

TEXAS DEPARTMENT OF PUBLIC SAFETY

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September 30, 2016

Mr. Cole McClendon
Sam Rayburn ISD Superintendent
9363 East FM 273
Ivanhoe, TX 75447

DUNS Number: 176042836

TINS Number: 751174872

FIPS Number: 147-1969A-OO

RE: Hazard Mitigation Grant Program, DR-4223, 2015 Memorial Day Floods
Catalog of Federal Domestic Assistance (CFDA) 97-039
FEMA Project Number: DR-4223-061
Project Title: Sam Rayburn ISD Community Safe Room
Period of Performance: September 16, 2016 to September 16, 2018

A Hazard Mitigation Grant Program subgrant has been awarded by Texas Division of Emergency Management (TDEM).

DR-4223-061						
Version I Amendment	Date	Total Subgrant Amount	Federal Cost Share Percentage	Federal Cost Share Amount	Local Cost Share Percentage	Local Cost Share Amount
o	9/10/2016	\$898,588		\$673,941	25%	\$224,647

This award is not for research or development as defined in 2 CFR 200.87.

A copy of the approved scope of work is attached. The terms and conditions of this award are also attached.

Signing and returning this award letter indicates subrecipient's acceptance of the scope of the subaward, the ability to pay the state match and all grant terms and conditions outlined in the attached documents.

Sam Rayburn

Acceptance of the subaward must be returned to TDEM before payment on the subaward can be processed.

EQUAL OPPORTUNITY EMPLOYER
COURTESY SERVICE • PROTECTION

ISD Subaward DR-4223-061 - Page 2

It is important that the subrecipient read, understand and comply with the scope and all terms and conditions. It is also vital that this information be disseminated to subrecipient's staff and contractors that are involved in work related to administrative support or administration of the subgrant.

If changes are needed to the scope of the subaward, period of performance or costs associated to the subaward, the subrecipient should immediately contact TDEM. No change will be considered approved to the subaward until the subrecipient is notified in writing by TDEM.

Please sign below to acknowledge acceptance of this subaward and agreement to abide by all terms and conditions.

Cole McClendon, Ed.D.

Superintendent

Designated Subrecipient Agent

10/21/16
Date

Should you wish to appeal any determination related to this subaward you must do so within 60 days of receipt of the notice of the action. You will need to provide your appeal with any documentation supporting your position to your assigned TDEM project officer within the allotted time.

If you have any questions please contact Christy King, Assistant Mitigation Officer at 512-424-7501 or email at christina.king@dps.texas.gov.

Sincerely,



W. Nim Kidd, CEM®

Chief

Texas Division of Emergency Management

Assistant Director

Texas Homeland Security

Texas Department of Public Safety

ATTACHMENTS: Grant Terms and Conditions
Scope of Work

Record of Environmental Considerations

COURTESY SERVICE PROTECTION

SAM RAYBURN ISD COMMUNITY SAFE ROOM CONSTRUCTION SCOPE OF WORK

Scope of Work

The Sam Rayburn Independent School District, the subrecipient for this Hazard Mitigation Grant Program (HMGP) application, is requesting funding to develop a Community Safe Room. This concrete structure will primarily be a disaster safe room for the students, staff, and nearby community of Sam Rayburn ISD. A secondary purpose will be a music and band hall for Sam Rayburn ISD.

The construction of the safe room will meet the Federal Emergency Management Agency's criteria for near-absolute protection from high wind events and tornadoes as well as the Texas Department of Emergency Management's (TDEM) requirements regarding a community safe room. It will comply with the requirement of FEMA P-361 and ICC-500, as well as local planning, zoning, building and all other applicable codes. The project will be ADA compliant and will be reviewed by a registered accessibility specialist as required by the State of Texas, prior to the beginning of construction. At completion of construction, the project will be inspected by a Registered Accessibility Specialist (RAS).

