

## 7.0 ITEMIZED COST ESTIMATES

### 7.1 Itemized Estimate

Detailed cost estimates have been prepared for Alternatives A, B and C. The cost estimate for the **Preferred Alternative (Alternative C)** is included on the following pages. It is anticipated that the project will be constructed in two segments. See **Section 8.0, Implementation Plan**. A detailed estimate has been developed for each Segment. The estimated cost of SR 86 improvements is shown in **Table 7-1: Summary of Project Costs**. The cost estimates for Alternatives A and B are in **Appendix C** along with the plan/profile sheets for Alternatives A and B.

#### Estimated Costs of Improvements to Local Roads:

This Design Concept Study includes improvements to Local Roads. The improvements include the following types of work:

- Realignment and widening of local roads that intersect SR 86 to improve geometry of the roadways for turning movements and to increase the capacity of the intersections.
- Extensions of local roads to improve access to properties that abut both SR 86 and local roads.
- Grading and paving unimproved local roads to improve access to adjacent properties.

The estimated cost for Design, R/W and Construction of each Local Road is shown in **Table 7-2: Summary of Costs to Pima County for Local Roads**.

The unit prices are based on recent ADOT bid results with adjustments made to reflect the project location and the difficulty of the work anticipated. See **Appendix A** for the preliminary structural pavement sections.

The basis for the quantity estimates and unit prices is summarized below.

#### Removals:

- Clearing and Grubbing (Acre).
- Removal of Structures and Obstructions (Lump Sum).
- Removal of Bridge Railing (L. Sum).
- Removal of Structural Concrete (Cu. Yd.).
- Removal of Asphaltic Concrete Pavement (Sq. Yd.).
- Removal of Pipe (Lin. Ft.).
- Remove and Salvage (Guard Rail Terminals) (Each).
- Remove and Salvage Guard Rail (Lin. Ft.).

- Remove Bituminous Pavement (Milling) (Sq. Yd).
- Saw Cutting (Lin. ft.).

#### Roadway Excavation:

- Roadway Excavation (Cu. Yd.).
  - Drainage Excavation (Cu. Yd.).
- Shrink and swell factors are not considered in the computed quantities for Roadway Excavation or Drainage Excavation.
- Dyke (Type A) (Lin. Ft.).

#### Borrow:

- Borrow (Cu. Yd.)
- Shrink and swell factors are not considered in the computed quantities for Borrow.

#### Aggregate Base:

- Aggregate Base, Class 2 (Cu. Yd.).

#### Bituminous Tack Coat:

- Bituminous Tack Coat (Ton).
- Apply Bituminous Tack Coat (Hour).

#### Fog Coat:

- Fog Coat (Ton).
- Blotter Material (Ton).

#### AC:

- Asphaltic Concrete (Ton).
- Asphalt Binder (PG 64-22) (5.25%) (Ton).
- Mineral Admixture (1%) (Ton).

#### AR-ACFC:

- AR-ACFC (Ton).
- Asphalt Rubber (9%) (Ton).
- Mineral Admixture (1%) (Ton).

#### Pipe Culvert

- Pipe Culvert (various sizes) (Lin. Ft.).
- Flared End Sections (various sized) (Each).

#### RCBC and Headwalls:

- Structural Concrete (Class S) (for Headwalls, RCBC) (Cu. Yd.).
- Structural Steel (Headwalls, RCBC) (Lb.).

#### Bridges:

- New Bridges (L. Sum).
- Bridge Modification (L. Sum).
- F-Shape Concrete Bridge Barrier and Transition (Lin. Ft.).

#### Fencing

- Barded Wire Fence, Type 1 (Lin. Ft.).

#### Seeding/Revegetation

- Seeding (Class II) (Acre).

#### Guardrail/Barrier

- Guardrail (Type) (Lin. Ft.).
- Guardrail Terminal (Each).
- Median Cable Barrier (Lin. Ft.).
- Reconstruct Guard Rail End Terminal Assembly (Each).

#### Channel Lining

- Shotcrete (Bank Protection for Dikes) (Sq. Yd.)

#### Pavement Marking

- Delineators (Type) (Each).
- Pavement Marker, Raised (Type) (Each).
- Pavement Marking (Type).

#### Traffic Signals

- Remove Traffic Signals (L. Sum).
- Traffic Signal (Each).

#### Miscellaneous Work (Signing) (L. Sum).

#### Maintenance of Traffic

- Maintenance and Protection of Traffic (percent of construction cost) (L. sum) – Below the line item.

