

BIOLOGICAL ASSESSMENT

2002 South I-25 Corridor and
US 85 Corridor Record of Decision
Reevaluation and Section 4(f) Evaluation

US 85 Highlands Ranch Parkway to C-470

May 2017

	CORRIDOR IMPROVEMENTS		
	Highlands Ranch Pkwy to C-470		



2002 SOUTH I-25 CORRIDOR AND US 85 CORRIDOR RECORD OF DECISION
REEVALUATION AND SECTION 4(f) EVALUATION

US 85 Highlands Ranch Parkway to C-470

Biological Assessment

Prepared for:



Prepared by:



May 2017

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Acronyms and Abbreviations

ADA	Americans with Disabilities Act of 1990
BMP	best management practices
C-470	Colorado State Highway 470
CBP	Colorado butterfly plant
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
CNHP	Colorado Natural Heritage Program
CPW	Colorado Parks and Wildlife
DRCOG	Denver Regional Council of Governments
ESA	Endangered Species Act
FE	Federally Endangered
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FT	Federally Threatened
I-25	Interstate 25
IPaC	Information, Planning and Conservation
NEPA	National Environmental Policy Act
PEL	Planning and Environmental Linkages
ROD	Record of Decision
SB 40	Senate Bill 40
SPWRAP	South Platte Water Related Activities Program, Inc.
ULTO	Ute's ladies tresses orchid
US 85	U.S. Highway 85
USFWS	U.S. Fish and Wildlife Service

1.0 Introduction/Background

1.1 History

The United States Highway 85 (US 85) South Corridor extends 25.5 miles from Interstate 25 (I-25) in Denver to the Town of Castle Rock in Douglas County. From a regional perspective, this corridor is a multimodal major arterial for longer-distance, regional trips. The corridor also provides access to numerous commercial and residential developments that are crucial to Douglas County's economy.

In May 2001, the Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) completed the *South I-25/US 85 Final Environmental Impact Statement* (FEIS) (CDOT 2001a). A Record of Decision (ROD) was signed in August 2001 that selected the Preferred Alternative from the FEIS, referred to as the Selected Alternative. A *Revised Record of Decision* was signed in 2002. There were no changes to the Selected Alternative in the 2001 ROD in the 2002 Revised ROD (CDOT 2002).

The FEIS/ROD outlined a set of improvements to address transportation needs for a 2020 horizon year along US 85 from approximately Meadows Parkway to Blakeland Drive. Since then, Douglas County has helped provide funding to CDOT to combine with their own funding to design and construct six segments of the Selected Alternative from the FEIS/ROD. In addition, funding has been provided to improve sections of I-25.

The US 85 Corridor segments and their status are shown in Figure 1.

As additional residential and commercial growth occurs in the northwest portion of the county, further studies have been conducted to identify what transportation improvements are necessary to support the development. Douglas County is conducting two separate but coordinated studies of US 85.

- The *US 85 Corridor Improvements Planning and Environmental Linkages (PEL) Study Report* (Douglas County 2016) updated the 2002 FEIS/ROD recommendations for transportation improvements to US 85 from approximately State Highway 67 (SH 67) in Sedalia to 0.5 mile north of County Line Road. The PEL study identified the long-term transportation needs beyond 2040. It was done primarily to determine what improvements are needed in addition to those selected in the FEIS/ROD. The PEL study defined a Purpose and Need, developed and evaluated a set of alternatives, and recommended improvements for the study area. Near-term improvements to 2020 include providing six through lanes with continuous flow intersections between Highlands Ranch Parkway and Colorado State Highway 470 (C-470) (which includes a multiuse path on the east side of US 85) and providing six through lanes from C-470 to 1,200 feet north of County Line Road (including a new bridge over C-470, a grade-separated Centennial Trail, and a flyover ramp for northbound to westbound traffic). More details about the recommendations and improvements beyond 2020 are in the PEL study document.

- The Highlands Ranch Parkway to C-470 Project is another segment of the FEIS/ROD Selected Alternative. Douglas County obtained funding from the Denver Regional Council of Governments (DRCOG) to construct this project beginning in 2019. Before design can proceed, the 2002 FEIS/ROD needs to be reevaluated to reflect current conditions. This National Environmental Policy Act (NEPA) Reevaluation determines if the findings from the FEIS/ROD remain valid, so that this segment of the FEIS/ROD Selected Alternative can proceed to final design and construction.

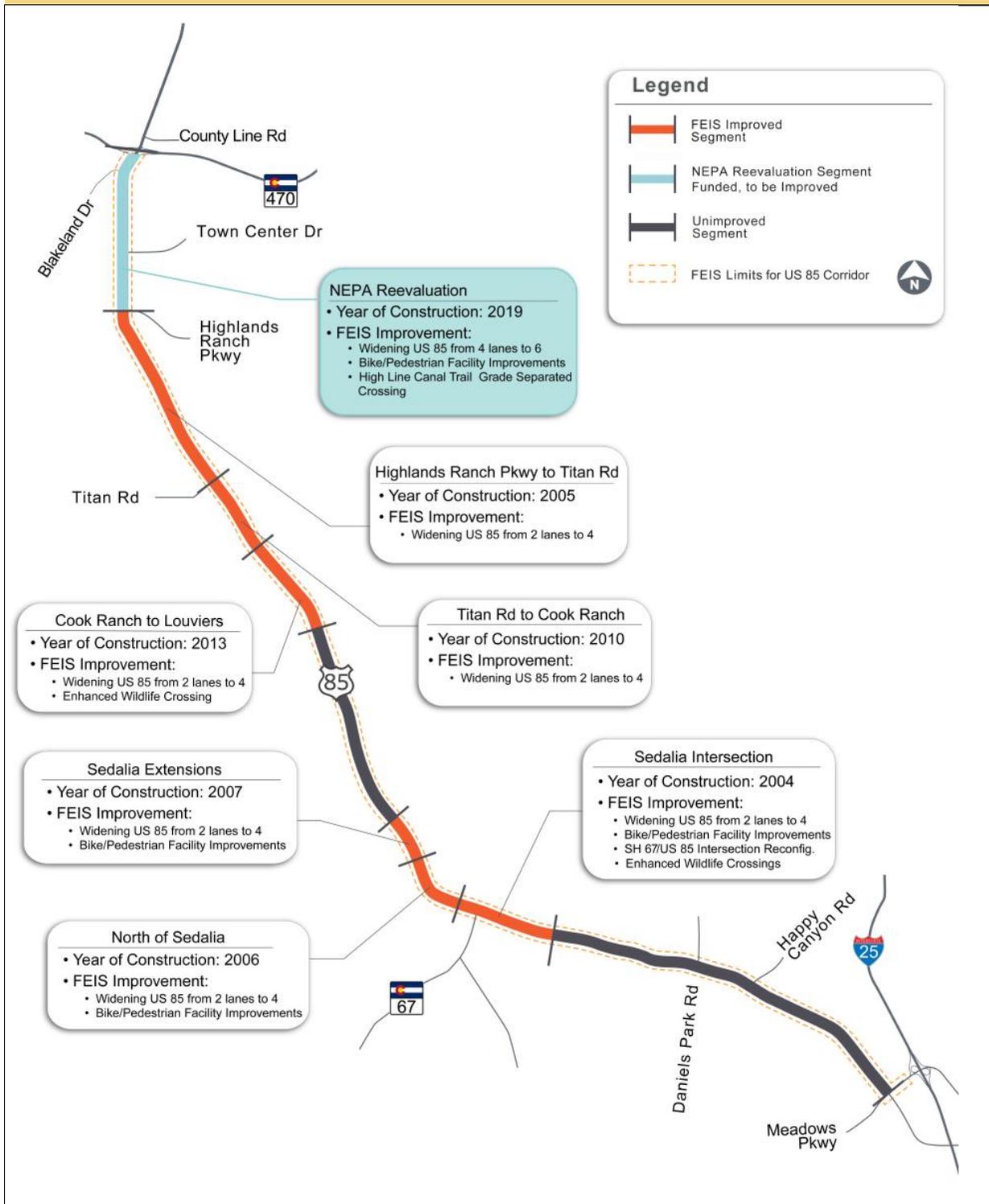
1.2 Study Area

The approximate 312-acre environmental resource study area for this NEPA Reevaluation is located in Douglas County along two miles of US 85, from Highlands Ranch Parkway to C-470. The study area begins approximately 1,900 feet south of the intersection of US 85 and Highlands Ranch Parkway and extends north to C-470, as shown in Figure 1. The eastern and western boundaries vary along the length of the study area but extend an average of 500 feet to 700 feet in either direction of US 85. The boundaries were set to encompass areas on either side of US 85 associated with the Refined Selected Alternative improvements to be evaluated for direct and indirect impacts.

