

GENERAL NOTES

1. CONCRETE:
 - A. ALL CONCRETE SHOULD HAVE STONE AGGREGATE (NORMAL WEIGHT). 28-DAY COMPRESSIVE STRENGTH (f'_c) SHOULD BE 3,000 PSI MINIMUM FOR CAST-IN-PLACE CONCRETE.
 - B. REINFORCING BARS SHOULD BE MILD STEEL WITH A MINIMUM YIELD STRENGTH OF 60 KSI.
 - C. REINFORCING BAR PROTECTION:
 1. CONCRETE PLACED AGAINST EARTH - 3"
 2. CONCRETE PLACED IN FORMS - 1-1/2"
 - D. REINFORCING BAR PLACEMENT TOLERANCE IS 1/2" IN ANY DIRECTION.
 - E. SPLICING OF REINFORCEMENT IS NOT PERMITTED EXCEPT AS SHOWN ON THE DRAWINGS. BARS SHOULD BE LAP SPLICED AT ALL CORNERS. SPLICE LENGTHS AS FOLLOWS:
 1. #4 BARS - 24"
 2. #5 BARS - 30"
 - F. WELDED WIRE REINFORCEMENT: LAP ONE AND ONE-HALF MESH SPACES AT SPLICES AND WIRE IN CONTACT.
 - G. FIELD WELDING OF REINFORCEMENT SHOULD NOT BE PERMITTED.
 - H. ALL REINFORCING BAR BENDS SHOULD BE MADE MECHANICALLY. HEAT-BENDING SHOULD NOT BE PERMITTED.
2. MASONRY:
 - A. MASONRY SHOULD HAVE SPECIFIED COMPRESSIVE STRENGTH (f'_m) OF 1,500 PSI AT MINIMUM 28-DAYS.
 - B. MORTAR SHOULD BE TYPE M OR S PER ASTM C270-97.
 - C. REINFORCING BARS SHOULD BE MILD STEEL WITH A MINIMUM YIELD STRENGTH OF 60 KSI.
 - D. REINFORCING BAR PLACEMENT TOLERANCE IS 1/2" IN ANY DIRECTION.
 - E. SPLICING OF REINFORCEMENT SHOULD NOT BE PERMITTED EXCEPT AS SHOWN ON THE DRAWINGS. SPLICE LENGTHS AS FOLLOWS:
 1. #4 BARS - 24"
 2. #5 BARS - 30"
 3. #6 BARS - 36"
3. WOOD:
 - A. FRAMING LUMBER TO HAVE MODULUS OF ELASTICITY = 1,200,000 PSI MIN. AND $F = 850$ PSI MIN. FOR NORMAL DURATION LOADING. EXAMPLES OF ACCEPTABLE GRADE AND SPECIES OF FRAMING LUMBER INCLUDE #2 AND BETTER SOUTHERN PINE, DOUGLAS FIR, HEM-FIR, AND SPRUCE-PINE-FIR.
 - B. PLYWOOD SHOULD BE RATED SHEATHING SPAN RATING 32/16, MIN. 23/32 THICKNESS.
 - C. ALL WOOD SILL PLATES SHOULD BE PRESSURE-PRESERVATIVE TREATED FOR ABOVE GROUND CONTACT USE.
 - D. NAILS SHOULD BE COMMON WIRE NAILS.
4. COLD-FORMED (LIGHT GAUGE) SHEATHING:
 - A. YIELD STRENGTH FOR METAL IS 36 KSI MINIMUM.
 - B. ALL METAL SHOULD BE G60 GALVANIZED BY THE MANUFACTURER (ONLY FOR SAFE ROOMS IN HURRICANE-PRONE REGIONS).
 - C. THE CONTRACTOR SHOULD VERIFY AND COORDINATE ALL DIMENSIONS AND QUANTITIES PRIOR TO STARTING CONSTRUCTION.
6. THE CONSTRUCTION DRAWINGS SHOULD NOT BE SCALED. DIMENSIONS APPLY.
7. IF THERE IS A CONFLICT AMONG THE GENERAL NOTES, SPECIFICATIONS, AND PLANS, THE ORDER OF PRECEDENCE IS NOTES, THEN SPECIFICATIONS, THEN PLANS.

