

# PLANNING REPORT

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## TOWN OF NEW CASTLE LOVA TRAIL NEW CASTLE TO CANYON CREEK SEGMENT



October 2017

Prepared by



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# New Castle to Canyon Creek

## LOVA Trail Planning

2016-2017



**Study Area Map**

This study of the New Castle to Canyon Creek LOVA Trail Planning effort evaluates three principal routes to provide pedestrian and bicycle access between New Castle and Canyon Creek as identified in the Study Area Map above. From this study, it is hoped that a collaborative decision can be made by the stakeholders through a public review process to provide a final route for design, funding and construction for the New Castle to Canyon Creek segment of the LOVA Trail. This study is intended to provide information to evaluate each alternative alignment above to consider the following:

- Safety
- Ease of maintenance and year round use
- Accessibility
- Best user experience for comfort and convenience
- Best user experience for views and environmental aesthetics
- Ability to connect to multiple uses and destination points
- Avoids environmentally sensitive areas for vegetation and wildlife discounting the need to acquire additional permitting outside the purview of CDOT and Garfield County. (ie., avoids wetlands, culturally sensitive areas, etc..)
- Financial feasibility
- Ability to successfully implement

As is noted above, there are three (3) primary routes (alignments) under consideration with one secondary consideration to be evaluated. These alignments are noted as follows:

- Alignment A – This alignment ties into an existing commercial sidewalk near the Town’s commercial core and utilizes the Garfield County Road 240 (Bruce Road) corridor. The route then proceeds east, along the north side of the county road to the east terminus of CR 240 with Highway 6.

Characteristics of this alignment are:

1. Rural, intimate setting
  2. Adjacent to a low volume roadway
  3. Adjacent to a low speed roadway
  4. Limited room to construct facilities
  5. The most physically challenging alignment (100’ of elevation gain/loss throughout the route)
  6. Quiet user experience (except local traffic)
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9. Likely the easiest alternative to implement

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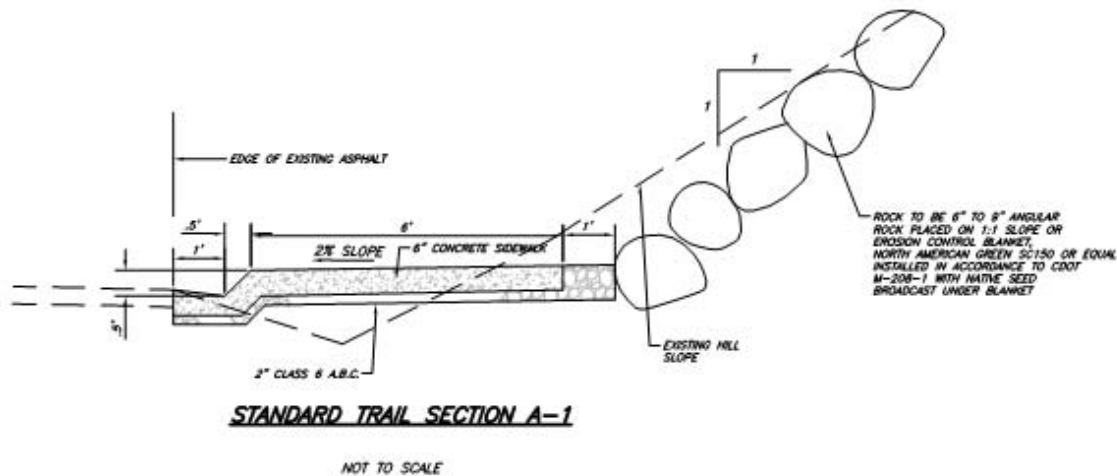
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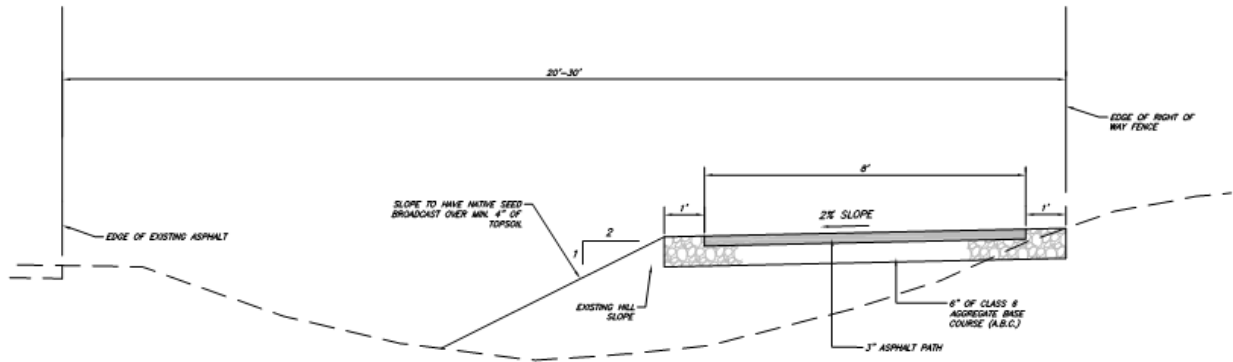
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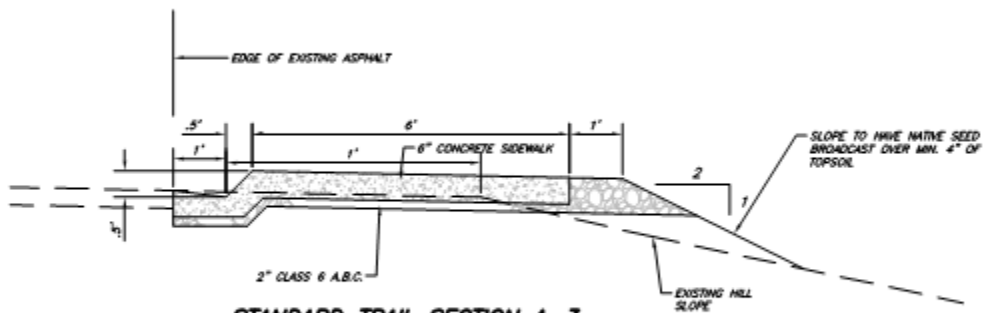
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**STANDARD TRAIL SECTION A-2**

NOT TO SCALE

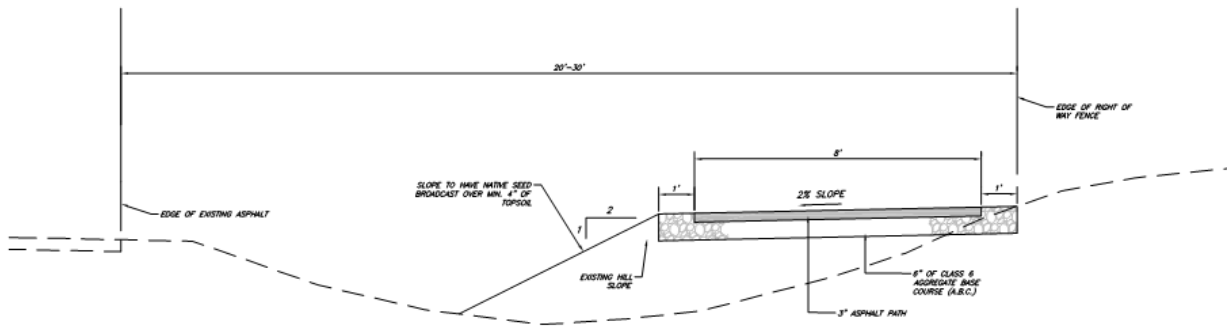
Section A-2 chosen to capitalize on the ability to handle drainage on each side of the trail and to provide the maximum set back from the roadway.



