



**Illinois Department
of Transportation**

Design Firm Name	Crawford, Murphy & Tilly, Inc.	Calc'd By	BLH	Date	12/20/2023
Project Description	I-55 over Sangamon River	Checked	VT	Date	12/29/2023
Contract Number	72K98	QA/QC		Date	
Design Firm Proj. No.	21004103				

Submittal	Final	Final Quantity	57,005
Pay Item No.	Pay Item Name		Unit of Measure
Z0001905	STRUCTURAL STEEL REPAIR		POUND

QUANTITY CALCULATIONS

								QUANTITY	C-CODE
Steel Repairs	t (in)	w (in)	L (in)	lbs/ft	No.	no. of locations	Coeff.	Weight (lbs)	
Replace in-kind									
Lateral bracing 2L3.5x3x5/16			129.00	6.6	10			709.50	
CF Cord 2L3.5x3x5/16			76.06	6.6	2			83.67	
Repair 1						16			
L5x3.5x1/2			86	13.6	16			1559.47	
3/4" Fill PL	0.750	3.50	71.00		16		1.02	860.39	
3/4" dia. CF bolts ⁽³⁵⁾			2.500	64.7	128			82.8	
3/4" dia. web bolts ⁽³⁶⁾			4.250	89.5	255			228.2	
<i>(35) Length = 3/8" conn. PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(36) Length = 1/2" clip angle + 3/4" fill PL + 7/16" t/web + 3/4" fill PL + 5/16" exist. clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
Repair 2						6			
L6x6x5/8			86	24.2	24			4162.40	
3/4" Fill PL	0.750	12.00	71.00		12		1.02	2212.43	
3/4" dia. clip bolts ⁽³⁷⁾			2.750	67.8	240			162.7	
3/4" dia. clip bolts ⁽³⁸⁾			3.250	74	60			44.4	
3/4" dia. web bolts ⁽³⁹⁾			5.000	95.8	168			160.9	
<i>(37) Length = 5/8" clip angle + 5/8" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(38) Length = 5/8" clip angle + 5/8" clip angle + 3/8" conn. Plate + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(39) Length = 5/8" clip angle + 3/4" fill PL + 9/16" t/web + 3/4" fill PL + 5/8" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
Repair 3									
<u>Loc. 1</u>									
1/2" Bent PL	0.500	14.00	190.50		2		1.02	771.39	
1/2" Cover PL	0.500	17.00	190.50		1		1.02	468.35	
L5x3.5x1/2			85.5	13.6	4			387.60	
1-1/4" Fill PL	1.250	3.50	71.00		4		1.02	358.50	
1/2" Fill PL	0.500	3.50	7.00		4		1.02	14.17	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500	102	28			28.6	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	44			39.3	
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	116			85.8	
<i>(40) Length = 1/2" clip angle + 1.25" fill PL + 7/16" web + 1.25" fill PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(41) Length = 1/2" bent PL + 3/4" exist. flange + 7/16" t/web + 3/4" exist. flange + 1/2" bent PL + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(42) Length = 1/2" bent PL + 3/4" exist. flange + 1/2" cover PL + 1.5" thread (AISC). Weight is per 100 count</i>									
<u>Loc. 2</u>									
1/2" Bent PL	0.500	14.00	89.50		2	1	1.02	362.41	
1/2" Cover PL	0.500	17.00	89.50		1	1	1.02	220.04	
L5x3.5x1/2			85.5	13.6	2	1		193.80	
1-1/4" Fill PL	1.250	3.50	71.00		2	1	1.02	179.25	
1/2" Fill PL	0.500	3.50	7.00		2	1	1.02	7.09	
3/4" fill PL	0.750	16.00	41.50		1		1.02	143.69	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500	102	14	1		14.3	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	21	1		18.3	
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	22	1		16.3	
<u>Loc. 3</u>									
1/2" Bent PL	0.500	14.00	72.50		2	1	1.02	293.57	
1/2" Cover PL	0.500	17.00	72.50		1	1	1.02	178.24	



