



March 7, 2017

MEMORANDUM

To: Wendi Palmer
Russell Pennington
Gary Behlen

From: Jenny A. Young, PE, AICP

Re: Golf Cart Route: Vista Ridge to Downtown – Preliminary Recommendations
FHU Reference No. 117033-01

FHU has completed an evaluation of several routes for golf carts to use to connect the Vista Ridge neighborhood with Downtown Erie. In coordination with Town staff, we have identified a recommended route for golf carts to use, with three options as described below and shown on **Figure 1**.

Option 1 (Recommended Route with Signage Only):

The first option is to use the Recommended Route (shown in yellow) on the attached map. This route would primarily make use of existing streets, most of which have a posted speed of 25 mph, which is consistent with the Town Code 6-11-14: Operation of Golf Cars. The connection between Vista Pointe and Erie Commons would require golf carts to use the existing east-west bicycle and pedestrian trail that crosses Coal Creek and extends from Columbine Way to Bonnell Avenue. The cost associated with this option is for approximately 100 signs along both directions of the route which would serve to:

- Identify the golf cart route
- Provide wayfinding to Downtown and to the Community Center
- Instruct golf cart drivers that they are to yield to pedestrians and bicyclists on the shared trail
- Warn vehicular traffic along Erie Parkway that there may be golf carts present at the Powers Street and Briggs Street crossings

Following is a summary of considerations for Option 1:

- The cost is estimated to be \$45,000.
- The use of Vista Parkway as a designated golf cart route would require a change to the Town Code; it has a posted speed of 35 mph, which is allowed for golf cart use by Colorado state regulations, but not by the Town’s current code.
- The operation of golf carts on the trail would also require a change to the Town Code (golf cart use on trails is currently prohibited in section 6-11-14(G)).

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- The shared use of the trail by bicyclists, pedestrians, and golf carts is not ideal; however, this option could be used as an initial phase to test the level of interest in using golf carts to connect between Vista Ridge and Downtown and the Community Center. If the trail is getting a lot of use by golf carts (and/or complaints by trail users), the Town could consider upgrading to Option 2 or Option 3.

Option 2 (Recommended Route with Signage and Golf Cart Trail):

This option follows the same route as Option 1, but instead of the golf carts using the bicycle and pedestrian trail between Columbine Way and Bonnell Avenue, a separate parallel trail would be constructed specifically for golf cart use. This trail would be a ten foot asphalt trail located south of the existing bicycle and pedestrian trail. The two trails would converge at the bridge over Coal Creek, and all users (bicyclists, pedestrians, and golf carts) would share the single bridge. Golf carts would be required to stop and allow bicyclists and pedestrians to cross the bridge before entering onto the bridge. This option would require signage similar to Option 1. Following is a summary of considerations for Option 2:

- The cost is estimated to be \$180,000
- The use of Vista Parkway as a designated golf cart route would require a change to the Town Code; it has a posted speed of 35 mph, which is allowed for golf cart use by Colorado state regulations, but not by the Town's current code.
- This option would require shared use of the bridge over Coal Creek by bicyclists, pedestrians, and golf carts, but the golf carts would otherwise be separated from the existing bicycle and pedestrian trail.
- The operation of golf carts on the bridge would also require a change to the Town Code (golf cart use on trails is currently prohibited in section 6-11-14(G)).

Options 3 (Alternate Route with Signage and Golf Cart Trail):

The third option makes use of an alternate alignment (shown in blue) west of Vista Pointe rather than extending through the Vista Pointe neighborhood. Option 3 would require construction of a separate golf cart trail (ten foot asphalt) parallel to the Coal Creek Trail from Jacques Way (in Vista Pointe) to Bonnell Avenue. Similar to Option 2, the two trails would converge at the bridge over Coal Creek, and all users (bicyclists, pedestrians, and golf carts) would share the single bridge. Golf carts would be required to stop and allow bicyclists and pedestrians to cross the bridge before entering onto the bridge. This option would require signage similar to Option 1. Following is a summary of considerations for Option 3:

- The cost is estimated to be \$360,000
- The use of Vista Parkway as a designated golf cart route would require a change to the Town Code; it has a posted speed of 35 mph, which is allowed for golf cart use by Colorado state regulations, but not by the Town's current code.
- This option would require shared use of the bridge over Coal Creek by bicyclists, pedestrians, and golf carts, but the golf carts would otherwise be separated from the existing bicycle and pedestrian trail.
- The operation of golf carts on the bridge would also require a change to the Town Code (golf cart use on trails is currently prohibited in section 6-11-14(G)).
- This option would minimize the use of neighborhood streets in Vista Pointe as the golf cart route.



