***Return Bid To:***
**MARSHALL COUNTY**
**ENGINEERING DEPARTMENT**
**424 BLOUNT AVENUE SUITE 305**
**GUNTERSVILLE, AL 35976**
**(256) 571-7712**

**BID NO: 48 - 22**

**BID OPENING DATE & TIME: MONDAY, DECEMBER 12, 2022 - 2:00 P.M.**

**LOCATION:** ROOM A319 - COMMISSION CHAMBERS - 3RD FLOOR - MARSHALL COUNTY COURTHOUSE - GUNTERSVILLE, AL

# *INVITATION FOR BIDS*
# *FOR SAFE ROOM AT WATERFRONT GROCERY*
# *DISTRICT 2*
# *MARSHALL COUNTY, AL*

**CONTRACTOR RESPONSE:**

**CONTRACTOR NAME:** _____

**CONTRACTOR ADDRESS:** _____

_____

**TELEPHONE NO.** _____

**EMAIL:** _____

**ALABAMA GENERAL CONTRACTOR LICENSE NO.** _____

**COST PER ITEM REQUESTED:**

**BID FOR SAFE ROOM/SHELTER:** _____
(Including foundation, delivery, and setting)

**BID FOR GENERATOR W/COVER:** _____
(7.5 kw-LP/NG Generac or equivalent that can run for at least 24 hours without refueling)

**CONTRACTOR RESPONSE:**
I hereby agree to furnish the above named items on or by the dates requested and hereby certify that all specifications set above will be met.

_____ _____
Authorized Representative Typed or Written Name

# COMMUNITY SAFE ROOM DESIGN CRITERIA

I. GENERAL

A. Work included: Provide a 10' x 48', above ground, pre-engineered, pre-manufactured, 1/4" steel plate material tornado Safe Room with rolled rounded roof and ceiling, installed on a monolithic concrete foundation system with #4 rebar reinforcements on an 18" grid and shall include a vapor barrier, as needed for a complete and proper installation.

1. Performance criteria for tornado and hurricane Safe Rooms will be built on the design criteria in FEMA P-361 Fourth Edition/April 2021 publication and the manuals and publications listed therein, and the ASCE 7-05.
2. FEMA 361 manual and ASCE 7-05 present the information necessary for the computation of wind pressures and the loads imposed by winds on the walls, roof, windows, and doors of a Safe Room area. The walls, ceiling, floor, foundation, and all connections joining these elements will be designed to resist the pressures and loads calculated from the design wind speed without localized element failure and without separating from one another.
3. The entire Safe Room structure must resist failure from wind pressures and debris impacts. For community Safe Rooms, the structural elements and the building envelope must be designed to resist wind-induced loads as well as impacts from debris.

B. Submittals

1. Product data: Contractor will submit the following in accordance with the "Qualifications for Safe Room Design" acceptance:
   a. Manufacturer's specifications and other data needed to prove compliance with the specified requirements of FEMA 361, ASCE 7-05.
   b. Show drawings in sufficient detail of fabrication, installation, and anchorage;
   c. Manufacturer's recommended installation procedures;
   d. Layouts of foundation and anchor bolt specifications;
   e. Paint and coatings;
   f. Ventilation, providing a minimum of 15 cu. ft. per person per minute;
   g. Door(s) and door frame(s). This Safe Room shall have a total of two (2) handicap accessible entryways with the door opening to the outside having a 2" overlap and 1" hinge and lock materials.
2. Definitions
   a. Building Width: Measured from outside to outside of sidewall frame.
   b. Building Length: Measured from outside to outside of end wall frame.
   c. Building Height: Measured from the intersection of the top of the roof framing to the top of the concrete floor slab.

II. DESIGN REQUIREMENTS

A. Design structural systems according to professionally recognized methods and standards, and legally adopted building codes.

B. Design under supervision of Professional Engineer licensed in Alabama.

C. The approved design by the Professional Engineer will include the foundation/floor slab design as well as the Safe Room itself.

