I-70 Mountain
Drainage & Water Quality

Alternative	Option	2 - ML 65	3 - ML 65	GP 65	GP 55	ML Viaduct (Floyd - Tunnel)	EJMT Bore	Hard Shoulder Running	Minimum Program	Maximum Program
06	01				x			WB		

Alternative	Option	Major CMP Rehab (100%)	Major CBC Rehab (50%)	Major Culvert (RCP)	Major Culverts (CBC)	Minor Culverts	Inlets	Riprap	Roadside Sediment Bay	Total
06	01	$ -	$ -	$ -	$ -	$ 1,135,160	$ 893,200	$ 457,133	$ 7,774,700	$ 10,260,193

Assumptions:

(1) Costs based on CDOT 2012 Construction Cost Data Book unless noted otherwise. See HOBAS, CDOT and Sediment Bay work sheets for unit cost development.

(2) Five typical sections were developed for existing I-70 using Google aerial and street view images. Existing roadway and median widths were estimated using aerial images.

(3) Proposed roadway widths are based on lane configuration typical sections provided by the roadway team (ALT01-01 for 2 & 3 lane GP, ALT02-01 for 2 & 3 lane GP, ALT04-01, ALT05-01, ALT06-01, ALT06-02).

(4) Drainage as-builts were not available for review and a site visit was not conducted. Existing major (deep) culvert locations were located using USGS topo maps. Assumed culvert size is based on TR55 peak runoff method for a 100 year storm event, Q100 doubled to accunt for snow runoff, rainfall + snow full flow conveyance and 1% culvert slope. A maximum 84" CMP (corrugated metal pipe) size was assumed before before switching to a CBC (concrete box culvert).

(5) Existing minor (roadway) culvert locations were assumed at 500 ft OC (on center) and 1000 ft OC for barrier and non-barrier existing roadway sections respectively. Proposed culvert locations are assumed at 500 ft OC and replacement of 100% of the existing minor culverts under WB I-70.

(6) Roadside sediment bays are located at 1000 ft OC based on the number of basins identified in the Clear Creek SCAP and dividing by the SCAP roadway total length (SCAP = an average of 4 sediment bays per mile). Minor cross culverts at imtermediate 500 ft OC locations are connected by a longitudinal culvert to the downstream sediment basin located at the 1000 ft OC culvert locations.

(7) Minor culvert riprap pad assumed to be 4 D (pipe diameter) x 10 D and a depth of 2 x riprap size. Twelve inch riprap assumed for upstream and down stream ends of minor culverts.

(8) Existing major culverts are not impacted nor improved by the project.

(9)

(10)

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain + snow cfs/ac)	Size No.	Size Span (ft)	Size Rise-Dia (ft-in)	CMP / RCB	RCB Conc (sf)
1	**Hogback to Mt Vernon**	1	2.5	140	35							4.0					
						22a	32					127	1		60	CMP	N/A
						22b	32					127	1		60	CMP	N/A
						22c	32					127	1		60	CMP	N/A
						22d	32					127	1		60	CMP	N/A
						16a	142					568	1	8	6	RCB	28
						16b	23					90	1		54	CMP	N/A
						16c	23					90	1		54	CMP	N/A
						17a	108					432	1	8	4	RCB	24
						17b	51					204	1		72	CMP	N/A
						17c	102					408	1	8	4	RCB	24
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35			114				4.0					
						17d - Mt Vernon Cyn	72					288	1		66	CMP	N/A
						18a	137	4000	400	10%	246	548	1	6	6	RCB	24
						18 b	137				246	548	1	6	6	RCB	24
						13a	193	5000	700	14%	346	772	1	8	6	RCB	28
						13b	63	3000	600	20%	153	252	1		78	CMP	N/A
						13c	63				153	252	1		78	CMP	N/A
						13d	63				153	252	1		78	CMP	N/A
						11a - Bear Gulch	225	4000	300	8%	467	900	1	8	8	RCB	32
						11b	25	1000	120	12%	74	98	1		54	CMP	N/A
						11c	25				74	98	1		54	CMP	N/A
						10a	22	1000	120	12%	66	88	1		54	CMP	N/A
3	**Chief Hosa to Evergreen**	3	1.0	150	0			114				4.0					
						15a - Cold Spring Gulch	90					360	1	6	5	RCB	22
						15b	11					44	1		42	CMP	N/A
						15c - Swede Gulch	60					240	1	5	4	RCB	18

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain	Size			CMP / RCB	RCB Conc (sf)
4	**Evergreen to Floyd Hill**	2	5.0	140	35							4.0					
						16a	49					196	1		72	CMP	N/A
						16b	18					72	1		48	CMP	N/A
						16c	315					1260	1	10	8	RCB	36
						16d	181					724	1	8	6	RCB	28
						16e	10					40	1		42	CMP	N/A
						8a	33					132	1		60	CMP	N/A
						8b	47					188	1		66	CMP	N/A
						8c	6					24	1		36	CMP	N/A
						8d - Soda Creek											N/A
						7a	38					150	1		66	CMP	N/A
						7b	38					150	1		66	CMP	N/A
						7c	38					150	1		66	CMP	N/A
						7d	38					150	1		66	CMP	N/A
						12a - Beaver Brook											N/A
						12b	12					48	1		42	CMP	N/A
						12c	93					372	1	6	5	RCB	22
						12d	54					216	1		72	CMP	N/A
5	**Floyd Hill to US 6**	3	2.5	95	0			118				4.0					
						2a	51					204	1		72	CMP	N/A
						2b	42					168	1		66	CMP	N/A
						2c	108	4000	1600	40%	271	432	1	8	4	RCB	24
						3a	107					428	1	8	4	RCB	24
						3b	35					140	1		60	CMP	N/A
						3c	10					40	1		42	CMP	N/A
						3d - Johnson Gulch	918	10000	2200	22%	1381	3672	4	8	8	RCB	128
						34a	38					152	1		66	CMP	N/A
						34b	38					152	1		66	CMP	N/A
						34c - Clear Creek Br.											N/A
6	**US 6 to Tunnel**	4	2.0	100	20			118				4.0					
						34d	37					148	1		66	CMP	N/A
						33a	37					148	1		66	CMP	N/A
						33b	134	4000	1200	30%	307	536	1	6	6	RCB	24
						33c - Clear Creek Br.											N/A
						32a - Clear Creek Br.											N/A
						32b	447					1788	2	8	8	RCB	64

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain	Size			CMP / RCB	RCB Conc (sf)
7	**Tunnel to Idaho Springs**	3	3.0	80	0							4.0					
						31a	154					616	1	8	6	RCB	28
						31b - Clear Creek Br.											N/A
						31c	1385					5540	5	8	8	RCB	160
						31d	110					440	1	6	6	RCB	24
						31e	110					440	1	6	6	RCB	24
						36a	123					492	1	6	6	RCB	24
						36b	123					492	1	6	6	RCB	24
						36c - Soda Creek											N/A
						36d -Clear Creek Br.											N/A
						35a - Clear Creek Br.											N/A
						35b	65					258	1		78	CMP	N/A
						35c	65					258	1		78	CMP	N/A
						35d	65					258	1		78	CMP	N/A
						35e	65					258	1		78	CMP	N/A
8	**Idaho Springs to Dumont**	5	4.0	100	20							4.0					
						34a - Hukill Gulch	184					736	1	8	6	RCB	28
						34b	15					60	1		48	CMP	N/A
						34c -Georgia Gulch	156					624	1	8	6	RCB	28
						34d - Oro Gulch	103					412	1	6	5	RCB	22
						27a	5					20	1		30	CMP	N/A
						27b - Hoosac Gulch	176					704	1	8	6	RCB	28
						28a - Fall River											N/A
						28b	33					133	1		60	CMP	N/A
						28c	33					133	1		60	CMP	N/A
						28d	33					133	1		60	CMP	N/A
						28e	33					133	1		60	CMP	N/A
						28f	33					133	1		60	CMP	N/A
						29g	33					133	1		60	CMP	N/A
						29a - Spring Gulch	1153					4612	3	10	8	RCB	108
						29b	67					266	1		78	CMP	N/A
						29c	67					266	1		78	CMP	N/A
						29d	72					286	1		78	CMP	N/A
						29e	72					286	1		78	CMP	N/A

