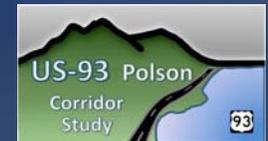


Polson Area Transportation Plan US 93 Polson Corridor Study

Public Meeting No. 2

February 24, 2011



Introductions

- ◆ Introduction of dignitaries
- ◆ Stakeholders
 - ◆ City of Polson
 - ◆ Lake County
 - ◆ CSKT
 - ◆ MDT
- ◆ Technical Oversight Committee (TOC)
 - ◆ Members in attendance
- ◆ Consultant team

Purpose of this Evening's Meeting

- ◆ Polson Area Transportation Plan
 - ◆ Intersection Levels of Service (LOS)
 - ◆ Comprehensive Safety Statistics
 - ◆ Land Use Projections
- ◆ US 93 Polson Corridor Study Update
 - ◆ Existing Conditions
 - ◆ Areas of Concern
 - ◆ Needs and Objectives
 - ◆ Alternate Routes Under Consideration
- ◆ Next Steps
- ◆ Questions & Conclusion

Polson Area Transportation Plan



Polson Area Transportation Plan *(Intersection Levels of Service)*



Existing Intersection Levels of Service

- ◆ 16 intersections counted in summer and fall (2010)
 - ◆ 5 signalized
 - ◆ 11 unsignalized
- ◆ All operating at an acceptable level of service of C or better except US 93 and 1st Street East
 - ◆ LOS D during PM Peak
 - ◆ May have been affected by closure of Main Street and shift in traffic volumes
- ◆ Counts and analysis are valid for the time period observed

Existing Intersection Levels of Service

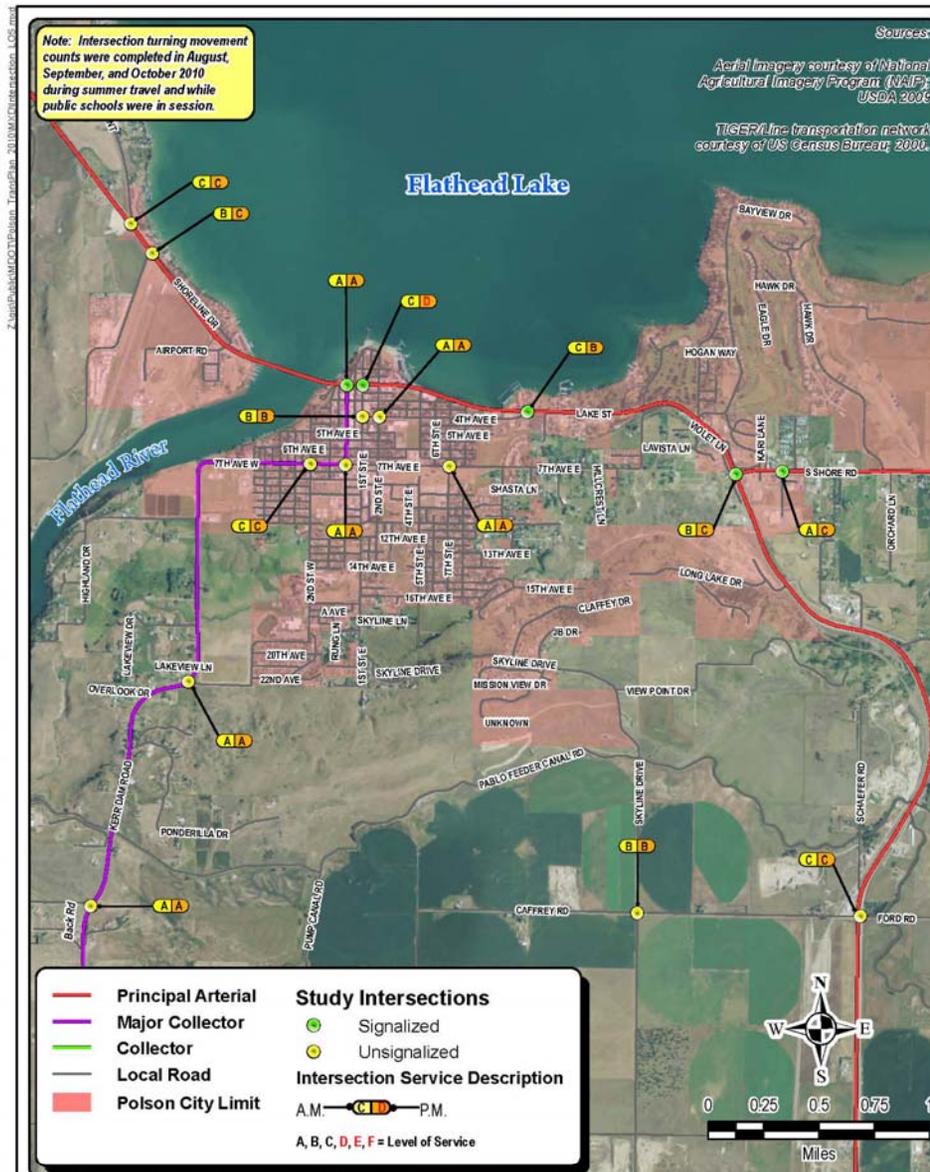


Figure 2-3
Intersection Level of Service
Polson Area Transportation Plan

DRAFT



Existing Intersection Truck Traffic Percentages

Table 2-6
Truck Traffic Percentages

Intersection		AM %	PM %
US 93 & South Shore Road	S	6.6%	3.7%
US 93 (3 rd Avenue East) & 4 th Avenue East	S	5.8%	3.1%
US 93 (2 nd Avenue East) & 1 st Street East	S	5.0%	3.5%
US 93 (2 nd Avenue East) & Main Street *	S	3.8%	3.7%
South Shore Road (MT 35) & Heritage Lane	S	7.4%	3.2%
US 93 & Rocky Point Road	U-1W	4.3%	4.0%
US 93 & Irvine Flats Road	U-1W	4.9%	5.2%
US 93 & Caffrey Road	U-2W	6.2%	4.4%
4 th Avenue East & 1 st Street East	U-4W	2.6%	2.0%
4 th Avenue East & 2 nd Street East	U-4W	0.6%	0.2%
7 th Avenue & Main Street *	U-4W	2.7%	0.9%
7 th Avenue West & 2 nd Street West	U-2W	3.7%	1.4%
7 th Avenue East & 7 th Street East	U-4W	2.7%	1.9%
Skyline Drive & Caffrey Road	U-2W	12.3%	12.4%
Kerr Dam Road & Grenier Lane	U-1W	5.0%	5.1%
Kerr Dam Road & Back Road	U-1W	9.7%	6.3%

S=Signalized; U-1W=Unsignalized one-way stop controlled; U-2W=Unsignalized two-way stop controlled;
U-4W=Unsignalized four-way stop controlled. *Main Street under construction during data collection.



