

Appendix D

COST ESTIMATES

The material in section D1, along with the sidewalk cost estimates per square foot, were taken directly from "Recommended Guidelines/Priorities for Sidewalks and Walkways," from PEDSAFE online resource, a project sponsored by the USDOT Federal Highway Administration.

D.1 Sidewalk Cost Considerations (1)

The actual cost of providing sidewalks is different for each region of the country and varies with the season. Actual bid prices are also influenced by how busy contractors are at the time of construction.

The cost of constructing sidewalks alone is relatively low; typical bids run between \$20 to \$30 a square yard (\$2.22 - \$3.33 square foot).

Factors to consider when calculating the cost of sidewalks:

1. Presence of curb and gutter: The costs of providing curb and gutter, which presumes the need to also provide a street drainage system, run much higher than the cost of sidewalk alone.
2. Number of driveways: To comply with ADA, many existing driveways must be replaced with ones that provide a level passage at least 0.9 (3 ft) wide. It can also be advantageous to inventory all existing driveways to see if any can be closed, resulting in a cost-savings.
3. Number of intersections: While intersections represent a reduction in the sidewalk, curb ramps are required where sidewalks cross intersections and the cost of



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providing additional traffic control at each intersection should be considered.

4. Obstacles to be removed: The cost for moving or removing obstacles such as utility poles, signposts, and fire hydrants vary too much to be itemized here; however, they are required to be moved if they obstruct access. These costs must be calculated individually for each project.
5. Structures: While minor sidewalk projects rarely involve new structures such as a bridge, many projects with significant cuts and fills may require retaining walls and/or culvert extensions. The costs of retaining walls must be calculated individually for each project.
6. Right-of-way: While most sidewalk projects can be built within existing rights-of-way (especially infill projects), some may require some right-of-way easement. An alternative to acquiring right-of-way is to narrow the roadway, which should consider the needs of bicyclists (e.g., through bike lanes or shoulders, at a minimum of 1.5 m (5 ft)).
7. Miscellaneous factors: Planters, irrigation, benches, decorative lampposts, and other aesthetic improvements cost money, but they are usually well worth it if the impetus for the project is to create a more pleasant and inviting walking environment.

When project costs appear to be escalating due to one or more of the above-listed items, especially retaining walls or acquiring right-of-way, consideration may be given to narrowing the sidewalk in constrained areas as a last



resort. The full sidewalk width should be resumed in non-constrained areas – this is preferable to providing a narrow sidewalk throughout, or dropping the project because of one difficult section.

Tips to Reduce Total Costs:

1. Stand-alone vs. integrated within another project: Sidewalks should always be included in road construction projects. Stand-alone sidewalk projects cost more than the same work performed as part of a larger project. Sidewalks can be piggybacked to projects such as surface preservation, water or sewer lines, or placing utilities underground. Besides the monetary savings, the political fallout is reduced, since the public doesn't perceive an agency as being inefficient (it is very noticeable if an agency works on a road, then comes back to do more work later). The reduced impacts on traffic are a bonus to integration.
2. Combining Projects: A cost-savings can be achieved by combining several small sidewalk projects into one big one. This can occur even if the sidewalks are under different jurisdictions, or even in different localities, if they are close to each other. The basic principle is that bid prices drop as quantities increase.

D.2 Cost Estimates

Estimated costs were also calculated for the five major recommended greenways in the Wake Forest area and roadway segments for sidewalk projects. These estimates are simply to serve as a rough guide for the Town of Wake Forest, as other factors can increase actual costs.



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Greenway Trail Cost Estimates

Greenway Corridor	From	To	Length (ft)	Cost per Mile	Min. Width (ft)	Estimated Cost*
Wake Forest Bypass Greenway	Durham Road	Wake Forest Reservoir	25350	\$350,000	10	\$1,680,398
Smith Creek Greenway	Neuse River	Sedgefield Subdivision	34050	\$350,000	10	\$2,257,102
Richland Creek Greenway	Neuse River	Richland Hills Subdivision	34775	\$350,000	10	\$2,305,161
Sanford Creek Greenway	Smith Creek	Rogers Road	11370	\$350,000	10	\$753,693
Cimarron Greenway	NC 98 Bypass	Cimarron Parkway	3530	\$350,000	10	\$233,996
					Total:	\$7,230,350

A value of \$350,000 per mile of trail assumes a 10-foot wide asphalt surface, with signage, trailheads, and minor bridges. This cost is significantly reduced for natural surface trail types which will be options for portions of these facilities. These estimates are based on a number of local studies and local research. The chart above outlines approximate baseline costs for each recommended greenway.

The sidewalk project cost index table on the following pages uses an estimate of \$3/square foot to provide an estimate per each pedestrian corridor. \$3/square foot was chosen to be conservative and is towards the high end of typical costs per square foot. Some pedestrian corridors have sections of existing sidewalk so these sections were subtracted from



the overall construction length. Wake Forest policy requires sidewalks on both sides of thoroughfares, collectors, and commercial streets and it is recommended in this Plan to also require sidewalks on both sides of any street near multi-family development, schools, and other trip attractors. Otherwise, residential streets only require one side. This was taken into consideration when developing these cost estimates.

Footnote

1 “Recommended Guidelines/Priorities for Sidewalks and Walkways.” US Department of Transportation, Federal Highway Administration.

http://www.walkinginfo.org/pedsafe/moreinfo_sidewalks.cfm#cost.



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