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain	Size			CMP / RCB	RCB Conc (sf)
9	**Dumont to Empire Pass**	4	5.0	100	20							4.0					
						30a - Mill Creek											N/A
						30b	29					116	1		60	CMP	N/A
						25a	175					700	1	8	6	RCB	28
						25b	148					592	1	8	6	RCB	28
						28a	414					1656	2	8	8	RCB	64
						28b	535					2140	2	8	8	RCB	64
						27a - Clear Creek											N/A
						27b - WB I70	54					216	1		72	CMP	N/A
						27c - WB I70	96					384	1	6	5	RCB	22
						27d - Clear Creek Br.											N/A
						27e - West Fork Clear Creek Br.											N/A
						27f - Clear Creek Br.											N/A
						34a - Clear Creek											N/A
						34b	45					180	1		66	CMP	N/A
						33a	31					124	1		60	CMP	N/A
						33b	31					124	1		60	CMP	N/A
						33c	31					124	1		60	CMP	N/A
						33d	31					124	1		60	CMP	N/A
10	**Empire Pass to Georgetown**	5	2.0	105	25							4.0					
						33e	57					228	1		72	CMP	N/A
						5a	57					228	1		72	CMP	N/A
						5b	57					228	1		72	CMP	N/A
						5c	57					228	1		72	CMP	N/A
						5d	79					315	1	6	5	RCB	22
						5e	79					315	1	6	5	RCB	22
						5f	79					315	1	6	5	RCB	22
						5g	79					315	1	6	5	RCB	22
						8a	79					315	1	6	5	RCB	22
						8b	79					315	1	6	5	RCB	22
						8c	79					315	1	6	5	RCB	22
						8d - Silver Gulch	660					2640	3	8	8	RCB	96
11	**Georgetown to Silver Plume**	3	3.0	80	0							4.0					
						8e	122					488	1	6	6	RCB	24
						17a	268					1070	1	10	6	RCB	32
						17b	268					1070	1	10	6	RCB	32
						18a	36					144	1		66	CMP	N/A
						18b - Clear Creek											N/A
						24a	321					1284	2	8	6	RCB	56
						24b	138					552	1	8	6	RCB	28
						24c - Clear Creek											N/A
						24d - Clear Creek											N/A

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain	Size			CMP / RCB	RCB Conc (sf)
12	**Silver Plume to Loveland Ski**	4	8.0	100	20							4.0					
						14a - Brown Gulch	824					3296	3	8	8	RCB	96
						14b	86					344	1	6	5	RCB	22
						14c - Pinkerton Gulch	294					1176	1	8	6	RCB	28
						14d - Cloud Gulch	261					1044	1	8	6	RCB	28
						15a	126					504	1	6	6	RCB	24
						22a - Thompson Gulch	939					3756	4	8	8	RCB	128
						21a	146					584	1	8	6	RCB	28
						21b	76					304	1		78	CMP	N/A
						16a	460					1840	2	8	8	RCB	64
						16b	51					204	1		72	CMP	N/A
						20a	24					96	1		54	CMP	N/A
						20b	850					3400	3	8	8	RCB	96
						20c	54					216	1		72	CMP	N/A
						20d	171					684	1	8	6	RCB	28
						19a	498					1992	2	8	8	RCB	64
						18a	267					1068	1	8	8	RCB	32
						13a - Watrous Gulch	1177					4708	5	8	8	RCB	160
						13b	178					712	1	8	6	RCB	28
						13c - Herman Gulch	2178					8712	8	8	8	RCB	256
						14a	271					1084	1	8	8	RCB	32
						14b - Dry Gulch	2327					9308	1	8	8	RCB	32
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0							3.5					
						22a	103					361	1	6	5	RCB	22
						21a	624					2184	2	8	8	RCB	64
						30a - Straight Creek	831					2909	3	8	8	RCB	96
						30b	40					139	1		60	CMP	N/A
						30c	40					139	1		60	CMP	N/A
						30d	40					139	1		60	CMP	N/A
						30e	40					139	1		60	CMP	N/A
						30f	40					139	1		60	CMP	N/A
						25a	40					139	1		60	CMP	N/A
						25b	40					139	1		60	CMP	N/A
						25c	576					2016	2	8	8	RCB	64
						25d	33					114	1		60	CMP	N/A
						25e	33					114	1		60	CMP	N/A
						26a-Hamilton Gulch	894					3129	3	8	8	RCB	96
						26b	43					151	1		66	CMP	N/A
						26c	43					151	1		66	CMP	N/A
						35a	154					539	1	6	6	RCB	24
						35b	14					49	1		42	CMP	N/A

I-70 Mountain C Rogers 12/13/2013
Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Major Crossing (see USGS topo drawings)											
						Section No. east-west = a-z	Area (ac)	SFact (20sc) HL (ft)	Height (ft)	Slope (%)	Q100 TR55 (cfs)	Use Average Q100 X 2 (rain	Size			CMP / RCB	RCB Conc (sf)
14	**4.5 mi north of Dillon Interchange to Dillon Interchange**	3	4.5	100	0							3.5					
						35c	52					183	1		66	CMP	N/A
						35d	52					183	1		66	CMP	N/A
						35e	52					183	1		66	CMP	N/A
						34a	537					1880	2	8	8	RCB	64
						34b	59					207	1		72	CMP	N/A
						34c	59					207	1		72	CMP	N/A
						34d	59					207	1		72	CMP	N/A
						34e	59					207	1		72	CMP	N/A
						4a	65					228	1		72	CMP	N/A
						4b	65					228	1		72	CMP	N/A
						4c	65					228	1		72	CMP	N/A
						4d	65					228	1		72	CMP	N/A
						4e-Laskey Gulch	2435					8523	8	8	8	RCB	256
						4f	24					84	1		54	CMP	N/A
						5a	55					193	1		72	CMP	N/A
						5b	232					812	1	8	8	RCB	32
						5c-irrigation	527									CMP	N/A
						5d	204					714	1	8	6	RCB	28
						5e	204					714	1	8	6	RCB	28
						7a	204					714	1	8	6	RCB	28
						7b	63					221	1		72	CMP	N/A
			49.0														

Unit Cost	
Total Cost	

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
												Existing Culvert Rehab				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Sise (in)	CMP (100%)	Span	Rise	RCB (50%)
1	**Hogback to Mt Vernon**	1	2.5	140	35	**Prop. Rdwy W(ft)**	**140**									
							0	0	0	0		60	140			0
							0	0	0	0		60	140			0
							0	0	0	0		60	140			0
							0	0	0	0		60	140			0
							0	0	0	0			0	8	6	70
							0	0	0	0		54	140			0
							0	0	0	0		54	140			0
							0	0	0	0			0	8	4	70
							0	0	0	0		72	140			0
							0	0	0	0			0	8	4	70
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35	**Prop. Rdwy W(ft)**	**140**									
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20			0	6	6	70
						+upslope	20	20	20	20			0	6	6	70
						+upslope	20	20	20	20			0	8	6	70
						+upslope	20	20	20	20		78	140			0
						+upslope	20	20	20	20		78	140			0
						+upslope	20	20	20	20		78	140			0
						+upslope	20	20	20	20			0	8	8	70
						+upslope	20	20	20	20		54	140			0
						+upslope	20	20	20	20		54	140			0
						+upslope	20	20	20	20		54	140			0
3	**Chief Hosa to Evergreen**	3	1.0	150	0	**Prop. Rdwy W(ft)**	**150**									
						+upslope	20	20	20	20			0	6	5	75
						+upslope	20	20	20	20		42	150			0
						+upslope	20	20	20	20			0	5	4	75