**STANDARD TRAIL SECTION A-3**

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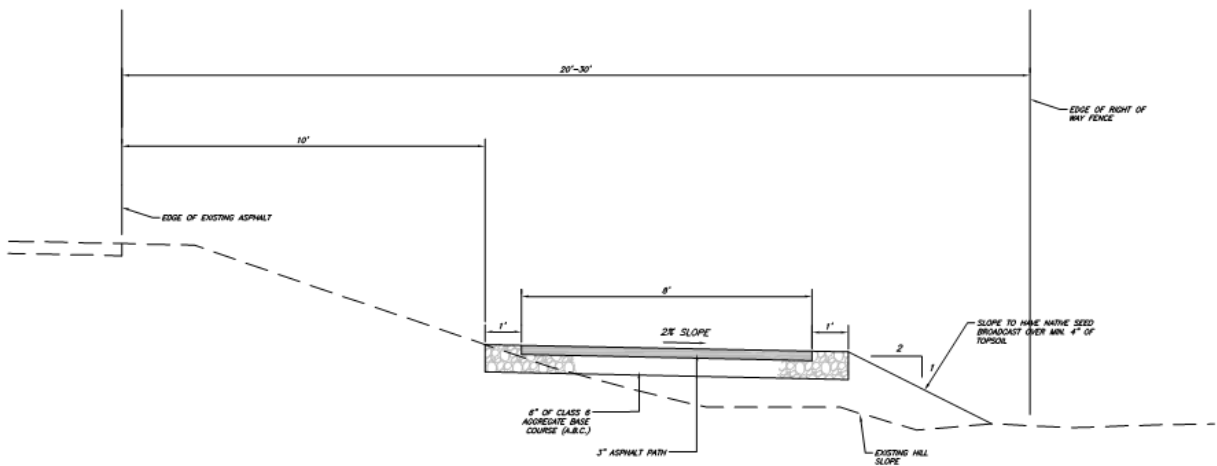
Section A-3 anticipates minimum room to construct the trail without the need to provide “cut slope” improvements that would be necessary to acquire additional right of way.



**STANDARD TRAIL SECTION B-1**

NOT TO SCALE

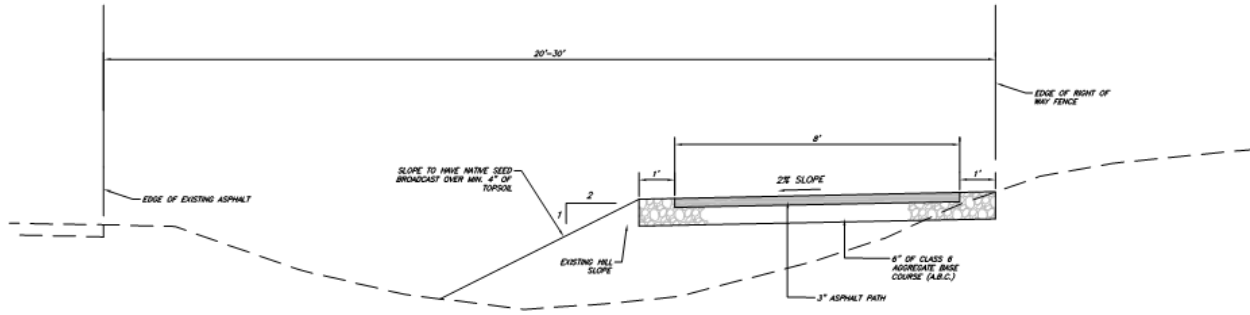
Section B-1 capitalizes on the ability to handle drainage on both sides of the trail and to try to gain as much separation as possible from the adjacent high volume/high speed traffic.



**STANDARD TRAIL SECTION B-2**

NOT TO SCALE

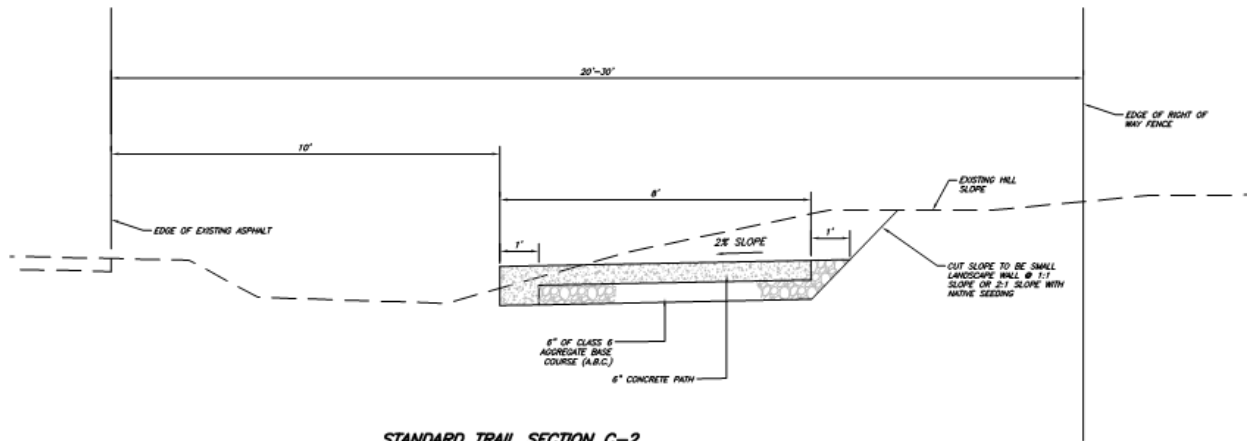
Section B-2 capitalizes on a minimum traffic/trail separation of 10' while dealing with adjacent, excessive fill slopes that would otherwise likely require the acquisition of significant right of way.



**STANDARD TRAIL SECTION C-1**

NOT TO SCALE

Section C-1 capitalizes on drainage on both sides of trail along with maximizing set back from adjacent traffic.

