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COMMISSION**

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Memorandum

TO: Partnership Technical Advisory Committee

DATE: March 17, 2008

FR: Theresa Romell, Glen Tepke, and Christina Atienza

W.I.: 1512

RE: Draft Transportation 2035 Local Street and Road Needs and Shortfall Assessment

This memorandum summarizes the draft Transportation 2035 needs and shortfalls for local streets and roads. The draft findings show that the shortfalls, as projected over the Plan, to maintain the existing local streets and roads and system totals \$17 billion (escalated dollars). By comparison, the last Plan identified roughly \$11.6 billion in shortfalls for the same assets, after making an adjustment for escalation. The increase in shortfalls to maintain the existing system is primarily attributable to an increase in the price of paving materials and deferred maintenance expense for streets and roads, and refinement in the methodology used to estimate needs for non-pavement assets.

Draft 25-year local street and road (LS&R) capital maintenance needs, revenues and shortfalls are summarized in the table below:

DRAFT T2035 LS&R 25-YEAR NEEDS, REVENUES, AND SHORTFALLS (In Millions, Escalated)

Region	Pavement Need	NonPavement Need	Total Need	Total Revenue	Total Shortfall	MTS Shortfall	MTS Pavement Shortfall	MTS Non-Pavement Shortfall
Alameda	\$ 2,699	\$ 3,223	\$ 5,922	\$ 2,606	\$ 3,316	\$ 1,735	\$ 514	\$ 1,220
Contra Costa	\$ 2,134	\$ 2,143	\$ 4,277	\$ 2,429	\$ 1,848	\$ 1,043	\$ 355	\$ 689
Marin	\$ 895	\$ 546	\$ 1,441	\$ 577	\$ 864	\$ 396	\$ 222	\$ 174
Napa	\$ 875	\$ 379	\$ 1,255	\$ 403	\$ 851	\$ 361	\$ 289	\$ 73
San Francisco	\$ 1,675	\$ 1,793	\$ 3,467	\$ 2,123	\$ 1,344	\$ 849	\$ 503	\$ 346
San Mateo	\$ 1,343	\$ 1,681	\$ 3,024	\$ 1,503	\$ 1,521	\$ 664	\$ 140	\$ 523
Santa Clara	\$ 3,975	\$ 4,006	\$ 7,981	\$ 4,432	\$ 3,549	\$ 1,374	\$ 858	\$ 516
Solano	\$ 1,415	\$ 1,083	\$ 2,498	\$ 716	\$ 1,782	\$ 776	\$ 386	\$ 390
Sonoma	\$ 2,313	\$ 1,169	\$ 3,482	\$ 1,430	\$ 2,052	\$ 1,021	\$ 673	\$ 348
Total	\$ 17,323	\$ 16,024	\$ 33,347	\$ 16,219	\$ 17,128	\$ 8,218	\$ 3,939	\$ 4,279

“Capital Maintenance” consists of activities that extend the useful life of the roadway asset by five or more years. This category can be further broken down into capital maintenance for pavements and capital maintenance for non-pavement assets (sidewalks, storm drains, traffic signals, curb and gutter, etc.). For the purposes of Transportation 2035, the calculation of the LS&R shortfall only includes the unmet need for capital maintenance and does not include shortfalls for on-going “operations.” LS&R operations include routine maintenance such as pothole filling, street sweeping and striping, and overhead expense. It is assumed in the

Transportation 2035 calculations that LS&R revenues are applied first to the need for on-going operations and once those needs are met, funding is directed towards capital maintenance.

The capital maintenance shortfall is further segmented into the shortfall that exists on the Metropolitan Transportation System (MTS). The MTS is synonymous with the Federal Aid system in the Bay Area, which includes all arterial and most collector routes.

