

May 30, 2024

Project# 27003.014

To: Lisa Cornutt, Oregon Department of Transportation

Karl MacNair, City of Medford

From: Marc Butorac, PE, PTOE, PMP; John McPherson, AICP (HDR), Matt Bell, Amy Griffiths, PE

RE: Task 5.1.3B: Concept Analysis

# **INTRODUCTION**

This memorandum documents the high-level technical and economic feasibility assessment and preliminary environmental screening of the initial alternatives developed according to the South Stage Overpass (and Underpass) and I-5/South Stage Interchange overarching solution scenarios<sup>1</sup>. Based on the information documented herein, the project team recommends eight alternatives to be advanced for further consideration.

# TECHNICAL FEASIBILITY

Each of the initial 16 alternatives assumed to meet the Purpose and Need was reviewed by the project team using conceptual horizontal and vertical alignments based on the design criteria established in TM #3.1.4: Structural and Constructability Methodology and Assumptions. Next, the constructability was assessed (see Attachment A for the high-level constructability assessment). Based on this review and assessment, the following alternatives were deemed not technically feasible and are proposed to be eliminated from further consideration.

South Stage Underpass (Option 2): Alternative O-5 - This vertical alignment was determined not to be technically feasible. The alternative would tunnel under I-5 and Bear Creek. The tunnel would require approximately 30 feet of wet soil clearance under the creek, resulting in an approximate 50-foot minimum depth tunnel. Given the proximity of

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<sup>&</sup>lt;sup>1</sup> Technical Memorandum (TM) #5.1.1 - Range of Alternatives provides greater documentation on the initial alternatives. Overarching scenarios were screened in TM #5.1.3.1 - Transportation Analysis Screening; the results of this screening indicated that only the South Stage Overpass and I-5/South Stage Interchange scenarios could meet the Purpose and Need.

Bear Creek to OR99, there is not enough road length to develop an acceptable vertical profile (i.e., the roadway grade would exceed design standards) under the creek nor is there enough to tie into the existing highway. The vertical profile would also make it challenging to connect South Stage Road to the existing Samike Drive and the San George Estates access.

- Glenwood Road Alignment: Alternative O-8 The location of Glenwood Road approximately halfway south along OR99 between South Stage Road and Phoenix Road has limited utility in offloading the South Medford Interchange, introduces a break in the east-west continuity of the South Stage corridor, and creates a new intersection along OR99. These features are not consistent with the Overpass Scenario. In addition, the alternative would require right-of-way (ROW) directly from identified environmental justice (EJ) properties located immediately north and south of Glenwood Road east of OR99. Due to the marginal transportation utility of the southern alignment, proximity to the Phoenix Road Interchange, and potential EJ impacts, this alternative was deemed not to be technically feasible nor supported by the findings of the Overpass Scenario in TM #5.1.3.1: Transportation Analysis Screening. As such, it would not meet the Purpose and Need of this project.
- I-5 South Stage Left-Lane Merge for NB On-Ramp: Alternative I-6 The introduction of a left-lane merge for the northbound on-ramp at South Stage Road runs contrary to FHWA and ODOT standard practice as it introduces driver expectation issues (the majority of interchange throughout the country and all interchanges in the immediate vicinity have right-lane merge and diverge movements for ramps). Further, it introduces a short, potentially challenging, and likely unsafe weave section for vehicles entering from South Stage on the left side and then attempting to exit at the South Medford interchange on the right-side and having to weave across the two northbound travel lanes. Due to the inherent safety concerns with the weaving at this location and driver expectations, this alternative was deemed not to be technically feasible given other alternatives with traditional right-hand merge movements and equal or lesser potential economic and environmental impacts.

The remaining alternatives (O-1, O-2, O-3, O-4, O-6, O-7, I-1, I-2, I-3, I-4, I-5, I-7, and I-8) were all found to be technically feasible and were advanced for further consideration.

# ECONOMIC FEASIBILITY

The economic feasibility assessment was based on the magnitude of construction cost opinion range (in 2024 dollars) and the right-of-way, existing building structure, and other infrastructure impacts compared to operational effectiveness. Details of the factors used to determine economic feasibility of the technically feasible overpass and interchange alternatives are shown in Tables 1 and 2, respectively.

#### **Table 1 – Overpass Alternative Economic Factors**

		0-1	0-2	0-3	0-4	O-6	0-7
			South Stage	South Stage			
			Southerly	Southerly	South Stage	South Stage	Lower I-5
		South Stage	Realignment	Realignment	Underpass	Northerly	NB Travel
Description	Unit	Alignment	(Option 1)	(Option 2)	(Option 1)	Realignment	Lanes
Total Right-of-Way Impacts	SF	609,400	611,800	620,500	611,800	864,700	609,400
Existing Structure Impacts	each	-	-	-	-	3	-
Initial Cost Opinion - Low		\$109.1M	\$127.9M	\$138.8M	\$162.0M	\$233.7M	\$172.8M
High		\$141.8M	\$166.3M	\$180.4M	\$210.6M	\$303.8M	\$224.6M

Color Coding: Green indicates least impact/cost by factor, orange indicates medium impacts/cost by factor, and red indicates highest impact/cost by factor.

		I-1	I-2	I-3	I-4	I-5	I-7	I-8	
								I-5 South	
			South Stage	South Stage		South	South Stage	Stage Partial	
			Southerly	Southerly	Southerly South Stage		Single Point	Split-	
		South Stage	Realignment	Realignment	Underpass	Diverging	Urban	Diamond	
Description	Unit	Alignment	(Option 1)	(Option 2)	Interchange	Diamond	Interchange	Interchange	
Total Right-of-									
Way Impacts	SF	1,437,300	1,176,300	1,259,600	1,176,300	871,600	660,600	2,107,700	
Existing									
Structure									
Impacts	each	-	2	-	2	-	-	-	
Initial Cost									
<b>Opinion - Low</b>		\$134.6M	\$139.8M	\$145.1M	\$172.7M	\$186.6M	\$248.6M	\$223.6M	
High		\$175.0M	\$181.7M	\$188.6M	\$224.5M	\$242.6M	\$323.2M	\$290.7M	

#### Table 2 – Interchange Alternative Economic Factors

Cost Opinion Ranges are for Comparative Purposes Only

# **Operational Effectiveness**

TM #5.1.3.1: Transportation Analysis Screening indicated the necessary capacity needs for alternatives under the Overpass and Interchange Scenarios. The Overpass Scenario found that a 3-lane connection between OR99 and North Phoenix Road would be effective in meeting the Purpose and Need. The Interchange Scenario found that the forecasted turning movements could be effectively served by a 3-lane connection between OR99 and North Phoenix Road, traditional diamond signalized interchange terminals with right- and left-turn lanes, and the ability to expand to five lanes east of I-5. Thus, interchange forms producing more capacity are not necessary unless there was a direct cost savings to construct alternative (i.e., smaller bridge structures, less right-of-way impacts, etc.) or an obvious reduction in impacts to the natural environment. The following alternatives introduced enhanced interchange characteristics exceeding the project needs, while not demonstrating obvious benefits that would outperform other technically feasible alternatives:

- South Stage Diverging Diamond: Alternative I-5
- I-5 South Stage Single Point Interchange: Alternative I-7
- I-5 South Stage Partial Split-Diamond Interchange: Alternative I-8

# Magnitude of Construction Cost Opinions

The initial construction cost opinions shown in Tables 1 and 2 indicated a range of \$109 million to \$323 million for the technically feasible alternatives (see Attachment B for the initial alternative magnitude of cost opinion ranges). The following interchange alternatives exceed the transportation needs of the project and do not provide reduced right-of-way, existing build structure, and/or other infrastructure impacts nor demonstrate obvious benefits that would outperform other technically feasible alternatives:

- Lower I-5 Northbound Travel Lanes: Alternative O-7
- South Stage Diverging Diamond: Alternative I-5
- I-5 South Stage Single Point Interchange: Alternative I-7
- I-5 South Stage Partial Split-Diamond Interchange: Alternative I-8

# Right of Way, Existing Building Structure, and Other Infrastructure Impacts

Each alternative requires additional right-of-way and have the potential to impact existing building structures and other infrastructure. The following alternative was found to have larger impacts, while not demonstrating obvious benefits that would outperform other technically feasible alternatives:

#### South Stage Northerly Realignment: Alternative O-6

This alternative had the highest right-of-way impact (864,700 SF), impacted 3 existing building structures, and would require a new rail crossing west of OR99.

Based on this assessment, the following alternatives were deemed not to be economically feasible due to their relative cost opinions to alternatives with adequate capacity and lesser right-of-way, existing building structure, and other infrastructure impacts and are proposed to be eliminated.

- South Stage Northerly Realignment: Alternative O-6
- Lower I-5 Northbound Travel Lanes: Alternative O-7
- South Stage Diverging Diamond: Alternative I-5
- I-5 South Stage Single Point Interchange: Alternative I-7
- I-5 South Stage Partial Split-Diamond Interchange: Alternative I-8

The remaining alternatives (O-1, O-2, O-3, O-4, I-1, I-2, I-3, I-4) were found to be technically and economically feasible and advanced for further consideration.

# **ENVIRONMENTAL SCREENING**

The project team used the environmental resource and topographical constraints map from TM #5.1.3.2: Concept Level Environmental Screening (see Figure 1 below) and the initial single-line horizontal and vertical alignments to conduct an initial environmental screening. This screening measures:

- Potential Park Impacts
- Potential Wetland and Water Impacts
- Potential Environmental Justice Impacts
- Potential Flood Plain Impacts
- Potential Historic Resource Impacts
- Potential Community Cohesion Impacts
- Potential Number of Developed Parcels with Potential ROW Takes
- Potential Number of Undeveloped Parcels with ROW Takes
- Potential Number of Structures Requiring Removal
- Potential Total ROW Acreage Needed

Table 3 summarizes the potential impacts of technically and economically feasible alternatives and provides an initial ranking of alternatives within each category.







#### Table 3: Potential Environmental Impacts of the Proposed Technically and Economically Feasible Alternatives

Measure	Alternative O-1	Alternative O-2	Alternative O-3	Alternative O-4	Alternative I-1	Alternative I-2	Alternative I-3	Alternative I-4
Park <sup>1</sup>	146,000 SF	172,400 SF	172,400 SF	172,400 SF	488,000 SF	369,200 SF	421,200 SF	514,400 SF
Rank	1	2	2	2	5	3	4	6
Wetlands and Waters <sup>1</sup>	3,170 SF	46,260 SF	24,110 SF	46,260 SF	58,450 SF	101,540 SF	79,390 SF	101,540 SF
Rank	1	3	2	3	4	6	5	6
Environmental Justice	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates. At grade proximity to property	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates	No acquisitions. Noise and air quality effects to San George Estates. At grade proximity to property
Rank	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)
Floodplains <sup>1</sup>	34,600 SF	32,200 SF	32,200 SF	32,200 SF	137,400 SF	32,200 SF	32,200 SF	135,000 SF
Rank	2	1	1	1	4	1	1	3
Historic Resources <sup>2</sup>	None identified	None identified	None identified	None identified	None identified	None identified	None identified	None identified
Rank	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)
Community Cohesion	Does not split a neighborhood.	Does not split a neighborhood.	Does not split a neighborhood.	Does not split a neighborhood.	Does not split a neighborhood.			
Rank	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)
Number of developed parcels with potential ROW takes	3 developed parcels	3 developed parcels	3 developed parcels	3 developed parcels	3 developed parcels	3 developed parcels	3 developed parcels	3 developed parcels
Rank	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)	0 (Same)
Number of undeveloped parcels with potential ROW takes	6 undeveloped parcels	5 undeveloped parcels	5 undeveloped parcels	5 undeveloped parcels	8 undeveloped parcels	7 undeveloped parcels	7 undeveloped parcels	7 undeveloped parcels
Rank	2	1	1	1	4	3	3	3
Number of structures requiring removal	-	-	-	-	-	2 structures	-	2 structures
Rank	1	1	1	1	1	2	1	2
Total ROW acreage	609,400 SF	611,800 SF	620,500 SF	611,800 SF	1,437,300 SF	1,176,300 SF	1,259,600 SF	1,176,300 SF
Rank	1	2	3	2	6	4	5	4

<sup>1</sup> Impacts for parks, wetlands, and floodplains is based on worst case for fill. These impacts will be refined based on assumptions for columns.

<sup>2</sup> Detailed survey has not been completed

1 – Lowest impact; 6 = Highest impact > Colors are used to visually compare alternatives (Dark Green, Light Green, Yellow, Orange, and Red to highlight lowest to highest impact and denote similar impact levels)

Green Text > Indicated potential opportunity for less EJ noise and visual impacts due to South Stage being at-grade adjacent to the subject properties.

# ALTERNATIVES FOR FURTHER EVALUATION

Based on screening for technical and economic feasibility and potential environmental impact factors, the project team recommends advancing the 8 remaining alternatives for further consideration and feedback from the PMT, PDT, PAC, system users, and community. During this review period, the project team suggests considering the following topics:

- Interchange alternatives impact vs. benefit: Given the footprint of the interchange alternatives, they have greater potential park, wetland and water, floodplain, and total ROW acreage impacts compared to the remaining Overpass and Underpass alternatives. These potential impacts and the associated interstate interchange spacing deviations on I-5 need to be weighed against the potential Purpose and Need benefits identified of the interchange versus the Overpass alternatives.
- I-5 Overpass vs. Underpass alternative impacts and benefits: Given the ability of the I-5 underpass alternatives (O-4 and I-4) to be potentially phased to a future interchange beyond 2045 and reduce the overall height of the South Stage Road vertical alignment in relation to nearby EJ properties, the potential reductions in noise and other environmental impacts should be examined.
- Future interchange compatibility of Overpass alternatives: Given the identified benefits of the interchange scenario according to the Purpose and Need performance measures and the anticipated growth in the study area beyond year 2045 by the cities of Medford and Phoenix, the compatibility of the Overpass alternatives to accommodate potential future interchange ramps should be considered.

See Attachment C for renderings of the 8 remaining alternatives.

