



SR 910
New Access Cost Estimate

	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 0910	N Montour Road	Totals
Design ¹	\$596,200	\$369,300	\$394,200	\$606,300	\$0	\$177,500	\$2,143,500
Construction ²	\$1,806,600	\$1,119,000	\$1,194,400	\$1,837,200	\$0	\$537,800	\$6,495,000
Relocated Utilities	\$180,700	\$111,900	\$119,500	\$183,800	\$0	\$53,800	\$649,700
Right-of-Way	\$400,000	\$0	\$261,000	\$454,100	\$0	\$49,500	\$1,164,600
Construction Inspection	\$298,100	\$184,700	\$197,100	\$303,200	\$0	\$88,800	\$1,071,900
Subtotals:	\$3,281,600	\$1,784,900	\$2,166,200	\$3,384,600	\$0	\$907,400	\$11,524,700
40% Contingency:	\$1,312,700	\$714,000	\$866,500	\$1,353,900	\$0	\$363,000	\$4,610,100
TOTALS:	\$4,594,300	\$2,498,900	\$3,032,700	\$4,738,500	\$0	\$1,270,400	\$16,134,800

1 - Design cost was assumed to cover Preliminary Engineering tasks (i.e. required studies and environmental clearances).

2 - See construction breakdown below.

SR 0910 Interchange Construction Breakdown							
Items	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 0910	N Montour Road	Total
Excavation/Borrow	\$750,000	\$200,000	\$212,000	\$807,825	\$0	\$66,675	\$2,036,500
Pavement	\$555,450	\$532,450	\$485,300	\$618,125	\$0	\$381,425	\$2,572,750
Structures	-	-	\$48,000	\$105,000	\$0	\$0	\$153,000
Signals	\$200,000	\$200,000	\$250,000	-	\$0	\$0	\$650,000
Mobilization (5%)	\$75,273	\$46,623	\$49,765	\$76,548	\$0	\$22,405	\$270,613
MPT (15%)	\$225,818	\$139,868	\$149,295	\$229,643	\$0	\$67,215	\$811,838
TOTAL Construction Cost	\$1,806,540	\$1,118,940	\$1,194,360	\$1,837,140	\$0	\$537,720	\$6,494,700

Ramp 1			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	50000	\$750,000
Pavement	\$115.00/SY	4830	\$555,450
Structures	-	-	-
Signals	\$200,000.00/EACH	1	\$200,000
Right-of-Way	-	-	\$400,000

Ramp 2			
Items	Unit Cost	Qty	Cost
Borrow	\$20.00/CY	10000	\$200,000
Pavement	\$115.00/SY	4630	\$532,450
Structures	-	-	-
Signals	\$200,000.00/EACH	1	\$200,000
Right-of-Way	-	-	-

Ramp 3			
Items	Unit Cost	Qty	Cost
Borrow	\$20.00/CY	10600	\$212,000
Pavement	\$115.00/SY	4220	\$485,300
Structures	\$600.00/LF	80	\$48,000
Signals	\$250,000.00/EACH	1	\$250,000
Right-of-Way	\$5.00/SF	52200	\$261,000

Ramp 4			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	53855	\$807,825
Pavement	\$115.00/SY	5375	\$618,125
Structures	\$600.00/LF	175	\$105,000
Signals	-	-	-
Right-of-Way	\$3.00/SF	151345	\$454,035

SR 0910			
Items	Unit Cost	Qty	Cost
Excavation	-	-	-
Pavement	-	-	-
Structures	-	-	-
Signals	-	-	-
Right-of-Way	-	-	-

N Montour Rd			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	4445	\$66,675
Pavement	\$95.00/SY	4015	\$381,425
Structures	-	-	-
Signals	-	-	-
Right-of-Way	\$3.00/SF	16500	\$49,500



SR 28
New Access Cost Estimate

	Ramp 1	Ramp 3	Ramp 6	Ramp 7	Ramp 8	Totals
Design ¹	\$727,100	\$353,900	\$312,800	\$1,087,800	\$982,800	\$3,464,400
Construction ²	\$3,304,600	\$1,608,200	\$1,421,500	\$4,944,200	\$4,467,000	\$15,745,500
Relocated Utilities	\$330,500	\$160,900	\$142,200	\$494,500	\$446,700	\$1,574,800
Right-of-Way	\$1,497,300	\$3,221,000	\$708,500	\$2,934,300	\$1,580,200	\$9,941,300
Construction Inspection	\$545,300	\$265,400	\$234,600	\$815,900	\$737,100	\$2,598,300
Subtotals:	\$6,404,800	\$5,609,400	\$2,819,600	\$10,276,700	\$8,213,800	\$33,324,300
40% Contingency:	\$2,562,000	\$2,243,800	\$1,127,900	\$4,110,700	\$3,285,600	\$13,330,000
TOTALS:	\$8,966,800	\$7,853,200	\$3,947,500	\$14,387,400	\$11,499,400	\$46,654,300

1 - Design cost was assumed to cover Preliminary Engineering tasks (i.e. required studies and environmental clearances).

