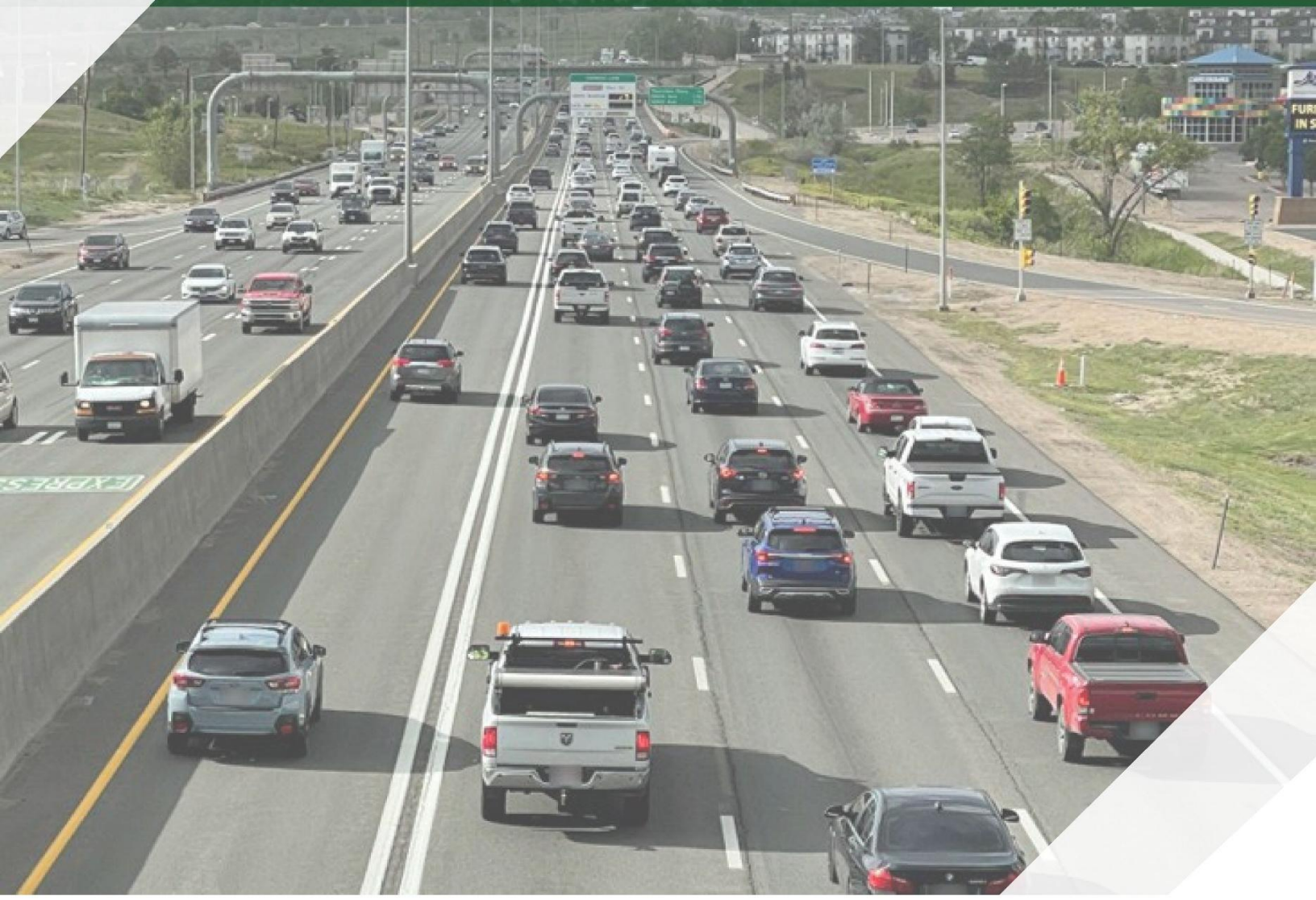
I-25 (US 36 to 104th Avenue)

Safety and Operations Improvements Project



Appendix D13: Paleontological Resources Technical Report

July 2026

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Appendix D13. Paleontological Resources Technical Report

July 27, 2026 - Version 2
Project Number: PM 0253-299
Subaccount Number: 25563

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Attachments

Attachment A Project Information
Attachment B Copy of State of Colorado Paleontological Permit

Acronyms and Abbreviations

Acronym or Abbreviation	Full Name
ARPA	Archaeological Resources Protection Act
af	Artificial Fill
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
Qco	Colluvium
CDOT	Colorado Department of Transportation
CHPA	Colorado Historical, Prehistorical and Archaeological Resources Act of 1973
CFR	Code of Federal Regulations
TKda	Denver and Arapahoe Formations
DMNS	Denver Museum of Nature and Science
EIS	Environmental Impact Statement
ERO	ERO Resources Corporation
FHWA	Federal Highway Administration
FWS	Fish and Wildlife Service
GIS	Geographic Information System
I-25	Interstate 25
I-76	Interstate 76
I-270	Interstate 270
IGA	Intergovernmental Agreement
LORS	Laws, ordinances, regulations, and standards
Ql	Loess
mE	Meters East
mN	Meters North
NEPA	National Environmental Policy Act
NPS	National Park Service
ROD1	North I-25 Record of Decision 1
PRPA	Paleontological Resources Preservation Act
PBDB	Paleobiology Database
Qp	Piney Creek Alluvium
PYFC	Potential Fossil Yield Classification
SVP	Society of Vertebrate Paleontology
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFS	United States Forest Service
UTM	Universal Transverse Mercator
UCM	University of Colorado Museum
US 36	United States Highway 36
WSP	Western Slope Paleontological Services

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1.0 Introduction and Background

The Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) are proposing transportation improvements to Interstate 25 (I-25) between United States Highway 36 (US 36)/I-270/I-76 interchange and 104th Avenue (**Figure 1**). This Paleontological Resources Technical Report (technical report) was prepared to support evaluation of the I-25 (US 36 to 104th Avenue) Safety and Operations Improvements Project (the project).

CDOT has previously completed an Environmental Impact Statement (EIS) and other planning efforts that recommended improvements to this segment of I-25. The current project evaluates proposed transportation improvements that reflect and build upon previous recommendations. Because the current project includes elements that were not evaluated and approved in the **North I-25 Record of Decision 1** (ROD1) (FHWA and CDOT, 2011), this project is undergoing new evaluation under the National Environmental Policy Act (NEPA).

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

- Project History
- Project Limits
- Purpose and Need
- Proposed Action Description

Figure 1. Project Limits



2.0 Regulatory Setting

Fossils are classified as non-renewable scientific resources protected by various laws, ordinances, regulations, and standards (LORS) across the country. The Society of Vertebrate Paleontology (SVP) has established professional procedures for assessing and mitigating adverse impacts on paleontological resources (SVP, 2025). This paleontological study was conducted in accordance with the LORS that are applicable to paleontological resources within the project area, as well as established best practices in mitigation paleontology (Murphey et al., 2019). Pertinent federal, state, county, and city LORS are summarized below.

