLVD, UNIT 304 BELLEAIR, FL 33786 (502) 836-4232

ARCHITECT:

DESIGN

SPUR DESIGN, LLC 312 SW 25TH STREET Oklahoma City, OK 73109 (405) 842-6100

KS ARCH REG. NO. A-930, EXP. 12/31/2021 KS ENGR REG. NO. E-2586, EXP. 12/31/2021



SPECIAL INSPECTION OF FABRICATED ITEMS

PER IBC 1704.2.5. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP: EITHER:

- A. SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION AT THE FABRICATOR'S SHOP, OR;
- B. THE FABRICATOR SHALL HAVE BEEN APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC 1704.2.5.1. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR THE OWNER'S AUTHORIZED AGENT FOR SUBMITTAL TO THE BUILDING OFFICIAL AS SPECIFIED IN IBC SECTION 1704.5 STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

TESTING FOR SEISMIC RESISTANCE - IBC 2021

- PER IBC 1705.13, TESTING FOR SEISMIC RESISTANCE ARE REQUIRED AS NOTED BELOW: 2. NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL IN THE SEISMIC FORCE-RESISTING
- SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E **OR F** SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341. EXCEPTION: NONDESTRUCTIVE TESTING IS NOT REQUIRED IN THE SEISMIC FORCE-RESISTING SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B OR C THAT ARE NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE. WITH A RESPONSE MODIFICATION COEFFICIENT, **R**, **OF 3 OR LESS**, EXCLUDING CANTILEVER COLUMN SYSTEMS
- 3. NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN THE SEISMIC FORCE-RESISTING SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E OR F OTHER THAN THOSE COVERED IN SECTION 1705.13.L.1, INCLUDING STRUTS, COLLECTORS, CHORDS AND FOUNDATION ELEMENTS, SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341. EXCEPTION: NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IS NOT REQUIRED IN THE SEISMIC FORCE-RESISTING SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B OR C WITH A RESPONSE MODIFICATION COEFFICIENT, R, OF 3 OR LESS.
- 4. FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F AND WITH DESIGNATED SEISMIC SYSTEMS THAT ARE SUBJECT TO THE REQUIREMENTS OF SECTION 13.2.2 OF ASCE 7 FOR CERTIFICATION, THE REGISTERED DESIGN PROFESSIONAL SHALL SPECIFY ON THE APPROVED CONSTRUCTION DOCUMENTS THE REQUIREMENTS TO BE MET BY ANALYSIS, TESTING OR EXPERIENCE DATA AS SPECIFIED THEREIN. CERTIFICATES OF COMPLIANCE DOCUMENTING THAT THE REQUIREMENTS ARE MET SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS SPECIFIED IN SECTION 1704.5.
- 5. SEISMIC ISOLATION SYSTEMS IN SEISMICALLY ISOLATED STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E OR F SHALL BE TESTED IN ACCORDANCE WITH SECTION 17.8 OF ASCE 7

SEISMIC SPECIAL INSPECTIONS - IBC 2021

- PER IBC 1705.12, INSPECTIONS FOR SEISMIC RESISTANCE ARE REQUIRED AS NOTED BELOW: 1. SPECIAL INSPECTIONS OF STRUCTURAL STEEL IN THE SEISMIC FORCE-RESISTING SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E OR F SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341.
- 2. SPECIAL INSPECTIONS OF STRUCTURAL STEEL ELEMENTS IN THE SEISMIC FORCE-RESISTING SYSTEMS OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B, C, D, E **OR F** OTHER THAN THOSE COVERED ABOVE, INCLUDING STRUTS, COLLECTORS, CHORDS AND FOUNDATION ELEMENTS, SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341.
- 3. COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION. FOR THE SEISMIC FORCE-RESISTING SYSTEMS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F, PERIODIC SPECIAL INSPECTION SHALL BE REQUIRED.
- 4. STRUCTURAL WOOD CONSTRUCTION. FOR THE SEISMIC FORCE-RESISTING SYSTEMS OF RUCTURES ASSIGNED TO *SEISMIC DESIGN CATEGORY C, D, E OR F, PERIODIC SPECIAL* INSPECTION SHALL BE REQUIRED.
- 5. DESIGNATED SEISMIC SYSTEMS. FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY **C, D, E OR F**, THE SPECIAL INSPECTOR SHALL EXAMINE *DESIGNATED SEISMIC SYSTEMS* REQUIRING SEISMIC QUALIFICATION IN ACCORDANCE WITH SECTION 13.2.2 OF ASCE 7 AND VERIFY THAT THE LABEL, ANCHORAGE AND MOUNTING CONFORM TO THE CERTIFICATE OF COMPLIANCE.
- 6. STORAGE RACKS. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE ANCHORAGE OF STORAGE RACKS THAT ARE 8 FEET OR GREATER IN HEIGHT IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY **D**, **E OR F**.
- 7. SEISMIC ISOLATION SYSTEMS. PERIODIC SPECIAL INSPECTION SHALL BE PROVIDED FOR SEISMIC ISOLATION SYSTEMS IN SEISMICALLY ISOLATED STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B. C. D. E OR F DURING THE FABRICATION AND INSTALLATION OF ISOLATOR UNITS AND ENERGY DISSIPATION DEVICES.
- 8. COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES. PERIODIC SPECIAL INSPECTION SHALL BE PROVIDED FOR THE INSTALLATION OF COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES IN THE SEISMIC FORCE-RESISTING SYSTEMS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F. EXCEPTION: SPECIAL INSPECTIONS ITEMIZED IN SECTIONS 1705.12.1 THROUGH 1705.12.9 ARE NOT

REQUIRED FOR STRUCTURES DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING:

- 1. THE STRUCTURE CONSISTS OF LIGHT-FRAME CONSTRUCTION; THE DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, SDS' AS DETERMINED IN SECTION 1613.3.4, DOES NOT EXCEED 0.5; AND THE BUILDING HEIGHT OF THE STRUCTURE DOES NOT EXCEED 35
- 2. THE SEISMIC FORCE-RESISTING SYSTEM OF THE STRUCTURE CONSISTS OF REINFORCED MASONRY OR REINFORCED CONCRETE; THE DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, SDS' AS DETERMINED IN SECTION 1613.3.4, DOES NOT EXCEED 0.5; AND THE BUILDING HEIGHT OF THE STRUCTURE DOES NOT EXCEED 25 FEET.