2 - See construction breakdown below.

SR 28 Interchange Construction Breakdown						
Items	Ramp 1	Ramp 3	Ramp 6	Ramp 7	Ramp 8	Total
Excavation	\$124,050	\$242,535	\$178,185	\$808,965	\$474,840	\$1,828,575
Borrow	\$1,405,600	\$0	\$550,460	\$2,011,540	\$1,912,540	\$5,880,140
Pavement	\$1,224,175	\$1,097,560	\$455,860	\$1,050,755	\$820,180	\$4,648,530
Structures	\$0	\$0	\$0	\$248,900	\$514,900	\$763,800
Mobilization (5%)	\$137,691	\$67,005	\$59,225	\$206,008	\$186,123	\$656,052
MPT (15%)	\$413,074	\$201,014	\$177,676	\$618,024	\$558,369	\$1,968,157
TOTAL Construction Cost	\$3,304,600	\$1,608,200	\$1,421,500	\$4,944,200	\$4,467,000	\$15,745,500

Ramp 1			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	8270	\$124,050
Borrow	\$20.00/CY	70280	\$1,405,600
Pavement	\$115.00/SY	10645	\$1,224,175
Structures	\$950.00/LF	0	\$0
Right-of-Way	\$5.00/SF	299450	\$1,497,250

Ramp 3			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	16169	\$242,535
Pavement	\$115.00/CY	9544	\$1,097,560
Structures	\$950.00/SY	0	\$0
Right-of-Way	\$5.00/LF	644200	\$3,221,000

Ramp 7			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	53931	\$808,965
Borrow	\$20.00/CY	100577	\$2,011,540
Pavement	\$115.00/SY	9137	\$1,050,755
Structures	\$950.00/LF	262	\$248,900
Right-of-Way	\$5.00/SF	586852	\$2,934,260

Ramp 8			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	31656	\$474,840
Borrow	\$20.00/CY	95627	\$1,912,540
Pavement	\$115.00/SY	7132	\$820,180
Structures	\$950.00/LF	542	\$514,900
Right-of-Way	\$5.00/SF	316038	\$1,580,190

Ramp 6			
Items	Unit Cost	Qty	Cost
Excavation	\$15.00/CY	11879	\$178,185
Borrow	\$20.00/CY	27523	\$550,460
Pavement	\$115.00/SY	3964	\$455,860
Structures	\$950.00/LF	0	\$0
Right-of-Way	\$5.00/SF	141688	\$708,440

**SR 130
New Access Cost Estimate**

	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 130	Nike Site Road	Sandy Hill Road	Totals (with SR 130)	Totals (without SR 130)
Design ¹	\$317,100	\$1,332,100	\$1,289,700	\$278,300	\$4,653,000	\$397,900	\$180,200	\$8,448,300	\$3,795,300
Construction ²	\$960,800	\$4,036,600	\$3,908,100	\$843,100	\$14,100,000	\$1,205,600	\$546,000	\$25,600,200	\$11,500,200
Relocated Utilities	\$96,100	\$403,700	\$390,900	\$84,400	\$1,410,000	\$120,600	\$54,600	\$2,560,300	\$1,150,300
Right-of-Way	\$802,200	\$0	\$704,300	\$868,600	\$4,700,000	\$278,700	\$180,000	\$7,533,800	\$2,833,800
Construction Inspection	\$158,600	\$666,100	\$644,900	\$139,200	\$2,326,500	\$199,000	\$90,100	\$4,224,400	\$1,897,900
Subtotals:	\$2,334,800	\$6,438,500	\$6,937,900	\$2,213,600	\$27,189,500	\$2,201,800	\$1,050,900	\$48,367,000	\$21,177,500
40% Contingency:	\$934,000	\$2,575,400	\$2,775,200	\$885,500	\$10,875,800	\$880,800	\$420,400	\$19,347,100	\$8,471,300
TOTALS:	\$3,268,800	\$9,013,900	\$9,713,100	\$3,099,100	\$38,065,300	\$3,082,600	\$1,471,300	\$67,714,100	\$29,648,800

1 - Design cost was assumed to cover Preliminary Engineering tasks (i.e. required studies and environmental clearances).

