

Alum Creek Drive Corridor Preliminary Engineering Status Report

July 2017

DRAFT

Prepared For



Prepared By



INTRODUCTION

The following status report documents the result of our initial preliminary engineering analysis. Thus far, the primary focus of this analysis has been potential typical sections and their impact on cost, right-of-way, and other factors. The findings include a comparison matrix to support the Engineer in determining how to proceed.

A second focus has been a preliminary analysis of the drainage conditions based on record plan and GIS data research to determine the approximate drainage-shed of the existing storm system under Alum Creek Drive.

TYPICAL SECTIONS

A range of typical section options were considered. These start with the most compliant to Volume 1 of the Ohio Department of Transportation's Location and Design Manual, and then include some deviations of which may *make sense* yet vary on their compliance of all conditions in Volume 1.

Exhibit 1 illustrates five options for the typical section. Options one, two, and four comply with all criteria—including 12-foot lane width, 10-foot paved median and right shoulders, and both the guardrail and barrier offsets, 12 and 10 feet respectively (L&D Vol. 1, Table 301-3). The third and fifth options satisfies all criteria except only four feet of the median shoulder would be paved with the remainder graded.

The variation of the median shoulder reflects a nuance in the L&D that does not require a median shoulder on undivided roadways, yet requires a full width shoulder when adding a fifth and sixth lane to a divided arterial or collector. While preferable from a safety standpoint, the additional width comes at a substantial cost.

Exhibit 2 includes a Typical Symmetric (Option 1 from Exhibit 1) as well as a Typical Asymmetric option. The asymmetric option is shown as a way to focus the take of right-of-way and impacts to grading to one side of Alum Creek Drive, something which may be advantageous north of Big Walnut Creek.

The typical sections do not show pedestrian or bicyclists facilities; however, MORPC mentions the addition of an Shared Use Path on the Metropolitan Transportation Plan and the MPO will likely require the inclusion of a path (or some other accommodation) as a condition of receiving Federal funding for the project. Accommodation may likely be best provided with some combination of sidepath and sidewalk.

BRIDGE RECONSTRUCTION AND MAINTENANCE OF TRAFFIC

Three options are provided for how the bridges may be reconstructed over Big Walnut Creek. All options maintain two lanes of traffic in each direction through construction and include an optional multi-use path.

- With Option 1 (Exhibit 3), the two bridges would be widened to the outside in the first phase of construction, followed by a second phase where traffic would be maintained

on the recently constructed bridge, allowing for the existing structure to be demolished and reconstructed.

- In Option 2 (Exhibit 4) Phase 1, the southbound lanes would be narrowed and an initial section of bridge would be constructed between the two structures. In Phase 2, southbound traffic would remain as maintained in Phase 1, and the northbound lanes would be moved over to be maintained on the recently constructed section of bridge, allowing construction of the northbound deck in one phase. The final Phase (3) of construction would conclude with replacing what remaining of the existing southbound bridge while traffic is maintained on the northbound bridge.
- Option 3 (Exhibit 5) Phase 1 consists of constructing two northbound lanes outside of the northbound bridge. Phase 2 maintains southbound traffic on what was the northbound bridge and northbound traffic gets maintained on the lanes added onto the northbound bridge. This allows for the southbound section of the bridge to be reconstructed in full. Phase 3 consists of shifting traffic to use the southbound section of bridge, allowing for the remaining section of the northbound bridge to be demolished and reconstructed.

Options 2 and 3 are very similar, except for where the first phase is constructed (inside vs outside), as well as how far the center of the two structures vary from the centerline.

COMPARISON EVALUATION AND MATRIX

A comparison of the typical sections and bridge reconstruction options is provided on Table 1.

DRAINAGE ANALYSIS

Preliminary analysis is underway on the Alum Creek Drive trunk storm sewer to identify the limits of its tributary area and consider initial alternatives for how to accommodate and treat additional flows resulting from road widening. This will be further developed once the condition of the existing sewer is established.

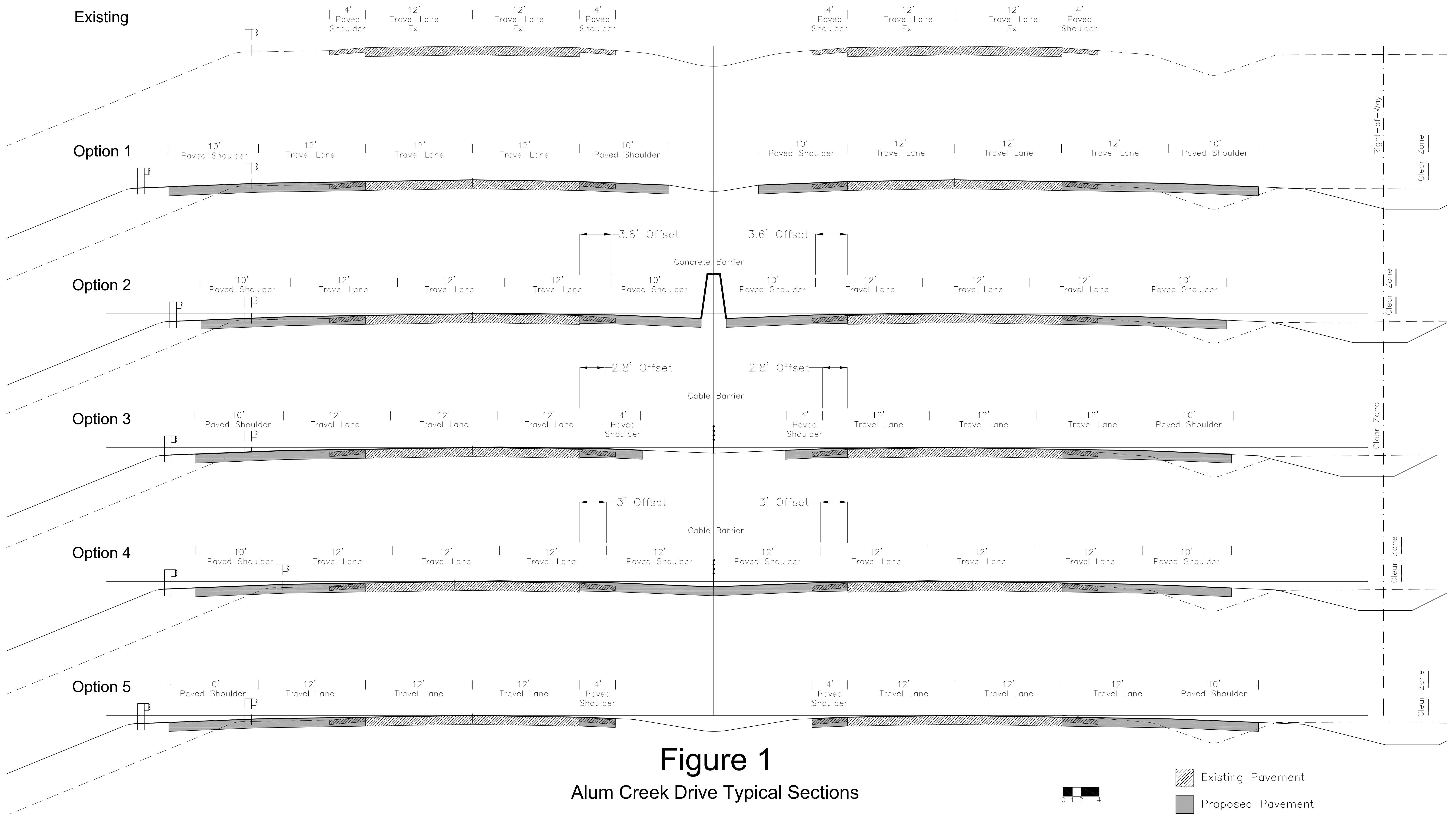
NEXT STEPS

Stantec would recommend a meeting to discuss the typical sections and determine which one should be advanced for Alum Creek Drive, of which may differ north and south of the bridge over Big Walnut Creek. Once a decision is made, a footprint and more accurate cost estimate can be developed. The same process will be required for the bridge, evaluating the provided structures and determining whether there is a preference for one or something different altogether.

Upon receipt of the storm sewer analysis, Stantec will provide a recommendation for how to proceed. Options include using the existing sewer, as well as constructing a new system, or a hybrid of the two. This is tentatively anticipated no later than October of 2017.