Sam Rayburn ISD participated in the Hazard Mitigation Action Plan (HMAP) for Fannin County. The Fannin County Multi-Jurisdictional Hazard Mitigation Plan was recently updated in 2014 and approved in 2015. The specific project to develop a safe room at Sam Rayburn ISD is identified in the mitigation section of the HMAP at page 193 of the Plan.

The project is cost effective, with a benefit-cost ration of 2.57 to 1. This new construction project does not adversely impact any environmental or historic resources on site or in the immediate project vicinity. In addition the project will not have an adverse impact on the quality of the human environment.

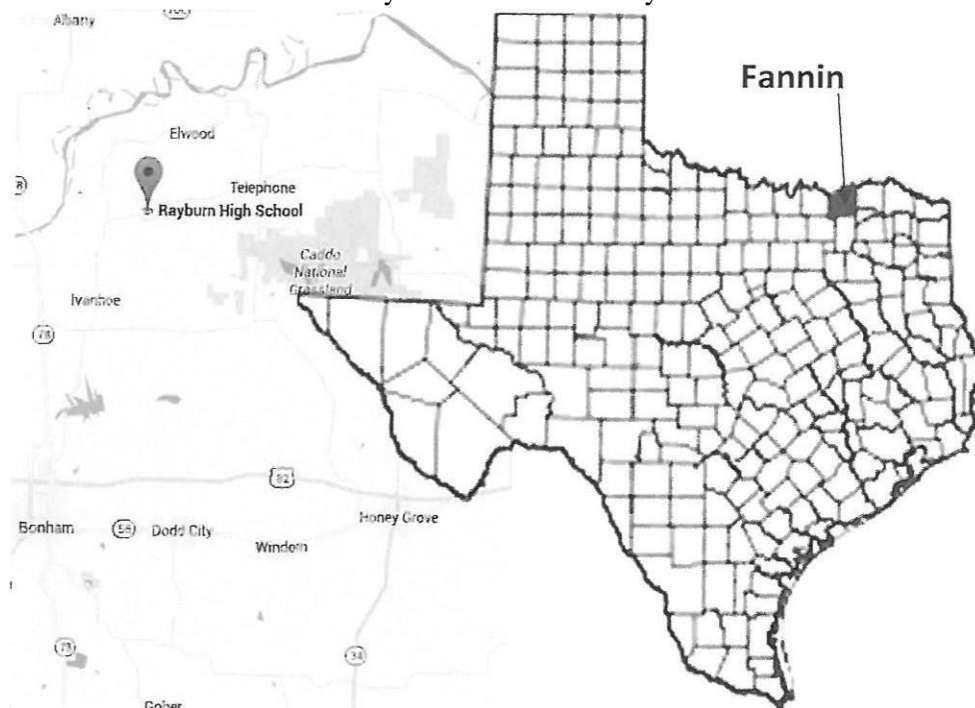
Project Specifications

Location

Sam Rayburn is an independent school district of Texas in northeast Fannin County serving the educational needs of approximately five hundred students from kindergarten through high school. While located in the rural town of Ivanhoe, the District is widely known in northeast Texas as a leader in technology, academics, and athletics. Both the Sam Rayburn Elementary School and the Sam Rayburn High School are located on the same property at 9636 East FM 273.

