National Renewable Energy Laboratory

# HOISTING AND RIGGING LIFT PLAN

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| **INTRODUCTION** | | | | | | | | | |
| The lift master or designated hoisting and rigging (H&R) operator prepares the lift plan. A Hoisting and Rigging Lift Plan is required for complex and/or critical lifts. After the plan is developed, it must be submitted to the ESH POC for review and approval. Information developed in this plan must be reviewed with the H&R operator and workers involved in the work activity prior to the lift.  REFERENCE DOCUMENTATION: <https://training.bnl.gov/demo/BasicRiggingWorkbook.pdf> | | | | | | | | | |
| PART 1 - GENERAL INFORMATION | | | | | | | | | |
| **Team Name:** | | | | **Lift Plan Preparer Name:** | | | | | |
|  | | | |  | | | | | |
| **Lift Plan Preparer Contact Info:** | | | | **Weight of Load in lbs.** (Indicate actual or estimated) | | | | | |
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| **Load Description and Dimensions:** | | | | | | | | | |
| SCOPE OF WORK | | | | | | | | | |
| Describe the scope of work. Include specific information about the unique characteristics of the lift: | | | | | | | | | |
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| LIFT CONSIDERATIONS | | | | | | | | | |
| Identify factors to consider that will contribute to a safe and successful lift. **Note:** This is not an exhaustive list. | | | | | | | | | |
|  | Weight not verified | | |  | Rotation of load | | | | |
|  | Weight verified | | |  | Multiple crane lift | | | | |
|  | High center of gravity | | |  | Other dynamic factors involved | | | | |
|  | Stability of load | | |  | Man basket lift | | | | |
|  | Awkward size/shape/sharp edges | | |  | Hazards to workers in the area | | | | |
|  | No dedicated lifting points on load | | |  | Environmental factors, such as freezing conditions or solar flux. **Describe.** | | | | |
|  | Proof testing required on research and development fabricated loads | | |  |  | | | | |
|  | No lifting point directly above load | | |  | Other considerations. **Describe.** | | | | |
|  | Tag lines required. Consider personnel positioning issues | | |  |  | | | | |
|  | Lack of visibility. **Identify communication requirements.** | | |  |
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| **ROUTE OF TRAVEL AND LAYDOWN AREA (Performed at Work Area by H&R Operator – Prior to Lift)** | | | | | | | | **DETERMINATION** | |
|  | Are the route and laydown area clear of obstructions? | | | | | | | Yes | No |
|  | Is the laydown/landing area adequately sized to accommodate the load? | | | | | | | Yes | No |
|  | Is suitable packing available to protect slings from sharp and small diameter edges? | | | | | | | Yes | No |
|  | Have barricades been deployed to prevent access by unauthorized workers? | | | | | | | Yes | No |
|  | Have you confirmed that the laydown area is within the operating radius of the equipment? | | | | | | | Yes | No |
|  | Have environmental conditions been considered regarding safety of the lifting operation? | | | | | | | Yes | No |
|  | Does the crane operator have a clear view of the lift master? | | | | | | | Yes | No |
|  | Are other forms of communication necessary, such as radios? | | | | | | | Yes | No |
|  | For rotations, the load’s tip point and lift point are located precisely and rigging tension will be maintained to prevent the load from raising and flipping uncontrollably. | | | | | | | Yes | No |
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| SEQUENCE OF LIFTING OPERATION | | | | | | | | | |
| Provide a step-by-step description of the lifting operation. | | | | | | | | | |
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| PART 2 – LIFT PLAN | | | | | | | | | |
| To be completed by the lift master or designated H&R operator. Provide a sketch detailing the position of the crane(s), the rigging method, and the lifting accessories/equipment. | | | | | | | | | |
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| LIFTING EQUIPMENT AND ACCESSORIES INFORMATION | | | | | | | | | |
| List the type and safe working load of equipment used. | | | | | | | | | |
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| DEBRIEF AND LESSONS LEARNED ( To Be Done By Competition Staff ) | | | | | | | | | |
| Did the lifting operation go as planned or are changes to the lift plan required? | | | | | | | | | |
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| CONCURRENCE/APPROVAL SIGNATURES | | | | | | | | | |
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| Lift Master – Printed Name | |  | Concurrence Signature | | |  | Date | | |
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| SAFETY OFFICER – Printed Name | |  | Approval Signature | | |  | Date | | |