



FINAL REPORT

Polaris Drive/Westside Blvd. Planning and Environmental Linkages Study

Prepared for:

Casper Metropolitan Planning Organization



CASPER AREA
METROPOLITAN PLANNING ORGANIZATION
Casper - Mills - Evansville - Bar Nunn - Natrona County



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ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of Highway and Transportation Officials
APE	Area of Potential Effects
BLM	Bureau of Land Management
BMP	Best Management Practices
CFR	Code of Federal Regulations
dBA	Decibels of A-weighted levels
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
LRTP	Long-Range Transportation Plan
LWCF	Land and Water Conservation Fund
MSAT	Mobile Source Air Toxics
NEPA	National Environmental Policy Act
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
MBTA	Migratory Bird and Treaty Act
N.D.	No Date
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PWG	Project Working Group
SHPO	(Wyoming) State Historic Preservation Office
START	Southern Teton Area Rapid Transit
TAC	Transportation Advisory Committee
USFWS	U.S. Fish and Wildlife Service
WGFD	Wyoming Game and Fish Department
WYDOT	Wyoming Department of Transportation



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EXECUTIVE SUMMARY

The Town of Bar Nunn and the surrounding areas continue to experience significant growth, mainly due to energy development. Salt Creek Highway, the primary access into Bar Nunn from the Casper area, already experiences congestion and is not designed to handle the current or forecasted car and truck traffic volumes. Recognizing that Polaris Drive is a priority project for the community, the Casper MPO initiated this Planning and Environmental Linkages (PEL) study. This PEL Study would precede and serve as the basis for, any future environmental documents prepared in compliance with the National Environmental Policy Act (NEPA).

The purpose of the Polaris Drive/Westside Blvd. Planning and Environmental Linkages Study is to identify transportation needs and develop preliminary alternatives for solutions to the transportation challenges in the Salt Creek Highway corridor, with a focus on construction of a new Polaris Drive arterial road. The study limits extend for approximately 1.5 miles to the east and west of Salt Creek Highway, bounded by the US 20/26 Bypass on the south and Westwinds Road on the north, and encompasses the Town of Bar Nunn. This PEL study area meets FHWA criteria for logical termini and independent utility.

The purpose of this Proposed Action is to safely and efficiently accommodate current and future traffic volumes and improve regional mobility and access. The need for the Proposed Action:

- To provide an arterial connecting the Town of Bar Nunn with the City of Casper that is built to proper arterial road standards.
 - WYDOT has indicated that Salt Creek Highway has insufficient shoulders, safety concerns, right-of-way limitations, many access points, and lack of a detour route during routine construction.
- To provide an alternative access to the Town of Bar Nunn for emergency vehicles or during closure of the Salt Creek Highway.
 - There is currently only one road into and out of the Bar Nunn area to/from the south. With the anticipated increase in residential, commercial, and industrial development and associated higher traffic volumes on Salt Creek Highway, traffic flow disruptions (congestions, accidents, roadway maintenance) and potential emergency access blockages are anticipated to increase.
- To improve regional mobility.
 - Up to 2,000 homes are expected to be built in the Bar Nunn general area by 2020. Providing regional access for these residents and to potential new economic development areas is a priority.
 - The *Connecting Casper 2030 Long Range Transportation Plan (2030 LRTP)* (Casper MPO 2007) identifies a goal to develop a safe and efficient transportation system that provides for the movement of persons and goods



within and through the Casper Metropolitan Planning Area (CMPA). This is to be accomplished by providing connections to the regional transportation system.

- To accommodate existing and projected travel demand generated by the continued residential, commercial, and industrial development planned in the “Bar Nunn Community Development Plan”.
 - 25,000 vehicles per day are anticipated to use the Salt Creek Highway north of Howard Street with the building of the projected 2,000 new homes by 2020.
 - Anticipated commercial and industrial growth will increase the number of trucks traveling the Salt Creek Highway (a proposed ready-mix plant and pre-cast concrete plant north of Bar Nunn and a truck-train transfer station northeast of the Natrona County International Airport)
 - 2030 traffic levels along Salt Creek Highway show portions of this roadway operating at LOS D and LOS E. With projected development for the northwest portion of the CMPA, upgrades to Salt Creek Highway will be needed.
- To accommodate multimodal transportation.
 - The *2030 LRTP* identifies a goal to coordinate long-range planning recommendations with efforts to promote alternative travel modes (ride-sharing, walking, public transit, rail, bicycles, air, etc.). This is to be accomplished by providing transportation alternatives in the form of transit, bicycle and pedestrian facilities and services for persons who cannot or choose not to use automobiles.
- To improve traffic safety.
 - The *2030 LRTP* goal of a safe and efficient transportation system for the CMPA will also be accomplished by developing roadway geometric designs that improve the safety and operational characteristics of the transportation system and meet accepted engineering standards.
 - WYDOT data reveals that 54 crashes with 3 fatalities occurred along this stretch of Salt Creek Highway from 2010 to 2012.

The study team developed several alternatives to address the Purpose and Need:

- Alignments that connect to logical end points and cross roads.
- Cross sections for 2- or 4-lane highway configurations, with auxiliary lanes at cross roads, as needed. Median treatments and accommodation of pedestrians and bicyclists were considered.
- Intersection types including signalized or unsignalized control.

A Resource Group of state and federal agencies, the Project Working Group (PWG), and the public participated in the alternatives development and screening process. The consultant team led the collaborative and iterative process to receive input from the PWG. Evaluation criteria were applied, as appropriate, throughout the screening process, using the best information available at each level of screening. The PWG representatives identified goals and values important to their respective communities or



agencies. The study team provided technical information, for example traffic operations data, to the groups as the discussions proceeded. In this way, alternatives were developed and screened in coordination with the PWG. An alternative development process, a screening process, and evaluation criteria were developed and employed for this project.

After screening, the following alternatives were recommended to be studied further during the full NEPA process:

Alignments

- Segment 1 – Alignment a
- Segment 2 – Alignments 3 and 4
- Segment 3 – Alignments B and D

Cross Sections

Cross Section 1 with right-of-way preservation to accommodate Cross Section 3. Though not included in the recommended cross section, Cross Section 1 allows for the addition of curb, gutter and sidewalk as adjacent development occurs.

Intersections

All identified intersection improvements for all alignments.

It is recommended that the Casper MPO pursue getting the Polaris Drive design and construction phases on the MPO Transportation Plan, followed by the State Transportation Improvement Plan (STIP), so that when new federal and state funding programs are authorized, this project will be in position to get funded. Local match funds from the Town of Bar Nunn and Natrona County would also be needed, so local officials should begin to reserve funds for this project.

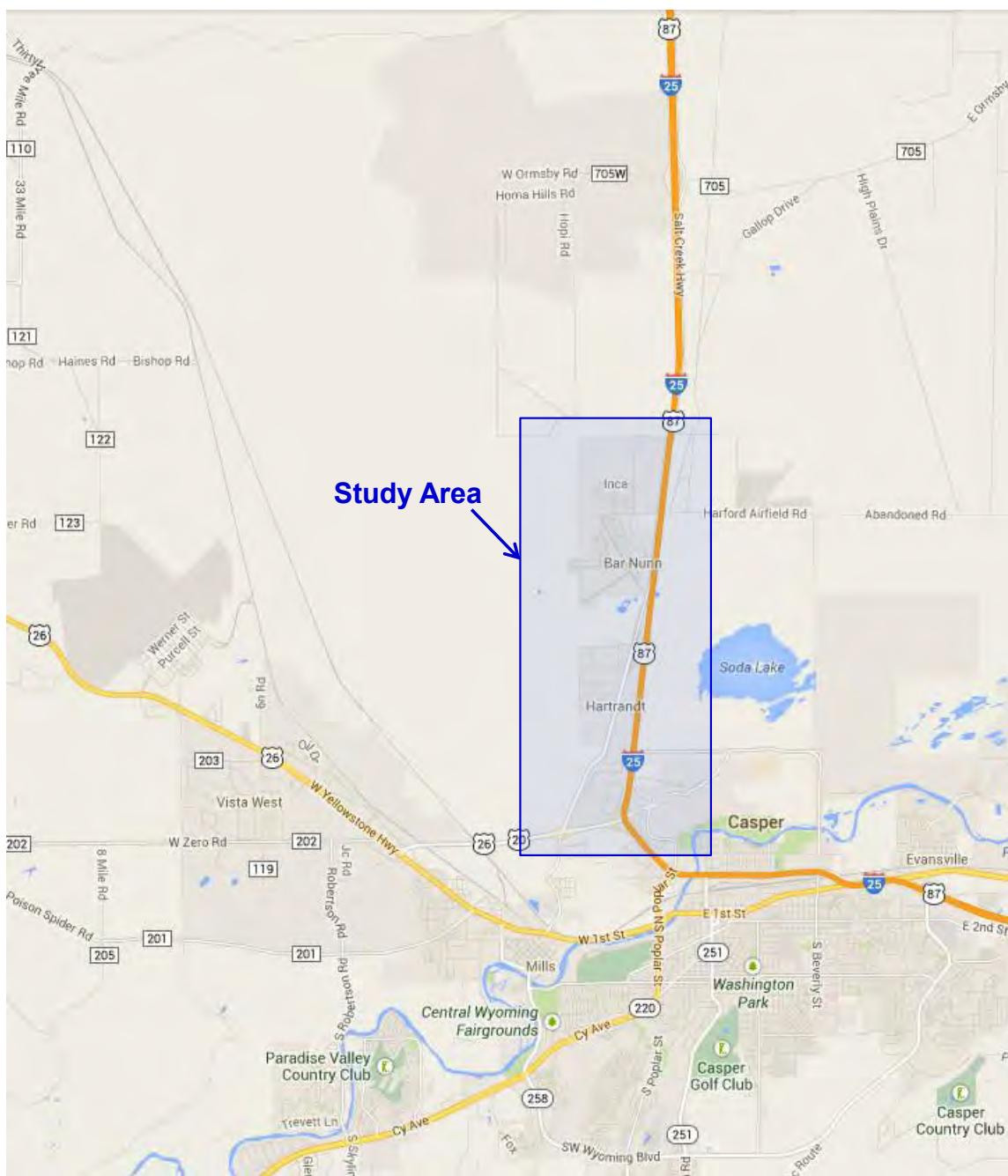


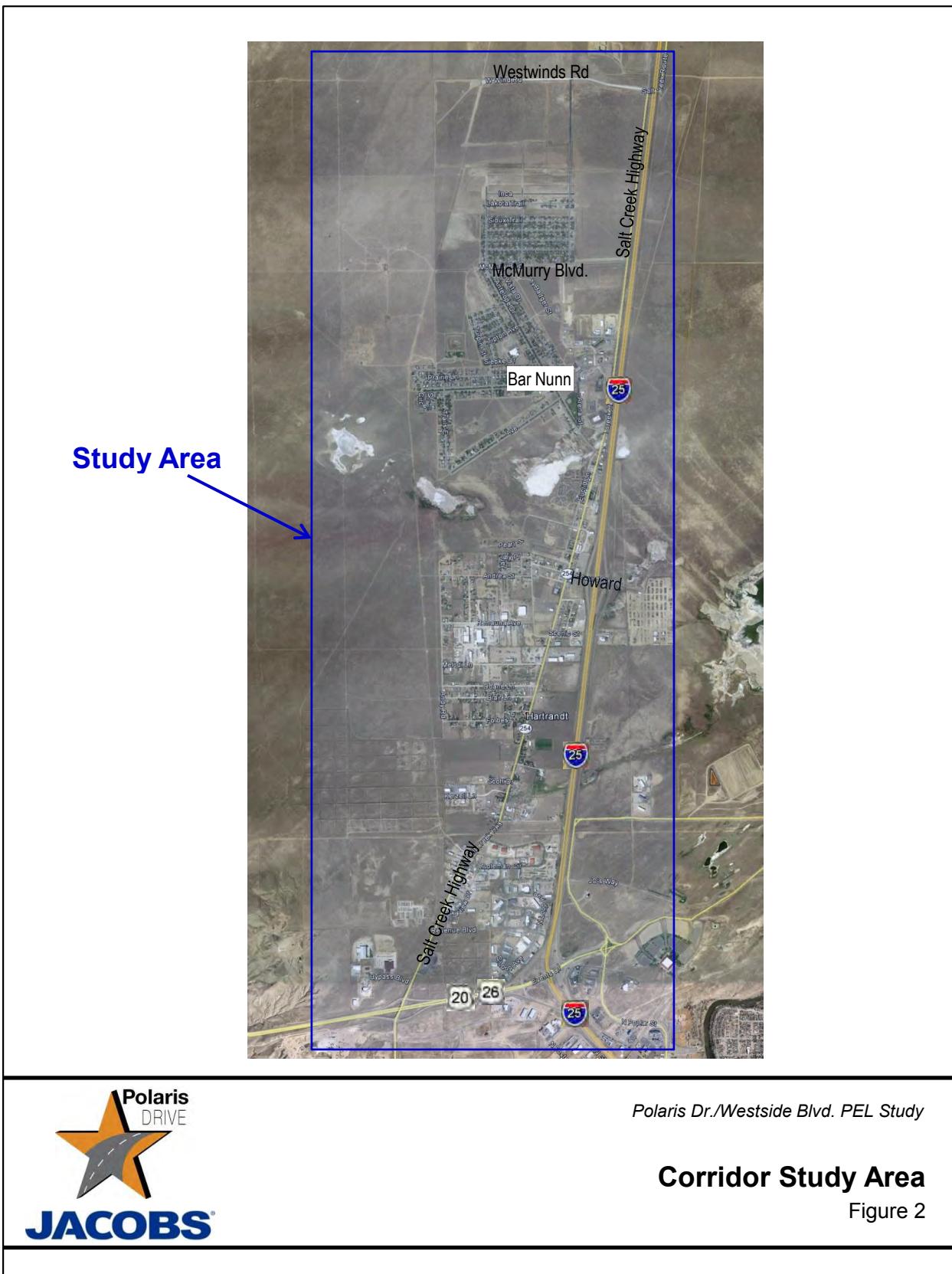
INTRODUCTION

The Town of Bar Nunn and the surrounding areas continue to experience significant growth, mainly due to energy development. Salt Creek Highway, the primary access into Bar Nunn from the Casper area, already experiences congestion and is not designed to handle the current or forecasted car and truck traffic volumes. The Casper Area Metropolitan Planning Organization (MPO) conducted the *Salt Creek Highway/McMurtry Boulevard Corridor Study* to assess traffic and access in the Bar Nunn area. One key recommendation was the construction of Westside Blvd. (since renamed Polaris Drive) – a road mostly parallel to the Salt Creek Highway, on the west side of Bar Nunn.

Recognizing that Polaris Drive is a priority project for the community, the Casper MPO initiated this Planning and Environmental Linkages (PEL) study in January, 2013. The Casper MPO undertook the study with the Federal Highway Administration (FHWA), in cooperation with the Wyoming Department of Transportation (WYDOT), Natrona County and the Town of Bar Nunn (representatives of each comprises the Project Working Group (PWG)). As noted by FHWA, a PEL Study “represents an approach to transportation decision-making that considers environmental, community, and economic goals early in the planning stage and carries them through project development, design, and construction. This PEL Study would precede, and serve as the basis for, any future environmental documents prepared in compliance with the National Environmental Policy Act (NEPA).”

The purpose of the Polaris Drive/Westside Blvd. Planning and Environmental Linkages Study is to identify transportation needs and develop preliminary alternatives for solutions to the transportation challenges in the Salt Creek Highway corridor, with a focus on construction of a new Polaris Drive arterial road. The study limits extend for approximately 1.5 miles to the east and west of Salt Creek Highway, bounded by the US 20/26 Bypass on the south and Westwinds Road on the north, and encompasses the Town of Bar Nunn. The regional vicinity of the corridors is displayed in Figure 1, and the corridor study area is shown in Figure 2.







1.0 STUDY LOCATION AND DESCRIPTION

1.1 LOGICAL TERMINI

FHWA NEPA requirements specify that the study area boundaries must meet the criteria for logical termini and independent utility. FHWA defines logical termini to be the rational end points for both a transportation improvement and environmental review. A project is considered to have independent utility if it could and would be constructed absent of other projects in the area. FHWA guidance states that a project must be considered and evaluated as a “whole” project – not segmented. It must also satisfy an identified need and consider local context.

This PEL study area meets FHWA criteria for logical termini and independent utility. The drop-in traffic and development on the north and west boundaries of the study area, plus the restricted access boundaries on the east by I-25 and south by the WY 20/26 Bypass demonstrate that the PEL study area has logical termini. This area is of sufficient size to broadly address environmental concerns. The Proposed Action satisfies identified needs (see Section 1.4) and is not tied into any other transportation projects in the area, thereby demonstrating independent utility.

1.2 EXISTING CORRIDOR

1.2.1 Highway Conditions

1.2.1.1 *Conditions Assessment*



Salt Creek Hwy., North of McMurry

Salt Creek Highway is classified as a Minor Arterial Road. Arterial roads typically have limited access to facilitate mobility, are designed for higher speeds, and have fairly wide shoulders (overall street width of at least 40 feet). Salt Creek Highway is functionally and conditionally deficient for its classification and use.

As seen in the photos at left, Salt Creek Highway is not built to arterial standards and generally has poor pavement conditions. It primarily has one 11-foot lane per direction, with shoulders varying from as wide as 8 feet near Revenue Blvd., to no shoulders along much of the section in Bar Nunn. In addition, there is a drop off into adjacent drainage ditches in places, with little to no separation from the shoulder edges and no protective barriers.



Salt Creek Hwy., South of Sunset

As the primary route into and out of the Bar Nunn area, Salt Creek Highway carries a significant number of heavy trucks. Daily traffic volumes are over 10,000 near Revenue Blvd. There are numerous access points along most of the section



Salt Creek Hwy., North of Howard

of Salt Creek Highway in the study area, which makes maintenance of traffic and access difficult during any construction because there isn't an alternative route for a detour.

Salt Creek Highway is the only direct access route between Bar Nunn and Casper for emergency services. I-25 is an alternative, but its limited access can significantly increase response times. Should an incident shut down Salt Creek Highway, there is no viable alternative route except I-25, and emergency response time would be significantly impacted.

1.2.1.2 Existing Road Needs

- 1) Reconstruction of Salt Creek Highway with access restrictions, or construction of a viable alternative route, constructed to arterial standards.
- 2) An alternative access route into and out of Bar Nunn for emergencies.

1.2.2 Traffic

1.2.2.1 Existing Volumes

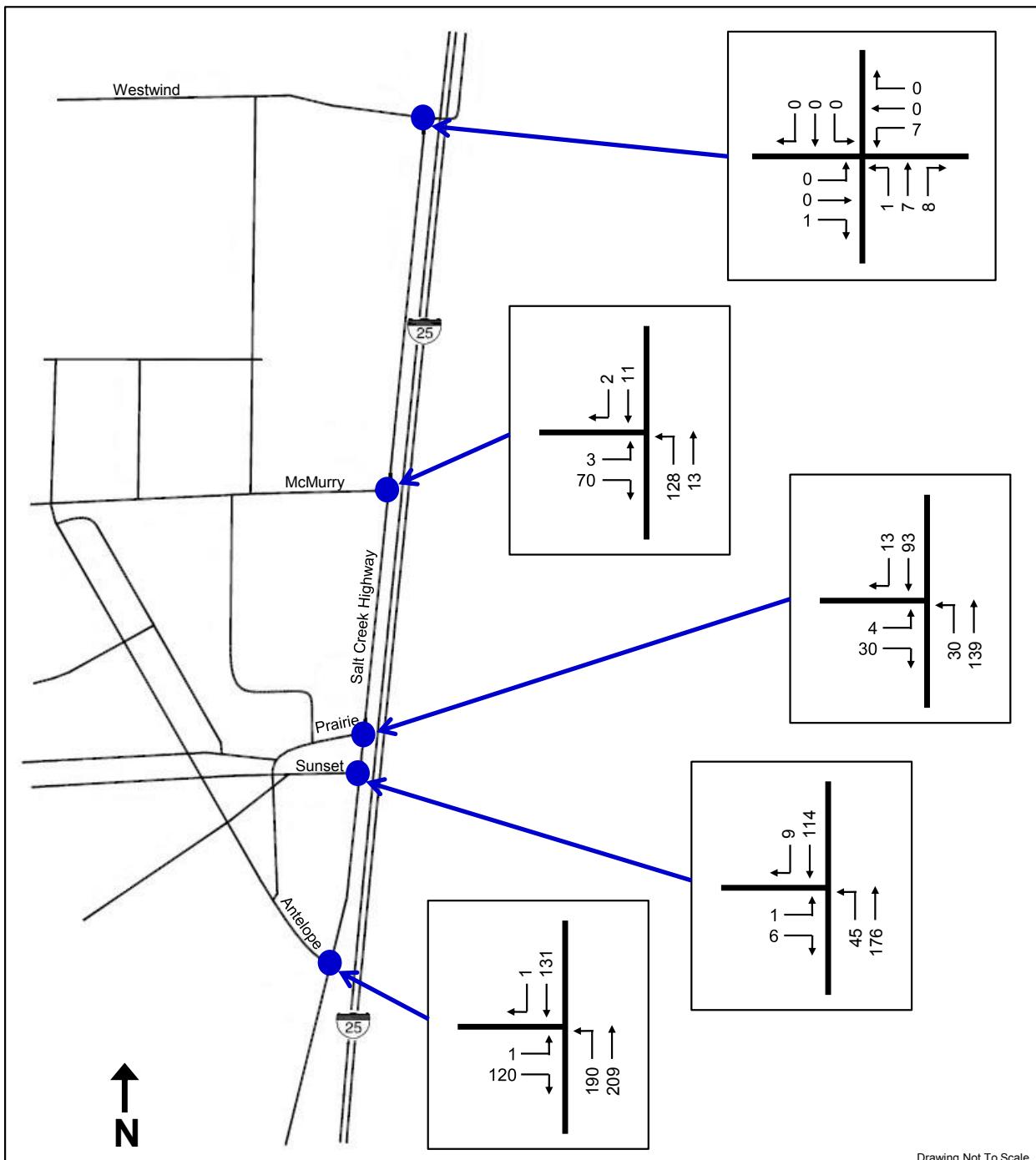
Traffic volumes were used to assess existing operations along Salt Creek Highway. Existing turning movement traffic counts were collected at key intersections along Salt Creek Highway and at the Wardwell/I-25 interchange. They were collected during the assumed "worst case" late afternoon peak hour, on Wednesday, May 8, 2013. No seasonal or other adjustments were made to the traffic counts, since the alternatives evaluation was conducted based on future traffic projections.

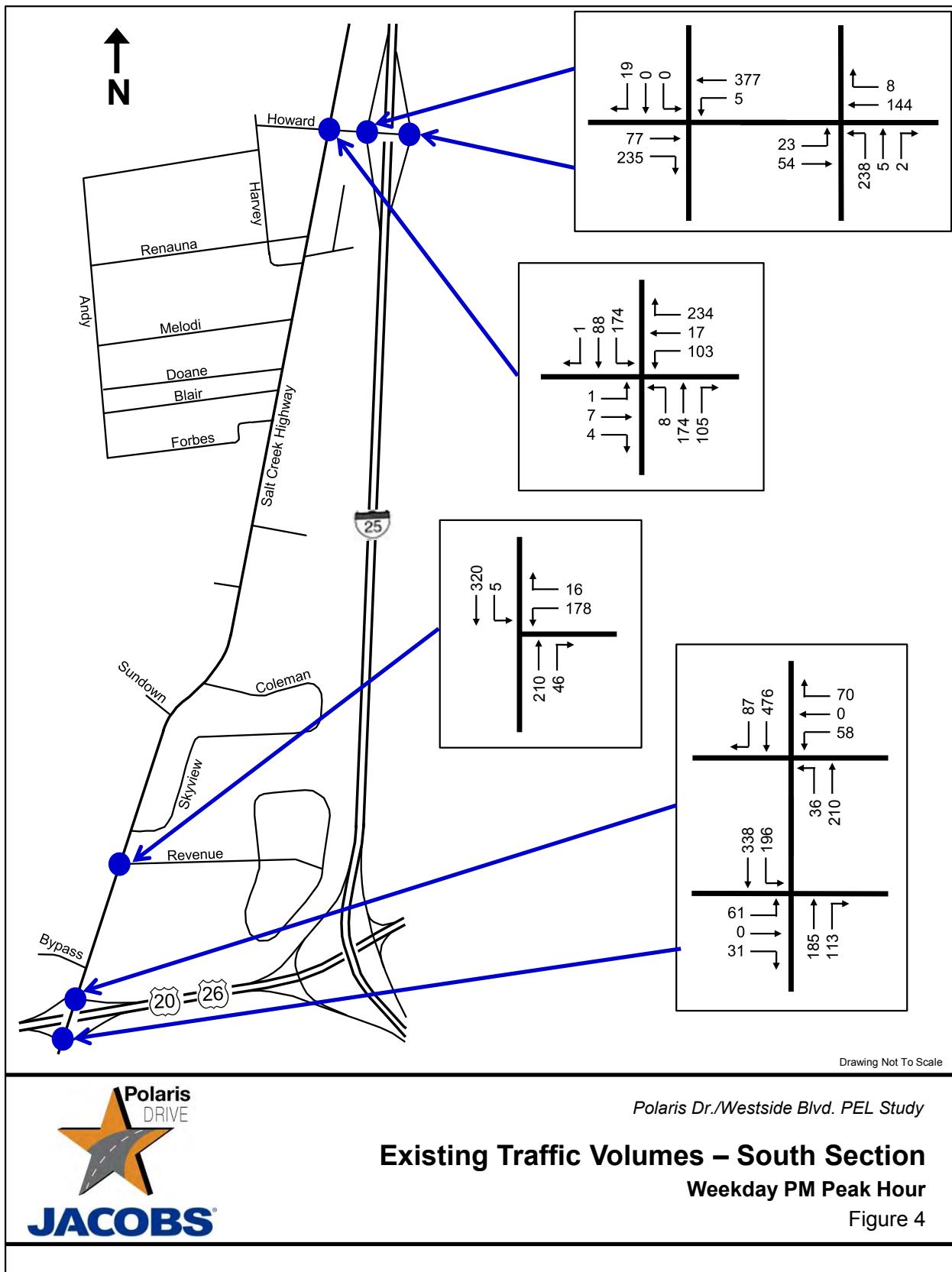
The existing traffic volumes for the weekday PM peak hour are illustrated on Figure 3 for the northern part of the corridor, and Figure 4 for the southern part.

Limited information is available on truck volumes on the corridor, but observations reveal a significant number of heavy trucks use the corridor to access local businesses.

1.2.2.2 Existing Operations

Traffic operations at the study area intersections were analyzed using methodologies in the Transportation Research Board's *Highway Capacity Manual 2010* and Synchro software (Version 7).







The Level of Service for a two-way, stop controlled intersection is determined by delay and is defined for each minor or stopped-controlled movement based on gaps on the major road. Level of Service is not defined for the overall unsignalized intersection. The criteria are as follows:

- **Level of Service A** is the best level of operation and indicates delay of less than 10 seconds/vehicle (sec/veh).
- **Level of Service B** is a good level of operation with short delays of 10 to 15 sec/veh.
- **Level of Service C** (15 to 25 sec/veh of delay) and **D** (25 to 35 sec/veh of delay) are acceptable levels of operation, with average to long delays.
- At **Level of Service E**, the volume of traffic is approaching the capacity of the intersection, and long delays of 35 to 50 sec/veh will occur.
- At **Level of Service F**, the volume of traffic exceeds the capacity, and very long delays of more than 50 sec/veh and queuing will occur.

Table 1 presents the existing Levels of Service for the key intersections in the study area. The analysis indicates that the intersections and movements are currently operating at acceptable levels of service.

Table 1 – Existing Level of Service

Intersection	Existing Level of Service*
Westwind/I-25 NB	a
Westwind/I-25 SB	-
Westwind/Salt Creek	-
Salt Creek/McMurry	b
Salt Creek/Prairie	a
Salt Creek/Sunset	a
Salt Creek/Antelope	a
Salt Creek/Howard	d
Wardwell/I-25 SB	b
Wardwell/I-25 NB	b
Salt Creek/Ranauna	b
Salt Creek/Revenue	c
Salt Creek/20/26 WB	c
Salt Creek/20/26 EB	d
Salt Creek/Polaris	-
Polaris/Renauna	-
Polaris/Sunset	-
Polaris/McMurry	-

*Minor street left turn movement



1.2.2.3 Existing Operational Needs

The analysis indicates no existing traffic flow operational needs in the study area.

1.2.3 Non-Motorized Transportation

There are no sidewalks, pathways or bike lanes along Salt Creek Highway. Crosswalks are not provided at intersections. Traffic and roadside conditions give Salt Creek Highway a pedestrian and bicycle Level of Service of F.

1.2.4 Safety

1.2.4.1 Crash Assessment

Accident concentrations are expected at intersections because they have a high number of conflicting vehicle movements. WYDOT accident information was analyzed to determine if there are locations within the corridor that have unusually high accident characteristics. For this study, the three-year period between January 1, 2010, and December 31, 2012, was analyzed.

