



# ***The Intersection of Asset Management and Transportation Improvement Plans***

ICC Conference  
November 29, 2023  
Indianapolis, Indiana

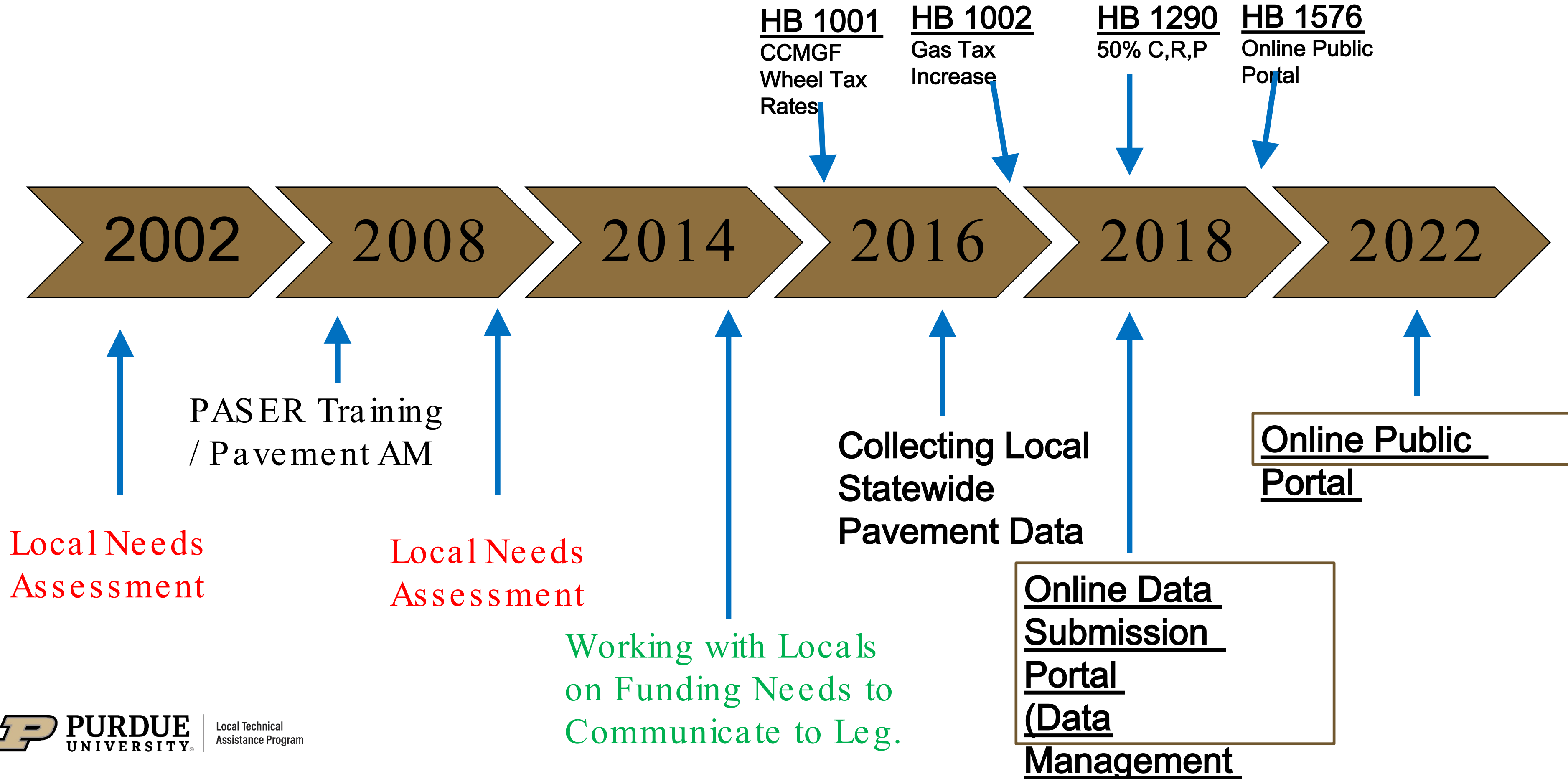
Indiana LTAP  
Montgomery County  
Vanderburgh County



# ***Asset Management for Local Agencies***

Patrick Conner, PE  
Lead Asset Management Engineer, LTAP

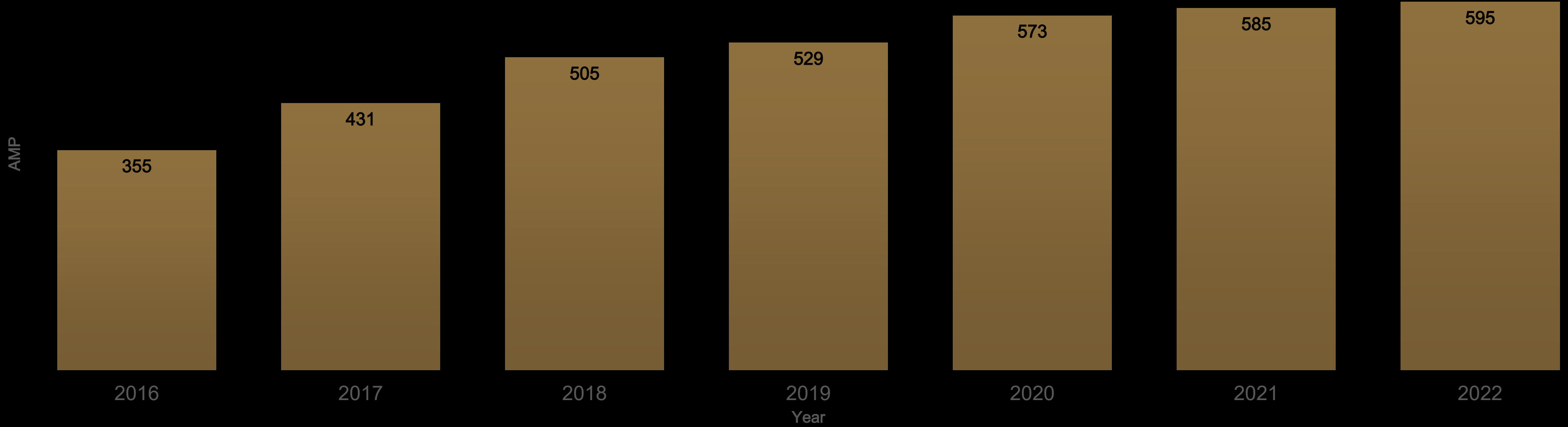
# Collecting and Storing Asset Management Data



# *Asset Management Collection over the Years*

- 2022 Asset Management Plans
  - Total – 595
    - Pavement – 512
    - Bridge - 83

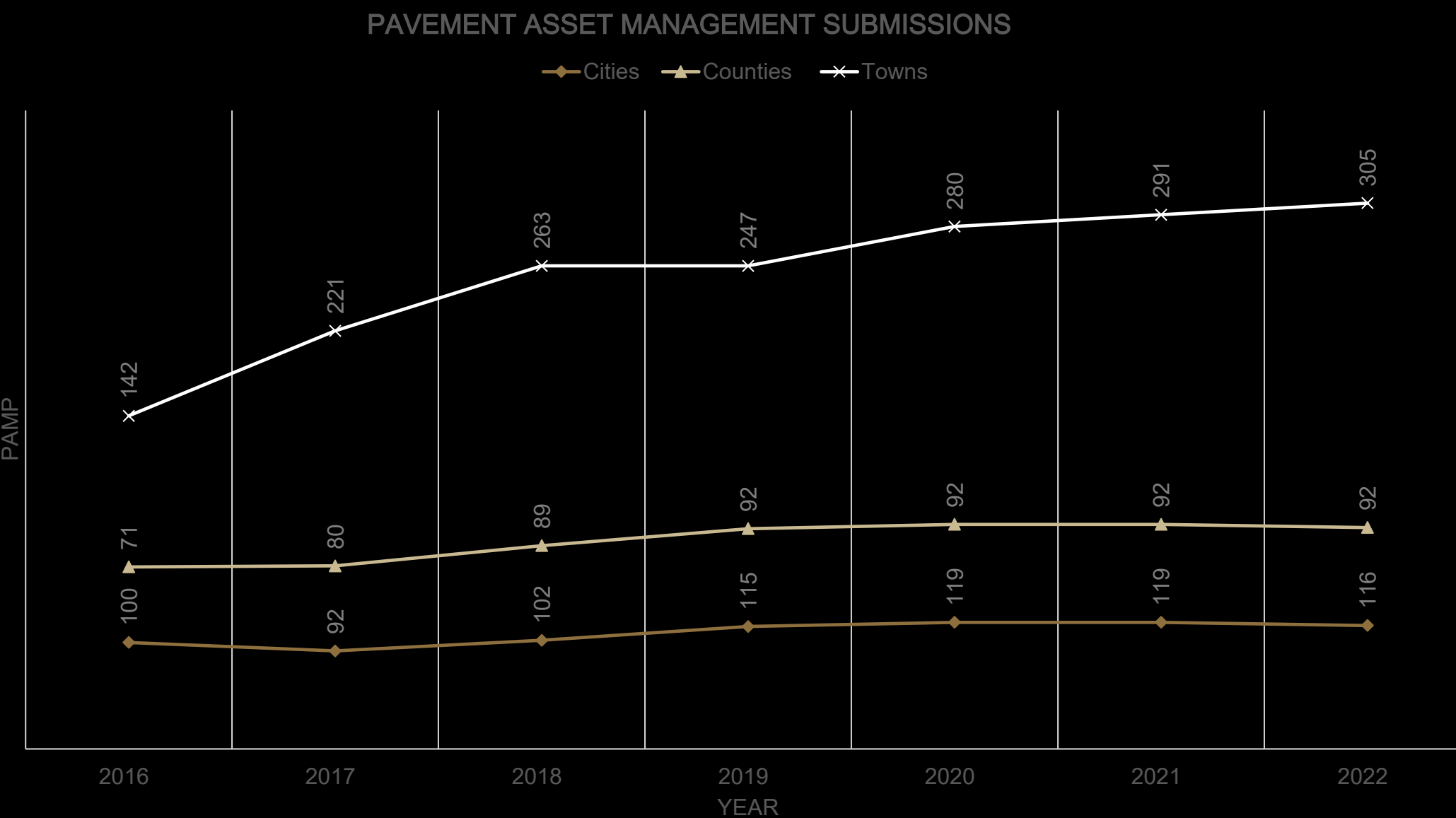
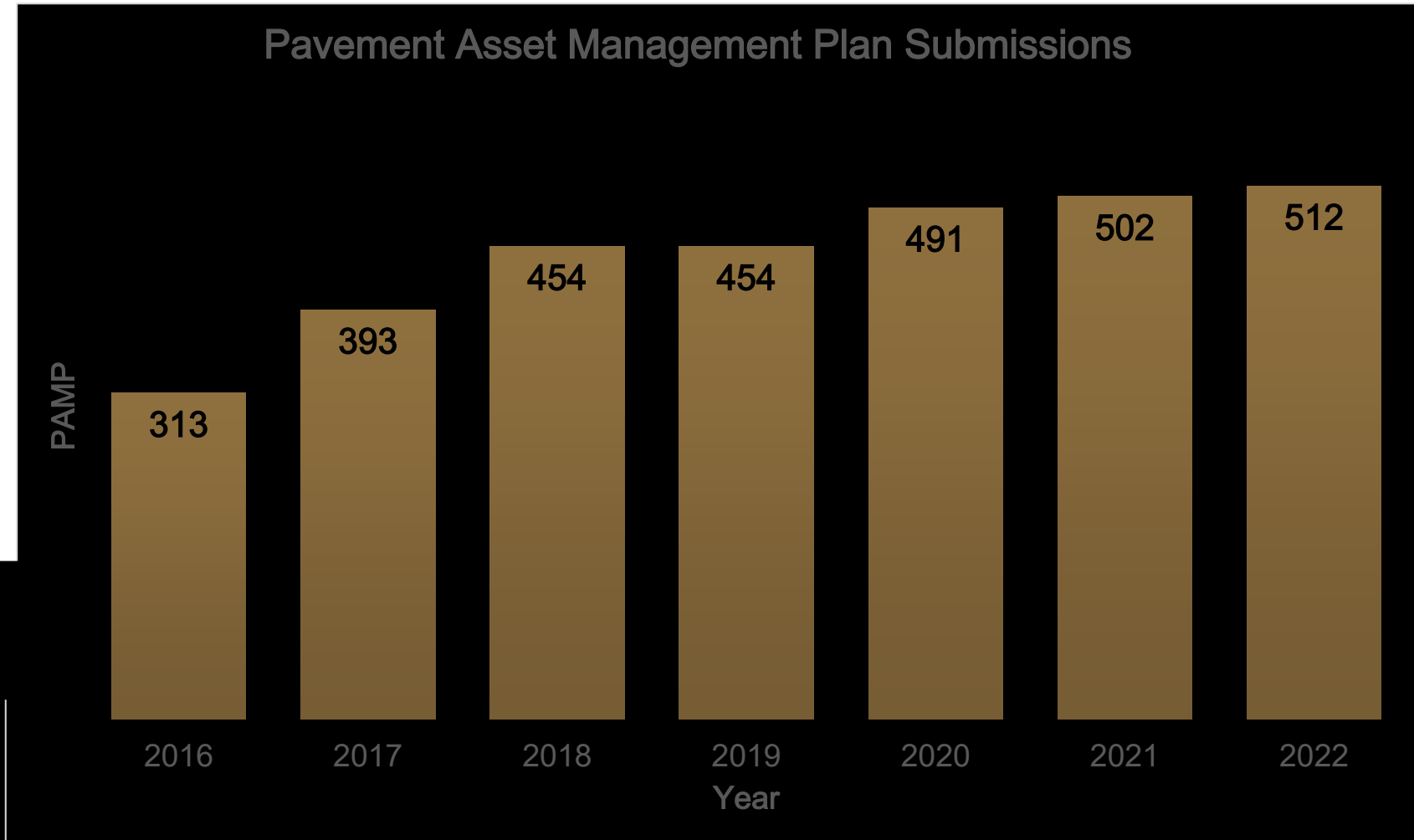
## Total Asset Management Plan Submissions





# Asset Management Collection over the Years

- 2022 Asset Management Plans
  - Pavement – 512
    - City- 116
    - Town- 305
    - County- 92

