

Street Resurfacing and Capital Projects Update

PUBLIC WORKS COMMITTEE

November 14, 2023

Outline

- **Overview of the City's Street Maintenance Program**
- **Pavement Rating**
- **Resurfacing List (Process/Steps)**
- **Program Funding**
- **Use of Motor Vehicle Privilege Tax**
- **Innovative Practices**
- **Current staffing levels**
- **Update on other projects**

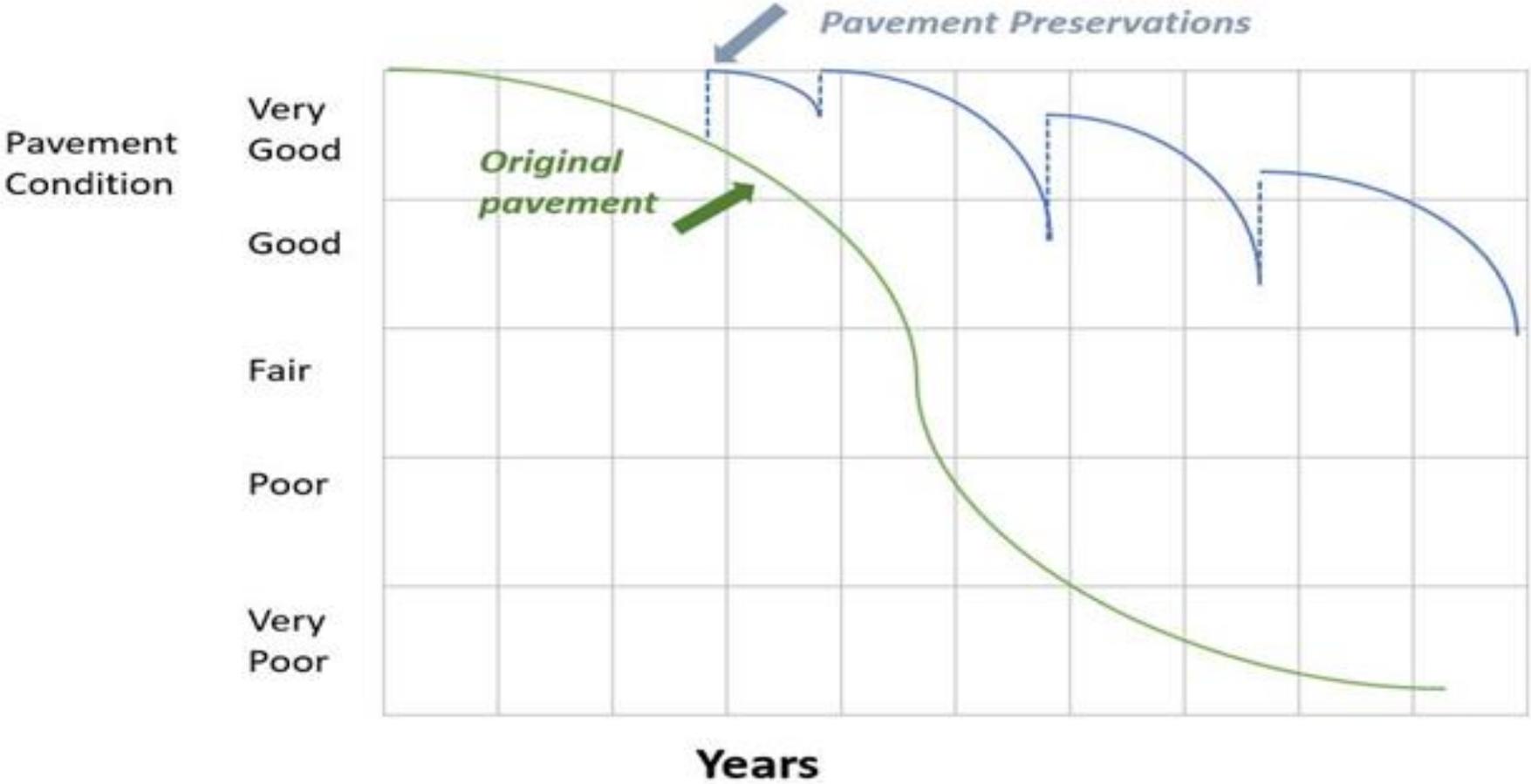
City Street Maintenance Program

- City currently maintains approximately 1,200 miles of hard surface streets and over 6.75 miles of gravel/dirt streets.
- There are three main types of road surfaces found on City maintained streets: hot mix asphalt, Bituminous Surface Treatment (BST) and dirt/gravel streets.
- City incorporates two types of routine practices to preserve streets as weathering and breakdown of roads occur. Pothole repair and crack sealing are the main preservation practices.
- When the preservation practices no longer generate the pavement quality needed, the road must then be milled and resurfaced.



