2013 MONTANA FEDERAL LANDS ACCESS PROGRAM PROPOSAL

MAIN BOULDER RIVER ROAD RECONSTRUCTION

SWEET GRASS COUNTY

APPENDIX C

Maps, Photos, & Detailed Cost Estimate

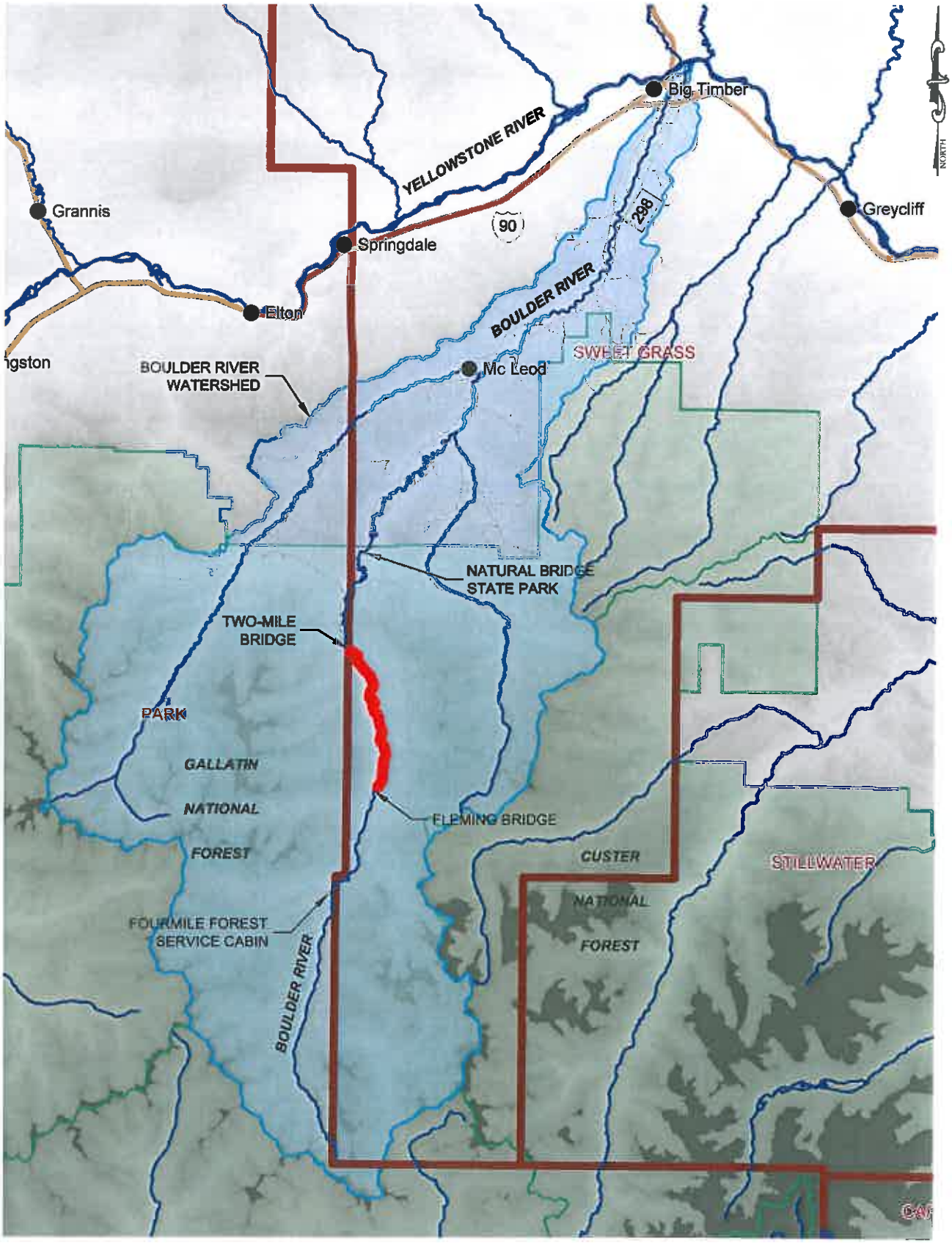

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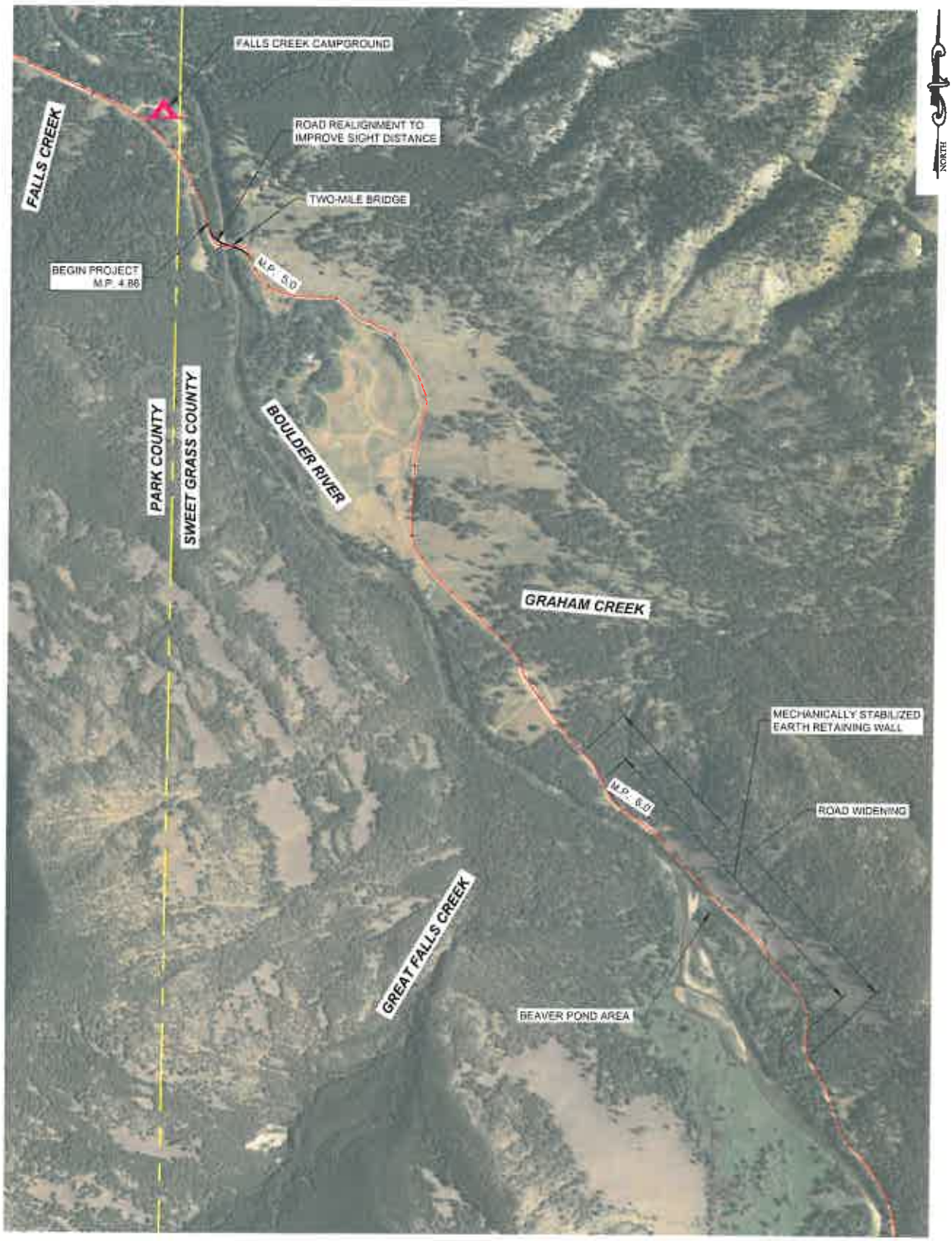
FIGURE 1
OVERVIEW MAP

