

Programmatic Wetland Finding

20992: Iliff Avenue Corridor Design Project

July 29, 2020

This wetland finding has been written in compliance with Executive Order 11990, "Protection of Wetlands" and in accordance with 23 CFR 771, 23 CFR777, and Technical Advisory T6640.8A

Project Description and Location

The Iliff Avenue Corridor Design Project (CDOT Project Number STU C100-038, Subaccount 20992) is an Arapahoe County local agency project with CDOT oversight as a result of project including federal funding. This project will construct operational and multimodal improvements on Iliff Avenue from Parker Road to Quebec Street. The project is primarily located in Arapahoe County with small portions at each end of the project located in the City and County of Denver and the City of Aurora. The project is located approximately 8 miles southeast of downtown Denver in Township 4 South, Range 67 West. This project will construct operational and multimodal improvements on East Iliff Avenue from South Parker Road to South Quebec Street. The project elements include the addition of:

- On-street bicycle lanes in each direction between South Rosemary Street and South Dayton Way
- Separate eight-foot-wide pedestrian and bicycle paths (which widen to a 10-foot width where there are currently no on-street bicycle lanes)
- Turn (deceleration) and acceleration lanes at several intersections. These deceleration lanes are dedicated right-turn lanes and do not allow for through movements at any of the intersections. They will be signed and striped for "right-turn" only
- Signal timing to accommodate bus queue jumps at several intersections
- Bridge widening (East Iliff Avenue) over Cherry Creek to accommodate new on-street facilities
- Drainage upgrades and water quality improvements along the corridor and adjacent to Cherry Creek and the High Line Canal
- Improved medians and crosswalks
- Improved bus pads
- Bicycle counters
- Improved traffic signal interconnection
- Access consolidation strategies

Additional minor improvements will be constructed along South Parker Road and South Quebec Street both to the north and to the south of East Iliff Avenue to accommodate the improvements at each of these intersections.

In order to accommodate these improvements, numerous temporary and permanent easements will be required for the project. Additional public right-of-way (ROW) may also need to be acquired at specific locations.

Wetland Summary

A delineation of wetlands and other waters of the U.S. was performed on August 12, 2016, and subsequently verified on September 25, 2017 and May 6, 2020. The delineation was performed within the project area which encompasses all potential limits of disturbance for the project. Two wetland areas (WL-1 and WL-2) were identified within the study area in association with Cherry Creek and the High Line Canal.

WL-1 is located just south of the Iliff Avenue bridge structure over Cherry Creek. WL-1 was observed to be a palustrine scrub-shrub wetland (PSS) dominated by facultative wetland (FACW) coyote willow (*Salix exigua*) in the sapling/shrub stratum, and FACW reed canary grass (*Phalaris arundinacea*) in the herbaceous stratum. Hydrology for this wetland is provided by Cherry Creek. Primary wetland hydrology indicators observed were saturation (A3) and hydrogen sulfide odor (C1). Secondary wetland hydrology indicators observed were drainage patterns (B10) and geomorphic position (D2). The hydric soil indicator observed was thick dark surface (A12). Sampling point 1 (CCS-1) was completed in WL-1.

WL-2 is located in High Line Canal and was observed to be a palustrine emergent (PEM) wetland dominated by plains cottonwood (*Populus deltoides*) in the tree stratum, and obligate (OBL) softstem bulrush (*Schoenoplectus tabernaemontani*) in the herbaceous stratum. Hydrology for this wetland is provided by the High Line Canal. Primary wetland hydrology indicators observed were saturation (A3) and hydrogen sulfide odor (C1). The hydric soil indicator observed was hydrogen sulfide (A4). Sampling point 3 (HC-1) was completed in WL-2. Part of the wetland lacked vegetation due to the presence of a man-made structure.

FACWet was not completed for WL-1 and WL-2 because the project's permanent impacts do not meet the 0.10 acre threshold for requiring the analysis.

