

Structure / Hazards Evaluation Form

FHAZ-1

By: _____

Where required, circle all the information or items that apply.

NOTE: WINDS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTED.

STRUCTURE DESCRIPTION:		Date/Time of Eval: _____	
Bldg ID: _____		Date/Time of Disaster: _____	
No. Stories: _____ No. Basements: _____			
MATERIALS:		TYPE OF COLLAPSE:	
<input type="checkbox"/> Wood <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> URM <input type="checkbox"/> PC Concrete <input type="checkbox"/> Tilt-Up <input type="checkbox"/> CMU Walls <input type="checkbox"/> Other - specify _____		<input type="checkbox"/> Pancake <input type="checkbox"/> Soft 1st Floor <input type="checkbox"/> Wall Failure <input type="checkbox"/> Burn-out <input type="checkbox"/> Middle Story <input type="checkbox"/> Overturn Other: _____	
FRAMING SYSTEM:		LOCATION OF VOIDS:	
<input type="checkbox"/> Shearwall <input type="checkbox"/> Moment Frame <input type="checkbox"/> Braced Frame Other: _____		<input type="checkbox"/> Between Floors <input type="checkbox"/> Basement <input type="checkbox"/> Shafts Other: _____	
OCCUPANCY:		DESCRIPTION OF UNSAFE AREAS & HAZARDS:	
<input type="checkbox"/> Hospital <input type="checkbox"/> Police Station <input type="checkbox"/> Fire Station <input type="checkbox"/> Emergency Operations Center <input type="checkbox"/> Office Building <input type="checkbox"/> School <input type="checkbox"/> Public Assembly <input type="checkbox"/> Industrial <input type="checkbox"/> Hotel <input type="checkbox"/> Apartment <input type="checkbox"/> Retail Store <input type="checkbox"/> Other: _____		_____ _____ _____ _____ _____ _____	
OTHER INFORMATION:			
_____ _____ _____ _____ _____			

SKETCH:

Structure / Hazards Evaluation Form

FHAZ-2

By:

Where required, circle all the information or items that apply.

NOTE: WIND MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTED.

SKETCH:

A large rectangular area filled with a grid of small dots, intended for a hand-drawn sketch. The grid consists of approximately 30 columns and 40 rows of dots.

Structure / Hazards Check List

FHAZ-3

By:

This is only a Check List. Check all Appropriate Structure Hazards

<p>STRUCTURE DESCRIPTION:</p> <p>Bldg ID: _____</p> <p>No. Stories: _____ No. Basements: _____</p> <p><u>From a SAFE Distance, CHECK:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Alignment of Structure's Corners & Faces <input type="checkbox"/> Alignment of Structure's Floors <input type="checkbox"/> Burned-out Floors <input type="checkbox"/> Type of Exterior Walls - Conc., URM, CMU, Tilt-up, Wood <input type="checkbox"/> Condition of Exterior Walls - Openings, Wall Piers <input type="checkbox"/> Condition of Facing or Projecting Elements <input type="checkbox"/> Presence of Precast Conc Facing or Brick/Stone Veneer <input type="checkbox"/> Presence of other FALLING HAZARDS <input type="checkbox"/> Are Structural or other Plans Available? <input type="checkbox"/> Presence of Rooftop Equipment, Towers, etc <input type="checkbox"/> Presence of Distinctive Elements, Additions, Stairwells <input type="checkbox"/> Any Alternate Energy Source - Generator, Solar Elec <input type="checkbox"/> Presence of Tanks w/Explosive/Corrosive Material 	<p>TYPE OF COLLAPSE:</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;">Pancake</td> <td style="width:33%;">Soft 1st Floor</td> <td style="width:33%;">Wall Fall</td> </tr> <tr> <td>Torsion</td> <td>Middle Story</td> <td>Overturn</td> </tr> <tr> <td>Burn-out</td> <td>Other</td> <td></td> </tr> </table> <p><u>Walk around Structure and CHECK:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> I.D. URM Walls - Thick Bearing or Thin/non-bearing <input type="checkbox"/> I.D. Tilt-up Walls - CIP Cols, Cast-on, Pre-cast Walls? <input type="checkbox"/> Tilt-up Wall Connection to Footing- Pour strip, other? <input type="checkbox"/> Extent of Burned-out Floors/Roof <input type="checkbox"/> Presence of Flowing Liquids <input type="checkbox"/> I.D Areas of Structure to be avoided <input type="checkbox"/> I.D most PROBABLE Collapse or Fall Mode <input type="checkbox"/> I.D All Exterior FALLING HAZARDS <input type="checkbox"/> I.D All Ingress and Egress Locations <p><u>From Above Structure in Elevated Platform, CHECK:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> I.D Extent of Burn-out - Full Floor, Part Floor <input type="checkbox"/> Types of Interior Walls, Chimneys, Flue Shafts, etc <input type="checkbox"/> I.D.Condition of Floor/roof connections to Ext Walls 	Pancake	Soft 1st Floor	Wall Fall	Torsion	Middle Story	Overturn	Burn-out	Other	
Pancake	Soft 1st Floor	Wall Fall								
Torsion	Middle Story	Overturn								
Burn-out	Other									
<p><u>If you choose to enter the Structure:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Make sure that at least one other Team Member remains outside and you maintain radio contact <input type="checkbox"/> Notify Leader you are entering structure - Which Side <input type="checkbox"/> Leave Easily Visable Trail as you explore interior ** <input type="checkbox"/> Check Each Closed Door for heat PRIOR to OPENING <input type="checkbox"/> Inspect Ground Floor Level Before moving Upward <input type="checkbox"/> Check Main Columns and Shear Walls-Cracks, Spalling <input type="checkbox"/> Check Beam to Column & to Exterior Wall Connections <input type="checkbox"/> Check Stair wells for Damage and Access <input type="checkbox"/> Determine extent of Floor/Roof Burn-out <input type="checkbox"/> Determine extent of Floor/Roof Fire, Structural Damage <input type="checkbox"/> I.D All Interior Collapse & Falling Hazards <input type="checkbox"/> Locate Safe Havans and Escape Routes <input type="checkbox"/> Report all Data to Outside Person before continuing <input type="checkbox"/> Proceed Up/Down Only if Can Maintain Radio Contact <input type="checkbox"/> Proceed to Upper Stories, Check each before Proceeding <input type="checkbox"/> Proceed to Basement and Check Structure & Foundation 	<p>NOTES</p> <p>1. ** Suggestions for Visable Trail are: Light Sticks, Paint Arrows on floor, Electronic Relay Devices</p>									

