

Draft Environmental Assessment

**Construction and Hardening of the Welcome
Park Community Center and Safe Room
Project, West Bank of St. James Parish, LA**

St. James Parish, Louisiana
HMGP 1603-0365

FEMA-1603-DR-LA

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LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act of 1990, as Amended
APE	Area of Potential Effect
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute
ATS	Advanced Treatment System
BFE	Base Flood Elevation
BMP	Best Management Practices
CBRA	Coastal Barrier Resources Act of 1982
CBRS	Coastal Barrier Resources System
C-CAP	Coastal Change Analysis Program
CFR	Code of Federal Regulations
CUP	Coastal Use Permit
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972, as Amended
CY	Cubic Yards
DFE	Design Flood Elevation
DFIRM	Digital Flood Insurance Rate Map
EA	Environmental Assessment
EF	Enhanced Fujita Scale
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FEMA 361	FEMA's <i>Design and Construction Guidance for Community Safe Rooms, Second Edition</i>
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farm Protection Policy Act
GOHSEP	Governor's Office of Homeland Security and Emergency Preparedness
IBC	International Building Code
ICC	International Code Council® <i>ICC/NSSA Standard for the Design and Construction of Storm Shelters</i>
LA	Louisiana
LADOTD	Louisiana Department of Transportation and Development
LBLD	Lafourche Basin Levee District
LDEQ	Louisiana Department of Environmental Quality
LDEQ EDMS	LDEQ Electronic Document Management System
LDEQ LUST	LDEQ Leaking Underground Storage Tank Database
LDEQ VRP	LDEQ Voluntary Remediation Program Database
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LF	Linear Foot/Linear Feet
LPP	Low Pressure Pipe
LPDES	Louisiana Pollutant Discharge Elimination System
MHP	Miles per Hour

MSL	Mean Sea Level
MRR-2-09-1	FEMA’s Mitigation Interim Policy, “Hazard Mitigation Assistance for Safe Rooms”
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act of 1966, as Amended
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PVC	Polymerized Vinyl Chloride
RCP	Reinforced Concrete Pipe
R.S.	(Louisiana) Revised Statutes
SF	Square Foot/Square Feet
SHPO	State Historic Preservation Office/Officer
SONRIS	Strategic Online Natural Resources Information System
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
WSS	Web Soil Survey

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1.0 INTRODUCTION

1.1 Project Authority

Hurricane Katrina, a Category 4 hurricane with a storm surge above normal high tide levels, moved across the Louisiana, Mississippi and Alabama gulf coasts on August 29, 2005. Maximum sustained winds at landfall were estimated at 140 miles per hour (mph). President Bush declared a major disaster for the State of Louisiana due to damages from Hurricane Katrina and signed a disaster declaration (FEMA-1603-DR-LA) on August 29, 2005, authorizing the Department of Homeland Security's Federal Emergency Management Agency (FEMA) to provide federal assistance in designated areas of Louisiana. FEMA is administering this disaster assistance pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), PL 93-288, as amended. Section 404 of the Stafford Act authorizes FEMA's Hazard Mitigation Program to provide funds to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration.

In accordance with 44 Code of Federal Regulation (CFR) for FEMA, Subpart B – Agency Implementing Procedures, Section 10.9, an Environmental Assessment (EA) was prepared. The EA was prepared pursuant to Section 102 of the National Environmental Policy Act of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (40 CFR Parts 1500-1508). The EA determines if the proposed hardening of the to-be-constructed Welcome Park Community Center and the construction of interior tornado safe rooms within this structure on the West Bank of St. James Parish, Louisiana will have the potential for significant adverse effects on the quality of the human and natural environment. The results of this EA will be used to make a decision whether to initiate preparation of an Environmental Impact Statement (EIS) or to prepare a Finding of No Significant Impact (FONSI).

1.2 Project Location

St. James Parish is located in the central part of southeast Louisiana. It is approximately 165,760 acres (259 square miles), bordered to the east by St. John the Baptist Parish, to the south by Lafourche Parish, to the west by Assumption Parish, and to the north by Ascension Parish. The Town of St. James is located on the West Bank of the Mississippi River in St. James Parish. St. James Parish has approximately 21,056 people according to 2005-2009 estimated U.S. Census Bureau figures. The town of St. James is approximately 50 miles from New Orleans, Louisiana and 60 miles from Baton Rouge, Louisiana. The proposed project is located at 7248 Park Street, St. James, Louisiana (30.046556, -90.851331) (Figures 1, 2, and 3). The proposed project is located within Section 22, Township 12S, Range 16E.

Figure 1: Proposed Location in St. James Parish, Louisiana

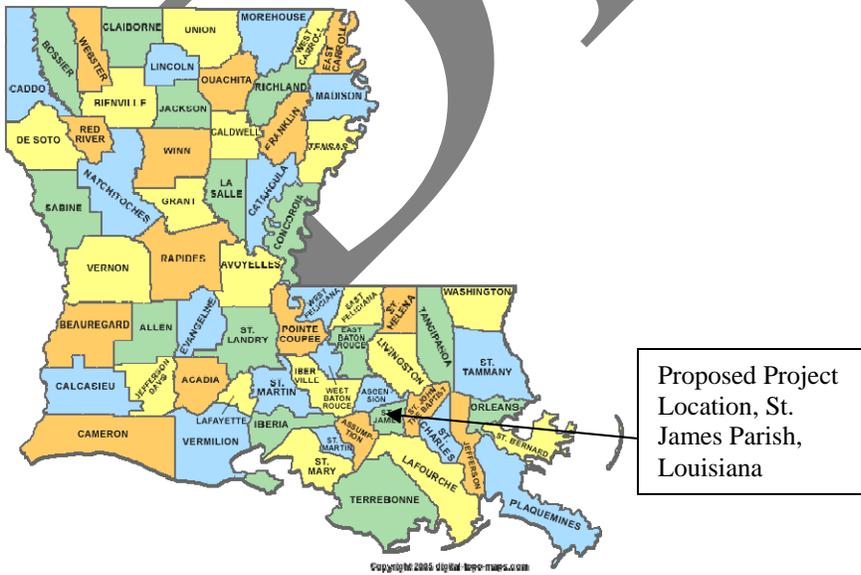


Figure 2: Proposed Project Location on the West Bank of St. James Parish

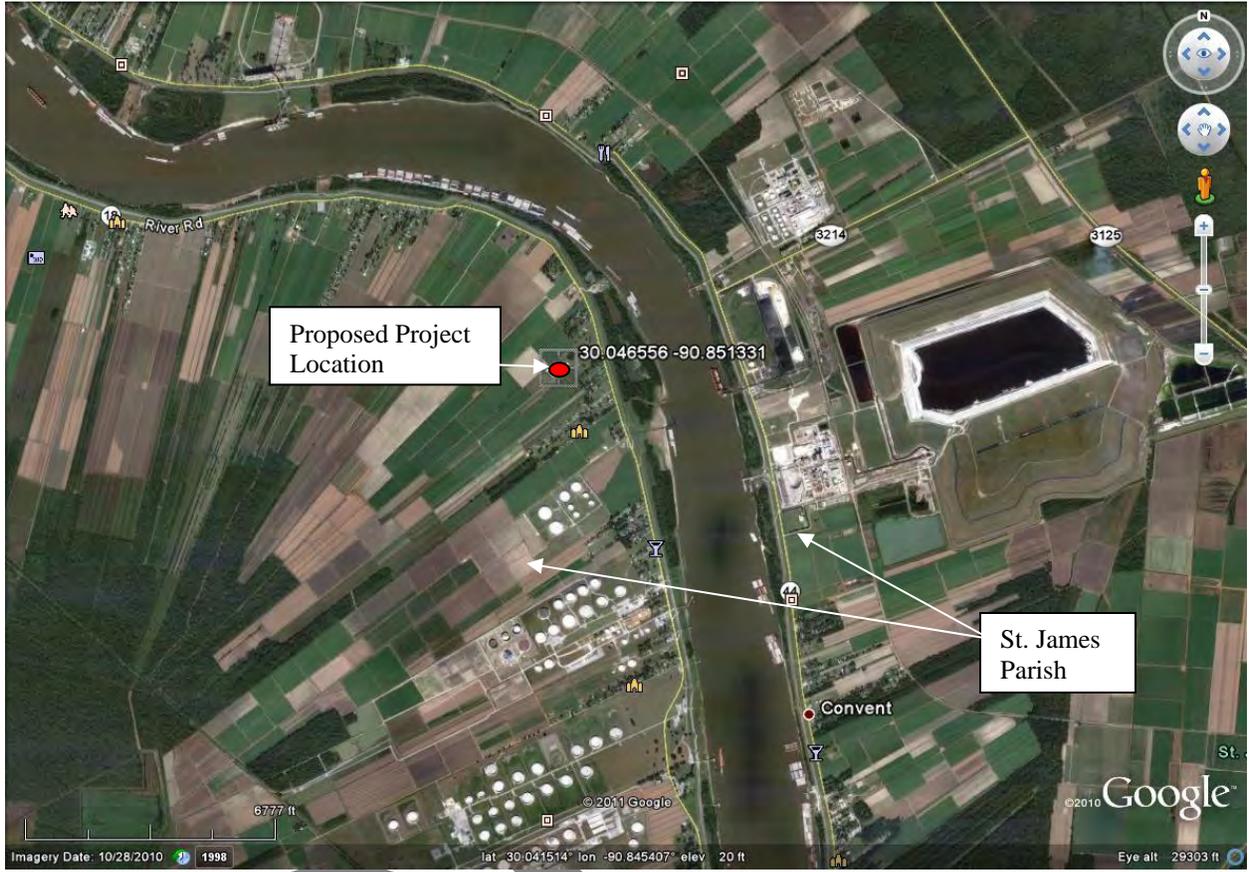
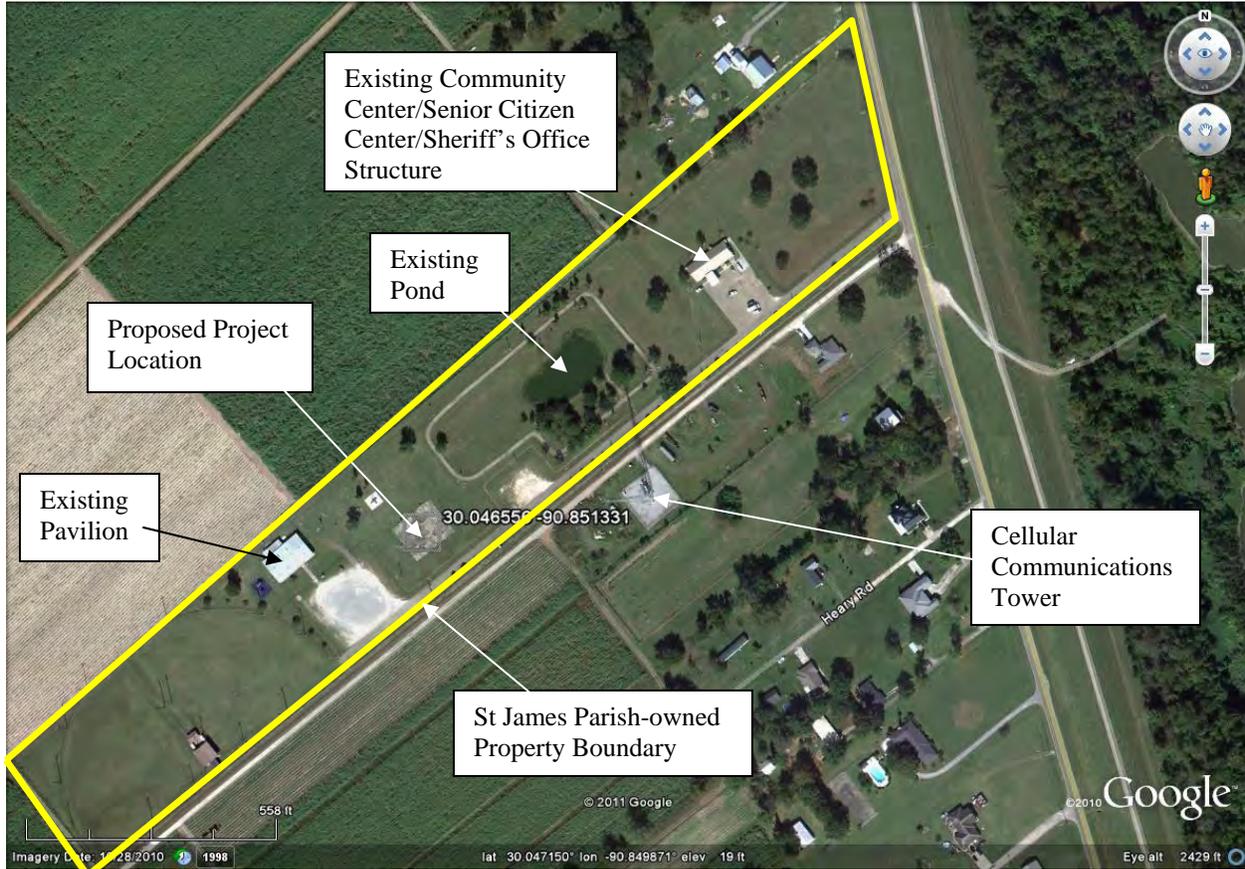


Figure 3: Proposed Project Vicinity



2.0 PURPOSE AND NEED

The purpose of the proposed project is to provide life-safety protection for essential St. James Parish personnel during extreme wind events. The personnel would include parish local government and public works employees, emergency responders, such as volunteer firemen and Acadian Ambulance Service paramedics, St. James Parish West Bank Sheriff's office personnel, St. James Parish Youth detention workers, essential industrial workers and staff, and other members of the community that are considered to be at risk populations. The population at risk is comprised of only those people who are unable to evacuate ahead of a storm for any reason. There is a need to improve the safety of critical personnel and at risk populations who must remain on the West Bank of St. James Parish immediately, prior to, and during an impending severe weather event or natural disaster.

3.0 ALTERNATIVES

3.1 Alternative 1 - No Action

Under this alternative, St. James Parish would not perform the proposed mitigation work at the site. Consequently, the parish employees, emergency responders, and other essential employees would remain at risk during the most severe storms. The No Action alternative does not address

the needs and requirements of the Parish toward providing for the safety of those Parish employees and emergency responders that are required to remain in the Parish during an approaching natural disaster.

3.2 Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action)

The scope of work for the proposed action indicates the "hardening" of a to-be-constructed community center and the construction of two (2) interior tornado safe rooms within the new community center to accommodate 190 essential St. James Parish personnel and at risk population. The term "hardening" is defined as project-specific specialized design and construction methods which are applied to one (1) or more rooms within a building and/or to an entire building envelope to allow portions of and/or the entire structure to resist wind pressures and windborne debris impacts during an extreme wind event and are capable of providing life-safety protection to the occupants of the room or structure. The proposed project would be constructed on St. James Parish-owned and maintained property that encompasses the existing proposed project site, the public park areas, including the pavilion, pond, jogging path, and the existing community center/senior citizen center along with the surrounding land east to Louisiana (LA) Highway 18 (Figure 3).

The proposed Welcome Park Community Center's structural envelope would be designed by a certified engineer with experience in calculating wind loads on buildings and interior tornado safe rooms so that the structure would not fail due to wind induced loads, wind pressure, or wind-borne debris. By hardening the proposed Welcome Park Community Center, St. James parish would be able to provide a larger hurricane safe area for longer term occupancy as well as the tornado safe rooms for shorter term occupancy. St. James Parish has determined that it would be more cost effective to harden a new, under construction building, and construct tornado safe rooms within the new structure than to retrofit one (1) or more existing buildings within the Parish. In addition, according to FEMA's *Design and Construction Guidance for Community Safe Rooms, Second Edition* (FEMA 361), regarding construction of tornado safe rooms, "recent FEMA-sponsored projects have evaluated the construction cost of hardening a small area or room during the design and construction of a new building. The FEMA projects indicate that although the cost to construct this portion of a building may be 25 to 50 percent higher than the construction cost for a non-hardened version of the same area or room, the entire impact to the total project cost is often less than 5 to 10 percent of the entire building construction project."

Although St. James Parish is requesting funding only for the proposed "hardening" of the to-be-constructed Welcome Park Community Center and the construction of the two (2) interior tornado safe rooms within this structure; the proposed mitigation action would be considered a "connected action" under NEPA and the entire construction process of the Welcome Park Community Center will be considered for review in this EA. According to NEPA Regulations in 40 CFR Part 1508, connected actions are defined as actions that are "closely related and therefore should be discussed in the same impact statement." Actions are connected if they:

- (i) Automatically trigger other actions which may require environmental impact statements.