III. PERFORMANCE CRITERIA

A. Resistance to loads from wind pressure for Safe Rooms

1. Wind pressures are to be determined using ASCE 7-05 Minimum Design Loads for Buildings and Other Structures (or revisions to this standard). Pressures for the Main Wind Force Resisting System (MWFRS) are to be used for the walls, ceiling, structural attachments and foundation system. Pressures for Components and Cladding are to be used for the door and other attachments to the exterior of the Safe Room. For computing wind pressures to be used as a service load, the wind velocity (V) shall be minimum of 250 mph (3-second peak gust).
2. The Safe Room walls, ceiling and floor will withstand design pressures such that no element shall separate from another (such as walls to floor, ceiling to walls). Such separation shall constitute a failure of the Safe Room.
3. The entire Safe Room structure must resist failure from overturning, shear (sliding), and uplift from design pressures.
4. The Allowable Stress Design (ASD) method shall be used for the Safe Room design for any of the construction materials selected. Unfactored load combinations shall be used in accordance with ASCE 7-05 for allowable stress design. Because of the extreme nature of this design wind speed, other environmental loads, such as flood or earthquake loads, should not be added.
5. No importance factor shall be added to the pressure calculations because the extreme nature of the design event already accounts for critical nature of the Safe Room. Therefore, the importance factor (1) used in the design computations shall equal one. The internal gust coefficient ($GC_{Pi}$) shall be for buildings with no openings.
6. In the event that the roof of the Safe Room is exposed at grade, the roof of the Safe Room shall be able to resist wind pressures as determined in sections 1(a) through (e).

B. Windborne Missile Impact Resistance on Safe Room Walls and Ceiling.

1. Loads from windborne missile impacts must be considered. For design purposes, it is assumed that the design wind speed of 250 mph propels a 15-lb. missile horizontally at 100 mph. The design missile is a nominal 2x4 wood board, 12 feet long, weighing 15 lbs., striking the Safe Room enclosure on end 90° to the surface. The vertical missile design speed is 2/3 of the horizontal speed, or 67 mph.
2. The walls and ceiling of a Safe Room must resist perforation by the design missile such that the missile does not perforate the inside most surface of the Safe Room. Only Safe Room wall openings used for access are permitted. Windows, skylights, or other similar openings shall not be used unless they have been laboratory tested to meet the missile impact criteria of section 2(a). Note: The Wind Engineering Research Center at Texas Tech University has tested numerous materials and material combinations and should be contacted regarding performance of those materials.

C. Other Loads

1. The designer should assess whether an adjacent structure is a liability to the Safe Room; that is, if it poses a threat to the Safe Room from collapse. If the adjacent structure is deemed a liability, the loads imposed upon the Safe Room due to the

collapse of this adjacent structure shall be considered as an additional impact load on the Safe Room.

D. Safe Room Access Door(s) and Door Frame(s)
   1. The Safe Room entry door(s) and frame(s) shall resist the design wind pressures for components and cladding of this criteria and the missile impact loads of FEMA 361. Only doors and their frames that can resist calculated design wind pressures and are constructed of materials tested and passed by Texas Tech WISE Research Center for missile impacts are acceptable. All doors shall have sufficient points of connection to their frame to resist design wind pressure and impact loads. Unless specifically designed for, each door shall be attached to their frame with a minimum six points of connection. Note: See the design specifications and details for Safe Room doors in FEMA 361 publication for additional guidance. Door designs and materials of construction included in FEMA 361 publication were developed through calculations and laboratory testing at Texas Tech University.
   2. The doorway shall provide a minimum clear opening width of 32" for wheelchair accessibility. The transition from the concrete sidewalk into the Safe Room must not exceed 1/4" vertical rise. If a threshold is provided, it must be wheelchair accessible.