Wetland Impacts

The project results in 0.013 acre (547 sq-ft) of permanent impacts to WL-2. Permanent impacts are from placement of fill material and construction of an extension and wingwalls for the box culvert under Iliff Avenue to accommodate widening for roadway and pedestrian improvements. There are no temporary wetland impacts.

The project activities and resulting wetland impacts meet the conditions for authorization under Nationwide Permit 14. A Preconstruction Notification is required.

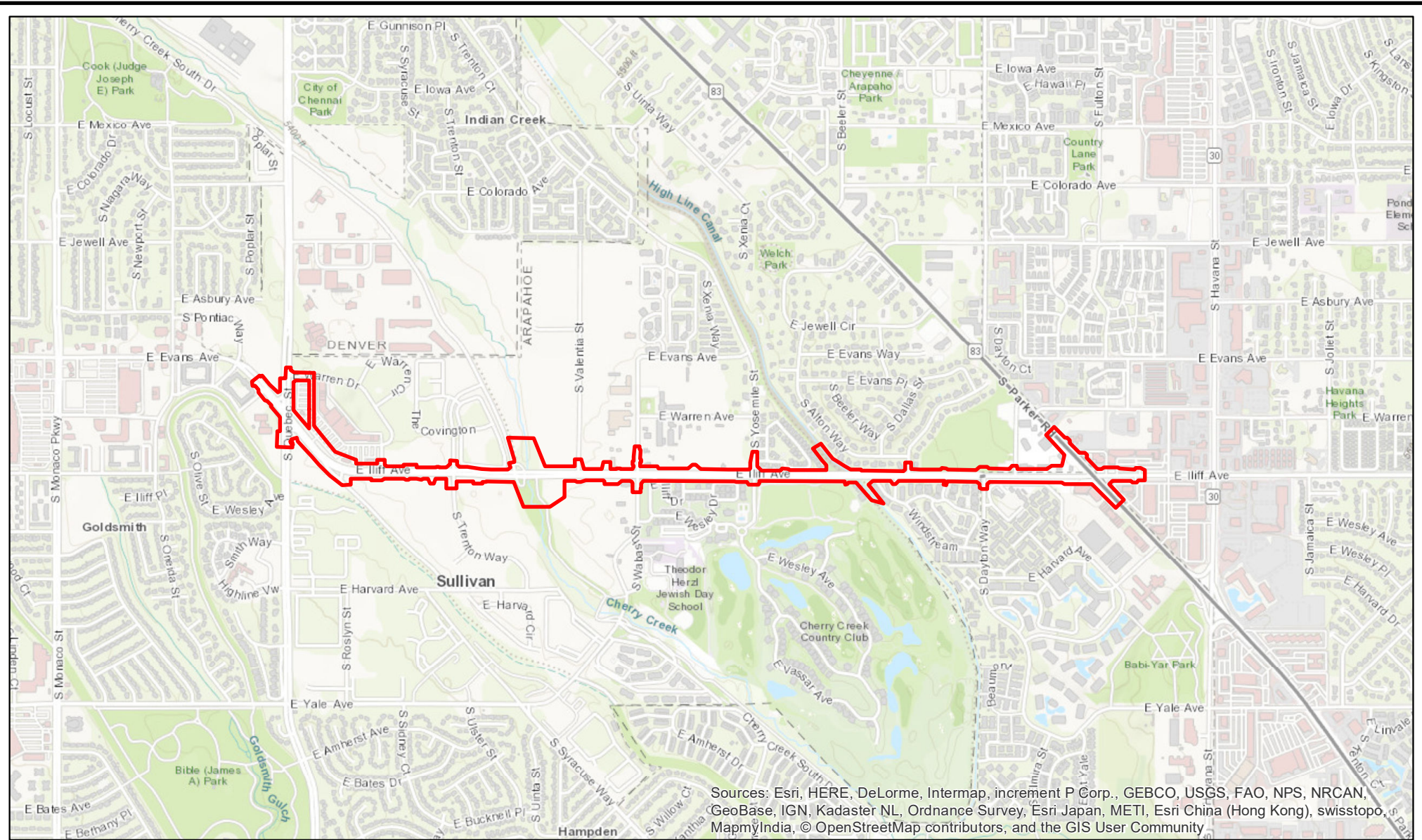
Wetland Mitigation

Prior to implementing compensatory wetland mitigation, impacts must be avoided and minimized to the maximum extent practicable. During design, impacts to WL-1 were avoided. At WL-2, no practicable alternative existed for avoiding impacts entirely, but impact minimization was achieved by widening to only one side of Iliff Avenue, and avoiding wetland impacts to the south.

