

Section 8 Brieser Construction SH&E Manual

July

2015

This written program documents the steps *Brieser Construction* has taken to protect and safeguard the public and employees and to prevent damage to property resulting from various hazards during Demolition operations present at our construction sites. This policy applies to “Gut-Rehab”, Renovations as well as any structural removal or partial removal.

Demolition

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CROSS REFERENCE:	29 CFR 1926, Subpart T Demolition; ANSI/ASSE A10.6 Safety Requirements for Demolition Operations National Demolition Association Safety Manual		

DEMOLITION

Brieser Construction

Purpose

This written program documents the steps *Brieser Construction* has taken to protect and safeguard the public and employees and to prevent damage to property resulting from various hazards during Demolition operations present at our construction sites. This policy applies to “Gut-Rehab”, Renovations as well as any structural removal or partial removal.

Brieser Construction Management has overall responsibility for coordinating safety and health programs in this company. Copies of the written program may be obtained at the job site or in the Corporate Office.

If, after reading this program, you find that improvements can be made, please contact Brieser Construction. We encourage all suggestions because we are committed to creating a safe workplace for all our employees and to the success of our Demolition Program. We strive for clear understanding, safe behavior, and involvement with the program from every level of the company.

Scope

To define the requirements, responsibilities, and procedures necessary for an Engineering Survey of projects that require Demolition Operations. The purpose of the survey is to assess existing conditions at the work site, and to identify engineering and administrative control measures which should be used to prevent occupational injuries to Brieser personnel, subcontractors and the public.

Responsibilities

The Program Administrator: Brieser Safety Manager

This person is responsible for:

- Issuing and administering this program and making sure that it satisfies all applicable federal, state and local requirements.
- Ensuring that employees receive initial and refresher training on the use of this policy.
- Maintaining training records for all employees included in the training sessions

Project Managers, Superintendents and Foremen

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These people are responsible for:

- Ensuring an Engineering Survey is completed of each job site prior to commencement of demolition activities.
- Reviewing the Engineering Survey between Project Manager and site Superintendent or Job Foremen
- Knowing the hazards in their areas that require the use of this policy
- Assuring that safe operations are maintained within their departments to prevent injuries demolition operations
- Enforcing the use of this policy in the areas in which it's required

Employees

- Understanding what constitutes demolition activities
- Adhering to and completing all required permits for demolition operations
- Seek guidance when you do not understand a particular section or permit within this policy

Definitions

Allowable Floor Load- The established carrying capacity rating, expressed in pounds per square foot, based upon engineering design and calculation

Catch Platform- A temporary structure erected around, attached to and abutting the building being demolished for the purpose of safeguarding and protecting the employees and the public by catching a retaining falling objects or debris.

Chute- A trough or tube used to guide and transport sliding objects, material or debris from a higher to a lower level.

Competent Person- One who is capable of identifying existing and predictable hazards in the surrounding or working conditions that are unsanitary, hazardous or dangerous to employees and who has the authorization to take prompt corrective measure to eliminate them.

Demolition- Dismantling, razing, destroying or wrecking any building or structure or any part thereof.

Qualified Persons- Those who by possession of a recognized degree, certificate or professional standing or by extensive knowledge, training and experience in the demolition industry have successfully demonstrated their ability to solve or resolve problems relating to the subject matter of this standard.

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PREPARATORY OPERATIONS

General

Immediately after a contract is awarded and prior to commencement of work on site, an Engineering Survey will be conducted. The Engineering Survey must be made by a Brieser trained competent person and/or a team. The team should consist of knowledgeable people of the appropriate disciplines and/or certifications, Brieser General Superintendent, Brieser Safety Dept., Owner, Brieser Project Manager, local authorities, and a fire and emergency resource. A report of the findings of the engineering survey must be written. The survey will aid in project planning, and identify specific hazard conditions at the site. The survey will identify engineering and administrative controls to be implemented to minimize employee exposure to potentially hazardous conditions during demolition, dismantlement and renovation activities.