	Options	Median Treatment	Med. Sh. To CL Offset	Median Shoulder Width	Lane Width	Right Shoulder Width	Pavement Width Per Side (Lane + Shoulder)	Design Exceptions	Construction Phasing	Wedge Course	Anticipated Additional Right-of-Way Required	Planning Level Cost
Typical Sections	Option 1	Grass, 10'	5'	10' Paved	12'	10' Paved	56' (2x2 Lane MOT)	None	n/a	No	25' Each Side	~\$26.2M Excludes Structure Cost
	Option 2	Concrete Barrier	2'	10' Paved	12'	10' Paved	56' (2x2 Lane MOT)	None	n/a	Yes	25' Each Side	~\$27.3M Excludes Structure Cost
	Option 3	Cable Barrier	8'	4' Paved, 10' Graded	12'	10' Paved	50' (2x2 Lane MOT)	Median Shoulder Width/Material	n/a	Yes	25' Each Side	~\$26.6M Excludes Structure Cost
	Option 4	Cable Barrier	2'	12' Paved	12'	10' Paved	58' (2x2 Lane MOT)	None	n/a	Yes	25' Each Side	~\$27.1M Excludes Structure Cost
	Option 5	Grass, 10'	5'	4' Paved, 10' Graded	12'	10' Paved, 10' Graded	50' (2,2 Lane MOT)	Median Shoulder Width/Material	n/a	No	25' Each Side	~\$24.3M Excludes Structure Cost
	Asymmetric Option	Concrete Barrier	NB: ~9.2', SB: ~2.9'	10' Paved	12'	10' Paved	56' (2x2 Lane MOT)	None	n/a	Yes	35' East Side Only	N/A
Bridge Sections	Option 1	Parapet	5'	10'	12'	10'	56' (2x2 Lane MOT)	None	2 phase	N/A	TBD	~\$11.4M (\$300/sf x 340 ft. x 112 ft.)
	Option 2	Barrier or Concrete Median	2'	10'	12'	10'	56' (2x2 Lane MOT)	None	3 phase	N/A	TBD	~\$11.4M (\$300/sf x 340 ft. x 112 ft.)
	Option 3	Barrier or Concrete Median	SB: 2' NB: 10'	10'	12'	10'	56' (2x2 Lane MOT)	None	3 phase	N/A	TBD	~\$11.4M (\$300/sf x 340 ft. x 112 ft.)