- (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.
- (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

The proposed hardened Welcome Park Community Center with interior tornado safe rooms would be constructed on public property with minimum elevation of 18.0 feet above mean sea level (msl), which is four (4) feet above the highest Base Flood Elevation (BFE) of 14 feet above msl indicated on any of the St. James Parish Digital Flood Insurance Rate Maps (DFIRMs). Google Earth, the Internet-based satellite imagery and mapping program which is a source of some of the figures found in this EA, confirmed that the proposed project site elevation is 18 feet above msl. The proposed Welcome Park Community Center, which would be an approximate 12,000 square foot (SF) building according to construction plans provided by St. James Parish, would be constructed at a currently undeveloped site which would have the address of 7248 Park Street, St. James, Louisiana on the West Bank of the Mississippi River (30.046556, -90.851331) (Figures 2 and 3). The proposed project site is located on a St. James Parish-owned public park complex which includes a picnic pavilion, a parking area, a basketball court, a pond, and a jogging trail. The proposed Welcome Park Community Center site is located southwest of the existing Community Center/Senior Citizen Center/Sheriff's Office building on the same Parish-owned property. A cellular communications tower is located southeast of, and across Park Street from, the proposed project location (see Figure 3).

The proposed Welcome Park Community Center structure would be constructed of insulated concrete masonry blocks and fully grouted with #4 reinforcing steel rebar, which would meet the American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) 7-05 *Minimum Design Loads for Buildings and Other Structures* and FEMA 361 criteria. The requirements of FEMA Publication 361 would be incorporated into the construction of the proposed new Welcome Park Community Center. FEMA 361 guidance interprets the new International Code Council® (ICC®) *ICC/NSSA Standard for the Design and Construction of Storm Shelters* (ICC-500), which was published in 2008 in consensus with the National Storm Shelter Association. Unlike most model building codes such as International Building Code (IBC), which are developed for property loss protection, the ICC-500 was developed for life-safety protection. According to ICC-500, Section 101.1 Purpose:

The purpose of this standard is to establish minimum requirements to safeguard the public health, safety, and general welfare relative to the design, construction, and installation of storm shelters construction for protection from high winds associated with tornadoes and hurricanes. This standard is intended for adoption by government agencies and organizations for use in conjunction with model codes to achieve uniformity in the technical design and construction of storm shelters.

ICC-500 has been incorporated by reference into the 2009 IBC to regulate the design and construction of tornado safe rooms to provide life-safety protection from extreme wind events.

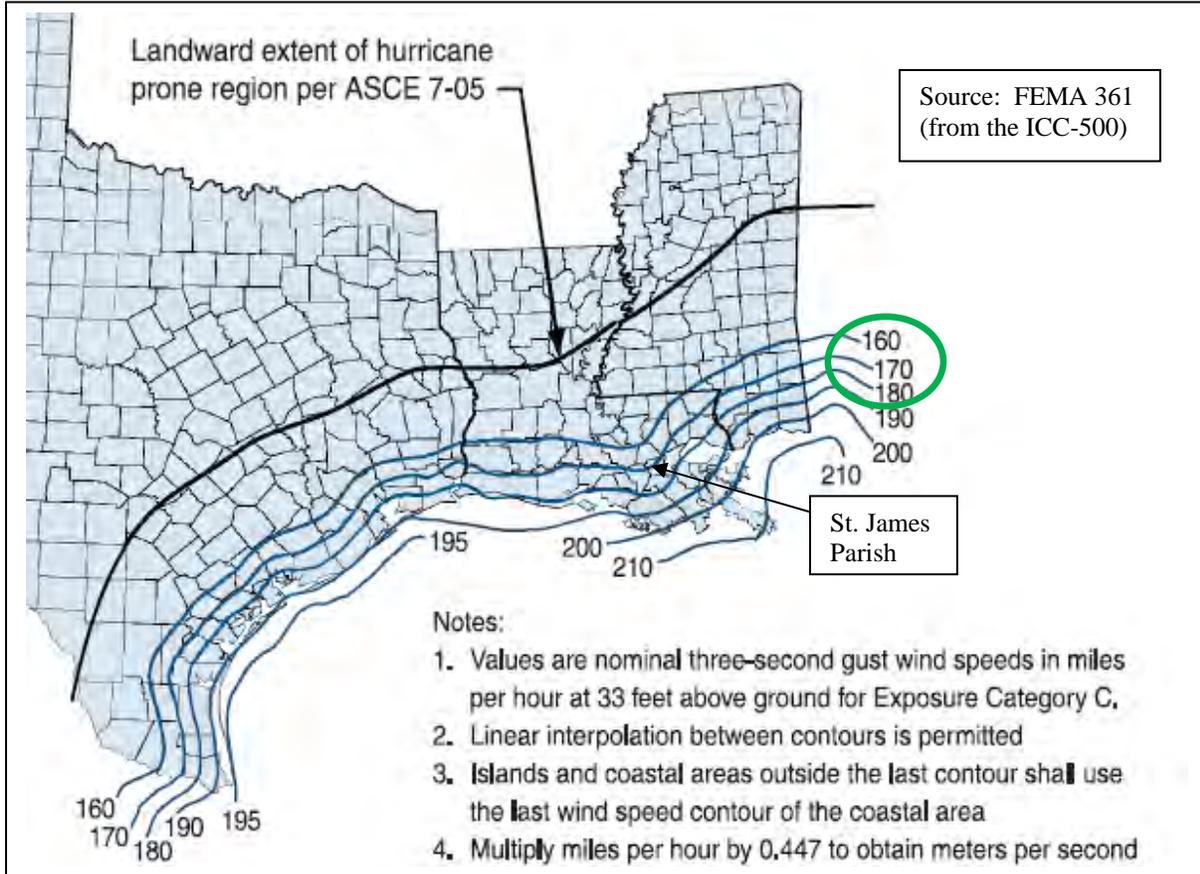
It should be noted that the technical information provided in FEMA 361 must be adhered to as a condition of receiving FEMA HMGP funding for construction of hardened facilities and/or

tornado safe rooms. This condition is stated in FEMA’s Mitigation Interim Policy, MRR-2-09-1, “Hazard Mitigation Assistance for Safe Rooms” (MRR-2-09-1), dated April 30, 2009. This document may be referenced at: <http://www.fema.gov/government/grant/hma/mrr-2-09-1.shtm> and also presented in Appendix A.

The hardened areas of the proposed Welcome Park Community Center structure would be designed to withstand 165 mph winds, with 3-second sustained winds. Figure 4 depicts the recommended hurricane hardened structure design wind speed for the proposed project location in St. James Parish, which ranges between 160 and 180 mph. The building would be constructed to the IBC and Uniform State Codes for structures rated to 165 mph winds, sustained for 3 seconds. According to FEMA 361, the 3-second range of gust wind speed for a Category 4 (“Extreme”) hurricane is 160 – 189 mph.

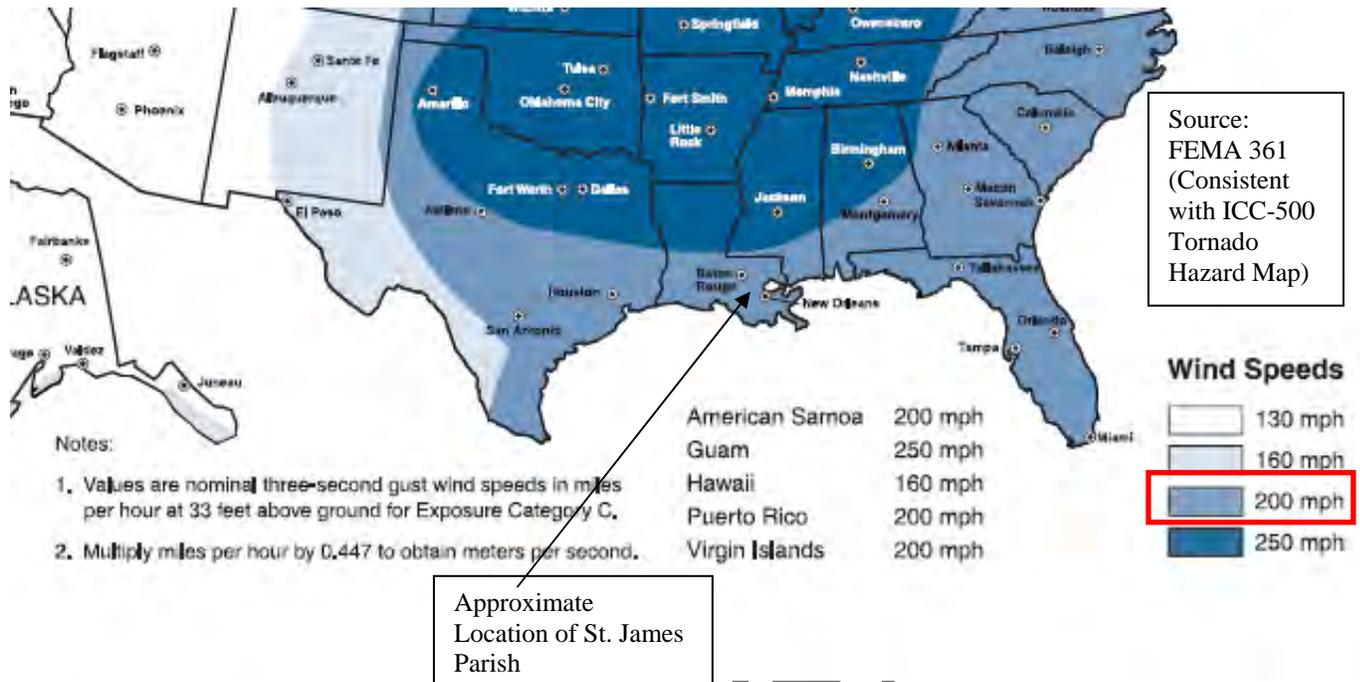
The pillars and columns of the proposed Welcome Park Community Center would be constructed of reinforced steel. The exterior walls would be designed to the applicable wind loads and updraft pressures and wind exposure requirements for the 165 mph criteria. The exterior doors and windows would be impact-rated to FEMA 361 rating standards. The building would utilize a steel truss system covered with a metal roof, fastened according to 165 mph speed building code standards. The building roof would be constructed to withstand uplift wind pressures equal to the magnitude of hurricanes with sustained winds of 165 mph. The structure would be elevated to height requirements above the 100-year/24-hour flood event.

Figure 4: Hurricane Hardened Structure/Safe Room Design Wind Speed Map



The interior tornado safe rooms would be constructed to withstand 200 mph winds in accordance with FEMA 361 guidelines (Figure 5). The proposed interior tornado safe rooms would be designed to provide the greatest level of protection during the height of a storm, when the winds are strongest and capable of causing the most damage. It is anticipated that the proposed mitigation action would have a useful life of 50 years.

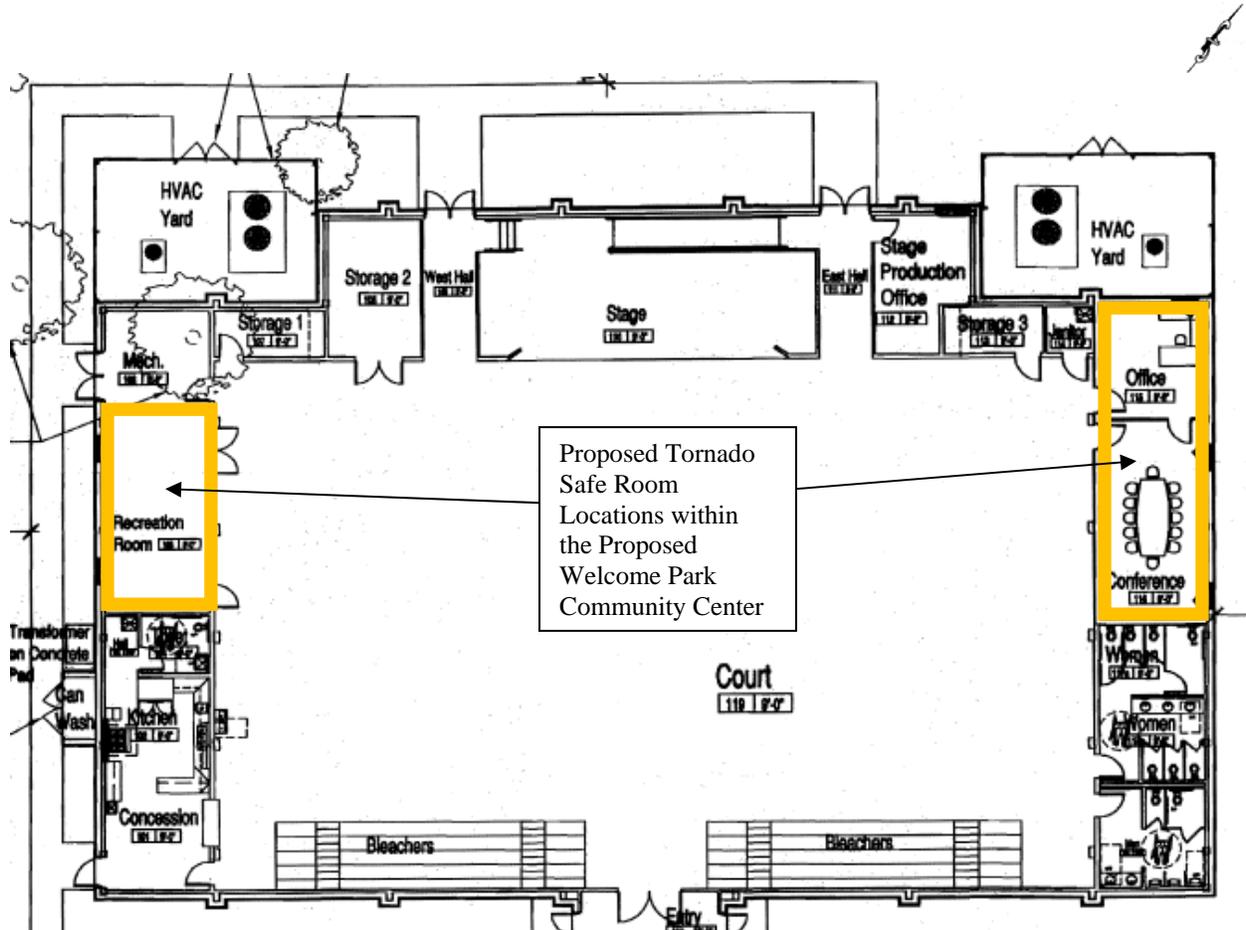
Figure 5: Tornado Safe Room Design Wind Speed Map



Approximately 9,300 SF of the proposed building, comprised of the entire exterior building envelope, would be hardened and 1,000 SF of the interior of the structure would be used as tornado safe rooms. Per FEMA 361, the recommended minimum size is 5 SF per person (standing or seated) for tornado safe rooms. For wheelchair-bound persons, the minimum recommendation is 10 SF. For hurricane safe structures, 20 SF is the recommended minimum size per person (standing, seated, or wheelchair-bound) due to need for longer term occupancy and sleeping spaces for personnel. FEMA 361 also recommends that a community tornado safe room or hurricane safe structure be sized so that there is a minimum of one wheelchair space for every 200 occupants.

According to the Parish’s project design firm, the proposed tornado safe rooms would be constructed within the proposed new Welcome Park Community Center within the rooms labeled as the Recreation Room and the Conference Room/Office (Figure 6).

Figure 6: Proposed Welcome Park Community Center Floor Plan Depicting Proposed Tornado Safe Room Locations



The proposed occupancy time for the tornado safe rooms would be approximately two (2) hours. The planned occupancy of the proposed hardened Welcome Park Community Center structure for longer term events, such as hurricanes, would be for at least 24 hours but no more than 48 hours. The proposed tornado safe rooms would be constructed with adequate ventilation, rest rooms, and first aid rooms and would be served by natural gas generators in the event of loss of electrical power to ensure that there would be proper ventilation and lighting. The proposed tornado safe rooms would provide maximum occupancy based on FEMA 361 tornado safe room guidelines, which may be needed to adequately respond immediately after storms or major winds events. The proposed tornado safe rooms would be managed by St. James Parish. As required by MRR-2-09-1, the Parish has developed a *Safe Room/Hurricane Hardened Facility Operations, Management, and Maintenance Plan*, which is attached in Appendix B.

