







CITY OF E	BOULDEF	R, OSMP			TR	AIL CONSTRUCT	ION NOTES	PRIN'	T DATE:	Aug 11, 2020	P	PROJECT:	Upper Bear Canyon Trail Re-Route		
STA. ST	TART	STA.	END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
										#N/A	#N/A	#N/A			
										Construct New			Allowances for occasional 2-ft width due to barriers (boulders,		
										Trail, 3-ft Full			bedrock, trees, etc) - see project specifications for more		
+0		37+60			2.5					Bench	3760		information.		
10		37100			2.5				100	Belleti	3700		Decommission old trail:		
													FIRST 100 ft, est. 4 ft width: See detail 911.60 A "Contour		
													Restoration". 1) Pull/remove any berm; 2) then use excavated		
													soil and rock to fully re-contour trail to match natural slope; 3)		
													then seed; 4) then cover with duff; 5) then cover with logs,		
													sticks/slash.		
													SECOND 100 ft, est. 4 ft width: See detail 911.60 C		
													"Scarification", plus addition of soil fill. 1) Pull/remove any berm;		
													2) then use excavated soil and rock to partially re-contour trail		
													(about half of what is used for full-recontour in first 100 ft);		
										Special Instructions			3) then seed; 4) then cover with duff; 5) then cover with logs,		
+0									spc	- See Notes	SEE NOTES	N/A	sticks/slash.		
													Note - no 0+00 stake. First whisker is at 1+00. (One blue		
													whisker at top of rock outcrop at 0+40.) Notify OSMP Project		
										Special Instructions			Manager who will set 10-ft spacing whiskers prior to		
+0		1+00							I	- See Notes	SEE NOTES	N/A	construction.		
10		1100							БРС	Sec 1 (Sees	BEE TO TES	1 (/ 11			
+0		+8						3	sst	Stone Step	2	EA			
+0		+0						3	881	Stone step	3	LA	Taper wall with steps - lowest height of wall is est. 1 ft at		
										Cton Dota's's					
		0				2				Stone Retaining	1.0	C.C.	1st/lowest step; highest part of wall is est. 2 ft at 3rd/highest		
+0		+8				2			srw	Wall	16	SF	step.		
													Rip-rap POSSIBLY needed: Depends on restoration of old trail - if		
													fill soil can fully re-contour/fill the old trail's cut-slope (including		
													backslope), then rip-rap is likely not needed; otherwise stabilize		
+8		+23				5			rr	Rip-Rap	75	SF	downhill side of trail with rip-rap.		
+50								1	rt	Remove Tree	1	EA	5-inch diameter.		
+70								1	rt	Remove Tree	1	EA	4-inch diameter.		
										Grade Reversal					
+70								1	I	High Point	1	EA			
170								1	5111P	ingii i Oiiit	1	. E/1			
+70								1	go#	Stone Gergovia	1	EA	2-3CF. Place on downhill edge of grade rev. high point.		
+70								1	gai	Stone Gargoyle		ĽA	2-301. Trace on downinn edge of grade fev. high point.		

CITY OF						RAIL CONSTRUCT			PRINT DAT	E: Aug 11, 2020		ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. S	TART	STA. I	END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-	Built Abr	v Item	Designed	UOM	Notes	Progress Notes	Compl?
		Ü				- C	Ü								- Table
										Stone Retaining					
1+00		1+20				1.5			cry	Wall	30	SF			
1100		1+20				1.5			31 V	YY all	30	, 51			
1+08								1	rt	Remove Tree	1 1	EA	POSSIBLE remove tree. 10-inch diameter.		
1100								1	11	Kemove rice	<u> </u>	LA	1 OSSIBLE TEMOVE TICE. 10-Men diameter.		
										Grade Reversal					
1+10								1	orli	Low Point	1 1	EA			
1+10								1	811	LOW I OIIIt	+	LA			
1+57								1	rt	Remove Tree	1 1	EA	8-inch diameter, dead snag.		
1+37								1	11	Kemove free	<u> </u>	LA	o-men diameter, dead snag.		
											1				
										Grade Reversal	1				
1+70								1	arh	High Point	1	EA	1+90 is corresponding low point.		
1+70								1	gill	ingii i Oilit	+ '	LLA	1 + 70 is corresponding low point.		
1+70								1	r a a	Stone Gargoyle	1 1	EA	2-3CF. Place on downhill edge of grade rev. high point.		
1+70								1	gai	Stolic Gargoyic	<u>'</u>	LEA	2-3C1. Trace on downing edge of grade fev. fight point.		
										Grade Reversal					
1+90								1	orli	Low Point	1 1	EA	1+70 is corresponding high point.		
1+90								1	g11]	LOW I OIIIt	+	LLA	1+70 is corresponding high point.		
										Stone Retaining					
2+04		2+17				1			srv	Wall	13	SF			
2104		2117				1			31 V	YY all	1.	, 51			
2+24								1	sst	Stone Step	1 1	I EA			
2.2.								-	55.	Stone Step	1	L. L.			
										Stone Retaining					
2+25		2+45				1.5			srv	Wall	30	SF	2-ft high at center, tapering to 1-ft high at both ends.		
		0				- 10					+	1	6,p		
											1				
										Stone Retaining	1				
2+65		2+77				1			srv	Wall	12	2 SF			
										1	1	1			
											1				
											1				
2+80		2+84						3	sst	Stone Step] 3	B EA			
										<u> </u>	1	1			
											1				
											1				
2+82								2	gai	Stone Gargoyle	2	2 EA	Place 1 gargoyle (2-3CF each) on each side of the staircase.		
										1	1	1			
										G. D.	1				
										Stone Retaining	1				
2+84		2+86				1			srv	Wall	2	2 SF	Crib downhill side of trail at top step - tie wall into top step.		
											1				
											1				
3+26								1	rt	Remove Tree	1	I EA	4-inch diameter, on uphill side of trail.		
													<u> </u>		

