





APPENDIX G CONCEPTUAL DESIGN INFORMATION

MASTER PLAN (
	-				
PROJECT : Boulder Creek N	DP - Reach 1				
DRAINAGEWAY : Boulder Creek					
REACH: 1A					
JURISDICTION : City of Longmor					
REACH ID: BCM-Reach1A	Jeremy Deischer		DATE :	2015-10-05	
				TOTAL	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)					
ERC Estimated Riparian Restoration <user defined="" ite<="" td=""><td>ms 1</td><td>AC</td><td>\$35,000.00</td><td>\$33,747.00</td><td>700 ft. of 30 ft each side of channel</td></user>	ms 1	AC	\$35,000.00	\$33,747.00	700 ft. of 30 ft each side of channel
Marrier D					
Capital Improvement Costs	Ian Capital Improvement Cost Su	ımmary			
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$33.747.00	
Subtotal Capital Improvement Costs				\$33,747.00	
Additional Capital Improvement Costs				\$55,747.00	
Dewatering	\$337.47	L.S.		\$337.00	
Mobilization	5%	L.O.		\$1,687.00	
Traffic Control	\$843.68	L.S.		\$844.00	
Utility Coordination/Relocation	\$843.68	L.S.		\$844.00	
Stormwater Management/Erosion Control	5%	2.0.		\$1,687.00	
Subtotal Additional Capital Improvement Costs				\$5,399.00	
Land Acquisition Costs				40,000.00	
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$5,872.00	
Legal/Administrative	5%			\$1,957.00	
Contract Admin/Construction Management	10%			\$3,915.00	
Contingency	25%			\$9,787.00	
Subtotal Other Costs		\$21,531.00			
Total Capital Improvement Costs				\$60,677.00	
				•	
Master Plan Operation					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, erosion, tree &		L.F.	\$2.00	\$280.00	
Total Annual Operation and Maintenance Cos				\$280.00	
Effective Interest Rate	<u> </u>			1.50%	
Total Operation and Maintenance Costs Over	50 Years			\$9,800.00	

UD-MPCostv2_Reach1.xlsm, BCM-Reach1A 2015-10-20, 9:14 AM

MAS						
PROJECT:	Boulder Creek MDP - Reach 1					
DRAINAGEWAY:	•					
REACH :	Boulder Creek 1B	•				
JURISDICTION :	City of Longmont					
REACH ID:	BCM-Reach1B	Jeremy Deischer		DATE :	2015-10-05	
KEACH D.	DOMPROBLEM	Coroniy Doloonor		DAIL.	2010 10 00	1
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Riverside Spillway	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$225,000.00</td><td>\$225,000.00</td><td></td></user>	1	L.S.	\$225,000.00	\$225,000.00	
	Master Plan Capital Improv	rement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$225,000.00	
Subtotal Capital Improvement Costs					\$225,000.00	
Additional Capital Improvement Co	sts					
Dewatering		\$2,250.00	L.S.		\$2,250.00	
Mobilization		5%			\$11,250.00	
Traffic Control		\$5,625.00	L.S.		\$5,625.00	
Utility Coordination/Relocation		\$5,625.00	L.S.		\$5,625.00	
Stormwater Management/Erosion Control		5%			\$11,250.00	
Subtotal Additional Capital Improvement Cos	ts				\$36,000.00	
Land Acquisition Costs					00.00	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital					\$0.00	
Other Costs (percentage of Capital Engineering	Improvement Costs)	450/			\$39.150.00	
Legal/Administrative		15%			\$39,150.00	
Contract Admin/Construction Management		5% 10%			\$13,050.00	
Contingency		25%			\$65,250.00	
Subtotal Other Costs		\$143,550.00				
Total Capital Improvement Cost	\$				\$404,550.00	
Total Supria. Improvement Gost					ψ.σ.,σσσ.σσ	
Maste	r Plan Operation and Maintenand	e Cost Summar	v			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	moval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$31.00	
Total Annual Operation and Ma	intenance Cost				\$31.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years				\$1,085.00	

UD-MPCostv2.2_Reach1.xlsm, BCM-Reach1B 2015-10-20, 9-17 AM

MAS	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH								
PROJECT :	Boulder Creek MDP - Read	ch 2							
DRAINAGEWAY:	Boulder Creek								
REACH:	2A								
JURISDICTION:	Weld County								
REACH ID:	BCM-Reach2A Jeremy Deischer DATE: 2015-10-05								
			•	•					

REACH ID:	BCM-Reach2A	Jeremy Deischer		DATE :	2015-10-05	
			I		TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)				<u>'</u>		
	<user defined="" items<="" td=""><td>5400</td><td>SF</td><td>\$250.00</td><td>\$1,350,000.00</td><td>30 ft width bridge</td></user>	5400	SF	\$250.00	\$1,350,000.00	30 ft width bridge
	<user defined="" items<="" td=""><td>3900</td><td>SF</td><td>\$50.00</td><td>\$195,000.00</td><td>130 ft x 30 ft</td></user>	3900	SF	\$50.00	\$195,000.00	130 ft x 30 ft
	Master Plan Capital Impro					
Capital Improvement Costs	-					
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00 \$1.545.000.00	
Special Items (User Defined)						
Subtotal Capital Improvement Costs Additional Capital Improvement Cos					\$1,545,000.00	
Dewatering	sts	\$15.450.00	L.S.		\$15,450,00	
Mobilization		5%	L.3.		\$15,450.00	
Traffic Control		\$38,625.00	L.S.		\$38.625.00	
Utility Coordination/Relocation		\$38,625.00	L.S.		\$38.625.00	
Stormwater Management/Erosion Control		5%	i		\$77,250.00	
Subtotal Additional Capital Improvement Cost	its				\$247,200.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$268,830.00	
Legal/Administrative		5%			\$89,610.00	
Contract Admin/Construction Management		10%			\$179,220.00	
Contingency Subtotal Other Costs		25%			\$448,050.00 \$985,710.00	
Total Capital Improvement Costs	5				\$2,777,910.00	
Master	r Plan Operation and Maintenar					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris re		30	L.F.	\$2.00 \$1,000.00	\$12.00	
	<user defined="" items<="" td=""><td>\$1,000.00</td><td></td></user>	\$1,000.00				
Total Annual Operation and Mai	intenance Cost				\$1,012.00 1.50%	
Effective Interest Rate						
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UD-MPCostv2.2_Reach2.xism. BCM-Reach2A

UD-MPCostv2.2_Reach2.xism. BCM-Reach2B

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MASTE	R PLAN COST ESTIMAT	E FOR INDIV	IDUAL RE	ACH		
PROJECT: B	oulder Creek MDP - Reach 2					
	oulder Creek					
REACH: 21						
	/eld County					•
	CM-Reach2B	Jeremy Deischer		DATE :	2015-10-05	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Modify Diversion for Aquatic Passage <u< td=""><td>Jser Defined Items</td><td>1</td><td>L.S.</td><td>\$205,000.00</td><td>\$205,000.00</td><td></td></u<>	Jser Defined Items	1	L.S.	\$205,000.00	\$205,000.00	
Capital Improvement Costs	Master Plan Capital Improv	ement Cost Su	mmary			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
lydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
andscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$205,000,00	
Subtotal Capital Improvement Costs					\$205,000.00	
Additional Capital Improvement Costs						
Dewatering		\$2,050.00	L.S.		\$2,050.00	
Mobilization		5%			\$10,250.00	
Traffic Control		\$5,125.00	L.S.		\$5,125.00	
Jtility Coordination/Relocation		\$5,125.00	L.S.		\$5,125.00	
Stormwater Management/Erosion Control		5%			\$10,250.00	
Subtotal Additional Capital Improvement Costs Land Acquisition Costs					\$32,800.00	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Impro	woment Coetel				\$0.00	
Engineering	venient costs)	15%			\$35,670.00	
_egal/Administrative		5%			\$11.890.00	
Contract Admin/Construction Management		10%			\$23,780.00	
Contingency		25%			\$59,450.00	
Subtotal Other Costs						
Total Capital Improvement Costs					\$368,590.00	
						16
Master Pla						
Description Maintenance (and date of the control of		Quantity	Unit	Unit Cost	Total Annual Cost \$122.00	
Hydraulic Structure Maintenance (e.g. debris removal,		1	EA	\$610.00		
Total Annual Operation and Mainter	nance Cost				\$122.00	
Effective Interest Rate		1.50%				

Total Operation and Maintenance Costs Over 50 Years

\$4,270.00

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MASTER PLAN COST ESTIM					
PROJECT : Boulder Creek MDP - Reach 2					
DRAINAGEWAY: Boulder Creek					
REACH: 2C					
JURISDICTION : Weld County					
REACH ID: BCM-Reach2C	Jeremy Deischer		DATE:	2015-10-05	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
Special Items (User Defined)		-			
Modify Ditch for Aquatic & Habitat Passage	1	L.S.	\$250,000.00	\$250,000.00	
Master Plan Capital Imp	provement Cost Su	mmary			
Capital Improvement Costs				60.00	
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements Detention/Water Quality Facilities				\$0.00 \$0.00	
Detention/Water Quality Facilities Removals				\$0.00	
				\$0.00	
Landscaping and Maintenance Improvements Special Items (User Defined)				\$250.000.00	
Subtotal Capital Improvement Costs				\$250,000.00	
Additional Capital Improvement Costs				\$250,000.00	
Dewatering	\$2,500.00	L.S.		\$2,500.00	
Mobilization	5%	2.0.		\$12,500.00	
Traffic Control	\$6,250.00	L.S.		\$6,250.00	
Utility Coordination/Relocation	\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control	5%	2.0.		\$12,500.00	
Subtotal Additional Capital Improvement Costs				\$40,000.00	
Land Acquisition Costs				¥ 10,000.00	
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$43,500.00	
Legal/Administrative	5%			\$14,500.00	
Contract Admin/Construction Management	10%			\$29,000.00	
Contingency	25%			\$72,500.00	
Subtotal Other Costs				\$159,500.00	
Total Capital Improvement Costs				\$449,500.00	
Master Plan Operation and Mainten					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Maintenance Cost				\$122.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$4,270.00	

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MAS	STER PLAN COST ESTIMAT	TE FOR INDIV	IDUAL RE	ACH		
PROJECT:	Boulder Creek MDP - Reach 2					
DRAINAGEWAY:	Boulder Creek		-			
REACH:	2D					-
JURISDICTION :	Weld County					-
REACH ID:	BCM-Reach2D	Jeremy Deischer		DATE :	2015-10-05	1
		•				
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Modify Ditch for Aquatic & Habitat Passage	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000.00</td><td></td></user>	1	L.S.	\$250,000.00	\$250,000.00	
	Master Plan Capital Impro	vement Cost Su	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$250,000.00	
Subtotal Capital Improvement Costs					\$250,000.00	
Additional Capital Improvement Cos	sts					
Dewatering		\$2,500.00	L.S.		\$2,500.00	
Mobilization		5%			\$12,500.00	
Traffic Control		\$6,250.00	L.S.		\$6,250.00	
Utility Coordination/Relocation		\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control		5%			\$12,500.00	
Subtotal Additional Capital Improvement Cos	sts				\$40,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$43,500.00	
Legal/Administrative		5%			\$14,500.00	
Contract Admin/Construction Management		10%			\$29,000.00	
Contingency		25%			\$72,500.00	
Subtotal Other Costs					\$159,500.00	
Total Capital Improvement Cost	s				\$449,500.00	
Maste	r Plan Operation and Maintenan	ice Cost Summai	ry			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	moval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
					A100.00	

Total Operation and Maintenance Costs Over 50 Years

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\$4,270.00

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MAS						
PROJECT :	Boulder Creek MDP - Reach 2					
DRAINAGEWAY:	Boulder Creek					
REACH:	2E					
JURISDICTION:	Weld County	Jeremy Deischer		DATE :		
REACH ID:	BCM-Reach2E	2015-10-05	<u>I</u>			
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)			<u>. </u>		<u>'</u>	
180 ft span bridge	<user defined="" items<="" td=""><td>5400</td><td>SF</td><td>\$250.00</td><td>\$1,350,000.00</td><td>30 ft width bridge</td></user>	5400	SF	\$250.00	\$1,350,000.00	30 ft width bridge
Removal of old bridge	<user defined="" items<="" td=""><td>3900</td><td>SF</td><td>\$50.00</td><td>\$195,000,00</td><td>130 ft x 30 ft</td></user>	3900	SF	\$50.00	\$195,000,00	130 ft x 30 ft
						1
	Master Plan Capital Improv	rement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$1,545,000.00	
Subtotal Capital Improvement Costs					\$1,545,000.00	
Additional Capital Improvement Co	sts					
Dewatering		\$15,450.00	L.S.		\$15,450.00	
Mobilization		5%			\$77,250.00	
Traffic Control		\$38,625.00	L.S.		\$38,625.00	
Utility Coordination/Relocation		\$38,625.00	L.S.		\$38,625.00	
Stormwater Management/Erosion Control		5%			\$77,250.00	
Subtotal Additional Capital Improvement Co-	sts				\$247,200.00	
Land Acquisition Costs						
ROW/Easements						
Subtotal Land Acquisition Costs \$0.00						
Other Costs (percentage of Capita						
Engineering	15% \$3					
Legal/Administrative		5%			\$89,610.00	
Contract Admin/Construction Management		10%			\$179,220.00	
Contingency		25%			\$448,050.00	
Subtotal Other Costs					\$985,710.00	
Total Capital Improvement Cost	s				\$2,777,910.00	

Total Operation and Maintenance Costs Over 50 Years

\$35,420.00

UD-MPCostv2.2_Reach2.xlsm, BCM-Reach2E 2015-10-20, 9:26 AM

MA	STER PLAN COST ESTIMAT	E FOR INDIV	IDUAL RE	ACH		
PROJECT:						
DRAINAGEWAY:	Boulder Creek MDP - Reach 2 Boulder Creek					
	2F					
REACH:	-					
JURISDICTION :	Weld County	Jeremy Deischer		DATE	2015-10-05	1
REACH ID:	BCM-Reach2F	Jeremy Deischer		DATE :	2015-10-05	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
Riverbank Spillway	<user defined="" items<="" td=""><td>20</td><td>L.S.</td><td>\$225,000.00</td><td>\$4,500,000.00</td><td></td></user>	20	L.S.	\$225,000.00	\$4,500,000.00	
Lateral Spillway	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$225,000.00</td><td>\$225,000.00</td><td></td></user>	1	L.S.	\$225,000.00	\$225,000.00	
	Master Plan Capital Improv	ement Cost Su	mmarv			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$4,725,000.00	
Subtotal Capital Improvement Costs					\$4,725,000.00	
Additional Capital Improvement Co	ests					
Dewatering		\$47,250.00	L.S.		\$47,250.00	
Mobilization		5%			\$236,250.00	
Traffic Control		\$118,125.00	L.S.		\$118,125.00	
Utility Coordination/Relocation		\$118,125.00	L.S.		\$118,125.00	
Stormwater Management/Erosion Control		5%			\$236,250.00	
Subtotal Additional Capital Improvement Co	sts				\$756,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capita	I Improvement Costs)					
Engineering		15%			\$822,150.00	
Legal/Administrative		5%			\$274,050.00	
Contract Admin/Construction Management		10%			\$548,100.00	
Contingency		25%			\$1,370,250.00	
Subtotal Other Costs					\$3,014,550.00	
Total Capital Improvement Cos	ts				\$8,495,550.00	
						ir
	er Plan Operation and Maintenance					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	emoval, erosion, structural repairs, etc.)	21	EA	\$610.00	\$641.00	
Total Annual Operation and Ma	nintenance Cost				\$641.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years				\$22,435.00	

UD-MPCostv2.2_Reach2.xlsm, BCM-Reach2F 2015-10-20, 9:26 AM

MAST						
PROJECT:	Boulder Creek MDP - Reach 2					
DRAINAGEWAY:	Boulder Creek					
REACH:	2G					-
JURISDICTION :	Weld County					
REACH ID:	BCM-Reach2G	Jeremy Deischer		DATE:	2015-10-05	
_				•		•
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)		GOARTITI	Oltil	01411 0001	0001	OCEN COMMENTO
	User Defined Items	2000	L.F.	\$133.00	\$266,000,00	
	User Defined Items	2000	AC			200 ft an each alst of these
ERC Riparian Restoration <-	User Defined Items	18	AC	\$35,000.00	\$642,792.00	200 ft. on each side of river
	Master Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs	master riall Capital Impro	vement cost out	IIIIai y			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$908,792.00	
Subtotal Capital Improvement Costs					\$908,792.00	
Additional Capital Improvement Costs						
Dewatering		\$9,087.92	L.S.		\$9,088.00	
Mobilization		5%			\$45,440.00	
Traffic Control		\$22,719.80	L.S.		\$22,720.00	
Utility Coordination/Relocation		\$22,719.80	L.S.		\$22,720.00	
Stormwater Management/Erosion Control		5%			\$45,440.00	
Subtotal Additional Capital Improvement Costs					\$145,408.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Im	provement Costs)					
Engineering		15%			\$158,130.00	
Legal/Administrative		5%			\$52,710.00	
Contract Admin/Construction Management		10%			\$105,420.00	
Contingency		25%			\$263,550.00 \$579,810.00	
Subtotal Other Costs						
Total Capital Improvement Costs					\$1,634,010.00	
Master F	Master Plan Operation and Maintenance Cost Summary					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris remo	oval, erosion, tree & weed removal, etc.)	2000	L.F.	\$2.00	\$800.00	
Total Annual Operation and Main		, , , , ,			\$800.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenance Costs Over 50 Years					\$28,000,00	i

UD-MPCostv2.2_Reach2.xlsm, BCM-Reach2G 2015-10-20, 9:26 AM

MAS						
PROJECT:						
DRAINAGEWAY:	Boulder Creek MDP - Reach 3 Boulder Creek					
REACH:	3A					
JURISDICTION :	Weld County					-
REACH ID:	BCM-Reach3A	Jeremy Deischer		DATE :	2015-10-05	1
REACH ID:	DOM-REGUISA	Jerenny Delactier		DATE.	2013-10-03	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
ERC Stream Restoration	<user defined="" items<="" td=""><td>2000</td><td>L.F</td><td>\$135.00</td><td>\$270,000.00</td><td></td></user>	2000	L.F	\$135.00	\$270,000.00	
ERC Riparian Restoration	<user defined="" items<="" td=""><td>18</td><td>AC</td><td>\$35,000.00</td><td>\$642,792.00</td><td>200 ft. on each side of stream</td></user>	18	AC	\$35,000.00	\$642,792.00	200 ft. on each side of stream
						N
	Master Plan Capital Impro	vement Cost Sui	mmary			
Capital Improvement Costs Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
					\$0.00	
Channel Improvements Detention/Water Quality Facilities					\$0.00	
					\$0.00	
Removals Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$912,792.00	
Subtotal Capital Improvement Costs					\$912,792.00	
Additional Capital Improvement Co	oto.				\$912,792.00	
Dewatering	515	\$9,127.92	L.S.		\$9,128.00	
Mobilization		5%			\$45,640.00	
Traffic Control		\$22,819.80	L.S.		\$22,820.00	
Utility Coordination/Relocation		\$22,819.80	L.S.		\$22.820.00	
Stormwater Management/Erosion Control		5%			\$45,640.00	
Subtotal Additional Capital Improvement Cos	sts				\$146,048.00	
Land Acquisition Costs					***************************************	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capita	Improvement Costs)					
Engineering	· ·	15%			\$158,826.00	
Legal/Administrative		5%			\$52,942.00	
Contract Admin/Construction Management		10%			\$105,884.00	
Contingency		25%			\$264,710.00	
Subtotal Other Costs						
Total Capital Improvement Cost	s				\$1,641,202.00	
Maste	r Plan Operation and Maintenan	ce Cost Summar				
Description	·	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris re	emoval, erosion, tree & weed removal, etc.)	2000	L.F.	\$2.00	\$800.00	
Total Annual Operation and Ma	intenance Cost			<u> </u>	\$800.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years				\$28,000.00	
· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>			<u> </u>	

