

Southwest Chief Thru-Car Alternatives Analysis – Preliminary Environmental Impact Analysis

6.1 PERMITTING APPROACH

This section describes the approach for the anticipated permitting and regulatory approvals required for the implementation of rail service that would operate on the BNSF Railway Pueblo Subdivision between La Junta and Pueblo, Colorado (The Project). The alternatives under consideration require up to 7 miles of new siding tracks, new turnouts and control points, at-grade crossing safety improvements, one 70' span single-track railroad bridge, drainage improvements, Positive Train Control (PTC), Centralized Traffic Control (CTC), an extended siding for staging the SWC Connector at the La Junta Amtrak Station. Improvements are mainly expected to stay within BNSF right of way for track improvements and public right of way for crossing improvements. It is essential to fully understand what specific permits and authorizations are required prior to Project execution. The following sections provide updates on obtaining necessary permits and monitoring any changes that could potentially affect the permitting process and the proposed Project schedule.

6.2 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Based on the proposed Project parameters, there is reasonable likelihood that the Project will qualify as a Categorical Exclusion (CE) by the Federal Railroad Administration (FRA). Based on 23 CFR § 771.116 FRA Categorical Exclusions, the Project appears to be applicable to 771.116(c) (22), "Track and track structure maintenance and improvements when carried out predominantly within the existing right-of-way that do not cause a substantial increase in rail traffic beyond existing or historic levels, such as stabilizing embankments, installing or reinstalling track, re-grading, replacing rail, ties, slabs and ballast, installing, maintaining, or restoring drainage ditches, cleaning ballast, constructing minor curve realignments, improving or replacing interlockings, and the installation or maintenance of ancillary equipment."

The Project is likely to qualify as a CE for NEPA review, however an FRA Categorical Exclusion Worksheet submission is required before this determination can be made. The purpose of this worksheet is to assist in gathering and organizing materials for environmental analysis required under NEPA, particularly for projects that may qualify as a CE. CEs are categories of actions (i.e., types of projects) that the FRA has determined that normally do not have a significant effect on the human environment and which generally do not require the preparation of either an environmental impact statement (EIS) or an environmental assessment (EA). The final decisions to prepare EAs and EISs are made by FRA.

NEPA compliance cannot be determined until the Categorical Exclusion Worksheet is submitted, evaluated, and determined by the FRA. However, there is reasonable likelihood that the proposed Project will meet the criteria to be a CE.

6.3 CLEAN WATER ACT, SECTION 404, 401, AND 402

A Clean Water Act (CWA) Section 404 permit is required for any activity involving construction in a jurisdictional wetland or water of the U.S. The U.S. Army Corps of Engineers (USACE) administers the Section 404 program and the U.S. Fish and Wildlife Service (USFWS), and the State Historic Preservation Office have important advisory roles in the Section 404 permitting process. National Wetland Inventory (NWI) data was reviewed to identify potentially jurisdictional streams, waterbodies, wetlands, soil types, and vegetation types within the Project Area to determine if a Section 404 permit may be required.

A Section 401 Water Quality Certification is the state approval process for water quality impacts, administered by the Colorado Department of Public Health and Environment. In Colorado, a separate Section 401 Water Quality Certification is required only when a Clean Water Act Section 404 Individual Permit is required. Best Management Practices, including storm-water management controls per Section 402 of the CWA, will be implemented, where necessary, to provide that Project activity will not harm or alter surrounding wetlands features. If applicable, all on-site pollutants, including waste materials, will be handled, and disposed of in accordance with BMPs to avoid contamination of water resources.

All work is to upgrade existing railroad infrastructure components. Project activities will occur within existing previously disturbed railroad right-of-way. If impacts to waters are anticipated as the Project progresses, it will be necessary to obtain any required permits at that time. There are no waters of special quality or concern, or protected drinking water resources present at or adjacent to the Project area that may be affected as a

result of the Project, therefore, it is unlikely that a CWA Section 402 will be required. No construction activities will occur in a jurisdictional wetland or within waters of the U.S., therefore a 401 Water Quality Certification will not be required unless a Section 404 permit is mandatory. A consultation with USACE is needed to determine if a Section 404 permit is required based on the updated Project parameters.

