Starke County Highway Department September 2020 Monthly Report

BUDGET 2020 AND 2021

MVH AND LRS REVENUES 2016 TO June 2020

MVH

MVH DISTRIBUTIONS 2016 TO AUGUST 2020

	January	February	March	April	May	June	July	August	Total Through August	September	October	November	December	TOTAL
2016	$189,804.01	$155,908.25	$208,887.16	$269,509.18	$212,357.07	$196,866.52	$216,294.64	$214,381.51		$179,979.40	$192,978.35	$166,533.37	$176,141.50	$2,379,640.96
2017	$186,619.71	$155,419.73	$205,632.60	$247,652.69	$218,892.36	$181,077.42	$221,226.40	$88,487.57		$248,605.16	$313,652.08	$269,487.46	$283,301.47	$2,620,054.65
2018	$282,229.21	$254,335.50	$292,270.69	$334,512.78	$343,398.99	$271,237.08	$312,144.20	$133,764.07		$256,744.00	$262,896.81	$249,026.65	$254,825.62	$3,247,385.60
2019	$250,376.19	$243,946.60	$266,788.10	$281,404.62	$274,696.64	$254,543.52	$250,029.06	$126,899.22	**$1,948,683.95**	$266,886.64	$264,696.16	$264,222.96	$254,539.02	$2,999,028.73
2020	$249,651.64	$239,958.92	$286,264.16	$286,327.42	$235,189.35	$189,096.24	$203,221.01	$126,885.32	**$1,816,594.06**					$2,866,938.78
					-14.38%	-25.72%	-18.73%	-0.01%	**-6.78%**					**-4.41%**

LRS DISTRIBUTIONS 2016 TO AUGUST 2020

	January	February	March	April	May	June	July	August	Total Through August	September	October	November	December	TOTAL
2016	$20,205.77	$20,758.95	$22,415.90	$25,058.46	$21,512.86	$22,700.99	$22,792.71	$5,957.28		$20,123.60	$22,014.05	$21,513.06	$21,848.99	$246,902.62
2017	$20,686.23	$20,325.92	$21,818.72	$21,914.16	$22,549.56	$21,731.84	$23,920.08	$8,825.77		$33,226.31	$41,151.35	$37,966.98	$40,237.75	$314,354.67
2018	$35,894.64	$37,104.54	$35,836.55	$35,130.69	$40,201.14	$36,188.51	$42,233.73	$13,359.23		$46,231.69	$36,712.15	$33,883.52	$35,906.02	$428,682.41
2019	$36,852.68	$35,609.11	$36,010.37	$34,782.10	$37,083.77	$37,369.52	$38,436.22	$16,778.22	**$272,921.99**	$41,216.43	$41,378.64	$38,826.68	$40,473.24	$434,816.98
2020	$37,362.41	$36,706.84	$37,917.40	$35,442.43	$34,181.35	$27,881.49	$31,527.29	$17,148.58	**$258,167.79**					$420,062.78
					-7.83%	-25.39%	-17.98%	0.22%	**-5.41%**					**-3.40%**

Roadways

Our productivity this past month has exceeded our expectations. We completed 30.76 miles of road improvements since your last meeting. Most of those improvements are chip seals. Last month I said we were on pace to complete 85 miles for the year if all goes well. Well, we now have completed 87.99 so far, and we could complete as many as 50 miles more this month and early October. We are now on pace for about 138.56 miles of road improvements for the year if all goes well. Last year we completed 88.75 miles of road improvements. As you may remember, we need to complete approximately50 miles of improvements each year to maintain our PASER rating level (the actual necessary total depends on what type of road improvements are being completed). 138.56 miles should greatly improve our over PASER rating for the County. Although some of the higher total can be attributed to the availability of grindings from recent INDOT projects, we have been able to complete five different types of road improvements so far and we will be adding crack sealing to that list later this month. This fits perfectly with the "mix of fixes" asset management strategy. Doing the right treatment at the right time is the key to effective roadway management.