# Overpass (Underpass) Alternatives

#### South Stage Alignment: Alternative O-1







**Overpass Alternative 1** 

Range of Alternatives Screening



#### South Stage Southerly Realignment (Option 1): Alternative O-2



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Range of Alternatives Screening



#### South Stage Southerly Realignment (Option 2): Alternative O-3



#### South Stage Underpass (Option 1): Alternative O-4





# Interchange Alternatives

#### South Stage Alignment: Alternative I-1



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Range of Alternatives Screening



#### South Stage Southerly Realignment (Option 1): Alternative I-2







#### South Stage Southerly Realignment (Option 2): Alternative I-3



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#### South Stage Underpass Interchange: Alternative I-4





# **NEXT STEPS**

Viable solution scenarios based on the transportation analysis screening, the environmental screening, and the land use screening will be refined and evaluated further to identify a recommended alternative.



#### **ATTACHMENT A – HIGH LEVEL CONSTRUCTABILITY ASSESSMENT**









Date: \_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: \_\_\_\_\_ Email: \_\_\_\_\_









Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: **22** Email:







The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level engineering analysis and confirmation through

Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: 03 Email: \_\_\_\_\_







The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level information that will require additional engineering analysis and confirmation through more detailed data collection and design prior to implementation

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The profile grade appears to extend below elevation 1425 and flood elevations in FEMA FIRMette are approximately elevation 1428 to elevation 1434. This profile grade would likely not allow structures over Bear Creek to pass the necessary flood elevations and the amount of structure within the floodway may not allow for a no-rise condition. This profile is likely infeasible and at best would likely require numerous design exceptions and deviations.

50 foot tall cut walls may not be feasible. The walls may need to be tiered and/or require significant tiebacks. To confirm feasibility geotechnical input would be required which is beyond the scope of this project.

Date: \_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: \_\_\_\_\_ Email: \_\_\_\_\_









Date: \_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: \_\_\_\_\_ Email: \_\_\_\_\_

#### Alternative Development Worksheet Potential Existing System Enhancement Sketches











Date:	
Name: 06	
Email:	







The contracted work for this project is based on memo are preliminary, concept, planning-level engineering analysis and confirmation through

Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: 07 \_\_\_\_\_ Email:









The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level information that will require additional engineering analysis and confirmation through more detailed data collection and design prior to implementation



Fill walls in the floodway may create challenges with maintaining a no rise condition and may not be feasible.

Biggest challenges for structural design and constructibility will be:

- Intersection on bridge

- Multiple crossings of Bear Creek and extensive construction in environmentally sensitive areas

Tall columns needed to the west of I-5
Traffic staging needed to allow construction of a bent in the I-5 median.



Date: \_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: \_\_\_\_\_ Email: \_\_\_\_\_











Fill walls in the floodway may create challenges with maintaining a no rise condition and may not be feasible.

Biggest challenges for structural design and constructibility will be:

- Intersection on bridge
- Extensive construction in environmentally sensitive areas
- Tall columns needed to the west of I-5
- Traffic staging needed to allow construction of a bent in the I-5 median.

Date: \_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: 12 Email: \_\_\_\_\_







Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: **I3** Email:







The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level information that will require additional engineering analysis and confirmation through more detailed data collection and design prior to implementation

The profile grade appears to extend below elevation 1425 and flood elevations in FEMA FIRMette are approximately elevation 1428 to elevation 1434. This profile grade would likely not allow structures over Bear Creek to pass the necessary flood elevations and the amount of structure within the floodway may not allow for a no-rise condition. This profile is likely infeasible and at best would likely require numerous design exceptions and deviations.

50 foot tall cut walls may not be feasible. The walls may need to be tiered and/or require significant tiebacks. To confirm feasibility geotechnical input would be required which is beyond the scope of this project.

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Date: \_\_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: \_\_\_\_\_\_ Email: \_\_\_\_\_\_







The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level information that will require additional engineering analysis and confirmation through more detailed data collection and design prior to implementation

Fill walls in the floodway may create challenges with maintaining a no rise condition and may not be feasible.

Biggest challenges for structural design and constructibility will be:

Interchange on bridge considering the overall profile change needed from east to west
Extensive construction in environmentally sensitive areas

Tall columns needed to the west of I-5
Traffic staging needed to allow construction of a bent in the I-5 median.

Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: **15** Email:







Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: **I6** Email:







The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level engineering analysis and confirmation through more detailed data collection and design prior

challenges with maintaining a no rise condition

Date: Overpass Alternative Option [ ] Interchange Alternative [ ] Name: **17** Email: \_\_\_\_\_









The contracted work for this project is based on desktop information and is at a planning level. Therefore, the information and analysis in this memo are preliminary, concept, planning-level information that will require additional engineering analysis and confirmation through more detailed data collection and design prior to implementation

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Fill walls in the floodway may create challenges with maintaining a no rise condition and may not be feasible.

Biggest challenges for structural design and constructibility will be:

- Intersections on bridge

- Multiple crossings of Bear Creek and extensive construction in environmentally sensitive areas

- Tall columns needed to the west of I-5
- Flyover structure in the SE
- Traffic staging needed to allow construction of a bent in the I-5 median

Date: \_\_\_\_\_\_ Overpass Alternative Option [ ] Interchange Alternative [ ] Name: 18 Email: \_\_\_\_\_

#### ATTACHMENT B – INITIAL ALTERNATIVE MAGNITUDE OF COST OPINION RANGES



#### South Stage Road Extension Plan

O-1 Overpass ODOT



#### Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024				
Reviewed By: Darren Hippenstiel, PE						
This Estimate has a Rating			3C	(See rating scale guide below.)		
ITEM			TOTAL		TOTAL COST	
		UNIT	QUANTITY	UNIT PRICE	IUTAL CUST	
RALL M		1.0	A1.1	<b>\$5,400,000,00</b>	<b>*</b> E 400.000.00	
		LS	ALL	\$5,466,000.00	\$5,466,000.00	
		LS	ALL	\$4,383,000.00	\$4,383,000.00	
		LS	ALL	\$0.00	\$0.00	
Erosion Control		AC	12.0	\$10,000.00	\$120,000.00	
Removal of Structures and Obstructions		LS	ALL	\$534,000.00	\$534,000.00	
Clearing and Grubbing		LS	ALL	\$800,000.00	\$800,000.00	
General Earthworks		CY	75,300	\$40.00	\$3,012,000.00	
Asphalt Roadway - Full Depth		SF	316,726	\$9.20	\$2,913,881.04	
Asphalt Roadway - Grind & Inlay (2" Depth)		SF		\$3.10	\$0.00	
Concrete Roadway - Full Depth		SF	0	\$15.60	\$0.00	
Subgrade Geotextile		SY	35,192	\$1.50	\$52,788.00	
Concrete Curbs - Standard Curb		LF	0	\$30.90	\$0.00	
Concrete Curbs - Standard Curb & Gutter		LF	13,034	\$36.70	\$478,347.80	
Raised Concrete Island		SF		\$12.90	\$0.00	
Truck Apron (Concrete)		SF		\$19.30	\$0.00	
Concrete Cycle Track		SF	0	\$8.40	\$0.00	
Separated Bicycle Facility - Asphalt		SF	0	\$3.00	\$0.00	
Concrete Walks		SF	78,204	\$8.40	\$656,913.60	
Separated Multi-Use Path - Concrete		SF	0	\$8.40	\$0.00	
Separated Multi-Use Path - Asphalt		SF	0	\$3.00	\$0.00	
Detectable Warnings		EA	8	\$500.00	\$4,000.00	
Pedestrian Ramps		EA	8	\$7,500.00	\$60,000.00	
Bike Ramps		EA		\$2,500.00	\$0.00	
Extra for Pedestrian Ramps		EA	8	\$1,500.00	\$12,000.00	
Chain Link Fence		LF		\$50.00	\$0.00	
Residential Driveway Reconstruction		EA	0	\$1,500.00	\$0.00	
Commercial Driveway Reconstruction		EA	0	\$3,000.00	\$0.00	
Retaining Walls, Gravity		SF		\$55.00	\$0.00	
Retaining Walls, MSE		SF	5,400	\$200.00	\$1,080,000.00	
Retaining Walls, Cut (Soldier pyle, tie back, so	il nail)	SF		\$300.00	\$0.00	
Sound Walls		SF	0	\$45.00	\$0.00	
Fish Friendly Box Culvert, Complete		LF		\$1,000.00	\$0.00	
Bridge Structure, Complete		SF	88,160	\$450.00	\$39,672,000.00	
Guardrail System, Complete		LF	3,100	\$50.00	\$155,000.00	
Storm Water Conveyance System, Complete		LS	ALL	\$2,157,000.00	\$2,157,000.00	
Regional Water Quality and Hydromodification	System, Complete	SF	42,800	\$28.00	\$1,198,400.00	
Permanent Landscaping		SF	91.238	\$4.20	\$383,199,60	
Irrigation, Complete		SF	91,238	\$2.50	\$228.095.00	
Pavement Markings, Complete		LS	ALL	\$144.000.00	\$144.000.00	
Signage, Complete		LS	ALL	\$108.000.00	\$108.000.00	
Illumination System, Complete		LS	ALL	\$1,006.600.00	\$1.006.600.00	
Traffic Signal Modifications, Complete		LS	ALL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$0.00	
Traffic Signal System, Complete		LS	ALL		\$0.00	
Fiber Optic Interconnect System Complete		LS	ALL		\$0.00	
Utility Undergrounding, Complete		LF	0	\$100.00	\$0.00	
			-			
		Т	OTAL CONSTR	UCTION COST	\$ 64,625,225	

#### South Stage Road Extension Plan

**O-1 Overpass** 



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This Estimate has	; a Rating of:	3C	(See rating scale gu	uide b	selow.)
ITEM	UNIT	TOTAL QUANTITY			TOTAL COST
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$16,157,000.00		\$16,157,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	16,157,000
		TOTAL PROJ	ECT SUBTOTAL	\$	80,784,959
		3	5% Contingency	\$	28,274,740
	TOTAL	ESTIMATED P	ROJECT COST	\$	109,059,699

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 60% based on risk.
**О-2 Overpass** одот



Prepared By: Eza Gaigalas	Date: March 2024			
Reviewed By: Darren Hippenstiel, PE				
	This Estimate has a Rating of:	3C	(See rating scale guide below.)	
ITEM		TOTAL		TOTAL COST
	ONIT	QUANTITY	UNIT PRICE	TUTAL CUST
Mahilipatian		A1.1	¢c 414 000 00	\$6,414,000,00
	LS	ALL	\$6,411,000.00	\$6,411,000.00
		ALL	\$5,138,000.00	\$5,136,000.00
		ALL	\$0.00	\$0.00
Erosion Control	AC	12.0	\$10,000.00	\$120,000.00
Removal of Structures and Obstructions		ALL	\$626,000.00	\$626,000.00
Clearing and Grubbing		ALL	\$939,000.00	\$939,000.00
	<u> </u>	67,833	\$40.00	\$2,713,320.00
Asphalt Roadway - Full Depth	SF	316,726	\$9.20	\$2,913,881.04
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00
Subgrade Geotextile	SY	35,192	\$1.50	\$52,788.00
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80
Raised Concrete Island	SF		\$12.90	\$0.00
Truck Apron (Concrete)	SF		\$19.30	\$0.00
	SF	0	\$8.40	\$0.00
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
Concrete Walks	SF	78,204	\$8.40	\$656,913.60
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00
Detectable Warnings	EA	8	\$500.00	\$4,000.00
Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00
	EA		\$2,500.00	\$0.00
Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00
	LF	0	\$50.00	\$0.00
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00
Retaining Walls, Gravity	SF	0.000	\$55.00	\$0.00
Retaining Walls, MSE	SF	3,660	\$200.00	\$732,000.00
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00
	SF	0	\$45.00	\$0.00
Fish Friendly Box Culvert, Complete	LF	440,400	\$1,000.00	\$0.00
Bridge Structure, Complete	SF	110,480	\$450.00	\$49,716,000.00
Guardrall System, Complete		2,300	\$50.00	\$115,000.00
Storm Water Conveyance System, Complete		ALL	\$2,068,000.00	\$2,068,000.00
Regional Water Quality and Hydromodification System,	Complete SF	42,800	\$28.00	\$1,198,400.00
	SF	91,238	\$4.20	\$383,199.60
Payament Markinga, Camplete	SF	91,238	\$2.50	\$228,095.00
Pavement Markings, Complete	LS	ALL	\$138,000.00	\$138,000.00
Signage, Complete	LS	ALL	\$104,000.00	\$104,000.00
Troffic Signal Madifications, Complete	LS	ALL	\$964,800.00	\$964,800.00
Traffic Signal System Complete	LS	ALL		\$0.00
Fiber Ontic Interconnect System Complete		ALL	<u> </u>	\$0.00
		ALL	¢400.00	\$0.00
		U	\$100.00	\$0.00
	T	OTAL CONST	UCTION COST	\$ 75.772.745

O-2 Overpass



#### Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This	Estimate has a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$18,944,000.00	\$18,944,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 18,944,000
	\$ 94,719,479			
	\$ 33,151,820			
	\$ 127,871,299			