Construction of the proposed Welcome Park Community Center would include the installation of a new package sewage treatment plant with a new filter bed. The sewage treatment station would consist of a Quanics® three-stage system. In the first stage, raw sewage from the proposed Welcome Park Community Center would enter a 1,000 gallon septic tank via an inlet pipe. In this septic tank, the solids settle to the bottom where aerobic bacteria (bacteria that require oxygen to live and function) would begin deteriorating the organic material within the

solids. This septic tank would have two 26-inch access risers with lids. The sewage, minus the settled out solids, would leave the 1,000 gallon septic tank through an effluent filter on the outlet end and be piped to the second stage, which would consist of a 1,500 gallon septic tank known as a dosing tank. This dosing tank would have one 26-inch access riser with a re-circulating device and an effluent pump with a step system package which would have a filtered screen. An electrical disconnect, alarm and control panel which would be mounted on the exterior wall of the Welcome Park Community Center would be connected to the effluent pump. The electrical disconnect, alarm, and control panel would be mounted at least 42 inches above grade or as required by applicable electrical code.

The third stage of the sewage plant would consist of an Advanced Treatment System (ATS) tank which would have spray nozzles at the top of the interior of the tank to distribute the effluent through the treatment media. The ATS tank would contain one of two treatment media: the AeroCell® Advanced Treatment System is a patented open cell foam media with high porosity, large surface area, and ease of microbial attachment; or the BioCOIR® Treatment System, which is a patented natural recycled media consisting of coconut husk fibers that, according to the manufacturer, “is proving to be very resilient to deterioration in the septic environment” and allows excellent water/air ratio to be maintained over a long period of time. According to the manufacturer, both of these systems have been proven to treat wastewater to high treatment levels. The treatment media would filter the remaining solid particles and allow the remaining liquid to flow to the bottom of the ATS tank where it would reach the outlet piping. The ATS tank would be connected to the step package in the dosing tank for effluent re-circulation, and would have two access risers and an air vent. According to the manufacturer’s website, the appropriately sized ATS tank is equal in size to the daily effluent flow; however, local regulations may dictate the proper size of the ATS tank. The treated sewage would re-circulate between stage 2 and 3 via pressure line from the step package to the ATS tank and a return gravity line from the ATS back to the dosing tank re-circulation device. A 20-percent discharge gravity line to the Quanics® Disposal Field would be connected to the 26-inch access riser of the 1,500 gallon dosing tank. Eighty percent of the effluent would return to the dosing tank for re-circulation. During periods of low flow, 100 percent of the effluent is returned to the treatment stream.

The final disposal options from the 20-percent discharge line would include drip irrigation, low pressure pipe (LPP), or a dispersal mound system. The sand or stone filter bed would function as a leach field and would be designed to remove contaminants and impurities from the liquid that is discharged from the sewage treatment plant prior to its final discharge into the environment. The maximum depth that this equipment would be buried would be verified with the equipment manufacturer. A plan view of the proposed three-stage sewage treatment system is depicted in Figure 7. A section view of the proposed sewage treatment plant is depicted in Figure 8.

Figure 7: Plan View of the Proposed Project Sewage Treatment Plant

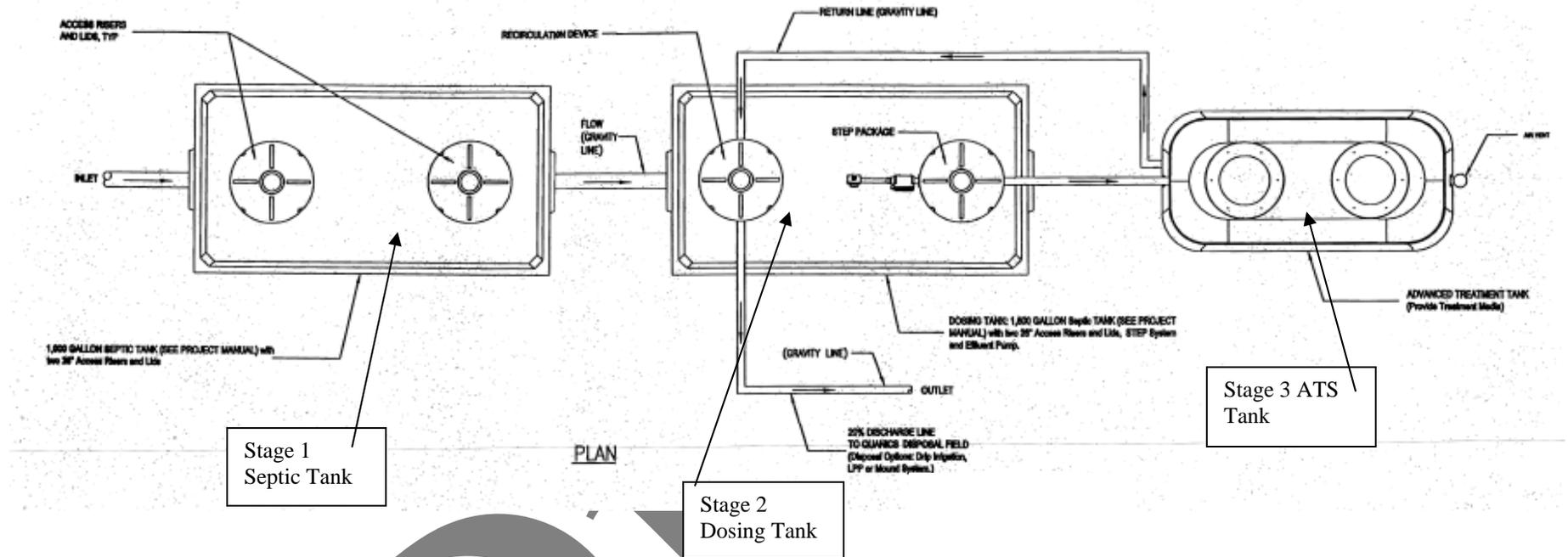
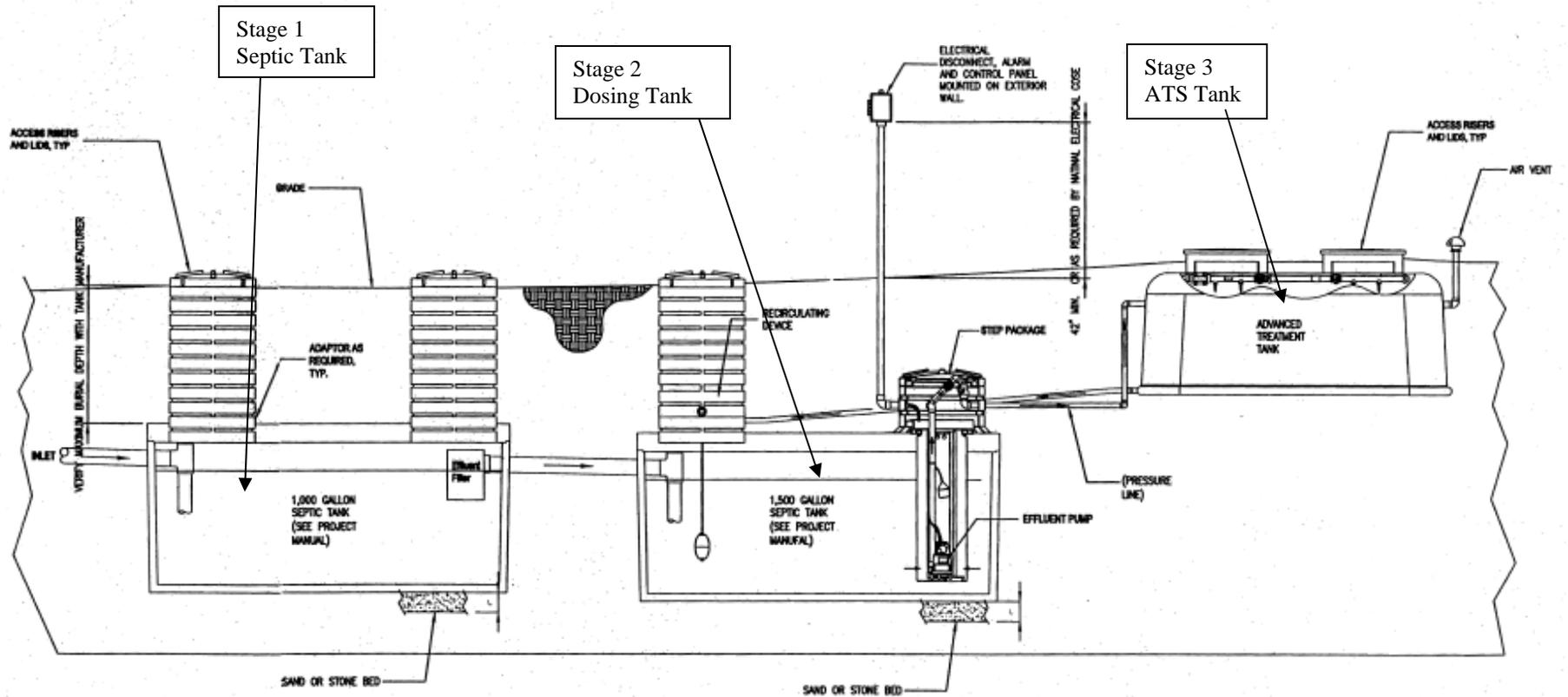


Figure 8: Section View of the Proposed Project Sewage Treatment Plant

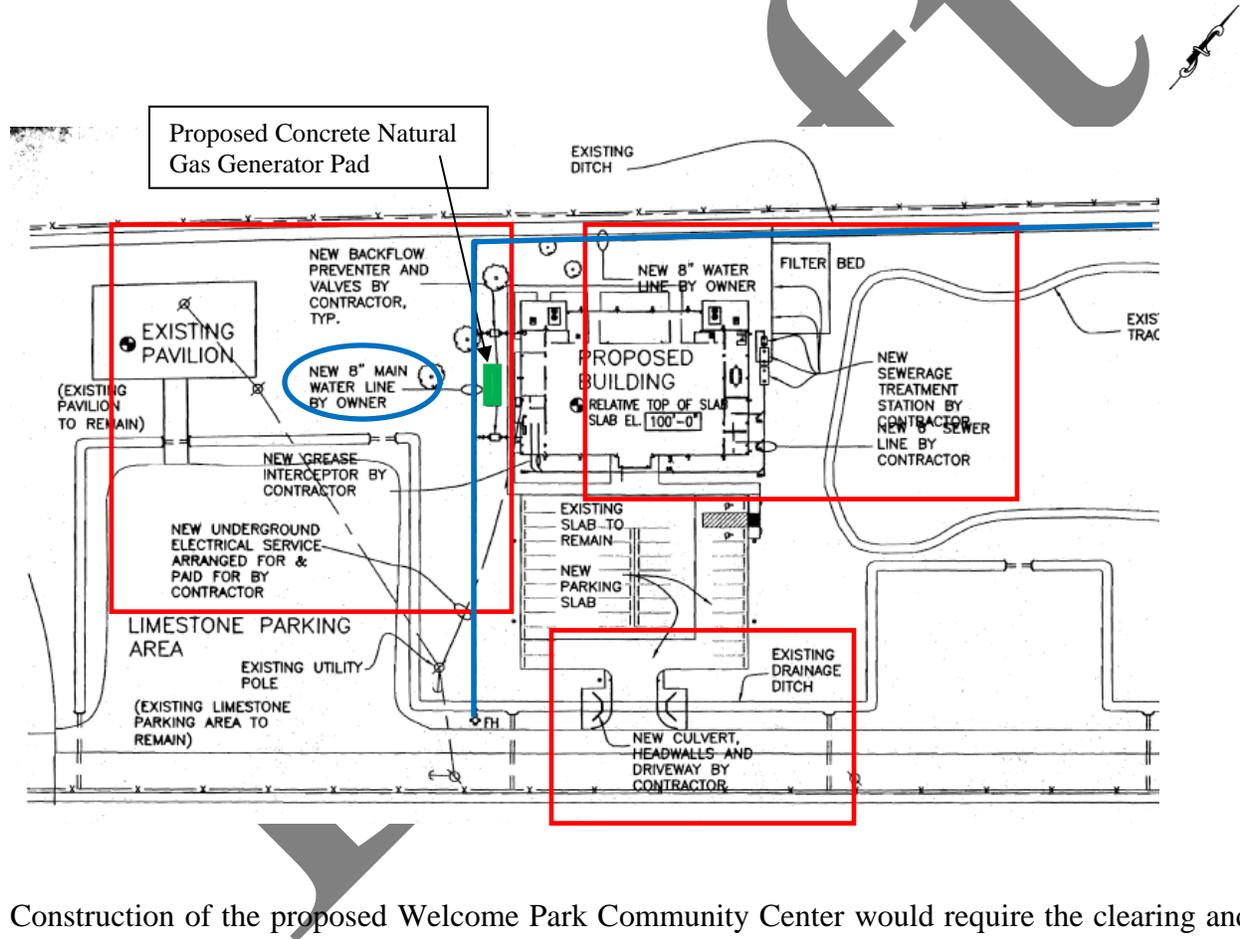


SECTION

1 SEWERAGE TREATMENT STATION
 C8 NOT TO SCALE

The proposed site waste lines would include 171 linear feet (LF) of 6-inch polymerized vinyl chloride (PVC) sewer line and 178 LF of 4-inch PVC sewer line. Site water lines to be installed would include 28 LF of 6-inch PVC piping for fire water, 28 LF of 4-inch PVC piping, and 28 LF of 2.5-inch PVC piping. New backflow preventer valves, new underground electrical service would also be installed. A concrete generator pad would be located in the southeast side of the proposed structure to accommodate the natural gas generators. To accommodate the proposed entrance driveway, 40 LF of new 36-inch diameter reinforced concrete pipe (RCP) culvert with headwalls would be installed within the existing drainage ditch located southeast of the proposed Welcome Park Community Center (Figure 9).

Figure 9: Proposed Project Construction Plan of Proposed Welcome Park Community Center

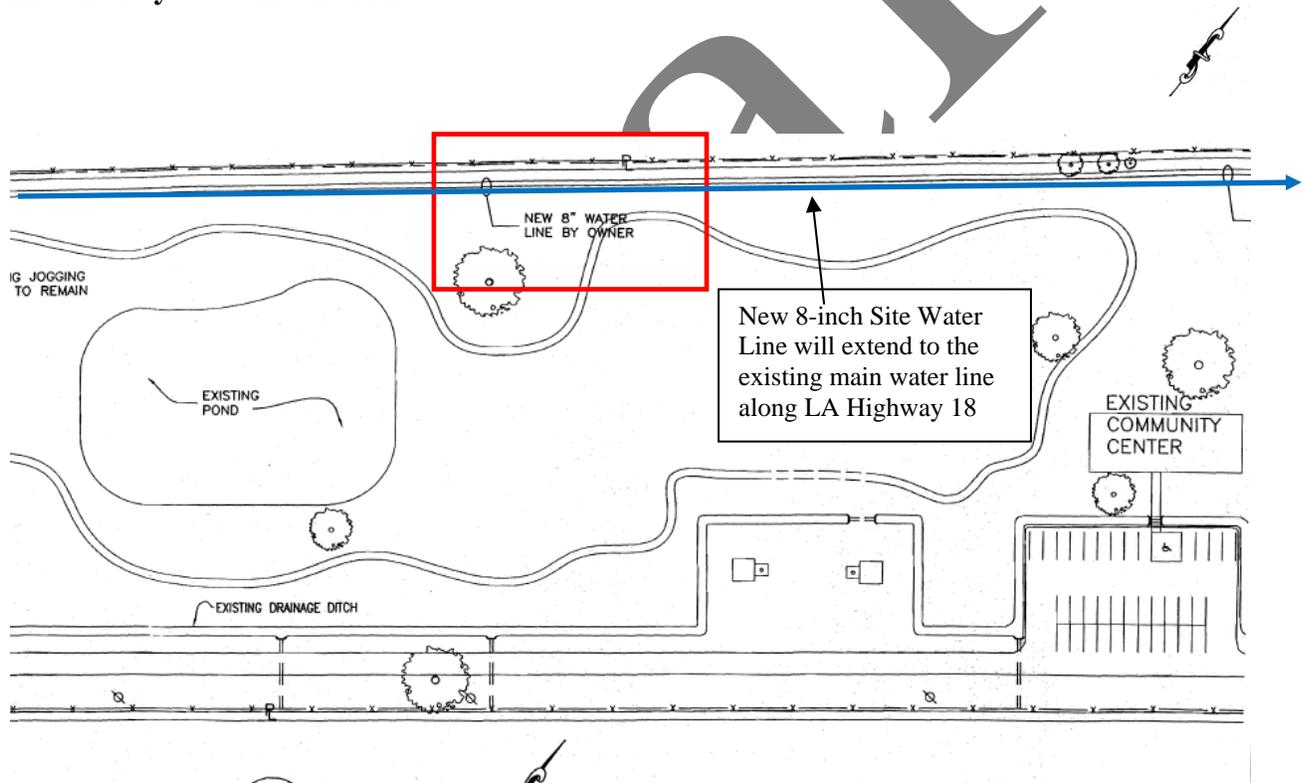


Construction of the proposed Welcome Park Community Center would require the clearing and grubbing of 1.97 acres of land. Excavation for a two foot deep foundation for the structure would require the excavation of 449 cubic yards (CY) of soil and 449 CY of fill and backfill. Approximately 6,800 square yards of cement concrete would be required for the parking lot and driveways and 2,770 SF of Americans with Disabilities Act- (ADA-) compliant concrete cement sidewalks would be required. Approximately 92 LF of 6-foot high sight-proof wooden fencing would be installed with three 8-foot wide wooden gates. Approximately 12,000 SF of termite treatment would also be applied during the construction process.