City Street Maintenance Program

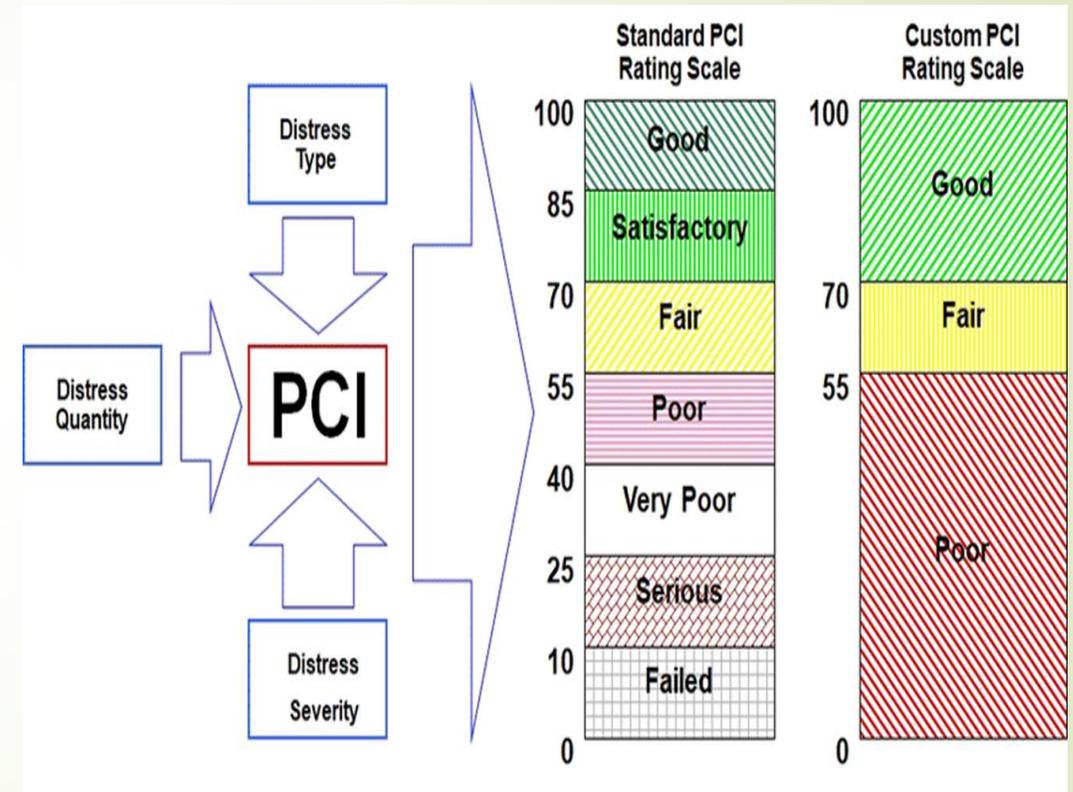
Concept of Pavement Preservation



Source: UNC School of Government

Pavement Rating

- Historically roads are resurfaced based on a “worst is first” philosophy.
- Streets are given a condition rating from 0 to 100 (with 100 being the best possible condition).
- Pavement Condition Index (PCI) consolidates the different types of pavement distresses into one number.
- Due to staffing issues, it’s been several years since some streets have rated.



Process to Develop the Resurfacing List

- Staff develops a list of the “worst” rated streets by ward (referencing current pavement index, work order requests, Council member and citizen complaints).
- Staff field verifies the street segments to be included.
- The draft list is sent to other city departments to determine if there are conflicting projects (i.e. water, sewer, replacements etc.).
- One on One meetings are held with the Council Members to review the selected streets in their Ward.
- The list is then sent to the Purchasing Department to start formal procurement.
- Council approves the contract for the selected contractor.
- Work is conducted during warm months of the year (April through November).

