Jefferson Lab
Thomas Jefferson National Accelerator Facility

Material Handling Lift Plan

(See ES&H Manual Chapter 6141 Appendix T4 Hoisting and Rigging Operations) for Instructions

Click For Word Doc

Instructions:

This form *must* be completed for each lift using a mobile crane, forklifts with suspended loads or a critical lift, with an overhead crane or forklift. This form should be used for a non-routine lift with overhead cranes or incorporated into a Temporary Operational Safety Procedure.

STEP 1 – Planning the Lift

Lift Title:	DIRC BaBar Box Lift Plan
Location:	Hall D (Building 203)
Lift Date (s):	As Needed
Lift Plan Prepared by:	Tom Carstens Phone # EXT 7292 Date
JLab Approved by:	Mark Stevens Phone # 876-3940 Date 5/30/2018
JLab Work Coordinator: ~~Mark Stevens~~ Mark Stevens Phone # ~~EXT 6383~~ 876-3940 5/30/2018	

DOE Lift Classification:		**CRITICAL**	X	**PRE-ENGINEERED PRODUCTION**		**ORDINARY**	

Load Weight # 840lbs

Load Weight Determined By:

- ☐ Equipment Manufacturers Data Plate
- ☒ Rigger Estimate
- ☐ Labeled Shipping Weight
- ☐ Dyno Measured

Describe the Load:

The BaBar Box is form of Cherenkov Detector consisting of 48 synthetic fused silica bars glued together to form 12 individual bars approximately 16' long. The bars are glued to a 4" long light guide and exit window made of the same material. The bars are supported and arranged inside of a very thin aluminum-Hexcell shell that is approximately 16.5" long, 18" wide and 1.5" deep. Each BaBar Box weights ~~approximently~~approximately 250lbs.

A special BTHLD rolling fixture has been fabricated and tested. It attaches to the BaBar Box and is used to pick it up, roll it to the correct position, and install/place the box into the final assembly frame. This insertion/rolling fixture weights 590lbs

Rigging Hardware Required:

List all items (size & load rating) to be used under the hook to accomplish the planned lift.

BTHLD Rolling/Lifting Fixture, 300lbs WLL
2 each 2 ¾" Shackles, 5T
1 each 1Ton Chain fall
1 each 36" lifting strap, 4800lbs (basket)
1 each 12' strap, 8400lbs (straight)

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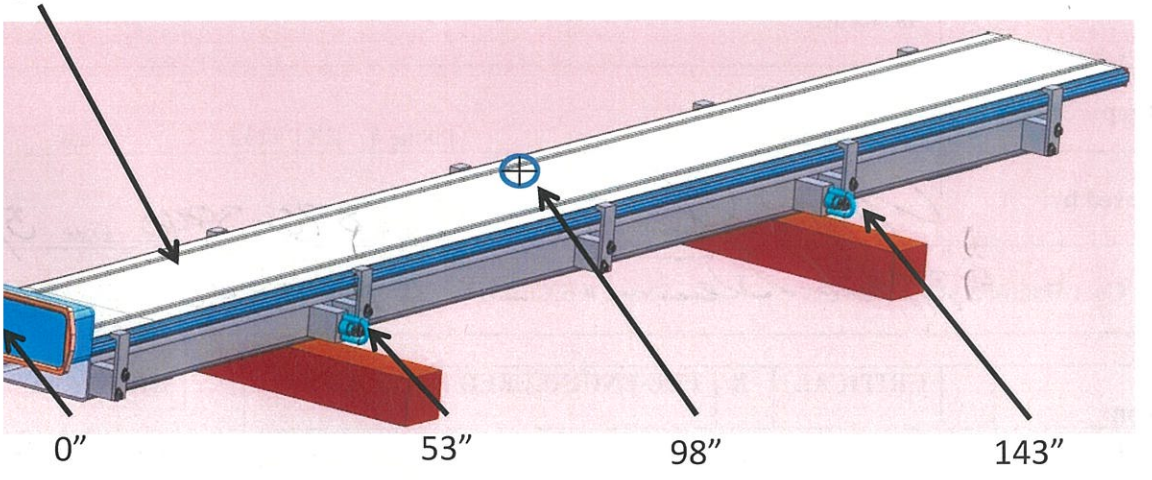
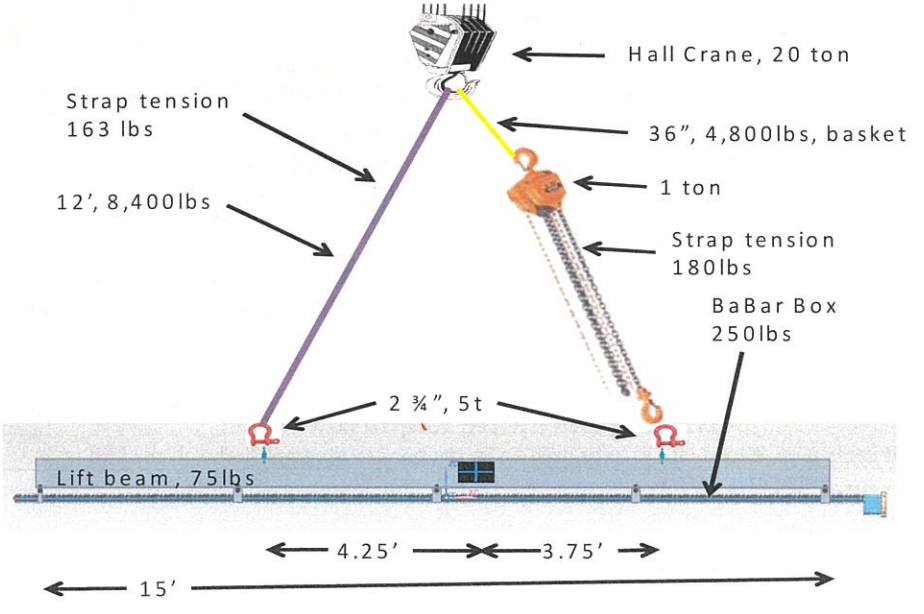
Plan View:

ollowing:

t Horizontal Load with CG labeled
l weight
bs

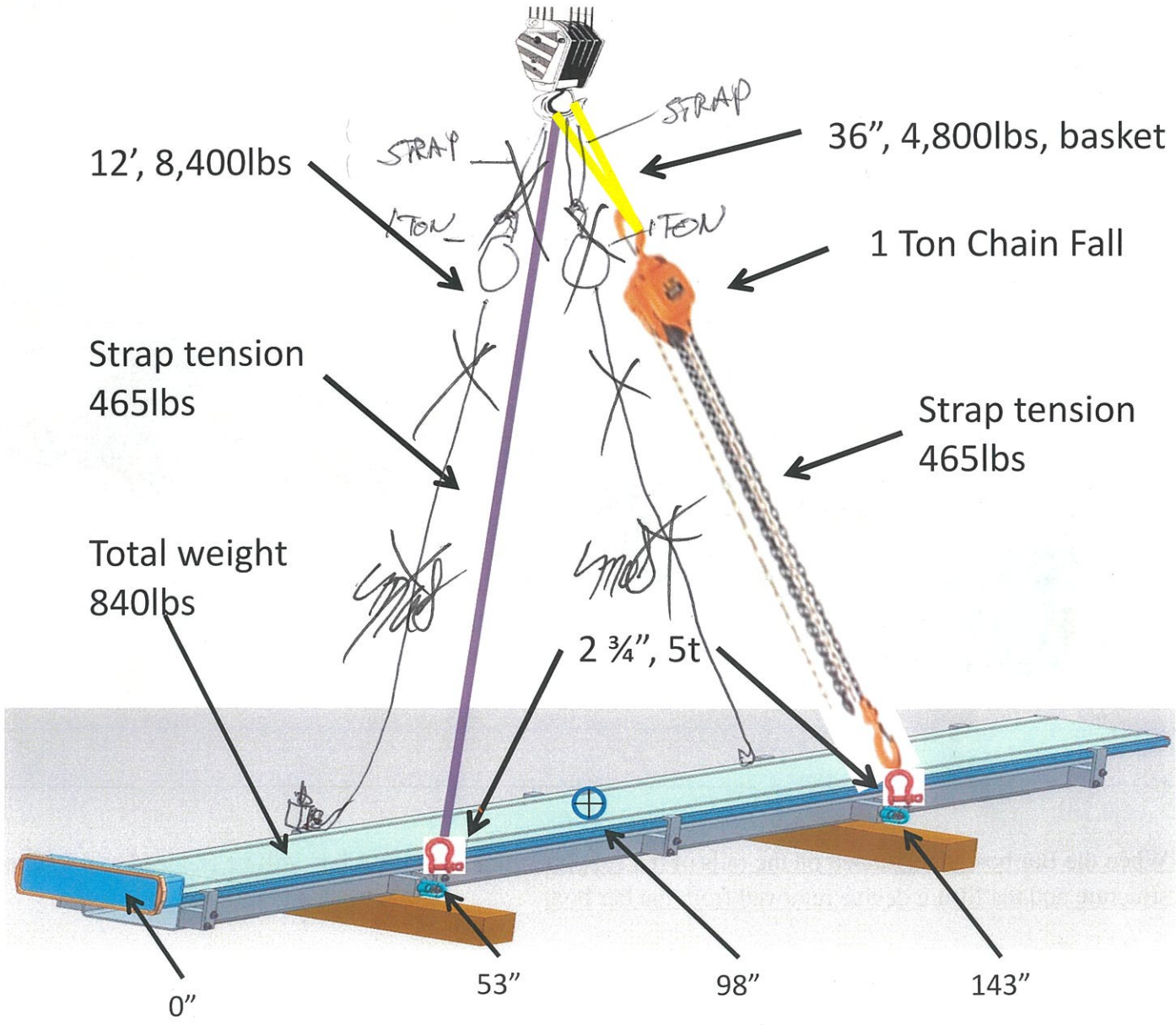


e Lifting fixture is first placed on top of dunnage pre-positioned so the far side lifting blocks will make ıtact as it is rolled up right. The BaBar Box is then craned on top of the fixture and secured.

