

Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

**Enclosure 1**  
Original Permit (with Attachments)



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS  
200 SOUTH SANTA FE AVENUE, SUITE 301  
PUEBLO, COLORADO 81003-4270

SIGNED

February 29, 2016

Regulatory Division

SUBJECT: Action No. SPA-2015-00428-SCO, Sterling Ranch Residential Development Project, El Paso County, Colorado

Jim Morley  
SR Land, LLC  
20 Boulder Crescent Suite 201  
Colorado Springs, CO 80903

Mr. Morley:

You are hereby authorized under Section 404 of the Clean Water Act to discharge dredged and fill material into waters of the United States to conduct work in associated with construction of the Sterling Ranch Residential Development in accordance with Action Number SPA-2015-00428-SCO. A copy of the permit is enclosed.

To use this permit, you must ensure that the work is conducted in accordance with the terms and conditions of the permit. You must submit revised drawings to us for approval prior to construction should any changes be found necessary in either the location or plans for the work. Approval of revised plans may be granted if they are found not contrary to the public interest.

This permit is not an approval of the project design features, nor does it imply that the construction is adequate for its intended purpose. This permit does not authorize any injury to property or invasion of rights or any infringement of Federal, state or local laws or regulations. You must possess the authority, including property rights, to undertake the proposed work.

Enclosed is a compliance certification form. Upon completion of the project, please sign and date the form and return it to this office.

If you have any questions concerning our regulatory program, please contact me at 719-543-6915 or by e-mail at [van.a.truan@usace.army.mil](mailto:van.a.truan@usace.army.mil). At your convenience,

please complete a Customer Service Survey at  
<http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Van Truan", with a long horizontal flourish extending to the right.

Van Truan  
Chief, Southern Colorado  
Regulatory Branch

Enclosure(s)

**Certification of Compliance  
with Department of the Army Permit**

Action Number: SPA-2015-00428-SCO

Name of Permittee: SR Land, LLC

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Van Truan  
Albuquerque District, U.S. Army Corps of Engineers  
200 South Santa Fe Avenue, Suite 301  
Pueblo, Colorado 81003-4270

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Please enclose photographs showing the completed project (if available).

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Date Work Started \_\_\_\_\_

Date Work Completed \_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Permittee

## DEPARTMENT OF THE ARMY PERMIT

Permittee Jim Morley

Permit No. SPA-2015-00428-SCO

Issuing Office Albuquerque District, U.S. Army Corps of Engineers

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The Sterling Ranch Residential Development Project includes installation of attendant utilities, channel improvements to the main stem of Sand Creek, three off-line stormwater detention ponds, development of two permanent residential access roads and associated culverts, and development of residential units. Permanent impacts to waters of the US will result from construction of the residential access roads and associated culverts, and construction of residential units in the unnamed western tributary to Sand Creek. Total cumulative permanent impacts from the discharge of fill material into waters/wetlands of the US from the proposed project will total 4.21 acres and 5,048 linear feet within the main channel of Sand Creek and its western tributary. The project will be constructed in accordance with the attached drawings, entitled, "Sterling Ranch Wetland Impact Location Map, Sterling Ranch Sketch Plan figure number 8, and Sterling Ranch Channel Improvements & Mitigation Plan sheets 1 through 3 dated October 13, 2015, in Sand Creek, El Paso County, Colorado, Application by Jim Morley, Application No. SPA-2015-00428-SCO".

**Project Location:** The project is located on 1,443.7 acres northeast of the intersection of Black Forest Road and Woodmen Road in unincorporated El Paso County, Colorado. The property is on the United States Geological Survey (USGS) Falcon Quadrangle on portions of Sections 27, 28, 32, 33, and 34 in Township 12 South, Range 65 West and the northwest portion of Section 4, Township 13 South, Range 65 West. The approximate coordinates of the project center are 39.964483 latitude and -104.664944 longitude (WGS 84 datum).

**Permit Conditions:** In accordance with the attached Colorado Department of Public Health and Environment Section 401 Water Quality Certification pages 1 through 6 of 6, dated February 4, 2016.

### General Conditions:

1. The time limit for completing the work authorized ends on March 1, 2021. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity,

although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

#### Special Conditions:

1. The permittee shall implement and abide by the compensatory mitigation plan titled Conceptual Mitigation Plan for Sterling Ranch Residential Development, prepared by CORE Consultants, Inc. on October 29, 2015 except where changes are necessary to comply with special conditions listed below. The permittee shall implement the mitigation plan concurrently with the construction of the project and complete the initial construction and plantings associated with the mitigation work prior to EITHER the initiation of operation OR completion of construction of the project. Completion of all elements of this mitigation plan is a requirement of this permit.
2. The permittee shall submit annual compensatory mitigation site monitoring reports to the Corps Albuquerque District Office by December 31st of each year, beginning in 2016, for a minimum of 3 years or until the Corps has determined that the mitigation performance standards and success criteria have been met. The monitoring reports shall be prepared in accordance with Corps Regulatory Guidance Letter 08-03 (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources) and current Corps Albuquerque District Mitigation Monitoring Guidelines available at <http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits/Mitigation.aspx>. The mitigation monitoring reports shall at a minimum include the following:
  - a. Comparison of pre-construction site conditions to an as-built survey as submitted in accordance with Special Condition 4.
  - b. A map showing the wetland AND/OR Ordinary High Water Mark (OHWM) delineation, and aerial photos marked to show the wetland AND/OR OHWM boundary.
  - c. Photographs (minimum 5) from fixed photographic monitoring points with a location reference map and indicating camera orientation.

d. All data collected to document whether the mitigation site is achieving performance standards described in the mitigation plan and a narrative discussion of progress made toward meeting performance standards.

e. Fish and wildlife observations at the mitigation site.

f. Summary statement regarding the perceived success of the mitigation project and any potential problem areas. Suggestions and a timetable for corrections should be included if it is anticipated that project goals may not be met.

g. Date(s) of field inspection(s).

3. In order to assist the Corps in scheduling compliance inspections, the permittee shall notify the Corps Albuquerque District Office, in writing, at least 7 calendar days in advance of the initiation of mitigation construction AND no later than 15 calendar days following completion of construction activities.

4. Within 60 days after completion of construction of the mitigation project, the permittee shall submit as-built drawings and a description of the work conducted to the Corps Albuquerque District Office. The drawings shall include the following:

a. The Department of the Army Action Number.

b. A plan view drawing of the location of the authorized work footprint (as shown in permit drawings) with an overlay of the work as constructed in the same scale. The drawing should show all "earth disturbance," wetland impacts, structures, and the boundaries of any on-site and/or off-site mitigation or avoidance areas. The drawings shall contain, at a minimum, 1-foot OR greater topographic contours of the entire site.

c. Ground photographs of the completed work. The camera positions and view-angles of the ground photographs shall be identified on a map, aerial photograph, or project drawing.

d. A description of all deviations between the work as authorized by the permit and the work as constructed. Clearly indicate on the as-built drawings the location of any deviations.

5. Your responsibility to complete the required compensatory mitigation as set forth in Special Condition No. 1 will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers.

#### Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit ~~does~~ not obviate the need to obtain other Federal, state, or local authorizations required by law.

- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. **Limits of Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. **Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 1 establishes a time limit for the completion of the activity authorized by this

permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
\_\_\_\_\_  
(PERMITTEE)

2/23/2016  
\_\_\_\_\_  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

  
\_\_\_\_\_  
(FOR THE DISTRICT ENGINEER)