The proposed project site has an existing limestone parking area and an existing slab, both of which would remain. The existing slab is currently used as a basketball court. A new parking slab would be poured to augment the existing slab and provide additional parking area. There is also an existing pavilion located west of the proposed new community center structure which would remain in place. A new 8-inch main water line would be installed along the west side of the new community center and the along existing drainage ditch located northwest of the proposed Welcome Park Community Center. The new project site main water line would begin at the site fire hydrant, which would be installed as part of the proposed project, and would tie into the existing Parish main water line along LA Highway 18 (see Figures 9 and 10). The location of the Parish main water line along LA Highway 18 would need to be verified in the field prior to installation of the proposed project main water line to insure a proper connection.

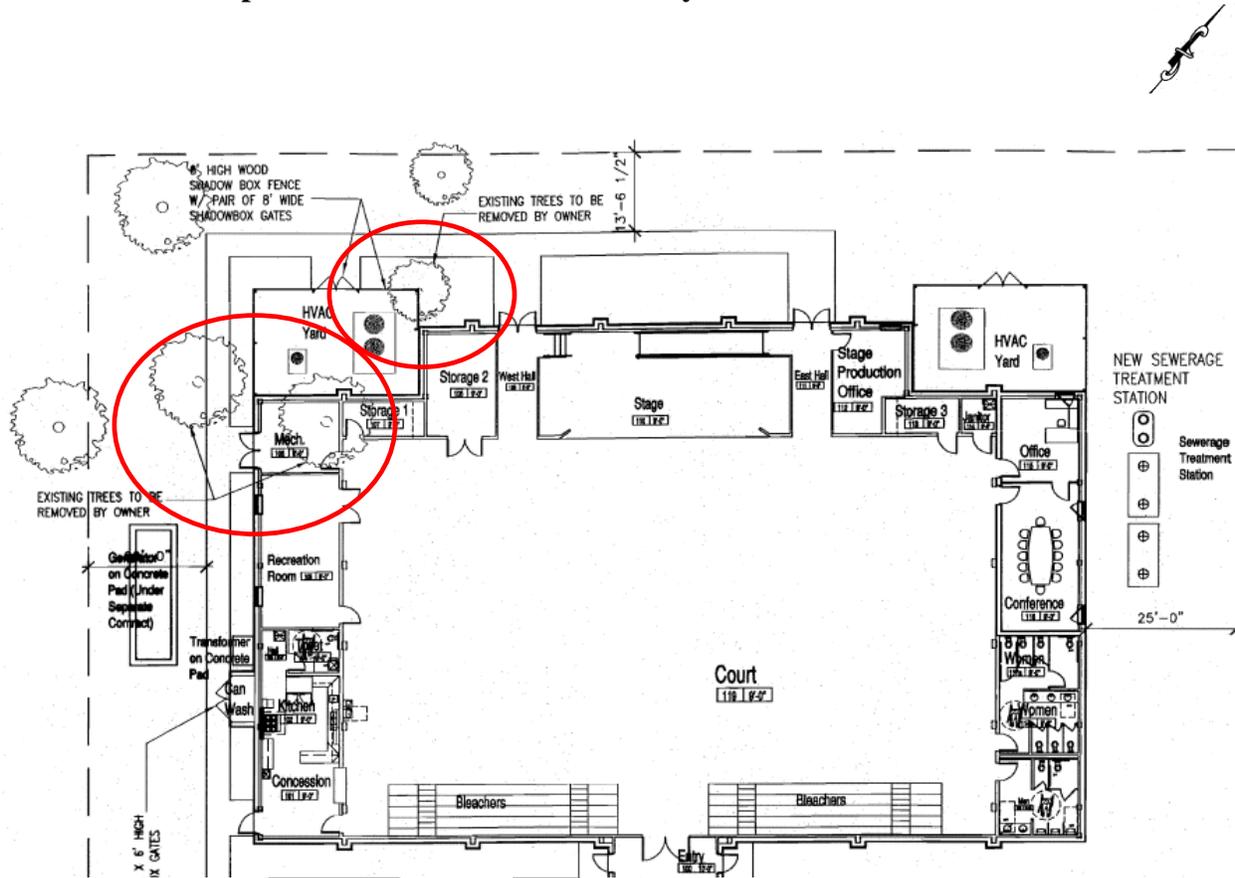
There are an existing jogging track and a pond located east of the proposed Community Center site; both of which would remain in place (Figure 10).

Figure 10: Proposed Project Construction Plan of the New Water Line that Would Be Installed by St. James Parish



According to site construction plans provided by the St. James Parish, three of six existing trees at the west corner of the proposed location would need to be removed to accommodate the construction of the proposed Welcome Park Community Center (Figure 11). In addition, existing playground equipment located in this area would need to be removed or moved to another location on the property.

Figure 11: Proposed Project Construction Plan Showing Trees that Would Be Removed to Construct the Proposed Welcome Park Community Center



FEMA Environmental and Historic Preservation representatives met with the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), St. James Parish, and the Parish's project design firm representatives to conduct a site reconnaissance on November 7, 2011. Site photographs taken during this site visit are presented in Appendix C. A proposed project justification analysis is presented in Appendix D.

3.3 Alternative Eliminated From Further Consideration

The following alternative was also considered as a possible way to address the purpose and need of the Applicant but was eliminated from further consideration.

St. James Parish considered developing plans to harden existing public facilities; however, none of the existing Parish structures are built to the new state of Louisiana building code requirements. Therefore, these structures would require extensive re-design and reconstruction to meet FEMA 361 guidelines for tornado safe rooms. Additionally, most St. James Parish-owned structures are of a size that would only allow for occupancy of less than 20 individuals. Further, according to FEMA 361, when an existing space is retrofitted for safe room use, issues often occur when attempts are made to improve the level of protection in areas not originally designed for use as tornado safe rooms. Most structural and wall systems of existing buildings

would not be able to resist the wind forces and debris associated with the tornado safe room design wind speed. Retrofitting windows and door without improving the structural system is not recommended for life-safety protection.

The Parish has estimated that the cost to construct an adequate number of safe rooms utilizing existing facilities would be in excess of \$8 million and would accommodate less than a total of 100 individuals. This alternative was dismissed because it was not cost beneficial due to age and type of existing structures in the Parish.

4.0 AFFECTED ENVIRONMENT AND IMPACTS

4.1 Impact Summary

The following matrix summarizes the results of the environmental review process (Table 1). Potential environmental impacts that were found to be negligible are not evaluated further. Resource areas that have the potential for impacts of minor, moderate, or major intensity are further developed in the following sections. Definitions of the impact intensity are described below:

Negligible: The resource area (e.g., geology) would not be affected, or changes would be either non-detectable or if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.

Minor: Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.

Moderate: Changes to the resource would be measurable and have both localized and regional scale impacts. Impacts would be within or below regulatory standards, but historical conditions are being altered on a short-term basis. Mitigation measures would be necessary and the measures would reduce any potential adverse effects.

Major: Changes would be readily measurable and would have substantial consequences on a local and regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

Table 1 - Affected Environment and Environmental Consequences Matrix

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Geology, Soils, and Seismic Hazards	X				<p>There is potential for short-term localized increase in soil erosion during construction.</p> <p>NRCS policy clarifies several activities that are not subject to the rules and regulations of the Farmland Protection Policy Act (FPPA)-Subtitle I of Title XV, Section 1539-1549 of Public Law 97-98, which was published in the Federal Register on June 17, 1994. The third exception item is "Projects on land already in urban development or used for water storage." The NRCS Alexandria, LA office has determined that the proposed project construction areas are located within urban areas. The proposed project is therefore exempt from the rules and regulations of the FPPA. The NRCS has no objections to the proposed project.</p> <p>The proposed project site soils are classified as Cancienne silt loam, 0 to 1 percent slopes (CmA). According to the NRCS WSS site, CmA soil is somewhat poorly drained with a depth to water of approximately 18 to 48 inches. This soil type is classified as "somewhat limited" for shallow excavations, and "very limited" for septic tank absorption fields due to the shallow depth to the saturated zones. See also Appendix E.</p> <p>Louisiana lies in an area of low seismic risk. There is one known subsurface fault in St. James Parish and no recorded historical earthquakes in St. James Parish. See Appendix E for maps of Louisiana geologic faults and historical earthquakes. The potential for seismic effects on the proposed Welcome Park Community Center would be taken into account during the soil stability analysis and in construction planning, which would be conducted by a State-licensed engineer.</p>	<p>NRCS correspondence letter from W. Britt Paul of the Alexandria, LA office, dated 10/25/11. (See Appendix E)</p> <p>LDEQ email dated 11/2/2011. (See Appendix E)</p> <p>Internet Resources: NRCS WSS Site Earthquakes in Louisiana</p>	<p>Implement construction Best Management Practices (BMPs); install silt fences/straw bales to reduce sedimentation. Area soils would be covered and/or wetted during construction. If fill is stored on site as part of unit installation or removal, the contractor would be required to appropriately cover it. Construction contractor would be required to obtain a Louisiana Pollutant Discharge Elimination System (LPDES) permit, if applicable, and implement stormwater pollution prevention plan.</p> <p>The LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that the LDEQ Water Permit Division be contacted at (225) 219-3181 to determine whether the proposed improvements require one of these permits.</p> <p>All precaution should be observed to control nonpoint source pollution from construction activities. See also Section 6.0.</p>
Hydrology and Floodplains (Executive Order 11988)		X			<p>Effective DFIRMs for St. James Parish were reviewed on FEMA's web site. The proposed project site is located within zone "shaded X" (the 500-year or the 0.2 percent annual chance flood).</p> <p>The proposed project is located within 1,500 feet of a levee or other flood control structure which is under the jurisdiction of the Lafourche Basin Levee District (LBDL).</p> <p>See also Sections 4.2.1.</p>	<p>Effective DFIRM Panel 22093C 0100C</p> <p>Correspondence letter from the Louisiana Department of Natural Resources (LDNR), Coastal Zone Management Program, dated 10/31/2011. (See Appendix E)</p>	<p>The Applicant must coordinate with the LBLD (rtrosclair@lbd.us.com) to determine if a construction permit would be required.</p> <p>The project area must be kept cleared so as not to interfere with floodplain functions.</p> <p>The Applicant must contact the St. James Parish Floodplain Administrator to obtain all appropriate permits. See also Sections 4.2.1 and 6.0.</p>

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Wetlands (Executive Order 11990)	X				No USFWS-mapped wetlands are present within the proposed project area. No apparent wetlands were observed during the FEMA site visit to the proposed project site. The United State Army Corps of Engineers (USACE) indicated that a Department of the Army permit under Section 404 of the CWA will not be required.	Correspondence letter from the USACE, dated 01/25/2012. (See Appendix E) Internet Resource: U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory Wetlands Mapper.	Any changes or modifications to the proposed project will require a revised determination. Off-site locations of activities such as borrow, disposals, haul- and detour roads, and work mobilization site developments may be subject to USACE regulatory requirements. See also Section 6.0.
Surface Water and Water Quality		X			There are unnamed man-made drainage ditches located southeast and northwest of the proposed project site. In addition, there is a pond located northeast of the proposed project site. The proposed project would include the installation of a sanitary wastewater treatment facility and a new culvert with headwalls in the existing drainage ditch located southeast of the proposed community center structure. There is potential for short-term localized increase in sedimentation during construction. See also Section 4.2.2.	LDEQ email dated 11/2/2011. (See Appendix E)	Contractor to contact the LDEQ to determine if a LPDES permit is required. If required, the contractor must follow are requirements of the LPDES permit. Implement construction BMPs; install silt fences/straw bales to reduce sedimentation. A Sewage Sludge and Biosolids Use or Disposal Permit application or Notice of Intent must be submitted to the LDEQ. Additional information may be obtained on the LDEQ website at http://www.deq.louisiana.gov/portal/tab_id/2296/Default.aspx or by contacting the LDEQ Water Permits Division at (225) 219-3181. See also Sections 4.2.2 and 6.0.
Groundwater	X				St. James Parish does not overlie a Sole Source Aquifer. According to the LDNR Strategic Online Natural Resources Information System (SONRIS) database, there are no groundwater areas of concern in the project vicinity. According to the Louisiana Department of Transportation and Development (LADOTD) database, accessed via SONRIS, no recorded drinking water wells are located within the project vicinity; however, there may be unrecorded drinking wells near the project work areas.	LDEQ email dated 11/2/2011. (See Appendix E) Internet Resources: EPA Region VI Sole Source Aquifer Web Site LDNR SONRIS Database	The contractor should observe all precautions to protect the groundwater of the region. The LDNR Office of Conservation should be contacted at 225-342-5540 if any unregistered drinking water wells are encountered during construction work. See also Section 6.0.

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Coastal Resources		X			St. James Parish lies entirely within the Louisiana Coastal Zone and the proposed project may be subject to the rules and regulations of the Coastal Zone Management Act (CZMA). The St. James Parish Coastal Zone Management Committee has no objections to the proposed project provided that no additional structures or buildings are added that are not represented in the permit application. The project is not located within the Coastal Barrier Resources System (CBRS). See also Section 4.3.	Correspondence letter from the LDNR, Coastal Zone Management Program, dated 10/31/2011. (See Appendix E) Correspondence letter from the St. James Parish Government Coastal Zone Management Committee, dated 12/1/2011. (See Appendix E) Effective DFIRM Panel 22093C 0100C (for CBRS)	The proposed project may require a Coastal Use Permit (CUP) from the LDNR. The Applicant is required to complete a CUP Application packet with the LDNR in order to make this determination. The submission should include locality maps, construction plans and plans with cross section views, etc., along with the appropriate application fee. The application packet may be obtained by calling (225) 342-7591 or (800) 267-4019, or by visiting the LDNR website at http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=93&pnid=189&nid=191 . The St. James Parish Coastal Zone Committee must be notified if there are any changes to the proposed scope of work. See also Sections 4.3 and 6.0.
Air Quality	X				During construction, there is a potential for short-term localized increase in vehicle emissions and dust particles. The St. James Parish airshed is currently in attainment for all criteria pollutants per the Clean Air Act.	LDEQ email dated 11/2/2011. (See Appendix E)	Vehicle operation times would be kept to a minimum. Area soils would be covered and/or wetted during construction to minimize dust. See also Section 6.0.
Vegetation and Wildlife	X				The proposed project area is a developed area which borders agricultural fields which are currently planted with sugar cane. The developed areas consist of maintained grassland or paved roadways and driveways. No long-term impacts to existing vegetation and wildlife are anticipated.	USFWS determination of no effect, dated 10/25/11. (See Appendix E) Louisiana Department of Wildlife and Fisheries (LDWF) correspondence letter dated 11/10/11. (See Appendix E)	

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Threatened and Endangered Species (Endangered Species Act Section 7)	X				No impact to federally listed threatened or endangered species is anticipated. No impacts to critical habitats are anticipated. No impacts to state listed rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specific site.	USFWS determination of no effect on Federal trust resources, dated 10/25/11. (See Appendix E) LDWF correspondence letter dated 11/10/11. (See Appendix E)	The Applicant would be responsible for contacting the USFWS if there is a change in the scope of work, the project necessitates removal of mature pine trees or if construction activities have not been initiated within one year. See also Section 6.0.
Bald and Golden Eagle Protection Act of 1940 (Title 16 United States Code [USC] §§668-668c)	X				The bald eagle is protected under the Bald and Golden Eagle Protection Act, which prohibits anyone, without permission from the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." Bald eagles are known to occur in St. James Parish.	Internet Resource: USFWS Bald Eagle Management Guidelines and Conservation Measures – The Bald and Golden Eagle Protection Act	If a bald eagle or its nest is spotted within 1,500 feet of the project site during the months of October through mid-May, the Applicant must cease construction activities and contact LDWF and USFWS immediately. All correspondence must be documented and remain in the project permanent files. See also Section 6.0.

