SUMMARY

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Table 1 -- Summary of Structure Costs

	Proposed Bridges	Retaining Walls	Miscellaneous & Temporary Structures	Demolition	Repair	TOTAL
Alternative 1	$27,580,800	$4,017,300	$0	$1,548,495	$124,938,895	$158,085,490
Alternative 2	$526,646,568	$11,336,500	$40,000,000	$61,444,265	$8,774,020	$648,201,353
Alternative 3	$506,543,533	$14,031,500	$10,000,000	$66,230,138	$178,827	$596,983,999

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 1

Safety and Operational Improvements

PROPOSED BRIDGES

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
1	Prop. Sunnyside Ave. to Union St. Connector	Naugatuck River	210	2	12	12	10,920	$260	$2,839,200	Is there sufficient vertical clearance to allow bridge to pass under existing I-84 WB to Rt 8 SB ramp? Is there sufficient freeboard over the river?
2	Prop. Sunnyside Ave. to Union St. Connector	Metro North, Meadow Sreet	580	2	12	12	30,160	$260	$7,841,600	Is there sufficient horizontal clearance to place an abutment between Field Street and Bank Street?
3	I-84 EB off-ramp to Meadow Street	Metro North, Meadow Street, Bank Street	1,300	2	4	10	54,600	$260	$14,196,000	
4	West Main Street to Bank Street Connector	Metro North	200	2	12	12	10,400	$260	$2,704,000	
	Subtotal		2,290				106,080		$27,580,800	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

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December 22, 2006

Alternative 1

Safety and Operational Improvements

RETAINING WALLS

WALL NO.		LENGTH (FEET)	AVERAGE HEIGHT (FEET)			TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
101		320	11			3,520	$140	$492,800	
102		750	20			15,000	$140	$2,100,000	
103		225	11			2,475	$140	$346,500	
104		500	11			5,500	$140	$770,000	
105		60	5			300	$140	$42,000	
106		40	5			200	$140	$28,000	
107		90	5			450	$140	$63,000	
108		70	5			350	$140	$49,000	
109		90	5			450	$140	$63,000	
110		90	5			450	$140	$63,000	
Subtotal						28,695		$4,017,300	
MISCELLANEOUS & TEMPORARY STRUCTURES									
Estimated Subtotal								$0	

I-84/RT 8 INTERCHANGE

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December 22, 2006

Alternative 1

Safety and Operational Improvements

DEMOLITION

BRIDGE	CROSSING	BRIDGE NO.				SQUARE FEET OF DEMO	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
I-84 RAMP 197	RAMP 202 MEADOW STREET	3191F				14,778	$65	$960,570	
I-84 RAMP 199	MEADOW STREET	3191G				6,316	$65	$410,540	
I-84 RAMP 202	BANK STREET	3192				2,729	$65	$177,385	
Subtotal								$1,548,495	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 1

Safety and Operational Improvements

REPAIR

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
RTE 8 RAMP 079	SR 846 NB	1714	Deck Replacement	2,914	2,914	$105	$305,970	
			Substructure Patching		2,914	$5.25	$15,299	
			Complete Painting	5,828	2,914	$42	$122,388	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8	SR 846 SB	1715	Deck Patching	588	11,759	$2.60	$30,573	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		11,759	$5.25	$61,735	
			Complete Painting	23,518	11,759	$42	$493,878	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Bearing Replacement		11,759	$1	$11,759	
RTE 8 SB	ROUTE 73 WB	1716	Routine Maintenance		11,405	$2	$22,810	
			Spot Painting		11,405	$2	$22,810	
RTE 8 NB	FIFTH STREET	3183A	Routine Maintenance		4,089	$2	$8,178	
			Spot Painting		4,089	$2	$8,178	
			Safety Walk Retrofit		4,089	$7.50	$30,668	
RTE 8 SB	FIFTH STREET	3183B	Deck Replacement	4,089	4,089	$105	$429,345	
			Substructure Patching		4,089	$5.25	$21,467	
			Spot Painting		4,089	$2	$8,178	
RTE 8 NB	PORTER STREET	3184A	Deck Replacement	4,132	4,132	$105	$433,860	
			Substructure Patching		4,132	$5.25	$21,693	
			Spot Painting		4,132	$2	$8,264	
RTE 8 SB	PORTER STREET	3184B	Deck Replacement	4,132	4,132	$105	$433,860	
			Substructure Patching		4,132	$5.25	$21,693	
			Spot Painting		4,132	$2	$8,264	
RTE 8 NB	WASHINGTON AVENUE	3185	Routine Maintenance		3,183	$2	$6,366	
			Spot Painting		3,183	$2	$6,366	
RTE 8 SB	WASHINGTON AVENUE	3186	Routine Maintenance		3,357	$2	$6,714	
			Spot Painting		3,357	$2	$6,714	
RTE 8 SB	BANK ST & SO. LEONARD ST	3187	Deck Patching	770	15,393	$2.60	$40,022	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		15,393	$5.25	$80,813	
			Spot Painting		15,393	$2	$30,786	
RTE 8 NB	BANK ST & SO. LEONARD ST	3188	Deck Replacement	7,210	7,210	$105	$757,050	
			Substructure Patching		7,210	$5.25	$37,853	
			Spot Painting		7,210	$2	$14,420	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 1

Safety and Operational Improvements

REPAIR (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
RTE 8 RAMP 077	BANK STREET	3189	Routine Maintenance		2,915	$2	$5,830	
			Spot Painting		2,915	$2	$5,830	
RTE 8 NB	RTE 8 SB, RIVERSIDE STREET	3190A	Deck Replacement	130,165	130,165	$105	$13,667,325	
			Complete Painting	260,330	130,165	$42	$5,466,930	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8 SB	RIVERSIDE ST & SUNNYSIDE AVE	3190B	Deck Replacement	75,312	75,312	$105	$7,907,760	
			Substructure Patching		75,312	$5.25	$395,388	
			Spot Painting		75,312	$2	$150,624	
I-84 TR 811	I-84 TR 812 & NAUGATUCK RIVER	3190C	Deck Replacement	24,118	24,118	$105	$2,532,390	
			Substructure Patching		24,118	$5.25	$126,620	
			Spot Painting		24,116	$2	$48,232	
I-84 TR 812	RIVERSIDE ST, NAUGATUCK RIVER	3190D	Deck Patching	1,498	21,395	$3.64	$77,878	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		21,395	$5.25	$112,324	
			Spot Painting		21,395	$2	$42,790	
RTE 8 RAMP 128	RIVERSIDE STREET SOUTHBOUND	3190E	Deck Patching	1,225	13,613	$4.68	$63,709	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		13,613	$5.25	$71,468	
			Spot Painting		13,613	$2	$27,226	
			Seismic Retrofit		13,613	$2	$27,226	
I-84 TR 808	ROUTE 8 SOUTHBOUND & RAMP 129	3190F	Deck Patching	1,434	17,930	$4.16	$74,589	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		17,930	$5.25	$94,133	
			Spot Painting		17,930	$2	$35,860	
			Seismic Retrofit		17,930	$2	$35,860	
I-84 EB	I-84 WB, RTE 8, NAUGATUCK RIVER	3191A	Deck Replacement	221,669	221,699	$105	$23,278,395	
			Substructure Patching		221,669	$5.25	$1,163,762	
			Complete Painting	443,398	221,699	$42	$9,311,358	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Safety Walk Retrofit		221,699	$7.50	$1,662,743	
I-84 WB	RTE 8, NAUGATUCK RIVER	3191B	Deck Replacement	221,699	221,699	$105	$23,278,395	No deck area given, assume same as 3191A
			Substructure Patching		221,699	$5.25	$1,163,920	
			Complete Painting	443,398	221,699	$42	$9,311,358	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Safety Walk Retrofit		221,699	$7.50	$1,662,743	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 1

Safety and Operational Improvements

REPAIR (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
I-84 RAMP 169	I-84 TR 805 & 808	3191C	Deck Replacement	11,220	11,220	$105	$1,178,100	
			Substructure Patching		11,220	$5.25	$58,905	
			Complete Painting	22,440	11,220	$42	$471,240	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Safety Walk Retrofit		11,220	$7.50	$84,150	
			Seismic Retrofit		11,220	$2	$22,440	
I-84 TR 809	RTE 8 NB, RIVERSIDE STREET	3191D	Deck Replacement	27,726	27,726	$105	$2,911,230	
			Substructure Patching		27,726	$5.25	$145,562	
			Complete Painting	55,452	27,726	$42	$1,164,492	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Safety Walk Retrofit		27,726	$7.50	$207,945	
I-84 TR 810	ROUTE 8 NB & RAMP 128	3191E	Deck Patching	2,013	22,365	$4.68	$104,668	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		22,365	$5.25	$117,416	
			Spot Painting		22,365	$2	$44,730	
			Safety Walk Retrofit		22,365	$7.50	$167,738	
			Seismic Retrofit		22,365	$2	$44,730	
I-84 RAMP 198	NO NOTABLE FEATURE	3191H	Routine Maintenance		1,890	$2	$3,780	
			Substructure Patching		1,890	$5.25	$9,923	
			Spot Painting		1,890	$2	$3,780	
			Safety Walk Retrofit		1,890	$7.50	$14,175	
I-84 RAMP 200	I-84 RAMPS 199 & 202	3191I	Deck Patching	841	10,508	$4.16	$43,713	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		10,508	$5.25	$55,167	
			Complete Painting	21,016	10,508	$42	$441,336	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Safety Walk Retrofit		10,508	$7.50	$78,810	
I-84 WB	BANK STREET & RAMP 198	3193	Deck Patching	508	6,344	$4.16	$26,391	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		6,344	$5.25	$33,306	
			Spot Painting		6,344	$2	$12,688	
			Safety Walk Retrofit		6,344	$7.50	$47,580	
I-84 RAMP 201	I-84 RAMP 198	3194	Deck Patching	756	5,401	$7.28	$39,319	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		5,401	$5.25	$28,355	
			Spot Painting		5,401	$2	$10,802	
			Safety Walk Retrofit		5,401	$7.50	$40,508	

I-84/RT 8 INTERCHANGE

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December 22, 2006

Alternative 1

Safety and Operational Improvements

REPAIR (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
I-84	SR 847 SOUTH MAIN STREET	3196	Routine Maintenance		8,480	$2	$16,960	
			Substructure Patching		8,480	$5.25	$44,520	
			Spot Painting		8,480	$2	$16,960	
			Repair Impact Damage to Beams		8,480	$3.25	$27,560	
			Safety Walk Retrofit		8,480	$7.50	$63,600	
SOUTH ELM STREET	I-84 & MCMAHON STREET	3197	Deck Patching	1,367	8,543	$8.32	$71,078	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		8,543	$5.25	$44,851	
			Spot Painting		8,543	$2	$17,086	
RTE 8 NB	FREIGHT STREET	3198	Deck Replacement	6,030	6,030	$105	$633,150	
			Substructure Patching		6,030	$5.25	$31,658	
			Spot Painting		6,030	$2	$12,060	
I-84 TR 806	I-84 TR 808, 809, RIVERSIDE ST	3200	Routine Maintenance		19,332	$2	$38,664	
			Substructure Patching		19,332	$5.25	$101,493	
			Spot Painting		19,332	$2	$38,664	
PEDESTRIAN WALK	ROUTE 8 SOUTHBOUND	3201	Deck Patching	82	4,101	$1.04	$4,265	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		4,101	$5.25	$21,530	
			Spot Painting		4,101	$2	$8,202	
			Seismic Retrofit		4,101	$2	$8,202	
RTE 8 NB	SR 849 WEST MAIN ST NO 1	3203A	Deck Replacement	9,058	9,058	$105	$951,090	
			Substructure Patching		9,058	$5.25	$47,555	
			Complete Painting	18,116	9,058	$42	$380,436	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8 SB	SR 849 WEST MAIN ST NO 1	3203B	Deck Replacement	8,589	8,589	$105	$901,845	
			Substructure Patching		8,589	$5.25	$45,092	
			Complete Painting	17,178	8,589	$42	$360,738	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8 RAMP 131	WEST MAIN STREET NO 1	3203C	Deck Replacement	4,234	4,234	$105	$444,570	
			Substructure Patching		4,234	$5.25	$22,229	
			Complete Painting	8,468	4,234	$42	$177,828	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8 SOUTHBOUND	RIVERSIDE STREET	3205	Deck Replacement	9,063	9,063	$105	$951,615	
			Substructure Patching		9,063	$5.25	$47,581	
			Spot Painting		9,063	$2	$18,126	

I-84/RT 8 INTERCHANGE

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ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 1

Safety and Operational Improvements

REPAIR (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
HIGHLAND AVENUE	I-84	3207	Deck Patching	454	15,120	$1.56	$23,587	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		15,120	$5.25	$79,380	
			Spot Painting		15,120	$2	$30,240	
I-84 TR 806	I-84 WB	3209	Deck Replacement	5,781	5,781	$105	$607,005	
			Substructure Patching		5,781	$5.25	$30,350	
			Spot Painting		5,781	$2	$11,562	
BALDWIN STREET NO 1	I-84 SR 830 & I-84 RAMPS	4318	Deck Replacement	37,333	37,333	$105	$3,919,965	
			Substructure Patching		37,333	$5.25	$195,998	
			Complete Painting	74,666	37,333	$42	$1,567,986	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
Subtotal							$124,938,895	
TOTAL FOR ALTERNATIVE 1							$154,068,190	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 2