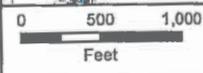
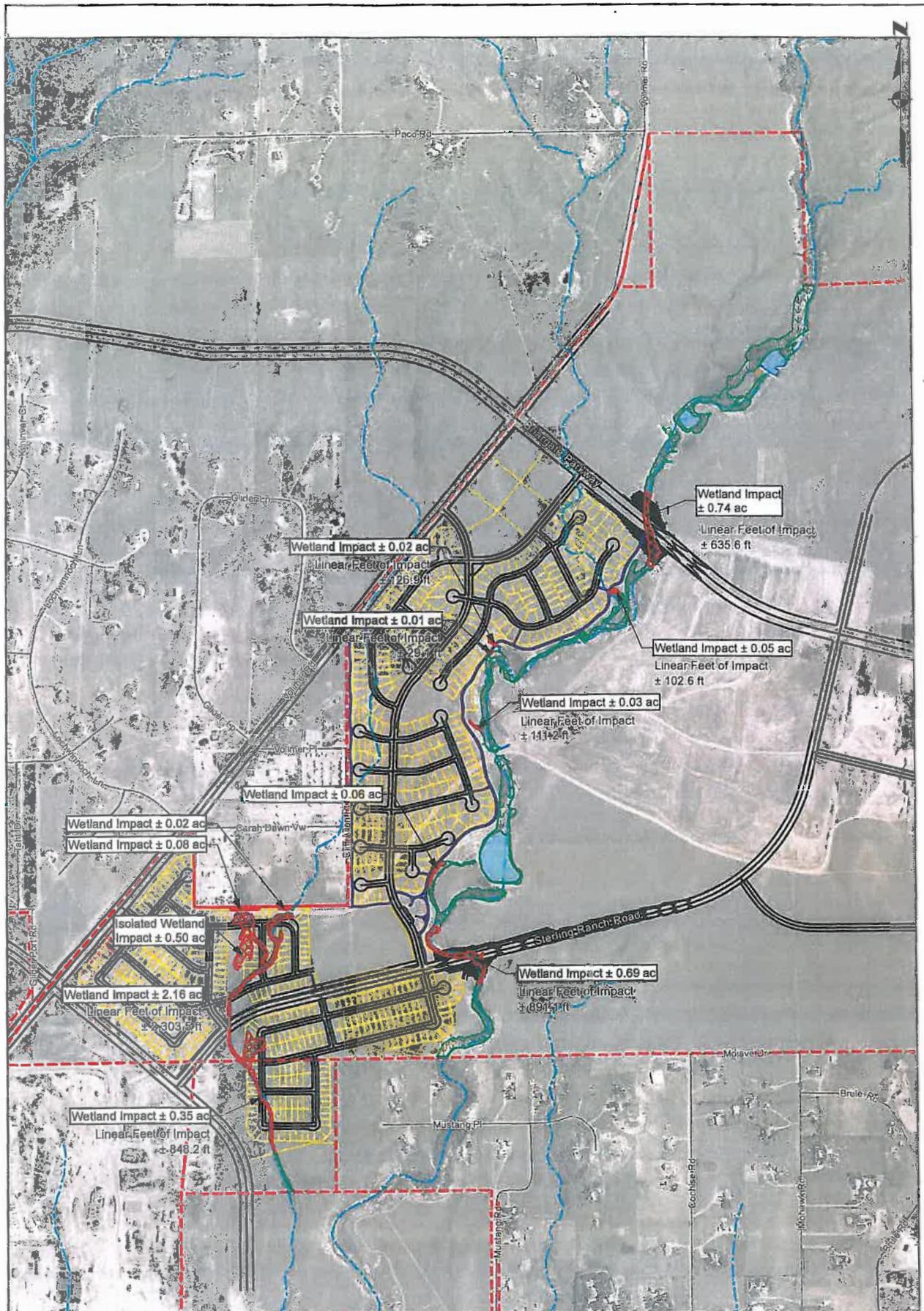
29 Feb 2016  
\_\_\_\_\_  
(DATE)

Patrick J. Dagon  
Lieutenant Colonel, U.S. Army  
District Commander

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFERREE)

\_\_\_\_\_  
(DATE)



- Permanent Impact
- Existing Wetland
- Existing Isolated Wetland
- Pond
- Dry Wash
- NHD Watercourse
- Proposed Road
- Proposed Trail
- Proposed Contour
- Parcel Boundary
- Proposed Lot Lines

**CORE CONSULTANTS**  
 CIVIL ENGINEERING  
 DEVELOPMENT CONSULTING  
 LAND SURVEYS  
 303.703.4444  
 1950 W. Littleton Blvd., Ste. 109  
 Littleton, CO 80120

**Sterling Ranch**  
**Wetland Impact Location Map**  
 El Paso County, Colorado

Date: 10/13/2015  
 Project #: 15-001

**LAND USE LEGEND:**

[White Box]	44 AC. RESIDENTIAL: 0-2 DU/AC,	9 D.U.
[Light Yellow Box]	23 AC. RESIDENTIAL: 0-4 DU/AC,	19 D.U.
[Yellow Box]	35 AC. RESIDENTIAL: 1 DU/AC,	35 D.U.
[Light Orange Box]	163 AC. RESIDENTIAL: 2 DU/AC,	326 D.U.
[Orange Box]	475 AC. RESIDENTIAL: 3-6 DU/AC,	1,000 D.U.
[Dark Orange Box]	101 AC. RESIDENTIAL: 5-8 DU/AC,	606 D.U.
[Red-Orange Box]	267 AC. RESIDENTIAL: 5-8 DU/AC ACTIVE ADULT,	1,642 D.U.
[Red Box]	32 AC. RESIDENTIAL: 6-12 DU/AC,	320 D.U.
[Dark Red Box]	41 AC. RESIDENTIAL: 12-20 DU/AC,	656 D.U.
[Red Box]	36 AC. COMMERCIAL	
[Blue Box]	57 AC. ELEMENTARY / K-8 SCHOOL	
[Green Box]	16 AC. NEIGHBORHOOD PARK	
[Green Box]	30 AC. COMMUNITY PARK	
[Light Green Box]	57 AC. OPEN SPACE / PARK / GREENWAY	
[Light Green Box]	49 AC. OPEN SPACE / BUFFER	
[Blue Box]	2 AC. UTILITY PARCEL	

TOTAL: 1444 AC. TOTAL: 5,407 D.U.

**SYMBOL LEGEND:**

[Solid Line]	ROAD
[Arrow]	FULL MOVEMENT ACCESS POINT
[Dashed Line]	100-YEAR FLOODPLAIN
[Dotted Line]	TRAIL
[Hatched Area]	BUFFER / OS TRAIL CORRIDOR / EASEMENT
[Green Circle]	NEIGHBORHOOD PARK
[Number]	ACCESS SPACING (FEET)

**VICINITY MAP:**

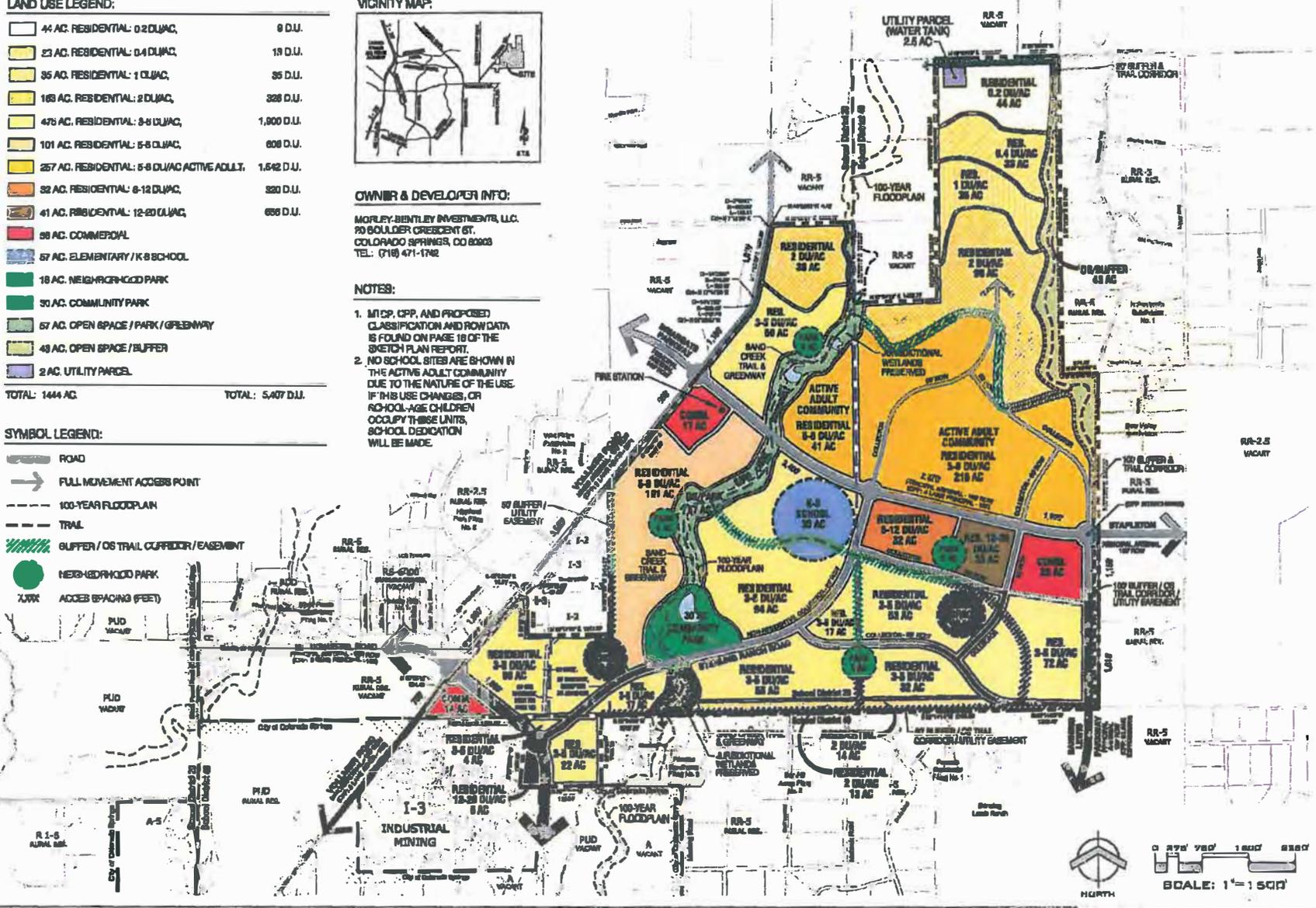


**OWNER & DEVELOPER INFO:**

MORLEY-BENTLEY INVESTMENTS, LLC  
 70 BOULDER CRESCENT ST.  
 COLORADO SPRINGS, CO 80903  
 TEL: (719) 471-1742

**NOTES:**

1. MDP, GPP, AND PROPOSED CLASSIFICATION AND ROW DATA IS FOUND ON PAGE 19 OF THE SKETCH PLAN REPORT.
2. NO SCHOOL SITES ARE SHOWN IN THE ACTIVE ADULT COMMUNITY DUE TO THE NATURE OF THE USE. IF THIS USE CHANGES, OR SCHOOL-AGE CHILDREN OCCUPY THESE UNITS, SCHOOL DEDICATION WILL BE MADE.



