

## ATTACHMENT C CRANE CRITICAL LIFT PROCEDURE

### **Introductory Information:**

Each year there are numerous accidents nation wide related to making lifts with cranes that are near the maximum capacity of the crane. Each of these accidents can result in injuries or death to workers and expensive damages to equipment and/or materials.

### **Objective:**

The Crane Critical Lift Procedure was developed to assure that an in-depth evaluation and planning to all heavy and/or complicated crane lifts is completed before the lift is attempted.

### **Definitions:**

**Critical Lift:** A critical lift has one or more of the following conditions:

- a) Load is over 75% of the crane's rated capacity for current configuration.
- b) Load is more than 20 tons.
- c) Lift is over operating systems (charged electrical equipment, pipelines, etc.)
- d) Lift requires the use of two (2) or more cranes.
- e) Hosting of contractor employees on a suspended work-platform or manbasket.

**Contractor's Construction Supervisor:** The contractor's supervisor responsible for the completing the critical lift.

**Crane Operator:** The operator that will be operating the crane and making the lift.

**Rigging Supervisor:** The contractor's supervisor responsible for planning and execution of the rigging that is being used for the critical lift.

**Craft Supervisor/Foreman:** The contractor's supervisor/foreman that will be directing the craftsmen making the critical lift.

**Contractor's Safety Manager:** The contractor's site safety manager.

**Contractor's Construction Manager:** The contractor's construction manager who is responsible for the contractor's daily construction activities at the site.

## Crane Critical Lift Procedure (Cont.)

### **Requirements:**

The contractor shall complete a “Critical Lift Plan” form and submit it to the KCP&L Construction Safety Management Representative or Appointed KCPL Representative within thirty (30) calendar days prior to the scheduled critical lift. The plan shall include the following information: (See Sample Critical Lift Plan on Attachment D.)

- a) Size, weight, and configuration of component being lifted.
- b) Crane to be used to make the lift with capacity charts showing capacity and radius from center pin of crane.
- c) Elevation of crane pad.
- d) Elevation that component is being lifted too.
- e) Drawing/drawings necessary to describe the lift and rigging being used for the lift.
- g) Company names of other contractors working in the area of the lift.

A review of the “Critical Lift Plan” must be performed at the site of the lift just prior to making the lift. This review shall include the following:

- a) Critical Lift Plan documentation.
- b) Safety precautions necessary for all employees in the area, including personnel employed by other contractors.
- c) Review of crane inspection and maintenance documentation to be assured they are current.
- d) A Prejob briefing including all employees involved in making the lift.
- e) The briefing of all other contractor’s superintendents who have employees working within the area, if any.

It is the responsibility of the contractor to comply with all Federal, State, and Local laws and regulation regarding the inspections, maintenance, and operation of the cranes within their fleet.



## Critical Lift Plan - Lift Detail Sheet 1

A. Weight			B. Jib		
1. Weight of Equipment		Lbs.	Erected:	Stowed:	
2. Weight of Headache Ball		Lbs.	1. Length of Jib		Ft.
3. Weight of Load Block		Lbs.	2. Angle of Jib		Deg.
4. Weight of Lifting Bar		Lbs.	3. Rated Capacity of Jib (From Chart)		Lbs.
5. Weight of Slings & Shackles		Lbs.	C. Sizing of Slings/Shackles		
6. Weight of Jib		Lbs.	1. Sling Selection:		
7. Weight of Cable (Load Fall)		Lbs.	a. Type of Arrangement		
8. Allowance for Unaccounted Material in Equipment (10% of Equip. Weight)		Lbs.	b. Number of Slings In Hookup		
9. Other		Lbs.	c. Certification Attached or Number		
<b>Total Weight</b>		Lbs.	d. Sling Length		Ft.
Source of Load Weight: (Name Plate, Drawings, Calculated)			e. Rated Capacity of Slings		Lbs.
Weight Verified By:			2. Shackle Selection:		
D. Crane			a. Capacity (tons)		
1. Type of Crane			b. Shackles Attached to Load By:		
2. Crane Capacity		Lbs.	c. Number of Shackles		
3. Lifting Arrangement			d. Certification Attached or Number		
a. Maximum Distance Center Load to Center Pin		Ft.	E. Crane Placement		
b. Length of Boom		Ft.	1. Smooth Solid Foundation in area?	Yes	No
c. Angle of Boom at Pickup		Deg.		2. Electrical Hazards in area?	
d. Angle of Boom at Set		Deg.	4. Rated capacity of crane under most sever lifting conditions:		
a. Over Rear		Lbs.	3. Obstructions/Obstacles to Lift/Swing?	Yes	No
b. Over Front		Lbs.		If "Yes," Explain:	
c. Over Side		Lbs.	4. Underground Piping/Cables?		
5. Rated Capacity of Crane for Lift		Lbs.	If "Yes," Explain:	Yes	No
6. Maximum Load on Crane		Lbs.			
7. Lift is _____ % of Crane's Rated Capacity					

## Critical Lift Plan – Lift Detail Sheet 2

### Pre-Lift Check List

1. Matting Acceptable?	Yes	No	7. Tag Line Used?	Yes	No
2. Outriggers Fully Extended?	Yes	No	8. Experienced Operator?	Yes	No
3. Crane in Good Condition?	Yes	No	9. Experienced Flagman Designated?	Yes	No
4. Adequate Awing Room?	Yes	No	10. Experienced Rigger?	Yes	No
5. Head Room Checked?	Yes	No	11. Load Chart in Crane?	Yes	No
6. Maximum Counterweight Used?			12. Wind Conditions?		

13. Crane Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

14. Functional test of Crane By: \_\_\_\_\_ Date: \_\_\_\_\_

Diagram Crane & Load Placement (Draw in space below, or attach copy)	Diagram Rigging Configuration (Craw in space below, or attach copy)
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Special Instructions or Restrictions for Crane, Rigging, Lift, Etc.

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- (a) MULTIPLE CRANE LIFTS REQUIRE A SEPARATE LIFT PLAN FOR EACH CRANE.
- (b) ANY CHANGES IN THE CONFIGURATION OF THE CRANE, PLACEMENT, RIGGING, LIFTING SCHEME, ETC. OR CHANGES IN ANY CALCULATIONS REQUIRE THAT A NEW LIFT PLAN BE DEVELOPED.