



CONCEPTUAL COST ESTIMATE  
ROUTE 20 AT WELLESLEY STREET

This estimate is based on conceptual design plans prepared by VHB, Inc., dated June, 2013.  
Prices were determined from the MassDOT Weighted Average Bid Prices web site.

This estimate does not consider any Right of Way acquisitions or utility pole relocations.

Assumptions

This estimate assumes the following:

**Pavement**

Assume Full Depth Pavement widening along Route 20 and for realignments of Boston Post Road, Wellesley Street and Windsor Way.  
Assume Mill & Overlay at all other paved locations within limits.

**Sidewalk**

Assume no sidewalk proposed.

**Vertical Granite Curb**

Assume new granite curb Type VB along realigned portions of intersection.

**Driveways**

Assume impact to two HMA driveway.

**Loam & Seed**

Assume removal of existing pavement and 4" of loam & seed at relocated roadway areas.

**Drainage Modifications**

Assume minor drainage modifications required.

Prepared by: DGallant

Checked by: NCrevier

Date: 8/29/2014



*Vanasse Hangen Brustlin, Inc.*

**Transportation  
Land Development  
Environmental  
Services**

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CONCEPTUAL COST ESTIMATE  
SUMMARY  
ROUTE 20 AT WELLESLEY STREET

<u>Description</u>	<u>Unit Price</u>	<u>Quantity</u>	<u>Total Cost</u>
Full Depth Pavement	\$85.00 /SY	3,000 SY	\$255,000.00
Mill & Overlay	\$15.00 /SY	8,020 SY	\$120,300.00
HMA Driveway	\$58.00 /SY	90 SY	\$5,220.00
Loam and Seed	\$18.00 /SY	1,780 SY	\$32,040.00
Granite Curbing (Item 50G)	\$35.00 /FT	2,400 FT	\$84,000.00
Drainage Modifications	\$29,000.00 /LS	1 LS	\$29,000.00
Traffic Signal	\$200,000.00 /LS	1 LS	\$200,000.00
		<b>SUBTOTAL:</b>	<b>\$496,560.00</b>
		Construction Staking (3%)	\$14,896.80
		Police Detail (5%)	\$24,828.00
		Mobilisation (3%)	\$14,896.80
		Construction Traffic Management (5%)	\$24,828.00
		Contingencies (20%)	\$99,312.00
		<b>SUBTOTAL:</b>	<b>\$675,321.60</b>
		Design and Permitting (12%)	\$81,038.59
		Survey (3%)	\$20,259.65
		<b>TOTAL:</b>	<b>\$776,619.84</b>
		<b>SAY:</b>	<b>\$777,000.00</b>

This estimate does not consider any Right of Way acquisitions, environmental impact mitigation or utility pole relocations.



**UNIT COSTS**

**Full Depth Pavement**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Top Course (Item 460)	2.0	0.0560 Ton/SY*in	\$110.00 /Ton	\$12.32
HMA Binder Course (Item 460)	2.0	0.0560 Ton/SY*in	\$110.00 /Ton	\$12.32
HMA Base Course (Item 420)	4.0	0.0560 Ton/SY*in	\$110.00 /Ton	\$24.64
Dense Graded Crushed Stone (Item 402)	4.0	0.0278 Yd/in	\$55.00 /CY	\$6.12
Gravel Borrow (Item 151)	8.0	0.0278 Yd/in	\$35.00 /CY	\$7.78
Unclassified Excavation (Item 120.1)	20.0	0.0278 Yd/in	\$30.00 /CY	\$16.68
Fine Grading and Compacting (Item 170)	N/A	N/A	\$4.00 /SY	\$4.00
			per SY Total=	\$83.86

**Full Depth Pavement COST PER SY= \$85.00**

**Mill & Overlay**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Pavement Milling (Item 129)	4.0	0.0278 Yd/in	\$18.00 /CY	\$2.00
HMA Top Course (Item 460)	2.0	0.0560 Ton/SY*in	\$110.00 /Ton	\$12.32
			per SY Total=	\$14.32

**Mill & Overlay COST PER SY= \$15.00**

**Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4.0	0.0278 Yd/in	\$45.00 /CY	\$5.00
Seed (Item 765)	N/A	N/A	\$2.00 /SY	\$2.00
Ordinary Borrow (Item 150)	4.0	0.0278 Yd/in	\$25.00 /CY	\$2.78
Unclassified Excavation (Item 120.1)	8.0	0.0278 Yd/in	\$30.00 /CY	\$6.67
			per SY Total=	\$16.46

**Loam Borrow and Seed COST PER SY= \$18.00**

**HMA Drive**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Top Course (Item 703)	3.5	0.0560 Ton/SY*in	\$180.00 /Ton	\$35.28
Gravel Borrow (Item 151)	8.0	0.0278 Yd/in	\$35.00 /CY	\$7.78
Unclassified Excavation (Item 120.1)	11.5	0.0278 Yd/in	\$30.00 /CY	\$9.59
Fine Grading and Compacting (Item 170)	N/A	N/A	\$4.00 /SY	\$4.00
			per SY Total=	\$56.66

**HMA Drive COST PER SY= \$58.00**



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UNIT COSTS

**Drainage Modifications**

12" Reinforced Concrete Pipe (Item 241.12)	\$60.00 /FT	100 FT	\$6,000.00
Catch Basin (Item 201)	\$2,600.00 /EA	4 EA	\$10,400.00
Manhole (Item 202)	\$2,700.00 /EA	2 EA	\$5,400.00
Frame and Grate (Item 222)	\$750.00 /EA	4 EA	\$3,000.00
Frame and Cover (Item 221)	\$700.00 /EA	6 EA	\$4,200.00

**Total Drainage Modifications=** \$29,000.00