Figure 1. Map Location

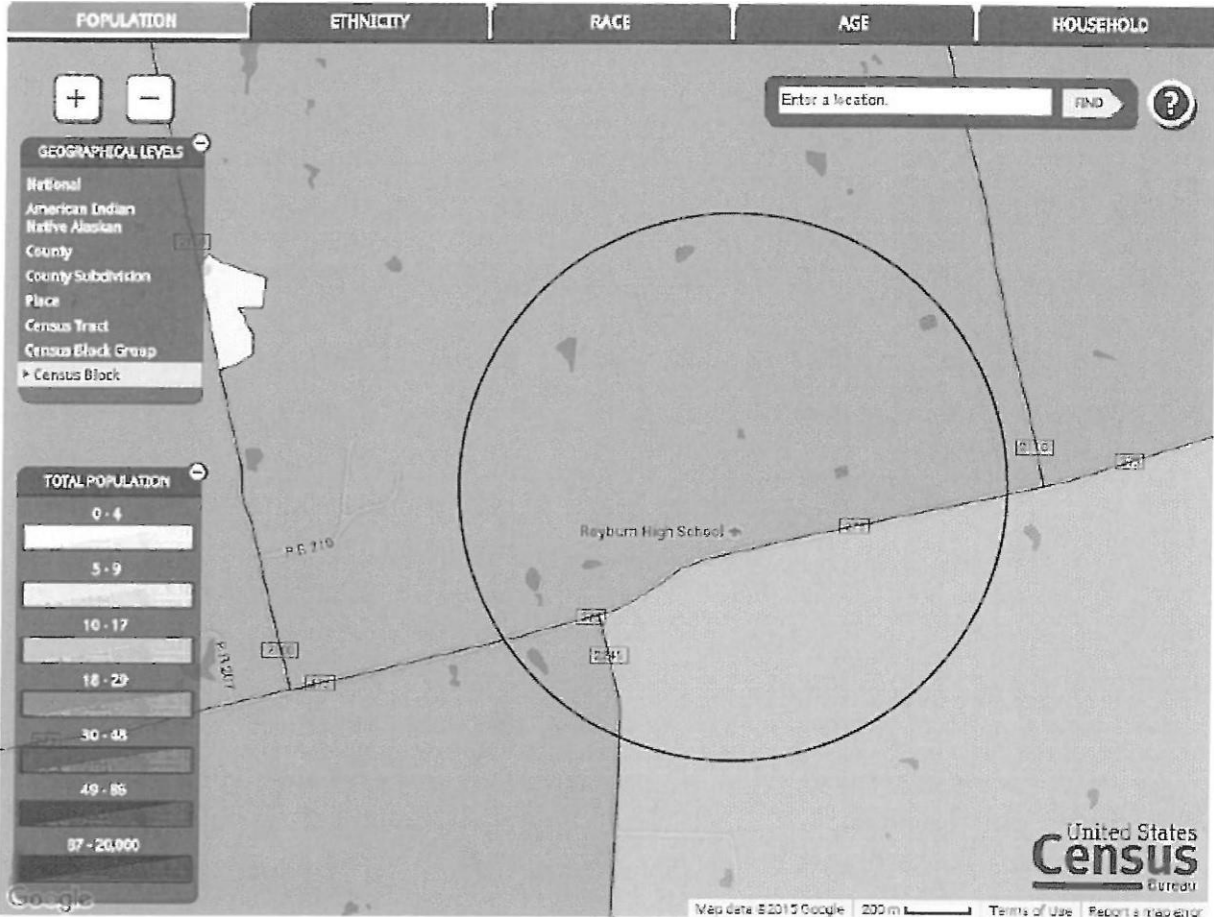
Sam Rayburn ISD Community Safe Room Construction SOW



The proposed project location for the construction of the community safe room is on the Sam Rayburn ISD campus at 9646 East FM 273, Ivanhoe, TX 75447 (coordinate are 33.769117, -96.104353; taken at the center of the proposed building). This allows for easy access from both the elementary school and the high school as well as access from the residences who are located within half a mile from the proposed project site. A map of the site and location of the proposed safe room can be found in Appendix A.

A half-mile radius circle was mapped to determine the population that is within the 0.5 mile radius and able to walk to the community safe room within 5 minutes, which can be seen in Figure 2. The Census Bureau confirms that there are 63 residents who live in the qualifying area; only 50 will be counted toward the safe room project as the remaining 13 residents are students/faculty/staff who are already counted in the school population. The population estimates can be found in Appendix D.

