January 2013 Construction Cost Outlook and Forecast

Jul-2012 POST-FORECAST REVIEW:

The ODOT Construction Cost Index measured inflation for CY 2012 at 6.3%. Most of the growth occurred during the first three quarters of the year, plateauing in the fourth quarter. We attribute 3.5% of the cost growth to increases in commodity inputs and the remaining portion to increases in contractor and supplier margins.

Jan-2013 FORECAST OVERVIEW:

In light of CY 2012 costs escalating 6.3%, we expect construction cost inflation to gradually decline in the next 6-to-12 months. Global growth will continue at a slow pace, driven by the emerging markets of China, India, and Brazil.

Domestic uncertainty persists regarding federal fiscal policy and a rising cost of living. How Congress and President Barack Obama resolve the current tax and spending issues will greatly influence the economy and inflation. Additionally, we expect the Federal Reserve to slow or to stop bond purchases in 2013, which currently amount to $85 billion per month. The market reaction to these events has yet to be seen. Health care costs are also of concern. Several provisions of the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act will become effective in 2014. With increased uncertainty comes increased risk, widening the range of potential inflation.

Given current economic indicators, we anticipate an inflation rate of 5.7% in CY 2013. We expect inflation growth to decline slightly in CY 2014 to 5.5%. However, due to greater uncertainty in CY 2014 we predict a high-range forecast of 10.0%. We predict inflation to peak in CY 2015 at 5.9%, with a gradual decline in CY 2016 (4.5%) and CY 2017 (4.0%). Beyond CY 2017, we expect a long-run construction cost inflation rate of 4.0%.

Table 1: January 2013—5-YEAR CONSTRUCTION COST INFLATION FORECAST

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<tbody>
<tr>
<td>High</td>
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<td>9.5%</td>
<td>7.5%</td>
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<td>5.5%</td>
<td>5.9%</td>
<td>4.5%</td>
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<tr>
<td>Low</td>
<td>3.0%</td>
<td>3.5%</td>
<td>3.5%</td>
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The following is an overview of factors that we believe will influence construction costs over the next five years: the direction of state, national, and global economies; and the cost of regional construction inputs including labor, oil and diesel, liquid asphalt, and steel, among others.
OHIO ECONOMY:

The Ohio economy has been expanding moderately since 2010, picking up considerably in 2012. According to JP Morgan Chase, Ohio’s GDP grew at a rate of 2.8% in 2012, which was faster than U.S. GDP growth (2.2%). Furthermore, Chase forecasts Ohio’s GDP will continue to outpace the national economy in 2013 (3.5%) and 2014 (4.2%).

Residential construction is beginning to pick up both within Ohio and nationally. While the national construction industry has added only 58,000 jobs since its low point in January 2011, the Wall Street Journal is reporting a relatively rosy outlook for 2013 and beyond. In the Cleveland area, contracts for future residential construction increased 9.0% through September 2012. Non-residential contractors also reported improved activity to the Cleveland Federal Reserve and “most were satisfied with backlogs going into 2013.” We expect non-residential construction spending and employment to trend with U.S. GDP. As business activity increases, so will demand for commercial and industrial construction.

U.S. ECONOMY:

The US is currently in a tepid economic recovery. In December, the Federal Reserve lowered their projections of economic growth to between 2.3% and 3.0% for CY 2013, which is down 0.2% from the September projection. Still, much uncertainty exists regarding the progression of the U.S. economy in the upcoming years. In 2013, whether favorably or negatively, the U.S. economy will be affected by fiscal cliff legislation and the implementation of both the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act. Additional uncertainty exists surrounding the implementation of further health care changes slated to begin in 2014. The unresolved debate regarding the debt ceiling, taxes, spending cuts, and other fiscal policy issues continues to plague the economy with uncertainty.

