ACTPO
April 26, 2023

ADAMS COUNTY

Office of
PLANNING and
DEVELOPMENT

Staff Updates

Significant Developments

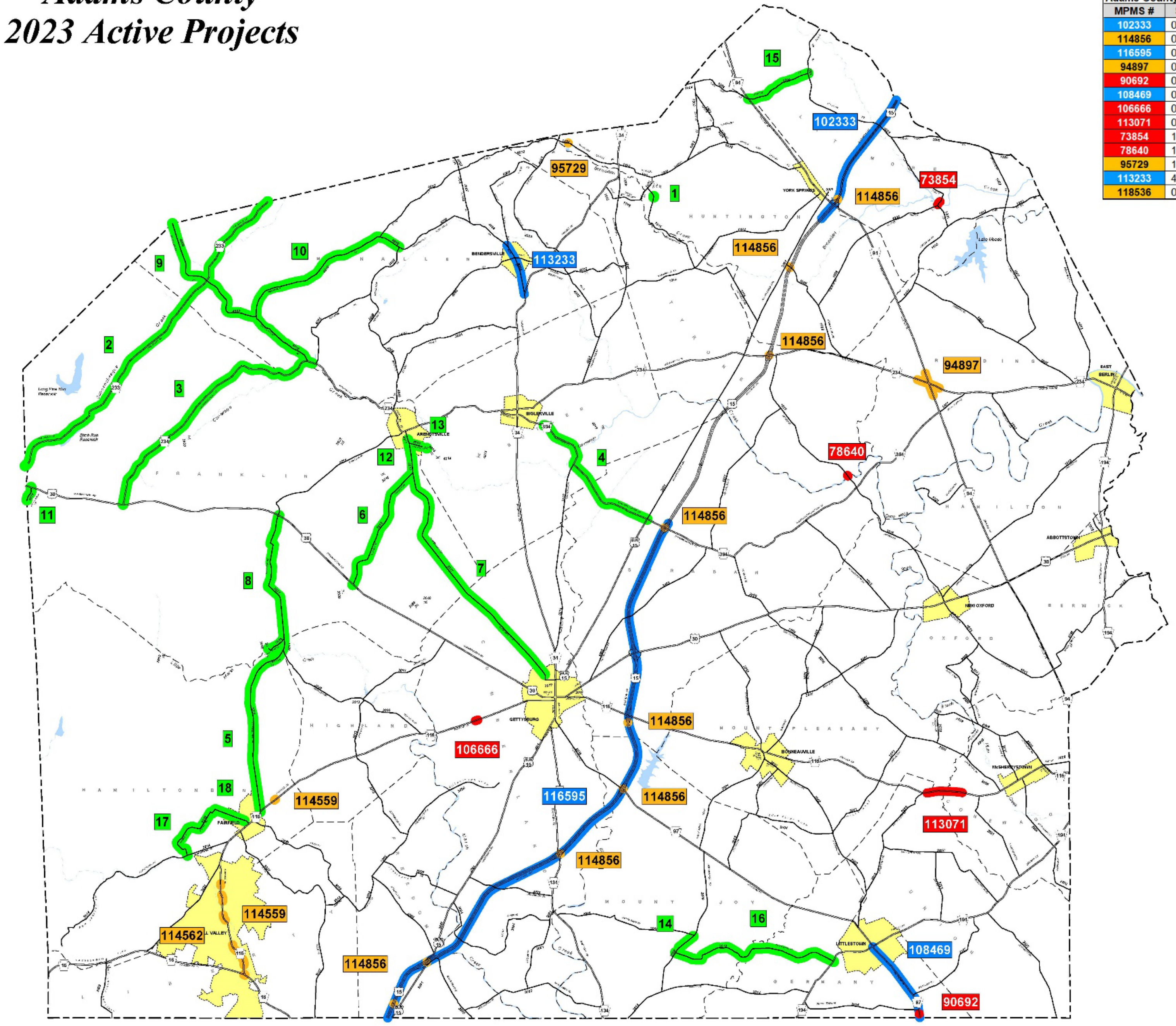
Development Name	Resubmission	Municipality	School District	Street Location	Total New Residential Lots or Units (≥ 25)	Total Building Square Feet (≥30,000) for Industrial, Commercial, or Mixed Use Development
The Crossings	**YES**	Cumberland	**GASD**	Old Mill Rd	**154**	0
The Residence at Willoughby Run	**NO**	Cumberland	**GASD**	730 Chambersburg Rd	**112**	179640
Crownstone Dealership	**NO**	Straban	**GASD**	3140 York Rd	**0**	40250
Canner Storage	**NO**	Biglerville	**UASD**	170 Hanover St	**0**	31725
Mayberry at Mason Dixon Phase 1	**YES**	LIttlestown	**LASD**	635 Hanover Pike	**48**	0

Staff Updates

HOP/Traffic Study/Project Meetings

- SRTP/PA Commuter Services
  - Board Meeting (March)
  - Regional Congestion Management Plan (March)
- PennDOT
  - District 8 Planning Partners Call (February)
  - Bi-Monthly Planning Partners Call (March)
  - @Home in Adams County – Presenter at Let's Talk Transportation! Event (April)
  - Spring Planning Partners Meeting (April)
  - PennDOT Legislative Briefing – Adams/Franklin (April)
- Iron Springs Plaza HOP Scoping Meeting (Hamiltonban Township)

Adams County 2023 Active Projects



Adams County Construction Contracts			
MPMS #	SR-Sec	Title	Type
102333	0015-038	US 15 Improvements - Adams	Safety Improvement
114856	0015-057	TSMO Adams County Devices	Intelligent Transportation System
116595	0015-059	US 15 Preservation NorthBound	Highway Restoration
94897	0094-026	94 & 234 Intersection Imp	Safety Improvement
90692	0097-010	Piney Creek Bridge 2	Bridge Replacement
108469	0097-013	Littlestown Resurfacing	409 Expanded Maintenance
106666	0116-044	PA 116/Trib Willoughby Run	Bridge Replacement
113071	0116-051	SR 116 Bridge over Conewago Creek	Bridge Replacement
73854	1005-009	Latimore Valley Road Brg-C	Bridge Restoration
78640	1015-016	Conewago Creek Bridge	Bridge Replacement
95729	1020-000	Peach Glen RR Crossing	Rail Highway Grade Crossing
113233	4008-030	SR 4008 Main Street Resurface	409 Expanded Maintenance
118536	0000-000	Dist AWPM 2023	General Maintenance

Adams County CY 2023 M213 Department Force Surface Improvement Work						
Map#	SR	Bseg	Boff	Eseg	Eoff	Type
1	1016	110	1560	110	1670	Patch
2	233	10	0	190	1793	Seal
3	234	10	0	120	2280	Seal
4	394	40	0	110	2968	Seal
5	3011	10	0	144	2034	Seal
6	3015	10	0	70	2654	Seal
7	3017	20	68	150	1576	Seal
8	3018	30	0	30	2666	Seal
9	4009	10	0	70	2146	Seal
10	4010	10	0	130	2134	Seal
11	4011	10	0	10	1665	Seal
12	4014	10	0	10	1539	Seal
13	4014	22	0	22	6	Seal
14	2029	30	800	30	3100	Level
15	1004	50	0	80	1697	Level
16	2012	10	0	80	2368	Level
17	3016	10	0	40	2046	Level
18	3016	40	2046	70	760	Paving

Legend

Color	Description
Red	Contracted Bridge Project
Blue	Contracted Highway/Resurfacing Project
Green	Department Force Highway Project
Orange	Traffic/Safety Related

PENNDOT GIS DISTRICT 8-0

PRODUCED BY: GEOGRAPHIC INFORMATION DIVISION

GIS PRODUCT No: Active_Projects_2023_01
March 31, 2023

Disclaimer

District 8-0 provides the data within these pages for your personal use. The maps shown here are for illustration purposes only and are not suitable for site specific decision making. Information is provided with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user.

ONWARD2050

Adams County Long Range Transportation Plan

Developing Ranking Systems for:

- Bridges
  - Local
  - State
- Pavement
- Safety

Refining ***Active Transportation and Safety Analysis*** to aid in incorporating bike & ped projects

- Most data inputs available from PennDOT data sources
- Currently identifying the data layers and fields/attributes necessary to build the ranking systems
- Ranking systems will evolve toward automated models in the future

Ex. Pavement Ranking Data Inputs

Category 1: Overall Condition (30 points)

Status of Structure	Points	Layers	Fields
Poor	30		
Fair	15		
Good	0		

Category 2: Overall Pavement Index Score (25 Points)

Points Formula	Layers	Fields
(100-OPI Score) / 100 x 25	Roadway Segments (RMSSEG)	OVERALL_PVMNT_IDX

Category 3: Average Daily Traffic Volumes (15 Points)

Average Daily Traffic Volume	Points	Layers	Fields
15,000 and higher	15	Roadway Segments (RMSSEG)	CUR_AADT
10,000 - 14,999	12		
5,000 - 9,999	9		
1,000 - 4,999	6		
500 - 999	3		
499 and lower	1		

Category 4: Truck Percentage (15 Points)

Truck Percentage	Points	Layers	Fields
21 and higher	15	Roadway Traffic (RMSTRAFFIC)	TRK_PCT
16-20	10		
11-15	7		
6-10	4		
Less than 5	1		

Category 5: Roadway Functional Classification (5 Points)

Roadway Functional Classification	Points	Layers	Fields
Other Freeway/Expressway	5	Administrative Classification of Roadway (RMSADMIN_Domain)	FHWA_FUNC_CLS
Principal Arterial	4		
Minor Arterial	3		
Major Collector	2		
Minor collector	1		
Local	0		

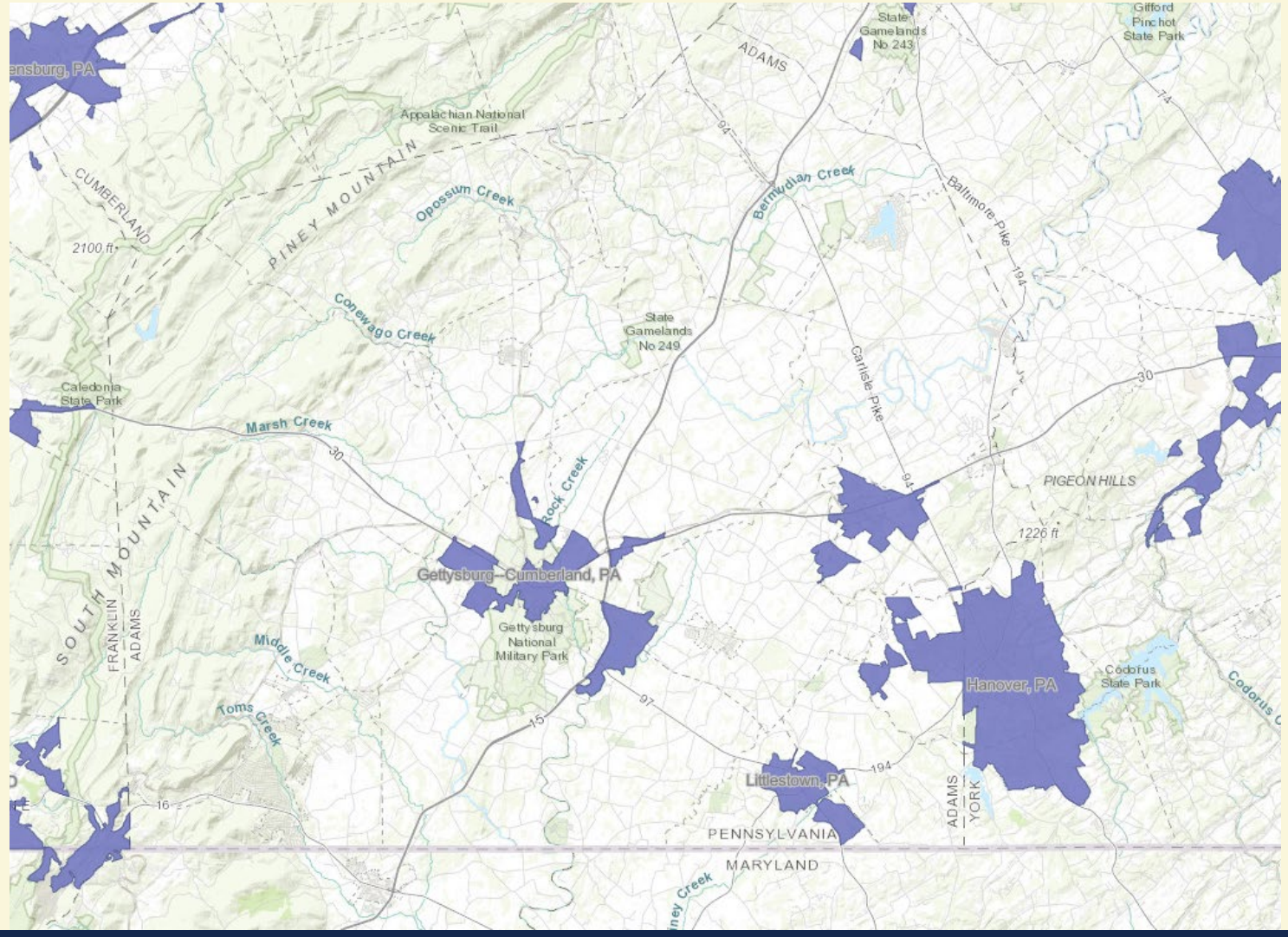
Domain Code Explanation	
1	Interstate
2	Other Freeway/Expressway
3	Other Principal Arterial
4	Minor Arterial
5	Major Collector
6	Minor Collector
7	Local

Category 6: PennDOT Business Plan Network (5 Points)

Business Plan Network	Points	Layers	Fields
National Highway System (NHS) Non-Interstate	5	Roadway Segments (RMSSEG_Domain)	BUS_PLAN_NETWRK
Fair	3		
Good / Excellent?	1		

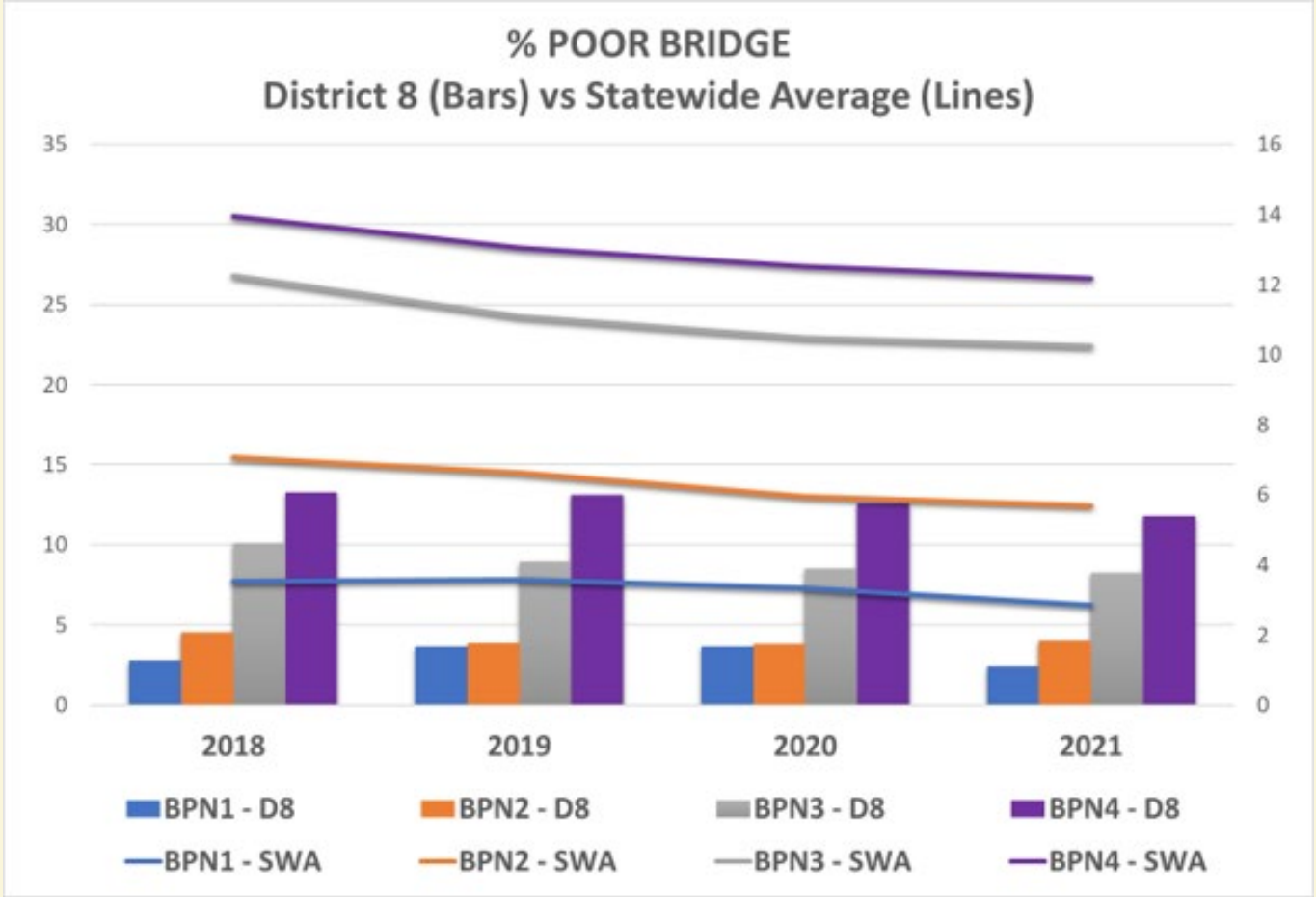
Domain Code Explanation			
1	INTERSTATE	D	DCNR Bridges
2	NHS NON-INTERSTATE	L	Local Network
3	NON-NHS WITH AADT>=2000	N	NEW
4	NON-NHS WITH AADT<2000	T	Turnpike

Staff Updates – 2020 Urban Area Boundaries



BRIDGE PLANNING

- Derek Mitch, P.E., District Bridge Engineer – Background
- Emphasis has switched from lowering number of “poor” bridge to a Lowest Life Cycle Cost.
- Taking a deeper look at our bridge program.
- LLC is based on “risk score”.