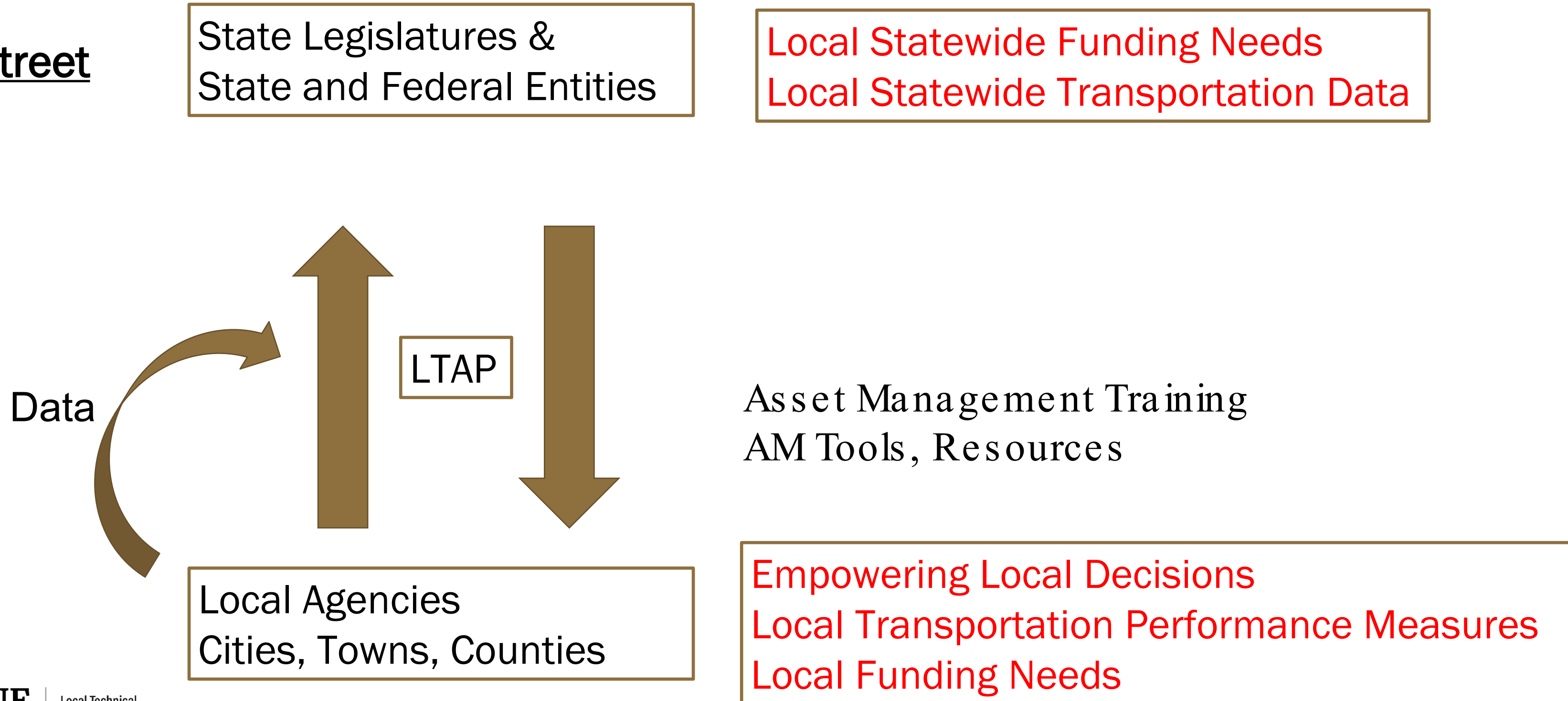


**Between 2021-2022 Pavement Inventory and Condition Ratings were collected on 99% of Local Roads**

# The Intersection of Asset Management and Transportation Improvement Plans

Why LTAP and Asset Management Training and Data Collection??

## 2 Way Street



# The Intersection of Asset Management and Transportation Improvement Plans

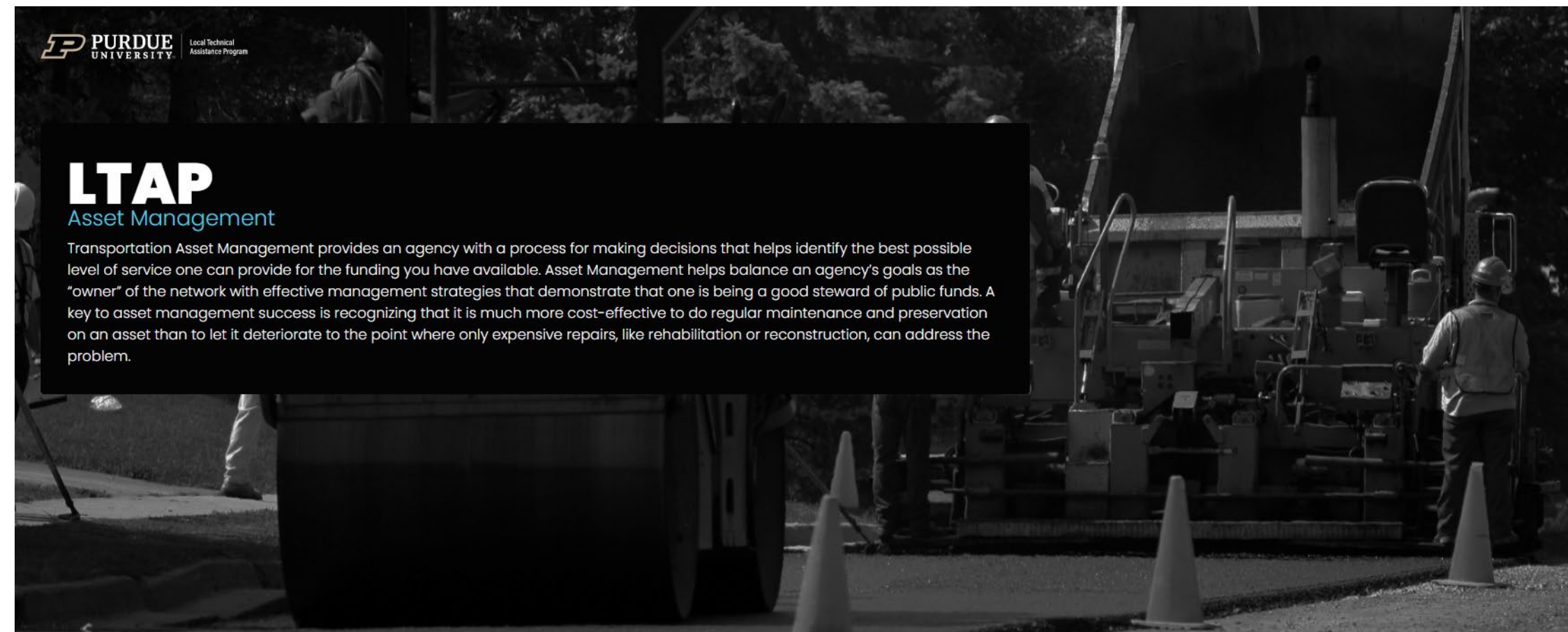
HB 1576

## IC 8-23-30-9 Electronic availability of local asset management plans

Sec. 9. Not later than July 1, 2022, the department shall make asset management plans of local units approved under this chapter available in an electronic format specified by the department on an Internet web site maintained by:

- (1) the department; or
- (2) an entity contracted by the department to approve asset management plans.

Website



### Overall for Indiana Local Roads

Asset Management provides the framework to plan, budget, and communicate the owner's strategy and results that they are working to achieve. In effort to help communicate and provide transparency, this website provides access to the data that the Indiana LTAP has been given from the cities, towns, and counties. The data below represents the aggregated data for cities, towns, and counties to report and demonstrate the size of

# *The Intersection of Asset Management and Transportation Improvement Plans*

## **Key Asset Management Concepts**

- Driven by Policy
- Based on Performance
- Founded on Life Cycle Needs
- Supported by Data
- Defensible



**or**



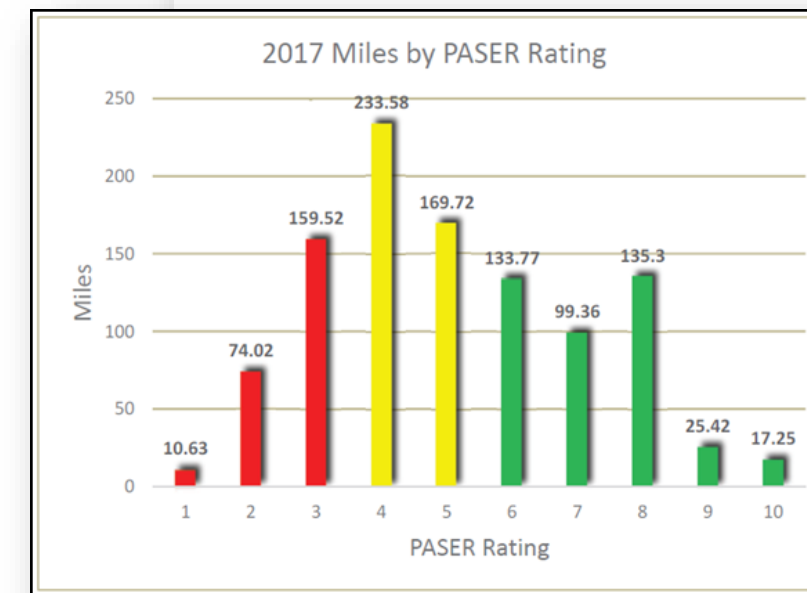


# The Intersection of Asset Management and Transportation Improvement Plans

## Setting Targeted Levels of Services

- Estimating funding levels
- Factors that impact the program
- Identifying realistic targets
- Setting one or more targeted level of service
- Easy to understand  
Good-Fair-Poor

PASER RATING	CONDITION	LEVEL OF REPAIR SUGGESTED	TYPICAL REPAIR COSTS (PER MILE)	NUMBER OF MILES IN THIS CONDITION	TOTAL AMOUNT NEEDED
9 and 10	Excellent	No maintenance required	\$0	20	\$0
8	Very Good	Little to no maintenance	\$1,000	25	\$25,000
7	Good	Crack sealing and	\$10,000	50	\$500,000
5 and 6	Fair to Good	Non-structural preservation treatment	\$100,000	100	\$10,000,000
3 and 4	Poor to Fair	Structural repair	\$130,000	100	\$13,000,000
				20	\$1,000,000
				315	\$24,525,000





# *The Intersection of Asset Management and Transportation Improvement Plans*

## *Benefits of Asset Management*

- Takes the politics out of pavement management
- Tool to Budget
- Tool to Plan
- Tool to Report/Communicate

# *The Intersection of Asset Management and Transportation Improvement Plans*

## *Turning Data into Action*

- Right Treatment at the Right Time
- Optimizing Strategy
- Defining Benefit Factors
  - Condition
  - AADT
  - Functional Class
  - Drainage
  - Roughness Index



# ***Transportation Improvement Planning & Programming***

Jennifer Sharkey, PE, PMP, CPM  
Lead Research Engineer, LTAP

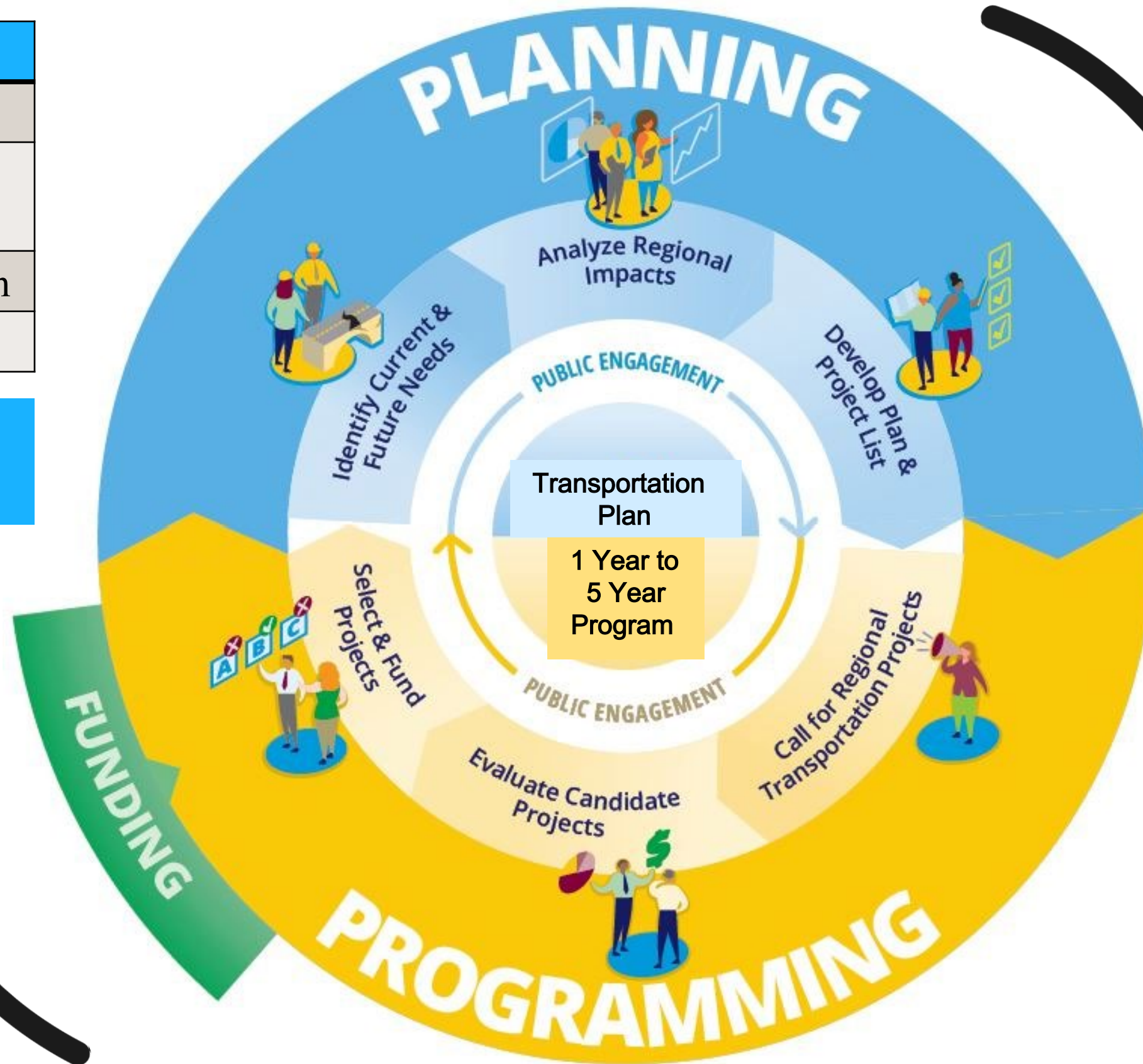


# Transportation Planning vs. Programming

## Planning

- Develop a vision
- Create goals, objectives and strategies
- Establish a long-term approach
- 5 Years, 10 Years, 20 Years

Identifies where to go and how to get there



## Programming

- Prioritize proposed projects
- Match projects with available funds
- Establish tangible expenditures
- 1 Year – 5 years