<u> </u>	ULDER, C	JOINIL			AIL CONSTRUCTI	ON NOTES			DATE.	Aug 11, 2020		tosher.	Upper Bear Canyon Trail Re-Route		
STA. STAI	.RT	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	Q1	ГҮ			# Units				Item
Design As	s-Built De	esign As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design	As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
					Č									8	1
										G 1 D 1					
										Grade Reversal					
3+26							1		grhp	High Point	1	EA			
										Grade Reversal					
2 . 45							1				1	E.			
3+45							1		grlp	Low Point	1	EA			
3+45	3	3+55					2		rt	Remove Tree	2	EA	Remove 3-inch and 4-inch diameter trees (2).		
										Constitution of the second			D 1		
										Special Instructions			Do not disturb stone cairn approx. 12' uphill. Do not disturb log		
4+15									spc	- See Notes	SEE NOTES	N/A	remains of cabin approx. 150 ft up the ridgeline.		
4+25							1		rt l	Remove Tree	1	EA	8" diameter, on uphill side.		
4+23							1		rt	Kemove Hee	1	ĽA	o diameter, on upinii side.		
										Bedrock					
4+25	4	4+60					15		brx	Excavation	15	CF			
										Special Instructions			Determine if stone retaining walls at 4+33 and 4+45 are needed,		
4+25	4	4+60							spc	- See Notes	SEE NOTES	N/A	or if tread can be cut through here.		
										Stone Retaining					
4+33	4	4+43			1					Wall	10	SE.			
4+33	4	++43			1				51 W	vv a11	10	21.			
										Stone Retaining					
4+45	4	4+60			1				srw	Wall	15	SF			
4+45							1		rt	Remove Tree	1	EA	10" diameter, uphill side.		
4+63							1		sst	Stone Step	1	EA			
1105							1		551	Stone Step	1	2/1			
										Bedrock					
4+69							3		brx	Excavation	3	CF			
										Bedrock					
5.50	_										2	CE			
5+50	5	5+54					3		brx	Excavation	3	CF			
										Bedrock					
	_	5+62					3			Excavation	3	CF			
5+58	15														
5+58	5	3102					3								
5+58	5	3102					3			C. I. P.					
5+58 5+63	5	5102					3			Grade Reversal Low Point		EA			

CITY OF B	BOULDER	I, OSMP		TR	AIL CONSTRUCTI				DATE:	Aug 11, 2020		ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. ST		STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	Q.	ГҮ			# Units				Item
Design	As-Built	Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design	As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
											_				_
										Grade Reversal					
											1	- .			
5+75							1		grhp	High Point	1	EA			
6+22							1		oar	Stone Gargoyle	1	EA	3CF. Place on downhill side of trail.		
0122							1		Sui	Stolle Guigojie		L/ i			
										G 117					
										Special Instructions					
6+22									spc	- See Notes	SEE NOTES	N/A	Note - swale crossing low point.		
										Special Instructions			Remove stump 12" deep and fill/compact with mineral soil.		
6+25										_	SEE NOTES				
0+23									spc	- See Notes	SEL NOTES	11/ A	(typ.)		
										Grade Reversal			Ensure that trail grade rises 2-3% over 6+22 swale crossing low		
6+40							1		grhp	High Point	1	EA	point.		
										Bedrock					
6+60		6+65					6			Excavation	6	CF			
0+00		0+03					Ü		DIX	Excavation	0	СГ			
6+68		6+75					5		sst	Stone Step	5	EA			
		,													
6+68							1		rt	Remove Tree	1	EA	4" diameter. (Leave the 8" diameter tree.)		
0+08							1		11	Remove free	1	EA	4 diameter. (Leave the 8 diameter tree.)		
6+75							1		gar	Stone Gargoyle	1	EA	2CF, uphill side.		
										Stone Retaining					
6+84		6+86			1					Wall	2	SF	Tie into bedrock at 6+86.		
0+64		0+00			1				srw	vv all	2	Sr	The lifto bedrock at 0+80.		
										Special Instructions					
6+86		6+89							spc	- See Notes	SEE NOTES	N/A	Use bedrock as tread surface.		
6+88							1		ger	Stone Gargoyle	1	EA	4CF. Place on downhill side to guide trail users over bedrock.		
0+88				 			1		gai	Stone Gargoyle	1	ĽA	Tel. I face on downling side to guide trail users over bedrock.		
7+88							1		rt	Remove Tree	1	EA	8" diameter, on downhill side.		
										Bedrock					
7+90		8+00					5				_	CF			
7+90		0+00					5		brx	Excavation	3	СГ			
										Bedrock					
9+05		9+15					6		brx	Excavation	6	CF			

