

Responses to WSDOT Cost/Inflation Estimating Survey – February 2007

Questions sent out to AASHTO/RAC List Serve	1. What do you use for inflation estimating?	2. Do you use a commercial forecast or in-house/agency assumed rates?	3. If using a commercial forecast, what service or product are you using?	4. Are there other approaches you are investigating or feel have merit for transportation capital projects?
Survey Responses				
<p>Alaska Jeff Ottesen Alaska Department of Transportation jeff_ottesen@dot.state.ak.us</p>	<p>We have started to use the FHWA guidance as to inflating to the year of construction on major projects. This is currently 4% per year, which is certainly not consistent with recent inflation we have seen, or that experienced across the US.</p> <p>In the development of a new electronic STIP tool, we hope to have an automatic tie to the "Scope, Schedule and Estimate" sheet prepared for each project, so that as updated SSE sheets are prepared for any given project, the numbers in the STIP are linked.</p> <p>We are currently asking project engineers to update the SSE sheets for projects at the time of each STIP, and each major amendment for the STIP. But these sheets are normally based on an immediate year of</p>	<p>No</p>	<p>NA</p>	<p>Other than what I discuss in the answer to #1, no.</p>

	<p>construction, rather than a delayed year which is often the case as the balancing between costs and funding resources is accomplished. This is a paper intensive process and the quality of and thought that goes into each SSE varies considerably. In short, we are pretty low on the technology curve on this issue.</p>			
<p>Arkansas Ed Hoppe Division Engineer Programs and Contracts Arkansas State Highway and Transportation Department 501-569-2262 ed.hoppe@arkansashighways.com</p>	<p>The Department maintains a Construction Cost Index for highway projects based on the FHWA CCI (1987 base = 100, by quarter past 6 years plus annual back to 1971). In estimating inflation we use the AR CCI in developing the rate. At present we have been using 6% per year inflation to estimate the increase in the cost of construction.</p>	<p>Same as 1.</p>	<p>While we do not specifically use a commercial forecast, we have access to AGC's The Data Digest and trade publications, such as , ENR, Roads & Bridges, Better Roads, etc., that report extensively on the trends and factors relating to highway construction inflation.</p>	<p>The information above relates to estimating for planning/programming purposes such as development of the STIP. PS&E estimate increases are handled on a project basis by the Department's design divisions.</p>
<p>Illinois Jerry D. Cameron Illinois Department of Transportation Jerry.Cameron@illinois.gov</p>	<p>We use a price index from our bidding data</p>	<p>We use a system built in house that calculates an index similar to the federal price index</p>	<p>NA</p>	<p>Risk in Estimating utilizing a task force made up of IDOT and Industry</p>
<p>Iowa Sandra Q. Larson, P.E. Research and Technology Bureau Director Highway Division Iowa Department of</p>	<p>We use a 4.5% annual program cost increase factor, which is an estimate of both inflation and "project scope creep".</p>	<p>In-house/ agency</p>	<p>NA</p>	<p>No</p>

<p>Transportation 515-239-1205 sandra.larson@dot.iowa.gov</p>				
<p>Kansas Dick McReynolds Engineer of Research Kansas DOT dick@ksdot.org</p>	<p>On construction projects, the “Engineer’s Estimate” uses the historical prices for each individual bid item for the region that the project happens to be. They use the TrnsPort software through AASHTO to compile and generate the estimate. The estimators get the “suggested” price for each bid item and they have the discretion of adjusting it. Recent historical prices are used to reflect the current inflation.</p> <p>The basis for the forward look the state uses is Moody's which is used to provide economic data and forecasts including inflation.</p>	Both-see 1.	See 1.	NA
<p>Massachusetts One Hwang Massachusetts Department of Transportation One.Hwang@state.ma.us</p>	<p>I derive my inflation rates from BLS's PPI indices because it's free, but I am hoping that MassHighway will purchase a copy of R.S. Means to explore the possibility of using values more specific to the transportation industry and to our region.</p>			
<p>Mississippi Paul Loper Mississippi Department of Transportation ploper@mdot.state.ms.us</p>	<p>A 3% rate is used for short term project planning. This rate was derived from the methods shown in question #2.</p>	The rate approximates the historical increase in the construction index computed each year by the	Do not use commercial forecast.	A trend line of the Construction Index mentioned will be updated each year. The projection method will utilize a second degree polynomial equation.

