

**North Highline  
Governance Study**

**CAPITAL BUDGET  
TABLES**

*October 20, 2005*

## CIP Sources

To estimate the likely annualized capital costs for North Highline, should it incorporate, King County capital expenditures were examined. Since fire and library facilities would be provided by those respective districts<sup>1</sup>, capital needs for North highline would be limited to streets, general government, surface water, and parks facilities. King County actual capital expenditures for these facilities are summarized in Table 1 below. While King County Roads and Surface Water Management Divisions each had a pattern of ongoing capital projects over the prior five years and forecast over the upcoming four years, King County Parks did not have a regular capital program for parks facilities in North Highline, and only the costs budgeted for 2005 were available. For each of the sources of capital project data identified below in Table 1, below, a detailed list of the projects follows. Evergreen Pool was omitted from the list of Parks projects because it can be considered a potential regional facility not necessarily one that would be assumed by the new City, should North Highline incorporate.

Sources	Characterization	Number	Cost
Roads CIP	South Park Bridge, curb, gutter, sidewalk, pedestrian improvements, traffic signal, widening, crosswalk, lane improvements, resurfacing, drainage, miscellaneous, shoulder improvements	47 projects	\$35 million, between 2000 - 2009
Parks CIP	White Center Field House, Arbor Lake play area, Lakewood Park pumphouse and play area, misc small projects and two master plans	17 projects	\$1.048 million in 2005
SWM CIP	Lake Hicks, conveyance, flood reduction, water quality, testing, NDAP	21 projects	\$4.19 million between 2002 - 2009

**Table 1 Sources of CIP Project Information for North Highline**

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<sup>1</sup> Per the Level of Service direction given by the North Highline UAC, 9/19/05

## Roads CIP

Type	Actual Expenditures					Budgeted	Programmed					Total
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		
South Park Bridge	\$ 344,779	\$ 395,692	\$1,838,778	\$1,321,378	\$1,131,475	\$2,688,145	\$ 926,000	\$3,321,000	\$7,320,000	\$ 136,000	\$19,423,246	
Curb, Gutter, Sidewalk	\$ 311,587	\$1,277,408	\$2,343,725	\$1,053,731	\$ 410,484	\$3,845,271	\$ -	\$ -	\$ -	\$ -	\$ 9,242,205	
Pedestrian Improvements	\$ 29,732	\$ 252,754	\$ 284,918	\$ 967,970	\$ 109,603	\$ 12,907	\$ -	\$ -	\$ -	\$ -	\$ 1,657,883	
Traffic Signal	\$ -	\$ 4,974	\$ 65,297	\$ 226,953	\$ 200,672	\$ 343,120	\$ -	\$ -	\$ -	\$ -	\$ 841,016	
Widening	\$ 25,408	\$ 138,603	\$ 645,240	\$ 193,166	\$ 617	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,003,034	
Crosswalk	\$ -	\$ -	\$ -	\$ 99,366	\$ 27,975	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 127,341	
Lane Improvements	\$ -	\$ -	\$ 49,789	\$ 31,756	\$ 2,166	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 103,711	
Resurfacing	\$ -	\$ -	\$ 52,894	\$ 113,544	\$ 22,385	\$1,503,720	\$ -	\$ -	\$ -	\$ -	\$ 1,692,542	
Drainage	\$ 264	\$ 328,308	\$ 63,722	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 392,294	
Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Shoulder Improvements	\$ -	\$ -	\$ 69,568	\$ -	\$ 6,240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,807	
<b>Grand Total</b>	<b>\$ 711,770</b>	<b>\$2,397,737</b>	<b>\$5,413,931</b>	<b>\$4,007,863</b>	<b>\$1,911,617</b>	<b>\$8,413,163</b>	<b>\$ 926,000</b>	<b>\$3,321,000</b>	<b>\$7,320,000</b>	<b>\$ 136,000</b>	<b>\$34,559,081</b>	

**Table 2 Roads CIP Project Information for North Highline – By Year and Type of Improvement**

## Parks CIP

Type	Detail	2005 Budgetted
<b>White Center Fieldhouse</b>	White Center Fieldhouse Study	\$ 332,405
	Replacement of Roof	
	Ventilation Improvements to Fieldhouse	
	Refinish of gymnasium floor	
	Electrical Upgrades to Fieldhouse	
<b>Arbor Lake Play Area</b>	Replacement of Play Area	\$ 94,262
<b>Lakewood Park Pumphouse</b>	Construction of new Pumphouse	\$ 325,000
	Installation of two new larger capacity vertical turbine pumps (3 cfs each) and controls	
	New electrical service	
	Replacement of the Pumphouse intake line	
	Replacement of the forcemain from the Pumphouse to 10th Ave SW	
<b>Lakewood Park Play Area</b>	Replacement of Play Area at Lakewood Park	\$ 75,000
<b>Small Contracts Program</b>	White Center Fieldhouse Parking lot paving	\$ 52,500
	Roof repair of racquetball courts	
	ADA repairs to White Center Fieldhouse	
<b>Other</b>	Master Site Plan, Lakewood Park	\$ 169,200
<b>TOTAL</b>		\$ 1,048,367

