Part I: Purpose and Need for Action

A. Description of the Proposed Action

The proposed action would reconstruct some 4.4 miles of U.S. Highway 2 (US 2) lying between Columbia Falls and Hungry Horse. The reconstruction would begin in Columbia Heights at the intersection of US 2 and Federal-Aid Secondary Route 206 (FAS 206) and continue northeasterly to Hungry Horse. The replacement of the existing bridge over the South Fork of the Flathead River west of Hungry Horse would be included with the proposed reconstruction activities on the route. FIGURE I-1 shows the location of the project area.

US 2, a principal arterial, has been designated as Federal-Aid Primary Route 1 (FAP 1). This proposed action is known as Project F1-2(39)138 and Mileposts 138.3 and 142.7 on the route were selected as termini. These milepost locations were selected as termini because they are the ending or beginning points for recent reconstruction projects along the route.

Current (1992) traffic volumes on US 2 in the immediate vicinity of the proposed action range from about 7,700 vehicles per day west of Columbia Heights to more than 5,400 vehicles per day east of Hungry Horse. Substantial variations in traffic volumes occur on this route each year because it is used to access Glacier National Park. Recreational travel between June and September produces traffic volumes which are often more than two times higher than the average daily traffic on the route.

Typical conditions in the project corridor are presented in PHOTO PLATES 1 and 2.

B. Condition of the Existing Facility

Construction on the existing facility began in 1929 and continued during the mid-1930’s. Improvements to the roadway were implemented in 1965 and 1966. The portion of US 2 in the project area has received only maintenance and safety improvements since 1966. The existing highway has a 24-foot wide paved surface with little or no shoulder area. The alignment of US 2 in the project area has numerous horizontal and vertical curves which limit sight distance. Steep roadside slopes are present in several locations within the corridor.

The physical condition of the state road system is periodically evaluated to help establish priorities for allocating construction funds. Among the items examined during such evaluations are the pavement condition (based on a physical inspection of surfacing defects) and the pavement serviceability index (PSI). The PSI correlates a mechanical measurement of surface roughness with the perceived roughness of the highway. A recent summary of the physical condition of this section of US 2 showed that the facility rates a score of 40 out of 40 possible points for pavement distress and has a PSI of 3.5 on a 5.0 scale for surface roughness.

The existing bridge across the South Fork of the Flathead River was completed in 1936 and has not received major renovations since then. The bridge deck is only 26-feet wide.

C. Need for the Proposed Action

Reconstruction of US 2 between Columbia Heights and Hungry Horse has been proposed for the following reasons:

Changes made since the Draft EIS are shown in bold-faced text.
Part I: Purpose and Need for Action

- The existing highway was constructed in the 1930's to design standards that are inadequate for current traffic volumes.
- The existing highway operates at an unacceptable level of service under current traffic conditions and the level of service will continue to deteriorate in the future as traffic volumes increase.
- The road's foundation, width, and horizontal and vertical alignments are poor.
- Adjacent sections of US 2 have been recently reconstructed to higher standards.
- The accident rate on the existing highway is substantially higher than the statewide average for other Primary Routes.
- The route has a wintertime accident problem.
- The highway is part of a heavily traveled scenic route that provides access to Glacier National Park.
- The project area has substantial highway commercial and residential development and the potential for additional growth.

The following paragraphs further describe the needs for the proposed action.

1. PROJECT STATUS

Although the proposed action was considered for many years, formal efforts towards its implementation did not begin until 1988. Authorization from the FHWA to begin preliminary engineering activities was received in October, 1988. In April of 1989, proposals were requested from consultants to provide necessary environmental documentation for the proposed action. Robert Peccia & Associates of Helena, Montana was selected to prepare the EIS in June, 1989.

Public meetings on the proposed action were held in Columbia Falls during October, 1989 and in June, 1990. The primary purposes of these meetings were to obtain input from the public on issues relevant to the project, to discuss highway design alternatives, and to provide information about the potential impacts of the proposed highway development. The Draft EIS/Section 4(f) Evaluation was circulated for public review in July, 1992. A public Design/Location hearing was held on December 10, 1992 in Columbia Falls. Comments on the Draft EIS were accepted until early 1993. The document has subsequently been modified in response to comments from the public and reviewing agencies. Part VI of the EIS summarizes scoping efforts and includes comments on the Draft EIS/Section 4(f) Evaluation.

