Economic & Planning Systems

Public Finance
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Land Use Policy

APPENDICES

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APPENDIX A

BACKBONE INFRASTRUCTURE COSTS

PROBABLE OPINION OF CONSTRUCTION COST

for

Sutter Pointe Specific Plan

ON-SITE ROADWAY

Sutter County, California

November 14, 2008

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

Sutter Pointe
On-Site Roadway Summary

PHASE- 1		**$**	**36,822,000**
PHASE- 2		**$**	**14,350,000**
PHASE- 3		**$**	**11,978,200**
PHASE- 4		**$**	**22,403,100**
	Sub Total	**$**	**85,553,300**
PHASE- A		**$**	**12,364,000**
PHASE- B		**$**	**19,797,000**
PHASE- C		**$**	**16,070,000**
PHASE- D		**$**	**14,808,000**
	Sub Total	**$**	**63,039,000**
	Total	**$**	**148,592,300**

Sutter Pointe
On-Site Roadway Summary

7900-00
11-14-08

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- 1							
Riego Rd.							
	Highway 99 to Road "A"	8-lane Divided Arterial - Non Residential	R-1.14a	1,000	L.F.	$ 1,860	
	Road "A" to 1500' west of Road "D"	6-lane Divided Arterial - Residential (1/2 section)	R-1.13	6,420	L.F.	$ 835	
	Road "A" to 1500' west of Road "D"	6-lane Divided Arterial - Non Residential (1/2 section)	R-1.13	3,450	L.F.	$ 835	
	1500' west or Road "D" to Road "D"	6-lane Divided Arterial - Non Residential (1/2 section)	R-1.13a	1,115	L.F.	$ 795	These costs are now
	1500' west of Road "D" to Natomas Rd.	6-lane Divided Arterial - HDR or Non Residential (1/2 section)	R-1.13a	3,110	L.F.	$ 795	part of the "S.P.
	At Road "D"	6x4 Intersection (b) - (1/2 section)	R-2.3	1	L.S.	$ 1,003,000	Regional Transportation
	At Road "A"	8x6x6x6 Intersection	R-2.1	1	L.S.	$ 3,033,000	improvements"
	At Pacific Ave	6x4 Intersection (a)	R-2.2	1	L.S.	$ 2,356,000	$22,980,000
	At Road "C"	6x4 Intersection (a)	R-2.2	1	L.S.	$ 2,356,000	
	At Road "D"	6x4 Intersection (b) - (1/4 section)	R-2.3	1	L.S.	$ 501,500	
	At Highway 99	Traffic Signal	R-2.17	1	L.S.	$ 270,000	
	Sub-total Riego Rd.						
Pacific Ave.							
	Road "E" to Riego Rd.	4-lane Divided Arterial (Residential)	R-1.9	1,350	L.F.	$ 1,110	$ 1,499,000
	Riego Rd. to Road "G"	4-lane Divided Arterial (HDR or Non-Residential)	R-1.9a	270	L.F.	$ 1,020	$ 275,000
	Road "G" to 1500' north of Road "J"	4-lane Divided Arterial (Residential)	R-1.9	1,800	L.F.	$ 1,110	$ 1,998,000
	At Road "E"	4x2 Roundabout	R-2.14	1	L.S.	$ 992,000	$ 992,000
	At Road "G"	4x2 Intersection	R-2.13	1	L.S.	$ 1,372,000	$ 1,372,000
	At Road "J"	4x2 Intersection	R-2.13	1	L.S.	$ 1,372,000	$ 1,372,000
	Sub-total Pacific Ave.						**$ 7,508,000**
Road "A"							
	500' north of Road "E" to Riego Rd.	6-lane Town Center Arterial	R-1.12	932	L.F.	$ 1,730	$ 1,612,000
	Riego Rd. to Road "G"	6-lane Divided Arterial	R-1.13	680	L.F.	$ 1,670	$ 1,136,000
	Road "G" to Road "J"	4-lane Divided Arterial (Residential)	R-1.9	1,320	L.F.	$ 1,110	$ 1,465,000
	At Road "J"	4x2x2 Roundabout	R-2.16	1	L.S.	$ 790,000	$ 790,000
	Sub-total Road "A"						**$ 5,003,000**
Road "C"							
	Road "B" to Road "E"	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	630	L.F.	$ 510	$ 321,000
	Road "E" to 600' south of Riego Rd.	4-lane Divided Arterial w/ Class I Bike Lane - Residential	R-1.10	1,160	L.F.	$ 1,110	$ 1,288,000
	600' south of Riego Rd. to Road "G"	4-lane Divided Arterial w/ Class I Bike Lane - Residential (1/2 section)	R-1.10	880	L.F.	$ 555	$ 488,000
	600' south of Riego Rd. to Road "G"	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	880	L.F.	$ 510	$ 449,000
	Road "G" to Road "D"	4-lane Divided Arterial w/ Class I Bike Lane - Residential	R-1.10	2,270	L.F.	$ 1,110	$ 2,520,000
	Road "D" to 1200' north	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	800	L.F.	$ 510	$ 408,000
	At Road "E"	4x2 Roundabout (3/4 section)	R-2.14	1	L.S.	$ 744,000	$ 744,000
	At Road "G"	4x2 Intersection	R-2.13	1	L.S.	$ 1,372,000	$ 1,372,000
	At Road "J"	4x2 Intersection	R-2.13	1	L.S.	$ 1,372,000	$ 1,372,000
	At Road "D"	4x4x4 Intersection	R-2.10	1	L.S.	$ 1,319,000	$ 1,319,000
	Sub-total Road "C"						**$ 10,281,000**

Sutter Pointe
On-Site Roadway Summary

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
Road "J"							
	3900' west of Road "A" to 1100' north of Road "D"	2-lane Residential Collector	R-1.1	7,910	L.F.	$ 430	$ 3,401,000
	1100' north of Road "D" to 600' north	2-lane Residential Collector (1/2 section)	R-1.1	600	L.F.	$ 215	$ 129,000
	At Road "D"	4x2 Roundabout	R-2.14	1	L.S.	$ 992,000	$ 992,000
	Sub-total Road "J"						**$ 4,522,000**
Road "G"							
	Road "A" to Road "D"	2-lane Residential Collector w/ Class II Bike Lane	R-1.3	6,720	L.F.	$ 540	$ 3,629,000
	Road "D" to 680' north	2-lane Residential Collector w/ Class II Bike Lane (1/2 section)	R-1.3	680	L.F.	$ 270	$ 184,000
	700' north of Road 'D" to phase line	2-lane Residential Collector w/ Class II Bike Lane	R-1.3	2,945	L.F.	$ 540	$ 1,590,000
	Sub-total Road "G"						**$ 5,403,000**
Road "D"							
	Riego Rd. to Road "G"	4-lane Residential Collector - HDR, Non-Residential (1/2 section)	R-1.4a	470	L.F.	$ 310	$ 146,000
	Road "G" to Road "C"	4-lane Residential Collector - Residential (1/2 section)	R-1.4	3,100	L.F.	$ 355	$ 1,101,000
	Road "G" to Road "C"	4-lane Residential Collector - HDR Non Residential (1/2 section)	R-1.4a	2,900	L.F.	$ 310	$ 899,000
	Sub-total Road "D"						**$ 2,146,000**
Road "E"							
	1000' east of Road "A" to Pacific Ave.	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	1,030	L.F.	$ 190	$ 196,000
	Pacific Ave. to Road "C"	2-lane Residential Collector w/ Class I Bike Lane	R-1.2	1,320	L.F.	$ 380	$ 502,000
	Road "C" to 1500' west of Road "D"	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	2,390	L.F.	$ 190	$ 454,000
	Sub-total Road "E"						**$ 1,152,000**
Road "B"							
	Road "C" to 2400' west	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	900	L.F.	$ 190	$ 171,000
Road "L"							
	Road "J" to 1500' north	2-lane Residential Collector	R-1.1	1,480	L.F.	$ 430	$ 636,000
Total Phase - 1							**$ 36,822,000**

Sutter Pointe
On-Site Roadway Summary

7900-00
11-14-08

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- 2							
Road "E"							
	Road "C" to Road "D"	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	3,515	L.F.	$ 190	$ 668,000
	At Road "C"	4x2 Roundabout (1/4 section)	R-2.14	1	L.S.	$ 248,000	$ 248,000
	At Road "D"	4x2x2 Roundabout (3/4 section)	R-2.16	1	L.S.	$ 592,500	$ 593,000
	Sub-total Road "E"						**$ 1,509,000**
Road "B"							
	Road "D" to Road "C"	2-lane Residential Collector w/ Class I Bike Lane	R-1.2	5,700	L.F.	$ 380	$ 2,166,000
	Road "C" to 1500' west	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	1,480	L.F.	$ 190	$ 281,000
	Sub-total Road "B"						**$ 2,447,000**
Road "C"							
	County bndy to south Road "B"	4-lane Divided Arterial w/ Class I Bike Lane - Residential	R-1.10	2,090	L.F.	$ 1,110	$ 2,320,000
	Road "B" to Road "E"	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	630	L.F.	$ 510	$ 321,000
	1200' north of Road "D" to Road "M"	4-lane Divided Arterial w/ Class I Bike Lane - Residential (1/2 section)	R-1.10	2,370	L.F.	$ 555	$ 1,315,000
	At Road "M"	4x4x2 Intersection (1/3 section)	R-2.9	1	L.S.	$ 623,500	$ 624,000
	Sub-total Road "C"						**$ 4,580,000**
Road "D"							
	Road "B" to Riego Rd.	4-lane Residential Collector (1/2 section)	R-1.4	1,360	L.F.	$ 355	$ 483,000
Road "G"							
	Phase 1 to Road "M"	2-lane Residential Collector w/ Class II Bike Lane	R-1.3	3,350	L.F.	$ 540	$ 1,809,000
Riego Rd.							
	Road "D" to Natomas Rd.	6-lane Divided Arterial - Residential (1/2 section)	R-1.13	2,000	L.F.	$ 835	These costs are now part of the "S.P. Regional Transportation Improvements" $2,172,000
	At Road "D"	6x4 Intersection (b) - (1/4 section)	R-2.3	1	L.S.	$ 501,500	
	Sub-total Riego Rd.						**$ -**
Road "J"							
	3900' west of Road "A" to 1600' north	2-lane Residential Collector	R-1.1	1,500	L.F.	$ 430	$ 645,000
	1200' east of Road "D" to 600' north	2-lane Residential Collector (1/2 section)	R-1.1	600	L.F.	$ 215	$ 129,000
	600' north of Road "D" to Road "M"	2-lane Residential Collector	R-1.1	2,760	L.F.	$ 430	$ 1,187,000
	Sub-total Road "J"						**$ 1,961,000**
Road "L"							
	1500' north of Road "J" to 2230' north	2-lane Residential Collector	R-1.1	2,230	L.F.	$ 430	$ 959,000
Road "M"							
	Road "C" to Road "G"	2-lane Residential Collector (1/2 section)	R-1.1	2,800	L.F.	$ 215	$ 602,000
Total Phase - 2							**$ 14,350,000**

Sutter Pointe
On-Site Roadway Summary

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- 3							
Road "J"							
	Phase 2 to Pacific Ave.	2-lane Residential Collector	R-1.1	3,750	L.F.	$ 430	$ 1,613,000
	Road "G" to Road "M"	2-lane Residential Collector	R-1.1	1,280	L.F.	$ 430	$ 550,000
	At Pacific Ave.	2x2x2 Roundabout	R-2.15	1	L.S.	$ 530,000	$ 530,000
	At Road "L"	4x4x4x2 Intersection (1/2 section)	R-2.2	1	L.S.	$ 1,178,000	$ 1,178,000
	Sub-total Road "J"						**$ 3,871,000**
Road "L"							
	Phase 2 to Road "J"	2-lane Residential Collector	R-1.1	2,225	L.F.	$ 430	$ 957,000
Pacific Ave.							
	Road "K" to Sankey Rd.	4-lane Divided Arterial (Residential) - 1/2 section	R-1.9	1,390	L.F.	$ 555	$ 771,000
	Road "K" to Sankey Rd.	4-lane Divided Arterial (HDR or Non-Residential) - 1/2 section	R-1.9a	1,390	L.F.	$ 510	$ 709,000
	Sub-total Pacific Ave.						**$ 1,480,000**
Sankey Rd.							
	Highway 99 to Pacific Ave.	4-lane Divided Arterial - Residential (1/2 section)	R-1.9	1,720	L.F.	$ 555	$ 955,000
	Pacific Ave. to 1900' east of Pacific Ave.	4-lane Divided Arterial - Non Residential (1/2 section)	R-1.9a	1,475	L.F.	$ 510	$ 752,000
	At Pacific Ave.	4x4x4x2 Intersection (1/2 section)	R-2.7	1	L.S.	$ 733,000	$ 733,000
	Sub-total Sankey Rd.						**$ 2,440,000**
Road "G"							
	Road "C" to Road "J"	4-lane Residential Collector (1/2 section)	R-1.4	640	L.F.	$ 355	$ 227,000
	Road "J" to 1300' north of Road "M"	2-lane Residential Collector (1/2 section)	R-1.1	2,360	L.F.	$ 215	$ 507,400
	2300' east of Road "J" to Road "M"	2-lane Residential Collector	R-1.1	1,240	L.F.	$ 430	$ 533,200
	Road "D" to 700' east	2-lane Residential Collector w/ Class II Bike Lane (1/2 section)	R-1.3	680	L.F.	$ 270	$ 183,600
	Sub-total Road "G"						**$ 1,451,200**
Road "M"							
	Road "C" to Road "G"	2-lane Residential Collector (1/2 section)	R-1.1	440	L.F.	$ 215	$ 95,000
	At Road "C'	4x4x2 Intersection (1/2 section)	R-2.9	1	L.S.	$ 623,500	$ 623,500
	Sub-total Road "M"						**$ 718,500**
Road "C"							
	Road "M" to Road "G"	4-lane Divided Arterial w/ Class I Bike Lane - Residential (1/2 section)	R-1.10	440	L.F.	$ 555	$ 244,000
Road "D"							
	Road "B" to Road "G"	4-lane Residential Collector (1/2 section)	R-1.4	870	L.F.	$ 355	$ 309,000
Road "E"							
	2800' east of Road "C" to Road "D"	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	1,120	L.F.	$ 190	$ 213,000
	At Road "D"	4x2x2 Roundabout (1/4 section)	R-2.16	1	L.S.	$ 197,500	$ 197,500
	Sub-total Road "E"						**$ 410,500**
Road "K"							
	Pacific Ave. to 850' east	2-lane Residential Collector (1/2 section)	R-1.1	450	L.F.	$ 215	$ 97,000
Total Phase - 3							**$ 11,978,200**

Sutter Pointe
On-Site Roadway Summary

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- 4							
Road "A"							
	County line to Road "B"	4-lane Town Center Arterial (105' ROW)	R-1.11	2,090	L.F.	$ 1,310	$ 2,738,000
	Road "B" to Road "E"	4-lane Town Center Arterial (123'ROW)	R-1.11a	490	L.F.	$ 1,130	$ 554,000
	Road "E" to Phase 1	6-lane Town Center Arterial	R-1.12	70	L.F.	$ 1,730	$ 121,000
	At Road "B"	4x4x4x2 Intersection (b)	R-2.8	1	L.S.	$ 1,613,000	$ 1,613,000
	At Road "E"	6x4x2 Intersection	R-2.11	1	L.S.	$ 1,341,000	$ 1,341,000
	Sub-total Road "A"						**$ 6,367,000**
Road "B"							
	Highway 99 to Road "A"	4-lane Divided Arterial - Non Residential	R-1.9a	705	L.F.	$ 1,020	$ 719,100
	Road "A" to 2400' west of Road "C"	2-lane Residential Collector w/ Class I Bike Lane	R-1.2	2,580	L.F.	$ 380	$ 980,000
	2400' west of Road "C" to Phase 2	2-lane Residential Collector w/ Class I Bike Lane (1/2 section)	R-1.2	900	L.F.	$ 190	$ 171,000
	Sub-total Road "B"						**$ 1,870,100**
Road "E"							
	1160' east of Road "A" to Road "A"	2-lane Residential Collector	R-1.1	760	L.F.	$ 430	$ 327,000
Sankey Rd.							
	900' west of Road "C" to Road "C"	4-lane Divided Arterial - Non Residential (1/2 section)	R-1.9a	500	L.F.	$ 510	$ 255,000
	Road "C" ot 1000' east	4-lane Divided Arterial - Non Residential	R-1.10a	600	L.F.	$ 1,020	$ 612,000
	1000' east of Road "C" to Natomas Rd.	4-lane Divided Arterial w/ Class I Bike Lane	R-1.10	2,000	L.F.	$ 1,110	$ 2,220,000
	At Road "C"	4x4 Intersection	R-2.12	1	L.S.	$ 1,999,000	$ 1,999,000
	At Highway 99	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	Sub-total Sankey Rd.						**$ 5,356,000**
Road "C"					,		
	Road "K" to 1160' north of Sankey Rd.	4-lane Divided Arterial w/ Class I Bike Lane - Non Residential	R-1.10a	1,350	L.F.	$ 1,020	$ 1,377,000
	1160' north of Sankey Rd. to Road "N"	4-lane Divided Arterial w/ Class I Bike Lane - Residential (1/2 section)	R-1.10	1,390	L.F.	$ 555	$ 771,000
	1160' north of Sankey Rd. to Road "N"	4-lane Divided Arterial w/ Class I Bike Lane - Non Residential (1/2 section)	R-1.10a	1,390	L.F.	$ 510	$ 709,000
	At Road "O"	4x2 Intersection	R-2.13	1	L.S.	$ 1,372,000	$ 1,372,000
	Sub-total Road "C"						**$ 4,229,000**
Road "O"							
	Road "C" to Road "N"	2-lane Residential Collector	R-1.1	2,070	L.F.	$ 430	$ 890,000
Road "N"							
	Road "C" to Natomas Rd.	2-lane Residential Collector	R-1.1	1,790	L.F.	$ 430	$ 770,000
Road "G"							
	1200' west of Road "C" to Road "C"	4-lane Industrial Collector (1/2 section)	R-1.8	800	L.F.	$ 380	$ 304,000
	Road "C" to Road "J"	4-lane Residential Collector (1/2 section)	R-1.4	640	L.F.	$ 355	$ 227,000
	Road "J" to 1300' north of Road "M"	2-lane Residential Collector (1/2 section)	R-1.1	3,600	L.F.	$ 215	$ 774,000
	Sub-total Road "G"						**$ 1,305,000**
Road "K"					,		
	1160' west of Road "C" to Road "C"	4-lane Industrial Collector (1/2 section)	R-1.8	760	L.F.	$ 380	$ 289,000
	At Road "C"	4x4 Intersection (1/2 section)	R-2.12	1	L.S.	$ 999,500	$ 1,000,000
	Sub-total Road "C"						**$ 1,289,000**
Total Phase - 4							**$ 22,403,100**

Sutter Pointe
On-Site Roadway Summary

7900-00
11-14-08

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- A							
Riego Rd.							
	1000' east of Road "R" to 600' east	6-lane Divided Arterial - Non Residential (1/2 section)	R-1.13a	800	L.F.	$ 795	$ 636,000
	1000' west of Road "S" to Road "S"	6-lane Divided Arterial - Non Residential	R-1.13a	420	L.F.	$ 1,590	$ 668,000
	Road "S" to Highway 99	8-lane Divided Arterial - Non Residential	R-1.14a	1,240	L.F.	$ 1,860	$ 2,306,000
	At Road "S"	8x6x3x3 Intersection	R-2.4	1	L.S.	$ 1,920,000	$ 1,920,000
	At Highway 99	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	Sub-total Reigo Rd.						**$ 5,800,000**
Road "Q"							
	1000' east of Road "R" to Highway 99	3-lane Industrial Collector	R-1.7	3,580	L.F.	$ 640	$ 2,291,000
Road "S"							
	Road "Q" to Riego Rd.	3-lane Industrial Collector	R-1.7	2,020	L.F.	$ 640	$ 1,293,000
Road "T"							
	2700' west of Road "Q" to Road "Q"	3-lane Industrial Collector	R-1.7	2,790	L.F.	$ 640	$ 1,786,000
Road "V"							
	Riego Rd. to 1300' north Riego Rd.	3-lane Industrial Collector	R-1.7	1,865	L.F.	$ 640	$ 1,194,000
Total Phase - A							**$ 12,364,000**
PHASE- B							
Pacific Ave.							
	1390' north of Road "J" to Road "K"	4-lane Divided Arterial (HDR or Non-residential)	R-1.9a	4,900	L.F.	$ 1,020	$ 4,998,000
	At Road "K"	4x4x4x2 Intersection (a)	R-2.2	1	L.S.	$ 1,178,000	$ 1,178,000
	Sub-total Pacific Ave.						**$ 6,176,000**
Road "C"							
	Road "D" to 1100' north	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	730	L.F.	$ 510	$ 372,000
Road "K"							
	Pacific Ave. to 1600' west of Road "C"	4-lane Industrial Collector (1/2 section)	R-1.8	3,250	L.F.	$ 380	$ 1,235,000
Road "R"							
	County Line to Road "V"	3-lane Industrial Collector	R-1.7	4,960	L.F.	$ 640	$ 3,174,000
	At Road "T"	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	At Riego Rd.	6x4x3x3 Intersection	R-2.5	1	L.S.	$ 1,972,000	$ 1,972,000
	Sub-total Road "R"						**$ 5,416,000**
Road "V"							
	Phase C to Phase A	3-lane Industrial Collector	R-1.7	3,090	L.F.	$ 640	$ 1,978,000
Riego Rd.							
	Phase C to Road "R"	4-lane Industrial Collector	R-1.8	980	L.F.	$ 760	$ 745,000
	Road "R" to 960' east	6-lane Divided Arterial - Non Residential	R-1.13a	560	L.F.	$ 1,590	$ 890,000
	960' east of Road "R" to 800' west of Road "S"	6-lane Divided Arterial - Non Residential (1/2 section)	R-1.13a	800	L.F.	$ 795	$ 636,000
	Sub-total Riego Rd.						**$ 2,271,000**
Road "Q"							
	Road "R" to 1300' east	3-lane Industrial Collector	R-1.7	1,300	L.F.	$ 640	$ 832,000
Road "T"							
	Phase C to Phase A	3-lane Industrial Collector	R-1.7	2,370	L.F.	$ 640	$ 1,517,000
Total Phase - B							**$ 19,797,000**

Sutter Pointe
On-Site Roadway Summary

Items	Roadway Segments	Project Description	Reference Table	Qty	Unit	Unit Price	Total
PHASE- C							
Sankey Rd.							
	1900' east of Pacific Ave. to 900' west of Road "C"	4-lane Divided Arterial - Non Residential (1/2 section)	R-1.9a	3,230	L.F.	$ 510	$ 1,647,000
Road "K"							
	1000' east of Pacific Ave to 1580' west of Road "C"	4-lane Industrial Collector (1/2 section)	R-1.8	2,800	L.F.	$ 380	$ 1,064,000
	1580' west of Road "C" to 420' east	4-lane Industrial Collector	R-1.8	420	L.F.	$ 760	$ 319,000
	1160' west of Road "C" to Road "C"	4-lane Industrial Collector (1/2 section)	R-1.8	760	L.F.	$ 380	$ 289,000
	At Road "C"	4x4 Intersection (1/4 section)	R-2.12	1	L.S.	$ 999,500	$ 1,000,000
	Sub-total Road "K"						**$ 2,672,000**
Road "C"							
	Phase A to Road "K"	4-lane Divided Arterial w/ Class I Bike Lane - Non Res. (1/2 section)	R-1.10a	2,800	L.F.	$ 510	$ 1,428,000
Riego Rd.							
	Powerline Rd. to 900' west Road "U"	4-lane Industrial Collector half section	R-1.8a	1,420	L.F.	$ 510	$ 724,000
	900' west of Road "U" to Phase B	4-lane Industrial Collector	R-1.8	1,890	L.F.	$ 760	$ 1,436,000
	At Road "U"	4x3x3x3 Intersection	R-2.6	1	L.S.	$ 1,280,000	$ 1,280,000
	At Powerline Rd.	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	Sub-total Riego Rd.						**$ 3,710,000**
Road "V"							
	Riego Rd. to Phase B	3-lane Industrial Collector	R-1.7	2,940	L.F.	$ 640	$ 1,882,000
Road "U"							
	Road "T" to Riego Rd.	3-lane Industrial Collector	R-1.7	3,420	L.F.	$ 640	$ 2,189,000
Road "T"							
	Powerline Rd. to Phase B	3-lane Industrial Collector	R-1.7	3,550	L.F.	$ 640	$ 2,272,000
	At Powerline Rd.	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	Sub-total Road "T"						**$ 2,542,000**
Total Phase - C							**$ 16,070,000**
PHASE- D							
Sankey Rd.							
	Highway 99 to Road "C"	4-lane Divided Arterial - Non Residential (1/2 section)	R-1.9a	7,440	L.F.	$ 510	$ 3,794,000
	At Pacific Rd.	4x4x4x2 Intersection (a) - (1/2 section)	R-2.7	1	L.S.	$ 733,000	$ 733,000
	Sub-total Sankey Rd.						**$ 4,527,000**
Road "H"							
	Sankey Rd. to Road "N"	2-lane Industrial Collector	R-1.5	1,900	L.F.	$ 490	$ 931,000
Road "N"							
	Road "O" to Road "C"	2-lane Industrial Collector	R-1.5	8,900	L.F.	$ 490	$ 4,361,000
Road "P"							
	Road "O" to Road "N"	2-lane Industrial Collector	R-1.5	1,520	L.F.	$ 490	$ 745,000
Road "O"							
	Highway 99 to Road "C"	2-lane Industrial Collector w/ Class II Bike Lane	R-1.6	8,640	L.F.	$ 460	$ 3,974,000
	At Road "H"	Traffic Signal	R-2.17	1	L.S.	$ 270,000	$ 270,000
	Sub-total Road "O"						**$ 4,244,000**
Total Phase - D							**$ 14,808,000**
TOTAL PROJECT COST							**$ 148,592,300**

NOTES

On-Site Roadway

Sutter Pointe Specific Plan

Sutter County, California

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. MacKay & Somps makes no warranty, either expressed or implied, as to the accuracy of this estimate.

2. This estimate is based on the Conceptual Land Use Plan, March 2008.

3. This estimate does not consider the following:

   a. Fencing and bulkheads
   b. Assessments for assessment, lighting & landscaping, GHAD, Mello Roos districts of the like
   c. Reimbursable dry utilities costs. (Est. net costs after reimbursements are included in the estimate.)
   d. Erosion Control and siltation costs
   e. Postal pads and mail boxes
   f. Land costs, right of way acquisition, entitlements, easements, and/or rights of entry
   g. Backflow Devices
   h. Pole relocation or under grounding of existing overhead facilities
   I. Fees due at building permit
   j. Over excavation of unsuitable materials, undercutting, and/or landslide repair
   k. Costs associated with high groundwater or inclement weather conditions
   l. Costs associated with limitations on construction access
   m. Tree preservation systems and mitigation costs
   n. Landscaping & associated design costs outside of back of the walk
   o. Costs associated with Homeowner's Associations
   p. Financing and overhead charges.
   q. Costs associated with Endangered Species and Wildlife Conservation.
   r. Cost associated with Corps of Engineer, Fish and Game, Fish and Wildlife and Wetlands (Permitting, Mitigation, and Preservation)
   s. Costs associated with inclusionary zoning and low income housing
   t. Toxic contamination evaluation studies or remediation
   u. Archaeological studies, investigations or relocations
   v. Costs associated with siltation basins
   w. Bridges and associated design costs
   x. Cost associated with traffic engineering studies, and construction
   y. Irrigation systems and associated design costs
   z. CMU and/or rock retaining walls
   aa. Cost associated with the design and construction of stormwater quality treatment units
   bb. Emergency vehicle access
   cc. Costs associated with tie-ins to existing utilities
   dd. Architectural design and associated fees
   ee. Detention facilities and associated maintenance costs
   ff. Interior drainage inlets and pipes associated with courtyard and/or open space areas
   gg. Bonds

4. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

5. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation

Figure R-1.0
Roadway Cross Section Index
Summary of Preliminary Per Foot Cost Estimates

SHEET	PROJECT NAME	TOTAL COST PER L.F.
R-1.1	2-lane Residential Collector	$ 430.00
R-1.2	2-lane Residential Collector (w/ Class I Bike lane)	$ 380.00
R-1.3	2-lane Residential Collector (w/ Class II Bike lane)	$ 540.00
R-1.4	4-lane Residential Collector (Residential)	$ 710.00
R-1.4a	4-lane Residential Collector (HDR or Non-Residential)	$ 620.00
R-1.5	2-lane Industrial Collector	$ 490.00
R-1.6	2-lane Industrial Collector (w/ Class II Bike lane)	$ 460.00
R-1.7	3-lane Industrial Collector	$ 640.00
R-1.8	4-lane Industrial Collector	$ 760.00
R-1.8a	4-lane Industrial Collector (half street)	$ 510.00
R-1.9	4-lane Divided Arterial (Residential)	$ 1,110.00
R-1.9a	4-lane Divided Arterial (HDR or Non-Residential)	$ 1,020.00
R-1.10	4-lane Divided Arterial - w/ Class I Bike lane (Residential)	$ 1,110.00
R-1.10a	4-lane Divided Arterial - w/ Class I Bike lane (HDR or Non-Res.)	$ 1,020.00
R-1.11	4-lane Town Center Arterial (123' ROW)	$ 1,310.00
R-1.11a	4-lane Town Center Arterial (105' ROW)	$ 1,130.00
R-1.12	6-lane Town Center Arterial	$ 1,730.00
R-1.13	6-lane Divided Arterial (Residential)	$ 1,670.00
R-1.13a	6-lane Divided Arterial (HDR or Non-Residential)	$ 1,590.00
R-1.14	8-lane Divided Arterial (Residential)	$ 1,930.00
R-1.14a	8-lane Divided Arterial (HDR or Non-Residential)	$ 1,860.00

Figure R-2.0
Intersection Index

SHEET	PROJECT NAME	TOTAL COST
R-2.1	8x6x6x6 Intersection	$ 3,033,000
R-2.2	6x4 Intersection (a)	$ 2,356,000
R-2.3	6x4 Intersection (b)	$ 2,006,000
R-2.4	8x6x3x3 Intersection	$ 1,920,000
R-2.5	6x4x3x3 Intersection	$ 1,972,000
R-2.6	4x3x3x3 Intersection	$ 1,280,000
R-2.7	4x4x4x2 Intersection (a)	$ 1,466,000
R-2.8	4x4x4x2 Intersection (b)	$ 1,613,000
R-2.9	4x4x2 Intersection	$ 1,247,000
R-2.10	4x4x4 Intersection	$ 1,319,000
R-2.11	6x4x2 Intersection	$ 1,341,000
R-2.12	4x4 Intersection	$ 1,999,000
R-2.13	4x2 Intersection	$ 1,372,000
R-2.14	4x2 Roundabout	$ 992,000
R-2.15	2x2x2 Roundabout	$ 530,000
R-2.16	4x2x2 Roundabout	$ 790,000
R-2.17	Traffic Signal	$ 270,000