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Design Firm Proj. No.	21004103				

Submittal	Final	Final Quantity	57,005
Pay Item No.	Pay Item Name		Unit of Measure
Z0001905	STRUCTURAL STEEL REPAIR		POUND

QUANTITY CALCULATIONS

							QUANTITY	C-CODE
L5x3.5x1/2			85.5	13.6	2	1	193.80	
1-1/4" Fill PL	1.250	3.50	71.00		2	1	1.02	179.25
1/2" Fill PL	0.500	3.50	7.00		2	1	1.02	7.09
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500	102	14	1		14.3
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	16	1		14.6
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	12	1		8.9
Loc. 4								
1/2" Bent PL	0.500	14.00	100.00		2		1.02	404.93
1/2" Cover PL	0.500	17.00	100.00		1		1.02	245.85
L5x3.5x1/2			85.5	13.6	2	1		193.80
1-1/4" Fill PL	1.250	3.50	71.00		2	1	1.02	179.25
1/2" Fill PL	0.500	3.50	7.00		2	1	1.02	7.09
3/4" fill PL	0.750	16.00	52.00		1		1.02	180.04
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	26			22.8
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	36			26.6
Loc. 5								
1/2" Bent PL	0.500	14.00	72.50		2		1.02	293.57
1/2" Cover PL	0.500	17.00	72.50		1		1.02	178.24
L5x3.5x1/2			85.5	13.6	2	1		193.80
1-1/4" Fill PL	1.250	3.50	71.00		2	1	1.02	179.25
1/2" Fill PL	0.500	3.50	7.00		2	1	1.02	7.09
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	19			16.7
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	42			31.1
Loc. 6								
1/2" Bent PL	0.500	14.00	87.50		2		1.02	354.31
1/2" Cover PL	0.500	17.00	87.50		1		1.02	215.12
L5x3.5x1/2			85.5	13.6	2	1		193.80
1-1/4" Fill PL	1.250	3.50	71.00		2	1	1.02	179.25
1/2" Fill PL	0.500	3.50	7.00		2	1	1.02	7.09
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	22			20.0
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	52			38.5
Loc. 7								
1/2" Bent PL	0.500	14.00	117.50		2		1.02	475.79
1/2" Cover PL	0.500	17.00	117.50		1		1.02	288.87
L5x3.5x1/2			86	13.6	2			194.93
1-1/4" Fill PL	1.250	3.50	71.50		2		1.02	180.51
1/2" Fill PL	0.500	3.50	7.25		2		1.02	7.34
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500	102	14			14.3
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	28			24.6
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	72			53.3
Loc. 8								
1/2" Bent PL	0.500	14.00	101.50		2		1.02	411.00
1/2" Cover PL	0.500	17.00	101.50		1		1.02	249.54
L5x3.5x1/2			85.5	13.6	4			387.60
1-1/4" Fill PL	1.250	3.50	71.00		4		1.02	358.50