1.3 Purpose for Reevaluation

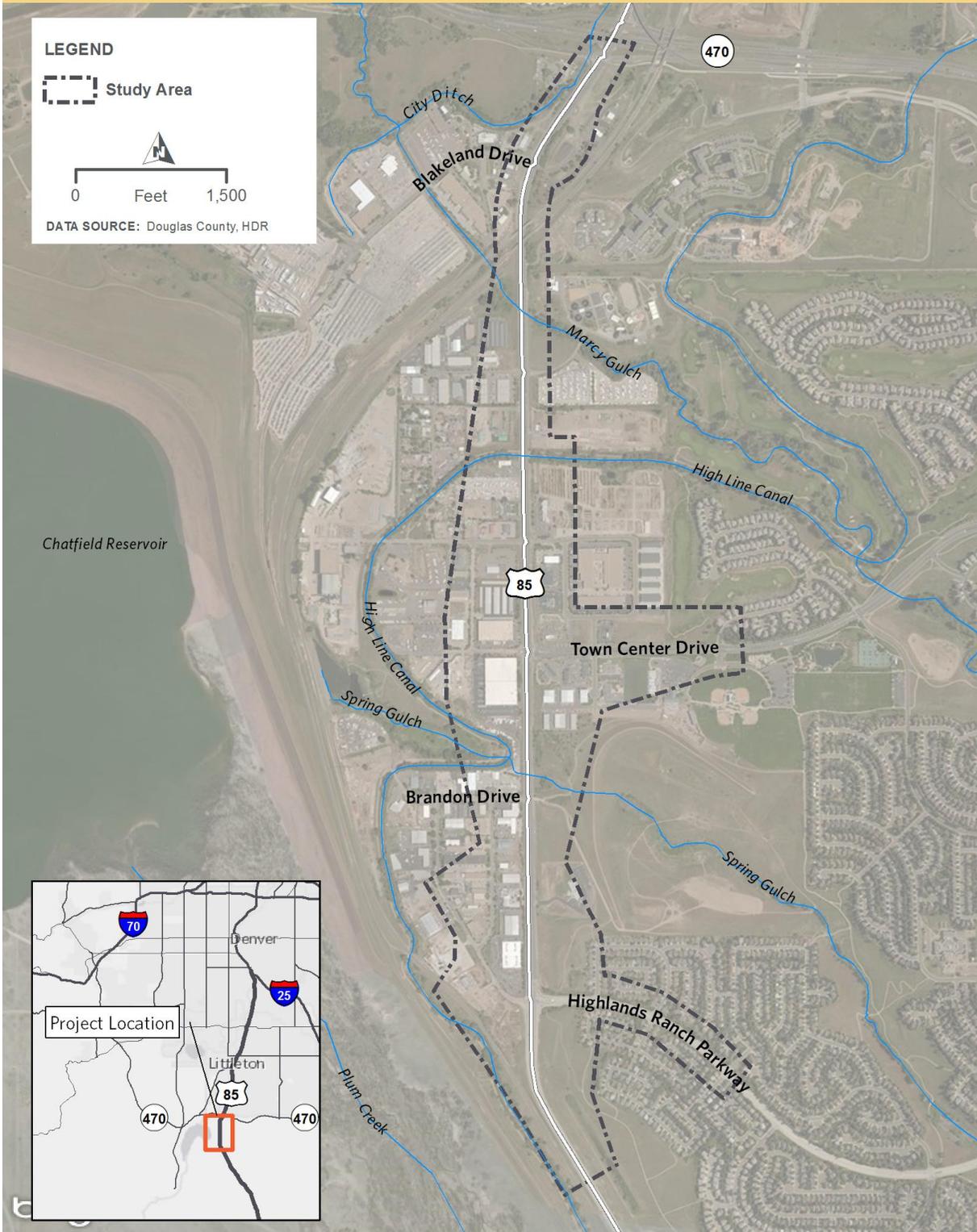
The purpose for this Reevaluation is to reevaluate the 2002 FEIS/ROD to address changes to conditions that have occurred since it was issued by FHWA, and to reanalyze impacts of recommended improvements for the Highlands Ranch Parkway to C-470 project. The Reevaluation uses data from the most recent fiscally constrained 2040 Regional Transportation Plan. The FEIS/ROD used data from the 2020 Regional Transportation Plan. The Reevaluation identifies changed existing and future conditions; identifies a refined Selected Alternative for improvements to improve capacity, operational performance and safety for traffic volumes in 2040; identifies changes in legislation, regulations, and guidance related to the improvements; reanalyzes impacts; and develops needed changes to the mitigation measures identified in the FEIS/ROD.

Figure 1. Status of US 85 Corridor Segments



Source: HDR 2016

Figure 2. US 85 Reevaluation Study Area



Source: HDR 2016.

1.4 Purpose for Biological Assessment

The Endangered Species Act (ESA) of 1973 (16 U.S.C. 153 et seq.), as amended, requires federal agency decisions and actions to conserve and recover listed species and use their authorities to further the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species (50 Code of Federal Regulations [CFR] §402). ESA directs all federal agencies to consult (referred to as Section 7 consultation) with the U.S. Fish and Wildlife Service (USFWS) when their activities “may affect” a listed species or designated critical habitat. The ESA also mandates that federal agencies contribute to the conservation of federally listed species by utilizing their authorities to conserve (recover) federally listed species so that listing is no longer necessary.

This biological assessment has been prepared in compliance with Section 7 of the Endangered Species Act of 1973, as amended. The purpose of this biological assessment is to review the Reevaluation Refined Selected Alternative to determine its likely effects on species listed as threatened, endangered, proposed, or candidate species under the ESA that potentially occur in the study area.

2.0 Description of the Alternatives

2.1 No-Action Alternative

The No-Action Alternative consists of leaving US 85 in its current condition between Highlands Ranch Parkway and C-470, with two general purpose lanes in each direction. Improvements to other sections of US 85 and to portions of I-25 as adopted in the 2002 ROD have already been implemented and are assumed as part of the No-Action Alternative network. The No-Action Alternative also includes improvements to C-470 as defined in the recent Finding of No Significant Impact.

2.2 Refined Selected Alternative

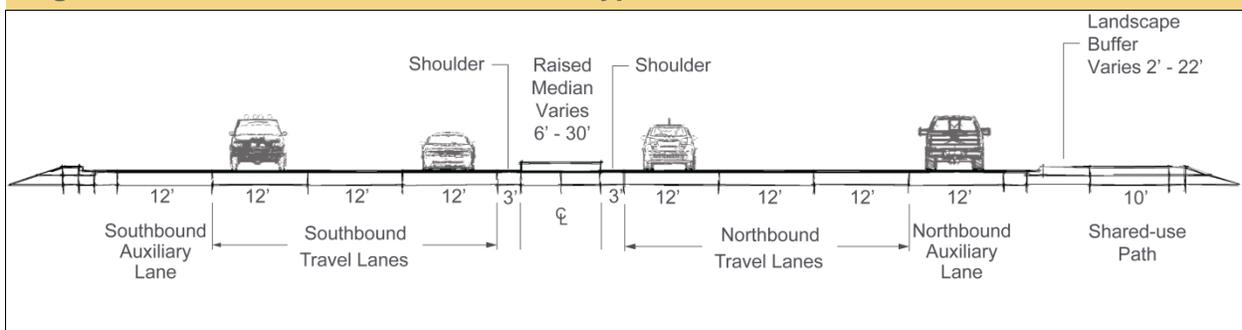
The 2002 FEIS/ROD Selected Alternative included widening both US 85 and I-25. The I-25 recommendations included widening to eight lanes between C-470 and Meadows Parkway and six lanes between Meadows Parkway and Douglas Lane. An east side frontage road was included between Schweiger Interchange and Castle Pines Parkway. Interchange modifications were included at Schweiger, Surrey Ridge Road, Castle Pines Parkway and Plum Creek Parkway. All improvements on I-25 that were in the Revised ROD have been completed, except for the widening of the Happy Canyon Road bridge.

For US 85, widening to six lanes between Highlands Ranch Parkway and C-470 and four lanes south to Meadows Parkway was recommended. The SH 67 interchange was to be reconfigured, a frontage road was recommended at Sedalia, and a minor realignment was recommended at Cook Ranch. Bicycle and pedestrian facilities were to be included all along US 85, a grade separation at the High Line Canal trail was included, and enhanced wildlife crossings were recommended.

Improvements in the 2002 FEIS/ROD Selected Alternative between Highlands Ranch Parkway and C-470 included a six-through-lane section (eight lanes including the auxiliary lanes) with a total width that ranges from 106 to 131 feet. The travel lanes are 12 feet wide. The alternative includes a raised median, inside curb and gutter, outside curb and gutter, inside shoulders, continuous auxiliary lanes, and a shared-use path. It also includes improvements to the High Line Canal Trail by changing the existing at-grade crossing to a grade-separated crossing under US 85. Access consolidation includes modification to right-in/right-out accesses, based on the *Final US 85 Access Management Plan, South I-25 Corridor and US 85 Corridor EIS* (CDOT 2001).

The Refined Selected Alternative includes all of the features described above, most of which are illustrated in the cross-section in Figure 3.

