



PREPARED BY: J. Samuelson & J. Campero

ENGINEER'S ESTIMATE  
PA-1 ROADWAY & UTILITY

1/31/2018

Item	Roadway	Length (LF)	ROW Width (LF)	Total Project Cost	Notes & Assumptions
1	Amber Lane (Ph II) Shady Willow Lane to Jeffery Way	1,370	96	\$2,600,000	Assumed Collector per City Std ST-2. Median landscaping included (parkway NOT included). Traffic Signal included with Jeffery Way estimate.
2	Jeffery Way Amber Lane to ≈ 3,000' south	1,860	140	\$5,500,000	Assumed Arterial St per ST-1 matching Jeffery Way north. Median landscaping included (parkway NOT included). Two (2) traffic signals included for Amber & Empire intersection.
3	Lone Tree Plaza Heidorn Ranch Road to Canada Valley Road	1,020	81	\$1,250,000	Assumed Lone Tree Plaza is widened & improved from a private road to a public Collector Street per ST-2. Median and parkway landscaping/irrigation was included. ROW acquisition costs were not included (private ROW dedication was assumed).
4	A Street Heidorn Ranch Road to B Street	580	96	\$1,600,000	Assumed A Street is a Collector Street per ST-2. Median landscaping included (parkway NOT included). Traffic Signal included for Heidorn Ranch Rd.
5	B Street Old Sand Creek Road to north end	2,780	96	\$6,400,000	Assumed B Street is a Collector Street per ST-2. Median landscaping included (parkway NOT included). Two (2) Traffic Signals included for C St and Old Sand Creek Rd.
6	C Street Heidorn Ranch Road to east end	1,600	96	\$3,500,000	Assumed C Street is a Collector Street per ST-2. Median landscaping included (parkway NOT included). Traffic Signals included for Heidorn Ranch Rd.
7	Heidorn Ranch Improvements Lone Tree Plaza to Old Sand Creek Rd	3,750		\$5,900,000	This cost estimate is to build the east half of Heidorn Ranch Road with the following assumptions; no median improvements, 32' width curb to curb, 6' detached sidewalk, street lights, 12" zone 2 water line, new PG&E gas line, no sewer, and no landscaping.
8	Additional Utilities			\$2,250,000	Additional utilities not within roadway estimates.
<b>Subtotal</b>				<b>\$29,000,000</b>	

<b>TOTAL PROJECT COST</b>	<b>\$29,000,000</b>
	<b>≈ \$29,000,000</b>

Notes

See individual roadway estimates for additional information.



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
**Amber Lane Improvements - Phase II**  
 (Jeffery Way to Shady Willow Ln)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 90,000.00	\$ 90,000.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
5	Grading/Import/Export	131,520	SF	\$ 1.00	\$ 131,520.00
6	5" AC	1,510	Ton	\$ 100.00	\$ 151,000.00
7	Aggregate Base	4,080	Ton	\$ 50.00	\$ 204,000.00
8	Geofabric	46,580	SF	\$ 0.50	\$ 23,290.00
9	Median Curb	2,740	LF	\$ 30.00	\$ 82,200.00
10	Curb & Gutter	2,740	LF	\$ 30.00	\$ 82,200.00
11	Sidewalk	13,700	SF	\$ 10.00	\$ 137,000.00
12	Signing and Striping	1,370	LF	\$ 5.00	\$ 6,850.00
13	12" Water Main	1,370	LF	\$ 150.00	\$ 205,500.00
14	8" NPWL	1,370	LF	\$ 120.00	\$ 164,400.00
15	10" Sewer Main	1,370	LF	\$ 100.00	\$ 137,000.00
16	24" Storm Drain	1,080	LF	\$ 120.00	\$ 129,600.00
17	Street Lights	14	EA	\$ 10,000.00	\$ 140,000.00
18	Traffic Signal		EA	\$ 250,000.00	\$ -
19	Landscaping & Irrigation	20,550	SF	\$ 5.00	\$ 102,750.00
<b>Subtotal</b>					<b>\$ 1,817,310.00</b>
Construction Cost Items					\$ 1,817,000.00
20% Contingency					\$363,000.00
<b>Construction Total</b>					<b>\$ 2,180,000.00</b> (Rounded)
Design Engineering @ 10%					\$218,000.00 (Rounded)
Construction Management and Inspection @ 10%					\$218,000.00 (Rounded)
Environmental (Neg Dec.) and Miscellaneous					\$0.00
ROW @ 0%					\$0.00
<b>TOTAL PROJECT COST</b>				\$	<b>2,616,000.00</b>
					<b>≈ \$2,600,000</b>

**Notes**

Assuming A Street is a Collector Street per ST-2. Median landscaping/Irrigation was included, parkway landscaping was NOT included (assumed private). Traffic Signal included with Jeffery Way Estimate.