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Cultural Resources (National Historic Preservation Act of 1966, as Amended [NHPA] Section 106)	X				A review of the Hardening of Community Safe Room at 7248 Park Street, St. James Parish, LA was conducted in accordance with FEMA's Hazard Mitigation Grant Program Programmatic Agreement dated January 31, 2011 (LA HMGP PA). In accordance with Stipulation VIII.D of the LA HMGP PA, FEMA determined that there are No Historic Properties Affected as a result of the proposed undertaking and provided the SHPO and Tribes (Alabama-Coushatta Tribe of Texas, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Chitimacha Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Muscogee Creek Nation, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and Tunica-Biloxi Tribe of Louisiana) the opportunity to review and comment on November 22, 2011. SHPO concurrence with FEMA's determination was received, dated December 1, 2011. The Tribes did not object within the regulatory timeframes; therefore, in accordance with Stipulation VIII.D of the LA HMGP PA and 36 CFR part 800.5(c)1, FEMA may proceed with funding the undertaking assuming concurrence.	SHPO concurrence letter dated 12/1/11 (See Appendix E) Internet Resource: FEMA HMGP Programmatic Agreement dated January 31, 2011.	If archaeological artifacts or features (prehistoric or historic) or human remains are discovered during the course of FEMA funded work at the project site, the Applicant must ensure that their Contractor stops work in the vicinity of the discovery and takes all reasonable measures to avoid and minimize harm to the discovery. The Applicant shall inform GOHSEP and FEMA of the discovery, and FEMA would deploy an archaeologist to the location to conduct a site condition assessment. The Applicant would not proceed with work until FEMA has completed consultation with the SHPO and other appropriate consulting parties on the treatment of the discovery. The local Coroner's Office would assess the nature and age of the human skeletal remains. If the Coroner's Office determines that the human skeletal remains are older than 50 years of age, the Louisiana Division of Archaeology would take jurisdiction over the remains. Within seventy-two (72) hours, the Applicant would notify FEMA and the Louisiana Division of Archaeology (225-342-8170) of the finding. FEMA would assist, as requested, the Louisiana Division of Archaeology and other interested parties, as necessary, to ensure compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (Revised Statute [R.S.] 8:671 <i>et seq.</i>) and other applicable laws. In addition, the Applicant must afford FEMA the opportunity to comply with the "Human Remains Policy" set forth by the Advisory Council on Historic Preservation (ACHP). See also Section 6.0.

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Environmental Justice (Executive Order 12898)/Socioeconomics	X				The U.S. Census Bureau does not have specific demographic data for the town of Paulina, Louisiana. According to the U.S. Census Bureau estimated data for 2005-2009, the percentage of families in St. James Parish below the poverty level is 10.4%. This figure for the U.S. as a whole is 9.9%. The median per capita income for St. James Parish is \$21,818. This figure for the U.S. as a whole is \$27,041. The demographic census data for St. James Parish are as follows: Caucasian: 50.2%, African American: 49.2%, and Hispanic: 1.1%. The comparable demographic census data for the U.S. as a whole are: Caucasian: 74.5%, African American: 12.4%, Hispanic: 15.1%. The proposed work has no potential to adversely impact any population.	Internet Resource: U.S. Census Bureau, American Fact Finder, Data for St. James Parish, Louisiana	
Noise		X			During the construction period there would be a short-term increase in noise levels. See also Section 4.4.	Internet Resource: St. James Parish Council, Louisiana – Code of Ordinances	St. James Parish does not have any specific ordinances regarding construction noise. If necessary, the following noise reduction measures should be considered: using a 7 A.M. to 7 P.M. construction schedule on all construction workdays. See also Sections 4.4 and 6.0.
Public Safety and Access/Americans with Disabilities Act of 1990, as Amended (ADA)	X				The proposed tornado safe rooms would be constructed within a "hardened" newly constructed facility. Designs for proposed Welcome Park Community Center and interior tornado safe rooms would incorporate FEMA 361 requirements, the ADA requirements, and any local ordinances pertaining to disabled persons. The proposed hardened structure and tornado safe rooms and would be managed by St. James Parish's <i>Safe Room/Hurricane Hardened Facility Operations, Management, and Maintenance Plan</i> , dated August 2011 (Appendix B). No impacts to public safety and security are anticipated.	FEMA 361 Guidance and Design Criteria Internet Resource: ADA Requirements	The contractor would place fencing around the work area perimeters to protect nearby residents from vehicular traffic. To minimize worker and public health and safety risks from project construction and closure, all construction and closure work would be done using qualified personnel trained in the proper use of construction equipment, including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner in accordance with the standards specified in Occupational Safety and Health Administration (OHS) regulations and the USACE safety manual. The contractor would post appropriate signage and fencing to minimize potential adverse public safety concerns. See also Section 6.0.

Resource Area	Impact Intensity				Impact Summary	Agency Coordination / Permits	Mitigation
	Negligible	Minor	Moderate	Major			
Traffic and Transportation		X			Traffic volumes along the respective work areas would increase temporarily during work activities. Surface traffic on the affected areas of Park Street would be impacted during culvert replacement work on the street. During water main work along LA Highway 18, traffic would need to be controlled to avoid harming workers and drivers on the road. See also Section 4.5.		Appropriate signage and barriers should be in place prior to construction activities in order to alert pedestrians and motorists of project activities and traffic pattern changes. The contractor would implement traffic control measures, as necessary. See also Sections 4.5 and 6.0.
Hazardous Materials and Toxic Wastes	X				Environmental Protection Agency (EPA) and LDEQ hazardous materials database searches were queried for the project work areas. No sites of concern were identified by the database search within the proposed project work areas. No environmental conditions of concern observed during field reconnaissance within the project area. The LDNR SONRIS database was queried for the project work areas. According to the LDNR, there are no recorded oil/gas wells located in the project area.	Internet Resources: EPA Envirofacts Database EPA Envromapper EPA Brownfields Database LDEQ Electronic Document Management System (EDMS) LDEQ Voluntary Remediation Program (VRP) Database LDEQ Louisiana State Brownfields Database LDNR SONRIS Database LDEQ Leaking Underground Storage Tank (LUST) Database LDEQ Authorized Debris Sites Database Email from the LDEQ dated 11/2/2011 (See Appendix E)	If hazardous materials are unexpectedly encountered in the project area during the proposed construction operations, appropriate measures for the proper assessment, remediation, management and disposal of the contamination would be initiated in accordance with applicable federal, state, and local regulations. The contractor would be required to take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction area. If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents. The LDNR Office of Conservation should be contacted at (225) 342-5540 if any unregistered wells of any type are encountered during construction work. For pipelines and other underground hazards, Louisiana One Call should be contacted at 800-272-3020 prior to commencing operations. See also Section 6.0.

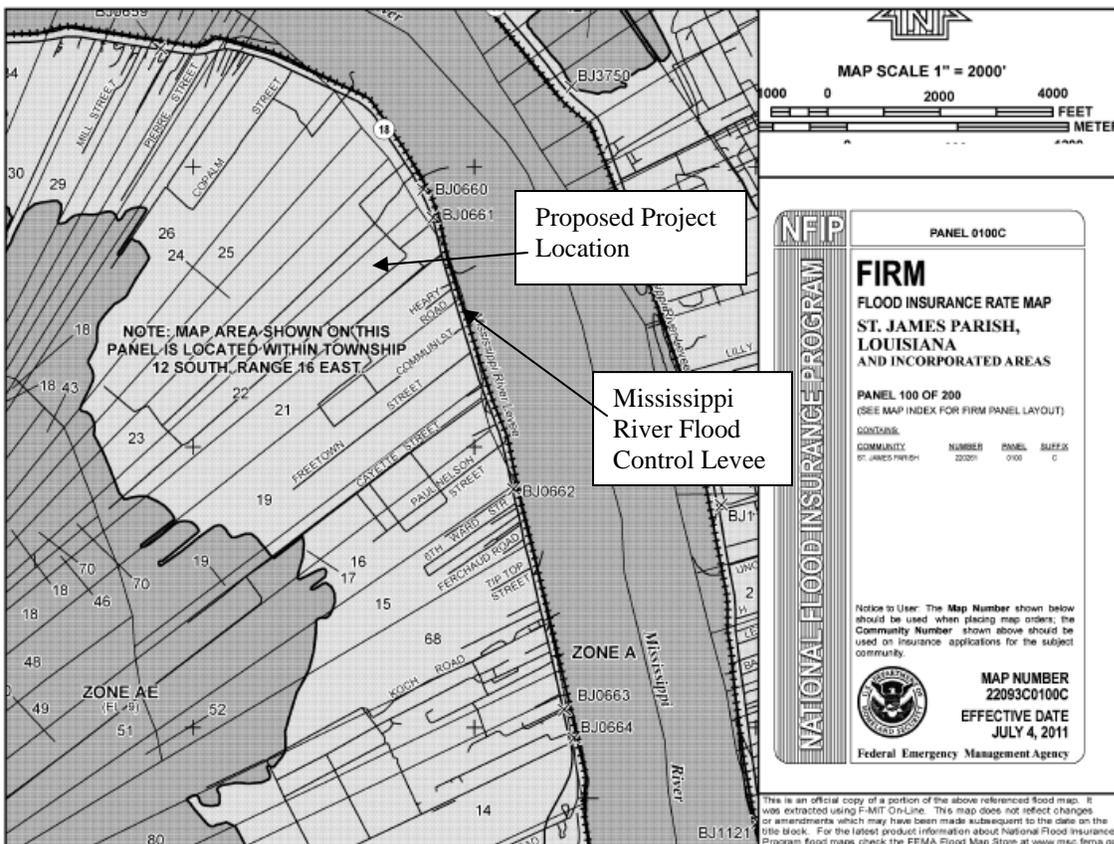
4.2 Water Resources

4.2.1 Hydrology and Floodplains

Executive Order 11988 (Floodplain Management) requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. St. James Parish enrolled in the National Flood Insurance Program (NFIP) on July 13, 1982. Preliminary DFIRMs were produced for St. James Parish, dated June 10, 2009. The Parish has adopted these DFIRMs and they became effective on July 4, 2011. According to effective DFIRM Panel Number 22093C 0100C (Figure 12) the proposed project is located in zone “shaded X” which is outside the base flood (100-year or 1.0 percent chance of flood within a given year), but is within the 500-year or 0.2 percent annual chance flood in a given year.

The proposed project site area is being protected from the 100-year flood hazard by a man-made levee system. Overtopping or failure of any levee system is possible. The proposed project site is located within 1,500 feet of a mainline levee or other flood control structure along the Mississippi River (Figure 12) which is under the jurisdiction of the Lafourche Basin Levee District (LBLD). The LBLD is part of a Louisiana State agency which was created under R.S. 38:291 to contain and manage the floodwaters along the major waterways in Louisiana.

Figure 12: Effective DFIRM Panel 22093C 0100C



Alternative 1- No Action: The No Action Alternative would have no effect on floodplains.

Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action): According to FEMA 361, structures containing community tornado safe rooms should be located in areas at low risk to flooding and mapped as unshaded zone X on newer DFIRMs and Flood Insurance Rate Maps (FIRMs) or zone C on older FIRMs (outside the 500-year [0.2 percent annual chance] floodplain) wherever possible. The proposed project is located in zone “shaded X” (the 500-year or 0.2 percent chance flood zone). To comply with Executive Order 11988, Floodplain Management, FEMA is required to follow the procedure outlined in 44 CFR Part 9 to assure that alternatives to the proposed action have been considered. This process is known as the "Eight-Step Planning Process."

Although the proposed action is not located in the base floodplain (the 100-year or 1.0 percent chance of flooding in a given year), due to the potential importance of the proposed hardened Welcome Park Community Center and the interior tornado safe rooms to the life safety of essential St. James Parish West Bank employees and the at risk population in the Parish, the Eight-Step Planning Process has been applied to this mitigation project and is described in Appendix F. The proposed action must be coordinated with the local floodplain manager as well as comply with local floodplain ordinances. For the purposes of this study, there are no practical alternatives to the proposed action.

After evaluating alternatives, including impacts to the floodplain, St. James Parish determined that the proposed project is the most practical alternative. Using the Eight-Step Process, FEMA has determined that there is no practicable alternative to constructing and hardening the proposed Welcome Park Community Center with interior tornado safe rooms within the 500-year floodplain because:

1. The entire proposed project area and surrounding community lies within 500-year floodplain. There are no practical locations outside of the 100-year or 500-year floodplain that St. James Parish could utilize for the proposed community center and interior safe rooms or for retrofitting existing structures with safe rooms on the West Bank of the Mississippi River within the Parish. Review of the St. James Parish effective DFIRMs indicates that there are no suitable FEMA-mapped X zones (areas outside the 100- or 500-year floodplain) on the West Bank of St. James Parish.
2. A “no action” plan would not provide a feasible solution to the needs and requirements of the Parish toward providing for the safety of critical personnel that are required to remain in the Parish during an approaching natural disaster.

According to FEMA 361, the lowest floor used for tornado safe room space and/or safe room support areas should be elevated to the higher of the following elevations, which should be used as the design flood elevation (DFE), which is, at a minimum, the BFE, and may include a factor of safety known as freeboard of 1 foot or more, as adopted by the community or Parish for flood load calculations:

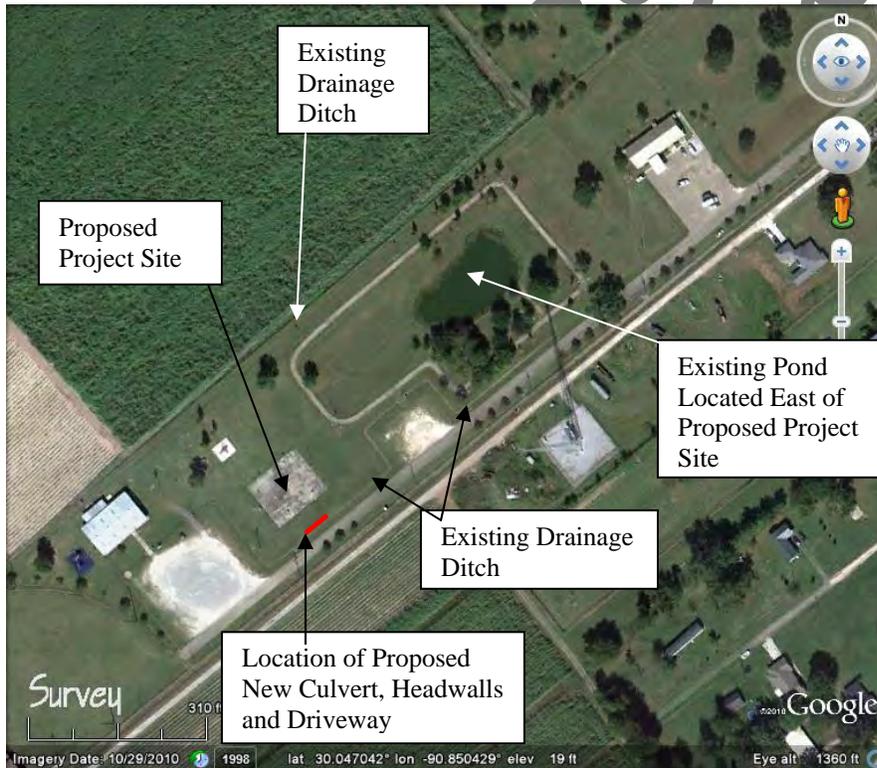
1. Two feet above the BFE, i.e., 2 feet above the flood elevation having a 1.0 percent annual chance of being equaled or exceeded in any given year (100-year event); or
2. The stillwater flood elevation associated with the 0.2 percent annual chance of being equaled or exceeded in any given year (500-year event); or
3. The lowest floor elevation required by the community's floodplain ordinance, if such ordinance exists.

As stated in Section 3.2, the proposed hardened Welcome Park Community Center with interior tornado safe rooms would be constructed with minimum elevation of 18.0 feet above msl, which is 4 feet above the highest BFE of 14 feet above msl indicated on any of the St. James Parish DFIRMs.

4.2.2 Surface Water and Water Quality

There are unnamed man-made drainage ditches located southeast and northwest of the proposed project site. In addition, there is a pond located northeast of the proposed project site. As stated in Section 3.2, 40 LF of new 36-inch diameter RCP culvert with headwalls would be installed within the existing drainage ditch located southeast of the proposed Welcome Park Community Center (see Figures and 9 and 13).

Figure 13 Proposed Project Surface Water Drainage



There are natural and man-made levees along both sides of the Mississippi River in St. James Parish (see Figures 14 and 15). The majority of the agricultural and developed area in St. James Parish has historically been, and is currently, built upon the natural levees. The natural levees, which are the result of many decades of sediment deposition from historic Mississippi River annual spring flooding, are approximately 3 miles wide on both sides of the River. The sediment deposition process no longer occurs on a regular basis due to construction of the man-made levee system for flood control along the Mississippi River.

