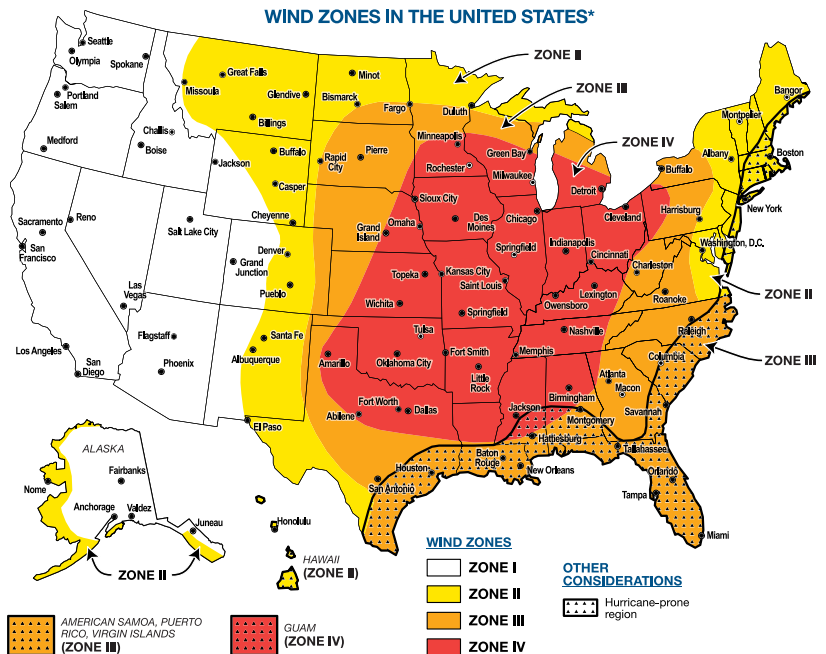# Ready Business®

SEVERE WIND
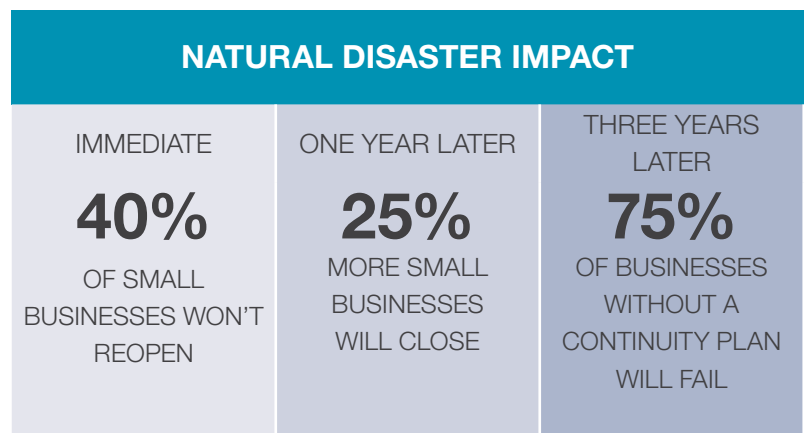# TORNADO
T O O L K I T

WHY SHOULD ORGANIZATIONS CARE ABOUT SEVERE WIND AND TORNADO RISK?

Most of the United States is at some risk for severe wind and tornadoes, and it is important that organizations, including associations, businesses, and community groups, understand the potential impacts.

The *Ready Business Program– Severe Wind/Tornado* and the Preparedness and Mitigation Project Plan allow users to take action to protect employees, protect customers, and help ensure business continuity as well.

WIND ZONES IN THE UNITED STATES*

WIND ZONES

ZONE I	(white)
ZONE II	(yellow)
ZONE III	(orange)
ZONE IV	(red)

OTHER CONSIDERATIONS
Hurricane-prone region

AMERICAN SAMOA, PUERTO RICO, VIRGIN ISLANDS (ZONE III)

GUAM (ZONE IV)

Source: FEMA P-320, Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business

NATURAL DISASTER IMPACT

IMMEDIATE	ONE YEAR LATER	THREE YEARS LATER
40%	**25%**	**75%**
OF SMALL BUSINESSES WON'T REOPEN	MORE SMALL BUSINESSES WILL CLOSE	OF BUSINESSES WITHOUT A CONTINUITY PLAN WILL FAIL

Source: 2014 data from the Federal Emergency Management Agency (FEMA) and US Department of Labor

Table of Contents

Introduction

Should your organization be concerned about severe wind and tornado risk? In most instances, yes. Most of the United States is at some risk for severe wind and tornadoes, not just in Tornado Alley, so it is important that you understand your risk, develop preparedness and mitigation plans, and take action. Doing so will not only increase the safety of employees and customers, but it will help you remain in business after disasters such as tornadoes strike. Maintaining business continuity is important for you, and when you are able to continue operations after a disaster, you will improve your community's ability to recover as well.

THE *READY BUSINESS PROGRAM* MOVES ORGANIZATIONAL LEADERS THROUGH A STEP-BY-STEP PROCESS TO:

✔	Identify Your Risk
✔	Develop a Plan
✔	Take Action
✔	Be Recognized and Inspire Others

Following these steps in the *Ready Business Program* as a part of your overall business continuity planning will help protect assets (people, property, operations); sustain the capability to provide goods and services to customers and/or supply chain; maintain cash flow; preserve competitive advantage and reputation; and provide the ability to meet legal, regulatory, financial, and contractual obligations.

Nonprofit organizations can also benefit from the *Ready Business Program* as business continuity will protect staff, clients, and property while allowing operations to continue.

Experts estimate that 75 percent of businesses without continuity planning will fail within three years of a disaster. The *Ready Business Program* offers information to complete continuity planning, including resources from the Federal Emergency Management Agency (FEMA) *Business Continuity Plan*.

The *Ready Business Program* will provide you with the tools to plan, take action, and become a Ready Business by addressing preparedness and mitigation for your STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and SERVICE. You will also have the opportunity to apply for recognition as a member of the Ready Business Community.

Introduction: Program Overview

Organizations have five options for recognition through the *Ready Business Program*. The levels include **STAFF, SURROUNDINGS, SYSTEMS**, **STRUCTURE,** and **SERVICE.** The **SERVICE** level is achieved by completing requirements for **STAFF**, **SURROUNDINGS**, **SYSTEMS**, and **STRUCTURE** levels in addition to the **SERVICE** requirements.

STAFF includes planning and preparedness activities for the protection of your staff.

SURROUNDINGS includes those elements that potentially pose a threat during an event, such as fences, flagpoles, and trees.