BRIDGE PLANNING

Bridge Risk Score Calculation

The risk score for each bridge is calculated using the formula below. Appendix Table J.2 defines the factors and the parameters that determine factor values.

$$\text{Bridge Risk} = \left(\sqrt{\text{Deck Area} * \text{Annual Average Daily Traffic}}\right) * F_s * F_{fc} * F_{det} * F_{aadtt} * F_{flood}$$

Appendix Table J.2: Bridge Risk Score Factors

Factor	Definition	Parameter	Factor Value
F_s	Scour Factor	Scour Rating = A	1.2
		Scour Rating ≠ A	1.0
F_{fc}	Fracture Critical Factor	Fracture Critical Rating < 5	1.4
		Fracture Critical Rating ≥ 5	1.0
F_{det}	Detour Length Factor	Detour Length > 30 miles	2.0
		Detour Length ≥ 10 miles	1.5
		Detour Length < 10 miles	1.0
F_{aadtt}	Annual Average Daily Truck Traffic Factor	Truck traffic > 20% total traffic	2.0
		Truck traffic ≥ 10% total traffic	1.5
		Truck traffic < 10% total traffic	1.0
F_{flood}	Bridge Closed for Flooding Event Factor	Bridge has been closed for flooding	3.0
		Bridge has been overtopped due to flooding	1.5
		Bridge has not been closed or overtopped due to flooding	1.0

BRIDGE PLANNING

- **Condition Rating (CR) 9 → Brand new**
- **Condition Rating (CR) 4 → Poor**
- **Condition Rating (CR) 0 → Collapsed in river**
- **A quick look at CR tells the story - a "wave" coming**

Treat Network by CR – Examine Next 30 Years

- CR = 0-2, Deck Area = 16,192 → Needs Replacement (5 years)
- CR = 3, Deck Area = 434,201 → Needs Replacement (10 years)
- CR = 4, Deck Area = 522,953 → Needs Replacement (15 years)
- CR = 5, Deck Area = 6,834,689 → Needs Rehab (15 years)
- CR = 6, Deck Area = 3,010,595 → Needs Rehab (25 years)
- CR = 7, Deck Area = 2,405,674 → Needs Preservation (15 years)
- CR = 8, Deck Area = 518,795 → Needs Preservation (25 years)
- CR = 9, Deck Area = 62,563 → Needs Preservation (40 years)

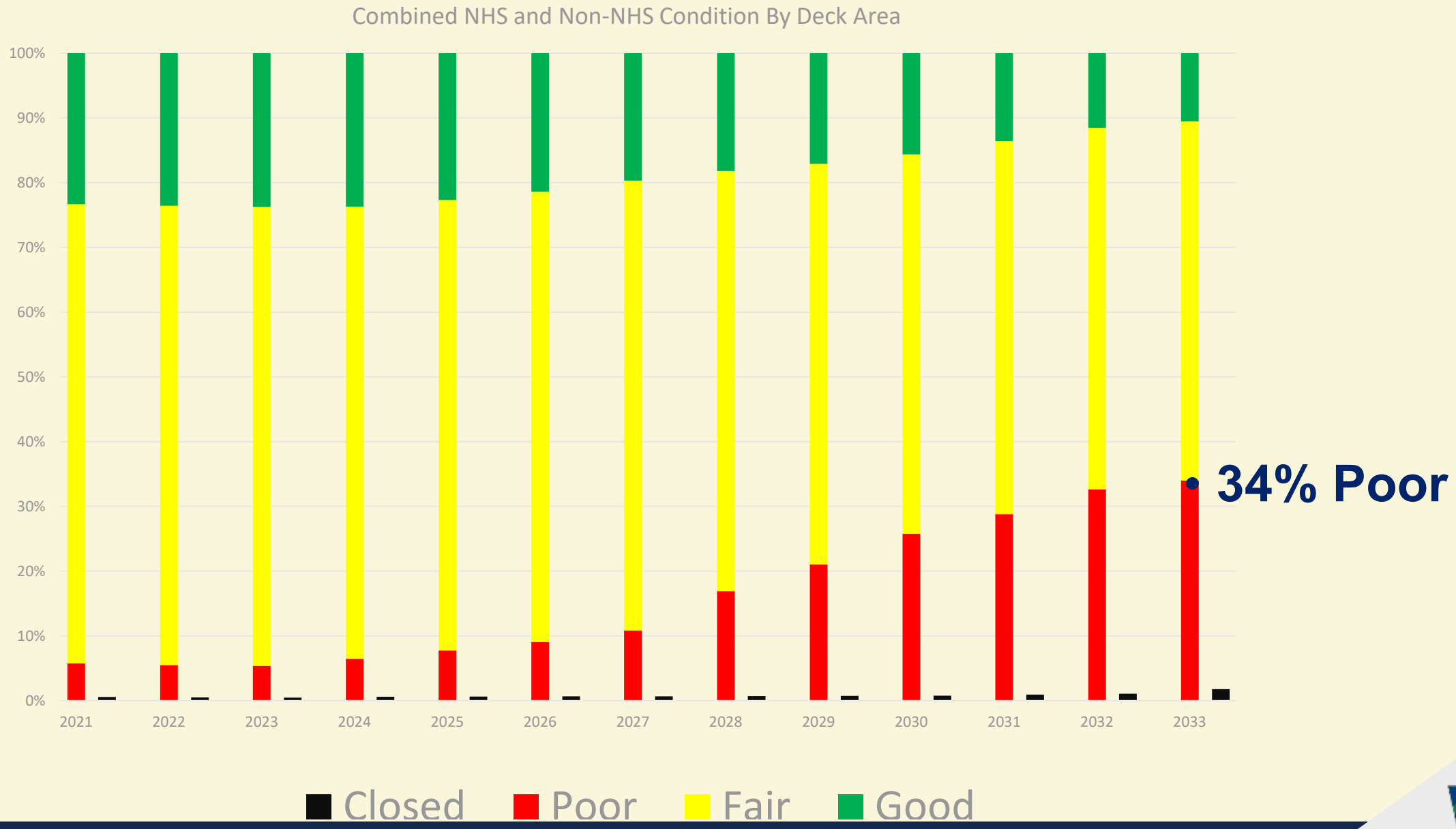
BRIDGE PLANNING

- Bridge design life ~75 years
- Eisenhower Interstate System – started 1956, ended 1972
- 1956 + 75 = 2031, 1972 + 75 = 2047
- 61% of our network in 1950-1979

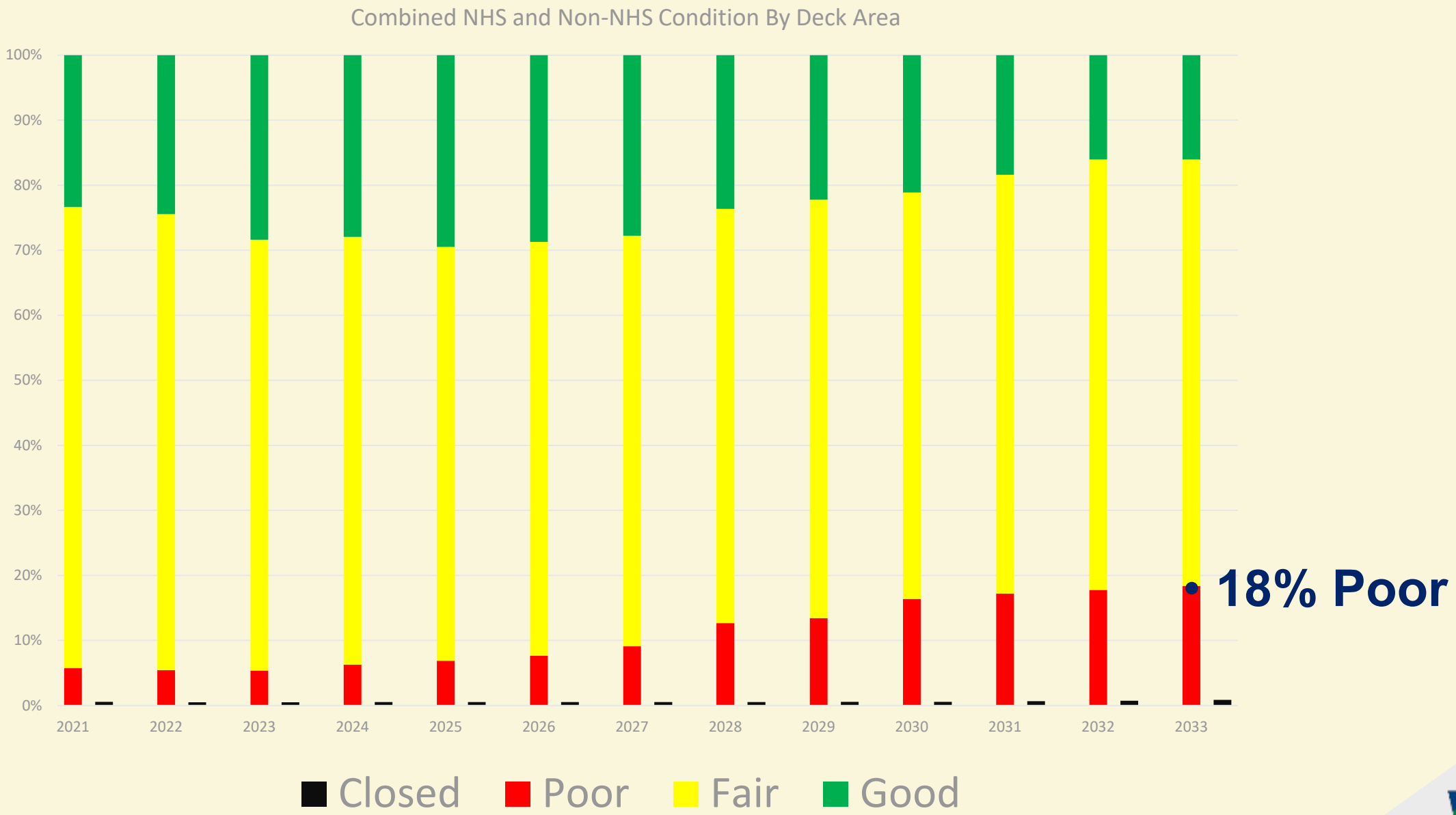
Deck area by Year built

	Adams	Cumberland	Dauphin	Franklin	Lancaster	Lebanon	Perry	York	Total
Before 1929	39,799.60	38,866.90	310,331.10	34,323.90	370,681.30	10,585.00	37,127.70	38,931.70	880,647.21
1930-39	39,470.40	29,984.70	141,061.31	59,610.30	98,780.70	40,290.50	78,018.30	119,943.40	607,159.62
1940-49	45,020.90	10,788.80	82,812.90	44,378.90	163,229.70	78,598.30	19,726.10	77,995.90	522,551.51
1950-59	53,002.00	66,973.00	510,886.40	41,055.30	203,651.51	14,597.90	132,319.90	646,443.52	1,668,929.52
1960-69	188,054.80	670,364.31	1,221,608.81	259,340.11	553,047.41	330,182.21	182,685.60	196,419.50	3,601,702.77
1970-79	8,619.90	306,924.21	1,768,922.20	39,376.80	1,213,390.27	31,411.00	0.00	221,574.00	3,590,218.38
1980-89	39,369.10	50,909.60	383,495.51	45,252.40	134,534.50	25,648.40	9,732.50	97,815.50	786,757.52
1990-99	59,398.20	202,012.20	150,322.80	18,469.10	136,783.91	8,675.20	11,632.20	32,825.30	620,118.91
2000-09	50,049.40	74,398.20	30,321.70	55,438.10	487,132.62	138,792.21	45,588.40	157,955.41	1,039,676.04
2010+	120,145.40	220,978.51	141,533.80	136,124.80	240,241.11	74,223.50	40,084.80	321,177.61	1,294,509.54
Total	**642,929.71**	**1,672,200.43**	**4,741,296.54**	**733,369.72**	**3,601,473.03**	**753,004.23**	**556,915.51**	**1,911,081.85**	**14,612,271.02**

WORST 1ST


Combined NHS and Non-NHS Condition By Deck Area
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
34% Poor
Closed
Poor
Fair
Good

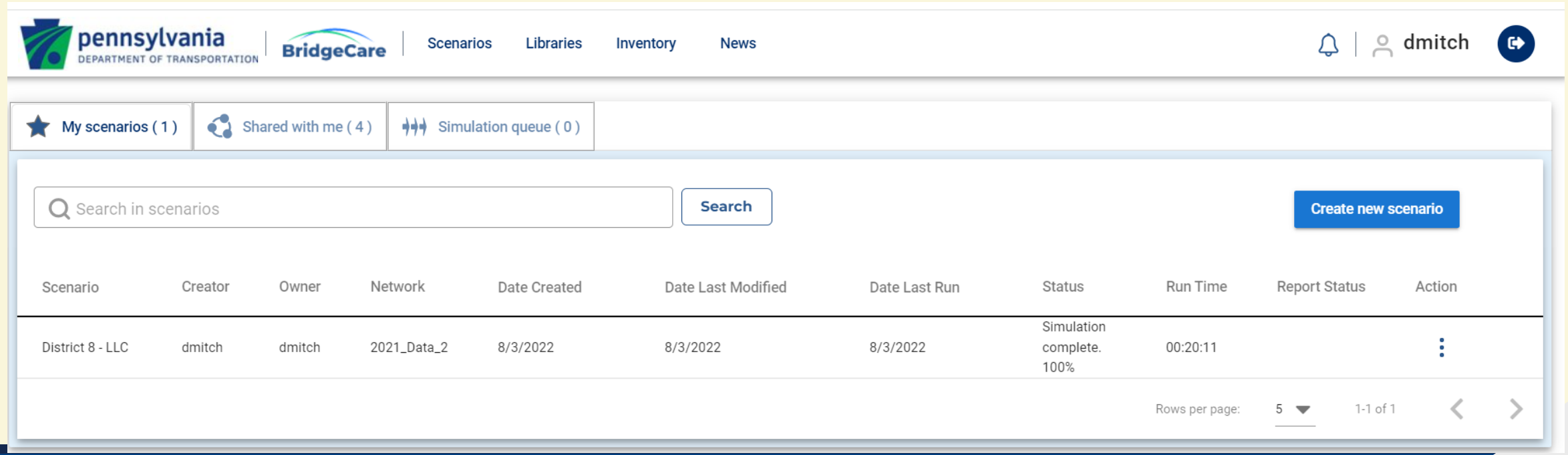
LOWEST LIFE CYCLE COST



BRIDGE CARE

BridgeCare – What is it?

- A web based weighted lowest life cycle analysis tool (MODA).
- Utilizes BMS2 data & historic deterioration curves to determine B/C ratios.
- Either standard library or user assigned costs & treatment libraries
- Think “STLRFD” of planning work.