Table 3 Parks CIP: Project Information for North Highline – For One Year: 2005

## SWM CIP

Start Date	Constr. Date	#	Project Name	Budget (\$)	2000	2001	2002	2003	2004	2005	2006	2007	2008
2000	2002	1	Lake Hicks Outlet Force Main Improvements – 10th Ave.	\$ 150,000	50,000	50,000	50,000	-	-	-	-	-	-
2003	2003	2	Lake Hicks Emergency – Force Main Replacement – Pumphouse to 10th Ave.	\$ 50,000	-	-	-	50,000	-	-	-	-	-
2003	2003	3	Conveyance Improvement – 12th Ave. at 120th Emergency	\$ 70,000	-	-	-	70,000	-	-	-	-	-
2003	2003	4	Three NDAP Quick Fixes	\$ 15,000	-	-	-	15,000	-	-	-	-	-
2001	2004	5	Lake Hicks Pump Replacement	\$ 300,000	-	75,000	75,000	75,000	75,000	-	-	-	-
2004	2004	6	Lake Hicks Water Quality Improvement	\$ 40,000	-	-	-	-	40,000	-	-	-	-
2004	2005	7	Lake Hicks Alum Treatment	\$ 50,000	-	-	-	-	25,000	25,000	-	-	-
2004	2005	8	Water quality testing on Lake Hicks	\$ 25,000	-	-	-	-	12,500	12,500	-	-	-
2004	2005	9	White Center Greenway – Regional R/D Pond Retrofit	\$ 300,000	-	-	-	-	150,000	150,000	-	-	-
2004	2005	10	Mallard Lake Water Quality Improvement	\$ 40,000	-	-	-	-	20,000	20,000	-	-	-
2005	2005	11	Ambaum Way Conveyance Improvement	\$ 240,000	-	-	-	-	-	240,000	-	-	-
2005	2006	12	Mallard Lake Flood Reduction	\$ 350,000	-	-	-	-	-	175,000	175,000	-	-
2005	2007	13	12th Ave. SW Conveyance Improvement	\$ 850,000	-	-	-	-	-	283,333	283,333	283,333	-
2004	2008	14	Greenbridge (a.k.a., Park Lake Homes/Hope IV)	\$ 1,000,000	-	-	-	-	200,000	200,000	200,000	200,000	200,000
2007	2007	18	Hamm Creek Water Quality Improvement	\$ 600,000	-	-	-	-	-	-	-	600,000	-
2000	2005	19	Hamm Creek Estuary	\$ 70,000	11,667	11,667	11,667	11,667	11,667	11,667	-	-	-
2003	2005	20	NDAP – Rich at 30th Ave. S.	\$ 40,000	-	-	-	13,333	13,333	13,333	-	-	-
			<b>Total Capital Budget 2000-2008</b>	<b>\$ 4,190,000</b>	61,667	136,667	136,667	235,000	547,500	1,130,833	658,333	1,083,333	200,000

**Table 4 SWM CIP: Project Information for North Highline – By Year and Improvement**

Note: For the purposes of estimating total investments by year, SWM project costs in the table above were spread levelly across the years between start date and construction date.

## Average Annual Capital Projects

Because the nature of capital projects is that they are not evenly distributed – both the types of projects and their costs can vary widely from year to year – it can be useful to “levelize” the costs for estimating the annual impacts. This can be done by establishing a rolling average annual cost of capital. The rolling average annual cost would then be used to budget annual contributions to capital reserve funds which accrue fund balances over a period of time in order to cover the large cost capital projects when they are needed.

The rolling 3-year average annual Roads and SWM capital costs are shown below. For Parks, it will be assumed that the average CIP would be approximately the same as the 2005 costs. This would be a similar level of expenditure as that of the comparable cities described on page 9 and would provide for implementation of the two master plans funded in 2005.

## Roads CIP

The calculations below consider the South Park Bridge improvements as regional projects, not projects ascribable to North Highline.