PROBABLE OPINION OF CONSTRUCTION COST

for

Sutter Pointe Specific Plan

OFF-SITE ROADWAYS

Sutter-Pointe Regional Transportation Improvements

Sutter County, California

November 14, 2008

MacKay & Somps
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

ULTIMATE BUILDOUT				
Mitigation Measures	**Description of Improvements**	**Total Estimated Cost**	**Traffic Share**	**Project Fair Share Cost**
M.M. 3.3-2A	Riego Road widen to four lanes	$ 5,180,000	50%	$ 2,590,000
M.M. 3.3-3A	Baseline Raod widen to four lanes	$ 5,082,000	50%	$ 2,541,000
M.M. 3.3-3B	Baseline Raod widen to four lanes	$ 6,413,000	35%	$ 2,244,550
M.M. 3.3-3C	Baseline Raod widen to four lanes	$ 20,207,000	21%	$ 4,243,470
M.M. 3.3-3D	Baseline Raod widen to four lanes	$ 11,811,000	12%	$ 1,417,320
M.M. 3.3-4	I-5 widen to eight lanes (add HOV lanes)	$ 9,843,000	24%	$ 2,362,320
M.M. 3.3-5A	Construct a grade-separated interchange	$ 19,000,000	100%	$ 19,000,000
M.M. 3.3-5B	Modify existing intersection	$ 488,200	50%	$ 244,100
M.M. 3.3-5C	Construct slip on-ramp	$ 2,937,000	50%	$ 1,468,500
M.M. 3.3-6A	Modify existing intersection	$ 486,000	50%	$ 243,000
M.M. 3.3-6B	Modify existing intersection	$ 877,000	50%	$ 438,500
M.M. 3.3-6C	Modify existing intersection	$ 479,200	21%	$ 100,632
M.M. 3.3-6D	Modify existing intersection	$ 22,300	12%	$ 2,676
M.M. 3.3-7A	Modify existing intersection	$ 1,752,400	50%	$ 876,200
M.M. 3.3-7B	Construct a grade-separated interchange	$ 30,200,000	16%	$ 4,832,000
M.M. 3.3-7C	Modify existing intersection	$ 20,200	16%	$ 3,232
M.M. 3.3-7D	Modify existing intersection	$ 680,800	16%	$ 108,928
M.M. 3.3-7E	Add traffic Signals	$ 801,900	16%	$ 128,304
M.M. 3.3-7F	Modify existing intersection	$ 1,113,400	7%	$ 77,938
Riego Road On-site Phase 1 & A	Riego Road widen to six lanes and four lanes	$ 19,594,000	50%	$ 9,797,000
M.M. 3.3-8A	SR 70/99 & I-5 Contruct HOV lanes & Auxiliary lanes	$ 36,275,600	32%	$ 11,608,192
M.M. 3.3-8B	SR 70/99 & I-5 Contruct HOV lanes	$ 10,605,000	35%	$ 3,711,750
M.M. 3.3-8C	SR 70/99 & I-5 Contruct HOV lanes	$ 13,332,000	39%	$ 5,199,480
M.M. 3.3-8D	SR 70/99 & I-5 Contruct HOV lanes	$ 8,080,000	31%	$ 2,504,800
M.M. 3.3-9A	Riego Road/Baseline Road widen to six lanes; construct a grade-separated crossing of the Union Pacific Railroad; Re-align Pleasant Grove Road (N) and Pleasant Grove Road (S); Install traffic signal	$ 41,020,000	50%	$ 20,510,000
M.M. 3.3-10A	Same as Mitigation Measure 3.3-3A	$ -	50%	$ -
M.M. 3.3-10B	16th Street widen to four lanes	$ 3,286,000	21%	$ 690,060
M.M. 3.3-10C	Same as Mitigation Measure 3.3-10B	$ -	3%	$ -
M.M. 3.3-10D	Watt Avenue widen to six lanes	$ 18,723,000	1%	$ 187,230
M.M. 3.3-11A	Elverta Road widen to four lanes	$ 17,787,000	16%	$ 2,845,920
M.M. 3.3-11B	Elverta Road widen to four lanes	$ 2,592,000	16%	$ 414,720

M.M. 3.3-11C	Same as Mitigation 3.3-10B	$	-	13%	$ -
M.M. 3.3-11D	Same as Mitigation 3.3-10B	$	-	1%	$ -
M.M. 3.3-12A	I-5 widen to eight lanes (add HOV lanes)	$	4,978,000	31%	$ 1,543,180
M.M. 3.3-12B	Same as Mitigation Measure 3.3-4	$	-	28%	$ -
M.M. 3.3-12C	I-5 widen to eight lanes (add HOV lanes)	$	9,301,000	24%	$ 2,232,240
M.M. 3.3-13A	Same as Mitigation Measure 3.3-5A	$	-	32%	$ -
M.M. 3.3-13B	Modify existing intersection	$	215,700	50%	$ 107,850
M.M. 3.3-13C	Restripe overcrossing	$	74,250	80%	$ 59,400
M.M. 3.3-13D	Construct slip on-ramp	$	2,937,000	80%	$ 2,349,600
M.M. 3.3-14A	Modify existing intersection	$	215,700	50%	$ 107,850
M.M. 3.3-14B	Modify existing intersection	$	379,600	50%	$ 189,800
M.M. 3.3-14C	Modify existing intersection	$	252,900	21%	$ 53,109
M.M. 3.3-14D	Modify existing intersection	$	252,900	12%	$ 30,348
M.M. 3.3-15A	Modify existing intersection	$	310,500	50%	$ 155,250
M.M. 3.3-15B	Modify existing intersection	$	401,000	16%	$ 64,160
M.M. 3.3-15C	Same as Mitigation Measure 3.3-7D	$	-	12%	$ -
M.M. 3.3-15D	Modify existing intersection	$	22,300	12%	$ 2,676
M.M. 3.3-15E	Modify existing intersection	$	480,400	16%	$ 76,864
M.M. 3.3-16	Same as Mitigation Measure 3.3-8(A-D)	$	-	32%	$ -
M.M. 3.3-19	Construct Frontage Road (just east of SR 99)	$	11,760,000	50%	$ 5,880,000
Riego Road On-site Ultimate Buildout	Riego Road widen to eight lanes and six lanes	$	5,656,000	50%	$ 2,828,000
Cumulative Cost		**$**	**325,926,250**		**$ 116,072,149**

NOTES

OFF-SITE ROADWAYS

Sutter-Pointe Regional Transportation Improvements

Sutter Pointe Specific Plan

Sutter County, California

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. Mackay & Somps Makes no warranty, either expressed or implied, as to the accuracy of this estimate.

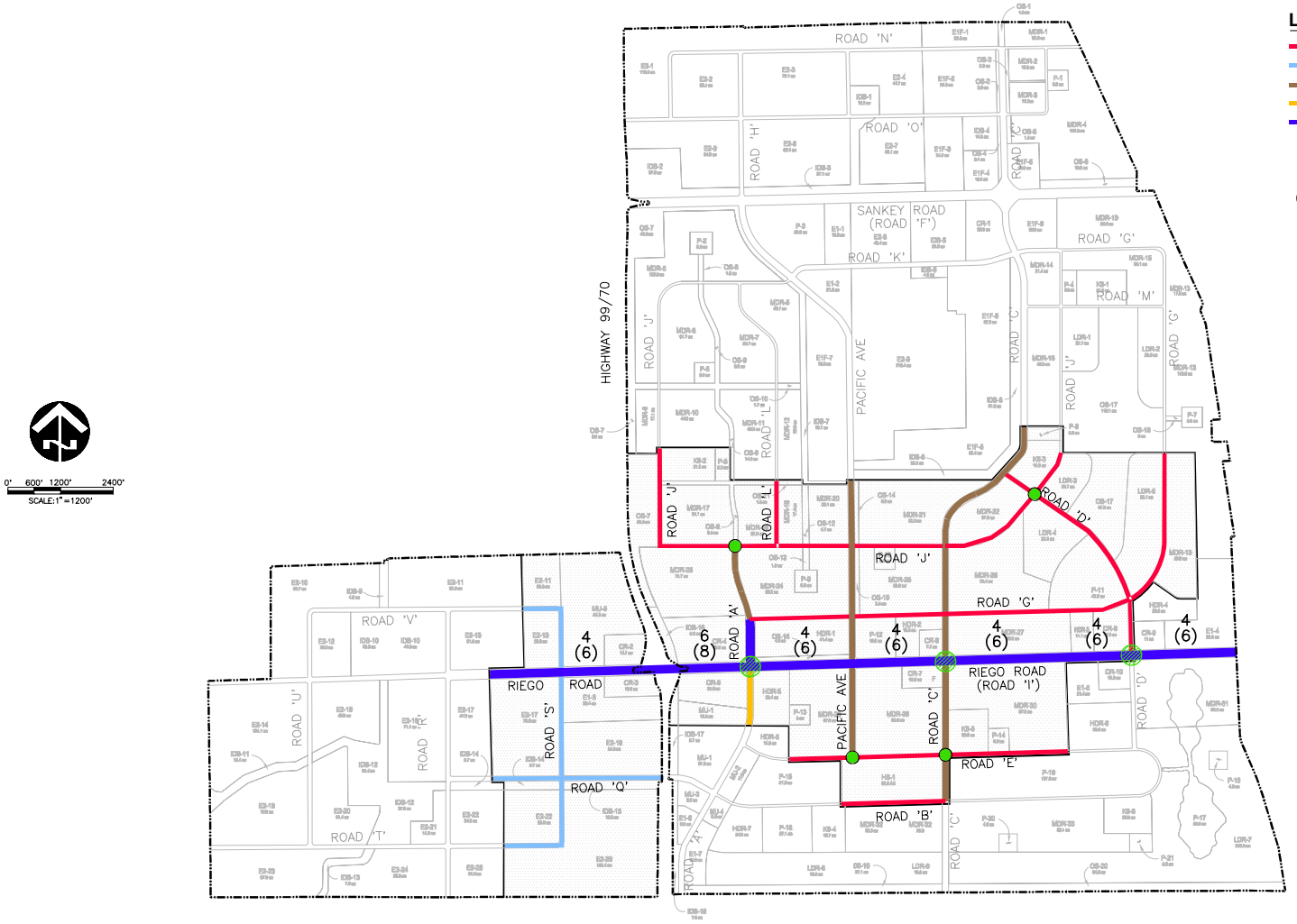
2. This estimate does not consider the following:

   a. Fencing and bulkheads
   b. Assessments for assessment, lighting & landscaping, GHAD, Mello Roos districts of the like
   c. Reimbursable dry utilities costs. (Est. net costs after reimbursements are included in the estimate.)
   d. Erosion Control and siltation costs
   e. Postal pads and mail boxes
   f. Land costs, right of way acquisition, entitlements, easements, and/or rights of entry. (unless listed)
   g. Backflow Devices
   h. Pole relocation or under grounding of existing overhead facilities
   I. Fees due at building permit
   j. Over excavation of unsuitable materials, undercutting, and/or landslide repair
   k. Costs associated with high groundwater or inclement weather conditions
   l. Costs associated with limitations on construction access
   m. Tree preservation systems and mitigation costs
   n. Landscaping & associated design costs outside of back of the walk
   o. Costs associated with Homeowner's Associations
   p. Financing and overhead charges.
   q. Costs associated with Endangered Species and Wildlife Conservation. (unless listed)
   r. Cost associated with Corps of Engineer, Fish and Game, Fish and Wildlife and Wetlands (Permitting, Mitigation, and Preservation)
   s. Costs associated with inclusionary zoning and low income housing
   t. Toxic contamination evaluation studies or remediation
   u. Archaeological studies, investigations or relocations
   v. Costs associated with siltation basins
   w. Bridges and associated design costs
   x. Cost associated with traffic engineering studies.
   y. Irrigation systems and associated design costs
   z. CMU and/or rock retaining walls
   aa. Cost associated with the design and construction of stormwater quality treatment units
   bb. Emergency vehicle access
   cc. Costs associated with tie-ins to existing utilities
   dd. Architectural design and associated fees
   ee. Detention facilities and associated maintenance costs
   ff. Interior drainage inlets and pipes associated with courtyard and/or open space areas
   gg. Bonds

3. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

4. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation

5. Mitigation Measures were provided by FEHR & PEERS via spreadsheet dated 9/30/08.



Sheet 2 of 21

SUTTER POINTE

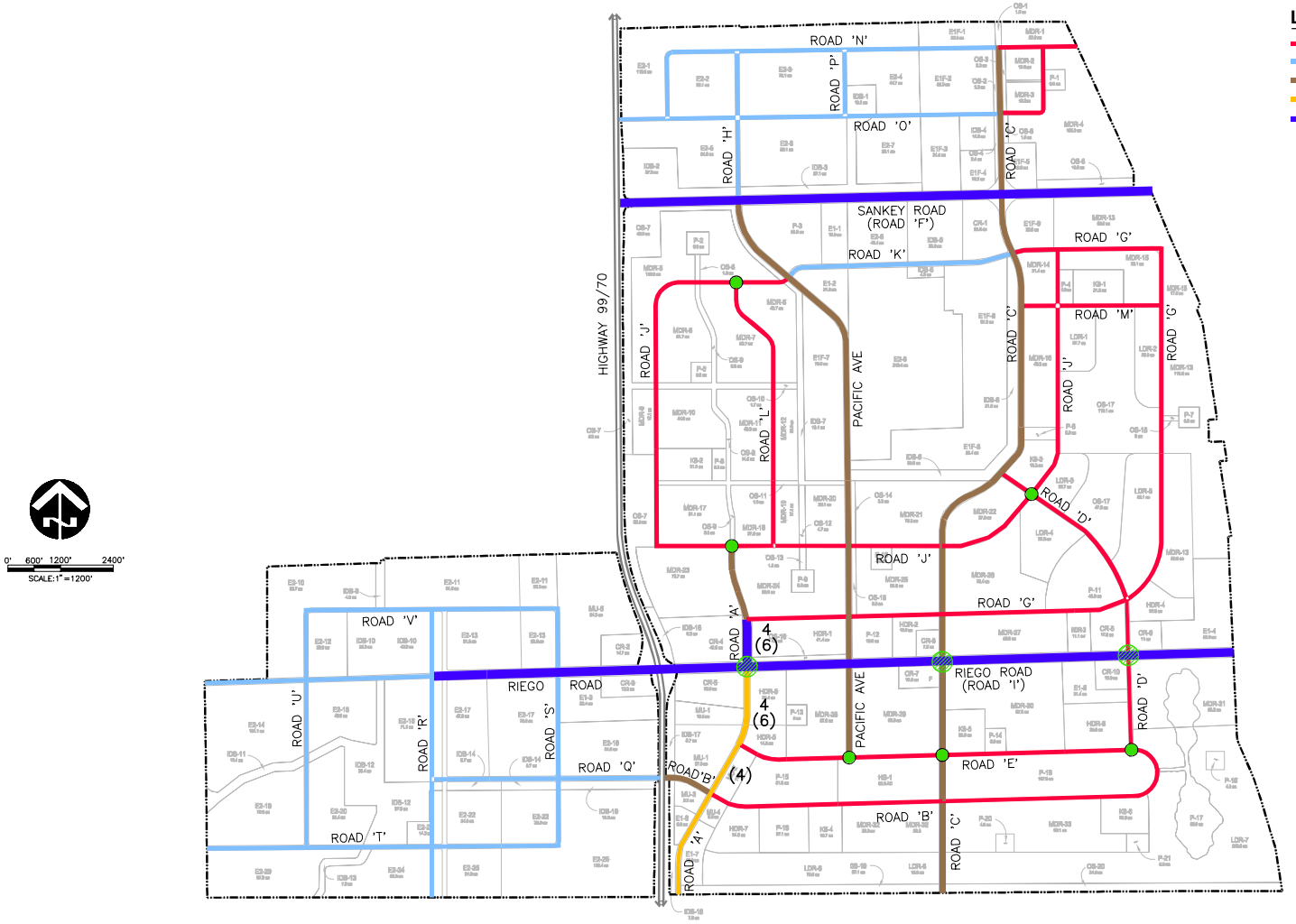
On-Site Roadway Plan - Phase 1 and A

MEASURE "M" GROUP

MACKAY & SOMPS

November 14, 2008

MAP A-1



SUTTER POINTE

MEASURE "M" GROUP

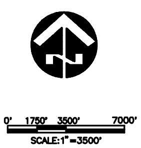
On-Site Roadway Plan - Buildout

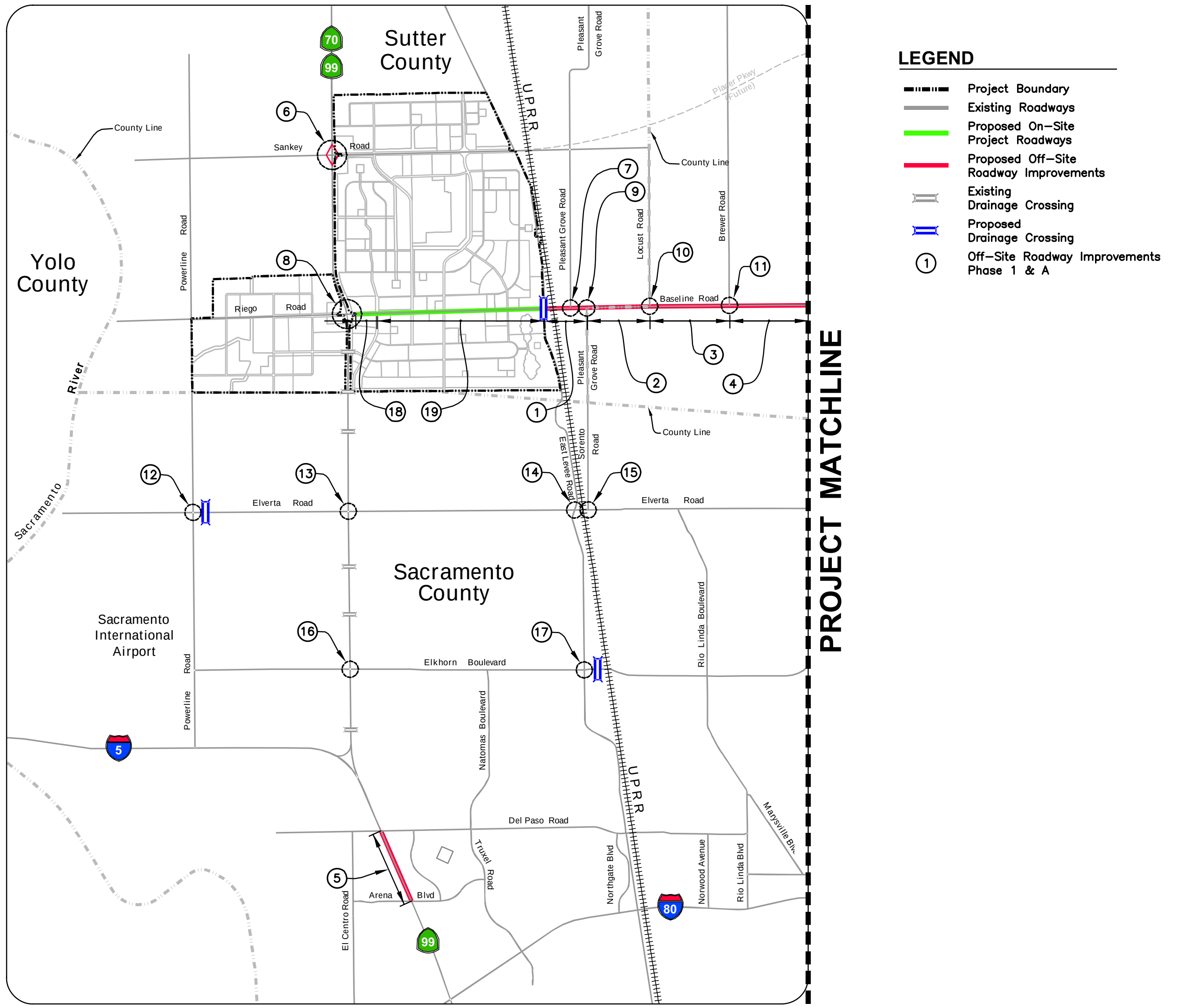
MacKay & Somps
CIVIL ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 924-8037

November 14, 2008

MAP A-2

		OFF–SITE ROADWAY IMPROVEMENTS
	Mitigation Number	Description of Improvements
1	M.M. 3.3–2A	Riego Road Widen to Four Lanes
2	M.M. 3.3–3A	Baseline Road Widen to Four Lanes
3	M.M. 3.3–3B	Baseline Road Widen to Four Lanes
4	M.M. 3.3–3C	Baseline Road Widen to Four Lanes
5	M.M. 3.3–4	I–5 Widen to Eight Lanes (Add HOV Lanes)
6	M.M. 3.3–5A	SR 70/99 Construct a Grade–separated Interchange
7	M.M. 3.3–5B	Modify Existing Intersection
8	M.M. 3.3–5C	Construct Slip On–Ramp
9	M.M. 3.3–6A	Modify Existing Intersection
10	M.M. 3.3–6B	Modify Existing Intersection
11	M.M. 3.3–6C	Modify Existing Intersection
12	M.M. 3.3–7A	Modify Existing Intersection
13	M.M. 3.3–7B	Construct a Grade–separated Interchange
14	M.M. 3.3–7C	Modify Existing Intersection
15	M.M. 3.3–7D	Modify Existing Intersection
16	M.M. 3.3–7E	Add Traffic Signals
17	M.M. 3.3–7F	Modify Existing Intersection
18		Riego Road Widen to Six Lanes
19		Riego Road Widen to Four Lanes





SUTTER POINTE

Off-Site Roadway Improvements Phase 1 & A (West)

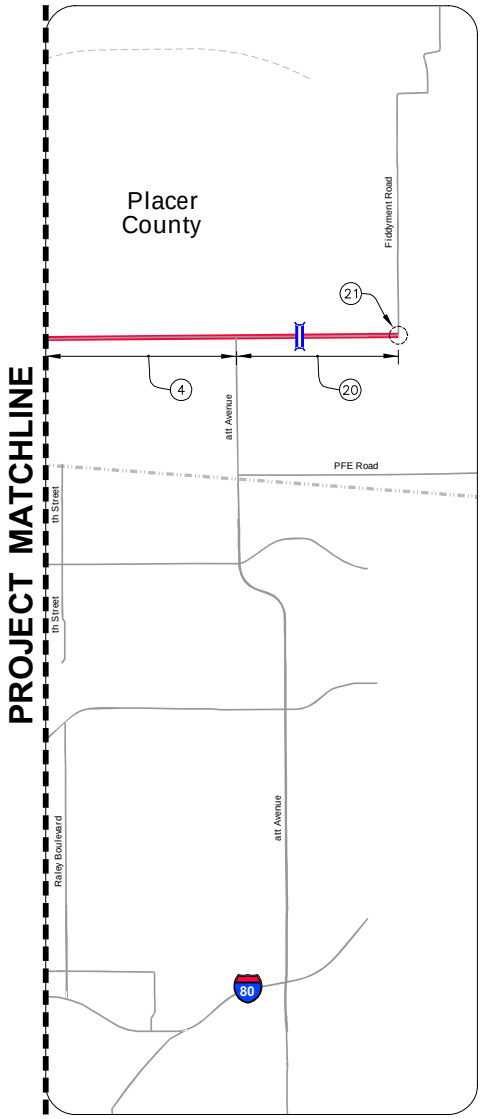
MEASURE "M" GROUP

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

November 14, 2008

MAP A-3

OFF-SITE ROADWAY IMPROVEMENTS		
	Mitigation Number	Description of Improvements
(4)	M.M. 3.3-3C	Baseline Road Widen to Four Lanes
(20)	M.M. 3.3-3D	Baseline Road Widen to Four Lanes
(21)	M.M. 3.3-6D	Modify Existing Intersection



LEGEND

- Project Boundary
- Existing Roadways
- Proposed On-Site Project Roadways
- Proposed Off-Site Roadway Improvements
- Existing Drainage Crossing
- Proposed Drainage Crossing
- (4) Off-Site Roadway Improvements Phase 1 & A

0' 1750' 3500' 7000'
SCALE: 1" = 3500'

11-17-2008 11:25:42 rsmith L:\Sacramento\19001\01 Master Plans\Infrastructure Booklet\05-Offsite Roadway Improvements Phase 1 & A-EAST.dwg

Sheet 5 of 21

SUTTER POINTE

MEASURE "M" GROUP

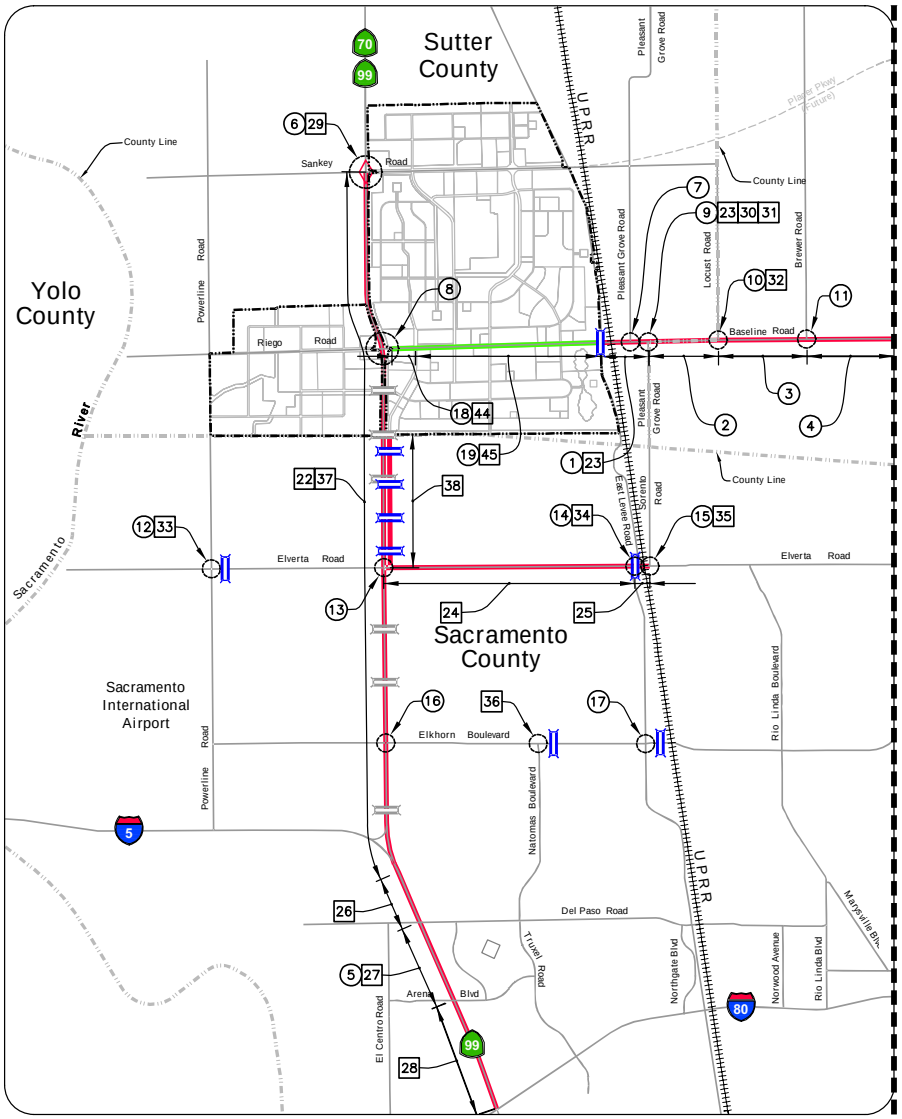
Off-Site Roadway Improvements Phase 1 & A (East)

MacKay & Somps
Engineers Planners Surveyors
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-1481

November 14, 2008

MAP A-4

OFF-SITE ROADWAY IMPROVEMENTS		
	Mitigation Number	Description of Improvements
1	M.M. 3.3-2A	Riego Road Widen to Four Lanes
2	M.M. 3.3-3A	Baseline Road Widen to Four Lanes
3	M.M. 3.3-3B	Baseline Road Widen to Four Lanes
4	M.M. 3.3-3C	Baseline Road Widen to Four Lanes
5	M.M. 3.3-4	I-5 Widen to Eight Lanes (Add HOV Lanes)
6	M.M. 3.3-5A	SR 70/99 Construct a Grade-separated Interchange
7	M.M. 3.3-5B	Modify Existing Intersection
8	M.M. 3.3-5C	Construct Slip On-Ramp
9	M.M. 3.3-6A	Modify Existing Intersection
10	M.M. 3.3-6B	Modify Existing Intersection
11	M.M. 3.3-6C	Modify Existing Intersection
12	M.M. 3.3-7A	Modify Existing Intersection
13	M.M. 3.3-7B	Construct a Grade-separated Interchange
14	M.M. 3.3-7C	Modify Existing Intersection
15	M.M. 3.3-7D	Modify Existing Intersection
16	M.M. 3.3-7E	Add Traffic Signals
17	M.M. 3.3-7F	Modify Existing Intersection
18		Riego Road Widen to Six Lanes
19		Riego Road Widen to Four Lanes
22	M.M. 3.3-8	SR 70/99 & I-5 Construct HOV Lanes & Auxiliary Lanes
23	M.M. 3.3-9A	Riego Road/ Baseline Road Widen to Six Lanes; Construct a Grade-separated Crossing of The Union Pacific Railroad; Re-align Pleasant Grove Road (N) and/or Pleasant Grove Road (S); Install Traffic Signal
24	M.M. 3.3-11A	Elverta Road Widen to Four Lanes
25	M.M. 3.3-11B	Elverta Road Widen to Four Lanes
26	M.M. 3.3-12A	I-5 Widen to Eight Lanes (Add HOV Lanes)
27	M.M. 3.3-12B	I-5 Widen to Eight Lanes (Add HOV Lanes)
28	M.M. 3.3-12C	I-5 Widen to Ten Lanes (Add HOV Lanes);
29	M.M. 3.3-13A	SR 70/99 Construct a Grade-separated Interchange
30	M.M. 3.3-13B	Modify Existing Intersection
31	M.M. 3.3-14A	Modify Existing Intersection
32	M.M. 3.3-14B	Modify Existing Intersection
33	M.M. 3.3-15A	Modify Existing Intersection
34	M.M. 3.3-15B	Modify Existing Intersection
35	M.M. 3.3-15C	Modify Existing Intersection
36	M.M. 3.3-15E	Modify Existing Intersection
37	M.M. 3.3-16	SR 70/99 & I-5 Construct HOV Lanes & Auxiliary Lanes
38	M.M. 3.3-19	Construct Four-Lane Frontage Road Connecting SPSP to Elverta Road
44		Riego Road Widen to Eight Lanes
45		Riego Road Widen to Six Lanes



LEGEND

- Project Boundary
- Existing Roadways
- Proposed On-Site Project Roadways
- Proposed Off-Site Roadway Improvements
- Existing Drainage Crossing
- Proposed Drainage Crossing
- (17) Off-Site Roadway Improvements Phase 1 & A
- [20] Off-Site Roadway Improvements Buildout

0' 1750' 3500' 7000'
SCALE:1"=3500'

SUTTER POINTE

MEASURE "M" GROUP

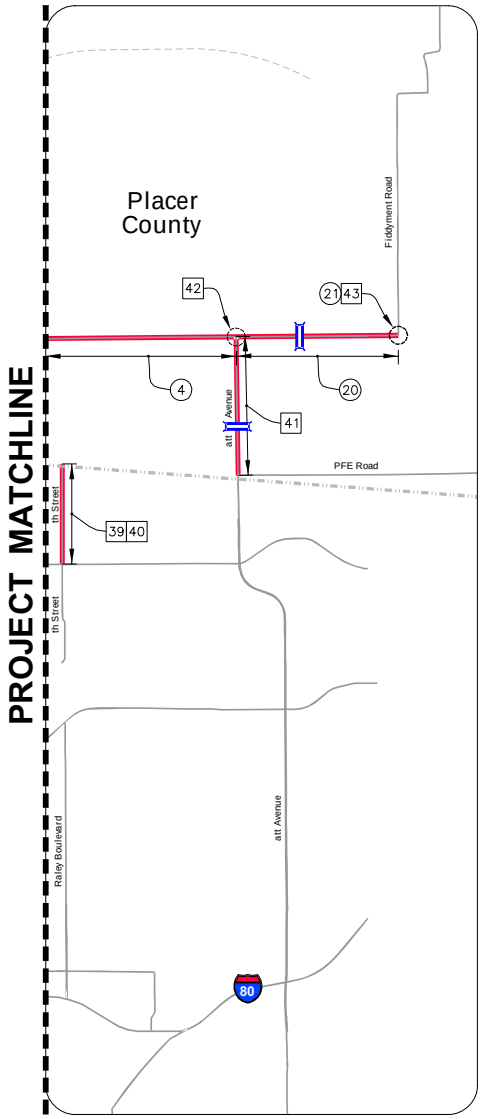
Off-Site Roadway Improvements Buildout (West)

