

2.1 Anticipating Maintenance Costs

Maintenance costs are highly variable. Geography, regional economy, exposure, allowed uses, frequency of vandalism, labor costs, and requirements of needed maintenance all play a role in determining the financial burden of trail maintenance.

Labor: many trails owners reduce labor costs by partnering with local nonprofit or volunteer advocacy groups, while others enjoy a dedicated budget or an active collaboration with an existing agency, such as a local parks and recreation departments. In recent years, contracting out for major work has become increasingly common, as governmental hiring has slowed and budgets have contracted in recent years. Thus, in-house skills and resources of a trail management crew is a determining factor of the cost of maintenance.

Man hours required to complete annual maintenance tasks on the Schuylkill Trail in Montgomery County, PA can be found on the [AmericanTrails.org website](http://AmericanTrails.org).

Regional Economy: Service and material costs vary widely between and even within regions. The Indiana Department of Transportation compiles a yearly summary of unit prices for all pay items included in the low, high, and average bids included in INDOT-awarded project contracts.ⁱ

Vandalism: costs associated with acts of vandalism can be difficult to control; however, some design and maintenance practices can lower costs by discouraging vandalism. See, for example, preventive measures in Section 3.5: Graffiti.

Maintenance practices: the degree to which routine, preventive maintenance is practiced can greatly impact total costs, particularly by extending pavement life. See Figure 3.

Exposure factors: a trail's particular weather and traffic exposure factors are major determinants of total maintenance costs. For example, the cost data from St. John's County, Florida (see below) does not necessarily apply to trails in regions that do not receive as much sun or where wintery weather can affect pavement condition by the use of de-icing materials.

Maintenance requirements and geography: mobilization of a trail crew can be a major component of maintenance costs. Gaining access to trails to perform maintenance can be challenging and time-consuming. Engelmann writes that "maintaining trails entails different challenges than maintaining roads. For example, trails are narrow and may have been constructed with less sub-base support, so when heavy road maintenance equipment is used, that equipment may cause more damage than the repairs," and that consequently, many "contractors won't work on trails because their equipment is too heavy for trails or too large for narrow trail corridors."ⁱⁱ Mobilization should therefore be a key component of contract negotiation. Solid pre-bid meetings should include checks on certifications and relevant experience, and discussion of a contractors' plan to sub-contract specialized jobs and gain access to the project area.

Keeping variability in mind, the information in the following table ([Table 5](#)) might provide a useful baseline estimate. It should also provide incentive to practice preventive maintenance in order to delay and perhaps reduce costs of major reconstruction work.

Table 5. St. John's County Greenway Maintenance 2003 Cost Estimates

Maintenance Task	Task Type	Recommended	Cost
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		Frequency	
Routine maintenance: - Yearly facility evaluation to determine the need for minor repairs - Tree/brush clearing - Mowing - Map/signage updates - Trash removal/litter clean-up - Repair flood damage: silt clean-up, culvert clean-out, etc. - Patching, minor regrading, or concrete panel replacement - Planting, pruning, and general beautification - Installation and removal of seasonal signage	Routine	On-going	\$1,500 annually
Sealcoating for 6-foot pedestrian trail	Minor Repairs	Every 5 years	\$3,500 per mile
Sealcoating for 10-foot multi-use trail	Minor Repairs	Every 5 years	\$5,800 per mile
Amenity replacement	Minor Repairs	As needed	On par with original costs
Resurfacing for 6-foot pedestrian asphalt trail	Major Reconstruction	Every 10 years	\$7,920 per mile for 1-inch overlay
			\$15,840 per mile for 2-inch overlay
Resurfacing for 10-foot multi-use asphalt trail	Major Reconstruction	Every 10 years	\$13,200 per mile for 1-inch overlay
			\$26,400 per mile for 2-inch overlay
Complete replacement, regrading, resurfacing	Major Reconstruction	Every 20 years	On par with original costs

Source: http://www.sjcfl.us/LAMP/media/SJC_GBT/trail_op_main_mgmt.pdf (pp 66-68)

St. John's County recommends that "trail operators should maintain records of the general costs of trail amenities as a means of estimating future repair and replacement costs. If custom elements, such as lighting, decorative railings, or benches, are used in trail design, the trail owner should consider ordering extra elements at the time of construction and storing them for future use, thereby defraying the cost of single-runs later."ⁱⁱⁱ However, experience along the Ohio River Greenway have shown that ordering supplies for anticipated future needs can be difficult when budgets are tight.

A best practice when purchasing new or replacement items is to purchase a “Cadillac” standard of amenities wherever possible. Not only do high-grade, institutional-quality amenities have the best lifecycle costs, but spending more up-front is logical since it is easier to find money for construction than for maintenance.

ⁱ[INDOT, Pay Items](#)

ⁱⁱ[Engelmann, Preventive Maintenance](#)

ⁱⁱⁱ[St. John’s County, p. 67](#)