SYSTEMS includes utility systems that support the operation of the building and are generally located on the roof.

STRUCTURE includes architectural and structural elements of the building, especially construction types that may be vulnerable to damage or failure during an event.

SERVICE includes the opportunities for your organization to engage and serve the community following an event. You may only qualify for SERVICE to others after you have prepared your own organization first.

It is important to remember that injury, damage, concurrent damage, cascading disasters such as fire following the event, business interruption, or even increased repair or recovery costs can come from failure to prepare or mitigate. As a result, the first step in the *Ready Business Program* is to complete a *Back-to-Business Self-Assessment* to identify vulnerabilities from any source.

The *Ready Business Program* is intended to recognize and acknowledge businesses and organizations who complete preparedness and mitigation actions to protect employees, customers, and continuity. You can get started today by following the steps provided.

For more information or assistance, contact ReadyBusiness@flash.org or (877) 221-7233.

Benefits

Peace of mind that your organization is prepared not only for severe wind and tornadoes, but for other business interruptions and natural disasters.

Ready Business **window cling** to announce to your customers or clients and employees that you have taken steps to prepare your STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and are prepared to be of SERVICE after an event.

Ready Business **recognition certificate**.

Ready Business **web badge** to display on your organization's website.

Organization listing on Ready Business website.

Sample news release to recognize and acknowledge your organization's participation in the *Ready Business Program* and tips for media placement.

Gain tips for **media placement**.

Inspire others to take steps to improve community resiliency.

Introduction: *Ready Business Program*

1

IDENTIFY YOUR RISK

Complete the *Back-to-Business Self-Assessment* to determine the specific areas your organization needs to address to prepare, mitigate risk, and return to operation following a disaster.

2

DEVELOP A PLAN

1. Based on the information in the *Back-to-Business Self-Assessment*, complete the Ready Business Preparedness and Mitigation Project Plan for STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and SERVICE to identify preparedness and mitigation actions needed to ensure safety and business continuity. (Note: *Completing this plan is a critical first step toward recognition as a Ready Business.*)

2. Review the *Quick Reference Guide* to determine which preparedness and mitigation actions you want to take based on the potential impacts to your organization.

3

TAKE ACTION

1. Now that you have created your Preparedness and Mitigation Project Plan, make sure it is approved by the building owner if you are leasing or renting your building. (Note: *Be sure to check with your local building department to secure required permits prior to performing any retrofitting or other mitigation activity.*)

2. Perform preparedness and mitigation activities as prioritized in the Preparedness and Mitigation Project Plan. Document your actions as instructed in the checklists for STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and SERVICE with signatures, photographs, receipts, or letters from a company or organization manager, engineer, or design professional, where applicable.

4

BE RECOGNIZED AND INSPIRE OTHERS

1. Complete and submit the application for recognition as a Ready Business.

After you have completed these steps, you will be eligible to become a member of the Ready Business Community, and will enjoy the peace of mind of knowing you have done your part to promote safety, mitigate potential loss, and protect your business or organization.

1

Identify Your Risk:

Back-to-Business Self-Assessment
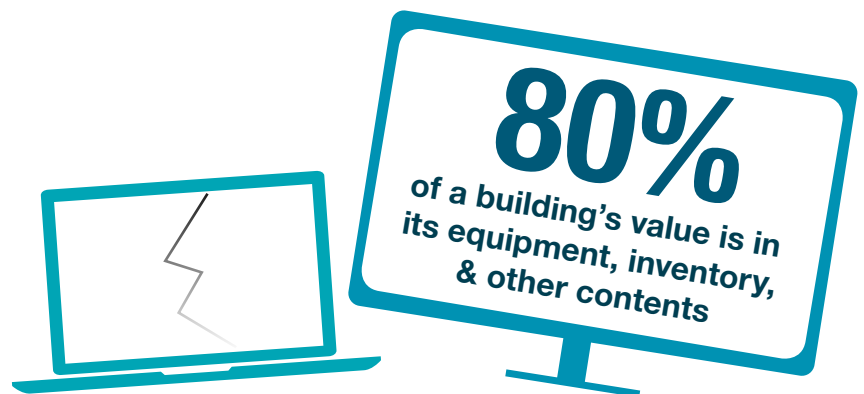
PLANNING SCENARIO

On May 1 of this year, a severe wind event/tornado strikes your community and damages both the structure and the contents in the building where your organization operates. Due to damage, your building has been 'yellow tagged' during a rapid assessment by the building department and is closed. A more thorough assessment of your building damage is needed to determine if your structure is safe, or can be made safe, prior to reopening.

Due to the number of buildings damaged in your community, your building's detailed damage assessment will take place three days after the event. You should assume you will not be able to access your facilities for at least three days.

Depending on your type of organization, expect that either 50 percent of your inventory (product) is unsellable, or that 50 percent of your computers or other equipment was damaged during the event (choose whichever creates the greater impact on your organization). Assume that all utilities are interrupted.

Further, you should project that the disruptions will continue for one additional day. The assessment will show that the damage is repairable to the structure, so now you will need to address staff, contents, cleanup, repairs, and replacement.

Based on this scenario, complete the 13 questions on the following pages to identify your risk.

80%
of a building's value is in its equipment, inventory, & other contents

Source: FEMA E-74, *Reducing the Risks of Nonstructural Earthquake Damage - A Practical Guide*

1 | Identify Your Risk: *Back-to-Business Self-Assessment*

ASSESS YOUR READINESS

Based on the planning scenario, complete the 13 questions below to highlight areas that your Preparedness and Mitigation Plan and Business Continuity Plan should address.