		MDOT Construction Division. The computation method for the index is similar to the one used by the FHWA to obtain the price trends for federal aid construction.		
Missouri Travis Koestner, PE TSE - Contract Services Missouri Department of Transportation 573-526-2923	MoDOT uses 4% in its Statewide Transportation Improvement Program (STIP)	MoDOT's Resource Management and Transportation Planning Groups recommend a rate to use based on historical averages from FHWA and PPI rates.	NA	NA
Montana Lesly Tribelhorn, PE Highways Bureau Montana Department of Transportation 406-444-6242 ltribelhorn@mt.gov	We use a straight inflation rate of 3% per year, compounded annually. We inflate the total estimated construction cost after adding in contingencies. (Note: Lesly's perspective is from the engineering end of the process which uses the rate provided by the Planning Office to estimate construction costs)	We use an in-house assumed rate (from Global Insight Inc.) However, we have initiated the process to have an economist within our planning division determine appropriate inflation rates	See below	We have initiated the process to have an economist within our planning division determine appropriate inflation rates based on a market analysis.

		<i>based on a market analysis.</i>		
Montana (continued) Paul Johnson, PE Project Analysis Bureau Montana Department of Transportation 406-444-7259 paujohnson@mt.gov	<p>The Montana Department of Transportation (MDT) utilizes the services of Global Insight Inc. to determine inflationary factors for highway construction costs. The Highway Construction Cost Index provided by Global Insight provides MDT with historical values as well as future forecasts.</p> <p>(Note: Paul's perspective is from the planning end of the process which uses the rate provided by Global Insight, and incorporates current local data)</p>	As mentioned previously, MDT utilizes Global Insight Inc. as a source for inflationary information. Global Insight is considered an official source of economic information for the State of Montana.	The Highway Construction Cost Index provided by Global Insight Inc.	MDT would like to develop a procedure for determining inflationary factors at the state level. (Presently, our best available data source is the national/regional information provided by Global Insight.) Additionally, MDT would like to evaluate the factors that cause our state rate to vary from the national average. However, it would require a substantial reallocation of resources within the department to make this happen. So while we are steering our efforts in this direction, it will take time to see meaningful results.
North Dakota James Rath Design Division North Dakota Department of Transportation 701-328-1722 jrath@nd.gov	4%	In-house assumed rates	NA	None
Oregon John Riedl, PE Senior Cost Engineer Oregon Department of Transportation 503-986-3886	Inflation estimating is performed in house through the ODOT office of economics with Dave Kavanaugh together with information provided by the office of spec's, estimating and office of	The office of economics uses a number of services - including commercial	Cost forecasting for smaller STIP projects is quite different than costs for mega projects as defined by FHWA. ODOT does follow the	The recently developed market sector analysis tool was copied and given to Jay Drye in WsDOT at this years TCCE meeting at AASHTO - he should have

<p>John.J.RIEDL@odot.state.or.us</p>	<p>prelet (SOEPL).</p>	<p>services as well as in house forecasting expertise. Several commercial services are available - I so not have a list but can give you contact names for that information if desired.</p>	<p>CEVP and CRA program protocols to a degree - depending on the order and magnitude of the work and risk. The recent OTIA III program was just evaluated for risk via a multi level risk analysis based upon work type, level of scoping based upon project bundles, market sector analysis of bid trends over the last 3 years and work sector workforce saturation.</p>	<p>a copy available for you.</p>
<p>Saskatchewan, Canada Allan Widger Executive Director, Engineering Standards Branch Saskatchewan Highways and Transportation 306-787-4858 awidger@highways.gov.sk.ca</p>	<p>I received your questions through the AASHTO Committees so decided to respond. I was surprised to receive this question from Washington State since Saskatchewan just had a consultant review our Construction Bid Price Trends and estimating for our Department and most of the information they quoted was from your web site which I had given to them as a good reference. They included it as being one of the best sources of information.</p>	<p>Everybody is having the same problem with increasing construction costs and what to use as inflation rates. Historically there has been a slow continuous increase and predictions of things like bid price trends have been possible. With the cost increases of 50% or more in the last two years we</p>	<p>Saskatchewan has been trying to use the same approach that you do of breaking down the major construction components into the inputs and predicting the inputs such as labour/fuel/materials/equipment cost/profit separately since there does seem to be information available on each of the input factors for our small market.</p>	<p>The Saskatchewan report has temporarily been pulled from our web site http://www.highways.gov.sk.ca/docs/reports_manuals/reports/report_transition.asp but should be posted again in the very near future.</p>