Type of Road Improvement	Miles Completed as of 9/8/2020	Planned miles in September and October	TOTAL
Hot Mix Asphalt	13	0	13
Cold Mix Asphalt	5.58	6	11.58
Chip Seal	29.485	16.57	46.055
Crack Seal	0	15	15
Grade/Reshape/Apply Grindings to gravel road	17.145	10	27.145
Grade and Reshape gravel road	22.78	3	25.78
	87.99	50.57	138.56

When we complete this many miles, we start to see common complaints and concerns about each method. Here is a list the most common concerns and our response:

HOT MIX

1) The road looks rough
2) There is a drop off to my driveway
3) The intersections are rough and don't match the roadways

We almost always hear these concerns before the project is over. Many people do not understand that there are three layers or "lifts" to our hot mix asphalt roads: a levelling course, a binder course, and a finishing course. The rough road complete is usually a result of people driving over the levelling or binder courses not realizing that there will be a smooth, finishing course laid on of the first two. For the last two common concerns these are also called in before the contractor applies the shoulder stone and finishes the intersection. Although the paving for these roads is usually completed in less than a week. It can take up to two more weeks to complete the other tasks before a road is inspected for final approval.

COLD MIX

1) The road is soft and there are divots near my driveway
2) Why are you chip sealing over the cold mix road less than a year after you pave it?

Cold mix is softer and takes longer to cure than hot mix. Hot mix roads harden almost immediately while cold mix roads can take up to a few weeks. Cold Mix asphalt is about 1/4th the cost of hot mix. The longer curing time is the trade off for using the less expensive asphalt. Cold mix roads are also not as smooth as hot mix roads. We chip seal over cold mix roads as soon as possible because cold mix asphalt is more permeable to water than hot mix asphalt. Even with a chip seal applied a cold mix/chip seal road is less than 1/3rd the cost of a hot mix road.

CHIP SEAL

1) The chips are damaging my car
2) There is stone in my yard
3) There is oil in my yard
4) Chip sealing sucks!!!
5) Why did you gravel my road!?!

Chip sealing is an easy, inexpensive way to prolong the life of roadways (about $5500 a mile). Unfortunately, it has its drawbacks. Although people often complain about broken windshield and chipped paint, we have not received any tort

claims in the last seven years as a result of chip sealing Yes, oil and loose stone can end up on the each of someone's property. We do our best to mitigate this. Yes, chip sealing is not nearly as nice as hot mix but if we tried to hot mix every road in the county it would, under our current budget, take 175 years to pave all the roads in the County. It does take a while for a chip seal road to be compacted by traffic, usually about a week or two (although high travel roads like Toto Rd. compact in only a day or two)

CRACK SEAL

1) What are those black lines in the road?
2) Tar from your crack seal is on my tire

Although many people don't understand the procedure, crack sealing is one of the most cost effective roadway preservation treatments in our arsenal ($1500.00 a mile). Those "black lines" keep water out of cracks on the roadway. When applied properly crack seal hardens quickly and is not a danger to car tires.

RESHAPING AND APPLYING GRINDINGS TO A GRAVEL ROAD

1) This new pavement you are using looks and rides terribly
2) Chip seal my road!!!!!!
3) Pave my road!!!!!!!!

Although grindings can look like paved asphalt it is much closer in utility to a gravel road. We are using grindings as a precursor to possibly chip sealing many of our gravel roads. We are currently experimenting with its usage.

Additional Roadway work planned for this year:

CULVERT CLEANING

CULVERT REPLACEMENTS

PASER RATINGS/GRAVEL ROAD RATINGS

CRACK SEAL

CMA PAVING

CHIP SEAL

GRINDINGS

Our current chip seal list, both completed and planned, is on the next page. We have listed each mile of the other road improvements in our most recent monthly reports. This list is getting too long to include everything each month.