BRIDGE CARE

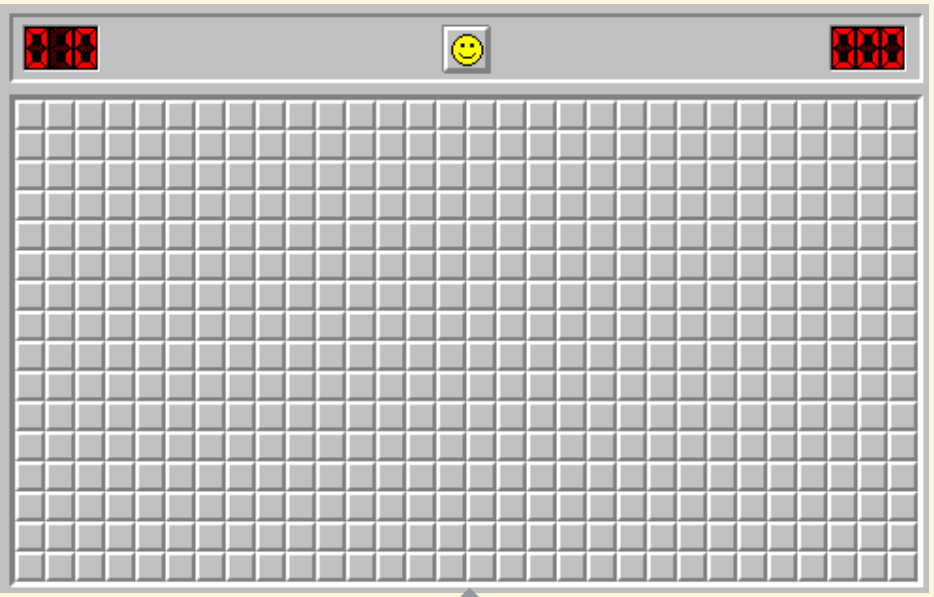
BridgeCare – What is it (Cont.)?

- A reduction in unknown risks on the planning side.
- “Pathfinding” tool
- Accurate in “macro” or aggregate level.

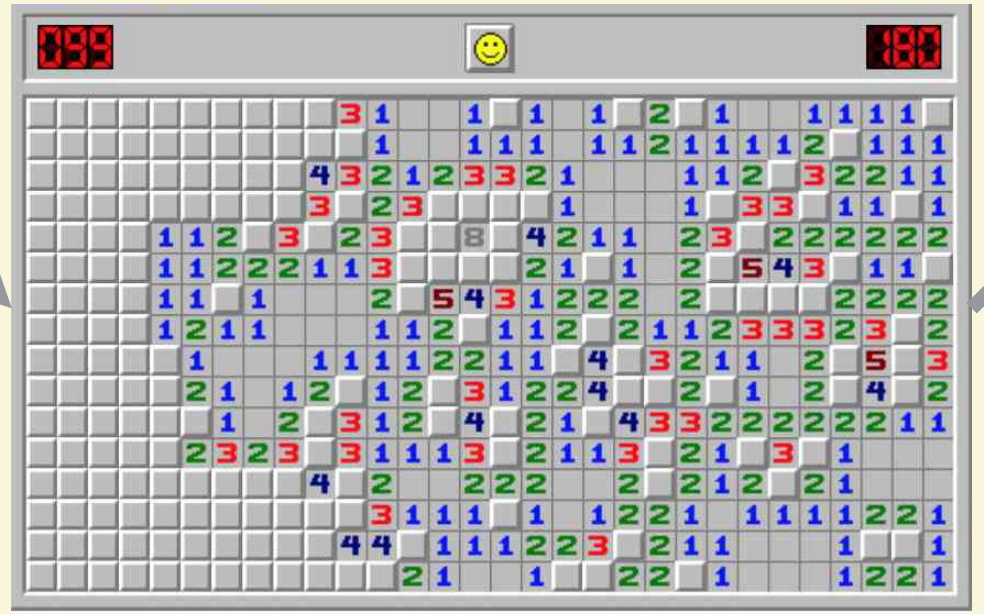
BridgeCare – What is it not?

- A panacea for planning
- 100% accurate at the “micro” or individual bridge level
- Substitute for Engineering Judgment / Planning Staff
  - Arch life → Concrete arches seem to last 125yrs, steel arches seem to last 65 years
  - Concrete Tee Beams → can’t do a deck replacement

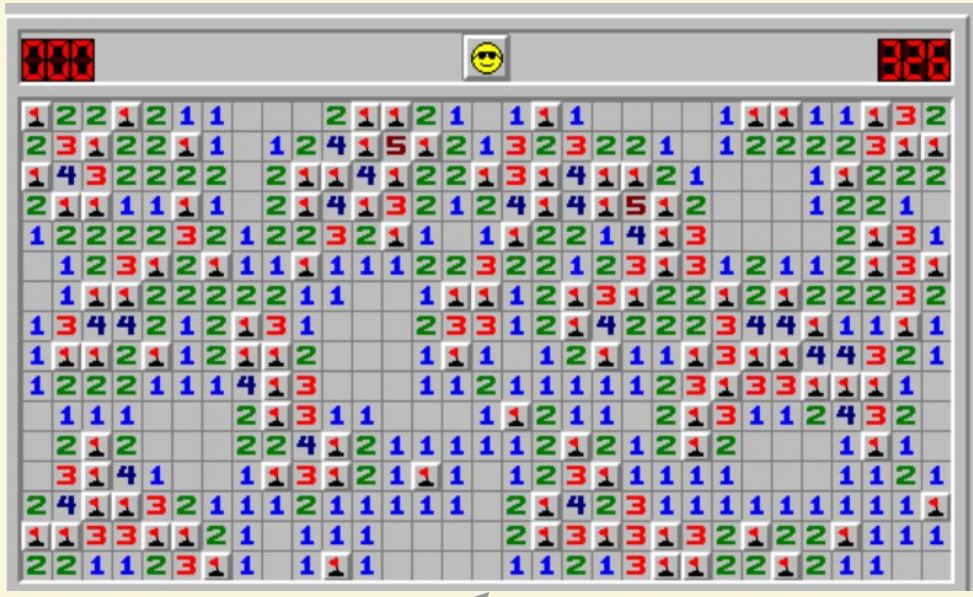
BRIDGE CARE - MINESWEEPER



BridgeCare



Engineering Judgement / Planning Staff



BRIDGE PLANNING

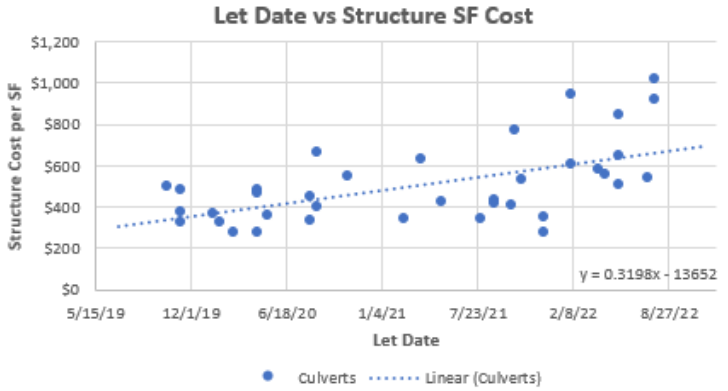
Unit Cost Data: Replacement - Culvert
ECMS Data Range: 08/02/2019 to 08/02/2022

Last Updated: 09/13/22
Updated By: KJS

Data Set Count: 37 Culvert Projects

Instructions:
(1) Cells shaded green are input.
(2) To add a new project, copy a row from the middle of the table and insert the row in the middle of the table. This will retain the drop downs, eliminate the need to reapply the filters to the column headings, and automatically add the new data point to the graph. After insertion, edit all shaded data fields
(3) After all new projects are added, re-sort data using by newest first.
(4) After new cost data is entered, adjust trendline formula input based off of chart.

Notes:
(1) Items/cost associated with natural streambed material placement/storage
(2) Items/cost associated with unique issues (e.g. sinkhole stabilization) that appear on structures tab block were excluded.
(3) Over-excavation and backfilling of unsuitable material included under other
(4) SF Costs include temporary excavation support and removal of existing structures.



	Structure	Total
2020 Average SF Cost =	$414	$826
2021 Average SF Cost =	$449	$877
2022 Average SF Cost =	$719	$1,301
Overall Average SF Cost =	$507	$974
Trendline Slope =	0.3198	
Trendline Y-intercept =	-13652	

Structure Trendline		
Date	SF Cost	
#########	$696	Today
6/30/2023	$773	
6/30/2024	$890	
6/30/2025	$1,007	
6/30/2026	$1,124	

Project Data						Structure Data										Construction Cost Data							
																Low Bidder - Structure Cost							
ECMS Project	Let Date	Dist.	County	Route & Section	Structure Plan Number	No. of Spans	Structure Type	Wing Type	Barrier Type	Span (FT)	Wall Width (FT)	Rise (FT)	Culv. Length (FT)	Staged Constr. ?	Dist. Slab ?	Str. Area (SF)	Lump Sum	Rebar	Rock	TES&PS	Other Str. Item	Existing Removal	Total Structure	Structure SF Cost	Total Constr. SF Cost
87538	7/28/22	8	Lancaster	0772 - 048	S-40076	1	Box - Precast	Combo	Combo G/R	6.00	0.67	3.00	42.13	No	Yes	309	$284,000	$4,800	in LS	$0	$300	$25,000	$314,100	$1,017	$2,198
100292	7/28/22	8	Lebanon	0419 - 009	S-40249	1	Box - Precast	Combo	Combo G/R	7.50	0.67	6.00	57.23	No	Yes	506	$406,976	$26,495	$3,612	$0	$13,179	$17,495	$467,757	$924	$1,606
90846	7/14/22	8	Dauphin	4006 - 006	S-40454	1	Box - Precast	End Section	10M	26.00	1.08	7.50	29.25	No	No	824	$400,000	$4,096	$21,350	$0	$2,070	$20,000	$447,516	$543	$872
89288	5/12/22	8	Lancaster	7101 - BRG	L-65	1	Box - Precast	End Section	10M	16.00	1.08	4.00	31.50	Yes	Yes	573	$391,900	Alt. Bid	$9,800	$37,500	$4,565	$40,000	$483,765	$844	$1,715
89288	5/12/22	8	Lancaster	7101 - BRG	L-64	2	Box - Precast	End Section	10M	12.00	1.00	5.00	43.50	Yes	Yes	1,218	$655,735	Alt. Bid	$9,800	$37,500	$7,500	$80,000	$790,535	$649	$1,318
92562	5/12/22	8	York	2079 - 005	S-40014	1	Box - Precast	End Section	SM G/R	27.00	1.08	6.00	33.75	No	Yes	985	$460,000	$11,820	in LS	$0	$2,240	$30,000	$504,060	$512	$796
100211	4/14/22	8	York	3035 - 001	S-39942	1	Box - Precast	End Section	SM G/R	25.00	1.08	6.00	32.33	No	No	879	$408,719	$3,135	$21,871	$12,276	$3,467	$40,761	$490,228	$558	$922
78655	3/31/22	8	Cumberland	0997 - 039	S-39668	1	Box - Precast	End Section	PA Bridge	18.00	1.08	7.00	35.83	No	Yes	723	$389,900	$8,525	$5,040	$0	$520	$20,000	$423,985	$586	$877
91359	2/3/22	8	York	2002 - 019	S-39830	1	Box - Precast	End Section	SM G/R	7.50	0.67	5.00	29.38	No	Yes	260	$229,000	$850	in LS	$10,000	$2,250	$4,000	$246,100	$947	$1,803

Page

BRIDGE PLANNING

Cost Analysis:

			Total Replacement			Partial Replacement		Rehabilitation		
			Culvert [2]	Bridge [3]	Com-bined	Super-structure	Deck	Stone Arch	Conc. Arch	Preser-vation
Design Cost (Total Cost)		Preliminary Engineering	$296,242	$319,848	$310,518	$215,915	$138,765	$196,528	$220,848	$107,492
		Final Design	$175,172	$229,551	$198,113	$202,539	$257,226	$112,583	$139,289	$163,241
		Preliminary + Final	$471,414	$549,398	$508,631	$418,454	$395,991	$309,111	$360,136	$270,733
		Right-of-Way	$17,438	$19,732	$18,385	$4,271	$7,098	$18,365	$26,709	$238
Design Cost (Cost per SF)		No. of Projects with Design Costs	37	27	64	10	3	3	5	10
		Total Associated SF Area	30,912	100,284	131,196	25,303	20,722	4,222	11,883	143,199
		Average SF Area	835	3,714	2,050	2,530	6,907	1,407	2,377	14,320
		Total Design Cost (PE + FD + R/W)	$18,383,784	$15,346,797	$33,710,629	$4,227,253	$1,209,270	$982,427	$1,934,228	$2,709,704
		Average Cost per SF	$595	$153	$257	$167	$58	$233	$163	$19
Construction Cost (Cost per SF)	Structure Only	2020 Average	$414	$342	$378	(1)	(1)	(1)	(1)	$73
		2021 Average	$449	$406	$426	(1)	(1)	(1)	(1)	$64
		2022 Average	$719	$353	$634	(1)	(1)	(1)	(1)	$97
		Overall Average	$507	$365	$446	$236	$143	$372	$157	$72
	Low Bid (w/o CENG)	2020 Average	$826	$567	$697	(1)	(1)	(1)	(1)	$103
		2021 Average	$877	$752	$812	(1)	(1)	(1)	(1)	$125
		2022 Average	$1,301	$494	$1,115	(1)	(1)	(1)	(1)	$184
		Overall Average	$974	$627	$825	$402	$233	$596	$356	$133
		Constr. Engineering (CENG)	$122	$78	$103	$50	$29	$75	$44	$17
		Low Bid Average + CENG	$1,096	$706	$928	$452	$262	$671	$400	$149
Total (Cost per SF)			$1,690	$859	$1,185	$619	$320	$904	$563	$168

Page 1

BRIDGE PLANNING

- CR = 4, Deck Area = 522,953 → Needs Replacement (15 years)
- CR = 5, Deck Area = 6,834,689 → Needs Rehab (15 years)

• **Bridge (Light) Preservation →**	**$ 25 / SF**	New Programmatic Preservation
• **Bridge (Medium) Preservation →**	**$ 75 / SF**	
• **Bridge (Heavy) Preservation →**	**$ 150 / SF**	
• **Bridge Deck Replacement →**	**$ 250 / SF**	
• **Bridge Beam & Deck Replace →**	**$ 450 / SF**	~%70 increase to do full replacement
• **Bridge Total Replacement →**	**$ 750 / SF**	
• **Culvert Replacement →**	**$1000 / SF**	

NEW PROGRAMATIC PRESERVATION

- Bridge (Light) Preservation Contract - Reduce long term degradation of bridges (focus on joints & scour).

