APPROVED
SUMMARIZED MINUTES

CITY OF SCOTTSDALE
TRANSPORTATION COMMISSION
REGULAR MEETING

Thursday, October 21, 2021

Meeting Held Electronically and Remotely

CALL TO ORDER

Chair Iacovo called the regular meeting of the Scottsdale Transportation Commission to order at 5:49 p.m. Chair Iacovo invited Commissioner Wilcoxon to introduce himself. Commissioner Wilcoxon provide a brief bio and introduction. Chair congratulated Commissioner Lall for being appointed to his second term.

ROLL CALL

PRESENT: Pamela Iacovo, Chair
Don Anderson, Vice Chair
Karen Kowal
B. Kent Lall
Mary Ann Miller
Kerry Wilcoxon
Andy Yates

STAFF: David Smith, Traffic Engineer Senior
Shayne Lopez, Transportation & Streets Paving Manager
Phil Kercher, Traffic Engineering Manager
Mark Melnychenko, Transportation & Streets Director
Dan Worth, Executive Director Public Works

GUESTS: Brendan Russo Ph.D., P.E., Associate Professor, Department of Civil Engineering, NAU

PUBLIC COMMENT

There were no commissioner comments.

1. APPROVAL OF MINUTES

Typographical errors were identified.

COMMISSIONER LALL MOVED TO APPROVE THE REGULAR MEETING MINUTES OF THE TRANSPORTATION COMMISSION ON SEPTEMBER 16, 2021 AS AMENDED. VICE CHAIR ANDERSON SECONDED THE MOTION, WHICH CARRIED 7-0 WITH CHAIR IACOVO, VICE CHAIR ANDERSON, COMMISSIONERS KOWAL, LALL, MILLER, WILCOXON AND YATES VOTING IN THE AFFIRMATIVE WITH NO DISSENTING VOTES.

2. MEDIAN OPENING ANALYSIS

David Smith, Senior Traffic Engineer, and guest Brendan Russo Ph.D., P.E., Associate Professor, Department of Civil Engineering, NAU, presented this item. Mr. Smith discussed the comparison between the raised median left-in/left-out (LILO) treatment versus an untreated full access intersection. A LILO is typically applied on arterial roadways with medians and consisting of a channelizing island in the median, which helps direct vehicles turning left both onto and out of minor streets or driveways. There are at least 60 LILOs throughout the City.

Mr. Russo reviewed study objectives:

- Conduct a crash analysis of existing LILO sites in Scottsdale to assess the overall safety performance of the LILO treatment
- Analyze factors associated with crash frequency and/or severity at LILO sites to assess what conditions may be most conducive to LILO treatments

Crash Modification Factors (CMF) are used by agencies to estimate the expected change in crashes after specific treatment is applied. If the CMF is less than 1 for a specific treatment, the treatment is expected to reduce crashes. At greater than one, an increase in crashes would be expected. Currently no CMFs exist for LILO median treatments.

Mr. Russo stated that for this analysis, the City provided crash data from 2000 through 2019, including all crashes occurring within 300 feet from each site both on LILO treatment sites as well as the control sites. Data collection geometry and volume data collection methods were reviewed. Overall findings indicate that the LILO treatment seems promising in terms of safety performance. There were significant reductions in angle and left-turn crashes as well as differing levels of injury crashes. Future applications could be considered at generally similar sites. There were statistically significant results in terms of specific design features. It is anticipated that results from this report will be disseminated to the transportation community through publishing and presentation at conferences such as the annual meeting of the Transportation Research Board.

Commissioner commended the comprehensiveness of the research data. Publication of the CMF makes a funding stream available to municipalities. Commissioner inquired whether Scottsdale has warrants that govern installation or removal of CFMs. Mr. Smith stated that the City does not follow such warrants. They do have guidelines in terms of the number of through travel lanes being crossed. Arterial roadway functional classifications are typically a good consideration. The science and statistics from the study will assist the City in these decisions moving forward. Phil Kercher, Traffic Engineering Manager, added that while warrants are not governing factors, the City does endeavor to use the LILOs where possible. There are spacing requirements for access points, typically consisting of three-legged intersections.

Chair asked for clarification on the term "control site." Mr. Russo stated that a control site is identified to be as similar as possible to the treatment sites, with the only difference being the absence of the LILO.

3. FIVE YEAR PAVING PRIORITIZATION

Shayne Lopez, Transportation & Streets Paving Manager, provided an overview of pavement miles in the City. There are 907 centerline miles of payment consisting of over 20 million square yards overall and an estimated value of $1 billion. When streets are repaired in good condition, the maintenance costs less over the lifetime of the payment. If roadways are allowed to deteriorate to a poor condition, the overall cost of maintenance dramatically increases. The key to a successful pavement management program is to develop an accurate performance model of the roadway and then identify the optimal timing and rehabilitation strategy. PCI is a numerical rating of the pavement condition based on the type and severity of distresses observed/measured on the pavement surface. Values range from 100 to 0. Samples of various PCI road conditions and most suitable treatments were reviewed.