During the three-year period, there were 54 traffic crashes (37 property damage-only crashes, 14 injury crashes, and 3 fatal crashes). Table 2 depicts the yearly number of fatal, injury, and property damage-only crashes within the corridor.

Table 2: Traffic Crashes and Injuries

Year	Persons Injured	Persons Killed	Property Damage Only	Injury Crashes	Fatal Crashes	Total Crashes
2010	6	0	10	6	0	16
2011	8	2	14	5	2	21
2012	5	1	13	3	1	17
Total	19	3	37	14	3	54

Source: WYDOT Crash History Report.

Fatal Crashes

Three fatal crashes occurred in the study corridor during the three-year period at the following locations:

- Intersection of Salt Creek Highway and Prairie Lane (Mile Post 18.20). The manner of collision was Angle Right (front to side) where a left-turning vehicle failed to yield the right-of-way.
- Non-intersection location (north of Salt Creek Hwy/Coleman Cir intersection, Mile Post 2.45). A



southbound speeding motorist ran off the road while negotiating a curve and hit a building or wall during darkness when the roadway section was unlighted.

- Non-intersection location at approximately the same location as the second crash (north of Salt Creek Hwy/Coleman Cir intersection, Mile Post 2.50). A westbound speeding motorist overturned while negotiating a curve during darkness when the roadway section was unlighted.

Crash Locations

One of the three fatal crashes occurred at an intersection, and two occurred at non-intersection locations. Out of 54 crashes, 27 (50%) crashes occurred at non-intersection locations, 24 (44%) crashes occurred at intersection locations, 2 (4%) crashes were driveway-related, and 1 (2%) crash occurred at a railroad grade crossing.

Manner and Frequency of Collision

Out of 54 crashes, 32 (60%) crashes involved more than one moving vehicle and 22 (40%) involved a single vehicle.

More than One Vehicle - The collision type and frequency for the 32 crashes involving more than one vehicle are:

- Angle Right (front to side, includes broadside) – 9 (28%)
- Rear End – 9 (28%)
- Angle (front to side), opposing direction – 6 (19%)
- Wildlife-related (hit Deer/Antelope) – 5 (16%)
- Backing – 2 (6%)
- Sideswipe (same direction) – 1 (3%)

Single Vehicle - The manner of collision and frequency for the 22 crashes involving a single vehicle are:

- Speeding – 11 (50%)
- Failed to keep proper lane – 3 (13%)
- No improper driving – 4 (18%)
- Loss of control (avoiding animal) – 2 (9%)
- Ran off road (snow/icy conditions) – 1 (5%)
- Other improper action – 1 (5%)

Road Condition - Road condition for all 54 crashes is:

- Dry – 37 (68%) (includes the three fatal crashes)
- Ice/Frost/Snow – 12 (22%)
- Wet – 5 (10%)

Lighting Condition - Lighting condition for all 54 crashes is:

- Daylight – 34 (63%) (includes 1 fatal crash)
- Darkness unlighted – 15 (28%) (includes 2 fatal crashes)



- Dawn – 3 (6%)
- Darkness lighted – 2 (4%)

1.2.4.2 Existing Safety Needs

Based on the crash statistics, the lack of lighting, lack of shoulders, and general design not being up to arterial standards appears to have contributed to the fatalities and other crashes. There is a need to eliminate fatal crashes and reduce the overall number of crashes on this road.

1.2.5 Transit

Bus transit does not currently serve the Bar Nunn area. Casper Area Transit has identified a need to provide service for employees at businesses along Salt Creek Highway.

1.2.6 Growth and Traffic Projections

1.2.6.1 Land Use Assumptions

The land use assumptions from the *Bar Nunn I-25 Interchange Feasibility Study* were used as the 2035 future land use scenario.

1.2.6.2 2035 Traffic Projections

Turning movement projections presented in the *Bar Nunn I-25 Interchange Feasibility Study* were used as the starting point to develop the 2035 Build Scenario traffic projections.

The TransCAD model developed for the *Bar Nunn I-25 Interchange Feasibility Study* was used to extrapolate the Build Scenario volumes to the intersections that were not included in the *Interchange Study*. The TransCAD model assumed more connections to Polaris Drive than are included in this study, so judgment was applied to reassign volumes to the envisioned access points to the arterial road.

The TransCAD model was also used to estimate the No-Build Scenario volumes – those that would divert back to Salt Creek Highway rather than I-25 if Polaris Drive were not built. Depending on their destinations, some motorists would find it faster to use I-25 rather than Salt Creek Highway. In other words, construction of Polaris Drive would attract some traffic away from I-25 – not just from Salt Creek Highway.

The 2035 No-Build Scenario traffic volumes for the weekday PM peak hour are illustrated on Figure 5 for the northern part of the corridor, and Figure 6 for the southern part.



1.2.6.3 2035 Traffic Operations

Synchro was used to analyze the network under the 2035 No Build and Build Scenarios. Existing roadway and traffic control configurations were used as the starting point.

The operation of a signalized intersection is measured in terms of level of service. Level of service (LOS) is directly related to average control delay per vehicle. The criteria are as follows:

- **Level of service A** is the best level of operation and indicates minimal control delay of 10 sec/veh or less
- **Level of service B** is a good level of operation with short delays of more than 10 sec/veh to 20 sec/veh
- **Level of service C** (20 to 35 sec/veh of delay) and **D** (35 to 55 sec/veh of delay) are acceptable levels of operation, with average to longer delays
- At **level of service E**, the volume of traffic is approaching the capacity of the intersection and long delays greater than 55 sec/veh to 80 sec/veh occur
- At **level of service F**, the volume of traffic exceeds the capacity, and very long delays, more than 80 sec/veh, and queuing occur

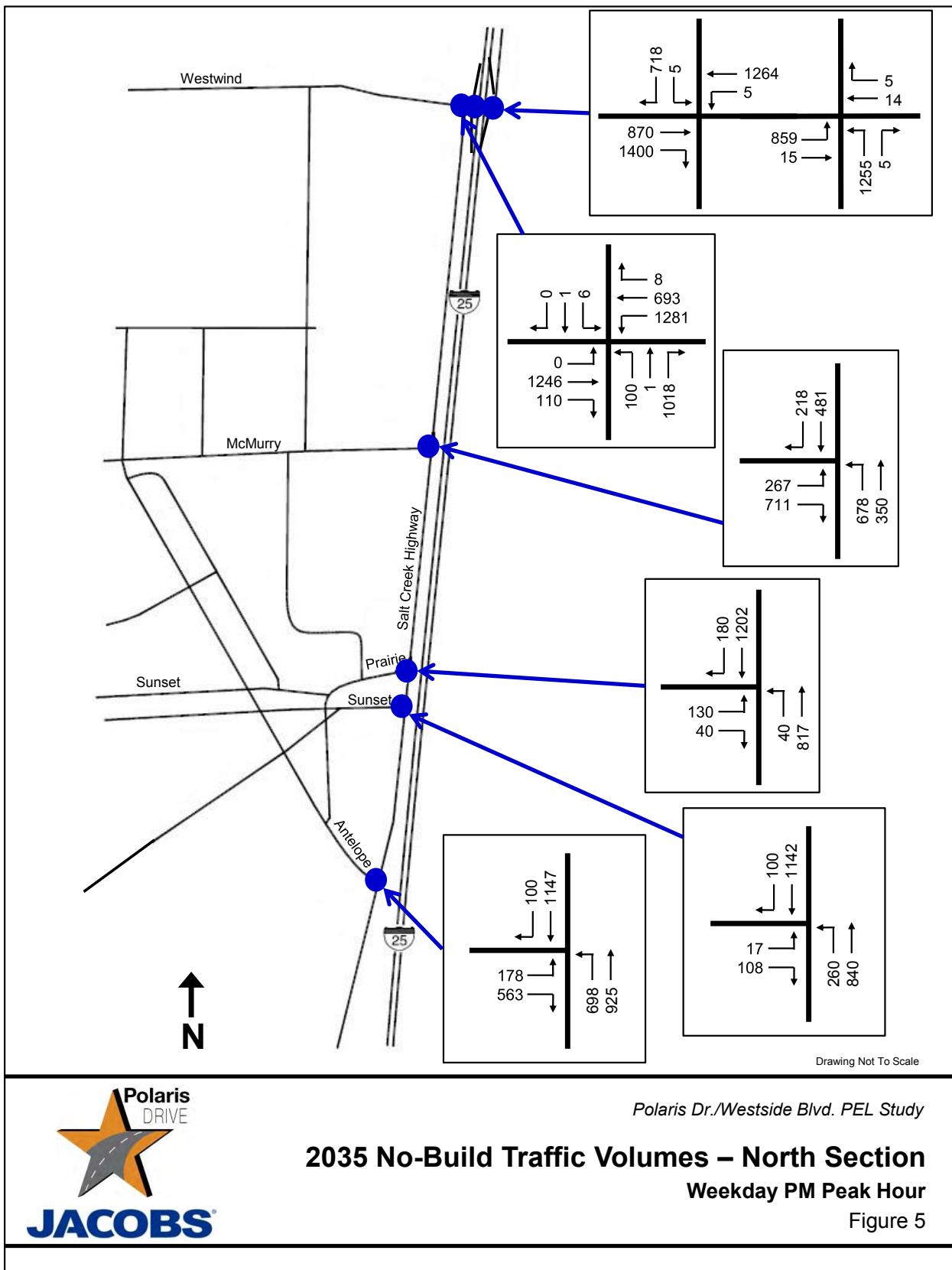
No Build Scenario

Table 3 presents the 2035 No Build Scenario Levels of Service for the key intersections in the study area, as well as likely needed improvements. Under the No Build Scenario, extensive improvements would be needed, as follows:

- At the new Westwinds Road./I-25 interchange, including realignment of the Salt Creek Highway intersection further to the west.
- Along Salt Creek Highway, from Westwinds Road to Revenue Blvd., including six traffic signals, separate turn lanes, and a second southbound through lane from Westwinds Road to Howard Street.
- At the Salt Creek Highway/20/26 Bypass interchange (Bypass), including signals and turn lanes.

Build Scenario

Intersection operations under the Build Scenario vary depending on alternative. Results are presented in Section 3.2.



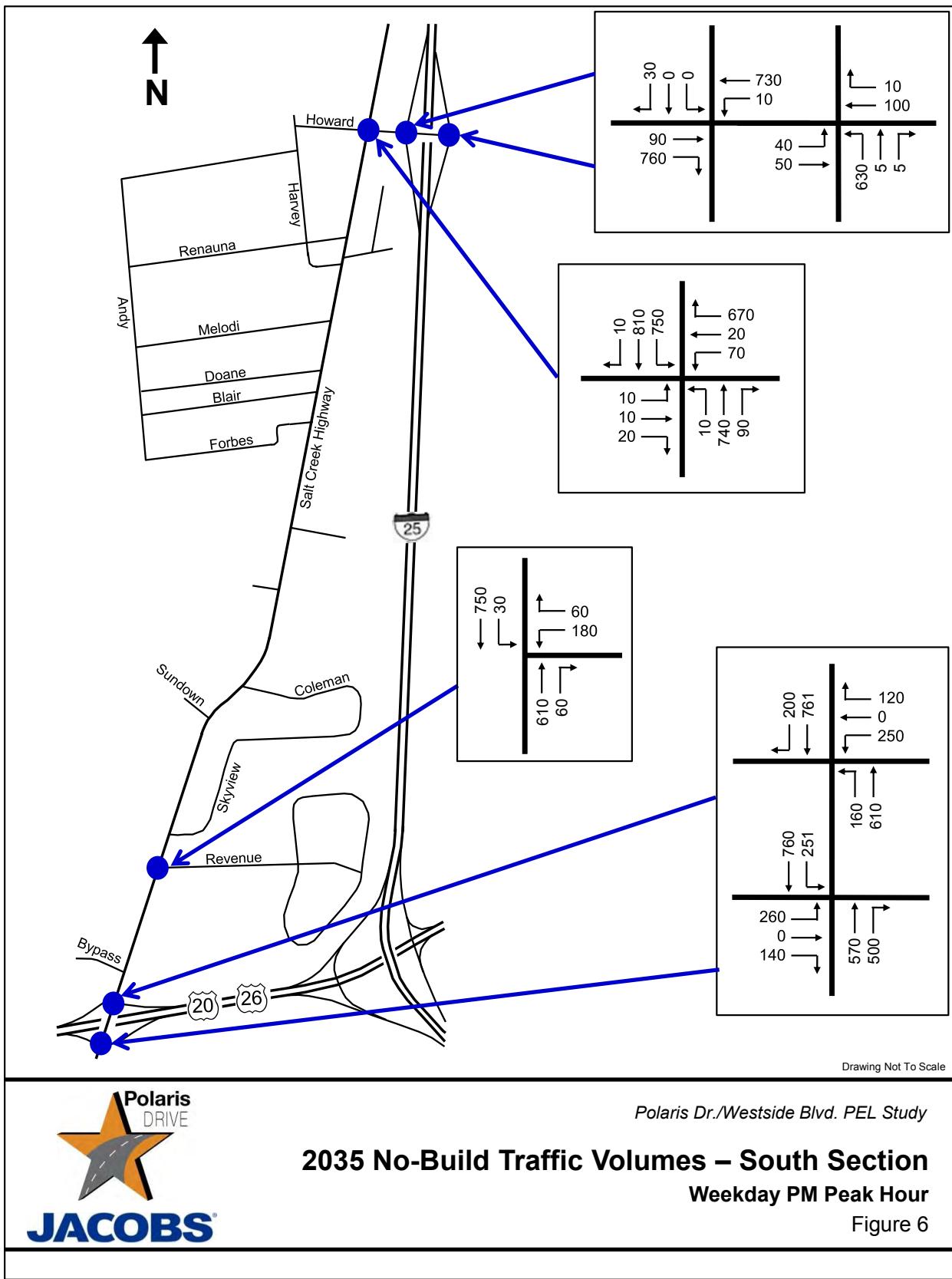




Table 3 – 2035 No-Build Levels of Service (PM Peak Hour)

Intersection	Level of Service	Level of Service with Improvements	Improvements Likely Needed
Westwind/I-25 NB	f	C	Traffic Signal, 2nd EB Left Turn Land, NB Left Turn Lane
Westwind/I-25 SB	f	B	Traffic Signal, 2nd EB Thru Lane, 2nd WB Thru lane, 2nd SB Right Turn Lane, EB Free Right Turn Lane
Westwind/Salt Creek	f	C	Traffic Signal, 2nd WB Thru Lane, 2nd EB Thru Lane, 2nd WB Left Turn lane, 2nd NB Right Turn Lane, EB Right Turn Lane, Relocate Intersection to the West
Salt Creek/McMurtry	f	C	Traffic Signal, NB Left Turn Lane, SB Right Turn lane, 2nd SB Thru Lane
Salt Creek/Prairie	f	A	Traffic Signal, 2nd SB Thru Lane, NB Left Turn Lane, EB Right Turn Lane
Salt Creek/Sunset	f	f	2nd SB Thru Lane, NB Left Turn Lane, EB Right Turn Lane
Salt Creek/Antelope	f	C	Traffic Signal, NB Left Turn Lane, EB Left Turn Lane, 2nd SB Thru Lane, SB Right Turn Lane
Salt Creek/Howard	f	C	Traffic Signal, WB Right Turn Lane, SB Left Turn Lane, 2nd SB Left Turn Lane, NB Right Turn Lane
Wardwell/I-25 SB	c	-	-
Wardwell/I-25 NB	f	B	Traffic Signal
Salt Creek/Renauna	e	e	NB Left Turn Lane
Salt Creek/Revenue	f	B	Traffic Signal
Salt Creek/20/26 WB	f	B	Traffic Signal, WB Left Turn Lane, NB Left Turn Lane, SB Right Turn Lane
Salt Creek/20/26 EB	f	B	Traffic Signal, EB Left Turn Lane, NB Right Turn Lane, SB Left Turn Lane

Lower-case letters indicate Level of Service for the minor street left turn movements at unsignalized intersections.

Upper-case letters indicate the intersection Level of Service at signalized intersections.

1.3 PURPOSE OF THE PROPOSED ACTION

The purpose of this Proposed Action is to safely and efficiently accommodate current and future traffic volumes and improve regional mobility and access.

1.4 NEED FOR THE PROPOSED ACTION

- To provide an arterial connecting the Town of Bar Nunn with the City of Casper that is built to proper arterial road standards.

- WYDOT has indicated that Salt Creek Highway has insufficient shoulders, safety concerns, right-of-way limitations, many access points, and lack of a detour route during routine construction.
- To provide an alternative access to the Town of Bar Nunn for emergency vehicles or during closure of the Salt Creek Highway.
- There is currently only one road into and out of the Bar Nunn area to/from the south. With the anticipated increase in residential, commercial, and industrial development and associated higher traffic volumes on Salt Creek Highway, traffic flow disruptions (congestions, accidents, roadway maintenance) and potential emergency access blockages are anticipated to increase.
- To improve regional mobility.
 - Up to 2,000 homes are expected to be built in the Bar Nunn general area by 2020. Providing regional access for these residents and to potential new economic development areas is a priority.
 - The *Connecting Casper 2030 Long Range Transportation Plan (2030 LRTP)* identifies a goal to develop a safe and efficient transportation system that provides for the movement of persons and goods within and through the Casper Metropolitan Planning Area (CMPA). This is to be accomplished by providing connections to the regional transportation system.
- To accommodate existing and projected travel demand generated by the continued residential, commercial, and industrial development planned in the “Town of Bar Nunn Community Development Plan”.
 - 25,000 vehicles per day are anticipated to use the Salt Creek Highway north of Howard Street with the building of the projected 2,000 new homes by 2020.
 - Anticipated commercial and industrial growth will increase the number of trucks traveling the Salt Creek Highway (a proposed ready-mix plant and pre-cast concrete plant north of Bar Nunn and a truck-train transfer station northeast of the Natrona County International Airport)
 - 2030 traffic levels along Salt Creek Highway show portions of this roadway operating at LOS D and LOS E. With projected development for the northwest portion of the CMPA, upgrades to Salt Creek Highway will be needed.
- To accommodate multimodal transportation.
 - The *2030 LRTP* identifies a goal to coordinate long-range planning recommendations with efforts to promote alternative travel modes (ride-sharing, walking, public transit, rail, bicycles, air, etc.). This is to be accomplished by providing transportation alternatives in the form of



transit, bicycle and pedestrian facilities and services for persons who cannot or choose not to use automobiles.

- To improve traffic safety.
 - The 2030 LRTP goal of a safe and efficient transportation system for the CMPA will also be accomplished by developing roadway geometric designs that improve the safety and operational characteristics of the transportation system and meet accepted engineering standards.
 - WYDOT data reveals that 54 crashes with 3 fatalities occurred along this stretch of Salt Creek Highway from 2010 to 2012.

1.5 PLANNING CONTEXT

Four transportation studies have been performed since 2007 to assess traffic conditions in the Bar Nunn area and to evaluate various proposed transportation projects. These studies assisted in forming the baseline condition and future land use/traffic scenarios for this PEL. Below are summaries of the studies and their conclusions.

Connecting Casper, 2030 Long Range Transportation Plan, June 2007

This plan was prepared for the Casper MPO to provide a long-range planning-level evaluation of transportation and roadway conditions in the Casper metropolitan area, project and evaluate potential future conditions, establish regional transportation goals and objectives, identify needs and issues, and proposed potential long-term projects. Proposed projects that are applicable to this PEL are:

- **Northeast Corridor Belt Loop** – This loop would be located east of Bar Nunn and would extend Bryan Stock Trail to the north, then west to Bar Nunn at or near McMurry Blvd.
- **McMurtry Blvd./I-25 Interchange** (see description of the “Bar Nunn I-25 Interchange Feasibility Study” below)
- **WY 20/26 Extension** from I-25 near Bar Nunn to the Natrona County Airport to improve regional mobility.

Salt Creek Highway/McMurtry Boulevard Corridor Study, July 2008

Prepared for the Casper MPO, this study examined existing and future transportation needs along Salt Creek Highway in Bar Nunn. Future planned development was taken into account. Conclusions applicable to this study include:

- Based on land use and traffic projections, an additional interchange with I-25 in Bar Nunn is needed. The Westwinds Road/Salt Creek Highway underpass is a feasible location.
- An interchange at I-25 and McMurry Boulevard could produce adverse social impacts on the adjacent residential area.



- Salt Creek Highway has safety issues and would need major upgrades and widening to accommodate forecasted growth.
- Westwinds Road would provide an arterial road connection between I-25 and Polaris Drive.

Bar Nunn Salt Creek Intersection & Bar Nunn Subarea Planning Traffic Study, January 2012

Prepared for the Casper MPO, this study assessed Salt Creek Highway in the Bar Nunn area, plus adjacent local roads, to determine what improvements could be done in the area to accommodate traffic growth.

Recommendations include:

- Based on land use and traffic projections, an additional interchange with I-25 in Bar Nunn is needed.
- An arterial roadway (Polaris Drive) is justified and needed on the west side of Bar Nunn.
- Westwinds Road would provide an arterial road connection between I-25 and Polaris Drive.
- An interchange at Westwinds Road would allow local truck traffic to minimize impacts to the Bar Nunn residential areas.

Bar Nunn I-25 Interchange Feasibility Study, March, 2013

Prepared for WYDOT, this study followed the FHWA PEL process and guidelines and assessed the applicability of a new interchange located somewhere along I-25 between Westwinds Road and McMurry Blvd.

The study included:

- A Purpose and Need statement was developed for the interchange.
- The FHWA Eight Policy worksheet was reviewed and completed for the new interchange. While there are issues that would need to be addressed in a future NEPA process, no major flaws were identified.
- The regional traffic forecasts that were used for this PEL.
- Public involvement was included.
- An interchange at Westwinds Road was identified as the preferred alternative.

1.6 OTHER TRANSPORTATION PROJECTS IN THE VICINITY

The proposed interchange at I-25/Westwinds Road is the only project proposed in the area that would have a significant effect on the Proposed Action. The location of this project is illustrated on Figure 7.



Polaris Dr./Westside Blvd. PEL Study

Other Area Transportation Projects

Figure 7



2.0 ALTERNATIVES

This chapter describes the process used to identify, evaluate, and screen alternatives for this study.

2.1 ALTERNATIVE DEVELOPMENT AND SCREENING PROCESS

2.1.1 Alternatives

The study team developed several alternatives to address the Purpose and Need presented in Chapter 1. The alternatives were categorized into alignments, cross sections and intersections along the corridor, as follows:

- Alignments that connect to logical end points and cross roads.
- Cross sections for 2 or 4-lane highway configurations, with auxiliary lanes at cross roads, as needed. Median treatments and accommodation of pedestrians and bicyclists were considered.
- Intersection types including signalized or unsignalized control.

2.1.2 Decision-Making Process

A Resource Group of state and federal agencies, the PWG, and the public participated in the alternatives development and screening process. The major functions of the groups as they relate to the process are summarized in Table 4.

Table 4 - Major Roles and Responsibilities

Stakeholder or Group	Roles and Responsibilities
Resource Group (state and federal agencies)	Provide necessary input based on regulatory responsibilities.
Project Working Group (PWG) Casper MPO, Natrona County, WYDOT, Town of Bar Nunn, FHWA, and consultant staff	Provide input and make recommendations. Execute PEL study process, perform technical analyses, provide input to evaluation process, conduct screening, and develop recommendations.
Public	Inform scoping, provide input, identify issues, and discuss solutions.

The consultant team led the collaborative and iterative process to receive input from the PWG. The Resource Group provided information during the scoping process and as needed throughout the process. The PWG representatives identified goals and values important to their respective communities or agencies. The study team provided technical information, for example traffic operations data, to the groups as the discussions proceeded. In this way, alternatives were developed and screened in coordination with the project groups.



The project Purpose and Need, goals, and alternatives were vetted with the public at open house meetings. Refer to Chapter 4 Agency Coordination and Public Involvement for further information regarding the engagement of agencies and the public.

2.1.3 Alternatives Development and Screening Process

The process used to develop and screen the range of reasonable alternatives is as follows:

- Develop a Purpose and Need statement (described in Chapter 1).
- Identify a set of project goals (described in Chapter 1).
- Develop project evaluation criteria based on the Purpose and Need, community values, and project goals (described in Section 2.1.4).
- Identify potentially feasible alternatives based on an assessment of the existing conditions in the study area, potential traffic growth, project Purpose and Need, and public and agency input.
- Conduct screening to eliminate those alternatives that could not meet the Purpose and Need or have fatal flaws (Level 1).
- Conduct a qualitative comparison screening (Level 2) of the remaining alternatives to identify those alternatives that best address the Purpose and Need, community values and project goals.
- Prioritize the remaining alternatives to aid future decisions about phasing and implementation (see Chapter 5 - Next Steps).

2.1.4 Evaluation Criteria

The Purpose and Need and goals defined in Chapter 1 shaped the evaluation criteria by which the alternatives were compared. The study team developed criteria based on the Purpose and Need and project goals in cooperation with resource agencies and the PWG. The screening criteria are:

- Provide an arterial connecting the Town of Bar Nunn with the City of Casper.
- Provide an alternative access to the Town of Bar Nunn.
- Improve regional mobility.
- Relative impact of the alternative on environmental resources which include land use and zoning, transportation and traffic (safety, traffic flow, multi-modal), visual and aesthetics, noise, hazardous materials, right-of-way, utilities, social conditions, economic conditions, air quality, biological resources, parks and recreation, historic and archaeological resources, water resources and floodplains and wetlands and other Waters of the US.



These criteria were applied, as appropriate, throughout the screening process, using the best information available at each level of screening. Not all criteria were used at each level of screening, and the study team concentrated on distinguishing criteria based on the level of detail needed to make decisions at each level. These distinguishing criteria are described in each level of screening in section 2.4.

2.2 No BUILD SCENARIO

The No Build Scenario includes reasonably foreseeable and programmed projects near the study area. The only project is the proposed I-25 interchange at Westwinds Road. Under the No Build Scenario, traffic will increase along Salt Creek Highway, access to parcels will be more difficult, and congestion and crashes will increase. These conditions will make it difficult to attract new businesses to the study area.

The No Build Scenario was used in the evaluation and screening process at Level 2 screening as a base scenario against which the alternatives were evaluated.

2.3 ALTERNATIVES CONSIDERED

2.3.1 Alignments

The following alternatives were considered.

- Construct a new arterial on an alignment east of I-25. The alignment would start at the 20/26 Bypass and connect to Westwinds Rd. at the new proposed interchange with I-25, but would be located on an alignment east of I-25.
- Widen/improve Salt Creek Highway. Reconstruct the road and make improvements to provide sufficient capacity, improve safety, and bring up to arterial road standards.
- Construct a new arterial on an alignment west of Salt Creek Highway and the Town of Bar Nunn. This alternative would generally parallel Salt Creek Highway in a location west of the Town of Bar Nunn and is further divided into segments and additional alignments. All alignments described are approximate and could move east or west slightly from the locations shown (except where constraints are noted). All alignments are proposed to be constructed to arterial road standards, with a 45 mph design speed and restricted access between cross road intersections.

The alignment alternatives fall into three corridor segments, as shown in Figure 8.





Segment 1 runs south from Westwinds Road to approximately the south Bar Nunn town line (Figure 9). Only one alignment was considered in Segment 1. It generally follows an existing dirt road along most of its length and has proposed connections to Westwinds Road, McMurry Blvd., and Sunset Blvd. Along approximately the middle one-third of its length, Segment 1 parallels the west side of the existing petroleum pipeline, maintaining a minimum 50-foot separation buffer from the approximate center line of pipe line to the outside of the alignment footprint.