Polson Area Transportation Plan (*Comprehensive Safety Statistics*)



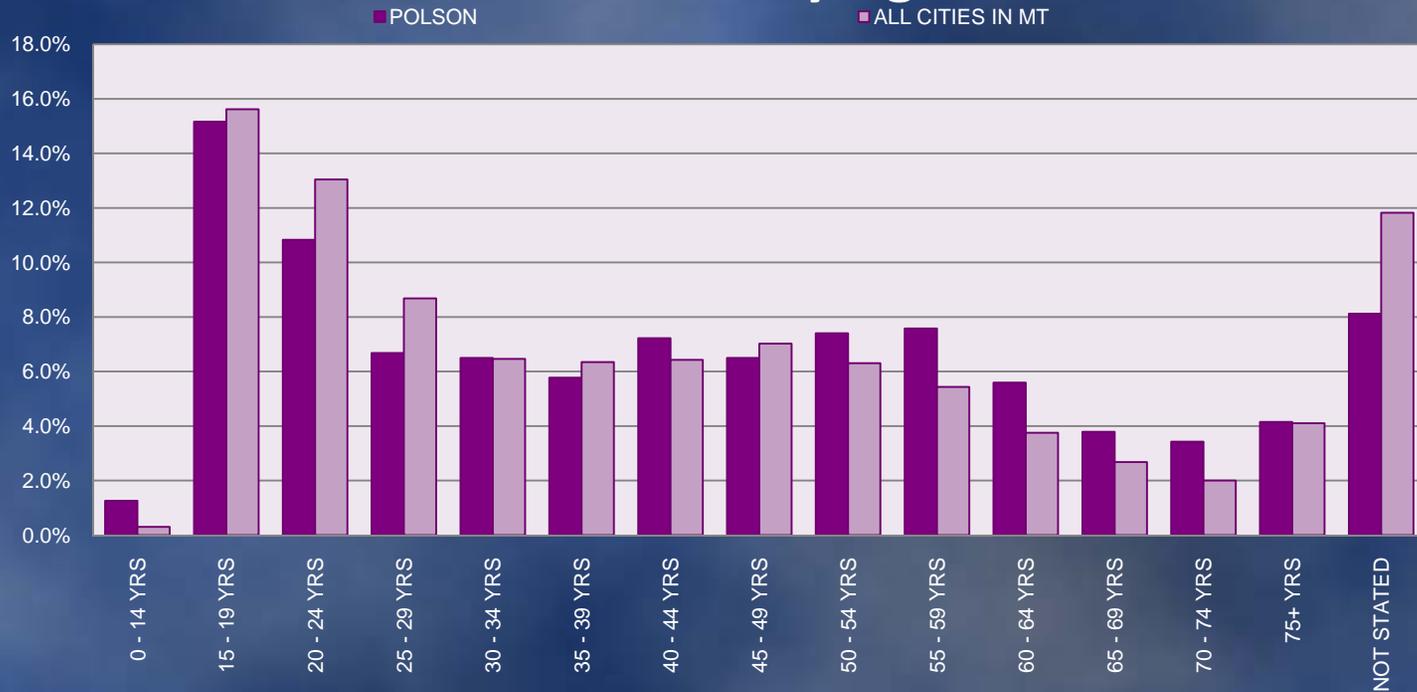
Preliminary Data

- ◆ Summarized by MDT from law enforcement crash reports
- ◆ Data from 2005-2009
- ◆ Comparison of Polson vs. other cities
- ◆ 295 reported crashes in Polson city limits
 - ◆ 104 reported injuries

Preliminary Data

- ◆ Highest percent involvement in crashes are 15- to 19-year-olds

Drivers by Age



Preliminary Data

- ◆ **Contributing circumstances of all crashes noted include:**
 - ◆ **Being inattentive**
 - ◆ **Following too closely**
 - ◆ **Failing to yield the right-of-way**
 - ◆ **Driving too fast for conditions**
 - ◆ **Alcohol impairment**
 - ◆ **Unable to properly back up their vehicle.**

Polson Area Transportation Plan *(Growth within the Planning Boundary)*



Purposes

- ◆ **Context for transportation planning**
 - ◆ Amount of growth (population and employment)
 - ◆ Characteristics relevant to transportation
- ◆ **For this effort**
 - ◆ Background information developed to allocate future growth
 - ◆ Inputs for TransCAD model (# households, # jobs)

Limitations

- ◆ **Uncertainty of small-area forecasts**
- ◆ **Boundaries (Polson city limit, Polson Growth Policy two-mile study boundary, Transportation Plan Study Area)**
- ◆ **Data (Census not available after 2000 for small areas, QCEW data are confidential)**
- ◆ **Annexations**

Conditions and Trends

- ◆ Polson: ~5,000 people; 20% of County total. About 15% of County employment.
- ◆ Population and employment growth in Polson and Lake County: ~1-2%/ year on average
- ◆ Trends suggest, but do not dictate, a future growth scenario

Factors That Affect Future Growth

- ◆ National and state factors
 - ◆ Aging population, shift to service-oriented sectors, westward migration of US population
- ◆ Local factors
 - ◆ Quality of life; natural amenity
 - ◆ Location relative to markets
 - ◆ Public policy (land use, infrastructure, economic development)
 - ◆ Flathead Reservation

Projections

- ◆ **Polson Growth Policy forecasts**
 - ◆ Consistent with state trends and forecasts
 - ◆ Reasonable basis for long-run planning
- ◆ **Growth by 2030**
 - ◆ # households: 20-30 per year (30 – 40 total in the 2-mile unincorporated boundary)
 - ◆ # jobs: 20-40 per year