8. THE CONSTRUCTION DRAWINGS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ALL MEASURES NECESSARY TO ENSURE THAT THE STRUCTURE IS PROTECTED DURING CONSTRUCTION. THESE MEASURES INCLUDE (BUT ARE NOT LIMITED TO) SHORING AND BRACING FOR CONSTRUCTION LOADS AND WORKER SAFETY PURPOSES.
9. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR NAILING REQUIREMENTS OF UPLIFT/SHEAR RESISTANCE CONNECTORS.
10. ALL PLYWOOD JOINTS SHOULD BE SOLIDLY BLOCKED W/2X4'S
11. WALL & CEILING PENETRATIONS THROUGH THE MISSILE PROTECTION SHEATHING SHOULD BE MINIMIZED
12. CONDUITS & OTHER VERTICAL RUNS IN WALLS SHOULD BE COLLECTED AND RUN IN THE CHASE.
13. DO NOT DRILL THROUGH WALL STUDS OR TOP AND BOTTOM PLATES FOR PLUMBING SUPPLY LINES OR VENTS. INSTALL ALL PLUMBING SUPPLY LINES AND VENTS IN PLUMBING CHASE.
15. VENTILATION IS TO BE PROVIDED IN ACCORDANCE WITH THE LOCAL BUILDING CODE. VENTILATION MAY BE EITHER NATURAL OR MECHANICAL SUCH THAT MINIMUM VENTILATION IS 0.5 AIR CHANGES / HOUR.
16. THE DESIGNS SHOWN ARE COMPLIANT WITH THE 1997 NEHRP RECOMMENDED PROVISIONS.
17. TO ENSURE THE SAFE ROOM PROVIDES THE DESIRED LEVEL OF PROTECTION, A PROFESSIONAL ENGINEER OR ARCHITECT SHOULD BE CONSULTED FOR ANY DESIGN CONDITIONS FOUND TO BE DIFFERENT FROM THOSE REPRESENTED BY THESE PLANS.
18. SEE SHEETS 17 AND 18 OF 18 FOR THE MATERIALS LIST FOR EACH SAFE ROOM.
19. TO OBTAIN AN EQUIVALENT LEVEL OF PROTECTION, SAFE ROOM DESIGNS NOT MEETING THE SPECIFIC REQUIREMENTS OF THE DESIGNS IN THESE PLANS SHOULD BE DESIGNED TO MEET THE FEMA SAFE ROOM CRITERIA SET FORTH IN FEMA 361 "DESIGN AND CONSTRUCTION GUIDANCE FOR COMMUNITY SAFE ROOMS."
20. THE DOORS SHOWN IN THESE PLANS WERE LABORATORY-TESTED FOR DEBRIS IMPACT FOR DOOR WIDTHS FROM 2'-6" TO 3'-0". DHS STRONGLY ENCOURAGES INDIVIDUALS TO USE A MINIMUM DOOR WIDTH OF 2'-8" FOR WHEELCHAIR ACCESS.
21. FOR ALL CONSTRUCTION, USE ONLY UNITED STATES MANUFACTURED SCREWS AND HARDWARE AS THERE HAVE BEEN HIGH RECORDED FAILURE RATES OF SCREWS AND HARDWARE IMPORTED FROM OTHER COUNTRIES.


DESIGN BASIS

1. LIVE LOADS USED IN DESIGN:
 - A. WIND PRESSURES DEVELOPED FROM 250-MPH 3-SEC. GUST IN ACCORDANCE THE WIND LOAD CALCULATION PROCEDURE IN ASCE7-05, SECTION 6.5 METHOD 2-ANALYTICAL METHOD AS MODIFIED BY FEMA 361, CHAPTER 3 FOR SAFE ROOM DESIGN AND LIFE-SAFETY PROTECTION.
 - B. WINDBORNE DEBRIS (MISSILE) IMPACT LOADS CREATED BY A 15-LB 2X4 TRAVELING HORIZONTALLY AT 100 MPH, TRAVELING VERTICALLY AT 67 MPH, AND IMPACTING NORMAL TO WALL SURFACE.
2. SOIL BEARING CAPACITY OF 2,000 PSF MIN. HAS BEEN ASSUMED.

ABBREVIATIONS

A.B.	ANCHOR BOLT
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
DBL.	DOUBLE
DIA	DIAMETER
E.W.	EACH WAY
GA.	GAUGE
GYP	GYPSONUM
ICF	INSULATING CONCRETE FORMS
KSI	THOUSAND LBS PER SQUARE INCH
MAX	MAXIMUM
M.H.	MANHOLE
MIN.	MINIMUM
N.T.S	NOT TO SCALE
O.C.	ON CENTER
P.T.	PRESSURE TREATED
REQD.	REQUIRED
S.F.	SQUARE FOOT
SYP	SOUTHERN YELLOW PINE
TYP	TYPICAL
WWF	WELDED WIRE FABRIC
W/	WITH

GENERAL NOTES	
DRAWING NO: G-01	SHEET 2 OF 18
DATE: OCTOBER 1998	
REVISED: AUGUST 2008	REV. NO. 2



FEMA