6.4 ENDANGERED SPECIES ACT, SECTION 7

The U.S. Fish and Wildlife Service (USFWS) consultation is required by Section 7 of the Endangered Species Act (ESA) or any activity that may adversely affect federal listed, proposed, or candidate endangers species or their designated critical habitat. According to the USFWS Information for Planning and Consultation Report (IPaC) resource list (Attached in **Appendix A**), three federally proposed, candidate, threatened, or endangered species or subspecies with the potential to occur or be affected by the Project area including:

- **Eastern Black Rail** (*Laterallus jamaicensis ssp. jamaicensis*): Listed as a threatened species. No critical habitat has been designated for this species. Black Rails nest in marshes and wet meadows across North America, including riparian marshes, coastal prairies, saltmarshes, and impounded wetlands. Key plant species in these habitats include saltmeadow hay, sand cordgrass, chairmaker's bulrush, saltgrass, needlerush species (genus *Juncus*), and various species of pickleweed (genus *Salicornia*).
- **Monarch Butterfly** (*Danaus plexippus*): Federal candidate species for threatened listing (not a legally binding designation). Critical habitat includes the significant presence of milkweed that is needed for larvae and adults. There are no permitting or consultation requirements with USFWS under the ESA for candidate species or for disturbances to suitable habitat for those species, like that of the monarch butterfly. The candidate status will be reviewed annually to determine whether the species needs listing as threatened or endangered.
- (*Bombus suckleyi*): Federal candidate species for endangered listing (not a legally binding designation). No critical habitat has been designated for this species. As of 02/20/2025, the USFWS will be developing consultation guidance for the Suckley's cuckoo bumble bee. As part of this guidance, mapped areas (called High Potential Zones) where Suckley's cuckoo bumble bee is most likely to occur will be developed. These zones will narrow the current range map below and reflect specific areas where we will recommend consultations to occur.

Critical habitats are those areas of land, air, or water that are essential for maintaining or restoring threatened or endangered plant or animal populations. The USFWS has not designated or identified any critical habitat within or adjacent to the Project area.

A Biological Assessment (BA) may be required to determine if federally listed or special status species will be directly or indirectly affected by the proposed Project. To ensure no impact to special status species, an updated species list from USFWS is required to be obtained within 90 days of starting any construction activities. Due to the lack of suitable habitat within the Project site area, it is unlikely that any candidate, threatened or endangered species would be impacted by the construction or operation of the Project, but a field verification BA is required to make this determination.

6.5 MIGRATORY BIRD TREATY ACT AND THE BALD AND GOLDEN EAGLE PROTECTION ACT

The Migratory Bird Treaty Act (MBTA) applies to any federal activity that would adversely affect a migratory bird or its nest, eggs, or young. The USFWS is the lead agency for managing migratory birds and eagles. Federal regulations prohibit construction activities that would result in the harassment or take of individual birds, eggs, young, and/or active bird nests of species protected under the MBTA and the Bald and Golden Eagle Protection Act. Birds of Conservation Concern (BCC) amendment to the Fish and Wildlife Conservation Act mandates the USFWS to identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the ESA. The nesting season extends from about December 1 to August 31 for Bald and Golden Eagles. In addition to MBTA and BGEPA, Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, obligates for the protection of both migratory birds and migratory bird habitat.

According to IPaC results (attached IPaC resource list in the **Appendix**), there are 17 BCC that may be present within the proposed Project site, plus Bald Eagle (*Haliaeetus leucocephalus*) and Golden Eagle (*Aquila chrysaetos*). The Bald Eagle and Golden Eagle are not BCC in this area but warrants attention because of the BGEPA. The Probability of Presence Summary detailed in the IPaC resource list describes the species that are most likely to be present, breeding, and/or roosting within the proposed Project area. It is recommended that construction activities and any vegetation clearing be conducted outside peak-nesting seasons to avoid any adverse effects to migratory birds and their habitats to ensure compliance with the MBTA and BGEPA. Should construction and vegetation clearing occur during peak-nesting seasons, active bird nest surveys should be conducted by a qualified biologist no more than 5 days prior to construction.

The USFWS recommends conservation actions to minimize the harassment or take of migratory birds and minimize destruction of habitat, including avoidance of activity during the nesting season in nesting habitat, pre-clearing of vegetation during the non-nesting season, and surveys for nesting birds where construction activity cannot be avoided during the nesting season. It is recommended that a pre-construction migratory bird and golden eagle nest clearance surveys be performed prior to nesting season and the mobilization of equipment at the start of construction to determine if the Project will have an impact on MBTA or BGEPA listed species.

6.6 NATIONAL HISTORIC PRESERVATION ACT, SECTION 106

Section 106 of the National Historic Preservation Act (NHPA) Section 106 requires federal agencies to take historic properties into account for all projects in which the agencies are involved. The act requires agencies to initiate consultation with State Historic Preservation Officers (SHPO) in the Colorado Office of Archaeology and Historic Preservation (OAHP) and if Native American tribal lands are involved with Tribal Historic Preservation Officers (THPO) to identify any cultural resources and historic properties that may be eligible for or already listed in the National Register of Historic Places. Also included are survey report records.