MASONRY TESTING

- 1. PER IBC 1705.4, SPECIAL INSPECTIONS AND TESTS SHALL BE REQUIRED FOR MASONRY CONSTRUCTION THAT SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602. 2. SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR:
- A. EMPIRICALLY DESIGNED MASONRY, GLASS UNIT MASONRY, OR MASONRY VENEER DESIGNED IN ACCORDANCE WITH IBC SECTION 2109, 2110, OR CHAPTER 14, RESPECTIVELY, WHERE THEY ARE PART OF A STRUCTURE CLASSIFIED AS RISK CATEGORY I, II, OR III.
- B. MASONRY FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH TABLE 1807.1.6.3(1), 1807.1.6.3(2), 1807.1.6.3(3), OR 1807.1.6.3(4).
- C. MASONRY FIREPLACES, MASONRY HEATERS OR MASONRY CHIMNEYS INSTALLED OR CONSTRUCTED IN ACCORDANCE WITH SECTION 2111, 2112, OR 2113, RESPECTIVELY.
- 3. SPECIAL INSPECTIONS AND TESTS FOR EMPIRICALLY DESIGNED MASONRY, GLASS UNIT MASONRY OR MASONRY VENEER DESIGNED IN ACCORDANCE WITH SECTION 2109, 2110, OR CHAPTER 14, RESPECTIVELY, WHERE THEY ARE PART OF A STRUCTURE CLASSIFIED AS RISK CATEGORY IV SHALL BE PERFORMED IN ACCORDANCE WITH TMS 402, LEVEL B QUALITY ASSURANCE.
- 4. LEVEL A QUALITY ASSURANCE SHALL BE THE MINIMUM REQUIREMENT FOR MASONRY IN RISK CATEGORY I, II, OR III STRUCTURES AND DESIGNED IN ACCORDANCE WITH TMS PART 4 (PRESCRIPTIVE DESIGN METHODS) OR TMS APPENDIX A (EMPIRICAL DESIGN OF MASONRY).
- 5. LEVEL B QUALITY ASSURANCE SHALL BE THE MINIMUM REQUIREMENT FOR MASONRY IN RISK CATEGORY IV STRUCTURES AND DESIGNED IN ACCORDANCE WITH TMS CHAPTER 12 OR 13; OR IT SHALL BE THE MINIMUM REQUIREMENT FOR MASONRY IN RISK CATEGORY I. II. OR III STRUCTURES AND DESIGNED IN ACCORDANCE WITH CHAPTERS OTHER THAN TMS PART 4 (PRESCRIPTIVE DESIGN METHODS) OR TMS APPENDIX A (EMPIRICAL DESIGN OF MASONRY).
- 6. LEVEL C QUALITY ASSURANCE SHALL BE THE MINIMUM REQUIREMENT FOR MASONRY IN RISK CATEGORY IV STRUCTURES AND DESIGNED IN ACCORDANCE WITH CHAPTERS OTHER THAN TMS PART 4 (PRESCRIPTIVE DESIGN METHODS) OR TMS APPENDIX A (EMPIRICAL DESIGN OF MASONRY).

SCHEDULE OF SPECIAL INSPECTIONS					
VERIFICATION / INSPECTION	SOIL / FOUNDATION INSPECTION				
IBC SECTION 1705.6, TABLE 1705.6	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT, OR ETT		
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	IBC 1705.6, TABLE 1705.6	ETT		
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	IBC 1705.6, TABLE 1705.6	ETT		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	IBC 1705.6, TABLE 1705.6	ETT		
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS	IBC 1705.6, TABLE 1705.6	ETT		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	IBC 1705.6, TABLE 1705.6	ETT		
THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE.					

SCHEDULE OF SPECIAL INSPECTIONS					
VERIFICATION / INSPECTION	CONCRETE INSPECTION				
IBC 2021 SECTION 1705.6, TABLE 1705.6	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT, OR ETT		
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	PERIODIC	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1 - 26.6.3 IBC 1908.4	ETT		
REINFORCING BAR WELDING:					
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	PERIODIC	AWS D1.4 ACI 318: 26.6.4	AWS-CWI		
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16", AND	PERIODIC				
C. INSPECT ALL OTHER WELDS	CONTINUOUS				
INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	PERIODIC	ACI 318: 17.8.2	ETT		
INSPECTION OF ANCHORS POST- INSTALLED IN HARDENED CONCRETE MEMBERS:					
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	CONTINUOUS	ACI 318: 17.8.2.4	ETT		
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.	PERIODIC	ACI 318: 17.8.2	ETT		
VERIFYING USE OF REQUIRED MIX DESIGN.	PERIODIC	ACI 318: Ch. 19, 26.4.3, 26.4.4 IBC 1904.1, 1904.2, 1908.2, 1908.3	ETT		
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12 IBC 1908.10	ACI-CFTT OR ACI-STT		
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS	ACI 318: 26.5 IBC 1908.6, 1908.7, 1908.8	ETT		
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 26.5.3-26.5.5 IBC 1908.9	ETT		
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	ACI 318: 26.11.2	ETT		
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 26.11.1.2(b)	ETT		

Drawing Title STRUCTURAL SPECIAL INSPECTIONS	Project Title CONSTRU	Project Number 589-704		
	BUILDING SPECIALT	a 26 AND R Y CARE C	ENOVAT	E Building Number 26
VA Health Care System Approval:	Location 5500 EAST KEL WICHITA, KANS	LOGG AVENUE SAS 67218		Drawing Number
	Date 12/21/2022	Checked SBJ	Drawn ZAF	Drawing # 16 OF 190
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RIVERFRONT HEALTH & SAFETY

HOUSTON, TX 77008

INDUSTRIAL HYGENIST

1139 OLIVE STREET,

ST. LOUIS, MO 63101

(314) 436-9492

(713) 864-2900

25219 MADISON AVENUE, SUITE 100 KANSAS CITY, MO 64108 (913) 369-7200

HEALTHCARE PLANNER INNOVA GROUP 3196 N. SWAN ROAD TUCSON, AZ 85712

(520) 886-8650

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_ INSPECTIONS					
OLTING INSPECTIONS					
COMMENTS	AGENT PE/GE, EIT, OR ETT				
-	-				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
TABLE N5.6-1	ETT				
-	-				
TABLE N5.6-2	ETT				
TABLE N5.6-2	ETT				
TABLE N5.6-2	ETT				
TABLE N5.6-2	ETT				
-	-				
TABLE N5.6-3	ETT				