An "Open House" informational meeting was held in Columbia Falls on November 9, 1994. This meeting was held to discuss design modifications to the preferred alternative and to provide new information relevant to the project.

2. CAPACITY

Current Traffic Volumes - Traffic on US 2 has been monitored at locations in and near the project corridor with a continuously-recording permanent counter since 1982. A permanent automatic traffic recorder (ATR) was initially installed between Hungry Horse and Martin City. The ATR (Station A-60) was moved to MP 139.5 (near the House of Mystery) prior to reconstructing US 2 north of Hungry Horse.
Figure I-1
Project Location Map
Columbia Heights-Hungry Horse
Project F 1-2(39)138

BEGIN PROJECT MP 138.3
END PROJECT MP 142.7

Flathead National Forest

T30N R19\20W

SCALE
Miles 1
Traffic volumes on this segment of US 2 have continued to increase since 1982. TABLE I-1 shows the annual average daily traffic (AADT) for ATR Station A-60 since 1982 (1). This data reveals that traffic on US 2 increased consistently over the period. The 1985 AADT for the old ATR location was 11.83% higher than the corresponding figure for 1982. This represented an average annual growth rate of +2.96% for the 1982-1985 period. The 1992 AADT at the new ATR location (MP 139.5) was also 33.96% higher than the 1986 AADT. This represents an average annual growth rate of +4.85% during the past seven years at the new ATR site.

Records from other ATR stations on US 2 provide additional insight on traffic growth on the route (1). Since 1982, the AADT on US 2 has increased by 57.1% at Station A-24 near Kalispell and by 30.2% at Station A-36 west of Browning. This compares to an overall increase in traffic of 61.2% for the same period at Station A-60. The average annual growth rates for the 1982-1992 period at Stations A-24 and A-36 were 5.19% and 2.75%, respectively.

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   * ATR located between Hungry Horse and Martin City

Considered together, these statistics suggest a trend of steady growth in traffic volumes on the route and the project area since 1982. Current (1992) AADT for the ATR and other count locations in and near the project corridor are shown in FIGURE II-1 in Part II of the EIS.

Existing Level of Service - Capacity analyses, based on current AADT volumes at Station A-60, show that the existing highway operates at a Level of Service E (LOS E) during the peak travel periods. LOS E is indicative of unstable traffic flows, delays, average travel speeds of less than 50 mph, and long lines of vehicles caused by the inability to pass slower cars. This condition is expected to occur in July and August when traffic volumes within the corridor nearly double.

Projected Design Year Traffic - Regression analysis, a method of projecting future traffic volumes based on historical data, predicted that traffic at Station A-60 would be about 8,850 vehicles per day by the design year (2010).

Existing data shows that traffic volumes on US 2 will increase regardless of the proposed improvements on the route. FIGURE II-6 in Part II shows projected design year traffic volumes at count locations in and near the project area.

Projected Design Year Level of Service - The American Association of State Highway and Transportation Officials (AASHTO) recommends that rural arterials be designed to operate at a LOS B some 20 years into the future. AASHTO guidance also indicates that the 30th highest hourly volume of the year (30HV) provides a reasonable design control for rural arterials. Both of these general policies are followed in the design of rural arterials in Montana.

With no improvements and steady traffic growth, the operating conditions of the existing highway will continue to deteriorate and the facility will function at LOS E more frequently through the design year.

The capacity calculations indicate that two-lane highways incorporating design features, such as medians
Photo Plate 1 - Typical Conditions In Project Area

Photo 1 - The proposed action begins in Columbia Heights. This photograph was taken from FAS 206 west of the intersection with US 2. Traffic on US 2 must stop or yield before proceeding to Hungry Horse or Bigfork.

Photo 2 - Commercial strip development is moderately dense in Columbia Heights. Note that access to US 2 is unrestricted in many locations in this area.

Photo 3 - Between Columbia Heights and Badrock Canyon, US 2 passes through gently rolling terrain. Note that guardrail has been installed to protect motorists from steep fill slopes adjacent to the highway.