A desktop Cultural Resource Survey was performed to ensure that no archaeological or historical artifacts would be impacted by the Project. The data sources for this review include the COMPASS database maintained by OAHP, and the Historic Sites Inventory database maintained by CDOT. Below is a list of Resources that could be impacted by infrastructure improvement, along with any survey report records that are associated with the project area. Resources with **Bold** text are called out because the Colorado SHPO may require determination of effects for those resources.

BAXTER SIDING SITES WITHIN OR ADJACENT TO APE:

- 5PE.1665.13 - Atchison, Topeka & Santa Fe Railroad ~ Burlington Northern And Santa Fe Railroad – Spur, Does Not Support Eligibility of Entire Linear Resource (2010).
- 5PE.3951 – U.S. Highway culvert K-19-F, historic archaeology structure, Officially Not Eligible (2002).
- 5PE.6880 - Historical archaeology isolated find, recommended Field Not Eligible (2008).

- 5PE.6882 – Historical archaeology isolated find, recommended Field Not Eligible (2008).
- 5PE.8182 – Historic structure, circa 1900 single dwelling, **Officially Needs Data** (2015).

BAXTER SIDING SURVEYS WITHIN OR ADJACENT TO APE:

- MC.CH.R100, 2000, *Colorado Historic Bridge Survey*, by Clayton B. Fraser, Fraser design, for The Colorado Department of Transportation.
- PE.E.R5, 2010, *A Class III Cultural Resource Inventory of The Pueblo Contractor Yard For The Proposed Raton 2010 Expansion Project, Pueblo County, Colorado*, by Kinneer, Christopher, Centennial Archaeology, Inc., for The Department of Energy.

MANZANOLA SIDING SITES WITHIN OR ADJACENT TO APE:

- 5OT.1423 – Us Highway 50 - Hwy 50, 1920s historic road/trail, **Supports Eligibility of Entire Linear Resource** (2024).
- 5OT.1423.1 - Us Highway 50 segment, Does Not Support Eligibility of Entire Linear Resource (2014).
- 5OT.1694 - Atchison, Topeka And Santa Fe Railroad Main Line, determined **Officially Eligible** (2024).

MANZANOLA SIDING SURVEYS WITHIN OR ADJACENT TO APE:

- MC.R.R86 – 2014, *Class III Cultural Resource Survey, Arkansas Valley Conduit Geotechnical Drill Hole Locations, Bent, Crowley, Kiowa, Otero, Prowers and Pueblo Counties, Colorado (Ero # 4709) (Vols. 1 And 2)*, by Crosser, Ian, Sean Larmore And Kathleen Croll, Prepared By Ero Resources Corporation, for Stantec And The Bureau Of Reclamation Great Plains Region.
- MC.R.R94 – 2019, *Cultural Resource Inventory, Option Year 3, Arkansas Valley Conduit Regional Systems, Bent, Crowley, Otero, And Prowers Counties, Colorado*, by Crosser, Ian, Abigail Sanocki, Marin Millen, And Ryan Nordstrom, Prepared by Ero Resources Corporation.

- MC.R.R98 – 2019, *Synthetic Cultural Resource Survey Report Arkansas Valley Conduit Bent, Crowley, Kiowa, Otero, Prowers, and Pueblo Counties, Colorado*, by Crosser, Ian, Jenny Engleman, Marin Millen, and Ryan Nordstrom with Contributions By Kevin P. Gilmore And Michelle A. Slaughter, Prepared by Ero Resources Corporation For Stantec And The Bureau Of Reclamation Great Plains Region.
- OT.CH.NR17 – 2012, *An Intensive Archaeological Resource Inventory of Us Highway 50 Between Manzanola and Rocky Ford, Otero County, Colorado*, by Greg Wolff, Colorado Department of Transportation.

NA JUNCTION SIDING SURVEYS WITHIN OR ADJACENT TO APE:

- 5PE.68 – Prehistoric archaeology open camp site, officially not eligible (1989)

NA JUNCTION SIDING

Surveys within or adjacent to APE:

- PE.CH.R23 – 1984, *Archaeological Clearance of Project BRF-050-4(13), Pueblo County, Colorado*, by Chocol, Barbara and Steven M. Wallace, for Colorado Department Of Highways, Archaeological Unit.