Involves allocating resources and executing projects

# Transportation Improvement Plan

**PURPOSE:** Identify where to go and how to get there

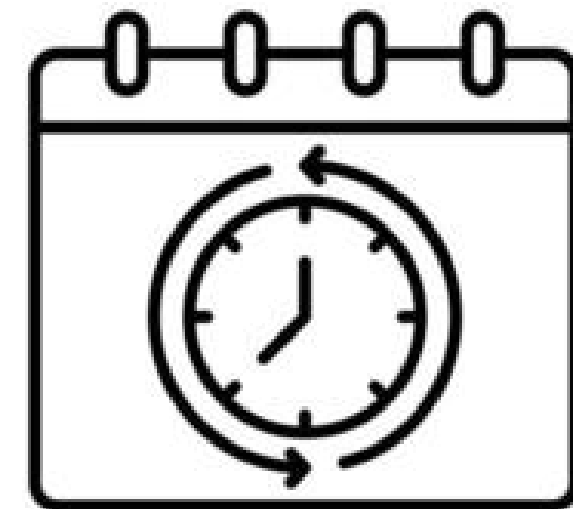
Develops a vision



Creates goals,  
objectives & strategies



Establishes a long -term  
approach



*(5 years, 10 years, 20 years)*

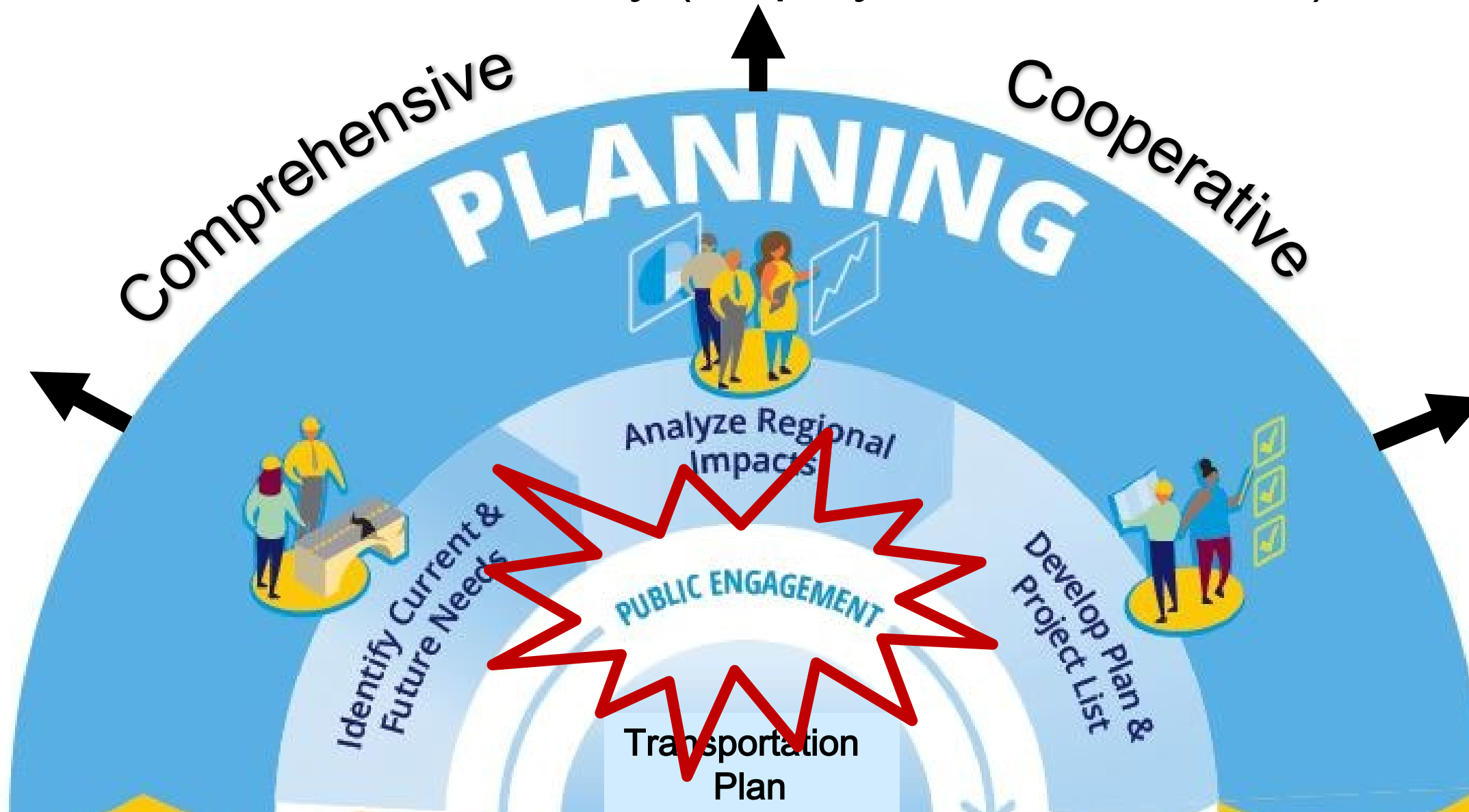
**Thoroughfare Plan, Capital Improvement Plan,  
Long -Range Transportation Plan**



# Transportation Planning Process

- Land use / comprehensive plans
- Economic development target areas
- Environmental considerations
- Connectivity (employment/multimodal)

- Levels of service
- Types of service
- Accessibility
- Safety
- Economic vitality
- Quality of life

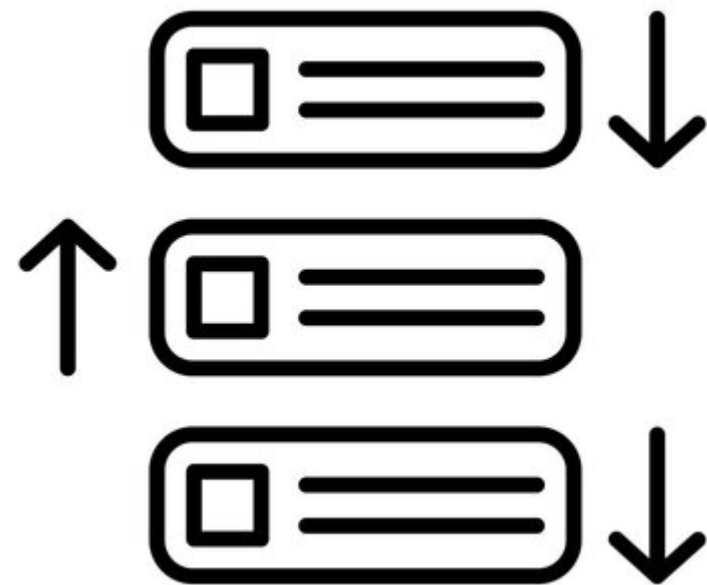


- Wish-list
- Project scope
- Project budget
- Project impacts
- Partnership opportunities

# Transportation Improvement Program

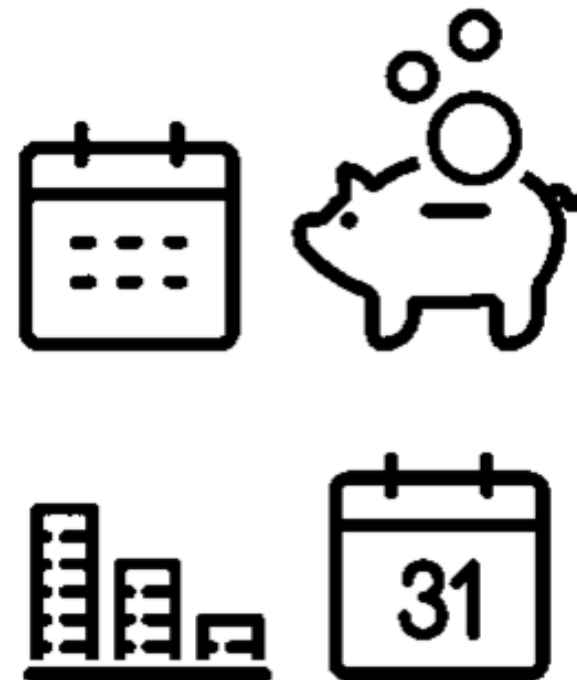
**PURPOSE: Allocate resources and execute projects**

**Prioritizes proposed projects**

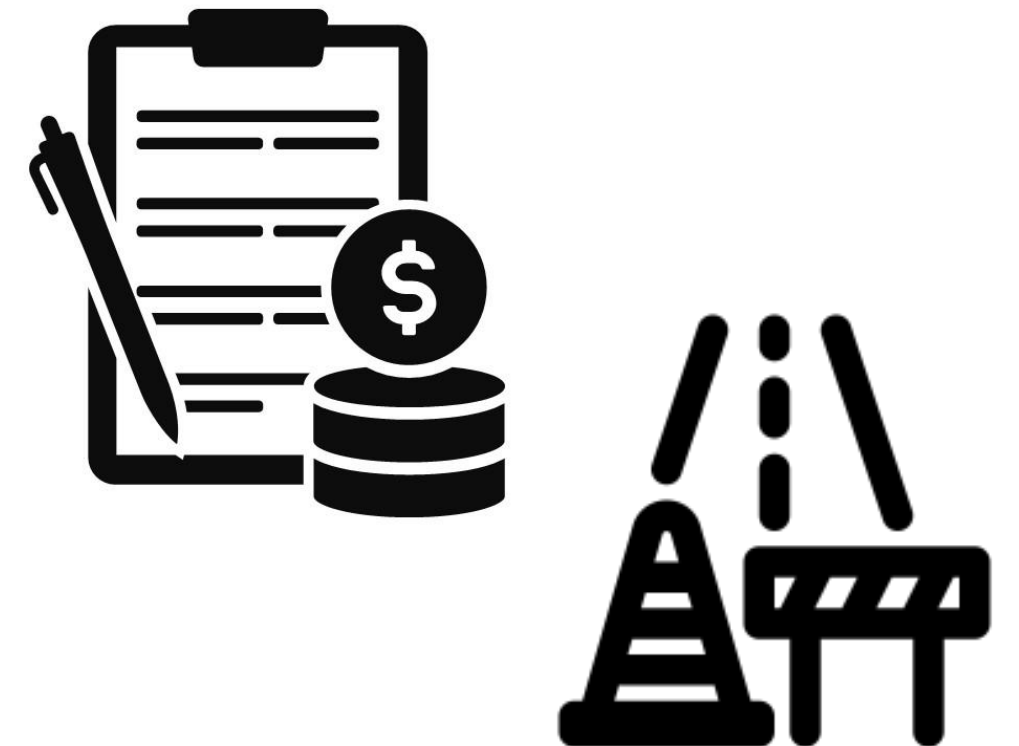


*(1 year – 5 years)*

**Matches projects with available funds**

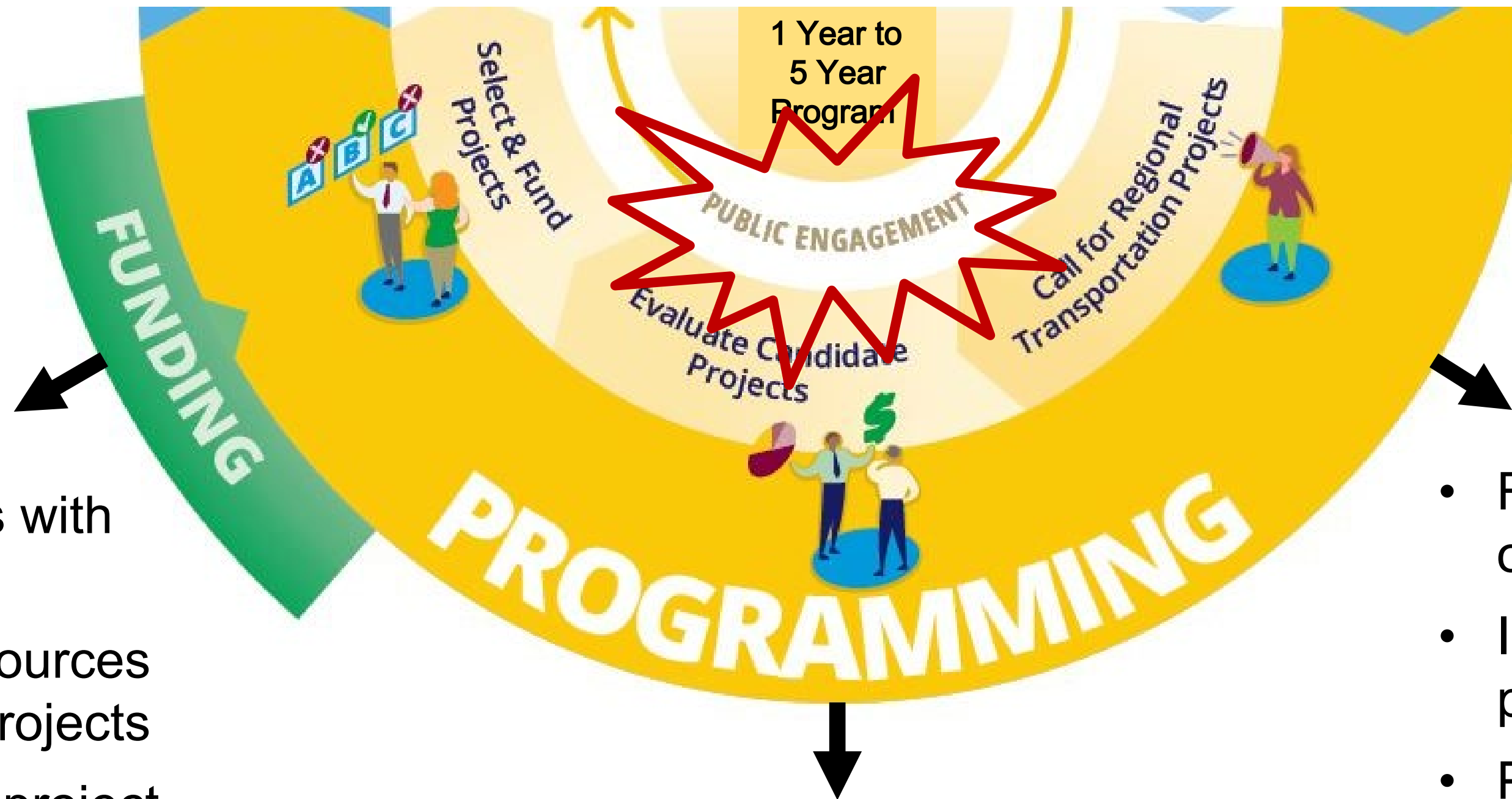


**Establishes tangible expenditures**



**Paving Program , Maintenance Program ,  
Capital Improvement Program**

# Transportation Programming Process



- Match funds with projects
- Allocate resources to specific projects
- Commence project design/construction

- Review funding opportunities
- Identify project partnerships
- Prioritize sources of transportation funding

- Review wish-list of projects
- Align shortlist of projects with local and regional goals and priorities