#### AC Material Quality Incentive:

- Included as a below the line item.
- Unit Price - \$3.00 per Ton.

#### AR-ACFC Smoothness Incentive:

- Included as a below the line item.
- Unit Price - \$11,000 per lane mile (new construction).
- Unit Price - \$7,000 per lane mile (overlay – mill & replace).

## 7.2 Estimate Summary – Preferred Alternative

### Estimated Cost – SR 86 (See Table 7-1):

The estimated cost of the improvement of SR 86 includes the improvement of Local Roads within the SR 86 R/W.

The estimated construction and design cost of the preferred alternative identified in this study is \$67,440,000 for mainline SR 86.

The estimated cost of R/W and Drainage Easements (DE) for mainline SR 86 for the preferred alternative is \$3,956,000.

An estimated amount of \$800,000 has been identified for Environmental Mitigation (Envir. Mit). The \$800,000 will be allocated during the Segment C2 design/construction phase.

An amount of \$1,200,000 is included for relocation of utility lines that will be attributable to ADOT. The extent of utility relocations and the responsibility for the cost of utility relocations will be determined during the design phase.

### Estimated Cost to Pima County for Local Roads (See Table 7-2):

The estimated cost of the improvement of local roads outside the limits of the SR 86 R/W is shown as a cost to Pima County. The estimated cost of construction and design of local roads is \$6,864,000. The cost of R/W and Drainage Easements for the improvement of local roads is \$952,000.

There are no costs shown for Valencia Road. The cost of the intersection including the signal system and that part of Valencia Road lying within the ADOT R/W is included in the SR 86 cost estimate. Pima County will design, obtain R/W and construct the widening of Valencia Road outside the ADOT R/W for SR 86.

TABLE 7-1: SUMMARY OF ESTIMATED COSTS FOR SR 86

Segment No.	Segment Name	Begin MP	End MP	Length (miles)	SR 86 Construction Costs (\$)	SR 86 Design Costs (\$)	SR 86 R/W & DE Costs (\$)	SR 86 Utility Relocation Costs (\$)	Envir. Mit. (\$)	Total Project Costs (\$)
C1	Sandario Rd. to San Joaquin Rd.	156.88	163.23	6.35	42,280,000	3,382,000	1,785,000	200,000	0	47,647,000
C2	San Joaquin Rd. to Kinney Rd.	163.23	166.58	3.35	20,290,000	1,623,000	2,171,000	1,000,000	800,000	25,884,000
<b>PROJECT TOTALS</b>				<b>9.70</b>	<b>62,570,000</b>	<b>5,005,000</b>	<b>3,956,000</b>	<b>1,200,000</b>	<b>800,000</b>	<b>73,531,000</b>

TABLE 7-2: SUMMARY OF ESTIMATED COSTS TO PIMA COUNTY FOR LOCAL ROADS

Segment No.	Local Road	Construction (\$)	Design (\$)	R/W & DE (\$)	Total (\$)
C1	Continental Rd.	92,000	7,000	None	99,000
C1	Valencia Rd.	0	0	None	0
C1	Old Ajo Hwy. (W)	97,000	8,000	27,000	132,000
<b>Segment No. C1</b>	<b>Subtotal</b>	<b>189,000</b>	<b>15,000</b>	<b>27,000</b>	<b>231,000</b>
C2	San Joaquin Rd.	201,000	16,000	None	217,000
C2	Camino Verde	1,882,000	151,000	125,000	2,158,000
C2	Tucson Estates Pkwy. (N)	435,000	35,000	180,000	650,000
C2	Spencer St.	183,000	15,000	33,000	231,000
C2	Oklahoma St.	355,000	28,000	209,000	592,000
C2	Sunset Blvd. (S)	541,000	43,000	147,000	731,000
C2	Sheridan Ave.	118,000	9,000	7,000	134,000
C2	Kinney Rd.	2,451,000	196,000	224,000	2,871,000
<b>Segment No. C2</b>	<b>Subtotal</b>	<b>6,166,000</b>	<b>493,000</b>	<b>925,000</b>	<b>7,584,000</b>
<b>TOTAL: SEGMENT C1 &amp; C2</b>		<b>6,356,000</b>	<b>508,000</b>	<b>952,000</b>	<b>7,816,000</b>

### 7.3 Estimate of Future Maintenance Costs

An estimate of the additional future annual maintenance costs that would result from the additional roadway lane miles added to this section of SR 86 was developed for the project. The additional future annual maintenance costs for SR 86; Sandario Road to Kinney Road are estimated to be approximately \$124,411 (See Table 7-3).