**Sterling Ranch  
 SKETCH PLAN**

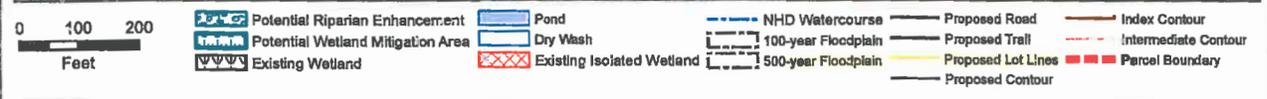
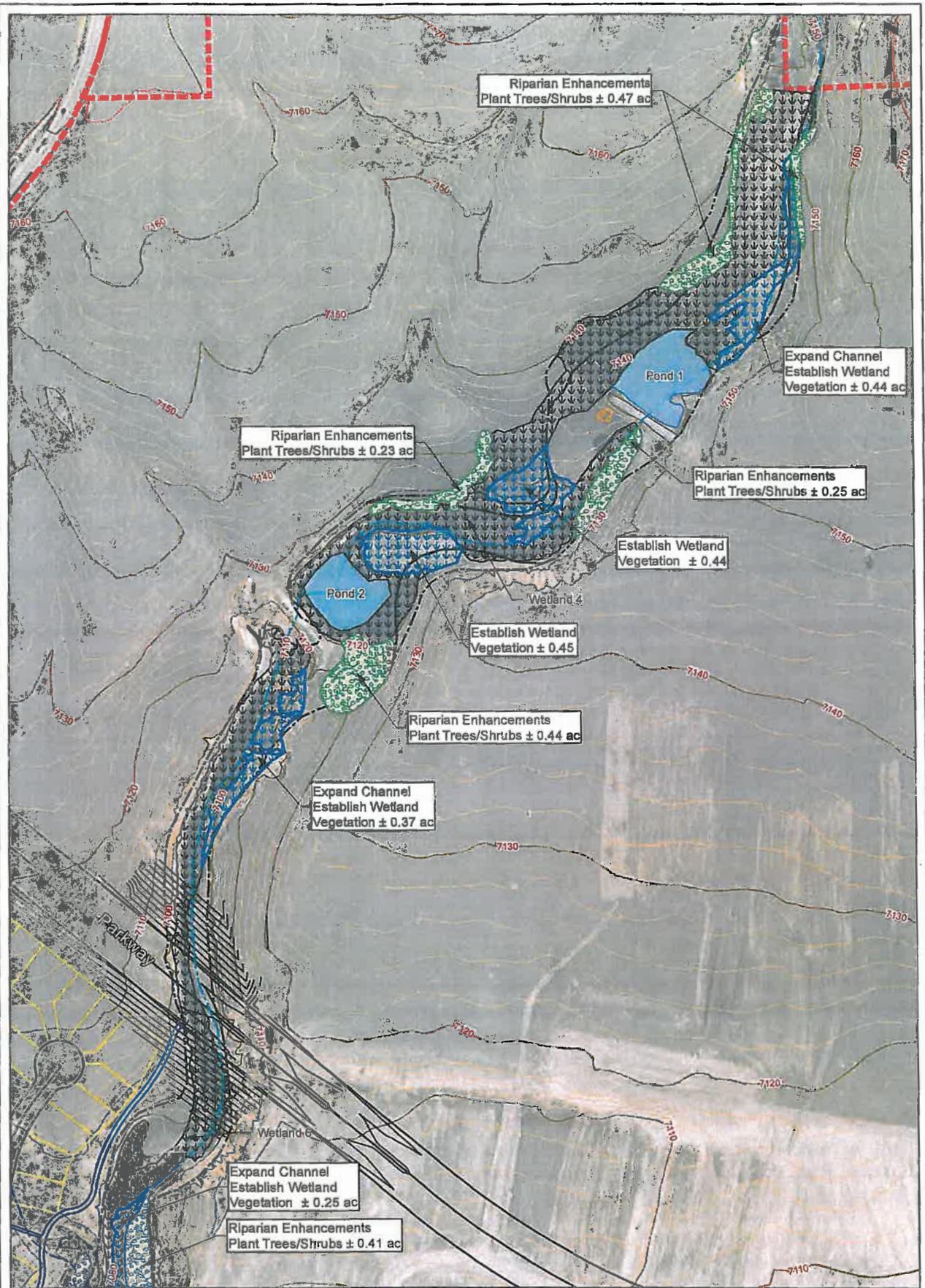
MORLEY-BENTLEY INVESTMENTS, L.L.C.

FIGURE NO.

8 of 30

DATE: 05/15/2008





0 100 200  
Feet

**CORE CONSULTANTS**  
CIVIL ENGINEERING  
DEVELOPMENT CONSULTING  
LAND SURVEYING  
303.703.4444  
1950 W. Littleton Blvd., Ste. 109  
Littleton, CO 80120

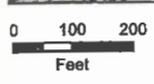
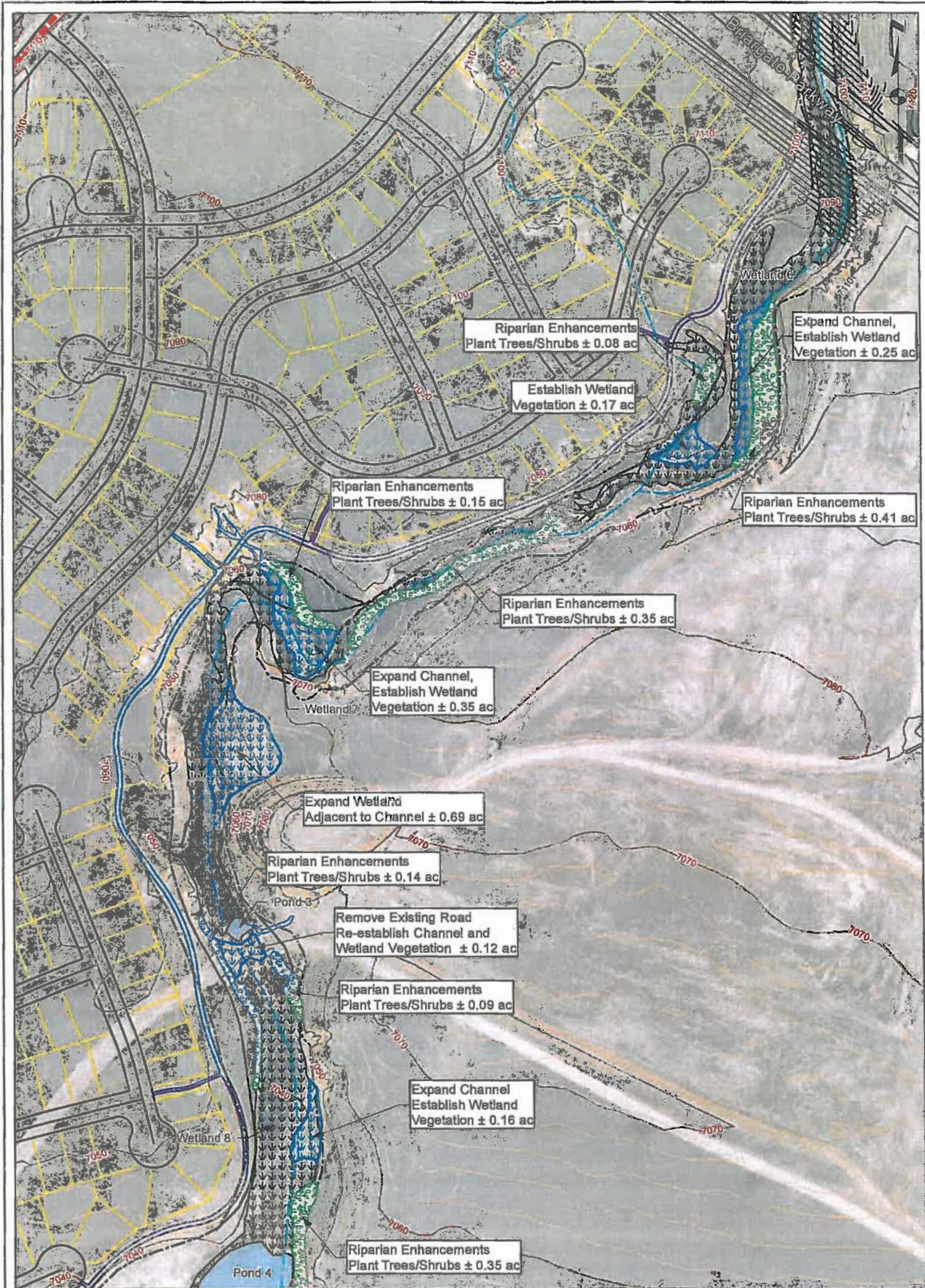
## Sterling Ranch

