



Office of Transportation
Engineering
Pavement Management
Program Presentation
Rob Stull, Project
Manager

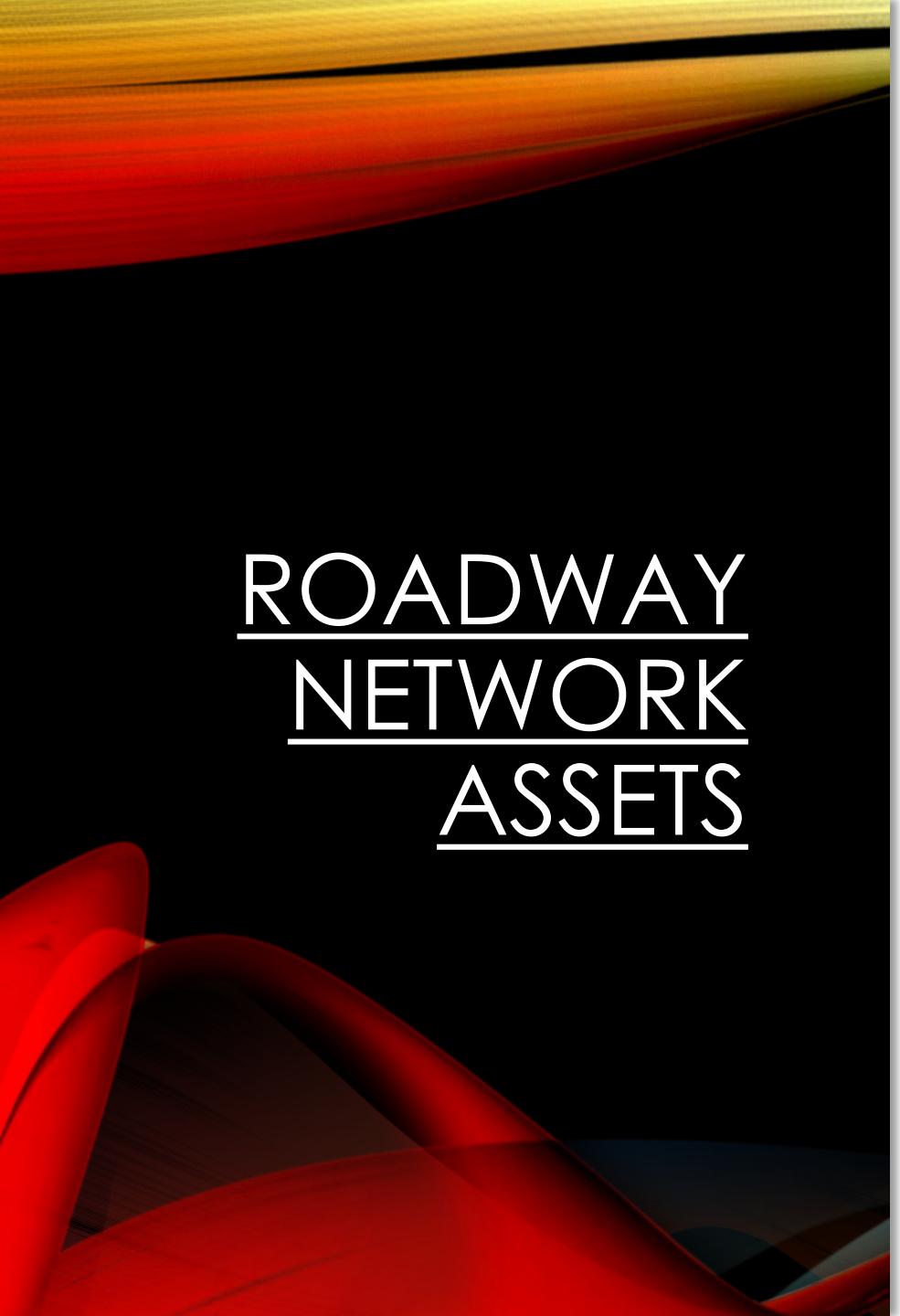
FREDERICK COUNTY DIVISION OF PUBLIC WORKS

OVERVIEW

Responsibilities of the Pavement Management Program (PMP).

Program utilizes an optimized approach.

Pioneer of County asset management programs.



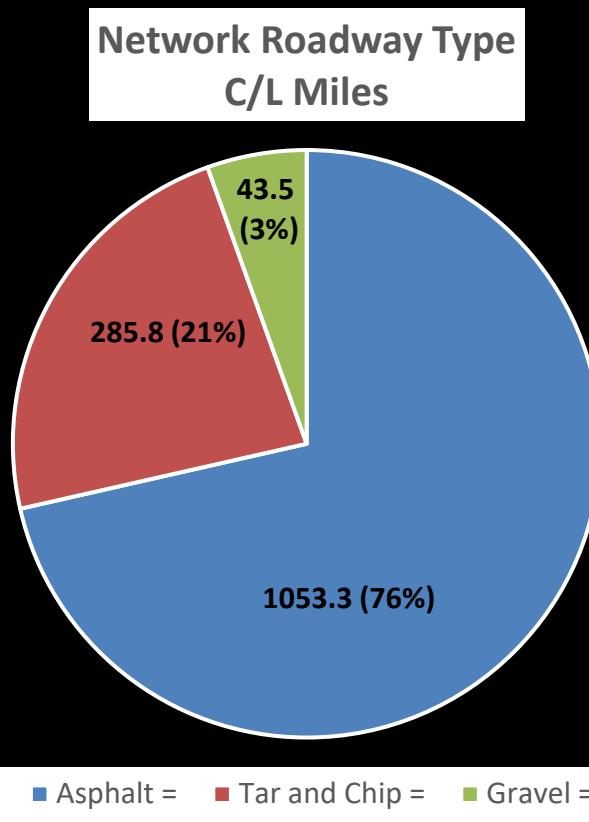
ROADWAY NETWORK ASSETS

The program manages 1,339.1 centerline miles.