CITY OF	BOULDER	, OSMP			TI	RAIL CONSTRUCT	ION NOTES	P	RINT DA	ATE:	Aug 11, 2020	P.	ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. S Design	TART As-Built	STA. Design	END As-Built	Whisker Color	WIDTH (FT) Design As-Built	HEIGHT (FT) Design As-Built	LENGTH (FT) Design As-Built	QTY Design As-	Built A	brv :	Item	# Units Designed	UOM	Notes	Progress Notes	Item Compl?
9+25		9+40						10	S	sst	Stone Step	10	EA	Build as staircase.		
9+48		9+60						7		not .	Stone Step	7	EA	Build as staircase.		
7+40		9+00						/	8	sst i	stone step	/	LA	build as staircase.		
											Special Instructions					
9+80									S		•	SEE NOTES	N/A	Note - swale crossing low point.		
											Stone Retaining			Possible 1-tier stone retaining wall and/or 1-2 steps. Evaluate		
10+00		10+12				1			Si	rw	Wall	12	SF	with OSMP Project Manager when woody debris is removed.		
											G . 117					
10+12		10+17									Special Instructions - See Notes	SEE NOTES	NI / A	Remove soil/debris from bedrock - use bedrock as tread surface.		
10+12		10+17							S	pc ·	- See Notes	SEE NOTES	N/A	Remove son/debris from bedrock - use bedrock as tread surface.		
											Bedrock					
10+15		10+20						15	b		Excavation	15	CF	Break/remove boulder in backslope.		
														T.		
											Stone Retaining					
10+17		10+28				1.5			Si	rw	Wall	16.5	SF			
40.00											_	_				
10+30								1	:	rt .	Remove Tree	1	EA	8" diameter, dowhill side.		
											Special Instructions					
10+38									S			SEE NOTES	N/A	Remove 12-inch log.		
10.00										P	200 110005	5221(0125	1,711	Atomoro 12 montog.		
											Stone Retaining					
10+60		10+68				1			Si	rw	Wall	8	SF	Tie in with rock at 10+68.		
											_					
10+64								1		rt	Remove Tree	1	EA	4" diameter, uphill side.		
											Stone Retaining			Incorporate existing stable boulders into the wall. (Qty. reduced 50% to account for existing boulders.) Tie in with existing		
10+69		10+86				2			01		Wall	17	SF	boulders on both ends.		
10+09		101.00				2			5.	1 44	11 411	17)I	bounders on both chas.		
											Stone Retaining					
10+90		11+00				2			Si		Wall	20	SF	3' height at 10+90, tapering to 1' height at 11+00.		
											Special Instructions					
11+20									S	pc	- See Notes	SEE NOTES	N/A	FYI - cliff overlook site.		
											Ct D					
11 - 40		11.54				1					Stone Retaining	_	CE.	Tomon from 6 inch height at 11,40 to 15 ft height at 11,54		
11+49		11+54				1			Si	rw	wall	5	SF	Taper from 6-inch height at 11+49 up to 1.5-ft height at 11+54.		

CITY OF BOULD	ER, OSMP			RAIL CONSTRUCTI		PRINT	DATE:	Aug 11, 2020	PF	ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT) Design As-Built	LENGTH (FT)	QTY			# Units				Item
Design As-Bu	lt Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
					•	•							
								Special Instructions					
11+54	11+57						spc		SEE NOTES	N/A	Use bedrock as tread surface.		
							spe	200110005					
11+57	11+61					3	sst	Stone Step	3	EA	Build as staircase.		
								Stone Retaining					
11+68	11+83			1.5			srw	Wall	22.5	SF			
								Special Instructions					
11+84	11+91						spc		SEE NOTES	N/A	Thru-cut small knoll, est. 10" grade reduction.		
11101	11171						spe	200110005	5221(0125	11/11	grade reduction.		
								Bedrock					
12+00	12+50					10	brx	Excavation	10	CF			
12+00	12+30		+			10	ULX	LACAVALIOII	10	CI.			
								Special Instructions					
12 00	12 00							_	GEE MOTEG		D 1 1' /		
12+00	12+80						spc	- See Notes	SEE NOTES	N/A	Remove several sapling trees.		
								Bedrock					
12+35	12+39					10	brx	Excavation	10	CF	Remove large boulder on uphill side.		
								Special Instructions					
12+51	12+53						spc	- See Notes	SEE NOTES	N/A	Use bedrock as tread surface.		
								Stone Retaining					
12+57	12+60			1			srw	Wall	3	SF			
								Special Instructions					
12+60	12+63						spc	*	SEE NOTES	N/A	Use existing flat rock as tread and step.		
12100	12103						spc	See I votes	DEL ITOTES	11/ A	ese existing nat fock as treat and step.	_	
								Grade Reversal					
13+00						1			1	EA			
13+00						1	grip	Low Point	1	EA			
								C I D I					
10 10								Grade Reversal					
13+18			ļ			1	grhp	High Point	1	EA			
13+18						1	gar	Stone Gargoyle	1	EA	2-3CF. Place on downhill edge of grade rev. high point.		
13+19	13+24					3	sst	Stone Step	3	EA			
								Stone Retaining					
13+29	13+35			1				Wall	6	SF			
13+39	13+47					6	cot	Stone Step	6	EA	Build as staircase.		
13+37	15747		1			U	sst	Prone preh	0	ĽΛ	Duna as stancase.		

