

# *Technical Memorandum No.1*

**Project Name:** Campbell County Coal Belt Transportation Study

**Client:** Campbell County, WY

**Project No:** 11309104

**Subject: Summary of Findings & Next Steps**

## **Phase I - Stakeholder Identification, Funding Sources, and Data Acquisition**

**By:** Dan Roberts, P.E., Project Manager  
Kadmas, Lee & Jackson

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The purpose of this technical memorandum is to outline the methodology used during Phase I of the Campbell County Coal Belt Transportation Study and summarize the stakeholder input process and the key findings gathered from stakeholder input. The final sections of this memorandum will briefly discuss the methodology and approach that will be utilized during Phase II of the study and list some key action items that will be required moving forward.

### **I. SUMMARY OF KEY FINDINGS**

- There appears to be general consensus among stakeholders that a well-coordinated and comprehensive roadway improvement plan, as envisioned by Campbell County, is necessary and will be mutually-beneficial in meeting the mobility needs of the Coal Belt region.
- While a majority of survey respondents rate Campbell County roadway system at or above satisfactory levels (i.e., good, excellent, or superior ratings for their needs with regard to the overall roadway conditions, accessibility, safety, and adequacy of posted speeds), there are existing roadway deficiencies that may be addressed by the County on a near-term basis, as “*Interim Transportation Safety Enhancement Measures*”. The specific roadway safety improvements may be identified and implemented while long-range transportation improvement projects are being planned and developed over time for future construction.
- The coal mining industry has the most significant impact on the transportation network within the study area. The BLM leases for the mining operations within the Coal Belt region often span periods of time considerably longer than the horizon years typically associated with traditional roadway improvement programs. For this reason, an appropriate transportation planning strategy is needed that will accommodate the unique, local conditions – one that accounts not only for the future growth in traffic levels, but also the operational characteristics of the coal development and mining activities (e.g., strip ratios, location of active and foreseeable future mining operations, external market-driven conditions, planned rail projects, proximity of future roads to adjacent mining sites, etc).

- There are an enormous array of constraints within the study area that will impact the planning and implementation of a comprehensive, future roadway network in some fashion. Some are minor having a minimal effect on cost to build, ability to implement, and network functionality. Others are more significant with the potential for generating considerable costs to construct, imparting repetitive impacts on network functionality or affecting the overall plausibility of a road corridor altogether. Identifying these constraints/barriers and building a hierarchy of effect each will have on the transportation network is the key toward analyzing and developing a comprehensive transportation plan within this study area.
- Based on a preliminary review of potential sources of future transportation infrastructure funding opportunities, there are four possible channels for federal transportation funding to support projects in Campbell County. These funding opportunities include: 1) Jobs Legislation, 2) FY-11 Appropriations, 3) Surface Transportation Reauthorization Act, 4) Extension of Surface Transportation programs. The mining industry anticipates funding road projects based on their specific needs and financial feasibility. The interest exists within this industry to minimize the need for these occurrences and participate in a funding program possessing comprehensive benefits with shared costs.

## II. INTRODUCTION

The scope of work to be accomplished during Phase I of this study was to obtain relevant data from stakeholders and their resources to support the technical analysis in Phase II. The specific activities required to be conducted and completed during Phase I were:

- **Steering Committee Meetings:** Conduct bi-weekly conference calls and a face-to-face meeting upon conclusion of Phase I.
- **Identify Stakeholders:** Develop a methodology for determining who they are and their needed level of participation
- **Needs Analysis:** Identify the methodology and processes and information needed to inform stakeholders and the general public of the study. Develop the methods and information needed to involve stakeholders in an input processes that will discover their needs and generate relevant input toward the Phase II analysis. Conduct up to 26 on-site stakeholder interviews and up to 500 mail-in surveys.
- **Data Collection:** Identify and obtain publicly available data and data provided through stakeholder contact. Develop a GIS data base consisting of key information that will support analysis and decision making during Phase II.
- **Funding Source Research:** Identify potential funding avenues and resources for road projects to be further evaluated in Phase II and discussed in the final report.
- **Prepare a Phase I Technical Memorandum:** Outline methodology and findings from Phase I work in a Technical Memorandum to be reviewed by the Steering Committee.
- **Workshop with County Commissioners:** Review Phase I approach and findings, discuss Phase II methodology, review next steps, and receive input.

**Figure 1** identifies the area within Campbell County in which this study has focused. It measures approximately 1,300 square miles and encompasses the primary coal, oil and gas production regions of Campbell County. The area within the City of Gillette's corporate boundary has been excluded from this study.

