

2021

ROAD RESURFACING PLAN



SYMMES TOWNSHIP ROAD RESURFACING PLAN, 2021

Organization of the Road Resurfacing Plan

This plan creates groupings of all Symmes Township roads (paving districts), provides a timetable for resurfacing of each Township road and estimates the cost of annual resurfacing in support a future levy request. Also, sidewalk costs including future installation and maintenance are considered. Based upon these estimated costs, a recommended levy to fund road and sidewalk projects is provided.



Background

Symmes Township has operated a successful road maintenance program, allowing Township roads to be preserved at high quality levels. Excellent streets communicate that Symmes Township is a quality community and desirable place to live, and enhance strong property values. The Township's road maintenance program has been supported by a .9 mill levy passed in 2006 for:

the general construction, reconstruction, resurfacing and repair of streets, roads, and bridges within the township and for constructing, rehabilitating, repairing or maintaining sidewalks, walkways, trails,

¹ As used in this Plan, "resurfacing" includes road repair, new asphalt resurfacing, additives to extend surface life and curb repair/replacement.

bicycle pathways, or similar improvements, or acquiring ownership interest in land necessary for the foregoing improvements.

The current 2013 levy generated \$533,285.72 in 2019, and expired at the end of 2019 (with the last collection in 2020).

The total amount of road miles in Symmes Township subject to Township maintenance is 43± miles. Attachment "A" is a colored coded map showing the present resurfacing¹ status of all roads within the Township. As of the cycle to be completed by 2020, all Township roads will have been resurfaced (or newly constructed) at least one time within a 17 year period under the Township's road maintenance program (1999-2027).² Attachment "B" graphically depicts the future resurfacing program for Symmes Township. Each Township road is grouped into a future paving district. Each road, road detail, district grouping and estimate of cost is also shown and cross-referenced in table format in Attachment "C".

Under this Plan, all roads within the Township are projected to be resurfaced one time within the next 17 years. A single resurfacing once each 17 years adequately maintains good surface conditions. This schedule is slightly more aggressive than in peer jurisdictions polled (20 years, 22 years).

The road districts were grouped based on age, miles to be resurfaced, and proximity. Paying attention to proximity will allow greater efficiency and therefore better pricing. With the Township containing approximately 43 road miles, on average 2.5 miles must be resurfaced each year to meet a 17 year schedule. Notice

² This excludes several new roads not yet accepted.

that some districts have greater or lesser miles in them, and therefore resurfacing cost may vary somewhat year to year. See Attachment C. However, the average year to year resurfacing cost must be covered by the levy funds generated.

Following this Plan, it is anticipated that paving districts 8 -14 would be resurfaced under a seven-year levy to be considered at the November 2020 general election. See Attachments B and C. There are 15± road miles contained in those seven districts.



Cost Estimate Strategy

To determine the appropriate levy amount, analysis was done examining the typical cost per road mile for resurfacing. Cost estimate variables are whether curb exists and the age of the street. Street age impacts the amount of curb replacement and full depth repairs.

Most of the roads in Symmes Township that will be resurfaced are considered to be “2nd Generation” streets. This means that the street has been resurfaced once previously. 2nd Generation streets usually are the most costly to repair, and frequently require full curb replacement, which at this state of deterioration

Pursuant to the Township’s Sidewalk Maintenance Policy adopted in Resolution G-9736, the Township has committed to undertaking residential sidewalk

³ For estimating the required levy, this Plan assumes that all roads to be resurfaced contain curbs, which a large majority of streets in Symmes Township do. This conservative approach builds in a slight

allowance for unknown repairs. Also, note that the average road miles for the upcoming paving districts 1--7 is 2.65 miles, which will cost more than the average 2.5 mile span.

is less expensive than patchwork curb repair. 2nd Generation streets may also need more “full depth repair,” however staying on a regular resurfacing schedule such as in this Plan, as well as regular maintenance, reduces such costs long term.

Known quantity costs, actual recent costs and verification with various current resources (engineering firms, ODOT, paving companies) provided the following guidance as to future estimated costs:

1. New surfacing: \$130,788/ mile;
2. Curb replacement: \$264,000/ mile.

They result in an approximate resurfacing cost of \$170,500/mile, or \$426,250 for the average 2.5 mile paving district (present dollars).³

Based upon these cost estimates, projected resurfacing cost of all Symmes Township streets have been estimated in Attachment “C”. ODOT recommend an annual inflation factor of 2% which was incorporated into the cost estimates as well. By the last paving district, 2027, the estimated cost for a 2.5 mile paving district would be \$480,027. Those streets anticipated to be resurfaced under the next seven year levy cycle, paving districts 8—14, are identified in Attachment “C”.

Sidewalks

Under the current 2013 levy, \$25,000 has been set aside annually for new sidewalk construction. The Township’s 2019 Sidewalk Plan also anticipates future construction.

allowance for unknown repairs. Also, note that the average road miles for the upcoming paving districts 1--7 is 2.65 miles, which will cost more than the average 2.5 mile span.

repair within Symmes Township. In 2019, Township staff repaired approximately 200 lineal feet of sidewalk. It is anticipated that future years' sidewalk repair work may be bid out, however, staff will continue to repair as much as possible in-house to save cost.



The estimated life of a residential sidewalk before maintenance becomes needed is 15 years. With aging sidewalks now more regularly coming online, it is reasonable to prepare for 500 feet of sidewalk repair per year in each of the next seven years. At \$8/sq. ft., the estimated cost of repair for 500 lineal feet of sidewalk for 2021 will be \$16,000 and by 2027 \$18,019 (adjusted 2% per year).

Cost Estimate and Levy Revenue

The required levy to meet the goals of a 17 year resurfacing program, on average 2.5 miles per year, is based upon 1) estimated costs and 2) the amount a levy will generate. A summary of estimated costs from above, on an annual basis is:

Item	Annual Average Cost	
Average Road resurfacing cost, 2.5 miles:	\$453,139.00	$((426,250 + 480,027)/2)$
Sidewalk repair:	\$17,009.00	$((16,000 + 18,019)/2)$
Total	\$470,148.00	



Therefore, for maintenance only, a levy would need to be sufficient to generate an average of \$543,000± per year in each of the next seven years.

Attachment D is 2020 information from the County Auditor that provides a projection of revenue that would be raised in Symmes Township from a .9 mill levy (\$542,292). If a .9 mill renewal levy was passed, the following funding would be anticipated:

	.9 Millage
Annual Revenue:	\$542,292.00
Annual Resurfacing:	\$453,139.00
Annual Sidewalk Repair:	\$17,009.00
New Sidewalk Construction:	\$25,000.00
Total Cost:	\$495,148.00
Average Balance:	\$47,144.00



Recommendation

- 1) The Board authorizes the Administrator to proceed with a seven year .9 mill renewal levy, for the same purposes as the expiring levy.
- 2) Use a portion of carryover funds to supplement the sidewalk construction fund during this period.

Conclusion

Adoption of a .9 mill levy for a seven year period will maintain roads and sidewalks, and provide minimal funding for new sidewalk construction.

Less money will be available for sidewalk construction; however, the carryover may be used to supplement construction if desired. The Township will be able to commit to a 17 year resurfacing cycle which should provide for adequate maintenance and avoid major costs due to failures.

Attractive quality streets and sidewalks keep Symmes Township a desirable place for families to live, create a prosperous environment for businesses to succeed, and support strong property values.