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STA. S	START	STA.	END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
		Design	As-Built	Color	Design As-Built		Design As-Built	Design As-Built	Abry	Item	Designed	UOM	Notes	Progress Notes	Compl?
					8 8	8 11 8	3 3	3 3 6	71011	TCIII	Besigned	00111	1000	Trogress rivees	сотгрт.
										Stacked Rock			Build rock rubble wall around outer edge of steps to steer trail		
13+39		13+45				1.5			srb	Barrier	0		users around switchback.		
13+39		15+45				1.3			SLO	Darrier	7	SF	users around switchback.		
										Stone Retaining					
12.46		12.54				1				_		CE			
13+46		13+54				1			srw	Wall	8	SF			
										Grade Reversal					
12.71								1			1	T: A			
13+71								1	grlp	Low Point	1	EA			
										Grade Reversal					
12.00								1			,	EA			
13+80								1	grnp	High Point	1	EA			
12 . 90								1		Stone Correct	1	EA	2.2CE Diago on downkill adag of and a new high a sint		
13+80								1	gar	Stone Gargoyle	1	EA	2-3CF. Place on downhill edge of grade rev. high point.		
										Grade Reversal					
14.20								1				E 4			
14+30								1	grip	Low Point	1	EA			
										Special Instructions					
14.25		14.45								-	GEE NOTES	NT /A	D 2 L 11		
14+35		14+45							spc	- See Notes	SEE NOTES	IN/A	Remove 3 boulders.		
										Grade Reversal					
14.40								1			1	TC A			
14+40								1	grnp	High Point	1	EA			
										Stone Retaining					
14.50		14.50				1				_		CE	Tie in mide enicking benefit on at 14,50		
14+50		14+56				1			srw	Wall	0	SF	Tie in with existing boulder at 14+56.		
14.65		14+87						10	4	Ctono Cton	10	TC A	Duild as stainess when familie Call stars as and d		
14+65		14+87						10	sst	Stone Step	10	EA	Build as staircase where feasible. Crib edges as-needed.		
										Stone Retaining			Stone retaining wall for cribbing on edges of steps if needed (see		
14.65		14:07				1				_	22				
14+65		14+87				1			srw	Wall	2.2	SF	item above).		
										Bedrock					
14+00		14+94						3		Excavation	,	CF	Remove embedded bedrock on uphill side.		
14+90		14+94						3	brx	Encavation	3	CF	remove embedded bedrock on upinn side.		
										Stone Retaining					
15.00		15+21				2.5				Wall	27 5	CE	Tie in with existing boulder at 15+21.		
15+06		13+21				2.5			srw	vv all	37.5	SГ	THE III WITH EXISTING DOUBLET AT 13+21.		
										Special Instructions					
15 : 21		15+24								-	SEE NOTES	NI / A	Use existing 2 steps in rock as steps up.		
15+21		13+24							spc	- See Motes	PEE NOTES	1 1 / A	OSC CAISING 2 SICHS IN TOCK AS SICHS UP.		
15+20		15+32						2	oct.	Stone Ston	2	ΕΛ			
15+29		13+32							SSL	Stone Step		EA			

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STA. S	TART	STA.	END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abry	Item	Designed	UOM	Notes	Progress Notes	Compl?
8		0			8			8	11017	100111	Besigned	0 01/1		11081000 110000	compri
										Stone Retaining					
15+35		15+45				1			srw	Wall	10	SF	Tie in with existing boulders on both ends.		
13+33		13 173				1			31 W	vv an	10	51	The fir with existing bounders on both ends.		4
15+46		15+49						2	cet	Stone Step)	EA			
13+40		13+47						<u></u>	331	Stolle Step		LA			
										Bedrock					
15+59		15+62						3	brx	Excavation	3	CF	Remove boulder in backslope.		
13+39		13+02						J	UIA	Excavation	3	CI	Remove bounder in backstope.		4
										Bedrock					
16+00		16+70						30		Excavation	30	CF			
10+00		10+70						30	UIX	Excavation	30	CI			_
										Special Instructions			Remove stump 12" deep and fill/compact with mineral soil.		
16+05										- See Notes	SEE NOTES		(typ.)		
10+03									spc	See Notes	PET MOTER	11/71	 		
										Stone Retaining					
16+17		16+21				1			srw	Wall	1	SF	Tie in with existing boulders on both ends.		
10+17		10+21				1			51 W	vv an	7	31	The fill with existing bounders on both ends.		
										Stone Retaining			Incorporate existing stable boulders into the wall. Tie in with		
16+27		16+45				1.5			srw	Wall	27	SF	existing boulders on both ends.		
10+27		10743				1.3			51 W	vv an	21	31	existing bounders on both chas.		
16+71		16+74						2	sst	Stone Step	2	EA			
10+71		10174						2	sst	Stone step		LA			
										Bedrock					
17+00		19+00						40	brx	Excavation	40	CF			
17100		17100						10	OIA	Executation	10	CI	D '1.1		
													Possible retaining wall - build if and where needed to achieve		
										Stone Retaining			relatively uniform trail grade and width, and/or to raise tread		
17+16		17+40				2.5			srw	Wall	60	SF	above bedrock.		
17110		17170				2.3			D1 W	,, 411	+		acore courses.		
										Stone Retaining					
17+40		17+50				2			srw	Wall	2.0	SF	Tie in with existing rock at 17+50.		
17110		1,100				_			51 11		1 20	~-			
										Special Instructions					
17+50		17+58							spc	- See Notes	SEE NOTES	N/A	Thru-cut small knoll, est. 1-ft grade reduction.		
17.50		50							-F*		1 3120	1			
										Stone Retaining					
17+60		17+70				1.5			srw	Wall	15	SF	Tie in with existing rock at 17+60.		
203						- 1.0			,	•					
										Stone Retaining					
17+76		17+80				2.5			srw	Wall	10	SF	Tie in with existing rock on both ends.		
, 0											1	t -	6		
										Stone Retaining					
17+83		17+87				1.5			srw	Wall	6	SF	Tie in with existing rock on both ends.		
17.03		2.101			ı	1.0		l	51 77			1~-			