Figure 3. Refined Selected Alternative Typical Section



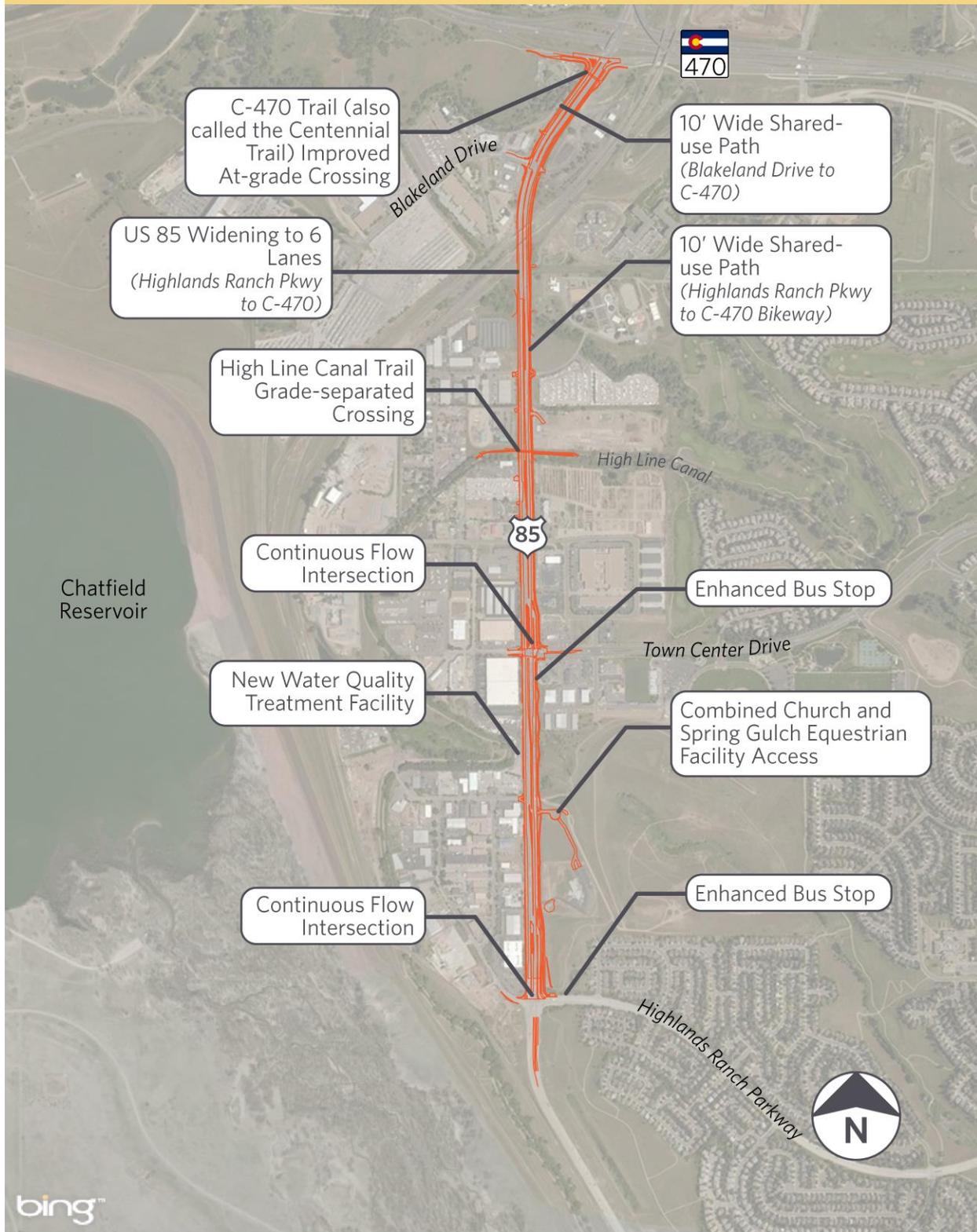
Source: HDR 2016.

Design Changes Included in the Refined Selected Alternative

Changes in the Refined Selected Alternative design compared to the Selected Alternative include continuous flow intersections at Town Center Drive and Highlands Ranch Parkway and minor changes to access and some elements of the cross-section, culvert sizes, bus stop enhancements, and retaining walls (Figure 4). All of these changes are minor refinements to the same basic alternative.

- US 85 Mainline.** The width of the auxiliary lane increased 10 feet to 12 feet. In some locations, to minimize impacts, the auxiliary lane may be 11 feet. The FEIS/ROD design had included an alignment shift to the west. This is no longer a part of the Refined Selected Alternative. It also includes a wider raised median (30 feet compared to 10 feet) and no inside shoulders at the continuous flow intersections.

Figure 4. US 85 Highlands Ranch Parkway to C-470 Refined Selected Alternative



Source: HDR 2016.

- **Intersection and Access Improvements.** Changes in access and turning movements are described in Figure 5. There are notable changes at the intersections below. They are described and illustrated on the following pages.
 - Highlands Ranch Parkway and Town Center Drive.
 - Norwood Drive, Carder Court, and Brandon Drive.
 - Spring Gulch Equestrian Facility and Grace Presbyterian Church.

Figure 5. Changes in Access and Turning Movements

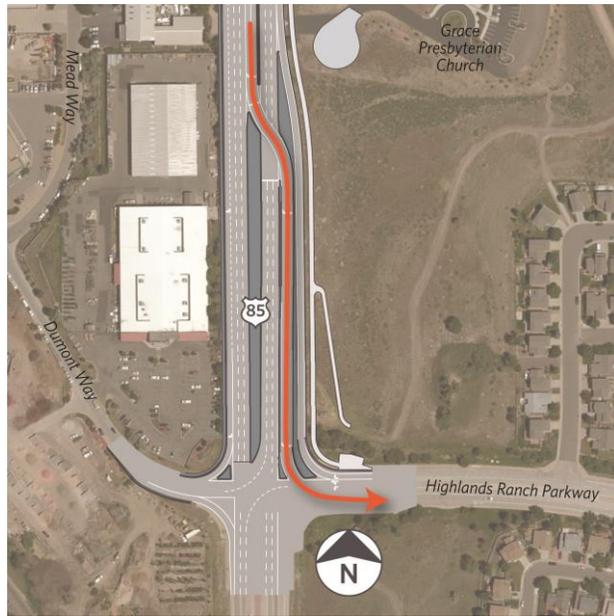
Location	FEIS/ROD Access		NEPA Reevaluation Access	
	Existing Conditions	2002 Selected Alternative	Refined Selected Alternative	Change from FEIS/ROD
Norwood Drive				Left turns and east/west through movements displaced
Carder Court				Left turns and east/west through movements displaced
Midway - Town Center Drive				No U-turn southbound to northbound
Brandon Drive - Spring Gulch Equestrian Facility			Combined access to Spring Gulch Equestrian Facility and Grace Presbyterian Church	Left turns (except southbound) and east/west through movements displaced
Grace Presbyterian Church	No Access Documented (Church constructed 2012)			No change
Highlands Ranch Parkway - Dumont Way				No U-turn southbound to northbound

Note: N/S through movements assumed for all intersections

Source: HDR 2016.

At Highlands Ranch Parkway and Town Center Drive, there are continuous flow intersections. This innovative intersection design improves operations for intersections with a high number of left-turn movements. This type of traffic pattern exists on US 85 within the study area, and the Refined Selected Alternative incorporates this design modification at the Highlands Ranch Parkway and Town Center Drive intersections. When compared to a traditional signal-controlled intersection, the primary differentiating feature of the continuous flow intersection is the relocation of left-turn movements on an approach to the other side of the opposing traffic flow. Figure 6 and Figure 7 display the continuous flow intersection layouts at Highlands Ranch Parkway and Town Center Drive with the relocated left-turn movement highlighted.

Figure 6. Highlands Ranch Parkway Continuous Flow Intersection



Source: HDR 2016.

Figure 7. Town Center Drive Continuous Flow Intersection



Source: HDR 2016.

At Norwood Drive, Carder Court, and Brandon Drive, the intersections are right-in/right-out. Left-turning traffic is relocated to adjacent intersections, as shown in Figure 8 and Figure 9.

Figure 8. Highlands Ranch Parkway Continuous Flow Intersection U-Turn Access



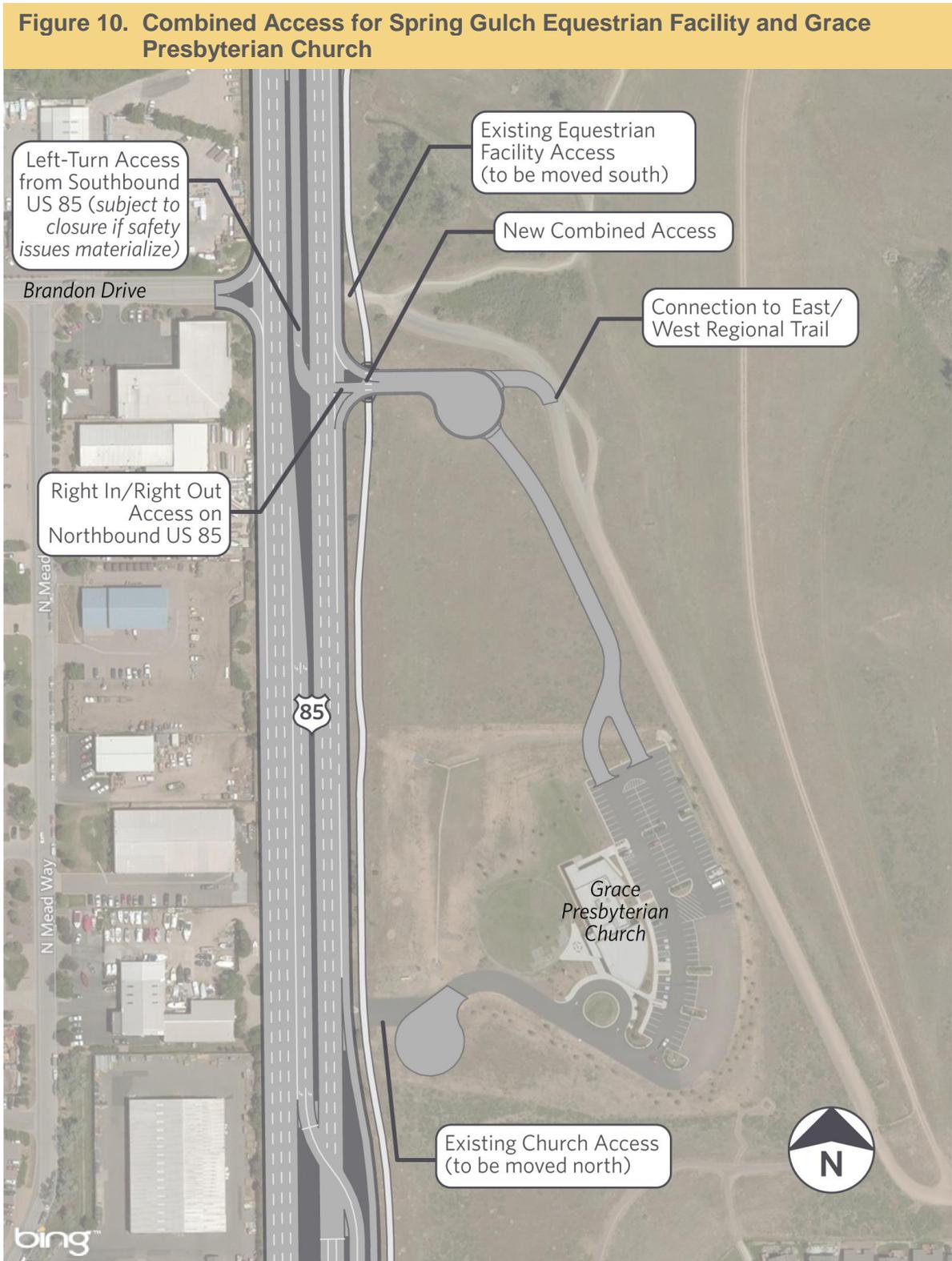
Source: HDR 2016.

