Corridor 79-216

Casper to Billings Corridor

Corridor Purpose and Rationale

This energy corridor provides north-south connectivity for interstate energy transport from Casper, Wyoming to Billings, Montana. Input regarding alignment from PacifiCorp and the Western Utility Group during the WWEC PEIS suggested following this route. There are no major pending ROWs for transmission line or pipeline projects within the corridor at this time. Federal land is limited for the first 30 miles of the corridor.

Corridor location:
Montana (Carbon Co.) and Wyoming (Big Horn, Converse, Fremont, Hot Springs, Natrona and Washakie Co.)
BLM: Billings, Casper, Cody, Lander, and Worland Field Offices
Regional Review Region: Region 4

Corridor width, length:
Width 3,500 ft
106 miles of designated corridor
255 miles of posted route, including gaps

Designated Use:
- corridor is multi-modal

Corridor of concern (Y)
GRSG core area and habitat, NRHP, NHT

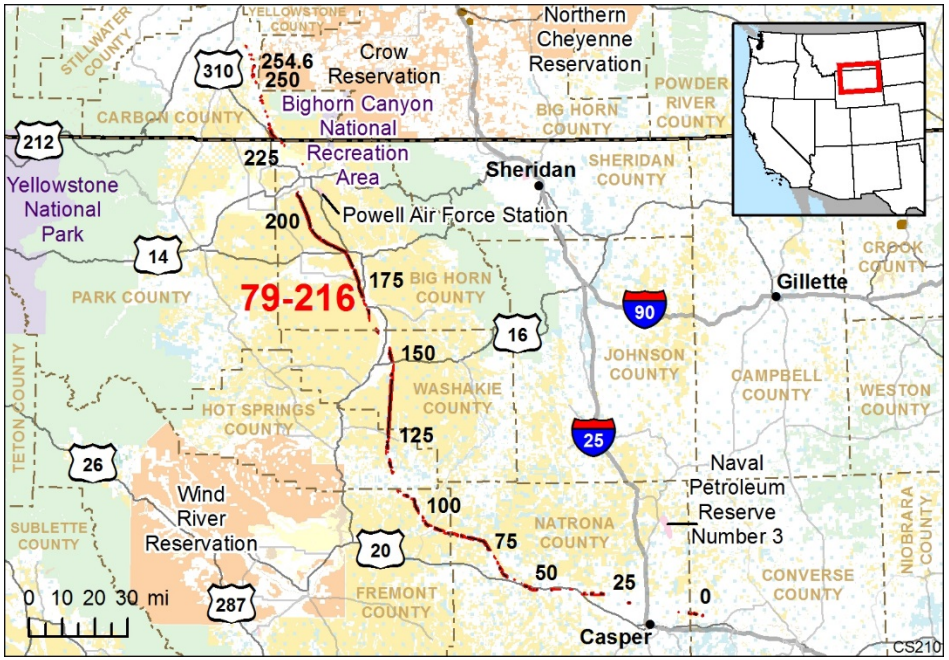


Figure 1. Corridor 79-216

Corridor history:
- Locally designated prior to 2009 (N)
- Existing infrastructure (Y)
  - 69-, 115-, and 230-kV transmission lines are within or adjacent to portions of the corridor.
  - Multiple crude oil and natural gas pipelines are within or immediately adjacent to the corridor.
- Energy potential near the corridor (Y)
  - A wind power plant is within 4 mi.
  - 4 substations are within the corridor and 29 more substations are within 5 mi of the corridor.
- Corridor changes since 2009 (N)

