



CITY OF RAPID CITY

DEPARTMENT OF PARKS AND RECREATION
515 WEST BOULEVARD
RAPID CITY, SOUTH DAKOTA 57701

Jeff Biegler
Parks & Recreation
Director
(605) 394-5225

To: Rapid City Public Works Committee
From: Lon Van Deusen, Parks Division Manager
Subject: Shared – Use Pathway Repair
Date: October 6, 2014

Lon Van Deusen,
Parks & Cemetery
Manager
(605) 394-4175

Doug Lowe,
Recreation Manager
(605) 394-4168

Alex DeSmidt
Landscape Designer
(605) 394-5225

Jeri Taton
Administrative
Assistant
(605) 394-5225

At the September 9, 2014 Public Works Committee Meeting a request was made to provide a cost estimate for of repairs needed to the Rapid City bike path. An updated condition assessment was made by Lon Van Deusen and Scott Anderson on September 17 and 18. A small golf cart was used during the inventory to transport staff from the west end of the Leonard Swanson Memorial Recreation Pathway at the Fish Hatchery to the east end where it terminates at the Star of the West Sports Complex. This assessment included only the main shared use path within the floodway and tributaries that extend into north Rapid City.

Criteria for the assessment was developed to simplify this process and create categories of importance to help set priorities for the work needed. Six categories of hazards were identified and are included in the summary. In addition to the obvious broken and cracked concrete panels, additional modifications were identified which could potentially make the path safer but would require additional engineering and design work. No estimate is included for these modifications. Several areas that would require additional study include pathway underpasses and the ramp under the railroad trestle north of west Main Street.

*The cost estimates utilized for replacement and/or repair figures were based on current bid prices on City projects.

Shared Use Recreational Trail Repair Estimate

Condition Class:

Category 1 – This includes sidewalk panels with multiple fractures, displacement and breaks that could present tripping hazards to pedestrians and rolling hazards for bicycles and small wheeled conveyance (roller blades, skates, and strollers for example). High priority.

Category 2 – This includes sidewalk panels that have fewer cracks than Category 1 but have at least some displacement exceeding 1/2 inches that could present a tripping hazard or hazard to small wheeled conveyance. Intermediate priority.

Category 3 – This includes sidewalk panels with very minor cracking and no displacement. The cracking will be less or smaller than the control joints or saw cut joints that are purposely included in the pathway construction. Low priority but should be monitored.

Trip Hazards – This includes sidewalk panels that are displaced at the control joints through the process of settling and tree root damage. Displacement of at least 1/2 inches is considered a trip hazard to pedestrians. Sidewalk panels are intact and this condition can be remedied with concrete grinding equipment to eliminate trip hazards without replacing the concrete panels.

Guard Rails and Marker Posts (Off Trail Hazards) – This includes features along the path that potentially could be hazards to anyone straying off the recreational path. Typically this includes storm drains and culverts used to channel runoff under the recreational trail.

Drop offs – This condition exists when there is not adequate backfill along the sidewalk edges. This can occur from erosion, compaction or maintenance vehicles cutting corners while plowing snow for example. Typically any drop off greater than two inches becomes a hazard for bicyclists that stray from the concrete path surface and attempt to steer back onto the concrete path.

SUMMARY OF COSTS

CATEGORY	UNITS	COST	TOTAL
Category 1	44 Panels (8' x 8')	\$8.00 / sq ft	\$22,528
Category 2	39 Panels (8' x 8')	\$8.00 / sq ft	\$19,968
Category 3	57 Panels (8' x 8')	\$8.00 / sq ft	\$29,184
Trip Hazards	104 linear feet	\$25.00 / ft	\$ 2,600
Guard Rails / Marker Posts	13 sets/pairs	\$1,000.00 / pair	\$13,000
Drop offs	56 linear feet	\$25.00 / ft	\$ 1,400

TOTAL..... \$ 88,680

Miscellaneous:

Areas at several of the underpasses have been identified as potential hazards for bicyclists due to the close proximity to the water, low clearance and drop offs associated with their original construction. Parks staff also feels that the ramp under the railroad trestle north of West Main Street should be modified to lessen the steep grade and relatively sharp curve at the bottom of the ramp. Engineering, design and construction costs for these areas have not been determined at this point.