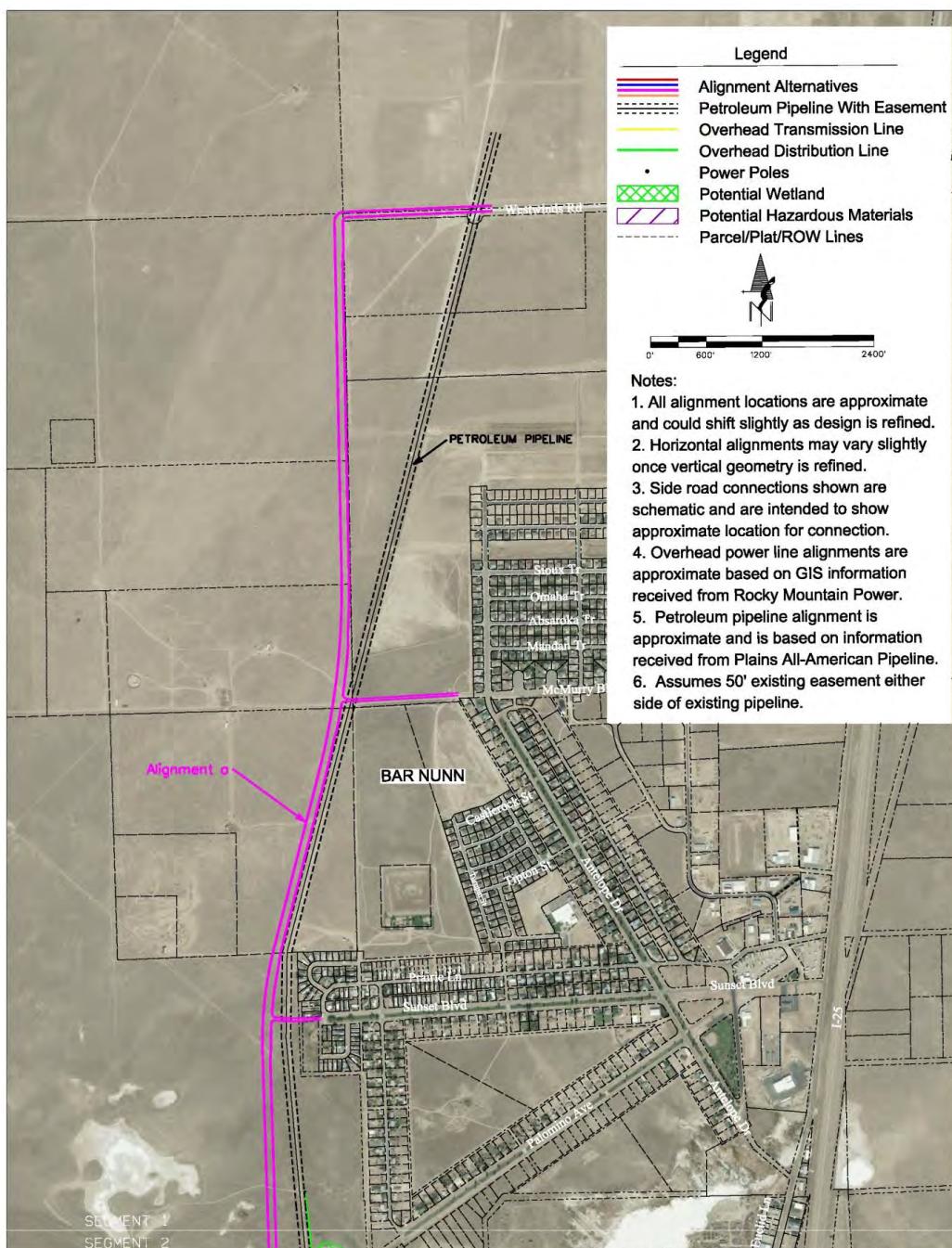
Segment 2 starts at the south Bar Nunn Town Line and runs south to the Hartrandt southern town line on the west side of Salt Creek Highway (just south of Kerzell Lane) (Figure 10). There are four alternatives in Segment 2. The northern end of all four starts west of the existing alkali wetlands.

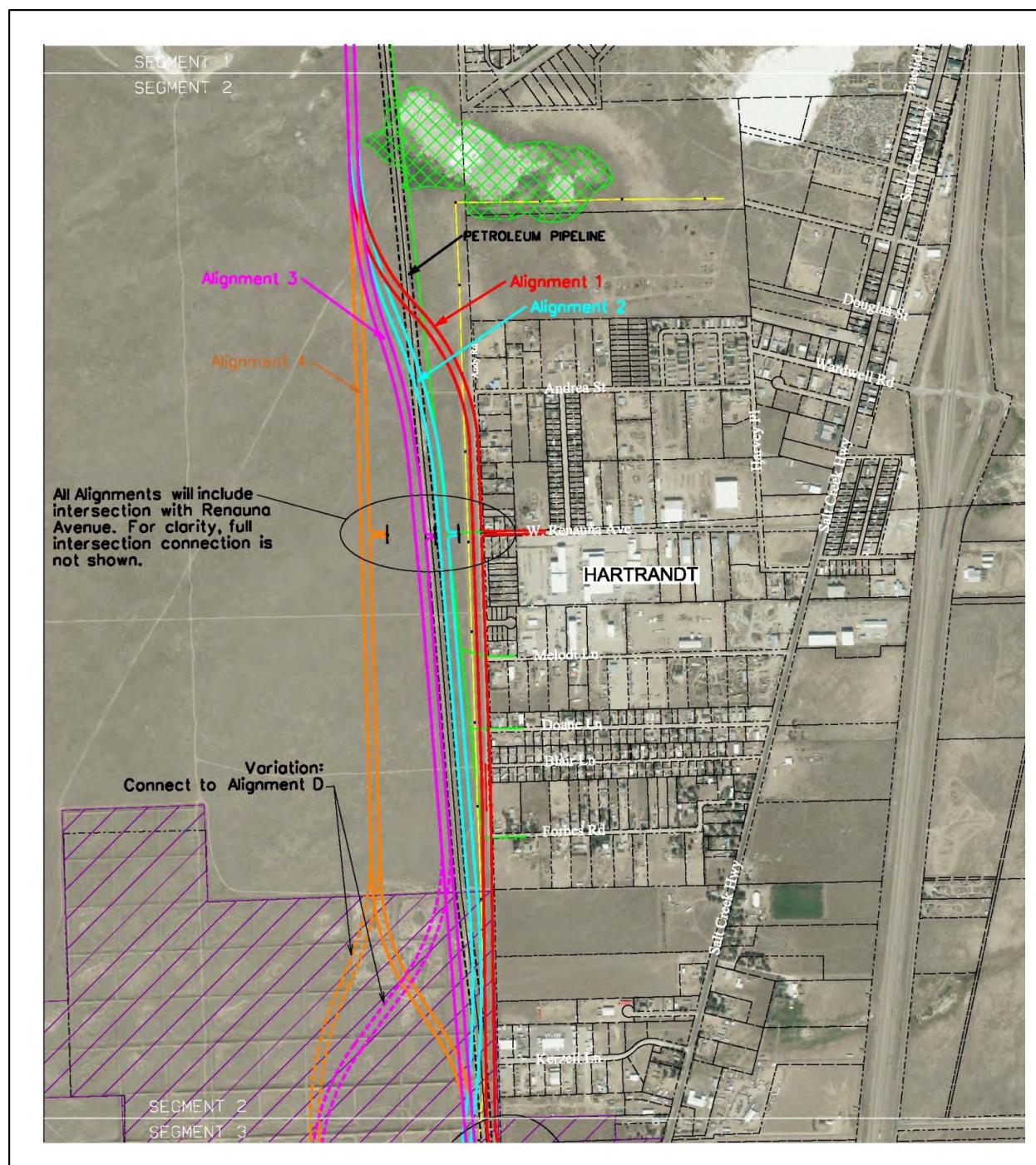
- Alignment 1 would replace existing Andy Road between Andrea Street and Forbes Road and then continue south on the same bearing.
- Alignment 2 would parallel the existing petroleum pipeline on the east side, while Alignment 3 would do the same on the west side. A minimum 50-foot buffer from the approximate center line of pipeline would be maintained under both alternatives.
- Alignment 4 would be located approximately 1,000 feet west of Andy Road. This location could vary but the alignment will be located in a way to maximize development potential on both the east and west sides of Polaris Drive.

Note that access to Polaris Drive in this segment would only be via Renauna Avenue under all four alternatives. It should also be noted that all four alignments would pass through an old petroleum tank farm to varying degrees at the southern end of Segment 2. This is discussed further in Chapter 3.

Segment 3 alternatives start at the southern Hartrandt line and continue south to connect back to Salt Creek Highway (Figure 11).

- Alignment A connects to the western end of existing Sundown Place, which currently intersects Salt Creek Highway.
- Alignment B would make Polaris Drive the major through movement and would return to the Salt Creek Highway alignment approximately 350 feet north of Revenue Blvd. Salt Creek Highway would be realigned to 'T' into Polaris drive approximately 650' feet north of the existing Skyview Drive/ Salt Creek Highway intersection.

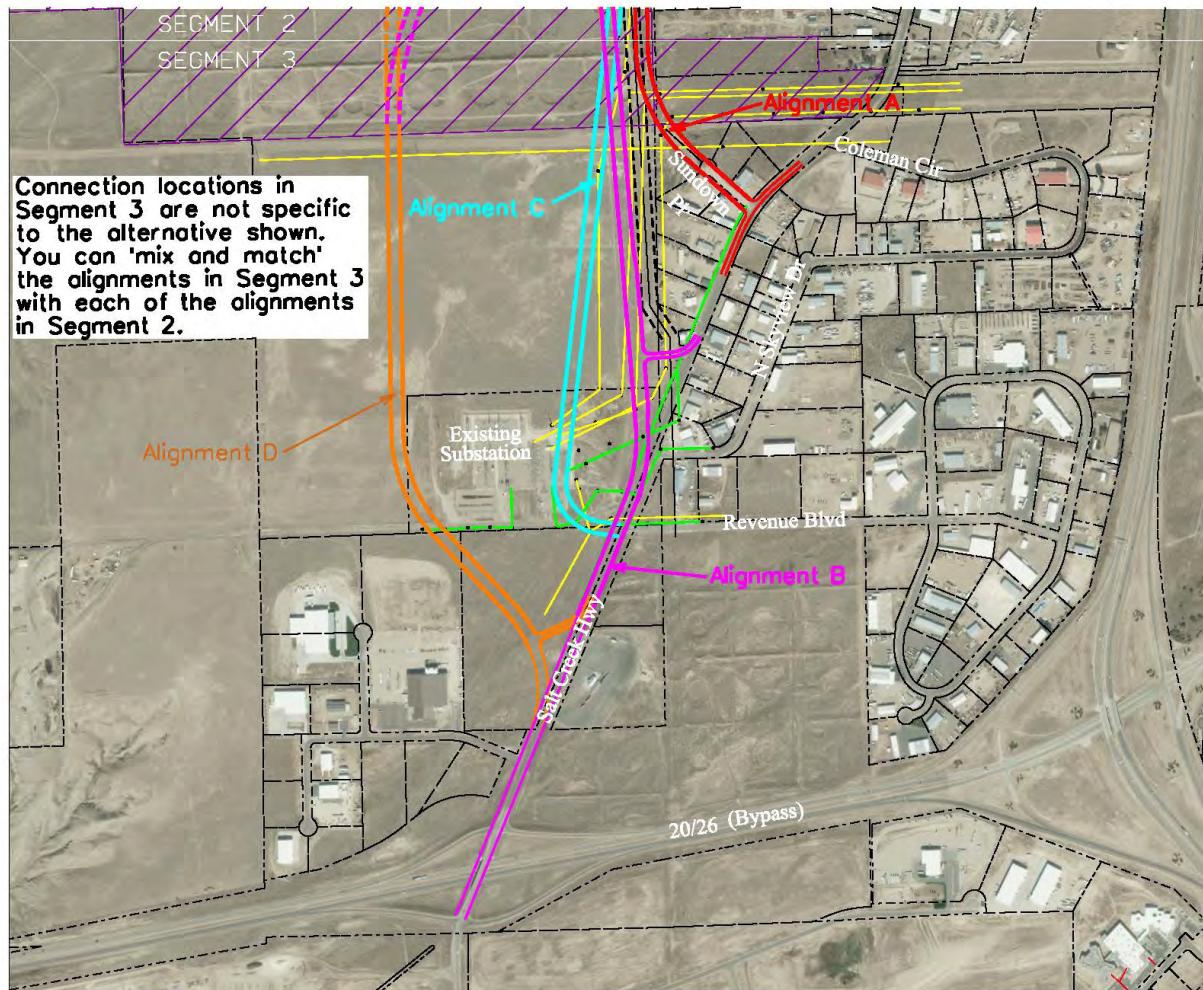




Polaris Dr./Westside Blvd. PEL Study

Segment 2 Alternatives

Figure 10





- Alignment C would intersect Salt Creek Highway opposite Revenue Boulevard.
- Alignment D would be located west of the existing electrical substation. The alignment would make Polaris Drive the major through movement and would return to the Salt Creek Highway alignment at Bypass Blvd. Salt Creek Highway would be realigned to 'T' into Polaris drive approximately 800' north of the existing Bypass Blvd/Salt Creek Highway intersection.

All four alignments in Segment 2 could connect to any of the four alignments in Segment 3. Variations to the southern ends of the Segment 2 alignments would shift to the west to connect to Alignment D in Segment 3.

2.3.2 Cross Sections

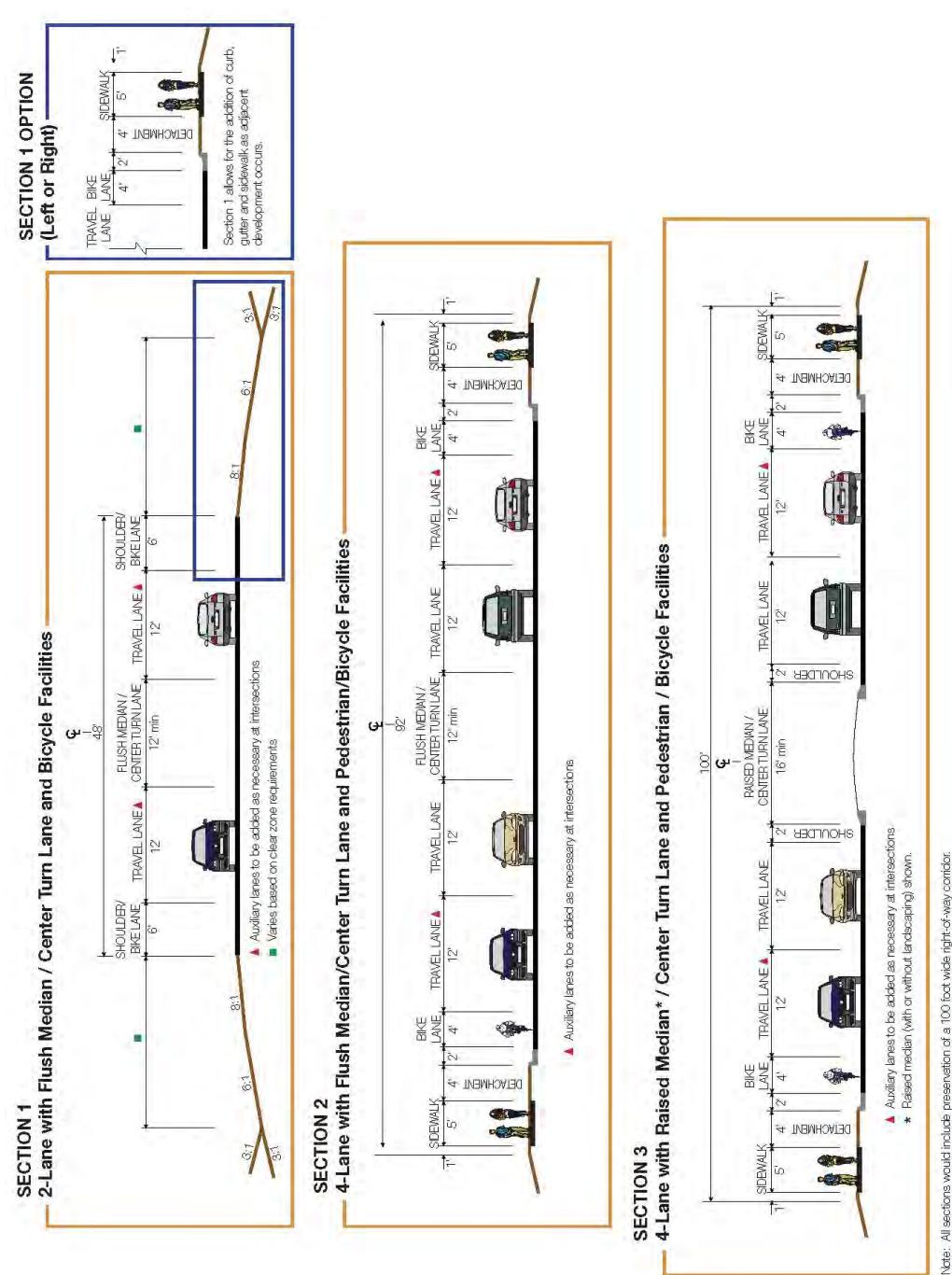
The cross section alternatives for Polaris Drive were developed in consultation with the PWG. They are illustrated in Figure 12. Any of the cross sections could be applied to any of the alignment alternatives.

Cross Section 1 is a two-lane arterial cross section. It includes two 12-foot travel lanes (one per direction) with a 12-foot flush median that becomes a left turn lane at intersections, and 6-foot shoulders/bike lanes. Surface drainage into roadside ditches is assumed. Though not included as the Cross Section 1 'base case', this section allows for the addition of curb, gutter and sidewalk as adjacent development occurs.

Cross Section 2 has two 12-foot travel lanes per direction with 12-foot flush median that becomes a left turn lanes at intersections. It also includes 4-foot bikes lanes, 2-foot curb and gutter, 4-foot detachment and 5-foot sidewalks. All surface drainage would be collected in an enclosed drainage system.

Cross Section 3 is similar to Section 2, but instead of a flush median, it includes a 16-foot minimum width raised median/left turn lane, including curb and gutter, with 2-foot shoulders on either side. The raised median would provide landscaping or xeriscaping opportunities.

All cross sections would include auxiliary lanes, as necessary, at intersections. Additionally, all sections would include preservation of a 100 foot wide right-of-way corridor.





2.3.3 Intersection Configuration and Control

For all alignments, Westwinds Road, McMurry Blvd., Sunset Blvd. and Renauna Avenue would all be extended to intersect Polaris Drive. All the proposed Polaris Drive alignments either intersect with Salt Creek Highway or become the through movement with Salt Creek Highway. In Segment 3, Alignments B and D, Polaris Drive would become the major through movement and Salt Creek Highway would be realigned to "T" into Polaris Drive.

All of the intersections with Polaris Drive would be signalized, except Westwinds Road. It is assumed that Westwinds Road would terminate at Polaris Drive and would not continue to the west. This location could either be a stop controlled intersection or a tight curve (low design speed) connecting Polaris Drive and Westwinds Road.

Auxiliary lanes were also evaluated for each alternative. At McMurry Blvd. and Sunset Blvd., separate southbound and westbound left turn lanes and a northbound right turn lane would be needed. Because all alignments would direct additional traffic onto Salt Creek Highway at a location south of Revenue Blvd, an additional southbound through lane would be needed south from the Salt Creek Highway intersection through the Bypass interchange. A southbound left turn lane and northbound right turn lane would be required at the Polaris/Salt Creek intersection. The additional southbound through lane would need to be continued to just past the eastbound ramps intersection and then taper back down to one lane. The bridge over the Bypass would need to be widened to accommodate the additional southbound through lane and also to accommodate a second southbound left turn lane. With Alternatives B and D, Salt Creek Highway would be re-aligned to 'T' in with Polaris drive and would require two approach lanes, signed as left turn only and shared left/right.

2.3.4 Estimates of Probable Construction Costs

Planning-level estimates of probable construction costs were developed. Since there are many combinations of alignments and cross sections, a range of costs was developed. All estimates assume Cross Section 1 in combination with the recommended Alignments (Alignment a, 3 and B and a, 4 and D). The construction cost of the range of alignment alternatives for Polaris Drive is estimated to be between **\$16.7 and \$18.0 million**. The portion of construction costs within Bar Nunn would be just under \$8 million. The construction costs include construction bid items, construction engineering and contingency. Also, improvements between the Polaris Drive tie in with Salt Creek Highway and 20/26 are not included in these construction costs. Other program costs such as NEPA document preparation, preliminary engineering, final design engineering, right-of-way plans and acquisition would be in addition to the construction costs



described above. More accurate estimates of probable costs will be developed during the project design phase.

2.4 ALTERNATIVES SCREENED

2.4.1 Level 1 Screening

During Level 1 screening, the study team evaluated whether alignment and cross section alternatives addressed Purpose and Need elements or had fatal flaws.

The Level 1 criteria (based on the Purpose and Need) are as follows:

- Provide an arterial connection between the Town of Bar Nunn and the City of Casper.
- Provide an alternative access to the Town of Bar Nunn.
- Improve regional mobility.

The fatal flaw criteria are:

- Irreconcilable environmental impacts
- Irreconcilable community impacts
- Inability to be implemented

Below is a summary of the Level 1 screening:

- Construct a new arterial on an alignment east of I-25: screened out - does not provide an arterial connection or an alternate access to the Town of Bar Nunn.
- Widen/Improve Salt Creek Highway: screened out - does not provide an arterial connection or an alternate access to the Town of Bar Nunn.
- Construct a new arterial on an alignment west of Salt Creek Highway and the Town of Bar Nunn: carry forward to Level 2 screening.

2.4.2 Level 2 Screening

During Level 2 screening, the alternatives retained after Level 1 were refined and evaluated in greater detail. Level 2 alternatives were categorized into alignments, cross sections, and intersections. The evaluation criteria were applied, as appropriate, throughout the Level 2 screening process. Not all criteria were used for all alignment, cross section and intersection alternatives. Criteria were evaluated if they revealed differences between the alternatives. The alternatives were also evaluated against the No Build Scenario, which is the base scenario for comparison.

The Level 2 criteria evaluates the relative impact of the alternative on environmental resources including land use and zoning, transportation and traffic (safety, traffic flow, multi-modal), visual and aesthetics, noise, hazardous materials, right-of-way, utilities, social conditions,



economic conditions, air quality, biological resources, parks and recreation, historic and archaeological resources, water resources and floodplains and wetlands and other Waters of the US. Additional information on these resources can be found in Chapter 3 *Affected Environment and Environmental Consequences*.

The study team worked closely with the PWG to establish consensus. Alternatives were also presented to the public during Level 2 screening to solicit feedback.

2.4.2.1 Alignment Alternatives

The alignment alternatives in Segments 1, 2, and 3 were quantitatively evaluated based on resources that could be impacted (either positively or negatively) by one or more of the alignments.

Segment 1

The single alignment alternative evaluated in Segment 1 would provide access to undeveloped land via a new intersection with Westwinds Road, opening up new development opportunities. Segment 1, in combination with Segments 2 and 3, will help reduce the volume of traffic on Salt Creek Highway, easing access to parcels along Salt Creek Highway. The reduction in volume on Salt Creek Highway may also improve safety on Salt Creek Highway by reducing the potential for accidents.

This segment would require right-of-way acquisition of currently vacant land but would not impact any structures or require any relocation. There would be some negative visual and noise impacts to residential areas to the east, but because of the large separation between the alignment and residential area (in most areas), the impacts would be minor. Changes in land use, property values, neighborhood identification/size would result in both beneficial and adverse impacts.

There could be some impacts to the petroleum pipe line in this segment, but as the design is refined, and more is known about the pipeline, the alignment could be modified to reduce utility and hazardous materials impacts.



Table 5 – Segment 1 Alignment Alternatives Evaluation

Resource	No Build	Alignment a
Transportation and Traffic		
Access	Red	Green
Safety	Red	
Traffic Flow	Red	Green
Visual		Yellow
Noise	Yellow	
Hazardous Materials		Yellow
Right-of-Way		Yellow
Utilities		Yellow
Social Conditions		Yellow
Economic Conditions	Red	Light Green

Yellow = some negative impact or an impact fairly easily mitigated.

Red = a substantial negative impact.

White = neutral or no significant impact.

Light green = some potential benefit.

Dark green = a substantial potential benefit

Segment 2

Segment 2 Alignments 2, 3 and 4 would have similar impacts and benefits as the Segment 1 alignment. All would improve traffic flow and access, and they could improve safety by reducing accidents on Salt Creek Highway.

Alignment 1 also improves traffic flow but has a substantial negative impact on access. Because Alignment 1 would replace Andy Road between Andrea Street and Forbes Road, circulation around the residential area would be negatively impacted. Also, some parcels only have access off of Andy Road, so a new additional circulation road or individual accesses would be required to maintain access for each of these properties.

All alignments in this segment would improve economic conditions by providing access to new potential development parcels, although Alignment 4 would have a greater benefit because its location would allow for larger developments on both the east and west sides of Polaris Drive. Alignments 2, 3 and 4 would have some negative impacts to visual, noise and social conditions. These impacts would be minor because of the separation between the alignment and residential area. Because Alignment 1 replaces Andy Road, visual and noise impacts to the adjacent residential area would be much greater, as well as increased negative impact to social conditions.



Alignment alternatives 2, 3 and 4 would require acquisition of currently vacant land but would not impact any structures or require any relocation. Alignment 1 would require acquisition of less vacant land than 2, 3 and 4 but would require additional partial or full acquisition from residential properties if an alternate circulation road is required or if an alternate access can't be constructed.

All four alignments would pass through an old petroleum tank farm, so potential contamination issues would need to be investigated during the next phase of the NEPA process. All alignments may also impact existing high-tension electrical wires and petroleum pipe line, although Alternatives 1 and 2 may have a higher impact because of their proximity to the utilities.

Finally, the northern portion of all alignments in this segment would pass through an area of alkali wetlands. More detailed wetland delineation will be required as part of the next phase of NEPA in order to avoid the wetland with the preferred alignment.

Table 6 – Segment 2 Alignment Alternatives Evaluation

Resource	No Build	Alignment 1	Alignment 2	Alignment 3	Alignment 4
Transportation and Traffic					
Access	Red	Red			
Safety	Red	Light Green			
Traffic Flow	Red	Green			
Visual		Red	Yellow		Yellow
Noise	Yellow	Red	Yellow		Yellow
Hazardous Materials		Yellow			Yellow
Right-of-Way		Red	Yellow		Yellow
Utilities		Red	Red	Yellow	
Social Conditions		Red	Yellow	Yellow	
Economic Conditions	Red	Light Green	Light Green	Light Green	Dark Green
Wetlands		Yellow	Yellow	Yellow	Yellow

Yellow = some negative impact or an impact that can be fairly easily mitigated.

Red = a substantial negative impact.

White = neutral or no significant impact.

Light green = some potential benefit.

Dark green = a substantial potential benefit

Segment 3

All four alignment alternatives in Segment 3 would provide access, economic, and traffic flow benefits. Alignment B and D would provide additional traffic flow benefits by making Polaris Drive the major through movement, and Salt Creek



Highway a “T” intersection into Polaris Drive. Alignment C would result in a higher potential for accidents at the intersection with Salt Creek Highway since there will be a higher volume of vehicles making left and right turns. Crash potential along Salt Creek Highway would be higher for Alignment A because the intersection of Sundown Place with Salt Creek Highway is located on vertical and horizontal curves with limited sight distances. This section of Salt Creek Highway would require additional alignment and safety improvements to reduce the sight distance hazard.

All alignment alternatives in this segment would require acquisition of some currently vacant land. Alignments A, B and D would not impact any structures or require any relocation. Alignment C would require a substantial acquisition from the existing substation property and would require extensive reconstruction of existing substation infrastructure.

The north end of all four alignments would pass through an old petroleum tank farm so potential contamination issues would need to be investigated during the next phase of the NEPA process. All alignments may also impact existing high-tension electrical wires and petroleum pipe line, although Alternatives A, B and C may have a higher impact because of their proximity to the utilities. Alignment C would have significant impacts to a dense group of high-tension electrical wires at the existing substation.

Table 7 – Segment 3 Alignment Alternatives Evaluation

Resource	No Build	Alignment A	Alignment B	Alignment C	Alignment D
Transportation and Traffic					
Access	Red	Green	Green	Green	Green
Safety	Red	Red	Light Green	Yellow	Light Green
Traffic Flow	Red	Light Green	Green	Light Green	Green
Hazardous Materials		Yellow	Yellow	Yellow	Yellow
Right-of-Way		Yellow	Yellow	Red	Yellow
Utilities		Yellow	Yellow	Red	White
Economic Conditions	Red	Green	Green	Green	Green

Yellow = some negative impact or an impact that can be fairly easily mitigated.

Red = a substantial negative impact.

White = neutral or no significant impact.

Light green = some potential benefit.

Dark green = a substantial potential benefit



2.4.2.2 *Cross Section Alternatives*

Each of the three Cross Sections evaluated accommodate existing and projected 2035 travel demand. In fact, 4 through lanes (as included in Cross Sections 2 and 3), are beyond what is necessary to handle the projected 2035 travel demand.

Cross Sections 2 and 3 accommodate multi-modal transportation better than Cross Section 1 since pedestrian facilities on Cross Section 1 will not be constructed until development of adjacent land occurs.

Given likely funding constraints and 2035 traffic forecasts, Cross Section 1, the two-lane arterial cross section, is the recommended cross section. Though not included as the Cross Section 1 ‘base case’, this section allows for the addition of curb, gutter and sidewalk as adjacent development occurs. Cross Section 1 will also include the acquisition and preservation of 100 feet of right-of-way in order to accommodate future traffic volumes beyond the 2035 study year.

Polaris Drive would ultimately become the gateway arterial for this area. As development occurs and traffic increases, two through lanes per direction would be needed, although projections indicate this would occur after the 30-year planning horizon of this study. At that time, either Cross Section 2 or Cross Section 3 could be constructed.

