



CONSTRUCTION SITES

HURRICANE PREPAREDNESS PLAN

Construction Sites Hurricane Preparedness Plan

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Storm Hazard Awareness and Preparation

1.0 Storm Hazard Awareness

When warned by the Weather Forecast, the Project Safety Manager/Field Construction Manager will designate an observer to monitor real time weather radar and warn the site when appropriate.

1.1 Thunder Storms

Thunderstorms are almost a daily occurrence in the summer but may occur anytime of the year. High winds and lightning are a certainty.

- a. Project personnel will monitor the storm progress toward the vicinity of the site.
- b. Personnel will be informed by the Project Superintendent to abandon drill rigs, cranes and other areas where lightning may likely strike when the storm is approximately 10 miles from the site. The Project Superintendent will inform personnel when they may return to work.
- c. Daily clean-up and proper bundling and stabilization of stored material must be maintained to minimize the possibility of debris and materials becoming airborne

1.2 Tornado

- a. Take refuge in the designated sheltering structure on the site. Avoid window and door openings.
DO NOT SEEK SHELTER IN VEHICLES, CONEXES OR TRAILERS
- b. Operations of mobile cranes are to be suspended. Booms should be laid down if time permits or the load line hooked to the structure at some low point. The equipment should be left and refuge taken in a shelter.
- c. If the site is hit by a tornado, the site superintendent will survey the site for damage before authorization to return to work is given. The Superintendent will determine how and who will initiate repairs before the general workforce returns to their stations.
- d. When returning to work stations, all personnel should proceed with caution and inform their supervisors of downed power lines and any storm damage they may encounter

1.3 Hurricane Preparations and Reaction Plan

The Project Manager is responsible for these preparations and implementations of these plans.

The site will not be occupied during the storm if it is in the hurricane path.

Preparations will be made in time for personnel to prepare for the storm at their homes.

1.4 Preparations

Ensure that the project office is outfitted with a portable, battery operated weather band radio and extra batteries.

Develop, maintain and distribute a list of emergency telephone numbers and email addresses for employees and authorities

Organize a Damage Survey and Repair Team. This team will be the first on the site to assess damage after the storm and make the site safe enough for the return of the entire workforce.

Prepare a system to inform employees of when to return to work. (A company website with a bulletin or discussion board, etc.)

Identify and avoid long-term material storage in areas prone to flooding.

Identify vulnerable work in progress and determine how to best protect it from damage whether by boarding up windows, sand bags, capping pipes, buried incomplete underground piping, etc.

Develop a list, procure and store supplies necessary for preparing the site for a hurricane.

Keep the project free from an accumulation of debris and scrap material that can become windblown hazards. This will reduce the amount of time necessary to complete preparations on the job site in the event of a hurricane emergency.

Ensure that fuel supplies, de-watering pumps and generators are adequate for repairs after the storm.

Be prepared to anchor or restrain everything that could blow away with netting for dumpsters, banding and banding tools for lumber, form work, scaffold planks, port-a-potties, etc. Look and see what will fly, then restrain it.

Be alert to job conditions that require advance attention or special material so as to reduce emergency preparation time.

1.5 When a Hurricane Approaches

The Projection Manager and/or site superintendent will decide when to prepare the project for a hurricane or tropical storm

Check the supplies against the inventory list stockpiled at the beginning of the hurricane season.

1.6 Housekeeping

Ensure that all loose scrap material is gathered up and disposed of in the dumpsters.

Ensure that the dumpsters are emptied. If the dumpster service is unable to pull the dumpsters they shall be securely covered with nets to prevent the debris in them from becoming windblown hazards.

Ensure that all loose forming materials are neatly stacked and banded.

Ensure that all materials, tools, sheds, gang boxes, and small equipment that can be damaged by rising water are removed from excavations and low areas prone to flooding.

Ensure that continuous berms are installed at excavations.

Remove any non-essential barricades and anchor essential barricades.

Ensure that incomplete underground piping is protected against the infiltration of sand and silt.

Ensure that all equipment is relocated out of excavations.

Lower mobile crane booms.

Raise the hook, trolley in and allow tower cranes to weathervane.

Top off the fuel tanks of all equipment and ensure fill caps are properly secured.

Ensure dewatering, standby, and diesel powered equipment is ready to operate. Operate this equipment as conditions warrant.

Identify vulnerable material and work in progress and determine how to best protect it from the effects of flooding.

Ensure that all electronic equipment in storage is protected from rising water.

Ensure backup electrical generator power as required.

Turn off the power and water to the office trailers

Ensure that critical project documents are protected from damage. Move them to a permanent structure if necessary.

