

PAVEMENT MANAGEMENT PROGRAM

As the City of San Marcos grows, so does the number of lane-miles added to the city's roadway system. Over the last 10 years the number of lane miles in the city has grown from 331 to 433 lane-miles of pavement. It would cost over \$62.7 million to resurface all of the City's roadway system.

Since 2009, the City of San Marcos has utilized a pavement management program designed to analyze and identify maintenance schedules for the City's roadway system. The goals of which are:

- Reduce maintenance/repair costs
- Extend the pavement life
- Minimize costly reconstruction costs
- Create predictable maintenance budget schedules

The City's pavement management program focuses on preventative maintenance. The most cost-efficient approach to correct any street deficiency is to address the issue before the street requires costly repairs or reconstruction. According to American Association of State Highway and Transportation Officials (AASHTO), reconstructing roads after they've deteriorated can cost more than three times the cost of preventative maintenance.

Assessment:

Every three years, the Streets Division of the Public Works Department contracts with an engineering firm to conduct a comprehensive automated pavement imaging scan of the entire street network within the city limits. The imaging scan is completed by a special vehicle equipped with a laser road imaging system that identifies pavement distresses such as:

- Alligator cracking
- Bleeding
- Block cracking
- Bumps and sags
- Corrugations
- Depressions
- Edge cracking
- Longitudinal and transverse cracking
- Patching
- Potholes
- Rutting
- Shoving
- Slippage cracking
- Swelling
- Raveling
- Weathering

The last street condition assessment was conducted in 2020. The Streets department is contracted with Applied Research Associates to conduct a new assessment in 2023.

The data collected during the assessment is uploaded into “PAVER”. PAVER is the city’s pavement management software. This software uses American Society for Testing and Materials (ASTM) D-6433-03 standards for Pavement Condition Index (PCI) calculation. Each segment of roadway is assigned a score of 0-100 based on its condition. The PCI can then be used to identify which roadways need work and the type of work required.

The pavement management program is focused on streets with a PCI rating of 100 -41. Segments in this PCI range are suitable candidates for maintenance activities. Streets with a PCI of 40 and below are candidates for complete reconstruction and are referred to Capital Improvements.

PCI SCORES	RATINGS
100 – 81	Excellent
80 – 61	Good
60 – 41	Fair
40 – 21	Poor
20 – 0	Failing

Maintenance Program Schedule:

PCIs are aggregated by neighborhood to schedule work by neighborhood in order to reduce the mobilization costs and reduce disruptions to the neighborhood. Once a draft plan is completed, the draft is sent to multiple departments and utilities including the Capital Improvements/Engineering Department, Planning & Development Services, SMTX Utilities Department, and Centerpoint Energy for review of potential conflicts. Streets identified for construction within 5 years are removed from the 5-Yr Maintenance Plan. This coordination ensures that the streets are not reconstructed twice in a short period of time.

Once comments are received the plan is adjusted as necessary and the final plan is uploaded to the City website. The plan can be view at <http://sanmarcostx.gov/306/StreetsSidewalks>

The City’s 5-Year Street Maintenance Plan goal is to prevent and defray costs for complete road reconstruction through timely and purposeful maintenance practices.

If you would like to submit comments on the 5-Yr Street Maintenance plan, please do so by emailing the Public Works Department at pw_info@sanmarcostx.gov