2.4.2.3 *Intersection Alternatives*

The intersection improvements described in Section 0 would be needed for all alternatives in Segments 1, 2, and 3. Traffic signals are assumed for all intersections along Polaris Drive (except at Westwinds Road), as capacity analysis shows that “stop” sign control would be insufficient. Other intersection control options could be explored in greater in future environmental impact documents.

2.5 **Recommendation**

After Level 2 screening, the following alternatives were recommended as the Proposed Action to be studied further during the full NEPA process:

Alignments

- Segment 1 – Alignment a
- Segment 2 – Alignments 3 and 4
- Segment 3 – Alignments B and D



Cross Sections

Cross Section 1 with right-of-way preservation to accommodate Cross Section 3. Though not included in the recommended cross section, Cross Section 1 allows for the addition of curb, gutter and sidewalk as adjacent development occurs.

Intersections

All identified intersection improvements for all alignments.



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The National Environmental Policy Act (NEPA) requires that for any action undertaken by a federal agency (i.e., the Federal Highway Administration), all environmental effects need to be identified and analyzed to assist the agency in the decision-making process. This chapter describes the existing environmental conditions within the study area and evaluates impacts to those resources potentially affected through implementation of the Proposed Action.

The boundaries of the study area are defined based on an evaluation of the environment surrounding the study area for resources that could be affected by the Proposed Action. The study area extends approximately one-half mile surrounding the location of the Proposed Action. For some resources (e.g., transportation and traffic), a larger area was considered to provide a complete analysis of potential impacts.

For this report, a number of environmental resources were evaluated and are discussed in this chapter. In some cases, resources simply do not exist in the study area or are not likely to be directly or indirectly impacted by the Proposed Action. Preliminary studies and public and agency scoping also concluded that very few resources were considered potentially affected by the Proposed Action. However, in accordance to NEPA requirements, all resources will need to be evaluated by qualified biologists and planners to verify their presence or absence, and to assess potential impacts during subsequent NEPA documentation.

For this PEL report, resources considered of value in the identification of alternatives were evaluated.

3.1 LAND USE AND ZONING

Construction and operation of a roadway can affect ongoing uses of adjacent land and future plans for changes in land use. A variety of land uses occur within the study area that could be affected by development of a new roadway. Traveling south to north, the proposed alignments would skirt the western boundary of Hartrandt and Bar Nunn. Hartrandt is a Census-Designated Place with a 2010 population of 693. The Town of Bar Nunn has a 2010 population of 2,213 (U.S. Census Bureau 2010).

3.1.1 West of Proposed Alignments

Land use and zoning west of the proposed alignments is consistent throughout their length. Land cover maps generated by the U.S. Environmental Protection Agency's (EPA) GIS database show land west of the alignments as shrub/scrub, with some grasslands; no development or other use is indicated (EPA 2006). This use is confirmed by Natrona County, which has zoned the land west of the alignments as urban agricultural (Natrona Regional Geospatial Cooperative n.d.).



3.1.2 East of Proposed Alignments

Land use and zoning east of the proposed alignments varies. The proposed locations for the intersection with Salt Creek Highway at the southern end of the study area are in lands zoned by Natrona County as light industrial (Natrona Regional Geospatial Cooperative n.d.). Aerial photography confirms the industrial use.

Traveling north, the proposed alignments would pass the western boundary of Hartrandt. Two of the proposed alignments would roughly parallel Andy Road, and one would replace Andy Road near the southern end of the study area (Segment 2). Adjacent lands on the east side of Andy Road are primarily zoned and used as light industrial, with the following exceptions (Natrona Regional Geospatial Cooperative n.d.):

- Land between the southern terminus of Andy Road and Doane Lane is used and zoned as urban mixed residential.
- Land between Doane Lane and Andrea Street (at the northern terminus of Andy Road) is used and zoned as both mobile home and suburban residential. These uses are primarily adjacent to Andy Road with light industrial use farther east.

Land on both sides of the proposed alignment between Andrea Street and Westwinds Road is zoned as urban agricultural. As the alignment approaches Bar Nunn, it would pass within 600 feet of the western terminus of Bar Nunn's Sunset Blvd. This area is the westernmost extension of the Bar Nunn development and is currently used and zoned as a mobile home subdivision (Town of Bar Nunn 2008).

Between Sunset Blvd and Westwinds Road, the alignment would parallel Bar Nunn's western municipal boundary. No development currently exists in the immediate vicinity of the proposed roadway. However, in this stretch of Segment 1, the town has zoned lands on the east side of the road for various residential uses, ranging from mobile home subdivision to one- and one-to-two unit residential (Town of Bar Nunn 2008).

3.1.3 Neighborhood Impacts

A review of the zoning and land cover maps indicates that both beneficial and adverse impacts would result where the alignment would be immediately adjacent to residences. Adverse impacts would be related to increased roadway use, such as increased noise. Conversely, these residents would also experience improved access to Casper and other destinations. Where the alignment would be near residences but not immediately adjacent to them, similar adverse impacts would occur to a slightly lesser degree, without the benefits of improved access.



Mitigation measures should be evaluated as part of the NEPA process for each particular business or residence affected. Because land use planning is under the purview of local agencies, ongoing coordination with local planners and other officials is an important part of the process and will be an essential part of future project development, as well as ongoing conversations with property owners, businesses, and residences potentially affected .

3.1.4 Secondary Land Use Impacts/Induced Growth

The Town of Bar Nunn's Community Development Plan (2008) notes that the town continues to experience substantial growth in population and new housing, and is the fastest growing municipality in Natrona County. The Town is considering developing land for industrial and commercial purposes. A land use and annexation boundary plan has recently been developed, which includes an additional six sections of undeveloped land to the north and two sections to the northwest of Bar Nunn. The annexation study projected an additional 500 dwelling units added to the area over the next 20 years (Town of Bar Nunn 2008). For these reasons, induced growth that could result from the Proposed Action would be compatible with the Town's plans.

In addition, there will be induced growth on the west side of the corridor, on land which Natrona County has zoned Urban Agricultural. There do not appear to be any plans for this area to be annexed to the Town of Bar Nunn or to extend utilities to this area. The Casper MPO and Town of Bar Nunn should work closely with Natrona County to assure that the area is planned for possible induced growth. Refer to the Natrona County Land Use Plan and the Bar Nunn Community Development Plan for current land use planning.

By the time NEPA analysis begins, there has already been substantial investment in planning for a project, and addressing public concerns about land use and making project revisions or redesigns is more difficult. Therefore, discussions with local planning agencies and communities should occur prior to the NEPA process to address land use impacts. Building partnerships with stakeholders can help form a regional consensus on managing growth in the study area and its effects. During this process, local planning agencies could consider implementing zoning changes or growth management regulations, such as access management strategies (including developing an access management program and/or plan), purchasing access rights, incorporating context-sensitive design, acquiring land, implementing conservation easements, or providing incentives for infill development.



3.2 TRANSPORTATION AND TRAFFIC

Synchro was used to analyze the network under the 2035 Build Scenarios. The base case Polaris Drive analysis assumed a two-lane cross section with no auxiliary lanes and “stop” sign control on the side streets. Table 8 shows the resulting Levels of Service and needed improvements if Polaris Drive were constructed. If Polaris Drive is built, fewer No Build improvements would be needed to handle traffic growth than shown in Table 3. Improvements still required include those shown in Table 3 minus the improvements listed in column 2 of Table 8, which are the No Build improvements no longer needed if Polaris Drive were built. This demonstrates the need for Polaris Drive in the short-term. However, constructing Polaris Drive would trigger the need for additional improvements around the 20/26 (Bypass) interchange beyond what is needed to handle the No Build traffic. This is because Polaris Drive would attract additional traffic from I-25 that would now travel through this interchange.

Under the Build Scenario, extensive improvements that were described in the No Build scenario would still be needed at the new Westwinds Road/I-25 interchange, including realignment of the Salt Creek Highway intersection further to the west. However, no additional improvements would be needed as a result of the construction of Polaris Drive. In fact, one less improvement would be needed (eastbound right turn lane on Westwinds Road at Salt Creek Drive).

Along Salt Creek Highway, from Westwinds Road to Revenue Blvd., no additional improvements would be needed as a result of the construction of Polaris Drive. Improvements would be needed at the 20/26 Bypass interchange when Polaris Drive is constructed, including signal and turn lanes. An additional southbound through lane at both interchange intersections, plus a second southbound left turn lane (first would be needed in No Build) at the Bypass Eastbound Ramps intersection, with the construction of Polaris Drive. This is needed due to the attraction of some people from I-25, resulting in higher traffic volumes through this Bypass interchange than under the No Build Scenario.

Until full build-out of Bar Nunn (assumed in the 2035 scenarios), only a two lane Polaris Drive cross section, with auxiliary lanes at intersections, would be needed. A four-lane section is not envisioned to be needed. However, a second southbound through lane would be needed approaching the Salt Creek Highway intersection, running south through the Bypass interchange intersections.

Capacity analysis indicated that traffic signals would be needed at all four Polaris Drive intersections, with turn lanes as specified in the Level of Service table.



Table 8 – 2035 Build Levels of Service (PM Peak Hour, with Polaris Drive)

Intersection	No-Build Improvements NOT NEEDED Under Build Scenario	Build Scenario Improvements Needed With Polaris Drive Beyond the No-Build Improvements	Build Level of Service With Build and Remaining No-Build Improvements
Westwind/I-25 NB		-	B
Westwind/I-25 SB		-	B
Westwind/Salt Creek	EB Right Turn Lane	-	B
Salt Creek/McMurry	NB Left Turn Lane, SB Right Turn Lane, 2nd SB Thru Lane	-	A
Salt Creek/Prairie		-	C
Salt Creek/Sunset		-	C
Salt Creek/Antelope	2nd SB Thru Lane, SB Right Turn Lane	-	C
Salt Creek/Howard	2nd SB Left Turn Lane, NB Right Turn Lane	-	B
Wardwell/I-25 SB		-	b
Wardwell/I-25 NB	Traffic Signal	-	e
Salt Creek/Ranauna	NB Left Turn Lane	-	a
Salt Creek/Revenue	Traffic Signal	-	b
Salt Creek/20/26 WB	SB Right Turn Lane	2nd SB Thru Lane	B
Salt Creek/20/26 EB		2nd SB Left Turn Lane, 2nd SB Thru Lane	C
Salt Creek/Polaris		Traffic Signal, SB Left Turn Lane, 2nd SB Thru Lane, NB Right Turn Lane, WB Left Turn Lane and Shared Left/Right Lane	B
Polaris/Renauna		Traffic Signal, SB Left Turn Lane	A
Polaris/Sunset		Traffic Signal, NB Right Turn Lane,	A
Polaris/McMurry		Traffic Signal, NB Right Turn Lane, WB Left Turn Lane, SB Left Turn	B

The improvements to the Bypass interchange, beyond what was discussed in Table 3 to handle background traffic growth, would be needed when approximately 40% of the traffic growth occurs and Polaris Drive is constructed. If this is prorated along the 30-year planning horizon, assuming a constant growth rate, the improvements would be needed in 2025.



3.3 VISUAL AND AESTHETICS

A new roadway and interchanges would result in visual impacts in the study area by introducing a new transportation facility into the landscape. A preliminary review of study area photographs indicates that existing visual quality is low both on the undeveloped western side of the proposed alignments and on the eastern, developed side. As described under Section 3.1 Land Use and Zoning, land cover west of the proposed alignments is undeveloped shrub/scrub and grasslands. Project photographs show that few topographic features provide visual interest on the west side, although the view to the west provides an unbroken expanse of grasslands toward gently rolling hills on the horizon. Existing overhead utility lines along the proposed alignment are a human-made intrusion into the landscape, detracting from visual intactness. Within Hartrandt, scattered debris (such as automobile tires) and a variety building types and heights indicate a lack of intactness and unity, as defined by FHWA's *Visual Impact Assessment for Highway Projects* (1979).

FHWA guidance for assessing visual impacts includes an evaluation of impacts as seen both of the road and from the road (FHWA 1979). Adverse impacts may occur for viewers of the new road, particularly residents adjacent to Andy Road and in Bar Nunn that are in proximity to the proposed alignment. Adverse impacts may also occur at the proposed roadway intersection at the south end of the corridor, although to a lesser degree because of the primarily industrial nature of the area. Beneficial impacts for viewers from the road may occur, particularly regarding views to the west, where undeveloped agricultural land currently exists, and to the south toward Casper Mountain.

As part of the NEPA process, a visual impact assessment would be conducted in accordance with FHWA's *Visual Impact Assessment for Highway Projects*. This assessment would include a description of the existing visual quality, important visual resource issues, viewer characteristics, and the visual environment. Based on these elements, key observation points would be determined that represent important views. If necessary, photo simulations would be developed to assist in determining impacts to visual quality and identifying appropriate mitigation measures. Relevant mitigation measures could include design options for lighting, guard rail, walls, and landscaping.

3.4 NOISE

Highway traffic noise is a major contributor to overall transportation noise (FHWA 2011), and noise impacts are expected as a result of construction and use of a proposed roadway. A traffic noise impact occurs when traffic noise levels approach or exceed established noise abatement criteria (NAC), or the projected traffic noise levels substantially exceed existing noise levels, which is typically an increase of 10 or 15 decibels (dBA). Noise abatement criteria represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities (FHWA 2011).



Based on FHWA's NAC categories, land uses and human activities on the west side of the roadway would fall within Category D, which represents undeveloped land. The areas of undeveloped land on the east side of the proposed alignment would fall within Category D as well. Category D lands have no assigned NAC threshold. Remaining areas on the east side of the alignment would fall within Category B, which includes residences, and Category C, which includes industrial uses. The NAC thresholds for Category B are lower than those for Category C, reflecting their different types of use (i.e., residential vs. industrial).

Noise impacts are expected to primarily affect the Hartrandt residents in proximity to Andy Road and residents of the mobile home area at the western edge of Bar Nunn. During the NEPA process, existing and predicted future noise levels should be identified to determine the level of impact expected, followed by an assessment of noise impacts and the potential for noise abatement. Noise abatement must be considered if federal funds will be used and if a traffic noise impact is expected to occur on a new or expanded highway (FHWA 2011).

If noise abatement measures are being considered, every reasonable effort would be made to obtain substantial noise reductions, defined by state highway agencies to typically range from 5 to 10 dBA (FHWA 2011). Noise abatement measures, such as noise barriers, may be appropriate near residential areas. This option may be feasible at the residential area within Bar Nunn that would be in proximity to the proposed roadway. Noise barriers may not be feasible along Andy Road because roadway openings must be preserved for access purposes. Other possible noise abatement measures include implementing traffic management measures, creating buffer zones, planting vegetation, installing noise insulation in buildings, and relocating the highway (FHWA 2011). The specific type of measures implemented, if any, would be determined based on a detailed noise study conducted during the NEPA process, as defined under *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. In addition, noise-compatible land use planning could be undertaken during the NEPA process. This type of planning encourages the location of less noise-sensitive land uses near highways, promotes the use of open space separating roads from developments, and suggests special construction techniques that minimize the impact of noise from highway traffic (FHWA 2011).

During construction, a “common-sense approach” to controlling noise impacts of construction equipment and activities would also be considered. Although not required, the FHWA Roadway Construction Noise Model could be used to predict construction noise during the project development and construction phases, if needed (FHWA 2011). In addition, Best Management Practices (BMP) could be incorporated to minimize the effect of construction on local residents and sensitive noise receptors.



3.5 HAZARDOUS MATERIALS

Roadway construction activities have the potential to encounter hazardous materials or contaminated sites that may be located in the construction right-of-way. Those sites may affect the project due to recognized environmental conditions or other hazardous materials concerns. Given the agricultural and industrial nature of land uses in the study area, it is possible that environmental contamination from hazardous materials may have occurred. A preliminary search of EPA data indicates that several Resource Conservation and Recovery Act sites occur in the study area, but would not be affected by the Proposed Action. Most of these sites are located near the southern intersection with Salt Creek Highway (EPA 2013b). The sites are on the south side of the highway and are not expected to be affected by construction or operation of the new roadway. A water discharger exists at the western end of Kerzell Lane in proximity to the proposed alignment (EPA 2013b), posing potential impacts that should be further reviewed during the NEPA process.

An area known as the Salt Creek Oilfield region spurred Casper's growth and Wyoming's energy industry in the 1920s. This region roughly follows present-day I-25 from Casper north to the Midwest, and includes the study area. Several oil "tank farms" were constructed to hold oil for shipping during that time (WY SHPO n.d.1,2). One of these tank farms existed in Segment 1 near Salt Creek Highway on land through which the proposed alignment would travel. According to Wyoming Department of Environmental Quality personnel, most of these tanks held crude oil, but some refinery fuel or other intermediate/product tanks also could have existed at this tank farm. Most or all of the tanks held between 60,000 to 80,000 billion barrels. It is believed that use of this tank farm was discontinued between 1930 and 1950. It was not included in a RCRA Corrective Action (pers. comm. R. Breuer 2013) and was not indicated in the EPA GIS data search (EPA 2013).

During the NEPA process, a hazardous materials assessment, such as a Modified Phase I Environmental Site Assessment, would typically be needed. During the final planning and design process, this information can be used to identify avoidance options, when possible, and to assist with the development of specific contaminated soils or groundwater material management or mitigation measures to protect worker health and safety. Properties targeted for construction should undergo further site assessments and/or preliminary site investigations as part of any right-of-way acquisition process, and may require remediation prior to acquisition or development.

3.6 RIGHT-OF-WAY

Establishment of a new roadway requires purchase and use of land that is owned by public entities or private individuals. Federal relocation regulations provide for uniform and equitable treatment of persons displaced from their homes, businesses, farms, or other properties by federal and federally funded programs or projects, and they establish uniform and equitable land acquisition



policies. According to Natrona County GIS maps, land through which much of the proposed roadway would travel is privately owned (Natrona County 2013). The proposed alternatives are expected to impact local commercial and residential property, although impacts to actual residences should be minimal. At the southern end of the study area, the proposed alignment would connect to Salt Creek Highway, a state road. Additional roadway right-of-way within the study area may be owned by the Natrona County or local municipalities. No right-of-way impacts to community services are expected. Once an alignment is determined, right-of-way should be preserved to prevent development of the corridor.

During the NEPA process, impacts to neighborhoods, businesses, and individual residences should be identified and avoided or effects minimized where possible. The NEPA process should identify the number of buildings subject to displacement, determine if a disproportionate population would be affected, identify the number of relocations expected, if any, and discuss how any relocations would affect access to employment and important services. Mitigation measures should be designed to avoid, minimize, or mitigate adverse community effects. If property acquisition is required for right-of-way, acquisition proceedings would conform to the requirements set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Uniform Relocation Act Amendments of 1987.

3.7 UTILITIES

There are two major utilities in the corridor. Rocky Mountain Power owns and operates a series of high-tension lines and towers in the corridor, as well as a substation at the southern end of the corridor near Salt Creek Highway and Revenue Blvd. Plains All-American Pipeline owns and maintains a 12-inch petroleum pipeline. Illustrated in Figures 9, 10 and 11, the pipeline runs north-south through the area being considered for Polaris Drive. The figure illustrates an assumed 50-foot buffer on either side of the pipe (measured from the approximate center line of the pipeline) to be avoided by Polaris Drive.

Any potential relocates, crossings, or other impacts to these facilities will have to be identified during the NEPA process. Coordination with the two utility owners will need to take place to ensure that relocation and/or crossing the facilities is feasible and that it is done in such way as to minimize impacts to the utilities.

3.8 SOCIAL CONDITIONS

Social resources include a variety of factors that may affect quality of life. New roadways can affect quality of life by dividing neighborhoods, facilitating new development, changing property values, increasing mobility, or affecting safety. Composition of the potentially affected communities was identified to identify any preliminary potential issues.



Demographic maps generated by EPA's GIS database indicate that 0-10 percent of residents in the study area live below the 2010 poverty level, and 0-10 percent of residents in the study area are minority (EPA 2010). According to U.S. Census data, 93.8 percent of the population of Hartrandt and 93.4 percent of the population of Bar Nunn is white (U.S. Census Bureau 2010). During the NEPA process, a more in-depth examination of low-income and/or minority populations should be conducted to verify these findings and confirm that no change has occurred from existing conditions. Based on current data, no disproportionate impacts to such populations are expected.

The EPA's GIS database was also used to identify the location of schools, places of worship, and hospitals. None were shown within the study area; therefore, no impacts to community resources are expected.

Within Hartrandt, Andy Road is the farthest road from I-25 and Salt Creek Highway. Most of the residential zoned areas in Hartrandt are adjacent to Andy Road and are, therefore, at the farthest distance from the existing highways. Currently, there is no development west of Andy Road and the residential area, providing a buffer for this location. Construction of a roadway at this location may affect quality of life for these residents. Noise and visual impacts (described under their respective sections above) would also affect quality of life. Changes in land use, property values, and neighborhood identification could occur from induced growth, as well as potential urban renewal and increased neighborhood size (described under Section 3.1 Land Use and Zoning). These impacts would be both beneficial and adverse. Specifically, there could be environmental justice issues with Alignment 1 (Andy Road), if a large percentage of residents are low income.

Coordination with the various agencies having resource oversight should occur during the NEPA process to obtain any site-specific data and identify any social issues that could constrain the project. Specific resource agencies to confer with regarding the communities' social characteristics include local planning agencies (e.g., county, city, and community planning offices), social services agencies, and community groups.

3.9 ECONOMIC CONDITIONS

Development of a new roadway can affect growth rates, business activity, property values, and tax revenues by changing accessibility and/or the local environment. As mentioned under Section 3.1 Land Use and Zoning, the Hartrandt area comprised primarily industrial uses, with some residential. General business and light industrial zones exist in Bar Nunn. Bar Nunn's Community Development Plan (2008) notes that the town is primarily residential with small amounts of commercial and industrial development. The reduced amount of taxes normally generated by business and industry affects the Town's income and operating ability (Town of Bar Nunn 2008). The new roadway would affect economic conditions through potential development of additional employment centers in the business and industrial zones. Increased



retail sales and use tax, business tax, and property tax could result from induced growth — a beneficial impact.

Coordination with the various agencies having resource oversight should occur during the NEPA process to obtain any site-specific data and identify any economic issues that could constrain the Proposed Action. Specific resource agencies to confer with regarding economics include city and county planning offices and chambers of commerce.

3.10 AIR QUALITY

Air quality is generally assessed by comparing concentrations of air pollutants to National Ambient Air Quality Standards (NAAQS), which are set to protect human health and welfare. Six “criteria” air pollutants have been identified that can be harmful to public health and the environment. Areas with concentrations of criteria pollutants that are below the levels established by the NAAQS are considered in “attainment.” EPA GIS data currently indicates that Natrona County is in attainment for all criteria pollutants (EPA 2013c).

The addition of a new roadway would result in air quality impacts both from construction activities and operations. Construction emissions differ from regular traffic emissions and can result in short-term impacts. Construction activities may be sources of temporary emissions from fugitive dust or equipment exhausts. Adjoining properties in the study area would be near construction activities and may be affected.

If necessary, an air quality impact analysis to determine long-term operations impacts should be conducted as part of the NEPA process. A local analysis may consist of hot-spot modeling for carbon monoxide concentrations at intersections or other locations where vehicle idling may result in higher carbon monoxide concentrations. A qualitative analysis for particulate matter hot-spots may be performed and potentially calculation of daily emission levels of the mobile source air toxics (MSAT).

3.11 BIOLOGICAL RESOURCES (VEGETATION, WILDLIFE, SPECIAL SPECIES)

Vegetation, wildlife, and special status species (including both plants and animals) can be affected by new roadway development through their removal, habitat fragmentation or reduction, and direct mortality. As described under Section 3.1 Land Use and Zoning, land cover in the study area consists of developed area and some open space east of the proposed alignments, and shrub/scrub and grasslands west of the alignments.

Pockets of shrub/scrub and grasslands occur within Bar Nunn's developed areas and between Bar Nunn and Hartrandt (EPA 2006). In Wyoming, prairie grasslands are typically below 7,000 feet in elevation and are predominantly located in the eastern portions of the state, although they are also common in basins of south central and southwestern portions of Wyoming. The state's



grasslands are known to support large numbers of wildlife. The grasslands are sometimes described as grazer systems, because grass is digestible by a wide range of animals (WGFD 2010). The two most common large animal species that may occur with the project area are pronghorn and mule deer. The area is also mapped as overall range for white-tailed deer and elk, although the likelihood for these species to occur is relatively low.

The study area is not located in an area identified by the Wyoming Game and Fish Department (WGFD) as a habitat priority area (WGFD 2009). A review of state and county information was conducted for wildlife, as well as threatened, endangered, and special status species that could occur in the study area (see Table 9).

Table 9 – Special Status Species in Natrona County

Species	Status	Habitat Type	Likelihood of Occurrence
Birds			
Greater sage-grouse	Candidate	Inhabits upland sagebrush habitat in rolling hills and benches. Breeding occurs on open leks (or strutting grounds), and nesting and brooding occurs in upland areas and meadows in proximity to water and generally within a 2-mile radius of the lek.	Low – Study area is within known distribution of species. However, vegetation adjacent to study area appears to be void of large, well-established sagebrush stands.
Least Tern	Endangered	Nests in colonies on beaches and sandbars.	Very Low – Mainly associated with riverine systems. There are a few waterbodies or wetlands in the project vicinity that may provide nesting habitat.
Piping Plover	Threatened	Northern Great Plains piping plovers favor wide, sparsely vegetated sand or gravel beaches adjacent to vast alkali lakes.	Low – Some alkali features exist in the study area, which may not support breeding; more research is needed.
Whooping Crane	Endangered	The whooping crane breeds, migrates, winters, and forages in a variety of wetland and other habitats, including coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields.	Very Low – Would be a migrant through the region and is more typically associated with the North Platte River system.
Fishes			
Pallid Sturgeon	Endangered	Pallid sturgeons evolved and adapted to living close to the bottom of large, silty rivers with natural a hydrograph.	None – Part of the North Platte River system.
Flowering Plants			
Ute	Threatened	Inhabits moist meadows associated	None – Associated habitat



Species	Status	Habitat Type	Likelihood of Occurrence
Birds			
Ladies'-tresses		with perennial stream terraces, floodplains, and oxbows at elevations between 4,300 to 6,850 feet.	types not present.
Western Prairie Fringed Orchid	Threatened	Found most often on unplowed, calcareous prairies and sedge meadows. Soil moisture is a critical determinant of growth, flowering, and distribution	None – Associated habitat types not present.

Source: U.S. Fish and Wildlife Service 2013a

The U.S. Fish and Wildlife Service (USFWS) recommends contacting the WGFD to identify important greater sage-grouse habitats, recommended seasonal restrictions within the study area, and appropriate measures to minimize potential impacts. The USFWS also recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. No project activities that may exacerbate habitat loss or degradation are permitted in important habitats. In addition, the State of Wyoming has adopted “Greater Sage-grouse Core Area Protection,” which states that development of any type in the identified core areas may occur only when no decline to the species can be demonstrated. The burden of proof for showing development does not affect sage-grouse rests with the proponent (USFWS 2013b). Although the likelihood of occurrence is low, due to the extent of shrub/scrub and grasslands within the study area, consultation with the WGFD should occur to determine the presence of this species.

Black-tailed Prairie Dog (*Cynomys ludovicianus*) and white-tailed Prairie Dog (*Cynomys leucurus*) are both federal species of concern in Natrona County. The WGFD encourages the conservation of prairie dog colonies for their value to the many species that rely on them. The range of the black-tailed prairie dog includes short and mixed grass prairies east of the Rocky Mountains. Black-tailed prairie dogs occur within the eastern third of Wyoming. Because black-tailed prairie dog colonies in Wyoming do not currently support any ferret populations, black-footed ferret surveys are not necessary within Wyoming. WGFD is currently updating its list of black-footed ferret “block-cleared areas” – areas of prairie dog colonies for which black-footed ferret surveys are no longer required. The white-tailed prairie dog typically inhabits moderately sloped grasslands, desert grasslands, and shrublands at altitudes ranging from 5,500 to 9,800 feet across western and central Wyoming. If white-tailed prairie dog towns or complexes greater than 200 acres will be disturbed, WGFD should be contacted to determine if surveys for ferrets are recommended (USFWS 2013b).

The bald eagle (*Haliaeetus leucocephalus*) is a federal species of concern in Natrona County. Bald eagles build large nests in the tops of large trees near rivers, lakes, marshes, or other wetland areas. During winter, bald eagles



gather along open water to forage and night roost in large mature trees, usually in secluded locations that offer protection from harsh weather. Bald eagles often return to use the same nest and winter roost year after year. Because bald eagles are particularly sensitive to human disturbance at their nests and communal roosts, protective buffers are needed around these areas (USFWS 2013). A review of study area photographs does not indicate the presence of large trees, and there are no rivers within the study area. However, it is possible bald eagles use the area, particularly given the presence of open shrub/scrub and grasslands.

The USFWS has developed National Bald Eagle Management Guidelines that define when and under what circumstances the protective provisions of the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act may apply. In more open habitats typical to Wyoming, additional conservation recommendations may also be necessary (USFWS 2013).

