OVERHEAD CRANE, HOIST AND TUGGER LIFT & RIGGING PLAN

Work Order No: _____ **Site/Location:** _____
Task Description: _____ **Date Prepared:** _____
Item(s) to be Lifted: _____ **Date/Time of Lift:** _____
Qualified employee Preparing Form: _____

1. This form is for daily, task specific use of overhead cranes and hoists for loads weighing less than the crane's max rating, and with a known center of gravity.

2. The following cribbage will be utilized for the planned lift: _____

3. Location of crane or hoist to be utilized: _____

4. List any hazardous services/utilities identified in area of travel path:_____

5. Are there any services/utilities in load travel path to be removed from service prior to making lift? ☐ Yes ☐ No
   5.1 If services/utilities are left in service, are there the potential hazards/risk? ☐ Yes ☐ No
   5.2 List hazards and mitigations:
   _____

A) CRANE

Size/Type/Configuration _____
Manufacturer _____
Serial Number _____
Vendor _____

Last Crane Annual Inspection _____
Load Line: Diameter _____
No. of Parts _____
Capacity _____

B) SLINGS

A. Type (Material) _____
B. Size _____ in.
C. Length _____ ft., in.
D. Rated Capacity per Sling _____ lbs.
E. d/D Ratio _____
F. Number of Slings _____
G. Other _____

C) SHACKLES

A. Pin Diameter _____ in.
B. Capacity _____ lbs.
C. Shackles attached to Lobby or Collector Ring ☐ Yes ☐ No
D. Number of Shackles _____
E. Other (chain falls, etc.) _____

D) RIGGING DIAGRAM & BLOCKING DIMENSIONS-Draw out rigging plan in space below.

Include rigging point to hook, pad eyes, structural members, load line(s), load line angles, sling angles, shackles, calculated sling tension, rigging connection points to the load, tugger line pull(s) with angle factor and calculated total load on tugger load lines.

Multi-leg lifts must be calculated with consideration for 2 legs to support the entire load as a safety factor.

Weight =	
No. of Legs =	
Sling Angle =	
Load Factor =	
Weight ÷ Legs x Load Factor =	
Calculated Sling Tension =	

E) COMPONENT WEIGHTS

A.	Load Block	_____ lbs.	F.	Headache Ball & Hook	_____ lbs.
B.	Spreader Bar	_____ lbs.	G.	Cable (Load Line)	_____ lbs.
C.	Slings	_____ lbs.	H.	Other (Chain Falls, etc.)	_____ lbs.
D.	Shackles	_____ lbs.	I.	Weight of Load to be lifted	_____ lbs.
E.	Jib	_____ lbs.	J.	**Total Load to be lifted (sum A-I)**	**_____ lbs.**

K. Source of Load weight _____ (Mfg., Engineer, Truck Ticket, DWGS, Dynameter, etc.)

L. Maximum Radius: Crane Center pin to Center of Load _____ ft.

M. Length of Boom _____ ft.

N. Angle of Boom at Load Pick-up _____ degrees

O. Angle of Boom at Load Placement _____ degrees

P. Crane capacity at max radius from load chart _____ lbs.

Q. Lift is _____ % of rated capacity _____% (**J / P) x 100**

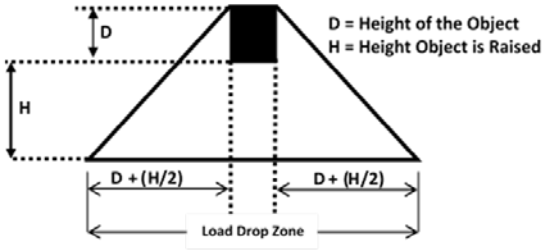
If rated capacity (Q) is less than the crane's rated capacity, proceed with lift. If rated capacity (Q) is greater than the crane's rated capacity, contact a third party for crane and structure inspection, conduct load test on crane, and develop an engineered lift plan.

F) LOAD DROP ZONE:

A. The Load Drop Zone (LDZ), according to OSHA, is the "area (including but not limited to the area directly beneath the load) in which it is reasonably foreseeable that partially or completely suspended materials could fall in the event of an accident." OSHA 1926.1401

B. For suspended loads, the LDZ shall be defined as the area underneath the load and radius from that area equal to the sum of the vertical length of the load and half of the height the load is to be lifted. Refer to the figure below for an illustration on determining the LDZ area.

C. Additionally, the lift team shall consider the fall path if a load were to strike an object, ricochet, or bounce off an existing structure or equipment below the lift and adjust the LDZ accordingly.



Height of object: _____ feet Height object raised: _____ feet **Load Drop Zone: _____ feet**

G) COMMENTS/OTHER:

- ☐ Job Risk Briefing Form completed and attached
- ☐ Overhead Crane/Hoist and Tugger Pre-Shift Inspection Form completed and attached
- ☐ Load Attachment Points have been inspected and are in good condition
- ☐ Quarterly rigging inspection has been completed and rigging condition is acceptable for this lift
- ☐ All rigging hardware visually inspected prior to use
- ☐ Chain buckets utilized for storing excess chain if using chain falls
- ☐ Tag line(s) being utilized
- ☐ Fall protection required (yes/no) for the task on hand
- ☐ Evaluation for need of softeners conducted
- ☐ Climate conditions verified acceptable for the duration of the lift– heat, cold, wind, rain, lightning, etc.
- ☐ No load to be suspended over personnel or occupied building(s), and load path is clear of any hazards.
- ☐ Ground bearing pressure is less than 2,000 PSF, (If greater, TECO civil engineer to be notified and initial sign here_____.
- ☐ Working near power lines? Yes/No If yes, review TECO's Crane operating near power lines Procedure
- ☐ Proper PPE in place. Hard Hats, High Visibility apparel, Safety glasses, hearing protections etc.
- ☐ TECO safe work practices have been reviewed
- ☐ Lift is being made per the lift plan
- ☐ Load drop zone been calculated, perimeter secured

H) HAZARDOUS SYSTEMS/CRITICAL ASSETS

A. Moving and/or lifting loads around identified specific hazardous systems or over critical assets such as turbines, generators, exciters, heaters, natural gas lines, cable trays, etc. require station management notification prior to the lift being made. Check box below that is relevant if making a lift around specific hazards systems or critical assets.

- ☐ Notification has been communicated to station management that lifts are to be made over critical assets such as turbines, generators, exciters, etc.
- ☐ Notification has been communicated to station management that lifts are to be made near or over specific hazardous systems such as over high voltage cable trays, MCC's, transformers, ammonia, hydrogen, natural gas systems and/or other identified specific hazards prior to making the lift.
- ☐ N/A

Signing below indicates a pre-lift meeting with all parties has been conducted and all concerns for the lift have been addressed

I) SIGNATURES	PRINT NAME	SIGNATURE	DATE
*Qualified Crane Operator	_____	_____	_____
*Qualified Rigger	_____	_____	_____
*Qualified Signal Person	_____	_____	_____
*Contractor Qualified Lift Dir.	_____	_____	_____
**TECO Supervisor	_____	_____	_____
TECO Engineer	_____	_____	_____
Primary Contractor Site Mgr.	_____	_____	_____
Sub-Contractor Site Mgr.	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

*Minimum required parties to attend pre lift meeting and sign

**TECO Supervisor required to review and verify lift plan prior to lifts being conducted by a contractor

☐ **Document Submitted to Tampa Electric when lift(s) complete** Date/Time/Representative_____