

February 28, 2020

Kristin Sullivan, Director  
Adams County Community & Economic Development  
Development Services Division, Community Planning and Development  
4430 South Adams County Parkway  
Brighton, Colorado 80601

RE: Pioneer Water Pipeline Project—Conditional Use Permit Application

Dear Ms. Sullivan:

On behalf of Pioneer Water Pipeline, LLC (Pioneer), a subsidiary of Expedition Water Resources Colorado, LLC, Tetra Tech, Inc. (Tetra Tech) is submitting a Conditional Use Permit (CUP) application for the proposed Pioneer Water Pipeline Project (Project). The Project consists of construction and operation of approximately 19.2 miles of new produced water gathering pipelines in Adams County. The purpose of the Project is to further Adams County's goal of reducing impacts to the community of oil and gas exploration by transferring the transportation of produced water from trucks to pipeline in both Adams and Weld counties. The pipeline will provide transportation service from 15 well sites in Adams County to Expedition's existing EWS #6 wastewater injection and disposal facility, significantly reducing truck traffic. Of the 19.2 miles in Adams County, approximately 12.3 miles are within unincorporated Adams County, and the remaining 6.9 miles are within the jurisdictional boundaries of the City of Brighton and City of Thornton. The City of Thornton and the City of Brighton would review the portions of the Project within their municipal limits.

Tetra Tech prepared this CUP application per the requirements of Chapter 2—Application and Permitting Procedures in the Adams County Development Standards and Regulations (ACDSR), the CUP Checklist. This permit application also includes submittal requirements outlined in Chapter 6—Regulations Governing Areas and Activities of State Interest (AASI) for supplemental environmental impact analysis as requested by the Adams County Department of Community Planning and Development during the Conceptual Review process (PRE2019-00065). Pioneer respectfully submits the following attachments:

- CUP Transmittal Items Checklist
- AASI Checklist
- CUP Development Application Form

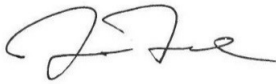
Kristin Sullivan, Director  
Adams County Community & Economic Development  
Pioneer Water Pipeline Project  
Page 2 of 2

- CUP Application Package, including to requirements outlined in Section 06-07-02 under Chapter 6 Regulations governing AASI

The Conditional Use Permit application fee of \$1,000, and the Tri County Health Application Fee of \$360, as noted on the CUP Checklist, is being provided at the time the application submittal.

Pioneer and Tetra Tech appreciate your assistance. If you have any questions, please contact me by telephone at (303) 253-1647 or email at [John.Heule@tetrattech.com](mailto:John.Heule@tetrattech.com).

Sincerely,



John Heule  
Environmental Planner

cc: Spence McCallie, Pioneer

Attachments (4):  
CUP Transmittal Items Checklist  
AASI Checklist  
CUP Development Application Form  
CUP Application Package



## CONDITIONAL USE PERMIT

Application submittals must include all documents on this checklist as well as this page. Please use the reference guide (pgs. 3-4) included in this packet for more information on each submittal item.

All submittals shall include one (1) hard copy of all documents and one (1) electronic copy with all documents combined in a single PDF. For hard copies, each document shall be labeled or tabbed with the corresponding checklist number.

- 1. Development Application Form (pg. 5)
- 2. Application Fees (see pg. 2)
- 3. Written Explanation of the Project Reference CUP Application Section 1.1
- 4. Site Plan Showing Proposed Development Reference Exhibit A
- 5. Proof of Ownership (warranty deed or title policy)
- 6. Proof of Water and Sewer Services Reference CUP Application Section 2.7
- 7. Proof of Utilities (e.g. electric, gas) Reference CUP Application Section 2.8
- 8. Legal Description Reference Exhibit F
- 9. Certificate of Taxes Paid Reference CUP Application Section 2.10
- 10. Certificate of Notice to Mineral Estate Owners/and Lessees (pg. 7) Reference CUP Application Section 2.11
- 11. Certificate of Surface Development (pg. 8-10) Reference CUP Application Section 2.12

Supplemental Items (if applicable) \*Contact County staff for supplemental forms

- 1. Traffic Impact Study
- 2. Neighborhood Meeting Summary Reference Exhibit G
- 3. Solid waste transfer station\*
- 4. Solid waste composting facility\*
- 5. Scrap tire recycling facility\*
- 6. Inert fill\*

Application Fees	Amount	Due
Conditional Use Permit	\$1,000 (\$300 per additional residential request/ \$500 per additional non-residential)	With application submittal
Tri-County Health *made payable to Tri-County Health	\$360	With application submittal



## AREAS AND ACTIVITY OF STATE INTEREST (1041)

Application submittals must include all documents on this checklist as well as this page. Please use the reference guide (pg. 3) included in this packet for more information on each submittal item.

All submittals shall include one (1) hard copy of all documents and one (1) electronic copy with all documents combined in a single PDF. For hard copies, each document shall be labeled or tabbed with the corresponding checklist number.

- 1. Development Application Form (pg. 5)
- 2. Application Fees (see table pg. 2)
- 3. Written Explanation of the Project
- 4. Site Plan Showing Proposed Development Reference Exhibit A
- 5. Proof of Ownership (title policy dated within 30 days of submittal)
- N/A 6. Proof of Water and Sewer Services Reference CUP Application Section 2.7
- 7. Proof of Utilities (e.g electric, gas) Reference CUP Application Section 2.8
- 8. Neighborhood Meeting Summary Reference Exhibit G
- 9. Legal Description Reference Exhibit F
- N/A 10. Certificate of Taxes Paid Reference CUP Application Section 2.10
- N/A 11. Certificate of Notice to Mineral Estate Owners/and Lessees (pg. 7) Reference CUP Application Section 2.11
- N/A 12. Certificate of Surface Development (pg. 8-10) Reference CUP Application Section 2.12

Refer to **Section 6-07-02** of the Development Standards and Regulation for items below:

- 13. Information Describing the Applicant Reference CUP Application Section 3.2
- 14. Information Describing the Project Reference CUP Application Section 3.3
- 15. Property Rights, Permits and Other Approvals Reference CUP Application Section 3.4
- 16. Financial Feasibility of the Project Reference CUP Application Section 3.5
- 17. Land Use Reference CUP Application Section 3.6
- 18. Local Government Services Reference CUP Application Section 3.7
- 19. Financial Burden on County Residents Reference CUP Application Section 3.7

*continued on next page...*



- 20. Local Economy Reference CUP Application Section 3.9
- 21. Recreational Opportunity Reference CUP Application Section 3.10
- 22. Environmental Impact Analysis Reference CUP Application Section 3.11.

**Supplemental Items (if applicable) -2 hard copies required**

- 1. Drainage Report
- 2. Traffic Impact Study
- 3. Erosion and Sediment Control Plans
- 4. Construction / Engineering Design Plans

<b>Application Fees</b>	<b>Amount</b>	<b>Due</b>
AASI Permit	\$5,000 and cost of mailings	With application submittal
Tri-County Health *made payable to Tri-County Health	\$150	With application submittal
Drainage Report	\$500	With application submittal
Traffic Impact Study	\$600	With application submittal
Erosion and Sediment Control Plans	\$500	With application submittal
Construction Plans	\$100	With application submittal



### DEVELOPMENT APPLICATION FORM

#### Application Type:

<input type="checkbox"/> Conceptual Review	<input type="checkbox"/> Preliminary PUD	<input type="checkbox"/> Temporary Use
<input type="checkbox"/> Subdivision, Preliminary	<input type="checkbox"/> Final PUD	<input type="checkbox"/> Variance
<input type="checkbox"/> Subdivision, Final	<input type="checkbox"/> Rezone	<input type="checkbox"/> Conditional Use
<input type="checkbox"/> Plat Correction/ Vacation	<input type="checkbox"/> Special Use	<input type="checkbox"/> Other: _____

**PROJECT NAME:**

#### APPLICANT

Name(s):  Phone #:

Address:

City, State, Zip:

2nd Phone #:  Email:

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#### OWNER

Name(s):  Phone #:

Address:

City, State, Zip:

2nd Phone #:  Email:

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#### TECHNICAL REPRESENTATIVE (Consultant, Engineer, Surveyor, Architect, etc.)

Name:  Phone #:

Address:

City, State, Zip:

2nd Phone #:  Email:

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**DESCRIPTION OF SITE**

Address:

City, State, Zip:

Area (acres or square feet):

Tax Assessor Parcel Number

Existing Zoning:

Existing Land Use:

Proposed Land Use:

Have you attended a Conceptual Review? YES  NO

If Yes, please list PRE#:

I hereby certify that I am making this application as owner of the above described property or acting under the authority of the owner (attached authorization, if not owner). I am familiar with all pertinent requirements, procedures, and fees of the County. I understand that the Application Review Fee is non-refundable. All statements made on this form and additional application materials are true to the best of my knowledge and belief.

Name:

Date:

Owner's Printed Name

Name:

Owner's Signature





# Pioneer Water Pipeline Project

## Conditional Use Permit Application

February 2020

Prepared for:



4430 South Adams County Parkway, Brighton, CO 80601

Prepared by:



Pioneer Water Pipeline, LLC, 600 17th Street, Suite 725, Denver, CO 80202

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**Exhibits**

- Exhibit A: Alignment Sheets
- Exhibit B: Natural Resource Conservation Overlay Report
- Exhibit C: Conceptual Review Preliminary Comments, Questions, and Responses
- Exhibit D: Typical Pipeline Trench and HDD
- Exhibit E: Expedition’s Occupational Safety and Health Administration form 300: Summary of Work-Related Injuries and Illnesses
- Exhibit F: List of Parcel Owners
- Exhibit G: Neighborhood Meeting Notification, Meeting Materials, and Summary
- Exhibit H: Routing Analysis
- Exhibit I: Summary of Water Wells in the Vicinity of the Project

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- 3: Adams County Road Crossings Map
- 4: Adams County Zoning Map
- 5: Adams County Land Cover Map
- 6: Adams County Groundwater Aquifers Map



## List of Acronyms

AASI	Areas and Activities of State Interest
ACDSR	Adams County Development Standards and Regulations
BMP	Best Management Practice
CAAQS	Colorado Ambient Air Quality Standards
CDPHE	Colorado Department of Public Health and Environment
CDWR	Colorado Division of Water Resources
CFR	Code of Federal Regulation
COGCC	Colorado Oil and Gas Conservation Commission
CPW	Colorado Parks and Wildlife
CRS	Colorado Revised Statutes
CUP	Conditional Use Permit
dba	Decibels
EPA	U.S. Environmental Protection Agency
Expedition	Expedition Water Solutions Colorado, LLC
HDD	Horizontal Directional Drilling
HDPE	High-Density Polyethylene
IPaC	Information for Planning and Consultation
NAAQS	National Ambient Air Quality Standards
NHD	National Hydrology Dataset
NRCO	Natural Resources Conservation Overlay
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
Pioneer Project	Pioneer Water Pipeline, LLC Pioneer Water Pipeline Project
ROW	Right-of-Way
SCADA	Supervisory Control and Data Acquisition
SWMP	Stormwater Management Plan
Tetra Tech	Tetra Tech, Inc.
USR	Use by Special Review
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

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# 1. Introduction

Tetra Tech, Inc (Tetra Tech), has prepared this Conditional Use Permit (CUP) application on behalf of Pioneer Water Pipeline, LLC (Pioneer), a subsidiary of Expedition Water Solutions Colorado, LLC (Expedition), for the proposed Pioneer Water Pipeline Project (Project). Tetra Tech prepared this CUP application per the requirements of Chapter 2—Application and Permitting Procedures in the Adams County Development Standards and Regulations (ACDSR), the CUP Checklist, and the requirements outlined in Chapter 6—Regulations Governing Areas and Activities of State Interest (AASI) as requested by the Adams County Department of Community Planning and Development during the Conceptual Review process (PRE2019-00065).

## 1.1 Document Organization

The permit application is organized in the same sequence as the submittal requirements in the CUP Checklist, AASI Checklist, and the Adams County Department of Community Planning and Development supplemental requirements. Exhibits provided with the application are listed in Table 1. Individual figures are listed in Table 2.

**Table 1:**  
**List of Exhibits Included with the Application**

Exhibit	Content
A	Alignment Sheets
B	Natural Resource Conservation Overlay Report
C	Conceptual Review Preliminary Comments, Questions, and Responses
D	Typical Pipeline Trench and HDD
E	Expedition’s Occupational Safety and Health Administration form 300: Summary of Work-Related Injuries and Illnesses
F	List of Parcel Owners
G	Neighborhood Meeting Notification, Meeting Materials, and Summary
H	Routing Narrative
I	Summary of Water Wells in the Vicinity of the Project.

**Table 2:**  
**List of Figures Included with the Application**

Figure Number	Content <sup>1</sup>
1	Project Overview Map
2	Adams County Overview Map
3	Adams County Road Crossings Map
4	Adams County Zoning Map
5	Adams County Land Cover Map
6	Adams County Groundwater Aquifers Map

1 The information in this application is based on the pipeline route shown in these figures. The pipeline alignment is subject to change based on final engineering.

## 1.2 Project Description

The Project would consist of construction of approximately 48.5 miles of 4- to 12 inch-diameter high-density polyethylene (HDPE) produced water gathering pipelines and associated appurtenances in Adams and Weld counties, Colorado. Approximately 29.3 miles of pipeline would be located in Weld County, and 19.2 miles of pipeline would be located in Adams County. Approximately 12.3 miles will be in unincorporated Adams County. Within Adams County, the Project would traverse the municipalities of Brighton and Thornton. A Project Overview Map is provided as Figure 1 and an Adams County Project Map is provided as Figure 2. A detailed Project description is included in Section 2.3. Alignment sheets are included as Exhibit A.

## 1.3 Project History

Pioneer attended a Conceptual Review meeting with the Adams County Department of Community Planning and Development (PRE2019-00065) on July 22, 2019. The Adams County Department of Community Planning and Development advised Pioneer that the Project would be subject to the County's CUP review and approval. In addition, Pioneer was notified that the CUP application must also address and include submittal requirements for the AASI permit (Section 3) and a Natural Resources Conservation Overlay (NRCO) Review if the Project impacts up to an acre of land in the NRCO Review (Exhibit B).

Copies of the Adams County Department of Community Planning and Development Conceptual Review comments and the sections of this document that respond to those questions are included in Exhibit C. Table B-1 in Exhibit C also includes responses to the Development Conceptual Review comments and a reference matrix that details the specific section of this document where additional information can be found addressing each of the review comments.

## 1.4 Purpose and Need

The purpose of the Project is to allow more efficient pipeline transportation of produced water from oil and gas production facilities in Adams and Weld counties to Expedition's existing EWS #6 wastewater injection and disposal facility, thereby also significantly reducing truck traffic. Wastewater injection is a process of disposing of fluid underground into geologic formations that are capable of holding fluid. EWS #6 accepts water 24 hours per day and is able to dispose of 25,000 barrels (1,050,000 gallons) of water per day with the ability to expand.

Pioneer estimates that oil and gas production facilities generate approximately half as much water as product, meaning that for every two barrels of product generated at an oil and gas production facility, an operator must dispose of one barrel of produced water. Without this Project, the operators of the oil and gas production facilities in Adams and Weld counties that would be connected by the proposed pipeline would transport the water generated during production to EWS #6 by truck (Illustration 1). Permits for the oil and gas facilities are described in additional detail in Section 2.3.2. Pioneer expects that the Project would have the following beneficial effects:

- **Traffic:** Construction of the Project would remove the equivalent of 5 million truck miles and over 50,000 truckloads per year on local roads.

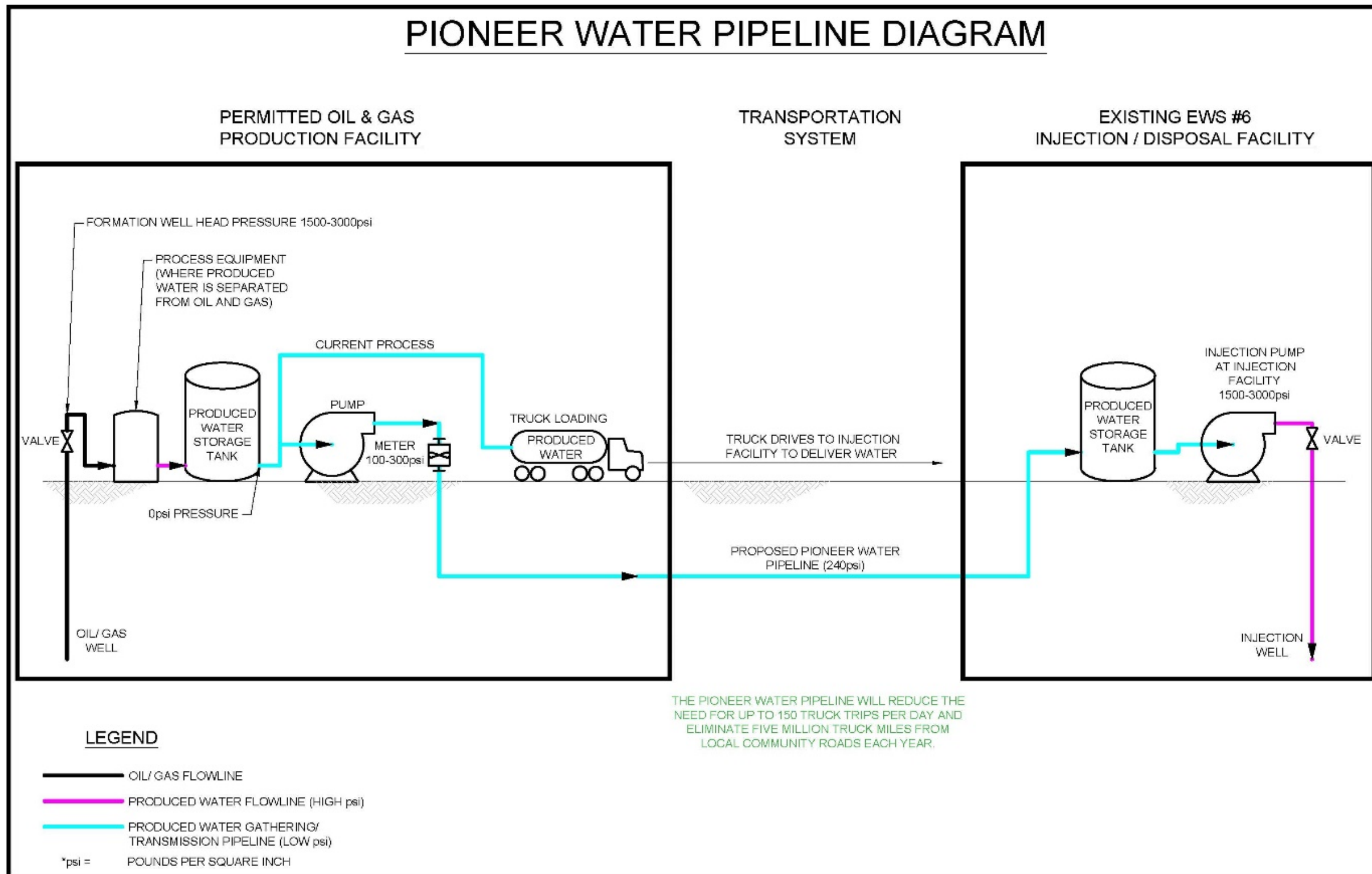
- **Infrastructure:** The removal of these trucks from local road means fewer repairs and longer life for the streets and highways of the community.
- **Safety:** The removal of heavy truck miles from local roads would reduce the potential for traffic accidents.
- **Air Quality:** Removal of truck traffic reduces vehicle emissions and the quantity of particulates, ozone, odors, and other air pollutants in the atmosphere.
- **Sustainability:** Completion of the 100 percent electric-powered Project would reduce carbon emissions by 21,000 metric tons per year.
- **Community Revenue:** The Project anticipates providing approximately \$500,000 per year in new tax revenue to the community, directly benefitting public schools among other public services.
- **Jobs:** The Project is expected to create 100 locally sourced jobs during construction, and approximately four permanent jobs once operational.

Pioneer has designed the Project to allow for expansion and additional capacity in the future if there is a need and economic feasibility to connect additional oil and gas facilities.

## 1.5 Regulatory Overview

Pioneer would ensure the Project obtains applicable land use, environmental, and construction permits, and would ensure permit conditions are met prior to the start of construction. Refer to Section 3.4.2 for additional information on permitting for the Project.

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**Illustration 1: Current and Proposed Method of Produced Water Transportation from Oil and Gas Production Facilities**  
 Note: The Project would transport the produced water via pipeline; without the Project, the produced water would be transported by truck.

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## 2. Conditional Use Permit Application Requirements

### 2.1 Development Application Form and CUP Checklist

The Adams County Development Application and AASI and CUP Checklists are included as part of this permit package as an attachment to the cover letter.

### 2.2 Application Fees

The \$1,000.00 application fee for the CUP permit and the \$360.00 Tri-County Health Department review fee are included with this application.

### 2.3 Written Explanation of the Project

#### 2.3.1 Project Overview

The Project consists of construction and operation of approximately 19.2 miles of new produced water gathering pipelines in Adams County (Figures 1–2). Of the 19.2 miles in Adams County, approximately 12.3 miles are within unincorporated Adams County, and the remaining 6.9 miles are within the jurisdictional boundaries of the City of Brighton and City of Thornton. The City of Thornton and the City of Brighton would review the portions of the Project within municipal limits.

The Project is designed to transport produced water from 16 oil and gas production facilities located within Adams County and operated by Great Western Petroleum, LLC (see Section 2.3.2 for additional information about oil and gas production facility permits). An additional 29.3 miles of pipeline and connections to six additional oil and gas production facilities would be located within Weld County.

Produced water, also known as wastewater, is recovered as byproduct that is brought to the surface during oil and gas production. Oil, gas, and produced water leaves the well head at pressures up to 3,000 pounds per square inch (psi). The content of produced water varies with the formation where the water originates, but is generally high in salts with trace amounts of other minerals. After being brought to the surface, produced water is stored at the permitted oil and gas facilities in a storage tank. From the storage tank, the Project would transport the produced water via pipeline to Expedition's existing EWS #6 wastewater injection and disposal facility in Weld County. The pipeline would transport the produced water at a maximum pressure of approximately 240 psi until it reaches a storage tank at EWS #6. The maximum allowable pressure of the Pioneer Water Pipeline Project will be 333 psi. Expedition would increase the water pressure again at EWS #6 before it is injected underground.

#### 2.3.2 Oil and Gas Production Facilities

Sixteen of the 22 oil and gas production facilities that the Project would connect are located within Adams County. The remaining six oil and gas production facilities are located in Weld County. The pipeline will be capable of transporting approximately 39.2 thousand barrels per day, of which an estimated 33 thousand barrels per day would come from oil and gas production facilities in Adams County at peak flow. Table 3 identifies the permit status for the Adams County oil and gas production facilities.

**Table 3:**  
**Oil and Gas Production Facility Permitting Jurisdictions and Permitting Status**

Oil and Gas Production Facility Name	Permitting Jurisdiction	Permit Number/Status
Baseline	Adams County	USR2018-00010
B-Farm	Adams County	USR2017-00004
Brant	Adams County	USR2018-00011
Gus	Adams County	USR2018-00013
Ivey	Adams County	USR2016-00006
Kortum	Adams County	USR2018-00009
Ocho	Adams County	USR2016-00005
Rio	Adams County	USR2019-00001
Schaefer	Adams County	USR2016-00003
Seltzer	Adams County	USR2018-00002
Tollway	Adams County	USR2018-00005
Tower	Adams County	USR2018-00012
Sharp	Adams County	Application for USR in progress
Rico	Adams County	Application for USR in progress
Henderson	Adams County	Application for USR in progress
Prairie	Brighton	Located within the City of Brighton (Case File 18-00214)

USR = Use by Special Review

Great Western Petroleum, LLC would obtain Use by Special Review permits for the Sharp, Rico, and Henderson oil and gas production facilities from the Adams County Department of Community and Economic Development. Each Use by Special Review (USR) permit authorizes at least one produced water pipeline and associated appurtenances (pumps, valves, etc.) at the oil and gas production facility. Great Western Petroleum, LLC would assign the right to construct the produced water pipeline to Pioneer. Pioneer would construct the pipeline and appurtenances associated with the Project within the limits of the permitted well pad. This application therefore excludes Project facilities within the well pad. Pioneer would not construct the facilities at these locations until a USR permit has been issued to Great Western Petroleum, LLC.

### **2.3.3 Pipelines**

The Project would consist of construction of approximately 48.5 miles of 4- to 12 inch-diameter HDPE produced water gathering pipelines and associated appurtenances in Adams and Weld counties. Pioneer is seeking a permanent easement for its pipelines that is approximately 10 feet wide as well as an additional 30 feet of temporary easement for pipeline construction.

The pressure and capacity of produced water pipelines is dependent on the distance from the pipeline origin (at each oil and gas production facility). The temperature of the produced water when it is extracted from the ground is high (close to formation temperature) and it cools and contracts as it travels through pipelines away from the well head. The Project pipelines would operate at an estimated 240 psi but may operate at a higher pressure depending on temperature. The maximum allowable pressure will be

333 psi. Pioneer would control pressure and monitor temperature using remotely operated valves located along the Project route. Illustration 1 in Section 1.4 of this document provides a graphical representation of the pipeline from the permitted oil and gas production facilities to EWS#6. Table 4 and Figures 1 and 2 provide the pipeline segment names, diameters, and total length of each within unincorporated Adams County. Brighton and Thornton would review and approve the remaining approximately 6.9 miles of pipeline in Adams County. Section 3.6 provides information on existing land use and zoning districts crossed by the Project.

**Table 4:**  
**Proposed Pipeline Segments within Unincorporated Adams County**

Pipeline	Diameter (inches)	Length within Unincorporated Adams County (miles)
B-Farm Connection	6	0.15
Baseline Lateral	6	0.23
Gus Lateral	6	0.28
Henderson Lateral	4	0.11
Ivey Lateral	8	0.15
Kortum Lateral	8	0.14
North Adams Trunk	10	1.81
Ocho Connection	6	0.19
Pioneer Mainline	12	4.29
Rio Lateral	8	0.19
South Adams Trunk	10-12	3.6
Seltzer Lateral	4	0.08
Tollway Connection	6	0.12
Tower Lateral	6	0.92

To date, Pioneer has conducted a detailed routing effort to identify a preferred route. Pioneer is currently in the final stages of civil survey and anticipates finalizing landowner agreements and survey by the end of March 2020. The Project route may undergo minor route changes within the same parcels currently crossed by the Project as survey has been completed and landowner agreements are finalized. Pipeline construction often results in minor changes to the pipeline centerline within the permanent easement as a result of information gathered during construction. Pioneer would alert Adams County if information gathered in the field resulted in a change in the permanent and easement and would provide as-built spatial data identifying the pipeline centerline to Adams County upon completion of construction.

Pioneer's construction contractor would install the pipeline using mechanically excavated open-cut trenching techniques. The pipeline would be buried at a depth of 48 inches of cover or more. Pioneer's construction contractor would string pipe segments along the ditch line, fuse sections together using thermal fusion, and lower the pipeline into the open cut ditches. Each fusion joint would be logged by a data recorder with the results audited by qualified technicians, then lowered into the trench and backfilled. Upon completion of construction, the pipeline would be hydrostatically pressure tested to industry standards prior to operations.

Pioneer routed the Project to make use of existing rights-of-way (ROWs), property boundaries, and utility corridors associated with the oil and gas production facilities to the extent possible. Pioneer would obtain Adams County road ROW permits as required prior to construction, and the pipeline would only cross county road ROWs at or near a perpendicular angle. Pioneer has received preliminary approval to install pipelines within the E-470 Public Highway Authority ROW. Pioneer would obtain easements where the pipeline would cross private property. The pipeline would cross parcel 157123401001, which is owned by Adams County (reference Section 2.6). Additional information about the routing process is included in Section 3.3.2.

Pioneer proposes to cross state highways, county roads, railroads, and wetlands and streams and other existing infrastructure where practicable via horizontal directional drilling (HDD) to mitigate impacts to infrastructure and sensitive resources to the maximum extent practicable. Table 5 lists the county and state road crossings where the pipeline would be installed using HDD within Adams County. Section 3.11.5 describes Pioneer’s commitment to avoiding impacts to wetlands and surface waters. The crossings listed in Table 5 are also depicted on Figure 3. Typical road and culvert crossings are provided in Exhibit D. Pioneer would repair or replace any Adams County infrastructure damaged during construction of the Project to pre-construction conditions.

**Table 5:**  
**Adams County Road Crossings**

Crossing ID (Figure 3)	Street	Nearest Cross Streets <sup>1</sup>	Road Type
1	Colorado Blvd	E 156th Ave & Colorado Blvd	Local Road
2	Holly St	State Highway 7 & Holly St	Local Road
3	Monaco St	State Highway 7 & Monaco St	Local Road
4	Quebec St	State Highway 7 & Quebec St (South)	Local Road
5	County Road 2 - #3	County Rd 2 & Quebec St	County
6	County Road 2 - #4	County Rd 2 & Yosemite St	County
7	County Road 2 - #2	County Rd 2 & Lima St	County
8	County Road 2 - #1	County Rd 2 & Tucson St	County
9	Riverdale Rd #1	Riverdale Rd & State Highway 7 (South)	Local Road
10	Riverdale Rd #2	E-470 & Riverdale Rd	Local Road
11	E 136th Ave #1	E 136th Ave & Potomac St (West)	Local Road
12	E 136th Ave #2	E 136th Ave & Potomac St (East)	Local Road
13	Potomac St	E 136th Ave & Potomac St (South)	Local Road

### **2.3.4 Aboveground Appurtenances and Construction Laydown Areas**

Construction of the pipelines would require an approximately 10-foot-wide permanent easement plus an additional 30-foot-wide temporary easement for a total construction corridor of 40 feet in width.

Appurtenant aboveground facilities such as isolation valves, pumps, and cleaning tool launcher and receivers would be located at the existing oil and gas production facilities. Approximately five aboveground appurtenances consisting of three mainline valve sets and two cleaning tool launchers or receivers would be located on private easements within unincorporated Adams County. Pioneer would

site aboveground appurtenances outside of floodplains and outside of Adams County ROWs on private land. Easement negotiations for the aboveground locations are currently underway. Final locations of valves and other appurtenances would be provided to the Adams County Department of Community and Economic Development prior to public hearings.

Pioneer would design the project to be remotely operated through an automated supervisory control and data acquisition (SCADA) system. In the event of a leak or other unsafe condition, the SCADA system would automatically close valves and stop the flow of produced water.

Pioneer would use existing laydown areas in Weld County and at EWS #6 to stage equipment and materials for Project construction. Pioneer does not anticipate using additional temporary workspaces in unincorporated Adams County besides those located along the pipeline route (see Exhibit A for the locations) that would be used to excavate trench, fuse pipeline segments, deliver the HDD equipment and pipe segments, excavate HDD entry and receiving pits, temporarily stockpile excavated soil from the pits, and serve as laydown for pipe segments. Pioneer's construction contractor would backfill, compact, and restore and revegetate the pipeline trench upon completion of the pipe installation. Following construction, the contractor would return temporary workspaces to pre-construction conditions.

### **2.3.5 Project Construction and Operation Safety**

Pioneer is committed to safety and the Project would comply with all federal, state, and local rules and regulations to provide safe, reliable service. The Colorado Oil and Gas Conservation Commission (COGCC) would regulate the Project under the COGCC Series 1100 rules for flowlines (Series 1100 Rules), which references various technical standards and design, installation, construction reclamation, and operating/integrity management requirements. The Series 1100 Rules require Pioneer to submit a Flowline Report (Form 44) within 90 days of placing the Project into active status. Form 44 would include the location and specifications of the Project. The COGCC would have the authority to inspect the Project, and Pioneer would be required to notify the COGCC of the location of the Project within 30 days of construction.

Pioneer's parent company, Expedition, is rated Platinum by Independent Energy Standards, which place Expedition in the top 10 percent of similar companies for safety, environmental stewardship, and responsibility. Expedition's Occupational Safety and Health Administration's Form 300, "Summary of Work-Related Injuries and Illnesses," is included with this application as Exhibit E.

In the event of an emergency, the Project's SCADA system would automatically stop flow in the pipelines. Emergency response procedures would be described in an Emergency Response Plan for the Project, which can be provided to Adams County upon request.

### **2.3.6 Impact Avoidance and Minimization**

Pioneer would design the Project to minimize impacts to sensitive resources and existing infrastructure such as utilities and roadways through the use of HDD. County and public road crossings would be constructed using HDD. Major construction activities for construction the Project would include staging materials, pipeline trenching and road crossing, pipeline installation, pressure-testing, backfilling, and restoration.

## 2.4 Construction Schedule

Pioneer proposes to begin construction activities in Weld County as early as March 2020 and in Adams County in fall 2020. Construction is expected to take approximately 6 months, with the Project fully in-service by the first quarter of 2021. Table 6 summarizes the Project’s anticipated schedule in Adams County.

**Table 6:**  
**Project Schedule**

Project Schedule Milestone	Approximate Milestone Date
Adams County Neighborhood Meeting	December 2019
CUP Application Filed with Adams County	February 2020
Anticipated Adams County Planning Commission Hearing	June 2020
Anticipated Board of County Commissioners (BOCC) Hearing	July 2020
Anticipated Development Agreement Signed by BOCC	July 2020
Begin Construction Adams County	July 2020
Pipeline Testing	Late Fall 2020
Project In-Service	First Quarter 2021

## 2.5 Site Plan Showing Proposed Development

An overview of the Project is included as Figure 1. An Adams County overview map is provided as Figure 2. Alignment sheets according to CUP Application standards showing existing and proposed improvements for the gathering system are provided as Exhibit A.

## 2.6 Proof of Ownership (Warranty Deed or Title Policy)

Pioneer would secure applicable easements and executed ROW agreements with landowners authorizing the right to construct, operate, and maintain the Project on privately and publicly owned properties. Pioneer would execute agreements with property owners and would record these agreements with the Adams County Clerk and Records Office prior to the commencement of construction activities. At this time, easements are in place for a majority of the Project route within Adams County. Pioneer would provide easements to Adams County for the Project prior to construction.

The pipeline would cross one Adams County-owned parcel (parcel #157123401001) via HDD, and Pioneer has contacted Adams County to obtain a license agreement from Adams County Real Property division. The License Agreement would not inhibit Adams County’s continued use of this parcel as open space and South Platte River Trail.

Pioneer would obtain Adams County road ROW permits from Adams County as required prior to construction, and the pipeline would only cross county road ROWs at or near a perpendicular angle. A map depicting unincorporated Adams County road crossings is included as Figure 3. A list of parcels within unincorporated Adams County on which the Project would be located is included in Exhibit F.

## **2.7 Proof of Water and Sewer Services**

### **2.7.1 Water Services**

Pioneer's construction contractor would use water during construction for dust suppression, weed control, soil conditioning, and testing of the pipeline. Pioneer's construction contractor would obtain water under permit or delivered to the site as needed from local supplier and would not require a municipal water supply. Additional information is available in Section 3.4.4.

### **2.7.2 Sewer Services**

The operation of the Project would not require water or sanitary services. Temporary sanitary facilities would be provided for construction workers along the pipeline ROW during construction.

## **2.8 Proof of Utilities (e.g., Electric, Gas)**

A utility connection is not required to construct or operate the Project.

## **2.9 Legal Description**

Exhibit A shows parcels crossed by the Project and their legal descriptions.

## **2.10 Certificate of Taxes Paid**

Prior to commencement of construction activities, Pioneer would obtain applicable easements and executed ROW agreements for the pipeline. As easement holder, Pioneer is not responsible for the payment of property taxes on the parcels; they remain the responsibility of the landowner.

## **2.11 Certificate of Notice to Mineral Estate Owners/and Lessees**

Pursuant to Colorado Revised Statutes (CRS) Section 24-65.5-102 (2)(a), a pipeline does not constitute an "application for development" that would trigger the requirements of the Surface Development Notification Act, CRS Section 24-65.5-101; therefore, these requirements are not applicable to the Project.

## **2.12 Notice of Surface Development**

Pursuant to CRS Section 24-65.5-102 (2)(a), a pipeline does not constitute an "application for development" that would trigger the requirements of the Surface Development Notification Act, CRS Section 24-65.5-101; therefore, these requirements are not applicable to the Project.

## **2.13 Supplemental CUP Information**

### **2.13.1 Neighborhood Meeting Summary**

Pioneer held a neighborhood meeting in accordance with the ACDSR from 5 p.m. to 8 p.m. on Tuesday, December 10, 2019, at Todd Creek Golf Club (8455 Heritage Dr., Thornton, CO 80602). The purpose of the neighborhood meeting was to provide the community a description of the Project and answer related questions from the attendees. A copy of the notification, neighborhood meeting materials, and a summary of the neighborhood meeting is provided in Exhibit G.

**2.13.2 Solid Waste Transfer Station**

Not applicable. The Project does not involve a solid waste transfer station.

**2.13.3 Solid Waste Composting Facility**

Not applicable. The Project does not involve a solid waste composting facility.

**2.13.4 Scrap Tire Recycling Facility**

Not applicable. The Project does not involve a solid tire recycling facility.

**2.13.5 Inert Fill**

Not applicable. The Project does not involve inert fill.

**2.13.6 AASI Requirements**

This permit application also includes AASI requirements as requested by the Adams County Department of Community Planning and Development during the Conceptual Review process. Refer to Section 3 of this application package.



### **3. Section 6-07-02. AASI Additional Supplemental Requirements**

This CUP application also responds to requirements outlined in Section 06-07-02 under Chapter 6 Regulations Governing AASI and the AASI Checklist as requested by Adams County during the Conceptual Review process. The Project does not meet definitions of a Major New Domestic Water Treatment System, a Major New Domestic Sewage Treatment Systems, a major extension of an existing Domestic Water and Wastewater Treatment System, Major Facilities of a Public Utility, an Airport, Arterial Highways, Interchanges and Collector Highways, or Rapid or Mass Transit Facilities; therefore, this CUP application does not address Section 6-08 for additional submittal requirements related to AASI submittals for those project types.

#### **3.1 6-07-02-01. Application Fee**

A \$1,000.00 application fee and the \$360.00 Tri-County Health Department review fee are included as part of the CUP permit application. AASI permit fees are not applicable to the Project.

#### **3.2 6-07-02-02. Information Describing the Applicant**

The names, addresses, email address, fax number, organization form, and business of the Applicant, and if different, the owner of the Project.

##### **Applicant Information**

Pioneer Water Pipeline, LLC  
Attn: Mr. Spence McCallie  
600 17<sup>th</sup> Street, Suite 725  
Denver, CO 80202  
303-815-7064  
[smccallie@expedition-water.com](mailto:smccallie@expedition-water.com)

##### **Project Owner Information**

Pioneer Water Pipeline, LLC  
Attn: Mr. Spence McCallie  
600 17<sup>th</sup> Street, Suite 725  
Denver, CO 80202  
303-815-7064  
[smccallie@expedition-water.com](mailto:smccallie@expedition-water.com)

**3.2.1 The names, addresses and qualifications, including those areas of expertise and experience with projects directly related or similar to that proposed in the application package, of individuals who are or shall be responsible for constructing and operating the Project.**

**Land Project Manager**

Rhett Gore  
Purple Land Management  
700 17<sup>th</sup> Street #500  
Denver, CO 80202  
(303) 586-3167  
[rgore@purplelandmgmt.com](mailto:rgore@purplelandmgmt.com)

**Permitting and Environmental Consultant:**

Tetra Tech  
John Heule, Project Manager  
350 Indiana Street, Suite 500  
Golden, CO 80401  
Office: 303-980-3574  
[John.Heule@tetrattech.com](mailto:John.Heule@tetrattech.com)

**Project Engineer**

Mr. Jim McMangle  
Spartan Engineering  
12345 W Alameda Parkway  
Lakewood, CO 80228

**Project Surveyor**

Jeff Weaver  
Encompass Services  
10901 W 120th Ave Suite 400  
Broomfield, CO 80021

**Construction Manager**

The construction manager would be identified once the Project has been put out for bid in 2020.

**Operations Manager**

The operations manager would be identified once the Project has been put out for bid in 2020.

**3.2.2 Authorization of Application by the Project Owner (If Different than the Applicant)**

Not applicable.

### **3.2.3 Qualifications of Individuals Directly Related to the Proposed Project and Applicant's Financial and Technical Capability**

Pioneer's parent company, Expedition, is a private-equity backed leading midstream produced water infrastructure company in the Rockies, and has expanded its revolving credit facility to \$100 million. Cadence Bank served as lead arranger and administrative agent. The increased facility would fund Expedition's continued pipeline and facilities growth initiatives to service long-term, contracted customers in the Denver–Julesburg, Green River and Powder River Basins. The syndicated bank group also includes UMB, First Horizon and Woodforest.

Founded in 2013, Expedition has grown from a single disposal facility to a multi-basin company today with a capacity of more than 150,000 barrels a day. Expedition has constructed and manages 17 disposal wells and over 300 acres of evaporative pond capacity in Colorado and Wyoming. Expedition's commitment to build and maintain high-volume facilities enables it to grow with its customers while bringing tangible benefits to communities in which it operates.

Spence McCallie is the lead engineer for Pioneer Water Pipeline. Mr. McCallie has more than 10 years of experience constructing produced water pipelines and more than 20 years of overall pipeline construction experience. Pioneer has contracted Spartan Engineering to provide additional expertise in safety, engineering, and construction of the pipeline. Spartan Engineering is a global full-service engineering company with centuries of combined engineering, design, and construction management experience for pipelines.

## **3.3 6-07-02-03. Information Describing the Project**

### **3.3.1 Detailed Plans and Specifications of the Project**

Please see Section 2.3 for Detailed Plans and Specifications of the Project.

### **3.3.2 Descriptions of Alternatives**

Pioneer considered and eliminated several alternative routes prior to selecting the preferred route. The routing process began by identifying the pipeline beginning points (permitted oil and gas production facilities) and the terminus (EWS #6). Alternative routes were then selected to minimize potential impacts while meeting the pipeline's objective. Refer to Exhibit H for descriptions of the alternatives.

### **3.3.3 Schedules for Designing, Permitting, Constructing, and Operating the Project.**

Pioneer will design and construct the Project to avoid impacts to existing land uses and the public to the extent practicable. Section 2.4 provides an estimated milestone schedule for the Project. A final schedule for construction activities would be developed at a later date. The sections below provide additional detail on temporary workspaces and phasing for construction of the Project.

#### **3.3.3.1 Survey, Permitting, Landowner Negotiations, Work Zone Preparation**

The preliminary work phase consists of activities that cannot be performed at the same time as pipeline construction, such as civil survey, permitting, landowner negotiations, and work zone preparation.

### **3.3.3.2 Pipeline Construction**

Pioneer is seeking permanent easement that is approximately 10 feet wide and an additional 30 feet of temporary easement for pipeline construction. The pipeline construction would consist of trenching, assembling the pipeline, and placing the pipeline within the open trench, backfilling the trench, and restoring the land according to landowner agreements. Typical construction drawings depicting typical trench section views and HDD are included in Exhibit D. The work zone may move up to 5,000 feet per day. In addition, this phase would include pipeline HDD installation. Refer to Section 2.3.5 for information regarding temporary workspaces and staging areas.

### **3.3.3.3 Surface Restoration**

Upon completion of the construction, Pioneer's restoration contractor would remove construction materials and debris from the site. Temporary workspaces would be re-contoured to pre-construction conditions. Disturbed areas where vegetation was removed by construction activities to an extent that it caused potential soil erosion would be treated with seedbed preparation techniques, re-seeded with an approved seed mixture, and mulched as necessary during the planting season according to landowner agreements.

The Project would utilize a Stormwater Management Plan (SWMP) for implementation of best management practices (BMPs) to mitigate soil erosion, control noxious weeds, and revegetate disturbed areas. The Project intersects approximately 2.8 miles of area designated within the Adams County Stormwater Permit Area. Therefore, Pioneer will likely be required to obtain an Adams County Stormwater Quality (SWQ) Permit for Construction. Mature vegetation would be actively avoided, although some vegetation would be impossible to avoid and therefore would be replaced per the property owner's reasonable request with a like species. Vegetation in public ROW would be replaced to Adams County standards for revegetation within the public ROW. If pavement is damaged by open-cut crossings, it would be restored to meet or exceed pre-construction existing conditions and comply with local standards. Pioneer would repair or replace any Adams County infrastructure damaged by construction of the Project to pre-construction conditions.

### **3.3.3.4 Testing and Commissioning**

The commissioning phase consists of testing and cleaning the pipeline and associated facilities. Before the pipeline is put into service, it would undergo hydrostatic pressure testing, i.e., filled with water and tested to verify the structural integrity and workmanship of the pipeline. Additionally, the test would ensure that no leaks are present.

### **3.3.4 Purpose and Need**

Refer to Section 1.4—Purpose and Need, of this application.

### **3.3.5 Construction and Operation Conservation Techniques**

Construction of the Project would incorporate mitigation measures that would minimize impacts to water quality, water use, existing land uses, surrounding communities, cultural resources, and the natural environment. Pioneer would use a SWMP for implementation of BMPs to mitigate soil erosion, control noxious weeds, and revegetate disturbed areas.

### 3.4 6-07-02-04. Property Rights, Permits and Other Approvals

Pioneer would obtain all necessary federal, state, and local permits and approvals and obtain property rights for construction and operation of the Project. A description of property rights, permits, and approvals required is provided in the sections that follow.

#### 3.4.1 Property Rights

Documentation of property rights would be provided to Adams County Department of Planning and Development prior to construction. Refer to Section 2.5—Proof of Ownership of this application for more details.

#### 3.4.2 Federal, State, and Local Permits and Approvals

Table 7 lists the permits approvals anticipated to be required for the Project and the status of obtaining these permits. Construction of the Project would be performed in accordance with the applicable requirements as stipulated in the permits.

<b>Table 7: Potential Permits and Approvals</b>		
<b>Regulatory Authority</b>	<b>Permit/Approval</b>	<b>Status</b>
<b>Federal Approvals</b>		
U.S. Army Corps of Engineers (USACE)	Federal Clean Water Act Section 404	Pioneer would hire a qualified contractor to perform wetland delineations in spring 2020, prior to construction. Pioneer would implement minor project layout adjustments, including minor route adjustments and the use HDD technology, to avoid unnecessary wetland impacts. If wetland impacts are unavoidable, Pioneer would obtain necessary permits and approvals from the USACE-Denver Regulatory Office prior to construction. The Project would likely qualify for a Nationwide Permit 12 for impacts related to linear transportation projects.
<b>State of Colorado Approvals</b>		
Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division	Stormwater Discharges Associated with Construction Activity Authorization to Discharge under the Colorado Discharge Permit System (COR400000)	Pioneer would apply for coverage under COR400000 at least 10 days prior to construction in accordance with CDPHE requirements. Pioneer would also manage stormwater through implementation of a SWMP in accordance with Part I.C. of COR400000.
	General Permit for Construction Dewatering Discharges to Discharge under the Colorado Discharge Permit System (COG070000)	Pioneer would apply for coverage under COG070000 at least 30 days before the anticipated date of discharge as needed.
Colorado Division of Water Resources (CDWR), Groundwater Information and Well Permitting	Temporary Dewatering Permit (GWS-62 form)	Pioneer would obtain prior to construction as needed.

<b>Table 7: Potential Permits and Approvals</b>		
<b>Regulatory Authority</b>	<b>Permit/Approval</b>	<b>Status</b>
CDPHE, Water Quality Control Division	Water Quality Certification under Section 401 of the Clean Water Act	Pioneer would obtain in conjunction with Section 404 permits. Under the Colorado 401 Certification Regulation, all nationwide permits are certified by statute and do not require a certification.
Colorado Department of Transportation, Region 1	Driveway/ Access Permit	Pioneer to apply for permit in spring 2020.
	Utility/Special Use Permit for crossings of state and federal highways	Pioneer to apply for permit in spring 2020.
CDPHE, Air Pollution Control Division	General Construction Permit –Land Development Projects (GP03) for land development including but not limited to land preparation such as excavating or grading, for residential, commercial, or industrial development, or oil and gas exploration and production	Pioneer would obtain prior to construction as needed.
	Air Pollutant Emission Notice for construction activity that disturbs 25 acres of continuous land or more and/or lasts 6 months or more in duration	Pioneer would obtain prior to construction as needed.
<b>Local Approvals</b>		
Adams County	Conditional Use Permit	Submitted to Adams County in February 2020.
	ROW Permit and Engineering Review for work in Adams County public ROW	Pioneer would apply for the ROW permit prior to CUP public hearings in spring 2020, and Pioneer would only cross county road ROWs at or near a perpendicular angle. New access to Adams County road ROW is not required for this Project. Pioneer does not anticipate obtaining an access permit from Adams County.
	Adams County Stormwater Quality (SWQ) Permit	The Project intersects approximately 2.8 miles of area designated within the Adams County Stormwater Permit Area. Therefore, Pioneer will likely be required to obtain an Adams County Stormwater Quality (SWQ) Permit for Construction.
Weld County	Right-of-Way Use Permit Application	Pioneer to apply for permit in spring 2020.
	Floodplain Development Permit	Pioneer to apply for permit in spring 2020.
E-470	Application for Pipeline or Wire Line – Crossing And/or Longitudinal for construction in, on, along, over, across, through or under E-470 property	Pioneer has received preliminary approval to install pipelines within the E-470 Public Highway Authority ROW based on in-person meetings with E-470 in fall 2019. Pioneer would apply for formal approval in spring 2020.
UPRR Railroad	Union Pacific Crossing/Encroachment Permit issued by the Union Pacific Railroad for utilities that cross or follow along the ROW	Pioneer to apply for permit in spring 2020.
City of Thornton	Special Use Permit <sup>1</sup>	Pioneer held a meeting with the City of Thornton on November 21, 2019, to discuss permitting requirements for the Project, and Pioneer provided additional information about the Project on February 14, 2020. To date, Thornton has not indicated whether the Project would require a land use permit. Pioneer would apply for the permit in March 2020 if required.

<b>Table 7: Potential Permits and Approvals</b>		
<b>Regulatory Authority</b>	<b>Permit/Approval</b>	<b>Status</b>
	Right-of-way Permit for road crossings.	Pioneer to apply for permit in spring 2020.
City of Brighton	Conditional Use Permit	Pioneer submitted an application in December 2019 and received comments on the application in early February 2020. Pioneer expects permit approval in late spring or early summer 2020.
City of Fort Lupton	Use by Special Review Permit	Pioneer to apply for permit in spring 2020.
Ditch Owners	Application for project review and crossing approval.	Pioneer to apply for permit in spring 2020.

1 Pioneer began conversations with Thornton on November 21, 2019, to determine whether City of Thornton permits are required for construction. At this time, Thornton is not requiring a land use permit.

### **3.4.3 Copies of Federal and State Consultation Correspondence and Mitigation Requirements and Environmental Impact Reporting**

#### **3.4.3.1 Federal and State Consultation Correspondence**

Pioneer does not currently expect a federal or state approval is required for the Project as there is no federal nexus and there are no state consultation requirements at this time. The Project would be permitted through local jurisdictions. If the Project requires a federal permit (i.e., USACE) then the Project would coordinate and obtain the necessary permits and approvals prior to construction.

#### **3.4.3.2 Mitigation Required by Federal, State, and Local Authorities**

If mitigation measures are required as conditions of federal, state, or local permits issued for the Project, Pioneer would provide copies upon receipt.

### **3.4.4 Description of Water to Be Used by The Project**

Dust suppression, weed control, soil conditioning, and hydrostatic testing of the pipeline would require water use during construction. The construction contractor would obtain appropriate permits for water appropriation and discharge, as required (Table 7). Water would be obtained from surface or groundwater under permit or delivered to the site as needed from local supplier as available. Approximately 680,000 gallons of water would be required for hydrostatic testing. Hydrostatic test water would be tested and disposed of according to the CDPHE General Permit for Construction Dewatering Discharges (COG070000) and returned to the source or injected at EWS #6 upon completion of hydrostatic testing. An additional 1.3 million gallons of water would be needed for dust suppression, weed control, and soil conditioning during construction.

## **3.5 6-07-02-05. Financial Feasibility of the Project**

### **3.5.1 Estimated Construction Costs**

The total estimated cost of the proposed Project is approximately \$51 million. It is estimated approximately \$27 million would be associated with construction in Adams County.

### **3.5.2 Contract or Agreement for Revenues or Services**

The Project would be financed through private equity, with contractual agreements with local customers to provide minimum revenues. The details of contracts between Pioneer and its contractors to build the proposed Project have not been completed; contract details would be largely confidential.

### **3.5.3 Description of the persons or entity(ies) who shall pay for or use the Project and/or services produced by the Development and those who shall benefit from any and all revenues generated by it.**

The purpose of the Project is to provide transportation of produced water from Great Western Petroleum, LLC oil and gas production facilities in Adams County to the existing injection facility at EWS #6. In addition, the proposed Project would reduce future truck use for wastewater transportation and provide safe and reliable service to Pioneer's customers. Pioneer anticipates that construction of this pipeline would reduce the need for up to 150 truckloads per day from Adams County roads and eliminate 5 million truck miles from local community roads each year of the of the predicted 50-year lifespan of the Project. Property tax revenue to Adams County generated by the proposed Project are estimated to be about \$250,000 annually inclusive of all mill levy jurisdictions. Pioneer will pay about \$319,000 in sales tax associated with construction of the Project.

The Project expects to directly benefit Great Western Petroleum LLC and its customers, Adams County, and indirectly benefit the public.

### **3.5.4 Cost of All Mitigation Measures Proposed for the Project.**

The cost of mitigation, such as for HDD crossings of streams, roads, and drainages and avoidance sensitive resources, is included within the total estimated cost of the Project. The total cost for construction of the proposed Project in Adams County is approximately \$27 million. Pioneer would bear 100 percent of mitigation costs.

### **3.5.5 Detailed description of Project Financing**

Pioneer's parent company, Expedition Water Solutions (Expedition) is a private-equity-backed leading midstream produced water infrastructure company in the Rockies, and has a revolving credit facility of \$100 million. Cadence Bank (Cadence) served as lead arranger and administrative agent for the recent expansion of revolving credit. The increased facility would fund Expedition's continued pipeline and facilities growth initiatives. The syndicated bank group also includes UMB, First Horizon, and Woodforest.

## **3.6 6-07-02-06. Land Use**

### **3.6.1 Description of Existing Land Uses**

Adams County zoning maps (11-21-2019) indicate the Project passes through six zoning classifications. The Project is overlaid on the Adams County Zoning classifications on Figure 4. Table 8 lists the zoning districts crossed by the Project and length in each zone. The Project meets the requirements of a Major Energy Facility, which is a conditional use in the zoned areas traversed by the Project.



**Table 8:**  
**Adams County Zone Districts Crossed by the Project.**

Zone District	Zone Symbol	Length Crossed by the Project (miles)
Agricultural-1 District	A-1	2.2
Agricultural-3 District	A-3	7.8
Planned Unit of Development	P-U-D	0.3
Proposed Planned Unit of Development	P-U-D(P)	1.2
Public Lands, Parks Open Space, and Facilities	PL	0.5
Residential Estate	R-E	0.5

Fifteen National Land Cover Database land cover classifications are crossed by the Project within Adams County (Figure 5): open water, developed open space, developed low intensity, developed medium intensity, developed high intensity, barren land, deciduous forest, evergreen forest, mixed forest, shrub/scrub, grassland/herbaceous, pasture/hay, cultivated crops, woody wetlands, and emergent herbaceous wetlands (Exhibit B, Figure 2).

### **3.6.2 Compliance with Provisions of Local Land Use Plans**

The Imagine Adams County Adams County Comprehensive Plan (Adams County 2012a) outlines the County’s objectives for future development within unincorporated areas of the County and in municipal growth areas. It establishes goals, policies, and strategies that would influence day-to-day decision-making regarding land use applications, capital improvement planning, and regional coordination efforts with other jurisdictions and agencies. Key goals, policies, and strategies related to the Project are discussed below.

*Key Goal: Promote Coordinated and Connected Growth.*

The Project would support the County’s growing population and provide construction-related jobs. The Project would also serve to remove industrial traffic from County roads increasing safety within the County as it grows.

*Key Goal: Protect the Health, Safety, and Welfare of Adams County’s Inhabitants.*

The Project would replace less efficient truck traffic with more efficient and safer pipeline transportation of produced water to the treatment facility. This would in turn reduce emissions from vehicles increasing the health and safety of residents within the County and near oil and gas production sites.

*Key Goal: Foster Regional Collaboration and Partnerships.*

Because the Project route passes through multiple municipalities and serving the oil and gas industry throughout the region, it would serve to further integrate the area and mitigate the impacts of the oil and gas industry throughout the region.

*Key Goal: Reduce the Fiscal Impact of Growth*

With the construction of the Pioneer pipeline, fewer trucks would be making daily trips on roads that serve the area, reducing the wear and frequency of repairs and maintenance, *and* decreasing costs to the County, especially as the population and industry within the County grows and changes.

*Key Goal: Promote Economic Vitality.*

The Project may restrict future land uses directly within the pipeline permanent easement but agricultural uses would continue to be allowed. The Project would not discourage high-quality commercial growth and economic development from occurring in areas surrounding the Project. The Project supports commercial growth and economic development in the surrounding area by ensuring a reliable and high-quality produced water transportation service that is essential to promoting a clean and safe environment for existing and future businesses in Adams County. The Project would also generate construction and operations-related jobs.

*Key Goal: Preserve the County's Natural Resources.*

The Project would not require additional water supply or use during operation. Pioneer is acquiring necessary permits for water service required during construction of the Project. See Sections 3.4.2, 3.11.3, and 3.11.4. The Project would reduce vehicle traffic, benefiting user experience in outdoor areas in the County, including parks, trails, and natural areas.

*Countywide Policy: Transportation*

The Project anticipates that construction of this Project would eliminate 5 million truck miles from local community roads each year of the predicted 50-year lifespan of the Project, which would provide a more sustainable transportation solution, preserve the integrity of the road system, and provide the safest and most reliable means of transportation through Adams County.

*Countywide Policy: Economic Development*

Construction and operation of the Project would generate economic benefits for the local economy in Adams County. The Project is expected to have a total estimated cost of \$51 million; approximately \$27 million of the Project cost would be allocated for the Adams County portion of the Project. At its peak, construction of the Project is expected to involve approximately 100 on-site jobs that would be filled primarily by local workers. Additional non-local workers are expected to commute from the Colorado Front Range Region or temporarily relocate to Adams and Weld Counties for construction of the Project. Estimates that construction wages will add \$3.2 million to the Adams County economy and estimates the Project would result in hiring of four full-time employees for operations.

Adams County may also benefit from Project-related expenditures during Project operation. The Project would qualify as a targeted industry for employment within the County as specified by the Adams County Economic Development Corporation (Energy, Logistics, Wholesale Trade). The Project would allow for existing businesses in Adams County to expand and strengthen the labor workforce who live and work in the County.

Additional economic benefits would be derived from property tax. Based on assessed value, Pioneer estimates that property tax revenues generated by the Project would be approximately \$500,000 annually. Taxing authorities that would benefit from property tax would include school districts, metropolitan districts, fire districts, library district, water and sanitation districts and other Adams County municipalities. These benefits would be generated each year and extend for the operating life of the Project.

*Countywide Policy: County Fiscal Balance*

Fiscal balance is a key element of the County Comprehensive Plan. The Comprehensive Plan states that “commercial and industrial development anywhere in the County would generate a positive fiscal benefit.” Pioneer estimates property tax revenues generated by the Project are estimated to be approximately \$250,000 annually.

*Countywide Policy: Community Facilities and Services*

The Project would be built to federal, state, and local quality and design standards. Pioneer is committed to safety, and would follow federal, state, and local regulations, design, and performance standards to provide safe, reliable service to Pioneer’s customers.

Economic, environmental, and visual impacts due to construction and operation of the pipeline facilities were considered during the planning and development and siting of the pipeline facilities was designed to ensure minimization of impacts. The pipeline would be located underground and is not expected to interfere with existing or proposed agricultural use for more than one growing season.

*Countywide Policy: Natural Resources and Resource Extraction*

The Project supports commercial growth and economic development in the surrounding area by ensuring a reliable and produced water transportation service that is essential to existing companies in Adams County. The transport of produced water supports the extraction of natural resources contributes to the local economy, providing employment to County citizens and tax income to the government.

Pioneer has minimized its impacts to Adams County natural resources including wetlands, watersheds, floodplains, streams, and air quality. Section 3.11 summarizes potential Project impacts and mitigation measures taken by Pioneer to reduce impacts and avoid resources.

*Countywide Policy: Agricultural Lands*

Impacts to agricultural land would be minimal because the route primarily parallels existing ROWs. Furthermore, the pipeline would be located underground with the exception of approximately five appurtenances located within the permanent easements aboveground (reference Section 2.3.4) and is not expected to interfere with existing or proposed agricultural use.

*Countywide Policy: Sustainability Initiatives*

The Project anticipates that construction of this Project would eliminate 5 million truck miles from local community roads each year of the of the predicted 50-year lifespan of the Project, improving the operational efficiency of produced water transportation in and around Adams County by reducing energy

and fuel consumption and decreasing overall risk. Pipelines provide the safest and most reliable means of transportation or resources. Overall, the Project would reduce emissions, reduce potential conflicts between passenger vehicles and trucks, minimize the risk of spills, preserve the integrity of the road networks, avoid environmentally sensitive areas and abate impacts to property owner land by following section lines and existing ROWs.

*Countywide Policy: Hazard Mitigation*

Pioneer would prepare a site-specific Emergency Response Plan to establish emergency protocols for the produced water pipeline and associated facilities. Contractors and project personnel would be familiarized with the emergency procedures. In addition, construction contractors have standardized emergency protocol. Refer to Section 3.11.11.

### **3.6.3 Impacts and Net Effect of Project on Land Use Patterns**

The Project would have no impact on the land use patterns within Adams County. Overall, the Project route would allow for agricultural practices and other zoned uses to continue within the pipeline easement, reduce environmental pollutants and risks to environmentally sensitive areas, minimize truck traffic and impacts to County roads and provide service local customers to boost local employment and contribute to the tax base.

### **3.6.4 Description of Surrounding and/or Impacted Communities**

The Project is located primarily within unincorporated Adams County, with portions in Brighton and Thornton, CO and extends into unincorporated Weld County. Within unincorporated Adams County, the pipeline route passes on the edges of residential communities and developments, but remains adjacent to roadway ROWs, not going directly through residential communities. Otherwise, the project route passes primarily through agricultural uses.

### **3.6.5 Description of Cultural Resources**

Refer to Section 3.11.10—Areas of Paleontological, Historic or Archaeological Importance.

### **3.6.6 Existing and Unique Agricultural Land in Area**

The *Adams County Open Space, Parks and Trails Master Plan* (Adams County 2012b) identifies agricultural lands and local food production districts to preserve high-quality agricultural lands in the County. The Project would not impact these districts, proposed open space or park focus areas, nor would it impact associated land use goals. Refer to Sections 3.6.2 and 3.6.3 for additional information. The Project route and valve set locations would be along existing roads, property section lines, utility ROWs, and easements to minimize impacts to agricultural activities. Furthermore, the pipeline would be located to a depth of at least 48 inches and is not expected to interfere with existing or proposed agricultural use for more than one growing season.

### **3.7 6-02-02-07. Local Government Services**

#### **3.7.1 Existing Capacity of and Demand for Local Government Services**

The Project would not have an adverse effect on the capability of local government to continue to provide services, nor would it exceed the capacity of service delivery systems. The Project would not require new permanent roads to complete construction of the Project or operations activities. Oversized loads would be permitted and approved by the County prior to using County roads. Effects on roads and transportation are discussed in Section 3.7.3 of this application.

In Adams County, the Project would be located within two school districts, Brighton School District 27J and Adams 12 Five Star School District. Impacts to these districts are not anticipated because the construction does not directly pass by any schools and is not expected to substantially impact bus routes.

In Adams County, the Project route is located within two fire districts, North Metro Fire Protection District and Brighton Fire Rescue District. Pioneer would consult with each to address any concerns the fire protection districts have. Neither fire protection districts have expressed any concerns to date.

As discussed in Section 2.3.5 and Section 3.11.11, Pioneer's Emergency Response Plan would include procedures and directions for emergency dispatch in the case of a pipeline emergency. The Project would not increase fire protection demands.

The Project is not expected to cause additional demand on law enforcement services. Interference or damage to the pipeline facilities would be detected by continuous electronic monitoring by Pioneer employees. In the case of an emergency, Pioneer would follow the Emergency Response Plan described in Section 3.11.11. Local law enforcement would be contacted as applicable based on the type and degree of such an emergency.

The existing infrastructure has the capacity to accommodate the activities associated with the construction, operations, and required maintenance of the proposed facilities and respective pipelines.

#### **3.7.2 Impacts and Net Effect of the Project on Demand for Local Government Services**

No new electric service would be required for the Project. Aboveground appurtenances would operate on solar power from on-site solar panels. Natural gas would not be necessary to construct the Project. Water use would be obtained from surface or groundwater under permit or delivered to the site as needed. A municipal source is not required.

The required electricity associated with the pipeline would not have an adverse effect on the capability of local government to continue to provide services, nor would it exceed the capacity of service delivery systems. The Project would not increase the need for police or fire protection services during construction and would be operated by Pioneer using appropriate security and emergency response procedures. No disruption to local utility services are expected to occur during construction or operation of the Project. It is not anticipated that the construction and operation of the Project would create additional demands for local government services.

### **3.7.3 Potential Effect of the Project on the Existing Transportation Network**

As described in Section 2.12, the Project would not adversely impact the existing transportation network. Pioneer anticipates that construction of this Project would eliminate 150 truck trips per day and 5 million truck miles from local community roads each year of the predicted 50-year lifespan of the Project, which would reduce emissions, reduce potential conflicts between passenger vehicles and trucks, preserve the integrity of the road networks, reduce impacts to local infrastructure in conjunction with the goals of the Adams County Comprehensive Plan, and provide the safest and most reliable means of transportation of produced water through Adams County.

Pioneer would obtain an Adams County ROW crossing permit prior to construction, and the pipeline would only cross county road ROWs at or near a perpendicular angle. In any segment of the Project that is parallel to an Adams County ROW, the pipeline will be constructed a minimum of five (5) feet from the edge of the maximum future ROW width, as designated in the Adams County 2012 Transportation Plan.

Truck haul routes for material deliveries from off-site areas to the Project would utilize Colorado Boulevard, 160th Avenue, 168th Avenue, Quebec Street, U.S. 85, Riverdale Road, and 136th Avenue. None of these roads are expected to experience a significant impact from the delivery of materials during construction. Pioneer does not anticipate that the construction contractor would need to improve or close roads, intersections, or bridges to accommodate oversized truck deliveries to the Project.

Increases in traffic due construction trucks and other vehicles are expected to be negligible. Construction work hours are expected to be 7 AM to 7 PM Monday through Saturday. Construction may occur on Sundays and other hours outside the 7 AM to 7 PM timeframe on an as-required basis.

The total number and type of vehicles accessing the pipeline route during peak construction would include:

- Pickup trucks: 100 trips per day
- "Low boy" equipment transport trucks: 1-6 trips per week
- Pipe transport truck and trailer: 12 trips per week
- Bus/van: 1 trip per day

## **3.8 6-07-02-08. Financial Burden on County Residents**

### **3.8.1 Description of the Existing Tax Burden and Fee Structure for Government Services**

The Project is expected to generate economic benefits to Adams County during construction and after the Project has been placed in service because of an increase in assessed value and goods and services associated with the annual operation of these facilities. Pioneer estimates property tax revenue to Adams County generated by the Project would be about \$250,000 annually.

### 3.8.2 Impacts and Net Effect of the Project on Existing Tax Burden and Fee Structure for Government Service

The Project would not create an undue financial burden on Adams County. The total estimated cost of the Project is estimated to be approximately \$51 million. Approximately \$27 million of the Project cost would be allocated for the Adams County portion of the Project. Pioneer estimates they will pay approximately \$250,000 annually in property tax.

## 3.9 6-02-02-09. Local Economy

### 3.9.1 Description of Local Economy

Adams County had a total estimated population of 511,868 in 2018 (Table 9). The population in Adams County increased by an estimated 70,265 residents or approximately 16 percent from 2010 to 2018 and accounted for approximately nine percent of the total statewide population in 2018 (U.S. Census Bureau, 2019).

**Table 9:  
Population—2010**

Geographic Area	Total Population <sup>1</sup>		2010 to 2018	
	2010	2018	Net Change	Percent Change
Adams County	441,603	511,868	70,265	15.9%
State of Colorado	5,029,196	5,695,564	666,368	13.2%
United States	308,745,538	327,167,434	18,421,896	6.0%

<sup>1</sup> U.S. Census Bureau (2019)

According to the Colorado Department of Labor and Employment, the annual unemployment rate (not seasonally adjusted) was 2.4 percent in Adams County in October 2019, slightly higher than the statewide annual unemployment rate of 2.2 percent. Annual average unemployment rates during the recent economic downturn peaked in 2011, ranging from 9.2 percent statewide to 10.8 percent in Adams County (Colorado Information Marketplace 2019).

In 2017, the Adams County economy employed approximately 259,641 people. Employment has subsequently increased, with more people employed in 2017 than a decade earlier. Overall, Adams County represented 9.0 percent of the state's total employment in 2017 (Colorado Information Marketplace 2019).

In 2017, the most common industries in Adams County by number of employees are office and administrative support (40,255), management (25,958) and sales and related (24,532). These industries were the largest employers, collectively employing 34.9 percent of the Adams County workforce in 2017. The highest paying industries include computer and mathematical; architecture and engineering; computer; engineering and science; and law enforcement workers including supervisors and legal. (Data USA 2019).

In 2017, the average annual household income in Adams County was \$64,087, approximately 2.1 percent lower than the state average of \$65,458, and 12.2 percent lower than the Denver-Aurora-Lakewood Metro Area of \$71,884 (Data USA 2019).

### ***3.9.2 Impacts and Net Effects on the Local Economy and Opportunities for Economic Diversity***

Construction and operation of the Project would generate economic benefits for the local economy in Adams County. The construction and capital spending phase would also generate economic benefits elsewhere in the state of Colorado and for the state as a whole.

The Project is expected to have a total estimated cost of \$51 million, approximately \$27 million of the Project cost would be allocated for the Adams County portion of the Project. At its peak, construction of the Project is expected to involve approximately 100 jobs during construction that would be filled primarily by local workers. Additional non-local workers are expected to commute from the Colorado Front Range Region or temporarily relocate to Adams and Weld Counties for construction of the Project. The Project is expected to result in four new full-time employees during operations.

Project-related expenditures for construction labor and materials would also support economic activity elsewhere in the local and state economy through the multiplier effect, because these initial changes in demand “ripple” through the local economy and generate secondary impacts. Industries likely to experience the greatest economic benefits include the construction sector and the professional and technical services sectors. Spending on local accommodation, food, and local services by construction workers temporarily relocating to the area is also expected to support income elsewhere in the local area. Construction-related impacts would be one-time impacts that would last for the duration of construction.

Adams County may also benefit from Project-related expenditures during Project operation. These impacts would be much smaller than those expected to occur during construction. Additional economic benefits would be derived from property tax, approximately \$250,000 based on all mill levy jurisdictions. Authorities that would benefit from property tax would include school districts, metropolitan districts, fire districts, library district, water and sanitation districts, and other Adams County municipalities. These benefits would be generated each year and extend for the operating life of the Project.

### ***3.9.3 Description of Jobs Created***

Project construction is expected to directly employ approximately 100 construction-related workers during construction peak, with additional employment supported elsewhere in the local and state economy. The Project is expected to result in four new full-time employees during operations.

### ***3.9.4 Income Potential from Jobs Created by or as a Result of the Project***

The Project is expected to have a total estimated construction labor cost of \$51 million, approximately \$27 million associated with Adams County. As discussed in Section 3.9.2, construction of the Project would also support employment and income in other sectors of the local and state economy through the multiplier effect, because these initial changes in demand “ripple” through the local economy and generate secondary impacts. Spending on local accommodation, food, and local services by construction



workers temporarily relocating to the area is also expected to support income elsewhere in the local area. Construction-related impacts would be one-time impacts that would last for the duration of construction.

Project-related expenditures during operation would also support income in the local and state economy through the multiplier effect. These expenditures are expected to result in small but positive economic impacts that would occur annually over the operating life of the Project.

### **3.10 6-02-02-10. Recreational Opportunities**

#### ***3.10.1 Description of Present and Potential Recreation Uses***

Avoidance of recreational lands (parks) was a major consideration in the route selection process and the Project is not expected to be located within recreational areas. Because the produced water pipeline would be located underground with the exception of approximately five appurtenances (reference Section 2.3.4), located aboveground within the permanent easements, there is no anticipated impact to recreation resources. The pipeline will be installed using HDD at a near perpendicular angle across the Todd Creek Trail and South Platte River Trail. No hunting areas or recreational facilities are in the vicinity of the Project. The Project would not affect area fishing amenities.

#### ***3.10.2 Map of Locations of Recreational Uses***

The pipeline crosses the Todd Creek Trail and the South Platte River Trail. No other recreational facilities or trails are located in the vicinity of the pipeline route.

#### ***3.10.3 Impacts and Net Effect of the Project on Present and Potential Recreational Opportunities***

The Project would not degrade the quality or quantity of recreational opportunities and experiences within the County as the Project would be located underground with the exception of approximately five appurtenances located aboveground (reference Section 2.3.4) within the permanent easements. The pipeline will be installed using HDD to cross the Todd Creek Trail and the South Platte River Trail. No temporary or permanent impacts to these trails are expected.

### **3.11 6-02-02-11. Environmental Impact Analysis**

This section addresses Section 6-20-01 of the Adams County Development Manual, which is an appendix that provides examples of the types of concerns that the BOCC would take into consideration in determining whether permit application complies with the approval criteria contained in Section 6-17 of the Adams County Development Manual.

#### ***3.11.1 Air Quality***

##### ***3.11.1.1 Affected Airsheds***

The Project is located within the Denver Metro/North Front Range airshed, which encompasses Adams County. Since 2002, the region has been designated as in attainment with all National Ambient Air Quality Standards (NAAQS) except ozone, for which the region is designated as nonattainment. As of January 22, 2020, the entire project is located within the “serious nonattainment area” for the 2008 eight-hour

ozone standard (84 FR 70897). Ozone levels tend to peak during the summer months when ozone formation is greatest in the presence of heat and sunlight.

### 3.11.1.2 Map and Description of the Ambient Air Quality and State Air Quality Standards of Affected Airsheds

The air pollutants for which U.S. Environmental Protection Agency (EPA) has promulgated NAAQS, and the Colorado Air Quality Control Commission has promulgated Colorado Ambient Air Quality Standards (CAAQS), summarized in Table 10.

**Table 10:**  
**Ambient Air Quality Standards and PSD Increments**

Pollutant/Averaging Time	NAAQS (µg/m <sup>3</sup> )	CAAQS (µg/m <sup>3</sup> )	PSD Class I Increment (µg/m <sup>3</sup> ) <sup>1</sup>	PSD Class II Increment (µg/m <sup>3</sup> ) <sup>1</sup>
<b>CO (carbon monoxide)</b>				
1-hour <sup>2</sup>	40,000	40,000	— <sup>3</sup>	— <sup>3</sup>
8-hour <sup>2</sup>	10,000	10,000	— <sup>3</sup>	— <sup>3</sup>
<b>NO<sub>2</sub> (nitrogen dioxide)</b>				
1-hour <sup>8</sup>	188	188	— <sup>3</sup>	— <sup>3</sup>
Annual <sup>4</sup>	100	100	2.5	25
<b>O<sub>3</sub> (ozone)</b>				
8-hour <sup>6</sup>	137	137	— <sup>3</sup>	— <sup>3</sup>
<b>PM<sub>2.5</sub> (particulate matter less than 10 microns in diameter)</b>				
24-hour <sup>7</sup>	35	35	2	9
Annual <sup>4</sup>	12	12	1	4
<b>SO<sub>2</sub> (sulphur dioxide)</b>				
1-hour <sup>9</sup>	196	196	— <sup>3</sup>	— <sup>3</sup>
3-hour <sup>2</sup>	1,300	700	25	512
24-hour <sup>2</sup>	— <sup>5</sup>		5	91
Annual <sup>4</sup>	— <sup>5</sup>		2	20

PSD = Prevention of significant deterioration

µg/m<sup>3</sup> = Micrograms per cubic meter

- 1 The PSD increment values serve information purposes only and do not constitute a regulatory PSD increment consumption analysis.
- 2 No more than one exceedance per year.
- 3 No PSD increments have been established.
- 4 Annual arithmetic mean.
- 5 The NAAQS for this averaging time for this pollutant was revoked by the EPA (2016).
- 6 An area is in compliance with the standard if the fourth-highest daily maximum 8-hour ozone concentrations in a year, averaged over 3 years, is less than or equal to the level of the standard.
- 7 An area is in compliance with the standard if the highest 24-hour PM<sub>2.5</sub> concentrations in a year, averaged over 3 years, is less than or equal to the level of the standard.
- 8 An area is in compliance with the standard if the 98<sup>th</sup> percentile of daily maximum 1-hour NO<sub>2</sub> concentrations in a year, averaged over 3 years, is less than or equal to the level of the standard.
- 9 An area is in compliance with the standard if the 99<sup>th</sup> percentile of daily maximum 1-hour SO<sub>2</sub> concentrations in a year, averaged over years, is less than or equal to the level of the standard.

Air pollutants emitted from construction of the Project would be transported by the winds in the area. CDPHE has provided a representative wind rose (Illustration 2) for the Fort St. Vrain Power Plant located near Platteville. This wind rose shows the typical wind patterns in the Front Range, which includes the Project. As shown in the illustration, winds generally follow a northeast-southwest orientation that aligns with the South Platte River.

### **3.11.1.3 Impacts and Net Effect on Air Quality during Construction and Operation**

Impacts to air quality in the vicinity of the Project would be short term, transient, and limited to the construction period of the pipeline (approximately 6 months). Construction vehicles and equipment required for vegetation clearing, trenching, HDD installation and re-contouring may produce fugitive dust or exhaust emissions during the construction phase of the Project. Emissions of fugitive particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) may be generated by construction equipment movement, pipeline trench excavation, and earthmoving activities. Engine exhaust emissions of NO<sub>x</sub>, SO<sub>2</sub>, CO, volatile organic compounds and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>) would result from the operation of construction equipment.

Dust suppression would be conducted during construction. No air emissions are expected from the operation of the pipeline. As described in Section 3.4.2 (Table 7) Pioneer will submit a CDPHE APEN including a dust suppression plan prior to construction, and CDPHE would stipulate additional mitigation, monitoring and recordkeeping requirements for a minor source construction air permit if required.

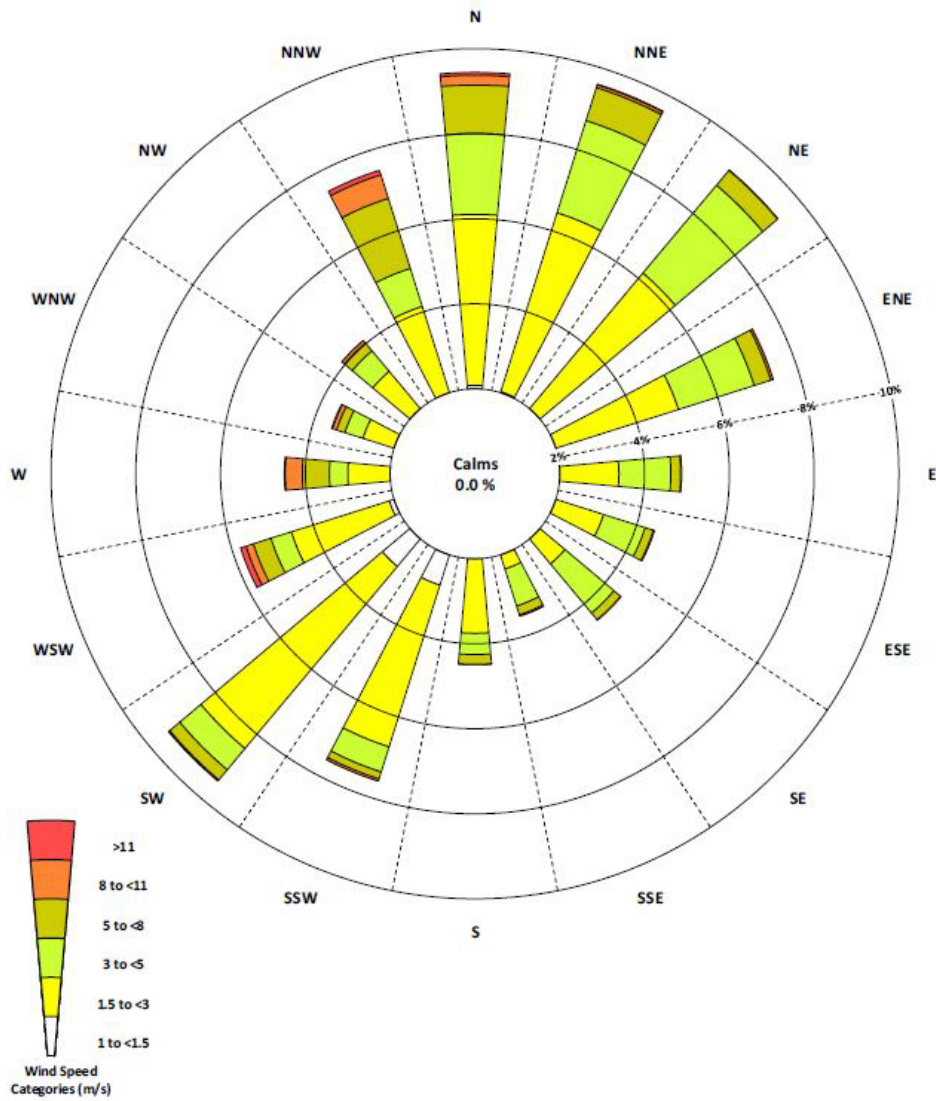


Illustration 2: Wind Frequencies by Speed and Direction, Platteville, CO

### **3.11.2 Visual Quality**

#### **3.11.2.1 Ground Cover, Vegetation, or Other Natural Features**

The Project would be predominantly located adjacent to existing roadways and within grasslands, pastures, and areas of agricultural land use. The pipeline would be installed by means of open trenching or by HDD and would ultimately be buried underground with the exception of approximately three valve sets located within the permanent easement (Section 2.3.4). Pioneer would provide the final location of valve sets prior to public hearings for the Project.

Ground cover, vegetation, and other natural features vary throughout Adams County along the Project alignment. The entire Project is within the Flat to Rolling Plains Ecoregion, which is a subset of the High Plains Ecoregion, and consists of relatively flat terrain with few natural landscape features. The majority of the native vegetation in this area has been removed and replaced with crops such as wheat, grain, corn, and barley. Natural features crossed by the Project are limited to natural drainageways that traverse the landscape.

#### **3.11.2.2 Description of Viewsheds, Scenic Vistas, Unique Landscapes or Land Formations**

The Project would not affect high visibility corridors. Unique landscapes or formations that would be crossed by the Project were not identified, which consists of primarily grasslands/pastures and agricultural land use and light commercial development. The Project would also not affect scenic vistas to the west towards the mountain ranges because the pipeline would be underground and there are no buildings associated with the valve sets.

#### **3.11.2.3 Map and Description of Buildings, Structure Design, and Materials To Be Used for the Project**

A map and description of the Project components, including structure design and materials to be used, are provided in Section 2.3.2.