When the proposed infrastructure and facilities do not pose an increased risk of direct mortality, WGFD recommends using the following general guidelines to avoid disturbing eagles and adequately protecting their habitat (USFWS 2013b):

1. Conduct surveys within 0.5-mile of proposed activity for eagle nests and/or roosts during the appropriate time of year. Contact the USFWS Ecological Services Wyoming Field Office if a project will occur within 0.5-mile of a known nest or roost to determine the potential impact of the activity to nesting and/or roosting bald eagles.
2. Avoid project-related disturbance and habitat alteration within 0.5-mile of bald eagle nests from the period of early courtship to post-fledging of chicks (January 1 through August 15).
3. Avoid disturbance within 0.5-mile of communal winter roosts from November 1 to April 1.
4. Avoid construction of above-ground structures within 0.5-mile of bald eagle nest sites and communal winter roost sites. Below-ground structures may be sited closer as long as construction occurs outside of the active nesting or roosting season and will not result in the loss of alternate nest sites or roost trees.

In Wyoming, the nesting season occurs from February 1 to August 15, and bald eagle nest buffers should receive full implementation during this time period. For some activities (e.g., construction), a larger buffer around the nest may be necessary (USFWS 2013b).

The mountain plover (*Charadrius montanus*) is a federal species of concern in Natrona County. The mountain plover is a migratory, terrestrial shorebird. Suitable habitat for nesting mountain plovers includes grasslands, mixed grassland areas and short-grass prairie, shrub-steppe, plains, alkali flats, agricultural lands, cultivated lands, sod farms, and prairie dog towns. The USFWS encourages project planners to develop and implement protective



measures if mountain plovers, or suitable mountain plover habitat, occur within project areas. Measures to protect the mountain plover include avoidance of suitable habitat during the plover nesting season (April 10 through July 10), prohibition of ground disturbing activities in prairie dog towns, and prohibition of any permanent above-ground structures that may provide perches for avian predators or deter plovers from using preferred habitat (USFWS 2013b).

The black-footed ferret (*Mustela nigripes*) is listed by the USFWS as a federally endangered species in Natrona County. However, the USFWS no longer recommends surveys for black-footed ferrets in either black- or white-tailed prairie dog towns in Wyoming. The WGFD notes that there have been no verified reports of any extant black-footed ferret individuals or populations in any prairie dog complex since 1981, and it is unlikely that black-footed ferret populations in Wyoming have persisted through drastic reductions of prairie dog complexes. There is an experimental, non-essential population of black-footed ferrets in the Shirley Basin/Medicine Bow Management Area (USFWS 2013). This area is southeast of Casper and the study area. For these reasons, no impacts to black-footed ferrets are expected.

Construction clearing and grubbing operations and work on structures should be scheduled to avoid impacting migratory birds protected by the MBTA. Pre-construction surveys for nesting birds should be completed and should follow the methods set forth by the USFWS and WGFD (USFWS 2013b).

3.12 PARKS AND RECREATION

Section 4(f) of the Department of Transportation Act of 1966 stipulates that FHWA and other Departments of Transportation cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic sites unless there is no feasible and prudent alternative to the use of land, and the action includes all possible planning to minimize harm to the property resulting from use. The *Town of Bar Nunn Community Development Plan* notes that there are three (unnamed) public parks in Bar Nunn (Town of Bar Nunn 2008). The Town's web site lists them as Romie Nunn Park (at the north end of Trails End), Antelope Territory (at the crossing of Antelope Drive and Palamino Avenue), and Heritage Park (East end of Sunset Boulevard) (Town of Bar Nunn 2013). However, because of their location the three parks are not expected to be affected by the proposed alignments.

The Land and Water Conservation Fund (LWCF) Act of 1965 established a federal funding program to assist states in developing outdoor recreation sites. Section 6(f) of the act prohibits the conversion of property acquired or developed with these funds to a non-recreational purpose without the approval of the National Park Service (National Park Service 2008). A file search was conducted to determine whether LWCF 6(f) funds were used on recreation facilities within the study area. The Town of Barr Nunn received three grants for park development using 6(f) funds (InvestigateWest 2012). One appears to

have been for the Romie Nunn Park; the other two are currently unknown. As noted above, these parks are not expected to be affected because of their location. However, prior to the NEPA process, the Town should be contacted to confirm that no new parks have been established and no parks qualify as 4(f) or 6(f) resources.

3.13 HISTORIC AND ARCHAEOLOGICAL RESOURCES

Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Historic structures or archeological resources could be affected by construction and use of a new roadway.

A search of EPA GIS data indicated no properties listed on the NRHP occur in the study area (EPA 2013b). However, the Casper Buffalo Trap, a Paleoindian bison kill site located in a sand dune south of I-25 on the northwest side of Casper, is listed on the NRHP. The specific location of this site is restricted and should be confirmed prior to the NEPA process after determining the Area of Potential Effects (APE). In addition, it is possible that there may be archeological resources in the study area that could be disturbed during project construction. Therefore, the potential presence of such resources should be further investigated during the NEPA process.

Any project taking place on federal lands, using federal funds, or requiring federal permitting must be preceded by a cultural resource inventory and project review in compliance with Section 106 of the National Historic Preservation Act (NHPA), as well as the Wyoming Antiquities Act and the Wyoming Environmental Quality Act. As part of the NEPA process, consultation with the Wyoming State Historic Preservation Office (SHPO) should occur for concurrence with NRHP eligibility determinations. If historic properties are identified within the APE, a determination of no adverse effect or adverse effect should be identified during the NEPA process, followed by consultation with the SHPO.

3.14 WATER RESOURCES AND FLOODPLAINS

Transportation projects can introduce potential contaminants that may impact water resources during both construction and operation. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris, and chemicals and transport them to a nearby storm sewer system or directly to a water body. Under Section 402 of the Clean Water Act National Pollutant Discharge Elimination System, construction projects that disturb one acre or greater or are part of a larger common plan of development require a Construction Stormwater Permit and a Stormwater Management Plan (EPA 2012).

A new roadway adds new impervious surface to an area, which prevents rain from soaking into the ground, thus increasing flows during storms and reducing



stream flows during dry periods. This leads to runoff that brings sediment, nutrients, and contaminants into bodies of water (EPA 2012).

Although no surface water bodies have been identified that could be affected by the Proposed Action, pollutant loading from runoff has the potential to affect downstream drinking water supplies and wastewater treatment facilities. During the NEPA process, the location of storm sewer systems, drinking water supplies, and groundwater resources that could be potentially affected by runoff from both construction activities and operation should be identified and analyzed for possible impact.

Once impacts are analyzed, mitigation measures need to be evaluated. BMPs can be identified to eliminate or reduce the potential impacts from construction, as well as operations and maintenance.

3.15 WETLANDS AND OTHER WATERS OF THE US

Under the Section 404 of the Clean Water Act, impacts to Waters of the U.S., including wetlands and open water features, must be avoided, minimized, or mitigated to ensure that there is no net loss of functions and values of jurisdictional wetlands.

EPA GIS data indicates an area described as “other” wetlands east of the proposed alignment just north of the boundary between Segment 1 and 2 (EPA 2013b). This wetlands area is not expected to be impacted by the Proposed Action given its distance from the proposed alignment. No other water bodies were identified within the study area.

3.16 CUMULATIVE IMPACTS

Resources that may be cumulatively impacted by future projects when combined with other past, present, and reasonably foreseeable future projects may include noise impacts to local residents and economic impacts to local businesses. During the NEPA process, additional analysis and agency coordination will need to be performed. Local and regional comprehensive, transportation, and other pertinent plans should be reviewed to identify such projects. Wildlife habitat loss may also occur due to planned future development, particularly considering induced growth.



4.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The Casper MPO has executed a public and agency involvement program to provide opportunities for interested parties to participate in and contribute to the PEL study. The intent was to solicit information, ideas, and opinions from the public and agencies. This chapter summarizes the results of those activities.

4.1 AGENCY COORDINATION

At the beginning of the study, a project kickoff meeting was held. PWG members from Casper MPO, Town of Bar Nunn, WYDOT, FHWA, and Natrona County were in attendance, as well as representatives from the City of Casper.

4.1.1 Coordination with State and Federal Agencies

At the onset of the study, environmental resource information was obtained and reviewed from state and federal agency sources, including The U.S. Environmental Protection Agency, U.S. Bureau of Land Management (BLM), Natural Resources Conservation Service, Wyoming Game and Fish Department (WGFD), and Wyoming Department of Environmental Quality. The purpose of this coordination was to determine what environmental resources could be impacted by the Proposed Action.

4.1.2 Coordination with Local Agencies

At the start of this study, a Project Working Group (PWG) was formed to advise, review and make decisions regarding this study. The PWG included staff from the Casper MPO, Town of Bar Nunn, Natrona County, WYDOT and FHWA. Generally, the PWG serves as a technical body providing recommendations to the elected representatives.

The study team coordinated with members of the PWG throughout the course of this study and participated in six PWG meetings. The discussions included the study purpose and need, study goals, evaluation criteria, alternatives, corridor recommendations, and plans for public involvement. The PWG also reviewed and provided comments on the draft PEL study report, which were incorporated into the final report. Appendix A contains more detailed information on the meetings with the PWG.

4.2 PUBLIC INVOLVEMENT

Two public meetings were held. The Casper MPO distributed press releases to announce the public meetings, and notices/information were available on the MPO website. The Town of Bar Nunn also disseminated information regarding the meetings.



Kickoff Meeting - February 28, 2013, 1:00 to 2:30 p.m., Bar Nunn Town Hall.

At the beginning of the study, a project kickoff meeting was held, which provided an opportunity to describe the intention of the study and to initiate a discussion of potential issues, needs and solutions for the study area. Handouts were available describing the project and PEL process, in addition to the study schedule and a map illustrating the study area. The history of the Salt Creek Highway corridor was discussed, as well as vision and opportunities, issues, and constraints. Available data was revealed and data needs were determined.

There were 13 citizens at this kickoff meeting, representing stakeholders with a wide breadth of expertise, including community planning, utilities, real estate development, and business. The stakeholders provided key input at the onset of the study for scoping and guided the development of a corridor vision, purpose and need, and study goals. Appendix B contains more detailed information on the kickoff meeting.

Public Open House Meetings – September 19, 2013, 4:00 to 5:00 p.m., Bar Nunn Council Room; 6:30 to 7:30 pm, Bar Nunn Elementary School.

The purpose of these meeting was to describe the project process, explain the alternatives and the screening process, obtain citizen input on the alternatives, and address concerns. Five people attended the two meetings combined.

Written communication in the form of emails, letters, and comment sheets were encouraged throughout the study, although no other input has been received to date.

Comments received were positive towards the Proposed Action and the recommendations from the draft PEL study. The study team reviewed and considered all comments as part of the alternatives development and screening. One stakeholder at the meetings was a potentially affected land owner, who was in favor of the project and the proposed alignment (Segment 1 and 2).

5.0 NEXT STEPS

5.1 PROJECT PRIORITIZATION

It is recognized that there are limited resources to implement the Proposed Action. For this reason, the project prioritization plan was developed. The plan provides an implementation framework for project selection. The prioritization is primarily based on the relative importance of each corridor segment for the identified Purpose and Need elements: mobility, alternative access, safety, and economic development. The prioritization plan also considers environmental impacts, right-of-way needs, and public support. Table 10 displays the prioritization plan, and Table 11 summarizes the prioritization.

Table 10 – Prioritization Plan

Segment/Section	How do elements of the Purpose and Need (in bold) inform priorities?	Recommendations
Segment 1	<ul style="list-style-type: none"> • Arterial Road – would meet this need for the northern section • Alternative Access – completed alternative access to Westwinds • Mobility – no significant mobility effect until more northern development occurs • Multi-Modal – depends on cross section • Safety – little change in safety on Salt Creek Highway 	Priority = LOW
Segment 2	<ul style="list-style-type: none"> • Arterial Road – would meet this need for the middle section • Alternative Access – connects arterial to Town of Bar Nunn • Mobility – would provide alternative route for most traffic on Salt Creek Highway • Multi-Modal – depends on cross section • Safety – significant reduce traffic and improve access on Salt Creek Highway 	Priority = HIGH (need to construct with Segment 3 initially)
Segment 3	<ul style="list-style-type: none"> • Arterial Road – would meet this need for the southern section • Alternative Access – needed first section of arterial to meet this need – need Segment 2 • Mobility – this section alone would not change traffic on Salt Creek Highway • Multi-Modal – depends on cross section • Safety – no change on Salt Creek Highway but needed as a start to the arterial 	Priority = HIGH (need to construct with Segment 2 initially)
Cross Section 1	<ul style="list-style-type: none"> • Arterial Road – would meet minimum requirements • Alternative Access – depends on segments constructed • Mobility – depends on segments constructed • Multi-Modal – some bike accommodation but no pedestrian accommodation • Safety – depends on segments constructed 	Priority = HIGH
Cross Section 2	<ul style="list-style-type: none"> • Arterial Road – would meet arterial requirements • Alternative Access – depends on segments constructed • Mobility – depends on segments constructed • Multi-Modal – good bike and pedestrian accommodations • Safety – depends on segments constructed 	Priority = LOW
Cross Section 3	<ul style="list-style-type: none"> • Arterial Road – would meet arterial requirements • Alternative Access – depends on segments constructed • Mobility – depends on segments constructed • Multi-Modal – good bike and pedestrian accommodations • Safety – depends on segments constructed 	Priority = LOW



Table 11 – Prioritization Summary

High Priorities	1) Segments 2 and 3 2) Cross Section 1
Low Priorities	1) Segment 1 2) Cross Section 2 or 3

5.2 POTENTIAL FUNDING SOURCES

Obtaining funding for transportation projects is challenging. However, given the demonstrated need for this project and the collaboration of state, county and local agencies during this study, the Polaris Drive project should be competitive for any available funds. The federal funding situation is in a state of flux and the future levels of funding are unknown. It is recommended that the Casper MPO pursue getting the Polaris Drive design and construction phases on the MPO Transportation Plan, followed by the State Transportation Improvement Plan (STIP), so that when new federal and state funding programs are authorized, this project will be in position to get funded. Local match funds from the Town of Bar Nunn and Natrona County would also be needed, so local officials should begin to reserve funds for this project.

Private funding could also be investigated. Since this roadway will benefit area industries and open access to lands for future development, Natrona County can look for opportunities for private contributions towards portions of this arterial roadway.

5.3 NEXT STEPS

The PEL study has accomplished an assessment of the transportation needs in this north-south corridor to and from Bar Nunn. The study team engaged the community stakeholders and the public to develop a purpose and set of needs for the corridor. The study process considered effects on the human and natural environment and consulted with applicable resource agencies.

This planning process and PEL study provide the foundation for moving ahead in the future with improvement projects that will be initiated under NEPA.



6.0 REFERENCES AND ACKNOWLEDGEMENTS

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APPENDICES

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| APPENDIX A | AGENCY COORDINATION |
| APPENDIX B | PUBLIC INVOLVEMENT |
| APPENDIX C | FHWA QUESTIONNAIRE |
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APPENDIX A AGENCY COORDINATION

FINAL MEETING MINUTES

Westside Blvd. PEL

Project Kickoff Meeting

Thursday, February 28, 2013

1:00 PM to 2:30 PM

Location: Bar Nunn Town Hall

Prepared by: Chuck Huffine, Jacobs

Attendees:

Casper MPO:	Sally Kerpchar, Constance Lake
Town of Bar Nunn:	Jerry Petty, Bill Johnston, Carol Pendley, Chuck Johnson
WYDOT:	Kevin McCoy, Chad Aagard
FHWA:	Jeff Purdy
Natrona County:	Forest Chadwick
City of Casper:	Andrew Beamer, Brian Lockwood, Zulima Lopez
Jacobs:	Chuck Huffine, Bob Quinlan, Heidi Schram
Citizens:	Rich Fairservis, Dan Guerettman, Mike Coleman, Marrdyce Wilson, Susan Dynarski, Jason Fox, Carol Crump, Bill Edwards, Brian Sunwall, Jared Serves, Don Daurs, Josh Brown, John Blase

Copies: Casper MPO, File

Summary of Discussion:

1. Introductions – everyone introduced themselves and who they represent.
2. Define Roles and Communication Methods
 - a. E-mail is the preferred method of communication
 - b. Most meeting will be by conference call
 - c. Sally Kerpchar and Chuck Huffine will be the main project contacts
 - d. Sally will form a Project Advisory Team to guide the project and review submissions.
 - e. Meeting handouts will be sent electronically to Sally.
3. Project Goals and Objectives
 - a. The primary goal of this study is to complete the PEL (Planning Environmental Linkage) process to enable the Westside Blvd. project to be programmed on the STIP (State Transportation Improvement Plan) and be set-up to complete the NEPA process.
 - b. Objectives include meeting FHWA guidelines; coordinating with WYDOT, Natrona County, Bar Nunn, utilities, and other key entities; engaging the public; and completing the study within 9 months.
4. Study Process
 - a. Planning and Environmental Linkage (PEL) Process – there was a brief discussion on what a PEL is, why it is the best process for this project, and what the basic requirements and procedures are.
 - b. Public Involvement – there will be a public open house near the end of the project for the public to view the alternatives and discuss the project.

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- c. MAP-21 Performance Measures – the performance measures must first be set by the USDOT, then the State, then the MPO. This will take over 18 months to complete. Project will need to demonstrate how they will meet the established performance measures, but this phase of the project will be completed before they are set.
 - d. Purpose and needs statement is very important – defines the need and the scope of the alternatives
5. Project Schedule – a draft project schedule was handed out and reviewed. The study will be completed within 9 months, but the project team will look for ways to reduce that schedule, if possible.
6. Corridor Discussion – all attendees participated in an active discussion on the project, which included the history, issues and constraints, ideas for alternatives, and their concerns. The following were some key points and information:
- a. WYDOT studied Salt Creek Highway and it has major problems with pavement condition, a lack of shoulders, many access points, not enough right-of-way to be able to make significant improvements, and nowhere to divert traffic during construction.
 - b. Salt Creek Highway is the only road in and out of the community to the south. A secondary means of access is needed to reduce congestion, emergency access, and an alternative in case Salt Creek Hwy is closed.
 - c. WYDOT has improvement plans from the Routes 20/26 interchange to the truck inspection area. There are no plans for improvements north of there.
 - d. The new arterial would have a section that is in Natrona County's jurisdiction.
 - e. An interchange has been discussed with I-25 at Westwind.
 - f. An Amoco Gas (Standard Oil) pipeline that runs along the dirt road (possible new arterial alignment) was replaced a few years ago because the old one was leaking (possible environmental issue).
 - g. There is no set alignment for the new arterial.
 - h. Study will examine the entire arterial (with a goal of clearing the entire facility through NEPA), although there is only funding for the Bar Nunn portion. Need to make sure NEPA addresses logical termini to avoid any appearance of segmentation (although the project could be constructed in phases).
 - i. Project must have “independent utility”, meaning it must be able to function on its own, without further construction of adjoining segments.
 - j. There are no plans for annexation related to this new arterial.
 - k. City water on Salt Creek and I-25 (would cross at southern end of arterial if connected).
 - l. Rocky Mountain Power has overhead line expansion plans to the north, including a new substation just west of the proposed connection to Westwind.
 - m. There is an 8” steel pipe running parallel to the old runway to the south.
 - n. Look into discretionary State Transportation Funds for developing the southern end of the corridor, as it assist them with implementing Salt Creek Highway improvements.

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- o. Citizen recommended a left turn lane at the Wardwell/Howard off ramp to accommodate increased traffic.
 - p. Additional growth will take place within 20-30 years in response to the planned development of an intermodal (rail/truck/air) facility northeast of the Natrona County Airport. This may lead to the extension of Westwind Road, although there are currently no plans in place.
 - q. Don't look for funding from the Casper Area Economic Development Authority (no money available).
7. Data – a short discussion took place on needed data and where Jacobs can turn to, to find additional information.
- a. Go to geosmart.casperwy.gov for GIS data. They are still working on the zoning layer – updating future land use maps..
 - b. Dallas at Bar Nunn can be called for GIS – (307) 262-8897
 - c. Chuck Johnson has water and sewer knowledge – (307) 237-7269.
 - d. Sally to send list of machine and turning movement traffic counts to Chuck.
 - e. Bar Nunn has some land use projections, but probably will need to discuss with the MPO, Bar Nunn and Natrona County to make a “best guess” at a 2035 land use scenario. Jacobs to review existing plans and make a “first try” at the 2035 scenario.
 - f. Sally to try to get the TransCAD model used for the Bar Nunn Subarea Traffic Study.
 - g. WYDOT standards will be used.
 - h. Wardwell has GPS data for its existing facilities.
8. The next meeting will be a conference call to discuss the Purpose and Needs statement.

Action Items

1. Jacobs will coordinate with all involved entities to obtain the latest existing data, plans and studies for traffic, right-of-way, roadways, utilities, drainage, land use, and other areas.
2. Jacobs to develop a Purpose and Needs statement and hold a conference call with Casper MPO and others, as needed, to discuss.

MEETING MINUTES

Polaris Dr. / Westside Blvd. PEL



Coordination Meeting
Thursday, April 4, 2013, 9:30am
Monday, April 22, 2013, 2pm

Location: Conference Call

Prepared by: Velvet Kuesel, Jacobs

Attendees :	Casper MPO:	Sally Kerpchar
April 4	Town of Bar Nunn:	Bill Johnston, Chuck Johnson
	WYDOT:	Kevin McCoy, Chad Aagard
	FHWA:	None
	Natrona County:	None
	City of Casper:	None
	Jacobs:	Chuck Huffine, Bob Quinlan, Velvet Kuesel, Heidi Schram

Attendees :	FHWA:	Jeff Purdy
April 22	Jacobs	Chuck Huffine, Bob Quinlan, Velvet Kuesel

Original meeting held April 4. Jeff Purdy was not able to attend this meeting so Jacobs met with him on April 22 to review the content of the April 4 meeting. *All notes in italics below are from April 22 meeting.*

Copies: Attendees, Mike Haigler, Trish Chavis, Robert Lewallen, File

[AI] = Action Item (Summarized at end of minutes)

Summary of Discussion:

1. Finalize the Purpose and Needs Statement

Kevin will send Jacobs an example of a Purpose and Needs Statement that he has recently submitted. [AI]

The Long Range Plan is currently being updated. The needs identified in the P&N statement need to be consistent with what is shown in that plan which is scheduled to be completed by April 2014. Since this PEL study will be completed ahead of the Long Range Plan, Jacobs will need to coordinate with Fehr & Peers to make sure that anything in the P&N, or the PEL, are consistent with the Long Range Plan. Chuck will coordinate directly with Ann Bowers at Fehr & Peers. [AI]

Comments received on P&N: [AI]

- a. The statement doesn't say anything about Salt Creek Highway. Statement will be updated to include discussion of Salt Creek Highway.
- b. Some grammatical errors to be corrected.
- c. Vehicle counts need to be updated.
- d. Number of homes listed seems high. Number needs to be adjusted based on agreed upon land use.
- e. Language should be 'finessed' a bit to make the statement more acceptable to FHWA.

Jeff reviewed the Purpose and Needs Statement and believes that it covers all of the necessary topics. The only comment is to change ‘Regional Mobility’ to ‘Regional Mobility and Network Connectivity’. [AI]

2. Future land use scenarios and the TransCAD model

As with the PEL and Purpose and Need Statement, Jacobs will need to coordinate with Fehr & Peers to make sure that land use scenarios and traffic modeling is consistent with the Long Range Plan.

Jeff mentioned to the team to be sure to coordinate with the Morrison-Maierle Interchange Study, as well as other studies in the area. The Jacobs team does have all of these studies. Jeff noted that the interchange study assumes full build out in 20 years. Even at the current rate of development of about 44 units per a year full build out would take longer than 20 years.

In response, Sally noted that Bar Nunn has been experiencing growth of more like 100 units per year, not the 44 that Jeff stated. This information will be confirmed.

3. Our approach to outlining the PEL

PEL outline was presented to group. No comments received. The outline will be distributed to Jeff Purdy for his review and concurrence. [AI]

Jeff would like to add an additional section to Chapter 3 to address land use, population density and other planning elements. [AI]

4. Alternative development approach

The Alternatives Development section of the PEL document will include a discussion of the alternatives that have already been assessed during previous studies, but will most likely not require an extensive alternatives screening process.

Some discussions to include in Alternatives Development section:

- a. The HKM study determined that Salt Creek Highway cannot handle future traffic volumes for the following reasons: narrow existing ROW, existing roadway is only 3 lanes with no space to widen, and the frequency of the existing accesses.
- b. A new alignment much further to the west doesn't make sense because there is no planned development.
- c. Andy Lane could be another alternative considered but following this existing alignment would require closure of some existing connections and would cut through the existing trailer park.
- d. Some reasons for not placing a new alignment on the east side of I-25: most property is owned by County(not City), I-25 acts as a barrier and would require a bridge over I-25 at McMurry Blvd, it would not satisfy all of the points in the Purpose and Needs Statement
- e. All alternatives above, as well as any other feasible alternatives, will be expanded upon in the Alternatives Development section of the PEL.

The alternatives development process was described to Jeff. No comments received.

5. Logical Termini

The team agreed that the PEL should clear the entire corridor from a southern terminus at existing Salt Creek Highway somewhere north of 20/26 up to a north termini at Westwinds. The limits may also include connections back to Salt Creek Highway.

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April 4, 2013

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Jeff agreed with the logical termini. He added that a connection just from the north termini down to Howard, not all the way down to 20/26, may not make sense.

6. Phasing and Implementation

- The PEL will include a brief discussion of 'Next Steps' including possible phasing and implementation of the project, but that will be discussed in more detail as part of a separate action.
- The PEL will not include a discussion of specific funding sources.
- There is a meeting schedule for April 18th with WYDOT to discuss possible phasing and funding for this project.
- The cost estimate that will be prepared for the project will be broken down into phases. Possible phases could be Phase 1 from Howard to McMurry, another Phase from McMurry to Westwind (which may be developer funded), and a last phase from Howard down to connection back to Salt Creek Hwy.

The April 18th meeting with WYDOT was postponed. Jeff was made aware that this phasing and funding discussion would happen soon.

7. Next Steps

Contact Jeff Purdy to update him on the discussion during this meeting and to get his input on the P&N, PEL outline and Alternatives Development process. Input from Jeff will be communicated back to the group. [AI]

Next coordination meeting will be some time the first week of May. Possible agenda items include presentation of future land use scenarios and a draft alignment. [AI]

It was agreed that all project documentation should use the new project logo and be referred to as Polaris Dr. / Westside Blvd.

Action Item Register

Action	Responsible Party	Due Date
Send example Purpose and Need statement to Jacobs	Kevin McCoy	Completed
Incorporate P & N comments from both April 4 and April 22 nd meetings.	Jacobs	5/1/13
Coordinate with Fehr & Peers to ensure consistency between Long Range Plan and PEL	Jacobs	5/1/13
Contact Jeff Purdy to update him on the discussion during this meeting and to get his input on the P&N, PEL outline and alternatives development process	Jacobs	Completed April 22
Schedule next coordination meeting	Jacobs	5/1/13
Add planning section to Chapter 3 of PEL outline	Jacobs	5/1/13

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: April 25, 2013

Velvet Kuesel, Jacobs



MEETING AGENDA

Date: May 16, 2013
Time: 11:00 am
Location: Conference Call
Subject: Polaris/Westside Coordination Meeting

- 1) Introductions
- 2) Potential Alignments
- 3) Proposed Cross Sections
- 4) Land Use Assumptions
- 5) Next Steps
- 6) Next Meeting

MEETING MINUTES

Polaris Dr. / Westside Blvd. PEL



Coordination Meeting
Thursday, May 16, 2013, 11:00 am

Location: Conference Call

Prepared by: Velvet Kuesel, Jacobs

Attendees :	Casper MPO:	Sally Kerpchar, Joy Clark
April 4	Town of Bar Nunn:	Bill Johnston
	WYDOT:	Chad Aagard
	FHWA:	Jeff Purdy
	Natrona County:	Trish Chavis, Mike Haigler
	City of Casper:	Robert Lewallen
	Jacobs:	Chuck Huffine, Bob Quinlan, Velvet Kuesel, Heidi Schram

Copies: Attendees, Kevin McCoy, Chuck Johnson, File

[AI] = Action Item (Summarized at end of minutes)

Summary of Discussion:

1. Proposed Cross Sections

Drafts of the cross section alternatives were presented to the group. The concept is to initially build the 2-lane section, but purchase the ROW required for a future 4-lane section.

The following comments received on cross sections: [AI]

- a. Section 1; No changes.
- b. Section 2; Add curb and gutter, detachment, and sidewalk to each side of the section. Section 1 would be built first, and these items would be added on to the section in the future. The detachment area of this section could possibly be used as a utility corridor in the future.
- c. Section 3; Change 'Boulevard' to a 4 foot detachment between the curb and gutter and sidewalk. This detachment could possibly act as a future utility corridor.