E. Safe Room Ventilation (FEMA 361)
   1. Forced air ventilation for the Safe Room shall be provided. A protective shroud or cowling, meeting the missile impact requirements of FEMA 361, must protect any ventilation openings in the Safe Room and have interior baffles to prevent debris intake. The ventilation system must be capable of providing the minimum number of air changes for the Safe Room's occupancy rating of 15 cubic feet per person per minute and have interior louvers to prevent insects from entering when not in use.
   2. All mechanical, electrical and other equipment providing this ventilation must be protected to the same standard as the Safe Room.

F. Emergency Lighting and Lighted Exit Signs
   1. Emergency lighting shall be provided for this Safe Room.
   2. A lighted EXIT sign shall be installed over each door.

G. Safe Room Accessibility
   1. The needs of persons with disabilities requiring Safe Room space must be considered, and the appropriate access for such persons must be provided in accordance with the Americans with Disabilities Act (ADA). Entrance ramps, doors, aisles, restrooms and restroom or water fixtures must be handicap accessible.

H. Submittals
   1. Design data: Provide detailed Design Criteria and Calculations. Design shall be certified by a Professional Engineer who is licensed in the State of Alabama.
   2. Certification: Manufacturer certification that the building conforms to the contract documents and manufacturer's standard design procedures.
   3. Shop Drawings: Show building layout, primary and secondary framing member sizes and location, cross-section, and product and connection details.
   4. Product Data: Information on manufactured products to be incorporated into the project.
   5. Color: White

6. Anchor Bolt Drawings: Layouts with bolt diameters.
7. Anchor Rod System (Bolt Pull Test) Data: Testing data by an Independent Laboratory on pull strength of anchor bolts in foundation.
8. Emergency Back-Up Generator: If a generator is used, it must have a protective housing. The housing should be designed and manufactured using like materials as the Safe Room and be certified by an Alabama PE.

IV. PRODUCT

A. Safe Room shall be a pre-manufactured above-ground 1/4" steel plate, with rolled rounded roof and ceiling.
   1. For purposes of this project the Safe Room shall consist of a steel enclosure that is permanently attached to a concrete slab/foundation. The slab/foundation system and its reinforcement are to be designed as part of the Safe Room by the manufacturer's structural engineer.
      a. The manufacturer will be responsible for preparation of the subgrade as required to accommodate the foundation system and set the floor elevation of the Safe Room as indicated or required to provide wheelchair access and positive drainage away from the Safe Room.

B. Metal Materials
   1. Select materials and material yield strengths based on building design requirements:
   2. Shop Coat: Sandblasted, primed and painted white inside and outside.
      a. This above-ground Safe Room, if berming is optioned, requires an additional asphalt or tar-based coating on the outside lower 40" of the sidewalls, as an approved means of protection from corrosion and also a detail showing how water will be prevented from entering the Safe Room.

C. Framing Components
   1. Primary Framing: Provide a welded steel frame as required to meet the design criteria.
   2. The frame shall be anchored to a cast-in-place concrete monolithic slab/foundation system that is reinforced as required by the manufacturer's design engineer.

D. Roof and Wall Panel Components
   1. Steel walls, rounded roof panels, doors and ventilation guards shall be constructed of 1/4" thick steel materials, which have been tested and passed by Texas Tech WISE Research Center, to meet the design criteria.
   2. Panel construction shall form a weather-tight barrier and shall be attached to the primary framework as required by the design engineer.

E. Door(s) and Door Hardware
   1. The door(s) shall have an additional dead bolt lock that is key operated for security.
   2. The door(s) shall be operable with a minimum of force. Latches shall be operated with level type handles that comply with the ADAAG. The door(s) shall swing out and have a 2" minimum overlap and 1" hinge and lock materials.
   3. The doorway(s) shall provide a minimum clear opening of 32" for wheelchair access.
   4. The threshold shall comply with the ADAAG for wheelchair accessibility.