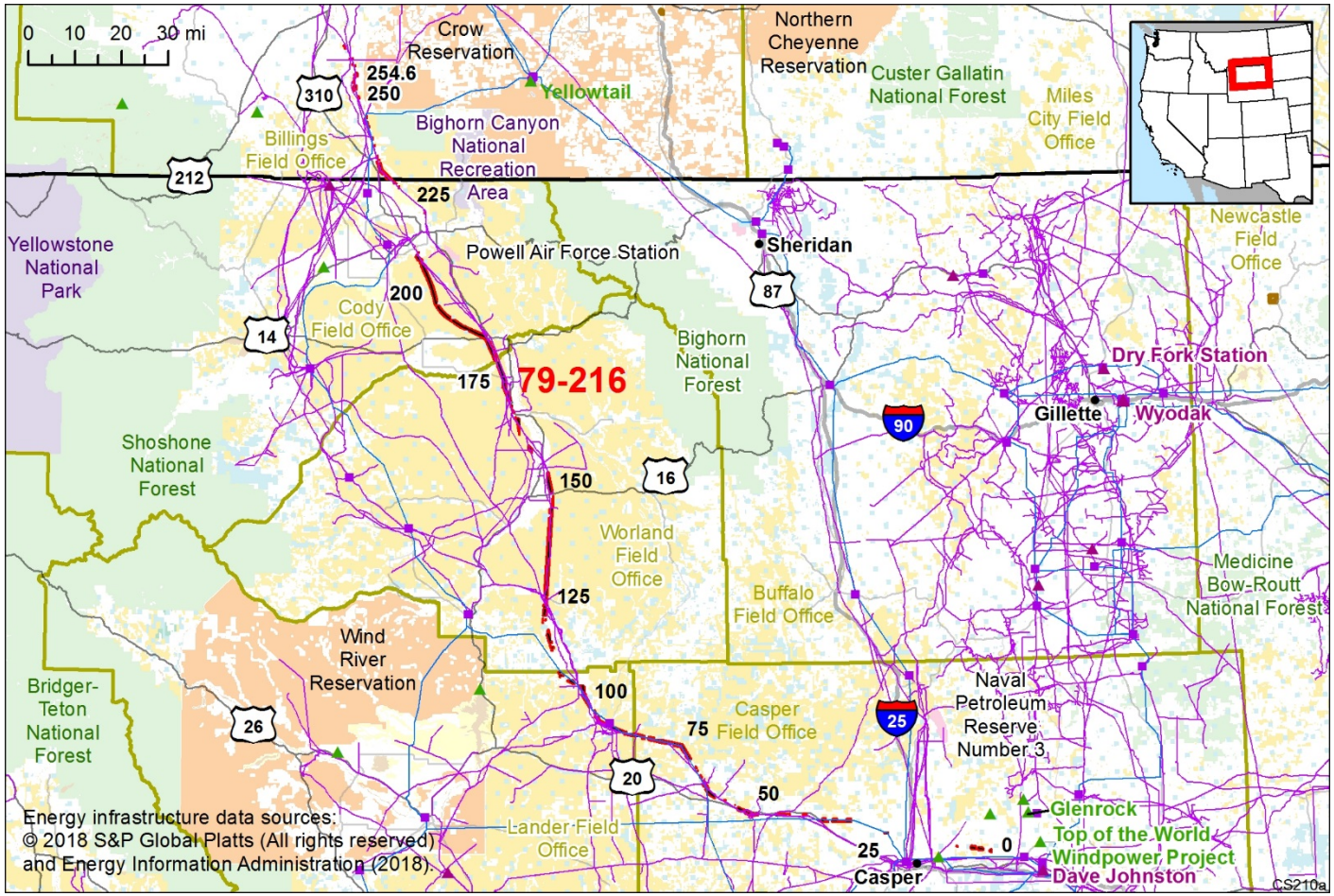
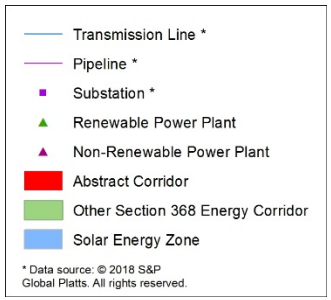


