



MONTANA
MDT★
DEPARTMENT OF TRANSPORTATION

Maclay Bridge Planning Study



Informational
Meeting No. 2
July 10th, 2012

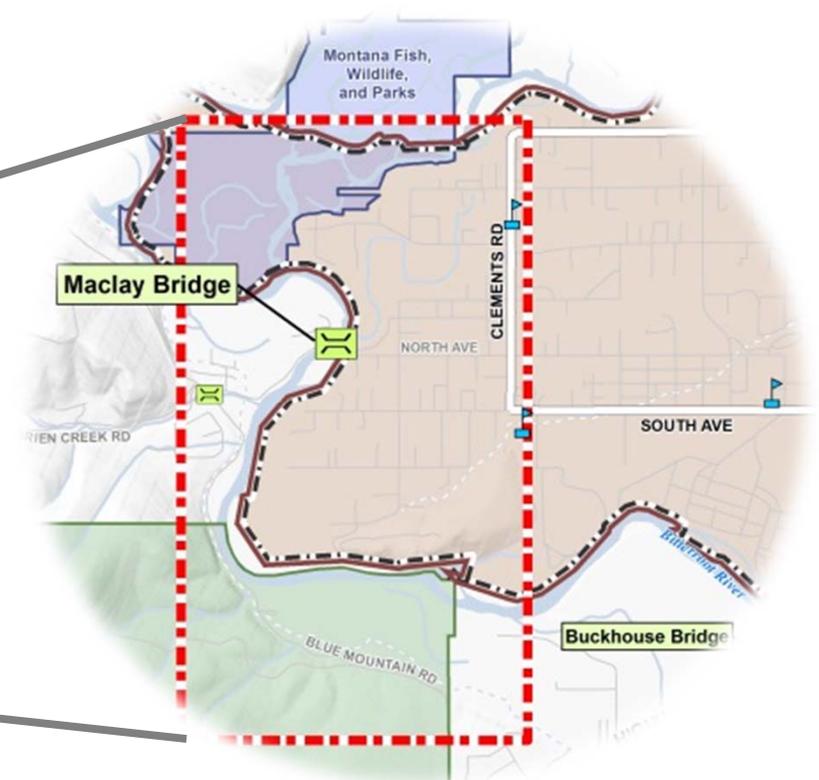
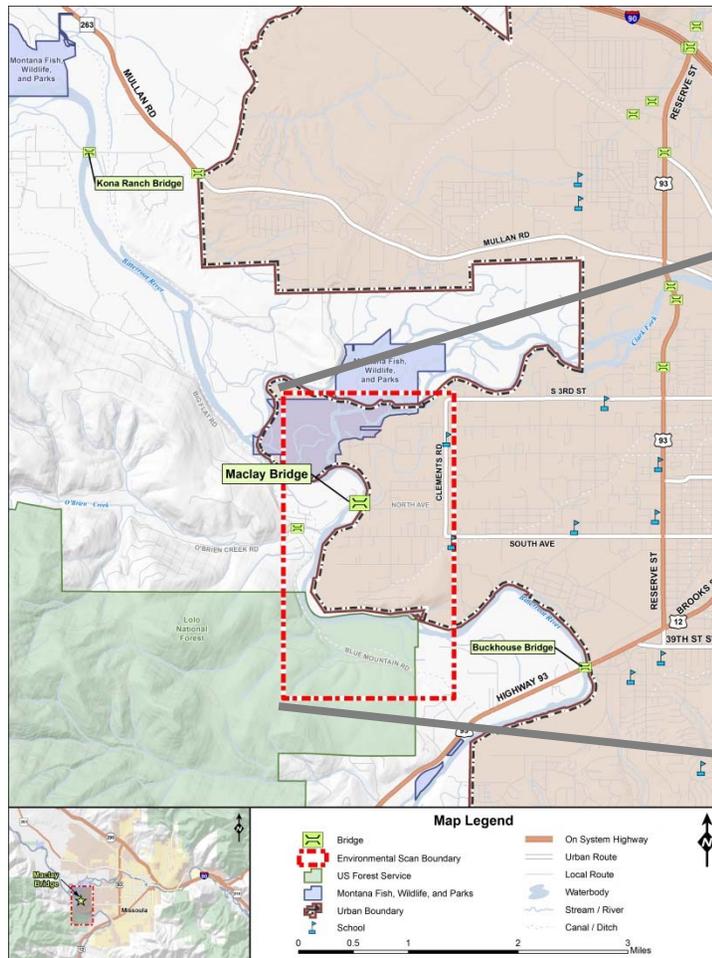
Introduction

- Introduction of local officials
- Partners
 - Missoula County
 - MDT
 - FHWA
- Planning team members in attendance
- Consultant team

[Outline of this Evening's Meeting]

- Existing and projected conditions in the Maclay Bridge vicinity
- Resource considerations in the environmental scan boundary
- Preliminary areas of concern
- Next steps & conclusion

Study Vicinity Map





Existing & Projected Conditions in the Maclay Bridge Vicinity

[Maclay Bridge]