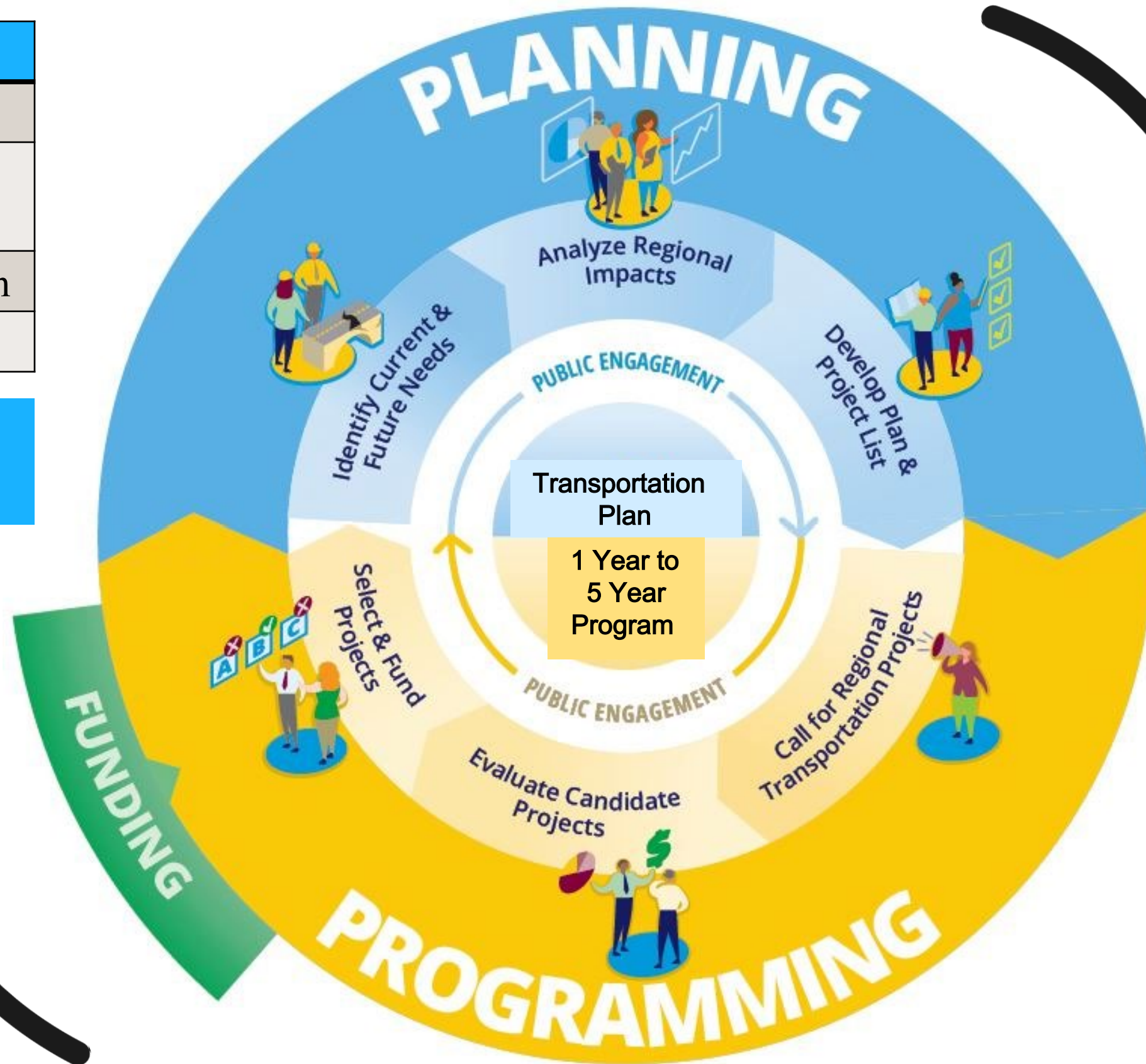


# Transportation Planning vs. Programming

## Planning

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## Programming

- Prioritize proposed projects
- Match projects with available funds
- Establish tangible expenditures
- 1 Year – 5 years


Involves allocating resources and executing projects



# Asset Management Plan, Transportation Plan, Transportation Program

## Asset Management Plan

**Roadway Asset Management Plan**




Jennifer L. Sharkey, PE

The purpose of this plan is to provide information regarding Steuben County's transportation network and prioritize improvements and upgrades to these facilities.

STEUBEN COUNTY HIGHWAY DEPARTMENT  
1900 N 200 W  
Phone: (260) 668-1000 x 3600  
Fax: (260) 833-1564  
8/26/2015

## Transportation Plan


**Long Range Transportation Plan**  
Harrison County, Indiana  
Adopted Spring, 2003



**Harrison County, Indiana**

## Transportation Program

**Noble County Highway Department**  
Transportation Asset Management - Highways  
2016 Road Rehabilitation and Maintenance Plan



Prepared by: Zachary S. Smith, P.E.  
Date: April 25, 2016

1118 E. Main St.  
Albion, IN 46701  
260-636-2124  
[zsmith@nobleco.us](mailto:zsmith@nobleco.us)



# Asset Management Plan, Transportation Plan, Transportation Program

## Asset Management Plan

Roadway	From Road	To Road	Length	Width	Surface Type	Rating	Year Rated	Functional Classification
Butler Ln.	Kathryns Ct.	Patty Ln.	0.04	35	Asphalt	7	2016	Local—Residential
Candy Ln.	Meadow Ln.	Patty Ln.	0.06	22	Chip Seal	6	2016	Local—Residential
Carnoustie Cir.	Claridge Ct.	End	0.06	28	Asphalt	8	2016	Local—Residential
Carnoustie Cir.	Ballenshire Ln.	Claridge Ct.	0.09	28	Asphalt	8	2016	Local—Residential
Circle Dr.	N 900 E	N 900 E	0.09	23	Chip Seal	5	2016	Local—Residential
Circle Dr.	E. Split	E. Split	0.48	18	Chip Seal	5	2016	Local—Residential

**Inventory & Condition - Existing**

## Transportation Program

Road name	Start Point	End Point	Miles	Work performed	Cost	Year	Cumulative Cost
Angling Rd.	Kendallville	800N	1	1.5" HMA Surface	\$55,746	2016	\$55,746
600S	SR9	Bridge 82	2.45	1.5 HMA Surface	\$136,578	2016	\$192,324
Appleman Rd.	1000E	Riley Rd.	1.2	Crack Seal	\$6,875	2016	\$199,199
900N	1050W	SR.5	2.5	Crack Seal	\$13,750	2016	\$212,949
550S	1100E	Old SR.3	1	Crack Seal	\$5,500	2016	\$218,449

**1-year program**

## Transportation Plan



**External & Internal Factors**

### Shiloh Road/Fogel Road (see Figure 14)

**Project Location:** From S.R. 337 to Corydon-New Middletown Road at New Middletown.

**Project Length:** 11,700 feet (2.22 miles)

**Project Description:** • Reconstruct 2-lane rural section from S.R. 337 to Corydon-New Middletown Road. Realign approximately 2,000 feet (0.38 miles) and follow existing alignment for approximately 9,700 feet (1.84 miles).

**Project Termini:** Connect S.R. 337 (Major Collector) to Corydon-New Middletown Road (Major Collector) at New Middletown.

**Current Functional Classification:** Local Road – To be reclassified as a Major Collector.

**Current ADT:** 1,764 v.p.d

- Benefits:**
- Connect S.R. 337 (Major Collector) to Corydon-New Middletown Road (Major Collector) at New Middletown.
  - Improve access to southern portion of Corydon.
  - Realign horizontal and vertical curves to improve sight distance.
  - Improved traffic flow and safer facility.

**Wish List of Proposed Projects**

Year	Rating	Treatment	Estimated cost per mile	Estimated miles	Estimated cost
2016	7-10	Crack Seal	\$5,500	33.6	\$184,800
	6-7	Rejuvenator	\$11,733	4.2	\$49,749
	6	Single Micro Seal	\$35,200	0.3	\$10,912
	6	Single Chip Seal	\$10,939	13.3	\$144,944
	5	Double Chip Seal	\$21,036	32.2	\$676,314
	5	Double Micro Seal	\$46,933	5.8	\$275,111
	4-5	1.5" HMA Surface	\$55,746	3.5	\$192,324
	4-5	Wedge	\$5,000	15.7	\$78,250
	1-3	Reconstruction	\$56,624		\$509,616
	<b>2016 Total</b>				
2017	8-10	Asphalt Sealant	\$12,085	9.9	\$119,282
	7-10	Crack Seal	\$5,665	46.4	\$262,969
	6	Single Chip Seal	\$11,267.38	30.8	\$346,472
	6	Micro Seal	\$36,256.00	1.0	\$37,344
	5	Double Chip Seal	\$21,667.29	24.8	\$536,265
	5	Double Miro Seal	\$48,341.33	5.8	\$279,353
	4-5	1.5" HMA Surface	\$57,418.38	0.6	\$35,025
	4-5	2" HMA Binder	\$73,601.33	7.0	\$513,737
4-5	Wedge	\$5,150.00	7.0	\$36,050	
1-3	Reconstruction	\$58,322.72	8.5	\$495,743	
<b>2017 Total</b>					<b>\$2,662,241</b>

**5-year program**

# Asset Management Plan, Transportation Plan, Transportation Program



Transportation Plan

Asset Management Plan (existing) & Transportation Plan (future)

