

HAM-75-0857 I-75 OVER TOWNE ST.

SINGLE SPAN COMPOSITE STEEL BEAM BRIDGE

Span = 66'-11 13/16" C/C BRGS.

ITEM	EXT.	PARTICIPATION 03/IMS/10	QUANTITY	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.
202	11003	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP
202	22900	473	473	SQ YD	APPROACH SLAB REMOVED			473
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL A)			LUMP
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)			LUMP
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)			LUMP
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)			LUMP
503	21300	LUMP	LUMP		UNCLASSIFIED EXCAVATION			LUMP
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBIUZATION			LUMP
507	00500	7,940	7,940	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	7,940		
507	00500	8,550	8,550	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	8,550		
509	10000	146,644	146,644	POUND	EPOXY COATED REINFORCING STEEL	47,509	99,135	
509	30020	3,318	3,318	FT	NO. 4 GFRP DEFORMED BARS		3,318	
509	30030	1,251	1,251	FT	NO. 5 GFRP DEFORMED BARS		1,251	
509	30040	2,170	2,170	FT	NO. 6 GFRP DEFORMED BARS		2,170	
511	33501	8	8	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	8		
511	46513	316	316	CU YD	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	316		
511	53014	540	540	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN		540	
511	53014	32	32	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN		32	
511	53014	26	26	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN		26	
511	53014	152	152	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN	152		
512	10100	1,010	1,010	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	275	735	
512	33000	7	7	SQ YD	TYPE 2 WATERPROOFING	7		
513	10260	328,782	328,782	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3		328,782	
513	20000	7,383	7,383	EACH	WELDED STUD SHEAR CONNECTORS		7,383	
514	00061	18,231	18,231	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN		18,231	
514	00067	18,231	18,231	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN		18,231	
514	10000	10	10	EACH	FINAL INSPECTION REPAIR		10	
516	10010	396	396	FT	ARMORLESS PREFORMED JOINT SEAL	396		
516	13600	353	353	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	54	299	
516	13900	44	44	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	44		
516	14020	414	414	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	414		
516	44101	46	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN 12"x12"x3.12" WITH 13"x13"x1 1/2" LOAD PLATI			46
516	47001	LUMP	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP
518	21200	21	21	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	21		
518	40000	44	44	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	44		
518	40010	10	10	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	10		
523	20000	2	2	EACH	DYNAMIC LOAD TESTING			2
523	20500	2	2	EACH	RESTRIKE			2
526	30001	1,267	1,267	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN		1,267	
526	90030	396	396	FT	TYPE C INSTALLATION		396	

Bridge Limits 70.05 ft
Deck Width 190.00 ft

202	11003	LUMP	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
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202	22900	473	SQ YD	APPROACH SLAB REMOVED
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106.34 ft width

20	ft	length
2	each	RA&FA
4253.6	sf	
473	sy	

503	11101	LUMP	0	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL A)
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31.00	ft	height
25.65	ft	length
795.15	sf	
21.03	ft	height
13.21	ft	length
277.81	sf	
26.00	ft	height
20.00	ft	length
520.00	sf	
1592.96	sf	total/location
4.00	each	locations
6372	sf	total - appx. For estimating cost purposes only

503	21300	LUMP	LUMP	UNCLASSIFIED EXCAVATION
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widening section:	8.83	ft	width+1+1
	7.00	ft	appx. Widening length each side +1
	10.50	ft	height
	4.00	each	sides
	2596.02	cu ft	total 1978 widening section
ex. Section	7.75	ft	width +1+1
	101.75	ft	length
	10.50	ft	height
	2.00	each	sides
	16559.81	cu ft	
wingwalls	3.75	ft	width +1+1
	15.50	ft	length+1
	12.00	ft	height
	4.00	each	
	2790.00	cu ft	
	21945.83	cu ft	total
	812.81	cy	total - used for cost estimating purposes