2.1 Federal

The National Environmental Policy Act (NEPA) of 1969, as amended (Public Law 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Public Law 94-52, July 3, 1975, Public Law 94-83, August 9, 1975, and Public Law 97-258 § 4(b), Sept. 13, 1982), recognizes the continuing responsibility of the Federal Government to "preserve important historic, cultural, and natural aspects of our national heritage..." (Sec. 101 [42 USC § 4321]) (#382).

The goal of the NEPA process is to make informed publicly supported decisions about environmental issues. Under NEPA, the federal government requires that:

- All federal agencies consider the environmental impacts of proposed actions;
- The public be informed of the potential environmental impacts of proposed actions; and
- The public be involved in planning and analysis relevant to actions that affect the environment.

With the Paleontological Resources Preservation, Title VI, Subtitle D in the Omnibus Public Lands Act of 2009, Public Law 111-011, the Secretary (Interior and Agriculture) shall manage and protect paleontological resources on federal land using scientific principles and expertise.

The Paleontological Resources Preservation Act (PRPA) is modeled after the Archaeological Resources Protection Act (ARPA) and incorporates the recommendations of the May 2000 Report of the Secretary of the Interior, Assessment of Fossil Management on Federal and Indian Lands, regarding future actions to formulate a consistent paleontological resources management framework. With the passage of the PRPA, Congress officially recognizes the importance of paleontological resources on federal lands (United States Department of Interior [USDI], United States Department of Agriculture [USDA] excluding Tribal lands) by declaring that fossils from federal lands are federal property that must be preserved and protected using scientific principles and expertise. The PRPA essentially codifies existing policies of the Bureau of Land Management (BLM), National Park Service (NPS), United States Forest Service (USFS), Bureau of Reclamation (BOR), and Fish and Wildlife Service (FWS).

The PRPA provides:

- Uniform definitions for “paleontological resources” and “casual collecting”;
- Uniform minimum requirements for paleontological resource use permit issuance (terms, conditions, and qualifications of applicants);
- Uniform criminal and civil penalties for the illegal sale and transport, and the theft and vandalism of fossils from federal lands;
- Uniform requirements for the curation of federal fossils in approved repositories; and
- Federal protections for scientifically significant paleontological resources that apply to projects if any construction or other related project impacts occur on federally owned or managed lands, involve the crossing of state lines, or are federally funded. Because this project has FHWA involvement, federal protections under NEPA apply to paleontological resources within the project area.

2.2 State

The Colorado Historical, Prehistorical and Archaeological Resources Act of 1973 (CHPA) (CRS 24-80-401 to 411, and 24-80-1301 to 1305) defines permitting requirements and procedures for collecting prehistoric resources, including paleontological resources on state lands, and actions that should be taken if those resources are discovered in the course of state funded projects and on state-owned/ administered lands. Based on this legislation, CDOT requests assessments on state-owned and/or administered lands that have the potential to contain significant paleontological resources, and mitigation monitoring during ground disturbance in these areas. CDOT will review this study and must fulfill FHWA’s NEPA requirements under the CHPA.

2.3 County

Adams County has no LORS that specifically address potential adverse impacts on paleontological resources. Therefore, no county-level protections of paleontological resources pertain to the project.

2.4 City

There are no City of Thornton LORS that pertain to the project.

2.5 Private Lands

There are no LORS applicable to paleontological resources that occur on privately owned lands in the state of Colorado.

3.0 Methodology

This study will evaluate the paleontological sensitivity of the geologic units within the project area by researching their known fossil potential and paleontological significance and by determining the number and significance of previously recorded fossil localities within the project area and elsewhere in the same geologic units. This study was undertaken at the request of ERO Resources Corporation (ERO) and CDOT.

3.1 Personnel

The field survey was conducted by Paleo Resource Specialists Principal Investigator Dr. Paul C. Murphey. The data analysis was completed, and this report was prepared by Dr. Paul C. Murphey. Geographic Information System (GIS) support was provided by ERO Resources.

3.2 Analysis of Existing Data Methods

The analysis of existing paleontological data included the following elements:

A museum record search to determine the presence of previously recorded fossil localities within the project area from the University of Colorado Museum (UCM) and the Denver Museum of Nature and Science (DMNS). An additional records search used the public online Paleobiology Database (PBDB);

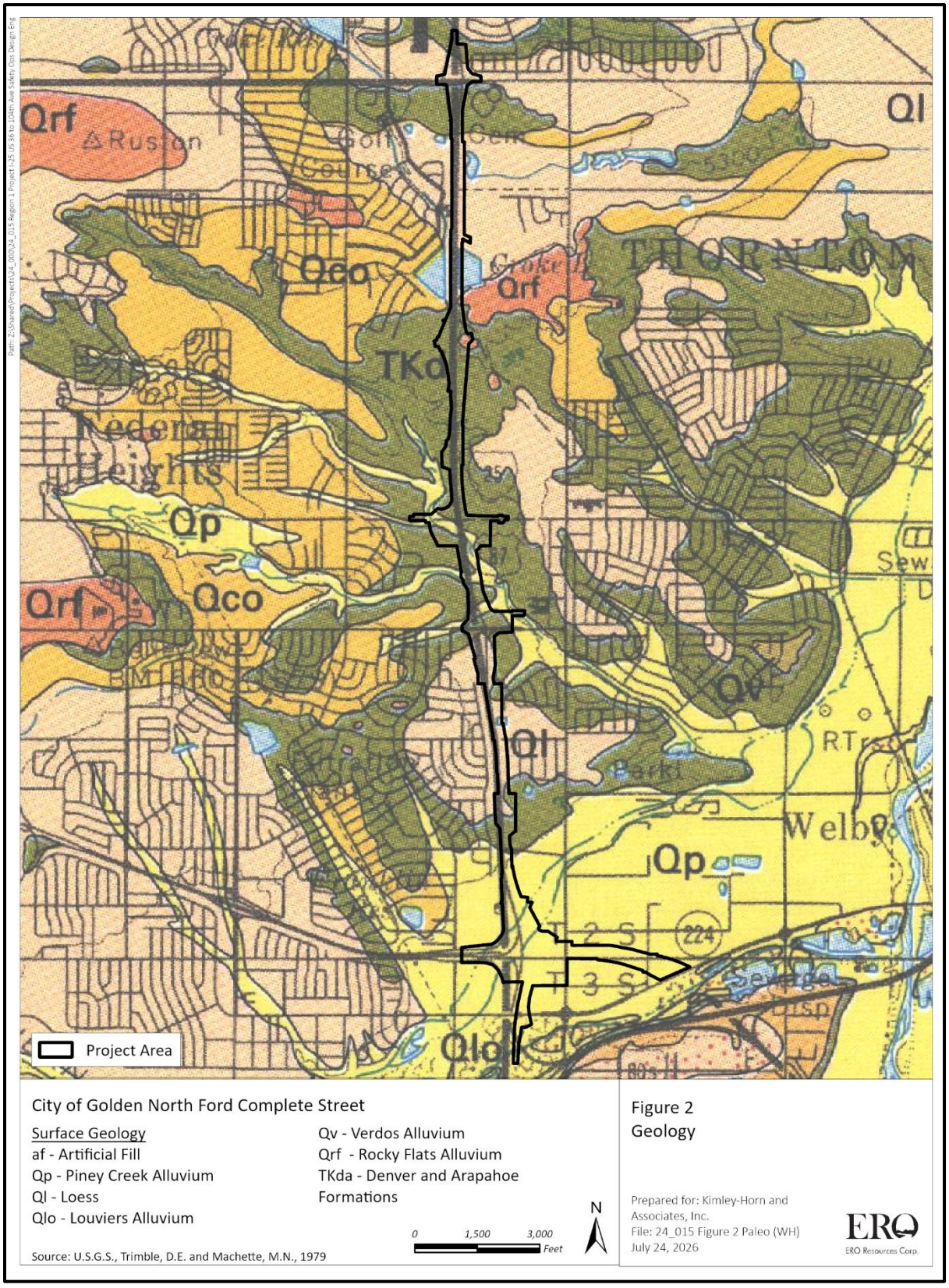
- A geologic map review to determine the distribution of geologic units within the project area; and
- A literature search to evaluate the paleontological sensitivity of the project area and the same geologic units near the project area.

