



CITY OF KIRKLAND

Department of Public Works

123 Fifth Avenue, Kirkland, WA 98033 425.587.3809

www.ci.kirkland.wa.us

MEMORANDUM

To: David Ramsay, City Manager

From: Daryl Grigsby, Public Works Director
Ray Steiger, P.E., Capital Projects Manager

Date: November 30, 2006

Subject: 7TH AVENUE/114TH AVENUE WATERMAIN REPLACEMENT – AWARD CONTRACT

RECOMMENDATION:

It is recommended that the City Council award Schedules A, B, and C of the construction contract for the 7th Avenue/114th Avenue Watermain Replacement Project to Buno Construction of Snohomish, WA in the amount of \$949,688. Additionally, it is recommended that Council authorize an additional \$370,000 in funding for the project.

BACKGROUND AND DISCUSSION:

The 7th Avenue/114th Avenue Watermain Replacement Project includes the replacement of approximately 2,600 lineal feet of 1960 Asbestos Cement (AC) watermain and 1970 undersized Ductile Iron (DI) pipe with 20" and 12" DI pipe in the Highlands Neighborhood (Attachment A). The existing watermains serve a large area including the downtown. Water system modeling done as a part of the City's Water Comprehensive Plan (comp plan) indicates that the existing hydraulic capacity of the existing watermains are less than 60% of the desired fire flow for that area.

These watermains were in the list of top priority replacement projects identified by the most recent comp plan; other projects identified in the list included Central Way, Market Street, Waverly Way, the west of Market AC watermains, and the City's 650 pump station, all of which have now been completed. The replacement of individual water service lines and fire hydrant connections along the project alignment is also included in the planned work.

At their meeting of October 3, 2006, Council authorized staff to advertise for contractor bids on the Project. With the authorization to bid memo, Staff indicated that the construction estimate exceeded the project budget, Staff informed Council that the project was broken into separate schedules which would provide a better opportunity to analyze the bids and would allow the ability to recommend an award to best accommodate available funds. To ascertain the actual bid amounts, Council approved moving forward with the advertisement. During that meeting we informed Council we were not requesting additional funds, but once the bids were received we would return with our recommendations for additional funding if necessary.

The first advertisement was published on October 11th and on October 26, 2006, nine contractor bids were received and are as shown below.

Bid result for the 7th Avenue/114th Avenue Watermain Replacement Project

	Contractor	Schedule A	Schedule B	Schedule C	Total Bid
1	Buno Construction	\$392,457.92	\$407,581.12	\$149,648.96	\$949,688.00
2	Construct Co.	\$385,313.91	\$405,027.88	\$169,079.70	\$959,421.49
3	Kar-Vel Construction	\$402,481.12	\$410,919.56	\$187,895.42	\$1,001,432.74
	<i>Engineer's Estimate</i>	<i>\$457,000</i>	<i>\$400,000</i>	<i>\$154,000</i>	<i>\$1,011,000</i>
4	G & G Excavation	\$426,153.82	\$402,481.12	\$204,867.68	\$1,033,502.62
5	DDJ Construction	\$419,913.60	\$457,036.16	\$180,825.60	\$1,057,775.36
6	Marshbank Construction	\$421,882.88	\$440,830.40	\$206,143.36	\$1,068,856.64
7	A & A Excavating	\$502,644.41	\$487,070.67	\$220,312.93	\$1,210,028.01
8	VJM Construction Co.	\$480,939.52	\$546,910.40	\$204,821.44	\$1,232,671.36
9	Westwater Construction Co.	\$577,793.39	\$537,829.63	\$239,891.92	\$1,355,514.94

Based on the bids received, there are currently insufficient project funds to complete the project (Attachment B). However, Staff reviewed a number of scenarios, compared historical construction costs to the bids received, and considered other factors prior to arriving at the recommendation to award all three schedules.

Historical Costs

In part driven by recent projects, and in part driven by Council's request for Staff to prepare a report on the factors and options that are associated with the recent escalation in construction prices (a full report is anticipated in January 2007), Staff assembled a comparison of the average bids for watermain construction since 1998 (Attachment C). To a large degree, Kirkland watermain experience is with eight inch to twelve inch diameter pipe (a notable exception to that was Central Way which was 16 inch diameter); this graph reflects those costs. Comparison of the low bid received for Schedule C (12" AC) indicates that the price is consistent with and even somewhat below the trend for that diameter of pipe. The number of bidders and time of year are likely reasons for the competitive price received.

