

City of Jacksonville Florida

One City. One Jacksonville.



HUD's MITIGATION DEFINITION

“Those activities that increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters.”

- U.S. Department of Housing
and Urban Development



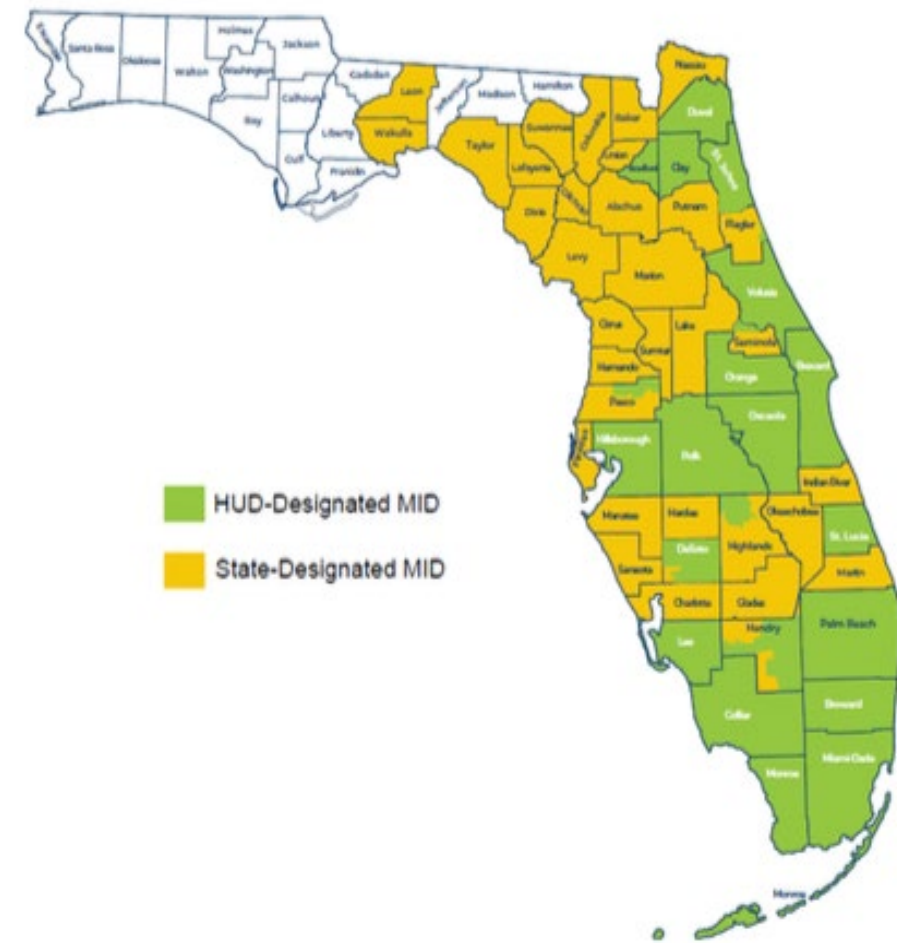
CDBG-MIT Overview

- In total, 51 Florida counties are currently eligible for CDBG-MIT funding.
 - Due to 2016 and 2017 (Hurricanes Hermine, Matthew, and Irma) disasters
- Rebuild Florida Critical Facility Hardening Program [CFHP]
 - (Opened April 15, 2020)
- Rebuild Florida General Planning Program
 - (Opened May 15, 2020)
- Rebuild Florida Mitigation General Infrastructure Program
 - (Opens June 15, 2020)