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
**Jeffery Way Extension**  
 (3,000ft south of Amber Ln to Amber Ln)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 190,000.00	\$ 190,000
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000
4	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000
5	Grading/Import/Export	260,400	SF	\$ 1.00	\$ 260,400
6	5" AC	3,490	Ton	\$ 100.00	\$ 349,000
7	Aggregate Base	9,440	Ton	\$ 50.00	\$ 472,000
8	Geofabric	107,880	SF	\$ 0.50	\$ 53,940
9	Median Curb	3,720	LF	\$ 30.00	\$ 111,600
10	Curb & Gutter	3,720	LF	\$ 30.00	\$ 111,600
11	Sidewalk	18,600	SF	\$ 10.00	\$ 186,000
12	Signing and Striping	1,860	LF	\$ 5.00	\$ 9,300
13	8" Water Main	2,120	LF	\$ 120.00	\$ 254,400
14	8" NPWL	3,600	LF	\$ 120.00	\$ 432,000
15	8" Sewer Main	1,900	LF	\$ 100.00	\$ 190,000
16	18" Storm Drain	630	LF	\$ 100.00	\$ 63,000
17	24" Storm Drain	2,000	LF	\$ 120.00	\$ 240,000
18	Street Lights	20	EA	\$ 10,000.00	\$ 200,000
19	Traffic Signal	2	EA	\$ 250,000.00	\$ 500,000
20	Landscaping & Irrigation	27,900	SF	\$ 5.00	\$ 139,500
<b>Subtotal</b>					<b>\$ 3,792,740</b>
Construction Cost Items					\$ 3,793,000
20% Contingency					\$ 759,000
<b>Construction Total</b>					<b>\$ 4,550,000 (Rounded)</b>
Design Engineering @ 10%					\$ 455,000 (Rounded)
Construction Management and Inspection @ 10%					\$ 455,000 (Rounded)
Environmental (Neg Dec.) and Miscellaneous					\$ -
ROW @ 0%					\$ -
<b>TOTAL PROJECT COST</b>				\$	<b>5,460,000</b>
				≈	<b>\$5,500,000</b>

**Notes**

Assuming Jeffery Way is constructed as Arterial Street per ST-1 matching Jeffery Way north. Median landscaping/irrigation included, parkway landscaping/irrigation was NOT included. Traffic Signal included for Amber & Empire intersection. Utilities extended to just north of Sand Creek.



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
 Lone Tree Plaza Drive  
 (Heidorn Ranch Rd to Canada Valley Road)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 50,000.00	\$ 50,000.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Clearing and Grubbing	1	LS	\$ 5,000.00	\$ 5,000.00
5	Grading/Import/Export	31,620	SF	\$ 1.00	\$ 31,620.00
	AC Overlay	230	Ton	\$ 100.00	\$ 23,000.00
6	5" AC	560	Ton	\$ 100.00	\$ 56,000.00
7	Aggregate Base	1,520	Ton	\$ 50.00	\$ 76,000.00
8	Geofabric	17,340	SF	\$ 0.50	\$ 8,670.00
9	Median Curb	2,040	LF	\$ 30.00	\$ 61,200.00
10	Curb & Gutter	2,040	LF	\$ 30.00	\$ 61,200.00
11	Sidewalk	10,200	SF	\$ 10.00	\$ 102,000.00
12	Signing and Striping	1,020	LF	\$ 5.00	\$ 5,100.00
13	12" Water Main		LF	\$ 150.00	\$ -
14	8" NPWL		LF	\$ 120.00	\$ -
15	10" Sewer Main		LF	\$ 100.00	\$ -
16	12" Sewer Main		LF	\$ 120.00	\$ -
17	Storm Drain Improvements (modify)	1,020	LF	\$ 75.00	\$ 76,500.00
18	Street Lights	6	EA	\$ 10,000.00	\$ 60,000.00
19	Traffic Signal		EA	\$ 250,000.00	\$ -
20	Landscaping & Irrigation	45,900	SF	\$ 5.00	\$ 229,500.00
	<b>Subtotal</b>				<b>\$ 865,790.00</b>
	Construction Cost Items				\$ 866,000.00
	20% Contingency				\$173,000.00
	<b>Construction Total</b>				<b>\$ 1,040,000.00</b> (Rounded)
	Design Engineering @ 10%				\$104,000.00 (Rounded)
	Construction Management and Inspection @ 10%				\$104,000.00 (Rounded)
	Environmental (Neg Dec.) and Miscellaneous				\$0.00
	ROW @ 0%				\$0.00