Planning

- ✓ Inspect the condition of the framing, floors, and walls. Make note of any apparent modifications. Review record drawings for accuracy and compare to current observations.
- ✓ Locate all utility line locations (for example, gas, electricity, steam, water, and sewer) and ensure that such service lines have been capped or otherwise controlled outside of the building lines.
- ✓ If utility service must remain within the jobsite they shall be marked with RED tapes or paints to identify that the line is “LIVE”. This is a last resort and needs to be approved by safety manager! All utility lines should otherwise be locked and tagged out of service per OSHA and Brieser polices on lockout/tagout.
- ✓ All Brieser employees performing demolition operations are required to have in their possession a non-contact AC Voltage tester (tick tracer) that has both a visual and audible warning. This instrument is used a final check before an employee touches any electrical conductor. De-energize or Lockout/Tagout is required before use of this instrument.
- ✓ Determine if hazardous materials or substances have been used in any pipes, above or underground tanks, pieces of equipment, or processes on the site. When the presence of any such hazard is suspected or identified, perform testing and purging and eliminate the hazard prior to beginning demolition. The Owner’s Survey should identify this information.
- ✓ Remove existing glass prior to beginning demolition work. Protect or reroute any pedestrian or vehicle traffic ways. Provide barricades to ensure that unauthorized personnel are not allowed entry to the work site.
- ✓ Ensure that employee entrances to multi-story structures being demolished are completely protected by sidewalk sheds, canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies must be at least 2 feet

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wider than the building entrances (1 foot wider on each side) and must be capable of sustaining a load of 150 pounds per square foot.

- ✓ Some systems may have instruments that contain radioactive isotopes. In these cases, ensure that the shutter on the instrument is closed and deadlocked before disconnecting or removing. Deliver the removed instrument to the appropriate personnel immediately for controlled storage and/or disposal.
- ✓ Contain organic dust material by the use of water and shielding to prevent explosion where a possible ignition source exists.
- ✓ Fire safety is a critical part of the plan. Items to consider include:
 - Fire watches
 - Hot Work Permits
 - Wall Openings
 - When to shut down fire systems
 - Extended fire watch coverage (after hours)
- ✓ Develop emergency action plans for each phase of demolition and share with local authorities, site security, and affected personnel.
- ✓ Segregate and dispose of demolished materials, as local regulatory authorities require. The Owner's Survey should note the presence of hazardous materials.
- ✓ Do not remove insulation materials from vessels or piping until it has been determined that they do not contain asbestos fiber. The Owner's Survey should note any Asbestos Building Inspections performed. Obtain a copy of this inspection with the project file and communicate to site supervision
- ✓ Do not disturb painted surfaces until it has been determined if lead is present
- ✓ A copy of this plan must be forwarded to the Brieser Safety Dept. for review and filing.

Execution

- ✓ Hold updates as required with local authorities, security, and affected site personnel to address changing work conditions, as well as Emergency Action Plan changes.
- ✓ If it is necessary to maintain any services or utilities to the site, locate temporary lines as required and protect them from damage (for example, Fire Systems).
- ✓ Begin demolition of exterior walls and floor construction at the top of the structure and proceed downwards. The only exception is cutting holes in floors for chutes and similar preparatory work.
- ✓ Remove load-bearing walls/floors only after all stories above have been demolished and removed.
- ✓ In buildings of a skeletal steel type construction, the steel framing may be left in place during the demolition of masonry walls provided that all beams, girders, and similar structural supports have been cleared of all loose material as the demolition progresses downward. In the structural survey, it must be determined that these walls are not loadbearing.