UD-MPCostv2.2_Reach3.xlsm, BCM-Reach3A 2015-10-20, 9:28 AM

MASTER PLAN CO					
PROJECT : Boulder Creek MDP	Reach 3				
DRAINAGEWAY: Boulder Creek	- Neach 3				
REACH: 3B					
JURISDICTION : Weld County					
REACH ID: BCM-Reach3B	Jeremy Deischer		DATE:	2015-10-05	
NEAGH D. BOW ROLLING			DAIL.	100000	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
Special Items (User Defined)	207.11111	0.1	0.1 000.		00211 001111121110
Riverside Spillway <user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$225,000.00</td><td>\$225,000.00</td><td></td></user>	1	EA	\$225,000.00	\$225,000.00	
	Capital Improvement Cost Su	mmary			
Capital Improvement Costs				****	
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements Detention/Water Quality Facilities				\$0.00 \$0.00	
Removals				\$0.00	
				\$0.00	
Landscaping and Maintenance Improvements Special Items (User Defined)				\$225,000,00	
Subtotal Capital Improvement Costs				\$225,000.00	
Additional Capital Improvement Costs				\$225,000.00	
Dewatering	\$2,250.00	L.S.		\$2,250,00	
Mobilization	5%	2.0.		\$11,250.00	
Traffic Control	\$5,625.00	L.S.		\$5,625.00	
Utility Coordination/Relocation	\$5,625.00	L.S.		\$5,625.00	
Stormwater Management/Erosion Control	5%			\$11,250.00	
Subtotal Additional Capital Improvement Costs				\$36,000.00	
Land Acquisition Costs				400,000.00	
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$39,150.00	
Legal/Administrative	5%			\$13,050.00	
Contract Admin/Construction Management	10%			\$26,100.00	
Contingency	25%			\$65,250.00	
Subtotal Other Costs	\$143,550.00				
Total Capital Improvement Costs	\$404,550.00				
	nd Maintenance Cost Summar				
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural re	pairs, etc.) 1	EA	\$610.00	\$31.00	
Total Annual Operation and Maintenance Cost				\$31.00	
Effective Interest Rate	<u> </u>			1.50%	
Total Operation and Maintenance Costs Over 50	/ears			\$1,085.00	

UD-MPCostv2_Reach3.xlsm, BCM-Reach3B 2015-10-20, 9:29 AM

MA	STER PLAN COST ESTIMAT	E FOR INDIV	IDUAL RE	ACH		
PROJECT:	Boulder Creek MDP - Reach 4					
DRAINAGEWAY:	Boulder Creek					
REACH:	4A					
JURISDICTION :	Weld County					
REACH ID:	BCM-Reach4A	Jeremy Deischer		DATE :	2015-10-05	1
REACH ID.	DOMPREGUINA	Jerenny Delactier		DATE.	2013-10-03	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Modify Ditch for Aquatic & Habitat Passage	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000.00</td><td></td></user>	1	L.S.	\$250,000.00	\$250,000.00	
	Mantan Blan Canital Income					
Capital Improvement Costs	Master Plan Capital Improv	ement Cost Su	mmary			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$250,000,00	
Subtotal Capital Improvement Costs					\$250,000.00	
Additional Capital Improvement Co	sete				\$2.50,000.00	
Dewatering	313	\$2,500.00	L.S.		\$2,500.00	
Mobilization		5%	L.U.		\$12,500.00	
Traffic Control		\$6,250,00	L.S.		\$6,250.00	
Utility Coordination/Relocation		\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control		5%	2.0.		\$12,500.00	
Subtotal Additional Capital Improvement Co	sts	0,0			\$40,000.00	
Land Acquisition Costs	5.0				\$40,000.00	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capita	I Improvement Costs)					
Engineering		15%			\$43,500.00	
Legal/Administrative		5%			\$14,500.00	
Contract Admin/Construction Management		10%			\$29,000.00	
Contingency		25%			\$72,500.00	
Subtotal Other Costs						
Total Capital Improvement Cos	ts	\$449,500.00				
						*
Maste	er Plan Operation and Maintenand	e Cost Summai	ry			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	emoval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Ma	intenance Cost				\$122.00	
Effective Interest Rate					1.50%	

\$4,270.00

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2, Reach4-yism, BCM-Reach4A 2015-10-20, 9:33 AM

MA	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH									
MINOTERY EARLY GOOT ESTIMATE FOR INDIVIDUAL REAGIN										
PROJECT :	Boulder Creek MDP - Re	each 4								
DRAINAGEWAY:	Boulder Creek	Boulder Creek								
REACH:	4B	4B								
JURISDICTION:	Boulder County									
REACH ID:	BCM-Reach4B	Jeremy Deischer		DATE:	2015-10-05					
					TOTAL					

DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
		QUANTITY	UNII	UNII COST	COST	USER COMMENTS
Channel Improvements						
Soil Riprap, Type M		178	C.Y.	\$85.00	\$15,111.00	400 L.F. of Right Bank stabilization
Landscaping and Maintenance Im	provements					
Reclamation & seeding (native grasses)		0	ACRE	\$1,219.00	\$305.00	
Special Items (User Defined)						
180 ft. span bridge at County Line road <	User Defined Items	7200	S.F.	\$250.00	\$1,800,000.00	40 ft width
	User Defined Items	4800	S.F.	\$50.00	\$240,000.00	120 ft x 40 ft.
			•			
	Master Plan Capital Impro	vement Cost Su	mmary			
Capital Improvement Costs	master i lan Gapitar impre	venient oost ou	типси у			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$15,111,00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$305.00	
Special Items (User Defined)					\$2,040,000.00	
Subtotal Capital Improvement Costs						
Additional Capital Improvement Costs					\$2,055,416.00	
Dewatering		\$20,554,16	L.S.		\$20,554.00	
Mobilization		5%			\$102,771.00	
Traffic Control		\$51,385.40	L.S.		\$51,385.00	
Utility Coordination/Relocation		\$51,385.40	L.S.		\$51,385.00	
Stormwater Management/Erosion Control		5%			\$102,771.00	
Subtotal Additional Capital Improvement Costs					\$328,866,00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Imp	provement Costs)					
Engineering		15%			\$357,642.00	
Legal/Administrative		5%			\$119,214.00	
Contract Admin/Construction Management		10%			\$238,428.00	
Contingency		25%			\$596,071.00	
Subtotal Other Costs					\$1,311,355.00	
Total Capital Improvement Costs					\$3,695,637.00	
Master P	Plan Operation and Maintenan	ce Cost Summar	У			
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris remo	wal, erosion, tree & weed removal, etc.)	40	L.F.	\$2.00	\$16.00	
	User Defined Items	1	EA	\$800.00	\$800.00	
Total Annual Operation and Maint	tenance Cost				\$816.00	
Effective Interest Rate						
Total Operation and Maintenance Costs Over 50 Years						
Total Operation and Maintenance	Costs Over 50 Tears				\$28,560.00	

UD-MPCostv2_Reach4.xlsm, BCM-Reach4B 2015-10-20, 9:34 AM

PROJECT:	Boulder Creek MDP - Reach 4			
DRAINAGEWAY:	Boulder Creek			
REACH:	4B-100yr			
JURISDICTION:	Boulder County			
REACH ID:	BCM-Reach4B-100yr	Jeremy Deischer	DATE :	2015-10-05

					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements						
Excavation, Mid Range		9458	C.Y.	\$29.00	\$274,282.00	Fill required to raise roadway
Soil Riprap, Type M		178	C.Y.	\$85.00	\$15,111.00	400 L.F. RB Stabilization
Landscaping and Maintenance						
Reclamation & seeding (native grasses)		0	ACRE	\$1,219.00	\$305.00	
Special Items (User Defined)						
220 ft span bridge at County Line Road	<user defined="" items<="" td=""><td>8800</td><td>S.F.</td><td>\$250.00</td><td>\$2,200,000.00</td><td>40 ft. width</td></user>	8800	S.F.	\$250.00	\$2,200,000.00	40 ft. width
Asphalt for roadway	<user defined="" items<="" td=""><td>7022</td><td>S.Y.</td><td>\$60.00</td><td>\$421,333.00</td><td>1580 ft. of roadway construction (N side)</td></user>	7022	S.Y.	\$60.00	\$421,333.00	1580 ft. of roadway construction (N side)
Old bridge removal	<user defined="" items<="" td=""><td>4800</td><td>S.F.</td><td>\$50.00</td><td>\$240,000.00</td><td>120 ft. x 40 ft.</td></user>	4800	S.F.	\$50.00	\$240,000.00	120 ft. x 40 ft.
Master Dien Conital Improvement Cost Symmony						

Master Plan Capital Improvement Cost Summary								
Capital Improvement Costs Pipe Culverts and Storm Drains \$0.00								
			\$0.00					
			\$0.00					
			\$289,393.00					
			\$0.00					
			\$0.00					
			\$305.00					
			\$2,861,333.00					
			\$3,151,031.00					
\$31,510.31	L.S.		\$31,510.00					
5%			\$157,552.00					
\$78,775.78			\$78,776.00					
\$78,775.78	L.S.		\$78,776.00					
5%			\$157,552.00					
			\$504,166.00					
			\$0.00					
			\$0.00					
15%			\$548,280.00					
5%			\$182,760.00					
10%			\$365,520.00					
25%								
			\$2,010,359.00					
			\$5,665,556.00					
				Transfer of the control of the contr				
Master Plan Operation and Maintenance Cost Summary								
Total Annual Operation and Maintenance Cost								
Effective Interest Rate								
Total Operation and Maintenance Costs Over 50 Years								
	\$31,510.31 5% \$78,775.78 \$78,775.78 5% 5% 15% 5% 10% 25%	\$31,510,31 L.S. 5% S78,775.78 L.S. \$78,775.78 L.S. 578,775.78 L.S. 5% U.S. 5% U.S. 40 U.S. 40 U.S. 40 U.F.	\$31,510,31 LS. \$5% \$78,775.78 LS. \$78,775.78 LS. \$78,775.78 LS. \$9% 15% 5% 10% 25% unce Cost Summary Quantity Unit Unit Cost 40 LF. \$2.00	\$0.00 \$0.00				

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4B-100yr

MASTER PLAN COST ESTI					
PROJECT : Boulder Creek MDP - Reach 4					
DRAINAGEWAY: Boulder Creek					
REACH : 4C-Boulder					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach4C-Boulder	Jeremy Deischer		DATE :	2015-10-05	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)	QUANTITI	ONII	ONIT COST	0001	OSER COMMENTS
Riverbank Spillway <user defined="" items<="" td=""><td>11</td><td>L.S.</td><td>\$225,000.00</td><td>\$2,475,000.00</td><td></td></user>	11	L.S.	\$225,000.00	\$2,475,000.00	
Lateral Spillway <user defined="" items<="" td=""><td>2</td><td>L.S.</td><td>\$225,000.00</td><td>\$450,000.00</td><td></td></user>	2	L.S.	\$225,000.00	\$450,000.00	
Master Plan Capital Im	provement Cost Su	mmary			
Capital Improvement Costs					
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$2,925,000.00	
Subtotal Capital Improvement Costs				\$2,925,000.00	
Additional Capital Improvement Costs					
Dewatering	\$29,250.00	L.S.		\$29,250.00	
Mobilization	5%			\$146,250.00	
Traffic Control	\$73,125.00	L.S.		\$73,125.00	
Utility Coordination/Relocation	\$73,125.00	L.S.		\$73,125.00	
Stormwater Management/Erosion Control	5%			\$146,250.00	
Subtotal Additional Capital Improvement Costs				\$468,000.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$508,950.00	
Legal/Administrative	5%			\$169,650.00	
Contract Admin/Construction Management	10%			\$339,300.00	
Contingency	25%			\$848,250.00	
Subtotal Other Costs	\$1,866,150.00				
Total Capital Improvement Costs	\$5,259,150.00				
Master Plan Operation and Mainte					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	13	EA	\$610.00	\$397.00	
Total Annual Operation and Maintenance Cost				\$397.00	
Effective Interest Rate			<u> </u>	1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$13,895.00	

UD-MPCostv2_Reach4.xism, BCM-Reach4C-Boulder 2015-10-20, 9:36 AM

MAS	STER PLAN COST ESTIMAT	E FOR INDIV	IDUAL RE	ACH		
PROJECT:	Boulder Creek MDP - Reach 4					
DRAINAGEWAY:	Boulder Creek MDP - Reach 4 Boulder Creek					-
REACH:	4C-Weld					-
JURISDICTION :	Weld County					-
REACH ID:	BCM-Reach4C-Weld	Jeremy Deischer		DATE :	2015-10-05	1
REACH ID.	DCW-Reacti4C-VVeid	Jeremy Delaction		DATE:	2013-10-03	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
Riverbank spillway	<user defined="" items<="" td=""><td>2</td><td>L.S.</td><td>\$225,000.00</td><td>\$450,000.00</td><td></td></user>	2	L.S.	\$225,000.00	\$450,000.00	
	Master Plan Capital Improv	ement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals		\$0.00				
Landscaping and Maintenance Improvements		\$0.00				
Special Items (User Defined)					\$450,000.00	
Subtotal Capital Improvement Costs					\$450,000.00	
Additional Capital Improvement Co	sts					
Dewatering		\$4,500.00	L.S.		\$4,500.00	
Mobilization		5%			\$22,500.00	
Traffic Control		\$11,250.00	L.S.		\$11,250.00	
Utility Coordination/Relocation		\$11,250.00	L.S.		\$11,250.00 \$22,500.00	
Stormwater Management/Erosion Control		5%			. ,	
Subtotal Additional Capital Improvement Cos	sts				\$72,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital	I Improvement Costo)				\$0.00	
Other Costs (percentage of Capital	r improvement Costs)	15%			\$78,300,00	
Legal/Administrative		15%			\$78,300.00	
Contract Admin/Construction Management		10%			\$52,200.00	
Contract Admin/Construction Management Contingency		25%			\$130,500.00	
Subtotal Other Costs		2070			\$287,100.00	
Total Capital Improvement Cost	s				\$809,100.00	
Total Capital improvement Cost					ψουσ, 100.00	
Maste	r Plan Operation and Maintenance	e Cost Summar	ry			
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	moval, erosion, structural repairs, etc.)	2	EA	\$610.00	\$61.00	
Total Annual Operation and Ma	intenance Cost				\$61.00	
Effective Interest Rate	·		,	•	1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years	\$2,135.00				

UD-MPCostv2.2_Reach4.x/sm, BCM-Reach4C-Weld 2015-10-20, 9:35 AM

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH								
PROJECT :	Boulder Creek MDP - Reach	4						
DRAINAGEWAY:	Boulder Creek							
REACH:	4D							
JURISDICTION:	Boulder County							
REACH ID:	BCM-Reach4D Jeremy Deischer DATE: 2015-10-05							
		·		•				

					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements						
Soil Riprap, Type M		102	C.Y.	\$85.00	\$8,670.00	230 ft. x 6 ft. x 2 ft.
Excavation, Mid Range		188	C.Y.	\$29.00	\$5,452.00	Fill required in addition to soil riprap
Landscaping and Maintenance	Improvements					
Reclamation & seeding (native grasses)	·	1	ACRE	\$1,219.00	\$610.00	
	Master Plan Capital Improv	ement Cost Sui	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$14,122.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$610.00	
Special Items (User Defined)					\$0.00	
Subtotal Capital Improvement Costs					\$14,732.00	
Additional Capital Improvement Cos	sts					
Dewatering		\$147.32	L.S.		\$147.00	
Mobilization		5%			\$737.00	
Traffic Control		\$368.30	L.S.		\$368.00	
Utility Coordination/Relocation		\$368.30	L.S.		\$368.00	
Stormwater Management/Erosion Control		5%			\$737.00	
Subtotal Additional Capital Improvement Cos	its				\$2,357.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs						
Other Costs (percentage of Capital	Improvement Costs)					
Engineering	<u> </u>	15%			\$2,563.00	
Legal/Administrative		5%			\$854.00	
Contract Admin/Construction Management		10%			\$1,709.00	
Contingency		25%			\$4,272.00	
Subtotal Other Costs		·	•	·	\$9,398.00	
Total Canital Improvement Costs						

Total Capital Improvement Costs	\$26,487.00				
Master Plan Operation and Maintenand					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal, etc.)	230	L.F.	\$2.00	\$92.00	
Total Annual Operation and Maintenance Cost					
Effective Interest Rate					
Total Operation and Maintenance Costs Over 50 Years	Total Operation and Maintenance Costs Over 50 Years				

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4D 2015-10-20, 9:36 AM

MASTER PLAN COST ESTIMA	TE FOR INDIV	IDIIAI RE	ACH		7		
MASTER FEAR COST ESTIMA	IL I OK INDIV	IDUAL KL	ACII				
PROJECT : Boulder Creek MDP - Reach 4							
DRAINAGEWAY: Boulder Creek							
REACH: 4E							
JURISDICTION : Boulder County					-		
REACH ID: BCM-Reach4E	Jeremy Deischer		DATE :	2015-10-05			
	•				_		
				TOTAL			
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS		
Special Items (User Defined)							
Remove washed out bridge <user defined="" items<="" td=""><td>1200</td><td>S.F.</td><td>\$50.00</td><td>\$60,000.00</td><td>15 ft. x 80 ft.</td></user>	1200	S.F.	\$50.00	\$60,000.00	15 ft. x 80 ft.		
					V		
Master Plan Capital Impro	vement Cost Su	mmary					
Capital Improvement Costs							
Pipe Culverts and Storm Drains				\$0.00			
Concrete Box Culverts				\$0.00			
Hydraulic Structures				\$0.00			
Channel Improvements				\$0.00			
Detention/Water Quality Facilities				\$0.00			
Removals				\$0.00			
Landscaping and Maintenance Improvements				\$0.00			
Special Items (User Defined)				\$60,000.00			
Subtotal Capital Improvement Costs				\$60,000.00			
Additional Capital Improvement Costs							
Dewatering	\$600.00	L.S.		\$600.00			
Mobilization	5%			\$3,000.00			
Traffic Control	\$1,500.00	L.S.		\$1,500.00			
Utility Coordination/Relocation	\$1,500.00	L.S.		\$1,500.00			
Stormwater Management/Erosion Control	5%			\$3,000.00			
Subtotal Additional Capital Improvement Costs				\$9,600.00			
Land Acquisition Costs							
ROW/Easements	\$0.00						
Subtotal Land Acquisition Costs							
Other Costs (percentage of Capital Improvement Costs)							
Engineering							
Legal/Administrative	5%			\$3,480.00			
Contract Admin/Construction Management	10%			\$6,960.00			
Contingency	25%			\$17,400.00			
Subtotal Other Costs			·	\$38,280.00			
Total Capital Improvement Costs							

