



Project: 20241009 (FRA-71-2191)	PID 105464
Subject: Quantity Calc	
Computed by: CAD	Date: 6/11/2025
Checked by: CAS	Date: 6/11/2025

REFER TO QTY BASEMAP FOR CAD MEASUREMENTS:

**ITEM 202E11501 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS)**

# OF MAIN SECONDARY MEMBERS TO BE PARTIALLY REMOVED = 12 EACH (ONLY PORTIONS OF FASCIA BEAM WILL BE REPLACED)

**TOTAL COST = 12 EACH**

**SAY = 12 EACH**

**ITEM 513E10201 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN**

**WC2 REPAIR**

CRACK WIDTH = 0 IN  
CRACK HEIGHT = 8.00 IN  
STIFFENER HEIGHT REMOVED = 0 IN  
STIFFENER WIDTH = 0 IN  
STIFFENER THICKNESS = 0 IN  
STEEL DENSITY = 490 PCF

STIFFENER VOLUME = 0.0000 CF  
STIFFENER WEIGHT = 0.000 LB

**SECONDARY MEMEBERS: CROSSFRAMES**

(CROSSFRAMES ARE NUMBERED STARTING AT PIER 2. THERE ARE THREE CROSSFRAMES IN BEAM HEAT STRAIGHTENING AREA WHICH WE ARE ASSUMING WILL NEED TO BE REPLACED.)

GIRDERS SPACING = 6.91666667 FT  
BEAM WEB HEIGHT = 2.25 FT  
HORIZONTAL STRUT LENGTH = 6.917 FT  
DIAGONAL STRUT LENGTH = 7.17731767 FT

EACH CROSS FRAME HAS TWO DIAGONAL AND ONE HORIZONTAL STRUT:

LENGTH = 21.271302 FT  
NUMBER OF CROSS FRAMES = 4 EACH  
TOTAL LENGTH = 85.085208 FT  
WEIGHT OF L3x3x5/16 = 6.1 LBS/FT  
TOTAL WEIGHT = 519.019769

**TOTAL CWEIGHT = 519.02 LBS**

**SAY = 520 LBS**

**ITEM 513E95000 - STRUCTURAL STEEL, MISC.; REPAIR OF DAMAGED MEMBERS, COMPLETE PENETRATION WELDING**

COMPLETE PENETRATION WELDING WILL BE DONE AT WC2-3 DETAILS

TOTAL LENGTH = 0.66666667 FT

**TOTAL COST = 0.66666667 FT**

**SAY = 0.67 FT**

**ITEM 513E95030 - STRUCTURAL STEEL, MISC.; REPAIR OF DAMAGED MEMBERS, DRILLING**

PER WC2-2: A TEMPOARY SMALL 1" HOLE WILL BE DRILLED TO ARREST 8" CRACK

NO OF HOLES TO BE DRILLED = 1 EACH

**TOTAL COST = 1 EACH**

**SAY = 1 EACH**

**ITEM 513E95030 - STRUCTURAL STEEL, MISC.; REPAIR OF DAMAGED MEMBERS, COPE HOLES**

PER WC2-3: THREE COPE HOLES

NO OF COPE HOLES = 1 EACH

**TOTAL COST = 1 EACH**

**SAY = 1 EACH**

**ITEM 514E20001 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (TWO COATS)**

BEAM 1 HEAT STRAIGHTENING LIMIT PLUS 2 FT= 46.833 FT  
BEAM 9 HEAT STRAIGHTENING LIMIT PLUS 2 FT= 14.5 FT  
BEAM 10 HEAT STRAIGHTENING LIMIT PLUS 2 FT= 6.33 FT

PERIMETER = 6.66 FT

AREA = 450.6356 SF

CROSS FRAMES:

LENGTH = 21.2713 FT  
PERIMETER = 1 FT  
NO OF CROSSFRAMES = 4  
AREA = 85.08521 SF

**TOTAL AREA = 535.72 SF**

**SAY = 536 SF**

**ITEM 849E10000 - DAMAGE ASSESSMENT**

**TOTAL = 1.00 LS**

**SAY = 1.00 LS**

**ITEM 849E10500 - SURFACE PREPARATION**

**TOTAL = 1.00 LS**

**SAY = 1.00 LS**

**ITEM 849E10600 - REPAIRING DAMAGED MEMBERS BY GRINDING**

TOTAL HOURS = 4 HOUR (ASSUMED)

**TOTAL = 4.00 HOUR**

**SAY = 4.00 HOUR**

**ITEM 849E10700 - STRAIGHTENING DAMAGED MEMBERS**

LENGTH OF HEAT STRAIGHTENING = 44.833 FT

**TOTAL LENGTH = 44.83 FT**

**SAY = 45 FT**