

# **ATTACHMENT C**

## **DOT's Discussion of Recommendations for Cost Estimate Reductions**

**And**

## **The CIP Cost Estimate Review Committee's (CCERC) Discussion of Recommendations for Cost Estimate Reductions**

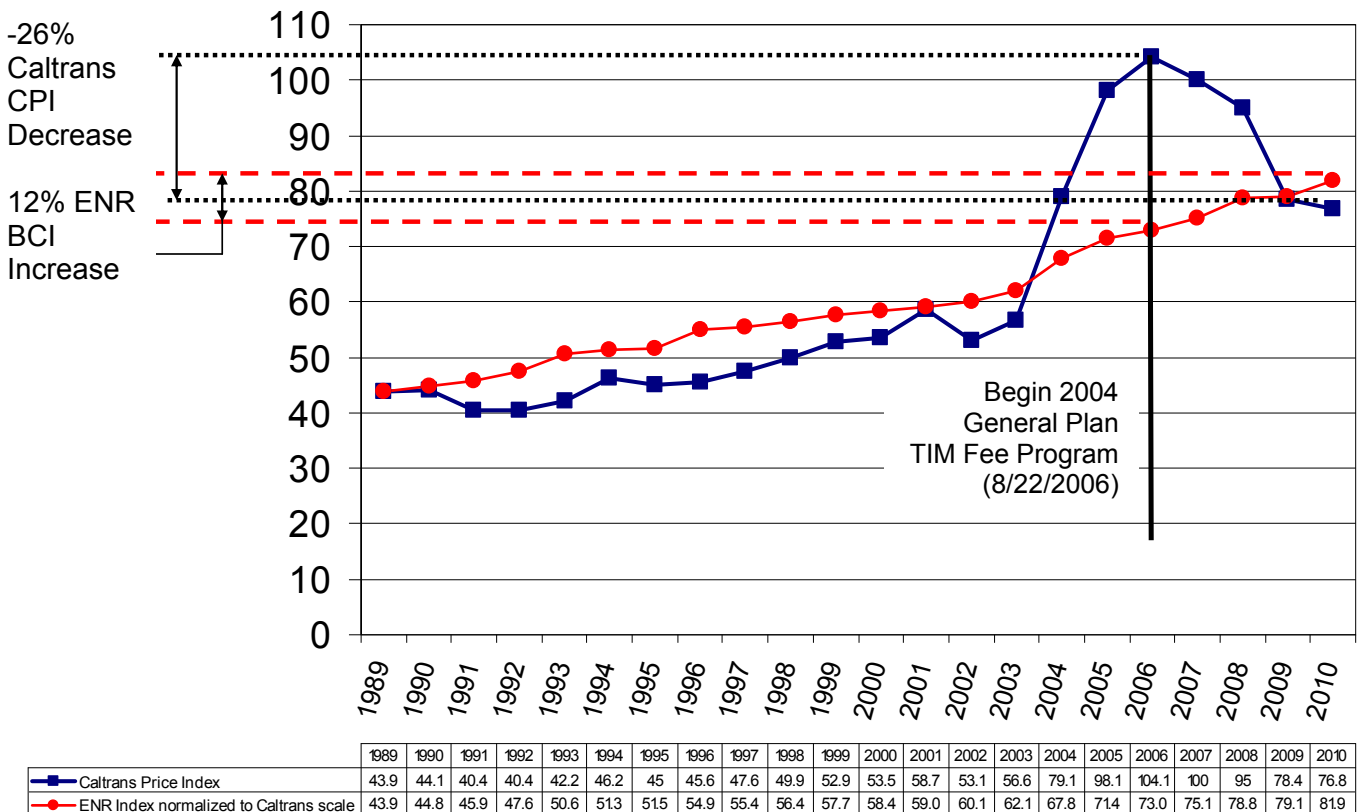
# DOT's Discussion of Cost Estimate Reductions for Construction (i.e., "Hard") Costs

## Summary

The Department of Transportation (DOT) has determined that construction costs have decreased, on average, approximately 16%-24% over the last several years. DOT's conclusion stems from comparing DOT's actual construction costs versus its engineer's estimates, and also looking at the trend in the Caltrans Price Index (CPI) and the Engineering News Record (ENR) Building Cost Index (BCI) data over the same time period.

## Analysis

The Caltrans CPI spiked in 2006 and has declined by 26% through 2010. In contrast, the ENR BCI increased in a more constant and incremental fashion from 2006 through 2010 totaling an increase of 12% over that period, or roughly 3% per year (see Chart 1 below). Note that both indices have ended up in roughly the same place since 1989, although they took quite different paths to get there.



**Chart 1 – Caltrans CPI and ENR BCI Comparison**

Given the dramatic decline in the CPI back to 2004 levels, DOT believes that a review of its assumptions of unit prices for key construction cost components (e.g., asphalt-concrete, roadway excavation) is appropriate.

DOT used the following methodology to assess the accuracy of its current cost estimates and to determine how much in aggregate, they should be lowered or raised:

- Select several bid summaries from recently awarded CIP projects within the County of El Dorado, representing various types of projects recently constructed (i.e. HOV, Interchange, AC Overlay etc...);
- Evaluate the Bids for consistency (i.e. bid item comparison, weighted items, etc...);
- Perform a statistical analysis (i.e., remove the low and high bid and calculate the average bid total of the remaining bids).

The results of this analysis are summarized in Table 1 below:

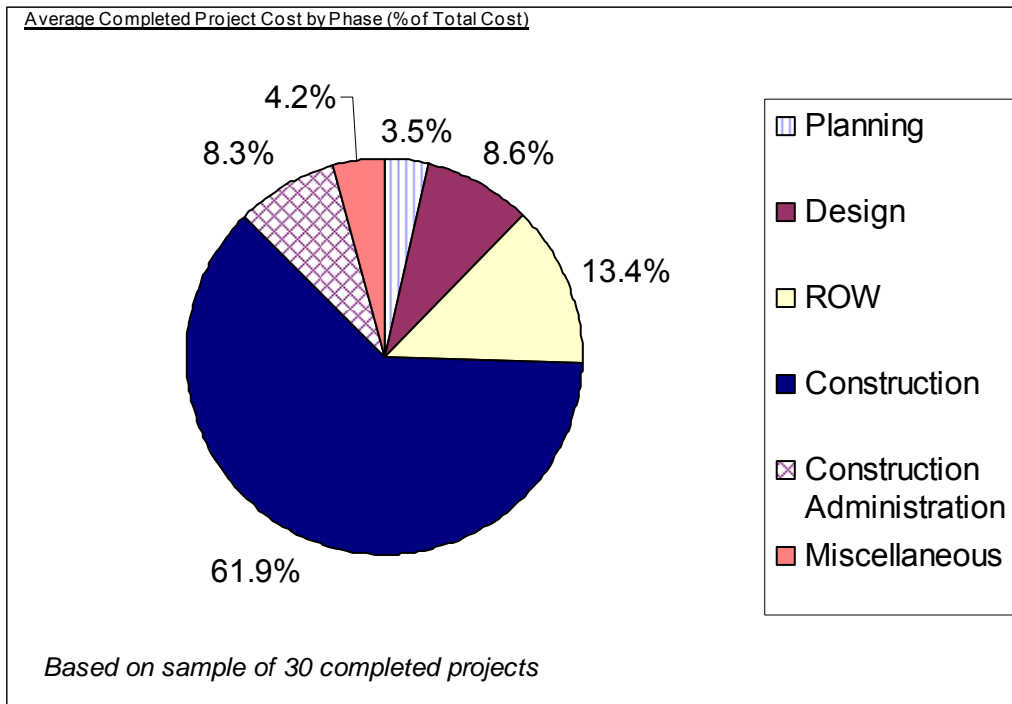
**Table 1 – Engineer’s Estimate vs. Average Actual Bid Cost Comparison**

Project Name	Project No.	Project Type	Bid Date	Engineer’s Estimate	Average Bid	% Diff.
US 50 / HOV Lane Phase 1A	53110	High Occupancy Vehicle Lane	10/30/2008	\$ 33,470,346	\$ 27,836,990	(16.83)
Missouri Flat Inter-change Phase 1B	71336	Interchange	10/21/2009	\$ 32,081,371	\$ 27,263,360	(15.02)
Silva Valley Pkwy Widening	72370	Roadway	9/10/2010	\$ 1,158,300	\$ 642,852	(44.5)
Latrobe Rd Overlay	72182	AC Overlay	9/2/2010	\$ 899,586	\$ 794,182	(11.72)
Newtown Rd Overlay	72184	AC Overlay	8/5/2011	\$ 840,618	\$ 899,604	7.02
Tennessee Creek at Green Valley Rd	77109	Roadway / Bridge	2/18/2011	\$ 3,666,192	\$ 2,902,096	(20.84)

The range of “% Diff.”, i.e., percentage difference, between the Engineer’s Estimate and Average Actual Bids, ranged from +7.02% to -44.5%, with an average of -16.98%. If the two AC Overlay projects are removed from the analysis, (because these types of projects are not in the TIM Fee Program), the average difference of the remaining projects is -24.3%.

Because construction costs are just one component of a project’s total cost, to arrive at an average overall percentage reduction that could be applied to the entire TIM Fee Program, DOT took the -24.3% (the average percentage difference calculated above) of 62% (the average construction cost as a % of total project costs) to arrive at an overall reduction of 15%. Note: The 62% figure comes from an analysis of 30 DOT CIP projects completed between 2002 and 2010, costing between \$20K and \$36M each.

The results of that analysis showed that construction costs averaged 62% of the total project costs. Reference chart below and attached summary table:



### Conclusion

Based on the above analysis, DOT proposes to reduce the total costs of most of the unconstructed projects in the TIM Fee Program by 15%.