Figure 9. Town Center Drive Continuous Flow Intersection U-Turn Access



Source: HDR 2016.

Access to the Spring Gulch Equestrian Facility (owned by the U.S. Army Corps of Engineers) is combined with access to Grace Presbyterian Church. This is a 3/4 movement; however, the southbound left turn movement may be eliminated at CDOT's discretion if safety issues materialize. Traffic destined to southbound US 85 from this access would make a U-turn at Town Center Drive. This change includes paving of the driving entrance and relocating the entrance 120 feet south (Figure 10). The Grace Presbyterian Church was not in this location in 2002, so the project setting has changed.



Source: HDR 2016.

- **Retaining Walls.** There are more retaining walls (approximately 80,000 square feet) to avoid or minimize parking or property impacts, minimize riparian vegetation impacts, minimize impacts to water quality treatment and drainage features, minimize impacts to Section 4(f) historic and recreation properties, and minimize impacts to the railroad bridge substructure and foundations.
- **Improved Bus Stops and Connections.** The design now includes improvements to the existing RTD 402L bus stops:
 - ▶ The stop on US 85 north of Highlands Ranch Parkway is being eliminated. The existing stop on the north side of Highlands Ranch Parkway east of US 85 is being moved and enhanced with a bench, shelter, and bike racks.
 - ▶ The stop on US 85 north of Town Center Drive is being moved to south of Town Center Drive and enhanced with bench, shelter, bike racks, and bike lockers.

For both southbound and northbound stops, the Refined Selected Alternative includes sidewalk connections from the bus stop to the adjacent side street.

- **Shared-use Path.** There are minor changes in the width of shared-use path and the width of separation between the roadway and path.
 - ▶ *Highlands Ranch Parkway to Blakeland Drive.* Rather than a consistent 5-foot landscaped buffer, the path has 2-foot gravel shoulders, and its distance from the roadway generally varies from between 2 and 22 feet with landscaping in the buffer where there is adequate room. At the railroad crossings south of Blakeland Drive, the path is detached and set back from the roadway by 14 feet.
 - ▶ *Blakeland Drive to C-470.* The Refined Selected Alternative has a wider path (10 feet instead of 8 feet) that is detached on the east side of US 85 with landscaping in the buffer where there is adequate room. On the west side, it is also 10 feet wide but attached.
 - ▶ *C-470 Trail (also called the Centennial Trail).* The shared-use path is connected to the C-470 Trail with an improved at-grade crossing of US 85. The at-grade crossing enhancements for the C-470 Trail include restriping the crosswalks, adding new Americans with Disabilities Act of 1990 (ADA) ramps, reconfiguring the existing median island, and providing better wayfinding through the intersection. A future grade-separated crossing will be constructed in a later project when funded.
- **Water Quality Treatment.** To meet current municipal separate storm sewer systems (MS4) requirements, the Refined Selected Alternative assumes conversion of an existing parcel owned by Douglas County (north of Brandon Drive) by the High Line Canal to a water quality facility. This location has been tentatively selected at this phase of design, but

specific details may change during the final design process. If the changes result in additional environmental impacts, those will be documented in a reevaluation.

- **High Line Canal Trail Grade-separated Crossing.** The culvert for the High Line Canal Trail underpass at US 85 (Figure 11) is now 2 feet higher and wider than the Selected Alternative—12 feet high and 14 feet wide.

Figure 11. High Line Canal Trail Grade-separated Crossing: Existing Condition and Future Condition Simulation



Source: CDOT 2002.

3.0 Study Area Habitat

The study area is located in an urban, developed, commercial area at an elevation of approximately 5,450 feet. The general habitat types within the study area include upland grassy/weedy roadside habitat, riparian and wetland habitat, and landscaped areas. The area has an average annual precipitation of approximately 16 inches, an annual max temperature of 63 degrees, and an average minimum temperature of 35 degrees Fahrenheit (Western Regional Climate Center 2015).

The study area occurs in the Front Range fans ecoregion, which consists of short grass and mixed grass prairie (Chapman et al. 2006). Short grass prairie is present in very isolated locations in the study area because of urban development along the corridor. The dominant plant species in these locations are smooth brome (*Bromis inermis*), crested wheatgrass (*Agropyron cristatum*), soapweed yucca (*Yucca glauca*), blue grama (*Bouteloua gracilis*), and rabbitbrush (*Chrysothamnus spp.*). The most common vegetation community is the roadside upland/landscaped habitat that is dominated by noxious weeds, with isolated patches of crested wheatgrass, smooth brome, cheat grass (*Bromis tectorum*), and other grasses and ornamental trees (Photo 1). Landscaped/disturbed areas in the study area do not provide significant habitat for wildlife although some species of wildlife may occasionally be observed passing through these areas.

Riparian habitats are biologically diverse and productive ecosystems and provide several important ecological functions, including providing food, water, and cover for resident and migratory wildlife species. Biological surveys conducted in August 2015 documented riparian habitat along Plum Creek, Marcy Gulch, Spring Gulch, and the High Line Canal (Photo 1; Photo 2 and Photo 3). Riparian and wetland areas are dominated by narrowleaf willow (*Salix exigua*), plains cottonwood (*Populus deltoides*), narrow leaf cottonwood (*Populus angustifolia*), peachleaf willow (*Salix amygdaloides*), boxelder (*Acer negundo*), plum (*Prunus Americana*), New Mexico locust (*Robinia neomexicana*), Russian olive



Photo 1. Typical right-of-way habitat along US 85 with a high percentage of noxious weeds.



Photo 2. High Line Canal typical riparian vegetation



Photo 3. Photo of dense riparian cover along Marcy Gulch

Figure 12. Riparian Areas in the Study Area



Source: Douglas County, CDOT 2001; HDR.

(*Elaeagnus angustifolia*), chokecherry (*Prunus virginiana*), Siberian elm (*Ulmus pumila*), green ash (*Fraxinus pennsylvanica*), reed canary grass (*Phalaris arundinacea*), water hemlock (*Cicuta douglasii*), cattail (*Typha spp.*), and various sedges and rushes. The riparian community associated with Plum Creek includes a few secondary channels and oxbows (including wetlands), some snags (dead trees), areas with exposed cut banks, and a high density of noxious weed species.

4.0 Agency Consultation and Coordination History

As required by Section 7 of the ESA, interagency consultation has been initiated between CDOT and the USFWS regarding federally listed species that could potentially be affected by the project. Consultation with USFWS indicates that the only federally listed species that could be affected by the Refined Selected Alternative is the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (A. Michael, USFWS, 2015 personal comm. to Francesca Tordonato, CDOT). A resource agency meeting was held on September 24, 2015, to discuss the proposed project. An official Information, Planning and Conservation (IPaC) letter was requested and received on August 2, 2016, that provides a list of federally endangered, threatened, proposed, and candidate species to be considered for analysis (Appendix A).

4.1 Previous Consultations

A biological assessment for the *South I-25/US 85 Final Environmental Impact Statement* was prepared by Ensign and submitted to the USFWS in October 2000 (CDOT 2000a). The biological assessment analyzed impacts to the Preble's meadow jumping mouse (Preble's) from the Selected Alternative. FHWA determined in the biological assessment that the proposed project was likely to adversely affect the threatened Preble's. The USFWS concurred with the FHWA's determination in a Biological Opinion issued February 9, 2001.