Project Name	2000 Actual Expenditures	2001 Actual Expenditures	2002 Actual Expenditures	2003 Actual Expenditures	2004 Actual Expenditures	2005 Budget	2006 Programmed	2007 Programmed
<b>All Projects</b>								
<b>Total for Year</b>	\$ 711,770	\$2,397,737	\$5,413,931	\$4,007,863	\$1,911,617	\$8,413,163	\$ 926,000	\$3,321,000
<b>3 Yr. Moving Average (-2 to +2 yrs)</b>		2,840,000	3,130,000	2,890,000	4,430,000	4,130,000	3,720,000	4,380,000
South Park Bridge	\$344,779	\$395,692	\$1,838,778	\$1,321,378	\$1,131,475	\$2,688,145	\$926,000	\$3,321,000
<b>Without South Park Bridge</b>								
<b>Total for Year</b>	\$ 366,991	\$2,002,045	\$3,575,153	\$2,686,486	\$ 780,142	\$5,725,018	\$ -	\$ -
<b>3 Yr. Moving Average (-1 to +1 yrs)</b>		1,980,000	2,750,000	2,350,000	3,060,000	2,170,000	1,910,000	

Table 5 Roads CIP: Moving Average of King County Investments in North Highline

## SWM CIP

All Projects	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total for Year	\$ 61,667	\$ 136,667	\$ 136,667	\$ 235,000	\$ 547,500	\$ 1,130,833	\$ 658,333	\$ 1,083,333	\$ 200,000
3 Yr. Moving Average (-1 to +1 yrs)		112,000	169,000	306,000	638,000	779,000	958,000	647,000	

**Table 6 SWM CIP: Moving Average of King County Investments in North Highline**



## Summary of All Annual Estimates

Because there was a wide range of amounts when the three-year rolling CIP averages were considered (e.g., Roads three-year rolling average ranged from \$1,910,000 to \$3,060,000, over \$1 million difference), these three-year averages were averaged further to establish an average annual CIP appropriation amount. This created an annual CIP Fund contribution amount that would be needed to support a CIP reserve fund from which annual capital appropriations could be made. This annual level of CIP fund contribution would accrue a reserve balance in years when the capital needs were smaller than the annual capital appropriation – and the reserve would become large enough to support the capital needs in some years when annual expenditures would exceed the annual contribution. Table 7 below shows these annual amounts rounded to the nearest quarter million dollars.

<b>Historical Average Annual Contribution to Capital Projects</b>	
<b>Roads</b>	\$ 2,500,000
<b>Parks</b>	\$ 1,000,000
<b>SWM</b>	\$ 750,000
<b>TOTAL</b>	\$ 4,250,000

Table 7 King County Capital Projects in North Highline – Summary

## Comparison With Comparable Cities

As with the operating costs that vary based on city level of service policies, comparable cities have a wide range in capital costs. These do not provide a good basis of determining what capital expenditures are appropriate for a new city because they depend on the respective cities' level of service and financial policies. The variables that contribute to the level of annual CIP costs include extent of deferred facility maintenance, extent of new development to be served, level of service standards, and the extent to which the city has established a CIP reserve that allows it to finance large projects. A brief review of the three comparable cities used for operating cost comparisons shows that two of the three generate approximately 20% of their annual capital costs through annual General Fund support, while the other has established substantial CIP reserves. Significant other sources of capital project funding include grants, loans and bonds. Grants generally require a small percentage match, and loans and bonds require a percentage debt service annually, both thereby reducing the General Fund impacts. Reserve funds with annual General Fund contributions help to levelize annual General Fund impacts by saving money for a period of time before constructing a capital project.

Table 9 below shows the average annual total CIP expenditures for Parks and General Government and for Transportation CIP for the three comparable cities selected for this study, Burien, Des Moines and University Place. Surface Water Management CIP is not included, as that is entirely funded by SWM fees and has no impact on the City's General Fund.

City	Parks & General Government	Roads	Total
Burien	\$ 8,579,000	\$ 8,017,000	\$ 16,596,000
Des Moines	\$ 2,359,000	\$ 6,032,000	\$ 8,391,000
University Place	\$ 1,004,000	\$ 3,546,000	\$ 4,550,000