The 2008 Mitigation Rule establishes a preference for the use of mitigation bank credits, which reduces some of the risks and uncertainties associated with compensatory mitigation. Furthermore, opportunities for onsite mitigation are limited due to the constrained nature of the High Line Canal in the vicinity of the wetland impacts; High Line Canal is located between a bike path to the west and a near vertical embankment and private properties to the east. Bank credits are the preferred source of compensatory mitigation for this project. Based on a review of the USACE's Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS), wetland bank credits are available from the Big Thompson Confluence Bank, whose service area encompasses the project. Arapahoe County commits to purchasing bank credits for the Iliff Avenue Corridor Design Project.

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands. The proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

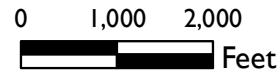
Attached Figures: Project Location, Cherry Creek Impacts, High Line Canal and Wetland Impacts



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

 Study Area



Pinyon
Environmental, Inc.

PROJECT LOCATION
Iiff Avenue Corridor Design
Arapahoe and Denver Counties, Colorado

Drawn By: JAF	Figure: I
Reviewed By: CAT	Date: 11/8/2017

Site Location: Sections 27 & 28, Township 4S, Range 67W, 6th Principal Meridian

Pinyon Project Number: I/16-665-03.8300

P:\A\ARPC000000\10\0400CAD\BASES\Environmental\C15002_BRG_Model_APCO_5.26.2020.dwg




Temporary Impacts		
Impact	SF	Acre
Open Water	4915	0.112

Legend

- Open Water
- Temporary Impacts
- Permanent Impacts
- Limits of Disturbance

Print Date: 6/15/2020 10:04 AM
 Drawing File Name: C15002_BRG_Model_APCO_5.26.2020.dwg
 Horiz. Scale: 1" = 45' Vert. Scale:



DAVID EVANS AND ASSOCIATES INC.
 1600 Broadway, Suite 800
 Denver Colorado 80202
 Phone: 720.946.0969

Sheet Revisions		
Date:	Comments	Init.



