



Legislation Text

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TO:

Honorable Mayor and Members of the City Council

THROUGH:

Bruce Moe, City Manager

FROM:

Erick Lee, Public Works Director
Katherine Doherty, City Engineer
Adilia Miller, Senior Civil Engineer

SUBJECT:

Consideration of 2021 Pavement Management Program Final Report (Public Works Director Lee).

RECEIVE AND FILE

RECOMMENDATION:

Staff recommends that City Council receive and file the final report for the 2021 Pavement Management Program update.

FISCAL IMPLICATIONS:

There are no fiscal implications to receiving and filing this report. Projects identified in the report for street rehabilitation in order to maintain or improve the overall condition of the streets and alleys in the City of Manhattan Beach will be incorporated into future Capital Improvement Program budgets.

BACKGROUND:

The City of Manhattan Beach (City) is responsible for the repair and maintenance of approximately 100.1 centerline miles of streets, of which 8.0 miles are arterials, 7.6 miles are collectors, and 84.5 miles are residential roadways. Street pavement is considered the City's most valuable asset, with the replacement value estimated to be approximately \$99.3 million. This is calculated by combining each street section's projected reconstruction cost, excluding the value of other non-pavement street components such as curb and gutters, sidewalks, drainage, etc.

Similar to assessing the maintenance needs of a building, a Pavement Management Program (PMP) is a planning tool that utilizes engineering software to assess and forecast pavement maintenance needs and assist in budgeting for street rehabilitation work. In essence, the PMP provides the qualitative information needed to assess the condition of all City streets so that staff can prioritize roadway repairs that maximize preservation of this infrastructure in the most cost effective manner.

The California Street and Highway Code Section 2108.1 mandates that every city receiving funding under the State Transportation Improvement Program develops a PMP to manage its local streets. Los Angeles County Metropolitan Transportation Authority (Metro) Proposition C Local Return

Guidelines also require each City to assess its pavement condition every three years in order to remain eligible for funding. The City's last update was conducted in 2018.

DISCUSSION:

Nichols Consulting Engineers (NCE) was selected by the City in 2020 to perform an update to the PMP. For the 2021 PMP update, the City's entire vehicular street network was inspected via a semi-automated inspection method in compliance with American Society for Testing and Materials (ASTM) D6433-18, the standard for determining the condition of pavement. (The walking inspection method was performed in the 2018 PMP Update). The most recent inspection was completed between December 2020 and March 2021 and a report was submitted to the City in September 2021 for final review and approval. The report included a complete inventory of the Pavement Condition Index (PCI) for every vehicular street in the City. Pedestrian streets are not part of this update, as the scope of this project focused on areas that accommodate vehicular traffic only.

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100, with 100 being best. The following categories are typically used within the standard PCI range:

0-24 Very Poor (Category V): reconstruction may be needed

25-49 Poor (Category IV): thick overlays used

50-69 Good (Category II or III): thin overlays used

70-100 Very Good (Category I): preventive maintenance used (e.g., slurry)

Pavement condition is primarily affected by climate, traffic loads and volumes, construction materials used and age. A newly constructed street will have a PCI of 100, and in general, streets with a PCI above 70 are considered in Very Good condition and show little surface distress. PCI scores of 50 - 69 are considered in Good condition and show medium levels of distress that include longitudinal and/or transverse cracks, minor rutting and raveling with signs of weathering, and the pavement structure progressively becoming deficient. PCI scores of 25 - 49 are considered Poor and include pavements exhibiting moderate to severe surface distress, including alligator cracking, rutting, and potholes. PCI scores of 0 - 24 are considered Very Poor, with pavement exhibiting severe distress as it nears the end of its service life.

The City's average weighted (by area) PCI is 70; this is considered to be in a Very Good condition and is slightly higher than the statewide average of 66. The color-coded map attached depicts the Street PCI Ratings for all streets in the City (see attachment). The overall goal of the City is to: 1) maintain an average PCI above 80 and 2) clear the backlog of low-rated streets. This is accomplished by balancing the need to address failing streets while also ensuring sufficient funds are allocated to preserving streets in the Good range.

The City's projected paving budget needs for the current 5-Year Capital Improvement Plan (CIP) total \$8.85 million and are broken down by fiscal years (FY) as follows:

FY 21/22 - \$1.250 million

FY 22/23 - \$2.350 million

FY 23/24 - \$1.450 million

FY 24/25 - \$2.350 million

FY 25/26 - \$1.450 million

These amounts include yearly allocations from Streets and Highways, Prop C, Measure R, and Measure M Funds. The projected Biennial Slurry Seal Program budget needs are: FY 21/22 \$970,000 and FY 23/24 \$770,000, which includes allocations from Gas Tax for preventive maintenance work. At this funding level, the network PCI is projected to increase to 73 and be maintained at that level for the next five years. Similarly, deferred maintenance costs will decrease from \$18.8 million (present value cost of streets to be rehabilitated) to \$17.0 million in FY 2027/28. Reaching the City's goal of achieving an average PCI of 80 (or above) will require an annual 5-year paving budget of approximately \$3.2 million, which is higher than the current annual allocation.

For the upcoming CIP years, staff will propose to City Council that street rehabilitation efforts continue to focus on: 1) the streets depicted in Category IV (Poor) and Category V (Very Poor) conditions in the attached Current PCI Condition map, and 2) continuation of the Biennial Slurry Seal Program to help maintain higher PCI values.

On March 2, 2021, City Council awarded a Design Service Agreement to Kreuzer Engineering for the design of the Street Resurfacing Cycle 2 Project to rehabilitate streets in Categories IV and V. These planned improvements will help raise the City's average PCI and upgrade a significant portion of the Categories IV and V streets.

PUBLIC OUTREACH:

No public outreach was conducted in preparing the PMP Report. However, as CIP Street Resurfacing Projects are designed and constructed, the public will be engaged through outreach notification materials and public meetings.

ENVIRONMENTAL REVIEW:

The City has reviewed the proposed activity for compliance with the California Environmental Quality Act (CEQA) and has determined that the activity is not a "Project" as defined under Section 15378 of the State CEQA Guidelines; therefore, pursuant to Section 15060(c)(3) of the State CEQA Guidelines the activity is not subject to CEQA. Thus, no environmental review is necessary.

LEGAL REVIEW:

No review is required for this report.

ATTACHMENTS:

1. Final Report - 2021 Pavement Management Program
2. Current PCI Condition Map