MacKay & Somps
Engineers Planners Surveyors
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-9200

November 14, 2008

MAP A-5

OFF-SITE ROADWAY IMPROVEMENTS		
	Mitigation Number	Description of Improvements
(4)	M.M. 3.3-3C	Baseline Road Widen to Four Lanes
(20)	M.M. 3.3-3D	Baseline Road Widen to Four Lanes
(21)	M.M. 3.3-6D	Modify Existing Intersection
[39]	M.M. 3.3-10B	16th Street Widen to Four Lanes
[40]	M.M. 3.3-10C	16th Street Widen to Four Lanes
[41]	M.M. 3.3-10D	Watt Avenue Widen to Six Lanes
[42]	M.M. 3.3-14C	Modify Existing Intersection
[43]	M.M. 3.3-14D	Modify Existing Intersection



LEGEND

- Project Boundary
- Existing Roadways
- Proposed On-Site Project Roadways
- Proposed Off-Site Roadway Improvements
- Existing Drainage Crossing
- Proposed Drainage Crossing
- (17) Off-Site Roadway Improvements Phase 1 & A
- [20] Off-Site Roadway Improvements Buildout

0' 1750' 3500' 7000'
SCALE:1" =3500'

11-17-2008 11:27:06 rsmith L:\Sacramento\19001\01 Master Plans\Infrastructure Booklet\07-Offsite Roadway Improvements Buildout-EAST.dwg

SUTTER POINTE

MEASURE "M" GROUP

Off-Site Roadway Improvements Buildout (East)

MacKay & Somps
Engineers Planners Surveyors
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-9292

November 14, 2008

MAP A-6

PRELIMINARY COST ESTIMATE

Sewer Master Plan

SUTTER POINTE

Sutter County, California

November 14, 2008

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

PRELIMINARY COST ESTIMATE

Sutter Pointe - Sewer Master Plan

Sutter County

Date: November 14, 2008

CONSTRUCTION COSTS				PHASE 1			PHASE A			PHASE 2			PHASE B			PHASE 3			PHASE C			PHASE 4			PHASE D			TOTAL		
ITEM No.	DESCRIPTION	UNIT PRICE	UNIT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT
1.0 - ONSITE SEWER																													
1.A COLLECTION SYSTEM																													
1.	8" Sanitary Sewer	$38.00	LF	21,500	LF	$817,000	3,750	LF	$142,500	8,400	LF	$319,200	9,900	LF	$376,200	6,800	LF	$258,400	9,250	LF	$351,500	5,950	LF	$226,100	11,950	LF	$454,100	77,500	LF	$2,945,000
2.	10" Sanitary Sewer	$42.00	LF	2,500	LF	$105,000	5,500	LF	$231,000	750	LF	$31,500	2,350	LF	$98,700	1,600	LF	$67,200	2,150	LF	$90,300	3,500	LF	$147,000	6,800	LF	$285,600	25,150	LF	$1,056,300
3.	12" Sanitary Sewer	$57.00	LF	3,850	LF	$219,450	0	LF	$0	4,700	LF	$267,900	950	LF	$54,150	0	LF	$0	2,300	LF	$131,100	4,200	LF	$239,400	0	LF	$0	16,000	LF	$912,000
4.	15" Sanitary Sewer	$90.00	LF	7,500	LF	$675,000	3,400	LF	$306,000	0	LF	$0	3,250	LF	$292,500	350	LF	$31,500	0	LF	$0	600	LF	$54,000	1,000	LF	$90,000	16,100	LF	$1,449,000
5.	18" Sanitary Sewer	$120.00	LF	5,000	LF	$600,000	1,250	LF	$150,000	1,100	LF	$132,000	350	LF	$42,000	2,500	LF	$300,000	650	LF	$78,000	50	LF	$6,000	150	LF	$18,000	11,050	LF	$1,326,000
6.	21" Sanitary Sewer	$158.00	LF	1,800	LF	$284,400	2,900	LF	$458,200	3,850	LF	$608,300	400	LF	$63,200	4,150	LF	$655,700	1,400	LF	$221,200	0	LF	$0	0	LF	$0	14,500	LF	$2,291,000
7.	24" Sanitary Sewer	$188.00	LF	3,550	LF	$667,400	0	LF	$0	950	LF	$178,600	350	LF	$65,800	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	4,850	LF	$911,800
8.	27" Sanitary Sewer	$230.00	LF	14,900	LF	$3,427,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	14,900	LF	$3,427,000
9.	30" Sanitary Sewer	$282.00	LF	2,400	LF	$676,800	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	2,400	LF	$676,800
10.	36" Sanitary Sewer	$375.00	LF	2,550	LF	$956,250	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	2,550	LF	$956,250
11.	48" Sanitary Sewer	$510.00	LF	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0
12.	48" SSMH (min. 400' spacing)	$6,650.00	EA	101	EA	$670,819	35	EA	$231,088	37	EA	$248,544	42	EA	$279,300	28	EA	$187,031	36	EA	$238,569	36	EA	$237,738	50	EA	$330,838	365	EA	$2,423,925
13.	60" SSMH (min. 400' Spacing)	$13,650.00	EA	13	EA	$182,569	7	EA	$98,963	12	EA	$163,800	2	EA	$25,594	10	EA	$141,619	4	EA	$47,775	0	EA	$0	0	EA	$0	48	EA	$660,319
14.	72" SSMH (min. 400' Spacing)	$15,750.00	EA	12	EA	$194,906	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	12	EA	$194,906
15.	48" Reception SSMH	$7,000.00	EA	2	EA	$14,000	1	EA	$7,000	0	EA	$0	1	EA	$7,000	1	EA	$7,000	1	EA	$7,000	0	EA	$0	0	EA	$0	6	EA	$42,000
16.	60" Reception SSMH	$14,000.00	EA	3	EA	$42,000	0	EA	$0	1	EA	$14,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	4	EA	$56,000
17.	Dewater Trench	$10.00	LF	65,550	LF	$655,500	16,800	LF	$168,000	19,750	LF	$197,500	17,550	LF	$175,500	15,400	LF	$154,000	15,750	LF	$157,500	14,300	LF	$143,000	19,900	LF	$199,000	185,000	LF	$1,850,000
	TOTAL COLLECTION SYSTEM					**$10,188,094**			**$1,792,750**			**$2,161,344**			**$1,479,944**			**$1,802,450**			**$1,322,944**			**$1,053,238**			**$1,377,538**			**$21,178,300**
1.B PUMP STATIONS																													
1.	Sewer Pump Station A - Phase C (1.2 mgd - PWWF)	$1,100,000.00	mgd/EA	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$1,320,000	0	EA	$0	0	EA	$0	1	EA	$1,320,000
2.	Sewer Pump Station B - Phase A (3.5 mgd - PWWF)	$900,000.00	mgd/EA	0	EA	$0	1	EA	$3,150,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$3,150,000
3.	Sewer Pump Station C - Phase C (1.1 mgd - PWWF)	$1,100,000.00	mgd/EA	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$1,210,000	0	EA	$0	0	EA	$0	1	EA	$1,210,000
4.	Sewer Pump Station D - Phase A (6.7 mgd - PWWF)	$900,000.00	mgd/EA	0	EA	$0	1	EA	$6,030,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$6,030,000
5.	Sewer Pump Station E - Phase D (2.3 mgd - PWWF)	$1,100,000.00	mgd/EA	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$2,530,000	1	EA	$2,530,000
6.	Sewer Pump Station F - Phase C (2.2 mgd - PWWF)	$1,100,000.00	mgd/EA	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$2,420,000	0	EA	$0	0	EA	$0	1	EA	$2,420,000
7.	Sewer Pump Station G - Phase 1 (5.6 mgd - PWWF)	$900,000.00	mgd/EA	1	EA	$5,040,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$5,040,000
8.	Sewer Pump Station H - Phase 1 (6.2 mgd - PWWF)	$900,000.00	mgd/EA	1	EA	$5,580,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$5,580,000
9.	Sewer Pump Station I - Phase 2 (3.4 mgd - PWWF)	$900,000.00	mgd/EA	1	EA	$3,060,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$3,060,000
10.	Sewer Pump Station J - Phase 2 (1.7 mgd - PWWF)	$1,100,000.00	mgd/EA	1	EA	$1,870,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$1,870,000
11.	Central Pump Station - Phase 1 (27.0 mgd - PWWF)	$750,000.00	mgd/EA	1	EA	$20,250,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$20,250,000
	TOTAL PUMP STATIONS					**$35,800,000**			**$9,180,000**			**$0**			**$0**			**$0**			**$4,950,000**			**$0**			**$2,530,000**			**$52,460,000**

CONSTRUCTION COSTS				PHASE 1			PHASE A			PHASE 2			PHASE B			PHASE 3			PHASE C			PHASE 4			PHASE D			TOTAL		
ITEM No.	DESCRIPTION	UNIT PRICE	UNIT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT
1.C ONSITE FORCE MAINS																													
1	8" Force Main	$80.00	LF	0	LF	$0	0	LF	$0	0	LF	$0	350	LF	$28,000	0	LF	$0		LF	$0	0	LF	$0	0	LF	$0	350	LF	$28,000
2	10" Force Main	$100.00	LF	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	1,950	LF	$195,000	0	LF	$0	0	LF	$0	1,950	LF	$195,000
3	12" Force Main	$120.00	LF	1,100	LF	$132,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	1,100	LF	$132,000
4	15" Force Main	$150.00	LF	3,300	LF	$495,000	1250	LF	$187,500	0	LF	$0	0	LF	$0	0	LF	$0	2,650	LF	$397,500	0	LF	$0	2050	LF	$307,500	9,250	LF	$1,387,500
5	21" Force Main	$270.00	LF	11,600	LF	$3,132,000	2450	LF	$661,500	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	14,050	LF	$3,793,500
6	8" Line Isolation Valve	$1,800.00	EA	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$1,800	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$1,800
7	10" Line Isolation Valve	$2,000.00	EA	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$2,000	0	EA	$0	0	EA	$0	1	EA	$2,000
8	12" Line Isolation Valve	$2,200.00	EA	0	EA	$0	0	EA	$0	1	EA	$2,200	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$2,200
9	15" Line Isolation Valve	$3,200.00	EA	0	EA	$0	1	EA	$3,200	1	EA	$3,200	0	EA	$0	0	EA	$0	1	EA	$3,200	0	EA	$0	1	EA	$3,200	4	EA	$12,800
10	21" Line Isolation Valve	$4,500.00	EA	3	EA	$13,500	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	3	EA	$13,500
11	6" Air/Vac Assembly (inc. precast vault)	$10,000.00	EA	17	EA	$170,000	11	EA	$110,000	7	EA	$70,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	35	EA	$350,000
12	2" Air/Vac Assembly	$2,500.00	EA	0	EA	$0	0	EA	$0	1	EA	$2,500	1	EA	$2,500	0	EA	$0	5	EA	$12,500	0	EA	$0	2	EA	$5,000	9	EA	$22,500
13	Dewater Trench	$35.00	LF	16,000	LF	$560,000	3700	LF	$129,500	0	LF	$0	350	LF	$12,250	0	LF	$0	4600	LF	$161,000	0	LF	$0	2050	LF	$71,750	26,700	LF	$934,500
	TOTAL FORCE MAIN					**$4,502,500**			**$1,091,700**			**$77,900**			**$44,550**			**$0**			**$771,200**			**$0**			**$387,450**			**$6,875,300**
1.D BORE AND JACK																													
1.	Bore and Jack under HWY 99/70 (42" Casing)	$1,300.00	LF	600	LF	$780,000		LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$780,000
	TOTAL BORE AND JACK					**$780,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$780,000**
2.0 - OFFSITE SEWER																													
A. SUTTER POINTE INTERCEPTOR (LINE 'A')																													
1.	Parallel Forcemain (1-12", 1-18") (Forcemains - Open cut inside roadway)	$345.00	LF	46,600	LF	$11,500,000	INC.	LS	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	INC,.	LF	INC.	1	LF	$11,500,000
2.	24" Forcemain	$400.00	LF	0	LF	$0	INC.	LS	INC.	0	LF	$0	INC.	LF	INC.	46,600	LF	$19,400,000	INC.	LF	INC.	0	LF	$0	INC.	LF	INC.	46,600	LF	$19,400,000
3.	Pipe Bore and Jack (24" casing for 12" pipe)	$750.00	LF	550	LF	$412,500	INC.	LS	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	LF	LF	INC.	550	LF	$412,500
4.	Pipe Bore and Jack (30" Casing for 18" pipe)	$950.00	LF	550	LF	$522,500	INC.	LS	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	INC.	LF	INC.	0	LF	$0	LF	LF	INC.	550	LF	$522,500
5.	Pipe Bore and Jack (36" Casing for 24" pipe)	$1,100.00	LF	0	LF	$0	INC.	LS	INC.	0	LF	$0	INC.	LF	INC.	550	LF	$605,000	INC.	LF	INC.	0	LF	$0	LF	LF	INC.	550	LF	$605,000
6.	SS Monitoring Station	$250,000.00	LS	1	LS	$250,000	INC.	LS	INC.	0	LS	$0	INC.	LS	INC.	0	LS	$0	INC.	LS	INC.	0	LS	$0	INC.	LS	INC.	1	LS	$250,000
7.	Storage (3.9 MG)	$15,600,000.00	LS	0	LS	$0	INC.	LS	INC.	1	LS	$15,600,000	INC.	LS	INC.	0	LS	$0	INC.	LS	INC.	0	LS	$0	INC.	LS	INC.	1	LS	$15,600,000
	TOTAL SUTTER POINTE INTERCEPTOR (LINE 'A')					**$12,685,000**			**INC.**			**$15,600,000**			**INC.**			**$20,005,000**			**INC.**			**$0**			**INC.**			**$48,290,000**

CONSTRUCTION COSTS			PHASE 1			PHASE A			PHASE 2			PHASE B			PHASE 3			PHASE C			PHASE 4			PHASE D			TOTAL		
ITEM No.	DESCRIPTION	UNIT PRICE	UNIT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT	QTY	UNIT	AMOUNT
	CONSTRUCTION COST ESTIMATE SUMMARY																												
	1.0 - ONSITE SEWER																												
	A. COLLECTION SYSTEM					**$10,188,094**			**$1,792,750**			**$2,161,344**			**$1,479,944**			**$1,802,450**			**$1,322,944**			**$1,053,238**			**$1,377,538**			**$21,178,300**
	B. PUMP STATIONS					**$35,800,000**			**$9,180,000**			**$0**			**$0**			**$0**			**$4,950,000**			**$0**			**$2,530,000**			**$52,460,000**
	C. FORCE MAIN					**$4,502,500**			**$1,091,700**			**$77,900**			**$44,550**			**$0**			**$771,200**			**$0**			**$387,450**			**$6,875,300**
	E. BORE AND JACK					**$780,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$780,000**
	2.0 - OFFSITE SEWER																												
	A. SUTTER POINTE INTERCEPTOR (LINE 'A')					**$12,685,000**			**INC.**			**$15,600,000**			**INC.**			**$20,005,000**			**INC.**			**$0**			**INC.**			**$48,290,000**
	Subtotal Construction Costs					**$63,955,594**			**$12,064,450**			**$17,839,244**			**$1,524,494**			**$21,807,450**			**$7,044,144**			**$1,053,238**			**$4,294,988**			**$129,583,600**
	15% Engineering/Inspection					**$9,593,339**			**$1,809,668**			**$2,675,887**			**$228,674**			**$3,271,118**			**$1,056,622**			**$157,986**			**$644,248**			**$19,437,540**
	20% Contingency					**$12,791,119**			**$2,412,890**			**$3,567,849**			**$304,899**			**$4,361,490**			**$1,408,829**			**$210,648**			**$858,998**			**$25,916,720**
	GRAND TOTAL CONSTRUCTION COST					**$86,340,052**			**$16,287,008**			**$24,082,979**			**$2,058,067**			**$29,440,058**			**$9,509,594**			**$1,421,871**			**$5,798,233**			**$174,937,860**
	CREDITS/FEES																												
	3.0 SRCSD CONNECTION FEE																												
	a. Residential Land Use	$7,100.00	ESD	7,391	ESD	$52,476,100	822	ESD	$5,836,200	4,097	ESD	$29,088,700	0	ESD	$0	2,922	ESD	$20,746,200	0	ESD	$0	2,993	ESD	$21,250,300	0	ESD	$0	18,225	ESD	$129,397,500
	b. Commercial/Industrial Land Use	$7,100.00	ESD	611	ESD	$4,338,100	2,680	ESD	$19,028,000	0	ESD	$0	4,624	ESD	$32,830,400	565	ESD	$4,011,500	3,734	ESD	$26,511,400	553	ESD	$3,926,300	3,727	ESD	$26,461,700	16,494	ESD	$117,107,400
	c. Public Facilities	$7,100.00	ESD	792	ESD	$5,623,200	0	ESD	$0	308	ESD	$2,186,800	0	ESD	$0	185	ESD	$1,313,500	0	ESD	$0	176	ESD	$1,249,600	0	ESD	$0	1,461	ESD	$10,373,100
	TOTAL SRCSD CONNECTION FEE					**$62,437,400**			**$24,864,200**			**$31,275,500**			**$32,830,400**			**$26,071,200**			**$26,511,400**			**$26,426,200**			**$26,461,700**			**$256,878,000**

NOTES

Sutter Pointe Sewer Master Plan

Sutter County, California

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. MacKay & Somps makes no warranty, either expressed or implied, as to the accuracy of this estimate.

2. This estimate is based on the March 21, 2008 Addendum to the Sutter Pointe Sewer Plan, prepared by Mackay and Somps. Minor adjustments were made to facilities within individual phases, subsequent to March, 2008.

3. Costs for PWWF storage attenuation are included in this estimate under Section 2 "Offsite Sewer" . Storage requirements are currently being developed by Sacramento Regional County Sanitation District (SRCSD). Estimated storage cost per phase is estimated based on 25% of ADWF. (Source: HDR)

4. This estimate does not consider the following:

a. Cost associated with environmental (wetland) mitigations or biological surveys
b. Phased construction or out-of-regular-sequence construction
c. Costs associated with ground water or inclement weather conditions
d. Financial Charges
e. Bonds
v. Land costs, acquisition of right of way, easements, and/or rights of entry
w. Assessments from assessment, lighting & landscaping, Mello-Roos districts or the like

5. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation.

6. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

7. Interim improvements may be required depending on development timing of individual units.

8. SRCSD Connection Fees, shown in this estimate, are based on the latest CSD-1/SRCSD "Impact/Connection Fee" schedule. Commercial/Industrial and Public Facilities connection fees are assumed to be the same rate as single-family residential ($7100/ESD) purposes of this estimate. A more detailed connection fee analysis for commercial users can be performed when specific "use categories" are determined within the Inustrial/Commercial regions.

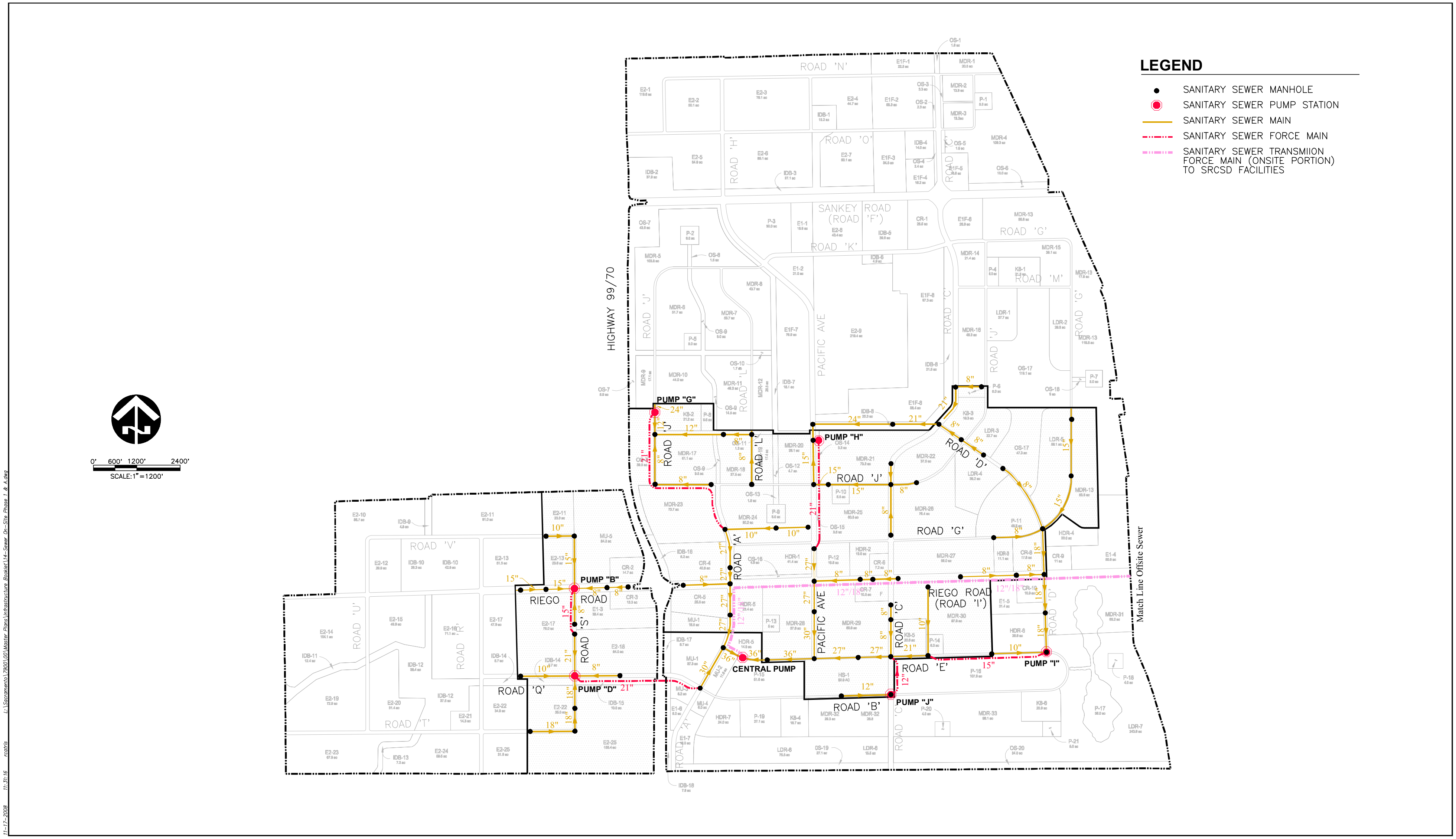
9. Pump station costs are based on recent bid information for the Sacramento region, including public information provided by CSD-1. Pump station costs are intended to cover all expenses associated with sewer pump station as well as site work.

10. Costs for all "Offsite" Sewer improvements are from then Central Pump Station (CPS) to the Point of Connection (POC) to the Upp Northwest Interceptor-3 (Shown in Section 2).

11. Estimate assumes all "Onsite" sewer materials and construction methods conforming to the County of Sutter Department of Public Works Design Standards, dated November 2005.

12. Bore and jacking for "Offsite" Sanitary Sewer Force Main (SSFM) assumes 300 LF for the NEMDEC Channel Crossing and 250 LF for crossing additional small culverts and wetlands.

13. Intended route for "Offsite" SSFM 'Line A' is: Northerly from CPS to Riego Road, easterly on Riego Road to Pleasant Grove Road, Southly on Pleasant Grove to Rio Linda Blvd, Rio Linda Road becomes Elwyn Ave, then southly on 2nd Avenue, westerly on M Street and southerly on 6th Street to POC at Elkhorn Blvd. (Total length +/- 46,600 LF, within roadway).



Sheet 14 of 21

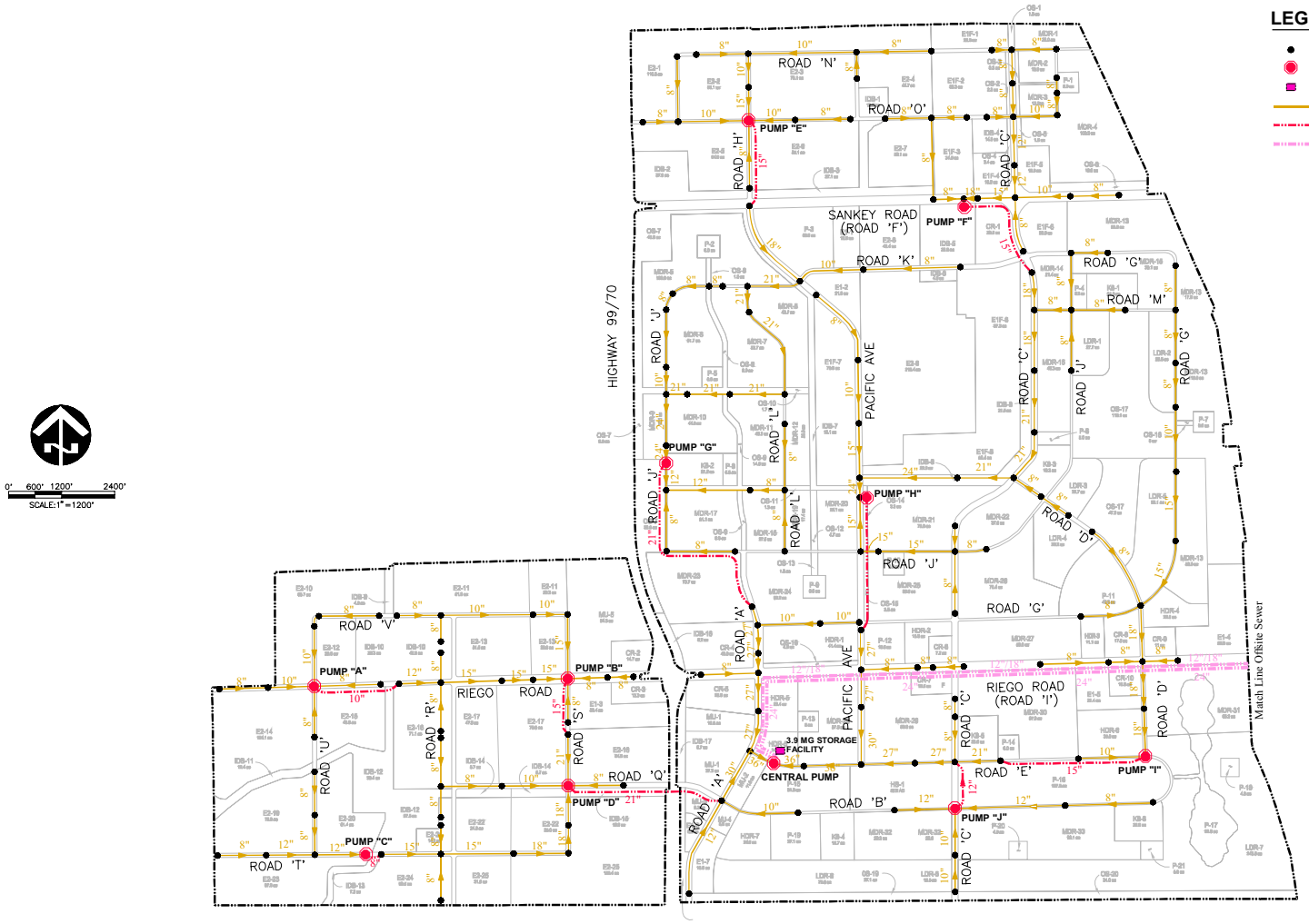
SUTTER POINTE

On-Site Sanitary Sewer Plan - Phase 1 and A

MEASURE "M" GROUP

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-6092
November 14, 2008

MAP A-7



SUTTER POINTE

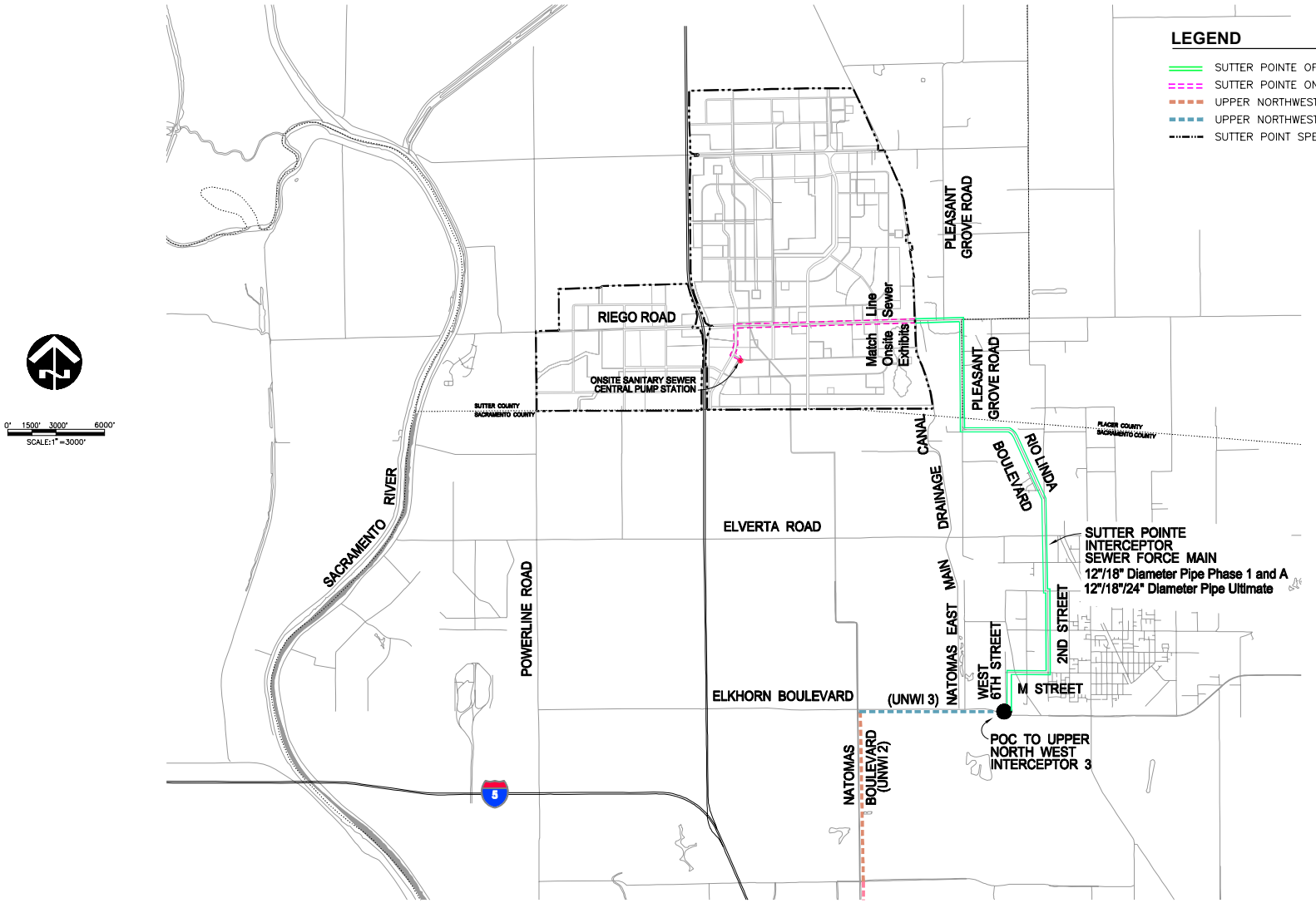
MEASURE "M" GROUP

On-Site Sanitary Sewer Plan - Buildout

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 924-8037

November 14, 2008

MAP A-8



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SUTTER POINTE

MEASURE "M" GROUP

Off-Site Sanitary Sewer Improvements

MACKAY & SOMPS
CIVIL ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite C, Sacramento, CA 95815 (916) 925-0200

