Appendix C8.

Biological Resources

C8. Biological Resources Technical Memorandum

June 2023

Project Number: NHPP 006A-06
Subaccount Number: 22922

Introduction

The following project information can be found in **Attachment A** Project Information:

- Introduction and Background
- Project Study Area
- Purpose and Need
- Proposed Action Description

Legislation

This report has been prepared in accordance with the following federal and state regulations and policies:

- The United States Endangered Species Act (ESA) – Protects federally listed plant and animal species with the goal of ensuring their long-term survival. The ESA is administered by the U.S. Fish and Wildlife Service (USFWS). All projects are subject to compliance with the ESA.
- Section 404 of the Clean Water Act – Regulates waters of the U.S. and provides a permitting framework for impacts through the U.S. Army Corps of Engineers (USACE).
- Executive Order 11990 Protection of Wetlands– Requires federal agencies to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands."
- The Colorado Non-game, Endangered, and Threatened Species Conservation Act– Provides regulations and management objectives for species listed as threatened, endangered, or rare by Colorado Parks and Wildlife (CPW).
- Impacted Black-tailed Prairie Dog Policy – Provides guidance for CDOT activities that affect prairie dogs. Projects requiring relocation should follow Colorado Department of Transportation's (CDOT) Black-tailed Prairie Dog Relocation Guidelines.

- Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act – The Migratory Bird Treaty Act (MBTA) protects migratory birds, their eggs and active nests. Most wild birds commonly found in the United States are protected by the MBTA. The Bald and Golden Eagle Act specifically protects the two species of eagles. Both acts are administered by the USFWS.
- Colorado Senate Bill 40 (SB 40) – Requires any agency of the state to obtain wildlife certification from CPW when construction is planned in a stream, stream bank, or tributary. Reporting guidance and mitigation requirements for CDOT project are outlined in a Memorandum of Agreement with CPW.
- Colorado Noxious Weed Act – Requires the control of plant species officially designated as noxious weeds by the Colorado Department of Agriculture (CDA). The CDA classifies noxious weeds as List A, List B, or List C. List A species are designated for eradication while List B species must be managed to stop continued spread. List C species are not required to be managed by local jurisdictions but are monitored to provide additional education and research. Management is also required by Federal Executive Order (EO) 13112, "Invasive Species"; the Federal Noxious Weeds Act; Colorado EO D006-99, "Development and Implementation of Noxious Weed Management Programs"; and Colorado EO D002-03, "Directing State Agencies to Coordinate Efforts for the Eradication of Tamarisk on State Lands."

Methodology

DEA investigated biological resources within the study area and immediate vicinity. The investigation included queries of regulatory agency databases and documents related to biological resources in the project vicinity and were limited to readily available resources. A field survey was also conducted. Available sources of background data pertaining to botanical and wildlife resources within the study area included, but were not limited to:

- U.S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI), Online Mapper (USFWS 2019)
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Web Soil Survey (USDA 2021a)
- U.S. Geological Survey (USGS) National Hydrologic Dataset, Hydrographic Viewer (USGS 2022)
- Colorado Natural Heritage Program (CNHP) Statewide Element Occurrence by Quadrangle (CNHP 2019a)
- Colorado Parks and Wildlife (CPW) All Species Activity Mapping Data (CPW 2020a)
- Google™ Earth Pro Mapping

DEA performed a field survey of the study area on September 18, 2019, March 10, 2021, and

March 4, 2022. During the survey, biological resources were reviewed to characterize existing habitat with an emphasis on areas having the potential to support special status species or critical habitats. Migratory birds, wildlife, riparian areas, noxious and invasive weeds and surface waters including wetlands were also investigated. Representative photographs were taken and provided in the attached photo log **(Attachment A)**. No formal protocol surveys for any particular species were performed.

Potential wetlands were evaluated utilizing the methods for routine on-site wetland determinations as described in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and used methods in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (Corps 2008) to determine wetland boundaries. The Corps defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 Code of Federal Regulations (CFR) 328.2(c)). Wetland boundaries were determined by a visible change in vegetation community, soils, topographic changes and other visible distinctions between wetlands and uplands.

The wetland indicator status of plant species was identified using the National Wetland Plant List (Corps 2018) and nomenclature was determined using the PLANTS Database (USDA 2021b).

Intermittent, ephemeral and perennial drainages with characteristics of a defined streambed, streambank, ordinary high-water mark (OHWM) and other erosional features also were identified. The OHWM identifies the lateral jurisdictional limits of non-wetland WOTUS. Federal jurisdiction over non-wetland WOTUS extends to the OHWM, defined in 33 CFR 328.3 as "the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." The Corps defines "stream bed" as "the substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders."