	ROAD	FROM	TO	MILES	NOTES
1	600 N	150 E	300E	1.5	Completed 8/17/2020
2	300 E	RR tracks north of 600N	480 N	1.2	Completed 8/17/2020
3	300E	400N	250N	1.5	Completed 8/17/2020
4	175 N	US35	410 E	0.13	Completed 8/18/2020
5	410E	200N	Dead End	0.28	Completed 8/18/2020
6	190 N	410E	Dead End	0.25	Completed 8/18/2020
7	650E	100N	25N	0.75	Completed 8/19/2020
8	750E	400N	Dead End	0.275	Completed 8/19/2020, Double Chip Seal
9	500E	200N	250N	0.5	Completed 8/20/2020
10	600 W	500 S	hwy 10	1	Completed 8/25/2020, Double Chip Seal
11	500 W	SR 10	500 S	1	Completed 8/25/2020
12	50 E	500 S	Hwy 10	1	Completed 8/25/2020
13	700S	100E	RR tracks	0.25	Completed 8/26/2020
14	700 S	200 E	300 E	1	Completed 8/26/2020
15	200 E	800 S	900 S	1	Completed 8/26/2020
16	600 E	800S	900S	1	Completed 8/26/2020
17	850 E	625 S	850 S	2.25	Completed 8/27/2020
18	975 E	625 S	750 S	1.25	Completed 8/27/2020
19	1000 E	625 S	.2 mi south of SR10	0.8	Completed 8/28/2020
20	625S	975E	1000E	0.25	Completed 8/28/2020
21	900E	625S	Bridge	0.33	Completed 8/28/2020
22	Toto Rd	700E	SR23	2	Completed 8/28/2020
27	400S	700E	CR210	0.67	Completed 8/31/2020
23	Rolling Dunes Subdivision	Toto Rd.	750E	1.2	Completed 8/31/2020
24	Fox Run Subdivision	700E	700E	0.6	Completed 8/31/2020
25	Toto Rd.	700E	625E	0.75	Completed 8/31/2020
26	Toto Rd.	625E	US35	2.25	Completed 9/1/2020
27	Toto Rd.	US35	300E	1	Completed 9/1/2020
28	Toto Rd.	250E	Range Rd.	2.5	Completed 9/2/2020
29	Toto Rd.	Range Rd	100W	1	Completed 9/2/2020
31	Toto Rd	850 W	900 W	0.5	Cold mix last year
32	Toto Rd	850W	725W	1.25	Chip Seal
33	725 W	Toto Rd.	250 S	0.5	Cold mix last year
34	Toto Rd.	725W	SR39	5.25	Chip Seal
35	Toto Rd.	100W	SR39	1	Chip Seal
36	Toto Rd.	250E	300E	0.5	Chip Seal
37	1200 E	900 N	Marshall Co. Line (At the Curve)	1.25	Cold mix last year
38	850N	975E	gravel	0.5	Must grind up old chip seal first
39	Pine Ridge	1200E	Edgewater	0.06	Chip Seal
40	Edgewater	Pine Ridge	Dead End	0.2	Chip Seal
41	Woodbine	Edgewater	1200E	0.06	Chip Seal
42	700E	600N	700N	1	Chip Seal
43	300E	250N	400N	1.5	Chip Seal
44	250N	US35	700E	3	Chip Seal
				46.055	

Mowing and brush chopping

We are completing our last rounds of mowing with our part time staff. Francis Tibbs will start mowing a last pass of the County in early October.

The town of North Judson has approached us, asking if we will do their mowing for them next year if they reimbursed us. Street Superintendent Joe Leszek is providing me with details on routes and how often they would want the roads mowed. I will present this to the Commissioners at their next meeting. If you approve I will send him our costs to do the mowing.

Tree callout procedures

Overview – The Starke County Highway Department considers several factors when responding to after-hours weather-related incidents. These include the severity of the incident, the size of the affected area and the time and personnel necessary to respond timely.