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

**O-3 Overpass** ODOT



Prepared By: Eza Gaigalas		Date: March 2024				
R	eviewed By: Darren Hippenstiel, PE					
	Т	his Estimate has a Rating of:	3C	(See rating scale gu	ng scale guide below.)	
	ITEM	UNIT	TOTAL		TOTAL COST	
		ONT	QUANTITY		IUTAL COST	
_	NA-bill-stice		A1.1	\$C.057.000.00	¢c.057.000.00	
-		L3	ALL	\$6,957,000.00	\$6,957,000.00	
-		LS	ALL	\$5,575,000.00	\$5,575,000.00	
-		L3	ALL	\$0.00	\$0.00	
-		AC	12.1	\$10,000.00	\$121,000.00	
-	Removal of Structures and Obstructions	L3	ALL	\$679,000.00	\$679,000.00	
_	Clearing and Grubbing	LS	ALL	\$1,019,000.00	\$1,019,000.00	
-	General Earthworks	Ci	69,800	\$40.00	\$2,792,000.00	
-	Asphait Roadway - Full Depth	SF	319,982	\$9.20	\$2,943,838.08	
	Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00	
	Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00	
	Subgrade Geotextile	SY	35,554	\$1.50	\$53,331.00	
	Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00	
-	Concrete Curbs - Standard Curb & Gutter		13,168	\$36.70	\$483,265.60	
_	Raised Concrete Island	SF		\$12.90	\$0.00	
_	Truck Apron (Concrete)	SF		\$19.30	\$0.00	
_	Concrete Cycle Track	SF	0	\$8.40	\$0.00	
	Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00	
	Concrete Walks	SF	79,008	\$8.40	\$663,667.20	
_	Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00	
	Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00	
	Detectable Warnings	EA	8	\$500.00	\$4,000.00	
_	Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00	
	Bike Ramps	EA		\$2,500.00	\$0.00	
	Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00	
	Chain Link Fence	LF		\$50.00	\$0.00	
	Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00	
_	Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00	
_	Retaining Walls, Gravity	SF		\$55.00	\$0.00	
_	Retaining Walls, MSE	SF	4,100	\$200.00	\$820,000.00	
	Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00	
_	Sound Walls	SF	0	\$45.00	\$0.00	
_	Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00	
_	Bridge Structure, Complete	SF	121,680	\$450.00	\$54,756,000.00	
	Guardrail System, Complete	LF	2,400	\$50.00	\$120,000.00	
	Storm Water Conveyance System, Complete	LS	ALL	\$2,104,000.00	\$2,104,000.00	
	Regional Water Quality and Hydromodification System, Com	plete SF	43,200	\$28.00	\$1,209,600.00	
	Permanent Landscaping	SF	92,176	\$4.20	\$387,139.20	
	Irrigation, Complete	SF	92,176	\$2.50	\$230,440.00	
	Pavement Markings, Complete	LS	ALL	\$141,000.00	\$141,000.00	
	Signage, Complete	LS	ALL	\$106,000.00	\$106,000.00	
L	Illumination System, Complete	LS	ALL	\$981,700.00	\$981,700.00	
L	Traffic Signal Modifications, Complete	LS	ALL		\$0.00	
L	Traffic Signal System, Complete	LS	ALL		\$0.00	
L	Fiber Optic Interconnect System Complete	LS	ALL		\$0.00	
L	Utility Undergrounding, Complete	LF	0	\$100.00	\$0.00	
			OTAL CONST		¢ 00.040.004	
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**O-3 Overpass** ODOT



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estim	nate has a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$20,555,000.00	\$20,555,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 20,555,000
	\$ 102,776,715			
		3	5% Contingency	\$ 35,971,860
	TOTAL	ESTIMATED P	ROJECT COST	\$ 138,748,575

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
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#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

**O-4** Underpass ODOT



Prepared By: Eza Gaigalas			Date: March 2024		
Reviewed By: Darren Hip	penstiel, PE				
	This Esti	mate has a Rating of:	3C	(See rating scale gu	ide below.)
ITEM			TOTAL		TOTAL COST
		ONIT	QUANTITY	UNIT PRICE	IUTAL COST
Mobilization		18	A1.1	\$7,488,000,00	¢7 499 000 00
		L3	ALL	\$7,466,000.00	\$7,466,000.00
		LS	ALL	\$6,000,000.00	\$0,000,000.00
Construction Staging		L3	ALL	\$7,500,000.00	\$7,500,000.00
Erosion Control		AC	12.0	\$10,000.00	\$120,000.00
Removal of Structures	and Obstructions	LS	ALL	\$731,000.00	\$731,000.00
Clearing and Grubbing		LS	ALL	\$1,096,000.00	\$1,096,000.00
General Earthworks		CY	777,500	\$40.00	\$31,100,000.00
Asphalt Roadway - Full		SF	316,726	\$9.20	\$2,913,881.04
Asphalt Roadway - Gri	nd & Inlay (2" Depth)	SF		\$3.10	\$0.00
Concrete Roadway - Fi	ull Depth	SF	0	\$15.60	\$0.00
Subgrade Geotextile		SY	35,192	\$1.50	\$52,788.00
Concrete Curbs - Stand	dard Curb		0	\$30.90	\$0.00
Concrete Curbs - Stand	dard Curb & Gutter		13,034	\$36.70	\$478,347.80
Raised Concrete Island	d	SF		\$12.90	\$0.00
Truck Apron (Concrete	e)	SF		\$19.30	\$0.00
Concrete Cycle Track		SF	0	\$8.40	\$0.00
Separated Bicycle Faci	ility - Asphalt	SF	0	\$3.00	\$0.00
Concrete Walks		SF	78,204	\$8.40	\$656,913.60
Separated Multi-Use Pa	ath - Concrete	SF	0	\$8.40	\$0.00
Separated Multi-Use Pa	ath - Asphalt	SF	0	\$3.00	\$0.00
Detectable Warnings		EA	8	\$500.00	\$4,000.00
Pedestrian Ramps		EA	8	\$7,500.00	\$60,000.00
Bike Ramps		EA		\$2,500.00	\$0.00
Extra for Pedestrian Ra	amps	EA	8	\$1,500.00	\$12,000.00
Chain Link Fence		LF		\$50.00	\$0.00
Residential Driveway R	Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway	Reconstruction	EA	0	\$3,000.00	\$0.00
Retaining Walls, Gravit	ty	SF		\$55.00	\$0.00
Retaining Walls, MSE		SF	1,500	\$200.00	\$300,000.00
Retaining Walls, Cut (S	Soldier pyle, tie back, soil nail)	SF	9,000	\$300.00	\$2,700,000.00
Sound Walls		SF	0	\$45.00	\$0.00
Fish Friendly Box Culve	ert, Complete	LF		\$1,000.00	\$0.00
Bridge Structure, Comp	plete	SF	36,000	\$450.00	\$16,200,000.00
Guardrail System, Corr	nplete	LF		\$50.00	\$0.00
Storm Water Conveyar	nce System, Complete	LS	ALL	\$10,584,000.00	\$10,584,000.00
Regional Water Quality	y and Hydromodification System, Complete	SF	42,800	\$28.00	\$1,198,400.00
Permanent Landscapin	ng	SF	91,238	\$4.20	\$383,199.60
Irrigation, Complete		SF	91,238	\$2.50	\$228,095.00
Pavement Markings, C	complete	LS	ALL	\$706,000.00	\$706,000.00
Signage, Complete		LS	ALL	\$530,000.00	\$530,000.00
Illumination System, Co	omplete	LS	ALL	\$4,939,000.00	\$4,939,000.00
Traffic Signal Modificat	tions, Complete	LS	ALL		\$0.00
Traffic Signal System,	Complete	LS	ALL		\$0.00
Fiber Optic Interconnec	ct System Complete	LS	ALL		\$0.00
Utility Undergrounding,	, Complete	LF	0	\$100.00	\$0.00
			OTAL CONST		¢ 05.094.005
			OTAL CUNSIN	COCTION COST	<del>ə 95,981,62</del> 5

**O-4 Underpass** 



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024	Date: March 2024		
Reviewed By: Darren Hippenstiel, PE					
This Estimate has	a Rating of:	3C	(See rating scale gu	Jide L	pelow.)
		TOTAL			TOTAL COST
		QUANTITY			TOTAL COOL
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$23,996,000.00		\$23,996,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00	I	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	23,996,000
TOTAL PROJECT SUBTOTAL					119,980,359
35% Contingency \$					41,993,130
TOTAL ESTIMATED PROJECT COST					161,973,489

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

**O-5 Underpass** ODOT



Prepared By: Eza Gaigalas			Date: March 2024			
Reviewed	l By: Darren Hippenstiel, PE					
		This Estimate has a	Rating of:	3C	(See rating scale gu	uide below.)
ITEM				TOTAL		TOTAL COST
			UNIT	QUANTITY	UNIT PRICE	IUTAL COST
Mahilia	otion		18	AL 1	¢11 952 000 00	\$11,852,000,00
			L3	ALL	\$11,852,000.00	\$11,652,000.00
Canatr	Control		L3	ALL	\$9,491,000.00	\$9,491,000.00
Constr			L3	ALL	\$0.00	\$0.00
Erosio			AC	12.0	\$10,000.00	\$120,000.00
Remov	al of Structures and Obstructions		LS	ALL	\$2,558,000.00	\$2,558,000.00
Clearin			LS	ALL	\$2,274,000.00	\$2,274,000.00
Genera			05	1,469,500	\$40.00	\$58,780,000.00
Aspha	t Roadway - Full Depth		SF	316,726	\$9.20	\$2,913,881.04
Asphal	t Roadway - Grind & Inlay (2" Depth)		SF		\$3.10	\$0.00
Concre	te Roadway - Full Depth		SF	0	\$15.60	\$0.00
Subgra			SY	35,192	\$1.50	\$52,788.00
Concre	te Curbs - Standard Curb			0	\$30.90	\$0.00
Concre	te Curbs - Standard Curb & Gutter			13,034	\$36.70	\$478,347.80
Raised	Concrete Island		SF		\$12.90	\$0.00
Truck /	Apron (Concrete)		SF		\$19.30	\$0.00
Concre	te Cycle Track		SF	0	\$8.40	\$0.00
Separa	ted Bicycle Facility - Asphalt		SF	0	\$3.00	\$0.00
Concre	te Walks		SF	78,204	\$8.40	\$656,913.60
Separa	ted Multi-Use Path - Concrete		SF	0	\$8.40	\$0.00
Separa	ted Multi-Use Path - Asphalt		SF	0	\$3.00	\$0.00
Detect	able Warnings		EA	8	\$500.00	\$4,000.00
Pedest	rian Ramps		EA	8	\$7,500.00	\$60,000.00
Bike R	amps		EA		\$2,500.00	\$0.00
Extra f	or Pedestrian Ramps		EA	8	\$1,500.00	\$12,000.00
Chain	_ink Fence		LF		\$50.00	\$0.00
Reside	ntial Driveway Reconstruction		EA	0	\$1,500.00	\$0.00
Comm	ercial Driveway Reconstruction		EA	0	\$3,000.00	\$0.00
Retain	ng Walls, Gravity		SF		\$55.00	\$0.00
Retain	ng Walls, MSE		SF	41,040	\$200.00	\$8,208,000.00
Retain	ng Walls, Cut (Soldier pyle, tie back, soil nail)		SF		\$200.00	\$0.00
Sound	Walls		SF	0	\$45.00	\$0.00
Fish Fr	iendly Box Culvert, Complete		LF		\$1,000.00	\$0.00
Bridge	Structure, Complete		SF	24,000	\$450.00	\$10,800,000.00
Guard	ail System, Complete		LF		\$50.00	\$0.00
Storm	Water Conveyance System, Complete		LS	ALL	\$18,888,000.00	\$18,888,000.00
Regior	al Water Quality and Hydromodification System, Co	mplete	SF	42,800	\$28.00	\$1,198,400.00
Perma	nent Landscaping		SF	91,238	\$4.20	\$383,199.60
Irrigatio	on, Complete		SF	91,238	\$2.50	\$228,095.00
Pavem	ent Markings, Complete		LS	ALL	\$1,260,000.00	\$1,260,000.00
Signag	e, Complete		LS	ALL	\$945,000.00	\$945,000.00
Illumina	ation System, Complete		LS	ALL	\$8,814,200.00	\$8,814,200.00
Traffic	Signal Modifications, Complete		LS	ALL		\$0.00
Traffic	Signal System, Complete		LS	ALL		\$0.00
Fiber C	Optic Interconnect System Complete		LS	ALL		\$0.00
Utility U	Indergrounding, Complete		LF	0	\$100.00	\$0.00
				OTAL CONCER	UCTION COST	¢ 120.077.995
				UTAL CUNSTR	UCTION COST	<del>3 139,977,82</del> 5

O-5 Underpass одот



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas	Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE					
This Estimate has	a Rating of:	3C	(See rating scale gu	ıide t	below.)
ITEM	UNIT	TOTAL	UNIT PRICE		TOTAL COST
		QUANTITY			
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$34,995,000.00		\$34,995,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	34,995,000
TOTAL PROJECT SUBTOTAL					174,975,559
50% Contingency \$					87,487,780
	TOTAL	ESTIMATED P	ROJECT COST	\$	262,463,339

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

### South Stage Road Extension Plan O-6 Overpass Northerly Realignment одот



Prepared By: Eza Gaigalas	Date: March 2024			
Reviewed By: Darren Hippenstiel, PE				
Thi	s Estimate has a Rating of:	3C	(See rating scale gu	iide below.)
		TOTAL		
ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
		····	•···	•···
Mobilization	LS	ALL	\$11,720,000.00	\$11,720,000.00
Traffic Control	LS	ALL	\$9,389,000.00	\$9,389,000.00
Construction Staging	LS	ALL	\$0.00	\$0.00
Erosion Control	AC	16.7	\$10,000.00	\$167,000.00
Removal of Structures and Obstructions	LS	ALL	\$2,542,000.00	\$2,542,000.00
Clearing and Grubbing	LS	ALL	\$1,695,000.00	\$1,695,000.00
General Earthworks	CY	92,967	\$40.00	\$3,718,680.00
Asphalt Roadway - Full Depth	SF	443,281	\$9.20	\$4,078,181.52
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00
Subgrade Geotextile	SY	49,254	\$1.50	\$73,881.00
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00
Concrete Curbs - Standard Curb & Gutter	LF	18,242	\$36.70	\$669,481.40
Raised Concrete Island	SF	,	\$12.90	\$0.00
Truck Apron (Concrete)	SF		\$19.30	\$0.00
Concrete Cycle Track	SF	0	\$8.40	\$0.00
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
Concrete Walks	SF	109.452	\$8.40	\$919 396 80
Separated Multi-Lise Bath - Concrete	91 95	0	\$8.40	¢0.00
Separated Multi-Use Path - Conclete	51 9E	0	\$2.00	\$0.00
Separated Multi-Ose Patri - Asphalt	5F	0	\$3.00 \$5.00	\$0.00
	EA	8	\$500.00	\$4,000.00
Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00
	EA	•	\$2,500.00	\$0.00
Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00
Chain Link Fence	LF		\$50.00	\$0.00
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00
Retaining Walls, Cut (soldier Pyle, tie back, soil nail)	SF	2,000	\$300.00	\$600,000.00
Retaining Walls, MSE	SF	3,000	\$200.00	\$600,000.00
Retaining Walls, Cast-in-Place	SF		\$160.00	\$0.00
Sound Walls	SF	0	\$45.00	\$0.00
Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00
Bridge Structure, Complete	SF	211,120	\$450.00	\$95,004,000.00
Guardrail System, Complete	LF	3,100	\$50.00	\$155,000.00
Storm Water Conveyance System, Complete	LS	ALL	\$2,861,000.00	\$2,861,000.00
Regional Water Quality and Hydromodification System, Compl	ete SF	59,900	\$28.00	\$1,677,200.00
Permanent Landscaping	SF	127,694	\$4.20	\$536,314.80
Irrigation, Complete	SF	127.694	\$2.50	\$319.235.00
Pavement Markings, Complete	LS	ALL	\$191.000.00	\$191.000.00
Signage, Complete	LS	ALL	\$144.000.00	\$144.000.00
Illumination System, Complete	18	ALL	\$1,335,000,00	\$1,335,000,00
Traffic Signal Modifications. Complete	1.9	ALL	÷.,000,000.00	\$0.00
Traffic Signal System Complete	19			\$0.00 \$0.00
Fiber Optic Interconnect System Complete	19			ቃ0.00 ቁስ ስስ
Utility Undergrounding Complete	1 -	ΛLL Λ	\$100.00	φ0.00 ¢0.00
		0	\$100.00	φ0.00
	T(	OTAL CONSTR	UCTION COST	\$ 13 <u>8,471,371</u>

