A small steel frame structure is to be erected and you are to prepare an estimate of the cost based on the data given below and the assumptions provided.

Assumptions: the unloading, erection, temporary bolting, and plumbing will be done by a crew of 1 foreman, 1 crane operator, and 4 structural steel workers with 55 ton crawler crane. The bolting will be done by 2 structural steel workers using power tools. The painting will be done by a crew of 3 painters (structural steel) with spray equipment. For unloading at site, erection, temporary bolting, and plumbing, allow 7 labor-hours per ton for the roof trusses, and allow 5.6 labor-hours per ton for remaining steel. Assume 60 crew hours will be required for bolting. Allow 1.11 labor-hours per ton for painting.

**Materials A36 Structural steel Trusses 15tons**

 **Columns, etc. 50tons**

**Costs: Structural steel supply: $0.22/#**

 **Fabrication: $450/ton - trusses: $250/ton – other steel**

 **Freight cost: $1.65/100#**

 **Field bolts: 250 @ $0.66 each**

 **Paint: 41 gallons @ $16/gallon**

**Labor costs: assume payroll taxes and insurance are 80% of labor wage, use the following:**

 **Foreman $24.10**

 **Crane operator $21.10**

 **Structural steel worker $22.10**

 **Painter $20.20**

**Equipment costs:**

 **Crane $915/day**

 **Power tools $23.40/day**

 **Paint equipment $68/day**

 **Move-in/out $300**

**Overhead: 40% of field labor cost**

**Profit: 12% of all costs**