The geologic units within the project area were classified according to the Potential Fossil Yield Classification (PFYC) system. The record search area included only the same geologic units that occur within the project area. The geologic map used was prepared by Lindvall (1980). The literature search emphasized publications on paleontological resources from the same geologic units present within the project area and the same units elsewhere in Colorado.

3.3 Field Survey Methods

The analysis of existing data was followed by a pedestrian field survey. The field survey included a pedestrian examination of the project area. Only areas for which permission to enter had been granted and that were safely accessible were surveyed. The field survey was completed on Saturday, October 5, 2024, and Saturday, July 18, 2026.

Figure 2. Geologic Map of the Project Area



4.0 Existing Conditions

The field survey results are summarized in **Tables 1-11**. The geology of the eleven survey areas is the same as reported by Paleo Solutions but with the absence of Rocky Flats Alluvium and the addition of modern artificial fill (**Figure 1**), which has low potential to produce in-situ fossils of scientific significance.

Two fossil localities were documented during the field survey, both in Survey Area E (**Table 5**). Locality F-20241005-01 consists of a fragment of ceratopsian bone which was deemed significant and was collected for curation at the Museum of Western Colorado. The element is tentatively identified as a partial epijugal of a ceratopsian dinosaur, based on its pyramidal shape and rugose (rough) outer texture. The jugal is a "T"-shaped element of the skull that sits below the eye and forms part of the lower margin of the orbit, with the epijugal (or jugal horn) protruding laterally from the bottom of this element. The epijugal can be prominent in chasmosaurine ceratopsians such as *Pentaceratops sternbergii*, the element from which this genus derives its name ("five-horned face").

Locality F-20241005-02 consists of a fragment of fossilized wood, which was deemed non-significant and was not collected. The wood exhibits evidence of hydraulic transport and, along with numerous clasts of conglomerate around this detention basin, suggests that it originated in the Arapahoe Formation but was reworked from the Laramie Formation.

Table 1. Summary of Survey Area A

Survey Area Name	A
Survey Date(s)	10/5/2024, 7/18/2026
Formation(s)	Mapped: Piney Creek Alluvium (Qp). Observed: Quaternary artificial fill (af)
Topography	Vegetated slopes in between I-25 ramps, Clear Creek, and E 70th Avenue
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-01, P-20260718-01
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendation	Low paleontological potential, immediate paleontological clearance recommended

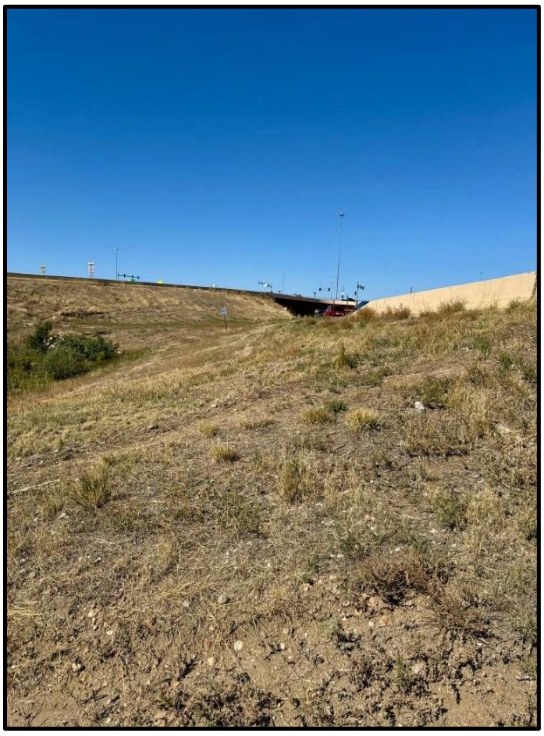


Photo 1. View north from P-20241005-01.
UTM 13S, 501564 mE, 4407984 mN.



Photo 2. View south from P-20260718-05.
UTM 13S, 501522 mE, 4407955 mN.

Table 2. Summary of Survey Area B

Survey Area Name	B
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Quaternary loess (Ql). Observed: Quaternary loess (Ql)
Topography	Gentle vegetated slope down to wetland just south of Grant Way and east of I-25
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-02
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Low paleontological potential, immediate paleontological clearance recommended



Photo 1. View north from P-20241005-02. UTM 13S, 501380 mE, 4410455 mN.