Photo 4 - The proposed action ends in Hungry Horse where an adjoining segment of US 2 was recently reconstructed. This photo shows the transitional area between the four-lane highway in Hungry Horse and the existing two-lane road east of the bridge over the South Fork of the Flathead River.
Photo Plate 2 - Deficiencies

Photo 1 - The existing highway has paved shoulders that are less than two feet wide. The shoulder’s narrow width combined with high traffic volumes on US 2 creates hazardous conditions for bicyclists using the facility.

Photo 2 - The cliff at the west end of Berne Memorial Park limits sight distance for motorists. Improvements to the facility’s horizontal alignment are necessary to eliminate unsafe conditions and to develop a new highway based on 60 mph design standards.

Photo 3 - The existing highway was constructed more than fifty years ago and has had few improvements since then. The pavement surface has deteriorated (evidenced by the numerous patches shown here) and needs major repairs.

Photo 4 - The existing highway has several locations where vertical curves must be improved.
or left turn lanes, may improve the operation of the facility. However, the analyses clearly show that the two-lane options would not provide an acceptable level of service in the design year. Four-lane designs were shown to operate at LOS B or better under current and design year traffic conditions. These analyses are discussed further in Part II of the EIS.

3. ROADWAY DEFICIENCIES

Inadequate Cross-section - As stated previously, the existing two-lane highway was initially constructed more than fifty years ago and has received only maintenance and safety improvements since its completion. The existing 24-foot wide facility is not consistent with geometric design policies for rural arterials established by AASHTO guidelines or departmental design standards. These sources of design information indicate that a two-lane rural arterial with traffic characteristics like this section of US 2 should, at a minimum, have 12-foot lanes and 10-foot surfaced shoulders. The existing facility is obviously inadequate considering current minimum design standards for two-lane rural arterials.

Some portions of the corridor also have roadsides that do not meet design standards for slopes and ditches.

The existing bridge over the South Fork of the Flathead River was constructed in 1938 and can accommodate only a 28-foot wide road. Clearly, the bridge deck does not provide sufficient surface width to meet minimum standards for driving lanes and shoulders on rural arterials.

Substandard Geometrics - The alignment of US 2 between the House of Mystery and Hungry Horse needs improvements because several existing horizontal and vertical curves do not meet the criteria for a 60 mph design. Three sharp horizontal curves in Badrock Canyon (including one 7° 00', one 6° 00', and one 10° 00' curve) and several vertical curves along the route do not meet 60 mph design standards. Adjacent sections of US 2 have been reconstructed to geometric standards based on higher design speeds. Similar improvements are necessary for the US 2 in the project area to maintain design continuity on the route. Please refer to APPENDIX 1 for a general discussion of design speed and geometrics.

Deteriorated Physical Conditions - The existing pavement of US 2 within the project corridor has deteriorated and needs repairs. Evaluations of pavement condition and the PSI for this section described earlier in this Part, suggest a need for rehabilitating the pavement or reconstructing the highway. The estimated cost of rehabilitating the pavement and maintaining it in a condition similar to its present state through the design year would be nearly $380,000. Rehabilitation of the pavement surface would not provide a facility that meets geometric design standards for road width or increase the road's capacity.

Roadway Improvements Provided by the Proposed Action - At a minimum, the proposed action would provide paved driving and shoulder surfaces and roadside slopes that are consistent with MDT design standards and AASHTO guidelines for rural arterials. The proposed action would improve the horizontal and vertical alignments of US 2 to 60 mph design standards and eliminate existing sight distance problems. These improvements would provide direct operational and safety benefits for the corridor.

4. SAFETY

Accident History of the Corridor - For the period from January 1, 1983 through December 31, 1990, 188 accidents, including 6 fatal accidents and 100 accidents with injuries or possible injuries, were recorded in this 4.4 mile-long segment of US 2 (4). These accidents produced 7 fatalities and more than 160 injuries.