2 - See construction breakdown below.

SR 130 Interchange Construction Breakdown									
Items	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 130	Nike Site Road	Sandy Hill Road	Total (with SR 130)	Total (without SR 130)
Excavation	\$23,790	\$210,015	\$2,276,445	\$139,575	\$0	\$172,350	\$4,170	\$2,826,400	\$2,826,400
Borrow	\$339,680	\$0	\$0	\$3,190	\$0	\$0	\$0	\$342,900	\$342,900
Pavement	\$437,128	\$693,693	\$730,161	\$559,692	\$0	\$542,228	\$250,707	\$3,213,700	\$3,213,700
Structures	\$0	\$2,460,000	\$0	\$0	\$0	\$290,000	\$0	\$2,750,000	\$2,750,000
Roadway Upgrade (\$5M/ mi)	\$0	\$0	\$0	\$0	\$11,000,000	\$0	\$0	\$11,000,000	\$0
Signals	\$0	\$0	\$250,000	\$0	\$750,000	\$0	\$200,000	\$1,200,000	\$450,000
Mobilization (5%)	\$40,100	\$168,200	\$162,900	\$35,200	\$587,500	\$50,300	\$22,800	\$1,067,000	\$479,500
MPT (15%)	\$120,100	\$504,600	\$488,500	\$105,400	\$1,762,500	\$150,700	\$68,300	\$3,200,100	\$1,437,600
TOTAL Construction Cost	\$960,798	\$4,036,508	\$3,908,006	\$843,057	\$14,100,000	\$1,205,578	\$545,977	\$25,600,000	\$11,500,000

Right-of-Way costs for commercial and residential properties as part of the ROW cost were provided by AECOM except for SR 130 upgrades were assumed to be 40% of the estimated construction cost.

Ramp 1				Raw Quantities
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	1586	\$23,790	1586 CY
Borrow	\$20.00/CY	16984	\$339,680	17777 CY
Pavement	\$115.00/SY	3801	\$437,128	34210 SF
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$10.00/SF	80220	\$802,200	80216.9196 SF
Ramp 2				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	14001	\$210,015	14001 CY
Borrow	\$20.00/CY	-6861	\$0	140 CY
Pavement	\$115.00/SY	6032	\$693,693	54289 SF
Structures	\$110.00/SF	10058	\$1,110,000	
Noise Wall	\$75.00/SF	18000	\$1,350,000	Estimated 20-ft in height and 900-ft length (full extent of housing development)
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$3.00/SF	0	\$0	0 SF
Ramp 3				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	151763	\$2,276,445	151763 CY
Borrow	\$20.00/CY	-55422	\$0	20460 CY
Pavement	\$115.00/SY	6349	\$730,161	57143 SF
Structures	\$1.00/LF	0	\$0	
Signals	\$250,000.00/EACH	1	\$250,000	
Right of Way	\$3.00/SF	234760	\$704,280	234757.153 SF
Ramp 4				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	9305	\$139,575	9305 CY
Borrow	\$20.00/CY	160	\$3,190	4812 CY
Pavement	\$115.00/SY	4867	\$559,692	43802 SF
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$10.00/SF	86860	\$868,600	86856.7567 SF
Nike Site Road				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	11490	\$172,350	11490 CY
Borrow	\$20.00/CY	-4893	\$0	852 CY
Pavement	\$95.00/SY	5708	\$542,228	51369 SF
Structures	\$65.00/SF	4440	\$290,000	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$3.00/SF	92870	\$278,610	92869.6033 SF
SR 130				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	0	\$0	0 CY
Borrow	\$20.00/CY	0	\$0	0 CY
Pavement	\$95.00/SY	0	\$0	0 SF
Signals	\$250,000.00/EACH	3	\$750,000	
Upgrade	\$5M/ mile	2	\$11,000,000	
Right of Way	40% Construction	LS	\$4,700,000.0	0 SF
SANDY HILL ROAD				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	278	\$4,170	278 CY
Borrow	\$20.00/CY	-139	\$0	0 CY
Pavement	\$95.00/SY	2639	\$250,707	23751.2006 SF
Signals	\$200,000.00/EACH	1	\$200,000	
Structures	\$1.00/LF	0	\$0	
Right of Way	\$5.00/SF	36000	\$180,000	36000 SF