Species-specific surveys were conducted for Preble's, Colorado butterfly plant (CBP; *Gaura neomexicana* var. *coloradensis*), and Ute's ladies tresses orchid (ULTO; *Spiranthes diluvialis*) within the South I-25 Corridor and US 85 Corridor right-of-way. Surveys for ULTO and CBP were negative; however, surveys for Preble's presence was confirmed along East Plum Creek near Castle Rock (CDOT 2000b).

5.0 Changes in Laws, Regulations or Guidance since FEIS/ROD

Changes have occurred to the Preble's, ULTO, and CBP block clearance zones since the biological assessment for the *South I-25/US 85 Final Environmental Impact Statement* was completed. The streams in the project area were not block cleared for Preble's at the completion of the FEIS/ROD. The current Preble's block clearance zone (Figure 13 on pg. 25) shows the majority of the Refined Selected Alternative study area as block-cleared except for a small portion of the High Line Canal riparian area west of US 85 within the study area and Chatfield State Park and the South Platte River (only the portion south of C-470). Additionally, critical habitat for Preble's was designated on December 15, 2010, that includes areas adjacent to the study area (Figure 13 on pg. 25). The block clearance zone for ULTO and CBP ends at the

southern boundary of Arapahoe County where the Platte River crosses under C-470. This does not affect the Reevaluation study area.

The Platte River Recovery Implementation Program went into effect on January 1, 2007. The purpose of this program is to provide ESA compliance for water users in the Platte River Basin upstream of the Loup River confluence in Nebraska for effects on the target species and critical habitat, while managing certain land and water resources to provide benefits for those species.

The evaluation of Platte River species was addressed in a Programmatic Biological Assessment and Biological Opinion to evaluate water depletions to the Platte River from 2012 to 2019 (USFWS 2012). Platte River species occur in Nebraska, which is well away from the study area but may be affected by water uses for the Refined Selected Alternative, so they must be evaluated to comply with Section 7 of the ESA. The Platte River species include three federally listed bird species, one federally listed fish species, and one federally listed plant species (Section 6.4, Table 1).

6.0 Methods and Field Studies

Sirena Brownlee, HDR Senior Biologist, and Ryan Hammons, HDR Ecologist conducted a biological resources survey of the study area on August 12, 2015. The survey included an approximately 50-foot-wide buffer for vegetation and a 0.50-mile buffer for federally-listed species and raptors. All biological resource data collected in the field was recorded with a Trimble Geo XT global positioning system unit. The purpose of the field surveys was to assess the study area for the presence and suitability of potential habitat for listed species. An additional survey was conducted by Sirena Brownlee on July 28, 2016, to document Senate Bill 40 (SB 40) resources and raptor nests in the study area.

The team reviewed the FEIS/ROD findings and conducted a desktop review of all available data for biological resources including habitat preferences and known distribution for listed species in the study area. In addition, prior to conducting field work, the following resources were reviewed:

- Federal candidate, threatened, and endangered species, as identified by the USFWS online Information, Planning and Conservation (IPaC) System (USFWS 2016a).
- Colorado Natural Heritage Program (CNHP) spatial data (CNHP 2016).
- eBird for recent sightings of federally listed birds in the project area (eBird 2015).

6.1 Species Evaluation and Effects Determination

The potential for occurrence of each species was determined based on the categories listed below. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided.

- *Known to occur*—the species has been documented in the project area by a reliable source.

- *May occur*—the project area is within the species' documented range, and vegetation communities, and soils, resemble those known to be used by the species.
- *Unlikely to occur*—the project area is within the species' currently documented range, but vegetation communities, soils, etc., do not resemble those known to be used by the species, or the project area is clearly outside the species' currently known range.

Species listed by the USFWS were assigned effect determinations based on three categories of possible effect (USFWS 1998). The effects determinations recommended by USFWS include:

- *May affect, is likely to adversely affect*—the project is likely to adversely affect a species if 1) the species is known to occur in the project area, and 2) project activities would disturb areas or habitat elements known to be used by the species or would directly affect an individual.
- *May affect, is not likely to adversely affect*—the project is not likely to adversely affect a species if 1) the species may occur but its presence has not been documented, and 2) project activities would not result in disturbance to areas or habitat elements known to be used by the species.
- *No effect*—the project will have no effect on a species if 1) the species is considered unlikely to occur (range, vegetation, etc., are inappropriate), and 2) the species or its sign was not observed during surveys of the project area.

6.2 Block Clearance Zones

The majority of the study area is located in a block clearance zone for Preble's. Block clearance zones are areas that the USFWS has determined, through analysis of species survey data and occurrence information, that there is a very low probability of the species occurring in an area and that it is likely extirpated from that area. The block clearance for the Preble's covers the Denver metropolitan area, with an exception of the Rocky Mountain Arsenal National Wildlife Refuge. The current Preble's block clearance zone shows the majority of the current study areas as block cleared except for a portion of the High Line Canal riparian area west of US 85, Chatfield State Park, the South Platte River (only the portion south of C-470), and Plum Creek (Figure 9; USFWS 2016c).

6.3 Action Area

The "action area" includes "all areas to be affected directly or indirectly by the Federal Action and not merely the immediate area involved in the action" (USFWS 1998, 50 CFR § 402.02).

For the purposes of this analysis, the action area consists of a 0.50-mile radius from the proposed centerline of the roadway because of the potential for noise impacts and visual disturbance from construction activities. All direct and indirect effects are expected to be contained within this 0.50-mile radius.

6.4 Species Considered and Evaluated

Based on the USFWS online IPaC System (Appendix A), there are 10 federally listed threatened or endangered species (Table 1) with the potential to occur in the action area (USFWS 2016a). Based on the review of habitat present within the action area and consultation with USFWS, the only federally listed species with potential habitat in the action area is the Preble's. Critical habitat for Preble's has been designated in the South Platte River and Plum Creek adjacent to the action area as shown in Figure 13 on pg. 25 (75 Federal Regulation 78430; December 15, 2010). No other critical habitat for any federally listed species occurs in the action area. No further evaluation is deemed necessary for those species not known or suspected to occur within the action area.

7.0 Preble's Meadow Jumping Mouse

7.1 History

Status

The Preble's meadow jumping mouse was listed as threatened throughout its range in May 1998 (63 Federal Register 26517). On February 2, 2005, the USFWS issued a 12-month finding on a petition to delist the Preble's and proposed to remove it from the federal list of threatened and endangered species because of their finding that the Preble's is not a discrete taxonomic entity and does not meet the definition of a subspecies (70 Federal Register 5404). In July 2008, the Preble's was determined to be a valid subspecies and it maintained its threatened status in Colorado, but individuals in Wyoming were no longer listed and critical habitat in Wyoming was eliminated (73 Federal Register 39790). In August 2011, however, ESA protections for this species in Wyoming were reinstated, though critical habitat in Wyoming was not (76 Federal Register 47490).

Life History

The Preble's is a small mouse with an extremely long tail, large hind feet, and long hind legs, which allow the mouse to escape from predators by making incredible jumps. The distinctive long tail is bicolored, lightly furred, and often twice as long as the body, occupying more than 60 percent of the total body length. The Preble's has a dark broad stripe on its back that runs from head to tail and is bordered on either side by gray to orange-brown fur (USFWS 2003). Population trends and density are not well known and there is no reliable abundance estimates for the Preble's (73 Federal Register 39790).

Preble's meadow jumping mouse habitat consists of dense, well-developed wetland and riparian areas with dense vegetation, as well as the adjoining uplands containing undisturbed shrub and grass uplands up to 300 feet beyond the 100-year floodplain. Upland areas are used to hibernate, forage, and escape flooding. Hibernation occurs underground or beneath logs or other similar shelters from mid-October through early May (USFWS, 2003). The Preble's may travel more than 2.3 miles along linear riparian habitats. The diet of these rodents includes

Table 1. Federally Listed Species and their Potential to Occur in the Action Area

Species	Status ¹	Habitat Requirements	Potential for Occurrence in Action Area	Determination of Effect
Birds				
Least Tern* (<i>Sterna antillarum</i>)	FE	Nests along reservoirs, lakes and rivers with bare sandy shorelines or islands along several rivers in Nebraska.	Unlikely to occur. No suitable habitat in action area. This species is included because it inhabits the middle Platte River.	
Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	FT	Old-growth forests in western North America, where it nests in tree holes, old bird of prey nests, or rock crevices.	Unlikely to occur. No suitable habitat is present in the action area.	No effect.
Piping Plover* (<i>Charadrius melodus</i>)	FT	Wetlands, lakeshores, and marshes. Nesting habitat is along reservoirs, lakes and rivers with bare sandy/pebbly areas with sparse vegetation.	Unlikely to occur. No suitable habitat in action area. This species is included because it inhabits the middle Platte River.	
Whooping Crane* (<i>Grus Americana</i>)	FE	Mid-river sandbars, wet meadows, and reservoir edges along the Platte River in Nebraska.	Unlikely to occur. No suitable habitat in action area. This species is included because it inhabits the middle Platte River.	
Mammals				
Preble's meadow jumping mouse (<i>Zapus hudsonius preblei</i>)	FT	Occurs along Front Range of Colorado along permanent or intermittent streams in areas with herbaceous cover and adequate cover of shrubs and trees.	May occur. Occupied habitat mapped along Spring Gulch and High Line Canal in the action area (Figure 13, pg. 25).	May affect, but is not likely to adversely affect the Preble's meadow jumping mouse.