- Crosses Bitterroot River 2.75 miles west of Reserve Street
- River Pines and North Avenue are functionally classified as “collector” roadways by Missoula County
- Serves multiple users, including: local residents, landowners west of Bitterroot River, recreationalists, school buses and emergency responders

Physical Characteristics

- Two-lane roadways (North Avenue and River Pines Road)
- One-lane bridge (Maclay Bridge)
- Asphalt surfacing throughout
- Access density of 32.4 access/mile
 - Ten approaches are “public” approaches
 - Thirty-seven are private approaches
- Curved alignment into and out of existing bridge

Traffic Counts

- Ranges from 2,610 vehicles per day (vpd) on River Pines Road to 2,000 vpd on North Avenue (2010 counts)

Street	Location	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
River Pines Rd	300 ft W of Maclay Bridge	2300	2060	2300	2130	2410	2460	(a)	2380	2610	2360
North Ave	300 ft W of Clements Rd	1660	(a)	2010	(a)	2140	(a)	(a)	(a)	2000	(a)

Roadway Geometrics - Curves

- Three horizontal curves do not meet current Missoula County standards

Location	Feature	Value	Standard	
North Ave W / Edward Ave Intersection	450' SE of Maclay Bridge	Horizontal Curve	175'	525'
River Pines Rd / Riverside Dr	50' NW of Maclay Bridge	Horizontal Curve	125'	525'
River Pines Rd	2300' SW of Maclay Bridge	Horizontal Curve	125'	525'

- Vertical grades are within the Missoula County Standards (less than 6.0%)
- Stopping sight distance acceptable

Roadway Geometrics – Clear Zone

- Clear zone is the total roadside border area available for safe use by errant vehicles
- This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or recovery area
- Obstacles may be in the clear zone as well
- River Pines Road - just southwest of the existing bridge
 - Top of roadway fill slope is between 2 and 4 feet from the edge of the travel lane
 - Trees and utility poles are found within this area
 - Roadway fill slope in this area is steep and lined with riprap to the river

[Roadway Geometrics - Widths]

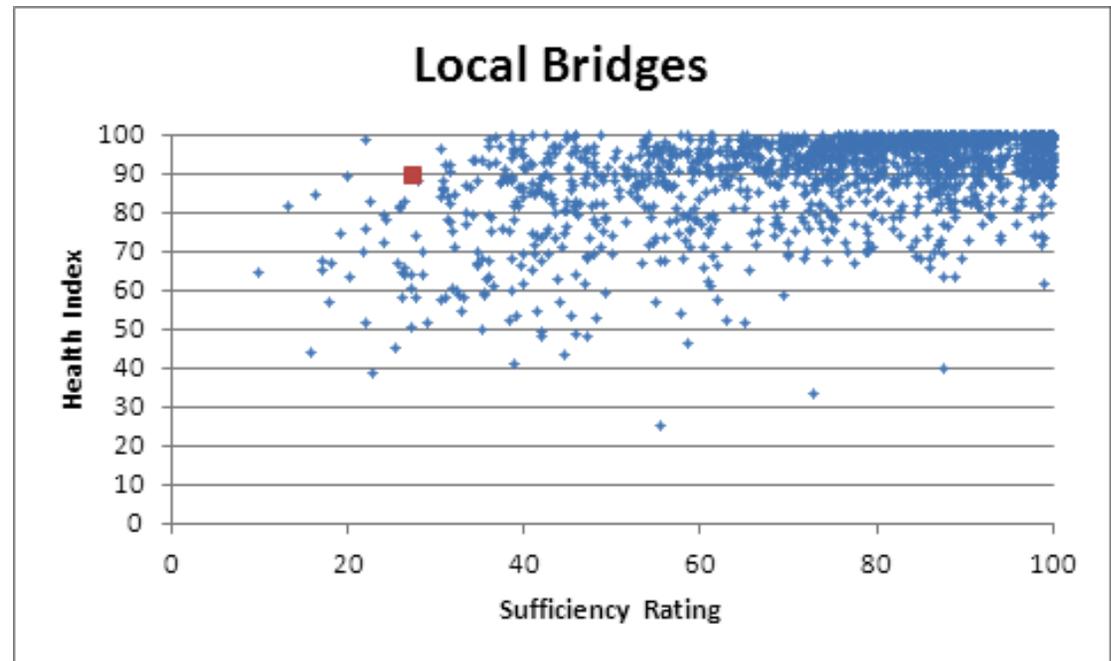
- Determined from field measurements
 - Surface width, lane width, shoulder width, and number of lanes

Location		Lanes	Surface Width (ft)	Lane Width (ft)	Shoulder Width (ft)
North Ave W	Clements Rd to Maclay Bridge	2	31	11	1 (north) / 8 (south)
Maclay Bridge	On Bridge	1	14	14	0
River Pines Rd	Maclay Bridge to Blue Mountain Road	2	22	11	0