The prices for the 20 inch diameter pipe associated with Schedules A and B are not empirically supported by our information – we were not able to locate recent comparable sized pipe projects. The relative increase over the twelve inch pipe indicates however that it appears to be a good price. A second consideration is the grouping of the top bidders with some above and some below the bid price – this suggests that the prices are consistent.

Other Factors

One option considered by Staff was to award Schedules A and B only which would complete approximately 80% of the as-bid project. The inclusion of Schedule C, *which was not in the original CIP project scope*, would reduce the project budget by approximately \$150,000 in construction costs as well as inspection costs to complete that schedule. Schedule C was added during the design of the project for two reasons: 1) the existing watermain that is being replaced by Schedule C is 1960 AC, and it was determined that the increased flows and pressure with the adjacent new watermains will put additional stress on this main – its replacement concurrent with A & B provides a higher degree of safety to the system, and 2) the existing watermain, although not anticipated with this project is

scheduled for future replacement; construction concurrent with the larger (20" diameter) project will reduce the unit costs.

Recommendation to the award the construction project at this time instead of delaying for a possible improvement to the bidding climate is also based on Staff's contention that the project was bid at an ideal time of the construction season, and the number of bidders suggests that the prices represent a competitive bidding environment. Final support for recommending award is that the City has obtained the necessary drilling permit to go beneath the BNSFRR which involved a considerable time delay as well as approximately \$6,000 in fees, and the City is also moving forward with the partial reconstruction of the intersection of 114th Ave NE/NE 85th Street as a part of the Sound Transit NE 85th Street corridor improvement. Ideally the watermain work will be completed prior to the work associated with the intersection improvements; delaying this award to a later bid date could conflict with the upcoming roadway work.

Funding

As noted above, during the October 3 Council meeting, we provided a revised engineering estimate based on recent construction cost increases. The lowest responsible bid is \$61,000 less than the engineer's estimate that was provided in October.

Award of all three schedules represents an additional \$370,000 in needs for the project budget. Staff proposes two sources of funding for the additional budget: 1) \$200,000 from the utility capital contingency fund (Attachment D), and 2) \$170,000 from NE 85th Street watermain project, by delaying a portion of the 2007 funding (Attachment E).