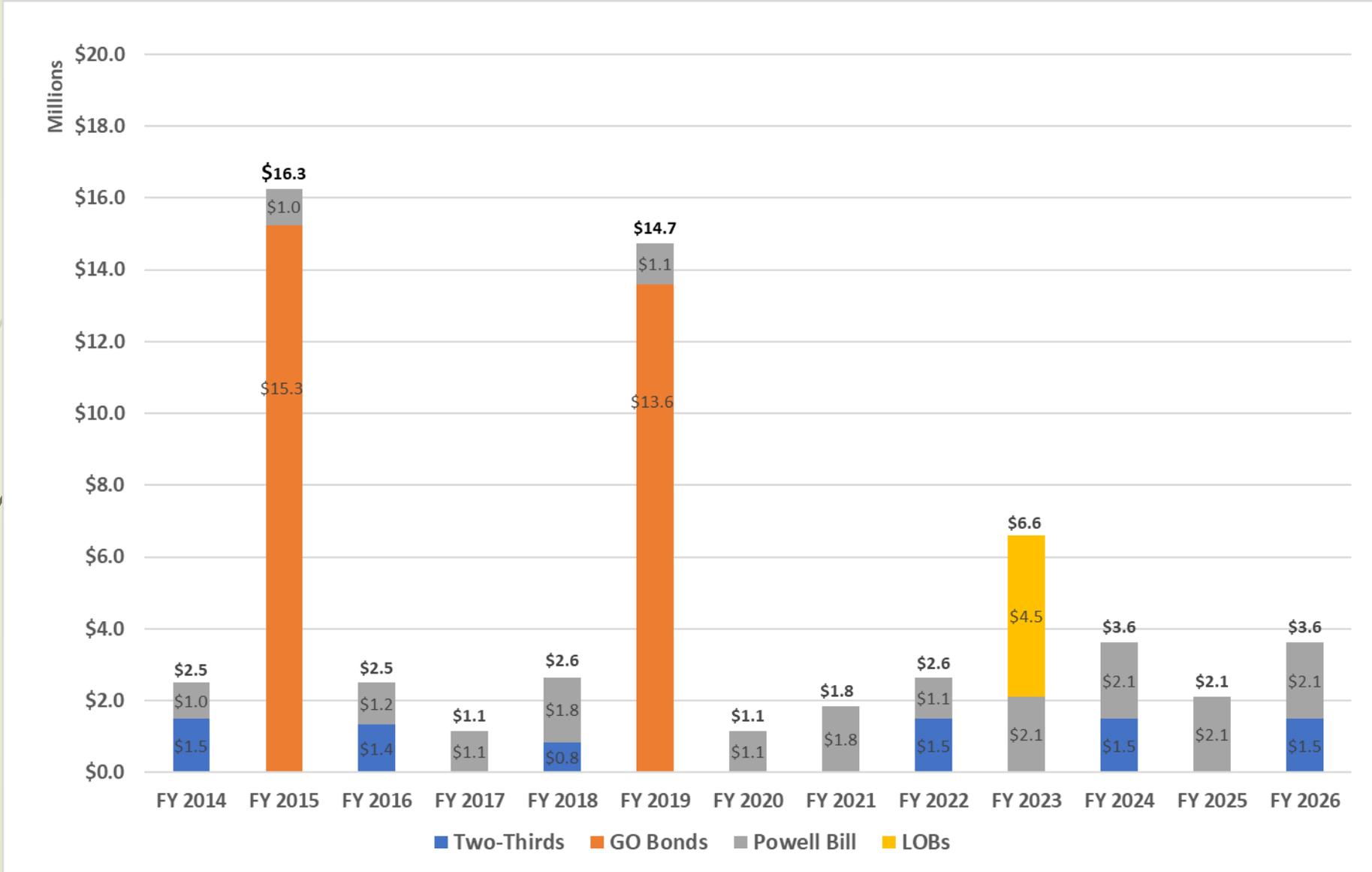
Resurfacing Versus Preservation Costs

Rough Estimates of the Use and Cost of Three Types of Road Treatment In NC Benchmarking