In terms of survey results, over 60 percent of the City's pavement is rated good or better and the backlog is rated at 1 percent. Backlog includes roads with a PCI between 0 and 40 that will require extensive rehabilitation. The City has an effective budget of $5.9 million for pavement maintenance. To reach a target PCI of 70 (rated very good), by 2026, a budget of $8.5 million annually is required. A graph of the five-year plan was reviewed, with the software having prioritized the plan based on the current PCI data and a concept of deferred maintenance savings. The next step in the program process is to submit a budget increase request of $2.6 million to achieve a PCI of 70 in five years.

Other ongoing projects include a parking lot pavement survey. The results will produce a similar treatment plan and budget recommendations. In 2025, another pavement survey is planned, which will calibrate the model and track maintenance and progress for reaching the 70 PCI.

Commissioner inquired as to how the City's PCI index compares to other cities. Mr. Lopez stated that Scottsdale's PCI is among the highest in the Valley and one of the lowest backlogs. The national PCI average is 65.

Mark Melnychenko, Transportation & Streets Director, commented that data from the five-year plan has assisted staff in providing answers to residents who contact the City regarding neighborhood street conditions in terms of scheduling and cost.

Commissioner referenced a fact in the presentation that stated that streets less than four inches deep cannot be resurfaced, but must be completely rebuilt. Commissioner inquired about the inventory of streets in the City that are less than four inches deep. Mr. Lopez stated that the consultant was told to make an assumption that all residential streets would require reconstruction. Based on the limited projects performed thus far, all streets were less than four inches. Vice Chair surmised that the majority of older residential streets in the City are likely no thicker than two to three inches.

. COOL PAVING UPDATE

Mr. Lopez provided a brief background regarding the Phoenix Heat Island profile. The City of Phoenix Transportation Department partnered with ASU and presented to the Commission in June. Their study evaluated the effectiveness, performance and community perception of cool pavement. Data collection and analysis occurred across multiple neighborhoods between July 2020 and July 2021. This allowed the team to study the impacts of the surface treatment under various weather conditions. Methodologies for data gathering were reviewed.

Findings were as follows:

- Roads with Cool pavement (CP) were measured between 12 and 10.5 degrees lower on average than untreated asphalt
- CP had higher surface reflectivity which declined over time, decreasing after ten months from a range of 33 to 38 to 19 to 30 across eight neighborhoods
- CP treated roads on average had lower subsurface temperatures 4.8 degrees lower than untreated asphalt
- At 6 feet height above the road, air temperature was lower above CP treated streets by an average of 0.5 and 0.3 degrees in the evening and daytime respectively, compared to untreated asphalt
- Higher mean radiant temperature (total amount of heat exposure walking on the surface) increased by 5.5 degrees at noon and afternoon hours due to higher surface reflectivity

Based on the findings, the executive summary made recommendations:

- Recommend that CP be applied to newer pavements
- Additional studies should be performed to determine other impacts on the surrounding neighborhood
- More research is needed regarding long term maintenance

Commissioner asked about internal conversations regarding the City doing its own pilot. Mr. Lopez said there has been preliminary discussion on potential locations.

Commissioner inquired as to the square yard cost for treatment. Mr. Lopez said he did not have the figures on the exact unit rate. Staff has had conversations with the supplier and the cost is estimated to be twice the cost of a traditional slurry.

Commissioner commented that while the CP lowers surface temperature, there is a higher radiant temperature. Mr. Lopez concurred and added that it would be helpful to have survey data regarding the human experience and perception regarding the temperature effects.

In response to a comment from Chair, Mr. Lopez stated that further information should be gathered regarding the effects of reflectivity on surrounding building temperatures. Mr. Melnychenko stated his understanding from the data that regular asphalt will hold the heat. Cool paving will reflect the heat. In the evening hours, cool paving is considerably cooler, as it does not hold in the heat. He agreed that more information from Phoenix is needed.

5. COMMISSION IDENTIFICATION OF FUTURE AGENDA ITEMS

In response to a question from Chair, Mr. Melnychenko stated that the Transportation Action Plan agenda item intent is to discuss input received from the virtual public meeting. Other topics to be discussed include 128th Street.

It was discussed that Vice Chair will provide a quarterly presentation on the Paths & Trails Subcommittee.

Vice Chair requested an update on the Shea and 124th Street underpass. Dan Worth, Executive Director, Public Works, stated that the City has settled the dispute with the original builder. The City is currently designing a modification that will remove portions of the gabion wall, which is not built to specification. After design, the goal is to contract and for construction.

6. ADJOURNMENT

With no further business to discuss, being duly moved by Vice Chair Anderson and seconded by Commissioner Kowal, the meeting adjourned at 7:26 p.m.

AYES: Chair Iacovo, Vice Chair Anderson, Commissioners Kowal, Lall, Miller, Wilcoxon and Yates
NAYS: None

SUBMITTED BY:

eScribers, LLC

***Note: These are summary action meeting minutes only. A complete copy of the audio/video recording is available at http://www.scottsdaleaz.gov/boards/transp.asp**