V. EXECUTION

A. Examination

1. Verify that the size accommodates the number of occupants stated.
2. Verify that the foundation complies with the Design Criteria and is installed correctly.
3. Verify that the anchor system hold down plates and/or bolts/rods have been tested and are the indicated size and installed as specified on the anchoring system shop drawings.

B. Erection/Installation

1. Erect or install building system in accordance with manufacturer's instructions, engineer's drawings, and other documents.
2. Make sure the entire building system works as required by engineer's recommendations and specifications.

## QUALIFICATIONS FOR SAFE ROOM DESIGN ACCEPTANCE

The qualified vendor must be able to accomplish the following tasks with the construction and placement of the Community Safe Room at Waterfront Grocery.

1. Deliver and install one (1) or more above-ground, 10' x 48', pre-engineered, pre-manufactured, modular 1/4" steel plate material Safe Room with rolled rounded roof and ceiling, including an 7.5 KW (natural gas or propane) emergency generator, that can run at least 24 hours without refueling, with an additional protective housing, which complies with FEMA 361 Second Edition/August 2008 Community Safe Room Design Criteria and is certified by an Alabama Licensed Professional Engineer.

2. Vendor must submit with his bid proposal the drawings and specifications by the same PE for the Safe Room and the foundation, including Wind Analysis and Impact Calculations for an above-ground Community Storm Safe Room, prepared in accordance with referenced design standards in ANSI/ASCE 7-05 - Wind Loads, and FEMA 361. Drawings, specifications, and Wind Analysis/Impact Calculations must be certified with an Alabama Licensed Professional Engineer's Seal of Approval for both the Safe Room and the foundation. Documentation of testing performed by an independent testing laboratory on the anchoring system used to secure the Safe Room to the foundation shall be submitted as certification of compliance.

3. This Safe Room installation shall be a 10' x 48', with rolled rounded roof and ceiling, and be constructed of 1/4" solid steel plate materials with two (2), six (6) point locking door(s), with one (1) being a keyed lock for security. Door(s) must be fully handicap accessible. Safe Room shall have a minimum 3"x 3" angle frame ribbing on 48" centers, 3/8" x 4" x 4" angle anchor frame using 3/4" anchor bolts a minimum of eight (8) inches in length with bolt holes on 24" center. Safe Room/Shelter hull to be anchored directly to concrete foundation and grounded, using materials required as stated in anchoring system.

4. The Safe Room/Shelter shall have a single 16" in depth seat down both sides and normally a double row 22" in depth seat in the center, maintaining wheelchair passable space. Seats and brackets are to be constructed of at least 3/16" steel material.

5. Vendor will provide breaker box mounting brackets, with a welded receptacle box for light and switch installations, mounting brackets for fluorescent lights and emergency lighting. Vendor shall provide a lighted EXIT sign with emergency light over each door. Safe Room must be grounded at multiple locations, including the center row of seats, w/copper wire and grounding rods to meet national and local electric code requirements.

6. Vendor must provide a powered forced air ventilation system to provide a minimum of 15 cubic feet of fresh air per person per minute. All ventilation system exterior intake/exhaust ducts must have a protective shroud or cowling that meets the same missile impact requirements as the Safe Room. Intake and exhaust ducts must have interior baffles to prevent debris from entering into Safe Room.

7. Safe Room shall be sandblasted, primed and painted inside and outside white. An additional protective coating of asphalt-based material to be rolled on or sprayed on the lower 40 inches of the exterior Safe Room sidewalls if the Safe Room is to be bermed.

8. Vendor will provide a monolithic concrete foundation with #4 rebar reinforcements on an 18" grid, and shall include a vapor barrier. Purchaser may provide the concrete for the foundation as "in-kind" services. Vendor will form and finish concrete.

9. Vendor will provide Safe Room transportation to the site.

10. Vendor will supply crane services. For safety reasons, only a Professional Crane Service Company and operator may be used for off-loading of the Safe Room.