The boundaries of identified wetlands and other characteristics of potential WOTUS were mapped using a Trimble Global Positioning System (GPS) unit. Data was differentially corrected using Trimble Pathfinder Office software. GPS data were incorporated using ESRI® ArcGIS Desktop software.

Existing Conditions

Vegetation

The study area consists of Vasquez Boulevard, intersecting secondary roadways, and commercial/industrial/retail buildings which are primarily bordered by plant species typical

of maintained areas and roadside uplands. Common vegetation includes grasses and forbs such as smooth brome (Bromus inermis), cheatgrass (Bromus tectorum), Kentucky bluegrass (Poa pratensis*)*, crested wheatgrass (Agropyron cristatum), yellow foxtail (Setaria pumila), prickly lettuce (Lactuca serriola) and kochia (Bassia scoparia). Small trees and shrubs also occur in the study area including Russian olive (Elaeagnus angustifolia), Siberian elm (Ulmus pumila), Eastern red cedar (Juniperus virginiana), tree of heaven (Ailanthus altissima) and rabbitbrush (Ericameria nauseosa).

Threatened and Endangered Species

Federally listed species

Based on a review of the online Information for Planning and Conservation (IPaC) System, there are three federally endangered species, three threatened species, and a candidate species with the potential to occur in the study area or have potential to be impacted by the project (USFWS, 2022). No critical habitat occurs in the study area. The federally listed species include:

- Gray wolf (Canis lupus) - Endangered
- Pallid sturgeon (Scaphirhynchus albus) - Endangered
- Piping Plover (Charadrius melodus) - Threatened
- Whooping crane (Grus americana) - Endangered
- Ute ladies'-tresses orchid (Spiranthes diluvialis) - Threatened
- Western prairie fringed orchid (Platanthera praeclara) - Threatened
- Monarch butterfly (Danaus plexippus) - Candidate

The pallid sturgeon, Piping Plover, Whooping Crane, and western prairie fringed orchid occur downstream of the study area along the Platte River and could be impacted by projects that would result in water depletions to its tributary, the South Platte River. In order to address the effects this depletion will have on federally listed species downstream that depend on the river for their survival, CDOT, as a state agency, is participating in the South Platte Water Related Activities Program (SPWRAP). CDOT is cooperating with the Federal Highway Administration (FHWA) which provides a federal nexus for the project. In response to the need for formal consultation for the water used from the South Platte basin, FHWA has prepared a Programmatic Biological Assessment (PBA) dated 02/22/2012 that estimates total water usage through 2019. The PBA has since been extended through 2032 and addresses pallid sturgeon, Piping Plover, Whooping Crane and western prairie fringed orchid. On 04/04/2012, the USFWS signed a Biological Opinion which concurs with this approach and requires a yearly reporting of water usage. The extension, which has the same reporting requirements, was signed by the USFWS on March 29, 2019.

Effects to species not addressed in the PBA or affected by causes other than water depletions to the South Platte, were analyzed separately. The habitat and distribution of each of the remaining species was reviewed, and the potential for occurrence for each species was assigned based on evaluating the study area for suitable habitat.

Gray wolf: The project does not include a predator management program so environmental review of the species is not applicable, and no further discussion is provided in this memo.

Ute ladies'-tresses orchid: occupy moist soils and wet meadows associated with perennial stream terraces, floodplains and oxbows at elevations below 6,500 feet; typically, in relatively open habitats and they require a relatively high-water table. No suitable habitat for this species occurs in the study area.

Monarch butterfly: occupy a variety of habitats including meadows, fields, roadsides, suburban parks and gardens, but requires milkweeds for caterpillars. The species is unlikely to occur because the study area is not within a designated migration corridor, breeding area, or overwintering area for this species. Also, no milkweed was observed which significantly reduces the likelihood of occurrence.

Preble's meadow jumping mouse: this federally threatened species is not included in the IPaC list because the project is located within the Denver Metro Area Block Clearance Zone established by the USFWS, and is not expected to occur. The species does not need to be evaluated and no further discussion of the species is provided in this memo.

State Listed Species

The CPW lists 74 species of amphibians, birds, fish, mammals, reptiles and mollusks as endangered, threatened, or of special concern within the state of Colorado (CPW, 2021a). According to the CNHP Tracking List (CNHP, 2019b), eight state-listed species have current and/or historical occurrences and observation locations in Adams County. Those eight species are black-tailed prairie dog (Cynomys ludovicianus), black-footed ferret (Mustela nigripes), Preble's meadow jumping mouse (Zapus hudsonius preblei), northern leopard frog (Lithobates pipiens), burrowing owl (Athene cunicularia), ferruginous hawk (Buteo regalis), mountain plover (Charadrius montanus), and bald eagle (Haliaeetus leucocephalus), The habitat requirements and current distribution of the remaining species was reviewed, and burrowing owl and black-tailed prairie dog have the potential to occur in the study area.