Section 1 will most likely be constructed first, and when volumes call for additional lanes, the section will be widened, and curb and gutter, the detachment and sidewalk will be added. Another construction phasing option is to transition Section 1 to Section 2 by first constructing Section 1 and the ultimate sidewalk (as shown in Section 2), and when traffic demand triggers the need for 4 through lanes, widen for the additional lane on each side of the section and add the curb and gutter. This option would provide pedestrian facilities sooner than if they had to wait until volumes called for widening.

The group concurred that the posted speed will be 40 mph, with a design speed of 45 mph.

2. Potential Alignments

For the purposes of discussion, the alignment was described in 3 different segments.

- Segment 1 - Westwind to a location near the south end of Palomino Ave. (just north of the potential existing wetlands)
- Segment 2 - South end of Palomino Ave. to Sundown Pl.

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- Segment 3 - Sundown Place to Revenue Blvd.

Segment 1 discussion: There is an existing 100 foot wide pipeline easement through this section. The proposed alignment will be located just to the west of this existing easement.

Segment 2 discussion: There are three options for the alignment in this segment.

i. **On Andy Rd.**

- Pros: Roadway improvement could ‘clean up’ the adjacent neighborhood
Least amount of impact to the potential hazardous materials area (as compared to other alignments)
- Cons: There are several existing private accesses along Andy Rd.
Andy Road is owned by the adjacent HOA, not the County

ii. **Just east of the existing 100 foot easement**

- Pros: Ability to limit the number of access points (Renauna Ave. only)
- Cons: Close proximity to Andy Rd.
Median amount of impact to the potential hazardous materials area (as compared to other alignments)

iii. **Just west of the existing 100 foot easement**

- Pros: Better separation from Andy Rd.
Eliminates crossing of the existing pipe line since the Segment 1 alignment is already to the west of the existing easement/pipeline.
- Cons: Largest impact to hazardous materials area (as compared to other alignments)

Segment 3 discussion: There are four options for the alignment in this segment.

i. **At Sundown Pl.**

- Pros: Utilizes existing roadway and connection to Salt Creek Hwy
- Cons: Existing intersection of Sundown Pl. and Salt Creek Hwy is unsafe (bad sight distance, located in a curve) and would require reconstruction of Salt Creek Hwy. if Polaris Dr. were to tie in at this location.

This alternative was eliminated from consideration by the group.

ii. **At Skyview Dr.**

- Pros: Reduces impact to power sub station

Meeting Minutes – Polaris Dr. / Westside Blvd. Coordination Meeting

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Cons: Creates a new intersection with a more minor roadway (Skyview Dr.)

iii. **At Revenue Blvd.** (*this is the preferred alternative*)

Pros: Creates a new intersection with a more significant roadway (Revenue Blvd.)

Cons: Increased impacts to power sub station

iv. **Make Polaris through movement and tee in Salt Creek Hwy.**

Pros: None specifically discussed

Cons: None specifically discussed

The length of the crossing over the existing pipe line should be as short as possible by crossing as close to perpendicular as possible. Also, the profile should be place at a location that will not reduce the amount of cover over the existing pipe line.

Comments on the alignment are dependent upon receiving additional information on the existing pipe line alignment and easement. Once alignment changes are incorporated they will be distributed to the group. ^[AI]

The above pros and cons do not make up the complete alternatives analysis. Additional evaluation for inclusion in the PEL will occur over the coming months.

3. Land Use Assumptions

A land use memo was distributed to the group for review.

The proposed 20-year land use forecasts to be documented in the PEL will be based on the Bar Nunn Salt Creek Intersection & Bar Nunn Subarea Planning Traffic Study and from the Bar Nunn I-25 Interchange Feasibility Study. The group agrees with this approach. The numbers from these studies will be compared to the Bar Nunn growth boundary to make sure the growth is consistent.

4. Other

Velvet Kuesel has contacted some individuals who may have information about the Amoco property and the existing pipe line. No specific information has been received to date, but will be important to obtain since the alignments will depend on the location of the existing easement. Velvet will forward Sally the contact information.

5. Next Steps

Jacobs will coordinate with Sally to pick a date for the next coordination meeting. The Jacobs team would most likely drive up to Casper for this meeting. *Subsequent to the meeting it was determined that the June call will be a conference call, not face to face.*

Action Item Register

Action	Responsible Party	Due Date
Update cross section for changes discussed	Jacobs	6/4/13
Incorporate alignment comments	Jacobs	6/4/13
Forward AMOCO property/pipe line contact information to Sally	Jacobs (VK)	6/4/13

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Schedule next coordination meeting	Jacobs	6/1/13

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: May 29, 2013

Velvet Kuesel, Jacobs

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MEETING AGENDA

Date: June 26, 2013
Time: 9:00 am
Location: Conference Call
Subject: Polaris/Westside Coordination Meeting

- 1) Introductions
- 2) Potential Alignments – Pipeline and Overhead Power Line Updates
- 3) Proposed Typical Sections
- 4) Traffic Projections
- 5) Traffic Analysis
- 6) Next Steps / Public Meeting Date
- 7) Next Meeting

MEETING MINUTES

Polaris Dr. / Westside Blvd. PEL



Coordination Meeting
Wednesday June 26, 2013, 9:00 am

Location: Conference Call

Prepared by: Velvet Kuesel, Jacobs

Attendees :	Casper MPO:	Sally Kerpchar
April 4	Town of Bar Nunn:	Bill Johnston
	WYDOT:	None
	FHWA:	None
	Natrona County:	Mike Haigler
	City of Casper:	None
	Jacobs:	Chuck Huffine, Bob Quinlan, Velvet Kuesel, Heidi Schram

Copies: Attendees, Joy Clark, Jeff Purdy, Kevin McCoy, Chuck Johnson, Chad Aagard, Robert Lewallen, Trish Chavis, File

[AI] = Action Item (Summarized at end of minutes)

Summary of Discussion:

1. Proposed Alignment

No changes have been made to the proposed alignment since the last meeting because we don't know exactly where the existing pipeline is located.

Overhead Power Line: Jacobs received information on June 24 from Rocky Mountain Power about their existing and proposed overhead lines in the vicinity of the project. The files seem to contain all of the necessary information about the locations of their lines. They also contain an alignment of the existing pipeline. This is the only information we currently have about that pipeline. Jacobs will be looking at these files in more detail over the next few weeks to determine if that pipeline alignment was located in the field, or if it is just approximate.

Pipeline: Jacobs contacted BP and they informed us that they have divested all of their properties in Wyoming and no longer own the pipeline in the project vicinity. Their latest information shows that the line was sold to Plains All-American Pipeline in 2002. We have tried many times to get in touch with someone from Plains, but with no response. Jacobs will continue to try to get information from Plains, but in the meantime, will do a title search of the Amoco and Feland properties to locate existing easements associated with the pipeline.

2. Proposed Typical Sections

After the 5/16/13 meeting Jacobs received some additional comments on Typical Section 2 and the section has been updated to show curb and gutter, detachment, and sidewalk. This change was confirmed by the group. Additional cross section comments are as follows:

- Should the minimum bike lane width be 6 foot, not including the gutter pan? No, AASHTO 2012 states that the minimum is 5 foot measured from the face of a curb to the center of the bike lane line. (Figure 4-14) Section is ok as shown.

- Can the sidewalk be reduced to a minimum width of 5 foot? Yes, adjustment will be made to sections 2 and 3.

These comments will be incorporated as appropriate into the cross sections. [AI]

3. Traffic Projections

- Turning movement projections presented in the “Bar Nunn I-25 Interchange Feasibility Study” were used as the starting point to develop the 2035 Build traffic projections.
- The TransCAD model developed for the “Bar Nunn Sub-Area Traffic Study” was used to extrapolate the Build volumes to the intersections that were not included in the Interchange Study. The TransCAD model assumed more connections to Polaris than are being included in this study, so judgment was applied to reassign volumes to the envisioned access points to the arterial road.
- The TransCAD model was also used to estimate the volumes that would divert back to Salt Creek Highway vs. I-25 if Polaris Drive was not built (No-Build scenario). Depending on destinations, some motorists would find it faster to use I-25 rather than Salt Creek Highway. In other words, construction of Polaris Drive will attract some traffic from I-25 – not just from Salt Creek Highway.
- In examining the Build volumes, at the southern end of Polaris Drive, the Salt Creek/Polaris movements should be the through movements, with the north leg of Salt Creek Highway realigned to “tee” into the new arterial road.

4. Traffic Analysis

- Synchro was used to analyze the network under the 2035 No Build and Build scenarios. In both scenarios, existing roadway and traffic control configurations were used as the starting point. Polaris Drive analysis was started assuming a two-lane cross section with no auxiliary lanes and “stop” sign control on the side streets.
- Under both No Build and Build scenarios, extensive improvements will be needed at the new Westwind/I-25 interchange, including realignment of the Salt Creek Highway intersection further to the west. No additional improvements would be needed as a result of the construction of Polaris Drive. In fact, one less improvement (eastbound right turn lane on Westwinds at Salt Creek Drive) would be needed.
- More extensive improvements would be needed along Salt Creek Highway, from Westwind to Revenue, under the No Build scenario, including six traffic signals, separate turn lanes, and a second southbound through lane from Westwind to Howard. No additional improvements would be needed on this section of Salt Creek Highway as a result of the construction of Polaris Drive.
- Improvements will be needed at the Salt Creek Highway/20 & 26 Bypass interchange under both scenarios, including signal and turn lanes. An additional southbound through lane at both interchange intersections, plus a second southbound left turn lane (first would be needed in No Build) at the Bypass Eastbound Ramps intersection, with the construction of Polaris Drive. This is needed due to the attraction of some people from I-

Meeting Minutes – Polaris Dr. / Westside Blvd. Coordination Meeting

June 26, 2013

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25, resulting in higher traffic volumes through this Bypass interchange than under the No Build scenario. Jacobs will contact WYDOT to determine what improvements are being planning for this area.

- Up until full build out of Bar Nunn (assumed in the 2035 scenarios), only a two lane Polaris Drive cross section, with auxiliary lanes at intersections, will be needed. A four lane section is not envisioned to be needed under this forecast growth scenario. However, a second southbound through lane will be needed approaching the Salt Creek Highway intersection, running south through the 20/26 Bypass interchange intersections.
- Signals will be needed at all four Polaris Drive intersections, with turn lanes as specified in the Level of Service table.
- Jacobs will conduct additional analysis to determine at what percentage of the forecast 2035 traffic volumes the improvements at the 20/26 Bypass interchange will be needed. [AI]

5. Other

- The team briefly discussed the alternatives development content of the PEL. At the end of the alternatives screening process there may be one recommended alternative, or a range of alternatives. Also, Jeff Purdy will be looking for a clear ranking of the alternatives in the document which will be based on the pros and cons of each alternative, not just a general list of those pro's and con's. This expectation will be confirmed with Jeff ahead of preparation of this section of the document. [AI]
- Bar Nunn Town Hall is available September 19 from 3-4pm for a team meeting and 4-5pm for the Public Open House. Availability of the school for the evening public meeting cannot be determined yet as schools are out of session.
- Next coordination meeting will be set for July 18, 9 am.

Action Item Register

Action	Responsible Party	Due Date
Update cross sections 2 and 3	Jacobs	7/18/13
Confirm what Jeff Purdy would like to see in the alternatives development section of the PEL	Jacobs	7/18/13
Determine when 20/26 Bypass interchange improvements will be necessary.	Jacobs	7/18/13

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: July 15, 2013

Velvet Kuesel, Jacobs



MEETING AGENDA

Date: July 18, 2013
Time: 9:00 am
Location: Conference Call
Subject: Polaris/Westside Coordination Meeting

- 1) Introductions
- 2) Potential Alignments – Pipeline and Overhead Power Line Updates
- 3) PEL Report Outline
- 4) Next Steps / Public Meeting
- 5) Next Coordination Meeting

MEETING MINUTES

Polaris Dr. / Westside Blvd. PEL



Coordination Meeting
Wednesday July 18, 2013, 9:00 am

Location: Conference Call

Prepared by: Velvet Kuesel, Jacobs

Attendees :

Casper MPO:	Sally Kerpchar, Joy Clark
Town of Bar Nunn:	Bill Johnston
WYDOT:	None
FHWA:	None
Natrona County:	Trish Chavis, Mike Haigler
City of Casper:	None
Jacobs:	Chuck Huffine, Bob Quinlan, Velvet Kuesel, Heidi Schram

Copies: Attendees, Jeff Purdy, Kevin McCoy, Chuck Johnson, Chad Aagard, Robert Lewallen, File

[AI] = Action Item (Summarized at end of minutes)

Summary of Discussion:

1. General Discussion

- The proposed alignments have not been revised since Jacobs is still waiting on information about the existing pipeline. There has been communication with Plains All-American Pipeline, but no solid data has been received.
- After doing some research Jacobs determined that the time and cost associated with doing a title search on oil and gas property is extensive. Because of that, Jacobs will define the alignments based on the information receive from our contacts at Plains All-American Pipeline. The hope is that we get additional information from them early the week of the 22nd.
- The next team coordination meeting most likely won't occur until the week of August 12th. Waiting until then to discuss the revised alignments may not allow enough time to prepare for the September 19th public meet. Instead of waiting until the week of August 12th to present the revised alignments, Jacobs will send the information to the group and get feedback via e-mail. [AI]
- The P.E.L. outline has been updated and will be sent to the group for review. [AI]
- No additional changes are required on the cross sections.
- September 19th is the firm date for the Public Meetings. Jacobs will begin preparing the graphics for the meeting.

Meeting Minutes – Polaris Dr. / Westside Blvd. Coordination Meeting

July 18, 2013

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Action Item Register

Action	Responsible Party	Due Date
Update alignment alternatives	Jacobs	7/31/13
Distribute updated P.E.L. outline to the group	Jacobs	7/26/13

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: July 25, 2013**Velvet Kuesel, Jacobs**

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MEETING AGENDA

Date: August 15, 2013
Time: 9:00 am
Location: Conference Call
Subject: Polaris/Westside Coordination Meeting

- 1) Introductions
- 2) Potential Alignments Discussion
- 3) Public Meeting
 - a) Location/Time Confirmation
 - b) Project Team Meeting Prior
 - c) Meeting Format and Roles
 - d) Comment Forms (electronic version?)
 - e) Advertisement – who is doing what?
 - i) Flyer
 - ii) Press Release
- 4) Report
- 5) Next Coordination Meeting

MEETING MINUTES

Polaris Dr. / Westside Blvd. PEL

Coordination Meeting
Thursday, August 15, 2013, 9:00 am



Location: Conference Call

Prepared by: Chuck Huffine, Jacobs

Attendees :

Casper MPO:	Sally Kerpchar
Town of Bar Nunn:	Bill Johnston
WYDOT:	Chad Aagard
FHWA:	None
Natrona County:	Trish Chavis, Mike Haigler
City of Casper:	None
Jacobs:	Chuck Huffine, Bob Quinlan, Heidi Schram

Copies: Attendees, Jeff Purdy, Kevin McCoy, Chuck Johnson, Robert Lewallen, File

[AI] = Action Item (Summarized at end of minutes)

Summary of Discussion:

1. General Discussion

- Mike Haigler with Natrona County Road & Bridge has no problems with the alignment alternatives.
- Andy Road alignment – access and noise issues, may require relocation of transmission line running north/south.
- Segment 3 – Blue alignment takes out a portion of the substation. Chad Aagard suggested a roundabout at Salt Creek/Polaris.
- Bill Johnson – have an alignment in Segment 2 that is further west which may allow more development – further away from the pipeline easement.
- Move the blue alignment in Segment 2 west of the purple alignment but about 300 feet. Put in a new orange alignment half way between existing dirt roads to maximize development space.
- The Public Meeting will be on September 19th. 3-4 pm will be a discussion with the Technical Advisory Committee. 4-5 pm will be Public Meeting #1 in the Bar Nunn Council Chambers. 6:30-8:00 will be Public Meeting #2 at Bar Nunn Elementary School gym.
- It will be an open house format with display boards. Chuck Huffine to do an introductory and summary presentation first. It will include a small background and history of the project.
- Send Velvet's e-mail addresses for Pacific Power and the pipeline for notification of the public meeting.
- Next conference call will be the week of September 3rd.

Meeting Minutes – Polaris Dr. / Westside Blvd. Coordination Meeting

August 15, 2013

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Action Item Register

Action	Responsible Party	Due Date
Set-up and hold public meetings	Jacobs	9/19/13
Send utility contact info to Sally	Jacobs	8/30/13

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: August 22, 2013

Chuck Huffine, Jacobs

J:_Transportation\WVXX5500_Westside Blvd. Casper\Project Management\Meeting Minutes\PolarisDr_Minutes 08-15-13.docx



MEETING AGENDA

Date: September 12, 2013
Time: 9:00 am
Location: Conference Call
Subject: Polaris/Westside Coordination Meeting

- 1) Introductions
- 2) Public Meeting
 - a) Location/Time Confirmation
 - b) Attendees (name tags)
 - c) Project Team Meeting Prior
 - d) Meeting Format and Roles
 - e) Preferred Display Format
- 3) Pros and Cons
- 4) Report
- 5) Next Coordination Meeting

**MEETING MINUTES
Polaris Dr. / Westside Blvd. PEL**



**Coordination Meeting
Thursday, September 12, 2013, 9:00 am**

Location: Conference Call

Prepared by: Chuck Huffine, Jacobs

Attendees:

Casper MPO:	Joy Clark
Town of Bar Nunn:	Bill Johnston
WYDOT:	None
FHWA:	None
Natrona County:	Mike Haigler
City of Casper:	None
Jacobs:	Chuck Huffine, Bob Quinlan

Copies: Attendees, Jeff Purdy, Kevin McCoy, Chuck Johnson, Chad Aagard, Robert Lewallen, Mike Haigler, Andrew Nelson, File

Summary of Discussion:

1. General Discussion

- The Public Meeting will be on September 19th. 3-4 pm will be a discussion with the Technical Advisory Committee. 4-5 pm will be Public Meeting #1 in the Bar Nunn Council Chambers. 6:30-8:00 will be Public Meeting #2 at Bar Nunn Elementary School gym.
- It will be an open house format with display boards. Chuck Huffine to do an introductory and summary presentation first. It will include a small background and history of the project in Powerpoint. Team will be available to ask questions on a one-on-one basis after the presentation, with display boards available.
- Jacobs to supply pre-printed nametags for the committee, with blank nametags for other attendees to use.
- There was a discussion on the pros and cons of the various alignment alternatives. In Segment 2, the Andy Road alignment (Alignment 1) will present access and neighborhood impact problems, plus will limit land for potential future development. In Segment 3, Alignment A has significant sight distance issues at the intersection with Salt Creek Highway which would require reconstruction and realignment. These alternatives should likely be screened out.
- Work on the draft report has begun.
- Conference calls in the future will be scheduled on an as-needed basis.

If comments or corrections to these minutes are not received by the undersigned within 7 days of the Issue Date, the minutes as published will be considered to accurately reflect the meeting.

Issue Date: September 17, 2013
Chuck Huffine, Jacobs



APPENDIX B PUBLIC INVOLVEMENT

MEETING AGENDA

Date: February 28, 2013
Time: 1:00 pm
Location: Bar Nunn Town Hall – Council Room
Subject: Westside Blvd. Study Kick-off Meeting

- 1) Introductions
- 2) Define Roles and Communication Methods
- 3) Project Goals and Objectives
- 4) Study Process
 - a) Planning and Environmental Linkage (PEL) Process
 - i) What is a PEL?
 - ii) PEL Requirements/Procedures
 - b) Public Involvement
 - c) MAP-21 Performance Measures
- 5) Project Schedule
- 6) Corridor Discussion
 - a) History
 - b) Vision and Opportunities
 - c) Issues and Constraints
- 7) Data
 - a) Previous Studies and Plans
 - b) Available Data
 - i) Survey/ROW
 - ii) Traffic
 - iii) Road
 - iv) Environmental
 - c) Data Needs
 - d) Design Logistics
 - i) CAD program/standards
- 8) Next Meeting

What is a PEL?

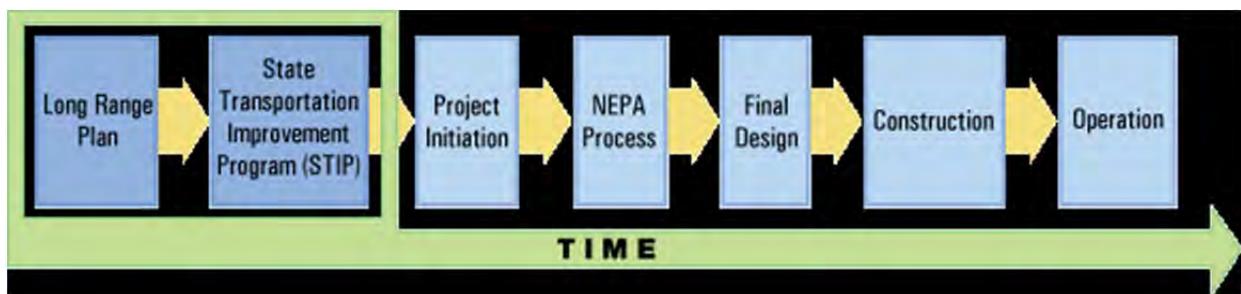
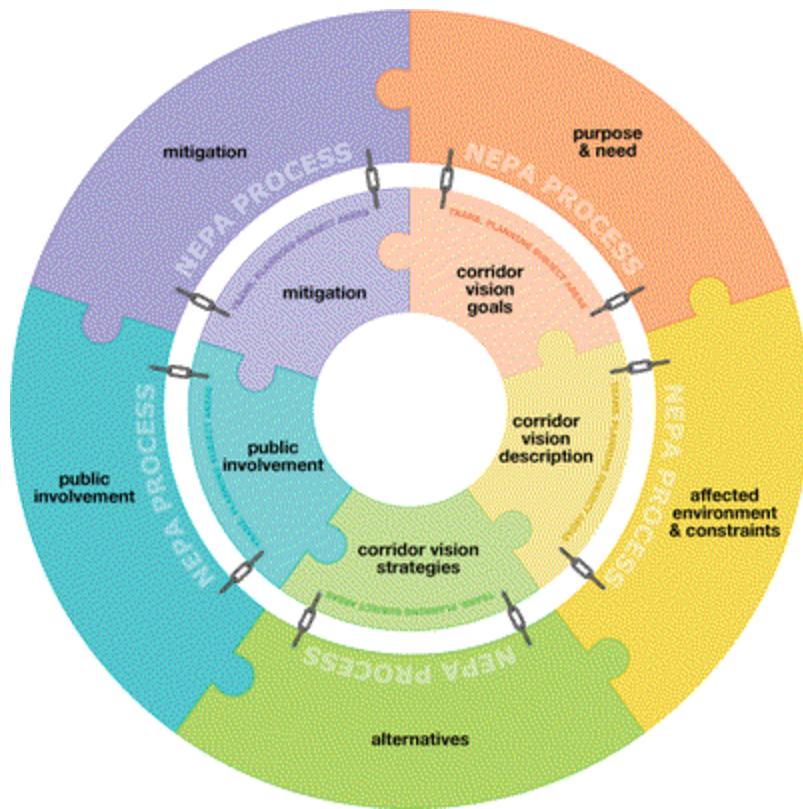
PEL stands for “Planning Environmental Linkage”. It is an approach to transportation decision-making that considers environmental, community, and economic goals early in the planning stage, and carries them through project development, design and construction. It is a process developed by FHWA.

- PEL is a process with a variety of applications
 - Corridor Feasibility Studies
 - Get Projects Added to the STIP and Funded
- Not a National Environmental Policy Act (NEPA) process, but elements can be carried forward into NEPA
 - Purpose and Need
 - Alternatives Screening
 - Public Involvement
- Early involvement of resource agencies and public communities
- Requires comprehensive documentation to minimize reevaluation during the NEPA process
 - PEL Study proceeds and serves as a basis for any future environmental documents prepared in compliance with NEPA
 - PEL Questionnaire

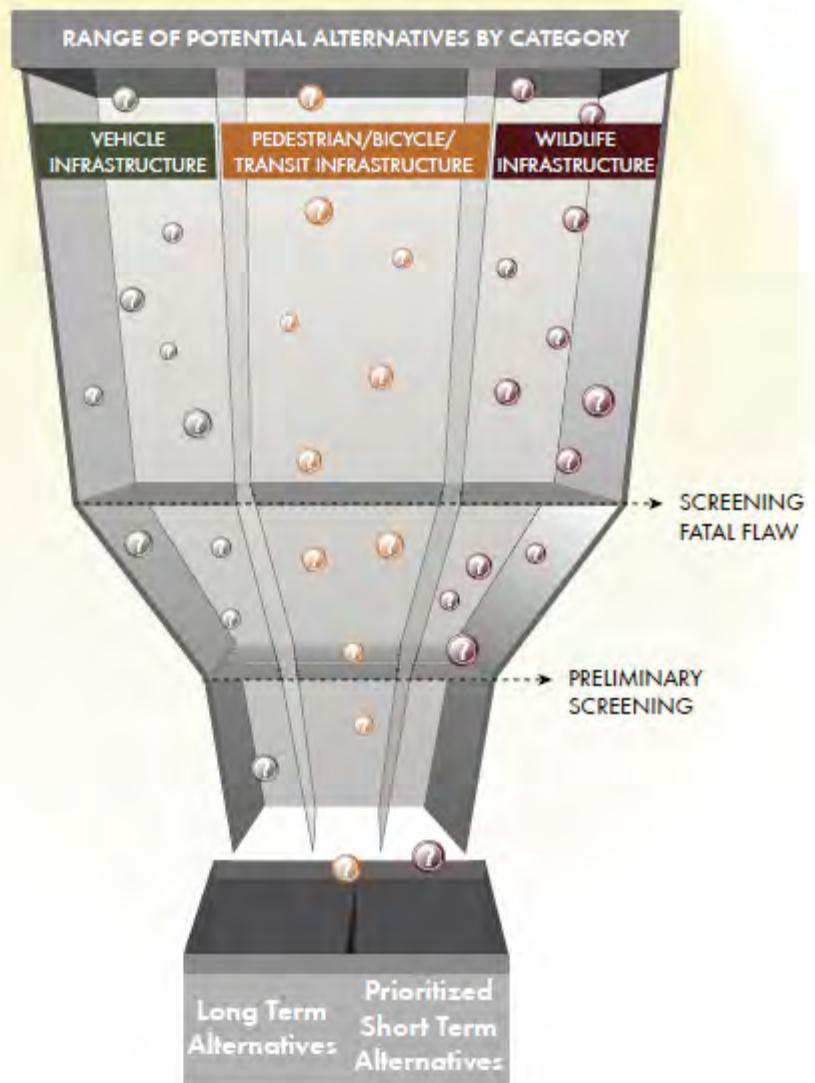
Why Do a PEL?

- Long-range planning develops the "purpose and need" and foundation for alternatives analysis. Both are required by NEPA.
 - Reduces the amount of time in the NEPA process required to develop purpose and need and alternatives screening criteria;
 - Multiple projects in the corridor may use the same purpose and need and criteria for screening alternatives.
- Provides clarity for public input in framing purpose and need/criteria for local agencies, planning partners and general public.
 - Engages interested parties on what public involvement is intended to achieve early in the process;
 - Enhances public understanding of the overall process;
 - Keeps public interested in the process.
- Corridors at the planning stage include discussion and involvement that will be useful later in NEPA process.
 - Engages policy makers and the public early in transportation discussions and reduces potential for later conflicting goals by
 - Identifying transportation system deficiencies
 - Identifying corridor functions
 - Developing corridor strategies
 - Developing mitigation strategies

- Engages resource agencies early in discussions, reducing potential for later conflicting goals, by
 - Identifying resource agency needs
 - Developing environmental data early
 - Documenting all steps
 - Encouraging early, proactive consultation
- Eliminates duplication of planning and NEPA processes by using environmental data acceptable in the NEPA process, documenting decisions and processes, and engaging resource agencies early through the use of:
 - One cohesive planning and NEPA process;
 - Resource agency decisions in planning process that are reflected in the NEPA and permitting processes;
 - Cooperation/consultation among all parties
- Supports federal transportation guidance and federal NEPA law that encourage building on decisions and information developed during the planning process.
- Develops a process for meeting new SAFETEA-LU requirements for the planning process, including:
 - New environmental mitigation activities/areas
 - New consultation requirements
- Encourages environmental stewardship
 - Involves transportation planning groups in environmental stewardship activities;
 - Provides early opportunity to avoid potential environmental harms.
- Identifies fatal flaws early
 - Reduces time and money spent on corridors/projects where environmental resources may create fatal flaws in project design or implementation.
- Improves project delivery
 - Reduces time spent on project environmental reviews;
 - Reduces costs on project environmental reviews;
 - Develops more accurate project cost forecasting through the use of:
 - Better information on potential environmental issues;
 - Better information on potential resource agency needs.
- Improves Transportation Management Area regional planning project oriented process:
 - Provides better opportunity for network management as opposed to project list development;
 - Results in more accurate project cost forecasting;
 - Shifts focus to corridor deficiencies, which improves potential for actually addressing problems;
 - Allows projects to be selected with the best benefit to the corridor.