Total estimated asset value of \$760 million.

Continuous effort is required to manage the network.

ROADWAY ASSET TYPES



AGILE ASSETS (AA)

Stores roadway information.

Includes optimization tools for computerized outputs.

Outputs are finalized and let.

“Project-level decisions”

Example of a project-level decision.

STEPS OF PROCESSES

Step 1

- Biennial Condition Evaluation Surveys Year 1 – Year 4
- HMA roads (Year 1 and Year 3)
- T&C roads (Year 2 and Year 4)
- Information captured by the surveys.
- Pavement Condition Index (PCI).

Step 2

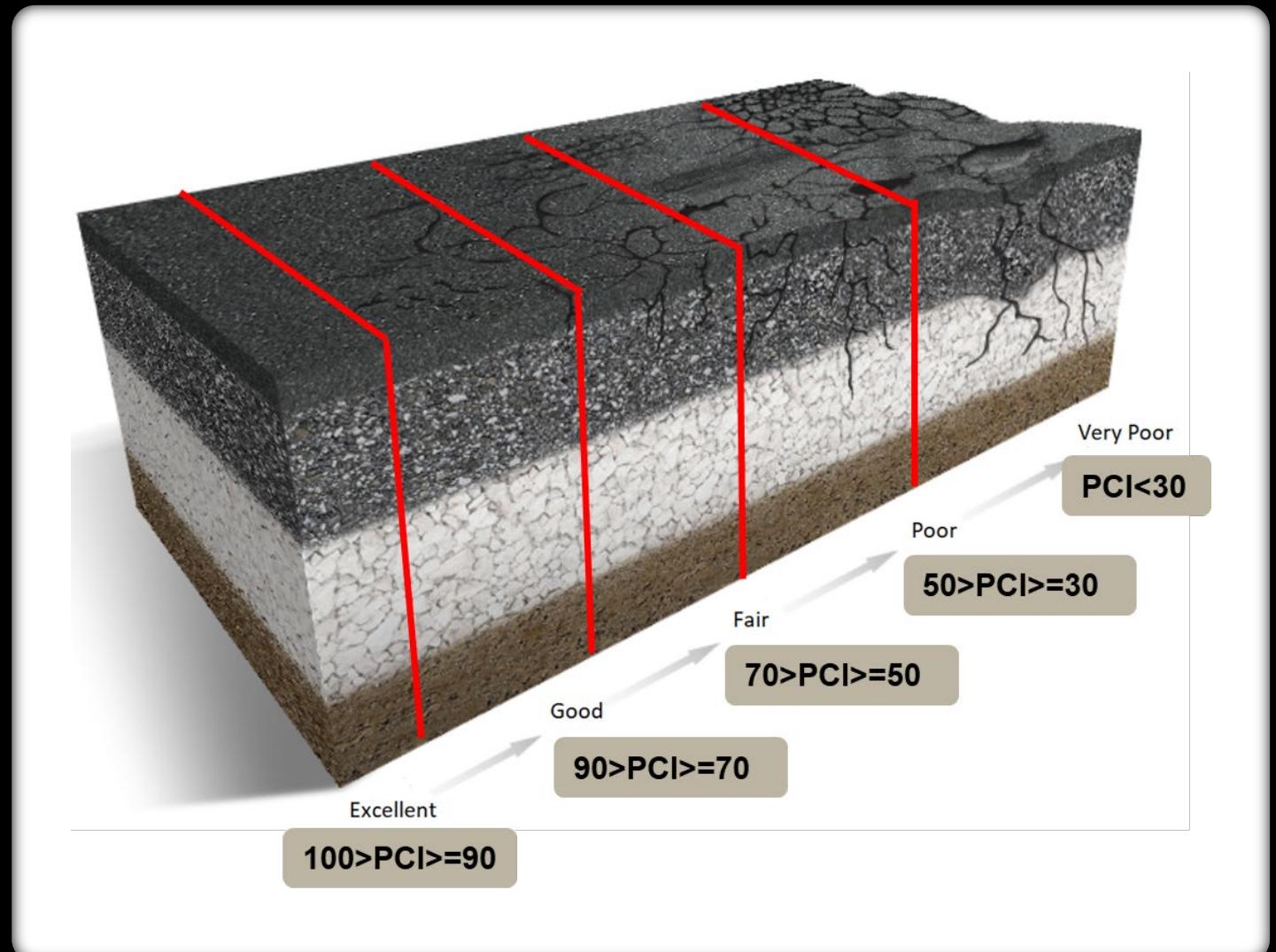
- Analyze Unit Costs
- Update construction history.
- Develop Master Work Plan (MWP).
- Five-year plan for flexibility in design.