### South Stage Road Extension Plan O-6 Overpass Northerly Realignment ODOT



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This Estimate ha	s a Rating of:	3C	(See rating scale gu	uide b	elow.)
ІТЕМ	UNIT	TOTAL QUANTITY	UNIT PRICE		TOTAL COST
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$34,618,000.00		\$34,618,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	34,618,000
TOTAL PROJECT SUBTOTAL					173,092,105
		3	5% Contingency	\$	60,582,240
TOTAL ESTIMATED PROJECT COST				\$	233,674,345

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

O-7 Overpass ODOT



### Engineer's Conceptual Estimate

				Date: March 2024			
Reviewed By: Darren Hippenstiel, PE							
This Estima	ate has a Rating of:	3C	(See rating scale guid	le below.)			
ITEM	UNIT	TOTAL		TOTAL COST			
	ONIT	QUANTITY		TOTAL COST			
Mahilipatian	18	AL 1	¢7.076.000.00	\$7,076,000,00			
	LS	ALL	\$7,970,000.00	\$7,970,000.00			
Construction Storing	LS	ALL	\$6,399,000.00	\$6,399,000.00			
	LS	ALL	\$7,999,000.00	\$7,999,000.00			
	AC	23.0	\$10,000.00	\$230,000.00			
Removal of Structures and Obstructions	LS	ALL	\$1,730,000.00	\$1,730,000.00			
	LS	ALL	\$1,154,000.00	\$1,154,000.00			
General Earthworks	CY	265,033	\$40.00	\$10,601,320.00			
Asphalt Roadway - Full Depth	SF	316,726	\$9.20	\$2,913,881.04			
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00			
Concrete Roadway - Full Depth	SF	480,000	\$15.60	\$7,488,000.00			
Subgrade Geotextile	SY	88,526	\$1.50	\$132,789.00			
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00			
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80			
Raised Concrete Island	SF		\$12.90	\$0.00			
Truck Apron (Concrete)	SF		\$19.30	\$0.00			
Concrete Cycle Track	SF	0	\$8.40	\$0.00			
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00			
Concrete Walks	SF	78,204	\$8.40	\$656,913.60			
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00			
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00			
Detectable Warnings	EA	8	\$500.00	\$4,000.00			
Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00			
Bike Ramps	EA		\$2,500.00	\$0.00			
Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00			
Chain Link Fence	LF		\$50.00	\$0.00			
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00			
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00			
Retaining Walls, Gravity	SF		\$55.00	\$0.00			
Retaining Walls, MSE	SF	5,000	\$200.00	\$1,000,000.00			
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00			
Sound Walls	SF	0	\$45.00	\$0.00			
Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00			
Bridge Structure, Complete	SF	88,160	\$450.00	\$39,672,000.00			
Guardrail System, Complete	LF	1,600	\$50.00	\$80,000.00			
Storm Water Conveyance System, Complete	LS	ALL	\$6.705.000.00	\$6.705.000.00			
Regional Water Quality and Hydromodification System, Complete	SF	90.800	\$28.00	\$2.542.400.00			
Permanent Landscaping	SF	91 238	\$4 20	\$383 199 60			
Irrigation. Complete	SF	91 238	\$2.50	\$228 095 00			
Pavement Markings. Complete	15	ALL	\$447 000 00	\$447,000,00			
Signage, Complete	LS	ALL	\$336.000.00	\$336.000 00			
Illumination System. Complete	1.5	ALL	\$3 128 700 00	\$3 128 700 00			
Traffic Signal Modifications, Complete	1.5	ALL	<i>\$</i> 0,120,100.00	\$0,120,100.00 \$0.00			
Traffic Signal System. Complete	1.5	ALL	<u> </u>	\$0.00			
Fiber Optic Interconnect System Complete	1.5	ALL	<u> </u>	\$0.00			
Utility Undergrounding, Complete	1 F	0	\$100.00	0.00 \$0.00			
		0	φ100.00	φ0.00			
	T	OTAL CONSTR	UCTION COST	\$ 102,357,646			

102,357,646

**O-7 Overpass** 



#### Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Esti	mate has a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$25,590,000.00	\$25,590,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 25,590,000
	\$ 127,950,380			
		3!	5% Contingency	\$ 44,782,640
	TOTAL	ESTIMATED PI	ROJECT COST	\$ 172,733,020

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
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#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-1 Overpass O-1 ODOT



Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estima	te has a Rating of:	3C	(See rating scale gu	ide below.)
		TOTAL		
	UNII	QUANTITY	UNIT PRICE	IUTAL CUST
			· ·	
	1.0	A1.1	<b>#0.745.000.00</b>	<b>0</b> 0 745 000 00
Mobilization	LS	ALL	\$6,745,000.00	\$6,745,000.00
	LS	ALL	\$5,408,000.00	\$5,408,000.00
Construction Staging	LS	ALL	\$0.00	\$0.00
Erosion Control	AC	15.6	\$10,000.00	\$156,000.00
Removal of Structures and Obstructions	LS	ALL	\$658,000.00	\$658,000.00
Clearing and Grubbing	LS	ALL	\$987,000.00	\$987,000.00
General Earthworks	CY	100,075	\$40.00	\$4,003,000.00
Asphalt Roadway - Full Depth	SF	476,366	\$9.20	\$4,382,569.04
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00
Subgrade Geotextile	SY	52,930	\$1.50	\$79,395.00
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80
Raised Concrete Island	SF		\$12.90	\$0.00
Truck Apron (Concrete)	SF		\$19.30	\$0.00
Concrete Cycle Track	SF	0	\$8.40	\$0.00
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
Concrete Walks	SF	78,204	\$8.40	\$656,913.60
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00
Detectable Warnings	EA	16	\$500.00	\$8,000.00
Pedestrian Ramps	EA	16	\$7,500.00	\$120,000.00
Bike Ramps	EA		\$2,500.00	\$0.00
Extra for Pedestrian Ramps	EA	16	\$1,500.00	\$24,000.00
Chain Link Fence	LF		\$50.00	\$0.00
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway Reconstruction	EA	0	\$3,000,00	\$0.00
Retaining Walls Gravity	SF	-	\$55.00	\$0.00
Retaining Walls MSE	SE	5 400	\$200.00	\$1 080 000 00
Retaining Walls Cut (Soldier pyle tie back soil nail)	SF	-,	\$300.00	\$0.00
Sound Walls	SE	0	\$45.00	\$0.00
Fish Friendly Box Culvert, Complete	L F		\$1,000,00	\$0.00
Bridge Structure Complete	SE	106 160	\$450.00	\$47 772 000 00
Guardrail System Complete	L F	3 100	\$50.00	\$155,000,00
Storm Water Conveyance System Complete	15	AL I	\$2,926,000,00	\$2,926,000,00
Regional Water Quality and Hydromodification System Complete	SE	58 800	\$28.00	\$1,646,400,00
Permanent Landscaning	SE	01 238	\$4.20	\$383 100.60
Irrigation Complete		01 228	\$4.20 \$2.50	\$303,199.00
Revement Markings, Complete		91,230 ALL	\$2.50	\$220,093.00
Signage Complete	LS	ALL	\$196,000.00	\$196,000.00
Illumination System Complete			¢∠33,000.00	\$4.265.400.00
Traffic Signal Modifications Complete	LS	ALL	\$1,305,400.00	φ1,305,400.00 ¢0.00
Traffic Signal System Complete	LS	ALL	+	\$0.00
Fiber Optic Interconnect System Complete	LS	ALL	+	\$0.00
	LS	ALL	<b>#</b> 400.00	\$0.00
		0	\$100.00	\$0.00
	T(	OTAL CONSTR	RUCTION COST	\$ 79.751.320

I-1 Overpass O-1 ODOT



#### Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This Estimate has	a Rating of:	3C	(See rating scale gu	uide be	elow.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE		TOTAL COST
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$19,938,000.00		\$19,938,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	19,938,000
TOTAL PROJECT SUBTOTAL				\$	99,692,054
35% Contingency				\$	34,892,220
	TOTAL	ESTIMATED PI	ROJECT COST	\$	134,584,274

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-2 Overpass O-2 ODOT



Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
	This Estimate has a Rating of		(See rating scale gu	ide below.)	
ITEM		TOTAL		TOTAL COST	
	SNIT	QUANTITY	UNIT PRICE	TUTAL CUST	
Mehilization	19	AL 1	\$7,006,000,00	\$7,006,000,00	
	E3		\$7,000,000.00	\$7,000,000.00 \$5,617,000,00	
Construction Staging	L3	ALL	\$3,017,000.00	\$3,017,000.00 \$0.00	
Erosion Control	LS	15.6	\$0.00	\$0.00 \$156,000,00	
Permanal of Structures and Obstructions	AC	15.0	\$10,000.00	\$130,000.00	
Clearing and Cruthing	LS	ALL	\$004,000.00	\$004,000.00	
	LS	ALL 07.020	\$1,026,000.00	\$1,026,000.00	
		97,039	\$40.00	\$3,881,560.00	
Asphalt Roadway - Full Depth	SF	474,984	\$9.20	\$4,369,850.96	
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00	
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00	
Subgrade Geotextile	SY	52,776	\$1.50	\$79,164.00	
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00	
Concrete Curbs - Standard Curb & Gutter	LF	13,006	\$36.70	\$477,320.20	
Raised Concrete Island	SF		\$12.90	\$0.00	
Truck Apron (Concrete)	SF		\$19.30	\$0.00	
Concrete Cycle Track	SF	0	\$8.40	\$0.00	
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00	
Concrete Walks	SF	78,036	\$8.40	\$655,502.40	
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00	
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00	
Detectable Warnings	EA	8	\$500.00	\$4,000.00	
Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00	
Bike Ramps	EA		\$2,500.00	\$0.00	
Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00	
Chain Link Fence	LF		\$50.00	\$0.00	
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00	
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00	
Retaining Walls, Gravity	SF		\$55.00	\$0.00	
Retaining Walls, MSE	SF	3,660	\$200.00	\$732,000.00	
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00	
Sound Walls	SF	0	\$45.00	\$0.00	
Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00	
Bridge Structure, Complete	SF	113,660	\$450.00	\$51,147,000.00	
Guardrail System, Complete	LF		\$50.00	\$0.00	
Storm Water Conveyance System, Complete	LS	ALL	\$2,862,000.00	\$2,862,000.00	
Regional Water Quality and Hydromodification System	n, Complete SF	58,600	\$28.00	\$1,640,800.00	
Permanent Landscaping	SF	91,042	\$4.20	\$382,376.40	
Irrigation, Complete	SF	91,042	\$2.50	\$227,605.00	
Pavement Markings, Complete	LS	ALL	\$191.000.00	\$191.000.00	
Signage, Complete	LS	ALL	\$287.000.00	\$287.000.00	
Illumination System, Complete	LS	ALL	\$1,335.600.00	\$1.335.600.00	
Traffic Signal Modifications, Complete	LS	ALL	, ,,	\$0.00	
Traffic Signal System, Complete		ALL		\$0.00	
Fiber Optic Interconnect System Complete		ALL		\$0.00	
Utility Undergrounding, Complete		0	\$100.00	\$0.00	
		· · · ·	÷	<u> </u>	
	т	OTAL CONSTR	RUCTION COST	\$ 82,833,779	

I-2 Overpass O-2 ODOT



#### Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estimate has	a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$20,709,000.00	\$20,709,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 20,709,000
	\$ 103,545,513			
35% Contingency				\$ 36,240,930
	TOTAL	ESTIMATED PI		\$ 139,786,443