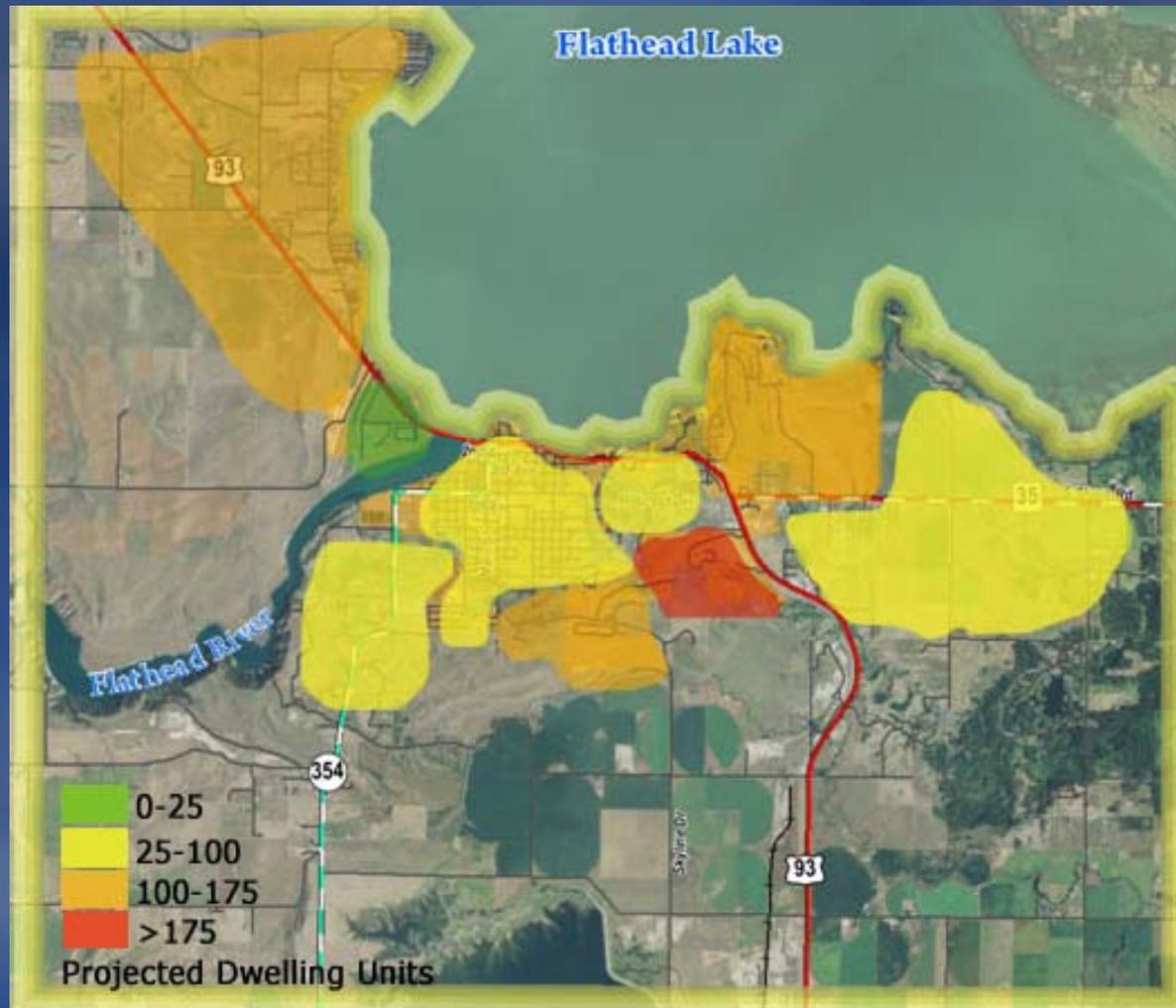
Land Use Forecasts and Location (Dwelling Units)

- ◆ 620 new dwelling units inside City limits
- ◆ 225 new dwelling units outside of City limits and within transportation plan boundary
 - ◆ *Twenty year planning period (Year 2030)*
 - ◆ *Population forecasts based on average annual growth rate of 1.4 %*
 - ◆ *2.25 persons per household*

Land Use Forecasts and Location (Dwelling Units)

- ◆ Existing platted lots are available and not yet developed
 - ◆ Skyline (100 lots)
 - ◆ Mission Bay (150 lots)
 - ◆ Cougar Ridge (200 lots)
 - ◆ Hillcrest (100 lots)
- ◆ Constraints to development south of ridge and north of Caffrey Road
- ◆ Outside City limits, main expansion areas are to the east and northwest