November 14, 2008

MAP A-9

PRELIMINARY COST ESTIMATE

WATER MASTER PLAN

SUTTER POINTE

Sutter County, California

November 14, 2008

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

ENGINEER'S PRELIMINARY OPINION OF COSTS

Sutter County

Based on the Sutter Pointe Water System Model for Proposed Water Supply Program (PWSP)

CONSTRUCTION COSTS (PWSP)

ITEM No.	DESCRIPTION	UNIT PRICE	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT
A. WATER TRANSMISSION																													
1.	12" T-Main incl. pipe and fittings, DIP	$64.00	26,500	LF	$1,696,000	11,000	LF	$704,000	9,500	LF	$608,000	6,800	LF	$435,200	9,800	LF	$627,200	0	LF	$0	11,400	LF	$729,600	21,400	LF	$1,369,600	96,400	LF	$6,169,600
1.a	12" T-Main (parallel on 4 lane ROW and larger)	$94.00	26,500	LF	$2,491,000	3,300	LF	$310,200	6,000	LF	$564,000	10,400		$977,600	7,500	LF	$705,000	5,700		$535,800	9,000	LF	$846,000	0	LF	$0	68,400	LF	$6,429,600
2.	18" T-Main incl. pipe and fittings, DIP	$94.00	26,400	LF	$2,481,600	5,200	LF	$488,800	20,000	LF	$1,880,000	9,900	LF	$930,600	11,000	LF	$1,034,000	15,000	LF	$1,410,000	19,000	LF	$1,786,000	0	LF	$0	106,500	LF	$10,011,000
3.	24" T-Main incl. pipe and fittings, DIP	$135.00	4,400	LF	$594,000	1,000	LF	$135,000	0	LF	$0	7,800	LF	$1,053,000	0	LF	$0	1,800	LF	$243,000	0	LF	$0	0	LF	$0	15,000	LF	$2,025,000
4.	30" T-Main incl. pipe and fittings, DIP	$170.00	4,700	LF	$799,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	4,700	LF	$799,000
5.	36" T-Main incl. pipe and fittings, DIP	$205.00	2,500	LF	$512,500	2,200	LF	$451,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	4,700	LF	$963,500
6.	42" T-Main incl. pipe and fittings, DIP	$240.00	5,400	LF	$1,296,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	5,400	LF	$1,296,000
7.	48" T-Main incl. pipe and fittings, DIP	$275.00	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0
8.	12" Butterfly Valve Assembly	$2,500.00	13	EA	$32,500	8	EA	$20,000	5	EA	$12,500	3	EA	$7,500	8	EA	$20,000	0	EA	$0	9	EA	$22,500	14	EA	$35,000	60	EA	$150,000
9.	18" Butterfly Valve Assembly	$4,000.00	13	EA	$52,000	4	EA	$16,000	12	EA	$48,000	2	EA	$8,000	9	EA	$36,000	11	EA	$44,000	11	EA	$44,000	0	EA	$0	62	EA	$248,000
2.	24" Butterfly Valve Assembly	$7,200.00	3	EA	$21,600	2	EA	$14,400	0	EA	$0	3	EA	$21,600	0	EA	$0	1	EA	$7,200	0	EA	$0	0	EA	$0	9	EA	$64,800
3.	30" Line Valve	$28,000.00	4	EA	$112,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	4	EA	$112,000
4.	36" Line Valve	$35,000.00	2	EA	$70,000	2	EA	$70,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	4	EA	$140,000
5.	42" Line Valve	$40,000.00	2	EA	$80,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	2	EA	$80,000
6.	48" Line Valve	$50,000.00	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0
7.	Fire Hydrant Assembly (assumed 1000" spacing)	$5,000.00	96	EA	$482,000	23	EA	$113,500	36	EA	$177,500	35	EA	$174,500	28	EA	$141,500	23	EA	$112,500	39	EA	$197,000	21	EA	$107,000	301	EA	$1,505,500
8.	Bore and Jack under HWY 99/70 (54" Casing)	$1,000.00	600	LF	$600,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$600,000
9.	Bore and Jack under HWY 99/70 (24" Casing)	$500.00	600	LF	$300,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$300,000
	TOTAL WATER TRANSMISSION				**$11,620,200**			**$2,322,900**			**$3,290,000**			**$3,608,000**			**$2,563,700**			**$2,352,500**			**$3,625,100**			**$1,511,600**			**$30,894,000**
B. WATER STORAGE TANKS																													
1.	Treatment Plant Storage Tank (4MG) (Includes booster pump station and hydromatic tank)	$5,000,000.00	0	EA	$0	1	EA	$5,000,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$5,000,000
2.	Storage Tank (6MG) (Includes booster pump station and hydromatic tank)	$7,500,000.00	1	EA	$7,500,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000
3.	Storage Tank (6MG) (Includes booster pump station and hydromatic tank)	$7,500,000.00	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000
4.	Storage Tank (6MG) (Includes booster pump station and hydromatic tank)	$7,500,000.00	0	EA	$0	0	EA	$0	1	EA	$7,500,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000
5.	Storage Tank (6MG) (Includes booster pump station and hydromatic tank)	$7,500,000.00	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000	0	EA	$0	1	EA	$7,500,000
6.	Storage Tank (6MG) (Includes booster pump station and hydromatic tank)	$7,500,000.00	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,500,000	1	EA	$7,500,000
	TOTAL WATER STORAGE				**$7,500,000**			**$5,000,000**			**$7,500,000**			**$7,500,000**			**$0**			**$0**			**$7,500,000**			**$7,500,000**			**$42,500,000**

CONSTRUCTION COSTS (PWSP)

ITEM No.	DESCRIPTION	UNIT PRICE	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT
C. SURFACE WATER TREATMENT PLANT																													
1.	Surface Water Treatment Plant (29.3 mgd)	$1,250,000.00	0	mgd	$0	INC	mgd	INC	14.7	mgd	$18,375,000	INC	mgd	INC	14.6	mgd	$18,250,000	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	29.3	mgd	$36,625,000
	TOTAL SURFACE WATER TREATMENT PLANT				**$0**			**INC**			**$18,375,000**			**INC**			**$18,250,000**			**INC**			**$0**			**INC**			**$36,625,000**
D. GROUND WATER TREATMENT PLANT																													
1.	West Ground Water Treatment Plant (12.5 mgd)	$1,250,000.00	12.5	mgd	$15,625,000	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	12.5	mgd	$15,625,000
2	East Ground Water Treatment Plant (12.5 mgd)	$1,250,000.00	0	mgd	$0	INC	mgd	INC	12.5	mgd	$15,625,000	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	0	mgd	$0	INC	mgd	INC	12.5	mgd	$15,625,000
	TOTAL GROUND WATER TREATMENT PLANT				**$15,625,000**			**INC**			**$15,625,000**			**INC**			**$0**			**INC**			**$0**			**INC**			**$31,250,000**
E. GROUND WATER WELL FIELDS																													
E.1 - EAST WELL AND PUMP FACILITY																													
1.	Well & Pump Facility	$1,000,000.00	0	EA	$0	0	EA		7	EA	$7,000,000	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		7	EA	$7,000,000
2.	12" Raw Water incl. Fittings, DIP	$85.00	0	LF	$0	0	LF		10,100	LF	$858,500	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		10,100	LF	$858,500
3.	16" Raw Water incl. Fittings, DIP	$120.00	0	LF	$0	0	LF		3,500	LF	$420,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		3,500	LF	$420,000
4.	21" Raw Water incl. Fittings, DIP	$160.00	0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0
5.	24" Raw Water incl. Fittings, DIP	$180.00	0	LF	$0	0	LF		3,400	LF	$612,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		3,400	LF	$612,000
6.	30" Raw Water incl. Fittings, DIP	$225.00	0	LF	$0	0	LF		3,300	LF	$742,500	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		3,300	LF	$742,500
7.	36" Raw Water incl. Fittings, DIP	$270.00	0	LF	$0	0	LF		7,500	LF	$2,025,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		7,500	LF	$2,025,000
8.	12" Butterfly Valve Assembly	$2,500.00	0	EA	$0	0	EA		1	EA	$2,500	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$2,500
9.	16" Butterfly Valve Assembly	$3,500.00	0	EA	$0	0	EA		2	EA	$7,000	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		2	EA	$7,000
10.	21" Butterfly Valve Assembly	$4,600.00	0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0
11.	24" Butterfly Valve Assembly	$7,300.00	0	EA	$0	0	EA		4	EA	$29,200	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		4	EA	$29,200
12.	30" Butterfly Valve Assembly	$14,000.00	0	EA	$0	0	EA		1	EA	$14,000	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$14,000
13.	36" Butterfly Valve Assembly	$17,000.00	0	EA	$0	0	EA		1	EA	$17,000	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$17,000
	SUBTOTAL EAST WELL AND PUMP FACILITY				**$0**			**INC.**			**$11,727,700**			**INC.**			**$0**			**INC.**			**$0**			**INC.**			**$11,727,700**
E.2- WEST WELL AND PUMP FACILITY																													
2.	Well & Pump Facility	$1,000,000.00	9	EA	$9,000,000	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		9	EA	$9,000,000
3.	12" Raw Water incl. Fittings, DIP	$85.00	14,850	LF	$1,262,250	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		14,850	LF	$1,262,250
4.	16" Raw Water incl. Fittings, DIP	$120.00	4,500	LF	$540,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		4,500	LF	$540,000
5.	21" Raw Water incl. Fittings, DIP	$160.00	6,300	LF	$1,008,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		6,300	LF	$1,008,000
6.	24" Raw Water incl. Fittings, DIP	$180.00	5,850	LF	$1,053,000	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		5,850	LF	$1,053,000
7.	30" Raw Water incl. Fittings, DIP	$225.00	0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0
8.	36" Raw Water incl. Fittings, DIP	$270.00	0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0	0	LF		0	LF	$0
9.	12" Butterfly Valve Assembly	$2,500.00	5	EA	$12,500	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		5	EA	$12,500
10.	16" Butterfly Valve Assembly	$3,500.00	1	EA	$3,500	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$3,500
11.	21" Butterfly Valve Assembly	$4,600.00	1	EA	$4,600	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$4,600
12.	24" Butterfly Valve Assembly	$7,300.00	1	EA	$7,300	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		1	EA	$7,300
13.	30" Butterfly Valve Assembly	$14,000.00	0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0
14.	36" Butterfly Valve Assembly	$17,000.00	0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0	0	EA		0	EA	$0
	SUBTOTAL WEST WELL AND PUMP FACILITY				$12,891,150			INC.			$0			INC.			$0			INC.			$0			INC.			$12,891,150
	TOTAL GROUND WATER WELL FIELDS				**$12,891,150**			**INC.**			**$11,727,700**			**INC.**			**$0**			**INC.**			**$0**			**INC.**			**$24,618,850**

CONSTRUCTION COSTS (PWSP)

ITEM No.	DESCRIPTION	UNIT PRICE	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT	
F. RAW WATER PUMP STATION																														
1.	Raw Water Booster Pump Station (Bennet or Sankey)	$2,200,000.00	0	EA	$0	0	EA	$0	1	EA	$2,200,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$2,200,000	
2.	Raw Water Diversoin Facility (Fair Share Cost)	$7,278,078.00	0	EA	$0	0	EA	$0	1	EA	$7,278,078	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$7,278,078	
	TOTAL RAW WATER PUMP STATION				**$0**			**$0**			**$9,478,078**			**$0**			**$0**			**$0**			**$0**			**$0**			**$9,478,078**	
G. SURFACE RAW-WATER SUPPLY (BENNET TO WEST TREATMENT SITE)																														
1.	42" Steel Cylinder Pipe (CMCL, D.I.P. or Equal) incl. fittings	$350.00	0	LF	$0	0	LF	$0	29,500	LF	$10,325,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	29,500	LF	$10,325,000	
2.	42" Line Valves	$60,000.00	0	EA	$0	0	EA	$0	6	EA	$360,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	6	EA	$360,000	
	TOTAL SURFACE RAW-WATER SUPPLY				**$0**			**$0**			**$10,685,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$10,685,000**	
G. (ALT-1) SURFACE RAW-WATER SUPPLY (SANKEY TO WEST TREATMENT SITE)																														
1.A	42" Steel Cylinder Pipe (CMCL, D.I.P., or Equal) incl. fittings	$350.00	0	LF	$0	0	LF	$0	27,200	LF	$9,520,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	27,200	LF	$9,520,000	
2.A	42" Line Valves	$60,000.00	0	EA	$0	0	EA	$0	6	EA	$360,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	6	EA	$360,000	
	TOTAL (ALT-1) SURFACE RAW-WATER SUPPLY				**$0**			**$0**			**$9,880,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**(ALT-1)**	**$9,880,000**
****G. (ALT-2) SURFACE RAW-WATER SUPPLY (BENNET TO EAST TREATMENT SITE)****																														
1.B	42" Steel Cylinder Pipe (CMCL, D.I.P., or Equal) incl. fittings	$350.00	0	LF	$0	0	LF	$0	28,500	LF	$9,975,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	28,500	LF	$9,975,000	
2.B	42" Line Valves	$60,000.00	0	EA	$0	0	EA	$0	6	EA	$360,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	6	EA	$360,000	
3.B	Bore and Jack under HWY 99/70 (60" Casing)	$1,100.00	0	LF	$0	0	LF	$0	600	LF	$660,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$660,000	
	TOTAL (ALT-2) SURFACE RAW-WATER SUPPLY				**$0**			**$0**			**$10,995,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**(ALT-2)**	**$10,995,000**
*****G. (ALT-3) SURFACE RAW-WATER SUPPLY (SANKEY TO EAST TREATMENT SITE)*****																														
1.C	42" Steel Cylinder Pipe (CMCL) incl. fittings	$400.00	0	LF	$0	0	LF	$0	26,100	LF	$10,440,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	26,100	LF	$10,440,000	
2.C	42" Line Valves	$80,000.00	0	EA	$0	0	EA	$0	6	EA	$480,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	6	EA	$480,000	
3.C	Bore and Jack under HWY 99/70 (60" Casing)	$1,100.00	0	LF	$0	0	LF	$0	600	LF	$660,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$660,000	
	TOTAL (ALT-3) SURFACE RAW-WATER SUPPLY				**$0**			**$0**			**$11,580,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**(ALT-3)**	**$11,580,000**

CONSTRUCTION COSTS (PWSP)

ITEM No.	DESCRIPTION	UNIT PRICE	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT
	CONSTRUCTION COST ESTIMATE SUMMARY																												
	A. WATER TRANSMISSION				$11,620,200			$2,322,900			$3,290,000			$3,608,000			$2,563,700			$2,352,500			$3,625,100			$1,511,600			$30,894,000
	B. WATER STORAGE TANKS				$7,500,000			$5,000,000			$7,500,000			$7,500,000			$0			$0			$7,500,000			$7,500,000			$42,500,000
	C. SURFACE WATER TREATMENT PLANT				$0		INC				$18,375,000		INC				$18,250,000		INC				$0		INC				$36,625,000
	D. GROUND WATER TREATMENT PLANT				$15,625,000		INC				$15,625,000		INC				$0		INC				$0		INC				$31,250,000
	E. GROUND WATER WELL FIELD				$12,891,150		INC.				$11,727,700		INC.				$0		INC.				$0		INC.				$24,618,850
	F. RAW WATER PUMP STATION				$0			$0			$9,478,078			$0			$0			$0			$0			$0			$9,478,078
	G. SURFACE RAW-WATER SUPPLY				$0			$0			$10,685,000			$0			$0			$0			$0			$0			$10,685,000
	Subtotal Construction Costs (A-G)				$47,636,350			$7,322,900			$76,680,778			$11,108,000			$20,813,700			$2,352,500			$11,125,100			$9,011,600			$186,050,928
	15% Engineering/Inspectior				$7,145,453			$1,098,435			$11,502,117			$1,666,200			$3,122,055			$352,875			$1,668,765			$1,351,740			$27,907,639
	20% Contingency				$9,527,270			$1,464,580			$15,336,156			$2,221,600			$4,162,740			$470,500			$2,225,020			$1,802,320			$37,210,186
	GRAND TOTAL CONSTRUCTION COST				$64,309,073			$9,885,915			$103,519,050			$14,995,800			$28,098,495			$3,175,875			$15,018,885			$12,165,660			$251,168,753

ALTERNATIVES FOR SURFACE RAW-WATER SUPPLY (Refer to section "G")

G. (ALT-1) SURFACE RAW-WATER SUPPLY (SANKEY TO WEST TREATMENT SITE)
(Adjust from Proposed Proposed Water Supply Project if used)

Proposed Surface Raw-Water Supply (Item 'G') Total	$10,685,000
Alternative 1 Total	$9,880,000
Difference From Proposed Surface Raw-Water Supply	($805,000)
15% Engineering/Inspectior	($120,750)
20% Contingency	($161,000)
Total Adjustment for Alt-1	($1,086,750)

****G. (ALT-2) SURFACE RAW-WATER SUPPLY (BENNET TO EAST TREATMENT SITE)****
(Adjust from Proposed Proposed Water Supply Project if used)

Proposed Surface Raw-Water Supply (Item 'G') Total	$10,685,000
Alternative 2 Subtotal	$10,995,000
Difference From Proposed Surface Raw-Water Supply	$310,000
15% Engineering/Inspectior	$46,500
20% Contingency	$62,000
Total Adjustment for Alt-2	$418,500

*****G. (ALT-3) SURFACE RAW-WATER SUPPLY (SANKEY TO EAST TREATMENT SITE)*****
(Adjust from Proposed Proposed Water Supply Project if used)

Proposed Surface Raw-Water Supply (Item 'G') Total	$10,685,000
Alternative 3 Subtotal	$11,580,000
Difference From Proposed Surface Raw-Water Supply	$895,000
15% Engineering/Inspectior	$134,250
20% Contingency	$179,000
Total Adjustment for Alt-3	$1,208,250

NOTES:

11/14/08

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. MacKay & Somps makes no warranty, either expressed or implied, as to the accuracy of this estimate.

2. This estimate assumes that the demands for the initial phases of developement will be served by groudwater sources. Surface water will then be brought on to meet the demands of the developement as the community builds out.

3. This estimate assumes the Sutter Pointe Specific Plan would be successful in converting a portion of their agricultural water rights to municipal and industrial uses for the Specific Plan Area.

4. This estimate assumes that the primary source for raw surface water will be from the Bennet Pumping Plant (BPP), and the alternate location would be NCMWC's proposed Sankey Water Diversion Project (SWDP). The developement costs include the turnout, booster pump and raw water transmission line as one line item, and an estimated fair share cost for a proposed diversion as another item (see fair share calculation at rear of estimate). Estimate assumes that fair share cost is the same whether Bennet, or Sankey Diversion option is chosen.

5. The proposed primary route for raw water transmission will be from the BPP then southerly to Sankey Road, easterly to Powerline Road, then southerly to Riego Road, easterly on Riego Road, and southerly to a to a proposed raw water treatment plant. Alternatively, a raw surface water treatment plant could be placed on the eastern portion of the project, whereas the alignment for raw surface water transmission would be from the BPP then southerly to Sankey Road, then easterly (crossing HWY 99) to within the project boundary and south easterly to a proposed raw water treatment site. Both alignment options can utilize a potential tie in to a possible booster pump from a Sankey Diversion Project, thereby reducing the transmission length by +/- 2,400 LF. The alternative costs are shown in the estimate and reflected as potential cost deductions.

6. This estimate does not include any fees by a retail water purveyor providing services in the South Sutter Specific Plan Area. This estimate does, however, include the full cost of the water system, and no fees or credits are applicable.

7. This estimate does not consider the following:

a. Cost associated with environmental (wetland) mitigations or biological surveys
b. Phased construction or out-of-regular-sequence construction
c. Costs associated with ground water or inclement weather conditions
d. Financial Charges
e. Bonds
f. Land costs, acquisition of right of way, easements, and/or rights of entry
g. Assessments from assessment, lighting & landscaping, Mello-Roos districts or the like

8. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation.

9. Costs have been been tabulated and extracted for Phase as well as annual costs according the SPSP Conceptual Phasing Plan dated March, 2008.

10. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

11. Interim improvements may be required depending on development timing of individual units.

12. This cost estimate is based only on the quantities as shown on the exhibits provided in the Sutter Pointe Specific Plan Water Master Plan Report, which includes backbone onsite and offsite utilities.

13. 4 Cost esimtates have been included for the 3 water supply scenarios options shown on the following page:

NOTES:

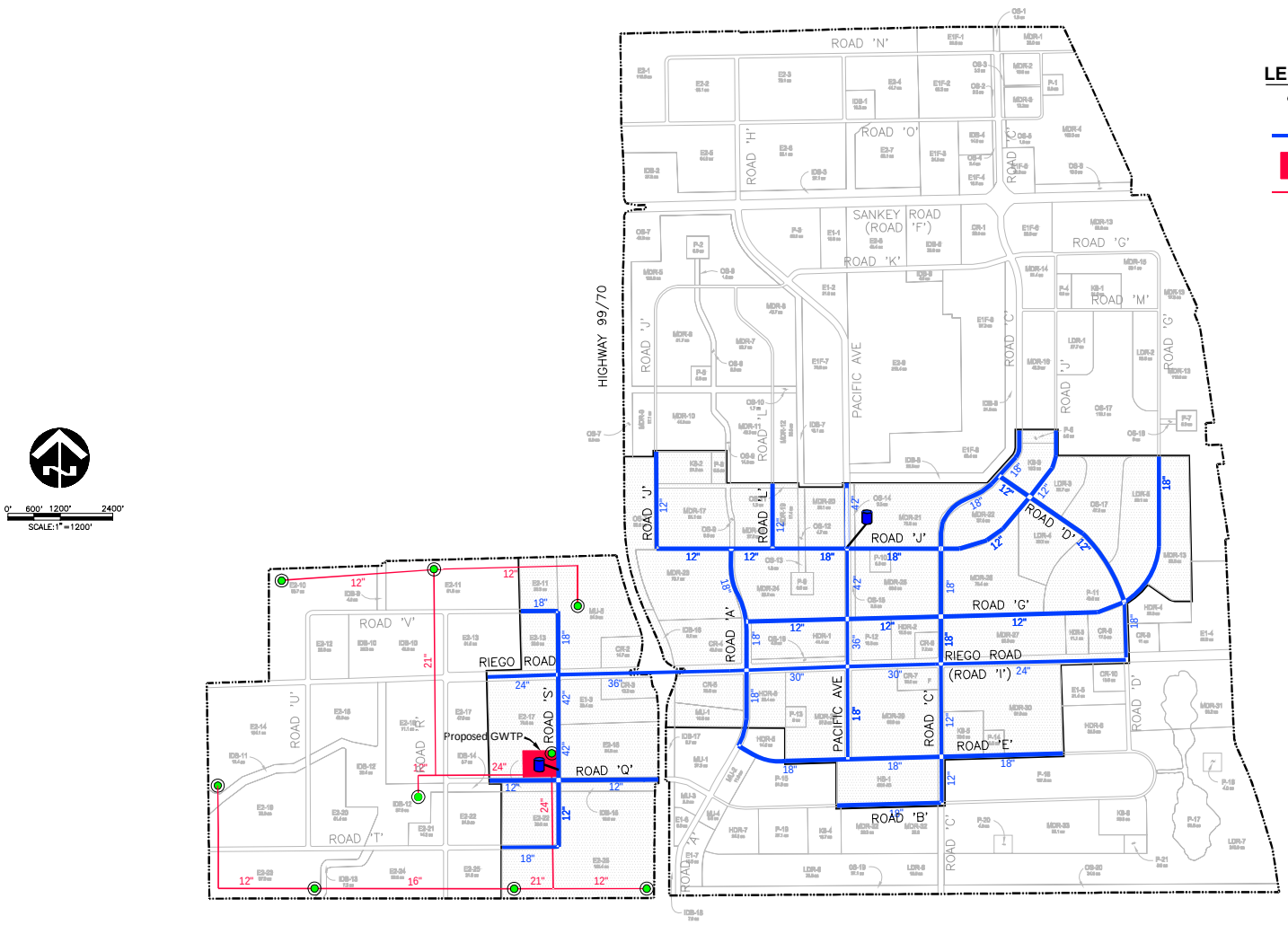
11/14/08

1. Proposed - Water Supply Program: Includes both east and west well fields, and surface water treatment plant adjacent to the western ground water treatment plant. Proposed surface water transmission is from Bennet to West Treatment Plant site with a 42" transmission line sized for 29.3 MGD flows. Assumes ground water well and pump facilities will be completed in the initial phases.

2. Alt. "A" Revised - Water Supply Program: Includes both east and west well fields, and surface water treatment plant adjacent to the western ground water treatment plant. Proposed surface water transmission is from Bennet to the West Treatment site with a 42" transmission line sized for 35.1 MGD flows. Assumed ground water well and pump facilities will be completed in the initial phases.

3. Alt "B" Winter Diversion - Water Supply Program (West Well Field): Includes west well field, and surface water treatment plant adjacent to the western ground water treatment plant. Proposed surface water transmission is from Bennet to the West Treatment site with a 42" transmission line sized for 33.1 MGD flows.

4. Alt "B" Winter Diversion - Water Supply Program (East Well Field): Includes east well field, and surface water treatment plant adjacent to the eastern ground water treatment plant. Proposed surface water transmission is from Bennet to the EastTreatment site with a 42" transmission line sized for 33.1 MGD flows.



SUTTER POINTE

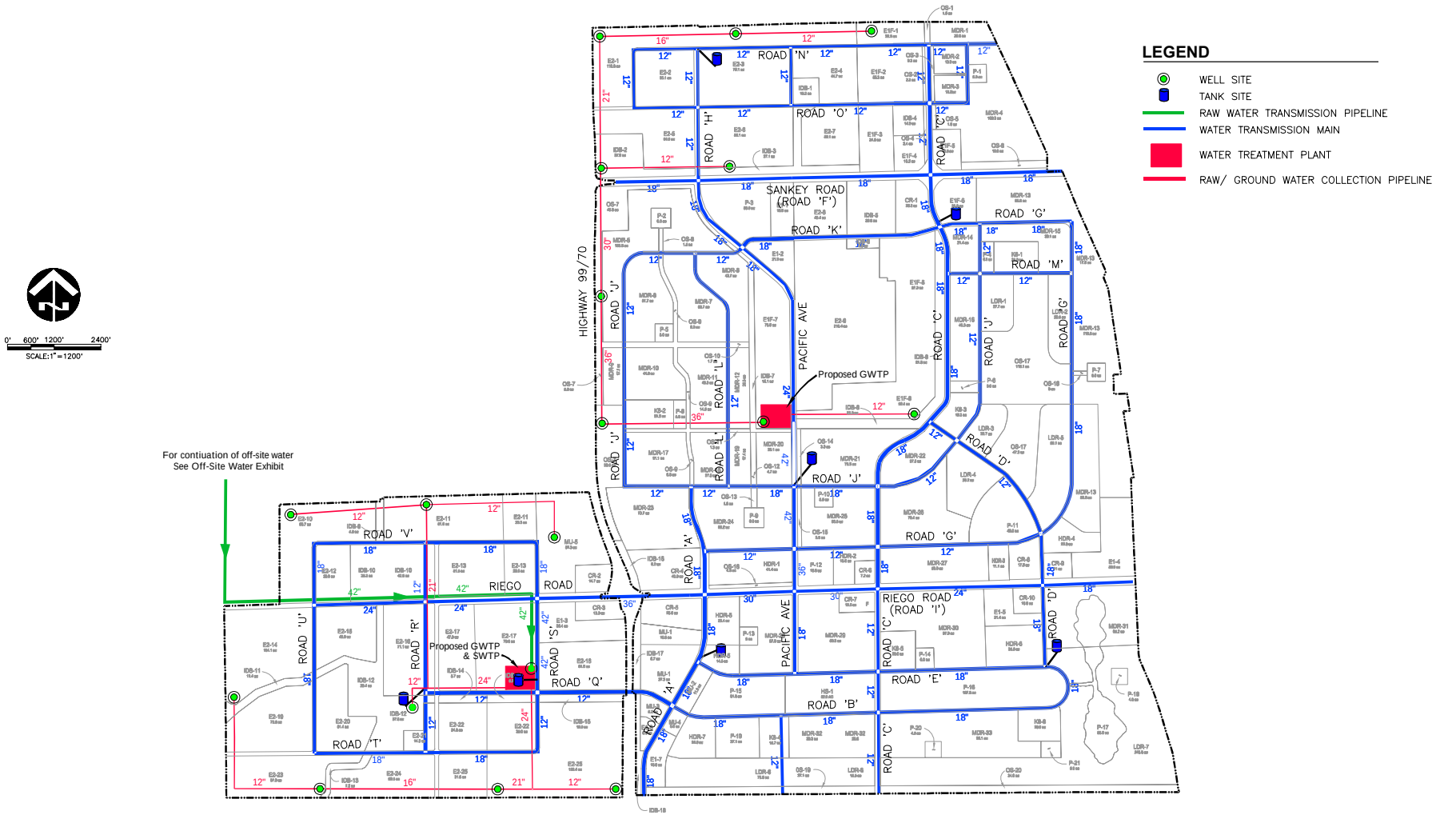
MEASURE "M" GROUP

On-Site Water Plan - Phase 1 and A

MACKAY & SOMPS
CIVIL ENGINEERING PLANNING SURVEYING
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-1481

November 14, 2008

MAP A-10



Sheet 12 of 21

SUTTER POINTE

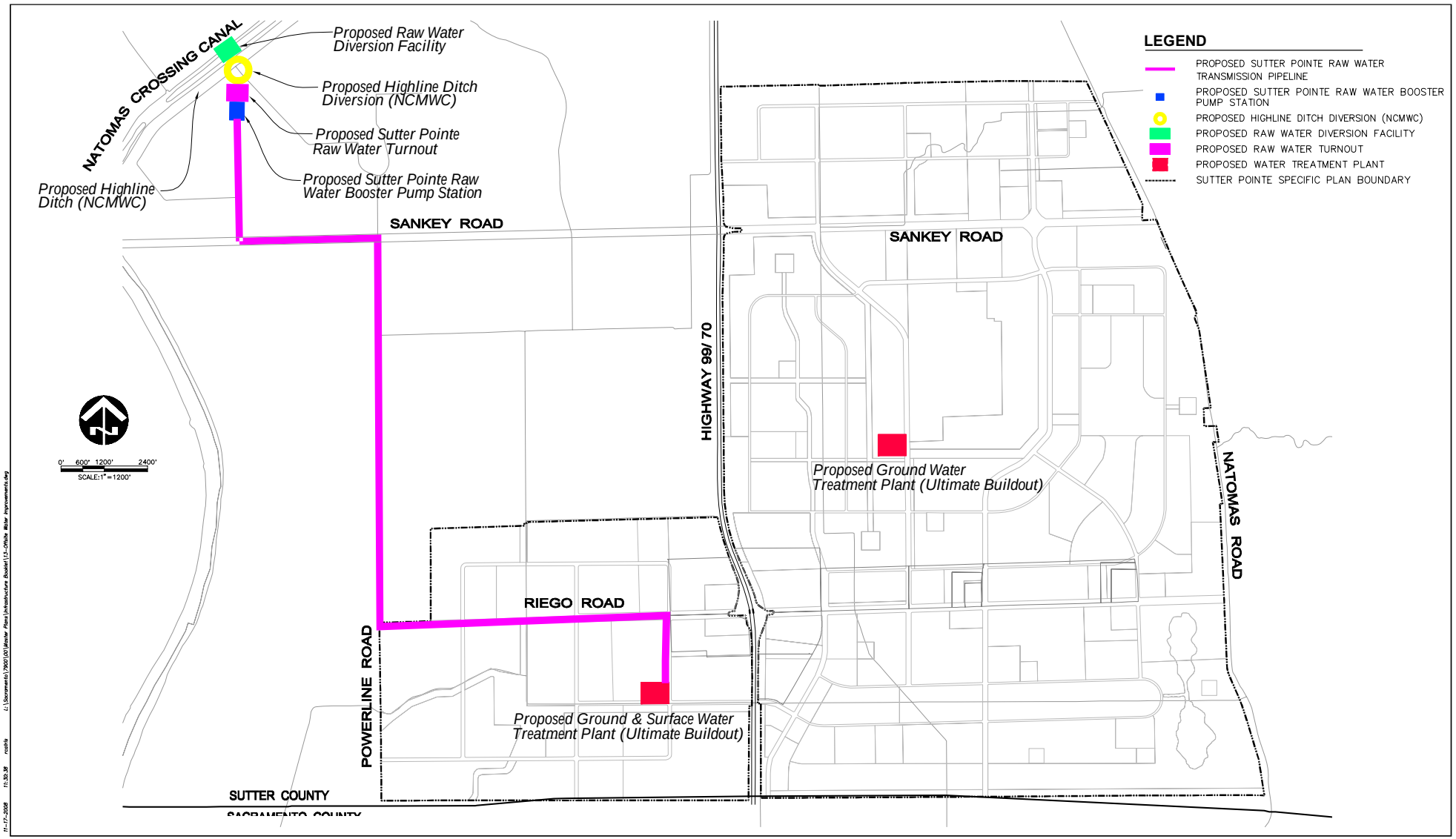
MEASURE "M" GROUP

On-Site Water Plan - Buildout

MacKAY & SOMPS

November 14, 2008

MAP A-11



SUTTER POINTE

MEASURE "M" GROUP

Off-Site Water Improvements

MacKay & Somps

November 14, 2008

MAP A-12

Sutter Pointe Specific Plan

DRAINAGE COST ESTIMATES

Sutter County, California

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SUMMARY

	Description	Total Cost, $
1.	Drainage Shed 1 Facilities Subtotal (Table 12)	10,706,000
2.	Drainage Shed 2 Facilities Subtotal (Table 13)	4,425,000
3.	Drainage Shed 3 Facilities Subtotal (Table 14)	5,399,000
4.	Drainage Shed 4 Facilities Subtotal (Table 15)	9,783,000
5.	Drainage Shed 5 Facilities Subtotal (Table 16)	15,467,000
6.	Drainage Shed 6 Facilities Subtotal (Table 17)	19,695,000
7.	Drainage Shed 7 Facilities Subtotal (Table 18)	35,559,000
8.	Drainage Shed 8 Facilities Subtotal (Table 19)	7,023,000
9.	Drainage Shed 9 Facilities Subtotal (Table 20)	19,638,000
10.	Drainage Shed 10 Facilities Subtotal (Table 21)	5,663,000
11.	Drainage Shed 11 Facilities Subtotal (Table 22)	16,303,000
12.	Drainage Shed 12 Facilities Subtotal (Table 23)	14,923,000
13.	Regional Facilities Subtotal (Table 24)	49,625,000
	Subtotal - Drainage Facilities	**214,209,000**