MAIN BOULDER ROAD IMPROVEMENTS
SWEET GRASS & PARK COUNTIES



0 0.1 0.2
SCALE IN MILES
1 MILE = 5"

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LEGEND

APPROX. CRASH LOCATION PER MDT CRASH DATA

FIGURE 2
CONCEPTUAL PLAN

MAIN BOULDER ROAD IMPROVEMENTS
SWEET GRASS & PARK COUNTIES

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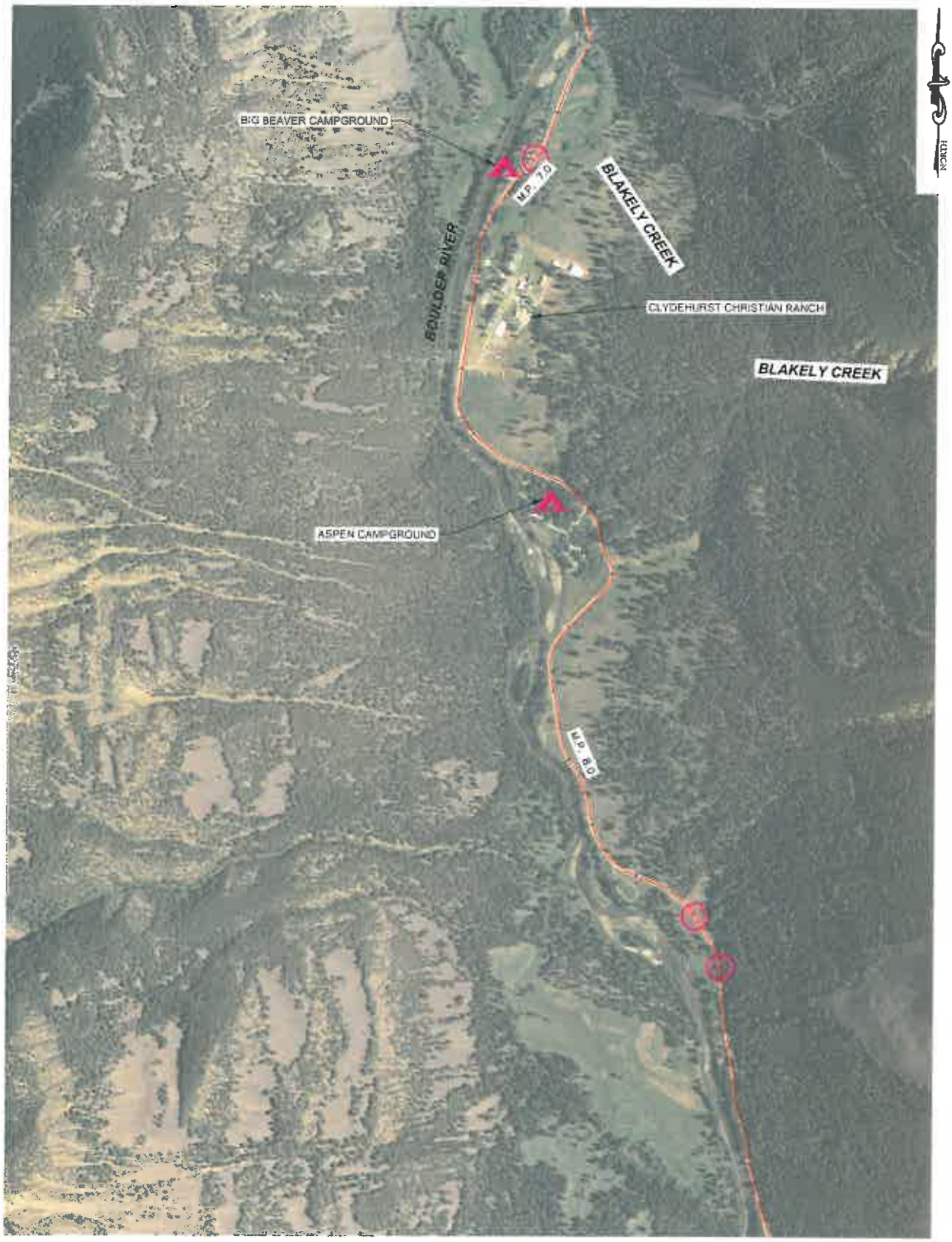