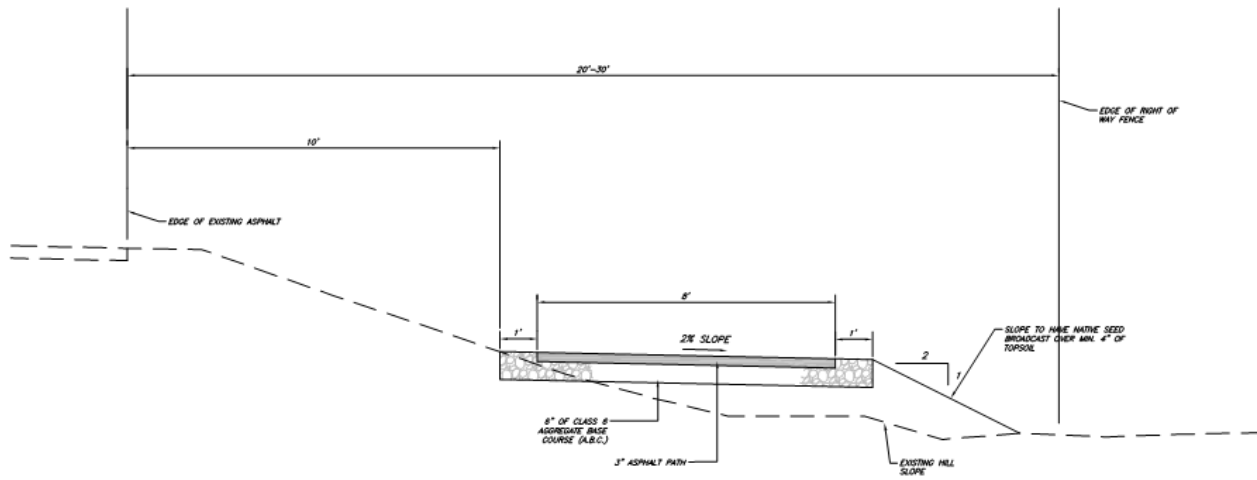


**STANDARD TRAIL SECTION C-2**

NOT TO SCALE

Section D-1 provides an opportunity to incorporate the trail into existing adjacent landscaping improvements with the Church Property.

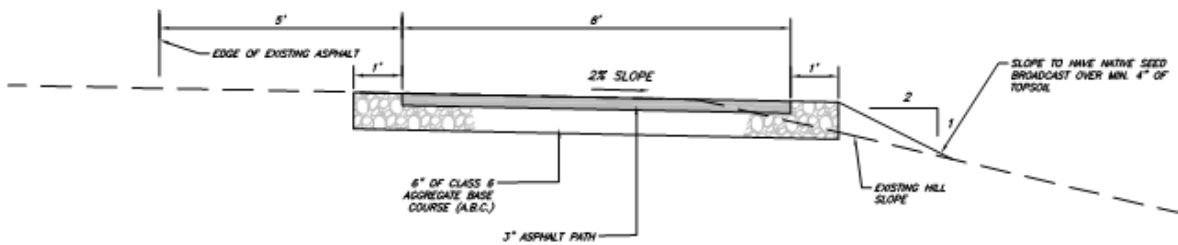




**STANDARD TRAIL SECTION C-3**

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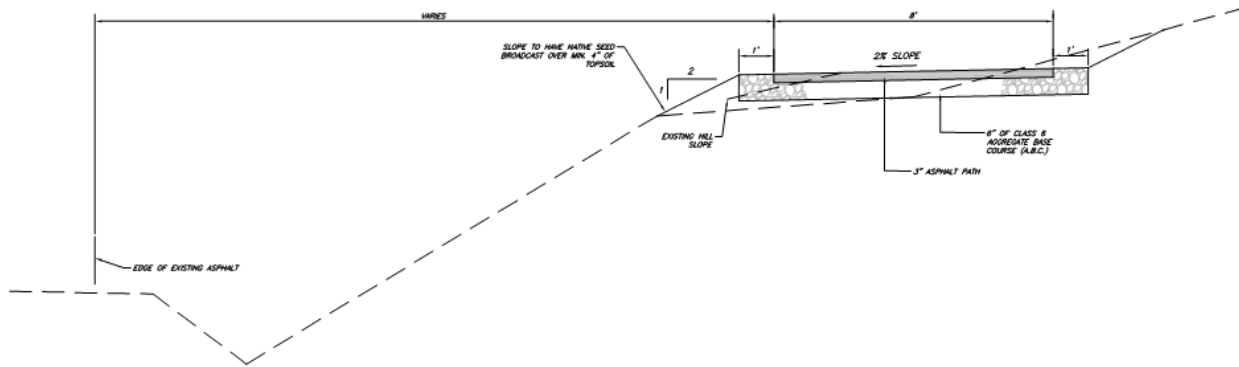
Section C-3 deals with the potential excessive fill slopes coupled with maintaining a minimum of 10' of separation of trail from edge of roadway.



**STANDARD TRAIL SECTION D-1**

NOT TO SCALE

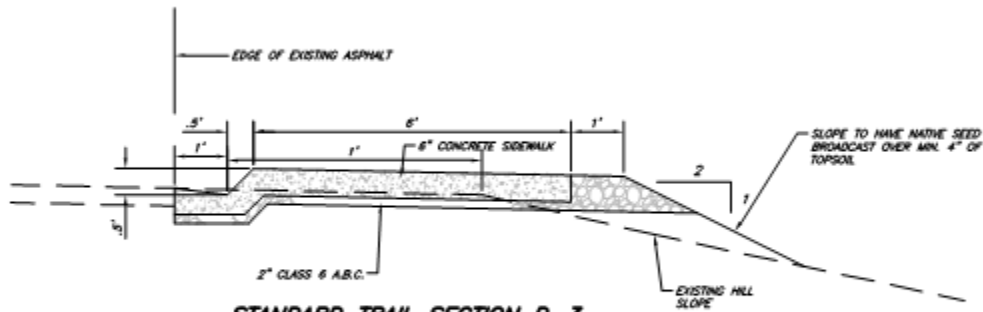
Section D-1 provides an adjacent facility to the low volume/low speed roadway, similar to the functioning Talbott Trail.



**STANDARD TRAIL SECTION D-2**

NOT TO SCALE

Section D-2 allows the opportunity to climb to the top of the existing roadway cut bank to locate the trail as far as possible from the traffic while enhancing the user experience.



**STANDARD TRAIL SECTION D-3**

NOT TO SCALE

Section D-3 allows the opportunity to minimize the impacts to adjacent properties through Riverbend.

**Cost Considerations**

The following several pages identify the estimated preliminary costs for each of the alternatives discounting the detailed design that would be necessary to follow this evaluation. Each of the alternatives have be evaluated using costs that are similar for the various materials and labor that are anticipated to be incurred for the various tasks necessary to accommodate the construction of each of the alternatives. The estimates have been prepared in an attempt to make an apple to apples comparison. The following base unit prices have been used in each of the estimates to maintain consistency and represent recent unit prices for the stated cost item based upon an average of recent received bids for a variety of projects in the Rifle to New Castle construction market.

## Comparative Unit Prices

1. Earthwork Cut = \$2.50 per CU YD
2. Earthwork Fill = \$5.00 per CU YD
3. Class 2 Aggregate Base Course (purchased, hauled and installed): \$32.00 per Ton
4. Class 6 Aggregate Base Course (purchased, hauled and installed): \$40.00 per Ton
5. 3" (single lift) of Hot Mix Bituminous Pavement: \$150 per Ton
6. Top Soil (purchased, hauled and installed): \$40.00 per CU YD
7. Seeding (purchased, spread and tacked in place): \$0.05 per SF
8. Mountable Curb, Gutter and 7' wide sidewalk: \$8.00 per SF
9. Slope Stabilization: \$40 per SF
10. Bridge Construction: \$1,000 per FT
11. Platform Construction (Shale Bluff)/with foundation: \$115 per SF
12. 18" CMP/ADS Drainage Pipe: \$35 per LF
13. 24" CMP/ADS Drainage Pipe: \$40 per LF
14. 36" CMP/ADS Drainage Pipe: \$75 per LF

## **COST ESTIMATE DISCUSSION**

The following estimate for Alternative A is the estimate of the improvements along County Road 240 from HWY 6 on the West end of HWY 6 on the East end at the West Canyon Tree Farm. For Alternative A, the estimate, without contingency and soft costs, the estimate is \$115,452 more than the Alternative B route which also starts at the CR 240/ HWY 6 intersection on the west end and terminates at the CR 240/ HWY 6 intersection at the West Canyon Tree Farm.