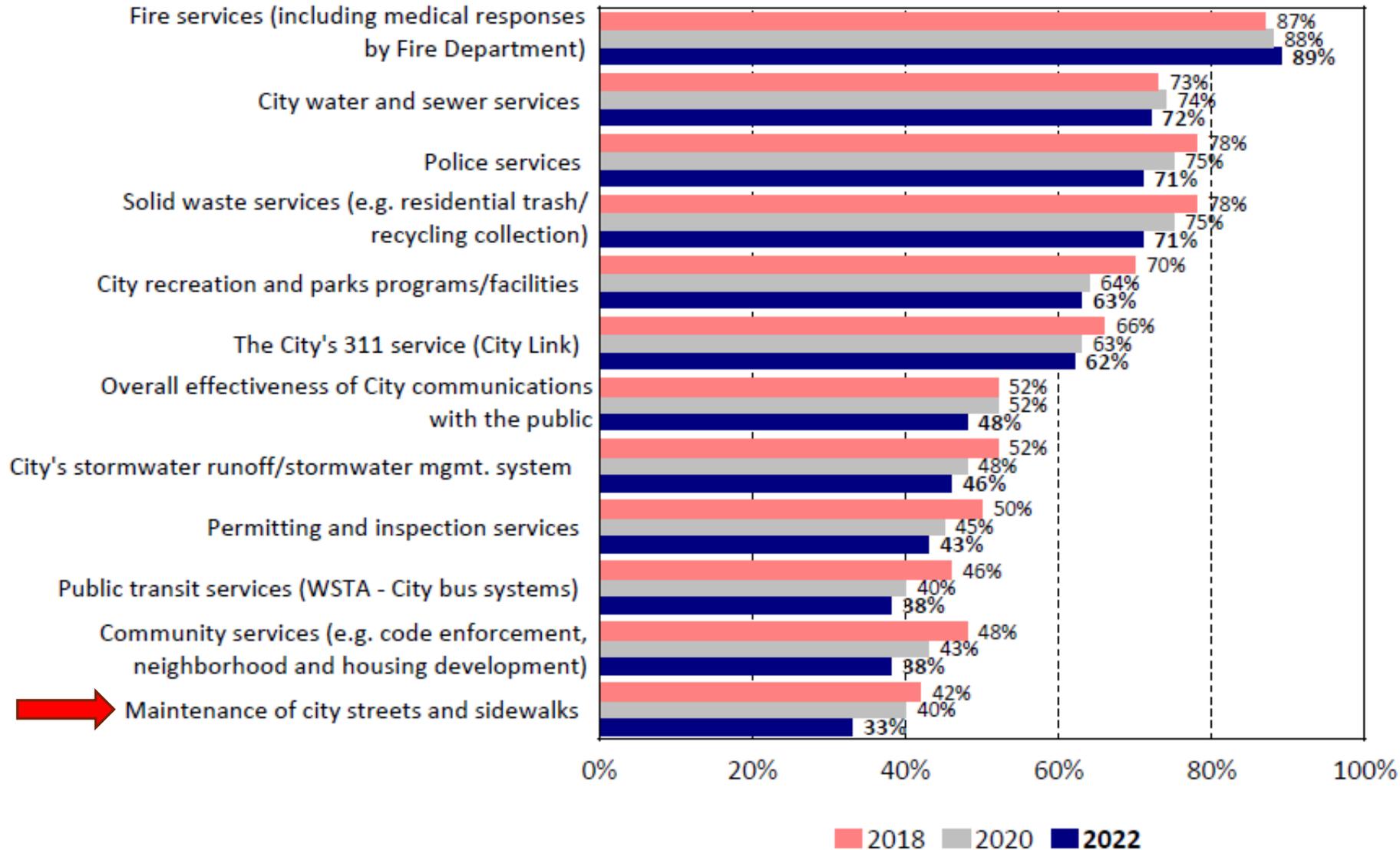
Source: UNC School of Government

Street Resurfacing Funding



TRENDS: Overall Satisfaction with City Services by Major Category - 2018 to 2022

by percentage of respondents who rated the item as a 4 or 5 on a 5-point scale (excluding don't knows)



Most Recent Resident Survey Results

*Streets maintenance is the lowest rated service and is trending downward.

Motor Vehicle Privilege Tax (MVPT) Authority

Local Act	- Cannot exceed \$20 per vehicle
	- First \$10 can be used for any legal purpose
	- Everything above \$10 has to be split:
	1/3 for traffic management
	1/3 for public transit
	1/3 for non-motorized transportation
General Authority	- Cannot exceed \$30 per vehicle
	- First \$5 can be used for any legal purpose
	- Not more than \$5 can be used for public transit
	- All remaining must be used for streets

*The City currently charges \$15 per vehicle under the local act authority.

Motor Vehicle Privilege Tax Distribution

<u>Amount</u>	<u>Local Act</u>	<u>General Authority</u>
First \$5	Any general purpose	Any general purpose
\$5 - \$10	Any general purpose	Streets or WSTA
\$10 - \$15	Split evenly WSTA, traffic, non-motorized	Streets
\$15 - \$20	Split evenly WSTA, traffic, non-motorized	Streets
\$20 - \$25	not allowed	Streets
\$25 - \$30	not allowed	Streets

**Each five-dollar increment equals approximately \$900,000*

Note: Expanded MVPT authority does not require funding for traffic management and non-motorized transportation functions.

Potential Uses for Additional MVPT

Increasing to \$30 per vehicle produces an additional \$2.8 million

Policy Choices

1. Street Resurfacing – Funding predominantly for resurfacing
2. Transit – Up to an additional \$600,000 could be used for WSTA
3. Current allocations of MVPT to transit and non-motorized projects could be diverted for additional street resurfacing (approx. 600,000)

*Requires reallocation of other revenue sources to implement.