# **CCERC's Discussion of Cost Estimate Reductions for Construction (i.e., "Hard") Costs**

## **Capital Improvement Program (CIP)**

### **Cost Estimate Review Cost Committee Hard Costs Summary Only.**

#### **HARD COSTS EXECUTIVE SUMMARY:**

The committee analyzed three different methods in reviewing the hard costs. These methods are similar to current County cost estimating procedures. Based upon the analysis the Cost Committee recommended that all of the hard costs be reduced by 25%.

This analysis only looked at the hard costs of construction, the soft and right of way costs analysis will be completed later. The County staff has determined that the net result of the adjustment for the 25% reduction of hard costs to the program would equate to a conservative net costs reduction of 10%. Though the actual number is around 15%, the County staff indicated they would like use the conservative 10% at this time. (See attached Agenda dated 7/14/11)

#### **BACKGROUND AND ANALYSIS:**

On March 24, 2011 a kick off meeting was set up by the El Dorado County Department of Transportation (DOT) to investigate and review the cost estimates in the Capital Improvement Projects. DOT proposed to work with the CIP Cost Estimate Review Committee (Cost Committee) in reviewing the CIP cost estimates for accuracy.

The purpose for this process was to ensure that the CIP project cost estimates are of high quality and more importantly reflect current and accurate costs. In addition, this process would promote understanding and appreciation for the complexities and requirements for cost estimating for public improvements and recommend new tools and techniques to improve DOT's estimating capabilities.

DOT staff and their roles will include responsibilities and deliverables associated with a third party review of the detailed cost estimates for the projects proposed for the 2011 CIP projects as well as completed CIP projects. More specifically the Cost Committee concentrated on the TIM fee projects that are part of the 2011 overall CIP program.

Bob Slater and Matt Smeltzer and their associated Project Managers would be called upon to answer all projects within the 10 year CIP. While Craig McKibbin is the overall coordinator of for this effort and his planning team developed all the "Future" projects beyond the 10 year CIP. Steve Kooyman and Claudia Wade have now taken on Mr. McKibbin's role since his retirement.

DOT provided information and necessary backup to the Cost Committee. Access to this information was available through appropriate links set up by DOT staff.

At the kick-off meeting the committee and DOT staff agreed that it made no sense to look at all of the CIP projects and that we should initially look at a representative sample of projects. DOT provided a list of those projects to the group. (See attachment).

At our April 14, 2011 meeting the Cost Committee had reviewed the list of projects that DOT staff had provided at the 3/24 meeting and the Cost Committee agreed to do preliminary reviews on 13 projects. Some of the discussion points from that meeting were; should we just adjust all the CIP projects per the current Caltrans cost index? Should we review soft costs, right of way costs and construction costs at the same time or individually? The Cost Committee agreed to first review the hard construction costs only.

In reviewing the hard costs from actual bids to the current Engineers estimates, there are several specific line items that would have to be reviewed. It was agreed by doing this it would not adversely impact the outcome if we were to look at specific line items. DOT staff and the Cost Committee agreed to review those line items that were consistent with the County's Method A estimating guidelines. There are 5 line items that we would compare our estimates to: AC, AB, Roadway excavation, PCC Sidewalk and PCC curb and gutter.

At our May 5, 2011, DOT provided excel spread sheets for 4 projects, including the bid summaries and the engineer's estimates at the time of the bid. In addition, DOT provided information on currently constructed projects and the differences between what the bids were and the Engineers estimates.

The Cost Committee came up with three methods in comparing actual bid costs to the Engineer's estimate as outlined below:

Method A- The Cost Committee compare the actual total bid costs to the total Engineer's estimated cost.

Method B- As outline above, the Cost Committee compared the 5 specific line items in the bids consistent with the DOT Method A.

Method C- This was based upon both the Caltrans Cost Index and the Engineers New Record (ENR) index. However, the ENR index without a reset to the original program start date has further inflated perception of index increases. For example from 2004 to 2010 Caltrans was downs 2.9% while ENR from 2004 to 2010 is up 27.4%. Applying ENR halfway through the program without a reset to the start date has not accurately represented either index.

At the May 26, 2011 meeting the Cost Committee completed their review and submitted their findings regarding the costs comparison. (See Attached Analysis). The following was the Cost Committee conclusion based upon each of the Methods:

- Method A: By comparing the total costs for the Engineers estimates to the low bid, the low bids were for 26.2% to 52.6% less than the Engineers estimates. The average of the four selected DOT projects resulted in the 40% lower number than the Engineers estimate. However, based upon a weighted average we found that bids had come in at 34.2% less than the Engineers estimate.
- Method B: We also looked at the sampling of the selected line items. In that analysis it was determined that based upon a weighted average, we found that the line items had come in at 29.9% less than the Engineers estimates.
- Method C: By using the current Caltrans Cost index, costs have come in 26.2% less than at the peak in 2006.

The Cost Committee also looked at the two projects after the construction of the project was completed. The Cost Committee compared the total Engineers estimate to the lowest bidder. This analysis showed an average of 32% less than the Engineers estimate. The final construction costs after all change orders were processed still came in at 24% lower than the Engineers estimates.

## **CONCLUSION:**

Based upon the three methods outlined above, costs were coming in anywhere between 34.2% to 26.2% lower than the Engineers estimates.

The three methods analyzed the costs of projects coming in at the time of bidding, the Cost Committee also looked at a comparison of the Engineers estimates to final constructed projects costs. Two of the most recent projects were reviewed. That analysis had determined that the constructed projects came in 24% lower than the Engineers estimates.

It could be justified that all the costs be reduced by the average of 30% of the three methods. The Engineers estimates do include contingencies for change orders in their estimating. However, to be conservative the Cost Committee concluded that a reduction in the County's TIM/CIP costs estimates be reduced by 25%.

The County provided information to the Cost Committee that indicated approximately 62% of the Program was available to be removed or reduced in some form or another. (See attachment). However, as explained by staff, a 25% hard cost reduction does not necessarily translate to a program wide 25% cost reduction. Due to reimbursement commitments, already-expected funds, an indirect relationship between soft/hard costs and for many other reasons, a 25% reduction in hard cost translates to only a 15% reduction in the program costs. Based upon that information provided by DOT, staff recommended that a conservative net of 10% reduction should be used for an adjustment, even though the actual Cost Committee findings translate to a 15% reduction. (See attached Agenda dated 7/14/11)

Additional reductions are expected to be available through further investigation of the following, but not all of these avenues have been fully reviewed at this time:

- Potential removal of specific projects which may not be required from the fee program
- Potential reductions in right of way costs
- Potential reductions in soft costs

Potential project specific cost estimate reviews which refine the accuracy of previous estimates or update project assumptions based on new information.



**Agenda: CIP Cost Estimate Review Meeting**  
**July 14, 2011, 4:00 - 6:00pm**  
**DOT Conf. 248, County Bldg. "C", 2850 Fairlane Ct., Placerville**

**A. Announcements**

1. Craig retiring on 8/12/11

**B. Construction (Hard) Costs (Handouts)**

1. Craig met with Jim and Bob and reviewed this committee's analysis and recommendation to reduce hard costs by 25%. They decided to reduce the total project cost estimates by 10% (including soft costs and ROW).
2. Rationale: Construction costs amount to about 62%, on average, of the total project cost, multiplied by a 25% reduction gets to about 15% so to be conservative, DOT is recommending an overall cost reduction of 10%.
3. The proposed changes to the TIM Fee Program, including the recommendation from this committee, result in an overall reduction of approximately \$100M based on current calculations (which is about 10% of the total Program).
4. This information was reviewed with the TFWG on 6/23/11 and is being included in the 2011 TIM Fee Annual Update, tentatively scheduled to go to the Board in Sept.

**C. ROW Costs vs. Estimates (Handouts)**

**D. Soft Costs**

1. From our last meeting, this committee was to review the completed cost analysis handed out and come back with suggestions/recommendations as to how to look at soft costs

**E. Next Meeting: ?**

**F. Attendees:**

Project Summary Table, Sorted by Construction Completion Year

P = Planning/Environmental; D = Design; R = Right of Way; C = Construction; \* = Bridge Projects