		<i>are asking the same questions you are and have been unable to determine what to expect.</i>		
Texas Jack Foster, P.E. Director, Systems Planning Transportation Planning and Programming Division Texas Department of Transportation 512-486-5024 jfoster@dot.state.tx.us	<i>Currently TxDOT uses four percent as our inflation rate.</i>	<i>TxDOT uses rates derived in-house.</i>	<i>Not applicable.</i>	<i>TxDOT is not currently investigating other approaches.</i>
Virginia John W. Lawson Director of Financial Planning Virginia Department of Transportation 804-786-2454 John.Lawson@VDOT.Virginia.gov	<i>We inflate construction projects to the year of advertisement. If a project is to begin in FY 2010, it would be inflated from the current years estimate by a factor representing the forecasted cumulative growth for fiscal years 2007, 2008, 2009 and 2010. We include an inflation factor for the current year since our project estimating tool is based on historical costs from the prior year. The inflation rates are applied by the agency's cost estimating tool.</i>	<i>We obtain our inflation forecast through the Virginia Department of Taxation. They have worked with Moodys.com to develop a construction forecast for this purpose.</i>	<i>The custom forecast from Moodys.com explained above is a blended forecast based on PPI for transportation construction and materials.</i>	<i>We have looked at using ENR or just the PPI for land transportation, but they have not tracked well for us.</i>
West Virginia Robert Watson ,P.E Budget Division West Virginia Division of Highways 304-558-9623	<i>Federal-Aid Construction Price Index (national values) 10-year rolling average.</i>	<i>In-house</i>	<i>N/A</i>	<i>We are not evaluating any at this time.</i>

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Wisconsin Steven Krebs Wisconsin Department of Transportation steven.krebs@dot.state.wi.u	<i>The Wisconsin Construction Cost Index</i>	<i>In House Agency assumed rate and/or CPI.</i>	<i>Sometimes CPI</i>	<i>We are currently investigating this very question. At this time we don't have information to add.</i>
Washington Aaron Butters Systems Analysis and Program Development Manager Washington State Department of Transportation 360-705-7153 ButterA@wsdot.wa.gov Eric Meale Economics Manager Washington State Department of Transportation 360-705-7942 MealeE@wsdot.wa.gov	<i>WSDOT currently uses a private service to supply this information. The construction forecast assumptions have been taken from an index prepared and maintained by Global Insight. Global Insight is an economics and forecasting consulting firm.</i>	<i>Global Insight provides inflation estimates for 10 years and the last year's inflation rate is used to project to 50 years.</i>	<i>Global Insight Highway Construction Cost Index</i>	<i>In its 2007-09 biennial budget request, WSDOT updated estimates on a project-by project basis to reflect current costs (June 2006). Some project cost updates merely reflect the increased cost escalation of the project from the date of the last estimate, while others also reflect the continued engineering refinement of design details. From there, WSDOT has applied an inflation factor for each of the project phases of Project Engineering, Right of Way, and Construction to year of expenditure, as follows:</i> <ul style="list-style-type: none"> • <i>Project Engineering cost projections include a general measure of inflation (the Implicit Price Deflator for personal consumption).</i> • <i>Right of Way cost growth through 2007 reflect assumptions based on a forecast of the</i>

market value of real and personal taxable property prepared by the state's Economic and Revenue Forecast Council, and for 2008 and beyond, the forecast is derived from a forecast of assessed property value (Puget Sound baseline) prepared by Conway Pederson Economics.

- The construction forecast assumptions have been taken from an index prepared and maintained by Global Insight.*

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