The magnitude of coal mining operations, rail systems, oil and gas associated infrastructure and the vast, undeveloped nature of the landscape discovered within the study area creates unique challenges not associated with traditional transportation planning. Solutions will require the development and implementation of unique methodologies for analyzing and planning new transportation corridors.

The following sections discuss methodologies used during Phase I, our findings, and the recommended approach for Phase II of this study.

### III. PHASE I APPROACH

Stakeholders, who could be affected by surface transportation corridors within the study area, were identified utilizing the following resources:

- Campbell County parcel mapping and County Assessor's tax role records
- BLM mineral lease information
- Utility infrastructure ownership through research from the Public Facilities Commission
- WyGIS data base information published by the University of Wyoming
- Wyoming Oil and Gas Conservation Commission
- Knowledge of industry operators
- Knowledge of local, state and federal government interests
- Knowledge of emergency service agencies serving within the study area
- Input from the Steering Committee.

The list of surface owners generated from Campbell County parcel mapping records provided 2,570 owners within the study area. With guidance from the steering committee this list of owners was sorted to develop a more manageable number of stakeholders. The key consideration was stakeholders with a reasonable size of surface ownership. Land ownership in excess of 1,000 acres was agreed upon and established as the threshold number. Subsequently, land owners with surface ownership in excess of 1,000 acres were identified for participation in the study input process. Stakeholders with subsurface/mineral interests and industry operators were also identified for involvement. In all, one hundred and forty- one (141) stakeholders were directly contacted. **Figure 2** is a graphical representation of the surface owner holdings of those stakeholders indicating a comprehensive involvement was achieved within the study area.

A project web site located at [www.campbellcountycoalbelt.com](http://www.campbellcountycoalbelt.com) was developed allowing the general public to become familiar with the scope of the project and keep abreast of the study progress moving forward. The website became active on January 12, 2010. A public survey was included on the website for those individuals who wished to make comments regarding the study area. On January 21, 2010 a news release was distributed to the various news papers and radio networks throughout Campbell County as well as those in Wright, Buffalo and Douglas, WY. The news release introduced the CCCBTS to the general public and provided a map depicting the project study area. No responses were provided through the survey prepared for and made available to the general public on the project web-site.

**The Stakeholder involvement efforts utilized two methods:**

***Method 1: Written and personal contact letters followed by one-on-one interviews***

Stakeholders involved in this manner were viewed as having significant interest and potentially have the most impact toward transportation corridors and their planning. There were 33 stakeholders identified for

participation in this process. They were determined as having surface, mineral, infrastructure asset, regulatory interests, or service interests within the study area. They were further classified under the following categories:

- Mining Stakeholders
- Power Company/ Electrical Stakeholders
- Oil and Gas Stakeholders
- Pipeline Stakeholders
- Office of State Lands & Investments
- State & Federal Agencies
- US Forest Service Stakeholder
- Local Government Stakeholders
- School District
- Emergency Services
- Rail Stakeholders
- Non-Industry/ Non-Government Stakeholders (major private landowners)

The following two stakeholder groups were added to this participation process even though no known surface, mineral or operational interest representing these industries were identified:

- Wind Energy Stakeholders
- Uranium Mining Stakeholders

The landowners with the largest amount of surface ownership holdings within each of the top, middle and bottom third of the study area were identified for participation in the interview process.

Interview questions were developed for each stakeholder classification. In total, fourteen specific interview questionnaires were developed, reviewed and confirmed by the Steering Committee. An introduction letter and interview questions were mailed out on January 13, 2010. This letter was meant to notify the stakeholders of the study and request their involvement. The letter was followed up by a phone call to arrange the interview. The first interview was conducted on January 26, 2010 with Black Thunder Mine/Thunder Basin Coal. Of the 33 stakeholders identified to be interviewed, 26 interviews were conducted by the conclusion of Phase I.

***Method 2: Stakeholder involvement through notice letter with mail-in survey and on-line survey option***

Stakeholders who owned 1,000 acres or more and were not interviewed, were sent a letter describing the project and inviting them to complete the survey or take the same survey on-line on a web link that was set-up and only accessible to this group of stakeholders.

The survey questions were developed by the study team, reviewed and confirmed by the Steering Committee prior to being posted on-line or sent to stakeholders. A total of 108 letters and surveys were sent to stakeholders with a request to complete and return the survey by February 12, 2010. Of the 108 only 21 were completed and returned by the completion date and only one was taken on-line. One additional survey has been received since the closing date.