Figure 2. Half-Mile Radius



The Sam Rayburn ISD campus is not located within the flood plain. A FIRM-ette has been included and can be found in Appendix B. The campus location falls within the unshaded Zone X, meaning that this area is determined to be outside the 0.2% annual chance floodplain.

Design

The proposed project will be 3,664 square feet and constructed according to design standards specified in FEMA Safe Room publications, including FEMA P-361, Safe Rooms for Tornadoes and Hurricanes, Guidance for Community and Residential Safe Rooms (2015).

The proposed project offers "near absolute protection" from extreme wind events. Near absolute perfection means that the occupants of the safe room built accordance to FEMA P-361 guidance will have a very high probability of being protected from injury or death¹. The design provides protection from 250 MPH wind speeds.

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FEMA P-361, Safe Rooms for Tornadoes and Hurricanes, Guidance for Community and Residential Safe Rooms (2015)

Sam Rayburn ISD Community Safe Room Construction SOW

The 3,664 square foot safe room is almost entirely safe room area. A conservative estimate of usable area would be 3,015 square feet, as the secondary purpose of the space as a music and band hall would be movable, allowing available space for sheltering. It is estimated that the safe room will hold 600 people with the calculations of 597 standing at 5 square feet apiece, and 3 wheelchairs at 10 square feet apiece. Two ADA compliant water closets, a men's facility with one toilet and a women's with two toilets, are located along the wall on either side of the entrance that faces the parking and drive for a total of three toilets. The design of the proposed safe room can be found in Appendix A.

Environmental Impact & Cost-Effectiveness

The proposed construction will be on the Sam Rayburn ISD campus. The safe room will not adversely impact any environmental or historic resources on site or in the immediate project vicinity. In addition, the project will not have an adverse impact on the quality of the human environment.

Constructing the safe room on the Sam Rayburn ISD campus does not require additional land purchase, and provides life-safety protection for a large population that is concentrated at this location during the school day. A benefit-cost analysis has been conducted on this project, resulting in a benefit cost ratio of 2.57 to 1.

Operations and Maintenance

A Standard Operating Procedures (SOP) for the Operations and Maintenance of the dual-purpose community safe room located at Sam Rayburn ISD has been drafted. The focus of the SOP is to provide procedures for opening, managing, and closing down a community safe room in response to a tornado event. This draft SOP can be found in Appendix C.

The community safe room will be maintained by Sam Rayburn ISD. An annual project maintenance cost of \$1,000 will be funded from their budget.

Need for the Project

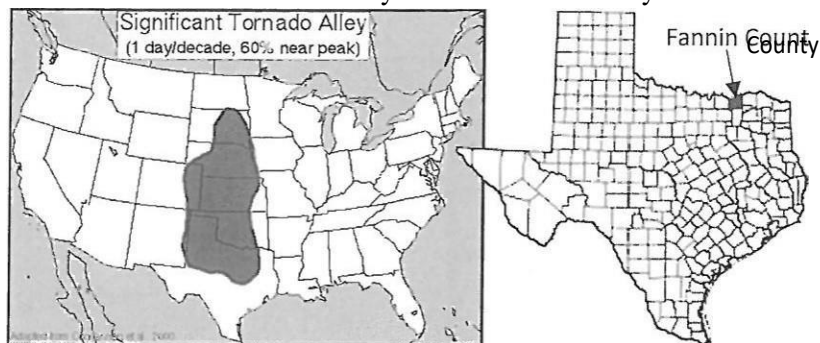
Currently, there is no safe room for the Sam Rayburn ISD student body, staff and community overall, yet the vulnerability for the area to tornado and high wind events is high. The potential severity of impact is considered substantial, and the probability of future events is highly likely.