Asset Management Plan & Transportation Plan

Transportation Plan

ledge  
Transportation Program  
Transportation Program

Asset Management Plan



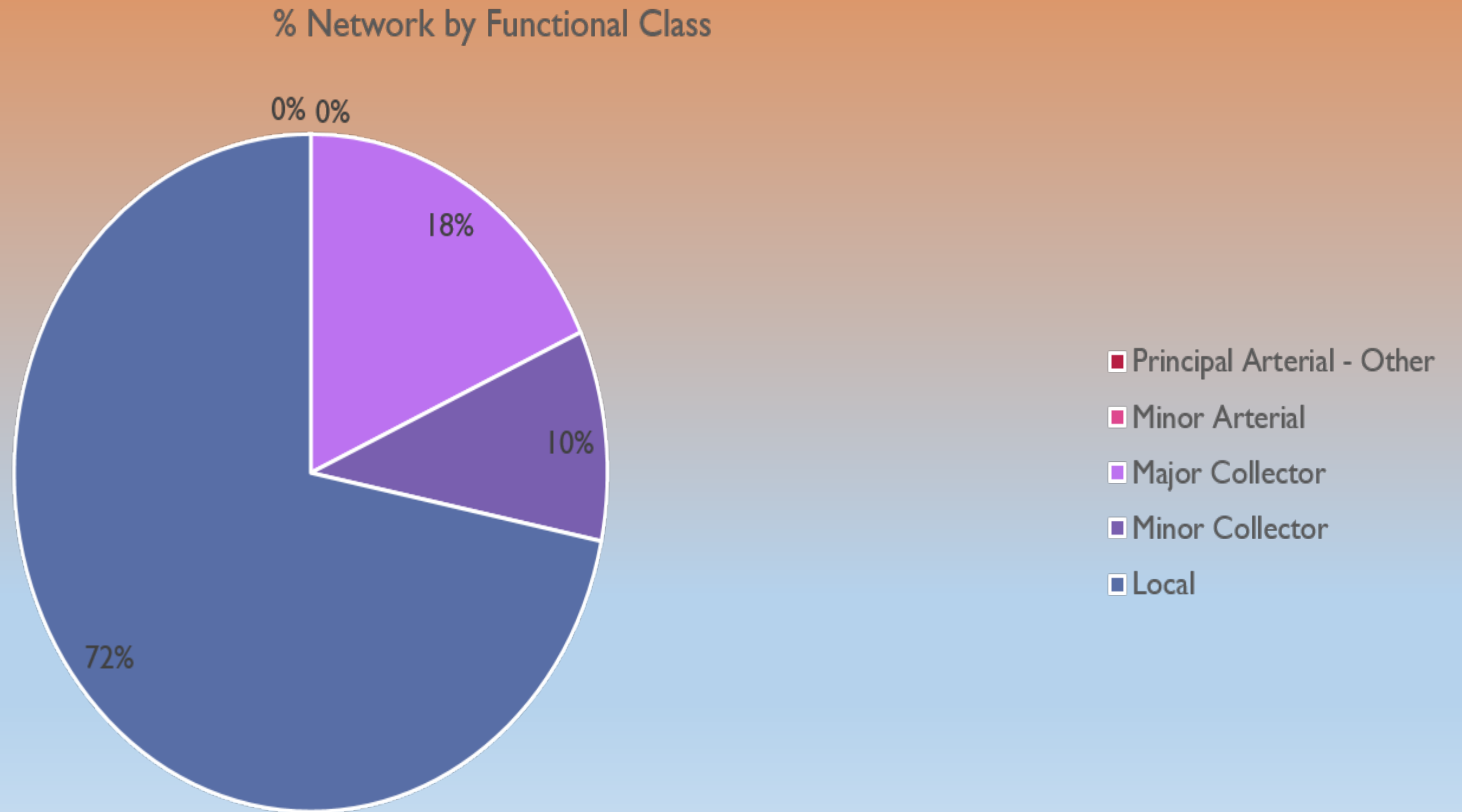


***How do Counties use  
Asset Management  
Plans?***

# Asset Management into Action

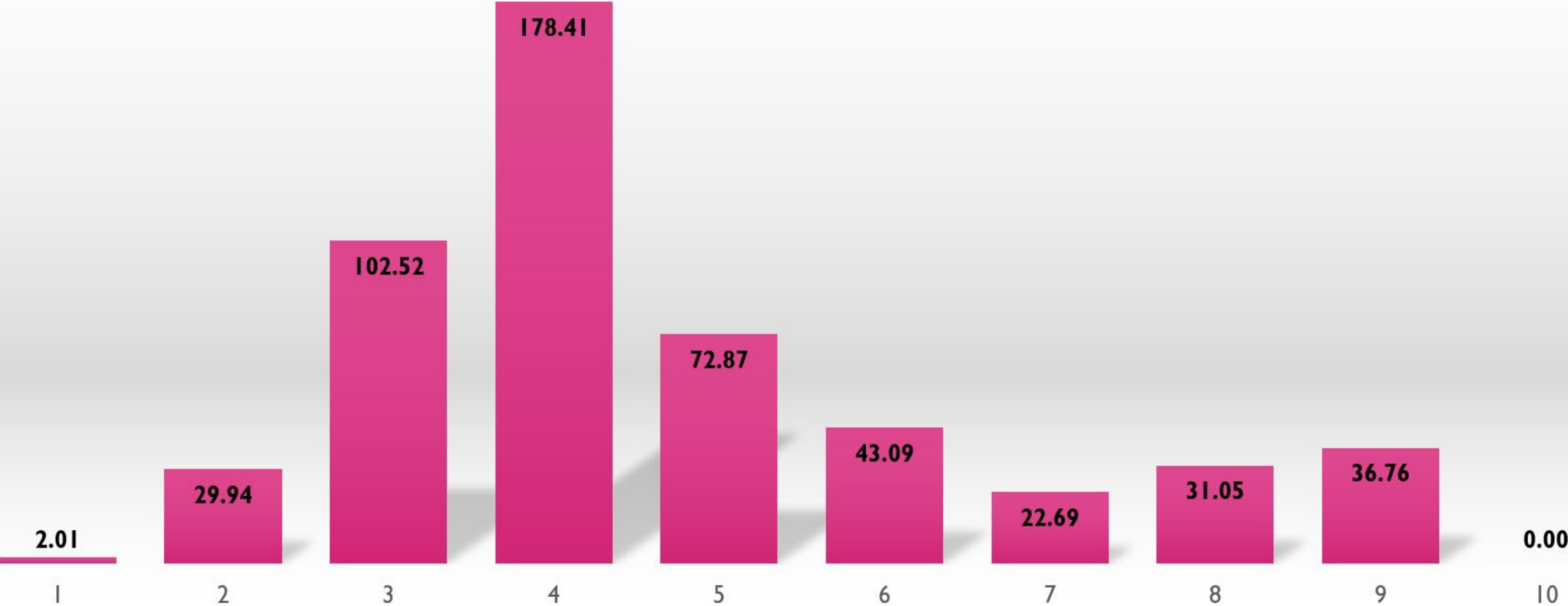
Montgomery County Highway

# Distribution of Transportation Network



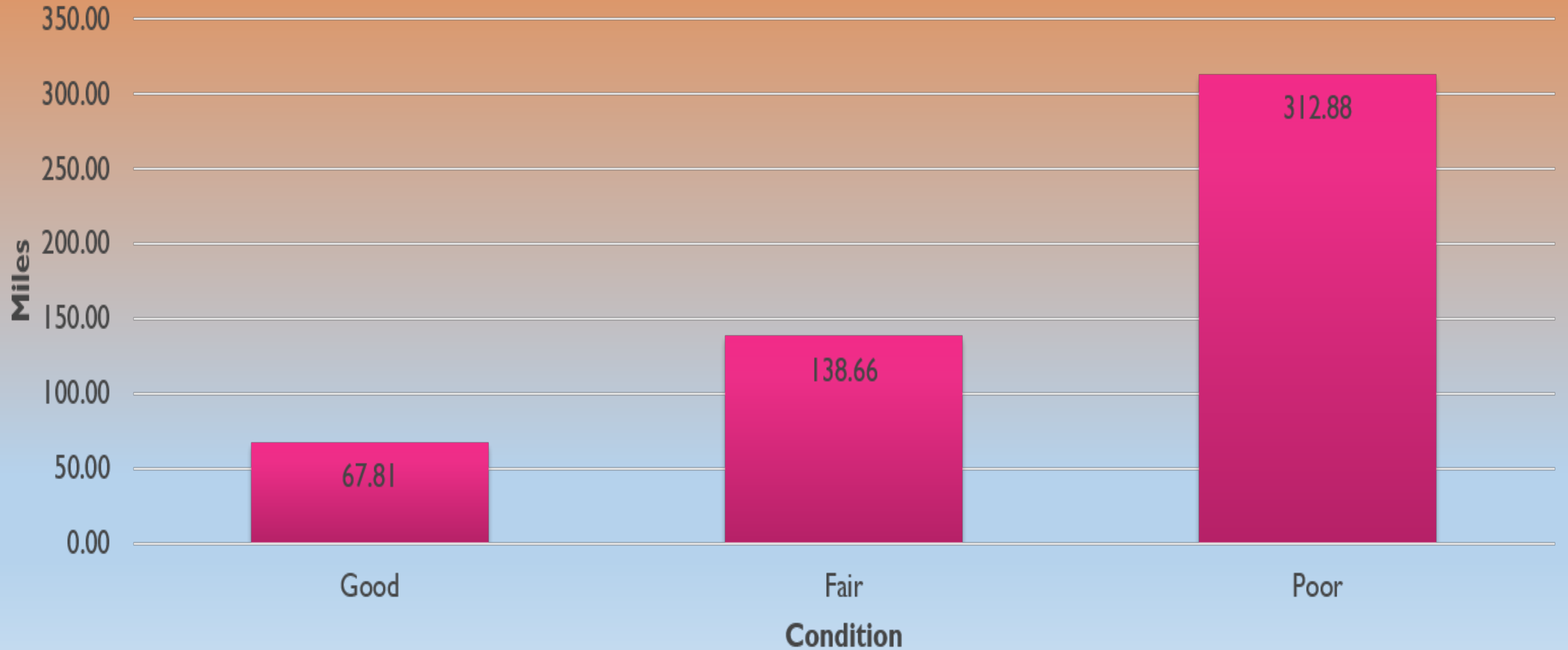


# PASER Rating by Miles



PASER Rating

# Condition Rating by Miles



# Summary of Treatment Types

- 500 Miles = **-500** years of life each year

TREATMENT TYPE	YEARS ADDED 2022	YEARS ADDED WITH FUTURE PLAN
Crack Seal (1 mile = 1 Yr)	0	20 (20 miles)
Hot Mix (1 mile = 10 Yr)	80 (8 miles)	80 (8 miles)
Cold Mix (1 mile = 10 Yr)	80 (8 miles)	250 (25 miles)
Chip Seal (1 mile = 7 yr)	140 (20 miles)	329 (47 miles)
	<b>TOTAL 300 years</b>	<b>TOTAL 679 years</b>
	<b>-200 YEARS</b>	<b>+179 YEARS</b>

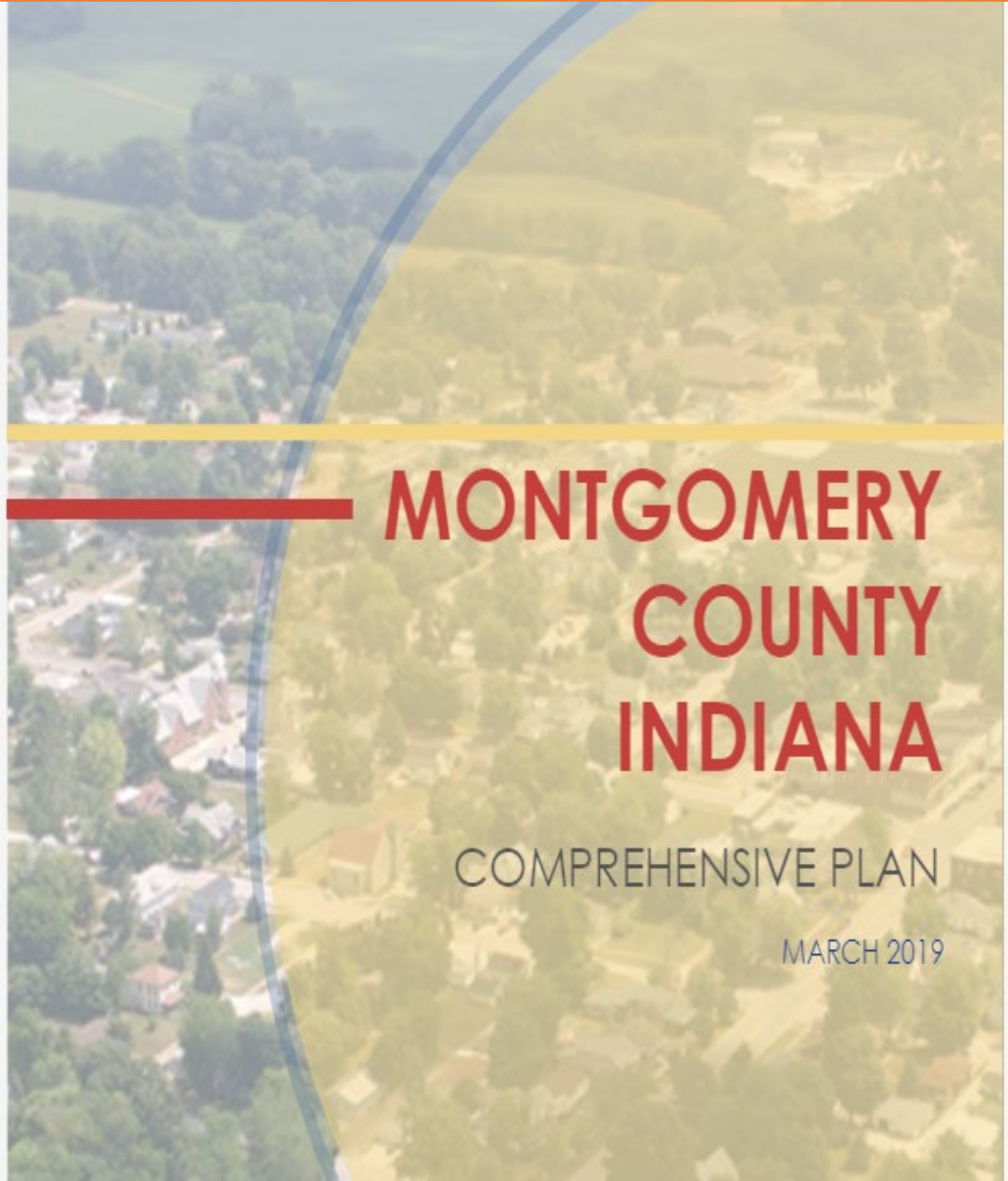
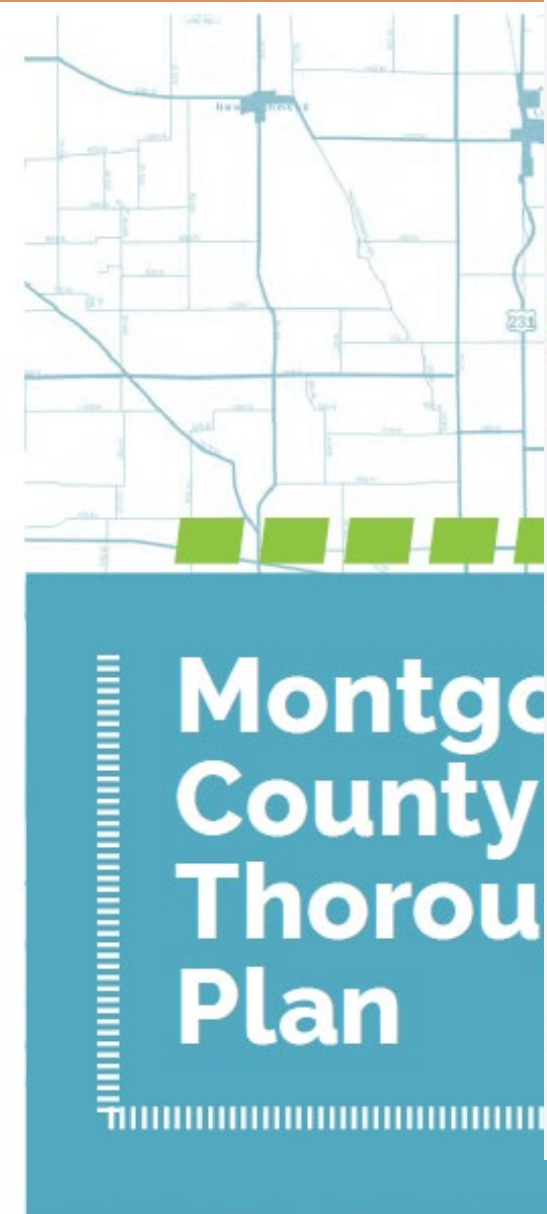
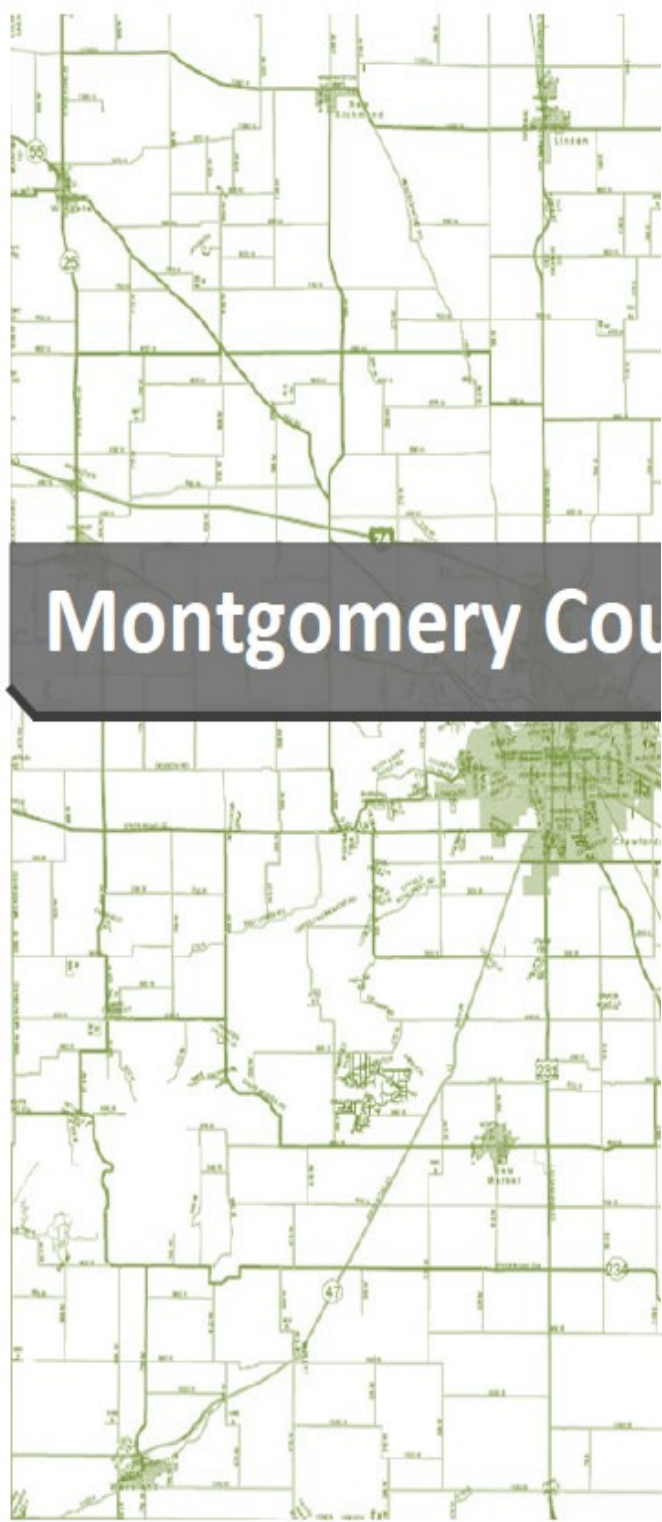


**\$ 1,813,412 Increase for Paved Roads**



# Plans

- Local Road Safety Plan
- Thoroughfare Plan
- Comprehensive Plan



# Local Road Safety Plan

- Crash Data
- Sign Grant
  - 1300 signs replaced
  - Thoroughfares were prioritized
  - HSIP 90/10 grant
    - LRSP helped get this

## Risk Factors

As part of the analysis, several risk factors were also analyzed which compared incidence of crashes on the roadway network as a whole versus incidence of crashes which shared the identified attributes. The data tables for this analysis can be found in the appendix. Data categories analyzed included:

- Traffic Volume (AADT)
- Roadway Width
- Shoulder Width
- Apparent Right-of-Way Width Beyond Edge of Pavement
- Roadway Classification
- Pavement Condition (PASER Rating)
- Location (Township Location)
- Curve Sign Distribution
- Speed Limit
- Pavement Type
- Snow Routes
- Ditch Condition

## Heat Maps

In addition to the individual risk factors, heat maps were also created for specific crash types based on input from the highway department to understand cluster locations of certain types of crashes. These include the bulleted list below and are shown on the following pages.

- Roadway Departure
- Animal Crashes
- Snow/Ice Crashes
- Wet Crashes



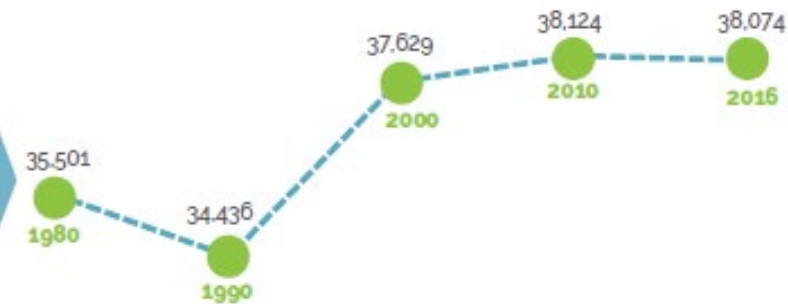
# Thoroughfare Plan

## Population & Growth

The following demographic data were gathered for the 2019 Montgomery County Comprehensive Plan. Transportation networks are often related to the population of an area, and the land uses. As a community grows, understanding the anticipated changes can help build a better transportation network.