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-3 Overpass O-3 ODOT



Prepared By: Eza Gaigalas		Date: March 2024			
R	eviewed By: Darren Hippenstiel, PE				
		This Estimate has a Rating of:	3C	(See rating scale gu	ide below.)
	ITEM		TOTAL		TOTAL COST
		UNIT	QUANTITY	UNIT PRICE	IUTAL CUST
	Mart 199 - 2014 - 2	1.0	A1.1	¢7,000,000,00	¢7,000,000,00
			ALL	\$7,268,000.00	\$7,268,000.00
		LS	ALL	\$5,828,000.00	\$5,828,000.00
_		LS	ALL	\$0.00	\$0.00
_	Erosion Control	AC	15.9	\$10,000.00	\$159,000.00
	Removal of Structures and Obstructions	LS	ALL	\$710,000.00	\$710,000.00
	Clearing and Grubbing	LS	ALL	\$1,064,000.00	\$1,064,000.00
	General Earthworks	CY	100,256	\$40.00	\$4,010,240.00
	Asphalt Roadway - Full Depth	SF	487,546	\$9.20	\$4,485,425.04
	Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00
	Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00
	Subgrade Geotextile	SY	54,172	\$1.50	\$81,258.00
	Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00
	Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80
	Raised Concrete Island	SF		\$12.90	\$0.00
	Truck Apron (Concrete)	SF		\$19.30	\$0.00
	Concrete Cycle Track	SF	0	\$8.40	\$0.00
	Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
	Concrete Walks	SF	78,204	\$8.40	\$656,913.60
	Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00
	Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00
	Detectable Warnings	EA	8	\$500.00	\$4,000.00
	Pedestrian Ramps	EA	8	\$7,500.00	\$60,000.00
	Bike Ramps	EA		\$2,500.00	\$0.00
	Extra for Pedestrian Ramps	EA	8	\$1,500.00	\$12,000.00
	Chain Link Fence	LF		\$50.00	\$0.00
	Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
	Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00
	Retaining Walls, Gravity	SF		\$55.00	\$0.00
	Retaining Walls, MSE	SF	4,100	\$200.00	\$820,000.00
	Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00
	Sound Walls	SF	0	\$45.00	\$0.00
	Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00
	Bridge Structure. Complete	SF	117.980	\$450.00	\$53.091.000.00
	Guardrail System. Complete	LF	2.400	\$50.00	\$120.000.00
	Storm Water Conveyance System, Complete	18	ALL	\$2,937,000,00	\$2,937,000,00
	Regional Water Quality and Hydromodification System. Cor	mplete SF	59 900	\$28.00	\$1 677 200 00
-	Permanent Landscaping	SF	91 238	\$4 20	\$383 199 60
-	Irrigation. Complete	SF	91,238	\$2.50	\$228,095,00
-	Pavement Markings Complete		ALL	\$196,000,00	\$196,000,00
-	Signage Complete		ΔI I	\$294,000,00	\$294,000,00
-	Illumination System Complete			\$1 370 400 00	\$1 370 400 00
-	Traffic Signal Modifications Complete			ψ1,370, <del>4</del> 00.00	\$0.00
⊢	Traffic Signal System Complete	10			ψ0.00 ¢n.nn
⊢	Fiber Ontic Interconnect System Complete	10			ψ0.00 ¢0.00
╞	Litility Undergrounding, Complete	L3	ALL 0	\$100.00	ψ0.00 ¢0.00
				φ100.00	φŪ.ŪŪ
		Т	OTAL CONSTR	RUCTION COST	\$ 85,934,079

I-3 Overpass O-3 ODOT



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estima	te has a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$21,484,000.00	\$21,484,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 21,484,000
	\$ 107,420,813			
35% Contingency				\$ 37,597,290
	TOTAL	ESTIMATED P	ROJECT COST	\$ 145,018,103

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
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- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-4 Underpass O-2 ODOT



Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
	This Estimate has a Rating of:	3C	(See rating scale guide below.)		
1754		TOTAL		TOTAL COST	
	ONIT	QUANTITY	UNIT PRICE	IUTAL CUST	
	1.6	A1.1	¢7,077,000,00	¢7 077 000 00	
	LS	ALL	\$7,977,000.00	\$7,977,000.00	
Construction Staging		ALL	\$6,395,000.00	\$0,395,000.00	
	LS	ALL	\$7,993,000.00	\$7,993,000.00	
Erosion Control	AC	15.6	\$10,000.00	\$156,000.00	
Removal of Structures and Obstructions	LS	ALL	\$1,730,000.00	\$1,730,000.00	
	LS	ALL 742.000	\$1,154,000.00	\$1,154,000.00	
General Earthworks	CY	743,600	\$40.00	\$29,744,000.00	
Asphalt Roadway - Full Depth	SF	473,298	\$9.20	\$4,354,343.44	
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00	
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00	
Subgrade Geotextile	SY	52,589	\$1.50	\$78,883.50	
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00	
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80	
Raised Concrete Island	SF		\$12.90	\$0.00	
Truck Apron (Concrete)	SF		\$19.30	\$0.00	
Concrete Cycle Track	SF	0	\$8.40	\$0.00	
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00	
Concrete Walks	SF	78,204	\$8.40	\$656,913.60	
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00	
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00	
Detectable Warnings	EA	16	\$500.00	\$8,000.00	
Pedestrian Ramps	EA	16	\$7,500.00	\$120,000.00	
Bike Ramps	EA		\$2,500.00	\$0.00	
Extra for Pedestrian Ramps	EA	16	\$1,500.00	\$24,000.00	
Chain Link Fence	LF		\$50.00	\$0.00	
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00	
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00	
Retaining Walls, Gravity	SF		\$55.00	\$0.00	
Retaining Walls, MSE	SF	1,500	\$200.00	\$300,000.00	
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF	9,000	\$300.00	\$2,700,000.00	
Sound Walls	SF	0	\$45.00	\$0.00	
Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00	
Bridge Structure, Complete	SF	41,000	\$450.00	\$18,450,000.00	
Guardrail System, Complete	LF	6,861	\$50.00	\$343,050.00	
Storm Water Conveyance System, Complete	LS	ALL	\$10,640,000.00	\$10,640,000.00	
Regional Water Quality and Hydromodification System, C	Complete SF	58,500	\$28.00	\$1,638,000.00	
Permanent Landscaping	SF	91,238	\$4.20	\$383,199.60	
Irrigation, Complete	SF	91,238	\$2.50	\$228,095.00	
Pavement Markings, Complete	LS	ALL	\$710.000.00	\$710.000.00	
Signage, Complete	LS	ALL	\$1.064.000.00	\$1.064.000.00	
Illumination System, Complete	LS	ALL	\$4,965,100.00	\$4,965,100.00	
Traffic Signal Modifications, Complete	LS	ALL	+ 1,2 20, 200.00	\$0.00	
Traffic Signal System, Complete	1.5	ALL	1 1	\$0.00	
Fiber Optic Interconnect System Complete	1.5	ALL	1 1	\$0.00	
Utility Undergrounding, Complete		0	\$100.00	\$0.00	
			\$100.00	\$0.00	
	T	OTAL CONSTR	RUCTION COST	\$ 102.290.933	

I-4 Underpass O-2 ODOT



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estimate	has a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$25,573,000.00	\$25,573,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 25,573,000
	\$ 127,866,667			
35% Contingency				\$ 44,753,340
	TOTAL	ESTIMATED P	ROJECT COST	\$ 172,620,007

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
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#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-5 Overpass O-1 ODOT

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Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
	This Estimate has a Rating of:	3C	(See rating scale gu	ide below.)
ITEM		TOTAL		TOTAL COST
	SNIT	QUANTITY		TOTAL COST
Mehilization			\$9.351.000.00	\$0.351.000.00
	E3	ALL	\$9,351,000.00	\$9,551,000.00
	L3	ALL	\$7,494,000.00	\$7,494,000.00 \$0.00
	LS	ALL	\$0.00	\$0.00 \$166,000,00
	AC	16.6	\$10,000.00	\$166,000.00
Removal of Structures and Obstructions	LS	ALL	\$913,000.00	\$913,000.00
	LS	ALL 02.044	\$1,369,000.00	\$1,369,000.00
General Earthworks	CY	83,811	\$40.00	\$3,352,440.00
Asphalt Roadway - Full Depth	SF	521,026	\$9.20	\$4,793,441.04
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00
Subgrade Geotextile	SY	57,892	\$1.50	\$86,838.00
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80
Raised Concrete Island	SF		\$12.90	\$0.00
Truck Apron (Concrete)	SF		\$19.30	\$0.00
Concrete Cycle Track	SF	0	\$8.40	\$0.00
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
Concrete Walks	SF	78,204	\$8.40	\$656,913.60
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00
Detectable Warnings	EA	16	\$500.00	\$8,000.00
Pedestrian Ramps	EA	16	\$7,500.00	\$120,000.00
Bike Ramps	EA		\$2,500.00	\$0.00
Extra for Pedestrian Ramps	EA	16	\$1,500.00	\$24,000.00
Chain Link Fence	LF		\$50.00	\$0.00
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00
Retaining Walls, Gravity	SF		\$55.00	\$0.00
Retaining Walls, MSE	SF	3,820	\$200.00	\$764,000.00
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00
Sound Walls	SF	0	\$45.00	\$0.00
Fish Friendly Box Culvert, Complete	LF		\$1,000.00	\$0.00
Bridge Structure, Complete	SF	163,348	\$450.00	\$73,506,600.00
Guardrail System, Complete	LF	7,793	\$50.00	\$389,650.00
Storm Water Conveyance System, Complete	LS	ALL	\$2,856,000.00	\$2,856,000.00
Regional Water Quality and Hydromodification System	, Complete SF	63,200	\$28.00	\$1,769,600.00
Permanent Landscaping	SF	91,238	\$4.20	\$383,199.60
Irrigation, Complete	SF	91,238	\$2.50	\$228,095.00
Pavement Markings, Complete	LS	ALL	\$191,000.00	\$191,000.00
Signage, Complete	LS	ALL	\$286,000.00	\$286,000.00
Illumination System, Complete	LS	ALL	\$1.332.800.00	\$1.332.800.00
Traffic Signal Modifications, Complete	LS	ALL	+ , ,	\$0.00
Traffic Signal System, Complete	LS	ALL		\$0.00
Fiber Optic Interconnect System Complete	LS	ALL		\$0.00
Utility Undergrounding, Complete	LF	0	\$100.00	\$0.00
	T	OTAL CONSTR	<b>UCTION COST</b>	\$ 110,519,925

I-5 Overpass O-1 ODOT



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This Estimate has	a Rating of:	3C	(See rating scale gu	uide b	elow.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE		TOTAL COST
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$27,630,000.00		\$27,630,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	27,630,000
TOTAL PROJECT SUBTOTAL				\$	138,152,659
35% Contingency				\$	48,353,440
TOTAL ESTIMATED PROJECT COST				\$	186,506,099

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
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#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-6 Overpass O-1 Left Merge ODOT



Engineer's Conceptual Estimate

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
	This Estimate has a Rating of:	3C	(See rating scale gu	ide below.)
		TOTAL		
	UNIT	QUANTITY	UNIT PRICE	IUIAL CUSI
Mobilization	15	Δ11	\$8,011,000,00	\$8,011,000,00
	18	ALL	\$6,011,000.00	\$6,011,000.00
	15		\$0.00	\$0.00
Erosion Control	20	15.9	\$0.00	\$0.00 \$158,000,00
Personal of Structures and Obstructions	AC	15.6	\$10,000.00	\$136,000.00
Clearing and Grubbing	E3	ALL	\$132,000.00	\$132,000.00
		78 546	\$1,173,000.00	\$1,173,000.00
Applet Boodwov, Full Dopth	61 9E	10,540	00.0 <del>4</del> 0 00.02	\$3,141,040.00
Asphalt Roadway - Full Depth	SF	404,034	\$9.20 \$2.10	\$4,430,034.04 \$0.00
Asphalt Roadway - Grind & Inlay (2 Depth)	3F	0	\$3.10	\$0.00
Concrete Roadway - Full Depth	SF	52.840	\$15.60	\$0.00
Subgrade Geotextile	Sf	53,649	\$1.50 \$20.00	\$00,773.50
Concrete Curbs - Standard Curb		0	\$30.90	\$0.00
Concrete Curbs - Standard Curb & Gutter		13,034	\$36.70	\$478,347.80
	SF		\$12.90	\$0.00
Truck Apron (Concrete)	SF	0	\$19.30	\$0.00
	SF	0	\$8.40	\$0.00
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00
	SF	78,204	\$8.40	\$656,913.60
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00
Detectable warnings	EA	16	\$500.00	\$8,000.00
Pedestrian Ramps	EA	16	\$7,500.00	\$120,000.00
Bike Ramps	EA	10	\$2,500.00	\$0.00
Extra for Pedestrian Ramps	EA	16	\$1,500.00	\$24,000.00
	LF		\$50.00	\$0.00
Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00
Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00
Retaining Walls, Gravity	SF	= 100	\$55.00	\$0.00
Retaining Walls, MSE	SF	5,400	\$200.00	\$1,080,000.00
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00
Sound Walls	SF	0	\$45.00	\$0.00
Fish Friendly Box Culvert, Complete	LF	100.100	\$1,000.00	\$0.00
Bridge Structure, Complete	SF	136,160	\$450.00	\$61,272,000.00
Guardrail System, Complete	LF	3,100	\$50.00	\$155,000.00
Storm Water Conveyance System, Complete	LS	ALL	\$2,691,000.00	\$2,691,000.00
Regional Water Quality and Hydromodification System	Complete SF	59,600	\$28.00	\$1,668,800.00
Permanent Landscaping	SF	91,238	\$4.20	\$383,199.60
Devenuent Markinge Complete	SF	91,238	\$2.50	\$228,095.00
Pavement Markings, Complete	LS	ALL	\$180,000.00	\$180,000.00
Signage, Complete	LS	ALL	\$270,000.00	\$270,000.00
Illumination System, Complete	LS	ALL	\$1,255,600.00	\$1,255,600.00
	LS	ALL		\$0.00
Fiber Optio Interconnect Surface Consults	LS	ALL		\$0.00
		ALL	A	\$0.00
Utility Undergrounding, Complete	LF	0	\$100.00	\$0.00
		OTAL CONSTR	UCTION COST	\$ 94.698.204

I-6 Overpass O-1 Left Merge



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024		
Reviewed By: Darren Hippenstiel, PE				
This Estimate has	a Rating of:	3C	(See rating scale gu	uide below.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL COST
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	\$23,675,000.00	\$23,675,000.00
Right-of-Way Support	EA	0	\$18,000.00	\$0.00
County Staff Time	YR		\$50,000.00	\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$ 23,675,000
	\$ 118,375,938			
35% Contingency				\$ 41,431,580
	TOTAL	ESTIMATED P	ROJECT COST	\$ 159,807,518