#### **3.11.2.4 Impacts and Net Effect of the Project on Visual Quality**

Overall, the Project is not expected to affect visual quality. The pipeline would be installed by means of trenching or by HDD and ultimately would be buried underground and would be compatible with the surrounding area and harmonious with the character of the predominantly rural and agricultural land uses. The valve sets would be located within the permanent easements for the Project, which would be collocated with other linear ROWs including utility corridors and roadways. The valve sets would be visible from adjacent roadways and nearby residences. However, the valve sets would be similar to ancillary facilities associated with other oil and gas production facilities and would therefore not be out of character in the landscape setting.

Pioneer anticipates that pipeline construction would take approximately 6 months. Visual impacts would occur during construction when equipment, construction crews, and temporary construction staging areas are present; however, visual impacts would be short term as the pipeline would be installed underground and equipment would be removed once construction is complete.

### 3.11.3 Surface Water Quality

#### 3.11.3.1 Map and Description of All Surface Waters

The Project is anticipated to cross surface water features mapped by the National Hydrography Dataset (NHD). The NRCO Report (Exhibit B) for the Project describes pipeline crossings of desktop-mapped surface water features within the NRCO. Pioneer would contract a qualified consultant to complete a wetland and other waters of the United States (WOTUS) delineation in spring 2020 to verify and delineate aquatic resources. Potential streams mapped by the NHD crossed by the Project in Adams County are summarized in Table 11.

**Table 11:**  
**Surface Water Crossings by the Project in Unincorporated Adams County**

Crossing ID	Lateral Name	Stream Name (if available)	Latitude of Crossing <sup>1</sup>	Longitude of Crossing <sup>1</sup>
1	Pioneer Mainline	German Ditch	39.9858017	-104.9329987
2	Pioneer Mainline	German Ditch	39.9856987	-104.9329987
3	Pioneer Mainline	—	39.98550034	-104.9329987
4	Pioneer Mainline	—	39.98490143	-104.9329987
5	Pioneer Mainline	—	39.98590088	-104.9169998
6	Pioneer Mainline	Signal Ditch	39.98889923	-104.9029999
7	Pioneer Mainline	Signal Ditch	39.98590088	-104.9049988
8	N. Adams Trunk	Brighton Ditch	39.99409866	-104.8410034
9	N Adams Trunk	Brighton Ditch	39.9817009	-104.8460007
10	Tower Lateral	—	39.95660019	-104.9029999
11	Tower Lateral	—	39.95740128	-104.901001
12	S. Adams Trunk	Fulton Lateral Ditch	39.94319916	-104.8280029
13	Gus Lateral	—	39.95460129	-104.8850021
14	S. Adams Trunk	—	39.95510101	-104.8840027
15	S. Adams Trunk	Brantner Ditch	39.95199966	-104.8649979
16	S. Adams Trunk	—	39.94879913	-104.8600006
17	S. Adams Trunk	Third Creek	39.9435997	-104.8290024
18	S. Adams Trunk	Third Creek	39.94340134	-104.8280029
19	S. Adams Trunk	Third Creek	39.94329834	-104.8280029
20	S. Adams Trunk	Fulton Ditch	39.94319916	-104.8249969

Source: USGS (2018)

<sup>1</sup> Based on preliminary desktop analysis. Field verification required to confirm actual site conditions.

Pioneer plans to install the pipeline using HDD for crossings of a majority of these features. If construction using HDD is not practicable, Pioneer would work under a USACE Nationwide Permit 12 and restore the crossing to pre-construction conditions when construction has been completed. Pioneer would not site aboveground appurtenances within the NRCO. Therefore, the Project would not result in permanent impacts to wetlands or other WOTUS.

### 3.11.3.2 Impact and Net Effects of the Project on the Quantity and Quality of Surface Waters

The Project would not have an adverse net effect on the capacities or functioning of streams in the impact area, or on the permeability, volume, recharge capability, and depth of aquifers in the surrounding area. Pioneer would obtain all necessary state, county, and local permits and comply with associated permit conditions (Section 3.4.2).

BMPs for sediment and erosion control to protect surface water would be accomplished through a combination of construction techniques, vegetation and revegetation, administrative controls, and structural features. BMPs that can be expected are listed in Table 12. Specific BMP types and selection criteria expected for various stages of construction are listed below in Table 13.

**Table 12:**  
**Non-Structural and Structural BMPs**

Non-Structural BMPs		
Program Oversight	Construction Site Planning and Management	Good Housekeeping/ Materials Management
Construction Phase Plan Review Contractor Training and Certification Database Development and Maintenance	Timing of Projects Construction Sequencing Site Operator BMP Inspection and Maintenance Training Non-structural practices may include, but are not limited to a stabilized staging area, minimize initial pad site acreage, slope pad to the reserve put, wind erosion and dust control, temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, vegetative buffer strips, protection of trees, and preservation of mature vegetation. A water source may be used to abate dust and alleviate wind erosion.	General Construction Site Waste Management Emergency Response Plan
Structural BMPs		
Erosional Control	Sediment Control	Runoff Control
Berms Check Dams Culverts Culvert Protection Diversions Land Grading	Silt Fence Straw Bales Land Grading Vehicle Tracking Control Wattle	Berm Check Dam Culverts Culvert Protection Ditch and Berm

**Table 13:**  
**BMPs Types and Selection Criteria**

Active	Completed	Final Stabilization
Pipelines and Storage Areas		
Berm Check Dams Culvert Protection Ditch & Berm Erosion Control Blanket Land Grading Mulches, with or without a tackifier Revegetation Silt Fence Vehicle Tracking Control	Berm Check Dams Culvert Protection Ditch & Berm Erosion Control Blanket Land Grading Mulches, with or without a tackifier Revegetation Silt Fence	Berm Culverts Diversion Ditch/Ditch and Berm Revegetation Mulches, with or without a tackifier

**Table 13:**  
**BMPs Types and Selection Criteria**

Active	Completed	Final Stabilization
Straw Bales Wind Erosion Control Wattles	Straw Bales Wattles	
<b>Access Roads</b>		
Berm Check Dams Culverts Culvert Protection Ditch & Berm Erosion Control Blanket Land Grading Mulches, with or without a tackifier Revegetation Silt Fence Vehicle Tracking Control Straw Bale Wind Erosion Control Wattles	Berm Check Dams Culverts Culvert Protection Ditch & Berm Erosion Control Blanket Land Grading Silt Fence Straw Bale Roadside Ditch with Turnout	Berm Culverts Culvert Protection Ditch and Berm Gravel Surfacing Revegetation

### 3.11.3.3 Impacts and Net Effects of the Project Streambed Conditions

Streams and man-made waterways in the vicinity of the Project have been modified greatly as a result of historical and current agricultural practices. The Project would avoid perennial streams, rivers, or features through the use of HDD technology; however, other ephemeral and intermittent resources may be crossed by the Project alignment via open-cut trenching following USACE regulations and standards. Impacts to streams would be minor and temporary, the Project ROW would be returned to pre-construction conditions following construction. Downstream flow and aquatic life, if present, would not be impeded. Features would be returned to pre-construction contours, backfilled with the originally excavated material, and restored with salvaged vegetation in the minimum time necessary to conduct activities. BMPs would be used to avoid adverse impacts on minor ephemeral and intermittent streams, irrigation ditches, and any associated riparian features during the temporary disturbance of the features. As a result, the Project would not permanently affect the physical characteristics of the waterways crossed by the Project.

### 3.11.4 Groundwater Quality and Quantity

#### 3.11.4.1 Map and Description of All Groundwater

The Project is located above the Denver and Arapahoe aquifers within the Denver Basin (Figure 6; CDWR, 2018). The Denver Basin (Denver, Arapahoe, and Laramie-Fox Hills aquifers) is a geologic formation in which aquifers lie on top of each other in layers with confining deposits separating the aquifers (USGS 2009). The Project is entirely within the CDWR South Platte Division (CGS 1992). Groundwater in areas crossed by the Project and vicinity generally flows towards the South Platte River.



#### **3.11.4.1.1.1 Project Area Aquifers**

The pipeline alignment within Adams County is located above the Denver, Arapahoe, and Laramie-Fox Hills aquifers of the Denver Basin.

#### **3.11.4.1.1.2 The Denver Aquifer**

The Denver aquifer underlies an area of approximately 3,500 miles and varies in thickness from a thin eroded edge at its outcrop/subcrop up to 1,000 feet. The Denver aquifer consists of a series of interbedded clay shale, clay, siltstone, and sandstone lenses. The sandstone and peddle compositions are typically volcanic. Carbonaceous material and coal beds are also common (CDNR, 2014).

Due to the fine-grained composition of the aquifer, wells commonly have yields of 50 to 150 gallons per minute. The wells are typically developed for domestic uses, although a number of municipal wells have been drilled on the western side of the basin where yields are higher. The Denver aquifer is separated from the underlying Arapahoe aquifer by an extensive clay/shale unit approximately 50 feet thick. The clay/shale interval serves as a hydraulic barrier between the aquifers (CDNR 2014).

#### **3.11.4.1.1.3 The Arapahoe Aquifer**

The Arapahoe aquifer is composed of interbedded conglomerates, sandstones, siltstones, and clay shales. The aquifer underlies an area of almost 4,700 square miles and is generally about 400 feet thick. For administrative purposes, the northern portion of the hydrogeologic unit is subdivided into an upper and lower aquifer that is separated by shale sequence ranging from 50 to 100 feet thick (CDNR, 2014).

Wells in the Arapahoe aquifer have the highest yield of the four aquifers, up to 800 gallons per minute. Consequently, the aquifer is used extensively to supply municipal water systems. Water quality is generally good, as evidenced by its use by Deep Rock Water to obtain water for bottling (CDNR 2014).

#### **3.11.4.1.1.4 The Laramie-Fox Hills Aquifer**

The lowermost of the four Denver Basin aquifers is the Laramie-Fox Hills aquifer, which underlies approximately 6,700 square miles and marks the areal extent of the basin for economic groundwater development. The aquifer is made up of both the marine sandstones of the Fox Hills and the overlying fluvial sandstones in the lower Laramie Formation. The Laramie-Fox Hills aquifer is generally between 250 and 300 feet thick and includes about 150 to 200 feet of fine- and medium-grained sandstone (CDNR, 2014).

Well yields of 350 gallons per minutes are common. The aquifer is extensively utilized throughout the basin for commercial development and less so for domestic use because wells within the aquifer are deeper over most of the basin. Both the Laramie-Fox Hills and Arapahoe aquifers are generally under artesian pressure (CDNR, 2014).

#### **3.11.4.1.2 Colorado Division of Water Resources South Platte Division**

Groundwater well information for wells permitted by the CDWR (2018) in the vicinity of the Project was reviewed to summarize groundwater conditions. A summary of information for water wells within 0.25 mile

of the Project is provided in Exhibit I. A map of water wells is included within Exhibit I, Figure I-1. Groundwater flow in the deeper bedrock aquifers is expected to be influenced by regional flow conditions.

The Project would not impact groundwater, directly contribute to groundwater recharge, or impact aquifer water levels. The pipeline would be located approximately 48 inches deep; therefore, no aquifer groundwater is expected to be encountered or impacted. If groundwater is encountered during trenching or HDD activities, dewatering methods may be employed, and the water would be pumped and discharged to undisturbed soils close to the pipeline trench.

Groundwater quality also would be protected through the implementation of a SWMP and through the implementation of waste management BMPs during construction. Waste from materials brought onto the construction site would be placed in appropriate containment and then removed for disposal/recycling to a licensed facility. No waste materials would be buried, dumped, or discharged to waters of the state. In addition, groundwater would not be utilized during construction activities or when the pipeline is operational. No subsurface water impoundment structures are proposed such as water storage systems or subsurface dams.

The potential for a pipeline failure release is remote. There may be areas that would require mitigation in order to restore areas affected by spills and/or repair the pipeline; however, the overall impacts are expected to be localized and minor.

Pioneer would prepare a site-specific Emergency Response Plan to establish emergency protocols for the produced water pipeline and associated facilities in the event of a release. Contractors and project personnel would be familiarized with the emergency procedures. In addition, construction contractors have their own standardized emergency protocol they would follow.

### **3.11.5 Wetlands and Riparian Areas**

#### **3.11.5.1 Map and Description of all Floodplains, Wetlands, and Riparian Areas To Be Affected by the Project**

Using aerial imagery, USGS topographic maps and NHD, NWI, and Federal Emergency Management Agency floodplain information, potential aquatic resources intersected by the Project are shown in detail on sheet maps in Exhibit B. Table 14 summarizes wetland types crossed by the Project in unincorporated Adams County.

**Table 14:**  
**Wetland Types Crossed by the Project in Unincorporated Adams County**

<b>Wetland Type</b>	<b>Cowardin Type</b>	<b>Acreage within the Project Area<sup>2</sup></b>
Freshwater Emergent Wetland	PEM1A	0.03
Freshwater Emergent Wetland	PEM1C	0.55
Freshwater Pond	PUBF	0.17
Riverine	R2UBH	0.43
Riverine	R4SBC	1.33
Riverine	R5UBFx	0.04
Riverine	R5UBH	0.16
	<b>Total</b>	<b>2.71</b>

**Table 14:**  
**Wetland Types Crossed by the Project in Unincorporated Adams County**

Wetland Type	Cowardin Type	Acreage within the Project Area <sup>2</sup>
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Source: USFWS (2019)

Notes: PEM1A—Palustrine, Emergent, Persistent, Temporary flooded; PEM1C—Palustrine, Emergent, Persistent, Seasonally Flooded; PUBF—Palustrine, Unconsolidated Bottom, Semipermanently Flooded; R2UBH—Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded; R4SBC—Riverine, Intermittent, Streambed, Seasonally Flooded; R5UBFx—Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated; R5UBH— Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

<sup>2</sup> Based on preliminary desktop analysis. Field verification required to confirm actual site conditions.

**3.11.5.2 Description of the source of water interacting with the surface systems to create each wetland (i.e., side-slope runoff, over-bank flooding, groundwater seepage, etc.)**

Potential wetland areas and other aquatic features were identified during a preliminary desktop review. The majority of the features crossed by the Project are anticipated to be fed by surface water runoff, high groundwater table, and/or seepage from irrigation ditches and canals.

**3.11.5.3 Impacts and Net Effect of the Project on the Floodplains, Delineated Flood Hazard Zones, Wetlands, and Riparian Areas**

The proposed Project would intersect riparian areas associated with the South Platte River in two locations, a narrow riparian area along Big Dry Creek and a small riparian area following an unnamed stream north of German Ditch.

At the time of this application, the Project study area intersects 86 suspected emergent wetlands within Adams County; however, field verification would be required to confirm the location and extent of wetlands intersected by the Project. No forested wetlands or riparian areas would be crossed by the Project as delineated by the USFWS NWI or observed on aerial imagery (Table 14). In addition, pipeline installation is generally considered a temporary impact, as wetland features would be returned to pre-construction contours and revegetated upon completion of construction. Pioneer would contract a qualified consultant to complete a wetland and other WOTUS delineation in spring 2020 to verify and delineate aquatic resources. HDD technology would be utilized to avoid surface impacts to perennial features and any other sensitive resources identified. Pioneer would complete appropriate consultation and/or permitting with the USACE-Denver Regulatory Office and obtain all authorizations for impacts to potential WOTUS as needed; however, based on a preliminary review of resources present and construction plans and methodology, written authorization does not appear to be necessary.

The Project intersects Federal Emergency Management Agency 100-year floodplains associated with Big Dry Creek, Todd Creek, an unnamed tributary to Todd Creek, and the South Platte River. The Project would temporarily impact floodplains. These impacts would be restored to the original contours once construction is completed and therefore, the project would not result in impacts to 100-year floodplains. Reference Exhibit B, Figure 3 for a map of FEMA 100-Year floodplains crossed by the Project.

### **3.11.6 Terrestrial and Aquatic Animals and Habitat**

#### **3.11.6.1 Map and Description of Terrestrial and Aquatic Animals**

A desktop analysis was performed to identify wildlife habitat in the area of the Project (Exhibit B). The shortgrass prairie in Colorado was once inhabited by massive herds of free-ranging bison and pronghorn as well as huge prairie dog colonies, deer, and elk and top predators including gray wolves and grizzly bears. Currently, the most abundant animals on the prairie are domestic cattle, coyotes, and prairie dogs. Pronghorn still inhabit Colorado's prairies, although in reduced numbers. Species of conservation concern that still inhabit native prairie habitats in Colorado include burrowing owl, ferruginous hawk, mountain plover, McCown's longspur, chestnut-collared longspur, and long-billed curlew as well as northern pocket gopher, ornate box turtle, massasugua rattlesnake, and Texas horned lizard (NatureServe 2018). Deer, turkey, pheasant, and dove are the common game wildlife in the vicinity of the Project. It is not anticipated that construction and operation would have a more than a temporary and negligible impact on game and non-game wildlife, livestock, and other animals.

#### **3.11.6.2 Description of Stream Flows and Lake Levels Needed to Protect the Aquatic Environment**

The Project would not impact stream flows or lake levels. Perennial water features would be crossed by HDD with no disturbance to the bed or bank. Other features would be crossed by open-cut trenching, however, downstream flow and aquatic life, if present, would not be impeded. Features would be returned to pre-construction contours, backfilled with the originally excavated material, and restored with salvaged vegetation in the minimum time necessary. All surface water crossings necessary for the Project would adhere to state requirements for the use of surface waters as regulated by the CDWR. The aquatic environment would not be adversely impacted by the Project following restoration.

The CDPHE Water Quality Control Division's General Permit for Stormwater Discharges from Construction Activities allows for dewatering of groundwater and stormwater to undisturbed soils to allow for infiltration on the site. It is not anticipated that dewatering activities would be required during the Project. However, if dewatering becomes necessary, groundwater and/or stormwater may be pumped from excavations or trenches to the ground surface for containment, infiltration, or evaporation. If necessary, the location of pumping and discharge of the groundwater or stormwater would be marked on the site plan prior to the start of pumping activities. If it becomes necessary to contain and sample groundwater prior to discharge or pump groundwater off site or into a waterway or storm sewer, a groundwater discharge permit (Colorado Discharge Permit System) would be obtained from the state prior to engaging such activities. It is not expected that any such dewatering activities would impact stream flows or lake levels.

#### **3.11.6.3 Description of Threatened or Endangered Animal Species and Habitat**

Please reference Exhibit B for information regarding threatened and endangered animal species and habitat.

#### **3.11.6.4 Map and Description of Critical Wildlife Habitat and Livestock Range**

Please reference Exhibit B for a map and description of wildlife habitat. The Project is not expected to affect livestock as the pipeline would be located underground with the exception of three aboveground valve sets located within the permanent easement for the Project.

### **3.11.6.5 Impacts and Net Effect of Project on Terrestrial and Aquatic Animals, Habitat and Food Chain**

No critical wildlife habitat for federally listed species is present in the immediate vicinity of the Project and no such habitat is mapped by state or local agencies. The relative size of the Project and primarily temporary nature of disturbance is not anticipated to impact the food chain of area wildlife.

The Project is located in a predominantly rural agricultural area with little native wildlife habitat and ideal grassland habitat. Project construction (pipeline) would cause temporary disturbance of approximately 190 acres of agricultural land. Native shortgrass prairie is not anticipated at a measurable quantity within the Project boundaries. Under expected conditions, it is not anticipated that construction and operation within the Project would have a more than a temporary and negligible impact on migration routes, calving areas, summer and winter range, game and non-game wildlife, livestock, or other animals. It is possible that the Project may be used for opportunistic feeding for wildlife; however, the Project ROW does not offer suitable habitat distinguishable from the rest of the surrounding properties. The primary effect is likely to be temporary wildlife avoidance of the construction zone due to noise, vibration, and human presence during one growing season. However, impacts to vegetation and wildlife would be minimized using BMPs and mitigation measures, performance of appropriate pre-construction surveys, avoidance of sensitive habitat areas, and using HDD techniques to avoid disturbance to sensitive resources.

Quantitative impacts, albeit temporary and minimal, to aquatic resources cannot be estimated until field investigations are conducted to confirm and delineate features. Minimal and temporary impacts to the aquatic environment may occur during excavation, pipeline placement, and backfill. BMPs would minimize erosion and sedimentation. Intermittent and ephemeral water features would not be dewatered (in the event water is present) during pipeline construction and local water sources would not be utilized for construction. The pipeline would be installed via HDD under all perennial streams. All water features would be restored to pre-existing contours; therefore, no stream flows, lake levels, or spawning streambeds would be permanently impacted by the Project.

A raptor nest survey for the entire Project (not limited to the NRCO areas) conducted in January 2020 within 0.5 mile of the Project identified 32 raptor nests during the survey (Attachment 1). Twenty raptor nests were observed within the 0.5-mile buffer of the Project including one bald eagle nest (Nest 023), two red-tailed hawk nests (Nests 0018 and 009), and 17 nests with unknown species determination. The unknown nests were small and are unlikely to be used by eagles. Nest 032, a bald eagle nest located within the 0.5-mile buffer of the Project according to data provided by CPW, was not found by the biologist during the survey.

CPW recommends a seasonal non-encroachment buffer of 0.5 mile from October 15 to July 31 for active bald eagle nests and 0.3 mile from February 15 to July 15 for active red-tailed hawk nests. As the raptor nest survey was conducted early in the year (January 2020), only a few nests were active. Additional raptor nest surveys should be conducted if construction activities are expected to occur prior to August 31, 2020, when the raptor breeding season ends. The Project will adhere to the CPW recommendations to avoid potential harassment of raptors during construction.

### 3.11.7 Terrestrial and Aquatic Plant Life

#### 3.11.7.1 Map and Description of Terrestrial and Aquatic Plant

A desktop analysis was performed to identify terrestrial and aquatic plant habitat in the area of the Project and field reconnaissance is proposed for late summer/early fall 2018. The results of those studies were reported in Exhibit B and are summarized in this section.

The Project intersects five vegetation types (CPW 2013):

- *Agriculture* is controlled use for production of biological products.
- *Irrigated Ag* is irrigated crops and fields.
- *Grass/Forb Mix* is rangeland co-dominated by grasses and forbs.
- *Grass Dominated* is rangeland dominated by annual and perennial grasses.
- *Rangeland* is a mix of non-native and native grasses, grass-like plants, forbs, or shrubs suitable for grazing or browsing use.

The Project in Adams County is located entirely with the one Level III ecoregion, High Plains (25) as mapped by the EPA. Within the High Plains, the Project is located within the Flat to Rolling Plains (25d). Dryland farming is extensive, with areas of irrigated cropland scattered throughout the ecoregion. Winter wheat is the main crop, with a smaller acreage in forage crops. Land use is predominantly rangeland in contrast to the cropland or mosaic of cropland and rangeland of surrounding ecoregions. Blue grama-buffalograss is the natural shortgrass prairie type with blue grama (*Bouteloua gracili*), buffalograss (*Bouteloua dactyloides*), threadleaf sedge (*Carex filifolia*), fringed sage (*Carex crinita*), Junegrass (*Koeleria* spp.), and western wheatgrass (*Pascopyrum* spp.) the most common species expected (Chapman et al. 2006).

Desktop analysis suggests that variations of Palustrine, Emergent or Palustrine, Scrub/Shrub wetlands may be crossed by the Project. If wetland communities are present, the wetland vegetation anticipated include cattail (*Typha* spp.), rough cocklebur (*Xanthium strumarium*), plains switchgrass (*Panicum virgatum*), barnyard grass (*Echinochloa* spp.), bulrushes (*Scirpus* spp.), rushes (*Juncus* spp.), and sedges (*Carex* spp.), willows (*Salix* spp.), alder (*Alnus* spp.), peach-leaf willow (*Salix amygdaloides*), and cottonwoods (*Populus* spp.).

**Listed Plant Species:** Three federally listed plant species, Colorado butterfly plant, Ute ladies-tresses and western prairie fringed orchid, were considered for an effects analysis. As described in Exhibit B, it is unlikely that the identified federally listed species would occur in areas crossed by the Project.

**Noxious Weeds.** Noxious weeds, as identified based on the Colorado Noxious Weed Act (35-5.5 CRS) and the Adams County Noxious Weed Management Plan and Enforcement Policy, are expected to be encountered because the majority of the Project is located within recently disturbed areas, near roadways, and in fallow fields. Because field investigations are pending (anticipated late summer/early fall 2018), the specific composition and density of noxious weeds cannot be identified at this time. Following field assessment, a specific weed management plan would be prepared as necessary. The Project would comply with the Adams County Noxious Weed Management Plan and Enforcement Policy.

### 3.11.7.2 Impacts and Net Effect that the Project on Terrestrial and Aquatic Plant Life

Based on the Project location and lack of suitable plant and wildlife habitat, it is not anticipated that any formal field surveys for federally listed plant species would be necessary. The State of Colorado does not have a sensitive species list for plants, and no formal protections are in force. Pioneer has begun informal consultation with USFWS and CPW to identify any issues that need to be addressed with development of the Project. No issues with effects to terrestrial or aquatic plants have been identified to date.

Field reconnaissance is pending and proposed for late summer/early fall 2018. Findings from the survey would provide the necessary data to prepare an appropriate weed management and revegetation plan as needed. Field data would ensure the plan would address the actual site conditions and propose appropriate actions for compliance with county and state regulations. A preliminary reclamation plan for the project, which addresses BMPs for the minimization of weed species, has been prepared as part of the SWMP.

Overall, the Project pipeline would cause temporary disturbance of less than 59.5 acres of agricultural/rangeland within unincorporated Adams County. Native shortgrass prairie is not anticipated to be present at a measurable quantity with the Project boundaries. Quantitative impacts, albeit temporary and minimal, to aquatic resources cannot be estimated until field investigations are conducted to confirm and delineate features. Mitigation measures would be performed if required to replace vegetation disturbed during construction of the Project.

### 3.11.8 Soils, Geologic Conditions, and Natural Hazards

#### 3.11.8.1 Map and Description of Soil, Geologic Conditions, and Natural Hazards

##### 3.11.8.1.1 Soils

NRCS-mapped soil types crossed by the Project are summarized in Table 15. Generally, the soils crossed by the Project are non-hydric, gently to moderately sloping, well drained loams (NRCS 2020).

**Table 15:**  
**Summary of Soil Types**

Soil ID	Soil Series	Slopes	Flooded	Ponded	Drainage	Permeability	Hydric
AdB	Arvada loam	0–3%	None	None	Well drained	Rapid	No
AsB	Ascalon sandy loam	0–3%	None	None	Well drained	Very Rapid	No
AsC	Ascalon sandy loam	3–5%	None	None	Well drained	Very Rapid	No
AsD	Ascalon sandy loam	5–9%	None	None	Well drained	Very Rapid	No
BoD	Blakeland loamy sand	3–9%	None	None	Somewhat excessively drained	Very Rapid	No
DaA	Dacono loam	0–1%	None	None	Well drained	Very Rapid	No
DaB	Dacono loam	1–3%	None	None	Well drained	Very Rapid	No
Gr	Gravelly land-Shale outcrop complex	N/A	None	None	Excessively drained	Very Rapid	No
Lv	Loamy alluvial land, gravelly substratum	N/A	Occasional	None	Somewhat excessively drained	Very Rapid	Yes; 5%

**Table 15:**  
**Summary of Soil Types**

Soil ID	Soil Series	Slopes	Flooded	Ponded	Drainage	Permeability	Hydric
Lw	Loamy alluvial land, moderately wet	N/A	Occasional	None	Somewhat poorly drained	Very Rapid	Yes; 6%
MISLD	Gravel pits	N/A	None	None	N/A	Very Rapid	No
NIA	Nunn loam	0–1%	None	None	Well drained	Rapid	No
NuA	Nunn clay loam	0–1%	None	None	Well drained	Rapid	No
NuB	Nunn clay loam	1–3%	None	None	Well drained	Moderately Rapid	No
PIB	Platner loam	0–3%	None	None	Well drained	Rapid	No
PIC	Platner loam	3–5%	None	None	Well drained	Rapid	No
ReD	Renohill loam	3–9%	None	None	Well drained	Moderately Rapid	No
ShF	Samsil-Shingle complex	3–35%	None	None	Well drained	Moderately Slow	No
Tc	Terrace escarpments	N/A	None	None	Excessively drained	Very Rapid	No
UIC	Ulm loam	3–5%	None	None	Well drained	Rapid	Yes; 2%
UID	Ulm loam	5–9%	None	None	Well drained	Rapid	Yes; 2%
W	Water	N/A	None	None	N/A	N/A	Yes; 10%
Wt	Wet alluvial land	N/A	Frequent	None	Poorly drained	Very Rapid	Yes; 100%

Source: NRCS (2020)

### 3.11.8.1.2 Geologic Characteristics

According to the Adams County Colorado Geologic Features map (2005), surface geology in areas crossed by the Project consists predominantly of sedimentary rock such as mudstone, sandstone, claystone, and conglomerates of the Denver and Arapahoe Formations, modern alluviums, eolian deposits, and gravel and alluviums. A geotechnical study would be performed at select locations along the pipeline route as needed prior to the initiation of construction activities.

### 3.11.8.1.3 Natural Hazards

The Project passes through multiple 100-year floodplains within Adams County (Exhibit B, Figure 3). Sensitive aquatics features as discussed in Sections 3.11.3 and 3.11.5 would be identified through field reconnaissance and avoided. In the Denver Basin, most aquifer recharge occurs in the highland areas between stream channels in the topographically higher southern part of the basin (El Paso, Elbert, Douglas counties). Precipitation is greater in this area, and the permeable soils derived from the Dawson Arkose formation enable deep percolation (USGS 2009). Recharge to this area of the South Platte River basin primarily occurs as infiltration of precipitation, infiltration of ephemeral stream water, deep percolation of water applied to irrigated, agricultural fields and seepage beneath irrigation ditches (Arnold 2010). The Project is located within the northern portion of the Denver and Arapahoe aquifers and consist of shallow and temporary soil disturbance. Impacts to aquifer recharge are not anticipated.

Steep terrain is typically avoided or excluded during routing because constructing a pipeline and access roads on steep slopes could require complex engineering and erosion controls around the pipeline and



may result in greater potential environmental impacts. The pipeline is not expected to be installed in areas with slopes greater than 8 percent; however, if steep terrain is encountered, the pipeline may be installed using HDD and no additional measures would be needed for this sloped area. Pioneer would avoid other areas of steep slopes. No geotechnical hazards such as faults and fissures, unstable slopes, expansive or evaporative soils, or risk of subsidence or upheaval have been identified that might affect the ability to safely construct or operate the Project. The Project is located in a rural agricultural area that is not generally subject to wildfire hazard.

### **3.11.8.2 Risks to the Project from Natural Hazards**

Based on the location of the Project in the Colorado Front Range and general agricultural setting, the Project would not be subject to significant risk from natural hazards.

### **3.11.8.3 Impact and Net Effect of the Project on Soil and Geologic Conditions in the area**

Pipeline construction is not anticipated to impact long-term soil productivity. The pipeline would be primarily installed underground in a shallow (approximately 4 feet deep) trench and would not affect soil and geologic conditions in the area, impact any streambed meander limits, or affect aquifer recharge. The staging areas in Adams County are described in Section 3.3.3. These staging areas are limited in extent and will be sited to limit affect soil and geologic conditions, streambed meander limits or aquifer recharge areas.

### **3.11.9 Nuisances**

Short-term localized impacts are anticipated from a temporary increase in traffic, construction equipment exhaust (fumes), and clearing and preparing areas for construction. The short-term impacts are not expected to result in nuisance effects. If a nuisance arises during construction, the nuisance would be mitigated in coordination with Adams County. The following sections address potential nuisances that may arise, as a result of the Project.

#### **3.11.9.1 Noise**

Project construction is expected to take place between the hours of 7 AM and 7 PM, is not expected to exceed 80 decibels on the A-weighted scale (dBA) and would therefore be in conformance with Section 4-13-03.2 of the ACDSR.

Major activities involved in construction of the Project would include staging materials, produced water pipeline trenching and boring, produced water pipeline fusing and installation, pressure-testing, backfilling the pipeline trench, installation of valve sets, re-contouring and revegetation. See Section 3.3.3 for a description of these activities. Construction at night is not anticipated but may occur in coordination and with approval from Adams County.

The construction phase would produce noise because heavy equipment would be required to build the proposed produced water pipeline and valve sets. Sound levels would fluctuate, depending on the construction activity, equipment type and distance between noise source and receiver. Sound from construction equipment would vary dependent on the construction phase and the number and type of

equipment a location at any given time. The variation in power and usage imposes additional complexity in characterizing construction noise levels

The following mitigation measures would reduce the potential for temporary adverse noise impacts during construction:

- Advertise a Project hotline and email whereby residents can contact Pioneer directly with their noise concerns. Throughout construction and operation of the Project, Pioneer would document, investigate, and attempt to resolve legitimate Project-related noise complaints.
- Notify landowners who may be directly impacted along the ROW prior to noisy construction activities.
- Coordinate construction vehicle travel to reduce the number of passes by sensitive receptors.
- Restrict noisy construction activity, which causes off-site annoyance as evidenced by the filing of a legitimate noise complaint, would be restricted to daytime hours (i.e., 7 AM to 7 PM) unless construction during nighttime hours is requested by Pioneer.

The produced pipeline would be buried underground. No noise is expected to be generated by the produced water pipeline during operation. The valve sets would be unmanned facilities. No noise is expected to be generated at the valve sets during operation, except when crews are onsite to perform routine maintenance activities. Noise generated as a result of routine maintenance activities would be short term.

#### **3.11.9.2 Glare**

Glare is not anticipated to be generated by the Project because the produced water pipeline would be buried underground. The aboveground piping associated with aboveground appurtenances would not have a reflective surface.

#### **3.11.9.3 Dust**

Limited dust would be generated during all construction phases with the exception of pressure testing. Dust suppression measures that would be implemented during construction, BMPs, and site restoration and revegetation activities are discussed in Tables 12 and 13. Pioneer will submit a CDPHE APEN including a dust suppression plan prior to construction, and CDPHE would stipulate additional mitigation, monitoring and recordkeeping requirements for a minor source construction air permit if required.

#### **3.11.9.4 Fumes**

Fumes would be generated during construction from construction equipment exhaust. Fumes from vehicles would also be generated during operation of the Project and would include fumes from trucks used for routine maintenance activities along the pipeline or at valve set locations. Impacts during construction and operation as a result of fumes would be short term and localized to the location of construction equipment and delivery trucks. Additional air quality information is included in Section 3.11.1.

#### **3.11.9.5 Vibrations**

Minimal vibration would occur during construction due to the use of heavy machinery and operations such as drilling and trenching. The vibrations would be temporary in nature and limited to the immediate area

around the construction work. Any vibrations would last only during the construction timeframe and only be experienced within the 50-foot-wide construction zone adjacent to construction vehicles. No vibrations are expected during operation of the pipeline.

### **3.11.9.6 Odors**

An odor is the property of a substance to stimulate chemical sense receptors that sample the air in and around human or animal (Encyclopedia Britannica 2012). Existing odors in the vicinity of the pipeline route may include diesel exhaust from vehicles, vehicles traveling on adjacent roadways, and agricultural operations immediately surrounding the Project.

Odors resulting from construction of the Project may include vehicle and equipment exhaust. These odor emissions are expected to be short term and transient in nature, limited to the area of active construction, and adequately dispersed by diurnal winds.

During commissioning, startup, and long-term operations and maintenance of the Project, odors would be minimal and limited to the use of on-site maintenance equipment.

### **3.11.10 Areas of Paleontological, Historic or Archaeological Importance**

#### **3.11.10.1 Description of All Sites of Paleontological, Historic, or Archaeological Interest**

Tetra Tech completed a desktop analysis to identify cultural and historic resources listed on the National Register of Historic Places (NRHP), determined or recommended eligible for the NRHP, or that remain unevaluated for listing on the NRHP that may be impacted by construction of the Project. No potentially significant cultural resources are expected to be impacted by the Project. Pioneer would have an Unanticipated Discovery Plan in place for the Project, however. Please refer to Attachment 2 of the NRCO report for the full Cultural Resources Class I Letter Report and additional information regarding cultural resources.

#### **3.11.10.2 Impacts and Net Effect of the Project All Sites of Paleontological, Historic, or Archaeological Interest**

The results of a Class I cultural resources survey conducted in January 2020 did not identify any significant cultural, historic, or archaeological resources within the Project in Adams County that could not be avoided. Should any additional undiscovered paleontological, historic, or archaeological artifacts be uncovered during construction activities that are not previously identified, such activities would be temporarily stopped until a qualified person can evaluate the object of interest as outlined in the Unanticipated Discovery Plan.

### **3.11.11 Hazardous Materials Description**

#### **3.11.11.1 Hazardous, Toxic, and Explosive Substances To Be Used, Stored, Transported, Disturbed or Produced in Connection with the Project**

Upon completion, the pipeline would transport produced water to the existing EWS #6 water facility located in Weld County. The Project includes the placement of remote isolation valves spaced throughout the Project within Adams County for the purpose of providing emergency safety isolation along the pipeline.

Toxic or explosive substances would not be stored in construction areas or along the pipeline or associated valve sets during operations. There are no chemical or waste storage facilities associated with the Project.

Hazardous chemicals that may be used during construction and operation are those found in diesel fuel, gasoline, coolant (ethylene glycol) and lubricants in machinery. Hazardous materials would not be drained onto the ground or into streams or drainage areas. Enclosed containment would be provided for waste disposal. Pioneer does not expect that the Project will generate hazardous materials during any phase of the Project, however construction waste, including trash and litter, garbage, other solid waste, petroleum products and other potentially hazardous materials would be removed to a disposal facility authorized to accept such materials. The hazardous materials identified above may be stored in trucks in small quantities overnight within unincorporated Adams County.

Pioneer and its contractors would provide and maintain sanitary accommodations for the use of their employees during construction of the Project in a manner that would comply with the requirements and regulations of health departments and of other governmental bodies. These accommodations, including trash dumpsters and portable waste facilities (toilets), would be located in several locations along the construction route based on the construction plan. The final numbers, locations, and vendors would be provided by the construction contractor. Construction waste would be stockpiled in the construction staging areas and would be removed from the construction sites during the construction process.

### **3.11.11.2 Location of Storage Areas**

Temporary workspaces are discussed in Section 2.3. These areas would be used to temporarily store pipeline construction materials as well as necessary construction equipment. Spill containment measures would be specified in the site-specific SWMP. Temporary workspaces are discussed in Section 2.3.4 and would also be used to temporarily store pipe and other materials necessary for construction HDD activities.

### **3.11.11.3 Reportable Quantities, Emergency Response Plan**

Reference Section 2.3.5 for information regarding Project safety.

In addition, the Project would be designed and operated per the Pioneer internal operating standards and practices and written maintenance procedures including the development of a site-specific Emergency Response Plan.

Construction activities would be performed by methods that prevent discharge or accidental spillage of solid matter, contaminants, debris, and other pollutants and wastes into flowing streams or dry watercourses, lakes and underground water sources. During construction, the focus would be primarily on containment-type BMPs.

Temporary workspaces would be located and arranged in a manner to preserve trees and vegetation. Excavated material or other construction materials would not be stockpiled or deposited near or on-stream banks or other watercourse perimeters where they could be washed away by high water or storm runoff or could encroach upon stream banks.

Fueling vehicles would be equipped with spill kits and fire extinguishers and personnel would be properly trained in spill prevention control and countermeasures. Based on review of available information from federal and state databases, construction activities associated with the Project are not anticipated to encounter known areas of soil or groundwater contamination. In general, if trenching or HDD activity uncovers previously unknown areas of contamination, work would immediately be stopped until a pre-determined Pioneer contact is notified and consulted. Pioneer or its contractor would then perform all necessary testing and handling of such materials as required by applicable state and/or federal requirements.

#### 3.11.11.3.1 Emergency Response

Pioneer would prepare a site-specific Emergency Response Plan to establish emergency protocols for the produced water pipelines and associated facilities. The purpose of this plan is primarily to minimize the hazard to the public, Pioneer's employees and to property and secondarily to reestablish service should a service interruption occur. The plan would establish procedures and defines responsibilities prior to, during, and following an emergency and includes contact information and instructions for all such anticipated emergency situations. The plan would describe the specific responsibilities of Pioneer responders including dispatchers and emergency responders.

#### 3.11.11.3.2 Routine Maintenance

Routine maintenance of the Project facilities would be performed as outlined in Pioneer's internal operating standards and practices and written maintenance procedures, which meet or exceed regulatory requirements. Maintenance activities associated with the Project would include, but are not limited to:

- Implement a damage prevention program, including observation of any construction activities by others on or near the permanent easement.
- Participate in the State of Colorado's one-call program and responding to one-calls.
- Implement a public education program.
- Install and maintain pipeline markers.
- Inspect block valves.
- Inspect crossings by other pipelines, highways, railroads and utilities.
- Inspect and maintain safety, control, mechanical and electrical equipment.
- Maintain communication equipment.
- Calibration of all instruments.

### **3.11.12 Balance Between Benefits and Losses**

#### **3.11.12.1 Foreseeable Benefits of Natural, Agricultural, Recreational, Range, or Industrial Resources**

There would be no anticipated loss of resources within Adams County or loss of opportunities to develop such resources. Industrial resources and future opportunities to develop commercial and industrial resources would be supported by the Project because it would continue to support the oil and gas industry and help support future growth.

#### **3.11.12.2 Foreseeable Losses of Natural, Agricultural, Recreational, Range, or Industrial Resources**

The majority of the project ROW in Adams County is located within agricultural/rangeland. Pioneer's restoration contractor would restore the pipeline ROWs to pre-construction conditions. Native shortgrass prairie is not present at a measurable quantity within the pipeline ROW. Potential impacts to wetland

would be minimal based on desktop analysis. Impacts to wetlands are not anticipated to extend past one to two growing seasons (see Section 3.11.5). The Project would not adversely affect future opportunities to develop commercial and industrial resources. The pipeline ROW has been routed with landowner considerations to maximize the use of existing ROWs and property boundaries and to avoid potential conflict with land use and development.

### **3.11.13 Monitoring and Mitigation**

#### **3.11.13.1 Description of All Mitigation for the Project**

Mitigation and monitoring activities have been described as related to environmental and community resources and concerns throughout this document. Construction and operation mitigation activities would be financed as a part of the cost of the Project. BMPs listed in Tables 12 and 13 are intended to minimize disturbed area and to protect natural features. Mitigation would be completed during and after construction until the ROW has been restored.

#### **3.11.13.2 Methodology Used to Measure Impacts**

Field investigations would be conducted in spring 2020 to define potential aquatic and terrestrial resources, wildlife, and cultural resources baseline and impacts more accurately. As needed, additional mitigation and/or studies would be proposed following the pedestrian surveys and analysis specific to the resources identified and potential impacts.

Fugitive dust emissions during construction would be controlled with the implementation of BMPs including application of water during high wind conditions to eliminate fugitive dusts. The SWMP would specify BMPs to be followed during construction activities that would minimize erosion and impacts to water quality from storm events. The implementation of dust controls and stormwater BMPs include monitoring requirements.

#### **3.11.13.3 Description of Location and Intervals of Proposed Monitoring**

Construction monitoring may be required for stormwater, erosion control, air quality, wildlife, cultural and historic resources, and other resources. During construction of the Project, BMPs would be monitored either by Pioneer or by Pioneer's contractor to ensure their effective implementation. For example, the effectiveness of dust suppression and stormwater management controls would be evaluated. An environmental inspector would also monitor sediment erosion control facilities during construction to ensure compliance with the SWMP.

Post-construction monitoring would be completed for stormwater/erosion, ROW restoration, and weed control until all permit requirements have been met and all landowners' requirements have been met. The Project intersects approximately 2.8 miles of area designated within the Adams County Stormwater Permit Area. Therefore, Pioneer will likely be required to obtain an Adams County Stormwater Quality (SWQ) Permit for Construction.

## **3.12 60-07-02-12. Referrals to Outside Agencies, Response to Referral Comments and Neighborhood Scoping Meeting**

To date, no referrals or responses from outside agencies has been received to date. A description of the Neighborhood Meeting is included in Section 2.13.1.

## 4. Section 2-02-08-06. CUP Approval Criteria

The Planning Commission, in making their recommendation, and the Board of County Commissioners, in approving a conditional use permit, shall find:

1. *The conditional use is permitted in the applicable zone district.*

**Response in this Application.** In consultation with the Adams County Department of Community Planning and Development, Pioneer has been advised that the produced water pipeline is subject to the County CUP review and approval in zone districts crossed by the Project. Reference Section 3.6 for additional information regarding the existing land use plans and potential Project impacts.

**Reference Sections.** Section 2.3—Written Explanation of the Project, Section 3.6—Land Use.

2. *The conditional use is consistent with the purposes of these standards and regulations.*

**Response in this Application.** The Project would remain consistent with the purposes of the ACDSR's goals to "control and assist in the orderly, efficient, and integrated development of the County, in order to preserve the health, safety, and welfare of the public, in accordance with established County policies and plans" (ACDSR 1-01-03). All required permits would be obtained from the appropriate federal, state, or local agency prior to construction. Table 7 in Section 3.4.2 describes the permits and approvals required by the Project and their status.

**Reference Sections.** Section 3.4—Property Rights, Permits and Other Approvals

3. *The conditional use will comply with the requirements of these standards and regulations including, but not limited to, all applicable performance standards.*

**Response in this Application.** The Project would remain consistent with ACDSR's performance standards outlined in Chapter 4—Design Requirements and Performance Standards. All other federal, state, and local standards would be upheld including the COGCC Series 1100 Rules, Colorado Department of Transportation Construction Standards, Clean Water Act Sections 404 and 401, etc.

**Reference Sections.** Section 2.3—Written Explanation of the Project and Section 3.4—Property Rights, Permits and Other Approvals.

4. *The conditional use is compatible with the surrounding area, harmonious with the character of the neighborhood, not detrimental to the immediate area, not detrimental to the future development of the area, and not detrimental to the health, safety, or welfare of the inhabitants of the area and the County. In making this determination, the Planning Commission and the Board of County Commissioners shall find, at a minimum, that the conditional use will not result in excessive traffic generation, noise, vibration, dust, glare, heat, smoke, fumes, gas, odors, or inappropriate hours of operation.*

**Response in this Application.** The Project is compatible with the surrounding area and its operation would not result in permanent additional nuisances to the local population. Overall, the produced

water pipeline is not expected to affect visual quality. The produced water pipeline would be installed by means of trenching or by HDD, and it ultimately would be buried underground and so would be compatible with the surrounding area and harmonious with the character of surrounding rural and agricultural land uses. Aboveground appurtenances would be similar to other ancillary facilities associated with oil and gas in the area and therefore would not be out of character in the landscape.

Short-term localized noise impacts are anticipated from a temporary increase in traffic, construction equipment exhaust (fumes), and clearing and preparing areas for construction. The short-term impacts are not expected to result in nuisance effects. If a nuisance arises during construction, the nuisance would be mitigated in coordination with Adams County. Section 3.11.9 address potential nuisances that may arise as a result of the Project.

**Reference Sections.** Section 3.11.2—Visual Quality and Section 3.11.9—Nuisances

5. *The conditional use permit has addressed all off-site impacts.*

**Response in this Application.** Pioneer is committed to safety and would follow all federal, state, and local rules and regulations to provide safe, reliable service for Pioneer’s customers. Off-site impacts due to construction or operation of the pipeline were considered during the planning, siting, and routing process of the pipelines (Sections 3.3.2). The pipeline routes would be located underground and their operation would not produce any nuisances or inconveniences to nearby landowners or the general public.

Construction of the Project would incorporate mitigation measures that would minimize impacts to water quality, water use, existing land uses, local government resources, cultural resources, and the natural environment. Pioneer would use a SWMP for implementation of BMPs to mitigate soil erosion, control noxious weeds, and revegetate disturbed areas. Groundwater quality also would be protected through the implementation of a SWMP and through the implementation of waste management BMPs during construction.

Given the location of the route along existing roadways and agricultural areas, noise during construction has been partially mitigated by avoiding dense population areas, and following unpopulated and rural populated areas. The resulting noise would not be uncharacteristic of typical noise from day-to-day activities in the area. Dust suppression would be conducted during construction and would not be uncharacteristic of the dust created by existing agricultural activities. No other off-site impacts to air or water quality are expected as a result of construction or operation of the facilities or pipelines. During construction, an increase in traffic is expected to be negligible.

**Reference Sections.** Exhibit H—Routing Analysis, Section 3.3.1—Detailed Plans and Specifications of the Project, Section 3.11.1—Air Quality, Section 3.11.2—Visual Quality, Section 3.11.4—Groundwater Quality and Quantity, and Section 3.11.9—Nuisances



6. *The site is suitable for the conditional use including adequate usable space, adequate access, and absence of environmental constraints.*

**Response in this Application.** Pioneer conducted a thorough review of the pipeline route. Pioneer is seeking a permanent easement for its pipelines that is approximately 10 feet wide, along with an additional 30 feet of temporary easement, for a total construction corridor of 40 feet in width. Appurtenant aboveground appurtenances such as isolation valves, pumps, and cleaning tool launcher and receivers would be located at the existing oil and gas production facilities. Within unincorporated Adams County, approximately five aboveground appurtenances (reference Section 2.3.4) would be located along the pipelines within the 10-foot-wide pipeline easements.

Pioneer does not anticipate using additional temporary workspaces in unincorporated Adams County besides the temporary workspaces located along the pipeline route, which would be used to excavate trench, fuse pipeline segments, deliver the HDD equipment and pipe segments, excavate HDD entry and receiving pits, temporarily stockpile excavated soil from the pits, and serve as laydown for pipe segments. Following construction, the contractor would return temporary workspaces to pre-construction conditions.

The pipeline would be constructed on private land with the exception of CDOT ROW crossings and one Adams County-owned parcel (parcel #157123401001). The pipeline would be installed using HDD and would not impact the existing South Platte River Trail on this parcel. The pipeline would be located underground for its entire length and Pioneer would minimize impacts to sensitive water resources and public roads using HDD techniques where possible. The pipeline easements could continue to be farmed after the pipeline is installed.

Section 3.7.3 describes haul routes that would be used during construction of the Project. None of these roads are expected to experience a significant impact from the delivery of materials during construction. It is not expected that Pioneer's construction contractor would need to improve or close any roads, intersections, or bridges to accommodate oversized truck deliveries to the Project.

**Reference Sections.** Section 2.3—Written Explanation of the Project, Section 3.7.3—Potential Effect of the Project on the Existing Transportation Network.

7. *The site plan for the proposed conditional use will provide the most convenient and functional use of the lot including the parking scheme, traffic circulation, open space, fencing, screening, landscaping, signage, and lighting.*

**Response in this Application.** The pipeline would not interfere with the agriculture use in the area and is generally routed near and parallel to section lines, property lines, and existing utility corridors to minimize impacts on future development. The aboveground appurtenances are not visually sensitive given the existing oil and gas infrastructure in the area and they would appear as a minor feature in the landscape. It is anticipated that the Project would not adversely impact area visual resources.

**Reference Sections.** Section 2.3—Written Explanation of the Project, Section 3.11.2—Visual Quality and Section 3.11.9—Nuisances.

8. *Sewer, water, storm water drainage, fire protection, police protection, and roads are to be available and adequate to serve the needs of the conditional use as designed and proposed.*

**Response in this Application.** Pioneer accounted for all sewer, water, stormwater drainage, fire protection, police protection, and road availability to serve the needs of the Project. The pipelines would be located underground and would not require utility services (i.e., sewer, water, stormwater drainage, etc.), or the construction of new roads.

As discussed in Section 3.11.11, Pioneer would follow an Emergency Response Plan, which would include procedures and directions for emergency dispatch in the case of a pipeline emergency. The Project would not increase fire protection demands. Appurtenant aboveground facilities such as isolation valves, pumps, and cleaning tool launcher and receivers would be located at the existing oil and gas production facilities. Aboveground appurtenances within unincorporated Adams County would be located on private land and outside of storm water drainage facilities and floodplains. The Project does not anticipate an increase in police protection.

It is not expected that Pioneer's construction contractor would need to improve or close any roads, intersections, or bridges to accommodate oversized truck deliveries to the Project. See Section 3.7.3 for additional information about the Project and its effect on local transportation networks.

**Reference Sections.** Section 2.3—Written Explanation of the Project, Section 2.7—Proof of Water and Sewer Services, and Section 3.7—Local Government Services.

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———. 2014b. Species Profile Western Prairie Fringed Orchid (*Platanthera praeclara*). <https://www.fws.gov/midwest/endangered/plants/prairief.html>. Accessed December 2019.

———. 2014c. The Preble's Meadow Jumping Mouse 5-year Review. 15 pp.

———. 2017. Species Biological Report for Colorado butterfly plant (*Oenothera coloradensis*; formerly *Gaura neomexicana* subsp. *coloradensis*). Available online at: [https://www.fws.gov/wyominges/PDFs/BO\\_Reports/20170607\\_BiologicalReport\\_ColoradobutterflyplantFinal.pdf](https://www.fws.gov/wyominges/PDFs/BO_Reports/20170607_BiologicalReport_ColoradobutterflyplantFinal.pdf). Accessed December 2019.

———. 2018. IPaC—Information Planning and Conservation System. Available online at: <http://ecos.fws.gov/ipac/>. Accessed December 2019.

USGS (U.S. Geological Survey). Groundwater Atlas of the United States. February 2009. Accessed December 2019.

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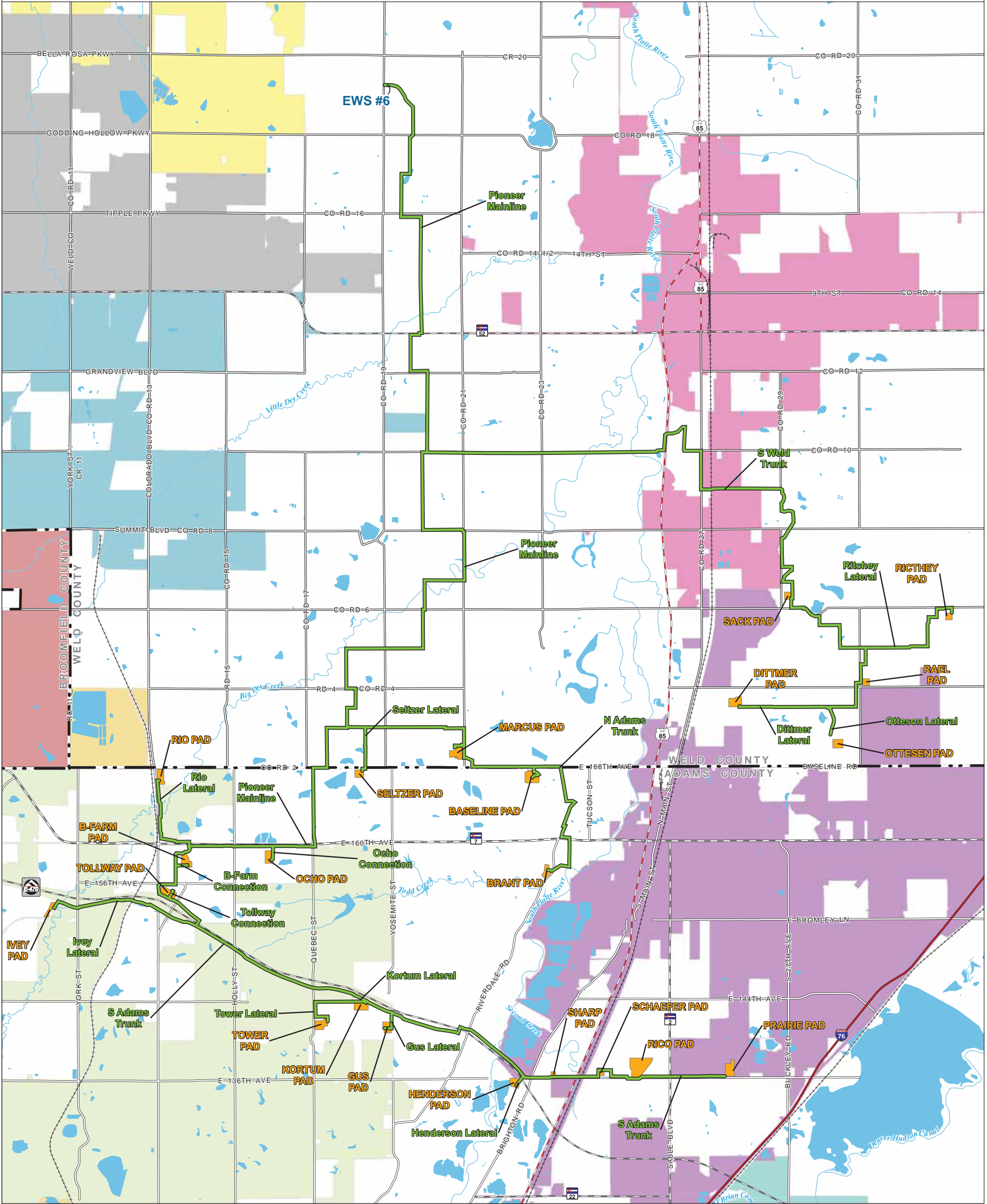
# Figures

- 1: Project Overview Map
- 2: Adams County Overview Map
- 3: Adams County Road Crossings Map
- 4: Adams County Zoning Map
- 5: Adams County Land Cover Map
- 6: Adams County Groundwater Aquifers Map

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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**Legend**

- EWS #6
- Pioneer Produced Water Pipeline
- Oil and Gas Production Facility

**Transportation**

- Interstate
- U.S. Highway
- Major Local Road
- Railroad

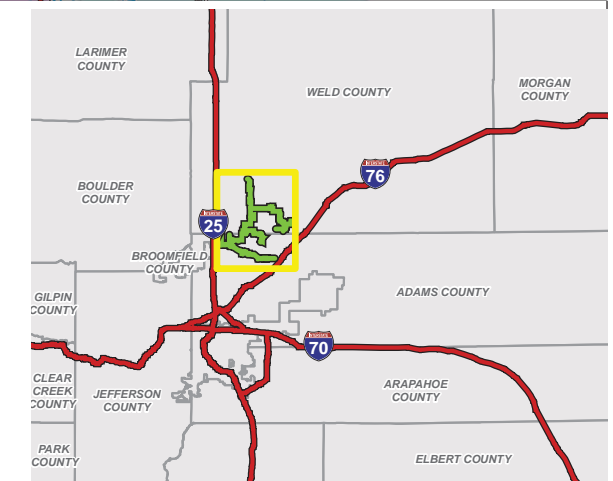
**Jurisdiction**

- Brighton
- Broomfield
- Commerce City
- Dacono
- Firestone
- Fort Lupton
- Frederick
- Northglenn
- Thornton
- County Boundary

0 1 2 Miles

Scale is 1:37,500 when printed at 22x34

NOT FOR CONSTRUCTION



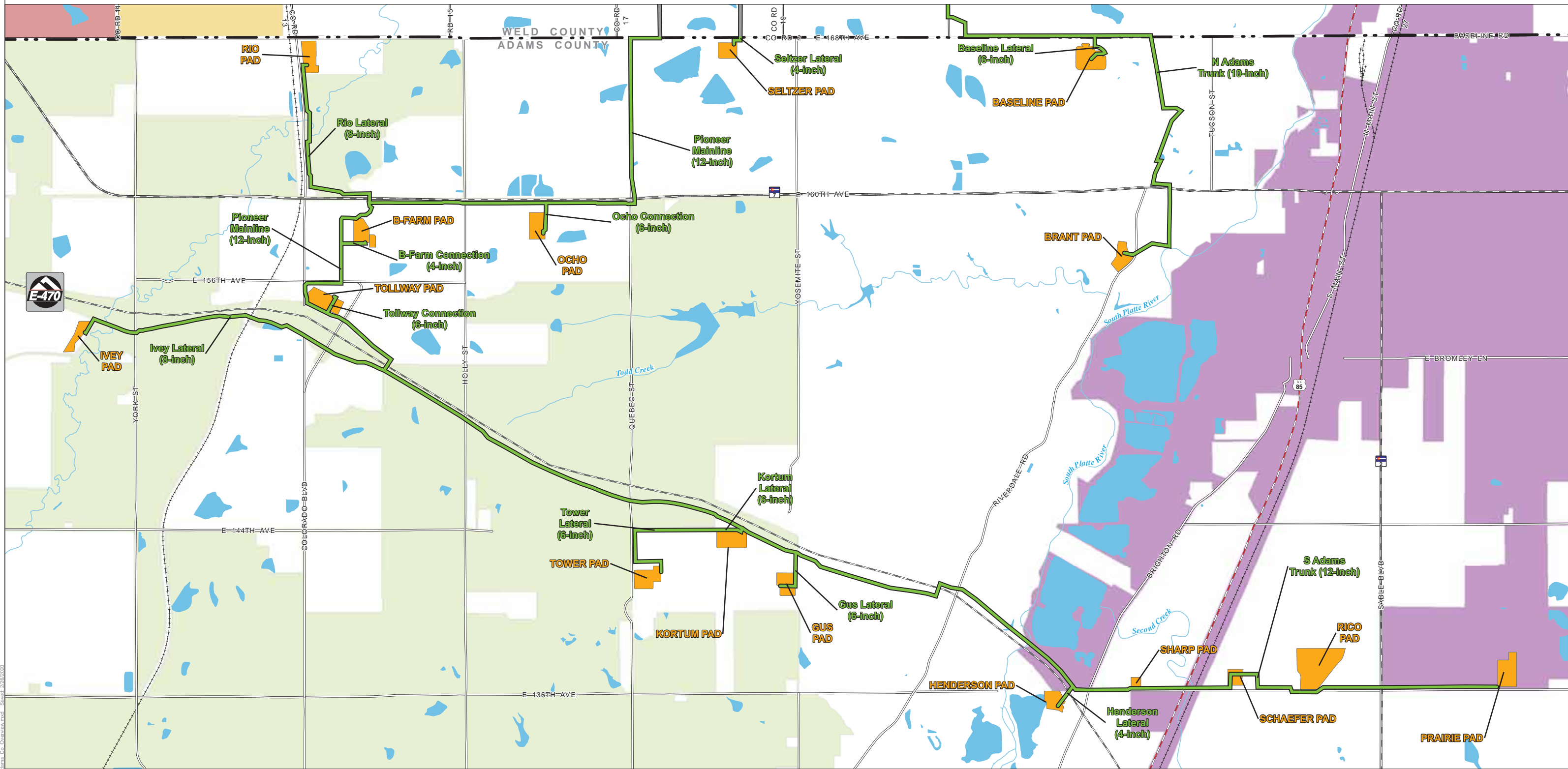
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



Path: P:\7087\_Pioneer\_Water\GIS\Layout\Adams\_County\_CUP\Fig1\_Project\_Overview.mxd Saved: 2/26/2020

# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 2: Adams County Overview Map



**Project Features**

- Pioneer Produced Water Pipeline (Adams County)
- Pioneer Produced Water Pipeline (Weld County)
- Oil and Gas Production Facility

**Transportation**

- Interstate
- U.S. Highway
- Major Local Road
- + + + + Railroad

**Jurisdiction**

- Brighton
- Broomfield
- Northglenn
- Thornton
- County Boundary

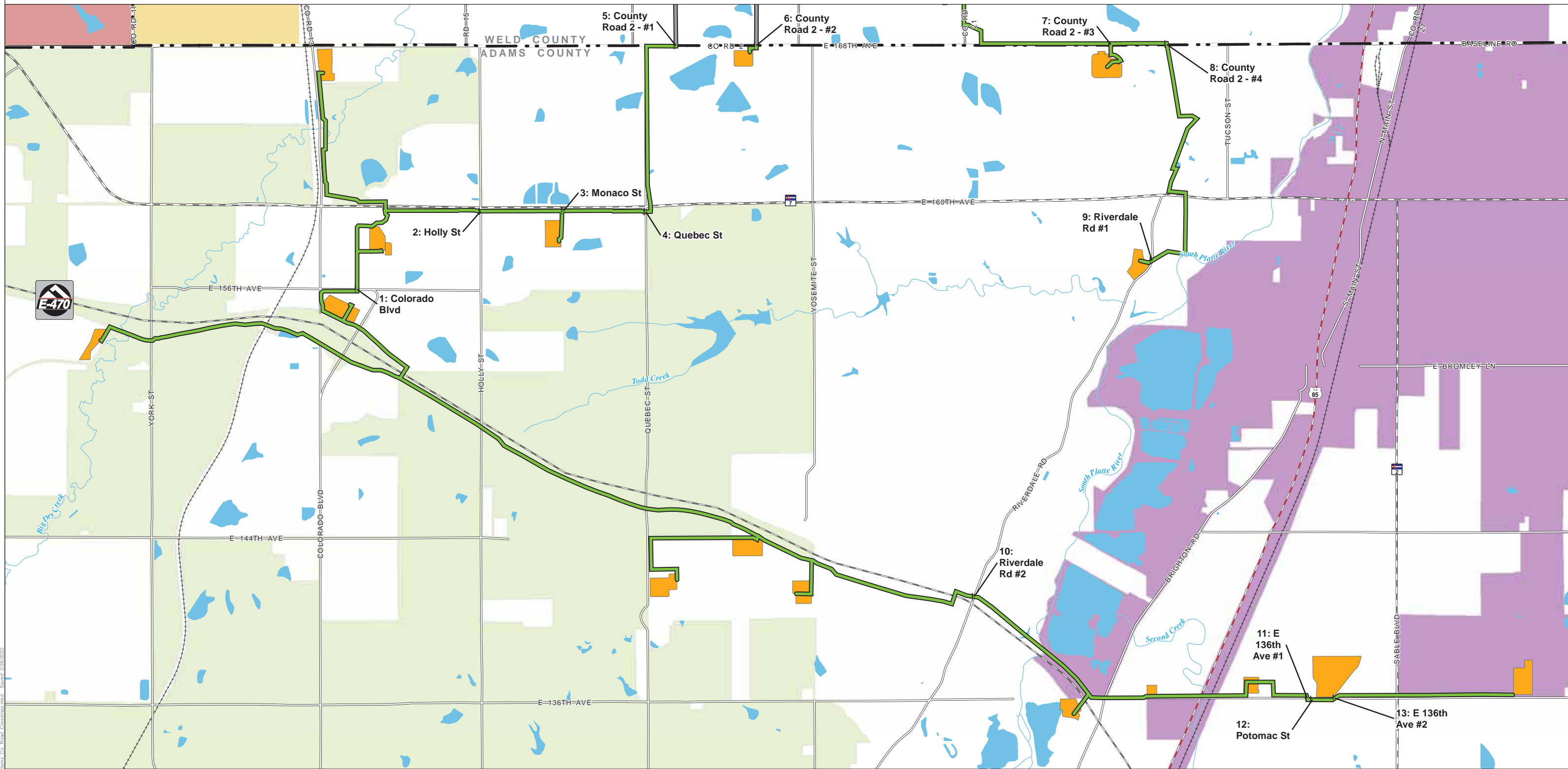
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.

Sources: CDOT 2015, US Census 2019, BTS 2019, NHD 2019

0 0.5 1 Miles  
Scale is 1:18,000 when printed at 22x34  
NOT FOR CONSTRUCTION

# PIONEER PRODUCED WATER PIPELINE PROJECT

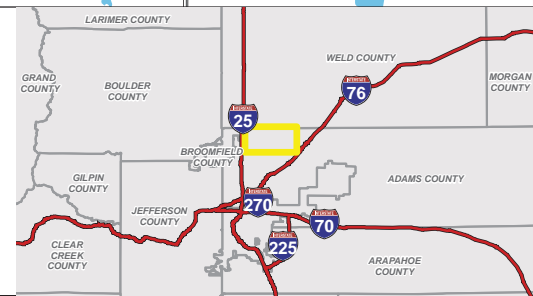
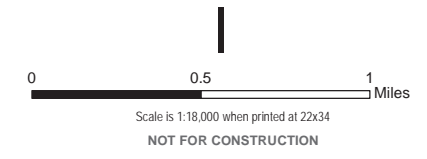
Figure 3: Adams County Road Crossings Map



- Project Features**
- ! Road Crossing
  - Pioneer Produced Water Pipeline (Adams County)
  - Pioneer Produced Water Pipeline (Weld County)
  - Oil and Gas Production Facility

- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Jurisdiction**
- Brighton
  - Broomfield
  - Northglenn
  - Thornton
  - County Boundary



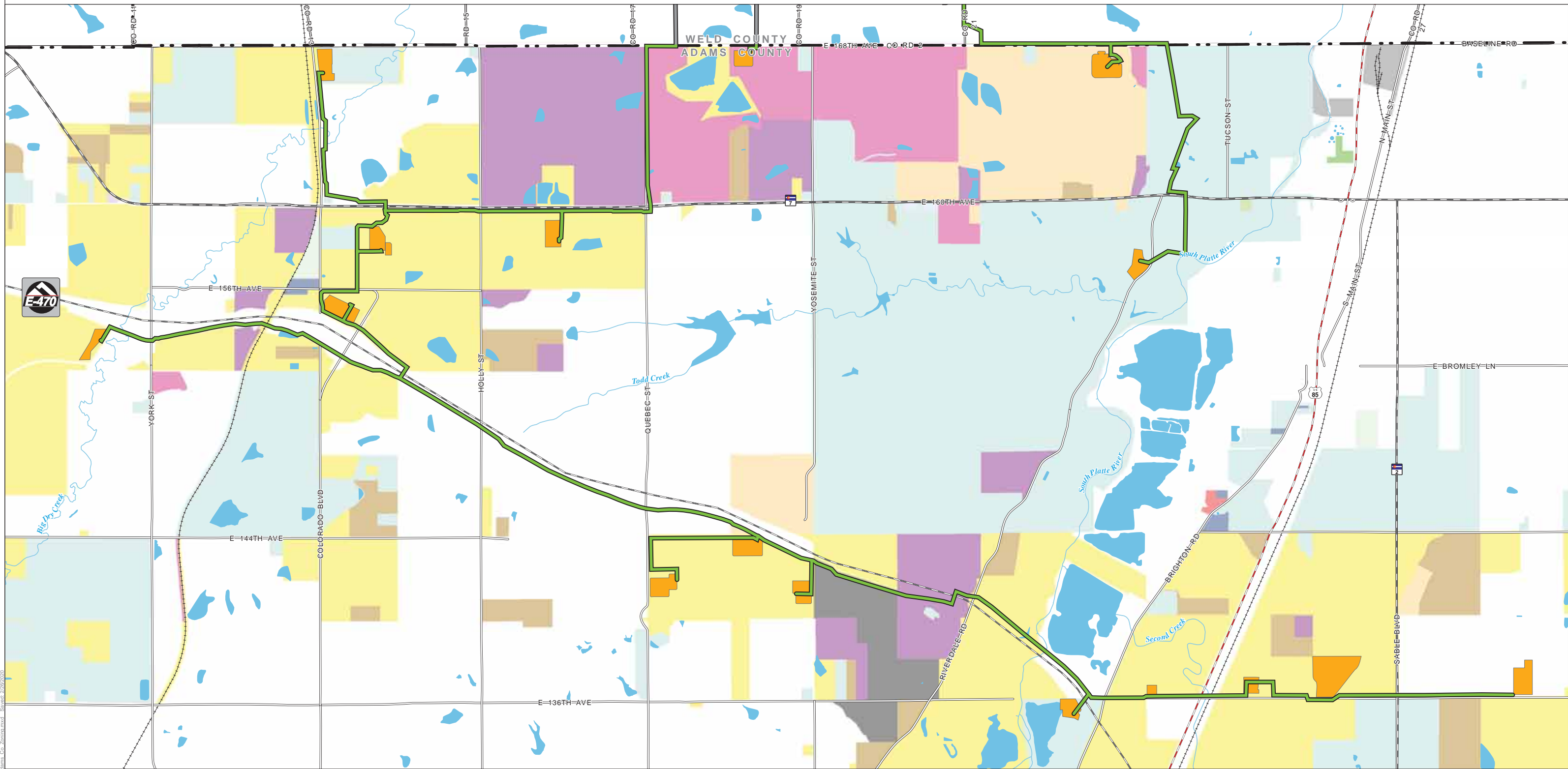
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



Sources: CDOT 2015, US Census 2019, BTS 2019, NHD 2019

# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 4: Adams County Zoning Map

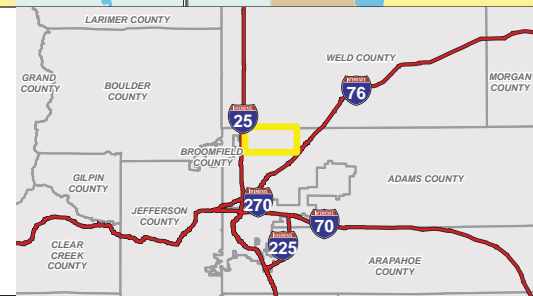


- Project Features**
- Pioneer Produced Water Pipeline (Adams County)
  - Pioneer Produced Water Pipeline (Weld County)
  - Oil and Gas Production Facility

- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Zoning**
- |     |          |       |
|-----|----------|-------|
| A-1 | I-1      | R-1-C |
| A-2 | I-2      | R-E   |
| A-3 | I-3      |       |
| C-2 | P-U-D    |       |
| C-3 | P-U-D(P) |       |
| C-4 | PL       |       |
| C-5 |          |       |

Scale is 1:18,000 when printed at 22x34  
 NOT FOR CONSTRUCTION

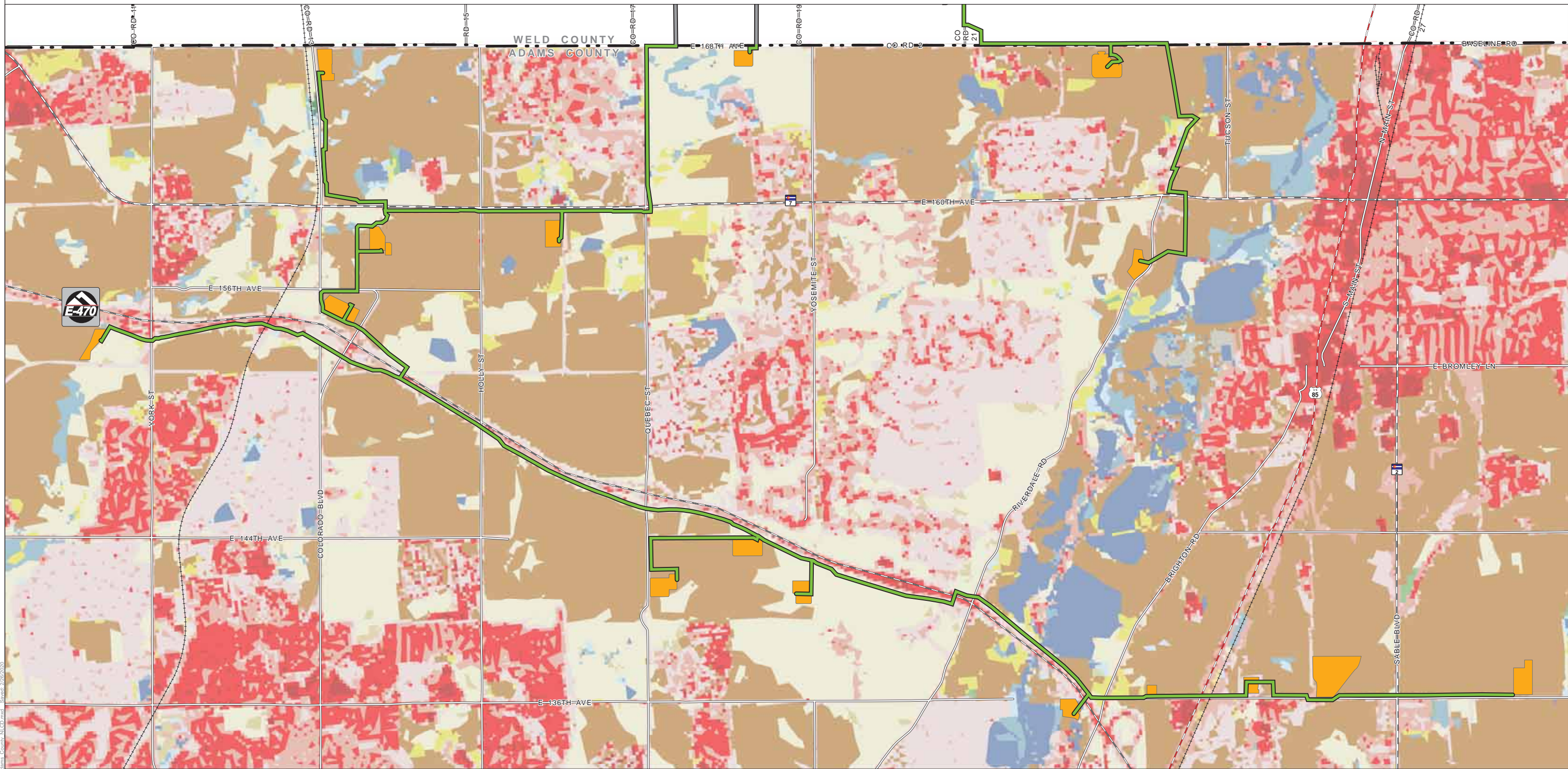


The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.

