

WASHINGTON CITY TRANSPORTATION IMPACT FEE

SEPTEMBER 2014

HORROCKS
ENGINEERS



Washington City
Where Dixie Begins



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EXECUTIVE SUMMARY

The purpose of this report is to present the impact fee calculation methodology for the roadway facilities. The proposed impact fee was calculated based upon the future roadway improvements identified in the Washington City Transportation Master Plan (TMP) that can be attributed to projected future development over the next 10 to 20 years. The projected future development growth was determined by evaluating issued residential and commercial building permits. The permits for the various developments were converted to a single family equivalent (SFE) in terms of trips generated in the PM peak hour (see Table 3 for further details). For purposes of this study it was assumed that Washington will continue to experience similar type growth over the next 10 to 20 years as development continues.

The SFE impact fee was calculated by dividing the city responsible roadway improvement costs by the projected future SFE development units over the next 10 to 20 years.

The following table identifies the recommended impact fee schedule for various land-uses:

Table 1: Proposed Land Use Impact Fees

Category	Land Use	Unit	Applicable ITE Code(s)	Demand Index (single family equivalent)	Impact Fee Cost Per Unit
Residential	Single Family Detached	Dwelling Units	210	1	\$3,159
	Condominium/Townhome	Dwelling Units	230	0.52	\$1,643
	Apartment	Dwelling Units	220	0.62	\$1,959
Office	Office Building	1,000 sq. ft.	710	1.56	\$4,928
	Medical Office Building	1,000 sq. ft.	720	3.57	\$11,278
Retail	Less Intensive Retail	1,000 sq. ft.	890	0.24	\$758
	Intensive Retail	1,000 sq. ft.	820	1.95	\$6,160
Services	Quality Restaurant	1,000 sq. ft.	931	2.36	\$7,455
	Fast Food	1,000 sq. ft.	934	7.11	\$22,460
	Convenience Market w / Gas Pumps	Pump Stations	945	2.13	\$6,729
	Bank	1,000 sq. ft.	912	6.08	\$19,207
Industrial	Industrial	1,000 sq. ft.	110	1.46	\$4,612
	Manufacturing	1,000 sq. ft.	140	1.1	\$3,475
	Warehousing	1,000 sq. ft.	150	0.48	\$1,516
Institutional	Elementary School	Students	520	0.28	\$885
	Middle/Junior High School	Students	522	0.3	\$948
	High School	Students	530	0.28	\$885
	Private School (K-8)	Students	534	0.6	\$1,895
	Private School (K-12)	Students	536	0.55	\$1,737
	Day Care	1,000 sq. ft.	565	2.61	\$8,245
	Library	1,000 sq. ft.	590	3.51	\$11,088
	Church	1,000 sq. ft.	560	0.66	\$2,085
Log	Hotel/Motel	rooms	310/320	0.63	\$1,990

The recommended single family detached housing impact fee of \$3,159 represents a 18% increase from the recommended impact fee from the 2010 Washington City Impact Fee Study.

INTRODUCTION

Impact fees are a way for a community to obtain funds to assist in the construction of infrastructure improvements that are needed to serve new growth. The premise behind impact fees is that if no new development was allowed, the existing infrastructure would adequately serve the existing level of development in the city. Therefore, new development should pay for the fraction of improvements that are required because of new growth. Impact fees are assessed for many types of infrastructure and facilities that are provided by a community such as roads, sewer, water, parks and trails.

According to state law, impact fees cannot be used to correct existing deficiencies in a system, only to fund growth-related capital improvements.

There are many ways to quantify the impact of new growth on the transportation system in Washington City. The method used in this study to assess the impact is to consider all the needed transportation improvements identified in the Transportation Master Plan (TMP) and then eliminate the cost of those improvements that are necessary to correct existing deficiencies.

Washington City presently assesses transportation impact fees from new development. This allows transportation related costs to be assessed to new development based on the proportional impact of new development.

In calculating the impact fees, the PM peak hour is used as it typically includes larger background/commuter traffic volumes. The typical residential unit is then assigned as a base factor for the other types of development. During the average PM peak hour it will account for approximately one trip on the roadway network.

PROJECTED FUTURE GROWTH

To determine the amount of development that will occur in Washington City over the next 10 to 20 years the following steps were followed:

- Obtain the record of permits issued for various developments from January 2011 to December 2013. Impact fee studies will often establish a future growth trend based on the recent history of issued building permits. As the City has experienced an abnormal past 3 years of building that has been primarily residential growth with almost no commercial growth activity, an average commercial trend will be based on prior years, such as from 2005 to 2006. The available commercially-zoned land combined with the gaining growth trends in the surrounding communities indicate that there will be strong commercial growth that would be similar to these prior years. This building permit information is shown in Table 3.
- Determine the PM peak hour trip generation rate for each land-use type using the ITE TRIP GENERATION MANUAL 9th Edition.
- Adjust the trip generation rate in terms of heavy vehicles percentage (it was assumed that 1 heavy vehicle would be equivalent to 2 passenger vehicles based on information

obtained from the Transportation Research Board's Highway Capacity Manual) and primary trips. The primary trip adjustment eliminates trips to various land-uses that are pass-by trips or diverted trips. A typical trip that is not adjusted with an adjustment factor assumes that a trip is made from one destination to another, with the intent that the destination is the reason for the trip. In an adjusted trip, an intermediate stop is made before the final destination is reached, such as a bank, post office, fast food, gasoline, etc. These adjustments are called by-pass trip adjustments and are represented in the primary trip adjustment. The primary trip adjustment also contains internal capture adjustments. Retail trips in Washington City have a significant number of internally captured trips, which are trips that are made at the same central location such as Home Depot, then going to the bank, going shopping at Wal-Mart, and stopping at a specialty retail store all in the same shopping center complex. Primary trip percentages were taken from the Institute of Transportation Engineers' Trip Generation Handbook.

- To compare how vehicle trips from each land use impact the roadway system, each land use is measured next to a single family home to determine how many effective single family homes equate to a given type of land use. For instance, the trips generated by a 5,000 sq. ft. medical building is equivalent to the trips generated by 18 single family homes. Therefore, we calculate a demand index factor for each land use based on the single family unit as the base factor by dividing the effective trip end for the land-use by the single family unit effective trip end, which is 1.01 per single family home, according to the Trip Generation Handbook, cited above. This produces the Single Family Equivalent unit, or SFE unit.
- Multiply the demand index for each land-use by the number of permits issued on an average year for the land use. The sum of the SFE units for the various land-uses is then multiplied by 10 to determine the projected number of SFE units expected over the next 10 years in Washington City when calculating the cost for 10 years of projects. The same is done when calculating for 20 years of projects. The SFE units expected per year is multiplied by 20 years when considering all projects for impact fees.

Based upon the methodology used above it is projected that Washington City will experience approximately 8,610 SFE units of growth over the next 10 years, and 17,220 SFE units of growth over the next 20 years.

ROADWAY IMPROVEMENT PROJECTS

A list of roadway improvement projects were taken from the Washington City Transportation Master Plan completed in May 2014. Recommended improvements are separated into 0 to 5 year improvements and 6 to 20 year improvements. A detailed cost estimate for each project was performed and can be found in the appendix of the Transportation Master Plan. In this study, these projects were subdivided into which projects would likely be constructed in the 6 to 10 year time frame so projects are divided up into 0 to 5 year projects, 6 to 10 year projects, and 11 to 20 year projects. This allows the City greater flexibility when calculating impact fee alternatives to consider. In addition, each project was evaluated to determine what portion or percentage would be eligible for impact fees.

Table 2: SINGLE FAMILY EQUIVALENT (SFE) DEMAND INDEX

Category	Land Use	Unit	Applicable ITE Code(s)	ITE Trip Ends per Unit (PM peak Hour)	Heavy Vehicle %	Heavy Vehicle Adjustment*	Primary Trip Adjustment	Effective Trip Ends per Unit	Demand Index (single family equivalent)
Residential	Single Family Detached	Dwelling Units	210	1.00	0%	1	1.00	1.00	1
	Condominium/Townhome	Dwelling Units	230	0.52	0%	1	1.00	0.52	0.52
	Apartment	Dwelling Units	220	0.62	0%	1	1.00	0.62	0.62
Office	Office Building	1,000 sq. ft.	710	1.49	5%	1.05	1.00	1.56	1.56
	Medical Office Building	1,000 sq. ft.	720	3.57	0%	1	1.00	3.57	3.57
Retail	Less Intensive Retail	1,000 sq. ft.	890	0.45	5%	1.05	0.50	0.24	0.24
	Intensive Retail	1,000 sq. ft.	820	3.71	5%	1.05	0.50	1.95	1.95
Services	Quality Restaurant	1,000 sq. ft.	931	7.49	5%	1.05	0.30	2.36	2.36
	Fast Food	1,000 sq. ft.	934	33.84	5%	1.05	0.20	7.11	7.11
	Convenience Market w/ Gas Pumps	Pump Stations	945	13.51	5%	1.05	0.15	2.13	2.13
	Bank	1,000 sq. ft.	912	24.30	0%	1	0.25	6.08	6.08
Industrial	Industrial	1,000 sq. ft.	110	0.97	50%	1.5	1.00	1.46	1.46
	Manufacturing	1,000 sq. ft.	140	0.73	50%	1.5	1.00	1.10	1.10
	Warehousing	1,000 sq. ft.	150	0.32	50%	1.5	1.00	0.48	0.48
Institutional	Elementary School	Students	520	0.28	0%	1	1.00	0.28	0.28
	Middle/Junior School	Students	522	0.3	0%	1	1.00	0.30	0.30
	High School	Students	530	0.28	0%	1	1.00	0.28	0.28
	Private School (K-8)	Students	534	0.61	0%	1	1.00	0.61	0.60
	Private School (K-12)	Students	536	0.55	0%	1	1.00	0.55	0.55
	Day Care	1,000 sq. ft.	565	13.18	0%	1	0.20	2.64	2.61
	Library	1,000 sq. ft.	590	7.09	0%	1	0.50	3.55	3.51
Church	1,000 sq. ft.	560	0.66	0%	1	1.00	0.66	0.66	
Ldg	Hotel/Motel	rooms	310/320	0.60	5%	1.05	1.00	0.63	0.63

It was assumed, based on City practices, that developers will typically pay for improvements on the outside 25 ft right-of-way on each side of the road (one lane of asphalt plus curb, gutter, and sidewalk) while the City would be responsible for the remainder. Based upon the cost estimate it is anticipated that the cost to complete the projected roadway improvements over the next 20 years is \$172,372,349 with \$59,118,658 (34%) being eligible for impact fees. The 20 year model produces 20 years of projects, but the alternatives listed in Table 4 also look at projects that are likely to be built in the next 10 years.

