

IN CASE OF A CONFLICT BETWEEN THE GENERAL NOTES AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN UNLESS APPROVED IN WRITING BY THE CONTRACTING OFFICER.

1. BUILDING CODE	
- UFC 3-310-01	STRUCTURAL LOAD DATA
- UFC 3-310-02A	STRUCTURAL DESIGN CRITERIA FOR BUILDINGS
- UFC 3-310-04	SEISMIC DESIGN FOR BUILDINGS
- UFC 4-010-01	DoD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
- ASCE 7-02	MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES
- 2003 IBC	2003 INTERNATIONAL BUILDING CODE WITH ARKANSAS FIRE PREVENTION CODE AMENDMENTS
2. BUILDING OCCUPANCY CATEGORY	IV
3. DESIGN DEAD LOADS (PSF)	
- ROOF	22.5
- FLOORS & MEZZANINES	N/A
4. DESIGN LIVE LOADS (PSF)	
- ROOF (WITHOUT REDUCTION)	20
- FLOORS & MEZZANINES	N/A
- SLABS-ON-GRADE	300
5. WIND LOAD PARAMETERS (BASED ON ASCE 7-02)	
- BASIC WIND SPEED	90 MPH
- WIND IMPORTANCE FACTOR	1.15
- WIND EXPOSURE CATEGORY	B
- INTERNAL PRESSURE COEFFICIENT, GCPI	±0.18
- COMPONENTS & CLADDING PRESSURE	
- WALLS	22.0 PSF
- ROOF	SEE PRESSURE DIAGRAM
6. SEISMIC DESIGN PARAMETERS (BASED ON ASCE 7-02)	
- IMPORTANCE FACTOR, I_e	1.50
- OCCUPANCY CATEGORY	IV
- MAPPED SPECTRAL RESPONSE ACCELERATIONS	
- SHORT PERIOD, S_s	0.500g
- ONE-SECOND, S_1	0.175g
- SITE CLASS	D
- SPECTRAL RESPONSE COEFFICIENTS	
- SHORT PERIOD, S_{DS}	0.511g
- ONE-SECOND, S_{D1}	0.250g
- SEISMIC DESIGN CATEGORY	D
- BASIC SEISMIC FORCE RESISTING SYSTEMS WITH CORRESPONDING RESPONSE MODIFICATION COEFFICIENT (R), SYSTEM OVERSTRENGTH FACTOR (η_o) AND DEFLECTION AMPLIFICATION FACTOR (C_d)	
- ORDINARY STEEL CONCENTRICALLY BRACED FRAMES	R=3.25 $\eta_o=2.0$ $C_d=3.25$
- ORDINARY STEEL MOMENT FRAMES	R=3.5 $\eta_o=2.0$ $C_d=3.0$
- SEISMIC RESPONSE COEFFICIENT, C_s	0.236
- ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE
7. SNOW LOADS PARAMETERS (BASED ON ASCE 7-05)	
- GROUND SNOW LOAD, P_g	10 PSF
- FLAT ROOF SNOW LOAD, P_f	9.2 PSF
- SNOW EXPOSURE FACTOR, C_e	1.0
- SNOW LOAD IMPORTANCE FACTOR, I	1.2
- THERMAL FACTOR, C_t	1.1

