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Date: 3/20/2025
To: Steve Morasch
Landerholm
From: Bryce Hanson, P.E.
Project Name: Camas Woods
AKS Job No.: 8397

Subject: SR500/Everett Drive Intersection Control Construction Cost Analysis – Traffic Mitigation

AKS prepared an Intersection Control Evaluation (ICE) report to evaluate and document control types for improving the existing intersection of SR500 & Everett Drive to mitigate traffic impacts from the proposed Camas Woods Subdivision. Although a signalized intersection would meet the capacity needs of the development, a roundabout was selected as the preferred alternative to be consistent with Washington Department of Transportation (WSDOT) preferences. This is also consistent with the City's Everett Street Corridor analysis, findings, and final recommendations from City Council for future use of this intersection and roadway. Additional documentation to support this conclusion is available upon request and has been properly provided to the City.

The ICE report included rough order of magnitude (ROM) construction cost estimates for the two different intersection improvement alternatives (signal & roundabout). The detailed ROM construction cost estimates, including contingency and sales tax, are attached and are summarized below:

Signal Intersection: \$1,680,467

Roundabout Intersection: \$2,565,405

As shown, the roundabout is estimated to cost approximately 53% greater than the signalized intersection, or approximately \$985,000 more.

Furthermore, engineering, surveying and permitting for a roundabout design requires significantly more effort than for a signalized intersection. This is for a variety of reasons, most of which stem from the increased footprint of roadway improvements (horizontal and vertical geometry design, stormwater management, lighting design, additional geotechnical investigations, additional topographic and construction surveying, etc.). This additional effort is also exaggerated by the fact that the intersection is to be permitted through WSDOT. We expect the consulting fees to be 15-20% of the ROM construction cost for either intersection, assuming no critical areas are impacted. Therefore, the total design and construction cost, using a conservative 15% estimate is approximated to be:

Signal Intersection: \$1,680,467 + \$252,000 = \$1,932,467

Roundabout Intersection: \$2,565,405 + \$384,800 = \$2,950,205

Overall, the roundabout intersection is estimated to increase project cost by at least \$1.02 million.

Attached: ROM Construction Cost Estimates (2 pages)

ROUNDBABOUT - ROUGH ORDER OF MAGNITUDE **Estimated Construction Costs**

PROJECT NAME SR500 & NE Everett Drive Intx
Estimated by: Benjamin Protsman/Bryce Hanson
Signature
Telephone # 360-882-0419
Date 3/20/2025

ASSUMPTIONS

- 1: Signing and Striping cost is based on similar projects. Cost is subject to change upon varying factors (Material type, quantity, and WSDOT requirements).
- 2: Separate Storm Quantities are based on two proposed stormwater facilities on each side of SR500 to convey and treat runoff generated.
- 3: Assumed grading costs incorporated into cost items based on scope of project.
- 4: Lighting estimate assumes (8 cobra head lights, includes conduit, pole base, junction box). Estimate does not include cost for flashing beacons due to the low speed road.
- 5: Demolition costs include haul off and existing asphalt removal.
- 6: Taxes are included.

GENERAL SITE WORK

Item	Qty	Unit	Unit Price	Total
Mobilization	1	LS	\$175,000.00	\$175,000.00
Temporary Work Zone Traffic Control	1	LS	\$200,000.00	\$200,000.00
Demolition	1	LS	\$75,000.00	\$75,000.00
Erosion Control	1	LS	\$30,000.00	\$30,000.00
Utility Relocation	1	LS	\$35,000.00	\$35,000.00
Wetland Fill	1	LS	\$150,000.00	\$150,000.00
Subtotal				\$665,000.00

STREETS

Item	Qty	Unit	Unit Price	Total
HMA .85' PG58-22 & .70' Aggregate Base	2694	SY	\$85.00	\$228,990.00
Standard Curb and Gutter	75	LF	\$20.00	\$1,500.00
WSDOT Curb 1 (Mountable)	316	LF	\$34.00	\$10,744.00
WSDOT Curb 2 (Splitter Islands)	2273	LF	\$28.00	\$63,644.00
WSDOT Curb 3 (Central Island)	222	LF	\$55.00	\$12,210.00
Concrete Pavement, .75' apron	414	SY	\$68.00	\$28,152.00
Stamped Concrete Splitter Island .75'	138	SY	\$68.00	\$9,384.00
Splitter Island & Apron Base Course .75'	178	TONS	\$31.00	\$5,518.00
Extra for New Curb Ramps	6	EACH	\$1,000.00	\$6,000.00
Truncated Domes on New Surfaces	12	EACH	\$250.00	\$3,000.00
3.0" HMA Driveway	242	SY	\$40.00	\$9,680.00
Concrete Ped/Cyclist sidewalk & Safety Buffer	13063	SF	\$8.00	\$104,504.00
Street Subtotal				\$483,326.00