Project #	Name	Total Cost (\$M)	10/11	11/12	12/13	13/14	14/15	15/20	Future
1	53110 U.S. 50 HOV Lanes (Phase 1) - El Dorado Hills to Bass Lake Grade	43.95	R, C						
2	72369 Hollow Oak Road Drainage	0.42	D						
3	72370 Silva Valley Parkway Widening (2 to 4 lanes)	1.29	D, R, C						
4	72372 White Rock Rd Widening (2 to 4 lanes) - Latrobe Rd to Monte Verde Dr/Windfield Wy Intersection Signalization	0.87	D, R, C						
5	73354 Durock Road/Business Drive Intersection Signalization	2.04	D, R, C						
6	73359 Latrobe Road North of Ryan Ranch Road (Milepost 7.0 - 7.35)	1.91	D, R, C						
7	76114 Green Valley Road/Deer Valley Road West Intersection Improvements	1.09	D, C						
8	77120* Mosquito Road Bridge at South Fork American River - Maintenance Project	0.33	D, C						
9	77121* Ice House Road Bridges - Maintenance Project	1.16	D, C						
10	71336 U.S. 50/Missouri Flat Road Interchange Improvements - Phase 1B	40.52	D, C	C					
11	76107 Green Valley Rd/Silver Springs Pkwy Intersection Signalization, Silver Springs Pkwy to Green Valley Rd (north segment)	7.16	D, C	C					
12	77109* Green Valley Road at Tennessee Creek - Bridge Replacement	7.12	P, D, R, C	P					
13	72304 Northside School Class 1 Bike Path - Phase 1 (SR193)	1.41	D, R, C	C					
14	72306 Northside School Class 1 Bike Path - Phase 2 (SR49)	1.69	D, R, C	C					
15	73358 Pleasant Valley Road/Oak Hill Road Intersection Improvements	1.04	D, R, C	C					
16	77117* Rubicon Trail at Ellis Creek - Bridge Replacement	0.95	P, D, R, C	D					
17	77118* Wentworth Springs Road at Gerle Creek - Bridge Replacement	0.95	P, D, R, C	D					
18	71346 U.S. 50/Missouri Flat Road Interchange Improvements - Phase 1C - Riparian Restoration	1.27	P, D, R, C	P					
19	76108 Silver Springs Pkwy to Bass Lake Rd (south segment)	1.62	D, C						
20	77115* Sly Park Road at Clear Creek Crossing - Bridge Replacement	6.38	D, R, C	D, R, C					
21	73320 Pleasant Valley Road (SR 49)/Patterson Drive Intersection Signalization	4.18	P, D, R, C	D, R, C					
22	77122* Newtown Road at South Fork of Weber Creek - Bridge Replacement	3.85	P, D, R, C	D, R, C					
23	71328 U.S. 50/Silva Valley Parkway Interchange - Phase 1	3.18	P, D, R, C	P, D, R, C	D, R, C				
24	73360 Cold Springs Road at Mt. Shasta Lane - Realignment	64.06	P, D, R, C	D, R, C	D				
25	73362 Salmon Falls Road at Glenesh Lane - Realignment	1.10	P, D	D, R, C	D, R, C				
26	77114* Green Valley Road at Weber Creek - Bridge Replacement	1.25	P, D, R, C	D, R, C	D, R, C				
27	66115 Bass Lake Frontage Improvements - Silver Springs	10.56	P, D, R, C	P, D, R, C	P, D, R, C				
28	77116* Bucks Bar Road at the North Fork Cosumnes River - Bridge Rehabilitation	2.02	P, D, R, C	P, D, R, C	P, D, R, C				
29	53113 U.S. 50 HOV Lanes (Phase 2A) - Bass Lake Grade to Cameron Park Drive	4.65	P, D, R, C	P, D, R, C	D, R, C				
30	77119* Blair Road at EID Canal - Bridge Replacement	24.87	D		D, R, C				
31	BR113* Silver Fork at South Fork American River - Bridge Replacement	2.17	P	P	P	D, R, C			
32	BR40* Green Valley Rd at Indian Creek - Bridge Replacement	4.28	P	P	P	D, R, C			
33	BR69* Alder Drive at EID Canal - Bridge Replacement	14.96	P	P	P	D, R, C			
34	BR71* Bassi Rd at Granite Creek - Bridge Replacement	2.18	P	P	P	D, R, C			
35	BR92* Hazel Valley Rd at PG&E Canal - Bridge Replacement	3.60	P	P	P	D, R, C			
36	BR04* Mt. Murphy Rd at South Fork American River - Bridge Replacement	2.18	P	P	P	D, R, C			
37	BR61* Mosquito Road Bridge at South Fork American River - Bridge Replacement	8.07	P	P	P	D, R, C			
38	71324 Saratoga Way Extension - Phase 1	30.56	P	P	P	P, D, R, C			
39	71324 Saratoga Way Extension - Phase 1	15.27	P	P	P	P, D, R, C			
40	71343 U.S. 50/Silva Valley Parkway Interchange - Phase 2 On Ramps and Auxiliary Lane	14.20	P	P	P	D, R, C			
41	71375 Headington Road Extension - Missouri Flat Road to El Dorado Road	23.09	P, R, C			D, R, C			
42	73150 Cameron Park Drive/Green Valley Road Intersection Improvements	12.87	P, D, R, C	D		P			
43	53122 U.S. 50 HOV Lanes (Phase 2B) - Cameron Park Drive to Ponderosa Road	7.00	D						
44	53116 U.S. 50 HOV Lanes (Phase 3) - Ponderosa Road to Greenstone Road	22.64	D						
45	66116 Latrobe Road/White Rock Road Connector (New Road)	34.74	P, D						
46	71338 U.S. 50/Ponderosa Rd Interchange - Durock Rd Realignment	23.99	P						
47	71339 U.S. 50/Ponderosa Rd Interchange - N. Shingle Rd Realignment	7.15	D						
48	71365 Palmer / Wild Chaparral Connection	5.02	P	D					
49	72334 Diamond Springs Parkway - Phase 1	9.90	P	P					
50	72361 U.S. 50/Cameron Park Drive Interchange Improvements	32.51	P, D, R, C	D	D, R, C				
51	73310 White Rock Road/Post Street Signal	58.81	P, F						
		0.48	D	D	D	D	D		



Project Summary Table, Sorted by Construction Completion Year

P = Planning/Environmental; D = Design; R = Right of Way; C = Construction; \* = Bridge Projects

Project #	Name	Total Cost (\$M)	10/11	11/12	12/13	13/14	14/15	15/20	Future
52	GP124 Country Club Drive Extension - Bass Lake Road to Silver Dove Road	1.47							D R C
53	OP005 Metal Beam Guardrail Installation	0.67						D	
54	71323 U.S. 50/EI Dorado Hills Boulevard Interchange Improvements	28.34						D	R C
55	53115 U.S. 50 - Westbound Auxiliary Lane - El Dorado Hills Blvd to Empire Ranch Rd	3.69							R C
56	53120 U.S. 50 Mainline Widening at El Dorado Hills	2.50							D R C
57	66109 Bass Lake Road Full Improvements - Phase 1A	11.59							P D R C
58	71330 U.S. 50/Bass Lake Road Interchange Improvements - Phase 1	20.83							P D R C
59	71332 U.S. 50/Cambridge Road Interchange Improvements - Phase 1	10.65							P D R C
60	71335 Country Club Dr. - Silva Valley Parkway to the "Old Lincoln Highway"	7.97							P D R C
61	71340 U.S. 50/EI Dorado Hills Blvd Interchange - Pedestrian Overcrossing	6.78							P D R C
62	71347 U.S. 50/EI Dorado Road Interchange Improvements - Phase 1	3.54							P D R C
63	71376 U.S. 50/EI Dorado Road Interchange Improvements - Phase 2	7.27							P D R C
64	72332 El Dorado Hills Boulevard/Francisco Drive Intersection Alignment	11.70							P D R C
65	72350 Latrobe Rd Widening (2 to 4 lanes) - Golden Foothill Pkwy (south) to Investment Blvd	4.31							P D R C
66	72387 Cameron Park Drive Widening - Durock Road to Coach Lane	9.09							P D R C
67	72368 Diamond Springs Parkway - Phase 2	3.40							P D R C
68	72374 White Rock Rd. Widening (2 to 4 lanes) - Monte Verde Dr. to Silva Valley Pkwy Interchange	25.59							P D R C
69	73307 Mother Lode Drive/Pleasant Valley Road Intersection Improvements	7.78							P D R C
70	GP125 Country Club Drive Ext. - Silver Dove Rd to east Bass Lake Hills SP Boundary	7.02							P D R C
71	GP126 Country Club Dr Realign. - Bass Lake Rd to east Bass Lake Hills Specific Plan Boundary	6.75							P D R C
72	GP130 Runnymede Drive Realignment at El Dorado Road	2.44							P D R C
73	GP137 White Rock Rd Widening (2 to 4 lanes) - Manchester Dr to Sacramento County Line	12.84							P D R C
74	GP144 Cameron Park Drive Widening - Palmer Drive to Meder Rd	15.37							P D R C
75	GP147 Saratoga Way Extension - Phase 2	4.64							P D R C
76	GP148 U.S. 50/Bass Lake Road Interchange Improvements - Phase 2	23.64							P D R C
77	GP149 U.S. 50/Cambridge Road Interchange Improvements - Phase 2	15.50							P D R C
78	GP150 U.S. 50 Eastbound Auxiliary Lanes from Cambridge Rd to Ponderosa Rd	14.55							P D R C
79	GP152 White Rock Rd Widening - 4 to 6 Lanes, Latrobe Rd to U.S. 50/Silva Valley Pkwy Interchange	7.68							P D R C
80	GP154 Latrobe Rd Widening (4 to 6 lanes) - White Rock Rd to Carson Creek (Suncastr Ln)	11.08							P D R C
81	GP155 Mother Lode Drive - Greenstone Road to Pleasant Valley Road Improvements	4.85							P D R C
82	GP159 Green Valley Road Widening from Salmon Falls Road to Deer Valley Road	15.51							P D R C
83	GP160 Pleasant Valley Road Widening from El Dorado Road to State Route 49	1.28							P D R C
84	GP163 Missouri Flat Rd Two-Way Left Turn Lane - El Dorado Rd to Headington Rd	1.48							P D R C
85	GP165 Missouri Flat Road Widening - Headington Road to Prospector's Plaza	1.62							P D R C
86	GP166 Bass Lake Road Widening - U.S. 50 to Silver Springs Parkway, Phase 1B	19.03							P D R C
87	GP171 Durock Road Widening - Robin Lane to South Shingle Road	9.18							P D R C
88	GP173 Pleasant Valley Rd Widening - Pearl Place to Big Cut Road in Diamond Springs	3.44							P D R C
89	GP174 Pleasant Valley Road Widening from Big Cut Road to Cedar Ravine Road	2.80							P D R C
90	GP175 Ponderosa Road Widening from North Shingle Road to Meder Road	3.44							P D R C
91	GP176 State Route 49 Widening from Pleasant Valley Road to Missouri Flat Road	9.70							P D R C
92	GP177 State Route 49 Passing Lanes from SR63 (in Cool) to the northern County Line	4.29							P D R C
93	GP178 Green Valley Road Widening - Francisco to Salmon Falls Road	2.44							P D R C
94	GP179 Green Valley Road Widening - Deer Valley Road East to Lotus Road	5.90							P D R C
95	GP182 Silva Valley Parkway/Golden Eagle Lane Intersection Signalization	0.77							P D R C
96	GP183 El Dorado Hills Boulevard Widening - Lassen Lane to Park Drive	1.32							P D R C
97	31202 Intelligent Transportation System (ITS) Improvements	5.83							P D R C
98	72355 Green Valley Rd Widening - County Line to Francisco Drive	9.19							P D R C
99	71319 U.S. 50/Camino Area Parallel Capacity/Safety Study	2.00							P