CITY OF BOULDER				RAIL CONSTRUCTI			NIDAIE	: Aug 11, 2020		(OJECT:	Upper Bear Canyon Trail Re-Route		
STA. START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design As-Built	Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Bui	t Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
-			-		-	-							1
								Special Instructions					
17+88							spc	- See Notes	SEE NOTES	N/A	Use existing bedrock/boulder as step.		
							 						
17+90	17+94					3	sst	Stone Step	3	EA	Build as staircase.		
								Stone Retaining					
40.07	10.10								1.4	~-			
18+05	18+19			1			srw	Wall	14	SF			
10.20	10.00					2		Chara Chara	ر ا	E A	Cta-la stana		
18+20	18+23					2	sst	Stone Step	2	EA	Stack steps.		
			1					Stone Retaining					
18+24	18+28		1	1			srw	Wall	1 4	SF	Tie in with step at 18+23 and boulder at 18+28.		
10124	10120		_	1		-	51 W	,, mii	+	ΩI	The manufact at 10+25 and bounder at 10+26.		
			1										
								Stone Retaining					
18+31	18+40			2.5			srw	Wall	22.5	SF			
							+						
								Bedrock					
18+47	18+55					14	brx	Excavation	14	CF	Remove 2 boulders.		
								Ctana Datainina					
								Stone Retaining					
18+56	18+65			2			srw	Wall	18	SF			
								Stone Retaining					
10.70	10.00			1					10	CE.			
18+70	18+80			1			srw	Wall	10	SF			
								Special Instructions					
18+85							cno.		SEE NOTES	NI / A	Note - low point of swale crossing.		
10+03							spc	- Sec Notes	SEE NOTES	IN/ A	Note - low point of swale crossing.		
			1										
			1										
19+10						2	rt	Remove Tree	2	EA	2 trees on uphill side: 8" and 5".		
->							+ **		 				
								Stone Retaining					
19+58	19+62		1	1			srw	Wall	4	SF	Connect to step.		
40.45													
19+62	19+66					3	sst	Stone Step	3	EA			
			1										
10+71	19+74		1			2	2-4	Stone Ston		ΕΛ			
19+71	19+74					2	sst	Stone Step	2	EA			
								Grade Reversal					
20+00						1	orln	Low Point	1	EA			
20100			L			1	grip	LOW I OIIIt	1	LΠ			

CITY OF BOULDE				AIL CONSTRUCTI			PRINT	DATE:	Aug 11, 2020		ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	Q7	ГҮ			# Units				Item
Design As-Built	Design As-Built	Color	Design As-Built	HEIGHT (FT) Design As-Built	Design As-Built	Design	As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
						, i				U			8	1
									C 1. D 1					
									Grade Reversal					
20+25						1		grhp	High Point	1	EA			
									Bedrock					
20+52	20+60					3			Excavation	2	CF			
20+32	20+00					3		brx	Excavation	3	СГ			
									Bedrock					
20+78	20+86					5		brx	Excavation	5	CF			
20.00	20.01					_			a, a,	2	Б.			
20+89	20+91					2		sst	Stone Step	2	EA			
									Special Instructions					
20+91	21+00							spc	- See Notes	SEE NOTES	N/A	Reduce grade 8-10".		
												<u> </u>		
									Grade Reversal					
21 60											F. 4			
21+60						1		grlp	Low Point	1	EA			
21+60	21+90					30		lb	Log Barrier	30	LF	Place between switchback legs to prevent shortcutting.		
									C					
									Special Instructions			Domovo styme 12" door and fill/commont with minaral soil		
										GEE MOTEG		Remove stump 12" deep and fill/compact with mineral soil.		
21+61								spc	- See Notes	SEE NOTES	N/A	(typ.)		
									Grade Reversal					
21+70						1		grhn	High Point	1	EA			
						_		8F	8					
24 50									a a 1					
21+70						1		gar	Stone Gargoyle	1	EA	Place on downhill side of grade rev. high point.		
21+78	21+82					2		sst	Stone Step	2	EA			
	- , 0 -									_				
									Stone Poteinine					
	• • • • • • • • • • • • • • • • • • • •								Stone Retaining	.	~			
21+84	21+88			1				srw	Wall	4	SF			
21+88	21+96					8		sst	Stone Step	8	EA	Build as staircase.		
21100	21170					- 3		551	Stone Step		<i>11</i> 1	Zalia di Salia de Cara		
									C. D.					
									Stone Retaining					
22+09	22+15			1				srw	Wall	6	SF			
									Bedrock					
22+10	22+15					2			Excavation	2	CF			
22+10	22±13							ULX	Encavation	2	CI.			