Sources: CDOT 2015, US Census 2019, BTS 2019, NHD 2019, Adams County 2020

# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 5: Adams County Land Cover Map

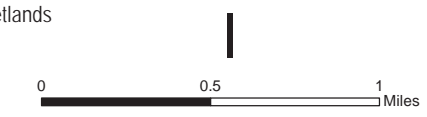


- Project Features**
- Pioneer Produced Water Pipeline (Adams County)
  - Pioneer Produced Water Pipeline (Weld County)
  - Oil and Gas Production Facility
- Jurisdiction**
- County Boundary

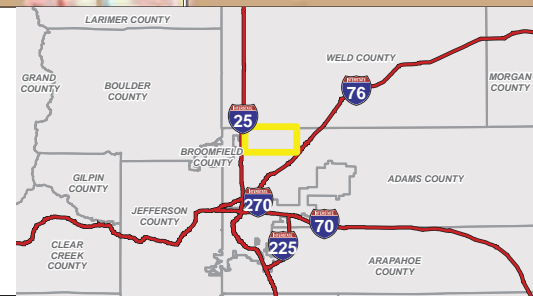
- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Land Cover**
- Open Water
  - Developed, Open Space
  - Developed, Low Intensity
  - Developed, Medium Intensity
  - Developed, High Intensity
  - Barren Land (Rock/Sand/Clay)
  - Deciduous Forest
  - Evergreen Forest
  - Mixed Forest
  - Shrub/Scrub
  - Grassland/Herbaceous
  - Pasture/Hay
  - Cultivated Crops

- Emergent Herbaceous Wetlands
- Woody Wetlands



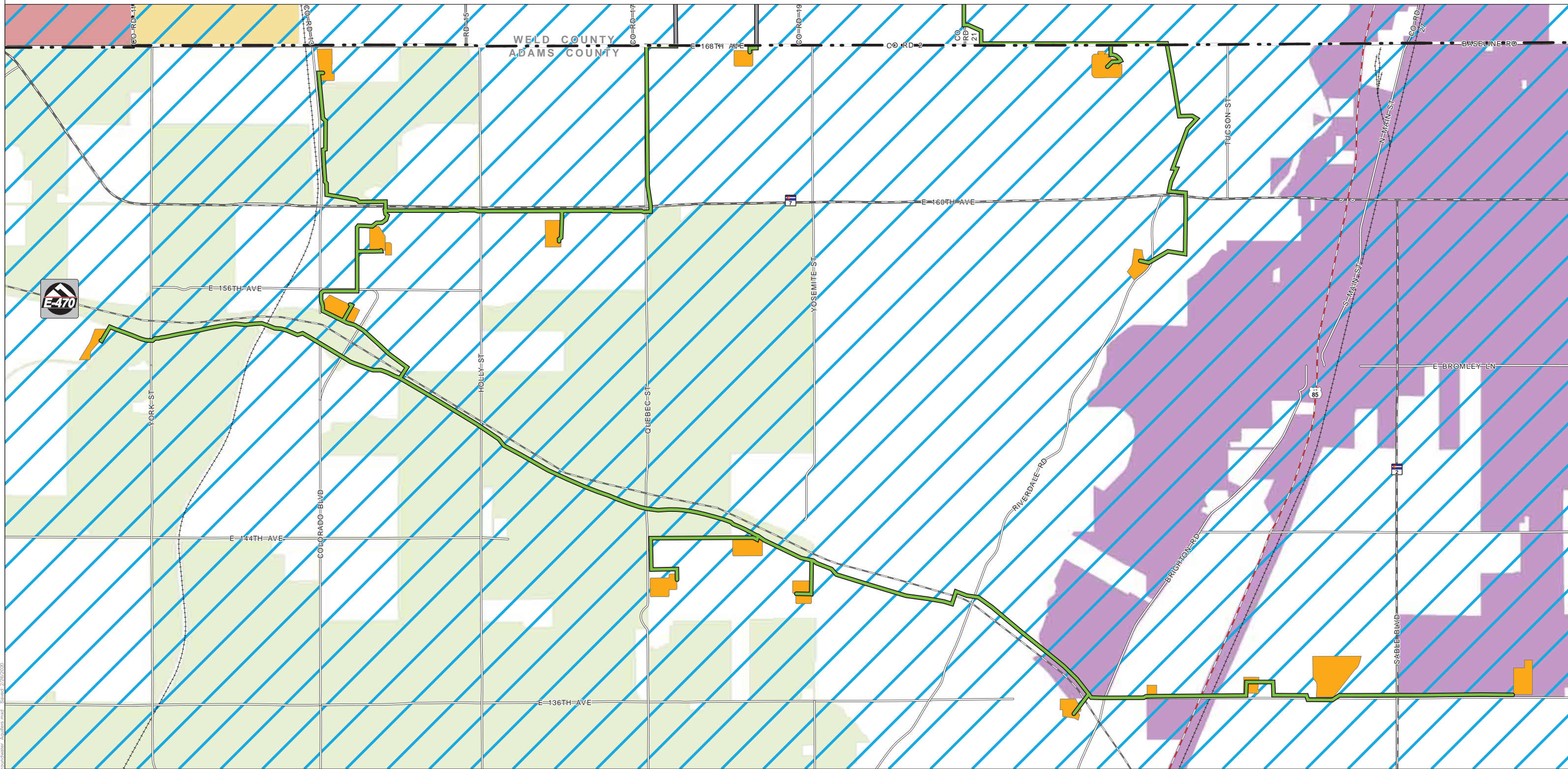
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



Sources: CDOT 2015, US Census 2019, BTS 2019, NLCD 2016

# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 6: Adams County Groundwater Aquifers Map

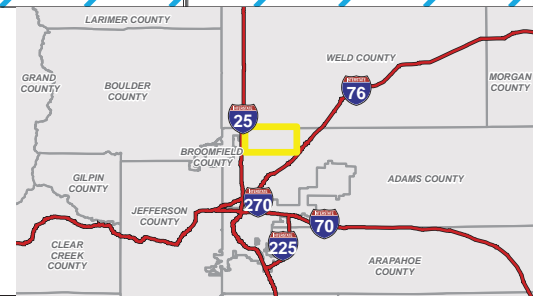
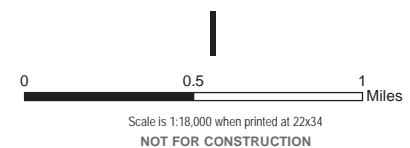


- Project Features**
- Pioneer Produced Water Pipeline (Adams County)
  - Pioneer Produced Water Pipeline (Weld County)
  - Oil and Gas Production Facility

- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Jurisdiction**
- Brighton
  - Broomfield
  - Northglenn
  - Thornton
  - County Boundary

- Groundwater Aquifer**
- Denver Basin



The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



Sources: CDOT 2015, US Census 2019, BTS 2019, USGS 2016

# **Exhibit A: Alignment Sheets**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

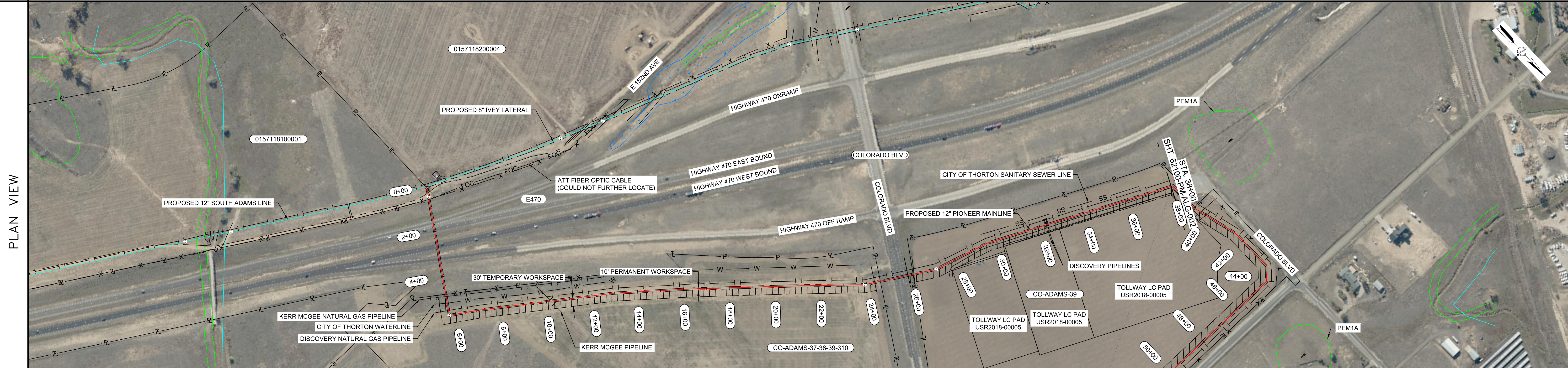
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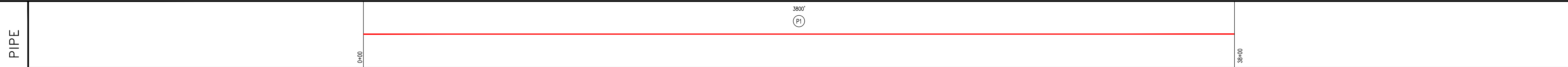


OWNER	0157118200004 COLORADO AND E-470 LLC 0.49 RODS	0157118100001 POSTLE DEVELOPMENT COMPANY 3.00 RODS	E470 STATE OF COLORADO 25.49 RODS	CO-ADAMS-37-38-39-310 BRIGHTON FARMS, LLC 118.59 RODS	COLORADO BLVD ADAMS COUNTY 9.10 RODS	CO-ADAMS-39 BRIGHTON FARMS, LLC 73.63 RODS	
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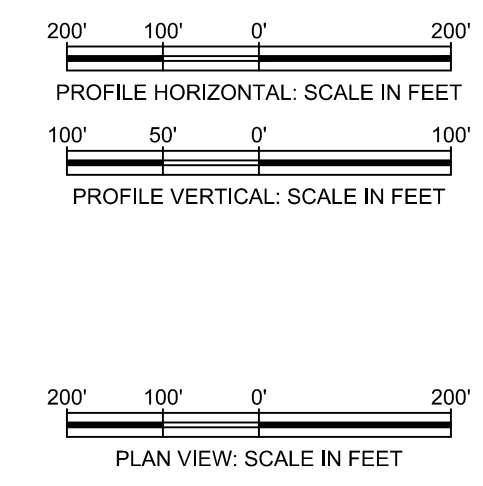
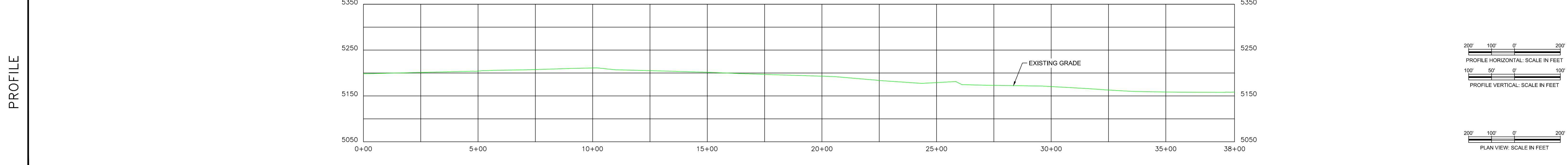
STATIONING	0+00 BEGIN STA 0+29 CL E 162 AVENUE 0+56 4' HOODWIRE FENCE 4+78 4' HOODWIRE FENCE 4+89 KERR MCGEE NATURAL GAS PIPELINE (5' COV.) 5+18 CITY OF THORTON WATERLINE (UNK. COV.) 5+60 20" DISCOVERY NATURAL GAS PIPELINE (5' COV.) 5+72 P.I. < 90°/322' L.T. 7+01 P.I. < 2°/597'2" R.T.	10+19 KERR MCGEE NATURAL GAS PIPELINE (5' T. COV.)	12+98 P.I. < 4°/102' L.T.	16+29 P.I. < 1°/28' R.T.	20+59 P.I. < 0°/393' R.T.	23+91 P.I. < 11°/107' L.T. 24+36 4' BARBED WIRE FENCE 25+16 EDGE OF COLORADO BLVD. 25+38 CL. OF COLORADO BLVD. 25+92 EDGE OF COLORADO BLVD. 25+94 4' BARBED WIRE FENCE 26+11 TOE OF BANK 27+11 P.I. < 15°/1000' L.T.	24+35 28+60 P.I. < 10°/200' R.T.	32+30 6" DISCOVERY PIPELINE (UNK. COV.) 32+34 8" DISCOVERY PIPELINE (UNK. COV.)	38+00
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CONSERVATION MEASURES	USACE
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



CROSSING METHOD	
DEPTH OF COVER	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	3800'	12" DR11 HDPE	A	01/16/20	ISSUED FOR REVIEW
			B	02/24/20	REVISED WORKSPACE & ADDED ENV DATA

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
— —	FIBER OPTIC CABLE
— —	OVERHEAD POWER
— —	TELEPHONE
—x—x—	FENCE LINE
— —	CIL ROAD
— —	CIL WATERBODY
— —	WATER SUPPLY LINE
— —	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊕	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
▭	PERMANENT EASEMENT
▭	TEMPORARY WORKSPACE
▭	ADDITIONAL TEMPORARY WORKSPACE
▭	STREAM
▭	WETLAND
▭	FLOODPLAIN

**GENERAL NOTES**

- ALL DISTANCES SHOWN ARE GRID DISTANCES BASED ON THE COLORADO COORDINATE SYSTEM OF 1983 (2011 ADJUSTMENT), SOUTH ZONE, U.S. SURVEY FEET.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.
- CONTRACTOR TO VERIFY ALL LAND OWNER AND CONSTRUCTION RESTRICTIONS ON THE LINE LIST.
- MINIMUM CLEARANCE AT ALL FOREIGN PIPELINE AND UTILITY CROSSINGS TO BE DETERMINED BY OPERATOR.
- A MINIMUM OF 5 FEET WALL TO WALL OF HORIZONTAL CLEARANCE IS REQUIRED AT ALL ADJACENT PIPELINES.
- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA

CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	TGF 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 12" PIPELINE  
ISSUE FOR REVIEW  
PIONEER MAINLINE  
PRELIMINARY ALIGNMENT SHEET  
0+00 TO 38+00  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-PM-ALG-001** SHEET **1** OF **6** REV: **B**

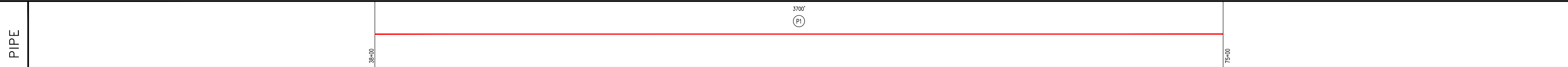


OWNER	CO-ADAMS-39 BRIGHTON FARMS, LLC 106.76 RODS	COLORADO BLVD ADAMS COUNTY 3.33 RODS	CO-ADAMS-37-38-39-310 BRIGHTON FARMS, LLC 114.15 RODS
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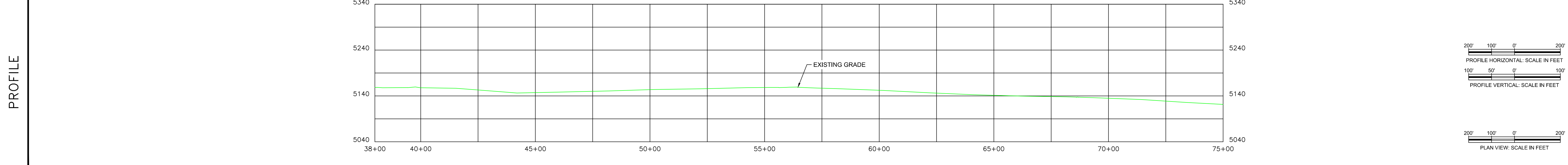
STATIONING	<p>38+00 P.I. &lt; 15°00'00" RT.</p> <p>38+41 P.I. &lt; 15°00'00" LT. 38+42 4' BARBED WIRE FENCE 38+43 4' BARBED WIRE FENCE 40+03 5' BARBED WIRE FENCE</p> <p>41+54 P.I. &lt; 15°00'00" RT.</p> <p>44+53 P.I. &lt; 45°04'49" RT.</p> <p>44+50 P.I. &lt; 45°04'49" RT.</p> <p>55+18 P.I. &lt; 90°04'50" LT. 55+01 EDGE OF ROAD 55+06 C.C. COLORADO BOULEVARD 56+08 EDGE OF ROAD 58+16 P.I. &lt; 0°00'00" LT.</p> <p>68+61 4" DISCOVERY CRUDE OIL PIPELINE (6' COV.) 68+67 10" DISCOVERY NATURAL GAS PIPELINE (5.8' COV.) 68+16 P.I. &lt; 0°00'00" LT.</p>
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CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



CROSSING METHOD	
DEPTH OF COVER	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	3700'	12" DR11 HDPE	A	01/16/20	ISSUED FOR REVIEW
			B	02/24/20	REVISED WORKSPACE & ADDED ENV DATA

LEGEND	
—●—	PROPOSED PIPELINE
—e—e—	PROPERTY LINE
- - -	FOREIGN PIPELINE
- o o	FIBER OPTIC CABLE
-o/-o-	OVERHEAD POWER
-T-T-	TELEPHONE
-x-x-	FENCE LINE
-.-.-	CIL ROAD
-.-.-	CIL WATERBODY
-w-w-	WATER SUPPLY LINE
-e-e-	ELECTRIC LINE
-R/W-	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊙	SEGMENTABLE BEND
⊙	WATER WELL
⊙	SADDLE BAGS
⊙	TRENCH BREAKER
□	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
□	FLOODPLAIN
⊙	MILE POST

**GENERAL NOTES**

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- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA

CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	TGF 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 12" PIPELINE  
ISSUE FOR REVIEW  
PIONEER MAINLINE  
PRELIMINARY ALIGNMENT SHEET  
38+00 TO 75+00  
ADAMS COUNTY, COLORADO**

DWG NO: 62100-PM-ALG-002    SHEET 2 OF 6    REV: B



OWNER	CO-ADAMS-37-38-39-310 BRIGHTON FARMS, LLC 39.94 RODS	HOLLY ST ADAMS COUNTY 2.99 RODS 118+59	CO-ADAMS-35 BRIGHTON FARMS, LLC 158.20 RODS	CO-ADAMS-34 QUEBEC 7, LLC 156.69 RODS	QUEBEC COUNTY ADAMS COUNTY 5.82 RODS 172+00
	112+00	118+59	158+20	172+00	177+00

STATIONING

112+24 P.I. < 139+57 RT.  
116+99 P.I. < 139+57 RT.  
118+11 P.I. < 145+84 LT.  
118+59 DIV ANCHOR RT. 21  
118+60 OVERHEAD POWER LINE  
118+63 JUNCTION BOX RT. 22  
118+68 TOP OF BANK (UNK. COV.)  
118+69 TOE OF BANK  
118+76 EDGE OF ROAD  
118+90 P.I. < 139+57 RT.  
118+92 DCP NATURAL GAS PIPELINE (UNK. COV.)  
119+09 EDGE OF ROAD

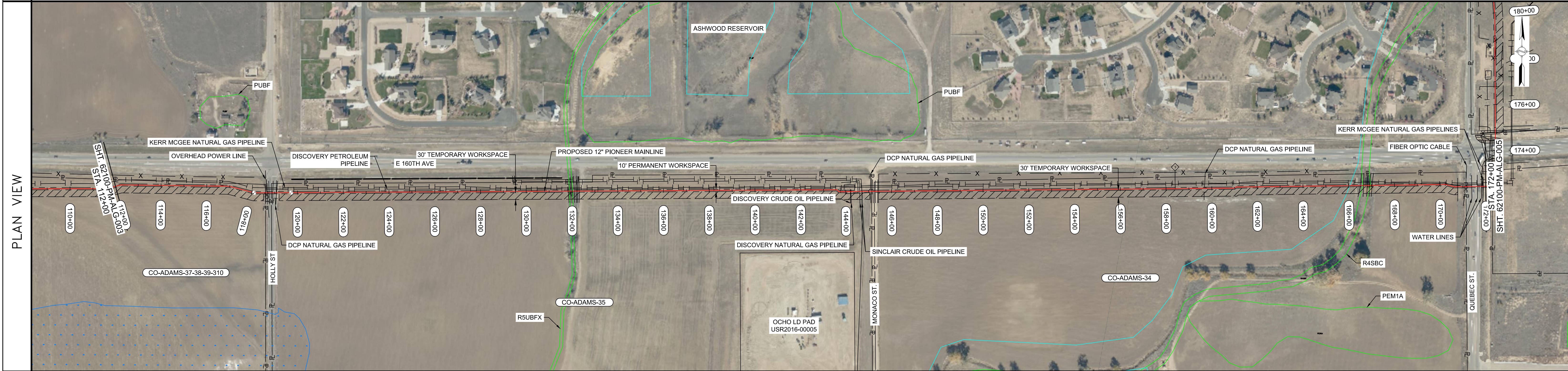
131+86 TOP OF BANK  
131+88 EDGE OF WETLAND  
132+01 TOP OF BANK  
132+03 EDGE OF WETLAND  
132+10 CL IRRIGATION DITCH  
132+18 TOP OF BANK  
132+21 TOP OF BANK  
132+31 TOP OF BANK

143+68 P.I. < 145+84 LT.  
143+70 P.I. < 145+84 LT.  
143+77 CENTERLINE OF ROAD  
144+20 4" DISCOVERY CRUDE OIL PIPELINE (UNK. COV.)  
144+23 10" DISCOVERY NATURAL GAS PIPELINE (UNK. COV.)  
144+54 CENTERLINE OF ROAD  
144+61 10" SINCLAIR CRUDE OIL PIPELINE (7.4' COV.)  
144+70 6" SINCLAIR CRUDE OIL PIPELINE (6.5' COV.)  
145+09 DCP NATURAL GAS PIPELINE (6.3' COV.)  
145+18 EDGE OF ROAD  
145+28 CL MONACO STREET  
145+40 EDGE OF ROAD  
145+44 4' HOGWIRE FENCE

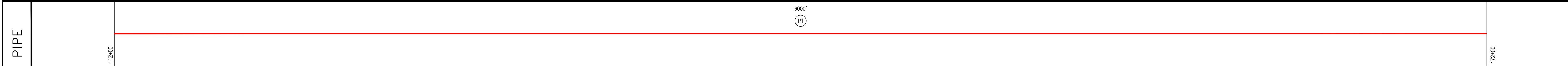
159+88 DCP NATURAL GAS PIPELINE (4.8' COV.)  
160+99 P.I. < 171+55 LT.  
161+08 P.I. < 171+55 RT.

166+52 TOE OF BANK  
166+53 TOP OF BANK  
166+59 TOP OF BANK  
166+91 CL DITCH  
167+02 TOP OF BANK

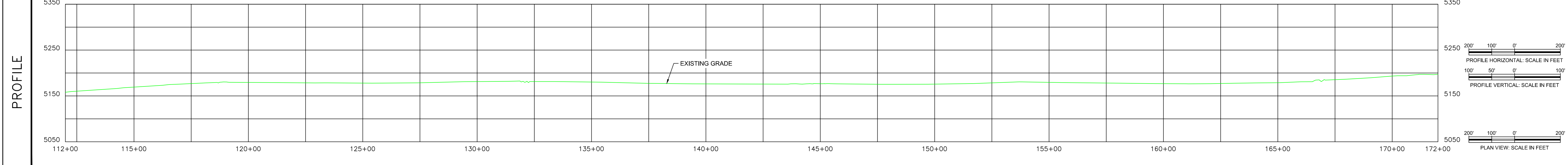
170+24 P.I. < 151+00 RT.  
170+59 P.I. < 151+00 RT.  
170+60 P.I. < 151+00 RT.  
171+11 PEDestal RT. 19  
171+13 FIBER OPTIC CABLE (UNK. COV.)  
171+14 EDGE OF ROAD  
171+38 WATERLINE (UNK. COV.)  
171+64 WATERLINE (UNK. COV.)  
171+88 NEAR MC GEE NATURAL GAS PIPELINE (UNK. COV.)  
171+88 NEAR MC GEE NATURAL GAS PIPELINE (UNK. COV.)  
171+88 NEAR MC GEE NATURAL GAS PIPELINE (8.8' COV.)



CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



CROSSING METHOD	
DEPTH OF COVER	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	6000'	12" DR11 HDPE	A	01/16/20	ISSUED FOR REVIEW
			B	02/24/20	REVISED WORKSPACE & ADDED ENV DATA

LEGEND

PROPOSED PIPELINE	POWER POLE	PERMANENT EASEMENT	FLOODPLAIN
PROPERTY LINE	MAINLINE VALVE	TEMPORARY WORKSPACE	
FOREIGN PIPELINE	TEST LEAD	ADDITIONAL TEMPORARY WORKSPACE	
FIBER OPTIC CABLE	SEGMENTABLE BEND	STREAM	
OVERHEAD POWER	WATER WELL	WETLAND	
TELEPHONE	SADDLE BAGS		
FENCE LINE	TRENCH BREAKER		
CIL ROAD			
OIL WATERBODY			
WATER SUPPLY LINE			
ELECTRIC LINE			
RIGHT-OF-WAY			

GENERAL NOTES

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- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA

CHECKS/APPROVALS

SCALE:	1" = 200'
DWN. BY:	TGF 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



PROPOSED 12" PIPELINE  
ISSUE FOR REVIEW  
PIONEER MAINLINE  
PRELIMINARY ALIGNMENT SHEET  
112+00 TO 172+00  
ADAMS COUNTY, COLORADO

DWG NO: 62100-PM-ALG-004 SHEET 4 OF 6 REV: B



OWNER

STATIONING

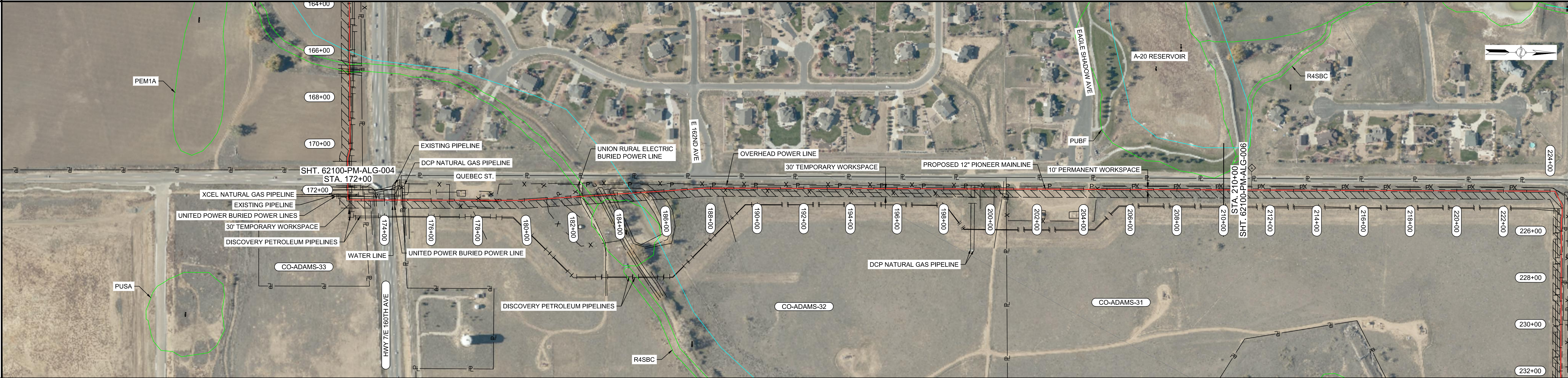
PLAN VIEW

PIPE

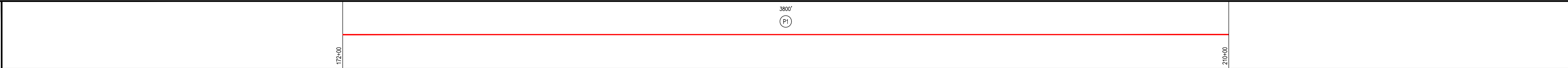
PROFILE

QUEBEC ST ADAMS COUNTY 0.34 RODS	CO-ADAMS-33 QUEBEC LIMITED LLC C/O FINLEY AND CO 8.02 RODS	HWY 7/E 160TH AVE STATE OF COLORADO 5.17 RODS	CO-ADAMS-32 ERN LIMITED PARTNERSHIP, ET AL 159.81 RODS	CO-ADAMS-31 ERN LIMITED PARTNERSHIP ET AL 57.08 RODS
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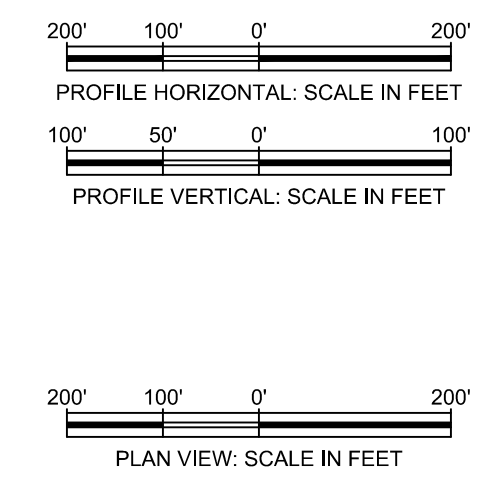
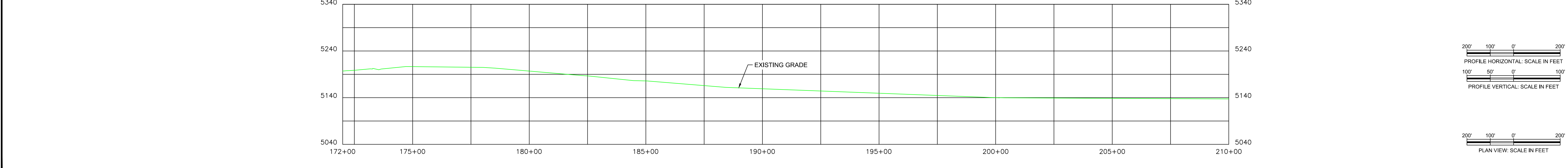
172+00 XCEL NATURAL GAS PIPELINE (6.8' COV.)  
 172+20 EXISTING PIPELINE (UNK. COV.)  
 172+24 ELECTRIC CABLE (UNK. COV.)  
 172+28 UNITED POWER BURIED POWER LINE (8.2' COV.)  
 172+54 8" DISCOVERY PETROLEUM PIPELINE (13' COV.)  
 172+59 20" DISCOVERY PETROLEUM PIPELINE (13' COV.)  
 173+17 JUNCTION BOX RT. 9  
 173+17 JUNCTION BOX RT. 16  
 173+23 JUNCTION BOX RT. 20  
 173+24 JUNCTION BOX RT. 14  
 173+27 JUNCTION BOX  
 173+29 POWER POLE RT. 6  
 173+64 EDGE OF ROAD  
 173+69 CL 160TH AVENUE  
 174+33 EDGE OF ROAD  
 174+42 UNITED POWER ELECTRIC CABLE (UNK. COV.)  
 174+42 FIBER OPTIC LINE (UNK. COV.)  
 174+44 FIBER OPTIC LINE (UNK. COV.)  
 174+55 FIBER OPTIC LINE (UNK. COV.)  
 174+71 WATERLINE (UNK. COV.)  
 174+76 4" BARBED WIRE FENCE  
 174+87 DCP NATURAL GAS PIPELINE (UNK. COV.)  
 176+02 4" STEEL FENCE POST  
 176+50 4" BARBED WIRE FENCE  
 179+83 P.L. < 3'55'17" LT.  
 180+84 4" WOOD FENCE  
 181+56 OVERHEAD POWER LINE  
 182+30 CL 160TH AVENUE  
 182+30 UNION RURAL ELECTRIC BURIED POWER LINE (UNK. COV.)  
 183+36 TOP OF BANK  
 183+36 TOP OF BANK  
 183+71 TOE OF BANK  
 183+71 TOE OF BANK  
 184+88 TOE OF BANK  
 184+88 TOE OF BANK  
 185+24 TOP OF BANK  
 185+24 TOE OF BANK  
 185+65 TOE OF BANK  
 187+87 P.L. < 3'55'17" RT.  
 188+98 POWER POLE LT. 13  
 191+98 POWER POLE LT. 12  
 194+97 POWER POLE LT. 12  
 197+98 POWER POLE LT. 12  
 198+86 P.L. < 0'02'51" RT.  
 199+17 DCP NATURAL GAS PIPELINE (UNK. COV.)  
 199+33 DCP NATURAL GAS PIPELINE (UNK. COV.)  
 199+56 4" STEEL PIPE CORRAL  
 200+17 4" STEEL PIPE CORRAL  
 200+17 4" STEEL PIPE CORRAL  
 200+55 CL 12" GRAVEL ROAD  
 200+73 POWER POLE LT. 12  
 203+70 POWER POLE LT. 13  
 204+58 4" WOOD POST FENCE  
 206+81 POWER POLE LT. 13  
 209+82 POWER POLE LT. 13



CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



CROSSING METHOD	
DEPTH OF COVER	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	6000'	12" DR11 HDPE	A	01/16/20	ISSUED FOR REVIEW
			B	02/24/20	REVISED WORKSPACE & ADDED ENV DATA

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
— —	FIBER OPTIC CABLE
— —	OVERHEAD POWER
— —	TELEPHONE
—x—x—	FENCE LINE
— —	CIL ROAD
— —	CIL WATERBODY
— —	WATER SUPPLY LINE
— —	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊖	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
⊕	PERMANENT EASEMENT
⊕	TEMPORARY WORKSPACE
⊕	ADDITIONAL TEMPORARY WORKSPACE
⊕	STREAM
⊕	WETLAND
⊕	FLOODPLAIN

**GENERAL NOTES**

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- CONTRACTOR TO VERIFY ALL LAND OWNER AND CONSTRUCTION RESTRICTIONS ON THE LINE LIST.
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- A MINIMUM OF 5 FEET WALL TO WALL OF HORIZONTAL CLEARANCE IS REQUIRED AT ALL ADJACENT PIPELINES.
- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA

CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	TGF 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 12" PIPELINE  
ISSUE FOR REVIEW  
PIONEER MAINLINE  
PRELIMINARY ALIGNMENT SHEET  
172+00 TO 210+00  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-PM-ALG-005** SHEET **5** OF **6** REV: **B**



OWNER

CO-ADAMS-31  
ERN LIMITED PARTNERSHIP ET AL  
139.69 RODS

STATIONING

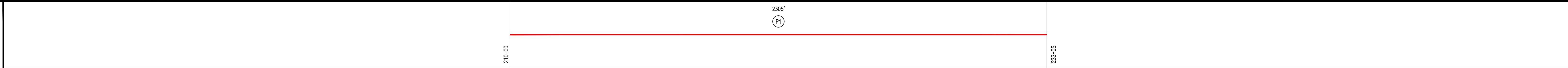
210+00  
212+80 POWER POLE LT. 13  
215+80 POWER POLE LT. 13  
218+55 POWER POLE LT. 13  
221+23 POWER POLE LT. 14  
223+95 POWER POLE LT. 14  
224+14 POWER POLE LT. 14  
224+55 POWER POLE LT. 14  
224+80 P.L. < 26+54.33' RT.  
225+39 P.L. < 26+54.33' RT.  
225+46 P.L. < 26+54.33' LT.  
224+70 P.L. < 89+57.14' LT.  
224+88 FENCE  
234+89 P.L. < 0+21.45' RT.  
235+00 OVERHEAD POWER LINE  
235+00 POWER POLE LT. 14  
235+00 CLOSURE MARKER  
235+00 CLOSURE MARKER  
235+42 EDGE OF E. 188TH AVE.  
235+70 END STA.

PLAN VIEW

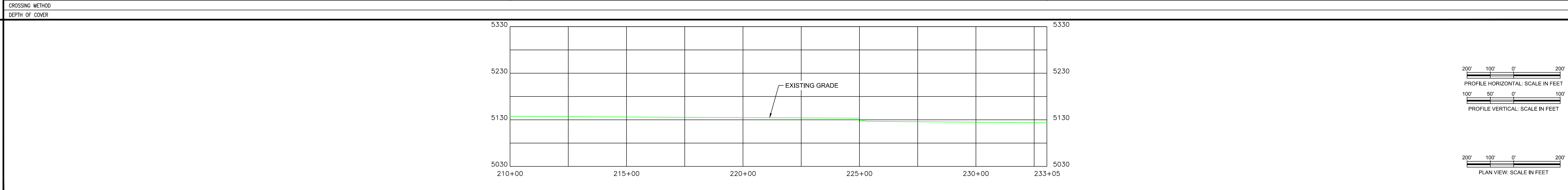


CONSERVATION MEASURES
USACE
TIMING RESTRICTIONS
WETLAND/WATERBODY ID
WETLAND/WATERBODY TYPE
M.O.P.

PIPE



PROFILE



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	2305'	12" DR11 HDPE	A	01/16/20	ISSUED FOR REVIEW
			B	02/24/20	REVISED WORKSPACE & ADDED ENV DATA

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
— —	FIBER OPTIC CABLE
—O—	OVERHEAD POWER
—T—	TELEPHONE
—X—	FENCE LINE
—C—	CIL ROAD
—W—	CIL WATERBODY
—W—	WATER SUPPLY LINE
—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊕	TEST LEAD
⊕	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
⊕	PERMANENT EASEMENT
⊕	TEMPORARY WORKSPACE
⊕	ADDITIONAL TEMPORARY WORKSPACE
⊕	STREAM
⊕	WETLAND
⊕	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	TGF 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



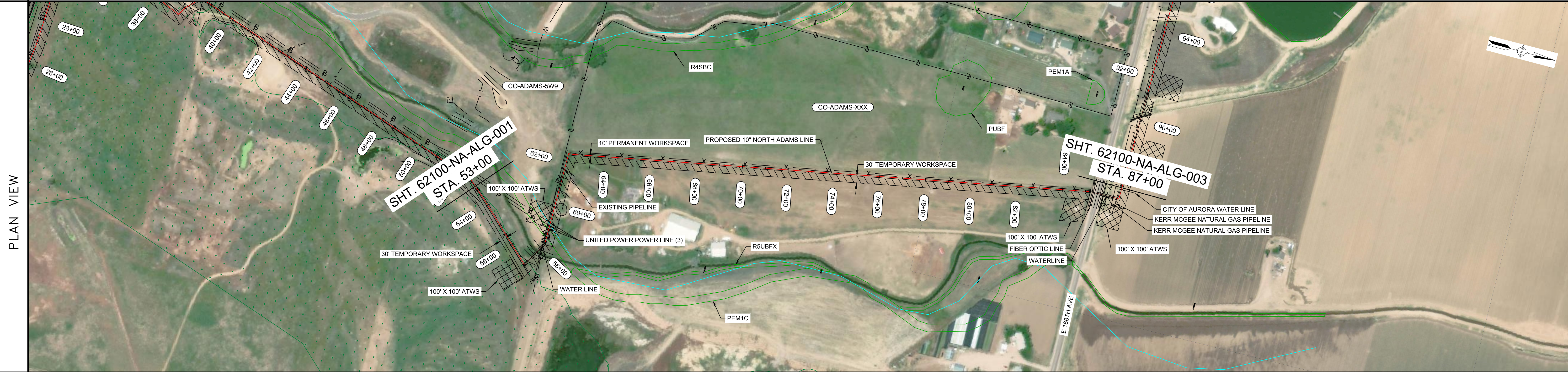
**PROPOSED 12" PIPELINE  
ISSUE FOR REVIEW  
PIONEER MAINLINE  
PRELIMINARY ALIGNMENT SHEET  
210+00 TO 235+70  
ADAMS COUNTY, COLORADO**

DWG NO: 62100-PM-ALG-006    SHEET 6 OF 6    REV: B



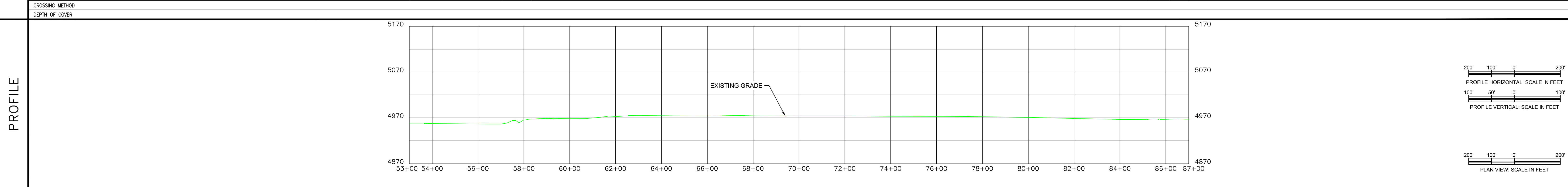


OWNER	CO-ADAMS-5W9	CO-ADAMS-XXX
	CITY OF AURORA	UNKNOWN
STATIONING	53+00	87+00
	31.24 RODS	174.82 RODS



CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	

PIPE		Ⓟ1	Ⓟ2	Ⓟ1	Ⓟ2	Ⓟ1
		405'	130'	2686'	100'	79'
CROSSING METHOD						
DEPTH OF COVER						



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	3170'	10" DR7 XRT-70 HDPE	A	02/20/20	ISSUE FOR REVIEW
P2	230'	10" DR7 XRT-70 HDPE - BORE			

LEGEND	
—●—	PROPOSED PIPELINE
—e—e—	PROPERTY LINE
—f—f—	FOREIGN PIPELINE
—foc—	FIBER OPTIC CABLE
—o/h—	OVERHEAD POWER
—t—t—	TELEPHONE
—x—x—	FENCE LINE
—c/c—	CIL ROAD
—w—w—	CIL WATERBODY
—w—w—	WATER SUPPLY LINE
—e—e—	ELECTRIC LINE
—r/w—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⚡	TEST LEAD
⚡	SEGMENTABLE BEND
⊙	WATER WELL
⊙	SADDLE BAGS
⊙	TRENCH BREAKER
▭	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
▭	STREAM
▭	WETLAND
▭	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 02/20/20
CHK. BY:	JAW 02/20/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10" PIPELINE  
ISSUED FOR REVIEW  
NORTH ADAMS LINE  
PRELIMINARY ALIGNMENT SHEET  
STA. 53+00 TO STA. 87+00  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-NA-ALG-002** SHEET **2** OF **6** REV: **A**



OWNER	CO-ADAMS-XXX	CO-WELD-5W1	CO-WELD-5W2
	UNKNOWN 64.68 RODS	YOSHI AND SUZU LLLP 243.31 RODS	ALF TODD CREEK VILLAGE NORTH LLC 33.83 RODS
STATIONING	87+00 97+67	118+28 124+00	137+62 143+40



90+13 TOP OF BANK  
90+16 CL OF BANK  
90+24 TOE OF BANK  
90+34 TOP OF BANK

94+48 UNITED POWER POWER LINE (UNK. COV.)  
94+68 CL 12 CONCRETE DRIVEWAY ROAD

99+00 -58+42.07' L.L.  
99+37 TOP OF BANK  
99+56 TOE OF BANK  
99+93 CL OF BANK  
99+93 TOP OF BANK  
100+12 CL DITCH  
100+45 TOP OF BANK  
100+58 CL 15" DIRT FIELD ROAD  
100+68 CL OF FENCE  
101+10 FENCE  
101+23 -62+42.55' L.L.  
101+79 -67+27.04' R.L.  
102+56 CL OF ANCHOR  
102+82 CL OF ANCHOR  
102+82 CL OF ANCHOR

109+02 VALVE BOX  
109+26 CENTERLINE OF ROAD  
109+43 VALVE BOX  
109+43 CL OF ROAD  
109+68 TREE LINE  
110+13 VALVE BOX  
110+62 TREE LINE  
110+83 -67+43.06' R.L.

118+28 -61+37.28' L.L.  
124+00 -67+56.53' R.L.

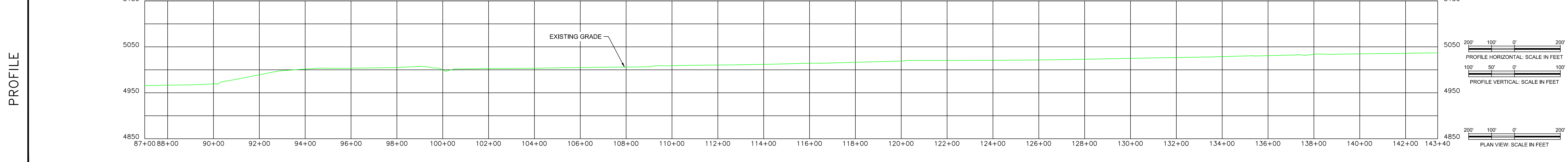
137+28 -62+19.33' R.L.  
137+62 -62+57.07' L.L.  
138+14 CL 30" GRAVEL ACCESS ROAD



CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	

PIPE	87+00	89+27	91+27	101+05	103+27	143+40
	227'	200'	978'	222'	4013'	

CROSSING METHOD  
DEPTH OF COVER



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	5218'	10" DR7 XRT-70 HDPE	A	02/20/20	ISSUE FOR REVIEW
P2	422'	10" DR7 XRT-70 HDPE - BORE			

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
— —	FIBER OPTIC CABLE
—O—	OVERHEAD POWER
—T—	TELEPHONE
—X—	FENCE LINE
— —	CIL ROAD
— —	CIL WATERBODY
—W—	WATER SUPPLY LINE
—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊖	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
□	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
▨	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 02/20/20
CHK. BY:	JAW 02/20/20
APPD. BY:	
JOB NO:	62100
AFE NO:	

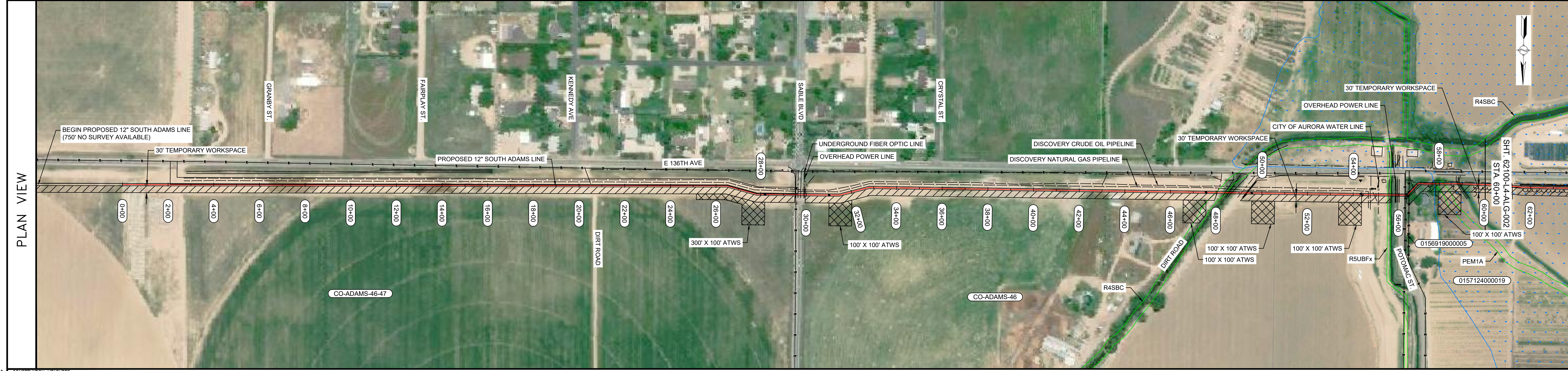


**PROPOSED 10" PIPELINE  
ISSUED FOR REVIEW  
NORTH ADAMS LINE  
PRELIMINARY ALIGNMENT SHEET  
STA. 87+00 TO STA. 143+40  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-NA-ALG-003** SHEET **3** OF **6** REV: **A**

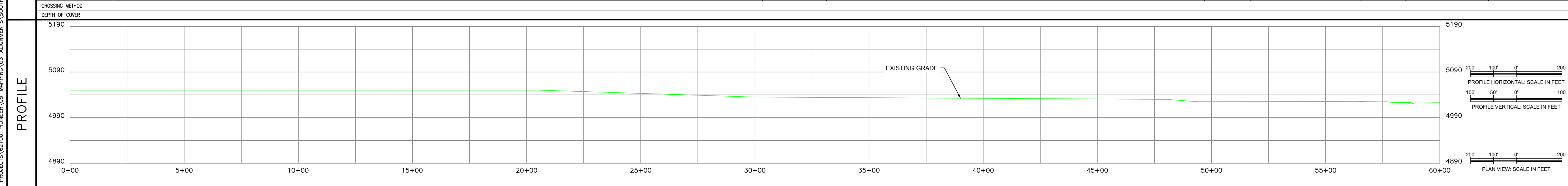
OWNER	CO-ADAMS-46-47 BRIGHTON LAKES LLC 179.05 RODS	CO-ADAMS-46 BRIGHTON LAKES LLC 161.92 RODS	POTOMAC ST ADAMS COUNTY 0.21 RODS	0156919000005 RITCHEY INVESTMENT COMPANY LLC 1.14 RODS	0157124000019 H F INVESTMENT COMPANY LLC 21.31 RODS	
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STATIONING	0+00 BEGIN STA. 16+33 P.L. < 010018 RT. 26+49 P.L. < 151527 RT. 27+84 P.L. < 143725 LT. 29+63 CENTERLINE OF SABLE BLVD 29+84 P.L. < 010327 LT. 29+84 UNDERGROUND FIBER OPTIC LINE 29+84 OVERHEAD POWER LINE 29+97 FENCE 31+44 P.L. < 151000 LT. 32+80 P.L. < 151522 RT. 42+95 P.L. < 010037 LT. 49+80 P.L. < 010000 LT. 47+86 EDGE OF WETLAND 48+05 CENTERLINE OF DIRT ROAD 48+39 TOP OF BANK 48+56 CL DITCH 48+56 CL DITCH 48+69 TOP OF BANK 48+69 CL OF STREAM 49+31 TOP OF BANK 49+31 CL DITCH 49+36 TOP OF BANK 54+75 DISCOVERY NATURAL GAS PIPELINE (7.6 COV.) 54+92 CL 15 GRAVEL FIELD ROAD 54+96 CL OF STREAM 54+96 CL OF STREAM 55+18 VALVE BOX LT. 9 55+19 MARKER LT. 10 55+21 VALVE BOX LT. 9 55+57 TOP OF BANK 55+57 CL OF WETLAND 55+86 CL DITCH 55+86 CL DITCH 55+86 TOP OF BANK 55+86 OVERHEAD POWER LINE 55+86 CL DITCH 56+02 TOP OF BANK 56+10 CENTERLINE OF POTOMAC ST 56+10 CL OF STREAM 57+38 P.L. < 171707 LT. 57+46 CL OF WETLAND 57+46 CL OF WETLAND 57+48 B WOOD PAST FENCE 57+91 EDGE OF WETLAND 58+60 TREE LINE 58+60 CL OF STREAM 58+73 P.L. < 171707 LT. 58+80 TOP OF BANK 58+80 CL DITCH 58+80 TOP OF BANK
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CONSERVATION MEASURES	
USAGE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY	
WETLAND/WATERBODY TYPE	
M.O.P.	

PIPE	<table border="1"> <tr> <th>PIPE</th> <td>P1</td> <td>2819'</td> <td>P2</td> <td>280'</td> <td>P1</td> <td>1657'</td> <td>P2</td> <td>200'</td> <td>P1</td> <td>481'</td> <td>P2</td> <td>200'</td> <td>P2</td> <td>363'</td> </tr> <tr> <th>CROSSING METHOD</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>DEPTH OF COVER</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	PIPE	P1	2819'	P2	280'	P1	1657'	P2	200'	P1	481'	P2	200'	P2	363'	CROSSING METHOD															DEPTH OF COVER														
PIPE	P1	2819'	P2	280'	P1	1657'	P2	200'	P1	481'	P2	200'	P2	363'																																
CROSSING METHOD																																														
DEPTH OF COVER																																														



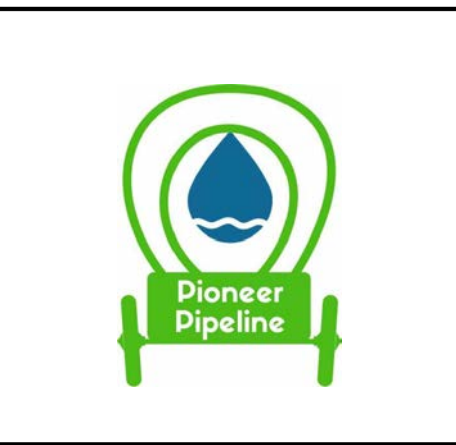
MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	4957'	10" DR7 HDPE	A	01/16/20	ISSUE FOR REVIEW
P2	363'	12" DR7 HDPE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS
P4	680'	10" DR7 HDPE - BORE			

LEGEND	
	PROPOSED PIPELINE
	PROPERTY LINE
	FOREIGN PIPELINE
	FIBER OPTIC CABLE
	OVERHEAD POWER
	TELEPHONE
	FENCE LINE
	OIL ROAD
	CL WATERBODY
	WATER SUPPLY LINE
	ELECTRIC LINE
	RIGHT-OF-WAY
	POWER POLE
	MAINLINE VALVE
	TEST LEAD
	SEGMENTABLE BEND
	WATER WELL
	SADDLE BAGS
	TRENCH BREAKER
	MILE POST
	PERMANENT EASEMENT
	TEMPORARY WORKSPACE
	ADDITIONAL TEMPORARY WORKSPACE
	STREAM
	WETLAND
	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10"/12" PIPELINE  
ISSUE FOR REVIEW  
SOUTH ADAMS / LINE 4  
PRELIMINARY ALIGNMENT SHEETS  
0+00 TO 60+00  
ADAMS COUNTY, COLORADO**

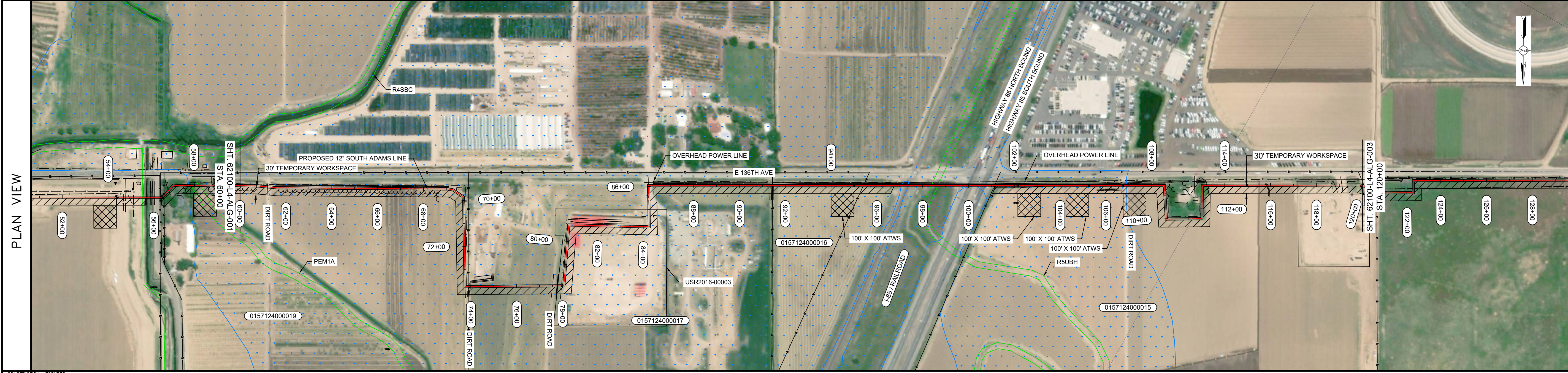
DWG NO: 62100-L4-ALG-001    SHEET 1 OF 7    REV: B

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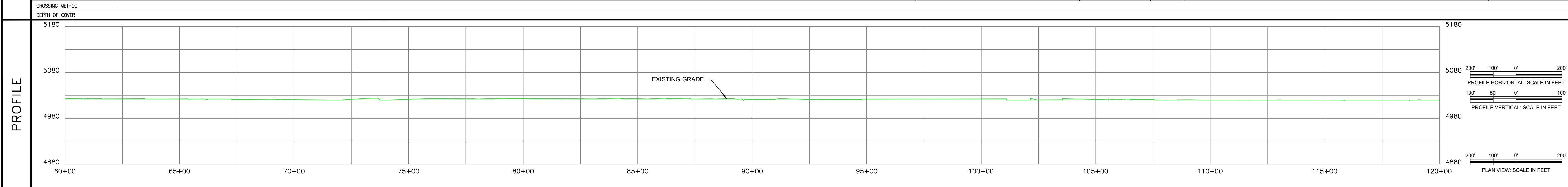
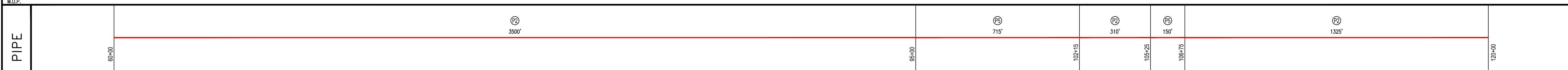


OWNER	0157124000019 H.F. INVESTMENT COMPANY LLC 84.17 RODS	0157124000017 SCHAEFER ELAINE A ET AL 106.40 RODS	0157124000016 SCHAEFER ELAINE A ET AL 24.03 RODS	I-85 / RAILROAD 34.72 RODS	0157124000015 SHARP AC LAND LLC 114.31 RODS
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STATIONING	68+00 P.I. < 68+05.49 RT 67+19 CL 12' GRAVEL FIELD ROAD 61+64 P.I. < 64+45.11 LT 67+64 CL 10' GRAVEL ROAD 63+42 CL 10' GRAVEL ROAD 68+05 CL 10' GRAVEL ROAD 68+06 P.I. < 67+05.57 RT 68+28 CL 10' GRAVEL ROAD 68+28 P.I. < 67+07.07 RT 68+84 P.I. < 67+02.42 RT 68+95 CL 10' GRAVEL ROAD 70+13 P.I. < 67+07.07 RT 72+91 CENTERLINE OF GRAVEL ROAD 72+75 P.I. < 67+28.99 LT 73+88 6' BARBED WIRE FENCE 73+94 CL DITCH 73+96 TOP OF BANK 77+77 CL OF BANK 77+78 CL IRRIGATION DITCH 77+79 TOP OF BANK 78+06 P.I. < 64+51.13 LT 80+72 P.I. < 68+37.16 RT	84+24 P.I. < 82+12.27 LT 84+99 CL 25' GRAVEL ROAD 85+00 P.I. < 85+03.37 RT 85+00 P.I. < 85+03.37 RT 86+25 UNITED POWER OVERHEAD POWER LINE	91+35 TOP OF BANK 91+41 CL 12' IRRIGATION DITCH 91+47 TOP OF BANK	97+07 EDGE OF FLOODPLAIN 97+07 CL OF ROAD 97+38 EDGE OF FLOODPLAIN 98+38 EDGE OF WETLAND 98+70 CL OF STREAM 100+01 CENTERLINE OF HIGHWAY 85 NORTH BOUND 100+22 EDGE OF FLOODPLAIN 100+32 CENTERLINE OF HIGHWAY 85 SOUTH BOUND 102+46 POWER POLE LT. 6 102+46 UNITED POWER OVERHEAD POWER LINE 102+46 POWER POLE LT. 20 104+61 TOE OF BANK 105+77 12" PLASTIC CULVERT 105+84 TOE OF BANK 105+84 10' X 10' PUMP HOUSE 106+27 IRRIGATION PUMP HOUSE 106+32 POWER POLE LT. 5 106+39 POWER POLE LT. 12 106+46 EDGE OF FLOODPLAIN 108+55 P.I. < 86+24.42 RT 108+55 P.I. < 86+24.42 RT 108+62 TREE LINE 108+62 TREE LINE 110+02 P.I. < 87+81.19 LT 110+02 P.I. < 87+81.19 LT 112+38 LIGHT POLE LT. 16 113+00 POWER POLE LT. 17 113+02 P.I. < 89+05.57 RT 113+16 TREE LINE 116+81 TOP OF BANK 116+81 JUNCTION DITCH 116+88 TOP OF BANK 116+88 JUNCTION BOX LT. 4 116+88 JUNCTION BOX LT. 8 118+72 JUNCTION BOX LT. 4 118+81 4' BARBED WIRE FENCE 119+12 CL 30' GRAVEL ACCESS ROAD 119+36 4' BARBED WIRE FENCE 119+51 P.I. < 106+25.25 RT 119+52 4' BARBED WIRE FENCE
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CONSERVATION MEASURES	USAGE	WETLAND/WATERBODY	WETLAND/WATERBODY TYPE	M.O.P.
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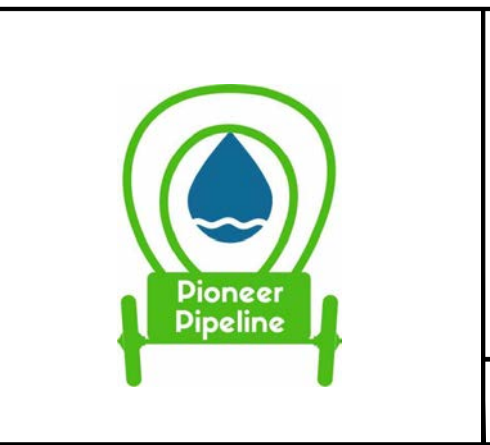
MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P2	5135'	12" DR7 HDPE	A	01/16/20	ISSUE FOR REVIEW
P5	865'	12" DR7 HDPE -- BORE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
—FC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—	CIL ROAD
—	CIL WATERBODY
—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊙	POWER POLE
⊕	MAINLINE VALVE
⊕	TEST LEAD
⊕	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
⊕	PERMANENT EASEMENT
⊕	TEMPORARY WORKSPACE
⊕	ADDITIONAL TEMPORARY WORKSPACE
⊕	STREAM
⊕	WETLAND
⊕	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



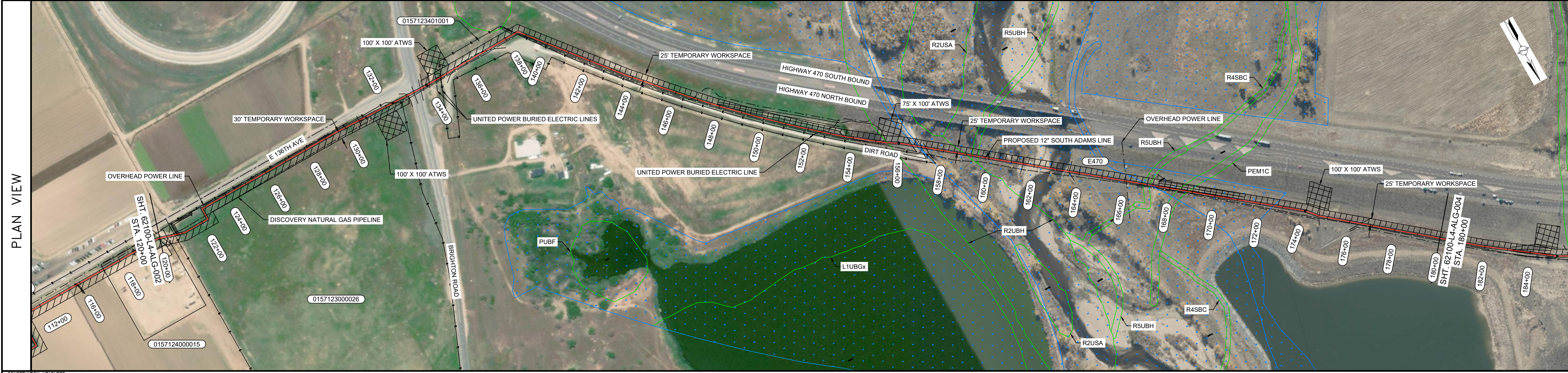
**PROPOSED 10"/12" PIPELINE  
ISSUE FOR REVIEW  
SOUTH ADAMS / LINE 4  
PRELIMINARY ALIGNMENT SHEETS  
60+00 TO 120+00  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-L4-ALG-002** SHEET **2** OF **7** REV: **B**

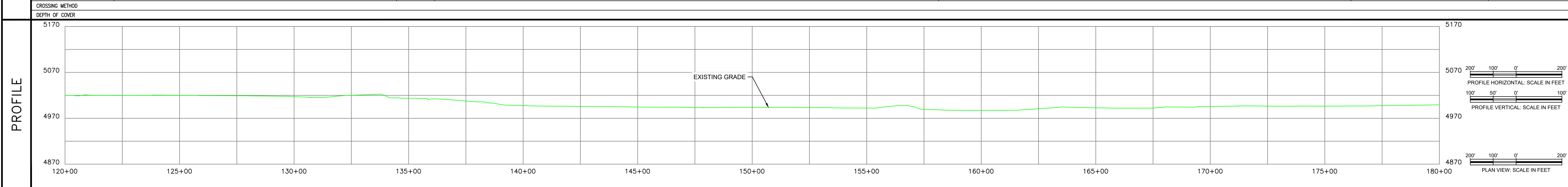
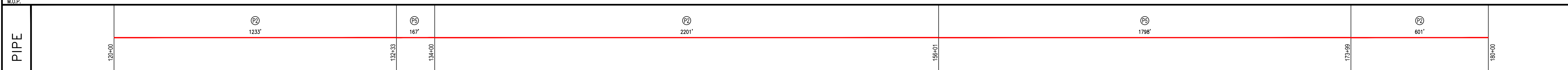
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OWNER	STATIONING
0157124000015 SHARP AC LAND LLC 4.06 RODS	120+00 120+467
0157123000026 CAMAS COLORADO INC C/O AGGREGATE INDUSTRIES 70.92 RODS	129+467 130+467
BRIGHTON ROAD ADAMS COUNTY 14.24 RODS	132+37 134+77
0157123401001 BOARD OF COUNTY COMMISSIONERS COUNTY OF ADAMS 22.82 RODS	134+77 139+49
E470 STATE OF COLORADO 251.59 RODS	161+50 179+91



CONSERVATION MEASURES
USAGE
TIMING RESTRICTIONS
WETLAND WATERBODY
WETLAND/WATERBODY TYPE
M.O.P.



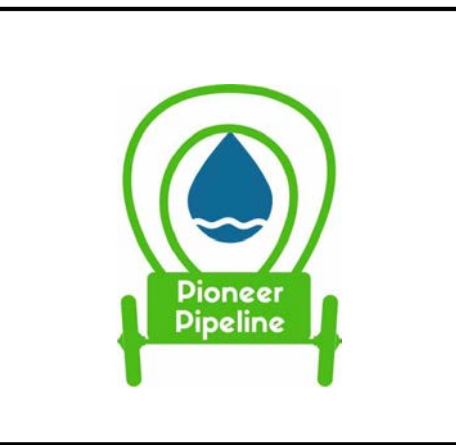
MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P2	4035'	12" DR7 HDPE	A	01/16/20	ISSUE FOR REVIEW
P5	1965'	12" DR7 HDPE - BORE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
—	PROPERTY LINE
— —	FOREIGN PIPELINE
—FC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—	CIL ROAD
—	WATERBODY
—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊙	POWER POLE
⊕	MAINLINE VALVE
⊕	TEST LEAD
⊕	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
⊕	PERMANENT EASEMENT
⊕	TEMPORARY WORKSPACE
⊕	ADDITIONAL TEMPORARY WORKSPACE
⊕	STREAM
⊕	WETLAND
⊕	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10"/12" PIPELINE  
ISSUE FOR REVIEW  
SOUTH ADAMS / LINE 4  
PRELIMINARY ALIGNMENT SHEETS  
120+00 TO 180+00  
ADAMS COUNTY, COLORADO**

DWG NO: 62100-L4-ALG-003 SHEET 3 OF 7 REV: B

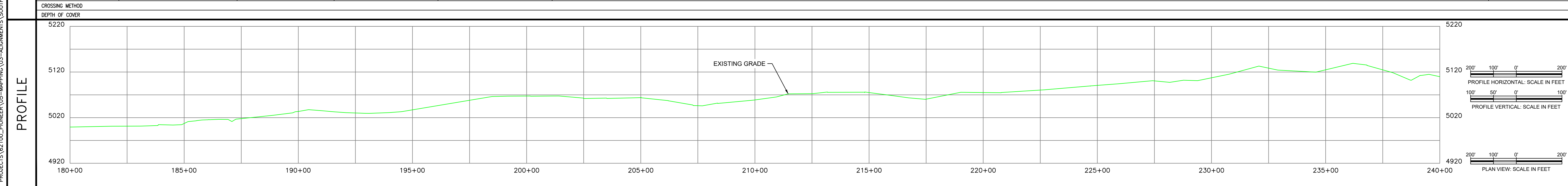
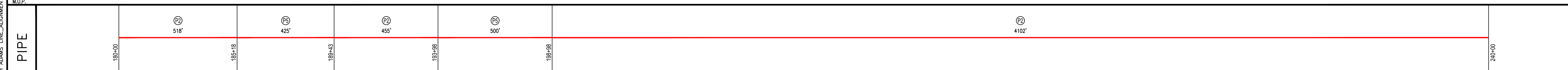
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OWNER	STATIONING
180+00 E470 STATE OF COLORADO 54.34 RODS	181+82 P.I. < 3'00"25' LT. 183+15 TOE OF BANK 184+28 TOE OF BANK 185+51 P.I. < 4'56"27' LT. 186+84 CL. OF STREAM 188+00 PEDESTAL LT. 17 189+07 UNITED POWER UNDERGROUND POWER LINE (UNK. COV.) 188+13 JUNCTION BOX LT. 24 188+16 JUNCTION BOX LT. 22 188+46 CL. OF STREAM 188+46 CL. OF STREAM 188+46 CL. OF STREAM 187+25 TOP OF BANK 187+25 TOP OF BANK 188+00 CENTER LINE OF RIVERDALE ROAD 188+91.4' HOGWIRE FENCE 188+98 P.I. < 4'46"03' LT.
188+97 0157122102035 ADAMS COUNTY 33.58 RODS	192+94 P.I. < 1'42"30' LT. 189+88 DISCOVERY PIPELINE (8.4' COV.) 193+98 P.I. < 88'22"35' LT. 194+53 4' HOGWIRE FENCE 188+10 CENTERLINE OF HIGHWAY 470 NORTH BOUND 197+73 CENTERLINE OF HIGHWAY 470 SOUTH BOUND 188+99.4' HOGWIRE FENCE 192+21 P.I. < 86'35"07' RT.
194+51 E470 STATE OF COLORADO 25.15 RODS	201+41 P.I. < 5'72"29' LT. 204+59 P.I. < 3'40"13' LT.
198+08 0157122103003 SAVE A CHILD INC 45.51 RODS	207+73.30' METAL CULVERT 210+91 TOE OF BANK 212+30 TOE OF BANK 213+18 P.I. < 4'05"07' RT. 214+81 P.I. < 2'32"24' RT.
208+17 0157122103001 PJDS FAMILY TRUST THE 64.44 RODS	216+73.3' ELECTRIC FENCE 218+02 P.I. < 2'05"21' RT.
216+80 0157122000001 COUNTY OF ADAMS 140.62 RODS	238+81 P.I. < 30'28"55' RT. 238+22 P.I. < 280'44"51' LT.



CONSERVATION MEASURES
USAGE
TIMING RESTRICTIONS
WETLAND/WATERBODY
WETLAND/WATERBODY TYPE
M.O.P.



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P2	5075'	12" DR7 HDPE	A	01/16/20	ISSUE FOR REVIEW
P5	925'	12" DR7 HDPE -- BORE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
—	PROPERTY LINE
— —	FOREIGN PIPELINE
—FC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—	CIL ROAD
—	WATER BODY
—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊙	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊕	SEGMENTABLE BEND
⊙	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
□	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
⊙	MILE POST
□	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10"/12" PIPELINE  
ISSUE FOR REVIEW  
SOUTH ADAMS / LINE 4  
PRELIMINARY ALIGNMENT SHEETS  
180+00 TO 240+00  
ADAMS COUNTY, COLORADO**

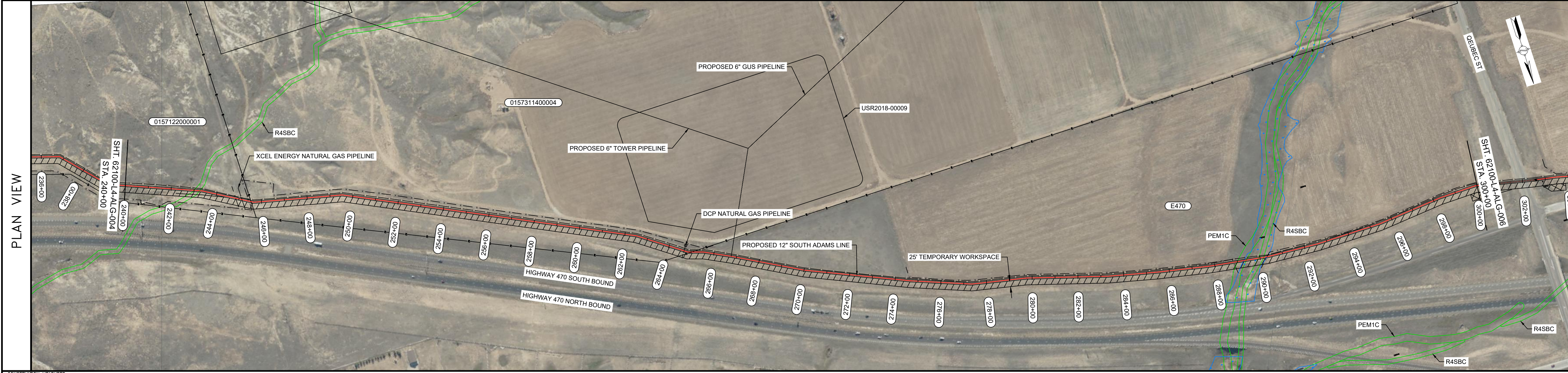
DWG NO: 62100-L4-ALG-004    SHEET 4 OF 7    REV: B

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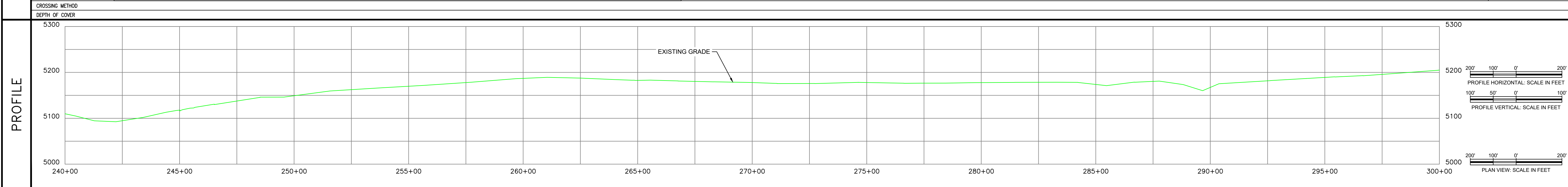
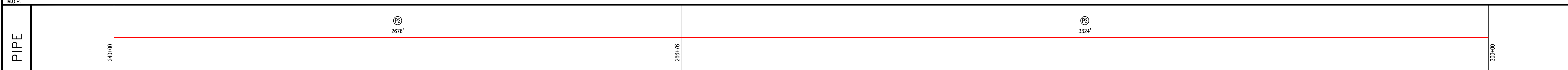


OWNER	015712200001 COUNTY OF ADAMS 33.56 RODS	0157311400004 EHLER IRENE ET AL 118.06 RODS	E470 STATE OF COLORADO 212.02 RODS
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STATIONING	240+00 245+54 248+51 P.I. < 0'1528' LT. 249+55 P.I. < 1'2500' RT.	250+00 252+48 P.I. < 9'3624' RT. 254+88 P.I. < 17'5324' LT. 255+55 P.I. < 9'4621' RT. 258+75 P.I. < 1'5825' RT.	265+00 264+89 4" DCP NATURAL GAS PIPELINE (UNK. COV.) 264+88 P.I. < 17'5324' LT. 265+55 P.I. < 9'4621' RT. 268+75 P.I. < 1'5825' RT.	270+00 270+00 P.I. < 4'5900' LT.	274+64 P.I. < 2'4304' LT.	277+95 P.I. < 8'1634' LT.	278+75 P.I. < 4'5820' RT.	283+31 P.I. < 3'2807' LT.	285+47 P.I. < 1'4695' LT.	287+77 P.I. < 2'4101' LT. 288+83 4" HOGWIRE FENCE 288+00 EDGE OF WETLAND 288+00 EDGE OF WETLAND 288+46 EDGE OF WETLAND 288+46 EDGE OF WETLAND 289+17 EDGE OF WETLAND 289+17 EDGE OF WETLAND 289+31 HOGWIRE FENCE 289+31 P.I. < 5'0657' LT. 290+42 CL OF STREAM	292+45 P.I. < 3'3632' LT.	295+44 P.I. < 5'1756' LT.	298+30 P.I. < 4'2557' RT.	299+45 P.I. < 130222' RT.	300+00
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CONSERVATION MEASURES	
USAGE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY	
WETLAND/WATERBODY TYPE	
M.O.P.	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P2	2676'	12" DR7 HDPE	A	01/16/20	ISSUE FOR REVIEW
P3	3324'	12" DR11 HDPE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
—	PROPERTY LINE
— —	FOREIGN PIPELINE
—FC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—	CIL ROAD
—	WATER BODY
—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊙	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊙	SEGMENTABLE BEND
⊙	WATER WELL
⊙	SADDLE BAGS
⊙	TRENCH BREAKER
□	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
⬢	FLOODPLAIN
⬢	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10"/12" PIPELINE**  
**ISSUE FOR REVIEW**  
**SOUTH ADAMS / LINE 4**  
**PRELIMINARY ALIGNMENT SHEETS**  
**240+00 TO 300+00**  
**ADAMS COUNTY, COLORADO**

DWG NO: 62100-L4-ALG-005    SHEET 5 OF 7    REV: B

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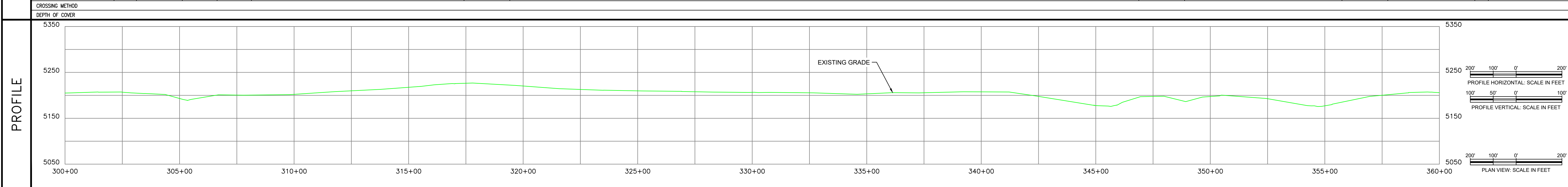
OWNER: STATE OF COLORADO  
 363.64 RODS  
 STATIONING: 300+00 TO 360+00

300+00 UNITED POWER UNDERGROUND POWER LINE (UNK. COV.)  
 300+00 CENTERLINE OF QUEBEC ST  
 302+48 P.I. < 2'2002' LT.  
 302+85 JUNCTION BOX RT. 10  
 303+22 JUNCTION BOX RT. 10  
 303+59 JUNCTION BOX RT. 10  
 304+46 JUNCTION BOX RT. 13  
 305+17 P.I. < 3'3844' RT.  
 305+37 P.I. < 2'2533' RT.  
 305+54 P.I. < 4'5742' RT.  
 305+81 EDGE OF WETLAND  
 305+81 EDGE OF WETLAND  
 311+78 P.I. < 0'0921' RT.  
 315+50.4' HOGWIRE FENCE  
 317+02 FENCE  
 326+92 P.I. < 5'0755' RT.  
 330+23 10" SINCLAIR PETROLEUM PIPELINE (UNK. COV.)  
 330+47 6" SINCLAIR PETROLEUM PIPELINE (UNK. COV.)  
 334+58 P.I. < 4'4644' RT.  
 344+63 P.I. < 0'1611' RT.  
 345+18 EDGE OF WETLAND  
 345+38 EDGE OF WETLAND  
 352+46 P.I. < 0'0753' RT.  
 353+41 EDGE OF WETLAND  
 353+81 EDGE OF WETLAND  
 354+27 EDGE OF FLOODPLAIN  
 354+42 CONCRETE HEADWALL  
 354+58 EDGE OF WETLAND  
 354+58 EDGE OF WETLAND  
 355+25 EDGE OF FLOODPLAIN  
 355+89 CL OF STREAM  
 359+51 4' BARBED WIRE FENCE



CONSERVATION MEASURES	USAGE
TIMING RESTRICTIONS	WETLAND/WATERBODY
WETLAND/WATERBODY	WETLAND/WATERBODY TYPE
M.O.P.	

PIPE	SIZE	LENGTH
P3	12"	61'
P6	12"	196'
P3	12"	191'
P6	12"	150'
P3	12"	926'
P6	12"	200'
P3	12"	2746'
P6	12"	200'
P3	12"	687'
P6	12"	200'
P3	12"	364'
P6	12"	71'



MK. NO.	QTY.	MATERIAL SUMMARY	REV.	DATE	REVISION
P3	4977'	12" DR11 HDPE	A	01/16/20	ISSUE FOR REVIEW
P6	1023'	12" DR11 HDPE - BORE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
—	PROPERTY LINE
— —	FOREIGN PIPELINE
—FC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—	CIL ROAD
—	OIL WATERBODY
—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊕	POWER POLE
⊕	MAINLINE VALVE
⊕	TEST LEAD
⊕	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
⊕	MILE POST
⊕	PERMANENT EASEMENT
⊕	TEMPORARY WORKSPACE
⊕	ADDITIONAL TEMPORARY WORKSPACE
⊕	STREAM
⊕	WETLAND
⊕	FLOODPLAIN

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- A MINIMUM OF 5 FEET WALL TO WALL OF HORIZONTAL CLEARANCE IS REQUIRED AT ALL ADJACENT PIPELINES.
- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA.

CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 10"/12" PIPELINE  
 ISSUE FOR REVIEW  
 SOUTH ADAMS / LINE 4  
 PRELIMINARY ALIGNMENT SHEETS  
 300+00 TO 360+00  
 ADAMS COUNTY, COLORADO**

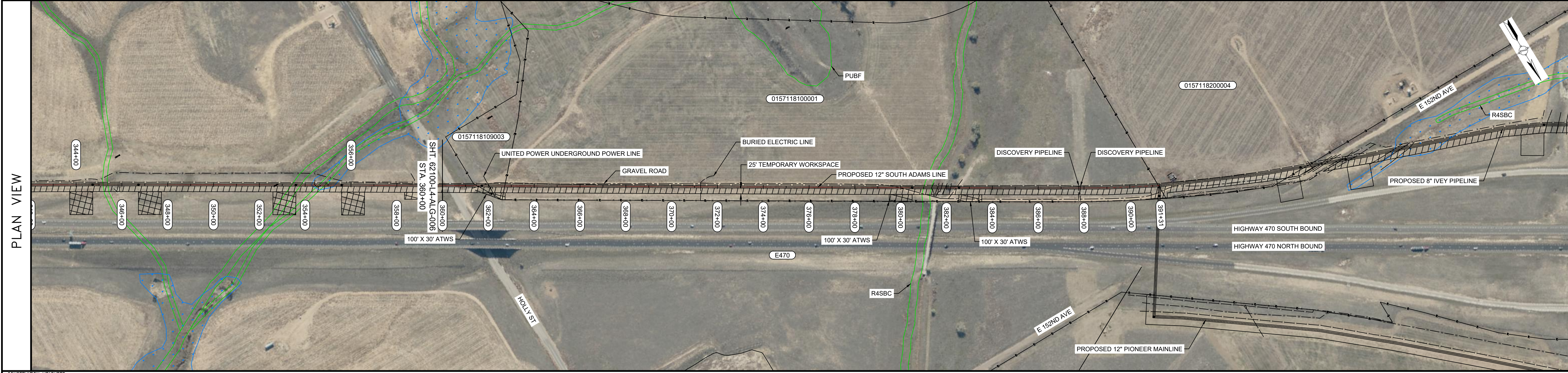
DWG NO: 62100-L4-ALG-006 SHEET 6 OF 7 REV: B

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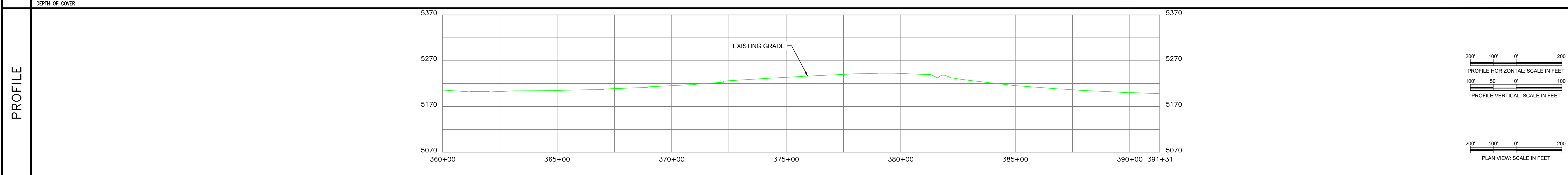
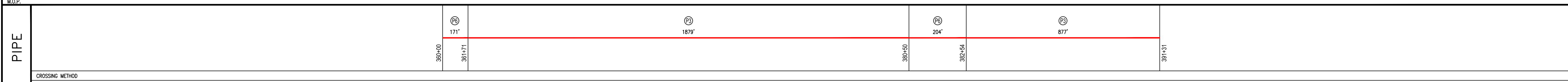


OWNER	STATE OF COLORADO 9.18 RODS	LENNAR COLORADO LLC 7.27 RODS	POSTLE DEVELOPMENT COMPANY 172.97 RODS	COLORADO AND E-470 LLC 0.31 RODS
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STATIONING	360+00 361+51 362+00 362+43 362+07 362+10 362+16 371+26 377+98 379+96 381+35 381+61 381+78 382+17 382+43 384+91 387+71 387+84 388+00 391+31	360+00 361+51 362+00 362+43 362+07 362+10 362+16 371+26 377+98 379+96 381+35 381+61 381+78 382+17 382+43 384+91 387+71 387+84 388+00 391+31	360+00 361+51 362+00 362+43 362+07 362+10 362+16 371+26 377+98 379+96 381+35 381+61 381+78 382+17 382+43 384+91 387+71 387+84 388+00 391+31	360+00 361+51 362+00 362+43 362+07 362+10 362+16 371+26 377+98 379+96 381+35 381+61 381+78 382+17 382+43 384+91 387+71 387+84 388+00 391+31	360+00 361+51 362+00 362+43 362+07 362+10 362+16 371+26 377+98 379+96 381+35 381+61 381+78 382+17 382+43 384+91 387+71 387+84 388+00 391+31
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CONSERVATION MEASURES	USAGE
TIMING RESTRICTIONS	
WETLAND WATERBODY	
WETLAND/WATERBODY TYPE	
M.O.P.	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P3	2756'	12" DR11 HDPE	A	01/16/20	ISSUE FOR REVIEW
P6	375'	12" DR11 HDPE - BORE	B	02/19/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
—E—E—	PROPERTY LINE
—F—F—	FOREIGN PIPELINE
—FOC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—C—C—	CIL ROAD
—W—W—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊙	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⊙	SEGMENTABLE BEND
⊙	WATER WELL
⊙	SADDLE BAGS
⊙	TRENCH BREAKER
□	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
▨	WETLAND
⊙	MILE POST
▨	FLOODPLAIN

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- ALL PARCEL DATA HEREIN REFLECTS THE RESPECTIVE COUNTY "GIS" DATA.

CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	

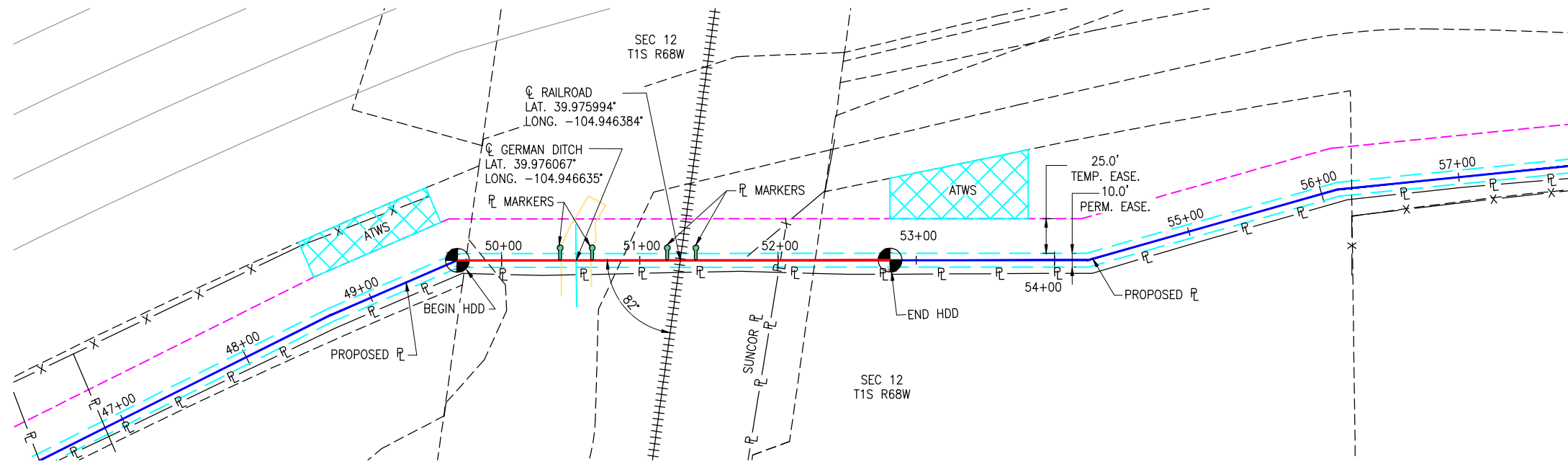


**PROPOSED 10"/12" PIPELINE**  
**ISSUE FOR REVIEW**  
**SOUTH ADAMS / LINE 4**  
**PRELIMINARY ALIGNMENT SHEETS**  
**360+00 TO 391+31**  
**ADAMS COUNTY, COLORADO**

DWG NO: 62100-L4-ALG-007    SHEET 7 OF 7    REV: B

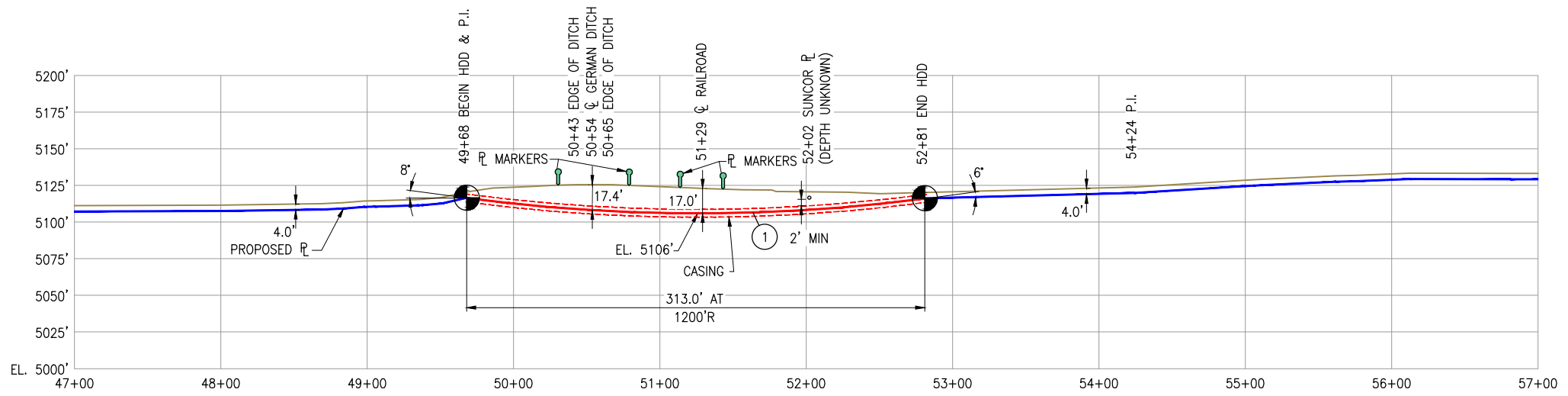
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PLAN VIEW

SCALE: 1"=100'



PROFILE VIEW

SCALE: HORIZ: 1"=100', VERT: 1"=100'

- NOTES:
- IN ADDITION TO THE SITE-SPECIFIC INFORMATION PROVIDED IN THIS DRAWING, GENERAL REQUIREMENTS INCLUDED IN PERMITS AND APPROVAL FROM FEDERAL, STATE, AND LOCAL AGENCIES ALSO APPLY.
  - CONTRACTOR SHALL USE THE "ONE-CALL" SYSTEM PRIOR TO BEGINNING WORK. CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL PARALLEL AND CROSSED UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION. THIS DRAWING SHALL NOT CONSTITUTE VERIFICATION OF LOCATION, DEPTH, QUANTITY, SIZE, OR TYPES OF EXISTING UTILITIES.
  - CONTRACTOR SHALL VERIFY ALL EXISTING FACILITY PLACEMENT PRIOR TO SUBMITTING BID. SPECIFIC SAFETY PROCEDURES, OUTLINED BY COMPANY, ARE TO BE FOLLOWED AT ALL TIMES. PERMITTING AND NOTIFICATION TO CROSS, OR WORK OVER EXISTING FACILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. MAINTAIN 2ft MINIMUM CLEARANCE WHEN CROSSING FOREIGN UNDERGROUND UTILITIES.
  - IF MATTING, SHORING, AND WELL POINTS ARE REQUIRED IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
  - ENTRY AND EXIT ANGLES ARE MEASURED FROM HORIZONTAL PLANE.
  - FILL MATERIAL IS NOT REQUIRED AT THIS SITE.
  - COORDINATES SHOWN ARE BASED ON STATE PLANE NAD 83 DATUM, US FOOT; COLORADO NORTH.
  - UTILITIES SHOWN ARE FOR HORIZONTAL REFERENCE ONLY.
  - INSTALL PIPELINE WARNING MARKERS ON BOTH SIDES OF CANAL.
  - LOCATING WIRE TO BE INSTALLED WITH PIPELINE.

REF. DWG. No.	REFERENCE DRAWING TITLE	REV.	REVISION DESCRIPTION	BY	CHK	APPD	DATE
		B	ISSUED FOR PERMIT	CAG	AL	JWM	2/17/20
		A	ISSUED FOR REVIEW	CAG	AL	JWM	2/17/20

**SPARTAN**  
ENGINEERING INC.  
12345 W. ALAMEDA PKWY. SUITE 205  
LAKEWOOD, CO. 80228  
303-658-0358  
www.spartan-eng.com



PER COLORADO STATE LAW, CONTACT "ONE-CALL" 48 HOURS (MIN.) PRIOR TO ANY EXCAVATION OR DIGGING POTHOLES. ALL UTILITY LOCATIONS AND DEPTHS MUST BE VERIFIED.

**Pioneer Pipeline**  
ADAMS COUNTY, COLORADO  
PIONEER PIPELINE PROJECT  
CROSSING AT UNION PACIFIC RAILROAD AND GERMAN DITCH  
SEC. 12, T1S, R68W

DWG. SCALE	DWG. SIZE	DRAWING No.	REV.
AS NOTED	ANSI B	10879-HDD-UP RAILROAD (51+29)	B

VICINITY MAP (N.T.S.)  
E. 156TH AVE.  
E-470  
COLD BLVD.  
PROPOSED RAILROAD  
LAT: 39.975994° LONG: -104.946384°  
PROPOSED GERMAN DITCH  
LAT: 39.976067° LONG: -104.946635°

CROSSING PIPE SPEC

ITEM	SIZE	DR	MAOP (PSIG)	PIPE SERVICE	MIN. BEND RADIUS
1	8"	9	161	PRODUCED WATER	240'

PIPE MATERIAL

LINE PIPE: 8", DR9, PE-RT, API 15LE	H.D.D. PIPE: 8", DR9, PE-RT, API 15LE
CASING PIPE: 12.750" O.D. x 0.375" WT, API 5L PSL-2, GR B, BARE, ERW, BFW	

H.D.D. BEGIN / END COORDS.

BEGIN H.D.D.	LAT. 39.976150°	LONG. -104.946922°
END H.D.D.	LAT. 39.975847°	LONG. -104.945877°

LEGEND

- H.D.D. ENTRY or EXIT
- BORE PIT
- A.T.W.S. (ADD'L TEMP. WORKSPACE)
- C/L EASEMENT
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- PROPOSED H.D.D.
- PROPERTY LINE/SECTION LINE
- FENCE LINE
- C/L ROAD/DRIVE
- EDGE OF ROAD/DRIVE
- GUARD RAIL
- CULVERT/SEWER
- RIGHT-OF-WAY
- RAILROAD TRACK
- C/L DITCH/STREAM/WATER
- TOP BANK/SLOPE
- TOE BANK/SLOPE
- EDGE OF FIELD/TREE LINE
- FOREIGN/FUTURE PIPELINE
- FOREIGN/FUTURE EASEMENT
- IRRIGATION LINE
- BURIED POWER
- OVERHEAD POWER
- COMM./TELE./T.V./FIBER OPTIC LINE
- STRUCTURE
- GUY WIRE/OVERHEAD OBSTRUCTION



OWNER

CO-ADAMS-0157311400004

EHLER IRENE ET AL

99.34 RODS

16+39

STATIONING

0+00 BEGIN STA.

5+28 -46'30"0"LT  
5+29 -46'30"0"LT

13+50 EDGE OF WETLAND  
13+72 EDGE OF WETLAND

15+43 FENCE

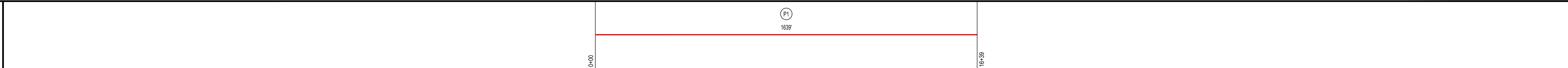
16+28 DISCOVERY OTHER-COMMENTS PIPELINE (8.6 COV.)  
16+39 END STA.

PLAN VIEW

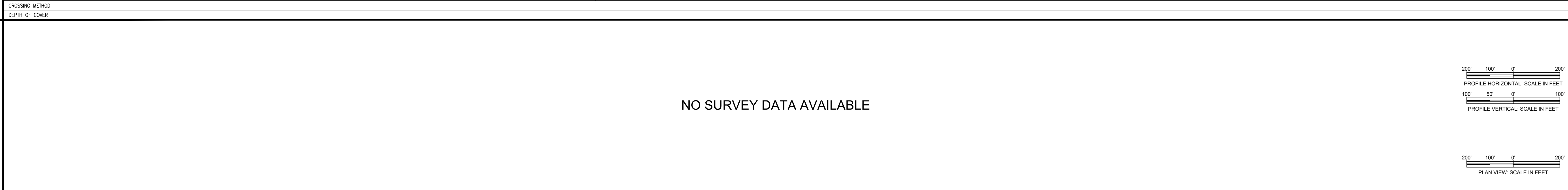


CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	

PIPE



PROFILE



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	1639'	6" DR11 POLY	A	01/16/20	ISSUE FOR REVIEW
			B	02/11/20	ADDED ENVIRONMENTAL DATA AND PADS

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
—FOC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—C—C—	CIL ROAD
—W—W—	CIL WATERBODY
—E—E—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
⚡	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
◊	MILE POST
▭	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
▨	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



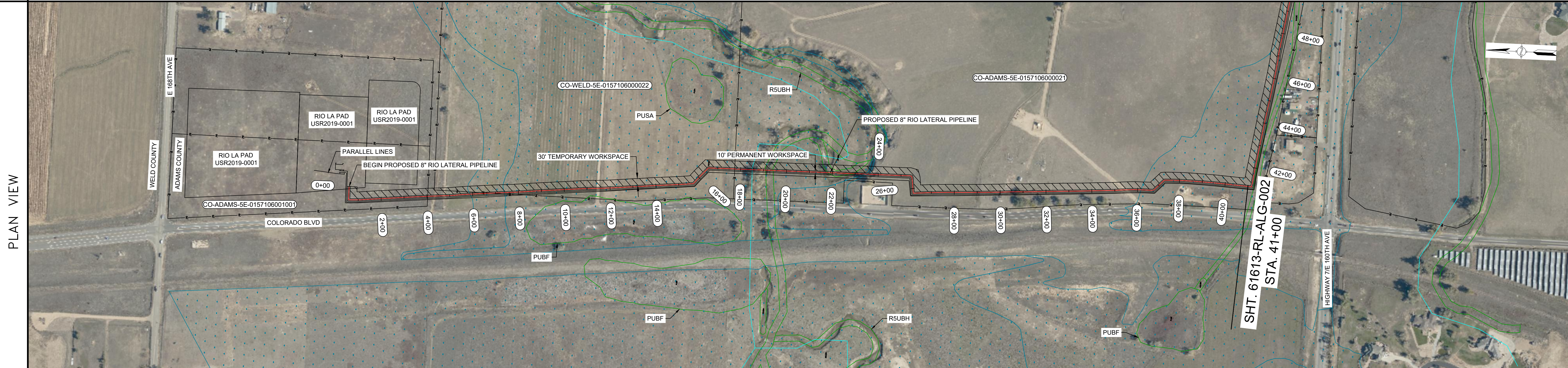
**PROPOSED 6" PIPELINE**  
**ISSUED FOR REVIEW**  
**GUS LATERAL**  
**PRELIMINARY ALIGNMENT SHEET**  
 STA. 0+00 TO STA. 16+39  
 ADAMS COUNTY, COLORADO

DWG NO: 62100-GL-ALG-001    SHEET 1 OF 1    REV: B

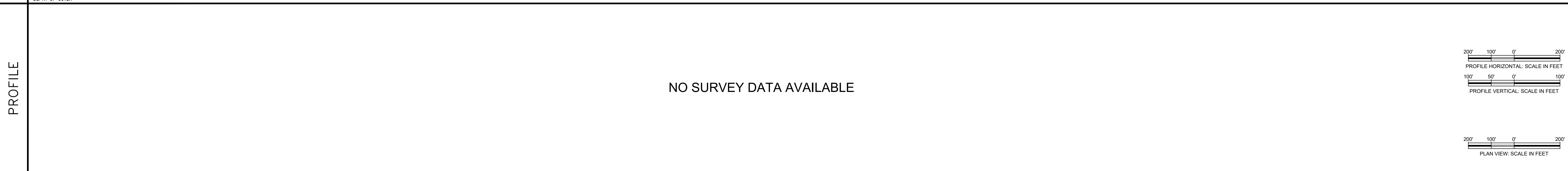
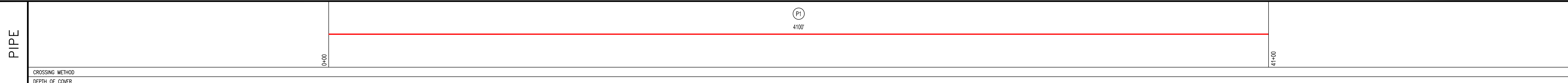


OWNER	CO-ADAMS-5E-0157106001001 RIO LA LLC 24.44 RODS	CO-WELD-XXX UNKNOWN 16.91 RODS	CO-WELD-5E-0157106000022 HAVANA AND ILIFF LLC 66.12 RODS	CO-ADAMS-5E-0157106000021 HAVANA AND ILIFF LLC 141.02 RODS
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STATIONING	0+00 BEGIN STA. 0+57 <1'46'22.91'L.I. 0+59 <1'46'22.91'L.I. 1+07 <1'48'05'L.I.	5+02 <1'42'13'L.I. 5+12 <1'15'45'L.I. 5+56 <1'54'35'R.L.I. 5+88 EDGE OF FLOODPLAIN	7+38 EDGE OF FLOODPLAIN 7+40 EDGE OF FLOODPLAIN 7+76 <1'05'48'L.I.	10+84 <1'16'52'R.L.I. 11+73 <1'28'37'L.I. 12+16 <1'00'02'L.I.	14+75 <1'13'57'L.I. 15+63 <1'47'32'01'L.I. 16+04 <1'49'41'R.L.I. 16+58 <1'48'16'23'R.L.I. 16+61 <1'55'12'21'L.I. 16+82 <1'43'04'R.L.I. 16+84 <1'20'05'L.I. 16+88 <1'52'00'R.L.I.	18+49 NHD FLOWLINE 19+08 EDGE OF WETLAND 19+41 EDGE OF WETLAND	21+78 EDGE OF WETLAND 22+49 EDGE OF WETLAND 23+41 EDGE OF FLOODPLAIN 23+49 EDGE OF FLOODPLAIN	25+51 <1'09'54'L.I. 25+57 <1'17'23'R.L.I. 25+64 <1'58'30'49'R.L.I. 25+83 <1'11'33'R.L.I. 26+20 <1'57'39'31'L.I.	30+65 <1'01'00'R.L.I. 30+73 <1'20'23'L.I. 30+81 <1'11'45'00'R.L.I. 30+88 <1'01'03'L.I. 30+95 <1'12'25'L.I.	31+10 <1'20'14'L.I. 32+20 <1'20'01'R.L.I. 32+32 <1'13'01'L.I.	34+95 <1'31'06'L.I. 35+38 <1'13'25'R.L.I. 35+83 <1'30'23'R.L.I. 36+14 EDGE OF FLOODPLAIN	36+68 <1'45'44'L.I. 37+53 <1'36'42'51'R.L.I. 37+57 <1'29'59'R.L.I. 38+15 <1'14'12'R.L.I. 38+48 <1'08'55'R.L.I.	41+00
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CONSERVATION MEASURES	USACE
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	4100'	8" DR11 HDPE	A	01/14/20	ISSUE FOR REVIEW
			B	02/24/20	ADDED ENVIRONMENTAL DATA AND PADS, REROUTE

LEGEND	
—●—	PROPOSED PIPELINE
— — —	PROPERTY LINE
— — —	FOREIGN PIPELINE
—FOC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—C/R—	CIL ROAD
—W—W—	CIL WATERBODY
—W—W—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
—●—	POWER POLE
— — —	MAINLINE VALVE
—●—	TEST LEAD
—▽—	SEGMENTABLE BEND
—○—	WATER WELL
—○—	SADDLE BAGS
—○—	TRENCH BREAKER
— — —	PERMANENT EASEMENT
— — —	TEMPORARY WORKSPACE
— — —	ADDITIONAL TEMPORARY WORKSPACE
— — —	STREAM
— — —	WETLAND
— — —	FLOODPLAIN
— — —	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	

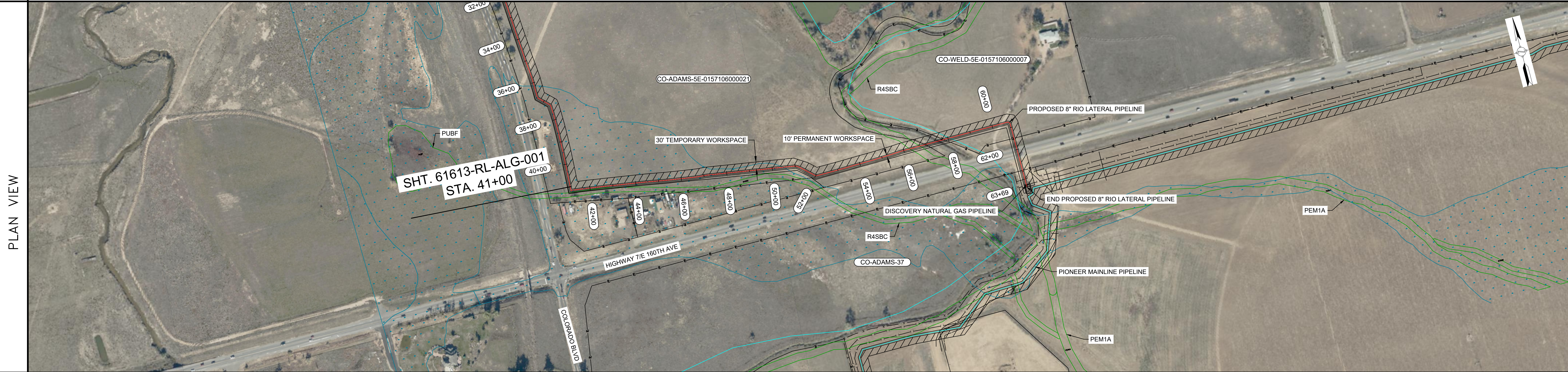


**PROPOSED 8" PIPELINE  
ISSUED FOR REVIEW  
RIO LATERAL  
PRELIMINARY ALIGNMENT SHEET  
STA. 0+00 TO STA. 41+00  
ADAMS COUNTY, COLORADO**

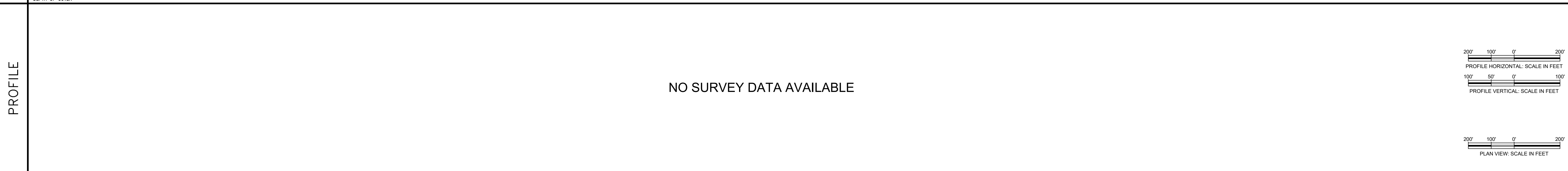
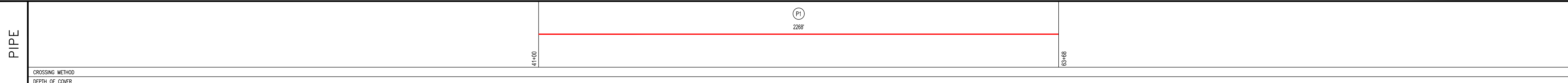
DWG NO: **62100-RL-ALG-001** SHEET **1** OF **2** REV: **B**



OWNER	CO-ADAMS-5E-0157106000021 HAVANA AND ILIFF LLC 96.70 RODS	CO-WELD-XXX UNKNOWN 5.12 RODS	CO-WELD-5E-0157106000007 EGAN ARTHUR G AND EGAN EDNA R 22.33 RODS	CO-WELD-XXX UNKNOWN 8.80 RODS	CO-ADAMS-37 BRIGHTON FARMS LLC 4.52 RODS
STATIONING	41+00 41+16 <S11581>L 41+89 <S11306>RT 44+46 <S10240>RT 46+81 <S5957>L 46+89 <S2111>L 46+94 <S10943>RT 47+00 <S10510>RT 47+11 <S23951>RT 50+46 EDGE OF FLOODPLAIN 51+02 <S230646>RT 51+16 <S10256>RT 51+53 <S12652>RT 52+00 <S239181>L 55+00 <S112051>L 55+88 <S25934>RT 61+48 62+84 63+68 62+00 CENTERLINE OF HIGHWAY 7/E 160TH AVE 63+38 FENCE 63+51 FENCE 63+57 SOLAR PANEL 63+68 20" DISCOVERY NATURAL GAS PIPELINE (7.5 COV.) 63+68 END STA.				



CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	2268'	8" DR11 HDPE	A	01/14/20	ISSUE FOR REVIEW
			B	02/24/20	ADDED ENVIRONMENTAL DATA AND PADS, REROUTE

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
—FOC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—C/R—	CIL ROAD
—W—W—	CIL WATERBODY
—W—W—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
⊗	POWER POLE
⊕	MAINLINE VALVE
⊙	TEST LEAD
▽	SEGMENTABLE BEND
⊕	WATER WELL
⊕	SADDLE BAGS
⊕	TRENCH BREAKER
◻	PERMANENT EASEMENT
▨	TEMPORARY WORKSPACE
▩	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
▨	FLOODPLAIN
⬮	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 8" PIPELINE  
ISSUED FOR REVIEW  
RIO LATERAL  
PRELIMINARY ALIGNMENT SHEET  
STA. 41+00 TO STA. 63+68  
ADAMS COUNTY, COLORADO**

DWG NO: **62100-RL-ALG-002** SHEET **2** OF **2** REV: **B**

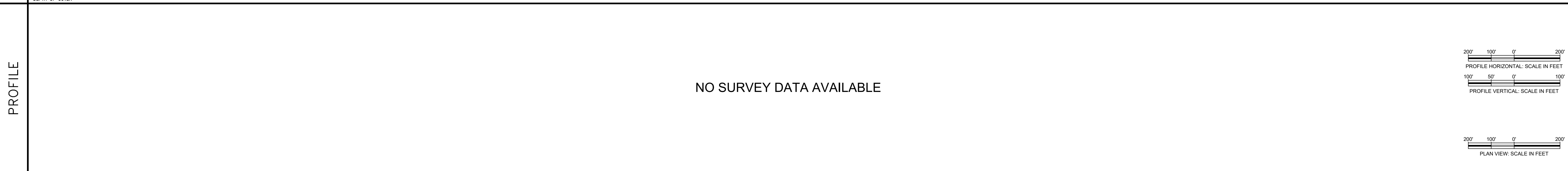
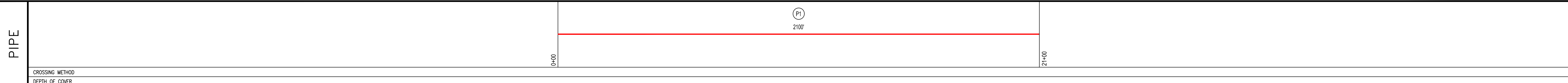


OWNER: CO-ADAMS-0157311400004  
 EHLER IRENE ET AL  
 127.27 RODS

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CONSERVATION MEASURES
USACE
TIMING RESTRICTIONS
WETLAND/WATERBODY ID
WETLAND/WATERBODY TYPE
M.O.P.



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	2100'	6" DR11 POLY / 8" DR11 POLY	A	01/16/20	ISSUE FOR REVIEW
			B	02/21/20	ADDED ENVIRONMENTAL DATA AND PADS, REROUTE

LEGEND	
—●—	PROPOSED PIPELINE
—●—	PROPERTY LINE
—●—	FOREIGN PIPELINE
—●—	FIBER OPTIC CABLE
—●—	OVERHEAD POWER
—●—	TELEPHONE
—●—	FENCE LINE
—●—	CIL ROAD
—●—	CIL WATERBODY
—●—	WATER SUPPLY LINE
—●—	ELECTRIC LINE
—●—	RIGHT-OF-WAY
—●—	POWER POLE
—●—	MAINLINE VALVE
—●—	TEST LEAD
—●—	SEGMENTABLE BEND
—●—	WATER WELL
—●—	SADDLE BAGS
—●—	TRENCH BREAKER
—●—	PERMANENT EASEMENT
—●—	TEMPORARY WORKSPACE
—●—	ADDITIONAL TEMPORARY WORKSPACE
—●—	STREAM
—●—	WETLAND
—●—	FLOODPLAIN
—●—	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 01/16/20
CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



PROPOSED 6 7/8" PIPELINE  
 ISSUED FOR REVIEW  
 TOWER LATERAL  
 PRELIMINARY ALIGNMENT SHEET  
 STA. 0+00 TO STA. 21+00  
 ADAMS COUNTY, COLORADO

DWG NO: 62100-TL-ALG-001 SHEET 1 OF 2 REV: B



OWNER

CO-ADAMS-0157311400004

EHLER IRENE ET AL

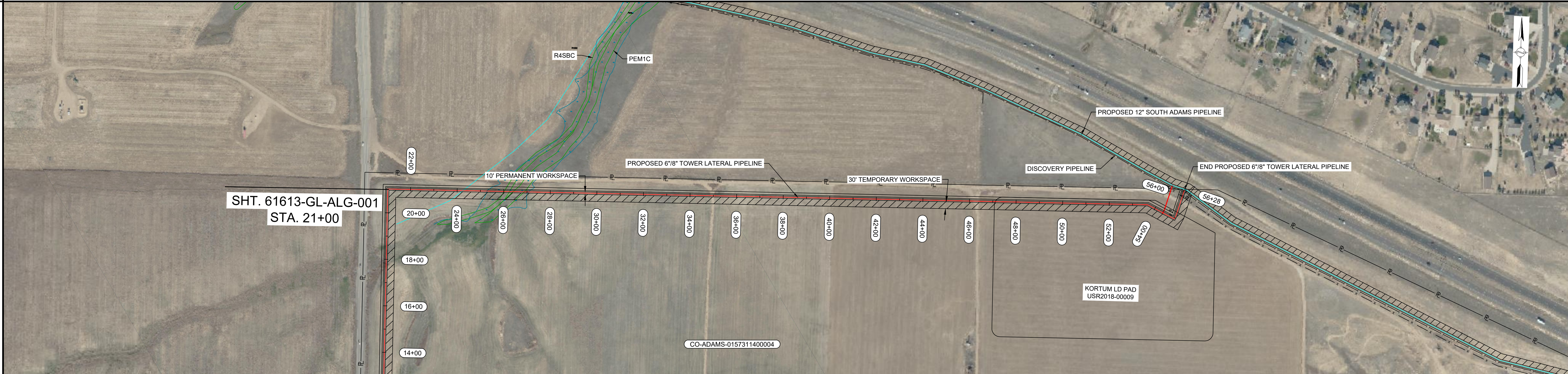
213.84 RODS

STATIONING

21+00

56+28

PLAN VIEW



SHT. 61613-GL-ALG-001  
STA. 21+00

PROPOSED 12" SOUTH ADAMS PIPELINE

PROPOSED 6" / 8" TOWER LATERAL PIPELINE

DISCOVERY PIPELINE

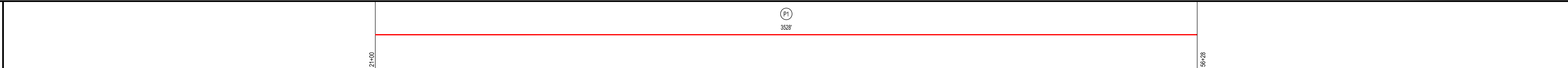
END PROPOSED 6" / 8" TOWER LATERAL PIPELINE

KORTUM LD PAD  
USR2018-00009

CO-ADAMS-0157311400004

CONSERVATION MEASURES
USACE
TIMING RESTRICTIONS
WETLAND/WATERBODY ID
WETLAND/WATERBODY TYPE
M.O.P.

PIPE

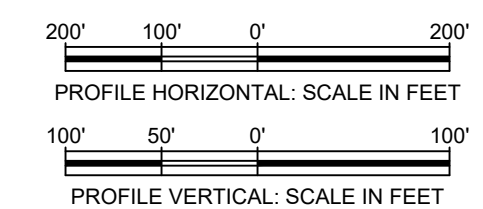


CROSSING METHOD
DEPTH OF COVER

PROFILE



NO SURVEY DATA AVAILABLE



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
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			B	02/21/20	ADDED ENVIRONMENTAL DATA AND PADS, REROUTE

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	PROPERTY LINE
	FOREIGN PIPELINE
	FIBER OPTIC CABLE
	OVERHEAD POWER
	TELEPHONE
	FENCE LINE
	CIL ROAD
	CIL WATERBODY
	WATER SUPPLY LINE
	ELECTRIC LINE
	RIGHT-OF-WAY
	POWER POLE
	MAINLINE VALVE
	TEST LEAD
	SEGMENTABLE BEND
	WATER WELL
	SADDLE BAGS
	TRENCH BREAKER
	PERMANENT EASEMENT
	TEMPORARY WORKSPACE
	ADDITIONAL TEMPORARY WORKSPACE
	FLOODPLAIN
	STREAM
	WETLAND
	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 200'
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CHK. BY:	JAW 01/16/20
APPD. BY:	
JOB NO:	62100
AFE NO:	

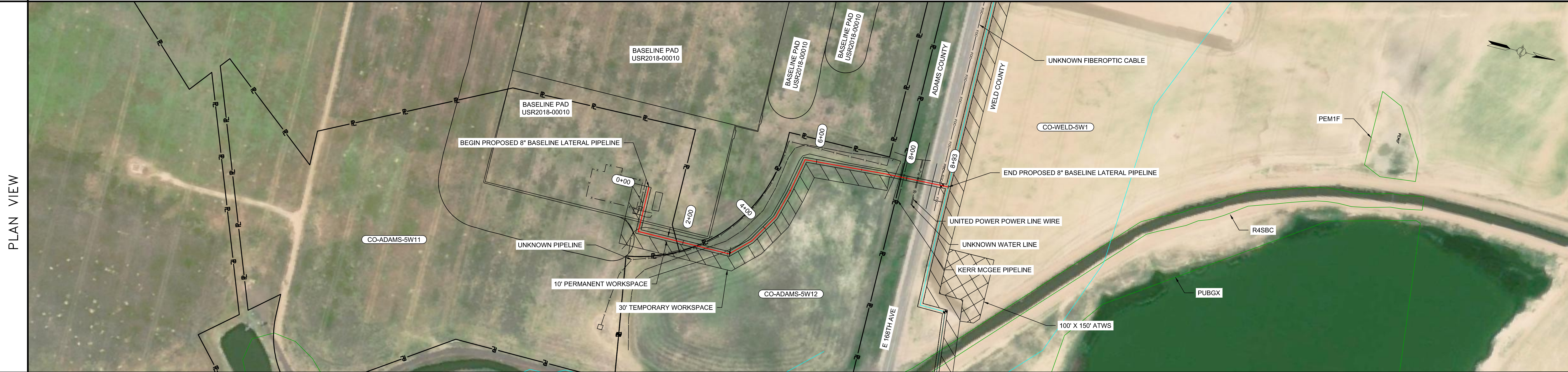


PROPOSED 6" / 8" PIPELINE  
ISSUED FOR REVIEW  
TOWER LATERAL  
PRELIMINARY ALIGNMENT SHEET  
STA. 21+00 TO STA. 56+28  
ADAMS COUNTY, COLORADO

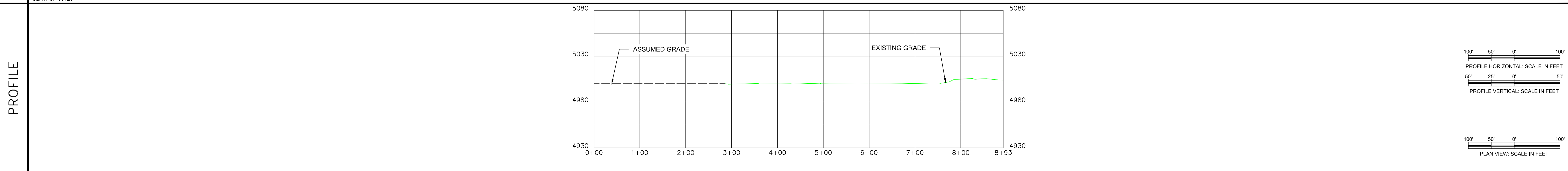
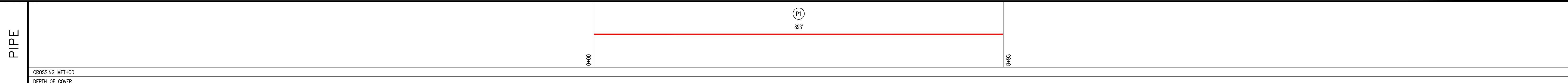
DWG NO: 62100-GL-ALG-002 SHEET 2 OF 2 REV: B



OWNER	STATIONING
CO-ADAMS-5W11 TAYLOR CARLOS, ET AL 0+00 11.25 RODS 1+86	CO-ADAMS-XXX UNKNOWN 2+30 2.71 RODS 2+30
CO-ADAMS-5W12 BASELINE LAKES HOLDINGS LLC ET ALS 3+60 33.78 RODS 7+88	CO-ADAMS-XXX E 168TH AVE 4.16 RODS 8+56
CO-WELD-5W1 YOSHI AND SUZU LLLP 2.20 RODS 8+93	



CONSERVATION MEASURES
USACE
TIMING RESTRICTIONS
WETLAND/WATERBODY ID
WETLAND/WATERBODY TYPE
M.O.P.



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	893'	8" DR7 HDPE	A	02/25/20	ISSUE FOR REVIEW

LEGEND	
—●—	PROPOSED PIPELINE
— —	PROPERTY LINE
— —	FOREIGN PIPELINE
—FOC—	FIBER OPTIC CABLE
—O/H—	OVERHEAD POWER
—T—T—	TELEPHONE
—X—X—	FENCE LINE
—C/R—	CIL ROAD
—W—W—	CIL WATERBODY
—W—W—	WATER SUPPLY LINE
—E—E—	ELECTRIC LINE
—R/W—	RIGHT-OF-WAY
—●—	POWER POLE
— —	MAINLINE VALVE
—●—	TEST LEAD
—▽—	SEGMENTABLE BEND
—○—	WATER WELL
—S—	SADDLE BAGS
—○—	TRENCH BREAKER
—	PERMANENT EASEMENT
—	TEMPORARY WORKSPACE
—	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
—	FLOODPLAIN
—	MILE POST

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CHECKS/APPROVALS	
SCALE:	1" = 100'
DWN. BY:	CDA 02/25/20
CHK. BY:	JAW 02/25/20
APPD. BY:	
JOB NO:	62100
AFE NO:	XXX



**PROPOSED 8" PIPELINE**  
**ISSUED FOR REVIEW**  
**BASELINE LATERAL**  
**PRELIMINARY ALIGNMENT SHEET**  
**STA. 0+00 TO STA. 8+93**  
**ADAMS & WELD COUNTY, COLORADO**

DWG NO: 62100-BL-ALG-001    SHEET 1 OF 1    REV: A

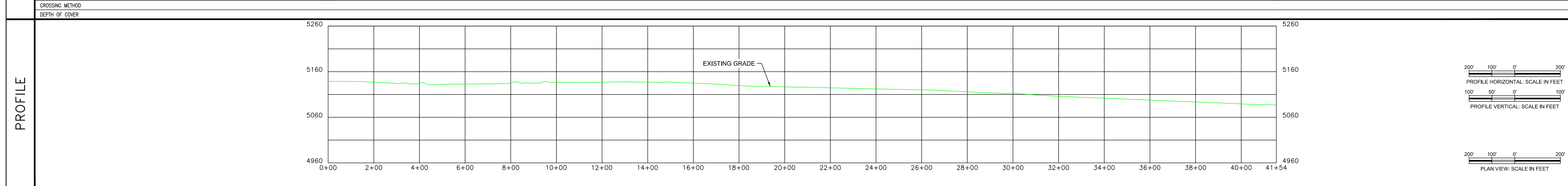
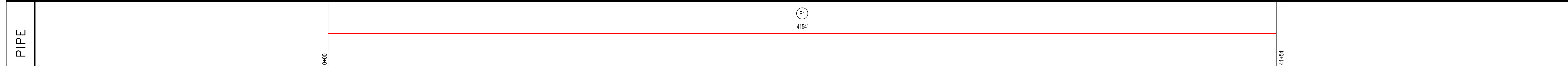


OWNER	CO-ADAMS-XXX UNKNOWN 20.16 RODS 9+33	CO-WELD-5W8 WW LLC 187.45 RODS	CO-WELD-XXX UNKNOWN 0.20 RODS 34+29	CO-WELD-37 CR2 INVESTMENTS LLC 43.94 RODS 41+54
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STATIONING	0+00 BEGIN STA. 0+09 UNK. EXISTING PIPELINE (UNK. COV.) 0+70 UNK. EXISTING PIPELINE (4.5' COV.) 1+08 UNK. EXISTING PIPELINE (3.5' COV.) 1+55 UNITED POWERLINE (UNK. COV.) 2+04 UNITED POWERLINE (UNK. COV.) 2+31 CENTERLINE OF E. 188TH AVE. 2+49 UNK. FIBEROPTIC LINE (UNK. COV.) 2+65 UNK. EXISTING PIPELINE (UNK. COV.) 4+46 <45°30'00"L 4+48 <45°30'00"L	9+18 UNITED POWERLINE (UNK. COV.) 10+97 <41°16'05"R/L 15+39 <86°18'11"R/L 18+69 <50°26'57"R/L 19+37 <85°14'23"L 20+50 <41°13'42"R/L 21+11 <13°04'30"L 22+47 <68°27'09"R/L 28+38 <3°17'28"L 29+69 <85°45'57"L 30+10 <88°18'34"R/L 32+16 <5°18'44"L 34+36 <84°13'29"L 34+46 <68°26'29"R/L	34+26 34+29 41+54
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CONSERVATION MEASURES	
USACE	
TIMING RESTRICTIONS	
WETLAND/WATERBODY ID	
WETLAND/WATERBODY TYPE	
M.O.P.	



MK. NO.	QTY.	MATERIAL SUMMARY	REV	DATE	REVISION
P1	4154'	8" DR7 HDPE	A	02/27/20	ISSUE FOR REVIEW

LEGEND	
—●—	PROPOSED PIPELINE
—e—e—	PROPERTY LINE
—f—f—	FOREIGN PIPELINE
—foc—	FIBER OPTIC CABLE
—o/h—	OVERHEAD POWER
—t—t—	TELEPHONE
—x—x—	FENCE LINE
—c/r—	CIL ROAD
—w—w—	CIL WATERBODY
—w/s—	WATER SUPPLY LINE
—e—e—	ELECTRIC LINE
—r/w—	RIGHT-OF-WAY
—●—	POWER POLE
—v—	MAINLINE VALVE
—t—	TEST LEAD
—b—	SEGMENTABLE BEND
—w—	WATER WELL
—s—	SADDLE BAGS
—t/b—	TRENCH BREAKER
—	MILE POST
—	PERMANENT EASEMENT
—	TEMPORARY WORKSPACE
—	ADDITIONAL TEMPORARY WORKSPACE
—	STREAM
—	WETLAND
—	FLOODPLAIN

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CHECKS/APPROVALS	
SCALE:	1" = 200'
DWN. BY:	CDA 02/27/20
CHK. BY:	JAW 02/27/20
APPD. BY:	
JOB NO:	62100
AFE NO:	



**PROPOSED 8" PIPELINE  
ISSUED FOR REVIEW  
SELTZER LATERAL  
PRELIMINARY ALIGNMENT SHEET  
STA. 0+00 TO STA. 41+54  
ADAMS & WELD COUNTIES, COLORADO**

DWG NO: 62100-SL-ALG-001    SHEET 1 OF 1    REV: A



# **Exhibit B: Natural Resource Conservation Overlay Report**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# Pioneer Water Pipeline Project

## Natural Resources Conservation Overlay Review

February 2020

Prepared for:



4430 South Adams County Parkway, Brighton, CO 80601

Prepared by:



Pioneer Water Pipeline, LLC, 600 17th Street, Suite 725, Denver, CO 80202

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# 1. Introduction

Tetra Tech, Inc, prepared this Natural Resources Conservation Overlay (NRCO) Review on behalf of Pioneer Water Pipeline, LLC (Pioneer), a joint venture of Expedition Water Solutions Colorado, LLC and Great Western Oil and Gas, LLC, for the proposed Pioneer Produced Water Pipeline Project (Project). Tetra Tech prepared this NRCO Review according to the requirements for the Adams County Community and Economic Development Department (ACCEDD) and the Adams County Development Standards and Regulations (ACDSR), Sections 3-38 and 4-11-02-03 as requested by the Adams County Department of Community Planning and Development during the Conceptual Review process.

The purpose of this NRCO review is to identify natural, scenic, cultural, and agricultural resources associated with the Project within the NRCO to meet Adams County Development Standards and Regulations Parts 3-38 and 4-11-02-03. This NRCO review was completed as a desktop analysis using the best available desktop data from various county, state, and federal resources. The only fieldwork completed in support of this NRCO review was a single field survey to confirm raptor nesting activity within 0.5 miles of the Project route in winter 2019/2020 (Attachment 1).

## 1.1 Qualification of Preparers

Mr. Steven Yarbrough, Professional Wetland Scientist, and Mr. John Heule, Wetland Professional In Training, both of whom are Tetra Tech Biologists, prepared these reports. In an email from Katie Keefe, Adams County Environmental Program Manager on October 23, 2019, to John Heule, Ms. Keefe stated Mr. Yarbrough and Mr. Heule “sufficiently demonstrate your staff possesses the professional qualifications necessary to conduct Resource Reviews within Adams County.”

## 1.2 Project Description

The Project would consist of construction of approximately 48.5 miles of 4- to 12 inch-diameter high-density polyethylene (HDPE) produced water gathering pipelines and associated appurtenances in Adams and Weld counties, Colorado. Approximately 29.3 miles of pipeline would be located in Weld County, and 19.2 miles of pipeline would be located in Adams County. Approximately 12.3 miles will be in unincorporated Adams County. Within Adams County, the Project would traverse the municipalities of Brighton and Thornton. The Project layout within Adams County is included as Figure 1.

The Project is designed to transport produced water from 16 oil and gas production facilities located within Adams County and operated by Great Western Petroleum, LLC. Sixteen of the 22 oil and gas wells are located within Adams County. Produced water, also known as wastewater, is recovered as byproduct that is brought to the surface during oil and gas production. This Project would transport wastewater via pipeline to Expedition Water Solution’s existing EWS #6 wastewater injection and disposal facility in Weld County.

Construction of the pipelines would require an approximately 10-foot-wide permanent easement plus an additional 30-foot-wide temporary easement for a total construction corridor of 40 feet in width. Additional temporary workspaces would also be required at certain locations, such as locations where the pipelines crosses roads or other existing infrastructure, or where environmental features such as wetlands and

waterbodies, are present. Appurtenant aboveground facilities such as isolation valves, pumps, and cleaning tool launcher and receivers would be located at the existing oil and gas production facilities. Approximately five aboveground appurtenances consisting of three mainline valve sets and two cleaning tool launchers or receivers would be located on private easements within unincorporated Adams County. Pioneer would site above-ground appurtenances outside of floodplains, wetlands and other Waters of the U.S., riparian areas, and outside of Adams County ROWs on private land. The 4- to 12-inch-diameter pipelines would be installed to a depth of approximately four feet below ground surface. Pioneer routed the Project to use existing rights-of-way (ROWs) and utility corridors associated with the oil and gas production wells to the extent possible to minimize impacts to the NRCO (Figure 1).

Pioneer proposes to cross state highways, county roads, railroads, and wetlands and streams and other existing infrastructure where practicable via horizontal directional drilling (HDD) to mitigate impacts to infrastructure and sensitive resources to the maximum extent practicable.

### 1.3 Project Location

The pipeline would intersect the NRCO for a total of approximately 4.7 miles. A list of the Project laterals and their intersection with the NRCO is provided in Table 1. The intersections between the Project and the NRCO are shown in Figures 1-4.

**Table 1:**  
**Project Intersections with the NRCO**

Pipeline Segment	Total Length (miles)	Length in NRCO (miles)
Henderson Lateral	0.15	0.1
Ivey Lateral	1.96	0.7
N. Adams Trunk	4.99	1.2
Pioneer Mainline	16.59	0.1
Rio Lateral	1.20	0.7
S. Adams Trunk	7.50	1.7
Tower Lateral	0.92	0.1
Pioneer Mainline S.	0.15	0.1

## 2. Resource Review

ACDSR Section 3-39-05-02-01 requires applicants for development review to evaluate the natural resources that intersect the NRCO, including federal and state listed species, wildlife habitat/riparian areas, wetlands and other WOTUS, lakes and reservoirs, hydric soils, 100-year floodplains, cultural resources, and agricultural resources. Of these resources, the ACDSR Section 3-39-05-02-01 assigns protection factors for five resources that have assigned protection factors for permanent loss. The protection factor is a calculation of the total acreage of impact multiplied by the protection factor assigned to that resource. These natural features and their respective protection factors provided in Table 2.



**Table 2:**

**Resource Protection Factors**

Natural Resource	Protection Factor (multiplier)
Wetlands	2.0
Riparian Areas	1.5
Lakes & Reservoirs	1.5
100-Year Floodplains	1.0
Hydric Soils	0.7

The Project is designed to limit the impacts to these natural resources to temporary duration so that they may be reclaimed onsite. There are no anticipated permanent losses to these resources in the NRCO areas and, therefore, no mitigation would be required.

## 2.1 Federal and State Listed Species

The Endangered Species Act (ESA) and its implementing regulations in Title 50 of the Code of Federal Regulations (CFR) Section 17 prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. The U.S. Fish and Wildlife Service (USFWS) is responsible for the implementation of the ESA.

Section 3 of the ESA defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct” (16 United States Code [USC] § 1532 (19)). Harm, in this case, means an act that actually kills or injures a federally listed wildlife species and “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” To harass means to perform “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering” (50 CFR §17.3). In addition, Section 9 of the ESA details generally prohibited acts, and Section 11 provides for both civil and criminal penalties for violators regarding species federally listed as threatened or endangered.

Colorado Revised Statute (CRS) 33-2-105 states that it is unlawful to “take, possess, transport, export, process, sell or offer for sale, or ship” any species listed as threatened or endangered by Colorado Parks and Wildlife (CPW). According to CRS 33-1-102 “Take” means to acquire possession of wildlife; but such term shall not include the accidental wounding or killing of wildlife by a motor vehicle, vessel, or train.”

On February 21, 2020, Tetra Tech generated a USFWS Information for Planning and Consultation (IPaC) resource list for federally listed species with potential to occur in the vicinity of the Project (USFWS 2020a). Tetra Tech also evaluated the CPW threatened and endangered species list. CPW species of concern do not have regulatory protection and were therefore not included in the analysis. One federally listed species (Ute ladies'-tresses orchid) and three state-listed species (burrowing owl, common shiner, and suckermouth minnow) have the potential to occur in the Project and are described in Tables 3 and 4, respectively. An initial survey for active raptor nests was conducted in the winter of 2020 within 0.5 mile of the Project; the results of the survey are included as Attachment 1. In addition, several prairie dog colonies were observed within 0.5 miles of the pipeline route during the survey. Prairie dogs are a state species of concern and also provide nesting habitat for burrowing owls, a state listed threatened species.

**Table 3:**  
**Federal Special Status Species Known to Occur in Adams County, Colorado**

Common Name	Scientific Name	Status	Likelihood of Occurrence in Study Area/Effects Analysis
<b>Birds<sup>1</sup></b>			
Least tern (interior population) ▲	<i>Sternula antillarum</i>	FE	Unlikely to occur. Very rare migrant. Potential habitat onsite might include streams in the Project area with flat, sandy shorelines. The Colorado Breeding Bird Atlas (CBAP 2016) shows no evidence of breeding for this species in Adams County. The Project will not result in depletions in the South Platte River.
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FT	Unlikely to occur. Habitat consists of mature mixed-conifer, pine-oak, and riparian forest in canyon habitat (USFWS 2013). These habitat components are not intersected by the Project. No designated critical habitat intersected by the Project. The Project will not result in depletions in the South Platte River.
Piping Plover ▲	<i>Charadrius melodus</i>	FT	Unlikely to occur. Very rare migrant. Potential habitat includes shorelines around small lakes, river islands, sand pits, and beaches on large lakes for breeding (Haig 1992). The Project intersects streams, but the Colorado Breeding Bird Atlas (CBAP 2016) shows that their distribution is limited to southeastern Colorado. The Project will not result in depletions in the South Platte River.
Whooping Crane ▲	( <i>Grus americana</i> )	FE	Unlikely to occur. Currently, no whooping cranes remain in or migrate through Colorado (Urbanek and Lewis 2015).
<b>Fish</b>			
Pallid Sturgeon ▲	( <i>Scaphirhynchus albus</i> )	FE	Not present in Colorado. Species occurs downstream in the Platte River in Nebraska (USFWS 2014a). The Project will not result in depletions in the South Platte River.
<b>Mammals</b>			
Preble's Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	FT	A majority of the Project in Adams County occurs in the Block Clearance zone for the species. A small section of the pipeline (approximately 0.55 mile east of Sable Road) occurs outside the Block Clearance Zone. This portion of the pipeline lacks suitable habitat for Preble's meadow jumping mouse.
<b>Plants</b>			
Ute Ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	FT	Potential to occur. Potential habitat includes seasonally flooded river terraces, subirrigated or spring-fed abandoned stream channels and valleys, and lakeshores. The Project intersects the South Platte River and several perennial or intermittent stream features which may have suitable habitat for Ute ladies'-tresses orchid. The Project will be constructed using horizontal directional drilling (HDD) beneath perennial and intermittent stream sources. Therefore, no adverse impacts to this species are expected (Fertig 2005).
Western Prairie Fringed Orchid ▲	<i>Platanthera praeclara</i>	FT	Not present. Occurs in the Platte River watershed downstream in Nebraska (USFWS 2014b). The Project will not result in depletions in the South Platte River.

▲ Water depletions in the South Platte River may affect the species and/or critical habitat associated with the Platte River in Nebraska.

FE = Federal Endangered, FT = Federal Threatened

Green highlighting in table: Potential to occur.

**Table 4:**  
**List of Colorado Endangered, Threatened, and Species of Concern**

Common Name	Scientific Name	State Status	Likelihood of Occurrence/Effects Analysis
<b>Amphibians</b>			
Boreal toad	<i>Anaxyrus boreas boreas</i>	SE	Unlikely to occur. This mountain species of toad would not find suitable habitat on the eastern plains.
<b>Birds</b>			
Burrowing owl	<i>Athene cunicularia</i>	ST	Likely to occur. Species nests in prairie dog burrows. There were active prairie dog colonies documented during the raptor nest survey that intersect the Project. Pioneer would adhere to recommendations included in CPW's <i>Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls</i> . The Project is not expected to impact this species.
Least tern	<i>Sterna antillarum</i>	SE	Unlikely to occur. See description in Table 3.
Lesser prairie chicken	<i>Tympanuchus pallidicinctus</i>	ST	Unlikely to occur. Uses mixed-grass dominated rangelands in southeastern Colorado. Breeding is currently limited to Baca, Prowers, Cheyenne, Kiowa counties.
Mexican spotted owl	<i>Strix occidentalis lucida</i>	ST	Unlikely to occur. Reference Table 3 for a full description.
Plains sharp-tailed grouse	<i>Tympanuchus phasianellus jamesii</i>	SE	Unlikely to occur. This species utilizes mixed grass prairie. Known occurrences of breeding birds located in northern Weld County.
Piping plover	<i>Charadrius melodus circumcinctus</i>	ST	Unlikely to occur. Species is an open-beach nesting bird. The Colorado Breeding Bird Atlas (CBAP 2016) shows evidence for this species only in southeastern Colorado.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	SE	Unlikely to occur. Breeding habitat is in southwestern Colorado. No critical habitat is present in Adams County.
Whooping crane	<i>Grus americana</i>	SE	Unlikely to occur. Reference Table 3 for full description.
<b>Fish</b>			
Arkansas darter	<i>Etheostoma Cragini</i>	ST	Unlikely to occur. The species is only known to occur in the Arkansas River drainages.
Bonytail	<i>Gila elegans</i>	SE	Unlikely to occur. Species only known to occur in the Colorado River drainages.
Brassy minnow	<i>Hybognathus hankinsoni</i>	ST	Unlikely to occur. Species prefers upper reaches of creeks with little to no current.
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	ST	Unlikely to occur. Species only known to occur in the Colorado and Green river systems.
Common shiner	<i>Luxilus cornutus</i>	ST	Potential to occur in perennial streams crossed by the Project. Range includes the upper South Platte River and St. Vrain drainages that are in proximity to the Project area. The Project will be constructed using HDD beneath perennial and intermittent stream sources. Therefore, no adverse impacts to this species are expected.
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	ST	Unlikely to occur. Species found primarily in headwater streams and mountain lakes.
Humpback chub	<i>Gila cypha</i>	ST	Unlikely to occur. Species only known to occur in the Colorado River drainages.
Lake chub	<i>Couesius plumbeus</i>	SE	Unlikely to occur. Species found in limited distribution in northwestern Colorado and along the Platte and Green rivers in Wyoming.

**Table 4:**  
**List of Colorado Endangered, Threatened, and Species of Concern**

Common Name	Scientific Name	State Status	Likelihood of Occurrence/Effects Analysis
Northern redbelly dace	<i>Phoxinus eos</i>	SE	Potential to occur. Species occurs in the front range of Colorado in small cool prairie streams.
Plains minnow	<i>Hybognathus placitus</i>	SE	Unlikely to occur. Species range extends into the eastern portions of Colorado along the South Platte and Arkansas river systems.
Rio Grande sucker	<i>Catostomus plebeius</i>	SE	Unlikely to occur. Species range in Colorado limited to the south-central portion along the Rio Grande and Pecos rivers. An isolated observation occurred in the South Platte River east of Greeley.
Razorback sucker	<i>Xyrauchen texanus</i>	SE	Unlikely to occur. Species only known to occur in the Colorado River drainages.
Southern redbelly dace	<i>Phoxinus erythrogaster</i>	SE	Unlikely to occur. In Colorado, the species is only known to occur in the West Plum Creek drainage.
Suckermouth minnow	<i>Phenacobius mirabilis</i>	SE	Potential to occur in perennial streams intersected by the Project. Species range includes the South Platte River and its associated drainages. The Project will be constructed using HDD beneath perennial and intermittent stream sources. Therefore, no adverse impacts to this species are expected.
<b>Mammals</b>			
Black-footed ferret	<i>Mustela nigripes</i>	SE	Unlikely to occur. Experimental populations are present in Colorado, but the Project area is in the USFWS block-cleared areas for black-footed ferret.
Gray wolf	<i>Canis lupus</i>	SE	Unlikely to occur. No extant populations of gray wolf are extant on the Great Plains of Colorado.
Grizzly bear	<i>Ursus arctos</i>	SE	Unlikely to occur. No extant populations of grizzly bear are known to exist in Colorado.
Kit fox	<i>Vulpes macrotis</i>	SE	Unlikely to occur. This species occupies arid desert shrublands and the margins of pinyon-juniper woodlands. Its distribution in Colorado is limited to the far west and southwest margins of the state.
Lynx	<i>Lynx canadensis</i>	SE	Unlikely to occur. This is a high-altitude forest species in Colorado.
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	ST	Unlikely to occur. Reference Table 3 for full description.
River otter	<i>Lontra canadensis</i>	ST	Unlikely to occur. This species range includes river systems in western Colorado and the upper South Platte River north of Fort Morgan.
Wolverine	<i>Gulo gulo</i>	SE	Unlikely to occur. Suitable habitat includes boreal forest and tundra. It is not known from the eastern prairie of Colorado.
<b>Mollusks</b>			
Cylindrical papershell	<i>Anodontooides ferussacianus</i>	SC	Unlikely to occur. Found in mud or sandy substrate of lakes and quiet streams.

Source CPW (2020a)

SE = State Endangered, ST = State Threatened, SP = State Proposed, SC=State Candidate

Green highlighting in table: Potential to occur.

Exhibit B: Resources Conservation Overlay Review  
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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## 2.2 Wildlife Habitat

### 2.2.1 Ecoregional Setting

The Project is completely situated in the High Plains Level III Ecoregion. The High Plains Level III Ecoregion includes four Level IV ecoregions. The Project area lies within the Flat to Rolling Plains (25d) Level IV ecoregion (Chapman et al. 2006). This ecoregion is characterized by moderate topological relief, silty and sandy soils, shortgrass prairie vegetation, intermittent streams, and few perennial streams. This ecoregion is known to have small scattered depressional “playa” wetlands and dense oil and gas production. Elevation in the Project area is between 4,900 and 5,000 feet above mean sea level.

### 2.2.2 General Wildlife

Tetra Tech queried the CPW Species Activity Mapping Data (CPW 2017b) to identify species with the potential to occur in the vicinity of the Project. Table 5 lists the species identified by CPW with habitat intersected by the Project. The list includes birds and mammals. Table 5 also lists the season each species is expected to occur in the Project area. Except for the white pelican, all of the species listed in Table 5 are expected to occur in the Project area year-round. The white pelican is expected in the Project area only during migration in the spring and fall months.

**Table 5:**  
**CPW-Identified Species with Potential to Occur in the Project Area**

Common Name	Scientific Name	Season Species is Expected to occur in the Project Area
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Year-round
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	Year-round
Goose	<i>Branta</i> spp.	Year-round
Great Blue Heron	<i>Ardea herodias</i>	Year-round
White Pelican	<i>Pelecanus erythrorhynchos</i>	Spring/fall
Mule Deer	<i>Odocoileus hemionus</i>	Year-round
Preble’s Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	Year-round
White-tailed Deer	<i>Odocoileus virginianus</i>	Year-round
Wild Turkey	<i>Meleagris</i> spp.	Year-round

Source: CPW (2020b)

The species identified by CPW as having potential to occur in the Project or were identified during the survey are not restricted to the site and commonly have large home ranges. Rodent species are known to hibernate or become dormant for portions of the winter. Avian species may be migrants or residents of the Project area.

Project construction activities may temporarily displace wildlife and reduce available habitat for animals currently using construction areas. The preparation of work sites poses the greatest disruption to wildlife in the Project. During vegetation clearing, a majority of individuals would move away from construction activities given the disruptive nature of these activities. Some individuals would attempt to hide within the path of disturbance (e.g., small mammals or reptiles may attempt to burrow underground or remain motionless within the vegetation during clearing).

The Project is not expected to have significant impacts on migratory routes for avian resources. The Project is not within any known major avian migration corridors or stop-over sites and would not impede flight for avian resources or prohibit stop-over in nearby areas. The Project may cause a minor temporary displacement in local food resources for carnivores as some small mammals and insects would be displaced during construction. A slight decrease in available food for herbivores may also occur due to vegetation clearing.

Some species such as birds or ungulates would continue to use the Project while project activities are underway. Noise and dust emissions during construction would also cause some wildlife to temporarily leave the Project area during construction. No long-term impacts to wildlife species are expected by the development and operation of the Project. The construction activities in the Project within the NRCO would be temporary and would be reclaimed after construction is completed. Native vegetation will be seeded and planted that will support wildlife species. Overall, wildlife and vegetation habitat is expected to return or improve in quality compared to the habitat that currently exists. Available food for both herbivores and carnivores is expected to return to pre-construction levels or increase when the Project is completed because reclamation would return or improve the habitat using native vegetation in the seed mix.

A raptor nest survey for the entire Project (not limited to the NRCO areas) conducted in January 2020 within 0.5 mile of the Project identified 32 raptor nests during the survey (Attachment 1). Twenty raptor nests were observed within the 0.5-mile buffer of the Project including one bald eagle nest (Nest 023), two red-tailed hawk nests (Nests 0018 and 009), and 17 nests with unknown species determination. The unknown nests were small and are unlikely to be used by eagles. Nest 032, a bald eagle nest located within the 0.5-mile buffer of the Project according to data provided by CPW, was not found by the biologist during the survey.

CPW recommends a seasonal non-encroachment buffer of 0.5 mile from October 15 to July 31 for active bald eagle nests and 0.3 mile from February 15 to July 15 for active red-tailed hawk nests. As the raptor nest survey was conducted early in the year (January 2020), only a few nests were active. Additional raptor nest surveys should be conducted if construction activities are expected to occur prior to August 31, 2020, when the raptor breeding season ends. Pioneer will adhere to the CPW recommendations to avoid potential harassment of raptors during construction.

### **2.2.3 Riparian Areas**

Riparian areas require a 1 to 1.5 acreage ratio mitigation measure according to the ACDSR Section 3-39-05-02-01. The Project would intersect six riparian areas: two areas associated with the South Platte River, two narrow areas along Big Dry Creek, and two areas associated with German Ditch. These areas are depicted on Figure 2. Pioneer is committed to boring under the riparian areas and the associated stream/river features to avoid impacts to these natural resources. Therefore, no impacts to riparian areas are expected as a result of the Project.



## 2.3 Wetlands and Other Waters of the U.S.

All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of WOTUS are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). The USACE regulates projects in navigable waters under Section 10 of the Rivers and Harbors Act.

Under USACE and U.S. Environmental Protection Agency (EPA) regulations, wetlands are defined as “those areas that are inundated or saturated by surface or groundwater 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.” In non-tidal waters, the lateral extent of USACE jurisdiction is determined by the ordinary high water mark, which is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR 328[e]).

Depending upon the level of impacts to the jurisdictional features, a pre-construction notification (PCN) and an approved jurisdictional determination by the USACE may be necessary for the Project. For permanent impacts less than 0.1 acre, no PCN would be required. If impacts to jurisdictional waters cannot be avoided, the Project will require permitting under the CWA § 404 program administered by USACE. The Denver Regulatory Office of USACE recommends consultation on projects that may exceed these thresholds to determine the need and/or type of permitting.

In addition to the federal regulations, wetlands are one of the natural areas that are protected by NRCO regulations, which require a 1 to 2 acreage ratio mitigation measure. Tetra Tech completed a desktop analysis for the Project in Adams County to identify potential jurisdictional wetlands or other WOTUS intersected by the Project route. Desktop analysis used recent publicly available information including the USFWS online National Wetlands Mapper tool (USFWS 2020b), U.S. Geological Survey National Hydrography Dataset (NHD; USGS 2020), and USDA-Farm Service Bureau National Agricultural Imagery Program (NAIP). The desktop review identified 23 crossings of NHD-mapped potential streams, 55 crossings of NWI-mapped potential wetlands, and 3 NHD-mapped waterbodies intersecting the Project in the NRCO (Figure 2). The NHD-mapped waterbodies appear to be ephemeral stock ponds or man-made drainage retention basins based on a review of aerial imagery. Pioneer plans to install the pipeline using HDD for crossings of a majority of these features. If construction using HDD is not practicable, Pioneer will work under a USACE Nationwide Permit 12 and restore the crossing to pre-construction conditions when construction is complete. Pioneer will not site above-ground appurtenances within the NRCO. Therefore, the Project will not result in permanent impacts to wetlands or other WOTUS.

## 2.4 Lakes and Reservoirs

Lakes and reservoirs are one of the natural areas that are protected by NRCO regulations by requiring a 1 to 1.5 acreage ratio mitigation measure. There are no lakes or reservoirs that intersect the Project in the NRCO; therefore, no mitigation measures would be required for impacts to lakes or reservoirs.

## 2.5 100-Year Floodplains

One-hundred-year floodplains are natural features that are protected by the NRCO regulations. A protection factor of 1-to-1 acreage ratio mitigation measure is required for permanent impacts to these features. A majority of the Project that intersects NRCO also falls within a Federal Emergency Management Agency (FEMA) 100-year floodplain (Figure 3; FEMA 2020). However, there are no anticipated permanent structures that would change the base flood elevation within these floodplain areas. The Project would have temporary impacts to the floodplains. These impacts would be restored to the original contours once construction has been completed; therefore, no protection factor mitigation would be necessary for impacts to 100-year floodplains.

## 2.6 Hydric Soils

Hydric soils are one of the natural areas that are protected by the NRCO regulations by requiring a 0.7 to 1 acreage mitigation measure. The NRCS Soil Survey Geographic Database (SSURGO; NRCS 2020) was evaluated to identify potentially hydric soils in the currently planned Project corridors. The database consists of geographic information system features called map units. Map units consist of one or more soil types. These soil types are attributed as either hydric or non-hydric. Each map unit is rated based on the percentage of each soil type within the map unit. Each map unit is then assigned a percentage of soil types identified as hydric. The five categories of hydric soil map units are:

- Hydric—Map unit is composed entirely of soils considered hydric
- Predominantly Hydric—Map unit is 66 to 99 percent composed of soils considered hydric
- Partially Hydric—Map unit is 33 to 65 percent composed of soils considered hydric
- Predominantly Non-hydric—Map unit is 1 to 32 percent composed of soils considered hydric
- Nonhydric—Map unit is composed entirely of soils considered non-hydric

For the purposes of this analysis, any map units with a hydric rating of 66 percent or more was considered hydric. Wet alluvial land is the only hydric soil type mapped by the NRCS is intersected by the Project (Table 6, Figure 4; NRCS 2020) within the NRCO. A majority of these are upland soils with two soils containing a dominance of hydric soil characteristics. These two soils are found within the floodplains of the South Platte River.

**Table 6:**  
**NRCS Soil types in the NRCO Intersected by the Project**

Soil Unit Name	Slopes	Flooded	Hydric Rating	Hydric?
Arvada loam	0–3%	None	0	No
Ascalon sandy loam	3–5%	None	0	No
Ascalon sandy loam	5–9%	None	0	No
Blakeland loamy sand	3–9%	None	0	No
Dacono loam	1–3%	None	0	No
Loamy alluvial land, gravelly substratum	N/A	Occasional	5	No
Loamy alluvial land, moderately wet	N/A	Occasional	6	No
Gravel pits	N/A	None	0	No

Soil Unit Name	Slopes	Flooded	Hydric Rating	Hydric?
Nunn loam	0–1%	None	0	No
Nunn clay loam	0–1%	None	0	No
Nunn clay loam	1–3%	None	0	No
Platner loam	0–3%	None	0	No
Platner loam	3–5%	None	0	No
Renohill loam	3–9%	None	0	No
Samsil-Shingle complex, 3 to 35 percent slopes	3–35%	None	0	No
Terrace escarpments	N/A	None	0	No
Ulm loam, 5 to 9 percent slopes	5–9%	None	2	No
Water	N/A	None	10	No
Wet alluvial land	N/A	Frequent	100	Yes

Gray shading in table= hydric soil.

The Project would not result in permanent impacts to areas with hydric soils including hydric soils associated with wetlands and other WOTUS. Therefore, no protection factor mitigation would be required.

## 2.7 Cultural Resources

Tetra Tech completed a desktop analysis to identify cultural and historic resources listed on the National Register of Historic Places (NRHP), determined or recommended eligible for the NRHP, or which remain unevaluated for listing on the NRHP that may be impacted by construction of the Project. No potentially significant cultural resources are expected to be impacted by the Project. Pioneer will have an Unanticipated Discovery Plan in place for the Project. Therefore, no impacts to cultural or historic resources are anticipated for the Project. Refer to Attachment 2 for the full Cultural Resources Class I Letter Report for additional information regarding historic and cultural resources.

## 2.8 Agricultural Use

A majority of the project route within the NRCO in Adams County is located within agricultural/rangeland with the exception of portions of the Project on oil and gas production facilities. Pioneer's restoration contractor will restore the pipeline right-of-way to pre-construction conditions, including recontouring and application of an appropriate native seed mix on the non-cropland parcels. The Project is compatible with Adams County's goal to preserve and maintain agricultural lands to the greatest extent possible. Any agricultural lands impacted by the Project would be temporary. The agricultural lands would be reclaimed for future use. There would be no to minimal loss of agricultural lands as a result of the Project.

# 3. Conclusions

The Project is not anticipated to result in permanent or significant effects to resources within the Adams County NRCO. A summary of the conclusions provided in this report by resource is provided below.

### **3.1 Wildlife**

The natural resources review evaluated the Project for impacts to the NRCO. The review identified one federally listed species (Ute ladies'-tresses orchid) and three state listed species (burrowing owl, common shiner, and suckermouth minnow) as having the potential to occur in the Project. The orchid, common shiner, and suckermouth minnow would be avoided because the Project has committed to boring under perennial water features and their associated riparian areas. Pioneer would adhere to recommendations included in CPW's *Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls (CPW 2008)*, and as such, the Project is not expected to impact this species.

### **3.2 Riparian Areas, Wetlands and other WOTUS, Hydric Soils, and Floodplains**

Six riparian areas were identified during the desktop review of the Project. These six areas will be avoided during construction by boring below them and their associated surface water features. Twenty-four streams, six wetlands, and one pond were identified during the review. The Project has committed to avoiding these features or other features identified by field surveys that are HDD directional drilling for crossings of a majority of these features. If construction using HDD is not practicable, Pioneer will work under a USACE Nationwide Permit 12, and restore the crossing to pre-construction conditions when construction is complete. Pioneer will not site above-ground appurtenances within the NRCO. No lakes or reservoirs were identified as intersecting the Project during the desktop review. There are 100-year floodplains within the Project, and it is anticipated that temporary impacts to these floodplains would occur. However, no change in base flood elevation would occur and no permanent impacts to floodplains would occur. In addition, temporary impacts to floodplains would be returned to pre-construction contours. Thone hydric soil unit is located in the Project intersecting the NRCO. These soils are associated with wetlands and other waters and would be avoided by boring under the areas. There are no anticipated permanent impacts to hydric soils for the Project.

### **3.3 Cultural Resources**

No impacts to cultural or historic resources are anticipated for the Project. Refer to Attachment 2 for the full Cultural Resources Class I Letter Report for additional information regarding historic and cultural resources.

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# Figures

Figure 1: Project Overview

Figure 2: Wetlands, Waters, and Riparian Areas

Figure 3: FEMA Floodplains

Figure 4: Hydric Soils

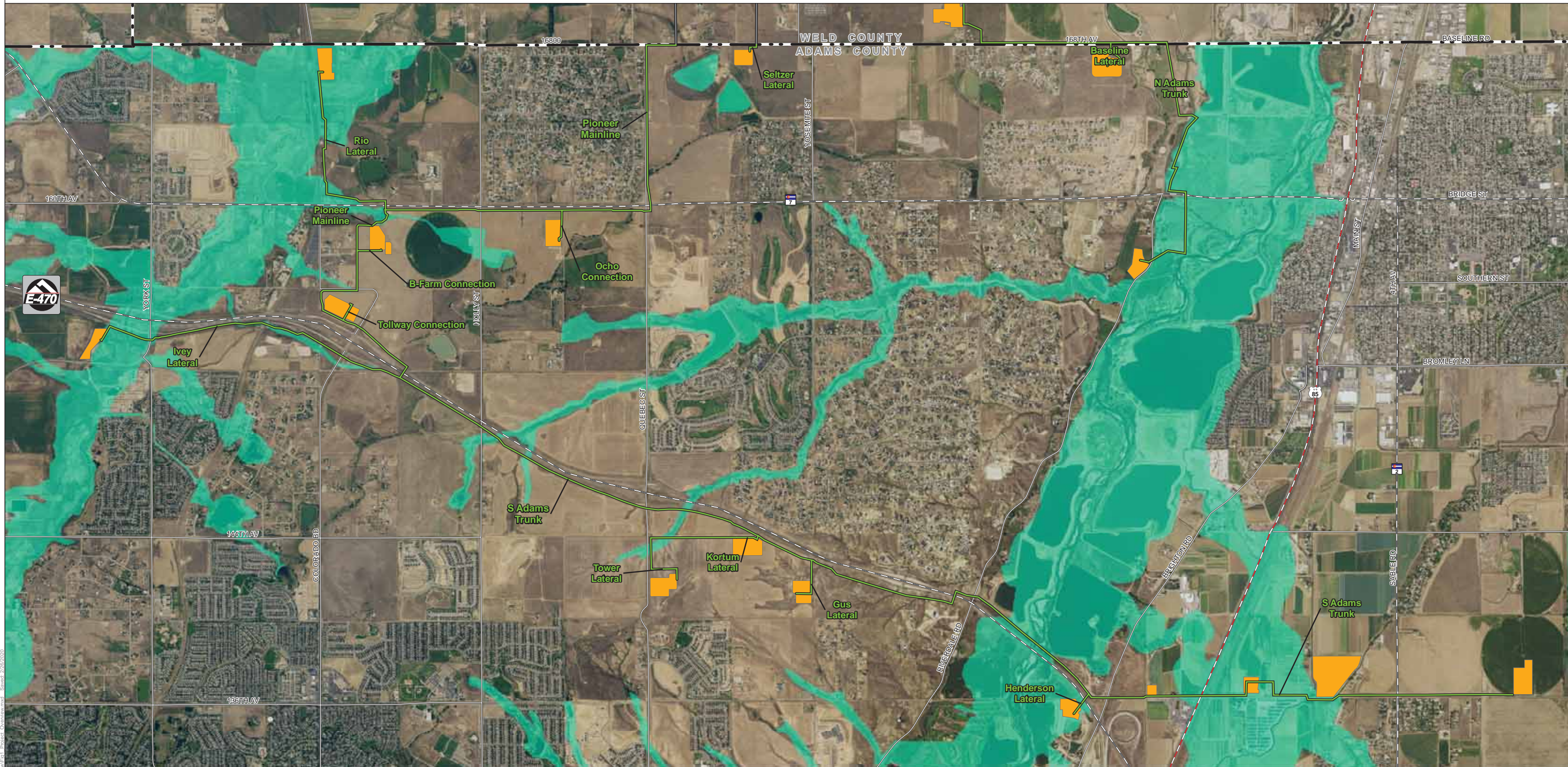
Exhibit B: Resources Conservation Overlay Review  
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# PIONEER PRODUCED WATER PIPELINE PROJECT

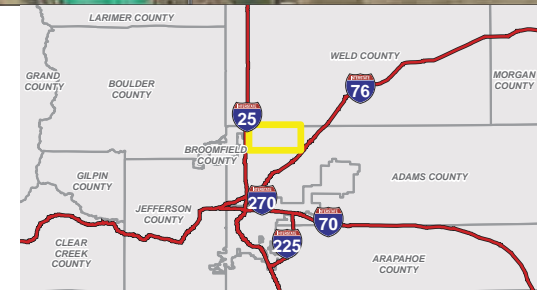
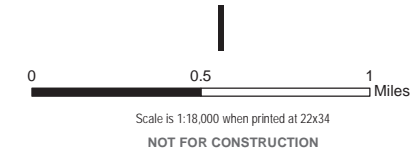
Figure 1: Project Overview



- Project Features**
- Pioneer Produced Water Pipeline (02/2020, Adams County)
  - Pioneer Produced Water Pipeline (02/2020, Weld County)
  - Oil and Gas Production Facility
  - Adams County Natural Resource Conservation Overlay (NRCO)

- Transportation (CDOT 2015)**
- U.S. Highway
  - State Highway
  - Major Local Road

- Boundary (CDOT, 2015)**
- County Boundary



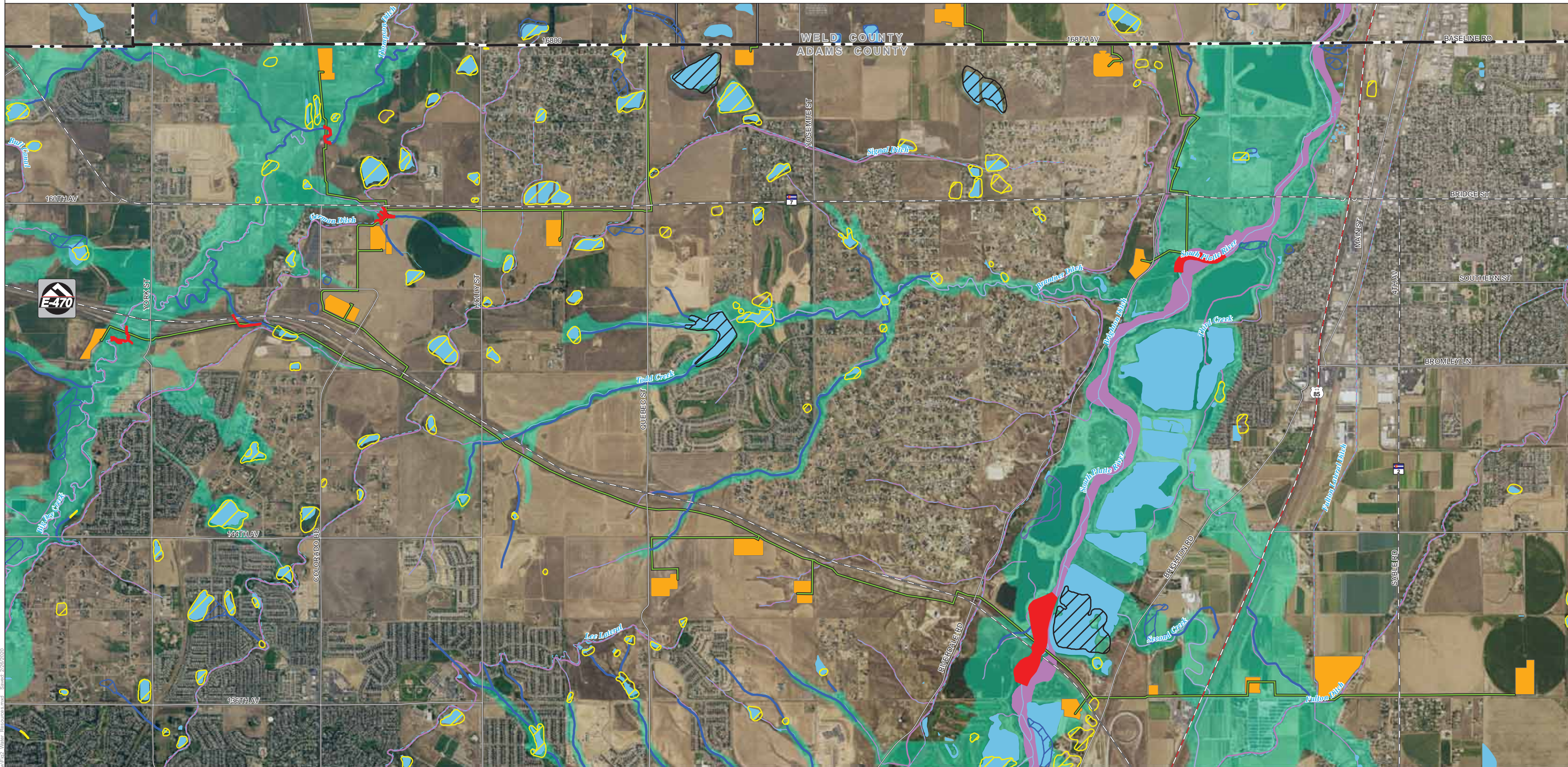
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.

**Adams County, CO**

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# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 2: Wetlands, Waters, and Riparian Areas



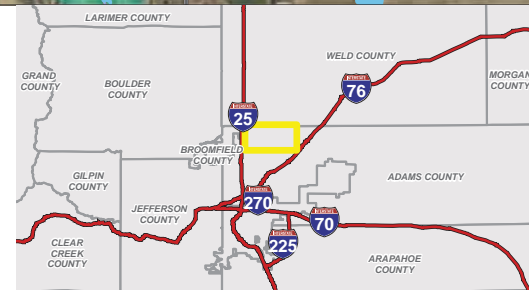
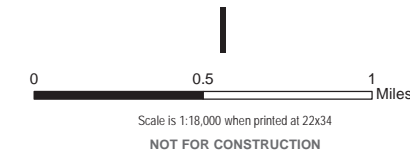
- Project Features**
- Pioneer Produced Water Pipeline (02/2020, Adams County)
  - Pioneer Produced Water Pipeline (02/2020, Weld County)
  - Oil and Gas Production Facility
  - Adams County Natural Resources Conservation Overlay (NRCO)

- Transportation (CDOT 2015)**
- U.S. Highway
  - State Highway
  - Major Local Road

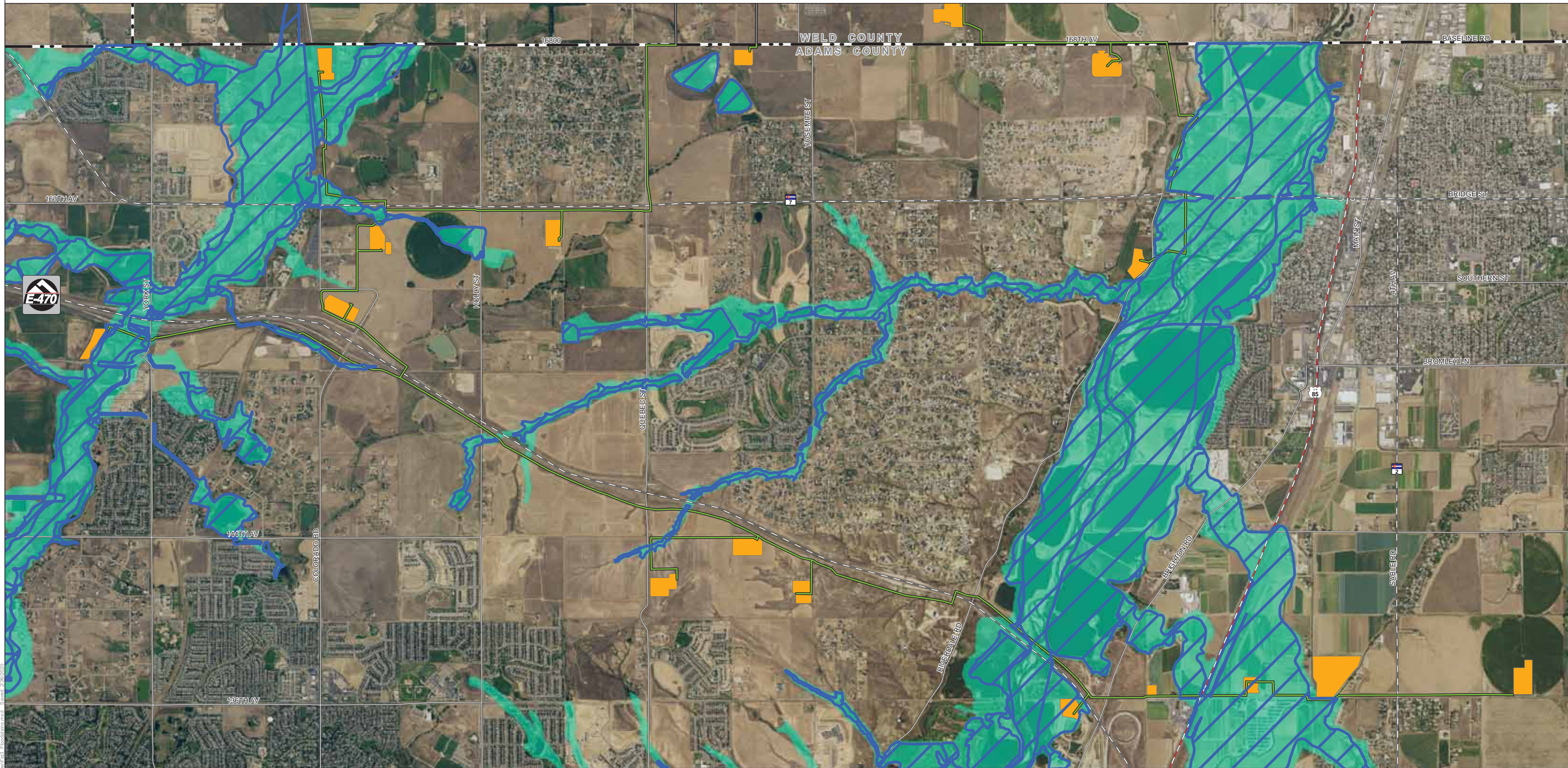
- Boundary (CDOT, 2015)**
- County Boundary





- Hydrology (NHD 2019)**
- Perennial Stream/River
  - Intermittent Stream/River
  - Canal/Ditch
  - Lake/Pond




- Wetlands (NWI 2019)**
- Freshwater Emergent Wetland
  - Freshwater Forested/Shrub Wetland
  - Freshwater Pond
  - Lake
  - Riverine



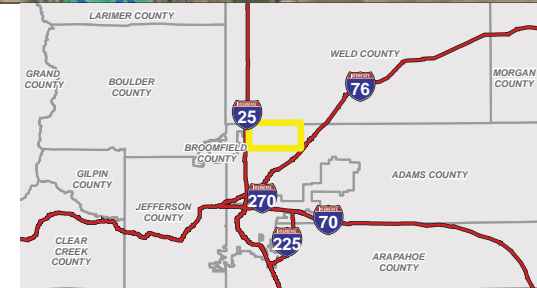
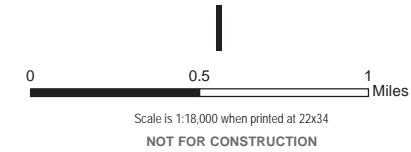
The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



- Project Features**
-  Pioneer Produced Water Pipeline (02/2020, Adams County)
  -  Pioneer Produced Water Pipeline (02/2020, Weld County)
  -  Oil and Gas Production Facility
  -  Adams County Natural Resource Conservation Overlay (NRCO)

- Transportation (CDOT 2015)**
-  U.S. Highway
  -  State Highway
  -  Major Local Road

- Boundary (CDOT, 2015)**
-  County Boundary



The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering

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- Project Features**
- Pioneer Produced Water Pipeline (02/2020, Adams County)
  - Pioneer Produced Water Pipeline (02/2020, Weld County)
  - Adams County Natural Resources Conservation Overlay (NRCO)
- Boundary**
- County Boundary

- Upland Soil Types**
- Arvada loam, 0 to 3 percent slopes
  - Ascalon sandy loam, 0 to 3 percent slopes
  - Ascalon sandy loam, 3 to 5 percent slopes
  - Ascalon sandy loam, 5 to 9 percent slopes
  - Blakeland loamy sand, 3 to 9 percent slopes
  - Dacono loam, 0 to 1 percent slopes
  - Dacono loam, 1 to 3 percent slopes

- Gravel pits
- Gravelly land-Shale outcrop complex
- Nunn clay loam, 0 to 1 percent slopes
- Nunn clay loam, 1 to 3 percent slopes
- Nunn loam, 0 to 1 percent slopes
- Platner loam, 0 to 3 percent slopes
- Platner loam, 3 to 5 percent slopes
- Renohill loam, 3 to 9 percent slopes

- Samsil-Shingle complex, 3 to 35 percent slopes
- Terrace escarpments
- Loamy alluvial land
- Loamy alluvial land, gravelly substratum
- Loamy alluvial land, moderately wet
- Ulm loam, 3 to 5 percent slopes
- Ulm loam, 5 to 9 percent slopes
- Water

- Hydric Soil Types**
- Wet alluvial land (100% Hydric)

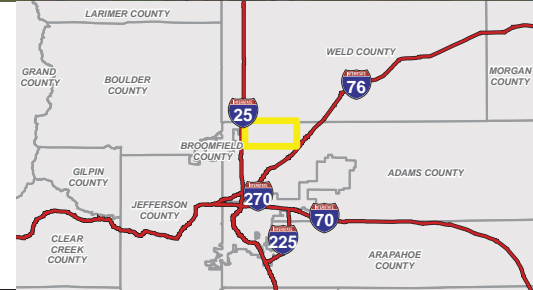
0 0.5 1 Miles

Scale is 1:18,000 when printed at 22x34

NOT FOR CONSTRUCTION



The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.



