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## PROJECT NAME: Citywide Street Overlay and Slurry Seal Program

<u>PURPOSE</u>: The City's Pavement Management Program provides annual maintenance and rehabilitation on public streets while considering available funding. The Program allows the City to maintain its street network both in the short and long term. The goal is to address all streets in a comprehensive manner to maintain an overall level of road serviceability while extending the life of our streets in a cost-effective manner.

The City of Encinitas manages 168 centerline miles of publicly owned and maintained streets. Streets are one of the City's most valuable assets with a replacement value estimated at approximately \$428 million (taken from the 2020 Citywide Pavement Survey Update).



### 1. What does a Pavement Management Program do?

Goal #1	Goal #2	Goal #3	Goal #4
<ul> <li>Inventory management of all streets maintained by the City.</li> </ul>	Document all maintenance and rehabilitation treatments performed by the City.	• Document existing and historical pavement condition data.	• Generate a list of streets for the City's annual pavement project based on existing conditions and available funding.

The City's Pavement Management Program includes 4 main goals:

### 2. How are the streets evaluated for resurfacing?

The process starts with an inventory of assets, also known as a Pavement Condition Survey. The City performs a Pavement Condition Survey approximately every 5 years. A consultant is hired to evaluate all public streets. Different types of pavement distress are observed and quantified, such as the severity and frequency of cracks. This data is then uploaded to the City's pavement management software, StreetSaver, which interprets the data and generates a rating from 0 (failed street) to 100 (street in excellent/new condition). We call this rating the Pavement Condition Index, or PCI for short. A PCI is determined for every public street segment in the City. The City conducted its last pavement condition survey in 2020.



### 3. How are the streets prioritized for resurfacing?

To prioritize street resurfacing, the PCI is used in conjunction with other factors, such as traffic volume, road type, maintenance history, other ongoing construction projects, proximity to other streets in need of resurfacing, and available funding. The City's Pavement Management Software then prioritizes the street sections based on a cost/benefit and budgetary analysis. This cost benefit value method provides an objective way to compare the needs of the City's street network and ensures that the decisions are made in the City's overall best interest. The list of streets for each annual pavement project is published and approved by City Council prior to the project's advertisement for construction bids.

### 4. Why is my street not on the resurfacing list?

Unfortunately, the need for surface treatment is greater than can be met by available funds. The City's Pavement Management Software generates an annual resurfacing street list with corresponding treatments that allow the City to get the most "bang for the buck" in order to best maintain the City's pavement network. However, as streets are resurfaced the data in StreetSaver is updated, watch for your street on future resurfacing project lists.

### 5. Why is a street in better condition receiving resurfacing before my street?

Proper maintenance extends the life of your car, house, and street. If a street is resurfaced while still in relatively good condition, the street will continue to function properly for many years. It is important to protect the City's investment in its street system and maintain streets before they deteriorate beyond simple repair. Streets requiring full reconstruction or rehabilitation are very expensive. The City utilizes cost-effective maintenance strategies such as slurry seals to prolong the service life of streets still in good condition.

### 6. How does the PCI rating impact the type of street resurfacing?

The PCI is very instrumental in determining what treatment is selected for each street. Typically, streets with PCI ratings above 70 are in very good to excellent condition. Streets in this category are generally treated with a minor surface treatment that focuses on rejuvenating and sealing the road, such as slurry. Streets that have a PCI rating between 25 and 70 are in poor to good condition and are typically treated with a new asphalt paving layer, often referred to as an overlay. Streets that have PCI ratings below 25 are considered in very poor or failed condition and may require more extensive street reconstruction.

7. What are the types of street resurfacing?



# **Asphalt Overlay**

- Constructs a new layer of asphalt on top of the existing street surface at a thickness of 1.5-2 inches.

- Streets are ground down (milled) before resurfacing so asphalt will not build up at the gutter or edge.

- The depth of a mill and overlay is often dependent on the functional class of the street and the current condition it is in.

- Typically, residential roads receive a 1.5" overlay while collector and arterial streets receive a 2" overlay.

- This type of treatment raises a street's PCI to 100.

# <image>

# **Slurry Seal**

- A pavement preservation method consisting of asphalt emulsion and aggregate.

- This is applied to the street surface at an average thickness of ¼ of an inch.

- This cost-effective maintenance treatment extends the life of streets already in good condition.

- A slurry seal creates a new road surface and helps seal the asphalt from water in order to prolong its service life.

- A slurry can raise a street's PCI anywhere from 10 to 15 points.

### 8. How much does it cost to resurface our streets?

The cost of street improvements can vary greatly depending on the type of improvement needed, which is determined by the existing pavement condition, its structural strength, traffic, and other factors. It costs much less to maintain a street that is in good condition than it is to rehabilitate a street that is in poor condition. There is a direct correlation between treatment cost and pavement condition. On average, a mill and overlay can cost 8-14 times more than a slurry seal. Meanwhile, a full street reconstruction can cost 40 times more than a slurry seal and 3 times more than a mill and overlay.



### **Cost to Maintain Streets Over Time**

(Unit prices taken from the 2020 Citywide Pavement Survey and Update Report)