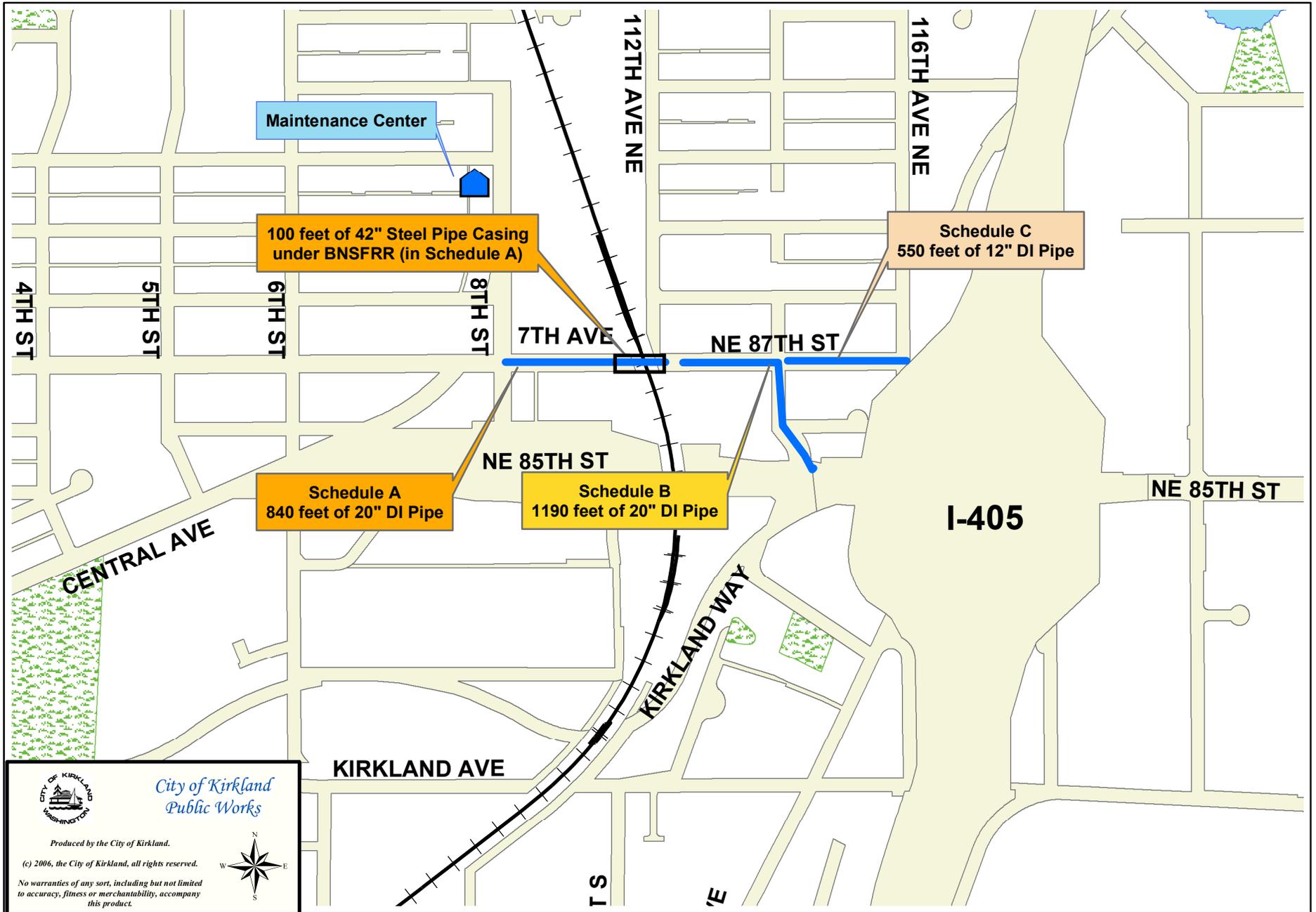
The proposed funding delay for the NE 85th Street watermain project is appropriate at this time in that the current review of future watermain projects in the draft water comp plan and reconsideration of the scope of the NE 85th Street watermain project (possible by a less costly alternative) support a delay of NE 85th Street.

With Council award at their December 12th meeting, the contractor has indicated that construction would begin in January 2007 with substantial completion expected by early summer 2007. Due to the significance of the construction project, traffic delays and pedestrian disruptions are anticipated, and Staff will work with the Contractor and the neighborhood association to communicate detour and construction updates.