0 0.1 0.2
SCALE IN MILES
1 MILE = 5"

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LEGEND

APPROX. CRASH LOCATION PER MDT CRASH DATA

FIGURE 3
CONCEPTUAL PLAN

MAIN BOULDER ROAD IMPROVEMENTS
SWEET GRASS & PARK COUNTIES

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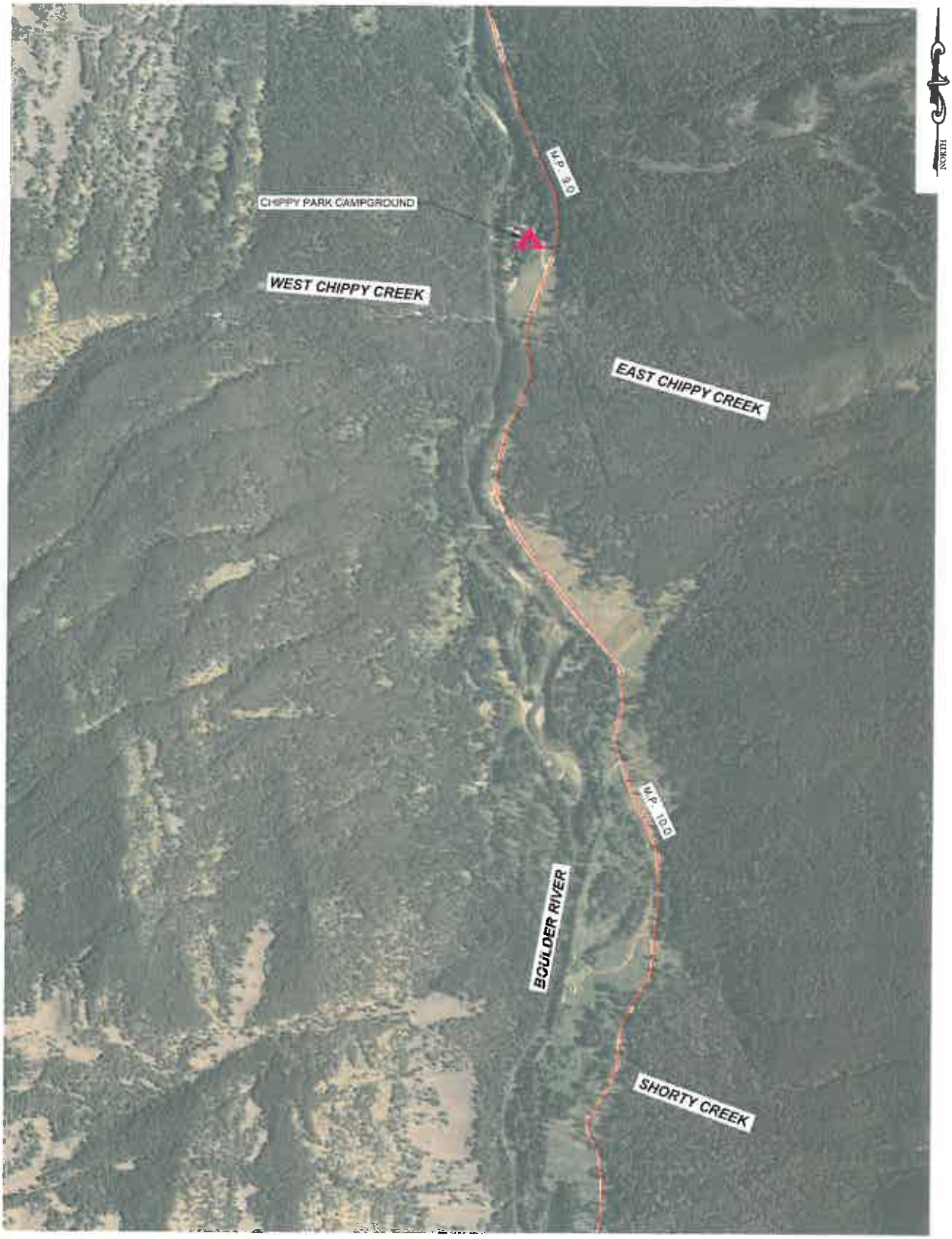