ontra

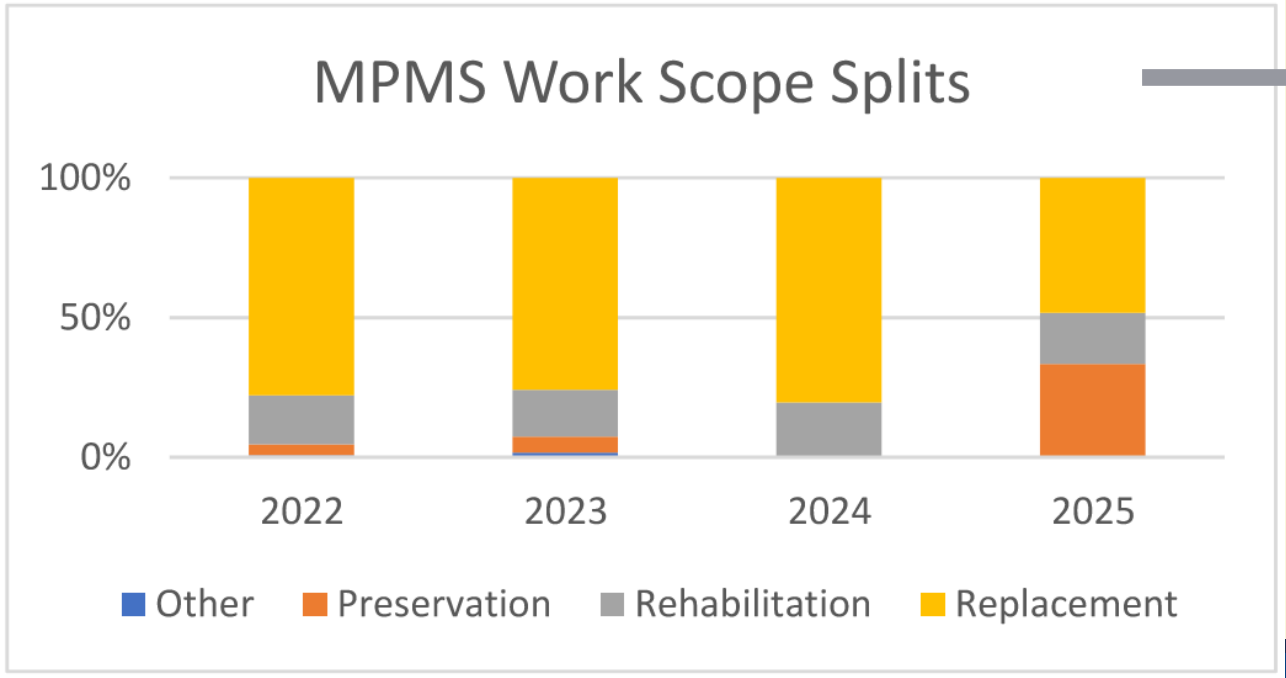
focus

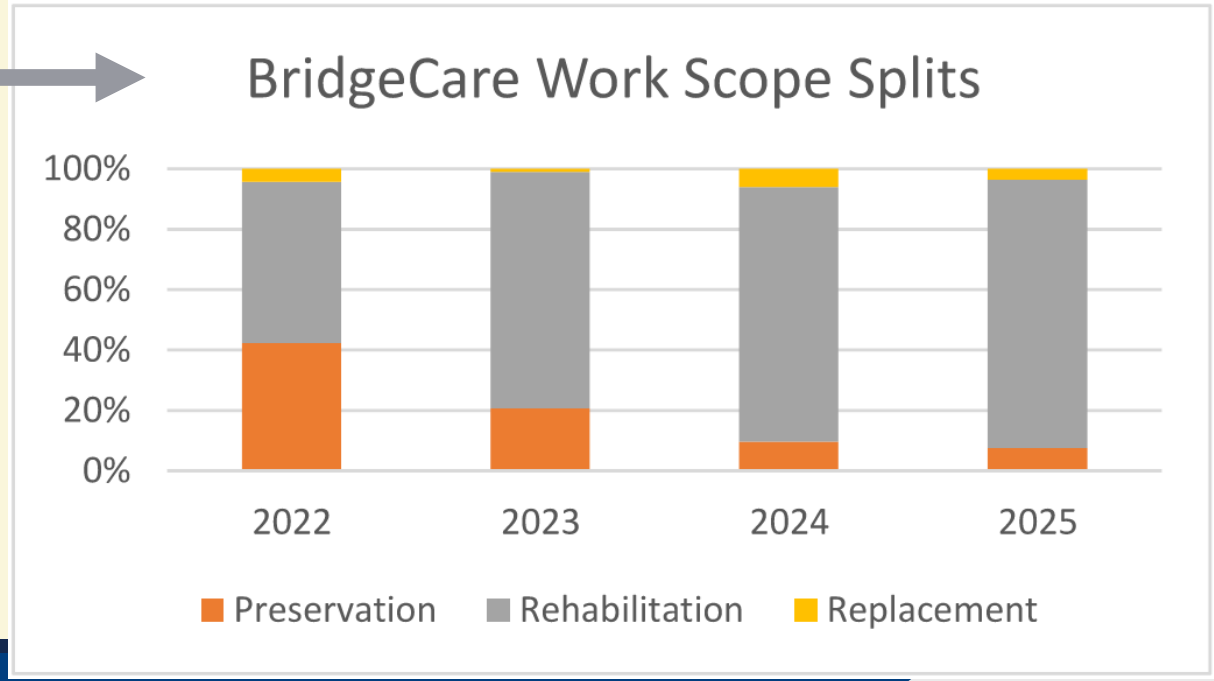
or

County	Joint Issue PC1/2	Scour Issue PC1/2
Adams	11	23
Cumberland	37	8
Dauphin	34	21
Franklin	9	1
Lancaster	56	46
Lebanon	17	13
Perry	13	10
York	29	47
D8-0	206	169

BRIDGE PLANNING

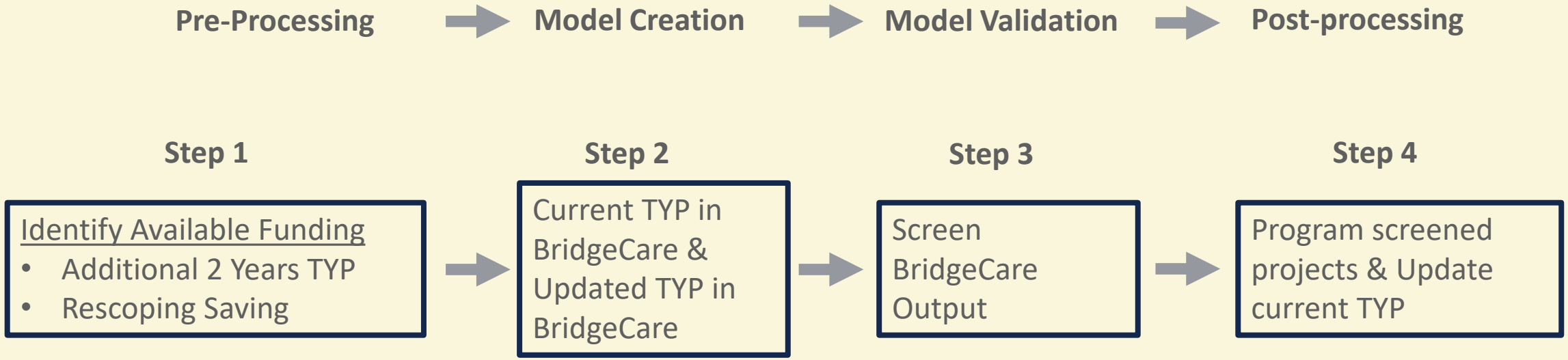
- Another angle - BAMS
- Bridge Asset Management → BridgeCare Software
- Can compare our planned project (MPMS) to our theoretical "perfect" LLC scopes.
- Reality is in between, because it will always be a mix.





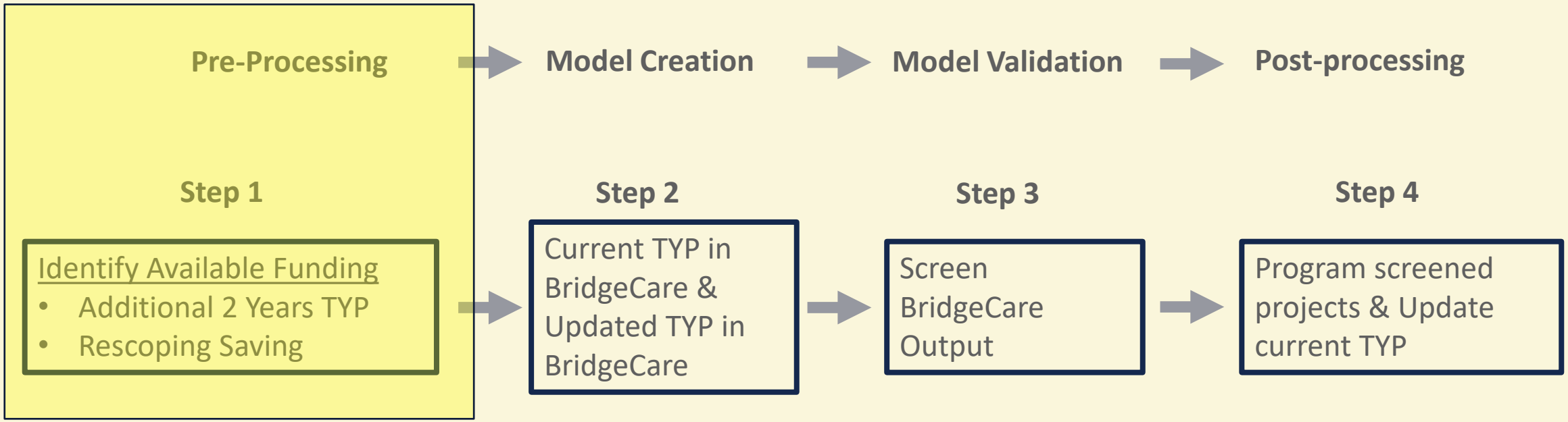
BRIDGE PLANNING

- High-level overview



BRIDGE PLANNING

- High-level overview



BRIDGE PLANNING

- Step 1 – Identify Available Funding
- Pennsylvania 2023 Transportation Program Financial Guidance

Breakdown of funding by percentage assigned for bridge work.

40%	0%	100%	0%	100%

Appendix 2: FFY 2023 -- Highway/Bridge Base Funding Allocation ($000)

Region	NHPP	STP	State Highway (Capital)	State Bridge	Off System Bridges (BOF)	HSIP	Highway Freight Program	Rail Highway Safety	CMAQ	STP TAP Set-Aside	STP-Urban	Carbon Reduction	PROTECT	Bridge Formula Program (BRIP)
Lebanon	2,006	1,915	2,526	1,372	1,372	1,363	0	0	1,318	0	0	0	0	1,265

Lebanon County - Without State Highway						
Funding Pot	NHPP	STP	State Highway	State Bridge	BOF	BRIP
Amount	$2,006	$1,915	$0	$1,372	$1,372	$1,265
Bridge Allocation	$802	$766	$0	$1,372	$1,372	$1,265
Total	$5,577					

BRIDGE PLANNING

- Step 1 – Funding

- Typical Approach

Prior TYP
2021-2033

→

Current TYP
2023-2033 – From TYP
2034-2035 – New years to program

- New Approach

Prior TYP
2021-2033

→

Current TYP
2023-2033 – Re-evaluate
2034-2035 – New years to program

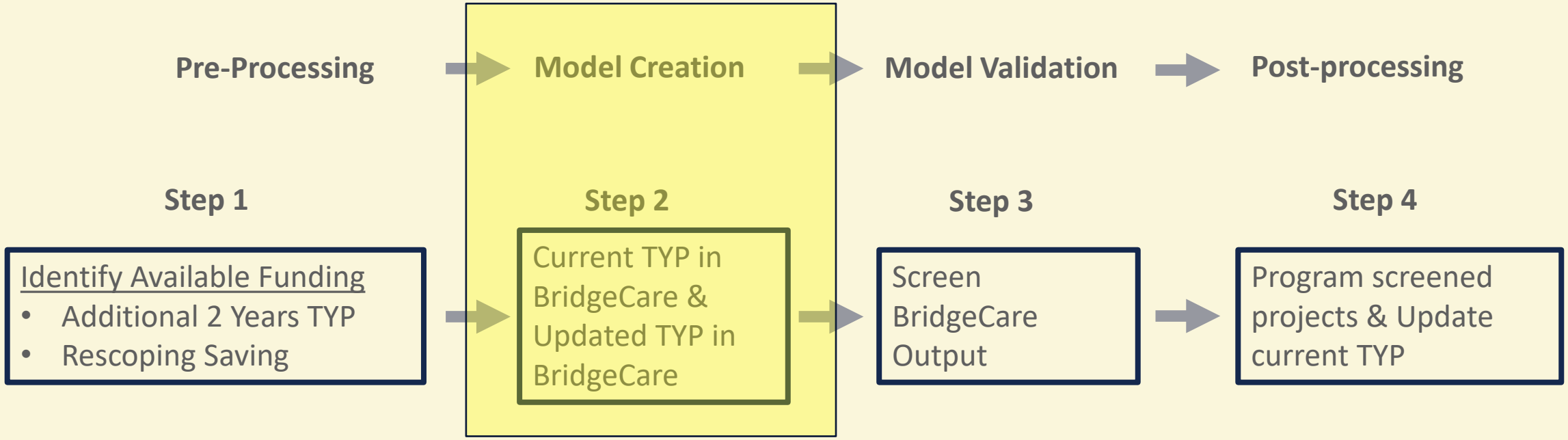
→

Adams
New Years funding = $11 M
Rescoping funding = $ 5 M
Total = $16 M

HATs
New Years funding = $86 M
Rescoping funding = $71 M
Total = $157 M

BRIDGE PLANNING

- High-level overview



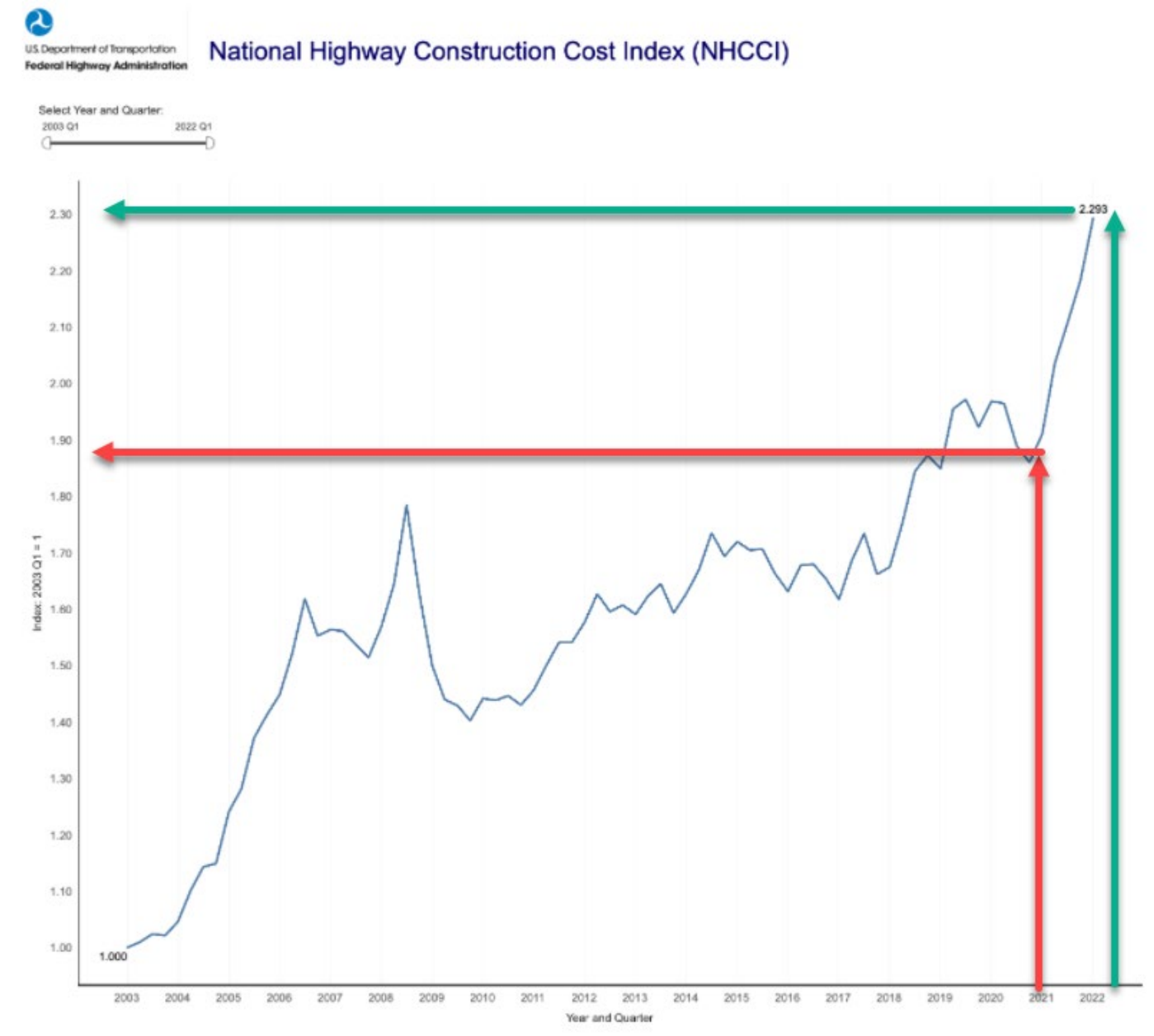
BRIDGE PLANNING

- Step 2 – Building Current & Updated TYP
  - Want to be able to see “gains” from LLC

- Scenario 1 – Current TYP – **Business As Usual (BAU)**
  - Update costs for inflation
  - Current TYP is only 10 out of 12 years, need to fill out years 11 & 12.
  - Business As Usual → fill up years 11 & 12 with replacements.

