



Pavement Maintenance Program Update

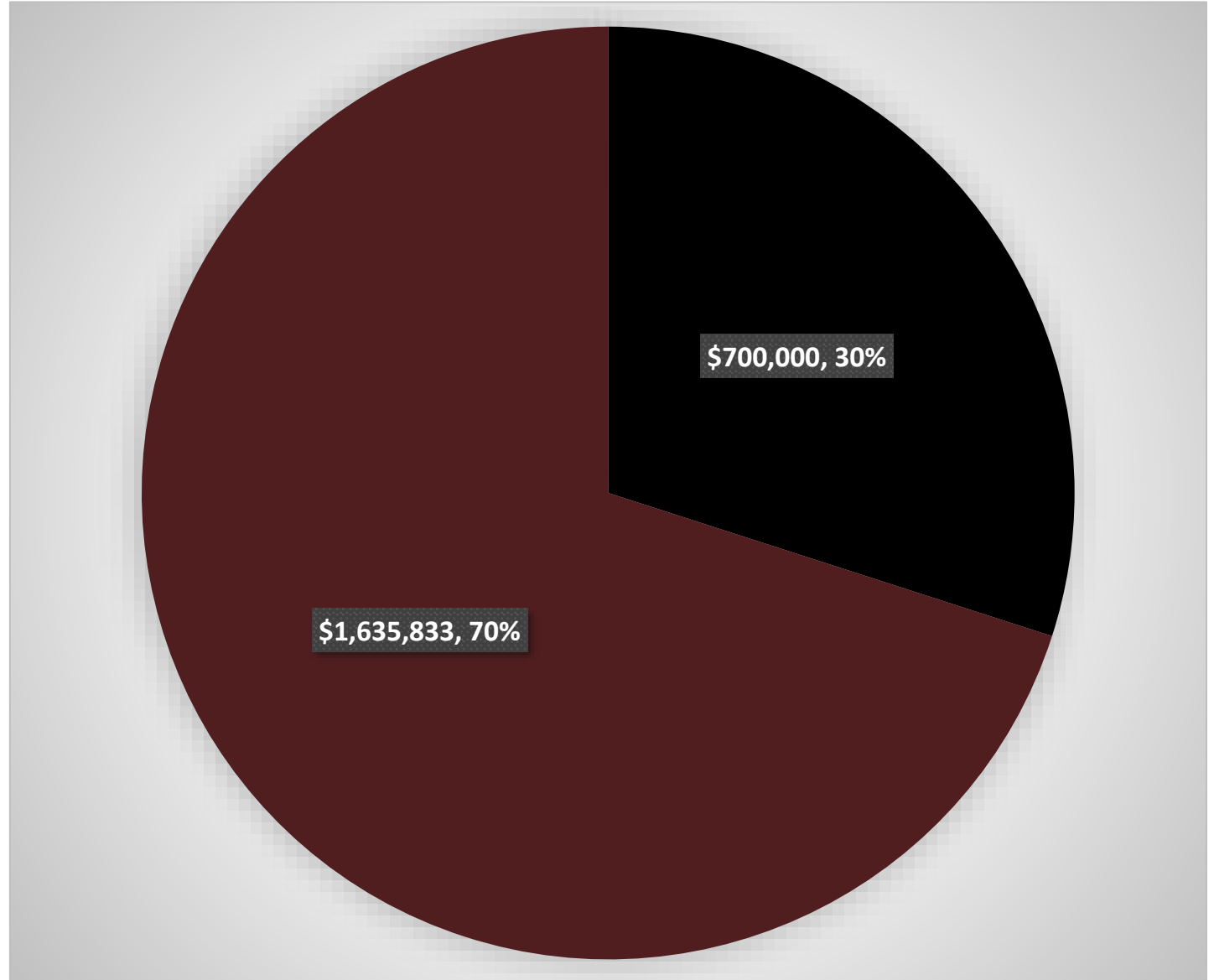
INFRASTRUCTURE & DEVELOPMENT COMMITTEE

Background

- Based on direction from the Infrastructure & Development Committee in August of 2024, and City Council in September of 2024, Asset Management and Public Works begin to calibrate the model for the street maintenance program.
- In November of 2024, the field verification began, which consisted of visually inspecting every road segment in the proposed plan.
- This inspection allowed Public Works staff to cross-check the asset management data with actual conditions, identifying discrepancies, addressing data inconsistencies, and ensuring that the maintenance strategy accurately reflected the true state of each street.