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QUANTITY CALCULATIONS

							QUANTITY	C-CODE
1/2" Fill PL	0.500	3.50	7.00		4	1.02	14.17	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500		102	28	28.6	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500		89.5	22	19.4	
3/4" dia. flange bolts ⁽⁴²⁾			3.250		74	58	42.9	
Loc. 9								
1/2" Bent PL	0.500	14.00	150.50		2	1.02	609.42	
1/2" Cover PL	0.500	17.00	150.50		1	1.02	370.01	
L5x3.5x1/2			85.5	13.6	4		387.60	
1-1/4" Fill PL	1.250	3.50	71.00		4	1.02	358.50	
1/2" Fill PL	0.500	3.50	7.00		4	1.02	14.17	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500		102	28	28.6	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500		89.5	34	30.3	
3/4" dia. flange bolts ⁽⁴²⁾			3.250		74	54	40.0	
Loc. 10								
1/2" Bent PL	0.500	14.00	52.00		2	1.02	210.56	
1/2" Cover PL	0.500	17.00	52.00		1	1.02	127.84	
L5x3.5x1/2			85.5	13.6	0		0.00	
1-1/4" Fill PL	1.250	3.50	71.00		0	1.02	0.00	
1/2" Fill PL	0.500	3.50	7.00		0	1.02	0.00	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500		102	0	0.0	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500		89.5	13	11.6	
3/4" dia. flange bolts ⁽⁴²⁾			3.250		74	34	25.2	
Loc. 11								
1/2" Bent PL	0.500	14.00	101.00		2	1.02	408.98	
1/2" Cover PL	0.500	17.00	101.00		1	1.02	248.31	
L5x3.5x1/2			85.5	13.6	2	1	193.80	
1-1/4" Fill PL	1.250	3.50	71.00		2	1.02	179.25	
1/2" Fill PL	0.500	3.50	7.00		2	1.02	7.09	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500		89.5	26	23.1	
3/4" dia. flange bolts ⁽⁴²⁾			3.250		74	20	14.8	
Loc. 12								
1/2" Bent PL	0.500	14.00	43.00		2	1.02	174.12	
1/2" Cover PL	0.500	17.00	43.00		1	1.02	105.72	
L5x3.5x1/2			85.5	13.6	2		193.80	
1-1/4" Fill PL	1.250	3.50	71.00		2	1.02	179.25	
1/2" Fill PL	0.500	3.50	7.00		2	1.02	7.09	
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500		102	14	14.3	
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500		89.5	9	8.0	
3/4" dia. flange bolts ⁽⁴²⁾			3.250		74	28	20.7	
Loc. 13								
1/2" Bent PL	0.500	14.00	90.50		2	1.02	366.46	
1/2" Cover PL	0.500	17.00	90.50		1	1.02	222.49	
L5x3.5x1/2			85.5	13.6	2	1	193.80	
1-1/4" Fill PL	1.250	3.50	71.00		2	1.02	179.25	
1/2" Fill PL	0.500	3.50	7.00		2	1.02	7.09	