Black-tailed prairie dog: A Colorado species of special concern that typically occupies dry, flat or gently sloping, open grasslands with low, relatively sparse vegetation. In developed areas, the species occupies vacant lots and areas of prior disturbance. One active black-tailed prairie dog colony was observed. The colony is less than two acres and is located along Dahlia Street west of the Mile High Greyhound Development project (**Figure 1**).

Burrowing owl: A Colorado threatened species that typically occupies open grasslands, especially prairie, plains, and savanna, and sometimes other open areas such as vacant lots

near human habitation. In Colorado, burrowing owls are highly associated with and most numerous in prairie dog colonies. Due to the presence of prairie dogs in the study area, there is potential for burrowing owls to occur.

Migratory Birds

Ground-nesting and other birds could potentially nest on the ground and in trees in the study area, but there were no active or inactive raptor nests, ground, or arboreal nests observed during the site visits. A review of the CPW raptor database indicated no raptor nests, including bald eagle nests, are mapped within 0.5 mile of the project (CPW 2021b).

Wetlands and Other Waters

No wetlands or other surface waters were identified in the study area during the site visits.

Senate bill 40

CDOT and CPW have a Memorandum of Agreement (CPW and CDOT, 2013) that describes the procedures for obtaining SB 40 certification. Streams that meet one or more of the four criteria described in the Memorandum of Agreement are considered to be under the jurisdiction of SB 40. No streams occur in the study area and Senate Bill 40 certification is not applicable.

Noxious And Invasive Weeds

A visual inspection of the study area was performed to identify noxious and invasive weed species lists on the Colorado Noxious Weed List. Noxious weed species listed on the Colorado Noxious Weed Lists A, B and C were mapped and are depicted on **Figure 1**. **Table 1** provides a summary of noxious species mapped in the study area.

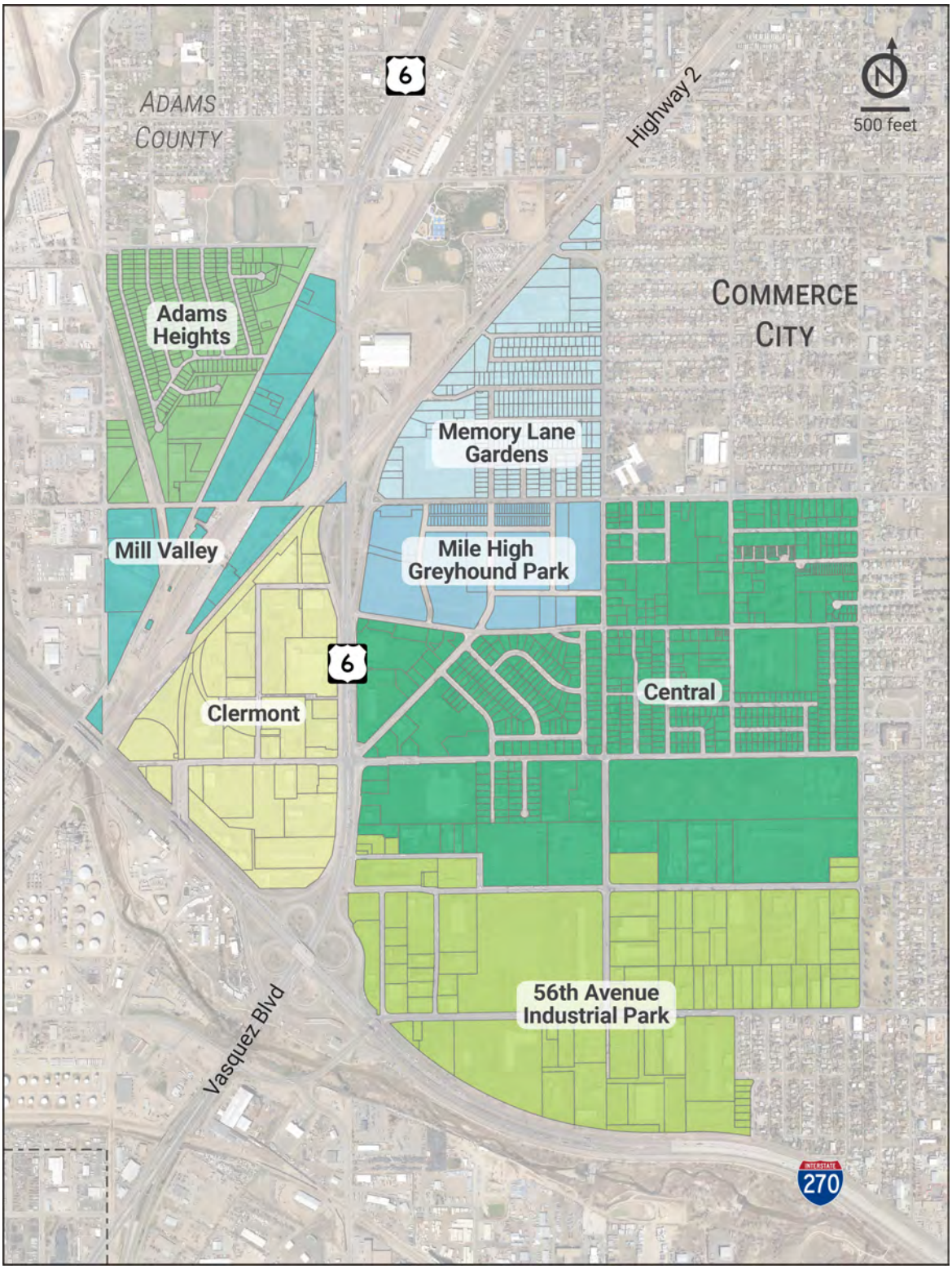
Table 1: Noxious Weeds Identified in the Study Area