1. UNLESS OTHERWISE SPECIFIED, HOT-ROLLED STEEL BUILDING MEMBERS USING W-SHAPES SHALL BE ASTM A992; M-, S-, AND C- SHAPES SHALL BE ASTM A36; SQUARE, RECTANGULAR & ROUND HSS SHAPES SHALL BE ASTM A 500 GRADE B; ANGLES SHALL BE ASTM A 36; CONNECTION PLATES & MISCELLANEOUS STIFFENER PLATES SHALL BE ASTM A 36; PIPE SHALL BE ASTM A53 GRADE B.
2. ALL SHEAR CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE STANDARD AISC WELDED OR AISC BOLTED CONNECTIONS AND SHALL HAVE SUFFICIENT CAPACITY TO SUPPORT THE END REACTION EQUAL TO ONE-HALF THE TOTAL UNIFORM CAPACITY SHOWN IN THE ALLOWABLE UNIFORM LOAD TABLES OF THE AISC ALLOWABLE STRESS DESIGN MANUAL – 9TH EDITION.
3. WELDING SHALL CONFORM WITH AWS D1.1 STRUCTURAL WELDING CODE.
4. ALL BOLTS FOR BEAM CONNECTIONS SHALL BE ASTM A325 WITH A MINIMUM DIAMETER OF 7/8" UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED AS SLIP CRITICAL. WASHERS SHALL BE INSTALLED UNDER NUTS OF FASTENERS WHEN REQUIRED BY THE SPECIFICATION FOR STRUCTURAL JOINTS.
5. ALL ANCHOR RODS SHALL BE ASTM F1554, GRADE 36 HEX HEADED ANCHOR ROD UNLESS NOTED OTHERWISE.
6. UNLESS NOTED OTHERWISE, THE FOLLOWING SHALL APPLY TO STEEL ROOF DECK. STEEL ROOF DECK SHALL BE 1.5822 BY VULCRAFT OR APPROVED EQUAL. STANDARD METAL DECKING SHALL BE ASTM A653 SQ GRADE 33 KSI WITH G60 GALVANIZED COATING. DECKING SHALL BE CONTINUOUS OVER AT LEAST THREE (3) SUPPORTS. EACH DECKING PANEL SHALL BE ATTACHED TO SUPPORTING MEMBERS AND ADJACENT PANELS PER THE ROOF DECK ATTACHMENT DETAIL FOR THE APPLICABLE PANEL WIDTH. SIDELAP CONNECTIONS SHALL BE PER THE ROOF DECK ATTACHMENT DETAIL, BUT A MINIMUM OF TWO #10 SELF TAPPING SIDE LAP SCREWS PER SPAN SHALL BE PROVIDED. IF OTHER PANEL WIDTHS ARE USED, CONTRACTOR MUST PROVIDE CONNECTIONS AND SPACING THAT PROVIDE EQUIVALENT SHEAR STRENGTH AND STIFFNESS. THE SUPPORTING CALCULATIONS FOR EQUIVALENT SHEAR STRENGTH AND STIFFNESS SHALL BE BASED UPON THE STEEL DECK INSTITUTE'S DIAPHRAGM DESIGN MANUAL.
7. UNLESS NOTED OTHERWISE, CONCRETE SLABS ON METAL FORM SHALL BE 3" STRUCTURAL CONCRETE AND REINFORCED WITH 6x6-W2.9xW2.9 WWF OR EQUIVALENT REINFORCING STEEL. THE METAL FORM SHALL BE GALVANIZED AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI. USE FLOOR HARDENER ON EXPOSED FLOORS.

36" PANEL

- NO. OF END AND SUPPORT WELDS 4
- SPACING OF EDGE WELDS 8 PER SPAN
- SPACING OF SIDELAP CONNECTIONS 8 PER SPAN

8. IF ROOF EDGE ANGLES AND BENT PLATES CAN NOT BE CONTINUOUS BECAUSE OF CONSTRUCTION HANDLING ISSUES, THE EDGE ANGLES AND BENT PLATES SHALL BE BUTT WELDED WITH A COMPLETE JOINT PENETRATION WELD.