1. Dispatchers at the Starke County Sheriff's Department notify the highway superintendent by telephone. The superintendent contacts the operations foreman and/or the Senior Driver by telephone and/or text message to coordinate a response.
2. The operations foreman and/or the Senior Driver contacts any other necessary personnel to respond and monitors their location on GPS until they complete the cleanup. The county is divided into 16 areas, and typically the driver assigned to an area is the one who responds.
3. In the event of a significant storm, operations will move to the Starke County Highway Department office with the following protocols:
    A. The office manager will notify dispatch and ask that they text her information.
    B. The office manager forwards texts to the operations foreman, superintendent and construction inspector and records location for internal recordkeeping.
    C. The operations foreman dispatches personnel to respond to the tree.
    D. The construction inspector enters road closure information into GIS.
    E. The superintendent checks the county and notifies the office manager if he finds any other trees.
    F. The sign technician is on standby to close roads with barricades as necessary.
    G. If power lines are in trees, maintenance workers call the garage immediately with location, utility company name and pole number. The office manager notifies the utility company and dispatch. These trees are the responsibility of the utility company. Dispatch will send emergency personnel to stand by until a crew arrives.
    H. The operations foreman notifies the office manager and construction inspector when an area is cleared so internal recordkeeping and GIS can be updated.

Bridges

Bridge 137 – ***CR 300 E over the Yellow River, just south of CR 50 N.*** Estimated completion date, Fall of 2022.

Bridge 7 – ***CR 1200 E over the Yellow River*** – Estimated Completion Date, Fall of 2021.

Bridge 59 – *CR700S over Bogus Run* – Estimated Completion Date, Fall of 2022

BRIDGE INSPECTIONS Phase II has started.

Culverts

Our 2020 Culverts inspections have been completed. We have completed our 2020 culvert inventory and found 8 additional culverts that need to replaced and 103 that need to be cleaned out of 625 total culverts. We have already completed 14 culvert replacements so far this year. 5 of those replacements were done in conjunction with the surveyor's office. We will start working on these culverts in late September

UPDATED COUNTY MAP

As you may remember, our office is working on an updated County map with Rhonda Milner and WTH/GIS. Mary and I have finished our review of the 377 concerns/questions/anomalies found in our initial look at the 2007 map earlier this year. Our comparison of the 2007 Starke County Map and the 2019 INDOT Road Inventory resulted in 246 ACTION ITEMS:

91 INDOT Inventory and/or name changes

96 Map Only Changes

17 INDOT and Map Changes – Frontage Road and Unnamed Road in Hamlet Industrial Park need names

34 – Rik needs to check

8 – Coordinate with Knox officials

OFFICE CHANGE – The right personnel in the right positions

1) Roadsoft asset management system
2) APWA certification
3) website

INDOT CALL FOR PROJECTS

INDOT recently announced a Federal grant opportunity. Applications will start being accepted on November 2nd, with December 11th being the deadline. These grants are more restrictive than Community Crossings grants. I will introduce my project ideas tonight.

SOURCEWELL

Last month, the Board approved the use of the Sourcewell collective bid system. It is already providing cost savings for the County. Mary reviewed our existing contracts and found that both our Verizon GPOS and our ATT phone costs can be reduced significantly by using the Sourcewell bids. In the case of the GPS the savings are 50% or about $10,000.00 a year. In the case of ATT the savings are about 25%, or about $500.00 a year. We have also saved $9,000.00 in our later truck order. The initial lowest bid was $162,000.00. The Sourcewell cost was $153,000.00. Just in the past month alone we have saved approximately $19,500.00, with $10,500.00 of that being annual savings.