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4E 2015-10-20, 9:36 AM

MASTER PLAN C						
PROJECT : Boulder Creek M	DP - Reach 4					
DRAINAGEWAY: Boulder Creek	Dr - Reach 4					
REACH: 4F						
JURISDICTION : Boulder County						
REACH ID: BCM-Reach4F	Jeremy	Deischer		DATE :	2015-10-05	
NEAGTID: DOM ROBOTA	Constant			DAIL:		
					TOTAL	
DESCRIPTION	QU	ANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
ERC Estimate - New Stream <user defined="" iter<="" td=""><td>ns</td><td>1</td><td>L.S.</td><td>\$1,130,000.00</td><td>\$1,130,000.00</td><td></td></user>	ns	1	L.S.	\$1,130,000.00	\$1,130,000.00	
ERC Estimate - Riparian Restoration <user defined="" item<="" td=""><td>ns</td><td>1</td><td>L.S.</td><td>\$2,730,000.00</td><td>\$2,730,000.00</td><td></td></user>	ns	1	L.S.	\$2,730,000.00	\$2,730,000.00	
	an Capital Improvement	t Cost Sur	nmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$3,860,000.00	
Subtotal Capital Improvement Costs					\$3,860,000.00	
Additional Capital Improvement Costs						
Dewatering	\$31	8,600.00	L.S.		\$38,600.00	
Mobilization		5%			\$193,000.00	
Traffic Control	\$90	6,500.00	L.S.		\$96,500.00	
Utility Coordination/Relocation	\$96	6,500.00	L.S.		\$96,500.00	
Stormwater Management/Erosion Control		5%			\$193,000.00	
Subtotal Additional Capital Improvement Costs					\$617,600.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Improvement Costs)						
Engineering		15%			\$671,640.00	
Legal/Administrative		5%			\$223,880.00	
Contract Admin/Construction Management		10%			\$447,760.00	
Contingency		25%			\$1,119,400.00	
Subtotal Other Costs	\$2,462,680.00					
Total Capital Improvement Costs	\$6,940,280.00					
	n and Maintenance Cos					
Description		uantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, erosion, tree &	weed removal, etc.)	8500	L.F.	\$2.00	\$3,400.00	
Total Annual Operation and Maintenance Cost					\$3,400.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenance Costs Over 5	0 Years				\$118,999.00	

MACTED BLAN COOT FORMATE FOR INDIVIDUAL BEACH

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4F 2015-10-20, 9:36 AM

MAS.	TER PLAN COST ESTIMA	TE FOR INDIV	IDUAL RE	ACH			
						_	
PROJECT :	Boulder Creek MDP - Reach 4 Boulder Creek					_	
REACH:	4G					_	
JURISDICTION :	Boulder County						
REACH ID:	BCM-Reach4G	Jeremy Deischer		DATE :	2015-10-05	1	
		•				-	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS	
Channel Improvements		40					
Excavation, Mid Range		804	C.Y.	\$29.00	\$23,316,00	Cut & Haul	
Excavation, Low Range		368	C.Y.	\$13.00	\$4,784.00	Cut & Fill Onsite	
Soil Riprap, Type M		778	C.Y.	\$85.00	\$66,130.00	1050 ft. x 2 ft. x 5 ft.	
Special Items (User Defined)					,		
	User Defined Items	1	L.S.	\$250,000.00	\$250,000.00		
, , , , , , , , , , , , , , , , , , , ,				7-00,000	4-00,00000		
	Master Plan Capital Impro	vement Cost Su	mmary				
Capital Improvement Costs	master i lan Capital impre	Venicin oost ou	illinary				
Pipe Culverts and Storm Drains					\$0.00		
Concrete Box Culverts					\$0.00		
Hydraulic Structures					\$0.00		
Channel Improvements					\$94,230.00		
Detention/Water Quality Facilities					\$0.00		
Removals					\$0.00		
Landscaping and Maintenance Improvements					\$0.00		
Special Items (User Defined)					\$250,000.00		
Subtotal Capital Improvement Costs					\$344,230.00		
Additional Capital Improvement Cost	s						
Dewatering		\$3,442.30	L.S.		\$3,442.00		
Mobilization		5%			\$17,212.00		
Traffic Control		\$8,605.75	L.S.		\$8,606.00		
Utility Coordination/Relocation		\$8,605.75	L.S.		\$8,606.00		
Stormwater Management/Erosion Control		5%			\$17,212.00		
Subtotal Additional Capital Improvement Costs Land Acquisition Costs	S				\$55,078.00		
ROW/Easements					\$0.00		
Subtotal Land Acquisition Costs					\$0.00		
Other Costs (percentage of Capital In	mprovement Costs)				\$0.00		
Engineering	· · · · · · · · · · · · · · · · · · ·	15%			\$59,896.00		
Legal/Administrative		5%			\$19,965.00		
Contract Admin/Construction Management		10%			\$39,931.00		
Contingency		25%			\$99,827.00		
Subtotal Other Costs		\$219,619.00					
Total Capital Improvement Costs							
Master							
Description							
	dydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.) 1 EA \$610.00 \$122.00						
Channel Maintenance (e.g. sediment & debris rem							
Total Annual Operation and Maintenance Cost							
Effective Interest Rate					1.50%		
Total Operation and Maintenance	e Costs Over 50 Years				\$7,490.00		

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4G 2015-10-20, 9:37 AM

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH								
PROJECT :	Boulder Creek MDP - Reach	4						
DRAINAGEWAY:	Boulder Creek							
REACH:	4H							
JURISDICTION:	Boulder County							
REACH ID:	BCM-Reach4H	Jeremy Deischer	DATE :	2015-10-05				

DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
180 ft. span bridge at Kenosha Road <user def<="" td=""><td>fined Items</td><td>7200</td><td>S.F.</td><td>\$250.00</td><td>\$1,800,000.00</td><td>40 ft. Bridge width</td></user>	fined Items	7200	S.F.	\$250.00	\$1,800,000.00	40 ft. Bridge width
Old bridge removal <user def<="" td=""><td>fined Items</td><td>3600</td><td>S.F.</td><td>\$50.00</td><td>\$180,000.00</td><td>90 ft. x 40 ft.</td></user>	fined Items	3600	S.F.	\$50.00	\$180,000.00	90 ft. x 40 ft.
Mas	ster Plan Capital Improvem	ent Cost Sun	nmary			
Capital Improvement Costs	ster Fran Capital Improven	ent Cost Sun	шпагу			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
tydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$1,980,000.00	
Subtotal Capital Improvement Costs					\$1,980,000.00	
Additional Capital Improvement Costs					\$1,300,000.00	
Dewatering		\$19,800.00	L.S.		\$19,800,00	
Mobilization (Mobilization)			L.S.			
		5%			\$99,000.00	
Traffic Control		\$49,500.00	L.S.		\$49,500.00	
Utility Coordination/Relocation		\$49,500.00	L.S.		\$49,500.00	
Stormwater Management/Erosion Control		5%			\$99,000.00	
Subtotal Additional Capital Improvement Costs					\$316,800.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Improvement	: Costs)					
Engineering		15%			\$344,520.00	
Legal/Administrative		5%			\$114,840.00	
Contract Admin/Construction Management		10%			\$229,680.00	
Contingency		25%			\$574,200.00	
Subtotal Other Costs					\$1,263,240.00	
Total Capital Improvement Costs					\$3,560,040.00	
Master Plan One	eration and Maintenance (Cost Summary	,			
Description Waster Fran Ope	cration and maintenance c	Quantity	Unit	Unit Cost	Total Annual Cost	
Description Channel Maintenance (e.g. sediment & debris removal, erosion	troe 8 wood romoval ata \	40	L.F.	\$2.00	\$16.00	
Channel Maintenance (e.g. sediment & debris removal, erosion User Def		40	EA	\$2.00	\$800.00	
Total Annual Operation and Maintenance			EA	\$000.00	\$816.00	
Effective Interest Rate	5 0031				1.50%	
Total Operation and Maintenance Costs (Over 50 Years				\$28,560.00	

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4H 2015-10-20, 9:38 AM

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MASTE						
DRAINAGEWAY: B	oulder Creek MDP - Reach 4 oulder Creek					
REACH: 4						
	oulder County					
REACH ID: B	CM-Reach4I	Jeremy Deischer		DATE :	2015-10-05	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
	Jser Defined Items	1	L.S.	\$205,000,00	\$205,000,00	
						"
	Master Plan Capital Improv	ement Cost Sur	mmary			
Capital Improvement Costs	master rian capital improv	rement dost out	illinar y			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$205,000.00	
Subtotal Capital Improvement Costs					\$205,000.00	
Additional Capital Improvement Costs						
Dewatering		\$2,050.00	L.S.		\$2,050.00	
Mobilization		5%			\$10,250.00	
Traffic Control		\$5,125.00	L.S.		\$5,125.00	
Utility Coordination/Relocation		\$5,125.00	L.S.		\$5,125.00	
Stormwater Management/Erosion Control		5%			\$10,250.00	
Subtotal Additional Capital Improvement Costs					\$32,800.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Impro	ovement Costs)					
Engineering		15%			\$35,670.00	
Legal/Administrative		5%			\$11,890.00	
Contract Admin/Construction Management		10%			\$23,780.00	
Contingency		25%			\$59,450.00	
Subtotal Other Costs		\$130,790.00				
Total Capital Improvement Costs					\$368,590.00	
Manager Dia						
	n Operation and Maintenand					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal,		1	EA	\$610.00	\$122.00	
Total Annual Operation and Mainte	nance Cost				\$122.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenance C	osts Over 50 Years				\$4,270.00	

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4I 2015-10-20, 9:38 AM

						_				
MA	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH									
						•				
PROJECT :	Boulder Creek MDP - Reach 4									
DRAINAGEWAY:	Boulder Creek									
REACH:	4J	4.1								
JURISDICTION:	Boulder County	Boulder County								
REACH ID:	BCM-Reach4J	BCM-Reach4J Jeremy Deischer DATE: 2015-10-05								
						•				
					TOTAL					
DESCRIPTION		USER COMMENT								
Special Items (User Defined)										
180 ft. span bridge at 109th St.	<user defined="" items<="" td=""><td>5400</td><td>S.F.</td><td>\$250.00</td><td>\$1,350,000.00</td><td>30 ft. bridge width</td></user>	5400	S.F.	\$250.00	\$1,350,000.00	30 ft. bridge width				

Old bridge removal	<user defined="" items<="" th=""><th>2400</th><th>S.F.</th><th>\$50.00</th><th>\$120,000.00</th><th>80 ft. x 30 ft.</th></user>	2400	S.F.	\$50.00	\$120,000.00	80 ft. x 30 ft.			
Stream Restoration	<user defined="" items<="" td=""><td>1</td><td>Mile</td><td>\$575,000.00</td><td>\$350,750.00</td><td>Average of New and Existing Stream Restoration</td></user>	1	Mile	\$575,000.00	\$350,750.00	Average of New and Existing Stream Restoration			
Riparian Restoration	<user defined="" items<="" td=""><td>18</td><td>ACRE</td><td>\$35,000.00</td><td>\$623,000.00</td><td></td></user>	18	ACRE	\$35,000.00	\$623,000.00				
	Master Plan Capital Improv								
Capital Improvement Costs	<u> </u>								
Pipe Culverts and Storm Drains					\$0.00				
Concrete Box Culverts					\$0.00				
Hydraulic Structures					\$0.00				
Channel Improvements					\$0.00				
Detention/Water Quality Facilities					\$0.00				
Removals					\$0.00				
Landscaping and Maintenance Improven	nents				\$0.00				
Special Items (User Defined)					\$2,443,750.00				
Subtotal Capital Improvement Costs					\$2,443,750.00				
Additional Capital Improvem	ent Costs								
Dewatering		\$24,437.50	L.S.		\$24,438.00				
Mobilization		5%			\$122,188.00				
Traffic Control		\$61,093.75	L.S.		\$61,094.00				
Utility Coordination/Relocation		\$61,093.75	L.S.		\$61,094.00				
Stormwater Management/Erosion Contro		5%			\$122,188.00				
Subtotal Additional Capital Improvement	ent Costs				\$391,002.00				
Land Acquisition Costs									
ROW/Easements					\$0.00				
Subtotal Land Acquisition Costs					\$0.00				
Other Costs (percentage of	Capital Improvement Costs)								
Engineering		15%			\$425,213.00				
Legal/Administrative		5%			\$141,738.00				
Contract Admin/Construction Manageme	int	10%			\$283,475.00				
Contingency		25%			\$708,688.00				
Subtotal Other Costs					\$1,559,114.00				
Total Capital Improvement	Costs				\$4,393,866.00				
•									
N.	Master Plan Operation and Maintenand	ce Cost Summar	ry						
Description		Quantity	Unit	Unit Cost	Total Annual Cost				
Channel Maintenance (e.g. sediment & r	debris removal, erosion, tree & weed removal, etc.)	30	L.F.	\$2.00	\$12.00				
Bridge Maintenance <user \$800.00<="" 1="" defined="" ea="" items="" td=""><td></td></user>									
Total Annual Operation an	d Maintenance Cost				\$812.00				
Effective Interest Rate					1.50%				
Total Operation and Maintenance Costs Over 50 Years									

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4J 2015-10-20, 9:39 AM

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH PROJECT: Boulder Creek MDP - Reach 4 DRAINAGEWAY: Boulder Creek REACH: 4K JURISDICTION: Boulder County REACH ID: BCM-Reach4K Jeremy Deischer DATE: 2015-10-05 QUANTITY UNIT UNIT COST DESCRIPTION USER COMMENTS COST Special Items (User Defined) ERC Stream Restoration ERC Riparian Restoration ----User Defined Items ----User Defined Items Master Plan Capital Improvement Cost Summary Central Improvement Costs Pipe Culverts and Storm Drains Concrete Box Culvers Hydraulic Structures Channel Improvements Detention/Water Custly Facilities Removals Landscaping and Maintenance Improvements Special Items (User Delined) Subtotat Castal Improvement Costs Special Items (User Delined) \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$2,090,221,00 \$2,090,221,00 Subtotal Capital Improvement Costs Additional Capital Improvem Dewatering Mobilization \$20,902.00 \$104,511.00 \$52,256.00 \$52,256.00 \$104,511.00 \$20,902.21 L.S. 5% \$52,255.53 L.S. \$52,255.53 L.S. Mobilization Traffic Control Utility Coordination/Relocation Stormwater Management/Erosion Control Subrouland Additional Capital Improvement Costs Land Acquisition Costs \$334,4. ROW/Easements Subtotal Land Acquisition Costs Other Costs (percentage of Capital Improve \$363,699.00 \$121,233.00 \$242,466.00 Engineering Legal/Administrative Contract Admin/Construction Management Contingency Subtotal Other Costs \$606,164.00 \$1,333,562.00 Total Capital Improvement Costs \$3,758,219.00 Master Plan Operation and Maintenance Cost Summary Description Quantity Unit Unit Cost Total Annual Cost Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal, etc.) 4600 L.F. \$2.00 \$1,840.00

\$1,840.00

\$64,399.00

Total Annual Operation and Maintenance Cost

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2_Reach4.xlsm, BCM-Reach4K 2015-10-20, 9:39 AM

MASTER PLAN COST ESTIMAT	E FOR INDIV	IDUAL RE	ACH		
PROJECT : Boulder Creek MDP - Reach 5					
DRAINAGEWAY: Boulder Creek					
REACH: 5A					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach5A	Jeremy Deischer		DATE:	2015-10-05	
				TOTAL	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)					
ERC Estimated New Stream <user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$600,000.00</td><td>\$600,000.00</td><td></td></user>	1	L.S.	\$600,000.00	\$600,000.00	
ERC Estimated Riparian Restoration <user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$1,450,000.00</td><td>\$1,450,000.00</td><td></td></user>	1	L.S.	\$1,450,000.00	\$1,450,000.00	
Master Plan Capital Impro	vement Cost Su	mmary			
Capital Improvement Costs					
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$2,050,000.00	
Subtotal Capital Improvement Costs				\$2,050,000.00	
Additional Capital Improvement Costs					
Dewatering	\$20,500.00	L.S.		\$20,500.00	
Mobilization	5%			\$102,500.00	
Traffic Control	\$51,250.00	L.S.		\$51,250.00	
Utility Coordination/Relocation	\$51,250.00	L.S.		\$51,250.00	
Stormwater Management/Erosion Control	5%			\$102,500.00	
Subtotal Additional Capital Improvement Costs				\$328,000.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)		1			
Engineering	15%			\$356,700.00	
Legal/Administrative	5%			\$118,900.00	
Contract Admin/Construction Management	10%			\$237,800.00	
Contingency	25%			\$594,500.00	
Subtotal Other Costs	\$1,307,900.00				
Total Capital Improvement Costs				\$3,685,900.00	
Master Dien Oneretier I Mainten	as Cast Cum				
Master Plan Operation and Maintenan					
Description Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal, etc.)	Quantity 4500	Unit L.F.	Unit Cost \$2.00	Total Annual Cost \$1.800.00	
	4000	L.F.	\$2.00	. ,	
Total Annual Operation and Maintenance Cost Effective Interest Rate	\$1,800.00				
Total Operation and Maintenance Costs Over 50 Years				1.50% \$62,999.00	
Total Operation and Maintenance Costs Over 50 Years				ან∠,999.00	