Table 1. Federally Listed Species and their Potential to Occur in the Action Area

Species	Status ¹	Habitat Requirements	Potential for Occurrence in Action Area	Determination of Effect
Fish				
Greenback Cutthroat Trout (<i>Oncorhynchus clarki stomias</i>)	FT	Species prefers mid- to high-elevation streams with cold, clear water of moderate gradient.	Unlikely to occur. No suitable habitat in action area.	No effect.
Pallid Sturgeon* (<i>Scaphirhynchus albus</i>)	FE	Inhabits large, silty rivers with a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars.	Unlikely to occur. No suitable habitat in action area. This species is included because it inhabits the middle Platte River.	
Flowering Plants				
Ute ladies' tresses orchid (<i>Spiranthes diluvialis</i>)	FT	Sub-irrigated alluvial soils along streams; open meadows on floodplains including riparian areas.	Unlikely to occur. No suitable habitat in action area; riparian vegetation is dense and study area lacks open wet meadow habitat typically associated with this species. Surveys to detect presence of the Ute ladies' tresses orchid in the action area in August 2015 were negative.	No effect.
Colorado butterfly plant (<i>Oenothera coloradensis</i>)	FT	Stream channel sites that are occasionally disturbed, sub-irrigated alluvial soils along streams, and open floodplain meadows.	Unlikely to occur. The action area consists of highly developed urban areas and maintained properties in which there are no wet or sub-irrigated meadows. Currently, the CBP is not found in Douglas County. The nearest	No effect.

Table 1. Federally Listed Species and their Potential to Occur in the Action Area

Species	Status ¹	Habitat Requirements	Potential for Occurrence in Action Area	Determination of Effect
			known existing population occurs in Weld County. Biological surveys conducted in August 2015 did not document suitable habitat for the CBP within the action area.	
Western prairie fringed orchid* (<i>Platanthera praeclara</i>)	FT	Occurs in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches in Nebraska	Unlikely to occur. No suitable habitat in action area. This species is included because it inhabits the middle Platte River.	

Source: USFWS 2016a.

¹Status Codes: FE = Federally Endangered; FT = Federally Threatened.

*Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.

CBP = Colorado butterfly plant

arthropods, fungus, moss, pollen, and a wide variety of plants, especially willow (*Salix* spp.) (USFWS 2003). Many animals prey upon them, including garter snakes (*Thamnophis* spp.), prairie rattlesnakes (*Crotalus viridus*), bullfrogs (*Lithobates catesbeianus*), foxes (*Vulpes vulpes*), long-tailed weasels (*Mustela frenata*), and Red-tailed Hawks (*Buteo jamaicensis*) (USFWS 2003).

Habitat that is not inhabited by Preble's includes highly disturbed or modified sites, such as landscaped areas, armored stream channels, and irrigation ditches with little or no vegetation; dry upland sites; dense stands of cattails; cropland; and areas more than 300 feet away from suitable habitat (USFWS 2016b).

The Preble's range extends along the eastern edge of the Front Range foothills of the Rocky Mountains from southeastern Wyoming to Colorado Springs, Colorado. In Colorado, the Preble's lives along creeks, rivers, and other waterbodies in Larimer, Weld, Boulder, Douglas, Jefferson, El Paso, Teller, and Arapahoe Counties from 4,650 feet to 7,600 feet in elevation (73 Federal Register 39790).

Preble's construct day nests composed of grasses that are found under debris at the base of shrubs and trees or in open grasslands. An individual mouse can have multiple day nests in both riparian and grassland communities and may abandon a nest after approximately a week of use. Hibernation nests occur underground both within and outside of the 100-year floodplain. Hibernacula have been located under willow, chokecherry (*Prunus* spp.), snowberry (*Symphoricarpos albus*), skunkbrush (*Rhus* spp.), sumac (*Rhus* spp.), clematis (*Clematis* spp.), cottonwoods (*Populus* spp.), Gambel's oak, and alyssum (*Alyssum* spp.). They typically enter hibernation nests between September and October and emerge the following May (USFWS 2016b).

The primary diet of Preble's includes insects and fungi in early spring May then shifts to fungi, moss, and pollen during mid-summer (July and August), and insects in the fall. Seeds also are a significant part of their diet, and Preble's have been observed climbing grass stalks to forage on the seed heads (USFWS 2003).

Threats

The primary threats to the Preble's includes loss, alteration and fragmentation of habitat, principally through conversion of prairie habitat containing well-developed riparian areas to agricultural and residential developments (73 Federal Register 39790). Changes to stream flow regimes due to water developments, diversions, and flood control have decreased the vegetative cover these mice need for cover, nests, food, and hibernation (73 Federal Register 39790). Road construction, bank stabilization, intense grazing, rock and sand extraction, invasive weeds, and fire have also been identified as threats. They are vulnerable to predation during foraging and dispersal activities and may fall prey to predators ranging from owls, foxes, weasels, and snakes (USFWS 2016b).

Species Recovery

In 2003, a Preble's recovery team released a list of recovery recommendations for the species (USFWS 2003). The recovery objective for these recommendations is the delisting of this species. The recovery criteria for delisting are:

- Document and maintain wild, self-sustaining Preble's meadow jumping mouse populations.
- Protect and manage habitat of Preble's meadow jumping mouse populations.
- Abate threats to Preble's meadow jumping mouse populations.
- Develop and implement a long-term management plan and cooperative agreement prior to delisting.

In 2009, the recovery team reconvened and is working toward development of a final recovery plan.

In 2006, Douglas County and the Towns of Castle Rock and Parker developed the Douglas County Habitat Conservation Plan and Environmental Assessment (DCHCP) to conserve the quality, quantity, and distribution of habitat needed to maintain the long-term viability of Preble's in Douglas County (Douglas County 2006). The DCHCP provides an Incidental Take Permit that covers the county and the two municipalities and allows them to conduct activities in Preble's habitat, such as road, bridge, trail construction and maintenance, utility crossings, and habitat improvements.

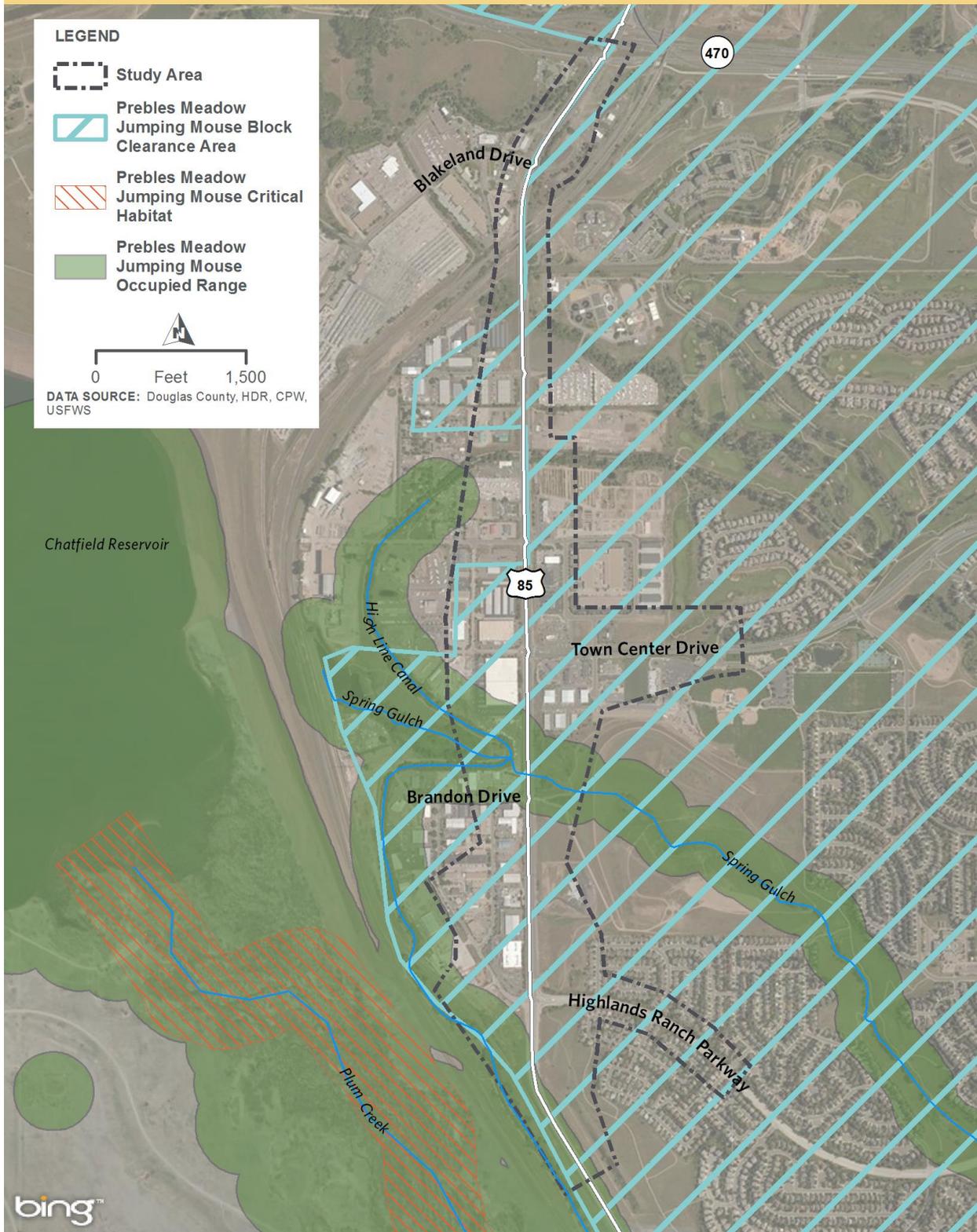
Designated Critical Habitat

In 2010, critical habitat was designated for Preble's in Colorado, totaling 8 habitat units along approximately 411 miles of rivers and streams and 34,935 acres in Boulder, Broomfield, Douglas, El Paso, Jefferson, Larimer, and Teller Counties (75 Federal Register 78430).