One hundred twelve of the 188 reported accidents occurred during the January 1, 1987 through December 31, 1990 period examined in detail for the EIS. The locations of these accidents are shown in FIGURE I-2 and the primary characteristics of the accidents are summarized in TABLE I-2. During the four-year period,
### TABLE I-2
ACCIDENT CHARACTERISTICS

**U.S. HIGHWAY 2 - COLUMBIA HEIGHTS TO HUNGRY HORSE (MP 138.3 TO MP 142.7)**

**ACCIDENT PERIOD:** 1/01/87 to 12/31/90

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<td>1</td>
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<td>12</td>
<td>14</td>
<td>7</td>
<td>2</td>
<td>13</td>
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| Time   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **NUMBER OF ACCIDENTS BY TIME OF DAY** | 5 | 6 | 0 | 3 | 4 | 0 | 3 | 4 | 4 | 4 | 2 | 2 | 3 | 9 | 6 | 8 | 10 | 6 | 10 | 5 | 5 | 5 | 5 | 3 |

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* Includes possible injury, incapacitating, and non-incapacitating injury categories from HIS printout

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I-8
Part I: Purpose and Need for Action

2 fatal accidents, 56 injury accidents, and 54 property damage only accidents were recorded for the corridor. Statistics show that the average severity of the accidents within the project corridor during the period was comparable to other Primary roads in Montana.

The overall accident rate for this section of US 2 during the four-year study period was calculated to be 3.67 accidents per million vehicle miles of travel (ACC/MVMT). This compares to an average accident rate for Montana’s Primary Road system of 2.19 ACC/MVMT over the same four-year period. The current accident rate for US 2 in the project area is more than 1.7 times higher than the average accident rate for other Primary Roads in the state.

Seventy of the accidents during the study period (63%) happened between Berne Road and Hungry Horse where the alignment of US 2 parallels the Flathead River. The accident rate for this 2.5 mile-long segment of the corridor was determined to be 4.04 ACC/MVMT and is 1.8 times higher than the average accident rates for Primary Roads in Montana during the study period. The accident rate for the Columbia Heights to Berne Road section was calculated to be 3.18 ACC/MVMT.

Safety Problems - The existing highway between Columbia Heights and Hungry Horse has several physical features and operational characteristics that present hazardous situations to motorists. These features and characteristics include:

- a narrow road with limited shoulder area,
- steep slopes adjacent to the road,
- horizontal curves with limited sight distance,
- sharp curves on the approaches to the narrow South Fork bridge,
- numerous fixed-objects in the roadside environment,
- unrestricted access to businesses and residences along the highway
- frequent use by bicyclists and pedestrians,
- substantial use of Berne Memorial Park coupled with uncontrolled approaches and limited sight distance in the vicinity of the park,
- lines of cars (queues) often form behind slower vehicles during peak travel periods, and
- reduced travel speeds in queues combined with inadequate opportunities for passing produce delays for motorists and contribute to driver frustrations and traffic conflicts.

The most common accidents in the corridor are collisions with fixed-objects along the road or run-off-the-road rollover incidents. The accident data shows that 35% of the accidents during the four-year period evaluated were collisions with fixed-objects. This is significantly higher than the average of 24% for collisions with fixed-objects on all Primary roads in Montana. The percentages of off-road accidents and vehicle rollovers during the period were comparable to statewide averages for Primary Routes.

Winter weather and shading from adjacent terrain often produces snowy/icy road conditions or periods of blowing snow within the corridor. The 1987 through 1990 accident data for the corridor shows that fifty of the reported accidents occurred during the months of November, December, January, February, and March when winter driving conditions may be encountered in the project area. Thirty-six percent of the accidents
in the project corridor during the study period occurred when roads were snowy, icy, or slushy. Data on accident characteristics shows that about 25% of the accidents on the statewide Primary road system occur under such road conditions.

The corresponding accident rate for the months of November through March during the four-year study period was 6.46 ACC/MVMT, a rate 2.9 times higher than the four-year statewide average accident rate for Primary Routes. The four-year average accident rate for the months of April through October was 3.16 ACC/MVMT. A comparison of these rates shows that the "winter time" accident rate for the corridor was more than twice as high as its accident rate for the months of April through October during the four-year study period.

Twenty-three accidents occurred in the vicinity of Berne Memorial Park (MP 140.5 to 141.2) during the four-year study period. Two fatal accidents and ten injury accidents occurred in this segment during the period. The accident rate for US 2 in the vicinity of Berne Memorial Park was determined to be 4.74 ACC/MVMT during the study period. This rate is 1.7 times higher than the four-year statewide average accident rate for Primary roads. Fallen rocks from the cliffs in Badrock Canyon near Berne Memorial Park have been reported in the past (5). However, the analysis of accident data does not show that this hazardous condition caused or contributed to any traffic accidents during the 1987 through 1990 period.