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

I-7 Single Point



Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
		3C	(See rating scale guide below.)		
1754		TOTAL		TOTAL COST	
	UNII	QUANTITY	UNIT PRICE	TUTAL COST	
				<b>*</b> • • • • • • • • • • • • • • • • • • •	
Mobilization	LS	ALL	\$12,466,000.00	\$12,466,000.00	
I raffic Control	LS	ALL	\$9,985,000.00	\$9,985,000.00	
Construction Staging	LS	ALL	\$0.00	\$0.00	
Erosion Control	AC	15.2	\$10,000.00	\$152,000.00	
Removal of Structures and Obstructions	LS	ALL	\$1,217,000.00	\$1,217,000.00	
Clearing and Grubbing	LS	ALL	\$1,825,000.00	\$1,825,000.00	
General Earthworks	CY	75,900	\$40.00	\$3,036,000.00	
Asphalt Roadway - Full Depth	SF	457,408	\$9.20	\$4,208,155.44	
Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00	
Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00	
Subgrade Geotextile	SY	50,824	\$1.50	\$76,236.00	
Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00	
Concrete Curbs - Standard Curb & Gutter	LF	13,034	\$36.70	\$478,347.80	
Raised Concrete Island	SF		\$12.90	\$0.00	
Truck Apron (Concrete)	SF		\$19.30	\$0.00	
Concrete Cycle Track	SF	0	\$8.40	\$0.00	
Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00	
Concrete Walks	SF	78,204	\$8.40	\$656,913.60	
Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00	
Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00	
Detectable Warnings	EA	16	\$500.00	\$8.000.00	
Pedestrian Ramps	EA	16	\$7,500.00	\$120,000,00	
Bike Bamps	FA		\$2,500,00	\$0.00	
Extra for Pedestrian Ramps	FA	16	\$1,500,00	\$24,000,00	
Chain Link Fence	LF		\$50.00	\$0.00	
Residential Driveway Reconstruction	EA FA	0	\$1 500 00	\$0.00	
Commercial Driveway Reconstruction	ΕΔ	0	\$3,000,00	\$0.00	
Retaining Walls, Gravity	E/X SE	0	\$55.00	\$0.00	
Retaining Walls, MSE	SF	47 410	\$200.00	\$9,482,000,00	
Retaining Walls, MOL	SF	47,410	\$300.00	\$0.00 \$0.00	
Sound Walls	51 SE	0	\$45.00	00.0¢ \$0.00	
Fish Friendly Box Culvert, Complete	31	0	\$43.00	\$0.00	
Pridae Structure, Complete	CI 0E	215 610	\$1,000.00	\$0.00 \$07.024.500.00	
Cuardrail Sustam Complete	JF	215,010	\$430.00 \$50.00	\$97,024,300.00 \$76,000.00	
Storm Water Conveyance System Complete	LF	1,556	\$30.00	\$70,900.00	
Begional Water Quality and Hydromedification System, Complete	LS Diata	ALL	\$2,583,000.00	\$2,583,000.00	
Regional Water Quality and Hydromounication System, Comp	SF SF	56,900	\$28.00	\$1,593,200.00	
	SF	91,238	\$4.20	\$383,199.60	
	SF	91,238	\$2.50	\$228,095.00	
Pavement Markings, Complete	LS	ALL	\$173,000.00	\$173,000.00	
Signage, Complete	LS	ALL	\$259,000.00	\$259,000.00	
Illumination System, Complete	LS	ALL	\$1,205,100.00	\$1,205,100.00	
I rattic Signal Modifications, Complete	LS	ALL		\$0.00	
I rattic Signal System, Complete	LS	ALL		\$0.00	
Fiber Optic Interconnect System Complete	LS	ALL		\$0.00	
Utility Undergrounding, Complete	LF	0	\$100.00	\$0.00	
				¢ 447.000.047	
		UTAL CONSTR	OCTION COST	<del>5</del> 147,260,647	

I-7 Single Point



#### **Engineer's Conceptual Estimate**

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This Estimate	This Estimate has a Rating of:		(See rating scale guide below.)		elow.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE		TOTAL COST
ENGINEERING SUPPORT					
Engineering & Construction Management	LS	ALL	\$36,816,000.00		\$36,816,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	36,816,000
TOTAL PROJECT SUBTOTAL				\$	184,079,381
35% Contingency \$				\$	64,427,790
	TOTAL	ESTIMATED P	ROJECT COST	\$	248,507,171