'Tornado Alley' is a nickname given to an area in the southern plains of the central United States that consistently experiences a high frequency of tornadoes each year. Although the boundaries are debatable, the region from central Texas, northward to northern Iowa, and from Central Kansas and Nebraska east to western Ohio is often collectively known as 'Tornado Alley', and is ideally situated for the formation of supercell thunderstorms, often the producers of violent (EF2 or greater) tornados¹

Figure 3. 'Tornado Alley'

¹ NOAA – NCDC, "Tornado Alley," <http://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornadoclimatology/tornado-alley>

Sam Rayburn ISD Community Safe Room Construction SOW

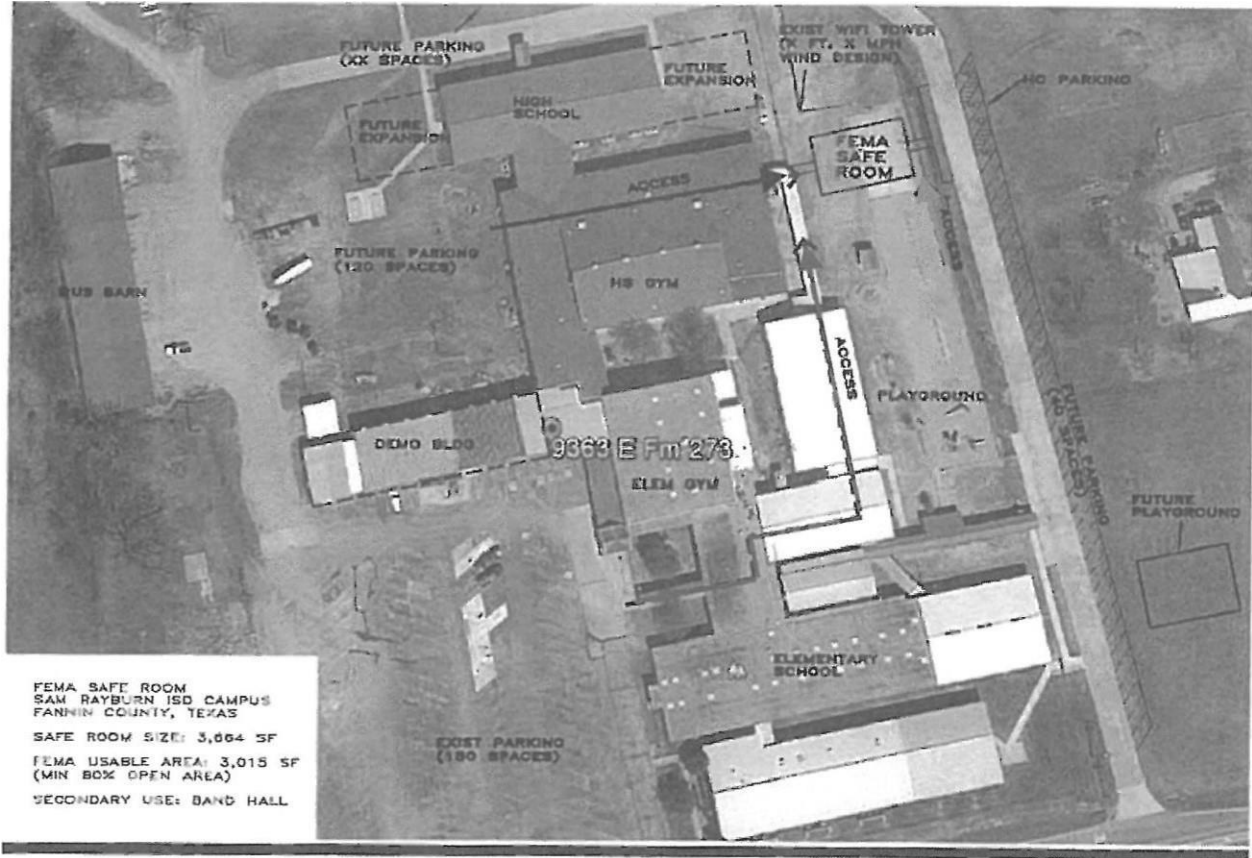


Fannin County is located within 'Tornado Alley' and the entire county is equally susceptible to tornado damage. Due to the county-wide probability of tornado, every structure has equal probability to be struck by an EFO tornado or higher. Fannin County has 47 documented tornado events recorded between the years 1955-2012. On January 17, 1996, the town of Ivanhoe was struck by an F2 tornado, causing 5 injuries and \$150K in damages.