Table 3: FUTURE GROWTH IN WASHINGTON CITY

Category	Land Use	Unit	Demand Index (single family equivalent)	# of Units for Permits Issued *	Average # of Units/Year	Average # of SFE Units/Year
Residential	Single Family Detached	Dwelling Units	1.00	1349	450	450
	Condominium/Townhome	Dwelling Units	0.52	0	0	0
	Apartment	Dwelling Units	0.62	0	0	0
Office	Office Building	1,000 sq. ft.	1.56	0	0	0
	Medical Office Building	1,000 sq. ft.	3.57	0	0	0
Retail	Less Intensive Retail	1,000 sq. ft.	0.24	0	0	0
	Intensive Retail	1,000 sq. ft.	1.95	214	169	330
Services	Quality Restaurant	1,000 sq. ft.	2.36	0	0	0
	Fast Food	1,000 sq. ft.	7.11	5	4	28
	Convenience Market w/ Gas Pumps	Pump Stations	2.13	0	0	0
	Bank	1,000 sq. ft.	6.08	5	4	24
Industrial	Industrial	1,000 sq. ft.	1.46	0	0	0
	Manufacturing	1,000 sq. ft.	1.10	8	6	7
	Warehousing	1,000 sq. ft.	0.48	0	0	0
Institutional	Elementary School	Students	0.28	0	0	0
	Middle/Junior School	Students	0.30	0	0	0
	High School	Students	0.28	0	0	0
	Private School (K-8)	Students	0.60	0	0	0
	Private School (K-12)	Students	0.55	0	0	0
	Day Care	1,000 sq. ft.	2.61	0	0	0
	Library	1,000 sq. ft.	3.51	0	0	0
Church	1,000 sq. ft.	0.66	42	33	22	
Lodge	Hotel/Motel	rooms	0.63	0	0	0
Total # of Single Family Equivalent Units/Year						861
Total # of Single Family Equivalent Units Over the Next 10 Years						8,610

* Residential permits from January 2011 to December 2013
Commercial permits from January 2005 to July 2006

POTENTIAL FUNDING SOURCES

Funding sources for transportation are essential if the Washington City recommended projects are to be built. Presently there are three main sources of revenue available to Washington City. These funding sources include: (1) State Funding through Class B and C funds; (2) Local General Funds; and (3) Private and Innovative Sources. The following paragraphs further describe these various transportation funding sources available to the City.

Class B and C Funds

The State of Utah makes funds available for highway construction from several sources. These sources include sales tax, motor fuel and special fuel taxes, vehicle control fees, motor vehicle registration fees, proportional registration, temporary permits, special transportation permits, highway use tax, safety inspections and miscellaneous fees. In the 1998 fiscal year, the gas tax was raised to 24.5 cents per gallon. The special fuel tax and motor registration fees were also raised in 1998. In addition, the State Legislature has programmed state general funds to support UDOT projects. Presently UDOT keeps about 75 percent of these funds and makes the remaining 25 percent available to counties and cities in the State Class B and C Program.

Presently Class B and C funds are allocated on a ratio of population and road miles for counties and municipalities. Type B funds are distributed to the counties and C funds to the cities. These funds are primarily for new construction, maintenance, or preservation at the discretion of the counties and cities.

Local General Funds

Municipalities and the county program a significant amount of local general funds for roadway maintenance and improvement. Future revenues are projected based on current and past general fund spending on roads and highways by the county and municipalities.

Private and Innovative Sources

With local expenditures increasing, municipalities will need to consider other forms of innovative highway funding programs in the future. Transportation impact fees on new developments is one type of innovative funding that many local governments use presently. In addition, developers are a source of funding for major projects that benefit their development. These and other innovative sources will assist in funding local highway projects over the next twenty years.

Table 4: 0 to 20 Year Roadway Projects Cost Estimate

Location	Current Cost	% City Responsibility	Eligible for Impact Fees
1-5 Year Improvements			
1a. Washington Parkway Bond	\$1,985,180	100%	\$1,985,180
1b. Buena Vista Bond	\$3,914,043	100%	\$3,914,043
2. Washington Fields Road from Lost Ridge Drive to 3650 South, Phase 4A	\$502,320	100%	\$502,320
3. Washington Fields Road from Lost Ridge Drive to 3650 South, Phase 4B	\$3,074,526	41%	\$1,256,164
4. Milepost 10 Concept Study	\$60,000	100%	\$60,000
5. 3650 South from Western City Limit to Southern Parkway	\$7,610,694	38%	\$2,894,892
6. Southern Parkway	\$17,000,000	0%	\$0
7. Merrill Road	\$2,432,976	30%	\$720,174
8. Milepost 11 Concept Study	\$60,000	100%	\$60,000
9. Wal-Mart / Home Depot Connection to St. George	\$800,982	100%	\$800,982
1-5 Year Improvement Totals	\$33,674,324	25%	\$8,427,358
6-10 Year Improvements			
1. 4750 South from Western City Limit to Washington Fields Road	\$3,135,530	40%	\$1,255,721
1a. Washington Parkway Bond	\$1,985,180	100%	\$1,985,180
2. Washington Fields Road from 3650 South to Stucki Farms, Phase 5B	\$2,268,448	59%	\$1,337,518
3. Washington Fields Road from Stucki Farms to Warner Valley Road, Phase 6B	\$3,067,610	47%	\$1,446,900
4. Washington Fields Road from Warner Valley Road to the Southern City Limit, Phase 7	\$4,004,978	41%	1,636,169
5. 240 West from Merrill Road to Southern City Limit	\$2,442,076	68%	\$1,650,403
6. 20 East from Merrill Road to Southern City Limit	\$3,991,624	70%	\$2,809,534
7. 300 East from Merrill Road to 3650 South	\$1,927,562	42%	\$816,360
8. 4200 South from Western City Limit to Washington Fields Road	\$2,636,316	36%	\$953,680
9. 840 South from 660 North (St. George) to 300 East	\$1,613,248	38%	\$608,426
10. South Frontage Road from Washington Parkway to 300 East	\$2,224,040	55%	\$1,228,500
11. Warner Valley Road from Southern Parkway to the Road through Warner Valley	\$5,876,700	37%	\$2,171,442
12. Extend Main Street to 100 East, south of 400 South	\$1,924,650	45%	\$868,140
6-10 Year Improvement Totals	\$37,097,962	51%	\$18,767,973
11-20 Year Improvements			
13. Main Street from I-15 Frontage Road to Washington Parkway	\$1,998,542	39%	\$779,870
14. Bulloch Street from 300 East to Milepost 13 Connector Road	\$1,358,266	36%	\$490,126
15. Long Valley Road	\$10,860,686	36%	\$3,916,146
16. Roadway through Warner Valley from Warner Valley Road to Southern Parkway	\$18,204,550	44%	\$8,077,160
17. Purgatory Road	\$5,924,350	37%	\$2,180,196
18. Harvest Lane from Merrill Road to Southern City Limit	\$3,103,828	40%	\$1,226,316
19. Washington Parkway from Milepost 13 Interchange to Western City Limit, Phase 1	\$15,895,750	28%	\$4,449,172
20. Washington Parkway from Milepost 13 Interchange to Western City Limit, Phase 2	\$2,418,780	100%	\$2,418,780
21. Washington Parkway from Milepost 13 Interchange to Western City Limit, Phase 3	\$4,392,570	57%	\$2,488,850
22. West Airport Road from Western City Limit to Washington Fields Road	\$3,135,530	34%	\$1,061,970
23. Tortoise Rock Road from Buena Vista Blvd. to Washington Parkway	\$1,063,608	38%	\$405,678
24. I-15 Milepost 11 Interchange	\$30,000,000	10%	\$3,000,000
25. Washington Dam Road from 1900 East to East City Limit	\$3,243,604	44%	\$1,429,064
11-20 Year Improvement Totals	\$101,600,064	31%	\$31,923,328
Roadway Total Costs	\$172,372,349	34%	\$59,118,658

PROPOSED IMPACT FEE POLICY

In calculating the SFE impact fee the following three alternatives were considered:

1. All impact fee eligible roadway cost over the next 20 years divided by the projected SFE units over the next 20 years.
2. All 0 to 5 year impact fee eligible roadway costs in addition to all 6 to 10 year projects divided by the projected SFE units over the next 10 years.
3. All 0 to 5 year impact fee eligible roadway costs in addition to 50% of the 6 to 10 year impact fee eligible roadway costs divided by the projected SFE units over the next 10 years.

Table 5 summarizes the results of the three alternatives:

Table 5: Impact Fee Cost Alternatives

#	Impact Fee Alternatives	City Responsibility	Impact Fee
1	All Projects (0 to 20 year projects)	\$59,118,658	\$3,433
2	All 0 to 5 year Projects and all 6 to 10 year projects	\$27,195,331	\$3,159
3	All 0 to 5 year Projects and 50% of the 6 to 10 year projects	\$21,179,781	\$2,069

Out of all the alternatives, Alternative #1 represents the maximum SFE impact fee that can be charged at \$3,433. However, the actual fee assessment may be set at a lower rate, as determined by the City Council. In discussion with City staff option #2 seemed to be the most practical at \$3,159.