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

## South Stage Road Extension Plan I-8 With Westbound Alignment



ODOT

Dete: March 2024         Dete: March 2024           Reviewed By: Ear cen Hippenstiel, PE         This Estimate has a Raing df.         3C         See raing scale guide below.)           TEM         UNT Pace         TOTAL QUANTITY         UNT Pace         TOTAL Construction         TOTAL QUANTITY         Construction         See raing scale guide below.)           Mobilization         LIS         ALL         \$11,211,000.00         \$11,211,000.00         \$11,211,000.00         \$10,000         \$10,000           Traffic Control         LIS         ALL         \$10,000	Engineer's Conceptual Estimate																																																																																																				
Reviewed By: Daren Hipperstiel, PE         This Estimate has a Rating 0.1         Sc         (see rating scale used below.)           TEM         UNIT         TOTAL QUANTITY         UNIT PRICE         TOTAL COST           Mobilization         LS         ALL         \$11,211,000.0         \$11,211,000.0           Traffic Control         LS         ALL         \$8,982,000.0         \$8,882,000.0           Construction Staging         LS         ALL         \$8,082,000.0         \$11,211,000.00           Construction Staging         LS         ALL         \$10,400.00         \$11,941,000.00           Construction Staging         LS         ALL         \$10,400.00         \$11,941,000.00           Construction Staging         LS         ALL         \$10,400.00         \$11,941,000.00           Construction Staging         LS         ALL         \$16,400.00         \$14,940,000.00           Construction Staging         SF         SST,003         \$840.00         \$14,940,900.00           Construction Staging         SF         O         \$15.60         \$6,200.00           Construction Staging         SF         O         \$15.60         \$6,200.00           Construction Staging         SF         O         \$15.00         \$6,000.00	Prepared By: Eza Gaigalas	Date: March 2024																																																																																																			
THM         UNIT         Citer anting scale guide below.)           TOTAL QUANTIY         UNIT prace         TOTAL COST           Mobilization         LS         ALL         \$11.211.000.00         \$11.211.000.00           Traffic Control         LS         ALL         \$8.000.00         \$8.98.200.00           Construction Staging         LS         ALL         \$10.000.00         \$16.500.00           Erosino Control         AC         16.5         \$10.000.00         \$16.900.00           Construction Staging         LS         ALL         \$10.94.000.00         \$16.900.00           Cleating and Grubbing         LS         ALL         \$1.04.000.00         \$16.900.00           General Earthworks         CY         124.863         \$44.00         \$4.949.520.00           Asphalt Roadway -Fuil Depth         SF         SC         \$5.10         \$0.00           Subgade Geolextile         SY         \$6.226         \$1.50         \$30.00           Concrete Roadway - Fuil Depth         SF         ST         \$1.50         \$30.00           Subgade Geolextile         SF         0         \$1.50         \$30.00         \$30.00           Concrete Roadway - Fuil Depth         SF         0         \$3.40         \$30.0	Reviewed By: Darren Hippenstiel, PE																																																																																																				
TYEM         UNIT         TOTAL QUARTITY         UNIT PRICE         TOTAL COST           Mobilization         LS         ALL         \$11211.000.00         \$11211.000.00         \$11211.000.00         \$11211.000.00         \$11211.000.00         \$11281.000.00         \$1281.000.00 <t< th=""><th>This Estimate has</th><th>a Rating of:</th><th>3C</th><th colspan="2">(See rating scale guide below.)</th></t<>	This Estimate has	a Rating of:	3C	(See rating scale guide below.)																																																																																																	
Num         OUANTTY         OUANTTY         OUANTTY         OUANTTY           Mobilization         LS         ALL         \$11,211,000.00         \$11,211,000.00           Traffic Control         LS         ALL         \$8,982,000.00         \$8,982,000.00           Construction Staging         LS         ALL         \$10,900.00         \$16,500.00           Branoval of Structures and Obstructions         LS         ALL         \$10,400.00         \$16,400.00           Clearing and Grubbing         LS         ALL         \$10,400.00         \$14,940,900.00         \$14,940,900.00           Apphalt Roadway - Grind & Inlay (2' Depth)         SF         \$31,01         \$0,00           Concrete Roadway - Full Depth         SF         \$15,60         \$9,000           Subgrade Geotextile         SY         \$6,226         \$1,50         \$97,893.00           Concrete Curbs - Standard Curb & Guter         LF         \$8,314         \$358,70         \$300,50.00           Concrete Curbs - Standard Curb & Guter         LF         \$12,90         \$0,00         \$0,00           Concrete Curbs - Standard Curb & Guter         LF         \$12,80         \$0,00         \$0,00           Concrete Bland         SF         0         \$54,00         \$0,00         \$0,00	ITEM	UNIT	TOTAL																																																																																																		
Mobilization         LS         ALL         \$11,211,000.00         \$11,211,000.00           Traffic Centrol         LS         ALL         \$8,982,000.00         \$8,662,000.00           Construction Staging         LS         ALL         \$5,000.00         \$8,662,000.00           Envision Centrol         AC         16.5         \$10,000.00         \$16,560,000           Removal of Structures and Obstructions         LS         ALL         \$16,940,000.00         \$11,941,000.00           Clearing and Grubbing         LS         ALL         \$16,940,000.00         \$11,941,000.00           Grange and Grubbing         LS         ALL         \$1,941,000.00         \$11,941,000.00           Asphalt Radway-Full Depth         SF         \$33.10         \$80.00         \$62,000           Asphalt Radway-Full Depth         SF         0         \$15,60         \$97,939.00           Concrete Curbs -Standard Curb & Gutter         LF         0         \$33.09         \$90.00           Concrete National Curb & Gutter         LF         0         \$81.290         \$90.00           Concrete Vick Tack         SF         0         \$81.40         \$84.09         \$90.00           Concrete Vick Tack         SF         0         \$83.00         \$90.00			QUANTITY																																																																																																		
Mesilization         LS         ALL         \$11,211,000,00         \$11,211,000,00           Trafic Control         LS         ALL         \$8,000,00         \$8,982,000,00           Construction Staging         LS         ALL         \$8,000         \$8,982,000,00           Erosino Control         AC         16,5         \$10,000,00         \$1,984,000,00           Bemoval of Structures and Obstructions         LS         ALL         \$1,044,000,00         \$1,944,000,00           Clearing and Grubbing         LS         ALL         \$1,044,000,00         \$1,944,000,00           General Eattworks         CY         124,863         \$400,00         \$4,949,520,00           Asphat Roadway - Full Depth         SF         \$57,033         \$8,20         \$5,400,705,44           Asphat Roadway - Full Depth         SF         \$15,00         \$10,000         \$10,900           Subgrade Gotextile         SY         \$65,226         \$15,00         \$20,000           Concrete Ruda - Standard Curb         LF         \$0         \$3,00         \$0,000           Concrete Ruda - Standard Curb         SF         \$12,280         \$0,000           Concrete Ruda - Standard Curb         SF         \$13,30         \$0,000           Roised Concrete Island																																																																																																					
Traffic Control         LS         ALL         \$8,982,000,00         \$9,982,000,00           Construction Slaging         LS         ALL         \$1,000,00         \$1,055,000,00           Erresion Control         AC         16,5         \$1,000,000         \$1,055,000,00           Removal of Structures and Obstructions         LS         ALL         \$1,164,000,00         \$1,044,000,00           Clearing and Grubbing         LS         ALL         \$1,164,000,00         \$1,044,000,00         \$1,044,000,00           General Earthworks         CY         124,863         \$40,00         \$1,641,000,00         \$1,641,000,00           General Earthworks         CY         124,863         \$40,00         \$1,641,000,00         \$1,641,000,00           Concrete Roadway - Full Depth         SF         0         \$15,60         \$00,00           Concrete Curbs - Standard Curb         LF         0         \$15,80         \$00,00           Concrete Curbs - Standard Curb & Gutter         LF         0         \$12,90         \$00,00           Concrete Solard Curb & Souther         SF         11,93,0         \$00,00         \$00,00           Concrete Vals         SF         0         \$34,00         \$419,025,60         \$50,00         \$20,00,00         \$20,00,00 <td>Mobilization</td> <td>LS</td> <td>ALL</td> <td>\$11,211,000.00</td> <td>\$11,211,000.00</td>	Mobilization	LS	ALL	\$11,211,000.00	\$11,211,000.00																																																																																																
Construction Staging         LS         ALL         \$10,000         \$10,000           Erosino Control         AC         16,5         \$10,000,00         \$165,000,00           Removal of Structures and Obstructions         LS         ALL         \$10,040,000,00         \$10,040,000,00           General Earthworks         CY         124,4663         \$40,000,00         \$1,041,000,00           Asphalt Roadway - Full Depth         SF         587,033         \$2,20         \$5,400,705,44           Asphalt Roadway - Grind & Inkay (2* Depth)         SF         0         \$15,60         \$00,00           Subgrade Geotextile         SF         0         \$15,60         \$00,00           Concrete Cadway - Fuil Depth         SF         0         \$15,60         \$00,00           Concrete Cadway - Fuil Depth         SF         0         \$15,80         \$00,00           Subgrade Geotextile         SF         0         \$33,00         \$00,00           Concrete Cadway - Fuil Depth         SF         \$12,90         \$00,00           Concrete Cadway - Fuil Depth         SF         \$13,20         \$00,00           Concrete Valax         Stand Carcere Cadway - Fuil Depth         \$15,00         \$23,80         \$00,00           Concrete Valax	Traffic Control	LS	ALL	\$8,982,000.00	\$8,982,000,00																																																																																																
Ension Control         AC         16.5         \$10,000,00         \$165,000,00           Removal of Structures and Obstructions         LS         ALL         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,094,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,000,00         \$1,604,00	Construction Staging	LS	ALL	\$0.00	\$0.00																																																																																																
Removal of Structures and Obstructions         LS         ALL         \$1,094,000.00         \$1,094,000.00           Clearing and Grubbing         LS         ALL         \$1,641,000.00         \$1,641,000.00           Asphalt Roadway - Full Depth         SF         557,033         \$2,20         \$5,400,075,44           Asphalt Roadway - Gind & Inay (2° Depth)         SF         0         \$15,60         \$0,00           Guncrete Roadway - Full Depth         SF         0         \$15,60         \$0,00           Guncrete Roadway - Full Depth         SF         0         \$15,60         \$90,00           Concrete Curbs - Standard Curb         LF         0         \$30,90         \$00.00           Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$38,70         \$305,123,80           Raised Concrete Usland         SF         \$11,30         \$40,00         \$0,00           Concrete Cycle Tack         SF         0         \$3,00         \$0,00           Concrete Valls	Erosion Control	AC	16.5	\$10.000.00	\$165.000.00																																																																																																
Clearing and Grubbing         L.S         ALL         \$1,641,000.00         \$1,641,000.00           General Earthworks         CY         124,863         \$40.00         \$4,944,200.00           Asphalt Roadway - Full Depth         SF         57,033         \$9,20         \$5,400,705,44           Asphalt Roadway - Full Depth         SF         0         \$15,60         \$0,000           Subgrade Geotextile         SY         66,226         \$1,50         \$97,830.00           Concrete Roadway - Full Depth         SF         0         \$15,60         \$80,00           Concrete Curbs - Standard Curb         LF         0         \$30,670         \$305,123,80           Concrete Curbs - Standard Curb         SF         0         \$14,40         \$30,670         \$305,123,80           Concrete Curbs - Standard Curb         SF         0         \$30,0         \$0,00         Concrete Curbs - Standard Curb & Statt         SF         0         \$33,00         \$0,00         Concrete Curbs - Standard Curb & Statt         SF         0         \$34,00         \$0,00         Concrete Curbs - Standard Curb & Statt         \$SF         0         \$33,00         \$0,00         Concrete Curbs - Standard Curb & Statt         \$SF         0         \$33,00         \$0,00         Statt         \$Statt	Removal of Structures and Obstructions	LS	ALL	\$1,094,000.00	\$1,094,000.00																																																																																																
General Earthworks         CY         124,863         \$40,00         \$4,994,520.00           Asphat Roadway - Full Depth         SF         567,033         \$9.20         \$5,400,705,440           Asphat Roadway - Grid & Inlay (2' Depth)         SF         0         \$15,60         \$0.00           Subgrade Geotextile         SY         65,226         \$15,0         \$97,830.00           Concrete Curbs - Standard Curb         LF         0         \$30,80         \$0.00           Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$36,70         \$30,50,123.00           Raised Concrete Island         SF         \$19,30         \$0.00         Concrete Curbs - Standard Curb         \$6,226         \$19,30         \$0.00           Concrete Cycle Facility - Asphat         SF         \$19,30         \$0.00         Concrete Valks         \$6,00         \$8,40         \$0.00           Separated Multi-Use Path - Asphat         SF         0         \$8,40         \$9,000         \$0.00 </td <td>Clearing and Grubbing</td> <td>LS</td> <td>ALL</td> <td>\$1.641.000.00</td> <td>\$1.641.000.00</td>	Clearing and Grubbing	LS	ALL	\$1.641.000.00	\$1.641.000.00																																																																																																
Asphalt Roadway - Full Depth         SF         567,033         \$9.20         \$5,400,705.44           Asphalt Roadway - Full Depth         SF         0         \$15.60         \$3.10         \$0.00           Subgrade Geotextile         SY         65.226         \$1.50         \$9.7,839.00           Concrete Roadway - Full Depth         SF         0         \$515.60         \$9.7,839.00           Concrete Curbs - Standard Curb         LF         0         \$30.90         \$0.00           Concrete Curbs - Standard Curb & Gutter         LF         8.314         \$26.70         \$305.123.80           Raised Concrete Island         SF         \$19.30         \$0.00         Concrete Curbs - Standard Curb & Gutter         SF         \$19.30         \$0.00           Concrete Valks         SF         0         \$8.40         \$0.00         Concrete Valks         \$19.30         \$0.00           Concrete Valks         SF         49.844         \$8.40         \$0.00         \$0.00         S0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0.00         \$0	General Earthworks	CY	124,863	\$40.00	\$4,994,520.00																																																																																																
Asphalt Roadway - Grind & Inlay (2* Depth)         SF         \$3.10         \$0.00           Concrete Roadway - Grind & Inlay (2* Depth)         SF         0         \$15.60         \$0.00           Concrete Roadway - Grind & Inlay (2* Depth)         SF         0         \$15.60         \$0.00           Concrete Curbs - Standard Curb         LF         0         \$305.90         \$0.00           Concrete Curbs - Standard Curb & Gutter         LF         0         \$305.90         \$0.00           Concrete (curbs - Standard Curb & Gutter         SF         \$12.90         \$0.00           Truck Apron (Concrete)         SF         \$19.30         \$0.00           Concrete (curbs - Standard Curb & State)         SF         0         \$8.40         \$0.00           Concrete (cycle Tack)         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$8.40         \$419,025.60           Separated Multi-Use Path - Asphalt         SF         0         \$8.40         \$8.00.00         \$0.00           Detectable Warnings         EA         16         \$57,00.00         \$120,000.00         \$8.40         \$0.00         \$0.00           Readmant Ramps         EA         16         \$150.00.00	Asphalt Roadway - Full Depth	SF	587,033	\$9.20	\$5,400,705.44																																																																																																
Concrete Roadway - Full Depth         SF         0         \$15.60         \$0.00           Sugrade Geotextile         SY         65.226         \$1.50         \$97,839.00           Concrete Curbs - Standard Curb         LF         0         \$30.90         \$30.00           Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$36.70         \$3005,123.80           Raised Concrete Island         SF         \$19.30         \$0.00         \$0.00           Concrete Cycle Track         SF         0         \$34.40         \$0.00           Concrete Cycle Track         SF         0         \$33.00         \$0.00           Concrete Walks         SF         0         \$3.00         \$0.00           Concrete Walks         SF         0         \$3.00         \$0.00           Concrete Walks         SF         0         \$3.40         \$0.00           Detectable Warnings         EA         16         \$7.00.00         \$12.000.00           Detectable Warnings         EA         16         \$7.50.00         \$2.00.00           Extra for Pedestrian Ramps         EA         16         \$1.50.00         \$0.00           Chraster Gurway Reconstruction         EA         0         \$3.000	Asphalt Roadway - Grind & Inlay (2" Depth)	SF		\$3.10	\$0.00																																																																																																
Subgrade Geotextile         SY         65,226         \$1:50         \$97,839.00           Concrete Curbs - Standard Curb & Gutter         LF         0         \$30.90         \$0.00           Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$36,70         \$30.90         \$0.00           Raised Concrete Island         SF         \$12.90         \$0.00         \$0.00           Truck Apron (Concrete)         SF         \$19.30         \$0.00         \$0.00           Concrete (Vole Track         SF         0         \$8.40         \$0.00           Concrete (Vole Track         SF         0         \$3.00         \$0.00           Concrete (Vole Track         SF         0         \$3.00         \$0.00           Separated Multi-Use Path - Concrete         SF         0         \$3.00         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Dedestrian Ramps         EA         16         \$7500.00         \$120,000.00           Dedestrian Ramps         EA         16         \$1500.00         \$24,000.00           Chain Link Pence         LF         \$50.00         \$0.00         \$0.00           Retaining Walls, Gravity         SF<	Concrete Roadway - Full Depth	SF	0	\$15.60	\$0.00																																																																																																
Concrete Curbs - Standard Curb         LF         0         \$30.90         \$0.00           Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$36.70         \$30,512.80           Raised Concrete Island         SF         \$12.90         \$0.00           Truck Apron (Concrete)         SF         \$19.30         \$0.00           Concrete Oxfe Track         SF         0         \$8.40         \$0.00           Concrete Valks         SF         0         \$8.40         \$0.00           Concrete Valks         SF         0         \$8.40         \$0.00           Concrete Walks         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Detectable Warnings         EA         16         \$570.00         \$120.000.00           Detectable Warnings         EA         16         \$150.00         \$20.000           Ext for Pedestrian Ramps         EA         16         \$150.00         \$20.000           Ext for Pedestrian Ramps         EA         16         \$150.00         \$0.00           Retaining Wails, Gravity         SF         0         \$3.00.00         \$0.00	Subgrade Geotextile	SY	65,226	\$1.50	\$97,839.00																																																																																																
Concrete Curbs - Standard Curb & Gutter         LF         8,314         \$36,70         \$305,123,80           Raised Concrete Island         SF         \$12,90         \$0,00           Truck Apron (Concrete)         SF         \$19,30         \$0,00           Concrete Cycle Track         SF         0         \$84,40         \$0,00           Concrete Vycle Track         SF         0         \$84,40         \$0,00           Separated Bicycle Facility - Asphalt         SF         49,884         \$84,40         \$0,00           Concrete Warks         SF         0         \$3,00         \$0,00           Separated Multi-Use Path - Asphalt         SF         0         \$3,00         \$0,00           Detectable Warnings         EA         16         \$50,000         \$8,000.00           Detectable Warnings         EA         16         \$50,000         \$24,000.00           Bike Ramps         EA         16         \$15,000.00         \$24,000.00           Chain Link Fence         LF         \$56,00         \$0,00           Reaining Walls, Carvity         SF         \$63,800.00         \$0,00           Retaining Walls, Carvity         SF         \$63,800.00         \$0,00           Retaining Walls, Carvity	Concrete Curbs - Standard Curb	LF	0	\$30.90	\$0.00																																																																																																
Raised Concrete Island         SF         \$12.90         \$0.00           Truck Apron (Concrete)         SF         \$19.30         \$0.00           Concrete Cycle Track         SF         0         \$8.40         \$0.00           Separated Bicycle Facility - Asphalt         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Concrete         SF         49.884         \$8.40         \$419.025.60           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$8.40         \$0.00           Detectable Warnings         EA         16         \$7.500.00         \$8.000.00           Pedestrian Ramps         EA         16         \$7.500.00         \$2.000.00           Ext for Pedestrian Ramps         EA         16         \$1.500.00         \$2.000.00           Chain Link Fence         LF         \$50.00         \$0.00         \$0.00           Residential Driveway Reconstruction         EA         0         \$3.000.00         \$0.00           Retaining Walls, Gravity         SF         63.800         \$20.00         \$1.2760.00.00           Retaining Walls, Gravity         SF         0	Concrete Curbs - Standard Curb & Gutter	LF	8,314	\$36.70	\$305,123.80																																																																																																
Truck Apron (Concrete)         SF         \$19.30         \$0.00           Concrete Cycle Track         SF         0         \$8.40         \$0.00           Separated Bicycle Facility - Asphalt         SF         0         \$3.00         \$0.00           Concrete Walks         SF         49,884         \$8.40         \$419,025.60           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Detectable Warnings         EA         16         \$57.00.00         \$120,000.00           Detectable Warnings         EA         16         \$7.500.00         \$20,000.00           Extra for Pedestrian Ramps         EA         16         \$1.500.00         \$24,000.00           Concretaid Driveway Reconstruction         EA         0         \$3.000.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$3.000.00         \$0.00           Retaining Walls, Cut (Codier pyle, tie back, soil nail)         SF         63.800         \$20.00         \$12,760.000.00           Retaining Walls, Cut (Codier pyle, tie back, soil nail)         SF         \$1,000.00         \$0.00         \$0.00 <t< td=""><td>Raised Concrete Island</td><td>SF</td><td></td><td>\$12.90</td><td>\$0.00</td></t<>	Raised Concrete Island	SF		\$12.90	\$0.00																																																																																																
Concrete Cycle Track         SF         0         \$8.40         \$0.00           Separated Bicycle Facility - Asphalt         SF         0         \$3.00         \$0.00           Concrete Walks         SF         0         \$3.00         \$0.00           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$419,025.60           Separated Multi-Use Path - Asphalt         SF         0         \$8.40         \$0.00           Detectable Warnings         EA         16         \$550.00         \$80,000.00           Pedestrian Ramps         EA         16         \$7500.00         \$20,000.00           Ext for Pedestrian Ramps         EA         16         \$7500.00         \$20,000.00           Ext for Pedestrian Ramps         EA         16         \$1500.00         \$20,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$3,000.00         \$0.00           Retaining Walls, Gravity         SF         63,800         \$200.00         \$0.00           Sound Walls         SF         0         \$445.00         \$0.00           Retaining Walls, Cit (Solder pyle, tie back, soil nail)         SF         0	Truck Apron (Concrete)	SF		\$19.30	\$0.00																																																																																																
Separated Bicycle Facility - Asphalt         SF         0         \$3.00         \$0.00           Concrete Walks         SF         49,884         \$8.40         \$419,025.60           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Detectable Warnings         EA         16         \$7,500.00         \$120,000.00           Pedestrian Ramps         EA         16         \$7,500.00         \$24,000.00           Extra for Pedestrian Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         0         \$45.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         6         \$300.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         0         \$45.00         \$7,7,13.60.00           Sound Walls         SF         0         \$45.00         \$7,7,13.60.00         \$0.00	Concrete Cycle Track	SF	0	\$8.40	\$0.00																																																																																																
Concrete Walks         SF         49,884         \$8.40         \$419,025.60           Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Detectable Warnings         EA         16         \$500.00         \$8,000.00           Detectable Warnings         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         63,800         \$200.00         \$1,760,000.00           Retaining Walls, MSE         SF         0         \$45.00         \$0.00           Retaining Walls, Cavity         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00	Separated Bicycle Facility - Asphalt	SF	0	\$3.00	\$0.00																																																																																																
Separated Multi-Use Path - Concrete         SF         0         \$8.40         \$0.00           Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Detectable Warnings         EA         16         \$500.00         \$8,000.00           Pedestrian Ramps         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         16         \$7,500.00         \$24,000.00           Chain Link Fence         EA         16         \$1,500.00         \$24,000.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sound Walls         SF         0         \$445.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         0         \$445.00         \$0.00           Sound Walls         SF         0         \$445.00         \$77.133.600.00         \$0.00         \$0.00           Findege	Concrete Walks	SF	49,884	\$8.40	\$419,025.60																																																																																																
Separated Multi-Use Path - Asphalt         SF         0         \$3.00         \$0.00           Detectable Warnings         EA         16         \$500.00         \$8,000.00           Pedestrian Ramps         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         16         \$7,500.00         \$120,000.00           Extra for Pedestrian Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Gravity         SF         \$300.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$100.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Bridge Structure, Complete         LF         \$1000.00         \$0.00           Bridge Structure, Complete         LF         \$1000.00         \$0.00           Bridge Structure, Complete         LF         \$1000.00         \$30.00           Bridge Structure, Complete	Separated Multi-Use Path - Concrete	SF	0	\$8.40	\$0.00																																																																																																
Detectable Warnings         EA         16         \$500.00         \$8,000.00           Pedestrian Ramps         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$500.00         \$24,000.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$24,000.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Gravity         SF         \$300.00         \$0.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sund Walls         SF         0         \$45.00         \$0.00           Sund Walls         SF         0         \$45.00         \$0.00           Sund Walls         SF         0         \$45.00         \$0.00           Sund Walls         Set O         \$300.00         \$0.00         \$0.00           Sund Walls         Set O         \$45.00         \$7,71.33.60.00         \$0.00           Bridge Structure, Complete <t< td=""><td>Separated Multi-Use Path - Asphalt</td><td>SF</td><td>0</td><td>\$3.00</td><td>\$0.00</td></t<>	Separated Multi-Use Path - Asphalt	SF	0	\$3.00	\$0.00																																																																																																
Pedestrian Ramps         EA         16         \$7,500.00         \$120,000.00           Bike Ramps         EA         \$2,500.00         \$0.00           Extra for Pedestrian Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$20,00         \$0.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Gravity         SF         \$300.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$30,500.00           Bridge Structure, Complete         LF         \$1,000.00         \$30,500.00           Bridge Structure, Complete         LF         \$1,000.00         \$3,411,000.00           Storm Water Conveyance	Detectable Warnings	EA	16	\$500.00	\$8,000.00																																																																																																
Bike Ramps         EA         \$2,500.00         \$0.00           Extra for Pedestrian Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$3,000.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$100.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$3,000.00           Storm Water Conveyance System, Complete         LF         \$1,000.00         \$3,010.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$2.50         \$1,42,400.00 <td>Pedestrian Ramps</td> <td>EA</td> <td>16</td> <td>\$7,500.00</td> <td>\$120,000.00</td>	Pedestrian Ramps	EA	16	\$7,500.00	\$120,000.00																																																																																																
Extra for Pedestrian Ramps         EA         16         \$1,500.00         \$24,000.00           Chain Link Fence         LF         \$50.00         \$0.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$305.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation,	Bike Ramps	EA		\$2,500.00	\$0.00																																																																																																
Chain Link Fence         LF         \$50.00         \$0.00           Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$3,000.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, Carvity         SF         \$300.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$445.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Strm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198	Extra for Pedestrian Ramps	EA	16	\$1,500.00	\$24,000.00																																																																																																
Residential Driveway Reconstruction         EA         0         \$1,500.00         \$0.00           Commercial Driveway Reconstruction         EA         0         \$3,000.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         63,800         \$200.00         \$12,760,000.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Strm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         LS         ALL         \$3,42.00         \$228,000.00	Chain Link Fence	LF		\$50.00	\$0.00																																																																																																
Commercial Driveway Reconstruction         EA         0         \$3,00.00         \$0.00           Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, SLUt (Soldier pyle, tie back, soil nail)         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         0         \$300.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Bridge Structure, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$305.000.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305.000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3441,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$4.20         \$244	Residential Driveway Reconstruction	EA	0	\$1,500.00	\$0.00																																																																																																
Retaining Walls, Gravity         SF         \$55.00         \$0.00           Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         63,800         \$200.00         \$12,760,000.00           Sound Walls         SF         0         \$45.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00	Commercial Driveway Reconstruction	EA	0	\$3,000.00	\$0.00																																																																																																
Retaining Walls, MSE         SF         63,800         \$200.00         \$12,760,000.00           Retaining Walls, Cut (Soldier pyle, tie back, soil nail)         SF         \$300.00         \$0.00           Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         LS         ALL         \$240.00.00         \$228,000.00           Signage, Complete         LS         ALL         \$244,431.60         \$145,495.00           Illumination System, Complete         LS         ALL         \$228,000.00         \$228,000.00         \$228,000.00         \$228,000.00         \$228,000.00         \$228,000.00         \$342,000	Retaining Walls, Gravity	SF		\$55.00	\$0.00																																																																																																
Retaining Walls, Cut (Soldier pyle, tie back, soil nail)SF\$300.00\$0.00Sound WallsSF0\$45.00\$0.00Fish Friendly Box Culvert, CompleteLF\$1,000.00\$0.00Bridge Structure, CompleteSF171,408\$450.00\$77,133,600.00Guardrail System, CompleteLF6,100\$50.00\$305,000.00Storm Water Conveyance System, CompleteLSALL\$3,411,000.00\$3,411,000.00Regional Water Quality and Hydromodification System, CompleteSF65,800\$28.00\$1,842,400.00Permanent LandscapingSF58,198\$4.20\$244,431.60Irrigation, CompleteSF58,198\$2.50\$145,495.00Pavement Markings, CompleteLSALL\$342,000.00\$342,000.00Signage, CompleteLSALL\$342,000.00\$342,000.00Illumination System, CompleteLSALL\$342,000.00\$342,000.00Traffic Signal Modifications, CompleteLSALL\$1,591,700.00Traffic Signal Modifications, CompleteLSALL\$1,591,700.00Traffic Signal System, CompleteLSALL\$0.00Fiber Optic Interconnect System CompleteLSALL\$0.00Fiber Optic Interconnect System CompleteLSALL\$0.00Utility Undergrounding, CompleteLSALL\$0.00Utility Undergrounding, CompleteLSALL\$0.00Store System, CompleteLSALL\$0.00 <tr <td="">\$0.00<td>Retaining Walls, MSE</td><td>SF</td><td>63,800</td><td>\$200.00</td><td>\$12,760,000.00</td></tr> <tr><td>Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Signage, Complete         LS         ALL         \$342,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$</td><td>Retaining Walls, Cut (Soldier pyle, tie back, soil nail)</td><td>SF</td><td></td><td>\$300.00</td><td>\$0.00</td></tr> <tr><td>Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$33,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1482,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,591,700.00         \$0.00           Fiber Optic Interconnect System Complete</td><td>Sound Walls</td><td>SF</td><td>0</td><td>\$45.00</td><td>\$0.00</td></tr> <tr><td>Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$244,000.00         \$228,000.00           Illumination System, Complete         LS         ALL         \$228,000.00         \$228,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,691,700.00         \$0.00           Fiber Optic Interconnect Syst</td><td>Fish Friendly Box Culvert, Complete</td><td>LF</td><td></td><td>\$1,000.00</td><td>\$0.00</td></tr> <tr><td>Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$228,000.00         \$228,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,591,700.00         \$0.00           Fiber Optic Interconnect System Complete         LS         ALL         \$0.00         \$0.00           Villity Undergrounding, Complete         LS         ALL         \$100.00         \$0.00  </td><td>Bridge Structure, Complete</td><td>SF</td><td>171,408</td><td>\$450.00</td><td>\$77,133,600.00</td></tr> <tr><td>Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$240,000         \$228,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,591,700.00         \$0.00           Fiber Optic Interconnect System Complete         LS         ALL         \$0.00         \$0.00           Fiber Optic Interconnect System Complete         LS         ALL         \$0.00         \$0.00           Utility Undergrounding, Complete         LF         0         \$100.00         \$0.00  </td><td>Guardrail System, Complete</td><td>LF</td><td>6,100</td><td>\$50.00</td><td>\$305,000.00</td></tr> <tr><td>Regional Water Quality and Hydromodification System, CompleteSF65,800\$28.00\$1,842,400.00Permanent LandscapingSF58,198\$4.20\$244,431.60Irrigation, CompleteSF58,198\$2.50\$145,495.00Pavement Markings, CompleteLSALL\$228,000.00\$228,000.00Signage, CompleteLSALL\$342,000.00\$342,000.00Illumination System, CompleteLSALL\$1,591,700.00\$342,000.00Traffic Signal Modifications, CompleteLSALL\$1,591,700.00\$0.00Traffic Signal System, CompleteLSALL\$0.00\$0.00Fiber Optic Interconnect System CompleteLSALL\$0.00\$0.00Utility Undergrounding, CompleteLF0\$100.00\$0.00</td><td>Storm Water Conveyance System, Complete</td><td>LS</td><td>ALL</td><td>\$3,411,000.00</td><td>\$3,411,000.00</td></tr> <tr><td>Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00           Illumination System, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,691,700.00         \$0.00           Traffic Signal System, Complete         LS         ALL         \$1,691,700.00         \$0.00           Fiber Optic Interconnect System Complete         LS         ALL         \$0.00         \$0.00           Utility Undergrounding, Complete         LF         0         \$100.00         \$0.00</td><td>Regional Water Quality and Hydromodification System, Complete</td><td>SF</td><td>65,800</td><td>\$28.00</td><td>\$1,842,400.00</td></tr> <tr><td>Irrigation, CompleteSF58,198\$2.50\$145,495.00Pavement Markings, 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CompleteLF0\$100.00</td><td>Illumination System, Complete</td><td>LS</td><td>ALL</td><td>\$1,591,700.00</td><td>\$1,591,700.00</td></tr> <tr><td>Traffic Signal System, CompleteLSALL\$0.00Fiber Optic Interconnect System CompleteLSALL\$0.00Utility Undergrounding, CompleteLF0\$100.00\$0.00</td><td>Traffic Signal Modifications, Complete</td><td>LS</td><td>ALL</td><td></td><td>\$0.00</td></tr> <tr><td>Fiber Optic Interconnect System Complete         LS         ALL         \$0.00           Utility Undergrounding, Complete         LF         0         \$100.00         \$0.00</td><td>Traffic Signal System, Complete</td><td>LS</td><td>ALL</td><td></td><td>\$0.00</td></tr> <tr><td>Utility Undergrounding, Complete</td><td>Fiber Optic Interconnect System Complete</td><td>LS</td><td>ALL</td><td></td><td>\$0.00</td></tr> <tr><td></td><td>Utility Undergrounding, Complete</td><td>LF</td><td>0</td><td>\$100.00</td><td>\$0.00</td></tr>	Retaining Walls, MSE	SF	63,800	\$200.00	\$12,760,000.00	Sound Walls         SF         0         \$45.00         \$0.00           Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Signage, Complete         LS         ALL         \$342,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$	Retaining Walls, Cut (Soldier pyle, tie back, soil nail)	SF		\$300.00	\$0.00	Fish Friendly Box Culvert, Complete         LF         \$1,000.00         \$0.00           Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$33,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1482,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$342,000.00         \$342,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,591,700.00         \$0.00           Fiber Optic Interconnect System Complete	Sound Walls	SF	0	\$45.00	\$0.00	Bridge Structure, Complete         SF         171,408         \$450.00         \$77,133,600.00           Guardrail System, Complete         LF         6,100         \$50.00         \$305,000.00           Storm Water Conveyance System, Complete         LS         ALL         \$3,411,000.00         \$3,411,000.00           Regional Water Quality and Hydromodification System, Complete         SF         65,800         \$28.00         \$1,842,400.00           Permanent Landscaping         SF         58,198         \$4.20         \$244,431.60           Irrigation, Complete         SF         58,198         \$2.50         \$145,495.00           Pavement Markings, Complete         LS         ALL         \$228,000.00         \$228,000.00           Signage, Complete         LS         ALL         \$244,000.00         \$228,000.00           Illumination System, Complete         LS         ALL         \$228,000.00         \$228,000.00           Illumination System, Complete         LS         ALL         \$342,000.00         \$342,000.00           Traffic Signal Modifications, Complete         LS         ALL         \$1,591,700.00         \$1,591,700.00           Traffic Signal System, Complete         LS         ALL         \$1,691,700.00         \$0.00           Fiber Optic Interconnect Syst	Fish 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Retaining Walls, MSE	SF	63,800	\$200.00	\$12,760,000.00																																																																																																	
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TOTAL CONSTRUCTION COST \$