### Population Change

Montgomery County experienced a population increase from 1990 to 2010, but the population has essentially remained the same from 2010 to 2016.



### Median Age

Montgomery County has seen a significant increase in the median age since 2000 with a 1 year age increase between 2010 and 2016.



### Poverty

Montgomery County experienced a sharp jump in the overall poverty level between 2000 and 2010. This was in concert with the population increases for the county.



### Median Household Income

Montgomery County has experienced a consistent increase in median household income since 1990. Increases have flattened somewhat from 2010 to 2016.



Source: US Census Bureau ACS 5-Year Estimates

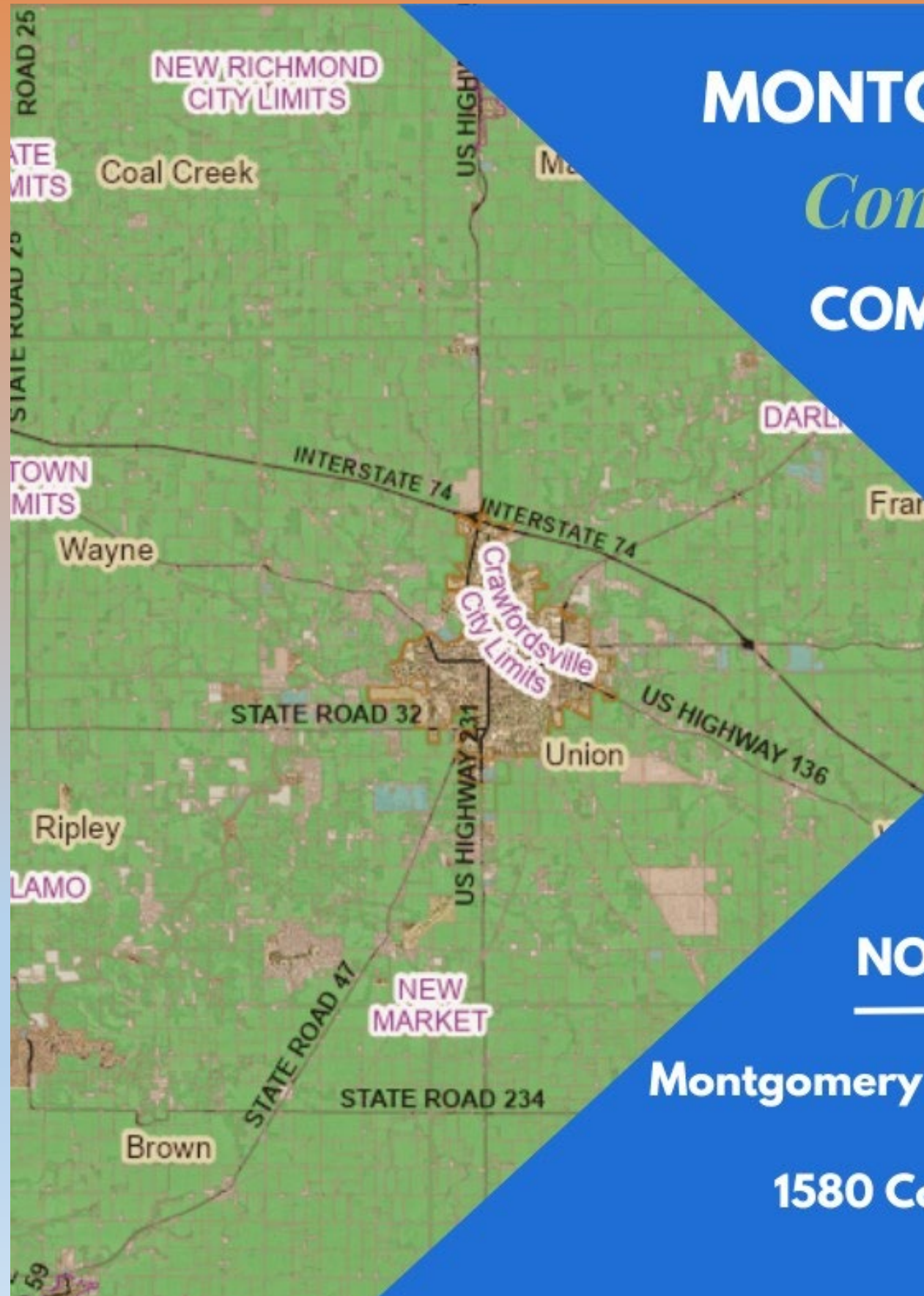
## Action Steps

- Pursue completion of a Local Road Safety Plan (LRSP)
- Adopt right of way standards into a future zoning ordinance
- Create a Capital Improvements Plan (CIP) to identify annual improvements
- Adopt the Thoroughfare Plan into the County Comprehensive Plan
- Require all new developments to dedicate and/or improve right of way for existing or future streets
- Incorporate regional initiatives that support coordination and safe transportation
- Partner with local jurisdictions to ensure transportation and land use support one another
- Encourage continued dialogue with private sector entities to coordinate improvements to the transportation network
- Work with INDOT to update roadway classifications
- Establish a policy that new and rehabilitated bridges on classified roads should accommodate pedestrians and cyclists.






# Comprehensive Plan



The map shows Montgomery County, Indiana, with major roads including Interstate 74, US Highway 136, US Highway 231, State Road 32, State Road 47, and State Road 234. City limits for New Richmond, Coal Creek, Wayne, Ripley, Brown, Union, Crawfordsville, and New Market are indicated. The county is divided into several townships: Wayne, Ripley, Brown, Union, and New Market.

**MONTGOMERY COUNTY**  
*Comprehensive Plan*  
**COMMUNITY WORKSHOP**



The seal of Montgomery County, Indiana, features a central illustration of a river flowing through a landscape with a tree and a building. The text around the seal reads "MONTGOMERY COUNTY INDIANA • EST. 1822".

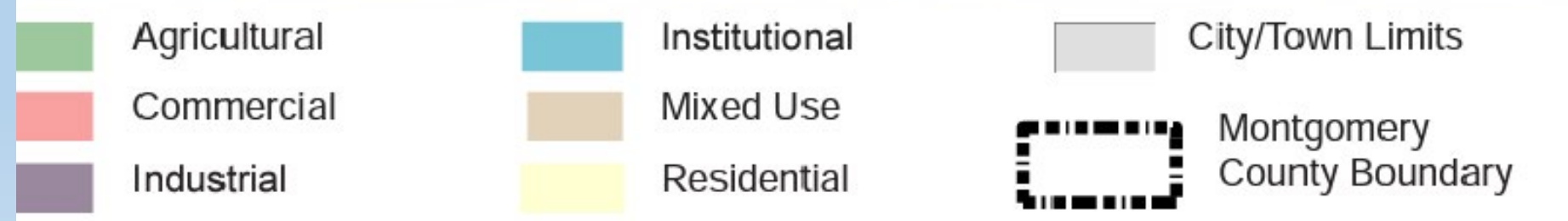
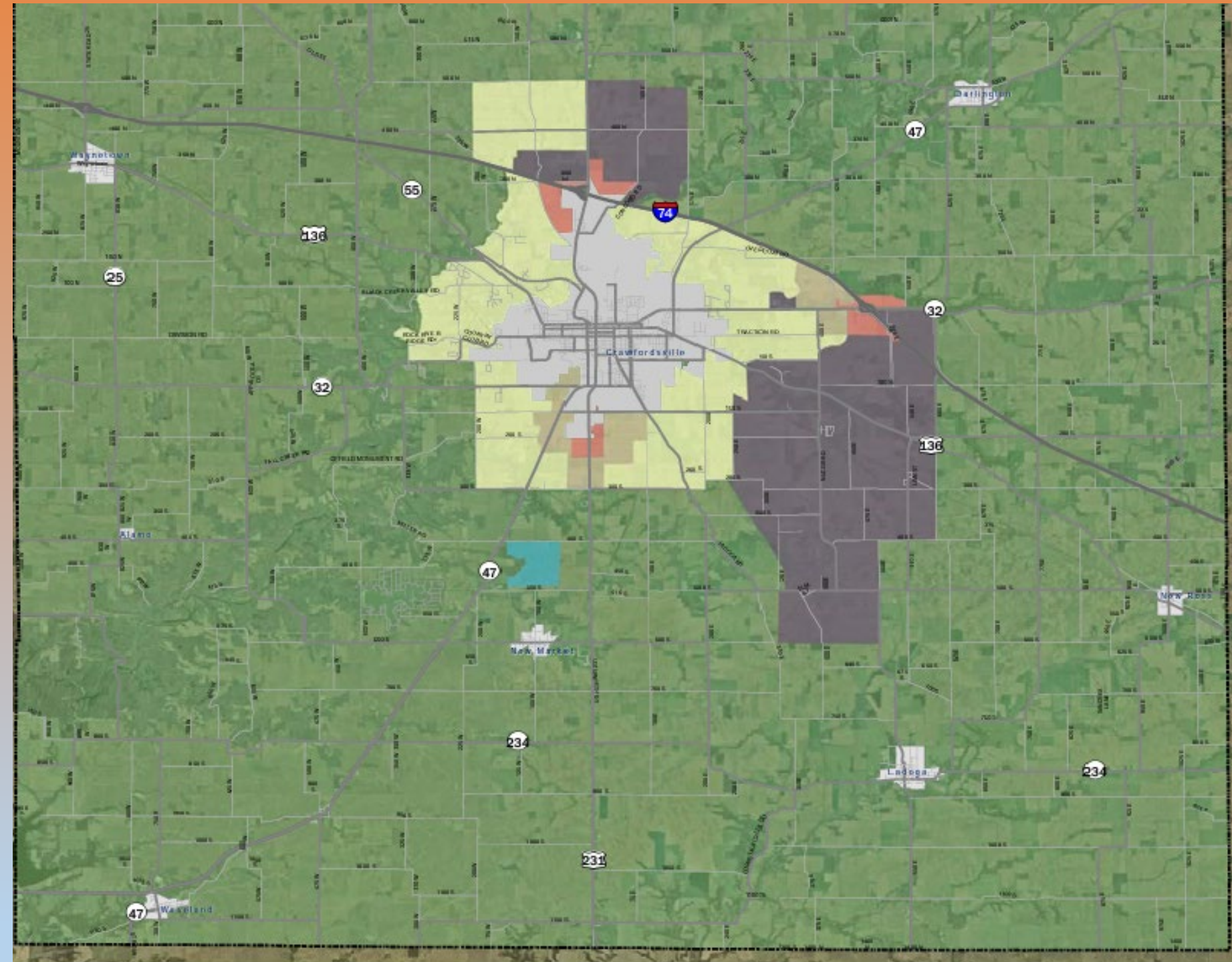
**NOV 14th 7:00PM - 8:30PM**

**Montgomery County Government Center  
Community Meeting Room  
1580 Constitution Row, Room E103  
Crawfordsville, IN 47933**



# Commissioner's Goals

- Jobs were #1 until
  - Tempur Sealy- 300+
  - Nucor expansion- 200
- Now #1 goal is HOUSING
  - 4 housing additions in the works



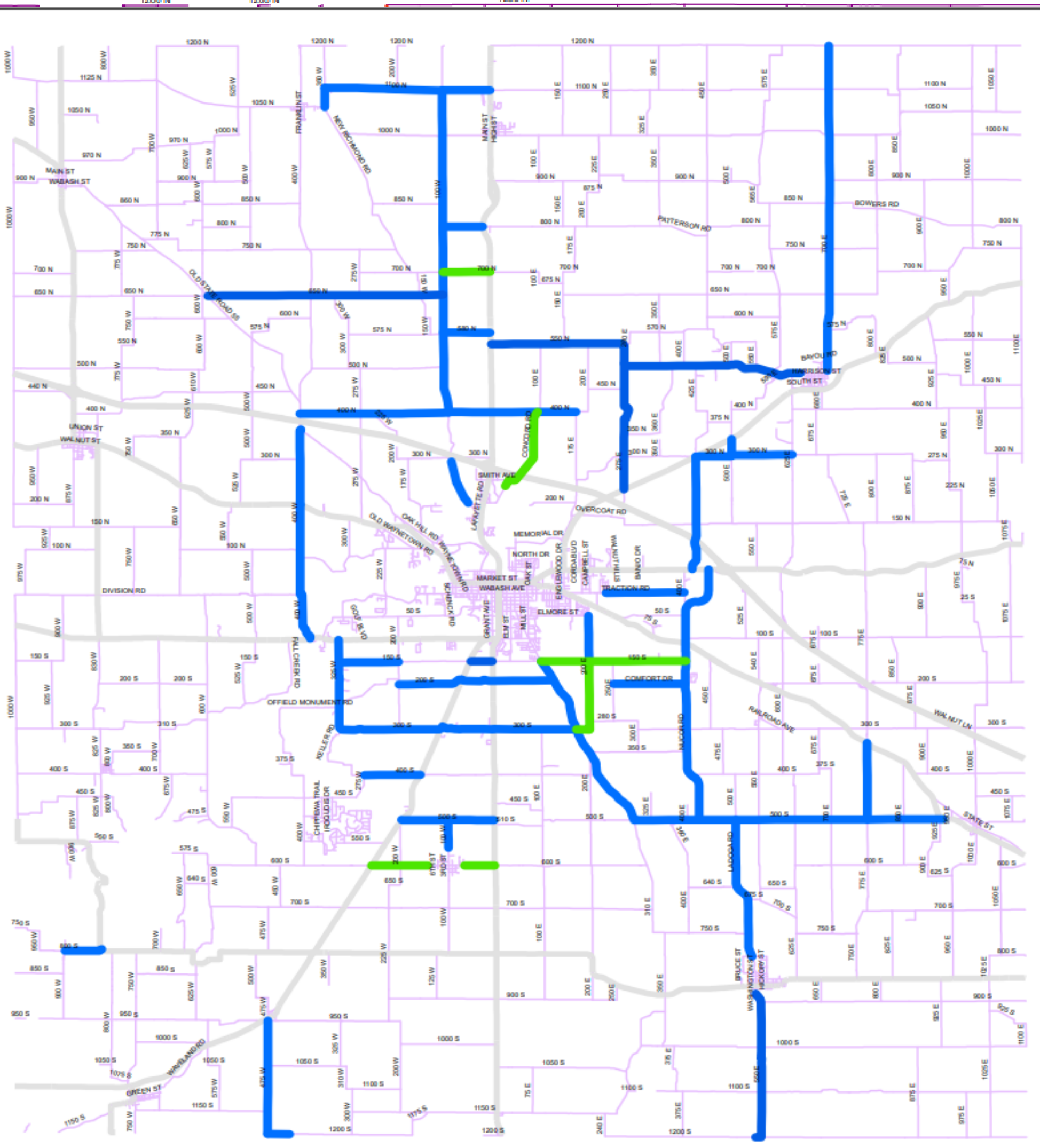
# CCMG Paving Policy

- Paving
  - CCMG
    - School
    - Completes the current loop that has been established prior to previous applications.
    - Does it enter or exit the county on a key road described in the thoroughfare plan
    - Major Collector or Minor Function class
    - Will be scored for Rank if not in the top 3 points