Unit 9 "West Plum Creek" (i.e., West Plum Creek Critical Habitat Unit), was one of the critical habitat areas added in 2010, and it includes much of the Plum Creek/West Plum Creek Watershed (Figure 13; 75 Federal Regulation 78430). Unit 9 consists of 90.3 miles of streams. Plum Creek from Chatfield Lake upstream to its confluence with East Plum Creek and West Plum Creek is included in Unit 9, with the exception of 0.14 miles of Plum Creek at the High Line Canal crossing. No designated critical habitat overlaps with the Refined Selected Alternative study area.

Critical habitat on Plum Creek extends outward 460 feet from each side of the stream (75 Federal Regulation 78430). The primary constituent elements (PCE) for Preble's include (75 Federal Regulation 78430):

Figure 13. Preble's Meadow Jumping Mouse Occupied Range and Critical Habitat



Source: USFWS 2016c; CPW 2015b

- Riparian corridors: (A) Formed and maintained by normal, dynamic, geomorphological, and hydrological processes that create and maintain river and stream channels, floodplains, and floodplain benches and that promote patterns of vegetation favorable to the Preble's meadow jumping mouse; (B) Containing dens, riparian vegetation consisting of grasses, forbs, or shrubs, or any combination thereof, in areas along rivers and streams that normally provide open water through the Preble's meadow jumping mouse's active season; and (C) Including specific movement corridors that provide connectivity between and within populations. This may include river and stream reaches with minimal vegetative cover or that are armored for erosion control; travel ways beneath bridges, through culverts, along canals and ditches, and other areas that have experienced substantial human alteration or disturbance; and
- Additional adjacent floodplain and upland habitat with limited human disturbance (including hayed fields, grazed pasture, other agricultural lands that are not plowed or disked regularly, areas that have been restored after past aggregate extraction, areas supporting recreation trails, and urban-wildland interfaces).

7.2 Environmental Baseline

The environmental baseline identifies the current status of, and effects on, the species in the action area. This should be the current condition of the habitat, including all impacts that have occurred or are occurring to the species up to the time that the project will be implemented.

The current Preble's block clearance zone shows the majority of the action area as block cleared except for a small portion of the High Line Canal riparian area west of US 85 within the action area and Chatfield State Park and the South Platte River (Figure 13). However, Colorado Parks and Wildlife (CPW) data documents potential occupied habitat along Spring Gulch and High Line Canal west of US 85 in the action area. Additionally, occupied habitat is shown adjacent to the study area in Plum Creek and Chatfield Reservoir, as shown in Figure 13 (CPW 2015).

Preble's presence in the vicinity has been confirmed through field surveys conducted in support of the FEIS/ROD in the vicinity of the action area, including along East Plum Creek in Castle Rock (CDOT 2000b). Surveys conducted in 1998 on USACE property in the area surrounding Chatfield Reservoir documented captures along the South Platte River and Plum Creek (USACE 2013). Trapping surveys conducted in the FEIS/ROD study area during the 1998 surveys include trapping on the east and west side of High Line Canal, the east side of Marcy Gulch and near Spring Gulch. These surveys were all negative for the presence of Preble's (USFWS 2015).

Habitat for Preble's in the action area has been highly degraded due to the presence of US 85 and the adjacent development that have impacted and removed riparian habitat over the years. Culverts that convey streams and ditches under US 85 were not designed for wildlife passage and, therefore, they fragment habitat for many riparian species such as Preble's. The adjacent railroad and industrial development likely prohibits movement and connectivity between

populations on the Plum Creek and Chatfield Park area with potential habitat on the east side of US 85. Adjacent vegetation has been highly degraded by noxious weeds that invade riparian areas. Neither Spring Gulch nor High Line Canal contain appropriate denning habitat for Preble's. Spring Gulch is an intermittent stream surrounded by a small emergent wetland. The uplands surrounding Spring Gulch contain some mixed grass prairie habitat that is managed by the Spring Gulch Equestrian Center for equestrian jumping but does not contain undisturbed grasslands that Preble's prefer. The High Line Canal riparian area in the area has no adjacent uplands with undisturbed shrub and grass communities that are preferred by Preble's.

8.0 Effects of the Action

Direct and Indirect Effects

The majority of project construction activities would occur within the block clearance zone for Preble's in areas that are highly developed or degraded. There would be no direct impacts to riparian habitat in occupied Preble's habitat that has not been block cleared (Figure 9). However, because of the proximity to Plum Creek and Chatfield Reservoir, it is possible that Preble's could forage in riparian areas on the west side of the action area. Minor impacts to riparian habitat that could be used for foraging would occur as a result of roadway widening, modifying the High Line Canal culvert, and improvements at Spring Gulch. A total of approximately 1.4 acres of permanent impact to riparian habitat and 0.44 acre of temporary impact to riparian vegetation will occur in the action area. No impacts would occur within Preble's critical habitat along Plum Creek. Impacts to Preble's connectivity are discountable since the area does not likely provide movement across US 85. Total impacts to all riparian areas (occupied and non-occupied habitats) are listed in Table 2.

Table 2. Location and Magnitude of Potential Impacts to Riparian Areas

Location	Temporary Impacts (acres)	Permanent Impacts (acres)
North of Blakeland East Side of US 85	0.026	0.532
South of Blakeland to just South of Aspen Terrace Mill Vista Road—East Side of US 8	0.018	0.458
Marcy Gulch West Side of US 85	0.197	0
Marcy Gulch East Side of US 85	0.005	0.197
High Line Canal West Side of US 85	0.065	0.034
High Line Canal East Side of US 85	0.114	0.116
Spring Gulch East Side of US 85	0.019	0.054
Total Impacts (acres)	0.44	1.4

Construction activities may temporarily affect Preble's in the vicinity of the action area if construction activities are conducted during the Preble's active season (May 1 through November 1). Construction activities are expected to occur year-round from early 2019 through late 2020. Although temporary disturbance from construction activities may occur, the effect is expected to be minor and temporary because it is likely that the species, if present would avoid the area during construction activities. It is unlikely there are any occupied burrows in the action area riparian areas due to the high levels of human disturbance and degraded adjacent upland habitat. However, if occupied burrows were present, construction activities, such as heavy equipment operation could impact burrows through ground vibration and loud noise. In addition, Preble's could be crushed or smothered by construction equipment or workers.

Riparian trees and shrubs removed during construction will be replaced as stipulated in CDOT's Guidelines for Senate Bill 40 Wildlife Certification (CDOT 2013a).

Cumulative Effects

Cumulative effects include the environmental baseline plus the additive effect of reasonably foreseeable future state, county, and private activities. Future development and related infrastructure are likely the most serious threats to Preble's populations in the area. Increased development would result in habitat loss, increased traffic volumes, increased noise and air pollution, and increased human activity. An increase in residential development likely would increase the number of domestic dogs and cats in areas adjacent to riparian areas, which would increase predations of Preble's. The action area currently has an infestation of non-native and noxious weeds that could spread into riparian areas and reduce the amount of forage material and cover for Preble's.

The recently completed PEL Study identified additional widening of the entire US 85 corridor and intersection and interchange improvements. Widening of US 85 in the PEL study area could impact Preble's habitat along Plum Creek.

9.0 Conservation Measures Proposed

The applicable mitigation measures will be implemented to minimize the impacts of the Refined Selected Alternative on Preble's meadow jumping mouse in the action area:

- Riparian trees and shrubs removed during construction will be replaced as stipulated in CDOT's Guidelines for Senate Bill 40 Wildlife Certification (CDOT 2013a), which state that trees removed during construction, whether native or non-native, shall be replaced with a goal of 1:1 replacement based on a stem count of all trees with diameter at breast height of 2 inches or greater. Shrubs removed during construction, whether native or non-native, will be replaced based on their preconstruction areal coverage. In all cases, all such trees and shrubs will be replaced with native species. Best management practices (BMP) applicable in SB 40 jurisdictional areas will be proposed to CPW in the SB 40 application package when specific project impacts are determined in final design.

- In accordance with the SB 40 Memorandum of Agreement (MOA) (CDOT 2013b) signed by CDOT and CPW in 2013 (CDOT 2013), success criteria for trees and shrubs will be followed per CDOT Specification 214.
- Construction staging and materials stockpiling will be located greater than 50 feet from the edge of wetlands or the edge of other waters of the U.S., when possible, to avoid disturbance of vegetation and to prevent pollutant discharges into sensitive habitats. Specific locations will be determined during construction planning.
- Equipment will be refueled within designated refueling containment areas away from the ordinary high water mark and wetlands.
- Wetland/riparian areas not impacted by the project will be protected from construction activities by temporary and/or construction limit fencing.
- Mitigation for impacts caused by water depletions on Platte River species will be addressed by FHWA and CDOT participation in the Platte River Recovery Implementation Program, the South Platte Water Related Activities Program, Inc. (SPWRAP), and the existing Programmatic Biological Assessment between CDOT and USFWS. Water used for this project will be reported to the USFWS at the completion of the project.
- Temporary disturbance areas will be reseeded and protected using CDOT-approved BMPs. Any disturbance to existing vegetation will be avoided to the maximum extent possible.
- To the maximum extent practicable, disturbing (for example, crushing, trampling) or removing (for example, cutting, clearing) all vegetation, such as willows, trees, shrubs, and grasses within riparian and adjacent upland habitats will be limited to avoid impacts to Preble's.
- A Noxious Weed Management Plan will be prepared prior to construction that identifies control methods (e.g., herbicides) and BMPs that will be used to eradicate or control weeds during and after construction.