- Scenario 2 – Updated TYP – **Revised & Rescoped (R&R)**
  - Update costs for inflation
  - Rescope selected TYP projects
  - Add new work according to BridgeCare screening

BRIDGE PLANNING



2021 Index– 1.85

2022 Index – 2.31

Net = 2.31/1.85 = 1.25 → 25%

BRIDGE PLANNING

- Adams County – Bridge Funding (2023 - Pre TIP Update)

State Bridges								2023 (Pre TIP/TYP Update)		
MPMS	BRKEY	B/C/A/S	ADT	Detour	Risk	DA (SF)	Width	Const $	Scope	LET
90692	85	S	7572	7	1465	315	0	$805,000	Replacement	2023
106666	102	S	8789	15	3047	445	1	$788,201	Replacement	2023
87433	72	S	3148	8	1322	260	1	$1,062,900	Replacement	2024
106665	99	B	4830	5	2440	1002	1	$1,232,800	Rehabilitation	2024
87431	181	S	485	8	367	269	1	$521,984	Replacement	2024
99832	281	B	592	7	2556	4748	1	$3,193,000	Preservation	2024
90740	246	B	1006	9	1457	2262	0	$3,136,000	Replacement	2026
90698	168	B	1185	12	2790	2891	1	$2,200,000	Replacement	2027
78642	201	B	214	12	2812	7069	0	$5,655,200	Rehabilitation	2027
80962	238	B	2507	3	2139	1450	1	$1,305,000	Replacement	2028
90752	290	C	726	8	548	528	0	$800,000	Replacement	2028
90782	366	B	1146	9	1429	2059	0	$1,350,000	Replacement	2029
90782	367	B	1146	9	1216	1491	0	$1,350,000	Replacement	2029
117174	303	C	182	7	424	400	0	$500,000	Replacement	2030
99727	11	C	9267	7	3145	462	0	$100,000	Preservation	2034
90686	84	S	6849	7	1795	473	0	$355,000	Replacement	2034
90699	176	B	427	11	864	754	1	$600,000	Replacement	2034
99751	249	B	623	13	1702	1882	0	$250,000	Preservation	2034
99751	250	C	663	12	744	360	0	$250,000	Preservation	2034
99752	252	A	355	5	952	882	0	$115,000	Preservation	2034
99756	253	B	911	7	1264	729	0	$100,000	Preservation	2034
99756	254	S	904	7	1184	640	0	$75,000	Preservation	2034
87432	278	S	656	2	699	301	1	$362,000	Replacement	2034

In “Project Delivery Pipeline” Do not modify

In TIP – Rescope and add projects

In TYP – Rescope, Replace, Add, or change Let Dates

BRIDGE PLANNING

Bridge Scope Review Committee

- Staff
  - District Bridge Engineer
  - Assistant Bridge Engineer – Design
  - Assistant Bridge Engineer – Inspection
  - Planning & Programming Unit Delegate
  - Construction Unit – Structure Control Engineer
- Review inspection reports for every project on TYP
  - Adjust scope with an emphasis on LLC
  - Total Projects Reviewed = 570
  - Total Projects Rescoped = 275

Selected Cost Data - Total Cost		
#	Scope	Cost / SF
0	None	*$0*
1	Minor Repairs	*$100*
2	Preservation	*$168*
3	Rehab & Deck Replacement	*$320*
4	Rehab & SS Replacement	*$619*
5	Full Replacement	*$859*
6	Culvert Replacement	*$1,690*
7	Culvert Relining	*$846*

BRIDGE PLANNING – TIP UPDATE

- Adams County – Bridge Funding (2023 – BAU vs R&R)

Bridges		2023 (Pre TIP/TYP Update)		
MPMS	BRKEY	Const $	Scope	LET
90692	85	$805,000	Replacement	2023
106666	102	$788,201	Replacement	2023
87433	72	$1,062,900	Replacement	2024
106665	99	$1,232,800	Rehabilitation	2024
87431	181	$521,984	Replacement	2024
99832	281	$3,193,000	Preservation	2025
90740	246	$2,569,111	Replacement	2026
90698	168	$3,382,015	Replacement	2027
78642	201	$5,294,866	Rehabilitation	2028
80962	238	$1,747,160	Replacement	2030
90752	290	$636,207	Replacement	2030
90782	366	$2,555,396	Replacement	2030
90782	367	$1,850,459	Replacement	2031
117174	303	$511,327	Replacement	2031
99727	11	$130,001	Preservation	2031
90686	84	$680,533	Replacement	2031
90699	176	$1,084,824	Replacement	2032
99751	249	$529,570	Preservation	2032
99751	250	$101,299	Preservation	2033
99752	252	$248,183	Preservation	2033
99756	253	$205,131	Preservation	2034
99756	254	$180,088	Preservation	2034
87432	278	$433,066	Replacement	2034

In "Project Delivery Pipeline"
Do not modify

In TIP – Rescope and add projects

$22 Million → $17 Million

In TYP – Rescope, Replace,
Add, or change Let Dates

"Frees" ~$5 million

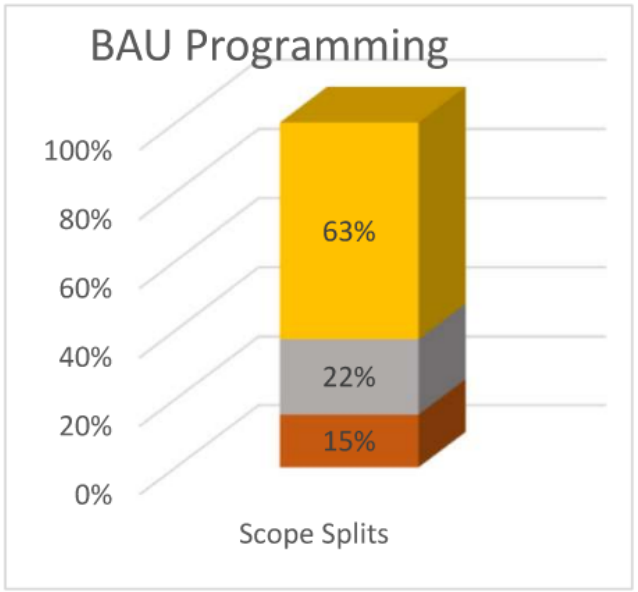
2023 (Post TIP/TYP Update)	
Const $	Scope
$1,851,315	Rehabilitation
$2,437,098	Rehabilitation
$6,322,042	Rehabilitation
$362,513	Preservation
$1,327,904	Replacement
$306,410	Preservation
$383,946	Preservation
$1,036,167	Replacement
$118,969	Preservation
$1,225,268	Replacement
$380,927	Rehabilitation
$297,126	Preservation
$58,541	Preservation
$0	Remove
$122,102	Preservation
$0	Remove
$852,017	Replacement

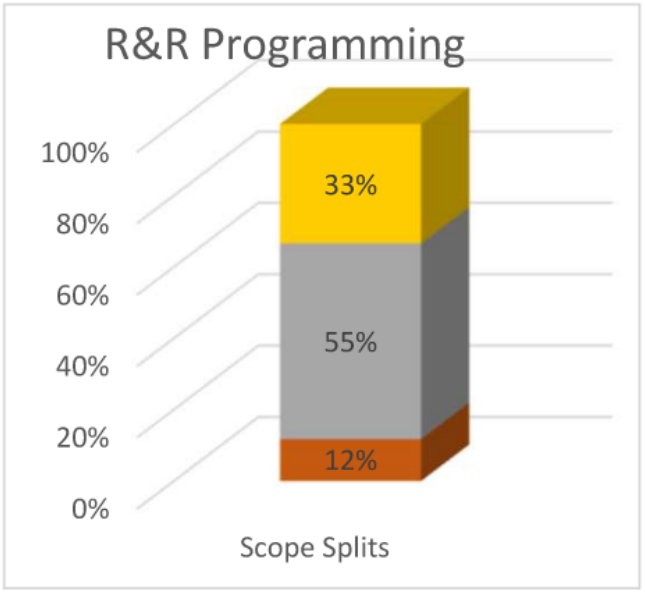
BRIDGE PLANNING – TIP UPDATE

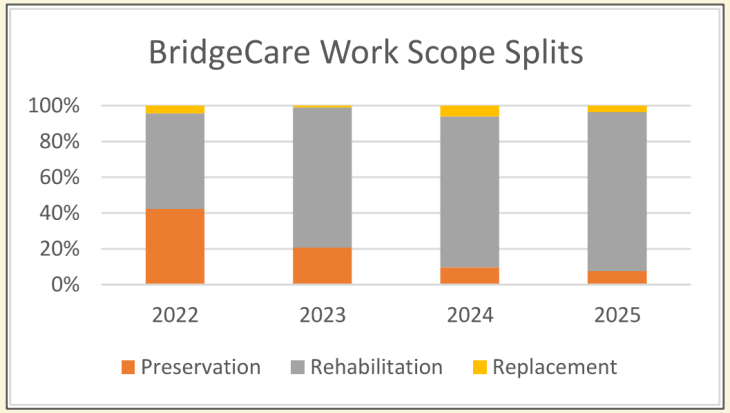
- Adams County – Bridge Funding (2023 – BAU vs R&R)

Total	Funding	% Funding
Preservation	$4,587,273	15%
Rehabilitation	$6,527,666	22%
Replacement	$18,628,184	63%

Total	Funding	% Funding
Preservation	$3,534,439	12%
Rehabilitation	$16,555,500	55%
Replacement	$10,088,764	33%



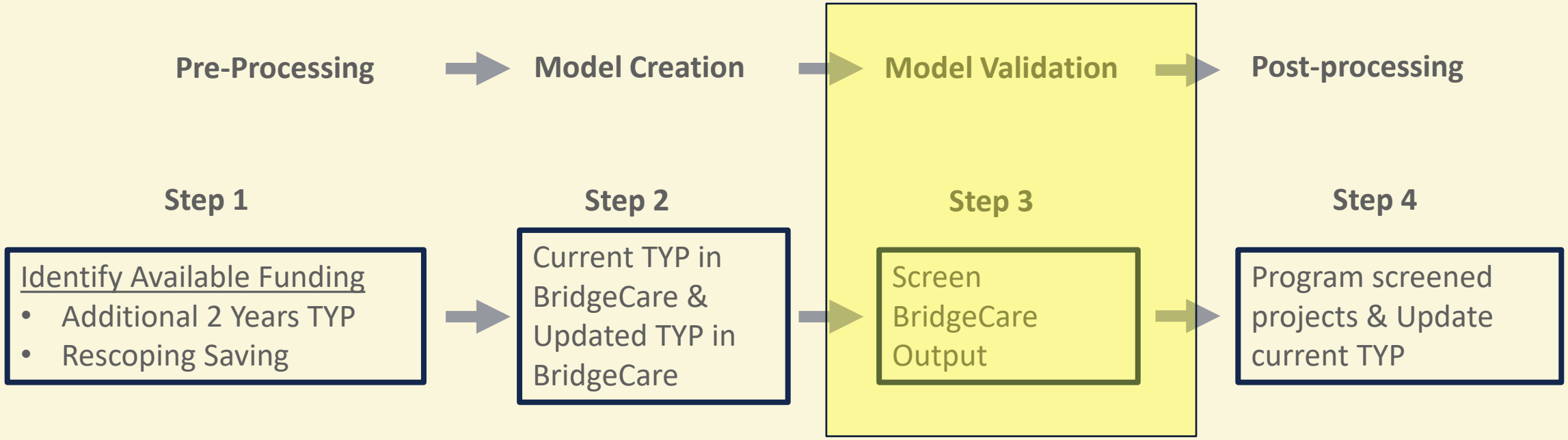




Close match to BridgeCare

BRIDGE PLANNING

- High-level overview



BRIDGE PLANNING

- Step 3 – Model Validation
  - Verify MPMS treatments
  - Verify MPMS budgets
  - Verify BridgeCare treatments
  - Verify BridgeCare budgets

#	Scope	Cost / SF
0	None	*$0*
1	Minor Repairs	*$100*
2	Preservation	*$168*
3	Rehab & Deck Replacement	*$320*
4	Rehab & SS Replacement	*$619*
5	Full Replacement	*$859*
6	Culvert Replacement	*$1,690*
7	Culvert Relining	*$846*

	Width
0	None
1	Minor Neck Down
2	"1 Lane Bridge"

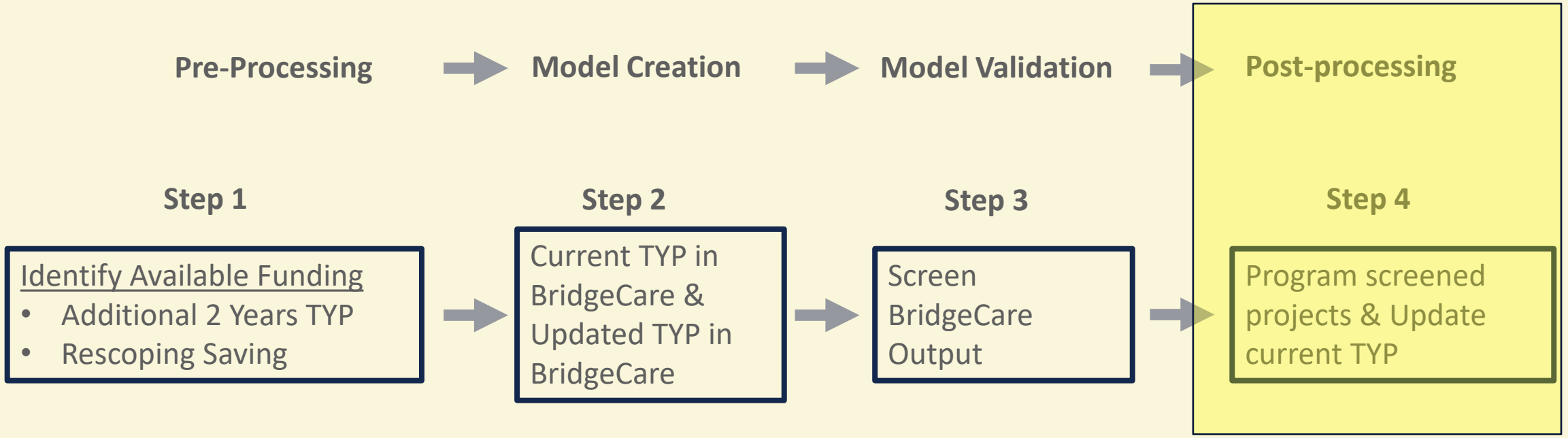
2023 Inflation =	1.21
BAMS --> D8-0 Cost Factor	1.54

BRIDGECARES Suggested Projects

BRKey	Bridge Length	Deck Area	Structure Type	BPN	Risk Score	Treatment	BAMS Yearly Cost	BAMS Scope	Agree %	D8-0 Scope	Notes	$/SF	D8-0 Cost
13	154	7,007	P/S, I beams	2	12,249	Deck Replacement	$ 2,285,636	3	50%	0	LMC Overlay skews recommend.	0	$ -
52	42	2,297	Concrete(in place), Slab (solid)	2	7,850	Superstructure Rep Rehab	$ 1,371,608	4	50%	5	Major cracks in substructure	1,040	$ 3,675,282
100	36	943	Concrete(in place), T-beams	3	3,551	Superstructure Rep Rehab	$ 515,330	4	100%	4	Agree	749	$ 1,087,315
115	45	2,066	Concrete(in place), Slab (solid)	3	13,632	Deck Replacement	$ 547,822	3	100%	3	Agree	387	$ 1,230,938
119	36	1,188	Concrete(in place), T-beams	3	1,864	Deck Replacement	$ 344,304	3	0%	1	Deck is good, scuppers are issue	121	$ 221,247
162	31	775	Steel, I beams	3	1,919	Deck Replacement	$ 193,750	3	75%	3	Paint beams	387	$ 461,862
235	66	2,211	P/S, Box beam - adj	3	8,992	Superstructure Rep Rehab	$ 1,281,577	4	100%	3	Agree	387	$ 1,317,649
294	51	1,811	P/S, Box beam - (spread)	4	1,031	Deck Replacement	$ 590,573	3	100%	3	Agree	387	$ 1,078,970
321	25	450	Masonry, Arch culvert	4	528	Culvert Rehab (Other)	$ 122,932	7	100%	7	Agree	1,024	$ 708,577
342	36	745	Steel, I beams	3	1,329	Superstructure Rep Rehab	$ 431,946	4	100%	3	Agree	387	$ 444,103
447	32	576	Steel, I beams	L	882	Superstructure Rep Rehab	$ 314,705	4	0%	5	One-lane bridge safety concern.	1,040	$ 921,460
						Total =	**$ 8,000,184**					**Total =**	**$ 11,147,402**