**TABLE 7-3: ESTIMATE OF FUTURE MAINTENANCE COSTS**

Annual Maintenance Cost Per Lane Mile Using PeCoS Latest FY Data <sup>1</sup>	
Category	SR 86, Sandario Rd to Kinney Rd
1. Paved Surfaces & Shoulders	420
2. Roadside	230
3. Drainage & Environmental	100
4. Rest Areas	
5. Traffic Operations - Signal & Lighting; Signing & Striping - ITS	935
6. Landscaping	85
7. Winter Storms	155
8. Emergency Response	30
9. Miscellaneous Maintenance <sup>2</sup>	300
10. Support and Other Operating Expenses	1165
11. Other Specialty Items <sup>3</sup>	
<b>MCL = Maintenance Cost per Lane Mile</b>	<b>\$3,420</b>
Annual Maintenance Cost of Project at PA/DCR Phase	
PW = Total Pavement Width <sup>4</sup>	38
NL = Number of 12-ft Wide Lanes	3.17
LP = Length of Project in Miles	9.7
<b>PMC = Current Project Maintenance Cost</b>	<b>\$105,051</b>
Annual Maintenance Cost of Project at Beginning of Maintenance Phase	
IF = Inflation Factor <sup>5</sup>	1.058
N = Number of Years to Maintenance Phase	3
<b>PMCI = Project Maintenance Cost including Inflation</b>	<b>\$124,411</b>

- Notes: 1- Lane mile width is 12 ft, Total maintenance lane miles = 27,722 miles  
 Metropolitan Phoenix maintenance lane miles = 2016 miles, Other Locations = 25,706 miles  
 2- Miscellaneous maintenance include building and yard maintenance, training, material handling, vegetation control and contract considered in the maintenance cost breakdown  
 3- For Other Specialty Items, contact Central Maintenance.  
 4- Total pavement width includes the main line, ramps and shoulders.  
 5- Based on increase in maintenance costs of 76% over the last 10 years

Gray areas require manual entry  
 NL = PW / 12  
 PMC = MCL x NL x LP  
 PMCI = PMC x (IF^N)

Arizona Department of Transportation  
Estimated Engineering Construction Cost

**Itemized Estimate**

Project Number: 086 PM 156 H6806 01C

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: SEGMENT C1 (SANDARIO RD TO SAN JOAQUIN RD)