- INSPECTIONS						
ONRY	LEVEL C I	NSPECTIO	NC			
	COMMENTS					
IBC CTION	TMS 402 ACI 530 ASCE 5	TMS 602 ACI 530.1 ASCE 6	AGENT PE/GE, EIT, OR ETT			
		ART. 1.5	ETT			
	-		-			
		ART. 2.1, 2.6A-C, 2.4 G.1.b	ETT			
		ART. 3.3B	ETT			
		ART. 2.4B, 2.4H	ETT			
		ART. 3.4, 3.6A	ETT			
		ART. 2.1C	ETT			
		ART. 3.2D, 3.2F	ETT			
		ART. 3.3F	ETT			
	SEC. 1.2.1(e) 6.1.4.3, 6.2.1		ETT			
	SEC. 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)		AWS-CWI			
		ART. 1.8C 1.8D	ETT			
		ART. 3.6B	ETT			
		ART. 3.5, 3.6C	ETT			
		ART. 3.3 B.9, 3.3 F.1.b	ETT			
		ART. 1.4 B.2.a-c.3, 1.4 B.3-4	ETT			

ARCHITECT:

DESIGN

POOLE FIRE PROTECTION, INC. 19910 WEST 161ST STREET OLATHE, KANSAS 66062 (913) 829-8690 PHYSCIAL SECURITY

FORCE PROTECT 3210 GULF BLVD, UNIT 304 BELLEAIR, FL 33786 (502) 836-4232

SCHEDULE OF SPECIAL INSPECTIONS VERIFICATION / INSPECTION STEEL DECK MECHANICAL FASTENING INSPECTIONS EXTENT AGENT IBC 2021 1705.2.2, COMMENTS OBSERVE, PE/GE, EIT, SDI QA/QC - LATEST EDITION PERFORM OR ETT INSPECTIONS PRIOR TO MECHANICAL ---FASTENING MANUFACTURER INSTALLATION ETT OBSERVE TABLE 1.6 INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS PROPER TOOLS AVAILABLE FOR FASTENER ETT OBSERVE TABLE 1.6 INSTALLATION PROPER STORAGE FOR MECHANICAL OBSERVE TABLE 1.6 ETT FASTENERS INSPECTIONS DURING MECHANICAL ---FASTENING TABLE 1.7 ETT FASTENERS ARE POSITIONED AS REQUIRED OBSERVE FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S ETT OBSERVE TABLE 1.7 INSTRUCTIONS INSPECTIONS AFTER MECHANICAL ---FASTENING CHECK SPACING, TYPE, AND INSTALLATION PERFORM TABLE 1.8 ETT OF SUPPORT FASTENERS CHECK SPACING, TYPE, AND INSTALLATION ETT PERFORM TABLE 1.8 OF SIDELAP FASTENERS CHECK SPACING, TYPE, AND INSTALLATION PERFORM TABLE 1.8 ETT OF PERIMETER FASTENERS VERIFY REPAIR ACTIVITIES TABLE 1.8 ETT PERFORM

PERFORM

TABLE 1.8

ETT

DOCUMENT ACCEPTANCE OR REJECTION

OF MECHANICAL FASTENERS

SCHEDULE OF SPECIAL INSPECTIONS					
VERIFICATION / INSPECTION STEEL DECK WELDING INSPECTIONS					
IBC 2021 1705.2.2, SDI QA/QC -2011	EXTENT AGENT OBSERVE, COMMENTS PE/GE, EIT, PERFORM OR ETT				
INSPECTIONS PRIOR TO WELDING	-	-	-		
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	OBSERVE	TABLE 1.3	ETT		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	OBSERVE	TABLE 1.3	ETT		
MATERIAL IDENTIFICATION (TYPE/GRADE)	OBSERVE	TABLE 1.3	ETT		
CHECK WELDING EQUIPMENT	OBSERVE	TABLE 1.3	ETT		
INSPECTIONS DURING WELDING	-	-	-		
USE OF QUALIFIED WELDERS	OBSERVE	TABLE 1.4	ETT		
CONTROL AND HANDLING OF WELDING CONSUMABLES	OBSERVE	TABLE 1.4	ETT		
ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	OBSERVE	TABLE 1.4	ETT		
WPS FOLLOWED	OBSERVE	TABLE 1.4	ETT		
INSPECTIONS AFTER WELDING	-	-	-		
VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	PERFORM	TABLE 1.5	ETT		
WELDS MEET VISUAL ACCEPTANCE CRITERIA	PERFORM	TABLE 1.5	ETT		
VERIFY REPAIR ACTIVITIES	PERFORM	TABLE 1.5	ETT		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	PERFORM	TABLE 1.5	ETT		

SCHEDULE OF SPECIAL INSPECTIONS					
VERIFICATION / INSPECTION	STEEL	STEEL DECK PLACEMENT INSPECTIONS			
IBC 2021 1705.2.2, SDI QA/QC -2011	EXTENT OBSERVE, PERFORM	COMMENTS	AGENT PE/GE, EIT, OR ETT		
INSPECTIONS PRIOR TO DECK PLACEMENT	-	-	-		
VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	PERFORM	TABLE 1.1	ETT		
DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	PERFORM	TABLE 1.1	ETT		
INSPECTIONS AFTER DECK PLACEMENT	-	-	-		
VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	PERFORM	TABLE 1.2	ETT		
VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS	PERFORM	TABLE 1.2	ETT		
DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	PERFORM	TABLE 1.2	ETT		

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KS ARCH REG. NO. A-930, EXP. 12/31/2021 KS ENGR REG. NO. E-2586, EXP. 12/31/2021



SCHEDULE OF SPECIAL INSPECTIONS				
VERIFICATION / INSPECTION	INS	SPECTION PRIOR TO WELD	NG	
IBC 2021 SECTION 1705.2, AISC 360-16	EXTENT OBSERVE, PERFORM	COMMENTS	AGENT PE/GE, EIT, OR ETT	
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	OBSERVE	TABLE N5.4-1	ETT	
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	PERFORM	TABLE N5.4-1	ETT	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	PERFORM	TABLE N5.4-1	ETT	
MATERIAL IDENTIFICATION (TYPE/GRADE)	OBSERVE	TABLE N5.4-1	ETT	
WELDER IDENTIFICATION SYSTEM	OBSERVE	TABLE N5.4-1	ETT	
 FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) BACKING TYPE AND FIT (IF APPLICABLE) 	OBSERVE	TABLE N5.4-1	ETT	
 FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY) JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) BACKING TYPE AND FIT (IF APPLICABLE) 	OBSERVE	TABLE N5.4-1	ETT	
CONFIGURATION AND FINISH OF ACCESS HOLES	OBSERVE	TABLE N5.4-1	ETT	
 FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 	OBSERVE	TABLE N5.4-1 TABLE N5.4-1	ETT	
	ODOLIVE			