TABLE 12

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 1

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 1 Facilities				
a. Water Quality/Detention Basin				
· Excavate	422,387	cy	2.50	1,056,000
· Dewatering	30	ac	5,000.00	150,000
· Access Road (6" Aggregate Base)	7,800	sy	5.19	40,500
b. Pump Station				
· Pump Station	31	cfs	60,000.00	1,860,000
c. Open Channel				
· Excavate	42,400	cy	3.00	127,200
· Dewatering	4,972	lf	10.00	49,700
· Access Road (6" Aggregate Base)	8,300	sy	5.19	43,100
- Fence, 6' Chainlink	9,944	lf	16.12	160,300
d. Road Crossings (Box Culverts)				
· Reinforced Concrete	456	cy	508.88	231,800
· Dewatering[1]	240	lf	0.00	0
· Structural Excavation	3,010	cy	5.00	15,052
e. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	1,500	lf	115.00	172,500
· 42" Diameter Storm Drain	1,600	lf	160.00	256,000
· 48" Diameter Storm Drain	1,000	lf	180.00	180,000
· 54" Diameter Storm Drain	1,200	lf	195.00	234,000
· 60" Diameter Storm Drain	2,700	lf	210.00	567,000
· 66" Diameter Storm Drain	1,800	lf	230.00	414,000
· 72" Diameter Storm Drain	3,700	lf	250.00	925,000
· Dewatering[1]	13,500	lf	0.00	0
· 60" Diameter Manhole	6	ea	4,000.00	24,000
· 72" Diameter Manhole	4	ea	5,000.00	20,000
· Saddle Manhole	16	ea	8,000.00	128,000
· Outlet Structure at Detention Basin or Channel	8	ea	15,000.00	120,000
f. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 1 Drainage Facilities				6,824,152
Land Acquisition	40	ac	37,500.00	1,493,700
Construction Contingencies (20%)				1,364,830
Administration, Engineering, and Environmental (15%)				1,023,623
TOTAL SHED 1 DRAINAGE FACILITIES COST				10,706,305

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 13

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 2

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 2 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	136,472	cy	2.50	341,200
·	Dewatering	9	ac	5,000.00	45,000
·	Access Road (6" Aggregate Base)	4,300	sy	5.19	22,300
b.	Pump Station				
·	Pump Station	11	cfs	60,000.00	684,000
c.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	0	lf	115.00	0
·	42" Diameter Storm Drain	500	lf	160.00	80,000
·	48" Diameter Storm Drain	900	lf	180.00	162,000
·	54" Diameter Storm Drain	0	lf	195.00	0
·	60" Diameter Storm Drain	0	lf	210.00	0
·	66" Diameter Storm Drain	0	lf	230.00	0
·	72" Diameter Storm Drain	5,900	lf	250.00	1,475,000
·	Dewatering[1]	7,300	lf	0.00	0
·	60" Diameter Manhole	1	ea	4,000.00	4,000
·	72" Diameter Manhole	2	ea	5,000.00	10,000
·	Saddle Manhole	12	ea	8,000.00	96,000
·	Outlet Structure at Detention Basin	3	ea	15,000.00	45,000
d.	Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
·	500-ft Fill Corridor (Approximate)	3800	lf	n/a	0
e.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	29,645.00	29,600
	Subtotal - Shed 2 Drainage Facilities				2,994,100
	Land Acquisition	10	ac	37,500.00	382,500
	Construction Contingencies (20%)				598,820
	Administration, Engineering, and Environmental (15%				449,115
TOTAL SHED 2 DRAINAGE FACILITIES COST					4,424,535

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 14

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 3

			Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 3 Facilities						
	a.	Water Quality/Detention Basin					
		·	Excavate	171,630	cy	2.50	429,100
		·	Dewatering	13	ac	5,000.00	65,000
		·	Access Road (6" Aggregate Base)	5,100	sy	5.19	26,500
	b.	Pump Station					
		·	Pump Station	15	cfs	60,000.00	924,000
	c.	Storm Drainage Pipe System					
		·	36" Diameter Storm Drain	0	lf	115.00	0
		·	42" Diameter Storm Drain	2,150	lf	160.00	344,000
		·	48" Diameter Storm Drain	0	lf	180.00	0
		·	54" Diameter Storm Drain	1,800	lf	195.00	351,000
		·	60" Diameter Storm Drain	0	lf	210.00	0
		·	66" Diameter Storm Drain	0	lf	230.00	0
		·	72" Diameter Storm Drain	5,200	lf	250.00	1,300,000
		·	Dewatering[1]	9,150	lf	0.00	0
		·	60" Diameter Manhole	4	ea	4,000.00	16,000
		·	72" Diameter Manhole	4	ea	5,000.00	20,000
		·	Saddle Manhole	10	ea	8,000.00	80,000
		·	Outlet Structure at Detention Basin	2	ea	15,000.00	30,000
	d.	Mobilization/Demobilization (1%, not to exceed $50,000		1	ls	35,856.00	35,900
	Subtotal - Shed 3 Drainage Facilities						3,621,500
	Land Acquisition			14	ac	37,500.00	510,000
	Construction Contingencies (20%)						724,300
	Administration, Engineering, and Environmental (15%						543,225
TOTAL SHED 3 DRAINAGE FACILITIES COST							5,399,025

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 15

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 4

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 4 Facilities				
a. Water Quality/Detention Basin				
· Excavate	400,220	cy	2.50	1,000,500
· Dewatering	32	ac	5,000.00	160,000
· Access Road (6" Aggregate Base)	8,500	sy	5.19	44,100
b. Pump Station				
· Pump Station	30	cfs	60,000.00	1,800,000
c. Open Channel				
· Excavate	21,590	cy	3.00	64,800
· Dewatering	3,552	lf	10.00	35,500
· Access Road (6" Aggregate Base)	5,920	sy	5.19	30,700
- Fence, 6' Chainlink	7,104	lf	16.12	114,500
d. Road Crossings (Box Culverts)				
· Reinforced Concrete	48	cy	508.88	24,500
· Dewatering[1]	50	lf	0.00	0
· Structural Excavation	237	cy	5.00	1,185
e. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	0	lf	115.00	0
· 42" Diameter Storm Drain	0	lf	160.00	0
· 48" Diameter Storm Drain	3,450	lf	180.00	621,000
· 54" Diameter Storm Drain	0	lf	195.00	0
· 60" Diameter Storm Drain	0	lf	210.00	0
· 66" Diameter Storm Drain	0	lf	230.00	0
· 72" Diameter Storm Drain	7,950	lf	250.00	1,987,500
· Dewatering[1]	11,400	lf	0.00	0
· 60" Diameter Manhole	0	ea	4,000.00	0
· 72" Diameter Manhole	7	ea	5,000.00	35,000
· Saddle Manhole	16	ea	8,000.00	128,000
· Outlet Structure at Detention Basin or Channel	5	ea	15,000.00	75,000
f. Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
· 500-ft Fill Corridor (Approximate)	8500	lf	n/a	0
g. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 4 Drainage Facilities				6,172,285
Land Acquisition	39	ac	37,500.00	1,450,000
Construction Contingencies (20%)				1,234,457
Administration, Engineering, and Environmental (15%				925,843
TOTAL SHED 4 DRAINAGE FACILITIES COST				9,782,585

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 16

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 5

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 5 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	538,644	cy	2.50	1,346,600
·	Dewatering	42	ac	5,000.00	210,000
·	Access Road (6" Aggregate Base)	12,300	sy	5.19	63,800
b.	Pump Station				
·	Pump Station	43	cfs	60,000.00	2,580,000
c.	Open Channel				
·	Excavate	8,000	cy	3.00	24,000
·	Dewatering[1]	1,292	lf	0.00	0
·	Access Road (6" Aggregate Base)	1,900	sy	5.19	9,900
-	Fence, 6' Chainlink	2,296	lf	16.12	37,000
d.	Road Crossings (Box Culverts)				
·	Reinforced Concrete	218	cy	508.88	111,100
·	Dewatering[1]	140	lf	0.00	0
·	Structural Excavation	1,426	cy	5.00	7,130
e.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	0	lf	115.00	0
·	42" Diameter Storm Drain	0	lf	160.00	0
·	48" Diameter Storm Drain	500	lf	180.00	90,000
·	54" Diameter Storm Drain	200	lf	195.00	39,000
·	60" Diameter Storm Drain	600	lf	210.00	126,000
·	66" Diameter Storm Drain	1,800	lf	230.00	414,000
·	72" Diameter Storm Drain	18,500	lf	250.00	4,625,000
·	Dewatering[1]	21,600	lf	0.00	0
·	60" Diameter Manhole	0	ea	4,000.00	0
·	72" Diameter Manhole	2	ea	5,000.00	10,000
·	Saddle Manhole	42	ea	8,000.00	336,000
·	Outlet Structure at Detention Basin or Channel	6	ea	15,000.00	90,000
f.	Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
·	500-ft Fill Corridor (Approximate)	3400	lf	n/a	0
g.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
	Subtotal - Shed 5 Drainage Facilities				10,169,530
	Land Acquisition	46	ac	37,500.00	1,737,700
	Construction Contingencies (20%)				2,033,906
	Administration, Engineering, and Environmental (15%				1,525,429
TOTAL SHED 5 DRAINAGE FACILITIES COST					15,466,565

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 17

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 6

			Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 6 Facilities						
	a.	Water Quality/Detention Basin					
		·	Excavate	656,788	cy	2.50	1,642,000
		·	Dewatering	48	ac	5,000.00	240,000
		·	Access Road (6" Aggregate Base)	12,817	sy	5.19	66,500
	b.	Pump Station					
		·	Pump Station	61	cfs	60,000.00	3,660,000
	c.	Open Channel					
		·	Excavate	92,980	cy	3.00	278,900
		·	Dewatering Near Major Road[1]	6,361	lf	0.00	0
		·	Dewatering	5,754	lf	10.00	57,500
		·	Access Road (6" Aggregate Base)	20,192	sy	5.19	104,800
		-	Fence, 6' Chainlink	24,230	lf	16.12	390,600
	d.	Road Crossings (Box Culverts)					
		·	Reinforced Concrete	508	cy	508.88	258,600
		·	Dewatering[1]	300	lf	0.00	0
		·	Structural Excavation	2,978	cy	5.00	14,889
	e.	Storm Drainage Pipe System					
		·	36" Diameter Storm Drain	0	lf	115.00	0
		·	42" Diameter Storm Drain	350	lf	160.00	56,000
		·	48" Diameter Storm Drain	350	lf	180.00	63,000
		·	54" Diameter Storm Drain	0	lf	195.00	0
		·	60" Diameter Storm Drain	0	lf	210.00	0
		·	66" Diameter Storm Drain	0	lf	230.00	0
		·	72" Diameter Storm Drain	20,900	lf	250.00	5,225,000
		·	Dewatering[1]	21,600	lf	0.00	0
		·	60" Diameter Manhole	1	ea	4,000.00	4,000
		·	72" Diameter Manhole	1	ea	5,000.00	5,000
		·	Saddle Manhole	42	ea	8,000.00	336,000
		·	Outlet Structure at Detention Basin or Channel	15	ea	15,000.00	225,000
	f.	Raised Shed Boundary Fill Zone (Material Obtained From On-Site)					
		·	500-ft Fill Corridor (Approximate)	11800	lf	n/a	0
	g.	Mobilization/Demobilization (1%, not to exceed $50,000		1	ls	50,000.00	50,000
	Subtotal - Shed 6 Drainage Facilities						12,677,789
	Land Acquisition			69	ac	37,500.00	2,579,600
	Construction Contingencies (20%)						2,535,558
	Administration, Engineering, and Environmental (15%						1,901,668
TOTAL SHED 6 DRAINAGE FACILITIES COST							19,694,615

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 18

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 7

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 7 Facilities				
a. Water Quality/Detention Basin				
· Excavate	1,436,621	cy	2.50	3,591,600
· Dewatering	166	ac	5,000.00	828,800
· Access Road (6" Aggregate Base)	60,237	sy	5.19	312,600
b. Pump Station				
· Pump Station	106	cfs	60,000.00	6,360,000
c. Open Channel				
· Excavate	80,792	cy	3.00	242,400
· Dewatering Near Major Road[1]	3,620	lf	0.00	0
· Dewatering	6,647	lf	10.00	66,500
· Access Road (6" Aggregate Base)	17,112	sy	5.19	88,800
- Fence, 6' Chainlink	20,534	lf	16.12	331,000
d. Road Crossings (Box Culverts)				
· Reinforced Concrete	1,426	cy	508.88	725,500
· Dewatering [1]	802	lf	0.00	0
· Structural Excavation	6,507	cy	5.00	32,536
e. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	3,900	lf	115.00	448,500
· 42" Diameter Storm Drain	4,450	lf	160.00	712,000
· 48" Diameter Storm Drain	1,700	lf	180.00	306,000
· 54" Diameter Storm Drain	5,700	lf	195.00	1,111,500
· 60" Diameter Storm Drain	11,000	lf	210.00	2,310,000
· 66" Diameter Storm Drain	2,500	lf	230.00	575,000
· 72" Diameter Storm Drain	6,300	lf	250.00	1,575,000
· 72" Diameter HDPE Storm Drain	1,400	lf	465.00	651,000
· Dewatering[1]	36,950	lf	0.00	0
· 60" Diameter Manhole	17	ea	4,000.00	68,000
· 72" Diameter Manhole	15	ea	5,000.00	75,000
· Saddle Manhole	43	ea	8,000.00	344,000
· Inlet/Outlet Structure at Detention Basin or Channel	18	ea	15,000.00	270,000
f. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 7 Drainage Facilities				21,075,736
Land Acquisition	190	ac	37,500.00	7,107,200
Construction Contingencies (20%)				4,215,147
Administration, Engineering, and Environmental (15%				3,161,360
TOTAL SHED 7 DRAINAGE FACILITIES COST				35,559,444

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 19

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 8

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 8 Facilities				
a. Water Quality/Detention Basin				
· Excavate	269,324	cy	2.50	673,300
· Dewatering	21	ac	5,000.00	102,600
· Access Road (6" Aggregate Base)	6,933	sy	5.19	36,000
b. Pump Station				
· Pump Station	21	cfs	60,000.00	1,236,000
c. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	600	lf	115.00	69,000
· 42" Diameter Storm Drain	1,200	lf	160.00	192,000
· 48" Diameter Storm Drain	500	lf	180.00	90,000
· 54" Diameter Storm Drain	1,200	lf	195.00	234,000
· 60" Diameter Storm Drain	0	lf	210.00	0
· 66" Diameter Storm Drain	1400	lf	230.00	322,000
· 72" Diameter Storm Drain	5550	lf	250.00	1,387,500
· Dewatering[1]	10,450	lf	0.00	0
· 60" Diameter Manhole	4	ea	4,000.00	16,000
· 72" Diameter Manhole	3	ea	5,000.00	15,000
· Saddle Manhole	14	ea	8,000.00	112,000
· Outlet Structure at Basin	4	ea	15,000.00	60,000
d. Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
· 500-ft Fill Corridor (Approximate)	1100	lf	n/a	0
e. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	45,454.00	45,500
Subtotal - Shed 8 Drainage Facilities				4,590,900
Land Acquisition	22	ac	37,500.00	825,000
Construction Contingencies (20%)				918,180
Administration, Engineering, and Environmental (15%				688,635
TOTAL SHED 8 DRAINAGE FACILITIES COST				7,022,715

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 20

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 9

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 9 Facilities				
a. Detention Basin				
· Excavate	655,776	cy	2.50	1,639,400
· Dewatering	41	ac	5,000.00	202,700
· Access Road (6" Aggregate Base)	8,943	sy	5.19	46,400
b. Pump Station				
· Pump Station	47	cfs	60,000.00	2,844,000
c. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	1,100	lf	115.00	126,500
· 42" Diameter Storm Drain	600	lf	160.00	96,000
· 48" Diameter Storm Drain	6,000	lf	180.00	1,080,000
· 54" Diameter Storm Drain	2,200	lf	195.00	429,000
· 60" Diameter Storm Drain	2,700	lf	210.00	567,000
· 66" Diameter Storm Drain	2,200	lf	230.00	506,000
· 72" Diameter Storm Drain	10,600	lf	250.00	2,650,000
· Dewatering[1]	25,400	lf	0.00	0
· 60" Diameter Manhole	3	ea	4,000.00	12,000
· 72" Diameter Manhole	16	ea	5,000.00	80,000
· Saddle Manhole	31	ea	8,000.00	248,000
· Outlet Structure at Basin	3	ea	15,000.00	45,000
d. - Raised Shed Boundary Fill Zone (Material Obtained From both On-Site and Off-Site)				
· 500-ft Fill Corridor (Approximate)	18000	lf	n/a	0
· Import Material from Off-Site Using Scrapers[2]	686,810	cy	2.50	1,717,000
· Spread topsoil by equipment on sit[2]	686,810	cy	1.50	1,030,200
e. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 9 Drainage Facilities				13,369,200
Land Acquisition	42	ac	37,500.00	1,590,000
Construction Contingencies (20%)				2,673,840
Administration, Engineering, and Environmental (15%				2,005,380
TOTAL SHED 9 DRAINAGE FACILITIES COST				19,638,420

Notes:
1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).
2. Haul and Spread Quantities reflect import material from offsite necessary for raising the shed boundary as well as providing a positive gradient for on-site drainage. Borrow site is assumed to be land located north of plan area, west of Highway 99.

TABLE 21

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 10

			Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 10 Facilities						
	a.	Water Quality/Detention Basin					
		·	Excavate	210,286	cy	2.50	525,700
		·	Dewatering	20	ac	5,000.00	98,800
		·	Access Road (6" Aggregate Base)	6,552	sy	5.19	34,000
	b.	Pump Station					
		·	Pump Station	16	cfs	60,000.00	960,000
	c.	Storm Drainage Pipe System					
		·	36" Diameter Storm Drain	500	lf	115.00	57,500
		·	42" Diameter Storm Drain	600	lf	160.00	96,000
		·	48" Diameter Storm Drain	1,200	lf	180.00	216,000
		·	54" Diameter Storm Drain	600	lf	195.00	117,000
		·	60" Diameter Storm Drain	1,400	lf	210.00	294,000
		·	66" Diameter Storm Drain	1,100	lf	230.00	253,000
		·	72" Diameter Storm Drain	3,100	lf	250.00	775,000
		·	Dewatering[1]	8,500	lf	0.00	0
		·	60" Diameter Manhole	2	ea	4,000.00	8,000
		·	72" Diameter Manhole	4	ea	5,000.00	20,000
		·	Saddle Manhole	11	ea	8,000.00	88,000
		·	Outlet Structure at Basin	2	ea	15,000.00	30,000
	d.	Mobilization/Demobilization (1%, not to exceed $50,000		1	ls	35,730.00	35,700
	Subtotal - Shed 10 Drainage Facilities						3,608,700
	Land Acquisition			21	ac	37,500.00	791,300
	Construction Contingencies (20%)						721,740
	Administration, Engineering, and Environmental (15%						541,305
TOTAL SHED 10 DRAINAGE FACILITIES COST							5,663,045

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 22

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 11

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 11 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	298,225	cy	2.50	745,600
·	Dewatering	23	ac	5,000.00	114,100
·	Access Road (6" Aggregate Base)	7,910	sy	5.19	41,100
b.	Pump Station				
·	Pump Station	27	cfs	60,000.00	1,620,000
c.	Open Channel				
·	Excavate	27,111	cy	3.00	81,300
·	Dewatering[1]	4,325	lf	0.00	0
·	Access Road (6" Aggregate Base)	7,208	sy	5.19	37,400
-	Fence, 6' Chainlink	8,650	lf	16.12	139,400
d.	Road Crossing (two 72" RCPs)				
·	Reinforced Concrete	288	cy	508.88	146,400
·	Dewatering[1]	160	lf	0.00	0
·	Structural Excavation	1,849	cy	5.00	9,244
e.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	0	lf	115.00	0
·	42" Diameter Storm Drain	600	lf	160.00	96,000
·	48" Diameter Storm Drain	2,400	lf	180.00	432,000
·	54" Diameter Storm Drain	3,200	lf	195.00	624,000
·	60" Diameter Storm Drain	1,200	lf	210.00	252,000
·	66" Diameter Storm Drain	800	lf	230.00	184,000
·	72" Diameter Storm Drain	2,400	lf	250.00	600,000
·	Dewatering[1]	10,600	lf	0.00	0
·	60" Diameter Manhole	1	ea	4,000.00	4,000
·	72" Diameter Manhole	11	ea	5,000.00	55,000
·	Saddle Manhole	9	ea	8,000.00	72,000
·	Outlet Structure at Basin	5	ea	15,000.00	75,000
f.	- Raised Shed Boundary Fill Zone (Material Obtained From both On-Site and Off-Site)				
·	500-ft Fill Corridor (Approximate)	12700	lf	n/a	0
·	Haul Material in Trucks from Sankey Regional Detention Site[2]	1,460,240	cy	2.50	3,650,600
·	Spread topsoil by equipment on site[2]	1,460,240	cy	1.50	2,190,400
g.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
	Subtotal - Shed 11 Drainage Facilities				11,219,544
	Land Acquisition	31	ac	37,500.00	1,157,000
	Construction Contingencies (20%				2,243,909
	Administration, Engineering, and Environmental (15%				1,682,932
TOTAL SHED 11 DRAINAGE FACILITIES COST					16,303,385

Notes:
1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).
2. Haul and Spread Quantities reflect import material from offsite necessary for raising the shed boundary as well as providing a positive gradient for on-site drainage. Borrow site is assumed to be land located north of plan area, west of Highway 99.

TABLE 23

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

SHED 12

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 12 Facilities				
a. Water Quality/Detention Basin				
· Excavate	493,107	cy	2.50	1,232,800
· Dewatering	49	ac	5,000.00	244,600
· Access Road (6" Aggregate Base)	20,000	sy	5.19	103,800
b. Pump Station				
· Pump Station	51	cfs	60,000.00	3,036,000
c. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	600	lf	115.00	69,000
· 42" Diameter Storm Drain	0	lf	160.00	0
· 48" Diameter Storm Drain	0	lf	180.00	0
· 54" Diameter Storm Drain	4,700	lf	195.00	916,500
· 60" Diameter Storm Drain	0	lf	210.00	0
· 66" Diameter Storm Drain	850	lf	230.00	195,500
· 72" Diameter Storm Drain	11,700	lf	250.00	2,925,000
· 72" Diameter HDPE Storm Drain	800	lf	465.00	372,000
· Dewatering[1]	18,050	lf	0.00	0
· 60" Diameter Manhole	1	ea	4,000.00	4,000
· 72" Diameter Manhole	9	ea	5,000.00	45,000
· Saddle Manhole	27	ea	8,000.00	216,000
· Inlet/Outlet Structure at Detention Basin	8	ea	15,000.00	120,000
d. Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
· 500-ft Fill Corridor (Approximate)	9400	lf	n/a	0
e. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Drainage Shed 12 Facilities				9,530,200
Land Acquisition	55	ac	37,500.00	2,057,600
Construction Contingencies (20%)				1,906,040
Administration, Engineering, and Environmental (15%				1,429,530
TOTAL DRAINAGE SHED 12 FACILITIES COST				14,923,370

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 24

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

REGIONAL FACILITIES

		Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.		Regional Facilities				
	a.	Detention Basins - Sankey Spill				
		· Excavate[1]	7,565,641	cy	2.50	18,914,100
		· Dewatering	414	ac	3,000.00	1,242,000
		· Access Road (6" Aggregate Base	77,972	sy	5.19	404,700
		· Riprap[2]	12,857	cy	59.40	763,700
	b.	Sankey North Storage Outlet (Cell #1)				
		· 42" Diameter Storm Drain	85	lf	160.00	13,600
		· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
		· Dewatering[3]	85	lf	0.00	0
		- 42-inch Canal Gate	1	ea	20,000.00	20,000
	c.	Cross-Connection Between Sankey Basin Cells #1 and #2				
		· 72" Diameter Storm Drain	430	lf	250.00	107,500
		· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
		· Dewatering[2]	430	lf	0.00	0
	d.	Internal North-South Cross-Connections Within Sankey Cell #1				
		· 72" Diameter Storm Drain	160	lf	250.00	40,000
		· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
		· Dewatering[2]	160	lf	0.00	0
	e.	Downstream Channel Improvements Parallel to Sankey Road and Highway 99				
		· Excavate	168,747	cy	4.65	784,700
		· Dewatering[3]	2,040	lf	0.00	0
		· Access Road (6" Aggregate Base)	1,456	sy	5.19	7,600
		- Fence, 6' Chainlink	2,040	lf	16.12	32,900
	f.	Sankey South Storage Outlet (Cell #3)				
		· 42" Diameter Storm Drain	760	lf	160.00	121,600
		· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
		· Dewatering[3]	760	lf	0.00	0
		· 60" Diameter Manhole	1	ea	4,000.00	4,000
		- 42-inch Canal Gate	1	ea	20,000.00	20,000
	g.	Sankey South Storage Inlet (Cell #3)				
		· 54" Diameter Storm Drain	330	lf	195.00	64,400
		· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
		· Dewatering[3]	330	lf	0.00	0

Notes:
1. Excavated volume is assumed to be utilized as on-site fill for project land east of Highway 99.
2. Dewatering cost is embedded in dewatering estimates for adjacent detention basins.
3. Channel Improvements summarized in this table reflect only the improvements necessary to optimize gravity drainage for the Sankey Detention volume after a Sankey Spill event.

TABLE 24

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1

REGIONAL FACILITIES

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
h. Cross-Connection Between Sankey Basin Cells #3 and #4				
· 54" Diameter Storm Drain	500	lf	195.00	97,500
· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
· Dewatering[3]	500	lf	0.00	0
i. Cross-Connection Between Sankey Basin Cells #4 and #5				
· 72" Diameter Storm Drain	100	lf	250.00	25,000
· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
· Dewatering[3]	100	lf	0.00	0
j. Sankey Interceptor Channel				
· Excavate	9,913	cy	3.00	29,700
· Dewatering[3]	4,570	lf	0.00	0
· Access Road (6" Aggregate Base)	5,508	sy	5.19	28,600
- Fence, 6' Chainlink	4,570	lf	16.12	73,700
k. East Drainage Canal Improvements				
· Excavate	189,950	cy	4.65	883,300
· Dewatering	32	ac	5,000.00	159,300
· Access Road (6" Aggregate Base)	30,845	sy	5.19	160,100
- Fence, 6' Chainlink	37,014	lf	16.12	596,700
l. Redundancy Features to RD1000 Pumping Facilities				
- Backup pumping capacity and power supply	1	ls	TBD	
m. Mobilization/Demobilization (1%, not to exceed $50,000)	1	ls	50,000.00	50,000
Subtotal - Regional Drainage Facilities				24,974,700
Land Acquisition	424	ac	37,500.00	15,909,100
Construction Contingencies (20%)				4,994,940
Administration, Engineering, and Environmental (15%				3,746,205
TOTAL REGIONAL DRAINAGE FACILITIES COST				49,624,945

Notes:
1. A portion of excavated volume is proposed as import for Sheds 9 and 11, see Tables 20 and 23.
2. Includes Emergency Spillways and Inlet Weir
3. Dewatering cost is embedded in dewatering estimates for adjacent detention basins.
4. Channel Improvements summarized in this table reflect only the improvements necessary to optimize gravity drainage for the Sankey Detention volume after a Sankey Spill event.