# CCMG

- Policy
  - Around Schools
  - Loop around Crawfordsville



# Cold Mix Paving Policy

- Cold Mix Asphalt ( Ranked by score)
  - Paser Rating 1-4
  - Time Spent Maintaining Roadway
  - Pothole Saturation (percentage of potholes within a segment)
  - Minor or Local Function Class
  - Roadway has high Action Request Work Order volume.
  - Roadway AADT
  - Roadway has or a change in attractants

### Score Sheet for Cold Mix Paving

Road Name 925 E      Feature Name 0233d      Year to Pave \_\_\_\_\_  
 Beginning Intersection 550 N      Ending Intersection S.R.47      Miles 0.6003

Evaluation Criteria based on Data Collected							
Category	Scoring Criteria	Scale		Score	Weight	Weighted Score	
Function Class	Major Collector	2	MAJOR COLLECTOR	2	5	10	
	Minor Collector	2		0			
	Local	1		0			
PASER Rating	1	4	3	0	25	50	
	2	3		0			
	3	2		2			
	4	1		0			
	5+	0		0			
Average Daily Traffic Counts	301+	4	73	0	10	10	
	131-300	2		0			
	0-130	1		1			
Action Request (Multiple people)	7+	2	2	0	15	0	
	4-6	1		0			
	0-3	0		0			
Attractor (Described in Policy)		1	0	0	15	0	
Pot Hole Saturation	61%-100%	5	50%	0	25	75	
	31%-60%	3		2			
	0%-30%	1		1			
Hours of Labor Spent	32+	5	32	2	25	125	
	9--31	3		2			
	0-8	1		1			
<b>Weighted Sub-Total:</b>						<b>270</b>	



Road Name	Begin	End	Class	Ave PASER	ADT	Work Orders	Atractor	Potole %	Labor Hours	Eval Score	Miles
1100 S	550 E	875 E	Local	2	103	8	0	100%	40	370	3.33
440 N	SR 25	1000 W	Local	1	63	1	0	80%	40	365	1.32
1050 E	New Ross	800 S	Local	2	87	6	0	80%	40	347	2.49
New Richmond Rd	700 N	1000 N	Local	3	153	7	0	75%	38	343	3.51
525 E	SR 32	100 S	Local	2	56	2	0	100%	40	340	1.90
1075 E	SR 32	200 S	Major Collector	3	870	8	0	75%	28	330	3.05
1000 S	US 231	200 W	Local	3	152	1	0	70%	32	325	2.00
600 N	600 W	Old 55	Local	3	20	1	0	75%	35	315	0.57
1000 S	550 E	1075 E	Minor Collector	3	165	7	0	58%	37	312	4.77
600 S	SR 47	600 W	Major Collector	4	447	3	1	51%	32	284	3.38
950 E	600 S	SR 234	Minor Collector	3	404	4	0	57%	21	272	2.61
200 W	950 S	1000 S	Local	3	87	1	0	70%	24	265	0.50
650 N	700 E	450 E	Local	4	109	4	0	58%	29	263	2.54
1025 E	800 S	SR 234	Local	2	63	6	0	50%	12	255	0.49
1000 E	600 S	New Ross	Minor Collector	3	289	1	0	85%	8	245	0.50
925 E	SR 47	400 N	Major Collector	4	49	2	0	50%	29	245	2.12
200 S	1000 E	1075 E	Major Collector	3	139	2	1	50%	12	245	0.50
650 N	SR 25	600 W	Major Collector	3	114	3	1	60%	20	243	2.68
100 S	600 E	1075 E	Local	3	47	2	0	68%	17	240	5.03
100 S	Nucor Rd	600 E	Local	4	101	4	0	67%	14	233	2.82
Bowers Rd	700 E	1000 E	Local	3	101	2	0	43%	24	232	3.15
300 W	1150 S	1200 S	Minor Collector	3	102	1	0	50%	20	215	0.50
1150 S	US 231	300 W	Minor Collector	3	214	1	0	33%	21	186	3.00
200 S	775 E	1000 E	Minor Collector	4	84	2	1	32%	9	177	2.34
600 S	950 E	1000 E	Minor Collector	3	535	0	0	10%	2	165	0.33
800 S	1050 E	1025 E	Local	2	58	6	0	30%	8	155	0.25
Division Rd	400 W	650 W	Local	4	100	2	0	30%	6	118	2.62
550 W	US 136	100 N	Local	4	109	0	0	43%	5	115	1.06
500 E	400 N	SR 47	Local	4	108	0	0	43%	5	115	0.64
575 E	500 N	600 N	Local	4	151	0	0	25%	7	100	1.32
400 N	590 E	500 E	Local	4	57	0	0	15%	2	90	0.51
590 E	500 N	400 N	Local	4	76	0	0	20%	8	90	1.05

# Summary

- Asset Management beginning tool that develops farther than just pavement conditions
- Community input through plans
  - Local road Safety
  - Thoroughfare
  - Comp Plan
- Let the above determine goals
- Let the goals dictate policy

# Thank You

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Phone: 765-362-2304



# Vanderburgh Co.

# CIPP



AMERICAN  
**STRUCTUREPOINT**  
INC.

**Capital Improvement Plan**  
**Capital Improvement Program**





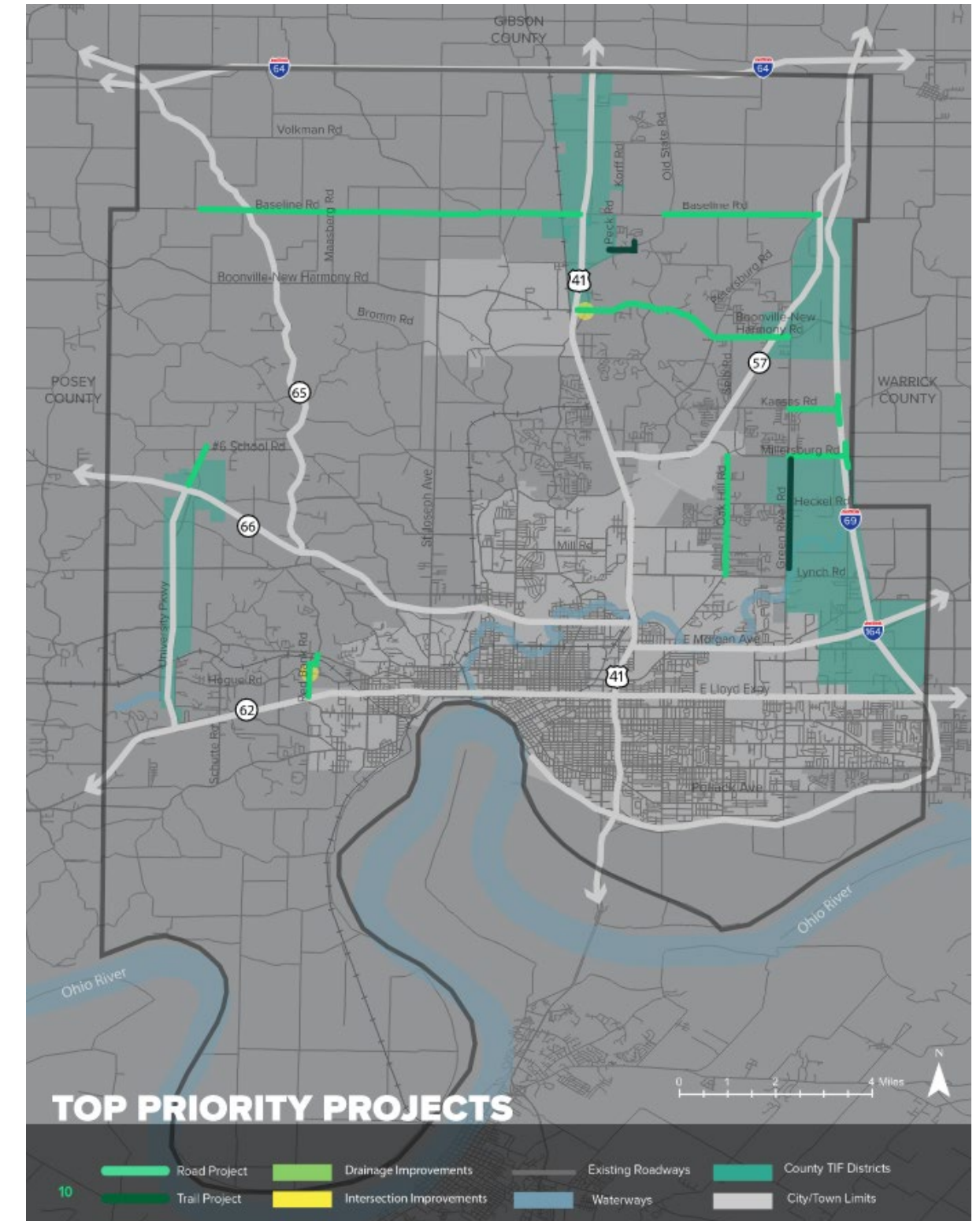
# Vanderburgh Co.-CIPP

- **Capital Improvement Plan**

- 20 year horizon
- Not fiscally constrained
- Stakeholder input generated project list

- **Capital Improvement Program**

- Traffic Counts/Congestion
- Safety
- Economic Benefits
- Funding Potential





# Oak Hill Road

- Complete reconstruction utilizing federal funds
- Poor road conditions generating complaints from the public
- Traffic count of over 15,000 vehicles/day
- Due to the poor conditions, high traffic count, and public complaints, some work had to be done quickly. However, the scope and cost of the work needed to be minimized as much as possible since the road would be reconstructed in about three years.
- Long term repair would have milled, patched, resurfaced and replaced traffic signal loops.
- Scope scaled back to only include resurfacing and striping.
- Combining information from AMP and CIPP, higher costs were avoided.
- Vanderburgh County has an approved AMP, this short-term project was eligible for and received CCMG funds

## ROAD 24

**LOCATION:** OAK HILL RD, LYNCH RD TO HECKEL RD

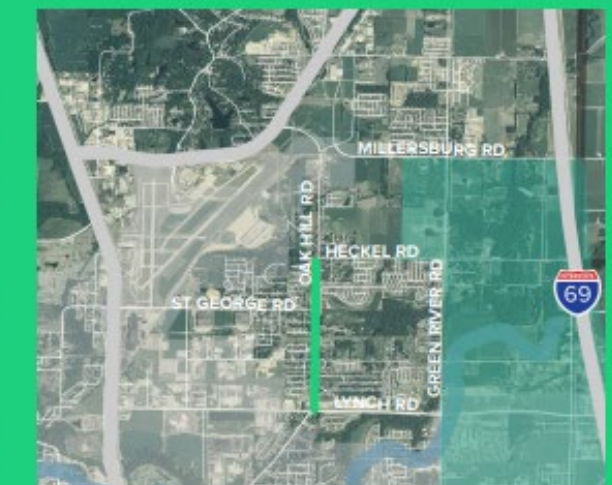
**DESCRIPTION:** ROADWAY WIDENING, 3 LANES, CURB AND GUTTER

**PROJECT SCORING:** 75

**OVERALL COST:** \$12,896,000

DESCRIPTION	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
Roadway, new/reconstruction, 3 lanes, curb & gutter		8410	LFT	\$636	\$5,348,760
Construction Engineering	105	1	LS	\$139,000	\$139,000
Mobilization and Demobilization	110	1	LS	\$347,000	\$347,000
Clearing Right of Way	201	1	LS	\$139,000	\$139,000
Stormwater Management Budget	205	1	LS	\$139,000	\$139,000
Drainage	720	1	LS	\$347,000	\$347,000
Signage and Pavement Markings	800	1	LS	\$139,000	\$139,000
Maintaining Traffic	801	1	LS	\$347,000	\$347,000

DESCRIPTION	COST
Construction Subtotal	\$6,945,000
30.0% Contingency	\$2,084,000
Estimated Total- Construction	\$9,030,000
Preliminary Engineering- 15.0%	\$1,355,000
Construction Inspection- 12.5%	\$1,129,000
Project subtotal	\$11,514,000
Project Contingency- (% varies based on project type and location)- Land Acquisition Costs, Utility Relocations, Environmental Mitigation	12%
	\$1,382,000
Project Total	\$12,896,000







# Seib Road

- Seib Road is included in the county's Capital Improvement Plan, but not the Program
- 2021 PASER ratings that ranged from 1-5.
- New 200 lot residential subdivision was also being built on Seib Road.
- Estimate to reconstruct was over \$10 million
- Classified as a local road, not federal fund eligible
- Near term funding to reconstruct Seib Road did not seem probable.
- Vanderburgh County decided to proceed with a project that milled, patched, and resurfaced Seib Road for \$188,680.00.
- Since Vanderburgh County has an approved AMP, this project was eligible for and received CCMG funds, which reduced the county's cost

## ROAD 35

**LOCATION:** SEIB RD, KANSAS RD TO BOONVILLE-NEW HARMONY RD

**DESCRIPTION:** ROADWAY WIDENING, 2-3 LANES, SHOULDER/DITCH

**PROJECT SCORING:** 30

**OVERALL COST:** \$10,130,000

DESCRIPTION	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
Roadway, widening, 2-3 lanes, shoulder/ditch		8660	LFT	\$494	\$4,278,040
Construction Engineering	105	1	LS	\$111,000	\$111,000
Mobilization and Demobilization	110	1	LS	\$278,000	\$278,000
Clearing Right of Way	201	1	LS	\$111,000	\$111,000
Stormwater Management Budget	205	1	LS	\$111,000	\$111,000
Drainage	720	1	LS	\$278,000	\$278,000
Signage and Pavement Markings	800	1	LS	\$111,000	\$111,000
Maintaining Traffic	801	1	LS	\$278,000	\$278,000



DESCRIPTION	COST
Construction Subtotal	\$5,556,040
30.0% Contingency	\$1,667,000
Estimated Total- Construction	\$7,223,000
Preliminary Engineering- 15.0%	\$1,083,000
Construction Inspection- 12.5%	\$903,000
Project subtotal	\$9,209,000
Project Contingency- (% varies based on project type and location)- Land Acquisition Costs, Utility Relocations, Environmental Mitigation	10% \$921,000
Project Total	\$10,130,000



# Benefits/Conclusions

- Having an inventory of all projects informs the public of leadership awareness of the vast need for infrastructure investment
- Plan development process provides a forum for community to provide input and helps establish community buy-in on the CIPP
- Rough project estimates significantly aid in determining a funding plan
- If a funding plan cannot be determined, prioritization in the Asset Management Plan becomes more critical in developing appropriate repair strategies
- Prioritization of improvements can provide incentive for economic development and a tool to negotiate private investment in the proposed project.