ROCKY FORD SIDING SITES WITHIN OR ADJACENT TO APE:

- 5OT.1694.6 - Atchison, Topeka And Santa Fe Railroad Main Line Segment, **Officially Eligible** (2024).
- 5OT.1423 - Us Highway 50 - Hwy 50, 1920s historic road/trail, **Supports Eligibility of Entire Linear Resource** (2024).
- 5OT.1743 – Historic site, Knapp farm, **Officially Eligible** (2021).

ROCKY FORD SIDING SURVEYS WITHIN OR ADJACENT TO APE:

- OT.CH.NR17 – 2012, *An Intensive Archaeological Resource Inventory of Us Highway 50 Between Manzanola and Rocky Ford, Otero County, Colorado*, Wolff, Greg, Colorado Department of Transportation.

- MC.R.R98 – 2019, *Synthetic Cultural Resource Survey Report Arkansas Valley Conduit Bent, Crowley, Kiowa, Otero, Prowers, And Pueblo Counties, Colorado*, by Crosser, Ian, Jenny Engleman, Marin Millen, And Ryan Nordstrom with Contributions By Kevin P. Gilmore And Michelle A. Slaughter, Prepared By Ero Resources Corporation For Stantec And The Bureau Of Reclamation Great Plains Region.

The above review of the OAHF and CDOT database yielded six cultural resource sites that the Colorado SHPO may require additional research related to determinations of eligibility and effects if the project moves forward. No additional research is required at this time.

6.7 AIR QUALITY

Air quality in any given location is defined by the concentration of various pollutants in the atmosphere, generally expressed in units of parts per billion (ppb), parts per million (ppm) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. The significance of a pollutant concentration is determined by comparing it to federal and/or state ambient air quality standards. The federal Clean Air Act (CAA or ACT), 42 U.S.C. Sections 7401-7671(q) provides that emission sources must comply with the air quality standards and regulations that have been established by federal, state, and county regulatory agencies. These standards and regulations focus on (1) the maximum allowable ambient pollutant concentrations, and (2) the maximum allowable emissions from individual sources.

The CAA requires all states to control air pollution emission sources so that National Ambient Air Quality Standards (NAAQS) are met and maintained. The NAAQS establishes maximum acceptable concentrations for nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀), particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5}), ozone (O_3), and lead (Pb); these are known as criteria pollutants. The NAAQS are established by the U.S. Environmental Protection Agency (USEPA) and are outlined in 40 Code of Federal Regulations (CFR) 50. NAAQS represent the maximum allowable atmospheric concentrations that may occur to protect public health and welfare and include a reasonable margin of safety to protect the more sensitive individuals in the population.

Pueblo and Otero County was evaluated individually for each of the six criteria pollutants. The proposed Project is designated unclassifiable/attainment areas for all six criteria pollutants by the USEPA. This designation indicates that air quality monitoring data show both counties as either meeting the NAAQS or lack sufficient data for a definitive classification, but they are not considered to be in nonattainment.

6.8 FLOODPLAINS

Floodplains are determined by the Federal Emergency Management Agency (FEMA). FEMA has redefined floodplain terminology from 100- and 500-year floods to the 1% annual chance flood. Review of the FEMA National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) describe the location of the floodway plus any adjacent floodplain area must be kept free of encroachments so that the 1% annual chance flood can be carried without substantial increases in flood heights. The 1% annual chance flood (100-year flood), also known as base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The proposed Project site is adjacent to the Special Flood Hazard Area (SFHA) Zone A, Zone C, and others which are subject to inundation by the 1% annual chance of flood. Other locations of the Project may be located within the SFHA.

A Flood Insurance Study (FIS) may be required to provide a flood risk analysis beyond what the FIRMs show. It is unlikely that the Project would affect floodplain functions, such as floodplain capacity or water flow. However, it is recommended that floodplain best management practices (BMPs), mitigations measures, and possible flood design structures/features are implemented during construction activities and operation of the Project within and adjacent to the SFHA.

6.9 HAZARDOUS MATERIALS AND WASTE

Hazardous materials and wastes are governed by the EPA, USACE, DoD, and U.S. Department of Transportation. Hazardous substances are defined in accordance with CERCLA, the CWA, and the Resource Conservation and Recovery Act (RCRA) and include any element, compound, mixture, solution, or substance specified as hazardous, and when released into the environment, may present substantial danger to public health or welfare, or the environment. The definition also includes any imminent hazardous chemical or mixture that the EPA oversees under the Toxic Substances Control Act (TSCA).

Construction activities would involve heavy machinery and equipment, and the operation of the Project may increase the risk of fuel spills or related waste. Such as the development of a Spill Prevention, Control, and Countermeasure (SPCC) plan to avoid accidental release of hazardous materials and waste. Where applicable, wooden/metal

railroad ties and components, in addition to hazardous materials and waste, will be disposed of properly to prevent any potential contamination in accordance with local, state, and Federal regulations.