Street Maintenance Program Budget

- Total allocated budget for the Street Maintenance and repairs
 - \$2,353,833 million
- Concrete repairs – Alsbury, Renfro & Hidden Creek
 - \$700,000
- Pavement Maintenance – Crack Seal, Pressure Pave, Mill & Overlay
 - \$1,635,833



Completed and In-Progress Concrete Repairs



Using FY23-24 funds these locations have been completed or are in progress.

Completed:

NW Renfro @ Silver Ridge Ct	\$20,530
1200 blk W/B E HCP	\$16,800
W HCP @ SW Wilshire Blvd	\$10,640
900 blk Hidden Vistas Blvd	\$49,270

In-Progress:

200 blk E/B SW Alsbury Blvd	\$105,942
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Total Spent	\$203,182
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	Estimated Cost	Comments
Work completed since August 5, 2024		
1200 Blk Hidden Creek Parkway	\$16,800	FY 23-24 Operating Budget
NW Renfro and Silver Ridge	\$20,530	FY 23-24 Operating Budget
HW 174 and Hidden Creek Parkway	\$10,640	FY 23-24 Operating Budget
Alsbury Blvd – 3 locations	\$125,000	FY 23-24 Operating Budget
Current and upcoming projects		
15 locations along Hidden Creek Parkway Between SH 174 and E. Renfro, NW Renfro and Alsbury	\$700,000	FY 24-25 Street Maintenance Fund
Hidden Creek @ Lisa/1285 block	\$237,094	Work is underway – FY 24-25 Street Maintenance Fund
Hidden Creek @ Cardinal Ridge	TBD	FY 24-25 Street Maintenance Fund
Hidden Creek @ Dobson/Hidden Oaks	TBD	FY 24-25 Street Maintenance Fund

Concrete Repairs

Recommendations

Asset Management Recommendation

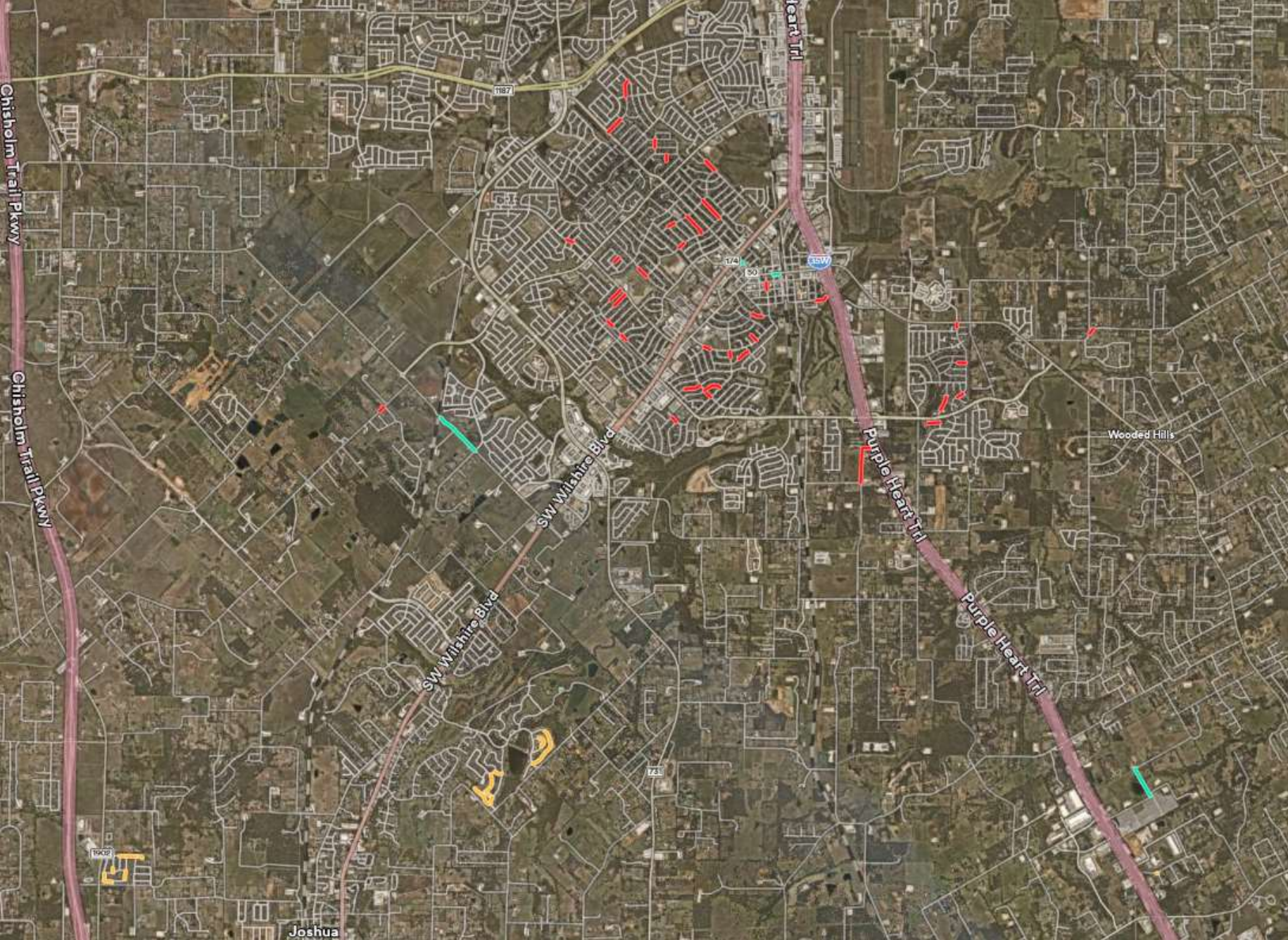
Asset Management Model	Estimated Cost
Asphalt Maintenance Sealing	\$115
Microsurface	\$44,727
Mill & Overlay	\$1,554,925
Concrete Joint Sealing	\$231.06
Total	\$1,599,999