For the Estimate for Alternative B, the entire estimate includes the improvements pricing from CR 240/HWY 6, along HWY 6 to the Canyon Creek Interchange at MM 107.

For the Estimate for Alternative C, the estimate removes \$110,000 from the Alternative B estimate for the savings that would be realized for the work effort needed along CR 138 versus the modified section necessary to incorporate the trail section with the existing landscaping improvements, parking and access points associated with the New Creation Church from HWY 6.

Alternative D estimates do require the potential purchase of right of way from a couple of affected property owners. The project could potentially require the purchase of 2.5 acres of the NCIG Financial property towards the east end of the route while the preferred routes on the west end of the route could require as much as 2 acres of right of way purchase from the Taylor family. Vacant, undeveloped land in the area has been purchase in the \$30,000 per acre range which equates to a potential expenditure of \$135,000 for right of way for the 4.5 acres.

Town of New Castle					
LOVA Trail Alternative A					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$90,952.33	\$9,095.23
2	Traffic Control	LS	0.05	\$45,901.41	\$2,295.07
3	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
4	Trail Section A-1	LF	3,500	\$ 127.23	\$445,308.67
5	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
6	Trail Section A-2	LF	2,800	\$ 93.53	\$261,887.74
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
8	Trail Section A-3	LF	1,510	\$ 113.57	\$171,484.57
9	Irrigation Ditch Relocation	LF	490	\$15.00	\$7,350.00
10	36" CMP	LF	30	\$75.00	\$2,250.00
11	8" CMP	LF	30	\$30.00	\$900.00
12	12" CMP	LF	4	\$35.00	\$140.00
13	36" CMP	LF	3	\$75.00	\$225.00
14	24" CMP	LF	10	\$40.00	\$400.00
15	Sign Relocations	EA	7	\$250.00	\$1,750.00
16	4-Wire, barb wire fence removal/replacement	LF	900	\$12.00	\$10,800.00
<b>Total Estimate</b>					<b>\$ 929,418.58</b>
10% Contingency					\$ 92,941.86
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 163,577.67</b>
<i>Preliminary Final Estimate</i>					<b>\$ 1,185,938.10</b>

With the addition of the Alternative B estimate (noted as follows), the total estimate for the Alternative A variant to Alternative B is \$4,474,130.00

Town of New Castle					
LOVA Trail Alternative B					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$329,937.38	\$32,993.74
2	Traffic Control	LS	0.25	\$790,440.90	\$197,610.22
3	Transition section from concrete to asphalt path	LF	50	\$ 104.52	\$5,226.04
4	Trail Section CR 240 to West Canyon	LF	8,525	\$ 95.48	\$813,967.00
5	Shale Bluff Platform	SF	11,000	\$ 115.00	\$1,265,000.00
6	Trail Section West Canyon to New Creation	LF	5,035	\$ 105.03	\$528,815.98
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 104.52	\$5,226.04
8	Trail Section in Front of New Creation	LF	1,100	\$ 113.57	\$124,922.53
9	Revegetation	Ac.	5	\$ 20,000.00	\$90,000.00
10	Trail Section from New Creation to Interchange	LF	2,200	\$95.48	\$210,056.00
11	18" CMP	LF	760	\$35.00	\$26,600.00
12	24" CMP	LF	380	\$40.00	\$15,200.00
13	36" CMP	LF	200	\$75.00	\$15,000.00
14	Sign Relocations	EA	7	\$250.00	\$1,750.00
15	4-Wire, barb wire fence removal/replacement	LF	5,000	\$12.00	\$60,000.00
<b>Total Estimate</b>					<b>\$ 3,392,367.56</b>
10% Contingency					\$ 339,236.76
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 597,056.69</b>
<i>Preliminary Final Estimate</i>					<b>\$ 4,328,661.01</b>

For Alternative C, the base estimate cost reduces by \$110,000. When including the contingency and the soft costs, the Alternative C variant to Alternative B reduces the cost to \$4,190,061.00

Town of New Castle					
LOVA Trail Alternative D					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$251,172.18	\$25,117.22
2	Traffic Control	LS	0.05	\$125,871.41	\$6,293.57
3	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
4	Trail Section River Park to NCIG West	LF	5,540	\$ 93.53	\$518,156.20
5	Slope Stabilization in Mine Area	SF	2,400	\$ 25.00	\$60,000.00
6	Trail Section from NCIG West to Riverbend	LF	4,388	\$ 79.50	\$348,848.19
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
8	Trail Section through Riverbend	LF	1,220	\$ 113.57	\$138,550.45
9	Trail Section through NCIG East	LF	4,060	\$ 79.50	\$322,772.03
10	Shale Bluff Stabilization	SF	4,000	\$ 25.00	\$100,000.00
11	Bridge Construction across Colorado River	LS	1	\$365,000.00	\$365,000.00
12	Trail Section on Two Track through CDOT	LF	3,903	\$93.53	\$365,047.59
13	Trail Section adjacent to Colorado River and Canyon Creek	LF	575	\$194.00	\$111,550.00
14	Trail Section from RR to Interchange	LF	200	\$154.00	\$30,800.00
15	18" CMP	LF	800	\$30.00	\$24,000.00
16	24" CMP	LF	400	\$35.00	\$14,000.00
17	36" CMP	LF	200	\$75.00	\$15,000.00
18	Revegetation	Ac.	4	\$20,000.00	\$80,348.94
18	Sign Relocations	EA	4	\$250.00	\$1,000.00
19	4-Wire, barb wire fence removal/replacement	LF	1,000	\$12.00	\$12,000.00
<b>Total Bid</b>					<b>\$ 2,548,839.06</b>
10% Contingency					\$ 254,883.91
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 448,595.67</b>
<i>Preliminary Final Estimate</i>					<b>\$ 3,252,318.64</b>

As previously mentioned, the potential for the need to purchase right of way exists. Considering such an occurrence is required, the **Preliminary Final Estimate for the Alternative D Route is \$3,387,319.00**

As a final consideration in the report, a decision matrix has been used to as a simple, subjective tool prepared to identify a preliminary final design for the preferred route for the LOVA trail between New Castle and Canyon Creek. The following table identifies the scoring of such:

Determination Criteria	Alternative A (CR 138 Route)	Alternative B (HGWHY 6 Route)	Alternative C (CR 240 Route)	Alternative D (Riverbend Route)	Comments
Public Input	2	4	3	1	Rather not travel along a highway
Safety	2	4	3	1	Safer not next to major highway
Accessibility	1	3	2	4	Most convenient access
Ease of maintenance	3	1	2	4	State highway more maintained
User comfort & convenience	3	4	2	1	more comfortable with less traffic
User views & environmental Aesthetics	3	4	2	1	Country friendly
Multi-use & destination points	2	3	4	1	connects to Apple Tree trail and Bridge
Avoids sensitive areas (i.e., wetlands, culturally sensitive area, etc.)	1	4	3	2	Disrupts the least amount to sensitive areas
Financial feasibility	4	3	2	1	based on current cost easement
Ability to implement	2	4	3	1	Easiest to build not along highway
Total Ranking per Matrix Criteria	23	34	26	17	

As is observed in the above decision matrix, it has been our opinion that based upon the variety of criteria evaluated, that the Alternative D (Riverbend Route) be the route to continue with design and funding towards construction. As an attachment to this report, the “preliminary” final drawings have been prepared for the routing of the trail. Prior to construction, more detailed design, NEPA analysis, geotechnical analysis will be necessary in the vicinity of and associated with structures proposed with this alternative. As well, the additional survey and platting necessary to secure the right of way from the affected land owners will be necessary.