<b>TOTAL PROJECT COST</b>	<b>\$ 1,248,000.00</b>
	<b>≈ \$1,250,000</b>

**Notes**

Assuming Lone Tree Plaza is widened and improved from a private road to a public Collector Street per ST-2. Median and parkway landscaping/irrigation was included. ROW acquisition costs were not included (private ROW dedication was assumed).



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
 A Street  
 (Heidorn Ranch Rd to B Street)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 60,000.00	\$ 60,000.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
5	Grading/Import/Export	55,680	SF	\$ 1.00	\$ 55,680.00
6	5" AC	640	Ton	\$ 100.00	\$ 64,000.00
7	Aggregate Base	1,730	Ton	\$ 50.00	\$ 86,500.00
8	Geofabric	19,720	SF	\$ 0.50	\$ 9,860.00
9	Median Curb	1,160	LF	\$ 30.00	\$ 34,800.00
10	Curb & Gutter	1,160	LF	\$ 30.00	\$ 34,800.00
11	Sidewalk	17,400	SF	\$ 10.00	\$ 174,000.00
12	Signing and Striping	580	LF	\$ 5.00	\$ 2,900.00
13	12" Water Main	580	LF	\$ 150.00	\$ 87,000.00
14	8" NPWL		LF	\$ 120.00	\$ -
15	10" Sewer Main		LF	\$ 100.00	\$ -
16	12" Sewer Main		LF	\$ 120.00	\$ -
17	Storm Drain Improvements	580	LF	\$ 150.00	\$ 87,000.00
18	Street Lights	6	EA	\$ 10,000.00	\$ 60,000.00
19	Traffic Signal	1	EA	\$ 250,000.00	\$ 250,000.00
20	Landscaping & Irrigation	8,700	SF	\$ 5.00	\$ 43,500.00
<b>Subtotal</b>					<b>\$ 1,080,040.00</b>
Construction Cost Items					\$ 1,080,000.00
20% Contingency					\$216,000.00
<b>Construction Total</b>					<b>\$ 1,300,000.00</b> (Rounded)
Design Engineering @ 10%					\$130,000.00 (Rounded)
Construction Management and Inspection @ 10%					\$130,000.00 (Rounded)
Environmental (Neg Dec.) and Miscellaneous					\$0.00
ROW @ 0%					\$0.00
<b>TOTAL PROJECT COST</b>				\$	<b>1,560,000.00</b>
					<b>≈ \$1,600,000</b>

**Notes**

Assuming C Street is a Collector Street per ST-2. Median landscaping/Irrigation was included, parkway landscaping was NOT included (assumed private). Traffic Signal included at Heidorn Ranch.



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
**B Street**  
 (Old Sand Creek Rd to Mokelumne Trail)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 230,000.00	\$ 230,000.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
5	Grading/Import/Export	266,880	SF	\$ 1.00	\$ 266,880.00
6	5" AC	3,060	Ton	\$ 100.00	\$ 306,000.00
7	Aggregate Base	8,280	Ton	\$ 50.00	\$ 414,000.00
8	Geofabric	94,520	SF	\$ 0.50	\$ 47,260.00
9	Median Curb	5,560	LF	\$ 30.00	\$ 166,800.00
10	Curb & Gutter	5,560	LF	\$ 30.00	\$ 166,800.00
11	Sidewalk	27,800	SF	\$ 10.00	\$ 278,000.00
12	Signing and Striping	2,780	LF	\$ 5.00	\$ 13,900.00
13	12" Water Main	2,780	LF	\$ 150.00	\$ 417,000.00
14	8" NPWL	3,243	LF	\$ 120.00	\$ 389,160.00
15	10" Sewer Main	2,780	LF	\$ 100.00	\$ 278,000.00
16	Storm Drain Improvements	2,780	LF	\$ 150.00	\$ 417,000.00
17	Street Lights	28	EA	\$ 10,000.00	\$ 280,000.00
18	Traffic Signal	2	EA	\$ 250,000.00	\$ 500,000.00
19	Landscaping & Irrigation	41,700	SF	\$ 5.00	\$ 208,500.00
<b>Subtotal</b>					<b>\$ 4,409,300.00</b>
Construction Cost Items					\$ 4,409,000.00
20% Contingency					\$882,000.00
<b>Construction Total</b>					<b>\$ 5,290,000.00</b> (Rounded)
Design Engineering @ 10%					\$529,000.00 (Rounded)
Construction Management and Inspection @ 10%					\$529,000.00 (Rounded)
Environmental (Neg Dec.) and Miscellaneous					\$0.00
ROW @ 0%					\$0.00
<b>TOTAL PROJECT COST</b>					<b>\$6,348,000</b>
					<b>≈ \$6,400,000</b>

