



MEMORANDUM

TO: Anke Voss, Director of Facilities Urbana Free Library

FROM: Craig E. Shonkwiler, P.E., Assistant City Engineer
Shannon Beranek, E.I.T., Civil Engineer I

DATE: May 8, 2019

RE: Library Staff Parking Lot Alley Rehabilitation/Reconstruction Options

Action Requested

In addition to a prior request on evaluating The Urbana Free Library staff parking lot located near the 300 block of South Race Street, an evaluation of the alley that runs along the northern edge of the parking lot was requested. The alley was to be evaluated for possible rehabilitation options and associated costs for the Library to pursue.

Analysis

City of Urbana Engineering staff performed a field visit of the alley and the pavement distresses were evaluated to come up with two possible options for the rehabilitation of the alley.

The two alley options with estimated base construction costs are:

1. Asphalt millings added to existing alley and surface sealed (\$13,000)
2. Reconstruction with 12 inches of aggregate and surface sealed (\$16,600)

Attached to this memo is a cost comparison matrix that includes, estimated costs for an engineering consultant to perform the design and construction observation work, possible maintenance needs, and the largest benefit and largest drawback of each option.

Full reconstruction of the alley with asphalt or concrete should not be necessary since the expected traffic using it is minimal.

Recommendation

Both rehabilitation options are viable; however, Option 2 Reconstructing the alley with aggregate is expected to give a longer life in terms of preventing ruts from the vehicles that traverse the alley.

Library Owned Alley Rehabilitation/Reconstruction Options

Prepared by: SLB
 Reviewed by: CES



		Estimated Construction Cost ¹	Estimated Engineering Consultant Fee ²	Total Estimated Costs	Expected Maintenance	Largest Benefit	Largest Drawback
1	Asphalt Millings used to fill in alley defects then a surface treatment to seal the pavement	\$ 13,000	\$ 3,900	\$ 16,900	Addition of new aggregate or millings and surface seal (typical)	Easily maintainable	More frequent maintenance
2	Reconstruction of alley with a 12" aggregate base, then a surface treatment to seal the pavement	\$ 16,600	\$ 4,980	\$ 21,580	Re-application of the surface seal treatment (typical), addition of new aggregate or millings in the future (possible)	Better rutting prevention	Periodic maintenance

1. Includes contingency of 15%, material testing of 2.5%, and construction using prevailing wages. Cost is 2019 dollars. Actual construction costs to be determined by market in low bid situation.
2. Fee estimated at 30% of construction cost. Fee includes topographic survey, design and construction observation. Actual fee to be negotiated with engineering consultant.

Note: If one of the alley options is chosen in addition to the parkinglot rehabilitation, the Base Total Cost Estimate for parking lot rehabilitation options 1 and 2 have a reduction of \$1700 due to not needing to do the partial alley work