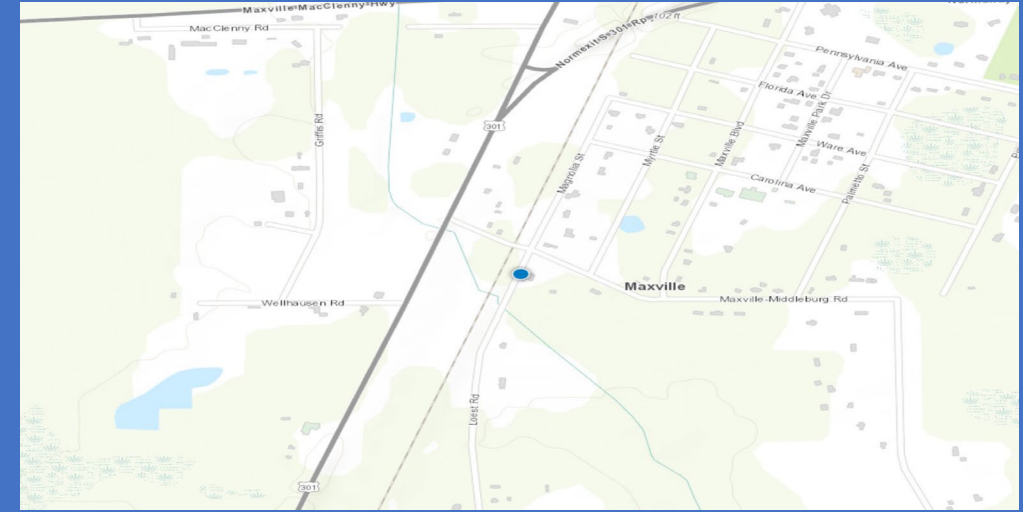


CDBG-MIT FUNDING

- At least 50% of funds must be spent on mitigation needs to HUD-designated Most Impacted and Distressed (MID) areas
- Remaining funds can be spent in State-designated Most Impacted Distressed (MID) areas
- 50% minimum spending to benefit low-to-moderate income (LMI) communities
- 50% minimum required funding extended in 6 years
- 100% must be expended in 12 years



Traffic Signals Generator Critical Facility



ADDRESS: 1007 Superior Street Jacksonville, FL 32254

- DESCRIPTION: The City of Jacksonville's Traffic Engineering Division plays an integral part in deploying one of the largest evacuation plans throughout the city and state roadways in addition to restoring order after a major storm is over. Traffic Engineering is responsible for the maintenance, operation and repair of the Traffic Signal Control System and the Arterial Intelligent Transportation System (ITS), in Duval County. The traffic signal control system includes all traffic control signals at intersections, roadway warning flashers, pedestrian crossing flashers, school zone flashers, overhead signs, and railroad preemption lines.

PROPOSED MITIGATION/SOLUTION:

- During unforeseen outages and those that occur during storms and hurricane, the proposed generator will ensure Traffic Engineering's Traffic Management Center (TMC) remains connected.
- The generator will allow for continuous connectivity and operation of the ITS system during emergency situations that call for the best optimal performance. The generator will ensure that the Traffic Management Center (TMC) remains connected.



C7.1
125 ekW/ 156.3 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only
(Tier 3 Nonroad Equivalent Emission Standards)



Image shown may not reflect actual configuration

D125-8
125 ekW/ 156.3 kVA
60 Hz / 1800 rpm/ 480V

Package Performance

Generator Set Power Rating with Fan @ 0.8 Power Factor	125 ekW
Generator Set Power Rating	156.3 kVA

Fuel Consumption

100% Load With Fan	37.8 L/hr	10.0 g/hr
75% Load With Fan	30.3 L/hr	8.0 g/hr
50% Load With Fan	21.9 L/hr	5.8 g/hr

Cooling System¹

Engine Coolant Capacity	9.5 L	2.5 gal
Radiator Coolant Capacity	11.5 L	3.0 gal
Engine Coolant Capacity with Radiator/Exp Tank	21.0 L	5.5 gal
Air Flow Restriction (System)	0.12 kPa	0.48 in Water

Inlet Air

Combustion Air Inlet Flow Rate	14.4 m ³ /min	508.5 cfm
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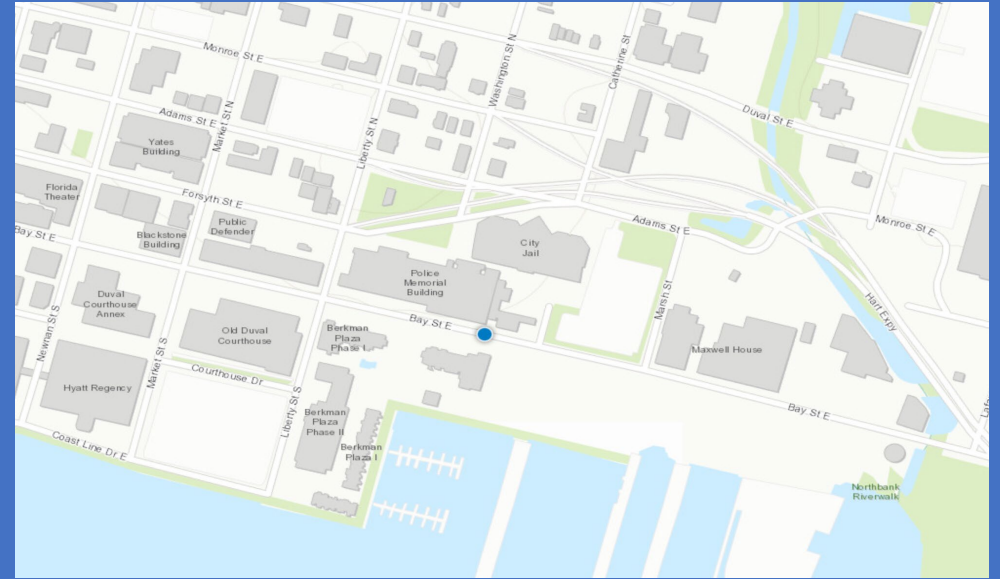
Exhaust System