## Hard Cost Analysis – Sample Projects Selection

(See spreadsheet for backup data)

### Method A Analysis:

- 1) Engineer's Estimate/Low Bid Comparison
  - a. Yields range of 26.2% to 52.6% overestimated hard costs
  - b. Average of four selected DOT jobs over all unit costs results in a 40.0% general overestimated average or a 34.2% weighted overestimated average

### 2) Unit Cost Comparison

#### a. Hot Mix Asphalt (AC)

Project Name	Qty	Unit	DOT Unit Cost	Low Bid Unit Cost
Point View Drive	1,900	TON	N/A	\$90
Silva Valley Parkway	2,360	TON	\$95	\$64
White-reek Road	333	TON	\$95	\$124
Durock Road	1,600	TON	\$106.67	\$82
Tennessee Creek	4,051	TON	\$85	\$79
Average Unit Cost wghtd by TON			\$92.27	\$78.02
Percent Reduction			15.4%	
Average Unit Cost unweighted			\$95.56	\$78.75
Percent Reduction			17.6%	

#### b. Aggregate Base (AB)

Project Name	Qty	Unit	DOT Unit Cost	Low Bid Unit Cost
Point View Drive *	3,286	CY	N/A	\$51.80*
Silva Valley Parkway	2,607	CY	\$85	\$33
White-reek Road	341	CY	\$85	\$44
Durock Road	1,187	CY	\$119.33	\$47
Tennessee Creek	5,368	CY	\$40	\$45
Average Unit Cost wghtd by CY			\$63.08	\$44.47
Percent Reduction			29.5%	
Average Unit Cost unweighted			\$81.44	\$44.20
Percent Reduction			45.7%	

\* - Converted 4,600 TON to CY at 1.4 TON/CY

c. Roadway Excavation

Project Name	Qty	Unit	DOT Unit Cost	Low Bid Unit Cost
Point View Drive	7,000	CY	N/A	\$17
Silva Valley Parkway	1,900	CY	\$100	\$20
White Rock Road	541	CY	\$105	\$20
Durock Road	1,400	CY	\$48.51	\$41
Tennessee Creek	9,908	CY	\$48.75	\$15
Average Unit Cost wghtd by CY			\$58.02	\$18.02
Percent Reduction			68.9%	
Average Unit Cost unweighted			\$75.57	\$22.60
Percent Reduction			70.1%	

d. Curb, gutter, & sidewalk – bid quantities too small to have any meaning.

e. Percent reduction summary

- i. AC reduced 15.4%
- ii. AB reduced 29.5%
- iii. Roadway Ex reduced 68.9%

3) Note range of DOT unit cost on the above items and how they compare to Method B estimating procedures....continued below.

Method B Analysis:

- 1) Assume CIP Type B Estimating Procedure
  - a. AC = \$95/ton
  - b. AB = \$55/ton
  - c. Roadway Excavation = \$38/cy
  - d. PCC Curb & Gutter = \$10/lf
  - e. PCC Sidewalk = \$7/sf
- 2) Per Method A sampling above, appropriate unit costs could be as follows:
  - a. AC = \$78.02/ton (17.9% reduction)
  - b. AB = \$44.47/cy (19.1% reduction)
  - c. Roadway Excavation = \$18.02/cy (52.6% reduction)
  - d. A simple average of these numbers, an arguably inaccurate way of looking at it without weighting, yields an overall Method B overestimated cost average of 29.9%

Method C Analysis: (see attachments)

- 1) Caltrans Cost Index is down 26.2% since 2006 peak of 104.1
- 2) ENR is up 10.7% since 2006
- 3) Application of ENR index without reset to original program start date has further inflated perception of index increases. ie: 2004 to 2010 Caltrans is down 2.9% while ENR from 2004 to 2010 is up 27.4%. Applying ENR half way through the program without a rest to the start date has not accurately represented either index.
- 4) Comparison of delivered cost to low bids.

## **CIP Project Cost Estimates – Type B**

Use this methodology for projects that are far out in the future and/or which are in the very preliminary planning stages.

Refer to the sample for Sophia Parkway as you read through these instructions.

### **PROJECT ESTIMATING APPROACH**

The cost estimate methodology described below was originally used on most projects identified in the TIM Fee Program. It provides for an order of magnitude estimate for projects that are not well defined. More detailed estimates should always be used when available.

All costs are to be in "today's dollars" – i.e., do not include a factor for future inflation/deflation in prices. Generally, round to the nearest \$1,000.

### **COST ANALYSIS METHODOLOGY**

#### **Unit Costs**

A unit price analysis was done using the most recent DOT bid projects. That analysis resulted in the following unit costs for project cost estimating using this Type B methodology. These are the basic roadway construction item unit prices to use:

- AC = \$95/ton
- AB = \$55/cy
- Roadway Excavation = \$38/cy
- PCC Curb & Gutter = \$10/lf
- PCC Sidewalk = \$7/sf

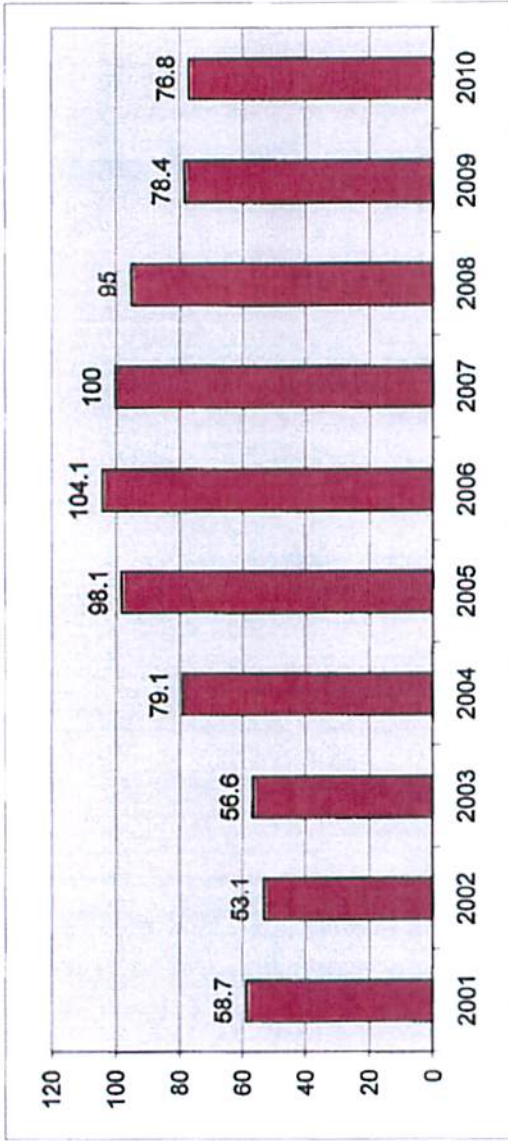
These costs reflect prices current as of the later part of 2008 and are the basis for determining other minor roadway items and miscellaneous items of work.

#### **Roadway Items**

Estimate the costs for the roadway portion of the project by estimating the number of miles of 12-foot wide lanes in two different classifications –Minor Roadway and Freeway/Major Roadway. County roads of less than four lanes are considered a "Minor Roadway" (i.e., Grade 1). Any U.S. highway, State highway, or County road of four lanes or more are considered a "Major Roadway" (i.e., Grade 2).

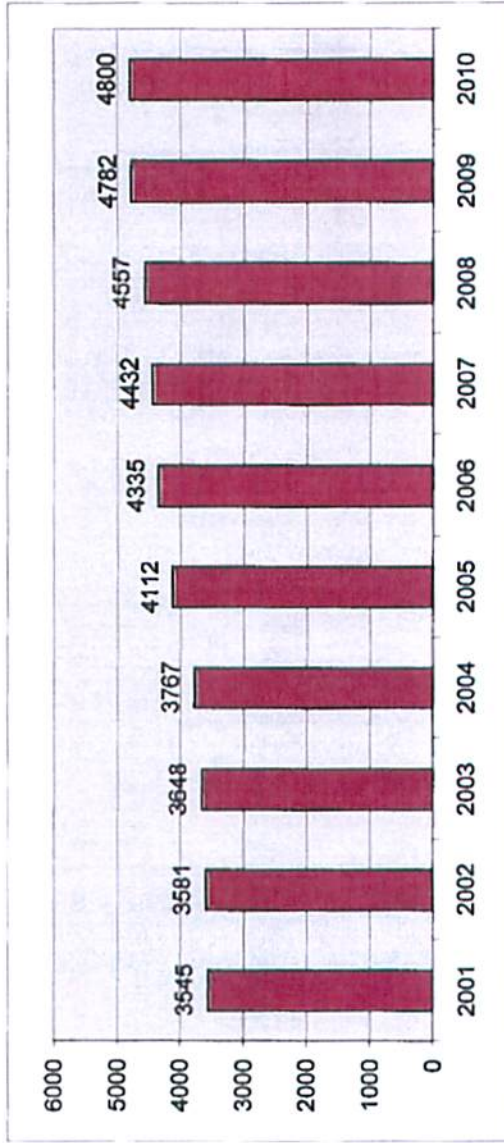
- Minor Roadway (Less than 4 Lanes), GRADE 1: Use \$600,000 per lane mile
- Major Roadway (4 Lanes and More), GRADE 2: Use \$800,000 per lane mile