CORRIDOR VISION



Performance Management

Program purpose

A key feature of MAP-21 is the establishment of a performance- and outcome-based program. The objective of this performance- and outcome-based program is for States to invest resources in projects that collectively will make progress toward the achievement of the national goals.

National policy in support of performance management

“Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment of Federal transportation funds by refocusing on national transportation goals, increasing the accountability and transparency of the Federal-aid highway program, and improving project decision-making through”

National performance goals

Establishes national performance goals for the Federal-aid highway program in seven areas:

Goal area	National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

Performance measures

Requires the Secretary, in consultation with States, metropolitan planning organizations (MPOs), and other stakeholders, to establish performance measures in the areas listed below. Provides for **USDOT to establish such measures within 18 months of enactment**, and prohibits DOT from establishing additional performance measures.

- Pavement condition on the Interstate System and on remainder of the National Highway System (NHS)
- Performance of the Interstate System and the remainder of the NHS
- Bridge condition on the NHS
- Fatalities and serious injuries—both number and rate per vehicle mile traveled--on all public roads
- Traffic congestion
- On-road mobile source emissions
- Freight movement on the Interstate System

Performance targets

- ***Setting of State targets.*** Within one year of the DOT final rule on performance measures, requires States to set performance targets in support of those measures. States may set different performance targets for urbanized and rural areas.
To ensure consistency each State must, to the maximum extent practicable –
 - coordinate with an MPO when setting performance targets for the area represented by that MPO; and
 - coordinate with public transportation providers when setting performance targets in an urbanized area not represented by an MPO.
- ***Setting of MPO targets.*** Within 180 days of States or providers of public transportation setting performance targets, requires MPOs to set performance targets in relation to the performance measures (where applicable). To ensure consistency, each MPO must, to the maximum extent practicable, coordinate with the relevant State and public transportation providers when setting performance targets.
- ***Plans requiring targets.*** Requires the following plans to include State targets (and/or MPO targets, as appropriate):
 - Metropolitan transportation plans.
 - Metropolitan Transportation Improvement Program (TIP).
 - Statewide Transportation Improvement Program (STIP).
 - State asset management plans under the National Highway Performance Program (NHPP).
 - State performance plans under the Congestion Mitigation and Air Quality Improvement program.
 - Additionally, State and MPO targets *should* be included in Statewide transportation plans.

Preliminary Schedule

Westside Blvd. Study

Tasks	2013										
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
1. Review/Project Management											
A. Review Previous Studies											
B. Review Existing Data											
C. Initial Kickoff Meeting	★										
D. Coordination Calls											
E. Project Management Tasks	●	●	●	●	●	●	●	●	●	●	
2. Purpose and Need											
A. Finalize PEL Process											
B. Define Purpose and Need											
C. Define Performance Measures											
D. Define Linkage to Regional Plans											
3. Conceptual Planning											
A. Data Collection											
B. Base Concept Development			★								
C. Alternative Development											
D. Concept Review and Finalization							★				
E. Cost Estimates											
4. Projected Traffic Volumes											
A. WYDOT Modeling Discussion	★										
B. Develop Sub-Area and Calibrate											
C. Traffic Projections				★							
5. Roadway Network/Alternatives Analysis											
A. Alternatives Screening Process											
B. Concept Feasibility Assessment											
C. Alternatives Analysis											
6. Environmental Evaluation											
A. Review Environmental Data											
B. Potential Environmental Impacts							★				
7. Public Involvement									★		
8. Final Products											
A. Draft Study Report									▲		
B. Final Study Report										★▲	
C. Final Deliverables											

- Monthly Invoices and Project Status Reports
- ★ Technical Group Meetings
- ★ Public Open House/Town & MPO Presentations
- ★ Coordination Calls
- ▲ Submit Draft and Final Reports

JACOBS



Federal Highway Administration

Planning/Environmental Linkages Questionnaire

This questionnaire is intended to act as a summary of the Planning process and ease the transition from planning to a National Environmental Policy Act (NEPA) analysis. Often, there is no overlap in personnel between the planning and NEPA phases of a project, so consequently much (or all) of the history of decisions made in the planning phase is lost. Different planning processes take projects through analysis at different levels of detail. Without knowing how far, or in how much detail a planning study provided, NEPA project teams are not aware of and may often re-do work that has already been done. This questionnaire is consistent with the 23 CFR 450 (Planning regulations) and other FHWA policy on Planning and Environmental Linkage (PEL) process.

The Planning and Environmental Linkages study (PEL Study) is used in this questionnaire as a generic term to mean any type of planning study conducted at the corridor or subarea level which is more focused than studies at the regional or system planning levels. Many states may use other terminology to define studies of this type and are considered to have the same meaning as a PEL study.

At the inception of the PEL study, the study team must decide how the work will later be incorporated into subsequent NEPA efforts. A key consideration is whether the PEL study will meet standards established by NEPA regulations and guidance. One example is the use of terminology consistent with NEPA vocabulary (e.g. purpose and need, alternatives, affected environment, environmental consequences).

Instructions: These questions should be used as a guide throughout the planning process, not just answered near completion of the process. When a PEL study is started, this questionnaire will be given to the project team. Some of the basic questions to consider are: "What did you do?", "What didn't you do?" and "Why?". When the team submits a PEL study to FHWA for review, the completed questionnaire will be included with the submittal. FHWA will use this questionnaire to assist in determining if an effective PEL process has been applied before NEPA processes are authorized to begin. The questionnaire should be included in the planning document as an executive summary, chapter, or appendix.

1. Background:

- a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)
- b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan or transportation improvement program years)?
- c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?



- d. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)
 - e. Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.
 - f. Are there recent, current or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?
2. Methodology used:
 - a. What was the scope of the PEL study and the reason for completing it?
 - b. Did you use NEPA-like language? Why or why not?
 - c. What were the actual terms used and how did you define them? (Provide examples or list)
 - d. How do you see these terms being used in NEPA documents?
 - e. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.
 - f. How should the PEL information be presented in NEPA?
 3. Agency coordination:
 - a. Provide a synopsis of coordination with federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.
 - b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?
 - c. What steps will need to be taken with each agency during NEPA scoping?
 4. Public coordination:
 - a. Provide a synopsis of your coordination efforts with the public and stakeholders.
 5. Purpose and Need for the PEL study:
 - a. What was the scope of the PEL study and the reason for completing it?
 - b. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.
 - c. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?
 6. Range of alternatives: Planning teams need to be cautious during the alternative screen process; alternative screening should focus on purpose and need/corridor vision, fatal



flaw analysis and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the purpose and need/corridor vision cannot be considered viable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria and screening process, including:

- a. What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)
 - b. How did you select the screening criteria and screening process?
 - c. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws)
 - d. Which alternatives should be brought forward into NEPA and why?
 - e. Did the public, stakeholders, and agencies have an opportunity to comment during this process?
 - f. Were there unresolved issues with the public, stakeholders and/or agencies?
7. Planning assumptions and analytical methods:
- a. What is the forecast year used in the PEL study?
 - b. What method was used for forecasting traffic volumes?
 - c. Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long-range transportation plan?
 - d. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs and network expansion?
8. Environmental resources (wetlands, cultural, etc.) reviewed. For each resource or group of resources reviewed, provide the following:
- a. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?
 - b. Is this resource present in the area and what is the existing environmental condition for this resource?
 - c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?
 - d. How will the data provided need to be supplemented during NEPA?
9. List environmental resources you are aware of that were not reviewed in the PEL study and why? Indicate whether or not they will need to be reviewed in NEPA and explain why.
10. Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where it can be found.



11. Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.
12. What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?
13. Are there any other issues a future project team should be aware of?
 - a. Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

Meeting: Westside Kick-Off
Date: 2-28-13

NAME	JURISDICTION & EMAIL
JERRY PETTY	BAN Nunn
BILL JOHNSTON	" "
Carol Pendley C/T	" "
RICH FAIRSERVIS	Granite Peak
DAN Gwertzman	" "
JEFF PURDY	FHWA
Mike Coleman	Town of Mills
MARREDYCE WILSON	Town of Mills
SUSAN DYNARESKI	Casper KOA sdynareski@casperkota.com
CHARL AFGARD	WSDOT charl.afgard@wyo.gov.
JASON FOX	Sunset Car Wash
CAROL CRUMP	CITIZENS ADVISORY
BILL EDWARDSON	CHEBA
HEIDI SCHRAM	Jacobs heidi.schram@jacobs.com
BOBBY QUINNAN	Jacobs Engineering Group robert.guylan@jacobs.com
CHUCK HUFFINE	Jacobs Engineering Group chuck.huffine@jacobs.com

Meeting: Westside Kick-Off
Date: 2-28-13

NAME	JURISDICTION & EMAIL
Andrew Bedner	CITY OF CASPER
Brian Lockwood	CITY OF CASPER - Water Dist
Julina Lopez	CITY OF CASPER - Sewer
Brian Sunwall	brian.sunwall@mtprpwr.com Motor Power Kenworth -
Bruce Sunwall	b.sunwall@mtprpwr.com Motor Power Kenworth -
Forest Chadwick	Natrona Co. Commission
Jared Serves - Wardwell Water	Wardwell Water - Wardwell@wyoming.com
Chuck Johnson	TOWN OF BAR Nunn
Don Dydis	CHECK
Josh Brown	Bar Nunn
John Blase	BAR NUNN

FINAL MEETING MINUTES

Westside Blvd. PEL

Project Kickoff Meeting

Thursday, February 28, 2013

1:00 PM to 2:30 PM

Location: Bar Nunn Town Hall

Prepared by: Chuck Huffine, Jacobs

Attendees:

Casper MPO:	Sally Kerpchar, Constance Lake
Town of Bar Nunn:	Jerry Petty, Bill Johnston, Carol Pendley, Chuck Johnson
WYDOT:	Kevin McCoy, Chad Aagard
FHWA:	Jeff Purdy
Natrona County:	Forest Chadwick
City of Casper:	Andrew Beamer, Brian Lockwood, Zulima Lopez
Jacobs:	Chuck Huffine, Bob Quinlan, Heidi Schram
Citizens:	Rich Fairservis, Dan Guerettman, Mike Coleman, Marrdyce Wilson, Susan Dynarski, Jason Fox, Carol Crump, Bill Edwards, Brian Sunwall, Jared Serves, Don Daurs, Josh Brown, John Blase

Copies: Casper MPO, File

Summary of Discussion:

1. Introductions – everyone introduced themselves and who they represent.
2. Define Roles and Communication Methods
 - a. E-mail is the preferred method of communication
 - b. Most meeting will be by conference call
 - c. Sally Kerpchar and Chuck Huffine will be the main project contacts
 - d. Sally will form a Project Advisory Team to guide the project and review submissions.
 - e. Meeting handouts will be sent electronically to Sally.
3. Project Goals and Objectives
 - a. The primary goal of this study is to complete the PEL (Planning Environmental Linkage) process to enable the Westside Blvd. project to be programmed on the STIP (State Transportation Improvement Plan) and be set-up to complete the NEPA process.
 - b. Objectives include meeting FHWA guidelines; coordinating with WYDOT, Natrona County, Bar Nunn, utilities, and other key entities; engaging the public; and completing the study within 9 months.
4. Study Process
 - a. Planning and Environmental Linkage (PEL) Process – there was a brief discussion on what a PEL is, why it is the best process for this project, and what the basic requirements and procedures are.
 - b. Public Involvement – there will be a public open house near the end of the project for the public to view the alternatives and discuss the project.

Meeting Minutes – Westside Blvd. Kickoff

February 28, 2013

Page 2

- c. MAP-21 Performance Measures – the performance measures must first be set by the USDOT, then the State, then the MPO. This will take over 18 months to complete. Project will need to demonstrate how they will meet the established performance measures, but this phase of the project will be completed before they are set.
 - d. Purpose and needs statement is very important – defines the need and the scope of the alternatives
5. Project Schedule – a draft project schedule was handed out and reviewed. The study will be completed within 9 months, but the project team will look for ways to reduce that schedule, if possible.
6. Corridor Discussion – all attendees participated in an active discussion on the project, which included the history, issues and constraints, ideas for alternatives, and their concerns. The following were some key points and information:
- a. WYDOT studied Salt Creek Highway and it has major problems with pavement condition, a lack of shoulders, many access points, not enough right-of-way to be able to make significant improvements, and nowhere to divert traffic during construction.
 - b. Salt Creek Highway is the only road in and out of the community to the south. A secondary means of access is needed to reduce congestion, emergency access, and an alternative in case Salt Creek Hwy is closed.
 - c. WYDOT has improvement plans from the Routes 20/26 interchange to the truck inspection area. There are no plans for improvements north of there.
 - d. The new arterial would have a section that is in Natrona County's jurisdiction.
 - e. An interchange has been discussed with I-25 at Westwind.
 - f. An Amoco Gas (Standard Oil) pipeline that runs along the dirt road (possible new arterial alignment) was replaced a few years ago because the old one was leaking (possible environmental issue).
 - g. There is no set alignment for the new arterial.
 - h. Study will examine the entire arterial (with a goal of clearing the entire facility through NEPA), although there is only funding for the Bar Nunn portion. Need to make sure NEPA addresses logical termini to avoid any appearance of segmentation (although the project could be constructed in phases).
 - i. Project must have “independent utility”, meaning it must be able to function on its own, without further construction of adjoining segments.
 - j. There are no plans for annexation related to this new arterial.
 - k. City water on Salt Creek and I-25 (would cross at southern end of arterial if connected).
 - l. Rocky Mountain Power has overhead line expansion plans to the north, including a new substation just west of the proposed connection to Westwind.
 - m. There is an 8” steel pipe running parallel to the old runway to the south.
 - n. Look into discretionary State Transportation Funds for developing the southern end of the corridor, as it assist them with implementing Salt Creek Highway improvements.

Meeting Minutes – Westside Blvd. Kickoff

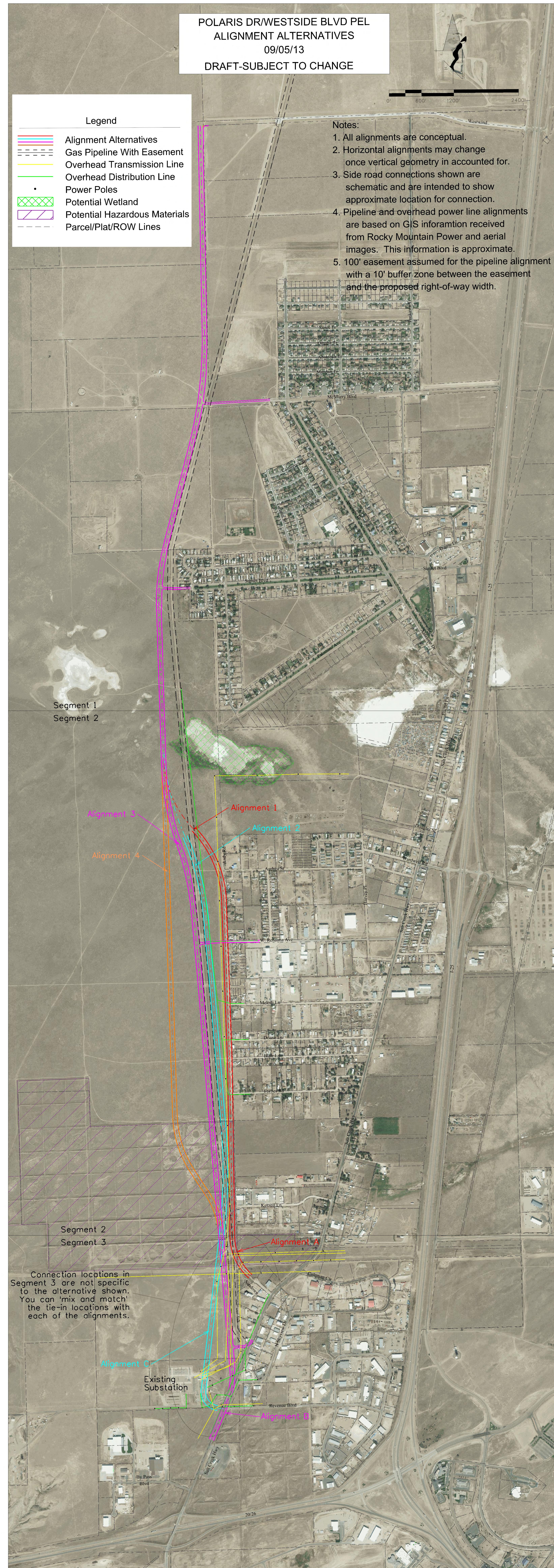
February 28, 2013

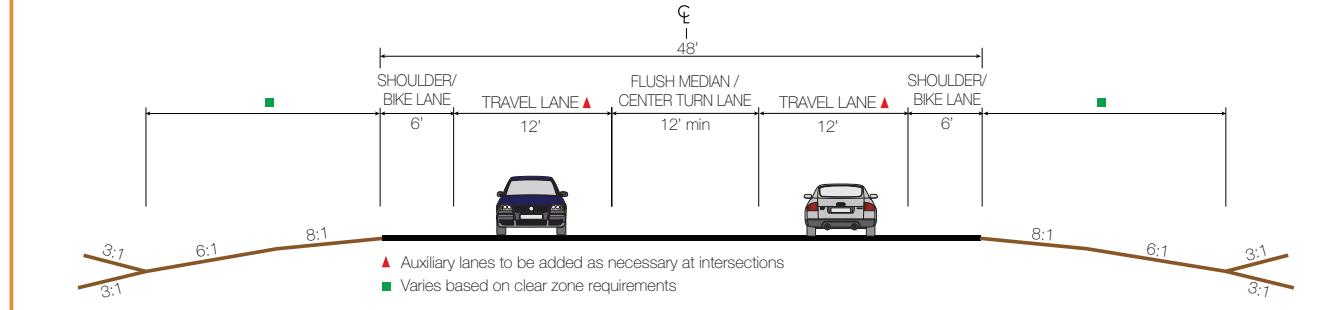
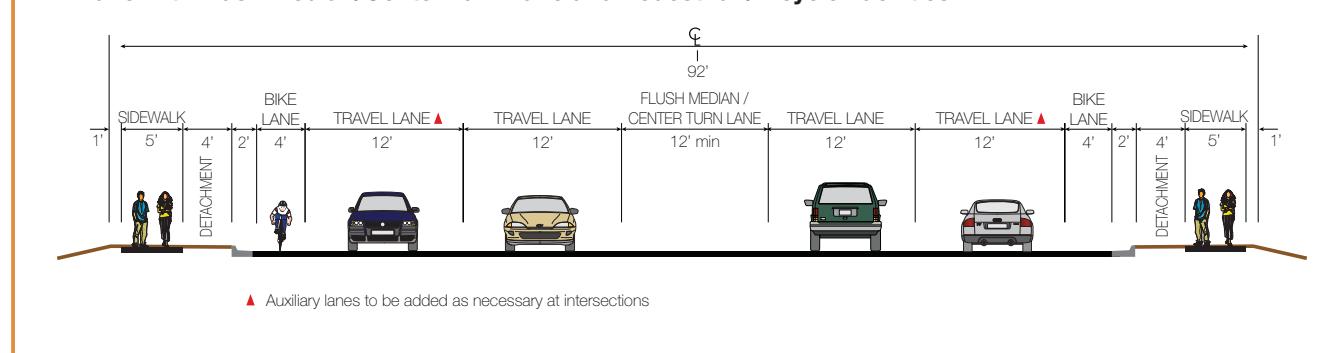
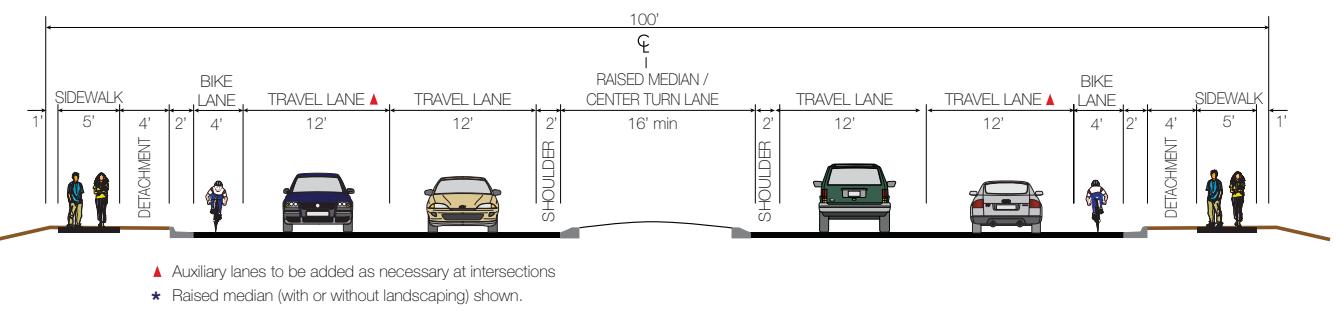
Page 3

- o. Citizen recommended a left turn lane at the Wardwell/Howard off ramp to accommodate increased traffic.
 - p. Additional growth will take place within 20-30 years in response to the planned development of an intermodal (rail/truck/air) facility northeast of the Natrona County Airport. This may lead to the extension of Westwind Road, although there are currently no plans in place.
 - q. Don't look for funding from the Casper Area Economic Development Authority (no money available).
7. Data – a short discussion took place on needed data and where Jacobs can turn to, to find additional information.
- a. Go to geosmart.casperwy.gov for GIS data. They are still working on the zoning layer – updating future land use maps..
 - b. Dallas at Bar Nunn can be called for GIS – (307) 262-8897
 - c. Chuck Johnson has water and sewer knowledge – (307) 237-7269.
 - d. Sally to send list of machine and turning movement traffic counts to Chuck.
 - e. Bar Nunn has some land use projections, but probably will need to discuss with the MPO, Bar Nunn and Natrona County to make a “best guess” at a 2035 land use scenario. Jacobs to review existing plans and make a “first try” at the 2035 scenario.
 - f. Sally to try to get the TransCAD model used for the Bar Nunn Subarea Traffic Study.
 - g. WYDOT standards will be used.
 - h. Wardwell has GPS data for its existing facilities.
8. The next meeting will be a conference call to discuss the Purpose and Needs statement.

Action Items

1. Jacobs will coordinate with all involved entities to obtain the latest existing data, plans and studies for traffic, right-of-way, roadways, utilities, drainage, land use, and other areas.
2. Jacobs to develop a Purpose and Needs statement and hold a conference call with Casper MPO and others, as needed, to discuss.



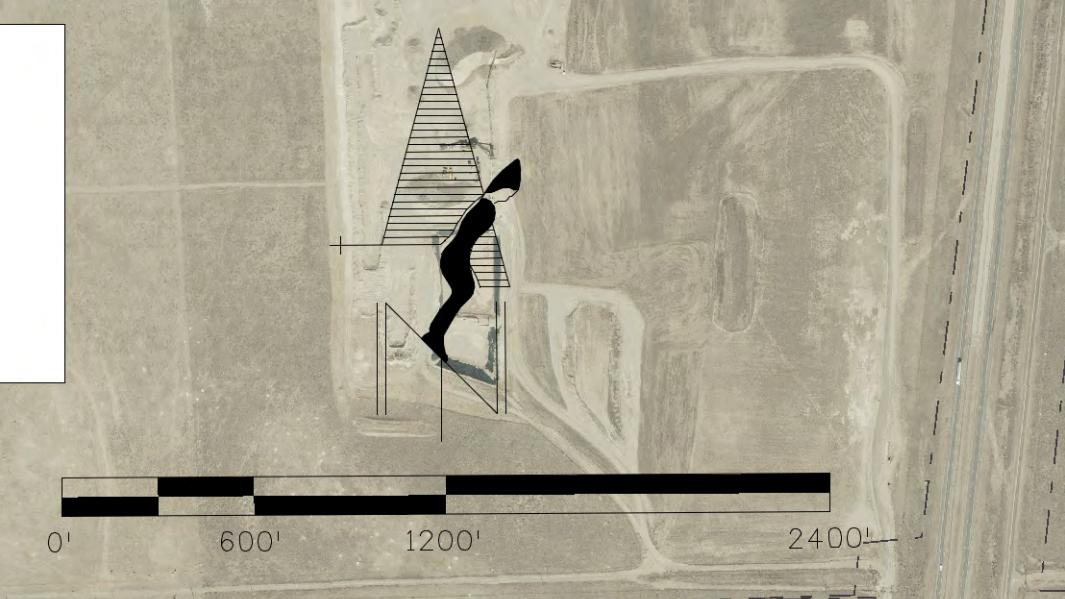
**SECTION 1****2-Lane with Flush Median / Center Turn Lane and Bicycle Facilities****SECTION 2****4-Lane with Flush Median/Center Turn Lane and Pedestrian/Bicycle Facilities****SECTION 3****4-Lane with Raised Median* / Center Turn Lane and Pedestrian / Bicycle Facilities**

POLARIS DR/WESTSIDE BLVD PEL

ALIGNMENT ALTERNATIVES

09/05/13

DRAFT-SUBJECT TO CHANGE

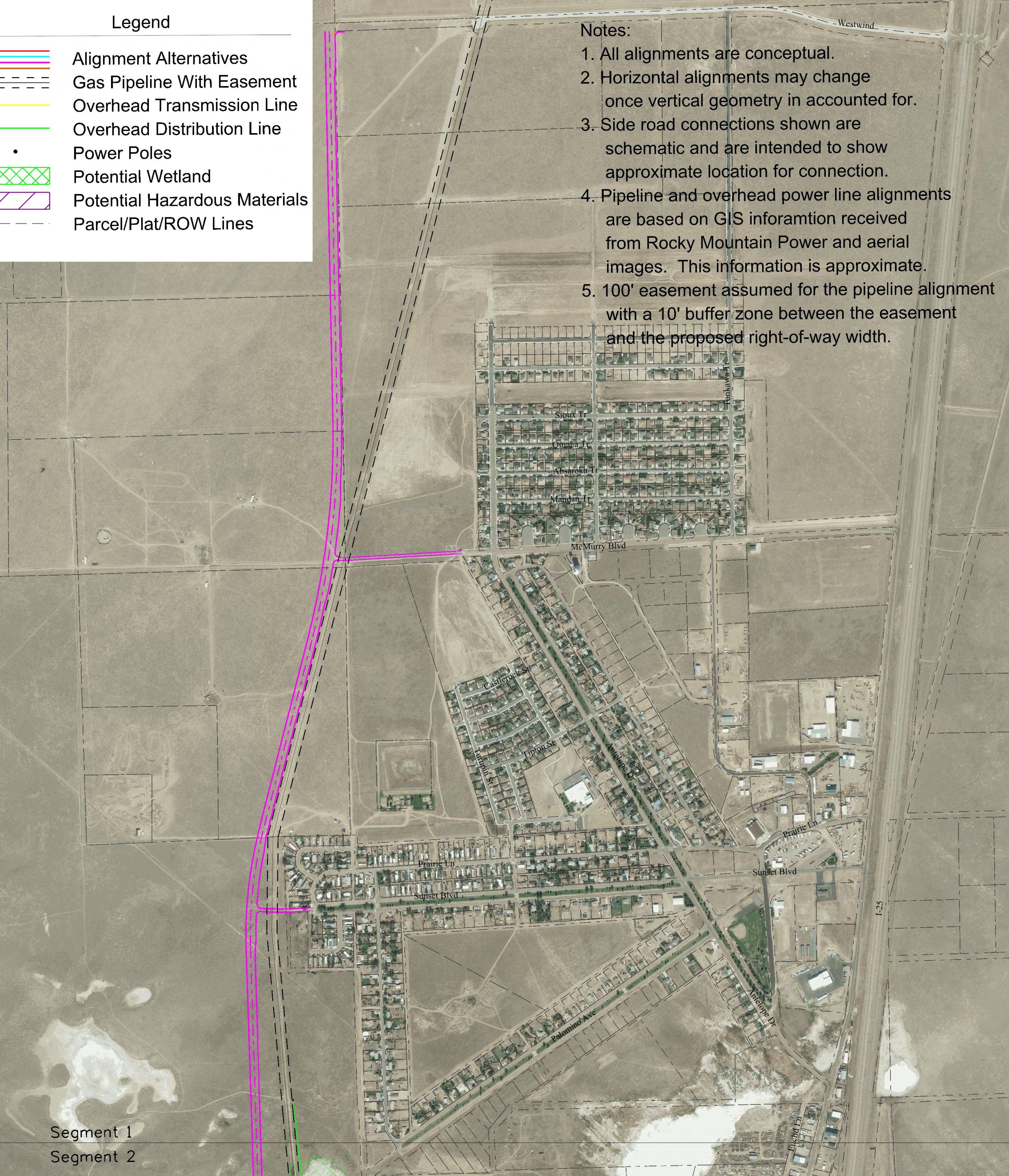


Legend

- Alignment Alternatives
- Gas Pipeline With Easement
- Overhead Transmission Line
- Overhead Distribution Line
- Power Poles
- Potential Wetland
- Potential Hazardous Materials
- Parcel/Plat/ROW Lines

Notes:

1. All alignments are conceptual.
2. Horizontal alignments may change once vertical geometry is accounted for.
3. Side road connections shown are schematic and are intended to show approximate location for connection.
4. Pipeline and overhead power line alignments are based on GIS information received from Rocky Mountain Power and aerial images. This information is approximate.
5. 100' easement assumed for the pipeline alignment with a 10' buffer zone between the easement and the proposed right-of-way width.