Struct. Haz. Mitigation Form - FMIT-1

By: _____

Date: _____

Where required, circle all the information or items that apply.

NOTE: AFTERSHOCKS MAY CAUSE ADDITIONAL DAMAGE OTHER THAN NOTED.

<p>STRUCTURE DESCRIPTION:</p> <p>Bldg ID: _____</p> <p>No. Stories: _____ No. Basements: _____</p> <p>MATERIALS:</p> <p>Wood Concrete Steel URM Tilt-up PC Conc</p> <p>TYPE OF COLLAPSE:</p> <p>Pancake Soft 1st Story Wall Fall Burn-out O-turn</p> <p>Other, specify: _____</p>	<p>MITIGATION METHODS & ABBREVIATIONS</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>Avoid and Barracade</td> <td>A&B</td> <td>Horiz. Tieback</td> <td>H-TB</td> </tr> <tr> <td>Remove</td> <td>Remo</td> <td>Vert Tieback</td> <td>V-TB</td> </tr> <tr> <td>Minimize Exposure</td> <td>Exp-M</td> <td>Shield</td> <td>Shld</td> </tr> <tr> <td>Vertical Shore</td> <td>V-Sho</td> <td></td> <td></td> </tr> <tr> <td>Horiz. Shore</td> <td>H-Sho</td> <td>Monitor</td> <td>Mon</td> </tr> <tr> <td>Raker Shore</td> <td>R-Sho</td> <td colspan="2">(GoTo Monitor Form)</td> </tr> <tr> <td>Daigonal Brace</td> <td>DB</td> <td colspan="2">Other (specify)</td> </tr> <tr> <td>Heavy Equipment</td> <td>HE</td> <td></td> <td></td> </tr> </table>	Avoid and Barracade	A&B	Horiz. Tieback	H-TB	Remove	Remo	Vert Tieback	V-TB	Minimize Exposure	Exp-M	Shield	Shld	Vertical Shore	V-Sho			Horiz. Shore	H-Sho	Monitor	Mon	Raker Shore	R-Sho	(GoTo Monitor Form)		Daigonal Brace	DB	Other (specify)		Heavy Equipment	HE		
Avoid and Barracade	A&B	Horiz. Tieback	H-TB																														
Remove	Remo	Vert Tieback	V-TB																														
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Raker Shore	R-Sho	(GoTo Monitor Form)																															
Daigonal Brace	DB	Other (specify)																															
Heavy Equipment	HE																																