### Channel Improvements & Mitigation Plan

#### Sheet 1

El Paso County, Colorado

Date: 10/13/2016  
Project #: 15-001



- Potential Riparian Enhancement
- Potential Wetland Mitigation Area
- Existing Wetland
- Pond
- Dry Wash
- Existing Isolated Wetland

- NHD Watercourse
- 100-year Floodplain
- 500-year Floodplain
- Proposed Road
- Proposed Trail
- Proposed Lot Lines
- Proposed Contour

- Index Contour
- Intermediate Contour
- Parcel Boundary



CIVIL ENGINEERING  
 DEVELOPMENT CONSULTING  
 LAND SURVEYING  
 303.702.4444  
 1950 W. Littleton Blvd., Ste. 139  
 Littleton, CO 80120

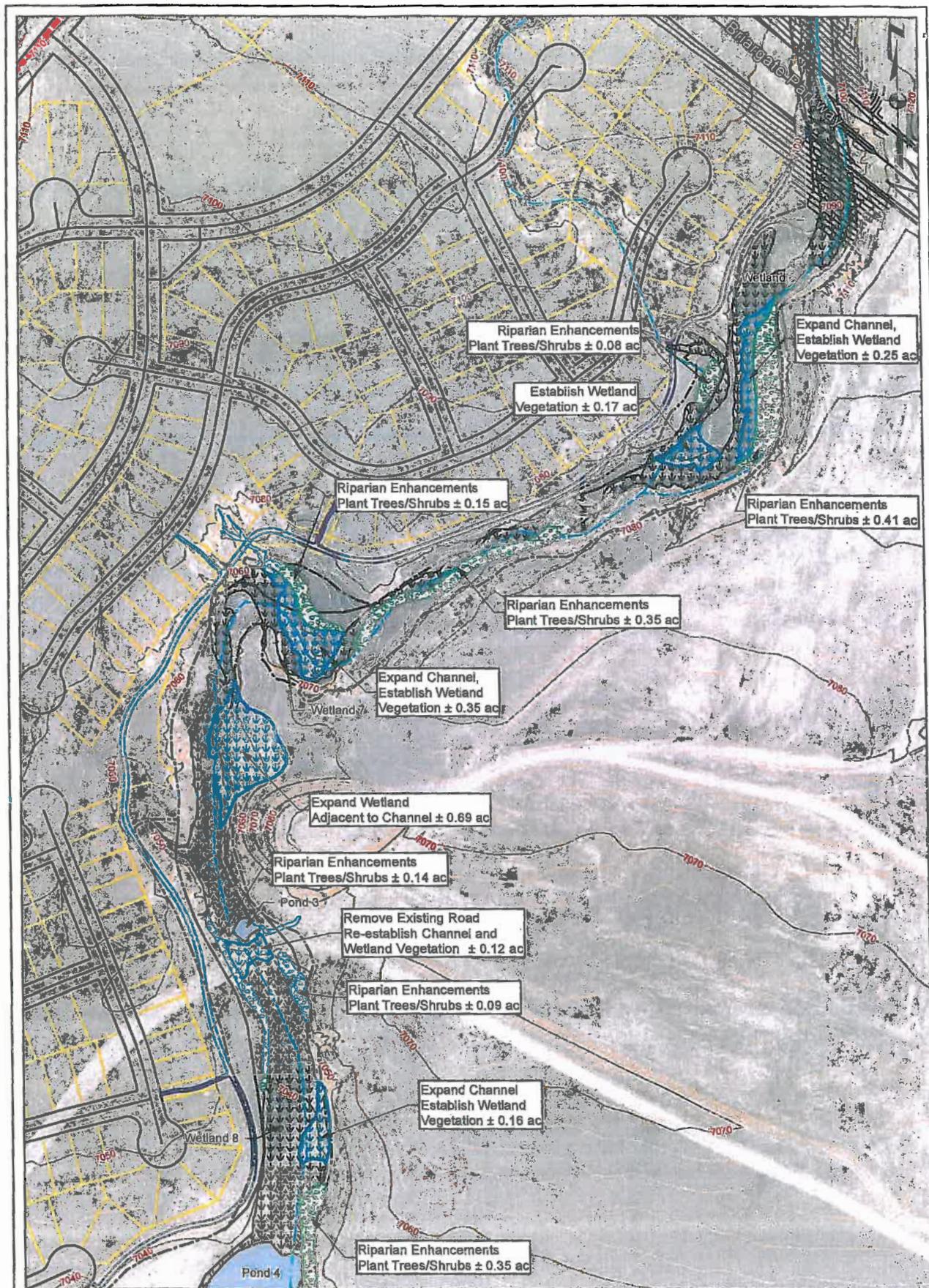
## Sterling Ranch

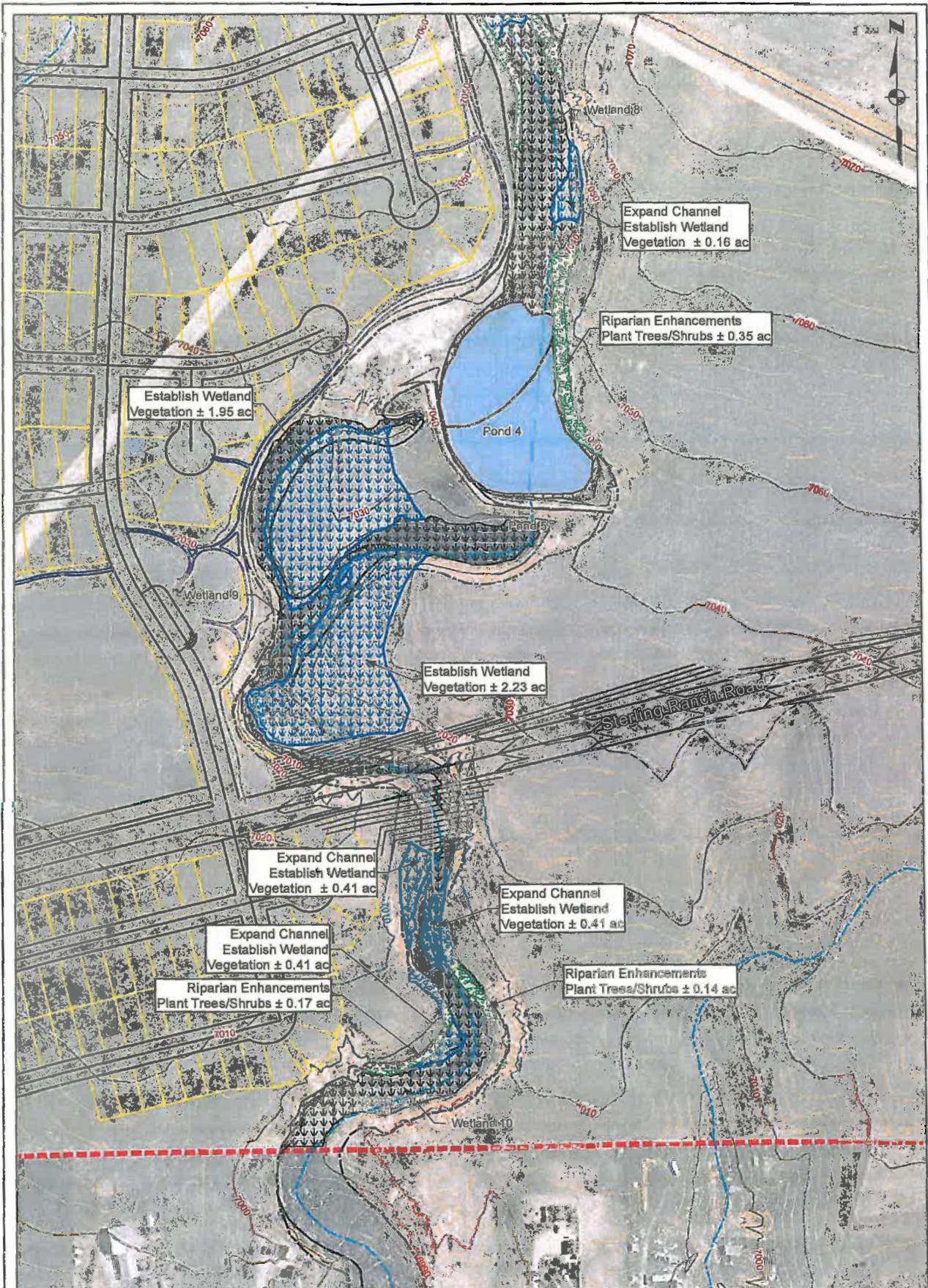
### Channel Improvements & Mitigation Plan