Common Name	Scientific Name	Weed List	Abundance and Location*
Downy brome	Bromus tectorum	C	Low to medium density along roadside edges throughout the study area.
Field bindweed	Convolvulus arvensis	C	Medium density behind the commercial properties west of Vasquez Boulevard
Puncturevine	Tribulus terrestris	C	Medium to high density along roadside edges throughout the study area.
Russian olive	Elaeagnus angustifolia	B	Single occurrence behind the commercial properties on Dexter Street.
Scotch thistle	Onopordum acanthium	C	Low density behind the commercial properties on Dexter Street.

* Densities were assigned when more than one population was identified in the study area. Densities are defined as follows: High = (>70%) area dominated by infestation or very high cover of the species; Medium = (40-70%) less cover and density than High; Low = (10-40%) individuals of species are present and beginning to establish.

Invasive weeds including kochia (Bassia scoparia) and Russian thistle (Salsola tragus) also occur.

Figure 1: Biological Resources



Impacts

No Action

The No Action would leave Vasquez Boulevard as it currently is configured and would not provide substantial improvements beyond typical current maintenance activities. No impacts to biological resources would result from this alternative.

Proposed Action

Threatened and Endangered Species

Federally Listed Species
Six federally listed species were assessed for their potential to occur in the project area or be impacted by the project:

- Pallid sturgeon, piping plover, interior Least Tern and western prairie fringed orchid: occur downstream of the study area and could be potentially impacted by water depletions and have undergone consultation with the USFWS under FHWA's PBA.
- Ute ladies'-tresses orchid: based on a lack of suitable habitat, the project would have no effect on the species.
- Monarch butterfly: a candidate species with no legal protection, but no adverse effects to the species is expected.

State Listed Species
Two state-listed species, black-tailed prairie dog and burrowing owl, were assessed for their potential to occur in the project area or be impacted by the project.

During construction, impacts to the active prairie dog colonies may occur and will be confirmed during final design. Due to the presence of prairie dogs, there is a potential for burrowing owls to occur in the study area. The project may result in ground disturbance to prairie dog burrows which could impact burrowing owls that require the burrows for nesting and roosting.

Migratory Birds

Suitable migratory bird habitat is present in the study area and migratory birds have the potential to be impacted by clearing/grubbing of ground vegetation, trimming/removal of trees and construction noise.

Wetlands and Other Waters

No impacts to wetlands or other surface waters would result from the project.

Vegetation, Noxious Weeds and Invasive Weeds

Much of the study area is developed and disturbed, and much of the vegetation is planted/manicured along medians and sidewalks where minor impacts to vegetation would occur. Noxious and invasive weeds are also present in the study area and construction activities have the potential for introducing and spreading weeds.

Mitigation

Threatened and Endangered Species

Federally Listed Species

For pallid sturgeon, piping plover, interior Least Tern, whooping crane, and western prairie fringed orchid, the water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the consultation with USFWS. The Project would have no effect on the other federally listed species and no other mitigation is proposed.

State Listed Species

Prior to construction, the contractor should conduct new surveys for the presence of active prairie dog colonies and follow CDOT's Impacted Black-tailed Prairie Dog Policy (CDOT 2009). For unavoidable impacts to the colony along Dahlia Street, trapping and removal may be required due to the surrounding development constraints. A CDOT **Revision of Section 240 for Prairie Dog Management** will be incorporated into the project special provisions once impacts and mitigation are determined during final design.

In Colorado, burrowing owls may be present from March 15 and remain after young have fledged through October. If construction activities occur between March 15th and October 31st, the contractor should follow CDOT's **Revision of Section 240 for Prairie Dog Management** and CPW's **Recommended Survey Protocols and Actions to Protect Nesting Burrowing Owls** (CPW 2008). Additional guidelines to facilitate compliance with the MBTA should also be followed as described in the following section.