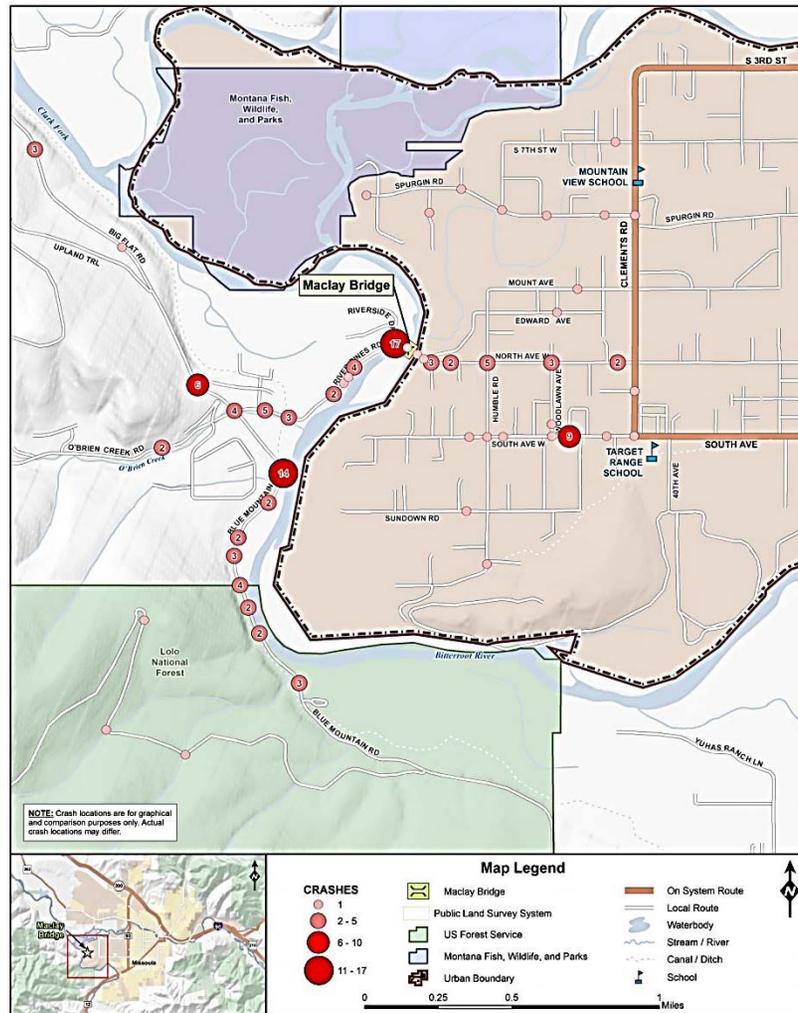
Widths Are Of Interest

Bridge Crossing

- Rated as functionally obsolete, but not structurally deficient
- Sufficiency rating (SR) = 27.3
- Health Index = 89.91
 - Ranks near the bottom quartile of all off-system bridges



Safety (Reported Crashes)



[Future Traffic Volumes]

- Two Methods Available
- Average Annual Growth Rate (AAGR)
 - 20 years ahead – look 20 years back.....
- *TransCad* Travel Demand Model
 - Based on adopted planning documents (land use/zoning/growth policy) and existing transportation system

Future Traffic Volumes - *TransCad*

- *TransCad* model based on adopted planning documents
- Incorporates land use in Target Range Neighborhood Plan and areas to the west of Bitterroot River
- Typically preferred for areas with MPO's
- Results:
 - River Pines Road: 2,610 vpd (2010) to 3,650 vpd (2040)
 - North Avenue: 2,000 vpd (2010) to 3,100 vpd (2040)
 - Compared to AAGR: River Pines Rd 4,550/North Ave 2,350



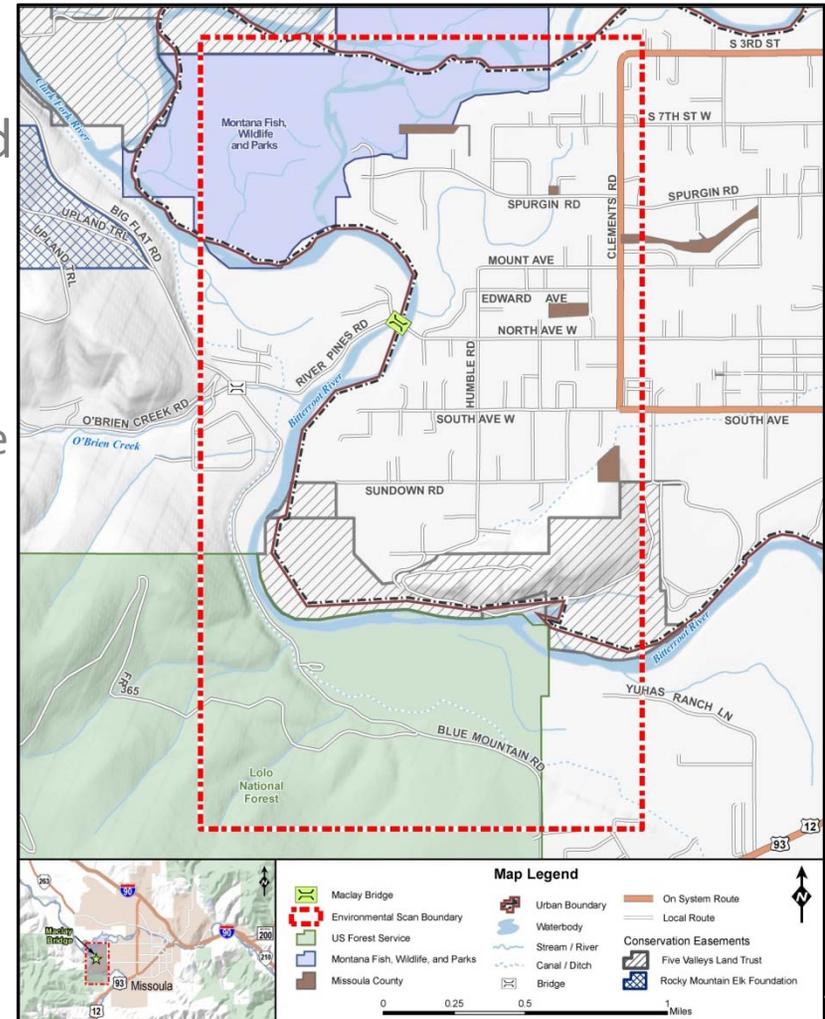
Resource Considerations in the Environmental Scan Area