**ALTERNATIVE C1**

Item No	Item Description	Unit	Quantity	Unit Price	Amount
2010011	CLEARING AND GRUBBING	ACRE	120.4	\$1,500.00	\$180,600
2020001	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.SUM	1	\$25,000.00	\$25,000
2020005	REMOVAL OF BRIDGE RAILING	L.SUM	1	\$30,000.00	\$30,000
2020009	REMOVAL OF STRUCTURAL CONCRETE	CU.YD.	915	\$200.00	\$183,000
2020029	REMOVAL OF ASPHALTIC CONCRETE PAVEMENT	SQ.YD.	8,000	\$2.50	\$20,000
2020041	REMOVAL OF PIPE	L.FT.	411	\$25.00	\$10,275
2020057	REMOVE AND SALVAGE (GUARD RAIL TERMINALS)	EACH	28	\$300.00	\$8,400
2020072	REMOVE AND SALVAGE GUARD RAIL	L.FT.	7,050	\$5.00	\$35,250
2020084	REMOVE BITUMINOUS PAVEMENT (MILLING) (2 1/2")	SQ.YD.	137,440	\$1.50	\$206,160
2020201	SAW CUTTING	L.FT.	8,180	\$1.50	\$12,270
2030301	ROADWAY EXCAVATION	CU.YD.	5,300	\$8.00	\$42,400
2030811	DYKE (TYPE A) (C-03.10)	L.FT.	24,800	\$40.00	\$992,000
2030901	BORROW	CU.YD.	300,000	\$10.00	\$3,000,000
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	70,900	\$30.00	\$2,127,000
4040111	BITUMINOUS TACK COAT	TON	179	\$450.00	\$80,550
4040116	APPLY BITUMINOUS TACK COAT	TON	310	\$150.00	\$46,500
4040125	FOG COAT	TON	33.5	\$500.00	\$16,750
4040163	BLOTTER MATERIAL	TON	100.4	\$40.00	\$4,016
4040264	ASPHALT BINDER (PG 64-22)	TON	3,610	\$400.00	\$1,444,000
4060026	MINERAL ADMIXTURE (FOR 3/4" MIX)	TON	652	\$90.00	\$58,680
4140040	ASPHALTIC CONCRETE FRICTION COURSE (ASPHALT-RUBBER)	TON	7,123	\$40.00	\$284,920
4140042	ASPHALT RUBBER MATERIAL (FOR AR-ACFC)	TON	641	\$600.00	\$384,600
4140044	MINERAL ADMIXTURE (FOR AR-ACFC)	TON	65	\$90.00	\$5,850
4160004	ASPHALTIC CONCRETE (3/4" MIX) (END PRODUCT) (SPECIAL MIX)	TON	68,770	\$35.00	\$2,406,950
5010011	PIPE, CORRUGATED METAL, 24"	L.FT.	184	\$75.00	\$13,800
5010017	PIPE, CORRUGATED METAL, 30"	L.FT.	504	\$95.00	\$47,880
5010025	PIPE, CORRUGATED METAL, 36"	L.FT.	96	\$120.00	\$11,520
5014030	FLARED END SECTION, 30" (C-13.25)	EACH	8	\$500.00	\$4,000
5014036	FLARED END SECTION, 36" (C-13.25)	EACH	2	\$700.00	\$1,400
6010002	STRUCTURAL CONCRETE (CLASS S) (F'C = 3,000)	CU.YD.	16,076	\$300.00	\$4,822,800
6010508	NEW BRIDGES (BLACK HILLS & SNYDER HILLS)	L.SUM	1	\$2,655,000.00	\$2,655,000
6010601	BRIDGE MODIFICATION	L.SUM	1	\$137,000.00	\$137,000
6011130	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32 INCH)	L.FT.	656	\$90.00	\$59,040
6050003	REINFORCING STEEL (CULVERTS & HEADWALLS)	LB.	2,241,000	\$0.75	\$1,680,750
7015042	TEMPORARY PAINTED MARKING (STRIPE)	L.FT.	177,770	\$0.10	\$17,777
7030022	DELINEATOR (FLEXIBLE) (SINGLE WHITE OR SINGLE YELLOW)	EACH	132	\$40.00	\$5,280
7060001	PAVEMENT MARKER, RAISED (REFLECTIVE)	EACH	1,900	\$4.00	\$7,600
7080021	PERMANENT PAVEMENT MARKING (PAINTED) (WHITE OR YELLOW)	L.FT.	177,770	\$0.10	\$17,777
7330630	REMOVE TRAFFIC SIGNALS	L.SUM	1	\$25,000.00	\$25,000
733X001	TRAFFIC SIGNAL (VALENCIA RD)	EACH	1	\$250,000.00	\$250,000
8050003	SEEDING (CLASS II)	ACRE	80.3	\$3,000.00	\$240,900
9030011	BARBED WIRE FENCE, TYPE 1	L.FT.	31,300	\$3.00	\$93,900
9050001	GUARD RAIL, W-BEAM, SINGLE FACE	L.FT.	4,000	\$20.00	\$80,000
9050090	CONSTRUCT GUARD RAIL TERMINAL FROM SALVAGE	EACH	8	\$1,000.00	\$8,000

Arizona Department of Transportation  
Estimated Engineering Construction Cost

**Itemized Estimate**

Project Number: 086 PM 156 H6806 01C

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: SEGMENT C1 (SANDARIO RD TO SAN JOAQUIN RD)