505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION
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507	00500	7940	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
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60	ft	RA pile estimated length
60	each	number of piles
70	ft	FA pile estimated length
62	each	number of piles

		7940	ft	abutment piles
507	00500	8550	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
		65	ft	RA pile estimated length
		60	each	number of piles
		75	ft	FA pile estimated length
		62	each	number of piles
		8550	ft	abutment piles
509	10000	146644	POUND	EPOXY COATED REINFORCING STEEL

SUPERSTRUCTURE

99135 LBS

ABUTMENTS

47509 LBS

TOTAL

146644 lbs

511	33501	8	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN
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512	10100	1010	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
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Superstructure

parapet + wall + overhang LT:	22.54	ft	
Bridge Length	70.05	ft	
Area	1578.93	sq ft	
parapet LT:	9.66	ft	
A.S.	60.00	ft	
Area	579.60	sq ft	
parapet + overhang RT:	15.96	ft	
Bridge Length	70.05	ft	
Area	1118.00	sq ft	
parapet + overhang RT:	9.66	ft	
AS	60.00	ft	
Area	579.60	sq ft	
median barrier	11.11	ft	
bridge length + A.S.	130.05	ft	
area	1444.86	sf	
end diaphragm	3.32	ft	height
	197.96	ft	length
	2.0	each	RA&FA
	1313.1	sq ft	
	735	sy	total super
Abutment	5.50	ft	avg. height
	197.96	ft	length
	2.00	each	RA&FA
	2177.56	sq ft	
wingwall	22.0	ft	length

front	6.1	ft	avg. height
	2.0	each	RA&FA
	267.7	s.f.	
top & back	21.4	ft	length
	3.0	ft	width
	2.0	each	RA&FA
	27.4	sf	
	2472.7	sf	total abutment
	275	sy	total abutment
	1010	sy	total

512	33000	7	SQ YD	TYPE 2 WATERPROOFING
		2.00	ft	wide
	RA:			
		9.62	ft	height (phase 1 cj)
		4.19	ft	height (phase 1 cj closure pour)
	FA:			
		9.52	ft	height (phase 1 cj)
		4.21	ft	height (phase 1 cj closure pour)
		55.08	sf	
		6.12	sy	

513	10260	328782	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3
	beams	68.03	FT	LENGTH OF A BEAM
		169	lb/ft	weight of beam/ft
		23	BEAMS	
		264417	POUND	
	crossframes	126	each	number of crossframes
		485	lb	each crossframe
		61110	pound	
	misc. 1%	3255	pound	
		328782	pound	total

513	20000	7383	EACH	WELDED STUD SHEAR CONNECTORS
		107	each	rows of connectors/beam
		3	each	3 connectors/row
		23	each	beams
		7383	each	total

514	61	18231	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN
	beams	8.19	ft	area of beam to be painted
		68.03	ft	length of beam

		23	each	beams
		12820.03	sf	total beams
crossframes		4.24	ft	perimeter
		8.50	ft	length of section
		126.00	each	number of crossframes
		4542.83	sf	intermediate crossframes
		18231.15	sf	total + 5%misc & end crossframe
514	67	18231	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

514	10000	10	EACH	FINAL INSPECTION REPAIR
		68.03	ft	total length of beam
		4.12	ft	subtract off beam inside diaphragm
		63.91	ft	length of beam painted
		23.00	each	beams
		1469.84	ft	of beam to be painted
		10.00	each	test 1 location per 150 foot of beam

516	10010	396.00	FT	ARMORLESS PREFORMED JOINT SEAL
		198	ft	length
		2	each	
		396.00	ft	

516	13600	353	SQ FT	1" PREFORMED EXPANSION JOINT FILLER
	abutment:	2.50	ft	height
		3.00	ft	width
		2.00	each	(RA&FA)
		15.00	sf	abutment
	footing	3.00	ft	height
		6.50	ft	width
		2.00	each	(RA&FA)
		39.00	sf	total footing
		54	sf	total abutment
super	median barrier	4.75	ft	height
		60.00	ft	length of A.S.
		285.00	sf	
super-	diaphragm:	4.37	ft	height
		3.00	ft	width
		13.11	sf	
		299	sf	total super
		353	sf	total