# Vanderburgh Co. CIPP Awards/Recognition

- 2019 Association of Indiana Counties (AIC) County Achievement Award
- 2020 American Council of Engineering Companies (ACEC) Engineering Excellence State Finalist Award





## VANDERBURGH COUNTY

**Commissioner Cheryl Musgrave**  
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**John Stoll, P.E., County Engineer**  
[jstoll@vanderburghgov.org](mailto:jstoll@vanderburghgov.org)

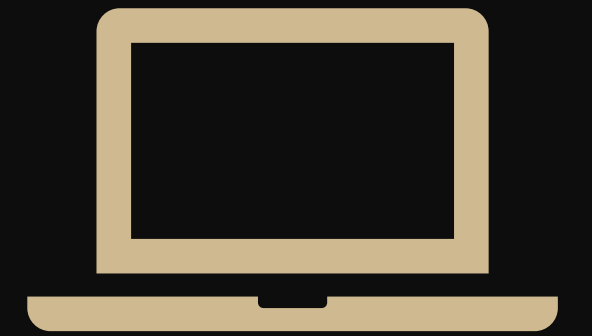


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**STRUCTUREPOINT**  
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**Mike McBride, P.E.**  
[mmcbride@structurepoint.com](mailto:mmcbride@structurepoint.com)

**Link To Vanderburgh County CIPP**

[https://www.evansvillegov.org/egov/documents/2c8679f2\\_e809\\_964f\\_26f4\\_1c2a96\\_b468f7.pdf](https://www.evansvillegov.org/egov/documents/2c8679f2_e809_964f_26f4_1c2a96_b468f7.pdf)



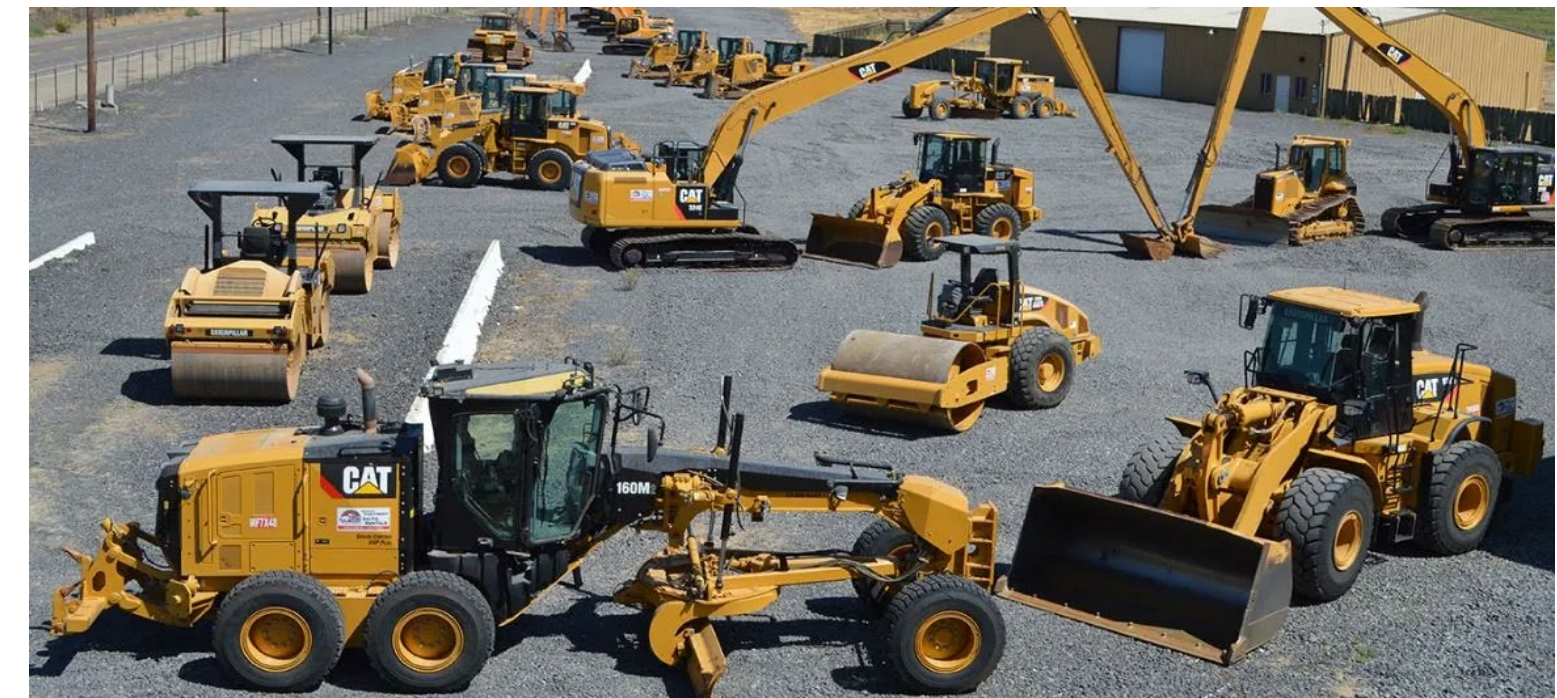
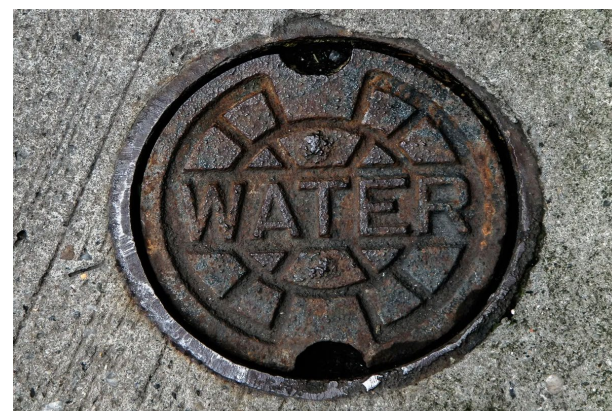
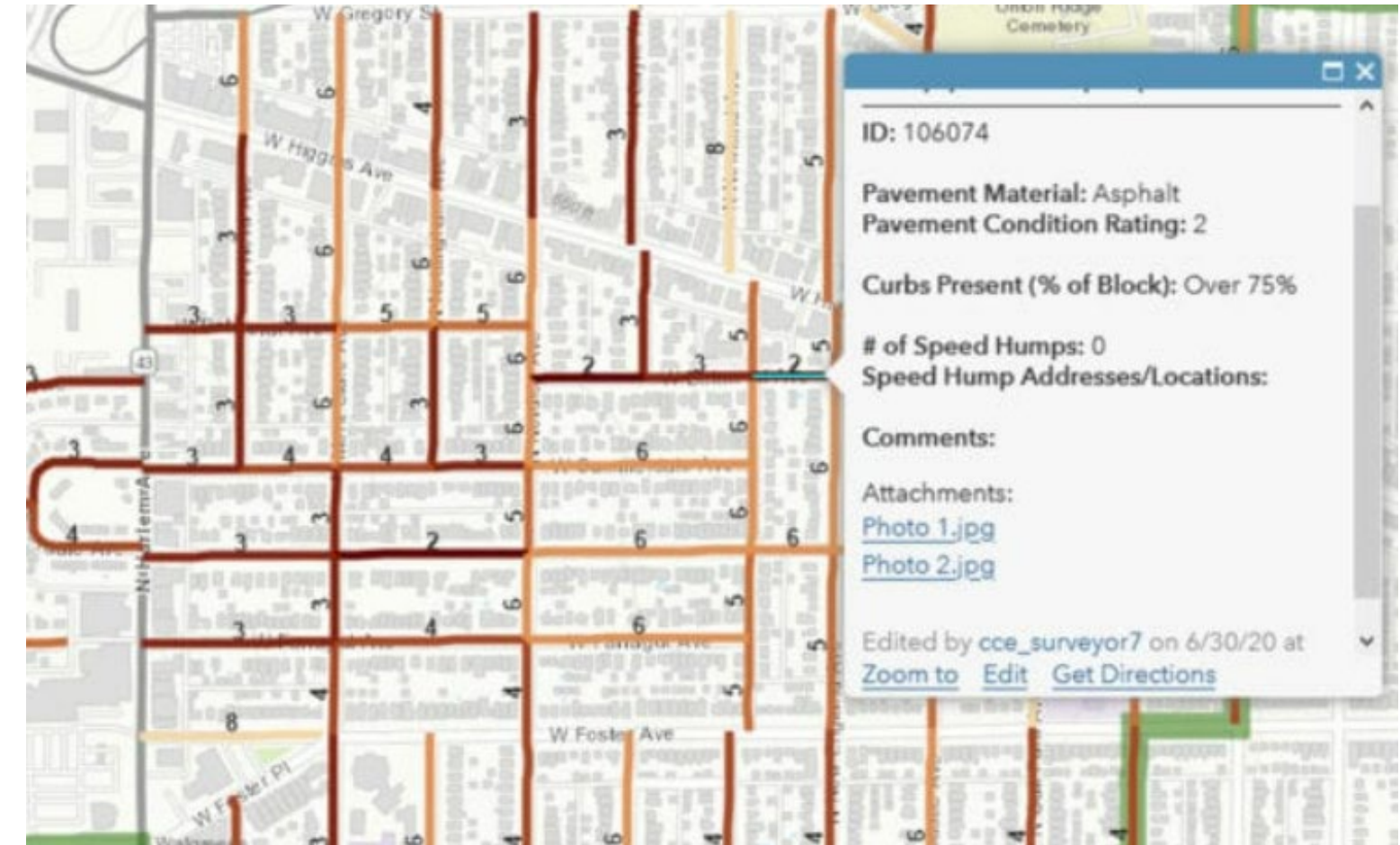
# ***Future of LTAP Asset Management***

Patrick Conner, PE  
Lead Asset Management Engineer, LTAP



# WHAT'S NEXT FOR ASSET MANAGEMENT IN INDIANA

- PASER Certification
- GIS-based reporting by local agencies
- Incorporate additional transportation assets (i.e. stormwater, water, wastewater, fleet, signage, pavement markings, guardrail, etc.)





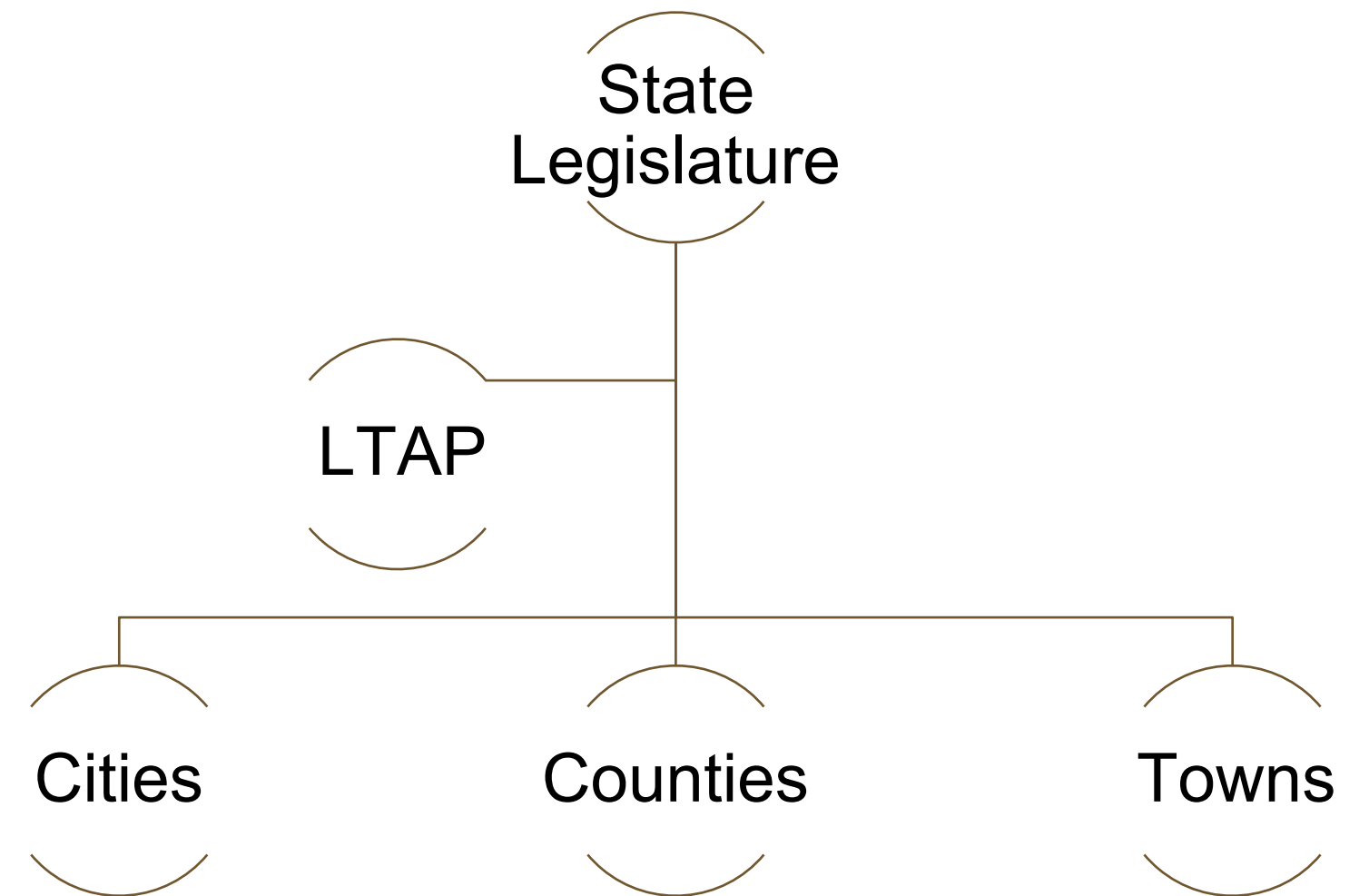


# ***Summary and Key Takeaways***

# Intersection of Asset Management and Transportation Improvement

## Asset Management

- **Timeline of activities**
  - 2016 – began collecting local data statewide
  - 2018 – online data submission portal launched
  - 2022 – online public portal released
- **Benefits**
  - Driven by policy
  - Based on performance
  - Founded on lifecycle needs
  - Supported by data
  - Defensible



## Key Takeaways

- Takes politics out of pavement management
- Tool to budget
- Tool to plan
- Tool to communicate

# *Intersection of Asset Management and Transportation Improvement*

## Plans and Programs

- **Transportation Improvement Plan**
  - Comprehensive, Cooperative, & Continuing
  - Identifies where to go and how to get there
  - Long-range planning for 5, 10, 20 years into the future
- **Transportation Improvement Program**
  - Allocates resources and executes projects
  - Actionable list of items to complete
  - Short-term planning for 1 year to 5 years

## Key Takeaways

### Transportation Improvement Plan

- Develops a vision
- Creates goals, objectives & strategies
- Identifies “wish-list” of projects

### Transportation Improvement Program

- Prioritizes projects
- Matches projects to funding
- Executes project design & construction



# *Intersection of Asset Management and Transportation Improvement*

## Strategies for Success

- **Montgomery County**

- Solicit stakeholder input
  - Local Road Safety Plan
  - Thoroughfare Plan
  - Comprehensive Plan
- Identify overarching goals of the community
  - Used to be jobs, now it is housing
- Establish policies based on identified goals



- **Vanderburgh County**

- Benefits of a Plan
  - Inventory of projects
  - Community input
  - Tool to attract private investment
- Benefits of a Program
  - Prioritizes project development & funding
  - Identifies appropriate repair strategies



### Key Takeaways

- Know your network
- Know your goals
- Let goals dictate policy

### Key Takeaways

- Aids in private investment
- Strategically invests limited road funding
- Ability to leverage grant opportunities

# ***TO LEARN MORE...***

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