Table 8 Average Annual CIP Funding in Cities Comparable to North Highline

## **APPENDICES**

**APPENDIX 1    King County Roads CIP – Project Listing for North Highline**

**APPENDIX 2:   King County SWM CIP – Project Listing for North Highline**

# King County Roads CIP

MASTER	Project	Project Name	Location	Scope	Type	Tot
	300103	North Highline Quick Response Projects	North Highline	Provide resources to implement local road related improvement priorities in North Highline community.	Miscellaneous	\$ -
	300197	South Park Bridge #3179	14th/16th Ave S. over Duwamish Rwer	Conduct a NEPA EIS to study design and construction alternatives for the bridge. The EIS will include an historical resource survey and documentation. This is a place keeper for the bridge rehab/replace project funds that will follow this EIS if this project is approved under the RTID ballot measure.	South Park Bridge	\$17,862,000
	300301	1st Ave S. - Urban Retrofit	Seattle C/L to Burien C/L	Provide curb, gutter, sidewalk, drainage and landscaping on east and west sides of Myers Way S. / 1st Avenue S. from S. 99th Street to SW 128th Street.	Curb, Gutter, Sidewalk	\$ 1,500,000
	300390	S. 96th St. Stage II	8th Ave S. to Des Moines Memorial Dr S.	Widen the roadway to two lanes with paved shoulders to include illumination and a traffic signal at Des Moines Way South.	Widening	\$ 1,003,034
	300400	S. 120th St	Des Moines Way to Military Rd S.	Design and construct a project to provide curb, gutters and sidewalks along both sides of S. 120th St. Evaluate existing roadway geometry. Related drainage improvements to be designed and constructed as well.	Curb, Gutter, Sidewalk	\$ 1,751,152
	300597	SW 100th St	8th Ave SW to 17th Ave SW	Construct curb, gutter and sidewalk along south side of SW 100th Street from 8th Ave SW to 17th Ave SW. Project to be constructed with CIP C63355 (Pedestrian Priority).	Curb, Gutter, Sidewalk	\$ 41,734
	300599	Des Moines Memorial Dr S.	S. 99th St to S. 128th St	Construct curb, gutter, and sidewalk on both sides of the roadway for the entire length of the project. Existing 4-lane roadway will have a new asphalt overlay and the roadway will be re-striped to a 3-lane section with one through lane in each direction, a two-way left turn lane and 5-foot wide bicycle lanes. The sidewalk will incorporate over 200 memorial markers, placed at 80-foot intervals, to honor the men and women from Washington State who gave their lives during WWI.	Curb, Gutter, Sidewalk	\$ 5,055,615
	300600	12th Ave SW	SW 107th St to SW 116th St	Enclose ditches and provide cement concrete curb, gutter and sidewalk with parallel parking along the curb on the west side from SW 108th Street to SW 116th Street.	Curb, Gutter, Sidewalk	\$ 565,417
	300988	South Park Bridge #3179 - Maintenance	14th/16th Ave S. over Duwamish River	This project provides for the design and construction of a series of maintenance and repair projects to extend the functional life of the bridge by at least ten years. Work can be structural (such as expansion joint replacement, control tower roof/wall repairs, concrete approach spall repairs, underwater pier repairs) or mechanical (such as reworking the centerlocks, adjusting moveable leads to prevent interference, repairing cracked gears) or electrical (such as replacing the navigation lights, adding lighting, and replacing all corroded wiring). Work to be performed by both County forces and outside contractors.	South Park Bridge	\$ 1,395,140
	301000	10th Ave SW	SW 108th St to SW 116th St	Pedestrian facility on east side. Coordinate project with anticipated Parks Department improvements to Lakewood Park.	Pedestrian Improvements	\$ 800,007
	301094	Des Moines Memorial Dr S. @ S. 118th St	Intersection @ S. 118th St	Install a traffic signal with steel poles, pedestrian facilities, and illumination.	Traffic Signal	\$ 621
RDCW04	C62302	S. 100th St @ 1st Ave S.	Intersection	Repair Guardrail per work order	Pedestrian Improvements	\$ 6,561
RDCW06	C63301	SW 100th St	17th Ave SW to 21st Ave SW	Construct curb, gutter, and sidewalk on the south side of the roadway.	Curb, Gutter, Sidewalk	\$ 212,242
RDCW06	C63304	19th Ave SW	SW 104th St to SW 106th St - east side	Construct asphalt shoulder on east side	Resurfacing	\$ 21,105
RDCW06	C63322	SW 104th St	20th Ave SW to 22nd Ave SW	Construct concrete stairway to establish and provide a safe pedestrian environment for local community.	Pedestrian Improvements	\$ 18,779
RDCW06	C63323	Des Moines Memorial Dr S. @ S. 99th St - Ped Sig	Intersection	Replace existing crosswalk flasher with actuated steel-pole pedestrian signal	Crosswalk	\$ 54,392
RDCW06	C63324	S. 110th St	1st Ave S. to Occidental Pl S. - north side	Construct asphalt shoulder on north side.	Shoulder Improvements	\$ 6,240
RDCW06	C63341	SW 112th St	1st Ave S. to 1st Ave SW	Construct curb, gutter, and sidewalk along the north side of the roadway.	Curb, Gutter, Sidewalk	\$ 4,493
RDCW06	C63342	S. 100th St	8th Ave S. to 14th Ave S.	Construct paved shoulder on south side of roadway.	Shoulder Improvements	\$ 69,568
RDCW06	C63352	Military Rd S. - east side	S. 116th St to S. 120th St	Curb, gutter, and sidewalk to be constructed on the east side of roadway.	Curb, Gutter, Sidewalk	\$ 4,598
RDCW06	C63392	SW 106th St @ 17th Ave SW	Intersection	Add solid lid to existing CB and install new CB for inlet.	Drainage	\$ 3,667
RDCW06	C63702	S. 111th St @ 5th Ave S.	Intersection	Construct drainage improvements to extend pedestrian pathway.	Pedestrian Improvements	\$ 11,876
RDCW06	C63731	8th Ave SW	SW 100th St to SW 102nd St	Construct curb, gutter, and sidewalk on the east side of roadway. Construction of this segment will complete a missing link.	Curb, Gutter, Sidewalk	\$ 9,201