BRIDGE PLANNING

- High-level overview



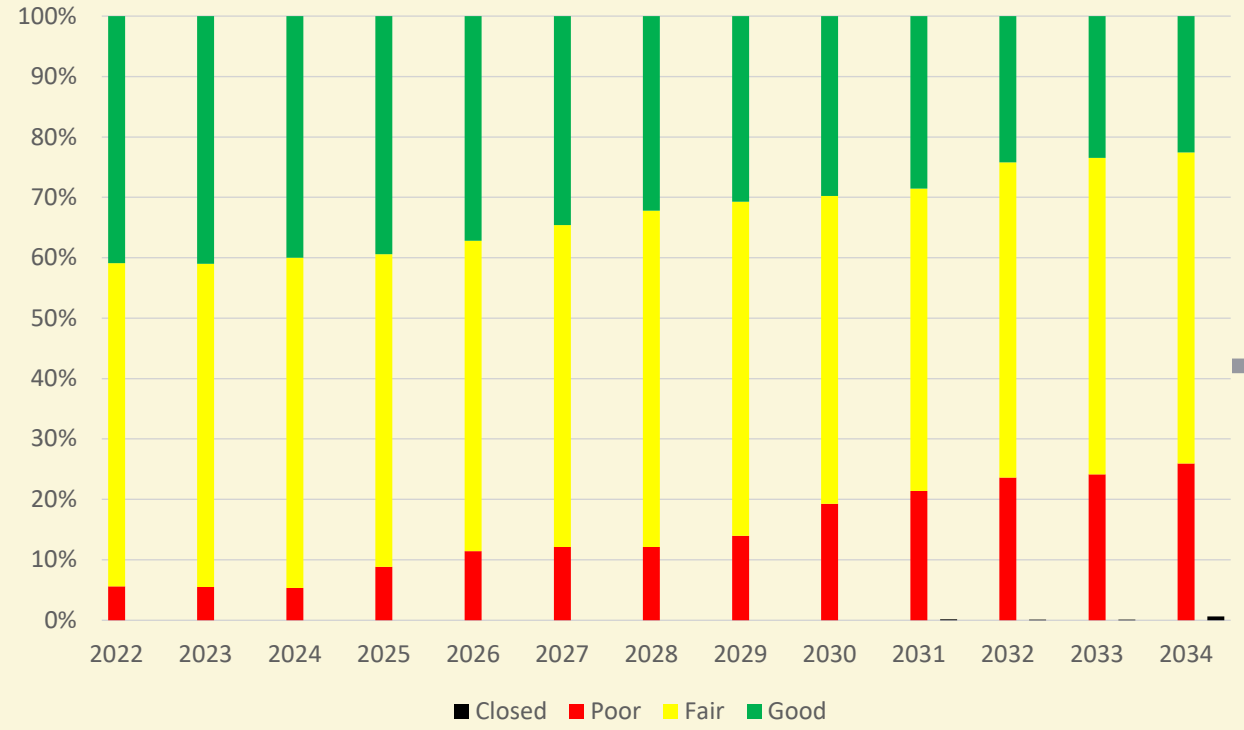
BRIDGE PLANNING – TIP UPDATE

- **Outputs - Adams**
- 4 Graphs to tell the story
- Performance of network over time
- Total Deck Area Percentage
- NHS Deck Area Percentage
- Non-NHS Deck Area Percentage
- BAU – "Business As Usual" – program replacements
- R&R – Revised & Rescoped – focuses on LLC
- All graphs go from BAU → R&R

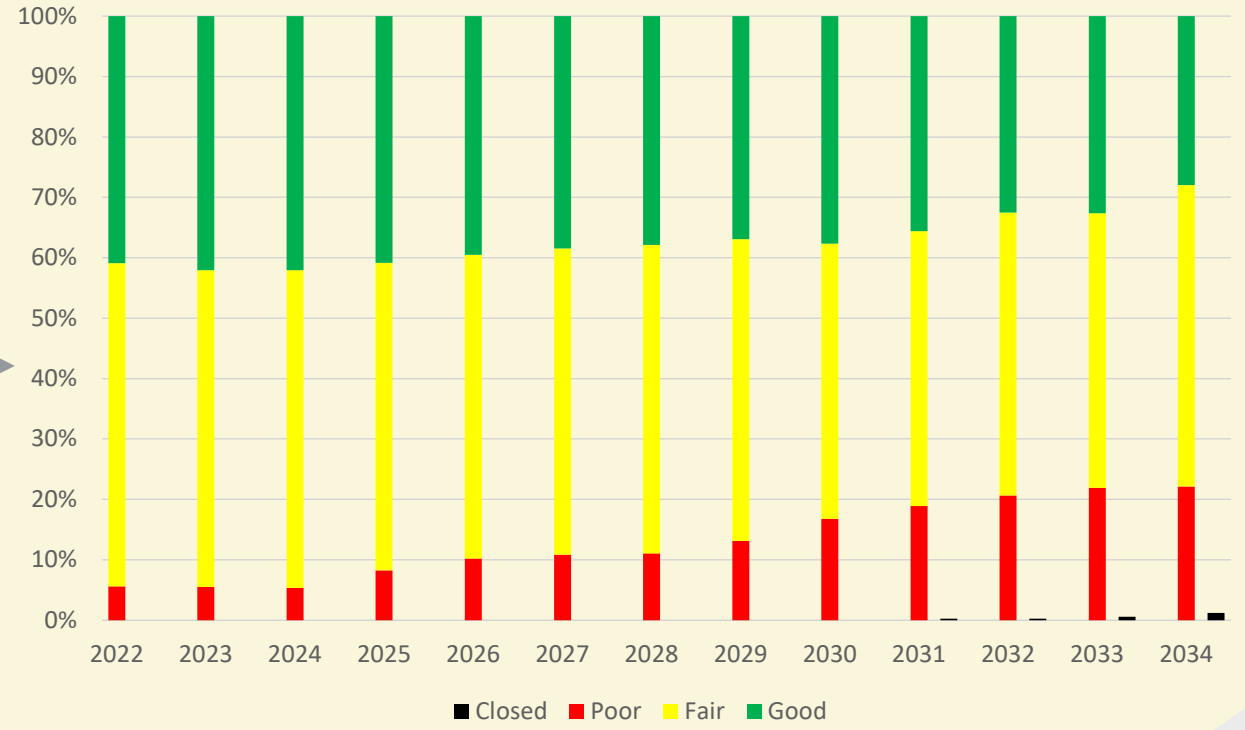
BRIDGE PLANNING

- Adams TYP – Business As Usual vs Revised & Rescoped

BAU

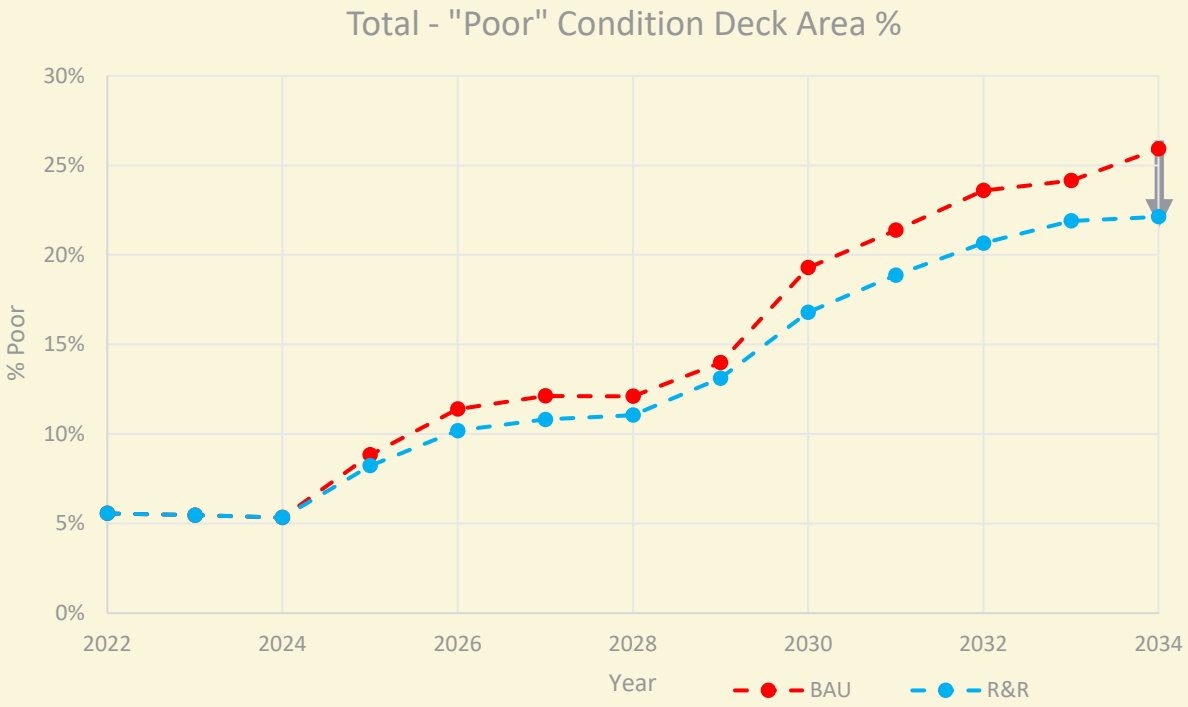


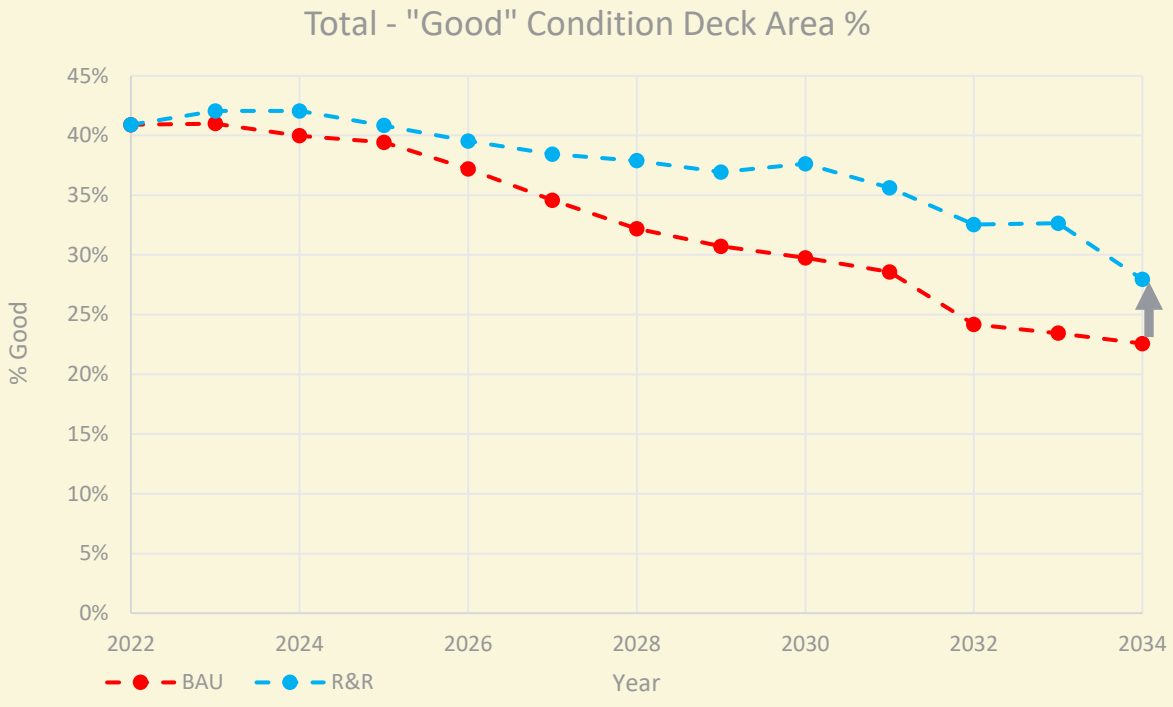
R&R



BRIDGE PLANNING – TIP UPDATE

- Adams TYP – Business As Usual vs Revised & Rescoped



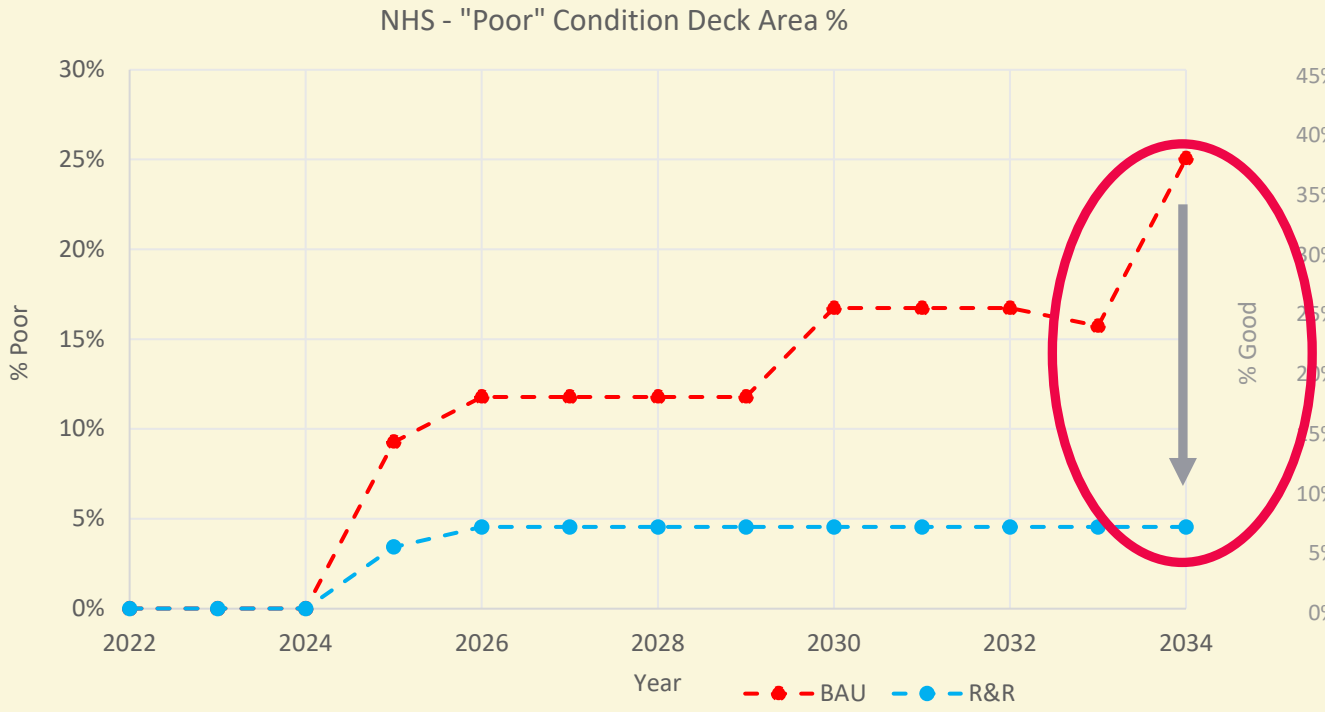


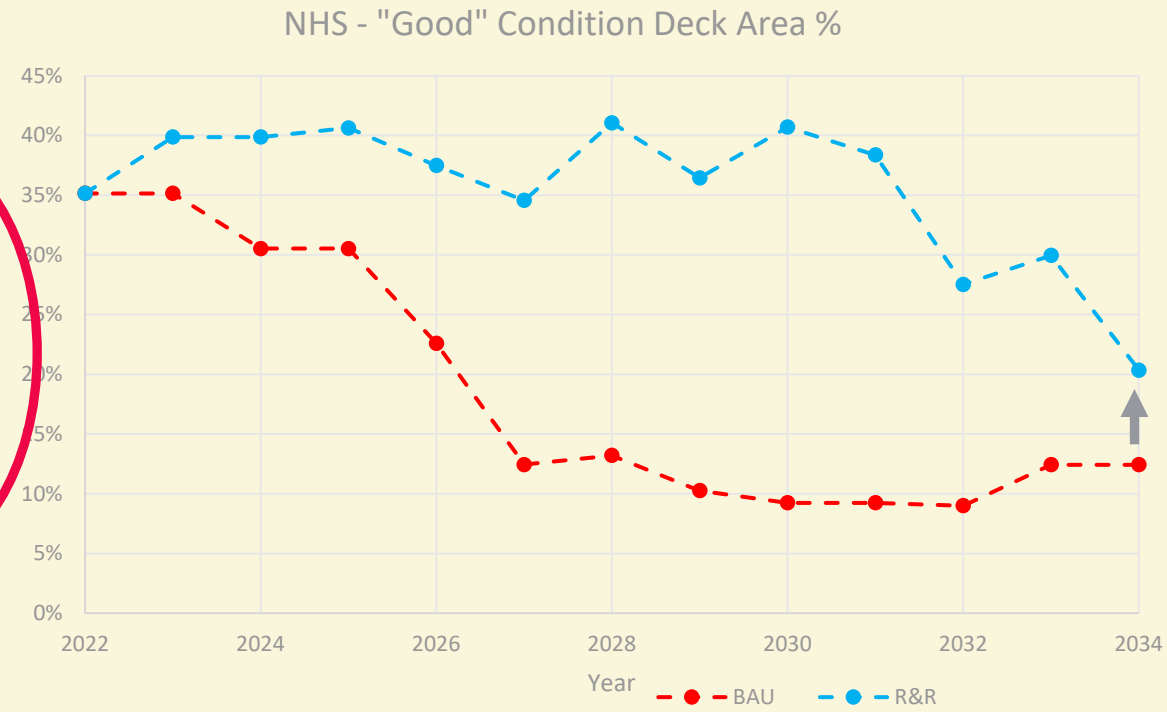
Base 17% reduction in “Poor” bridges at same funding levels