Sam Rayburn ISD is the only ISD in Fannin County that is not located within a city limits, but is in a rural county area. Over 550 staff and students located at this location daily during the school year. Constructing a safe room at the Sam Rayburn ISD campus would provide life-safety protection for these students and staff. Enrollment records from the Elementary School as well as from the Junior High and Senior High School, along with an employee roster can be found in Appendix D.

Students and Staff from both the High School and the Elementary School will be able to access the safe room from one side. Citizens within the half-mile radius who would reach the safe room within the prescribed time limit after notification is made will be able to access the safe room from the other side. Figure 4 below shows the access routes from the schools, arrows colored in red and blue, as well as an access route for citizens coming from the surrounding area by an arrow colored in green.

Figure 4. Access to Safe Room



Alternatives Considered

Three alternatives were considered to provide safe room shelter to the communities during tornado storm events. The first is to construct a school safe room; the second is to provide county law enforcement and first responders with campus plans and incorporate them into emergency drills and exercise; the third is to take no action.

Alternative 1, the proposed action, includes the development and construction of a dual-purpose, community safe room at Sam Rayburn ISD, which will provide near absolute protection for students, faculty, and staff in addition to citizens that live within a half mile radius of the project location in the event of a tornado. The safe room will protect an area that is at high risk for tornado events and will withstand winds up to 250 MPH.

Alternative 2 is to incorporate the school into county emergency response drills and exercises. While this would assist in the response as the school would have a plan in the event of a tornado, this would not protect students, faculty, staff, and citizens from a high wind event.

Alternative 3 is the no action option. This means that no action would be taken to provide safe room shelter to the school and surrounding community during tornado and severe storm events. Alternative 3 would result in potential loss of life of students, staff, and residents, emergency medical service providers, and emergency management officials. This alternative continues to place the community at risk of tornado and high wind events.

Proposed Schedule

Sam Rayburn ISD Community Safe Room Construction SOW

SCHEDULE FOR THE SAM RAYBURN ISD DUAL PURPOSE COMMUNITY SAFE ROOM

Description Of Task	Starting Point	Unit Of Time	Duration	Unit Of Time	Work Complete By
Receive Grant Award Letter	1	MONTHS	1	MONTHS	Sam Rayburn ISD
Develop Quality Assurance Plan	1	MONTHS	3	MONTHS	Architect hired by Sam Rayburn ISD
Final Design of Plans & Specs ; Prepare Construction Documents	1	MONTHS	3	MONTHS	Architect hired by Sam Rayburn ISD
TDEM Receive Architect Stamped Plans	4	MONTHS	2	MONTHS	Sam Rayburn ISD will submit to TDEM
Obtain Building Permits	6	MONTHS		MONTHS	Sam Rayburn ISD
Provide Design for Building Inspection	6	MONTHS	1/2	MONTHS	Architect hired by Sam Rayburn ISD
Procurement for Construction	8	MONTHS	1	MONTHS	Sam Rayburn ISD
Site Work & Excavation; Pier Drilling; Grade Beam Placement; Underground Utility Work; Slab Placement	9	MONTHS	3	MONTHS	Architect hired by Sam Rayburn ISD
Perimeter and Interior Masonry Wall Construction; Composite Metal and Concrete Roof Deck Placed	12	MONTHS		MONTHS	Architect hired by Sam Rayburn ISD
Structural Steel Erection	13	MONTHS	1/2	MONTHS	Architect hired by Sam Ra burn ISD
Review & Acceptance of Operation & Maintenance Plan	13	MONTHS	3	MONTHS	Sam Rayburn ISD
Above Slab Electrical and Plumbing Starts	14	MONTHS	1	MONTHS	Sam Rayburn ISD and General Contractor
Drywall Construction Framed	14	MONTHS	1	MONTHS	Sam Rayburn ISD and General Contractor
Order & Installation of Signs	15	MONTHS		MONTHS	
HVAC Work Begins; Placement of Units & Ductwork; Roof System Installed	15	MONTHS	1	MONTHS	Sam Rayburn ISD and General Contractor