Public Works Recommendation

Public Works Model	Estimated Cost
Asphalt Maintenance Sealing	\$150,000
Pressure Pave	\$594,676
Mill & Overlay	\$838,570
Concrete Joint Sealing	\$4,410.00
Contingency	\$12,342
Total	\$1,599,999

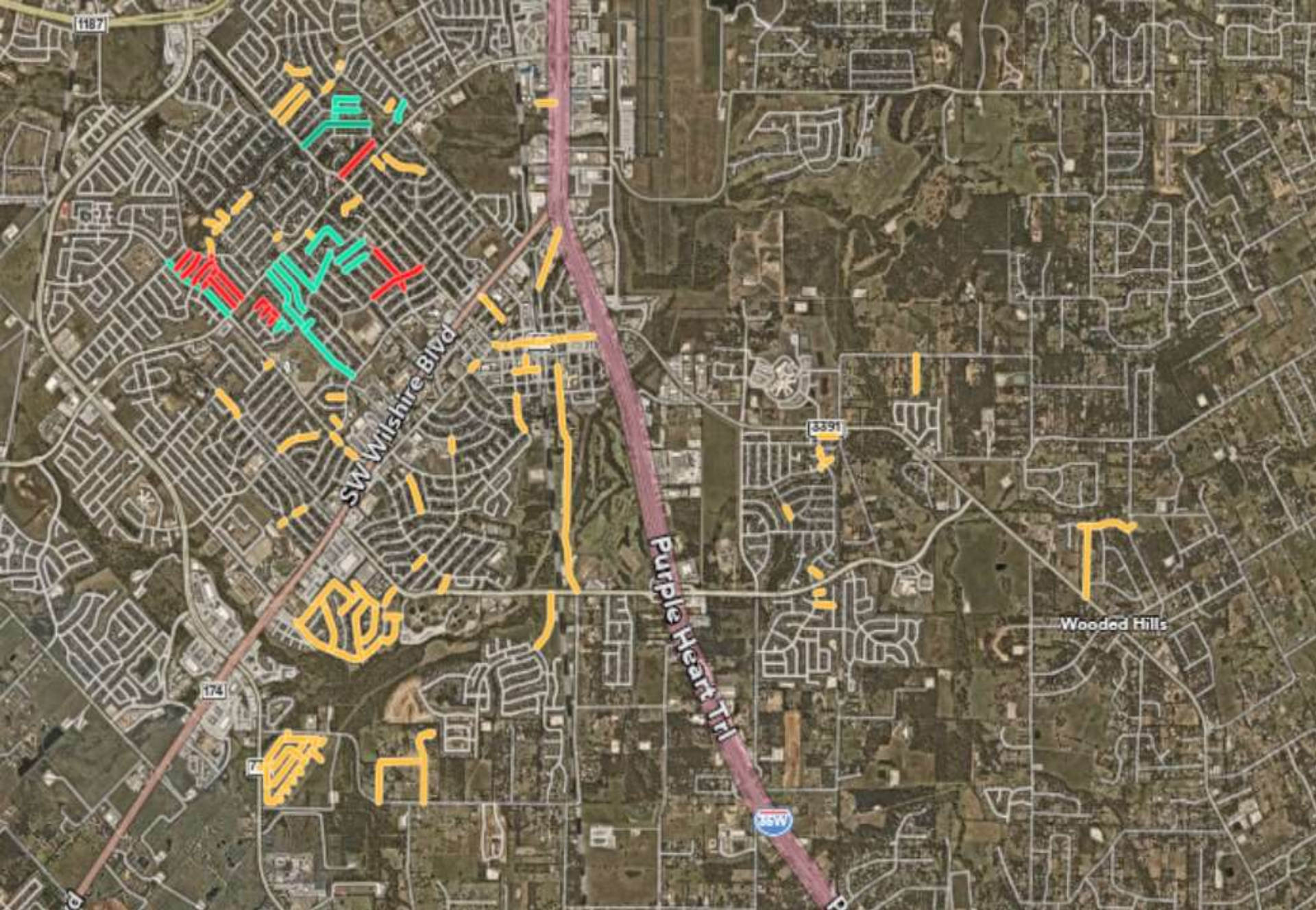
Asset Management Recommendations

- Red – Mill & Overlay – Full Depth Repair
- Yellow – Crack and Concrete Joint Seal
- Green - Microsurface



Public Works Recommendations

- Red – Mill & Overlay - Full Depth Repair
- Yellow – Crack and Concrete Joint Seal
- Green – Pressure Pave



Public Works Recommendations



Maintenance Activity	Number of Locations	Linear Feet	Activity Estimated Cost
Asphalt Crack Seal	88	46,010	\$150,000
Pressure Pave	35	17,846	\$594,676
2" Mill & Overlay – Full Depth	22	9,964	\$838,570
Concrete Joint Sealing	1	1,470	\$4,410
Contingency			\$12,342
Total	146	75,290	\$1,599,999