SCHEDULE OF SPECIAL INSPECTIONS				
VERIFICATION / INSPECTION INSPECTION AFTER WELDING				
IBC 2021 SECTION 1705.2, AISC 360-16	EXTENT OBSERVE, PERFORM	COMMENTS	AGENT PE/GE, EIT, OR ETT	
WELDS CLEANED	OBSERVE	TABLE N5.4-3	ETT	
SIZE, LENGTH, AND LOCATION OF WELDS	PERFORM	TABLE N5.4-3	ETT	
WELDS MEET VISUAL ACCEPTANCE CRITERIA CRACK PROHIBITION WELD / BASE-METAL FUSION CRATER CROSS SECTION WELD PROFILES WELD SIZE UNDERCUT POROSITY	PERFORM	TABLE N5.4-3	ETT	
ARC STRIKES	PERFORM	TABLE N5.4-3	ETT	
K - AREA	PERFORM	TABLE N5.4-3	ETT	
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	PERFORM	TABLE N5.4-3	ETT	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	PERFORM	TABLE N5.4-3	ETT	
REPAIR ACTIVITIES	PERFORM	TABLE N5.4-3	ETT	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	PERFORM	TABLE N5.4-3	ETT	
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	OBSERVE	TABLE N5.4-3	ETT	

SCH	SCHEDULE OF SPECIAL INSPECTIONS FICATION / INSPECTION INSPECTION DURING WELDING 021 SECTION 1705.2, AISC 360-16 EXTENT OBSERVE, PERFORM COMMENTS AGENT PE/GE, EIT, OR ETT 021 AND HANDLING OF WELDING Image: Colspan="3">Image: Colspan="3" Image: Colspan="3">Image: Colspan="3" Image: Colspan="3">Image: Colspan="3" Image: Colspan="3">Image: Colspan="3" Image: Colspan="3" Image: Colspan="3" Image: Colspan="3" Image: Colspan				
ERIFICATION / INSPECTION	IN	ISPECTION DURING WELDIN	IG		
IBC 2021 SECTION 1705.2, AISC 360-16	EXTENT OBSERVE, PERFORM	COMMENTS	AGENT PE/GE, EIT, OR ETT		
ONTROL AND HANDLING OF WELDING ONSUMABLES • PACKAGING • EXPOSURE CONTROL	OBSERVE	TABLE N5.4-2	ETT		
O WELDING OVER CRACKED TACK WELDS	OBSERVE	TABLE N5.4-2	ETT		
 NVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS PRECIPITATION AND TEMPERATURE 	OBSERVE	TABLE N5.4-2	ETT		
 /PS FOLLOWED SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) PROPER POSITION (F,V,H,OH) 	OBSERVE	TABLE N5.4-2	ETT		
 PELDING TECHNIQUES INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS 	OBSERVE	TABLE N5.4-2	ETT		
LACEMENT AND INSTALLATION OF STEEL EADED STUD ANCHORS	PERFORM	TABLE N5.4-2	ETT		

VA Health Care System Approval: 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218)
	Drawing Number
Date 12/21/2022Checked SJBDrawn ZAFDrawn Drawn Drawn	DAUII wing # 17 OF 190





Drawing Title TYPICAL DETAILS - CONCRETE	Project Title CONSTRU	Project Title CONSTRUCT INFILL OF BUILDING 26 AND BENOVATE		
	SPECIALT	Y CARE C	LINICS	- Building Number 26
VA Health Care System Approval:	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		Drawing Number	
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 18 OF 190
7				9

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NTS

SPLICE & DEVELOPMENT SCHEDULE FOR HOOKS



 OUTSIDE FAC
OF BAR

000PSI		fc=7000PSI		fc=8000PSI		BAR	
	0.7 Lhb	Lhb	0.7 Lhb	Lhb	0.7 Lhb	SIZE	
	6	6	6	6	6	#3	
	6	8	6	7	6	#4	
	7	9	7	9	7	#5	
	9	11	8	11	8	#6	
	10	13	10	12	9	#7	
	12	15	11	14	10	#8	
	13	17	12	16	12	#9	
	14	19	14	18	13	#10	
	16	21	15	19	14	#11	
		25		23		#14	
		33		31		#18	

CONTRACTION/CONSTRUCTION JOINT DETAIL

EL 1	ABLE	
ZE	DOWEL SPACING(in)	
	18	
	18	
	20	

OWEL TABLE	
EL LENGTH(in)	DOWEL SPACING(in)
16	12
16	12
18	12
18	12
18	12
18	12



- PROVIDE JOINT SEALANT OR

FILLER AS SPECIFIED; SEE ARCH

R 1/8" WIDE SAWCUT, PROVIDE JOINT SEALA AS SPECIFIED; SEE AR	NT OR FILLER CH
TOP OF SLAB	
	R
G TABLE	
CE BETWEEN JOINTS (FT)	
13	
15	
18	
20	
23	
25	

- SAW CUT JOINT. AS

SOON AS EQUIPMENT CAN BE

PLACED ON SLAB WITHOUT DAMAGE



	- LCS - COMPRESSION LAP SPL - LTS - TENSION LAP SPLICE LE - LDH - HOOKED BAR TENSION	ICE LENGTH NGTH EMBEDMENT LENGTH	ALL EMBEDMENT AND LAP SPLICE LEN AS REQ'D BY THE MULTIPLIERS BELOW MULTIPLIERS IF APPLICABLE. 1.3 IF CONC CONTAINS LIGHT WEIGH 1.3 IF EPOXY COATED REBAR USED
2)	SPLICE &		PMENT SCHEDUL
	12db FOR #6, #7, #8 6db FOR #3, #4, #5	90° HOOK 90° HOOK BEYOND	135° HOOK 135° HOOK 90° HOOK BEYOND 135° HOOK