HOUSING: Current indicators point to a sustained housing recovery. After nearly two years of decline in home prices, October marked the fifth consecutive month of year-over-year gains. November also proved to be a positive month for the housing industry; Americans bought new homes at the fastest pace in more than 2 1/2 years. The number of contracts signed to purchase previously owned homes also rose to the highest level in more than two years, while the number of building applications issued rose to a four-year high. Though housing growth has yet to reclaim the ground lost during the recession, there are signs of a housing recovery.

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2 JP Morgan Chase, “Regional Perspectives, Ohio Economic Outlook,” December 2, 2012
U.S. CONSTRUCTION: The construction industry is expected to continue to show signs of improvement. Total U.S. construction starts are predicted to rise 6.0% in 2013.\textsuperscript{10} We project residential and non-residential construction will increase; however, we anticipate public construction will decrease slightly. Construction in the private sector has been boosted by an increase in new home sales, largely because of steady job gains and low mortgage rates. However, the decrease in public sector construction reflects tighter budgets at the state and local level. Even with some bright spots indicating recovery, the construction market has a long way to go to be considered healthy.

INTERNATIONAL ECONOMY:

The global economy is recovering in fits and starts. The Euro currency stayed solvent in 2012 despite facing financial turmoil, mainly in Greece and Spain.\textsuperscript{11} Uncertainty and slow growth in Europe are expected to continue. This will continue to decrease demand for raw materials and hold down the growth of crude oil consumption.

As Brazil is the host nation for the 2014 FIFA World Cup and the 2016 Summer Olympics, global demand for construction materials will be somewhat affected by the required building projects. However, projections have decreased from the initial estimates due to inflation moderating Brazil’s overall growth.\textsuperscript{12}

China’s GDP growth is expected to top 8.0\% in the foreseeable future.\textsuperscript{13} The continued growth means strong demand for scrap steel and petroleum products. Though domestic crude oil prices may dip, prices of refined products are predicted to remain at current levels. Some fluctuation due to global demand is expected.\textsuperscript{14}

Slow growth has also affected raw commodities; surpluses continue to build while prices decline. Overproduction of steel and copper persists due to the regional structure of producers.\textsuperscript{15} The global glut in inventory has not necessarily translated into lower end-user costs. This effect is seen by ODOT’s guardrail price index that has remained relatively unchanged since 2008, though trending slightly downward.\textsuperscript{16}

Japan is intentionally weakening its currency to boost the attractiveness of its exports. In an attempt to spur economic growth, Prime Minister Shinzo Abe has signaled his support of a weaker yen.\textsuperscript{17} The United States imports more than $100 billion in goods from Japan, fourth behind China, Canada, and Mexico. Though most steel used in construction is produced domestically, Japanese steel, equipment, and other commodities will help temper global prices.
KEY CONSTRUCTION INPUT TRENDS:

LABOR: One of the most significant inputs is the cost of labor used to construct each ODOT project. Most workers on ODOT construction projects are covered by union labor contracts with the Ohio Contractor’s Association. These contracts are set to expire on April 30, 2013. Without knowing the outcome of the contract negotiations, we anticipate labor costs to escalate annually between 2.5% and 3.25% during the forecast period.

CONTRACTOR & SUPPLIER MARGINS: Supplier and contractor margins are expected to play a role in inflation once again during the next 12-to-18 months. We predict increased margins to reflect both general uncertainty regarding implementation of health care reform legislation passed in 2010 and Congress’s inability to resolve federal fiscal policy disputes. Between June 2011 and December 2012, the average number of bidders dropped by 14.0% for asphalt contracts and by 8.0% for bridge replacement contracts.\(^{18}\) Though competition is at a four-year low, the market is expected to remain even.