Full-Build Alternate 1

PROPOSED BRIDGES

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
1	Sunnyside Ave. to Meadow Street Connector	Naugatuck River	740	2	12	12	38,480	$260	$10,004,800	Conventional connstruction
2	Sunnyside Ave. to Meadow Street Connector	Metro North	210	2	12	12	10,920	$260	$2,839,200	
3	West Main Street to South Main Street Connector	Metro North	150	2	9	9	6,900	$260	$1,794,000	
4	Highland Avenue to West Main Street Connector	I-84 WB Exit 19 Off-Ramp	330	2	7	7	13,847	$260	$3,600,168	Conventional construction, short term closures of Exit 19 Ramp to erect superstructure
5	I-84 EB	Riverside Street, Rte 8 NB to I-84 WB Off-Ramp, Rte 8 NB, Rte 8 NB to Riverside Street Off-Ramp, Naugatuck River, Sunnyside Avenue, Sunnyside Avenue to Bank Street Connector, Metro North, Bank Street	2,770	4	12	12	210,520	$300	$63,156,000	Pier placement limited, high skew required, but possible. Crane access is limited for smaller picks and shorter reach of pier construction. Crane access for superstructure erection is non-existent, a launching of spans from previously erected spans, or a launching truss with travelers scheme is
6	I-84 EB	South Main Street	80	6	12	12	8,000	$260	$2,080,000	Conventional construction, short term closures of South Main Street to erect superstructure
7	I-84 EB	Washington Street	160	4	12	12	12,160	$260	$3,161,600	
8	I-84 WB	Riverside Street, Sunnyside Avenue, Naugatuck River, Sunnyside Avenue to Bank Street Connector, Rte 8 SB, Rte 8 NB, Rte 8 NB to I-84 WB Ramp, Metro North, Bank Street	2,930	4	12	12	222,680	$300	$66,804,000	Pier placement limited, high skew required, but possible. Crane access is limited for smaller picks and shorter reach of pier construction. Crane access for superstructure erection is non-existent, a launching of spans from previously erected spans, or a launching truss with travelers scheme is
9	I-84 WB	South Main Street	80	5	12	12	7,040	$260	$1,830,400	
10	I-84 WB	Washington Street	160	4	12	12	12,160	$260	$3,161,600	
11	Chase Parkway	I-84 EB Exit 18 On-Ramp, I-84 EB, I-84 WB, I-84WB Exit 18 Off-Ramp	220	4	7	7	14,520	$260	$3,775,200	Pier in median of I-84. Conventional construction, short term closures of I-84 EB & WB to erect superstructure
12	Highland Ave.	I-84 EB Exit 19 Off-Ramp, I-84 EB, I-84 WB, I-84 WB Exit 19 On-Ramp	300	4	10	10	21,600	$260	$5,616,000	
13	South Elm Street	I-84 EB Frontage Road, I-84 EB, I-84 WB, Union Street	320	2	11	11	16,000	$260	$4,160,000	Pier in median of I-84. Conventional construction, short term closures of I-84 EB & WB to erect superstructure
14	Baldwin Street	I-84 EB Frontage Road, I-84 EB, I-84 WB, Union Street	400	4	11	11	29,600	$260	$7,696,000	
15	Hamilton Avenue	I-84 EB Exit 22, I-84 EB, I-84 WB	420	5	9	9	34,440	$260	$8,954,400	
16	I-84 EB to Rte 8 NB Ramp	I-84 EB, I-84 WB, Rte 8 NB to I-84 WB Ramp, Rte 8 SB, Rte 8 SB to I-84 EB Ramp	1,200	1	10	10	43,200	$400	$17,280,000	Pier in median of I-84. Conventional construction, short term closures of I-84 EB & WB to erect superstructure
17	I-84 EB Exit 19 On-Ramp	I-84 EB Exit 20 Off-Ramp, Riverside Street	1,200	1	10	10	43,200	$400	$17,280,000	Pier placement limited, but available. Crane access from south side. Conventional construction, short term closures of Extrance 31 Ramp, Rte 8 SB, Naugatuck River, & Rte 8 NB to erect superstructure
18	I-84 EB to Rte 8 SB Ramp	Sunnyside Ave.	75	3	7	15	4,650	$260	$1,209,000	Conventional construction, short term closures of Sunnyside Ave. to erect superstructure
19										NOT USED
20	I-84 EB Exit 20 Off-Ramp	Rte 8 SB, Riverside Street, Naugatuck River, Rte 8 NB, West Main Street to Bank Street Connector, Metro North, Bank Street	2,650	2	9	9	121,900	$300	$36,570,000	
21	I-84 EB Frontage Road	South Main Street	80	1	7	12	2,800	$260	$728,000	
22	I-84 EB Exit 22 Off-Ramp	Washington Street	160	3	7	9	8,960	$260	$2,329,600	
23	I-84 EB Exit 23 On-Ramp	Frontage Road	120	1	10	10	4,320	$260	$1,123,200	Conventional construction, short term closures of Goss St. to erect superstructure

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December 22, 2006

Alternative 2

Full-Build Alternate 1

PROPOSED BRIDGES (Cont'd)

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
24	I-84 WB Exit 19 On-Ramp	Rte 8 SB Exit 32 On-Ramp	320	1	10	10	11,520	$260	$2,995,200	Conventional construction, short term closures of Entrance 32 Ramp to erect superstructure
25	I-84 WB Exit 20 On-Ramp	Rte 8 NB to Riverside Street Off-Ramp, Naugatuck River, I-84 EB to Rte 8 NB Ramp, Sunnyside Avenue, Metro North	1,100	1	10	10	39,600	$400	$15,840,000	Conventional construction, short term closures of Railroad to erect superstructure
26	I-84 WB to Rte 8 NB Ramp	Riverside Street	430	2	11	11	21,500	$260	$5,590,000	Conventional construction, short term closures of Riverside NB to erect superstructure
27	I-84 WB to Rte 8 NB Ramp	Freight Street, Naugatuck River, Sunnyside Avenue	1,600	2	11	11	80,000	$260	$20,800,000	Conventional construction, short term closures of Freight St. to erect superstructure
28	I-84 WB to Rte 8 SB Ramp	Rte 8 SB, Riverside Street, Rte 8 NB, I-84 EB Exit 20 Off-Ramp, I-84 EB, I-84 WB, Metro North	1,400	2	11	11	70,000	$400	$28,000,000	Pier placement limited, very tight radius so span lenghts must be limited. Conventional construction, short tem closures of I-84 EB & WB
29	I-84 WB Exit 21 Off-Ramp	Bank St.	100	1	10	10	3,600	$260	$936,000	Conventional connstruction
30	Union Street	South Main Street	80	1	10	10	2,880	$260	$748,800	
31	Union St.	I-84 Exit 22 Off-Ramp	70	1	10	10	2,520	$260	$655,200	Conventional construction, short term closures of Brass Mill Drive to erect superstructure
32	I-84 WB Exit 22 Off-Ramp	I-84 WB Exit 22 On-Ramp	100	2	11	11	5,000	$260	$1,300,000	Conventional construction, short term closures of Entrance 22 Ramp to erect superstructure
33	Rte 8 NB (west shore to east shore)	Bank Street, Naugatuck River	1,300	2	11	11	65,000	$260	$16,900,000	Conventional connstruction
34	Rte 8 NB (east shore to west shore)	Naugatuck River	1,600	2	12	12	83,200	$300	$24,960,000	Conventional connstruction, but with obsructed overhead.
35	Rte 8 NB	West Main St.	150	4.5	12	12	12,300	$260	$3,198,000	Conventional construction, short term closures of West Main St. to erect superstructure
36	Rte 8 SB	Riverside Street, Bank Street	700	4	10	10	50,400	$260	$13,104,000	Conventional construction, short term closures of Riverside SB. to erect superstructure
37	Rte 8 SB	West Main St.	150	4	12	15	11,850	$260	$3,081,000	Conventional construction, short term closures of West Main St. to erect superstructure
38	Rte 8 NB Exit 30 On-Ramp	Bank Street, Naugatuck River	1,200	1	10	10	43,200	$260	$11,232,000	Conventional connstruction
39	Rte 8 NB to I-84 EB Ramp	Naugatuck River, Rte 8 NB Exit 30 On-Ramp	480	1	10	10	17,280	$400	$6,912,000	Conventional construction, short term closures of Entrance 30 Ramp to erect superstructure
40	Rte 8 NB to I-84 EB Ramp	West Main St. to South Main Street Connector, Bank Street, I-84 EB Exit 20 Off-Ramp, Benedict Street	1,050	1	10	10	37,800	$260	$9,828,000	Conventional construction, short term closures of Connector and Benedict Street to erect superstructure
41	Rte 8 NB to Riverside Street Off-Ramp	Naugatuck River	850	1	10	10	30,600	$300	$9,180,000	
42	Rte 8 NB to I-84 WB Ramp	Rte 8 SB	950	1	9	11	34,200	$300	$10,260,000	Conventional connstruction, but with obsructed overhead. Short term closure of Rte 8 SB and Riverside SB & NB to erect superstructure.
43	Rte 8 NB Exit 33 On-Ramp	Naugatuck River, Sunnyside Avenue, Metro North	1,600	1	10	10	57,600	$260	$14,976,000	Conventional connstruction, but with obsructed overhead.
44	Rte 8 SB to I-84 WB Ramp	I-84 WB Exit 19 Off-Ramp	570	2	9	9	26,220	$260	$6,817,200	Conventional construction, short term closures of Exit 19 Ramp to erect superstructure
45	Rte 8 SB to I-84 WB Ramp	Rte 8 SB Exit 32 On-Ramp	250	1	10	10	9,000	$260	$2,340,000	Conventional construction, short term closures of Entrance 32 Ramp to erect superstructure

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URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 2

Full-Build Alternate 1

PROPOSED BRIDGES (Cont'd)

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
46	Rte 8 SB to Riverside Street Off-Ramp	Rte 8 NB to I-84 WB Ramp, I-84 WB, I-84 EB	1,000	1	10	10	36,000	$400	$14,400,000	
47	Rte 8 SB to I-84 EB Ramp	Rte 8 NB to I-84 WB Ramp, I-84 WB, I-84 EB, Riverside Street, Naugatuck River, Rte 8 NB to Riverside Street Off-Ramp	1,950	2	10	10	93,600	$400	$37,440,000	
	Subtotal		33,755				1,732,767		$526,646,568	

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URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 2

Full-Build Alternate 1

RETAINING WALLS

WALL NO.		LENGTH (FEET)	AVERAGE HEIGHT (FEET)			TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
101		900	12			10,350	$140	$1,449,000	
102		160	4			640	$140	$89,600	
103		100	5			500	$140	$70,000	
104		260	12			2,990	$140	$418,600	
105		210	3			630	$140	$88,200	
106		500	9			4,500	$140	$630,000	
107		240	4			960	$140	$134,400	
108		70	13			875	$140	$122,500	
109		80	15			1,200	$140	$168,000	
110		160	10			1,600	$140	$224,000	
111		200	4			800	$140	$112,000	
112		330	20			6,600	$140	$924,000	
113		120	12			1,380	$140	$193,200	
114		610	8			4,575	$140	$640,500	
115		300	3			900	$140	$126,000	
116		1,250	16			20,000	$140	$2,800,000	
117		250	12			2,875	$140	$402,500	
118		90	5			450	$140	$63,000	
119		60	19			1,140	$140	$159,600	
120		320	11			3,520	$140	$492,800	
121		320	11			3,520	$140	$492,800	
122		270	11			2,970	$140	$415,800	
123		90	8			720	$140	$100,800	
124		110	11			1,210	$140	$169,400	
125		100	5			500	$140	$70,000	
126		320	12			3,840	$140	$537,600	
127		150	3			450	$140	$63,000	
128		90	8			720	$140	$100,800	
129		70	8			560	$140	$78,400	
Subtotal						80,975		$11,336,500	

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Alternative 2

Full-Build Alternate 1

MISCELLANEOUS & TEMPORARY STRUCTURES

Estimated Subtotal			$40,000,000

DEMOLITION		BRIDGE NO.	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	
Chase Parkway	I-84 EB & WB		11,000	$65	$715,000
Highland Ave.	I-84 EB & WB	3207	15,120	$65	$982,800
I-84 TR 806	I-84 WB	3209	5,781	$65	$375,765
I-84 TR 806	I-84 TR 808, 809, RIVERSIDE ST	3200	19,332	$65	$1,256,580
PEDESTRIAN WALK	ROUTE 8 SOUTHBOUND	3201	4,101	$65	$266,565
RTE 8 SOUTHBOUND	RIVERSIDE STREET	3205	9,063	$65	$589,095
RTE 8 SB	SR 849 WEST MAIN ST NO 1	3203B	8,589	$65	$558,285
RTE 8 NB	SR 849 WEST MAIN ST NO 1	3203A	9,058	$65	$588,770
RTE 8 RAMP 131	WEST MAIN STREET NO 1	3203C	4,234	$65	$275,210
I-84 EB	I-84 WB, RTE 8, NAUGATUCK RIVER	3191A	221,699	$65	$14,410,435
I-84 WB	RTE 8, NAUGATUCK RIVER	3191B	221,699	$65	$14,410,435
I-84 RAMP 169	I-84 TR 805 & 808	3191C	11,220	$65	$729,300
I-84 TR 809	RTE 8 NB, RIVERSIDE STREET	3191D	27,726	$65	$1,802,190
I-84 TR 810	ROUTE 8 NB & RAMP 128	3191E	22,365	$65	$1,453,725
I-84 RAMP 197	RAMP 202 MEADOW STREET	3191F	14,778	$65	$960,570
I-84 RAMP 199	MEADOW STREET	3191G	6,316	$65	$410,540
I-84 RAMP 198	NO NOTABLE FEATURE	3191H	1,890	$65	$122,850
I-84 RAMP 200	I-84 RAMPS 199 & 202	3191I	10,508	$65	$683,020
RTE 8 NB	RTE 8 SB, RIVERSIDE STREET	3190A	130,165	$65	$8,460,725
RTE 8 SB	RIVERSIDE ST & SUNNYSIDE AVE	3190B	75,312	$65	$4,895,280
I-84 TR 811	I-84 TR 812 & NAUGATUCK RIVER	3190C	24,118	$65	$1,567,670
I-84 TR 812	RIVERSIDE ST, NAUGATUCK RIVER	3190D	21,395	$65	$1,390,675
RTE 8 RAMP 128	RIVERSIDE STREET SOUTHBOUND	3190E	13,613	$65	$884,845
I-84 TR 808	ROUTE 8 SOUTHBOUND & RAMP 129	3190F	17,930	$65	$1,165,450
RTE 8 NB	FREIGHT STREET	3198	6,030	$65	$391,950
SOUTH ELM STREET	I-84 & MCMAHON STREET	3197	8,543	$65	$555,295
I-84	SR 847 SOUTH MAIN STREET	3196	8,480	$66	$559,680
I-84 RAMP 201	I-84 RAMP 198	3194	5,401	$67	$361,867
I-84 WB	BANK STREET & RAMP 198	3193	6,344	$68	$431,392
I-84 RAMP 202	BANK STREET	3192	2,729	$69	$188,301
Subtotal			944,539		$61,444,265