132,465,840

# South Stage Road Extension Plan I-8 With Westbound Alignment



### Engineer's Concentual Estimate

Prepared By: Eza Gaigalas		Date: March 2024			
Reviewed By: Darren Hippenstiel, PE					
This	This Estimate has a Rating of:		(See rating scale guide below.)		elow.)
ITEM	UNIT	TOTAL QUANTITY	UNIT PRICE		TOTAL COST
ENGINEERING SUPPORT				-	
Engineering & Construction Management	LS	ALL	\$33,117,000.00		\$33,117,000.00
Right-of-Way Support	EA	0	\$18,000.00		\$0.00
County Staff Time	YR		\$50,000.00		\$0.00
ENGINEERING SUPPORT SUBTOTAL				\$	33,117,000
TOTAL PROJECT SUBTOTAL					165,585,574
35% Contingency				\$	57,954,960
TOTAL ESTIMATED PROJECT COST				\$	223,540,534

#### Unit Costs Note:

The associated product and material costs are based upon the most recent available cost data. Due to the current volatility of the construction market, we cannot guarantee these costs for any duration of time.

#### Assumptions:

- The assumed roadway section is 8 inches ACP over 16 inches of compacted aggregate base.
- Due to the on-street bicycle facility the assumed storm inlet spacing is 150 feet.
- All overhead utilities will be relocated and remain above ground.
- No sound walls are required for this project.
- -
- -

#### Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions;

limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

#### **Engineering Effort:**

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

## **ATTACHMENT C – RENDERINGS OF EIGHT REMAINING ALTERNATIVES**

# Alternative O-1: South Stage Alignment





Alternative O-2: South Stage Southerly Realignment (Option 1)



Alternative O-3: South Stage Southerly Realignment (Option 2)



Alterative O-4: South Stage Underpass (Option 1)

## Alternative I-1: South Stage Alignment





Alternative I-2: South Stage Southerly Realignment (Option 1)



Alternative I-3: South Stage Southerly Realignment (Option 2)



## Alternative I-4: South Stage Underpass Interchange