BRIDGE: FRA-00315-13.020 SFN: 2515075
PID: 125023
CALCULATED BY: JPG DATE: 05/13/26
CHECKED BY: BWR DATE: 05/13/26

CARPENTER MARTY transportation

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	
509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	LB

Assumed % of bars to be replaced=	25%
longitudinal	
Number=	6
Number of bars to be replaced=	2
Size=	5
weight per lf=	1.043lb/ft
Length=	389.75 ft
weight=	813 LB
Vertical	
Number=	390
Number of bars to be replaced=	98
Size=	5
weight per lf=	1.043lb/ft
Length=	7.00 ft
weight=	715 LB
Total Quantity =	**1,529 LB**

512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	SY

Sealer 6" beyon repair area. Increase Length and perimeter by=	1.00 ft
Length=	389.75 ft
Equivilent Perimeter=	5.36 ft
Sealing of concrete=	2477.25 ft^2
Total Quantity =	**275 SY**

512e74000	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	SY

Length=	389.75 ft
6" of sealing removed from edge of patching area=	1.00 ft
Increase estimated by=	50%
Sealing of concrete=	586.12 ft^2
Total Quantity =	**66 SY**

Designer: JPG Date: 05/13/26
Checker: BWR Date: 5-13-26

519E11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN	SF

Repair Location	Patching Section	Perimeter	Length	Area	Area (Includes 50% Increase)
1	A	0.83 ft	23.58 ft	20.00 ft^2	30.00 ft^2
4	A	0.83 ft	7.75 ft	6.50 ft^2	10.00 ft^2
5	A	0.83 ft	14.75 ft	12.50 ft^2	19.00 ft^2
8	A	0.83 ft	1.00 ft	1.00 ft^2	1.50 ft^2
13	A	1.21 ft	2.00 ft	2.50 ft^2	4.00 ft^2
16	A	0.83 ft	7.00 ft	6.00 ft^2	9.00 ft^2
20	A	0.83 ft	20.75 ft	17.50 ft^2	26.50 ft^2
24	A	0.83 ft	4.75 ft	4.00 ft^2	6.00 ft^2
25	A	0.83 ft	3.25 ft	3.00 ft^2	4.50 ft^2
27	A	0.83 ft	15.00 ft	12.50 ft^2	19.00 ft^2

Area of repair = 129.50 ft^2

Total Quantity = **130 SF**

519E11900	SPECIAL - PATCHING CONCRETE STRUCTURE, PARAPET	CY

Cross-sectional area of Section B = 0.94 ft^2
Cross-sectional area of Section C = 1.37 ft^2
Cross-sectional area of Section D = 2.92 ft^2

Cross-sectional areas have been increased by 50%

	Patching Section	Length	CY
2	B	15.50 ft	0.54 CU YD
3	B	8.25 ft	0.29 CU YD
6	B	8.50 ft	0.30 CU YD
7	B	17.50 ft	0.61 CU YD
9	C	1.00 ft	0.05 CU YD
10	C	5.75 ft	0.29 CU YD
11	B	7.83 ft	0.27 CU YD
12	B	7.83 ft	0.27 CU YD
14	D	43.00 ft	4.65 CU YD
15	C	7.50 ft	0.38 CU YD
17	D	30.00 ft	3.24 CU YD
18	D	22.42 ft	2.42 CU YD
19	D	28.83 ft	3.11 CU YD
21	D	29.75 ft	3.21 CU YD
22	D	10.42 ft	1.13 CU YD
23	C	7.00 ft	0.36 CU YD
26	D	13.67 ft	1.48 CU YD
28	C	25.17 ft	1.28 CU YD
			24.00 CU YD

Total Quantity = **24 CU YD**

BRIDGE: FRA-00315-15.160 SFN: 2501414
PID: 125023
CALCULATED BY: JPG DATE: 05/13/26
CHECKED BY: BWR DATE: 05/13/26

CARPENTER MARTY transportation

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	
509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	LB

Assumed % of bars to be replaced=	25%
longitudinal	
Number=	6
Number of bars to be replaced=	2
Size=	4
weight per lf=	0.668lb/ft
Length=	173.67 ft
weight=	232 LB
Vertical	
min Spacing in exisitng plans=	1.00 ft
Number=	174
Number of bars to be replaced=	44
Size=	5
weight per lf=	1.043lb/ft
Length=	7.00 ft
weight=	321 LB
Total Quantity =	**554 LB**

512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	SY

Sealer 6" beyon repair area. Increase Length and perimeter by=	1.00 ft
Length=	173.67 ft
Equivalent Perimeter=	3.45 ft
Sealing of concrete=	772.17 ft^2
Total Quantity =	**86 SY**