Ongoing Progress

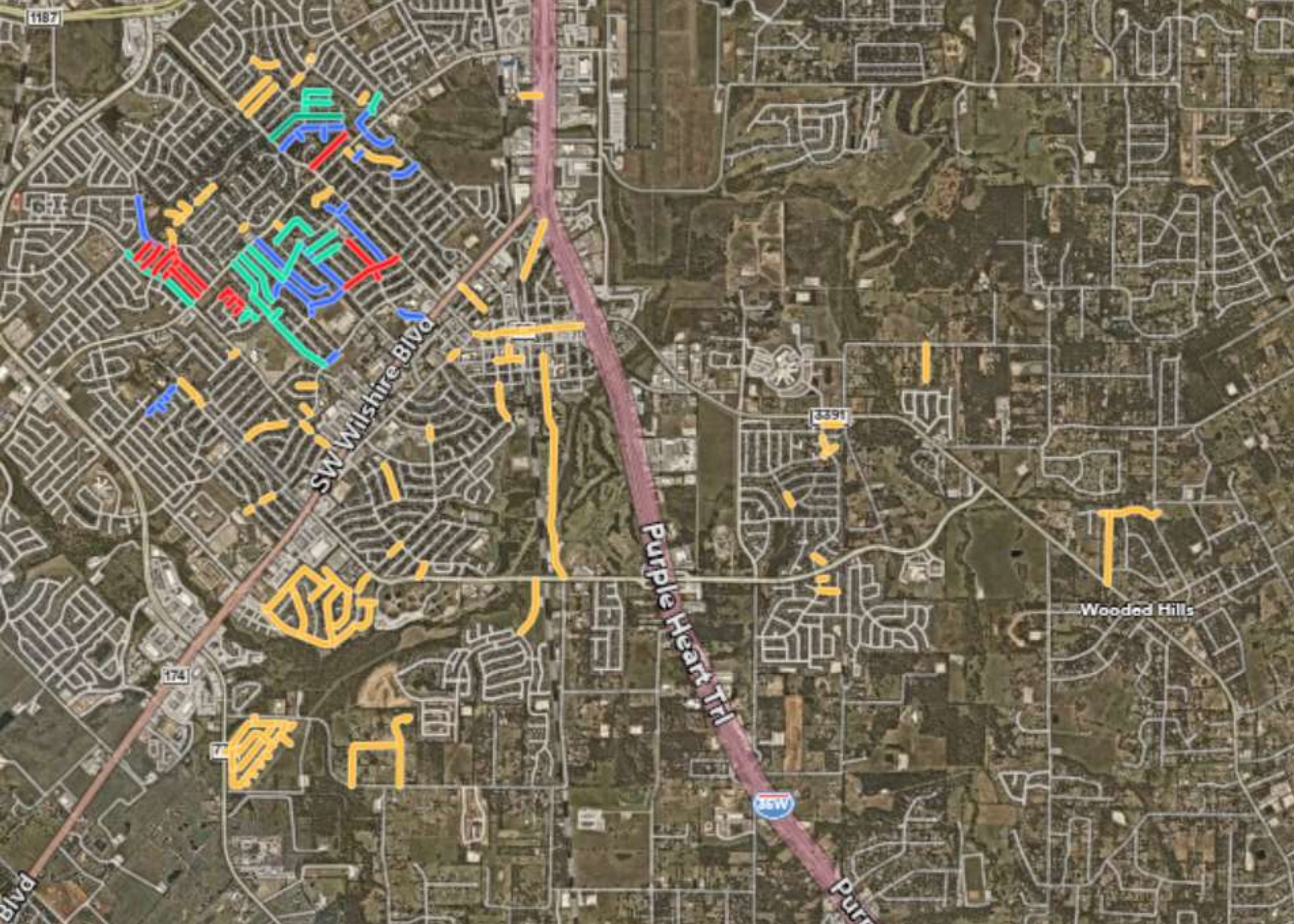
- Procurement Process
 - Advertised January 24th
 - Bids due February 27th
 - Council date for contract award March 24th
- Upcoming agenda item for Pressure Pave March 24th
- FY 25 for Street Maintenance
 - \$700,000 – Reliable Paving – Approved November 2024
 - \$600,000 - PressurePave
 - \$1,053,833 – Current Solicitation