MAGTER BY AN OOST FOTIMATE FOR INDUSTRIAL READY

UD-MPCostv2_2_Reach5_xtsm, BCM-Reach5A 2015-10-20, 9:41 AM

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PROJECT: Boulder Creek MDP - Reach 5					
DRAINAGEWAY: Boulder Creek					
REACH: 5B					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach5B	Jeremy Deischer		DATE :	2015-10-05	
	•				
				TOTAL	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)	QUANTITI	ONII	ONIT COST	0031	OSER COMMENTS
Modify Ditch for Aquatic & Habitat Passage <user defined="" items<="" td=""><td></td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000,00</td><td></td></user>		L.S.	\$250,000.00	\$250,000,00	
Modify Ditch for Aquatic & Habitat Passage < User Defined Items	1	L.S.	\$250,000.00	\$250,000.00	
Master Plan Capital Improv	ramant Cast Coo				
Capital Improvement Costs	rement Cost Sur	nmary			
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$250,000.00	
Subtotal Capital Improvement Costs				\$250,000.00	
Additional Capital Improvement Costs				\$250,000.00	
Dewatering	\$2,500.00	L.S.		\$2,500.00	
Mobilization Section 1997	\$2,500.00 5%	L.S.		\$2,500.00	
Traffic Control	\$6,250.00	L.S.		\$6,250.00	
Utility Coordination/Relocation	\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control	5%	L.O.		\$12,500.00	
Subtotal Additional Capital Improvement Costs	370			\$40,000.00	
Land Acquisition Costs				\$40,000.00	
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)				\$0.00	
Engineering	15%			\$43,500,00	
Legal/Administrative	5%			\$14.500.00	
Contract Admin/Construction Management	10%			\$29,000.00	
Contingency	25%			\$72,500.00	
Subtotal Other Costs	2070			\$159,500.00	
Total Capital Improvement Costs				\$449,500.00	
Total Suprai improvement Socie				ψ 1 10,000100	
Master Plan Operation and Maintenance					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Maintenance Cost					
Effective Interest Rate					
Total Operation and Maintenance Costs Over 50 Years				\$4,270.00	
				÷ .,=70100	

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH

UD-MPCostv2.2, Reach5.xism, BCM-Reach5B 2015-10-20, 9-41 AM

MASTER PLAN COST ESTIMA					
PROJECT : Boulder Creek MDP - Reach 5					
DRAINAGEWAY: Boulder Creek					
REACH: 5C					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach5C	Jeremy Deischer		DATE:	2015-10-05	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)	<u>·</u>				
Riverbank spillway <user defined="" items<="" td=""><td>5</td><td>L.S.</td><td>\$225,000.00</td><td>\$1,125,000.00</td><td></td></user>	5	L.S.	\$225,000.00	\$1,125,000.00	
Mantan Blan Opplied house					
Master Plan Capital Impr Capital Improvement Costs	ovement Cost Su	mmary			
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$1,125,000.00	
Subtotal Capital Improvement Costs				\$1,125,000.00	
Additional Capital Improvement Costs					
Dewatering	\$11,250.00	L.S.		\$11,250.00	
Mobilization	5%			\$56,250.00	
Traffic Control	\$28,125.00	L.S.		\$28,125.00	
Utility Coordination/Relocation	\$28,125.00	L.S.		\$28,125.00	
Stormwater Management/Erosion Control	5%			\$56,250.00	
Subtotal Additional Capital Improvement Costs				\$180,000.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%	-		\$195,750.00	
Legal/Administrative	5%			\$65,250.00	
Contract Admin/Construction Management	10% 25%			\$130,500.00	
Contingency Subtotal Other Costs	25%			\$326,250.00 \$717,750.00	
Total Capital Improvement Costs				\$2,022,750.00	
Master Plan Operation and Maintena	nce Cost Summar	v			
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	5	EA	\$610.00	\$153.00	
Total Annual Operation and Maintenance Cost				\$153.00	
Total Affiliat operation and waintenance cost \$155.00 Effective interest Rate \$1.50%					
Total Operation and Maintenance Costs Over 50 Years				\$5,355.00	
Total Operation and maintenance costs Over 30 Tears				ψυ,υυυ.υυ	

UD-MPCostv2_Reach5.xlsm, BCM-Reach5C 2015-10-20, 9-42 AM

MAS						
PROJECT: DRAINAGEWAY:	Boulder Creek MDP - Reach 5 Boulder Creek					
REACH:	5D					
JURISDICTION :	Boulder County	Jeremy Deischer			2015-10-05	
REACH ID:	BCM-Reach5D	Jeremy Deischer		DATE :	2015-10-05	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Grade Control for Acquatic & Habitat Passage	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$205,000.00</td><td>\$205,000.00</td><td></td></user>	1	L.S.	\$205,000.00	\$205,000.00	
	Master Plan Capital Improv	ement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$205,000.00	
Subtotal Capital Improvement Costs					\$205,000.00	
Additional Capital Improvement Cos	sts					
Dewatering		\$2,050.00	L.S.		\$2,050.00	
Mobilization		5%			\$10,250.00	
Traffic Control		\$5,125.00	L.S.		\$5,125.00	
Utility Coordination/Relocation		\$5,125.00	L.S.		\$5,125.00	
Stormwater Management/Erosion Control		5%			\$10,250.00	
Subtotal Additional Capital Improvement Cost Land Acquisition Costs	ts				\$32,800.00	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$35,670.00	
Legal/Administrative		5%			\$11,890.00	
Contract Admin/Construction Management		10%			\$23,780.00	
Contingency	\$59,450.00					
Subtotal Other Costs						
Total Capital Improvement Cost						
					\$368,590.00	
Master	Plan Operation and Maintenanc	e Cost Summar	ry			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris rer	moval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Mai	intenance Cost				\$122.00	
Effective Interest Rate					1.50%	

Total Operation and Maintenance Costs Over 50 Years

\$4,270.00

UD-MPCostv2_Reach5.xfsm, BCM-Reach5D 2015-10-20, 9-42 AM

MASTER						
PROJECT: Bou						
	ulder Creek					
REACH: 5E						
JURISDICTION : Bou	ulder County					
REACH ID: BCN	M-Reach5E	Jeremy Deischer		DATE:	2015-10-05	
						T
DECORIDATION		OHANTITY	LINUT	LINET COST	TOTAL	LIGER COMMENTS
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Grade Control for Acquatic & Habitat Passage <use< td=""><td>er Defined Items</td><td>2</td><td>L.S.</td><td>\$205,000.00</td><td>\$410,000.00</td><td>Two diversions DS of 95th St.</td></use<>	er Defined Items	2	L.S.	\$205,000.00	\$410,000.00	Two diversions DS of 95th St.
	Master Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs	waster Fran Capital Impro	venient cost out	ппат у			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$410,000.00	
Subtotal Capital Improvement Costs					\$410,000.00	
Additional Capital Improvement Costs						
Dewatering		\$4,100.00	L.S.		\$4,100.00	
Mobilization		5%			\$20,500.00	
Traffic Control		\$10,250.00	L.S.		\$10,250.00	
Utility Coordination/Relocation		\$10,250.00	L.S.		\$10,250.00	
Stormwater Management/Erosion Control		5%			\$20,500.00	
Subtotal Additional Capital Improvement Costs					\$65,600.00	
Land Acquisition Costs						
ROW/Easements					\$0.00 \$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital Improve	amout Cootal				\$0.00	
Engineering	ement costs)	15%			\$71,340.00	
Legal/Administrative		5%			\$23,780.00	
Contract Admin/Construction Management		10%			\$47.560.00	
Contingency		25%			\$118,900.00	
Subtotal Other Costs					\$261,580.00	
Total Capital Improvement Costs	\$737,180.00					
Tapital improvement costs					+101,100.00	
Master Plan	Operation and Maintenan	ce Cost Summar	у			
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, er	rosion, structural repairs, etc.)	2	EA	\$610.00	\$244.00	
Total Annual Operation and Maintena	ance Cost				\$244.00	
Fifective Interest Rate						
Effective Interest Rate					1.50%	

MAGTER BLAN COOT FOR MATE FOR INDUSTRIAL REACH

UD-MPCostv2.2_Reach5.xlsm, BCM-Reach5E 2015-10-20, 9:45 AM

G - 15

MAS						
	1					
PROJECT :						
DRAINAGEWAY:	Boulder Creek					
REACH:	5F					
JURISDICTION :	Boulder County					
REACH ID:	BCM-Reach5F	Jeremy Deischer		DATE :	2015-10-05	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
ERC New Stream Restoration	<user defined="" items<="" td=""><td>2000</td><td>L.F.</td><td>\$133.00</td><td>\$266,000.00</td><td></td></user>	2000	L.F.	\$133.00	\$266,000.00	
	<user defined="" items<="" td=""><td>18</td><td>Acre</td><td>\$35,000.00</td><td>\$642,792.00</td><td>200 ft on each side of stream</td></user>	18	Acre	\$35,000.00	\$642,792.00	200 ft on each side of stream
Land Acquisition						
Easement/ROW Acquisition		23.67	ACRE	\$569.71	\$13,485.00	Parcel: 146516010001 (6.7% Easement of Parcel Required)
	Mantas Plan Canita :					
Combal homogeneous Contra	Master Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$908,792.00	
Subtotal Capital Improvement Costs					\$908,792.00	
Additional Capital Improvement Cos	ts					
Dewatering		\$9,087.92	L.S.		\$9,088.00	
Mobilization		5%			\$45,440.00	
Traffic Control		\$22,719.80	L.S.		\$22,720.00	
Utility Coordination/Relocation		\$22,719.80	L.S.		\$22,720.00	
Stormwater Management/Erosion Control		5%			\$45,440.00	
Subtotal Additional Capital Improvement Cost	s				\$145,408.00	
Land Acquisition Costs					0.0.00	
ROW/Easements Subtotal Land Acquisition Costs					\$13,485.00 \$13,485.00	
Other Costs (percentage of Capital	Improvement Costs)				\$13,485.00	
Engineering	Improvement Costs)	15%			\$158,130.00	
Legal/Administrative		5%			\$52,710.00	
Contract Admin/Construction Management		10%			\$105,420.00	
Contingency		25%			\$263,550.00	
Total Capital Improvement Costs					\$579,810.00 \$1,647,495.00	
- Canada and Canada Gode					+ 1,0 11 , 100.00	
Master	Plan Operation and Maintenan	ce Cost Summar	'v			
Description	a oporation und maintenan	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris re	moval, erosion, tree & weed removal, etc.)	2000	L.F.	\$2.00	\$800.00	
Total Annual Operation and Mai		,			\$800.00	
Effective Interest Rate					1.50%	
Effective Interest Rate Total Operation and Maintenance Costs Over 50 Years						

UD-MPCostv2.2_Reach5.xlsm, BCM-Reach5F 2015-10-20, 9:43 AM

MA	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH									
						'				
PROJECT :	Boulder Creek MDP - Reach 5									
DRAINAGEWAY:	Boulder Creek									
REACH:	5G	5G								
JURISDICTION:	Boulder County	Boulder County								
REACH ID:	BCM-Reach5G	Jeremy Deischer		DATE :	2015-10-05					
						·				
					TOTAL					
DESCRIPTION		QUANTITY UNIT UNIT COST COST								
Special Items (User Defined)										
Old bridge removal	<user defined="" items<="" td=""><td>4800</td><td>S.F.</td><td>\$50.00</td><td>\$240,000.00</td><td>120 ft. x 40 ft.</td></user>	4800	S.F.	\$50.00	\$240,000.00	120 ft. x 40 ft.				
400 (t b-ld	Harris Deffered Name	7000	0.5	\$050.00	64 000 000 00					

Total Operation and Maintenance Costs Over 50 Years

Special Items (User Defi	ned)					
Old bridge removal	<user defined="" items<="" th=""><th>4800</th><th>S.F.</th><th>\$50.00</th><th>\$240,000.00</th><th>120 ft. x 40 ft.</th></user>	4800	S.F.	\$50.00	\$240,000.00	120 ft. x 40 ft.
180 ft. span bridge	<user defined="" items<="" td=""><td>7200</td><td>S.F.</td><td>\$250.00</td><td>\$1,800,000.00</td><td></td></user>	7200	S.F.	\$250.00	\$1,800,000.00	
	Master Plan Capital Impro	vement Cost Su	mmary			
Capital Improvement Co						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Impr	ovements				\$0.00	
Special Items (User Defined)					\$2,040,000.00	
Subtotal Capital Improvement Cos					\$2,040,000.00	
Additional Capital Impro	vement Costs					
Dewatering		\$20,400.00	L.S.		\$20,400.00	
Mobilization		5%			\$102,000.00	
Traffic Control		\$51,000.00	L.S.		\$51,000.00	
Utility Coordination/Relocation		\$51,000.00	L.S.		\$51,000.00	
Stormwater Management/Erosion Co	ontrol	5%			\$102,000.00	
Subtotal Additional Capital Improv	vement Costs				\$326,400.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage	e of Capital Improvement Costs)					
Engineering		15%			\$354,960.00	
Legal/Administrative		5%			\$118,320.00	
Contract Admin/Construction Manag	ement	10%			\$236,640.00	
Contingency		25%			\$591,600.00	
Subtotal Other Costs					\$1,301,520.00	
Total Capital Improvement	ent Costs				\$3,667,920.00	
			,			
	Master Plan Operation and Maintenan					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sedimen	t & debris removal, erosion, tree & weed removal, etc.)	40	L.F.	\$2.00	\$16.00	
Bridge Maintenance	<user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$800.00</td><td>\$800.00</td><td></td></user>	1	EA	\$800.00	\$800.00	
Total Annual Operation	and Maintenance Cost				\$816.00	
Effective Interest Rate					1.50%	

\$28,560.00

UD-MPCostv2 2, Reach5.xism, BCM-Reach5G 2015-10-20, 9:43 AM UD-MPCostv2 2, Reach5.xism, BCM-Reach5G-100yr

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MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH PROJECT: Boulder Creek MDP - Reach 5 DRAINAGEWAY: Boulder Creek REACH: 5G-100yr JURISIOITION: Boulder County REACH ID: BCM-Reach5G-100yr Jeremy Deischer DATE: 2015-10-05 QUANTITY UNIT UNIT COST DESCRIPTION USER COMMENTS COST Channel Improvements Excavation, Mid Range 14304 C.Y. \$29.00 \$414,816.00 Special Items (User Defined) Remoul of old 120 It. bridge 220 span bridge Asphalt Remove and Replace Second Master Plan Capital Improvement Cost Summary Capital Improvement Costs Pipe Culverts and Storm Drains Concrete Box Culverts Hydraulic Structures Channel Improvements Detention/Water Quality Facilities Remonals \$0.00 \$0.00 \$0.00 \$414,816.00 \$0.00 \$0.00 \$0.00 \$2.842,667.00 \$3,257,483.00 Removals Landscaping and Maintenance Improvements Special Items (User Defined) \$32,575.00 \$162,874.00 \$81,437.00 \$81,437.00 \$162,874.00 \$521,197.00 Additional Capital Improvement Costs Dewatering Mobilization Traffic Control Littly Coordination/Relocation Scirmweter Management/Erosion Control Suthotal Additional Capital Improvement Costs Land Acquisition Costs Subtotal Additional Capital Improvement Costs Covince Costs (Percentage of Capital Improvement Costs Cother Costs (Percentage of Capital Improvement Costs Engineering \$32,574.83 LS. 5% LS. \$81,437.08 LS. \$81,437.08 LS. 5% \$0.00 \$0.00 \$566,802.00 \$188,934.00 \$377,868.00 \$944,670.00 \$2,078,274.00 Engineering Legal/Administrative Contract Admin/Construction Management Contingency Subtotal Other Costs Total Capital Improvement Costs \$5,856,954.00 Total Annual Cost \$16.00 \$800.00

\$816.00

\$28,560.00

Total Annual Operation and Maintenance Cost

Total Operation and Maintenance Costs Over 50 Years

UD-MPCosn/2 2, Reach5.xlsm, BCM-Reach5G-100yr 2015-10-20, 9:44 AM

MAS						
PROJECT :						
DRAINAGEWAY:	Boulder Creek MDP - Reach 5 Boulder Creek					
REACH:	5G-Interim					
JURISDICTION :	Boulder County					
REACH ID:	BCM-Reach5G-Interim	Jeremy Deischer		DATE :	2015-10-05	
<u> </u>		•				
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Channel Improvements						
Excavation, Mid Range		3290	C.Y.	\$29.00	\$95,410.00	Fill required for roadway reconstruction raising roadway 2 ft.
Special Items (User Defined)						, , , , , , , , , , , , , , , , , , ,
Asphalt Remove and Replace	<user defined="" items<="" td=""><td>4511</td><td>S.Y.</td><td>\$60.00</td><td>\$270,667.00</td><td>1015 ft (40 ft width)</td></user>	4511	S.Y.	\$60.00	\$270,667.00	1015 ft (40 ft width)
Geo-Fabric roadway protection	<user defined="" items<="" td=""><td>4511</td><td>S.Y.</td><td>\$17.00</td><td>\$76,689.00</td><td>Turf Reinforcement Mat (TRM) US and DS side of 95th St.</td></user>	4511	S.Y.	\$17.00	\$76,689.00	Turf Reinforcement Mat (TRM) US and DS side of 95th St.
(2) Vegetated spillways 95th St. Pond	<user defined="" items<="" td=""><td>2</td><td>L.S.</td><td>\$225,000.00</td><td>\$450,000.00</td><td>Upstream of 95th Street</td></user>	2	L.S.	\$225,000.00	\$450,000.00	Upstream of 95th Street
	<user defined="" items<="" td=""><td>2</td><td>L.S.</td><td>\$250,000.00</td><td>\$500,000.00</td><td>2 structures DS of 95th adjusted for aquatic and habitat passage</td></user>	2	L.S.	\$250,000.00	\$500,000.00	2 structures DS of 95th adjusted for aquatic and habitat passage
Stream Restoration DS of 95th St.	<user defined="" items<="" td=""><td>750</td><td>L.F.</td><td>\$133.00</td><td>\$99,750.00</td><td></td></user>	750	L.F.	\$133.00	\$99,750.00	
Riparian Restoration DS of 95th St.	<user defined="" items<="" td=""><td>7</td><td>AC</td><td>\$35,000.00</td><td>\$241,047.00</td><td></td></user>	7	AC	\$35,000.00	\$241,047.00	
Stream Restoration US of 95th St.	<user defined="" items<="" td=""><td>3000</td><td>L.F.</td><td>\$133.00</td><td>\$399,000.00</td><td></td></user>	3000	L.F.	\$133.00	\$399,000.00	
Riparian Restoration US of 95th St.	<user defined="" items<="" td=""><td>28</td><td>AC</td><td>\$35,000.00</td><td>\$964,187.00</td><td></td></user>	28	AC	\$35,000.00	\$964,187.00	
Land Acquisition						
Easement/ROW Acquisition		17.00	ACRE	\$569.73	\$9,685.00	
	Master Plan Capital Impro	vement Cost Sui	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures		\$0.00				
Channel Improvements					\$95,410.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined) Subtotal Capital Improvement Costs					\$3,001,340.00 \$3,096,750.00	
Additional Capital Improvement Costs	te				\$3,096,750.00	
Dewatering		\$30,967.50	L.S.		\$30,968.00	
Mobilization		5%	2.0.		\$154,838.00	
Traffic Control		\$77,418.75	L.S.		\$77,419.00	
Utility Coordination/Relocation		\$77,418.75	L.S.		\$77,419.00	
Stormwater Management/Erosion Control		5%			\$154,838.00	
Subtotal Additional Capital Improvement Cost	ts				\$495,482.00	
Land Acquisition Costs						
ROW/Easements					\$9,685.00	
Subtotal Land Acquisition Costs					\$9,685.00	
Other Costs (percentage of Capital	Improvement Costs)	450/			\$500.005.00	
Engineering		15%			\$538,835.00	
Legal/Administrative Contract Admin/Construction Management		5% 10%			\$179,612.00 \$359,223.00	
Contract Admin/Construction Management Contingency		25%			\$898,058.00	
Subtotal Other Costs		2070			\$1,975,728.00	
Total Capital Improvement Costs					\$5,577,645.00	
Total Suprial Improvement Costs					\$5,011,040.00	
Mostor	Plan Operation and Maintenan	ca Cast Summar	24			
	rian Operation and maintenan	Quantity	Unit	Unit Cost	Total Annual Cost	
Description Hydraulic Structure Maintenance (e.g. debris ren	nough procion, etructural repaire, etc.)	Quantity	EA	\$610.00	\$244.00	
Hydraulic Structure Maintenance (e.g. debris ren Channel Maintenance (e.g. sediment & debris ren		5500	L.F.	\$610.00	\$244.00 \$2.200.00	
	<user defined="" items<="" td=""><td>2</td><td>EA</td><td>\$610.00</td><td>\$61.00</td><td></td></user>	2	EA	\$610.00	\$61.00	
				ψ010.00		
Total Annual Operation and Mai Effective Interest Rate	menance Cost				\$2,505.00 1.50%	
	0 . 0 . 50.1/					
Total Operation and Maintenand	ce Costs Over 50 Years				\$87,674.00	