Existing - North of Big Walnut Creek

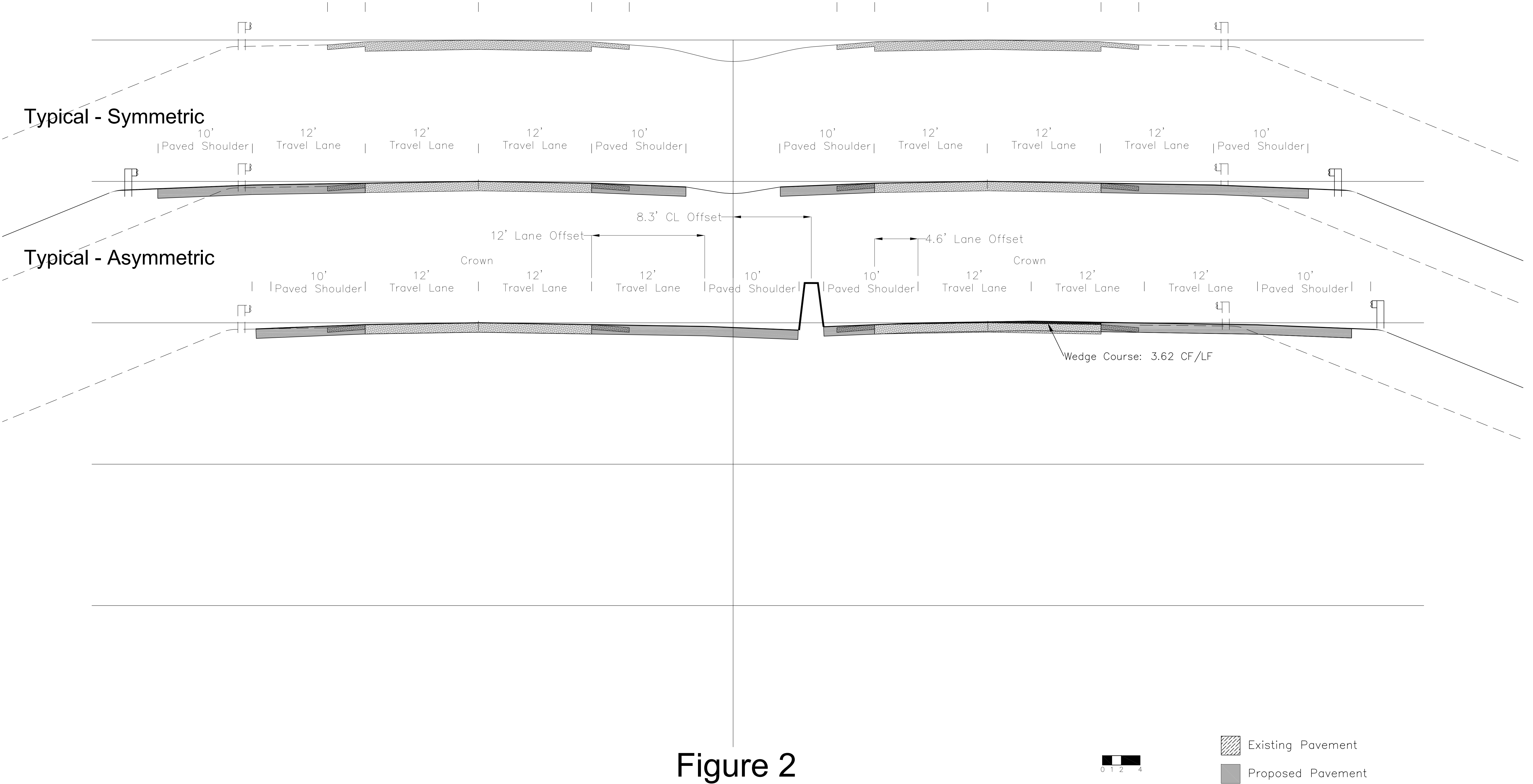


Figure 2
Alum Creek Drive Asymmetric Typical Sections

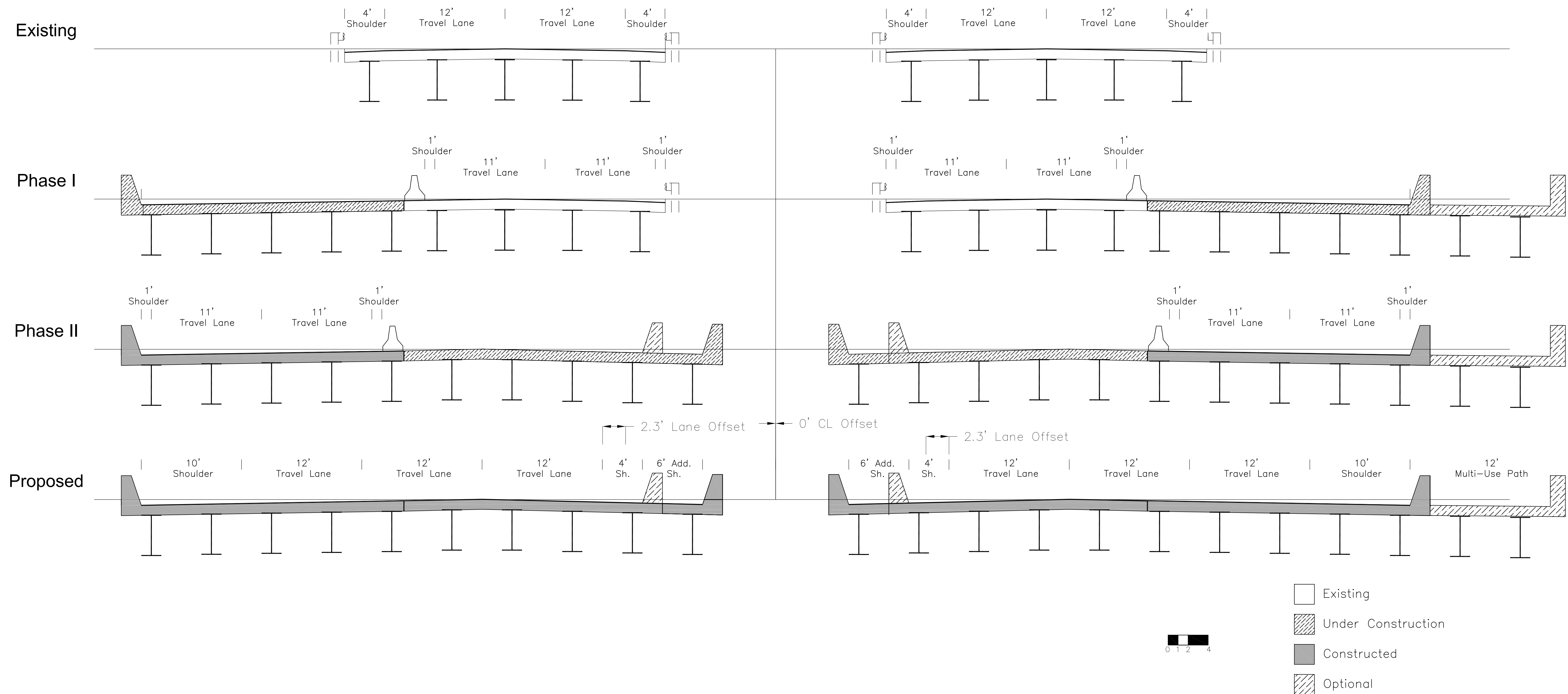


Figure 3
 Alum Creek Drive - Big Walnut Creek Bridge Option 1

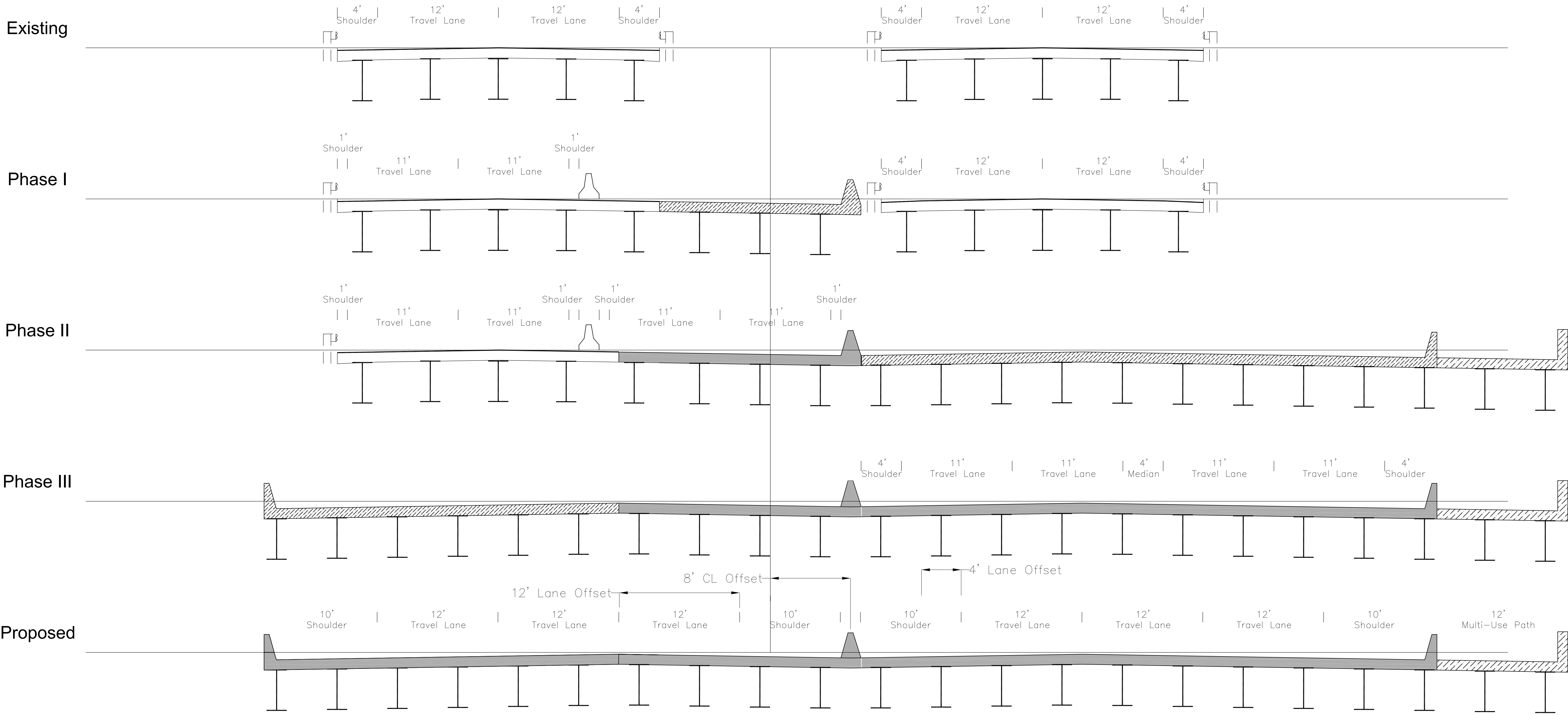


Figure 4
Alum Creek Drive - Big Walnut Creek Bridge Option 2

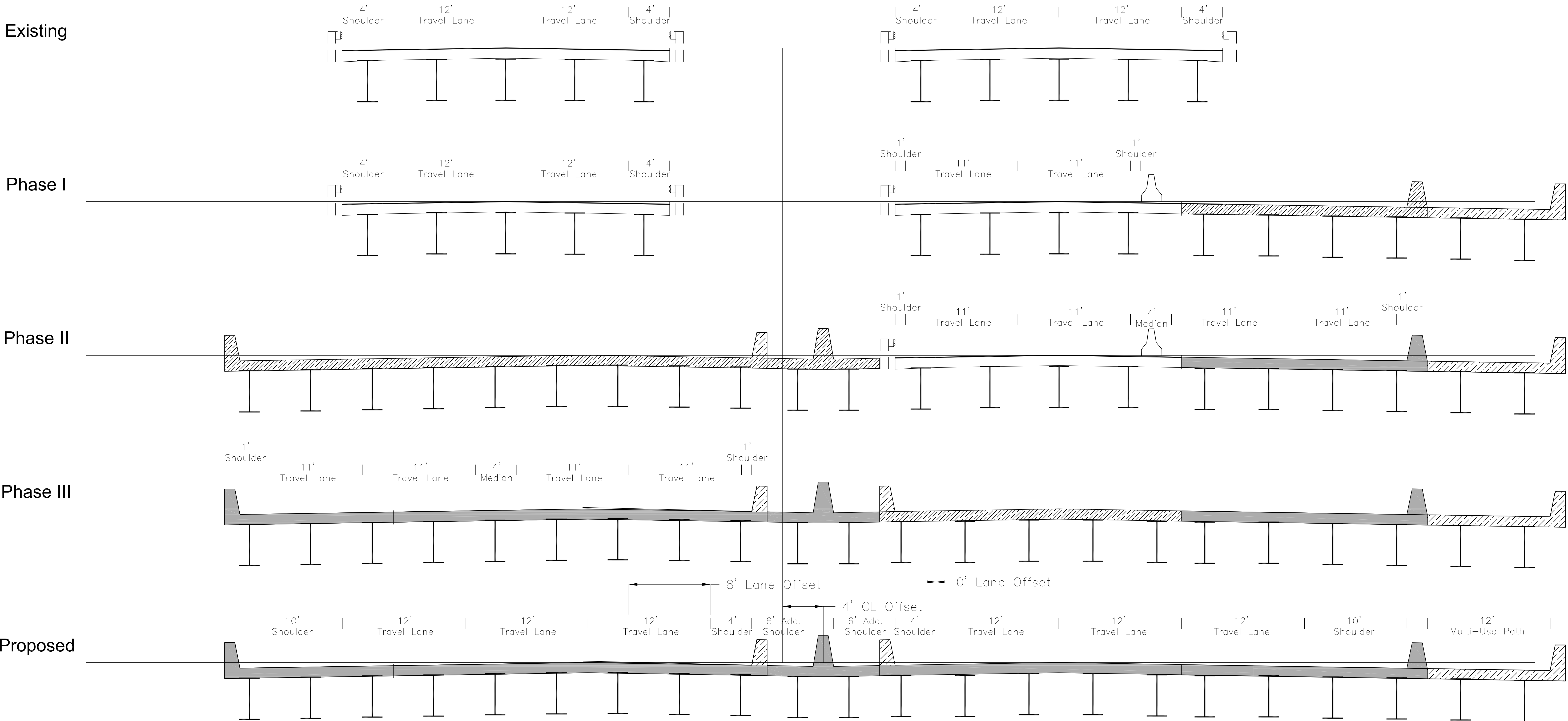


Figure 5
Alum Creek Drive - Big Walnut Creek Bridge Option 3

Alum Creek Drive - State Route 317 to Groveport Road

CONSTRUCTION COSTS

Roadway	\$	2,163,000	Signals	\$	380,000
Erosion Control	\$	595,000	Street Lighting	\$	749,000
Drainage	\$	4,433,000	Structures	\$	-
Pavement	\$	5,486,000	Landscaping	\$	-
Water	\$	-	Miscellaneous	\$	200,000
Traffic Control	\$	52,000			
Construction Item Subtotal (rounded)				\$	14,058,000
Project Scale Factor*	0%		Project Scale Unit Cost Cont.	\$	-
General Contingency	20%		General Contingency	\$	2,811,600
Annual/Cumulative Inflation Rate	3%	19%	Inflation**	\$	3,274,000
Year of Estimate/Construction	2016	2022	Subtotal of Construction Costs	\$	20,143,600

*Smaller projects typically have higher unit costs due to a loss of economies of scale. The Project Scale Factor is a rough adjustment to unit costs provided for projects which are often significantly larger.

**Cumulative inflation between the year of estimate and construction. Includes project scale cost contingency and general contingency.

OTHER PROJECT COSTS

Utility Relocation			\$	235,000
Right-of-Way			\$	1,211,000
Environmental	3%		\$	605,000
Engineering	14%	of Construction Subtotal	\$	2,821,000
Construction Observ., Services	6%	of Construction Subtotal	\$	1,209,000
Subtotal of Other Project Costs				\$ 6,081,000

ESTIMATED TOTAL PROJECT COST

\$ 26,224,600

Estimate prepared by Stantec Consulting Services

6/22/2017

These cost estimates were developed at a planning level of analysis and many factors, some of which could affect the total project cost, remain unknown at this time. This estimates provides our best judgment of project cost based on the level of analysis (planning leve) by design professionals familiar with the construction industry. Bid item costs are based, in part, on previous bids tabulated by ODOT's Estimator software, and will vary as the Stantec has no control over a contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Stantec cannot and does not guarantee that bids or prices will not vary from this estimate.