Elevations in St. James Parish range from approximately 20 feet above msl near the Mississippi River to approximately one (1) foot above msl in the lowland marshes. The natural levees are higher in elevation than the land further north and east of the river on the East Bank and further south and west of river on the West Bank. Therefore, surface water in St. James Parish flows away from the river, toward the lowland swamps and marshes (wetlands) to the north and east on the East Bank, and toward lowland swamps and marshes to the south and west on the West Bank (which includes the project area) (Figure 14). Surface water then flows from the lowland swamps and marshes toward Lac Des Allemands via a series of interconnected bayous and canals (see Figure 15).

Figure 14 Proposed Project Drainage Map

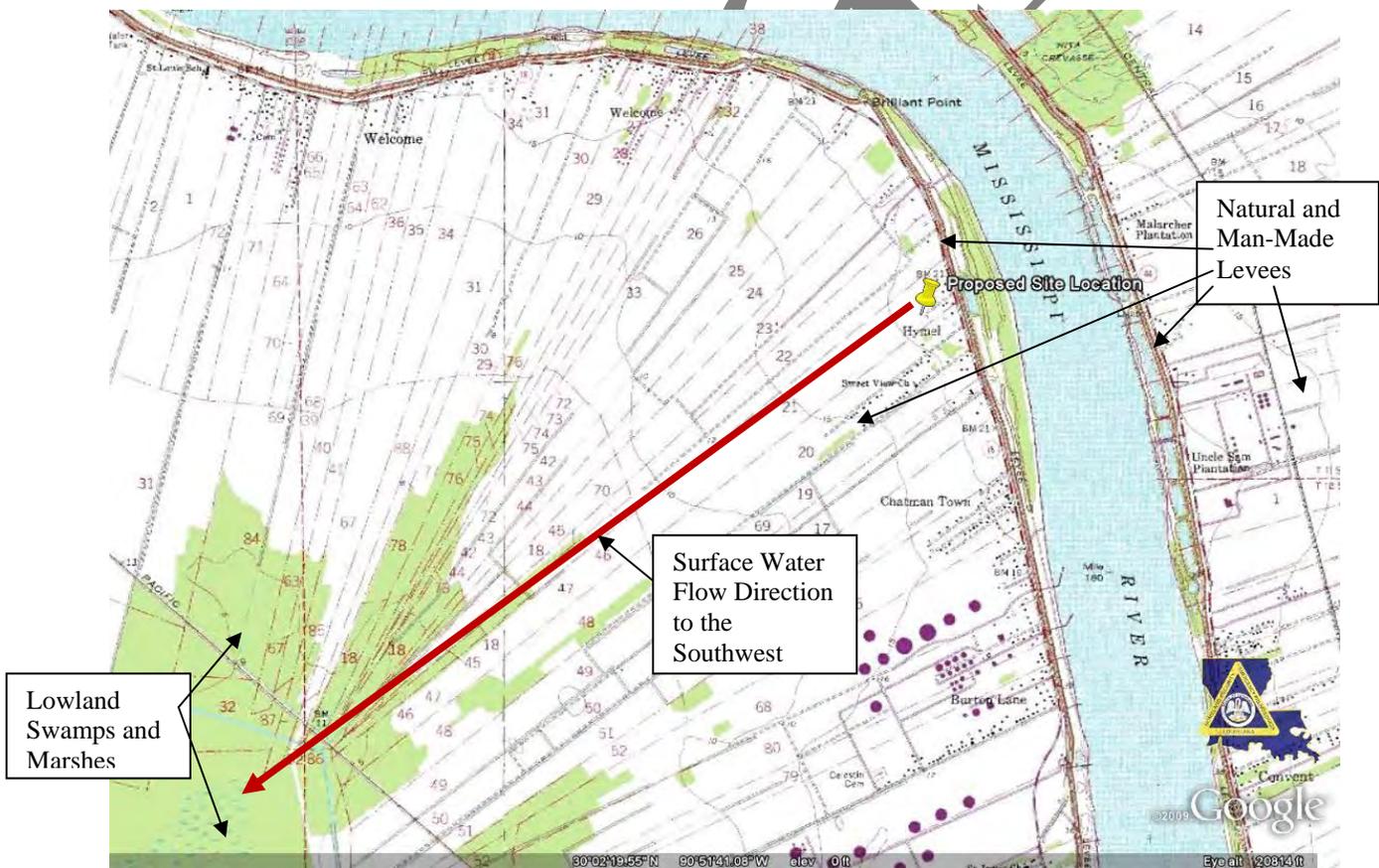
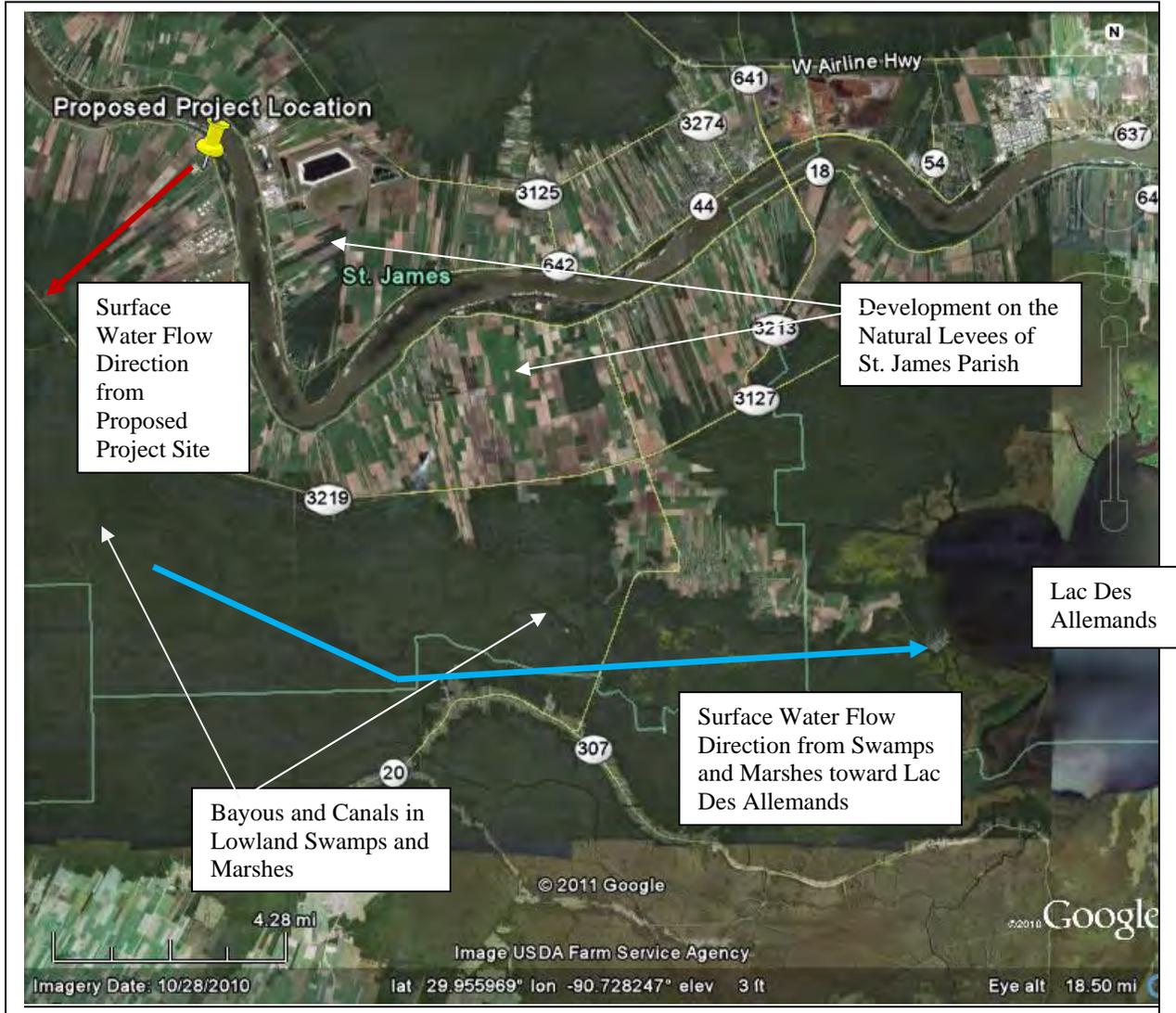


Figure 15 Overall Proposed Project Drainage Map



Alternative 1- No Action: The No Action Alternative would not change site drainage or have an effect on the surface water quality of the area.

Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action): The proposed project construction drawings indicate that a new culvert, headwalls, and an entrance driveway would be constructed within and over the existing drainage ditch located southeast of the proposed project site (see Figures 9 and 13). In addition, the construction plans indicate that a new sewage treatment system, along with a new sewer line and a filter bed, would be constructed on the northeast side of the proposed community center structure. A Sewage Sludge and Biosolids Use or Disposal Permit application or Notice of Intent must be submitted to the LDEQ. Additional information may be obtained on the LDEQ website at <http://www.deq.louisiana.gov/portal/tabid/2296/Default.aspx>

or by contacting the LDEQ Water Permits Division at (225) 219-3181. Copies of the agency correspondence are presented in Appendix E.

During construction there is the potential to impact surface waters through minor erosion and sedimentation. Excavation and trenching would be required to install the foundation for the Welcome Park Community Center, the new culvert and headwalls in the existing drainage ditch, the new underground electrical service, the new 8-inch water line which would run from the project site fire hydrant to LA Highway 18, the new 6-inch and 4-inch sewer lines, and the sewage treatment station. In order to minimize impacts to waters of the U.S., the contractor is required to implement BMPs that meet the LDEQ's permitting specifications for storm water discharge regulated under Section 402 of the CWA. This includes specific construction measures to reduce or eliminate run-off impacts. However, any adverse effects to water quality associated with the construction of the projects would be short term and minimized by the measures described above.

4.3 Coastal Resources

The LDNR regulates development in the designated coastal zone under the CZMA of 1972. A central requirement of the CZMA is that each state having a coastline develops a management program for its coastal zone. In 1978, the Louisiana Legislature passed the State and Local Coastal Resources Management Act. This act established a coastal zone boundary and a system of Coastal Use Permits (CUPs) to regulate uses and activities in Louisiana's coastal zone. These CUPs are required for those projects that have a direct impact on coastal waters.

Federally-funded activities that affect the coastal zone are also subject to federal consistency provisions of the CZMA. Before the federal agency can grant financial assistance, the proposed project Applicant must attach a consistency certification issued by the state coastal agency.

The USFWS administers the Coastal Barrier Resource Act of 1982 (CBRA). The Act designated various undeveloped coastal barrier lands and islands, depicted by specific maps and the new FEMA DFIRMs, for inclusion in the CBRS. Areas so designated were made ineligible for direct or indirect Federal financial assistance that might support development, including flood insurance, except for emergency life-saving activities. There are designated CBRS units in Louisiana, but not near the proposed project area.

Alternative 1- No Action: The No Action Alternative would have no effect on the coastal zone or any designated CBRS unit.

Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action): The proposed project site is located in the designated Louisiana Coastal Management Zone. The LDNR regulates the Louisiana Coastal Zone Management Program. In a response letter dated October 31, 2011, the LDNR indicated that the Applicant must complete a Coastal Use Permit Application packet to the LDNR to obtain an official determination, and begin processing any CUP that may be required for the project. The Applicant must coordinate with the LDNR for permits and clearances. Copies of

the agency correspondence are presented in Appendix E. The St. James Parish Coastal Zone Committee must also be notified if there are any changes to the proposed scope of work.

The proposed project site is not part of a designated CBRS unit. Therefore, CBRA does not apply.

4.4 Noise

Noise is generally described as unwanted sound. The project area is generally moderately developed with residential and commercial structures and several roadways are located near the proposed project. There are several noise receptors within 1,000 feet of the proposed project site, including several residential structures and the St. James Parish-run Senior Citizen Center, located at 7140 Park Street (see Figure 4) within the existing community center. Existing noise consists primarily of traffic noise. Noise levels within and adjacent to the project area would increase during construction activities as a result of construction equipment and increased vehicular activity.

Alternative 1- No Action: The No Action Alternative would have no impact on noise in the project area.

Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action): Construction and hardening of the new Welcome Park Community Center and interior tornado safe rooms would result in an increase in noise. The increase is expected to be temporary and would not affect any sensitive receptors. St. James Parish does not have any specific ordinances regarding construction noise. If necessary, the following noise reduction measures should be considered: using a 7 A.M. to 7 P.M. construction schedule on all workdays.

4.5 Traffic and Transportation

The proposed site is located in a sparsely developed, moderate traffic volume area near LA Highway 18, a major, high-volume traffic, Parish road.

Alternative 1- No Action: The No Action alternative would have no effect on traffic.

Alternative 2 – Construction and Hardening of the New Welcome Park Community Center and Interior Tornado Safe Rooms (Proposed Action): Construction at the proposed project site would have a temporary effect on traffic by increasing the number of heavy machinery vehicles on Park Street and on LA Highway 18. Construction traffic should be closely monitored and controlled as appropriate. All construction activities would be conducted in a safe manner in accordance with OSHA requirements.

Surface traffic on the affected areas of Park Street would be impacted during culvert and headwall installation and installation of the entrance driveway work along Park Street. In addition, the excavation work required to connect the proposed project site main water line with the existing Parish main water line along LA Highway 18 would temporarily disrupt existing

traffic patterns. The contractor would implement traffic control measures as necessary, including flag men, to control traffic flow during this activity. During construction activities, the construction site(s) would be fenced off to discourage trespassers.

5.0 CUMULATIVE IMPACTS

Cumulative impacts are those effects on the environment that result from the incremental effect of the action when added to past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The impact of Hurricane Katrina in St. James Parish resulted in either wind or flood damage to many structures. There have been other projects in St. James Parish to repair other structures to pre-disaster condition with upgrades to codes and standards. In addition, St. James Parish plans to construct an earthen berm for flood control in South Vacherie, which is located on the West Bank of the Mississippi River. The Parish also plans to upgrade culverts in other areas of the Parish, and the Parish plans to widen the Longview Canal to improve the drainage in the Grand Pointe Bourbon subdivision of Paulina, Louisiana on the East Bank of the Mississippi River.

According to the National Oceanic and Atmospheric Administration (NOAA) Coastal Change Analysis Program (C-CAP) Land Cover Atlas, from 1996 to 2006, the percent of developed land parish wide in St. James has increased from 8.43% to 8.54%, and the percentage of impervious surface area has increased from 2.79% to 2.94%. Within the same timeframe, the percentage of forested land parish-wide has decreased from 55.29% to 54.99%, and the percentage of St. James that is designated as wetland has decreased from 57.86% to 57.61%. In 1996, St. James Parish had 73.93 square miles of agricultural land. In 2006, St. James Parish had 74.01 square miles of agricultural land, for a net gain of 0.08 square miles of land (+0.11% change) used for agriculture.

The proposed project would require soil disturbance at the project site. In addition, minor soil excavation would be required to install drainage culverts and utilities at the proposed site. The cumulative impact to the natural resources within St. James Parish would be negligible and not likely to adversely affect the Parish as a whole. The human environment of St. James Parish would be impacted by increasing the safety and welfare of those Parish employees and citizens who must remain on the West Bank of St. James Parish immediately before, during, and immediately after a severe weather event. On the whole, the human environment of St. James Parish would benefit by the project, and no significant adverse cumulative impacts would occur.

6.0 CONDITIONS AND MITIGATION MEASURES

Based upon the studies and consultations undertaken in this environmental assessment, several conditions and mitigation measures must be taken by the Applicant prior to and during project implementation.

- The LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that the LDEQ Water Permit Division be contacted at (225) 219-3181 to determine whether the proposed improvements require one of these permits. The contractor is required to implement BMPs that meet the LDEQ permitting specifications for storm water discharge regulated under Section 402 of the CWA. All precautions should be observed to control nonpoint source pollution from construction activities.
- The contractor would be responsible for keeping all excavated areas periodically sprayed with water, all equipment maintained in good working order, and all construction vehicles would be limited to 15 mph to minimize pollution/fugitive dust.
- This project may require a CUP from the LDNR. Determination of CUP requirements must be obtained through the submission of a completed CUP application to the LDNR. Projects may be coordinated by contacting LDNR at (225) 342-7591 or 1-800-267-4019. The St. James Parish Coastal Zone Committee must be notified if there are any changes to the proposed scope of work.
- The Applicant must coordinate with the LBLD (rtrosclair@lbd.us.com) to determine if a construction permit would be required.
- Any changes or modifications to the proposed project would require a revised determination. Off-site locations of activities such as borrow; disposals, haul-and detour-roads and work mobilization site developments may be subject to the Department of the Army regulatory requirements and may have an impact to a Department of Army project.
- The Applicant would be responsible for contacting the USFWS if there is a change in the scope of work, the project necessitates removal of mature pine trees or if construction activities have not been initiated within one year.
- If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents.
- The proposed project would include a sanitary wastewater treatment facility. A Sewage Sludge and Biosolids Use or Disposal Permit application or Notice of Intent must be submitted to the LDEQ. Additional information may be obtained on the LDEQ website at <http://www.deq.louisiana.gov/portal/tabid/2296/Default.aspx> or by contacting the LDEQ Water Permits Division at (225) 219-3181.