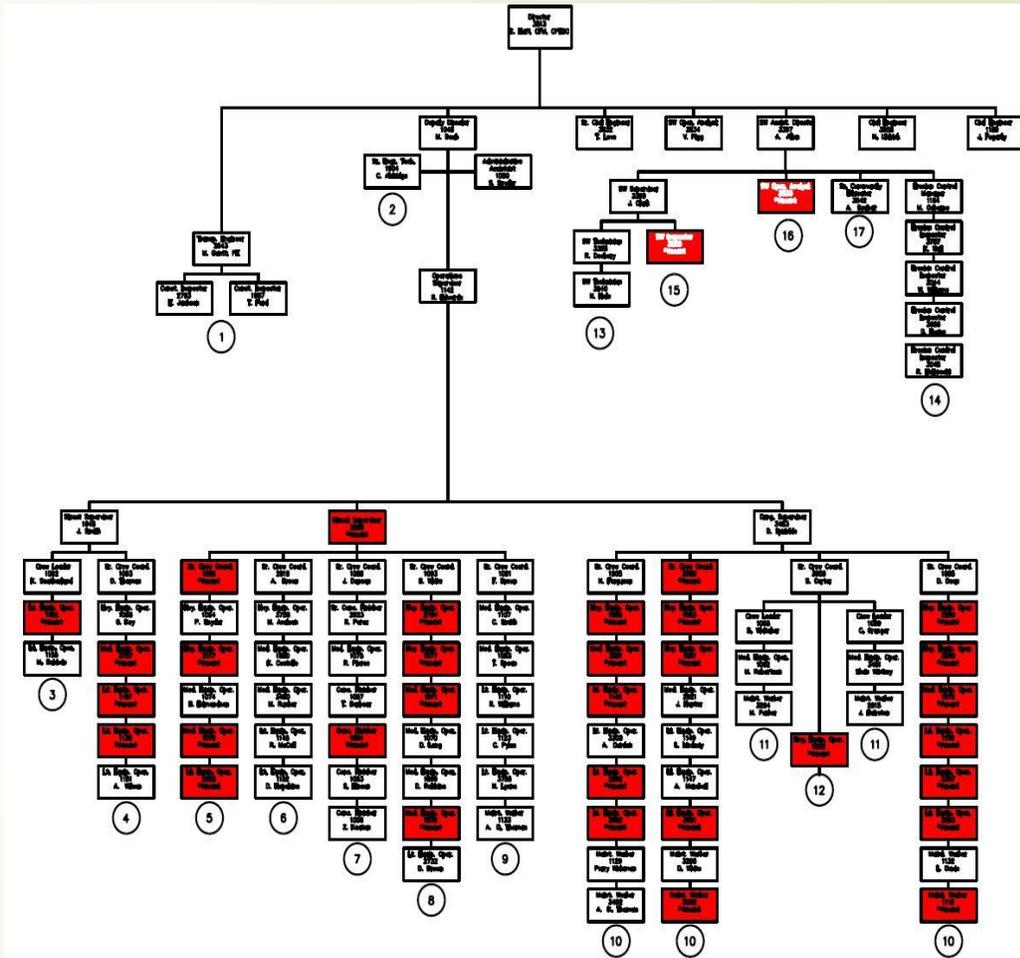
Innovative Practices

- ▶ Other municipalities are utilizing technology for street rating purposes.
- ▶ Companies have video and radar collection capability to provide a Pavement Condition Index (PCI) in a GIS database for hundreds of miles of road.
- ▶ This information would yield an updated pavement condition database for the entire city that could be utilized for resurfacing as well as emergency services.
- ▶ Staff would like to move forward with a Request for Proposals (RFP) for this work.



Field Operations Current Staffing Levels

- The Department is still struggling to fill vacancies (red denotes current vacant positions).
- Some workgroups have over 50% vacancy.
- Recent hires are at the Maintenance Worker position.
- Several planned retirements of tenured/skilled team members in upcoming months.
- Have several staff enrolled in the CDL training program.



Project Updates

- Project: **Annual Street Resurfacing**
- Ward: All
- Approximate Cost: \$ 7,700,000
- All road segments in the contract are complete except for Town Run which is expected to be completed in the next two weeks.



Project Updates

- Project: **Old Salisbury Road**
- Ward: South
- Approximate Cost: \$2,921,000
- Damages: Geotechnical road failure and culvert replacement.
- Final designs are complete and have awarded a contract for construction.



Project Updates

- Project: **Lynnhaven Road**
- Ward: West
- Approximate Cost: \$700,000
- Damages: Failure of 18" pipe in the middle of the road.
- Construction is underway and final completion is expected by the end of the year.



Project Updates

- Project: **Sidewalk Cutting**
- Ward: All
- Approximate Cost: \$ 200,000
- Two rounds of sidewalk cutting have been completed to remove hazards to the pedestrian public. Over 1000 repairs have been completed.



Project Updates

- Project: **Hawthorne Road Culvert**
- Ward: Southwest
- Damages: culvert settlement, shifting, invert undermining, carries water service to the hospital, access route to the hospital.
- Approximate Replacement Cost: \$ 3,000,000
- Currently project designs are complete and easement acquisition is underway.



Project Updates

- Culvert: **Underwood Avenue**
- Ward: North
- Damages: 20'x 20' concrete box culvert invert failure resulting in sinkhole at the curb line. Carries water and sewer lines.
- Approximate Repair Cost: \$755,000
- Project is complete and road is open to traffic. Minor punch list items remain



Project Updates

- Project: **Griffith Road Culvert**
- Ward: South
- Damages: Large class corrugated metal pipe invert rusted out causing a sinkhole and undermining the road. Carries 36" raw water line.
- Approximate Repair Cost: \$ 200,000.
- Culvert invert was replaced with structural grout and voids filled. Project is complete.