Segment 1

Segment 2

Segment 1
Segment 2

Alignment 3

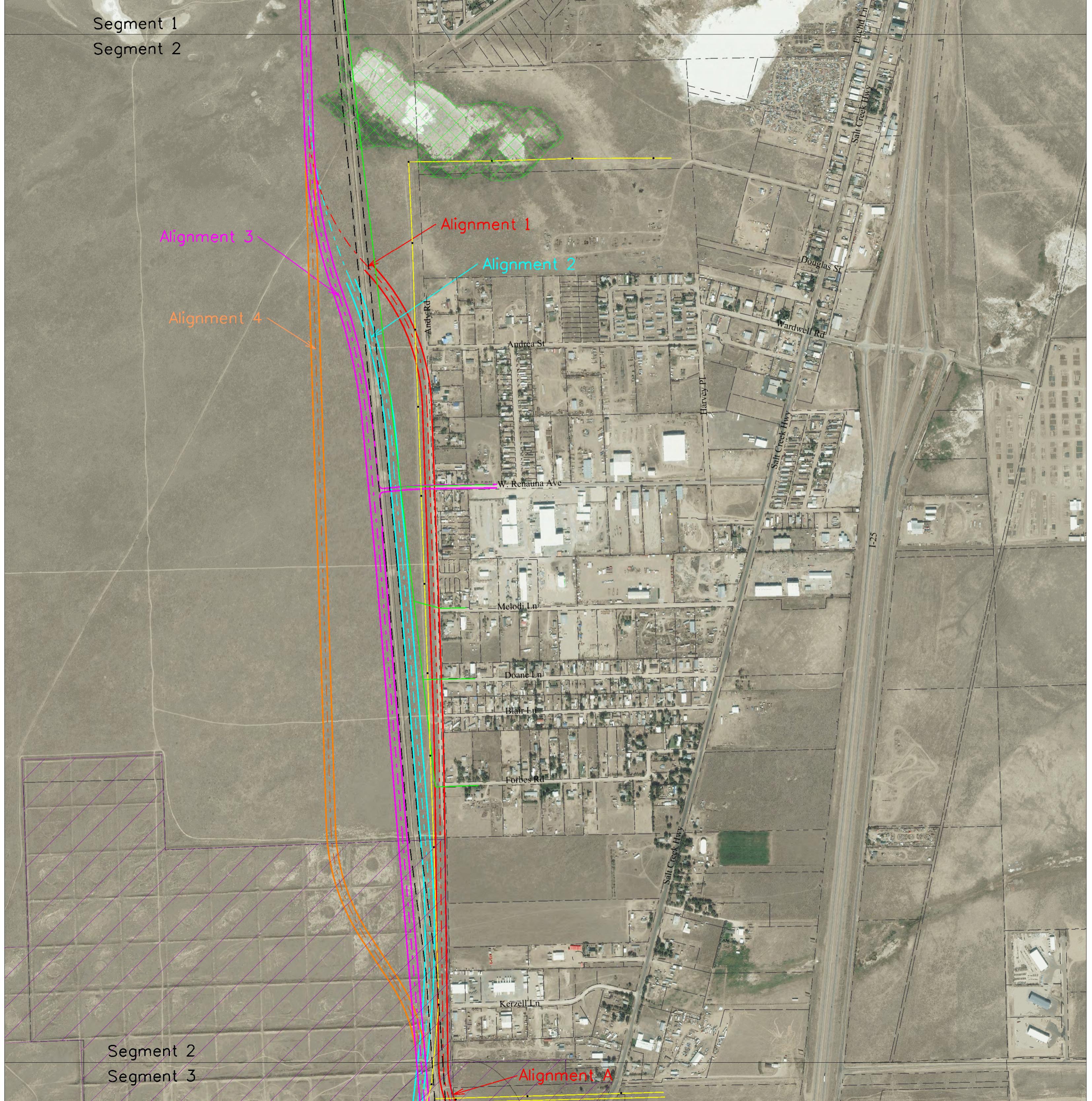
Alignment 4

Alignment 1

Alignment 2

Segment 2
Segment 3

Alignment A



Segment 2
Segment 3

Connection locations in Segment 3 are not specific to the alternative shown. You can 'mix and match' the tie-in locations with each of the alignments.

Alignment A

Alignment C

Existing Substation

Alignment B



Polaris Drive/Westside Blvd.

Planning and Environmental Linkage (PEL) Study Public Meeting – 9/19/13

PURPOSE: Safely and Efficiently Accommodate Current and Future Traffic Volumes, and Improve Regional Mobility and Access

NEEDS:

- Provide an Arterial Connecting Bar Nunn and Casper
- Provide Alternative Access to Bar Nunn
- Improve Regional Mobility
- Accommodate Existing and Future Travel Demand
- Accommodate Multi-Modal Transportation
- Improve Traffic Safety

ALTERNATIVES:

- No Build
- Improve Salt Creek Highway
- Other Build Alternatives
- Polaris Drive Alternatives
 - Three Segments
 - Segment A (Northern)
 - Segment B (Middle)
 - Segment C (Southern)
 - Cross Sections



SCREENING:

- No Build – Must Stay In
- Improve Salt Creek Highway
- Segment 2
 - Alternative A – Andy Road
- Segment 3
 - Alternative 1 - Sundown

Questions?

*Andrew Nelson, Casper MPO Supervisor
anelson@cityofcasperwy.com*

*Chuck Huffine, Jacobs – Project Manager
chuck.huffine@jacobs.com*

NEXT STEPS:

- PEL Report – approval by WYDOT and FHWA
- Funding/Programming
- Full NEPA Process
- Design
- Construction

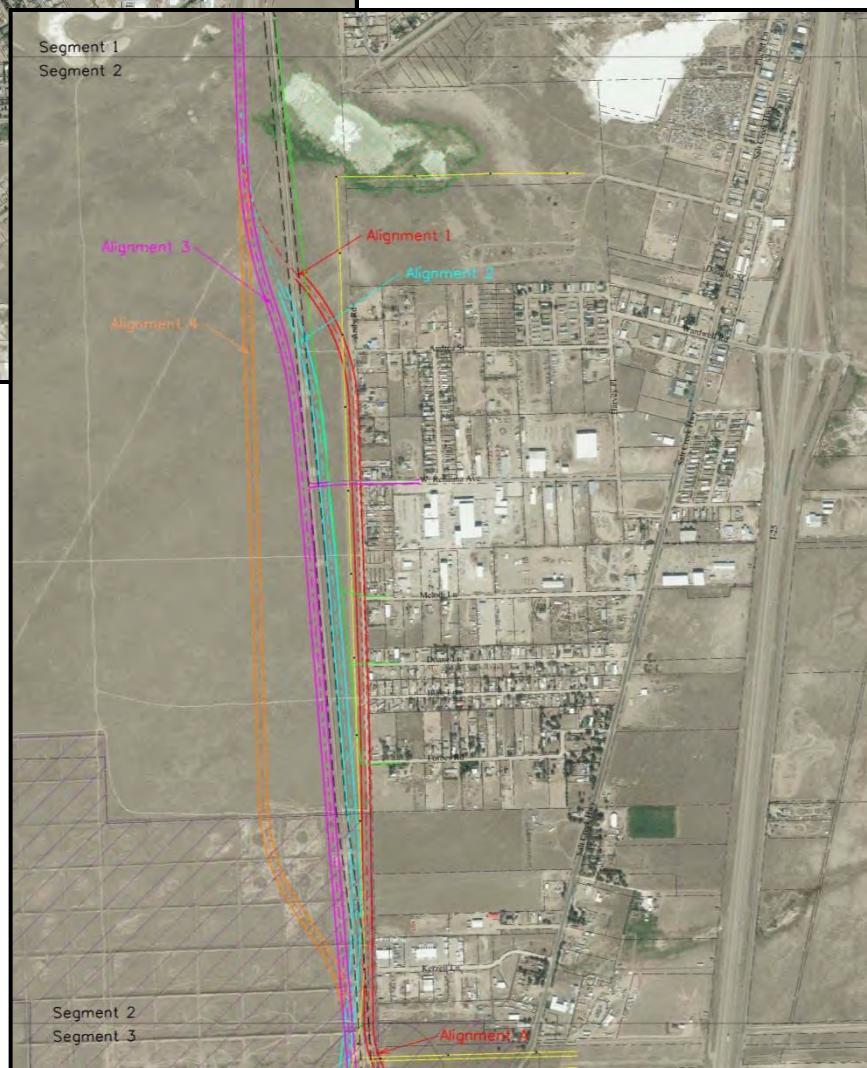
POLARIS DR/WESTSIDE BLVD PEL
ALIGNMENT ALTERNATIVES
09/05/13
DRAFT-SUBJECT TO CHANGE



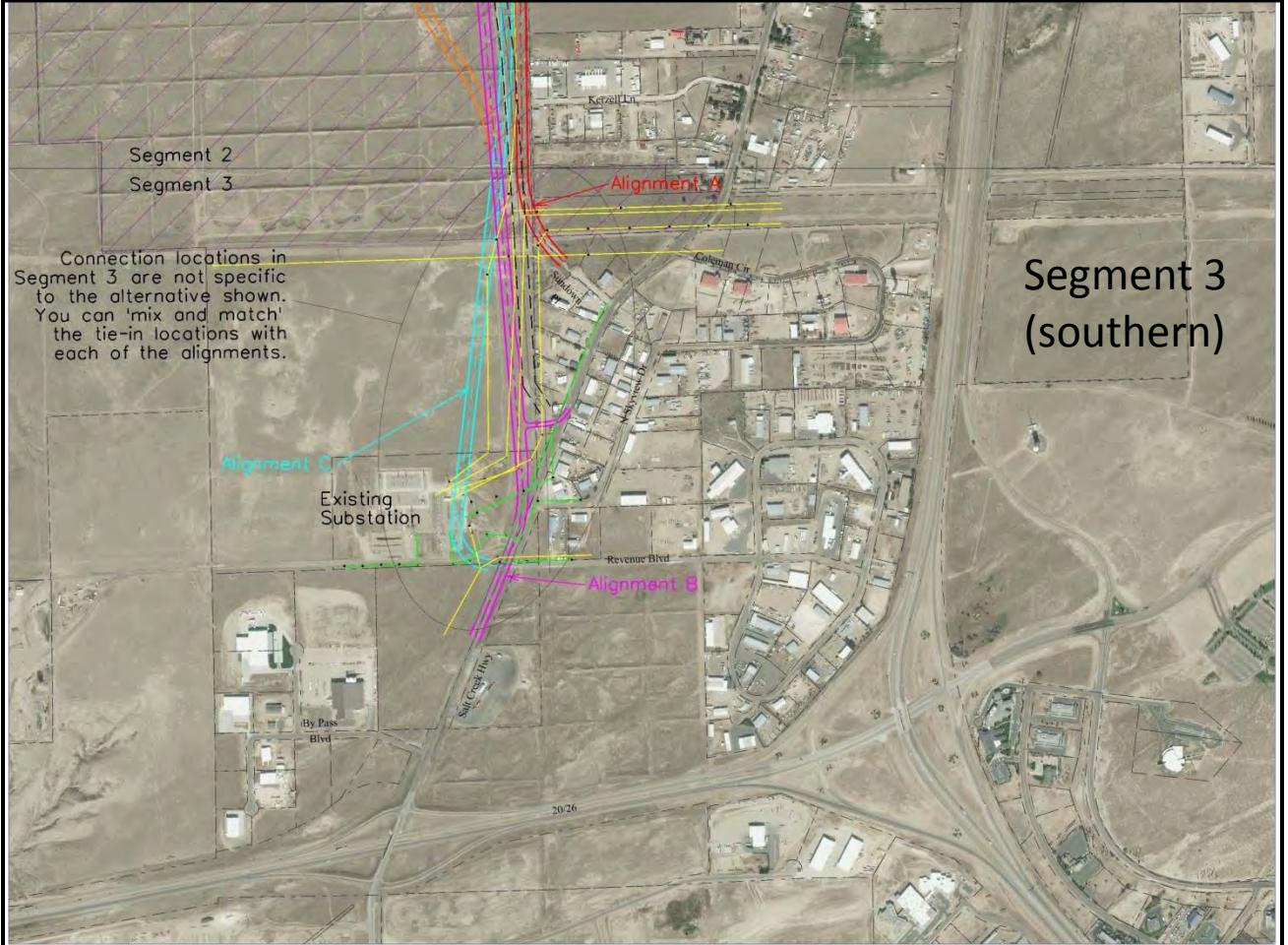
Notes:

1. All alignments are conceptual.
2. Horizontal alignments may change once vertical geometry is accounted for.
3. Side road connections shown are schematic and are intended to show approximate location for connection.
4. Pipeline and overhead power line alignments are based on GIS information received from Rocky Mountain Power and aerial images. This information is approximate.
5. 100' easement assumed for the pipeline alignment with a 10' buffer zone between the easement and the proposed right-of-way width.

Segment 1 (northern)



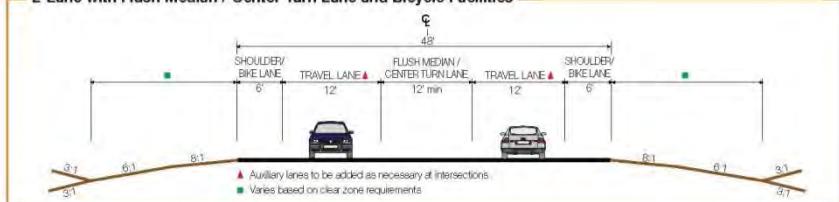
Segment 2 (middle)



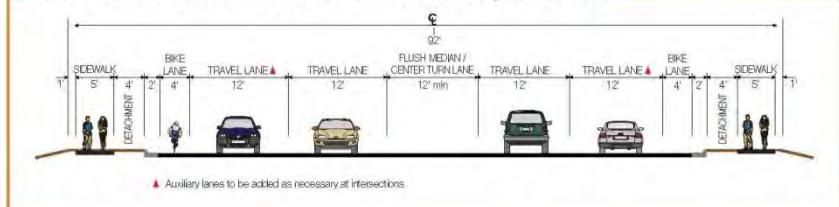
DRAFT Cross Sections

July 18, 2013

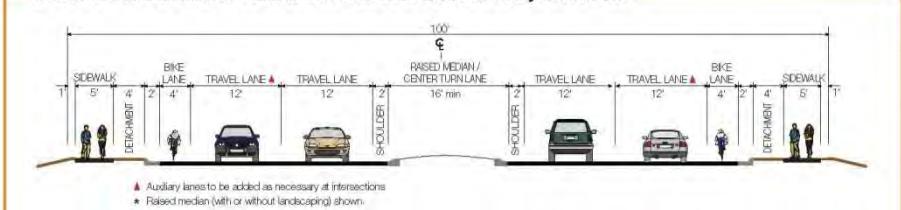
SECTION 1 2-Lane with Flush Median / Center Turn Lane and Bicycle Facilities



SECTION 2 4-Lane with Flush Median/Center Turn Lane and Pedestrian/Bicycle Facilities



SECTION 3 4-Lane with Raised Median* / Center Turn Lane and Pedestrian / Bicycle Facilities



Segment 1 (northern)

Resources Potentially Impacted	No Build	Improve Salt Creek Highway	Proposed Alignment
Access		Red	Green
Visual			Yellow
Noise	Yellow		Yellow
Safety	Red	Green	Green
Traffic Flow	Red	Green	Green
Right-of-Way		Red	Yellow
Utilities			Yellow
Neighborhood			Yellow
Economic Conditions		Cyan	Green
Wildlife			Yellow

Key:	
Green	Potential Benefit
Cyan	Potential Slight Benefit
White	No Significant Benefits or Impacts
Yellow	Potential Slight Impacts
Red	Potential Impacts

Segment 2 (middle)

Resources Potentially Impacted	No Build	Improve Salt Creek Highway	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Access		Red	Yellow	Green		Green
Visual			Red	Yellow		Yellow
Noise	Yellow		Red	Yellow		Yellow
Safety	Red	Green	Cyan	Green	Green	Green
Traffic Flow	Red	Green	Green	Green	Green	Green
Hazardous Materials	Red		Yellow	Yellow		Yellow
Right-of-Way		Red	Red	Yellow		Yellow
Utilities			Yellow	Yellow		Yellow
Neighborhood			Red	Yellow		Yellow
Economic Conditions		Green	Cyan	Cyan	Cyan	Green
Wildlife			Yellow	Yellow		Yellow

Segment 3 (southern)

Resources Potentially Impacted	No Build	Improve Salt Creek Highway	Alternative A	Alternative B	Alternative C
Access		Red	Green	Green	Green
Safety	Red	Green	Yellow	Cyan	Yellow
Traffic Flow	Red	Green	Cyan	Green	Cyan
Hazardous Materials	Red		Yellow	Yellow	Yellow
Right-of-Way		Red	Yellow		Red
Utilities			Yellow	Yellow	Red
Economic Conditions		Green	Green	Green	Green



Public Open House – Sign-In Sheet
September 19, 2013 - 6:30 p.m. to 8:00 p.m.

Name (please print)	Organization (if applicable)	Name (please print)	Organization (if applicable)
Becky Welsh			
Mailing Address	Mailing Address		
2817 Prairie Ln	302-258-2679		
City, State, Zip	Phone		
Bar Nunn wsg	82601		
Email Address			

Name (please print)	Organization (if applicable)	Name (please print)	Organization (if applicable)
Raymond Kraft			
Mailing Address			
5135 N Antelope Dr			
City, State, Zip	Phone		
Burnunn Hwy	82601 237-5172		
Email Address			

Name (please print)	Organization (if applicable)	Name (please print)	Organization (if applicable)



CASPER AREA
CHAMBER OF COMMERCE
ESTABLISHED 1913 • CASPER, WYOMING

Welcome To The Town Of
Bar Nunn



U.S. Department of Transportation
Federal Highway Administration

WYOMING

DEPARTMENT OF TRANSPORTATION



Public Open House – Sign-In Sheet
September 19, 2013 - 6:30 p.m. to 8:00 p.m.

Name (please print)	Organization (if applicable)	Name (please print)	Organization (if applicable)
Blic Johnston		Kendy Summey	A7
Mailing Address		Mailing Address	
PO Box 941	235-9900	City, State, Zip	262-4418
City, State, Zip	Phone	Email Address	
Casper	82602		
Email Address			
Partners@QuestOffice.net		Name (please print)	Organization (if applicable)
Mailing Address			
1880 Prairie Ln	307 473-3248	City, State, Zip	Phone
City, State, Zip	Phone	Email Address	
Bar Nunn			
Email Address			
Mark Sibson		Name (please print)	Organization (if applicable)
Mailing Address			
1880 Prairie Ln	307 473-3248	City, State, Zip	Phone
City, State, Zip	Phone	Email Address	
Bar Nunn			
Email Address			
Wyo. DOT		Name (please print)	Organization (if applicable)
Mailing Address			
4820 Turpin Street	307-277-6796	City, State, Zip	Phone
City, State, Zip	Phone	Email Address	
Bar Nunn, Wyo 82601			
Email Address			



Welcome To The Town of
Bar Nunn



CASPER AREA
AN INDOOR PARKING ORGANIZATION





Public Open House – Sign-In Sheet
September 19, 2013 – 4:00 p.m. to 5:00 p.m.

Name (please print)	Organization (if applicable)
Andrew Beamer	CITY OF CASPER
Mailing Address	
200 N. David	
City, State, Zip	Phone
Casper, WY	235-8341
Email Address	
abeamer@city.casper.wy.us	
Name (please print)	Organization (if applicable)
Mike Haigler	
Mailing Address	
P.O. Box 8481	
City, State, Zip	Phone
WY 82644	235-9311
Email Address	
mike@haigler.net	
Name (please print)	Organization (if applicable)
Forrest Chaderick	C. Commissioner
Mailing Address	
1024 Broad St	
City, State, Zip	Phone
Casper, WY	252-0286
Email Address	
forrest.chaderick@casper.org	

Welcome To The Town Of
Bar Nunn


CASPER AREA
 METROPOLITAN PLANNING ORGANIZATION
 U.S. Department of Transportation


**NATRONA
COUNTY**





Public Open House – Sign-In Sheet
September 19, 2013 – 4:00 p.m. to 5:00 p.m.

Name (please print) <i>Kevin McKey - WyoIT</i>	Organization (if applicable)	Name (please print) <i>Mary England</i>	Organization (if applicable)
Mailing Address <i>34W S. Colterman</i>	City, State, Zip <i>Casper, WY</i>	Phone <i>(307) 235-1200</i>	Phone <i>473-3225</i>
Email Address		Email Address <i>Mary.England@rockymountainpowers.net</i>	
Name (please print) <i>Ron Wilcox</i>	Organization (if applicable)	Name (please print) <i>Chad Hargard</i>	Organization (if applicable)
Mailing Address <i>2840 East 1st Street</i>	City, State, Zip <i>Casper WY 82609</i>	Mailing Address <i>100 Bryan Stock Trail</i>	City, State, Zip <i>473-3225</i>
Email Address	Phone <i>(307) 235-1200</i>	Email Address <i>chad.hargard@wyo.gov</i>	Phone <i>473-3225</i>
Name (please print) <i>Ron Wilcox @ Rocky Mountain Powers</i>	Organization (if applicable)	Name (please print) <i>Lowell Fenner</i>	Organization (if applicable)
Mailing Address <i>300 S. Wolcott Suite 300</i>	City, State, Zip <i>Casper, WY 82601</i>	Mailing Address <i>900 Bryan Stock Trail</i>	City, State, Zip <i>473-3225</i>
Email Address	Phone <i>(307) 235-1200</i>	Email Address <i>lowell.fenner@wyo.gov</i>	Phone <i>473-3225</i>
Name (please print) <i>Bill Edwards</i>	Organization (if applicable)	Name (please print) <i>Bar Nunn</i>	Organization (if applicable)
Mailing Address <i>300 S. Wolcott Suite 300</i>	City, State, Zip <i>Casper, WY 82601</i>	Mailing Address <i>Bar Nunn</i>	City, State, Zip <i>473-3225</i>
Email Address	Phone <i>(307) 235-1200</i>	Email Address	Phone <i>473-3225</i>



APPENDIX C FHWA QUESTIONNAIRE

FHWA PEL Questionnaire: Polaris Drive Planning and Environmental Linkage Study

Background	
What is the name of the PEL document and other identifying project information (e.g. sub-account or STIP numbers)?	Planning and Environmental Linkage Study (Polaris Drive), Natrona County, Casper Area Metropolitan Planning Organization Project # ????????
Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were conducted.	Study Period: February 2013 through November 2013 February 2013: Project Kickoff Meeting Spring 2013: Develop Purpose and Need and Evaluate Alternatives September 2013: Public Open House Spring
Provide a description of the existing transportation corridor, including project limits, modes, number of lanes, shoulder, access control and surrounding environment (urban vs. rural, residential vs. commercial, etc.)	In process
Who was the sponsor of the PEL study? (DOT, Local Agency, Other)	Casper Metropolitan Planning Organization, WYDOT, FHWA
Who was included on the study team (Name and title of agency representatives, consultants, etc.)?	Casper MPO: Sally Kerpchar, Acting MPO Supervisor WYDOT: Kevin McCoy, Traffic Engineer; Chad Aagard, Resident Engineer FHWA: Jeff Purdy, Planning and Right-of-Way Program Manager
Are there recent, current or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?	<ul style="list-style-type: none"> - Natrona County, Wyoming County Development Plan – 1998 - Connecting Casper, 2030 Long Range Transportation Plan – June 2007 - Bar Nunn Salt Creek Intersection & Bar Nunn Subarea Planning Traffic Study

	<ul style="list-style-type: none"> - January 2012 - Town of Bar Nunn Community Development Plan – June 2008 - Salt Creek Highway/McMurry Boulevard Corridor Study – Draft Report <p>These studies present the anticipated growth and traffic demands for the project area into the year 2030.</p>
Methodology	
Did you use NEPA-like language? Why or why not?	Yes, to provide a PEL document that provides a seamless transition to future NEPA projects along the corridor.
What were the actual terms used and how did you define them? (Provide examples or list)	<ul style="list-style-type: none"> - Purpose and Need - Alternative Analysis - ?????
How do you see these terms being used in NEPA documents?	TBD
What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by CDOT and the local agency, with buy-in from FHWA, the Corps, and USFWS.	<p>Purpose and Need: Casper MPO, WYDOT, FHWA, Town of Bar Nunn</p> <p>Alternatives Analysis: same as above.</p>
How should the PEL information below be presented in NEPA?	TBD
Agency Coordination	
Provide a synopsis of coordination with federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.	TBD
What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved in the PEL study?	WYDOT, Casper Area Municipal Planning Organization, Natrona County, Town of Bar Nunn
What steps will need to be taken with each agency during NEPA scoping?	Continued discussion and involvement in the project to present alternatives and mutually agree as to which alternative would best address the Purpose and Need of the project.
Public Coordination	
Provide a synopsis of your coordination efforts with the public and stakeholders.	A kickoff / Public meeting was held in March 2013 to discuss the general

	<p>purpose and need for the project and present conceptual alignments and receive comment and concerns from the public.</p> <p>A second public meeting will be held in September 2013 to present the recommended alternative(s) and comments from the public on the recommended alternative(s).</p>
Corridor Vision/Purpose and Need	
What was the scope of the PEL study and the reason for doing it?	<p>The scope and main goals of this project are to perform a more detailed feasibility study of Polaris Drive compared to previous planning studies and to develop conceptual plans for alternative concepts</p>
Provide the corridor vision, objectives, or purpose and need statement.	<p>The purpose of this proposed action is to safely and efficiently accommodate current and future traffic volumes and improve regional mobility and access. The implementation of the proposed action shall address the following needs:</p> <ul style="list-style-type: none"> ➤ To provide an arterial connecting the Town of Bar Nunn with the City of Casper that is built to proper arterial road standards ➤ To provide an alternative access to the Town of Bar Nunn for emergency vehicles or closure of the Salt Creek Highway ➤ To improve regional mobility ➤ To accommodate existing and projected travel demand ➤ To accommodate multi-modal transportation ➤ To improve traffic safety

What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?	TBD
Range of Alternatives Considered, Screening Criteria and Screening Process	
What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)	A general alignment consisting of four options was considered. The alignments extend from Westwind Boulevard south along the west side of the Bar Nunn community and development to the south of Bar Nunn to various connections with the Salt Creek Highway near Revenue Boulevard. Options varied with distance from the developed areas to the east.
How did you select the screening criteria and screening process?	Through input received from the public comments, coordination with local officials and stakeholders, previous planning studies, all with input and approval from FHWA, WYDOT and Casper MPO.
For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws)	In Process
Which alternatives should be brought forward into NEPA and why?	In Process
Did the public, stakeholders, and agencies have an opportunity to comment during this process?	In Process. Many representatives of the public and local businesses provided input during the Project Kickoff Meeting. A public meeting will also be held in September, 2013 to present the preliminary results of the study.
Were there unresolved issues with the public, stakeholders and/or agencies?	TBD
Planning Assumptions and Analytical Methods	
What is the forecast year used in the PEL study?	2035
What method was used for forecasting traffic volumes?	Traffic analysis was performed by WYDOT and verified by AllTrafficData
Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long-range transportation plan?	Yes.
What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs and network expansion?	TBD
Resources (wetlands, cultural, etc.) reviewed. For each resource or group of resources reviewed, provide the following:	

In the PEL study, at what level of detail was the resource reviewed and what was the method of review?	<ul style="list-style-type: none"> • Land Use and Zoning • Neighborhood Impacts • Transportation and Traffic • Visual and Aesthetics • Noise • Hazardous Materials • Right-of-Way • Utilities <p>Additional Input to be provided from the PEL document.</p>
Is this resource present in the area and what is the existing environmental condition for this resource?	Input to be provided from the PEL document.
What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?	Input to be provided from the PEL document.
How will the data provided need to be supplemented during NEPA?	Input to be provided from the PEL document.
List resources that were not reviewed in the PEL study and why? Indicate whether or not they will need to be reviewed in NEPA and explain why.	
<ul style="list-style-type: none"> • Social Conditions • Economic Conditions • Air Quality • Wildlife Resources • Parks and Recreation • Historic and Archaeological Resources • Water Resources, Floodplains, and Wetlands 	
Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where it can be found.	
No.	
Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.	
TBD	
What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?	
TBD	
Are there any other issues a future project team should be aware of? Examples: Utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.	
TBD	



APPENDIX D FHWA AND WYDOT ACCEPTANCE LETTERS