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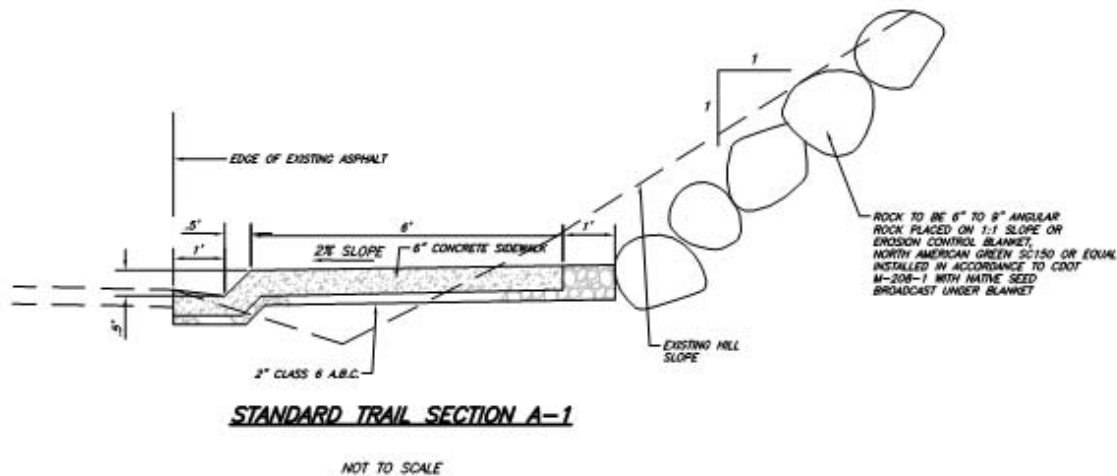
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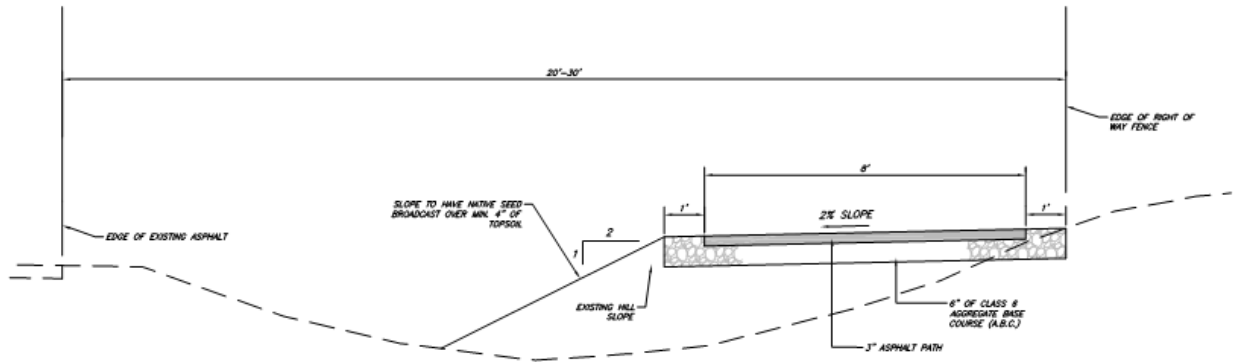
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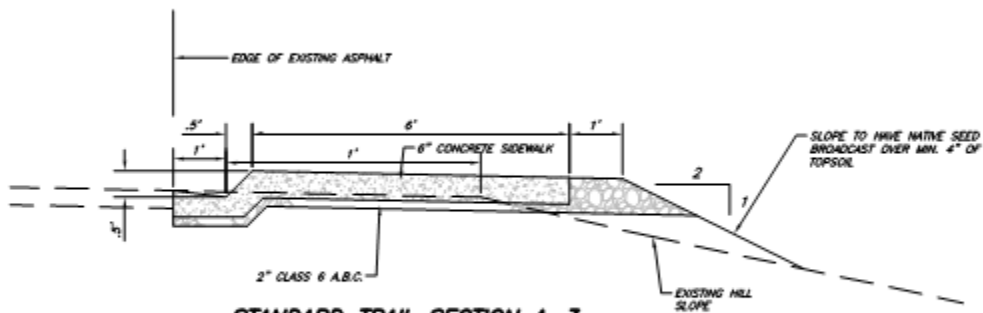
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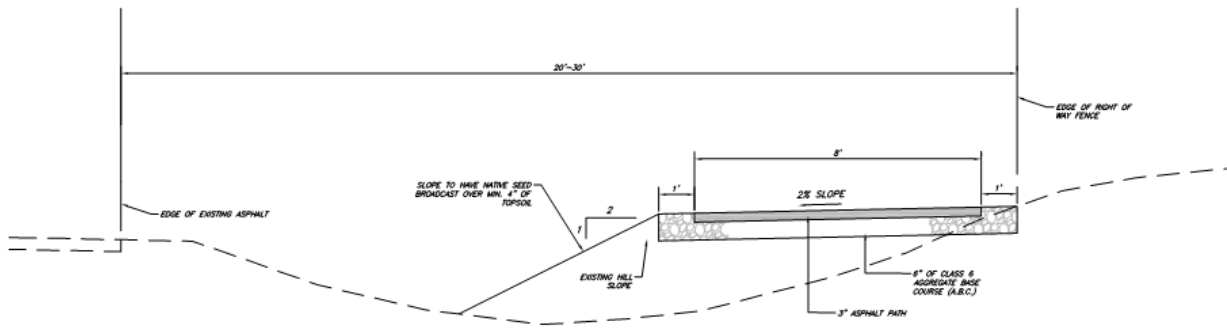
Section A-2 chosen to capitalize on the ability to handle drainage on each side of the trail and to provide the maximum set back from the roadway.