	EMBEDMENT				LAP SPLICE			EMBEDMENT		
	COMPR	TENSIC	ON (LTE)	COMPR	TENSIC	ON (LTS)	HOOK	COMPR	TENSIC	N
BAR	(LCE)	TOP	OTHER	(LCS)	TOP	OTHER	(LDH)	(LCE)	TOP	0
#3	8	20	15	12	26	20	6	8	18	
#4	10	26	20	15	34	26	8	9	25	
#5	13	33	25	19	43	33	10	12	31	
#6	15	40	30	23	51	40	12	14	37	
#7	18	58	35	26	75	46	13	17	54	
#8	20	66	41	30	86	53	15	19	62	
#9	23	74	46	34	97	59	17	21	70	
#10	26	84	52	38	109	67	19	24	78	
#11	29	93	57	42	121	74	22	27	87	
NOTES (1. TOP E FRES 2. ALL E 3. ABBF - LCE -	(PERTAINING BARS ARE H BARS ARE F BARS THAT A REVIATIONS COMPRESS	<u>G TO TAB</u> ORIZONT TE CAST I ARE NOT HON EMB	<u>LE):</u> AL BARS 1 BELOW TH "TOP BAR EDMENT L	THAT HAVE IEM. S" ARE "OTI ENGTH	MORE TH HER" BAR	ian 12" of RS	- <u>N</u> 2 3 4	OTES (GEN . Stagger . All Dimen . Bars gre . All Splic	ERAL): ALL SPLI NSIONS IN EATER TH ES SHALI	CE IDI AN BI

				-		
		#14	18 ¼	27	21 ¾	3
		#18	24	36	28 1⁄2	4
		D= INS	DIDE DIAMETER OF	BEND		
	TYPIC	<u>AL</u>	END I	HOOK	TYPE	S
$\mathcal{S}\mathcal{J}$	NTS					

DEVELOPMENT AND LAP SPLICE SCHEDULE

- LTE - TENSION EMBEDMENT LENGTH

f'c = 3500 psi







DETAILING HC	JOK
	-
DIMENSION A C	DR G
B B B B B B C C C C C C C C C C C C C C	



4 4 1/2 5 ½



DULE

MULTIPLIERS: ALL EMBEDMENT AND LAP SPLICE LENGTHS SHALL BE INCREASED AS REQ'D BY THE MULTIPLIERS BELOW. APPLY MULTIPLE IGHT WEIGHT AGGREGATES

CES 12 db MIN, BUT NOT LESS THAN 12" NDICATED IN TABLE ARE IN INCHES IAN #11 SHALL BE MECHANICALLY SPLICED 4. ALL SPLICES SHALL BE WIRED IN CONTACT STACKED VERTICAL.

f'c = 4000 psi						
IT	LAP SPLICE					
N (LTE)	COMPR	TENSIC	N (LTS)	HOOK		
OTHER	(LCS)	TOP	OTHER	(LDH)		
14	12	24	18	6		
19	15	32	25	7		
24	19	40	31	8		
28	23	48	37	10		
42	26	70	54	12		
47	30	80	62	13		
54	34	91	70	15		
60	38	102	78	17		
67	42	113	87	19		







	P THICKNESS	Ν	WELD "A'
10	1/4"	2	3/16"
	1/4"	3	3/16"
	1/4"	4	3/16"
	5/16"	5	1/4"
	5/16"	7	1/4"



08-6231
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Drawing Title TYPICAL DETAILS - STEEL		Project Title CONSTRUC	Project Title CONSTRUCT INFILL OF		
	BUILDING 2 SPECIALTY	26 AND R / CARE C	ENOVATE LINICS	Building Number 26	
VA Health Care System Approval:		Location 5500 EAST KELL WICHITA, KANSA	OGG AVENUE AS 67218		Drawing Number
		Date 12/21/2022	DateCheckedDrawn12/21/2022CheckerAuthor		Drawing # 20 OF 190
	7		8		



3	4	5	

LOCATION	FILLET WELD SIZE & SPACING
STUD TO TRACK	1/8" AT EACH FLANGE
STUD TO STUD	1/8"X1" @ 12" OC AT EACH FLANGE
BUILT-UP LINTEL	1/8"X1" @ 12" OC AT EACH FLANGE OF TRACK
LINTEL TO SUPPORT STUDS	1/8" FOR FULL LENGTH OF BEARING, EACH SIDE OF BEAM
TRACK TO TRACK	1/8"X1" @ 12" OC EACH SIDE
TRACK TO STUD AT JAMB	1/8"X3" MINIMUM
LEDGER TO STUD	1/8" TOP & BOTTOM EACH STUD
DIAGANOL KICKER	1/8"X3" TOP & BOTTOM EACH STUD EA SIDE

Drawing Title TYPICAL DETAILS - CFMF	Project Title CONSTRU	Project Number 589-704		
	BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS			E Building Number 26
VA Health Care System Approval:	Location 5500 EAST KEL WICHITA, KANS	LOGG AVENUE SAS 67218		Drawing Number
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 21 OF 190

DULE		
NG	FULL HEIGHT STUDS	SILL PLATE STUDS
Ļ	(2) 600\$162-54	-













- MIN 600T125-54 (Fy=50 KSI), (BY OTHERS)



Drawing Title TYPICAL DETAILS - CFMF	g Title Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS		Project Number 589-704 Building Number 26		
VA Health Care System Approval:	Location 5500 EAST KELLO WICHITA, KANSA	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		Drawing Number	
	Date 12/21/2022	Checked Checker	Drawn Author	JAUJJ Drawing # 22 OF 190	
7		8		9	

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STRAP BRACE ELEVATION



— DIAGONAL STRAP

_ __ _

- DIAGONAL STRAP STRAP TO EDGE ANGLE DETAIL 3 NTS







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TUDS, RF

SA053







1/8" = 1'-0"

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Drawing Title SERVICE YARD PLAN/DETAILS	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS			Project Number 589-704 Building Number 26
VA Health Care System Approval:	Location 5500 EAST KEL WICHITA, KANS	LOGG AVENUE SAS 67218		Drawing Number
	Date 12/21/2022	Checked SJB	Drawn ZAF	JJIUI Drawing # 23 OF 190
5 7		8		9

NOTE: AT EACH END OF A STEEL LINTEL, PROVIDE A PLATE 3/8" x 7" x 0'-8" W/ (2) 1/2" DIAMETER x" 4" HEADED STUDS. FIELD WELD BEAM BOTTOM FLANGE TO PLATE 3/16" x 3" LONG EACH SIDE AND EACH END.
— BOND BEAM REINF PER GENERAL NOTES
WF BEAM PER SCHEDULE.
PROVIDE SOAPS AS REQD
3/16 3@12
<u>3/16</u> 3@12

rawing Title GROUND FLOOR DEMO PLAN	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS			Project Number 589-704
				Building Number 26
A Health Care System Approval:	Location 5500 EAST KEL WICHITA, KANS	LOGG AVENUE SAS 67218		Drawing Number
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 24 OF 190