1. PRIOR TO PLACEMENT OF CONCRETE, LOCATION AND SIZES OF OPENINGS, CONDUITS, PIPES, SLEEVES AND OTHER EMBEDDED ITEMS REQUIRED FOR OTHER TRADES SHALL BE VERIFIED BY THE APPROPRIATE TRADE. THESE EMBEDDED ITEMS SHALL MEET THE REQUIREMENTS OF CHAPTER 6.3 OF ACI 318. ALL SUBSTITUTIONS OF EMBEDDED ITEMS SHOWN ON THE CONTRACT DOCUMENTS MUST BE APPROVED BY THE CONTRACTING OFFICER.
2. CONCRETE FOR BUILDING MEMBERS SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS NOTED OTHERWISE.
3. CONCRETE FOR SLABS SUBJECTED TO VEHICULAR WHEEL LOADS SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI.
4. NON-PRESTRESSED CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A 615 GRADE 60.
5. REINFORCEMENT LAP SPLICES SHALL CONFORM TO 1/S-402.
6. CONCRETE COVER OVER REINFORCEMENT SHALL CONFORM TO THE MINIMUM REQUIRED BY 2/S-402 UNLESS NOTED OTHERWISE.
7. REFER TO DETAIL 3/S-402 FOR TYPICAL REINFORCING BARS AT WALL AND FOUNDATION CORNERS AND INTERSECTIONS.
8. REINFORCEMENT DETAILING AND PLACEMENT SHALL CONFORM TO ACI 318 AND ACI 315.
9. REINFORCEMENT SHALL BE PLACED 1 1/2" FROM TOP OF NON-STRUCTURAL SLABS ON GRADE UNLESS NOTED OTHERWISE.
10. ALL EXTERIOR CONCRETE CURBS AND SLABS SHALL BE CHAMFERED 3/4" ON THE EXTERIOR EXPOSED CORNER UNLESS NOTED OTHERWISE.
11. CONSTRUCTION JOINTS IN BEAMS AND SUPPORTED FLOOR SLABS NOT SHOWN ON DRAWINGS SHALL BE PLACED IN THE CENTER OF A SPAN, WITH JOINT SPACING NOT TO EXCEED 60 FEET.
12. MECHANICAL EQUIPMENT PADS ON FLOOR SLABS SHALL BE 6" THICK AND REINFORCED WITH #4 @ 12" OC EW, UNLESS NOTED OTHERWISE.
13. TERMINATE ALL REINFORCING BARS AT SLAB EDGES W/ STD 180° BEND.
14. EPOXY ADHESIVE ANCHORS INTO CONCRETE SHALL BE HILTI HAS-E THREADED RODS EMBEDDED WITH HILTI RE-500 EPOXY ADHESIVE OR APPROVED EQUAL.
15. STEEL REINFORCING THAT IS TO BE DRILLED AND EMBEDDED INTO EXISTING OR HARDENED CONCRETE WITH EPOXY ADHESIVE SHALL BE EMBEDDED USING HILTI RE-500 EPOXY ADHESIVE OR APPROVED EQUAL.
16. EXPANSION ANCHORS INSTALLED IN EXISTING CONCRETE SHALL BE HILTI KWIK BOLT II OR APPROVED EQUAL.
17. REFER TO DETAIL 6/S-402 FOR TYPICAL GRADE BEAM VOID.
18. ALL GROUT SHALL BE NONSHRINK, NONMETALLIC GROUT. GROUT SHALL BE FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT COMPLYING WITH ASTM C 1107. PROVIDE GROUT SPECIFICALLY RECOMMENDED BY MANUFACTURER FOR INTERIOR AND EXTERIOR APPLICATIONS.

1. ALL CMU SHALL BE 2 CELL BLOCK AND HAVE A SPECIFIED MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI ON NET AREA AT 28 DAYS.
2. TYPE "S" MORTAR SHALL BE USED.
3. ALL CMU BOND BEAMS, LINTELS, CELLS WHICH CONTAIN REINFORCING STEEL AND CMU WALLS TO BE FULLY GROUTED SHALL BE FILLED SOLID WITH 3,000 PSI PEA GRAVEL CONCRETE, UNLESS NOTED OTHERWISE. CMU SHALL BE FULLY GROUTED BELOW GRADE.
4. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR UNOBSTRUCTED CONTINUOUS VERTICAL CELL NOT LESS THAN 2" x 3" IN PLAN DIMENSIONS.
5. GROUT SHALL BE PLACED IN 4'-0" MAXIMUM LIFTS.
6. FOUNDATION DOWELS SHALL EXTEND INTO THE FOUNDATION CONCRETE AS DETAILED. THERE SHALL BE A FOUNDATION DOWEL FOR EACH VERTICAL WALL REINFORCING.
7. LAP SPLICES OF REINFORCING SHALL BE THE GREATER OF 24" OR 40 BAR DIAMETERS.
8. HORIZONTAL REINFORCING SHALL BE KNOCKOUT BOND BEAMS @ 4'-0" OC MAXIMUM (TOP OF EACH GROUT LIFT) WITH (2) #5 CONTINUOUS UNLESS NOTED OTHERWISE. THE VERTICAL SLOTS IN KNOCKOUT BOND BEAMS SHALL BE AT LEAST 3" INTO THE HEIGHT OF AN 8" HIGH BLOCK UNIT.
9. NORMAL VERTICAL WALL REINFORCING SHALL EXTEND CONTINUOUSLY FROM THE TOP OF THE FOUNDATION TO EMBED AT LEAST 6" INTO THE TOP OF WALL BOND BEAM. AN ADDITIONAL (1) #4 HOOKED DOWEL SHALL BE INSTALLED IN THE TOP OF ALL MASONRY WALLS AT EACH VERTICAL REINFORCING. THE DOWELS SHALL PROJECT 24" INTO THE WALL AND HOOK 6" INTO THE TOP OF WALL BOND BEAM. WHEN A SLAB IS POURED ON TOP OF A WALL THE #4 HOOKED DOWELS SHALL EXTEND INTO THE SLAB AND TERMINATE 2" BELOW THE TOP OF THE SLAB.
10. ADHESIVE ANCHORS INTO GROUTED CMU BOND BEAMS AND CELLS SHALL BE HILTI HAS-E THREADED RODS EMBEDDED WITH HILTI HIT HY 150/HIT-ICE ADHESIVE OR APPROVED EQUAL.
11. ADHESIVE ANCHORS INTO HOLLOW CMU AND CLAY BRICK SHALL BE HILTI HIT-I STANDARD INSERTS EMBEDDED WITH HILTI HIT-HY 20 ADHESIVE OR APPROVED EQUAL.

