



CITY OF CARSON

Legislation Text

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Report to Mayor and City Council

Tuesday, September 01, 2020

Consent

SUBJECT:

UPDATE ON CITY'S ANNUAL SLURRY SEAL PROGRAM (CITY COUNCIL)

I. SUMMARY

At the request of the City Council, this staff report provides an update on the status of the City's Annual Slurry Seal Program and background information about how the Maintenance Zones for work are selected each year.

II. RECOMMENDATION

1. RECEIVE AND FILE.

III. ALTERNATIVES

Take another action the City Council deems appropriate consistent with the requirements of the law.

IV. BACKGROUND

The City of Carson is responsible for the repair and maintenance of approximately 203.1 centerline miles of streets of which 49.2 miles are arterials, 5.7 miles are secondary arterials, 18.1 miles are collectors, and 130.1 miles are residential streets. Streets or pavements are one of the City's most valuable assets, and it's always the City's goal to keep this infrastructure in good and safe condition at all times.

In January 2017, NCE completed a Pavement Management Program for the City. The program provides recommended repairs, preventive maintenance schedule, and corresponding costs to improve the City's overall roadway system network. It determines the overall condition of the city-maintained streets, provides the Pavement Condition Index (PCI) of every street and highlights options for improving them. The PCI is a measurement of pavement grade or condition that ranges from 0 to 100. A newly constructed street will have a PCI of 100, while a failed street will have a PCI of 25 or less. The pavement

condition is primarily affected by the climate, traffic loads and volumes, construction materials, and age.

The PMP provided the maintenance and repair strategies to the City, which included the selection of appropriate treatment such as surface slurry seals or overlays, and the determination of unit cost based on the most recent bid tabs, which includes all related engineering/design cost and construction cost.

In general, when the City has utilized surface treatments such as slurry seal when the pavement is in good condition, this type of treatment is usually considered “preventive maintenance”. When pavement condition deteriorates to lower levels, overlay and reconstruction have been performed and these treatments are considered “rehabilitation or reconstruction”.

The City has been utilizing rubberized slurry seal on city streets due to its superior benefits over conventional slurry seal in preventing deterioration of the existing pavement. Application of rubberized slurry seal is the best-cost effective approach extending pavement life, preserving structural capacity, and providing quality service to the traffic. Slurry Seal is a pavement surface treatment, used for streets, parking lots, shopping malls pavement and other high-traffic, low-speed pavement surfaces. Slurry Seal replenishes the pavement surface while providing a uniform black slip-resistant durable surface, and significantly extends the life of existing pavements by protecting the under-surface from damage caused by water seepage, adding another approximately 7-10 years in the life of the pavement. With one simple application, existing pavement receives a new wearing surface of uniform texture. Enhanced surface appearance helps increase property value in the neighborhood.

Each year the City performs slurry sealing and makes its best effort to implement the street maintenance needed to maintain the integrity of the City’s infrastructure. The Slurry Sealing is a 10-year cycle program between the City’s seven Maintenance Zones. Selection of the streets to be slurry sealed is based on the data contained in the PMP. Each street segment in the PMP is assigned a corresponding Pavement Condition Index (PCI) that indicates the treatment needed to maintain structural integrity. Residential and collector streets in fair and good conditions with PCI between 62 and 75 are recommended for slurry sealing. In other words, it costs much less to maintain streets in good condition than to repair streets that have failed.

Currently, the City has an annual budget of approximately \$900,000 for slurry sealing of city streets as listed in the City’s Capital Improvement Program (CIP). Streets in need of immediate attention based on the City’s PMP are given a higher priority, and staff makes its best effort to implement the maximum slurry sealing within the allocated budget.

By sustaining the current annual budget of \$900,000 for slurry sealing, the City can meet the recommended cycle of 7-10 years for those streets that are still in good enough condition to benefit from this treatment.

Per the completed PMP, there are approximately 18,000,000 s.f. of roadway surface area in the city that needs to be slurry sealed. The City performs slurry sealing annually and has completed approximately 5,500,000 s.f. of roadway surface area.

For this year FY 20/21, the city will slurry seal the following area:

- Maintenance Zone Nos. 4 and 5 (portion) - bordered by the 405 Freeway, Wilmington Avenue, 213th Street, 223rd Street and Bonita Street. Also included is the following four City Parks parking lots: Del Amo Park (CIP Project No.1401), Stevenson Park (CIP Project No. 1410), Dominguez Park (CIP Project No. 1417), and Calas Park (CIP Project No. 1418), given that these parking lot areas are also in need of the same surface treatment. The approximate square footage of to be slurry sealed is 1,800,000 s.f.

A location map and list of street names for FY 20/21 slurry sealing is attached as Exhibit No. 1.

For next year FY 21/22, the city will slurry seal the following area:

- Maintenance Zone 1 - bordered by Rainsbury Avenue, Bitterlake Street, Central Avenue, Victoria Street, with an approximate square footage of 400,000 s.f.
- Maintenance Zone 5 - bordered by Figueroa Street, Torrance Boulevard, Bonita Street, and 223rd Street, with an approximate square footage of 1,500,000 s.f.

A location map of the area to be slurry sealed in FY 21/22 is also shown in Exhibit No. 1.

In prior years (Fiscal Years 2013-2019), the City has completed the slurry sealing of the following area:

- Maintenance Zone 1 - bordered by the 91 freeway to the south, Billings Drive, 169th Street, and Margay Avenue, with an approximate square footage of 1,250,000 s.f. A location map and list of street names are attached as Exhibit No. 2.
- Maintenance Zone 3 - bordered by 405 freeway on the north, Avalon Boulevard, Figueroa Street and Sepulveda Boulevard. Also included as part of this project was Turmont Street between Fairman Drive and Central Avenue. The total approximate square footage sealed was 800,000 s.f. A location map and list of street names are attached as Exhibit No. 3.
- Maintenance Zone 2 - bordered by the 405 freeway on the south, Main Street, Victoria Street, Avalon Boulevard, 189th Street, with an approximate square footage of 1,600,000 s.f. A location map and list of street names are attached as Exhibit No. 4.

By undertaking a program of planned pavement maintenance such as slurry sealing, considerable savings in rehabilitation costs may be achieved. The pavement surface will remain sound, usable, and safe. Extensive downtime needed to repair deep cracks and

potholes will be reduced or eliminated.

However, it is important to note that streets that require slurry sealing are only a portion of the City's roadways. To prevent the decline of the PCI, the City will need to invest more in street rehabilitation and reconstruction. Staff will return in a future meeting to discuss possible strategies to accomplish this.

V. FISCAL IMPACT

None, this staff report is for information only, no funding is requested as part of the report.

VI. EXHIBITS

1. Location Map - On-going & Future Slurry Sealing, FY 20/21 and FY 21/22 (pgs. 5-8)
2. Location Map - Completed Slurry Sealing, FY 13/14 (pgs. 9-13)
3. Location Map - Completed Slurry Sealing, FY 16/17 (pgs. 14-17)
4. Location Map - Completed Slurry Sealing, FY 18/19 (pgs. 18-20)

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