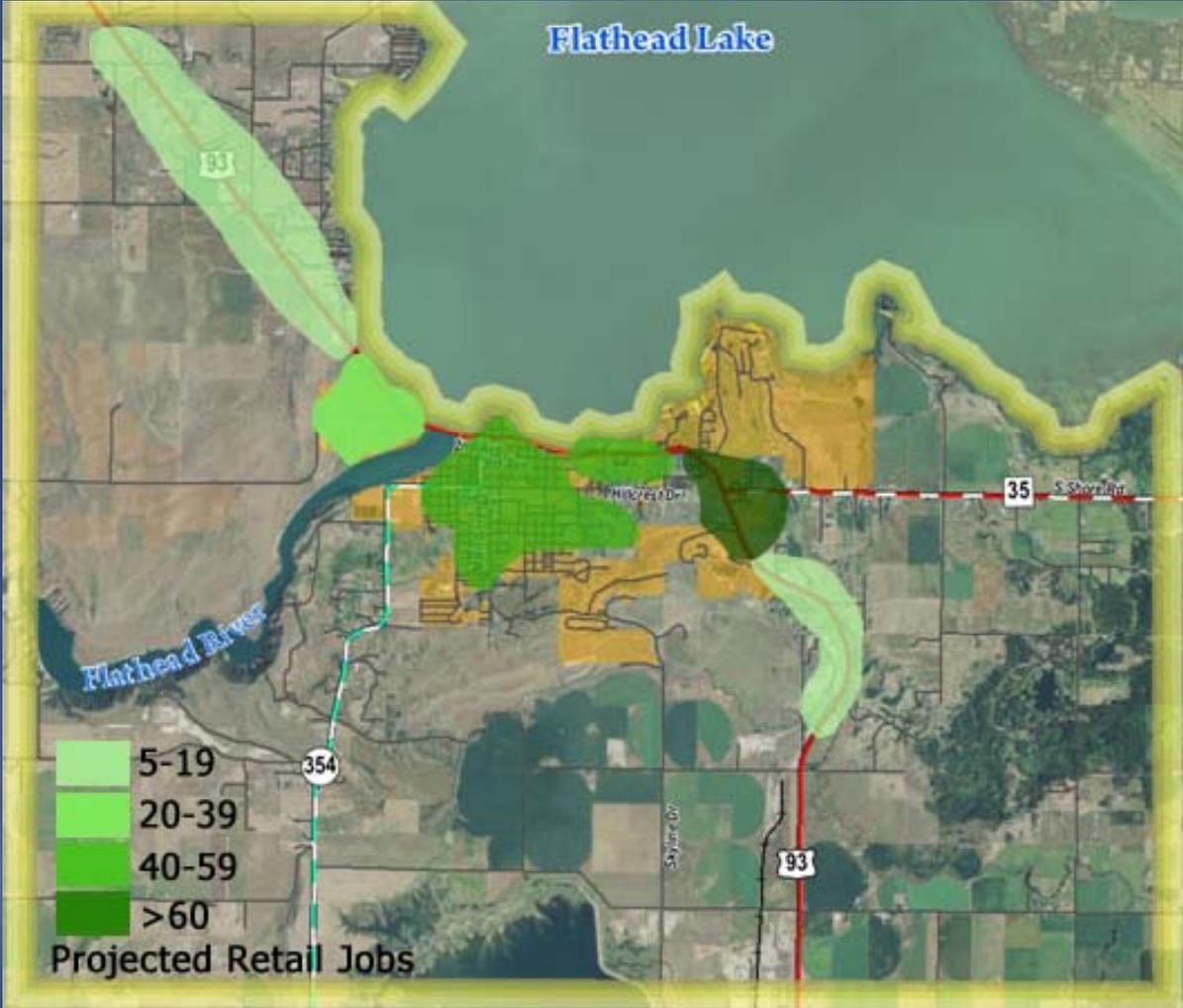
Land Use Forecasts and Location (Dwelling Units)



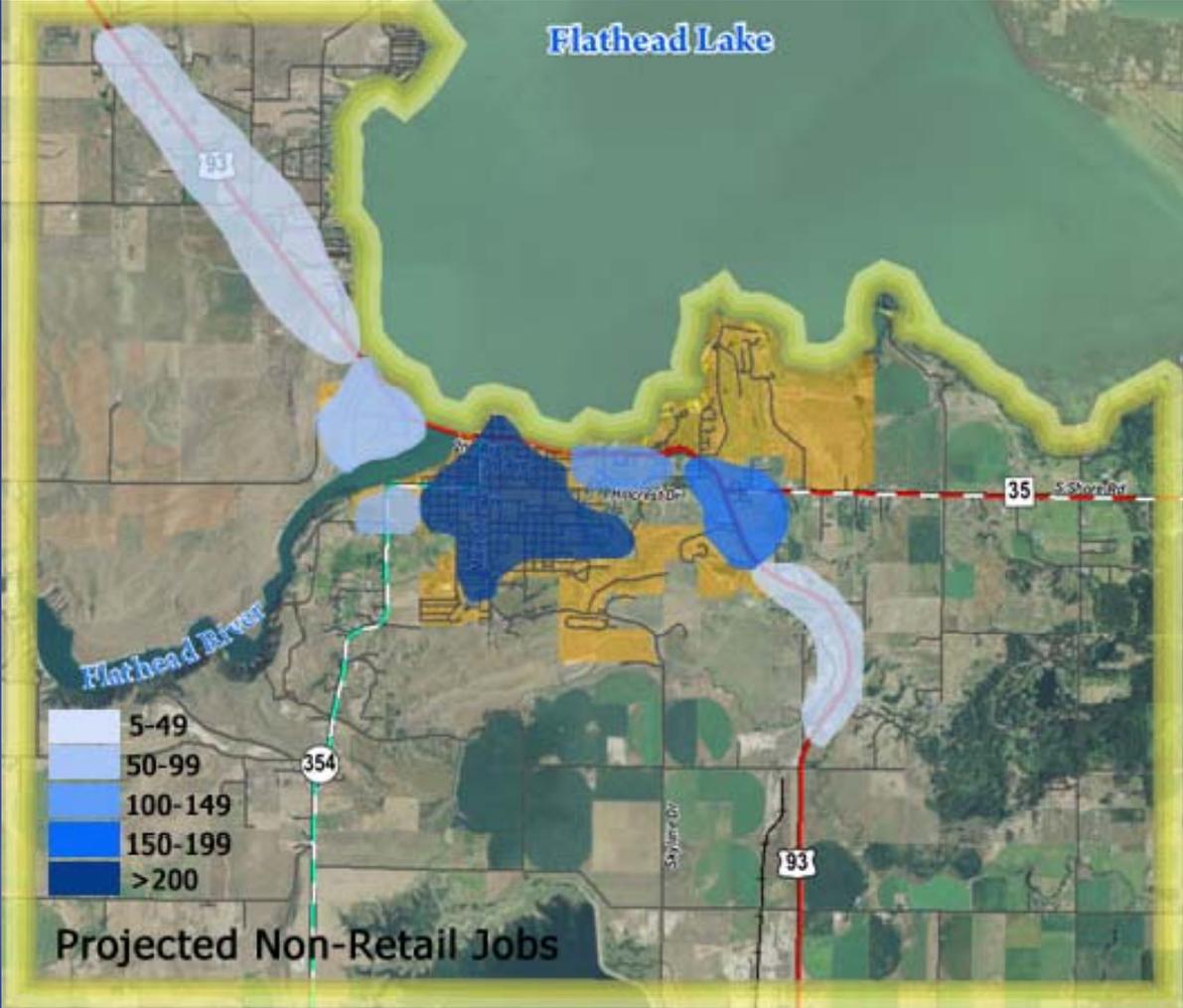
Land Use Forecasts and Location (Retail and Non-Retail Jobs)