Environmental Resources

- Geographic Setting
- Land Ownership/Management
- Land Use
- Geological Resources
- Soils and Prime Farmland
- Water Resources
- Wetlands
- Floodplains and Floodways
- Hazardous Materials
- Air Quality
- Noise
- Visual Resources
- Biological Resources
- Vegetation
- Cultural and Archaeological Resources
- Demographics

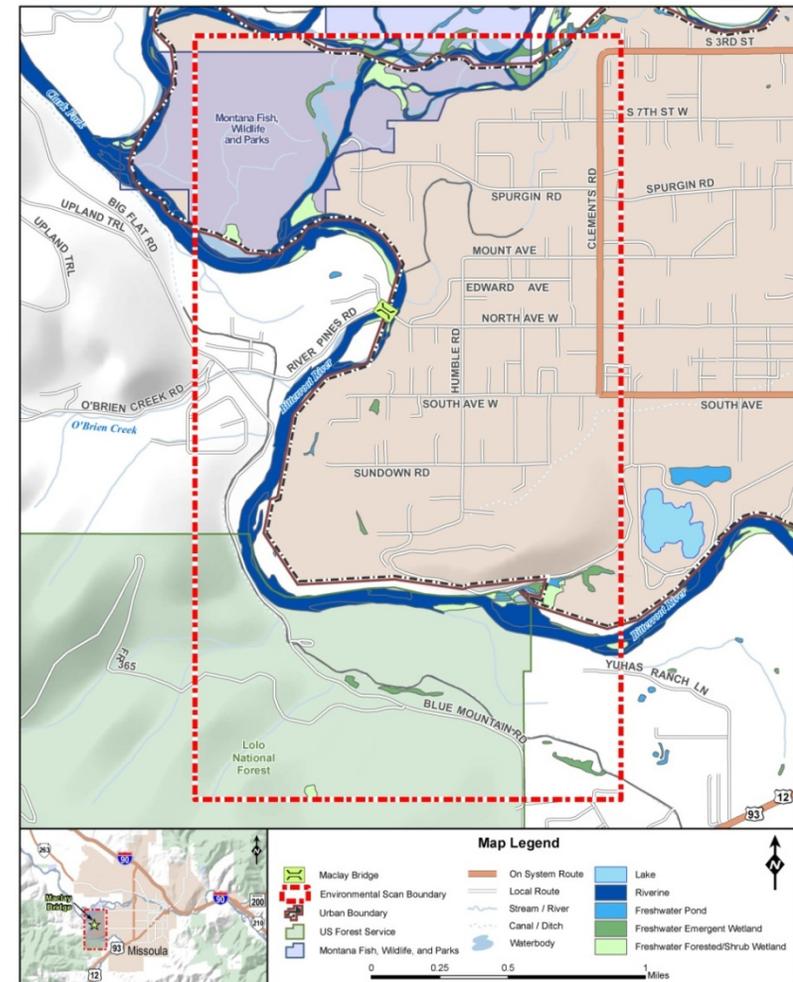
Land Ownership/Management

- Predominately privately owned land
- Public land in environmental scan boundary includes:
 - MFWP – Kelly Island Fishing Access Site
 - Isolated Missoula County-owned parcels
 - Lolo National Forest
- Five Valleys Land Trust – Conservation Easement



