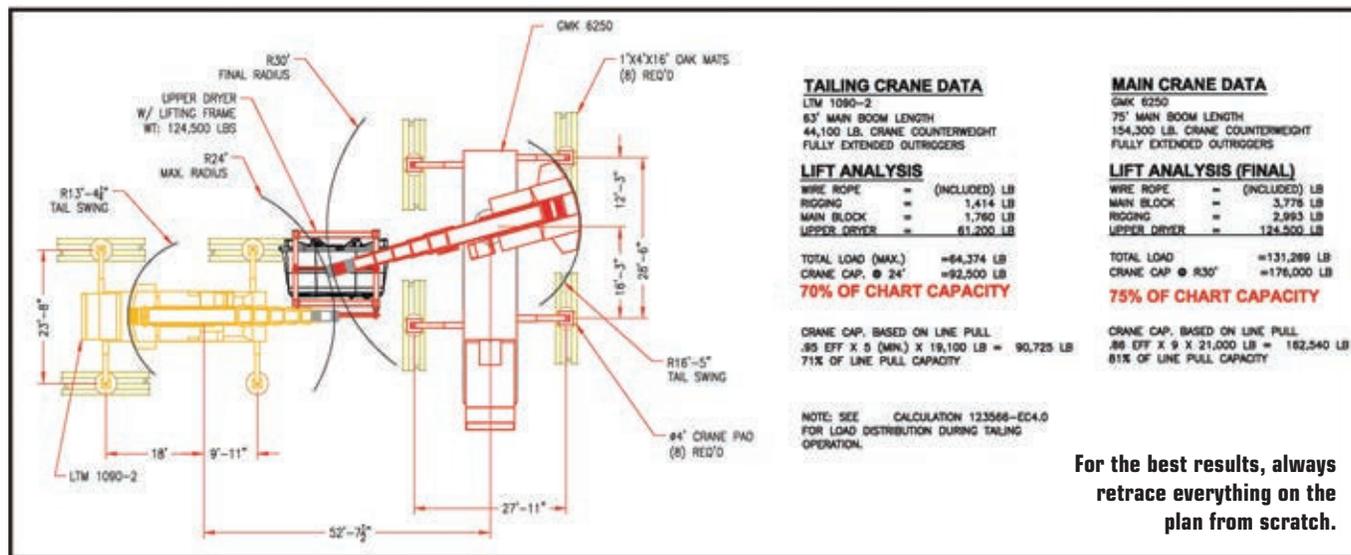


Mike Riggs answers the question: Why review a lift plan?

Never assume



For the best results, always retrace everything on the plan from scratch.

Planning load handling and lift activities followed by a review prevents and minimizes loss of life, injury and property damage. Additionally, a review provides guidance to all personnel involved or responsible for the safety of the load handling activities.

According to ASME P30 the following should be considered when writing a lift plan.

- Potential hazards to persons
- Hazards in proximity to the work area
- Complexity of the load handling activity
- Adverse impacts from environmental conditions
- Load Handling Equipment (LHE) and rigging capacity and/or performance
- An adverse commercial impact

Once a lift plan is completed, it is ready

for the review process. The review serves to verify that the content of the plan is accurate and workable.

HOW EXTENSIVE OF A REVIEW SHOULD A LIFT PLAN RECEIVE?

The extent of the review should be determined by the complexity and/or criticality of the load handling activity. For example, a multi-crane lift will require more scrutiny than a single-crane lift. In most cases, a mobile crane lift will require more planning and evaluation than an overhead crane lift. Additionally, a lift with low head room activities will create conditions to consider that are not present when head room is unlimited. These are instances that would require a more critical look at the activity and lift plan.

WHO SHOULD REVIEW THE PLAN?

Similar to the development of the lift plan, many different individuals may be utilized to do a thorough and complete review. Not all experts will need to have an engineering degree or be a professional engineer but all should be competent in their field of expertise.

Lift plans and load movement activities can be complex and may require the assistance of several specialists during the review process. Experts in the review process may include but are not limited to: rigging specialist, mobile, overhead,

or tower crane specialist, heavy haul specialist, or a specialist experienced with jacking systems.

For example: In a lift plan which uses a mobile crane attached to a non-symmetrical load where the load is set through an opening, in the roof of a six story building.

One reviewer may have the skill and knowledge to verify the center of gravity, load weight, rigging configuration, tension on slings and hardware. Additionally, the same reviewer may be qualified to review the crane's setup and capacity at the shown configuration. This individual may even understand the process. Yet, if the crane is near capacity (even though all ground pressure calculations are provided), there may be a need for a qualified engineer to verify the calculations. Calculation without verification, as part of the review, is not a complete or thorough review process.

HOW MUCH INFORMATION SHOULD I HAVE WHEN REVIEWING A LIFT PLAN?

When reviewing lift plans you will often find that information required to do a thorough review may not be provided. If you do not have what you need, ask for it.

Information that is needed may be overlooked by the developer because it is known to them or is not in a readily accessible location. Your review will

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anything

not be complete if information is missing, even information as simple as the dimensions of below-the-hook lifting devices, lifting lug dimensions, dimensions between attachment points, center of gravity locations, type of slings being used and the like.

HOW IMPORTANT IS THE PROCESS IN A LIFT PLAN?

The reviewer should have a good understanding of the process determined in the plan. All calculations of load weights, rigging configuration as well as crane size and set-up may be reviewed and determined to be sufficient for the lift. However, the process from getting the load from point A to point B, then to point C may create hazards that cannot be overcome by correct crane set up or a properly rigged load.

As an example, one is reviewing a lift plan requiring two cranes to lift a load off a trailer, rotate it 90 degrees and set it in a staging area until needed. While reviewing the process it is found that during one point in the lift the head crane is at 75 percent of chart capacity and the tailing crane is at 70 percent of chart capacity. In this situation, the following questions were asked by the reviewer:

- Are the crane operators familiar with these specific cranes?
- Have the crane operators worked in tandem before?
- Does the signalperson have experience with the operators and signaling multiple crane lifts?

As the results of these three questions, the reviewer learned that the operators may not know each other. Additionally, the crane operators and signalperson's

identity and experience is unknown to the lift plan developer. The cranes may not be the exact cranes identified in the lift plan but would be similar.

These unknowns were a result of commonly found circumstances. The lift plan was authored by one company, the cranes were to be leased by another company, the operators were to be provided by the local union hall and the signalperson was from a subcontractor on the job site. These unknowns can impact the way a lift plan is created, reviewed and executed.

The solution to overcome the safety hazard created by these unknowns was to practice (prior to the lift) with an equivalent load, using the crane, operators and signalperson selected for the lift.

Reviewing a lift plan can be intensive or more simplistic, depending on the load handling activity itself. For the best results, always retrace everything on the plan from scratch. Never assume that calculations, rigging or crane capacities are correct. A mistake that may be overlooked is a life that may be overlooked. ■

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