UD-MPCostv2_Reach5.xlsm, BCM-Reach5G-Interim

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH PROJECT: Boulder Creek MDP - Reach 5

DRAINAGEWAY: Boulder Creek

REACH: SH

JURISDICTION: City of Boulder

REACH ID: BCM-ReachSH Jeremy Deischer DATE : 2015-10-05 QUANTITY UNIT UNIT COST COST DESCRIPTION USER COMMENTS 4500 L.F. \$133.00 \$598,500.00 41 AC \$35,000.00 \$1,446,281.00 200 ft. riparian restoration each side of stream Master Plan Capital Improvement Cost Summary \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$2,044,781.00 \$2,044,781.00 \$102,239.00 \$51,120.00 \$51,120.00 \$51,120.00 \$51,120.00 \$51,120.00 \$51,120.00 \$51,120.00 Capital Improvement Costs
Pipe Culverts and Storm Drains
Concrete Box Culverts
Hydraulic Structures
Channel Improvements
Detention/Water Quality Facilities Detention/Water Quality Facilities
Removals
Landscaping and Maintenance Improvements
Special Items (Lies Defined)
Subtotal Capital Improvement Costs
Additional Capital Improvement Costs
Dewatering
Mobilization
Traffic Control
Utility Coordination/Relocation
Subrotal Additional Capital Improvement Costs
Land Acquisition Costs
ROW/Essements
Subtotal Land Acquisition Costs
Subtotal Land Acquisition Costs \$0.00 \$0.00 \$10.00 \$118.597.00 \$237,195.00 \$522,997.00 \$1,304,571.00 \$3,676,518.00 Engineering
Legal/Administrative
Contract Admini/Construction Management
Contingency
Subtotal Other Costs Total Capital Improvement Costs Master Plan Operation and Maintenance Cost Summary

Description Quantity Unit Unit Cost Total Annual Cost
Chainel Maintenance (e.g. sediment & debris remoial, erosion, tree & weed removal, etc.) 4500 L.F. \$2.00 \$1,800.00

Total Annual Operation and Maintenance Cost \$1,800.00

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2, Reach5.vism, BCM-Reach5H

MASTER PLAN COST ESTIM					
PROJECT : Boulder Creek MDP - Reach 6					
DRAINAGEWAY: Boulder Creek					
REACH: 6A					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach6A	Jeremy Deischer		DATE:	2015-10-05	
	•				
				TOTAL	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)					
Modify Ditch for Aquatic & Habitat Passage <user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000.00</td><td></td></user>	1	L.S.	\$250,000.00	\$250,000.00	
Master Plan Capital Imp	rovement Cost Su	mmary			
Capital Improvement Costs				#0.00	
Pipe Culverts and Storm Drains Concrete Box Culverts				\$0.00 \$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$250,000.00	
Subtotal Capital Improvement Costs				\$250,000.00	
Additional Capital Improvement Costs				\$230,000.00	
Dewatering	\$2,500.00	L.S.		\$2,500.00	
Mobilization	5%			\$12,500.00	
Traffic Control	\$6,250.00	L.S.		\$6,250.00	
Utility Coordination/Relocation	\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control	5%			\$12,500.00	
Subtotal Additional Capital Improvement Costs				\$40,000.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital Improvement Costs)				\$0.00	
Engineering	15%	1		\$43.500.00	
Legal/Administrative	5%			\$14,500.00	
Contract Admin/Construction Management	10%			\$29.000.00	
Contingency	25%			\$72,500.00	
Subtotal Other Costs				\$159,500.00	
Total Capital Improvement Costs	\$449,500.00				
Master Plan Operation and Mainten					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Maintenance Cost		<u> </u>		\$122.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$4,270.00	

UD-MPCostv2_Reach6.xism, BCM-Reach6A 2015-10-20, 9:48 AM

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH PROJECT: Boulder Creek MDP - Reach 6 DRAINAGEWAY: Boulder Creek REACH: 6B JURISDICTION: Boulder County REACH ID: BCM-Reach6B Jeremy Deischer DATE: 2015-10-05 QUANTITY UNIT UNIT COST DESCRIPTION USER COMMENTS COST 7200 S.F. \$250.00 \$1.800.000.00 40 ft width at 75th St. 4400 S.F. \$50.00 \$220,000.00 110 x 40 ft Master Plan Capital Improvement Cost Summary Ceptel Improvement Costs Pipe Cukerts and Storm Drains Concrete Box Cukerts Hydraulic Structures Channel Improvements Detention/Water Cuality Facilities Removals Landscaping and Maintenance Improvements Special Items (User Delined) Spitchtal Canalital Improvement Costs Statistal Canalital Improvement Costs \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$2.00 \$2.00 \$2.00 \$0.00 Subtotal Capital Improvement Costs Additional Capital Improvem Dewatering Mobilization \$20,200.00 \$101,000.00 \$50,500.00 \$50,500.00 \$101,000.00 \$20,200.00 L.S. 5% \$50,500.00 L.S. \$50,500.00 L.S. Mobilization Traffic Control Utility Coordination/Relocation Stormwater Management/Errosion Control Subrounder Management/Errosion Control Subtoatal Additional Capital Improvement Costs Land Acquisition Costs \$0.00 \$0.00 ROW/Easements Subtotal Land Acquisition Costs Subtotal Land Acquisition Costs Engineering Logar/Administrative Contract Admin/Construction Management Contract Admin/Construction Management Contingency Subtotal Other Costs \$351,480.00 \$117,160.00 \$234,320.00 \$585,800.00 \$1,288,760.00

 Master Plan Operation and Maintenance Cost Summary

 Description
 Quantity
 Unit
 Unit Cost
 Total Annual Cost

 Channel Maintenance (e.g. sediment & debris removal, erosion, free & weed removal, etc.)
 40
 L.F.
 \$2.00
 \$16.00

 Bridge Maintenance
 | ←--User Defined Items
 1
 EA
 \$800.00
 \$800.00

\$3,631,960.00

\$816.00

\$28,560.00

Total Capital Improvement Costs

Total Annual Operation and Maintenance Cost

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2_Reach6.xism, BCM-Reach6B

MASTER PLAN COST ESTIM]							
PROJECT : Boulder Creek MDP - Reach 6								
DRAINAGEWAY: Boulder Creek								
REACH: 6B-100yr								
JURISDICTION : Boulder County								
REACH ID: BCM-Reach6B-100yr	Jeremy Deischer		DATE :	2015-10-05				
		1	1		I			
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS			
Channel Improvements								
Excavation, Mid Range	7242	C.Y.	\$29.00	\$210,018.00	Fill required for roadway improvement			
Special Items (User Defined)								
180 ft span bridge at 75th St. <user defined="" items<="" td=""><td>7200</td><td>S.F.</td><td>\$250.00</td><td>\$1,800,000.00</td><td>40 ft. width at 75th</td></user>	7200	S.F.	\$250.00	\$1,800,000.00	40 ft. width at 75th			
Remove and Replace Asphalt <user defined="" items<="" td=""><td>7333</td><td>S.Y.</td><td>\$60.00</td><td>\$440,000.00</td><td>1650 feet of roadway reconstruction (South Side)</td></user>	7333	S.Y.	\$60.00	\$440,000.00	1650 feet of roadway reconstruction (South Side)			
Old bridge removal <user defined="" items<="" td=""><td>4400</td><td>S.F.</td><td>\$50.00</td><td>\$220,000.00</td><td>110 ft x 40 ft</td></user>	4400	S.F.	\$50.00	\$220,000.00	110 ft x 40 ft			
Master Plan Capital Imp	rovement Cost Su	mmary						
Capital Improvement Costs								
Pipe Culverts and Storm Drains				\$0.00				
Concrete Box Culverts				\$0.00				
Hydraulic Structures				\$0.00				
Channel Improvements				\$210,018.00				
Detention/Water Quality Facilities				\$0.00				
Removals				\$0.00				
Landscaping and Maintenance Improvements				\$0.00				
Special Items (User Defined)				\$2,460,000.00				
Subtotal Capital Improvement Costs Additional Capital Improvement Costs				\$2,670,018.00				
Dewatering	\$26,700.18	L.S.		\$26,700.00				
Mobilization	5%	L.O.		\$133.501.00				
Traffic Control	\$66,750.45	L.S.		\$66,750.00				
Utility Coordination/Relocation	\$66,750.45	L.S.		\$66,750.00				
Stormwater Management/Erosion Control	5%	2.0.		\$133,501.00				
Subtotal Additional Capital Improvement Costs				\$427,202.00				
Land Acquisition Costs				***************************************				
ROW/Easements				\$0.00				
Subtotal Land Acquisition Costs				\$0.00				
Other Costs (percentage of Capital Improvement Costs)								
Engineering	15%			\$464,583.00				
Legal/Administrative	5%			\$154,861.00				
Contract Admin/Construction Management	10%			\$309,722.00				
Contingency	25%			\$774,305.00				
Subtotal Other Costs				\$1,703,471.00				
Total Capital Improvement Costs				\$4,800,691.00				
Master Plan Operation and Mainten	ance Cost Summar	ry						
Description	Quantity	Unit	Unit Cost	Total Annual Cost				
Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal, etc.)	40	L.F.	\$2.00	\$16.00				
Bridge Maintenance <user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$800.00</td><td>\$800.00</td><td></td></user>	1	EA	\$800.00	\$800.00				
Total Annual Operation and Maintenance Cost		<u> </u>		\$816.00				
Effective Interest Rate				1.50%				
Total Operation and Maintenance Costs Over 50 Years				\$28,560.00				
Total Operation and maintenance costs over 30 Tears				Ψ20,300.00				

UD-MPCostv2_Reach6.xism, BCM-Reach68-100yr

MAS						
PROJECT:						
DRAINAGEWAY:	Boulder Creek MDP - Reach 7 Boulder Creek		-			
REACH:	7A		-			
JURISDICTION :	Boulder County					
REACH ID:	BCM-Reach7A	Jeremy Deischer		DATE :	2015-10-05	
REPORT ID.	DOM RODON A	,		DAIL.		
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
		QUANTITI	UNII	UNII COST	0031	USER COMMENTS
Special Items (User Defined)						
Riverside Spillway	<user defined="" items<="" td=""><td>4</td><td>LS</td><td>\$225,000.00</td><td>\$900,000.00</td><td></td></user>	4	LS	\$225,000.00	\$900,000.00	
Lateral Spillway	<user defined="" items<="" td=""><td>3</td><td>LS</td><td>\$225,000.00</td><td>\$675,000.00</td><td></td></user>	3	LS	\$225,000.00	\$675,000.00	
						Hr.
	Master Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$1,575,000.00	
Subtotal Capital Improvement Costs					\$1,575,000.00	
Additional Capital Improvement Co	sts		1			
Dewatering		\$15,750.00	L.S.		\$15,750.00	
Mobilization		5%			\$78,750.00	
Traffic Control		\$39,375.00	L.S.		\$39,375.00	
Utility Coordination/Relocation		\$39,375.00	L.S.		\$39,375.00	
Stormwater Management/Erosion Control		5%			\$78,750.00	
Subtotal Additional Capital Improvement Cos	its				\$252,000.00	
Land Acquisition Costs ROW/Easements					\$0.00	
					\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital	Improvement Costs				\$0.00	
Engineering	Improvement costs)	15%	1		\$274,050.00	
Legal/Administrative		5%			\$91,350.00	
Contract Admin/Construction Management		10%			\$182,700.00	
Contingency		25%			\$456,750.00	
Subtotal Other Costs		2070			\$1,004,850.00	
Total Capital Improvement Cost	s				\$2,831,850.00	
Maste	r Plan Operation and Maintenan					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re		7	EA	\$610.00	\$214.00	
Total Annual Operation and Ma	intenance Cost				\$214.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years	\$7,490.00				

UD-MPCostv.2.2, Reach7.x/sm, BCM-Reach7A 2015-10-20, 9-51 AM

MASTER PLAN COST ESTI					
PROJECT : Boulder Creek MDP - Reach 7 DRAINAGEWAY : Boulder Creek					
REACH: 7B					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach7B	Jeremy Deischer		DATE :	2015-10-05	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)		•			
Riverside Spillway <user defined="" items<="" td=""><td>5</td><td>LS</td><td>\$225,000.00</td><td>\$1,125,000.00</td><td></td></user>	5	LS	\$225,000.00	\$1,125,000.00	
Lateral Spillway <user defined="" items<="" td=""><td>2</td><td>LS</td><td>\$225,000.00</td><td>\$450,000.00</td><td></td></user>	2	LS	\$225,000.00	\$450,000.00	
a our pointed temp			QLL0,000.00	\$100,000.00	
Master Plan Capital In	nnrovement Cost Su	mmary			
Capital Improvement Costs	iipioreiiiciit Gost Gu	minury			
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
andscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$1,575,000.00	
Subtotal Capital Improvement Costs				\$1,575,000.00	
Additional Capital Improvement Costs					
Dewatering	\$15,750.00	L.S.		\$15,750.00	
Mobilization	5%			\$78,750.00	
Traffic Control	\$39,375.00	L.S.		\$39,375.00	
Utility Coordination/Relocation	\$39,375.00	L.S.		\$39,375.00	
Stormwater Management/Erosion Control	5%			\$78,750.00	
Subtotal Additional Capital Improvement Costs				\$252,000.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$274,050.00	
_egal/Administrative	5%			\$91,350.00	
Contract Admin/Construction Management	10%			\$182,700.00	
Contingency Subtotal Other Costs	25%			\$456,750.00 \$1,004,850.00	
Total Capital Improvement Costs	\$2.831.850.00				
Total Capital Improvement Costs				\$2,031,030.00	
Master Plan Operation and Mainte					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	7	EA	\$610.00	\$214.00	
Total Annual Operation and Maintenance Cost					
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$7,490.00	

UD-MPCostv2_Reach7.xlsm, BCM-Reach7B 2015-10-20, 9:51 AM

MASTER PLAN COST ESTI								
PROJECT : Boulder Creek MDP - Reach 7								
	DRAINAGEWAY: Boulder Creek							
REACH: 7C								
JURISDICTION : Boulder County					•			
REACH ID: BCM-Reach7C	Jeremy Deischer		DATE :	2015-10-05				
					- M			
i				TOTAL				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS			
Special Items (User Defined)								
Modify Ditch for Aquatic & Habitat Passage	1	L.S.	\$250,000.00	\$250,000.00				
Master Plan Capital Ir	mprovement Cost Su	ımmary						
Capital Improvement Costs	•							
Pipe Culverts and Storm Drains				\$0.00				
Concrete Box Culverts				\$0.00				
Hydraulic Structures				\$0.00				
Channel Improvements				\$0.00				
Detention/Water Quality Facilities				\$0.00				
Removals				\$0.00				
Landscaping and Maintenance Improvements				\$0.00				
Special Items (User Defined)				\$250,000.00				
Subtotal Capital Improvement Costs				\$250,000.00				
Additional Capital Improvement Costs								
Dewatering	\$2,500.00	L.S.		\$2,500.00				
Mobilization	5%			\$12,500.00				
Traffic Control	\$6,250.00	L.S.		\$6,250.00				
Utility Coordination/Relocation	\$6,250.00	L.S.		\$6,250.00				
Stormwater Management/Erosion Control	5%			\$12,500.00				
Subtotal Additional Capital Improvement Costs				\$40,000.00				
Land Acquisition Costs								
ROW/Easements				\$0.00				
Subtotal Land Acquisition Costs				\$0.00				
Other Costs (percentage of Capital Improvement Costs)								
Engineering	15%			\$43,500.00				
Legal/Administrative	5%			\$14,500.00				
Contract Admin/Construction Management	10%			\$29,000.00				
Contingency	25%			\$72,500.00				
Subtotal Other Costs	\$159,500.00							
Total Capital Improvement Costs				\$449,500.00				
Master Plan Operation and Mainte	enance Cost Summa	ry						
Description	Quantity	Unit	Unit Cost	Total Annual Cost				
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00				
Total Annual Operation and Maintenance Cost				\$122.00				
Effective Interest Rate				1.50%				
Total Operation and Maintenance Costs Over 50 Years				\$4,270.00				
Total Operation and Maintenance Costs Over 50 Years	\$4,270.00							