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QUANTITY CALCULATIONS

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3/4" dia. bent PL bolts ⁽⁴¹⁾		4.500		89.5	23				20.8
3/4" dia. flange bolts ⁽⁴²⁾		3.250		74	54				40.0
Loc. 14									
1/2" Bent PL	0.500	14.00	272.50		2		1.02		1103.44
1/2" Cover PL	0.500	17.00	272.50		1		1.02		669.94
L5x3.5x1/2			85.5	13.6	6				581.40
1-1/4" Fill PL	1.250	3.50	71.00		6		1.02		537.74
1/2" Fill PL	0.500	3.50	7.00		6		1.02		21.26
3/4" dia. clip bolts ⁽⁴⁰⁾			5.500	102	42				42.8
3/4" dia. bent PL bolts ⁽⁴¹⁾			4.500	89.5	63				55.9
3/4" dia. flange bolts ⁽⁴²⁾			3.250	74	162				119.9
Repair 4									
L5x3.5x1/2			86	13.6	1				97.47
3/4" Fill PL	0.750	3.50	71.00		1		1.02		53.77
3/4" dia. stiffener bolts ⁽⁴³⁾			4.250	86.4	14				12.1
<i>(43) Length = 1/2" clip angle + 3/4" fill PL + 7/16" web + 3/4" fill PL + 5/16" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
Repair 5									
Loc. 1									
<i>(CF2 steel already calculated in CF section)</i>									
1/2" Bent PL	0.500	14.00	205.00		2		1.02		830.11
1/2" Cover PL	0.500	17.00	205.00		1		1.02		503.99
L5x3.5x1/2			85.5	13.6	4	1			387.60
1-1/4" Fill PL	1.250	3.50	71.00		4		1.02		358.50
1/2" Fill PL	0.500	3.50	7.00		4		1.02		14.17
L7x4x1/2			85.5	17.9	2				255.08
1-1/4" Fill PL	1.250	4.00	71.00		2		1.02		204.85
1/2" Fill PL	0.500	4.00	7.00		2		1.02		8.10
3/4" dia. clip bolts ⁽⁴⁴⁾			5.500	102	14				14.3
3/4" dia. bent PL bolts ⁽⁴⁵⁾			4.500	89.5	51				45.9
3/4" dia. flange bolts ⁽⁴⁶⁾			3.250	74	136				100.6
<i>(44) Length = 1/2" clip angle + 1.25" fill PL + 7/16" web + 1.25" fill PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(45) Length = 1/2" bent PL + 3/4" exist. flange + 7/16" t/web + 3/4" exist. flange + 1/2" bent PL + 1.5" thread (AISC). Weight is per 100 count</i>									
<i>(46) Length = 1/2" bent PL + 3/4" exist. flange + 1/2" cover PL + 1.5" thread (AISC). Weight is per 100 count</i>									
Loc. 2									
<i>(CF2 steel already calculated in CF section)</i>									
1/2" Bent PL	0.500	14.00	156.00		2		1.02		631.69
1/2" Cover PL	0.500	17.00	156.00		1		1.02		383.53
L5x3.5x1/2			85.5	13.6	4	1			387.60
1-1/4" Fill PL	1.250	3.50	71.00		4		1.02		358.50
1/2" Fill PL	0.500	3.50	7.00		4		1.02		14.17
L7x4x1/2			85.5	17.9	2				255.08
1-1/4" Fill PL	1.250	4.00	71.00		2		1.02		204.85
1/2" Fill PL	0.500	4.00	7.00		2		1.02		8.10
3/4" dia. clip bolts ⁽⁴⁴⁾			5.500	102	14				14.3
3/4" dia. bent PL bolts ⁽⁴⁵⁾			4.500	89.5	39				34.9
3/4" dia. flange bolts ⁽⁴⁶⁾			3.250	74	103				76.5



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QUANTITY CALCULATIONS

QUANTITY C-CODE

(44) Length = 1/2" clip angle + 1.25" fill PL + 7/16" web + 1.25 fill PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count

(45) Length = 1/2" bent PL + 3/4" exist. flange + 7/16" t/web + 3/4" exist. flange + 1/2" bent PL + 1.5" thread (AISC). Weight is per 100 count

(46) Length = 1/2" bent PL + 3/4" exist. flange + 1/2" cover PL + 1.5" thread (AISC). Weight is per 100 count

Repair 6

Loc. 1

1/2" Bent PL	0.500	14.00	169.50		2		1.02	686.36
1/2" Cover PL	0.500	17.00	169.50		1		1.02	416.72
3/4" Web PL	0.750	37.00	169.50		2		1.02	2714.25
L5x3.5x1/2			85.5	13.6	4	1		387.60
1-1/4" Fill PL	1.250	3.50	71.00		4		1.02	358.50
1/2" Fill PL	0.500	3.50	7.00		4		1.02	14.17
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500	89.5	43			38.4
3/4" dia. web PL bolts ⁽⁶²⁾			3.500	77.1	684			527.4
3/4" dia. flange bolts ⁽⁶³⁾			3.250	74	102			75.5

(61) Length = 1/2" bent PL + 3/4" exist. flange + 7/16" t/web + 3/4" exist. flange + 1/2" bent PL + 1.5" thread (AISC). Weight is per 100 count

(62) Length = 3/4" web PL + 7/16" web + 3/4" web PL + 1.5" thread (AISC). Weight is per 100 count

(63) Length = 1/2" bent PL + 3/4" exist. flange + 1/2" cover PL + 1.5" thread (AISC). Weight is per 100 count