Caltrans Price Index

Year  
2001  
2002  
2003  
2004  
2005  
2006  
2007  
2008  
2009  
2010  
2011



ENR-BCI (20 Cities)

2001  
2002  
2003  
2004  
2005  
2006  
2007  
2008  
2009  
2010  
2011

***Hard Costs Comparisons After Construction Completed***

<b>Description</b>	<b>Bid Date</b>	<b>Engineer's Estimate</b>	<b>Low Bid</b>	<b>Final Construction Costs To Complete Including Change Orders.</b>
<b>Project 72401 White Rock Road Realignment and Widening, Manchester Drive to Latrobe Road</b>	<b>10/17/07</b>	<b>\$4,496,207</b>	<b>\$3,147,026</b> <b>30% lower than Engineers Estimates</b>	<b>\$3,434,011</b> <b>24% lower than the Engineer's Estimate</b>
<b>Project 72403 Latrobe Road Realignment, Widening and Bridge Project</b>	<b>3/27/08</b>	<b>\$10,079,471</b>	<b>\$6,627,770</b> <b>34% lower than Engineers Estimates</b>	<b>\$7,640,360</b> <b>24% lower than the Engineer's Estimate</b>



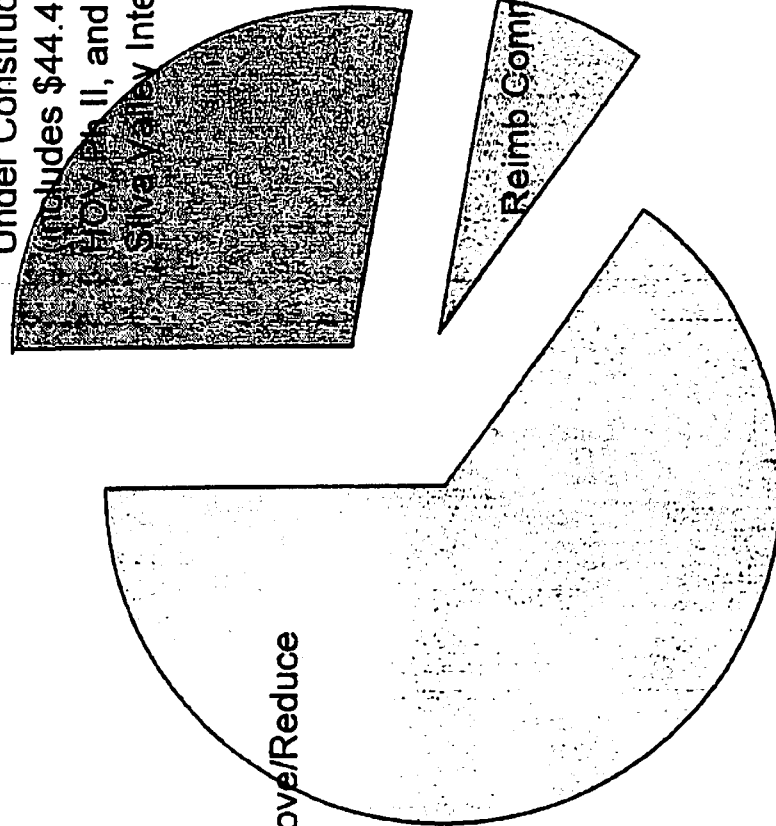
# Adopted TIM Fee Program 2010 (\$M)

TOTAL \$995.8M

Reimb Agmts, Completed Projects, and Under Construction \$276.1M (28%)  
(Includes \$44.4M for HOV Ph I but not HOV Ph II, and \$86.2M for Silva Valley Interchange)

Available to Remove/Reduce \$648M (65%)\*

Reimb Commts \$71.7M (7%)



\* This is an upper bound; this total has not been reduced by \$ already spent on projects in process.

# DOT's Discussion of Cost Estimate Reductions for Right of Way Acquisition Costs

## Summary

DOT is recommending an overall cost reduction of 4% for eligible projects in the TIM Fee Program, as a result of falling real estate prices.

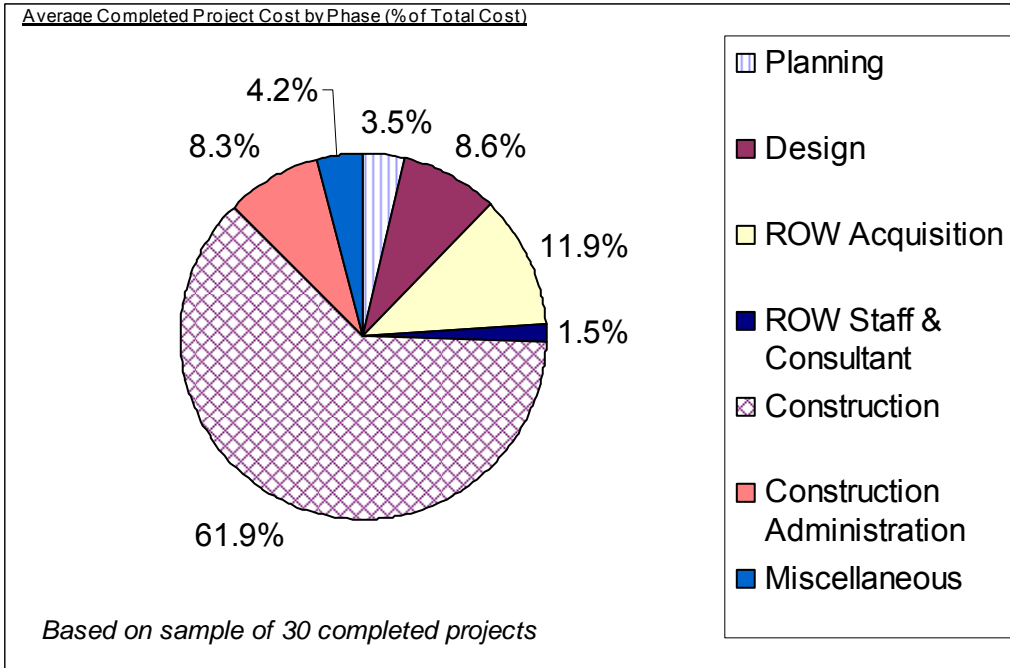
## Analysis

DOT has analyzed right of way acquisition costs for projects that were recently constructed, bid, or that have recent appraisals. There is a wide range in the right of way acquisition costs per square foot. The range is a function of a variety of factors such as the area of the County the real estate is in, its associated zoning (e.g., residential vs. commercial), the type of right of way acquisition being purchased (e.g., easement or fee title), etc. However, in general, DOT has concluded that right of way acquisition costs have declined between approximately 30% and 60% since 2008. DOT is recommending using the low end of this range i.e., 30% at this time for purposes of calculating any reduction in cost of TIM Fee projects. This is a conservative estimate which DOT believes is appropriate until which time that DOT can review all CIP project cost estimates in more detail, including the right of way acquisition estimates. (This more thorough review will take place as part of the annual 2012 CIP update process.)

Because right of way acquisition costs are just one component of a project's total cost, to arrive at an average overall percentage reduction that could be applied to the entire TIM Fee Program, DOT took the 30% reduction in right of way acquisition costs (described above), and multiplied it by 11.9% (the percentage that right of way costs in the TIM Fee Program) to arrive at an overall reduction of approximately 4%. Note: 11.9% is the right of way acquisition cost component of the 13.4% figure for total right of way costs in the analysis of 30 DOT CIP projects. The 13.4% includes 1.5% for labor costs associated with right of way acquisitions; DOT does not believe labor cost estimates should be reduced as part of the ROW analysis because these costs have not gone down. Reference the chart on the next page.

## Conclusion

Based on the above analysis, DOT proposes to reduce the total costs of most of the projects in the TIM Fee Program by 4%. (Note that not all project costs can be reduced because some projects' right of way acquisitions have been completed, or they have had their estimates recently reviewed and updated based on recent appraisals or acquisitions.)



# **CCERC's Discussion of Cost Estimate Reductions for Right of Way Acquisition Costs**

**DRAFT**

**11-18-11**

**Capital Improvement Program (CIP)**

**Cost Estimate Review Committee Right of Way (ROW)**

**Costs Summary Only.**

**ROW COSTS EXECUTIVE SUMMARY:**

The Cost Estimate Review Committee (Cost Committee) was provided information by County Staff, which were based upon total costs comparison for ROW acquisition costs. Actual costs comparison of each type of land use and easements costs comparisons were not analyzed. The Cost Committee felt that total cost comparison would provide similar results if we were to analyze each of the land uses and easements costs. The detail information on how the Cost Committee determined these percentages are outlined in the analysis section of this summary.

Based upon what has been provided to the Cost Committee to date. We would recommend that the ROW acquisition portion of the CIP/TIM fee program (10.4%) be reduced by 48%. In summary, the 10.4% associated with the ROW acquisition (purchase) should be reduced to 5% ( $10.4 \times .48 = 5$ ). The Cost Committee approximated that this adjustment appears to equate to a TIM fee reduction of a net 3% of the Program.