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December 22, 2006

Alternative 2

Full-Build Alternate 1

REPAIR

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
RTE 8 RAMP 079	SR 846 NB	1714	Deck Replacement	2,914	2,914	$100	$291,400	
			Substructure Patching		2,914	$5	$14,570	
			Complete Painting	5,828	2,914	$40	$116,560	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
RTE 8	SR 846 SB	1715	Deck Patching	588	11,759	$2.50	$29,398	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		11,759	$5	$58,795	
			Complete Painting	23,518	11,759	$40	$470,360	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Bearing Replacement		11,759	$1	$11,759	
RTE 8 SB	ROUTE 73 WB	1716	Routine Maintenance		11,405	$2	$22,810	
			Spot Painting		11,405	$2	$22,810	
RTE 8 NB	FIFTH STREET	3183A	Routine Maintenance		4,089	$2	$8,178	
			Spot Painting		4,089	$2	$8,178	
			Safety Walk Retrofit		4,089	$7	$28,623	
RTE 8 SB	FIFTH STREET	3183B	Deck Replacement	4,089	4,089	$100	$408,900	
			Substructure Patching		4,089	$5	$20,445	
			Spot Painting		4,089	$2	$8,178	
RTE 8 NB	PORTER STREET	3184A	Deck Replacement	4,132	4,132	$100	$413,200	
			Substructure Patching		4,132	$5	$20,660	
			Spot Painting		4,132	$2	$8,264	
RTE 8 SB	PORTER STREET	3184B	Deck Replacement	4,132	4,132	$100	$413,200	
			Substructure Patching		4,132	$5	$20,660	
			Spot Painting		4,132	$2	$8,264	
RTE 8 NB	WASHINGTON AVENUE	3185	Routine Maintenance		3,183	$2	$6,366	
			Spot Painting		3,183	$2	$6,366	
RTE 8 SB	WASHINGTON AVENUE	3186	Routine Maintenance		3,357	$2	$6,714	
			Spot Painting		3,357	$2	$6,714	
RTE 8 SB	BANK ST & SO. LEONARD ST	3187	Deck Patching	770	15,393	$2.50	$38,483	Assumes 8" thick deck @ $2100 per CY of patch area
			Substructure Patching		15,393	$5	$76,965	
			Spot Painting		15,393	$2	$30,786	
RTE 8 NB	BANK ST & SO. LEONARD ST	3188	Deck Replacement	7,210	7,210	$100	$721,000	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
			Substructure Patching		7,210	$5	$36,050	
			Spot Painting		7,210	$2	$14,420	
RTE 8 RAMP 077	BANK STREET	3189	Routine Maintenance		2,915	$2	$5,830	
			Spot Painting		2,915	$2	$5,830	

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December 22, 2006

Alternative 2

Full-Build Alternate 1

REPAIR (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR	SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
BALDWIN STREET NO 1	I-84 SR 830 & I-84 RAMPS	4318	Deck Replacement	37,333	37,333	$100	$3,733,300	
			Substructure Patching		37,333	$5	$186,665	
			Complete Painting	74,666	37,333	$40	$1,493,320	Assumes 2 SF of painted area per SF of deck area @ $21 per SF of painted area
Subtotal							$8,774,020	
TOTAL FOR ALTERNATIVE 2							$636,864,853	

I-84/RT 8 INTERCHANGE

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ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 3

Full-Build Alternate 2

PROPOSED BRIDGES

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
1	Sunnyside Ave. to Union St. Connector	Naugatuck River	740	2	12	12	38,233	$260	$9,940,667	Is there sufficient vertical clearance to allow bridge to pass under existing I-84 WB to Rt 8 SB ramp? Is there sufficient freeboard over the river?
2	Sunnyside Ave. to Union St. Connector	Metro North	210	2	12	12	10,850	$260	$2,821,000	Is there sufficient horizontal clearance to place an abutment between Meadow Street and the Railroad?
3	Sunnyside Ave. to Bank Street Connector	Metro North	60	2.5	7	12	3,160	$260	$821,600	
4	I-84 EB	Riverside Street, Sunnyside Avenue, Naugatuck River, Sunnyside Avenue to Bank Street Connector, Rte 8 SB, Rte 8 NB, Rte 8 NB to I-84 WB Ramp, Metro North, Bank Street	2,680	3	12	12	170,627	$260	$44,362,933	
5	I-84 EB	South Main Street	80	5	12	12	7,013	$260	$1,823,467	
6	I-84 EB	Washington Street	160	4	12	12	12,107	$260	$3,147,733	
7	I-84 EB Exit 22 Off-Ramp	Washington Street	160	2	7	9	6,987	$260	$1,816,533	
8	I-84 WB	Riverside Street, Sunnyside Avenue, Naugatuck River, Sunnyside Avenue to Bank Street Connector, Rte 8 SB, Rte 8 NB, Rte 8 NB to I-84 WB Ramp, Metro North, Bank Street	2,880	3	12	12	183,360	$260	$47,673,600	
9	I-84 WB	South Main Street	80	5	12	12	7,013	$260	$1,823,467	
10	I-84 WB	Washington Street	160	4	12	12	12,107	$260	$3,147,733	
11	Chase Parkway	I-84 EB Exit 18 On-Ramp, I-84 EB, I-84 WB, I-84WB Exit 18 Off-Ramp	220	4	7	7	14,447	$260	$3,756,133	
12	Highland Avenue	I-84 EB, I-84 WB, ROAD	340	4	10	10	24,480	$260	$6,364,800	
13	Baldwin Street	I-84 EB, I-84 WB, Sunnyside Avenue, Union Street	500	4	11	11	36,833	$260	$9,576,667	
14	Hamilton Avenue	I-84 EB Exit 22, I-84 EB, I-84 WB	420	5	9	9	34,300	$260	$8,918,000	
15	I-84 EB to Rte 8 SB Ramp	Riverside Street, Sunnyside Avenue, Naugatuck River(W to E), Sunnyside Avenue to Bank Street Connector (W to E), Sunnyside Avenue to Bank Street Connector (E to W), Naugatuck River (E to W)	2,450	1	10	10	87,383	$260	$22,719,667	
16	I-84 EB to Rte 8 NB Ramp	I-84 EB, I-84 WB, Naugatuck River, Rte 8 NB to I-84 WB Ramp, Rte 8 SB Frontage Road, Rte 8 SB, Rte 8 NB, Rte 8 NB Frontage Road	1,500	1	10	10	53,500	$400	$21,400,000	
17	I-84 EB Exit 20 Off-Ramp	Sunnyside Avenue, Naugatuck River, Rte 8 SB, Rte 8 NB, Metro North	1,400	1	10	10	49,933	$260	$12,982,667	
18	I-84 EB Exit 22 On-Ramp	I-84 EB Exit 22 Off-Ramp	300	1	10	10	10,700	$260	$2,782,000	
19	I-84 EB Exit 23 On-Ramp	Frontage Road	120	1	10	10	4,280	$260	$1,112,800	
20	Highland Avenue to West Main Street Connector	I-84 WB Exit 19 Off-Ramp	330	2	7	7	13,750	$260	$3,575,000	
21	I-84 WB Exit 20 On-Ramp	Riverside Street, Naugatuck River, Sunnyside Avenue, Sunnyside Avenue to Bank Street Connector, Rte 8 SB, Rte 8 NB, Rte 8 NB to I-84 WB Ramp, Metro North	2,250	1	10	10	80,250	$260	$20,865,000	
22	I-84 WB to Rte 8 NB Ramp	I-84 WB Exit 20 On-Ramp, Metro North, Sunnyside Avenue	1,930	2	11	11	95,857	$260	$24,922,733	
23	I-84 WB to Rte 8 SB Ramp	I-84 WB Exit 20 On-Ramp, I-84 WB, I-84 EB, I-84 EB Exit 20 Off-Ramp	1,100	1	10	10	39,233	$400	$15,693,333	Pier placement significantly limited
24	I-84 WB Exit 22 Off-Ramp	I-84 WB Exit 22 On-Ramp	100	2	11	11	4,967	$260	$1,291,333	

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Alternative 3

Full-Build Alternate 2

PROPOSED BRIDGES (Cont'd)

	BRIDGE	CROSSING	LINEAR FEET	NO. OF 12' LANES	LEFT SHLDR	RIGHT SHLDR	TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
25	Sunnyside Avenue	I-84 WB Exit 22 Off-Ramp	70	1	10	10	2,497	$260	$649,133	
26	Rte 8 NB	5th Street	160	2	12	12	8,267	$260	$2,149,333	
27	Rte 8 NB	Porter Street	110	2	12	50	9,863	$260	$2,564,467	
28	Rte 8 NB	Washington Avenue	60	3	12	12	3,820	$260	$993,200	
29	Rte 8 NB	Bank Street	400	3	12	12	25,467	$260	$6,621,333	
30	Rte 8 NB	Naugatuck River, Sunnyside Avenue to Bank Street Connector	930	2	12	12	48,050	$260	$12,493,000	
31	Rte 8 NB	Sunnyside Avenue	60	3	12	12	3,820	$260	$993,200	
32	Rte 8 NB	Freight Street	290	2	12	12	14,983	$260	$3,895,667	
33	Rte 8 NB	Naugatuck River, West Main Street Entrance Ramp, West Main Street	1,150	3	12	12	73,217	$260	$19,036,333	
34	Rte 8 SB	5th Street	160	2	12	12	8,267	$260	$2,149,333	
35	Rte 8 SB	Porter Street	110	2	12	12	5,683	$260	$1,477,667	
36	Rte 8 SB	Washington Avenue	60	3	12	12	3,820	$260	$993,200	
37	Rte 8 SB	Bank Street	500	3	12	12	31,833	$260	$8,276,667	
38	Rte 8 SB	Naugatuck River, Sunnyside Avenue to Bank Street Connector	1,020	2	12	12	52,700	$260	$13,702,000	
39	Rte 8 SB	Sunnyside Avenue	60	3	12	18	4,180	$260	$1,086,800	
40	Rte 8 SB	Freight Street	290	2	12	12	14,983	$260	$3,895,667	
41	Rte 8 SB	Naugatuck River, West Main Street Entrance Ramp, West Main Street	1,150	3	12	12	73,217	$260	$19,036,333	
42	Rte 8 NB to I-84 EB Ramp	Sunnyside Avenue to Bank Street Connector, I-84 EB Exit 20 Off-Ramp	1,300	1	10	10	46,367	$260	$12,055,333	Pier placement limited and confined, but possible
43	Rte 8 NB to I-84 WB Ramp	Rte 8 NB, Rte 8 SB, Rte 8 SB Frontage Road, Naugatuck River, Riverside Street	2,100	1	10	10	74,900	$350	$26,215,000	
44	Rte 8 NB to I-84 WB Ramp	I-84 WB Exit 19 Off-Ramp	570	2	9	9	26,220	$260	$6,817,200	
45	Rte 8 NB Entrance Ramp	Freight Street	520	3	11	11	32,067	$260	$8,337,333	
46	Rte 8 NB Entrance Ramp	West Main Street Exit Ramp, West Main Street, Naugatuck River	940	2	11	11	46,687	$260	$12,138,533	
47	Rte 8 SB Exit 30 Off-Ramp	Porter Street	110	1	10	12	4,143	$260	$1,077,267	
48	Rte 8 SB to I-84 WB Ramp	Naugatuck River	1,000	1	10	10	35,667	$260	$9,273,333	
49	Rte 8 SB to I-84 EB Ramp	I-84 EB to Rte 8 NB Ramp, Rte 8 NB to I-84 WB Ramp, Sunnyside Avenue, I-84 WB Exit 20 On-Ramp, I-84 WB, I-84 WB to Rte 8 SB Ramp, I-84 EB, Metro North, Bank Street	2,100	1	10	10	74,900	$400	$29,960,000	
50	Rte 8 SB Exit Ramp	Freight Street	430	3	11	12	26,947	$260	$7,006,133	
51	Rte 8 SB Exit Ramp	Naugatuck River, West Main Street Exit Ramp, West Main Street	1,300	2	11	11	64,567	$260	$16,787,333	
52	West Main Street Entrance Ramp	Naugatuck River	380	1	10	10	13,553	$260	$3,523,867	
	Subtotal		37,500				1,832,053		$506,543,533	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 3

Full-Build Alternate 2

RETAINING WALLS

WALL NO.		LENGTH (FEET)	AVERAGE HEIGHT (FEET)			TOTAL SQUARE FEET	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
101		920	11			10,120	$140	$1,416,800	
102		40	20			800	$140	$112,000	
103		320	11			3,520	$140	$492,800	
104		320	4			1,280	$140	$179,200	
105		320	11			3,520	$140	$492,800	
106		320	11			3,520	$140	$492,800	
107		220	11			2,420	$140	$338,800	
108		320	11			3,520	$140	$492,800	
109		160	10			1,600	$140	$224,000	
110		160	10			1,600	$140	$224,000	
111		170	9			1,530	$140	$214,200	
112		120	9			1,080	$140	$151,200	
113		300	3			900	$140	$126,000	
114		1,250	16			20,000	$140	$2,800,000	
115		250	12			2,875	$140	$402,500	
116		100	9			900	$140	$126,000	
117		60	19			1,140	$140	$159,600	
118		320	11			3,520	$140	$492,800	
119		320	11			3,520	$140	$492,800	
120		320	11			3,520	$140	$492,800	
121		160	8			1,200	$140	$168,000	
122		180	9			1,620	$140	$226,800	
123		280	11			3,080	$140	$431,200	
124		160	11			1,760	$140	$246,400	
125		200	11			2,200	$140	$308,000	
126		60	11			660	$140	$92,400	
127		240	21			5,040	$140	$705,600	
128		240	10			2,400	$140	$336,000	
129		240	10			2,400	$140	$336,000	
130		180	9			1,620	$140	$226,800	
131		160	7			1,120	$140	$156,800	
132		300	10			3,000	$140	$420,000	
133		300	10			3,000	$140	$420,000	
134		80	3			240	$140	$33,600	
Subtotal						100,225		$14,031,500	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 3