UD-MPCostv2.2, Reach7-xism, BCM-Reach7C 2015-10-20, 9-51 AM

MASTER PLAN COST ESTIMA									
	PROJECT: Boulder Creek MDP - Reach 7								
DRAINAGEWAY : Boulder Creek									
REACH: 7D									
JURISDICTION : Boulder County									
REACH ID: BCM-Reach7D	Jeremy Deischer		DATE :	2015-10-05					
				TOTAL					
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS				
Special Items (User Defined)									
Modify Ditch for Aquatic & Habitat Passage	1	L.S.	\$250,000.00	\$250,000.00					
Master Plan Capital Impro	ovement Cost Sui	nmary							
Pipe Culverts and Storm Drains				\$0.00					
Pipe Culverts and Storm Drains Concrete Box Culverts				\$0.00					
Hydraulic Structures				\$0.00					
Hydraulic Structures Channel Improvements				\$0.00					
Detention/Water Quality Facilities Removals				\$0.00 \$0.00					
Landscaping and Maintenance Improvements Special Items (User Defined)				\$0.00 \$250.000.00					
Subtotal Capital Improvement Costs				\$250,000.00					
Additional Capital Improvement Costs									
Dewatering	\$2,500.00	L.S.		\$2,500.00					
Mobilization	5%			\$12,500.00					
Traffic Control	\$6,250.00	L.S.		\$6,250.00					
Utility Coordination/Relocation	\$6,250.00	L.S.		\$6,250.00					
Stormwater Management/Erosion Control	5%			\$12,500.00					
Subtotal Additional Capital Improvement Costs				\$40,000.00					
Land Acquisition Costs									
ROW/Easements				\$0.00					
Subtotal Land Acquisition Costs				\$0.00					
Other Costs (percentage of Capital Improvement Costs)									
Engineering	15%			\$43,500.00					
Legal/Administrative	5%			\$14,500.00					
Contract Admin/Construction Management	10%			\$29,000.00					
Contingency	25%			\$72,500.00					
Subtotal Other Costs	\$159,500.00								
Total Capital Improvement Costs				\$449,500.00					
Master Plan Operation and Maintena	nce Cost Summar	v							
Description Description	Quantity	Unit	Unit Cost	Total Annual Cost					
Hydraulic Structure Maintenance (e.g. debris removal, erosion, structural repairs, etc.)	quantity 1	EA	\$610.00	\$122.00					
			ψ010.00						
Total Annual Operation and Maintenance Cost				\$122.00					
Effective Interest Rate				1.50%					
Total Operation and Maintenance Costs Over 50 Years				\$4,270.00					

UD-MPCostv2_Reach7.xlsm, BCM-Reach7D 2015-10-20, 9:52 AM

	a							
MAS								
PROJECT :	Boulder Creek MDP - Reach 7							
DRAINAGEWAY:	Boulder Creek							
REACH:	7E							
JURISDICTION:	Boulder County							
REACH ID:	BCM-Reach7E	Jeremy Deischer		DATE :	2015-10-05			
	1		1		TOTAL			
DECORIDATION		OLIANITITY	UNIT	UNIT COST	COST	LIGER COMMENTS		
DESCRIPTION		QUANTITY	UNII	UNII COST	COST	USER COMMENTS		
Special Items (User Defined)								
180 ft. span bridge at 61st St.	<user defined="" items<="" td=""><td>5400</td><td>S.F.</td><td>\$250.00</td><td>\$1,350,000.00</td><td>30 ft width bridge at 61st St.</td></user>	5400	S.F.	\$250.00	\$1,350,000.00	30 ft width bridge at 61st St.		
Old bridge removal	<user defined="" items<="" td=""><td>2700</td><td>S.F.</td><td>\$50.00</td><td>\$135,000.00</td><td>90 ft x 30 ft</td></user>	2700	S.F.	\$50.00	\$135,000.00	90 ft x 30 ft		
						W		
	Master Plan Capital Improv	ement Cost Sur	mmary					
Capital Improvement Costs								
Pipe Culverts and Storm Drains					\$0.00			
Concrete Box Culverts					\$0.00			
Hydraulic Structures					\$0.00			
Channel Improvements					\$0.00			
Detention/Water Quality Facilities					\$0.00			
Removals					\$0.00			
Landscaping and Maintenance Improvements					\$0.00			
Special Items (User Defined)					\$1,485,000.00			
Subtotal Capital Improvement Costs					\$1,485,000.00			
Additional Capital Improvement Co	ests							
Dewatering		\$14,850.00	L.S.		\$14,850.00			
Mobilization		5%			\$74,250.00			
Traffic Control		\$37,125.00	L.S.		\$37,125.00			
Utility Coordination/Relocation		\$37,125.00	L.S.		\$37,125.00			
Stormwater Management/Erosion Control		5%			\$74,250.00			
Subtotal Additional Capital Improvement Co	sts				\$237,600.00			
Land Acquisition Costs								
ROW/Easements					\$0.00			
Subtotal Land Acquisition Costs					\$0.00			
Other Costs (percentage of Capita	I Improvement Costs)							
Engineering		15%			\$258,390.00			
Legal/Administrative		5%			\$86,130.00			
Contract Admin/Construction Management		10% 25%			\$172,260.00 \$430,650.00			
Contingency Subtotal Other Costs								
	i							
I otal Capital Improvement Cost	Total Capital Improvement Costs \$2,670,030.00							
	ii							
	r Plan Operation and Maintenand							
Description		Quantity	Unit	Unit Cost	Total Annual Cost			
Channel Maintenance (e.g. sediment & debris r		30	L.F.	\$2.00	\$12.00			
Bridge Maintenance	<user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$800.00</td><td>\$800.00</td><td></td></user>	1	EA	\$800.00	\$800.00			
Total Annual Operation and Ma	intenance Cost				\$812.00			
	Effective leterant Pote							

\$28,420.00

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2_Reach7.xtsm, BCM-Reach7E 2015-10-20, 9:52 AM

MASTER PLAN COST E	STIMATE FOR INDIV	IDUAL RE	ACH]
PROJECT : Boulder Creek MDP - Reach	7				
DRAINAGEWAY: Boulder Creek					
REACH: 7E-100yr					
JURISDICTION : Boulder County					
REACH ID: BCM-Reach7E-100yr	Jeremy Deischer		DATE :	2015-10-05	
	T			TOTAL	I
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements					
Excavation, Mid Range	9180	C.Y.	\$29.00	\$266,220.00	Fill required for roadway reconstruction
Special Items (User Defined)					
220 ft. span bridge <user defined="" items<="" td=""><td>6600</td><td>S.F.</td><td>\$250.00</td><td>\$1,650,000.00</td><td>30 ft width bridge at 61st St.</td></user>	6600	S.F.	\$250.00	\$1,650,000.00	30 ft width bridge at 61st St.
Remove and replace asphalt <user defined="" items<="" td=""><td>6667</td><td>S.Y.</td><td>\$60.00</td><td>\$400,000.00</td><td>2000 ft of roadway reconstruction (N and S Side)</td></user>	6667	S.Y.	\$60.00	\$400,000.00	2000 ft of roadway reconstruction (N and S Side)
Old bridge remvoal <user defined="" items<="" td=""><td>2700</td><td>S.F.</td><td>\$50.00</td><td>\$135,000.00</td><td>90 ft x 30 ft</td></user>	2700	S.F.	\$50.00	\$135,000.00	90 ft x 30 ft
	al Improvement Cost Su	mmary			
Capital Improvement Costs Pice Culverts and Storm Drains	*			\$0.00	
Pipe Cuiverts and Storm Drains Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$266,220.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$2.185.000.00	
Subtotal Capital Improvement Costs				\$2,451,220,00	
Additional Capital Improvement Costs				.,.,	
Dewatering	\$24,512.20	L.S.		\$24,512.00	
Mobilization	5%			\$122,561.00	
Traffic Control	\$61,280.50	L.S.		\$61,281.00	
Utility Coordination/Relocation	\$61,280.50	L.S.		\$61,281.00	
Stormwater Management/Erosion Control	5%			\$122,561.00	
Subtotal Additional Capital Improvement Costs				\$392,196.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital Improvement Costs)				\$0.00	
Engineering	15%			\$426.512.00	
Legal/Administrative	5%			\$142,171.00	
Contract Admin/Construction Management	10%			\$284.342.00	
Contingency	25%			\$710,854.00	
Subtotal Other Costs				\$1,563,879.00	
Total Capital Improvement Costs				\$4,407,295.00	
Master Plan Operation and Ma		/		T =	
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal		L.F.	\$2.00	\$12.00	
Bridge Maintenance <user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$800.00</td><td>\$800.00</td><td></td></user>	1	EA	\$800.00	\$800.00	
Total Annual Operation and Maintenance Cost				\$812.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$28,420.00	

UD-MPCostv2_Reach7.xlsm, BCM-Reach7E-100yr

MAS	TER PLAN COST ESTIMAT	TE FOR INDIV	IDUAL RE	ACH		
PROJECT :	Boulder Creek MDP - Reach 7					
DRAINAGEWAY:	Boulder Creek WDF - Reach 7					-
REACH:	7F					-
JURISDICTION :	Boulder County					
REACH ID:	BCM-Reach7F	Jeremy Deischer		DATE :	2015-10-05	1
·				'	1	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
Special Items (User Defined)		401111111				
Remove pedestrian bridge	<user defined="" items<="" td=""><td>2250</td><td>S.F.</td><td>\$50.00</td><td>\$112,500.00</td><td>Existing 75ft x 30 ft</td></user>	2250	S.F.	\$50.00	\$112,500.00	Existing 75ft x 30 ft
	<user defined="" items<="" td=""><td>2700</td><td>S.F.</td><td>\$300.00</td><td>\$810,000.00</td><td>180 ft x 15 ft</td></user>	2700	S.F.	\$300.00	\$810,000.00	180 ft x 15 ft
						н
	Master Plan Capital Impro	vement Cost Su	mmarv			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$922,500.00	
Subtotal Capital Improvement Costs					\$922,500.00	
Additional Capital Improvement Cos	ts	\$9,225.00	L.S.		\$0.00F.00	
Dewatering			L.S.		\$9,225.00	
Mobilization Traffic Control		5% \$13,837.50	L.S.		\$46,125.00 \$13,838.00	Decreased from default to 1.5%
Utility Coordination/Relocation		\$80,000.00	L.S.		\$80,000.00	Increased from default
Stormwater Management/Erosion Control		5%	L.J.		\$46.125.00	Increased nom derault
Subtotal Additional Capital Improvement Cost	s	0,0			\$195,313.00	
Land Acquisition Costs					4.00,0.000	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$167,672.00	
Legal/Administrative		5%			\$55,891.00	
Contract Admin/Construction Management		10%			\$111,781.00	
Contingency		25%			\$279,453.00	
Subtotal Other Costs					\$614,797.00	
Total Capital Improvement Costs	3				\$1,732,610.00	
Master	Plan Operation and Maintenan	ce Cost Summai	ry			
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris re		15	L.F.	\$2.00	\$6.00	
	<user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$800.00</td><td>\$800.00</td><td></td></user>	1	EA	\$800.00	\$800.00	
Total Annual Operation and Mai	ntenance Cost				\$806.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenand	ce Costs Over 50 Years				\$28,210.00	

UD-MPCostv2_2_Reach7.xtem_BCM-Reach7F 2015-10-20, 9-53 AM

MAS	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH						
PROJECT :	Boulder Creek MI	P - Reach 7					
DRAINAGEWAY:	Boulder Creek III.	or - Reduit /					
REACH:	7G						
JURISDICTION :	Boulder County						
REACH ID:	BCM-Reach7G		Jeremy Deischer		DATE :	2015-10-05	
			•				-
						TOTAL	
DESCRIPTION			QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Pipe Culverts and Storm Drains							
Circular Pipes							
Diameter (in)	Length (ft)	No. of Barrels					
54-inch	600	1	600	L.F.	\$263.00	\$157.800.00	
Headwalls						*****	
Diameter (in)	Applicable	No. of Barrels					
54-inch	Yes	1	2	EA	\$1,760,84	\$3,522,00	
Wingwalls (includes concrete apror	n)		*				
Diameter (in)		No. of Barrels					
54-inch		1	2	EA	\$10,733.84	\$21,468.00	
Special Items (User Defined)	•						
Remove existing diversion structure	<user defined="" item<="" td=""><td>ns</td><td>1</td><td>L.S.</td><td>\$20,000,00</td><td>\$20,000.00</td><td></td></user>	ns	1	L.S.	\$20,000,00	\$20,000.00	
3							
	Master PI	an Capital Improv	vement Cost Su	mmary			
Capital Improvement Costs							
Pipe Culverts and Storm Drains						\$182,790.00	
Concrete Box Culverts						\$0.00	
Hydraulic Structures						\$0.00	
Channel Improvements						\$0.00	
Detention/Water Quality Facilities						\$0.00	
Removals						\$0.00	
Landscaping and Maintenance Improvements						\$0.00	
Special Items (User Defined)						\$20,000.00	
Subtotal Capital Improvement Costs						\$202,790.00	
Additional Capital Improvement Cos	sts						
Dewatering			\$2,027.90	L.S.		\$2,028.00	
Mobilization			5%			\$10,140.00	
Traffic Control			\$5,069.75	L.S.		\$5,070.00	
Utility Coordination/Relocation			\$5,069.75	L.S.		\$5,070.00	
Stormwater Management/Erosion Control			5%			\$10,140.00	

Total Capital Improvement Costs				\$364,620.00	
Master Plan Operation and Maintenance	Cost Summar	ry			
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Culvert Maintenance (e.g. sediment & debris removal, erosion at entrance/exit, structural repairs, e	600	L.F.	\$1.00	\$120.00	
Total Annual Operation and Maintenance Cost				\$120.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$4,200.00	
3					

UD-MPCostv2_Reach7.xlsm, BCM-Reach7G 2015-10-20, 9:54 AM

MAS	STER PLAN COST ESTIMA	TE FOR INDIV	IDUAL RE	ACH		
PROJECT : DRAINAGEWAY :	Boulder Creek MDP - Reach 7 Boulder Creek					
REACH :	7H					
JURISDICTION :	Boulder County					-
REACH ID:	BCM-Reach7H	Jeremy Deischer		DATE :	2015-10-05	1
TENOTI D.	Dom Redon 11			DAIL.		-
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements						
Soil Riprap, Type M		356	C.Y.	\$85.00	\$30,222.00	Protection for Sanitary near Boulder Creek (400 LF)
Landscaping and Maintenance	Improvements					
Reclamation & seeding (native grasses)	Ī	0	ACRE	\$1,219.00	\$305.00	
Special Items (User Defined)	1					
Grade Control Structure to Protect Sanitary	<user defined="" items<="" td=""><td>2</td><td>L.S.</td><td>\$205,000.00</td><td>\$410,000.00</td><td></td></user>	2	L.S.	\$205,000.00	\$410,000.00	
and the second of the second s	Delinou Renio	-	2.0.	ΨΕΟΟ,ΟΟΟ.ΟΟ	W110,000.00	
	Master Plan Capital Impr	ovement Cost Sur	mmary			
Capital Improvement Costs	aster i ian oupital impi	O. O. HOLLE OUGE OU	ury			
Pipe Culverts and Storm Drains	·				\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$30,222.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$305.00	
Special Items (User Defined)					\$410,000.00	
Subtotal Capital Improvement Costs					\$440,527.00	
Additional Capital Improvement Co	sts	64 405 07	1.0		\$4,405,00	
Dewatering Mobilization		\$4,405.27 5%	L.S.		\$4,405.00	
Traffic Control		\$11.013.18	L.S.		\$11.013.00	
Utility Coordination/Relocation		\$11,013.18	L.S.		\$11,013.00	
Stormwater Management/Erosion Control		5%			\$22,026.00	
Subtotal Additional Capital Improvement Cos	sts				\$70,483.00	
Land Acquisition Costs						
ROW/Easements	<u> </u>				\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$76,652.00	
Legal/Administrative Contract Admin/Construction Management		5%			\$25,551.00 \$51.101.00	
Contract Admin/Construction Management Contingency		10% 25%			\$51,101.00 \$127,753.00	
Subtotal Other Costs		2070			\$281,057.00	
Total Capital Improvement Cost	s				\$792,067.00	
Total Supital improvement cost					Ψ132,001.00	
Masto	r Plan Operation and Maintena	nce Cost Summar	7/			
Description	i rian Operation and maintena	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	moval erosion structural repairs etc.)	quantity 2	EA	\$610.00	\$244.00	
Total Annual Operation and Ma				\$2.0.00	\$244.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenan	ce Costs Over 50 Years				\$8,540.00	
Total Operation and maintenant	oc oosts over so rears				φυ,υ-τυ.υυ	

UD-MPCostv2_2_Reach7.xtem_BCM-Reach7H 2015-10-20, 9:54 AM

MASTE	R PLAN COST ESTIMAT	E FOR INDIVI	DUAL REA	CH		
PROJECT: Bo	ulder Creek MDP - Reach 7					
	ulder Creek					•
REACH: 7I						•
	y of Boulder					•
		Jeremy Deischer		DATE:	2015-10-05	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
ERC Stream Restoration <us< td=""><td>ser Defined Items</td><td>6250</td><td>L.F.</td><td>\$133.00</td><td>\$831,250.00</td><td></td></us<>	ser Defined Items	6250	L.F.	\$133.00	\$831,250.00	
ERC Riparian Restoration <us< td=""><td>ser Defined Items</td><td>14</td><td>A.C.</td><td>\$35,000.00</td><td>\$502,181.00</td><td>50 ft each side</td></us<>	ser Defined Items	14	A.C.	\$35,000.00	\$502,181.00	50 ft each side
	Master Plan Capital Improv	ement Cost Sur	nmary			
Capital Improvement Costs Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$1,333,431.00	
Subtotal Capital Improvement Costs					\$1,333,431.00	
Additional Capital Improvement Costs						
Dewatering		\$13,334.31	L.S.		\$13,334.00	
Mobilization		5%			\$66,672.00	
Traffic Control		\$33,335.78	L.S.		\$33,336.00	
Utility Coordination/Relocation		\$33,335.78	L.S.		\$33,336.00	
Stormwater Management/Erosion Control		5%			\$66,672.00	
Subtotal Additional Capital Improvement Costs					\$213,350.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Improv	rement Costs)					
Engineering		15%			\$232,017.00	
Legal/Administrative		5%			\$77,339.00	
Contract Admin/Construction Management		10%			\$154,678.00	
Contingency		25%			\$386,695.00	
Subtotal Other Costs					\$850,729.00	
Total Capital Improvement Costs					\$2,397,510.00	
	n Operation and Maintenance					
Description		Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal,		6250	L.F.	\$2.00	\$2,500.00	
Total Annual Operation and Maintena	nce Cost				\$2,500.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenance Cos	sts Over 50 Years				\$87,499.00	