It should be noted that Staff has indicated to the Cost Committee the ROW soft costs could be estimated at 4% of the total hard costs. If this is the case and data can be provided to justify this 4%, the ROW acquisition portion of the CIP/TIM fee program would then be (9.4%) and then reduced by 48%. The 9.4% associated with the ROW acquisition (purchase) could be reduced to 4.5% ( $9.4\% \times .48 = 4.5\%$ ).

**BACKGROUND:**

On March 24, 2011 a kick off meeting was set up by the El Dorado County Department of Transportation (DOT) to investigate and review the cost estimates in the Capital Improvement Projects. DOT proposed to work with the CIP Cost Estimate Review Committee (Cost Committee) in reviewing the CIP cost estimates for accuracy.

The purpose for this process was to ensure that the CIP project cost estimates are of high quality and more importantly reflect current and accurate costs. In addition, this process would promote understanding and appreciation for the complexities and requirements for cost estimating for public improvements and recommend new tools and techniques to improve DOT's estimating capabilities.

DOT staff and their roles will include responsibilities and deliverables associated with a third party review of the detailed cost estimates for the projects proposed for the 2011 CIP projects as well as completed CIP projects. More specifically the Cost Committee concentrated on the TIM fee projects that are part of the 2011 overall CIP program.

Bob Slater and Matt Smeltzer and their associated Project Managers would be called upon to answer all projects within the 10 year CIP. While Craig McKibbin is the overall coordinator for this effort and his

planning team developed all the “Future” projects beyond the 10 year CIP, Steve Kooyman and Claudia Wade have now taken on Mr. McKibbin’s role since his retirement.

DOT provided information and necessary backup to the Cost Committee. Access to this information was available through appropriate links set up by DOT staff.

At the kick-off meeting the Cost Committee and DOT staff agreed that it made no sense to look at all of the CIP projects and that the Cost Committee should initially look at a representative sample of projects. DOT provided a list of those projects to the group. (See attachment).

At our April 14, 2011 meeting, the Cost Committee had reviewed the list of projects that DOT staff had provided at the March 24, 2011 meeting at which time the Cost Committee agreed to do preliminary reviews on 13 projects. Some of the discussion points from that meeting were; should the Cost Committee adjust all the CIP projects per the current Caltrans cost index? Should they review soft costs, right of way costs and construction costs occur at the same time or individually? The Cost Committee agreed to first review the hard construction costs only.

At the meeting there were 6 projects the Cost Committee requested County Staff to provide information on the soft costs and ROW acquisition costs. Staff was asked to provide this information at the following meeting.

At our May 5, 2011 DOT provided the Cost Committee the description of categories and was provided one project’s full multi-year cost summary for the group to go over and to understand the different soft costs and ROW costs categories. Some of the questions that came out to this meeting were: What number or percentage are we going to apply for soft costs on future projects? We can calculate historic numbers, but are these reasonable? How do we determine if soft costs are reasonable?

The Cost Committee agreed that Right of way acquisition costs should be looked at and accounted for separately from the soft costs.

At the May 26, 2011 meeting, the Cost Committee was provided a hand out on cost analysis that uses the “Project Updating Guidelines for 2011” and come back at the next meeting on suggestions/recommendations on how to deal with soft costs. A sample of 30 projects (Exhibit B) were handed out that summarized where soft, ROW and hard costs including the task and descriptions.

The Cost Committee specifically asked Staff to dig out actual ROW costs and estimates for completed projects so the Cost Committee can take a look and compares them to the past Engineer’s estimates.

At the July 14, 2011 meeting, the Cost Committee was provided with 9 projects in the past 3 years that have acquired ROW that were either constructed or currently under construction. In addition, the Silva Valley Interchange ROW acquisition costs and appraisal should be coming in within the next few months. This would provide the Cost Committee a more current assessment of ROW land costs.

One of the recommendations was to compare the cost per square foot between the Engineer’s estimate and the actual costs, then reduce the ROW acquisition costs by that percentage difference.

At the August 11, 2011 meeting, the Staff provided some ROW costs 9 projects. (See Exhibit A) Once again the Cost Committee felt that the group should wait until we see what the Silva Valley Interchange (SVI) ROW costs are as compared to the Engineer’s estimate.

At the November 2, 2011 meeting, the SVI project had an initial estimate of \$14.6 million estimated and based upon the current appraisals in accordance to DOT Staff, a revised conservative estimate is around

\$7 million. In addition Saratoga ROW provided a high end in terms of ROW costs and documentation by Staff was to be sent to the Cost Committee.

#### **ANALYSIS:**

The ROW Cost Committee has taken the 9 project sampling and reviewed this information. Based upon the 9 projects the Cost Committee eliminated 4 of the 9 projects for analysis. The reason for was the lack of information for those projects. Three of the projects were completed in 2010 and the estimated ROW costs were based upon appraisal information at the time the estimates were done and therefore, were not a good sampling for a comparison. The 4<sup>th</sup> project had no estimate for 2008.

When the 4 projects were removed the actual costs as compared to the Engineer's estimates from 2008 came in on average +/-44% less than the Engineer's estimate. (See Exhibit A) Based upon the sampling of the 5 projects that provided a better comparison to the Engineer's estimates, the Cost Committee determined that the Engineer's Estimated ROW acquisition costs at \$489,000 with the actual ROW costs at \$273,000 (56%). This would be a 44% overestimate on the ROW Costs. These were based upon 2008 numbers and not the peak costs for ROW in 2005 and 2006.

Based upon information provided by Staff at the November 2, 2011 on the SVI appraisal costs with some contingency the Engineer's estimates the \$7 million would be safe to assume for ROW acquisition. The Engineer's previous estimates was \$14.6 million, this is 52% less than the Engineer's estimate. (See Exhibit B)

With the economic situation in the area today, land costs are significantly less than they were in 2005 and 2006 at their peak. Based upon the Staff sampling and the most current appraisals on SVI it is apparent that this is the case.

Information provided to the Cost Committee on May 26, 2011, the 30 sampling projects in the program approximately 13.4% is associated with ROW costs. Of the 13.4% (See Exhibit C) approximately 2.5% is associated with ROW Soft Costs. However, based upon the November 2, 2011 meeting Staff felt that 3% is a more conservative number to use for ROW soft costs. Therefore approximately 10.4% ( $13.4 - 3 = 10.4$ ) of the CIP/TIM programs appears to be spent on ROW acquisition costs.

It should be noted that Staff has indicated to the Cost Committee the ROW soft costs could be estimated at 4% of the total hard costs. If this is the case and data can be provided to justify this 4%, the ROW acquisition portion of the CIP/TIM fee program would then be (9.4%) and then reduced by 48%. The 9.4% associated with the ROW acquisition (purchase) could be reduced to 4.5% ( $9.4 \times .48 = 4.5$ ).

Based upon what has been provided to the Cost Committee to date. We would recommend that the ROW acquisition portion of the CIP/TIM fee program (10.4%) be reduced  $(44 + 52)/2 = 48\%$ . In summary, the 10.4% associated with the ROW acquisition (purchase) should be reduced to 5%. The Cost Committee approximated that this adjustment appears to equate to a TIM fee reduction of a net 3% of the Program.

#### **CONCLUSION AND RECOMMENDATIONS:**

The following is the Cost Committee's conclusion and recommendations:

Based upon what has been provided to the Cost Committee to date. We would recommend that the ROW acquisition portion of the CIP/TIM fee program (10.4%) be reduced  $(44 + 52)/2 = 48\%$ . In summary, the 10.4% associated with the ROW acquisition (purchase) should be reduced to 5%. The Cost Committee approximated that this adjustment appears to equate to a TIM fee reduction of a net 3% of the Program.

It should be noted that Staff has indicated to the Cost Committee the ROW soft costs could be estimated at 4% of the total hard costs. If this is the case and data can be provided to justify this 4%, the ROW acquisition portion of the CIP/TIM fee program would then be (9.4%) and then reduced by 48%. The 9.4% associated with the ROW acquisition (purchase) could be reduced to 4.5% ( $9.4\% \times .48 = 4.5\%$ ).



Project Summary Table, Sorted by Construction Completion Year

P = Planning/Environmental; D = Design; R = Right of Way; C = Construction; \* = Bridge Projects