Step 3

- Fiscal Year projects are designed in-house.
- Advertise for bid.
- Three to five contracts per fiscal year.

PAVEMENT CONDITION INDEX THRESHOLDS

- 90-100 Excellent
- 80-90 Good
- 70-80 Satisfactory
- 60-70 Fair
- <60 Poor



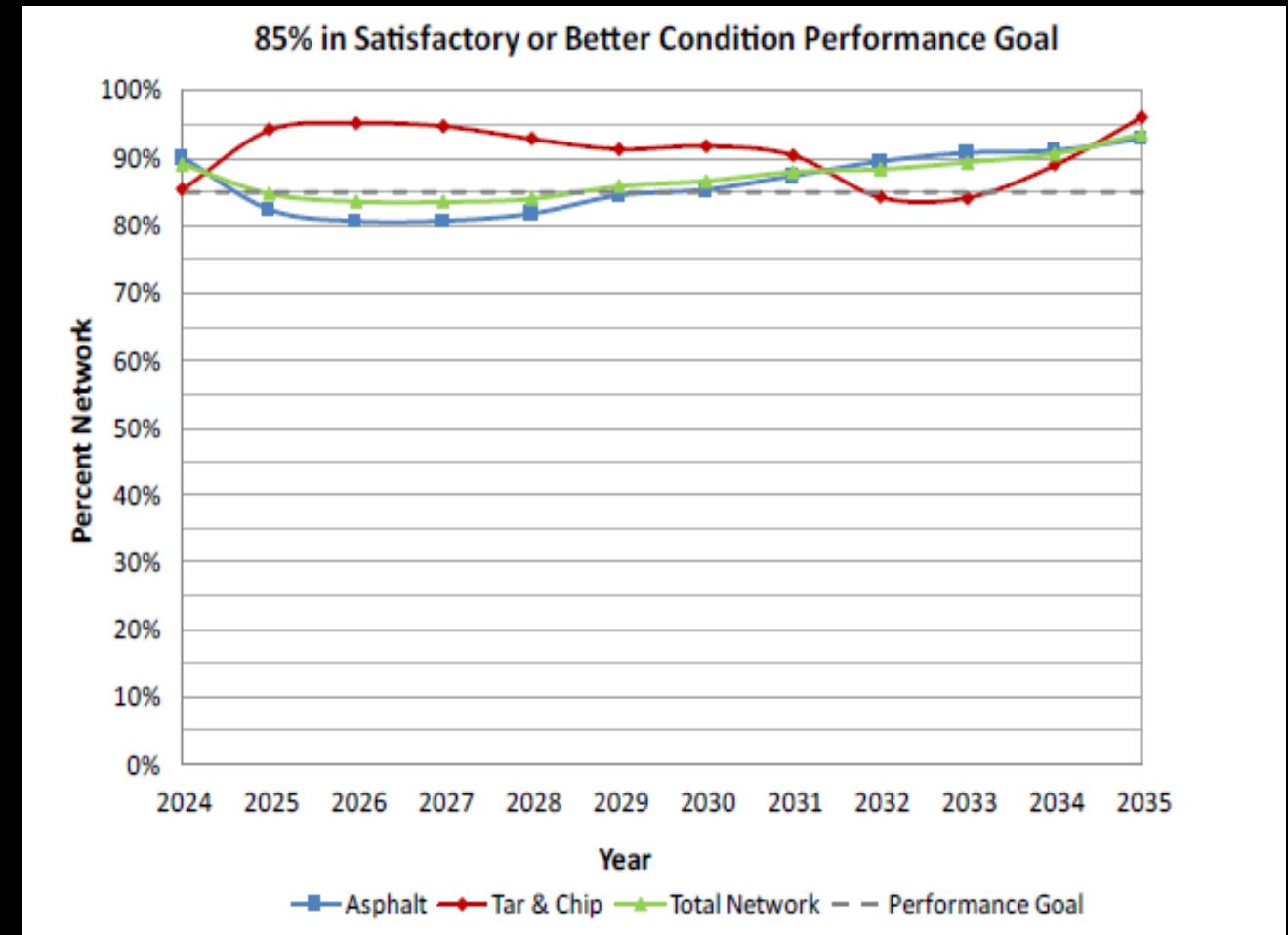
PROGRAM GOALS



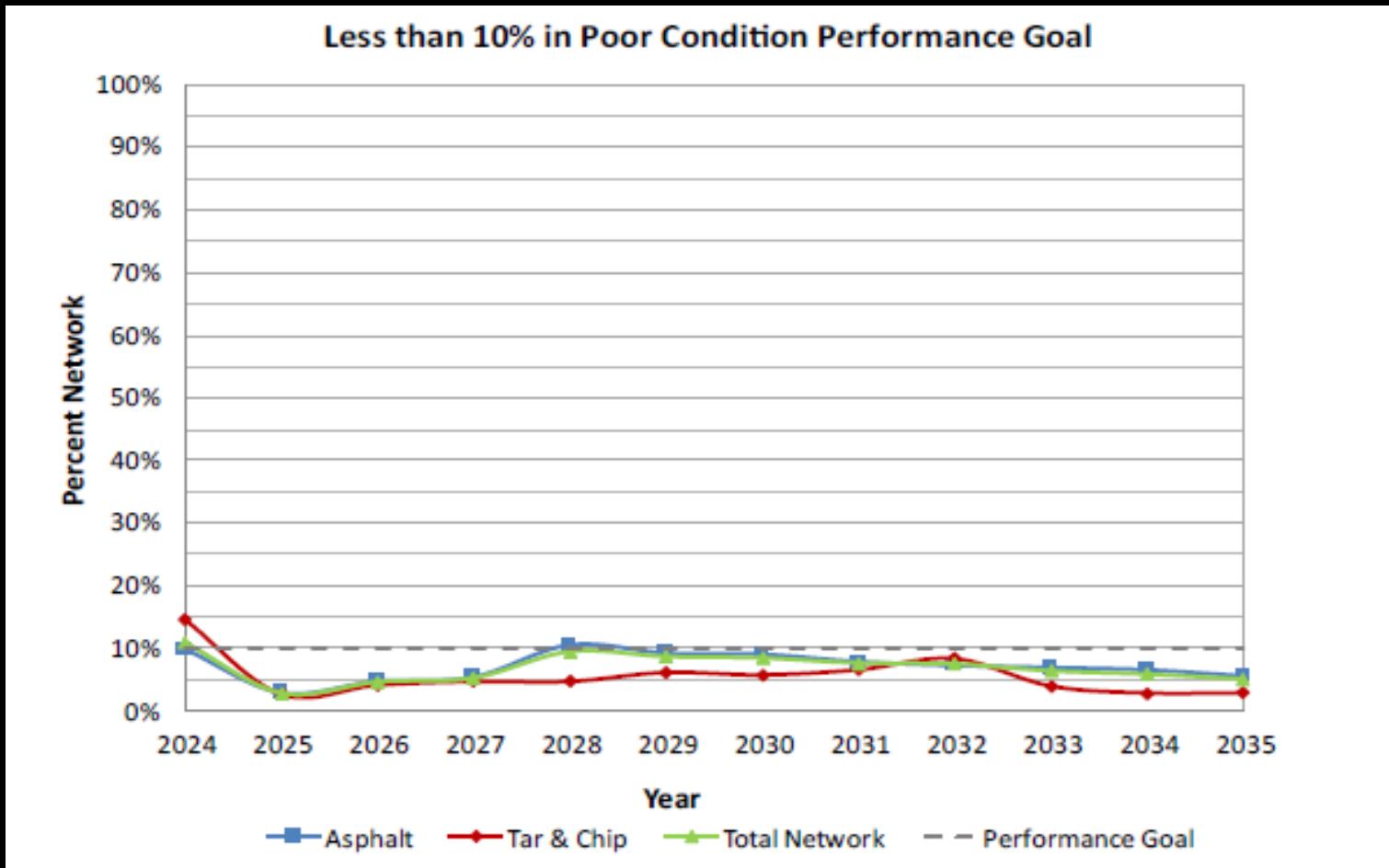
- Goals or key performance indicators:
 1. 85% of the network with PCI > 70.
 2. < 10% of the total network with PCI < 60.
 3. Exploring other goals.