**ALTERNATIVE C1**

9050090	CONSTRUCT GUARD RAIL TERMINAL FROM SALVAGE	EACH	8	\$1,000.00	\$8,000
9120002	SHOTCRETE (Bank Protection for Dikes)	SQ.YD.	12,720	\$50.00	\$636,000
9240050	MISCELLANEOUS WORK (Signing)	L.SUM	1	\$155,000.00	\$155,000
928X001	RUMBLE STRIP (8-INCH) (MEDIAN SIDE)	L.FT.	65,500	\$0.20	\$13,100
<b>ALTERNATIVE C1 SUBTOTAL</b>					<b>\$22,588,695</b>
934XX01	MISCELLANEOUS WORK (15%)	COST	15%		\$3,388,304
<b>SUBTOTAL</b>					<b>\$25,976,999</b>
207XX01	DUST PALLIATIVE (1%)	COST	1%		\$259,770
209XX01	FURNISH WATER (1%)	COST	1%		\$259,770
701XX01	MAINTENANCE AND PROTECTION OF TRAFFIC (10%)	COST	10%		\$2,597,700
810XX01	EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$259,770
924XX02	CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$519,540
925XX01	CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$519,540
<b>SUBTOTAL</b>					<b>\$30,393,089</b>
901XX01	MOBILIZATION (10%)	COST	10%		\$3,039,309
<b>SUBTOTAL</b>					<b>\$33,432,398</b>
	CONTINGENCIES (5%)	Cost	5%		\$1,671,620
	CONSTRUCTION ENGINEERING	COST	15%		\$5,014,860
407X006	AR-ACFC SMOOTHNESS INCENTIVE (OVERLAY)	LANE	12	\$7,000.00	\$82,600
414X001	AR-ACFC SMOOTHNESS INCENTIVE	LANE	13	\$11,000.00	\$137,500
417X002	AC (END PRODUCT) (SHRP) MATERIAL QUALITY INCENTIVE	TON	68,770	\$3.00	\$206,310
951X010	INDIRECT COST ALLOCATION	COST	5.19%		\$1,735,141
<b>Alternative C1</b>					<b>\$42,280,429</b>

**OTHER COST**

	DESIGN	COST	8%		\$3,382,400
	R/W Mainline (50.51 acres)	L.SUM	1	\$1,266,400.00	\$1,266,400
	Drainage Easements (26.29 acres)	L.SUM	1	\$518,600.00	\$518,600
	Utility Relocation	L.SUM	1	\$200,000.00	\$200,000
<b>OTHER COST</b>					<b>\$5,367,000</b>

Summary		Section	Total
		Alternative C1	\$42,280,000
		OTHER COST	\$5,367,000
		<b>Total Project Cost</b>	<b>\$47,647,000</b>

Arizona Department of Transportation  
Estimated Engineering Construction Cost

**Itemized Estimate**

Project Number: 086 PM 156 H6806 01C

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: SEGMENT C2 (SAN JOAQUIN RD TO KINNEY RD)