SR 981
New Access Cost Estimate

	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 0981	Fiedors Grove Road	Totals
Design ¹	\$524,600	\$598,400	\$252,700	\$354,600	\$244,900	\$544,900	\$2,520,100
Construction ²	\$1,665,100	\$1,899,600	\$802,100	\$1,125,400	\$777,400	\$1,729,600	\$7,999,200
Relocated Utilities	\$83,300	\$95,000	\$40,200	\$56,300	\$38,900	\$86,500	\$400,200
Right-of-Way	\$188,700	\$250,000	\$157,200	\$946,200	\$0	\$271,700	\$1,813,800
Construction Inspection	\$262,300	\$299,200	\$126,400	\$177,300	\$122,500	\$272,500	\$1,260,200
Subtotals:	\$2,724,000	\$3,142,200	\$1,378,600	\$2,659,800	\$1,183,700	\$2,905,200	\$13,993,500
40% Contingency:	\$1,089,600	\$1,256,900	\$551,500	\$1,064,000	\$473,500	\$1,162,100	\$5,597,600
TOTALS:	\$3,813,600	\$4,399,100	\$1,930,100	\$3,723,800	\$1,657,200	\$4,067,300	\$19,591,100

- 1 - Design cost was assumed to cover Preliminary Engineering tasks (i.e. required studies and environmental clearances).
2 - See construction breakdown below.

SR 981 Interchange Construction Breakdown							
Items	Ramp 1	Ramp 2	Ramp 3	Ramp 4	SR 0981	Fiedors Grove Road	Total
Excavation	\$797,745	\$911,430	\$138,345	\$256,335	\$0	\$13,710	\$2,117,600
Borrow	\$0	\$0	\$0	\$0	\$0	\$976,000	\$976,000
Pavement	\$589,669	\$671,408	\$529,907	\$681,464	\$647,710	\$451,577	\$3,571,800
Structures	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Signals	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mobilization (5%)	\$69,400	\$79,200	\$33,500	\$46,900	\$32,400	\$72,100	\$333,500
MPT (15%)	\$208,200	\$237,500	\$100,300	\$140,700	\$97,200	\$216,200	\$1,000,100
TOTAL Construction Cost	\$1,665,014	\$1,899,538	\$802,052	\$1,125,399	\$777,310	\$1,729,587	\$7,999,000

Due to the minimal presence of utilities within the study limits, an estimated 5% of the construction cost was utilized to determine the utility cost for SR 981. Due to the presence of multiple utilities and potential conflict points within the SR 130 study limits, an estimated 10% of the construction cost was utilized to determine the utility cost for SR 130.

SR 981 does not include a cost associated with an upgrade to the SR 981 Corridor beyond the interchange turning lanes and the relocation of Fiedors Grove Road. The required upgrade to the SR 981 Corridor will be determined as part of the Laurel Valley Transportation Improvement Project.

Calculations:

Ramp 1				Raw Quantities
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	53183	\$797,745	53183 CY
Borrow	\$20.00/CY	-22745	\$0	3847 CY
Pavement	\$115.00/SY	5128	\$589,669	46148 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$1.50/SF	125793	\$188,690	
Ramp 2				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	60762	\$911,430	60762 CY
Borrow	\$20.00/CY	-28419	\$0	1962 CY
Pavement	\$115.00/SY	5838	\$671,408	52545 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$1.50/SF	166647	\$249,971	
Ramp 3				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	9223	\$138,345	9223 CY
Borrow	\$20.00/CY	-3411	\$0	1201 CY
Pavement	\$115.00/SY	4608	\$529,907	41471 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$1.50/SF	104800	\$157,200	
Ramp 4				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	17089	\$256,335	17089 CY
Borrow	\$20.00/CY	-7892	\$0	653 CY
Pavement	\$115.00/SY	5926	\$681,464	53332 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$5.00/SF	189231	\$946,155	
SR 981				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	0	\$0	0 CY
Borrow	\$20.00/CY	0	\$0	0 CY
Pavement	\$95.00/SY	6818	\$647,710	61362 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$5.00/SF	0	\$0	
Fiedors Grove Road				
Items	Unit Cost	Qty	Cost	
Excavation	\$15.00/CY	914	\$13,710	914 CY
Borrow	\$20.00/CY	48800	\$976,000	49257 CY
Pavement	\$95.00/SY	4753	\$451,577	42781 SQFT
Structures	\$1.00/LF	0	\$0	
Signals	\$200,000.00/EACH	0	\$0	
Right of Way	\$1.50/SF	181116	\$271,674	