GOAL 1

% Acceptable Condition by Pavement Type



GOAL 2

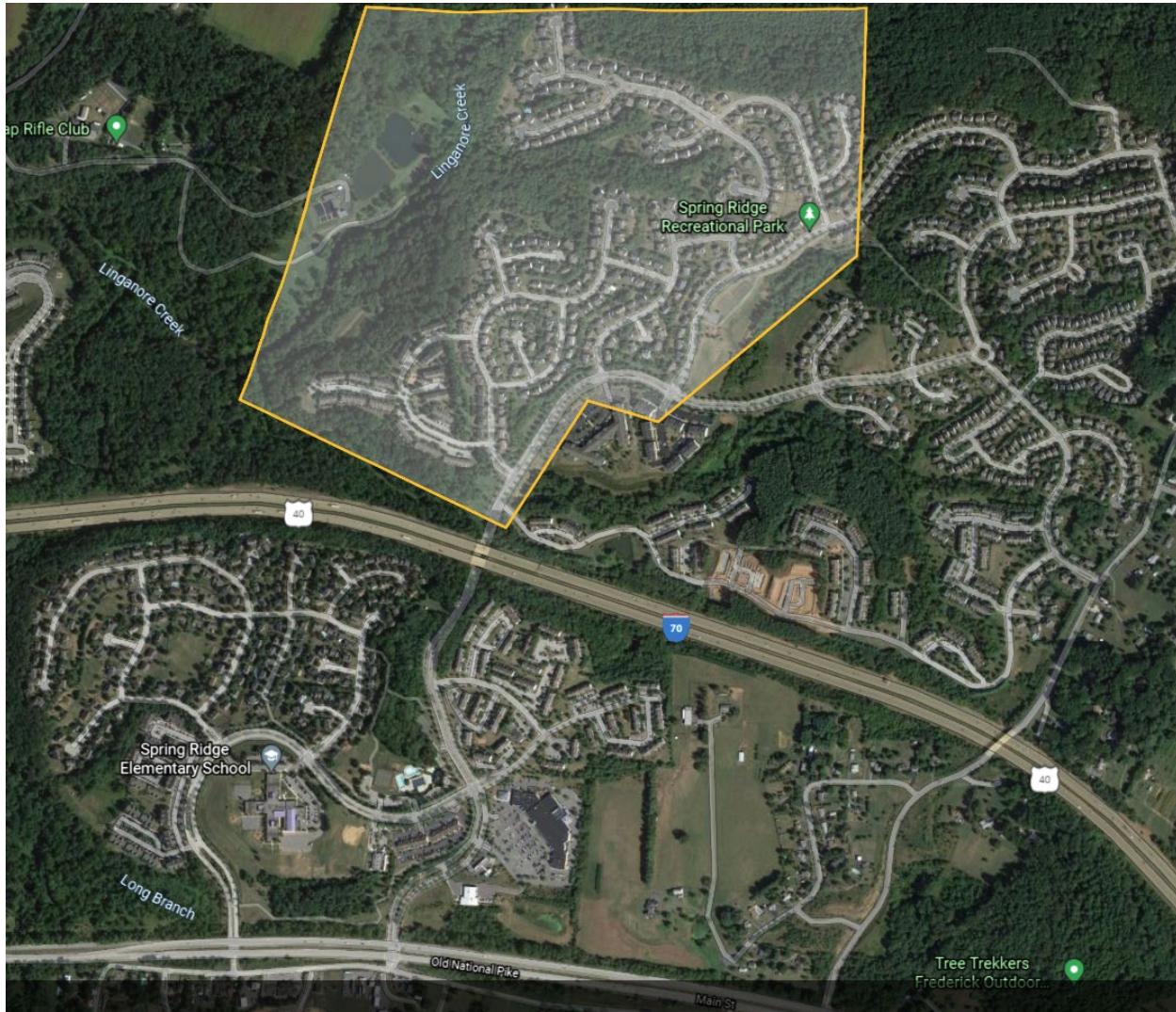


% Poor Condition by Pavement Type

NEIGHBORHOOD GROUPING ANALYSIS



- Developed in 2018.
- Tool is utilized in the software program.
- Tool provides same final surface appearance upon completion.
- Featured in presentations nationwide.



CONSTRUCTION PROCEDURES

Hot Mix Asphalt Roadways

- Full-Depth Reconstruction
- Cold-In-Place Recycling
- Foamed Asphalt Recycling
- Overlay
- Patching

Tar and Chip Roadways

- Hot Mix Asphalt use
- Sealing Wearing Surface
- Fog Seal
- Surface Coat/Micro-surfacing



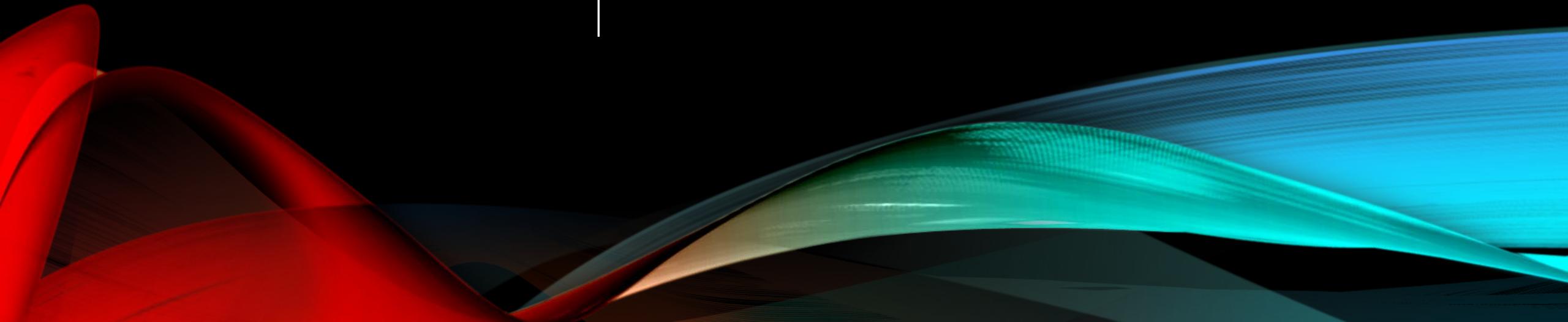
PMP RECENT ACCOMPLISHMENTS

Developed dashboards displaying real-time goals status.

Developed interactive mapping.

Evolving by piloting new products.

