

STATE OF COLORADO



DEPARTMENT OF TRANSPORTATION
Contracts and Market Analysis Branch
4201 East Arkansas Avenue, 4th Floor
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COLORADO CONSTRUCTION COST INDEX REPORT Calendar Year 2012 Second Quarter

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SUMMARY

CONSTRUCTION COST INDEX FOR SELECTED HIGHWAY CONSTRUCTION ITEMS

2nd QUARTER ENDING June 30, 2012

Index for this quarter.....	1.0190
Index for last quarter.....	1.0000
Point change from last quarter.....	0.0190
Percentage change from last quarter.....	1.90%

Average number of bidders this quarter.....	4.24
Change in number of bidders from last quarter.....	-15.2%

NOTE: Information shown in this publication uses calendar year 2012 Quarter 1 (ending March 31, 2012)
Index = 1.0000.

Summary for all Design-Bid-Build projects awarded between 4/1/2012 and 6/30/2012

Project Amount	Number of Projects	Number of Bidders	Total Contract Amount	Average Number of Bidders
\$0.00 to \$599,999.99	14	42	\$5,440,630.92	3.00
\$600,000.00 to \$1,499,999.99	12	63	\$13,402,774.25	5.25
\$1,500,000.00 to \$4,999,999.99	18	81	\$51,749,435.11	4.50
\$5,000,000.00 to \$9,999,999.99	5	19	\$31,158,116.70	3.80
\$10,000,000.00 to \$19,999,999.99	1	7	\$12,146,268.86	7.00
\$20,000,000.00 or Greater	0	0	\$0.00	0.00
Total	50	212	\$113,897,225.84	4.24

Average cost per Design-Bid-Build project is \$2,277,944.52.