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Existing Culvert Rehab				
4	Evergreen to Floyd Hill	2	5.0	140	35	Prop. Rdwy W(ft)	140									
						+upslope	20	20	20	20		72	140			0
						+upslope	20	20	20	20		48	140			0
						+upslope	20	20	20	20			0	10	8	70
						+upslope	20	20	20	20			0	8	6	70
						+upslope	20	20	20	20		42	140			0
						+upslope	20	20	20	20		60	140			0
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20		36	140			0
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20		66	140			0
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		42	140			0
						+upslope	20	20	20	20			0	6	5	70
						+upslope	20	20	20	20		72	140			0
5	Floyd Hill to US 6	3	2.5	95	0	Prop. Rdwy W(ft)	95									
						+upslope	20	20	20	20		72	95			0
						+upslope	20	20	20	20		66	95			0
						+upslope	20	20	20	20			0	8	4	47.5
						+upslope	20	20	20	20			0	8	4	47.5
						+upslope	20	20	20	20		60	95			0
						+upslope	20	20	20	20		42	95			0
						+upslope	20	20	20	20			0	8	8	190
						+upslope	20	20	20	20		66	95			0
						+upslope	20	20	20	20		66	95			0
						+upslope							0			0
6	US 6 to Tunnel	4	2.0	100	20	Prop. Rdwy W(ft)	100									
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20			0	6	6	50
							---	---	---	---			0			0
							---	---	---	---			0			0
						+upslope	20	20	20	20			0	8	8	100

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Existing Culvert Rehab				
7	**Tunnel to Idaho Springs**	3	3.0	80	0	**Prop. Rdwy W(ft)**	**80**									
						+upslope	20	20	20	20			0	8	6	40
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20			0	8	8	200
						+upslope	20	20	20	20			0	6	6	40
						+upslope	20	20	20	20			0	6	6	40
						+upslope	20	20	20	20			0	6	6	40
						+upslope	20	20	20	20			0	6	6	40
						+upslope	20	20	20	20			0			0
							---	---	---	---			0			0
							---	---	---	---			0			0
						+upslope	20	20	20	20		78	80			0
						+upslope	20	20	20	20		78	80			0
						+upslope	20	20	20	20		78	80			0
						+upslope	20	20	20	20		78	80			0
8	**Idaho Springs to Dumont**	5	4.0	100	20	**Prop. Rdwy W(ft)**	**100**									
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20		48	100			0
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	6	5	50
						+upslope	20	20	20	20		30	100			0
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20			0	10	8	150
						+upslope	20	20	20	20		78	100			0
						+upslope	20	20	20	20		78	100			0
						+upslope	20	20	20	20		78	100			0
						+upslope	20	20	20	20		78	100			0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Existing Culvert Rehab				
9	Dumont to Empire Pass	4	5.0	100	20	Prop. Rdwy W(ft)	100									
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20			0	6	5	50
							---	---	---	---			0			0
						+upslope	20	20	20	20			0			0
							---	---	---	---			0			0
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
10	Empire Pass to Georgetown	5	2.0	105	25	Prop. Rdwy W(ft)	105									
						+upslope	20	20	20	20		72	105			0
						+upslope	20	20	20	20		72	105			0
						+upslope	20	20	20	20		72	105			0
						+upslope	20	20	20	20		72	105			0
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	6	5	52.5
						+upslope	20	20	20	20			0	8	8	157.5
11	Georgetown to Silver Plume	3	3.0	80	0	Prop. Rdwy W(ft)	80									
						+upslope	20	20	20	20			0	6	6	40
						+upslope	20	20	20	20			0	10	6	40
						+upslope	20	20	20	20			0	10	6	40
						+upslope	20	20	20	20		66	80			0
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20			0	8	6	80
						+upslope	20	20	20	20			0	8	6	40
						+upslope	20	20	20	20			0			0
						+upslope	20	20	20	20			0			0

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Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Existing Culvert Rehab				
12	**Silver Plume to Loveland Ski**	4	8.0	100	20	**Prop. Rdwy W(ft)**	**100**									
						+upslope	20	20	20	20			0	8	8	150
						+upslope	20	20	20	20			0	6	5	50
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	6	6	50
						+upslope	20	20	20	20			0	8	8	200
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20		78	100			0
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		54	100			0
						+upslope	20	20	20	20			0	8	8	150
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20			0	8	8	50
						+upslope	20	20	20	20			0	8	8	250
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	8	400
						+upslope	20	20	20	20			0	8	8	50
						+upslope	20	20	20	20			0	8	8	50
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0	**Prop. Rdwy W(ft)**	**100**									
						+upslope	20	20	20	20			0	6	5	50
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20			0	8	8	150
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20		60	100			0
						+upslope	20	20	20	20			0	8	8	150
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20			0	6	6	50
						+upslope	20	20	20	20		42	100			0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

100%	50%

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	Culvert Extension (ft)						All Alternatives				
						Clear Water	A06-01 (WB HSR)	None	None	None	None	Existing Culvert Rehab				
14	4.5 mi north of Dillon Interchange to Dillon Interchange	3	4.5	100	0	Prop. Rdwy W(ft)	100									
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20		66	100			0
						+upslope	20	20	20	20			0	8	8	100
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20			0	8	8	400
						+upslope	20	20	20	20		54	100			0
						+upslope	20	20	20	20		72	100			0
						+upslope	20	20	20	20			0	8	8	50
						+upslope	20	20	20	20		0	0			0
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20			0	8	6	50
						+upslope	20	20	20	20		72	100			0
			49.0										0			0

Ave	63			7.5	6.4	
USE	66			8	6	
Rehab	60	$	247	8	6	$ 750
Rehab	Grout	$	44			
	Port	$	60			
		$	351			$ 750
	$		-	$		-

Unit Cost	
Total Cost	

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	A06-01 (WB HSR) Culvert Extension (ft)														
						36	42	48	54	60	66	72	78	5x4	6x5	6x6	8x4	8x6	8x8	10x8
1	Hogback to Mt Vernon	1	2.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Mt Vernon to Chief Hosa	2	3.5	140	35															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
3	Chief Hosa to Evergreen	3	1.0	150	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
4	Evergreen to Floyd Hill	2	5.0	140	35															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	A06-01 (WB HSR) Culvert Extension (ft)														
5	**Floyd Hill to US 6**	3	2.5	95	0															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	**US 6 to Tunnel**	4	2.0	100	20															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
7	**Tunnel to Idaho Springs**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
8	**Idaho Springs to Dumont**	5	4.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	A06-01 (WB HSR) Culvert Extension (ft)														
9	**Dumont to Empire Pass**	4	5.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
10	**Empire Pass to Georgetown**	5	2.0	105	25															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
11	**Georgetown to Silver Plume**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	A06-01 (WB HSR) Culvert Extension (ft)														
12	**Silver Plume to Loveland Ski**	4	8.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