- Prior to the proposed project implementation, the Applicant must contact the St. James Parish Floodplain Administrator in order to ensure compliance with St. James Parish requirements for the NFIP and to ensure that all appropriate permits are obtained.
- If a bald eagle or its nest is spotted within 1,500 feet of the project site during the months of October through mid-May, the Applicant must cease construction activities and contact LDWF and USFWS immediately. All correspondence must be documented and remain in the project permanent files.
- Construction traffic should be closely monitored and controlled as appropriate. All construction activities would be conducted in a safe manner in accordance with OSHA requirements. To alert motorists and pedestrians of project activities, appropriate signage and barriers should be used during construction. During construction activities, the construction site(s) would be fenced off to discourage trespassers. Traffic on Park Street and LA Highway 18 would be controlled, as necessary, during construction and excavation activities.
- If archaeological artifacts or features (prehistoric or historic) are discovered during the course of FEMA funded work at the project site, the Applicant must ensure that their Contractor stops work in the vicinity of the discovery and takes all reasonable measures to avoid and minimize harm to the discovery. The Applicant shall inform GOHSEP and FEMA of the discovery, and FEMA would deploy an archaeologist to the location to conduct a site condition assessment. The Applicant would not proceed with work until FEMA has completed consultation with the SHPO and other appropriate consulting parties on the treatment of the discovery.
- In addition, if human remains are discovered during the course of FEMA funded work, the Applicant and the Applicant's Contractor are responsible for immediately halting work within the vicinity of the human remains finding. The Applicant will immediately notify GOHSEP, FEMA, the local Police Department, and the local Coroner's Office of the discovery. The local Coroner's Office will assess the nature and age of the human skeletal remains. If the Coroner's Office determines that the human skeletal remains are older than 50 years of age, the Louisiana Division of Archaeology will take jurisdiction over the remains. Within seventy-two (72) hours, the Applicant will notify FEMA and the Louisiana Division of Archaeology (225-342-8170) of the finding. FEMA will assist, as requested, the Louisiana Division of Archaeology and other interested parties, as necessary, to ensure compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671 *et seq.*) and other applicable laws. In addition, the Applicant must afford FEMA the opportunity to comply with the "Human Remains Policy" set forth by the ACHP.
- Any change to the approved scope of work will require reevaluation under Section 106.
- In accordance with applicable local, state, and federal regulations, the Applicant is responsible for acquiring any necessary permits and/or clearances prior to the commencement of any construction related activities.

- FEMA Mitigation Interim Policy MRR-2-09-1 and all applicable technical information provided in FEMA 361 must be adhered to as part of the HMGP funding requirements.

Failure to comply with these conditions may make part or all of these projects ineligible for FEMA funding.

7.0 PUBLIC INVOLVEMENT

The public will be invited to comment on the proposed action. A legal notice was published in the following newspaper: The New Orleans Times-Picayune from February 27, 2012 to March 2, 2012. Additionally the Environmental Assessment was made available at the St. James Library (Vacherie Branch) from February 27, 2012 to March 17, 2012. The Environmental Assessment was published on FEMA's and the Parish's official websites. A copy of the Public Notice is attached in Appendix G.

8.0 AGENCY COORDINATION

U.S. Army Corps of Engineers (USACE)
Louisiana Department of Environmental Quality (LDEQ)
Louisiana Department of Natural Resources (LDNR), Coastal Zone Management Program
Louisiana Department of Wildlife and Fisheries (LDWF)
Environmental Protection Agency (EPA)
U.S. Department of Agriculture - Natural Resources Conservation Service (USDA-NRCS)
Louisiana State Historic Preservation Officer (SHPO)
U.S. Fish and Wildlife Service (USFWS)

9.0 LIST OF PREPARERS

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APPENDIX A

FEMA'S MITIGATION INTERIM POLICY, MRR-2-09-1, "HAZARD MITIGATION ASSISTANCE FOR SAFE ROOMS"



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MITIGATION INTERIM POLICY

MRR-2-09-1

I. TITLE:

Hazard Mitigation Assistance for Safe Rooms

II. DATE OF ISSUANCE: April 30, 2009

III. PURPOSE:

This policy updates the previous memorandum on this subject (MRR-2-07-1) issued March 7, 2008, to identify revised design criteria eligible to support Pre-Disaster Mitigation program (PDM) and Hazard Mitigation Grant Program (HMGP) safe room activities. Specifically, the revised FEMA Publications 320 *Taking Shelter From the Storm: Building a Safe Room For Your Home or Small Business – Third Edition, August 2008* and 361 *Design and Construction Guidance for Community Safe Rooms – Second Edition, August 2008*.

This document describes FEMA's policy on the use of PDM and HMGP funds for safe rooms. This policy will ensure national consistency in the use of PDM and HMGP funds for the construction or retrofit of residential, non-residential, or community safe rooms. These activities are for the hazard mitigation purpose of immediate life safety resulting from structural and building envelope protection against extreme wind hazards for a limited at-risk population that cannot evacuate out of harm's way prior to an event.

For the purposes of PDM and HMGP, the term "safe room" only applies to:

- extreme wind (combined tornado and hurricane) residential and non-residential safe rooms;
- extreme wind (combined tornado and hurricane) community safe rooms;
- tornado community safe rooms; and
- hurricane community safe rooms.

IV. SCOPE AND APPLICABILITY:

PDM

This policy applies to PDM projects for which the application period opens on or after the date of this policy.

HMGP

This policy applies to HMGP projects for which funding is made available pursuant to a major disaster declared on or after the date of this policy.



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V. AUTHORITY:

Sections 203 (PDM) and 404 (HMGP) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5133 and 5170c.

VI. BACKGROUND:

The Stafford Act authorizes FEMA to provide funding for the purpose of reducing or eliminating risks to life and property from hazards and their effects. Mitigation grant program regulations and guidance that implement these authorities identify various types of hazard mitigation projects or activities that meet this purpose and may be eligible for funding. These projects represent a range of activities that protect structures, the contents within those structures and/or the lives of their occupants.

Extreme wind mitigation projects including residential, non-residential, and community safe rooms for the hazard mitigation purpose of immediate life safety resulting from structural and building envelope protection are eligible activities under PDM and HMGP. In extreme wind events where there is sufficient warning time such as hurricanes, the general population may be expected to leave the area of anticipated immediate impact and seek shelter outside the at-risk area. However, some people such as first responders and those physically unable to leave the area remain in harm's way. Therefore, for hurricane threats, FEMA will only consider funding extreme wind mitigation projects that are designed for a specific population that cannot remove themselves from harm's way during a land-falling hurricane. In extreme wind events such as tornados, the threat posed affords little to no warning to allow the general population to leave the area of immediate impact and therefore they must seek immediate life safety protection. This limits the potential occupancy of tornado residential, nonresidential, and community safe rooms to onsite occupants only, or to those within close proximity.

PDM and HMGP funds may only be used for safe room projects designed to achieve "near-absolute protection" as described in FEMA Publications 320 and 361. Any lower threshold of protection exposes safe room occupants to a greater degree of risk than is acceptable. In order to provide this acceptable level of hazard mitigation protection during extreme wind events a structure has to meet design criteria intended for this specific purpose, which exceed the design criteria for structure and building envelope protection only. In some cases, these projects also afford some ancillary level of structural and building envelope protection to reduce or eliminate damage to the structure and its contents and to ensure continuation of facility function.

PDM and HMGP funds are not available for general population shelters, including evacuation or recovery shelters intended to provide longer-term services and housing for people leaving the anticipated impact area of an extreme wind event, or because their homes have been damaged or



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destroyed by extreme wind events, fire, disasters, or other catastrophes. Such general population shelters are not intended to sustain the extreme wind event and are not required to satisfy the higher design criteria of near-absolute protection consistent with hazard mitigation residential, nonresidential, and community safe rooms as established in FEMA Publications 320 and 361. In addition, the hazard mitigation time of protection for safe rooms is 2 hours for tornado events and 24 hours for hurricane events. These time periods also differentiate hazard mitigation event-only safe rooms from longer-term evacuation and recovery shelters.

Furthermore, the planning and operation of PDM and HMGP safe rooms should not conflict with State and/or local evacuation plans. PDM and HMGP safe room project activities should not be used as a substitute for, or as an option for individuals to ignore local community and/or State evacuation plans or any other law or ordinance.

VII. POLICY:

FEMA will consider an extreme wind event mitigation activity consisting of the retrofit or construction of a residential, nonresidential, or community safe room (single- or multi-use) to be an eligible project type for PDM and HMGP grant awards as follows:

- where it provides immediate life-safety protection in the target area of impact of a striking hurricane and/or tornado;
- where it is designed only to the extent it is necessary for the limited population that must remain in the impact strike area during a hurricane and/or tornado event, to the extent necessary for the limited time period that a hurricane and/or tornado event is occurring;
- where the mitigation measure is consistent with the identified risk to be mitigated;
- where the mitigation measure is not located in a flood hazard area where the flood waters have the potential to endanger occupants within the safe room;
- where the mitigation measure is constructed with criteria recognized by FEMA to afford near-absolute protection and verified by a licensed design professional;
- where allowable safe room project costs are directly related to and necessary for the hazard mitigation purpose of providing immediate life safety resulting from structural and building envelope protection to the limited population required to remain in the impact zone during an extreme wind event;
- where adequate operations and maintenance planning are demonstrated;
- where the mitigation measure is demonstrated to be cost-effective, and
- where other applicable PDM and HMGP program conditions are demonstrated, as shown in PDM and HMGP program-specific guidance.



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Accordingly, this policy establishes the following eligibility parameters for PDM and HMGP safe room projects:

- eligible activities;
- design standards;
- flood hazard siting limitations;
- population protected;
- period of protection;
- eligible costs;
- operation plan;
- maintenance plan; and
- cost-effectiveness.

A. Eligible Activities and Design Standards.

Extreme wind mitigation project activities for the design and construction of new safe rooms, as well as for the design and retrofitting of existing buildings or portions thereof for the hazard mitigation purpose of immediate life safety resulting from structural and building envelope protection from tornado and/or hurricane hazards, are eligible for PDM and HMGP funding consideration. These mitigation activities are available to residential, non-residential, and public structures. In all cases these projects must result in a completed safe room constructed with criteria recognized by FEMA to afford near-absolute protection and verified by a licensed design professional.

Eligible safe room activities are limited to:

- extreme wind (combined tornado and hurricane) residential, non-residential safe rooms; and
- extreme wind (combined tornado and hurricane) community safe rooms; and
- tornado community safe rooms; as well as
- hurricane community safe rooms.

PDM and HMGP funds are not available for general population shelters, including evacuation or recovery shelters.

To qualify for PDM and HMGP funding, a safe room provides near-absolute protection when it complies with FEMA recognized design and construction criteria, codes, or standards. Any safe room designed to a lower design criteria, and hence, providing a lower level of protection results in a greater degree of risk than is acceptable to FEMA and is, therefore, not eligible for PDM and HMGP funding. FEMA recognizes acceptable life safety protection for safe room occupants if project application



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documentation shows that the safe room project meets or exceeds the criteria set forth in the publications or standards listed below:

- FEMA Publication 320 *Taking Shelter From the Storm: Building a Safe Room For Your Home or Small Business – Third Edition, August 2008*; or
- FEMA Publication 361 *Design and Construction Guidance for Community Safe Rooms – Second Edition, August 2008*.

In addition, the *Standard For the Design and Construction of Storm Shelters* (ICC-500), a consensus standard from the International Code Council (ICC) is acceptable for use in designing PDM and HMGP safe rooms only when incorporating specific recommendations outlined in FEMA Publications 320 and 361. FEMA has identified specific design criteria in FEMA Publications 320 and 361 to be more conservative than what is presented in the ICC-500 due to both emergency management considerations and maintaining near-absolute protection.

B. Flood Hazard Siting Limitations

To be considered for funding, PDM and HMGP safe room projects will include maps or other documentation that identifies the projects' location relative to the floodplain. FEMA does not support the placement of safe rooms where floodwaters have the potential to endanger their occupants, therefore FEMA Publications 320 (Section II, pages 23 and 24) and 361 (Chapter 3, pages 3-28 through 3-33 and Chapter 5, pages 5-14 through 5-17) outline specific flood hazard siting limitations. To be eligible for PDM and HMGP funding, FEMA will only consider applications for residential, non-residential and community safe rooms consistent with FEMA Publications 320 and 361 located outside the following high hazard areas:

- The Coastal High Hazard Area (VE zones) or other areas known to be subject to high-velocity wave action; or
- Areas seaward of the Limit of Moderate Wave Action (LiMWA) where mapped, also referred to as the Coastal A Zone in ASCE 24-05, or
- Floodways.

In addition, residential and non-residential safe rooms consistent with FEMA Publication 320 may not be located in:

- Areas subject to coastal storm surge inundation associated with a Category 5 hurricane (where applicable, these areas should be mapped areas studied by the U.S. Army Corps of Engineers (USACE), NOAA, or other qualified sources).

FEMA Publications 320 (Section II) and 361 (Chapter 3) provide additional flood hazard design criteria that should be adhered to when designing and constructing safe rooms.



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C. Population Protected and Period of Protection.

To be eligible for funding under PDM and HMGP, FEMA will only consider safe room projects that provide hazard mitigation to a specific population facing the immediate threat of impact from a land-falling hurricane or a strike from a tornado.

To be considered, PDM and HMGP applications for safe room projects will demonstrate design for life safety protection for a duration related to the specific period of onset for the tornado event and/or for the hurricane event. The hazard mitigation time of protection for safe rooms, consistent with the ICC-500 standard requirements, is to provide 2 hours of protection for tornado events and 24 hours of protection for hurricane events.

As previously stated, the planning and operation of PDM and HMGP safe rooms, including the identification of the population to be protected, should not conflict with State and/or local evacuation plans. PDM and HMGP safe room project activities should not be used as a substitute for, or as an option for individuals to ignore local community and/or State evacuation plans or any other law or ordinance.

FEMA will only consider PDM and HMGP applications for safe room projects that identify the safe room population that must remain behind to face an imminent threat against either, or both, tornado or hurricane hazards. This is the population that the applicant will identify and quantify, so that the anticipated population and resulting size of the safe room can be verified during the grant application review process. This is demonstrated by risk assessment information such as that developed as part of a mitigation plan or evacuation plan.

For tornados, this population is generally limited to the family or group of families that live in the dwelling or dwellings served by the safe room, workers that are provided access to a safe room at their place of business, or individuals that occupy or are provided access to an on-site community safe room, built either as an integral part of the building or as a separate structure. In addition, due to the short time period between tornado identification and impact, these at-risk populations must be within close proximity to the safe room in order benefit from it. Populations that cannot reach the safe room in a reasonable time, or that are not granted access to the safe room, are not considered potential occupants of the safe room.

For hurricanes, this population is comprised of individuals that must stay in the area that may be impacted by the extreme wind hazard and includes first responders, critical and essential services personnel and facility occupants who cannot otherwise safely evacuate on their own from the path of a hurricane.



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The identification of the population to be protected directly impacts safe room size requirements. PDM and HMGP funding will not be provided to support safe rooms that are sized larger than that required to accommodate the identified at-risk population. Therefore, PDM and HMGP safe room project applications are subject to the floor area per occupant space requirements and size limitations identified in the design criteria recognized in Section A of this Interim Policy. These standards are generally prescriptive (e.g., FEMA Publication 320) or performance-based (e.g., FEMA Publication 361). For example, the following size limitations apply to residential and non-residential safe rooms utilizing the prescriptive designs provided in FEMA Publication 320.

- *Prescriptive residential safe room designs provided in FEMA Publication 320 for either, or both, tornado or hurricane hazards:* The maximum floor dimensions are 14 feet by 14 feet square, providing 196 square feet of safe room space. The maximum residential safe room safe occupancy should not exceed 16.
- *Prescriptive non-residential safe room designs provided in FEMA Publication 320 for tornado only:* The maximum floor dimensions are 14 feet by 14 feet square, providing 196 square feet of safe room space. The maximum non-residential safe room safe occupancy should not exceed 33.
- *Prescriptive non-residential safe room designs provided in FEMA Publication 320 for combined tornado and hurricane:* The maximum floor dimensions are 14 feet by 14 feet square, providing 196 square feet of safe room space. The maximum non-residential safe room safe occupancy should not exceed 8.