Figure 1
Recommended and Alternate Golf Cart Routes



Town of Erie Golf Cart Path Opinion of Probable Cost Option 1-Signage Only



FHU Ref # 115237-01

Date Prepared: March 6, 2017

Prepared By: E. Stover

Project Construction Items	Unit	Quantity	Unit Cost (\$)	Total Cost	
New Signage (and sign posts)	LS	1	\$30,000	\$30,000	
Total accounted construction items				\$30,000	(A)
	% Range		% Used		
Project Construction Bid Items (from above)	Project Dependent			\$30,000	(A)
Mobilization	(4 to 10%) of (A) Default = 6%		6.00%	\$1,800	(B)
Contingencies	(15% - 30%) of (A+B)		30.00%	\$9,540	(C)
Total of Construction Bid Items	(A+B+C)			\$41,340	(D)
Total Construction Engineering	15% of (D)		0.00%	\$0	(E)
Total Final Engineering	10% of (D)		10.00%	\$4,134	(F)
Total Project Cost	(D+E+F)			\$45,474	

1. Unit Costs based on average CDOT project bids, available on CDOT's website.
2. In providing opinions of probable construction cost, the Client understands that Felsburg Holt & Ullevig has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinions of probable construction costs provided herein are to be made on the basis of our qualifications and experience. FHU makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.



Town of Erie Golf Cart Path
Opinion of Probable Cost
 Option 2-New Path (Segments H + I)



FHU Ref # 115237-01

Date Prepared: March 6, 2017

Prepared By: E. Stover

Project Construction Items	Unit	Quantity	Unit Cost (\$)	Total Cost	
Clearing and Grubbing	LS	1	\$7,000	\$7,000	
Aggregate Base Course (ABC)	TON	745	\$40	\$29,792	
Asphalt Cart Path (HMA)	TON	336	\$90	\$30,240	
New Signage (and sign posts)	LS	1	\$30,000	\$30,000	
Total accounted construction items				\$97,032	(A)
	% Range		% Used		
Project Construction Bid Items (from above)	Project Dependent			\$97,032	(A)
Removals	3% of (A)		3.00%	\$2,911	(B)
Erosion Control	(3-8%) of (A)		5.00%	\$4,852	(C)
Construction Traffic Control	5 to 25% of (A)		5.00%	\$4,852	(D)
Drainage	8% of (A)		8.00%	\$7,763	(E)
Mobilization	(4 to 10%) of (A+B+C+D+E) Default = 6%		6.00%	\$7,045	(F)
Contingencies	(15% - 30%) of (A+B+C+D+E+F)		30.00%	\$37,336	(G)
Total of Construction Bid Items	(A+B+C+D+E+F+G)			\$161,789	(H)
Total Construction Engineering	15% of (H)		0.00%	\$0	(I)
Total Final Engineering	10% of (H)		10.00%	\$16,179	(J)
Total Project Cost	(H+I+J)			\$177,968	

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Town of Erie Golf Cart Path
Opinion of Probable Cost
 Option 3-New Path (Segments E + I)



FHU Ref # 115237-01

Date Prepared: March 6, 2017

Prepared By: E. Stover

Project Construction Items	Unit	Quantity	Unit Cost (\$)	Total Cost	
Clearing and Grubbing	LS	1	\$10,000	\$10,000	
Aggregate Base Course (ABC)	TON	1,915	\$40	\$76,608	
Asphalt Cart Path (HMA)	TON	864	\$90	\$77,760	
New Signage (and sign posts)	LS	1	\$30,000	\$30,000	
Total accounted construction items				\$194,368	(A)
	% Range		% Used		
Project Construction Bid Items (from above)	Project Dependent			\$194,368	(A)
Removals	3% of (A)		3.00%	\$5,831	(B)
Erosion Control	(3-8%) of (A)		5.00%	\$9,718	(C)
Construction Traffic Control	5 to 25% of (A)		5.00%	\$9,718	(D)
Drainage	8% of (A)		8.00%	\$15,549	(E)
Mobilization	(4 to 10%) of (A+B+C+D+E) Default = 6%		6.00%	\$14,111	(F)
Contingencies	(15% - 30%) of (A+B+C+D+E+F)		30.00%	\$74,789	(G)
Total of Construction Bid Items	(A+B+C+D+E+F+G)			\$324,085	(H)
Total Construction Engineering	15% of (H)		0.00%	\$0	(I)
Total Final Engineering	10% of (H)		10.00%	\$32,409	(J)
Total Project Cost	(H+I+J)			\$356,494	

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