Loc. 2

1/2" Bent PL	0.500	14.00	97.00		2		1.02	392.78
1/2" Cover PL	0.500	17.00	97.00		1		1.02	238.48
L5x3.5x1/2			85.5	13.6	2			193.80
1/2" Fill PL	0.500	3.50	71.00		2		1.02	71.88
3/4" Bot. flg. fill PL	0.750	16.00	108.00		1		1.02	373.93
3/4" Web Fill PL	0.750	3.50	34.00		2		1.02	51.50
3/4" Web PL	0.750	37.00	97.00		2		1.02	1553.29
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500	89.5	22			20.0
3/4" dia. web PL bolts ⁽⁶²⁾			3.500	77.1	420			323.8
3/4" dia. flange bolts ⁽⁶³⁾			3.250	74	34			25.2
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500	102	14			14.3

(64) Length = 1/2" clip angle + 1.25" fill PL + 7/16" web + 1.25 fill PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count

Loc. 3

1/2" Bent PL	0.500	14.00	90.50		2		1.02	366.46
1/2" Cover PL	0.500	17.00	90.50		1		1.02	222.49
L5x3.5x1/2			85.5	13.6	2			193.80
1/2" Fill PL	0.500	3.50	71.00		2		1.02	71.88
3/4" Fill PL	0.750	3.50	46.00		2		1.02	69.68
3/4" Web PL	0.750	25.00	90.50		2		1.02	979.19
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500	89.5	21			18.6
3/4" dia. web PL bolts ⁽⁶²⁾			3.500	77.1	152			117.2
3/4" dia. flange bolts ⁽⁶³⁾			3.250	74	54			40.0
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500	102	14			14.3

Loc. 4

1/2" Bent PL	0.500	14.00	72.50		2		1.02	293.57
1/2" Cover PL	0.500	17.00	72.50		1		1.02	178.24
L5x3.5x1/2			85.5	13.6	2			193.80
1/2" Fill PL	0.500	3.50	71.00		2		1.02	71.88



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QUANTITY CALCULATIONS

							QUANTITY	C-CODE
3/4" Fill PL	0.750	3.50	52.00			2	1.02	78.77
3/4" Web PL	0.750	19.00	72.50			2	1.02	596.17
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500		89.5	16		14.6
3/4" dia. web PL bolts ⁽⁶²⁾			3.500		77.1	114		87.9
3/4" dia. flange bolts ⁽⁶³⁾			3.250		74	42		31.1
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500		102	14		14.3
Loc. 5								
1/2" Bent PL	0.500	14.00	54.50			2	1.02	220.69
1/2" Cover PL	0.500	17.00	54.50			1	1.02	133.99
L5x3.5x1/2			85.5		13.6	2		193.80
1/2" Fill PL	0.500	3.50	71.00			2	1.02	71.88
3/4" Fill PL	0.750	3.50	58.00			2	1.02	87.86
3/4" Web PL	0.750	13.00	54.50			2	1.02	306.63
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500		89.5	12		10.6
3/4" dia. web PL bolts ⁽⁶²⁾			3.500		77.1	60		46.3
3/4" dia. flange bolts ⁽⁶³⁾			3.250		74	30		22.2
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500		102	14		14.3
Loc. 6								
1/2" Bent PL	0.500	14.00	87.50			2	1.02	354.31
1/2" Cover PL	0.500	17.00	87.50			1	1.02	215.12
L5x3.5x1/2			85.5		13.6	2		193.80
1/2" Fill PL	0.500	3.50	71.00			2	1.02	71.88
3/4" Fill PL	0.750	3.50	46.00			2	1.02	69.68
3/4" Web PL	0.750	25.00	87.50			2	1.02	946.73
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500		89.5	20		17.9
3/4" dia. web PL bolts ⁽⁶²⁾			3.500		77.1	88		67.8
3/4" dia. flange bolts ⁽⁶³⁾			3.250		74	52		38.5
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500		102	14		14.3
Loc. 7								
1/2" Bent PL	0.500	14.00	76.00			2	1.02	307.75
1/2" Cover PL	0.500	17.00	76.00			1	1.02	186.85
L5x3.5x1/2			85.5		13.6	2		193.80
1/2" Fill PL	0.500	3.50	71.00			2	1.02	71.88
3/4" Fill PL	0.750	3.50	58.00			2	1.02	87.86
3/4" Web PL	0.750	13.00	76.00			2	1.02	427.60
3/4" dia. bent PL bolts ⁽⁶¹⁾			4.500		89.5	17		15.4
3/4" dia. web PL bolts ⁽⁶²⁾			3.500		77.1	100		77.1
3/4" dia. flange bolts ⁽⁶³⁾			3.250		74	14		10.4
3/4" dia. clip bolts ⁽⁶⁴⁾			5.500		102	14		14.3
Loc. 8								
1/2" Bent PL	0.500	14.00	160.50			2	1.02	649.91
1/2" Cover PL	0.500	17.00	160.50			1	1.02	394.59
L5x3.5x1/2			85.5		13.6	4		387.60
1/2" Fill PL	0.500	3.50	71.00			4	1.02	143.75
3/4" Fill PL	0.750	3.50	46.00			4	1.02	139.36
3/4" Web PL	0.750	25.00	160.50			2	1.02	1736.57