UD-MPCostv2 2, Reach7.x/sm, BCM-Reach7l 2015-10-20, 9:54 AM

MAST	ER PLAN COST ESTIMAT	E FOR INDIVI	DUAL RE	ACH		
PROJECT:	Boulder Creek MDP - Reach 8					
DRAINAGEWAY:	Boulder Creek					
REACH:	8A					
JURISDICTION :	Boulder County					
REACH ID:	BCM-Reach8A	Jeremy Deischer		DATE :	2015-10-05	
KEAGIID.	DOMPREGUIDA	ociony Deliberio		DAIL.	2010 10 00	I
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
ERC Estimate New Stream	User Defined Items	1	L.S.	\$230,000,00	\$230,000,00	
ERC Estimate Riparian Restoration <	User Defined Items	1	L.S.	\$140,000.00	\$140,000.00	
	Master Plan Capital Improv	vement Cost Sur	mmary		<u> </u>	
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$370,000.00	
Subtotal Capital Improvement Costs					\$370,000.00	
Additional Capital Improvement Costs						
Dewatering		\$3,700.00	L.S.		\$3,700.00	
Mobilization		5%			\$18,500.00	
Traffic Control		\$9,250.00	L.S.		\$9,250.00	
Utility Coordination/Relocation		\$9,250.00	L.S.		\$9,250.00	
Stormwater Management/Erosion Control		5%			\$18,500.00	
Subtotal Additional Capital Improvement Costs					\$59,200.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital Im	provement Costs)					
Engineering		15%			\$64,380.00	
Legal/Administrative		5%			\$21,460.00	
Contract Admin/Construction Management		10%			\$42,920.00	
Contingency		25%			\$107,300.00	
Subtotal Other Costs					\$236,060.00	
Total Capital Improvement Costs					\$665,260.00	
14	Non Operation and Maintenant	as Cook Summer				
	Plan Operation and Maintenand			Halt Cook	Total Assessed C	
Description Channel Maintenance (e.g. sediment & debris remo	and erosion tree & uned removal etc.)	Quantity 1700	Unit L.F.	Unit Cost \$2.00	Total Annual Cost \$680.00	
Total Annual Operation and Main		1700	L.F.	Ψ2.00	\$680.00	
Effective Interest Rate	terrance Cost				1,50%	
Total Operation and Maintenance	Costs Over 50 Vears				\$23.800.00	
Total Operation and maintenance	Costs Over 50 Tears				\$23,000.00	

UD-MPCostv2_2_Reach8_xism, BCM-Reach8A 2015-10-20, 9:55 AM

MASTER PLAN COST ESTIMAT	TE FOR INDIVI	IDUAL RE	ACH		
PROJECT : Boulder Creek MDP - Reach 8 DRAINAGEWAY : Boulder Creek					
					•
JURISDICTION : Boulder County REACH ID: BCM-Reach8B	Jeremy Deischer		DATE :	2015-10-05	
REACH ID: BOM-Reachab	Jeremy Delscher		DATE:	2015-10-05	I
				TOTAL	
DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)					
ERC Estimate New Stream <user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$640,000.00</td><td>\$640,000.00</td><td></td></user>	1	L.S.	\$640,000.00	\$640,000.00	
ERC Estimate Riparian Restoration <user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$390,000.00</td><td>\$390,000.00</td><td></td></user>	1	L.S.	\$390,000.00	\$390,000.00	
Master Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs					
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$1,030,000.00	
Subtotal Capital Improvement Costs				\$1,030,000.00	
Additional Capital Improvement Costs					
Dewatering	\$10,300.00	L.S.		\$10,300.00	
Mobilization	5%			\$51,500.00	
Traffic Control	\$25,750.00	L.S.		\$25,750.00	
Utility Coordination/Relocation	\$25,750.00	L.S.		\$25,750.00	
Stormwater Management/Erosion Control	5%			\$51,500.00	
Subtotal Additional Capital Improvement Costs				\$164,800.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$179,220.00	
Legal/Administrative	5%			\$59,740.00	
Contract Admin/Construction Management	10%			\$119,480.00	
Contingency	25%			\$298,700.00	
Subtotal Other Costs				\$657,140.00	
Total Capital Improvement Costs				\$1,851,940.00	
Master Plan Operation and Maintenan					
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, erosion, tree & weed removal, etc.)	4800	L.F.	\$2.00	\$1,920.00	
Total Annual Operation and Maintenance Cost				\$1,920.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years				\$67,199.00	

2015-10-20, 9:55 AM UD-MPCostv2.2_Reach8.xlsm, BCM-Reach8B

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH PROJECT: Boulder Creek MDP - Reach 8 DRAINAGEWAY: Boulder Creek REACH: 8C JURISDICTION: Cily of Boulder REACH ID: BCM-Reach8C Jeremy Deischer DATE: 2015-10-05 QUANTITY UNIT UNIT COST DESCRIPTION USER COMMENTS COST Master Plan Capital Improvement Cost Summary Capital Improvement Costs Pipe Cuberts and Storm Drains Concrete Box Cuberts Hydraule Stututes Channel Improvements Detension/Water Custly Facilities Removals Landscaping and Maintenance Improvements Special Items (User Defined) Spicial Items (User Defined) Spicial Items (User Defined) Subtotal Capital Improvement Costs Additional Capital Improvem Dewatering Mobilization \$23,250.00 \$116,250.00 \$58,125.00 \$58,125.00 \$116,250.00 \$372,000.00 \$23,250.00 L.S. 5% \$58,125.00 L.S. \$58,125.00 L.S. Mobilization Traffic Control Utility Coordination/Relocation Stormwater Management/Errosion Control Subrounder Management/Errosion Control Subtoatal Additional Capital Improvement Costs Land Acquisition Costs \$0.00 ROW/Essements Subtotal Land Acquisition Costs Subtotal Land Acquisition Costs Engineering Logal/Administrative Contract Admin/Construction Management Contract Admin/Construction Management Subtotal Other Costs \$404,550.00 \$134,850.00 \$269,700.00 \$674,250.00 \$1,483,350.00 Total Capital Improvement Costs \$4,180,350.00 Master Plan Operation and Maintenance Cost Summary Description Quantity Unit Unit Cost Total Annual Cost Channel Maintenance (e.g. sediment & debris removal, erosion, free & weed removal, etc.) 20 L.F. \$2.00 \$8.00 Bridge Maintenance | ←--User Defined Items 1 EA \$800.00 \$800.00

\$808.00

\$28,280.00

Total Annual Operation and Maintenance Cost

Total Operation and Maintenance Costs Over 50 Years

UD-MPCostv2.2_Reach8.xlsm, BCM-Reach8C 2015-10-20, 9:56 AM

MASTER F	PLAN COST ESTIMAT	TE FOR INDIVI	DUAL RE	ACH		
PROJECT : Boulde	er Creek MDP - Reach 8					
	er Creek					
REACH: 8D						
	f Boulder					
	Reach8D	Jeremy Deischer		DATE :	2015-10-05	
		,				
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
ERC Estimate New Stream <user i<="" td=""><td>Defined Items</td><td>1</td><td>L.S.</td><td>\$340,000.00</td><td>\$340,000.00</td><td></td></user>	Defined Items	1	L.S.	\$340,000.00	\$340,000.00	
ERC Estimate Stream Restoration <user i<="" td=""><td>Defined Items</td><td>1</td><td>L.S.</td><td>\$210,000.00</td><td>\$210,000.00</td><td></td></user>	Defined Items	1	L.S.	\$210,000.00	\$210,000.00	
	laster Plan Capital Impro	vement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$550,000.00	
Subtotal Capital Improvement Costs					\$550,000.00	
Additional Capital Improvement Costs						
Dewatering		\$5,500.00	L.S.		\$5,500.00	
Mobilization		5%			\$27,500.00	
Traffic Control		\$13,750.00	L.S.		\$13,750.00	
Utility Coordination/Relocation		\$13,750.00	L.S.		\$13,750.00	
Stormwater Management/Erosion Control		5%			\$27,500.00	
Subtotal Additional Capital Improvement Costs					\$88,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs Other Costs (percentage of Capital Improvement					\$0.00	
	ent Costs)					
Engineering		15%			\$95,700.00	
Legal/Administrative		5%			\$31,900.00	
Contract Admin/Construction Management		10%			\$63,800.00	
Contingency Subtotal Other Costs		25%			\$159,500.00 \$350,900.00	
Total Capital Improvement Costs					\$988,900.00	
Master Plan O	peration and Maintenan	ce Cost Summar	V			
Description	poration and maintenan	Quantity	Unit	Unit Cost	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris removal, eros	sion, tree & weed removal, etc.)	2600	L.F.	\$2.00	\$1,040.00	
Total Annual Operation and Maintenan					\$1,040.00	
Effective Interest Rate					1.50%	
Total Operation and Maintenance Costs	o Over EO Veers				\$36,400.00	

MACTED BLAN COOT FORMATE FOR INDIVIDUAL BEACH

UD-MPCostv2_Reach8.xism, BCM-Reach8D

MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH

 PROJECT:
 Boulder Creek MDP - Reach 8

 DRAINAGEWAY:
 Boulder Creek

 REACH :
 8E

 JURISDICTION :
 City of Boulder

 REACH ID:
 BCM-Reach8E
 Jeremy Deischer
 DATE :
 2015-10-05

					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements						
Excavation, Mid Range		133	C.Y.	\$29.00	\$3,867.00	30 ft x 40 ft x 3 ft
Special Items (User Defined)					•	
Roadway Surface (Concrete)	<user defined="" items<="" td=""><td>43</td><td>C.Y.</td><td>\$730.00</td><td>\$31,543.00</td><td>25 ft x 70 ft x 8 in</td></user>	43	C.Y.	\$730.00	\$31,543.00	25 ft x 70 ft x 8 in
Landscaping	<user defined="" items<="" td=""><td>700</td><td>S.F.</td><td>\$2.00</td><td>\$1,400.00</td><td>2 of 70 ft x 5 ft</td></user>	700	S.F.	\$2.00	\$1,400.00	2 of 70 ft x 5 ft
Trees	<user defined="" items<="" td=""><td>2</td><td>EA</td><td>\$500.00</td><td>\$1,000.00</td><td></td></user>	2	EA	\$500.00	\$1,000.00	
Signage / Barriers	<user defined="" items<="" td=""><td>2</td><td>EA</td><td>\$1,500.00</td><td>\$3,000.00</td><td></td></user>	2	EA	\$1,500.00	\$3,000.00	
	•			,		
	Master Plan Capital Improv	ement Cost Sur	nmary			

Signage / Barriers <user defined="" items<="" th=""><th>2</th><th>EA</th><th>\$1,500.00</th><th>\$3,000.00</th><th></th></user>	2	EA	\$1,500.00	\$3,000.00			
Master Plan Capital Improve	Master Plan Capital Improvement Cost Summary						
Capital Improvement Costs							
Pipe Culverts and Storm Drains				\$0.00			
Concrete Box Culverts				\$0.00			
Hydraulic Structures				\$0.00			
Channel Improvements				\$3,867.00			
Detention/Water Quality Facilities				\$0.00			
Removals				\$0.00			
Landscaping and Maintenance Improvements				\$0.00			
Special Items (User Defined)				\$36,943.00			
Subtotal Capital Improvement Costs				\$40,810.00			
Additional Capital Improvement Costs							
Dewatering		L.S.		\$0.00			
Mobilization	5%			\$2,041.00			
Traffic Control	\$1,020.25	L.S.		\$1,020.00			
Utility Coordination/Relocation	\$1,020.25	L.S.		\$1,020.00			
Stormwater Management/Erosion Control	5%			\$2,041.00			
Subtotal Additional Capital Improvement Costs				\$6,122.00			
Land Acquisition Costs							
ROW/Easements				\$0.00			
Subtotal Land Acquisition Costs				\$0.00			
Other Costs (percentage of Capital Improvement Costs)							
Engineering	15%			\$7,040.00			
Legal/Administrative	5%			\$2,347.00			
Contract Admin/Construction Management	10%			\$4,693.00			
Contingency	25%			\$11,733.00			
Subtotal Other Costs				\$25,813.00			
Total Capital Improvement Costs				\$72,745.00			
					*		

UD-MPCosh2_2_Reach8.x8rm, BCM-Reach8E 2015-10-20, 9:56 AM

MAS	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH								
PROJECT :	Boulder Creek MDP - Reach 8								
DRAINAGEWAY:	Boulder Creek								
REACH:	8F								
JURISDICTION:	Boulder County								
REACH ID:	BCM-Reach8F	Jeremy Deischer		DATE :	2015-10-05				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS			
Master Plan Capital Ir								
Capital Improvement Costs								
Pipe Culverts and Storm Drains				\$0.00				
Concrete Box Culverts				\$0.00				
Hydraulic Structures				\$0.00				
Channel Improvements				\$0.00				
Detention/Water Quality Facilities				\$0.00				
Removals				\$0.00				
Landscaping and Maintenance Improvements				\$0.00				
Special Items (User Defined)				\$0.00				
Subtotal Capital Improvement Costs				\$0.00				
Additional Capital Improvement Costs								
Dewatering	\$0.00	L.S.		\$0.00				
Mobilization	5%			\$0.00				
Traffic Control	\$0.00	L.S.		\$0.00				
Utility Coordination/Relocation	\$0.00	L.S.		\$0.00				
Stormwater Management/Erosion Control	5%			\$0.00				
Subtotal Additional Capital Improvement Costs				\$0.00				
Land Acquisition Costs								
ROW/Easements				\$0.00				
Subtotal Land Acquisition Costs				\$0.00				
Other Costs (percentage of Capital Improvement Costs)								
Engineering	15%			\$0.00				
Legal/Administrative	5%			\$0.00				
Contract Admin/Construction Management	10%			\$0.00				
Contingency	25%			\$0.00				
Subtotal Other Costs				\$0.00				
Total Capital Improvement Costs	Total Capital Improvement Costs							
Master Plan Operation and Mainte	enance Cost Summar							
Description	Quantity	Unit C.Y.	Unit Cost	Total Annual Cost				
Sediment Removal (4 locations 1x annually) <user defined="" items<="" td=""><td>\$24,000.00</td><td></td></user>	\$24,000.00							
Total Annual Operation and Maintenance Cost	\$24,000.00							
Effective Interest Rate	1.50%							
Total Operation and Maintenance Costs Over 50 Years	\$839,993.00							

UD-MPCostv2_Reach8.xlsm, BCM-Reach8F

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PROJECT: DRAMACEVAY: Boulder Creek MDP- Reach 9 Modern Provided Management Coast Surface Modern MDATE: 1995-19-66 MDATE: 1995-19-	MAS	1					
DRAINGEWAY Boulder Croke Sp.							П
REACH : ALURISDICTION City of Boolder							
DESCRIPTION QUANTITY UNIT UNIT COST COST USER COMMENTS							
DESCRIPTION							
DESCRIPTION							
DESCRIPTION	REACH ID:	BCM-Reach9A	Jeremy Deischer		DATE :	2015-10-05	
DESCRIPTION							
Channel Improvements	DESCRIPTION		QUANTITY	UNIT	UNIT COST		USER COMMENTS
Second Meditions Second Medi			401111111				
Landscaping and Maintenance Improvements			1303	C.Y.	\$29.00	\$37,773.00	Estimated cut
1		Immunitaria manuta				44.1	
Table Tabl		improvements		1000			
Land Acquisition							
Master Plan Capital Improvement Cost Summary			325	L.F.	\$54.00	\$17,550.00	
Master Plan Capital Improvement Costs Summary							
Capital Improvement Costs	Easement/ROW Acquisition		0.30	ACRE	\$550,000.00	\$165,000.00	
Capital Improvement Costs							10
Page Colores and Storm Draines		Master Plan Capital Impro	vement Cost Sur	mmary			
Sociation Soci							
Hydrautic Structures							
Channel Improvements							
Debration/Water Cualty Facilities \$0.00							
Second Interest (User Defined)							
Landscaping and Maintenance Improvements							
Special terms (Liker Defined) \$0.00 \$0.0							
Subtotal Capital Improvement Costs S66,542.00							
Additional Capital Improvement Costs Septiment							
Dewastering \$566.42						\$56,542.00	
Mobilization S94		sts					
Traffic Control				L.S.			
Listy Coordination/Relocation							
Substotal Additional Capital Improvement Costs \$3,047.00							
Subtotal Additional Capital Improvement Costs \$9,047.00				L.S.			
Land Acquisition Costs			5%				
Section Sect		ets				\$9,047.00	
Subtral Land Acquisition Costs \$165,000.00 Chief Costs (percentage of Capital Improvement Costs)							
## Other Costs (percentage of Capital Improvement Costs)							
Engineering						\$165,000.00	
Lagal Administrative 5% \$3.279.00		Improvement Costs)	4804				
Contract Admin/Construction Management							
Confingency 25% \$16,397,00 Subtoal Other Costs \$36,073.00 Total Capital Improvement Costs Master Plan Operation and Maintenance Cost Summary Description Quantity Unit Unit Cost Total Annual Cost Trail Maintenance (e.g. structural repairs, crusher fines, etc.) 325 L.F. \$6.00 \$390.00 Total Annual Operation and Maintenance Cost \$390.00 \$390.00 Effective Interest Rate 1.50%							
Subtotal Other Costs \$36,073.00							
Total Capital Improvement Costs \$266,662.00 Master Plan Operation and Maintenance Cost Summary Description Quantity Unit Unit Cost Total Annual Cost Total Annual Cost Total Annual Cost Saso.00 Trail Maintenance (e.g. structural repairs, crusher fines, etc.) 325 L.F. \$6.00 \$390.00 Total Annual Operation and Maintenance Cost Effective Interest Raile 1,50%							
Master Plan Operation and Maintenance Cost Summary Description Trail Maintenance (e.g. structural repairs, crusher fines, etc.) 325 LF. \$6.00 \$390.00 Total Annual Operation and Maintenance Cost \$390.00 Effective Interest Rate 1.50%							
Description Quantity Unit Unit Cost Total Annual Cost Total Annual Cost S300.00 S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Cost S3	Total Sapital Improvement Cost						
Description Quantity Unit Unit Cost Total Annual Cost Total Annual Cost S300.00 S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Unit Cost S300.00 Unit Cost S3	Maste						
Trail Maintenance (e.g. structural repairs, crusher fines, etc.) 325 L.F. \$6.00 \$390.00 Total Annual Operation and Maintenance Cost \$390.00 \$390.00 Effective Interest Rate 1.50%		poration and maintenant					
Total Annual Operation and Maintenance Cost \$390.00 Elfective Interest Rate 1.50%		er fines, etc.)					
Effective Interest Rate 1.50%							
Total Operation and Maintenance Costs Over 50 Years \$13,650.00	Total Operation and Maintenan	ce Costs Over 50 Years				\$13,650.00	

UD-MPCostv2.2_Reach9.xlsm, BCM-Reach9A 2015-10-20, 9:58 AM

ĺ	MAS	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH											
	PROJECT :	Boulder Creek MDP - Rea	ich 9										
	DRAINAGEWAY:	Boulder Creek	Boulder Creek										
	REACH:	9B											
	JURISDICTION:	City of Boulder											
	REACH ID:	BCM-Reach9B	BCM-Reach9B Jeremy Deischer DATE: 2015-10-05										
		·	·										
						TOTAL							

					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Channel Improvements						
Excavation, Mid Range		21201	C.Y.	\$29.00	\$614,829.00	Cut required
Landscaping and Maintenance	Improvements					
Reclamation & seeding (native grasses)	·	7	ACRE	\$1,219.00	\$8,533.00	
Trail/Path, Concrete (10' Width)		250	L.F.	\$54.00	\$13,500.00	
Special Items (User Defined)						
Tennis Court Reconstruction	<user defined="" items<="" td=""><td>7</td><td>EA</td><td>\$65,000.00</td><td>\$455,000.00</td><td></td></user>	7	EA	\$65,000.00	\$455,000.00	
Basketball Court Relocation	<user defined="" items<="" td=""><td>1</td><td>EA</td><td>\$30,000.00</td><td>\$30,000.00</td><td></td></user>	1	EA	\$30,000.00	\$30,000.00	
Acquisition of Homes (3)	<user defined="" items<="" td=""><td>5594</td><td>S.F.</td><td>\$100.00</td><td>\$559,400.00</td><td></td></user>	5594	S.F.	\$100.00	\$559,400.00	
Removal of Homes (3)	<user defined="" items<="" td=""><td>3</td><td>EA</td><td>\$40,000.00</td><td>\$120,000.00</td><td></td></user>	3	EA	\$40,000.00	\$120,000.00	
Asphalt Remove and Replace	<user defined="" items<="" td=""><td>5640</td><td>S.Y.</td><td>\$60.00</td><td>\$338,400.00</td><td></td></user>	5640	S.Y.	\$60.00	\$338,400.00	
Land Acquisition						
Easement/ROW Acquisition		7.00	ACRE	\$1,132,560.00	\$7,927,920.00	\$26 per S.F.