VA FORM 08-6231

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Drawing Title FIRST FLOOR DEMO PLAN	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS		Project Number 589-704 Building Number 26	
VA Health Care System Approval:	Location 5500 EAST KELL WICHITA, KANSA	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 25 OF 190
7		8		9

NOTES
RESPONSIBLE FOR THE MEANS AND METHODS OF GRITY AND STABILITY OF THE EXISTING STRUCTURE THE WORK IS COMPLETED. THE CONTRACTOR WILL IRED LOCATIONS WHERE EXISTING CONSTRUCTION ED BY DEMOLITION AND RELATED ACTIVITIES. NT SHORING AND UNDERPINNING WORK AND SIGNED, SIGNED AND SEALED BY A STRUCTURAL STATE OF KANSAS AND SUBMITTED TO THE DESIGN REVIEW AND APPROVAL PRIOR TO START OF
BE COORDINATED WITH EXISTING FIELD CRIBED IN THE DEMOLITION AND CONSTRUCTION IVITIES ON-SITE. REFER TO THE ARCHITECTURAL, CTRICAL DEMOLITION AND CONSTRUCTION F CONFLICTS, THE CONTRACTOR WILL NOTIFY THE C
CATED ON THESE DRAWINGS IS FOR REFERENCE ERIFIED BY THE CONTRACTOR. VERIFY THE EXACT THE SITE. DETERMINE THE NATURE AND EXTENT OF VECESSARY BY COMPARING THE CONTRACT STING CONSTRUCTION. COORDINATE ALL ERNMENT.
DNSIBLE FOR REPAIRS TO ANY STRUCTURAL EMAIN AND THAT HAVE BEEN DAMAGED DURING O THE COMPLETE SATISFACTION OF THE S WILL BE AT NO EXPENSE TO THE GOVERNMENT. DESIGNED BY A STRUCTURAL ENGINEER LICENSED O AND SUBMITTED TO THE DESIGN ENGINEER OF APPROVAL PRIOR TO COMMENCING REPAIR WORK.
E QUALIFIED, EXPERIENCED PERSONNEL FOR OPERATIONS. PERFORM DEMOLITION AND CAREFUL AND ORDERLY MANNER TO PREVENT MAGE TO PROPERTY, AND THE SPREADING OF DUST
OF THE STRUCTURE TO FALL OR DEBRIS TO DROP H WILL ENSURE THE INTEGRITY OF THE STRUCTURE.
DRK, VERIFY THAT THE SCOPE OF DEMOLITION ACT DOCUMENTS WILL NOT DAMAGE, CUT OR IECHANICAL SYSTEM, ELECTRICAL SYSTEM OR HER STRUCTURE.
THE EXISTING STRUCTURE THAN INDICATED ON THE O NOT DAMAGE, MAR, CUT OR DEFACE THE MATERIALS TO BE REUSED.
LUDE IN THEIR BID THE COST OF REMOVING ROM THE SITE IN ACCORDANCE WITH ALL AND REGULATIONS.
EXISTING SLABS OR WALLS ARE TO BE CREATED, TOR WILL CORE HOLES AT THE OUTSIDE CORNERS R TO DEMOLITION; THE DEMOLITION CONTRACTOR UTSIDE CORNERS OF THE NEW OPENING PRIOR TO DEMOLISH SLAB OR WALL ONLY AFTER THE IRED NEW STRUCTURAL FRAMING, SHORING, NFORCEMENT IS IN PLACE AND SECURED. SAW AND WILL NOT EXTEND INTO THE EXISTING SLAB YOND THE CORED HOLES AT THE CORNERS OF A
ENSIONS OR ELEVATIONS. GENERAL CONTRACTOR IDITIONS, ELEVATIONS AND DIMENSIONS.

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GENERAL SHEET NOTES

- APPLICABILITY.
- ADJACENT B26 FF).
- FOR SIZE AND REINFORCEMENT. REFER TO PLAN FOR ELEVATION.
- F. ALL COLUMNS ARE W12X58, UNO.

FOUNDATION PLAN NOTES:

- AND SIZE.
- 4. 2'-0" x 2'-0" CONCRETE PEDESTAL, TYPICAL @ 4 PLACES.
- 5. 3'-0" x 3'-0" CONCRETE PEDESTAL, TYPICAL @ 14 PLACES.

SCHEDULE - SPREAD FOOTING					
Type Mark	WIDTH	THICK	REINF		
F1	6' - 10"	1' - 3"	#6 @ 10" OC, EW, T&B, UNO		
F2	6' - 0"	1' - 3"	#6 @ 10" OC, EW, T&B, UNO		
F3	6' - 10"	1' - 3"	#6 @ 10" OC, EW, T&B, UNO		

Drawing Title GROUND FLOOR/FOUNDATION PLAN	Project Title CONSTRU BUILDING SPECIALT	Project Number 589-704 Building Number 26		
VA Health Care System Approval:	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218			Drawing Number
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 26 OF 190
		0		

A. REFERENCE SHEET SA001 FOR STRUCTURAL GENERAL NOTES AND SA030 AND SA050 FOR TYPICAL STRUCTURAL DETAILS. REVIEW NOTES & DETAILS FOR

B. SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN. C. FINISH FLOOR (FF) ELEVATION = 0'-0" UNO (COORDINATE FF ELEVATION W/ EXIST

D. FOOTINGS DENOTED ON PLAN BY "FX"; REFER TO SCHEDULE ON THIS SHEET

E. (X'-X") INDICATES EXIST DIMENSIONS OR ELEVATIONS. GENERAL CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, ELEVATIONS AND DIMENSIONS.

1. NEW 7" THICK CONCRETE SLAB ON GRADE W/ #4 @ 16" OCEW ON 3" HIGH CHAIR @ 42" OCEW. PLACE SLAB ON 15 MIL WATER VAPOR BARRIER OVER COMPACTED SELECT FILL - SEE SOIL REPORT. SEE STRUCTURAL GENERAL NOTES AND TYPICAL DETAILS FOR JOINT REQUIREMENTS.