516	13900	44	SQ FT	2" PREFORMED EXPANSION JOINT FILLER
		2.60	ft	width
		4.19	ft	height

		4.00	each	
		44	sf	total
516	14020	414	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL
		206.62	ft	length at RA
		206.62	ft	length at FA
		414	ft	total
516	44101	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN 12"X12"X3.12" WITH 13"X13"X1 1/2" LOAD PLATE
		23	each	# beams
		2		RA&FA
		46		
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
518	21200	21	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC
Abutments				
		0.0	ft (height)	avg height at RA
		0.00	ft (length)	
		2	ft (width)	
		2	each	
		0.0	cu. Ft.	
wingwalls				
		6.2	ft (avg. height)	
		22.00	ft (length)	at ra
		2	ft (width)	
		2	each	
		543.8	cu. Ft.	
Abutment Total		21	cu.yd.	
518	40000	44	FT	6" PERFORATED CORRUGATED PLASTIC PIPE
Abutment				
	Rear Abutment & ww	22.0	ft	
	Forward Abutment & ww	22.0	ft	
	Abutment Total	44	ft	
518	40010	10	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS
Abutment				
	Rear Abutment	5.0	ft	
	Forward Abutment	5.0	ft	
	Abutment Total	10.0	ft	
523	20000	2	EACH	DYNAMIC LOAD TESTING
523	20500	2	EACH	RESTRIKE
511	53014	540	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN
	deck	0.71	ft	deck thickness

		70.05 ft	ft	length
		190.0	ft	width
		9427.56	cu. Ft.	
	haunch	0.36	sf	area
		70.05 ft	ft	length
		21	each	# of beams used for hauch calc
		524.58	cu.ft.	
	overhang	0.27	ft	thickness
		70.05	ft	length
		11.34	ft	width
		215.14	cu ft	
RA&FA	end diaphragm	3.49	ft	height
		197.96	ft	length
		3.0	ft	width
		2.0	each	RA&FA
		4147.3	cu ft	
	noise wall	0.83	ft	width
		4.50	ft	height
		69.05	ft	length
		258.94	cu ft	
	total	539.76	cu. Yd	

526	30001	1267	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN
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		30.00	ft	length
		190.00	ft	width
		2	each	
		11400	sf	
		1266.67	sy	

526	90030	396.00	FT	TYPE C INSTALLATION
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		198.00	ft	
		2.00	each	
		396.00	ft	

511	53014	32	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN
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		6.16	sf	area of median barrier
		69.05	ft	length of bridge
		2.00	each	sides
		850.70	cu ft	
		32	cy	total

511	53014	26	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN
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		4.92	sf	area of PARAPET
		69.05 ft	ft	length of bridge

2 each sides

679.45 cu ft

26 cy total

511 46513 316 CU YD CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN

abutment	197.96	ft	length
	3.00	ft	width
	3.08	ft	height
	2.00	each	ra&fa
	3652.4	cu. Ft.	

footing	218.18	ft	length
	6.50	ft	width
	3.00	ft	height
	2.00	each	RA&FA
	8509.0	cu. Ft.	
	316.0	cu yd	

wingwall	4.00	ft	avg.-height
	22.00	ft	AVG-length
	2.50	ft	width
	2.00	EACH	RA&FA

449.4 eu-ft

total 467.4 eu-yd

511 53014 152 CU YD CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN

abutment	197.96	ft	length
	3.00	ft	width
	3.08	ft	height
	2.00	each	ra&fa
	3652.4	cu. Ft.	
wingwall	4.09	ft	avg. height
	22.00	ft	AVG. length
	2.50	ft	width
	2.00	EACH	RA&FA
	449.4	cu ft	
total	152.0	cu yd	