**Illinois Department
of Transportation**

Design Firm Name	Crawford, Murphy & Tilly, Inc.	Calc'd By	BLH	Date	12/20/2023
Project Description	I-55 over Sangamon River	Checked	VT	Date	12/29/2023
Contract Number	72K98	QA/QC		Date	
Design Firm Proj. No.	21004103				

Submittal	Final	Final Quantity	57,005
Pay Item No.	Pay Item Name		Unit of Measure
Z0001905	STRUCTURAL STEEL REPAIR		POUND

QUANTITY CALCULATIONS

						QUANTITY	C-CODE
3/4" dia. bent PL bolts ⁽⁶¹⁾		4.500		89.5	36		32.6
3/4" dia. web PL bolts ⁽⁶²⁾		3.500		77.1	56		43.2
3/4" dia. flange bolts ⁽⁶³⁾		3.250		74	94		69.6
3/4" dia. clip bolts ⁽⁶⁴⁾		5.500		102	28		28.6
Repair 7							
<i>(CF steel already calculated in CF section)</i>					1		
1/2" Bent PL	0.500	14.00	276.00		2	1.02	1117.61
1/2" Cover PL	0.500	17.00	276.00		1	1.02	678.55
L7x4x1/2			85.5	17.9	4		510.15
1-1/4" Fill PL	1.250	4.00	71.00		4	1.02	409.71
1/2" Fill PL	0.500	4.00	7.00		4	1.02	16.20
3/4" dia. clip bolts ⁽⁶⁵⁾		5.500		102	28		28.6
3/4" dia. web bolts ⁽⁶⁶⁾		3.500		77.1	92		70.7
3/4" dia. bent PL bolts ⁽⁶⁷⁾		4.500		89.5	69		61.8
3/4" dia. cover PL bolts ⁽⁶⁸⁾		3.250		74	92		67.9
<i>(65) Length = 1/2" clip angle + 1.25" fill PL + 7/16" web + 1.25" fill PL + 1/2" clip angle + 1.5" thread (AISC). Weight is per 100 count</i>							
<i>(66) Length = 3/4" web PL + 7/16" web + 3/4" web PL + 1.5" thread (AISC). Weight is per 100 count</i>							
<i>(67) Length = 1/2" bent PL + 3/4" exist. flange + 7/16" t/web + 3/4" exist. Flange + 1/2" bent PL + 1.5" thread (AISC). Weight is per 100 count</i>							
<i>(68) Length = 1/2" bent PL + 3/4" exist. flange + 1/2" cover PL + 1.5" thread (AISC). Weight is per 100 count</i>							
						Total:	57005