AGILE ASSETS DEMONSTRATION



ADC Map Grid	ADC Map Page	Name	From Street	To Street	Length	Width	Surface Area (SF)	Number of Lanes	Lane Miles	PCI	Pavement Type	Shoulder Type	Shoulder Width	% Shoulder	% Median	% Acceleration
B3	4684	Aaron Court	Brockton Dr	c-d-s	0.12	18	11404.8	2	0.240	97.33	Asphalt	None	1			
D1	4565	Abbington Court	Boyd Drive	c-d-s	0.15	20	15840	2	0.300	69.22	Asphalt	None	1			
F1	4805	Aberdale Place	Moreland Dr N	c-d-s	0.07	22	8131.2	2	0.140	69.78	Asphalt	None	1			
G6	4687	Aberdeen Way	Royal Crest Cir	Royal Crest Cir	0.14	25	18480	2	0.280	68.25	Asphalt	Concrete C&G	6	1		
C4	4334	Acer Court	Hessong Bridge Rd	Private Road	0.05	20	5280	2	0.100	57.24	Asphalt	None	1			
F4	4689	Adam Court	Moxton Dr	c-d-s	0.12	20	12672	2	0.240	95.49	Asphalt	None	1			
D1	4805	Adams Street	Tuscarora St	Mountville Rd	0.14	16	11827.2	2	0.280	100	Asphalt	None	1			
		Adamstown Commons Drive	Mountville Road	Johns Mill Road	0.68	25	89760	2	1.360	100	Asphalt					
F10	4685	Adamstown Road	MD 85	Mountville Rd	1.83	20	193248	2	3.660	63.57	Asphalt	None	1			
G8	4688	Addie Court	Browningsville Rd	c-d-s	0.1	20	10560	2	0.200	79.7	Asphalt	None	1			
F7	4687	Addison Woods Road	Sugarloaf Pkwy	Carriage Hill St	0.22	32	37171.2	2	0.440	80.58	Asphalt	Concrete C&G	6	0.86		
F8	4687	Addison Woods Road	Byron Circle	Sugarloaf Pkwy	0.55	27	78408	2	1.100	56.93	Asphalt	Concrete C&G	6	1	0.04	
		Addition Ave	Knoxville Rd	Road end	0.1	21	11088	2	0.200	84.98	Tar & Chip	Gravel	2			
F8	4688	Adgate Drive	Browningsville Rd	Road end	0.21	20	22176	2	0.420	78.68	Asphalt	None	1			
D2	4448	Adirondack Drive	Alleghany Dr	c-d-s	0.26	20	27456	2	0.520	71.86	Asphalt	None	1			
C3	4684	Adrienne Court	Roundtree Rd	c-d-s	0.17	21	18849.6	2	0.340	86.11	Asphalt	None	1			
C6	4449	Adventure Avenue	MD 194	Inspiration Ave	0.4	27	57024	2	0.800	67.75	Asphalt	Asphalt	3	0.3		
C6	4449	Adventure Court	Adventure Ave	c-d-s	0.11	20	11616	2	0.220	76.74	Asphalt	None	1			
		Advisors Court	Corporate Drive	End	0.08	32	13516.8	2	0.160	100	Asphalt	Concrete C&G				
H2	4564	Agate Court	Limestone Ln	c-d-s	0.05	20	5280	2	0.100	69.99	Asphalt	None	1			

Contracts Actions ▾

Input Type	Contract name	Contractor	Inspector	Start Date	Completion ...	Att.	Comments	Last Updated by	Last Updated on ▾
2 - Contract Work ▾	FY 19 Patch and Repair	L. W. Wolfe Enterprises, Inc. ▾	Todd Souders ▾	7/15/2019 <input type="button" value="Calendar"/>	9/28/2020 <input type="button" value="Calendar"/>			RSTULL	9/28/2020
2 - Contract Work ▾	FY 19 Surface Coat	Slurry Pavers, Inc. ▾	Lester Payne ▾	8/9/2019 <input type="button" value="Calendar"/>	9/28/2020 <input type="button" value="Calendar"/>			RSTULL	9/28/2020
2 - Contract Work ▾	FY 19 Overlay	Francis O. Day Co., Inc. ▾	Lester Payne ▾	3/25/2019 <input type="button" value="Calendar"/>	9/28/2020 <input type="button" value="Calendar"/>			RSTULL	9/28/2020
2 - Contract Work ▾	FY 19 Chip Seal	American Paving Fabric ▾	Third Party ▾	8/12/2019 <input type="button" value="Calendar"/>	9/28/2020 <input type="button" value="Calendar"/>			RSTULL	9/28/2020
2 - Contract Work ▾	FY 20 Overlay	Francis O. Day Co., Inc. ▾	Lester Payne ▾	10/14/2019 <input type="button" value="Calendar"/>	5/21/2021 <input type="button" value="Calendar"/>			RSTULL	5/21/2021
2 - Contract Work ▾	FY 20 Patch and Repair	Francis O. Day Co., Inc. ▾	Todd Souders ▾	4/14/2020 <input type="button" value="Calendar"/>	5/21/2021 <input type="button" value="Calendar"/>			RSTULL	5/21/2021
2 - Contract Work ▾	FY 21 Overlay	Francis O. Day Co., Inc. ▾	Todd Souders ▾	<input type="button" value="Calendar"/>	<input type="button" value="Calendar"/>			RSTULL	9/16/2021
2 - Contract Work ▾	FY 21 Chip Seal	MT Laney Co., Inc. ▾	Todd Souders ▾	6/24/2021 <input type="button" value="Calendar"/>	11/23/2021 <input type="button" value="Calendar"/>			RSTULL	11/23/2021
2 - Contract Work ▾	FY 21/FY 22 Surface Coat	Slurry Pavers, Inc. ▾	Lester Payne ▾	7/6/2021 <input type="button" value="Calendar"/>	11/23/2021 <input type="button" value="Calendar"/>			RSTULL	11/23/2021
2 - Contract Work ▾	FY 21 Patch and Repair	Pleasants Construction ▾	Lester Payne ▾	9/27/2021 <input type="button" value="Calendar"/>	11/23/2021 <input type="button" value="Calendar"/>			RSTULL	11/23/2021