Path: P:\P1087 - Pioneer - Water\GIS\Adams-County-NRCS-Review\F04\_NRCS\_Soils.mxd Sheet: 2/26/2020

# **Attachment 1: Pioneer Water Pipeline Raptor Nest Survey**

Exhibit B: Resources Conservation Overlay Review  
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# Pioneer Water Pipeline

## Raptor Nest Survey Results

January 2020 - Draft







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## 1.0 INTRODUCTION

Pioneer Water Pipeline, LLC (Pioneer) contracted Tetra Tech, Inc. (Tetra Tech) to conduct a ground-based raptor nest survey for the proposed Pioneer Water Pipeline Project (Project). The Project would consist of approximately 45 miles of 4 to 12-inch diameter high-density polyethylene (HDPE) gathering pipelines and associated appurtenances in Adams and Weld counties, Colorado. The pipeline centerline was provided by Pioneer via email on December 18, 2019 (Figure 1). The objective of the raptor nest survey was to inventory raptor nests within a 0.5-mile buffer (Survey Area) of the pipeline centerline in accordance with the Colorado Parks and Wildlife (CPW) recommended raptor nest buffer zones and seasonal restrictions (CPW 2008).

## 2.0 METHODS

### 2.1 Raptor Nest Surveys

CPW maintains a Species Activity Mapping (SAM) database for select species, including bald eagle and osprey. Data obtained from the SAM database prior to the survey identified two bald eagle nests, winter concentration areas, and a winter foraging area located within the Survey Area (CPW 2019). CPW data identified eight additional bald eagle nests within approximately 2 miles of the Pipeline centerline. No osprey nests were identified in the database. CPW does not maintain data for other raptors.

The raptor nest survey was conducted prior to tree leaf-out to maximize the likelihood that nests would be detected by the biologist. The biologist drove accessible roads within the Survey Area scanning for raptor nests and making periodic stops to scan suitable habitat with binoculars and a spotting scope. The two bald eagle nests identified by CPW within the Survey Area were visited for field verification. Five additional bald eagle nests identified by CPW that are within 2 miles of the Project but located outside of the Survey Area were also visited and field verified. Non-eagle raptor nests observed while in transit to bald eagle nests were also recorded; however, a comprehensive survey for these nests was not conducted outside of the Survey Area.

The survey focused on stick nests; however, black-tailed prairie dog colonies that could support nesting burrowing owls or provide prey for raptors were also noted during the survey.

#### 2.1.1 Data Collection

To aid in navigation and data recording, tablets with built in topographic maps and a global positioning system (GPS) were used for electronic data collection. For each raptor nest located, the following data were collected:

- **Nest Identification Number:** Corresponding with GPS waypoint number.
- **Raptor Species:** If identified, the species was recorded. If the species using the nest could not be determined, the species was recorded as unknown.
- **Adult Present:** Proximity of the adult to the nest (e.g., on nest, nearby, or unknown).

- **Eggs or Young:** Number of eggs or young observed.
- **Nest Size:** Classified as large or small; small nests were those estimated by biologists as having a diameter of less than 24 inches, comprised of smaller sticks, and with other characteristics typical of nests used by smaller raptors and not by eagles. Large nests were those estimated by biologists as having a diameter of 24 inches or greater, comprised of larger sticks, and with other characteristics typical of nests used by eagles and other large raptors.
- **Nest Substrate:** Structure in which nest was located (e.g., broadleaf tree, cliff, artificial nest structure, etc.).
- **Nest Height:** Height relative to the structure it was on (e.g., on top of transmission pole, 3/4 of height of tree).
- **Nest Status:** To assess nest status, the following criteria were adapted from the USFWS Final Eagle Rule (USFWS 2016) and Postupalsky (1974):
  - In-use nest: The presence of eggs, dependent young, or adult on the nest, or signs of building or adding to the nest in preparation for egg-laying.
  - Alternate nest: One of potentially several nests within an eagle territory that is not an in-use nest at the current time. When there is no in-use nest, all nests in the territory are alternate nests. This term is specific to eagle nests.
  - Inactive: Defined by the absence of any adult, egg, or dependent young at the nest, or signs of building or adding to the nest in preparation for egg-laying. This term is specific to non-eagle nests.
  - Unknown: A nest that is present but for which surveyors are unable to determine status (e.g., presence of cattle prevented surveyors from approaching nest, vegetation around the nest site obscured the view of nest, wind speeds too high for close inspection of nest, etc.).
  - No Longer Present: A nest location that was provided by CPW but has subsequently been positively ascertained to be destroyed and no evidence of the nest remains.
  - Not Found: A nest location that was provided by CPW where the nest could not be located (e.g., road or access limitations), but that may still exist (not the same as “No Longer Present” above).
- **Nest Condition:** To assess nest condition, the following criteria were used (Postupalsky 1974):
  - Excellent: Defined cup or nest bowl with a well-maintained rim; adult or young present.
  - Good: Nest bowl intact and rim defined; minor repair needed for nest to be used; margins of nest in loose configuration, minor slumping occurring.
  - Fair: Nest bowl intact and nest not dilapidated but needs significant repair in order to be used; material is slumping or sliding.

- Poor: Loose structure of nest bowl still present; nest walls and side falling out; nest is in need of major repair to be used.
- Remnant: Nest bowl not defined; scant material remaining and not usable unless fully rebuilt.
- Unknown: The nest is gone; cannot be found; or the nest is present, but because of its location a determination cannot be made.

In addition to raptor nests, incidental observations of eagles were also recorded.

### 3.0 RESULTS AND DISCUSSION

The raptor nest survey was conducted on January 7 and 8, 2020. The biologist recorded data on 32 raptor nests during the survey (Figure 2; Table 1). Twenty raptor nests were observed within the Survey Area including one bald eagle nest (Nest 023), two red-tailed hawk nests (Nests 0018 and 009), and 17 nests with unknown species determination (Figure 2, Table 1). The unknown nests were all small nests and are unlikely to be used by eagles. Nest 032, a bald eagle nest located within the Survey Area according to data provided by CPW, was not found by the biologist during the survey.

Habitat within the Survey Area is primarily cropland, grassland, deciduous forest, and open lakes. These habitats provide suitable nesting and foraging resources for raptors. Busy roadways and human-occupied areas within the Survey Area represent existing disturbance to raptors.

CPW recommends a seasonal non-encroachment buffer of ½-mile from October 15 to July 31 for active bald eagle nests and 1/3-mile from February 15 to July 15 for active red-tailed hawk nests. As the raptor nest survey was conducted early in the year, only a few nests were active. Additional raptor nest surveys should be conducted if construction activities are expected to occur prior to August 31 of this year when the breeding season for Colorado raptors ends.

CPW guidance states that some raptors have adapted to urbanization and may tolerate human habitation in close proximity to the nest. During the survey, the biologist observed a bald eagle nest (Nest 028) in a deciduous tree located directly adjacent to a homestead (Figure 2). Therefore, some raptors in the Survey Area may be adapted to urbanization and tolerate construction activities within the CPW-recommended buffers and seasonal restrictions. Coordination with CPW is recommended before proceeding outside their guidelines. Additionally, bald eagles are protected by the Bald and Golden Eagle Protection Act. Therefore, coordination with USFWS is recommended.

A total of 15 black-tailed prairie dog colonies were observed in the Survey Area (Figure 2). These colonies ranged in size from small (approximately 15-30 burrows) to large (>500 burrows). Prairie dog colonies are known foraging and nesting habitat for burrowing owls, which are listed as state threatened by CPW. Colorado Revised Statute 33-2-105 states that it is unlawful to “take, possess, transport, export, process, sell or offer for sale, or ship” any species listed as threatened or endangered by CPW. If construction is expected to occur between March 15 and October 31 (burrowing owl breeding season), Tetra Tech recommends that Pioneer directs a qualified biologist to delineate the extent of the prairie dog colonies.

If colonies occur within 150 feet of the Project, preconstruction surveys for burrowing owls according to CPW-recommended survey protocol should be conducted.

Additional data collected during the survey, but not presented in the results of this report (i.e. nest photos), can be provided upon request.

**Table 1. Summary of Raptor Nest Data, January 2020**

Nest ID	Species	Nest Status	Nest Size	Nest Substrate	Distance (mi) to Pipeline Route <sup>1</sup>
023	Bald eagle	In-use	Large	Broadleaf tree	0.16
032	Bald eagle	Not Found	Large	Not Applicable	0.4
030	Bald eagle	No Longer Present	Large	Not Applicable	0.55
002	Bald eagle	Alternate	Large	Broadleaf tree	0.96
031	Bald eagle	No Longer Present	Large	Not Applicable	1.25
003	Bald eagle	In-use	Large	Broadleaf tree	1.37
028	Bald eagle	Alternate	Large	Broadleaf tree	1.45
029	Bald eagle	Alternate	Large	Broadleaf tree	1.68
018	Red-tailed hawk	In-use	Small	Broadleaf tree	0.39
009	Red-tailed hawk	In-use	Small	Broadleaf tree	0.45
012	Red-tailed hawk	In-use	Small	Broadleaf tree	0.7
005	Unknown	Inactive	Small	Broadleaf tree	0.04
024	Unknown	Inactive	Small	Broadleaf tree	0.04
025	Unknown	Inactive	Small	Broadleaf tree	0.05
001	Unknown	Inactive	Small	Broadleaf tree	0.1
022	Unknown	Inactive	Small	Broadleaf tree	0.12
006	Unknown	Inactive	Small	Broadleaf tree	0.15
027	Unknown	Inactive	Small	Broadleaf tree	0.2
019	Unknown	Inactive	Small	Broadleaf tree	0.23
004	Unknown	Inactive	Small	Broadleaf tree	0.26
014	Unknown	Inactive	Small	Broadleaf tree	0.27
008	Unknown	Inactive	Small	Not applicable	0.29
020	Unknown	Inactive	Small	Broadleaf tree	0.34

Nest ID	Species	Nest Status	Nest Size	Nest Substrate	Distance (mi) to Pipeline Route <sup>1</sup>
021	Unknown	Inactive	Small	Broadleaf tree	0.34
017	Unknown	Inactive	Small	Broadleaf tree	0.37
007	Unknown	Inactive	Small	Broadleaf tree	0.39
011	Unknown	Inactive	Small	Broadleaf tree	0.4
026	Unknown	Inactive	Small	Broadleaf tree	0.44
013	Unknown	Inactive	Small	Broadleaf tree	0.57
010	Unknown	Inactive	Small	Broadleaf tree	0.66
015	Unknown	Inactive	Small	Broadleaf tree	0.66
016	Unknown	Inactive	Large	Broadleaf tree	2.09

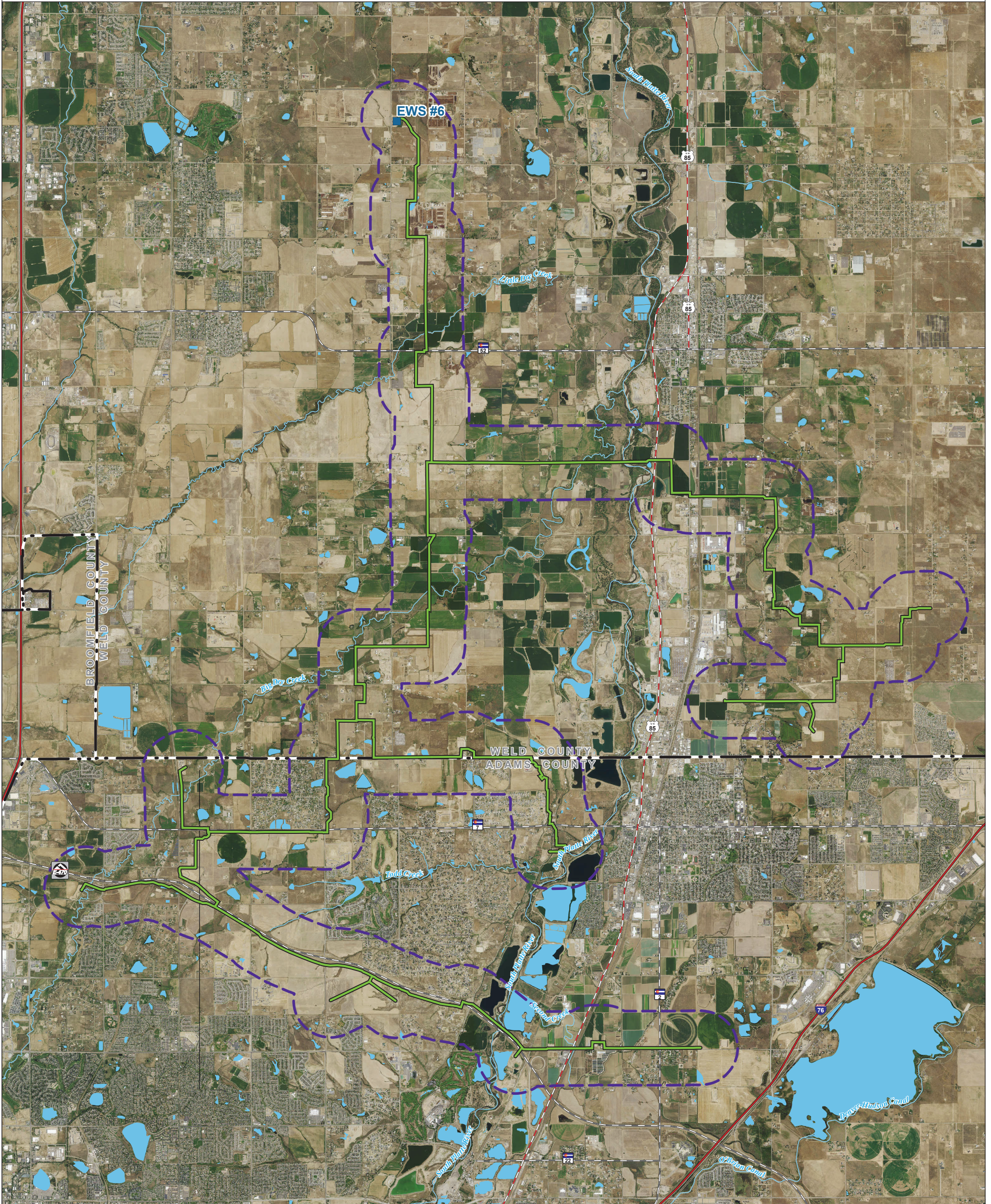
<sup>1</sup> Proposed Route 12/18/2019

## 4.0 REFERENCES

- CPW (Colorado Department of Wildlife). 2008. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. Revised February 2008.
- CPW. 2019. CPW Species Activity Mapping (Bald Eagle). Available online at: <https://www.arcgis.com/home/item.html?id=30cc9afded9c44d8835141f98f0c485a>. Accessed December 2019.
- Postupalsky, S. 1974. Raptor reproductive success: some problems with methods, criteria, and terminology. Raptor research report 2:21-31.
- USFWS (U.S. Fish and Wildlife Service). 2016a. Eagle Permits; Revisions to Regulations for Eagle Incidental Take and Take of Eagle Nests. Federal Register Vol 81. No. 242. Pp 91494-91554. December 16, 2016.



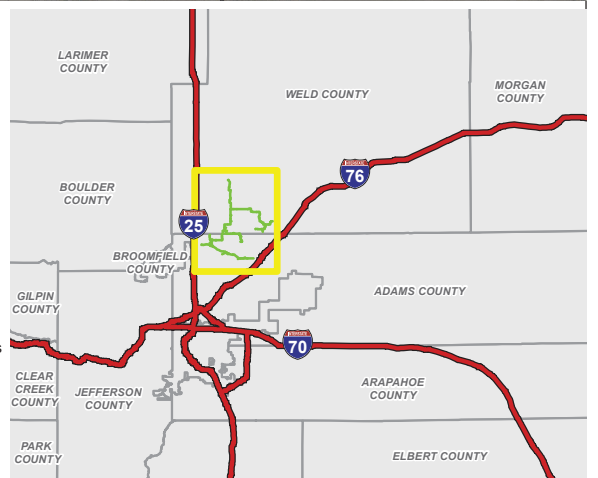
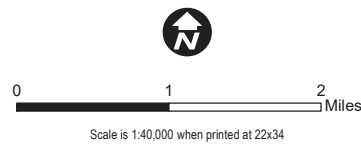




- Legend**
- EWS #6
  - Pioneer Produced Water Pipeline (12-18-2019)

- Transportation (CDOT 2015)**
- Interstate
  - U.S. Highway

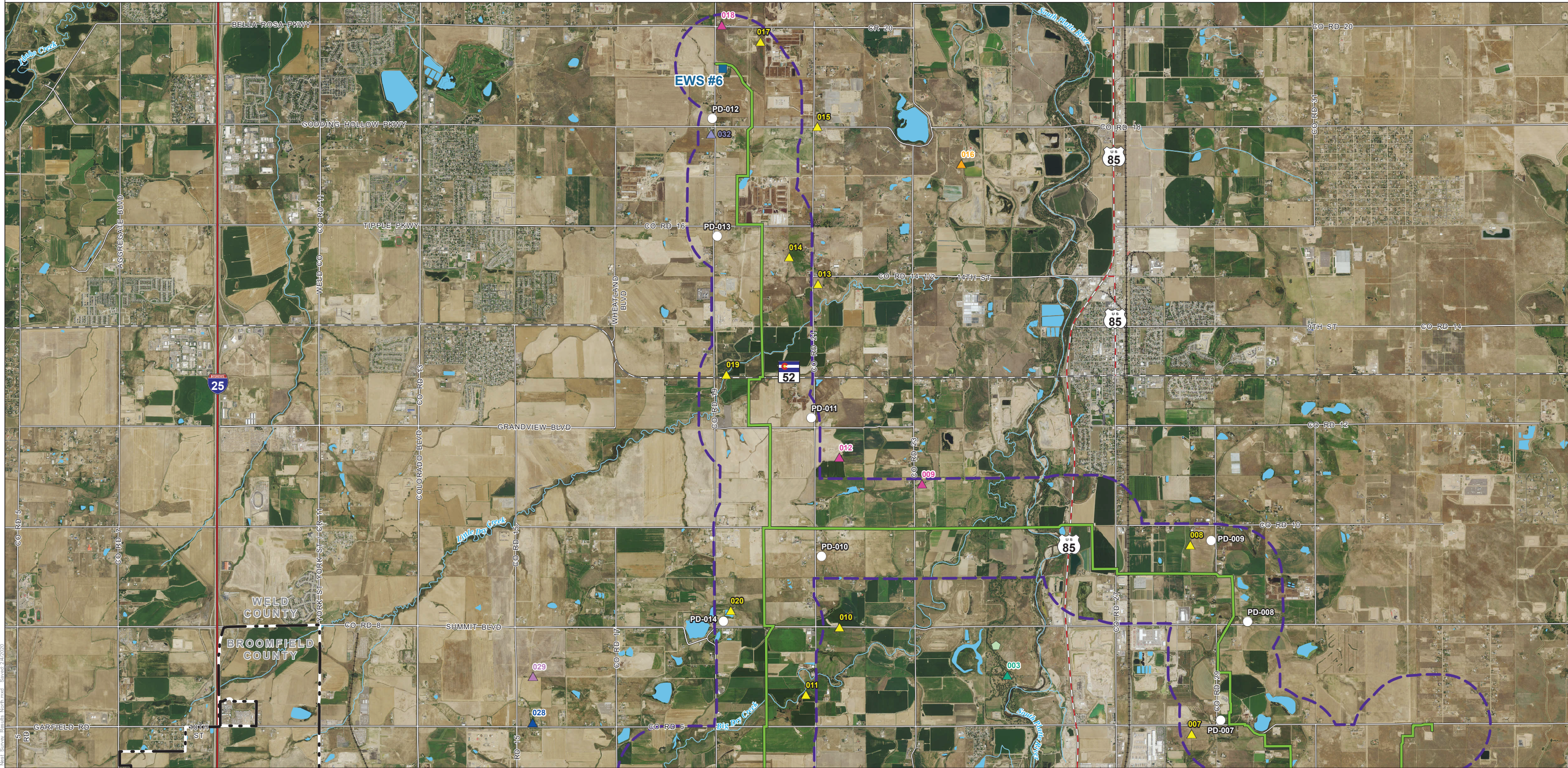
- Raptor Nest Survey Area (Tetra Tech, 2020)**
- 0.50-mile Buffer



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# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure 2a: Raptor Nest Survey Results - North

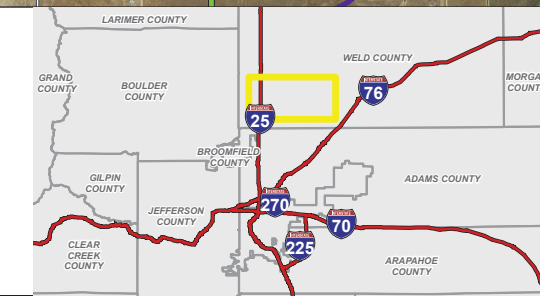
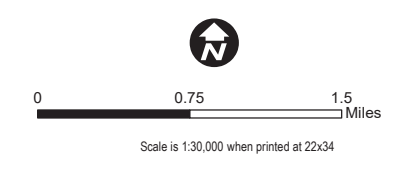


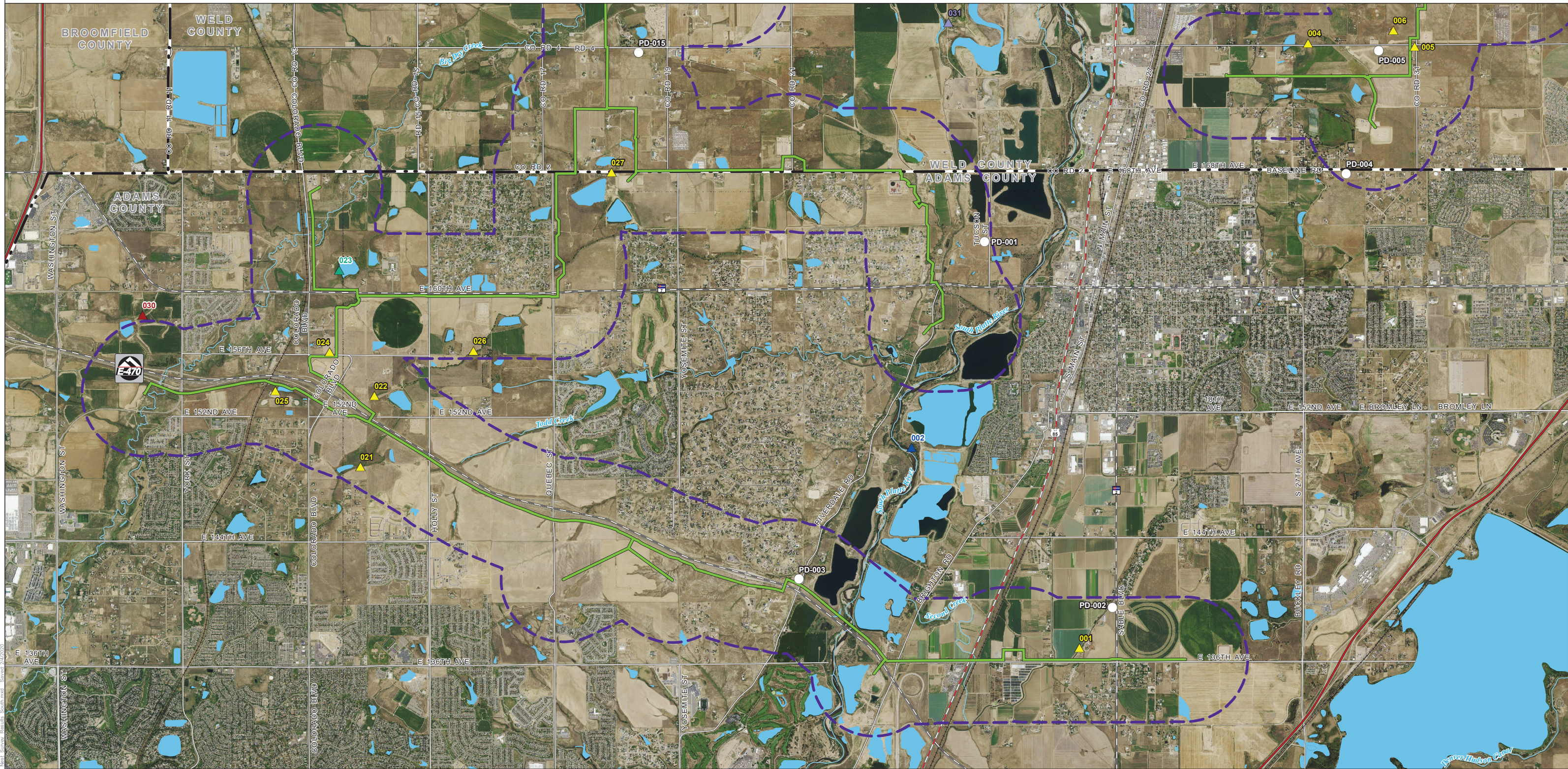
- Project Features**
- EWS #6
  - Pioneer Produced Water Pipeline (11-19-2019)
- Boundary (CDOT, 2015)**
- County Boundary

- Transportation (CDOT 2015)**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Species Survey (Tetra Tech, 2020)**
- Black-tailed Prairie Dog Colony
- Raptor Nest Survey (Tetra Tech, 2020)**
- Bald Eagle; Inactive; Large
  - Bald Eagle; Active; Large
  - Alternate Bald Eagle Nest

- Alternate Bald Eagle Nest; Not Found
- Red-tailed Hawk; Active; Small
- Unknown; Inactive; Small
- Unknown; Inactive; Large
- Immature Bald Eagle Sighting
- 0.50-mile Buffer





**Project Features**

- Pioneer Produced Water Pipeline (11-19-2019)

**Boundary (CDOT, 2015)**

- County Boundary

**Transportation (CDOT 2015)**

- Interstate
- U.S. Highway
- Major Local Road
- Railroad

**Species Survey (Tetra Tech, 2020)**

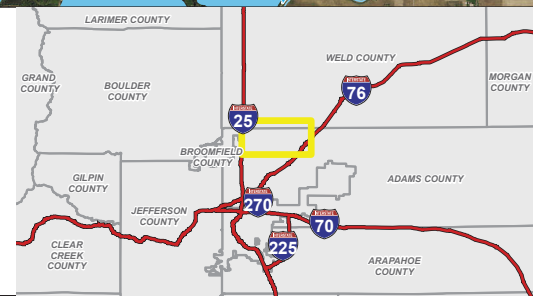
- Black-tailed Prairie Dog Colony

**Raptor Nest Survey (Tetra Tech, 2020)**

- Bald Eagle; Nest No Longer Present
- Bald Eagle; Active; Large
- Alternate Bald Eagle Nest; Not Found
- Unknown; Inactive; Small
- 0.50-mile Buffer

Scale is 1:24,000 when printed at 22x34

0 0.5 1 Miles





# **Attachment 2: Pioneer Water Pipeline Class I Cultural Resources Report**

Exhibit B: Resources Conservation Overlay Review  
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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February 21, 2020

Spence McCallie  
Vice President of Engineering  
Pioneer Water Pipeline, LLC  
600 17<sup>th</sup> Street, Suite 725 S  
Denver, CO 80202

Re: Cultural Resource Site File Search for the Pioneer Pipeline Project in Adams and Weld Counties, Colorado

Dear Mr. McCallie,

The purpose of this letter is to describe the results of a Class I Cultural Resource Site File Search and Literature Review for the Pioneer Pipeline Project, Adams and Weld Counties, Colorado. The results of this review include previously recorded sites and previously conducted surveys within 1-mile of the Project’s area of potential effect (APE).

For the purposes of this review, the term “APE” refers to a 100-foot-wide buffer (50 feet wide each side of the centerline) around the approximately 16.22-mile-long primary pipeline corridor within Adams County (Figures 1 and 2). The site file search covered a 2-mile-wide buffer (1 mile each side) around the Project centerline and this area is referred to as the “Research Area.”

The Project Research Area is located within the Fort Lupton (1988), Brighton (1994), Fredrick (1994) and Eastlake (1994) quadrangles. The legal locations of the Project Research Area are listed below in Table 1.

**Table 1. Legal Locations of Pioneer Pipeline Project Class I Research Area.**

Township	Range	Section(s)
1 South	68 West	1, 2, 10-15
1 South	67 West	1, 2, 5-9, 11,-27, 35
1 South	66 West	19, 20, 29, 30
1 North	68 West	36
1 North	67 West	31, 32

Tetra Tech, Inc. (Tetra Tech) conducted the site file search through the Colorado Historic Society Office of Archaeology and Historical Preservation (OAHP) Colorado Cultural Resource On-line Database (Compass) on September 23, 2019. This database includes records of all archaeological investigations that have been conducted and all cultural resources (prehistoric and historic archaeological sites) that have been previously recorded within the 2-mile-wide Research Area. Included in the Compass data are records of properties listed on the National Register of Historic Places (NRHP). Tetra Tech also reviewed historic Bureau of Land Management (BLM) General Land Office (GLO) records to determine

whether vestiges of trails, transportation routes, homesteads, or other historic resources may be present in the 2-mile-wide Research Area.

The Compass website shows that 20 prior investigations have been undertaken in the Research Area and 95 cultural resources (93 sites and 2 Isolated Finds [IFs] have been previously recorded. Nineteen of the 95 site records were not available.) All of the IFs are isolated artifacts. The previous investigations consist of Class III surveys for archaeological resource inventory, highway improvement, highway expansion, pipeline, water management, roadway development, access roads and historic research projects (Table 2).

**Table 2. Previously Conducted Surveys within Pioneer Pipeline Project Research Area.**

Report Number	Author(s)	Title	Year
AM.AE.R21		No Records Available	
AM.LM.R4		No Records Available	
AM.LM.R5		No Records Available	
AM.LM.R6		No Records Available	
AM.SC.R1		No Records Available	
AM.LG.R2	Dean E. Arnold	An Archaeological Survey of the Area Affected by the Northglenn Water Management Program	1978
MC.CH.R61	Barbara Choccol and Debra Angulski	Archaeological Clearance of Highway Project BRO 0012(1), Adams/Weld County Line Road at South Platte River	1985
AM.CH.NR5	Susan Thomas Baugh	Archaeological Survey of a Portion of State Highway 51, Adams County, Colorado (SR 0051(2))	1986
AM.CH.R4	Laurie R. Simmons and Christine Whitacre	E-470 Roadway Project, U.S. 85 Interchange	1988
MC.CH.R3	Kathryn L. Joyner	Final Report of Cultural Resource Inventory for the Proposed E-470 Corridor, Douglas, Arapahoe, Denver, Broomfield, and Adams Counties, Colorado	1988
AM.CH.R16	Sally Crum	Cultural Resource Survey of a Proposed Road South of Brighton, Adams County, Colorado (Bromley Lane at US 85 M6202(1))	1990
MC.CH.R157	Gail Hermsen Keeley	Historic Resources Survey Report: E-470 Segment IV, 120TH Avenue to I-25 North	1998
AM.FC.NR2	Cheryl A. Harrison	Cultural Resources Inventory for the Wagner Cellular Antenna Site and Access Road, Adams County	1999
AM.AE.R4	Ted Hoefer	Cultural Resource Investigation for 152 <sup>nd</sup> Adams County, Colorado	2001
AM.PA.R2	Unspecified	Washington Street Widening Project Cultural Resource Survey Report City of Thornton, Adams County, Colorado (SEI NO. 2003-78)	2004
AM.CH.NR28	Heid Guy Hays	Class III Cultural Resource Inventory of State Highway 7 at Holly Street Access Improvements for the Heritage Todd Creek Project, Adams County, Colorado (2005-187)	2005



Report Number	Author(s)	Title	Year
MC.CH.R184	Christopher Kinneer, Mary Painter, Denise Zier and Christian Zier	A Class III Archaeological Inventory of Corridor Alternatives and Miscellaneous Facilities Associated with the North I-25 Front Range Corridor Environmental Impact Statement, Adams, Boulder, Broomfield, Larimer, and Weld Counties	2007
AM.CH.R62	Greg Wolff	An Intensive Archaeological Resource Inventory of the South Platte River on State Highway 7 West of Brighton, Adams County, Colorado (BR 0072-015)	2008
MC.AE.R24	Erik Gantt, Stephen R. Anderson and Kristin A. Gensmer	Suncor Energy (U.S.A.) Pipeline Company Rocky Mountain Crude System Expansion Pipeline Project: Class III Cultural Resource Inventory Laramie County, Wyoming and Weld and Adams Counties, Colorado	2009
AM.SC.NR22	Jennifer Cook	Adams County Limited Results Cultural Resources Survey Report on Private Lands (Greaves)	2013

All but five (5AM.1477, 5AM.2271, 5AM.1476, 5AM.489 and 5AM.2115) of the 95 previous recorded resources are historic (Table 3). Of the 93 sites, eight (5AM.474.1, 5AM.474.4, 5WL.1317.11, 5AM.133, 5AM.2115, 5AM.457.1, 5AM.460.4 and 5AM.459.1) have been determined “Eligible-Officially”, eight sites (5AM.474.6, 5AM.471.4, 5AM.472.17, 5AM.472.20, 5AM.472.1, 5AM.3210.1, 5AM.3209.1 and 5AM.457.11) are shown as “Supports-Linear”, one site (5AM.2402) has been determined as “Needs Data-Officially”, one site (5AM.902) has no NRHP assessment given on the site form, 24 sites (5AM.3284.1, 5AM.3284.2, 5AM.3285.1, 5AM.3285.2, 5AM.3286, 5AM.3287, 5AM.3287, 5AM.3692, 5AM.3694, 5AM.3695, 5AM.3697, 5AM.3698, 5AM.3700, 5AM.3701, 5AM.3703, 5AM.3711, 5AM.3712, 5AM.3721, 5AM.3722, 5AM.3723, 5AM.3725, 5AM.3925, 5AM.3926 and 5AM.3928.1) have unknown NRHP eligibility (listed as No Records Available), two sites (5AM.2100.1 and 5AM.471.1) are shown as “Does Not Support Linear”, seven sites have been recommended as “Not Eligible-Field” and 40 sites have been determined “Not Eligible-Officially”. All of the IFs have been recommended as “Not Eligible-Field”.

Of the 95 cultural resources identified within the Research Area 20 sites are located within the Project APE. These resources include three railroad segments (5WL.751.1, 5AM.472.1 and 5AM.472.17), two ditch segments (5AM.471.4 and 5AM.473.2), three trail segments (5AM.126, 5AM.130 and 5AM.132), eight historic residences (5AM.458, 5AM.1235, 5AM.2200 5AM.2198, 5AM.2117, 5AM.3287, 5AM.3697 and 5AM.3721) and one historic road segment (5AM.3928.1). Three sites (5AM.3284.1, 5AM.3284.2 and 5AM.3286) have no record available. Site 5AM.3721 has been recommended as “Needs Data-Field.” Sites 5AM.472.1, 5AM.472.17 and 5AM.471.4 are recorded as “Segment Supports-Linear.” Site 5AM.3287 has been recorded as “Eligible Officially.” Sites 5AM.126, 5AM.130, 5AM.132 and 5WL.751.1 are recorded as “Not Eligible-Field.” Sites 5AM.473.2, 5AM.2198, 5AM.2117 and 5AM.3697 are recorded as “Not Eligible-Officially.” Site 5AM.3928.1 has no assessment given on the form.

**For Official Use Only: Disclosure of Site Locations Prohibited (43 CFR 7.18)**

**Table 3: Previously Recorded Cultural Resources within the Pioneer Pipeline Project Research Area.**

Site Number	Time Period	Site Type	NRHP Eligibility
5AM.1233	Historic	Residence	Not Eligible-Officially
5AM.1234	Historic	Residence	Not Eligible-Officially
5AM.1235	Historic	Residence	Not Eligible-Officially
5AM.1237	Historic	Residence	Not Eligible-Officially
5AM.126*	Historic	Trail Segment-Long Expedition	Not Eligible-Field
5AM.127	Historic	Stage Station	Needs Data-Field
5AM.130*	Historic	Trail Segment-Platte River Trail	Not Eligible-Field
5AM.132*	Historic	Trail Segment-Overland Trail and Stagecoach Route	Not Eligible-Field
5AM.133	Historic	School	Eligible-Officially
5AM.1372	Historic	Bridge	Not Eligible-Officially
5AM.1377	Historic	Culvert	Not Eligible-Officially
5AM.1378	Historic	Culvert	Not Eligible-Officially
5AM.1420	Historic	Bridge	Not Eligible-Officially
5AM.1421	Historic	Bridge	Not Eligible-Officially
5AM.1422	Historic	Bridge	Not Eligible-Officially
5AM.1476	Prehistoric	Lithic Concentration	Not Eligible-Officially
5AM.1477	Prehistoric	IF- Fire Altered Rock	Not Eligible-Field
5AM.2100.1	Historic	Ditch Segment-Harris Ditch	Does Not Support-Linear
5AM.2105.1	Historic	Ditch Segment	Not Eligible-Officially
5AM.2106.1	Historic	Ditch Segment	Not Eligible-Officially
5AM.2107.1	Historic	Ditch Segment	Not Eligible-Officially
5AM.2108.1	Historic	Ditch Segment	Not Eligible-Officially
5AM.2109.1	Historic	Ditch Segment	Not Eligible-Officially
5AM.2115	Prehistoric	Open Camp	Eligible-Officially
5AM.2116	Historic	Reservoir	Not Eligible-Officially
5AM.2117*	Historic	Residence	Not Eligible-Officially
5AM.2118	Historic	IF-Historic Artifact Concentration	Not Eligible-Officially
5AM.2198*	Historic	Residence	Not Eligible Officially
5AM.2199	Historic	Residence	Not Eligible-Officially
5AM.2200	Historic	Residence	Not Eligible-Officially
5AM.2271	Prehistoric	IF - -Lithic Flake	Not Eligible-Field
5AM.2375	Historic	Residence	Not Eligible-Officially
5AM.2402	Historic	Industrial Borrow Pit	Needs Data-Officially
5AM.2751	Historic	Bridge	Not Eligible-Officially
5AM.31.1	Historic	Railroad Segment-Boulder Valley Railroad	Not Eligible-Officially
5AM.3209.1	Historic	Ditch Segment-Brighton Ditch	Supports-Linear

Site Number	Time Period	Site Type	NRHP Eligibility
5AM.3210.1	Historic	Ditch Segment	Supports-Linear
5AM.3284.1		No Records Available	
5AM.3284.2		No Records Available	
5AM.3285.1		No Records Available	
5AM.3285.2		No Records Available	
5AM.3286*		No Records Available	
5AM.3287*	Historic	Residence	Eligible Officially
5AM.3287		No Records Available	
5AM.3692		No Records Available	
5AM.3694		No Records Available	
5AM.3695		No Records Available	
5AM.3697*	Historic	Residence	Not Eligible-Officially
5AM.3698		No Records Available	
5AM.3700		No Records Available	
5AM.3701		No Records Available	
5AM.3703		No Records Available	
5AM.371	Historic	Ditch Segment-McCann Ditch	Not Eligible-Officially
5AM.371.1	Historic	Ditch Segment-McCann Ditch	Not Eligible-Officially
5AM.3711		No Records Available	
5AM.3712		No Records Available	
5AM.3721*	Historic	Residence	Needs Data-Field
5AM.3722		No Records Available	
5AM.3723		No Records Available	
5AM.3725		No Records Available	
5AM.457.1	Historic	Canal Segment-Bull Canal	Eligible-Officially
5AM.457.11	Historic	Canal Segment-Bull Canal	Supports-Linear
5AM.458	Historic	Residence	Not Eligible-Field
5AM.459.1	Historic	Railroad Segment-Denver Pacific, Union Pacific Railroad	Eligible-Officially
5AM.460.1	Historic	Ditch Segment-Fulton Ditch	Within Existing District-Contributing
5AM.460.4	Historic	Ditch Segment-Fulton Ditch	Eligible-Officially
5AM.460.5	Historic	Ditch Segment-Fulton Ditch	Not Eligible-Field
5AM.461	Historic	Boxcar	Not Eligible-Field
5AM.462	Historic	Residence	Not Eligible-Officially
5AM.463	Historic	Residence	Not Eligible-Officially
5AM.467	Historic	Residence	Not Eligible-Officially
5AM.468	Historic	Residence	Not Eligible-Officially

Site Number	Time Period	Site Type	NRHP Eligibility
5AM.470	Historic	Residence	Not Eligible-Officially
5AM.471.1	Historic	Ditch Segment-German Ditch	Does Not Support-Linear
5AM.471.2	Historic	Ditch Segment-German Ditch	Not Eligible-Officially
5AM.471.4*	Historic	Ditch Segment-German Ditch	Segment Supports-Linear
5AM.472.1*	Historic	Railroad Segment-Union Pacific Railroad Dent Branch	Segment Supports-Linear
5AM.472.17*	Historic	Railroad Segment-Union Pacific Railroad Dent Branch	Segment Supports-Linear
5AM.472.20	Historic	Railroad Segment-Union Pacific Railroad Dent Branch	Segment Supports-Linear
5AM.473.2*	Historic	Ditch Segment-Signal Ditch	Not Eligible-Officially
5AM.474.1	Historic	Ditch Segment-Brantner Ditch	Eligible-Officially
5AM.474.4	Historic	Ditch Segment-Brantner Ditch	Eligible-Officially
5AM.474.6	Historic	Ditch Segment-Brantner Ditch	Segment Supports-Linear
5AM.475	Historic	Residence	Not Eligible-Officially
5AM.478	Historic	Boxcar	Not Eligible-Officially
5AM.489	Prehistoric	Lithic Scatter	Not Eligible-Officially
5AM.496	Historic	Residence	Not Eligible-Officially
5AM.625	Historic	Residence	Not Eligible-Officially
5AM.66	Historic	Trash Dump	Not Eligible-Field
5AM.902	Historic	Residence	No Assessment Given
5AM.3925		No Records Available	
5AM.3926		No Records Available	
5AM.3928.1*	Historic	Road Segment-Riverdale Road	No Assessment Given
5WL.1317.11	Historic	Railroad Segment-Union Pacific Railroad Dent Branch	Eligible-Officially
5WL.751.1	Historic	Railroad Segment-Boulder Valley Railroad	Not Eligible-Officially

\* Intersected by pipeline alignment.  
All sites highlighted in gray are located within the APE.

A review of the BLM GLO Original Survey Plats for T1S R66W, T1S R67W, T1S R68W, 1N R67W and 1N R68W identified 3 potential cultural resources (Table 4).

**Table 4: Class I File Search Data: Potential Cultural Resources within the Pioneer Pipeline Project Research Area**

Year	Resource	Township	Range
1862	Brantner Ditch	1 South	67 West
1909	Denver, Laramie & Northwestern Railroad	1 South	67 West
1862	Overland Trail	1 South	67 West

Sites that are recommended as Eligible (field or officially), have not been assessed (needs data-field, needs data-officially, or have no records available) for NRHP eligibility, should be treated as Eligible resources and avoided during all ground disturbing activities. The sites and IFs that are not eligible-officially or not eligible-field do not require additional management. Additionally while ground

disturbance is allowed on eligible historic sites, any extant structures should be avoided by project activities.

The only resources identified within the APE which require avoidance are 5AM.3287\*, 5AM.3284.1, and 5AM.3284.2. Tetra Tech contacted the Colorado OAH to gather information regarding 5AM.3284.1, 5AM.3284.2. These two sites are segments of 136<sup>th</sup> Avenue and do not require avoidance. Site 5AM.3287\* is a residence which is eligible officially. Pioneer will avoid impacts to this residence through the use of horizontal directional drilling or route adjustment. Therefore, no impacts to cultural and historic resources listed on the National Register of Historic Places (NRHP), determined or recommended eligible for the NRHP, or which remain unevaluated for listing on the NRHP are expected as part of this Project.

If you have any additional questions, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen Anderson".

Stephen Anderson M.A., R.P.A.  
Principal Archaeologist  
Main: 303-980-3601  
Mobile: 720-256-6843  
Stephen.Anderson@TetraTech.com

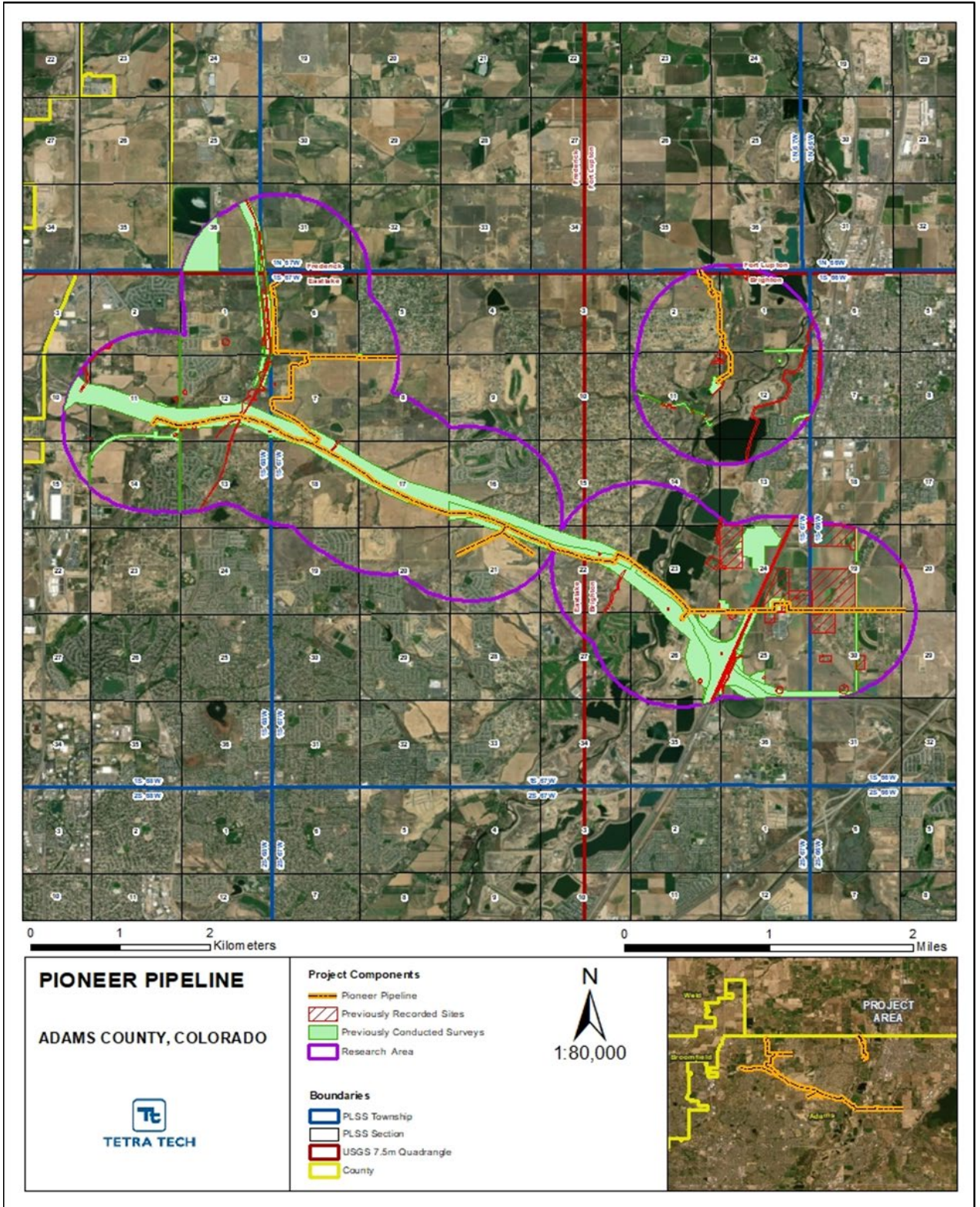


Figure 1. Project Overview.

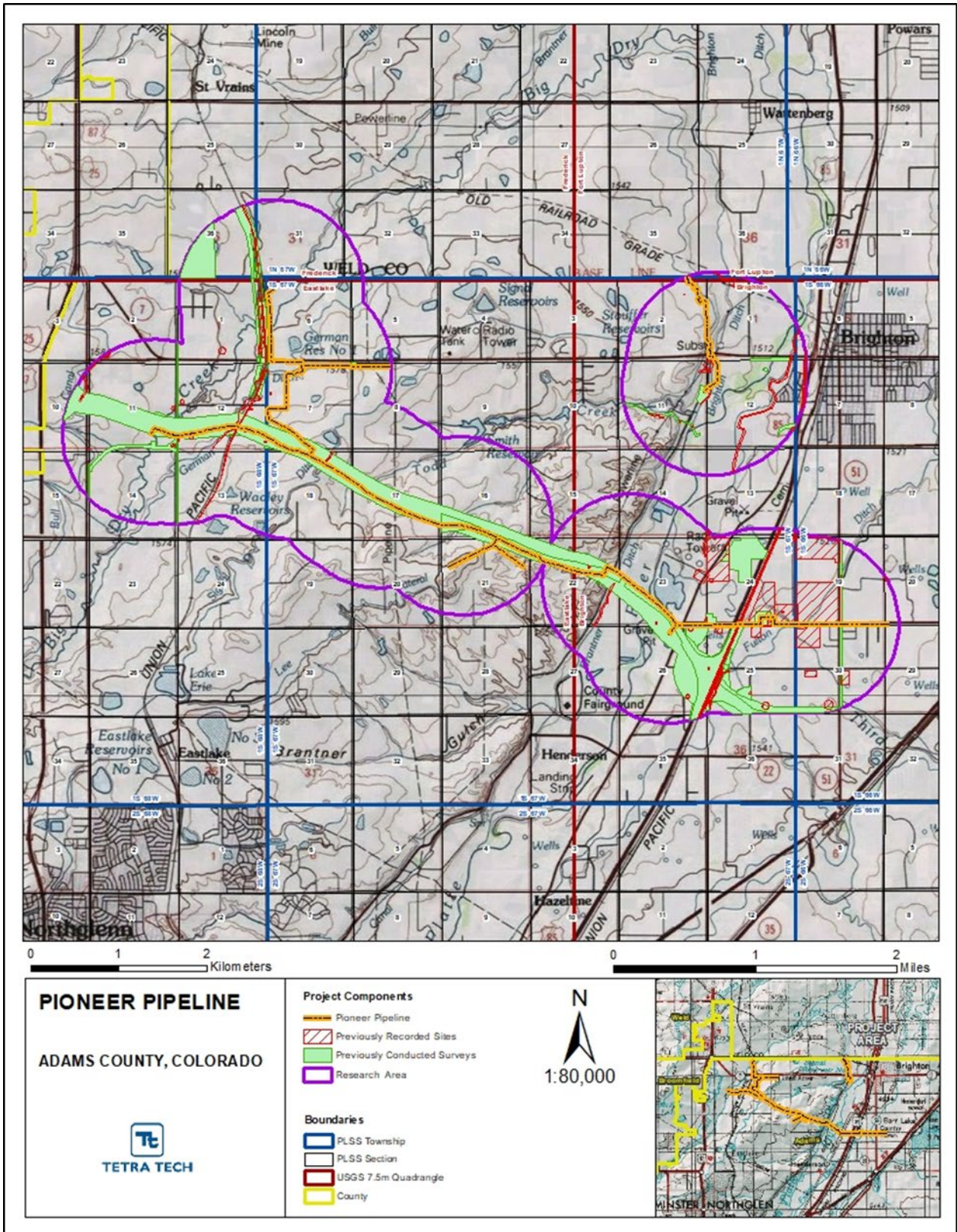


Figure 2. Project Topographical Map.





# **Exhibit C: Conceptual Review Preliminary Comments, Questions, and Responses**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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**Table C-1: CUP Sections Addressing Conceptual Review Comments**

Project Number	Commenter	Comment	Application Section Addressing Comment
<b>PRE2019-00065</b>			
<b>Commenting Division:</b> Planner Review <b>Name of Reviewer:</b> Greg Barnes, <b>Email:</b> <a href="mailto:gjbarnes@adcogov.org">gjbarnes@adcogov.org</a>			
PRE2019-00065	PLN01. REQUEST	Very limited information was provided regarding the actual request. From what we do know, multiple pipelines of 4-12 inches are being proposed. The application identifies water gathering lines as the purpose, but no specifics were provided.	CUP Application Sections 1 and 2
	PLN02. SITE LOCATION/ZONING	Based on the maps provided, the lines will connect multiple wellpads throughout the County.	CUP Application Section 1.2 Figure 2
	PLN03. PERMITTING REQUIREMENTS	<p>a. A neighborhood/scoping meeting is required prior to submittal of any formal application. A summary of the meeting shall be required in the application. Staff will provide the property owner mailing labels for this meeting. Section 2-01-02 outlines the meeting requirements (time, location, notice, etc.).</p> <p>b. A Conditional Use Permit application is required (Section 2-02-08) which shall also address and include all submittal requirements for the Areas and Activities of State Interest (AASI) permit (Chapter 6).</p> <p>c. A public hearing before the Planning Commission and Board of County Commissioners is required. The BOCC shall have the final authority to approve or deny the request.</p> <p>d. 3 routes shall be included with one preferred and two alternates. Each alternative will need to be described in detail, including why it was not selected as the preferred route.</p> <p>e. A detailed site plan, drawn to scale, is required for each route. Major roadways, landmarks, structures, bodies of water, etc. shall be identified.</p> <p>f. Describe the status of other Federal, State, and local permit requirements (chart form is preferred). If you have obtained these permits, please submit a copy with your application.</p> <p>g. A Development Agreement that outlines the requirements regarding the pre-construction, construction, post-construction, and maintenance requirements of the Project is required with submittal of any application.</p> <p>h. The proposed pipeline may be within the Aviation Height and Noise Overlay. Please coordinate the FAA regarding the proposed wellpad and pipeline connection.</p>	Exhibit F  CUP Application          Exhibit H          CUP Application Section 3.4.2 Figures 4, 5, 6, 7          N/A; Project is not located within the Aviation Height Overlay

Exhibit C: Conceptual Review Preliminary Comments, Questions, and Responses  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table C-1: CUP Sections Addressing Conceptual Review Comments**

Project Number	Commenter	Comment	Application Section Addressing Comment
		i. Please coordinate with the E-470- Authority, and other municipalities affected by this application address any potential impacts in the written explanation of any future application. j. Please address any impacts to the Brighton Fire District, Brighton School District, and CDOT right-of-ways. k. Safety Record: Please provide operational safety records for all parties involved in the construction, operation and maintenance of the pipeline and facilities. Report and describe items such as deaths, injuries, explosions, leaks and spills. Detail the steps to prevent such occurrences in the future. With the application describe other relevant safeguards, protocols, and reporting/notification systems that would be in place to respond to safety and security incidents involving the proposed infrastructure.	CUP Application Section 3.4.2 and Table 7 Figure 3  CUP Application Section 3.7.1  Exhibit D CUP Sections 2.3.5 and 3.11.11.3
	OTHER NOTES	1. Can colocation occur in conjunction with the Boardwalk Pipeline? 2. Financial feasibility must be a part of the AASI application 3. Future Land Use and zoning will be evaluated with your application. 4. Much more detail will be required with your next submittal.	Exhibit H  CUP Application Section 3.5  CUP Application Section 3.6 Figure 4  CUP Application
<b>Commenting Division: Development Engineering Review:</b>			
<b>Name of Reviewer:</b> Eden Steele, <b>Email:</b> <a href="mailto:esteele@adcogov.org">esteele@adcogov.org</a>			
PRE2019-00065	ENG1	Buried pipelines are exempt from surface floodplain regulations. A floodplain use permit is not required for this project.	Comment noted, no response required.
	ENG2	Segments of the pipeline are within the Adams County MS4 Stormwater Permit area. The applicant shall be responsible to ensure compliance with all Federal, State, and Local water quality construction requirements. If the proposed project will disturb an area greater than one (1) acre within the MS4 area, a Stormwater Quality (SWQ) Permit will be required. Applicant is responsible for installation and maintenance of Erosion and Sediment Control BMPs. Builder/developer is responsible for adhering to all the regulations of Adams County Ordinance 11 in regards to illicit discharge.	CUP Application Section 3.4.2
	ENG3	The proposed project alignment(s) are within the boundaries of the following regional drainage studies:	CUP Sections 3.3.5 and 3.11.4

**Table C-1: CUP Sections Addressing Conceptual Review Comments**

Project Number	Commenter	Comment	Application Section Addressing Comment
		<ul style="list-style-type: none"> <li>• Big Dry Creek North Tributaries Area – North Area Tributaries Big Dry Creek (ADCO) – Outfall Systems Planning Study; Prepared for Urban Drainage and Flood Control District, Adams County, and City of Thornton; Nov 1989</li> <li>• Brighton Watershed Area – Brighton Watershed Tributary to South Platte River – Outfall Systems Planning – Preliminary Design Report; Prepared for Urban Drainage and Flood Control District, Adams County, and the City of Brighton; Dec 1998</li> <li>• Todd Creek Area – Todd Creek and DFA 0052 Watersheds Outfall System Planning Study – Preliminary Design Report; Prepared for Urban Drainage and Flood Control District, Adams County, and City of Thornton; Dec 2003</li> <li>• Third Creek Area – Third Creek (Downstream of DIA) - Outfall System Planning Study Update – Preliminary Design Report; Prepared for Urban Drainage and Flood Control District, Adams County, City of Brighton, and Commerce City; Sep 2005</li> <li>• Second Creek Area - Second Creek Downstream of DIA and DFA 0053 Outfall System Planning Study Update; Prepared for Urban Drainage and Flood Control District, Adams County, Commerce City and City of Brighton; Oct 2003</li> <li>• South Platte River Area - South Platte River Major Drainageway Planning ; Prepared for Urban Drainage and Flood Control District, Adams County, Commerce City, City of Brighton, Denver Water Department, Metro Wastewater Reclamation District, and City of Thornton; April 2002</li> </ul>	
	ENG4	For the proposed regional drainage facilities identified in the studies listed in ENG3, it is recommended that the applicant either avoid them or install the line to a depth below the facility to provide sufficient cover and avoid potential utility conflicts. Show these regional facilities on the plans.	CUP Sections 3.11.3 and 2.3.2
	ENG5	Full street closings are generally not allowed within Adams County, unless approved by Construction Management. It is recommended that street crossing be bored, when possible, to prevent street closures.	CUP Section 2.3.3 Figure 4

Exhibit C: Conceptual Review Preliminary Comments, Questions, and Responses  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table C-1: CUP Sections Addressing Conceptual Review Comments**

Project Number	Commenter	Comment	Application Section Addressing Comment
	ENG6	Pipelines must be placed outside of public right-of-way except for perpendicular crossings.	CUP Application Section 2.3.3 Figure 4 Exhibit A
	ENG7	The developer is responsible for the repair or replacement of any County infrastructure damaged during the construction of this project.	CUP Application Section 2.3.3
	ENG8	Several sections of the proposed pipeline project run through jurisdictions that are outside of Adams County authority. Adams County cannot permit or approve the pipeline in these areas. The developer is responsible for meeting all requirements of other jurisdictions.	CUP Application Section 2.3.1
	ENG9	All work within County ROW will require utility (UTL) permitting. Work on County properties will require infrastructure (INF) permitting.	CUP Application Section 2.3.3
	ENG10	As a part of the construction permitting process, the developer is required to submit for review and receive approval of all construction documents. Construction documents shall include, at a minimum, site plans and profiles showing the specific location of the pipeline, both horizontally and vertically, in any area within the Adams County jurisdiction. All construction documents must meet the requirements of the Adams County Development Standards and Regulations.	Exhibit A
<b>Commenting Division: ROW Review</b>			
<b>Name of Reviewer:</b> Marissa Hillje, <b>Email:</b> <a href="mailto:mhillje@adcogov.org">mhillje@adcogov.org</a>			
PRE2019-00065	ROW1	Pipelines should be located in easements on private property. Said easements should be placed outside of the ultimate Right-of-ways of County roads as delineated by the Adams County Transportation Plan, approved 2012.	CUP Application Section 3.4.1
	ROW2	Encroachment upon Future Right-of-Way. In any segment of the Project that is parallel to an Adams County right-of-way, the pipeline shall be constructed a minimum of five (5) feet from the edge of the maximum future right-of-way width, as designated in the Adams County 2012 Transportation Plan.	CUP Application Section 3.7.3
	ROW3	As development of the Transportation Plan is implemented and if the location and existence of Developer's permanent easement precludes such development, Developer's	Comment noted.

**Table C-1: CUP Sections Addressing Conceptual Review Comments**

Project Number	Commenter	Comment	Application Section Addressing Comment
		overlapping easement rights shall be subordinated (subject to the then existing rights of the parties, laws and regulations) to accommodate Adams County's development.	
<b>Commenting Division: Environmental Analyst</b>			
<b>Name of Reviewer:</b> Katie Keefe, <b>Email:</b> <a href="mailto:kkeefe@adcogov.org">kkeefe@adcogov.org</a>			
PRE2019-00065	ENV1	All federal and state regulatory permits, including those required by PHMSA and COGCC, must be provided to the County at the time of conditional use permit application.	Table 7, section 3.4.2
	ENV2	Applicant must submit an emergency response plan for referral to the responding DERA for entire pipeline segment or various responding agencies for specific jurisdiction in which pipeline crosses.	CUP Application Section 2.3.5
	ENV3	It appears that segments of the pipeline cross land within the Natural Resource Conservation Overlay, the intent of which is to protect environmentally valuable areas and wildlife corridors associated with rivers, streams, riparian ecosystems and wetlands. All development within these areas must comply with NRCO buffers/setback requirements set forth in section 4-11-02-04-02.	Exhibit B
<b>Commenting Division: Building and Safety Review</b>			
<b>Name of Reviewer:</b> Justin Blair, <b>Email:</b> <a href="mailto:jblair@adcogov.org">jblair@adcogov.org</a>			
PRE2019-00065	BSD1	Building permits would be required for any permanent fencing, electrical, or structures/equipment, including temporary structures such as construction trailers and temporary electrical connections.	Comment noted.
	BSD4	Engineered plans will be required to obtain permits.	Exhibit A
	BSD5	Current adopted codes are the 2018 International Building Codes and the 2017 National Electrical Code.	Comment noted.
	BSD6	Applicant should contact Fire Department for their requirements.	3.7.1
<b>Commenting Division: Parks Review</b>			
<b>Name of Reviewer:</b> Aaron Clark, <b>Email:</b> <a href="mailto:aclark@adcogov.org">aclark@adcogov.org</a>			
PRE2019-00065	PRK1	The proposed pipeline route crosses the Willow Bay open space, owned by Adams County (parcel #157123400003) in addition to the South Platte River Trail in the same area. Much more information will be required regarding the pipeline's impacts to County open space and proposed methods to limit disruptions to trail access and traffic.	Section 2.6 and Section 3.10.1.

Exhibit C: Conceptual Review Preliminary Comments, Questions, and Responses  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table C-1: CUP Sections Addressing Conceptual Review Comments**

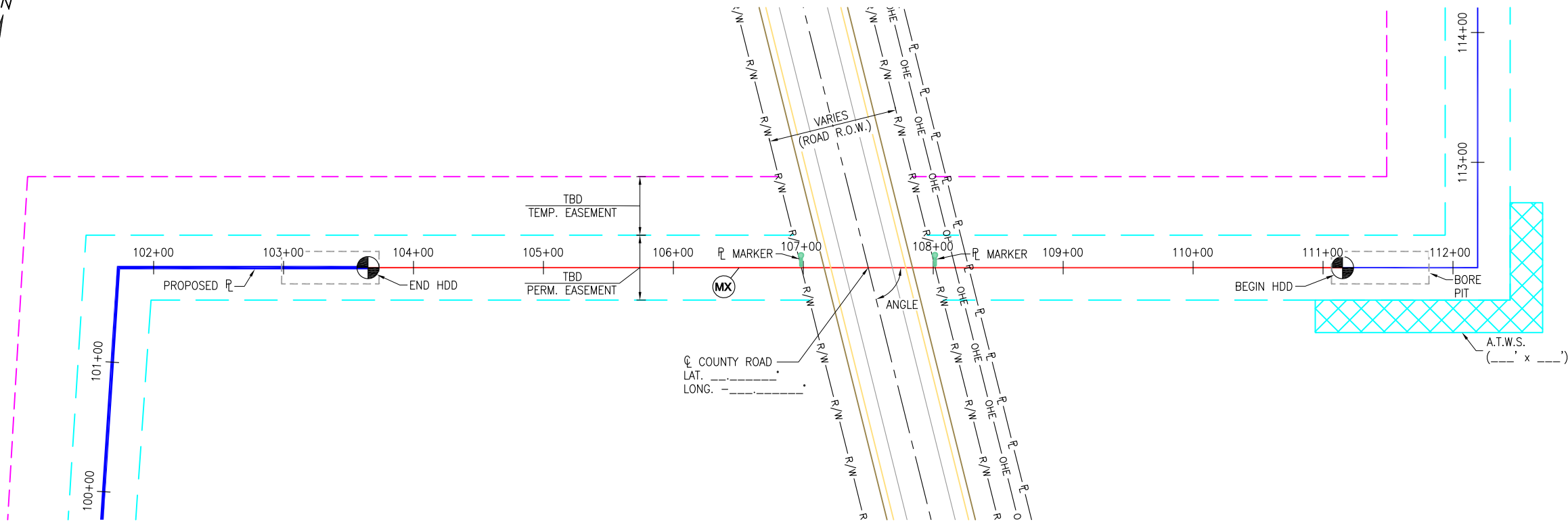
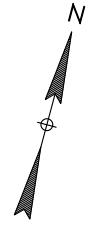
Project Number	Commenter	Comment	Application Section Addressing Comment
	PRK2	In the same vein, the proposed pipeline would cross the Murata Brothers Farm, owned by Adams County (parcel #157124000041 and #157124000040). This county owned property is in active agricultural use.	Exhibit A, Figures 1-6. The Project no longer crosses parcels 157124000041 and 157124000040.
	PRK3	The proposed pipeline would cross both the Fulton and Brantner ditches, in which Adams County is a shareholder. Potential impacts to these ditches and their rights should be discussed with the respective companies.	CUP Application Sections 3.11.3.1 and 3.4.2. Table 10



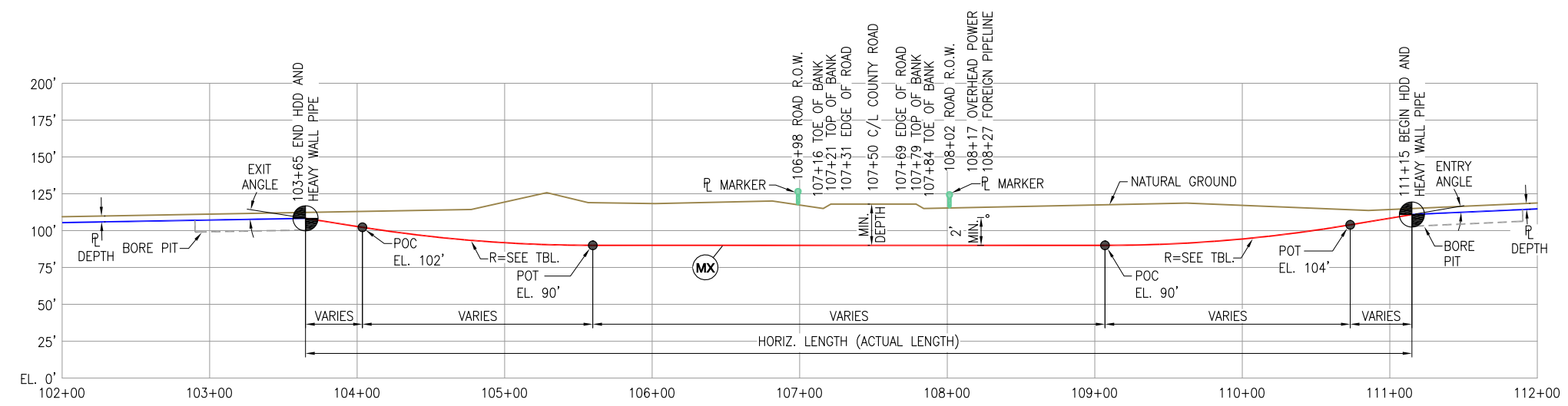
# **Exhibit D: Typical Pipeline Trench and HDD**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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**PLAN VIEW**  
SCALE: 1"=100'



**PROFILE VIEW**  
SCALE: HORIZ: 1"=100', VERT: 1"=100'

CROSSING PIPE SPEC					
ITEM	SIZE	DR	MAOP (PSIG)	℄ SERVICE	BEND RADIUS
M1	12"	9	148	PRODUCED WATER	240'
M2	12"	7	197	PRODUCED WATER	240'
M3	10"	9	148	PRODUCED WATER	200'
M4	10"	7	197	PRODUCED WATER	200'
M5	8"	11	118	PRODUCED WATER	200'
M6	8"	9	148	PRODUCED WATER	160'
M7	6"	9	148	PRODUCED WATER	120'
M8	6"	7	197	PRODUCED WATER	120'

CROSSING PIPE MATERIAL	
ITEM	DESCRIPTION
M1	12" DR9, PE-RT, API 15LE
M2	12", DR7, PE-RT, API 15LE
M3	10", DR9, PE-RT, API 15LE
M4	10", DR7, PE-RT, API 15LE
M5	8", DR11, PE-RT, API 15LE
M6	8", DR9, PE-RT, API 15LE
M7	6", DR9, PE-RT, API 15LE
M8	6", DR7, PE-RT, API 15LE

H.D.D. BEGIN / END COORDS.		
BEGIN H.D.D.	LAT. XX.XXXXXX'	LONG. -XXX.XXXXXX'
END H.D.D.	LAT. XX.XXXXXX'	LONG. -XXX.XXXXXX'

LEGEND	
	H.D.D. ENTRY or EXIT
	BORE PIT
	A.T.W.S. (ADD'L TEMP. WORKSPACE)
	C/L EASEMENT
	PERMANENT EASEMENT
	TEMPORARY EASEMENT/WORKSPACE
	PROPOSED H.D.D.
	PROPERTY LINE
	FENCE LINE
	C/L ROAD
	EDGE OF ROAD
	EDGE OF DRIVEWAY
	RIGHT-OF-WAY
	RAILROAD TRACK
	C/L DITCH/STREAM/WATER
	TOP BANK/SLOPE
	TOE BANK/SLOPE
	EDGE OF FIELD/TREE LINE
	FOREIGN PIPELINE
	IRRIGATION LINE
	BURIED POWER
	OVERHEAD POWER

- NOTES:**
- IN ADDITION TO THE SITE-SPECIFIC INFORMATION PROVIDED IN THIS DRAWING, GENERAL REQUIREMENTS INCLUDED IN PERMITS AND APPROVAL FROM FEDERAL, STATE, AND LOCAL AGENCIES ALSO APPLY.
  - CONTRACTOR SHALL USE THE "ONE-CALL" SYSTEM PRIOR TO BEGINNING WORK. CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL PARALLEL AND CROSSED UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION. THIS DRAWING SHALL NOT CONSTITUTE VERIFICATION OF LOCATION, DEPTH, QUANTITY, SIZE, OR TYPES OF EXISTING UTILITIES.
  - CONTRACTOR SHALL VERIFY ALL EXISTING FACILITY PLACEMENT PRIOR TO SUBMITTING BID. SPECIFIC SAFETY PROCEDURES, OUTLINED BY COMPANY, ARE TO BE FOLLOWED AT ALL TIMES. PERMITTING AND NOTIFICATION TO CROSS, OR WORK OVER EXISTING FACILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. MAINTAIN 2ft MINIMUM CLEARANCE WHEN CROSSING FOREIGN UNDERGROUND UTILITIES.
  - IF MATTING, SHORING, AND WELL POINTS ARE REQUIRED IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
  - ENTRY AND EXIT ANGLES ARE MEASURED FROM HORIZONTAL PLANE.
  - FILL MATERIAL IS NOT REQUIRED AT THIS SITE.
  - COORDINATES SHOWN ARE BASED ON STATE PLANE NAD 83 DATUM, US FOOT; COLORADO NORTH.
  - UTILITIES SHOWN ARE FOR HORIZONTAL REFERENCE ONLY.
  - INSTALL PIPELINE WARNING MARKERS ON BOTH SIDES OF ROADWAYS.

STATIONING AND ELEVATION ARE NOTIONAL AND INTENDED FOR ILLUSTRATION PURPOSES ONLY.

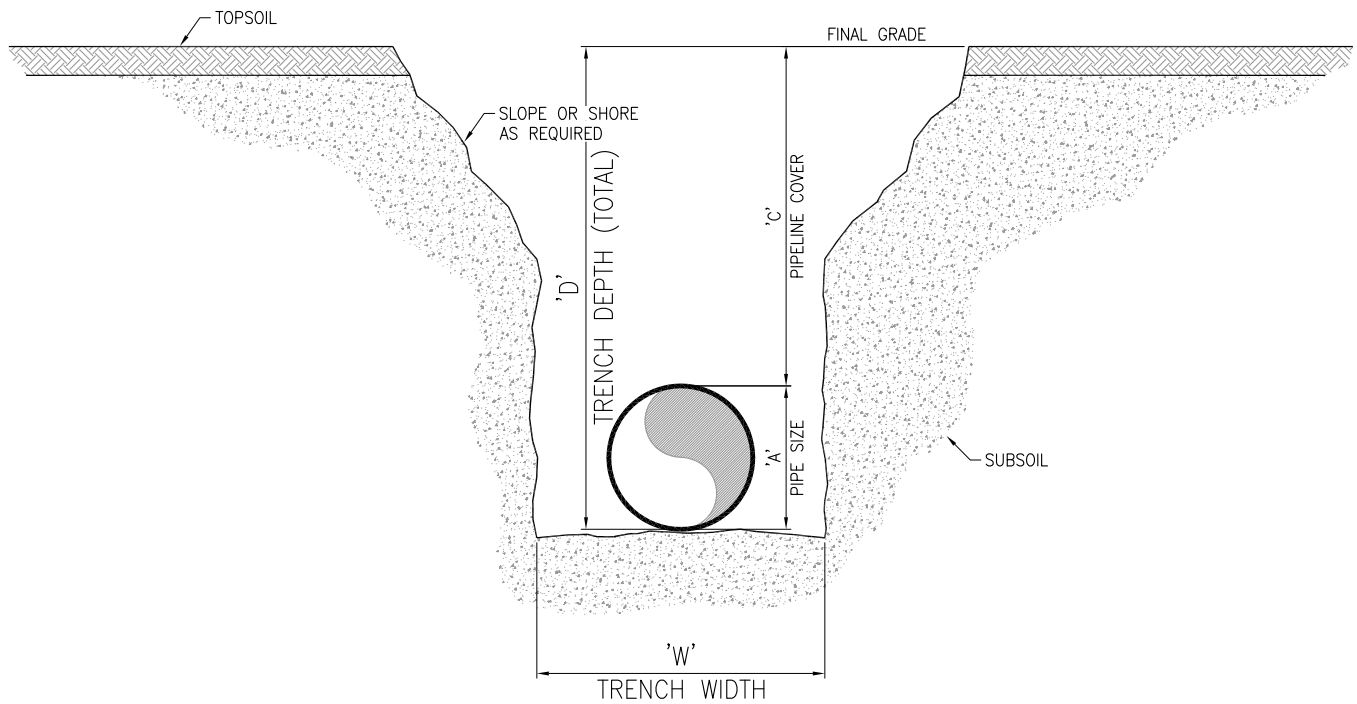
REF. DWG. No.	REFERENCE DRAWING TITLE	REV.	REVISION DESCRIPTION	BY	CHK	APPD	DATE
---	---	A	ISSUED FOR REVIEW	CAG	AL	JWM	12/17/19

**SPARTAN ENGINEERING INC.**  
12345 W. ALAMEDA PKWY. SUITE 205  
LAKEWOOD, CO. 80228  
303-658-0358  
www.spartan-eng.com

**811**  
PER COLORADO STATE LAW, CONTACT "ONE-CALL" 48 HOURS (MIN.) PRIOR TO ANY EXCAVATION OR DIGGING POTHOLES.  
ALL UTILITY LOCATIONS AND DEPTHS MUST BE VERIFIED.

**Pioneer Pipeline**  
CITY OF BRIGHTON, COLORADO  
PIONEER PIPELINE PROJECT  
PROPOSED TYPICAL DRAWING  
COUNTY ROAD CROSSING



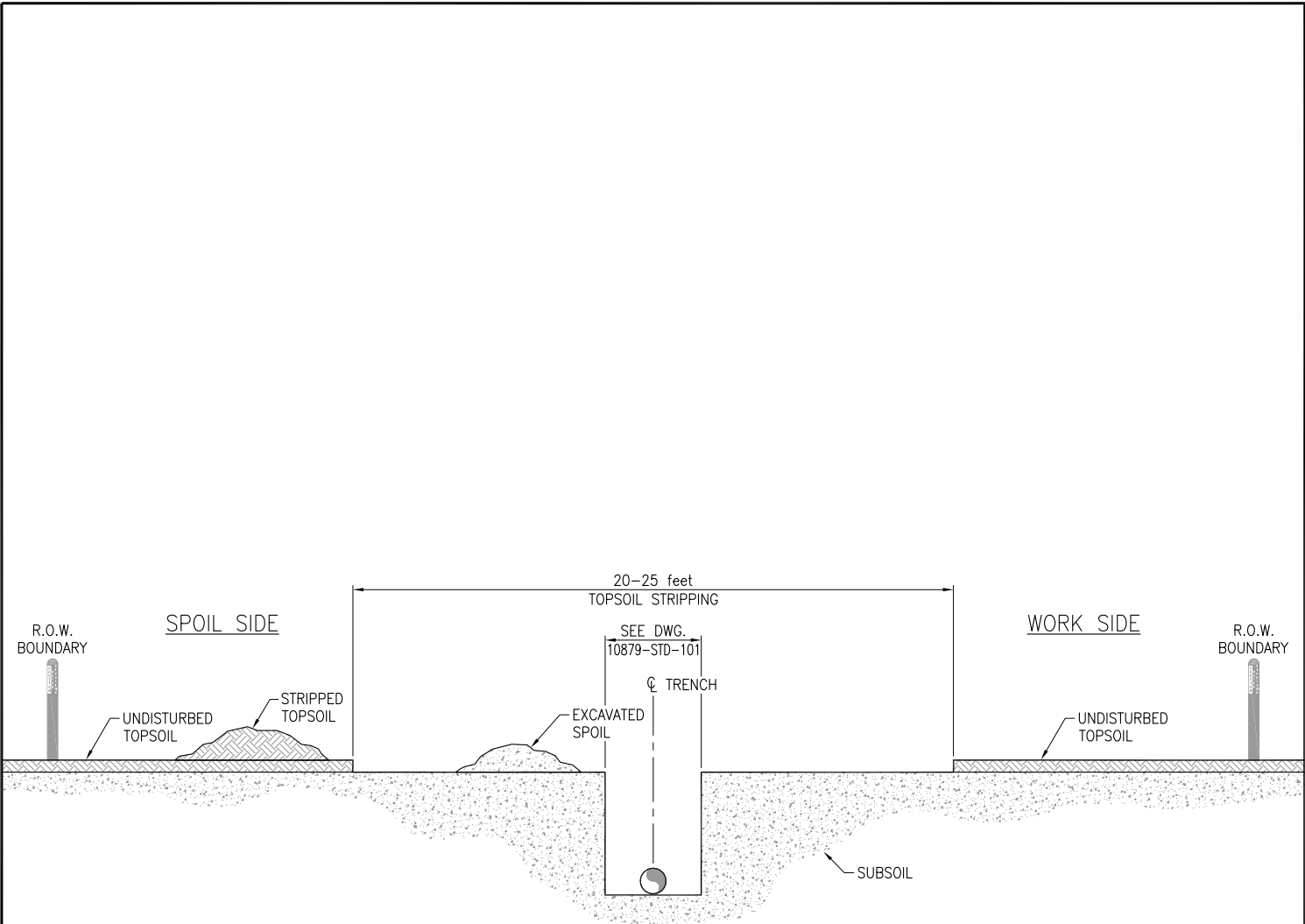


'A' PIPE SIZE (NOMINAL)	'C' PIPELINE COVER	'D' TRENCH DEPTH (TOTAL)	'W' TRENCH WIDTH (MIN.)
2"	48"	50"	12"
3"	48"	51"	12"
4"	48"	52"	12"
6"	48"	54"	18"
8"	48"	56"	20"
10"	48"	58"	22"
12"	48"	60"	24"
16"	48"	64"	28"
20"	48"	68"	32"
24"	48"	72"	36"
26"	48"	74"	38"
30"	48"	78"	42"
36"	48"	84"	48"
42"	48"	90"	56"

**NOTES:**

1. LOCATION: THE DITCH SHALL CONFORM TO LINE AS STAKED BY COMPANY.
2. THE MINIMUM DIMENSIONS OF THE FINISHED DITCH SHALL CONFORM TO THE ABOVE TABLE; EXCEPT WHERE SPECIAL DIMENSIONS HAVE BEEN APPROVED BY THE COMPANY REPRESENTATIVE.
3. APPLIES TO OPEN-TRENCHED INSTALLATION ONLY.