A total of 25 accidents occurred on the South Fork bridge or in the curves approaching the structure (MP 142.0 to 142.6) during the study period. Eleven of these accidents resulted in injuries. The four-year average accident rate for this section of US 2 was calculated to be 6.00 ACC/MVMT, some 2.7 times higher than the four-year statewide average for Primary Routes. Sixty-eight percent of the accidents in this area occurred when roads were wet, slushy or icy and in twelve incidents, motorists lost control and struck fixed-objects adjacent to the road or bridge railings.

Safety improvements were installed in the corridor during 1988 and 1989 in an attempt to make the roadside environment on the approaches to the bridge less hazardous and reduce the severity of run-off-the-road incidents and fixed-object collisions. Accident records after safety improvements were completed do not show a significant decline in the number or severity of accidents (4). This data suggests that minor safety projects may not effectively address fundamental problems with the facility and the harsh roadside environment. More major actions are necessary to correct alignment deficiencies and make the roadside less severe.

Safety Improvements Provided by the Proposed Action - The proposed action will generally correct or improve existing safety hazards in the corridor by limiting access to the road, providing a safer and more forgiving roadside environment, improving sight distance, and providing a wide shoulder for use by pedestrians and bicyclists. An improved traffic facility would also increase passing opportunities and relieve congestion.

The proposed highway reconstruction will not prevent snowy or icy road conditions from occurring on the facility during the winter months. However, measures incorporated into the proposed action would increase the effectiveness of winter maintenance activities and improve winter driving conditions for the public. The wide shoulders and flatter roadside slopes proposed for this project will provide room for snow storage away from travel lanes. Selective clearing of trees within new highway right-of-way may increase the number of locations within the corridor where the sun can melt snow from roadway. The improved alignment of the facility combined with the increased width of the roadway surface would make this section of highway less demanding for the motorist to negotiate during winter road conditions.

The hazardous conditions presented by sharp curves, limited sight distance, and the narrow bridge over the South Fork would be addressed by constructing a new four-lane bridge and improving the alignment of the approaches to the structure. Problems with unrestricted approaches and restricted sight distance in
the Berne Memorial Park area would be addressed by eliminating the sharp curves to the east and west of the park. Additionally, conflicts between users of this roadside area and through traffic would be addressed by restructuring the access to and the use of the area.

5. SYSTEM LINKAGE

The proposed action will link two recently reconstructed sections of US 2 and will substantially complete the renovation of the route between Kalispell and West Glacier. Reconstructed four-lane roads adjoin both ends of the project corridor. The Columbia Falls East-West project, located immediately west of Columbia Heights, was constructed in 1985 and provided an 88-foot wide surface on US 2. During 1986, a 66-foot wide four-lane highway through Hungry Horse and a 64-foot wide four-lane from Hungry Horse to Coram were built. A widened two-lane road with truck climbing lanes was also constructed between Coram and West Glacier in 1985.

The proposed action is needed to provide design continuity between projects on adjoining sections of US 2. Design continuity is an important consideration because it relates to the motorist’s ability to respond to driving situations in predictable and successful ways. Drivers on adjacent sections of US 2 accustomed to high design roadway geometrics and design features must adjust to less favorable driving conditions within the project area. The failure to provide similar geometrics or road design features between projects on this route may violate the expectations of motorists and inhibit their driving performance.

6. TRANSPORTATION DEMAND

Relationship to Local Transportation Plans - The portion of US 2 included in this proposed action is not included any local transportation plans. However, the Columbia Falls Planning Jurisdiction Master Plan and the Flathead County Master Plan, Year 2000 (1987) address land use and development issues along US 2. Policy recommendations in both Master Plans discourage the development of new strip commercial areas along transportation corridors like US 2. The transportation element of the Flathead County Master Plan also identifies US 2 between Columbia Heights and Hungry Horse as one of four high accident areas on the road system in the County.

The Flathead County Master Plan, Year 2000 lists three transportation goals that relate to the highway system in the county. They are:

6A Safe and dependable access to all developed land in the county.

6B A comprehensive circulation system which serves to efficiently interconnect all areas of the county with the region beyond.

6C An awareness that roads and highways provide the window that many people view the county from and therefore, signage, landscaping, road location, road design, building setbacks, and parking should be tempered to provide the optimum results.