In addition, PDM and HMGP safe rooms are not intended to protect thousands of potential occupants within a single community safe room. The emergency management considerations necessary to afford protection to thousands of occupants in large, public venues such as stadiums or amphitheaters are beyond the scope of PDM and HMGP community safe rooms and therefore are not eligible for PDM or HMGP funding. The emergency management considerations of such facilities require attention to behavioral and other non-engineering planning issues that directly affect the life safety for thousands of people are consistent with evacuation and recovery shelters, not PDM and HMGP safe rooms. Examples of emergency management considerations include egress timing for thousands of people in a stadium, how to manage a large group of individuals, and security issues.

The applicant will demonstrate consideration of at least the following components in determining eligible safe room population:

- population to be protected within the area at risk of impact by tornado and/or hurricane hazards;
- warning capabilities, logistics, and operations components that support basic safe room functions;



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- travel times for the population to be protected to reach the safe room, such that people are not exposed to additional risk when moving to the protected area;
- hazard mitigation time of protection: 2 hours for tornado and 24 hours for hurricane; and
- relationship of the population to be protected by the safe room to State or local emergency evacuation requirements.

D. Eligible Costs.

Allowable costs for PDM and HMGP safe room projects are those project components such as design and building costs directly related to and necessary for the hazard mitigation purpose of immediate life safety resulting from structural and building envelope protection to the limited population that must remain in the impact area during an extreme wind event. This applies to safe rooms that are either retrofits of existing facilities or new construction projects, and applies to both single and multi-use facilities.

FEMA will only consider as eligible costs those that are consistent with FEMA approved performance criteria (FEMA 320, 361), which generally includes:

1. Design activities;
2. Site preparation and building foundation materials and construction;
3. Structural systems capable of resisting the design wind loads (including roof decking and roof support structures);
4. Protective envelope components such as:
 - walls, ceiling/roof systems and doors; and
 - other retrofit hardening activities that meet FEMA approved performance criteria;
5. Functional components such as:
 - permanent electrical lighting, ventilation, heating/cooling, toilets and hand-washing facilities consistent with FEMA approved performance criteria; and
 - signage, emergency communications equipment, back-up power generation for the safe area; and
6. Operations and Maintenance Plan development.

In general, FEMA may allow hazard mitigation funding consideration for all necessary code-required mitigation-related project components. However, in the case of retrofits, pre-existing conditions of code non-compliance that local or State officials are obligated to remedy are not eligible for hazard mitigation funding consideration.

Ineligible costs include, but are not limited to:

1. Project components not directly related to the hazard mitigation purpose as described in this policy, such as:



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- General evacuation studies or plans; and
- 2. Project components not consistent with FEMA approved performance criteria (FEMA 320, 361) such as:
 - Inadequate designs;
 - Inadequate structural systems;
 - Inadequate protective envelope; and
- 3. The cost of any functionality or outfitting not directly required to meet FEMA approved performance criteria such as:
 - auditorium seating, sports equipment, furniture, interior or exterior decorative elements and fixtures, floor treatments;
- 4. Operation and maintenance of safe rooms; and
- 5. Costs associated with the acquisition of land.

E. Operations and Maintenance Plan.

To be considered for funding, PDM and HMGP community safe room project applications will include a statement acknowledging that the requested community safe room will be operated and maintained in a manner that will achieve the proposed hazard mitigation. FEMA will only consider operations and maintenance plans that are consistent with criteria available in FEMA Publication 361 *Design and Construction Guidance For Community Safe Rooms* Chapter 9 and the samples provided in Appendices C and D.

Subgrantees will provide a draft operations and maintenance plan to the grantee prior to performing any retrofit or construction activities as part of the funded project. The grantee will provide the draft plan to FEMA after they have affirmed its general consistency with FEMA 361 criteria. FEMA will then review the draft plan and determine if it is consistent with FEMA 361 criteria. Grantees may only approve the start of retrofit or construction activities after they receive FEMA's determination of the draft plan's consistency with FEMA 361 criteria.

Subgrantees will provide a final operations and maintenance plan to the grantee before project close-out. The grantee will provide the final plan to FEMA after they have affirmed its general consistency with FEMA 361 criteria. FEMA will then review the final plan and determine if it is consistent with FEMA 361 criteria.



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F. Cost-Effectiveness

PDM and HMGP safe room and community shelter projects requesting funding must demonstrate their cost-effectiveness through an acceptable benefit-cost analysis (BCA). The PDM applicant and/or subapplicant or the HMGP grantee and/or applicant must use a FEMA-approved methodology to determine the BCA. FEMA's BCA software may be obtained by contacting the BCA helpline via phone: 1(866) 222-3580 or email: bchelpine@dhs.gov or the applicable FEMA Regional Office.

G. Other general requirements

Mitigation activities must adhere to all other PDM or HMGP statutes, regulations, and requirements that apply to this funding category, including: Sections 203 and 404 of the Stafford Act; Hazard Mitigation Grant Program (44 CFR Subpart N); Mitigation Planning (44 CFR Part 201); Floodplain Management and Protection of Wetlands (44 CFR Part 9); Environmental Considerations (44 CFR Part 10), Uniform Administrative Requirements (44 CFR Part 13); Floodplain Management (44 CFR Part 60); other applicable federal environmental and grants management requirements; as well as applicable program guidance.

VIII. ORIGINATING OFFICE:

Mitigation Directorate (Risk Reduction Division, Grants Policy Branch)

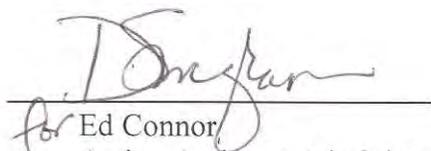
IX. SUPERSESSION:

This policy supersedes previous mitigation policies and guidance related to this subject including:

- FEMA Mitigation Interim Policy MRR-2-07-1, "Hazard Mitigation Assistance for Safe Rooms," dated March 7, 2008.

X. REVIEW DATE:

Not later than three years from date of publication.


for Ed Connor
Acting Assistant Administrator
Mitigation Directorate

Draft

APPENDIX B

**ST. JAMES PARISH SAFE ROOM/HURRICANE HARDENED FACILITY
OPERATIONS, MANAGEMENT, AND MAINTENANCE PLAN**

ST. JAMES PARISH GOVERNMENT

SAFE ROOM/HURRICANE HARDENED FACILITY OPERATIONS, MANAGEMENT, AND MAINTENANCE PLAN

August 2011

*New
9-30-11*

This manual outlines the duties and responsibilities of the Safe Room Manager and Safe Room Management Team. It also provides information on activities to be carried out in preparing, organizing, and managing a safe room and hurricane hardened facility for essential personnel.

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SECTION I OVERVIEW

A. General

This information is developed as a guide to follow towards the response to a disaster effecting St. James Parish and/or surround parishes and communities. The St. James Parish Safe Room Operations, Management, and Maintenance Plan is part of the Parish's commitment to disaster preparedness, prevention, mitigation, and effective response in the area of safe room management. This plan defines the organizational and functional mechanisms and procedures for carrying out the Safe Room Management Program in preparation of an event.

The Plan focuses on providing a safe room and hardened facility for essential personnel for a short period of time. This document was designed under the guidance of the Parish President's Office, the Director of Emergency Preparedness, Director of Human Resources, and the Director of Operations. Safe Room Managers, of these types of safe rooms for essential personnel, emergency responders, and nearby residents in the event of a tornado, should be ready to open the safe room for immediate use in response to an extreme wind event.

B. Assumptions

1. The Department of Emergency Preparedness, which is located at 5153 Canatella St., in Convent, La., is the lead responder to situations requiring the opening and manning of safe rooms in the Parish.
2. A large scale emergency will result in increased demands on members of the Parish Government and local law enforcements and emergency responders.
3. The St. James Parish Government will respond to all local disasters and will assist in the response to State and national disasters as requested by the proper authorities.
4. The St. James Parish Government shall ensure that all emergency designated safe rooms are used as intended during planning, design, and utilization.
5. That emergencies in St. James Parish may be categorized in two ways:
 - a) Those that are preceded by a buildup, advance warning of a pending disaster, which can provide the Parish with a timely and effective activation of local response and arrangements.
 - b) Other emergencies and disasters can occur in the Parish with little or no advance warning; thus, requiring mobilization and instant need of resources, which will require prompt action and support of the Parish and State just prior to or immediately after the onset of such emergencies.

C. Safe Room Plan

This Emergency Safe Room Response Plan is a guide for the Parish Department of Emergency Preparedness to handle local disasters, assign staff, implement procedures, and respond to a disaster that requires short-term housing of essential personnel.

Every essential staff member is to be made aware of the existence of this Plan. Also, area industrial essential support workers, emergency responders, Parish employees, law enforcement, and government officials must be fully knowledgeable of the contents of this Plan, be aware of their roles and responsibilities in any disaster as set out in the Parish's Standard Operating Procedures.

This Plan shall be stored in an area easily accessible to all members. Should a disaster occur, the Parish will follow the procedures and steps as outlined in the Parish's Standard Operating Procedures for the specific incident(s).

SECTION II WARNING SYSTEM

A. Introduction (Hurricane/Tropical Storms)

Being warned about the threat of a disaster in advance is crucial to the safety of life and property. This is made possible by modern detection and tracking devices that the Parish EOC has access to. Hence, the Parish is able to receive warning of an approaching hurricane and have broadcast approximately 36 to 72 hours before the hurricane strikes.

Hurricanes are one of the most destructive forces of nature on earth. A hurricane is a type of tropical cyclone, the general term for all circulating weather systems (counterclockwise in the Northern Hemisphere) originating over tropical waters. Tropical cyclones are classified as follows:

- **Tropical Depression** – An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph or less.
- **Tropical Storm** – An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39 to 73 mph.
- **Hurricane** – An intense tropical weather system with a well-defined circulation and sustained winds of 74 mph or higher.

Hurricane advisories are issued when a hurricane approaches land. At this time everyone in the affected area should begin to get prepared and use their plotting chart to track the path of the hurricane.

A **hurricane watch** is issued whenever a hurricane becomes a threat to a coastal area. Everyone in the area covered by the watch should listen for further advisories and should be prepared to act promptly if a hurricane warning is issued.

A **hurricane warning** will be issued when hurricane winds of 74 miles an hour or higher, or a combination of dangerously high water or very rough seas, are expected in a specific coastal area within 24 hours. At this time, the Safe Room Manager will be asked to activate their disaster plans, which will include the opening of emergency safe rooms.

Tornadoes: In a simplified tornado model, there are three regions of tornadic winds:

- Near the surface, close to the core or vortex of the tornado. In this region, the winds are complicated and include the peak at-ground wind speeds, but are dominated by the tornado's strong rotation. It is in this region that strong upward motions occur that carry debris upward, as well as around the tornado.

- Near the surface, away from the tornado's vortex. In this region, the flow is a combination of the tornado's rotation, inflow into the tornado, and the background wind. The importance of the rotational winds as compared to the inflow winds decreases with distance from the tornado's vortex. The flow in this region is extremely complicated. The strongest winds are typically concentrated into relatively narrow swaths of strong spiraling inflow rather than a uniform flow into the tornado's vortex circulation.
- Above the surface, typically above the tops of most buildings. In this region, the flow tends to become nearly circular.

In a tornado, the diameter of the core or vortex circulation can change with time, so it is impossible to say precisely where one region of the tornado's flow ends and another begins. It is important to remember that a tornado's wind speeds cannot be determined solely from its appearance.

Tornadoes are commonly categorized according to the Fujita Scale:

- **F0 Light** – Chimneys are damaged, tree branches are broken, shallow-rooted trees are toppled.
- **F1 Moderate** - Roof surfaces are peeled off, windows are broken, some tree trunks are snapped, unanchored manufactured homes are overturned, attached garages may be destroyed.
- **F2 Considerable** – Roof structures are damaged, manufactured homes are destroyed, debris becomes airborne (missiles are generated), large trees are snapped or uprooted.
- **F3 Severe** – Roofs and some walls are torn from structures, some small buildings are destroyed, unreinforced masonry buildings are destroyed, most trees in forest are uprooted.
- **F4 Devastating** – Well-constructed houses are destroyed, other houses are lifted from foundations and blown some distance, cars are blown some distance, large debris becomes airborne.
- **F5 Incredible** – Strong frame houses are lifted from foundations, reinforced concrete structures are damaged, automobile-sized debris becomes airborne, trees are completely debarked.

B. After A High Wind Event

1. Safe room occupants should not venture outside until the **Parish EOC has sounded the ALL CLEAR**, a sudden calm does not mean the end of the storm but that winds may blow again from the opposite direction.
2. See that people do not congregate in the road and thoroughfares and do not crowd around

government buildings and safe rooms needlessly.

C. After the All-Clear Has Been Given

Safe Room Managers should assess the condition of the safe room and report to the Parish EOC any damages, situations, or concerns that need to be addressed. If necessary, work orders should be made for repairs, supplies, or other items that may have been affected by the use of the safe room.

SECTION III OPERATIONS AND MANAGEMENT

A. Introduction

The operations and management of an Emergency Safe Room will be undertaken in a number of phases. These can be identified as:

1. Pre-Activation – This is the preparedness period when no hazard is threatening or has caused any impact to the building. The building is inspected and the team identified and oriented to their duties.
2. Opening of Building/Safe Room – This represents the phase when an Alert has been raised or a pending impact has been identified. The building is prepared for and accepts essential personnel required for response of a hazard.
3. Closure of Building/Safe Room – This phase represents the period after the All Clear when occupation of the safe room is no longer necessary.
4. Post-Activation the building is cleaned, repaired, and returned to normal use.

B. Pre-Activation

1. The Safe Room Manager must conduct a preliminary inspection of the building to determine if it is still suitable since the last inspection.

The Safe Room Manager must review the equipment/supplies checklist and obtain any missing items (see Appendix B – Safe Room Equipment and Supplies).

2. Obtain Keys
 - a) Location of keys must be known and should be easily accessible to the Safe Room Manager and members of the Safe Room Management Team
 - b) Duplicate keys should be obtained and kept at alternate locations, typically at the West Bank Courthouse Annex, located at 2631 LA Highway 20, in Vacherie, La. and the Welcome Senior Center, located at 7140 Park St., in St. James, La.
 - c) Ensure that there is proper labeling and identification of all keys for the building
3. Determine Space Available/Site Inspection

- a) Identify safe room space to be used for essential personnel
- b) Allocate space (footage) per person
- c) Designate functional areas (Registration)
- d) Check building to ensure that essential facilities are in good working condition (running water, functioning toilets, backup power)
- e) Check for any visible defects (loose connections, windows, and doors)

4. Mobilize Management Team

- a) Alert safe room management team through Parish Emergency Operations Center (EOC)
- b) Have ongoing/periodic contact with management team, especially before the hurricane season starts
- c) Provide necessary updates and inform members of when and where to report
- d) Select members of the safe room management team on February 1st of each year

5. Prepare Communication Plan

- a) Identify means of communication with EOC and Parish officials
- b) Update list of essential personnel – vulnerable facilities

C. Opening Of Building/Safe Room

1. Pre-Occupancy (Action depends on Nature of Emergency)

- a) Open building at designated time
- b) Check building to determine condition of facilities
- c) Prepare building to receive essential personnel

2. Occupancy

- a) Assign registrar and assistants as needed
- b) Register staff and essential personnel
- c) Complete registration forms

d) Secure supplies and equipment

3. Conduct Briefing/Information Sessions

a) Review duties, rules, areas, and staff introduction

b) Inform safe room occupants of ground rules and responsibilities

4. Secure Supplies

a) Contact relevant authority (Parish EOC)

b) Ensure availability of needed supplies

c) Check and record supplies

d) Do proper inventory of items

5. Implement Management Plan

a) Consult with the Emergency Preparedness Director for guidance

b) Review safe room rules and modify as necessary

c) Complete necessary documentation

d) Brief support team on specific duties

6. Security

a) Identify, select, brief, and appoint persons to perform security functions if law enforcement personnel is not present

b) Use identification badges if required by Parish EOC

D. Closure of Building/Safe Room

1. Arrange for Proper Evacuation of Safe Room and Building

a) Conduct a head count

b) Obtain "All Clear" signal from the Parish EOC

c) Assign and activate cleanup teams

- d) Inspect building for damage sustained during occupation
 - e) Restore arrangement of building
 - f) Close up building and return keys
2. Prepare Reports
- a) Gather information
 - b) Obtain reports from staff (Team Leaders)
 - c) Submit report to Parish EOC