2. REINFORCEMENT WITHIN THIS REGION SHALL BE #6 @ 5" OC, EW, T&B. 3. 4" SLAB DEPRESSION. SEE DETAIL 10/SA030. VERIFY w/ ARCH FOR LOCATION

6. MECH PAD, RE: ARCH FOR SIZE AND LOCATION. RE: 6 / SB301

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Drawing Title FOUNDATION DETAILS	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS	Project Number 589-704 Building Number 26
VA Health Care System Approval:	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218	Drawing Number
	DateCheckedDrawn12/21/2022SJBZAF	Drawing # 27 OF 190
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FOOTING BEARING ELEV

		 C. ALL ROOF OPENINGS SHADETAILS. D. (X'-X") INDICATES EXIST D TO FIELD VERIFY EXIST CO E. PROVIDE L4X4X1/4 CONT / F. TOS = 22'-5" TOS = BOTTOM OF DECK (#) ROOF PLAN NOTES: 1. 3" 18 GA TYPE N METAL DER REQUIREMENTS. 2. 3 1/2" NW NON-COMPOSITE 4x4-W2.9xW2.9.
		 SEE DETAIL 6 / SA050 FOI WITH PLUMBING. INDICATES RTU. COORD L FOR OPENING IN DECK. INDICATES PATIENT LIFT (LOCATION WITH EXISTING 1,000 LBS.
F	F G H	 BEAM BOTTOM FLANGE B W8x18, LOCATE UNDER ST TYPICAL FLOOR OPENING ARCH. FOR FLOOR OPENING
•	(19'-0") (7'-0")	BEAM SIZE
		INDICATES MOMENT CONNECTION —
		SEE DETAIL 4 / SA050 FOR SEE DETAIL 5 / SA050 FOR
/18X/1 N	W8X21 @ 4'-0" OC MAX W8X21 @ 4'-0" OC MAX	
	W10X45 W10X45 SA050 W10X45 W10X45 5	
	W14X53 W14X53 W10X33 @ 4'-0" OC MAX EX FCM 26-AHU-5B 0 5000# 0	
	26-AHU-5A 5000# 4	
WIBA/I	9 9 9 9 9	

Drawing Title ROOF FRAMING PLAN Project Title Project Number CONSTRUCT INFILL OF 589-704 BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS 26 VA Health Care System Approval: Drawing Number Location 5500 EAST KELLOGG AVENUE SF103 WICHITA, KANSAS 67218 Drawn Date Checked 12/21/2022 ZAF SJB Drawing # 29 OF 190 7

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<u>GE</u>	
A.	TYPICAL STRUCTURAL DETAILS. REVIEW NOTES & DETAILS FOR APPLICABILITY.
Β.	SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN.
C.	ALL ROOF OPENINGS SHALL BE FRAMED WITH ANGLE FRAMES PER THE TYPICAL DETAILS.
D.	(X'-X") INDICATES EXIST DIMENSIONS OR ELEVATIONS. GENERAL CONTRACTOR TO FIELD VERIFY EXIST CONDITIONS, ELEVATIONS, AND DIMENSIONS.
E.	PROVIDE L4X4X1/4 CONT AT PERIMETER OF ROOF. SEE 9 / SA050.
F.	TOS = 22'-5" TOS = BOTTOM OF DECK
RC	OF PLAN NOTES:
1.	3" 18 GA TYPE N METAL DECK. REFER TO GENERAL NOTES FOR FASTENING REQUIREMENTS.
2.	3 ½" NW NON-COMPOSITE SLAB (3" TOPPING OVER 0.6C 20 GA DECK. REINF W/ 4x4-W2.9xW2.9.
3.	SEE DETAIL 6 / SA050 FOR OPENING IN BEAM WEB. COORDINATE LOCATION WITH PLUMBING.
4.	INDICATES RTU. COORD LOCATION WITH ARCH AND MEP. SEE DETAIL 8 / SA050 FOR OPENING IN DECK.
5.	INDICATES PATIENT LIFT (2) LOCATIONS. SEE DETAIL 4 / SF501. COORD LOCATION WITH EXISTING CONDITIONS, ARCH AND MEP. ASSUMED WEIGHT = 1,000 LBS.
6.	BEAM BOTTOM FLANGE BRACE, RE: 6 / SF501
7.	W8x18, LOCATE UNDER STAIR STRINGER. RE: ARCH AND 5 / SF501
8.	TYPICAL FLOOR OPENING, COORDINATE LOCATION W/ MECHANICAL AND ARCH. FOR FLOOR OPENING DETAIL, RE: 4 / SA051 AND 5 / SA051
	BEAM SIZE
	Wðx10
	INDICATES MOMENT CONNECTION
	BEAM LEGEND
	SEE DETAIL 4 / SA050 FOR ELANGE MOMENT CONNECTION DETAIL LINO
	SEE DETAIL 5 / SA050 FOR WEB MOMENT CONNECTION DETAIL, UNO.

	No.	REVISION DESCRIPTION	DATE	CONSULTANTS	S:
one eighth inch = one foot 0 4 8 $1611012/19/2022$ 3:42:28 PM	VA FORM 08-6231	1		STRUCTURAL / CIVIL ENGINEER H2B, INC. (FIRM REG #: E-3405) 1225 N. LOOP WEST, SUITE 800 HOUSTON, TX 77008 (713) 864-2900 INDUSTRIAL HYGENIST RIVERFRONT HEALTH & SAFETY 1139 OLIVE STREET, ST. LOUIS, MO 63101 (314) 436-9492	MECH / ELEC / PLUMB / TECH ENGR SPUR DESIGN 25219 MADISON AVENUE, SUITE 100 KANSAS CITY, MO 64108 (913) 369-7200 HEALTHCARE PLANNER INNOVA GROUP 3196 N. SWAN ROAD TUCSON, AZ 85712 (520) 886-8650

5/16

4

3

 \sim ----

4

inch inch

||

11

LOOSE LINTEL SCHEDULE

LINTEL SIZE

1/4" PL X WALL WIDTH - 1/2"

L 3-1⁄2" x 3-1⁄2" x 1⁄4"

L 4" x 3-1⁄2" x 5/16"

L 5" x 3-½" x 3/8"

L 6" x 3-1⁄2" x 3/8"

L6 8'-1" TO 12'-0" 5/16" & 1/4" BENT PL (SEE DTL A)

MARK OPENING SIZE

L1 UP TO 1'-8"

L2 1'-9" TO 3'-0'

L3 3'-1" TO 4'-5"

L4 4'-6" TO 6'-3"

L5 6'-4" TO 8'-0"

1. HEIGHT OF MASONRY ABOVE LINTEL MUST BE MINIMUM OF ½ THE OPENING

NOTES:

WIDTH.