Base 24% increase in “Good” bridges at same funding levels

BRIDGE PLANNING – TIP UPDATE

- Adams TYP – Business As Usual vs Revised & Rescoped



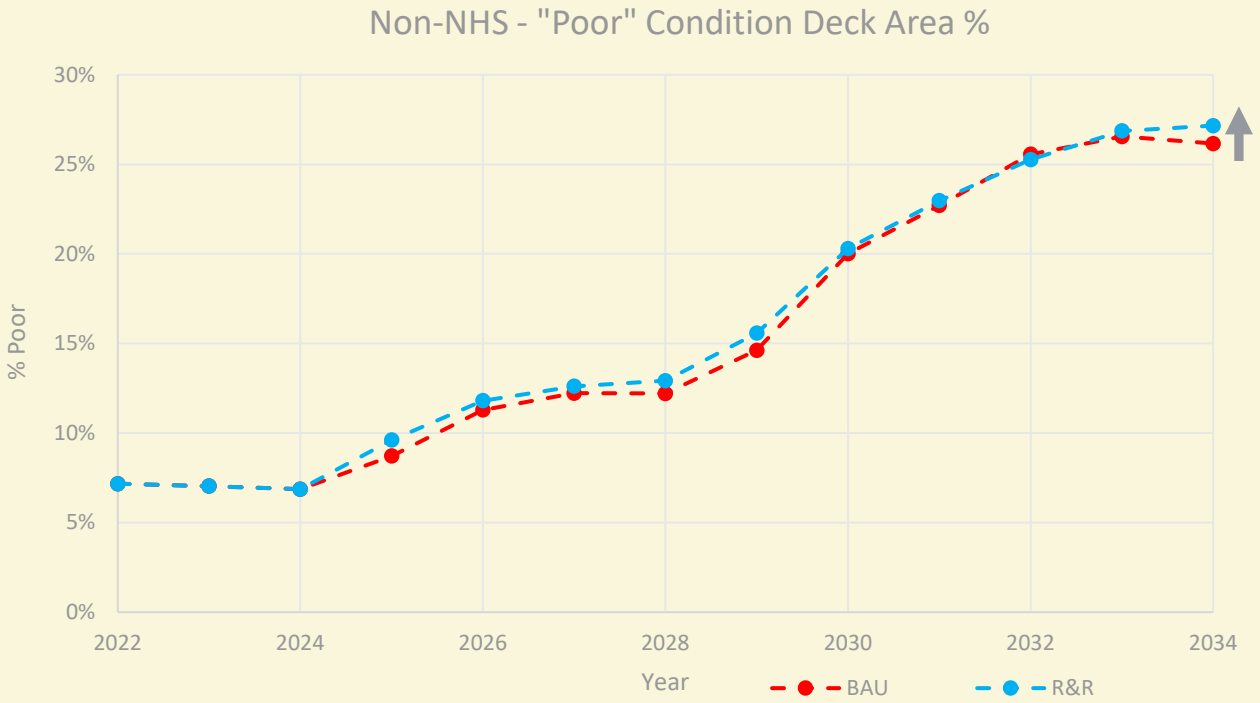


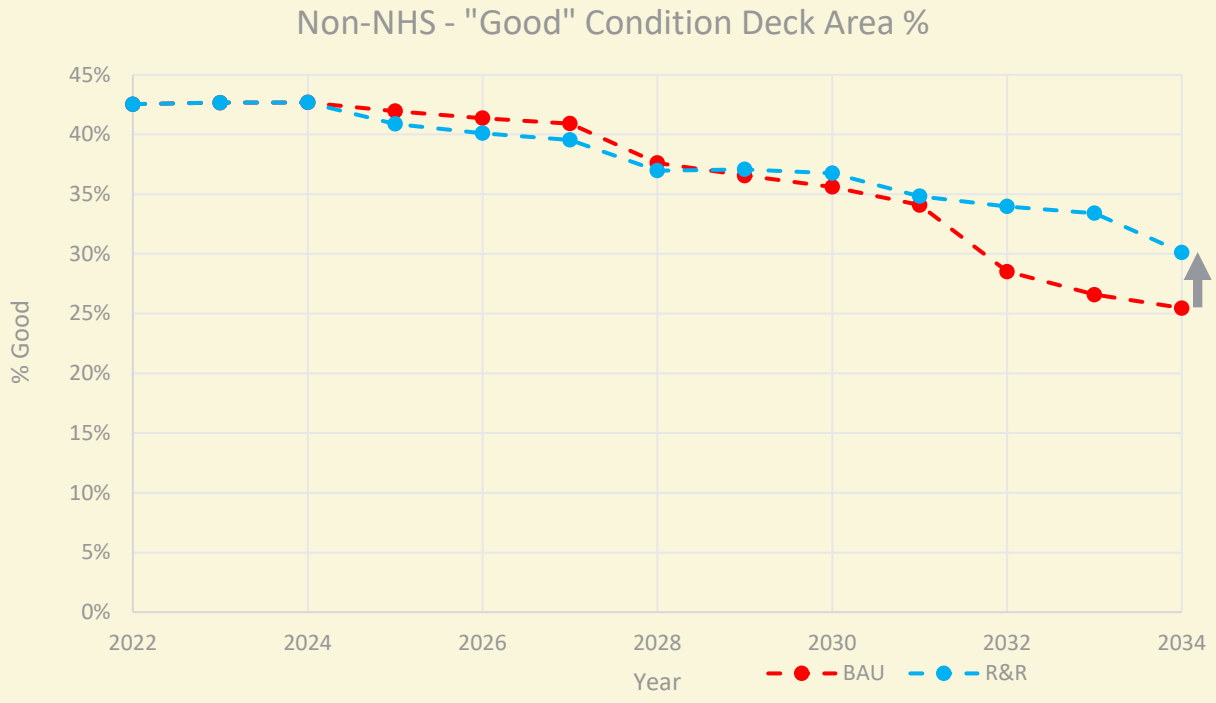
Base 82% reduction in “Poor” NHS bridges at same funding levels

Base 64% increase in “Good” NHS bridges at same funding levels

BRIDGE PLANNING – TIP UPDATE

- Adams TYP – Business As Usual vs Revised & Rescoped





Base 4% increase in “Poor” Non-NHS bridges at same funding levels

Base 18% increase in “Good” Non-NHS bridges at same funding levels

BRIDGE PLANNING – TIP UPDATE

- Currently on TIP vs Updated (Adams only)
- Adams MPO bridge budget = ~$5.5 M/yr
- Total Deck Area = 740,827 SF
  - "Poor" Deck Area = 25.91% → 22.13% → Delta = 3.78%
  - Replacement DA = 3.78% x 740,827 SF → 28,000 SF
  - Replacement Cost = 28,000SF x $859/SF = $24M
  - "Closed" Deck Area = 1.21% → 0.62% → 0.59%
  - Replacement DA = 0.59% x 740,827 SF → 4,400 SF
  - Replacement Cost = 4,400SF x $859/SF = $3.8M
- **Total "New funding" need for same effect = $27.8M → 5yrs of funding**
- **Difficult to quantify value of:**
  - **Minimizing issues on NHS system**
  - **Amount of "good" bridges increasing substantially.**

- **Derek Mitch, P.E., District Bridge Engineer**

Questions?

Performance Measures for Adams County

MAP-21 and FAST Act established a series of performance measures for State DOT's and MPO's to work towards.

- Safety (PM-1) – Last adopted on February 1, 2023 (Adopt yearly)
  - PM-1 measures how safe the transportation network is for users.
    1. Number of Fatalities
    2. Rate of Injuries
    3. Number of Serious Injuries
    4. Rate of Serious Injuries
    5. Number of non-motorized fatalities and serious injuries
- Pavement and Bridge Conditions (PM-2) – Adopted on October 31, 2018; Updated January 27, 2021 (Adopt every 4 years)
  - PM-2 measures the condition of the transportation network.
  - Assess the condition of the Interstate and National Highway System (NHS) pavements and bridges.
- System Performance (PM-3) – Adopted on October 31, 2018; Updated January 27, 2021 (Adopt every 4 years)
  - PM-3 measures the performance of the system (or the lack thereof).
  - Assess the level of reliability and congestion of the transportation network.

Performance Measures: What do PM-2 and PM-3 measure?

Attachment 2B: PM-2 and PM-3 Target Setting Notes

Measure Category	Performance Measure	Target Setting Notes
PM-2	Percentage of Pavements of the Interstate System in Good Condition	Planned and programmed projects were considered while establishing targets. Expected improvement from these projects is projected, as is anticipated deterioration on "untouched" pavements. Adequate funding is available and appropriate projects are programmed in the short term in order to result in investment that maintains a state of good repair.
	Percentage of Pavements of the Interstate System in Poor Condition	Planned and programmed projects were considered while establishing targets. Expected improvement from these projects is projected, as is anticipated deterioration on "untouched" pavements. Adequate funding is available and appropriate projects are programmed in the short term in order to result in investment that maintains a state of good repair.
	Percentage of Pavements of the Non- Interstate NHS in Good Condition	Planned and programmed projects were considered while establishing targets. Expected improvement from these projects is projected, as is anticipated deterioration on "untouched" pavements. Adequate funding is available and appropriate projects are programmed in the short term in order to result in investment that maintains a state of good repair. However, we forecast a decrease in the percentage in good condition which will continue in the future if our funding levels remain constant.
	Percentage of Pavements of the Non- Interstate NHS in Poor Condition	Planned and programmed projects were considered while establishing targets. Expected improvement from these projects is projected, as is anticipated deterioration on "untouched" pavements. Adequate funding is not available to result in investment that maintains what we previously defined as a state of good repair, which is no more than 5% in poor condition. This increase in the percentage in poor condition will continue in the future if our funding levels remain constant.
	Percentage of NHS Bridges Classified as in Good Condition	Planned and programmed projects were considered while establishing these targets. Expected improvement from these projects is projected, as well as anticipated deterioration. Short term flat forecasts are largely the resultant of the BIL/IIJA funding.
	Percentage of NHS Bridges Classified as in Poor Condition	Our internal data notes an actual of 4.5 vs the 4.4 value shown. Projected poor targets are based off of IIJA/BIL investment dollars applied to LLCC based investment decisions that

Performance Measures: What do PM-2 and PM-3 measure?

Measure Category	Performance Measure	Target Setting Notes
		are forecasted to largely be spent on preservation and not on reduction of poor deck area, as was previously custom. Forecasts show a higher, flat target due to a combination of factors, including IIJA/BIL money, adoption of LLCC investment logic and software model maturity level.
PM-3	Percent of the Person-Miles Traveled on the Interstate That Are Reliable	The target as adjusted during the 2020 mid-period report is maintained for this performance period. With no major changes to PennDOT's project selection and implementation strategy in the near-term, it is anticipated that the measure will remain relatively consistent from year-to-year. The target was set using the trends from 2017 to 2021, with a cushion to accommodate yearly fluctuations. The target also considers increased freight and more road construction impacting performance. PennDOT anticipates performance will move closer to the levels seen prior to the COVID-19 pandemic.
	Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable	With no major changes to PennDOT's project selection and implementation strategy in the near-term, it is anticipated that the measure will remain relatively consistent from year-to-year. The target was set using the trends from 2017 to 2021, with a cushion to accommodate yearly fluctuations. The target also considers increased freight and more road construction impacting performance. PennDOT anticipates performance will move closer to the levels seen prior to the COVID-19 pandemic.
	Truck Travel Time Reliability (TTTR) Index	The target as adjusted during the 2020 mid-period report is maintained for this performance period. With no major changes to PennDOT's project selection and implementation strategy in the near-term, it is anticipated that the measure will remain relatively consistent from year-to-year. The target was set using the trends from 2017 to 2021, with a cushion to accommodate yearly fluctuations. The target also considers increased freight and more road construction impacting performance. PennDOT anticipates performance will move closer to the levels seen prior to the COVID-19 pandemic.
	Annual Hours of Peak Hour Excessive Delay Per Capita:	The approach for developing targets for the CMAQ PHED measures included the following •Develop conservative targets reflecting that recent trends may not be representative of future conditions. •Uncertainties with COVID-19, inflation, long-term trends for working at home and energy and supply chain disruptions.

Performance Measures: What do PM-2 and PM-3 measure?

Measure Category	Performance Measure	Target Setting Notes
		•Future funding (e.g. IIJA) may initiate more project construction activities impacting congestion. •Generalized approach for target determination Average 2018 and 2019 PHED values. •Assume same values for 2-year and 4-year targets. 4-year targets can be updated at the midterm report
	Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel:	The approach for developing targets for the CMAQ Non-SOV measure included the following • Develop conservative targets reflecting that recent trends may not be representative of future conditions. • Uncertainties with COVID-19, inflation, long-term trends for working at home and energy and supply chain disruptions. Expectations of future higher work-at-home percentages than pre-pandemic conditions. •Note that COVID impacts on work-at-home and transit commuting in 2020-2021 will be included in future ACS 5-year estimates throughout performance period. •Generalized approach for target determination Average non-SOV 5-year ACS values for end year periods 2016-2020. •Assume same values for 2-year and 4-year targets. 4-year targets can be updated at the midterm report
	Total Emission Reductions (kg/day)	Targets were developed by evaluating historic emission benefits accrued during the 2018-2021 performance period and evaluating CMAQ project emission benefits currently programmed in the FY2023 TIP for "new" CMAQ funded projects. The emission estimates for these two approaches were compared and assessed. The lower of these two values was considering as the more conservative estimate and used for the 4-year target value. The 2-year target was established as 1/2 of the 4-year target.

Performance Measures: PM-2s & PM-3s compared to 2018-2021 Targets

Attachment 1A: PM-2 and PM-3 4-Year Performance Assessment for 2018-2021 Performance Period

Measure Category	Performance Measure	Urbanized Area*	2021 4-Year Performance	2021 4-Year Target	Target Met
PM-2	Percentage of Pavements of the Interstate System in Good Condition	Statewide	68.8%	60.0%	Yes
	Percentage of Pavements of the Interstate System in Poor Condition	Statewide	0.4%	2.0%	Yes
	Percentage of Pavements of the Non- Interstate NHS in Good Condition	Statewide	49.0%	33.0%	Yes
	Percentage of Pavements of the Non- Interstate NHS in Poor Condition	Statewide	15.2%	5.0%	Yes
	Percentage of NHS Bridges Classified as in Good Condition	Statewide	27.5%	26.0%	Yes
	Percentage of NHS Bridges Classified as in Poor Condition	Statewide	4.4%	6.0%	Yes
PM-3	Percent of the Person-Miles Traveled on the Interstate That Are Reliable	Statewide	92.8%	89.5%	Yes
	Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable	Statewide	92.6%	87.4%	Yes
	Truck Travel Time Reliability (TTTR) Index	Statewide	1.30	1.40	Yes
	Annual Hours of Peak Hour Excessive Delay Per Capita:	Philadelphia	13.1	17.2	Yes
		Pittsburgh	9.3	11.8	Yes
	Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel:	Philadelphia	30.6%	28.1%	Yes
		Pittsburgh	27.6%	24.4%	Yes
	Total Emission Reductions (kg/day): PM2.5	Statewide	269.080	20.490	Yes
	Total Emission Reductions (kg/day): NOx	Statewide	1644.620	612.820	Yes
	Total Emission Reductions (kg/day): VOC	Statewide	360.220	201.730	Yes
	Total Emission Reductions (kg/day): PM10	Statewide	0.000	0.000	Yes
	Total Emission Reductions (kg/day): CO	Statewide	3791.360	250.000	Yes

** Urbanized areas are based on 2010 CENSUS urbanized area boundaries (2010 Census Urban Area Reference Maps)*

Performance Measures: PM-2s & PM-3s compared to 2018-2021 Targets

Attachment 1B: Reliability Performance by MPO/RPO 2018-2021

(Green Highlighted Cells = Better than Target; Red Highlighted Cells = Worse than Target)