Figure 2. Corridor 79-216 and nearby electric transmission lines and pipelines



Keys for Figures 1 and 2

Conflict Map Analysis

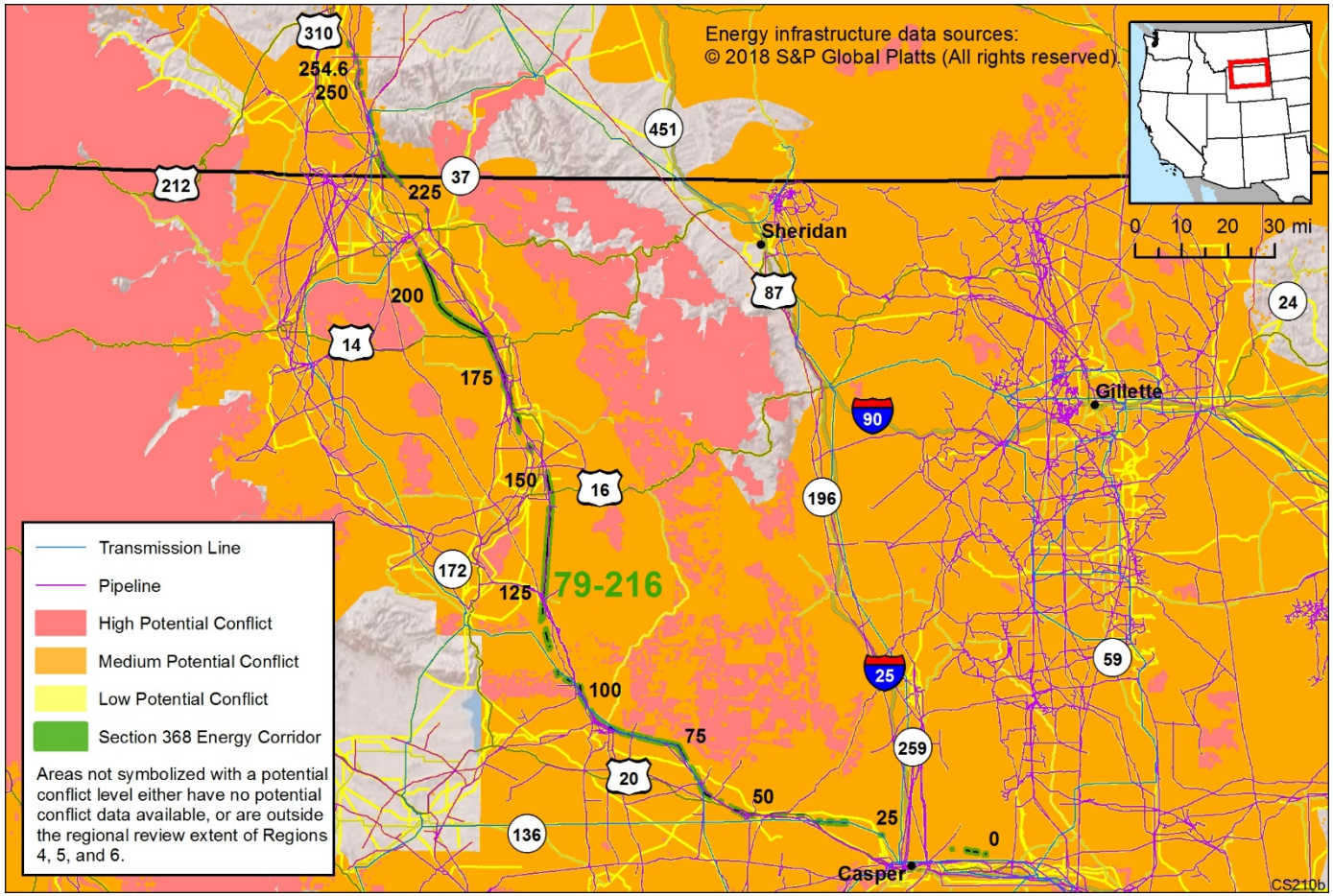


Figure 3. Map of Conflict Areas in Vicinity of Corridor 79-216

Figure 3 reflects a comprehensive resource conflict assessment developed to enable the Agencies and stakeholders to visualize a corridor's proximity to environmentally sensitive areas and to evaluate options for routes with lower potential conflict. The potential conflict assessment (low, medium, high) shown in the figure is based on criteria found on the WWEC Information Center at www.corridoreis.anl.gov. To meet the intent of the Energy Policy Act and the Settlement Agreement siting principles, corridors may be located in areas where there is potentially high resource conflict; however, where feasible, opportunity for corridor revisions should be identified in areas with potentially lower conflict.