														20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**A06-01 (WB HSR) Culvert Extension (ft)**														
14	**4.5 mi north of Dillon Interchange to Dillon Interchange**	3	4.5	100	0															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
			49.0			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						0								**0**						

Unit Cost	$ 88	$ 102	$ 117	$ 132	$ 146	$ 161	$ 175	$ 190	$ 320	$ 470	$ 570	$ 500	$ 750	$ 1,000	$ 1,250
Total Cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Total Cost $		**-**					**Total Cost $**		**-**			

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
						36	42	48	54	60	66	72	78	5x4	6x5	6x6	8x4	8x6	8x8	10x8
1	**Hogback to Mt Vernon**	1	2.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**60**	**0**	**20**	**0**	**60**	**0**	**0**	**40**	**0**	**20**	**20**	**0**
3	**Chief Hosa to Evergreen**	3	1.0	150	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
						0	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**0**	**0**	**0**
4	**Evergreen to Floyd Hill**	2	5.0	140	35															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						20	**40**	**20**	**0**	**20**	**100**	**40**	**0**	**0**	**20**	**0**	**0**	**20**	**0**	**20**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
5	**Floyd Hill to US 6**	3	2.5	95	0															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**20**	**60**	**20**	**0**	**0**	**0**	**0**	**40**	**0**	**80**	**0**
6	**US 6 to Tunnel**	4	2.0	100	20															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**40**	**0**
7	**Tunnel to Idaho Springs**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**80**	**0**	**20**	**100**	**0**
8	**Idaho Springs to Dumont**	5	4.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**20**	**0**	**120**	**0**	**0**	**80**	**0**	**20**	**0**	**0**	**60**	**0**	**60**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
9	**Dumont to Empire Pass**	4	5.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**100**	**20**	**20**	**0**	**0**	**20**	**0**	**0**	**40**	**80**	**0**
10	**Empire Pass to Georgetown**	5	2.0	105	25															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**140**	**0**	**0**	**0**	**60**	**0**
11	**Georgetown to Silver Plume**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**20**	**0**	**60**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
12	**Silver Plume to Loveland Ski**	4	8.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	**0**	**0**	**20**	**0**	**0**	**40**	**20**	**0**	**20**	**20**	**0**	**100**	**600**	**0**
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**180**	**40**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**200**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

20	30	36	32	48	64	80

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
14	**4.5 mi north of Dillon Interchange to Dillon Interchange**	3	4.5	100	0															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	**0**	**0**	**20**	**0**	**60**	**200**	**0**	**0**	**0**	**0**	**0**	**60**	**220**	**0**
			49.0			**20**	**100**	**40**	**100**	**440**	**360**	**400**	**240**	**20**	**260**	**200**	**40**	**380**	**1400**	**80**
						1700								**2380**						

Unit Cost	$ 88	$ 102	$ 117	$ 132	$ 146	$ 161	$ 175	$ 190	$ 320	$ 470	$ 570	$ 500	$ 750	$ 1,000	$ 1,250
Total Cost	$ 1,760	$ 10,200	$ 4,680	$ 13,200	$ 64,240	$ 57,960	$ 70,000	$ 45,600	$ 6,400	$ 122,200	$ 114,000	$ 20,000	$ 285,000	$ 1,400,000	$ 100,000

Total Cost $ 267,640 **Total Cost $ 2,047,600**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

														20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**														
						Culvert Extension (ft)														
						36	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**5x4**	**6x5**	**6x6**	**8x4**	**8x6**	**8x8**	**10x8**
1	**Hogback to Mt Vernon**	1	2.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**60**	**0**	**20**	**0**	**60**	**0**	**0**	**40**	**0**	**20**	**20**	**0**
3	**Chief Hosa to Evergreen**	3	1.0	150	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
						0	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**0**	**0**	**0**
4	**Evergreen to Floyd Hill**	2	5.0	140	35															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						20	**40**	**20**	**0**	**20**	**100**	**40**	**0**	**0**	**20**	**0**	**0**	**20**	**0**	**20**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)								20	30	36	32	48	64	80
5	**Floyd Hill to US 6**	3	2.5	95	0															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**20**	**60**	**20**	**0**	**0**	**0**	**0**	**40**	**0**	**80**	**0**
6	**US 6 to Tunnel**	4	2.0	100	20															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**40**	**0**
7	**Tunnel to Idaho Springs**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**80**	**0**	**20**	**100**	**0**
8	**Idaho Springs to Dumont**	5	4.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**20**	**0**	**120**	**0**	**0**	**80**	**0**	**20**	**0**	**0**	**60**	**0**	**60**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

						20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**						
						Culvert Extension (ft)						
9	**Dumont to Empire Pass**	4	5.0	100	20							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	20	0	0
						0	0	0	0	20	0	0
						0	0	0	0	0	40	0
						0	0	0	0	0	40	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**100**	**20**	**20**	**0**	**0**	**20**	**0**	**0**	**40**	**80**	**0**
10	**Empire Pass to Georgetown**	5	2.0	105	25							
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**140**	**0**	**0**	**0**	**60**	**0**
11	**Georgetown to Silver Plume**	3	3.0	80	0							
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**20**	**0**	**60**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)								20	30	36	32	48	64	80
12	**Silver Plume to Loveland Ski**	4	8.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	**0**	**0**	**20**	**0**	**0**	**40**	**20**	**0**	**20**	**20**	**0**	**100**	**600**	**0**
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**180**	**40**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**200**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
														20	30	36	32	48	64	80
14	4.5 mi north of Dillon Interchange to Dillon Interchange	3	4.5	100	0															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	**0**	**0**	**20**	**0**	**60**	**200**	**0**	**0**	**0**	**0**	**0**	**60**	**220**	**0**
			49.0			**20**	**100**	**40**	**100**	**440**	**360**	**400**	**240**	**20**	**260**	**200**	**40**	**380**	**1400**	**80**
						1700								**2380**						

Unit Cost	$ 88	$ 102	$ 117	$ 132	$ 146	$ 161	$ 175	$ 190	$ 320	$ 470	$ 570	$ 500	$ 750	$ 1,000	$ 1,250
Total Cost	$ 1,760	$ 10,200	$ 4,680	$ 13,200	$ 64,240	$ 57,960	$ 70,000	$ 45,600	$ 6,400	$ 122,200	$ 114,000	$ 20,000	$ 285,000	$ 1,400,000	$ 100,000
			Total Cost $		**267,640**					**Total Cost $**		**2,047,600**			

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

														20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**														
						Culvert Extension (ft)														
						36	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**5x4**	**6x5**	**6x6**	**8x4**	**8x6**	**8x8**	**10x8**
1	**Hogback to Mt Vernon**	1	2.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**60**	**0**	**20**	**0**	**60**	**0**	**0**	**40**	**0**	**20**	**20**	**0**
3	**Chief Hosa to Evergreen**	3	1.0	150	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
						0	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**0**	**0**	**0**
4	**Evergreen to Floyd Hill**	2	5.0	140	35															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						20	**40**	**20**	**0**	**20**	**100**	**40**	**0**	**0**	**20**	**0**	**0**	**20**	**0**	**20**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)								20	30	36	32	48	64	80
5	**Floyd Hill to US 6**	3	2.5	95	0															
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**20**	**60**	**20**	**0**	**0**	**0**	**0**	**40**	**0**	**80**	**0**
6	**US 6 to Tunnel**	4	2.0	100	20															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**40**	**0**
7	**Tunnel to Idaho Springs**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**80**	**0**	**20**	**100**	**0**
8	**Idaho Springs to Dumont**	5	4.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	**0**	**20**	**0**	**120**	**0**	**0**	**80**	**0**	**20**	**0**	**0**	**60**	**0**	**60**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