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- ✓ Support floors that are weakened or otherwise unsafe so they can support loads of materials being removed from demolition areas.
- ✓ Use only those entrances, stairways, passageways, and ladders designated as a means of access to the structure. All other ways must be entirely closed at all times.
- ✓ Do not allow any wall section more than one story in height to stand alone without lateral bracing. All walls must be left in a stable condition at the end of each shift.
- ✓ Provide fall prevention at all wall openings.
- ✓ Identify all floor openings and cover with secured covers substantial enough to support the weight of any load that may be imposed
- ✓ A competent person(s) must make frequent inspections as the work progresses to detect hazards resulting from weakened floors, walls, or loosened materials.
- ✓ Do not drop any material to any point lying outside the exterior walls of the structure unless the area is effectively protected. Approved chutes must be used to contain materials.
- ✓ Block off areas where demolished materials are stored except for openings for removal. Keep such openings closed at all times when not in use.
- ✓ Adequately support all penetrating walls or partitions to be demolished on both sides of the wall or partition so the load will not swing or move freely.
- ✓ During the course of demolition, keep personnel out of high-risk areas such as pinch points or crush points.
- ✓ Thoroughly inspect the job site after demolition is completed. Clean and restore the site to a usable condition (for example, permanently close any temporary openings).
- ✓ Avoid use of explosives wherever possible. If demolition by use of explosives is required, refer to the requirements set forth in OSHA 1926 SUBPART U, “BLASTING AND THE USE OF EXPLOSIVES,” or as local regulatory authorities require. Blasting requires the use of specially trained and certified experts and will not be undertaken by Brieser personnel.

Concrete/Asphalt Demolition

- ✓ Prior to chipping, drilling or removing concrete or asphalt from floors or other locations the construction superintendent or job foremen will check all maps and prints for the location of possible existing lines.
- ✓ A Competent person trained in the use of Brieser’s line locate equipment will sweep the area for sub-surface interferences.
- ✓ The location of such lines will be marked for the guidance of the Brieser employees performing the work.

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Utilities

- ✓ Each piping, electrical and communication system will be assessed to identify any required disconnection and/or relocation work to be performed.
- ✓ It will be the responsibility of the Brieser Construction Competent person to determine whether or not electrical lines can be de-energized during the excavating or concrete breaking work. If not, the following must be included as specified instructions on the permit:
 - Grounding of tools or equipment
 - Insulating employees (Electrically rated gloves for example)
 - Non-destructive techniques such as hand digging or vacuum excavation

Environmental

An assessment of environmental documentation which may exist such as Phase I, II reports, asbestos surveys, environmental audits etc. to determine the presence of hazardous materials shall be obtained by the owner and reviewed before demolition activities commence. A visual inspection will be conducted to: identify underground storage tanks; asbestos; drums; visual staining; air pollution control equipment; stored chemicals; industrial wastes; transformers; contaminated sumps; and catch basins which could expose employees to hazards requiring special personal protection.

Training

Employees required to conduct Demolition Operations will be trained in the following:

- This Policy/Procedure: Brieser Safety Manual Section 8 Demolition or Orientation II
- Use of Line Location Equipment
- Asbestos Awareness
- Lead Awareness

Brieser Construction employees must demonstrate an understanding of the above training, and the ability to safely execute all the tasks that go into the execution of a safe demolition job. This includes proper training on all tools and equipment used, all special permitting that is required as a result of the Engineering Survey and lastly respiratory protection in hazardous environments. Employee training must be certified and documented.

When the company has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, Brieser Construction shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

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- Changes in the workplace render previous training obsolete; or
- Changes in the types of demolition techniques used render previous training obsolete; or
- Inadequacies in an affected employee's knowledge or use of assigned task indicate that the employee has not retrained the requisite understanding or skill.

Brieser Construction shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained, the date(s) of training, and that identifies the subject of the certification.

**BRIESER CONSTRUCTION
SAFETY & HEALTH MANUAL
SECTION 8
DEMOLITION
SUB-SECTION
TRAINING**

ATTENDANCE ROSTER

Brieser Construction

EMPLOYEE NAME (Print or Type)	EMPLOYEE SIGNATURE	TRADE	JOB TITLE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

ROUTING	PERSONEL MANAGER	Add to Training Database
	SCAN	SAFETY/DEMOLITION/TRAINING/MMDDYY TRAINING CERTIFICATION

DEMOLITION

Brieser Construction

Score: _____ %

Employees Name:		Date:	
Company:		Instructor:	
		Job Title:	

Answer the following questions "True" or "False" by circling the appropriate letter.