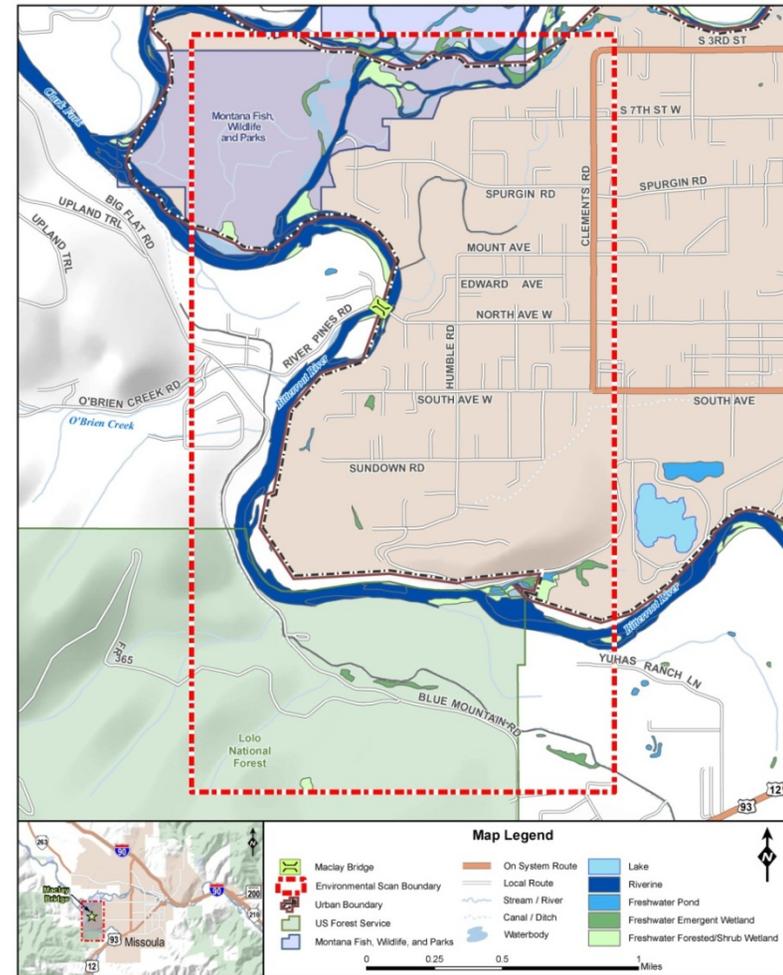
Water Resources

- Three predominant surface waters:
 - Bitterroot River
 - Clark Fork River
 - O'Brien Creek
- Bitterroot and Clark Fork Rivers are classified as impaired and are section 303(d) listed waterbodies



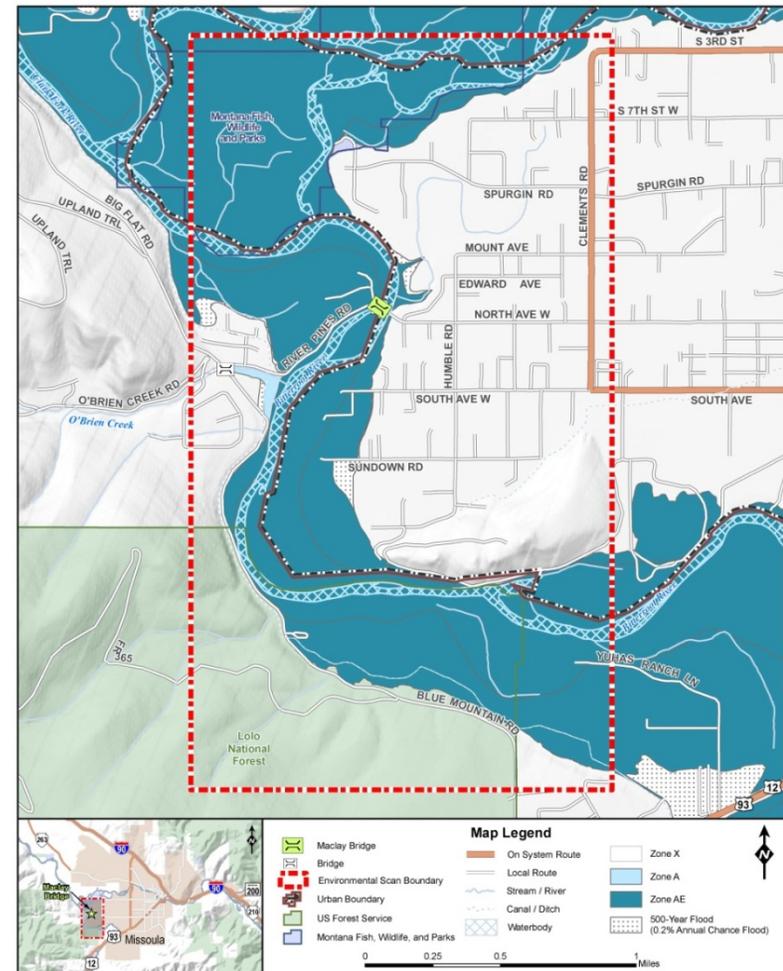
Wetlands

- National Wetland Inventory (NWI) - based on aerial photo interpretation
- NWI definition much broader than regulatory definition (COE)
- If a project, or projects, advance, a wetland impact evaluation would be required