**ALTERNATIVE C2**

Item No	Item Description	Unit	Quantity	Unit Price	Amount
2010011	CLEARING AND GRUBBING	ACRE	65.1	\$1,500.00	\$97,650
2020001	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.SUM	1	\$125,000.00	\$125,000
2020009	REMOVAL OF STRUCTURAL CONCRETE	CU.YD.	139	\$200.00	\$27,800
2020029	REMOVAL OF ASPHALTIC CONCRETE PAVEMENT	SQ.YD.	77,500	\$2.50	\$193,750
2020041	REMOVAL OF PIPE	L.FT.	879	\$25.00	\$21,975
2020072	REMOVE AND SALVAGE GUARD RAIL	L.FT.	550	\$10.00	\$5,500
2020084	REMOVE BITUMINOUS PAVEMENT (MILLING) (2 1/2")	SQ.YD.	15,436	\$1.50	\$23,154
2020201	SAW CUTTING	L.FT.	7,400	\$1.50	\$11,100
2030301	ROADWAY EXCAVATION	CU.YD.	36,200	\$8.00	\$289,600
2030401	DRAINAGE EXCAVATION	CU.YD.	84,600	\$8.00	\$676,800
2030811	DYKE (TYPE A) (C-03.10)	L.FT.	750	\$25.00	\$18,750
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	75,160	\$30.00	\$2,254,800
4040111	BITUMINOUS TACK COAT	TON	131	\$450.00	\$58,950
4040116	APPLY BITUMINOUS TACK COAT	HOUR	204	\$150.00	\$30,600
4040125	FOG COAT	TON	18.5	\$500.00	\$9,250
4040163	BLOTTER MATERIAL	TON	56.4	\$40.00	\$2,256
4040264	ASPHALT BINDER (PG 64-22)	TON	2,983	\$400.00	\$1,193,200
4060026	MINERAL ADMIXTURE (FOR 3/4" MIX)	TON	538	\$90.00	\$48,420
4140040	ASPHALTIC CONCRETE FRICTION COURSE (ASPHALT-RUBBER)	TON	4,090	\$40.00	\$163,600
4140042	ASPHALT RUBBER MATERIAL (FOR AR-ACFC)	TON	368	\$600.00	\$220,800
4140044	MINERAL ADMIXTURE (FOR AR-ACFC)	TON	37	\$90.00	\$3,330
4160004	ASPHALTIC CONCRETE (3/4" MIX) (END PRODUCT) (SPECIAL MIX)	TON	56,810	\$35.00	\$1,988,350
5010011	PIPE, CORRUGATED METAL, 24"	L.FT.	254	\$75.00	\$19,050
5010025	PIPE, CORRUGATED METAL, 36"	L.FT.	440	\$120.00	\$52,800
5010035	PIPE, CORRUGATED METAL, 48"	L.FT.	110	\$150.00	\$16,500
5014024	FLARED END SECTION, 24" (C-13.25)	EACH	4	\$500.00	\$2,000
5014036	FLARED END SECTION, 36" (C-13.25)	EACH	2	\$700.00	\$1,400
6010002	STRUCTURAL CONCRETE (CLASS S) (F'C = 3,000)	CU.YD.	3,760	\$300.00	\$1,128,000
6050003	REINFORCING STEEL (CULVERTS & HEADWALLS)	LB.	518,250	\$0.75	\$388,688
7015042	TEMPORARY PAINTED MARKING (STRIPE)	L.FT.	120,000	\$0.10	\$12,000
7030022	DELINEATOR (FLEXIBLE) (SINGLE WHITE OR SINGLE YELLOW)	EACH	50	\$40.00	\$2,000
7060001	PAVEMENT MARKER, RAISED (REFLECTIVE)	EACH	1,220	\$4.00	\$4,880
7080021	PERMANENT PAVEMENT MARKING (PAINTED) (WHITE OR YELLOW)	L.FT.	120,000	\$0.10	\$12,000
7330630	REMOVE TRAFFIC SIGNALS	L.SUM	1	\$25,000.00	\$25,000
733X001	TRAFFIC SIGNALS (SAN JOAQUIN, CAMINO VERDE, TUCSON ESTATES PKWY, SUNSET, KINNEY)	EACH	5	\$250,000.00	\$1,250,000
8050003	SEEDING (CLASS II)	ACRE	37.5	\$3,000.00	\$112,500
9030011	BARBED WIRE FENCE, TYPE 1	L.FT.	8,000	\$5.00	\$40,000
9080031	CONCRETE CURB (C-05.10) (TYPE G)	L.FT.	3,450	\$20.00	\$69,000
9120002	SHOTCRETE (Bank Protection for Dikes/Channels)	SQ.YD.	1,686	\$50.00	\$84,300
9240050	MISCELLANEOUS WORK (Signing)	L.SUM	1	\$82,000.00	\$82,000
9280036	GROUND-IN RUMBLE STRIP (8 INCH)	L.FT.	29,000	\$0.20	\$5,800
<b>ALTERNATIVE C2 SUBTOTAL</b>					<b>\$10,772,552</b>
934XX01	MISCELLANEOUS WORK (15%)	COST	15%		\$1,615,883
<b>SUBTOTAL</b>					<b>\$12,388,435</b>

Arizona Department of Transportation  
Estimated Engineering Construction Cost

**Itemized Estimate**

Project Number: 086 PM 156 H6806 01C

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: SEGMENT C2 (SAN JOAQUIN RD TO KINNEY RD)

**ALTERNATIVE C2**

207XX01	DUST PALLIATIVE (1%)	COST	1%		\$123,884
209XX01	FURNISH WATER (1%)	COST	1%		\$123,884
701XX01	MAINTENANCE AND PROTECTION OF TRAFFIC (10%)	COST	10%		\$1,238,844
810XX01	EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$123,884
924XX02	CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$247,769
925XX01	CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$247,769
<b>SUBTOTAL</b>					<b>\$14,494,469</b>
901XX01	MOBILIZATION (10%)	COST	10%		\$1,449,447
<b>SUBTOTAL</b>					<b>\$15,943,916</b>
	CONTINGENCIES (5%)	Cost	5%		\$797,196
	CONSTRUCTION ENGINEERING	COST	15%		\$2,391,587
407X006	AR-ACFC SMOOTHNESS INCENTIVE (OVERLAY)	LANE	1	\$7,000.00	\$9,100
414X001	AR-ACFC SMOOTHNESS INCENTIVE	LANE	14	\$11,000.00	\$150,700
417X002	AC (END PRODUCT) (SHRP) MATERIAL QUALITY INCENTIVE	TON	56,810	\$3.00	\$170,430
951X010	INDIRECT COST ALLOCATION	COST	5.19%		\$827,489
<b>Alternative C2</b>					<b>\$20,290,418</b>