Visit the 368 Mapper for a full view of the potential conflict map (https://bogi.evs.anl.gov/section368/portal/)

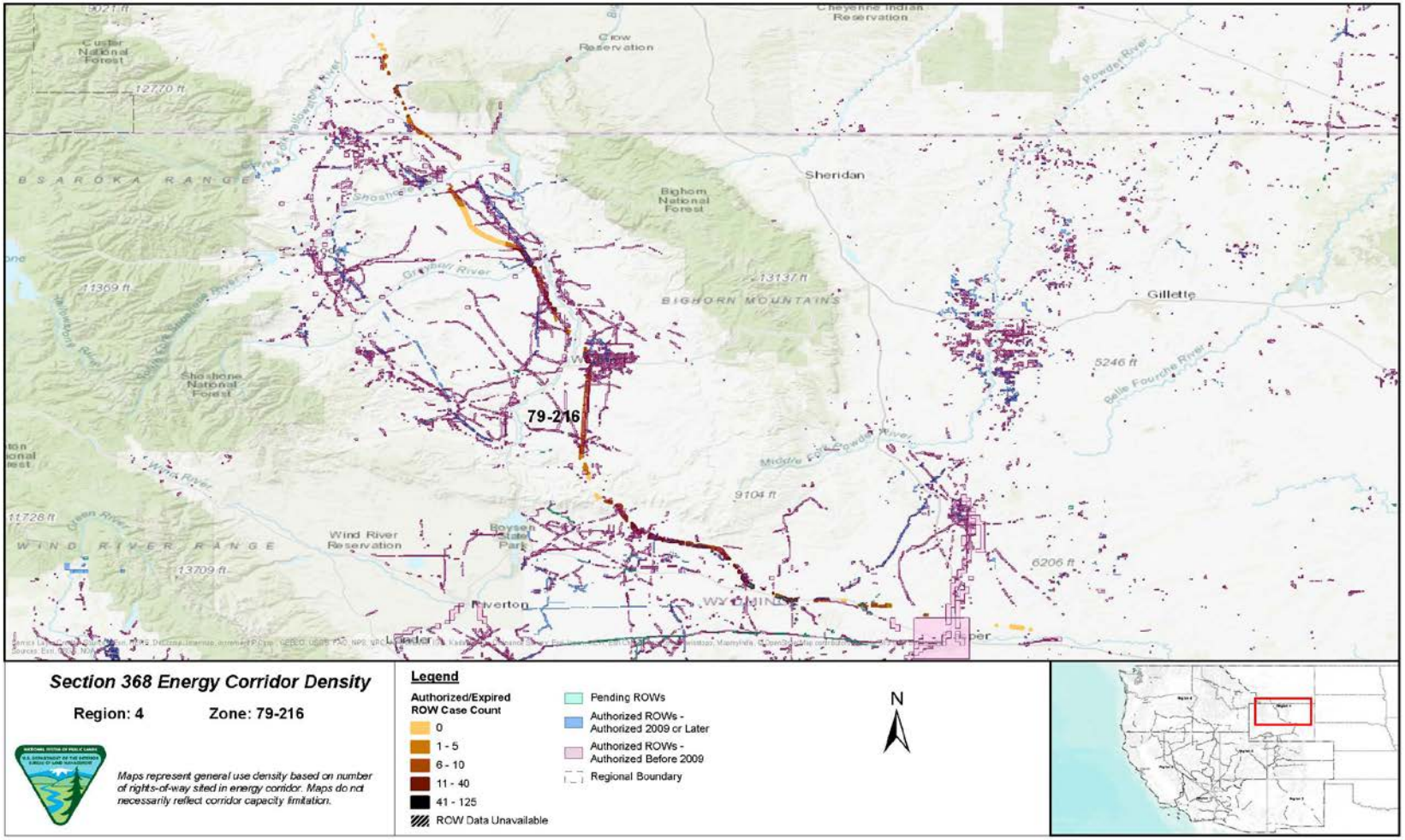


Figure 4. Corridor 79-216, Corridor Density Map

Figure 4 shows the density of energy use to assist in evaluating corridor utility. ROWs granted prior to the corridor designation (2009) are shown in pink; ROWs granted after corridor designation are shown in blue; and pending ROWs under current review for approval are shown in turquoise. Note the ROW density shown for the corridor is only a snapshot that does not fully illustrate remaining corridor capacity. Not all ROWs have GIS data at the time this abstract was developed. BLM and USFS are currently improving their ROW GIS databases and anticipate more complete data in the near future.