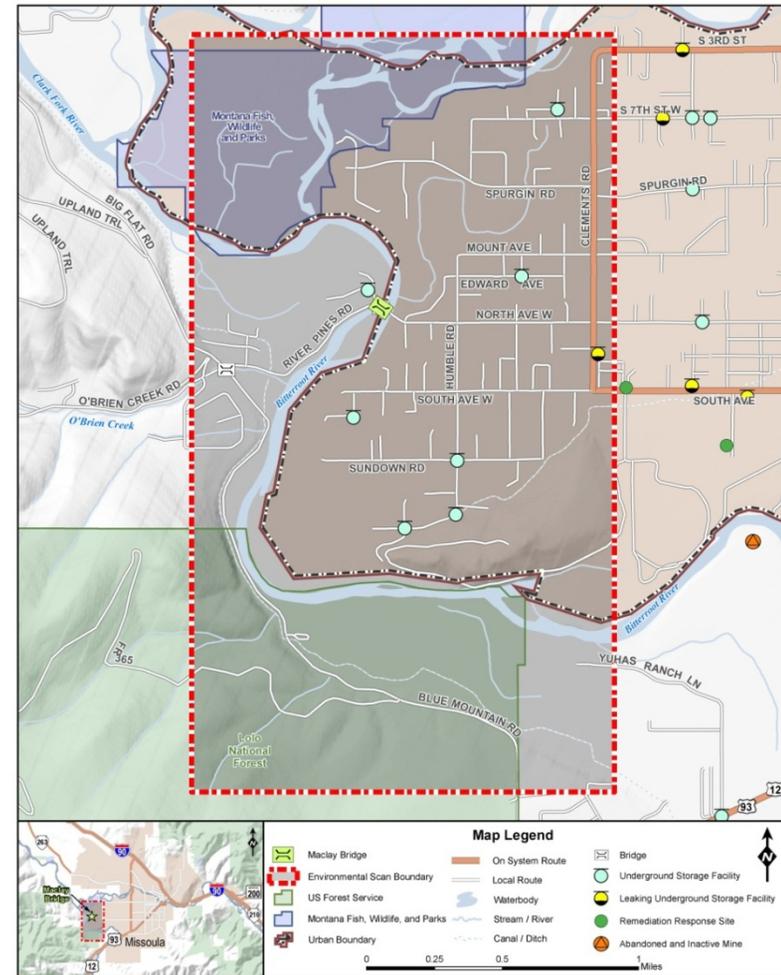
Floodplains and Floodways

- 100 – Year Flood (base flood for floodplain management programs)
- Most of the study corridor
 - Zone A (no Base Flood Elevations determined)
 - Zone AE (Base Flood Elevations determined)
 - Zone X (areas of 0.2% annual chance flood)



Hazardous Materials

- NRIS
 - Eight UST locations
 - One LUST locations
 - One petroleum release compensation site



[Visual Resources]

- Landscape Character
- Visual Sensitivity
- Scenic Integrity
- Landscape Visibility



Biological Resources

- Fish & Wildlife
- Vegetation



Fish and Wildlife

Threatened and Endangered Species

Common Name	USFWS Status	Habitat Requirements
Bull Trout	Threatened, Critical Habitat Designated	Within the Environmental Scan Area, the Bitterroot River, Clark Fork River, and O'Brien Creek are designated as Critical Habitat for bull trout.
Grizzly Bear	Threatened	In Missoula County include the Seeley, Swan, and Jocko Valleys, lower Mission Valley, and portions of the upper Rattlesnake watershed.
Canada Lynx	Threatened, Critical Habitat Designated	Habitat for the species does not exist in the Environmental Scan Area.
Wolverine	Candidate	Habitat for the species does not exist in the Environmental Scan Area.
Yellow Billed Cuckoo (Western Population)	Candidate	This habitat may be present in the Environmental Scan Area.

Fish and Wildlife

Species of Concern

Common Name	State Rank	MNHP Known Occurrences in Environmental Scan Area
Westslope Cutthroat Trout	S2	Yes
Hoary Bat	S3	Yes
Fisher	S3	Possible on Lolo National Forest
Black-backed Woodpecker	S3	Yes
Western Skink	S3	Yes
Fringed Myotis	S3	Yes
Grasshopper Sparrow	S3B	Yes
Cassin's Finch	S3	Yes
Pileated Woodpecker	S3	Yes
Lewis's Woodpecker	S2B	Yes
Flammulated Owl	S3B	No
Bald Eagle		Yes
Great Blue Heron	S3	Yes

Vegetation

- Threatened and Endangered Species
 - One threatened & one candidate identified in Missoula County

- Species of Concern
 - Toothcup (*Rotala ramosior*)

Common Name	USFWS Status	Habitat Requirements
Water Howellia	Threatened	Known occurrences of the species in Montana are all within the Swan River drainage in the northeastern portion of Missoula County.
Whitebark Pine	Candidate	This habitat does not exist in the Environmental Scan Area.