0 0.1 0.2
SCALE IN MILES
1 MILE = 5"

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LEGEND

APPROX. CRASH LOCATION PER MDT CRASH DATA

FIGURE 4
CONCEPTUAL PLAN

MAIN BOULDER ROAD IMPROVEMENTS
SWEET GRASS & PARK COUNTIES

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0 0.1 0.2
SCALE IN MILES
1 MILE = 5"

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LEGEND

APPROX. CRASH LOCATION PER MDT CRASH DATA

FIGURE 5
CONCEPTUAL PLAN

MAIN BOULDER ROAD IMPROVEMENTS
SWEET GRASS & PARK COUNTIES

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Two mile Bridge over Boulder River "S" Curve approach. Poor Sight Dist

MP 0.0 c Natural Bridge

Typical cut/fill road section Ditch cleaning req'd

View of road Ditch cleaning necessary full length

Typical cut area of roadway. Ditch cleaning req'd

Typical cut area of roadway. Hitt exposed bedrock

S curve - Poor sight dist. Bedrock

Cut section. Bedrock exposed

Cut/fill section

Miller Creek Bridge

Road through wetland area. Need to raise grade 8' ft.

Beaver pond area. Road bounded by River (left) & talus slope (rt)

Beaver pond area River (lt) talus slope (rt)

Beaver Pond Area

Beaver Point Area

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OPINION OF PROBABLE COST

PROJECT			FOREST	DATE
Main Boulder Road Improvements			*Gallatin National Forest - Absaroka Beartooth Wilderness*	*1/2/2013*
COUNTY	ROAD NO.	MILE POST	DESCRIPTION	LENGTH / ROADWAY WIDTH
Sweet Grass, Park	*6639*	*4.90*	*Improvements from Two-Mile Bridge to Fleming Bridge*	*6.7 Miles* / *16'-20'*