- | | | |
|----------|----------|---|
| T | F | 1. This policy applies to "Gut-Rehab", Renovations as well as any structural removal or partial removal of building materials. |
| T | F | 2. Project Manager, Superintendents or Foremen are responsible for ensuring an Engineering Survey is performed before engaging in any demolition activity.. |
| T | F | 3. Only a Qualified person can conduct an Engineering Survey? |
| T | F | 4. A Brieser Competent person in Demolition safe practices may conduct an Engineering Survey |
| T | F | 5. All utilities should be capped or otherwise disconnected from the building envelope. |
| T | F | 6. All utility lines must be capped or otherwise disconnected form the building envelope |
| T | F | 7. I need to have Asbestos Awareness training before I am eligible to perform demolition activities for Brieser Construction |
| T | F | 8. I need to have Lead Awareness training before I am eligible to perform demolition activities for Brieser Construction. |
| T | F | 9. I am not required to have an AC voltage tester (tick tracer) on my body ready for use while performing Demolition activity |
| T | F | 10. I must be trained to use the Brieser locate equipment |

DEMOLITION
Brieser Construction

Personal Protective Learning Exercise
Brieser Construction
Answers

- | | | | |
|----------|----------|-----|--|
| <i>T</i> | <i>F</i> | 1. | This policy applies to “Gut-Rehab”, Renovations as well as any structural removal or partial removal building materials. |
| <i>T</i> | <i>F</i> | 2. | Project Manager, Superintendents or Foremen are responsible for ensuring an Engineering Survey is performed before engaging in any demolition activity.. |
| <i>T</i> | <i>F</i> | 3. | Only a Qualified person can conduct an Engineering Survey? A Qualified person may be necessary if the difficulty of the work is beyond the knowledge level of the Competent Person. An example would be a multi-story building that is going to be leveled. |
| <i>T</i> | <i>F</i> | 4. | A Brieser Competent person trained in Demolition safe practices may conduct an Engineering Survey |
| <i>T</i> | <i>F</i> | 5. | All utilities should be capped or otherwise disconnected from the building envelope. |
| <i>T</i> | <i>F</i> | 6. | All utility lines must be capped or otherwise disconnected from the building envelope |
| <i>T</i> | <i>F</i> | 7. | I need to have Asbestos Awareness training before I am eligible to perform demolition activities for Brieser Construction |
| <i>T</i> | <i>F</i> | 8. | I need to have Lead Awareness training before I am eligible to perform demolition activities for Brieser Construction. |
| <i>T</i> | <i>F</i> | 9. | I am not required to have an AC voltage tester (tick tracer) on my body ready for use while performing Demolition activity. |
| <i>T</i> | <i>F</i> | 10. | I must be trained to use the Brieser locate equipment |

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BRIESER CONSTRUCTION

SAFETY & HEALTH MANUAL

SECTION 8 DEMOLITION

SUB-SECTION DEMOLITON ENGINEERING SURVEY

Prior to starting all demolition operations, OSHA Standard 1926.850(a) requires that an engineering survey of the structure must be conducted by a competent person. The purpose of this survey is to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. When indicated as advisable, any adjacent structure(s) or improvements should also be similarly checked. The demolition contractor must maintain a written copy of this survey. Photographing existing damage in neighboring structures is also advisable. **If the knowledge & experience level of the competent person performing this survey is beyond the scope of this project, the Brieser Safety Dept must be contacted before work starts. A structural Engineer may need to sign off on this permit as a Qualified Person.**

PERMIT INFORMATION	DEMOLITION PROCEDURE	
	COMPETENT EMPLOYEE	
	DATE	
	LOCATION	
	SAFETY APPROVAL	
ROUTING	CUSTOMER	
	PERSONNEL MANAGER	
	SCAN	SAFETY/PERMITS COMPLETED/DEMO ENG SURVEY/MMDDYY /LOCATION

Job Name		Job Location	
Job Contact		Phone Number	
Name of Structure		Date Built	
Structure Description			
Materials	Foundation	Walls	Floors
	Roof		
Method of Demolition			
Underground Utility Confirmation No.		Brieser Line Locate Device Operator Name	
If Concrete/Asphalt Breaking ONLY	Construction Defects section only need to be completed		Rev. 1

Construction Defects

Check if applicable	Details	Comments
<input type="checkbox"/>	Identify soil condition of site for voids, instability, & other harmful conditions	
<input type="checkbox"/>	Identify existing utilities both in and near construction area. Use of the Brieser Line Locating Equipment is mandatory and the use of JULIE is required if applicable.	
<input type="checkbox"/>	Are surrounding businesses also using utilities found on site & will they be shut-down if accidentally breached?	