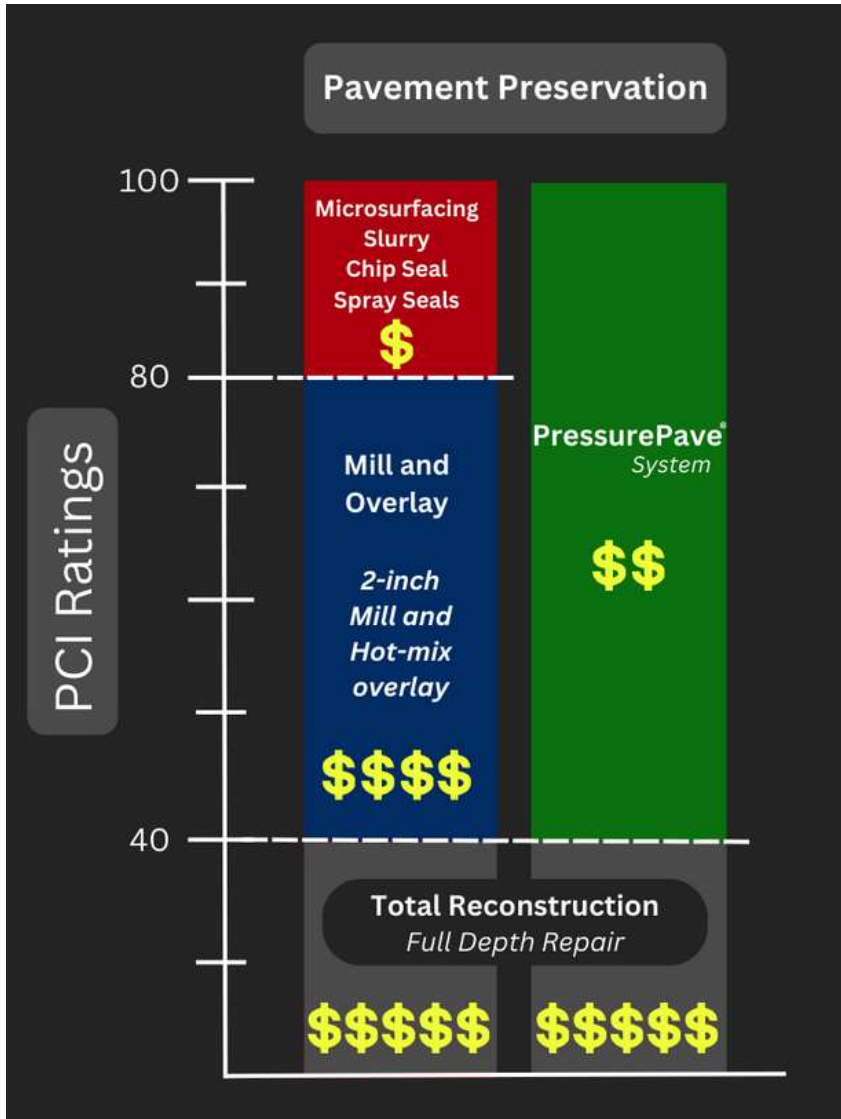
Pavement Treatment Map

*Contractors will have 75 business days to complete the work from the date of the notice to proceed

Public Works Pavement Plan

- Red – Mill & Overlay – Full Depth Repair
- Yellow – Crack and Concrete Joint Seal
- Green – Pressure Pave
- Blue – Capital Projects





What is PressurePave?

PressurePave is an innovative, patented system designed to preserve pavements that might otherwise be slated for mill and overlay processes. This system uses a unique pressure-injection method to apply crack sealant into the pavement while simultaneously overlaying it with a durable thin asphalt layer.

Key Benefits of PressurePave:

- **15-Year Service Life:** Provides long-lasting durability.
- **Quick Accessibility:** Treated areas are traffic-ready in just 30 minutes.
- **Complete Crack Sealing:** Ensures 100% of cracks are effectively sealed.
- **Crack-Resistant Underseal:** Enhances structural integrity beneath the surface.
- **New Overlay Appearance:** Offers a fresh, aesthetically pleasing finish.
- **Enhanced Impact:** Delivers greater value and functionality to treated streets.

Examples of Cities Using PressurePave



- Irving
- Cedar Park
- Midlothian
- Waxahachie
- San Angelo

Crack Seal



Crack Seal application





Reasons to Crack Seal

Preventive maintenance:

- Catching small cracks early and sealing them prevents them from expanding and causing more severe damage like potholes.

Water intrusion protection:

- Sealing cracks stops water from penetrating the asphalt base, which can erode the underlying structure.

Improved longevity:

- By preventing water damage, crack sealing can significantly extend the lifespan of an asphalt surface.

Cost-effective repair:

- Addressing cracks early through crack sealing is generally cheaper than larger damages later.



Mill & Overlay – Full Depth Repair

Benefits of Mill & Overlay

Mill and Overlay Process:

- Street maintenance technique that involves removing the top layer of asphalt with a milling machine, and overlaying new asphalt

Smooth driving surface:

- By addressing minor deformations, cracking, and irregularities

Aesthetic appeal:

- Enhances appearance of the pavement with a fresh, dark surface

Improved drainage:

- By restoring proper drainage flow and preventing water from accumulating and damaging pavement base

Base Repair:

- Provides correction to base failures leading to uneven travel patterns, sinking, and other irregularities that impact driving

Summary of Recommendations:

Strategic Collaboration:

- Eliminated redundant repairs by aligning with future reconstruction plans.
- Focused on reducing mobilization costs and improving project efficiency.

Expanded Scope:

- Increased the total number of roadway segments receiving treatment, yielding a wider community benefit.

Innovative Treatment Solutions:

- Researched and implemented alternative treatment options that enhance roadway infrastructure and expand impact potential.

Ongoing assessments will refine and enhance future strategies.

Questions/Discussion

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