				 <p><b>SPARTAN ENGINEERING INC.</b> 12345 W. ALAMEDA PKWY. SUITE 205 LAKEWOOD, CO. 80228 303-659-0358 www.spartan-eng.com</p>		 <p><b>Pioneer Pipeline</b> CITY OF BRIGHTON, COLORADO PIONEER PIPELINE PROJECT PROPOSED STANDARD DRAWING PIPELINE TRENCH WIDTH AND DEPTH OF COVER</p>					
A	ISSUED FOR REVIEW	CAG	AL	JWM	12/17/19	SPARTAN PROJ. No.	CLIENT PROJ. No.	DWG. SCALE	DWG. SIZE	DRAWING No.	REV.
REV.	REVISION DESCRIPTION	BY	CHK	APPD	DATE	10879	--	NONE	ANSI A	10879-PL-STD-101	A




**PROFILE VIEW**

SCALE: NONE

**NOTES:**

1. REMOVE TOPSOIL FROM OVER THE TRENCH AND UNDER THE SPOIL PILE.
  - STRIPPED WIDTH WILL BE APPROXIMATELY 20-25ft.
  - STORE TOPSOIL ON SPOIL SIDE, ADJACENT TO STRIPPED AREA.
2. EXCAVATE TRENCH SUBSOIL AND STORE ON SPOIL SIDE, ADJACENT TO THE TRENCH.
  - ALLOW FOR A 3ft SEPARATION BETWEEN THE TOPSOIL PILE AND THE TRENCH SPOIL PILE.
3. RETURN TRENCH SPOIL TO TRENCH AND COMPACT.
  - FEATHER OUT EXCESS SPOIL OVER STRIPPED AREA LEAVING A LOW ROACH CENTERED OVER THE TRENCH.
  - ALLEVIATE COMPACTION OF CLAY-RICH SUBSOILS OVER THE STRIPPED AREA.
4. RETURN TOP SOIL EVENLY OVER THE STRIPPED TRENCH AREA.
  - ENSURE TOPSOIL HAS SUFFICIENTLY SETTLED OR HAS BEEN COMPACTED.
5. ALLEVIATE COMPACTION OF TOPSOIL OVER THE ENTIRE RIGHT-OF-WAY.

 <p><b>SPARTAN ENGINEERING INC.</b>          12345 W. ALAMEDA PKWY. SUITE 205          LAKEWOOD, CO. 80228          303-659-0358          www.spartan-eng.com</p>					 <p><b>Pioneer Pipeline</b>          CITY OF BRIGHTON, COLORADO          PIONEER PIPELINE PROJECT          PROPOSED STANDARD DRAWING          TRENCH AND SOIL AREA TOPSOIL STRIPPING</p>						
A	ISSUED FOR REVIEW	CAG	AL	JWM	12/17/19	SPARTAN PROJ. No.	CLIENT PROJ. No.	DWG. SCALE	DWG. SIZE	DRAWING No.	REV. 
REV.	REVISION DESCRIPTION	BY	CHK	APPD	DATE	10879	--	AS NOTED	ANSI A	10879-PL-STD-100	

**Exhibit E:  
Expedition's Occupational Safety and  
Health Administration form 300:  
Summary of Work-Related Injuries  
and Illnesses**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# OSHA's Form 300A (Rev. 01/2004)

## Summary of Work-Related Injuries and Illnesses

Year 2019



U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	3	0
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	46
(K)	(L)

### Injury and Illness Types

Total number of... (M)	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All Other Illnesses
	0	0	0	0	0	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment information

Your establishment name Expedition Water Solutions (All Facilities)

Street 2015 Clubhouse Drive

City Greeley State Colorado Zip 80634

Industry description (e.g., Manufacture of motor truck trailers)  
Oil & Gas

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)  
SIC 1 3 8 9

OR North American Industrial Classification (NAICS), if known (e.g., 336212)  
2 1 3 1 1 2

### Employment information

Annual average number of employees 101

Total hours worked by all employees last year 193,920

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Sean Stone-Zabka  
Company executive

Safety Coordinator  
Title

970-347-7736  
Phone

1/1/2020  
Date

# OSHA's Form 300 (Rev. 01/2004) Log of Work-Related Injuries and Illnesses

**Attention:** This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.



Form approved OMB no. 1218-0176

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name Expedition Water Solutions Main Office (All Facilities)

City Greeley State Colorado

Identify the person				Describe the case		Classify the case												
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:						
						Death	Days away from work	Remained at work		Away From Work (days)	On job transfer or restriction (days)	Injury (1)	Skin Disorder (2)	Respiratory Condition (3)	Poisoning (4)	Hearing Loss (5)	All other illnesses (6)	
(G)	(H)	Job transfer or restriction (I)	Other recordable cases (J)	(K)	(L)													
		Field Hand		Unload Bay	Hot water got inside boot and burned foot	0	0	X	0	0	10							
		Field Hand		Wash Out	Pulled side muscle shoveling dirt			X			14							
		Field Hand		Field Office	Tripped on stair and rolled ankle			X			22							
<b>Page totals</b>						<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Injury (1)  
Skin Disorder (2)  
Respiratory Condition (3)  
Poisoning (4)  
Hearing Loss (5)  
All other illnesses (6)

# **Exhibit F: List of Parcel Owners**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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**Table 1:**  
**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
156919000005	RITCHEY INVESTMENT COMPANY LLC	13821 SABLE BLVD BRIGHTON CO 80601-7264	SECT,TWN,RNG:19-1-66 DESC: SW4 EXC RDS AND ROW 149/62A
156919000015	BRIGHTON LAKES LLC	200 W HAMPDEN AVE STE 201 ENGLEWOOD CO 80110-2407	SECT,TWN,RNG:19-1-66 DESC: SE4 156/40A
156920000017	BRIGHTON LAKES LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: PT OF THE N2 OF SEC 7 DESC AS BEG AT THE E4 COR SEC 7 TH N 00D 09M 32S W 1328/50 FT TH S 89D 50M 28S W 30 FT TO THE TRUE POB TH N 00D 09M 32S W 1196/14 FT TO A PT ON THE S ROW LN OF COLO HWY 7 SD PT BEING A PT ON A CURV TO THE
156920000017	BRIGHTON LAKES LLC	200 W HAMPDEN AVE STE 201 ENGLEWOOD CO 80110-2407	SECT,TWN,RNG:20-1-66 DESC: SW4 EXC RD AND EXC PARC ON N SIDE 158/20A
156930000001	FULTON IRRIGATION DITCH CO	13698 E 136TH AVE BRIGHTON CO 80601	SECT,TWN,RNG:30-1-66 DESC: PARC IN THE NW4 NW4 1/50A
157101200007	MUHLER WAYNE C AND MUHLER KAREN A	12310 E 168TH AVE BRIGHTON CO 80602-6627	SECT,TWN,RNG:1-1-67 DESC: PARC 1 BEG AT THE NE COR OF SD NW4 TH W 30 FT TH S 30 FT TH W 1635/15 FT BEING THE POB TH S 16D 13M W 52/14 FT TH S 11D 10M W 47/17 FT TH S 07D 55M E 36/50 FT TH THE FOL 6 COURSES S 52D 40M E 539/58 FT TH S 10D 18M W 544 FT
157101300001	CITY OF AURORA	15151 E ALAMEDA PARKWAY 5TH FLOOR AURORA CO 80012	SECT,TWN,RNG:1-67- TRACT:1 DESC: PT OF THE SW4 OF SEC 1 DESC AS FOLS BEG AT THE SW COR OF SD SW4 TH N 1100 FT TO THE POB TH CONT N 1555/90 FT TH E 1623/37 FT TH S 43D 28M W 515/25 FT TH S 19D 00M W 1408/34 FT TH N 88D 48M E 118/37 FT TH S 24D 39M W 39
157101300002	AGGREGATE INDUSTRIES WCR INC	1687 COLE BLVD STE 300 GOLDEN CO 80401-3318	SECT,TWN,RNG:1-67- TRACT:1 DESC: SW4 EXC ROW EXC PARCS AND EXC HIWAY 84/8630A
157102100003	CARLSON TAYLOR R UND 24.25% INT AND THORNTON CORY J UND 24.25 INT ET ALS	PO BOX 247 EASTLAKE CO 80614-0247	SECT,TWN,RNG 2-1-67 DESC: FILING 2 PARC OF LAND IN THE N2 OF SEC 2 DESC AS FOLS BEG AT THE N4 COR OF SD SEC 2 TH S 04D 44M 25S E 70/19 FT TO THE TRUE POB TH N 89D 31M 29S E 2007/46 FT TH S 51D 05M 34S E 103/75 FT TH S 14D 37M 55S E 123/14 FT TH S 09D 37M
157102100004	CARLSON TAYLOR R UND 24.25% INT AND THORNTON CORY J UND 24.25 INT ET ALS	PO BOX 247 EASTLAKE CO 80614-0247	SECT,TWN,RNG 2-1-67 DESC: FILING 3 PARC OF LAND IN THE N2 OF SEC 2 DESC AS FOLS BEG AT THE N4 COR OF SD SEC 2 TH S 00D 18M 00S E 1740/35 FT TO THE TRUE POB TH N 88D 42M 24S E 449/52 FT TH S 30D 11M 58S E 141/65 FT TH S 65D 06M 44S E 92/65 FT TH N 77D 55
157102100004	CARLSON TAYLOR R UND 24.25% INT AND THORNTON CORY J UND 24.25 INT ET ALS	13295 E 136TH AVE BRIGHTON CO 80601-7281	SECT,TWN,RNG:24-1-67 DESC: ALL THAT PT W2 SE4 LYING E OF U P RR 60/89A

Exhibit G: Pipeline Routing Analysis  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table 1:**  
**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
157102101014	BASELINE LAKES HOLDINGS LLC ET ALS	PO BOX 247 EASTLAKE CO 80614-0247	SUB:BASELINE LAKES SUBDIVISION FILING NO 1 DESC: TRACT M
157104100005	SELTZER ROBERT L FAMILY TRUST	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: PT OF S2 SEC 7 DESC AS FOL BEG AT SW COR SD SEC 7 TH E 2487/41 FT TO S4 COR SD SEC TH E 582/56 FT TO A PT ON S LN SE4 SD SEC TH N 1316/34 FT TO A PT ON S LN N2 SE4 SD SEC TH W 582/28 FT TO S CEN 1/16TH COR SD SEC TH N 1315/
157104100005	SELTZER ROBERT L FAMILY TRUST	33641 COUNTY ROAD 83 BRIGGS DALE CO 80611-7808	SECT,TWN,RNG:4-1-67 DESC: PT OF NE4 SEC 4 DESC AS FOL BEG AT N4 COR SEC 4 TH S 1092/40 FT TO SW COR NW4 NE4 SD SEC TH E 305 FT TH S 31D 38M E 1377/30 FT TO A PT WHICH IS 298 FT W OF AND 140 FT N OF SW COR SE4 NE4 SEC 4 TH S TO S LN SD NE4 SEC 4 TH E
157104200003	ERN LIMITED PARTNERSHIP ET AL	7 CIRCLE DR WHEAT RIDGE CO 80215-6607	SECT,TWN,RNG:4-1-67 DESC: BEG AT NE COR NW4 NW4 SEC 4 TH S TO PT ON N/S C/L SD NW4 569/5 FT FROM POB TH SWLY 809/2 FT TO A PT TH S 8D 40M E 488/2 FT TH S 57D 04M E 390 FT TH S 64D 11M E 291 FT TH SELY 60 FT TO PT ON W LN SE4 NW4 660 FT N OF SW COR
157104300002	ERN LIMITED PARTNERSHIP ET AL	7 CIRCLE DR WHEAT RIDGE CO 80215-6607	SECT,TWN,RNG:4-1-67 DESC: SW4 SEC 4 EXC 8/5A IN NE COR SW4 N OF SIGNAL DT AND DESIGNATED AS TRACT 10 1/2 IN GAGENS SUBD OF SEC 3 AND 4 EXC PARC 100 FT N AND S BY 100 FT E AND W IN SE4 SW4 EXC HIWAY AND EXC PARC 140/3600A
157106000007	EGAN ARTHUR G AND EGAN EDNA R	4695 E 160TH AVE BRIGHTON CO 80602	SECT,TWN,RNG:6-1-67 DESC: ALL THAT PARC OF LAND LYING IN SW4 SEC 6 WHICH LIES W OF E LN OF SW4 OF SEC N OF PRESENT ROW OF HIWAY 7 E AND S OF PRESENT ROW OF GERMAN DT EXC HIWAY 13/30A
157106000022	HAVANA AND ILIFF LLC	18685 EAST PLAZA DR PARKER CO 80134	SECT,TWN,RNG:6-1-67 DESC: S2 NW4 TOG WITH PT OF SEC 6 DESC AS BEG AT CEN PT OF SEC 6 TH N 1279/22 FT TH E 68/7 FT ALG A LN // TO S LN OF N2 NW4 TH S TO A PT ON S LN OF NE4 SD SEC FROM WHENCE THE CEN PT BRS ALG S LN OF NE4 SD SEC 48/8 FT TH W ALG SD S LN
157106001001	RIO LA LLC	812 GRAVIER ST STE 360 NEW ORLEANS LA 70112-1408	SUB:CORCILIOUS ACRES LOT:1
157106001002	RIO LA LLC	812 GRAVIER ST STE 360 NEW ORLEANS LA 70112-1408	SUB:CORCILIOUS ACRES LOT:1
157106300002	HAVANA AND ILIFF LLC	18685 EAST PLAZA DR PARKER CO 80134	SECT,TWN,RNG:6-1-67 DESC: PT OF THE SW4 AND THE SE4 DESC AS BEG AT THE W4 COR SD SEC 6 TH N 89D 22M 53S E 30 FT TO THE TRUE POB SD PT BEING ON THE ELY ROW LN OF COLORADO BLVD TH S 00D 28M 19S E 659 FT TH S 03D 41M 13S E 735 FT TO A PT ON THE ELY ROW LN O

**Table 1:**  
**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
157107000002	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: A STRIP OF LAND 40 FT WIDE LYING // TO AND NLY AND WLY OF ELY AND SLY BANK OF GERMAN DT IN N2 NW4 2/33A
157107000014	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: BEG AT E4 COR SEC 7 TH N 1127/76 FT TH W 30 FT TO TRUE POB TH W 217 FT TH N 190/97 FT TO PT ON N LN S2 NE4 SD SEC TH W ALG SD N LN 3704/63 FT TO NW COR SE4 NW4 TH S 1314/56 FT TO PT ON E/W C/L TH E 3923/19 FT TO PT 30 FT W O
157107000016	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: PT OF THE N2 OF SEC 7 DESC AS BEG AT THE E4 COR SEC 7 TH N 00D 09M 32S W 1328/50 FT TH S 89D 50M 28S W 30 FT TO THE TRUE POB TH N 00D 09M 32S W 1196/14 FT TO A PT ON THE S ROW LN OF COLO HWY 7 SD PT BEING A PT ON A CURV TO THE
157107000016	BRIGHTON FARM LLC	13821 SABLE BLVD BRIGHTON CO 80601-7264	SECT,TWN,RNG:19-1-66 DESC: SW4 EXC RDS AND ROW 149/62A
157107000023	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: PT OF S2 SEC 7 DESC AS FOL BEG AT SW COR SD SEC 7 TH E 2487/41 FT TO S4 COR SD SEC TH E 582/56 FT TO A PT ON S LN SE4 SD SEC TH N 1316/34 FT TO A PT ON S LN N2 SE4 SD SEC TH W 582/28 FT TO S CEN 1/16TH COR SD SEC TH N 1315/
157107000023	BRIGHTON FARM LLC	15655 RIVERDALE RD BRIGHTON CO 80602-8216	SECT,TWN,RNG: 11-1-67 DESC: PARC A PARC OF LAND IN SEC 11 AND 12 CONSIDERING THE N LN OF THE NE4 OF SD SEC 11 TO BEAR S 88D 36M 42S W AND WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO BEG AT THE SW COR OF THAT PARC OF LAND DESC TH S 00D 22M 19S E C
157107400001	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: E-470 REMNANT PARC RE-223 RT DESC AS BEG AT THE S4 OF SD SEC 7 TH N 002 27M 38S W 30 FT TH N 89D 55M 36S E 374/24 FT TO THE TRUE POB TH N 54D 00M 00S W 840/59 FT TO A PT OF CURVATURE TH NWLY ALG THE ARC OF A CURV TO THE RT WHOS
157108000001	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:8-1-67 DESC: BEG AT NW COR SEC 8 TH S 236 FT TH E 450 FT TH N 235/4 FT TO N LN SD SEC TH W TO POB EXC HIWAY 1/23A
157108000004	QUEBEC 7 LLC	14642 STELLAS MEADOW DR BROOMFIELD CO 80023-8401	SECT,TWN,RNG:8-1-67 DESC: NE4 EXC COUNTY RDS AND DT ROW AND EXC HIWAY 148/486A
157108200002	BRIGHTON FARM LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:8-1-67 DESC: NW4 EXC 2A FOR SCHOOL AND EXC 7A M/L S AND E OF SIGNAL DT EXC HIWAY AND EXC PARC (2011000058828) 106/44A

Exhibit G: Pipeline Routing Analysis  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table 1:**  
**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
157108200002	BRIGHTON FARM LLC	PO BOX 247 EASTLAKE CO 80614-0247	SECT,TWN,RNG 2-1-67 DESC: FILING 2 PARC OF LAND IN THE N2 OF SEC 2 DESC AS FOLS BEG AT THE N4 COR OF SD SEC 2 TH S 04D 44M 25S E 70/19 FT TO THE TRUE POB TH N 89D 31M 29S E 2007/46 FT TH S 51D 05M 34S E 103/75 FT TH S 14D 37M 55S E 123/14 FT TH S 09D 37M
157109202001	QUEBEC LIMITED C/O FINLEY AND CO	12000 WASHINGTON ST NO. 100 THORNTON CO 80241	TALON VIEW SUBDIVISION BLK 25 LOT 1
157111100010	MEDLIN WAYNE E AND MEDLIN PATRICIA L	15655 RIVERDALE RD BRIGHTON CO 80602-8216	SECT,TWN,RNG: 11-1-67 DESC: PARC A PARC OF LAND IN SEC 11 AND 12 CONSIDERING THE N LN OF THE NE4 OF SD SEC 11 TO BEAR S 88D 36M 42S W AND WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO BEG AT THE SW COR OF THAT PARC OF LAND DESC TH S 00D 22M 19S E C
157112000033	SCI - 157 LLC	1440 BLAKE ST STE 320 DENVER CO 80202-1489	SECT,TWN,RNG:11-1-67 DESC: N 410/85 FT OF THE FOL DESC PROPERTY THAT PT OF SEC 11 AND 12 DESC AS BEG AT THE NW COR OF SD SEC 12 TH N 89D 07M 00S E A DIST OF 1313/40 FT TO THE NE COR OF THE NW4 NW4 SEC 12 TH S 00D 10M 45S E 1326/57 FT TO THE NE COR OF TH
157112000038	BAKER DELORES R 1/3 INT AND BAKER BRET A/APRIL K 2/3 INT	12420 E 160TH AVE BRIGHTON CO 80602-8221	SECT,TWN,RNG:12-1-67 DESC: E2 NW4 NW4 SEC 12 EXC PARCS IN NW COR TOG WITH E2 SW4 SW4 SEC 1 LYING S OF S/H NO 7 EXC W 209 FT THEREOF 12/1/67 AND 1/1/67 19/85A
157112010003	MEDLIN WAYNE E AND PATRICIA L	15655 RIVERDALE ROAD BRIGHTON CO 80601	SUB:ART EPPINGER FARMS BLK:1 LOT:1 DESC: EXC PARC
157121000016	KORTUM ACRES INC	15A MARLBOROUGH RD SHALIMAR FL 32579-1039	SECT,TWN,RNG:21-1-67 DESC: UND 1/2 INT IN N2 EXC PARC AND EXC PORT TO E-470 302/2134A
157121000016	KORTUM ACRES INC	812 GRAVIER ST STE 360 NEW ORLEANS LA 70112-1408	SUB:CORCILIOUS ACRES LOT:1
157121000017	CASTRODALE PATRICIA	4 SEARS CT KEOKUK IA 52632-2547	SECT,TWN,RNG:21-1-67 DESC: 1/2 INT IN N2 EXC PARC AND EXC PORT TO E- 470 302/2134A
157121000017	CASTRODALE PATRICIA	PO BOX 1231 KYLE TX 78640-1231	SUB:CORCILIOUS ACRES LOT:2
157122000001	COUNTY OF ADAMS	4430 SOUTH ADAMS COUNTY PKWY 5TH FLOOR SUITE C5000A BRIGHTON CO 80601-8204	SECT,TWN,RNG:22-1-67 DESC: NW4 EXC PORT TO E-470 79/1277A
157122103001	PJDS FAMILY TRUST THE	9845 E 138TH PL BRIGHTON CO 80602-8212	SUB:THE RIDGE AT RIVERDALE SUBDIVISION BLK:2 LOT:12



**Table 1:**

**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
157122103003	SAVE A CHILD INC	3241 W 44TH AVE DENVER CO 80211	SUB:THE RIDGE AT RIVERDALE SUBDIVISION BLK:3 LOT:5
157123000026	CAMAS COLORADO INC C/O AGGREGATE INDUSTRIES	1687 COLE BLVD STE 300 GOLDEN CO 80401-3318	SECT,TWN,RNG:23-1-67 DESC: BEG AT SE COR SE4 SEC 23 TH NLY ALG ELY LN OF SE4 TO NLY ROW LN OF 136TH AVE THE TRUE POB TH WLY ALG SD NLY ROW LN OF 136TH AVE TO ELY ROW LN OF OLD BRIGHTON RD TH NLY ALG SD ROW LN OF OLD BRIGHT RD TO N LN SE4 OF SD SEC
157123401001	BOARD OF COUNTY COMMISSIONERS COUNTY OF ADAMS	9755 HENDERSON RD BRIGHTON CO 80601-8114	WILLOW BAY SUBD FLG NO 1 LOT 1
157124000015	SHARP AC LAND LLC	9378 S STAR HILL CIR LONE TREE CO 80124-5443	SECT,TWN,RNG:24-1-67 DESC: ALL W OF RR ROW IN S2 EXC 9/78A TO STATE HIWAY 129/97A
157124000015	SHARP AC LAND LLC	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:8-1-67 DESC: NW4 EXC 2A FOR SCHOOL AND EXC 7A M/L S AND E OF SIGNAL DT EXC HIWAY AND EXC PARC (2011000058828) 106/44A
157124000016	ELAINE A SCHAEFER LIVING TRUST ET AL	13295 E 136TH AVE BRIGHTON CO 80601-7281	SECT,TWN,RNG:24-1-67 DESC: ALL THAT PT SE4 SW4 LYING E OF U P RR 7/24A
157124000017	ELAINE A SCHAEFER LIVING TRUST ET AL	13295 E 136TH AVE BRIGHTON CO 80601-7281	SECT,TWN,RNG:24-1-67 DESC: ALL THAT PT W2 SE4 LYING E OF U P RR 60/89A
157124000017	ELAINE A SCHAEFER LIVING TRUST ET AL	15600 HOLLY ST BRIGHTON CO 80602-7911	SECT,TWN,RNG:7-1-67 DESC: BEG AT E4 COR SEC 7 TH N 1127/76 FT TH W 30 FT TO TRUE POB TH W 217 FT TH N 190/97 FT TO PT ON N LN S2 NE4 SD SEC TH W ALG SD N LN 3704/63 FT TO NW COR SE4 NW4 TH S 1314/56 FT TO PT ON E/W C/L TH E 3923/19 FT TO PT 30 FT W O
157124000019	H F INVESTMENT COMPANY LLC	13022 E 136TH AVE BRIGHTON CO 80601-7281	SECT,TWN,RNG:24-1-67 DESC: SE4 SE4 EXC RD AND DT ROW 35/66A
157125000012	FULTON DITCH CO C/O BRICE STEELE	25 S 4TH AVE BRIGHTON CO 80601-2029	SECT,TWN,RNG:25-1-67 DESC: PARC IN NE COR 0/47A
157126101003	HENDERSON AGGREGATE LTD	4 SEARS CT KEOKUK IA 52632-2547	SECT,TWN,RNG:21-1-67 DESC: 1/2 INT IN N2 EXC PARC AND EXC PORT TO E- 470 302/2134A
157126201001	HENDERSON AGGREGATE LTD	PO BOX 700 HENDERSON CO 80640-9329	WORTHING SUBDIVISION AMENDED PLAT II 3RD FILING LOT 1 AND EXC HWY (2010000001294)
157126201001	HENDERSON AGGREGATE LTD	9378 S STAR HILL CIR LONE TREE CO 80124-5443	SECT,TWN,RNG:24-1-67 DESC: ALL W OF RR ROW IN S2 EXC 9/78A TO STATE HIWAY 129/97A

Exhibit G: Pipeline Routing Analysis  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

**Table 1:**  
**Adams County Conditional Use Permit Application—List of Parcel Owners Crossed by the Proposed and Alternative Routes**

Parcel Number	Owner	Owner Address	Parcel Legal Description
157301000007	HAVANA AND ILIFF LLC	18685 EAST PLAZA DR PARKER CO 80134	SECT,TWN,RNG:1-1-68 DESC: SE4 NE4 LYING E OF RR 2/50A
157311400002	LMB CAPITAL PARTNERS LLC	905 W 124TH AVE SUITE 200 WESTMINSTER CO 80234	SECT,TWN,RNG:11-1-68 DESC: PARC B BEG AT THE E4 COR OF SD SEC 11 TH S 1325/33 FT TH W 1187/88 FT TO THE TRUE POB TH W 1472/51 FT TH N 539/93 FT TH S 73D 08M E 226/58 FT TO A PT OF CURVATURE TH ELY ALG THE ARC OF A CURV TO THE RT WHOSE CENTER BRS S 16
157311400007	CITY OF THORNTON	33641 COUNTY ROAD 83 BRIGGS DALE CO 80611-7808	SECT,TWN,RNG:4-1-67 DESC: PT OF NE4 SEC 4 DESC AS FOL BEG AT N4 COR SEC 4 TH S 1092/40 FT TO SW COR NW4 NE4 SD SEC TH E 305 FT TH S 31D 38M E 1377/30 FT TO A PT WHICH IS 298 FT W OF AND 140 FT N OF SW COR SE4 NE4 SEC 4 TH S TO S LN SD NE4 SEC 4 TH E
157311400008	CITY OF THORNTON	200 W HAMPDEN AVE STE 201 ENGLEWOOD CO 80110-2407	SECT,TWN,RNG:20-1-66 DESC: SW4 EXC RD AND EXC PARC ON N SIDE 158/20A
157311400009	GRIZZLY PETROLEUM COMPANY LLC	1001 17TH ST FL 20 DENVER CO 80202-2035	SECT,TWN,RNG:11-1-68 DESC: S2 SE4 EXC RD AND EXC HIWAY AND EXC PARCS (2009000014855) & (2016000001353) & (2018000021183 /2018000021184) 30/9986A
157311400009	GRIZZLY PETROLEUM COMPANY LLC	15A MARLBOROUGH RD SHALIMAR FL 32579-1039	SECT,TWN,RNG:21-1-67 DESC: UND 1/2 INT IN N2 EXC PARC AND EXC PORT TO E-470 302/2134A

# **Exhibit G: Neighborhood Meeting Notification, Meeting Materials, and Summary**

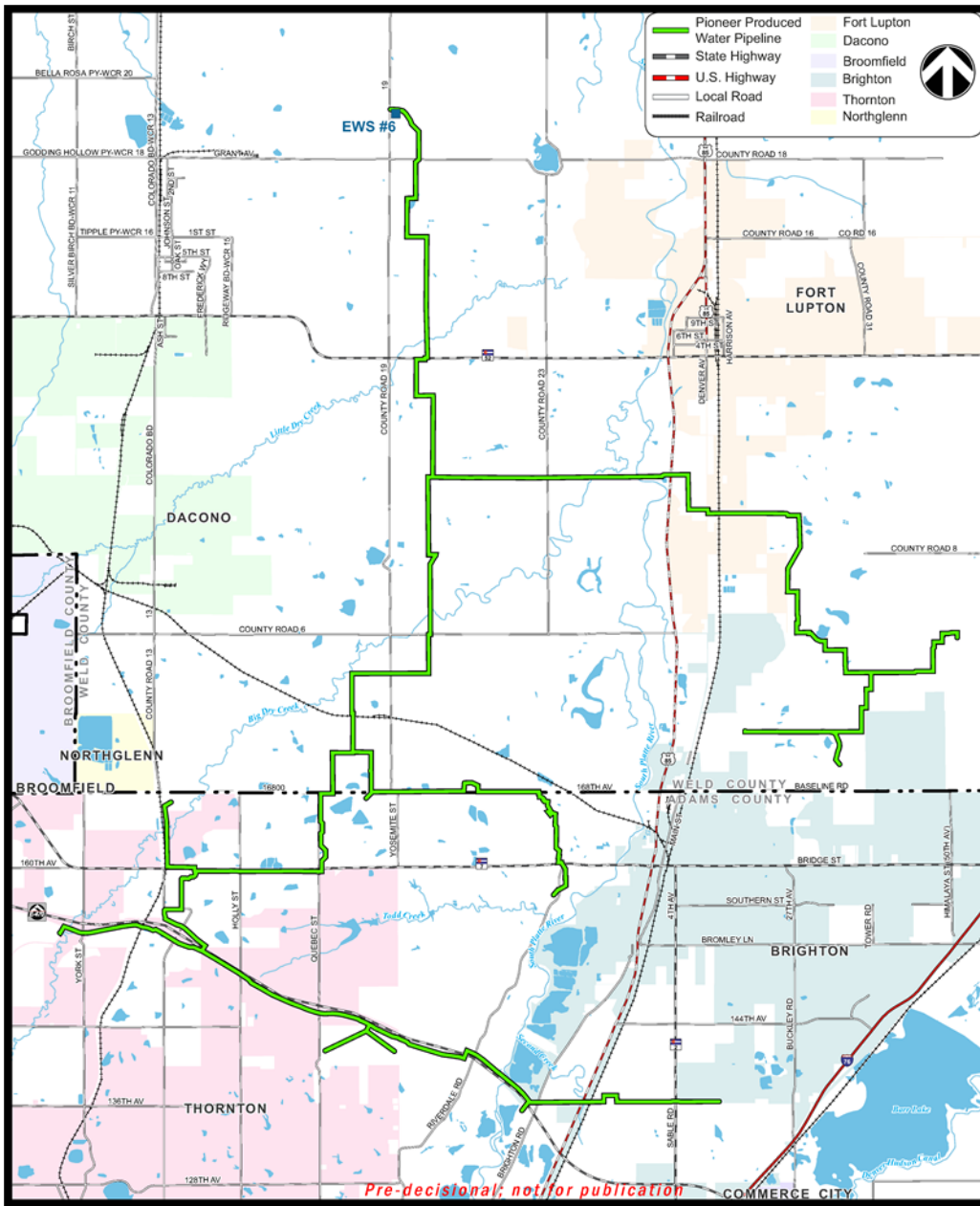
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# Pioneer Water Pipeline Project

## Neighborhood Meeting Report December 10, 2019



Pioneer Water Pipeline Project Overview map showing the preferred pipeline route.



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- Appendix B: Notification Letter for the Pioneer Water Pipeline Project Neighborhood Meeting
- Appendix C: Mailing List for the Pioneer Water Pipeline Project Neighborhood Meeting
- Appendix D: Notification Area for the Pioneer Water Pipeline Project Neighborhood Meeting
- Appendix E: Affidavit of Mailing
- Appendix F: Sign-in Sheets



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# Introduction

Pioneer Water Pipeline, LLC, (Pioneer) operated by Expedition Water Services, LLC, proposes to construct, own, and operate the Pioneer Produced Water Pipeline (Project) within Adams and Weld counties in Colorado. Pioneer held a neighborhood meeting in accordance with Adams County Development Standards and Regulations from 5 p.m. to 8 p.m. on Tuesday, December 10, 2019, at Todd Creek Golf Club (8455 Heritage Dr., Thornton, CO 80602). The purpose of this report is to document the meeting notification and questions asked during the meeting and provide a summary of the meeting results.

## Project Overview

The Project would consist of construction of approximately 45 miles of 4- to 12 inch-diameter high-density polyethylene (HDPE) gathering pipelines and associated appurtenances in Adams and Weld counties. Approximately 27 miles of pipeline would be located in Weld County, and 18 miles of pipeline would be located in Adams County. Within Adams and Weld counties, the Project would traverse unincorporated areas and may traverse portions of Brighton, Thornton, and Fort Lupton.

Production water, also known as wastewater, is recovered as byproduct that is brought to the surface during oil and gas production. The Project is designed to transport production water from approximately 22 oil and gas production facilities in Adams and Weld Counties to Expedition's existing EWS #6 wastewater injection and disposal facility in Weld County.

Construction of the pipelines would require an approximately 10-foot-wide permanent easement plus an additional 30-foot-wide temporary workspace. Additional temporary workspaces would also be required at locations where the pipelines cross roads or other existing infrastructure, for example, or where environmental features such as wetlands and waterbodies are present. Appurtenant aboveground facilities such as isolation valves, pumps and inline inspection tool launcher, and receivers would be located at the existing oil and gas well pad sites, and other appurtenant facilities would be located along pipelines within the 10-foot-wide permanent pipeline easements.





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## Neighborhood Meeting Summary

The Project Neighborhood Meeting was held from 5 p.m. to 8 p.m. on Tuesday, December 10, 2019, at Todd Creek Golf Club (8455 Heritage Dr., Thornton, CO 80602) in the City of Thornton.

The purpose of the Project Neighborhood Meeting was to provide the community a description of the Project and answer related questions from the attendees. The event was conducted in an open house format, which allowed for attendees to arrive at their convenience during a three-hour timeframe. At the meeting, attendees had an opportunity to obtain Project information based on specific areas of interest, speak directly with Project staff, and provide written and verbal comments regarding the Project.

Reproductions of the display boards, maps, contact cards, flyer, and Project information sheet used at the Neighborhood Meeting are included in Appendix A.

## Neighborhood Meeting Notification

Pioneer used a direct-mail notification (Appendix B) to inform the Project stakeholders of the Project Neighborhood Meeting based on a mailing list provided by Adams County for the Project on October 11, 2019 (Appendix C). The list included four neighborhood organizations: Riverside Village Owners Association, Todd Creek Village Park and Recreation District, Todd Creek Meadow Owners Association, Inc., and Todd Creek Village Metropolitan District. A total of 389 notifications were sent. A map of the notification area is included as Appendix D. An affidavit of mailing is included as Appendix E.

The notification letter contained the following information: purpose, date, time and place of the meeting; Project location map; and Project contact information. This notification was sent by the U.S. Postal Service presorted marketing mail on Nov. 27, 2019. The timing of the distribution of the notification letter complied with Adams County Standards and Regulations as the notification letters were sent out 13 days prior to the Project Neighborhood Meeting.



# Attendance and Comments Analysis

Nine members of the public signed into the Project Neighborhood Meeting. Adams County staff were notified of the Project Neighborhood Meeting date, time, and location and were invited to participate in the Project Neighborhood Meeting. Copies of the sign-in sheets are included in Appendix F.

Six Project team members attended the open house in addition to the members of the public. Team members are listed below in Table 1. A Spanish interpreter was also in attendance.

**Table 1:**  
**Project Team Members at Neighborhood Meeting**

Name	Organization	Name	Organization
John Heule	Tetra Tech CES	Jim Goddard	Pioneer Water Pipeline, LLC
Max Pivonka	Tetra Tech CES	Deana Perlmutter	Forbes Tate Partners
Zach Neal	Pioneer Water Pipeline, LLC	Taylor Christy	The Integral Group
Spence McCallie	Pioneer Water Pipeline, LLC		

## Comment Cards

Comment cards were provided to attendees at the Project Neighborhood Meeting. A blank comment form is provided in Appendix A. Stakeholders had the opportunity to submit written comments via the Project email address or by mailing comment cards to Pioneer. Commenters had the opportunity to request a response from Project team members. No comment cards were returned to the Project team at the meeting. As of December 20, 2019, no comment cards have been returned to the Project team.

## Oral Questions and Answers

Oral questions were asked by meeting attendees and the answers provided by Project team members included:

- **Is this pipeline going to carry fracking water?**
  - The Project is designed to transport production water from approximately 22 oil and gas production facilities in Adams and Weld Counties to Expedition’s existing EWS #6 wastewater injection and disposal facility in Weld County. Most of the production water is groundwater from the rock formation; however, some water used during hydraulic fracturing will mix with groundwater during hydraulic fracturing and will be transported with groundwater to EWS #6.
- **What is in the water that is coming out of the wells?**
  - Production water, also known as wastewater, is recovered as byproduct that is brought to the surface during oil and gas production. Production water is sometimes referred to as brine



water. Brine water is twice as salty as sea water, and it naturally occurs within rock formations underground. For about one barrel of oil and gas produced by a well, approximately three barrels of brine water are also produced.

- **Will there be any pump stations on the pipeline route?**
  - No pump stations will be located on the pipeline route. The pumps for the pipeline will be located at the well sites where the water enters the pipeline. The pumps at those facilities produce enough pressure to push the water all the way to the disposal site in Weld County.
- **Where is the produced water going?**
  - The Project would transport production water with trace amounts of oil, gas, and chemicals to Expedition's existing EWS #6 wastewater injection and disposal facility in Weld County. EWS #6 would treat the water to remove the trace amounts of oil, gas and chemicals but leaves the salt in the water, which is then pumped back into the ground into a salt water aquifer. The injected water is similar in composition to the salt water aquifer.
- **Will there be any surface appurtenances along the pipeline route?**
  - Only a few surface structures would be located along the pipeline route. They will be safety shutoff stations that will generally be at a pipeline junction and where the pipeline changes diameter.
- **How wide will the pipeline easements and construction areas be?**
  - During construction a 40-foot-wide space will be needed along the Project pipeline for installation. At times, where the pipeline crosses roads or water ways, a larger construction area will be needed. Once completed, a 10-foot-wide permanent easement will be needed for the pipeline for its lifetime.
- **Will the water treatment site and injection facility be fracturing or fracking the rock where they inject?**
  - The pressure will be low enough that the rock will not be fractured, and the injection site is regulated by the State of Colorado and the U.S. Environmental Protection Agency.
- **What is the projected lifetime of the injection site?**
  - The injection site is currently estimated to have a lifespan of 20 years, and it has been in-service since July 2019.



- **When will the pipeline in Adams County be constructed?**
  - Construction of the Adams County portion of the pipeline is estimated to start in summer 2020 and is projected to be completed by the end of 2020.
- **What is the equivalent number of truck trips for 500 million truck miles removed annually?**
  - Based on full buildout of production facilities, the Project will remove around 160 truck trips per day, and it would increase the amount removed as more oil and gas facilities are constructed and connected to the pipeline.
- **What is the lifespan of an oil and gas well?**
  - The lifespan of oil and gas production facilities typically ranges from 10 to 30 years, but the lifespan depends on the well and the oil and gas available in the formation below each specific facility.
- **What is the water pipeline going to be constructed of?**
  - The pipeline will be constructed of 4- to 12 inch-diameter HDPE gathering pipelines.
- **Can they lay pipeline on my property without notifying me?**
  - No, Pioneer will obtain easements signed by landowners for the entire Project route.
- **Would this Project be able to connect to future oil and gas production facilities if needed?**
  - Yes, this pipeline will have the capacity to carry produced water from future oil and gas facilities, depending on timing and location of those facilities.



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# Appendix A: Neighborhood Meeting Materials



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# Pioneer Water Pipeline

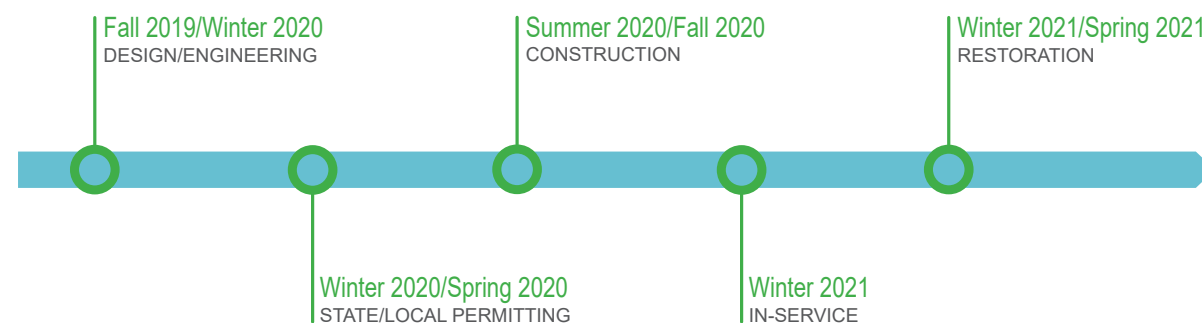
## Project Overview

Pioneer Water Pipeline, LLC, operated by Expedition Water Solutions Colorado, LLC, proposes to construct, own, and operate the Pioneer Water Pipeline within Adams and Weld counties. Approximately 18 miles of pipeline will be located in Adams County, and 27 miles of pipeline will be located in Weld County. The Project is designed to transport produced water from more than 20 oil and gas production facilities via pipeline to Expedition Water Solution’s existing produced water facility in Weld County. Without the Project, these oil and gas production facilities would transport all of its produced water using heavy trucks. The mission of the Project is to take these trucks off the road to create a safer, cleaner Colorado.

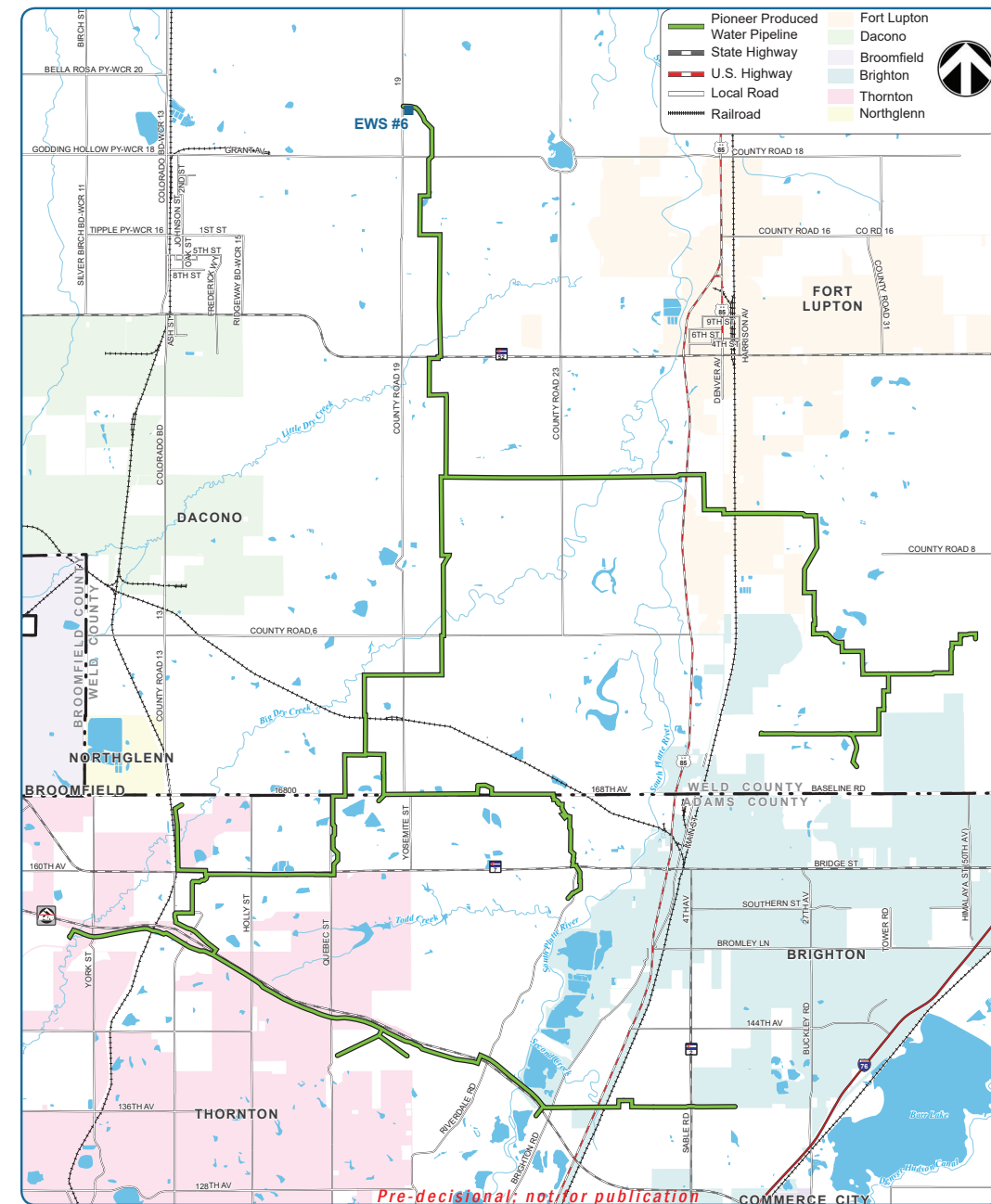
When the Project is brought into service, community benefits will include the following:

- **Jobs:** The Project will create 100 well paying, locally sourced jobs during construction and numerous jobs once in operation.
- **Tax Revenue:** The Project will provide approximately \$500,000 per year in new tax revenue to local communities, directly benefiting public schools.
- **Safety:** The Project will result in the removal of heavy truck miles from our roads and will likely reduce the quantity and severity of accidents.
- **Traffic:** The Project will result in the removal of the equivalent of 5 million truck miles from local community roads each year, making driving more convenient. Streets will be quieter, and roads will need fewer repairs.
- **Air Quality:** Removal of truck traffic reduces the amount of particulates, ozone, odors, and other air pollutants in the atmosphere.
- **Carbon Footprint:** Completion of the 100% electric-powered Pioneer Water Pipeline will reduce carbon emissions by 21,000 metric tons per year.

## Project Schedule



## Overview Map





# Pioneer Water Pipeline

## Project Safety

Pioneer is committed to safety from project initiation through operations and maintenance of pipelines and pipeline facilities. Pioneer has an extensive pipeline safety integrity management program that guides how our facilities are constructed and operated. Additionally, the Pioneer Water Pipeline has been designed to meet or exceed federal and state standards and safety requirements.

During the pipeline installation process, the following steps are taken:

- Perform an internal pressure test with fresh water to verify the integrity of the new pipeline.
- Fuse pipeline joints and test to verify integrity of the joints.

Pipeline inspectors will ensure safety and quality control during construction. As part of Pioneer's extensive pipeline safety integrity management program, the following will occur:

- Routinely patrol the pipeline multiple times each year.
- Continuously monitor and inspect the integrity of the pipeline to ensure operational and public safety via a high-tech metering and SCADA system that will instantaneously notify pipeline operators in the event of a leak.
- Internally clean the pipeline regularly to remove sediment.
- Remotely monitor critical operations such as pressure and temperature.
- Maintain an emergency response team to respond to potential safety issues.

For additional information related to the safety of the Pioneer Water Pipeline, please contact the project team at **303.291.8834** or visit us online at [pioneer-water.com](http://pioneer-water.com).



*Pioneer is committed to safety at all stages of a project — from project initiation to pipeline operation and maintenance.*







# Pioneer Water Pipeline

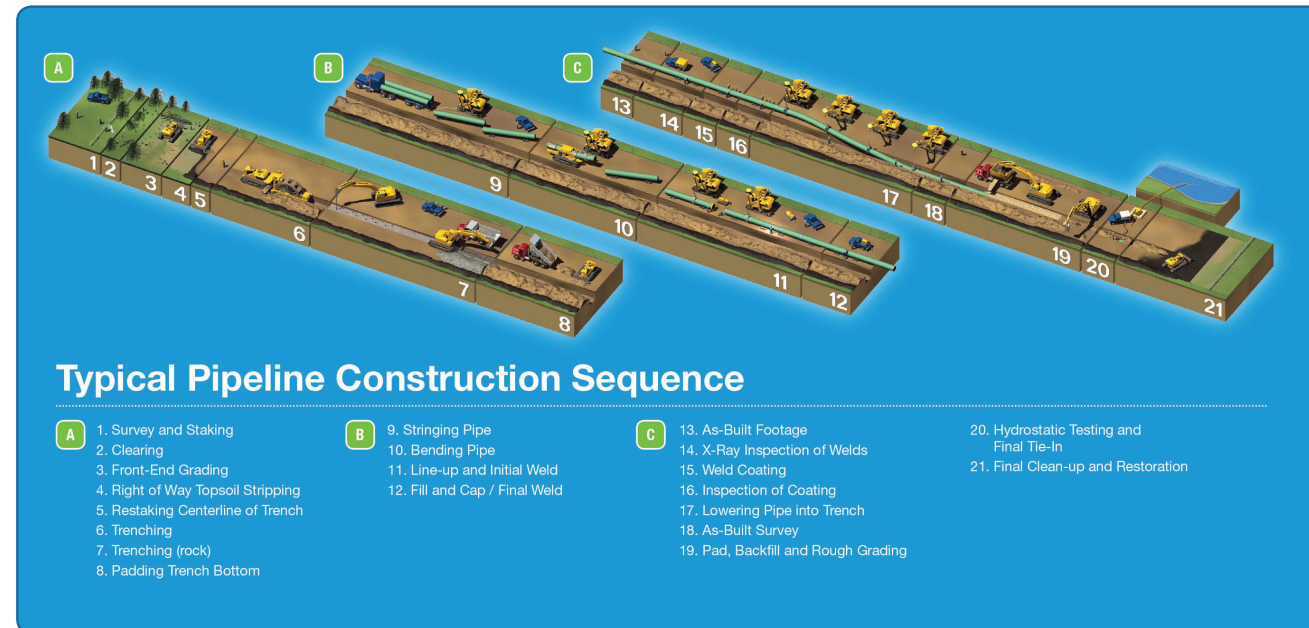
## Project Construction

Project construction is anticipated to begin on the Pioneer Water Pipeline in summer 2020. Please note that the Project schedule is subject to change.

The Project will be constructed in a safe manner, in accordance with federal, state, and industry safety standards. The following activities will occur during construction:

- Survey and clear the right-of-way.
- String the pipeline joints along the right-of-way.
- Fuse pipeline joints and test them to verify integrity of the joints.
- Excavate the pipeline trench.
- Lower the inspected pipeline joints into the trench.
- Backfill the pipeline trench.
- Perform pressure tests with fresh water to verify the integrity of the new pipeline.
- Restore the right-of-way to the conditions required by permits and landowner agreements.

The Project team will follow agency and permitting requirements during all stages of construction to reduce public inconvenience and ensure public safety.



*Pipeline joints being lowered into the trench. Post-construction, the right-of-way will be restored to the conditions required by permits and landowner agreements.*





# Pioneer Water Pipeline

The Pioneer Water Pipeline  
will remove

**5 million  
truck miles**

annually from community  
roads





pioneer-water.com  
Info@Pioneer-Water.com  
Please Note New Number: 303-291-6283



pioneer-water.com  
Info@Pioneer-Water.com  
Please Note New Number: 303-291-6283



pioneer-water.com  
Info@Pioneer-Water.com  
Please Note New Number: 303-291-6283



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pioneer-water.com  
Info@Pioneer-Water.com  
Please Note New Number: 303-291-6283



Pioneer Water Pipeline  
C/O Tetra Tech  
1560 Broadway, Suite 1400  
Denver, CO 80202

Place  
Stamp  
Here

**Pioneer Water Pipeline**  
**C/O Tetra Tech**  
**1560 Broadway, Suite 1400**  
**Denver, CO 80202**

Make Second Fold Here and Tape Top and Sides Together

Thank you for your interest in the Pioneer Water Pipeline. You can contact the Pioneer Water Pipeline team by calling our hotline at 303-291-8834 or by visiting our website at Pioneer-Water.com.

We appreciate your comments. Thank you.

Make First Fold Here

## CONTACT INFORMATION

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Title: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Email Address: \_\_\_\_\_

Telephone: \_\_\_\_\_



About the...

# Pioneer Water Pipeline

*Our mission is yours: a safer, cleaner Colorado.*

**The Pioneer Water Pipeline is the safest way to transport wastewater throughout Colorado by taking millions of heavy truck miles off the road.**

The pipeline will remove roughly **five million truck miles** from our community's roads each year. This means less traffic, fewer road repairs, and fewer chances of auto and pedestrian accidents in our increasingly-densely populated community.



Our pipeline will not transport hazardous materials through our community; it will serve only to move wastewater.

Eliminating wastewater truck traffic will remove **21,000 metric tons of CO2** from the atmosphere per year.

**CO<sup>2</sup>**  
 **21K Tonnes**

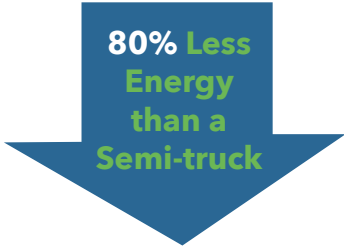


According to the Department of Transportation, water pipelines have a **99.99935%** safety rating.

**The Pioneer Water Pipeline supports our community's goal of maintaining safe & clean neighborhoods.**

**100% Electrically Powered**  


**95% Recyclable Materials**  


**80% Less Energy than a Semi-truck**  


**The Pioneer Water Pipeline will partner with the community to provide tangible benefits.**



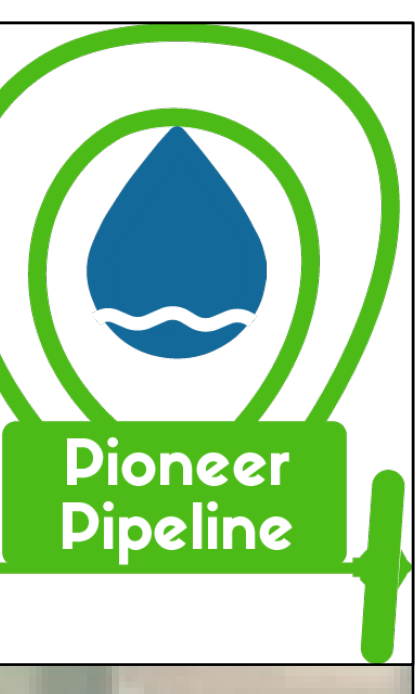
Create over 100 good-paying, locally-sourced construction jobs, as well as numerous permanent jobs once operational.



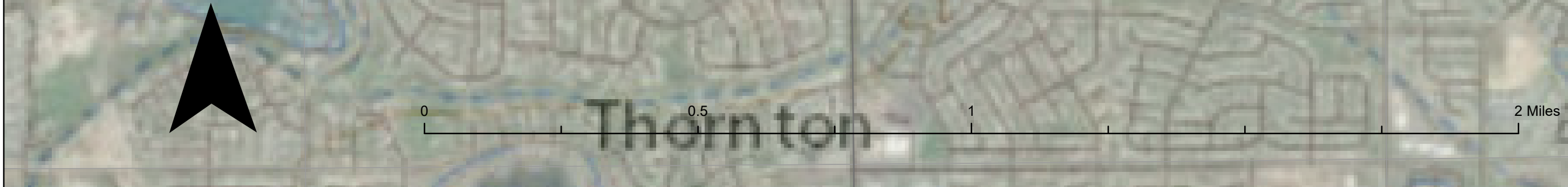
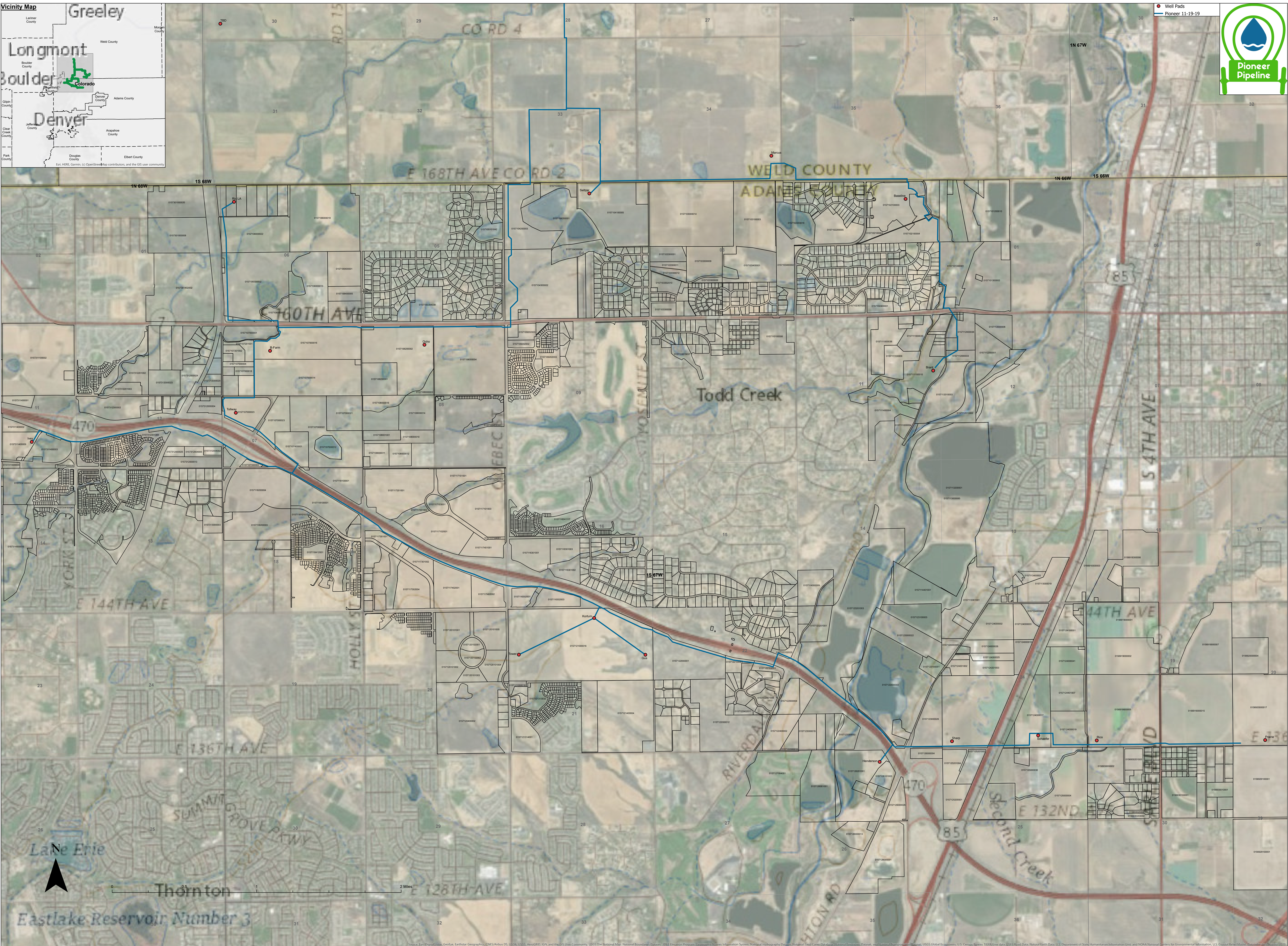
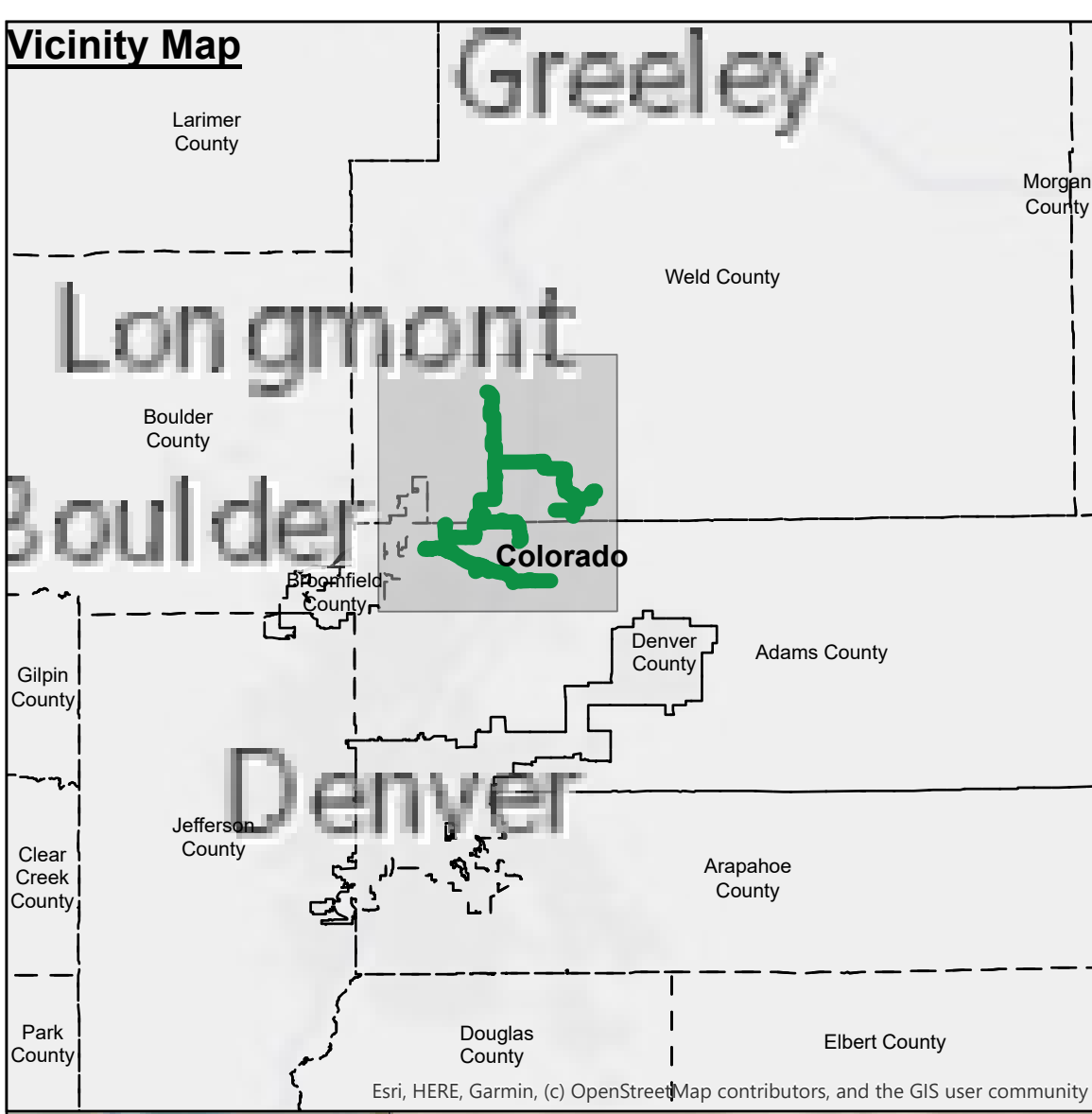
Generate approximately \$500K per year in new tax revenue to our community, the majority of which directly benefits public schools.



Make driving less inconvenient with quieter community streets, less repairs needed for roads and fewer windshield replacements.



Well Pads  
Pioneer 11-19-19





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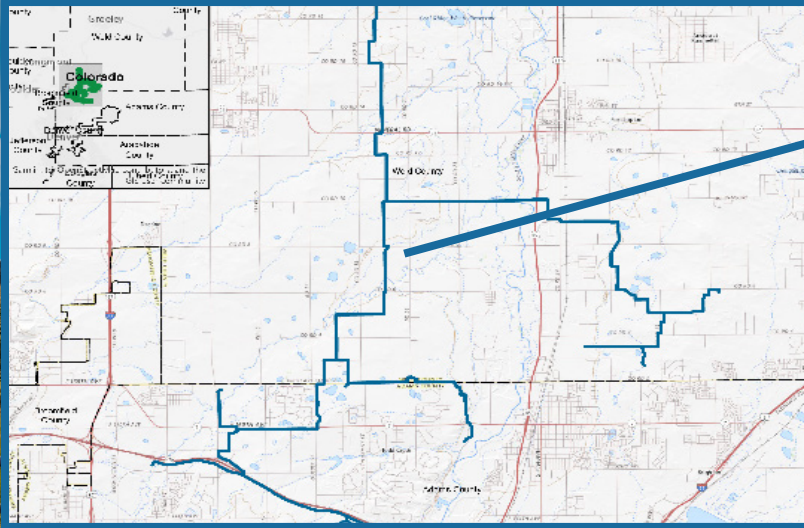
# **Appendix B: Notification Letter for the Pioneer Water Pipeline Project Neighborhood Meeting**



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# Proposed Pipeline Route



**#CleanerColorado**

Contact us via email or our project hotline:  
303-291-8834 | [Info@Pioneer-Water.com](mailto:Info@Pioneer-Water.com)



[www.pioneer-water.com](http://www.pioneer-water.com)



## Pioneer Water Pipeline

Dear Neighbor,

You are invited to attend a community meeting about Pioneer Pipeline's upcoming water pipeline project. Our pipeline is designed to carry non-potable water from Adams County to Weld County. Learn about our mission to get trucks off the road and create a cleaner, safer Colorado. Your feedback matters greatly to us!

**DATE:** *December 10, 2019*

**TIME:** *5:00PM - 8:00PM*

**LOCATION:** *Todd Creek Golf Club  
8455 Heritage Dr  
Thornton, CO 80602*

Please let us know if you can join us for light refreshments and discussion. <https://bit.ly/32IGQD0>

Place  
Stamp  
Here



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# **Appendix C: Mailing List for the Pioneer Water Pipeline Project Neighborhood Meeting**



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160TH INVESTMENTS LLC  
15187 MADISON ST  
BRIGHTON CO 80602-7704

BOARD OF COUNTY COMMISSIONERS COUNTY OF ADAMS  
4430 S ADAMS COUNTY PKWY FL 5  
BRIGHTON CO 80601-8222

ADAMS COUNTY  
4430 SOUTH ADAMS COUNTY PKWY  
BRIGHTON CO 80601-8204

BRIGHTON FARM LLC  
15600 HOLLY ST  
BRIGHTON CO 80602-7911

ADAMS COUNTY  
4430 S ADAMS COUNTY PKWY  
BRIGHTON CO 80601

BRIGHTON LAKES LLC  
200 W HAMPDEN AVE STE 201  
ENGLEWOOD CO 80110-2407

ADDISON LINDA GERALDINE AND  
ADDISON RONALD EDWARD  
107 6TH STREET/PO BOX 562  
DACONO CO 80514

BURKE PHILIP J AND  
BURKE JENNIFER K  
15841 RIVERDALE RD  
BRIGHTON CO 80602-8216

ANAYA PRISCILIANO AND  
LABRADO LAURA  
1761 ROWENA ST  
THORNTON CO 80229-3676

CAMAS COLORADO INC  
C/O AGGREGATE INDUSTRIES  
1687 COLE BLVD STE 300  
GOLDEN CO 80401-3318

ATSINGER EDWARD G III ET AL  
855 AVIATION DR SUITE 200  
CAMARILLO CA 93010-8569

CARLSON EDWARD R AND  
CARLSON TERRI LYNN  
11741 KEARNEY CIR  
THORNTON CO 80233-5211

BARKER LAURENCE M/NELL A TRUSTEES OF THE  
BARKER NELL A TRUST THE  
15940 W 66TH PL  
ARVADA CO 80007

CARLSON TAYLOR R UND 24.25% INT AND  
THORNTON CORY J UND 24.25 INT ET ALS  
PO BOX 247  
EASTLAKE CO 80614-0247

BASELINE LAKES HOLDINGS LLC  
PO BOX 247  
EASTLAKE CO 80614-0247

CARLSON TAYLOR R UND 24.25% INT AND  
THORNTON CORY J UND 24.25% INT ET ALS  
PO BOX 247  
EASTLAKE CO 80614-0247

BASELINE LAKES HOLDINGS LLC ET ALS  
PO BOX 247  
EASTLAKE CO 80614-0247

CARLSON TAYLOR R UND 24.25% INT AND  
THORNTON CORY J UN 24.25 INT ET ALS  
PO BOX 247  
EASTLAKE CO 80614-0247

BOARD OF COUNTY COMMISSIONERS  
COUNTY OF ADAMS  
9755 HENDERSON RD  
BRIGHTON CO 80601-8114

CASTRODALE PATRICIA  
4 SEARS CT  
KEOKUK IA 52632-2547

CC ERIE FARMS LLC UND 88% INT AND  
HOLLY HOLDINGS LLC UND 12% INT  
PO BOX 247  
EASTLAKE CO 80614-0247

COLORADO AND E-470 LLC  
PO BOX 247  
EASTLAKE CO 80614-0247

CERVANTES MARTIN ARMANDO  
6880 NIAGARA ST  
COMMERCE CITY CO 80022-2626

COUNTY OF ADAMS  
4430 S ADAMS COUNTY PKWY FL 5  
BRIGHTON CO 80601-8222

CITY OF AURORA  
15151 E ALAMEDA PARKWAY 5TH FLOOR  
AURORA CO 80012

COUNTY OF ADAMS  
BOARD OF COUNTY COMMISSIONERS  
4430 SOUTH ADAMS COUNTY PKWY  
BRGHTON CO 80601-8204

CITY OF BRIGHTON  
500 S 4TH AVE  
BRIGHTON CO 80601-3165

COUNTY OF ADAMS  
4430 SOUTH ADAMS COUNTY PKWY  
BRIGHTON CO 80601-8204

CITY OF THORNTON  
9500 CIVIC CENTER DR  
THORNTON CO 80229-4326

COUNTY OF ADAMS THE  
4430 SOUTH ADAMS COUNTY PKWY  
BRIGHTON CO 80601-8204

CITY OF THORNTON  
9500 CIVIC CENTER DR  
THORNTON CO 80229

COUNTY OF ADAMS THE  
9755 HENDERSON RD  
BRIGHTON CO 80601-8114

CITY OF THORNTON  
9500 CIVIC CENTER DR  
DENVER CO 80229-4300

DIAZ FRIEDA A  
9425 E 161ST PL  
BRIGHTON CO 80602

CITY OF THORNTON  
9500 CIVIC CENTER DR  
DENVER CO 80229-4326

DIAZ FRIEDA A  
9425 E 161ST AVE  
BRIGHTON CO 80602-7524

CITY OF THORNTON THE  
9500 CIVIC CENTER DR  
THORNTON CO 80229-4326

DILL AMY ANNE  
13850 RIVERDALE RD  
BRIGHTON CO 80602-8255

CLEVELAND CHERYL L AND CLEVELAND JUSTIN M AND  
CLEVELAND MARIA  
8831 W KIOWA DR  
BOISE ID 83709-6322

DIMANNA TAMMY R AND  
DIMANNA TERRY S  
16275 NOME ST  
BRIGHTON CO 80602-8301



E-470 PUBLIC HIGHWAY AUTHORITY  
22470 E STEPHEN D HOGAN PKWY STE 100  
AURORA CO 80018

H F INVESTMENT COMPANY LLC  
13022 E 136TH AVE  
BRIGHTON CO 80601-7281

EASTCREEK LLC  
PO BOX 247  
EASTLAKE CO 80614-0247

HANGAR 160 LLC  
8450 E CRESCENT PKWY STE 200  
GREENWOOD VILLAGE CO 80111-2816

EDWARDS PAUL E  
1709 S FILLMORE ST  
DENVER CO 80210-2946

HARRISON BEVERLY  
3476 COUNTY ROAD KK.75  
FOWLER CO 81039-9713

ERN LIMITED PARTNERSHIP ET AL  
7 CIRCLE DR  
WHEAT RIDGE CO 80215-6607

HART DARRELL LAVERN  
15864 RIVERDALE ROAD  
BRIGHTON CO 80602

FERRELL TIMOTHY R AND  
FERRELL CLAUDIA M  
13785 POTOMAC ST  
BRIGHTON CO 80601-7278

HART RONALD J  
11026 TRACEY CT  
NEW PORT RICHEY FL 34654-1517

FRETTER LOIS  
C/O CHRIS FRETTER  
BRIGHTON CO 80602-5685

HARTMANN DALE  
16387 PARIS WAY  
BRIGHTON CO 80602-8298

FULTON DITCH CO  
C/O BRICE STEELE  
25 S 4TH AVE  
BRIGHTON CO 80601-2029

HAVANA AND ILIFF LLC  
18685 EAST PLAZA DR  
PARKER CO 80134

GAYESKI CAPITAL EQUITIES LLC  
905 W 124TH AVE SUITE 200  
WESTMINSTER CO 80234

HENDERSON AGGREGATE LTD  
7321 E 88TH AVE  
HENDERSON CO 80640-8137

GRIFFIN SUDIE L  
2136 COUNTY ST 2970 / PO BOX 976  
BLANCHARD OK 73010-0976

HENDERSON AGGREGATE LTD  
PO BOX 700  
HENDERSON CO 80640-9329

GRIZZLY PETROLEUM COMPANY LLC  
1001 17TH ST FL 20  
DENVER CO 80202-2035

HT PARTERRE LAND LP  
609 MAIN ST STE 4400  
HOUSTON TX 77002-3169

JOHNSON CALEB AND  
JOHNSON DANIELL A  
16215 NOME ST  
BRIGHTON CO 80602-8301

LOCKETT KEVIN LEE  
12302 E 168TH AVE  
BRIGHTON CO 80602-6627

KEICHER JEFFREY M/MUNSON SUSAN M  
50% INT AND SCHREYER HELEN B 50% INT  
13677 CHERRY ST  
THORNTON CO 80602

MACIAS HELEN R AND  
MACIAS ROBERT A  
16080 OAKLAND CT  
BRIGHTON CO 80602-8296

KELLEY JEFFREY CHARLES  
602 SHADYCROFT LN  
LITTLETON CO 80120-4070

MC CRORY LAND AND CATTLE LLC  
16155 HIGHWAY 7  
BRIGHTON CO 80602-7648

KORTUM ACRES INC  
15A MARLBOROUGH RD  
SHALIMAR FL 32579-1039

MC DONALD GEORGE  
7500 E 100TH AVE  
HENDERSON CO 80640

KRAMERS LEILA M AND  
ZOPES MICHAEL L  
16380 PARIS WAY  
BRIGHTON CO 80602-8298

MOLLEVIK MICHAEL T AND  
MOLLEVIK KELLY L  
4993 E 111TH PL  
DENVER CO 80233-3815

LAMBERT JAMES DONALD 1/2 INT AND  
LAMBERT BARBARA JEAN 1/2 INT  
155 E BRIDGE ST  
BRIGHTON CO 80601-1612

MORRISON LYNNETTE  
2131 S COOK ST  
DENVER CO 80210-4913

LE BAO CHAU P  
14025 FLORENCE CT  
BRIGHTON CO 80602-7033

MOUNTAIN VIEW WATER USERS  
ASSOCIATION  
PO BOX 485  
BRIGHTON CO 80601

LE CHAU B  
987 HIGHWAY 85  
BRIGHTON CO 80603

OLD SCOTT FARM LLC  
5290 DTC PKWY STE 150  
ENGLEWOOD CO 80111-2764

LENNAR COLORADO LLC  
9781 S MERIDIAN BLVD STE 120  
ENGLEWOOD CO 80112-5935

PARRISH MARK A AND  
PARRISH KRISTINE A  
9414 E 161ST PL  
BRIGHTON CO 80602

LMB CAPITAL PARTNERS LLC  
905 W 124TH AVE SUITE 200  
WESTMINSTER CO 80234

PETROCCO ALBERT J JR  
PO BOX 459  
HENDERSON CO 80640-0459

PJDS FAMILY TRUST THE  
9845 E 138TH PL  
BRIGHTON CO 80602-8212

RITCHEY INVESTMENT COMPANY LLC  
13821 SABLE BLVD  
BRIGHTON CO 80601-7264

PLATTE RIVER FARMS LLC  
PO BOX 247  
EASTLAKE CO 80614-0247

RIVERSIDE VILLAGE OWNERS ASSOCIATION  
7501 VILLAGE SQUARE DR STE 205  
CASTLE PINES CO 80108-3700

PLAZA WEST 20 LLC  
9377 E 147TH PL  
BRIGHTON CO 80602

SANCHEZ ROY J AND  
SHANCHEZ NICOLLE E  
8457 E 163RD AVE  
BRIGHTON CO 80602-7564

POSTLE DEVELOPMENT COMPANY  
PO BOX 1024  
NIWOT CO 80544-1024

SASAKI FAMILY PARTNERSHIP LLLP  
697 VOILES DR  
BRIGHTON CO 80601-3322

QUEBEC 7 LLC  
14642 STELLAS MEADOW DR  
BROOMFIELD CO 80023-8401

SAVE A CHILD INC  
3241 W 44TH AVE  
DENVER CO 80211

QUEBEC LIMITED  
C/O FINLEY AND CO  
12000 WASHINGTON ST NO. 100  
THORNTON CO 80241

SCHAEFER ELAINE A ET AL  
13295 E 136TH AVE  
BRIGHTON CO 80601-7281

REICHARD-ARMSTRONG LORI LOUIS  
16197 PARIS WAY  
BRIGHTON CO 80602-8297

SEC 2-3 PHOENIX LLC  
9200 E MINERAL AVE STE 365  
CENTENNIAL CO 80112-3459

RH TODD CREEK LLC  
200 W HAMPDEN AVE STE 201  
ENGLEWOOD CO 80110-2407

SELTZER FARMS INC  
9390 E 168TH AVE  
BRIGHTON CO 80602-6606

RIO LA LLC  
812 GRAVIER ST STE 360  
NEW ORLEANS LA 70112-1408

SELTZER FARMS INC  
9390 E 168TH AVE  
BRIGHTON CO 80602

RIO LA LLC  
PO BOX 1231  
KYLE TX 78640-1231

SELTZER ROBERT L FAMILY TRUST  
33641 COUNTY ROAD 83  
BRIGGSDALE CO 80611-7808

SHARP AC LAND LLC  
9378 S STAR HILL CIR  
LONE TREE CO 80124-5443

TODD CREEK VILLAGE PARK  
AND RECREATION DISTRICT  
1700 N LINCOLN ST STE 2000  
DENVER CO 80203-4554

STEPHENS LINDY LOU  
1076 S 935 RD  
EL DORADO SPRINGS MO 64744-7279

TODD CREEK VILLAGE PARK AND  
RECREATION DISTRICT  
1700 N LINCOLN ST STE 2000  
DENVER CO 80203-4554

STRATUS TALON VIEW LLC  
8480 E ORCHARD RD STE 1100  
GREENWOOD VILLAGE CO 80111-5015

TODD CREEK VILLAGE PARK AND RECREATION  
DIST C/O MURRAY DAHL KUECHENMEISTER AND  
1700 LINCOLN ST STE 3800  
DENVER CO 80203-4538

THF PRAIRIE CENTER DEVELOPMENT LLC  
C/O THF REALTY INC  
211 N STADIUM BLVD STE 201  
COLUMBIA MO 65203-1161

UNITED POWER INC  
ATTN: PROPERTY TAX DEPT.  
BRIGHTON CO 80603-8728

TODD CREEK FARMS METRO DIST NO 1 WATER  
C/O ZIONS FIRST NATIONAL BANK TRUSTEE  
717 17TH ST STE 301  
DENVER CO 80202-3310

WAGNER RICK LYNN/GARY RON AND  
WAGNER TERRY DON  
8808 BEHRENS MILE ROAD  
BYERS CO 80103

TODD CREEK MEADOWS OWNERS  
ASSOCIATION INC  
8700 TURNPIKE DR STE 230  
WESTMINSTER CO 80031-4301

WATKINS BILLY J  
16300 YOSEMITE ST  
BRIGHTON CO 80602

TODD CREEK VILLAGE  
METROPOLITAN DISTRICT  
10450 E 159TH CT  
BRIGHTON CO 80602-7977

WEBB PHYLLIS ELLEN TRUST THE  
12152 E 168TH AVE  
BRIGHTON CO 80602-6661

TODD CREEK VILLAGE METROPOLITAN  
DISTRICT  
10450 E 159TH CT  
BRIGHTON CO 80602-7977

WEIGANDT JOHN WILLIAM  
10390 E 168TH AVE  
BRIGHTON CO 80602

TODD CREEK VILLAGE METROPOLITAN  
DISTRICT  
10450 E 159TH CT  
BRIGHTON CO 80602

WEINS JOHN AND  
WEINS LINDA  
312 MESA ST  
BRIGHTON CO 80601-4178

TODD CREEK VILLAGE PARK  
AND RECREATION DISTRICT  
2100 S LINCOLN ST STE 2000  
DENVER CO 80210-4409

WELHAM BLAZE G/REBECCA A AND  
WELHAM ROD G/JEANNE L  
13970 DEXTER ST  
THORNTON CO 80602-7034

WEWEL PAUL A AND  
WEWEL DIANNA F  
1187 MC INTOSH AVE  
BROOMFIELD CO 80020

AUSTIN NATHAN D  
OR CURRENT RESIDENT  
13571 KENNEDY AVE  
BRIGHTON CO 80601-6947

WRIGHT REVA L  
PO BOX 274  
BRIGHTON CO 80601-0274

BAJOREK JACK D AND  
BAJOREK TERESA L  
OR CURRENT RESIDENT  
16320 PARIS WAY  
BRIGHTON CO 80602-8298

AGAN ELIZABETH  
COURON MICHAEL J  
OR CURRENT RESIDENT  
16234 PARIS WAY  
BRIGHTON CO 80602-8299

BALLINGER MICHAEL D AND  
SCHASNY GERALDINE C  
OR CURRENT RESIDENT  
16144 LOMAND CIR  
BRIGHTON CO 80602

ALLEN ANDREW AND  
ALLEN LAURIE  
OR CURRENT RESIDENT  
8350 E 145TH PL  
BRIGHTON CO 80602-5766

BANEZ STEVEN BARDOS AND  
BANEZ MARIA LOURDES MANZANO PLATON  
OR CURRENT RESIDENT  
8400 E 145TH PL  
THORNTON CO 80602-5752