COMPARISON OF OLD FEES TO PROPOSED FEES

The October 2007 Washington Transportation Impact Fee Study recommended an impact fee of \$2,983 per single family residential unit. The April 2010 Impact Fee Study proposed a traffic impact fee of \$2,670 which represented a decrease of 10% from the recommended fee from 2007. This study proposes \$3,159, an increase of 18% above the recommended fee from 2010.

EXAMPLE CALCULATION

The following equation is to be used in calculating the impact fee:

Number of Land Use Units * Impact Fee Cost per Unit (taken from Table 1: Proposed Land Use Impact Fees) = Assessed Transportation Impact Fee

For example the transportation impact fee for a 3,890 sq. ft. office building would be calculated in the following way:

$$3.890 * \$4,928 = \$19,170$$

CONCLUSION

Washington City presently assesses transportation impact fees from new development. This allows transportation related costs to be assessed to the new development based on the proportional impact. It is important that the assessed impact fees are regularly updated to insure that the required roadway improvement costs attributed to growth and development can be met.

The recommended SFE impact fee of \$3,159 in Alternate #2 is short of the projected SFE fee of \$3,433 required to fully fund the City portion of roadway projects attributed to growth. However, it is appropriate to charge impact fees to correspond to what is decided to be funded.

APPENDIX

Washington City

2014 Capital Facilities Plan Update

2. Washington Fields Road from Lost Ridge Drive to 3650 South, Phase 4A

Major Arterial

(0.90 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	2,450	\$196,000.00
Base Course (8.0 inches)	cu yd	\$35.00	1,500	\$52,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	1,100	\$27,500.00
6' Wide Sidewalk	sq ft	\$5.00	-	\$0.00
30" High Back Curb & Gutter	ft	\$20.00	-	\$0.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$276,000.00

Impact Fee Quantity	Impact Fee Total	
2,450	\$196,000.00	
1,500	\$52,500.00	
1,100	\$27,500.00	
0	\$0.00	
0	\$0.00	
0	\$0.00	
IMPACT FEE SUBTOTAL		\$276,000.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,403 tons of Roadway Asphalt
 2,070 ft Curb & Gutter Length
 2,070 ft Sidewalk Length

SUBTOTAL	\$276,000.00
Drainage (10%)	\$27,600.00
Mobilization (10%)	\$27,600.00
Traffic Control (10%)	\$27,600.00
Subtotal	\$358,800.00
Construction Contingency (20%)	\$71,760.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$430,560.00
Engineering (20%)	\$71,760.00
GRAND TOTAL	\$502,320.00

IMPACT FEE SUBTOTAL	\$276,000.00
Drainage (10%)	\$27,600.00
Mobilization (10%)	\$27,600.00
Traffic Control (10%)	\$27,600.00
Subtotal	\$358,800.00
Construction Contingency (20%)	\$71,760.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$430,560.00
Engineering (20%)	\$71,760.00
IMPACT FEE TOTAL	\$502,320.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 38.00 ft
 Ultimate Right-Of-Way of 0.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

3-Lane Road
 No R/W in this project
 ~170' North of Lost Ridge Rd (300' of 1-Lane & Shoulder)
 ~170' South of Lost Ridge Rd (300' of 1-Lane & Shoulder)
 3090 South to 3650 South (2650' of 1-Lane & Shoulder)

IMPACT FEE % of GRAND TOTAL 100%

Washington City

2014 Capital Facilities Plan Update

3. Washington Fields Road from Lost Ridge Drive to 3650 South, Phase 4B

Major Arterial

(0.90 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	10,300	\$824,000.00
Base Course (8.0 inches)	cu yd	\$35.00	3,200	\$112,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	2,400	\$60,000.00
6' Wide Sidewalk	sq ft	\$5.00	18,300	\$91,500.00
30" High Back Curb & Gutter	ft	\$20.00	7,500	\$150,000.00
Right - of - Way	acre	\$60,000.00	7.53	\$451,800.00
SUBTOTAL				\$1,689,300.00

Impact Fee Quantity	Impact Fee Total
5,800	\$464,000.00
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
3.77	\$226,200.00
IMPACT FEE SUBTOTAL	
\$690,200.00	

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 3,512 tons of Roadway Asphalt
 2,070 ft Curb & Gutter Length
 2,070 ft Sidewalk Length

SUBTOTAL	\$1,689,300.00
Drainage (10%)	\$168,930.00
Mobilization (10%)	\$168,930.00
Traffic Control (10%)	\$168,930.00
Subtotal	\$2,196,090.00
Construction Contingency (20%)	\$439,218.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,635,308.00
Engineering (20%)	\$439,218.00
GRAND TOTAL	\$3,074,526.00

IMPACT FEE SUBTOTAL	\$690,200.00
Drainage (10%)	\$69,020.00
Mobilization (10%)	\$69,020.00
Traffic Control (10%)	\$69,020.00
Subtotal	\$897,260.00
Construction Contingency (20%)	\$179,452.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,076,712.00
Engineering (20%)	\$179,452.00
IMPACT FEE TOTAL	\$1,256,164.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 50.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

Additional 3 inches of asphalt added to entire surface
 3-Lane to 5-Lane w/ C & G, and Sidewalk

IMPACT FEE % of GRAND TOTAL 41%

Washington City

2014 Capital Facilities Plan Update

6. Southern Parkway

none

(1.74 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (6.0 inches)	ton	\$80.00	-	\$0.00
Base Course (8.0 inches)	cu yd	\$35.00	-	\$0.00
Granular Borrow (12.0 inches)	cu yd	\$25.00	-	\$0.00
6' Wide Sidewalk	sq ft	\$5.00	-	\$0.00
30" High Back Curb & Gutter	ft	\$20.00	-	\$0.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$0.00

Impact Fee Quantity	Impact Fee Total
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
0.00	\$0.00
IMPACT FEE SUBTOTAL	
\$0.00	

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 3,512 tons of Roadway Asphalt
 2,070 ft Curb & Gutter Length
 2,070 ft Sidewalk Length

SUBTOTAL	\$0.00
Drainage (10%)	\$0.00
Mobilization (10%)	\$0.00
Traffic Control (10%)	\$0.00
Subtotal	\$0.00
Construction Contingency (20%)	\$0.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$0.00
Engineering (20%)	\$0.00
GRAND TOTAL	\$0.00

IMPACT FEE SUBTOTAL	\$0.00
Drainage (10%)	\$0.00
Mobilization (10%)	\$0.00
Traffic Control (10%)	\$0.00
Subtotal	\$0.00
Construction Contingency (20%)	\$0.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$0.00
Engineering (20%)	\$0.00
IMPACT FEE TOTAL	\$0.00

Assumptions

BASED UPON PROJECT ESTIMATE

Grand Total \$17,000,000.00

Washington City

2014 Capital Facilities Plan Update

7. Merrill Road

Minor Arterial

(1.29 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	2,700	\$216,000.00
Base Course (8.0 inches)	cu yd	\$35.00	3,400	\$119,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	2,600	\$65,000.00
6' Wide Sidewalk	sq ft	\$5.00	40,800	\$204,000.00
30" High Back Curb & Gutter	ft	\$20.00	13,600	\$272,000.00
Right - of - Way	acre	\$60,000.00	7.68	\$460,800.00
SUBTOTAL				\$1,336,800.00

Impact Fee Quantity	Impact Fee Total	
2,000	\$160,000.00	
2,800	\$98,000.00	
2,100	\$52,500.00	
0	\$0.00	
0	\$0.00	
1.42	\$85,200.00	
IMPACT FEE SUBTOTAL		\$395,700.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,323 tons of Roadway Asphalt
 4,000 ft Curb & Gutter Length
 4,000 ft Sidewalk Length

SUBTOTAL	\$1,336,800.00
Drainage (10%)	\$133,680.00
Mobilization (10%)	\$133,680.00
Traffic Control (10%)	\$133,680.00
Subtotal	\$1,737,840.00
Construction Contingency (20%)	\$347,568.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,085,408.00
Engineering (20%)	\$347,568.00
GRAND TOTAL	\$2,432,976.00

IMPACT FEE SUBTOTAL	\$395,700.00
Drainage (10%)	\$39,570.00
Mobilization (10%)	\$39,570.00
Traffic Control (10%)	\$39,570.00
Subtotal	\$514,410.00
Construction Contingency (20%)	\$102,882.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$617,292.00
Engineering (20%)	\$102,882.00
IMPACT FEE TOTAL	\$720,174.00

Assumptions

3.00 inch Thick Asphalt	2 Lanes to 5 Lanes w/ C & G and Sidewalk
Pavement Width of 20.00 ft	45' width existing
Right-Of-Way of 12.00 ft	South side needs: C&G, Sidewalk and 20' asphalt roadway.
8.00 inch Thick Base Course	0.54 Mile of new road
6.00 inch Thick Granular Borrow	0.50 Mile of widening

IMPACT FEE % of GRAND TOTAL 30%

Washington City

2014 Capital Facilities Plan Update

9. Wal-Mart / Home Depot Connection to St. George

Major Collector

(0.22 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	70	\$5,600.00
Base Course (8.0 inches)	cu yd	\$35.00	100	\$3,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	60	\$1,500.00
5' Wide Sidewalk	sq ft	\$5.00	5,900	\$29,500.00
30" High Back Curb & Gutter	ft	\$20.00	2,400	\$48,000.00
Right - of - Way	acre	\$200,000.00	1.76	\$352,000.00
SUBTOTAL				\$440,100.00

Impact Fee Quantity	Impact Fee Total	
70	\$5,600.00	
100	\$3,500.00	
60	\$1,500.00	
5,900	\$29,500.00	
2,400	\$48,000.00	
1.76	\$352,000.00	
IMPACT FEE SUBTOTAL		\$440,100.00

SUBTOTAL	\$440,100.00
Drainage (10%)	\$44,010.00
Mobilization (10%)	\$44,010.00
Traffic Control (10%)	\$44,010.00
Subtotal	\$572,130.00
Construction Contingency (20%)	\$114,426.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$686,556.00
Engineering (20%)	\$114,426.00
GRAND TOTAL	\$800,982.00

IMPACT FEE SUBTOTAL	\$440,100.00
Drainage (10%)	\$44,010.00
Mobilization (10%)	\$44,010.00
Traffic Control (10%)	\$44,010.00
Subtotal	\$572,130.00
Construction Contingency (20%)	\$114,426.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$686,556.00
Engineering (20%)	\$114,426.00
IMPACT FEE TOTAL	\$800,982.00

Existing Conditions

Assume 5 inch Thick of Existing Asphalt
 2,326 tons of Roadway Asphalt
 190 ft Curb & Gutter Length
 190 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 1.00 ft
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 St. George City will need to complete road so it connects to 3050 East.