Migratory Birds

The MBTA protects all active nests, including cavity nests, ground nests and subterranean nests at all times. In Colorado, bird nesting and rearing activities typically occur between April 1st and August 31st; however, these dates are guidelines, and some raptors may nest beginning as early as February 15th. A MBTA survey shall be conducted prior to construction if work is scheduled to take place during these dates. Pre-construction surveys are valid for seven days and would need to be repeated if work does not commence within that time

period. To facilitate compliance with the MBTA, a CDOT **Revised Section 240 for Protection of Migratory Birds** will be incorporated into the project special provisions.

- The revised Section 240 outlines the following mitigation measures to avoid and minimize impacts to migratory birds:
    - Tree and shrub removal or trimming shall occur before February 15th or after August 31st if possible. If tree and shrub removal or trimming will occur between February 15th and August 31st, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming.
    - Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1st and August 31st, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities. Once vegetation is removed, repeated mowing/trimming should be performed to prevent reestablishment.
    - If new raptor nests are identified during the pre-construction survey, implement CPW's Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (CPW 2020b).
    - If an active migratory bird nest is identified during the pre-construction survey, or a nest is established during construction, an appropriate buffer of 50 feet will be established around the nest to prevent abandonment or destruction of the nest until the young have fledged or the nest is unoccupied.

Noxious and Invasive Weeds

An Integrated Noxious and Invasive Weed Management Plan will be prepared prior to construction to address the control methods to be used to stop the continued spread of noxious and invasive weed species, including the following mitigation measures:

- Require cleaning equipment and other best management practices (BMPs) specific to noxious and invasive weed management to reduce the potential for introducing and spreading noxious and invasive weeds in the study area.
- Minimize the necessary area of ground disturbance.
- Clean all construction vehicles of dirt/soil before off-loading at the project to prevent the introduction of noxious and invasive weeds. Treat project staging areas for noxious and invasive weeds prior to construction.
- Do not use areas with noxious and invasive weed populations for topsoil salvage.
- Use of herbicide prior to groundbreaking activities to control existing weeds, and management during the establishment phase of sod or other planting.

- Use of a slow release organic fertilizer (do not overfertilize as it becomes a stormwater pollutant and increases weed growth).

Table 2: Resource Impacts and Mitigation Measures

Context			
No critical habitat or other habitat for federally listed species occurs in the study area. Two black-tailed prairie dog colonies occur in the study area and due to their presence, the potential exists for burrowing owls also to occur. Suitable migratory bird habitat is present in the study area, but no nests were observed. No wetlands or other surface waters occur. Noxious and invasive weeds occur in the study area including one List B species and four List C noxious weed species.			
Impact Type	**No Action**	**Proposed Action**	**Mitigation**
Water depletions to the South Platte River basin	**Permanent Impacts:** None	**Permanent Impacts:** None **Temporary Impacts:** The pallid sturgeon, piping plover, and western prairie fringed orchid occur downstream of the study area along the Platte River and could be impacted by water depletions resulting from the project.	**Permanent:** None **Temporary:** Water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the programmatic BO.
Ground disturbance during construction	**Permanent Impacts:** None	**Permanent Impacts:** Potential loss of black-tailed prairie dogs and their habitat. Impacts will be verified during final design. **Temporary Impacts:** Displacement and/or relocation of black-tailed prairie dogs to avoid construction activities. Impacts will be verified during final design.	**Permanent/Temporary**: Follow CDOT's **Revision of Section 240 for Prairie Dog Management** and CPW's **Recommended Survey Protocols and Actions to Protect Nesting Burrowing Owls.**
Vegetation clearing during construction	**Permanent Impacts:** None	**Permanent Impacts:** Vegetation and habitat loss affecting migratory birds.	**Permanent:** Construction will comply with the requirements of the MBTA and work will be performed according to a CDOT **Revised Section 240 for Protection of Migratory Birds.**

		Temporary Impacts: Auditory disturbance and temporary displacement of birds near construction areas.	**Temporary:** • Minimize the amount and time period of disturbance to allow revegetation of disturbed areas. • Avoid disturbance to existing trees, shrubs, and vegetation, to the maximum extent possible. • Revegetate all disturbed areas with native grass and forb species. Apply seed, mulch and mulch tackifier in phases throughout construction. Plant native trees and shrubs where appropriate. • Use temporary erosion control blankets with flexible natural fibers. • Limit work areas as much as possible to minimize construction impacts to vegetation.
Introduction and spread of noxious and invasive weeds during construction	**Permanent Impacts:** None	**Permanent Impacts:** Construction activities could lead to spreading noxious weeds and land disturbance could create conditions suitable for weed establishment. **Temporary Impacts:** Grading activities from construction and equipment staging areas may create favorable conditions for the introduction and spread of noxious and invasive weeds.	**Permanent/Temporary**: Prepare and implement an Integrated Noxious and Invasive Weed Management Plan for the Project, which will be completed prior to construction. The Management Plan will identify the status and location of noxious and invasive weed infestations in the project and identify control methods (e.g., herbicides) and BMPs that will be used to eradicate or control weeds during and after construction.