IMPACTS ON YOUR ORGANIZATION		RESOURCES THAT CAN HELP MINIMIZE DAMAGE, DISRUPTIONS, AND INJURIES
SYSTEMS/STRUCTURE		
1. Can your organization operate without any of the following: computers, copier, fax machine, files, inventory, or special equipment (e.g., x-ray equipment, cash register, credit card readers)?	❑ Yes ❑ No	*Ready Business Program* - SYSTEMS
2. Can your organization operate without any of the following: gas, power, water, internet, or telecommunications?	❑ Yes ❑ No	*Ready Business Program* - SYSTEMS
3. Can you still operate your organization without access to the damaged building(s)?	❑ Yes ❑ No	*Ready Business Program* - STRUCTURE
STAFF/CUSTOMERS/VENDORS/SUPPLIERS (PEOPLE)		
4. Can you meet payroll if your business income is interrupted? If yes, estimate how long.	❑ Yes ❑ No	Business Continuity Plan - PEOPLE
5. Are your employees able to commute to work?	❑ Yes ❑ No	Business Continuity Plan - PEOPLE
IMPACT ON YOUR ORGANIZATION		
6. Is your organization easily accessible to the public, your customers, and employees (e.g., parking)?	❑ Yes ❑ No	Business Continuity Plan - PEOPLE
7. Are you communicating status with employees, key customers, vendors, and suppliers throughout your recovery?	❑ Yes ❑ No	Business Continuity Plan - PEOPLE

OPERATIONS			
8. Can your organization operate without access to the damaged building?	❑ Yes ❑ No		Business Continuity Plan - OPERATIONS
9. Have you set priorities on what operations your organization needs to recover 1st, 2nd, 3rd, etc.?	❑ Yes ❑ No		Business Continuity Plan - OPERATIONS
10. Are your suppliers up and running or do you have sufficient parts/supplies on hand to continue without resupply?	❑ Yes ❑ No		Business Continuity Plan - OPERATIONS
11. Are you able to ship your product or provide services to your customers based on your current impacts, understanding that the demand for these products or services may drastically change?	❑ Yes ❑ No		Business Continuity Plan - OPERATIONS
12. Do you still have all your customers/clients after the disaster?	❑ Yes ❑ No		Business Continuity Plan - OPERATIONS
OVERALL OPERATIONS			
13. Can your organization survive losses if it is closed and/or inaccessible for 3 to 7 days?	❑ Yes ❑ No		*Ready Business Program* & Business Continuity Plan

For each question, 1 - 13, that you answered 'No', address the specific issue in the Ready Business Preparedness and Mitigation Project Plan, or in your Business Continuity Plan.

Use the *Ready Business Program* resources to help determine the potential for damage to buildings and contents as well as how you will reduce the damage to buildings and contents if it occurs. Resources are incorporated throughout the Toolkit and a comprehensive list can be found on pages 43-45.

2

Develop A Plan

1. Based on the information in the completed *Back-to-Business Self-Assessment*, create a Ready Business Preparedness and Mitigation Project Plan for your STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and SERVICE to identify critical preparedness and mitigation actions needed to ensure safety and business continuity. Completing this plan will bring you one step closer to recognition as a Ready Business.

2. Review the *Quick Reference Guide* to determine which preparedness and mitigation actions you want to take based on the potential impacts to your organization.
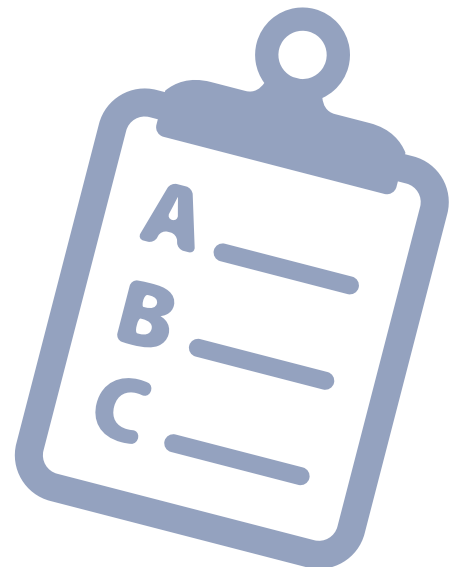
2 | Develop A Plan

STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, AND SERVICE

After you have identified the potential severe wind and tornado risks, and determined the possible impacts on your business or organization, create a Preparedness and Mitigation Project Plan and decide which solutions you will use to reduce risks. The Preparedness and Mitigation Project Plan will support the business continuity planning and readiness process, and bring you one step closer to recognition as a Ready Business.

READY BUSINESS PREPAREDNESS AND MITIGATION PROJECT PLAN

Organization:

Project Lead:

Name:

Title/Department:

Address:

Phone Number:

Email:

Executive Summary:

Background: *(Provide a summary description of risk to include priorities)*

Goals and Objectives:

2 | Develop A Plan: STAFF

Below is a list of key preparedness measures your organization can complete to help your staff get prepared for a severe wind and tornado event; however, the list is not all-inclusive. For additional guidance on preparedness measures, please see the *Quick Reference Guide:* STAFF in this program.

By performing Steps 1 through 6, businesses and organizations will be eligible for recognition as a Ready Business– STAFF. The Suggested Actions are recommended, but not required, for recognition.

POTENTIAL PREPAREDNESS ACTION	ASSIGNED TO	BUDGET	COMPLETION DATE
1 Develop a Sheltering Plan			
2 Develop Business Continuity and Crisis Communications Plans			
3 Conduct an Employee Awareness Campaign			
4 Develop an Employee Training Program			
5 Conduct an Employee Training Session			
6 Conduct a Severe Wind/ Tornado Drill			
SUGGESTED ACTION: Build an Emergency Supply Kit			
SUGGESTED ACTION: Purchase a NOAA Weather Radio for Monitoring During an Event/Download a Mobile Alerting App			
SUGGESTED ACTION: Review Insurance Coverage/Create Inventory			

2 | Develop A Plan: SURROUNDINGS

Below is a list of nonstructural severe wind/tornado mitigation activities that can be completed by a professional landscaper/tradesman or professional engineer; however, the list below is not all-inclusive. For additional guidance on nonstructural risks, please see the *Quick Reference Guide:* SURROUNDINGS in this program.

By performing all applicable activities, businesses and organizations will be eligible for recognition as a Ready Business – SURROUNDINGS.

SURROUNDINGS RISKS	MITIGATION SOLUTION	ASSIGNED TO	BUDGET	COMPLETION DATE
Signs	Consult a professional engineer to develop a plan that mitigatges against damage from severe wind and tornadoes.			
Flagpoles				
Landscaping/Trees	Consult a professional landscaper, and develop a plan for your surroundings that mitigates against damage from severe wind and tornadoes.			
Fences				

2 | Develop A Plan: SYSTEMS

Below is a list of nonstructural mitigation activities that may require an engineer to identify and evaluate appropriate mitigation steps; however, the list below is not all-inclusive. For additional guidance on nonstructural risks, please see the *Quick Reference Guide:* SYSTEMS in this program.

By performing all retrofit items, businesses and organizations will be eligible for recognition as a Ready Business– SYSTEMS.