#### Sheet 2

El Paso County, Colorado

Date: 10/13/2015  
 Project #: 15-001





- |                                   |                           |                     |                    |                      |
|-----------------------------------|---------------------------|---------------------|--------------------|----------------------|
| Potential Riparian Enhancement    | Pond                      | NHD Watercourse     | Proposed Road      | Index Contour        |
| Potential Wetland Mitigation Area | Dry Wash                  | 100-year Floodplain | Proposed Trail     | Intermediate Contour |
| Existing Wetland                  | Existing Isolated Wetland | 500-year Floodplain | Proposed Lot Lines | Parcel Boundary      |
|                                   |                           |                     | Proposed Contour   |                      |

 **CORE**  
CONSULTANTS

CIVIL ENGINEERING  
DEVELOPMENT CONSULTING  
LAND SURVEYING  
303.703.4444  
1950 W. Littleton Blvd., Ste. 109  
Littleton, CO 80120

**Sterling Ranch**  
**Channel Improvements & Mitigation Plan**  
**Sheet 3**  
El Paso County, Colorado

Date: 10/13/2015  
Project #: 15-001



**US Army Corps  
of Engineers®  
Albuquerque District  
Project**

## **PUBLIC NOTICE**

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Permit Application No.: SPA-2015-00428-SCO  
Project Name: Sterling Ranch Residential  
Development Project  
Applicant: SR Land, LLC  
Waterway: Sand Creek  
Public Notice Date: December 9, 2015  
Comment Due Date: January 9, 2016  
USACE Contact Phone: (719) 543-8102

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**Reply To:**

Southern Colorado Regulatory Office  
US Army Corps of Engineers, Albuquerque District  
200 South Santa Fe Avenue, Suite 301  
Pueblo, Colorado 81003-4270

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### **PERMIT APPLICATION UNDER SECTION 404 OF THE CLEAN WATER ACT (33 USC 1344)**

Summary of Proposed Project: We are requesting public comment on the following project before the above comment due date. The application is for a permit to place dredged/fill material into waters of the US associated with the construction of a residential development in Sand Creek and one tributary located near Falcon, El Paso County, Colorado. Details of the proposed project are provided below.

Name of Applicant: SR Land, LLC, 20 Boulder Crescent, Suite 201, Colorado Springs, CO 80903.

Location: The project is located on 1,443.7 acres northeast of the intersection of Black Forest Road and Woodmen Road in unincorporated El Paso County, Colorado. The property is on the United States Geological Survey (USGS) Falcon Quadrangle on portions of Sections 27, 28, 32, 33, and 34 in Township 12 South, Range 65 West and the northwest portion of Section 4, Township 13 South, Range 65 West. The approximate coordinates of the project center are 39.964483 latitude and -104.664944 longitude (WGS 84 datum).

Description of Work: The Sterling Ranch Residential Development Project includes installation of attendant utilities, channel improvements to the main stem of Sand Creek, three off-line stormwater detention ponds, development of two permanent residential access roads and associated culverts, and development of residential units. Permanent impacts to waters of the US will result from construction of the residential access roads and associated culverts, and construction of residential units in the unnamed western

## **NEWS RELEASE**

CESPA-RD-SC  
SPA-2015-00428-SCO

tributary to Sand Creek. Total cumulative permanent impacts to waters of the US from the proposed project will total 4.21 acres and 5,048 linear feet within the main channel of Sand Creek and its western tributary.

Purpose and Need: The project purpose is twofold: (1) the development of a medium sized single-family residential development and associated facilities and infrastructure on multiple parcels of land which will be incorporated in the City of Colorado Springs; and (2) creek channel improvements for hydrology and stormwater capability through control of flood water conveyance, establishing improved grade control, and facilitating improved water quality.

Likewise, the project need is twofold: (1) to satisfy market demand for additional housing in the City of Colorado Springs, El Paso County, based on recent County and City economic development reports; and (2) to address a County-wide high-priority stormwater management project while simultaneously managing an increase in stormwater runoff to Sand Creek via channel improvements.

Mitigation: Mitigation for impacts to wetlands and waters of the US on the Sterling Ranch project site is proposed within the Middle Fountain Creek watershed and includes creation of 4.21 acres of emergent wetlands located within and adjacent to the main channel of Sand Creek, with improvements throughout to allow for construction and reestablishment of wetlands.

Plans and Data: Drawings showing the location of the work site and other data are enclosed with this notice. If additional information is desired, it may be obtained from the applicant, or from:

Christopher M. Grosso  
U.S. Army Corps of Engineers  
Southern Colorado Regulatory Office  
200 South Santa Fe Avenue, Suite 301  
Pueblo, Colorado 81003-4270  
(719) 543-8102  
Fax No. (719) 543-9475  
E-mail: [Christopher.M.Grosso@usace.army.mil](mailto:Christopher.M.Grosso@usace.army.mil)

Statement of Findings: The Corps consulted district files and records, the latest version of the National Register of Historic Places (NRHP), and state records of NRHP-eligible and potentially eligible historic properties to determine if there are any historic properties that may be affected by the proposed undertaking. Based on this initial information, the Corps has made a preliminary determination that the proposed project will not affect any historic properties that meet the criteria for inclusion in the NRHP.

The Corps has reviewed the U.S. Fish and Wildlife Service's latest published version of Federally-listed endangered and threatened species located in El Paso County, Colorado to determine if any listed species or their critical habitat may occur in the proposed project area. The Corps has made a preliminary determination that the

## ***NEWS RELEASE***

CESPA-RD-SC  
SPA-2015-00428-SCO

proposed project will not affect any Federally-listed endangered or threatened species or their critical habitat that are protected by the Endangered Species Act.

The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the Colorado Department of Public Health and Environment. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

In accordance with environmental procedures and documentation required by the National Environmental Policy Act of 1969, an environmental assessment will be prepared for this project. Upon completion, the assessment may be seen at the U.S. Army Corps of Engineers, Albuquerque District Office, at the address given above.

Comments: Any comments concerning this project should be received by the District Engineer no later than January 9, 2016. Comments received after the end of the Public Notice comment period will not be considered. However, more time may be given if a request, with a valid reason, is received prior to the suspense date. The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed below. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The evaluation of the impact of this activity will include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act. All factors relevant to the proposal and the cumulative effects will be considered; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

If the District Engineer determines that the project complies with the 404(b) (1) guidelines, he will grant the permit unless issuance would be contrary to the public interest.

## ***NEWS RELEASE***

CESPA-RD-SC  
SPA-2015-00428-SCO

Any person may request a public hearing. The request must be submitted, in writing, to the District Engineer within 21 days of the date of this notice and must clearly set forth the reasons for holding a public hearing.

Patrick J. Dagon  
Lieutenant Colonel, U.S. Army  
District Commander

Enclosures:

Sheet 1 of 2 – Wetland Location Map

Sheet 2 of 2 – Wetland Impact Location Map

***NEWS RELEASE***

CESPA-RD-SC  
SPA-2015-00428-SCO



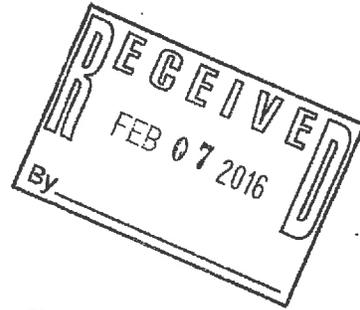
## COLORADO

Department of Public  
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

February 4, 2016

SR Land, LLC  
Attn: Jim Morley  
20 Boulder Crescent, Ste. 201  
Colorado Springs, CO 80903



**Re: Section 401 Water Quality Certification**  
**Colorado 401 Certification No.:** 4378  
**US Corps of Engineers 404 Permit No.:** SPA-2015-00428-SCO  
**Description:** Construction of a residential development  
**Location:** Latitude: 38.962389, Longitude -104.675084 in El Paso County,  
Colorado  
**Watercourse:** Sand Creek and tributaries, Arkansas River Basin, Segment  
COARFO04 of Fountain Creek Sub-basin  
**Designation:** Use Protected

Dear Mr. Morley:

The Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division (Division) has completed its review of the subject Clean Water Act (CWA) Section 404 Permit Application, and our preliminary determination with the issuance of the State of Colorado 401 Certification Public Notice (5 CCR 1002-82.5(B)). This segment is designated "Use Protected" thus no antidegradation review is required (5 CCR 1002-31.8(2)).