6.10 SOILS AND GEOLOGY

Several regulations have been established by federal agencies to protect and conserve soil resources. The descriptions below provide an overview of agency regulations that may be applicable to soil and geological resources analyzed and described herein. The final determination of whether permits are required is made by the regulating agency. The Soil and Water Resources Conservation Act of 1977 mandates the USDA to assess and plan for soil and water conservation, ensuring sustainable resource use. The Farmland Protection Policy Act of 1981 states federal agencies must “minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses”. Prime farmland is characterized as land with the best physical and chemical characteristics to produce food, feed, forage, fiber, and oilseed crops.

During construction activities, soil will be disturbed during the initiation of the Project; however, impacts to soil erosion would be minimized below significant levels through the implementation of site-specific erosion control plans and BMPs. BMPs would include the use of site-specific erosion control plans where no impervious surfaces exist to minimize surface soil runoff; the use of silt fences; covering of soil stockpiles; re-vegetation or covering with gravel base rock of disturbed areas in a timely manner; and wetting of soils to prevent fugitive dust and wind erosion. The existing geologic structures, faults, bedrock, soils, seismic and geologic stability, and native material surrounding excavations would not be adversely impacted and would not experience long-term changes as a result of the Project.

6.11 LAND USE

Information on zoning and public policy is based on reviews of local zoning ordinances and comprehensive plans for the applicable jurisdictions in connection with the identification of planned development and potential changes to policy or plans. The Project will occur within the existing railroad right-of-way, and it is compatible with the existing land use designations. No change will occur to land use and the Project is consistent with the existing uses and development patterns of the area.

6.12 TRANSPORTATION AND TRAFFIC

The Project will extend the available railway to improve transportation. The Project will improve the speed of travel and reduce the overall trip duration, making for more positive ridership experience to maintain ridership levels. Therefore, it is likely that the Project will have a beneficial impact on passenger rail service, as well as benefit freight operations on the line. A Traffic Assessment may be required to evaluate the potential transportation, traffic, and parking impacts, and address capacity constraints and potential impacts (beneficial or adverse) to existing railroad and highway operations.

6.13 COMMUNITIES, SOCIOECONOMICS, AND ENVIRONMENTAL JUSTICE

Providing an additional, reliable travel alternative to existing roadways would support resident access to jobs, shopping, recreation, and health care facilities. It is likely that the Project will not significantly affect adjacent communities, nor have a disproportionately high or adverse impact on any low income or minority populations in the Project area. Consultation with The Colorado State Demography Office may be required to determine if the proposed Project will have a beneficial or adverse effect to the adjacent communities within the Project area.

6.14 VISUAL AND SCENIC RESOURCES

Visual and scenic resources refer to the visual qualities of a natural or build environment that contributes to the overall beauty, enjoyment, and cultural value of a particular location. Visual impacts are demonstrated by identifying visual resources in the Project area, measuring the amount of change that would occur as a result of the Project, and predicting how the affected public would respond to or perceive those changes.

The proposed Project is unlikely to have significant changes on visual resources as it will involve only four new passenger trains operating on the line each day. The limited train frequency will minimize any potential visual disruptions or impacts to the surrounding landscape which preserves the Project area's aesthetic character. Given these factors, the Project is unlikely to cause noticeable changes to scenic views, it will not alter the overall visual quality or cause long-term visual impacts to the population of the region.

6.15 NOISE AND VIBRATION

The Project is located in a predominantly rural agricultural environment and will be entirely confined to the previously disturbed area within the existing railroad right-of-way. It is likely that there will be no permanent increase in noise or vibration resulting from the Project or operations. The Project is unlikely to change noise and/or vibration exposure levels. However, a preliminary noise survey and an analysis of the sensitivity receptors (such as residences, parks, schools, hospitals, public gathering spaces, etc.) may be required to determine if they are located in or near the Project area.

6.16 PARKS AND RECREATION

The Project does not include the conversion or preservation of any publicly owned park, recreation area, or wildlife and waterfowl refuge. Project activities will be entirely confined to the previously disturbed area within the existing railroad right-of-way. Therefore, the Project, will likely not affect parks and/or recreational facilities within the Project area.

6.17 COASTAL ZONES AND NAVIGABLE WATERWAYS

The Project will not cross or affect a navigable waterway. The Project is not in a designated coastal zone and does not have the potential to affect coastal resources.

APPENDIX A