The proposed action is consistent with the policy recommendations and transportation goals contained in the Master Plan documents. The acquisition of private lands in the corridor offers a way to control land use and development adjacent to the highway and ensure visual protection on acquired lands. The proposed action would provide improvements that would increase the safety and efficiency of the existing route for local and regional users of the facility.

Relationship to Statewide Transportation Plans - The Intermodal Surface Transportation Efficiency Act of 1991 restructured the Federal-Aid highway systems and will create a National Highway System (NHS) consisting of the present Interstate system and designated Primary routes in Montana by 1995. Until that
date, all of Montana’s principal arterial routes (like US 2 in the project corridor) are part of the Interim NHS and eligible for funding under this category. US 2 is one of the Primary roads that will be included on the future NHS. Policies formulated by the American Association of State Highway and Transportation Officials (AASHTO) will provide the basic road design guidance for future projects on the NHS.

Future development of US 2 in the project area is addressed by the Geometric Design Standards and Route Segment Plan approved in December, 1992. This document replaced the previous set of Geometric Design Standards (1986) and the Rural Primary Level of Development Plan (1985). The new document identifies the geometric design standards that will be used to develop the Interstate and non-Interstate segments of the NHS, non-NHS Primary routes, Secondary routes, and highway development in urban and developed areas.

Pertinent to this proposed action, the NHS Route Segment map in the Geometric Design Standards and Route Segment Plan indicates that future development of US 2 should provide a road surface that is at least 40 feet wide (6). Although this document provides the general framework for development of state roads, reconstruction of route segments must be advanced on a project-by-project basis and comply with all federal and state environmental statutes.

7. SOCIAL DEMANDS OR ECONOMIC DEVELOPMENT

Social Demands - Between Columbia Falls and West Glacier, US 2 passes through terrain nationally recognized for its scenic and recreational qualities. The highway provides the primary access to Glacier National Park at West Glacier as nearly 40% of the visitors enter at this location. Annual visitation to Glacier National Park has steadily increased since 1985. Visitations during 1992 was 2,195,767, the highest annual visitation total recorded since a new visitor counting method was implemented in 1985 (7). The 1992 visitation total was 39.2% higher than the comparable figure for 1985.

US 2 also provides access to reaches of the Flathead Wild and Scenic River System. A Recreational River segment of this system is located near Hungry Horse. The proposed action will provide additional safety, comfort and convenience for visitors that use this route to access Glacier National Park and other public recreation lands in the area.

Economic Development - Flathead County is one of the fastest growing regions in Montana and relies heavily on tourism for its economic well being. Some existing businesses have expanded and several new businesses have located along US 2 between Hungry Horse and West Glacier since previous improvements on the route were completed. Additionally, this area has seen an increase in residential uses since the mid-1980s.

The primary reasons for this commercial and residential activity can be attributed to the unique beauty of the region, the increasing numbers of seasonal visitors to the area, and the influx of new county residents. Business and residential development has occurred in response to demands by visitors and local residents. There is a strong likelihood that these factors may contribute to similar residential development in the project corridor.

The project area contains vacant or agriculturally-used parcels that can absorb additional residential and commercial development if the demand arises. Currently, no county land use controls, other than subdivision reviews or public health requirements, are in place to limit new development adjacent to the US 2 corridor. A land use plan for "Canyon" communities in Flathead County along US 2 has been completed and efforts to implement land use controls are underway. The proposed acquisition of private lands in Badrock Canyon and access control provisions are two measures which can be implemented with this proposed action to help control land uses along US 2.
D. Purpose of the Proposed Action

Based on the needs for reconstructing US 2 between Columbia Heights and Hungry Horse discussed above, the stated purpose of the proposed action is to provide for the safe and efficient movement of traffic.

To accomplish this underlying purpose, the proposed action must:

- incorporate physical characteristics designed to increase the safety, comfort, and convenience of the traveling public;
- yield an acceptable level of service (LOS B) with sufficient reserve capacity under design year traffic conditions;
- effectively link and provide design continuity between previously reconstructed portions of the route; and
- satisfy geometric standards for a 60 mph design speed.
References for Part I


3. AASHTO, Page 494.


5. Yarger, Terry, Supervisor, Geotechnical Section, MDT Materials Bureau in a meeting held on March 9, 1990.