Full-Build Alternate 2

MISCELLANEOUS & TEMPORARY STRUCTURES

Estimated Subtotal $10,000,000

DEMOLITION

BRIDGE	CROSSING	BRIDGE NO.	SQUARE FEET OF DEMO	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
RTE 8 RAMP 079	SR 846 NB	1714	2,914	$65	$189,410	
RTE 8	SR 846 SB	1715	11,759	$65	$764,335	
RTE 8 NB	FIFTH STREET	3183A	4,089	$65	$265,785	
RTE 8 SB	FIFTH STREET	3183B	4,089	$65	$265,785	
RTE 8 NB	PORTER STREET	3184A	4,132	$65	$268,580	
RTE 8 SB	PORTER STREET	3184B	4,132	$65	$268,580	
RTE 8 NB	WASHINGTON AVENUE	3185	3,183	$65	$206,895	
RTE 8 SB	WASHINGTON AVENUE	3186	3,357	$65	$218,205	
RTE 8 SB	BANK ST & SO. LEONARD ST	3187	15,393	$65	$1,000,545	
RTE 8 NB	BANK ST & SO. LEONARD ST	3188	7,210	$65	$468,650	
RTE 8 RAMP 077	BANK STREET	3189	2,915	$65	$189,475	
RTE 8 NB	RTE 8 SB, RIVERSIDE STREET	3190A	130,165	$65	$8,460,725	
RTE 8 SB	RIVERSIDE ST & SUNNYSIDE AVE	3190B	75,312	$65	$4,895,280	
I-84 TR 811	I-84 TR 812 & NAUGATUCK RIVER	3190C	24,118	$65	$1,567,670	
I-84 TR 812	RIVERSIDE ST, NAUGATUCK RIVER	3190D	21,395	$65	$1,390,675	
RTE 8 RAMP 128	RIVERSIDE STREET SOUTHBOUND	3190E	13,613	$65	$884,845	
I-84 TR 808	ROUTE 8 SOUTHBOUND & RAMP 129	3190F	17,930	$65	$1,165,450	
I-84 EB	I-84 WB, RTE 8, NAUGATUCK RIVER	3191A	221,699	$65	$14,410,435	
I-84 WB	RTE 8, NAUGATUCK RIVER	3191B	221,699	$65	$14,410,435	No deck area given, assume same as Bridge 3191A
I-84 RAMP 169	I-84 TR 805 & 808	3191C	11,220	$65	$729,300	
I-84 TR 809	RTE 8 NB, RIVERSIDE STREET	3191D	27,726	$65	$1,802,190	
I-84 TR 810	ROUTE 8 NB & RAMP 128	3191E	22,365	$65	$1,453,725	
I-84 RAMP 197	RAMP 202 MEADOW STREET	3191F	14,778	$65	$960,570	
I-84 RAMP 199	MEADOW STREET	3191G	6,316	$65	$410,540	
I-84 RAMP 198	NO NOTABLE FEATURE	3191H	1,890	$65	$122,850	
I-84 RAMP 200	I-84 RAMPS 199 & 202	3191I	10,508	$65	$683,020	
I-84 RAMP 202	BANK STREET	3192	2,729	$65	$177,385	
I-84 WB	BANK STREET & RAMP 198	3193	6,344	$65	$412,360	
I-84 RAMP 201	I-84 RAMP 198	3194	5,401	$65	$351,065	
I-84	SR 847 SOUTH MAIN STREET	3196	8,480	$65	$551,200	
SOUTH ELM STREET	I-84 & MCMAHON STREET	3197	8,543	$65	$555,295	
RTE 8 NB	FREIGHT STREET	3198	6,030	$65	$391,950	
I-84 TR 806	I-84 TR 808, 809, RIVERSIDE ST	3200	19,332	$65	$1,256,580	
PEDESTRIAN WALK	ROUTE 8 SOUTHBOUND	3201	4,101	$65	$266,565	
RTE 8 NB	SR 849 WEST MAIN ST NO 1	3203A	9,058	$65	$588,770	
RTE 8 SB	SR 849 WEST MAIN ST NO 1	3203B	8,589	$65	$558,285	
RTE 8 RAMP 131	WEST MAIN STREET NO 1	3203C	4,234	$65	$275,210	

I-84/RT 8 INTERCHANGE

URS Project Number 36935601

ESTIMATE OF PROPOSED BRIDGE AREAS AND COSTS

December 22, 2006

Alternative 3

Full-Build Alternate 2

DEMOLITION (Cont'd)

BRIDGE	CROSSING	BRIDGE NO.				SQUARE FEET OF DEMO	COST PER SQUARE FOOT	TOTAL COST	COMMENTS
RtE 8 SOUTHBOUND	RIVERSIDE STREET	3205				9,063	$65	$589,108	
I-84 TR 806	I-84 WB	3209				5,781	$65	$375,765	
BALDWIN STREET NO 1	I-84 SR 830 & I-84 RAMPS	4318				37,333	$65	$2,426,645	
Subtotal						1,018,925		$66,230,138	

REPAIR

BRIDGE	CROSSING	BRIDGE NO.	TYPE OF REPAIR		SQUARE FEET OF REPAIR	SQUARE FEET OF DECK	COST PER SQUARE FOOT OF DECK	TOTAL COST	COMMENTS
RTE 8 SB	ROUTE 73 WB	1716	Routine Maintenance			11,405	$2	$22,810	
			Spot Painting			11,405	$2	$22,810	
HIGHLAND AVENUE	I-84	3207	Deck Patching		454	15,120	$1.56	$23,587	Assumes 8" thick deck @ $2100 per CY
			Substructure Patching			15,120	$5.25	$79,380	
			Spot Painting			15,120	$2	$30,240	
Subtotal								$178,827	
TOTAL FOR ALTERNATIVE 3								$582,952,499	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: K. Smith
CHKD BY:

SUMMARY

(2001 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION
SPECIFIC ITEMS				
EARTH EXCAVATION	CY	683,569	$20.00	$13,671,379
ROCK EXCAVATION	CY	159,563	$50.00	$7,978,163
UNSUITABLE MATERIAL EXCAVATION (MUCK)	CY	150	$10.00	$1,500
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS)	CY	36,168	$70.00	$2,531,737
HAZARDOUS WASTE EXCAVATION (PCB's)	CY	3,617	$450.00	$1,627,545
BORROW	CY	0	$18.00	$0
NEW DRAINAGE SYSTEM	SY	11,117	$20.00	$222,341
EXISTING DRAINAGE UPGRADE	SY	2,489	$7.00	$17,422
SUPERPAVE	TON	504,916	$70.00	$35,344,106
CONCRETE BASE COURSE WIDENING	CY	11,117	$260.00	$2,890,430
MILLING OF BITUMINOUS CONCRETE (0 TO 4")	SY	25,600	$4.00	$102,400
CONCRETE PVMT REPLACEMENT FOR ROADWAY (FULL DEPTH)	CY	0	$580.00	$0
SUBBASE	CY	93	$28.00	$2,593
MAJOR PIPE CULVERTS	LF	0	$750	$0
CONCRETE BOX CULVERTS	LF	0	$975	$0
BRIDGE PROPOSED	SF	0	N/A	$27,580,800
BRIDGE DEMOLITION	SF	0	N/A	$1,548,495
BRIDGE REPAIR	SF	0	N/A	$124,938,895
OTHER STRUCTURES (MISC.)	SF	0	N/A	$0
RETAINING WALLS	-	0	N/A	$4,017,300
STANDPIPES (ESTIMATED)	EA	0	$14,000	$0
CONCRETE MEDIAN BARRIER	LF	0	$48.77	$0
MAJOR TRAFFIC SIGNAL MODIFICATIONS	EA	3	$50.00	$150
NEW TRAFFIC SIGNAL	EA	9	$70	$630
CONCRETE SIDEWALK	SY	8,198	$65	$532,856
ROADWAY LIGHTING (EXPRESSWAY & RAMPS)	LF	16,580	$53.34	$884,334
BCLC	LF	0	$8.00	$0
CONCRETE CURBING	LF	29,300	$28.00	$820,400
GUIDERAIL	LF	3,316	$48.00	$159,168
SIGNING & STRIPING (ESTIMATED)	LS	1	$152,121	$152,121
STAGE CONSTRUCTION ITEMS (ESTIMATED)	U	1	$1,100,000	$1,100,000
NOISE BARRIERS (ESTIMATED)	LS	1	$0	$0
MITIGATION (TBD)	U	1	$300,000	$300,000
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$0	$0
			SUBTOTAL A	**$226,424,765**
LUMP SUM ITEMS				
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$4,528,495
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$6,792,743
MOBILIZATION (7.5% OF SUBTOTAL A)				$16,981,857
MINOR ITEMS (15% OF SUBTOTAL A)				$33,963,715
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$4,528,495
			SUBTOTAL B	**$293,220,070**
ADDITIONAL ITEMS				
INCIDENTALS (7% OF SUBTOTAL B)				$20,525,405
CONTINGENCIES (5% OF SUBTOTAL B)				$14,661,004
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$23,457,606
UTILITY COST (3% OF SUBTOTAL B)				$8,796,602
RIGHT-OF-WAY (ESTIMATED)	LS	1	$24,000,000	$24,000,000
			TOTAL	**$384,660,686**
			ROUNDED TOTAL	**$384,700,000**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: K. Smith
CHKD BY:

EARTHWORK
UNIT - CUBIC YARDS

	L	W	D	SF	CY	Fill (CADD)	Fill Area	Fill Volume
SIDE ROADS								
South Elm St. Between Grand Ave and New Connector	500	32	2	16000	32000		#REF!	#REF!
Bank St. To S. Main St. Including the Roundabout	1780	32	2	56960	113920			
New Connector from Sunnyside Ave. To Union St.	2500	32	2	80000	160000			
New Two Way Connector Between W. Main St. To Bank St.	4600	32	2	147200	294400			
West Main St.	2395	7	2	16765	33530			
Freight St.	1705	7	2	11935	23870			
SIDEWALKS								
Meadow St. To New Connector	1510	9	2	13590	27180			
Willow St. to Riverside St.	2380	9	2	21420	42840			
Summit St. To Sunnyside St.	1415	9	2	12735	25470			
I-84 On Ramp To Freight St.	1135	9	2	10215	20430			
EOP								
	19920		**Cut Total=**		**773640**		**Fill Total=**	**#REF!**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: K. Smith
CHKD BY:

EARTHWORK
UNIT - CUBIC YARDS

Assume 15% of total excavation is Rock Excavation, therefore		773640 x 15% =	116046.0 Rock Ex.
Assume remaining excavation material is Earth Excavation		773640 less Rock =	657594.0 Earth Ex.
		Add 10% for Ramps and Sideroads	
Total Mainline Earth Excavation:	657,594	**723,353**	
Total Rock Excavation:	116,046	**127,651**	
Total Rock Excavation with Rock Swell (25%):	145,058	**159,563**	(available for fill)
Total Mainline Fill Required :	200,000	**220,000**	

SUMMARY

Item	% Of Cut/Fill	Cut (C.Y.)	Fill (C.Y.)		Total (C.Y.)
Earth Excavation	94.5	723,353			683,569
Rock Excavation	100	159,563			159,563
Fill	100	0	220,000		220,000
Contaminated Soil Excavation (Hydrocarbons)	5	723,353			36,168
Hazardous Waste Excavation (PCB's)	0.5	723,353			3,617
Surplus/Borrow (positive/negitive)				**Surplus**	623,132

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: R.Shamas
CHKD BY: G. Jacobs

DRAINAGE SYSTEM
NEW = MAINLINE, CLIMBING LANE, PROPOSED RAMPS, PROPOSED SIDE ROADS
UPGRADE = EXISTING RAMPS AND EXISTING SIDE ROADS
UNIT - L.F.

LOCATION	LENGTH (L.F.)	AVG. WIDTH (L.F.)	AREA (SF)
NEW DRAINAGE SYSTEM			
South Elm St. Between Grand Ave and New Connector	500	32	16,000
Bank St. To S. Main St. Including the Roundabout	1780	32	56,960
New Connector from Sunnyside Ave. To Union St.	2500	32	80,000
New Two Way Connector Between W. Main St. To Bank St.	4600	32	147,200
TOTAL NEW DRAINAGE SYSTEM			**300,160**
TOTAL NEW DRAINAGE SYSTEM (CY)			**11,117**
UPGRADE DRAINAGE SYSTEM			
South Main Street	1500	32	48,000
South Elm Street	900	32	28,800
Benedict Street	1050	32	33,600
Frieght Street	250	32	8,000
Union Street	1400	32	44,800
W. Main Street	350	32	11,200
Bank Street	1750	32	56,000
TOTAL UPGRADE DRAINAGE SYSTEM			**67,200**
TOTAL UPGRADE DRAINAGE SYSTEM (CY)			**2,489**

MAJOR PIPE CULVERTS

N/A

TOTAL **0**

CONCRETE BOX CULVERTS

N/A

TOTAL **0**

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

SUPERPAVE
Assume 0.002449 M-T/m^2/mm depth
UNIT - TONS

1 CM = 5400 LBS
1 CF = 200 LBS
1 M-T=2205 LBS
2000 lb per ton

LOCATION	LENGTH(ft)	WIDTH(ft)	THICKNESS(ft)	WEIGHT (TONS)
MAINLINE				
Not Applicable	-	-	-	-
RAMPS				
Not Applicable	-	-	-	-
SIDEROADS				
South Main Street	1500	32	0.7	3196.8
South Elm Street	900	32	0.7	1918.1
Benedict Street	1050	32	0.7	2237.8
Frieght Street	250	32	0.7	532.8
Union Street	1400	32	0.7	2983.7
W. Main Street	350	32	0.7	745.9
Bank Street	1750	32	0.7	3729.6
South Elm St. Between Grand Ave and New Connector	500.0	32.0	0.7	26096.5
Bank St. To S. Main St. Including the Roundabout	1780.0	32.0	0.7	92903.7
New Connector from Sunnyside Ave. To Union St.	2500.0	32.0	0.7	130482.7
New Two Way Connector Between W. Main St. To Bank St.	4600	32.0	0.7	240088.2
TOTAL SUPERPAVE				**504,916**

Assume thickness of superpave is 8 in

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

CONCRETE BASE COURSE
UNIT - SF

LOCATION	LENGTH (L.F.)	AVG WIDTH (L.F.)	AREA (SF)
MAINLINE			
Not Applicable	0.0	0.0	0.0
RAMPS			
Not Applicable	0.0	0.0	0.0
SIDE ROADS			
South Elm St. Between Grand Ave and New Connector	500.0	32	16,000
Bank St. To S. Main St. Including the Roundabout	1780.0	32	56,960
New Connector from Sunnyside Ave. To Union St.	2500.0	32	80,000
New Two Way Connector Between W. Main St. To Bank St.	4600.0	32	147,200
TOTAL AREA OF CONCRETE BASE COURSE			**300,160**
TOTAL AREA OF CONCRETE BASE COURSE (SY)			**33,351**

VOLUME
Thickness of Base Course = 230mm =9 IN

TOTAL VOLUME OF CONCRETE BASE COURSE (CF) **226,621**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

MILLING OF BITUMINOUS PAVEMENT
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)
MAINLINE			
Not Applicable			
		SUBTOTAL	0.0
RAMPS			
Not Applicable	0.0	0.0	0.0
		SUBTOTAL	0.0
SIDEROADS			
Existing To Remain			
South Main Street	1500.0	32.0	48000.0
South Elm Street	900.0	32.0	28800.0
Benedict Street	1050.0	32.0	33600.0
Frieght Street	250.0	32.0	8000.0
Union Street	1400.0	32.0	44800.0
W. Main Street	350.0	32.0	11200.0
Bank Street	1750.0	32.0	56000.0
		SUBTOTAL	230400.0
		TOTAL	**230400**
TOTAL AREA (SY)			**25600**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** B. Zukowski
ALTERNATIVE 6 **CHKD BY:** G. Jacobs
Transportation System Management, Tranportation Demand Management and Transit

CONCRETE PAVEMENT REPLACEMENT
ASSUME JTS. EVERY 12.2 M (40 ft)
MAINLINE ONLY
UNIT - SQUARE FEET

LOCATION	VOL. PER JOINT	NO. JOINTS	TOTAL VOL.		
CONC. PVMT. REPLACEMENT					
Assume Joints every 40 ft Assume 50 ft long WB, 6 ft wide & 1 ft deep.	6.25				
				NOT SURE	
Assume Joints every 40 ft Assume 50 ft long EB, 6 ft wide & 1 ft deep.	4.51				
Length of Mainline Repair - EB --- feet	4.51	11.3	51		
Length of Mainline Repair - WB --- feet	6.25	11.3	71	Struct $/SF	
				246SF	Rev. 10/22 per DOT - From $500/S
				246SF	Rev. 10/22 per DOT - From $575/S
TOTAL			**122**	80SF	
				40SF	
				150SF	

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

SUBBASE
UNIT - CUBIC YARDS
Depth = 10 in. earth cuts and fills =0.833 ft

FORMATION OF SUBGRADE
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)	DEPTH (ft)	VOLUME (ft^3)
PAVEMENT AREA					
South Elm St. Between Grand Ave and New Connector	500.0	32.0	16000.0	0.8	133.3
Bank St. To S. Main St. Including the Roundabout	1780.0	32.0	56960.0	0.8	474.5
New Connector from Sunnyside Ave. To Union St.	2500.0	32.0	80000.0	0.8	666.4
New Two Way Connector Between W. Main St. To Bank St.	4600.0	32.0	147200.0	0.8	1226.2
	9380.0	32.0	300160.0	0.8	2500.3
TOTAL VOLUME FOR SUBBASE (CF)					**2,500**
TOTAL VOLUME FOR SUBBASE (CY)					**93**
TOTAL AREA FOR FORMATION OF SUBGRADE (SF)			**300,160**		
TOTAL AREA FOR FORMATION OF SUBGRADE (SY)			**33351.11111**		

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

CONCRETE MEDIAN BARRIER
UNIT - `L.F.