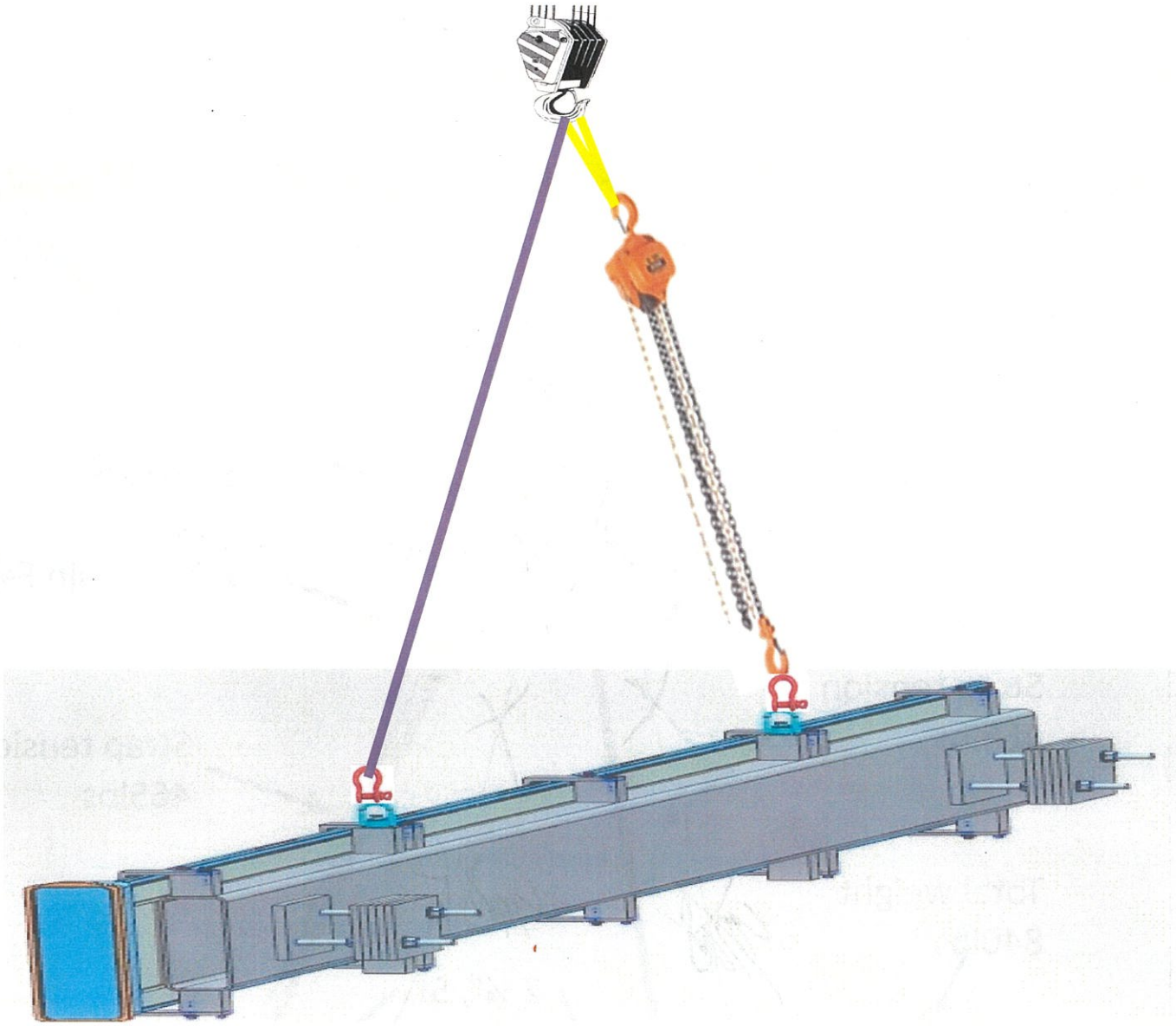


ELEVATION

After the BaBar Box is secured to the lifting fixture, the rigging (to include strap tension after lifting) for rolling and lifting is shown below.



As the load is rolled the counter weight rods and plates will be attached before the load is vertical.



When the Bar box is positioned on the rails of the support structure, the bar box will be clamped to the support structure and the lifting device removed from the bar box.

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Material Handling Lift Plan

STEP 2 – Setup for Lift

Equipment Make:__Hall D Bridge Crane (20 Ton)_____ Type:_____

Model#:_____ Serial#:_____

Owner:__JLAB_____

Annually Inspected By:_JLAB_____ Date:_____

Monthly Wire Rope Inspection Documented: Yes
Daily Inspection Documented: No

Equipment Operator[i]__Josh Foyles_____Certification/Qualification: _____
CCO No._____ Expiration Date:_____
Employer:_____

Lead Rigger: _____
Certification/Qualification: _____

Lift Director (ASME) or PIC (DOE)[ii]:_Mark Stevens_____

Site Supervisor[iii]:__Mark Stevens_____

- Establishes a perimeter that clearly identifies the area of the lift.
- Ensures ALL personnel within the perimeter wears proper PPE required for the area.
- Conducts a Pre-Lift Meeting where the sequences of actions that will occur to accomplish the lift are presented.
- Attend the Pre-Lift Meeting.

Signal Person:__None_____

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STEP 2 – Setup for Lift

PPE Requirements:

- Hard Hat
- Safety Shoes
- Safety Glasses
- List any additional PPE needed to perform the lift

Watch Personnel (Maintains Lift Perimeters) :_____

Identify a Muster Point:_Top of Truck Ramp_____

Emergency Procedures (in case of injury)

1. Stop Lift
2. Lower Load to a safe position
3. _____

_____

_____

Limits of Safe Operation (i.e. wind, rain, lighting or traffic)

STEP 3 - Lift

- **Accomplish the lift according to the Lift Plan.**