LIST OF POSSIBLE HAZARDS	HAZ LOCATOR <small>(Use Circled No. & locate on Sketch)</small>	MIT METHOD <small>(Use abbrev. indicated above)</small>	PRIORITY <small>(From 1 to 9, may be several of ea.)</small>	TIME REQD <small>(Est. to complete reqd mitigation)</small>	COMMENT
FALLING HAZARD TYPE					
Glass, Light Bldg Facing					
Bldg Contents, H'vy inc Safe					
Brick Veneer					
Rock Veneer Panels					
P.C. Panels					
HVAC Units					
Ducts, Elec Conduit					
Structure Element - Loose					
Str Elmt, Hanging & Attached					
Other					
LOCAL COLLAPSE HAZARD					
Leaning Wall					
Damaged Column					
Damaged Floor					
Un-braced Column					
Punching Shear Potential					
Debris Overload-Floor					
ResQ Equip Overload					
Rain & Clogged Roof Drains					
Damaged Retaining Wall					
Other					
GLOBAL COLLAPSE HAZARD					
Leaning Building					
Multi Floor Collapse					
Multi Column Collapse					
Other					

SKETCH:

US&R Structure Monitoring Form - MON-1

By: _____

Date: _____

Monitoring Began _____

Monitoring Ended _____

Sheet _____ of _____

STRUCTURE DESCRIPTION:

Bldg ID: _____

No. Stories: _____ No. Basements: _____

ATMOSPHERIC CONDITIONS

Temperature _____ °F

- | | | | |
|-------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| <input type="checkbox"/> Day | <input type="checkbox"/> Clear | <input type="checkbox"/> Calm | <input type="checkbox"/> Overcast |
| <input type="checkbox"/> Nite | <input type="checkbox"/> Cloudy | <input type="checkbox"/> Windy | <input type="checkbox"/> Gusty |