**STANDARD TRAIL SECTION A-3**

NOT TO SCALE

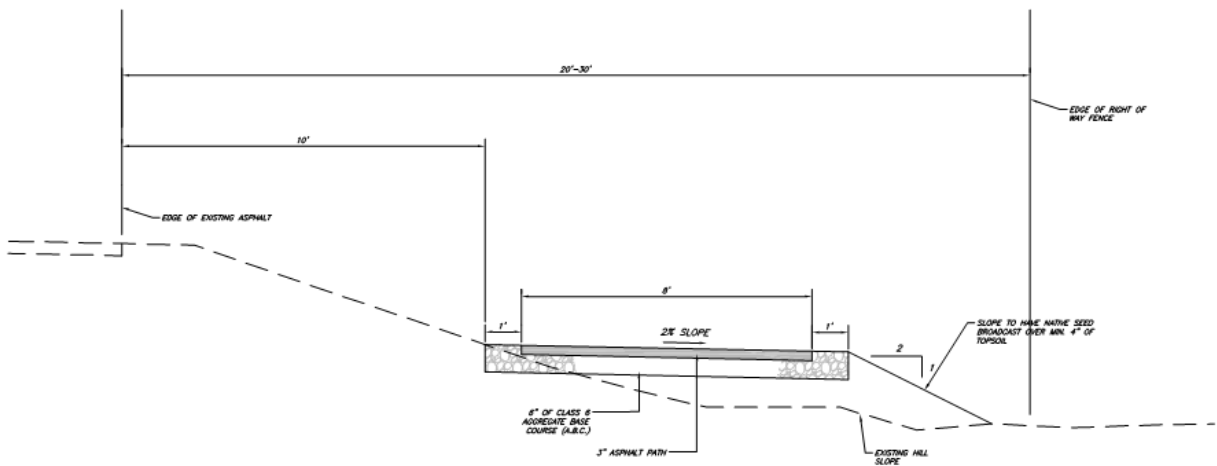
Section A-3 anticipates minimum room to construct the trail without the need to provide “cut slope” improvements that would be necessary to acquire additional right of way.



**STANDARD TRAIL SECTION B-1**

NOT TO SCALE

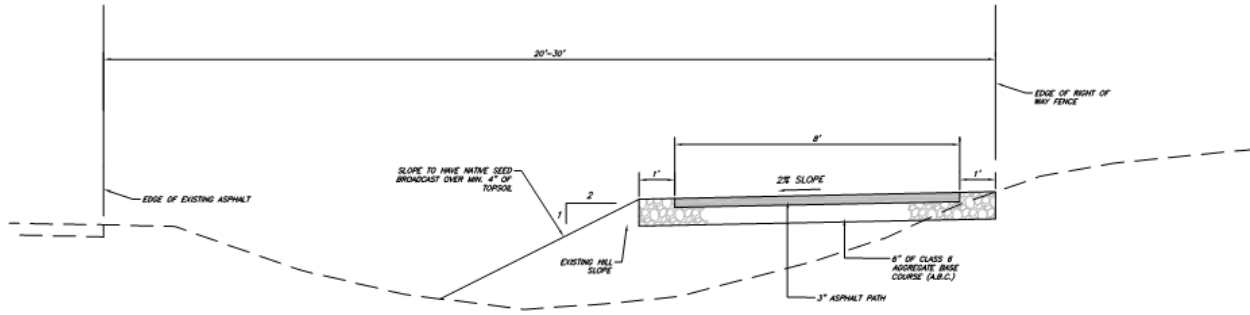
Section B-1 capitalizes on the ability to handle drainage on both sides of the trail and to try to gain as much separation as possible from the adjacent high volume/high speed traffic.



**STANDARD TRAIL SECTION B-2**

NOT TO SCALE

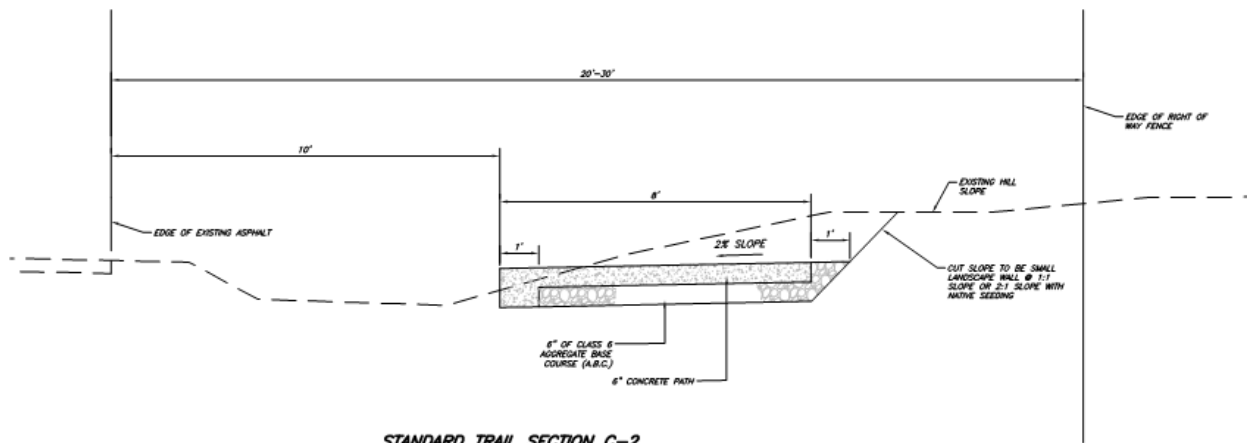
Section B-2 capitalizes on a minimum traffic/trail separation of 10' while dealing with adjacent, excessive fill slopes that would otherwise likely require the acquisition of significant right of way.



**STANDARD TRAIL SECTION C-1**

NOT TO SCALE

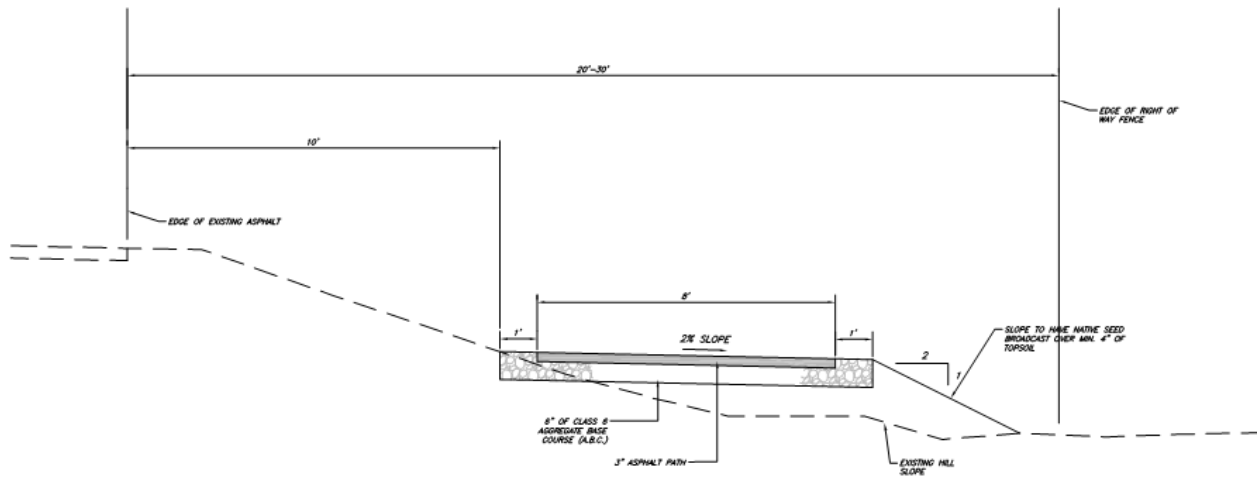
Section C-1 capitalizes on drainage on both sides of trail along with maximizing set back from adjacent traffic.