Backup computer files. Disconnect all computers and office equipment from the electrical outlets.

Be prepared to board up windows or put storm shutters in place. Have strong bracing for outside doors. Stock sandbags for doors etc.

Stock up on non-perishable foods that can be eaten without cooking or with little preparation if the site is to be occupied.

Be prepared to supply fuel tanks for de-watering pumps, portable generators and vehicles during the storm and remobilization after the storm.

Be prepared to anchor or restrain or dismantle and band anything that might blow away.

- a. Loose tools and lumber should be tied down or placed in storage containers.
- b. Ensure that all office and storage trailers are tied down securely.
- c. Anchor portable toilets or have them picked up.
- d. Procure netting adequate to cover dumpsters that could not be emptied.

Review the system to inform employees of when they are to return to work.

1.7 After The Storm Is Over

Assemble the Damage Survey Team. The Damage Survey Team will inspect the job site, identify and document the damage, prioritize repairs, complete Job Hazard Analysis and Safe Plans of Action, and then initiate repairs with a skeleton remobilization crew of skilled tradespersons.

Class A hazards will have priority and must be abated before calling in the whole workforce to resume construction.

Do not touch loose or dangling wires. Report such damages to the electrical Contractor, the utility company or police officers.

Stay clear of disaster areas where we may hamper first aid or rescue work. Be prepared to offer assistance with equipment.

Stay alert as to prevent any fires. (Water pressure will be low).

Complete preparations for the return of the full workforce.

Implement the system to inform employees to return to work.

Be aware that you may need to care for some of our employees. Call the local hospital and report persons needing assistance.

1.8 Hurricane Emergency Preparedness Program

Suggested Supplies	Safety Manager/Field Construction Manager		
	Person Assigned	Purchased	Date Checked
Water (Bottled)			
Matches, Sterno, Candles			
Batteries for Weather Radio, Flashlights, Phones etc.			
Flashlights/Emergency Lights			
Rain Gear			
First Aid Kit			
Blankets			
Plywood, nails, hammer			
Netting-dumpster, covers and anchoring means			
Banding material, clips and banding tools			
Reinforced poly			

1.9 Hurricane Preparedness Plan

72 hour Checklist

- Confirm that all emergency contact information is current (i.e.) phone numbers, email addresses etc.
- Verify that all erosion and sediment control devices are in place and meet adequate standards.
- Verify that all storage and office trailers are correctly tied down.
- Confirm all pumps and generators are in working order.
- Prioritize work-plan.
- Schedule trash dumpsters to be emptied
- Ensure that the jobsite weather radio is working and has backup batteries.
- Ensure there is sufficient supply of banding, clips, duct tape, tarps and sandbags as well as the manpower to accomplish preparations.
- Ensure that there is sufficient room to lay crane booms down

1.10 Hurricane Preparedness Plan

48 hour Checklist

- Review 72 hour Checklist
- Notify owners of unsecured trailers and storage containers to anchor them or remove them from the site.
- Review all scaffolding. Remove, stack and band planks, secure scaffolding or take it down.
- Verify that all equipment is fueled and all storage cans topped off and secure to prevent contamination of soil or wetlands.
- Begin banding loose materials.
- Review site drainage patterns and relocate materials stored in sheet low lands.
- Ensure all hazardous materials cannot contaminate water (hurricanes can produce 20 – 30 inches of rain). Store materials high and dry.
- Remove screening on fences, signs etc.
- Ensure there are enough computer disks to back up files.

1.11 Hurricane Preparedness Plan

24 Hour Checklist

- Review 48 hr. checklist
- Document the status of the project with pictures and store them in a dry secure location
- Back-up all computer files on diskette and store them in a dry secure place.
- Secure all windows with plywood or tape and move all items vulnerable to water damage away from windows.
- Lower crane booms
- Remove or anchor all trailers and storage containers that are not secured.
- Remove all non-essential barricades. Sandbag or tie down essential barricades

- All incomplete piping is to be capped to prevent sand infiltration.
- Tie down all materials and place weight of some sort (rebar, block etc.) on items that can be physically moved.
- Tie netting on all trash containers that are not empty.
- Review stored materials for potential of windblown rain damage.
- Confirm the inventory of all equipment in the office and in the field.
- Take pictures of site conditions for insurance purposes.

1.12 Hurricane Preparedness Plan

12 Hour Checklist

- Review 24-hour checklist
- Turn off water, power, gas, etc. at source.
- Evacuate site.
- Take pictures of any changes to the construction site conditions for insurance purposes.