# King County Roads CIP

MASTER	Project	Project Name	Location	Scope	Type	Tot
RDCW24	C66300	Military Rd S. - west side	S. 116th St to S. 120th St	At the intersection of South 116th Street, ADA (American Disabilities Act) improvements are proposed. Wheelchair ramps will be constructed on all corners of the intersection, and a pedestrian refuge island will be constructed in the northwest quadrant. Pathway improvements will be made on both sides of Military Road South from South 116th Street to South 120th Street by widening the existing shoulder to provide a safe non-motorized travel environment. This same improvement will also be made on the west side of the roadway from South 120th Street to South 123rd Street to complete a missing link. No extruded curb, gutter and sidewalk is recommended, except in the vicinity of the South 116th Street intersection. At locations where a sufficient pathway already exists, no work is proposed. A pathway width of at least six feet is recommended depending on roadway conditions.	Pedestrian Improvements	\$ 570,021
RDCW24	C66301	Boulevard Park - S. 124th St	20th Ave S. to 24th Ave S.	From 20th Avenue South to 24th Avenue South, improvements are proposed on the north side of the roadway to provide additional access for the children of Hilltop Elementary School. A short existing ditch section will be filled, and the roadway shoulder will be expanded to at least six feet. No extruded curb, gutter, and sidewalk is to be constructed at this location.	Pedestrian Improvements	\$ 90,049
RDCW24	C66351	S. 120th St	64th Ave S. to 68th Ave S.	Enclose drainage ditches and construct small retaining walls or rockeries, where necessary, and provide a continuous 6' pedestrian pathway on the south side of the roadway	Drainage	\$ 71,484
RDCW10	C72406	South Park Br #3179 Seismic Retrofit	14th/16th Ave S. over Duwamish River	Perform detail structure investigation, modeling, analysis, and prediction of bridge failure modes for a designed earthquake force. Identify all-vulnerable structure elements, recommend retrofit strategies/alternatives, cost estimates, risk factor, cost-benefit assessment, and finding summary technical report. The scope will include final design and PS&E document preparation for construction if a decision is made to proceed the seismic resistance upgrade.	South Park Bridge	\$ 166,107
RDCW19	C74303	S. 99th St - Pedestrian Signal	Des Moines Memorial Dr S. Intersection	Install steel pole pedestrian signal with pedestrian push-buttons and signal heads.	Crosswalk	\$ 4,751
RDCW19	C74313	S. 103rd/S. 108th St Actuated Pedestrian Crossings	Des Moines Memorial Dr S. Intersection	Replace existing overhead crosswalk flasher with steel pole pedestrian actuated crosswalk flasher	Crosswalk	\$ 7,899
RDCW19	C74314	16th Ave SW @ SW 107th St	Intersection - East/West Approaches	Rebuild SE corner radius and rechannelize east and westbound approaches to allow more room for northbound right-turning buses to make turn. METRO to reimburse upon completion of project.	Shoulder Improvements	\$ (0)
RDCW19	C74321	Des Moines Memorial Dr S. @ S. 120th St	Intersection	Restripe existing asphalt to add left turn lanes on Des Moines Way South. Modify or replace existing signal to provide for left turn movements.	Lane Improvements	\$ 24,454
RDCW19	C74323	Des Moines Memorial Dr S. @ S. 116th St	Intersection	Replace existing 39-year-old wood-pole traffic signal with steel pole traffic signal; improve curb radii/ramps.	Traffic Signal	\$ 361,074
RDCW19	C74331	Des Moines Memorial Dr S.	S. 96th St to S. 120th St.	Restripe existing asphalt to add left turn lanes on Des Moines Way South. Modify or replace existing signal to provide for left turn movements, change existing crosswalk flashers to controlled/actuated crossings at 3 locations and add illumination as necessary.	Lane Improvements	\$ 79,257
RDCW19	C74341	Military Rd S. @ S. 116th St	Intersection	Replace existing wood-pole spanwire signal with steel pole mastarm system.	Traffic Signal	\$ 479,321
RDCW26	C78302	S. 96th St Overlay	8th Ave S. to Des Moines Memorial Dr S.	Overlay from 8th Ave S. to Des Moines Memorial Dr. reschedule from 1988 Countywide Overlay	Resurfacing	\$ 166,438
RDCW26	C78304	Des Moines Memorial Dr S.	S. 99th St to S. 128th St	Resurfacing the roadway.	Resurfacing	\$ 1,505,000
	C85303	Military Rd S.	S. 120th St to S. 123th St	Construct 6' paved pathway on the west side of the roadway.	Pedestrian Improvements	\$ 66,205
	C85313	SW 104th St	20th Ave SW to 22nd Ave SW	Construct concrete stairway to establish and provide a safe pedestrian environment for local community.	Pedestrian Improvements	\$ 15,390
	C85323	SW 112th St	1st Ave S. to 1st Ave SW	Construct curb, gutter, and sidewalk along the north side of the roadway.	Curb, Gutter, Sidewalk	\$ 97,753
	C85333	Boulevard Park - S. 124th St	20th Ave S. to 24th Ave S.	From 20th Avenue South to 24th Avenue South, improvements are proposed on the north side of the roadway to provide additional access for the children of Hilltop Elementary School. A short existing ditch section will be filled, and the roadway shoulder will be expanded to at least six feet. No extruded curb, gutter, and sidewalk is to be constructed at this location.	Pedestrian Improvements	\$ 14,342
	C85343	16th Ave SW	SW Roxbury St to SW 100th St	Improve existing sidewalks along this busy commercial street to enhance pedestrian safety.	Pedestrian Improvements	\$ 32,843