						20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**						
						Culvert Extension (ft)						
9	**Dumont to Empire Pass**	4	5.0	100	20							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	20	0	0
						0	0	0	0	20	0	0
						0	0	0	0	0	40	0
						0	0	0	0	0	40	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**100**	**20**	**20**	**0**	**0**	**20**	**0**	**0**	**40**	**80**	**0**
10	**Empire Pass to Georgetown**	5	2.0	105	25							
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**140**	**0**	**0**	**0**	**60**	**0**
11	**Georgetown to Silver Plume**	3	3.0	80	0							
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**20**	**0**	**60**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)								20	30	36	32	48	64	80
12	**Silver Plume to Loveland Ski**	4	8.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	**0**	**0**	**20**	**0**	**0**	**40**	**20**	**0**	**20**	**20**	**0**	**100**	**600**	**0**
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0															
						0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
						0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**20**	**0**	**0**	**180**	**40**	**0**	**0**	**0**	**20**	**20**	**0**	**0**	**200**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
														20	30	36	32	48	64	80
14	4.5 mi north of Dillon Interchange to Dillon Interchange	3	4.5	100	0															
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	160	0
						0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
						0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
						0	**0**	**0**	**20**	**0**	**60**	**200**	**0**	**0**	**0**	**0**	**0**	**60**	**220**	**0**
			49.0			**20**	**100**	**40**	**100**	**440**	**360**	**400**	**240**	**20**	**260**	**200**	**40**	**380**	**1400**	**80**
						1700								**2380**						

Unit Cost	$ 88	$ 102	$ 117	$ 132	$ 146	$ 161	$ 175	$ 190	$ 320	$ 470	$ 570	$ 500	$ 750	$ 1,000	$ 1,250
Total Cost	$ 1,760	$ 10,200	$ 4,680	$ 13,200	$ 64,240	$ 57,960	$ 70,000	$ 45,600	$ 6,400	$ 122,200	$ 114,000	$ 20,000	$ 285,000	$ 1,400,000	$ 100,000
			Total Cost $		**267,640**					**Total Cost $**		**2,047,600**			

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

														20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**														
						Culvert Extension (ft)														
						36	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**5x4**	**6x5**	**6x6**	**8x4**	**8x6**	**8x8**	**10x8**
1	**Hogback to Mt Vernon**	1	2.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3	**Chief Hosa to Evergreen**	3	1.0	150	0															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4	**Evergreen to Floyd Hill**	2	5.0	140	35															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)								20	30	36	32	48	64	80
5	**Floyd Hill to US 6**	3	2.5	95	0															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6	**US 6 to Tunnel**	4	2.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7	**Tunnel to Idaho Springs**	3	3.0	80	0															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8	**Idaho Springs to Dumont**	5	4.0	100	20															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

						20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**						
						Culvert Extension (ft)						
9	**Dumont to Empire Pass**	4	5.0	100	20							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**
10	**Empire Pass to Georgetown**	5	2.0	105	25							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**
11	**Georgetown to Silver Plume**	3	3.0	80	0							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

						20	30	36	32	48	64	80
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy Wex (ft)**	**Existing Median (ft)**	**None**						
						Culvert Extension (ft)						
12	**Silver Plume to Loveland Ski**	4	8.0	100	20							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0							
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	0	0	0	0	0	0
						0	**0**	**0**	**0**	**0**	**0**	**0**

I-70 Mountain C Rogers 12/13/2013

Existing Major Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy Wex (ft)	Existing Median (ft)	None														
						Culvert Extension (ft)														
														20	30	36	32	48	64	80
14	4.5 mi north of Dillon Interchange to Dillon Interchange	3	4.5	100	0															
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			49.0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						0								0						

Unit Cost	$ 88	$ 102	$ 117	$ 132	$ 146	$ 161	$ 175	$ 190	$ 320	$ 470	$ 570	$ 500	$ 750	$ 1,000	$ 1,250
Total Cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Total Cost $ - **Total Cost $ -**

I-70 Mountain C. Rogers 11/27/2013
Minor Culverts

ID	Segment	Typical Section	Length (mi)	Existing Rdwy	Existing Median					Culvert Extension (ft)									
				Wex (ft)	(ft)	No. of Locations	peak Q5	Pipe Dia (in)		A06-01 (WB HSR)		None		None		None		None	
1	**Hogback to Mt Vernon**	1	2.5	140	35				**Prop. Rdwy W(ft)**	**140**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					13			50%	170	1105	170	1105	170	1105	170	1105	170	1105
	Existing Culvert Extensions					13	8.3	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					13	8.3	24	100%	170	2210	30	390	30	390	30	390	30	390
	Proposed Inlets/outlets					130			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					52		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**1495**		**1495**		**1495**		**1495**
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35				**Prop. Rdwy W(ft)**	**140**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					18			50%	170	1530	170	1530	170	1530	170	1530	170	1530
	Existing Culvert Extensions					18	8.3	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					18	8.3	24	100%	170	3060	30	540	30	540	30	540	30	540
	Proposed Inlets/outlets					144			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					72		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**2070**		**2070**		**2070**		**2070**
3	**Chief Hosa to Evergreen**	3	1.0	150	0				**Prop. Rdwy W(ft)**	**150**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					11			50%	180	990	180	990	180	990	180	990	180	990
	Existing Culvert Extensions					11	8.3	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0	8.3	24	100%	180	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					44			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					22		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**990**		**990**		**990**		**990**
4	**Evergreen to Floyd Hill**	2	5.0	140	35				**Prop. Rdwy W(ft)**	**140**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					26			50%	170	2210	170	2210	170	2210	170	2210	170	2210
	Existing Culvert Extensions					26	8.3	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					26	8.3	24	100%	170	4420	30	780	30	780	30	780	30	780
	Proposed Inlets/outlets					208			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					104		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**2990**		**2990**		**2990**		**2990**
5	**Floyd Hill to US 6**	3	2.5	95	0				**Prop. Rdwy W(ft)**	**95**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					26			100%	110	2860	125	3250	125	3250	125	3250	125	3250
	Existing Culvert Extensions					26	8.3	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0	8.3	24	100%	110	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					104			50%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					52		24		---	---	---	---	---	---	---	---	---	---
									Subtotal		**2860**		**3250**		**3250**		**3250**		**3250**