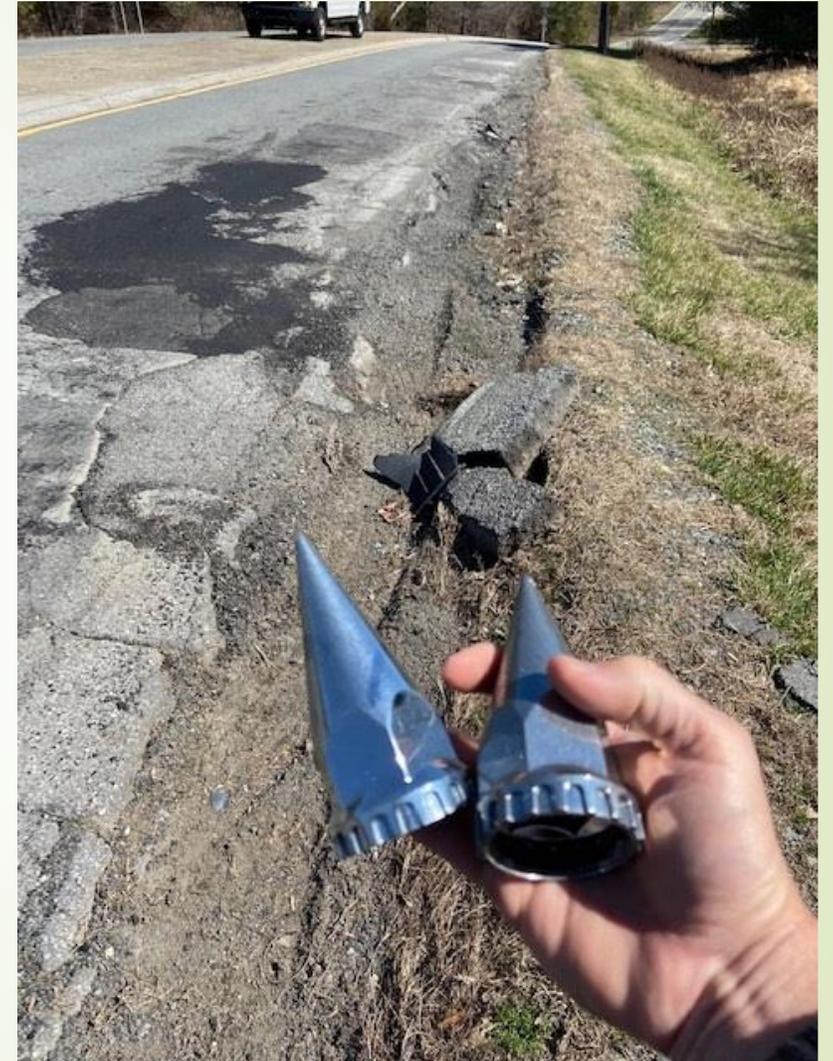
Project Updates

- ▶ Project: **Bethabara Road Culvert**
- ▶ Ward: North
- ▶ Damages: Large class arch metal pipe on concrete footings has failed. Road carries a 24" and 12" water mains.
- ▶ Approximate Replacement Cost: \$ 2,000,000
- ▶ Road currently closed and the project is under design.



Project Updates

- Project: **Lowery Street**
- Ward: East
- Damages: Design and construct roadway for industrial traffic and drainage systems due to failure.
- Approximate Replacement Cost: \$ 2,000,000
- Project is under design.