#### ***IV. RESULTS OF STAKEHOLDER INPUT SURVEY***

The surveys conducted as part of this study consisted of interviews with key stakeholders and mail-in input surveys along with online, web-based questionnaires to obtain input from all stakeholders in the Coal Belt region. The results from individual interviews and survey respondents were then reviewed, sorted, and tabulated to provide an overall summary of stakeholder input by category. The following is a brief summary of survey results, highlighting key areas of concerns and information that will be essential to the transportation planning process.

##### ***IV. A - Highlights of Interview Surveys (Key Stakeholders)***

The key items discussed during stakeholder interviews are listed below. In addition, details of individual interview sessions held with agency staff and local stakeholders have been documented and tabulated in more detail.

- Most current mine leases will take mining operations beyond 2020 to almost 2030. LBA's (lease by applications) , if acquired, will generally extend mine production plans another 10 years.
- No new changes in operations or technologies are anticipated by the coal mining industry.
- Highway 59 is the most frequently mentioned safety concern. Specific, supporting evidence toward these comments generally was not provided. The fire department indicated a high call-out rate due to accidents on Highway 59.
- No mining activity is expected to move eastward toward the burn line or coal out-crop.
- Open area south of Coal Creek Mine to Black Thunder Mine is of poor coal quality and is unlikely to be mined.
- The federal government possesses the majority of the mineral rights within the study area. The government benefits greatly from having the coal mined.
- BLM would strongly object to new corridors over potentially mineable coal or other minerals.
- At-grade crossings over BNSF/UP mainline tracks would not be allowed. Below-grade or above-grade crossings would be allowed. Above grade crossings are preferred by the railroads
- Plan any above-grade crossings of mainline rail systems for four track widths in all areas to account for expansion in the mid and northern sections of the study area. Tracks are placed 25ft C-C.
- Expansion of mines in the southern sector will impact a larger number of county roads – some within the near term (0-5 yrs).
- The middle tier (Belle-Ayr Mine, Cordero Mine and Caballo Mine) will impact county roads within the next 3-5 yrs and Highway 59 by 2030.
- Companies plan for and pay for relocations of roads as they make economical sense to do so. Only North Antelope-Rochelle has a detailed plan of when these will occur through the year 2025.
- Quality and safety of roads is considered to be very good overall by all stakeholders. Coal Creek mine has some mobility limitations as they are farthest from any major route and do not have direct access to primary corridors.
- No collaborative or cooperative efforts are currently being done by any of the mining companies to comprehensively plan out the transportation system outside of their areas of impact.

- Locate roads where coal has already been mined or won't be mined.
- Economics will drive mine growth and their degree of progression, driven by the:
  - a. Price of Coal and the Cost to deliver
    - Strip ratios (currently 2:1 to 4:1). Limit based on today's coal prices has been projected to 7:1. Anything beyond that may never be mined which could establish areas of unlikely development or at least push development much farther in the future than 2040.
- DM&E rail corridor is still moving forward and is being planned along the eastern side of the mining operations.
- Coal bed methane wells and operations are not increasing or expanding. In fact, they are planning to decommission up to 300 wells per year.

#### **IV.B - Summary of Mail-In Survey Results**

The following is an overall summary of survey results for the 18 questions included in individual mail-in survey forms. A more thorough and complete graphical representation and analysis of responses to each question has been tabulated and analyzed in more detail.

- The County roadway transportation system rates very high in terms of safety, mobility, accessibility to property (highest rating) and roadway condition.
- The State and Federal Highway systems rate very high in terms of mobility and meeting stakeholder transportation needs. Traffic congestion was rated lowest with only 57% of respondents rating it good or above.
- The greatest attributes of the roadway network were identified as:
  - a. Roadway condition
  - b. Roadway maintenance
- The transportation systems greatest shortfalls were listed as:
  - a. Congestion and truck traffic on Highway 59
  - b. Speeding and lack of law enforcement
- Of 21 survey responses, 81% felt transportation needs are being met. The following deficiencies were reported by the balance:
  - a. Fairview Road is not marked for speed and has sharp curves with people driving very fast.
  - b. County roads with higher traffic impact ability to cross roads to pasture cattle.
  - c. Fire department and ambulatory services have difficulty crossing at-grade railroad crossing to get north of Rozet.
  - d. Paving of County roads.
- Widening Highway 59 to 4 lanes and dust suppression are the most important actions that should be completed in the next six years.
- Most respondents to the survey are property owners or both property and business owners. Twenty (20) of 21 respondents make up these two categories. Most own their mineral rights. Oil and gas production is occurring on most respondent's properties.
- A small amount of subdividing may occur.