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE A SUMMARY

SUMMARY

	Description	Total Cost, $
1.	Drainage Shed 1 Facilities Subtotal	0
2.	Drainage Shed 2 Facilities Subtotal	0
3.	Drainage Shed 3 Facilities Subtotal	0
4.	Drainage Shed 4 Facilities Subtotal	0
5.	Drainage Shed 5 Facilities Subtotal	0
6.	Drainage Shed 6 Facilities Subtotal	0
7.	Drainage Shed 7 Facilities Subtotal	0
8.	Drainage Shed 8 Facilities Subtotal	0
9.	Drainage Shed 9 Facilities Subtotal (Table 58)	17,912,000
10.	Drainage Shed 10 Facilities Subtotal	0
11.	Drainage Shed 11 Facilities Subtotal (Table 59)	14,945,000
12.	Drainage Shed 12 Facilities Subtotal	0
13.	Regional Facilities Subtotal	0
	Subtotal - Drainage Facilities	**32,857,000**

TABLE 58

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE A SHED 9

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 9 Facilities				
a. Detention Basin				
· Excavate	655,776	cy	2.50	1,639,400
· Dewatering	41	ac	5,000.00	202,700
· Access Road (6" Aggregate Base)	8,943	sy	5.19	46,400
b. Pump Station				
· Pump Station	47	cfs	60,000.00	2,844,000
c. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	1,100	lf	115.00	126,500
· 42" Diameter Storm Drain	600	lf	160.00	96,000
· 48" Diameter Storm Drain	3,600	lf	180.00	648,000
· 54" Diameter Storm Drain	1,700	lf	195.00	331,500
· 60" Diameter Storm Drain	1,400	lf	210.00	294,000
· 66" Diameter Storm Drain	1,600	lf	230.00	368,000
· 72" Diameter Storm Drain	9,600	lf	250.00	2,400,000
· Dewatering[1]	19,600	lf	0.00	0
· 60" Diameter Manhole	3	ea	4,000.00	12,000
· 72" Diameter Manhole	11	ea	5,000.00	55,000
· Saddle Manhole	25	ea	8,000.00	200,000
· Outlet Structure at Basin	2	ea	15,000.00	30,000
d. - Raised Shed Boundary Fill Zone (Material Obtained From both On-Site and Off-Site)				
· 500-ft Fill Corridor (Approximate)	18000	lf	n/a	0
· Import Material from Off-Site Using Scrapers[2]	686,810	cy	2.50	1,717,000
· Spread topsoil by equipment on sit[2]	686,810	cy	1.50	1,030,200
e. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 9 Drainage Facilities				12,090,700
Land Acquisition	42	ac	37,500.00	1,590,000
Construction Contingencies (20%)				2,418,140
Administration, Engineering, and Environmental (15%				1,813,605
TOTAL SHED 9 DRAINAGE FACILITIES COST				17,912,445

Notes:
1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).
2. Haul and Spread Quantities reflect import material from offsite necessary for raising the shed boundary as well as providing a positive gradient for on-site drainage. Borrow site is assumed to be land located north of plan area, west of Highway 99.

TABLE 59

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE A SHED 11

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 11 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	298,225	cy	2.50	745,600
·	Dewatering	23	ac	5,000.00	114,100
·	Access Road (6" Aggregate Base)	7,910	sy	5.19	41,100
b.	Pump Station				
·	Pump Station	27	cfs	60,000.00	1,620,000
c.	Open Channel				
·	Excavate	27,111	cy	3.00	81,300
·	Dewatering[1]	4,325	lf	0.00	0
·	Access Road (6" Aggregate Base)	7,208	sy	5.19	37,400
-	Fence, 6' Chainlink	8,650	lf	16.12	139,400
d.	Road Crossing (two 72" RCPs)				
·	Reinforced Concrete	288	cy	508.88	146,400
·	Dewatering[1]	160	lf	0.00	0
·	Structural Excavation	1,849	cy	5.00	9,244
e.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	0	lf	115.00	0
·	42" Diameter Storm Drain	0	lf	160.00	0
·	48" Diameter Storm Drain	1,200	lf	180.00	216,000
·	54" Diameter Storm Drain	3,200	lf	195.00	624,000
·	60" Diameter Storm Drain	600	lf	210.00	126,000
·	66" Diameter Storm Drain	0	lf	230.00	0
·	72" Diameter Storm Drain	1,200	lf	250.00	300,000
·	Dewatering[1]	6,200	lf	0.00	0
·	60" Diameter Manhole	0	ea	4,000.00	0
·	72" Diameter Manhole	9	ea	5,000.00	45,000
·	Saddle Manhole	4	ea	8,000.00	32,000
·	Outlet Structure at Basin	3	ea	15,000.00	45,000
f.	- Raised Shed Boundary Fill Zone (Material Obtained From both On-Site and Off-Site)				
·	500-ft Fill Corridor (Approximate)	12700	lf	n/a	0
·	Haul Material in Trucks from Sankey Regional Detention Site[2]	1,460,240	cy	2.50	3,650,600
·	Spread topsoil by equipment on site[2]	1,460,240	cy	1.50	2,190,400
g.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
	Subtotal - Shed 11 Drainage Facilities				10,213,544
	Land Acquisition	31	ac	37,500.00	1,157,000
	Construction Contingencies (20%				2,042,709
	Administration, Engineering, and Environmental (15%				1,532,032
TOTAL SHED 11 DRAINAGE FACILITIES COST					14,945,285

Notes:
1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).
2. Haul and Spread Quantities reflect import material from offsite necessary for raising the shed boundary as well as providing a positive gradient for on-site drainage. Borrow site is assumed to be land located north of plan area, west of Highway 99.

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE 1 SUMMARY

	Description	Total Cost, $
1.	Drainage Shed 1 Facilities Subtotal	0
2.	Drainage Shed 2 Facilities Subtotal	0
3.	Drainage Shed 3 Facilities Subtotal	0
4.	Drainage Shed 4 Facilities Subtotal	0
5.	Drainage Shed 5 Facilities Subtotal	0
6.	Drainage Shed 6 Facilities Subtotal (Table 54)	18,265,000
7.	Drainage Shed 7 Facilities Subtotal (Table 55)	27,678,000
8.	Drainage Shed 8 Facilities Subtotal	0
9.	Drainage Shed 9 Facilities Subtotal	0
10.	Drainage Shed 10 Facilities Subtotal	0
11.	Drainage Shed 11 Facilities Subtotal	0
12.	Drainage Shed 12 Facilities Subtotal (Table 56)	13,067,000
13.	Regional Facilities Subtotal (Table 24)	49,625,000
	Subtotal - Drainage Facilities	**108,635,000**

TABLE 54

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE 1 SHED 6

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 6 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	656,788	cy	2.50	1,642,000
·	Dewatering	48	ac	5,000.00	240,000
·	Access Road (6" Aggregate Base)	12,817	sy	5.19	66,500
b.	Pump Station				
·	Pump Station	61	cfs	60,000.00	3,660,000
c.	Open Channel				
·	Excavate	92,980	cy	3.00	278,900
·	Dewatering Near Major Road[1]	6,361	lf	0.00	0
·	Dewatering	5,754	lf	10.00	57,500
·	Access Road (6" Aggregate Base)	20,192	sy	5.19	104,800
-	Fence, 6' Chainlink	24,230	lf	16.12	390,600
d.	Road Crossings (Box Culverts)				
·	Reinforced Concrete	508	cy	508.88	258,600
·	Dewatering[1]	300	lf	0.00	0
·	Structural Excavation	2,978	cy	5.00	14,889
e.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	0	lf	115.00	0
·	42" Diameter Storm Drain	350	lf	160.00	56,000
·	48" Diameter Storm Drain	350	lf	180.00	63,000
·	54" Diameter Storm Drain	0	lf	195.00	0
·	60" Diameter Storm Drain	0	lf	210.00	0
·	66" Diameter Storm Drain	0	lf	230.00	0
·	72" Diameter Storm Drain	17,100	lf	250.00	4,275,000
·	Dewatering[1]	17,800	lf	0.00	0
·	60" Diameter Manhole	1	ea	4,000.00	4,000
·	72" Diameter Manhole	1	ea	5,000.00	5,000
·	Saddle Manhole	34	ea	8,000.00	272,000
·	Outlet Structure at Detention Basin or Channel	12	ea	15,000.00	180,000
f.	Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
·	500-ft Fill Corridor (Approximate)	11800	lf	n/a	0
g.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
	Subtotal - Shed 6 Drainage Facilities				11,618,789
	Land Acquisition	69	ac	37,500.00	2,579,600
	Construction Contingencies (20%)				2,323,758
	Administration, Engineering, and Environmental (15%				1,742,818
TOTAL SHED 6 DRAINAGE FACILITIES COST					18,264,965

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 55

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE 1 SHED 7

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Drainage Shed 7 Facilities				
a. Water Quality/Detention Basin				
· Excavate	1,258,388	cy	2.50	3,146,000
· Dewatering	127	ac	5,000.00	637,300
· Access Road (6" Aggregate Base)	46,688	sy	5.19	242,300
b. Pump Station				
· Pump Station	106	cfs	60,000.00	6,360,000
c. Open Channel				
· Excavate	63,187	cy	3.00	189,600
· Dewatering Near Major Road[1]	3,620	lf	0.00	0
· Dewatering	3,372	lf	10.00	33,700
· Access Road (6" Aggregate Base)	11,653	sy	5.19	60,500
- Fence, 6' Chainlink	13,984	lf	16.12	225,400
d. Road Crossings (Box Culverts)				
· Reinforced Concrete	1,426	cy	508.88	725,500
· Dewatering[1]	802	lf	0.00	0
· Structural Excavation	6,507	cy	5.00	32,536
e. Storm Drainage Pipe System				
· 36" Diameter Storm Drain	1,600	lf	115.00	184,000
· 42" Diameter Storm Drain	400	lf	160.00	64,000
· 48" Diameter Storm Drain	600	lf	180.00	108,000
· 54" Diameter Storm Drain	3,600	lf	195.00	702,000
· 60" Diameter Storm Drain	5,700	lf	210.00	1,197,000
· 66" Diameter Storm Drain	2,500	lf	230.00	575,000
· 72" Diameter Storm Drain	4,500	lf	250.00	1,125,000
· 72" Diameter HDPE Storm Drain	800	lf	465.00	372,000
· Dewatering[1]	19,700	lf	0.00	0
· 60" Diameter Manhole	4	ea	4,000.00	16,000
· 72" Diameter Manhole	9	ea	5,000.00	45,000
· Saddle Manhole	27	ea	8,000.00	216,000
· Inlet/Outlet Structure at Detention Basin or Channel	8	ea	15,000.00	120,000
f. Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
Subtotal - Shed 7 Drainage Facilities				16,426,836
Land Acquisition	147	ac	37,500.00	5,502,200
Construction Contingencies (20%)				3,285,367
Administration, Engineering, and Environmental (15%				2,464,025
TOTAL SHED 7 DRAINAGE FACILITIES COST				27,678,429

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 56

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

OPINION OF PROBABLE COSTS
ALTERNATIVE 1 PHASING

PHASE 1 SHED 12

	Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1.	Drainage Shed 12 Facilities				
a.	Water Quality/Detention Basin				
·	Excavate	493,107	cy	2.50	1,232,800
·	Dewatering	49	ac	5,000.00	244,600
·	Access Road (6" Aggregate Base)	20,000	sy	5.19	103,800
b.	Pump Station				
·	Pump Station	51	cfs	60,000.00	3,036,000
c.	Storm Drainage Pipe System				
·	36" Diameter Storm Drain	600	lf	115.00	69,000
·	42" Diameter Storm Drain	0	lf	160.00	0
·	48" Diameter Storm Drain	0	lf	180.00	0
·	54" Diameter Storm Drain	4,700	lf	195.00	916,500
·	60" Diameter Storm Drain	0	lf	210.00	0
·	66" Diameter Storm Drain	850	lf	230.00	195,500
·	72" Diameter Storm Drain	6,700	lf	250.00	1,675,000
·	72" Diameter HDPE Storm Drain	800	lf	465.00	372,000
·	Dewatering[1]	13,650	lf	0.00	0
·	60" Diameter Manhole	1	ea	4,000.00	4,000
·	72" Diameter Manhole	9	ea	5,000.00	45,000
·	Saddle Manhole	17	ea	8,000.00	136,000
·	Inlet/Outlet Structure at Detention Basin	5	ea	15,000.00	75,000
d.	Raised Shed Boundary Fill Zone (Material Obtained From On-Site)				
·	500-ft Fill Corridor (Approximate)	9400	lf	n/a	0
e.	Mobilization/Demobilization (1%, not to exceed $50,000	1	ls	50,000.00	50,000
	Subtotal - Drainage Shed 12 Facilities				8,155,200
	Land Acquisition	55	ac	37,500.00	2,057,600
	Construction Contingencies (20%)				1,631,040
	Administration, Engineering, and Environmental (15%				1,223,280
TOTAL DRAINAGE SHED 12 FACILITIES COST					13,067,120

Note: 1. Dewatering in vicinity of major roads is embedded cost opinion in Sewer Master Plan (by others).

TABLE 24

SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

ALTERNATIVE 1 PHASING

PHASE 1 REGIONAL FACILITIES

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
1. Regional Facilities				
a. Detention Basins - Sankey Spill				
· Excavate[1]	7,565,641	cy	2.50	18,914,100
· Dewatering	414	ac	3,000.00	1,242,000
· Access Road (6" Aggregate Base	77,972	sy	5.19	404,700
· Riprap	12,857	cy	59.40	763,700
b. Sankey North Storage Outlet (Cell #1)				
· 42" Diameter Storm Drain	85	lf	160.00	13,600
· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
· Dewatering[2]	85	lf	0.00	0
- 42-inch Canal Gate	1	ea	20,000.00	20,000
c. Cross-Connection Between Sankey Basin Cells #1 and #2				
· 72" Diameter Storm Drain	430	lf	250.00	107,500
· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
· Dewatering[2]	430	lf	0.00	0
d. Internal North-South Cross-Connections Within Sankey Cell #1				
· 72" Diameter Storm Drain	160	lf	250.00	40,000
· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
· Dewatering - Deep[2]	160	lf	0.00	0
e. Downstream Channel Improvements Parallel to Sankey Road and Highway 99				
· Excavate	168,747	cy	4.65	784,700
· Dewatering[2]	2,040	lf	0.00	0
· Access Road (6" Aggregate Base)	1,456	sy	5.19	7,600
- Fence, 6' Chainlink	2,040	lf	16.12	32,900
f. Sankey South Storage Outlet (Cell #3)				
· 42" Diameter Storm Drain	760	lf	160.00	121,600
· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
· Dewatering[2]	760	lf	0.00	0
· 60" Diameter Manhole	1	ea	4,000.00	4,000
- 42-inch Canal Gate	1	ea	20,000.00	20,000
g. Sankey South Storage Inlet (Cell #3)				
· 54" Diameter Storm Drain	330	lf	195.00	64,400
· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
· Dewatering[2]	330	lf	0.00	0

Notes:
1. A portion of excavated volume is proposed as import for Sheds 9 and 11, see Tables 20 and 23.
2. Dewatering cost is embedded in dewatering estimates for adjacent detention basins.
3. Channel Improvements summarized in this table reflect only the improvements necessary to optimize gravity drainage for the Sankey Detention volume after a Sankey Spill event.

TABLE 24

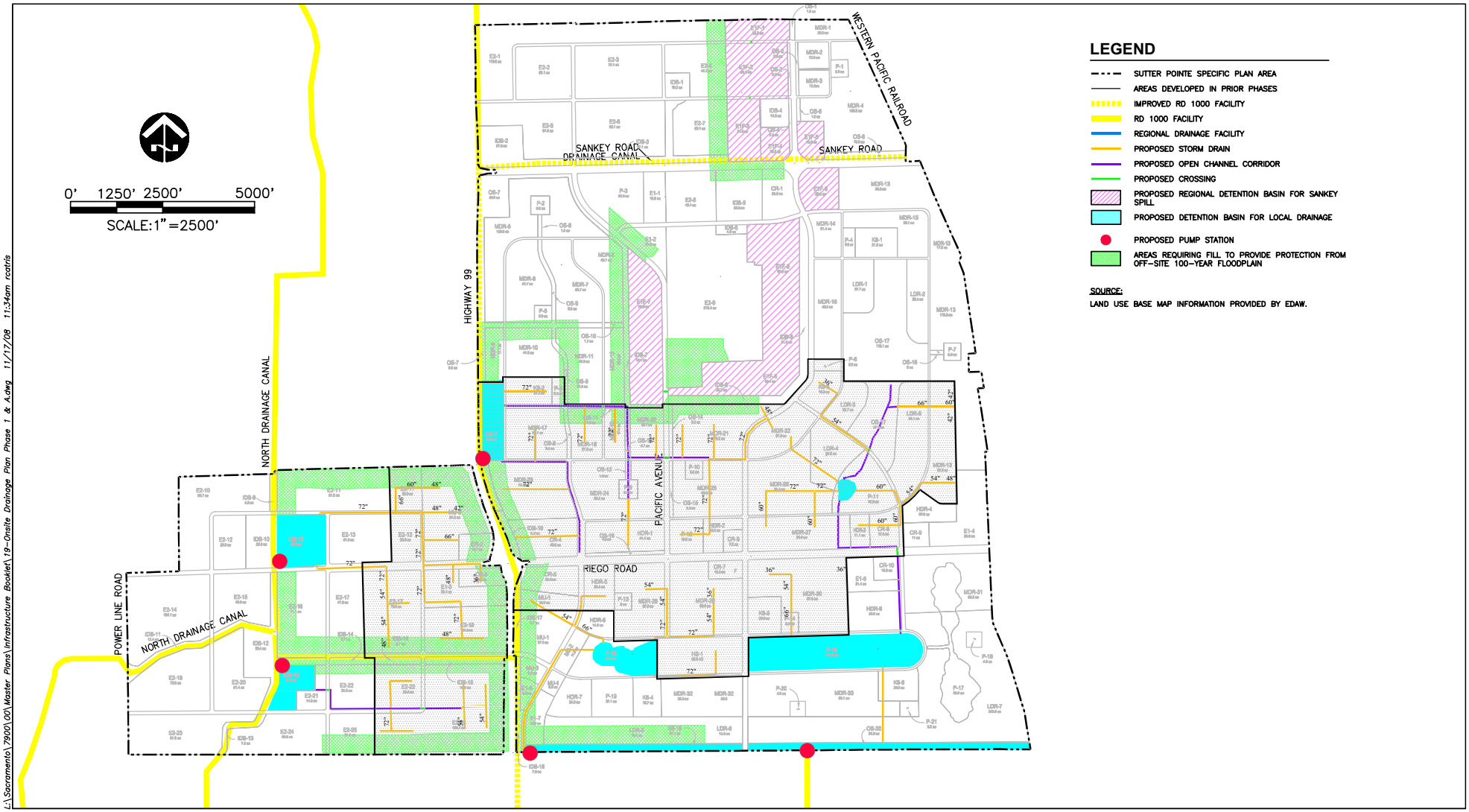
SOUTH SUTTER SPECIFIC PLAN
DRAINAGE MASTER PLAN

ALTERNATIVE 1 PHASING

PHASE 1 REGIONAL FACILITIES

Description	Quantity	Unit	Unit Cost, $	Total Cost, $
h. Cross-Connection Between Sankey Basin Cells #3 and #4				
· 54" Diameter Storm Drain	500	lf	195.00	97,500
· Inlet/Outlet Headwall	4	ea	15,000.00	60,000
· Dewatering[2]	500	lf	0.00	0
i. Cross-Connection Between Sankey Basin Cells #4 and #5				
· 72" Diameter Storm Drain	100	lf	250.00	25,000
· Inlet/Outlet Headwall	2	ea	15,000.00	30,000
· Dewatering[2]	100	lf	0.00	0
j. Sankey Interceptor Channel				
· Excavate	9,913	cy	3.00	29,700
· Dewatering[2]	4,570	lf	0.00	0
· Access Road (6" Aggregate Base)	5,508	sy	5.19	28,600
- Fence, 6' Chainlink	4,570	lf	16.12	73,700
k. East Drainage Canal Improvements				
· Excavate	189,950	cy	4.65	883,300
· Dewatering	32	ac	5,000.00	159,300
· Access Road (6" Aggregate Base)	30,845	sy	5.19	160,100
- Fence, 6' Chainlink	37,014	lf	16.12	596,700
l. Redundancy Features to RD1000 Pumping Facilities				
- Backup pumping capacity and power supply	1	ls	TBD	
m. Mobilization/Demobilization (1%, not to exceed $50,000)	1	ls	50,000.00	50,000
Subtotal - Regional Drainage Facilities				24,974,700
Land Acquisition	424	ac	37,500.00	15,909,100
Construction Contingencies (20%)				4,994,940
Administration, Engineering, and Environmental (15%				3,746,205
TOTAL REGIONAL DRAINAGE FACILITIES COST				49,624,945

Notes:
1. A portion of excavated volume is proposed as import for Sheds 9 and 11, see Tables 20 and 23.
2. Dewatering cost is embedded in dewatering estimates for adjacent detention basins.
3. Channel Improvements summarized in this table reflect only the improvements necessary to optimize gravity drainage for the Sankey Detention volume after a Sankey Spill event.



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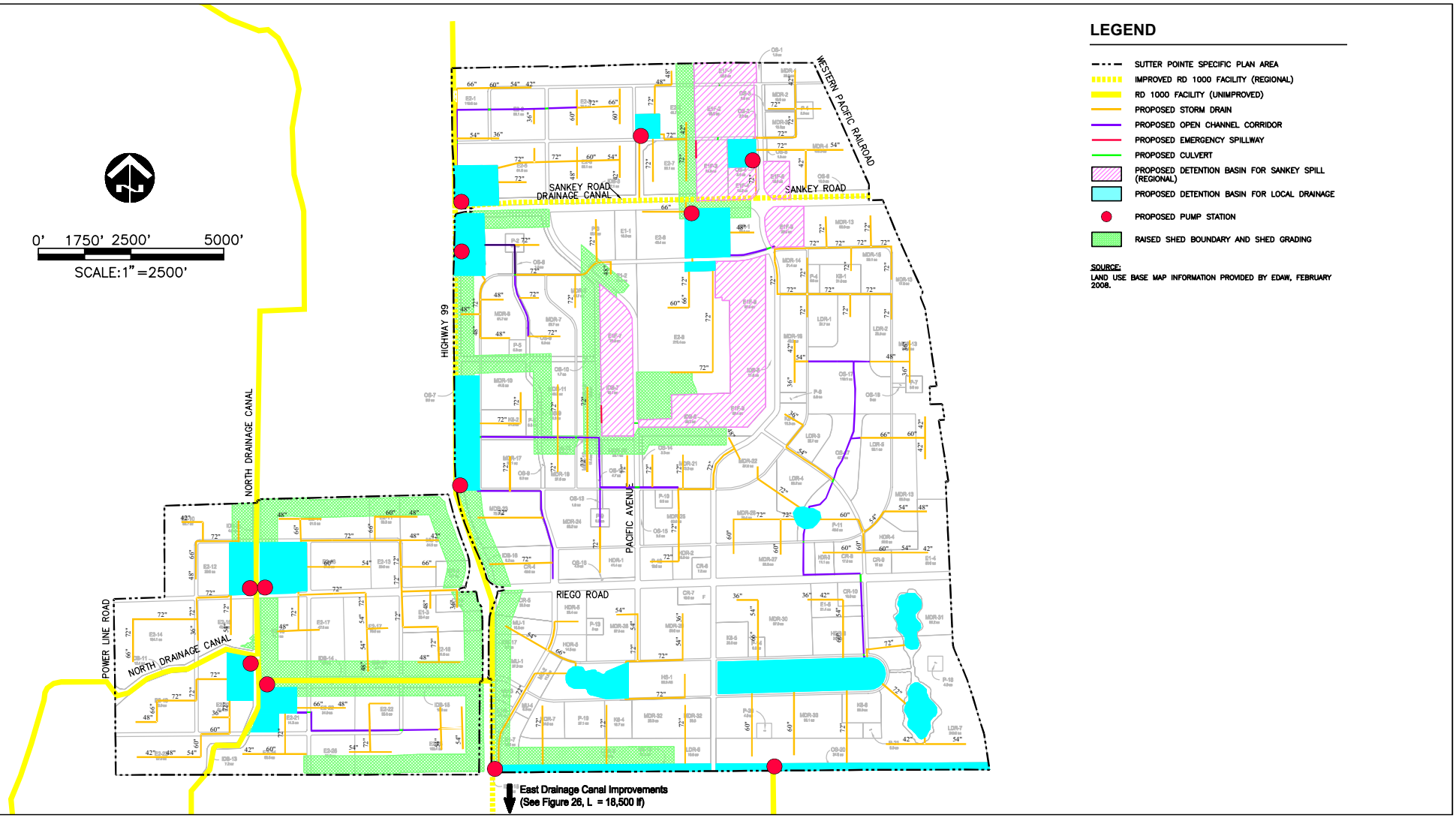
SUTTER POINTE

MEASURE "M" GROUP

On-Site Drainage Plan - Phase 1 and A

WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS
November 14, 2008

MAP A-13



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Sheet 20 of 21

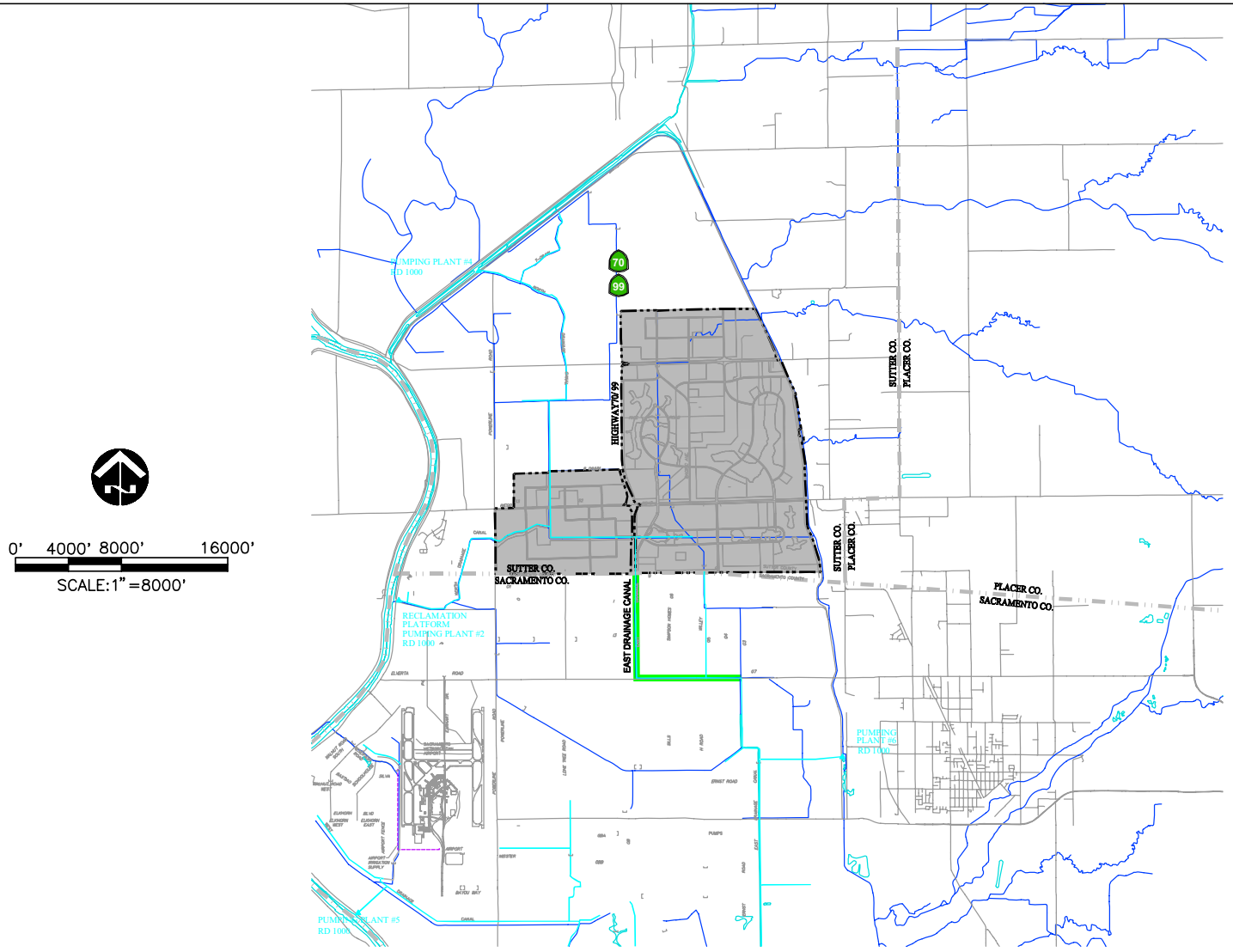
SUTTER POINTE

MEASURE "M" GROUP

On-Site Drainage Plan - Buildout

WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS
November 14, 2008

MAP A-14



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SUTTER POINTE

MEASURE "M" GROUP

Off-Site Drainage Improvements

WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS

November 14, 2008

MAP A-15

PRELIMINARY COST ESTIMATE

NCMWC Agricultural Irrigation

SUTTER POINTE

Sutter County, California

November 14, 2008

MacKay & Somps
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

PRELIMINARY COST ESTIMATE

Sutter Pointe - NCMWC Agricultural Irrigation

Sutter County

Dated: November 14, 2008

ITEM No.	CONSTRUCTION COSTS DESCRIPTION	UNIT PRICE	UNIT	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT
1.0 -	**IRRIGATION CANAL**																													
1.A	**PERMANENT CANAL**																													
1.	Excavation (6.2 CY per LF of canal)	$25.00	LF	12,520	LF	$313,000	0	LF	$0	0	LF	$0	5,150	LF	$128,750	2,010	LF	$50,250	0	LF	$0	2,080	LF	$52,000	3,540	LF	$88,500	25,300	LF	$632,500
2.	Access Road (15' wide - 6"AB section)	$30.00	LF	25,040	LF	$751,200	0	LF	$0	0	LF	$0	10,300	LF	$309,000	4,020	LF	$120,600	0	LF	$0	4,160	LF	$124,800	7,080	LF	$212,400	50,600	LF	$1,518,000
3.	6' Chain Link Fence	$16.00	LF	25,040	LF	$400,640	0	LF	$0	0	LF	$0	10,300	LF	$164,800	4,020	LF	$64,320	0	LF	$0	4,160	LF	$66,560	7,080	LF	$113,280	50,600	LF	$809,600
4.	Turnout (Headwall w/Gate)	$65,000.00	EA	1	EA	$65,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$65,000
	TOTAL PERMANENT CANAL					**$1,529,840**			**$0**			**$0**			**$602,550**			**$235,170**			**$0**			**$243,360**			**$414,180**			**$3,025,100**
1.B	**INTERIM CANAL**																													
1.	Excavation (6.2 CY per LF of canal)	$25.00	LF	4,360	LF	$109,000	0	LF	$0	1,200	LF	$30,000	1,120	LF	$28,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	6,680	LF	$167,000
2.	Access Road (15' wide - 6"AB section)	$30.00	LF	8,720	LF	$261,600	0	LF	$0	2,400	LF	$72,000	2,240	LF	$67,200	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	13,360	LF	$400,800
3.	6' Chain Link Fence	$16.00	LF	8,720	LF	$139,520	0	LF	$0	2,400	LF	$38,400	2,240	LF	$35,840	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	13,360	LF	$213,760
4.	Turnout (Headwall w/Gate)	$65,000.00	EA	1	EA	$65,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$65,000
5.	Relocate Existing Pump	$50,000.00	EA	1	EA	$50,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$50,000
	TOTAL INTERIM CANAL					**$625,120**			**$0**			**$140,400**			**$131,040**			**$0**			**$0**			**$0**			**$0**			**$896,560**
1.C	**CROSSINGS**																													
1.	Headwall/Drop Structure	$40,000.00	EA	18	EA	$720,000	0	EA	$0	0	EA	$0	1	EA	$40,000	2	EA	$80,000	0	EA	$0	2	EA	$80,000	9	EA	$360,000	32	EA	$1,280,000
2.	8' x 10' Culvert/Crossing	$650.00	LF	1,100	LF	$715,000	0	LF	$0	0	LF	$0	50	LF	$32,500	180	LF	$117,000	0	LF	$0	100	LF	$65,000	440	LF	$286,000	1,870	LF	$1,215,500
	TOTAL CROSSINGS					**$1,435,000**			**$0**			**$0**			**$72,500**			**$197,000**			**$0**			**$145,000**			**$646,000**			**$2,495,500**
2.0 -	**OTHER**																													
2A.	**OTHER**																													
1.	Abandon Existing Irrigation Canal (12.5 CY per LF)	$40.00	LF	8920	LF	$356,800	0	LF	$0	2230	LF	$89,200	0	LF	$0	4160	LF	$166,400	0	LF	$0	2230	LF	$89,200	3980	LF	$159,200	21,520	LF	$860,800
2.	Abandon Interim Irrigation Canal (6.2 CY per LF)	$20.00	LF	0	LF	$0	0	LF	$0	2120	LF	$42,400	2240	LF	$44,800	1200	LF	$24,000	1120	LF	$22,400	0	LF	$0	0	LF	$0	6,680	LF	$133,600
	TOTAL OTHER					**$356,800**			**$0**			**$131,600**			**$44,800**			**$190,400**			**$22,400**			**$89,200**			**$159,200**			**$994,400**

CONSTRUCTION COST ESTIMATE SUMMARY

	PHASE 1	PHASE A	PHASE 2	PHASE B	PHASE 3	PHASE C	PHASE 4	PHASE D	TOTAL
1.0 - IRRIGATION CANAL									
1A. PERMANENT CANAL	$1,529,840	$0	$0	$602,550	$235,170	$0	$243,360	$414,180	$3,025,100
1B. INTERIM CANAL	$625,120	$0	$140,400	$131,040	$0	$0	$0	$0	$896,560
1C. CROSSINGS	$1,435,000	$0	$0	$72,500	$197,000	$0	$145,000	$646,000	$2,495,500
2.0 - OTHER									
2A. OTHER	$356,800	$0	$131,600	$44,800	$190,400	$22,400	$89,200	$159,200	$994,400
Subtotal Construction Costs	$3,946,760	$0	$272,000	$850,890	$622,570	$22,400	$477,560	$1,219,380	$7,411,560
15% Engineering/Inspection	$592,014	$0	$40,800	$127,634	$93,386	$3,360	$71,634	$182,907	$1,111,734
20% Contingency	$789,352	$0	$54,400	$170,178	$124,514	$4,480	$95,512	$243,876	$1,482,312
GRAND TOTAL CONSTRUCTION COST	$5,328,126	$0	$367,200	$1,148,702	$840,470	$30,240	$644,706	$1,646,163	$10,005,606

NOTES

SUTTER POINTE SPECIFIC PLAN

NCMWC Agricultural Irrigation

Sutter County California

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. MacKay & Somps makes no warranty, either expressed or implied, as to the accuracy of this estimate.