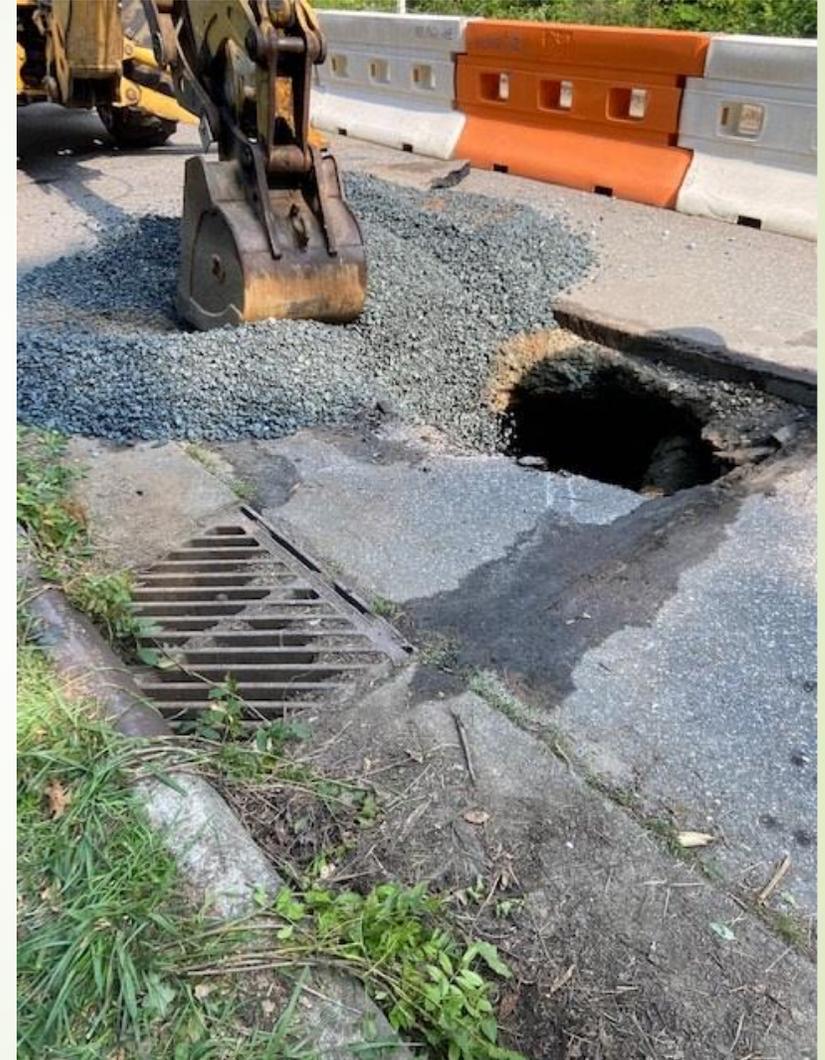
Project Updates

- Project: **Lura Road Culvert**
- Ward: West
- Damages: Failure of a 54" concrete pipe that is the sole ingress/egress for the neighborhood.
- Approximate Replacement Cost: \$ 500,000
- The project is under design and roadway is being monitored to maintain access.



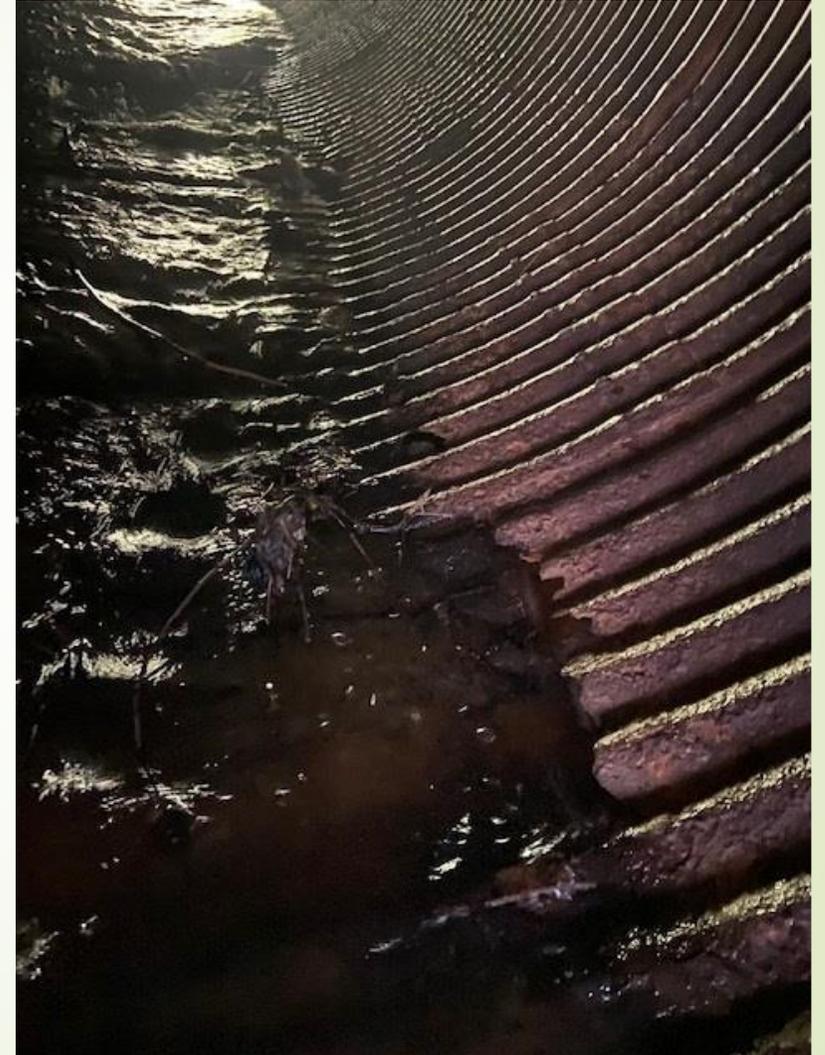
Project Updates

- Project: **Fanning Drive**
- Ward: Southeast
- Damages: Roadway failure due to collapse of 24" metal pipe. Fanning is the sole ingress/egress for neighborhood.
- Approximate Replacement Cost: \$ 700,000
- Project is complete and road is open to traffic.



