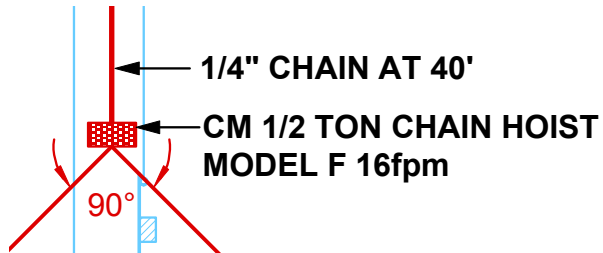


**SECTION OF BEAM**  
**SCALE: 1/2" = 1' - 0"**



**MOTOR CONNECTION TO BEAM:**

- 1 - 1/4" SHACKLE
- 1 - 1/4" CHAIN AT 40'
- 1 - CM 1/2 TON CHAIN HOIST
- 1 - 32" WIRE ROPE SLING
- 2 - 1/4" NICOPRESS SLEEVES
- 2 - 1/4" THIMBLES

**CALCULATIONS FOR THE WEIGHT OF THE MOTOR**

**1/4" CHAIN (40'):**

$$1 \text{ CHAIN} \times .6 \text{ LBS/FT} = 24 \text{ LBS}$$

**1/4" SHACKLES:**

$$.10 \text{ LBS EACH} \times 1 \text{ SHACKLE} = .10 \text{ LBS}$$

**1/4" 7x19 GAC (32" WIRE ROPE SLING):**

$$2.67 \text{ FT CABLE} \times .11 \text{ LBS/FT} = .2937 \text{ LBS}$$

**1/4" THIMBLES:**

$$.65 \text{ LBS EACH} \times 2 \text{ THIMBLES} = 1.3 \text{ LBS}$$

**1/4" NICOPRESS SLEEVES:**

$$.08 \text{ LBS EACH} \times 2 \text{ SLEEVES} = .16 \text{ LBS}$$

**TOTAL WEIGHT OF MOTOR & CONNECTIONS:**

$$\begin{aligned}
 &24 \text{ LBS } 1/4" \text{ CHAIN} \\
 &+ .10 \text{ LBS } 1/4" \text{ SHACKLES} \\
 &.2937 \text{ LBS } 1/4" \text{ 7x19 GAC AT 10 FT} \\
 &1.3 \text{ LBS } 1/4" \text{ THIMBLES} \\
 &.16 \text{ LBS } 1/4" \text{ NICOPRESS SLEEVES}
 \end{aligned}$$

$$= 25.8537 \text{ LBS}$$

**6**  
OF  
**9**

**FINAL PROJECT: LITTLE THEATRE LIGHT LADDER RE-RIG**

**CALCULATIONS: WEIGHT OF THE MOTOR AND CONNECTIONS**

**DESIGNER: ILIA KEMBLE**

**DATE REV: 5/15/14**

**SCALE: 1/4" = 1' - 0"**