CITY OF					RAIL CONSTRUCT			DATE:	Aug 11, 2020		ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. S	START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
													-	
									Stone Retaining			2-ft average height, but actual height ranges between 1-3' to fit		
										20				
22+25		22+40			2			srw	Wall	30	SF	topography.		
									Grade Reversal					
23+00							1	orln	Low Point	1	EA			
23100							-	86	EOW TOME	1	Di i			
									Grade Reversal					
23+20							1	grhp	High Point	1	EA			
23+20							1	gor	Stone Gargoyle	1	EA	3CF. Place on downhill edge of grade rev. high point.		
23720							1	gai	Stolic Gargoyic	1	LA	Jef. Trace on downmin edge of grade fev. high point.		
				1										
23+33							1	rt	Remove Tree	1	EA	8" dia, on uphill side.		
22.20							1	4	Remove Tree	1	E A	8" dia, on uphill side.		
23+38			-				1	rt	Remove free	1	EA	o dia, on upinii side.		
									Special Instructions					
23+60								spc	- See Notes	SEE NOTES	N/A	Remove log - 16" diameter.		
								-						
									Special Instructions					
22.05									_	GEE MOTEG	NT / A	NT-4		
23+85								spc	- See Notes	SEE NOTES	N/A	Note - swale crossing low point.		
24+00							1	gar	Stone Gargoyle	1	EA	3CF. Place on downhill side of trail.		
									Stone Retaining					
24+25		24+40			1.5				Wall	22.5	CE	Below tree - build if needed.		
24+23		24+40			1.5			srw	wall	22.5	SL	below tree - build if fleeded.		
									Stone Retaining					
24+45		24+55			1.5			srw	Wall	15	SF	Below tree.		
									Special Instructions					
24+65										SEE NOTES	NI/A	Note - swale crossing low point.		
24+03			1	 			 	spc	- See Motes	PER MOTES	1 1 / A	rvote - sware crossing low point.		
									Stone Retaining					
24+90		24+96			1.5			srw	Wall	9	SF	Tie in with existing rock at 24+96.		
									Special Instructions					
24.06		25+00								SEE NOTES	NI / A	Use existing healder/hedroek as treed/emitical adap		
24+96		23+00	1					spc	- see notes	SEE MOTES	1 1/ A	Use existing boulder/bedrock as tread/critical edge.		
				1					Stone Retaining					
24+99		25+05			1.5			srw	Wall	9	SF	Tie in with existing rock at 24+99.		
												-		

	BOULDER		T		RAIL CONSTRUCT			DATE:	Aug 11, 2020		ROJECT:	Upper Bear Canyon Trail Re-Route	_	
STA. S	START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
														1
									Grade Reversal					
25+40							1	grlp	Low Point	1	EA			
									Stone Retaining					
									_		~-			
25+41		25+50			1			srw	Wall	9	SF			
									Bedrock					
25+46							3		Excavation	2	CF			
23+40	-						3	DIX	Excavation	3	СГ			
									Grade Reversal					
25+52							1	grhn	High Point	1	EA			
20102							1	8 mp	Ingui Tome	1	Z. i			
									n					
									Bedrock					
25+65							5	brx	Excavation	5	CF			
									Stone Retaining					
									_					
25+96		25+97			1.5			srw	Wall	1.5	SF	Between 2 boulders.		
									Bedrock					
26+35		26+50					5		Excavation	5	CF	Possible.		
20+33		20+30					J	DIX	Excavation	3	CI	r Ossible.		
									Bedrock					
26+60		26+70					2	brx	Excavation	2	CF	Possible.		
									D 1 1					
									Bedrock					
27+05		27+10					2	brx	Excavation	2	CF	Possible.		
									Grade Reversal					
20.20							1			1	T: A			
28+30							1	grip	Low Point	1	EA			
									Grade Reversal					
28+40							1	grhn	High Point	1	EA			
	-						-	5-11	0v					
28+40			<u></u>				1	gar	Stone Gargoyle	1	EA	2-3CF. Place on downhill edge of grade rev. high point.		
20.04		20.00					4		G G		E 4	D '11		
28+84		28+90					4	sst	Stone Step	4	EA	Build as staircase.		
									Stacked Rock			Rubble wall around outside edge of stairs, to steer trail users		
28+84		28+92			1.5				Barrier	12		around the switchback.		
20704		20172			1.3			510	Dui I ()	12	D1	around the switchback.		
									Stone Retaining					
28+95		28+99			1			srw	Wall	4	SF	Anchor to existing bedrock on both ends.		
				1			1					<u> </u>		