Colorado Construction Cost Index Tabulations

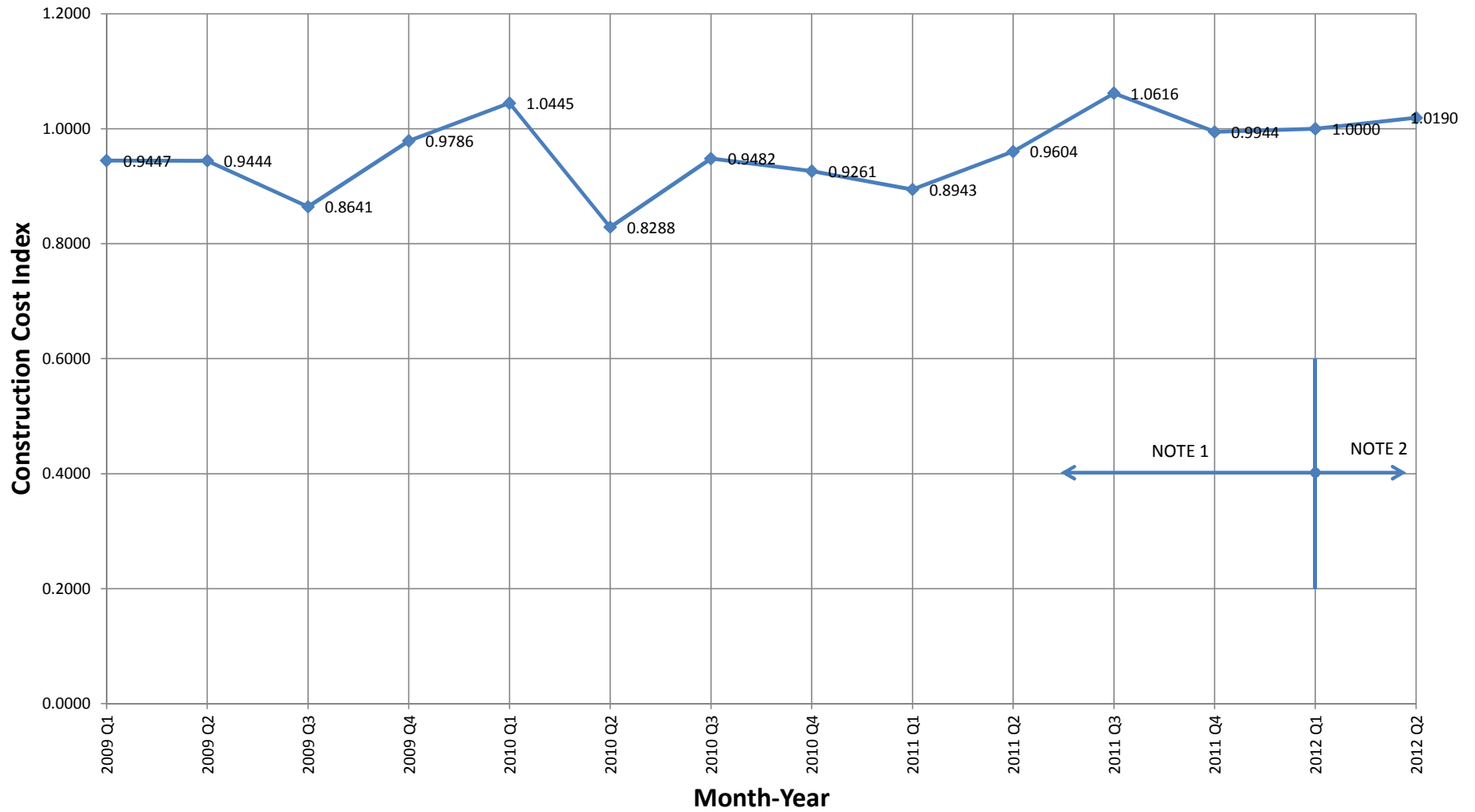
Year	Quarter	Earthwork		Hot Mix Asphalt		Concrete Pavement		Structural Concrete		Reinforcing Steel		Fisher Ideal Index	
		Price (\$)	Qty (CY)	Price (\$)	Qty (TON)	Price (\$)	Qty (SY)*	Price (\$)	Qty (CY)	Price (\$)	Qty (LB)	Relative	Cumulative
2009	Q1												0.9447
2009	Q2												0.9444
2009	Q3												0.8641
2009	Q4												0.9786
2010	Q1												1.0445
2010	Q2												0.8288
2010	Q3												0.9482
2010	Q4												0.9261
2011	Q1												0.8943
2011	Q2												0.9604
2011	Q3												1.0616
2011	Q4												0.9944
2012	Q1	9.32	295331.00	83.52	611829.00	29.47	459695.83	433.44	7636.00	0.88	1956874.00		1.0000
2012	Q2	10.61	367636.10	82.65	328357.21	31.18	264194.31	472.96	5910.00	0.97	833101.00	1.0190	1.0190

Weighted average prices and quantities are calculated after outliers (< 5% and > 95%) are removed in the preceding 7 years for a given quarter.

NOTE: Grayed out data (2009 Q1 through 2011 Q4) are calculated from previously published data with 1987 as base year, rebased to 2012 Q1 = 1.0000.

* Concrete Pavement is normalized to 9 inches thick.

Colorado CCI - Second Quarter (Ending June 30, 2012)



NOTE 1: Data between 2009 Q1 and 2011 Q4 are calculated from previously published data with 1987 as base year, rebased to 2012 Q1 = 1.0000.

NOTE 2: Data from 2012 Q1 and after are calculated using Fisher Ideal Index.

Comments:

This Colorado Construction Cost Index is composed of five sub groups of items and uses calendar year 2012 Quarter 1 (ending March 31, 2012) Index = 1.0000.

Earthwork (Excavation and Embankment):

The average price was \$10.61/CY which is up \$1.29/CY from the previous quarter.

Hot Mix Asphalt:

The average price was \$82.65/TON which is down \$0.87/TON from the previous quarter.

Concrete Pavement:

The average price was \$31.18/SY which is up \$1.71/SY from the previous quarter.