6	**US 6 to Tunnel**	4	2.0	100	20				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					11			100%	115	1265	130	1430	130	1430	130	1430	130	1430
	Existing Culvert Extensions					11	7	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					11	7	24	100%	115	1265	30	330	30	330	30	330	30	330
	Proposed Inlets/outlets					110			50%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					44		24		---	---	---	---	---	---	---	---	---	---
									Subtotal		**2530**		**1760**		**1760**		**1760**		**1760**
7	**Tunnel to Idaho Springs**	3	3.0	80	0				**Prop. Rdwy W(ft)**	**80**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					32			100%	95	3040	110	3520	110	3520	110	3520	110	3520
	Existing Culvert Extensions					32	7	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0	7	24	100%	95	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					128			50%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					64		24		---	---	---	---	---	---	---	---	---	---
									Subtotal		**3040**		**3520**		**3520**		**3520**		**3520**
8	**Idaho Springs to Dumont**	5	4.0	100	20				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
										Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					21			100%	115	2415	130	2730	130	2730	130	2730	130	2730
	Existing Culvert Extensions					21	5.7	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					21	5.7	24	100%	115	2415	30	630	30	630	30	630	30	630
	Proposed Inlets/outlets					210			50%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					84		24		---	---	---	---	---	---	---	---	---	---
									Subtotal		**4830**		**3360**		**3360**		**3360**		**3360**
9	**Dumont to Empire Pass**	4	5.0	100	20				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					26			100%	115	2990	130	3380	130	3380	130	3380	130	3380
	Existing Culvert Extensions					26	4.5	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					26	4.5	24	100%	115	2990	30	780	30	780	30	780	30	780
	Proposed Inlets/outlets					260			50%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					104		24		---	---	---	---	---	---	---	---	---	---
									Subtotal		**5980**		**4160**		**4160**		**4160**		**4160**
10	**Empire Pass to Georgetown**	5	2.0	105	25				**Prop. Rdwy W(ft)**	**105**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					11			50%	135	742.5	135	742.5	135	742.5	135	742.5	135	742.5
	Existing Culvert Extensions					11	4.5	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					11	4.5	24	100%	135	1485	30	330	30	330	30	330	30	330
	Proposed Inlets/outlets					110			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					44		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**1072.5**		**1072.5**		**1072.5**		**1072.5**
11	**Georgetown to Silver Plume**	3	3.0	80	0				**Prop. Rdwy W(ft)**	**80**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					32			50%	110	1760	110	1760	110	1760	110	1760	110	1760
	Existing Culvert Extensions					32	4.5	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0	4.5	24	100%	110	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					128			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					64		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**1760**		**1760**		**1760**		**1760**

12	**Silver Plume to Loveland Ski**	4	8.0	100	20				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					42			50%	130	2730	130	2730	130	2730	130	2730	130	2730
	Existing Culvert Extensions					42	5.7	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					42	5.7	24	100%	130	5460	30	1260	30	1260	30	1260	30	1260
	Proposed Inlets/outlets					420			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					168		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**3990**		**3990**		**3990**		**3990**
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					32	5.1	24	50%	130	2080	130	2080	130	2080	130	2080	130	2080
	Existing Culvert Extensions					32	5.1	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0			100%	130	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					128			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					64		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**2080**		**2080**		**2080**		**2080**
14	**4.5 mi north of Dillon Interchange to Dillon Interchange**	3	4.5	100	0				**Prop. Rdwy W(ft)**	**100**		**0**		**0**		**0**		**0**	
									Const %	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty	Unit Length	Pipe Qty
	Existing Culverts					24	5.1	24	50%	130	1560	130	1560	130	1560	130	1560	130	1560
	Existing Culvert Extensions					24	5.1	24	100%	0	0	0	0	0	0	0	0	0	0
	Proposed Culverts					0			100%	130	0	30	0	30	0	30	0	30	0
	Proposed Inlets/outlets					96			100%	---	---	---	---	---	---	---	---	---	---
	Riprap Protection					48		24		---	---	---	---	---	---	---	---	---	---
									Subtotal				**1560**		**1560**		**1560**		**1560**
	Total		**49.0**								**19240**		**34058**		**34058**		**34058**		**34058**
									Unit Cost		$ 59		$ 59		$ 59		$ 59		$ 59
									Total Cost		**$ 1,135,160**		**$ 2,009,393**		**$ 2,009,393**		**$ 2,009,393**		**$ 2,009,393**

I-70 Mountain C. Rogers 11/27/2013

Minor Culverts

									A06-01 (WB HSR)		None		None		None			
ID	**Segment**	**Typical Section**	**Length (mi)**	**Existing Rdwy**	**Existing Median**				**Inlet/ outlet**	**RipRap (12 in)**	**Inlet/ outlet**	**RipRap (12 in)**	**Inlet/ outlet**	**RipRap (12 in)**	**Inlet/ outlet**	**RipRap (12 in)**	**Sediment Bays**	**Sed. Bay - Sed. Bay**
				Wex (ft)	**(ft)**	**No. of Locations**	**peak Q5**	**Pipe Dia (in)**	**(ea)**	**(sf)**	**(ea)**	**(sf)**	**(ea)**	**(sf)**	**(ea)**	**(sf)**		**(ft)**
1	**Hogback to Mt Vernon**	1	2.5	140	35													
	Existing Culverts					13			---	---	---	---	---	---	---	---	7	
	Existing Culvert Extensions					13	8.3	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					13	8.3	24	---	---	---	---	---	---	---	---	7	3500
	Proposed Inlets/outlets					130			130	---	130	---	130	---	130	---		
	Riprap Protection					52		24	---	8320	---	8320	---	8320	---	8320		
											130	**8320**	**130**	**8320**	**130**	**8320**		
2	**Mt Vernon to Chief Hosa**	2	3.5	140	35													
	Existing Culverts					18			---	---	---	---	---	---	---	---	9	
	Existing Culvert Extensions					18	8.3	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					18	8.3	24	---	---	---	---	---	---	---	---	9	4500
	Proposed Inlets/outlets					144			144	---	144	---	144	---	144	---		
	Riprap Protection					72		24	---	11520	---	11520	---	11520	---	11520		
											144	**11520**	**144**	**11520**	**144**	**11520**		
3	**Chief Hosa to Evergreen**	3	1.0	150	0													
	Existing Culverts					11			---	---	---	---	---	---	---	---	6	
	Existing Culvert Extensions					11	8.3	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0	8.3	24	---	---	---	---	---	---	---	---	0	3000
	Proposed Inlets/outlets					44			44	---	44	---	44	---	44	---		
	Riprap Protection					22		24	---	3520	---	3520	---	3520	---	3520		
											44	**3520**	**44**	**3520**	**44**	**3520**		
4	**Evergreen to Floyd Hill**	2	5.0	140	35													
	Existing Culverts					26			---	---	---	---	---	---	---	---	13	
	Existing Culvert Extensions					26	8.3	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					26	8.3	24	---	---	---	---	---	---	---	---	13	6500
	Proposed Inlets/outlets					208			208	---	208	---	208	---	208	---		
	Riprap Protection					104		24	---	16640	---	16640	---	16640	---	16640		
											208	**16640**	**208**	**16640**	**208**	**16640**		
5	**Floyd Hill to US 6**	3	2.5	95	0													
	Existing Culverts					26			---	---	---	---	---	---	---	---	13	
	Existing Culvert Extensions					26	8.3	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0	8.3	24	---	---	---	---	---	---	---	---	0	6500
	Proposed Inlets/outlets					104			52	---	52	---	52	---	52	---		
	Riprap Protection					52		24	---	8320	---	8320	---	8320	---	8320		
									52	**8320**	**52**	**8320**	**52**	**8320**	**52**	**8320**	**13**	**6500**
6	**US 6 to Tunnel**	4	2.0	100	20													
	Existing Culverts					11			---	---	---	---	---	---	---	---	6	
	Existing Culvert Extensions					11	7	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					11	7	24	---	---	---	---	---	---	---	---	6	3000
	Proposed Inlets/outlets					110			55	---	55	---	55	---	55	---		
	Riprap Protection					44		24	---	7040	---	7040	---	7040	---	7040		
									55	**7040**	**55**	**7040**	**55**	**7040**	**55**	**7040**	**12**	**3000**
7	**Tunnel to Idaho Springs**	3	3.0	80	0													
	Existing Culverts					32			---	---	---	---	---	---	---	---	16	
	Existing Culvert Extensions					32	7	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0	7	24	---	---	---	---	---	---	---	---	0	8000
	Proposed Inlets/outlets					128			64	---	64	---	64	---	64	---		
	Riprap Protection					64		24	---	10240	---	10240	---	10240	---	10240		
									64	**10240**	**64**	**10240**	**64**	**10240**	**64**	**10240**	**16**	**8000**