Exhaust Stack Gas Temperature	450°C	843°F
Exhaust Gas Flow Rate	29.9 m ³ /min	1056 cfm
Exhaust System Backpressure (maximum allowable)	15.0 kPa	60.2 in water
Exhaust Flange Size (internal diameter)	89.0 mm	3.5 in



Proposed Work for Traffic Signal Critical Facility

Pre-Trial Detention Center Critical Facility



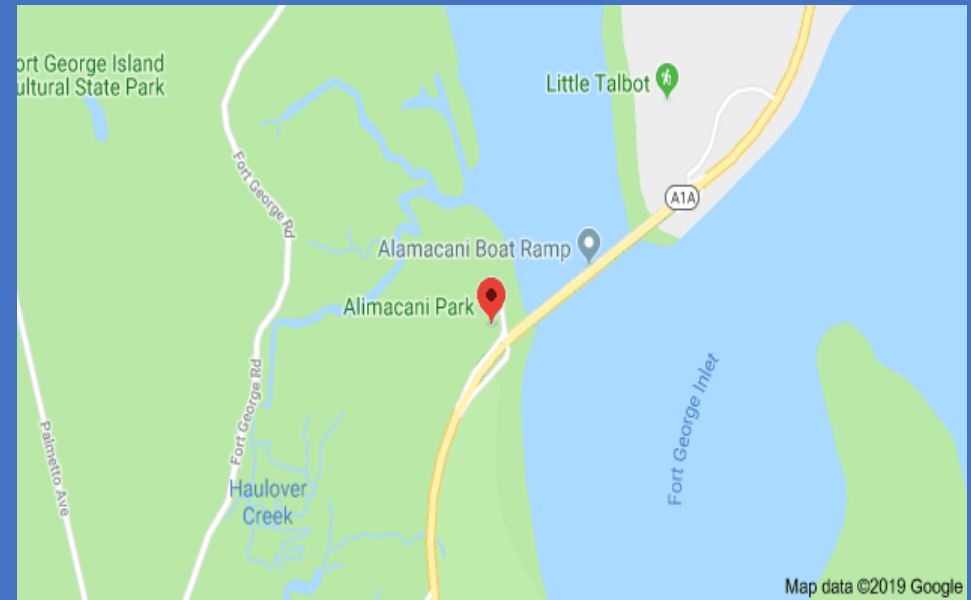
ADDRESS: 501 E Bay Street Jacksonville, FL 32202

DESCRIPTION: The City of Jacksonville's Pre-Trial Detention Center is a critical facility that houses more than 2800 inmates and 650 correctional officers. It is located on the North bank of the St. John's River and was built in 1978. Installation of the generator will be a public building and will not involve any ground disturbance, thus having no environment impact.

PROPOSED MITIGATION/SOLUTION:

- Installation of a generator will be in a public building and will not involve any ground disturbance, thus having no environmental impact.
- The proposed mitigation involves relocation of the two floor mounted 3000 amp switchboards and four JEA utility transformers is limited to the maximum allowable level of approximately 24 inches above existing concrete floor.

Police Memorial Critical Facility Project



ADDRESS: 501 East Bay Street Jacksonville, FL 32226

DESCRIPTION: The purpose of this project is to ensure that all public safety personnel have a safe place to work from before, during and after a natural disaster. The current generator failed its operational-load testing in 2016, which required Public Buildings to install a temporary rental generator to ensure continuity of service of the City's 911 Call Center and Police operations.