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Sections Actions ▾

Street Segment Name	PMP Road Number	Treatment	Work Code	Work Description	Layers	Layers (All)	Att.	Comments	Last Updated by	Last Updated on ▾	Layers	Material C...	Thickne...	Comme...	Att.	Last
Dogwood Lane(from:N/S US 40 Alt to:Road end)	4980	Asphalt F ▾	REHAB-THIN	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Birch Court(from:Off Pinoak Dr to:c-d-s)	1320	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Pin Oak Drive(from:Off Pinewood Trail to:Road end)	13270	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Poplar Lane(from:Off Pinewood Trail to:c-d-s)	13540	Asphalt R ▾	REHAB-THIN	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Tulip Tree Lane(from:Off Beechtree Dr N to:c-d-s)	17330	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Aspen Court(from:Off Pinewood Trail to:c-d-s)	570	Asphalt R ▾	REHAB-THIN	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Pinewood Trail(from:Dogwood Ln to:Road end)	13340	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Willow Tree Drive(from:US 40 Alt to:c-d-s w of Beechtree)	18430	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Camden Place (North)(from:Camden Dr to:c-d-s)	2860	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						
Camden Place (South)(from:Camden Dr to:c-d-s)	2861	Asphalt R ▾	REHAB-THICK	<input type="button" value="Edit"/>	0	0			RSTULL	11/23/2021						

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AgileAssets Pavement Management | Inventory | Condition Ratings | Construction History | Work Plans | Analysis | Reports | GIS | RSTULL | Save | Reload

Pavement Management > Reports > Current Scenario Dashboard

Pavement Types

- Tar & Chip
- Composite
- Parking Lot
- PCC
- Asphalt

Select All ... Invert

Network Overall Health

PCI: 81.5

Structure Index: 89.9

Environmental Index: 74.84

Pavement Condition By Group

Category	Lane Miles (fair, good, poor)
Asphalt	~500 (Fair), ~750 (Good), ~50 (Poor)
Tar & Chip	~50 (Fair), ~100 (Good), ~5 (Poor)
Collector	~500 (Fair), ~750 (Good), ~50 (Poor)
Local	~500 (Fair), ~750 (Good), ~50 (Poor)
MajorArt	~500 (Fair), ~750 (Good), ~50 (Poor)
MinArt	~500 (Fair), ~750 (Good), ~50 (Poor)