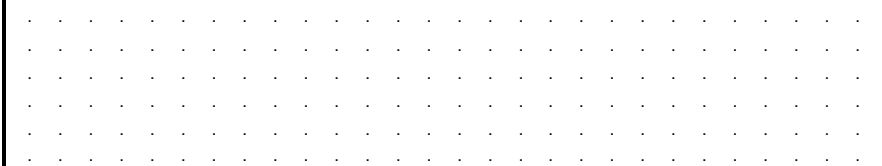
INSTRUMENT SETUP

Model/Serial No. _____
Location _____
Protection _____
Description _____

REFERENCE (Control) POINTS - at least two

Name(s) _____
Locations _____
Descriptions _____

SKETCH OF MP1



MONITORING POINT #1(MP1)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

SKETCH OF MP2



MONITORING POINT #2 (MP2)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

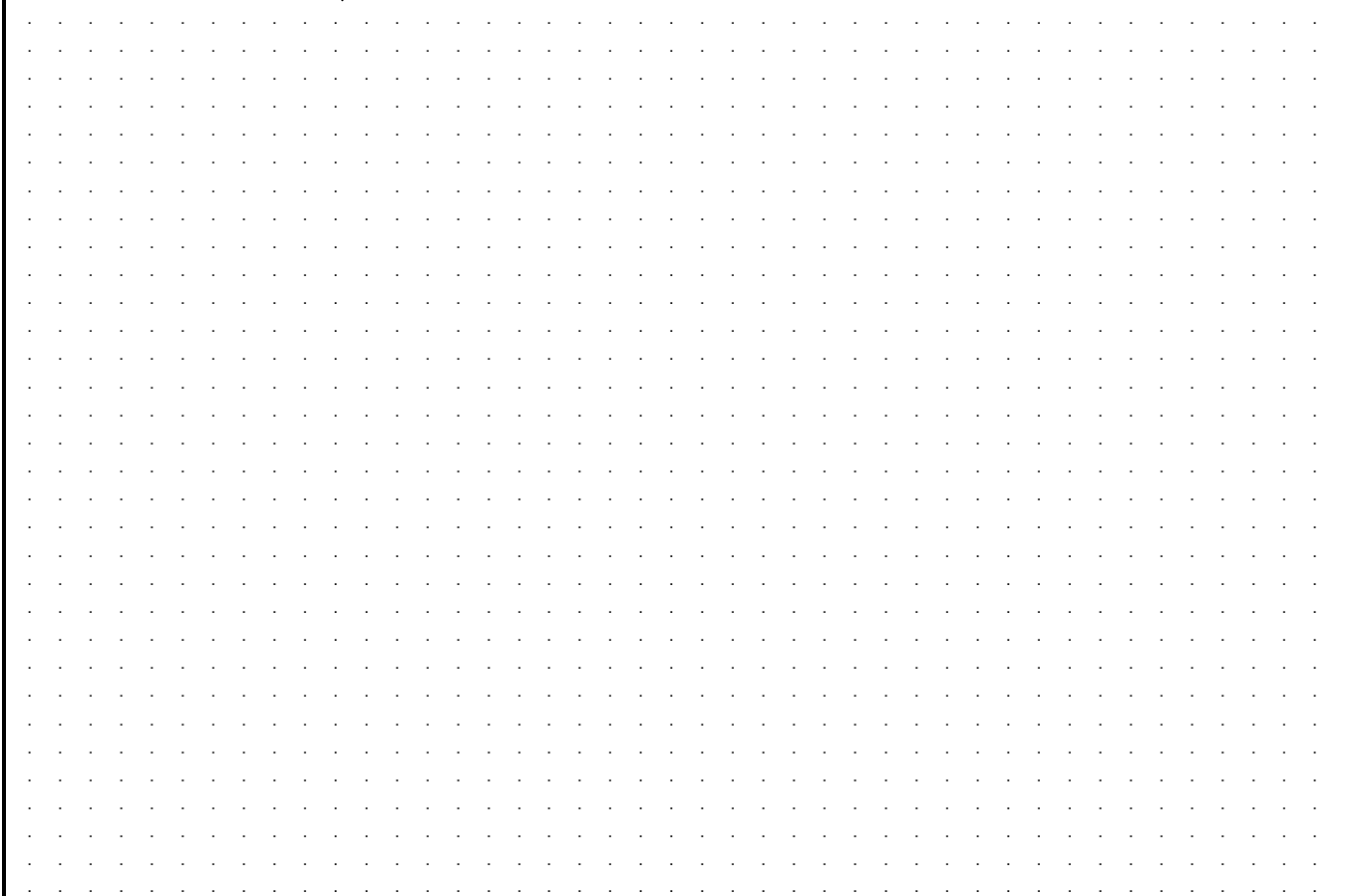
SKETCH OF MP3



MONITORING POINT #3 (MP3)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

SKETCH OF SITE (show structure, instrument, RPs):



US&R Struct. Monitoring Form - MON-1

By: _____ Date: _____

Monitoring Began _____

Monitoring Ended _____

<p>STRUCTURE DESCRIPTION:</p> <p>Bldg ID: _____ _____</p> <p>No. Stories: _____ No. Basements: _____</p>	<p>ATMOSPHERIC CONDITIONS Temperature _____</p> <p><input type="checkbox"/> Day <input type="checkbox"/> Clear <input type="checkbox"/> Calm <input type="checkbox"/> Haze</p> <p><input type="checkbox"/> Nite <input type="checkbox"/> Cloudy <input type="checkbox"/> Windy <input type="checkbox"/> Gusty</p>	<p>SKETCH OF SITE (show structure, instrument, CPs):</p> <div style="border: 1px dotted black; height: 200px;"></div>
<p>INSTRUMENT SETUP</p> <p>Model/Serial No. _____ Calibrated _____ Yes / No _____</p> <p>Location _____ Job Name _____</p> <p>Description _____ IP Coordinates _____</p>		<div style="border: 1px dotted black; height: 400px;"></div>
<p>CONTROL POINTS - at least three (see CP-LOG)</p> <p>Name _____</p> <p>Location _____</p> <p>Description _____</p>	<p>MONITORING POINT # (MP _____)</p> <p>Location _____</p> <p>Description _____</p> <p>ALERT displacement = _____</p> <p>ALARM displacement = _____</p>	
<p>CONTROL POINTS - at least three (see CP-LOG)</p> <p>Name _____</p> <p>Location _____</p> <p>Description _____</p>	<p>MONITORING POINT # (MP _____)</p> <p>Location _____</p> <p>Description _____</p> <p>ALERT displacement = _____</p> <p>ALARM displacement = _____</p>	
<p>CONTROL POINTS - at least three (see CP-LOG)</p> <p>Name _____</p> <p>Location _____</p> <p>Description _____</p>	<p>MONITORING POINT # (MP _____)</p> <p>Location _____</p> <p>Description _____</p> <p>ALERT displacement = _____</p> <p>ALARM displacement = _____</p>	

US&R Struct. Monitoring Form - MON-2

By: _____ Date: _____

Mon-2 Sht _____ of _____

Monitoring Began _____

Monitoring Ended _____

ADDITIONAL INSTRUMENT SETUP LOCATIONS

Location _____ Job Name _____
Description _____ IP Coordinates _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
Location _____
Description _____

MONITORING POINT # (MP _____)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
Location _____
Description _____

MONITORING POINT # (MP _____)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
Location _____
Description _____

MONITORING POINT # (MP _____)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

CONTROL POINTS - at least three (see CP-LOG)

Name _____
Location _____
Description _____

MONITORING POINT # (MP _____)

Location _____
Description _____
ALERT displacement = _____
ALARM displacement = _____

SKETCH OF SITE (show structure, instrument, CPs):

A large grid area for sketching the site, showing structure, instrument, and control points. The grid consists of approximately 20 columns and 30 rows of small squares.