- ◆ 250 retail jobs and 850 non-retail jobs inside city limits
- ◆ 30 retail jobs and 30 non-retail jobs outside the city limits and within the transportation plan boundary
 - ◆ *Twenty year planning period (Year 2030)*
 - ◆ *High end growth rate in employment of 1.9% utilized*
 - ◆ *Could be within a range of 1.1% to 1.9%*

Land Use Forecasts and Location (Retail Jobs)



Land Use Forecasts and Location (Non-Retail Jobs)



Next Steps

- ◆ Input land use forecasts into *TransCad* travel demand model
- ◆ Develop short-term and long-term recommendations for transportation system
- ◆ Attempt draft prioritization of projects
- ◆ Continue community outreach

How to Comment

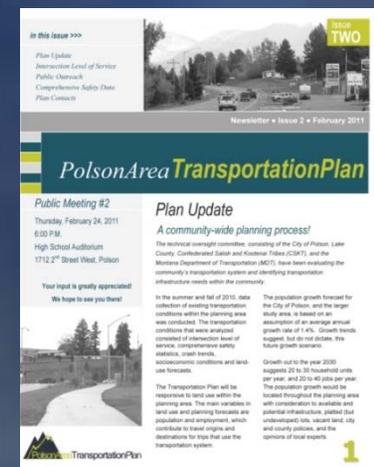
- ◆ We want your comments about the transportation system and your vision for improvements
 - ◆ Comment forms (at meeting)
 - ◆ By email (keyja@cdm.com or sludlow@mt.gov)
 - ◆ Regular mail:

Jeff Key, P.E. (CDM)

50 West 14th Street, 2nd Floor
Helena, Montana 59601

- ◆ Online at:

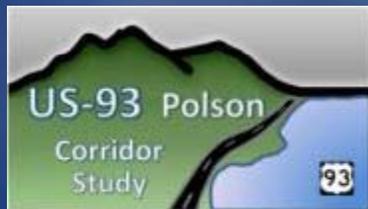
www.mdt.mt.gov/pubinvolve/polsontransplan/



US 93 Polson Corridor Study



US 93 Polson Corridor Study



US 93 Polson Corridor Study *(Existing Conditions)*

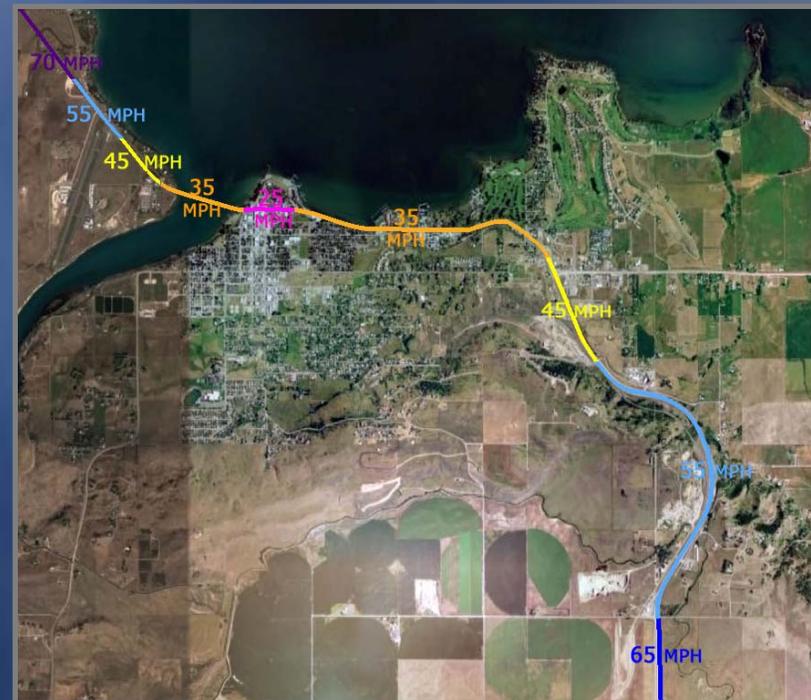


US 93 Corridor - Context

- ◆ Regional link between Idaho and Canada
- ◆ Important route between Missoula, Kalispell, and surrounding communities
- ◆ Serves multiple uses
 - ◆ Tourism traffic
 - ◆ Local traffic
 - ◆ Regional “thru” traffic
 - ◆ Truck traffic

US 93 Corridor – Context

- ◆ Functionally classified as a Principal Arterial (Non-Interstate)
- ◆ Posted speeds vary between 25 mph and 70 mph