3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 100%

Washington City

2014 Capital Facilities Plan Update

1. 4750 South from Western City Limit to Washington Fields Road

Minor Arterial

(0.87 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	5,800	\$464,000.00
Base Course (8.0 inches)	cu yd	\$35.00	7,400	\$259,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	5,600	\$140,000.00
6' Wide Sidewalk	sq ft	\$5.00	27,600	\$138,000.00
30" High Back Curb & Gutter	ft	\$20.00	9,200	\$184,000.00
Right - of - Way	acre	\$60,000.00	8.96	\$537,818.18
SUBTOTAL				\$1,722,818.18

Impact Fee Quantity	Impact Fee Total	
2,700	\$216,000.00	
3,500	\$122,500.00	
5,200	\$130,000.00	
0	\$0.00	
0	\$0.00	
3.69	\$221,454.55	
IMPACT FEE SUBTOTAL		\$689,954.55

SUBTOTAL	\$1,722,818.18
Drainage (10%)	\$172,282.00
Mobilization (10%)	\$172,282.00
Traffic Control (10%)	\$172,282.00
Subtotal	\$2,239,664.18
Construction Contingency (20%)	\$447,933.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,687,597.18
Engineering (20%)	\$447,933.00
GRAND TOTAL	\$3,135,530.18

IMPACT FEE SUBTOTAL	\$689,954.55
Drainage (10%)	\$68,996.00
Mobilization (10%)	\$68,996.00
Traffic Control (10%)	\$68,996.00
Subtotal	\$896,942.55
Construction Contingency (20%)	\$179,389.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,076,331.55
Engineering (20%)	\$179,389.00
IMPACT FEE TOTAL	\$1,255,720.55

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

5 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 40%

Washington City

2014 Capital Facilities Plan Update

2. Washington Fields Road from 3650 South to Stucki Farms, Phase 5B

Major Arterial

(0.80 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	7,000	\$560,000.00
Base Course (8.0 inches)	cu yd	\$35.00	3,600	\$126,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	2,700	\$67,500.00
6' Wide Sidewalk	sq ft	\$5.00	24,700	\$123,500.00
30" High Back Curb & Gutter	ft	\$20.00	8,300	\$166,000.00
Right - of - Way	acre	\$60,000.00	3.39	\$203,400.00
SUBTOTAL				\$1,246,400.00

Impact Fee Quantity	Impact Fee Total	
5,100	\$408,000.00	
3,100	\$108,500.00	
600	\$15,000.00	
0	\$0.00	
0	\$0.00	
3.39	\$203,400.00	
IMPACT FEE SUBTOTAL		\$734,900.00

SUBTOTAL	\$1,246,400.00
Drainage (10%)	\$124,640.00
Mobilization (10%)	\$124,640.00
Traffic Control (10%)	\$124,640.00
Subtotal	\$1,620,320.00
Construction Contingency (20%)	\$324,064.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,944,384.00
Engineering (20%)	\$324,064.00
GRAND TOTAL	\$2,268,448.00

IMPACT FEE SUBTOTAL	\$734,900.00
Drainage (10%)	\$73,490.00
Mobilization (10%)	\$73,490.00
Traffic Control (10%)	\$73,490.00
Subtotal	\$955,370.00
Construction Contingency (20%)	\$191,074.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,146,444.00
Engineering (20%)	\$191,074.00
IMPACT FEE TOTAL	\$1,337,518.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,046 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 35.00 ft
 Right-Of-Way of 0.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

Additional 3 inches of asphalt added to entire surface
 From 2-Lanes to 5-Lanes w/ C & G and Sidewalk
 City is responsible for 1 lane of asphalt

IMPACT FEE % of GRAND TOTAL 59%

Washington City

2014 Capital Facilities Plan Update

3. Washington Fields Road from Stucki Farms to Warner Valley Road, Phase 6B

Major Arterial

(1.07 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	10,300	\$824,000.00
Base Course (8.0 inches)	cu yd	\$35.00	4,200	\$147,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	6,600	\$165,000.00
6' Wide Sidewalk	sq ft	\$5.00	33,900	\$169,500.00
30" High Back Curb & Gutter	ft	\$20.00	19,000	\$380,000.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$1,685,500.00

Impact Fee Quantity	Impact Fee Total	
7,000	\$560,000.00	
0	\$0.00	
3,000	\$75,000.00	
0	\$0.00	
8,000	\$160,000.00	
0.00	\$0.00	
IMPACT FEE SUBTOTAL		\$795,000.00

SUBTOTAL	\$1,685,500.00
Drainage (10%)	\$168,550.00
Mobilization (10%)	\$168,550.00
Traffic Control (10%)	\$168,550.00
Subtotal	\$2,191,150.00
Construction Contingency (20%)	\$438,230.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,629,380.00
Engineering (20%)	\$438,230.00
GRAND TOTAL	\$3,067,610.00

IMPACT FEE SUBTOTAL	\$795,000.00
Drainage (10%)	\$79,500.00
Mobilization (10%)	\$79,500.00
Traffic Control (10%)	\$79,500.00
Subtotal	\$1,033,500.00
Construction Contingency (20%)	\$206,700.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,240,200.00
Engineering (20%)	\$206,700.00
IMPACT FEE TOTAL	\$1,446,900.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 3,284 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 30.00 ft
 Right-Of-Way of 0.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

Additional 3 inches of asphalt added to entire surface
 2 Lanes to 4 Lanes w/ Median w/ C & G and Sidewalk
 City portion includes median with median curb

IMPACT FEE % of GRAND TOTAL 47%

Washington City

2014 Capital Facilities Plan Update

4. Washington Fields Rd from Warner Valley Rd to Southern City Limit, Phase 7

Major Arterial

(1.03 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	6,900	\$552,000.00
Base Course (8.0 inches)	cu yd	\$35.00	8,800	\$308,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	6,600	\$165,000.00
6' Wide Sidewalk	sq ft	\$5.00	32,700	\$163,500.00
30" High Back Curb & Gutter	ft	\$20.00	10,900	\$218,000.00
Right - of - Way	acre	\$60,000.00	13.23	\$794,036.36
SUBTOTAL				\$2,200,536.36

Impact Fee Quantity	Impact Fee Total	
3,200	\$256,000.00	
4,100	\$143,500.00	
3,200	\$80,000.00	
0	\$0.00	
0	\$0.00	
6.99	\$419,490.91	
IMPACT FEE SUBTOTAL		\$898,990.91

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$2,200,536.36
Drainage (10%)	\$220,054.00
Mobilization (10%)	\$220,054.00
Traffic Control (10%)	\$220,054.00
Subtotal	\$2,860,698.36
Construction Contingency (20%)	\$572,140.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$3,432,838.36
Engineering (20%)	\$572,140.00
GRAND TOTAL	\$4,004,978.36

IMPACT FEE SUBTOTAL	\$898,990.91
Drainage (10%)	\$89,900.00
Mobilization (10%)	\$89,900.00
Traffic Control (10%)	\$89,900.00
Subtotal	\$1,168,690.91
Construction Contingency (20%)	\$233,739.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,402,429.91
Engineering (20%)	\$233,739.00
IMPACT FEE TOTAL	\$1,636,168.91

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 106.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

5 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 41%

Washington City

2014 Capital Facilities Plan Update

5. 240 West from Merrill Road to Southern City limit Residential Collector (1.26 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	5,500	\$440,000.00
Base Course (8.0 inches)	cu yd	\$35.00	7,000	\$245,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	5,200	\$130,000.00
5' Wide Sidewalk	sq ft	\$5.00	33,400	\$167,000.00
30" High Back Curb & Gutter	ft	\$20.00	13,400	\$268,000.00
Right - of - Way	acre	\$60,000.00	1.53	\$91,800.00
SUBTOTAL				\$1,341,800.00

Impact Fee Quantity	Impact Fee Total	
5,500	\$440,000.00	
7,000	\$245,000.00	
5,200	\$130,000.00	
0	\$0.00	
0	\$0.00	
1.53	\$91,812.61	
IMPACT FEE SUBTOTAL		\$906,812.61

SUBTOTAL	\$1,341,800.00
Drainage (10%)	\$134,180.00
Mobilization (10%)	\$134,180.00
Traffic Control (10%)	\$134,180.00
Subtotal	\$1,744,340.00
Construction Contingency (20%)	\$348,868.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,093,208.00
Engineering (20%)	\$348,868.00
GRAND TOTAL	\$2,442,076.00

IMPACT FEE SUBTOTAL	\$906,812.61
Drainage (10%)	\$90,682.00
Mobilization (10%)	\$90,682.00
Traffic Control (10%)	\$90,682.00
Subtotal	\$1,178,858.61
Construction Contingency (20%)	\$235,772.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,414,630.61
Engineering (20%)	\$235,772.00
IMPACT FEE TOTAL	\$1,650,402.61

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,624 tons of Roadway Asphalt
 2,830 ft Curb & Gutter Length
 2,482 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt	Half the overall length
Pavement Width of 42.00 ft	Half the overall length
Right-Of-Way of 60.00 ft	Half the overall length
8.00 inch Thick Base Course	Half the overall length
6.00 inch Thick Granular Borrow	Half the overall length
Sidewalk and Curb & Gutter	2/3 the overall length