Permits

No permits are required for the Proposed Action.

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Attachment A.

Project Information

Attachment A:

Project Information

June 2023

Project Number: NHPP 006A-06

Subaccount number: 22922

Introduction and Background

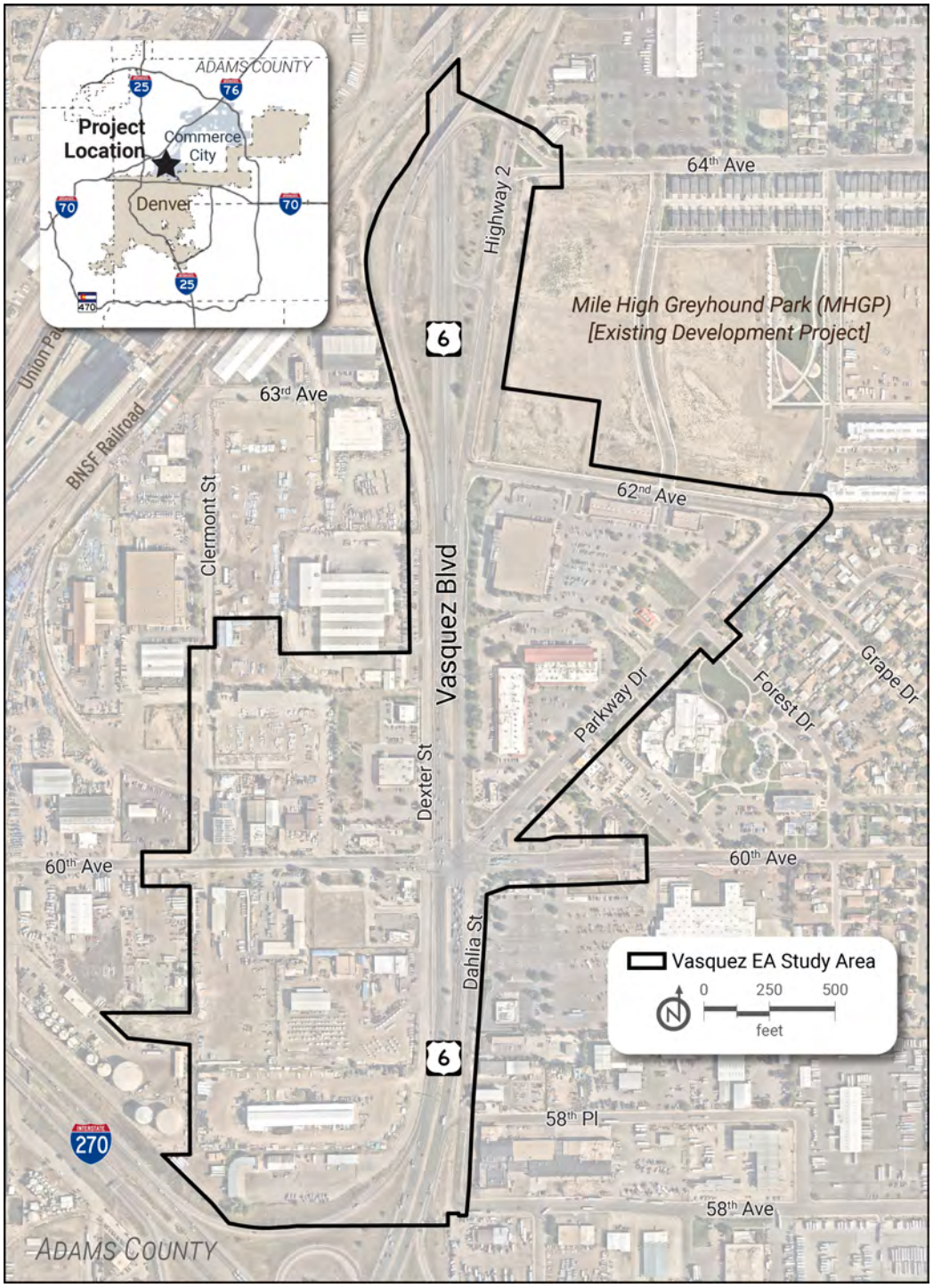
The Vasquez Boulevard (United States Route 6 [US 6]) I-270 to 64th Avenue project (Project) is located within the limits of the City of Commerce City (Commerce City) in Adams County. The Colorado Department of Transportation (CDOT), in cooperation with the Federal Highway Administration (FHWA) and local agencies including Adams County, the City of Commerce City, City and County of Denver, Denver Regional Council of Governments (DRCOG) and the Regional Transportation District (RTD), conducted a Planning and Environmental Linkages (PEL) study in 2018. The Vasquez Boulevard PEL study provided a framework for the implementation of transportation improvements along the corridor between 52nd Avenue and 64th Avenue and along I-270 for a ½-mile north and south of the I-270/Vasquez Boulevard interchange. The Project falls within the limits of the PEL study and is now following the NEPA process to prepare an Environmental Assessment to identify a preferred alternative based on the needs identified in the PEL.