**Notes**

Assuming B Street is a Collector Street per ST-2. Median landscaping/Irrigation was included, parkway landscaping was NOT included (assumed private). Two (2) Traffic Signals included for C St and Old Sand Creek Rd.



PREPARED BY: J. Samuelson & J. Campero  
 ENGINEER'S ESTIMATE  
 C Street  
 (Heidorn Ranch Rd to East End)

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 120,000.00	\$ 120,000.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
5	Grading/Import/Export	153,600	SF	\$ 1.00	\$ 153,600.00
6	5" AC	1,760	Ton	\$ 100.00	\$ 176,000.00
7	Aggregate Base	4,760	Ton	\$ 50.00	\$ 238,000.00
8	Geofabric	54,400	SF	\$ 0.50	\$ 27,200.00
9	Median Curb	3,200	LF	\$ 30.00	\$ 96,000.00
10	Curb & Gutter	3,200	LF	\$ 30.00	\$ 96,000.00
11	Sidewalk	16,000	SF	\$ 10.00	\$ 160,000.00
12	Signing and Striping	1,600	LF	\$ 5.00	\$ 8,000.00
13	12" Water Main	1,600	LF	\$ 150.00	\$ 240,000.00
14	8" NPWL	1,600	LF	\$ 120.00	\$ 192,000.00
15	10" Sewer Main	600	LF	\$ 100.00	\$ 60,000.00
16	12" Sewer Main	1,000	LF	\$ 120.00	\$ 120,000.00
17	Storm Drain Improvements	1,200	LF	\$ 150.00	\$ 180,000.00
18	Street Lights	16	EA	\$ 10,000.00	\$ 160,000.00
19	Traffic Signal	1	EA	\$ 250,000.00	\$ 250,000.00
20	Landscaping & Irrigation	24,000	SF	\$ 5.00	\$ 120,000.00
<b>Subtotal</b>					<b>\$ 2,426,800.00</b>
Construction Cost Items					\$ 2,427,000.00
20% Contingency					\$485,000.00
<b>Construction Total</b>					<b>\$ 2,910,000.00</b> (Rounded)
Design Engineering @ 10%					\$291,000.00 (Rounded)
Construction Management and Inspection @ 10%					\$291,000.00 (Rounded)
Environmental (Neg Dec.) and Miscellaneous					\$0.00
ROW @ 0%					\$0.00
<b>TOTAL PROJECT COST</b>				<b>\$</b>	<b>3,492,000.00</b>
				<b>≈</b>	<b>\$3,500,000</b>

**Notes**

Assuming C Street is a Collector Street per ST-2. Median landscaping/Irrigation was included, parkway landscaping was NOT included (assumed private). Traffic Signal included at Heidorn Ranch.



PREPARED BY: J. Samuelson

ENGINEER'S ESTIMATE

9/29/2016

**Heidorn Ranch (EBMUD to Sand Creek)**

Assumes no median, 32' curb to curb, 6' detached sidewalk, street lights, 12" zone 2 water line, gas line, no sewer, and no improvements to the intersections on Lone Tree Way.