Corridor Review Table

Designated energy corridors are areas of land prioritized for energy transmission infrastructure and are intended to be predominantly managed for multiple energy transmission infrastructure lines. Other compatible uses are allowable as specified or practicable. Resource management goals and objectives should be compatible with the desired future conditions (i.e., responsible linear infrastructure development of the corridor with minimal impacts) of the energy transmission corridor. Land management objectives that do not align with desired future conditions should be avoided. The table below identifies serious concerns or issues and presents potential resolution options to better meet corridor siting principles.

The preliminary information below is provided to facilitate further discussion and input prior to developing potential revisions, deletions, or additions.

CORRIDOR 79-216 REVIEW			
POTENTIAL COMPATIBILITY ISSUES or CONCERNS TO EXAMINE	**MILEPOST (MP)[1]**	**STAKEHOLDER INPUT and OTHER RELEVANT INFORMATION**	**POTENTIAL RESOLUTIONS BASED ON SITING PRINCIPLE ANALYSIS [2]**
BLM Jurisdiction: *Casper Field Office* ***Agency Land Use Plan:*** *Casper RMP 2007 and amendments*			
South Big Horn/Red Wall Scenic Byway and the corridor intersect - The RMP does not prescribe ROW avoidance or exclusions for areas within and adjacent to the scenic byway. Nevertheless, the byway should be managed to enhance opportunities for the American public to see and enjoy the unique scenic and historic opportunities on public lands.	MP 33 and MP 63 to MP 70	Transmission lines and pipelines are present within the designated corridor where it and the byway intersect.	The corridor intersections appear to best meet the siting principles. There are no management prescriptions preventing development within the corridor and the corridor is collocated with existing infrastructure.
BLM Jurisdiction: *Lander Field Office* ***Agency Land Use Plan:*** *Lander RMP 2014 and 2018 updates*			
VRM Class II areas and the corridor intersect - The objective of VRM Class II designation is to retain the existing character of the landscape.	MP 101 to MP 108	The Corridor Mapper tool and Map 30 of the RMP indicate that the corridor is mostly VRM Class III and IV, and only intersects VRM Class II in small slivers along the corridor western boundary from MP 101 to MP 108. There is an existing transmission line within or near to the corridor between MP 101 and MP 108.	In order to best meet the siting principles, a change in the VRM class for the area of VRM Class II intersection could be considered. Areas with the VRM Class II designation may not be compatible with future overhead transmission line development within the corridor. However, there is a transmission line currently running through the corridor. There are no options to shift this corridor to other federal lands outside of the VRM Class II area; no federal lands are adjacent to the northeast side of the corridor outside of the VRM Class II area. However, the width of the corridor could be decreased to the west to avoid the VRM Class II area.

CORRIDOR 79-216 REVIEW			
POTENTIAL COMPATIBILITY ISSUES or CONCERNS TO EXAMINE	**MILEPOST (MP)[1]**	**STAKEHOLDER INPUT and OTHER RELEVANT INFORMATION**	**POTENTIAL RESOLUTIONS BASED ON SITING PRINCIPLE ANALYSIS [2]**
BLM Jurisdiction: *Worland Field Office* ***Agency Land Use Plan:*** *Worland RMP (2015)*			
Kirby Creek Wild and Scenic Study River and the corridor intersect – Although the RMP does not specifically mention the Kirby Creek Wild and Scenic Study River, it does require the protection of the free-flowing condition, water quality, tentative classification, and any outstanding remarkable values of suitable river segments until Congress designates the river or releases it for other uses.	MP 123	A transmission line and several pipelines currently occur within the corridor where the study river segment occurs.	The conflict with the study river is minimal considering the existing infrastructure and the very small intersection of the study river at the corner of the corridor. Adding future infrastructure along the western portion of the corridor or slightly shifting the corridor to the west could readily avoid the study river. An existing IOP requires proposed projects to mitigate the disturbance to WSRs and their vicinity.
BLM Jurisdiction: *Cody Field Office* ***Agency Land Use Plan:*** *Cody RMP (2015)*			
Lands with undetermined status for wilderness characteristics intersect and are adjacent to the corridor.	MP 185 to MP 198	BLM Manual Section 6320 (Considering lands with wilderness characteristics in the BLM Land Use Planning Process), 3/15/2012, provides policy and guidance for considering lands with wilderness characteristics in land use planning under FLPMA. Comment on abstract: re-route to avoid land with wilderness characteristics unit re-route to better collocate with existing disturbance to avoid impacts and to minimize impacts to the viewshed of Cedar Ridge. Collocating within this viewshed will help maintain the cultural and spiritual setting of this site, which is important to many tribal nations.	The corridor could be rerouted to the east to follow existing infrastructure and avoid the potential lands with wilderness characteristics. The BLM retains broad discretion regarding the multiple use management of lands possessing wilderness characteristics without Wilderness or WSA designations. Agencies could consider a new IOP to assist with avoiding and/or minimizing impacts of developing energy infrastructure on lands with wilderness characteristics.
Paleocene, Eocene Thermal Maximum (PETM) ACEC and the corridor intersect— Allow surface-	MP 200 to MP 201	Comment on abstract: PETM ACEC overlaps 445 acres of corridor.	The corridor could be shifted east to align with the proposed WPCI ROW and avoid the ACEC.