During Hurricane Irma, the emergency generator failed to automatically start when power was lost to the facility due to a failed switch.

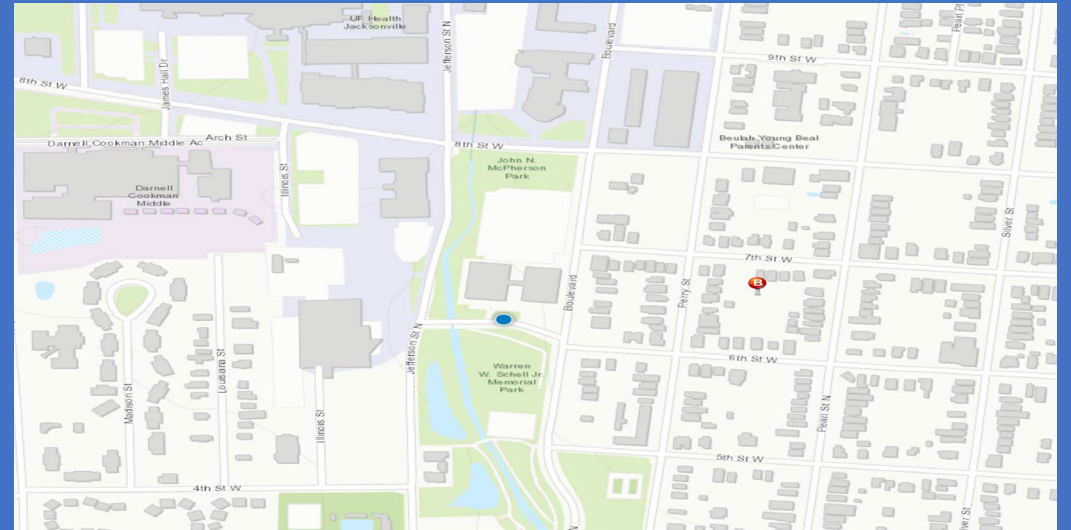
PROPOSED MITIGATION/SOLUTION:

- Replacement of the existing Caterpillar 565KW unit with a 600KW model generator is being proposed. The benefits of installing the larger generator would allow for several additional loads to be added to emergency power to include, the radio room, security cameras, gates, and ancillary air conditioning.

Proposed Work for Police Memorial Critical Facility



Department of Health Critical Facility



ADDRESS: 515 West 6th Street Jacksonville, FL 32206

DESCRIPTION: Pump stations are critical facility infrastructure that normally keep water pumped out of storage areas and neighborhoods. Upon installation the City of Jacksonville pump stations are automatically retrofitted with a back-up generator to ensure that the pump stations are working at all times even in the event of a storm.

However, during Hurricane Irma seven pump stations and the backup generators failed, and the electrical components blew out when waters rose above normal levels and flooded neighborhoods. This resulted in more flooding and waters were not pumped out for several days.

PROPOSED MITIGATION/SOLUTION:

- The Public Works Department has repaired the pump stations, but there is an additional need to replace the generators for all seven stations. If another storm passes through Jacksonville without these critical facilities restored to their pre-2017 functionality then the impact will result in more flooding, damage to property, and other losses. The Pump Station Project will help with floodplain management and protection during future flooding events.

Proposed Work for Department of Health Critical Facility Project

ELECTRIC POWER – Technical Spec Sheet STANDARD



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125 ekW/ 156.3 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

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Cooling System¹

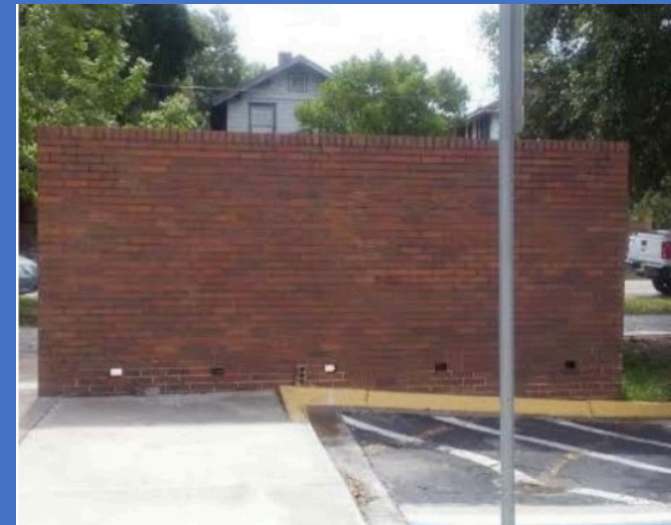
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Exhaust System