This letter shall serve as official notification that the Division is issuing "Regular Certification" in accordance with 5 CCR 1002-82.5(A)(2).

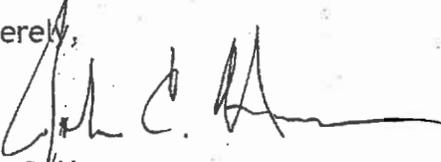
The 401 Certification issued by the Division pursuant to 5 CCR 1002-82.3(C) shall apply to both the construction and operation of the project for which a federal license or permit is required, and shall apply to the water quality impacts associated with the project. This certification does not constitute a relinquishment of the Division's authority as defined in the Colorado Water Quality Control Act, nor does it fulfill or waive any other local, state, or federal regulations.



February 4, 2016  
SR Land, LLC  
Page 2

If you have any questions or need additional information, please contact me at  
(303) 692-3586.

Sincerely,

A handwritten signature in black ink, appearing to read "John C. Hranac". The signature is fluid and cursive, with a long horizontal stroke at the end.

John C. Hranac  
Water Quality Assessor  
Environmental Data Unit  
Water Quality Control Division

Attachment

cc: US Army Corps of Engineers, Southern Colorado Regulatory Office  
Applicant's Agent, Mr. Chris Haas - CORE Consultants, Inc.  
File

## Certification Requirements:

- (A) The following requirements shall apply to all certifications:
- (1) Authorized representatives from the Division shall be permitted to enter upon the site where the construction activity or operation of the project is taking place for purposes of inspection of compliance with BMPs and certification conditions.
  - (2) In the event of any changes in control or ownership of facilities where the construction activity or operation of the project is taking place, the successor shall be notified in writing by his predecessor of the existence of the BMPs and certification conditions. A copy of such notification shall be provided to the Division.
  - (3) If the permittee discovers that certification conditions are not being implemented as designed, or if there is an exceedance of water quality standards despite compliance with the certification conditions and there is reason to believe that the exceedance is caused, in whole or in part, by the project, the permittee shall verbally notify the Division of such failure or exceedance within two (2) working days of becoming aware of the same. Within ten (10) working days of such notification, the permittee shall provide to the Division, in writing, the following:
    - (a) In the case of the failure to comply with the certification conditions, a description of (i) the nature of such failure, (ii) any reasons for such failure, (iii) the period of non-compliance, and (iv) the measures to be taken to correct such failure to comply; and
    - (b) In the case of the exceedance of a water quality standard, (i) an explanation, to the extent known after reasonable investigation, of the relationship between the project and the exceedance, (ii) the identity of any other known contributions to the exceedance, and (iii) a proposal to modify the certification conditions so as to remedy the contribution of the project to the exceedance.
  - (4) Any anticipated change in discharge location and/or quantities associated with the project which may result in water quality impacts not considered in the original certification must be reported to the Division by submission of a written notice by the permittee prior to the change. If the change is determined to be significant, the permittee will be notified within ten days, and the change will be acknowledged and approved or disapproved.
  - (5) Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions herein is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with limitations and prohibitions herein. The Division shall be notified immediately in writing of each such diversion or bypass.

- (6) At least fifteen days prior to commencement of a project in a watercourse, which the Division has certified, or conditionally certified, the permittee shall notify the following:
  - (a) Applicable local health departments;
  - (b) Owners or operators of municipal and domestic water treatment intakes which are located within twenty miles downstream from the site of the project; and
  - (c) Owners or operators of other intakes or diversions which are located within five miles downstream from the site of the project.

The permittee shall maintain a list of the persons and entities notified, including the date and form of notification.

- (7) Immediately upon discovery of any spill or other discharge to waters of the state not authorized by the applicable license or permit, the permittee shall notify the following:
  - (a) Applicable local health departments;
  - (b) Owners or operators of municipal and domestic water treatment intakes which are located within twenty miles downstream from the site of the project; and
  - (c) Owners or operators of other intakes or diversions which are located within five miles downstream from the site of the project.

The permittee shall maintain a list of the persons and entities notified, including the date and form of notification.

- (8) Construction operations within watercourses and water bodies shall be restricted to only those project areas specified in the federal license or permit.
- (9) No construction equipment shall be operated below the existing water surface unless specifically authorized by the 401 certification issued by the Division.
- (10) Work should be carried out diligently and completed as soon as practicable. To the maximum extent practicable, discharges of dredged or fill material shall be restricted to those periods when impacts to designated uses are minimal.
- (11) The project shall incorporate provisions for operation, maintenance, and replacement of BMPs to assure compliance with the conditions identified in this section, and any other conditions placed in the permit or certification. All such provisions shall be identified and compiled in an operation and maintenance plan which will be retained by the project owner and available for inspection within a reasonable timeframe upon request by any authorized representative of the Division.

- (12) The use of chemicals during construction and operation shall be in accordance with the manufacturers' specifications. There shall be no excess application and introduction of chemicals into state waters.
- (13) All solids, sludges, dredged or stockpiled materials and all fuels, lubricants, or other toxic materials shall be controlled in a manner so as to prevent such materials from entering state waters.
- (14) All seed, mulching material and straw used in the project shall be state-certified weed-free.
- (15) Discharges of dredged or fill material in excess of that necessary to complete the project are not permitted.
- (16) Discharges to state waters not identified in the license or permit and not certified in accordance therewith are not allowed, subject to the terms of any 401 certification.
- (17) Except as otherwise provided pursuant to subsection 82.7(C), no discharge shall be allowed which causes non-attainment of a narrative water quality standard identified in the Basic Standards and Methodologies for Surface Waters, Regulation #31 (5 CCR 1002-31), including, but not limited to discharges of substances in amounts, concentrations or combinations which:
  - (a) Can settle to form bottom deposits detrimental to beneficial uses; or
  - (b) Form floating debris, scum, or other surface materials sufficient to harm existing beneficial uses; or
  - (c) Produce color, odor, or other conditions in such a degree as to create a nuisance or harm existing beneficial uses or impart any undesirable taste to significant edible aquatic species, or to the water; or
  - (d) Are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life; or
  - (e) Produce a predominance of undesirable aquatic life; or
  - (f) Cause a film on the surface or produce a deposit on shorelines.

(B) Best Management Practices:

- (1) Best management practices are required for all projects for which Division certification is issued except for section 402 permits. Project applicants must select BMPs to be employed in their project. A listing and description of best management practices is located in Appendix I of Regulation No. 82: 401 Certification Regulation 5 CCR 1002-82.
- (2) All requests for certifications which require BMPs shall include a map of project location, a site plan, and a listing of the selected BMPs chosen for the project. At a minimum, each project must provide for the following:

- (a) Permanent erosion and sediment control measures that shall be installed at the earliest practicable time consistent with good construction practices and that shall be maintained and replaced as necessary throughout the life of the project.
- (b) Temporary erosion and sediment control measures that shall be coordinated with permanent measures to assure economical, effective, and continuous control throughout the construction phase and during the operation of the project.

Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

**Enclosure 2**  
Revised Compensatory Mitigation Plan  
November 19, 2021



**REVISED COMPENSATORY MITIGATION PLAN**

**for**

***Sterling Ranch Residential Development  
El Paso County, Colorado***

***Action No. SPA-2015-00428-SCO***

**PREPARED FOR:**

Sterling Ranch Metropolitan District No. 1  
4325 N Nevada Avenue #100  
Colorado Springs, CO 80907  
Contact: Jim Morley

**PREPARED BY:**

Bristlecone Ecology  
2023 W. Scott Place  
Denver, CO 80211  
Dan Maynard, Owner/Ecologist  
Phone: 971.237.3906

November 19, 2021

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## 1 INTRODUCTION

Sterling Ranch Metropolitan District No. 1 (“Proponent”) retained Bristlecone Ecology, LLC (“B.E.” or “Agent”) to prepare this Compensatory Mitigation Plan (CMP) for compliance with permit conditions pursuant to Section 404 of the Clean Water Act (CWA). The Sterling Ranch Residential Development (“Project”) holds a Section 404 permit for impacts to regulated Waters of the U.S. (WOTUS), including wetlands, under U.S. Army Corps of Engineers (USACE) Action No. SPA-2015-00428-SCO. This CMP addresses the requirement for compensatory mitigation to offset 11.93 acres of permanent WOTUS loss resulting from the development of the Project, located in unincorporated El Paso County (“County”), Colorado. The development includes approximately 1,500 acres of multi-use property north of East Woodmen Road and south and east of Vollmer Road (**Appendix A: Project Location Map**). The property is bisected by Sand Creek, a federally regulated WOTUS, and a tributary to the west of Sand Creek. This CMP creates an approach for establishing and managing wetland mitigation areas on the Project site that will offset the loss of regulated WOTUS authorized by Action No. SPA-2015-00248-SCO. In addition, this CMP, along with the tolling agreement included in **Appendix B**, fulfills the requirements of a non-compliance notice and after-the-fact (ATF) permitting process initiated by the USACE in communiques dated September 8<sup>th</sup> and October 20<sup>th</sup>, 2021.