Attachments

7th Avenue/114th Avenue Watermain Replacement WA 0051

Vicinity Map



 **City of Kirkland**
Public Works

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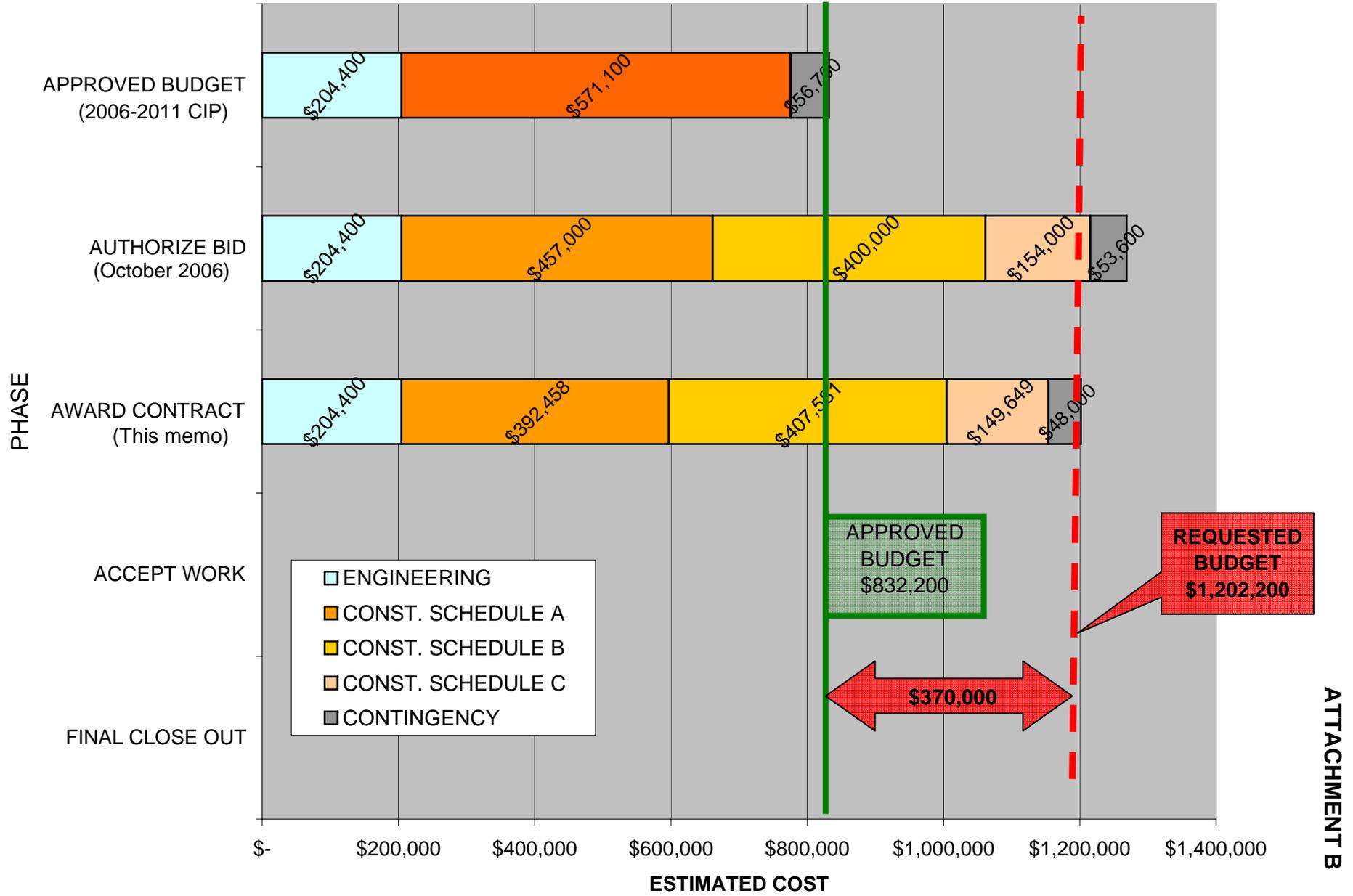
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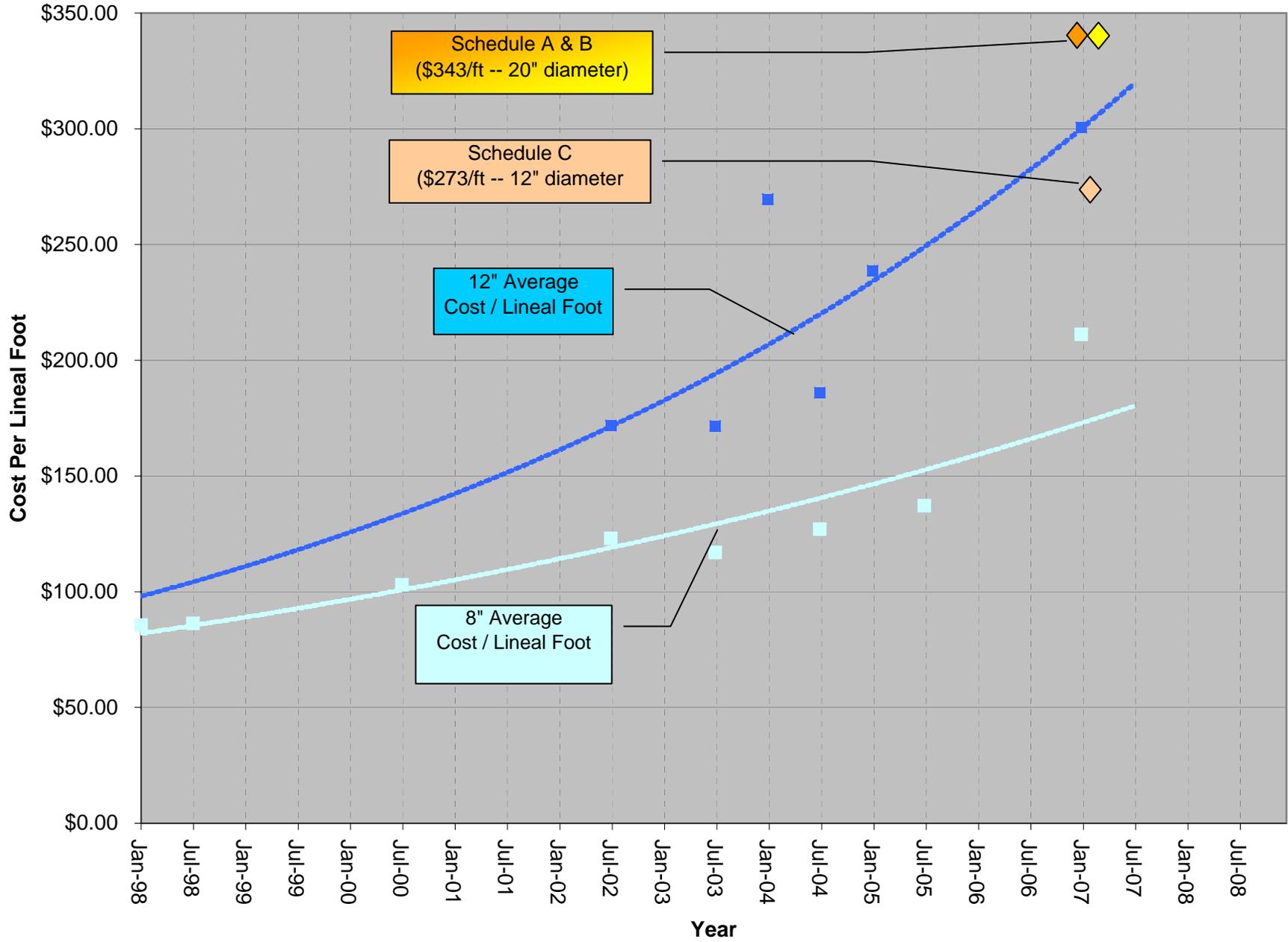