8	**Idaho Springs to Dumont**	5	4.0	100	20													
	Existing Culverts					21			---	---	---	---	---	---	---	---	11	
	Existing Culvert Extensions					21	5.7	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					21	5.7	24	---	---	---	---	---	---	---	---	11	5500
	Proposed Inlets/outlets					210			105	---	105	---	105	---	105	---		
	Riprap Protection					84		24	---	13440	---	13440	---	13440	---	13440		
									105	**13440**	**105**	**13440**	**105**	**13440**	**105**	**13440**	**22**	**5500**
9	**Dumont to Empire Pass**	4	5.0	100	20													
	Existing Culverts					26			---	---	---	---	---	---	---	---	13	
	Existing Culvert Extensions					26	4.5	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					26	4.5	24	---	---	---	---	---	---	---	---	13	6500
	Proposed Inlets/outlets					260			130	---	130	---	130	---	130	---		
	Riprap Protection					104		24	---	16640	---	16640	---	16640	---	16640		
									130	**16640**	**130**	**16640**	**130**	**16640**	**130**	**16640**	**26**	**6500**
10	**Empire Pass to Georgetown**	5	2.0	105	25													
	Existing Culverts					11			---	---	---	---	---	---	---	---	6	
	Existing Culvert Extensions					11	4.5	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					11	4.5	24	---	---	---	---	---	---	---	---	6	3000
	Proposed Inlets/outlets					110			110	---	110	---	110	---	110	---		
	Riprap Protection					44		24	---	7040	---	7040	---	7040	---	7040		
											110	**7040**	**110**	**7040**	**110**	**7040**		
11	**Georgetown to Silver Plume**	3	3.0	80	0													
	Existing Culverts					32			---	---	---	---	---	---	---	---	16	
	Existing Culvert Extensions					32	4.5	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0	4.5	24	---	---	---	---	---	---	---	---	0	8000
	Proposed Inlets/outlets					128			128	---	128	---	128	---	128	---		
	Riprap Protection					64		24	---	10240	---	10240	---	10240	---	10240		
											128	**10240**	**128**	**10240**	**128**	**10240**		
12	**Silver Plume to Loveland Ski**	4	8.0	100	20													
	Existing Culverts					42			---	---	---	---	---	---	---	---	21	
	Existing Culvert Extensions					42	5.7	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					42	5.7	24	---	---	---	---	---	---	---	---	21	10500
	Proposed Inlets/outlets					420			420	---	420	---	420	---	420	---		
	Riprap Protection					168		24	---	26880	---	26880	---	26880	---	26880		
											420	**26880**	**420**	**26880**	**420**	**26880**		
13	**Loveland Ski to 4.5 mi north of Dillon Interchange**	3	3.0	100	0													
	Existing Culverts					32	5.1	24	---	---	---	---	---	---	---	---	16	
	Existing Culvert Extensions					32	5.1	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0			---	---	---	---	---	---	---	---	0	8000
	Proposed Inlets/outlets					128			128	---	128	---	128	---	128	---		
	Riprap Protection					64		24	---	10240	---	10240	---	10240	---	10240		
											128	**10240**	**128**	**10240**	**128**	**10240**		
14	**4.5 mi north of Dillon Interchange to Dillon Interchange**	3	4.5	100	0													
	Existing Culverts					24	5.1	24	---	---	---	---	---	---	---	---	12	
	Existing Culvert Extensions					24	5.1	24	---	---	---	---	---	---	---	---		
	Proposed Culverts					0			---	---	---	---	---	---	---	---	0	6000
	Proposed Inlets/outlets					96			96	---	96	---	96	---	96	---		
	Riprap Protection					48		24	---	7680	---	7680	---	7680	---	7680		
											96	**7680**	**96**	**7680**	**96**	**7680**		
	Total		**49.0**						**406**	**55680**	**1814**	**157760**	**1814**	**157760**	**1814**	**157760**	**89**	**29500**
								Unit Cost	$ 2,200	$ 8.21	$ 2,200	$ 8.21	$ 2,200	$ 8.21	$ 2,200	$ 8.21	$ 67,800	$ 59
								Total Cost	**$ 893,200**	**$ 457,133**	**$ 3,990,800**	**$ 1,295,210**	**$ 3,990,800**	**$ 1,295,210**	**$ 3,990,800**	**$ 1,295,210**	**$ 6,034,200**	**$ 1,740,500**

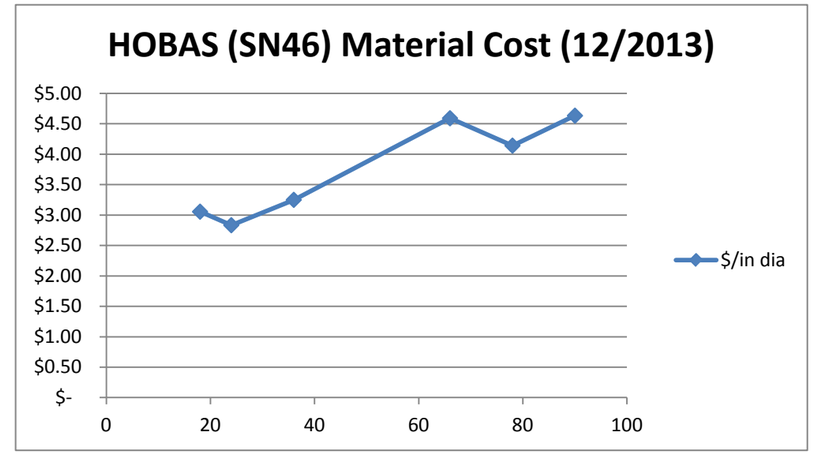
HOBAS Pipe (material) Cost
Denver, CO
12/5/2013

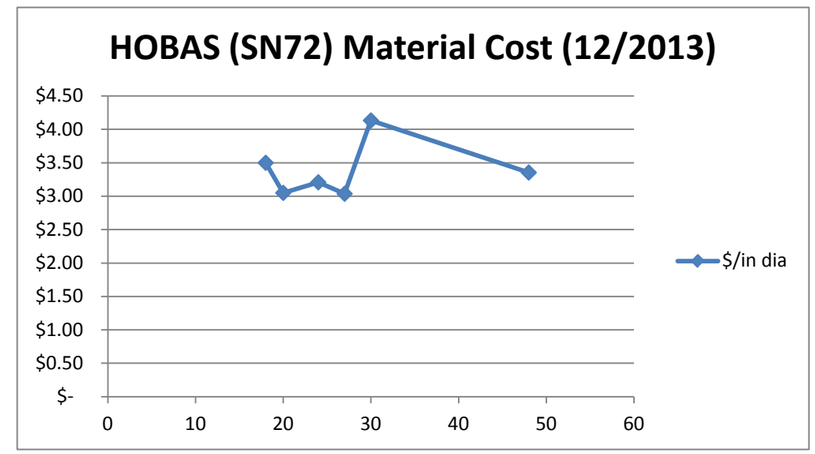
Size (in)	Item	Qty	$/LF	SN	$/in dia	Qty-$/in dia
18	CCFRPM	200	$ 55	46	$ 3.06	$ 611.11
24	CCFRPM	200	$ 68	46	$ 2.83	$ 566.67
36	CCFRPM	38	$ 117	46	$ 3.25	$ 123.50
66	CCFRPM	200	$ 303	46	$ 4.59	$ 918.18
78	CCFRPM	320	$ 323	46	$ 4.14	$ 1,325.13
90	CCFRPM	800	$ 417	46	$ 4.63	$ 3,706.67
		1758		**USE**	**$ 4.12**	**$ 7,251.25**