### 1.1 Purpose and Need

Under Section 404 of the CWA, actions that impact more than one-tenth of an acre of jurisdictional wetlands typically require compensatory mitigation for those effects. Under the terms of Action No. SPA-2015-00248-SCO, the Project as originally permitted was designed to impact 4.21 acres and 5,048 linear feet (LF) of WOTUS in Sand Creek and a minor tributary to the west. Since receipt of the original permit action, and per County regulations, the Proponent has been required to increase impacts to WOTUS in Sand Creek by an additional 7.22 acres, bringing the total impacts to the aforementioned 11.93 acres. In accordance with the compensatory mitigation requirements at 33 CFR 332.3(f)(2) and the South Pacific Division (SPD) Mitigation and Monitoring Guidelines (USACE 2015), the USACE requires a ratio of compensatory mitigation to impacts greater than 1-to-1 to account for temporal losses, likelihood of success of mitigation, differences between functions at the impact and mitigation sites, and other factors. Thus, the purpose of this CMP is to detail compensatory mitigation at a ratio greater than 1-to-1 for impacts of like kind resulting from development of the Project. Special Condition 1 of the authorization, as well as the USACE’s response dated October 20<sup>th</sup>, 2021, states that the completion of all elements of the CMP is a requirement of permit approval. Development of this CMP in accordance with the USACE’s requirements for compensatory mitigation will satisfy the need for such mitigation outlined in Action No. SPA-2015-00248-SCO, the COMP v2.0, the MRSC, and the requirements of listed at 33 CFR 332.4(c).

### 1.2 Project/Consultation History

An approved jurisdictional determination (AJD) was issued on April 14<sup>th</sup>, 2008 under USACE file number SPA-2007-00551-SCO determining that both Sand Creek and its western tributary were jurisdictional WOTUS. A formal wetland delineation of the Project site was conducted on February 5<sup>th</sup>, March 10<sup>th</sup>, and March 11<sup>th</sup>, 2015, and a wetland delineation report was finalized May 7<sup>th</sup>, 2015. A Department of the Army Individual Permit (IP) application was submitted to the Albuquerque District’s Southern

Colorado Regulatory Office on October 22<sup>nd</sup>, 2015, detailing 4.21 acres of permanent WOTUS loss in Sand Creek and its western tributary. Project authorization was granted on February 29<sup>th</sup>, 2016 under Action No. SPA-2015-00428-SCO, with an expiration date of March 1<sup>st</sup>, 2021. A site visit between the USACE, County, Proponent, and Proponent's authorized agent was held in the spring of 2019 to discuss, among other things, the development and approval of a CMP to account for and appropriately mitigate Project impacts to wetlands/WOTUS. On August 5<sup>th</sup>, 2020, B.E. requested a permit modification on behalf of the Proponent for additional impacts to WOTUS and an extension of the time limit authorized to complete the work since Action No. SPA-2015-00428-SCO was set to expire March 1<sup>st</sup>, 2021. The USACE responded to this request on September 8<sup>th</sup>, 2021, with a notice of non-compliance and request for additional information regarding the aspects of the Project that were found to be non-compliant. B.E. provided additional information on the Project's behalf in a letter response on October 2<sup>nd</sup>, 2021 and received the USACE's request for a revised CMP on October 20<sup>th</sup>, 2021.

## 2 SITE DESCRIPTION

Sterling Ranch Residential Development includes a mix of commercial, office, industrial, institutional, and multi-family residential use along with other associated facilities on approximately 1,500 acres in unincorporated El Paso County. The Project site is located northeast of the intersection of Black Forest Road and Vollmer Road on portions of Sections 25, 31, and 33 in Township 12 South, Range 65 West, and can be found on the Falcon NW 7.5-minute quadrangle (USGS 2019) (**Appendix A**). Elevations on the property range between approximately 6,990 and 7,330 feet above mean sea level (AMSL). Overall, the region is undergoing increasing commercial and residential development.

### 2.1 Proposed Action

The Proponent is currently in development of the 1,500-acre Sterling Ranch property. The Project is being developed in phases, in accordance with agreements between commercial and residential development interests. Currently, the Proponent is planning to develop an approximately 78-acre portion of the Sterling Ranch property known as Sterling Ranch Phase 2 (“Phase 2”). This phase will not impact the main channel of Sand Creek, but it will result in the permanent loss of nearly all of the western tributary within the property, approximately 3.11 acres of WOTUS. Facilities planned for this area include residential lots, arterial and local roads, and utilities. Stormwater runoff will be captured at an existing detention pond in the southwest portion of the property, then transferred through a water line to an existing outfall structure and into the main channel of Sand Creek at historic flow rates. (**Appendix C: Project Design Plans**).

In addition, the Proponent is preparing to begin construction of a bridge over Sand Creek at Briargate Parkway which will provide development access to the portions of the property east of Sand Creek. Construction of the Briargate Parkway bridge, abutments, grade control structures, and riprap transitions, will impact 0.74 acre of WOTUS in Sand Creek. Another bridge at the proposed Sterling Ranch Road will affect 0.69 acre of WOTUS. These impacts, as well as those resulting from the development of Phase 2, were included in the original permit authorization.

Additional impacts from Project development will occur at future stages but are still in the design phase. Impacts that are currently planned were all included in the original permit action. Current plans are provided in **Appendix C**; these plans represent a first submission to El Paso County for review and are subject to change based on County comments. These comments are a normal part of an iterative process between the Proponent and the Proponent’s design team and the County, and edits/comments are not expected to substantially affect the details of this mitigation plan.

In order to mitigate for permanent and temporary impacts to WOTUS resulting from the Phase 2 development, Briargate Parkway bridge construction, and other planned future construction, compensatory mitigation has been proposed herein to identify areas for wetland establishment and conservation. More specifics of the proposed mitigation are discussed in Section 3. A noxious weed management plan would be enacted in accordance with El Paso County standards (EPC 2017) to limit the establishment and spread of weedy species in wetland mitigation areas following their construction.

## 2.2 Watershed Approach

The USACE and EPA have indicated that a watershed approach is the preferred method for accomplishing permittee-responsible compensatory mitigation. As such, proposed mitigation shall be designed to take place within the same watershed that is impacted by project development. Wetland mitigation areas shall be designed to contribute to the sustainability and proper function of the watershed. The Project area is located in the Middle Fountain Creek watershed, 10-digit hydrologic unit code (HUC) 1102000303. Mitigation areas will be established on-site along Sand Creek in order to contribute direct benefit to the Middle Fountain Creek Watershed.

### 3 COMPENSATORY MITIGATION

Project impacts were authorized on February 29<sup>th</sup>, 2016, by Action No. SPA-2015-00428-SCO; a total of 4.21 acres of permanent WOTUS loss was authorized. The current action, which includes Phase 2, Briargate Parkway bridge construction, and future planned channel improvements in Sand Creek, will impact an additional 7.22 acres of WOTUS, for a Project total of 11.93 acres. Compensatory mitigation to address the impacts resulting from Project development is described in the following sections. Because the Proponent is requesting a permit modification for Action No. SPA-2015-00428-SCO to authorize losses not covered in the original permit, this CMP is designed to capture the mitigation offsets necessary to compensate the loss of 11.93 total acres of WOTUS. Thus, while this document discusses mitigation efforts tied directly to the future stream realignment of Sand Creek, these mitigation objectives are designed to compensate WOTUS losses resulting from all current and future Project components.

#### 3.1 Objectives

The primary purpose of compensatory mitigation is to offset the loss of wetlands or other WOTUS resulting from development of the Project. Thus, the principal objective of the mitigation effort is to promote conditions at the site that will allow for the successful establishment of mitigation areas. Mitigation has been designed to meet the needs of the watershed, which include stream channel and bank stabilization in anticipation of future increases in hydrologic flows, and offsetting impacts to the watershed resulting from development of the site. The intent is to provide functional lift to the watershed by incorporating needed stabilization to the system through an expansion of the wetland and flood prone areas in the Sand Creek channel. Details of these mitigation objectives is provided below.