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

Item	Description	Quantity	Unit	Unit Cost	Total
ROADWAY					
201	Clearing & Grubbing	-	Lump	\$ 35,000.00	\$ -
202	Walk Removed	-	SF	\$ 1.50	\$ -
203	Excavation	77,220.37	CY	\$ 20.00	\$ 1,544,407
203	Embankment	12,470.37	CY	\$ 20.00	\$ 249,407
	Cut and Reuse as Fill	-	CY	\$ 18.00	\$ -
	Place Excavated Materials as Embankment	-	CY	\$ 15.00	\$ -
204	Subgrade Compaction	92,089	SY	\$ 4.00	\$ 368,356
606	Cable Barrier	-	FT	\$ 15.00	\$ -
607	Fence, Misc.: Wood Fence (fall protection along path)	-	FT	\$ 30.00	\$ -
608	Concrete Walk, 4"	-	SF	\$ 7.00	\$ -
608	Concrete Walk, 8"	-	SF	\$ 9.00	\$ -
608	Curb Ramps	-	EA	\$ 1,000.00	\$ -
	Concrete Steps APP	-	SF	\$ 150.00	\$ -
	Brick Walk A.P.P.	-	SF	\$ 23.00	\$ -
609	Curb, Type 6	-	LF	\$ 20.00	\$ -
622	Concrete Barrier, Single Slope	-	FT	\$ 80.00	\$ -
622	Concrete Barrier End Section	-	EA	\$ 3,000.00	\$ -
	Subtotal				\$ 2,162,170
EROSION CONTROL					
207	Perimeter Filter Fabric Fence	25,900	FT	\$ 3.00	\$ 77,700
659	Water	467	M GAL	\$ 100.00	\$ 46,700
659	Topsoil	9,583	CY	\$ 30.00	\$ 287,489
659	Agricultural Lime	18	ACRE	\$ 100.00	\$ 1,784
659	Commercial Fertilizer	12	TON	\$ 700.00	\$ 8,162
659	Seeding & Mulching	86,333	SY	\$ 2.00	\$ 172,666
	Subtotal				\$ 594,501
DRAINAGE					
603	12" Conduit, Type B	-	FT	\$ 60.00	\$ -
603	15" Conduit, Type B	6,475.00	FT	\$ 75.00	\$ 485,625
603	18" Conduit, Type B	-	FT	\$ 90.00	\$ -
603	24" Conduit, Type B	-	FT	\$ 105.00	\$ -
604	60" Conduit, Type B	12,950.00	FT	\$ 250.00	\$ 3,237,500
601	Catch Basin No. 2-2B	86.33	EA	\$ 1,120.00	\$ 96,693
602	Catch Basin No. 3A	-	EA	\$ 2,400.00	\$ -
604	Manhole No. Type C	43.167	EA	\$ 4,000.00	\$ 172,667
605	4" Base Pipe Underdrain	51,800.00	FT	\$ 8.50	\$ 440,300
	Subtotal				\$ 4,432,785
PAVEMENT					
254	Pavement Planing, ~4"	69,067	SY	\$ 2.75	\$ 189,934
301	Asphalt Concrete Base	23,022	CY	\$ 120.00	\$ 2,762,668
304	Aggregate Base	15,348	CY	\$ 55.00	\$ 844,148
408	Prime Coat	-	Gal	\$ 4.00	\$ -
448	Asphalt Concrete Surface Course	6,715	CY	\$ 160.00	\$ 1,074,371
448	Asphalt Concrete Intermediate Course	3,837	CY	\$ 160.00	\$ 613,926
	Subtotal				\$ 5,485,048

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

WATER

638	6" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	100.00	\$	-
638	8" Ductile Iron Water Pipe and Fittings, Class 54	-	FT	\$	125.00	\$	-
638	16" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	200.00	\$	-
638	6" Valve and Appurtenances	-	EA	\$	600.00	\$	-
638	Fire Hydrant	-	EA	\$	2,500.00	\$	-
638	Valve Box Adjusted to Grade	-	EA	\$	300.00	\$	-
638	Fire Hydrant Adjusted to Grade	-	EA	\$	800.00	\$	-
	Water Line to Irrigation	-	FT	\$	20.00	\$	-
	Water Service and Meter	-	Lump	\$	3,000.00	\$	-
816	3/4" Water Service Tap Relocated	-	EA	\$	1,000.00	\$	-
Subtotal						\$	-

TRAFFIC CONTROL

621	RPM	1,295	EA	\$	25.00	\$	32,375
630	Removal of Ground Mounted Sign and Disposal	-	EA	\$	15.00	\$	-
630	Removal of Ground Mounted Post Support and Disposal	-	EA	\$	20.00	\$	-
630	Sign, Flat Sheet	-	SF	\$	20.00	\$	-
631	Sign, Double faced, Street Name	-	EA	\$	90.00	\$	-
630	Ground Mounted Support, No. 3 Post	-	FT	\$	15.00	\$	-
630	Street Name Sign Support, No. 3 Post	-	FT	\$	20.00	\$	-
644	Center Line	-	MI	\$	3,800.00	\$	-
644	Edge Line	9.81	MI	\$	2,000.00	\$	19,621
644	Lane Line	9.81	MI				
644	Channelizing Line	-	FT	\$	3.00	\$	-
644	Transverse Line	-	FT	\$	5.00	\$	-
644	Stop Line	-	FT	\$	15.00	\$	-
644	Crosswalk Line	-	FT	\$	12.00	\$	-
644	Parking Stall Line	-	FT	\$	1.50	\$	-
644	Lane Arrow	-	EA	\$	85.00	\$	-
644	Word on Pavement	-	EA	\$	100.00	\$	-
	Markings Removal	-	LF	\$	2.50	\$	-
	RRFB	-	EA	\$	15,000.00	\$	-
Subtotal						\$	51,996

LIGHTING

625	Connector Kit, Type II	260	EA	\$	60.00	\$	15,600
625	Conventional Lighting Pole, APP, with foundation, installed	130	EA	\$	3,300.00	\$	429,000
625	Luminaire, Conventional, APP	130	EA	\$	500.00	\$	65,000
625	Parking Lot Lighting, with Luminaires	-	EA	\$	7,000.00	\$	-
625	Conduit and Wiring	8,840	LF	\$	7.00	\$	61,880
625	Trench	21,790		\$	8.00	\$	174,320
625	Power Service, A.P.P.	1	EA	\$	3,000.00	\$	3,000
625	Control Center	-	EA	\$	3,000.00	\$	-
625	High Voltage Test		Lump	\$	6,000.00	\$	-
	Misc.	-	Lump	\$	15,000.00	\$	-
Subtotal						\$	748,800

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

SIGNALS

Signal (Full Replacement)	1	Lump	\$ 250,000.00	\$ 250,000
Signal (Minor Modifications)	3	Lump	\$ 10,000.00	\$ 30,000
Signal (Major Modifications)	1	Lump	\$ 100,000.00	\$ 100,000
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -
Subtotal				\$ 380,000

STRUCTURES

Spec Culvert Extension	-	SF	\$ 250.00	\$ -
	-	Lump	\$ -	\$ -
	-	Lump	\$ -	\$ -
Subtotal				\$ -

LANDSCAPING

-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	EA	\$ -	\$ -
-	Lump	\$ 50,000.00	\$ -
-	Lump	\$ -	\$ -
-	Lump	\$ -	\$ -

Subtotal \$ -

MISCELLANEOUS

614 Maintaining Traffic	-	Lump	\$ 100,000.00	\$ 100,000
623 Construction Layout Stakes	-	Lump	\$ 40,000.00	\$ 40,000
624 Mobilization	-	Lump	\$ 60,000.00	\$ 60,000
Subtotal				\$ 200,000

Construction Total \$ 14,055,000

Statements of Probable Construction and Right-of-Way Costs and Detailed Cost Estimates prepared by the Engineer represent his best judgment as a design professional familiar with the construction industry. It is recognized, however, that the Engineer has no control over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Engineer cannot and does not guarantee that bids or prices will not vary from any Statement of Probable Construction Cost or other cost estimate prepared by him.

Alum Creek Drive - State Route 317 to Groveport Road

CONSTRUCTION COSTS

Roadway	\$	2,575,000	Signals	\$	380,000
Erosion Control	\$	595,000	Street Lighting	\$	481,000
Drainage	\$	4,877,000	Structures	\$	-
Pavement	\$	5,486,000	Landscaping	\$	-
Water	\$	-	Miscellaneous	\$	200,000
Traffic Control	\$	52,000			
Construction Item Subtotal (rounded)				\$	14,646,000
Project Scale Factor*	0%		Project Scale Unit Cost Cont.	\$	-
General Contingency	20%		General Contingency	\$	2,929,200
Annual/Cumulative Inflation Rate	3%	19%	Inflation**	\$	3,411,000
Year of Estimate/Construction	2016	2022	Subtotal of Construction Costs	\$	20,986,200

*Smaller projects typically have higher unit costs due to a loss of economies of scale. The Project Scale Factor is a rough adjustment to unit costs provided for projects which are often significantly larger.

**Cumulative inflation between the year of estimate and construction. Includes project scale cost contingency and general contingency.