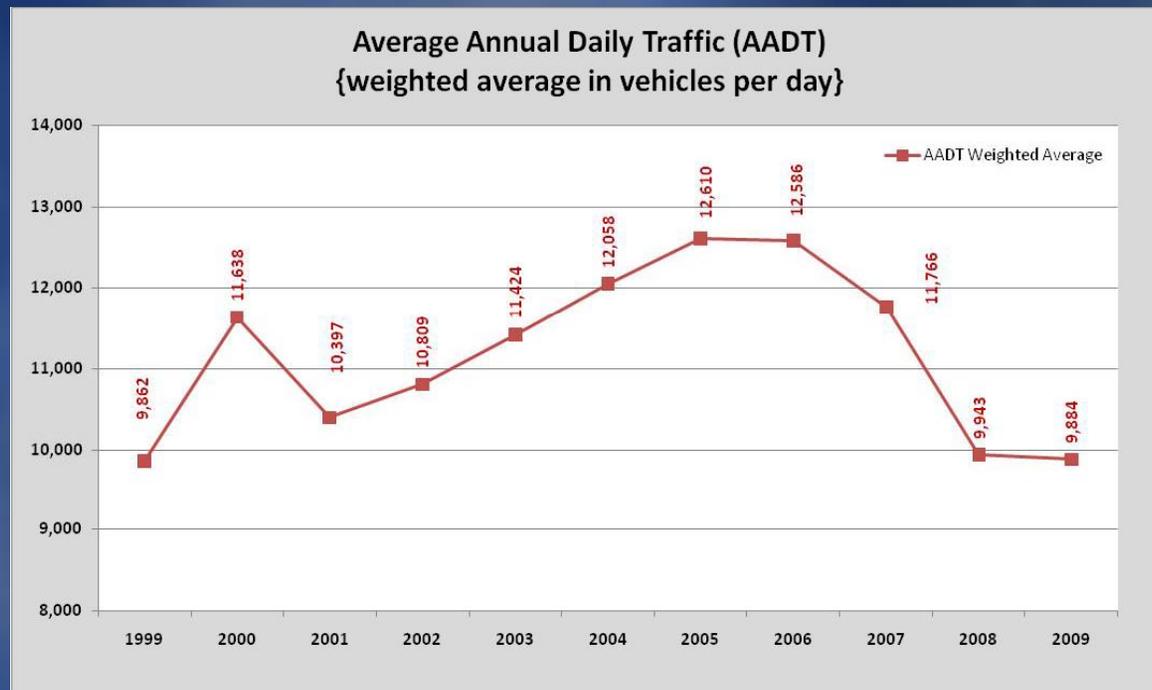
Physical Characteristics

- ◆ Four-lane divided highway to four-lane undivided to two-lane with turning lanes
- ◆ Recently completed work from Minesinger Trail to MT 35 included:
 - ◆ 4-lane roadway
 - ◆ Scenic overlook
 - ◆ Bike and pedestrian paths
 - ◆ Sidewalks
 - ◆ Traffic signal
 - ◆ Turn bays

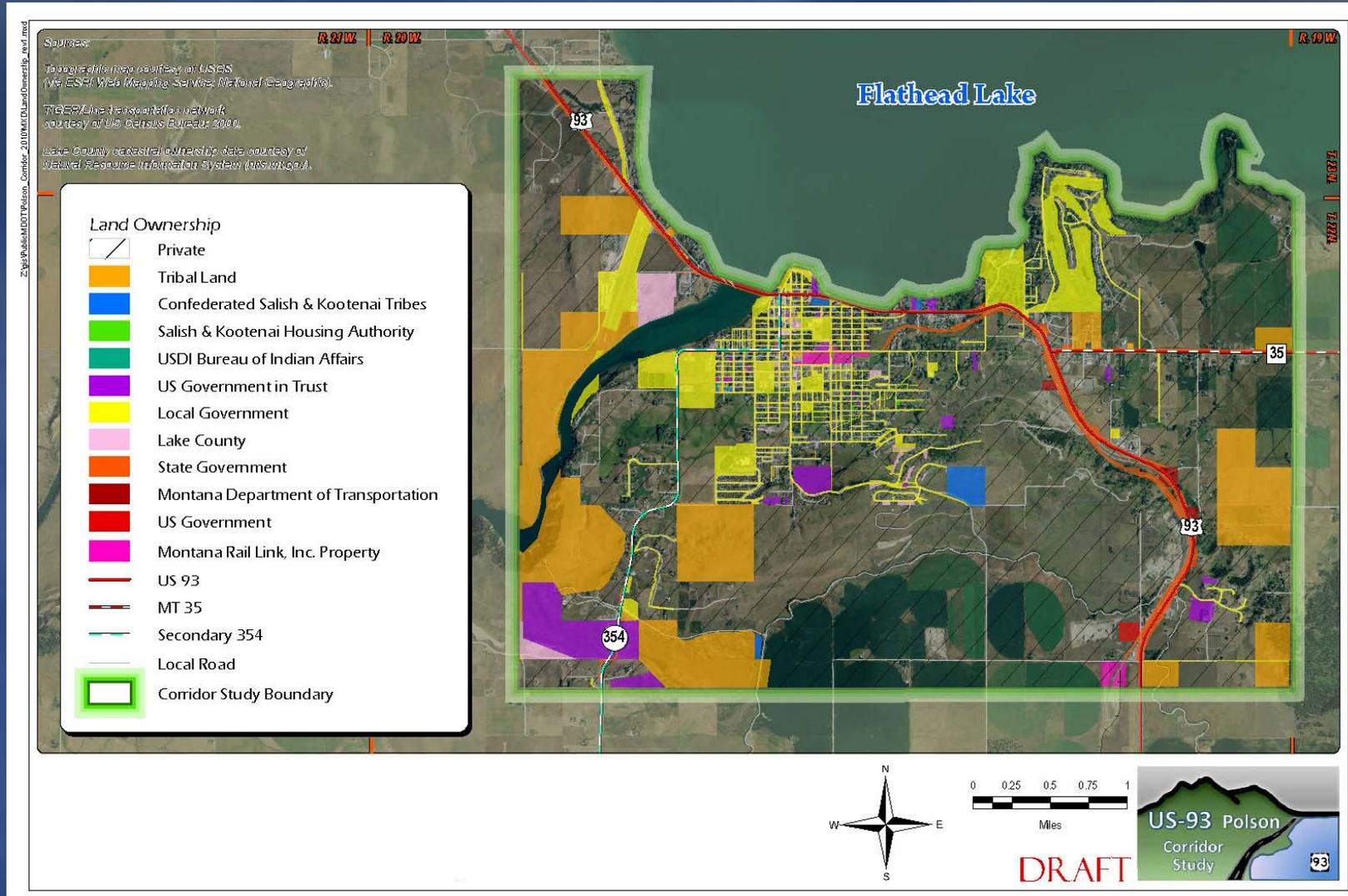


Existing Roadway Users and Traffic Volumes

- ◆ Highest daily traffic volumes occurred in years 2005 & 2006
- ◆ Six (6) permanent count locations on US 93



Right-of-Way and Jurisdictions



US 93 Polson Corridor Study (Areas of Concern)



Roadway Geometrics

◆ Substandard Geometric Design

Design Characteristic	Summary
Horizontal Alignment	Meets current design standards for design speeds of 45 mph and 60 mph
Vertical Alignment	Grades of 5.5% to 5.9% exceed 4% maximum
	Sag k-values of 128.81 and 130.15 are less 136 minimum
Roadside Clear Zone	Improvement options should be designed to current design standards
Surface Width	Surface widths of 28', 38', and 39' are less than 40' recommended width

Surface Width Concerns

- ◆ 40' or greater recommended for US 93 (MDT N.H.S. Route Segment Plan Map)