**STANDARD TRAIL SECTION C-2**

NOT TO SCALE

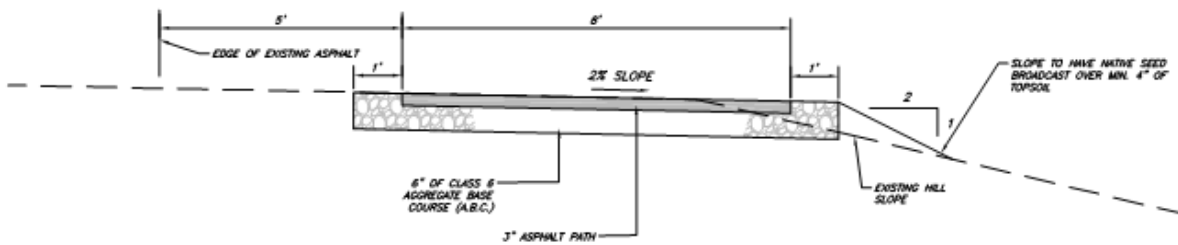
Section D-1 provides an opportunity to incorporate the trail into existing adjacent landscaping improvements with the Church Property.



**STANDARD TRAIL SECTION C-3**

NOT TO SCALE

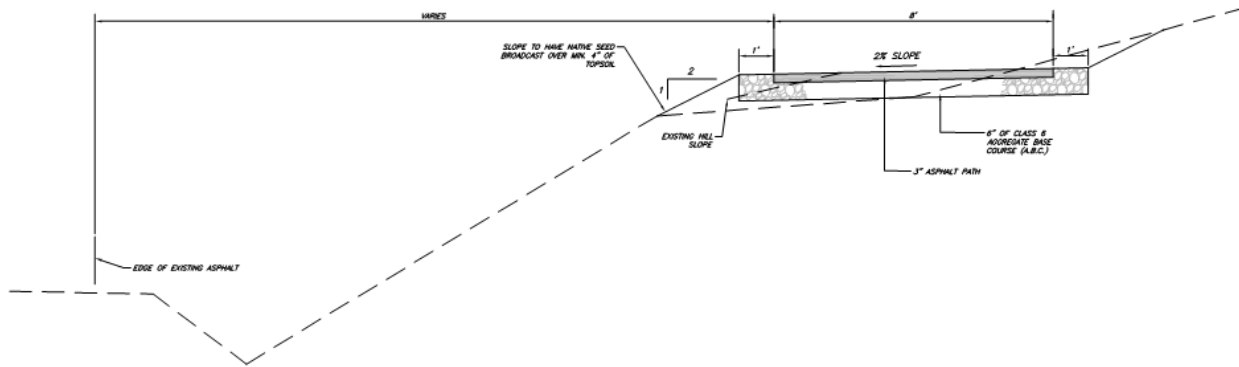
Section C-3 deals with the potential excessive fill slopes coupled with maintaining a minimum of 10' of separation of trail from edge of roadway.



**STANDARD TRAIL SECTION D-1**

NOT TO SCALE

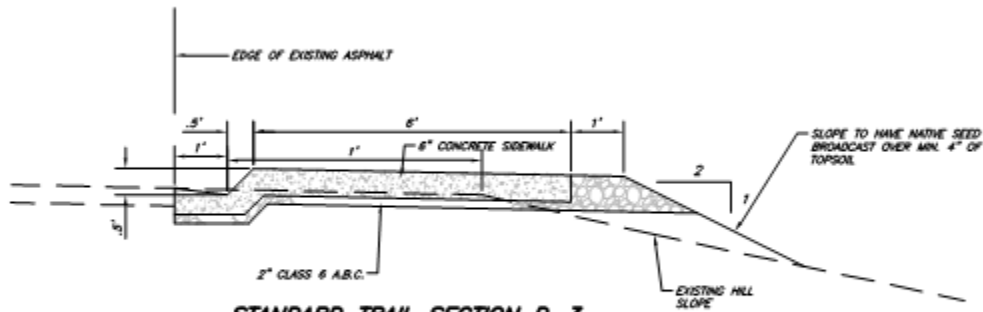
Section D-1 provides an adjacent facility to the low volume/low speed roadway, similar to the functioning Talbott Trail.



**STANDARD TRAIL SECTION D-2**

NOT TO SCALE

Section D-2 allows the opportunity to climb to the top of the existing roadway cut bank to locate the trail as far as possible from the traffic while enhancing the user experience.



**STANDARD TRAIL SECTION D-3**

NOT TO SCALE

Section D-3 allows the opportunity to minimize the impacts to adjacent properties through Riverbend.

**Cost Considerations**

The following several pages identify the estimated preliminary costs for each of the alternatives discounting the detailed design that would be necessary to follow this evaluation. Each of the alternatives have be evaluated using costs that are similar for the various materials and labor that are anticipated to be incurred for the various tasks necessary to accommodate the construction of each of the alternatives. The estimates have been prepared in an attempt to make an apple to apples comparison. The following base unit prices have been used in each of the estimates to maintain consistency and represent recent unit prices for the stated cost item based upon an average of recent received bids for a variety of projects in the Rifle to New Castle construction market.



## Comparative Unit Prices

1. Earthwork Cut = \$2.50 per CU YD
2. Earthwork Fill = \$5.00 per CU YD
3. Class 2 Aggregate Base Course (purchased, hauled and installed): \$32.00 per Ton
4. Class 6 Aggregate Base Course (purchased, hauled and installed): \$40.00 per Ton
5. 3" (single lift) of Hot Mix Bituminous Pavement: \$150 per Ton
6. Top Soil (purchased, hauled and installed): \$40.00 per CU YD
7. Seeding (purchased, spread and tacked in place): \$0.05 per SF
8. Mountable Curb, Gutter and 7' wide sidewalk: \$8.00 per SF
9. Slope Stabilization: \$40 per SF
10. Bridge Construction: \$1,000 per FT
11. Platform Construction (Shale Bluff)/with foundation: \$115 per SF
12. 18" CMP/ADS Drainage Pipe: \$35 per LF
13. 24" CMP/ADS Drainage Pipe: \$40 per LF
14. 36" CMP/ADS Drainage Pipe: \$75 per LF

## **COST ESTIMATE DISCUSSION**

The following estimate for Alternative A is the estimate of the improvements along County Road 240 from HWY 6 on the West end of HWY 6 on the East end at the West Canyon Tree Farm. For Alternative A, the estimate, without contingency and soft costs, the estimate is \$115,452 more than the Alternative B route which also starts at the CR 240/ HWY 6 intersection on the west end and terminates at the CR 240/ HWY 6 intersection at the West Canyon Tree Farm.

For the Estimate for Alternative B, the entire estimate includes the improvements pricing from CR 240/HWY 6, along HWY 6 to the Canyon Creek Interchange at MM 107.

For the Estimate for Alternative C, the estimate removes \$110,000 from the Alternative B estimate for the savings that would be realized for the work effort needed along CR 138 versus the modified section necessary to incorporate the trail section with the existing landscaping improvements, parking and access points associated with the New Creation Church from HWY 6.

Alternative D estimates do require the potential purchase of right of way from a couple of affected property owners. The project could potentially require the purchase of 2.5 acres of the NCIG Financial property towards the east end of the route while the preferred routes on the west end of the route could require as much as 2 acres of right of way purchase from the Taylor family. Vacant, undeveloped land in the area has been purchase in the \$30,000 per acre range which equates to a potential expenditure of \$135,000 for right of way for the 4.5 acres.