NONSTRUCTURAL RISKS	MITIGATION SOLUTION	ASSIGNED TO	BUDGET	COMPLETION DATE
Mechanical Systems	Consult a professional engineer to ensure all systems connections are designed to resist the expected wind load and uplift.			
Fuel Tanks				
Electrical Systems				
Communications Equipment				
Lightning Protection Systems				
Utility Connections				
Antennas				
Other Rooftop Structures				

2 | Develop A Plan: STRUCTURE

Assessing structural and complex nonstructural risk requires the services of a structural engineer or other design professional to accurately evaluate and design reasonable mitigation measures. Below is a list of potential mitigation solutions; however the list is not all-inclusive. For additional guidance on structural risks, please see the *Quick Reference Guide:* STRUCTURE in this program.

By performing a minimum of one retrofit item on this list, businesses and organizations will be eligible for recognition as a Ready Business – STRUCTURE.

STRUCTURAL RISKS	MITIGATION SOLUTION	ASSIGNED TO	BUDGET	COMPLETION DATE
Tornado Safe Room or Shelter	Install a tornado safe room or shelter that meets FEMA Guidelines or ICC/NSSA 500 Standards.			
Best Available Refuge Area	Consult a professional engineer to determine your Best Available Refuge Area (BARA) if a tornado safe room or shelter is not installed.			
Roof Systems	Consult a professional engineer and design the roof to withstand the expected wind loads, uplift, and water intrusion. Create a continuous load path, consider the integrity of roof coverings and decking, and install flashing to minimize water intrusion through vents or other openings.			
Skylights	Upgrade to pressure-rated, impact-resistant skylights.			
Gable-End Bracing	Consult a professional to properly brace the gable-end walls.			
Soffits	Consult a professional and ensure that soffits are properly supported.			

STRUCTURAL RISKS	MITIGATION SOLUTION	ASSIGNED TO	BUDGET	COMPLETION DATE
Gutters, Downspouts	Install systems that are noncombustible and designed for wind speed and uplift resistance.			
Wall Systems	Consult a professional engineer and design the wall system to withstand the expected wind loads, pressure, and water intrusion. Create a continuous load path, ensure the integrity of wall coverings and sheathing, and install adequate flashing to minimize water intrusion.			
Openings	Install pressure rated, impact-resistant exterior doors, windows, and garage/rolling doors.			
Canopies, Awnings, and Carports	Add supports to increase resistance to wind loads and uplift.			

2 | Develop A Plan: SERVICE

Can your organization provide community service to others following a disaster? Identify and build local relationships to create a SERVICE component in your Business Continuity Plan. For additional guidance on the SERVICE component, please see the *Quick Reference Guide:* SERVICE in this program.

By performing all applicable preparedness activities in STAFF and mitigation actions in SURROUNDINGS, SYSTEMS, and STRUCTURE, businesses and organizations will be eligible for recognition as a Ready Business – SERVICE.

SERVICE ACTION	ASSIGNED TO	BUDGET	COMPLETION DATE
Contact your Local Emergency Management Office			
Identify Ways to Engage and Participate in Your Community			

RELIEF KITS	CHARGING STATION	FOOD PREPARATION	VOLUNTEER
If your organization is open after the disaster, you could become a distributor or storage warehouse for Disaster Relief Kits. Providing a place for the supplies to be stored locally allows volunteer organizations to readily distribute them throughout affected areas.	Does your organization have electricity after the disaster? If so, you may want to become a volunteer charging station. Provide a safe, secure place for emergency responders, volunteers, and community members to charge their cell phones, power wheelchairs, and battery-powered tools.	Does your organization have the capability to prepare or serve meals? Providing a sanitary kitchen for emergency responders, volunteers, or community members to prepare or receive meals following a disaster is essential for rebuilding the community.	Not sure how your organization can directly contribute after the disaster? Volunteer. Contact your Local Emergency Manager and determine where the volunteer opportunities exist in the community. You could prepare meals, sort debris, or even work at a local office of a volunteer organization. For additional ideas, visit National Voluntary Organizations Active in Disaster.

PREPAREDNESS ACTION	PREPAREDNESS SOLUTIONS	PREPAREDNESS RESOURCES
STEP 1: Develop a Sheltering Plan	Develop a shelter plan for the occupants of your business based on the safest place of refuge. No one should remain outdoors or in a temporary or manufactured building. Review FEMA P-431 in detail. Know your safest place of refuge. When there is a warning, take refuge immediately in a tested and approved ICC/NSSA 500 storm shelter, FEMA safe room, or a community shelter labeled as an official tornado shelter. This is the safest location during a tornado. If no shelter meeting the above requirements is available, have a qualified building engineer or architect review your buildings to identify the Best Available Refuge Area for employees and customers. Consider retrofitting your building to strengthen the refuge. Only consider other places of refuge identified in the references if no storm shelter, safe room, or pre-identified Best Available Refuge Area is available.	FEMA P-431, *Tornado Protection: Selecting Refuge Areas in Buildings.* *Tornadoes* *Tornado Safety.* FLASH Card *How to Prepare for A Tornado.* Prepareathon FEMA P-361, *Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms.*

PREPAREDNESS ACTION	PREPAREDNESS SOLUTIONS	PREPAREDNESS RESOURCES
STEP 2: Develop Business Continuity and Crisis Communications Plans	Create a Business Continuity Plan that includes strategies for storing critical business documents and data.	**Ready** Business. *Business Continuity Plan*
	Assign a Business Continuity Team Leader responsible for implementing the Business Continuity Plan to bring your organization back to business after an event.	**Ready** Business. *Business Continuity Plan*
	Create a Crisis Communications Plan that includes internal and external communication protocols for before, during, and after a disaster.	**PREPARE MY BUSINESS**.org *Crisis Communications*
STEP 3: Conduct an Employee Awareness Program	Conduct an employee awareness campaign to educate staff on the safest response before, during, and after an event. Include definitions of National Weather Service (NWS) terms, e.g., tornado watch vs. tornado warning. Address shelter locations, emergency communication plans, and policies. Reference *How to Prepare for a Tornado* for additional content.	HOW TO PREPARE FOR A TORNADO *How to Prepare for A Tornado.* Prepareathon

PREPAREDNESS ACTION	PREPAREDNESS SOLUTIONS	PREPAREDNESS RESOURCES
STEP 4: Develop an Employee Training Program	Develop a training program that provides activities for employee engagement before, during, and after a tornado. Your training can be incorporated into established campaigns such as *National Preparedness Month*, and should focus on disaster preparedness and safety. Drills or exercises should be incorporated into the program.	 *Prepare Your Organization for A Tornado Playbook.* Prepareathon
STEP 5: Conduct an Employee Training Session	Hold a preparedness discussion with your staff. Discuss what you have done to prepare for disasters, review your Business Continuity Plan, review your Crisis Communication Plan, and share awareness campaign key messages. Use the *Prepare Your Organization for a Tornado Playbook* to facilitate this discussion and engage your employees. The discussion should: • Educate the employees about your business' continuity and crisis communication plans; • Include basic first aid and CPR training; and, • Describe sheltering plan.	 *Prepare Your Organization for A Tornado Playbook.* Prepareathon