11. If a generator is included in the bid request, an 7.5KW NG/LP generator, that can run at least 24 hours without refueling, transfer switch and additional generator protective covering will be provided by vendor. A generator must have a protective cover made from like materials and protected the same as the Safe Room. The protective generator covering must have Wind Analysis/Impact Calculations certification with an Alabama Licensed Professional Engineer's Seal of Approval and be in compliance with FEMA 361 Specifications.

12. Vendor will make appropriate discount allowances for any "in-kind" work/services that may be provided by purchaser. Any discount allowances will be in accordance with the itemized bid costings.

13. If the project involves "in-kind" work by the purchaser that could cause delays in the completion of the job, payment to the vendor will not be delayed. If the bid includes more than one unit, a purchase order or contract will be issued for each unit.

## SPECIAL INSTRUCTIONS

(1) The contractor shall fill in all required blanks on the bid pricing form included herein.

(2) A bid bond in the amount of 5% of the total bid cost shall be included with each bid submitted, but not to exceed $10,000.00.

(3) A performance bond and payment bond each in the amount of 100% of the total bid price will be required within fifteen (15) calendar days of the notice of award.

(4) Contractor shall submit with bid a copy of a certificate of insurance ($1.0 million minimum) and workman's compensation.

(5) The successful bidder shall begin work at least 15 calendar days after date of notice to proceed.

All work shall be completed within 120 calendar days from the date of notice to proceed.

(6) The Contractor shall include in his/her bid price the cost for all materials, labor, equipment, and incidentals necessary for the work to be completed in-place.

(7) Payment will be made on a monthly basis for work completed. There will be retained five (5) percent of the amount of the work done and will be held until completion of all work and final acceptance by the Marshall County Commission. No further retainage will be held after 50 percent of work completed.

Upon completion of all work, the contractor must give notice of completion of the project by advertising in a local newspaper.

Advertisement must run for a period of four (4) consecutive weeks and provide the County with proof of advertising (affidavit) from the paper, and a release of lien.

Upon completion and acceptance of all work, final payment will be made.

(8) The Contractor shall indemnify and save harmless Marshall County, Marshall County Commission, the officers and employees from all suits, actions, or claims of any character brought because of any injuries or damages received by any person, persons, or property on account of the said Contractor, or through use of unacceptable materials in constructing the work; or because of any claims or amounts arising or recovered under the "Workman's Compensation Act" or any other law, ordinance, order or decree.

(9) It shall be the bidder's responsibility to possess all proper City, County, State, and Federal licenses and shall familiarize himself with and shall comply with all Federal, State, and local laws, ordinances, and regulations.

(10) By signing this contract, the contracting parties affirm, for the duration of the agreement that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

**Each bidder is required to submit with the bid a certificate of E-Verify.**

(11) Bids may be submitted either by mail or in person, however, Marshall County will not be responsible for the security of mailed bids. (Also, if mailing bid, please be advised that we do not receive mail before 10:00 A.M. daily, therefore mail early to ensure prompt arrival).

(12) By signing and submitting of this bid, the vendor certifies that he/she is an equal opportunity employer.

(13) Bidders are required to use this "Invitation For Bids". Bidders shall bid all items, sign, and return all sheets in the "Invitation For Bids" to ***Marshall County Engineering, 424 Blount Ave., Suite 305, Guntersville, AL 35976***. Failure to do so will be cause for rejection of bid.

(14) Each individual bid must be submitted in a sealed envelope with the word "BID" and name of item marked on outside of envelope, along with the contractor's license number. Bids need to be mailed to ***Marshall County Engineering Department, 424 Blount Ave., Suite 305, Guntersville, AL 35976***

**THE MARSHALL COUNTY COMMISSION RESERVES THE RIGHT TO ACCEPT AND/OR REJECT ANY AND/OR ALL BIDS.**

**JAMES HUTCHESON, CHAIRMAN**
**MARSHALL COUNTY COMMISSION**