CITY OF BOULDER, OSMP											ROJECT: Upper Bear Canyon Trail Re-Route					
STA.	START	STA.	END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item	
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?	
28+98		29+15				1.5	•			Stacked Rock Barrier	25.5		Rubble wall on uphill side - connect to existing bedrock at 28+98. Give it a natural look so it looks like a natural extension of the existing bedrock: use large stone, lichen side facing up/out.			
29+60								1		Grade Reversal Low Point	1	EA				
29+78								1		Grade Reversal High Point	1	EA				
29+78								1	gar	Stone Gargoyle	1	EA	3CF. Place on downhill side of trail.			
30+35		30+50				2				Stone Retaining Wall	30	SF				
30+35		30+50						5		Bedrock Excavation	5	CF				
31+25		31+40				2				Stone Retaining Wall	30	SF				
31+72		31+78				1.5			srw	Stone Retaining Wall	9	SF	Tie into bedrock on both ends.			
32+00								1		Grade Reversal Low Point	1	EA				
32+10								1		Grade Reversal High Point	1	EA				
32+10								1	gar	Stone Gargoyle	1	EA	2-3CF. Place on downhill edge of grade rev. high point.			
32+15		32+19				1			srw	Stone Retaining Wall	4	SF	Tie into rock at 32+19.			
32+30		32+50						5		Bedrock Excavation	5	CF				
33+25									spc	Special Instructions - See Notes	SEE NOTES	N/A	Note - swale crossing low point.			
33+85										Special Instructions - See Notes	SEE NOTES	N/A	Note - swale crossing low point.			

CITY OF BOUL			TRAIL CONSTRUCTION NOTES					DATE:	Aug 11, 2020	P	ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. START	STA. END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QT	ΓΥ			# Units				Item
Design As-Bu	ilt Design As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design	As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
			Ü	, in the second	Ü									- I
												3CF. Place on downhill side of trail. Ensure that trail grade rises		
33+95						1		gar	Stone Gargoyle	1	EA	2-3% higher than 33+85 swale crossing low point.		
20.70						-		8	20000	_		Remove 12-inch diameter snag (dead tree) on uphill side.		_
												Grub/remove trunk/roots to 18 inches deep and fill/compact		
												with mineral soil. Snag is rotting - hopefuly stump/roots will		
34+22						1		rt	Remove Tree	1	EA	grub out easily.		
34+22						1	-	11	KCIIIOVC ITCC	1	LA	grub out cashy.		
34+25	34+29					3		eet	Stone Step	3	EA	Build as staircase.		
34123	34127					3		331	Stone step	3	LII	Build as stairease.		
34+27						1		gar	Stone Gargoyle	1	EA	4CF. Place on dowhill side of steps.		
31127						1		541	Stone dargojie		E. I	Ter. Thee on downin side of steps.		
									Stone Retaining					
34+28	34+37			1				srw	Wall	9	SF			
34+37	34+45					5		sst	Stone Step	5	EA	Build as staircase.		
												Set log parallel to slope (running up/down slope) on outside		
34+40						10		lb	Log Barrier	10	LF	edge of stairs to help guide people around switchback turn.		
												Set 4CF gargoyle stone as anchor at apex (inside corner of steps)		
										_				
34+41						1		gar	Stone Gargoyle	1	EA	of switchback.		
24.45	24.65					20		11.	I D	20	ID	C. 4 1 1 . 4		
34+45	34+65					20		lb	Log Barrier	20	LF	Set log between switchback legs to prevent shortcutting.		
									Special Instructions					
34+92									-	SEE NOTES	NI / A	Note - swale crossing low point.		
3十十万亿		1						spc	- BCC MOLES	PER MOTES	11/ M	rion - sware crossing row point.		
									Special Instructions			Note - swale crossing low point. Move boulder to downhill edge		
35+44									-	SEE NOTES		of trail - set stable (excavate foundation for it to set in).		
								-P-	2001.0000		- ', ' -	see seases (energiale roundation for it to bet in).		
									Grade Reversal					
36+10						1		grlp	Low Point	1	EA			
						-		<i>o</i> ⁻r	·	İ		Whiskers are only set at 20-ft intervals. Notify OSMP Project		
												į vietas		
									Special Instructions			Manager who will set 10-ft spacing whiskers prior to		
36+20	37+00							spc	- See Notes	SEE NOTES	N/A	construction.		
		1						1			1			
									C 1. P 1					
									Grade Reversal					
36+22						1		grhp	High Point	1	EA			
37+24	37+27					2		sst	Stone Step	2	EA			
		-									-			