# King County Roads CIP

MASTER	Project	Project Name	Location	Scope	Type	Tot
	C85353	Des Moines Memorial Dr S. @ S. 103rd/106th St	Intersections	Replace overhead spanwire crosswalk flashers with steel-pole-mounted pedestrian-actuated flasher systems. Seattle City Light install lighting upgrades on existing power poles.	Crosswalk	\$ 60,299
RDCW13	CC5303	Boulevard Park - 14th Ave S.	S. 99th Pl to S. 128th St	This project has limits from South 99th Street to South 128th Street. Work is to be done on the west side of the road. Existing ditches will be filled and replaced with new pipe and catch basins. A pathway width of minimum six feet is proposed depending on roadway conditions; at locations where a sufficient pathway already exists, no work is proposed. No extruded curb, gutter, and sidewalk is to be constructed at this location.	Drainage	\$ 173,711
RDCW13	CC5350	Boulevard Park - 8th Ave S.	S. 112th St to S. 128th St.	From South 112th Street to South 128th Street, improvements are proposed on the east side of the road. Existing ditch sections will be filled and replaced with new pipe and catch basins. A separated pathway of at least six feet is proposed at this location, with a minimum three foot buffer section. No extruded curb, gutter, and sidewalk is to be constructed at this location.	Drainage	\$ 98,505
RDCW13	CC5383	10th Ave SW	SW 112th St to SW 114th St	Construct a paved pathway along the west side to improve traffic and pedestrian safety.	Pedestrian Improvements	\$ 27,839
RDCW13	CC5392	SW 104th St	26th Ave SW to 28th Ave SW	Enclose existing ditch along south side of SW 104th Street between 26th Avenue SW and 28th Avenue SW. Also improve existing gravel pathway on north side of same section by widening and asphaltting.	Drainage	\$ 44,928
RDCW13	CC5762	12th Ave SW	SW 106th St to SW 107th St - east side	Install curbing along east side to define a school walkway.	Pedestrian Improvements	\$ 3,971
						\$34,559,081

**White Center – Lake Hicks**  
**WLRD Activity**  
 August 18, 2004

Capital Improvement Activity				
Note #	Project Start	Construction Date	Project Name	Project Budget (\$)
1.	2000	2002	Lake Hicks Outlet Force Main Improvements – 10th Ave.	150,000
2.	2003	2003	Lake Hicks Emergency – Force Main Replacement – Pumphouse to 10th Ave.	50,000
3.	2003	2003	Conveyance Improvement – 12th Ave. at 120th Emergency	70,000
4.	2003	2003	Three NDAP Quick Fixes	15,000
5.	2001	2004	Lake Hicks Pump Replacement	300,000
6.	2004	2004	Lake Hicks Water Quality Improvement	40,000
7.	2004	2005	Lake Hicks Alum Treatment	50,000
8.	2004	2005	Water quality testing on Lake Hicks	25,000
9.	2004	2005	White Center Greenway – Regional R/D Pond Retrofit	300,000
10.	2004	2005	Mallard Lake Water Quality Improvement	40,000
11.	2005	2005	Ambaum Way Conveyance Improvement	240,000
12.	2005	2006	Mallard Lake Flood Reduction	350,000
13.	2005	2007	12th Ave. SW Conveyance Improvement	850,000
14.	2004	2008	Greenbridge (a.k.a., Park Lake Homes/Hope IV)	1,000,000
18.		2007	Hamm Creek Water Quality Improvement	600,000
19.	Pre-2000	2005	Hamm Creek Estuary	70,000
20.	2003	2005	NDAP – Rich at 30 <sup>th</sup> Ave. S.	40,000
<b>Total Capital Budget 2000-2008</b>				<b>4,190,000</b>