512e74000	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	SY

Length=	173.67 ft
6" of sealing removed from edge of patching area=	1.00 ft
Increase estimated by=	50%
Sealing of concrete=	262.00 ft^2
Total Quantity =	**30 SY**

Designer: JPG Date: 05/13/26
Checker: BWR Date: 5-13-26

519E11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN	SF

Repair Location	Patching Section	Perimeter	Length	Area	Area (Includes 50% Increase)
1	A	0.83 ft	1.67 ft	1.50 ft^2	2.50 ft^2
4	A	0.83 ft	11.83 ft	10.00 ft^2	15.00 ft^2
6	A	0.83 ft	16.92 ft	14.50 ft^2	22.00 ft^2
8	A	0.83 ft	12.42 ft	10.50 ft^2	16.00 ft^2
9	A	0.83 ft	5.67 ft	5.00 ft^2	7.50 ft^2
10	A	0.83 ft	2.83 ft	2.50 ft^2	4.00 ft^2
11	A	0.83 ft	1.92 ft	2.00 ft^2	3.00 ft^2
13	A	0.83 ft	0.92 ft	1.00 ft^2	1.50 ft^2
14	E	0.50 ft	7.50 ft	4.00 ft^2	6.00 ft^2

Area of repair = 77.50 ft^2

Total Quantity = **78 SF**

519E11900	SPECIAL - PATCHING CONCRETE STRUCTURE, PARAPET	CY

Cross-sectional area of Section B = 0.94 ft^2
Cross-sectional area of Section C = 1.37 ft^2
Cross-sectional area of Section D = 2.92 ft^2

Cross-sectional areas have been increased by 50%

Repair Location	Patching Section	Length	CY
2	B	30.00 ft	1.04 CU YD
3	B	19.83 ft	0.69 CU YD
5	C	6.75 ft	0.34 CU YD
7	C	10.17 ft	0.52 CU YD
12	B	11.25 ft	0.39 CU YD
15	D	15.00 ft	1.62 CU YD
16	C	10.83 ft	0.55 CU YD
17	C	8.17 ft	0.41 CU YD
			6.00 CU YD

Total Quantity = **6 CU YD**

BRIDGE: FRA-00062-21.830R
PID: 125023
CALCULATED BY: JPG
CHECKED BY: BWR

SFN: 2503417
DATE: 05/13/26
DATE: 05/13/26

CARPENTER MARTY transportation

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	
509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	LB

Assumed % of bars to be replaced=	25%
longitudinal	
Number=	5
Number of bars to be replaced=	2
Size=	5
weight per lf=	1.043lb/ft
Length=	12.00 ft
weight=	25 LB
Vertical	
Number=	12
Number of bars to be replaced=	3
Size=	5
weight per lf=	1.043lb/ft
Length=	4.75 ft
weight=	15 LB
Total Quantity =	**40 LB**

512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	SY

Increase estimated by=	50%
Approximated area of sealing (CAD)=	
Front=	13.50 ft^2
Front half of top=	2.08 ft^2
Back=	36.44 ft^2
Back half of top=	5.00 ft^2
Area Rounded up=	58.00 ft^2
Sealing of concrete=	87.00 ft^2
Total Quantity =	**10 SY**

512e74000	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	SY

Length=	12.00 ft
6" of sealing removed from edge of patching area=	1.00 ft
Increase estimated by=	50%
Sealing of concrete=	18.00 ft^2
Total Quantity =	**2 SY**

Designer: JPG Date: 05/13/26
Checker: BWR Date: 5-13-26

519E11900	SPECIAL - PATCHING CONCRETE STRUCTURE, PARAPET			CY
	Cross-sectional area of repair	3.72 ft^2	Cross-sectional area has been increased by 50%	
	Repair Location	Length	CY	
	1	12.00 ft	1.65 CU YD	
			2.00 CU YD	
	Total Quantity =	**2 CU YD**		

BRIDGE: FRA-C0171-03.168 SFN: 2512025
PID: 125023
CALCULATED BY: JPG DATE: 05/12/26
CHECKED BY: BWR DATE: 05/12/26

CARPENTER MARTY transportation

ESTIMATED QUANTITIES

GENERAL INPUT:

Notes:

Skew = 0.00 degrees

Bridge limits = 276.00 ft
Rear Parapet= 37.42 ft
Forward Parapet= 31.42 ft

ITEM	DESCRIPTION	
202E11203	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS

		Rear Abutment	Forward Abutment
Length of deck removal =	276.00 ft		
Width of deck removal=	1.50 ft		
Deck thickness =	1.08 ft		
Volume of deck removal =	17 CY		
Cost to remove concrete =	$1500/cy		
Total =	$ 25,500.00		
Area of parapet removed and deck, section A =	4.61 ft^2		
Length=	276.00 ft		
Volume=	1272.53 ft^3		
Area of parapet removed, section B =	2.99 ft^2		
Length=		17.42 ft	23.42 ft
Volume=	121.93 ft^3		
Area of parapet removed, section C =	3.69 ft^2		
Length=		10.00 ft	10.00 ft
Volume=	73.75 ft^3		
Area of parapet removed, section D =	3.48 ft^2		
Length=		2.50 ft	2.50 ft
Volume=	17.38 ft^3		
Area of parapet removed, section E =	2.52 ft^2		
Length=		1.50 ft	1.50 ft
Volume=	7.56 ft^3		
Approximate volume of concrete to remove =	56 CY		
Cost to remove concrete =	$250/cy		
Total =	$ 14,000.00		
Total cost =	$39,500		
Quantity =	**LS**		

509E10000	EPOXY COATED STEEL REINFORCEMENT	LB

	8,450 LB
Total Quantity =	**8,450 LB**

Designer: JPG Date: 5/12/26
Checker: BWR Date: 5-12-26

509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	LB

Assumed % of bars to be replaced=	25%
S401 Deck, longitudinal	
Number=	3
Number of bars to be replaced=	1
Size=	4
weight per lf=	0.668lb/ft
Length=	276.00 ft
weight=	184 LB
S501 Deck, longitudinal	
Number=	3
Number of bars to be replaced=	1
Size=	5
weight per lf=	1.043lb/ft
Length=	276.00 ft
weight=	288 LB
S603,S604, S605 Deck over pier	
Number=	2
Number of bars to be replaced=	1
Size=	6
weight per lf=	1.502lb/ft
Combined Length=	62.83 ft
weight=	94 LB
S601 Deck, transverse top	
Number=	509
Number of bars to be replaced=	128
Size=	6
weight per lf=	1.502lb/ft
Length=	1.50 ft
weight=	288 LB
S503 Deck, transverse Bottom	
Number=	509
Number of bars to be replaced=	128
Size=	5
weight per lf=	1.043lb/ft
Length=	1.50 ft
weight=	200 LB
Total Quantity =	**1,056 LB**

509E30020	NO. 4 DEFORMED GFRP REINFORCEMENT	FT

Total Quantity =	**4936 FT**

510E10000	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	EACH

Total Quantity =	**164 EACH**

Designer: JPG Date: 3/18/26
Checker: BWR Date: 3.18.26

511E32210	CLASS QC2 CONCRETE, SUPERSTRUCTURE	CY

Area	1.62 ft^2
Length=	276.00 ft
Volume	448.36 ft^3
Total Volume=	448.36 ft^2
Total Quantity =	**17 CY**

511E34449	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	CY

		Rear Abutment	Forward Abutment
Area, section F	4.08 ft^2		
Length=	276.00 ft		
Volume	1126.96 ft^3		
Area, section G	4.08 ft^2		
Length=		23.42 ft	17.42 ft
Volume	166.73 ft^3		
Area, section H (avg of G and I)	3.68 ft^2		
Length=		10.00 ft	10.00 ft
Volumn=	73.54 ft^3		
Area, section I	3.27 ft^2		
Length=		2.50 ft	2.50 ft
Volume	16.35 ft^3		
Area, section J	2.42 ft^2		
Length=		1.50 ft	1.50 ft
Volume	7.27 ft^3		
Total Volume=	1390.86 ft^3		
Total Quantity =	**52 CY**		

512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	SY

Note: 6" of sealing beyong replacement

Perimeter, section F with deck	10.98 ft
Length=	276.00 ft
Area=	3030.26 ft^2
Perimeter, section G	8.40 ft
Length=	40.83 ft
Area=	342.84 ft^2
Perimeter, section H	7.15 ft
Length=	20.00 ft
Area=	143.03 ft^2
Perimeter, section I	7.15 ft
Length=	5.00 ft
Area=	35.76 ft^2
Perimeter, section J	7.20 ft
Length=	3.00 ft
Area=	21.60 ft^2
Sealing of concrete=	3573.49 ft^2
Total Quantity =	**398 SY**

512e74000	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	SY

Diaphragm ends to remove coating=	2
Length of parapet on wingwall=	2.00 ft
6" of sealing removed from edges of repair/replace area=	1.08 ft
Sealing of concrete=	4.33 ft^2
Total Quantity =	**1 SY**

606E35011	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 1, AS PER PLAN	EACH
	Number of Terminal Assemblies to be rebuilt= 2 each	
	Total Quantity = **2 EACH**	
607E39900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	FT
	VPF Length= 272.75 ft	
	Total Quantity = **273 FT**	
625E25604	CONDUIT, 4", 725.051	FT
	Length of parapet 344.83 ft Additional at ends for pull box= 5.00 ft	
	Total Quantity = **355 FT**	