The PEL study identified long-term transportation improvements and evaluated potential projects that could be implemented with available funding as near-term improvements. Potential near-term improvements were identified to improve operations, safety, and connectivity along Vasquez Boulevard, focusing on the Vasquez Boulevard/60th Avenue and Vasquez Boulevard/62nd Avenue intersections. Transportation Improvement Program (TIP) funding, state funding and other sources were obtained for this current Project to construct these near-term improvements along Vasquez Boulevard.

Study Area

The study area extends along Vasquez Boulevard from 58th Avenue (just north of the I-270 interchange) north to the BNSF Railroad bridge. West of Vasquez Boulevard, the study area extends to Clermont Street, between the on-ramp to I-270 and just north of 60th Avenue. East of Vasquez Boulevard, the study area includes Parkway Drive, 60th Avenue and 62nd Avenue. The study area also includes proposed drainage work to an existing water quality pond within the Mile High Greyhound Park (MHGP) property at the corner of 62nd Avenue and Highway 2. Some environmental resources evaluated for the NEPA process may have a slightly different study area depending on specific resource requirements.

Figure 1: Project Study Area



Purpose and Need

The purpose of the Vasquez Boulevard I-270 to 64th Avenue Project is to address the following needs:

- improve operations for vehicles and freight;
- improve safety;
- improve multimodal connections.

Proposed Action

The Proposed Action includes improvements at the Vasquez Boulevard/60th and Vasquez Boulevard/62nd intersections, as well as the local street network and multimodal facilities, as shown in **Figure 2**.

Vasquez Boulevard/60th Avenue

The Proposed Action includes the elements listed below for the Vasquez Boulevard/60th Avenue intersection:

- Only right turn movements to northbound Vasquez Boulevard from Parkway Drive. No access to other roads.
    - All inbound movements to Parkway Drive remain open as they exist now.
- All inbound movements from Vasquez Boulevard/60th to frontage roads remain as they exist now, but outbound movements are restricted.
    - Right turn only from southeast frontage road and all in movements allowed (all movements remain as they exist)
    - Right turn only from northwest frontage road and all in movements allowed (in movements remain as they exist)
    - No movement out from southwest frontage road and all in movements allowed (in movements remain as they exist)
- Two new local road connections to Clermont Street west of Vasquez Boulevard provide full access between frontage roads and 60th Avenue.
- Driveways on 60th Avenue, Parkway Drive and frontage roads remain as currently structures or have minor changes
- Restriping of existing crosswalks and new pedestrian refuges improve safety and accessibility of pedestrian infrastructure
- Corner curb bulb-outs would be added at the Parkway/Forest intersection as a deterrent to rivers who may think Forest Drive is an alternate route to 60th Avenue. The bulb-outs and crosswalk will provide visual indication of Forest Drive as a neighborhood street.

Vasquez Boulevard/62nd Avenue

The Proposed Action includes the elements listed below for the Vasquez Boulevard/62nd intersection:

- New traffic signal required at 62nd Avenue with the Vasquez Boulevard/60th Avenue intersection improvements to provide movements restricted from Parkway Drive to Vasquez Boulevard.
- Traffic signal provides full access to/from 62nd Avenue and Vasquez Boulevard/Highway 2.
- Southbound Highway 2 off ramp remains in existing configuration.
- Southbound traffic on Vasquez Boulevard and the Highway 2 off ramp have continuous green time without stopping at the signal for 62nd Avenue traffic.