Sam Rayburn ISD Community Safe Room Construction SOW

Description Of Task	Starting Point	Unit Of Time	Duration	Unit Of Time	Work Complete By
Electrical Panels & Distribution	17	MONTHS		MONTHS	Sam Rayburn ISD and General Contractor
Complete Exterior Drainage & Install Plumbing	17	MONTHS		MONTHS	Sam Rayburn ISD and General Contractor
Project Close-Out Activities	19	MONTHS	5	MONTHS	
Estimated Total Duration of the Proposed Activity: 24 MONTHS					

Cost Estimate

The costs to complete the multi-purpose safe room structure for the Sam Rayburn ISD are as follows:

Professional Fees/Services & Expenses	\$137,795
Construction/Equipment/Furnishings	\$760,793

TOTAL \$898,588

BUDGET FOR THE SAM RAYBURN ISD DUAL PURPOSE COM	
Description	FEMA Eligible Costs
PROFESSIONAL FEES/SERVICES EXPENSES	
Topographical Survey	\$2,000
Geotechnical Investigation	\$7,500
Professional Fees	
• Irchitectural & Engineering Basic Services	\$91,295
o Civil Engineering	\$6,000
Construction Material Testing	\$12,000
Pre Award Costs	
• Ipplication Development	\$16,000
o Architectural Design	\$5,000
Subtotal Professional Fees/Services:	\$137,795
CONSTRUCTION/EQUIPMENT/FURNISHINGS	
Site Work & Building Costs	
• FEM! Safe Room & Site Cost	\$760,793
Subtotal Construction/Equipment/Furnishings:	\$760,793
Estima	

Sam Rayburn ISD Community Safe Room Construction SOW

A full line-item construction budget follows for the total site work and building cost of \$760,793.

Sam Rayburn ISD Community Safe Room Construction SOW

General Conditions	Area		Scheduled Value
Division 2- Site			
Site Work (per CM)	1,400	\$27	37,800
Utility Extension- water (per LF)	500	\$20	10,000
Utility Extension- sewer (per LF)	250	\$80	20,000
Division 3-Concrete			
Concrete (foundation)	4,000	28	112,000
Handicap Parking & Sidewalk	2,000	5	10,000
Concrete Reinforcement (roof)	4,000	6	23,600
Division 4-Masonry			
Masonry	4,000	32	128,000
Division 5-Metals			
Steel- Protective Yard	4,000	3	12,000
Steel- Joists/Deck/Embeds	4,000	13.75	55,000
Misc. Steel Anchors	4,000	1.25	5,000
Division 6-			
Joist-Mezzanine/wood joist	250	\$ 20	5,000
Division 7-Thermal			
Waterproofing			
Roof	4,000	\$ 1.77	7,080
	4,000	13.50	54,000
Division 8-Doors			
Doors- Interior		2.68	10,720
FEMA Doors		1,500	6,000
Division 9-Finishes			
Finishes / Drywall	290	\$ 90	26,100
Division 10-Specialities			
FEMA Grilles	4,000	3.16	12,640
Division 15-Mech/Plumbing			
Plumbing		4.70	18,800
HVAC	4,000	8	32,000
Division 16-Electrical			
Electrical	4,000	12.25	49,000
Electrical Extension (per LF)	500	\$ 20	10,000
Subtotal:			644,740
Performance Bond			23,000
Insurance			15,000
General Contractor			78,053
Subtotal'			1,160,533
Total FEMA Eligible Cost			760,793