Programmatic Activity				
Note #	Start	Completion	Program Name	Budget (\$)
15.	Ongoing	Ongoing	Drainage and Water Quality Compliant Investigation	Varies
16.	Ongoing	Ongoing	Water Quality Compliance	Varies
17.	2002	2005	Salmon Creek Basin Plan Effort	200,000

1. Project activity, started in 2001, increases outlet conveyance and flood reduction at Lake Hicks. WLRD worked jointly with a Roads Improvement CIP at Tenth Avenue to contract and construct conveyance line improvements outletting Lake Hicks pumps. This reach of the outlet conveyance, from Southwest 110th to Southwest 116th Avenue, historically restricted the allowable pump discharge and therefore increased the frequency of flooding at Lake Hicks and upstream to Mallard Lake. Project completed in 2003.
2. To allow phasing of improvements at Lake Hicks, the force main from Tenth Avenue to the Lake Hicks existing pump house had to be realigned and upgraded. This work on Parks property replaced approximately 75 feet of asbestos pipe, thereby providing a temporary connection between the existing pumps and the new conveyance.

3. This project was jointly funded by King County and the City of Burien to replace a degraded section of conveyance at the intersection of 12th Avenue and Southwest 120th Street. During the 2003 storm, a sinkhole formed and this construction was completed as an emergency response. The City of Burien will pay for repair costs and King County will pay for emergency response costs.
4. WLRD's Neighborhood Drainage Assistance Program (NDAP) completed small drainage improvement projects (called Quick Fixes) at three different locations in the White Center area draining to Lake Hicks in 2003. NDAP is an ongoing capital program that funds a number of small projects each year to address off-road drainage problems that impact private property.
5. Pump replacement is a jointly funded project between Parks and WLRD. This work will upgrade the pump system to increase capacity from approximately 4.5 cfs from two pumps to 6 cfs from two pumps. Flow controls will be automated and will maintain flood protection for adjacent properties. The flow control will provide additional capacity to reduce the magnitude of lake level fluctuation during the wet season. This contract work is currently under construction. Additionally this project routed stormwater flows from adjacent Evergreen High/Cascade Middle school play fields to the pump forcemain bypassing Lake Hicks to improve water quality input to the Lake.
6. This project has selected a concept alternative. This project will provide an enhanced bioswale that performs biofiltration and absorption of pollutants prior to discharging flows to Lake Hicks, modifying an existing swale and pond in Lakewood Park adjacent to the parking area. The project will enhance the natural features of the existing drainage channel similar to methods described in the Lakewood Park Master Plan.
7. The water quality problems at Lake Hicks caused by nuisance bluegreen algae blooms will be addressed by treating the water and sediments in the lake with aluminum sulfate (alum). This treatment, currently planned for the spring of 2005, will also address the 303d listing of the lake in 1996 for phosphorus concentrations. Before treatment, King County must prepare an Integrated Phosphorus Management Plan (IAPMP), which is then reviewed and accepted by Washington Department of Ecology before coverage can be granted under the NPDES permit. The benefits provided by the alum treatment are not expected to be permanent, but should give several years of relief from annual nuisance algae problems while watershed-wide solutions are put in place. In addition, post-treatment monitoring must be carried out as part of the permit, but this may be at least partially combined with the water quality monitoring for other purposes.
8. To evaluate the effectiveness of proposed capital improvements, a detailed program of water sampling and assessment for Lake Hicks will be carried out May - October in 2004 and again in 2005, with several storm samples taken from inlets during the intervening winter months. The last comprehensive data collection on the lake was in the mid-1980s, when a simple hydrological diversion was put in place. The sampling program will: (1) monitor for bluegreen cyanobacterial toxicity through the summer bloom period; (2) compile data in 2004 to use as a baseline for determining the success of capital projects; and (3) compile



data in 2005 to look for the success of completed capital projects. A report on the collected data will be produced at the end of 2005.