Size (in)	$/in dia
18	$ 3.06
24	$ 2.83
36	$ 3.25
66	$ 4.59
78	$ 4.14
90	$ 4.63

18	CCFRPM	80	$ 63	72	$ 3.50	$ 280.00
20	CCFRPM	10	$ 61	72	$ 3.05	$ 30.50
24	CCFRPM	10	$ 77	72	$ 3.21	$ 32.08
27	CCFRPM	10	$ 82	72	$ 3.04	$ 30.37
30	CCFRPM	50	$ 124	72	$ 4.13	$ 206.67
48	CCFRPM	400	$ 161	72	$ 3.35	$ 1,341.67
		560			**$ 3.43**	**$ 1,921.29**

Size (in)	$/in dia
18	$ 3.50
20	$ 3.05
24	$ 3.21
27	$ 3.04
30	$ 4.13
48	$ 3.35





CDOT 2012 Cost Data

RCP

Size (in)	Item	Item No.	Qty	Unit	$/Unit	$/in dia	Qty-$/in dia		USE $	
24	RCP	603-01245	4621	LF	$ 57.75	$ 2.41	$ 11,119		$ 59	LF
30	RCP	603-01305	4956	LF	$ 77.26	$ 2.58	$ 12,763		$ 73	LF
36	RCP	603-01365	2339	LF	$ 79.00	$ 2.19	$ 5,133		$ 88	LF
42	RCP	603-01425	626	LF	$ 88.27	$ 2.10	$ 1,316		$ 102	LF
48	RCP	603-01485	1568	LF	$ 120.00	$ 2.50	$ 3,920		$ 117	LF
			14110			**$ 2.43**	**$ 34,251**			
54	RCP			LF					$ 132	LF
60	RCP			LF					$ 146	LF
66	RCP			LF					$ 161	LF
72	RCP			LF					$ 175	LF
78	RCP			LF					$ 190	LF
84	RCP			LF					$ 204	LF
90	RCP			LF					$ 219	LF

Grout & Inlets

Size (in)	Item	Item No.	Qty	Unit	$/Unit				USE $		$/in. dia/ft
Annular Space Grout		603-00001	119	CY	$ 299				$ 300	CY	$ 0.73
Inlet Ty C (5 ft)		604-00305	36	EA	$ 2,163				$ 2,200	EA	
Inlet Ty D (5 ft)		604-00505	4	EA	$ 2,944				$ 3,000	EA	

RCB

Size (ftxft)		Item	Item No.	Qty	Unit	$/LF	$/sf	Qty-$/sf	USE $	
6	7	CBC	603-70607	72	LF	$ 660	$ 15.71	$ 1,131		
12	6	CBC	603-71206	72	LF	$ 1,117	$ 15.51	$ 1,117		
16	6	CBC	603-71606	110	LF	$ 2,900	$ 30.21			
16	8	CBC	603-71608	55	LF	$ 1,980	$ 15.47	$ 851		
				199			**$ 15.57**	**$ 3,099**		
5	4	CBC	603-70504		LF				$ 320	LF
6	5	CBC	603-70605		LF				$ 470	LF
6	6	CBC	603-70606		LF				$ 570	LF
8	4	CBC	603-70804		LF				$ 500	LF
8	6	CBC	603-70806		LF				$ 750	LF
8	8	CBC	603-70808		LF				$ 1,000	LF
10	8	CBC	603-71008		LF				$ 1,250	LF

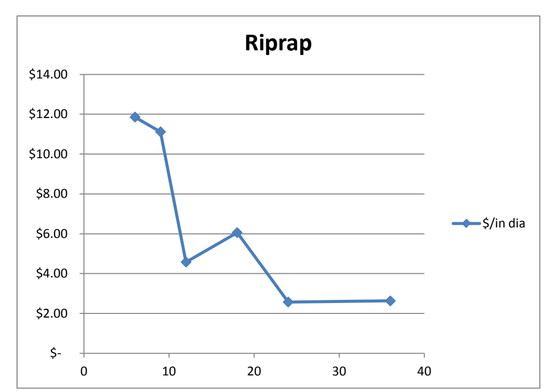
Riprap

Depth = 2 x Size

Size (in)	Item	Item No.	Qty	Unit	$/Unit	$/in dia	Qty-$/in dia	$/in dia	USE $		$/sf	
6	Riprap	506-00206	2657	CY	$ 71.15	$ 11.86	$ 31,508	11.86	$ 71	CY	$ 2.64	SF
9	Riprap	506-00209	225	CY	$ 100.07	$ 11.12	$ 2,502	10.55	$ 95	CY	$ 5.27	SF
12	Riprap	506-00212	2058	CY	$ 54.98	$ 4.58	$ 9,429	9.24	$ 111	CY	$ 8.21	SF
18	Riprap	506-00218	1471	CY	$ 109.08	$ 6.06	$ 8,914	6.62	$ 119	CY	$ 13.24	SF
24	Riprap	506-00224	12	CY	$ 61.81	$ 2.58	$ 31	4.00	$ 96	CY	$ 14.22	SF
36	Riprap	506-00236	90	CY	$ 94.71	$ 2.63	$ 237	2.63	$ 95	CY	$ 21.04	SF
			6513			**$ 8.08**	**$ 52,620**					

Size (in)	$/in dia	Equation
6	$ 11.86	11.86
9	$ 11.12	
12	$ 4.58	
18	$ 6.06	
24	$ 2.58	4
36	$ 2.63	2.63

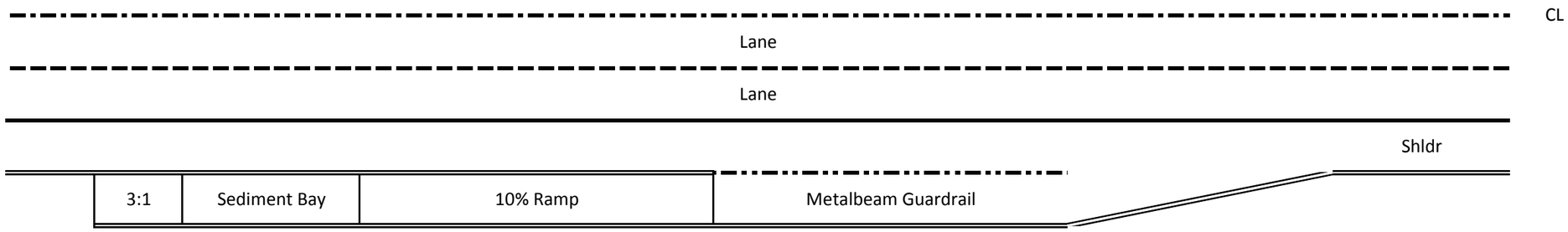
$/in dia = 11.86+(4.00-11.86)/(24-6)RipRap



Metal Beam Guardrail

Item	Item No.	Qty	Unit	$/Unit				USE $	
End Anchor Non-flared	606-02003	227	EA	$ 1,965				$ 2,000	
Bridge Rail Ty 3	606-10305	86	LF	$ 102				$ 110	
Guardrail ty 3	606-00301	111179	LF	$ 15				$ 20	

Roadside Sediment Bay



	* 50%	603-70806	* 50% of 603-70806	Br rail	Gdrl Ty 3	Anchor
Length (ft)	20	30	60	110	60	1
Unit Cost	$375	$750	$375	$110	$20	$2,000
Cost	$7,500	$22,500	$22,500	$12,100	$1,200	$2,000
Total Cost			**$67,800**			