2. This estimate is based on the Conceptual Plan for Natomas Central Mutual Water Company (NCMWC) Agricultural Irrigation for Sutter Pointe Specific Plan, dated March 21, 2008 by MacKay & Somps. The Conceptual Plan has not been reviewed or approved by NCMWC. Minor adjustments have been made to individual phases, subsequent to March, 2008.

3. The Conceptual Irrigation Plan is predicated on keeping as much agricultural land irrigated as possible as development progresses.

4. The Conceptual Irrigation Plan is not the result of detailed engineering studies and is schematic in nature.

5. The interim and permanent canal facilities have been designed to convey the maximum capacity of the Northern Pumping Plant (240 cfs). The prelim. canal design is trapezoidal with a 10-foot bottom width, 2:1 side slopes, maximum depth of 6 feet, and 1-foot freeboard. There will be a 15-foot wide access road and 6-foot chain link fence on both sides. The approximate corridor width is 70 feet.

6. This estimate does not consider the following:

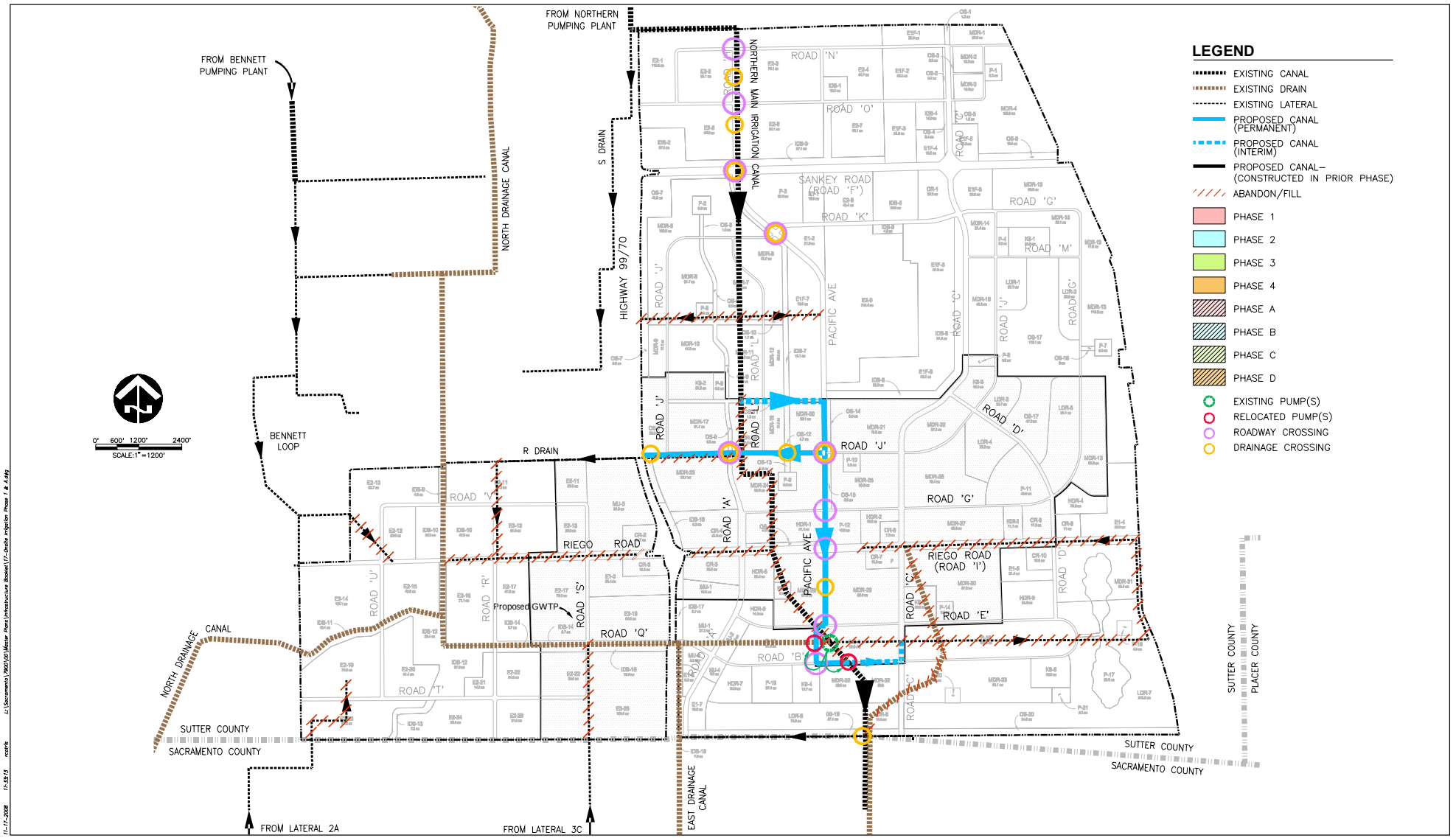
   a. Cost associated with environmental (wetland) mitigations or biological surveys
   b. Phased construction or out-of-regular-sequence construction
   c. Financial Charges
   d. Bonds
   e. Land costs, acquisition of right of way, easements, and/or rights of entry
   f. Assessments from assessment, lighting & landscaping, Mello-Roos districts or the like

7. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation.

8. Costs have been been tabulated and extracted for Phase as well as annual costs according the SPSP Conceptual Phasing Plan
dated March 10, 2008.

9. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

10. Interim improvements may be required depending on development timing of individual units.



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SUTTER POINTE

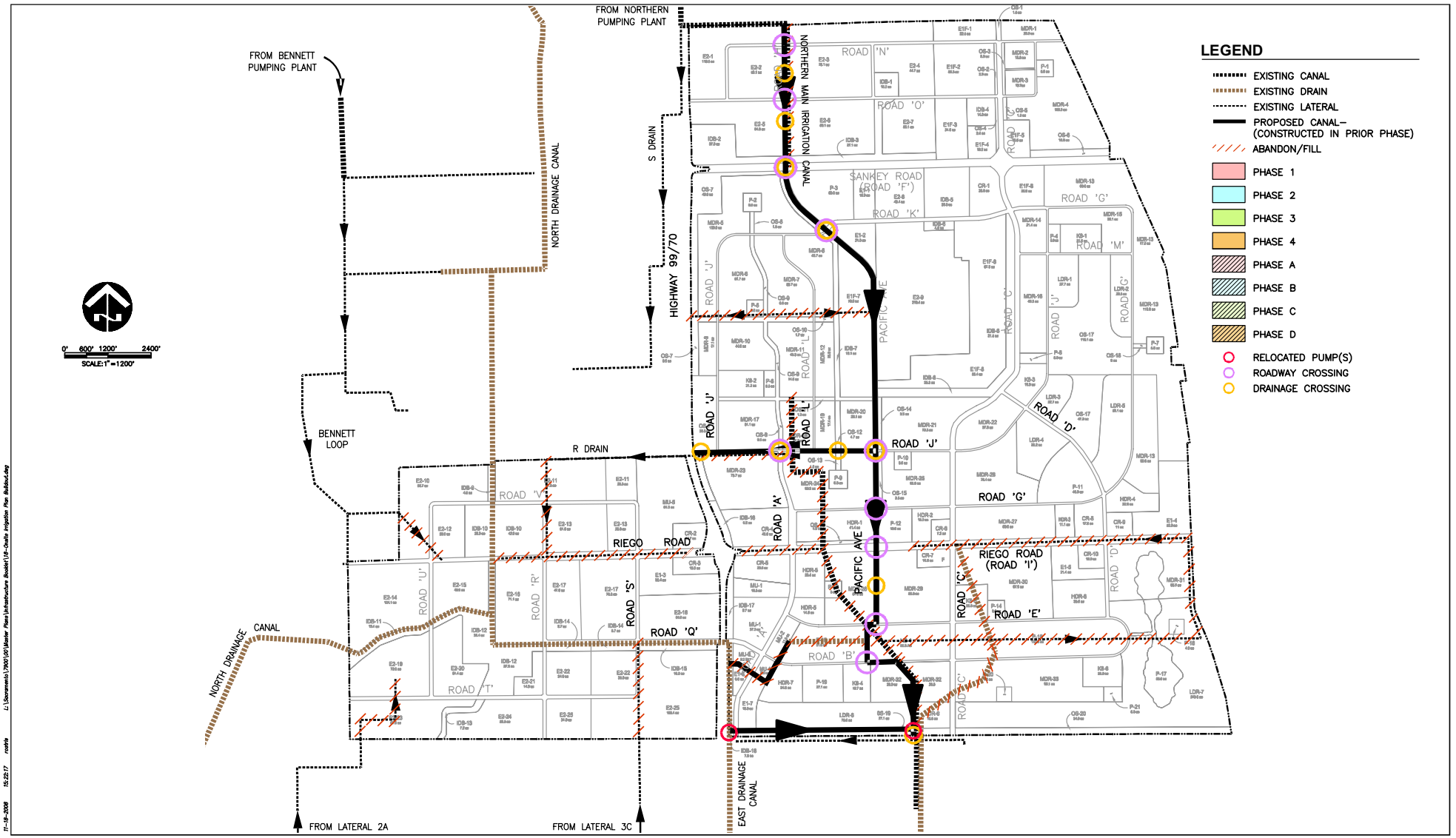
MEASURE "M" GROUP

On-Site Irrigation Plan - Phase 1 and A

MACKAY & SOMPS

November 14, 2008

MAP A-16



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SUTTER POINTE

MEASURE "M" GROUP

On-Site Irrigation Plan - Buildout

MacKAY & SOMPS
CIVIL ENGINEERS PLANNERS SURVEYORS

November 14, 2008

MAP A-17

PRELIMINARY COST ESTIMATE
DRY UTILITIES MASTER PLAN

SUTTER POINTE

November 14, 2008

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

PRELIMINARY COST ESTIMATE

Sutter Pointe Dry Utilities Master Plan

Sutter County

November 14, 2008

CONSTRUCTION COSTS

ITEM No.	DESCRIPTION	UNIT PRICE	UNIT	PHASE 1 QTY	PHASE 1 UNIT	PHASE 1 AMOUNT	PHASE A QTY	PHASE A UNIT	PHASE A AMOUNT	PHASE 2 QTY	PHASE 2 UNIT	PHASE 2 AMOUNT	PHASE B QTY	PHASE B UNIT	PHASE B AMOUNT	PHASE 3 QTY	PHASE 3 UNIT	PHASE 3 AMOUNT	PHASE C QTY	PHASE C UNIT	PHASE C AMOUNT	PHASE 4 QTY	PHASE 4 UNIT	PHASE 4 AMOUNT	PHASE D QTY	PHASE D UNIT	PHASE D AMOUNT	TOTAL QTY	TOTAL UNIT	TOTAL AMOUNT
1. ONSITE																														
A. ONSITE JOINT TRENCHING																														
1.	Residential Joint Trenching	$70.00	LF	51,500	LF	$3,605,000	0	LF	$0	27,000	LF	$1,890,000	0	LF	$0	15,000	LF	$1,050,000	0	LF	$0	0	LF	$0	0	LF	$0	93,500	LF	$6,545,000
2.	PG&E Contract Fees (Residential)	$100.00	LF	51,500	LF	$5,150,000	0	LF	$0	27,000	LF	$2,700,000	0	LF	$0	15,000	LF	$1,500,000	0	LF	$0	0	LF	$0	0	LF	$0	93,500	LF	$9,350,000
3.	Commercial Joint Trenching	$88.00	LF	20,000	LF	$1,760,000	16,000	LF	$1,408,000	9,500	LF	$836,000	24,000	LF	$2,112,000	9,500	LF	$836,000	21,000	LF	$1,848,000	14,500	LF	$1,276,000	32,000	LF	$2,816,000	146,500	LF	$12,892,000
4.	PG&E Contract Fees (Commercial)	$100.00	LF	20,000	LF	$2,000,000	16,000	LF	$1,600,000	9,500	LF	$950,000	24,000	LF	$2,400,000	9,500	LF	$950,000	21,000	LF	$2,100,000	14,500	LF	$1,450,000	32,000	LF	$3,200,000	146,500	LF	$14,650,000
5.	Bore and Jack under HWY 99/70 (48" casing)	$1,200.00	LF	600	LF	$720,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	600	LF	$720,000
	Total Onsite Joint Trenching					**$13,235,000**			**$3,008,000**			**$6,376,000**			**$4,512,000**			**$4,336,000**			**$3,948,000**			**$2,726,000**			**$6,016,000**			**$44,157,000**
B. ONSITE PG&E FACILITIES																														
1.	PG&E Overhead Electric to Substation (PG&E Resp.)	$0.00	TBD	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0
2.	PG&E Electric Substation (PG&E Resp.)	$0.00	TBD	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0	TBD	TBD	$0
3.	PG&E Gas Regulator Station (Underground Facility)	$300,000.00	EA	1	EA	$300,000	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	0	EA	$0	1	EA	$300,000
	Total Onsite PG&E Facilities					**$300,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$300,000**
2. OFFSITE																														
A. OFFSITE GAS																														
1.	2" PG&E Gas (From Locust Dr./W Los Garcia) (Developers obligation only - to closest point of connection)	$30.00	LF	11,000	LF	$330,000	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	0	LF	$0	11,000	LF	$330,000
	Total Offsite Gas					**$330,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$330,000**
B. OFFSITE PHONE																														
1.	SBC Facilities (Offsite - Extension from the North)	$ 250,000.00	LS	1	LS	$250,000	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	1	LS	$250,000
	Total Offsite Phone					**$250,000**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$250,000**
D. OFFSITE CABLE																														
1.	Comcast Cable (Comcast Resp.)	$0.00	LS	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0	0	LS	$0
	Total Offsite Cable					**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**			**$0**

DRY UTILITIES CONSTRUCTION COST SUMMARY	PHASE 1	PHASE A	PHASE 2	PHASE B	PHASE 3	PHASE C	PHASE 4	PHASE D	TOTAL
A. ONSITE JOINT TRENCHING	**$13,235,000**	**$3,008,000**	**$6,376,000**	**$4,512,000**	**$4,336,000**	**$3,948,000**	**$2,726,000**	**$6,016,000**	**$44,157,000**
50% Reimbursable option	**($3,575,000)**	**($800,000)**	**($1,825,000)**	**($1,200,000)**	**($1,225,000)**	**($1,050,000)**	**($725,000)**	**($1,600,000)**	**($12,000,000)**
Total Joint Trenching Costs	**$9,660,000**	**$2,208,000**	**$4,551,000**	**$3,312,000**	**$3,111,000**	**$2,898,000**	**$2,001,000**	**$4,416,000**	**$32,157,000**
B. ONSITE PG&E FACILITIES	**$300,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$300,000**
C. OFFSITE GAS	**$330,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$330,000**
D. OFFSITE PHONE	**$250,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$250,000**
E. OFFSITE CABLE	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Subtotal Construction Costs	**$10,540,000**	**$2,208,000**	**$4,551,000**	**$3,312,000**	**$3,111,000**	**$2,898,000**	**$2,001,000**	**$4,416,000**	**$33,037,000**
15% Engineering/Inspection	$1,581,000	$331,200	$682,650	$496,800	$466,650	$434,700	$300,150	$662,400	**$4,955,550**
20% Contingency	$2,108,000	$441,600	$910,200	$662,400	$622,200	$579,600	$400,200	$883,200	**$6,607,400**
GRAND TOTAL DRY UTILITIES COST	**$14,229,000**	**$2,980,800**	**$6,143,850**	**$4,471,200**	**$4,199,850**	**$3,912,300**	**$2,701,350**	**$5,961,600**	**$44,599,950**

NOTES

Sutter Pointe Master Plan - Dry Utilities

Sutter County, California

1. This estimate is prepared as a guide only and is subject to possible change. It has been prepared to a standard of accuracy which, to the best of our knowledge and judgment, is sufficient to satisfy our understanding of the purpose of this estimate. MacKay & Somps makes no warranty, either expressed or implied, as to the accuracy of this estimate.

2. This estimate does not consider the following:

   a. Cost associated with environmental (wetland) mitigations or biological surveys
   b. Costs associated with ground water or inclement weather conditions
   c. Financial Charges
   d. Bonds
   e. Land costs, acquisition of right of way, easements, and/or rights of entry
   f. Assessments from assessment, lighting & landscaping, Mello-Roos districts or the like

3. Costs presented herein represent an opinion based on historical information. No provision has been made for inflation.

4. Phasing costs for residential and commercial (Phase 1+A to 4+D), have been determined based on the Conceptu Phasing Plan, dated March 6, 2008, prepared by MacKay and Somps.

5. The "cash flow" situation may be different than the fees, credits, and reimbursements itemized in this estimate.

6. Interim improvements may be required depending on development timing of individual units.

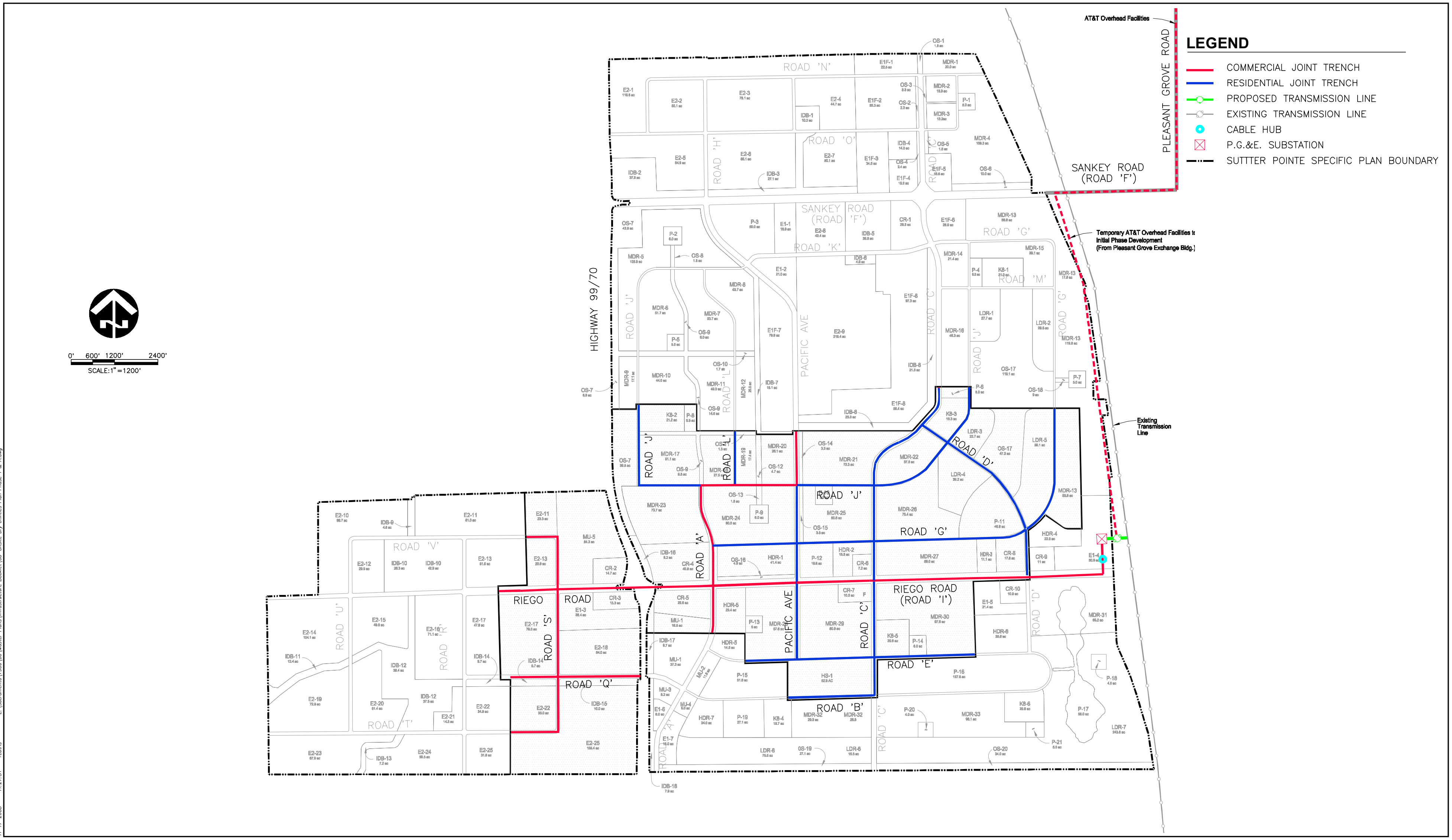
7. For the purposes of this estimate, it has been assumed that the developer will choose the "non-refundable discount option" from PG&E. It has been assumed that the non-refundable discount will be equal to $50/LF of residential and commercial joint trench construction.

8. Gas regulator station is considered part of the onsite gas distribution, and developer responsibility. The cost for the requlator station assumes and undergound factility, which is more aestetically pleasing. If an above ground facility is used, assume $200,000 for facility.

9. Cost of offsite phone extension is based on 3/4 difference between aerial and undergound design. (+/-$250,000 according to AT&T, exact amount to be determined)

10. Developer responsibility for offsite gas is to closest point of connnection, which at current time, is from the intersection of Locust & Los Garcia, 2 miles SPSP southeasterly, in Rio Linda.

12. All costs are plreliminary and subject to change, as well as negotiations with purveyors.



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SUTTER POINTE

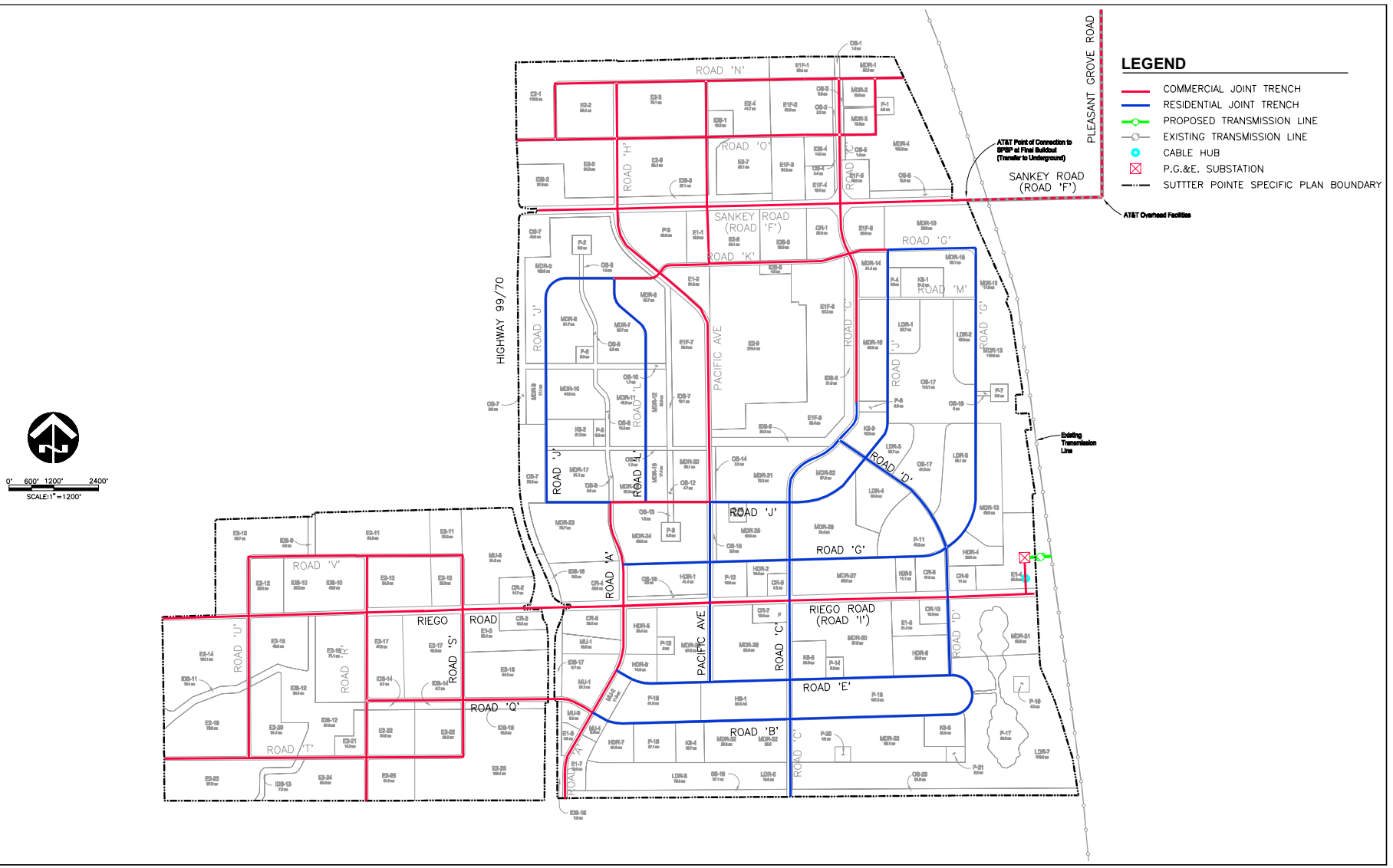
On-Site Dry Utilities Plan - Phase 1 and A

MEASURE "M" GROUP

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

November 14, 2008

MAP A-18



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SUTTER POINTE

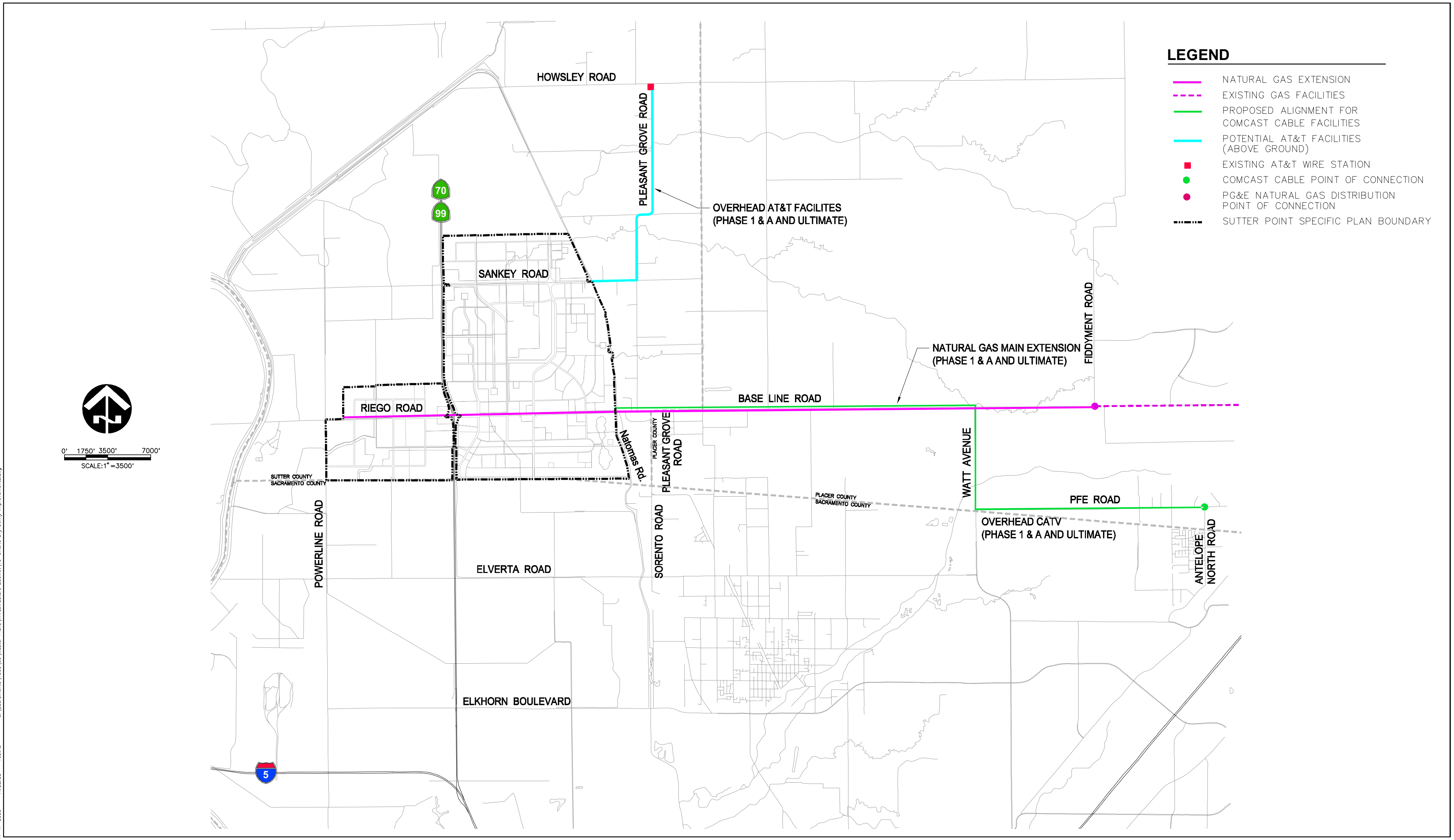
MEASURE "M" GROUP

On-Site Dry Utilities Plan - Buildout

MacKay & Somps

November 14, 2008

MAP A-19



Sheet 10 of 21

SUTTER POINTE

Off-Site Dry Utility Improvements

MEASURE "M" GROUP

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-60

November 14, 2008

MAP A-20

APPENDIX B

PUBLIC FACILITIES COSTS

Several Public Facility items are to be funded through the SPSP. Many of the actual costs for these items are not available yet, as more detailed information about the actual facilities or detailed studies are not available at this time. Therefore, several assumptions based on data from the developer or from similar projects were made to estimate facility costs. These assumptions are shown in **Table B-1**. For each Public Facility, an estimated size is shown (if available) and a cost factor is estimated. Many of the Public Facility costs shown are estimates at this time and are subject to change.