OTHER PROJECT COSTS

Utility Relocation			\$	235,000
Right-of-Way			\$	1,211,000
Environmental	3%		\$	630,000
Engineering	14%	of Construction Subtotal	\$	2,939,000
Construction Observ., Services	6%	of Construction Subtotal	\$	1,260,000
Subtotal of Other Project Costs				\$ 6,275,000

ESTIMATED TOTAL PROJECT COST

\$ 27,261,200

Estimate prepared by Stantec Consulting Services

6/22/2017

These cost estimates were developed at a planning level of analysis and many factors, some of which could affect the total project cost, remain unknown at this time. This estimates provides our best judgment of project cost based on the level of analysis (planning leve) by design professionals familiar with the construction industry. Bid item costs are based, in part, on previous bids tabulated by ODOT's Estimator software, and will vary as the Stantec has no control over a contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Stantec cannot and does not guarantee that bids or prices will not vary from this estimate.

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203	Excavation	68,587.04	CY	\$ 20.00	\$ 1,371,741
203	Embankment	11,031.48	CY	\$ 20.00	\$ 220,630
	Cut and Reuse as Fill	-	CY	\$ 18.00	\$ -
	Place Excavated Materials as Embankment	-	CY	\$ 15.00	\$ -
204	Subgrade Compaction	92,089	SY	\$ 4.00	\$ 368,356
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622	Concrete Barrier, Single Slope	7,300	FT	\$ 80.00	\$ 584,000
622	Concrete Barrier End Section	10	EA	\$ 3,000.00	\$ 30,000
	Subtotal				\$ 2,574,726
EROSION CONTROL					
207	Perimeter Filter Fabric Fence	25,900	FT	\$ 3.00	\$ 77,700
659	Water	467	M GAL	\$ 100.00	\$ 46,700
659	Topsoil	9,583	CY	\$ 30.00	\$ 287,489
659	Agricultural Lime	18	ACRE	\$ 100.00	\$ 1,784
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603	18" Conduit, Type B	-	FT	\$ 90.00	\$ -
603	24" Conduit, Type B	-	FT	\$ 105.00	\$ -
604	60" Conduit, Type B	12,950.00	FT	\$ 250.00	\$ 3,237,500
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602	Catch Basin No. 3A	-	EA	\$ 2,400.00	\$ -
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605	4" Base Pipe Underdrain	51,800.00	FT	\$ 8.50	\$ 440,300
	Subtotal				\$ 4,432,785
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301	Asphalt Concrete Base	23,022	CY	\$ 120.00	\$ 2,762,668
304	Aggregate Base	15,348	CY	\$ 55.00	\$ 844,148
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448	Asphalt Concrete Intermediate Course	3,837	CY	\$ 160.00	\$ 613,926
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Detailed Construction Estimate

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638	16" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	200.00	\$	-
638	6" Valve and Appurtenances	-	EA	\$	600.00	\$	-
638	Fire Hydrant	-	EA	\$	2,500.00	\$	-
638	Valve Box Adjusted to Grade	-	EA	\$	300.00	\$	-
638	Fire Hydrant Adjusted to Grade	-	EA	\$	800.00	\$	-
	Water Line to Irrigation	-	FT	\$	20.00	\$	-
	Water Service and Meter	-	Lump	\$	3,000.00	\$	-
816	3/4" Water Service Tap Relocated	-	EA	\$	1,000.00	\$	-
Subtotal						\$	-

TRAFFIC CONTROL

621	RPM	1,295	EA	\$	25.00	\$	32,375
630	Removal of Ground Mounted Sign and Disposal	-	EA	\$	15.00	\$	-
630	Removal of Ground Mounted Post Support and Disposal	-	EA	\$	20.00	\$	-
630	Sign, Flat Sheet	-	SF	\$	20.00	\$	-
631	Sign, Double faced, Street Name	-	EA	\$	90.00	\$	-
630	Ground Mounted Support, No. 3 Post	-	FT	\$	15.00	\$	-
630	Street Name Sign Support, No. 3 Post	-	FT	\$	20.00	\$	-
644	Center Line	-	MI	\$	3,800.00	\$	-
644	Edge Line	9.81	MI	\$	2,000.00	\$	19,621
644	Lane Line	9.81	MI				
644	Channelizing Line	-	FT	\$	3.00	\$	-
644	Transverse Line	-	FT	\$	5.00	\$	-
644	Stop Line	-	FT	\$	15.00	\$	-
644	Crosswalk Line	-	FT	\$	12.00	\$	-
644	Parking Stall Line	-	FT	\$	1.50	\$	-
644	Lane Arrow	-	EA	\$	85.00	\$	-
644	Word on Pavement	-	EA	\$	100.00	\$	-
	Markings Removal	-	LF	\$	2.50	\$	-
	RRFB	-	EA	\$	15,000.00	\$	-
Subtotal						\$	51,996

LIGHTING

625	Connector Kit, Type II	130	EA	\$	60.00	\$	7,800
625	Low Mast Lighting Pole APP, with foundation, installed	65	EA	\$	3,900.00	\$	253,500
625	Luminaire, Low Mast APP	65	EA	\$	700.00	\$	45,500
625	Parking Lot Lighting, with Luminaires	-	EA	\$	7,000.00	\$	-
625	Conduit and Wiring	4,488	LF	\$	7.00	\$	31,416
625	Trench	17,438		\$	8.00	\$	139,504
625	Power Service, A.P.P.	1	EA	\$	3,000.00	\$	3,000
625	Control Center	-	EA	\$	3,000.00	\$	-
625	High Voltage Test		Lump	\$	6,000.00	\$	-
	Misc.	-	Lump	\$	15,000.00	\$	-
Subtotal						\$	480,720

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

SIGNALS

Signal (Full Replacement)	1	Lump	\$ 250,000.00	\$ 250,000
Signal (Minor Modifications)	3	Lump	\$ 10,000.00	\$ 30,000
Signal (Major Modifications)	1	Lump	\$ 100,000.00	\$ 100,000
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -

Subtotal \$ 380,000

STRUCTURES

Spec Culvert Extension	-	SF	\$ 250.00	\$ -
	-	Lump	\$ -	\$ -
	-	Lump	\$ -	\$ -

Subtotal \$ -

LANDSCAPING

-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	EA	\$ -	\$ -
-	Lump	\$ 50,000.00	\$ -
-	Lump	\$ -	\$ -
-	Lump	\$ -	\$ -

Subtotal \$ -

MISCELLANEOUS

614 Maintaining Traffic	-	Lump	\$ 100,000.00	\$ 100,000
623 Construction Layout Stakes	-	Lump	\$ 40,000.00	\$ 40,000
624 Mobilization	-	Lump	\$ 60,000.00	\$ 60,000

Subtotal \$ 200,000

Construction Total \$ 14,200,000

Statements of Probable Construction and Right-of-Way Costs and Detailed Cost Estimates prepared by the Engineer represent his best judgment as a design professional familiar with the construction industry. It is recognized, however, that the Engineer has no control over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Engineer cannot and does not guarantee that bids or prices will not vary from any Statement of Probable Construction Cost or other cost estimate prepared by him.

Alum Creek Drive - State Route 317 to Groveport Road

CONSTRUCTION COSTS

Roadway	\$	2,382,000	Signals	\$	380,000
Erosion Control	\$	595,000	Street Lighting	\$	749,000
Drainage	\$	4,433,000	Structures	\$	-
Pavement	\$	5,486,000	Landscaping	\$	-
Water	\$	-	Miscellaneous	\$	200,000
Traffic Control	\$	52,000			
Construction Item Subtotal (rounded)				\$	14,277,000
Project Scale Factor*	0%		Project Scale Unit Cost Cont.	\$	-
General Contingency	20%		General Contingency	\$	2,855,400
Annual/Cumulative Inflation Rate	3%	19%	Inflation**	\$	3,325,000
Year of Estimate/Construction	2016	2022	Subtotal of Construction Costs	\$	20,457,400

*Smaller projects typically have higher unit costs due to a loss of economies of scale. The Project Scale Factor is a rough adjustment to unit costs provided for projects which are often significantly larger.

**Cumulative inflation between the year of estimate and construction. Includes project scale cost contingency and general contingency.

OTHER PROJECT COSTS

Utility Relocation			\$	235,000
Right-of-Way			\$	1,211,000
Environmental	3%		\$	614,000
Engineering	14%	of Construction Subtotal	\$	2,865,000
Construction Observ., Services	6%	of Construction Subtotal	\$	1,228,000
Subtotal of Other Project Costs				\$ 6,153,000

ESTIMATED TOTAL PROJECT COST

\$ 26,610,400

Estimate prepared by Stantec Consulting Services

6/22/2017

These cost estimates were developed at a planning level of analysis and many factors, some of which could affect the total project cost, remain unknown at this time. This estimates provides our best judgment of project cost based on the level of analysis (planning leve) by design professionals familiar with the construction industry. Bid item costs are based, in part, on previous bids tabulated by ODOT's Estimator software, and will vary as the Stantec has no control over a contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Stantec cannot and does not guarantee that bids or prices will not vary from this estimate.