PREPAREDNESS ACTION	PREPAREDNESS SOLUTIONS	PREPAREDNESS RESOURCES
STEP 6: Conduct a Severe Wind/Tornado Drill	Conduct your disaster drill, but before you begin, contact your local emergency manager for additional ideas, and to offer them a way to participate.	 *Prepare Your Organization for A Tornado Playbook.* Prepareathon
SUGGESTED ACTION: Build an Emergency Supply Kit	Build an emergency kit with supplies you may need before, during, or after the disaster.	 *Emergency Supply List*
SUGGESTED ACTION: Purchase a NOAA Weather Radio for Monitoring During an Event/Download Mobile Alerting App	Purchase a NOAA Weather Radio with single area message encoding (SAME) and download a severe weather alerts app for your mobile device. You may also sign up to receive emergency notifications from your local emergency services. Download *Be Smart. Take Part. Know Your Alerts and Warnings* for a summary of available notifications. Designate a Team Leader and assign them to monitor your NOAA Weather Radio during an event. Listen and heed instructions given by local emergency management officials. Have backup batteries and chargers.	 *NOAA Weather Radio All Hazards* *Be Smart. Take Part. Know Your Alerts and Warnings*

PREPAREDNESS ACTION	PREPAREDNESS SOLUTIONS	PREPAREDNESS RESOURCES
SUGGESTED ACTION: Review Insurance Coverage/ Create Inventory	Meet with your insurance agent annually to review your insurance, especially property coverage limits, deductibles, and coinsurance requirements. Maintain a current photo or video inventory of your premises, equipment, inventory, supplies, etc.	Ready Business. *Insurance Coverage Discussion Form*

RESOURCES:

FEMA. *Prepare Your Organization for A Tornado Playbook*. Prepareathon
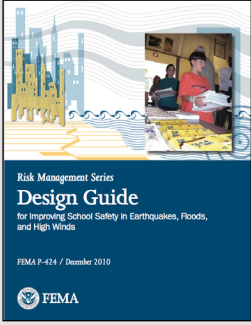
FEMA. *How to Prepare for A Tornado.* Prepareathon

SURROUNDINGS RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Signs	Consult a professional engineer to develop a plan that mitigates against damage from severe wind and tornadoes.	FEMA *Remove Trees and Potential Windborne Missiles: Protecting Your Property from High Winds*
Flagpoles		
Trees/Landscaping	Consult a professional landscaper, and develop a plan for your surroundings that mitigates against damage from severe wind and tornadoes.	
Fences		
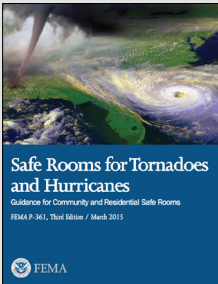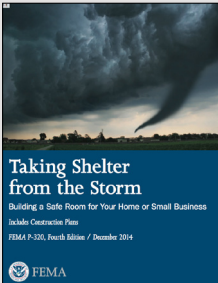
NONSTRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Mechanical Systems	Consult a professional engineer to evaluate and design structural connections to resist the expected wind loads and provide uplift resistance.	
Fuel Tanks		
Electrical Systems		
Communications Equipment		
Lightning Protection Systems		
Utility Connections		
Antenna		
Other Rooftop Structures		

FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.*
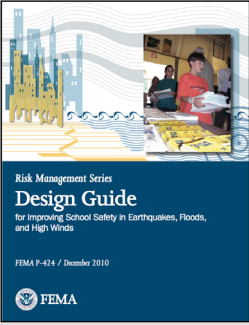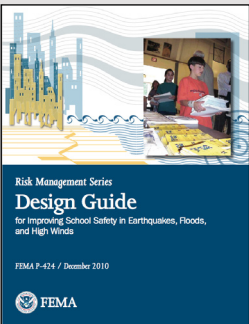
Quick Reference Guide: STRUCTURE
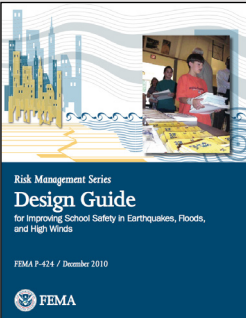
The International Code Council's *International Building Code (IBC)* addresses construction methods for most commercial structures as well as residential structures that are not covered by the *International Residential Code*. The IBC contains both prescriptive and engineered provisions, and applies to the many different types of commercial structures.
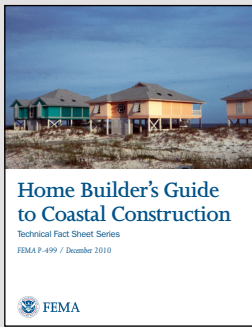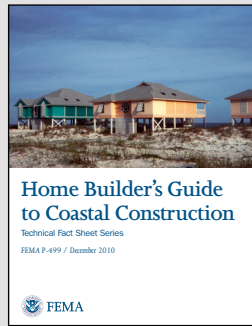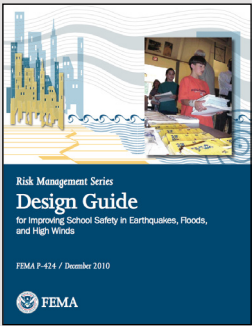
It is important to note that the recommendations in this document are general, and are intended to highlight areas of a structure that could be strengthened against severe winds and tornadoes. However, the recommendations cannot account for all of the different building types and variables in the *IBC*. As a result, a licensed professional is necessary to identify and perform building mitigation activity appropriate for your business or organization.

STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Tornado Safe Room or Shelter	Install a tornado safe room or shelter that is constructed using FEMA guidance or that meets ICC/NSSA 500 standards. A tornado safe room or shelter meeting FEMA guidance or ICC/NSSA 500 standards is the only mitigation action that will provide near-absolute life-safety in the event of a tornado.	FEMA P-361, *Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms.* FEMA P-320, *Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business.* ICC/NSSA 500-2014: *Standard and Commentary: ICC/NSSA Standard for the Design and Construction of Storm Shelters.*
Best Available Refuge Area (BARA)	Consult a professional engineer to determine your BARA if a tornado safe room or shelter is not installed.	

STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Roof Systems	Consult a professional engineer to design the roof to withstand the expected wind loads, provide uplift resistance, and prevent water intrusion. Consider the many features that define a roof, including slope, structure, covering, and attachments, and address the roof as a system. Ensure that the following design/ mitigation measures are included: • Roof-to-Wall Connections • Roof Structure • Roof Decking/Sealant • Roof Covering • Roof Flashing • Vents	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.* *Secure Built-Up and Single-Ply Roofs: Protecting Your Property from High Winds*
Skylights	Upgrade to pressure-rated, impact-resistant skylights.	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.*
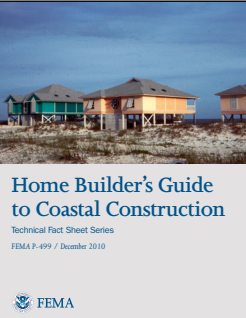
STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Gable-End Bracing	Hire a professional to brace any gable-end walls taller than 4 feet, so that loads on the gable-end walls are distributed over multiple roof trusses or rafters.	**Home Builder's Guide to Coastal Construction** Technical Fact Sheet Series FEMA P-499 / December 2010 FEMA FEMA P-499, *Home Builder's Guide to Coastal Construction.*
Soffits	Proper attachment is the most common cause of soffit failures. This can be addressed by installing wood backing or supports as an attachment point for soffits. If it is not possible to install wood supports, the soffit should be secured at 12-inch intervals on each side to limit flexing during high-wind events.	**Home Builder's Guide to Coastal Construction** Technical Fact Sheet Series FEMA P-499 / December 2010 FEMA FEMA P-499, *Home Builder's Guide to Coastal Construction.*
Gutters, Downspouts	Install noncombustible systems designed for high wind speeds, and that provide uplift resistance.	Risk Management Series **Design Guide** for Improving School Safety in Earthquakes, Floods, and High Winds FEMA P-424 / December 2010 FEMA FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.*
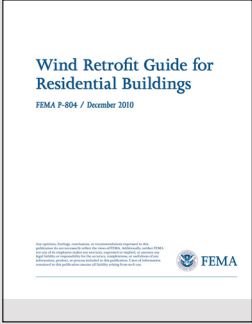
STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Wall Systems	Consult a professional engineer to design walls to withstand high wind loads, provide uplift resistance, and prevent water intrusion. Consider the many features that define a wall, including structure, covering, and openings. Address the wall as a system, ensuring the following design/mitigation measures are included: • Wall Structure • Wall Sheathing • House Wrap • Wall Coverings • Flashing Around Openings	 **Home Builder's Guide to Coastal Construction** Technical Fact Sheet Series *FEMA P-499 / December 2010* FEMA P-499, *Home Builder's Guide to Coastal Construction.* *Secure Metal Siding and Metal Roofs: Protecting Your Property from High Winds* *Maintain EIFS Walls: Protecting Your Property from High Winds*

STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Openings • Garage/Rolling Doors • Windows • Exterior Doors	• Install pressure-rated, impact-resistant garage doors or brace existing doors with assemblies designed to increase pressure ratings. • Install pressure-rated, impact-resistant windows, and install shutters that comply with ASTM E1996. • Install pressure-rated, impact-resistant exterior doors. • Ensure flashing and weather stripping around the windows and doors is designed/installed to protect against water intrusion from wind-driven rain.	FEMA *Reinforce or Replace Garage Doors: Protecting Your Property from High Winds* FEMA *Protect Windows and Doors with Covers: Protecting Your Property from High Winds* FEMA P-499, *Home Builder's Guide to Coastal Construction.* FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.*

STRUCTURAL RISKS	POTENTIAL MITIGATION SOLUTION	REFERENCES
Canopies, Awnings, and Carports	Add metal connectors to meet or exceed expected wind loads. For the carport, consider placing connectors: 1. Between supporting roof members and horizontal beams 2. At each beam-to-column connection 3. At each column-to-foundation connection	 FEMA P-804, *Wind Retrofit Guide for Residential Buildings.*

SERVICE ACTION	POTENTIAL SERVICE SOLUTION	SERVICE RESOURCES
Contact your Local Emergency Management Office	Contact your local emergency management office to identify emergency management personnel and resources in your area.	*Emergency Management Agencies*
	Contact your local emergency management office during your disaster planning to learn how you may provide service(s) before and after a disaster strikes. Include this information in your Business Continuity Plan.	
Identify Ways to Engage and Participate in your Community	In addition to preparing your organization, it is important to understand your local and tribal community emergency operations plans and to work with other organizations in your community or tribe. Opportunities to participate in whole community planning include the following: • Learn about public-private partnerships. • Participate in local or tribal organizations that make your community a safer and more prepared place to live and do business, such as your local Citizen Corps Council, hazard mitigation planning team, or local and tribal Community Emergency Response Team (CERT). • Citizen Corps Councils include representatives from all sectors of the community. This whole community membership helps to ensure the community perspective is reflected in local emergency management practices.	*Prepare Your Organization for A Tornado Playbook.* Prepareathon

3 Take Action

1. Make sure that your Preparedness and Mitigation Project Plan is approved by the building owner if you are leasing or renting your building. Always check with your local building department to secure required permits prior to performing any retrofitting or other mitigation activity.

2. Perform preparedness and mitigation activities as prioritized in the Preparedness and Mitigation Project Plan. Document your preparedness and mitigation as instructed in the checklists for STAFF, SURROUNDINGS, SYSTEMS, STRUCTURE, and SERVICE with signatures, photographs, receipts, or letters from a manager, engineer, or design professional, where applicable.
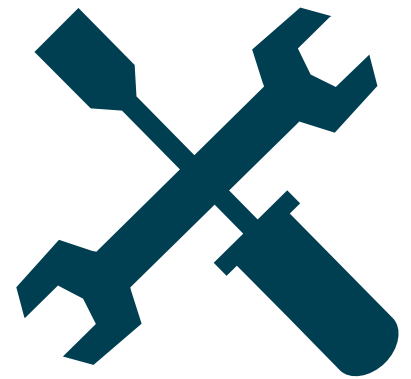
3 | Take Action: Ready Business - STAFF Checklist

The following checklists assist in documenting actions taken to prepare your staff and organizaion for severe wind/ tornado events. Submit these checklists with your application for recognition under *Step Four: Be Recognized and Inspire Others*. The Suggested Actions are recommended, but not required, for recognition.