2 Lanes to 3 Lanes w/ Median
w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 68%

Washington City

2014 Capital Facilities Plan Update

6. 20 East from Merrill Road to Southern City limit

Major Collector

(1.89 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	8,900	\$712,000.00
Base Course (8.0 inches)	cu yd	\$35.00	11,400	\$399,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	8,500	\$212,500.00
5' Wide Sidewalk	sq ft	\$5.00	49,900	\$249,500.00
30" High Back Curb & Gutter	ft	\$20.00	20,000	\$400,000.00
Right - of - Way	acre	\$60,000.00	3.67	\$220,200.00
SUBTOTAL				\$2,193,200.00

Impact Fee Quantity	Impact Fee Total	
8,900	\$712,000.00	
11,400	\$399,000.00	
8,500	\$212,500.00	
0	\$0.00	
0	\$0.00	
3.67	\$220,200.00	
IMPACT FEE SUBTOTAL		\$1,543,700.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 4,529 tons of Roadway Asphalt
 7,954 ft Curb & Gutter Length
 7,954 ft Sidewalk Length

SUBTOTAL	\$2,193,200.00
Drainage (10%)	\$219,320.00
Mobilization (10%)	\$219,320.00
Traffic Control (10%)	\$219,320.00
Subtotal	\$2,851,160.00
Construction Contingency (20%)	\$570,232.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$3,421,392.00
Engineering (20%)	\$570,232.00
GRAND TOTAL	\$3,991,624.00

IMPACT FEE SUBTOTAL	\$1,543,700.00
Drainage (10%)	\$154,370.00
Mobilization (10%)	\$154,370.00
Traffic Control (10%)	\$154,370.00
Subtotal	\$2,006,810.00
Construction Contingency (20%)	\$401,362.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,408,172.00
Engineering (20%)	\$401,362.00
IMPACT FEE TOTAL	\$2,809,534.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 46.00 ft 2 Lanes to 3 Lanes w/ C & G and Sidewalk
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

IMPACT FEE % of GRAND TOTAL 70%

Washington City

2014 Capital Facilities Plan Update

7. 300 East from Merrill Road to 3650 South

Residential Collector

(0.89 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	3,900	\$312,000.00
Base Course (8.0 inches)	cu yd	\$35.00	4,900	\$171,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	3,700	\$92,500.00
5' Wide Sidewalk	sq ft	\$5.00	23,500	\$117,500.00
30" High Back Curb & Gutter	ft	\$20.00	9,400	\$188,000.00
Right - of - Way	acre	\$60,000.00	2.96	\$177,600.00
SUBTOTAL				\$1,059,100.00

Impact Fee Quantity	Impact Fee Total	
2,800	\$224,000.00	
3,500	\$122,500.00	
1,500	\$37,500.00	
0	\$0.00	
0	\$0.00	
1.08	\$64,548.93	
IMPACT FEE SUBTOTAL		\$448,548.93

SUBTOTAL	\$1,059,100.00
Drainage (10%)	\$105,910.00
Mobilization (10%)	\$105,910.00
Traffic Control (10%)	\$105,910.00
Subtotal	\$1,376,830.00
Construction Contingency (20%)	\$275,366.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,652,196.00
Engineering (20%)	\$275,366.00
GRAND TOTAL	\$1,927,562.00

IMPACT FEE SUBTOTAL	\$448,548.93
Drainage (10%)	\$44,855.00
Mobilization (10%)	\$44,855.00
Traffic Control (10%)	\$44,855.00
Subtotal	\$583,113.93
Construction Contingency (20%)	\$116,623.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$699,736.93
Engineering (20%)	\$116,623.00
IMPACT FEE TOTAL	\$816,359.93

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,041 tons of Roadway Asphalt
 2,330 ft Curb & Gutter Length
 2,330 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt 2-lane to 3-lane road
 Pavement Width of 42.00 ft 1,600 feet of new road
 Right-Of-Way of 60.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 Includes C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 42%

Washington City

2014 Capital Facilities Plan Update

8. 4200 South from Western City Limit to Washington Fields Road

Minor Arterial

(0.73 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	4,900	\$392,000.00
Base Course (8.0 inches)	cu yd	\$35.00	6,200	\$217,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	4,650	\$116,250.00
6' Wide Sidewalk	sq ft	\$5.00	23,200	\$116,000.00
30" High Back Curb & Gutter	ft	\$20.00	7,800	\$156,000.00
Right - of - Way	acre	\$60,000.00	7.52	\$451,272.73
SUBTOTAL				\$1,448,522.73

Impact Fee Quantity	Impact Fee Total	
2,300	\$184,000.00	
2,900	\$101,500.00	
2,100	\$52,500.00	
0	\$0.00	
0	\$0.00	
3.10	\$186,000.00	
IMPACT FEE SUBTOTAL		\$524,000.00

SUBTOTAL	\$1,448,522.73
Drainage (10%)	\$144,853.00
Mobilization (10%)	\$144,853.00
Traffic Control (10%)	\$144,853.00
Subtotal	\$1,883,081.73
Construction Contingency (20%)	\$376,617.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,259,698.73
Engineering (20%)	\$376,617.00
GRAND TOTAL	\$2,636,315.73

IMPACT FEE SUBTOTAL	\$524,000.00
Drainage (10%)	\$52,400.00
Mobilization (10%)	\$52,400.00
Traffic Control (10%)	\$52,400.00
Subtotal	\$681,200.00
Construction Contingency (20%)	\$136,240.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$817,440.00
Engineering (20%)	\$136,240.00
IMPACT FEE TOTAL	\$953,680.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

New 5 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 36%

Washington City

2014 Capital Facilities Plan Update

9. 840 South from 660 North (St. George) to 300 East

Major Collector

(0.56 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	2,700	\$216,000.00
Base Course (8.0 inches)	cu yd	\$35.00	3,400	\$119,000.00
Granular Borrow (12.0 inches)	cu yd	\$25.00	2,600	\$65,000.00
5' Wide Sidewalk	sq ft	\$5.00	22,600	\$113,000.00
30" High Back Curb & Gutter	ft	\$20.00	7,600	\$152,000.00
Right - of - Way	acre	\$60,000.00	3.69	\$221,400.00
SUBTOTAL				\$886,400.00

Impact Fee Quantity	Impact Fee Total	
1,800	\$144,000.00	
2,200	\$77,000.00	
1,700	\$42,500.00	
0	\$0.00	
0	\$0.00	
1.18	\$70,800.00	
IMPACT FEE SUBTOTAL		\$334,300.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,145 tons of Roadway Asphalt
 600 ft Curb & Gutter Length
 350 ft Sidewalk Length

SUBTOTAL	\$886,400.00
Drainage (10%)	\$88,640.00
Mobilization (10%)	\$88,640.00
Traffic Control (10%)	\$88,640.00
Subtotal	\$1,152,320.00
Construction Contingency (20%)	\$230,464.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,382,784.00
Engineering (20%)	\$230,464.00
GRAND TOTAL	\$1,613,248.00

IMPACT FEE SUBTOTAL	\$334,300.00
Drainage (10%)	\$33,430.00
Mobilization (10%)	\$33,430.00
Traffic Control (10%)	\$33,430.00
Subtotal	\$434,590.00
Construction Contingency (20%)	\$86,918.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$521,508.00
Engineering (20%)	\$86,918.00
IMPACT FEE TOTAL	\$608,426.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 46.00 ft
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

3 Lane Road w/ C & G and Sidewalk
 Contains 2,600 feet of new road
 Contains 1,500 feet of road widening

IMPACT FEE % of GRAND TOTAL 38%

Washington City

2014 Capital Facilities Plan Update

10. South Frontage Road from Washington Parkway to 300 East

Major Collector

(0.80 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	3,800	\$304,000.00
Base Course (8.0 inches)	cu yd	\$35.00	4,800	\$168,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	3,600	\$90,000.00
5' Wide Sidewalk	sq ft	\$5.00	21,200	\$106,000.00
30" High Back Curb & Gutter	ft	\$20.00	8,500	\$170,000.00
Right - of - Way	acre	\$60,000.00	6.40	\$384,000.00
SUBTOTAL				\$1,222,000.00

Impact Fee Quantity	Impact Fee Total	
2,900	\$232,000.00	
4,000	\$140,000.00	
3,000	\$75,000.00	
10,000	\$50,000.00	
4,250	\$85,000.00	
1.55	\$93,000.00	
IMPACT FEE SUBTOTAL		\$675,000.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,854 tons of Roadway Asphalt
 2,356 ft Curb & Gutter Length
 2,356 ft Sidewalk Length

SUBTOTAL	\$1,222,000.00
Drainage (10%)	\$122,200.00
Mobilization (10%)	\$122,200.00
Traffic Control (10%)	\$122,200.00
Subtotal	\$1,588,600.00
Construction Contingency (20%)	\$317,720.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,906,320.00
Engineering (20%)	\$317,720.00
GRAND TOTAL	\$2,224,040.00

IMPACT FEE SUBTOTAL	\$675,000.00
Drainage (10%)	\$67,500.00
Mobilization (10%)	\$67,500.00
Traffic Control (10%)	\$67,500.00
Subtotal	\$877,500.00
Construction Contingency (20%)	\$175,500.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,053,000.00
Engineering (20%)	\$175,500.00
IMPACT FEE TOTAL	\$1,228,500.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 46.00 ft
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 55%

Washington City

2014 Capital Facilities Plan Update

11. Warner Valley Road from Southern Parkway to the Road through Warner Valley

Minor Arterial

(1.51 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	10,100	\$808,000.00
Base Course (8.0 inches)	cu yd	\$35.00	12,800	\$448,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	19,200	\$480,000.00
6' Wide Sidewalk	sq ft	\$5.00	47,900	\$239,500.00
30" High Back Curb & Gutter	ft	\$20.00	16,000	\$320,000.00
Right - of - Way	acre	\$60,000.00	15.56	\$933,454.55
SUBTOTAL				\$3,228,954.55