Master Plan Capital Improv	ement Cost Su	mmary		
Capital Improvement Costs				
Pipe Culverts and Storm Drains			\$0.00	
Concrete Box Culverts			\$0.00	
Hydraulic Structures			\$0.00	
Channel Improvements			\$614,829.00	
Detention/Water Quality Facilities			\$0.00	
Removals			\$0.00	
Landscaping and Maintenance Improvements			\$22,033.00	
Special Items (User Defined)			\$1,502,800.00	
Subtotal Capital Improvement Costs			\$2,139,662.00	
Additional Capital Improvement Costs				
Dewatering	\$21,396.62	L.S.	\$21,397.00	
Mobilization	5%		\$106,983.00	
Traffic Control	\$53,491.55	L.S.	\$53,492.00	
Utility Coordination/Relocation	\$53,491.55	L.S.	\$53,492.00	
Stormwater Management/Erosion Control	5%		\$106,983.00	
Subtotal Additional Capital Improvement Costs			\$342,347.00	
Land Acquisition Costs				
ROW/Easements			\$7,927,920.00	
Subtotal Land Acquisition Costs			\$7,927,920.00	
Other Costs (percentage of Capital Improvement Costs)				
Engineering	15%		\$372,301.00	
Legal/Administrative	5%		\$124,100.00	
Contract Admin/Construction Management	10%		\$248,201.00	
Contingency	\$620,502.00			
Subtotal Other Costs				
Total Capital Improvement Costs			\$11,775,033.0	0

UD-MPCostv2.2_Reach9.xlsm, BCM-Reach9B 2015-10-20, 9:58 AM

PROJECT: Boulder Creek MDP - Reach 9 DRAINAGEWAY: Boulder Creek REACH: 9C JURISDICTION: GLify of Boulder REACH ID: BCM-Reach9C Jeremy Deischer DATE: 2015-10-05	
DRAINAGEWAY: Boulder Creek REACH: 9C JURISDICTION: City of Boulder	
REACH: 9C JURISDICTION: City of Boulder	
JURISDICTION : City of Boulder	
REACH ID: BCM-Reach9C Jeremy Deischer DATE: 2015-10-05	
TOTAL	
TOTAL	
DESCRIPTION QUANTITY UNIT UNIT COST COST	USER COMMENTS
Special Items (User Defined)	
Boulder Creek Pedestrian Bridges <user \$1,520,000.00="" \$3,040,000.00<="" 2="" defined="" ea="" items="" td=""><td></td></user>	
Master Plan Capital Improvement Cost Summary	
Capital Improvement Costs	
Pipe Culverts and Storm Drains \$0.00	
Concrete Box Culverts \$0.00	
Hydraulic Structures \$0.00	
Channel Improvements \$0.00	
Detention/Water Quality Facilities \$0.00	
Removals \$0.00	
Landscaping and Maintenance Improvements \$0.00	
Special Items (User Defined) \$3,040,000.00	
Subtotal Capital Improvement Costs \$3,040,000.00	
Additional Capital Improvement Costs	
Dewatering \$30,400.00 L.S. \$30,400.00	
Mobilization 5% \$152,000.00	
Traffic Control \$45,600.00 L.S. \$45,600.00	
Utility Coordination/Relocation \$76,000.00 L.S. \$76,000.00	
Stormwater Management/Erosion Control 5% \$152,000.00	
Subtotal Additional Capital Improvement Costs \$456,000.00	
Land Acquisition Costs	
ROW/Easements \$0.00	
Subtotal Land Acquisition Costs \$0.00	
Other Costs (percentage of Capital Improvement Costs)	
Engineering 15% \$524,400.00	
Legal/Administrative 5% \$174,800.00	
Contract Admin/Construction Management 10% \$349,600.00	
Contingency 25% \$874,000.00	
Subtotal Other Costs \$1,922,800.00	
Total Capital Improvement Costs \$5,418,800.0)
40,10,000	
Master Plan Operation and Maintenance Cost Summary	
Description Quantity Unit Unit Cost Total Annual Cost	t
Bridge Maintenance <user defined="" items<="" th=""> 2 EA \$1,000.00 \$2,000.00</user>	
Bridge Maintenance <user defined="" items<="" th=""> 2 EA \$1,000.00 \$2,000.00</user>	

UD-MPCostv2.2_Reach9.xlsm, BCM-Reach9C 2015-10-20, 9:58 AM

MASTE										
PROJECT: E										
	Boulder Creek									
REACH: 9	9D									
	City of Boulder									
REACH ID:	BCM-Reach9D		Jeremy Deischer		DATE :	2015-10-05				
	TOTAL									
DESCRIPTION			QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS			
Pipe Culverts and Storm Drains										
Circular Pipes Diameter (in)	Longth (ft)	No. of Barrels		r	T	T				
48-inch	Length (ft) 750	No. of Barreis	750	L.F.	\$176.00	\$132,000.00				
Flare End Sections	730		750	L.F.	\$176.00	\$132,000.00				
Diameter (in)	Applicable	No. of Barrels								
48-inch	Yes	1	1	EA	\$2,512.00	\$2.512.00				
Channel Improvements		·			4-10-1-00	4-10-1-10				
Excavation, Low Range			2010	C.Y.	\$13.00	\$26,130.00	Earthwork			
			2010	C.Y.	\$13.00	\$20,130.00	Earthwork			
Special Items (User Defined)										
	User Defined Item		2060	S.Y.	\$60.00	\$123,600.00	14th Street			
	User Defined Item		3	EA	\$7,000.00	\$21,000.00				
Concrete for Weir Diversion <	User Defined Item	S	48	CY	\$730.00	\$35,186.00				
	Master Pla	an Capital Improv	ement Cost Su	mmarv						
Capital Improvement Costs										
Pipe Culverts and Storm Drains						\$134,512.00				
Concrete Box Culverts						\$0.00				
Hydraulic Structures						\$0.00				
Channel Improvements						\$26,130.00				
Detention/Water Quality Facilities						\$0.00				
Removals						\$0.00				
Landscaping and Maintenance Improvements						\$0.00				
Special Items (User Defined)						\$179,786.00				
Subtotal Capital Improvement Costs						\$340,428.00				
Additional Capital Improvement Costs										
Dewatering			\$3,404.28	L.S.		\$3,404.00				
Mobilization			5%			\$17,021.00				
Traffic Control Utility Coordination/Relocation			\$8,510.70	L.S.		\$8,511.00 \$100,000.00				
Stormwater Management/Erosion Control			\$100,000.00 5%	L.S.		\$17,021.00				
Subtotal Additional Capital Improvement Costs			3%	<u> </u>		\$145,957.00				
Land Acquisition Costs						\$140,907.00				
ROW/Easements						\$0.00				
Subtotal Land Acquisition Costs						\$0.00				
Other Costs (percentage of Capital Impr	ovement Costs)					\$0.00				
Engineering			15%			\$72,958.00				
_egal/Administrative			5%			\$24,319.00				
Contract Admin/Construction Management			10%			\$48,639.00				
Contingency			25%			\$121,596.00				
Subtotal Other Costs		\$267,512.00								
Total Capital Improvement Costs	\$753,897.00									
	an Operation	and Maintenanc	e Cost Summar Quantity	Unit	Unit Cont	Total Annual C				
Description Culvert Maintenance (e.g. sediment & debris removal,	erceion at entrene	a/avit etructural rapaire	Unit Cost \$1.00	Total Annual Cost \$150.00						
Juvert Maintenance (e.g. sediment & debris removal, Manhole and Inlet Maintenance (e.g. sediment & debr			750 3	L.F.	\$61.00	\$150.00				
//Annoie and Inlet Maintenance (e.g. sediment & debr Natraulic Structure Maintenance (e.g. debris removal			1	EA EA	\$610.00 \$610.00	\$37.00 \$122.00				
		repairs, etc.)		EA	\$010.00	\$309.00				
Total Annual Operation and Maintenance Cost Effective Interest Rate										
						1.50% \$10,815.00				
otal Operation and Maintenance Costs Over 50 Years										

UD-MPCostv2.2_Reach9.xlsm, BCM-Reach9D 2015-10-20, 9:59 AM

MA	STER PLAN COST ESTIMAT					
PROJECT:	Boulder Creek MDP - Reach 9					
DRAINAGEWAY:	Boulder Creek					-
REACH:	9E	-				
JURISDICTION :	City of Boulder					
REACH ID:	BCM-Reach9E	Jeremy Deischer		DATE :	2015-10-05	1
REACH ID.	DOM-REGUISE					
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
Special Items (User Defined)	1	40	-			
Modify Ditch for Aquatic & Habitat Passage	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000.00</td><td></td></user>	1	L.S.	\$250,000.00	\$250,000.00	
Additional Improvements	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$100,000.00</td><td>\$100,000.00</td><td></td></user>	1	L.S.	\$100,000.00	\$100,000.00	
	Master Plan Capital Impro	vement Cost Su	mmarv			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$350,000.00	
Subtotal Capital Improvement Costs					\$350,000.00	
Additional Capital Improvement Co	ests					
Dewatering		\$3,500.00	L.S.		\$3,500.00	
Mobilization		5%			\$17,500.00	
Traffic Control		\$8,750.00	L.S.		\$8,750.00	
Utility Coordination/Relocation		\$8,750.00	L.S.		\$8,750.00	
Stormwater Management/Erosion Control		5%			\$17,500.00	
Subtotal Additional Capital Improvement Co	sts				\$56,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capita	I Improvement Costs)					
Engineering		15%			\$60,900.00	
Legal/Administrative		5%			\$20,300.00	
Contract Admin/Construction Management Contingency		10% 25%			\$40,600.00	
Subtotal Other Costs		\$101,500.00 \$223,300.00				
Total Capital Improvement Cost	te	\$629,300.00				
. cta. Supital improvement cos					¥020,000.00	
Maste	r Plan Operation and Maintenan	ice Cost Summai	ry			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	emoval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Ma	intenance Cost				\$122.00	
Effective Interest Rate					1.50% \$4,270.00	
Total Operation and Maintenance Costs Over 50 Years						

UD-MPCostv2.2_Reach9.xlsm, BCM-Reach9E 2015-10-20, 9:59 AM

MAS	MASTER PLAN COST ESTIMATE FOR INDIVIDUAL REACH							
PROJECT :	Boulder Creek MDP - Reach	n 9						
DRAINAGEWAY:	Boulder Creek							
REACH:	9F							
JURISDICTION:	City of Boulder							
REACH ID:	BCM-Reach9F	Jeremy Deischer	DATE :	2015-10-05				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL	USER COMMENTS
DESCRIPTION	QUANTITY	UNII	UNII CUSI	COST	USER COMMENTS
Master Plan Capital Impr	ovement Cost Su	mmary			
Capital Improvement Costs	Overnerit Cost Sur	ппа у			
Pipe Culverts and Storm Drains				\$0.00	
Concrete Box Culverts				\$0.00	
Hydraulic Structures				\$0.00	
Channel Improvements				\$0.00	
Detention/Water Quality Facilities				\$0.00	
Removals				\$0.00	
Landscaping and Maintenance Improvements				\$0.00	
Special Items (User Defined)				\$0.00	
Subtotal Capital Improvement Costs				\$0.00	
Additional Capital Improvement Costs					
Dewatering	\$0.00	L.S.		\$0.00	
Mobilization	5%			\$0.00	
Traffic Control	\$0.00	L.S.		\$0.00	
Utility Coordination/Relocation	\$0.00	L.S.		\$0.00	
Stormwater Management/Erosion Control	5%			\$0.00	
Subtotal Additional Capital Improvement Costs				\$0.00	
Land Acquisition Costs					
ROW/Easements				\$0.00	
Subtotal Land Acquisition Costs				\$0.00	
Other Costs (percentage of Capital Improvement Costs)					
Engineering	15%			\$0.00	
Legal/Administrative	5%			\$0.00	
Contract Admin/Construction Management	10%			\$0.00	
Contingency	25%			\$0.00	
Subtotal Other Costs				\$0.00	
Total Capital Improvement Costs				\$0.00	
Master Plan Operation and Maintena	nce Cost Summar	V			
Description	Quantity	Unit	Unit Cost	Total Annual Cost	
Sediment Removal (6 locations - 1x annually) <user defined="" items<="" td=""><td>\$36,000.00</td><td></td></user>	\$36,000.00				
Total Annual Operation and Maintenance Cost				\$36,000.00	
Effective Interest Rate				1.50%	
Total Operation and Maintenance Costs Over 50 Years	\$1,259,989,00				

UD-MPCostv2_Reach9_xlsm, BCM-Reach9F

MAS						
	Boulder Creek MDP - Reach 10					
PROJECT : DRAINAGEWAY :						
	Boulder Creek					
REACH :	10A					
JURISDICTION :	City of Boulder	Inner Balantan			0045 40 05	
REACH ID:	BCM-Reach10A	Jeremy Deischer		DATE :	2015-10-05	
					TOTAL	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	COST	USER COMMENTS
Special Items (User Defined)						
Modify Ditch for Aquatic & Habitat Passage	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$250,000.00</td><td>\$250,000.00</td><td></td></user>	1	L.S.	\$250,000.00	\$250,000.00	
	Master Plan Capital Improv	ement Cost Sur	mmary			
Capital Improvement Costs						
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$250,000.00	
Subtotal Capital Improvement Costs					\$250,000.00	
Additional Capital Improvement Co	sts		1			
Dewatering		\$12,500.00	L.S.		\$12,500.00	
Mobilization		5%			\$12,500.00	
Traffic Control		\$6,250.00	L.S.		\$6,250.00	
Utility Coordination/Relocation		\$6,250.00	L.S.		\$6,250.00	
Stormwater Management/Erosion Control		5%			\$12,500.00	
Subtotal Additional Capital Improvement Cost Land Acquisition Costs	sts				\$50,000.00	
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capita	I Innoversity Octob				\$0.00	
Engineering	Improvement Costs)	15%			\$45,000.00	
Legal/Administrative		5%			\$15,000.00	
Contract Admin/Construction Management		\$30,000.00				
Contingency						
Subtotal Other Costs						
Total Capital Improvement Cost						
Total Capital Improvement Cost					\$465,000.00	
Maste	r Plan Operation and Maintenance	e Cost Summar	'v			
Description	•	Quantity	Unit	Unit Cost	Total Annual Cost	
Hydraulic Structure Maintenance (e.g. debris re	moval, erosion, structural repairs, etc.)	1	EA	\$610.00	\$122.00	
Total Annual Operation and Ma					\$122.00	
Effective Interest Rate					1.50%	

Total Operation and Maintenance Costs Over 50 Years

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\$4,270.00

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MAS	TER PLAN COST ESTIMAT	E FOR INDIVI	DUAL RE	ACH		
PROJECT :	Boulder Creek MDP - Reach 10					
DRAINAGEWAY:	Boulder Creek					
REACH:	10B					
JURISDICTION : REACH ID:	Boulder County BCM-Reach10B	Jeremy Deischer		DATE:	2015-10-05	
REACH ID:	BCM-Reach10B	Jeremy Deischer		DATE:	2015-10-05	
DESCRIPTION		QUANTITY	UNIT	UNIT COST	TOTAL COST	USER COMMENTS
Special Items (User Defined)						
	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$410,000.00</td><td>\$410,000.00</td><td></td></user>	1	L.S.	\$410,000.00	\$410,000.00	
ERC Estimate Riparian Restoration	<user defined="" items<="" td=""><td>1</td><td>L.S.</td><td>\$190,000.00</td><td>\$190,000.00</td><td></td></user>	1	L.S.	\$190,000.00	\$190,000.00	
	Master Dien Conits I Immen	tomont Cool Cool				
Capital Improvement Costs	Master Plan Capital Improv	vernent Cost Sur	nmary			
Pipe Culverts and Storm Drains					\$0.00	
Concrete Box Culverts					\$0.00	
Hydraulic Structures					\$0.00	
Channel Improvements					\$0.00	
Detention/Water Quality Facilities					\$0.00	
Removals					\$0.00	
Landscaping and Maintenance Improvements					\$0.00	
Special Items (User Defined)					\$600,000.00	
Subtotal Capital Improvement Costs					\$600,000.00	
Additional Capital Improvement Cos	its				,	
Dewatering		\$6,000.00	L.S.		\$6,000.00	
Mobilization		5%			\$30,000.00	
Traffic Control		\$15,000.00	L.S.		\$15,000.00	
Utility Coordination/Relocation		\$15,000.00	L.S.		\$15,000.00	
Stormwater Management/Erosion Control		5%			\$30,000.00	
Subtotal Additional Capital Improvement Cos	ts				\$96,000.00	
Land Acquisition Costs						
ROW/Easements					\$0.00	
Subtotal Land Acquisition Costs					\$0.00	
Other Costs (percentage of Capital	Improvement Costs)					
Engineering		15%			\$104,400.00	
Legal/Administrative		5%			\$34,800.00	
Contract Admin/Construction Management		10%			\$69,600.00	
Contingency Subtotal Other Costs		25%			\$174,000.00 \$382,800.00	
	-	\$1.078.800.00				
Total Capital Improvement Cost	5				\$1,070,000.00	
Master	Plan Operation and Maintenand	ce Cost Summar	у			
Description		Quantity 4800	Unit L.F.	Unit Cost \$2.00	Total Annual Cost	
Channel Maintenance (e.g. sediment & debris re	moval, erosion, tree & weed removal, etc.)	\$1,920.00				
Total Annual Operation and Mai	intenance Cost	\$1,920.00				
Effective Interest Rate						
Total Operation and Maintenance Costs Over 50 Years					\$67,199.00	
and manner and					43.,700.00	

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