BRG LEN

4"

4"

4"

4"

8"

1 1/2"

-1 45/256"

8"

_____ · ____ · ___ ·

ELEVATION - NORTH WALL

FIRE PROTECTION ENGINEER POOLE FIRE PROTECTION, INC. 19910 WEST 161ST STREET OLATHE, KANSAS 66062 (913) 829-8690 PHYSCIAL SECURITY

FORCE PROTECT 3210 GULF BLVD, UNIT 304 BELLEAIR, FL 33786 (502) 836-4232

	7		8	9
		1		 <u>GENERAL SHEET NOTES:</u> A. GC TO COORDINATE LOCATIONS OF NEVEXISTING CONDITIONS AND ARCH. B. REMOVE EXISTING CMU WALL INFILL AN EXISTING CONCRETE BEAM. CONCRETE PROVIDE CFMF STUD INFILL AS REQUIRE C. DEMAINING DRICK CLADDING ABOVE OF
				C. REMAINING BRICK CLADDING ABOVE OP ANGLE ATTACHED TO EXISTING CONCRE

2 ELEVATION - WEST WALL

ELEVATION - EAST WALL

1/8" = 1'-0"

Drawing Title EXISTING BUILDING SECTIONS	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS			E Project Number 589-704 Building Number 26
VA Health Care System Approval:	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		Drawing Number	
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 30 OF 190
7		8		9

VA FORM 08-6231	

ST. LOUIS, MO 63101

(314) 436-9492

TUCSON, AZ 85712 (520) 886-8650

(502) 836-4232

FORCE PROTECT 3210 GULF BLVD, UNIT 304 BELLEAIR, FL 33786

SPUR DESIGN, LLC 312 SW 25TH STREET Oklahoma City, OK 73109 (405) 842-6100 KS ARCH REG. NO. A-930, EXP. 12/31/2021 KS ENGR REG. NO. E-2586, EXP. 12/31/2021

BLOCKOUT SLAB AS REQUIRED TO FACILITATE STRINGER

TO BEAM CONNECTION

FF EL

C12X20.7 STAIR STRINGER

SLAB ON METAL DECK

BEAM, SEE PLAN

SMOOTH, TYP

Drawing Title	Project Title		Project Number	
FRAMING DETAILS	CONSTRU		589-704	
	BUILDING	BUILDING 26 AND RENOVATE		Building Number
	SPECIALT	SPECIALTY CARE CLINICS		26
VA Health Care System Approval:	Location 5500 EAST KEL WICHITA, KANS	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218		Drawing Number
	Date	Checked	Drawn	SFJUI
	12/21/2022	SJB	ZAF	Drawing # 31 OF 190
7		8		9

- "L" - WWF PER PLAN L6x4x5/16" (LLV) @ 48" OC
 "L"
 PL THICK
 WELD "W"

 12" - 18"
 1/4"
 3/16"
 TYP 1/4 AT DECK PERPENDICULAR TO BEAM

3 TY

TYPICAL SLAB DETAIL AT EXISTING BUILDING

SPUR DESIGN, LLC 312 SW 25TH STREET Oklahoma City, OK 73109 (405) 842-6100 KS ARCH REG. NO. A-930, EXP. 12/31/2021 KS ENGR REG. NO. E-2586, EXP. 12/31/2021

์ 1

STAMP: SPR JCENSED 28649 FANSA ONAL 12/21/22 Sand Busin

Drawing Title MECHANICAL PENTHOUSE PLANS	Project Title CONSTRUCT INFILL OF BUILDING 26 AND RENOVATE SPECIALTY CARE CLINICS			E Project Number 589-704 Building Number 26
VA Health Care System Approval:	Location 5500 EAST KELLOGG AVENUE WICHITA, KANSAS 67218			Drawing Number
	Date 12/21/2022	Checked SJB	Drawn ZAF	Drawing # 32 OF 190
7		8		9

MECHANICAL PENTHOUSE PLAN 1/4" = 1'-0"

GENERAL SHEET NOTES

- C. ALL ROOF OPENINGS SHALL BE FRAMED WITH ANGLE FRAMES PER THE TYPICAL
- DETAILS.
- LATERAL DEFLECTION TO 1" MAX. F. TOS = BOTTOM OF DECK.

(#) <u>MECHANICAL PENTHOUSE PLAN NOTES:</u> 1. 3 1/2" NW NON-COMPOSITE SLAB (3" TOPPING OVER 0.6C 20 GA DECK. REINF w/

- 4x4-W2.9xW2.9). DETAIL 9 / SA052.
- REQUIREMENTS.
- 4. STRAP BRACE AT (8) PLACES, RE: 1 / SA053
- 6. 4" THICK HOUSEKEEPING PAD, COORDINATE EXACT LOCATION AND SIZE WITH MEP AND ARCH, RE: 9 / SA051 .
- 7. INDICATES RTU. COORD LOCATION WITH ARCH AND MEP. SEE DETAIL 8 / SA050 FOR OPENING IN DECK.
- ARCH. FOR FLOOR OPENING DETAIL, RE: 4 / SA051 AND 5 / SA051

←N

A. REFERENCE SHEET SA001 FOR STRUCTURAL GENERAL NOTES AND SA051 FOR TYPICAL STRUCTURAL DETAILS. REVIEW NOTES & DETAILS FOR APPLICABILITY. B. SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN.

D. (X'-X") INDICATES EXIST DIMENSIONS OR ELEVATIONS. GENERAL CONTRACTOR TO FIELD VERIFY EXIST CONDITIONS, ELEVATIONS AND DIMENSIONS. E. MECHANICAL PENTHOUSE STRUCTURE SHALL BE DESIGNED TO LIMIT ITS

2. NEW CFMF STUD WALL w/ 600S162-54 (Fy=50 KSI) @ 16" OC, BY OTHERS,RE:

3. 1.5" GA 20 TYPE B METAL DECK. REFER TO GENERAL NOTES FOR FASTENING

5. CFMF FRAMED ROOF OPENING. RE: 7 / SA053 . PROVIDE HEADER ONLY FOR OPENINGS LESS THAN 10" WIDE. SEE MECHANICAL FOR LOCATIONS.

8. TYPICAL FLOOR OPENING, COORDINATE LOCATION W/ MECHANICAL AND