Impact Fee Quantity	Impact Fee Total	
4,700	\$376,000.00	
6,000	\$210,000.00	
8,900	\$222,500.00	
0	\$0.00	
0	\$0.00	
6.41	\$384,600.00	
IMPACT FEE SUBTOTAL		\$1,193,100.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$3,228,954.55
Drainage (10%)	\$322,896.00
Mobilization (10%)	\$322,896.00
Traffic Control (10%)	\$322,896.00
Subtotal	\$4,197,642.55
Construction Contingency (20%)	\$839,529.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$5,037,171.55
Engineering (20%)	\$839,529.00
GRAND TOTAL	\$5,876,700.55

IMPACT FEE SUBTOTAL	\$1,193,100.00
Drainage (10%)	\$119,310.00
Mobilization (10%)	\$119,310.00
Traffic Control (10%)	\$119,310.00
Subtotal	\$1,551,030.00
Construction Contingency (20%)	\$310,206.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,861,236.00
Engineering (20%)	\$310,206.00
IMPACT FEE TOTAL	\$2,171,442.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

New 5 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 37%

Washington City

2014 Capital Facilities Plan Update

12. Extend Main Street to 100 East, south of 400 South

Major Collector

(0.72 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	3,400	\$272,000.00
Base Course (8.0 inches)	cu yd	\$35.00	4,400	\$154,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	6,500	\$162,500.00
5' Wide Sidewalk	sq ft	\$5.00	19,000	\$95,000.00
30" High Back Curb & Gutter	ft	\$20.00	7,600	\$152,000.00
Right - of - Way	acre	\$60,000.00	3.70	\$222,000.00
SUBTOTAL				\$1,057,500.00

Impact Fee Quantity	Impact Fee Total	
2,300	\$184,000.00	
2,900	\$101,500.00	
4,300	\$107,500.00	
0	\$0.00	
0	\$0.00	
1.40	\$84,000.00	
IMPACT FEE SUBTOTAL		\$477,000.00

SUBTOTAL	\$1,057,500.00
Drainage (10%)	\$105,750.00
Mobilization (10%)	\$105,750.00
Traffic Control (10%)	\$105,750.00
Subtotal	\$1,374,750.00
Construction Contingency (20%)	\$274,950.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,649,700.00
Engineering (20%)	\$274,950.00
GRAND TOTAL	\$1,924,650.00

IMPACT FEE SUBTOTAL	\$477,000.00
Drainage (10%)	\$47,700.00
Mobilization (10%)	\$47,700.00
Traffic Control (10%)	\$47,700.00
Subtotal	\$620,100.00
Construction Contingency (20%)	\$124,020.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$744,120.00
Engineering (20%)	\$124,020.00
IMPACT FEE TOTAL	\$868,140.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 46.00 ft
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 New 3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 45%

Washington City

2014 Capital Facilities Plan Update

13. Main Street from I-15 Frontage Road to Washington Parkway

Minor Arterial

(0.59 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	4,000	\$320,000.00
Base Course (8.0 inches)	cu yd	\$35.00	5,000	\$175,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	3,800	\$95,000.00
6' Wide Sidewalk	sq ft	\$5.00	18,700	\$93,500.00
30" High Back Curb & Gutter	ft	\$20.00	6,300	\$126,000.00
Right - of - Way	acre	\$60,000.00	4.81	\$288,600.00
SUBTOTAL				\$1,098,100.00

Impact Fee Quantity	Impact Fee Total	
1,900	\$152,000.00	
2,400	\$84,000.00	
1,700	\$42,500.00	
0	\$0.00	
0	\$0.00	
2.50	\$150,000.00	
IMPACT FEE SUBTOTAL		\$428,500.00

	SUBTOTAL	\$1,098,100.00
	Drainage (10%)	\$109,810.00
	Mobilization (10%)	\$109,810.00
	Traffic Control (10%)	\$109,810.00
	Subtotal	\$1,427,530.00
	Construction Contingency (20%)	\$285,506.00
	Bid-Contingency (0%)	\$0.00
	Subtotal	\$1,713,036.00
	Engineering (20%)	\$285,506.00
	GRAND TOTAL	\$1,998,542.00

	IMPACT FEE SUBTOTAL	\$428,500.00
	Drainage (10%)	\$42,850.00
	Mobilization (10%)	\$42,850.00
	Traffic Control (10%)	\$42,850.00
	Subtotal	\$557,050.00
	Construction Contingency (20%)	\$111,410.00
	Bid-Contingency (0%)	\$0.00
	Subtotal	\$668,460.00
	Engineering (20%)	\$111,410.00
	IMPACT FEE TOTAL	\$779,870.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 988 tons of Roadway Asphalt
 1,200 ft Curb & Gutter Length
 1,200 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

New 5 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 39%

Washington City

2014 Capital Facilities Plan Update

14. Bulloch Street from 300 East to MP 13 Connector Road

Residential Collector

(0.52 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	2,300	\$184,000.00
Base Course (8.0 inches)	cu yd	\$35.00	2,900	\$101,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	2,200	\$55,000.00
5' Wide Sidewalk	sq ft	\$5.00	13,800	\$69,000.00
30" High Back Curb & Gutter	ft	\$20.00	5,500	\$110,000.00
Right - of - Way	acre	\$60,000.00	3.78	\$226,800.00
SUBTOTAL				\$746,300.00

Impact Fee Quantity	Impact Fee Total	
1,600	\$128,000.00	
2,100	\$73,500.00	
1,200	\$30,000.00	
0	\$0.00	
0	\$0.00	
0.63	\$37,800.00	
IMPACT FEE SUBTOTAL		\$269,300.00

SUBTOTAL	\$746,300.00
Drainage (10%)	\$74,630.00
Mobilization (10%)	\$74,630.00
Traffic Control (10%)	\$74,630.00
Subtotal	\$970,190.00
Construction Contingency (20%)	\$194,038.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,164,228.00
Engineering (20%)	\$194,038.00
GRAND TOTAL	\$1,358,266.00

IMPACT FEE SUBTOTAL	\$269,300.00
Drainage (10%)	\$26,930.00
Mobilization (10%)	\$26,930.00
Traffic Control (10%)	\$26,930.00
Subtotal	\$350,090.00
Construction Contingency (20%)	\$70,018.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$420,108.00
Engineering (20%)	\$70,018.00
IMPACT FEE TOTAL	\$490,126.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,186 tons of Roadway Asphalt
 5,760 ft Curb & Gutter Length
 5,760 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 42.00 ft
 Right-Of-Way of 60.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

2,800 feet of new 3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 36%

Washington City

**2014 Capital Facilities Plan Update
15. Long Valley Road**

Minor Arterial (3.02 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	20,100	\$1,608,000.00
Base Course (8.0 inches)	cu yd	\$35.00	25,600	\$896,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	19,200	\$480,000.00
6' Wide Sidewalk	sq ft	\$5.00	95,700	\$478,500.00
30" High Back Curb & Gutter	ft	\$20.00	31,900	\$638,000.00
Right - of - Way	acre	\$60,000.00	31.12	\$1,866,909.09
SUBTOTAL				\$5,967,409.09

Impact Fee Quantity	Impact Fee Total	
9,300	\$744,000.00	
11,900	\$416,500.00	
8,900	\$222,500.00	
0	\$0.00	
0	\$0.00	
12.81	\$768,727.27	
IMPACT FEE SUBTOTAL		\$2,151,727.27

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
0 tons of Roadway Asphalt
0 ft Curb & Gutter Length
0 ft Sidewalk Length

SUBTOTAL	\$5,967,409.09
Drainage (10%)	\$596,741.00
Mobilization (10%)	\$596,741.00
Traffic Control (10%)	\$596,741.00
Subtotal	\$7,757,632.09
Construction Contingency (20%)	\$1,551,527.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$9,309,159.09
Engineering (20%)	\$1,551,527.00
GRAND TOTAL	\$10,860,686.09

IMPACT FEE SUBTOTAL	\$2,151,727.27
Drainage (10%)	\$215,173.00
Mobilization (10%)	\$215,173.00
Traffic Control (10%)	\$215,173.00
Subtotal	\$2,797,246.27
Construction Contingency (20%)	\$559,450.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$3,356,696.27
Engineering (20%)	\$559,450.00
IMPACT FEE TOTAL	\$3,916,146.27

Assumptions

3.00 inch Thick Asphalt
Pavement Width of 65.00 ft
Right-Of-Way of 85.00 ft
8.00 inch Thick Base Course
6.00 inch Thick Granular Borrow
2 Lanes in each direction w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 36%

Washington City

2014 Capital Facilities Plan Update

16. Roadway through Warner Valley from Warner Valley Road to Southern Parkway

Minor Arterial

(5.06 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	33,700	\$2,696,000.00
Base Course (8.0 inches)	cu yd	\$35.00	42,900	\$1,501,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	32,200	\$805,000.00
6' Wide Sidewalk	sq ft	\$5.00	160,400	\$802,000.00
30" High Back Curb & Gutter	ft	\$20.00	53,500	\$1,070,000.00
Right - of - Way	acre	\$60,000.00	52.13	\$3,128,000.00
SUBTOTAL				\$10,002,500.00

Impact Fee Quantity	Impact Fee Total
20,000	\$1,600,000.00
30,000	\$1,050,000.00
20,000	\$500,000.00
0	\$0.00
0	\$0.00
21.47	\$1,288,000.00
IMPACT FEE SUBTOTAL	
\$4,438,000.00	

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$10,002,500.00
Drainage (10%)	\$1,000,250.00
Mobilization (10%)	\$1,000,250.00
Traffic Control (10%)	\$1,000,250.00
Subtotal	\$3,000,750.00
Construction Contingency (20%)	\$2,600,650.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$15,603,900.00
Engineering (20%)	\$2,600,650.00
GRAND TOTAL	\$18,204,550.00