Table 3. Summary of Survey Area C

Survey Area Name	C
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Quaternary loess (Ql). Observed: Quaternary loess (Ql)
Topography	Flat vegetated lot just north of east 80th Avenue
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-03
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Low paleontological potential, immediate paleontological clearance recommended

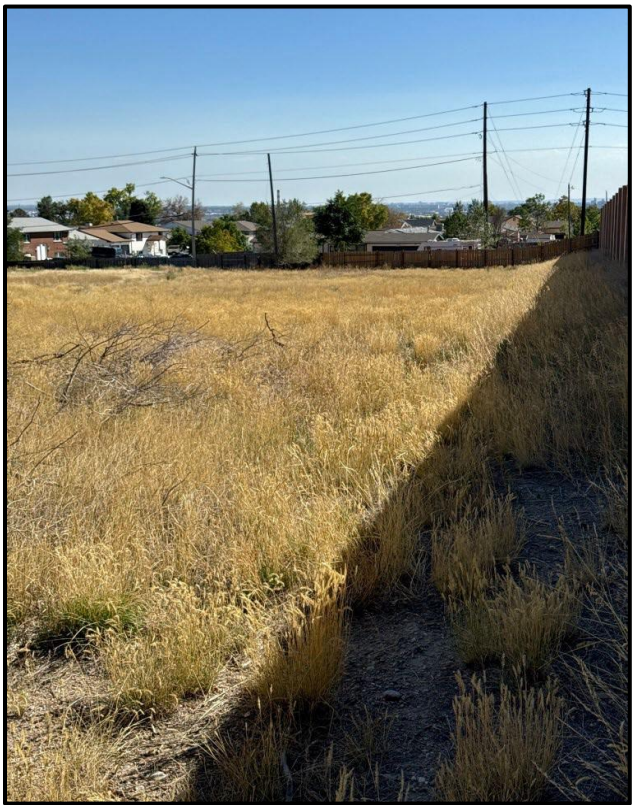


Photo 1. View south from P-20241005-03. UTM 13S, 501388 mE, 4410294 mN.

Table 4. Summary of Survey Area D

Survey Area Name	D
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Denver and Arapahoe Formations (TKda) and Piney Creek Alluvium (Qp) Observed: Denver and Arapahoe Formations (TKda) and Piney Creek Alluvium (Qp)
Topography	Flat vegetated lot
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-04
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Immediate paleontological clearance if no significant construction excavations. Paleontological monitoring if significant construction excavations are anticipated in area mapped as Denver Formation (TKda)



Photo 1. View east from P-20241005-04. UTM 13S, 501329 mE, 4411093 mE.

Table 5. Summary of Survey Area E

Survey Area Name	E
Survey Date(s)	10/5/2024, 7/18/2026
Formation(s)	Mapped: Denver and Arapahoe formations (TKda). Observed: Denver Formation and probable underlying Arapahoe Formation
Topography	Large circular depression (detention basin) and a narrow strip along the east side of I-25
% Bedrock and Exposure Location	2% bedrock (sandstone fragments in Prairie Dog burrow spoils and clasts derived from Arapahoe Formation.
Lithology(s)	N/A
Photo Points	P-20241005-05, P-20260718-02
NFOs	F-20241005-02 – Plantae, wood fragment
SFLs	F-20241005-01 – Ceratopsian partial epijugal (collected)
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Immediate paleontological clearance if no significant construction excavations. Paleontological monitoring if significant construction excavations are anticipated in area mapped as Denver Formation (TKda)



Photo 1. View southeast from P-20241005-05. UTM 13S, 501112 mE, 4412504 mN.

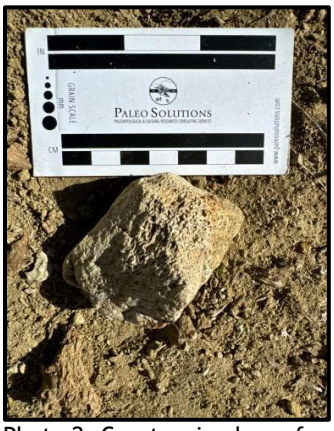


Photo 2. Ceratopsian bone fragment at F-20241005- 01.



Photo 3. View of prairie dog burrow from which the F-20241005-01 bone originated.

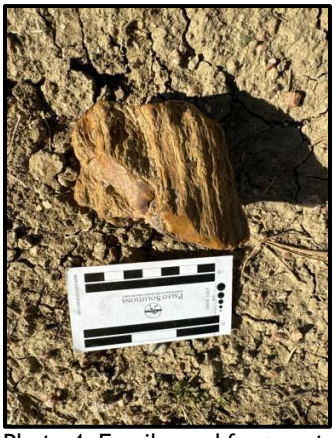


Photo 4. Fossil wood fragment probably eroded from the Arapahoe Formation (where it had been reworked from the Laramie Formation).



Photo 5. View north from P-20260718-02. UTM 13S, 501099 mE, 4412342 mN.

Table 6. Summary of Survey Area F

Survey Area Name	F
Survey Date(s)	10/5/2024, 7/18/2026
Formation(s)	Mapped: Colluvium (Qc), artificial fill (af). Observed: Colluvium (Qc), artificial fill (af)
Topography	Flat wooded area east of I-25 raised above the lot to the north and with an artificial berm along the southern boundary. Long grassy area adjacent to northbound I-25
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-06, P-20240718-03
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Low paleontological potential, immediate paleontological clearance recommended



Photo 1. View northwest from P-20241005-06.
UTM 13S, 501246 mE, 4413795 mN.



Photo 2. View south from P-20260718-03.
UTM 13S, 501095 mE, 4414475 mN.

Table 7. Summary of Survey Area G

Survey Area Name	G
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Colluvium (Qc), Denver and Arapahoe Formations (TKda). Observed: Colluvium (Qc), Denver and Arapahoe Formations (TKda)
Topography	Gentle vegetated slope on west side of I-25 southbound exit ramp to east 88th Avenue
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure
Lithology(s)	N/A
Photo Points	P-20241005-07
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Immediate paleontological clearance if no significant construction excavations. Paleontological monitoring if significant construction excavations are anticipated in area mapped as Denver Formation (TKda)



Photo 1. View northwest from P-20241005-07. UTM 13S, 500983 mE, 4413238 mN.

Table 8. Summary of Survey Area H

Survey Area Name	H
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Artificial fill (af), colluvium (Qc), Piney Creek Alluvium (QP), Denver and Arapahoe Formations (TKda). Observed: Artificial fill (af), colluvium (Qc), Piney Creek Alluvium (QP), Denver and Arapahoe Formations (TKda)
Topography	Vegetated hills on either side of Niver Creek and a large flat area with an intermittent drainage and artificial fill towards the southern edge
% Bedrock and Exposure Location	5%, intermittent exposure of Piney Creek alluvium along Niver Creek
Lithology(s)	N/A
Photo Points	P-20241005-08, P-202451005-09
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Immediate paleontological clearance if no significant construction excavations. Paleontological monitoring if significant construction excavations are anticipated in area mapped as Denver Formation (TKda)

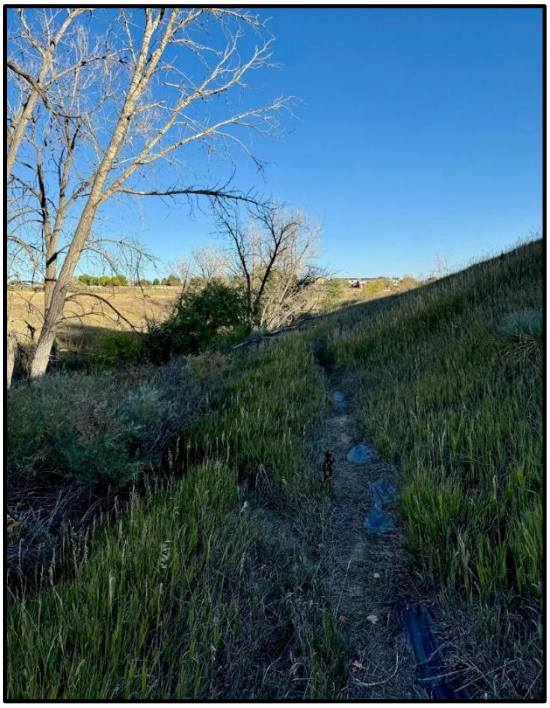


Photo 1. View northwest from P-20241005-08.
UTM 13S, 500750 mE, 4412413 mN.