STORM

Item	Qty	Unit	Unit Price	Total
Schedule A Culv. Pipe 12 in. Diam.	450	LF	\$ 70.00	\$31,500.00
Catch Basin Type 1	12	EA	\$ 2,000.00	\$24,000.00
Contech Filterra (Water Quality Vault)	3	EA	\$ 25,000.00	\$75,000.00
Storm Facility (Ponds)	1	LS	\$ 250,000.00	\$250,000.00
Storm Subtotal				\$380,500.00

SIGNING AND STRIPING

Item	Qty	Unit	Unit Price	Total
Signs, Striping	1	LS	\$60,000.00	\$60,000.00
Signing and Striping Subtotal				\$60,000.00

STREET LIGHTING

Item	Qty	Unit	Unit Price	Total
Street Lights	1	LS	\$165,000.00	\$165,000.00
Street Lighting Subtotal				\$165,000.00

LANDSCAPING

Item	Qty	Unit	Unit Price	Total
Groundcover, Mulch, Shrubs, Misc Plantings, Irrigation, basalt rocks, 3100 SF central island, 4300 SF splitter islands, and 4400 SF landscape strip.	1	LS	\$150,000.00	\$150,000.00
Landscaping Subtotal				\$150,000.00

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SUBTOTAL \$1,903,826.00
SALES TAX \$148,498.43
25% Contingency \$513,081.11
TOTAL \$2,565,405.54

SIGNAL INTERSECTION - ROUGH ORDER OF MAGNITUDE

Estimated Construction Costs

PROJECT NAME SR500 & NE Everett Drive Intx
Estimated by: Benjamin Protsman/Bryce Hanson
Signature
Telephone # 360-882-0419
Date 3/20/2025

ASSUMPTIONS

- 1: Signing and Striping cost is based on similar projects. Cost is subject to change upon varying factors (Material type, quantity, and WSDOT requirements).
- 2: Lighting estimate assumes (3 lights, includes conduit, pole base, junction box).
- 3: Signalization costs assume 3 traffic signals (Include installation and item cost).
- 4: Taxes are included.

GENERAL SITE WORK

Item	Qty	Unit	Unit Price	Total
Mobilization	1	LS	\$200,000.00	\$200,000.00
Temporary Work Zone Traffic Control	1	LS	\$150,000.00	\$150,000.00
Demolition	1	LS	\$50,000.00	\$50,000.00
Erosion Control	1	LS	\$25,000.00	\$25,000.00
Utility Relocation	1	LS	\$35,000.00	\$35,000.00
Subtotal				\$460,000.00

STREETS

Item	Qty	Unit	Unit Price	Total
HMA .85' PG58-22 & .70' Aggregate Base	1080	SY	\$85.00	\$91,800.00
Standard Curb and Gutter	600	LF	\$20.00	\$12,000.00
Extra for New Curb Ramps	6	EACH	\$1,000.00	\$6,000.00
Truncated Domes on New Surfaces	6	EACH	\$250.00	\$1,500.00
3.0" HMA Driveway	242	SY	\$40.00	\$9,680.00
Concrete Ped/Cyclist sidewalk & Safety Buffer	6804	SF	\$8.00	\$54,432.00
Street Subtotal				\$175,412.00

Storm

Item	Qty	Unit	Unit Price	Total
N/A				\$0.00

SIGNING AND STRIPING

Item	Qty	Unit	Unit Price	Total
Signs, Striping	1	LS	\$30,000.00	\$30,000.00
Signing and Striping Subtotal				\$30,000.00

STREET LIGHTING & SIGNAL

Item	Qty	Unit	Unit Price	Total
Street Lights	1	LS	\$50,000.00	\$50,000.00
Traffic Signal	1	LS	\$400,000.00	\$400,000.00
Interconnect system	1	LS	\$60,000.00	\$60,000.00
Pedestrian Crossing Signal	6	EACH	\$15,000.00	\$90,000.00
Street Lighting Subtotal				\$600,000.00

LANDSCAPING

Item	Qty	Unit	Unit Price	Total
N/A				\$0.00

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SUBTOTAL	\$1,265,412.00
SALES TAX	\$98,702.14
25% Contingency	\$316,353.00
TOTAL	\$1,680,467.14