Engineering Survey for Demolition or Remodeling

Check if Applicable	Details	Comments
<input type="checkbox"/>	If building has been damaged by fire, flood &/or explosion, do walls & floors need additional bracing?	
<input type="checkbox"/>	Has an asbestos/lead survey been completed in work areas? If so and if positive, abatement plans must be made	
<input type="checkbox"/>	Identify all utilities: electric, gas (oxygen, natural gas), water, fire sprinklers, sewer, steam, unlabeled pipes, process piping	
<input type="checkbox"/>	Identify all load-bearing walls	
<input type="checkbox"/>	Identify all hazardous chemical systems and storage areas	
<input type="checkbox"/>	Identify all windows, doors, sidewalks, entrances that must be protected with canopies	
<input type="checkbox"/>	Examine adjacent structures around construction area for pre-existing damage. Video or photograph conditions to mitigate damage claims later	
<input type="checkbox"/>	Identify ground water or water tables. Water can apply pressure to walls & intrude or seep	

Environmental Issues

Check if Applicable	Details	Location/Description
<input type="checkbox"/>	Asbestos	
<input type="checkbox"/>	Underground Storage Tanks (UST's)	
<input type="checkbox"/>	Backfill Material	
<input type="checkbox"/>	Storm water Runoff	
<input type="checkbox"/>	Waste Oil	
<input type="checkbox"/>	Solvents	
<input type="checkbox"/>	Contaminated Soil	
<input type="checkbox"/>	Unidentified Drums	
<input type="checkbox"/>	Special Waste	
<input type="checkbox"/>	Hazardous Waste	
<input type="checkbox"/>	Lead Disposal	
<input type="checkbox"/>	PCB Transformers	
<input type="checkbox"/>	PCB Ballasts	
<input type="checkbox"/>	Galbestos	
<input type="checkbox"/>	Contaminated Water	
<input type="checkbox"/>	Heavy Greases	
<input type="checkbox"/>	Contaminated Bricks	
<input type="checkbox"/>	Process Wastes	
<input type="checkbox"/>	Radioactive Devices	
<input type="checkbox"/>	Mercury Thermostats	

Clean Room, Healthcare, Infection Control Considerations

Check if Applicable	Details	Comments
<input type="checkbox"/>	Identify Separation Wall locations around project. This is a critical part of dust control plan	
<input type="checkbox"/>	Ensure all fire system components remain intact and unencumbered	
<input type="checkbox"/>	Develop atmospheric controls to create negative pressure in all construction areas 24/7, include filtration and exhaust to outside as needed	
<input type="checkbox"/>	Ensure all Return Air Ducts in construction area are sealed.	
<input type="checkbox"/>	Route client/public personnel through areas outside of construction areas. Post adequate signage to detail correct route	
<input type="checkbox"/>	Posts warning signs on all Construction Area Entrances	
<input type="checkbox"/>	Place sticky mats and other dust controls at all construction exits	
<input type="checkbox"/>	All debris carts exiting construction areas must be covered	
<input type="checkbox"/>	Identify critical areas that might be impacted by construction noise or vibration. Develop communication plans around scheduling and notification	
<input type="checkbox"/>	Post Emergency Procedures and Contact Information at all locations	
<input type="checkbox"/>	Identify hazard chemicals that will be used and develop vapor/fume control plans	
<input type="checkbox"/>	If fire alarm, fire sprinkler, fire exits, breach in fire walls, electrical, water, oxygen, sewer or HVAC is to be impacted, Interim Life Safety Measures (ILSM) will need to be implemented.	
<input type="checkbox"/>	Identify if air monitoring is needed: preconstruction levels, periodic during construction, and after construction	
<input type="checkbox"/>	Will any ceiling tile be removed that exposes dust into space that may enter clean areas?	
<input type="checkbox"/>	Will any other chase areas be opened that lead into clean areas?	
<input type="checkbox"/>	Clean areas with HEPA filtered units prior to removal of any barriers	

Survey Completed by

Name	Name
Signature	Signature
Date	Date