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

Item	Description	Quantity	Unit	Unit Cost	Total
ROADWAY					
201	Clearing & Grubbing	-	Lump	\$ 35,000.00	\$ -
202	Walk Removed	-	SF	\$ 1.50	\$ -
203	Excavation	77,220.37	CY	\$ 20.00	\$ 1,544,407
203	Embankment	12,470.37	CY	\$ 20.00	\$ 249,407
	Cut and Reuse as Fill	-	CY	\$ 18.00	\$ -
	Place Excavated Materials as Embankment	-	CY	\$ 15.00	\$ -
204	Subgrade Compaction	92,089	SY	\$ 4.00	\$ 368,356
606	Cable Barrier	-	FT	\$ 15.00	\$ -
607	Fence, Misc.: Wood Fence (fall protection along path)	-	FT	\$ 30.00	\$ -
608	Concrete Walk, 4"	-	SF	\$ 7.00	\$ -
608	Concrete Walk, 8"	-	SF	\$ 9.00	\$ -
608	Curb Ramps	-	EA	\$ 1,000.00	\$ -
	Concrete Steps APP	-	SF	\$ 150.00	\$ -
	Brick Walk A.P.P.	-	SF	\$ 23.00	\$ -
609	Curb, Type 6	-	LF	\$ 20.00	\$ -
IS	Cable Barrier	7,300	FT	\$ 30.00	\$ 219,000
Subtotal					\$ 2,381,170
EROSION CONTROL					
207	Perimeter Filter Fabric Fence	25,900	FT	\$ 3.00	\$ 77,700
659	Water	467	M GAL	\$ 100.00	\$ 46,700
659	Topsoil	9,583	CY	\$ 30.00	\$ 287,489
659	Agricultural Lime	18	ACRE	\$ 100.00	\$ 1,784
659	Commercial Fertilizer	12	TON	\$ 700.00	\$ 8,162
659	Seeding & Mulching	86,333	SY	\$ 2.00	\$ 172,666
Subtotal					\$ 594,501
DRAINAGE					
603	12" Conduit, Type B	-	FT	\$ 60.00	\$ -
603	15" Conduit, Type B	6,475.00	FT	\$ 75.00	\$ 485,625
603	18" Conduit, Type B	-	FT	\$ 90.00	\$ -
603	24" Conduit, Type B	-	FT	\$ 105.00	\$ -
604	60" Conduit, Type B	12,950.00	FT	\$ 250.00	\$ 3,237,500
601	Catch Basin No. 2-2B	86.33	EA	\$ 1,120.00	\$ 96,693
602	Catch Basin No. 3A	-	EA	\$ 2,400.00	\$ -
604	Manhole No. Type C	43.167	EA	\$ 4,000.00	\$ 172,667
605	4" Base Pipe Underdrain	51,800.00	FT	\$ 8.50	\$ 440,300
Subtotal					\$ 4,432,785
PAVEMENT					
254	Pavement Planing, ~4"	69,067	SY	\$ 2.75	\$ 189,934
301	Asphalt Concrete Base	23,022	CY	\$ 120.00	\$ 2,762,668
304	Aggregate Base	15,348	CY	\$ 55.00	\$ 844,148
408	Prime Coat	-	Gal	\$ 4.00	\$ -
448	Asphalt Concrete Surface Course	6,715	CY	\$ 160.00	\$ 1,074,371
448	Asphalt Concrete Intermediate Course	3,837	CY	\$ 160.00	\$ 613,926
Subtotal					\$ 5,485,048

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

WATER

638	6" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	100.00	\$	-
638	8" Ductile Iron Water Pipe and Fittings, Class 54	-	FT	\$	125.00	\$	-
638	16" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	200.00	\$	-
638	6" Valve and Appurtenances	-	EA	\$	600.00	\$	-
638	Fire Hydrant	-	EA	\$	2,500.00	\$	-
638	Valve Box Adjusted to Grade	-	EA	\$	300.00	\$	-
638	Fire Hydrant Adjusted to Grade	-	EA	\$	800.00	\$	-
	Water Line to Irrigation	-	FT	\$	20.00	\$	-
	Water Service and Meter	-	Lump	\$	3,000.00	\$	-
816	3/4" Water Service Tap Relocated	-	EA	\$	1,000.00	\$	-
Subtotal						\$	-

TRAFFIC CONTROL

621	RPM	1,295	EA	\$	25.00	\$	32,375
630	Removal of Ground Mounted Sign and Disposal	-	EA	\$	15.00	\$	-
630	Removal of Ground Mounted Post Support and Disposal	-	EA	\$	20.00	\$	-
630	Sign, Flat Sheet	-	SF	\$	20.00	\$	-
631	Sign, Double faced, Street Name	-	EA	\$	90.00	\$	-
630	Ground Mounted Support, No. 3 Post	-	FT	\$	15.00	\$	-
630	Street Name Sign Support, No. 3 Post	-	FT	\$	20.00	\$	-
644	Center Line	-	MI	\$	3,800.00	\$	-
644	Edge Line	9.81	MI	\$	2,000.00	\$	19,621
644	Lane Line	9.81	MI				
644	Channelizing Line	-	FT	\$	3.00	\$	-
644	Transverse Line	-	FT	\$	5.00	\$	-
644	Stop Line	-	FT	\$	15.00	\$	-
644	Crosswalk Line	-	FT	\$	12.00	\$	-
644	Parking Stall Line	-	FT	\$	1.50	\$	-
644	Lane Arrow	-	EA	\$	85.00	\$	-
644	Word on Pavement	-	EA	\$	100.00	\$	-
	Markings Removal	-	LF	\$	2.50	\$	-
	RRFB	-	EA	\$	15,000.00	\$	-
Subtotal						\$	51,996

LIGHTING

625	Connector Kit, Type II	260	EA	\$	60.00	\$	15,600
625	Conventional Lighting Pole, APP, with foundation, installed	130	EA	\$	3,300.00	\$	429,000
625	Luminaire, Conventional, APP	130	EA	\$	500.00	\$	65,000
625	Parking Lot Lighting, with Luminaires	-	EA	\$	7,000.00	\$	-
625	Conduit and Wiring	8,840	LF	\$	7.00	\$	61,880
625	Trench	21,790		\$	8.00	\$	174,320
625	Power Service, A.P.P.	1	EA	\$	3,000.00	\$	3,000
625	Control Center	-	EA	\$	3,000.00	\$	-
625	High Voltage Test		Lump	\$	6,000.00	\$	-
	Misc.	-	Lump	\$	15,000.00	\$	-
Subtotal						\$	748,800

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

SIGNALS

Signal (Full Replacement)	1	Lump	\$ 250,000.00	\$ 250,000
Signal (Minor Modifications)	3	Lump	\$ 10,000.00	\$ 30,000
Signal (Major Modifications)	1	Lump	\$ 100,000.00	\$ 100,000
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -

Subtotal \$ 380,000

SIGNALS

Signal	-	Lump	\$ 250,000.00	\$ -
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -

Subtotal \$ -

STRUCTURES

Spec Culvert Extension	-	SF	\$ 250.00	\$ -
	-	Lump	\$ -	\$ -
	-	Lump	\$ -	\$ -

Subtotal \$ -

LANDSCAPING

-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	EA	\$ -	\$ -
-	Lump	\$ 50,000.00	\$ -
-	Lump	\$ -	\$ -
-	Lump	\$ -	\$ -

Subtotal \$ -

MISCELLANEOUS

614 Maintaining Traffic	-	Lump	\$ 100,000.00	\$ 100,000
623 Construction Layout Stakes	-	Lump	\$ 40,000.00	\$ 40,000
624 Mobilization	-	Lump	\$ 60,000.00	\$ 60,000

Subtotal \$ 200,000

Construction Total \$ 14,274,000

Statements of Probable Construction and Right-of-Way Costs and Detailed Cost Estimates prepared by the Engineer represent his best judgment as a design professional familiar with the construction industry. It is recognized, however, that the Engineer has no control over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Engineer cannot and does not guarantee that bids or prices will not vary from any Statement of Probable Construction Cost or other cost estimate prepared by him.

Alum Creek Drive - State Route 317 to Groveport Road

CONSTRUCTION COSTS

Roadway	\$	2,332,000	Signals	\$	380,000
Erosion Control	\$	595,000	Street Lighting	\$	749,000
Drainage	\$	4,433,000	Structures	\$	-
Pavement	\$	5,788,000	Landscaping	\$	-
Water	\$	-	Miscellaneous	\$	200,000
Traffic Control	\$	52,000			
Construction Item Subtotal (rounded)				\$	14,529,000
Project Scale Factor*	0%		Project Scale Unit Cost Cont.	\$	-
General Contingency	20%		General Contingency	\$	2,905,800
Annual/Cumulative Inflation Rate	3%	19%	Inflation**	\$	3,384,000
Year of Estimate/Construction	2016	2022	Subtotal of Construction Costs	\$	20,818,800

*Smaller projects typically have higher unit costs due to a loss of economies of scale. The Project Scale Factor is a rough adjustment to unit costs provided for projects which are often significantly larger.

**Cumulative inflation between the year of estimate and construction. Includes project scale cost contingency and general contingency.

OTHER PROJECT COSTS

Utility Relocation			\$	235,000
Right-of-Way			\$	1,211,000
Environmental	3%		\$	625,000
Engineering	14%	of Construction Subtotal	\$	2,915,000
Construction Observ., Services	6%	of Construction Subtotal	\$	1,250,000
Subtotal of Other Project Costs				\$ 6,236,000

ESTIMATED TOTAL PROJECT COST

\$ 27,054,800

Estimate prepared by Stantec Consulting Services

6/22/2017

These cost estimates were developed at a planning level of analysis and many factors, some of which could affect the total project cost, remain unknown at this time. This estimates provides our best judgment of project cost based on the level of analysis (planning leve) by design professionals familiar with the construction industry. Bid item costs are based, in part, on previous bids tabulated by ODOT's Estimator software, and will vary as the Stantec has no control over a contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Stantec cannot and does not guarantee that bids or prices will not vary from this estimate.