IMPACT FEE SUBTOTAL	\$4,438,000.00
Drainage (10%)	\$443,800.00
Mobilization (10%)	\$443,800.00
Traffic Control (10%)	\$443,800.00
Subtotal	\$5,769,400.00
Construction Contingency (20%)	\$1,153,880.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$6,923,280.00
Engineering (20%)	\$1,153,880.00
IMPACT FEE TOTAL	\$8,077,160.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 2 Lanes in each direction w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 44%

Washington City

2014 Capital Facilities Plan Update

17. Purgatory Road

Minor Arterial

(1.52 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	10,200	\$816,000.00
Base Course (8.0 inches)	cu yd	\$35.00	12,900	\$451,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	19,400	\$485,000.00
6' Wide Sidewalk	sq ft	\$5.00	48,200	\$241,000.00
30" High Back Curb & Gutter	ft	\$20.00	16,100	\$322,000.00
Right - of - Way	acre	\$60,000.00	15.66	\$939,636.36
SUBTOTAL				\$3,255,136.36

Impact Fee Quantity	Impact Fee Total	
4,700	\$376,000.00	
6,000	\$210,000.00	
9,000	\$225,000.00	
0	\$0.00	
0	\$0.00	
6.45	\$386,909.09	
IMPACT FEE SUBTOTAL		\$1,197,909.09

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,003 tons of Roadway Asphalt
 3,236 ft Curb & Gutter Length
 3,236 ft Sidewalk Length
 Bridge over the Virgin River

SUBTOTAL	\$3,255,136.36
Drainage (10%)	\$325,514.00
Mobilization (10%)	\$325,514.00
Traffic Control (10%)	\$325,514.00
Subtotal	\$4,231,678.36
Construction Contingency (20%)	\$846,336.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$5,078,014.36
Engineering (20%)	\$846,336.00
GRAND TOTAL	\$5,924,350.36

IMPACT FEE SUBTOTAL	\$1,197,909.09
Drainage (10%)	\$119,791.00
Mobilization (10%)	\$119,791.00
Traffic Control (10%)	\$119,791.00
Subtotal	\$1,557,282.09
Construction Contingency (20%)	\$311,457.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,868,739.09
Engineering (20%)	\$311,457.00
IMPACT FEE TOTAL	\$2,180,196.09

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 2 Lanes in each direction w/ C & G and Sidewalk

8,050 feet of new 5-lane road

IMPACT FEE % of GRAND TOTAL 37%

Washington City

2014 Capital Facilities Plan Update

18. Harvest Lane from Merrill Road to Southern City limit

Residential Collector

(1.26 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	5,500	\$440,000.00
Base Course (8.0 inches)	cu yd	\$35.00	7,000	\$245,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	5,200	\$130,000.00
5' Wide Sidewalk	sq ft	\$5.00	33,400	\$167,000.00
30" High Back Curb & Gutter	ft	\$20.00	13,400	\$268,000.00
Right - of - Way	acre	\$60,000.00	7.59	\$455,400.00
SUBTOTAL				\$1,705,400.00

Impact Fee Quantity	Impact Fee Total	
3,900	\$312,000.00	
5,000	\$175,000.00	
3,800	\$95,000.00	
0	\$0.00	
0	\$0.00	
1.53	\$91,800.00	
IMPACT FEE SUBTOTAL		\$673,800.00

SUBTOTAL	\$1,705,400.00
Drainage (10%)	\$170,540.00
Mobilization (10%)	\$170,540.00
Traffic Control (10%)	\$170,540.00
Subtotal	\$2,217,020.00
Construction Contingency (20%)	\$443,404.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,660,424.00
Engineering (20%)	\$443,404.00
GRAND TOTAL	\$3,103,828.00

IMPACT FEE SUBTOTAL	\$673,800.00
Drainage (10%)	\$67,380.00
Mobilization (10%)	\$67,380.00
Traffic Control (10%)	\$67,380.00
Subtotal	\$875,940.00
Construction Contingency (20%)	\$175,188.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,051,128.00
Engineering (20%)	\$175,188.00
IMPACT FEE TOTAL	\$1,226,316.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,589 tons of Roadway Asphalt
 650 ft Curb & Gutter Length
 650 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 42.00 ft
 Right-Of-Way of 60.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 40%

Washington City

2014 Capital Facilities Plan Update

19. Washington Parkway from MP 13 to Western City Limit, Phase I

Major Arterial

(2.83 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	-	\$0.00
Base Course (8.0 inches)	cu yd	\$35.00	-	\$0.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	-	\$0.00
6' Wide Sidewalk	sq ft	\$5.00	-	\$0.00
30" High Back Curb & Gutter	ft	\$20.00	-	\$0.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$0.00

Impact Fee Quantity	Impact Fee Total
8,700	\$696,000.00
11,100	\$388,500.00
8,300	\$207,500.00
0	\$0.00
0	\$0.00
19.21	\$1,152,600.00
IMPACT FEE SUBTOTAL	
\$2,444,600.00	

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 1,453 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$0.00
Drainage (10%)	\$0.00
Mobilization (10%)	\$0.00
Traffic Control (10%)	\$0.00
Subtotal	\$0.00
Construction Contingency (20%)	\$0.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$0.00
Engineering (20%)	\$0.00
GRAND TOTAL	\$0.00

IMPACT FEE SUBTOTAL	\$2,444,600.00
Drainage (10%)	\$244,460.00
Mobilization (10%)	\$244,460.00
Traffic Control (10%)	\$244,460.00
Subtotal	\$3,177,980.00
Construction Contingency (20%)	\$635,596.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$3,813,576.00
Engineering (20%)	\$635,596.00
IMPACT FEE TOTAL	\$4,449,172.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 32.00 ft
 Right-Of-Way of 106.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

2-Lanes w/ half raised median, w/ C & G and Sidewalk on one side
 This includes a bridge, \$8,190,000

Grand Total \$15,895,750.00
 Estimate done by Horrocks Engineers

Washington City

2014 Capital Facilities Plan Update

20. Washington Parkway from MP 13 to Western City Limit, Phase II

Major Arterial

(2.83 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	7,000	\$560,000.00
Base Course (8.0 inches)	cu yd	\$35.00	8,900	\$311,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	6,700	\$167,500.00
6' Wide Sidewalk	sq ft	\$5.00	-	\$0.00
30" High Back Curb & Gutter	ft	\$20.00	14,500	\$290,000.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$1,329,000.00

Impact Fee Quantity	Impact Fee Total	
7,000	\$560,000.00	
8,900	\$311,500.00	
6,700	\$167,500.00	
0	\$0.00	
14,500	\$290,000.00	
0.00	\$0.00	
IMPACT FEE SUBTOTAL		\$1,329,000.00

SUBTOTAL	\$1,329,000.00
Drainage (10%)	\$132,900.00
Mobilization (10%)	\$132,900.00
Traffic Control (10%)	\$132,900.00
Subtotal	\$1,727,700.00
Construction Contingency (20%)	\$345,540.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,073,240.00
Engineering (20%)	\$345,540.00
GRAND TOTAL	\$2,418,780.00

IMPACT FEE SUBTOTAL	\$1,329,000.00
Drainage (10%)	\$132,900.00
Mobilization (10%)	\$132,900.00
Traffic Control (10%)	\$132,900.00
Subtotal	\$1,727,700.00
Construction Contingency (20%)	\$345,540.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,073,240.00
Engineering (20%)	\$345,540.00
IMPACT FEE TOTAL	\$2,418,780.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 9,255 tons of Roadway Asphalt
 14,928 ft Curb & Gutter Length
 14,928 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 24.00 ft
 Right-Of-Way of 0.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

Additional 2-Lanes w/ half raised median
 Curb for half of median will be installed, but no other curb.

IMPACT FEE % of GRAND TOTAL 100%

Washington City

2014 Capital Facilities Plan Update

21. Washington Parkway from MP 13 to Western City Limit, Phase III

Major Arterial

(2.83 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	15,000	\$1,200,000.00
Base Course (8.0 inches)	cu yd	\$35.00	3,000	\$105,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	2,500	\$62,500.00
6' Wide Sidewalk	sq ft	\$5.00	89,600	\$448,000.00
30" High Back Curb & Gutter	ft	\$20.00	29,900	\$598,000.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$2,413,500.00

Impact Fee Quantity	Impact Fee Total	
15,000	\$1,200,000.00	
3,000	\$105,000.00	
2,500	\$62,500.00	
0	\$0.00	
0	\$0.00	
0.00	\$0.00	
IMPACT FEE SUBTOTAL		\$1,367,500.00

	SUBTOTAL	\$2,413,500.00
	Drainage (10%)	\$241,350.00
	Mobilization (10%)	\$241,350.00
	Traffic Control (10%)	\$241,350.00
	Subtotal	\$3,137,550.00
	Construction Contingency (20%)	\$627,510.00
	Bid-Contingency (0%)	\$0.00
	Subtotal	\$3,765,060.00
	Engineering (20%)	\$627,510.00
	GRAND TOTAL	\$4,392,570.00

	IMPACT FEE SUBTOTAL	\$1,367,500.00
	Drainage (10%)	\$136,750.00
	Mobilization (10%)	\$136,750.00
	Traffic Control (10%)	\$136,750.00
	Subtotal	\$1,777,750.00
	Construction Contingency (20%)	\$355,550.00
	Bid-Contingency (0%)	\$0.00
	Subtotal	\$2,133,300.00
	Engineering (20%)	\$355,550.00
	IMPACT FEE TOTAL	\$2,488,850.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 16,197 tons of Roadway Asphalt
 14,928 ft Curb & Gutter Length
 14,928 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 24.00 ft
 Right-Of-Way of 0.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

Additional 3 inches of asphalt added to entire surface
 Includes C & G and Sidewalk on remaining side

IMPACT FEE % of GRAND TOTAL 57%

Washington City

2014 Capital Facilities Plan Update

22. West Airport Road from Western City Limit to Washington Fields Road

Minor Arterial

(0.87 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	5,800	\$464,000.00
Base Course (8.0 inches)	cu yd	\$35.00	7,400	\$259,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	5,600	\$140,000.00
6' Wide Sidewalk	sq ft	\$5.00	27,600	\$138,000.00
30" High Back Curb & Gutter	ft	\$20.00	9,200	\$184,000.00
Right - of - Way	acre	\$60,000.00	8.96	\$537,818.18
SUBTOTAL				\$1,722,818.18

