



**Berry Bros. General Contractors, Inc.
Corporate Policy Procedure**

Section # 15-A

Issue Date: 2/11/10

**(HSE) Health, Safety & Environmental
Policies and Procedures Manual**

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CRITICAL LIFT POLICY

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SUBPART A – SCOPE & APPLICATION

This document provides the instructions needed to safely conduct Critical Lifts.

This document pertains to all critical lifts conducted on company premises and client locations. It is applicable to lifts conducted by both company personnel and contractor personnel.

A "critical lift" is defined as any non-routine crane lift requiring detailed planning and additional or unusual safety precautions. Critical lifts include: lifts made where the load weight is greater than 75% of the rated capacity of the crane; lifts which require load to be lifted, swung or placed out of the operator's view; lifts made with more than one crane; lifts involving non-routine/technically difficult rigging arrangement; hoisting personnel with a crane or derrick; or any lift which the crane operator believes should be critical.



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SUBPART B – ROLES AND RESPONSIBILITIES

Site Superintendent/Project Managers

The person in charge (PIC) of the operation (site superintendent or project manager) where a critical lift requirement exists shall ensure that procedures and precautions listed in this policy are followed. This person has ultimate work authority over the operation with the power to plan, schedule, direct and execute work. The site superintendent/project manager may delegate and approve a company qualified lift supervisor or approve the lift plan developed by a contractor designated qualified lift supervisor. The PIC must approve the lift plan.

Lift Supervisor


A Lift Supervisor will be assigned for each lift. This individual can be a Project Manager, Site Inspector, Lead, or Foreman for either the company or contractor. Responsibilities include:

- A. Reading and understanding the lift plan
- B. Ensuring that each participant is trained for his or her position and that all employees understand the safety procedures to be followed
- C. Determining that required inspections are current for the crane
- D. Determining that lift hardware has the proper rating (i.e., slings, shackles, etc.)
- E. Ensuring that the lift area is secure, all traffic is re-routed, and unauthorized persons are not allowed to enter area during lift.

Safety Representative

The Safety Representative, who is not part of the lifting crew, will participate in reviews and be present to monitor the lift. The Safety Representative must understand all the critical lift procedures. Responsibilities include

- A. Reading and understanding the lift plan
- B. Verifying crane inspection
- C. Reviewing hazard analysis
- D. Attending the Critical Lift Meeting
- E. Attending the Pre-Lift Safety Meeting
- F. Monitoring the critical lift

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SUBPART C - CRITICAL LIFT DETERMINATION

The decision to designate a lift, as a critical lift is a company management decision. Guidelines provided here are intended to aid in making that decision. A lift should be designated as a critical lift if dropping, upset or collision could cause or result in any one of the following:

1. Damage that would result in serious economic consequences.
2. Damage that would result in unacceptable delay to schedule or other significant impact (such as loss of vital data).
3. Undetectable damage that would jeopardize future operations or safety of a facility.
4. Significant release of hazardous material to the environment or creation of an undesirable condition.
5. Personnel injury or significant adverse health impact, either onsite or offsite.
6. Any non-routine crane lift requiring detailed planning and additional or unusual safety precautions.
7. Critical lifts include: lifts made where the load weight is greater than 75% of the rated capacity of the crane.
8. Lifts which require load to be lifted, swung or placed out of the operator's view.
9. Lifts made with more than one crane.
10. Lifts involving non-routine/technically difficult rigging arrangement.
11. Hoisting personnel with a crane or derrick.
12. Any lift which the crane operator believes should be critical.
13. The item to be lifted requires exceptional care in handling because of size, weight, close-tolerance installation, high susceptibility to damage or other unusual factor.
14. The item, although non-critical, requires exceptional care in handling because it is being lifted above a critical item.

SUBPART D – PLANNING

1. Prior to the lift a planning meeting will be held a JSEA will be developed based on the site hazards involved. The planning meeting will include the lift supervisor, safety rep and operator of the crane. A copy of the completed JSEA shall accompany the critical lift plan.



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2. Before making a Critical Lift, a Critical Lift Plan will be prepared by the PIC and or designed Lift Supervisor, the crane operator and rigger. The plan shall be documented and a copy will be provided to PIC and the Safety Representative.

3. The contents of the Critical Lift Plan shall include:
 - a. Exact size and weight of the load to be lifted and all crane and rigging components which add to the weight.
 - b. The manufacturer's maximum load limits for the entire range of the lift as listed in the load charts shall also be specified.
 - c. Specify the lift geometry and procedures including the crane position, height of the lift, the load radius, and the boom length and angle for the entire range of the lift.
 - d. Designate the Crane Operator, Lift Supervisor, and Rigger, and state their qualifications.
 - e. A rigging plan that shows the lifts points and describes rigging procedures and hardware requirements.
 - f. Describe the ground conditions, outrigger or crawler track requirements, and, if necessary, the design of mats necessary to achieve a level, stable foundation of sufficient bearing capacity for the lift.
 - g. For floating cranes or derricks, the plan shall describe the operating base (platform) condition and any potential list.
 - h. The plan shall list environmental conditions (wind in excess of 25 MPH and weather conditions) under which lift operations are to be stopped.
 - i. The plan shall specify coordination and communication/signal requirements for the lift operation.
 - j. For tandem or tailing crane lifts, the plan shall specify the make and model of the cranes; the line, boom, and swing speeds; and requirements for an equalizer beam.