CORRIDOR 79-216 REVIEW			
POTENTIAL COMPATIBILITY ISSUES or CONCERNS TO EXAMINE	**MILEPOST (MP)[1]**	**STAKEHOLDER INPUT and OTHER RELEVANT INFORMATION**	**POTENTIAL RESOLUTIONS BASED ON SITING PRINCIPLE ANALYSIS [2]**
disturbing activities consistent with the goals of the ACEC.			
BLM Jurisdiction: *Billings Field Office (Montana)* ***Agency Land Use Plan:*** *Billings RMP (2015)*			
Other than the GRSG GHMA and PHMA intersections discussed below, no issues related to resource intersections with the corridor in the Billings Field Office have been identified.			
BLM Jurisdiction: *Casper Field Office, Cody Field Office, and Worland Field Office* ***Agency Land Use Plan:*** *Wyoming GRSG ROD and ARMPA– March 2019*			
GRSG GHMA and the corridor intersect – The 2019 ROD indicates that collocating new infrastructure within existing ROWs and maintaining and upgrading ROWs is preferred over the creation of new ROWs or the construction of new facilities in all management areas. Existing designated corridors, including Section 368 energy corridors, will remain open in all habitat management areas.	MP 0 to MP 42, MP 62 to MP 100, MP 121 to MP 128, and MP 142 to MP 230		The GHMA encompasses a broad area surrounding the corridor which cannot be avoided. There may be an opportunity to shift the corridor to the existing infrastructure in areas where it is not currently collocated.
GRSG PHMA (ROW avoidance area) and the corridor intersect – The ROD/ARMP indicates that collocating new infrastructure within existing ROWs and maintaining and upgrading ROWs is preferred over the creation of new ROWs or the construction of new facilities in all management areas. Existing designated corridors, including Section 368 energy corridors, will remain open in all habitat management areas.	MP 45 to MP 60, MP 100 to MP 120, and MP 128 to MP 142	Comment on abstract: from MP 125 to MP 147, the corridor follows existing pipelines across a unit of GRSG PHMA. The corridor could be shifted west to collocate with an existing transmission line and to eliminate the impacts to the grouse habitat from overhead transmission lines.	ROW avoidance areas are not compatible with the corridor's purpose as a preferred location for infrastructure. However, he PHMA encompasses a broad area surrounding the corridor which cannot be avoided. There may be an opportunity to shift the corridor to the existing infrastructure in areas where it is not currently collocated.
BLM Jurisdiction: *Billings Field Office* ***Agency Land Use Plan:*** *BLM ROD and ARMPAs for the Rocky Mountain Region, Including the GRSG Sub-Regions (Sept 2015); Attachment 5 (MP 230 to MP 255)*			
GRSG PHMA (ROW avoidance area) and the corridor intersect – The ROD/ARMP states that new ROW facilities would be located within or adjacent to existing ROWs to the extent practical. Existing utility corridors will remain open in PHMA.	MP 230 to 236, MP 238, MP 240, MP 242 to 245 and MP 249	Comment on abstract: delete corridor.	ROW avoidance areas are not compatible with the corridor's purpose as a preferred location for infrastructure. However, the PHMA encompasses a broad area surrounding the corridor which generally cannot be avoided and the corridor is collocated with existing infrastructure.