Area (MPO/RPO)	Interstate Reliability					Non-Interstate Reliability					Truck Travel Time Reliability Index				
	2017 Baseline	2018	2019	2020	2021	*2017 Baseline*	2018	2019	2020	2021	*2017 Baseline*	2018	2019	2020	2021
Statewide Total	**89.8%**	**89.6%**	**89.9%**	**96.2%**	**92.8%**	**87.4%**	**88.2%**	**88.4%**	**92.6%**	**92.6%**	**1.34**	**1.39**	**1.36**	**1.23**	**1.30**
Statewide Target			**89.5%** *2 & 4-Year Target*					**87.4%** *4-Year Target*					**1.40** *2 & 4-Year Target*		
Targets only Apply to Statewide Total - MPO Numbers Provided for Information Purposes Only															
Adams	*Not Applicable*					86.2%	89.8%	93.4%	95.8%	91.4%	*Not Applicable*				
Altoona	100.0%	100.0%	100.0%	100.0%	100.0%	82.7%	83.9%	84.4%	87.9%	90.0%	1.21	1.25	1.18	1.12	1.15
Centre	100.0%	100.0%	100.0%	100.0%	100.0%	91.3%	93.2%	94.9%	97.2%	96.3%	1.13	1.33	1.15	1.17	1.22
DVRPC	65.5%	66.0%	66.6%	90.6%	83.5%	81.2%	82.6%	83.2%	94.2%	93.1%	2.01	2.04	1.99	1.54	1.62
Erie	100.0%	100.0%	100.0%	100.0%	100.0%	83.8%	86.7%	88.2%	91.1%	84.5%	1.25	1.23	1.29	1.16	1.15
Franklin	100.0%	100.0%	100.0%	100.0%	100.0%	93.8%	96.5%	94.6%	95.6%	92.7%	1.08	1.11	1.09	1.09	1.11
Harrisburg	91.3%	92.7%	92.4%	99.7%	96.0%	91.0%	92.4%	90.3%	95.7%	94.9%	1.32	1.33	1.31	1.18	1.29
Johnstown	*Not Applicable*					93.0%	94.5%	95.6%	96.3%	96.6%	*Not Applicable*				
Lancaster	100.0%	100.0%	100.0%	100.0%	100.0%	95.2%	95.3%	92.1%	97.0%	95.2%	1.09	1.12	1.17	1.11	1.14
Lebanon	100.0%	100.0%	100.0%	100.0%	100.0%	97.5%	97.7%	95.4%	98.3%	93.8%	1.12	1.14	1.15	1.07	1.13
Lehigh Valley	100.0%	100.0%	99.5%	100.0%	100.0%	86.4%	84.6%	85.4%	95.7%	88.7%	1.32	1.34	1.35	1.14	1.30
NEPA	100.0%	100.0%	99.9%	100.0%	100.0%	91.9%	90.9%	93.1%	93.1%	93.2%	1.26	1.25	1.28	1.17	1.23
North Central	100.0%	100.0%	100.0%	100.0%	100.0%	93.0%	95.7%	95.6%	94.4%	93.9%	1.10	1.11	1.50	1.17	1.17
Northern Tier	100.0%	100.0%	100.0%	100.0%	100.0%	98.8%	99.1%	94.7%	97.6%	95.2%	1.24	1.17	1.18	1.13	1.16
Northwest	100.0%	100.0%	100.0%	100.0%	93.3%	87.5%	91.5%	91.8%	85.3%	82.0%	1.18	1.32	1.17	1.13	1.46
Reading	100.0%	100.0%	100.0%	100.0%	100.0%	93.2%	94.2%	95.0%	95.4%	94.3%	1.12	1.38	1.19	1.12	1.19
S. Alleghenies	100.0%	100.0%	100.0%	100.0%	100.0%	95.9%	96.7%	94.2%	96.8%	93.1%	1.11	1.13	1.16	1.12	1.15
Scranton	98.3%	98.3%	98.2%	100.0%	100.0%	87.4%	90.3%	90.1%	93.5%	92.1%	1.39	1.28	1.35	1.24	1.24
SEDA-COG	100.0%	100.0%	100.0%	100.0%	96.0%	95.7%	96.4%	96.2%	97.5%	94.3%	1.11	1.11	1.12	1.11	1.24
SPC	92.9%	91.6%	92.1%	98.0%	95.9%	87.0%	87.7%	88.9%	93.8%	93.8%	1.42	1.49	1.46	1.29	1.32
SVTS	99.3%	99.2%	100.0%	100.0%	100.0%	95.1%	96.7%	95.9%	95.3%	95.8%	1.18	1.59	1.14	1.13	1.23
Wayne	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	1.11	1.12	1.17	1.15	1.16
Williamsport	100.0%	100.0%	100.0%	100.0%	100.0%	98.4%	98.3%	97.4%	98.7%	97.5%	1.16	1.18	1.19	1.14	1.16
York	100.0%	97.5%	94.9%	100.0%	100.0%	90.0%	89.6%	90.7%	93.8%	93.4%	1.22	1.32	1.28	1.15	1.17

Performance Measures: 2022-2025 PM-2 & PM-3 Targets

Attachment 2A: PM-2 and PM-3 Baseline and Target Values for 2022-2025 Performance Period

Measure Category	Performance Measure	Urbanized Area*	2021 Baseline	2023 2-Year Target	2025 4-Year Target
PM-2	Percentage of Pavements of the Interstate System in Good Condition	Statewide	68.8%	69.0%	65.0%
	Percentage of Pavements of the Interstate System in Poor Condition	Statewide	0.4%	2.0%	2.0%
	Percentage of Pavements of the Non- Interstate NHS in Good Condition	Statewide	37.2%	31.0%	29.0%
	Percentage of Pavements of the Non- Interstate NHS in Poor Condition	Statewide	1.5%	6.0%	6.5%
	Percentage of NHS Bridges Classified as in Good Condition	Statewide	27.5%	28.0%	28.0%
	Percentage of NHS Bridges Classified as in Poor Condition	Statewide	4.4%	7.5%	7.5%
PM-3	Percent of the Person-Miles Traveled on the Interstate That Are Reliable	Statewide	92.8%	89.5%	89.5%
	Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable	Statewide	92.6%	88.0%	88.0%
	Truck Travel Time Reliability (TTTR) Index	Statewide	1.30	1.40	1.40
	Annual Hours of Peak Hour Excessive Delay Per Capita:	Allentown--	7.1%	8.4%	8.4%
		Harrisburg	7.2%	9.1%	9.1%
		Lancaster,	3.3%	3.7%	3.7%
		Philadelphia	13.1%	15.2%	15.1%
		Pittsburgh, PA	9.3%	10.5%	10.5%
		Reading, PA	6.3%	6.5%	6.5%
		York, PA	5.0%	6.4%	6.4%

Performance Measures: 2022-2025 PM-2 & PM-3 Targets

Measure Category	Performance Measure	Urbanized Area*	2021 Baseline	2023 2-Year Target	2025 4-Year Target
	Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel:	Allentown	20.4%	18.6%	18.6%
		Harrisburg	21.3%	20.2%	20.2%
		Lancaster	20.5%	21.9%	21.9%
		Philadelphia	30.6%	30.0%	30.0%
		Pittsburgh	27.6%	27.0%	27.0%
		Reading	22.8%	20.2%	20.2%
		York	18.4%	15.8%	15.8%
PM-3	Total Emission Reductions (kg/day): PM2.5	Statewide	269.080	18.000	36.000
	Total Emission Reductions (kg/day): NOx	Statewide	1644.620	392.000	785.000
	Total Emission Reductions (kg/day): VOC	Statewide	360.220	46.000	93.000
	Total Emission Reductions (kg/day): PM10	Statewide	0.000	0.000	0.000
	Total Emission Reductions (kg/day): CO	Statewide	3791.360	0.000	0.000

** Urbanized areas are based on 2010 CENSUS urbanized area boundaries (2010 Census Urban Area Reference Maps)*

2023-2026 TIP Administrative Actions

FFY 2023-2026 TIP MODIFICATIONS FORM

ADAMS MPO							Informed Coordinating Committee: 4/26/2023 Informed Technical Committee: N/A												
Adminstrative Modification - Highway					**Funds**		**FFY 2023**			**FFY 2024**			**FFY 2025**			**FFY 2026**			**Remarks**
Item	**Project Title**	**MPMS**	**Ph**	**Prog**	**Fed**	**Sta.**	**Fed.**	**Sta.**	**Loc.**	**Fed.**	**Sta.**	**Loc.**	**Fed.**	**Sta.**	**Loc.**	**Fed.**	**Sta.**	**Loc.**	
1	Piney Creek Bridge 2 97/010 Adams	90692	FD	Before															Adding the FD phase of Piney Creek Bridge 2 in FFY 2023 for $10,453 to add additional environmental activities. This project consists of a bridge replacement on PA 97 over Tributary to Piney Creek in Germany Township, Adams County. This project has a current estimated let date of May 25, 2023.
				Adjust		185		10,453											
				After		185		10,453											
2	Bridge Reserve Adams	87792	CON	Before	BRIP	185		141,000		70,000	213,124		696,000	235,011					This is a reserve line item.
				Before	BOF								52,000						
				Adjust	BRIP	185		-10,453											
				Adjust	BOF														
				After	BRIP	185		130,547		70,000	213,124		696,000	235,011					
				After	BOF								52,000						

2023-2026 TIP Administrative Actions

3	PA 116/Trib Willoughby Run 116/044 Adams	106666	UTL	Before															Adding the UTL phase of PA 116/Trib Willoughby Run in FFY 2023 for $223,000 to the current estimate. This project consists of bridge improvements on PA 116 (Fairfield Road) over Tributary to Willoughby Run in Cumberland Township, Adams County. This project has a current estimated let date of April 27, 2023.
				Adjust		185		223,000											
				After		185		223,000											
4	PA 116/Trib Willoughby Run 116/044 Adams	106666	CON	Before		185		635,500			204,000								Cashflowing the CON phase of PA 116/Trib Willoughby Run from FFY 2023 to FFY 2024 for $92,453 to better utilize current available funding. This project consists of bridge improvements on PA 116 (Fairfield Road) over Tributary to Willoughby Run in Cumberland Township, Adams County. This project has a current estimated let date of April 27, 2023.
				Adjust		185		-92,453			92,453								
				After		185		543,047			296,453								
5	Bridge Reserve Adams	87792	CON	Before	BOF	185		130,547			213,124		52,000	235,011					This is a reserve line item.
				Before	BRIP					70,000			696,000						
				Adjust	BOF	185		-130,547			-92,453								
				Adjust	BRIP														
				After	BOF	185					120,671		52,000	235,011					
				After	BRIP					70,000			696,000						

2023-2026 TIP Administrative Actions

FFY 2023-2026 TIP MODIFICATIONS FORM

Adminstrative Modification - Highway					Funds		FFY 2023			FFY 2024			FFY 2025			FFY 2026			Remarks
Item	Project Title	MPMS	Ph	Prog	Fed	Sta.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	
6	Eisenhower Drive Extension 0/RWY Adams	58137	FD	Before		581		1,961,000			629,250			1,000,000					Changing the funding flavor and Cashflowing the FD phase of Eisenhower Drive Extension from FFY 2023 to FFY 2024 for $90,565 to better utilize current available funding. This project consists of extending the Eisenhower Drive through Conewago Township, Adams County, from where it currently ends at High Street to Hanover Road (SR 0116) west of McSherrystown. Potential improvements include new alignment alternatives, partial new alignment alternatives, as well as options to improve the existing roadway network. This project has a current estimated let date of Jan. 2, 2025.
				Before		185					534,109			50,984					
				Adjust		581		-90,565											
				Adjust		185					90,565								
				After		581		1,870,435			629,250			1,000,000					
				After		185					624,674			50,984					
7	Wierman Mill Bridge 1009/012 Adams	87431	ROW	Before															Adding the ROW phase of Wierman Mill Bridge in FFY 2023 for $13,100 to the current estimate. This project consists of a bridge replacement on SR 1009 (Weirmans Mill Road) over Tributary to Bermudian Creek in Huntington Township, Adams County. This project has a current estimated let date of Jan. 11, 2024.
				Adjust		581		13,100											
				After		581		13,100											
8	US 15 Preservation NorthBound 15/059 Adams	116595	PE	Before															Adding the PE phase of US 15 Preservation NorthBound in FFY 2023 for $77,465. This is for survey, plan prep and permit submission for US 15 pipe replacement. This project consists of a pavement preservation on US 15 (Blue-Gray Highway) from the Maryland line to PA 394 (Shrivers Corner Road) in Freedom, Cumberland, Mount Joy and Straban Townships. This project has a current estimated let date of Dec. 14, 2023.
				Adjust		581		77,465											
				After		581		77,465											
9	Bridge Reserve Adams	87792	CON	Before	BOF	185					120,671		52,000	235,011					This is a reserve line item.
				Before	BRIP					70,000			696,000						
				Adjust	BOF	185					-90,565								
				Adjust	BRIP														
				After	BOF	185					30,106		52,000	235,011					
				After	BRIP					70,000			696,000						

2023-2026 TIP Administrative Actions

FFY 2023-2026 TIP MODIFICATIONS FORM

Adminstrative Modification - Highway					Funds		FFY 2023			FFY 2024			FFY 2025			FFY 2026			Remarks
Item	Project Title	MPMS	Ph	Prog	Fed	Sta.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	
10	Latimore Valley Road Brg-C 1005/009 Adams	73854	CON	Before															Adding the CON phase of Latimore Valley Road Brg-C in FFY 2023 for $186,320 for additional construction inspection costs and Class A Concrete Fill Material. This project consists of a bridge rehabilitation on SR 1005 (Latimore Valley Road) over Bermudian Creek in Latimore Township, Adams County. This project was let on June 24, 2021.
				Adjust	BOF		186,320												
				After	BOF		186,320												
11	Mengus Mill Rd Bridge 7207/BRG Adams	18049	PE	Before															This item is a deob.
				Adjust	BOF		-186,320												
				After															
12	94 & 234 Intersection Imp 94/026 Adams	94897	CON	Before	NHPP		545,069												Increasing the CON phase of 94 & 234 Intersection Imp in FFY 2023 for $162,533 for additional iron stone rock blasting. This project consists of an intersection improvement, adding left turn lanes and protected phasing to the intersection of PA 94 (Carlisle Pike) and PA 234 (East Berlin Road) in Reading Township, Adams County. This project was let on March 18, 2021.
				Adjust	NHPP		162,533												
				After	NHPP		707,602												
13	US 15 Preservation Northbound 15/059 Adams	116595	CON	Before	NHPP		2,737,931			3,416,299			2,770,000						Decreasing the CON phase of US 15 Preservation Northbound in FFY 2023 for $162,533 to the current estimate. This project consists of a pavement preservation on US 15 (Blue-Gray Highway) from the Maryland line to PA 394 (Shrivers Corner Road) in Freedom, Cumberland, Mount Joy and Straban Townships. This project has a current estimated let date of Dec. 14, 2023.
				Before	STP		113,585			1,302,140									
				Adjust	NHPP		-162,533												
				Adjust	STP														
				After	NHPP		2,575,398			3,416,299			2,770,000						
				After	STP		113,585			1,302,140									

2023-2026 TIP Administrative Actions

FFY 2023-2026 TIP MODIFICATIONS FORM

Adminstrative Modification - Highway					Funds		FFY 2023			FFY 2024			FFY 2025			FFY 2026			Remarks
Item	Project Title	MPMS	Ph	Prog	Fed	Sta.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	Fed.	Sta.	Loc.	
14	Piney Creek Bridge 2 97/010 Adams	90692	UTL	Before		185		46,000											Increasing the UTL phase of Piney Creek Bridge 2 in FFY 2023 for $29,000. This is for additional pole relocation. This project consists of a bridge replacement on PA 97 over Tributary to Piney Creek in Germany Township, Adams County. This project has a current estimated let date of July 13, 2023.
				Adjust		185													
				Adjust		581		29,000											
				After		185		46,000											
				After		185		29,000											
15	Eisenhower Drive Extension 0/RWY Adams	58137	FD	Before		581		1,870,435			629,250			1,000,000					Changing the funding flavor and Cashflowing the FD phase of Eisenhower Drive Extension from FFY 2023 to FFY 2024 for $29,000 to better utilize current available funding. This project consists of extending the Eisenhower Drive through Conewago Township, Adams County, from where it currently ends at High Street to Hanover Road (SR 0116) west of McSherrystown. Potential improvements include new alignment alternatives, partial new alignment alternatives, as well as options to improve the existing roadway network. This project has a current estimated let date of Jan. 2, 2025.
				Before		185					624,674			50,984					
				Adjust		581		-29,000											
				After		581		1,841,435			629,250			1,000,000					
				After		185					653,674			50,984					
16	Bridge Reserve Adams	87792	CON	Before	BRIP	185				70,000	30,106		696,000	235,011					This is a reserve line item.
				Before	BOF								52,000						
				Adjust	BRIP	185					-29,000								
				Adjust	BOF														
				After	BRIP	185				70,000	1,106		696,000	235,011					
				After	BOF								52,000						
Program Summary - Net Changes				Before FFY Totals			3,396,585	4,784,482	0	4,998,439	3,198,308	0	5,762,000	3,042,012	0	0	0	0	0
				Adjustments			0	0	0	0	0	0	0	0	0	0	0	0	
				After FFY Totals			3,582,905	4,784,482	0	4,998,439	3,198,308	0	5,762,000	3,042,012	0	0	0	0	

Next ACTPO Meeting

July 26, 2023

1:00 p.m.