Structural Concrete:

The average price was \$472.96 /CY which is up \$39.52/CY from the previous quarter.

Reinforcing Steel:

The average price was \$0.97/LB which is up \$0.09/LB from the previous quarter.

ADDITIONAL INFORMATION:

For the 2nd quarter, four sub groups, Earthwork, Concrete Pavement, Structural Concrete and Reinforcing Steel showed an increase in price while one sub group, Hot Mix Asphalt, showed a decrease in price.

This quarter, 50 Design-Bid-Build projects for a total of \$113,897,225.84 were bid and awarded. The five categories for CCI items totaled \$42,880,222.58 which is 37.6% of total Design-Bid-Build awarded amount. By comparison, last quarter, 45 Design-Bid-Build projects were bid and awarded.

The competition for projects decreased to 4.24 bidders from 5.00 bidders for each project on average.

There were 0 Modified Design-Build (MDB) and 0 Construction Manager / General Contractor (CM/GC) projects bid and awarded this quarter. By comparison, last quarter, 2 MDB projects and 0 CM/GC projects were bid and awarded.

MEMORANDUM

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CDOT's Methodology for Preparing the Colorado Construction Cost Index (CCI)

Engineering Estimates and Market Analysis Unit (EEMA)

Contracts and Market Analysis Branch (CMA)

November 29, 2012

Fixed weighting factors have historically been used in computing the Colorado Construction Cost Index (CCI). These weighting factors represent the quantity levels of each sub group in a pre-determined time period called the base period. One of the limitations of this approach is that it usually overstates the impact of price increases and understates the impact of price decreases as the current period moves further away from the base period. To solve this problem, the base period is reset from time to time. For the Colorado CCI, the base period was usually reset every 10 to 15 years. The last reset was in 1987, 25 years ago.

In the July/August 2011 issue of Public Roads, Karen White and Ralph Erickson from FHWA published an article, "New Cost Estimating Tool", introducing the new National Highway Construction Cost Index (NHCCI). The new methodology adopts the Fisher Ideal Index, which takes the weights of both the base period and the current period into account. By doing so, Fisher Ideal Index has the ability to accommodate the effects of substitutions. In other words, the effects of changes in pay items and in quantities in a sub group are considered as they happen, instead of doing a major reset once every several years. In addition, a statistics-based method was adopted to remove outliers, those data points that fall outside of the 5th and 95th percentile of a given sub group by using the preceding 7-year data for any given quarter.

EEMA has carefully studied FHWA's new methodology and believed this is a major improvement in calculating the CCI.

Currently, the NHCCI is a composite index calculated by using all "qualified" items, while in Colorado we have been using the major sub groups of items to construct the composite index from the very beginning. EEMA considers this approach to be valuable so we continued this tradition. Composite index is constructed based on the weighted average prices and quantities of sub groups.

Sub groups are reduced to 5 from 6, with the Structural Steel group dropped. The weight of Structural Steel in the annual cost is less than 1% in recent years, down significantly from near 10% about 50 years ago. For the existing groups, namely, Earthwork, Hot Mix Asphalt, Concrete Pavement, Structural Concrete, and Reinforcing Steel, pay items used in the calculations are adjusted as pay items are added and deleted as technology and specifications change with time.

The new method calculates relative changes between two neighboring quarters. The cumulative changes between any given two quarters are calculated by multiplying all the successive relative changes in between.

For convenience, not as a “base period”, the composite index for the 1st quarter of 2012 was set to 1.0000. For the purpose of continuity, for those users who use multi-quarter moving average, the previous quarterly data points are provided all the way back to the 1st quarter of 2009. These data were calculated from previously published results by using the old way of calculating the CCI, but rebased to 1st quarter 2012 as 1.0000.

It should be noted that the new way of preparing the Colorado CCI does not solve the problem of fluctuations caused by other factors. Unusual variations in the index may occur due to the wide differences in climate, terrain, and working conditions within the state. So the index must be used with caution.