LOCATION	LENGTH EA. DIRECTION	TOTAL LENGTH
Not Applicable		**0.0**
TOTAL		**0**

Struct $/SF	
246SF	Rev. 10/22 per DOT - From $500/S
246SF	Rev. 10/22 per DOT - From $575/S
80SF	
40SF	
150SF	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** B. Zukowski
ALTERNATIVE 6 **CHKD BY:** G. Jacobs
Transportation System Management, Tranportation Demand Management and Transit

ROADWAY LIGHTING
MEASURED BY LENGTH OF ROADWAY;
MAINLINE AND RAMPS
UNIT - LF

LOCATION	TOTAL LENGTH (LF)
ROADWAY LIGHTING (EXPRESSWAY)	
Not Applicable	0
ROADWAY LIGHTING (RAMPS)	
Not Applicable	0
ROADWAY LIGHTING (SIDE ROADS)	
Assume Existing Road Length to Remain + Proposed	
	7,200
	9,380
TOTAL	**16,580**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: K. Smith
CHKD BY:

CURBING
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION	LENGTH (ft)	COMMENT
BCLC		
TOTAL	**0**	
CONCRETE CURB		
ROADS		
existing to remain + existing to be removed		
Existing Length (to Remain)	0	Both sides of roadway
Existing Length (to be Removed)	0	Both sides of roadway
Proposed Length	18,760	Both sides of roadway
SIDEWALKS		
Meadow St. To New Connector Between W. Main and Bank St	1,510	One side of the road
Willow St. to Riverside St.	2,380	One side of the road
Summit St. To Sunnyside St.	1,415	One side of the road
I-84 On Ramp To Freight St.	1,135	One side of the road
West Main St.	2,395	
Freight St.	1,705	
TOTAL	**29300**	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** B. Zukowski
ALTERNATIVE 6 **CHKD BY:** G. Jacobs
Transportation System Management, Tranportation Demand Management and Transit

GUIDERAIL
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION	LENGTH (ft)
MAINLINE GUIDERAIL	
Not Applicable	
RAMP GUIDERAIL	
Not Applicable	
SIDE ROAD GUIDERAIL	
Assume 20% of remaining and proposed length	3316
TOTAL	**3316**

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

WSA PROJECT NO. 519530
8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

K. Smith

CONCRETE SIDEWALK
UNIT-SY

ITEM	LENGTH (ft)	WIDTH (LF)	AREA(SF)	COMMENT
SIDEWALKS				
Meadow St. To New Connector Between W. Main and Bank St	1510.0	**7.0**	**10570.0**	
Willow St. to Riverside St.	2380.0	**7.0**	**16660.0**	
Summit St. To Sunnyside St.	1415.0	**7.0**	**9905.0**	
I-84 On Ramp To Freight St.	1135.0	**7.0**	**7945.0**	
West Main St. (Willow to Riverside)	2395.0	**7.0**	**16765.0**	
Freight St. (R.R. to Riverside)	1705.0	**7.0**	**11935.0**	
TOTAL AREA (SF)			**73780.0**	
TOTAL (SY)			**8197.8**	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE

MADE BY: K. Smith
CHKD BY:

ESTIMATED ITEMS
UNIT - AS NOTED

ITEM	UNIT	
STANDPIPES	EA	**0**
N/A		
SIGNING & STRIPING	LS	**$152,121**
Assume $80,000 per mile of Proposed Alignment		
STAGE CONSTRUCTION ITEMS	U	**$1,100,000**
Assume $2M per contract for additional MPT costs undetermined at this time.		
NOISE BARRIERS	LS	**$0**
N/A		
MITIGATION	U	**$300,000**
To Be Determined		
INCIDENT MANAGEMENT SYSTEM	LS	**$0**
Assume $100,000 per Kilometer of Mainline Alignment		
RIGHT-OF-WAY	LS	**$24,000,000**

Assume per property acquisition (Full and partial) $1,000,000.00
Estimated total properties acquired 24

Larger ROW costs for purchase of property for Sedimentation/Detention Basins and other down stream impacts are assumed to be included in the Mitigation Costs.

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

TRAFFIC SIGNAL

Intersection	New Traffic Signal	Traffic Signal Major Upgrade
Mill St. At Union St.	1	
One Way Union St. Between Mill St. and S. Main St. at South Elm St.		1
One Way Union St. Between Mill St. and S. Main St. at South Main St.		1
New Connector Between S. Main and Mill St. at South Elm St.	1	
New Connector Between S. Main and Mill St. at South Main St.	1	
New Connector Between S. Main and Sunnyside Ave. at Bank St.	1	
New Connector Between S. Main and Sunnyside Ave. at New Two Way Connector Between W. Main St. And Bank St	1	
South Elm St. At South Main St.		1
Two Way Connector from Bank St. to S. Main St. at Benedict St.	1	
New Two Way Connector Between W. Main St. And Bank St. at Bank St.	1	
New Two Way Connector Between W. Main St. And Bank St. at Freight St.	1	
New Two Way Connector Between W. Main St. And Bank St. at W. Main St.	1	
TOTAL	9	3

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

STRUCTURES
ESTIMATED

UNIT - SQUARE FEET

LOCATION	Bridge Replacement	Bridge Widening	Deck Repair	Deck Replacement	Superstructure Replacement
BRIDGES					

Refer to 8 and 84 structure estimate by others

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

WSA PROJECT NO. 519530
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 6
Transportation System Management, Tranportation Demand Management and Transit

MADE BY: B. Zukowski
CHKD BY: G. Jacobs

MEASUREMENTS
UNIT - AS NOTED

ITEM	VALUE	UNIT	COMMENT
MAINLINE			
N/A	0	ft	
RAMPS			
N/A	0	ft	
TURNING ROADS			
N/A	0	ft	
SIDE ROADS			
Existing To Remain			
South Main Street	1500.0	ft	
South Elm Street	900.0	ft	
Benedict Street	1050.0	ft	
Frieght Street	250.0	ft	
Union Street	1400.0	ft	
W. Main Street	350.0	ft	
Bank Street	1750.0	ft	
Proposed Roads			
South Elm St. Between Grand Ave and New Connector	500.0	ft	(New Connector Between Bank St. And S. Main St.)
Bank St. To S. Main St. Including the Roundabout	1780.0	ft	
New Connector from Sunnyside Ave. To Union St.	2500.0	ft	
New Two Way Connector Between W. Main St. To Bank St.	4600.0	ft	
Existing Length (to Remain)	7200.0	ft	
Existing Width (Approximately)	32	ft	
Existing Length (to be Removed)	1150.0	ft	
Proposed Length	9380.0	ft	
Proposed Width	32	ft	
SIDEWALKS			
Meadow St. To New Connector Between W. Main and Bank St	1510.0	ft	
Willow St. to Riverside St.	2380.0	ft	
Summit St. To Sunnyside St.	1415.0	ft	
I-84 On Ramp To Freight St.	1135.0	ft	
West Main St.	2395.0	ft	
Freight St.	1705.0	ft	
Proposed Length	6440.0	ft	
Proposed Width	7.0	ft	

NOTE:
1. All length dimensions include roads on structure to be conservative.
2. All length dimensions are approximate and measured from CADD.

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: K. Smith
CHKD BY:

SUMMARY

(2001 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION	March 1, 2006 Mods % INCREASE	REVISED $$					
SPECIFIC ITEMS											
EARTH EXCAVATION	CY	491,356	$20.00	$9,827,121	0%	$0					
ROCK EXCAVATION	CY	114,696	$50.00	$5,734,781	0%	$0					
UNSUITABLE MATERIAL EXCAVATION (MUCK)	CY	0	$10.00	$0	0%	$0					
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS)	CY	25,998	$70.00	$1,819,837	0%	$0					
HAZARDOUS WASTE EXCAVATION (PCB's)	CY	2,600	$450.00	$1,169,895	0%	$0					
BORROW	CY	82,108	$18.00	$1,477,950	0%	$0					
NEW DRAINAGE SYSTEM	SY	5,042,270	$20.00	$100,845,400	0%	$0					
EXISTING DRAINAGE UPGRADE	SY	59,200	$7.00	$414,400	0%	$0					
SUPERPAVE	TON	339,758	$70.00	$23,783,053	0%	$0					
CONCRETE BASE COURSE WIDENING	CY	140,997	$260.00	$36,659,170	0%	$0					
MILLING OF BITUMINOUS CONCRETE (0 TO 4")	SY	14,031	$4.00	$56,124	0%	$0					
CONCRETE PVMT REPLACEMENT FOR ROADWAY (FULL DEPTH)	CY	150	$580.00	$87,000	0%	$0					
SUBBASE	CY	155,563	$28.00	$4,355,774	0%	$0					
MAJOR PIPE CULVERTS	LF	0	$750	$0	0%	$0					
CONCRETE BOX CULVERTS	LF	0	$975	$0	0%	$0					
BRIDGE PROPOSED	SF	0	N/A	$526,646,568	0%	$0					
BRIDGE DEMOLITION	SF	0	N/A	$61,444,265	0%	$0					
BRIDGE REPAIR	SF	0	N/A	$8,774,020	0%	$0	stage construction				
OTHER STRUCTURES (MISC.)	SF	0	N/A	$40,000,000	0%	$0	$68,847,031				
RETAINING WALLS	-	0	N/A	$11,336,500	0%	$0					
STANDPIPES (ESTIMATED)	EA	0	$14,000	$0	0%	$0					
CONCRETE MEDIAN BARRIER	LF	3,000	$48.77	$146,297	0%	$0					
CONCRETE SIDEWALK	SY	30,987	$65.00	$2,014,133	0%	$0					
MAJOR TRAFFIC SIGNAL MODIFICATIONS	EA	4	$50,000	$200,000	0%	$0					
NEW TRAFFIC SIGNAL	EA	14	$70,000	$980,000	0%	$0					
ROADWAY LIGHTING (EXPRESSWAY & RAMPS)	LF	136,165	$53.34	$7,262,687	0%	$0					
BCLC	LF	57,786	$8.00	$462,288	0%	$0					
CONCRETE CURBING	LF	19,920	$28.00	$557,760	0%	$0					
GUIDERAIL	LF	60,103	$48.00	$2,884,944	0%	$0					
SIGNING & STRIPING (ESTIMATED)	LS	1	$8,627,718	$8,627,718	0%	$0					
STAGE CONSTRUCTION ITEMS (ESTIMATED)	U	1	$3,000,000	$3,000,000	0%	$0					
NOISE BARRIERS (ESTIMATED)	LS	1	$0	$0	0%	$0					
MITIGATION (TBD)	U	1	$1,000,000	$1,000,000	0%	$0	0.426667232		#DIV/0!		
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$0	$0	0%	$0					
							Civil	Struct	Civil	Struct	
			SUBTOTAL A	**$861,567,686**		**$0**	$224,702,833	$526,646,568		$0	$0
LUMP SUM ITEMS											
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$17,231,354		$0					
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$25,847,031		$0					
MOBILIZATION (7.5% OF SUBTOTAL A)				$64,617,576		$0					
MINOR ITEMS (15% OF SUBTOTAL A)				$129,235,153		$0					
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$17,231,354		$0	$254,162,468			$0	
			SUBTOTAL B	**$1,115,730,154**		**$0**					
ADDITIONAL ITEMS											
INCIDENTALS (7% OF SUBTOTAL B)				$78,101,111		$0					
CONTINGENCIES (5% OF SUBTOTAL B)				$55,786,508		$0					
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$89,258,412		$0					
UTILITY COST (3% OF SUBTOTAL B)				$33,471,905		$0					
RIGHT-OF-WAY (ESTIMATED)	LS	1	$92,000,000	$92,000,000		$0	$348,617,935			$0	
			TOTAL	**$1,464,348,089**		**$0**	$1,354,129,804			$0	
			ROUNDED TOTAL	**$1,464,300,000**		**$0**					

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

EARTHWORK
UNIT - CUBIC YARDS

MAINLINE

Section Numbers	Distance	Cut (CADD)	Cut Area	Cut Volume	Fill (CADD)	Fill Area	Fill Volume
	0		**Cut Total=**	**556100**		**Fill Total=**	**625600**

680000	1181700
0.470588	556094.1
0.529412	625605.9

Assume 15% of total excavation is Rock Excavation, therefore 556100 x 15% = 83415.0 Rock Ex.
Assume remaining excavation material is Earth Excavation 556100 less Rock = 472685.0 Earth Ex.

