



TOWN OF ACTON
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Planning Department

MEMORANDUM

To: Planning Board **Date:** August 18, 2005
From: Roland Bartl, AICP, Town Planner *R.B.*
Subject: Ellsworth Village - Water Main on Flagg Road

The Planning Board's special permit for Ellsworth Village contained the following conditions:

3.2.27 The proposed pathway from the Site to Brookside Shops on Town-owned land, or any variation thereof, shall not be constructed.

3.2.28 Instead, and subject to the approval by the Acton Water District and the issuance of a Town of Acton permit for construction in a public way, the applicant shall install a water main on Flagg Road. The Board reserves the right to waive this requirement without further public notice, if the Applicant can prove to the Board's reasonable satisfaction that the cost of the water main installation on Flagg Road exceeds the cost of the pathway to Brookside Shops as proposed by a factor of 1.25. Pavement patching of the trench shall follow the "grind and inlay method" required under section 3.1.7 above.

Accordingly, the applicant has provided a cost estimate, which, he says, was prepared by an independent contractor – see attached "Comparative Construction Cost Estimate for Ellsworth Village). The Planning Board needs to decide whether or not the Applicant has proven to the Board's reasonable satisfaction that the cost of the water main installation on Flagg Road exceeds the cost of the pathway to Brookside Shops as proposed by a factor of 1.25.

I consulted with the Engineering Department on the estimates.

We feel that the estimate for the 650-ft. long, 18-ft. wide gravel pathway (\$42,230) is reasonably accurate. We have checked critical items and found that they were within the normal ranges, some of them at their low end. The estimate does not include an item for limited blasting, which may be required in small doses for pathway grading purposes.

The estimate for the 880-ft. long 6" water main installation without extensive ledge blasting (\$83,547) seems high at nearly \$95/foot. In a February 2005 memo, the Acton Water District Manager advises of a cost of "somewhere around \$65 a foot, all inclusive" for the installation of an 8" main. It includes the cost of government regulations (bid laws, prevailing wages, etc.) which typically inflates costs somewhat over private sector work. There is not much difference in cost between installing a 6" or 8" main. Assuming the Water District managers estimate correct, the installation would cost about \$57,200. Add the cost of one hydrant (The applicant's estimate included two hydrants, but I believe one hydrant would suffice) and the total cost would go up to about \$63,000 without extensive ledge blasting. This is still 1.49 times higher than the cost of building the pathway. We would have to depress this estimate further by over 16%, or more than

\$10,000, to bring it within the threshold of the 1.25 factor that the decision has set. Some further cost reductions may be possible due to the smaller diameter water main and lower private sector cost, but a 16% reduction seems rather ambitious. There is a high likelihood that extensive blasting would be required, which would increase the cost significantly.

Please advise staff if you are reasonably satisfied with the documentation to waive the Flagg Road water main installation, or if you require additional documentation and research.

Cc: George Dimakarakos
Ellsworth Village LLC
Engineering Department

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**COMPARATIVE CONSTRUCTION COST ESTIMATE
FOR ELLSWORTH VILLAGE**

Job # SM-2788
Date: August 1, 2005

ACTON, MA

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18 FOOT WIDE EMERGENCY ACCESS / PEDESTRIAN PATH ON TOWN LAND

Info. Source	Item	Quantity	Unit Price	Item Price	
SITE PREPARATION					
RSM 02370-700-1260	Hay bales staked	110	\$2.75	\$302.50	
RSM 02370-700-1000	Silk fence, polypropylene, 3' high, ideal conditions	110	\$0.77	\$84.70	
RSM 02230-100-0260	Clear and grub dense brush including stumps	0.63	AC	\$3,955.46	
RSM 02230-500-1420	Loam or topsoil, remove and stockpile on site, 6" d, 200' haul	587	CY	\$1,080.08	
SITE GRADING (CUT & FILL TO ROUGH GRADE)					
RSM G1030-115-3350	Cut & fill common earth, 300 h.p. dozer, 300' haul, 8" lifts, 4 passes	143	CY	\$6.35	
RSM 02315-210-4060	Borrow, common earth, 1-1/2 cy loader	1,104	CY	\$9.75	
PATHWAY					
RSM 02720-200-1531	8" d bank run gravel, compacted (6" actual depth)	302	CY	\$23.50	
RSM 02720-200-1530	6" d bank run gravel, compacted (4" actual depth)	225	CY	\$25.50	
RSM 02720-200-7000	Grade and roll sub-base, small areas under 2500 s.y. (per pass)	2,700	SY	\$1.43	
RSM 02910-810-0800	6" loam - Fine grading and seeding, incl. lime, fertilizer & seed	1,713	SY	\$4.76	
				SUM=	\$42,230

WATER MAIN INSTALLATION IN FLAGG ROAD

Info. Source	Item	Quantity	Unit Price	Item Price	
UTILITIES					
WATER DISTRIBUTION*					
RSM 03010-410-0200	Fire hydrant, 5 1/4" valve, two way, 20' offset, 6' deep	2	EA	\$5,625.00	
RSM 02510-730-3020	Water Supply, C.I.D.I., Push-on joint, 6" diameter	860	LF	\$16.85	
RSM G1030-805-1430	Trenching, 4' w x 6' d, 0-1 slope	860	LF	\$11.31	
RSM 02315-640-0200	Pipe bedding, sand	151	LCY	\$13.20	
RSM 02315-640-0100	Pipe bedding, crushed stone 3/4"-1/2"	151	LCY	\$38.50	
RSM 02720-200-1531	8" d bank run gravel, compacted (6" actual depth)	88	CY	\$23.50	
RSM 02720-200-1530	6" d bank run gravel, compacted (4" actual depth)	65	CY	\$25.50	
RSM 02740-310-1050	Pavement replacement over trench, 4" thick, initial patch	391	SY	\$40.00	
RSM 02860-100-5300	Asphalt removal, no haul	587	SY	\$2.01	
RSM 02740-310-1000	Pavement replacement over trench, 2" thick, initial patch	587	SY	\$28.50	
RSM 02785-400-3000	Sealing cracks 1/2 to 1 1/2" wide	1,760	LF	\$1.25	
RSM 02300-416-2200	Drilling & Blasting rock, trenches, up to 1500 cy (estimated 2' in bottom trench)	261	BCY	\$106.00	
				SUM=	\$99,963
				SUM=	\$83,647

W/O LEDGE=

*Materials Subject to the Approval of the Town of Acton

Notes:

- Not adjusted with Boston Cost Index factor of (1.036)
- Traffic control devices are not included within this estimate.
- This estimate does not include conflicts with existing utilities such as gas or storm drainage
- RSM : 2005 R.S. Means Site Work & Landscape Cost Data, 24th Annual Edition