ALLEN RONNIE CLAYTON AND  
ALLEN CAROLINE LOVANE  
OR CURRENT RESIDENT  
16040 IVANHOE ST  
BRIGHTON CO 80602

BARLOW ZANE POWELL  
OR CURRENT RESIDENT  
11640 E 163RD CT  
BRIGHTON CO 80602-7504

ALLSOPP WILLIAM AND  
ALLSOPP TRINA  
OR CURRENT RESIDENT  
16170 POPLAR ST  
BRIGHTON CO 80602-6080

BARNES KEVIN A AND  
BARNES CHRISTINE M  
OR CURRENT RESIDENT  
14810 E 136TH AVE  
BRIGHTON CO 80601

ANDERSON JESSICA AND  
ANDERSON BRAD  
OR CURRENT RESIDENT  
11303 E 163RD CT  
BRIGHTON CO 80602-7578

BARTON LILA B  
OR CURRENT RESIDENT  
15650 COLORADO BLVD  
BRIGHTON CO 80602

ANDERSON LANE AND  
ANDERSON SUSAN  
OR CURRENT RESIDENT  
16130 POPLAR ST  
BRIGHTON CO 80602-6080

BAUER ERIN F AND  
BAUER ERIC F  
OR CURRENT RESIDENT  
16340 PARIS WAY  
BRIGHTON CO 80602-8298

ANDERSON MATTHEW DOUGLAS AND  
ANDERSON MEL LING  
OR CURRENT RESIDENT  
16110 POPLAR ST  
BRIGHTON CO 80602-6080

BEARD LUKE MICHAEL AND  
BEARD PATRICIA  
OR CURRENT RESIDENT  
15275 COLORADO BLVD  
BRIGHTON CO 80602-7815

ARMIJO LOUIS J  
OR CURRENT RESIDENT  
11830 E 160TH AVE  
BRIGHTON CO 80602

BEJARANO BENNIE J AND  
BEJARANO MICHELE M  
OR CURRENT RESIDENT  
11523 E 163RD CT  
BRIGHTON CO 80602-7599

BESSER MIANNE L AND  
BESSER BROOKE  
OR CURRENT RESIDENT  
14640 E 136TH AVE  
BRIGHTON CO 80601-6948

BUELOW PETER AND  
FEIGHAN FAITH SHERRY  
OR CURRENT RESIDENT  
10440 E 142ND AVE  
THORNTON CO 80602-5774

BILODEAU DONNA J AND  
IRONS JAY P  
OR CURRENT RESIDENT  
16135 LOMAND CIR  
BRIGHTON CO 80602-7519

BURKE PHILIP J AND  
BURKE JENNIFER K  
OR CURRENT RESIDENT  
15841 RIVERDALE RD  
BRIGHTON CO 80602-8216

BLACK JOSEPH D AND  
BLACK JENNIFER  
OR CURRENT RESIDENT  
16050 OAKLAND CT  
BRIGHTON CO 80602-8296

BUSTAM DAVID S AND  
BARNUM MELISSA L  
OR CURRENT RESIDENT  
11123 E 163RD CT  
BRIGHTON CO 80602-7569

BLEA RONNIE C AND  
BLEA LAURIE M  
OR CURRENT RESIDENT  
16085 IVANHOE ST  
BRIGHTON CO 80602-7981

CABLE ROBERT A AND  
CABLE KELSEY J  
OR CURRENT RESIDENT  
10693 E 163RD CT  
BRIGHTON CO 80602

BLUNCK RODNEY AND  
BLUNCK JULIE  
OR CURRENT RESIDENT  
8559 E 163RD COURT  
BRIGHTON CO 80602

CARAFFA SONNY  
OR CURRENT RESIDENT  
8240 E 145TH PL  
BRIGHTON CO 80602-5766

BOEN KELLY DARNELL AND  
BOEN JODIE SUE  
OR CURRENT RESIDENT  
14095 BRIGHTON RD  
BRIGHTON CO 80601-7317

CARRIGAN DOUGLAS A AND  
CARRIGAN CATHY L  
OR CURRENT RESIDENT  
16242 POPLAR ST  
BRIGHTON CO 80602-6076

BORDEN KENNETH W AND  
BORDEN TAMARA L  
OR CURRENT RESIDENT  
13532 KENNEDY AVE  
BRIGHTON CO 80601

CASTILLO FRANK AND  
CASTILLO TERRY  
OR CURRENT RESIDENT  
16012 OLIVE ST  
BRIGHTON CO 80602-6002

BRADFORD WILLIAM R AND  
BRADFORD REBECCA L  
OR CURRENT RESIDENT  
10653 E 163RD CT  
BRIGHTON CO 80602

CHAPMAN LARY  
OR CURRENT RESIDENT  
15742 COLORADO BLVD  
BRIGHTON CO 80602

BROWN DOUGLAS W  
OR CURRENT RESIDENT  
16021 PONTIAC CT  
BRIGHTON CO 80602-6077

CHEN SONG AND  
HUANG CHUNMEI  
OR CURRENT RESIDENT  
11223 E 163RD CT  
BRIGHTON CO 80602-7575

BUDZYNSKI GREGORY J AND  
BUDZYNSKI CHANTELE M  
OR CURRENT RESIDENT  
8540 E 145TH PL  
BRIGHTON CO 80602-5749

CHEUNG KAI M AND GUAN GUI J AND  
ZHANG ZI S  
OR CURRENT RESIDENT  
10773 E 163RD CT  
BRIGHTON CO 80602

CHRISTENSEN CHAD A AND  
CHRISTENSEN RACHAEL S  
OR CURRENT RESIDENT  
11473 E 163RD CT  
BRIGHTON CO 80602-7579

DEHELD PATRICK AND  
DEHELD AMY  
OR CURRENT RESIDENT  
11230 E 163RD CT  
BRIGHTON CO 80602-7575

COMEAU DORSEY A AND  
COMEAU MARYCATHERINE  
OR CURRENT RESIDENT  
13572 KENNEDY AVE  
BRIGHTON CO 80601-6946

DELCAMP JAMES R AND  
DELCAMP BARBARA J  
OR CURRENT RESIDENT  
16185 LOMAND CIR  
BRIGHTON CO 80602

CONN DALE J AND  
CONN JUDY L  
OR CURRENT RESIDENT  
16010 PONTIAC CT  
BRIGHTON CO 80602-6082

DELUZIO BRIAN J  
OR CURRENT RESIDENT  
16030 OAKLAND CT  
BRIGHTON CO 80602-8296

CORCILIOUS WILLIAM A  
OR CURRENT RESIDENT  
4200 E 168TH AVE  
BRIGHTON CO 80602-6601

DERR REUBEN ALLEN AND  
DERR KATHERINE LEE  
OR CURRENT RESIDENT  
16125 LOMAND CIR  
BRIGHTON CO 80602-7519

COX PAMELA M AND  
COX MICHAEL  
OR CURRENT RESIDENT  
5992 E 161ST AVE  
BRIGHTON CO 80602-7964

DEVRIES HERMAN T AND  
DEVRIES JEAN C  
OR CURRENT RESIDENT  
10680 E 163RD CT  
BRIGHTON CO 80602

CULLEN JAMES AND  
CULLEN CHRISTINA  
OR CURRENT RESIDENT  
11420 E 163RD CT  
BRIGHTON CO 80602-7579

DOBBINS CHRISTOPHER L AND  
DOBBINS JILLIAN S  
OR CURRENT RESIDENT  
15851 RIVERDALE RD  
BRIGHTON CO 80602-8216

CURRAN BILL STUART AND  
CURRAN PAMELA BETH  
OR CURRENT RESIDENT  
16070 POPLAR ST  
BRIGHTON CO 80602-6079

DOLLINGER PAUL M AND DOLLINGER LAUREN C AND  
DAHL LAWRENCE A AND DAHL JERRI E  
OR CURRENT RESIDENT  
16011 POPLAR ST  
BRIGHTON CO 80602-6078

DABROWSKI WOJCIECH  
OR CURRENT RESIDENT  
16287 MOLINE ST  
BRIGHTON CO 80602

DRESSLER WILLIAM R AND  
DRESSLER DONNA L  
OR CURRENT RESIDENT  
14789 E 135TH AVE  
BRIGHTON CO 80601-6920

DAVIS RICHARD C AND  
BROERSMA TERRI LYNNE  
OR CURRENT RESIDENT  
13675 BRIGHTON RD  
BRIGHTON CO 80601-7326

DROZD KENNETH J  
OR CURRENT RESIDENT  
13540 SABLE BLVD  
BRIGHTON CO 80601-7225

DEAN JUSTIN AKA DEAN JUSTIN M AND  
DEAN KRISTA AKA DEAN KRISTA S  
OR CURRENT RESIDENT  
16130 NEWARK ST  
BRIGHTON CO 80602-8302

DUNHAM BOYD A AND  
DUNHAM DONLEVA L  
OR CURRENT RESIDENT  
16792 POPLAR CT  
BRIGHTON CO 80602-6032

EBERLE DAVID G AND  
EBERLE LORETTA J  
OR CURRENT RESIDENT  
9485 E 161ST AVE  
BRIGHTON CO 80602-7524

FLOYD KIRSTEN L  
OR CURRENT RESIDENT  
13561 SABLE BLVD  
BRIGHTON CO 80601-7266

EGAN ARTHUR G AND  
EGAN EDNA R  
OR CURRENT RESIDENT  
4695 E 160TH AVE  
BRIGHTON CO 80602

FONTES JOSE C AND  
FONTES MARIA L  
OR CURRENT RESIDENT  
8841 E 163RD PLACE  
BRIGHTON CO 80602

EHRMANN EDWARD J AND  
EHRMANN VICKI M  
OR CURRENT RESIDENT  
9445 E 161ST AVE  
BRIGHTON CO 80602

FORSYTHE ANDREW C AND  
FORSYTHE LORRI D  
OR CURRENT RESIDENT  
8985 E 162ND AVE  
BRIGHTON CO 80602

ELSHOF MICHAEL W AND  
ELSHOF SARAH R  
OR CURRENT RESIDENT  
16002 OLIVE CT  
BRIGHTON CO 80602-7599

FREW JAMES THOMAS  
OR CURRENT RESIDENT  
16721 POPLAR CT  
BRIGHTON CO 80602-6032

FALLON JOHN AND  
MENDELSON JESSICA  
OR CURRENT RESIDENT  
11270 E 163RD CT  
BRIGHTON CO 80602-7575

FRISK MICHELLE B AND  
FRISK SHANE R  
OR CURRENT RESIDENT  
10320 E 142ND AVE  
THORNTON CO 80602-5774

FERRELL TIMOTHY R AND  
FERRELL CLAUDIA M  
OR CURRENT RESIDENT  
13785 POTOMAC ST  
BRIGHTON CO 80601-7278

FROTTEN THOMAS S  
OR CURRENT RESIDENT  
16122 OLIVE ST  
BRIGHTON CO 80602-7598

FISCHER CYNTHIA L AND  
ROBERTS MICHAEL K  
OR CURRENT RESIDENT  
15611 COLORADO BLVD  
BRIGHTON CO 80602

FULTON IRRIGATION DITCH CO  
OR CURRENT RESIDENT  
13698 E 136TH AVE  
BRIGHTON CO 80601

FISH RYAN M AND  
FISH SARAH J  
OR CURRENT RESIDENT  
16288 XENIA CT  
BRIGHTON CO 80602-7586

GARCIA CHRISTOPHER V AND  
GARCIA C MICHELLE  
OR CURRENT RESIDENT  
8510 E 145TH PLACE  
BRIGHTON CO 80601

FISK AARON M AND  
JACKSON WYETH R  
OR CURRENT RESIDENT  
16051 PONTIAC COURT  
BRIGHTON CO 80602

GARCIA DAVID D II  
OR CURRENT RESIDENT  
16102 OLIVE ST  
BRIGHTON CO 80602-7598

FLETCHER BRETT  
OR CURRENT RESIDENT  
13550 GRANBY ST  
BRIGHTON CO 80601-6959

GIST ROBERT W AND  
GIST TINA M  
OR CURRENT RESIDENT  
10280 E 142ND AVE  
THORNTON CO 80602-5773



GLIDEWELL BRADLEY G AND  
GLIDEWELL CRISTINA  
OR CURRENT RESIDENT  
11981 E 160TH AVENUE  
BRIGHTON CO 80602

HARWOOD STEPHEN R  
OR CURRENT RESIDENT  
15661 COLORADO BLVD  
BRIGHTON CO 80602-7801

GONZALES CHARLES AND  
GONZALES LISA  
OR CURRENT RESIDENT  
16021 OAKLAND CT  
BRIGHTON CO 80602-8296

HAZEL TIMOTHY D AND  
HAZEL JULIE ANN  
OR CURRENT RESIDENT  
16780 POPLAR CT  
BRIGHTON CO 80602-6032

GONZALES JASON AND  
GONZALES STEPHANIE  
OR CURRENT RESIDENT  
16165 LOMAND CIR  
BRIGHTON CO 80602-7519

HEADRICK CRAIG L AND  
HEADRICK JANELLE C  
OR CURRENT RESIDENT  
11433 E 163RD CT  
BRIGHTON CO 80602

GOODALL STEPHEN JR  
GOODALL JAYMIE  
OR CURRENT RESIDENT  
10533 E 163RD AVE  
BRIGHTON CO 80602-7505

HEDDINGS JASON AND  
HEDDINGS ERICA  
OR CURRENT RESIDENT  
8457 E 163RD AVE  
BRIGHTON CO 80602-7564

GREENBURG THOMAS ARNOLD JR AND  
GREENBURG KATHLEEN GEAN  
OR CURRENT RESIDENT  
11180 E 166TH AVE  
BRIGHTON CO 80602-6614

HENEZHAN ADELL K  
OR CURRENT RESIDENT  
8427 E 163RD AVE  
BRIGHTON CO 80602-7564

GRIFFITH DUSTIN A AND  
GRIFFITH JESSICA R  
OR CURRENT RESIDENT  
16262 POPLAR ST  
BRIGHTON CO 80602-6076

HERNANDEZ-ALVAREZ MONICA N AND  
OLVERA-ROJAS JORGE E  
OR CURRENT RESIDENT  
9935 E 138TH PL  
THORNTON CO 80602-8214

H F INVESTMENT COMPANY LLC  
OR CURRENT RESIDENT  
13022 E 136TH AVE  
BRIGHTON CO 80601-7281

HILLMAN SCOTT A AND  
HILLMAN KARLA J  
OR CURRENT RESIDENT  
10790 E 163RD CT  
BRIGHTON CO 80602-7538

HANCOCK FORREST AND  
HANCOCK KOLLEEN  
OR CURRENT RESIDENT  
16254 PARIS WAY  
BRIGHTON CO 80602-8299

HODGSON CHRISTOPHER LEE  
HODGSON SABRINA RENEE  
OR CURRENT RESIDENT  
16137 PARIS WAY  
BRIGHTON CO 80602-8297

HARDING DEBRA J  
OR CURRENT RESIDENT  
5585 E 160TH AVE  
BRIGHTON CO 80602

HOLLAND RODNEY L AND  
HOLLAND LINDA M  
OR CURRENT RESIDENT  
14709 E 135TH AVE  
BRIGHTON CO 80601-6920

HARMS LUISA  
OR CURRENT RESIDENT  
16347 PARIS WAY  
BRIGHTON CO 80602-8298

INGRAM MICHAEL AND  
MCRAE-INGRAM JULIANE  
OR CURRENT RESIDENT  
16184 PARIS WAY  
BRIGHTON CO 80602-8297

JACKSON LARRY DEAN AND ROSEMARY  
OR CURRENT RESIDENT  
13510 FAIRPLAY ST  
BRIGHTON CO 80601-6954

KARSTEN JONATHAN AND  
KARSTEN ROBYN  
OR CURRENT RESIDENT  
16330 NOME ST  
BRIGHTON CO 80602-8300

JARAMILLO JOSE J AND  
CANCHOLA DELFINA  
OR CURRENT RESIDENT  
16025 IVANHOE ST  
BRIGHTON CO 80602

KEARNS BRIAN P AND  
KEARNS PAIGE C  
OR CURRENT RESIDENT  
10623 E 163RD CT  
BRIGHTON CO 80602

JESSEN COLIN S AND  
JESSEN JESSICA R  
OR CURRENT RESIDENT  
11583 E 163RD CT  
BRIGHTON CO 80602

KELLEY CURTIS AND  
KELLEY VANESSA  
OR CURRENT RESIDENT  
11343 E 163RD CT  
BRIGHTON CO 80602-7578

JOHNSON FREDERICK D AND  
JOHNSON SALLIE R  
OR CURRENT RESIDENT  
16172 DALLAS ST  
BRIGHTON CO 80602

KELLEY RODNEY D  
OR CURRENT RESIDENT  
15891 RIVERDALE RD  
BRIGHTON CO 80602-8216

JOHNSON JAY PATRICK AND  
JOHNSON ANGELA MARIE  
OR CURRENT RESIDENT  
16634 POPLAR CT  
BRIGHTON CO 80602-6031

KHANTHAVONG SAENG AND  
KHANTHAVONG SAENGJOY AND KHANTHAVONG BRENDA  
OR CURRENT RESIDENT  
8771 E 163RD PL  
BRIGHTON CO 80602-7572

JONES BRIAN D AND  
JONES SHERYL A  
OR CURRENT RESIDENT  
16072 OLIVE ST  
BRIGHTON CO 80602-7598

KIRKMAN DAVID  
OR CURRENT RESIDENT  
11180 E 163RD CT  
BRIGHTON CO 80602-7569

JONES CHRISTOPHER P AND  
JONES ANTOINETTE R  
OR CURRENT RESIDENT  
10943 E 163RD CT  
BRIGHTON CO 80602

KLINGER JAMES G AND  
KLINGER PAULINE C  
OR CURRENT RESIDENT  
16175 LOMAND CIR  
BRIGHTON CO 80602

JONES FRANKLIN D AND  
JAMISON MARIA G  
OR CURRENT RESIDENT  
11253 E 163RD CT  
BRIGHTON CO 80602-7575

KOCOUREK CHRISTOPHER R AND  
TRUJILLO KIMBERLY A  
OR CURRENT RESIDENT  
10833 E 163RD CT  
BRIGHTON CO 80602

KAHLER DONOVAN AND  
CHANTHIVONG INKHAM  
OR CURRENT RESIDENT  
16052 OLIVE ST  
BRIGHTON CO 80602-6002

KONDORF PETER AND  
KONDORF MICHELLE  
OR CURRENT RESIDENT  
6052 E 161ST AVE  
BRIGHTON CO 80602-7964

KARL JUSTINE M AND  
LOMBARDI GEORGE A  
OR CURRENT RESIDENT  
15880 COLORADO BLVD  
BRIGHTON CO 80602-7806

KOZLOV DANIEL  
OR CURRENT RESIDENT  
10860 E 163RD CT  
BRIGHTON CO 80602

KUSEK JEWEL AND  
KUSEK EDWARD ALAN  
OR CURRENT RESIDENT  
16164 PARIS WAY  
BRIGHTON CO 80602-8297

LYBARGER JOSHUA M AND  
LYBARGER ALICEA M  
OR CURRENT RESIDENT  
16143 HI LAND CIR  
BRIGHTON CO 80602-7515

LAMPSHIRE RICHARD WILLIAM AND  
LAMPSHIRE HILLARY NAGEL  
OR CURRENT RESIDENT  
11663 E 163RD CT  
BRIGHTON CO 80602

LYONS SADIE AND  
LYONS JEFFREY D  
OR CURRENT RESIDENT  
14740 E 136TH AVE  
BRIGHTON CO 80601-6958

LANGE FAMILY TRUST  
OR CURRENT RESIDENT  
8280 E 145TH PL  
BRIGHTON CO 80602-5766

MALARKEY CHARLES E AND  
NORTHROP KARYL A  
OR CURRENT RESIDENT  
16134 LOMAND CIRCLE  
BRIGHTON CO 80601

LEFEVRE BRIAN F AND  
LEFEVRE CYNTHIA R  
OR CURRENT RESIDENT  
8538 E 163RD CT  
BRIGHTON CO 80602-7573

MANGUS GERALD H AND  
MANGUS RAMONA R  
OR CURRENT RESIDENT  
16144 PARIS WAY  
BRIGHTON CO 80602-8297

LEMAY BODEN J AND  
LEMAY KATHY D  
OR CURRENT RESIDENT  
16740 POPLAR CT  
BRIGHTON CO 80602-6032

MANZANARES GABRIEL AND  
MANZANARES ANNA MARIE  
OR CURRENT RESIDENT  
10240 E 142ND AVE  
BRIGHTON CO 80602-5773

LEMKE KAREN B  
OR CURRENT RESIDENT  
16114 LOMAND CIR  
BRIGHTON CO 80602-7520

MARTINEZ MARES FERNANDO  
OR CURRENT RESIDENT  
13965 FLORENCE CT  
BRIGHTON CO 80602

LLOYD BRUCE MICHL  
OR CURRENT RESIDENT  
12202 E 168TH AVE  
BRIGHTON CO 80602-6661

MCCRORY J P  
OR CURRENT RESIDENT  
16152 MCCRORY CT  
BRIGHTON CO 80602-8330

LOMBARDI GEORGE/DIANE LIVING TRUST THE  
OR CURRENT RESIDENT  
15840 COLORADO BLVD  
BRIGHTON CO 80602-7806

MCCULLOH DOUGLAS  
OR CURRENT RESIDENT  
10563 E 163RD AVE  
BRIGHTON CO 80602-7505

LORSHBOUGH MARY J  
OR CURRENT RESIDENT  
15280 E 136TH AVE  
BRIGHTON CO 80601-6955

MEDLIN WAYNE E AND  
MEDLIN PATRICIA L  
OR CURRENT RESIDENT  
15655 RIVERDALE RD  
BRIGHTON CO 80602-8216

LUCAS NATASHA AND  
LUCAS DAVID  
OR CURRENT RESIDENT  
16257 PARIS WAY  
BRIGHTON CO 80602-8299

MILLER BARBARA L AND  
MILLER TERRY J  
OR CURRENT RESIDENT  
16104 LOMAND CIRCLE  
BRIGHTON CO 80602

MOLLICONI SANDRA  
OR CURRENT RESIDENT  
16227 PARIS WAY  
BRIGHTON CO 80602-8299

NICHOLSON RONALD D AND  
NICHOLSON TAMMY S  
OR CURRENT RESIDENT  
16299 XENIA COURT  
BRIGHTON CO 80602

MONTOYA ANTHONY S/SHARON L AND  
SOLANO ANTHONY W/NICOLE R  
OR CURRENT RESIDENT  
11550 E 163RD CT  
BRIGHTON CO 80602-7599

NOBITT MICHAEL J AND  
NOBITT ANDI L  
OR CURRENT RESIDENT  
7254 EAGLE SHADOW AVE  
BRIGHTON CO 80602-6000

MONTOYA ROBERT JAMES II AND  
MONTOYA CHRISTY  
OR CURRENT RESIDENT  
11633 E 163RD CT  
BRIGHTON CO 80602

NORTHERN HILLS CHRISTIAN CHURCH  
OR CURRENT RESIDENT  
5061 E 160TH AVE  
BRIGHTON CO 80602

MOORE CAMRON AND REGINA TRUST  
OR CURRENT RESIDENT  
11120 E 163RD CT  
BRIGHTON CO 80602-7569

NUNNALLY CLINTON J AND  
NUNNALLY BETSY  
OR CURRENT RESIDENT  
10950 E 163RD CT  
BRIGHTON CO 80602

MORELLO KIMBERLY  
OR CURRENT RESIDENT  
8509 E 163RD CT  
BRIGHTON CO 80602-7573

OLSAVSKY ALAN J AND  
OLSAVSKY MARY J  
OR CURRENT RESIDENT  
16297 PARIS WAY  
BRIGHTON CO 80602-8299

MORGAN JEFFREY J B  
OR CURRENT RESIDENT  
9465 E 161ST AVE  
BRIGHTON CO 80601-7524

ONAKA CLARENCE S REVOCABLE LIVING TRUST UND  
50% INT AND  
CARVALHO ELIZABETH M TRUST UND 50% INT  
OR CURRENT RESIDENT  
10600 E 163RD CT  
BRIGHTON CO 80602-7537

MORGAN TERRA J AND  
MORGAN LAURA L  
OR CURRENT RESIDENT  
11680 E 163RD CT  
BRIGHTON CO 80602

OSTROM MICHAEL J AND  
OSTROM STEPHANIE  
OR CURRENT RESIDENT  
11393 E 163RD CT  
BRIGHTON CO 80602-7578

MULLEN SHELLY K AND  
MULLEN BRENT M  
OR CURRENT RESIDENT  
8580 E 145TH PLACE  
BRIGHTON CO 80601

PASCHEN RONALD L AND  
PASCHEN WILLIAM P  
OR CURRENT RESIDENT  
16050 POPLAR ST  
BRIGHTON CO 80602-6079

MYER SANDRA K AND  
MYER JUSTIN E  
OR CURRENT RESIDENT  
16610 POPLAR CT  
BRIGHTON CO 80602-6031

PECK RYAN E AND  
PECK ROBIN L W DANNI  
OR CURRENT RESIDENT  
5901 E 160TH PLACE  
BRIGHTON CO 80602

NESS CHRISTOPHER  
OR CURRENT RESIDENT  
15861 RIVERDALE RD  
BRIGHTON CO 80602-8216

PETERSON ALAN AND  
PETERSON SHELLY  
OR CURRENT RESIDENT  
14545 UINTA ST  
BRIGHTON CO 80602-5764

PETROCCO FAMILY LIMITED PARTNERSHIP LLLP  
OR CURRENT RESIDENT  
14110 BRIGHTON RD  
BRIGHTON CO 80601

RITCHEY INVESTMENT COMPANY LLC  
OR CURRENT RESIDENT  
13821 SABLE BLVD  
BRIGHTON CO 80601-7264

PEVLER FRANK L  
OR CURRENT RESIDENT  
16164 DALLAS STREET  
BRIGHTON CO 80602

RYAN KIM L  
OR CURRENT RESIDENT  
8631 E 163RD PL  
BRIGHTON CO 80602-7572

PHILLIPS LILLIAN A AND  
PHILLIPS RICHARD T  
OR CURRENT RESIDENT  
11183 E 163RD CT  
BRIGHTON CO 80602-7569

SALAZAR JAKE LIVING TRUST UND 1/2 INT AND  
SALAZAR MARY E LIVING TRUST UND 1/2 INT  
OR CURRENT RESIDENT  
3350 E 156TH AVE  
BRIGHTON CO 80602-7794

POMPEY KAREN A AND  
BRUNTZ RANDY G  
OR CURRENT RESIDENT  
16696 POPLAR CT  
BRIGHTON CO 80602-6031

SANCHEZ CELESTE MAE AND  
SANCHEZ ANDREW ROMAN  
OR CURRENT RESIDENT  
12101 E 160TH AVE  
BRIGHTON CO 80602

POPISH PHILIP H AND  
POPISH SHARON L  
OR CURRENT RESIDENT  
14649 E 135TH AVE  
BRIGHTON CO 80601-6918

SANCHEZ EDUARDO A AND  
SANCHEZ DORA M  
OR CURRENT RESIDENT  
8701 E 163RD PLACE  
BRIGHTON CO 80602

POWELL ARLEN AND  
POWELL ROSEMARY  
OR CURRENT RESIDENT  
9955 E 138TH PL  
BRIGHTON CO 80602-8214

SAUER JOHN H  
OR CURRENT RESIDENT  
14589 E 135TH AVE  
BRIGHTON CO 80601-6916

PULIS JAMES A TRUST AND  
PULIS CAROLEE A TRUST  
OR CURRENT RESIDENT  
15295 COLORADO BLVD  
BRIGHTON CO 80602

SCHAEFER ELAINE A ET AL  
OR CURRENT RESIDENT  
13295 E 136TH AVE  
BRIGHTON CO 80601-7281

RAMIREZ JESUS GUSTAVO JR  
OR CURRENT RESIDENT  
13552 KENNEDY AVE  
BRIGHTON CO 80601-6946

SCHAFFER LLEWELLYN WOODROW AND KNOGGE  
KENDRA KATE AND SCHAFFER MARLEN GERALD  
OR CURRENT RESIDENT  
3600 E 156TH AVE  
BRIGHTON CO 80602-7768

RANDALL ELIZABETH M  
OR CURRENT RESIDENT  
16001 RIVERDALE RD  
BRIGHTON CO 80602-8304

SCHISLER JOHN  
OR CURRENT RESIDENT  
13584 CRYSTAL ST  
BRIGHTON CO 80601

RHEINHEIMER JOHN H AND  
RHEINHEIMER SONYA E  
OR CURRENT RESIDENT  
16625 POPLAR CT  
BRIGHTON CO 80602

SCHISLER RICKY  
OR CURRENT RESIDENT  
13544 CRYSTAL ST  
BRIGHTON CO 80601-7271

SCHLOSSER ROBERT R AND  
SCHLOSSER SUSAN R  
OR CURRENT RESIDENT  
16124 LOMAND CIR  
BRIGHTON CO 80601

STADLER RYAN L AND  
STADLER SHEILA L  
OR CURRENT RESIDENT  
16272 POPLAR ST  
BRIGHTON CO 80602-6076

SCHMIDTHUBER JASON D AND  
SCHMIDTHUBER AMY C  
OR CURRENT RESIDENT  
8449 E 163RD COURT  
BRIGHTON CO 80602

STANLEY RUPERT H AND  
STANLEY DEBORAH L  
OR CURRENT RESIDENT  
16232 POPLAR ST  
BRIGHTON CO 80602-6076

SCHULZ TODD V AND  
SCHULZ JULIE J  
OR CURRENT RESIDENT  
16654 POPLAR COURT  
BRIGHTON CO 80602

STEVENS MICHAEL C AND  
STEVENS TAMMARA  
OR CURRENT RESIDENT  
16282 POPLAR ST  
BRIGHTON CO 80602-6076

SEEGER DONALD R AND  
SEEGER PAULINE M  
OR CURRENT RESIDENT  
13590 SABLE BLVD  
BRIGHTON CO 80601

STIMMEL CHRISTOPHER J AND  
MCGINNESS MELISSA R  
OR CURRENT RESIDENT  
6051 E 160TH PLACE  
BRIGHTON CO 80602

SEN ERIC  
WU JIAO  
OR CURRENT RESIDENT  
16170 NEWARK ST  
BRIGHTON CO 80602-8302

STINSON CHRISTOPHER LYN AND  
STINSON ASHLEY ANNE  
OR CURRENT RESIDENT  
16300 PARIS WAY  
BRIGHTON CO 80602-8298

SICHTING ZERRI J AND  
SICHTING MELLISA C  
OR CURRENT RESIDENT  
16071 POPLAR STREET  
BRIGHTON CO 80602

STOCKTON JEFFERY L AND  
STOCKTON ALAYNA M  
OR CURRENT RESIDENT  
16155 LOMAND CIR  
BRIGHTON CO 80602-7519

SKOREV ANDREY AND  
SKOREV KRISTINA  
OR CURRENT RESIDENT  
11150 E 163RD CT  
BRIGHTON CO 80602-7569

STREET JERALD R AND  
STREET BARBARA R  
OR CURRENT RESIDENT  
13541 SABLE BLVD  
BRIGHTON CO 80601

SNOOK DON R AND SNOOK SUSAN B  
OR CURRENT RESIDENT  
10370 E 142ND AVE  
THORNTON CO 80602-5774

SWANTKOSKI JAROD AND  
SWANTKOSKI ANGELA  
OR CURRENT RESIDENT  
16080 IVANHOE ST  
BRIGHTON CO 80602

SPARROW JEFFERY C AND  
SPARROW RUTHANN  
OR CURRENT RESIDENT  
8720 E 163RD PL  
BRIGHTON CO 80602-7584

THOMAS JAMES R  
OR CURRENT RESIDENT  
13581 SABLE BLVD  
BRIGHTON CO 80601-7266

SPURGEON LIVING TRUST  
OR CURRENT RESIDENT  
16032 OLIVE ST  
BRIGHTON CO 80602-6002

THOMAS JOSEPH JEFFREY AND  
THOMAS KIM TERES  
OR CURRENT RESIDENT  
15930 JACKSON STREET  
BRIGHTON CO 80602

TOLAR TRAVIS W AND  
ERVEN AMANDA JO  
OR CURRENT RESIDENT  
10883 E 163RD CT  
BRIGHTON CO 80602-7547

WEBB GEORGE F  
OR CURRENT RESIDENT  
14600 E 136TH AVE  
BRIGHTON CO 80601-6948

TORRES JOSE LUIS  
OR CURRENT RESIDENT  
16154 LOMAND CIR  
BRIGHTON CO 80602-7520

WEGLIN GREG L AND  
WEGLIN BRANDY K  
OR CURRENT RESIDENT  
16115 LOMAND CIR  
BRIGHTON CO 80602-7519

UHING KENNETH D  
OR CURRENT RESIDENT  
13526 KENNEDY AVE  
BRIGHTON CO 80601-6946

WEINKAUF JOSHUA J AND  
WIENKAUF KAARI A  
OR CURRENT RESIDENT  
11103 E 163RD CT  
BRIGHTON CO 80602

VO THANH AND  
VO JUDY  
OR CURRENT RESIDENT  
11360 E 163RD CT  
BRIGHTON CO 80602-7578

WENK BRIAN A AND  
WENK LYNDA M  
OR CURRENT RESIDENT  
16123 HI LAND CIR  
BRIGHTON CO 80602-7515

VOHL MATTHEW AND  
DENTON MICHELLE  
OR CURRENT RESIDENT  
16274 PARIS WAY  
BRIGHTON CO 80602-8299

WEST ORREN JR AND  
WEST KRISTINE  
OR CURRENT RESIDENT  
7208 EAGLE SHADOW AVE  
BRIGHTON CO 80602-6000

VUE JAY M AND  
VUE MARIA CRISTINA G  
OR CURRENT RESIDENT  
10130 E 142ND AVE  
BRIGHTON CO 80602-5773

WHITT ERIC AND  
WHITT DIANE  
OR CURRENT RESIDENT  
16260 NOME ST  
BRIGHTON CO 80602-8301

W AND D MC DONALD TRUST  
OR CURRENT RESIDENT  
16055 IVANHOE ST  
BRIGHTON CO 80602-7981

WINE LEWIS L AND  
WINE HEATHER C  
OR CURRENT RESIDENT  
5862 E 161ST AVE  
BRIGHTON CO 80602

WANDZEK MICHAEL C AND  
WANDZEK SATHYA F  
OR CURRENT RESIDENT  
16292 POPLAR ST  
BRIGHTON CO 80602-6076

WINSLOW RICHARD S AND  
WINSLOW MICHELE R  
OR CURRENT RESIDENT  
16015 OLIVE ST  
BRIGHTON CO 80602-6002

WARRINGTON RICHARD R  
OR CURRENT RESIDENT  
8201 E 160TH AVENUE  
BRIGHTON CO 80602

WISOTZKEY RICHARD J AND  
GREFRATH LISA H  
OR CURRENT RESIDENT  
16045 OLIVE ST  
BRIGHTON CO 80602

WATKINS BILLY J  
OR CURRENT RESIDENT  
16300 YOSEMITE ST  
BRIGHTON CO 80602

WOLTERS EDWARD W AND  
WOLTERS HOLLY M  
OR CURRENT RESIDENT  
16145 LOMAND CIR  
BRIGHTON CO 80602-7519

WOOD JERRY D  
OR CURRENT RESIDENT  
11880 E 160TH AVE  
BRIGHTON CO 80602-7437

CURRENT RESIDENT  
14031 SABLE BLVD  
BRIGHTON CO 80601-7221

WRAY GEORGE H AND  
WRAY JEANNETTE I  
OR CURRENT RESIDENT  
13564 CRYSTAL STREET  
BRIGHTON CO 80601

CURRENT RESIDENT  
14151 POTOMAC ST  
BRIGHTON CO 80601-7229

XU JINGHANG  
OR CURRENT RESIDENT  
8300 E 145TH PL  
THORNTON CO 80602-5766

CURRENT RESIDENT  
13920 SABLE BLVD  
BRIGHTON CO 80601-7265

XU WEN YING AND PHU ANITA AND  
PHU COONG VAY  
OR CURRENT RESIDENT  
16360 PARIS WAY  
BRIGHTON CO 80602-8298

CURRENT RESIDENT  
13990 E 136TH AVE  
BRIGHTON CO 80601-7274

YORE MICHAEL AND  
YORE MARILYN GUYTON  
OR CURRENT RESIDENT  
11163 E 163RD CT  
BRIGHTON CO 80602-7569

CURRENT RESIDENT  
13697 E 136TH AVE  
BRIGHTON CO 80601-7281

YOUNG CAROL L  
OR CURRENT RESIDENT  
16153 DALLAS ST  
BRIGHTON CO 80602

CURRENT RESIDENT  
13698 E 136TH AVE  
BRIGHTON CO 80601-7281

ZAGEL JAMES R AND  
ZAGEL PAULA J  
OR CURRENT RESIDENT  
16168 DALLAS ST  
BRIGHTON CO 80602-7512

CURRENT RESIDENT  
14020 BRIGHTON RD  
BRIGHTON CO 80601-7318

ZEMLICKA JASON AND  
ZEMLICKA REBECCA  
OR CURRENT RESIDENT  
11143 E 163RD CT  
BRIGHTON CO 80602-7569

CURRENT RESIDENT  
14030 BRIGHTON RD  
BRIGHTON CO 80601-7318

ZHANG SONG AND XU YILI  
OR CURRENT RESIDENT  
16773 POPLAR CT  
BRIGHTON CO 80602

CURRENT RESIDENT  
12361 E 136TH AVE  
BRIGHTON CO 80601-7319

CURRENT RESIDENT  
13515 E 132ND AVE  
BRIGHTON CO 80601-7107

CURRENT RESIDENT  
12280 E 136TH AVE  
BRIGHTON CO 80601-7320



CURRENT RESIDENT  
4105 E 160TH AVE  
BRIGHTON CO 80602-6003

CURRENT RESIDENT  
13950 FLORENCE CT  
BRIGHTON CO 80602-7070

CURRENT RESIDENT  
4115 E 160TH AVE  
THORNTON CO 80602-6003

CURRENT RESIDENT  
11350 E 160TH AVE  
BRIGHTON CO 80602-7400

CURRENT RESIDENT  
6505 E 160TH AVE  
BRIGHTON CO 80602-6006

CURRENT RESIDENT  
16380 YOSEMITE ST  
BRIGHTON CO 80602-7506

CURRENT RESIDENT  
16100 QUEBEC ST  
BRIGHTON CO 80602-6012

CURRENT RESIDENT  
9414 E 161ST AVE  
BRIGHTON CO 80602-7523

CURRENT RESIDENT  
16675 POPLAR CT  
BRIGHTON CO 80602-6031

CURRENT RESIDENT  
9425 E 161ST AVE  
BRIGHTON CO 80602-7524

CURRENT RESIDENT  
9230 E 168TH AVE  
BRIGHTON CO 80602-6606

CURRENT RESIDENT  
3225 E 160TH AVE  
THORNTON CO 80602-7634

CURRENT RESIDENT  
7900 E 168TH AVE  
BRIGHTON CO 80602-6608

CURRENT RESIDENT  
16180 COLORADO BLVD  
THORNTON CO 80602-7637

CURRENT RESIDENT  
14020 FLORENCE CT  
BRIGHTON CO 80602-7032

CURRENT RESIDENT  
3450 E 156TH AVE  
BRIGHTON CO 80602-7793

CURRENT RESIDENT  
14040 FLORENCE CT  
BRIGHTON CO 80602-7032

CURRENT RESIDENT  
15770 COLORADO BLVD  
BRIGHTON CO 80602-7806

CURRENT RESIDENT  
14025 FLORENCE CT  
BRIGHTON CO 80602-7033

CURRENT RESIDENT  
15620 COLORADO BLVD  
BRIGHTON CO 80602-7808

CURRENT RESIDENT  
15681 HOLLY ST  
BRIGHTON CO 80602-7910

CURRENT RESIDENT  
15531 HOLLY ST  
BRIGHTON CO 80602-7931

CURRENT RESIDENT  
9885 E 138TH PL  
BRIGHTON CO 80602-8212

CURRENT RESIDENT  
9975 E 138TH PL  
BRIGHTON CO 80602-8214

CURRENT RESIDENT  
9995 E 138TH PL  
BRIGHTON CO 80602-8214

CURRENT RESIDENT  
15840 RIVERDALE RD  
BRIGHTON CO 80602-8217

CURRENT RESIDENT  
15864 RIVERDALE RD  
BRIGHTON CO 80602-8217

CURRENT RESIDENT  
16080 MCCRORY CT  
BRIGHTON CO 80602-8330

CURRENT RESIDENT  
16175 MCCRORY CT  
BRIGHTON CO 80602-8330



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# **Appendix D: Notification Area for the Pioneer Water Pipeline Project Neighborhood Meeting**

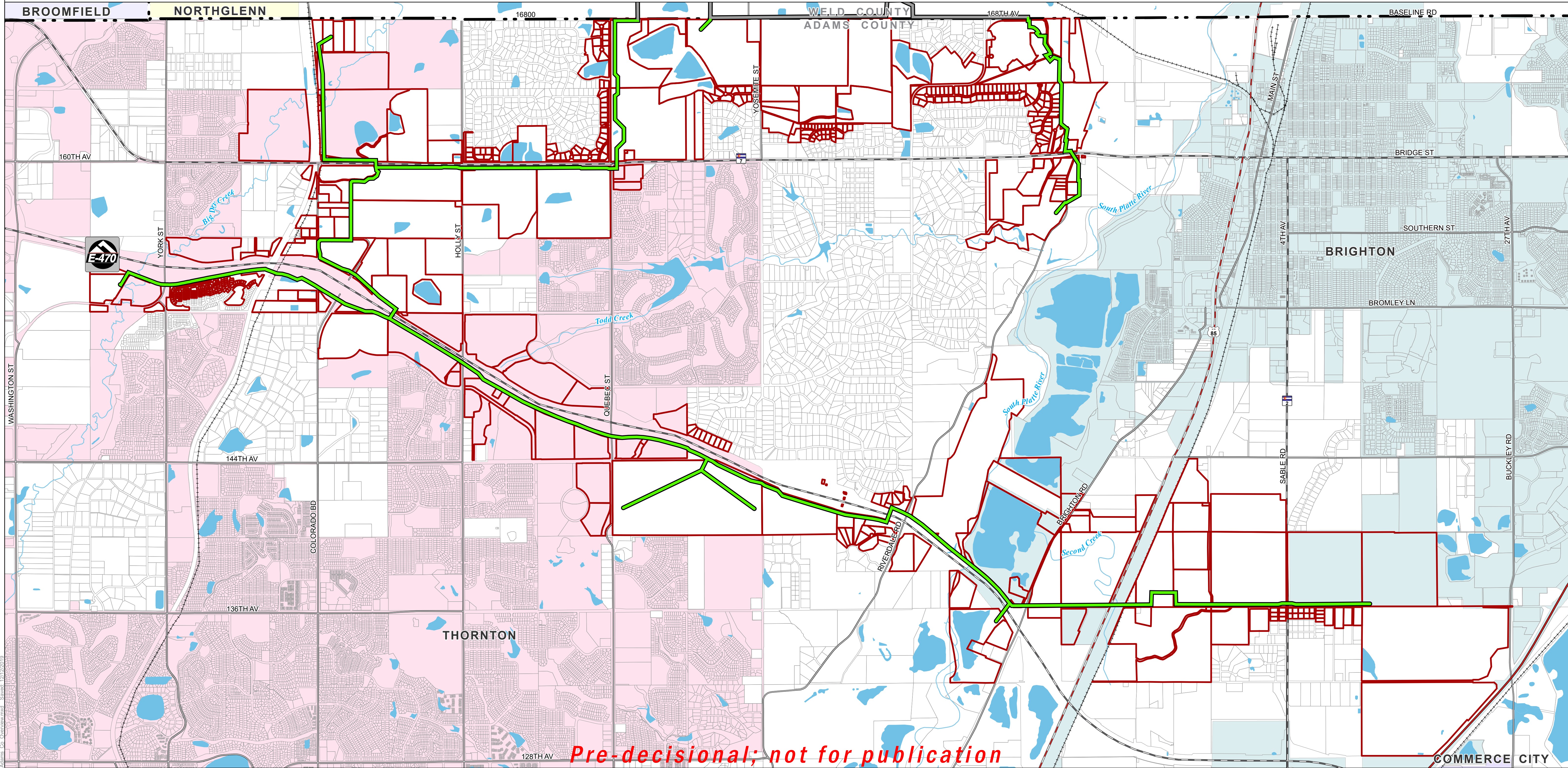


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# PIONEER PRODUCED WATER PIPELINE PROJECT

## Appendix B: Neighborhood Meeting Notification Area

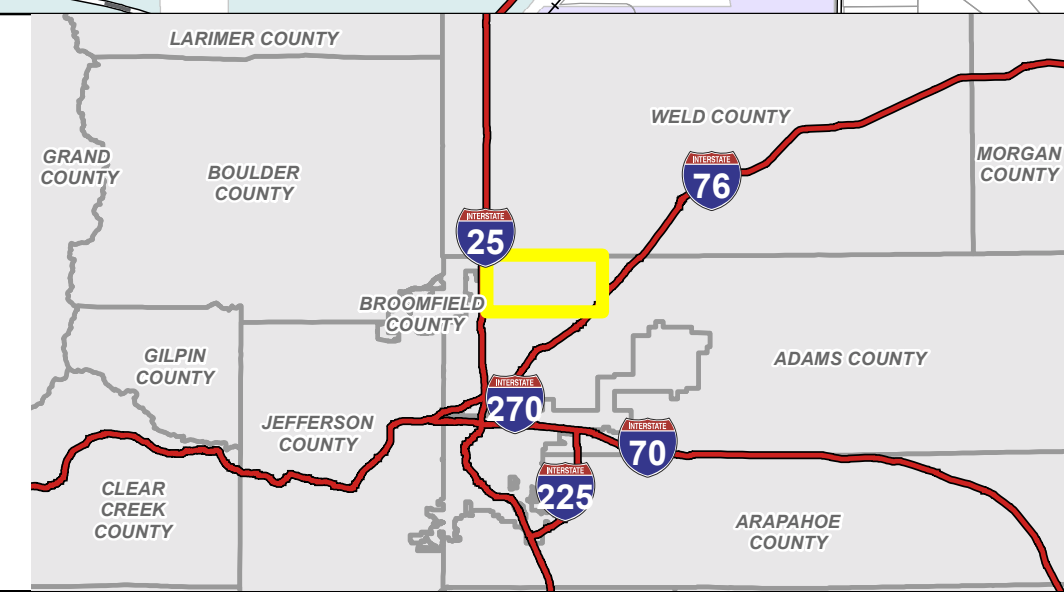
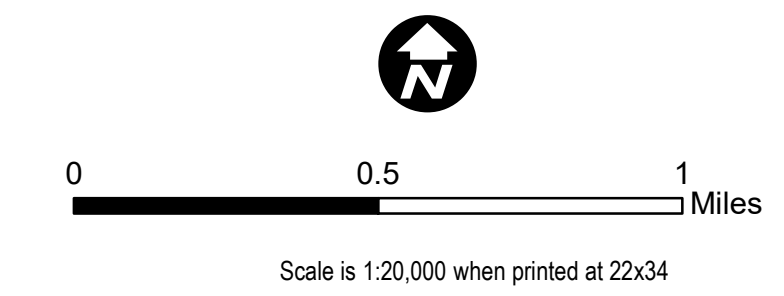


*Pre-decisional; not for publication*

- Project Features**
- Pioneer Produced Water Pipeline (11-04-2019, Adams County)
  - Pioneer Produced Water Pipeline (11-04-2019, Weld County)
  - Parcel
  - Parcel within Notification Area

- Transportation (CDOT 2015)**
- Interstate
  - - - U.S. Highway
  - Major Local Road
  - - - - - Railroad

- Boundary (CDOT, 2015)**
- Brighton
  - Broomfield
  - Northglenn
  - Thornton
  - County Boundary



Path: P:\2018\2\ Pioneer - Water\GIS\Layers\Neighborhood\_Meeting\Map2 Adams Co\_Overview.mxd Sheet: 12/12/2019



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# Appendix E: Affidavit of Mailing



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AFFIDAVIT OF MAILING

My name is Lynndell Epp. I am over the age of eighteen years. I have personal knowledge of the facts stated below.

On November 27, 2019, I mailed a copy of the postcard attached to the names provided to me by Pioneer Water Pipeline, which received the names from Adams County.

I mailed the document(s) by printing the names and addresses described above and depositing in the care and custody of the United States Postal Service. The person(s) and their respective addresses are attached.

A handwritten signature in black ink, appearing to read "Lynndell Epp", written over a horizontal line.

Signature of Affiant



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# Appendix F: Sign-in Sheets



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Pioneer Water Pipeline Community Meeting  
 Tuesday, December 10, 2019—5:00PM-8:00PM

Thank you for your interest in our project.

First and Last Name(s)	Organization	Address	Email Address	Phone Number
John Heule	Tetra Tech	350 Indiana Street #800 Golden, CO 80201		303 253 1647
Max Pivonka	Tetra Tech	1400 Broadway Ste 1400 Denver, CO 80202		303/291/6263
Zach Neal	EWS	9425 Keenan Street Highlands Ranch, CO 80135	Zneal@expedition-water.com	303-974-1994
Spence McClain	PWP	<del>1017</del> 600 17 <sup>TH</sup> ST SE 155 Denver, CO 80202	SMCCALLIN@EXPEDITION-WATER.COM	303-815-7064
Deana Perlmutter	FTP			303-881-8454
Taylor Christy	The Integral Group			
Wayne Mahler		12310 E 168 <sup>TH</sup> Brighton CO		



Pioneer Water Pipeline Community Meeting  
 Tuesday, December 10, 2019—5:00PM-8:00PM

Thank you for your interest in our project.

First and Last Name(s)	Organization	Address	Email Address	Phone Number
Bill Wycoff	Resident	333 CR 17 Brighton CO 80602	WycoffCLK@aol.com	
Ryan Myers	Great Western Operating Company	—	rmyers@gwp.com	
James Howarth	Resident			
FORREST Howarth	Resident	#16254 Paris way	forresthowarth@yahoo.com	—
Ryan Carlson	Carlson	PO Box 247 Eastlake		
Sharlene Krantz	Resident	1755 CR 23 Fort Lupton, CO	sharkrantz@aol.com	
LINDA MALLOY	Resident	14743 Wester loop	BLUECRATION@MSN.COM	720 884 7195



**Pioneer Water Pipeline Community Meeting**  
**Tuesday, December 10, 2019—5:00PM-8:00PM**

Thank you for your interest in our project.

First and Last Name(s)	Organization	Address	Email Address	Phone Number
Steve Gengel	Great Western			





# **Exhibit H: Routing Analysis**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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Figure H1: Adams County Alternative Routes

Exhibit H: Routing Analysis  
Conditional Use Permit Application  
Pioneer Water Pipeline Project

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# 1. Introduction

Tetra Tech, Inc (Tetra Tech), has prepared this routing analysis on behalf of Pioneer Water Pipeline, LLC (Pioneer), a subsidiary of Expedition Water Solutions Colorado, LLC (Expedition), for the proposed Pioneer Water Pipeline Project (Project). The analysis was performed as required by Section 6-07-02-03 under Chapter 6 Regulations Governing AASI and the AASI Checklist for supplemental environmental impact analysis and as requested by Adams County during the Conceptual Review process.

## 1.1. Alternative Concepts Considered

The purpose of the Project is to allow more efficient pipeline transportation of produced water from oil and gas production facilities (OGPFs) in Adams and Weld counties to Expedition's existing EWS #6 wastewater injection and disposal facility, thereby also significantly reducing truck traffic. Without the Project, oil and gas producers will transport produced water from permitted OGPFs to EWS #6 by truck. Transport of produced water by truck was eliminated as an alternative because Pioneer expects construction of the Project will remove the equivalent of five million truck miles and over 50,000 truckloads per year on local roads.

# 2. Identification of Preferred Routes

Pioneer considered and eliminated several alternative routes prior to deciding the preferred route (Figure H-1). The routing process began by identifying the pipeline beginning points (permitted OGPFs, Figure 1) and the terminus (EWS #6, Figure 1). Alternative routes were then selected to minimize potential impacts. The total length of each pipeline within unincorporated Adams County, Weld County, and municipalities is listed in Table (Page8). The features of the alternative routes included:

- Meets the Project's purpose and need in transporting produced water to the existing EWS #6 facility from OGPFs operated by Great Western Petroleum in the shortest distance possible to reduce impacts and construction costs.
- Parallels existing roadways, pipeline/utility corridors, and section lines to the extent practicable to minimize the creation of new linear corridors.
- Is located within properties owned by landowners who are willing to grant an easement for the pipeline on their property.
- Minimizes potential disturbance to environmentally sensitive areas such as floodplains, wetlands, and federal/state species habitats.
- Minimizes impacts to major water crossings and topography constraints.
- Reflects Pioneer's consideration of compatible zoning and land uses.

The major considerations for the preferred route within Adams County was to parallel existing rights-of-way and circumventing to the extent possible existing and planned residential areas and intentionally not bisect them. Emphasis was also placed on working with landowners to identify what would be least impactful and securing easements for the Pioneer Water Pipeline on private land and public rights-of-way.

Consideration was also given to reducing the number and length of laterals needed to reach well pads by having the pipeline route run through the well pad sites as well as the shortest linear length of pipeline.

### **3. Route Descriptions and Comparative Analysis**

The Project was divided into four zones for ease of identification of alternative routes (Figure 1). Descriptions of the preferred and alternative routes for each zone are described below:

#### **3.1. Zone A**

##### **3.1.1. Preferred Route**

This route originates on the eastern side of Zone A at the Brant LD OGPF. The pipeline travels east from the OGPF for 1,500 feet, crossing Riverdale Road and Brighton Ditch. The pipeline then turns north, crossing 160<sup>th</sup> Avenue and turning west, paralleling the north side of 160<sup>th</sup> Avenue, then turning north just before Brighton Ditch. The pipeline parallels the east side of Brighton Ditch for approximately 2,700 feet, where it turns west and crosses Brighton Ditch at a 90-degree angle. The pipeline turns north, crossing 168<sup>th</sup> Avenue and passing into Weld County. The pipeline parallels the north side of 168<sup>th</sup> Avenue as it travels west, crossing Brantner Ditch. Just west of Brantner Ditch, a lateral come from the Baseline LE OGPF on the south side of 168<sup>th</sup> Avenue, crossing the roadway to join the pipeline on the north side. The pipeline continues west along 168<sup>th</sup> Avenue, and as the pipeline reaches Havana Street turns, it north for 400 feet, then turns west, crossing County Road (CR) 21. The pipeline travels north, paralleling the west side of CR 21. A lateral connects the Marcus LD OGPF to the pipeline, located in Weld County. North of 168<sup>th</sup> Avenue, approximately 0.5 mile (2,600 feet), the pipeline turns west, crossing CR 19. Just west of CR 19, a lateral connecting the Seltzer LD OGPF to the pipeline, which crosses 168<sup>th</sup> Avenue from Adams to Weld county. The pipeline joins with the pipeline from Zone B and continues north into Weld County toward the EWS #6 facility. This route has secured easements, has the least amount of pipeline within Adams County, the least amount of waterway crossings, and is the furthest from the Todd Creek residential area.

- Route Length: 3.8 miles
- Route Length within unincorporated Adams County: 2.13 miles
- Route Length within unincorporated Weld County: 1.67 miles

##### **3.1.2. Route A-1**

This route originates on the eastern side of Zone A at the Brant LD OGPF. The pipeline travels north paralleling the east side of Brantner Ditch, then crossing Brantner Ditch near the location of the Brantner Ditch crossing of 160<sup>th</sup> Avenue. The pipeline continues north, paralleling the west side of Brantner Ditch. Approximately 2,600 feet north of 160<sup>th</sup> Avenue, the pipeline turns west. A lateral from the Baseline LE OGPF joins the pipeline at this turn. As the pipeline travels west, it parallels the east-west portion of Havana Street/Lima Street, passing to the south of Stouffer Reservoirs No. 1. A lateral connects from Marcus LD OGPF in Weld County and travels south, crossing 168<sup>th</sup> Avenue, connecting to the pipeline. The pipeline continues 500 feet west from this lateral junction and turns south, crossing Signal Ditch. The pipeline turns west, paralleling the south side of Signal Ditch, crossing Signal Ditch again and turning

north. Approximately 1,300 feet north of signal ditch, the pipeline turns west. The pipeline turns north before Signal Reservoir Number 2 and passes by the Seltzer LD OGPF. The pipeline turns west at 168<sup>th</sup> Avenue and parallels the roadway. The pipeline connects to the pipeline segment from Zone B, crosses 168<sup>th</sup> Avenue, passing into Weld County, traveling north to EWS #6. The majority of this portion of the pipeline is not located along major roadways. By not constructing along these major roadways, traffic impacts during construction of the pipeline will be reduced. This route is closest to Todd Creek residential area, of the Zone A routes. This section primarily runs along parcel boundaries, avoiding bisecting lands, and for portions is collocated with Williams's natural gas pipeline. This pipeline has the most water crossings and has the least engineering feasibility for construction within this zone.

- Route Length: 6.02 miles
- Route Length within unincorporated Adams County: 5.69 miles
- Route Length within unincorporated Weld County: 0.32 mile

### **3.1.3. Route A-2**

This route originates on the eastern side of Zone A at the Brant LD OGPF. The pipeline travels east approximately 1,500 feet, crossing Riverdale Road and Brighton Ditch, turning north near the South Platte River. The pipeline then travels north, crossing 160<sup>th</sup> Avenue. The pipeline turns west, paralleling the north side of 160<sup>th</sup> Avenue, turning north just before the east side of Brighton Ditch. The pipeline parallels the east side of Brighton Ditch for approximately 2,800 feet, where it turns west and crosses Brighton Ditch and Brantner Ditch at a 90-degree angle. The pipeline turns north, paralleling the west side of Brantner Ditch, passing by the Baseline LE OGPF, crossing 168<sup>th</sup> Avenue and into Weld County. The pipeline parallels the north side of 168<sup>th</sup> Avenue as it travels west. The pipeline crosses CR 21 and passes by the Marcus LD OGPF. The pipeline continues west, crossing CR 19. Just east of the Seltzer LD OGPF, it then turns north. At this turn, a lateral connects Seltzer LD OGPF to the pipeline, crossing 168<sup>th</sup> Avenue from Adams County. The pipeline then connects to the pipeline section from Zone B that pass into Weld County and travel north to EWS #6. Much of this route is outside of Adams County and farther away from the Todd Creek residential area than Route A-1. The landowners along this route are not all interested in participating in the project, rendering this route unfeasible.

- Route Length: 4.69 miles
- Route Length within unincorporated Adams County: 2.14 miles
- Route Length within unincorporated Weld County: 2.55 miles

## **3.2. Zone B**

### **3.2.1. Preferred Route**

This route originates in the southwest corner of Zone B at the Ivey LC OGPF. The lateral from this OGPF travels east, paralleling the south side of E-470. The pipeline crosses Dig Dry Creek, York Street, an unnamed intermittent stream, German Ditch, Union Pacific Railroad tracks, and Colorado Boulevard at 90-degree angles. The lateral joins the pipeline where it enters from Zone C, then crosses E-470 to the north side of the highway. The pipeline parallels the north side of E-470 to the west, crossing Colorado Boulevard and passing by the Tollway LC OGPF. The pipeline turns north just past the Tollway LC OGPF, connects with a short lateral, and then turns east at the east-west portion of Colorado Boulevard.

The pipeline travels east approximately 1,100 feet before turning north, crossing the east-west portion of Colorado Boulevard. The pipeline travels north, turning east just before German Ditch and passes by B-Farm LD OGPF, connecting with a short lateral. The pipeline parallels the route of German Ditch, crossing two unnamed intermittent streams. The pipeline then turns east and travels on the south side of 160<sup>th</sup> Avenue. At this turn, a lateral joins the pipeline, originating at the Rio LA OGPF on the southeast corner of 168<sup>th</sup> Avenue and Colorado Boulevard. The lateral travels south from the OGPF, paralleling the east side of Colorado Boulevard and crossing Big Dry Creek 3 times. The lateral turns east at an unnamed intermittent stream just north of 160<sup>th</sup> Avenue and crosses German Ditch. Just to the east of German Ditch, the lateral turns south, crossing 160<sup>th</sup> Avenue and joins the Pioneer mainline. As the pipeline travels east along the south side of 160<sup>th</sup> Avenue, it crosses Holly Street, an unnamed ditch, and passes by the Ocho LD OGPF and connects with a short lateral. The pipeline continues traveling east along 160<sup>th</sup> Avenue, crossing Monaco Street, Signal Ditch, and Quebec Street. On the southeast corner of 160<sup>th</sup> Avenue and Quebec Street, the pipeline turns north, crossing 160<sup>th</sup> Avenue and paralleling the east side of Quebec Street. As the pipeline travels north it crosses Signal Ditch, turns east at 168<sup>th</sup> Avenue and parallels the roadway for approximately 1,000 feet, then turns north, crossing 168<sup>th</sup> Avenue and into Weld County where the pipeline joins with the pipeline portion from Zone A in Weld County and travels north through Weld County to the EWS #6 disposal facility. This route has secured easements, runs along many existing utility corridors, and most efficiently connects all the well pad sites in the areas.

- Route Length: 8.55 miles
- Route Length within unincorporated Adams County: 5.08 miles
- Route Length within unincorporated Weld County: 0.52 mile
- Route Length within the City of Thornton: 1.94 miles

### **3.2.2. Route B-1**

This route originates in the southwest corner of Zone B at the Ivey LC OGPF. The lateral from this OGPF travels east paralleling the south side of E-470. The pipeline crosses Big Dry Creek, York Street, an unnamed intermittent stream, German Ditch, Union Pacific Railroad tracks, and Colorado Boulevard at 90-degree angles. The lateral joins the pipeline where it enters from Zone C, then crosses E-470 to the north side of the highway. The pipeline parallels the north side of E-470 going west, crossing Colorado Boulevard and passing by the Tollway LC OGPF. The pipeline turns north just past the Tollway LC OGPF, connecting with a short lateral, and then turns east at the east-west portion of Colorado Boulevard. The pipeline travels east approximately 1,100 feet before turning north, crossing the east-west portion of Colorado Boulevard. The pipeline travels north, turning east just before German Ditch and passes by B-Farm LD OGPF, connecting with a short lateral. The pipeline parallels the route of German Ditch, crossing two unnamed intermittent streams. The pipeline then turns east at 160<sup>th</sup> Avenue and travels east on the south side of the roadway. At this turn a lateral joins the pipeline, originating at the Rio LA OGPF on the southeast corner of 168<sup>th</sup> Avenue and Colorado Boulevard. The lateral travels south from the OGPF, paralleling the east side of Colorado Boulevard, and crossing Big Dry Creek 3 times. The lateral turns east at an unnamed intermittent stream just north of 160<sup>th</sup> Avenue and crosses German Ditch. Just to the east of German Ditch, the lateral turns south, crossing 160<sup>th</sup> Avenue and joins the main pipeline. The pipeline travels east along the south side of 160<sup>th</sup> Avenue, crossing Holly Street then turning north, crossing 160<sup>th</sup> Avenue and traveling north along the east side of Holly Street. At this turn, a lateral



from the Ocho LD OGPf at the southwest corner of 160<sup>th</sup> Avenue and Monaco Street, which crosses an unnamed intermittent stream connects to the pipeline. The pipeline continues north, parallel to the west side of Holly St, crossing 162<sup>nd</sup> Avenue, German Ditch, and Eagle Shadow Drive at 90-degree angles. At 168<sup>th</sup> Avenue, the pipeline turns west and crosses Holly Street. At CR 15, the pipeline crosses 168<sup>th</sup> Avenue into Weld County and travels north along the east side of CR 15. Approximately 1,400 feet north of 168<sup>th</sup> Avenue, the pipeline turns east and joins with the pipeline portion from Zone A and then travels north through Weld County to the EWS #6 disposal facility. This route follows the west and north borders of a residential development instead of the east and south borders, should there be conflicts within existing utility corridors. This route also has less pipeline within Adams County, but has an increased number of road crossings.

- Route Length: 9.02 miles
- Route Length within unincorporated Adams County: 3.89 miles
- Route Length within unincorporated Weld County: 1.68 miles
- Route Length within the City of Thornton: 3.45 miles

### **3.2.3. Route B-2**

This route originates where the pipeline from Zone C enters Zone B. The pipeline travels west along the south side of E-470, crossing Colorado Boulevard, German Ditch, Union Pacific Railroad tracks, and an unnamed intermittent stream. Approximately 1,000 feet west of the railroad tracks, the pipeline turns north, crossing E-470. At this turn a lateral connects from the Ivey LC OGPf which originates in the southeast corner of Zone B. From this OGPf, the lateral travels east, paralleling the south side of E-470 crossing Big Dry Creek and York St where it joins the pipeline at this turn. The pipeline travels north, crossing an unnamed intermittent stream, 156<sup>th</sup> Avenue, Big Dry Creek, 160<sup>th</sup> Avenue, and an unnamed intermittent stream. The pipeline turns east just before 168<sup>th</sup> Avenue, crosses Colorado Boulevard, and connects with the Rio LA OGPf. The pipeline turns north, crossing 168<sup>th</sup> Avenue and into Weld County and paralleling the east side of CR 13. Approximately 1,400 feet north of 168<sup>th</sup> Avenue, the pipeline turns east, crossing Thompson Ditch, Big Dry Creek, and CR 15. Approximately 1,300 feet east of CR 17, the pipeline turns north for 1,200 feet, then turns east, passing German Reservoir Number 12, an unnamed intermittent stream, and CR 17. The pipeline joins with the pipeline portion from Zone A and travels north through Weld County to the EWS #6 disposal facility. This route is unable to connect to the Tollway LC, B-Farm LD, and Ocho LD OGPfs due to engineering constraints, requiring these OGPfs to continue to be served by trucks to transport produced water to EWS #6.

- Route Length: 7.38 miles
- Route Length within unincorporated Adams County: 1.76 miles
- Route Length within unincorporated Weld County: 2.73 miles
- Route Length within the City of Thornton: 2.89 miles

## **3.3. Zone C**

### **3.3.1. Preferred Route**

This route originates where the pipeline from Zone D enters the east side of Zone C. A lateral crosses beneath E-470 connecting the Henderson OGPf to the pipeline. The pipeline travels west, paralleling the

north side of E-470 where it crosses the South Platte River via horizontal directional drilling (HDD), an unnamed intermittent stream, Brantner Ditch and Riverdale Rd. Just west of Riverdale road, the pipeline turns south, crossing E-470 then turning back west, paralleling the south side of E-470, crossing an unnamed intermittent stream. Just west of this unnamed intermittent stream, a lateral comes from the south connecting the Gus LD OGPF to the pipeline. The pipeline continues west along E-470, passing by the Kortum LD OGPF, a lateral comes from the Tower LD OGPF, passing by the Kortum LD OGPF, and connecting to the pipeline. The pipeline continues west, paralleling the south side of E-470, crossing an unnamed intermittent stream, Quebec Street, two unnamed intermittent streams, Todd Creek, Holly Street, Signal Ditch and reaching the west side of Zone C. This route is the most direct route, following the E-470 right-of-way for the entirety of the zone. This route has the best approach for the HDD beneath the South Platte River.

- Route Length: 6.29 miles
- Route Length within unincorporated Adams County: 3.19 miles
- Route Length within the City of Brighton: 2.64 miles
- Route Length within the City of Thornton: 0.45 mile

### **3.3.2. Route C-1**

This route originates where the pipeline from Zone D enters the east side of Zone C. A lateral crosses beneath E-470 connecting the Henderson OGPF to the pipeline. The pipeline travels west, paralleling the north side of E-470, where it crosses the South Platte River via HDD, an unnamed intermittent stream, Brantner Ditch, Riverdale Road, and the same unnamed intermittent stream five times. A lateral from the south crosses E-470, connecting the Kortum LD OGPF, Gus LD OGPF, and Tower LD OGPF. The pipeline continues west, paralleling the south side of E-470, crossing an unnamed intermittent stream, Quebec Street, two more unnamed intermittent stream, Todd Creek, Holly Street, and Signal Ditch and reaching the west side of Zone C. This route has an increased number of waterway crossings and is on the opposite side of E-470 from the existing utility corridor.

- Route Length: 6.54 miles
- Route Length within unincorporated Adams County: 2.99 miles
- Route Length within the City of Brighton: 0.43 mile
- Route Length within the City of Thornton: 3.12 miles

### **3.3.3. Route C-2**

This route originates where the pipeline from Zone D enters the east side of Zone C. The pipeline crosses from the north to the south side of E-470, turning west and paralleling the south side of E-470. At this junction, a lateral extends southwest that connects the Henderson OGPF to the pipeline. The pipeline travels west, paralleling the south side of E-470, where it crosses the South Platte River, an unnamed intermittent stream, Brantner Ditch, Riverdale Road, and an unnamed intermittent stream. Just west of this unnamed intermittent stream, a lateral from the south connects the Gus LD OGPF to the pipeline. The pipeline continues west along E-470, passing by the Kortum LD OGPF, a lateral comes from the Tower LD OGPF, passing by the Kortum LD OGPF, and connecting to the pipeline. The pipeline continues west, paralleling the south side of E-470, crossing an unnamed intermittent stream, Quebec

Street, two unnamed intermittent stream, Todd Creek, Holly Street, Signal Ditch and reaching the west side of Zone C. This route does not have the best approach for the HDD of the South Platte River, but reduces the number of HDDs needed under E-470.

- Route Length: 6.1 miles
- Route Length within unincorporated Adams County: 3.05 miles
- Route Length within the City of Brighton: 0.42 mile
- Route Length within the City of Thornton: 2.62 miles

### **3.4. Zone D**

#### **3.4.1. Preferred Route:**

This route originates at the Prairie LE OGPF on the eastern side of Zone D. The pipeline goes west from the OGPF paralleling the north side of 136<sup>th</sup> Avenue. The pipeline passes by the Rico OGPF on the northeast corner of 136<sup>th</sup> Avenue and Potomac Street. The pipeline crosses to the south side of 136<sup>th</sup> Avenue at the same location the Fulton Ditch crosses 136<sup>th</sup> Avenue. The pipeline continues west, paralleling 136<sup>th</sup> Avenue, and crossing the Fulton Lateral Ditch at a 90-degree angle. The pipeline crosses to the north side of 136<sup>th</sup> Avenue at the same location Third Creek crosses 136<sup>th</sup> Avenue. The pipeline continues west for approximately 1,000 feet and turns north approximately 400 feet before turning west again for 900 feet, passing by the Schaefer OGPF, turning south and the turning west to again parallel the north side of 136<sup>th</sup> Avenue. The pipeline then crosses the Union Pacific Railroad tracks, Second Creek, and U.S. Highway 85. The pipeline continues west, passing by the Sharp OGPF, then crossing Brighton Road at the western side of Zone D. This is the shortest pipeline route, presenting the most engineering feasibility, and is collocated with the Boardwalk Pipeline along 136<sup>th</sup> Avenue.

- Route Length: 2.73 miles
- Route Length within unincorporated Adams County: 1.84 miles
- Route Length within the City of Brighton: 0.89 mile

#### **3.4.2. Route D-1**

This route originates at the Prairie LE OGPF on the eastern side of Zone D. The pipeline goes west from the OGPF, paralleling the north side of 136<sup>th</sup> Avenue. The pipeline passes by the Rico OGPF on the northeast corner of 136<sup>th</sup> Avenue and Potomac Street. At the Fulton Lateral Ditch, the pipeline turns north, paralleling the east side of Fulton Lateral Ditch. Approximately 3,100 feet north of 136<sup>th</sup> Avenue, the pipeline turns west, crossing Fulton Lateral Ditch and Potomac Street. The pipeline turns south, paralleling the east side of the Union Pacific Railroad tracks for approximately 1,800 feet, crossing Third Creek before turning west. The pipeline crosses the Union Pacific Railroad tracks and U.S. Highway 85. A lateral to the south connects to the Schaefer OGPF to this turn. The pipeline continues west from the U.S. Highway 85 crossing, turning south just before Brighton Road. The pipeline crosses Second Creek and passes by the Sharp OGPF. The pipeline turns west, paralleling the north side of 136<sup>th</sup> Avenue, crossing Brighton Road to reach the west side of zone D. This route is collocated with the Boardwalk Pipeline from Prairie LE OGPF to the junction with the lateral for the Schaefer OGPF, which presents ease for land use designation of a new pipeline. This route is not feasible from an engineering standpoint and would result in more disturbance because it is longer than the preferred route.

- Route Length: 4.31 miles
- Route Length within unincorporated Adams County: 3.41 miles
- Route Length within the City of Brighton: 0.90 mile

### 3.4.3. Route D-2

This route originates at Prairie LE OGPf on the eastern side of Zone D. The pipeline heads west, paralleling the north side of 136th Avenue for approximately 1,000 feet, then turns north. The pipeline turns west at 144th Avenue, paralleling the south side of 144th Avenue and crosses Country Hills Drive and Fulton Ditch. The pipeline turns south on the east side of the Fulton Ditch Lateral and parallels the ditch for 2,000 feet. The pipeline turns west, crossing Fulton Lateral Ditch and Potomac Street. A lateral extends from the south, connecting the Rico OGPf at this turn. After traveling west, the pipeline turns south, paralleling the east side of the Union Pacific Railroad tracks for approximately 1,800 feet, crossing Third Creek before turning west. The pipeline crosses the Union Pacific Railroad tracks and U.S. Highway 85. There is a lateral that connects from the south from the Schaefer OGPf to this turn. The pipeline continues west from the U.S. Highway 85 crossing, turning south just before Brighton Road. The pipeline crosses Second Creek and passes by the Sharp OGPf. The pipeline turns west, paralleling the north side of 136th Avenue, crossing Brighton Road to reach the west side of Zone D. This route is the longest within Zone D and is not feasible from an engineering standpoint because the minimum pipeline pressure requirements cannot be attained along a longer route.

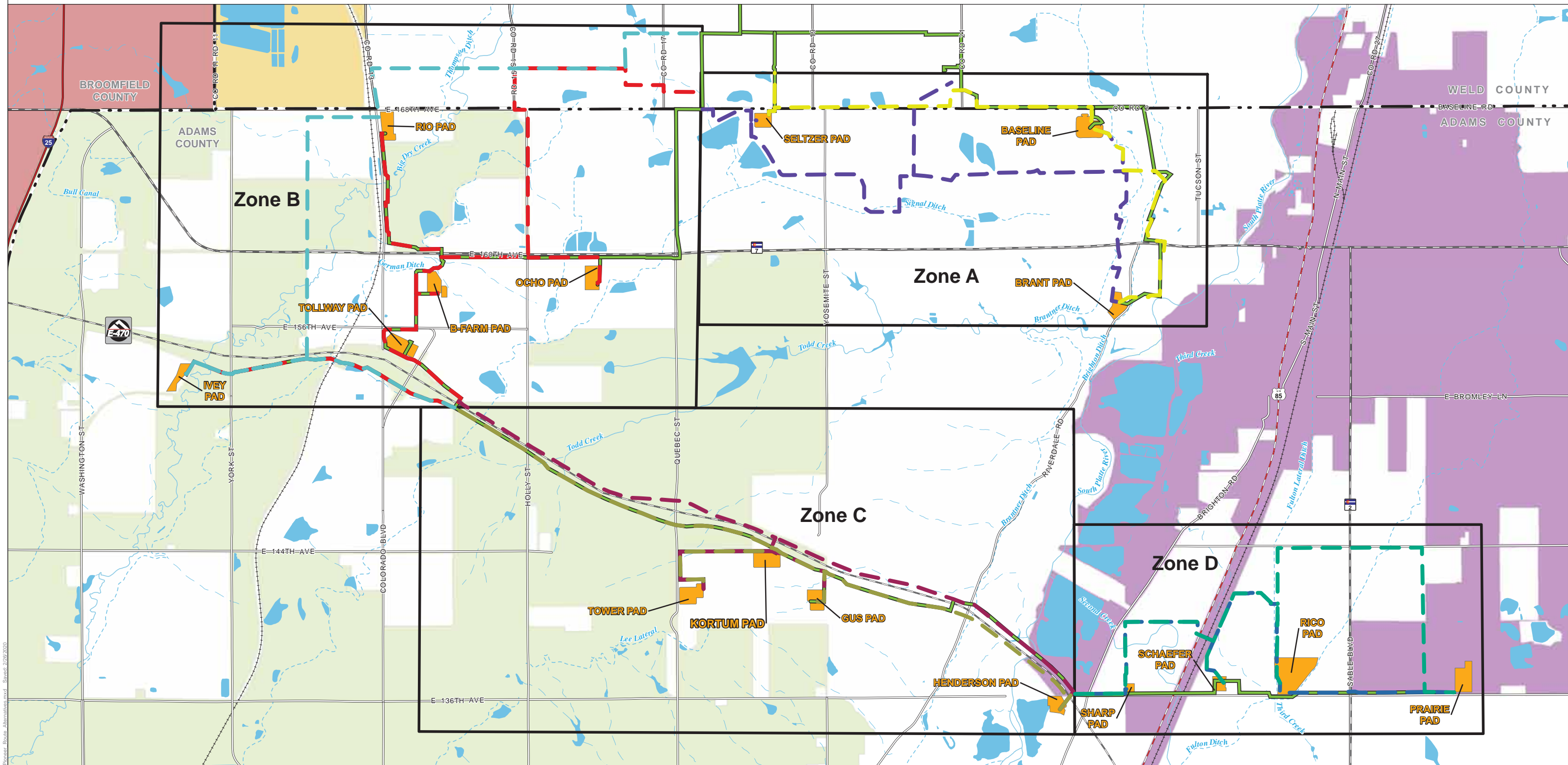
- Route Length: 5.58 miles
- Route Length within unincorporated Adams County: 4.70 miles
- Route Length within the City of Brighton: 0.88 mile

**Table 1:**  
**Adams County Pipeline Length by Zone by Municipality**

Route Name	Total Length (miles)	Length within Unincorporated Adams Co. (miles)	Length within Unincorporated Weld Co. (miles)	Length within Brighton (miles)	Length within Thornton (miles)
A-Preferred	3.80	2.13	1.67	0	0
A-1	6.02	5.69	0.32	0	0
A-2	4.69	2.14	2.55	0	0
B-Preferred	8.55	5.08	0.52	0	1.94
B-1	9.02	3.89	1.68	0	3.45
B-2	7.38	1.76	2.73	0	2.89
C-Preferred	6.29	3.19	0	2.64	0.45
C-1	6.54	2.99	0	0.43	3.12
C-2	6.10	3.05	0	0.42	2.62
D-Preferred	2.73	1.84	0	0.89	0
D-1	4.31	3.41	0	0.90	0
D-2	5.58	4.70	0	0.88	0

# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure H-1: Adams County Alternative Routes

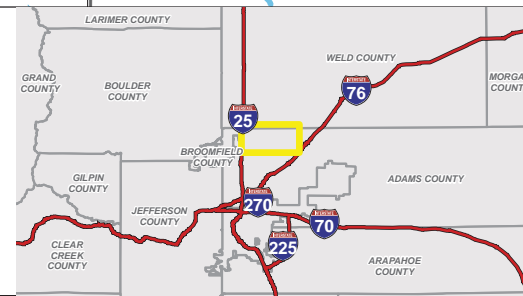


- Project Features**
- Preferred Route
  - Oil and Gas Production Facility
- Routes Considered and Eliminated**
- Route A-1
  - Route A-2
  - Route B-1
  - Route B-2
  - Route C-1
  - Route C-2
  - Route D-1
  - Route D-2

- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Jurisdiction**
- Brighton
  - Broomfield
  - Northglenn
  - Thornton
  - County Boundary

0 0.5 1 Miles  
Scale is 1:20,000 when printed at 22x34  
NOT FOR CONSTRUCTION



The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.

Path: P:\0087\_Pioneer\_Maps\GIS\Layouts\Adams\_County\_CUI\FEIG\_H1\_Pioneer\_Route\_Alternatives.mxd Sheet: 2/26/2020



# **Exhibit I: Summary of Water Wells in the Vicinity of the Project**

Conditional Use Permit Application  
Pioneer Water Pipeline Project

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**Table I-1**

Table 1: Groundwater well information for wells permitted by the Colorado Division of Water Resources in the vicinity of the Pioneer Water Project area was reviewed to summarize groundwater conditions. A summary of information for water wells within 0.25-mile of the Project is provided in the table below. See CUP Figure 9 for a map of the below water well locations.

Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
0002224	12920-F	Permit Canceled	39.990108	-104.846889	949.06	E	0	0	ALL UNNAMED AQUIFERS	Municipal		BRINES, EVERETT D	
0009744	46251--A	Well Constructed	39.94303	-104.82594	50.39	N	550	130	ALL UNNAMED AQUIFERS	Domestic	Stock	SITZMAN, G L	
0012606	305-AD	Application Denied	39.984591	-104.900915	702.86	NW	0	0	ALL UNNAMED AQUIFERS	Irrigation		CHRISTIANSEN, JAMES E	
0016018	90081-VE	Well Constructed	39.945126	-104.83025	563.94	S	480	190	ALL UNNAMED AQUIFERS	Domestic		WHITEBREAD, DON	
0017931	91308-VE	Permit Issued	39.942477	-104.815219	396.16	N	0	0	ALL UNNAMED AQUIFERS	Domestic		MONHOLLIN MARY LOU	
0019124	19124-MH	Permit Issued	39.979215	-104.949734	1129.38	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0019361	92231-VE	Permit Issued	39.971429	-104.942044	1181.13	NE	0	0	LARAMIE FOX HILLS	Domestic		NEITENBACH BRYAN & KIM	
0021094	93266-VE	Permit Issued	39.942447	-104.818774	405.51	N	0	0	ARAPAHOE	Domestic		MCKINSTER, ROBERT G	
0023972	55091-	Permit Expired	39.985019	-104.844305	606.51	E	0	0	ALL UNNAMED AQUIFERS	Domestic		BAUMGARTMER, HAROLD	
0026533	2846-F-R	Well Abandoned	39.987079	-104.841683	123.25	W	31	8	ALL UNNAMED AQUIFERS	Irrigation		OSCAR, HAAKE	1982-04-15
0026801	5874-R-R	Well Constructed	39.945906	-104.82772	881.67	S	36	22	ALL UNNAMED AQUIFERS	Irrigation		RITCHEY, EUGENE B	
0026802	5875-R-R	Well Constructed	39.946051	-104.825043	906.44	S	37	0	ALL UNNAMED AQUIFERS	Irrigation		RITCHEY, EUGENE B	
0026971	6595-F-R	Well Abandoned	39.987526	-104.838926	896.69	W	25	5	ALL UNNAMED AQUIFERS	Irrigation		HAAKE, OSCAR	1983-04-30
0027594	96075-VE	Permit Issued	39.985019	-104.844305	606.51	E	0	0	ALL UNNAMED AQUIFERS	Domestic	Stock	DONOVAN, GAIL	
0027644	96087-VE	Permit Issued	39.943066	-104.820129	180.49	N	0	0	LOWER ARAPAHOE	Household use only		SCHISLER, JOHN E	
0027708	96091-VE	Well Constructed	39.941401	-104.812774	791.70	N	52	33	ALL UNNAMED AQUIFERS	Household use only		MOORE, SHARON	
0029759	93152-VE	Permit Issued	39.94109	-104.815706	900.60	N	0	0	LOWER ARAPAHOE	Domestic		CASSELL, DAVID	
0030115	97046-VE	Application Received	39.994492	-104.837083	1069.45	W	0	0	ALL UNNAMED AQUIFERS	Domestic		STOUGH, DON	
0030509	97120-VE	Well Constructed	39.940711	-104.815015	1039.59	N	55	32	ALL UNNAMED AQUIFERS	Domestic		GIVENS, FRANK	
0030863	97205-VE	Permit Issued	39.992406	-104.837061	1187.88	NW	0	0	ALL UNNAMED AQUIFERS	Domestic		GETZ, RICHARD	
0030864	97206-VE	Permit Issued	39.992204	-104.837059	1224.09	NW	0	0	ALL UNNAMED AQUIFERS	Domestic		MORRISON, PENELOPE	
0030922	97209-VE	Permit Issued	39.94311	-104.816892	163.75	N	0	0	ALL UNNAMED AQUIFERS	Irrigation		RIVERIA, PAUL	
0031881	97421-VE	Well Constructed	39.979066	-104.936378	40.84	S	905	580	ALL UNNAMED AQUIFERS	Domestic		FETTER, LOIS	
0034235	98372-VE	Well Constructed	39.940569	-104.81648	1089.61	N	50	24	ALL UNNAMED AQUIFERS	Domestic		LIVINGSTON, COY	
0036365	36365-MH	Permit Issued	39.988025	-104.919639	762.58	S	0	0	ARAPAHOE	Monitoring/Sampling		SINCLAIR PIPELINE CO	
0039298	39298-MH	Well Abandoned	39.998646	-104.905707	694.22	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		DUKE ENERGY FIELD SERVICES LP	2001-06-20
0042899	42899-MH	Well Constructed	39.988536	-104.839562	820.05	SW	30	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0042900	42900-MH	Well Constructed	39.991916	-104.844396	513.07	E	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0042901	42901-MH	Well Constructed	39.991928	-104.839621	739.07	W	34	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0042904	42904-MH	Well Constructed	39.98852	-104.844329	155.95	E	15	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0043071	43071-MH	Well Constructed	39.945121	-104.806532	557.97	S	43	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THF PRAIRIE CENTER DEVELOPMENT LLC	
0043093	43093-MH	Permit Canceled	39.945121	-104.806532	557.97	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THF PRAIRIE CENTER DEVELOPMENT LLC	

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0043567	43567-MH	Permit Issued	39.991916	-104.844396	513.07	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0043573	43573-MH	Permit Issued	39.952287	-104.867657	77.73	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0043574	43574-MH	Permit Issued	39.952314	-104.862966	493.09	SW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0043955	43955-MH	Permit Issued	39.995312	-104.844464	383.50	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0045473	45473-MH	Well Constructed	39.99013	-104.83996	877.08	W	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF CAPITOL PRJECTS DIVISION	
0045476	45476-MH	Permit Issued	39.988518	-104.844327	155.56	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF CAPITOL PRJECTS DIVISION	
0045687	45687-MH	Well Abandoned	39.988518	-104.844327	155.56	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE, INDUSTRIES	2008-08-07
0046012	46012-MH	Well Abandoned	39.945178	-104.848995	651.93	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE, INDUSTRIES	2016-08-26
0046013	46013-MH	Well Abandoned	39.945165	-104.839637	589.34	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PETROCCO, DAVID	2016-08-26
0046179	46179-MH	Well Abandoned	39.941491	-104.825527	609.18	N	40	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		KELLY, JEFFREY	2007-12-04
0046183	46183-MH	Permit Issued	39.988518	-104.844327	155.56	E	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		CO DEPT TRANSPORTATION	
0047334	47334-MH	Well Constructed	39.9634	-104.9213	913.83	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
0047464	47464-MH	Well Abandoned	39.96285	-104.91485	199.15	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	2012-07-12
0047465	47465-MH	Well Abandoned	39.96292	-104.90547	841.83	SW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	2012-07-12
0048047	48047-MH	Permit Issued	39.99866	-104.93802	588.62	SW	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		BRIGHTON CITY OF	
0048054	48054-DW	Permit Issued	39.99192	-104.8444	513.52	E	0	0	ARAPAHOE	Dewatering		AURORA WATER	
0048104	48104-DW	Permit Issued	39.98852	-104.84433	155.56	E	0	0	ALL UNNAMED AQUIFERS	Dewatering		REYNOLDS-TIERDAEL	
0048745	48745-MH	Well Constructed	39.97741	-104.94735	465.37	S	20	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0048746	48746-MH	Well Constructed	39.981	-104.94253	1038.74	SE	20	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049042	49042-MH	Well Constructed	39.988171	-104.94252	796.95	E	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049043	49043-MH	Permit Issued	39.991667	-104.942565	757.73	E	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049129	49129-MH	Well Constructed	39.991667	-104.942565	757.73	E	20	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049130	49130-MH	Well Constructed	39.988137	-104.937854	352.25	S	34	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049258	49258-MH	Well Constructed	39.952313	-104.862965	493.30	SW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0049435	49435-MH	Permit Issued	39.94153	-104.853623	388.62	NW	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
0050175	50175-DW	Permit Issued	39.998713	-104.84453	192.75	E	0	0	ALL UNNAMED AQUIFERS	Dewatering		HOOD, BESSIE B	
0050176	50176-DW	Permit Issued	39.99872	-104.839737	1128.71	W	0	0	ALL UNNAMED AQUIFERS	Dewatering		HOOD, BESSIE B	
0050430	50430-MH	Well Constructed	39.944523	-104.847027	377.07	S	39	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		METRO WASTEWATER RECLAMATION DISTRICT	
0050566	50566-MH	Well Constructed	39.98503	-104.839542	727.10	W	20	3	DENVER	Monitoring/Sampling		BORAL, AGGREGATES	

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0051821	51821-MH	Well Abandoned	39.981416	-104.839555	780.57	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		METRO WASTEWATER RECLAMATION DISTRICT	2014-05-01
0051833	51833-MH	Well Abandoned	39.948731	-104.858301	324.68	SW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		METRO WASTEWATER RECLAMATION DISTRICT	2014-07-16
0051834	51834-MH	Permit Issued	39.9487	-104.862937	505.96	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		METRO WASTEWATER RECLAMATION DISTRICT	
0054215	54215-MH	Well Constructed	39.980889	-104.839279	928.47	NW	33	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		BRIGHTON CITY OF	
0056031	56031-MH	Permit Issued	39.998681	-104.854433	655.58	N	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AG WASSENAAR INC	
0056079	56079-MH	Permit Issued	39.991931	-104.83962	738.92	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF	
0058208	58208-DW	Well Abandoned	39.973015	-104.966342	690.13	NE	20	0		Dewatering		R&D PIPELINE CONSTRUCTION INC	2018-08-30
0058487	58487-DW	Well Abandoned	39.975898	-104.963683	59.98	SW	22	0		Dewatering		R&D PIPELINE CONSTRUCTION INC	2018-09-12
0059599	59599-MH	Permit Issued	39.985767	-104.932416	79.67	N	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		GREAT WESTERN OPERATING CO LLC	
0060544	78861--A	Well Constructed	39.942921	-104.835078	249.15	NW	52	33	ALL UNNAMED AQUIFERS	Household use only		HART MARTIN T & GERTRUDE L FIKE	
0076988	1250-R-R	Permit Canceled	39.9409	-104.84255	959.69	N	50	23	ALL UNNAMED AQUIFERS	Irrigation		WATADA, EVERETT	
0092542	1922-R-R	Well Constructed	39.943492	-104.850942	39.56	S	48	22	ALL UNNAMED AQUIFERS	Irrigation		HILL SAMUEL & THOMAS & C PETERSON	
0093092	98985--A	Permit Canceled	39.944904	-104.852079	515.62	SW	457	43	ARAPAHOE	Domestic		CARLSON ASSOCIATES INC	
0109130	110967-	Permit Issued	39.961164	-104.900615	473.62	S	0	0	ALL UNNAMED AQUIFERS	Commercial		NIELSEN, CONST	
0110494	111691-	Permit Issued	39.942465	-104.816916	398.61	N	0	0	ALL UNNAMED AQUIFERS	Domestic		PICCONI, F J	
0205103	114924-	Well Constructed	39.97749	-104.96169	800.60	SW	0	0	ALL UNNAMED AQUIFERS	Domestic		IVEY, FLOYD	
0207254		Application Information Requested	40.001301	-104.865547	402.66	NE	0	0	ALL UNNAMED AQUIFERS	Commercial	Irrigation	BDKS INC	
0216743	2846-F-R	Well Constructed	39.987079	-104.841683	123.25	W	30	8	ALL UNNAMED AQUIFERS	Irrigation		AGGREGATE INDUSTRIES WCR INC	
0217533	123045-	Well Constructed	39.97307	-104.94483	912.24	NE	420	120	LARAMIE FOX HILLS	Domestic		MALLO, TONY	
0217536	122599-	Permit Expired	39.97957	-104.94564	1294.07	S	0	0	LARAMIE	Domestic		CROFF, LINDA L	
0219328	6595-F-R	Well Constructed	39.98849	-104.838892	981.93	SW	33	13	ALL UNNAMED AQUIFERS	Irrigation		AGGREGATE INDUSTRIES WCR INC	
0227186	126295--A	Permit Issued	39.945065	-104.823119	546.15	S	0	0	ALL UNNAMED AQUIFERS	Domestic	Stock	RITCHEY, E	
0229343	127131-	Well Constructed	39.987257	-104.837759	1222.77	W	35	0	ALL UNNAMED AQUIFERS	Domestic	Stock	STONE JOSEPH & VIRGINIA	
0235051	33873-F	Permit Expired	39.984483	-104.90078	757.21	NW	0	0	ARAPAHOE	Municipal		NORTHLAND, INV	
0235567	132782-	Well Constructed	39.950297	-104.867409	597.07	NW	412	85	ALL UNNAMED AQUIFERS	Domestic		E-470 PUBLIC HIGHWAY AUTHORITY	
0244373	134971-	Permit Canceled	39.97957	-104.94564	1294.07	S	830	310	LARAMIE FOX HILLS	Domestic		CROFF, LINDA L	
0252631	12743-F-R	Well Constructed	39.940179	-104.821523	1232.19	N	32	25	ALL UNNAMED AQUIFERS	Irrigation		HENSEL RONALD J & MARILYN G	
0258227	31062-F	Permit Expired	39.980643	-104.940849	664.66	SE	0	0	LARAMIE FOX HILLS	Commercial		COLE, JOHN A	
0263846	18063--A	Well Constructed	39.941395	-104.815332	789.99	N	58	32	ALL UNNAMED AQUIFERS	Domestic		JONES, HOWARD	
0269220		Application Information Requested	39.986504	-104.942505	1311.29	NE	0	0	LARAMIE FOX HILLS	Household use only		NEUHALFEN, NORMAN J	
0278642	11405-AD	Application Denied	39.943453	-104.817783	38.72	N	0	0	ALL UNNAMED AQUIFERS	Municipal		THIRD CRK ASSOCIATES	
0284966	33261-F	Permit Expired	39.939071	-104.856101	1118.13	NE	0	0	LOWER ARAPAHOE	Domestic	Stock	WORTHING, JACK	
0314718	37753-F	Well Constructed	39.944904	-104.852079	515.62	SW	457	43	LOWER ARAPAHOE	Municipal		DAVIS, RICHARD C	
0330977	162138-	Permit Canceled	39.971429	-104.942044	1181.13	NE	0	0	ARAPAHOE	Household use only		NEITENBACH BRYAN & KIM	
0340105	165278-	Well Abandoned	40.000021	-104.841445	742.31	W	0	0	ALL UNNAMED AQUIFERS	Domestic		HOOD, BESSIE B	1998-06-18
0342321	165823-	Well Constructed	39.971429	-104.942044	1181.13	NE	940	200	LARAMIE FOX HILLS	Domestic		NEITENBACH, BRYAN	

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0351427		Application Information Requested	40.001751	-104.851776	226.06	N	0	0	LARAMIE FOX HILLS	Household use only		AIGAKI, T	
0353482	171050-	Well Constructed	39.971325	-104.940911	1050.84	NE	960	565	LARAMIE FOX HILLS	Domestic		ESPARZA JESSE & JOANIE	
0354036	175841-	Well Constructed	39.94109	-104.815706	900.60	N	0	155	LOWER ARAPAHOE	Household use only		GRANT CHRISTOPHER J & CAROLINE M ALARD	
0356813	172701-	Permit Expired	39.940108	-104.813057	1261.89	N	0	0	LOWER ARAPAHOE	Household use only		FRAZIER LAWRENCE A & KATHERINE M	
0357973	11988--A	Well Constructed	39.942447	-104.818774	405.51	N	200	90	UPPER ARAPAHOE	Domestic		DUNCAN SHARON SUE	
0385966	189409-	Well Abandoned	39.995091	-104.840103	473.98	SW	900	520	LARAMIE FOX HILLS	Domestic	Stock	SAYERS, KENNETH L	2007-06-27
0389277	45524-F	Well Constructed	39.942199	-104.827551	357.31	N	48	29	ALL UNNAMED AQUIFERS	Domestic		SALAZAR FRANK J & VIRGINIA L	
0390715	125875--A	Well Constructed	39.98779	-104.848193	1171.47	E	370	192	ALL UNNAMED AQUIFERS	Domestic		VERDEAL, MICHAEL	
0396489	46273-F	Well Constructed	39.9409	-104.84255	959.69	N	50	23	ALL UNNAMED AQUIFERS	Irrigation		JOHNSON, DICK	
0398234	195898-	Well Abandoned	39.979031	-104.946573	1053.13	S	860	160	LARAMIE FOX HILLS	Domestic		CLAPS, DON L	2000-02-01
0398401	195167-	Well Constructed	39.943066	-104.820129	180.49	N	500	200	ALL UNNAMED AQUIFERS	Household use only		SCHISLER, JOHN E	
0398722	194936--A	Well Constructed	39.941401	-104.812774	791.70	N	52	33	ALL UNNAMED AQUIFERS	Domestic		MOORE, SHARON D	
0398739	194936-	Well Constructed	39.941347	-104.812774	811.38	N	0	0	QUATERNARY ALLUVIUM	Domestic		MOORE, SHARON D	
0399296	195190-	Permit Expired	39.940027	-104.813164	1291.19	N	0	0	ALL UNNAMED AQUIFERS	Domestic		STEVENS, STEVEN S	
0401977	46966-F	Permit Expired	39.98119	-104.941025	867.93	SE	0	0	LARAMIE FOX HILLS	Commercial		HARWOOD, STEPHEN R	
0405046	198531-	Well Constructed	39.983799	-104.845083	592.69	SE	350	29	ALL UNNAMED AQUIFERS	Monitoring/Sampling		HART, RONALD J	
0406550	199250-	Permit Extended	39.979031	-104.946573	1053.13	S	0	0	LARAMIE FOX HILLS	Domestic		HARRISON BOB & GAIL	
0407897	201294-	Permit Canceled	39.94056	-104.822486	1093.98	N	430	125	LOWER ARAPAHOE	Domestic		SCHRODER, DUANE	
0411459	201436-	Well Replaced	39.978586	-104.948862	925.47	S	840	167	LARAMIE FOX HILLS	Domestic		BETTCHER, RICK	
0415468	60906--A	Well Constructed	39.94311	-104.816892	163.75	N	55	26	ALL UNNAMED AQUIFERS	Irrigation		BESSER MIANNE L & BROOKE	
0416710	204212-	Well Abandoned	39.985727	-104.941759	870.22	NE	890	450	LARAMIE FOX HILLS	Domestic		PETROCCO JOSEPH P & EWA	2013-05-03
0419585	21821--A	Well Constructed	39.940711	-104.815015	1039.59	N	55	32	ALL UNNAMED AQUIFERS	Domestic		GIVENS, FRANK R	
0422122	40357--A	Well Constructed	39.97912	-104.936378	60.53	S	905	580	LARAMIE FOX HILLS	Domestic		HARO, RAUDEL	
0423892	9357-F-R	Well Constructed	39.986949	-104.839181	824.01	W	31	7	ALL UNNAMED AQUIFERS	Irrigation		AGGREGATE INDUSTRIES WCR INC	
0424144	49483-F	Well Constructed	39.981195	-104.941738	958.22	SE	950	599	LARAMIE FOX HILLS	Domestic		HARWOOD, STEPHEN R	
0427307	49680-F	Well Constructed	39.957685	-104.88428	822.91	S	1080	543	LARAMIE FOX HILLS	Municipal		TODD CREEK METRO DIST #1	
0429945	49941-F	Well Constructed	39.957694	-104.880177	1259.93	SW	1080	542	LARAMIE FOX HILLS	Municipal		TODD CREEK METRO DISTRICT #1	
0430191	50476-F	Permit Expired	39.957685	-104.88428	822.91	S	0	0	ARAPAHOE	Municipal		TODD CREEK METRO DISTRICT #1	
0431554	165278--A	Well Constructed	39.999814	-104.84144	730.34	W	30	12	ALL UNNAMED AQUIFERS	Domestic		HOOD, BESSIE B	
0431724	211216-	Well Constructed	39.990109	-104.939721	28.94	W	860	530	ALL UNNAMED AQUIFERS	Domestic		LUCIO JOE LOUIS	
0432685	28611--A	Well Constructed	39.940895	-104.820202	971.16	N	40	22	ALL UNNAMED AQUIFERS	Domestic		NIXON GARY & NANCY	
0432759	8393--A	Well Constructed	39.942926	-104.819701	231.38	N	515	240	LOWER ARAPAHOE	Household use only		CONTER LEO H & FLORENCE R	
0434690	81546--A	Well Constructed	39.943013	-104.836648	199.00	N	440	50	LOWER ARAPAHOE	Household use only		FIKE, GERTRUDE L	
0436444	213813-	Well Constructed	39.940027	-104.813164	1291.19	N	450	150	ARAPAHOE	Domestic		STEVENS, STEVEN S	
0440319	215794-	Well Constructed	39.955656	-104.866022	1231.71	SW	1025	500	LARAMIE FOX HILLS	Domestic		WAGNER GARY L TRUSTEE	
0443152	195898--A	Well Constructed	39.979031	-104.946573	1053.13	S	875	670	LARAMIE FOX HILLS	Domestic		CLAPS, DON L	
0447271	16964--A	Well Constructed	39.941674	-104.814582	689.46	N	52	30	ALL UNNAMED AQUIFERS	Domestic		ZIMMERMAN, CARRIE L	
0455438	224079-	Well Constructed	39.985119	-104.845076	823.37	E	315	60	ALL UNNAMED AQUIFERS	Domestic		HART, RONALD J	

Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
0456122	223771-	Well Constructed	39.978689	-104.94755	934.55	S	920	640	LARAMIE FOX HILLS	Domestic		POWELL CHARLES R & BETH A	
0457518	224306-	Well Constructed	39.979031	-104.946573	1053.13	S	875	650	LARAMIE FOX HILLS	Domestic		HARRISON BOB & GAIL	
0458024	225976-	Well Constructed	39.985038	-104.941532	1022.03	NE	905	645	LARAMIE FOX HILLS	Domestic		THACKER DENNIS & CINDY	
0463220	227657-	Well Abandoned	39.950197	-104.88349	889.94	NW	1140	790	LARAMIE FOX HILLS	Domestic	Irrigati	BAYER, RAYMOND	2011-04-20
0464416	55436-F	Permit Issued	39.94186	-104.842731	609.93	N	0	0	LARAMIE FOX HILLS	Commercial	Industrial	JOHNSON, RICHARD M	
0464417		Application Information Requested	39.943344	-104.843445	758.14	N	0	0	LOWER ARAPAHOE	Irrigation		JOHNSON AUTO PLAZA	
0467559	230551-	Permit Issued	39.993828	-104.83897	520.35	W	0	0	LARAMIE FOX HILLS	Domestic		SAYERS, KENNETH L	
0469827		Application Information Requested	39.944809	-104.844048	222.18	N	0	0	ARAPAHOE	Commercial		JOHNSON, RICHARD M	
0471252		Application Information Requested	39.979301	-104.94735	465.37	S	0	0	ALL UNNAMED AQUIFERS	Domestic		MORRIS, GARY	
0471339	231431-	Permit Expired	39.984768	-104.941927	1165.89	NE	0	0	LARAMIE FOX HILLS	Domestic		SERENITY CUSTOM HOMES LLC	
0472282	233742-	Well Constructed	39.940992	-104.843525	926.95	N	51	20	ALL UNNAMED AQUIFERS	Commercial		JOHNSON, RICHARD M	
0472319	232000-	Well Constructed	39.984993	-104.942531	1211.93	NE	880	601	LARAMIE FOX HILLS	Domestic		HARRIS, CHARLES	
0472870	201436--A	Well Constructed	39.978586	-104.948862	925.47	S	888	440	LARAMIE FOX HILLS	Domestic		BETTCHER, RICK	
0475412	233886-	Well Constructed	39.978561	-104.944971	1010.45	SW	940	640	LARAMIE FOX HILLS	Domestic	Stock	SCHAFFER LLEWELLYN WOODROW	
0476145	36190--A	Well Constructed	39.994926	-104.838458	759.45	SW	35	10	ALL UNNAMED AQUIFERS	Stock		SAYERS, KENNETH	
0479853	56978-F	Permit Issued	39.955838	-104.875764	1075.48	S	0	0	LARAMIE FOX HILLS	Commercial	Irrigation	E-470 PUBLIC HIGHWAY AUTHORITY	
0480156	66297--A	Well Constructed	39.941809	-104.814759	640.20	N	540	286	LOWER ARAPAHOE	Domestic		SAATHOFF JEFFREY S & TAMI L	
0480212	235646-	Well Constructed	39.942426	-104.81422	416.28	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BORDEN KENNETH W & TAMARA L	
0486171	238940-	Permit Expired	39.984628	-104.941713	1174.94	NE	0	0	LARAMIE FOX HILLS	Domestic		BELL, STAN W	
0486813	38359-	Well Constructed	39.940014	-104.821702	1292.54	N	330	51	LOWER ARAPAHOE	Domestic		HENSEL RONALD J & MARILYN G	
0488467	243426-	Well Constructed	39.996022	-104.842231	275.63	W	280	35	ARAPAHOE	Household use only		MUHLER WAYNE & KAREN	
0489052	240218-	Well Constructed	39.982565	-104.844909	179.26	SE	335	70	LOWER ARAPAHOE	Household use only		SCI-157, LLC	
0489255	239631-	Well Constructed	39.94056	-104.822486	1093.98	N	430	125	LOWER ARAPAHOE	Domestic		SCHRODER, JERRY	
0490859	241128-	Well Constructed	39.986825	-104.844177	273.18	N	315	180	ALL UNNAMED AQUIFERS	Household use only		ADDISON JOHN & ANITA	
0497702	60906--A	Permit Issued	39.94311	-104.816892	163.75	N	0	0	ALL UNNAMED AQUIFERS	Irrigation		RIVERA, JOSEPH J	
0505828	249191-	Well Constructed	39.942935	-104.820154	228.06	N	30	0	ALL UNNAMED AQUIFERS	Irrigation		SCHISLER, JOHN E	
0506076	59243-F	Well Constructed	39.989413	-104.927138	1250.90	S	940	639	LARAMIE FOX HILLS	Irrigation		NORTHERN HILLS CHRISTIAN CHURCH	
0508041	46252--A	Well Constructed	39.942977	-104.823625	214.63	N	54	19	ALL UNNAMED AQUIFERS	Domestic		KELLY, JEFF	
0518576	61130-F	Permit Canceled	39.998716	-104.839738	1128.09	W	0	0	ALL UNNAMED AQUIFERS	Other		APEX MATERIAL SPECIALISTS LLC	
0519970	60772-F	Permit Expired	39.949282	-104.871505	998.25	N	1190	790	LARAMIE FOX HILLS	Domestic		WELHAM BLAZE G & REBECCA & ROD	
0531072	260406-	Well Constructed	39.97761	-104.946941	532.91	S	920	462	LARAMIE FOX HILLS	Domestic		ANAYA PRISCILIANO & LAURA LABRADO	
0531483	260254-	Well Constructed	39.996021	-104.842587	177.25	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0543322	16540--A	Well Constructed	39.94187	-104.814054	618.72	N	60	39	ALL UNNAMED AQUIFERS	Domestic		KARL MICHAEL G & SHAWNA LEA	
0547155	267779-	Well Constructed	39.983695	-104.93665	162.90	E	940	650	LARAMIE FOX HILLS	Domestic		KARL CHARLIE & JUSTINE	
0902216	27653-	Permit Expired	39.988536	-104.839562	820.05	SW	0	0	ALL UNNAMED AQUIFERS	Stock		HAAKE OSCAR & OSCAR JR	
0911152	78154-	Permit Expired	39.986262	-104.847214	1012.59	E	0	0	ALL UNNAMED AQUIFERS	Stock		MARSHALL, DUANE L	
0915161	122644--A	Application Received	39.943064	-104.818808	180.76	N	0	0	ALL UNNAMED AQUIFERS	Domestic		THOMAS, JAMES R	
2005217	2005217-AB	Well Abandoned	39.946908	-104.804196	1242.74	S	0	0	ALL UNNAMED AQUIFERS	Other		DOCTOR WATER WELL	2006-01-13

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Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
2005312	2005312-AB	Well Abandoned	39.98774	-104.83881	934.12	W	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-09
2005313	2005313-AB	Well Abandoned	39.98758	-104.83952	731.84	W	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-09
2005314	2005314-AB	Well Abandoned	39.98789	-104.84009	591.81	W	21	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-09
2005315	2005315-AB	Well Abandoned	39.98804	-104.84023	574.10	SW	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-09
2005316	2005316-AB	Well Abandoned	39.9882	-104.84014	618.91	SW	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-09
2005317	2005317-AB	Well Abandoned	39.98925	-104.83881	1136.81	SW	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-10
2005318	2005318-AB	Well Abandoned	39.99026	-104.8395	982.68	W	20	0	ALL UNNAMED AQUIFERS	Other		CITY OF AURORA	2006-08-10
3602445	268991-	Permit Expired	39.98477	-104.941925	1164.90	NE	0	0	LARAMIE FOX HILLS	Domestic		COOKSEY, MICHAEL G	
3603568	64502-F	Well Constructed	39.950653	-104.873263	575.22	N	1100	830	LARAMIE FOX HILLS	Domestic		POWELL ARLEN & ROSEMARY	
3615538	273346-	Well Constructed	39.99383	-104.83677	1135.70	W	806	556	LARAMIE FOX HILLS	Domestic		DE LA CRUZ BRECEDA, FERNANDO A.	
3617111	274412-	Well Constructed	39.97768	-104.94944	579.17	S	860	450	LARAMIE FOX HILLS	Domestic		SALAZAR, JACOB	
3633427	278861-	Well Constructed	39.98462	-104.9425	1307.30	NE	887	630	LARAMIE FOX HILLS	Domestic		RANDOLPH TONJA S & ROBERT M	
3648462	284745-	Permit Canceled	39.940737	-104.815271	1029.59	N	0	0	ALL UNNAMED AQUIFERS	Household use only		HENDERSON, GENE	
3648778	10949-R-R	Well Constructed	39.999204	-104.840887	843.07	W	22	10	QUATERNARY ALLUVIUM	Irrigation		HOOD JAMES A & BESSIE B	
3649660	227657-A	Well Constructed	39.950196	-104.883495	889.65	NW	1180	834	LARAMIE FOX HILLS	Domestic		BAYER, RAYMOND	
3650110	49140-A	Well Constructed	39.940737	-104.81529	1029.56	N	540	170	LOWER ARAPAHOE	Domestic		SMITH SHANNON D & GERALDINE K	
3655507	288657-	Well Constructed	39.941001	-104.814175	935.06	N	65	0	ALL UNNAMED AQUIFERS	Domestic		MORELAND, EVERETT D	
3656489	204212-A	Well Constructed	39.98573	-104.941759	869.54	NE	900	650	LARAMIE FOX HILLS	Domestic		PETROCCO, JOSEPH P	
3658919	12743-F-R	Permit Issued	39.940179	-104.821523	1232.19	N	0	0	QUATERNARY ALLUVIUM	Irrigation		SCHRODER, VIRGINIA	
3660177	77482-F	Well Constructed	39.984634	-104.940409	1028.13	NE	842	705	LARAMIE FOX HILLS	Commercial	Irrigation	HANGAR 160 LLC	
3661310	292230-	Permit Issued	39.979573	-104.945641	1294.07	S	0	0	LARAMIE FOX HILLS	Domestic		CROFF AMY, ROBERT AND LINDA	
3666883	20629-A	Well Constructed	39.942088	-104.820266	536.78	N	550	200	LOWER ARAPAHOE	Domestic		SCHISSLER, RICKY	
3669927	79318-F	Permit Expired	39.950105	-104.873802	794.42	N	0	0	LOWER ARAPAHOE	Domestic		HERNANDEZ-ALVAREZ, MONICA N	
3669998	298521-	Well Constructed	39.979324	-104.941793	496.41	E	925	720	LARAMIE FOX HILLS	Domestic		MOLLEVIK MICHAEL & KELLY	
3672895	79636-F	Permit Issued	39.950661	-104.871237	490.80	N	0	0	LOWER ARAPAHOE	Domestic		LE, CHAU	
3675440	26372-A	Permit Canceled	39.982404	-104.939345	918.26	E	0	0	LOWER ARAPAHOE	Domestic		WEINS, JOHN	
3675696	302440-	Well Constructed	39.988848	-104.846965	900.03	E	1010	500	LARAMIE FOX HILLS	Domestic	Irrigati	MCCRORY LAND AND CATTLE LLC	
3675764	302202-	Well Constructed	39.980035	-104.939954	391.62	S	930	720	LARAMIE FOX HILLS	Domestic		BARTON, LILA B	
3675890	302269-	Permit Issued	39.982404	-104.939345	918.26	E	0	0	LARAMIE FOX HILLS	Domestic		WEINS, JOHN	
3675959	303367-	Well Constructed	39.984876	-104.846085	1071.68	SE	0	0	ALL UNNAMED AQUIFERS	Domestic		KELLEY, RODNEY D.	
3678428	80729-F	Permit Issued	39.948937	-104.868315	976.34	N	0	0	LOWER ARAPAHOE	Domestic		ROBEY, GINA	
3678723	80767-F	Permit Issued	39.949833	-104.871866	816.07	N	0	0	LOWER ARAPAHOE	Domestic		MARTINEZ MARES FERNANDO	
3679622	80971-F	Permit Canceled	39.95074	-104.86982	391.00	NE	0	0	LARAMIE FOX HILLS	Domestic		CARLSON, EDWARD	
3679909	80991-F	Well Constructed	39.949289	-104.87152	997.60	N	1190	790	LARAMIE FOX HILLS	Domestic		WELHAM, BLAZE	
3679909	80991-F	Well Constructed	39.949289	-104.87152	997.60	N	1190	790	LARAMIE FOX HILLS	Domestic		WELHAM, REBECCA	
3680808		Application Information Requested	39.948684	-104.872331	1249.54	N	0	0	LARAMIE FOX HILLS	Domestic		PJDS FAMILY TRUST	
3682911	81632-F	Permit Issued	39.948696	-104.872692	1260.50	N	0	0	LARAMIE FOX HILLS	Domestic		BURCIAGA, JUSTINA	
3685863	82064-F	Permit Issued	39.949839	-104.871882	816.30	N	0	0	LOWER ARAPAHOE	Domestic		MARTINEZ, FERNANDO	
3686934		Application Received	39.998852	-104.896174	1176.35	NW	0	0		Industrial	Municipal	TODD CREEK VILLAGE METROPOLITAN DISTRICT	

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3687071	82798-F	Well Constructed	39.948686	-104.872329	1250.61	N	355	197	LOWER ARAPAHOE	Domestic		HERNANDEZ-ALVAREZ, MONICA	
3688647	313033-	Permit Issued	39.941091	-104.818137	901.45	N	0	0	LOWER ARAPAHOE	Domestic		CONTRERAS, JESUS	
3688768	82585-F	Permit Issued	39.94983	-104.871882	819.55	N	0	0	LOWER ARAPAHOE	Domestic		MARTINEZ, FERNANDO	
3691946	83218-F	Well Constructed	39.950747	-104.869831	391.09	NE	1000	440	LARAMIE FOX HILLS	Domestic		CARLSON, EDWARD	
3691946	83218-F	Well Constructed	39.950747	-104.869831	391.09	NE	1000	440	LARAMIE FOX HILLS	Domestic		CARLSON, TERRI	
3692626		Application Information Requested	39.948415	-104.871545	1313.89	N	0	0	LOWER ARAPAHOE	Domestic		CHAVEZ, REYNALDO	
3694424		Hydrogeology Review Requested	39.950658	-104.870768	473.33	N	0	0	LARAMIE FOX HILLS	Domestic		LE, CHAU	
3696880		Application Received	39.941075	-104.844216	896.07	N	0	0	LOWER ARAPAHOE	Commercial	Irrigation	JOHNSON, RICHARD M.	
9000082	479-RN	Well Constructed	39.998717	-104.839738	1128.15	W	26	6	ALL UNNAMED AQUIFERS	Stock		HOOD, ERVIN L	
9000227	1307-R	Well Constructed	39.941562	-104.848978	665.00	N	42	20	ALL UNNAMED AQUIFERS	Irrigation		WAGNER, WILBERT E	
9000249	1547-	Well Constructed	39.998663	-104.864446	665.73	N	127	6	ALL UNNAMED AQUIFERS	Domestic		CASE, STACY L	
9000299	1922-R	Well Constructed	39.943519	-104.847017	45.22	SE	38	25	ALL UNNAMED AQUIFERS	Irrigation		HILL SAMUEL & THOMAS & C PETERSON	
9000306	1930-R	Well Constructed	39.945149	-104.853633	228.51	SW	0	0	ALL UNNAMED AQUIFERS	Irrigation		TASHIRO, MASATO	
9000444	2846-F	Well Constructed	39.987078	-104.841682	123.58	W	30	8	ALL UNNAMED AQUIFERS	Irrigation		HAAKE OSCAR & RUTH	
9000449	2932-	Well Constructed	39.941516	-104.811253	753.41	N	49	31	ALL UNNAMED AQUIFERS	Domestic		LAPOINTE, ROBERT	
9000466	3087-F	Well Constructed	39.98815	-104.900933	608.56	W	1020	299	ALL UNNAMED AQUIFERS	Municipal		MOUNTAIN VIEW WATER USERS ASSN	
9000471	3135-	Well Constructed	39.941516	-104.811253	753.41	N	54	28	ALL UNNAMED AQUIFERS	Domestic		STEVENS, S S	
9000524	3541-F	Well Constructed	39.945149	-104.853633	228.51	SW	44	18	ALL UNNAMED AQUIFERS	Commercial		ADAMS TRANSIT MIX CORP	
9000547	3750-	Well Constructed	39.998717	-104.839738	1128.15	W	32	3	ALL UNNAMED AQUIFERS	Domestic		DAVIS, CHARLES	
9000704	5066-	Well Constructed	39.952263	-104.877157	283.78	NE	200	65	ALL UNNAMED AQUIFERS	Domestic		CARTER, FRANK	
9000763	5624-	Well Constructed	39.991928	-104.839621	739.07	W	28	7	ALL UNNAMED AQUIFERS	Domestic		GETZ, EDWARD	
9000799	5873-R	Well Constructed	39.945124	-104.82552	599.29	SE	38	0	ALL UNNAMED AQUIFERS	Irrigation		WELLENKOTTER, HENRY G	
9000800	5874-R	Well Constructed	39.945124	-104.82552	599.29	SE	35	26	ALL UNNAMED AQUIFERS	Irrigation		WELLENKOTTER, H G	
9000801	5875-R	Well Constructed	39.945124	-104.82552	599.29	SE	43	29	ALL UNNAMED AQUIFERS	Irrigation		WELLENKOTTER, HENRY G	
9000896	6595-F	Well Replaced	39.988536	-104.839562	820.05	SW	14	5	ALL UNNAMED AQUIFERS	Irrigation		HAAKE OSCAR & OSCAR JR	
9000963	7257-R	Well Constructed	39.945126	-104.83025	563.94	S	44	26	ALL UNNAMED AQUIFERS	Irrigation		WHITEHEAD DONALD & JOHNSON ROSE	
9000993	7647-	Well Constructed	39.985019	-104.844305	606.51	E	31	7	ALL UNNAMED AQUIFERS	Domestic		MOORE, FRANK A	
9000998	7746-	Well Constructed	39.988536	-104.839562	820.05	SW	693	15	ALL UNNAMED AQUIFERS	Domestic		AGGREGATE, INDUSTRIES	
9001003	7780-F	Well Constructed	39.941488	-104.825529	610.48	N	40	30	ALL UNNAMED AQUIFERS	Irrigation		WIEMER, GENE T	
9001068	8301-	Well Constructed	39.941516	-104.811253	753.41	N	65	45	ALL UNNAMED AQUIFERS	Domestic		KUHN, CHARLES L	
9001079	8393-	Well Abandoned	39.941499	-104.82077	751.30	N	182	35	ALL UNNAMED AQUIFERS	Domestic		CONTER, LEO	1998-09-01
9001180	8887-F	Well Constructed	39.941516	-104.811253	753.41	N	61	32	ALL UNNAMED AQUIFERS	Irrigation		ALIRES, THOMAS	
9001213	9157--A	Well Constructed	39.942988	-104.816143	209.27	N	420	80	ALL UNNAMED AQUIFERS	Domestic		LYONS SADIE & JEFFREY D	
9001248	9357-F	Well Constructed	39.991928	-104.839621	739.07	W	18	2	ALL UNNAMED AQUIFERS	Irrigation		HAAKE OSCAR JR & OSCAR	
9001261	9453-	Well Constructed	39.973854	-104.95694	443.99	NW	775	35	ALL UNNAMED AQUIFERS	Domestic		CORLEY, GEORGE	
9001478	10902-R	Well Constructed	39.941505	-104.816012	749.18	N	44	20	ALL UNNAMED AQUIFERS	Irrigation		TAYLOR, ANNA MARIA	
9001488	10949-R	Well Constructed	39.998717	-104.839738	1128.15	W	26	6	ALL UNNAMED AQUIFERS	Irrigation		HOOD JAMES A & BESSIE B	
9001595	11987-	Well Constructed	39.941434	-104.818756	776.57	N	180	30	ALL UNNAMED AQUIFERS	Domestic		BURROUGHS, LESLIE W	
9001596	11988-	Well Replaced	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BURROUGHS, LESLIE	1994-02-26

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 Pioneer Water Pipeline Project

Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
9001678	12685-	Well Constructed	39.941505	-104.816012	749.18	N	60	20	ALL UNNAMED AQUIFERS	Domestic		GONZALEZ-MILLAN, JONATHAN	
9001678	12685-	Well Constructed	39.941505	-104.816012	749.18	N	60	20	ALL UNNAMED AQUIFERS	Domestic		GARZA, BIANCA R.	
9001682	12693-F	Well Constructed	39.983226	-104.844371	328.39	S	18	4	ALL UNNAMED AQUIFERS	Irrigation		BAKER, GARY A	
9001721	13120-R		39.941488	-104.825529	610.48	N	0	0	ALL UNNAMED AQUIFERS	Irrigation		SHREEVE, HAROLD A	
9001735	13147-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DINGES AL B JR	
9001768	13403-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BARNES, GARNER	
9001781	13526-R	Well Constructed	39.943443	-104.805224	49.33	N	30	12	ALL UNNAMED AQUIFERS	Irrigation		THIRD CREEK ASSOCIATES	
9001784	13529-R	Well Constructed	39.943729	-104.815068	59.58	S	45	20	ALL UNNAMED AQUIFERS	Irrigation		THIRD CREEK ASSOCIATES	
9001798	13652-F	Well Constructed	39.993155	-104.838301	758.51	W	16	6	ALL UNNAMED AQUIFERS	Commercial		HORIUCHI BROTHERS A PARTNER	
9001799	13653-F	Well Constructed	39.992956	-104.838078	843.86	NW	18	6	ALL UNNAMED AQUIFERS	Commercial		HORIUCHI BROTHERS A PARTNER	
9001890	14211-R	Well Constructed	39.945162	-104.839638	588.03	S	43	23	ALL UNNAMED AQUIFERS	Irrigation		SHARP, LYLE	
9001891	14212-R		39.945182	-104.844332	602.18	S	0	0	ALL UNNAMED AQUIFERS	Irrigation		SHARP, LYLE	
9001960	14814-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		CONTER, LEO	
9001986	14973-	Well Constructed	39.945182	-104.844332	602.18	S	280	30	ALL UNNAMED AQUIFERS	Domestic		SHARP, ERNEST	
9002055	15603-	Well Constructed	39.941499	-104.82077	751.30	N	190	51	ALL UNNAMED AQUIFERS	Domestic		MOONEY TROY & JOAN	
9002179	16520-	Well Constructed	39.941562	-104.848978	665.00	N	38	25	ALL UNNAMED AQUIFERS	Domestic	Stock	HELDT, LOUIS	
9002183	16540-	Well Abandoned	39.941505	-104.816012	749.18	N	0	34	ALL UNNAMED AQUIFERS	Domestic		KARL MICHAEL F & SHAWNA LEA	2005-10-22
9002228	16964-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DOTY, M E	
9002324	18063-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		RUTT, ELMER S	
9002428	19324-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		SCHISLER, BENNY	
9002514	19802-R		39.945147	-104.834944	147.74	S	0	0	ALL UNNAMED AQUIFERS	Irrigation		SCHAEFER ELAINE A & CARL R	
9002525	19869-	Well Constructed	39.941344	-104.81885	809.35	N	0	0	ALL UNNAMED AQUIFERS	Domestic		ANDREWS, DELBERT	
9002525	19869-	Well Constructed	39.941344	-104.81885	809.35	N	0	0	ALL UNNAMED AQUIFERS	Domestic		ANDREWS, DELBERT	
9002546	20033-	Well Constructed	39.941505	-104.816012	749.18	N	46	31	ALL UNNAMED AQUIFERS	Domestic		HUDSON, EDWIN E	
9002562	20096-R	Well Constructed	39.945147	-104.834944	147.74	S	35	18	ALL UNNAMED AQUIFERS	Irrigation		PETROCCO, DAVID A	
9002563	20096-S	Well Constructed	39.94352	-104.841096	7.85	N	55	18	ALL UNNAMED AQUIFERS	Irrigation		PETROCCO FARMS INC	
9002632	20628-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DEWEY, CECIL	
9002633	20629-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DEWEY, CECIL	
9002653	20928-F	Well Constructed	39.941501	-104.858272	961.25	E	20	0	ALL UNNAMED AQUIFERS	Irrigation		WORTHING JACK & BERTHA	
9002655	20929-F	Well Constructed	39.941532	-104.853625	388.16	NW	20	0	ALL UNNAMED AQUIFERS	Irrigation		WORTHING JACK & BERTHA	
9002732	21821-	Well Constructed	39.940711	-104.815015	1039.59	N	0	0	ALL UNNAMED AQUIFERS	Domestic		GIVENS, FRANK R	
9002772	22877-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		PETERSEN, DAVID W	
9002815	23495-	Well Constructed	39.988536	-104.839562	820.05	SW	17	5	ALL UNNAMED AQUIFERS	Stock		HAAKE OSCAR & OSCAR JR	
9002816	23496-	Well Constructed	39.988536	-104.839562	820.05	SW	18	5	ALL UNNAMED AQUIFERS	Domestic	Stock	HAAKE OSCAR JR & OSCAR	
9002817	23497-	Well Constructed	39.988536	-104.839562	820.05	SW	18	5	ALL UNNAMED AQUIFERS	Domestic	Stock	HAAKE OSCAR & OSCAR JR	
9002818	23498-	Well Constructed	39.988536	-104.839562	820.05	SW	20	6	ALL UNNAMED AQUIFERS	Stock		HAAKE OSCAR & OSCAR JR	
9002835	23733-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BERNARD, J D	
9002878	24398-	Well Constructed	39.985019	-104.844305	606.51	E	26	3	ALL UNNAMED AQUIFERS	Domestic		LINDERMAN, HARRY J	
9002894	24647-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		SCHNUELLE, CLARENCE F	



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9002956	25480-	Well Constructed	39.984581	-104.937834	494.44	E	282	160	ALL UNNAMED AQUIFERS	Domestic		CARDWELL, CARL	
9003013	26160-	Well Constructed	39.941516	-104.811253	753.41	N	0	0	ALL UNNAMED AQUIFERS	Domestic		VANCORA, GENE	
9003014	26161-	Well Constructed	39.941499	-104.82077	751.30	N	48	37	ALL UNNAMED AQUIFERS	Domestic		DRESSLER, WILLIAM	
9003024	26372-	Well Constructed	39.980993	-104.942531	1038.03	SE	300	110	ALL UNNAMED AQUIFERS	Domestic		WEBB, FRED	
9003025	26382-	Well Constructed	39.995325	-104.839679	607.25	SW	30	4	ALL UNNAMED AQUIFERS	Domestic	Stock	BARNHART, FLOYD	
9003032	26470-	Well Constructed	39.995325	-104.839679	607.25	SW	24	5	ALL UNNAMED AQUIFERS	Domestic	Stock	BARNHART, FLOYD	
9003061	26988-	Well Constructed	39.941516	-104.811253	753.41	N	50	20	ALL UNNAMED AQUIFERS	Domestic		CRANDALL, DELL	
9003085	27702-	Well Constructed	39.9867	-104.84641	739.08	E	32	10	ALL UNNAMED AQUIFERS	Domestic	Stock	KING, HUGH J	
9003110	28144-	Well Constructed	39.973854	-104.95694	443.99	NW	150	56	ALL UNNAMED AQUIFERS	Domestic		MARESH, O D	
9003114	28167-	Well Constructed	39.941499	-104.82077	751.30	N	40	20	ALL UNNAMED AQUIFERS	Domestic		SCHNVELLE, CLARENCE	
9003156	28611-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BACKER, ALBERT J	
9003156	28611-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BACKER, ALBERT J	
9003156	28611-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BACKER, ALBERT J	
9003204	29598-	Well Constructed	39.988536	-104.839562	820.05	SW	32	8	ALL UNNAMED AQUIFERS	Stock		AGGREGATE, INDUSTRIES	
9003353	31172-	Well Constructed	39.981372	-104.849039	495.92	E	30	12	ALL UNNAMED AQUIFERS	Domestic		HEINZ, RALPH	
9003407	32203-	Well Constructed	39.941562	-104.848978	665.00	N	43	23	ALL UNNAMED AQUIFERS	Stock		HELDT, LOUIS	
9003412	32462-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		PEREZ JOSE A & MARTHA L	
9003413	32463-	Well Constructed	39.941499	-104.82077	751.30	N	0	0	ALL UNNAMED AQUIFERS	Domestic		PEREZ JOSE A & MARTHA L	
9003449	33206-	Well Constructed	39.941516	-104.811253	753.41	N	54	29	ALL UNNAMED AQUIFERS	Domestic		VOLESKY, W J	
9003481	34121-	Well Constructed	39.977375	-104.942556	725.01	E	200	25	ALL UNNAMED AQUIFERS	Domestic		QUADOR, CARL	
9003484	34264-	Well Constructed	39.980968	-104.937852	499.41	E	290	135	ALL UNNAMED AQUIFERS	Domestic		WEBB, FRED B	
9003487	34632-	Well Constructed	39.941505	-104.816012	749.18	N	305	70	ALL UNNAMED AQUIFERS	Domestic		GAZAWAY JOSHUA D & TRACY M	
9003506	35168-		39.941516	-104.811253	753.41	N	0	0	ALL UNNAMED AQUIFERS	Stock		RIGGI, JAKE A	
9003507	35169-		39.941516	-104.811253	753.41	N	0	0	ALL UNNAMED AQUIFERS	Domestic		RIGGI, JAKE A	
9003522	35562-	Well Constructed	39.955849	-104.886672	37.12	NE	0	0	ALL UNNAMED AQUIFERS	Domestic		NEWMAN, RAY	
9003543	36190-	Well Abandoned	39.995325	-104.839679	607.25	SW	28	4	ALL UNNAMED AQUIFERS	Stock		BARNHART, FLOYD	2001-09-15
9003643	40045-	Well Abandoned	39.941505	-104.816012	749.18	N	0	23	ALL UNNAMED AQUIFERS	Domestic		DALIFKA, PAUL	1993-06-01
9003658	40357-	Well Abandoned	39.980968	-104.937852	499.41	E	875	320	ALL UNNAMED AQUIFERS	Domestic		MORRISON, DUNCAN M	1998-01-30
9003668	40657-	Well Constructed	39.941516	-104.811253	753.41	N	53	32	ALL UNNAMED AQUIFERS	Domestic		MOORE, ROBERT P	
9003694	41414-	Well Constructed	39.941516	-104.811253	753.41	N	54	28	ALL UNNAMED AQUIFERS	Domestic		FLETCHER BRETT & MAUREEN WYER	
9003728	42799-	Well Constructed	39.941499	-104.82077	751.30	N	50	16	ALL UNNAMED AQUIFERS	Domestic		QUINTANA JOE & JENNIFER CHAVEZ- QUINTANA	
9003729	42800-	Well Constructed	39.941505	-104.816012	749.18	N	320	54	ALL UNNAMED AQUIFERS	Stock		THOMPSON, JERRY W	
9003748	43487-	Well Constructed	39.983522	-104.846333	682.18	SE	265	40	ALL UNNAMED AQUIFERS	Domestic		WILLIAMS, SUSAN	
9003749	43488-	Well Constructed	39.981406	-104.844319	268.05	NW	265	32	ALL UNNAMED AQUIFERS	Domestic		J&C HOLDINGS LIMITED LIABILITY CO	
9003750	43489-	Well Constructed	39.941505	-104.816012	749.18	N	0	0	ALL UNNAMED AQUIFERS	Domestic		BACA, MICHAEL R	
9003770	44105-	Well Constructed	39.941499	-104.82077	751.30	N	0	38	ALL UNNAMED AQUIFERS	Domestic		NIXON GARY & NANCY	
9003834	46251-	Well Constructed	39.941488	-104.825529	610.48	N	408	40	ALL UNNAMED AQUIFERS	Domestic		SHREEVE, HAROLD A	
9003835	46252-	Well Constructed	39.941488	-104.825529	610.48	N	50	29	ALL UNNAMED AQUIFERS	Domestic		SHREEVE, HAROLD A	
9003837	46319-	Well Constructed	39.94292	-104.844047	221.86	N	420	45	ALL UNNAMED AQUIFERS	Domestic		JOHNSON AUTO PLAZA	

Exhibit I: Summary of Water Wells in the Vicinity of the Project  
 Conditional Use Permit Application  
 Pioneer Water Pipeline Project

Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
9003904	48778-	Well Constructed	39.941499	-104.82077	751.30	N	55	20	ALL UNNAMED AQUIFERS	Domestic		CALKINS, DONALD E	
9003913	49140-	Well Abandoned	39.940688	-104.815148	1047.51	N	330	78	ALL UNNAMED AQUIFERS	Domestic		HENDERSON EUGENE T & MARY A	2012-03-20
9003935	50191-	Well Constructed	39.941505	-104.816012	749.18	N	360	186	ALL UNNAMED AQUIFERS	Domestic		DRESSLER, WILLIAM	
9004040	54499-	Well Constructed	39.941505	-104.816012	749.18	N	355	56	ALL UNNAMED AQUIFERS	Domestic		DOLIFKE, PAUL	
9004046	55089-	Well Constructed	39.966448	-104.928728	1181.23	NE	0	0	ALL UNNAMED AQUIFERS	Domestic		HOLEMAN, JOE A	
9004049	55128-	Well Constructed	39.987779	-104.84634	654.20	E	302	50	ALL UNNAMED AQUIFERS	Domestic	Stock	DICKINSON GLEN I & LEONA B	
9004057	55644-	Well Constructed	39.987572	-104.846746	763.25	E	0	0	ALL UNNAMED AQUIFERS	Domestic		DICKINSON GLEN I & LEONA B	
9004244	65777-	Well Constructed	39.942485	-104.820593	392.39	N	366	40	ALL UNNAMED AQUIFERS	Household use only		CALKINS, DONALD E	
9004252	66297-	Well Replaced	39.941809	-104.814759	640.20	N	370	50	ALL UNNAMED AQUIFERS	Domestic		DOLIFKA, PAUL	
9004289	67877-	Well Constructed	39.981804	-104.937094	287.27	E	0	80	ALL UNNAMED AQUIFERS	Domestic		WOLF, ROGER E	
9004293	68170-	Permit Canceled	39.942926	-104.845831	216.79	N	52	31	ALL UNNAMED AQUIFERS	Stock		JOHNSON, RICHARD M	
9004307	68578-	Well Constructed	39.980741	-104.849557	698.12	E	0	57	ALL UNNAMED AQUIFERS	Domestic		EPPINGER, ARTHUR W	
9004332	69638-	Well Constructed	39.941999	-104.815418	570.04	N	0	140	ALL UNNAMED AQUIFERS	Domestic		YOUNG ARDEN A & BARBARA S	
9004462	77978-	Well Constructed	39.979375	-104.940609	240.27	SE	950	360	ALL UNNAMED AQUIFERS	Domestic		DRAKE ROLLIE & ILLENE	
9004468	78160-	Well Constructed	39.985037	-104.844184	572.85	E	0	0	ALL UNNAMED AQUIFERS	Domestic		MARSHALL, DUANE L	
9004489	78861-	Well Abandoned	39.942921	-104.835078	249.15	NW	33	0	ALL UNNAMED AQUIFERS	Household use only		HART MARTIN T & GERTRUDE L FINK	1975-10-04
9004498	79293-	Well Constructed	39.942894	-104.835113	255.32	NW	330	56	ALL UNNAMED AQUIFERS	Household use only		THORNGREN, CYNTHIA	
9004516	80705-	Well Constructed	39.955741	-104.864952	1317.14	S	0	0	ALL UNNAMED AQUIFERS	Domestic		FEIS, JAKE	
9004545	81546-	Well Constructed	39.943014	-104.836648	198.67	N	0	0	ALL UNNAMED AQUIFERS	Domestic	Stock	FIKE, GERTRUDE L	
9004560	82070-	Well Constructed	39.984665	-104.846135	1012.38	SE	290	92	ALL UNNAMED AQUIFERS	Domestic		NESS, CHRISTOPHER	
9004561	82071-	Well Constructed	39.983657	-104.846243	711.63	SE	286	85	ALL UNNAMED AQUIFERS	Domestic		WILLIAMS, SUSAN	
9004697	88998-	Well Constructed	39.98802	-104.912189	753.33	S	0	510	ALL UNNAMED AQUIFERS	Domestic	Stock	HARRISON, BEVERLY	
9004747	91732-	Well Constructed	39.942683	-104.817358	319.37	N	0	80	ALL UNNAMED AQUIFERS	Domestic		CVANCARA, GENE	
9004939	98985-	Well Constructed	39.944904	-104.852079	515.62	SW	0	43	ALL UNNAMED AQUIFERS	Domestic		ADAMS AGGREGATE INC	
9005001	101310-	Well Constructed	39.98635	-104.842322	57.12	E	18	8	ALL UNNAMED AQUIFERS	Stock		BAKER GARY A & DOLORES R	
9005101	113862-	Well Constructed	39.940306	-104.809596	1198.71	N	460	160	ALL UNNAMED AQUIFERS	Domestic		PFANNENSTIEL, GERALD	
9005136	118139-	Well Constructed	39.939071	-104.856101	1118.13	NE	396	30	ALL UNNAMED AQUIFERS	Domestic		WORTHING, JACK	
9005141	118893-	Well Constructed	39.943518	-104.833079	229.91	E	460	116	ALL UNNAMED AQUIFERS	Domestic	Stock	SCHAEFER, CARL R	
9005143	119143-	Well Constructed	39.943095	-104.81863	169.34	N	0	0	ALL UNNAMED AQUIFERS	Domestic		THOMAS, JAMES R	
9005164	122605-	Well Constructed	39.942073	-104.822163	542.84	N	0	0	ARAPAHOE	Household use only		STRAUCH, HARRY	
9005166	122781-	Well Constructed	39.991789	-104.837073	1304.01	NW	0	0	ALL UNNAMED AQUIFERS	Domestic		GETZ, ED	
9005181	125875-	Well Abandoned	39.98779	-104.848193	1171.47	E	300	0	ALL UNNAMED AQUIFERS	Domestic		BOKS INC	1996-09-15
0043565A	43565-MH	Permit Issued	39.998717	-104.839738	1128.15	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0043630A	2004089-AB	Well Abandoned	39.943455	-104.805153	44.65	N	0	0	ALL UNNAMED AQUIFERS	Other		DELTA SUB ONE	2004-09-14
0043631A	2004090-AB	Well Abandoned	39.94376	-104.815145	70.90	S	0	0	ALL UNNAMED AQUIFERS	Irrigation		DELTA SUB ONE	2004-09-14
0043632A	2004091-AB	Well Abandoned	39.94376	-104.815002	70.60	S	0	0	ALL UNNAMED AQUIFERS	Irrigation		DELTA SUB ONE	2004-09-14
0045032A	45032-MH	Application Received	39.99872	-104.839736	1128.71	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		APEX MATERIAL SPECIALISTS	
0045033A	45033-MH	Application Received	39.995323	-104.839677	607.15	SW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		APEX MATERIAL SPECIALISTS	

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0045382A	45382-MH	Permit Issued	39.99872	-104.839736	1128.71	W	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF	
0046155A	46155-MH	Well Constructed	39.98736	-104.84021	537.35	W	29	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF	
0047333A	47333-MH	Well Constructed	39.96285	-104.91485	199.15	NE	30	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
0048747A	48747-MH	Permit Issued	39.99167	-104.94257	757.73	E	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049131A	49131-MH	Well Constructed	39.991642	-104.937909	484.89	W	54	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049433A	49433-MH	Permit Issued	39.9415	-104.85827	960.99	E	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
0049551G	284944-	Well Constructed	39.976244	-104.946041	115.34	SW	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551H	284945-	Well Constructed	39.977274	-104.945683	501.51	SW	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551I	284957-	Well Constructed	39.98011	-104.943326	1008.45	E	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551J	284958-	Well Constructed	39.981952	-104.942136	1252.36	SE	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551K	285572-	Well Constructed	39.988173	-104.939494	5.97	W	26	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551L	284959-	Well Constructed	39.989298	-104.93722	708.96	W	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551M	284960-	Well Constructed	39.989555	-104.938852	259.54	W	34	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551N	284961-	Well Constructed	39.990611	-104.94051	182.27	E	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551O	284962-	Well Constructed	39.989763	-104.939902	28.22	E	55	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551P	284964-	Well Constructed	39.991922	-104.940505	242.69	E	15	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0049551Q	284965-	Well Constructed	39.990149	-104.939835	2.08	E	54	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		REGIONAL TRANSPORTATION DISTRICT	
0050671A	50671-MH	Permit Issued	39.948701	-104.862937	505.96	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		METRO WASTEWATER RECLAMATION DISTRICT	
0058894A	78167--A	Well Constructed	39.986409	-104.845786	649.59	NE	765	265	ALL UNNAMED AQUIFERS	Domestic		N E W S LLC	
0063949A	5577-AD	Application Denied	39.98366	-104.846243	712.76	SE	0	0	ALL UNNAMED AQUIFERS	Domestic		BAUMGARTNER, JOYCE E	
0063949B	5576-AD	Application Denied	39.979353	-104.848849	903.10	NE	0	0	ALL UNNAMED AQUIFERS	Domestic		BAUMGARTNER, JOYCE E	
0203739A	25349-F	Permit Issued	39.95026	-104.88308	917.39	NW	0	0	LARAMIE FOX HILLS	Commercial		CARLSON, CLARKE D	
0203739B	31061-F	Permit Expired	39.950286	-104.88308	909.04	NW	0	0	ARAPAHOE	Commercial		CARLSON, CLARKE D	
0207254A		Application Information Requested	40.001301	-104.865547	402.66	NE	0	0	ALL UNNAMED AQUIFERS	Commercial	Irrigation	BDKS INC	
0213405A		Application Received	39.94339	-104.82077	751.62	N	0	0	ALL UNNAMED AQUIFERS	Domestic		THOMAS, J R	
0245963B	10717-AD	Application Denied	39.946882	-104.818173	1209.76	S	0	0	ALL UNNAMED AQUIFERS	Municipal		DAVENPORT, DEVELOPMNT	
0249713A	31020-F	Permit Expired	39.946951	-104.807826	1220.74	S	0	0	ARAPAHOE	Municipal		DAVENPORT, DEVELOPMENT	
0249713E	28863-F	Permit Issued	39.946951	-104.808005	1220.34	S	0	0	LARAMIE FOX HILLS	Municipal		DAVENPORT, DEVL	
0257485A	28814-M	Permit Issued	39.978725	-104.848137	1045.14	NE	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		RIVERDALE, SAND	
0257485B	28815-M	Permit Issued	39.98039	-104.846489	354.30	N	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		RIVERDALE, SAND	
0278387A	11406-AD	Application Denied	39.943464	-104.810647	45.56	N	0	0	ALL UNNAMED AQUIFERS	Municipal		THIRD CREEK ASSOCIATES	

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Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
0278387D	11409-AD	Application Denied	39.943733	-104.815067	60.89	S	0	0	ALL UNNAMED AQUIFERS	Municipal		THIRD CREEK ASSOCIATES	
0279039B	50990--A	Well Constructed	39.93896	-104.85692	1243.76	NE	400	60	LOWER ARAPAHOE	Household use only		DEARDORFF DENNIS & DEBRA	
0285028A	51-G	Well Constructed	39.971548	-104.956547	1289.16	NW	200	0	ALL UNNAMED AQUIFERS	Geothermal		CAMPBELL, TOM	
0285028B	50-G	Well Constructed	39.996318	-104.942174	549.45	E	200	0	ALL UNNAMED AQUIFERS	Geothermal		LOWE, DONALD	
0291881A	152309-	Well Constructed	39.943164	-104.828263	7.97	N	0	0	ALL UNNAMED AQUIFERS	Domestic		FULTON IRRIG DITCH CO	
0291881B	152309--A	Well Constructed	39.943137	-104.828281	17.85	N	460	182	LOWER ARAPAHOE	Domestic		FULTON IRRIG DITCH CO	
0311998A	156931-	Well Constructed	39.943713	-104.828333	78.26	SW	0	0	ALL UNNAMED AQUIFERS	Domestic		WHITEBREAD, DONALD H	
0311998B	156931--A	Well Constructed	39.943903	-104.828297	139.21	SW	480	190	ALL UNNAMED AQUIFERS	Domestic		WHITEBREAD, DONALD H	
0312623B	12145-AD	Application Denied	39.944677	-104.851025	471.09	S	0	0	ALL UNNAMED AQUIFERS	Municipal		CARLSON ASSOC	
0312623D	12147-AD	Application Denied	39.953886	-104.862547	1022.70	SW	0	0	ALL UNNAMED AQUIFERS	Municipal		CARLSON ASSOC	
0313633A	37205-F	Permit Expired	39.94594	-104.855677	14.80	SW	0	0	ARAPAHOE	Municipal		CARLSON ASSOCIATES INC	
0313633B	37206-F	Permit Expired	39.944569	-104.850845	431.50	S	0	0	ARAPAHOE	Municipal		CARLSON ASSOCIATES INC	
0313633E	37209-F	Permit Expired	39.946021	-104.855821	7.71	SW	0	0	LARAMIE FOX HILLS	Municipal		CARLSON ASSOCIATES INC	
0313633F	37210-F	Permit Expired	39.94465	-104.850954	461.16	S	0	0	LARAMIE FOX HILLS	Municipal		CARLSON ASSOCIATES INC	
0314035A	12161-AD	Application Denied	39.946785	-104.807914	1160.18	S	0	0	ALL UNNAMED AQUIFERS	Municipal		THIRD CREEK ASSOCIATES	
0314035C	12163-AD	Application Denied	39.946948	-104.813536	1229.22	S	0	0	ALL UNNAMED AQUIFERS	Municipal		THIRD CREEK ASSOCIATES	
0315574B		Application Information Requested	39.943394	-104.858269	960.99	E	0	0	ALL UNNAMED AQUIFERS	Other		ALBERT FREI & SONS	
0327806A	161304-	Well Abandoned	39.942477	-104.815219	396.16	N	39	0	ALL UNNAMED AQUIFERS	Domestic		MONHOLLIN MARY LOU	1991-08-08
0327806B	161304--A	Well Constructed	39.942477	-104.815219	396.16	N	60	15	ALL UNNAMED AQUIFERS	Domestic		EVANS-LOMBE C S & MARCIA	
0330432B	41222-F	Permit Expired	39.993134	-104.845383	804.39	E	0	0	ALL UNNAMED AQUIFERS	Commercial	Industrial	ROGERS, JACK	
0376420J	184088-	Well Constructed	39.949682	-104.882109	1239.60	NW	1140	521	LARAMIE FOX HILLS	Domestic	Stock	TROSTEL, JUSTIN	
0376420K	184089-	Permit Expired	39.949674	-104.883179	1098.98	NW	0	0	LARAMIE FOX HILLS	Domestic	Stock	CARLSON LEE S TRUSTEE	
0391877A	45804-F	Well Constructed	39.943481	-104.83238	50.91	NE	46	22	ALL UNNAMED AQUIFERS	Irrigation		CONSOLIDATED NURSERY PROPERTIES	
0396892A		Application Information Requested	39.941689	-104.850327	1306.67	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DURLAND, BONNIE M	
0396892B		Application Information Requested	39.941689	-104.850327	1306.67	N	0	0	ALL UNNAMED AQUIFERS	Domestic		DURLAND, BONNIE M	
0397841A	194372-	Well Constructed	39.986324	-104.846178	754.87	NE	150	0	ALL UNNAMED AQUIFERS	Domestic		DONOVAN, GAIL	
0397841B	194372--A	Well Constructed	39.986324	-104.846178	754.87	NE	150	60	ALL UNNAMED AQUIFERS	Domestic	Stock	N E W S LLC	
0411731A	201932-	Well Constructed	39.994528	-104.837083	1072.15	W	0	0	QUATERNARY ALLUVIUM	Domestic		STOUGH, DONALD D	
0411731B	201932--A	Permit Canceled	39.994515	-104.837083	1071.12	W	35	11	ALL UNNAMED AQUIFERS	Domestic	Stock	STOUGH, DONALD D	
0414202A	204220-	Well Constructed	39.992064	-104.837075	1246.70	NW	15	0	ALL UNNAMED AQUIFERS	Domestic		GETZ RICHARD LEE	
0414202B	204220--A	Well Constructed	39.992064	-104.837075	1246.70	NW	38	10	ALL UNNAMED AQUIFERS	Domestic		GETZ RICHARD LEE	
0414237A	204221-	Well Constructed	39.992064	-104.837075	1246.70	NW	15	0	ALL UNNAMED AQUIFERS	Domestic		MORRISON DAVID L & PENELOPE E	
0414237B	204221--A	Well Constructed	39.992064	-104.837075	1246.70	NW	35	10	ALL UNNAMED AQUIFERS	Domestic		MORRISON DAVID L & PENELOPE E	
0431554A	98241-VE	Well Constructed	40.000021	-104.841445	742.31	W	30	12	ALL UNNAMED AQUIFERS	Domestic		HOOD, BESSIE	
0434690A	98404-VE	Well Constructed	39.943014	-104.836648	198.67	N	440	50	ALL UNNAMED AQUIFERS	Domestic		FIKE, GERTRUDE L	
0436004A	213814-	Well Abandoned	39.940501	-104.816462	1114.24	N	50	0	ALL UNNAMED AQUIFERS	Domestic		LIVINGSTON COY & SHARON	1998-11-21
0436004B	213814--A	Well Constructed	39.940501	-104.816462	1114.24	N	50	0	ALL UNNAMED AQUIFERS	Domestic		LIVINGSTON COY & SHARON	
0464335A	54358-F	Permit Canceled	39.953868	-104.866365	581.60	S	1058	197	LARAMIE FOX HILLS	Municipal		TODD CREEK FARMS METRO DIST #1	

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0464335B	54359-F	Permit Canceled	39.954955	-104.871691	1037.56	S	1086	164	LARAMIE FOX HILLS	Municipal		TODD CREEK FARMS METRO DIST #1	
0470601A		Application Information Requested	39.989517	-104.920181	616.10	S	0	0	LARAMIE FOX HILLS	Commercial	Industrial	TODD CREEK FARMS METRO DIST #1	
0470601B	55501-F	Permit Issued	39.989106	-104.906877	1046.06	E	0	0	LARAMIE FOX HILLS	Commercial	Industrial	EAGLE SHADOW LLC	
0494789A	242123-	Well Constructed	39.943047	-104.814216	189.92	N	29	0	ALL UNNAMED AQUIFERS	Domestic		LEE TOM & JAYME	
0494789B	242123--A	Well Constructed	39.943047	-104.814216	189.92	N	60	30	ALL UNNAMED AQUIFERS	Domestic		LEE TOM & JAYME	
0498329B	59156-F	Permit Issued	39.957593	-104.903018	102.13	SE	0	0	ARAPAHOE	Municipal		TODD CREEK FARMS METRO DIST NO 1	
0505828A	249191--A	Well Constructed	39.942934	-104.820154	228.39	N	45	23	ALL UNNAMED AQUIFERS	Irrigation		SCHISSLER, JOHN E	
0518460A	254533-	Well Constructed	39.999853	-104.861209	231.35	N	850	0	DENVER	Domestic	Stock	WEBB, PHYLLIS	
0518460B	254533--A	Well Constructed	39.999852	-104.861387	231.66	N	980	540	LARAMIE FOX HILLS	Domestic	Stock	WEBB, PHYLLIS	
0520818A	60888-F	Well Constructed	39.954955	-104.871691	1037.56	S	1100	650	LARAMIE FOX HILLS			TODD CREEK FARMS METRO DISTRICT NO 1	
0520818B	60889-F	Well Constructed	39.953868	-104.866365	581.60	S	1100	400	LARAMIE FOX HILLS	Municipal		TODD CREEK FARMS METRO DISTRICT NO 1	
0520865A	255535-	Well Constructed	39.98765	-104.844052	14.71	E	15	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865B	255536-	Well Constructed	39.990671	-104.842902	37.12	W	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865C	255537-	Well Constructed	39.992954	-104.842451	134.11	E	14	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865D	255538-	Well Constructed	39.993978	-104.839794	289.73	W	34	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865E	255540-	Well Constructed	39.993848	-104.836987	1075.20	W	35	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865L	255547-	Well Constructed	39.987173	-104.837758	1222.88	W	31	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865M	255548-	Well Constructed	39.986723	-104.841678	123.96	W	30	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865P	255551-	Well Constructed	39.984583	-104.841402	209.66	W	30	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0520865Q	255552-	Well Constructed	39.985271	-104.840436	475.15	W	35	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
0521509A		Application Withdrawn	39.956848	-104.871689	1037.33	S	0	0	LARAMIE FOX HILLS	Other		TODD CREEK FARMS METRO DISTRICT NO 1	
0521509B		Application Withdrawn	39.955761	-104.866364	582.95	S	0	0	LARAMIE FOX HILLS	Other		TODD CREEK FARMS METRO DISTRICT NO 1	
0521545A	255945-	Well Abandoned	39.942449	-104.808975	420.05	N	60	0	ALL UNNAMED AQUIFERS	Domestic		LORSHBOUGH, ELDON E	2004-04-17
0521545B	255945--A	Well Constructed	39.942436	-104.80935	423.69	N	60	40	ALL UNNAMED AQUIFERS	Domestic		LORSHBOUGH, ELDON E	
0523709B	257784-	Well Abandoned	39.947101	-104.808364	1274.01	S	42	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THF PRAIRIE CENTER DEVELOPMENT LLC	2006-02-22
0523709D	257786-	Well Constructed	39.947001	-104.81293	1247.62	S	50	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THF PRAIRIE CENTER DEVELOPMENT LLC	
0525496A	257418-	Well Constructed	39.942353	-104.816896	439.33	N	45	0	ALL UNNAMED AQUIFERS	Fire	Irrigation	DROZD, KENNETH J	
0525496B	257418--A	Well Constructed	39.942353	-104.816896	439.33	N	45	25	ALL UNNAMED AQUIFERS	Fire	Irrigation	DROZD, KENNETH J	
0528704A	259502-	Well Constructed	39.952358	-104.865819	62.68	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0531485A	260252-	Well Constructed	39.954699	-104.864872	949.73	S	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		THORNTON CITY OF	
0536010A	262132--A	Well Constructed	39.984636	-104.841579	159.76	W	30	10	ALL UNNAMED AQUIFERS	Domestic		BLOOM JACK & KATHY	
0536010B	262132-	Well Abandoned	39.984636	-104.841579	159.76	W	26	0	ALL UNNAMED AQUIFERS	Domestic		BLOOM JACK & KATHY	2005-04-25

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0540685A		Application Information Requested	39.943077	-104.826126	721.70	N	0	0	LARAMIE FOX HILLS	Domestic		DOLIFKA, PAUL	
0540685B	266884-	Permit Issued	39.941203	-104.816439	858.71	N	0	0	LARAMIE FOX HILLS	Domestic		DOLIFKA, PAUL	
3404470D	34-GX	NA	39.98334	-104.93652	126.70	E	8	0	ALL UNNAMED AQUIFERS	Geothermal		CARL, CHARLIE	
3404470E	34-GX	NA	39.98285	-104.93781	487.89	E	8	0	ALL UNNAMED AQUIFERS	Geothermal		LOMBARDI, GEORGE	
3602914A	269236-	Well Abandoned	39.943134	-104.815405	156.68	N	36	0	ALL UNNAMED AQUIFERS	Domestic		KNAGO, CLAUDIA J	2006-09-22
3602914B	269236--A	Well Constructed	39.943134	-104.815405	156.68	N	60	39	ALL UNNAMED AQUIFERS	Domestic		AUSTIN, NATHAN D.	
3605512A	269617-	Well Abandoned	39.942939	-104.817758	225.73	N	0	0	ARAPAHOE	Irrigation		MOONEY JOAN & TROY	2006-07-17
3605512B	269617--A	Well Constructed	39.942939	-104.817758	225.73	N	45	29	ALL UNNAMED AQUIFERS	Irrigation		MOONEY JOAN & TROY	
3607290A	270494-	Well Constructed	39.99013	-104.83996	877.08	W	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AURORA CITY OF	
3609856A	5-GX	NA	39.95822	-104.88226	1193.07	SW	185	0	ALL UNNAMED AQUIFERS	Geothermal		OETKEN, DARREN	
3610916B	271579-	Well Constructed	39.99112	-104.84287	10.99	E	20	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		AGGREGATE INDUSTRIES WCR INC	
3612756A	272579-	Well Constructed	39.98736	-104.84021	537.35	W	30	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		AURORA CITY OF	
3622210D	275701-	Well Constructed	39.9634	-104.9213	913.83	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3622210E	275702-	Well Constructed	39.96324	-104.92108	931.88	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3622210F	275703-	Well Constructed	39.9635	-104.92099	836.95	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3622210G	275704-	Well Constructed	39.96338	-104.92092	865.39	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3622210H	275705-	Well Constructed	39.9636	-104.9207	765.88	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3622210I	275706-	Well Constructed	39.96327	-104.92071	871.19	NE	25	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		PLATEAU 470 LLC	
3630545A	277950-	Well Constructed	39.94241	-104.84288	409.85	N	350	150	LOWER ARAPAHOE	Monitoring/Sampling		JRE 85 LLC	
3630545B	277951-	Permit Canceled	39.94107	-104.84421	894.42	N	442	150	LOWER ARAPAHOE	Monitoring/Sampling		JRE 85 LLC	
3633824A	67745-F	Well Constructed	39.94237	-104.84303	425.97	N	350	132	LOWER ARAPAHOE	Commercial	Industrial	JRE 85 LLC	
3633824B	67746-F	Well Constructed	39.941048	-104.844298	905.75	N	442	127	LOWER ARAPAHOE	Commercial	Industrial	JRE 85 LLC	
3647173D	283956-	Well Constructed	39.953967	-104.863331	918.43	SW	0	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		THORNTON CITY OF/INFRA MAINT DEPT	
3647988A	284602-	Well Constructed	39.943237	-104.856411	609.61	SE	35	16	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
3647988B	284603-	Well Constructed	39.943257	-104.854696	232.92	SE	25	9	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
3647988C	284604-	Well Constructed	39.939291	-104.853635	1048.19	NW	41	20	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
3647988D	284605-	Well Constructed	39.939299	-104.856176	1045.94	NE	35	22	QUATERNARY ALLUVIUM	Monitoring/Sampling		ALBERT FREI & SONS	
3670441B	299128-	Well Constructed	39.980885	-104.839278	929.54	NW	0	0	ALL UNNAMED AQUIFERS	Monitoring/Sampling		WESTERN SUMMIT CONSTRUCTORS INC	
3691379A	83289-F	Permit Issued	39.950669	-104.872501	541.72	N	0	0	LOWER ARAPAHOE	Domestic		CLEVELAND, CHERYL L.	
3696569A	316513-	Well Constructed	39.993278	-104.844226	501.08	NE	21	0	QUATERNARY ALLUVIUM	Monitoring/Sampling		CITY OF AURORA	
3696569B	316514-	Well Constructed	39.993051	-104.84295	272.32	E	26	8	QUATERNARY ALLUVIUM	Monitoring/Sampling		CITY OF AURORA	

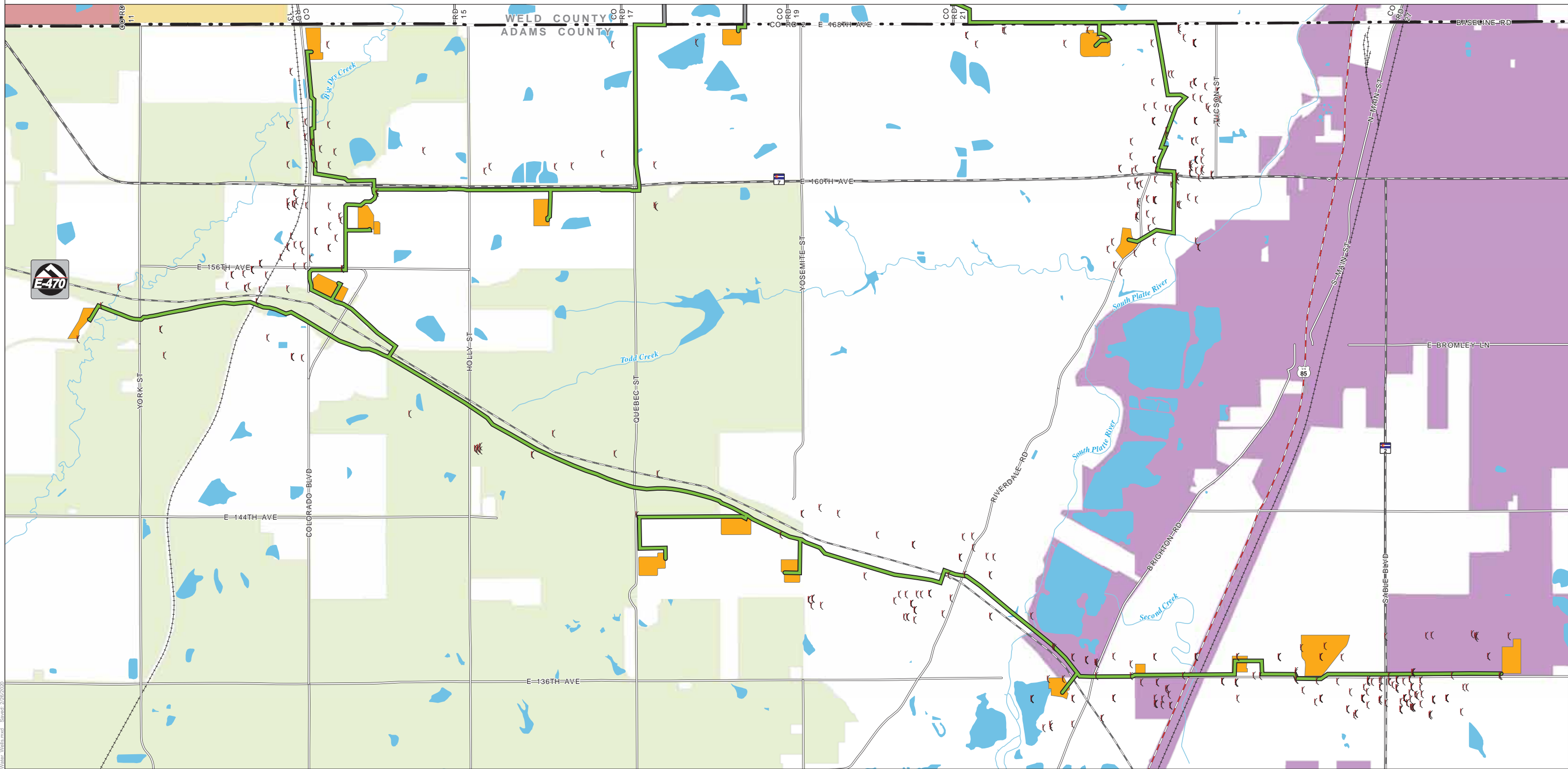
Well Receipt ID	Well Permit ID	Well Permit Status	Latitude	Longitude	Approximate Distance and from Project (feet)	Approximate Direction from Project	Total Depth (feet bgs)	Water Level (feet bgs)	Aquifer	Well Use 1	Well Use 2	Permit Applicant Name	Date of Well Plugging (if Applicable)
9001213A	9157-	Well Abandoned	39.9415	-104.81601	749.50	N	202	55	ALL UNNAMED AQUIFERS	Domestic		JACKSON, ART	1976-06-07
9002673A	20989-R	Well Constructed	39.99193	-104.83962	738.92	W	30	6	ALL UNNAMED AQUIFERS	Irrigation		SELTZER, CARL C	
C010010	10-WCB	Well Constructed	39.993608	-104.837244	1008.92	W	26	0	ALL UNNAMED AQUIFERS			HOOD, ERVIN L	
C010071	71-WCB	Well Constructed	39.941519	-104.834936	755.11	N	58	0	ALL UNNAMED AQUIFERS	Irrigation		OKADA EDDIE & HELEN	
C010254	254-WCB	Well Constructed	39.94517	-104.83964	589.34	S	43	21	ALL UNNAMED AQUIFERS	Irrigation		SHARP ERNEST JR	
C010514	514-WCB	Well Constructed	39.941559	-104.844309	717.06	N	34	22	ALL UNNAMED AQUIFERS	Domestic		SMITH, L M	
C010571	571-WCB	Well Constructed	39.99192	-104.844396	513.52	E	30	0	ALL UNNAMED AQUIFERS	Irrigation		CARLSON VICTOR SELTZER C	
C010574	574-WCB	Well Constructed	39.964719	-104.912433	704.61	SW	34	0	ALL UNNAMED AQUIFERS			DARRAS, LEON	
C010664	664-WCB	Well Constructed	39.94513	-104.83025	563.61	S	45	26	ALL UNNAMED AQUIFERS	Irrigation		WHITEHEAD & JOHNSON	
C010676	676-WCB	Well Constructed	39.94517	-104.83964	589.34	S	38	23	ALL UNNAMED AQUIFERS	Domestic		SHARP, ERNEST	
C010692	692-WCB	Well Constructed	39.988088	-104.9103	776.29	S	126	0	ALL UNNAMED AQUIFERS	Stock		HARRISON, BEVERLY	





# PIONEER PRODUCED WATER PIPELINE PROJECT

Figure I-1: Adams County Water Wells Map



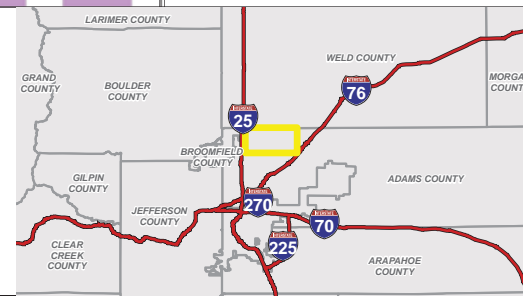
- Project Features**
- Pioneer Produced Water Pipeline (Adams County)
  - Pioneer Produced Water Pipeline (Weld County)
  - Oil and Gas Production Facility

- Transportation**
- Interstate
  - U.S. Highway
  - Major Local Road
  - Railroad

- Boundary**
- Brighton
  - Broomfield
  - Northglenn
  - Thornton
  - County Boundary

- Wells**
- Water Well\*

0 0.5 1 Miles  
Scale is 1:18,000 when printed at 22x34  
NOT FOR CONSTRUCTION



The route shown in this figure is a graphical representation and may not show exact locations. The pipeline alignment is subject to change based on final engineering.

\*Water well data retrieved 02/23/2020; only wells within 1/4 mile of route are displayed

Sources: CDOT 2015, US Census 2019, BTS 2019, NHD 2019, CDSS 2020