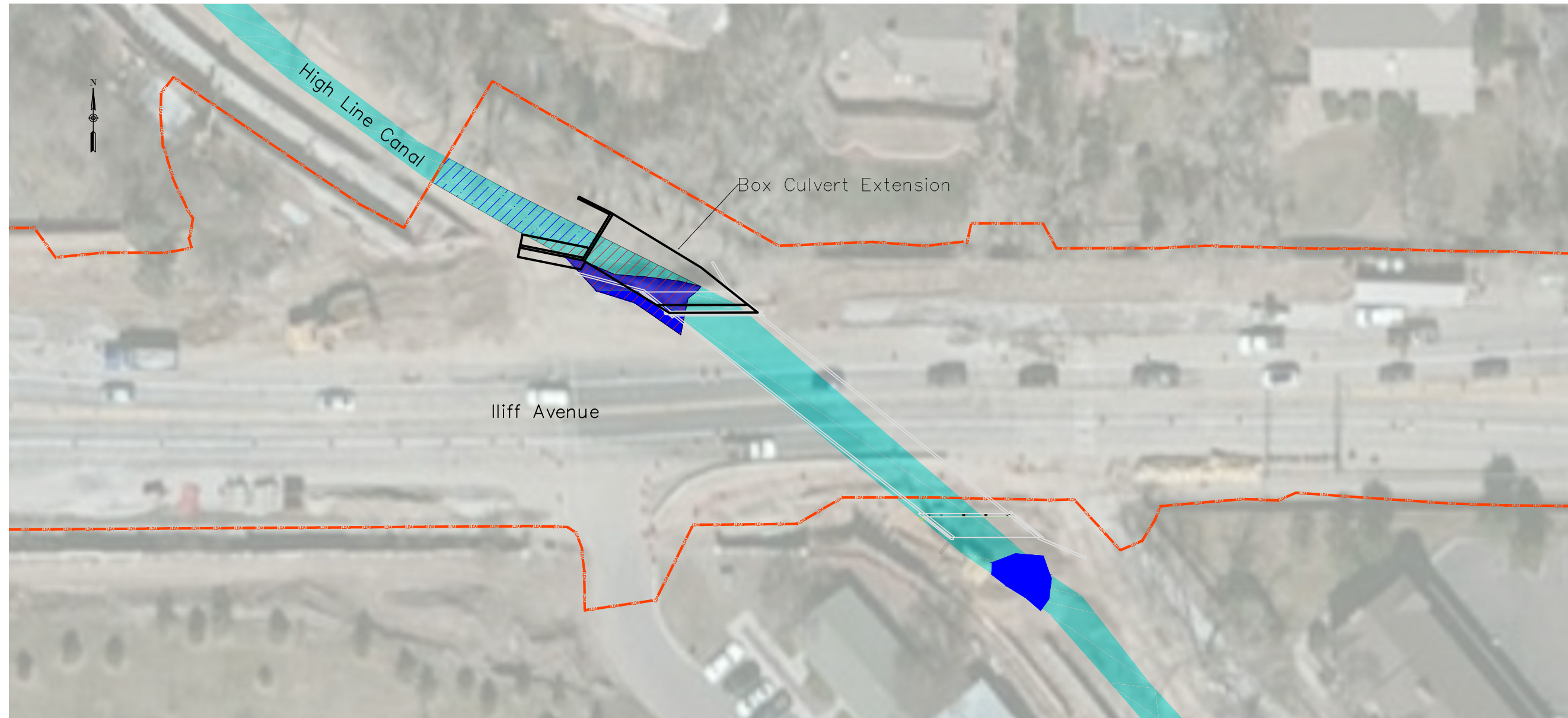
Arapahoe County
 Colorado's First

DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT ENGINEERING DIVISION
 6924 S. Lima St.
 Centennial, CO 80112
 720-874-6500

As Constructed
No Revisions:
Revised:
Void:

ILIFF AVE (QUEBEC ST to PARKER RD)			
CHERRY CREEK IMPACTS			
Designer: M. Gloden	Structure Numbers	ARA 20-8.5A	Sheet
Detailer: A. Cohen	Subset Sheets:		
Sheet Subset: ENV			

Project No./Code
STU C100-038
20992



Temporary Impacts		
Impact	SF	Acre
Open Water	730	0.017


Permanent Impacts		
Impact	SF	Acre
Open Water	396	0.009
Wetland	547	0.013

Legend

- Open Water
- Wetlands
- Temporary Impacts
- Permanent Impacts
- Limits of Disturbance

P:\A\ARPC000000\0400CAD\BASES\Environmental\C15002_BRG_Model_APCO_5.26.2020.dwg

Print Date: 6/15/2020 10:25 AM
 Drawing File Name: C15002_BRG_Model_APCO_5.26.2020.dwg
 Horiz. Scale: 1" = 45' Vert. Scale:



DAVID EVANS AND ASSOCIATES INC.
 1600 Broadway, Suite 800
 Denver Colorado 80202
 Phone: 720.946.0969

Sheet Revisions		
Date:	Comments	Init.



Arapahoe County
Colorado's First

DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT ENGINEERING DIVISION
 6924 S. Lima St.
 Centennial, CO 80112
 720-874-6500

As Constructed
No Revisions:
Revised:
Void:

ILIFF AVE (QUEBEC ST to PARKER RD) HIGH LINE CANAL AND WETLAND IMPACTS			
Designer: M. Gloden	Structure Numbers	ARA 20-9.2	20992
Detailer: A. Cohen		Sheet Subset: ENV	Subset Sheets:

Project No./Code
STU C100-038
20992
Sheet