Photo 2. View northwest from P-20241005-09.
UTM 13S, 500681 mE, 4411997 mN.

Table 9. Summary of Survey Area I

Survey Area Name	I
Survey Date(s)	10/5/2024
Formation(s)	Mapped: Artificial fill (af), Piney Creek Alluvium (Qp). Observed: Artificial fill (af), Piney Creek Alluvium (Qp)
Topography	Vegetated detention basin along a tributary of Niver Creek just west of I-25
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure. Ex-situ clasts probably derived from Arapahoe Formation
Lithology(s)	N/A
Photo Points	P-20241005-10
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Low paleontological potential, immediate paleontological clearance recommended

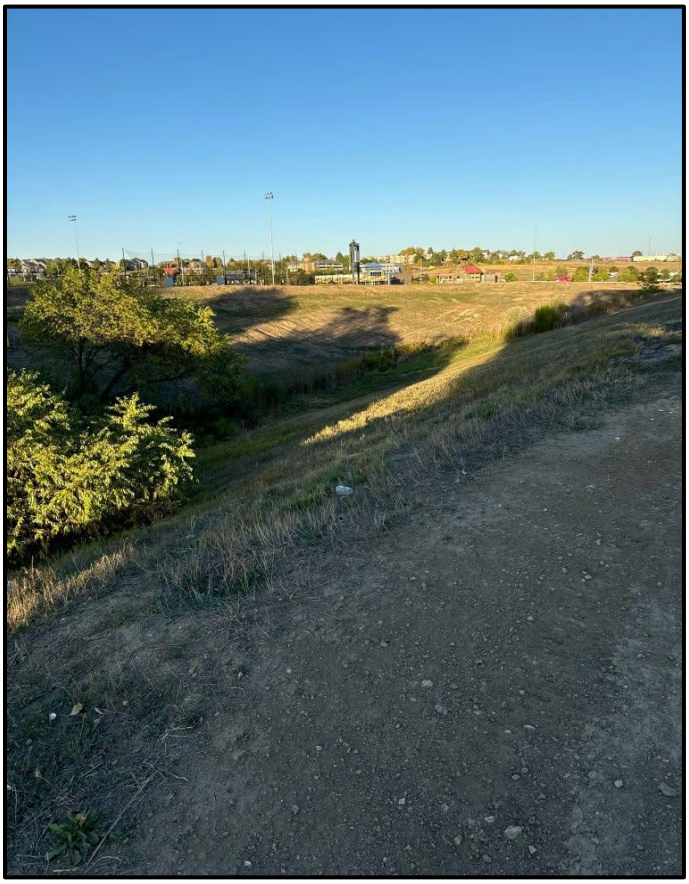


Photo 1. View northwest from P-20241005-10. UTM 13S, 500922 mE, 4411396 mN).

Table 10. Summary of Survey Area J

Survey Area Name	J
Survey Date(s)	7/18/2026
Formation(s)	Mapped: Denver and Arapahoe Formations (TKda). Observed: Artificial fill (af), Denver and Arapahoe Formations (TKda)
Topography	Flat lot adjacent to an RTD Park n' Ride
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure. Ex-situ clasts probably derived from Denver or Arapahoe formations
Lithology(s)	N/A
Photo Points	P-20260718-01
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Immediate paleontological clearance if no significant construction excavations. Paleontological monitoring if significant construction excavations are anticipated in area mapped as Denver Formation (TKda)



Photo 1. View north from P-20260718-01. UTM 13S, 501264 mE, 4411646 mN.

Table 11. Summary of Survey Area K

Survey Area Name	K
Survey Date(s)	7/18/2026
Formation(s)	Mapped: Quaternary loess (Ql). Observed: Quaternary loess (Ql)
Topography	Vegetated vacant lot gently sloping to east
% Bedrock and Exposure Location	0%, no bedrock or surficial sediment exposure.
Lithology(s)	N/A
Photo Points	P-20260718-01
NFOs	N/A, no new fossil localities
SFLs	N/A, no new fossil localities
Land Ownership	Private/CDOT ROW
Topographic Quad	Commerce City, CO USGS 7.5' Quadrangle
Geologic Map	Lindvall, 1980
Paleo Resource Status and Recommendations	Low paleontological potential, immediate paleontological clearance recommended



Photo 1. View northeast from P-20260718-01. UTM 13S, 501224 mE, 4410608 mN.

5.0 Recommendations

1. Immediate paleontological clearance is recommended for Survey Areas A, B, C, F, I, J and K (**Tables 1-3**, **Table 6**, **Tables 9-11**).
2. There are seven previously recorded fossil localities in the Denver Formation within Adams County. The fossil rich Denver Formation is mapped at the surface in portions of Survey Areas D, E, G, and H (**Tables 4, 5, 7, 8**). If significant construction excavations are anticipated at these locations, paleontological monitoring is recommended for areas mapped as Denver Formation (TKda, **Figure 2**). When the project design plans are finalized, the CDOT Staff Paleontologist should examine them and determine the amount (lateral extent and depth) of impact to the Denver Formation, and the amount of construction monitoring, if any, which is required to reduce potential adverse impacts on scientifically important paleontological resources to a less than significant level.
3. If any subsurface bones or other potential fossils are found during construction and a paleontological monitor is not present, work in the immediate vicinity (20-foot radius) should be temporarily halted, and the CDOT staff paleontologist should be notified to inspect the discovery and make further recommendations.

6.0 References

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Attachment A.

Project Information

Attachment A: Project Information

October 23, 2026 - Version 15

Subaccount number: 25563

BACKGROUND

The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) are proposing transportation improvements to Interstate 25 (I-25) between United States Highway 36 (US 36)/I-270/I-76 interchange and 104th Avenue.

Project History

CDOT has previously completed an Environmental Impact Statement (EIS), a Planning and Environmental Linkages (PEL) study, a safety audit, previous National Environmental Policy Act (NEPA)-level planning, and supplemental operational and transit and safety analyses that recommended improvements to this segment of I-25.