PREPAREDNESS ACTIONS	ACCOMPLISHED	INITIAL/DATE OF RESPONSIBLE PERSON
1 Developed a Shelter Plan	Must be completed to receive recognition	
2 Developed Business Continuity and Crisis Communications Plans	Must be completed to receive recognition	
3 Conducted an Employee Awareness Campaign	Must be completed to receive recognition	
4 Developed an Employee Training Program	Must be completed to receive recognition	
5 Conducted an Employee Training Session	Must be completed to receive recognition	
6 Conducted a Severe Wind/Tornado Drill	Must be completed to receive recognition	
SUGGESTED ACTION: Built an Emergency Supply Kit	❑ Yes ❑ No ❑ Not Applicable	
SUGGESTED ACTION: Purchased a NOAA Weather Radio and Downloaded a Mobile Alerting App to monitor the event	❑ Yes ❑ No ❑ Not Applicable	
SUGGESTED ACTION: Reviewed Insurance Coverage/Created Inventory	❑ Yes ❑ No ❑ Not Applicable	

SURROUNDINGS RISKS	MITIGATION SOLUTION	ACCOMPLISHED	INSERT PHOTO OR RECEIPT
Signs	Consulted a professional engineer to develop a plan that mitigates against damage from severe wind and tornadoes.	❑ Yes ❑ No ❑ Not Applicable	
Flagpoles		❑ Yes ❑ No ❑ Not Applicable	
Landscaping/Trees	Consulted a professional landscaper, and developed a plan for your surroundings that mitigates against damage from severe wind and tornadoes.	❑ Yes ❑ No ❑ Not Applicable	
Fences		❑ Yes ❑ No ❑ Not Applicable	

NONSTRUCTURAL RISKS	MITIGATION SOLUTION	ACCOMPLISHED	INSERT PHOTO OR RECEIPT
Mechanical Systems	Consulted a professional engineer and modified all relevant connections to resist expected wind loads and to provide uplift resistance.	❑ Yes ❑ No ❑ Not Applicable	
Fuel Tanks		❑ Yes ❑ No ❑ Not Applicable	
Electrical Systems		❑ Yes ❑ No ❑ Not Applicable	
Communications Equipment		❑ Yes ❑ No ❑ Not Applicable	
Lightning Protection Systems		❑ Yes ❑ No ❑ Not Applicable	
Utility Connections		❑ Yes ❑ No ❑ Not Applicable	
Antennas		❑ Yes ❑ No ❑ Not Applicable	
Other Rooftop Structures		❑ Yes ❑ No ❑ Not Applicable	

STRUCTURAL RISKS	MITIGATION SOLUTION	ACCOMPLISHED	INSERT PHOTO OR RECEIPT
Tornado Safe Room or Shelter	Installed a tornado safe room or shelter that meets FEMA Guidelines or ICC/NSSA 500 Standards.	❑ Yes ❑ No ❑ Not Applicable	
Best Available Refuge Area	Consult a professional engineer to determine your BARA if a tornado safe room or shelter is not installed.	❑ Yes ❑ No ❑ Not Applicable	
Roof Systems	Consulted a professional engineer to design the roof to withstand the expected wind loads, provide uplift resistance, and prevent water intrusion.	❑ Yes ❑ No ❑ Not Applicable	
Skylights	Upgraded to pressure-rated, impact-resistant skylights.	❑ Yes ❑ No ❑ Not Applicable	
Gable-End Bracing	Consulted a professional to properly brace the gable-end walls.	❑ Yes ❑ No ❑ Not Applicable	
Soffits	Consulted a professional to ensure soffits are adequately supported.	❑ Yes ❑ No ❑ Not Applicable	
Gutters, Downspouts	Installed noncombustible systems designed for wind speed and uplift resistance.	❑ Yes ❑ No ❑ Not Applicable	
Wall Systems	Consulted a professional engineer to ensure the wall can withstand expected wind loads and resist water intrusion.	❑ Yes ❑ No ❑ Not Applicable	
Openings	Installed pressure-rated, impact-resistant exterior doors, windows, and garage/rolling doors.	❑ Yes ❑ No ❑ Not Applicable	
Canopies, Awnings, and Carports	Added support to withstand wind loads and provide uplift resistance.	❑ Yes ❑ No ❑ Not Applicable	

SERVICE ACTION	SERVICE SOLUTION	INITIAL/DATE OF RESPONSIBLE PERSON
Contacted your Local Emergency Management Office	These activities are written into your Business Continuity Plan.	
Identified Ways to Engage and Participate in your Community	These activities are written into your Business Continuity Plan.	

4

Be Recognized and Inspire Others

Now that you have taken the steps to prepare and mitigate your organization to protect customers and employees, you can gain recognition for your accomplishment by completing the application and submitting with the checklists completed from *Take Action* to be recognized as a Ready Business Community Member.

You will receive a Ready Business Community Member recognition certificate, window cling, and web badge to let your customers and staff know that you are a Ready Business and your organization will be added to the list of program participants on the Ready Business website. You will also receive a sample news release that you may use to let your community know that you have taken action to prepare.

PLEASE COMPLETE:

Organization Name:

Owner/Manager:

Address:

Phone Number: Fax:

Email:

Organization Website URL:

Ready Business Designation Level (Please indicate each level you are applying for):	
❑ Ready Business - **STAFF**	Must complete steps one through six for STAFF recognition
❑ Ready Business - **SURROUNDINGS**	Muvst complete all applicable SURROUNDINGS mitigation activities for recognition
❑ Ready Business - **SYSTEMS**	Must complete all applicable SYSTEMS activities for recognition
❑ Ready Business - **STRUCTURE**	Must complete one of the applicable STRUCTURE activities for recognition
❑ Ready Business - **SERVICE**	Must complete all applicable SERVICE activities and STAFF, SURROUNDINGS, SYSTEMS, and STRUCTURE for recognition

Please include with your application the preparedness actions and mitigation checklists completed from *Step Three: Take Action*.

Feedback

Tell us about yourself and your organization

1. TYPE OF ORGANIZATION?

- ❑ Retail
- ❑ Professional Office
- ❑ Restaurant
- ❑ Service Provider
- ❑ Nonprofit
- ❑ Industrial
- ❑ Daycare Center/School
- ❑ Other, please list

_____

_____

2. HOW MANY PEOPLE DO YOU EMPLOY?

- ❑ 1 - 9
- ❑ 10 - 24
- ❑ 25 - 49
- ❑ 50 - 99
- ❑ 100 - 249
- ❑ 250 - 499
- ❑ 500 or more

3. HOW DID YOU HEAR ABOUT THE *READY BUSINESS PROGRAM*?

- ❑ Local Fire Department
- ❑ From another organization
- ❑ Online
- ❑ FEMA
- ❑ State or local emergency management office
- ❑ Other, please list

_____

_____

4. PLEASE PROVIDE ANY SUGGESTIONS FOR THE *READY BUSINESS PROGRAM*:

_____

_____

_____

_____

_____

Thank you for your participation in the *Ready Business Program*. You will receive a response to your application within two to four weeks. For more information or if you have questions about the program or application, contact FLASH at (877) 221-7233 or email ReadyBusiness@flash.org. Once you have completed the application(s), please scan and email to ReadyBusiness@flash.org.