Project #	Name	Total Cost (\$M)	10/11	11/12	12/13	13/14	14/15	15/20	Future
1	53110 U.S. 50 HOV Lanes (Phase 1) - El Dorado Hills to Bass Lake Grade	43.95							
2	72369 Hollow Oak Road Drainage	0.42	D	C					
3	72370 Silva Valley Parkway Widening (2 to 4 lanes)	1.29	D	C					
4	72372 White Rock Rd Widening (2 to 4 lanes) - Latrobe Rd to Monte Verde Dr/Windfield Wy Intersection Signalization	0.87	D	C					
5	73354 Durock Road/Business Drive Intersection Signalization	2.04	D	C					
6	73359 Latrobe Road North of Ryan Ranch Road (Milepost 7.0 - 7.35)	1.91	D	C					
7	76114 Green Valley Road/Deer Valley Road West Intersection Improvements	1.09	D	C					
8	77120* Mosquito Road Bridge at South Fork American River - Maintenance Project	0.33	D	C					
9	77121* Ice House Road Bridges - Maintenance Project	1.16	D	C					
10	71336 U.S. 50/Missouri Flat Road Interchange Improvements - Phase 1B	40.52	D	C					
11	76107 Green Valley Rd/Silver Springs Pkwy Intersection Signalization, Silver Springs Pkwy to Green Valley Rd (north segment)	7.16	D	C					
12	77109* Green Valley Road at Tennessee Creek - Bridge Replacement	7.12	D	C					
13	72304 Normside School Class 1 Bike Path - Phase 1 (SR183)	1.41	D	C					
14	72306 Northside School Class 1 Bike Path - Phase 2 (SR49)	1.69	D	C					
15	73358 Pleasant Valley Road/Oak Hill Road Intersection Improvements	1.04	D	C					
16	77117* Rubicon Trail at Ellis Creek - Bridge Replacement	0.95	D	C					
17	77118* Wentworth Springs Road at Gerle Creek - Bridge Replacement	1.27	D	C					
18	71346 U.S. 50/Missouri Flat Road Interchange Improvements - Phase 1C - Riparian Restoration	1.62	D	C					
19	76108 Silver Springs Pkwy to Bass Lake Rd (south segment)	6.38	D	C					
20	77115* Sly Park Road at Clear Creek Crossing - Bridge Replacement	4.18	D	C					
21	73320 Pleasant Valley Road (SR 49)/Patterson Drive Intersection Signalization	3.85	D	C					
22	77122* Newtown Road at South Fork of Weber Creek - Bridge Replacement	3.18	D	C					
23	71328 U.S. 50/Silva Valley Parkway Interchange - Phase 1	64.06	D	C					
24	73360 Cold Springs Road at Mt. Shasta Lane - Realignment	1.10	D	C					
25	73362 Salmon Falls Road at Ghiesek Lane - Realignment	1.25	D	C					
26	77114* Green Valley Road at Weber Creek - Bridge Replacement	10.56	D	C					
27	66115 Bass Lake Frontage Improvements - Silver Springs	2.02	D	C					
28	77116* Bucks Bar Road at the North Fork Consumes River - Bridge Rehabilitation	4.65	D	C					
29	53113 U.S. 50 HOV Lanes (Phase 2A) - Bass Lake Grade to Cameron Park Drive	24.87	D	C					
30	77119* Blair Road at EID Canal - Bridge Replacement	2.17	D	C					
31	BR113* Silver Fork at South Fork American River - Bridge Replacement	4.28	D	C					
32	BR40* Green Valley Rd at Indian Creek - Bridge Replacement	14.96	D	C					
33	BR69* Alder Drive at EID Canal - Bridge Replacement	2.18	D	C					
34	BR71* Bassi Rd at Granite Creek - Bridge Replacement	3.60	D	C					
35	BR92* Hazel Valley Rd at PG&E Canal - Bridge Replacement	2.18	D	C					
36	BR04* Mt. Murphy Rd at South Fork American River - Bridge Replacement	8.07	D	C					
37	BR61* Mosquito Road Bridge at South Fork American River - Bridge Replacement	30.56	D	C					
38	71324 Saratoga Way Extension - Phase 1	15.27	D	C					
39	71345 U.S. 50/Silva Valley Parkway Interchange - Phase 2 On Ramps and Auxiliary Lane	14.20	D	C					
40	71333 U.S. 50/Ponderosa Rd/South Shingle Rd Interchange Improvements	23.09	D	C					
41	71375 Headington Road Extension - Missouri Flat Road to El Dorado Road	12.87	D	C					
42	73150 Cameron Park Drive/Green Valley Road Intersection Improvements	7.00	D	C					
43	53122 U.S. 50 HOV Lanes (Phase 2B) - Cameron Park Drive to Ponderosa Road	22.64	D	C					
44	53116 U.S. 50 HOV Lanes (Phase 3) - Ponderosa Road to Greenstone Road	34.74	D	C					
45	66116 Latrobe Road/White Rock Road Connector (New Road)	23.99	D	C					
46	71338 U.S. 50/Ponderosa Rd Interchange - Durock Rd Realignment	7.15	D	C					
47	71339 U.S. 50/Ponderosa Rd Interchange - N. Shingle Rd Realignment	5.02	D	C					
48	71365 Palmer / Wild Chaparral Connection	9.90	D	C					
49	72334 Diamond Springs Parkway - Phase 1	32.51	D	C					
50	72361 U.S. 50/Cameron Park Drive Interchange Improvements	59.81	D	C					
51	73310 White Rock Road/Post Street Signal	0.48	D	C					



Project Summary Table, Sorted by Construction Completion Year

P = Planning/Environmental; D = Design; R = Right of Way; C = Construction; \* = Bridge Projects

Project #	Name	Total Cost (\$M)	10/11	11/12	12/13	13/14	14/15	15/20	Future
52	GP124 Country Club Drive Extension - Bass Lake Road to Silver Dove Road	1.47							D R C
53	QP005 Metal Beam Guardrail Installation	0.67						D	C
54	71323 U.S. 50/EI Dorado Hills Boulevard Interchange Improvements	28.34						D	R C
55	53115 U.S. 50 - Westbound Auxiliary Lane - El Dorado Hills Blvd to Empire Ranch Rd	3.69							D R C
56	53120 U.S. 50 Mainline Widening at El Dorado Hills	2.50							P D R C
57	66109 Bass Lake Road Full Improvements - Phase 1A	11.59							P D R C
58	71330 U.S. 50/Bass Lake Road Interchange Improvements - Phase 1	20.83							P D R C
59	71332 U.S. 50/Cambridge Road Interchange Improvements - Phase 1	10.65							P D R C
60	71335 Country Club Dr. - Silva Valley Parkway to the "Old Lincoln Highway"	7.97							P D R C
61	71340 U.S. 50/EI Dorado Hills Blvd Interchange - Pedestrian Overcrossing	6.78							P D R C
62	71347 U.S. 50/EI Dorado Road Interchange Improvements - Phase 1	3.54							P D R C
63	71376 U.S. 50/EI Dorado Road Interchange Improvements - Phase 2	7.27							P D R C
64	72332 El Dorado Hills Boulevard/Franisco Drive Intersection Alignment	11.70							D R C
65	72350 Latrobe Rd Widening (2 to 4 lanes) - Golden Foothill Pkwy (south) to Investment Blvd	4.31							D R C
66	72367 Cameron Park Drive Widening - Durock Road to Coach Lane	9.09							D R C
67	72368 Diamond Springs Parkway - Phase 2	3.40							P D R C
68	72374 White Rock Rd. Widening (2 to 4 lanes) - Montia Verde Dr. to Silva Valley Pkwy Interchange	25.59							P D R C
69	73307 Mother Lode Drive/Pleasant Valley Road Intersection Improvements	7.78							P D R C
70	GP125 Country Club Drive Ext. - Silver Dove Rd to west Bass Lake Hills SP Boundary	7.02							P D R C
71	GP126 Country Club Dr Realign. - Bass Lake Rd to east Bass Lake Hills Specific Plan Boundary	6.75							P D R C
72	GP130 Runnymede Drive Realignment at El Dorado Road	2.44							D C
73	GP137 White Rock Rd Widening (2 to 4 lanes) - Manchester Dr to Sacramento County Line	12.84							P D R C
74	GP144 Cameron Park Drive Widening - Palmer Drive to Meder Rd	15.37							P D R C
75	GP147 Saratoga Way Extension - Phase 2	4.64							P D R C
76	GP148 U.S. 50/Bass Lake Road Interchange Improvements - Phase 2	23.64							P D R C
77	GP149 U.S. 50/Cambridge Road Interchange Improvements - Phase 2	15.50							P D R C
78	GP150 U.S. 50 Eastbound Auxiliary Lanes from Cambridge Rd to Ponderosa Rd	14.55							P D R C
79	GP152 White Rock Rd Widening - 4 to 6 Lanes. Latrobe Rd to U.S. 50/Silva Valley Pkwy Interchange	7.68							P D R C
80	GP154 Latrobe Rd Widening (4 to 6 lanes) - White Rock Rd to Carson Creek (Suncaet Ln)	11.08							P D R C
81	GP155 Mother Lode Drive - Greenstone Road to Pleasant Valley Road Improvements	4.85							P D R C
82	GP159 Green Valley Road Widening from Salmon Falls Road to Deer Valley Road	15.51							P D R C
83	GP160 Pleasant Valley Road Widening from El Dorado Road to State Route 49	1.28							P D R C
84	GP163 Missouri Flat Rd Two-Way Left Turn Lane - El Dorado Rd to Headington Rd	1.48							P D R C
85	GP165 Missouri Flat Road Widening - Headington Road to Prospector's Plaza	1.62							P D R C
86	GP166 Bass Lake Road Widening - U.S. 50 to Silver Springs Parkway, Phase 1B	19.03							P D R C
87	GP171 Durock Road Widening - Robin Lane to South Shingle Road	9.18							P D R C
88	GP173 Pleasant Valley Rd Widening - Pearl Place to Big Cut Road in Diamond Springs	3.44							P D R C
89	GP174 Pleasant Valley Road Widening from Big Cut Road to Cedar Ravine Road	2.80							P D R C
90	GP175 Ponderosa Road Widening from North Shingle Road to Meador Road	3.44							P D R C
91	GP176 State Route 49 Widening from Pleasant Valley Road to Missouri Flat Road	9.70							P D R C
92	GP177 State Route 49 Passing Lanes from SR93 (in Cooll) to the northern County Line	4.29							P D R C
93	GP178 Green Valley Road Widening - Francisco to Salmon Falls Road	2.44							P D R C
94	GP179 Green Valley Road Widening - Deer Valley Road East to Lotus Road	5.90							P D R C
95	GP182 Silva Valley Parkway/Golden Eagle Lane Intersection Signalization	0.77							P D R C
96	GP183 El Dorado Hills Boulevard Widening - Lassen Lane to Park Drive	1.32							P D R C
97	31202 Intelligent Transportation System (ITS) Improvements	5.83							P D R C
98	72355 Green Valley Rd Widening - County Line to Francisco Drive	9.19							P D R C
99	71319 U.S. 50/Camino Area Parallel Capacity/Safety Study	2.00							P