Some of the previously recommended improvements have been constructed, like the Express Lanes approved in the **North I-25 Record of Decision 1** (ROD1) (FHWA and CDOT, 2011), while others have not yet been implemented. The current Project evaluates proposed transportation improvements that reflect and build upon previous recommendations.

Because the current Project includes elements that were not evaluated and approved in the **North I-25 ROD1**, this Project is undergoing new evaluation under the National Environmental Policy Act.

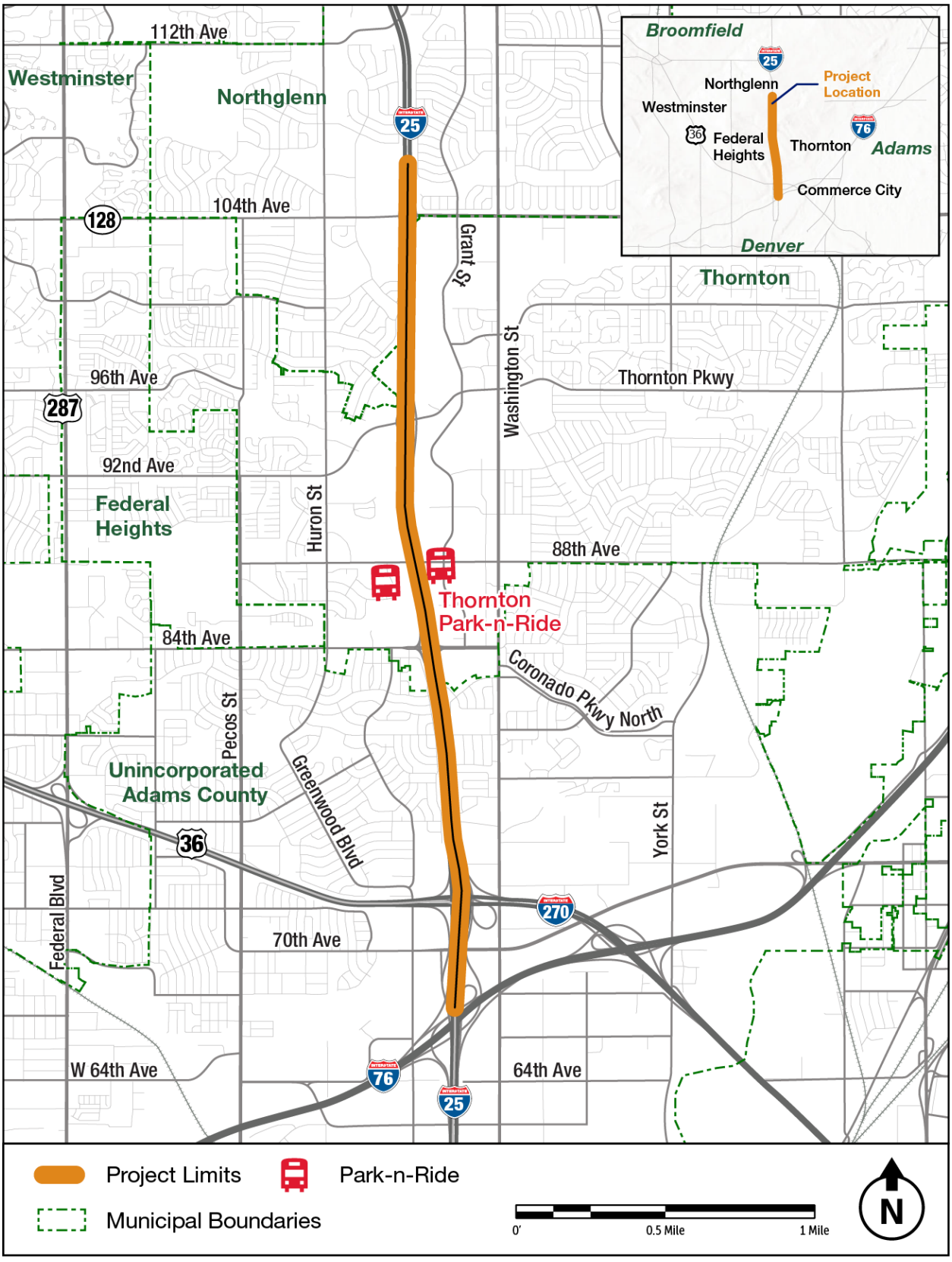
Study Area

The Project limits, illustrated in **Figure 1**, extend along I-25 from the US 36/I-76/I-270 interchange to 104th Avenue. It includes portions of US 36 and I-270, major arterials crossing I-25, and areas of potential drainage improvements. The study area for the Project varies by resource. Each resource's study area is defined within its corresponding technical report or memorandum.

The interchanges included in the Project limits are:

- I-25/US 36/270/I-76
- I-25/84th Avenue
- I-25/88th Transit Slip Ramps
- I-25/Thornton Parkway
- I-25/104th Avenue

Figure 1. Project Limits



PURPOSE AND NEED

The purpose of the Project is to improve I-25 between US 36 and 104th Avenue to address safety concerns and traffic operations.

The Project is needed to:

- Improve safety
- Improve traffic operations

In addition to addressing Project needs, the Project also has the following goal:

- Minimize environmental and community impacts caused by the Project

PROPOSED ACTION

The Project would improve approximately five miles of I-25 between US 36 and 104th Avenue. All lanes are 12 feet in width unless otherwise noted. The current cross-section of this segment of I-25 includes:

- Three general-purpose travel lanes in each direction
- One Express Lane in each direction, along the inside shoulder, separated from the adjacent general-purpose lane by a 2-foot buffer
- A southbound auxiliary lane between the 84th Avenue and US 36 interchanges
- A southbound auxiliary lane between the 88th Avenue transit slip ramp and the 84th Avenue interchange
- A northbound auxiliary lane between the 88th Avenue transit slip ramp and Thornton Parkway interchange
- Inside shoulders varying in width between 2 and 12 feet and outside shoulders varying in width between 6 and 12 feet

The Proposed Action on I-25 between US 36 and 104th Avenue, illustrated in **Figure 2**, includes the general-purpose and Express Lanes listed above and adds the following elements to the existing cross-section:

- A new 12-foot wide southbound general-purpose lane from 104th Avenue to south of 84th Avenue (all new lanes will be 12 feet in width)
- A new northbound climbing lane from the I-76 entrance ramp to 104th Avenue
- An expanded buffer of 4 feet between the Express Lane and the adjacent general-purpose lane
- A new continuous auxiliary lane southbound between the 84th Avenue and Thornton Parkway interchanges
- New continuous northbound auxiliary lanes between the interchanges at I-270 and 84th Avenue, 84th Avenue and Thornton Parkway, and Thornton Parkway and 104th Avenue
- Expanded inside and outside shoulders with typical 10-foot widths, and minimum 6.5-foot inside and 7-foot width in restricted locations