Table 2.5 Existing Roadway Surface Width

Location Reference Post (RP)	Width (feet)			Travel Lanes
	Surface	Lane	Shoulder	
RP 56.500 - 57.362	71	12	8	4
RP 57.362 - 57.865	71	12	8	4
RP 57.865 - 57.917	71	12	8	4
RP 57.917 - 58.361	71	12	8	4
RP 58.361 - 58.504	71	12	8	4
RP 58.504 - 58.912	71	12	8	4
RP 58.912 - 59.174	55	12	3	4
RP 59.174 - 59.511	39	12	7	2
RP 59.511 - 60.114	40	12	8	2
RP 60.114 - 60.724	39	12	7	2
RP 60.724 - 60.839	59	12	8	2
RP 60.839 - 61.113	38	12	7	2
RP 61.113 - 63.000	28	12	2	2

Source: 2009 Montana Road Log (page 42)

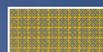


Crash Analysis

- ◆ Crash rates *higher* than comparable routes

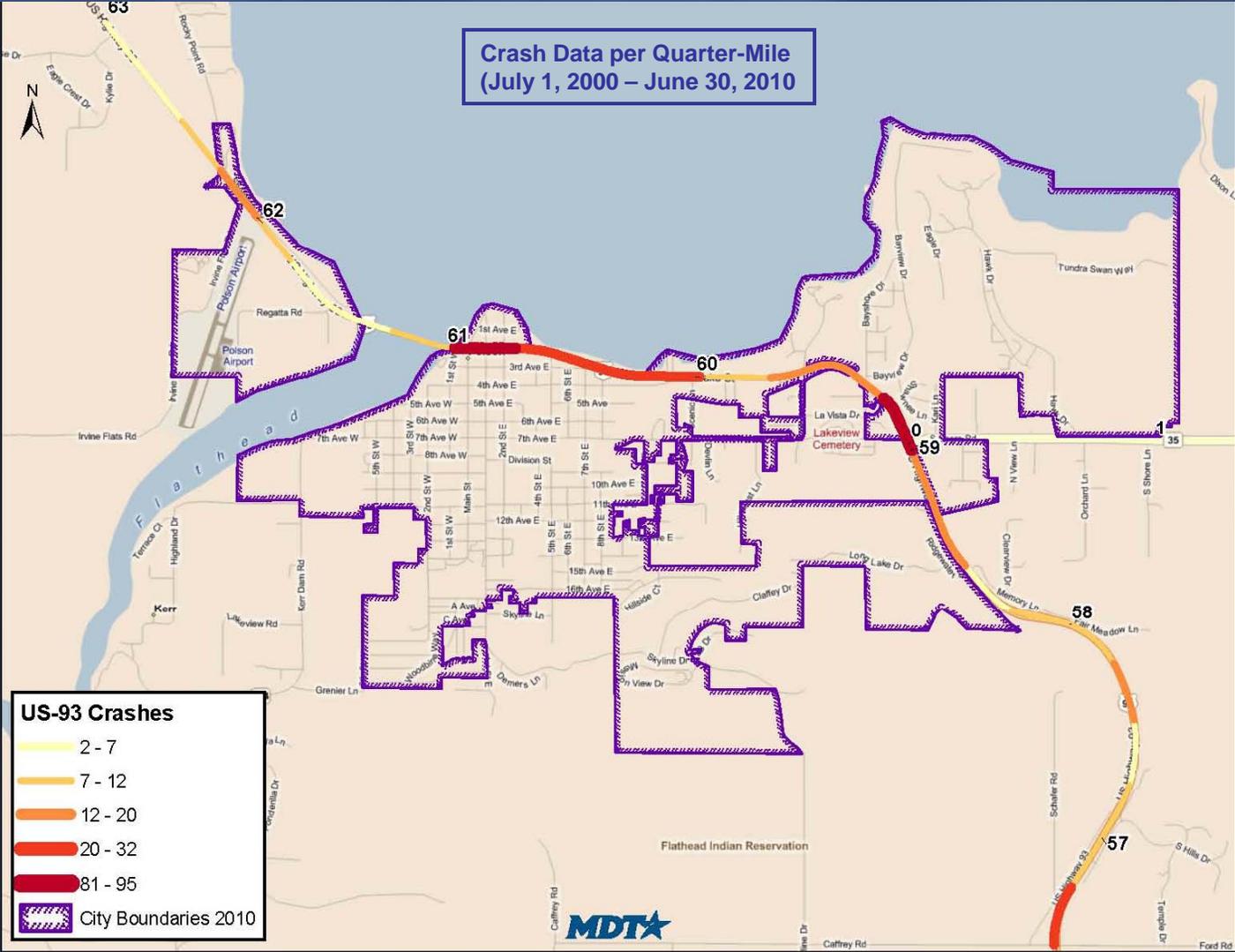
Table 2.8 US 93 Crash Statistics (RP 55.0 - 65.0)
(from July 1, 2000 - June 30, 2010)

Statewide Average	Study Area			NINHS Rural Routes ¹	NINHS Urban Routes ²
	South of MT-35	MT-35 to Irvine Flats Road	North of Irvine Flats Road		
All Vehicles Crash Rate	1.58	2.33	1.32	1.07	5.06
All Vehicles Severity Index	1.95	1.57	1.86	2.14	1.67
All Vehicles Severity Rate	3.08	3.66	2.46	2.29	8.48
Commercial Vehicles Crash Rate	2.63	4.44	1.05	0.90	
Commercial Vehicles Severity Index	1.88	1.22	1.00	2.34	
Commercial Vehicles Severity Rate	4.94	5.42	1.05	2.11	
Commercial Vehicle Crashes	8	18	4		
All Vehicle Crashes	73	256	79		



Denotes "urban" segment of US 93

Crash Data per Quarter-Mile



Access Points



- ◆ 131 Access Points (Density = 20 access points/mile)

Table 2.10 Access Points along US 93

Reference Post (RP)	North/East of US 93		South/West of US 93		Total	
	No. Accesses	Density (access/mi)	No. Accesses	Density (access/mi)	No. Accesses	Density (access/mi)
56.5 to 57.0	2	4	2	4	4	8
57.0 to 57.5	1	2	0	0	1	2
57.5 to 58.0	0	0	1	2	1	2
58.0 to 58.5	1	2	1	2	2	4
58.5 to 59.0	1	2	1	2	2	4
59.0 to 59.5	8	16	4	8	12	24
59.5 to 60.0	16	32	11	22	27	54
60.0 to 60.5	8	16	20	40	28	56
60.5 to 61.0	13	26	23	46	36	72
61.0 to 61.5	2	4	3	6	5	10
61.5 to 62.0	3	6	4	8	7	14
62.0 to 62.5	2	4	1	2	3	6
62.5 to 63.0	1	2	2	4	3	6

US 93 Polson Corridor Study *(Needs and Objectives)*



Needs and Objectives

- ◆ Variations from 1995 EIS needs and objectives (*)
- ◆ Used to develop screening criteria for potential alternate route(s)

Need Number 1: System Linkage

Preserve US 93 as a principal arterial.