Cultural and Archaeological Resources

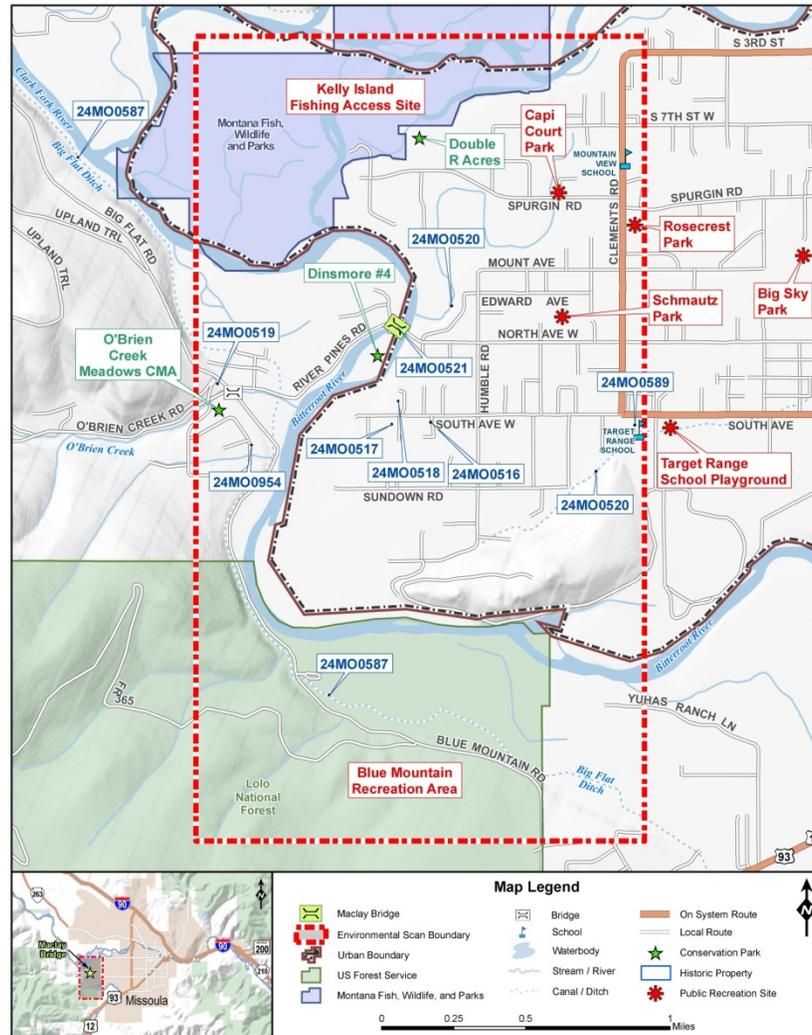
Resource Name	Smithsonian Site #	Type of Resource	National Register Eligibility Status
Stettler Property	24MO0516	Historic Residence	Ineligible
Rice Property	24MO0517	Historic Residence and Outbuildings	Consensus determination of eligibility
Maxwell Property	24MO0518	Historic Residence and Outbuildings	Ineligible
Maclay Property	24MO0519	Historic Residence and Outbuildings	Recommended as eligible for National Register
Missoula Irrigation District Ditches	24MO0520	Historic Irrigation System	Consensus determination of eligibility
Maclay Bridge	24MO0521	Historic Vehicular/Foot Bridge	Determined eligible for National Register
Big Flat Ditch	24MO0587	Historic Irrigation System	Consensus determination of eligibility
Maclay Ditch	24MO0954	Historic Irrigation System	Undetermined
Target Range Elementary School	24MO0589	Historic School	Listed on the National Register
Site in T13N, R20W, Sec. 35	24MO0209	Lithic Material Concentration	Undetermined
Site in T13N, R20W, NW 1/4 Sec. 35	24MO1388	Historic Residence	Undetermined

4(f) / 6(f)

FAS is 6(f) site

Name	Type of 4(f) Resource	Comments /Location
Kelly Island FAS	Public Recreation Site	666-acres site located at confluence of Bitterroot and Clark Fork Rivers, managed by MFWP
Rosecrest Park	Neighborhood Park	9.6 acres located south Spurgin Road between Clement Road and 37th Avenue. County ownership
Schmautz Park	Neighborhood Park	4.2 acre, undeveloped parcel located north of North Avenue and west of 42nd Avenue. County ownership
Target Range School Playground Target Range School (24MO0589)	Neighborhood Park Historic School	10 acre area containing sports fields, basketball courts, and play equipment. Target Range School is listed on National Register.
Dinsmore River Four	Conservation Park	Bitterroot River island habitat located south of existing Maclay Bridge County ownership
Double R Acres	Conservation Park	Clark Fork River riparian habitat adjoining Kelly Island FAS. County ownership
O'Brien Cr. Meadows Common Area	Conservation Park	O'Brien Creek riparian area located near intersection of Big Flat Road and O'Brien Creek Road. County ownership. Identified in Missoula County Parks and Conservation Lands Plan (1997)
Capi Court Park	Unimproved County Park	North of Spurgin Road and east of Sierra Drive
Five Valley Land Trust Conservation Easements	Wildlife Habitat/Public Use	Various locations along Bitterroot River
Lolo National Forest Lands	Public Multiple-use Property	Southwestern portion of Environmental Scan Area, part of Blue Mountain Recreation Area
Rice Property (24MO0517)	Historic Residence and Outbuildings	Consensus determination of eligibility for National Register
Maclay Property (24MO0519)	Historic Residence and Outbuildings	Recommended as eligible for National Register
Maclay Bridge (24MO0521)	Historic Vehicular/Foot Bridge	Determined eligible for National Register. Owned by Missoula County
Big Flat Ditch (24MO0587) Missoula Irrigation District Ditches (24MO0520)	Historic Irrigation Systems	Consensus determination of eligibility for National Register