**OTHER COST**

	DESIGN	COST	8%		\$1,623,200
	R/W Mainline (28.63 acres)	L.SUM	1	\$1,399,800.00	\$1,399,800
	Drainage Easements (8.74 acres)	L.SUM	1	\$770,600.00	\$770,600
	Utility Relocation	L.SUM	1	\$1,000,000.00	\$1,000,000
	Environmental Mitigation	L.SUM	1	\$800,000.00	\$800,000
<b>OTHER COST</b>					<b>\$5,594,000</b>

<b>Summary</b>	
Section	Total
Alternative C2	\$20,290,000
OTHER COST	\$5,594,000
<b>Total Project Cost</b>	<b>\$25,884,000</b>

Arizona Department of Transportation  
Estimated Engineering Construction Cost  
**Itemized Estimate**

Project Number: 086 PM 156 H6806 01C

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: C1 LOCAL ROADS

**C1 LOCAL ROADS**

Item No	Item Description	Unit	Quantity	Unit Price	Amount
2010011	CLEARING AND GRUBBING	ACRE	.9	\$1,500.00	\$1,350
2020001	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.SUM	1	\$5,000.00	\$5,000
2020029	REMOVAL OF ASPHALTIC CONCRETE PAVEMENT	SQ.YD.	4,094	\$2.50	\$10,235
2030301	ROADWAY EXCAVATION	CU.YD.	800	\$8.00	\$6,400
2030901	BORROW	CU.YD.	1,100	\$10.00	\$11,000
2030961	PREPARATION OF SUBGRADE (EXISTING GROUND)	SQ.YD.	996	\$8.00	\$7,968
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	506	\$30.00	\$15,180
4040111	BITUMINOUS TACK COAT	TON	1	\$450.00	\$450
4040264	ASPHALT BINDER (PG 64-22)	TON	34	\$400.00	\$13,600
4060026	MINERAL ADMIXTURE (FOR 3/4" MIX)	TON	6	\$90.00	\$540
4160002	ASPHALTIC CONCRETE (3/4" MIX) (END PRODUCT)	TON	641	\$35.00	\$22,435
7080021	PERMANENT PAVEMENT MARKING (PAINTED) (WHITE OR YELLOW)	L.FT.	3,240	\$0.10	\$324
8050003	SEEDING (CLASS II)	ACRE	1.4	\$3,000.00	\$4,200
924X003	MISCELLANEOUS WORK (Signing)	L.SUM	1	\$3,000.00	\$3,000
<b>C1 LOCAL ROADS SUBTOTAL</b>					<b>\$101,682</b>
934XX01	MISCELLANEOUS WORK (15%)	COST	15%		\$15,252
<b>SUBTOTAL</b>					<b>\$116,934</b>
207XX01	DUST PALLIATIVE (1%)	COST	1%		\$1,169
209XX01	FURNISH WATER (1%)	COST	1%		\$1,169
701XX01	MAINTENANCE AND PROTECTION OF TRAFFIC (10%)	COST	10%		\$11,693
810XX01	EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$1,169
924XX02	CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$2,339
925XX01	CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$2,339
<b>SUBTOTAL</b>					<b>\$136,813</b>
901XX01	MOBILIZATION (10%)	COST	10%		\$13,681
<b>SUBTOTAL</b>					<b>\$150,494</b>
	CONTINGENCIES (5%)	COST	5%		\$7,525
	CONSTRUCTION ENGINEERING	COST	15%		\$22,574
414X001	AR-ACFC SMOOTHNESS INCENTIVE	LANE MILE	.4	\$7,500.00	\$3,000
417X002	AC (END PRODUCT) (SHRP) MATERIAL QUALITY INCENTIVE	TON	641	\$1.50	\$962
951X010	INDIRECT COST ALLOCATION	COST	5.19%		\$7,811
<b>C1 LOCAL ROADS</b>					<b>\$192,366</b>

**OTHER COST**

	DESIGN	COST	8%		\$15,389
	R/W C1 LOCAL ROADS (0.28 ACRES)	L.SUM	1	\$27,300.00	\$27,300
<b>OTHER COST</b>					<b>\$42,689</b>

Summary	
Section	Total
C1 LOCAL ROADS	\$192,000
OTHER COST	\$43,000
<b>Total Project Cost</b>	<b>\$235,000</b>

Arizona Department of Transportation  
Estimated Engineering Construction Cost  
**Itemized Estimate**