CITY OF BOULDER, OSMP			TRAIL CONSTRUCTION NOTES PRINT DATE: Aug 11, 2020 P						PROJECT:	Upper Bear Canyon Trail Re-Route					
	STA. START		STA. END		WIDTH (FT)	HEIGHT (FT)		QTY			# Units				Item
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
_							-	_							1
										a. P					
										Stone Retaining			Backwall against existing trail backslope: Est. 1-2 ft height at		
37+26		37+45				3			srw	Wall	57	7 SF	37+26, tapering up to 4-ft height at 37+45.		
										Special Instructions			Notify OSMP Project Manager prior to construction to flag out		
										•					
37+27		37+45							spc	- See Notes	SEE NOTES	N/A	details of this retaining walls, steps, and switchback location.		
													1.5' height at 37+27, tapering down to <1-ft height at 37+45.		
										Stone Retaining			Wall wraps around/across existing trail between 37+27 to		
37+27		37+45				1.5			srw	Wall	27	7 SF	approx. 37+32, connecting to the existing bedrock at 37+27.		
													Decommission old trail, 100-ft: See detail 911.60 A "Contour		
													· ·		
													Restoration". Rip/de-compact existing tread to 3-inch depth.		
													Place soil fill (from adjacent excavations) at approx. 1.5 ft depth		
													(tapering up from existing critical edge towards backslope, or to		
													natural contours). Install seed and erosion control blanket (both		
										Special Instructions			provided by OSMP). Cover with duff (1-2 inch layer) and		
37+30									spc	- See Notes	SEE NOTES	N/A	occasional branches (est. 8-10).		
										Ctana Datainina			Destructions in the second second by the second sec		
										Stone Retaining			Backwall against existing trail backslope - see rip-rap below for		
37+45		37+60				1.5			srw	Wall	22.5	SF	upper section.		
27 45		27 60				2.5				n' n	27.5	(CF			
37+45		37+60				2.5			rr	Rip-Rap	37.5	SF	Place rip-rap on backwall (noted above) up to specified height.		
37+45								1	a a t	Stone Step	1	l EA			
37+43								1	sst	Stolle Step	<u> </u>	LEA			
										#N/A	#N/A	#N/A			
-										71.7.11		7/1//11			
	TRAIL I	REPAIR SE	ECTION							#N/A	#N/A	#N/A			
											1	1	Notify OSMP Project Manager prior to construction for		
										Consolial Invited					
										Special Instructions			staking/marking of the site per the construction items listed		
		<u> </u>							spc	- See Notes	SEE NOTES	N/A	below.		
													Bottom 3 steps with cribbing wall on downhill edge. Upper 2		
													steps stacked, and leading to bedrock trail section. (OSMP		
								5	sst	Stone Step	5	5 EA	Project Manager will mark specific locations.)		
										Stone Patairing			Cribbing well for downbill adap of stone (OCMD Deciant		
										Stone Retaining			Cribbing wall for downhill edge of steps. (OSMP Project		
		+10				1			srw	Wall	10	SF	Manager will mark specific location.)		
										Stone Retaining			Wall supporting lower portion of eroding slope. (OSMP Project		
		. 0				1.5				•		J _{CE}			
		+8				1.5			srw	Wall	12	2 SF	Manager will mark specific location.)		

CITY OF	BOULDE	R, OSMP	<u> </u>	TRAIL CONSTRUCTION NOTES PRINT DATE: Aug 11, 2020 PRO								ROJECT:	Upper Bear Canyon Trail Re-Route		
STA. S	STA. START STA. END		END	Whisker	WIDTH (FT)	HEIGHT (FT)	LENGTH (FT)	QTY			# Units				Item
Design	As-Built	Design	As-Built	Color	Design As-Built	Design As-Built	Design As-Built	Design As-Built	Abrv	Item	Designed	UOM	Notes	Progress Notes	Compl?
															1
													Rip-rap/rubble wall supporting upper portion of eroding slope.		
		+8				2.5			rr	Rip-Rap	20	SF	(OSMP Project Manager will mark specific location.)		
										1 1			2CF each. Place on old trail section being closed to discourage		
													continued use. (OSMP Project Manager will mark specific		
								6	gar	Stone Gargoyle	ϵ	EA	locations.)		
													Decommission old trail section being closed - rip/de-compact		
										Constitution of the sec					
										Special Instructions			tread and cover with duff. (OSMP Project Manager will mark		
									spc	- See Notes	SEE NOTES	N/A	specific location.)		
										#N/A	#N/A	#N/A			
]						
								1							
								1		#NT / A	HNT /A	#N1 / A			
										#N/A	#N/A	#N/A			
								1							
										#N/A	#N / A	#N/A			
										#1N/ A	#1N/ A	#1N/ A			
										#N/A	#N/A	#N/A			
										1111/11	1117/11	1111/11			
										#N/A	#N/A	#N/A			
										#N/A	#N/A	#N/A			
										#N/A	#N/A	#N/A			
								1							
								1				1			
										#N/A	#N/A	#N/A			
															
								1							
								1		HAT /A	113.7.7.1	WNT //			
										#N/A	#N/A	#N/A			
								1							
								1							
								1		#N/A	#NT / A	#NT / A			
										#1N/ A	#1N/A	#N/A			
								1							
								1							
								1		#N/A	#N / A	#N/A			
		1							}	π1 V/ /1	#1N/ A	π1N/ A			
								1							
								1							
								1		#N/A	#N/A	#N/A			
]				l		<u> </u>]	111/71	π1 1/ Δ	1111/11			