- A small percentage (30%) are open to transportation corridors running across their property.
- Most respondents are ranching businesses not generating much vehicular or truck traffic.

## ***V. FUTURE FUNDING OPPORTUNITIES – A PRELIMINARY REVIEW***

Based on a preliminary review of potential sources of future transportation infrastructure funding opportunities, there are four possible channels for federal transportation funding, including Jobs Legislation, FY 2011 Appropriations, Surface Transportation Reauthorization, and Extension of Surface Transportation programs. These funding opportunities are described below. These opportunities as well as other funding strategies for future roadway funding will be more thoroughly evaluated and identified during Phase II of this study.

1. **Jobs Legislation.** Including funding for transportation infrastructure in one of the next Jobs Bills is a possibility but there are two other Jobs Bills in the queue and they are at the front of the line: (1) a combination small business/labor/FEMA flood bill and (2) a clean energy bill. If those bills are completed with little public outcry, Congress might try to roll out an infrastructure spending bill, which could include money for transportation.
2. **The FY 2011 appropriations** process is on the move but with a few challenges. The House and Senate proposed funding levels for FHWA programs will become clearer by July 2010.
3. **Surface Transportation Reauthorization** is also moving along, with the Senate slowly working up their draft bill. The House has been sitting on its own preliminary draft since June 2009. However, with the recent passage of the short-term extension of the legislation through December, there isn't a lot of heightened motivation to wrap up a final bill. The progress of this bill will be monitored.
4. **Surface Transportation Extension.** The current extension of highway law expires in December 2010. It is likely that Congress will begin to develop yet another extension later this summer or early Fall. The extension could serve as a vehicle for bonus funding for transportation infrastructure but the funds would likely have to be offset.

## ***VI. PHASE II METHODOLOGY & APPROACH***

In an effort to guide the transportation planning process into its next phase, a study methodology and technical approach is being developed to facilitate identification of potential corridors for future roadway construction projects. In addition to traditional transportation network analysis and forecasting, this methodology involves identification of potential obstacles and opportunities based on an established set of criteria which will serve as constraints in the decision-making model. The following have been identified to date:

- Existing Utility Infrastructure (Power, Oil, and Gas)
- Location of Coal Development Operations, Approved/Pending Leases, and Strip Ratios
- Natural Barriers (e.g., Lakes, Streams, Topography, Environmentally Sensitive Areas, etc.)
- Man-Made Barriers (e.g., Bridges, Cemeteries, Communication Towers, air ports, rail, etc.)

The above features have been identified and are shown in **Figures 3** through **5B**. The technical approach that will be utilized during phase II of the study involves a GIS-based decision model that will

enable the study team to identify potential roadway alignments based on a given set of constraints and their assigned hierarchy within a decision making model.

## ***VII. NEXT STEPS – ACTION ITEMS***

Moving from Phase I into the Phase II transportation system analysis will require that the following information be obtained and associated action steps taken in order to meet the study objectives.

- Complete any outstanding stakeholder interviews – KL&J
  - Twenty Mile Land Co.
  - Jerry Dilts
  - Wyodak Mine
  - DM&E
- Complete review of prior studies – KL&J
- Obtain additional GIS data – KL&J
  - Anadarko data
  - DCP digital data
  - Uranium mining potential
- Obtain traffic data – KL&J, WYDOT, CC Sheriff
  - Existing ADT's for County roads and State Highways
  - Crash history – past 5 years
- Conduct a preliminary evaluation of the existing roadway safety features – KL&J, WYDOT, CC Public Works, Stakeholder input
- Identify any known major land development projects – CC Public Works, KL&J, Stakeholder Input
- Identify major traffic generators and primary trip destinations – KL&J, Steering Committee
- Identify planned transportation improvement projects – WYDOT, CC Public Works, KL&J, Stakeholders
  - Short term – 0 to 6 years
  - Long range – 10 years and beyond

### Phase II Schedule Milestones

- Conclude Development of Transportation Plan Alternatives – July 16<sup>th</sup>
- Preliminary Report – July 19<sup>th</sup>
- Steering Committee Review and Approval – July 20<sup>th</sup> thru July 29<sup>th</sup>
- Stakeholder Review and Comment – July 30<sup>th</sup> thru August 12<sup>th</sup>
- Public Meeting/ Open House – August 12<sup>th</sup>
- Final Report – August 27<sup>th</sup>
- Presentation to Commissioners – September 7<sup>th</sup>