For business continuity and preparedness questions, please contact FEMA at FEMA-Private-Sector@fema.dhs.gov.

Signature   Print Name   Date

www Valuable Websites

Prepareathon

www.ready.gov/prepare

FEDERAL ALLIANCE FOR SAFE HOMES (FLASH)

www.flash.org

Ready Severe Weather

www.ready.gov/severe-weather

Ready Business

www.ready.gov/business

The following is a list of websites and content referenced in this document.

Page #	Title of Document	Link
IFC	FEMA P-320, *Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business.*	www.fema.gov/media-library/assets/documents/2009
3	FEMA. *Business Continuity Plan*	www.fema.gov/media-library/assets/documents/89510
4	Ready Business email	ReadyBusiness@flash.org
18	National Voluntary Organizations Active in Disasters	www.nvoad.org/how-to-help/volunteering/
19	FEMA P-431, *Tornado Protection: Selecting Refuge Areas in Buildings.*	www.fema.gov/media-library/assets/documents/2246
19	*Tornadoes.* Ready Business	www.ready.gov/tornadoes
19	FLASH. *Tornado Safety.* FLASH Card	www.flash.org/pdf/flashcards/Tornado%20Safety%20Print.pdf
19	FEMA. *How to Prepare for A Tornado. Prepareathon*	www.fema.gov/media-library/assets/documents/98108
19	FEMA P-361, *Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms*, Third Edition.	www.fema.gov/media-library/assets/documents/3140
20	*Business Continuity Plan.* Ready Business	www.fema.gov/media-library/assets/documents/89510
20	*Business Continuity Plan.* Ready Business	www.fema.gov/media-library/assets/documents/89510
20	Small Business Administration. *Crisis Communications.*	www.agilityrecovery.com/assets/SBA/crisiscomms.pdf
20	FEMA. *How to Prepare for A Tornado.* Prepareathon	www.fema.gov/media-library/assets/documents/98108
21	FEMA. *Prepare Your Organization for A Tornado Playbook.* Prepareathon	www.fema.gov/media-library/assets/documents/98412
21	FEMA. *Prepare Your Organization for A Tornado Playbook.* Prepareathon	www.fema.gov/media-library/assets/documents/98412
22	FEMA. *Prepare Your Organization for A Tornado Playbook.* Prepareathon	www.fema.gov/media-library/assets/documents/98412
22	Ready Business. E*mergency Supply Kit*	www.fema.gov/media-library/assets/documents/90354
22	*NOAA Weather Radio All Hazards*	www.nws.noaa.gov/nwr
22	*Be Smart. Take Part. Know Your Alerts and Warnings*	www.community.fema.gov/
23	Ready Business. *Insurance Coverage Discussion Form*	www.fema.gov/media-library/assets/documents/90354
23	FEMA. *Prepare Your Organization for A Tornado Playbook.* Prepareathon	www.fema.gov/media-library/assets/documents/98412
23	FEMA. *How to Prepare for A Tornado.* Prepareathon	www.fema.gov/media-library/assets/documents/98108
24	FEMA. *Remove Trees and Potential Windborne Missiles: Protecting Your Property from High-Winds.*	www.fema.gov/media-library/assets/documents/13270

The following is a list of websites and content referenced in this document (continued).

Page #	Title of Document	Link
25	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High-Winds.*	www.fema.gov/media-library/assets/documents/5264
26	FEMA P-361, *Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms*, Third Edition.	www.fema.gov/media-library/assets/documents/3140
26	FEMA P-320, *Taking Shelter From the Storm: Building a Safe Room for Your Home or Small Business.*	www.fema.gov/media-library/assets/ documents/2009
26	ICC/NSSA 500-2014: Standard and Commentary: *Standard for the Design and Construction of Storm Shelters*	www.fema.gov/media-library/assets/documents/110209
27	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High-Winds.*	www.fema.gov/media-library/assets/documents/5264
27	FEMA. *Secure Built-Up and Single-Ply Roofs: Protecting Your Property from High Winds.*	www.fema.gov/media-library/assets/documents/13270
27	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High-Winds.*	www.fema.gov/media-library/assets/documents/5264
28	FEMA P-499, *Home Builder's Guide to Coastal Construction.*	www.fema.gov/media-library/assets/documents/6131
28	FEMA P-499, *Home Builder's Guide to Coastal Construction.*	www.fema.gov/media-library/assets/documents/6131
28	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High-Winds.*	www.fema.gov/media-library/assets/documents/5264
29	FEMA P-499, *Home Builder's Guide to Coastal Construction.*	www.fema.gov/media-library/assets/documents/6131
29	FEMA. *Secure Metal Siding and Metal Roof: Protecting Your Property from High-Winds*	www.fema.gov/media-library/assets/documents/13270
29	FEMA. *Maintain EIFS Walls: Protecting Your Property from High Winds*	www.fema.gov/media-library/assets/documents/13270
30	FEMA. *Reinforce or Replace Garage Doors: Protecting Your Property from High Winds*	www.fema.gov/media-library/assets/documents/13270
30	FEMA. *Protect Windows and Doors with Covers: Protecting Your Property from High Winds*	www.fema.gov/media-library/assets/documents/13270
30	FEMA P-499*, Home Builder's Guide to Coastal Construction.*	www.fema.gov/media-library/assets/documents/6131
30	FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds.*	www.fema.gov/media-library/assets/documents/5264
31	FEMA P-804, *Wind Retrofit Guide for Residential Buildings.*	www.fema.gov/media-library/assets/documents/21082

The following is a list of websites and content referenced in this document (continued).

Page #	Title of Document	Link
32	FEMA. *Emergency Management Agencies*	www.fema.gov/emergency-management-agencies
32	FEMA. *Prepare Your Organization for A Tornado Playbook.* Prepareathon	www.fema.gov/media-library/assets/documents/98412
40	Ready Business email	ReadyBusiness@flash.org
40	FEMA Private Sector Division Email	FEMA-Private-Sector@fema.dhs.gov