OLD EST.
320000
360000

		Add 10% for Ramps and Sideroads	
Total Mainline Earth Excavation:	472,685	**519,954**	
Total Rock Excavation:	83,415	**91,757**	
Total Rock Excavation with Rock Swell (25%):	104,269	**114,696**	(available for fill)
Total Mainline Fill Required :	625,600	**688,160**	

SUMMARY

Item	**% Of Cut/Fill**	**Cut (C.Y.)**	**Fill (C.Y.)**		**Total (C.Y.)**
Earth Excavation	94.5	519,954			491,356
Rock Excavation	100	114,696			114,696
Fill	100	0	688,160		688,160
Contaminated Soil Excavation (Hydrocarbons)	5	519,954			25,998
Hazardous Waste Excavation (PCB's)	0.5	519,954			2,600
Surplus/Borrow (positive/negitive)				**Borrow**	-82,108

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

DRAINAGE SYSTEM
NEW = MAINLINE, CLIMBING LANE, PROPOSED RAMPS, PROPOSED SIDE ROADS
UPGRADE = EXISTING RAMPS AND EXISTING SIDE ROADS
UNIT - SF

LOCATION	LENGTH (L.F.)	AVG. WIDTH (L.F.)	AREA (SF)
NEW DRAINAGE SYSTEM			
MAINLINE			
I-84 EASTBOUND	**16,890**	**70**	**1182300**
I-84 WESTBOUND	**15,980**	**70**	**1118600**
8 NORTHBOUND	**6,130**	**70**	**429100**
8 SOUTHBOUND	**8,520**	**70**	**596400**
RAMPS			
Total Proposed Length	**47,925**	**26**	**1246050**
TURNING ROADS			
Total Proposed Length	**18,070**	**26**	**469820**
TOTAL NEW DRAINAGE SYSTEM			**5,042,270**

UPGRADE DRAINAGE SYSTEM			
SIDE ROADS			
Existing to Remain			
Bank St.	1550	32	**49600**
S. Main St.	300	32	**9600**
TOTAL UPGRADE DRAINAGE SYSTEM			**59,200**

MAJOR PIPE CULVERTS

N/A

TOTAL **0**

CONCRETE BOX CULVERTS

N/A

TOTAL **0**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

SUPERPAVE
Assume 0.002449 M-T/m^2/mm depth
UNIT - TONS

1 CM = 5400 LBS
1 CF = 200 LBS
1 TON =2000 LBS

LOCATION	LENGTH(ft)	WIDTH(ft)	THICKNESS(ft)	WEIGHT (TONS)
MAINLINE				
I-84 EASTBOUND	**16,890**	**70**	**0.666**	78741.18
I-84 WESTBOUND	**15,980**	**70**	**0.666**	74498.76
8 NORTHBOUND	**6,130**	**70**	**0.666**	28578.06
8 SOUTHBOUND	**8,520**	**70**	**0.666**	39720.24
RAMPS				
Total Proposed Length	**47,925**	**26**	**0.666**	82986.93
TURNING ROADS				
Total Proposed Length	**18,070**	**26**	**0.666**	31290.012
SIDE ROADS				
Existing to Remain				
Bank St.	1550	32	**0.666**	3303.36
S. Main St.	300	32	**0.666**	639.36
TOTAL SUPERPAVE				**339,758**

Assume thickness of superpave is 8 in

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

CONCRETE BASE COURSE
UNIT - CF

LOCATION	LENGTH (L.F.)	AVG WIDTH (L.F.)	AREA (SF)		
MAINLINE					
I-84 EASTBOUND	16,890	70	1182300		
I-84 WESTBOUND	15,980	70	1118600		
8 NORTHBOUND	6,130	70	429100		
8 SOUTHBOUND	8,520	70	596400		
RAMPS					
Total Proposed Length	47,925	26	1246050		
TURNING ROADS					
Total Proposed Length	18,070	26	469820		
				246SF	Rev. 10/22 per DOT - From $500/SF
				246SF	Rev. 10/22 per DOT - From $575/SF
				80SF	
TOTAL AREA OF CONCRETE BASE COURSE			5,042,270	40SF	
				150SF	

VOLUME
Thickness of Base Course = 230mm =9 in

TOTAL VOLUME OF CONCRETE BASE COURSE (CF) **3,806,914**

TOTAL VOLUME OF CONCRETE BASE COURSE (CY) **140996.81**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

MILLING OF BITUMINOUS PAVEMENT
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)
MAINLINE			
Existing to Remain	0	60	**0**
		SUBTOTAL	0.0
RAMPS			
Existing to Remain	2580.0	26.0	**67080**
		SUBTOTAL	67080.0
SIDE ROADS			
Existing to Remain			
Bank St.	1550	32	**49600**
S. Main St.	300	32	**9600**
		SUBTOTAL	59200.0
		TOTAL	**126280**

TOTAL MILLING (SY) **14031.11**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

CONCRETE PAVEMENT REPLACEMENT
ASSUME JTS. EVERY 12.2 M (40 ft)
MAINLINE ONLY
UNIT - SQUARE FEET

LOCATION	VOL. PER JOINT	NO. JOINTS	TOTAL VOL.
CONC. PVMT. REPLACEMENT			
Assume Joints every 40 ft Assume 50 ft long WB, 6 ft wide & 1 ft deep.	6.25	399.5	
Assume Joints every 40 ft Assume 50 ft long EB, 6 ft wide & 1 ft deep.	4.51	422.25	
Length of Mainline Repair - EB --- feet	4.51	11.3	51
Length of Mainline Repair - WB --- feet	6.25	11.3	71
TOTAL			**122**

NOT SURE ABOUT THE DIMENSIONS FOR THE JOINT (Vol For Joint)?
ASSUME 1 FT DEEP * 40 LONG *PROPOSED ROAD WIDTH (Rita)

Struct $/SF	
246SF	Rev. 10/22 per DOT - From $500/SF
246SF	Rev. 10/22 per DOT - From $575/SF
80SF	
40SF	
150SF	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

SUBBASE
UNIT - CUBIC YARDS
Depth = 10 in. earth cuts and fills

FORMATION OF SUBGRADE
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)	DEPTH (ft)	VOLUME (ft^3)
MAINLINE					
I-84 EASTBOUND	16,890	70	1182300	0.833	984855.9
I-84 WESTBOUND	15,980	70	1118600	0.833	931793.8
8 NORTHBOUND	6,130	70	429100	0.833	357440.3
8 SOUTHBOUND	8,520	70	596400	0.833	496801.2
RAMPS					
Total Proposed Length	47,925	26	1246050	0.833	1037959.65
TURNING ROADS					
Total Proposed Length	18,070	26	469820	0.833	391360.06
					4200210.91
TOTAL SUPERPAVE (CF)					155563.4
TOTAL SUPERPAVE (CY)					155,563
TOTAL VOLUME FOR SUBBASE (CY)			5,042,270		
TOTAL AREA FOR FORMATION OF SUBGRADE (SF)			560,252		
TOTAL AREA FOR FORMATION OF SUBGRADE (SY)					

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

CONCRETE MEDIAN BARRIER
UNIT - `L.F.

LOCATION	LENGTH EA. DIRECTION	TOTAL LENGTH
Mainline Open Median (assume 10%)	#REF!	**65740.0**
Mainline Fixed Median (at East Limit)	1050.0	**2100.0**
Ramps (assume 5% barrier) total ramp length measuerd for both directions existing to remain + existing to be removed	N/A	**2396.3**
Shoulders (assume 2% barrier)	#REF!	**#REF!**
TOTAL		**#REF!**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

ROADWAY LIGHTING
MEASURED BY LENGTH OF ROADWAY;
MAINLINE AND RAMPS
UNIT - LF

LOCATION	TOTAL LENGTH (LF)
ROADWAY LIGHTING (EXPRESSWAY)	
Assume Entire Mainline Length	65740
Existing to Remain	0
ROADWAY LIGHTING (RAMPS)	
Assume Existing Ramp Length to Remain + Proposed	50505
TURNING ROADS	
Assume Entire Length	18070
SIDE ROADS	
Existing to Remain	
Assume Entire Length	1850
TOTAL	**136165**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

CURBING
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION	LENGTH (LF)
BCLC	
Assume 15% of Mainline Length	9861
both roadways	
Assume entire ramp length	47925
existing to remain	2580
Assume entire turning road length	18,070
TOTAL	**57786**
CONCRETE CURB	
Assume entire lenth of side roads to remain and turning roads	19920
	N/A
TOTAL	**19920**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** _____
ALTERNATIVE 7 **CHKD BY:** _____

GUIDERAIL
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION		LENGTH (LF)
MAINLINE GUIDERAIL		
Assume 20% of total project length	mainline length x 0.20 x 2	13148
Existing to Remain + Existing to be Removed		32870
RAMP GUIDERAIL		
Assume 20% of remaining and proposed length		10101
SIDE ROAD GUIDERAIL		
Assume 20% of remaining and proposed length		3984
TOTAL		**60103**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

ESTIMATED ITEMS
UNIT - AS NOTED

ITEM	UNIT	
STANDPIPES	EA	**0**
Assume one stand pipe at each of the following grade crossings:		
SIGNING & STRIPING	LS	**$8,627,718**
Assume $80,000 per Kilometer of Mainline Alignment		
STAGE CONSTRUCTION ITEMS	U	**$3,000,000**
Assume $2M per contract for additional MPT costs undetermined at this time.		
NOISE BARRIERS	LS	**$0**
MITIGATION	U	**$1,000,000**
To Be Determined		
INCIDENT MANAGEMENT SYSTEM	LS	**$0**
Assume $100,000 per Kilometer of Mainline Alignment		
RIGHT-OF-WAY	LS	**$92,000,000**

Assume per property acquisition (Full and partial) $1,000,000.00
Estimate total properties acquired 92

Larger ROW costs for purchase of property for Sedimentation/Detention Basins and other down stream impacts are assumed to be included in the Mitigation Costs.

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

STRUCTURES
ESTIMATED

UNIT - SQUARE FEET

LOCATION	Bridge Replacement	Bridge Widening	Deck Repair	Deck Replacement	Superstructure Replacement
BRIDGES					
Refer to 8&84 structure estimate by others.					

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** _____
ALTERNATIVE 7 **CHKD BY:** _____

CONCRETE SIDEWALK
MEASURED BY LENGTH OF SIDEROADS;

UNIT - LF

LOCATION	LENGTH (LF)	TOTAL LENGTH (LF)	WIDTH (LF)	AREA (SF)	COMMENT	
TURNING ROADS						
Assume Entire Length	18070	36140.0	7.0	252980.0	BOTH SIDES OF LOCAL TURNING ROADS	Assume 2.0' sidewalk depth
SIDE ROADS						
Existing to Remain						
Assume Entire Length	1850	3700.0	7.0	25900.0	BOTH SIDES OF LOCAL ROADS	
TOTAL				**278880.0**		
TOTAL AREA (SY)				**30986.66667**		

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

TRAFFIC SIGNAL
ESTIMATED

UNIT

LOCATION	New Traffic Signal	Major Traffic Signal Modifications
Proposed Side Roads		
New I-84 WB Ramps at Interchange 18 at W.Main St	1	
New I-84 EB Ramps at Interchange 18 at W.Main St	1	
Bridge over I-84 EB and WB at Chase Parkway		2
W. Main St. at Thomsaton Ave.	1	
Riverside at Freight	1	
Freight at new N/S Connector	1	
Sunnyside at Riverside	1	
Sunnyside at new Bank St. Connector	1	
Sunnyside at Meadow	1	
Meadow at Rte. 8 Ramps	1	
Sunnyside at I-84 WB On-ramp	1	
Sunnyside at Bank	1	
I-84 EB Ramps at New Connector	1	
Bank Street	2	
Int. 23		2
TOTAL	14	4

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

WSA PROJECT NO. 519530

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 7

MADE BY: _____
CHKD BY: _____

MEASUREMENTS
UNIT - AS NOTED

ITEM	VALUE	UNIT	COMMENT
MAINLINE			
I-84 EASTBOUND	16,890	ft	
I-84 WESTBOUND	15,980	ft	
EB Existing To Be Removed	16,890	ft	
WB Existing To Be Removed	15,980	ft	
8 NORTHBOUND	6,130	ft	
8 SOUTHBOUND	8,520	ft	
NB Existing To Be Removed	6,130	ft	
SB Existing To Be Removed	8,520	ft	
Existing Length (to Remain)	0	ft	
Existing Width (Approximately)	60	ft	
Existing Length (to be Removed)	32,870	ft	
Proposed Length	32,870	ft	
Proposed Width	70	ft	
RAMPS			
I-84 EB Ramps to/from Country Club Road	2,460	ft	1,2
I-84 WB On-ramp at Interchange 18	1,095	ft	3
Rte 8 SB CD to W. Main St.	3,310	ft	4
Rte 8 SB CD to I-84 WB	1,130	ft	5
I-84 WB Off-ramp to W. Main	1,940	ft	6
I-84 EB Ramps to Rte. 8 NB/SB	2,780	ft	7
CD-1 Rte 8 SB to I-84 WB/W. Main	1,020	ft	CD-1
On-ramp from Highland to I-84 EB	1,130	ft	8
Off-ramp from I-84 EB to CD-2	760	ft	9
Ramps from W. Main/Rte. 8 SB to CD-1	2,340	ft	10
On-ramp from W. Main to 8 SB	1,570	ft	11
Ramp from 8 SB to I-84 EB/CD-2	1,160	ft	12
Rte 8 SB Interchange 32 Off-ramp W. Main	1,400	ft	13
Rte 8 NB Interchange 34 On-ramp	870	ft	14
Rte 8 NB Ramp to CD-1	750	ft	15
Rte 8 NB Ramp to I-84 EB	810	ft	16
Frontage Rd EB	9,840	ft	17, 19, 20, 22
Interchange 22 On-ramp to Frontage Rd	1,000	ft	18
Off-ramp from Frontage Rd EB to Union St.	910	ft	21
On-ramp from Union St. to I-84 EB	1,790	ft	23
I-84 WB Interchange 23 Off-ramp	1,590	ft	24
I-84 WB Interchange 22 Off-ramp	1,320	ft	25
Ramp from I-84 Interchange 22 to Bank St.	4,140	ft	26
I-84 WB Interchange 22 On-ramp	580	ft	27
On-ramp from Meadow St. to Rte 8 NB/SB	950	ft	28
I-84 WB Ramp to Rte 8 SB	1,280	ft	29
Existing Length (to Remain)	2580	ft	
Existing Width (Approximately)	26	ft	
Existing Length (to be Removed)	4,860	ft	
Proposed Length	47,925	ft	
Proposed Width	26	ft	
TURNING ROADS			
CD Road EB	1,290	ft	CD-2
New Connector Road (W. Main to S. Main)	5,090	ft	side road 1
New Connector Road (Sunnyside to Meadow)	1,060	ft	side road 2
Riverside Dr. Realign	4,340	ft	side road 3
Chase Pkwy Realign	1,770	ft	side road 4
West Main Realignment	1,380	ft	side road 5
Meadow Street	1,400	ft	side road 6
New Connector Road (Highland to W. Main)	1,740	ft	side road 7
Existing Length (to Remain)	0	ft	
Existing Width (Approximately)	26	ft	
Existing Length (to be Removed)	8,890	ft	
Proposed Length	18,070	ft	
Proposed Width	26	ft	
SIDE ROADS			
Existing to Remain			Upgrade
Bank St.	1,550	ft	
S. Main St.	300	ft	
Existing Length (to Remain)	1,850	ft	
Existing Width (Approximately)	32	ft	
Existing Length (to be Removed)	1,850	ft	

NOTE:
1. All length dimensions do not include roads on structure. Structure costs include pavement.
2. All length dimensions are approximate and measured from CADD.