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

Item	Description	Quantity	Unit	Unit Cost	Total
ROADWAY					
201	Clearing & Grubbing	-	Lump	\$ 35,000.00	\$ -
202	Walk Removed	-	SF	\$ 1.50	\$ -
203	Excavation	69,066.67	CY	\$ 20.00	\$ 1,381,333
203	Embankment	11,511.11	CY	\$ 20.00	\$ 230,222
	Cut and Reuse as Fill	-	CY	\$ 18.00	\$ -
	Place Excavated Materials as Embankment	-	CY	\$ 15.00	\$ -
204	Subgrade Compaction	97,844	SY	\$ 4.00	\$ 391,378
606	Cable Barrier	7,300	FT	\$ 15.00	\$ 109,500
607	Fence, Misc.: Wood Fence (fall protection along path)	-	FT	\$ 30.00	\$ -
608	Concrete Walk, 4"	-	SF	\$ 7.00	\$ -
608	Concrete Walk, 8"	-	SF	\$ 9.00	\$ -
608	Curb Ramps	-	EA	\$ 1,000.00	\$ -
	Concrete Steps APP	-	SF	\$ 150.00	\$ -
	Brick Walk A.P.P.	-	SF	\$ 23.00	\$ -
609	Curb, Type 6	-	LF	\$ 20.00	\$ -
IS	Cable Barrier	7,300	FT	\$ 30.00	\$ 219,000
	Subtotal				\$ 2,331,433
EROSION CONTROL					
207	Perimeter Filter Fabric Fence	25,900	FT	\$ 3.00	\$ 77,700
659	Water	467	M GAL	\$ 100.00	\$ 46,700
659	Topsoil	9,583	CY	\$ 30.00	\$ 287,489
659	Agricultural Lime	18	ACRE	\$ 100.00	\$ 1,784
659	Commercial Fertilizer	12	TON	\$ 700.00	\$ 8,162
659	Seeding & Mulching	86,333	SY	\$ 2.00	\$ 172,666
	Subtotal				\$ 594,501
DRAINAGE					
603	12" Conduit, Type B	-	FT	\$ 60.00	\$ -
603	15" Conduit, Type B	6,475.00	FT	\$ 75.00	\$ 485,625
603	18" Conduit, Type B	-	FT	\$ 90.00	\$ -
603	24" Conduit, Type B	-	FT	\$ 105.00	\$ -
604	60" Conduit, Type B	12,950.00	FT	\$ 250.00	\$ 3,237,500
601	Catch Basin No. 2-2B	86.33	EA	\$ 1,120.00	\$ 96,693
602	Catch Basin No. 3A	-	EA	\$ 2,400.00	\$ -
604	Manhole No. Type C	43.167	EA	\$ 4,000.00	\$ 172,667
605	4" Base Pipe Underdrain	51,800.00	FT	\$ 8.50	\$ 440,300
	Subtotal				\$ 4,432,785
PAVEMENT					
254	Pavement Planing, ~4"	69,067	SY	\$ 2.75	\$ 189,934
301	Asphalt Concrete Base	24,461	CY	\$ 120.00	\$ 2,935,334
304	Aggregate Base	16,307	CY	\$ 55.00	\$ 896,908
408	Prime Coat	-	Gal	\$ 4.00	\$ -
448	Asphalt Concrete Surface Course	6,955	CY	\$ 160.00	\$ 1,112,741
448	Asphalt Concrete Intermediate Course	4,077	CY	\$ 160.00	\$ 652,298
	Subtotal				\$ 5,787,215

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

WATER

638	6" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	100.00	\$	-
638	8" Ductile Iron Water Pipe and Fittings, Class 54	-	FT	\$	125.00	\$	-
638	16" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	200.00	\$	-
638	6" Valve and Appurtenances	-	EA	\$	600.00	\$	-
638	Fire Hydrant	-	EA	\$	2,500.00	\$	-
638	Valve Box Adjusted to Grade	-	EA	\$	300.00	\$	-
638	Fire Hydrant Adjusted to Grade	-	EA	\$	800.00	\$	-
	Water Line to Irrigation	-	FT	\$	20.00	\$	-
	Water Service and Meter	-	Lump	\$	3,000.00	\$	-
816	3/4" Water Service Tap Relocated	-	EA	\$	1,000.00	\$	-
Subtotal						\$	-

TRAFFIC CONTROL

621	RPM	1,295	EA	\$	25.00	\$	32,375
630	Removal of Ground Mounted Sign and Disposal	-	EA	\$	15.00	\$	-
630	Removal of Ground Mounted Post Support and Disposal	-	EA	\$	20.00	\$	-
630	Sign, Flat Sheet	-	SF	\$	20.00	\$	-
631	Sign, Double faced, Street Name	-	EA	\$	90.00	\$	-
630	Ground Mounted Support, No. 3 Post	-	FT	\$	15.00	\$	-
630	Street Name Sign Support, No. 3 Post	-	FT	\$	20.00	\$	-
644	Center Line	-	MI	\$	3,800.00	\$	-
644	Edge Line	9.81	MI	\$	2,000.00	\$	19,621
644	Lane Line	9.81	MI				
644	Channelizing Line	-	FT	\$	3.00	\$	-
644	Transverse Line	-	FT	\$	5.00	\$	-
644	Stop Line	-	FT	\$	15.00	\$	-
644	Crosswalk Line	-	FT	\$	12.00	\$	-
644	Parking Stall Line	-	FT	\$	1.50	\$	-
644	Lane Arrow	-	EA	\$	85.00	\$	-
644	Word on Pavement	-	EA	\$	100.00	\$	-
	Markings Removal	-	LF	\$	2.50	\$	-
	RRFB	-	EA	\$	15,000.00	\$	-
Subtotal						\$	51,996

LIGHTING

625	Connector Kit, Type II	260	EA	\$	60.00	\$	15,600
625	Conventional Lighting Pole APP, with foundation, installed	130	EA	\$	3,300.00	\$	429,000
625	Luminaire, Conventional, APP	130	EA	\$	500.00	\$	65,000
625	Parking Lot Lighting, with Luminaires	-	EA	\$	7,000.00	\$	-
625	Conduit and Wiring	8,840	LF	\$	7.00	\$	61,880
625	Trench	21,790		\$	8.00	\$	174,320
625	Power Service, A.P.P.	1	EA	\$	3,000.00	\$	3,000
625	Control Center	-	EA	\$	3,000.00	\$	-
625	High Voltage Test		Lump	\$	6,000.00	\$	-
	Misc.	-	Lump	\$	15,000.00	\$	-
Subtotal						\$	748,800

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

SIGNALS

Signal (Full Replacement)	1	Lump	\$ 250,000.00	\$ 250,000
Signal (Minor Modifications)	3	Lump	\$ 10,000.00	\$ 30,000
Signal (Major Modifications)	1	Lump	\$ 100,000.00	\$ 100,000
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -

Subtotal \$ 380,000

STRUCTURES

Spec Culvert Extension	-	SF	\$ 250.00	\$ -
	-	Lump	\$ -	\$ -
	-	Lump	\$ -	\$ -

Subtotal \$ -

LANDSCAPING

-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	EA	\$ -	\$ -
-	Lump	\$ 50,000.00	\$ -
-	Lump	\$ -	\$ -
-	Lump	\$ -	\$ -

Subtotal \$ -

MISCELLANEOUS

614 Maintaining Traffic	-	Lump	\$ 100,000.00	\$ 100,000
623 Construction Layout Stakes	-	Lump	\$ 40,000.00	\$ 40,000
624 Mobilization	-	Lump	\$ 60,000.00	\$ 60,000

Subtotal \$ 200,000

Construction Total \$ 14,527,000

Statements of Probable Construction and Right-of-Way Costs and Detailed Cost Estimates prepared by the Engineer represent his best judgment as a design professional familiar with the construction industry. It is recognized, however, that the Engineer has no control over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Engineer cannot and does not guarantee that bids or prices will not vary from any Statement of Probable Construction Cost or other cost estimate prepared by him.

Alum Creek Drive - State Route 317 to Groveport Road

CONSTRUCTION COSTS

Roadway	\$	1,998,000	Signals	\$	380,000
Erosion Control	\$	595,000	Street Lighting	\$	749,000
Drainage	\$	4,433,000	Structures	\$	-
Pavement	\$	4,579,000	Landscaping	\$	-
Water	\$	-	Miscellaneous	\$	200,000
Traffic Control	\$	52,000			
Construction Item Subtotal (rounded)				\$	12,986,000
Project Scale Factor*	0%		Project Scale Unit Cost Cont.	\$	-
General Contingency	20%		General Contingency	\$	2,597,200
Annual/Cumulative Inflation Rate	3%	19%	Inflation**	\$	3,024,000
Year of Estimate/Construction	2016	2022	Subtotal of Construction Costs	\$	18,607,200

*Smaller projects typically have higher unit costs due to a loss of economies of scale. The Project Scale Factor is a rough adjustment to unit costs provided for projects which are often significantly larger.

**Cumulative inflation between the year of estimate and construction. Includes project scale cost contingency and general contingency.