US&R Struct. Monitoring Form - CP-LOG

By: _____ **Date:** _____ **CP Sht** ___ **of** ___

CONTROL POINT	READINGS*		TIME	IP Loc.	Comments, notes, angles...	SITE PLAN SKETCH

* NOTE: Total Station record X, Y, Z coordinates. Theodolite record Horizontal (HA) and Vertical (VA) Angle.

Follow OSHA 29 CFR part 1926 CFR Crane or Derrick Suspended Personnel Platforms. HERS must be responsible for Safety of the Operation

<p>Situation Name: _____</p> <p>HERS Name: _____</p> <p>RTM Name: _____</p> <p>Task Force: _____</p>	<p>Crane Operator _____</p> <p>Crane Co. Supervisor _____</p> <p>Platform Capacity _____</p> <p>Time Operation Start _____ Time Stop _____</p>
<p>PRIOR to LIFT, CHECK THE FOLLOWING:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Crane has a functioning Two-Block Device <input type="checkbox"/> Hoist Rope for Kinks <input type="checkbox"/> Multiple Part Line shall not be twisted around each other <input type="checkbox"/> Hoisting shall be inspected if rope is slack to ensure all ropes are properly stored on drums and in sheaves <input type="checkbox"/> General Structural integrity, welds intact & no broken or damaged parts <input type="checkbox"/> Rating Plate in place and readable <input type="checkbox"/> Guardrail system intact & toe board in place <input type="checkbox"/> Primary attachment is centered in place <input type="checkbox"/> Safety pigtail line in place <input type="checkbox"/> Connections made w/ rated shackles <input type="checkbox"/> Master link in place & thimbles on all eyes <input type="checkbox"/> Access gate operating properly and equipped with a restraining system to prevent accidental opening <input type="checkbox"/> Load in platform - tools, equipment & personnel are balanced and secure <input type="checkbox"/> Hook to which platform is attached can be closed and locked <input type="checkbox"/> Fall protection system consisting of body belt/harness system with lanyard appropriately attached to lower load block, overhaul ball, or structural member capable of supporting the fall impact of all lifted personnel using the anchorage <input type="checkbox"/> No other lifts shall be done by crane while using platform <input type="checkbox"/> Before personnel enter or exit the platform, it shall be stabilized <input type="checkbox"/> Hoisting shall be performed in a slow, controlled, and cautious manner <input type="checkbox"/> Crane shall be leveled within 1% of grade and shall be located on firm footing <input type="checkbox"/> Visual inspection of crane, rigging, personnel platform, and the crane support base shall be conducted by a competent person immediately after the trail lift to determine if the test has exposed any defects in any component or structure. Any defects that are found which create a safety hazard shall be corrected before hoisting personnel 	<p>Conduct a pre-lift meeting just prior to platform use with the following participants:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Crane Operator <input type="checkbox"/> Signal person <input type="checkbox"/> Persons to be Lifted <input type="checkbox"/> HERS responsible for planned operation <p>The Following will be discussed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inspections of Platform & Crane <input type="checkbox"/> Qualifications of Crane Operator <input type="checkbox"/> Time length of operation <input type="checkbox"/> Types of Operations to be performed <input type="checkbox"/> Number of persons to be lifted <p>Rules for Conducting Trail Lift</p> <p>A Trail Lift shall be performed just prior to lifting personnel. This shall be supervised by the responsible Crane Co employee and the HERS. The Trail Lift shall be repeated every time the Crane is moved, or a new work area is accessed</p> <ul style="list-style-type: none"> <input type="checkbox"/> Platform shall be Proof Tested at 125% of Rated Capacity, and held in suspension for five minutes in the location the work is to be performed <input type="checkbox"/> Documentation of the Proof Test, Platform/Crane Inspection, and Pre-hoist Meeting shall be recorded by use of this Check List <p>Proof Test, time & weights _____</p> <p>Weight of personnel & equip. _____</p> <p>Tasks to be performed _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Notes: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>