Cultural and 4(f) Sites





Preliminary Areas of Concern

Areas of Concern

Transportation

Traffic Volumes

- Existing traffic volumes exceed the AASHTO standard for a single lane bridge
- Projected traffic volumes over the next thirty years (year 2040) are expected to grow by 1,040 vpd (for River Pines Road) and 1,100 vpd (for North Avenue).

Safety

- A number of crash trends and areas of concern were identified within the crash analysis area

Areas of Concern

Transportation

Travel Time

- Without the existing Maclay Bridge in service, travel times between Community Medical Hospital and the intersection of Big Flat Road/Blue Mountain Road/O'Brien Creek Road/River Pines Road are expected to take:
 - 4.5 minutes longer by travelling via Buckhouse Bridge
 - 18.6 minutes longer by travelling via Kona Bridge.

Areas of Concern

Transportation

Horizontal Alignment

- Three horizontal curves do not meet current Missoula County or MDT standards

Clear Zones

- Numerous locations have features within the horizontal clear zone and are unprotected with no guardrail
 - A notable area of concern exists along River Pines Road adjacent to the Bitterroot River, where the steep fill slope begins only 2 to 4 feet of the edge of the travel lane

Areas of Concern

Transportation

Bridge

- Functionally obsolete due to the approach geometry and the narrow single lane bridge width
- The existing bridge is “load restricted” due to its present condition
- Oversize vehicles like school buses and fire engines which cross the bridge are subject to speed restrictions
- There are no dedicated bicycle or pedestrian features on the bridge

Areas of Concern

Transportation

Parking

- Parking has and continues to be a concern in the Maclay Bridge area
- Numerous parking resolutions passed by the Missoula County Commission
- Numerous records of “911 calls” to the area
 - Criminal Mischief, Curfew and Loitering, Disorderly Conduct, Disturbance, Suspicious Activity
 - Extra Patrol
 - Hazardous Vehicle
 - Other Hazard

Areas of Concern

Transportation

Widths

- Single lane bridge width of 14 feet does not meet current given existing and projected traffic volumes
- Roadway widths on River Pines Road, the Maclay Bridge, and North Avenue do not meet current Missoula County standards for width
- There are no shoulders on River Pines Road or the Maclay Bridge
- Dedicated bicycle and pedestrian facilities are absent on River Pines Road

Areas of Concern

Environmental

Fish and Wildlife

- Five endangered, threatened, proposed, or candidate species are listed for Missoula County
- Two may be likely to occur within the area:
 - Bull Trout (threatened, critical habitat designated)
 - Yellow Billed Cuckoo (candidate species).
- 13 animal species of concern for Missoula County were listed

Areas of Concern

Other Considerations

Speeds

- Neighborhood residents have suggested that speeds are an issue on North Avenue, River Pines Road and South Avenue

Traffic Growth

- Neighborhood residents have expressed concern over traffic growth through the neighborhood in recent years, and the potential for that to continue

Safety

- Neighborhood residents have expressed concerns over the potential for increased vehicle crashes if a new, two-lane bridge is constructed

Areas of Concern

Other Considerations

Noise

- Neighborhood residents have expressed concern over noise impacts due to increasing vehicular traffic through the area

Social Considerations

- Neighborhood desire to maintain the rural character of the area and limit traffic growth
- The *Target Range Neighborhood Plan* emphasizes the importance of continued County maintenance of the structure to help preserve access for local and Missoula Valley residents seeking recreational opportunities on nearby lands

Areas of Concern

Other Considerations

Social Considerations (continued)

- The *Target Range Neighborhood Plan* does not identify the need for a new bridge

Project Nomination

- Missoula County has nominated the existing Maclay Bridge for replacement using funding from FHWA's *Highway Bridge Replacement and Rehabilitation Program*



Next Steps and Conclusion

[Next Steps]

- Continue study coordination and outreach
- Finalize environmental scan
- Finalize existing and projected conditions report
- Develop transportation system needs & objectives
- Identify potential improvement options
- Screen potential improvement options based on screening process
- Draft corridor study report

[Prepare Planning Study Report]

- Draft Study Report
 - Available to the public
 - Posted on website
 - In conjunction with Informational Meeting 4
 - Typically 3-week review
- Finalize the Study Report

Conclusion

- Questions, answers and/or comments?

Study website:

<http://www.mdt.gov/pubinvolve/maclay/>

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