10.0 Effects Determination

CDOT has determined that the project *may affect, but is not likely to adversely affect* the Preble's meadow jumping mouse based on the block clearance zone in the action area and the highly developed and degraded adjacent habitat. A total of approximately 1.4 acres of permanent impact to riparian habitat and 0.44 acre of temporary impact to riparian vegetation that could provide foraging habitat for Preble's will be impacted by project construction activities. Conservation measures will restore disturbed areas and limit disturbance in riparian and adjacent upland habitats and the replace disturbed riparian habitat per SB 40. The Proposed Action will have no effect upon designated critical habitat for Preble's.

11.0 References

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Appendix A.
USFWS Online Information, Planning,
and Conservation (IPaC) System Letter





United States Department of the Interior



FISH AND WILDLIFE SERVICE
Colorado Ecological Services Field Office
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URL: www.fws.gov/coloradoES; www.fws.gov/platteriver

Consultation Code: 06E24000-2016-SLI-0395

August 02, 2016

Event Code: 06E24000-2016-E-01596

Project Name: US 85 Corridor Improvements Highlands Ranch Parkway to C-470

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: US 85 Corridor Improvements Highlands Ranch Parkway to C-470

Official Species List

Provided by:

Colorado Ecological Services Field Office

DENVER FEDERAL CENTER

P.O. BOX 25486

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<http://www.fws.gov/coloradoES>

<http://www.fws.gov/platteriver>

Consultation Code: 06E24000-2016-SLI-0395

Event Code: 06E24000-2016-E-01596

Project Type: TRANSPORTATION

Project Name: US 85 Corridor Improvements Highlands Ranch Parkway to C-470

Project Description: Corridor improvements in between Highlands Ranch parkway and CO 470.

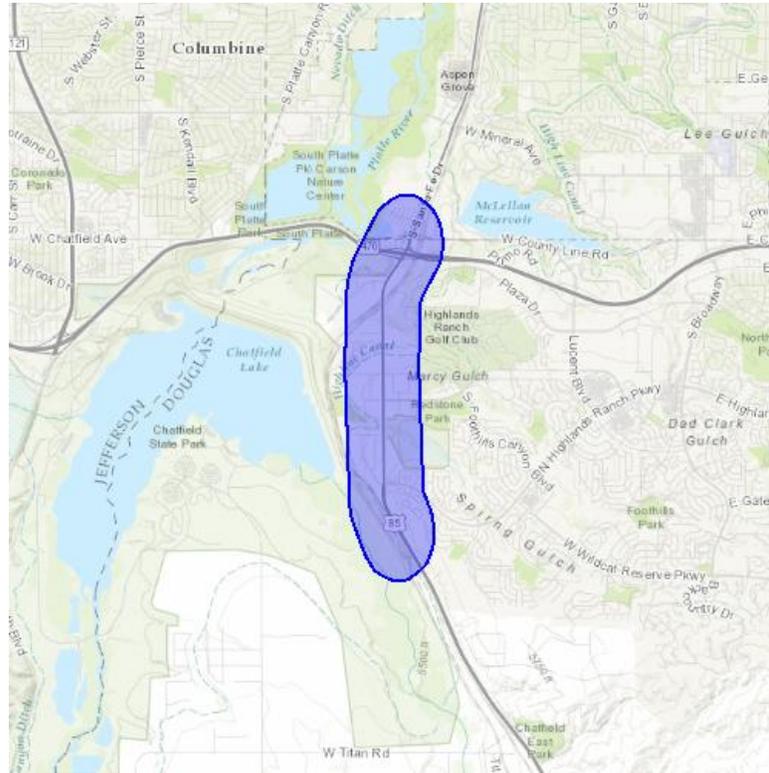
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: US 85 Corridor Improvements Highlands Ranch Parkway to C-470

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Arapahoe, CO | Douglas, CO



United States Department of Interior
Fish and Wildlife Service

Project name: US 85 Corridor Improvements Highlands Ranch Parkway to C-470

Endangered Species Act Species List

There are a total of 10 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 5 of these species should be considered only under certain conditions. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Least tern (<i>Sterna antillarum</i>) Population: interior pop.	Endangered		Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.
Mexican Spotted owl (<i>Strix occidentalis lucida</i>) Population: Entire	Threatened	Final designated	
Piping Plover (<i>Charadrius melodus</i>) Population: except Great Lakes watershed	Threatened	Final designated	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.
Whooping crane (<i>Grus americana</i>) Population: except where EXPN	Endangered	Final designated	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.



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Fishes			
Greenback Cutthroat trout <i>(Oncorhynchus clarki stomias)</i> Population: Entire	Threatened		
Pallid sturgeon <i>(Scaphirhynchus albus)</i> Population: Entire	Endangered		Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.
Flowering Plants			
Colorado Butterfly plant <i>(Gaura neomexicana var. coloradensis)</i>	Threatened	Final designated	
Ute ladies'-tresses <i>(Spiranthes diluvialis)</i>	Threatened		
Western Prairie Fringed Orchid <i>(Platanthera praeclara)</i>	Threatened		Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.
Mammals			
Preble's meadow jumping mouse <i>(Zapus hudsonius preblei)</i> Population: wherever found	Threatened	Final designated	



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Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Mammals	Critical Habitat Type
Preble's meadow jumping mouse (<i>Zapus hudsonius preblei</i>) Population: wherever found	Final designated



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Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.



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Appendix B: FWS Migratory Birds

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>
<http://www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php>

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>

For information about conservation measures that help avoid or minimize impacts to birds, please visit:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tools at:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>



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Migratory birds that may be affected by your project:

There are 23 birds on your migratory bird list. The list may include birds occurring outside this FWS office jurisdiction.

Species Name	Bird of Conservation Concern (BCC)	Seasonal Occurrence in Project Area
American bittern (<i>Botaurus lentiginosus</i>)	Yes	Breeding
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	Year-round
Black Rosy-Finch (<i>Leucosticte atrata</i>)	Yes	Year-round
Brewer's Sparrow (<i>Spizella breweri</i>)	Yes	Breeding
Burrowing Owl (<i>Athene cunicularia</i>)	Yes	Breeding
Cassin's Finch (<i>Carpodacus cassinii</i>)	Yes	Year-round
Dickcissel (<i>Spiza americana</i>)	Yes	Breeding
Ferruginous hawk (<i>Buteo regalis</i>)	Yes	Year-round
Flammulated owl (<i>Otus flammeolus</i>)	Yes	Breeding
Golden eagle (<i>Aquila chrysaetos</i>)	Yes	Year-round
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Yes	Breeding
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Yes	Breeding
Long-Billed curlew (<i>Numenius americanus</i>)	Yes	Breeding
Mountain plover (<i>Charadrius montanus</i>)	Yes	Breeding
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	Breeding
Prairie Falcon (<i>Falco mexicanus</i>)	Yes	Year-round
Sage Thrasher (<i>Oreoscoptes montanus</i>)	Yes	Breeding



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Short-eared Owl (<i>Asio flammeus</i>)	Yes	Wintering
Swainson's hawk (<i>Buteo swainsoni</i>)	Yes	Breeding
Virginia's Warbler (<i>Vermivora virginiae</i>)	Yes	Breeding
Western grebe (<i>aechmophorus occidentalis</i>)	Yes	Breeding
Williamson's Sapsucker (<i>Sphyrapicus thyroideus</i>)	Yes	Breeding
Willow Flycatcher (<i>Empidonax traillii</i>)	Yes	Breeding



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Appendix C: NWI Wetlands

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of



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this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

The following NWI Wetland types intersect your project area in one or more locations. To understand the NWI Classification Code, see <https://ecos.fws.gov/ipac/wetlands/decoder>. To view the National Wetlands Inventory on a map go to <http://www.fws.gov/wetlands/Data/Mapper.html>.

Wetland Types	NWI Classification Code
Freshwater Emergent Wetland	PEM1A
Freshwater Emergent Wetland	PEM1C
Freshwater Emergent Wetland	PEM1Cx
Freshwater Forested/Shrub Wetland	PFOA
Freshwater Forested/Shrub Wetland	PFOAx
Freshwater Forested/Shrub Wetland	PSSA
Freshwater Forested/Shrub Wetland	PSSAx
Freshwater Forested/Shrub Wetland	PSSC
Freshwater Forested/Shrub Wetland	PFOAh
Freshwater Pond	PABGh
Freshwater Pond	PABGx
Freshwater Pond	PUBFx
Freshwater Pond	PUBGx
Freshwater Pond	PUSA
Lake	L2ABGh



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Riverine	R4SBC
Riverine	R4SBCx
Riverine	R2UBF
Riverine	R3UBH
Riverine	R2UBFx