Objective

- Maintain connections to other Montana communities.
- Maintain connections to other major highways.



Need Number 2: Transportation Demand and Operations

Accommodate existing and future transportation demand on US 93 through the planning horizon of the year 2030.

Objectives

- Maintain a level of service (LOS) B or better (rural principal arterial. *
- Maintain a level of service (LOS) C or better (urban principal arterial. *
- Acknowledge the increase in non-motorized travel.



Need Number 3: Roadway Geometrics

Provide a facility that accommodates the diversity of vehicle types.

Objectives

- Provide appropriate lane configuration(s) to accommodate vehicle demand.
- Provide for unique turning movements and grade requirements for specialized vehicles.
- Improve the road surfacing widths to meet current MDT design criteria.
- Provide for bridge widths that meet current MDT design criteria.
- Provide modifications to the roadway horizontal alignment and vertical alignment to meet current MDT design criteria.

Need Number 4: Safety

Improve the safety of US 93.*

Objectives

- Provide adequate clear zones along US 93 and provide urban roadway features.
- Manage public access points and private approaches.



Need Number 5: Livability & Connectivity

Reduce conflicts by enhancing connectivity and minimizing impacts within the US 93 corridor.

Objectives

- Minimize impacts to existing neighborhoods. *
- Minimize impacts to environmental, sensitive and recreational resources, including trails. *
- Be responsive to land use plans and future transportation needs. *

Need Number 6: Truck Traffic

Minimize the impacts of US 93 thru truck traffic.

Objectives

- Provide appropriate signage to direct thru truck traffic.
- Minimize the number of vertical grade changes for thru truck traffic.
- Provide acceptable travel times with minimal delay for thru truck traffic.

Other Potential Objectives

Be responsive to long-term maintenance requirements.*

Limit construction disruption as much as possible.*

Community preference.

US 93 Polson Corridor Study *(Alternate Routes Under Consideration)*



Quantm Analysis

- ◆ Three trend areas identified via Quantm
 - ◆ Southern bridge crossing
 - ◆ Central bridge crossing
 - ◆ Northern bridge crossing
- ◆ Four EIS alignments also analyzed in Quantm (EIS 2, 3, 5 and 6)
- ◆ Four EIS alignments examined – not in Quantm (EIS 1, 4, 7 and 8)

Southern Bridge Crossing

- Northerly tie-in between Stone Horse Drive and Rocky Point
- Farthest westerly alignment
- Stays clear of airport runway influence
- Can be located within corridor study area
- Highest bridge crossing of three crossing areas

Estimated range of costs:
\$37.0 - \$47.2M

**Preliminary construction cost estimate for discussion purposes only.*
(Costs provided by Quantm)

**Costs do not include preliminary engineering (PE), construction engineering (CE), utility relocation, impact to structures, and/or ICAP*

Central Bridge Crossing

- Two potential northerly tie-in points:
 - Between Stone Horse Drive and Rocky Point
 - Directly opposite Rocky Point intersection
- Utilizes a portion of Kerr Dam Road
- Aligns west of the Polson airport property

Estimated range of costs:
\$36.0 - \$43.5M

**Preliminary construction cost estimate for discussion purposes only.*
(Costs provided by Quantm)

**Costs do not include preliminary engineering (PE), construction engineering (CE), utility relocation, impact to structures, and/or ICAP*

Northern Bridge Crossing

- Northerly tie-in closer to town, between Irvine Flats Road and existing western bridge end
- Closest alignment to town
- Follows Kerr Dam Road before crossing Flathead River
- Traverses through Fairgrounds property

Estimated range of costs:
\$33.0 - \$39.1M

**Preliminary construction cost estimate for discussion purposes only.*
(Costs provided by Quantm)

**Costs do not include preliminary engineering (PE), construction engineering (CE), utility relocation, impact to structures, and/or ICAP*

EIS Alignments

- Eight alternate routes from 1995 EIS
- Must be screened with new alternate routes developed from Quantm
- Must satisfy corridor needs and objectives

Estimated range of costs:
\$23.7 - \$48.8M

**Preliminary construction cost estimate for discussion purposes only.*

**Costs do not include preliminary engineering (PE), construction engineering (CE), utility relocation, impact to structures, and/or ICAP*

Quantm Alignment Fly-over Video



Note: Elevations have been exaggerated to help illustrate topography.

Next Steps

- ◆ Screen potential alternatives per corridor needs and objectives
- ◆ Rank potential alternatives per screening
- ◆ Continue community outreach
- ◆ Work with TOC and stakeholders to identify alternate(s) to carry forward for additional study

How to Comment

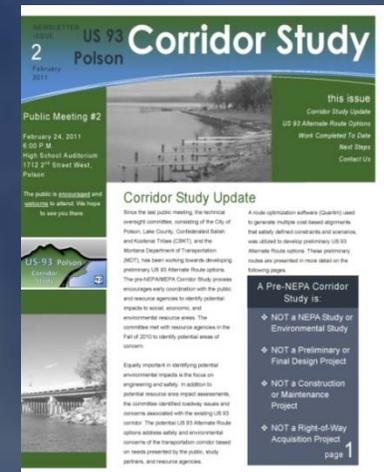
- ◆ We want your comments about the corridor and the preliminary alternatives
 - ◆ Comment forms (at meeting)
 - ◆ By email (keyja@cdm.com or sludlow@mt.gov)
 - ◆ Regular mail:

Jeff Key, P.E. (CDM)

50 West 14th Street, 2nd Floor
Helena, Montana 59601

- ◆ Online at:

www.mdt.mt.gov/pubinvolve/polsoncorridorstudy/



Conclusion

◆ Questions?



CDM

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