Shortfall Determination Methodology:

Pavement Need – In determining the pavement need portion of the capital maintenance shortfalls, MTC staff used a combination of information on maintenance treatment costs derived from a survey of local jurisdictions and model runs performed on each jurisdiction's StreetSaver® pavement management system database. Average treatment costs were calculated for each of the nine counties and their jurisdictions. The average costs were inserted into a standardized, regional, “best practices” decision tree. The decision tree was then imported into each jurisdiction’s StreetSaver® database prior to running the 25-year unconstrained pavement needs analysis. The costs for pavement maintenance needs were escalated at a 3% annual growth rate. The rate of growth for pavement maintenance costs may be adjusted according to the results of a study on construction costs currently being conducted by an MTC contractor. The 25-year total pavement maintenance need for each jurisdiction was then summed at the county level.

Non-Pavement Need – MTC contracted with Nichols Consulting Engineers to develop a model for estimating Non-Pavement need based on information provided by local jurisdictions on non-pavement asset inventory and useful life. One result of their work was that total regional non-pavement replacement costs can be predicted by the inventory of curb and gutter and streetlights. The total regional non-pavement asset replacement cost was then divided by the average of useful life for each of the major non-pavement asset groups in order to estimate an annual maintenance cost. The regional totals were then divided into city non-pavement need and county non-pavement need. The city need was distributed across all jurisdictions based on relative population share and the county need was distributed across the unincorporated jurisdictions based on total lane mileage. San Francisco was considered as a city only.

Local Bridge Need – Staff does not have an estimate of the 25-year local bridge need at this time. MTC contracted with the consulting firm, Cambridge Systematics, to assist with the development of the local bridge shortfall estimates. Bridge maintenance needs data will be based on information derived from Caltrans’ Pontis Bridge Management System software. Transit bridge maintenance needs are included in the transit capital replacement needs.

Revenue – Information from the jurisdiction surveys was used to determine revenues for LS&R maintenance derived from local and county sources, as well as to determine the categorical split—pavement maintenance, non-pavement and operations/other—by which each jurisdiction expends revenues available for LS&R maintenance. For the local and county generated revenue sources, an annual average was determined based on five years worth of each jurisdiction’s budget data. The annual average was then split by expenditure category and grown over the 25-year period. The growth rate used for locally generated revenue was 2.34% (based on information derived from historical state controller data) and the growth rate used for countywide sales tax measure revenue was based on information provided by the county sales

tax authorities. Projections of revenue that will be derived from the state gas tax subvention, Proposition 42, and Proposition 1B were prepared by MTC and split between expenditure categories according to the information provided by each jurisdiction on their survey. The nominal growth rate for gas tax revenue is approximately 1.2% annually, and for Proposition 42 funding, about 5% annually. It was assumed that the remaining Proposition 1B funding that each jurisdiction is eligible to receive after FY 2007/08 would be distributed in even increments over a five-year period. No growth rate was applied to Proposition 1B funding.

Regional Investment Discussion:

During development of Transportation 2030, the Partnership underwent a lengthy process to determine levels of regional investment in the capital maintenance of the LS&R and Transit systems. For LS&R, it was determined that the MTS was regionally significant and the maintenance shortfall on that system would represent the level for regional investment.

Currently, the maintenance shortfall that exists on the newly defined MTS is approximately 50% of the total shortfall, or more than \$8 billion, and may be too large to represent the regional investment commitment. As a reminder, after Transportation 2030 was adopted, the Partnership Board endorsed an expanded MTS to encompass the full Federal-Aid system in the region. Other ideas for prioritizing segments of the LS&R network in order to determine an appropriate regional investment level include 1) Only funding the capital maintenance shortfall in the pavement category; 2) Funding only a portion of the MTS; or 3) Investing at a level that will allow the region to achieve a certain Pavement Condition Index (PCI) on the MTS. For example, the Local Streets and Road Strategic Plan established a PCI goal of 75 on the MTS.

There will be an opportunity to have policy discussions about levels of regional commitment to the existing network as part of the Transportation 2035 trade-off discussions in late Spring. The data as well as some preliminary policy considerations are provided for you today for your feedback.