The PIC shall ensure that a step-by-step procedure is prepared for critical lifts. Although individual procedures are prepared for one-time critical lifts, general procedures may be employed to accomplish routine recurrent critical lifts, For example, a general procedure may be used to lift an item or series of similar items that are frequently lifted or repeatedly handled in the same manner.

Safety Representative Documentation review: The following documentation shall be reviewed by the Safety Representative:

1. Proof of Crane operator physical •



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2. Current operator license/training certificate •
3. Crane inspection verification

SUBPART E - APPROVAL OF CRITICAL LIFTS

The critical lift plan must be approved as required by the responsible contractor's procedures. In the absence of direction from the contractor's procedures, a critical lift procedure shall be approved (signed and dated) by the following:

- Procedure author.
- Lift Superintendent
- PIC (Person in charge).
- Responsible safety representative

SUBPART F - REVISIONS TO CRITICAL LIFT PROCEDURES

Revisions to the procedure shall be reviewed and approved through the same cycle as the original procedure. If multiple lifts are planned within a short period of time (five or fewer days) of the initial configuration, they will all be planned during the Critical Lift Planning Meeting and be noted in the Lift Procedure. Only one Critical Lift Review Meeting is required for this series of lifts; however, a safety meeting shall be held immediately prior to each lift.

SUBPART G - PRE-LIFT MEETING

Before the critical lift is performed, a pre-lift meeting with all participating personnel shall be held. During the meeting, the critical lift procedure shall be reviewed and questions shall be resolved. The pre-lift meeting shall be documented and a record maintained with the lift plan and JSEA.

SUBPART H - DOCUMENTATION

Critical lift documentation is required. When the job is finished, the PIC shall transmit the critical lift documentation to the manager (or designee) for whom the lift was done. This documentation is subject to audit for one year after the critical lift is completed.

Documentation of a critical lift shall include the following:



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- The critical lift procedure, recording job completion with approval signatures and hold point sign-offs.
- Documentation of the pre-lift meeting; containing, as a minimum, the meeting date and list of attendees.
- Hazard Analysis JSEA documentation.
- Any additional documentation deemed appropriate by the PIC or other responsible personnel (e.g., lessons learned).

Attachments: Critical Lift Plan Worksheet

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G. KM Representative: The contracted inspector trained in KM safety, environmental, and/or quality standards, policies and procedures.

H. Signal Person: The contractor's qualified, competent person responsible for providing signals to operator while lift is underway.

4. Requirements

- All requirements identified in the KM Contractor Environmental Safety Manual apply (Section 8 and Section 9 specifically).
- Review the "Lift Plan" at the lift site just prior to making the lift.
- The Lift Plan must include:
 - Current certification of the crane operator
 - Type of crane(s); rubber tire, track stationary, does the crane require on site assembly, including a copy of the most current certification
 - Is a load test required?
 - Type rigging that will be used, including rated capacity
 - Most recent annual inspection records, which must include the name of the person conducting the inspection and qualifications
 - Conditions that may delay the lift
 - Overhead hazards power lines, guidelines etc.
 - Soil/ground conditions [are there any subsurface vaults USTs, duct-banks storm water sewers, etc.
 - A Communication Plan – will radio or hand signals be used, how will other affected stakeholders in the area notified?
 - Load details
 - Will tag lines be used? If yes: how will they be used, is there sufficient room, what are the hazards etc.
 - Contingency plan if something goes wrong? Mechanical failure, incorrect load calculation resulting in exceeding 90% of crane capacity
 - Written calculations of the lift, including the configuration of the rigging and load.
- Safety precautions necessary for all employees in the area, including personnel employed by other contractors.
- All lifts out of water require additional calculations.
- Review of crane inspection and maintenance documentation to ensure they are current.
- A Pre-Lift huddle including all employees involved in making the lift.
- The briefing of all other contractor's superintendents who have employees working within the area, if any.
- Review and update of all associated JHA's/JSA's.

The contractor shall comply with all Federal, State, and Local laws and regulation regarding the inspections, maintenance, and operation of the cranes within their fleet.

The OSHA rule prohibits hoisting personnel by crane or derrick except when no safe alternative is possible. Based on the review of the record, OSHA determined that hoisting with crane- or derrick-suspended personnel platforms constitutes a significant hazard to hoisted employees and must not be permitted unless conventional means of transporting employees are not feasible or unless they present