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Exhaust System Backpressure (maximum allowable)	15.0 kPa	60.2 in water
Exhaust Flange Size (internal diameter)	89.0 mm	3.5 in



Pump Stations Critical Facility Project

ADDRESS:

- 6053 Hillman Drive Jacksonville, FL 32244
- 0 Alden Road Jacksonville, FL 32246
- 9768 Bradley Road Jacksonville, FL 32246
- 2341 Hilly Road Jacksonville, FL 32208
- 8435 118th Street Jacksonville, FL 32244
- 1625 Jessie Street Jacksonville, FL 32206

DESCRIPTION: The Pump Stations Critical Facility Project will help with the floodplain management and protection during flooding events. These pump stations are critical facility infrastructures that normally keep water pumped out of storage areas and neighborhoods. Upon installation the City of Jacksonville pump stations are automatically retrofitted with a back-up generator to ensure that the pump stations are working at all times even in the event of a storm.

PROPOSED MITIGATION/SOLUTION:

- It was proposed that emergency generators be bought for pump stations located at Hilly Road, Jessie Street, Hilman Drive, Bradley Road, McGirts Creek and Sandalwood Canal. All of these pump stations lie near storm water retention ponds or creeks that meander in various neighborhoods.
- By adding new generators to equipment that malfunctioned in 2017, it will ensure that these critical facilities function in the future prior to a disaster, and during an event. This measure will decrease the vulnerability of the existing neighborhoods and ensure that flood waters are pumped away from the areas in an efficient manner.

Pump Stations

Myrtle Ave Pump Station



Bradley Road Pump Station



McGrits Creek Park /
Low Brantley Pump Station



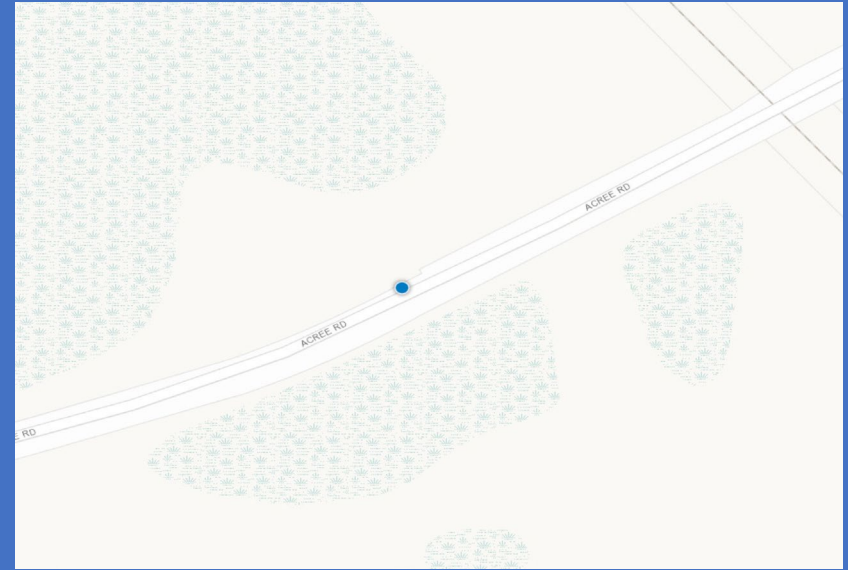
Hilly Road Pump Station



Sandalwood Canal Pump Station



Acree Road Bridge Replacement



ADDRESS: 9501 Acree Road Jacksonville, FL 32219

DESCRIPTION: The existing three bridges are showing signs of softening and deterioration at a rate of increasing occurrence due to the age of the structures. Continued maintenance on the bridge requiring road closures will make their replacement a more cost effective option.

PROPOSED MITIGATION/SOLUTION:

The existing three bridges are showing signs of softening and deterioration at a rate of increasing occurrence due to the age of the structures. Continued maintenance on the bridges requiring road closures will make their replacement a more cost effective option.

Acree Road Bridge Replacement





If there are any comments or questions about the project, please contact:

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Project Manager

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