Current Condition Map

MD 31, MD 170, FREDERICK, MOUNT AIRY, BALLENDALE CREEK, DAMASCUS

Section Details Data

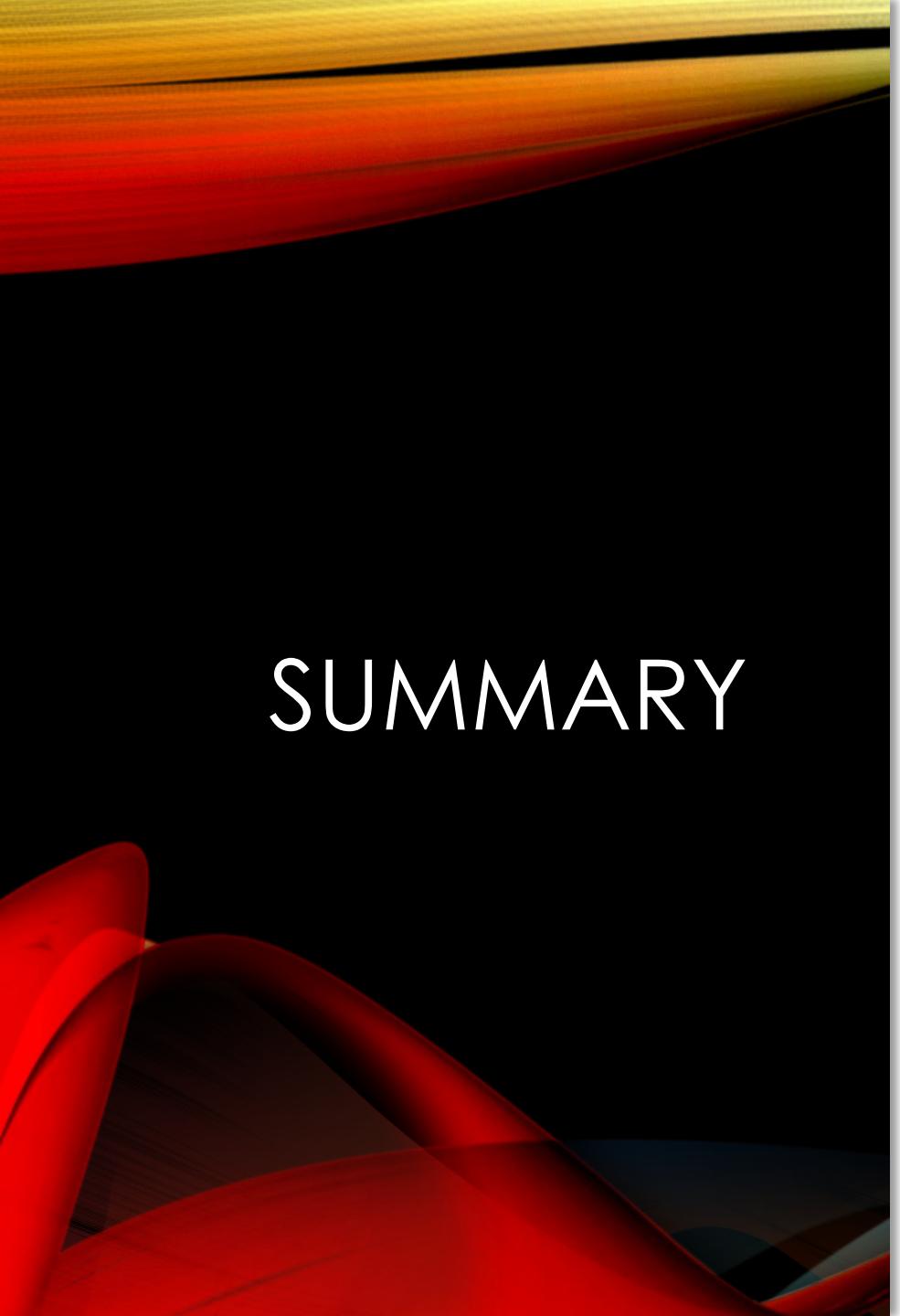
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PMP Road Number	Street Name	From Street	To Street	Functional Class	Pavement Type	Treatment Name	Length	Width	Shoulder Type	Shoulder Width	Lane Miles	Structural Index	Environmental Index	PCI	
18,060	Western Avenue	Tritapee Dr	Knoxville Rd	Local	Tar & Chip	Tar&Chip + FDR	0.06	15	None	1.00	0.12	10.50	39.33	30.15	
8,092	Fishing Creek Road-3		Mountaindale Rd	Gravel pavement	Local	Tar & Chip	Tar&Chip + FDR	0.87	11	None	1.00	0.87	21.42	38.33	31.57
4,940	Doctor Baxter Road	WS Linganore Rd	Road end	Local	Tar & Chip	Tar&Chip + FDR	0.10	15	Gravel	2.00	0.20	32.75	39.33	33.84	
4,250	Covell Road	Thurston Rd	Gravel pavement	Local	Tar & Chip	Tar&Chip + FDR	0.21	11	None	1.00	0.21	24.87	39.33	37.54	
17,250	Tritapee Drive	Western Ave	Brunswick Limits	Local	Tar & Chip	Tar&Chip + FDR	0.48	19	Gravel	2.00	0.92	23.84	51.44	41.30	
18,250	Whiten Road	Bastford Road	Road end	Local	Tar & Chip	Tar&Chip + FDR	0.04	14	None	1.00	0.04	23.54	54.33	41.84	
1,630	Boss Arnold Road (East)	Lander Rd	Catoctin Creek	Local	Tar & Chip	Tar&Chip + FDR	0.23	11	None	1.00	0.23	28.25	52.33	43.09	
5,810	Farmgate Court	Foxcroft Dr	c-d-s	Local	Asphalt	Asphalt Rehab-Thin	0.08	32	Concrete C&G	6.00	0.16	51.19	40.73	44.63	
12,421	Old Bohn Road	Gravel pavement	Woodville Road	Local	Tar & Chip	Tar&Chip + Asphalt Level	0.05	14	Gravel	2.00	0.10	40.58	43.00	48.08	
14,781	Roy Shafer Road	Bussard Rd	Bennies Hill Rd	Local	Tar & Chip	Tar&Chip + FDR	1.10	13	Gravel	2.00	1.10	40.88	50.89	48.25	
15,610	Sigler Road	Gravel pavement	Br F14-02X	Local	Tar & Chip	Tar&Chip	0.35	12	Gravel	2.00	0.35	50.81	39.08	47.18	
14,590	Rolling Green Court	Regina Dr	c-d-s	Local	Asphalt	Asphalt Rehab-Thin	0.31	21	None	1.00	0.62	64.42	32.47	47.08	
14,180	Revelle Court	Buchanan Dr	Road end	Local	Asphalt	Asphalt Rehab-Thick	0.10	20	None	1.00	0.20	67.92	31.88	48.08	
2,330	Brookmere Boulevard	Rocky Springs Rd	Hansen Cir	Local	Asphalt	Slurry Seal	0.32	20	None	1.00	0.64	74.06	34.08	49.67	
7,020	Upper Avenue	F/C HMD-24	c-d-s	Local	Asphalt	Asphalt Rehab-Thin	0.00	20	Concrete C&G	4.00	0.10	50.10	24.89	40.18	

Road Section Details

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1,630	Boss Arnold Road (East)	Lander Rd	Catoctin Creek	Local	Tar & Chip	Tar&Chip + FDR	0.23	11	None	1.00	0.23	28.25	52.33	43.09	
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15,610	Sigler Road	Gravel pavement	Br F14-02X	Local	Tar & Chip	Tar&Chip	0.35	12	Gravel	2.00	0.35	50.81	39.08	47.18	
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7,020	Upper Avenue	F/C HMD-24	c-d-s	Local	Asphalt	Asphalt Rehab-Thin	0.00	20	Concrete C&G	4.00	0.10	50.10	24.89	40.18	

Apply



SUMMARY

Piloting Innovative
Industry Technologies.

Utilization of Asset
Management.

Pioneer of County Asset
Management.

Progressive Network
Performance.