Impact Fee Quantity	Impact Fee Total	
2,700	\$216,000.00	
3,500	\$122,500.00	
2,600	\$65,000.00	
0	\$0.00	
0	\$0.00	
3,000	\$180,000.00	
IMPACT FEE SUBTOTAL		\$583,500.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$1,722,818.18
Drainage (10%)	\$172,282.00
Mobilization (10%)	\$172,282.00
Traffic Control (10%)	\$172,282.00
Subtotal	\$2,239,664.18
Construction Contingency (20%)	\$447,933.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,687,597.18
Engineering (20%)	\$447,933.00
GRAND TOTAL	\$3,135,530.18

IMPACT FEE SUBTOTAL	\$583,500.00
Drainage (10%)	\$58,350.00
Mobilization (10%)	\$58,350.00
Traffic Control (10%)	\$58,350.00
Subtotal	\$758,550.00
Construction Contingency (20%)	\$151,710.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$910,260.00
Engineering (20%)	\$151,710.00
IMPACT FEE TOTAL	\$1,061,970.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

IMPACT FEE % of GRAND TOTAL 34%

Washington City

2014 Capital Facilities Plan Update

23. Tortoise Rock Road from Buena Vista Blvd. to Washington Parkway

Major Collector

(0.38 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	1,800	\$144,000.00
Base Course (8.0 inches)	cu yd	\$35.00	2,300	\$80,500.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	1,800	\$45,000.00
5' Wide Sidewalk	sq ft	\$5.00	10,100	\$50,500.00
30" High Back Curb & Gutter	ft	\$20.00	4,100	\$82,000.00
Right - of - Way	acre	\$60,000.00	3.04	\$182,400.00
SUBTOTAL				\$584,400.00

Impact Fee Quantity	Impact Fee Total	
1,200	\$96,000.00	
1,500	\$52,500.00	
1,200	\$30,000.00	
0	\$0.00	
0	\$0.00	
0.74	\$44,400.00	
IMPACT FEE SUBTOTAL		\$222,900.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

SUBTOTAL	\$584,400.00
Drainage (10%)	\$58,440.00
Mobilization (10%)	\$58,440.00
Traffic Control (10%)	\$58,440.00
Subtotal	\$759,720.00
Construction Contingency (20%)	\$151,944.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$911,664.00
Engineering (20%)	\$151,944.00
GRAND TOTAL	\$1,063,608.00

IMPACT FEE SUBTOTAL	\$222,900.00
Drainage (10%)	\$22,290.00
Mobilization (10%)	\$22,290.00
Traffic Control (10%)	\$22,290.00
Subtotal	\$289,770.00
Construction Contingency (20%)	\$57,954.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$347,724.00
Engineering (20%)	\$57,954.00
IMPACT FEE TOTAL	\$405,678.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 46.00 ft
 Right-Of-Way of 66.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow

3 Lane Road w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 38%

Washington City

2014 Capital Facilities Plan Update

24. Milepost 11 Interchange

Major Arterial

(1.09 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	-	\$0.00
Base Course (8.0 inches)	cu yd	\$35.00	-	\$0.00
Granular Borrow (12.0 inches)	cu yd	\$25.00	-	\$0.00
6' Wide Sidewalk	sq ft	\$5.00	-	\$0.00
30" High Back Curb & Gutter	ft	\$20.00	-	\$0.00
Right - of - Way	acre	\$60,000.00	0.00	\$0.00
SUBTOTAL				\$0.00

Impact Fee Quantity	Impact Fee Total
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
0	\$0.00
0.00	\$0.00
IMPACT FEE SUBTOTAL	
\$0.00	

SUBTOTAL	\$0.00
Drainage (10%)	\$0.00
Mobilization (10%)	\$0.00
Traffic Control (10%)	\$0.00
Subtotal	\$0.00
Construction Contingency (20%)	\$0.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$0.00
Engineering (20%)	\$0.00
GRAND TOTAL	\$0.00

IMPACT FEE SUBTOTAL	\$0.00
Drainage (10%)	\$0.00
Mobilization (10%)	\$0.00
Traffic Control (10%)	\$0.00
Subtotal	\$0.00
Construction Contingency (20%)	\$0.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$0.00
Engineering (20%)	\$0.00
IMPACT FEE TOTAL	\$0.00

Existing Conditions

Assume 0 inch Thick of Existing Asphalt
 0 tons of Roadway Asphalt
 0 ft Curb & Gutter Length
 0 ft Sidewalk Length

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 106.00 ft
 8.00 inch Thick Base Course
 12.00 inch Thick Granular Borrow

IMPACT FEE % of GRAND TOTAL

Grand Total is in a range of \$25 to \$40 million

Estimate done by Horrocks Engineers, attached

I-15 MP 11 INTERCHANGE CONCEPT STUDY

CONCEPTUAL COST ESTIMATES

REALIGNED MAIN ST OPTION

Item	Cost Range	Remarks
Construction	\$15.0M - \$18.0M	
Utilities	\$.5M - \$1.5M	
ROW	\$1.5M - \$3.0M	5-10 relocations at ~ \$300K per relocation
PE	\$1.0M - \$1.5M	~ 8% of Construction
CE	\$1.5M - \$2.0M	~ 10% of Construction
Contingency	\$1.5M - \$2.0M	~ 10% of Construction
Total	\$21.0M - \$28.0M	

Assumptions/Risks/Challenges

- Interchange to be constructed as part of the I-15 widening project
- Main Street realigned to cross underneath I-15 (No grade change for I-15)
- I-15 Horizontal Alignment to remain unchanged
- Tight Diamond or Diamond with Roundabouts type interchange
- New Structures for I-15 over Main Street
- Minimal Reconstruction of Buena Vista (West Frontage Road)
- No impacts to the Power Sub Station
- ROW acquisitions of 5-10 parcels, depending on interchange type and access control
- Does not include construction of new frontage roads
- Utility impacts unknown
- Existing Main St structures may remain as Bike/Ped crossing
- Auxiliary Lanes will be constructed between adjacent interchanges

REALIGNED 300 EAST OPTION

Item	Cost Range	Remarks
Construction	\$22.0M - \$27.0M	Includes reconstruction of I-15
Utilities	\$.5M - \$2.0M	
ROW	\$2.5M - \$4.5M	9-15 relocations at ~ \$300K per relocation
PE	\$1.5M - \$2.0M	~ 8% of Construction
CE	\$2.0M - \$2.5M	~ 10% of Construction
Contingency	\$2.0M - \$2.5M	~ 10% of Construction
Total	\$30.5M - \$40.5M	

Assumptions/Risks/Challenges

- Interchange to be constructed as part of the I-15 widening project
- 300 East realigned to cross underneath I-15
- I-15 to be realigned and reconstructed for ~1.0 to 1.5 miles (to accommodate interchange)
- Tight Diamond or Diamond with Roundabouts type interchange
- Geometric & Operational Challenges on North side due to close proximity of Frontage Road & properties
- New Structures for I-15 over 300 East
- Realignment and Reconstruction of approximately 0.5 miles of Buena Vista (West Frontage Road)
- Additional costs if Buena Vista is realigned through or around the existing developments (North side)

- No impacts to the Power Sub Station
- ROW acquisitions of 9-15 parcels, depending on interchange type and access control
- Does not include construction of new frontage roads
- Utility impacts unknown
- Existing springs in I-15 median will need to be addressed
- Existing Main St structures to remain
- Auxiliary Lanes will be constructed between adjacent interchanges

Washington City

2014 Capital Facilities Plan Update

25. Washington Dam Road from 1900 East to East City Limits

Minor Arterial

(1.10 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (3.0 inches)	ton	\$80.00	7,400	\$592,000.00
Base Course (8.0 inches)	cu yd	\$35.00	9,400	\$329,000.00
Granular Borrow (6.0 inches)	cu yd	\$25.00	7,000	\$175,000.00
6' Wide Sidewalk	sq ft	\$5.00	34,800	\$174,000.00
30" High Back Curb & Gutter	ft	\$20.00	11,600	\$232,000.00
Right - of - Way	acre	\$60,000.00	4.67	\$280,200.00
SUBTOTAL				\$1,782,200.00

Impact Fee Quantity	Impact Fee Total	
3,400	\$272,000.00	
4,300	\$150,500.00	
3,300	\$82,500.00	
0	\$0.00	
0	\$0.00	
4.67	\$280,200.00	
IMPACT FEE SUBTOTAL		\$785,200.00

Existing Conditions

Assume 3 inch Thick of Existing Asphalt
 2,809 tons of Roadway Asphalt
 115 ft Curb & Gutter Length
 115 ft Sidewalk Length

SUBTOTAL	\$1,782,200.00
Drainage (10%)	\$178,220.00
Mobilization (10%)	\$178,220.00
Traffic Control (10%)	\$178,220.00
Subtotal	\$2,316,860.00
Construction Contingency (20%)	\$463,372.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$2,780,232.00
Engineering (20%)	\$463,372.00
GRAND TOTAL	\$3,243,604.00

IMPACT FEE SUBTOTAL	\$785,200.00
Drainage (10%)	\$78,520.00
Mobilization (10%)	\$78,520.00
Traffic Control (10%)	\$78,520.00
Subtotal	\$1,020,760.00
Construction Contingency (20%)	\$204,152.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,224,912.00
Engineering (20%)	\$204,152.00
IMPACT FEE TOTAL	\$1,429,064.00

Assumptions

3.00 inch Thick Asphalt
 Pavement Width of 65.00 ft
 Right-Of-Way of 85.00 ft
 8.00 inch Thick Base Course
 6.00 inch Thick Granular Borrow
 2 Lanes in each direction w/ C & G and Sidewalk

IMPACT FEE % of GRAND TOTAL 44%