AB	ANCHOR BOLT(S)	LDH	LONG DIMENSION HORIZONTAL
AFF	ABOVE FINISHED FLOOR	LDV	LONG DIMENSION VERTICAL
ALUM	ALUMINUM	LSL	LONG SLOT
ANCH	ANCHOR	KIP(S)	1,000 POUNDS
ARCH	ARCHITECT, ARCHITECTURAL	KLF	KIPS PER LINEAR FOOT
B	BENT	KSF	KIPS PER SQUARE FOOT
BG	BACK GOUGE	MAX	MAXIMUM
BL	BRICK LEDGE	MECH	MECHANICAL
BOS	BOTTOM OF STEEL ELEVATION	MFR	MANUFACTURER
BOT	BOTTOM	MIN	MINIMUM
BTWN	BETWEEN	NS	NEAR SIDE
CCJ	CRACK CONTROL JOINT	NUM	NUMBER
CJ	CONSTRUCTION JOINT	OC	ON-CENTER
CJP	COMPLETE JOINT PENETRATION	OH	OPPOSITE HAND
CLR	CLEAR	OVS	OVERSIZED
CONC	CONCRETE	PED	PEDESTAL
CONN	CONNECTION(S)	PJP	PARTIAL JOINT PENETRATION
CONT	CONTINUOUS	PL	PLATE
CTRD	CENTERED	PLF	POUNDS PER LINEAR FOOT
DBL	DOUBLE	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DWL	DOWEL	REINF	REINFORCING, REINFORCED
EA	EACH	REQD	REQUIRED
EF	EACH FACE	SIM	SIMILAR
EJ	EXPANSION JOINT	SP	SPACE(S)
EL	ELEVATION	SQ	SQUARE
ELEC	ELECTRICAL	SS	STAINLESS STEEL
ES	EVENLY SPACED	SSL	SHORT SLOT
EW	EACH WAY	SSMR	STANDING SEAM METAL ROOF
EXP	EXPANSION	STD	STANDARD
EXST	EXISTING	STL	STEEL
EXT	EXTERIOR	T&B	TOP AND BOTTOM
FFE	FINISHED FLOOR ELEVATION	THK	THICK
FIN	FINISHED, FINAL	TM	TOP OF MASONRY ELEVATION
FLR	FLOOR	TOB	TOP OF BEAM ELEVATION
FND	FOUNDATION	TOC	TOP OF CONCRETE ELEVATION
FT	FOOT, FEET	TOF	TOP OF FOOTING ELEVATION
FTG	FOOTING	TOS	TOP OF STEEL ELEVATION
FS	FOOTING STEP, FAR SIDE	TYP	TYPICAL
GA	GAUGE, GAGE	UON	UNLESS OTHERWISE NOTED
GALV	GALVANIZED	VERT	VERTICAL, VERTICALLY
HK	HOOK	W/	WITH
HORZ	HORIZONTAL, HORIZONTALLY	WP	WORK POINT
INT	INTERIOR	WS	WATERSTOP
JST	JOIST(S)	WWF	WELDED WIRE FABRIC
LB	POUND(S)		



101 SOUTH SPRING ST
LITTLE ROCK AR 72201
TELEPHONE 501-372-2900
FACSIMILE 501-372-0482

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PROJECT TITLE
REPAIR & RENOVATE MED. CLINIC PH IV A
LITTLE ROCK AIR FORCE BASE
JACKSONVILLE, ARKANSAS

STRUCTURAL GENERAL NOTES

DRAWN BY SLB	LEAD DESIGNER JCJ
TECH REVIEWER JTW	PROJECT NUMBER NKAK 06-8006 4
DESIGNED BY JCJ	SHEET S-001
DATE 13 MAY 2009	
SCALE AS SHOWN	22 OF 51