In addition to those changes to the cross-section, the Proposed Action would include the following elements:

- Realignment of the combined I-76 and US 36 on-ramp connection
- Expansion of the I-270 exit to northbound I-25 from one to two lanes; I-270 merge with I-25 shifted farther north (See **Figure 3**)
- Removal of bus-only slip ramps along I-25 at the Thornton Park-n-Ride facilities
- Changes to the Park-n-Ride west parking lot including reduction in size and reconstruction of circulation widths, sidewalks, and median areas to accommodate the proposed open channel of Niver Creek
- Changes to the Park-n-Ride east parking lot including reconstruction of bus bays and relocated shelters and amenities
- Replacement of the 88th Avenue bridge over I-25; wider to accommodate improved bicycle and pedestrian facilities and longer to accommodate I-25 widening

- Realignment of the I-25 adjacent existing trail and pedestrian network within the Niver Creek Open Space and its connections to the Thornton Park-n-Ride facilities (see **Figure 4**)
- Replacement of the aging pedestrian and bikeway underpass at the Thornton Park-n-Ride facility
- Removal of Niver Creek from the existing box culvert at the Thornton Park-n-Ride and conversion of the creek into an open channel
- Relocation of the segment of Niver Creek east of I-25, which currently flows south from the Park-n-Ride east parking lot to the creek's intersection with Tributary L, to the west side of I-25
- New water quality treatment features throughout the project area