\(^{18}\) The 12-month rolling average number of bidders for asphalt and bridge replacement work-types is compared for June 2011 and December 2012. Source of calculations: The Bid Analysis and Review Team.
Oil and Diesel: Fuel prices are a major cost driver of construction and asphalt production. Oil and fuel prices are expected to remain stable in the near term. The U.S. Energy Information Administration (EIA) forecast is materially unchanged for West Texas Intermediate crude oil (WTI). The prediction remains between $88 and $91 per gallon, a range that coincides with most predictions. Though some sources point to $50 per barrel domestic crude, we view this as highly unlikely. In 2013, we expect to see more domestically produced oil exported overseas.

Transportation and machinery rely on diesel to fuel operations. The EIA predicts retail diesel fuel will cost between $3.50 and $4.00 per gallon in 2013, a slight decline from levels in 2012. EIA forecasts are consistent with the gradually declining crude oil prices predicted for the coming quarters.

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LIQUID ASPHALT: Liquid asphalt and crude oil prices are closely linked. As stated in earlier forecasts, domestic refineries continue to pursue lighter crude inputs that yield less asphalt grade product. Barring unforeseen events, such as a military strike on Iran or further political unrest in the Middle East, liquid asphalt prices are predicted to follow the current trend. Annualized price change is expected to settle between -5% and +15% of 2012 levels. In real dollar terms, prices will remain at the current elevated level.
NATURAL GAS: Domestic production of natural gas is surging. Hence, prices continue a controlled descent. Futures are also at decade-low levels. U.S. firms are investing in the capabilities necessary to export compressed natural gas overseas. Such ventures will take several years to complete and are not expected to affect price levels within the forecast horizon. As natural gas is an input for the production, storage, and application of liquid asphalt, lower gas prices help stabilize production costs. Savings to the asphalt producer will not initially be visible to ODOT. However, over a longer term, market pressure should moderate prices.

STEEL: Steel costs continue to be influenced not only by our domestic market but also by international steel markets. The Wall Street Journal reports that there is a world steel production capacity surplus. Steel prices around the world have dropped throughout 2012. John Anton, IHS Global Insight, states that European and Chinese steel prices are cheaper than current domestic steel prices by $100 and $200, respectively. Anton concludes that the price difference cannot last and U.S. prices will fall in 2013. The Engineering News Record (ENR) projects structural steel prices will fall 14.2% in 2013 and then rise 11.4% in 2014 and another 3.3% in 2015.

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READY MIX CONCRETE (RMC): Though cement, a component of RMC, is impacted by global construction demand, RMC prices are influenced more by regional demand factors. With residential construction growing again, RMC prices are expected to move slowly upward due to this increased demand. We expect RMC prices to increase slowly in the first half of the forecast period (3-4%) until the residential and commercial building markets recover more fully. RMC Prices are expected to move upward more substantially in the latter-half of the forecast period (5-6%).

AGGREGATE: The current oil and gas development within the Utica and Marcellus shale have increased demand for aggregate in Eastern Ohio. Transportation costs for this heavy commodity will typically drive its price, effectively limiting the number of suppliers.

Throughout Ohio, only certain suppliers provide aggregate that meets ODOT’s quality standards. Given the limited competition in many areas, we predict aggregate prices to trend upward throughout the forecast period. In Eastern Ohio, there may be price spikes in the near term as supply is ramped up to meet demand.

FUNDING:

ODOT’s Capital Program anticipates additional funding from the sale of bonds from the Ohio Turnpike. With those additional funds, ODOT’s budget is projected to average just over $2 billion per year through FY 2017. Given anticipated market conditions, the incremental increase in spending will not materially raise construction demand throughout Ohio. Therefore, the potential funds from the Ohio Turnpike bond sale are not expected to have an appreciable impact on ODOT construction inflation.

SUMMARY:

Even with a great deal of uncertainty surrounding national and global economies, the Ohio economy is expected to remain on a steady growth path. We anticipate input cost growth to remain stable or to decline slightly in the near future, resulting in lower construction cost inflation than seen in CY 2012.

Prepared by the Bid Analysis and Review Team, Office of Estimating, Ohio Department of Transportation, January 23, 2013