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$100,000.00	\$ 100,000.00
2	Traffic Control	1	LS	\$ 65,000.00	\$ 65,000.00
3	Erosion Control/SWPPP	1	LS	\$ 40,000.00	\$ 40,000.00
4	Clearing and Grubbing	1	LS	\$100,000.00	\$ 100,000.00
5	Remove Existing Pavement	91,100	SF	\$ 1.00	\$ 91,100.00
6	Rough Grade Street Section	20,000	CY	\$ 10.00	\$ 200,000.00
7	Grading to Property Line	483,000	SF	\$ 0.40	\$ 193,200.00
8	6" AC	4,700	TON	\$ 100.00	\$ 470,000.00
9	24" AB	18,000	TON	\$ 45.00	\$ 810,000.00
10	Subgrade Fabric	120,000	SF	\$ 0.50	\$ 60,000.00
11	Median Curb	3,750	LF	\$ 30.00	\$ 112,500.00
12	Curb and Gutter	3,750	LF	\$ 30.00	\$ 112,500.00
13	6' Sidewalk	22,500	SF	\$ 10.00	\$ 225,000.00
14	Signing and Striping	3,750	LF	\$ 5.00	\$ 18,750.00
15	Survey Monuments	7	EA	\$ 700.00	\$ 4,900.00
16	Roadway Conform to Existing	2	EA	\$ 10,000.00	\$ 20,000.00
17	12" Water Main	3,790	LF	\$ 150.00	\$ 568,500.00
18	Blow Off Valve	2	EA	\$ 2,500.00	\$ 5,000.00
19	Air Release Valve	2	EA	\$ 5,000.00	\$ 10,000.00
20	12" Water Valve	7	EA	\$ 3,500.00	\$ 24,500.00
21	Fire Hydrant	5	EA	\$ 10,000.00	\$ 50,000.00
22	Connect to Existing Water	1	EA	\$ 7,500.00	\$ 7,500.00
23	Cathodic Protection	1	LS	\$ 30,000.00	\$ 30,000.00
24	Storm Drain Improvements	1,050	LF	\$ 150.00	\$ 157,500.00
25	Street Lights	25	EA	\$ 5,000.00	\$ 125,000.00
26	Street Light Trench	3,800	LF	\$ 20.00	\$ 76,000.00
27	Protect (Or remove and replace) 8" Calpine Gas (1st 400 feet)	400	LF	\$ 100.00	\$ 40,000.00
28	Protect 8" Calpine Gas (2nd 1,700 feet)	3,250	LF	\$ 25.00	\$ 81,250.00
29	Protection of Existing Gas Line (36" PG&E)	930	LF	\$ 100.00	\$ 93,000.00
30	Gas Line Removal Budget (24" PG&E)	3,780	LF	\$ 25.00	\$ 94,500.00
31	Remove and Replace Existing 2" Gas	810	LF	\$ 50.00	\$ 40,500.00
	<b>Subtotal</b>				<b>\$ 4,026,000.00</b>
	Construction Cost Items				\$ 4,026,000.00
	20% Contingency				\$805,000.00
	<b>Construction Total</b>				<b>\$4,831,000.00</b>
	Legal				\$20,000.00
	Design Engineering @ 10%				\$483,000.00
	Construction Management and Inspection @ 10%				\$483,000.00
	Environmental (Neg Dec.) and Miscellaneous				\$50,000.00



Right-of-Way	SF	\$0.00
Easement	SF	\$0.00

<b>TOTAL PROJECT COST</b>	<b>\$5,867,000.00</b>
<b>Final Est.</b>	<b>\$ 5,900,000.00</b>



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 ENGINEER'S ESTIMATE  
 Additional Utilities

1/31/2018

Item	Description	Quantity	Unit	Unit Price	Amount
1	Mobilization	1	LS	\$ 80,000.00	\$ 80,000.00
2	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Clearing and Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
4	12" Water Main	2,420	LF	\$ 150.00	\$ 363,000.00
5	8" NPWL	1,820	LF	\$ 120.00	\$ 218,400.00
6	12" Sewer Main	750	LF	\$ 120.00	\$ 90,000.00
7	Storm Drain Improvements	5,250	LF	\$ 150.00	\$ 787,500.00
<b>Subtotal</b>					<b>\$1,558,900.00</b>
Construction Cost Items					\$1,559,000.00
20% Contingency					\$312,000.00
<b>Construction Total</b>					<b>\$1,870,000.00</b>
Design Engineering @ 10%					\$187,000.00
Construction Management and Inspection @ 10%					\$187,000.00
Environmental (Neg Dec.) and Miscellaneous					\$0.00
ROW @ 0%					\$0.00
<b>TOTAL PROJECT COST</b>					<b>\$2,244,000</b>
					<b>≈ \$2,250,000</b>

Notes

Utilities not covered in other roadway estimates