- **Document minor adjustments required to accomplish the lift.**
- **Re-approval is required if Operators, equipment or rigging changes after initial approval.**

Post Lift De-Brief

What went well? _____

_____

Areas of Improvement: _____

_____

_____

Documentation – Send a copy of this COMPLETED LIFT PLAN to:

Name:	**Mark Loewus**	**Mark Loewus**	**28G**
	Print	e-mail address	Mail Stop

- **Rigging Hardware must be inspected and marked in accordance with the criteria contained in the following documents:**

  - *ASME B30.9 Slings*
  - *ASME B30.20 Below the Hook Lifting Devices*
  - *ASME B30.26 Rigging Hardware*
  - *29 CFR 1926.251 Rigging Equipment for Material Handling*

- **5-3.1.3 Responsibilities**

While the organizational structure of various projects may differ, the following roles are described here for purposes of delineating responsibilities. All responsibilities listed below shall be assigned in the work site organization. A single individual may perform one or more of these roles.

[i] **Equipment Operator:** directly controls the equipment's functions.

[ii] **Lift Director:** directly oversees the work being performed by a crane and the associated rigging crew. This position equates to the **Person-In-Charge (PIC)** identified in the DOE Hoisting & Rigging Standard.

[iii] **Site Supervisor:** exercises supervisory control over the work site on which a crane is being used and over the work that is being performed on that site.

Form Revision Summary

Revision 2.2 – 01/24/18 – Updated TPOC from B.Sperlazza to M.Loewus
Revision 2.1 – 01/25/17 – Updated TPOC from D.Kausch to B.Sperlazza
Revision 2.0 – 12/04/14 – Form revised to create uniformity between ALL material handling equipment
Revision 1.1 – 03/22/12 – Update to format only
Revision 1.0 – 04/12/10 – Update to reflect current laboratory operations

ISSUING AUTHORITY	FORM TECHNICAL POINT-OF-CONTACT	APPROVAL DATE	REVIEW DATE	REV.
ESH&Q Division	Mark Loewus	01/24/18	01/24/21	2.2

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