CORRIDOR 79-216 REVIEW			
POTENTIAL COMPATIBILITY ISSUES or CONCERNS TO EXAMINE	**MILEPOST (MP)[1]**	**STAKEHOLDER INPUT and OTHER RELEVANT INFORMATION**	**POTENTIAL RESOLUTIONS BASED ON SITING PRINCIPLE ANALYSIS [2]**
GRSG GHMA (ROW avoidance area) and the corridor intersect – The ROD/ARMP states that new ROW facilities would be located within or adjacent to existing ROWs to the extent practical. Existing utility corridors will remain open in GHMA.	MP 249 to MP 255	One crude oil pipeline occurs in the corridor at MP 251 to MP 252, and two crude oil pipelines occur in the corridor at MP 254. Comment on abstract: delete corridor.	ROW avoidance areas are not compatible with the corridor's purpose as a preferred location for infrastructure. However, the GHMA encompasses a broad area surrounding the corridor which cannot be avoided. There are no options to shift the corridor to other federal lands outside of the GHMA area between MP 249 and MP 255; no federal lands are available that follow the existing infrastructure but are outside of the GHMA area.

[1] Mileposts are rounded to the nearest mile.

[2] Siting Principles include: *Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment; Corridors promote efficient use of landscape for necessary development; Appropriate and acceptable uses are defined for specific corridors; and Corridors provide connectivity to renewable energy generation to the maximum extent possible, while also considering other generation, in order to balance the renewable sources and to ensure the safety and reliability of electricity transmission.* Projects proposed in the corridor would be reviewed during their ROW application review process and would adhere to Federal laws, regulations, and policy.

Additional Compatibility Concerns

The issues and concerns listed below are not explicitly addressed through agency land use plans or are too general in nature to be addressed without further clarification. Although difficult to quantify, the concerns listed have potential to affect future use and/or development within this designated corridor. The Agencies have provided a preliminary general analysis. The information below is provided to facilitate further discussion during stakeholder review.

Potential Corridor Revisions:

- Relocate the corridor from MP 0 to MP 22 by shifting the corridor south by about 1 mi to collocate within existing pipeline corridor then follow WPCI ROW 11 corridor to the south to avoid the Scenic Byway (comment on abstract).
- Relocate the corridor from MP 32 to MP 45 by shifting the corridor south about 7 mi. to align with WPCI ROW 11 corridor (comment on abstract).
- Relocate the corridor from MP 63 to MP 76 by shifting the corridor to follow WPCI ROW 11 corridor to the west of WWEC to avoid the Scenic Byway (comment on abstract).
- Relocate the corridor from MP 90 to MP 92 by shifting the corridor to follow WPCI ROW 11 corridor northeast to avoid reservoir at Badwater Rd (comment on abstract).
- Relocate the corridor at MP 100 by shifting the corridor about 2,000 ft east to follow WPCI ROW 4 corridor and collocate with existing pipeline (comment on abstract).
- Relocate the corridor from MP 108 to MP 115 by shifting the corridor 1 mi. east to follow WPCI ROW 4 corridor and collocate with existing pipeline (comment on abstract).

- Relocate the corridor from MP 150 to MP 169 by shifting the corridor 1 mi. east to follow WPCI ROW 4 corridor and collocate with existing pipeline (comment on abstract).
- Relocate the corridor from MP 184 to MP 205 by shifting the corridor about 3 mi. east to follow WPCI ROW 4 corridor and collocate with existing pipeline (comment on abstract).
- Relocate the corridor at MP 209 by shifting the corridor 1,000 ft east to follow WPCI ROW 4 corridor and collocate with existing pipeline (comment on abstract).
- Relocate the corridor at MP 174 by shifting the corridor 3,000 ft west to follow WPCI ROW 4 corridor (comment on abstract).

Analysis: The corridor could be shifted as suggested for all of the corridor segments suggested. In addition, shifting the corridor east between MP 184 and MP 205 would avoid an ACEC and reduce overlap with lands with wilderness characteristics. The corridor could be shifted between MP 63 and MP 76 to follow the WPCI ROW; however the corridor currently follows the existing transmission line.

Jurisdictional Concerns:

- Corridor crosses state lands along the corridor

Analysis: The Agencies could consider shifting the corridor from MP 142 to MP 143 so that the existing infrastructure will be the western border instead of the centerline to avoid state land and widen the designated corridor at that location.