PHASE I

LOCATION M.P.	DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT	RUNNING COST TOTAL	RUNNING COST TOTAL WITH MOBILIZATION & CONTINGENCY	Notes
N/A	Contractor Construction Administration	Lump Sum	1	$20,000	$20,000.00	$20,000.00	$28,000.00	
N/A	Fisheries Study AOP or Barrier	Lump Sum	1	$10,000	$10,000.00	$30,000.00	$42,000.00	
N/A	Public Toilet at Big Beaver Campground	Lump Sum	1	$25,000	$25,000.00	$55,000.00	$77,000.00	
N/A	Interpretive Signage (location & content determined by USFS)	Each	12	$4,200	$50,400.00	$105,400.00	$147,560.00	
N/A	Entrance Kiosk	Lump Sum	1	$30,000	$30,000.00	$135,400.00	$189,560.00	
N/A	USFS Miller Pit modifications including reclamation	Lump Sum	1	$30,000	$30,000.00	$165,400.00	$231,560.00	
0-4.9-11.6	Dust Abatement (Magnesium Chloride)	Mile	11.6	$15,000	$174,000.00	$339,400.00	$475,160.00	
4.9 - 11.6	Cultural Resources Inventory	Lump Sum	1	$20,000	$20,000.00	$359,400.00	$503,160.00	
4.9 - 11.6	Construction Surveying & Staking	Mile	6.7	$15,000	$100,500.00	$459,900.00	$643,860.00	
4.9 - 11.6	Traffic Control	Mile	6.7	$7,500	$50,250.00	$510,150.00	$714,210.00	
4.9 - 11.6	Subgrade Preparation & Roadway Shaping	Mile	6.7	$39,000	$261,300.00	$771,450.00	$1,080,030.00	
4.9 - 11.6	Ditch Construction	Mile	6.7	$20,000	$134,000.00	$905,450.00	$1,267,630.00	
4.9-5.9, 7.5-11.6	Roadway Surfacing (6" depth, 20' Width)	Mile	5.1	$70,000	$357,000.00	$1,262,450.00	$1,767,430.00	
5.9-7.5	Roadway Surfacing (6" depth, 16' Width)	Mile	1.6	$62,000	$99,200.00	$1,361,650.00	$1,906,310.00	
4.9 - 11.6	New Vehicle Turnout	Each	38	$5,000	$190,000.00	$1,551,650.00	$2,172,310.00	
4.9 - 11.6	Erosion Control	Mile	6.7	$16,000	$107,200.00	$1,658,850.00	$2,322,390.00	
4.9	Road Realignment to Improve Poor Sight Distance at Existing Bridge	Lump Sum	1	$21,000	$21,000.00	$1,679,850.00	$2,351,790.00	
4.9	Replace Existing Bridge (M.P. 4.9)	Lump Sum	1	$800,000	$800,000.00	$2,479,850.00	$3,471,790.00	
5.9	Embankment in Place for Wall Approaches	Cubic Yard	300	$20	$6,000.00	$2,485,850.00	$3,480,190.00	
5.9 - 6.45	Widen Roadway	Mile	0.5	$130,000	$65,000.00	$2,550,850.00	$3,571,190.00	
5.95 - 6.4	Mechanically Stabilized Earth Retaining Wall	Mile	0.45	$2,000,000	$900,000.00	$3,450,850.00	$4,831,190.00	
4.9-11.6	Single Lane Approach Improvements	Each	18	$3,000	$54,000.00	$3,504,850.00	$4,906,790.00	
7.8	Double Lane Approach Improvements	Each	1	$5,000	$5,000.00	$3,509,850.00	$4,913,790.00	
4.9-11.5	24" Dia. CMP Culvert	Linear Foot	1,620	$60	$97,200.00	$3,607,050.00	$5,049,870.00	
5.6	36" Dia. CMP Culvert	Linear Foot	60	$100	$6,000.00	$3,613,050.00	$5,058,270.00	
6.8-10.8	36" CMP Arch Culvert	Linear Foot	300	$160	$48,000.00	$3,661,050.00	$5,125,470.00	
5.95-6.8	48" CMP Arch Culvert	Linear Foot	300	$200	$60,000.00	$3,721,050.00	$5,209,470.00	
11.4	Replace Existing Timber Bridge at Miller Creek (S.R. 75.2)	Lump Sum	1	$300,000	$300,000.00	$4,021,050.00	$5,629,470.00	

Note: Project is estimated at 15,500 cy of in-place road mix including approaches, intersections, etc.

Assuming a 25% shrink/swell factor yields 19,500 cy of road mix required.

Based on royalty and crushing fees at the Stenberg Pit located within 10 miles of the Natural Bridge at $8 per ya

the USFS is donating $156,000 of material. Trucking and placing costs are included above.

Sub-Total	**$ 4,021,050.00**
Mobilization (10% of Sub-Total)	$ 402,105.00
Contingencies (30% of Sub-Total)	$ 1,206,315.00
Total Construction Cost	**$ 5,629,470.00**
Preliminary Engineering Costs (15% of Tot. Cnst)	$ 844,420.50
Construction Engineering Costs (10% of Tot. Cnst)	$ 120,631.50
Right of Way Costs	$ -
Other Costs	$ -
TOTAL PROJECT COSTS	**$ 6,594,522.00**