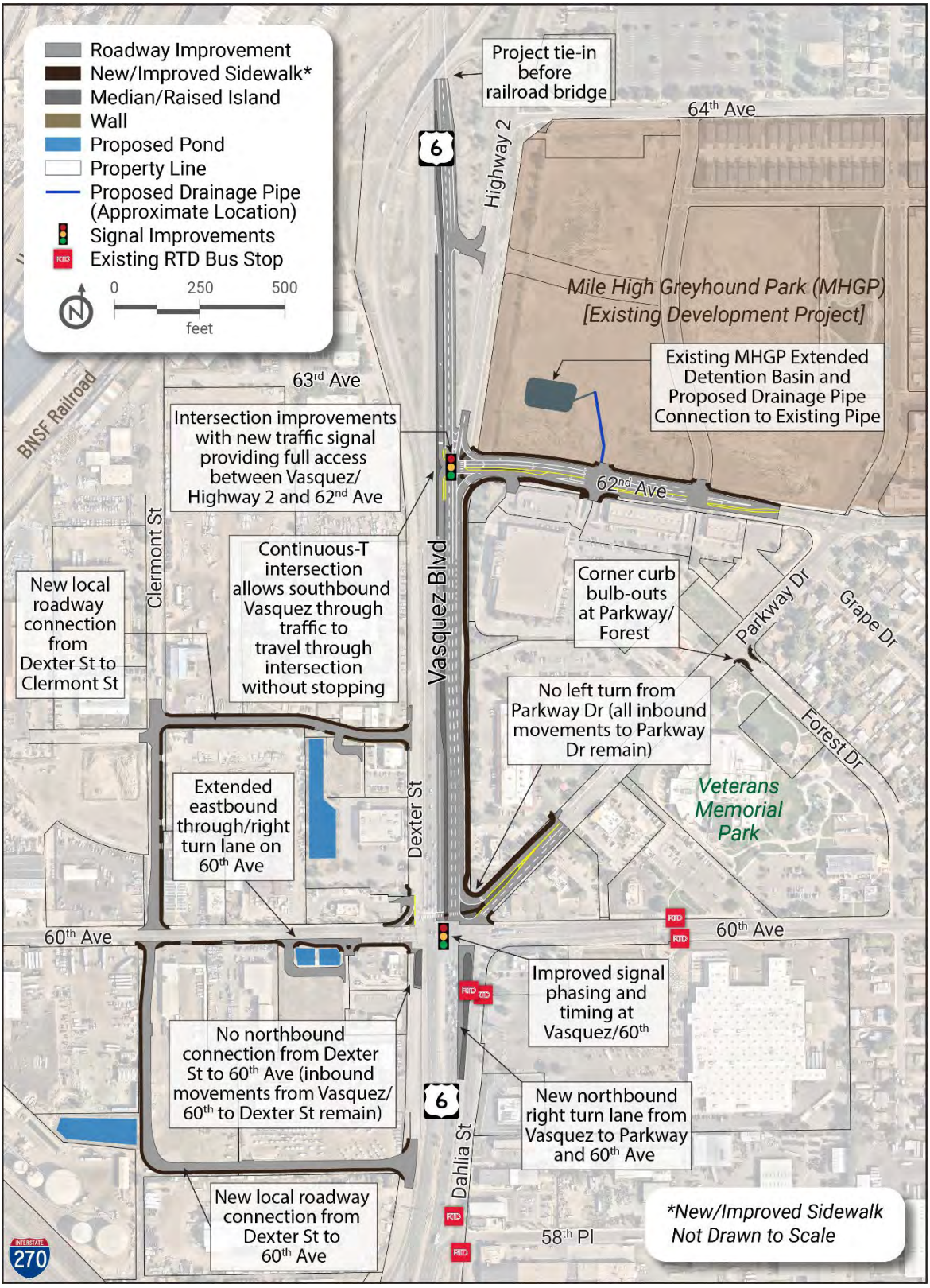
Vasquez Boulevard Improvements

In addition to the improvements at the Vasquez Boulevard/60th Avenue and 62nd Avenue intersections, a portion of Vasquez Boulevard will be reconstructed. The southbound lanes of Vasquez Boulevard will remain as they currently exist (12-foot travel lanes; roadway width varies from 24-feet to 60-feet). Northbound Vasquez Boulevard will be widened a maximum of two feet between 60th Avenue and 62nd Avenue and a maximum of 20 feet north of 62nd Avenue, and the existing median will be modified to add left turn lanes into and out of the new 62nd Avenue intersection. A 10-foot detached multi-use path will be constructed along the eastern side of Vasquez Boulevard, between 60th Avenue and 62nd Avenue.

Local Road Connections

New local roadway connections west of Vasquez Boulevard are part of the Project to enhance the local circulation and pedestrian and bicyclist connectivity of the local street network. The new roadways are two-lane, two-way local roads with the potential for direct property driveway access as approved by Commerce City.

Figure 2: Proposed Action



Attachment B.
Photograph Log

Photo 1. Facing north. View of Vasquez Boulevard from the intersection with Parkway Drive.

Photo 2. Facing south. View of Vasquez Boulevard near the intersection with 62nd Avenue.

Photo 3. Facing south. View of Dexter Street, parallel to Vasquez Boulevard.

Photo 4. Facing east. View of 60th Avenue at the intersection with Clermont Street.

Photo 5. Facing north. View of Clermont Street near the study area boundary.

Photo 6. Facing north. View of the black-tailed prairie dog colony along Dahlia Street.