Town of New Castle					
LOVA Trail Alternative A					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$90,952.33	\$9,095.23
2	Traffic Control	LS	0.05	\$45,901.41	\$2,295.07
3	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
4	Trail Section A-1	LF	3,500	\$ 127.23	\$445,308.67
5	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
6	Trail Section A-2	LF	2,800	\$ 93.53	\$261,887.74
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
8	Trail Section A-3	LF	1,510	\$ 113.57	\$171,484.57
9	Irrigation Ditch Relocation	LF	490	\$15.00	\$7,350.00
10	36" CMP	LF	30	\$75.00	\$2,250.00
11	8" CMP	LF	30	\$30.00	\$900.00
12	12" CMP	LF	4	\$35.00	\$140.00
13	36" CMP	LF	3	\$75.00	\$225.00
14	24" CMP	LF	10	\$40.00	\$400.00
15	Sign Relocations	EA	7	\$250.00	\$1,750.00
16	4-Wire, barb wire fence removal/replacement	LF	900	\$12.00	\$10,800.00
<b>Total Estimate</b>					<b>\$ 929,418.58</b>
10% Contingency					\$ 92,941.86
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 163,577.67</b>
<i>Preliminary Final Estimate</i>					<b>\$ 1,185,938.10</b>

With the addition of the Alternative B estimate (noted as follows), the total estimate for the Alternative A variant to Alternative B is \$4,474,130.00

Town of New Castle					
LOVA Trail Alternative B					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$329,937.38	\$32,993.74
2	Traffic Control	LS	0.25	\$790,440.90	\$197,610.22
3	Transition section from concrete to asphalt path	LF	50	\$ 104.52	\$5,226.04
4	Trail Section CR 240 to West Canyon	LF	8,525	\$ 95.48	\$813,967.00
5	Shale Bluff Platform	SF	11,000	\$ 115.00	\$1,265,000.00
6	Trail Section West Canyon to New Creation	LF	5,035	\$ 105.03	\$528,815.98
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 104.52	\$5,226.04
8	Trail Section in Front of New Creation	LF	1,100	\$ 113.57	\$124,922.53
9	Revegetation	Ac.	5	\$ 20,000.00	\$90,000.00
10	Trail Section from New Creation to Interchange	LF	2,200	\$95.48	\$210,056.00
11	18" CMP	LF	760	\$35.00	\$26,600.00
12	24" CMP	LF	380	\$40.00	\$15,200.00
13	36" CMP	LF	200	\$75.00	\$15,000.00
14	Sign Relocations	EA	7	\$250.00	\$1,750.00
15	4-Wire, barb wire fence removal/replacement	LF	5,000	\$12.00	\$60,000.00
<b>Total Estimate</b>					<b>\$ 3,392,367.56</b>
10% Contingency					\$ 339,236.76
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 597,056.69</b>
<i>Preliminary Final Estimate</i>					<b>\$ 4,328,661.01</b>

For Alternative C, the base estimate cost reduces by \$110,000. When including the contingency and the soft costs, the Alternative C variant to Alternative B reduces the cost to \$4,190,061.00

Town of New Castle					
LOVA Trail Alternative D					
Item No.	Description	Unit	Quantity	Engineers Estimate	
				Cost per Unit	Extended Cost
<b>BID SCHEDULE</b>					
1	Mobilization	LS	0.10	\$251,172.18	\$25,117.22
2	Traffic Control	LS	0.05	\$125,871.41	\$6,293.57
3	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
4	Trail Section River Park to NCIG West	LF	5,540	\$ 93.53	\$518,156.20
5	Slope Stabilization in Mine Area	SF	2,400	\$ 25.00	\$60,000.00
6	Trail Section from NCIG West to Riverbend	LF	4,388	\$ 79.50	\$348,848.19
7	Transition section from asphalt path to concrete sidewalk	LF	50	\$ 103.55	\$5,177.43
8	Trail Section through Riverbend	LF	1,220	\$ 113.57	\$138,550.45
9	Trail Section through NCIG East	LF	4,060	\$ 79.50	\$322,772.03
10	Shale Bluff Stabilization	SF	4,000	\$ 25.00	\$100,000.00
11	Bridge Construction across Colorado River	LS	1	\$365,000.00	\$365,000.00
12	Trail Section on Two Track through CDOT	LF	3,903	\$93.53	\$365,047.59
13	Trail Section adjacent to Colorado River and Canyon Creek	LF	575	\$194.00	\$111,550.00
14	Trail Section from RR to Interchange	LF	200	\$154.00	\$30,800.00
15	18" CMP	LF	800	\$30.00	\$24,000.00
16	24" CMP	LF	400	\$35.00	\$14,000.00
17	36" CMP	LF	200	\$75.00	\$15,000.00
18	Revegetation	Ac.	4	\$20,000.00	\$80,348.94
18	Sign Relocations	EA	4	\$250.00	\$1,000.00
19	4-Wire, barb wire fence removal/replacement	LF	1,000	\$12.00	\$12,000.00
<b>Total Bid</b>					<b>\$ 2,548,839.06</b>
10% Contingency					\$ 254,883.91
Permitting, Final Design, Contract Administration, Bidding					<b>\$ 448,595.67</b>
<i>Preliminary Final Estimate</i>					<b>\$ 3,252,318.64</b>

As previously mentioned, the potential for the need to purchase right of way exists. Considering such an occurrence is required, the **Preliminary Final Estimate for the Alternative D Route is \$3,387,319.00**

As a final consideration in the report, a decision matrix has been used to as a simple, subjective tool prepared to identify a preliminary final design for the preferred route for the LOVA trail between New Castle and Canyon Creek. The following table identifies the scoring of such:

Determination Criteria	Alternative A (CR 138 Route)	Alternative B (HGWHY 6 Route)	Alternative C (CR 240 Route)	Alternative D (Riverbend Route)	Comments
Public Input	2	4	3	1	Rather not travel along a highway
Safety	2	4	3	1	Safer not next to major highway
Accessibility	1	3	2	4	Most convenient access
Ease of maintenance	3	1	2	4	State highway more maintained
User comfort & convenience	3	4	2	1	more comfortable with less traffic
User views & environmental Aesthetics	3	4	2	1	Country friendly
Multi-use & destination points	2	3	4	1	connects to Apple Tree trail and Bridge
Avoids sensitive areas (i.e., wetlands, culturally sensitive area, etc.)	1	4	3	2	Disrupts the least amount to sensitive areas
Financial feasibility	4	3	2	1	based on current cost easement
Ability to implement	2	4	3	1	Easiest to build not along highway
Total Ranking per Matrix Criteria	23	34	26	17	

As is observed in the above decision matrix, it has been our opinion that based upon the variety of criteria evaluated, that the Alternative D (Riverbend Route) be the route to continue with design and funding towards construction. As an attachment to this report, the “preliminary” final drawings have been prepared for the routing of the trail. Prior to construction, more detailed design, NEPA analysis, geotechnical analysis will be necessary in the vicinity of and associated with structures proposed with this alternative. As well, the additional survey and platting necessary to secure the right of way from the affected land owners will be necessary.