Mainline Lengths and Widths

I-84	length	weighting factor	width	
EB Mainline Sec. 1 (western limit to bridge 11)	2686	0.159029	60	
EB Mainline Sec. 2 (bridge 11 to bridge 12)	2569	0.152102	85	
EB Mainline Sec. 3 (bridge 12 to structure 5)	1592	0.094257	72	
EB Mainline Sec. 4 (structure 5 to bridge 6)	988	0.058496	84	
EB Mainline Sec. 5 (br. 6 to br. 13)	325	0.019242	96	
EB Mainline Sec. 6 (br. 13 to br. 14)	763	0.045175	96	
EB Mainline Sec. 7 (br. 14 to br. 7)	3496	0.206986	96	(greatest width in section, reduces to 72' min.)
EB Mainline Sec. 8 (br. 7 to br. 15)	1825	0.108052	72	(greatest width in section, reduces to 60' min.)
EB Mainline Sec. 9 (br. 15 to eastern limit)	2646	0.156661	60	
total length	*16890*	0.355429		
weighted width		77.40468		
WB Mainline Sec. 1 (eastern limit to br. 15)	2173	0.135982	60	
WB Mainline Sec. 2 (br. 15 to br. 10)	1733	0.108448	72	(greatest width in section, reduces to 60' min.)
WB Mainline Sec. 3 (br. 10 to br. 14)	3519	0.220213	84	(greatest width in section, reduces to 56' min.)
WB Mainline Sec. 4 (br. 14 to br. 13)	689	0.043116	84	
WB Mainline Sec. 5 (br. 13 to br. 9)	375	0.023467	84	
WB Mainline Sec. 6 (br. 9 to structure 8)	912	0.057071	78	
WB Mainline Sec. 7 (structure 8 to Br. 12)	1490	0.093242	72	
WB Mainline Sec. 8 (br. 12 to br. 11)	2506	0.156821	60	
WB Mainline Sec. 9 (br. 11 to western limit)	2583	0.16164	72	
total length	*15980*	0.336279		
weighted width		72.27034		
Rt. 8				
NB Mainline Sec. 1 (southern limit to structure 33)	1257	0.205057	50	
NB Mainline Sec. 2 (structure 33 to structure 41)	668	0.108972	48	
NB Mainline Sec. 3 (structure 41 to Br. 35)	1843	0.300653	48	
NB Mainline Sec. 4 (br. 35 to northern limit)	2362	0.385318	64	
total length	*6130*	0.128998		
weighted width		54.5752		
SB Mainline Sec. 1 (northern limit to br. 37)	2272	0.266667	64	
SB Mainline Sec. 2 (br. 37 to Wall 108)	2133	0.250352	64	
SB Mainline Sec. 3 (wall 108 to Br. 18)	1072	0.125822	40	
SB Mainline Sec. 4 (br. 18 to structure 36)	1754	0.205869	62	
SB Mainline Sec. 5 (structure 36 to southern limit)	1289	0.151291	50	
total length	*8520*	0.179293		
weighted width		58.45047		
GRAND TOTAL	47520			
weighted width		69.33479		
		70		

Common to Alts. 2 and 3

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: K. Smith
CHKD BY:

SUMMARY

(2001 UNIT PRICES)

ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	EXTENSION	March 1, 2006 Mods % INCREASE	REVISED $$					
SPECIFIC ITEMS											
EARTH EXCAVATION	CY	670,987	$20.00	$13,419,737	0%	$0					
ROCK EXCAVATION	CY	156,626	$50.00	$7,831,313	0%	$0					
UNSUITABLE MATERIAL EXCAVATION (MUCK)	CY	0	$10.00	$0	0%	$0					
CONTAMINATED SOIL EXCAVATION (HYDROCARBONS)	CY	35,502	$70.00	$2,485,137	0%	$0					
HAZARDOUS WASTE EXCAVATION (PCB's)	CY	3,550	$450.00	$1,597,588	0%	$0					
BORROW	CY	112,117	$18.00	$2,018,104	0%	$0					
NEW DRAINAGE SYSTEM	SY	5,327,890	$20.00	$106,557,800	0%	$0					
EXISTING DRAINAGE UPGRADE	SY	59,200	$7.00	$414,400	0%	$0					
SUPERPAVE	TON	358,780	$70.00	$25,114,614	0%	$0					
CONCRETE BASE COURSE WIDENING	CY	148,984	$260.00	$38,735,734	0%	$0					
MILLING OF BITUMINOUS CONCRETE (0 TO 4")	SY	14,031	$4.00	$56,124	0%	$0					
CONCRETE PVMT REPLACEMENT FOR ROADWAY (FULL DEPTH)	CY	150	$580.00	$87,000	0%	$0					
SUBBASE	CY	164,375	$28.00	$4,602,508	0%	$0					
MAJOR PIPE CULVERTS	LF	0	$750	$0	0%	$0					
CONCRETE BOX CULVERTS	LF	0	$975	$0	0%	$0					
BRIDGE PROPOSED	SF	0	N/A	$506,543,533	0%	$0					
BRIDGE DEMOLITION	SF	0	N/A	$66,230,138	0%	$0					
BRIDGE REPAIR	SF	0	N/A	$178,827	0%	$0	stage construction				
OTHER STRUCTURES (MISC.)	SF	0	N/A	$10,000	0%	$0	$27,565,681				
RETAINING WALLS	SF	0	N/A	$14,031,500							
STANDPIPES (ESTIMATED)	EA	0	$14,000	$0	0%	$0					
CONCRETE MEDIAN BARRIER	LF	3,000	$48.77	$146,297	0%	$0					
CONCRETE SIDEWALK	SY	38,189	$65.00	$2,482,278	0%	$0					
MAJOR TRAFFIC SIGNAL MODIFICATIONS	EA	6	$50,000	$300,000	0%	$0					
NEW TRAFFIC SIGNAL	EA	19	$70,000	$1,330,000	0%	$0					
ROADWAY LIGHTING (EXPRESSWAY & RAMPS)	LF	142,771	$53.34	$7,615,034	0%	$0					
BCLC	LF	59,799	$8.00	$478,395	0%	$0					
CONCRETE CURBING	LF	24,550	$28.00	$687,400	0%	$0					
GUIDERAIL	LF	61,402	$48.00	$2,947,306	0%	$0					
SIGNING & STRIPING (ESTIMATED)	LS	1	$8,621,943	$8,621,943	0%	$0					
STAGE CONSTRUCTION ITEMS (ESTIMATED)	U	1	$3,000,000	$3,000,000	0%	$0					
NOISE BARRIERS (ESTIMATED)	LS	1	$0	$0	0%	$0					
MITIGATION (TBD)	U	1	$1,000,000	$1,000,000	0%	$0	0.484776121		#DIV/0!		
INCIDENT MANAGEMENT SYSTEM (ESTIMATED)	LS	1	$0	$0	0%	$0					
							Civil	Struct	Civil	Struct	
			SUBTOTAL A	**$818,522,707**		**$0**	$245,560,209	$506,543,533		$0	$0
LUMP SUM ITEMS											
CLEARING AND GRUBBING (2% OF SUBTOTAL A)				$16,370,454		$0					
MAINTENANCE & PROTECTION OF TRAFFIC (3% OF SUBTOTAL A)				$24,555,681		$0					
MOBILIZATION (7.5% OF SUBTOTAL A)				$61,389,203		$0					
MINOR ITEMS (15% OF SUBTOTAL A)				$122,778,406		$0					
HEALTH AND SAFETY SUPPORT COSTS (2% OF SUBTOTAL A)				$16,370,454		$0	$241,464,199			$0	
			SUBTOTAL B	**$1,059,986,906**		**$0**					
ADDITIONAL ITEMS											
INCIDENTALS (7% OF SUBTOTAL B)				$74,199,083		$0					
CONTINGENCIES (5% OF SUBTOTAL B)				$52,999,345		$0					
PRELIMINARY ENGINEERING (8%OF SUBTOTAL B)				$84,798,952		$0					
UTILITY COST (3% OF SUBTOTAL B)				$31,799,607		$0					
RIGHT-OF-WAY (ESTIMATED)	LS	1	$110,000,000	$110,000,000		$0	$353,796,988			$0	
			TOTAL	**$1,413,783,894**		**$0**	$1,347,364,929			$0	
			ROUNDED TOTAL	**$1,413,800,000**		**$0**					

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** _____
ALTERNATIVE 8 **CHKD BY:** _____

EARTHWORK
UNIT - CUBIC YARDS

MAINLINE

Section Numbers	Distance	Cut (CADD)	Cut Area	Cut Volume	Fill (CADD)	Fill Area	Fill Volume
	0			**Cut Total=**	**759400**	**Fill Total=**	**854300**

680000	1613700
0.470588	759388.2
0.529412	854311.8

Assume 15% of total excavation is Rock Excavation, therefore 759400 x 15% = 113910.0 Rock Ex.
Assume remaining excavation material is Earth Excavation 759400 less Rock = 645490.0 Earth Ex.

OLD EST.	
320000	CUT
360000	FILL

		Add 10% for Ramps and Sideroads	
Total Mainline Earth Excavation:	645,490	**710,039**	
Total Rock Excavation:	113,910	**125,301**	
Total Rock Excavation with Rock Swell (25%):	142,388	**156,626**	(available for fill)
Total Mainline Fill Required :	854,300	**939,730**	

SUMMARY

Item	% Of Cut/Fill	Cut (C.Y.)	Fill (C.Y.)		Total (C.Y.)
Earth Excavation	94.5	710,039			670,987
Rock Excavation	100	156,626			156,626
Fill	100	0	939,730		939,730
Contaminated Soil Excavation (Hydrocarbons)	5	710,039			35,502
Hazardous Waste Excavation (PCB's)	0.5	710,039			3,550
Surplus/Borrow (positive/negitive)				**Borrow**	-112,117

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

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DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

DRAINAGE SYSTEM
NEW = MAINLINE, CLIMBING LANE, PROPOSED RAMPS, PROPOSED SIDE ROADS
UPGRADE = EXISTING RAMPS AND EXISTING SIDE ROADS
UNIT - SF

LOCATION	LENGTH (L.F.)	AVG. WIDTH (L.F.)	AREA (SF)
NEW DRAINAGE SYSTEM			
MAINLINE			
I-84 EASTBOUND	**16,910**	**70**	**1183700**
I-84 WESTBOUND	**15,938**	**70**	**1115660**
8 NORTHBOUND	**9,000**	**70**	**630000**
8 SOUTHBOUND	**8,040**	**70**	**562800**
RAMPS			
Total Proposed Length	**49,945**	**26**	**1298570**
TURNING ROADS			
Total Proposed Length	**20,660**	**26**	**537160**
TOTAL NEW DRAINAGE SYSTEM			**5,327,890**
UPGRADE DRAINAGE SYSTEM			
SIDE ROADS			
Existing to Remain			
Bank St.	1550	32	**49600**
S. Main St.	300	32	**9600**
TOTAL UPGRADE DRAINAGE SYSTEM			**59,200**
MAJOR PIPE CULVERTS			
	N/A		
TOTAL			**0**
CONCRETE BOX CULVERTS			
	N/A		
TOTAL			**0**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

SUPERPAVE
Assume 0.002449 M-T/m^2/mm depth
UNIT - TONS

1 CM = 5400 LBS
1 CF = 200 LBS
1 TON =2000 LBS

LOCATION	LENGTH(ft)	WIDTH(ft)	THICKNESS(ft)	WEIGHT (TONS)
MAINLINE				
I-84 EASTBOUND	**16,910**	**70**	**0.666**	78834.42
I-84 WESTBOUND	**15,938**	**70**	**0.666**	74302.956
8 NORTHBOUND	**9,000**	**70**	**0.666**	41958
8 SOUTHBOUND	**8,040**	**70**	**0.666**	37482.48
RAMPS				
Total Proposed Length	**49,945**	**26**	**0.666**	86484.762
TURNING ROADS				
Total Proposed Length	**20,660**	**26**	**0.666**	35774.856
SIDE ROADS				
Existing to Remain				
Bank St.	1550	32	**0.666**	3303.36
S. Main St.	300	32	**0.666**	639.36
TOTAL SUPERPAVE				**358,780**

Assume thickness of superpave is 8 in

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

CONCRETE BASE COURSE
UNIT - CF

LOCATION	LENGTH (L.F.)	AVG WIDTH (L.F.)	AREA (SF)		
MAINLINE					
I-84 EASTBOUND	16,910	70	1183700		
I-84 WESTBOUND	15,938	70	1115660		
8 NORTHBOUND	9,000	70	630000		
8 SOUTHBOUND	8,040	70	562800		
RAMPS					
Total Proposed Length	49,945	26	1298570		
TURNING ROADS					
Total Proposed Length	20,660	26	537160		
				246SF	Rev. 10/22 per DOT - From $500/SF
				246SF	Rev. 10/22 per DOT - From $575/SF
				80SF	
TOTAL AREA OF CONCRETE BASE COURSE			5,327,890	40SF	
				150SF	

VOLUME
Thickness of Base Course = 230mm =9 in

TOTAL VOLUME OF CONCRETE BASE COURSE (CF) 4,022,557

TOTAL VOLUME OF CONCRETE BASE COURSE (CY) 148983.59

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

MILLING OF BITUMINOUS PAVEMENT
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)
MAINLINE			
Existing to Remain	0	60	**0**
		SUBTOTAL	0.0
RAMPS			
Existing to Remain	2580.0	26.0	**67080**
		SUBTOTAL	67080.0
SIDE ROADS			
Existing to Remain			
Bank St.	1550	32	**49600**
S. Main St.	300	32	**9600**
		SUBTOTAL	59200.0
		TOTAL	**126280**

TOTAL MILLING (SY) **14031.11**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

CONCRETE PAVEMENT REPLACEMENT
ASSUME JTS. EVERY 12.2 M (40 ft)
MAINLINE ONLY
UNIT - SQUARE FEET

LOCATION	VOL. PER JOINT	NO. JOINTS	TOTAL VOL.
CONC. PVMT. REPLACEMENT			
Assume Joints every 40 ft Assume 50 ft long WB, 6 ft wide & 1 ft deep.	6.25	398.45	
Assume Joints every 40 ft Assume 50 ft long EB, 6 ft wide & 1 ft deep.	4.51	422.75	
Length of Mainline Repair - EB --- feet	4.51	11.3	51
Length of Mainline Repair - WB --- feet	6.25	11.3	71
TOTAL			**122**

NOT SURE ABOUT THE DIMENSIONS FOR THE JOINT (Vol For Joint)?
ASSUME 1 FT DEEP * 40 LONG *PROPOSED ROAD WIDTH

Struct $/SF	
246SF	Rev. 10/22 per DOT - From $500/SF
246SF	Rev. 10/22 per DOT - From $575/SF
80SF	
40SF	
150SF	

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

SUBBASE
UNIT - CUBIC YARDS
Depth = 10 in. earth cuts and fills

FORMATION OF SUBGRADE
UNIT - SQUARE YARDS

LOCATION	LENGTH (ft)	WIDTH (ft)	AREA (ft^2)	DEPTH (ft)	VOLUME (ft^3)
MAINLINE					
I-84 EASTBOUND	16,910	70	1183700	0.833	986022.1
I-84 WESTBOUND	15,938	70	1115660	0.833	929344.78
8 NORTHBOUND	9,000	70	630000	0.833	524790
8 SOUTHBOUND	8,040	70	562800	0.833	468812.4
RAMPS					
Total Proposed Length	49,945	26	1298570	0.833	1081708.81
TURNING ROADS					
Total Proposed Length	20,660	26	537160	0.833	447454.28
					4438132.37
TOTAL SUPERPAVE (CF)					164375.3
TOTAL SUPERPAVE (CY)					164,375
TOTAL VOLUME FOR SUBBASE (CY)			5,327,890		
TOTAL AREA FOR FORMATION OF SUBGRADE (SF)			591,988		
TOTAL AREA FOR FORMATION OF SUBGRADE (SY)					

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

CONCRETE MEDIAN BARRIER
UNIT - `L.F.