Project Number: 086 PM 156 H6806 01L

Location: SANDARIO ROAD - KINNEY ROAD

Version: FINAL DESIGN CONCEPT REPORT

Alternative: C2 - SAN JOAQUIN RD TO KINNEY RD, LOCAL ROADS

**C2 LOCAL ROADS**

Item No	Item Description	Unit	Quantity	Unit Price	Amount
2010011	CLEARING AND GRUBBING	ACRE	13	\$1,500.00	\$18,750
2020001	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.SUM	1	\$122,500.00	\$122,500
2020029	REMOVAL OF ASPHALTIC CONCRETE PAVEMENT	SQ.YD.	26,090	\$2.50	\$65,225
2030301	ROADWAY EXCAVATION	CU.YD.	14,510	\$8.00	\$116,080
2030401	DRAINAGE EXCAVATION	CU.YD.	3,900	\$8.00	\$31,200
2030901	BORROW	CU.YD.	9,800	\$10.00	\$98,000
2030961	PREPARATION OF SUBGRADE (EXISTING GROUND)	SQ.YD.	52,190	\$8.00	\$417,520
3030022	AGGREGATE BASE, CLASS 2	CU.YD.	10,068	\$30.00	\$302,040
4040111	BITUMINOUS TACK COAT	TON	18	\$450.00	\$7,965
4040264	ASPHALT BINDER (PG 64-22)	TON	845	\$400.00	\$338,000
4060026	MINERAL ADMIXTURE (FOR 3/4" MIX)	TON	153	\$90.00	\$13,770
4160002	ASPHALTIC CONCRETE (3/4" MIX) (END PRODUCT)	TON	16,107	\$35.00	\$563,745
6010002	STRUCTURAL CONCRETE (CLASS S) (FC = 3,000)	CU.YD.	1,737	\$375.00	\$651,375
6050003	REINFORCING STEEL (CULVERTS & HEADWALLS)	LB.	244,799	\$0.75	\$183,599
7080021	PERMANENT PAVEMENT MARKING (PAINTED) (WHITE OR YELLOW)	L.FT.	48,808	\$0.10	\$4,881
8050003	SEEDING (CLASS II)	ACRE	9	\$3,000.00	\$27,300
9050001	GUARD RAIL, W-BEAM, SINGLE FACE	L.FT.	700	\$20.00	\$14,000
9050026	GUARD RAIL TERMINAL (TANGENT TYPE)	EACH	4	\$2,700.00	\$10,800
9080031	CONCRETE CURB (C-05.10) (TYPE G)	L.FT.	2,450	\$20.00	\$49,000
9080501	CONCRETE FORD WALL	L.FT.	1,800	\$50.00	\$90,000
9120002	SHOTCRETE (CHANNEL LINING)	SQ.YD.	3,200	\$50.00	\$160,000
924X003	MISCELLANEOUS WORK (Signing)	L.SUM	1	\$28,500.00	\$28,500
<b>C2 LOCAL ROADS SUBTOTAL</b>					<b>\$3,314,250</b>
934XX01	MISCELLANEOUS WORK (15%)	COST	15%		\$497,138
<b>SUBTOTAL</b>					<b>\$3,811,388</b>
207XX01	DUST PALLIATIVE (1%)	COST	1%		\$38,114
209XX01	FURNISH WATER (1%)	COST	1%		\$38,114
701XX01	MAINTENANCE AND PROTECTION OF TRAFFIC (10%)	COST	10%		\$381,139
810XX01	EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$38,114
924XX02	CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$76,228
925XX01	CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$76,228
<b>SUBTOTAL</b>					<b>\$4,459,323</b>
901XX01	MOBILIZATION (10%)	COST	10%		\$445,932
<b>SUBTOTAL</b>					<b>\$4,905,256</b>
	CONTINGENCIES (5%)	COST	5%		\$245,263
	CONSTRUCTION ENGINEERING	COST	15%		\$735,788
417X002	AC (END PRODUCT) (SHRP) MATERIAL QUALITY INCENTIVE	TON	16,107	\$3.00	\$48,321
951X010	INDIRECT COST ALLOCATION	COST	5.19%		\$231,439
<b>C2 LOCAL ROADS</b>					<b>\$6,166,087</b>

**OTHER COST**

	DESIGN	COST	8%		\$493,300
	R/W C2 LOCAL ROADS (14.20 acres)	L.SUM	1	\$925,000.00	\$925,000
<b>OTHER COST</b>					<b>\$1,418,000</b>

Summary	
Section	Total
C2 LOCAL ROADS	\$6,166,000
OTHER COST	\$1,418,000
<b>Total Project Cost</b>	<b>\$7,584,000</b>