9. This project will retrofit an existing regional stormwater pond to include additional stormwater detention capacity to reduce flows to Mallard Lake and Lake Hicks, immediately downstream. In addition, features will be included to provide water quality treatment. The project design started in 2004. Survey is currently being conducted. Additional budget to further increase detention capacity and water quality treatment may be negotiated with the City of Burien as part of the Salmon Creek Basin Plan effort currently underway. See Note 17 below.
10. This project proposes installation of an underground vault to provide water quality treatment of untreated flows from downtown White Center that enter Mallard Lake adjacent to the King County park at Southwest 104th Street. This Opportunity project will be located at King County HUD properties adjacent to Mallard Lake.
11. This project is proposed for funding in the 2005 budget for a cooperative project between King County and the City of Burien. The City of Burien proposes cost-share pro rata based on flows contributed to the system by each jurisdiction. Emergency project work in 2003 identified the deteriorated condition of pipe under Ambaum Way, a major arterial. The project proposes total replacement of pipe under this roadway in 2005 due to concern for failure of pipe and roadway.
12. This project is funded for evaluation of potential CIP solutions to chronic flooding at the Coronado Springs Apartments adjacent to Mallard Lake. Full funding for solutions has not been acquired.
13. This project is proposed for funding in the 2005 WLRD Budget at \$850K to be spent over three years. This will fund necessary improvements to Lake Hicks outlet conveyance from 116th Avenue Southwest to Ambaum Way, approximately 1,800 feet of drainage pipe system, within King County. These improvements are necessary to allow the future increase in pumped outflow from Lake Hicks. Inspection of the line was conducted in July 2004 using CIP Feasibility funds. Preliminary findings will be reviewed to develop designs of pipe repairs and/or replacements.
14. This project is WLRD's contribution to a King County Housing Authority development called "Greenbridge" in which new techniques for reducing the stormwater runoff impacts of development would be tested. WLRD's \$1 million contribution, allocated to "storm drainage", is its share of an approximately \$10 million King County local match for a federal grant to build the Greenbridge mixed-income residential development in the White Center area. WLRD's share will be disbursed in \$200,000 amounts over five years.
15. This is WLRD's ongoing program to investigate and troubleshoot drainage and water quality complaints/problems reported by local citizens. Over the past 5 years, this program has responded to over 64 such complaints/problems in the White Center area draining to Lake Hicks.

16. This is WLRD's ongoing program to enforce/provide technical assistance for compliance with the County's Water Pollution Code and the water quality source control requirements in the *Stormwater Pollution Control Manual*. Over the past 5 years, this program has conducted 65 site audits/consultations with business owners in the White Center area draining to Lake Hicks to identify source control needs and corrective actions for eliminating the discharge of contaminants to the storm and surface water system.

17. WLRD is currently working on the Salmon Creek Basin Plan with the City of Burien under a cost share agreement. The plan will identify additional capital improvement needs (see preliminary list below) as well as regulatory and programmatic needs. Implementation of the plan will require a new agreement that establishes each jurisdiction's cost share to address these needs. A public draft of the plan is expected to be completed this year and adopted next year.

18. Hamm Creek Water Quality Improvement CIP is currently reviewing conceptual alternatives to provide storm water quality treatment for local drainage at the crossing of North Fork Hamm Creek and 10<sup>th</sup> Ave at South 96 Street. Alternative selection will determine construction costs, currently in the range of \$350-500k. The local drainage from industrial areas and street drainage would receive treatment prior to discharge to Hamm Creek.

19. Hamm Creek Estuary CIP, completed in cooperation with Army Corps of Engineers and Seattle Public Utilities, involves a stream channel realignment and estuary habitat enhancement at the confluence of North Fork Hamm Creek and the Duwamish River. The project still includes funds for out-year monitoring, reparations and natural vegetation maintenance. In 2002-2003 a portion of these funds were used to stabilize stream bed erosion at the estuary.

20. Neighborhood Drainage Assistance is designing a small CIP at 30<sup>th</sup> Ave S and Roxbury for residential drainage improvement. This project is scheduled for 2005 construction.

Salmon Creek Basin Plan Effort	
Preliminary List of CIP and Programmatic Needs	
Proposed Project	Estimated Cost
Estuary restoration	\$4,000,000
By-pass line outfall modification	\$100,000
By-pass line TV inspection	\$2,500
Replace culvert under Shorewood Drive for fish passage	\$500,000
Lake Hicks alum treatment	\$50,000 plus \$50,000 every 3 years
Mallard Lake property purchase (east side)	\$400,000
Mallard Lake WQ treatment wetland (east side)	\$250,000
Mallard Lake native plantings and fecal coliform level signage	\$20,000
WQ treatment facility @ 108 <sup>th</sup> and 10 <sup>th</sup> utilizing existing undersized detention facility	\$100,000
Convert piped conveyance to open channel from White Center Regional Pond to Mallard Lake	\$200,000
Basin stewardship and hydrologic, WQ, and habitat monitoring	\$50,000 per year