LOCATION	LENGTH EA. DIRECTION	TOTAL LENGTH
Mainline Open Median (assume 10%)	#REF!	**65696.0**
Mainline Fixed Median (at East Limit)	1050.0	**2100.0**
Ramps (assume 5% barrier) total ramp length measuerd for both directions existing to remain + existing to be removed	N/A	**2497.3**
Shoulders (assume 2% barrier)	#REF!	**#REF!**
TOTAL		**#REF!**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

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MADE BY: _____
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ROADWAY LIGHTING
MEASURED BY LENGTH OF ROADWAY;
MAINLINE AND RAMPS
UNIT - LF

LOCATION	TOTAL LENGTH (LF)
ROADWAY LIGHTING (EXPRESSWAY)	
Assume Entire Mainline Length	65696
Existing to Remain	0
ROADWAY LIGHTING (RAMPS)	
Assume Existing Ramp Length to Remain + Proposed	52525
TURNING ROADS	
Assume Entire Length	20660
SIDE ROADS	
Existing to Remain	
Assume Entire Length	3890
TOTAL	**142771**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

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ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

CURBING
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION	LENGTH (LF)
BCLC	
Assume 15% of Mainline Length	9854
both roadways	
Assume entire ramp length	49945
existing to remain	2580
Assume entire turning road length	20,660
TOTAL	**59799**
CONCRETE CURB	
Assume entire lenth of side roads to remain and turning roads	24550
	N/A
TOTAL	**24550**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE **MADE BY:** _____
ALTERNATIVE 8 **CHKD BY:** _____

GUIDERAIL
ESTIMATED QUANTITY

UNIT - L.F.

LOCATION		LENGTH (LF)
MAINLINE GUIDERAIL		
Assume 20% of total project length	mainline length x 0.20 x 2	13139.2
Existing to Remain + Existing to be Removed		32848
RAMP GUIDERAIL		
Assume 20% of remaining and proposed length		10505
SIDE ROAD GUIDERAIL		
Assume 20% of remaining and proposed length		4910
TOTAL		**61402**

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108
DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

ESTIMATED ITEMS
UNIT - AS NOTED

ITEM	UNIT	
STANDPIPES	EA	**0**
Assume one stand pipe at each of the following grade crossings:		
SIGNING & STRIPING	LS	**$8,621,943**
Assume $80,000 per Kilometer of Mainline Alignment		
STAGE CONSTRUCTION ITEMS	U	**$3,000,000**
Assume $2M per contract for additional MPT costs undetermined at this time.		
NOISE BARRIERS	LS	**$0**
MITIGATION	U	**$1,000,000**
To Be Determined		
INCIDENT MANAGEMENT SYSTEM	LS	**$0**
Assume $100,000 per Kilometer of Mainline Alignment		
RIGHT-OF-WAY	LS	**$110,000,000**

Assume per property acquisition (Full and partial) $1,000,000.00
Estimate total properties acquired 110

Larger ROW costs for purchase of property for Sedimentation/Detention Basins and other down stream impacts are assumed to be included in the Mitigation Costs.

ADD-A-LANE ALTERNATIVE

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____

CHKD BY: _____

STRUCTURES
ESTIMATED

UNIT - SQUARE FEET

LOCATION	Bridge Replacement	Bridge Widening	Deck Repair	Deck Replacement	Superstructure Replacement
BRIDGES					
Refer to 8&84 structure estimate by others.					

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE **PROJECT NO. 174-H108**

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

CONCRETE SIDEWALK
MEASURED BY LENGTH OF SIDEROADS;

UNIT - LF

LOCATION	LENGTH (LF)	TOTAL LENGTH (LF)	WIDTH (LF)	AREA (SF)	COMMENT	
TURNING ROADS						
Assume Entire Length	20660	41320.0	7.0	289240.0	BOTH SIDES OF LOCAL TURNING ROADS	Assume 2.0' sidewalk depth
SIDE ROADS						
Existing to Remain						
Assume Entire Length	3890	7780.0	7.0	54460.0	BOTH SIDES OF LOCAL ROADS	
TOTAL				**343700.0**		
TOTAL AREA (SY)				**38188.88889**		

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

PROJECT NO. 174-H108

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

TRAFFIC SIGNAL
ESTIMATED

UNIT

LOCATION	New Traffic Signal	Major Traffic Signal Modifications		
Proposed Side Roads				
New I-84 WB Ramps at Interchange 18 at W.Main St	1			1
New I-84 EB Ramps at Interchange 18 at W.Main St	1			2
Bridge over I-84 EB and WB at Chase Parkway		2	3,4	
W. Main St. at Thomsaton Ave.	1			5
Riverside at W. Main	1			6
Riverside at Freight	1			7
Riverside at Rt. 8	1			8
Freight at new N/S Connector	1			9
Sunnyside at Riverside	1			10
Sunnyside at new Bank St. Connector	1			11
Sunnyside at new N/S Connector	1			12
Sunnyside at Meadow	1			13
Sunnyside at I-84 WB On-ramp	1			14
Sunnyside at Bank	1			15
Bank Street	3		16,17,18	
Rte. 8 at Int. 30	1			19
S. Main St.		2	20,21	
Baldwin St.	2		22,23	
Int. 23		2	24,25	
TOTAL	19	6		

WILBUR SMITH ASSOCIATES

PRELIMINARY ENGINEERING COST ESTIMATE

WSA PROJECT NO. 519530

DATE: 8/31/2010

PROJECT:
I-84/RTE 8 INTERCHANGE
ALTERNATIVE 8

MADE BY: _____
CHKD BY: _____

MEASUREMENTS
UNIT - AS NOTED

ITEM	VALUE	UNIT	COMMENT
MAINLINE			
I-84 EASTBOUND	16,910	ft	
I-84 WESTBOUND	15,938	ft	
EB Existing To Be Removed	16,910	ft	
WB Existing To Be Removed	15,938	ft	
8 NORTHBOUND	9,000	ft	
8 SOUTHBOUND	8,040	ft	
NB Existing To Be Removed	9,000	ft	
SB Existing To Be Removed	8,040	ft	
Existing Length (to Remain)	0	ft	
Existing Width (Approximately)	60	ft	
Existing Length (to be Removed)	32,848	ft	
Proposed Length	32,848	ft	
Proposed Width	70	ft	
RAMPS			
I-84 EB Ramps to/from Country Club Road	2,460	ft	1,2
I-84 WB On-ramp at Interchange 18	1,095	ft	3
Rte 8 SB CD to W. Main St.	3,310	ft	4
Rte 8 SB CD to I-84 WB	1,130	ft	5
I-84 WB Off-ramp to W. Main	1,940	ft	6
I-84 EB Ramps to Rte. 8 NB/SB	2,050	ft	7
CD-1 Rte 8 SB to I-84 WB/W. Main	1,840	ft	CD-1
Off-ramp from I-84 EB to Bank St.	320	ft	9
On-ramp from W. Main to I-84 EB/WB	1,080	ft	11
Ramp from 8 SB to I-84 EB/WB	2,610	ft	12
Rte 8 SB Interchange 32 Off-ramp W. Main	1,400	ft	13
Rte 8 NB On-ramp from I-84 EB/WB	1,950	ft	14
Rte 8 NB Ramp to CD-1	790	ft	15
Frontage Rd EB	8,150	ft	19, 20, 22
Interchange 22 On-ramp to I-84 EB	1,140	ft	18
Off-ramp from Frontage Rd EB to Union St.	910	ft	21
On-ramp from Union St. to I-84 EB	1,790	ft	23
I-84 WB Interchange 23 Off-ramp	1,590	ft	24
I-84 WB Interchange 22 Off-ramp	1,320	ft	25
Ramp from I-84 Interchange 22 to Baldwin St.	2,180	ft	26
I-84 WB Interchange 22 On-ramp	580	ft	27
On-ramp from Meadow St. to I-84 WB	200	ft	28
Rte 8 SB Interchange 30 Ramps	2,180	ft	29
Rte 8 NB Interchange 30 Ramps	2,460	ft	30
Rte 8 SB Ramps at Freight St	2,160	ft	31
Rte 8 NB Ramps at Freight St	2,030	ft	32
I-84 WB Ramp to Rte 8 SB	1,280	ft	-

Existing Length (to Remain)	2580	ft	
Existing Width (Approximately)	26	ft	
Existing Length (to be Removed)	8,230	ft	
Proposed Length	49,945	ft	
Proposed Width	26	ft	
TURNING ROADS			
New Connector Road (W. Main to Sunnyside Cc	2,760	ft	side road 1
New E/W Connector Road (Sunnyside to Baldwi	4,560	ft	side road 2
Riverside Dr. Realign	6,450	ft	side road 3
Chase Pkwy Realign	1,770	ft	side road 4
West Main Realignment	1,380	ft	side road 5
New Connector Rd. (Sunnyside to Bank)	1,730	ft	side road 6
New Connector Road (Highland to W. Main)	1,740	ft	side road 7
Freight Street Extension	270	ft	side road 8
Existing Length (to Remain)	0	ft	
Existing Width (Approximately)	26	ft	
Existing Length (to be Removed)	11,600	ft	
Proposed Length	20,660	ft	
Proposed Width	26	ft	
SIDE ROADS			
Existing to Remain			Upgrade
Bank St.	1,550	ft	
S. Main St.	300	ft	
Freight Street	2,040	ft	
Existing Length (to Remain)	3,890	ft	
Existing Width (Approximately)	32	ft	
Existing Length (to be Removed)	3,890	ft	

NOTE:
1. All length dimensions do not include roads on structure. Structure costs include pavement.
2. All length dimensions are approximate and measured from CADD.

Mainline Lengths and Widths

I-84	length	weighting factor	width	
EB Mainline Sec. 1 (western limit to bridge 11)	2686	0.158841	60	
EB Mainline Sec. 2 (bridge 11 to bridge 12)	2569	0.151922	85	
EB Mainline Sec. 3 (bridge 12 to structure4)	1550	0.091662	72	
EB Mainline Sec. 4 (structure 4 to bridge 5)	1050	0.062093	84	
EB Mainline Sec. 5 (br. 5 to br. 13)	325	0.019219	96	
EB Mainline Sec. 6 (br. 13 to br. 14)	763	0.045121	96	
EB Mainline Sec. 7 (br. 14 to br. 7)	3496	0.206742	96	(greatest width in section, reduces to 72' min.)
EB Mainline Sec. 8 (br. 7 to br. 15)	1825	0.107924	72	(greatest width in section, reduces to 60' min.)
EB Mainline Sec. 9 (br. 15 to eastern limit)	2646	0.156475	60	
total length	*16910*	0.338959		
weighted width		77.44228		
WB Mainline Sec. 1 (eastern limit to br. 15)	2173	0.136341	60	
WB Mainline Sec. 2 (br. 15 to br. 10)	1733	0.108734	72	(greatest width in section, reduces to 60' min.)
WB Mainline Sec. 3 (br. 10 to br. 14)	3519	0.220793	84	(greatest width in section, reduces to 56' min.)
WB Mainline Sec. 4 (br. 14 to br. 13)	689	0.04323	84	
WB Mainline Sec. 5 (br. 13 to br. 9)	375	0.023529	84	
WB Mainline Sec. 6 (br. 9 to structure 8)	940	0.058979	90	
WB Mainline Sec. 7 (structure 8 to Br. 12)	1420	0.089095	72	
WB Mainline Sec. 8 (br. 12 to br. 11)	2506	0.157234	60	
WB Mainline Sec. 9 (br. 11 to western limit)	2583	0.162066	72	
total length	*15938*	0.319476		
weighted width		72.98933		
Rt. 8				
NB Mainline Sec. 1 (southern limit to structure 34)	1240	0.137778	50	
NB Mainline Sec. 2 (structure 34 to structure 38)	2360	0.262222	48	
NB Mainline Sec. 3 (structure 38 to Br. 40)	2160	0.24	48	
NB Mainline Sec. 4 (br. 40 to br. 41)	740	0.082222	64	
NB Mainline Sec. 5 (br. 41 to northern limit)	2500	0.277778	60	
total length	*9000*	0.180404		
weighted width		52.92444		
SB Mainline Sec. 1 (northern limit to br. 33)	1400	0.174129	64	
SB Mainline Sec. 2 (br. 33 to br. 32)	760	0.094527	64	
SB Mainline Sec. 3 (br. 32 to structure 30)	2270	0.282338	40	
SB Mainline Sec. 4 (structure 30 to br. 26)	2360	0.293532	62	
SB Mainline Sec. 5 (br. 26 to southern limit)	1250	0.155473	50	
total length	*8040*	0.161161		
weighted width		54.4602		
GRAND TOTAL	49888			
weighted width		67.89274		
		70		

Common to Alts. 2 and 3