7th Avenue/114th Avenue Watermain Replacement WA 0051

Project Budget Report



Historical Watermain Construction Cost



FISCAL NOTE

Source of Request							
Daryl Grigsby, Public Works Director							
Description of Request							
Request for additional funding of \$370,000 for the 7th Avenue/114th Avenue Watermain Replacement project, to be funded by \$200,000 from the Water/Sewer Capital Contingency and \$170,000 from delaying the NE 85th Street Watermain Replacement project. The scope of this project has increased in order to include the replacement of an additional main that is old (and due for future replacement) and would suffer additional stress from the increased flows and pressure of this project's scheduled main replacements. Additionally, increased construction costs due to high demand on market resources are still a contributing factor to the bid prices. Funding is recommended to come from a delay in the NE 85th Street Watermain Project and from the Water/Sewer Capital Contingency.							
Legality/City Policy Basis							
Fiscal Impact							
One-time use of \$200,000 of the Water/Sewer Capital Contingency. The contingency is able to fully fund this request.							
Utilize \$170,000 of funding from the NE 85th Street Watermain Replacement project by delaying a portion of the initial phase of the NE 85th Watermain Replacement project.							
Recommended Funding Source(s)							
	Description	2006 Est End Balance	Prior Auth. 2005-06 Uses	Prior Auth. 2005-06 Additions	Amount This Request	Revised 2006 End Balance	2006 Target
	Water/Sewer Capital Contingency	1,766,520	507,500	0	200,000	1,059,020	1,766,520
	NE 85th St Watermain Proj. Delay				170,000		
Reserve	Water/Sewer Capital Contingency: 2005-2006 Prior Authorized Uses includes \$116,000 for the 18th Avenue Watermain Replacement project, \$111,500 for the 2005 Water System Improvements, \$20,000 for a watermain replacement coinciding with the 2004 Streambank Stabilization project, and \$260,000 for watermain work associated with the 116th Ave. Non-motorized Facilities project.						
Revenue/ Exp Savings							
Other Source							
Other Information							

Prepared By	Sandi Hines, Financial Planning Manager	Date	December 1, 2006
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**City of Kirkland
Revised 2006-2011 Capital Improvement Program**

WATER/SEWER UTILITY PROJECTS

Funded Projects:

Project Number	Project Title	Prior Year(s)	2006	2007	2008	2009	2010	2011	2006-2011 Total	Funding Source			
										Current Revenue	Reserve	Debt	External Source
WA 0051	7th Avenue/114th Avenue Watermain Replacemen	108,200	380,000	344,000					724,000	724,000			
WA 0058	NE 75th Street/130th Avenue NE Watermain Replc			66,900				634,100	634,100	634,100			
WA 0078	NE 85th St/132nd Ave NE Watermain Replacemen	150,000		-236,900	1,061,000	983,500	337,600		-2,619,000	-2,619,000	2,449,000		
WA 0090	Emergency Swr Pgm Watermain Replacement Pgr			50,000		50,000		50,000	150,000	150,000			
WA 0093	Vulnerability Analysis Facility Upgrades	70,000				218,600			218,600	218,600			
WA 0094	North Reservoir Rehabilitation/Repainting	150,000	690,000						690,000	690,000			
WA 0096	NE 83rd St Watermain Replacemen'					32,800	202,600		235,400	235,400			
WA 0097	120th Ave NE Watermain Replacemen'						251,000		251,000	251,000			
WA 0098	126th Ave NE Watermain Replacemen'						462,500		462,500	462,500			
WA 0099	Alexander Ave Watermain Replacemen'							211,000	211,000	211,000			
WA 0101	108th Ave NE Watermain Replacemen'			274,000					274,000	274,000			
WA 0102	104th Ave NE Watermain Replacemen'							374,500	374,500	374,500			
WA 0103	NE 113th Pl Watermain Replacemen'				193,000				193,000	193,000			
WA 0105	124th Ave Watermain Replacemen'			249,300					249,300	249,300			
WA 0110	105th Ave NE/106th Ave NE Watermain Rep		200,000	126,700					326,700	326,700			
WA 0115	Telemetry Upgrades			150,000					150,000	150,000			
SS 0046	Market Street Sewermain Replacemen'			206,000	801,000	218,500			1,225,500	1,225,500			
SS 0050	NE 80th Street Sewermain Replacemen'		240,000	916,700	196,300				1,353,000	1,353,000			
SS 0051	6th Street South Sewermain Replacemen'							391,800	391,800	391,800			
SS 0052	108th Avenue NE Sewermain Replacemen'							753,500	753,500	753,500			
SS 0056	Emergency Sewer Construction Prograrr			1,000,000		1,000,000		1,000,000	3,000,000		3,000,000		
SS 0060*	Trend Lift Station Elimination	160,000	399,000						399,000	399,000			
SS 0062	NE 108th Street Sewermain Replacement/Rehabilitator					699,400	792,300		1,491,700	1,491,700			
SS 0063	NE 53rd Street Sewermain Replacemen'				116,700	181,400			298,100	298,100			
SS 0064	7th Avenue South Sewermain Replacemen'						310,700		310,700	310,700			
SS 0066	Plaza Lift Station Pump Upgrades			50,000					50,000	50,000			
Total Funded Utility Projects		638,200	1,909,000	3,603,600	2,368,000	3,384,200	2,356,700	3,414,900	17,036,400	14,036,400	3,000,000	0	0

Unfunded Projects:

Project Number	Project Title	Six Year Total
WA 0052	108th Avenue NE Watermain Replacemen'	1,410,000
WA 0057	116th Avenue NE Watermain Replacemen'	1,643,000
WA 0059	101st Avenue NE Watermain Replacemen'	131,000
WA 0060	10th Avenue Watermain Replacemen'	262,000
WA 0063	Supply Station #3 Replacement & Transmission Main Add	770,000
WA 0067	North Reservoir Pump Station Replacemen'	847,000
WA 0076	6th Avenue Watermain Replacemen'	366,000
WA 0077	NE 110th Street Watermain Replacemen'	223,000
WA 0091	Norkirk Watermain Replacement Program	2,415,000
WA 0104	NE 62nd St Watermain Replacemen'	131,000
WA 0107	NE 73rd St Watermain Replacemen'	131,000
WA 0108	Public Watermain Replacements at NW University	1,288,000
WA 0109	112th Ave NE Watermain Replacemen'	547,000
WA 0111	111th Ave NE Watermain Replacemen'	364,000
WA 0112	116th Ave NE/NE 60th St Watermain Replac	849,000
WA 0113	116th Ave NE/NE 70th St Watermain Replac	671,000
Total Unfunded Utility Projects		12,048,000

Notes

* = Modification in timing and/or cost (see Project Modification/Deletion Schedule for greater detail)

+ = Moved from unfunded status to funded statu:

" = Moved from funded status to unfunded statu:

Shaded year(s) = Previous timing

Bold italics = New projects