OTHER PROJECT COSTS

Utility Relocation			\$	235,000
Right-of-Way			\$	1,211,000
Environmental	3%		\$	559,000
Engineering	14%	of Construction Subtotal	\$	2,606,000
Construction Observ., Services	6%	of Construction Subtotal	\$	1,117,000
Subtotal of Other Project Costs				\$ 5,728,000

ESTIMATED TOTAL PROJECT COST

\$ 24,335,200

Estimate prepared by Stantec Consulting Services

6/22/2017

These cost estimates were developed at a planning level of analysis and many factors, some of which could affect the total project cost, remain unknown at this time. This estimates provides our best judgment of project cost based on the level of analysis (planning leve) by design professionals familiar with the construction industry. Bid item costs are based, in part, on previous bids tabulated by ODOT's Estimator software, and will vary as the Stantec has no control over a contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Stantec cannot and does not guarantee that bids or prices will not vary from this estimate.

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

Item	Description	Quantity	Unit	Unit Cost	Total
ROADWAY					
201	Clearing & Grubbing	-	Lump	\$ 35,000.00	\$ -
202	Walk Removed	-	SF	\$ 1.50	\$ -
203	Excavation	74,822.22	CY	\$ 20.00	\$ 1,496,444
203	Embankment	10,072.22	CY	\$ 20.00	\$ 201,444
	Cut and Reuse as Fill	-	CY	\$ 18.00	\$ -
	Place Excavated Materials as Embankment	-	CY	\$ 15.00	\$ -
204	Subgrade Compaction	74,822	SY	\$ 4.00	\$ 299,289
606	Cable Barrier	-	FT	\$ 15.00	\$ -
607	Fence, Misc.: Wood Fence (fall protection along path)	-	FT	\$ 30.00	\$ -
608	Concrete Walk, 4"	-	SF	\$ 7.00	\$ -
608	Concrete Walk, 8"	-	SF	\$ 9.00	\$ -
608	Curb Ramps	-	EA	\$ 1,000.00	\$ -
	Concrete Steps APP	-	SF	\$ 150.00	\$ -
	Brick Walk A.P.P.	-	SF	\$ 23.00	\$ -
609	Curb, Type 6	-	LF	\$ 20.00	\$ -
622	Concrete Barrier, Single Slope	-	FT	\$ 80.00	\$ -
622	Concrete Barrier End Section	-	EA	\$ 3,000.00	\$ -
	Subtotal				\$ 1,997,178
EROSION CONTROL					
207	Perimeter Filter Fabric Fence	25,900	FT	\$ 3.00	\$ 77,700
659	Water	467	M GAL	\$ 100.00	\$ 46,700
659	Topsoil	9,583	CY	\$ 30.00	\$ 287,489
659	Agricultural Lime	18	ACRE	\$ 100.00	\$ 1,784
659	Commercial Fertilizer	12	TON	\$ 700.00	\$ 8,162
659	Seeding & Mulching	86,333	SY	\$ 2.00	\$ 172,666
	Subtotal				\$ 594,501
DRAINAGE					
603	12" Conduit, Type B	-	FT	\$ 60.00	\$ -
603	15" Conduit, Type B	6,475.00	FT	\$ 75.00	\$ 485,625
603	18" Conduit, Type B	-	FT	\$ 90.00	\$ -
603	24" Conduit, Type B	-	FT	\$ 105.00	\$ -
604	60" Conduit, Type B	12,950.00	FT	\$ 250.00	\$ 3,237,500
601	Catch Basin No. 2-2B	86.33	EA	\$ 1,120.00	\$ 96,693
602	Catch Basin No. 3A	-	EA	\$ 2,400.00	\$ -
604	Manhole No. Type C	43.167	EA	\$ 4,000.00	\$ 172,667
605	4" Base Pipe Underdrain	51,800.00	FT	\$ 8.50	\$ 440,300
	Subtotal				\$ 4,432,785
PAVEMENT					
254	Pavement Planing, ~4"	69,067	SY	\$ 2.75	\$ 189,934
301	Asphalt Concrete Base	18,706	CY	\$ 120.00	\$ 2,244,667
304	Aggregate Base	12,470	CY	\$ 55.00	\$ 685,871
408	Prime Coat	-	Gal	\$ 4.00	\$ -
448	Asphalt Concrete Surface Course	5,995	CY	\$ 160.00	\$ 959,261
448	Asphalt Concrete Intermediate Course	3,118	CY	\$ 160.00	\$ 498,816
	Subtotal				\$ 4,578,549

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

WATER

638	6" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	100.00	\$	-
638	8" Ductile Iron Water Pipe and Fittings, Class 54	-	FT	\$	125.00	\$	-
638	16" Ductile Iron Water Pipe and Fittings, Class 53	-	FT	\$	200.00	\$	-
638	6" Valve and Appurtenances	-	EA	\$	600.00	\$	-
638	Fire Hydrant	-	EA	\$	2,500.00	\$	-
638	Valve Box Adjusted to Grade	-	EA	\$	300.00	\$	-
638	Fire Hydrant Adjusted to Grade	-	EA	\$	800.00	\$	-
	Water Line to Irrigation	-	FT	\$	20.00	\$	-
	Water Service and Meter	-	Lump	\$	3,000.00	\$	-
816	3/4" Water Service Tap Relocated	-	EA	\$	1,000.00	\$	-
Subtotal						\$	-

TRAFFIC CONTROL

621	RPM	1,295	EA	\$	25.00	\$	32,375
630	Removal of Ground Mounted Sign and Disposal	-	EA	\$	15.00	\$	-
630	Removal of Ground Mounted Post Support and Disposal	-	EA	\$	20.00	\$	-
630	Sign, Flat Sheet	-	SF	\$	20.00	\$	-
631	Sign, Double faced, Street Name	-	EA	\$	90.00	\$	-
630	Ground Mounted Support, No. 3 Post	-	FT	\$	15.00	\$	-
630	Street Name Sign Support, No. 3 Post	-	FT	\$	20.00	\$	-
644	Center Line	-	MI	\$	3,800.00	\$	-
644	Edge Line	9.81	MI	\$	2,000.00	\$	19,621
644	Lane Line	9.81	MI				
644	Channelizing Line	-	FT	\$	3.00	\$	-
644	Transverse Line	-	FT	\$	5.00	\$	-
644	Stop Line	-	FT	\$	15.00	\$	-
644	Crosswalk Line	-	FT	\$	12.00	\$	-
644	Parking Stall Line	-	FT	\$	1.50	\$	-
644	Lane Arrow	-	EA	\$	85.00	\$	-
644	Word on Pavement	-	EA	\$	100.00	\$	-
	Markings Removal	-	LF	\$	2.50	\$	-
	RRFB	-	EA	\$	15,000.00	\$	-
Subtotal						\$	51,996

LIGHTING

625	Connector Kit, Type II	260	EA	\$	60.00	\$	15,600
625	Conventional Lighting Pole APP, with foundation, installed	130	EA	\$	3,300.00	\$	429,000
625	Luminaire, Conventional, APP	130	EA	\$	500.00	\$	65,000
625	Parking Lot Lighting, with Luminaires	-	EA	\$	7,000.00	\$	-
625	Conduit and Wiring	8,840	LF	\$	7.00	\$	61,880
625	Trench	21,790		\$	8.00	\$	174,320
625	Power Service, A.P.P.	1	EA	\$	3,000.00	\$	3,000
625	Control Center	-	EA	\$	3,000.00	\$	-
625	High Voltage Test		Lump	\$	6,000.00	\$	-
	Misc.	-	Lump	\$	15,000.00	\$	-
Subtotal						\$	748,800

Alum Creek Drive - State Route 317 to Groveport Road

Detailed Construction Estimate

SIGNALS

Signal (Full Replacement)	1	Lump	\$ 250,000.00	\$ 250,000
Signal (Minor Modifications)	3	Lump	\$ 10,000.00	\$ 30,000
Signal (Major Modifications)	1	Lump	\$ 100,000.00	\$ 100,000
TRENCH	-	FT	\$ 5.75	\$ -
Pull Box	-	EA	\$ 1,700.00	\$ -
Interconnect	-	EA	\$ 45.00	\$ -
Subtotal				\$ 380,000

STRUCTURES

Spec Culvert Extension	-	SF	\$ 250.00	\$ -
	-	Lump	\$ -	\$ -
	-	Lump	\$ -	\$ -
Subtotal				\$ -

LANDSCAPING

-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	SF	\$ -	\$ -
-	EA	\$ -	\$ -
-	Lump	\$ 50,000.00	\$ -
-	Lump	\$ -	\$ -
-	Lump	\$ -	\$ -

Subtotal \$ -

MISCELLANEOUS

614 Maintaining Traffic	-	Lump	\$ 100,000.00	\$ 100,000
623 Construction Layout Stakes	-	Lump	\$ 40,000.00	\$ 40,000
624 Mobilization	-	Lump	\$ 60,000.00	\$ 60,000
Subtotal				\$ 200,000

Construction Total \$ 12,984,000

Statements of Probable Construction and Right-of-Way Costs and Detailed Cost Estimates prepared by the Engineer represent his best judgment as a design professional familiar with the construction industry. It is recognized, however, that the Engineer has no control over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Engineer cannot and does not guarantee that bids or prices will not vary from any Statement of Probable Construction Cost or other cost estimate prepared by him.