Figure 2. Proposed Action

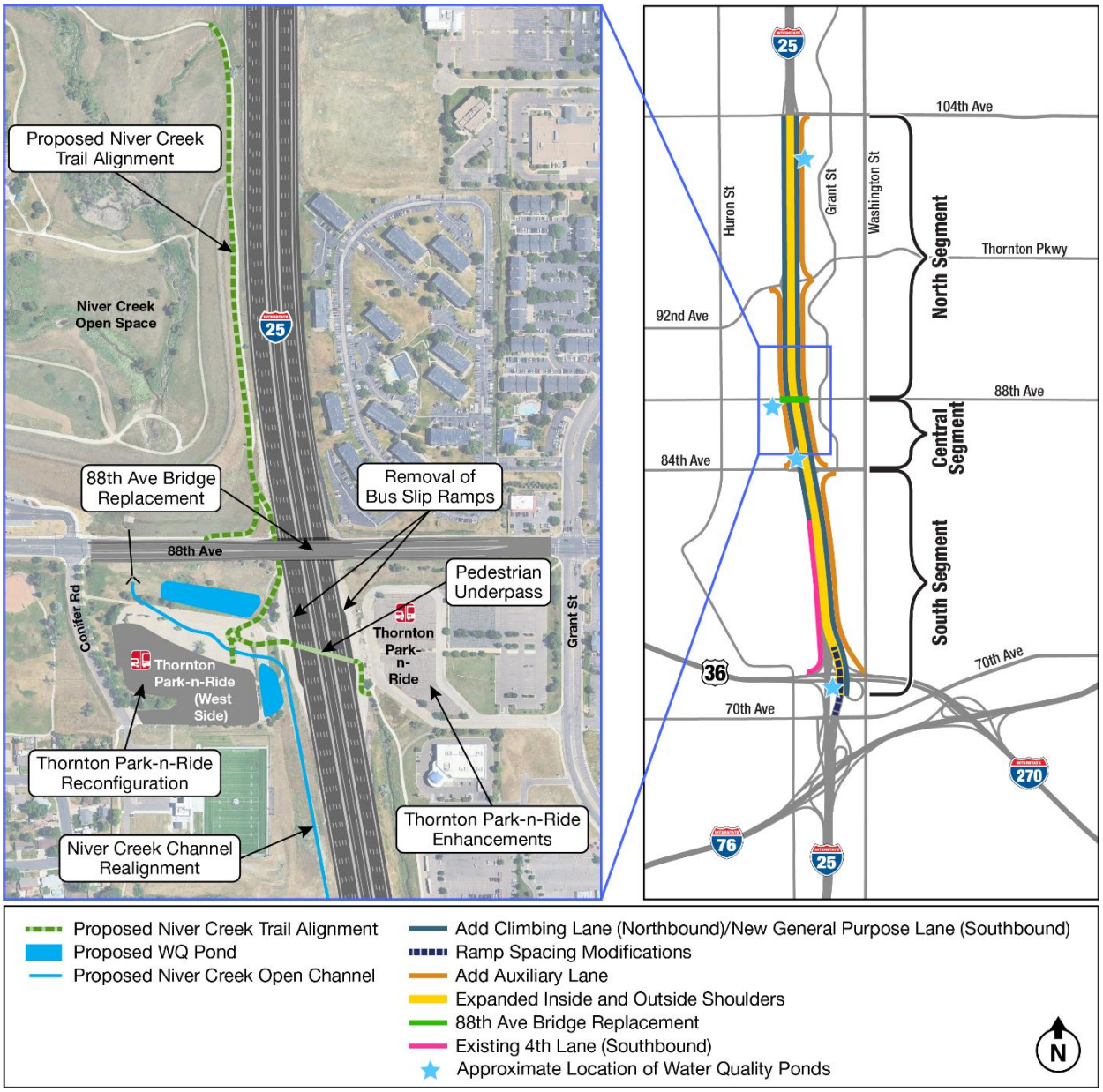


Figure 3. Proposed Improvements to I-270 Exit to NB I-25

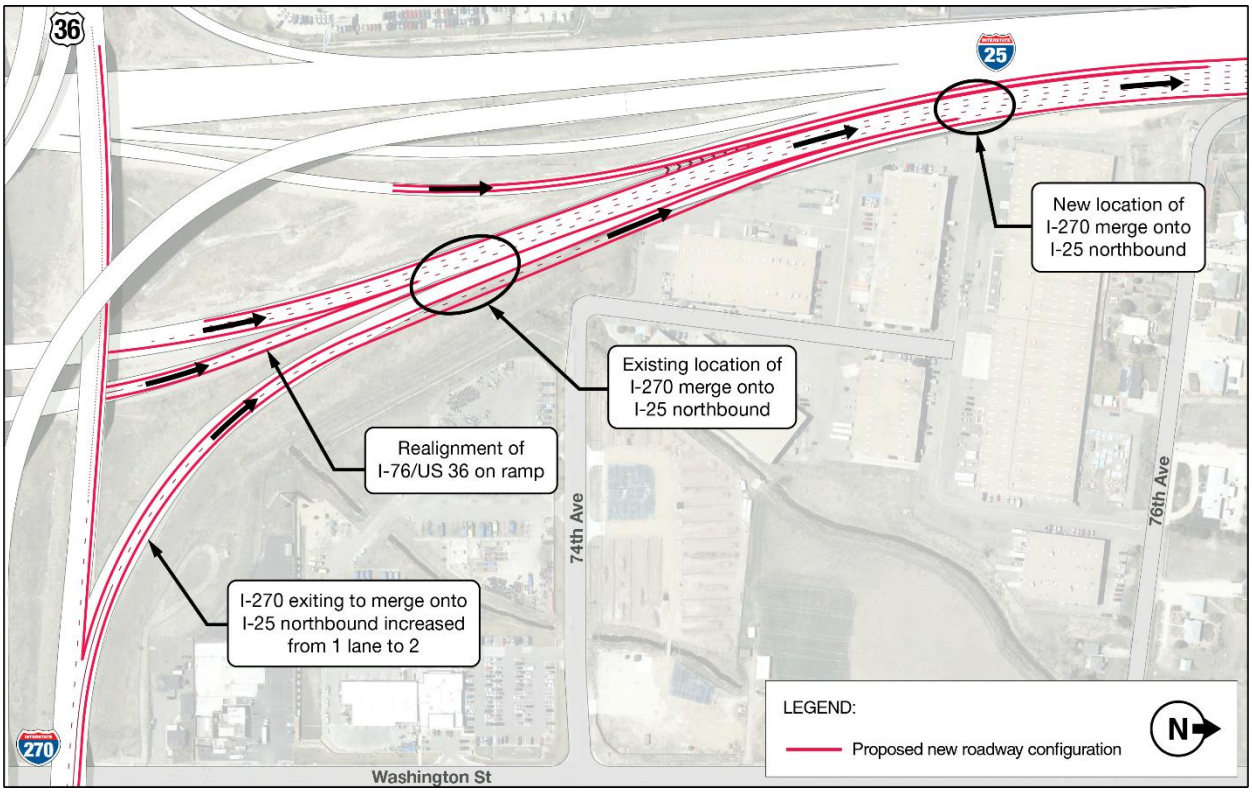
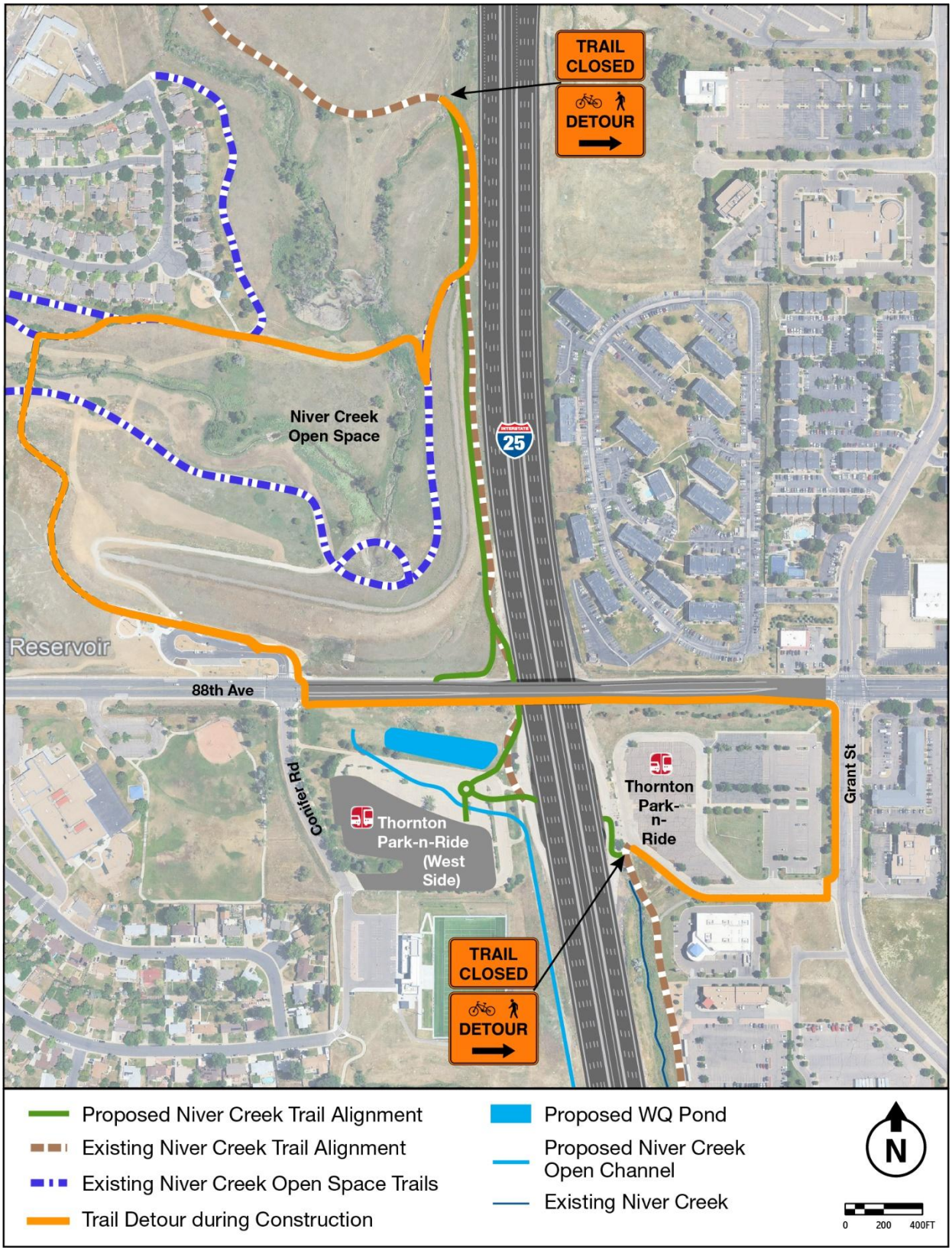


Figure 4. Proposed Realignment of Niver Creek Trail



Attachment B.

Copy of State of Colorado Paleontological Permit

Attachment B. Copy of State of Colorado Paleontological Permit

CDOT is dedicated to providing an accessible experience for everyone. While we are continuously improving our standards, some complex items in this document, such as certain figures and images, are difficult to create with fully accessible parameters to all users. If you need help understanding any part of this document, we are here to assist and have resources to provide additional accessibility assistance to any requests. Please email us at CDOT_Accessibility@state.co.us to request an accommodation, and a member of our I-25 Engineering Program will schedule a time to review the content with you. To learn more about accessibility at CDOT, please visit the Accessibility at CDOT webpage on the CDOT Website.

NOTE: This attachment is not able to be included in the Environmental Assessment at this time due to accessibility. If you would like a copy of this attachment or to sit down with a project team member to review this attachment, please contact the project team at I25.US36to104thAvenue@gmail.com or 720-378-8859.