Cultural Resources:

- Cedar Ridge is a large traditional cultural property that mostly lies north of, but does overlap a portion of the corridor segment. Cedar Ridge is an elevated topographic feature that overlooks the segment. Any facilities would create visual and setting impacts, and may impinge on the Native American experience from this visual vantage point.

Analysis: Section 106 of the NHPA requires federal agencies to consider the effects of an undertaking on cultural resources. Existing IOPs require tribal engagement early in the planning process for any proposed project in the corridor and adherence to existing IOPs for visual resources would be required.

Lands with wilderness characteristics:

- BLM-inventoried lands with wilderness characteristics: Timber Canyon
- Timber Canyon lands with wilderness characteristics overlaps 257 acres of the corridor MP 240 to MP 245 (comment on abstract).

Analysis: Agencies could consider an IOP to provide guidance on the review process for applications within corridors with incomplete inventories. The potential IOP would assist with avoiding, minimizing, and/or mitigating impacts on lands with wilderness characteristics.

Ecology:

- Grazing
- Vegetation specifically blowout penstemon, a sensitive species.
- 79-216 traces along eastern edge of Bridger Sage-steppe IBA and traverses the northeast section of the IBA from MP 249 to MP 255. This IBA supports the largest concentration of GRSG in the south-central portion of the state and roughly 3% of the male grouse surveyed in the state. The IBA

encompasses 21 lek sites (2.3% of the known leks in Montana), and at least 632 male GRSG, based on lek surveys. Although somewhat isolated to the east and west by the Prior and Beartooth mountain ranges, the area's Sage-grouse population is contiguous with, and part of, the grouse population in northern Wyoming (comment on abstract).

- Piney Creek upstream of MP 236 holds an aboriginal population of Yellowstone Cutthroat. The population is approximately 1 mile above the power ROW. Sage Creek has a native Yellowstone Cutthroat trout population and MP 245 intersects at the lower end of that fishery. Avoidance of stream bank and bed disturbances should be included in the best management practices around Sage and Piney Creek (comment on abstract).
- Considerable river recreation, hunting and fishing activities, streams and rivers that are important for coldwater fisheries, and Wyoming Game and Fish Department special management areas for both aquatic and terrestrial habitat conditions. In addition to a review of big game corridors and wildlife habitat displacement issues, soil landscape ecology should be a consideration due to the high level of erosion, sedimentation issues, and sparse vegetation in many areas along this route. Currently the Ecology Section of the Abstract is poorly defined and omits considerable information (comment on abstract).

Analysis: Existing IOPs and BMPs would be required. Section 7 consultation with USFWS would be commensurate with agency determination of potential affect to threatened or endangered species. In general, the corridor follows existing infrastructure. The Agencies could consider an IOP for habitat connectivity so that projects within Section 368 energy corridors are sited and designed in a manner that minimizes impacts on habitat connectivity.

Military and Civilian Aviation:

- MTR – IR and the corridor intersect from MP 164 to MP 175 and MP 193 to MP 209.

Analysis: Adherence to existing IOP regarding coordination with DoD would be required. Agencies considering a revision to the existing IOP to include height restrictions for corridors in the vicinity of DoD training routes.

Abstract Acronyms and Abbreviations

ACEC = area critical environmental concern; ARMPA = Approved Resource Management Plan Amendment; BLM = Bureau of Land Management; BMP = best management practice; DoD = Department of Defense; FO = Field Office; GHMA = general habitat management area; GIS = geographic information system; GRSG = Greater Sage-grouse; IBA = important bird area; IOP = interagency operating procedure; IR = instrument route; MP = milepost; MTR = Military Training Route; NHPA = National Historic Preservation Act; NHT = National Historic Trail; NRHP = National Register of Historic Places; PEIS = Programmatic Environmental Impact Statement; PETM = Paleocene, Eocene Thermal Maximum; PHMA = priority habitat management area; RFI = request for information; RMP = resource management plan; ROD = Record of Decision; ROW = right-of-way; USFS = U.S. Forest Service; USFWS = U.S. Fish and Wildlife Service; VRM = visual resource management; WPCI = Wyoming Pipeline Corridor Initiative; WSR = Wild and Scenic River; WWEC = West-wide Energy Corridor.