TRAINING

1) LTAP Snow plow training at the garage on October 14th
2) Snow plow simulator training

ENGINE (JAKE) BRAKES NOISE ORDINANCE

The decibel monitors for an engine brake ordinance cost about $200.00 each, There is some flexibility on sign placement through INDOT. Although INDOT does not endorse such noise ordinances they will cooperate if the community feels it is warranted. If the Commissioners want to go ahead with the ordinance I will work with Marty Lucas and Bill Dulin this month. I will present a draft ordinance as soon as that coordination is done.

Roadway Safety

We have asked Purdue LTAP to investigate two intersections for us:

1) CR700E/200N – any improvement to decrease accidents. THEY DID NOT RECOMMEND A FOUR WAY STOP
2) CR100E/500S – requested four way stop. THEY ADVISED WE COULD PUT IN A FOUR WAY STOP

Their report is attached

US30 Coalition

Next meeting is this Friday, September 11. We are proceeding in a "wait, watch, and see" manner if regards to Starke County's involvement in the coalition.

PURDUE
UNIVERSITY

SCHOOL OF CIVIL ENGINEERING

Indiana LTAP

September 1, 2020

Stephen "Rik" Ritzler
Starke County Highway Department

Dear Rik,
Per your request, I have investigated the intersections listed below.

CR 200N at CR 700E
This is a four-leg, two-way stop-controlled intersection with right-of-way on CR200N, which runs east-west. There are intersection warning signs on CR200N and Stop Ahead warning signs on CR700E. The County has also installed double Stop Signs on both legs of CR700N.

This is a low-volume intersection, with all traffic counts less than 400 vehicles per day on each intersection leg. The traffic counts taken did not specify direction, so only total volumes are available, not approach volumes. However, the traffic volumes are so low this is not significant as this intersection does not meet MUTCD guidelines for installing an all-way stop.

There is somewhat limited sight distance at this intersection; however, drivers can safely see around any obstructions if they come to a complete stop. I visited this intersection in July 2020 and watched driver behavior. Some drivers were prone to lazy/rolling stops and likely not taking the proper amount of time to see their way clear.

There have been three reported crashes at this intersection in the last five years: one in 2019 and two in 2020. None of which involved injury. All three were Right Angle crashes.

Although this intersection does not meet MUTCD guidelines for installation of an all-way stop, there are additional safety countermeasures the County can consider:

- Add Cross Traffic Does Not Stop (W4-4P) plaques underneath the Stop Signs on both the north and south legs.
- Add Stop Bars to designate the optimum stopping position for maximum visibility on both north and south legs and to further reinforce the stop condition.
- Maintain vegetation control in the vicinity of the intersection for clear sight triangles.

CR100E at CR500S
This is a four-leg intersection with right-of-way on CR100E and stop control on CR500S. There are no warning signs currently installed at or approaching this intersection. The speed limit is posted 45 mph in both directions in the vicinity of the intersection.

PURDUE
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SCHOOL OF CIVIL ENGINEERING

Indiana LTAP

This is a low-volume intersection, with all traffic counts less than 400 vehicles per day on each intersection leg. The traffic counts taken did not specify direction, so only total volumes are available, not approach volumes. However, the traffic volumes are so low this is not significant as this intersection does not meet MUTCD volume guidelines for installing an all-way stop.

There was one reported crash in the last five years: a Right Angle crash that did not involve injury.

Intersection sight distance is partially blocked by corn in the northeast quadrant and vegetation along the fence in the northwest quadrant; drivers have to nose out into the intersection to see conflicting vehicles. This presents a potential safety issue. Ideally, if the County can remove the sight distance concerns through maintenance and landowner agreements, that would alleviate the issue. If possible, this should be the County's first choice in addition to installing the recommendations noted for the previous intersection. However, if this isn't possible, the County can consider installing an all-way stop at this location due to the sight distance issues.

If you have any questions or need further assistance, please don't hesitate to contact me.

Sincerely,

Laura Slusher, PE
HELPERS Project Manager/Traffic Safety Engineer
Indiana Local Technical Assistance Program

via email