Table B-1
Sutter Pointe Specific Plan
Public Facilities Financing Plan
Summary of Public Facilities and Costs

Public Facility	Size	Unit	Cost Factor	Total Estimated Cost
Library [1]	**12,000**	**Sq. Ft.**	**$350 per sq. ft.**	**$4,200,000**
Transit [2]	**15**	**Acres**		**$8,000,000**
Fire				
Station 1	11,810	Sq. Ft.	Table 15-1	$9,689,000
Station 2	6,120	Sq. Ft.		$5,255,000
Station 3	6,120	Sq. Ft.		$3,635,000
Support Facilities (admin. office, vehicle maintenance, etc.)				$8,496,000
Total Fire				**$27,075,000**
Trails [3]	56,000	LF	**$100 per lineal ft.**	**$5,600,000**
Parks				**$62,765,000**
Open Space [3]	**395**	**Acres**	**$13,068 per acre**	**$5,159,246**
Government Building				
Government Center [5]	55,500	Sq. Ft.	$250 per sq. ft.	$13,875,000
Sheriff Station	24,000	Sq. Ft.	$420 per sq. ft.	$10,080,000
Total Government Building	**79,500**			**$23,955,000**
Corporation Yard [6]				
Building Sq. Ft.	68,000	Sq. Ft.	$200 per sq. ft.	$13,600,000
Site Preparation	204,732	Sq. Ft.	$5 per sq. ft.	$1,023,660
Total Corporation Yard	**272,732**			**$14,623,660**

"public_facilities"

[1] According to Lennar, there will be a total of 24,000 square feet of library space. However, 12,000 square feet is already funded through the high school construction costs. Cost of $350 per square foot is an estimate and may be adjusted as more detailed facility cost information becomes available.
[2] Estimate provided by Lennar. Operations are not covered by the financing plan, and therefore are not included in this table.
[3] Estimate provided by Lennar.
[4] Park costs estimates provided by Lennar. See Table 9-1.
Detailed facility cost estimates will be available when the Park Master Plan is available.
[5] EPS estimate based on commercial building construction costs. Square footage provided by EDAW.
[6] This is a rough estimate provided by EPS.

APPENDIX C

EXISTING FUNDING SOURCES

EXISTING FEE PROGRAMS

The following existing fee programs apply to the SPSP.

SUTTER COUNTY DEVELOPMENT IMPACT FEE

Sutter County has a development impact fee that typically would fund the following items for the SPSP:

- County General Government.
- Courts/Criminal Justice.
- Sheriff.
- Health and Social Services.

If no SP Fee Program were being proposed, the full amount of these fee components would apply to the SPSP. However, EPS has assumed that a 50 percent placeholder overlap exists between the County General Government, Sheriff, and Health and Social Services components and the proposed SP Fee Program.

EPS has adjusted the Sutter County Development Impact Fee to net out overlap with these, based on placeholder assumptions, pending additional information from the County and/or Development Impact Fee Nexus Study. **Table C-1** shows this estimated adjustment. Therefore, the Sutter County Development Impact Fee shown in the Financing Plan has been reduced to account for this overlap. Actual overlap may differ from this estimate, and must be finalized.

Estimated revenue from the adjusted Sutter County Development Impact fee is shown in **Table C-2**.

SUTTER COUNTY PROCESSING FEES

Processing fees apply to all new development within a county and are payable to the County at building permit. They include a fee for building permit, plan review, seismic/strong motion, and air pollution.

SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT FEE

Sacramento Regional County Sanitation District (SRCSD) provides sewer collection, conveyance, and treatment of wastewater to the Sacramento County area. The current SRCSD connection fee is $7,450 per Equivalent Standard Dwelling (ESD) in new communities. Each multifamily dwelling unit rate is 0.75 ESD. The County of Sacramento maintains a list of ESD Equivalent Factors for commercial users. For example, an office building with less than 200,000 square feet is given the rate of 0.20 ESD/1,000 square fee of gross floor area. Fee revenue generated from the SRCSD fee contributes to sewer system infrastructure such as the collection system and treatment plant.

NATOMAS BASIN HABITAT CONSERVANCY PROGRAM FEE

The current rate for the Natomas Basin Habitat Conservancy Program (NBHCP) is $38,133 per acre. This rate includes a land acquisition component. They fee may be reduced to $20,633 per acre, if for every acre of development the developer dedicates a half-acre of land. The mitigation fees are used acquire, restore, and manage mitigation lands to provide habitat for protected species and to maintain agriculture in the Natomas Basin.

SACRAMENTO AREA FLOOD CONTROL AGENCY FEE

The recently implemented Sacramento Area Flood Control Agency (SAFCA) fee is charged on a per-square-foot basis for new structure habitable square footage (i.e., conditioned space.) The fee does not apply to decks, porches, garages, awnings, or balconies. The revenue generated will provide additional flood protection to offset increased risk of damage during a flood as a result of a new development.

SCHOOL DISTRICT MITIGATION FEES

Currently Pleasant Grove Elementary School District and East Nicholas Joint Union High School District have adopted Level 1 school fees pursuant to Government Code section 65995. It is expected that approval of tentative tract maps will allow the districts to adopt Level 2 school fees for residential construction pursuant to Government Code section 65995.5.

LAND SECURED DEBT FINANCING SOURCES

ASSESSMENT DISTRICT

California statutes give local governments the authority to levy several special assessments for specific public improvements such as streets, storm drains, sewers, streetlights, curbs, gutters, and sidewalks. Creation of a special assessment district defines both the area to benefit from the improvements and the properties that will pay for the improvements. Thereafter, each property in the district will be assessed a share of the cost of improvements that is proportional to the benefit it receives from those improvements.

There is a variety of assessment district acts available to finance Public Facilities. The most frequently used assessment district is the Improvement Bond Act of 1915. This act also provides a vehicle for issuing assessment bonds for assessments authorized under the 1911 and 1913 Benefit Assessment Acts.

Facilities that could be funded by Assessment Districts include major roads, sewer, water, and drainage improvements when there is direct benefit to specific parcels. The establishment of Assessment Districts will be subject to the provisions of Proposition 218, which was adopted in November 1996. These provisions, among other things, require a vote of property owners being assessed with the vote weighted by the amount of property assessment.

MELLO-ROOS CFD

Adopted in 1982, the Mello-Roos Community Facilities Act provides a method for local governments to fund public facilities and certain services, particularly for newly developing areas. Items that may be financed through a CFD include these:

- Real or tangible property with an estimated useful life of five years or more which is or will be constructed, owned, or operated by a public entity;
- Facilities which confer special benefits such as streets, water, sewer and drainage facilities as well as facilities providing general benefit such as parks, schools, libraries, child care facilities, jails and administration facilities; and
- Public services such as Police protection services; fire protection, suppression services, and ambulance and paramedic services; recreation program services, library services, and the operation and maintenance of parks, parkways, open space, museums and cultural facilities; flood and storm protection services, including the operation and maintenance of storm drainage systems and sandstorm protection systems; and removal or remedial action for the cleanup of any hazardous substance released or threatened to be released into the environment.

A local government is empowered to levy CFD special taxes and issue bonds authorized by a two-thirds vote of qualified electors of the district. The formation process will require a public hearing, as well as a recorded boundary map, hearing report, a Rate and Method of Apportionment, and an election.

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Table C-1
Sutter Pointe Specific Plan
Public Facilities Financing Plan
Sutter County Development Impact Fee - Allocation to Sutter Pointe

Sutter County Development Impact Fee Component	Assumed Allocation Factor for Sutter Pointe	Percentage Allocation						
		Single Family [1]	Duplex/Fourplex	Multifamily	Mobile Homes	Office	Commercial	Industrial
County General Government	50%	5.54%	5.41%	5.78%	5.46%	11.57%	4.47%	12.09%
Courts/Criminal Justice	100%	9.78%	9.55%	10.18%	9.63%	20.41%	7.87%	21.33%
Library	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sheriff	50%	1.44%	1.40%	1.49%	1.41%	2.99%	1.16%	3.13%
Fire	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Health and Social Services	50%	3.35%	3.27%	3.49%	3.30%	0.00%	0.00%	0.00%
Urban Area: Parks & Rec.	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Urban Area: Library	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Urban Area: Roads	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total		**20.10%**	**19.63%**	**20.93%**	**19.80%**	**34.97%**	**13.49%**	**36.54%**
			Per Unit Cost				*Cost per Square Foot*	
Gross Sutter County Development Impact Fee		**$2,477**	**$2,301**	**$1,888**	**$1,584.00**	**$0.35**	**$0.94**	**$0.37**
Adjusted Fee For Sutter Pointe		**$498**	**$452**	**$395**	**$314**	**$0.12**	**$0.13**	**$0.14**

"impact_alloc"

[1] Represents the percent of total fee component that will apply to Sutter Pointe for development in Impact Fee Area 1. These place holder allocations were made by EPS and are subject to modification pending additional information from the County and/or Development Impact Fee Nexus Study.

Table C-2
Sutter Pointe Specific Plan
Public Facilities Financing Plan
Estimated Sutter County Development Impact Fee Revenue

Land Use	Units/ Sq. Ft.	Sutter County Development Impact Fee: Adjusted Fee [1]	Sutter County Development Impact Fee: Estimated Revenue
Residential	*units*		
Low-Density	1,461	$498	$727,398
Medium-Density	12,014	$498	$5,981,494
High-Density	4,025	$395	$1,590,513
Subtotal Residential	**17,500**		**$8,299,405**
Nonresidential	*sq. ft.*		
Commercial Retail	4,092,000	$0.13	$518,890
Office	4,214,000	$0.12	$515,699
Industrial	41,407,000	$0.14	$5,598,144
Subtotal Nonresidential	**49,713,000**		**$6,632,733**
Total Sutter County Development Impact Fee Revenue			**$14,932,138**

"dev_rev"

[1] EPS has assumed that portions of the Sutter County Development Impact Fee will overlap with the SP Fee Program. Therefore, EPS has adjusted this fee to net out overlap. The adjustments are estimates at this time, and are subject to change as further information becomes available. See Table C-1 for adjustment detail.

APPENDIX D

COST ALLOCATION METHODOLOGY

The basis for calculating all development impact fees is the Cost Allocation Method (CAM). The CAM uses dwelling unit equivalent (DUE) factors to spread the cost of backbone infrastructure and other Public Facilities over the developed land uses. Assuming that the extent, timing, and cost of all infrastructure not covered by existing fee programs and other funding mechanisms required to serve the project has been obtained, the steps in the CAM process are as follows:

- *Step 1:* Determine appropriate DUE factors for each land use or zoning category.
- *Step 2:* Determine cost allocation. Use DUE factors to allocate infrastructure costs to individual land use or zoning categories for each infrastructure facility. Apply the appropriate DUE factors to the acreage of each proposed zoning category to determine the percentage cost allocation. For purposes of estimating DUEs, certain assumptions were made on the percent allocation of allowable zoning categories in each land use designation of the community plan.
- *Step 3:* Allocate the cost of the various improvements to each benefiting land use by multiplying the total cost for each improvement by the percentage allocation of costs for each land use.
- *Step 4:* Divide the total cost allocated to each land use–zoning category by total acreage, units, or square feet of land uses.

The fees in a financing plan are preliminary and subject to change when the actual fee program is established via completion of a nexus study. The per-unit or per-acre fees in the financing plan are usually updated in the nexus study because of additional contingencies included in the nexus study to avoid under-funding the fee program, and because of updated or more detailed facility cost estimates.

Development impact fees are set under the conditions of Government Code 66000 *et seq.*, which is also known as AB 1600. These code sections set forth the procedural requirements for establishing and collecting development impact fees. The AB 1600 procedures require that "a reasonable relationship or nexus must exist between a governmental exaction and the purpose of the condition." Specifically, each local agency imposing a fee must perform the following tasks:

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the need for the Public Facility and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of Public Facility or portion of the Public Facility attributable to the development on which the fee is imposed.

The agency will adopt the appropriate fee ordinance and resolution to implement the fee. The timing and payment of the fee will be specified in the implementing ordinance and resolution.

APPENDIX E

TOTAL INFRASTRUCTURE BURDEN

The tables in this appendix are intended to detail the infrastructure burden in the SPSP. **Chart E-1** and **Tables E-1** through **E-5** compare the total infrastructure burden for a typical medium-density single-family unit in the SPSP with that burden in other nearby plan areas. The total infrastructure burden includes County processing fees, development impact fees, plan-area specific fees, school fees, and infrastructure bond debt.

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Chart E-1
Infrastructure Burden Comparison for
Medium-Density Single-Family Development
(2,200-Sq.-Ft. Unit, 5 Units per Acre)

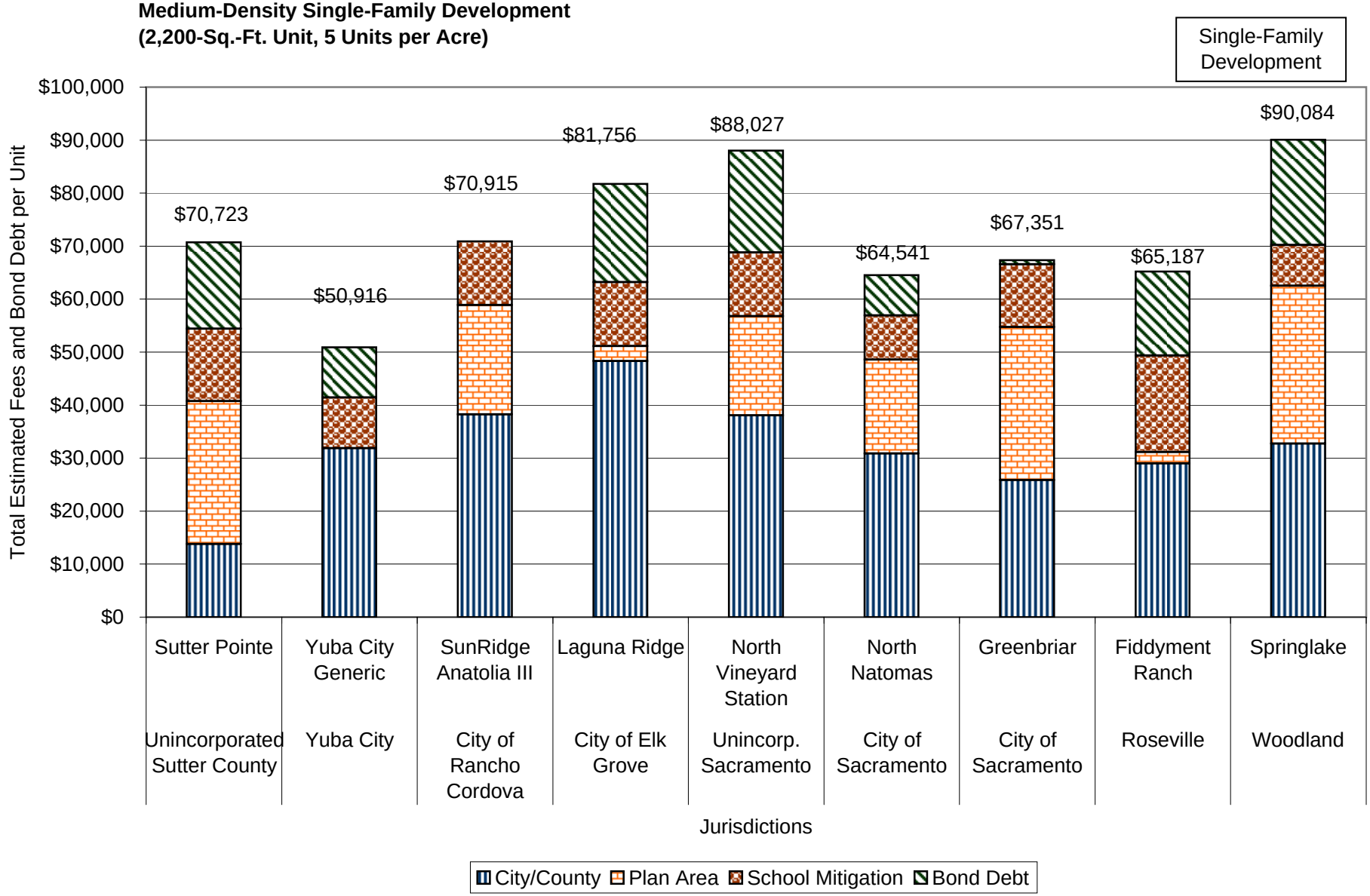

Table E-1
SINGLE-FAMILY HOMES
Summary of Infrastructure Costs per Unit
2,000-Sq.-Ft. Home, 450-Sq.-Ft. Garage, 3 Bedrooms
2 Bathrooms, 6 Units per Net Acre

	Sutter County		Sacramento County					Placer County	Yolo County
	Unincorporated	Yuba City	Rancho Cordova		Unincorporated	Sacramento		Roseville	Woodland
Summary of Infrastructure Costs per Unit	Sutter Pointe	Yuba City Generic	SunRidge Anatolia III	Laguna Ridge Central Shed	North Vineyard Station	North Natomas Quad 2, Basin 1	Greenbriar	Fiddyment Ranch	Springlake
Current as of	*Jun-08*	*Apr-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Jan-08*	*Feb-08*
Total City/County-Wide Development Impact Fees (from Table E-2)	$13,802	$31,897	$38,264	$48,334	$38,053	$30,877	$25,858	$28,990	$32,733
Plan Area Fees (from Table E-3)	$26,947	$0	$20,605	$2,807	$18,712	$17,700	$28,881	$2,162	$29,773
Total School Mitigation (from Table E-4)	$13,686	$9,552	$12,045	$12,045	$12,045	$8,360	$11,835	$18,224	$7,700
Estimated Bond Debt Of Special Taxes and Assessments (from Table E-5)	$16,288	$9,466	$0	$18,570	$19,217	$7,604	$777	$15,810	$19,878
Total Infrastructure Cost per Unit	**$70,723**	**$50,916**	**$70,915**	**$81,756**	**$88,027**	**$64,541**	**$67,351**	**$65,187**	**$90,084**
Total Fees (City, County, Schools, and Plan Area)	**$54,435**	**$31,897**	**$68,750**	**$61,021**	**$66,645**	**$56,937**	**$66,574**	**$49,377**	**$70,206**
Total Annual Taxes	**$1,313**	**$1,841**	**$200**	**$1,730**	**$1,657**	**$914**	**$63**	**$1,061**	**$1,804**

"summary"

Sources: Various Cities and Counties; and EPS.

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Table E-2
SINGLE-FAMILY HOMES
City/County Development Impact Fees per Unit
2,000-Sq.-Ft. Home, 450-Sq.-Ft. Garage, 3 Bedrooms
2 Bathrooms, 6 Units per Net Acre

	Sutter County		Sacramento County					Placer County	Yolo County
City/County Development Impact Fees per Unit: These are fees charged by the City or County and do not include fees for a special plan area.	Unincorporated Sutter Pointe	Yuba City Yuba City Generic	Rancho Cordova [1] SunRidge Anatolia III	Elk Grove Laguna Ridge Central Shed	Unincorporated [2] North Vineyard Station	Sacramento North Natomas Quad 2, Basin 1	Sacramento Greenbriar	Roseville Fiddyment Ranch	Woodland Springlake
Current as of	*Jun-08*	*Apr-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Jan-08*	*Feb-08*
CITY/COUNTY FEES PER UNIT									
Processing Fees per Unit [3]									
Building Permit	$1,498	$1,967	$1,498	$989	$2,192	$1,728	$1,728	$1,371	$1,497
Plan Check	$974	$983	$499	$658	$1,462	$726	$726	$822	$973
Energy Fee	-	-	-	-	-	-	-	-	-
Technology Surcharge	-	-	-	$79	-	$98	$98	-	-
Seismic / Strong Motion	$19	$20	$21	-	$24	$20	$20	$20	$19
Fire Review Fee	-	$206	$140	-	$140	-	-	-	-
Other Building Permit or Processing Fees	$15	$15	$451	$257	$696	-	-	-	-
Total Processing Fees per Unit	**$2,505**	**$3,191**	**$2,609**	**$1,982**	**$4,514**	**$2,571**	**$2,571**	**$2,212**	**$2,489**
Development Impact Fees per Unit									
Sewer [4]	$7,450	$5,100	$9,950	$9,950	$9,950	$9,950	$7,450	$6,120	$5,105
Water	-	$10,613	$12,755	$12,755	$12,755	$5,076	$5,076	$4,675	$3,166
Zone 40 Special Services Area A Fee	-	-	-	$724	-	-	-		
Traffic	-	-	$6,025	$10,258	$3,685	$1,566	$1,566	$1,983	$6,281
Transit [5]	-	-	$175	-	-	-	-	-	-
Regional Traffic Fees	-	-	-	-	-	-	-	$886	-
Drainage	-	$368	$2,466	$2,466	$2,466	-	-	$393	-
Parks - Neighborhood	-	-	-	-	-	-	-	$3,121	-
Parks - City-wide	-	-	-	-	-	$4,843	$4,843	$2,010	$6,395
Fire/Police	-	-	$1,120	$1,691	$1,120	-	-	$983	$2,814
In-Lieu Flood Protection Fees	-	-	-	-	-	-	-	-	-
Habitat / Greenbelt Preservation [6]	$3,349	-	-	-	$3,563	$6,408	$3,439	-	$1,443
Affordable Housing	-	-	-	$4,335	-	-	-	-	-
Capital Improvements/Public Facilities	-	$12,401	$3,165	$4,002	-	-	-	$2,426	$2,144
Other General Fees/One-Time Taxes [7]	-	$224	-	$171	-	$463	$913	$2,410	$212
Countywide Fees	$498	-	-	-	-	-	-	$1,771	$2,684
Total Development Impact Fees per Unit	**$11,297**	**$28,707**	**$35,656**	**$46,352**	**$33,539**	**$28,306**	**$23,287**	**$26,778**	**$30,244**
TOTAL CITY/COUNTY FEES PER UNIT	**$13,802**	**$31,897**	**$38,264**	**$48,334**	**$38,053**	**$30,877**	**$25,858**	**$28,990**	**$32,733**

"city county"

Sources: Various Cities and Counties; and EPS.

[1] This analysis assumes that the Rancho Cordova plan review fee is for production homes and was reduced by 50%.
[2] All development in Unincorporated Sacramento County will be subject to the County's affordable housing ordinance. Depending on the size and other characteristics of the development project, options to meet the requirements of the ordinance include constructing affordable units, providing land for affordable developments, and/or paying a fee. This analysis does not include the estimated affordable housing cost.
[3] Processing fees exclude mechanical, electrical, plumbing and other similar review fees.
[4] This analysis assumes that Sacramento Regional County Sanitation District will provide sanitary sewer treatment and disposal service to Sutter Pointe.
[5] Sacramento County Traffic and Transit Fees that impact Elk Grove, City of Sacramento, and Unincorporated Sacramento have been combined as the proposed fees have not been split between roadway and transit. Proposed fees to go to the Board of Supervisors the first half of 2008.
[6] The Greenbriar habitat mitigation fee is based on total estimated habitat mitigation costs excluding land acquisition as land is dedicated for the Greenbriar Project.
[7] The Greenbriar Other General Fees includes a preliminary estimate for air quality mitigation cost of $450 based on Greenbriar Public Facilities Financing Plan.

Table E-3
SINGLE-FAMILY HOMES
Plan Area Fees per Unit
2,000-Sq.-Ft. Home, 450-Sq.-Ft. Garage, 3 Bedrooms
2 Bathrooms, 6 Units per Net Acre

	Sutter County		Sacramento County					Placer County	Yolo County
Plan Area Fees: These fees are charged only	Unincorporated	Yuba City	Rancho Cordova	Elk Grove	Unincorporated	Sacramento		Roseville	Woodland
within a certain area of a County or City to fund	Sutter	Yuba City	SunRidge	Laguna Ridge	North Vineyard	North Natomas		Fiddyment	
facilities to serve a specific development project.	Pointe	Generic	Anatolia III [1]	Central Shed [2]	Station	Quad 2, Basin 1	Greenbriar [3]	Ranch	Springlake
Current as of	*Jun-08*	*Apr-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Jan-08*	*Feb-08*
PLAN AREA FEES PER UNIT									
Infrastructure Fee	-	-	-	-	-	$6,777	$4,203	-	-
Transit	$196	-	$71	-	$626	$420	-	$53	$243
Roadway	$4,743	-	$12,890	-	$13,142	-	$4,866	$175	$12,818
Park Improvement	$4,350	-	$4,302	$2,807	$4,295		-	-	$11,528
Fire/Police Protection	$911	-	-	-	-	-	-	-	$771
Library	$184	-	$581	-	$672		-	-	-
Drainage	$4,786	-	-	-	$6,494	-	$6,820	-	$12,570
Sewer	$5,329	-	$865	-	-	-	$2,184	-	$2,916
Water	$12,566	-	$1,254	-	$200	-	$3,355	$115	$1,810
Landscape Corridors	-	-	-	-	$2,783	-	$3,873	-	
Fee Program Formation/Administration	$1,009	-	$568	-	$1,076	-	-	-	$1,720
Public Land and Regional Park Acquisition Fees	-	-	-	-	-	$6,923	-	-	-
SAFCA Development Impact Fee [4]	$3,580	-	-	-	-	$3,580	$3,580	-	-
Other General Fees	$2,292	-	$74	-	-	-	-	$1,820	$2,656
Less Bond Proceeds	($13,000)	-	-	-	($10,575)	-	-	-	($17,259)
TOTAL PLAN AREA FEES PER UNIT	**$26,947**	**$0**	**$20,605**	**$2,807**	**$18,712**	**$17,700**	**$28,881**	**$2,162**	**29,773**
									"plan area"

Sources: Various Cities and Counties; and EPS.

[1] Park Improvement Fees for Rancho Cordova SunRidge Anatolia III include $3,445 park fee and $786.77 park renovation fee per the Development Agreement dated December 05, 2003. Fees reflect the current 2007 rate per the City of Rancho Cordova.
[2] Laguna Ridge has a private Master Cost Sharing Agreement to pay for certain infrastructure costs. The total does not include these privately funded backbone infrastructure and other public facility costs which may total an estimated $48,000 per unit.
[3] The funding of the Greenbriar plan area fees has not yet been determined.
[4] This analysis assumes the proposed SAFCA Development Impact Fee to be implemented in 2008. The proposed rate is $1.79 per sq. ft.

Table E-4
SINGLE-FAMILY HOMES
Estimated School Mitigation per Unit
2,000-Sq.-Ft. Home, 450-Sq.-Ft. Garage, 3 Bedrooms
2 Bathrooms, 6 Units per Net Acre

	Sutter County		Sacramento County					Placer County	Yolo County
	Unincorporated	Yuba City	Rancho Cordova		Unincorporated	Sacramento		Roseville	Woodland
Estimated School Mitigation Per Unit	Sutter Pointe	Yuba City Generic	SunRidge Anatolia III	Laguna Ridge Central Shed	North Vineyard Station	North Natomas Quad 2, Basin 1	Greenbriar	Fiddyment Ranch	Springlake
Current as of	*Jun-08*	*Apr-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Jan-08*	*Feb-08*
School District	*Pleasant Grove ESD East Nicholas JUHSD*	*Yuba City USD*	*Elk Grove USD*	*Elk Grove USD*	*Elk Grove USD*	*Natomas USD*		*Roseville City Elem & Roseville JUHSD*	*Woodland JUSD*
A. Annual School Mello-Roos CFD Taxes	-	$913	$200	$200	$200	-	-	-	-
B. Present Value of School CFD Tax	**$0**	**$9,552**	**$2,165**	**$2,165**	**$2,165**	**$0**	**$0**	**$0**	**$0**
C. School Fee per Sq. Ft.:									
Level 1 Fees	-	n/a	-	-	-	-	-	-	-
Level 2 (or 3) SB50 Fee	-	-	$4.94	$4.94	$4.94	$4.18	-	-	$3.85
Mitigation Agreement	$13,686	-	-	-	-	-	-	$2.95	-
D. Total School Fee:									
Stirling Fee	-	-	-	-	-	-	-	-	-
Level 2 (or 3) SB50 Fee	-	-	$9,880	$9,880	$9,880	$8,360	-	$5,900	$7,700
Mitigation Agreement	$13,686	-	-	-	-	-	$11,835	$12,324	-
E. Total School Mitigation (B+D)	**$13,686**	**$9,552**	**$12,045**	**$12,045**	**$12,045**	**$8,360**	**$11,835**	**$18,224**	**$7,700**

"school"

Sources: Various Cities and Counties; and EPS.

Table E-5
SINGLE-FAMILY HOMES
Special Taxes and Assessments per Unit
2,000-Sq.-Ft. Home, 450-Sq.-Ft. Garage, 3 Bedrooms
2 Bathrooms, 6 Units per Net Acre

	Sutter County		Sacramento County					Placer County	Yolo County
	Unincorporated	Yuba City	Rancho Cordova		Unincorporated	Sacramento		Roseville	Woodland
Special Taxes and Assessments per Unit for Infrastructure [1]	Sutter Pointe	Yuba City Generic	SunRidge Anatolia III	Laguna Ridge Central Shed	North Vineyard Station	North Natomas Quad 2, Basin 1	Greenbriar	Fiddyment Ranch	Springlake
Current as of	*Jun-08*	*Apr-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Mar-08*	*Jan-08*	*Feb-08*
Annual Special Taxes and Assessments per Unit									$1,804
Infrastructure CFD	$1,250	-	-	$1,530	$1,457	$811	-	$1,061	-
Infrastructure Assessment District	-	$928	-	-	-	-	-	-	-
SAFCA CCAD	$63	-	-	-	-	$104	$63	-	-
Total Annual Taxes and Assessments	**$1,313**	**$928**	**$0**	**$1,530**	**$1,457**	**$914**	**$63**	**$1,061**	**$1,804**
Estimated Bond Debt of Special Taxes and Assessments									
Infrastructure CFD	$15,511	-	-	$18,570	$19,217	$6,317	-	$15,810	$19,878
Infrastructure Assessment District	-	$9,466	-	-	-	-	-	-	-
SAFCA CCAD	$777	-	-	-	-	$1,287	$777	-	-
Total Estimated Bond Debt	**$16,288**	**$9,466**	**$0**	**$18,570**	**$19,217**	**$7,604**	**$777**	**$15,810**	**$19,878**

"taxes"

Sources: Various Cities and Counties; and EPS.

[1] Taxes and Assessments for schools can be found in Table E-4.