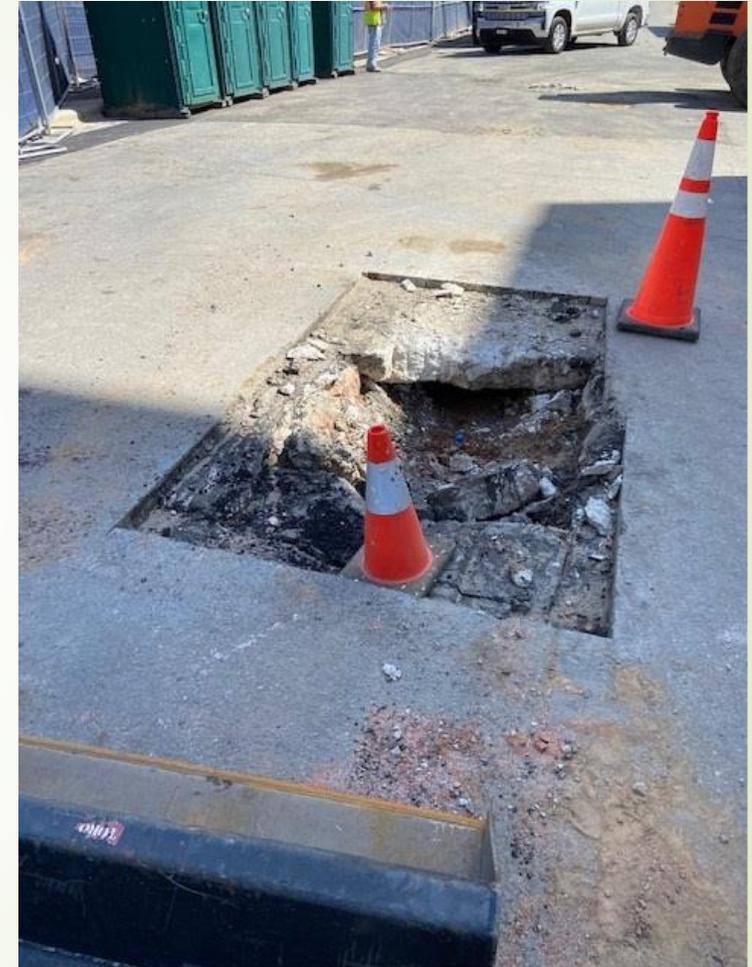
Project Updates

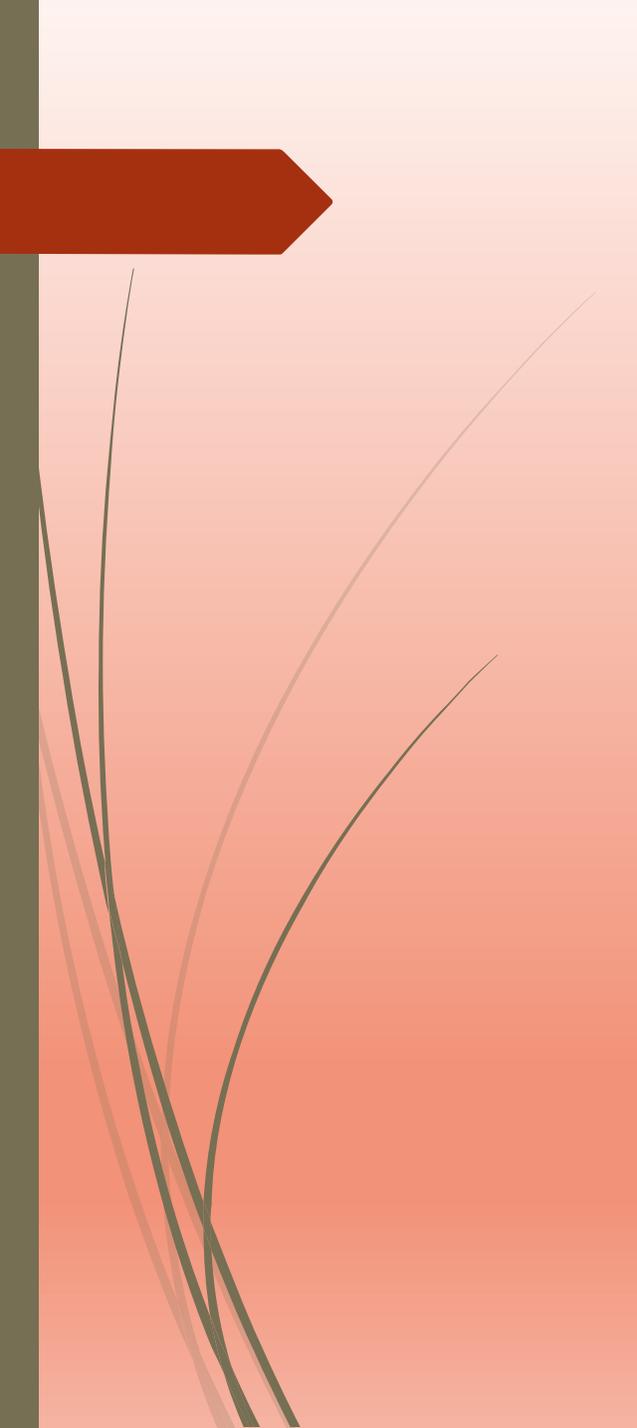
- Project: **Leinbach Drive Culvert**
- Ward: Northwest
- Damages: Failure of a 54" metal pipe.
- Approximate Replacement Cost: \$694,000
- The project is under design.



Project Updates

- Project: **3rd Street**
- Ward: Northwest
- Damages: Roadway failure in front of the Kaleideum facility.
- Approximate Cost: Unknown.
- Road has been plated and investigation will continue after construction is complete at the Kaleideum.





Questions?