# **EXHIBIT A**

## **COUNTY'S ROW ACQUISITION SAMPLING WITH COMMENTS FROM COST COMMITTEE**

7/13/11

DEAF T

Project #	ROW Acq. Estimates (\$K)						2007	ROW Acq. Actual (\$K)	Difference between 2008 Est. & Actual (\$K)	% Estimate was over/under Actual
	2011	2010	2009	2008	2007	2007				
77109	\$80	\$95	\$321	\$260			\$84	177	211%	
73354	\$29	\$7	\$25	\$25			\$31	-6	-19%	
72370	\$0	\$22	\$0	\$4 Not separate projects until 2009			\$0		0%	
72372	\$0	\$0	\$0				\$4	+4	0%	
71336	\$154	\$156	\$198	\$200			\$154	46	30%	
53110	\$25	\$25	\$25	\$0			\$25	-25	-100%	
72401	Completed	Completed	\$2,128	\$2,128			\$2,128	0	0%	
72402	Completed	Completed	\$266	\$266			\$266	0	0%	
72403	Completed	\$1,186	\$1,186	\$1,182			\$1,186	-4	0%	

ROW Acquisition costs were not broken out separately from ROW Labor costs

Revised  
Some items from 2008  
Appropriately  
Some items from 2007  
Some items from 2009

TOTAL \$4,061 489  
 \$3,878 213 56%  
 \$188 214 44%  
 5%

## **EXHIBIT B**

# **NOVEMBER 2, 2011 MEETING MINUTES FOR THE CIP COST ESTIMATE REVIEW COMMITTEE**

**Record: CIP Cost Estimate Review Meeting  
November 2, 2011, 3:30 – 5:30pm  
DOT Conf. 248, County Bldg. "C", 2850 Fairlane Ct., Placerville**

**A. Announcements –**

*Steve Kooyman has been appointed the acting Deputy Director for Transportation Planning and Land Development.*

**B. Construction (Hard) Costs**

1. This Committee to provide DOT with a letter addressed to Claudia, summarizing the Committee's findings and recommendations – *Larry Ito provided a draft document for DOT staff to review.*

**C. ROW Acquisition Costs vs. Estimates**

1. Saratoga ROW acquisition cost – provides a high end of the range for consideration – *Document to be emailed to group*
2. Silva Valley Interchange appraisals – *The appraisals have been completed, however are being reviewed by County staff and is not available at this time for distribution. However, according to Matt Smeltzer, the R/W appears to be much lower than the initial estimated cost of \$14.6M. Matt Smeltzer says it is safe to assume that this would go down to about \$7M.*
3. Decrease in ROW costs  
*Based on discussions, it was determined that the ROW acquisition portion of a project is approximately 3% of a project, however, per Matt Smeltzer, with new Caltrans requirements, this percentage has increased to about 4%. Based on discussions regarding the information provided by CCERC to staff on ROW, CCERC will provide a draft document as done with the hard costs for a justification for reduction of ROW costs.*

**D. Soft Costs**

1. At the August 11th meeting, this Committee submitted a draft soft cost analysis handout. Committee would like to know what the soft costs were for the larger Caltrans projects (i.e. HOV lanes).
2. DOT analysis of additional projects requiring Caltrans involvement  
*DOT staff is working on a spreadsheet providing soft cost estimates of project requiring Caltrans involvement. Spreadsheet, once completed to be forwarded to group. Staff provided a list of CIP projects summarizing how many \$'s were Caltrans related projects which accounted for about 78% of the CIP program. The CIP Cost Estimate Review Committee (CCERC) asked for similar information for projects on Exhibit B of the TIM Fee Program.*

**E. Next Meeting: Monday, November 14, 2011 – 1:00 p.m. – 3:00 p.m., DOT Library**

**F. Attendees:**

1. Larry Ito
2. Brian Allen
3. Norm Brown
4. DOT Staff: Steve Kooyman, Claudia Wade, Matt Smeltzer

**Agenda: CIP Cost Estimate Review Meeting  
November 2, 2011, 3:30 – 5:30pm  
DOT Conf. 248, County Bldg. "C", 2850 Fairlane Ct., Placerville**

**A. Announcements**

**B. Construction (Hard) Costs**

1. This Committee to provide DOT with a letter addressed to Claudia, summarizing the Committee's findings and recommendations – due date: ????

**C. ROW Acquisition Costs vs. Estimates**

1. Saratoga ROW acquisition cost – provides a high end of the range for consideration (handout)
2. Silva Valley Interchange appraisals - status

**D. Soft Costs**

1. At the last meeting, this Committee submitted a draft soft cost analysis handout. Committee would like to know what the soft costs were for the larger Caltrans projects (i.e. HOV lanes).
  - a. Developer delivered bid ready projects, with the County completing the construction, resulted in 24% cost in soft costs, 16% with developer fully delivered projects, and 25% on County delivered projects. The CCERC question was why do we estimate 42% on our CIP projects?
  - b. Committee analyzed:
    - (1) White Rock Road Realignment and widening Manchester Drive to Latrobe Road
    - (2) White Rock Road Widening and Traffic Signalization
    - (3) Wilson Blvd Intersection
    - (4) Sophia Parkway Extension Project fully Delivered County Road Project
    - (5) 72403 Latrobe road Suncastr Lane to GFP South
    - (6) 72402 Latrobe road –Highway 50 to White Rock Road
2. DOT analysis of additional projects requiring Caltrans involvement

**E. Next Meeting:**

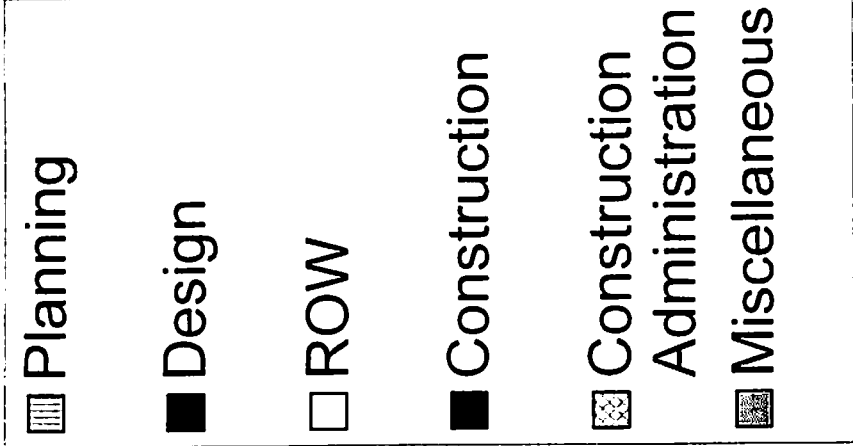
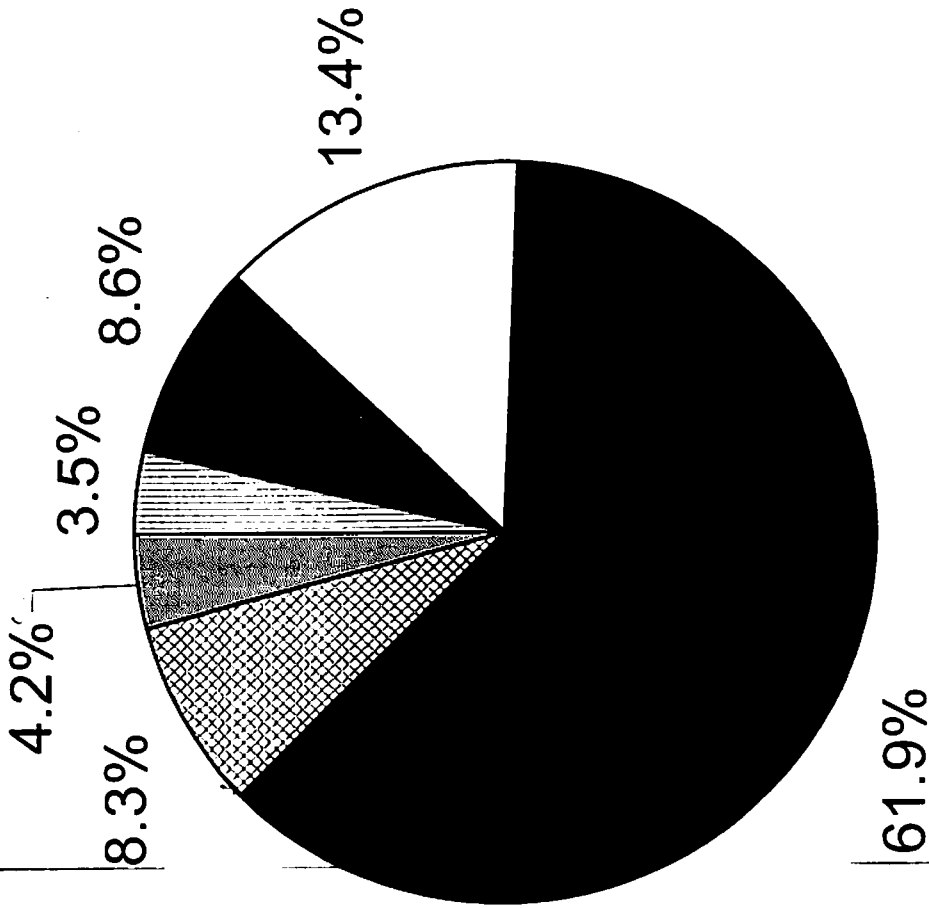
**F. Attendees:**

**EXHIBIT C**

**COUNTY'S ROW COST ANALYSIS  
FOR 30 COMPLETED PROJECT  
FROM 2011**



Average Completed Project Cost by Phase (% of Total Cost)



*Based on sample of 30 completed projects*