For the purposes of designing the stream channel improvements, for performing the functional stream assessment, and for categorizing mitigation areas, the Sand Creek drainage had been divided into three reaches:

- Reach 1: From the southern Project boundary upstream to Sterling Ranch Road.
- Reach 2: From Sterling Ranch Road upstream to Briargate Parkway.
- Reach 3: From Briargate Parkway upstream to the northern Project boundary.

The aquatic resources to be provided by the compensatory mitigation effort include 2.26 acres of wetlands in Reach 1, 20.75 acres in Reach 2, and 7.39 acres in Reach 3. These totals involve 17.37 acres of wetland establishment (or creation), 7.36 acres of re-establishment, 3.45 acres of enhancement, and 2.22 acres of preservation. Details of the locations, amounts, and types of wetland mitigation proposed are included in **Appendix D: Aquatic Resource Description Tables** and **Appendix E: Compensatory Mitigation Plan Map**.

To provide functional lift to the channel and provide stabilization for future increases in hydrologic flow in Sand Creek, the design incorporated a bankfull area of 14 square feet, a bankfull width of 17 feet, and a mean depth of 0.71 feet for all the channel sections with a new bankfull section. The straight riffle sections of channel will have a maximum grade of 5%, while the curved sections with the pools

will be flat from invert in to invert out. Maximum velocities in the channel were limited to 9 feet per second during the 100-year storm event and 7 feet per second during the 10-year storm event, with a few exceptions described below. The maximum shear stress allowed is 1.2 pound-feet, and any area above that will require armoring. Armoring has been limited to less than 30 percent of the total channel to minimize functional loss.

There are six grouted sloping boulder (GSB) drop structures proposed within the channel. There is a 5-foot drop and a 2.5-foot drop proposed in Reach 1 at stations 3+89 and 8+56, respectively. Along Reach 2 there is a 3-foot drop at station 50+31 and a 5-foot drop at station 55+12. Along Reach 3 there is a 6-foot drop at station 72+91 and a 6-foot drop at station 75+76. The use of drops larger than four feet was done in order to maintain grades close to existing as practicable so that the existing thalweg could remain connected. Around the GSBs, all slopes great than 10% will be armored with 36-inch grouted boulders. Sheet piling has been extended across the crest of the drop the full width of the floodplain. Weep drains will be used to prevent any uplift or groundwater migration. The proposed design calls for 61 riffle sections: eight (8) along Reach 1, 34 along Reach 2, and 19 along Reach 3. The riffles vary in length and slope in order to minimize wetland disturbance created by grade changes. Based on the results of a functional analysis of the stream by B.E., as well as a geomorphology analysis by others, riffle pools were selected as the preferred grade-control method in lieu of additional drop structures. The use of riffles to make up grade differences rather than more drop structures is preferable because it allows for flatter slopes to tie the riffle sections to the existing ground, as well as preserving a larger portion of the existing wetlands.

The following sections detail the specific locations and types of wetlands to be created, as well as the protections and performance standards that will ensure the successful establishment of mitigation areas.

### **3.2 Mitigation Area Selection**

Alternatives for mitigation area selection were considered prior to selecting on-site, permittee-responsible mitigation as the preferred alternative. In terms of chances for success, purchasing credits from a mitigation bank was one of the more viable alternatives. After reviewing the CSQT data and calculating the anticipated cost of purchasing credits to offset stream and wetland impacts, it was clear that this alternative would cost millions of additional dollars, and thus was not economically feasible for the Proponent. Because of the uncertainty of acquiring additional land for off-site permittee-responsible mitigation sites, off-site alternatives were not as practicable as simply using the large areas of available land along Sand Creek for mitigation. Since the Project is a stream stabilization effort, a no-action alternative was not viable. On-site permittee-responsible mitigation was selected as the alternative with the most reasonable cost, highest chance of success, and least uncertainty.

As previously mentioned, the USACE prefers that permittee-responsible mitigation occur within the same watershed as the impacts, and selecting on-site mitigation areas associated with the Sand Creek watershed will ensure that mitigation compensates the same watershed where impacts will occur. Moreover, on-site mitigation ensures that hydrologic and soil conditions are conducive to successful mitigation implementation.

Mitigation will occur along the Sand Creek channel, which will be widened and realigned to create a flatter, broader, and more sinuous channel. Throughout all three reaches, designed bankfull flood

terraces will be constructed to tie into the existing thalweg, allowing hydrology to escape the active channel and access the broad riverine terraces. These terraces will provide large areas where new wetlands will be established along the existing riverine habitat. Willows and rushes, the most abundant wetland plants currently on the site, will be planted along flood terraces to provide channel stability and seed new wetlands. Location mitigation areas adjacent to the existing Sand Creek channel will maintain connectivity to the existing aquatic resources on the site. Open space buffers will be maintained abutting the created mitigation areas; buffers will be 100-200 feet wide along the extent of Sand Creek in the Project area.

Mitigation areas have been selected primarily based on the availability of each site to receive the necessary hydrology to support wetlands. Sand Creek provides substantial, year-round hydrology to existing wetlands on the site, and as such is the natural choice for wetland mitigation establishment. Hydrology will also be provided through the release of stormwater runoff detained by three off-line detention facilities that will release stormwater at historic rates into Sand Creek. Due to the increase in impermeable surfaces adjacent to the creek through development, it is anticipated that additional hydrology above the current baseline will be available to support wetland mitigation sites. Furthermore, planned channel improvements in Sand Creek will stabilize the channel and reduce grade, allowing water to accumulate and pond in eddies and pools above and below grade control structures, as well as in designed ponds, oxbows, and flood terraces.

The site lies completely within the Sand Creek drainage basin; it is in the Middle Fountain Creek watershed, HUC 1102000303. The Sand Creek drainage basin covers approximately 22 square miles; it begins approximately five miles northeast of the Town of Falcon and travels approximately 15 miles to the southeast. The majority of the basin consists of undeveloped, rolling rangeland consistent with much of Colorado's plains and prairies.

### 3.3 Mitigation Area Instrument

Mitigation sites will be owned by the Proponent or a designated entity controlled by the Proponent, such as a limited liability company (LLC), homeowners' association (HOA), or another to-be-determined designee. Access to the sites will be restricted to those with written authorization. In accordance with the USACE's *Guidance for Mitigation and Mitigation Banking in the Albuquerque District* (2005), mitigation areas should be protected by a legally-binding instrument to ensure their success and proper maintenance. A legally-binding deed restriction will be prepared between the Proponent and the USACE that limits the activities that may be performed in established mitigation areas. An example deed restriction is provided in **Appendix F: Example Deed Restriction**.

### 3.4 Baseline Information

Existing site conditions are a critical component of wetland mitigation design, as they are predictors of success. B.E. performed a functional assessment of Sand Creek using the USACE's Colorado Stream Quantification Tool (CSQT), to accompany the Project's existing formal wetland delineation, in the fall of 2020. A detailed summary of the hydrologic, hydraulic, and geomorphological data obtained from the assessment is provided in **Appendix G: CSQT Data Sheets**. Proposed conditions for the stream channel are also provided in **Appendix G**.

Hydrology at the site is provided primarily by natural precipitation events and runoff in Sand Creek. The western tributary, which will be removed through construction, receives additional hydrology via two culverts that transport runoff from extensive impermeable surfaces on the RV and boat storage property to the north. Both streams flow generally from the north to the south. Sand Creek is in some reaches a perennial stream that maintains baseline hydrologic flows throughout the year, and in other reaches an intermittent or even ephemeral stream that flows only during the growing season or in response to precipitation events. Based on observations conducted during the formal wetland delineation of the site, Sand Creek appears to have significant subsurface flows. This baseline hydrology of Sand Creek will provide a stable water source for mitigation areas located within and along the Sand Creek channel, and anticipated runoff from the planned development surround the stream will increase the availability of water to the mitigation sites. Baseline hydrologic data are provided below.

Hydrologic and hydraulic criteria were modeled for each stream reach at the upstream extent of the reach. The model utilizes the rain gauge classified as “a 24-Hour Type II Storm” to simulate a long duration front storm common to the area. The following rainfall depths were utilized in the model: 2.1 inches for the 2 year storm, 2.5 inches for the 5 year storm, 3.0 inches for the 10 year storm, 3.6 inches for the 25 year storm, 4.1 inches for the 50 year storm, and 4.6 inches for the 100 year storm. The flow rate at the head of each of the three reaches was modeled as follows:

- Reach 1 (Sterling Ranch Road) was modeled at 1,590.5 cubic feet per second (CFS).
- Reach 2 (Briargate Parkway) was modeled at 1,833.5 CFS.
- Reach 3 (northern Project boundary) was modeled at 1,627.1 CFS.

Existing conditions at the site have a range of flow velocities in each reach. For Reach 1, velocities range from 7.33 feet/second to 10.06 feet/second; for Reach 2, velocities range from 2.23 feet/second to 10.53 feet/second; for Reach 3, velocities range from 2.33 feet/second to 10.52 feet/second.

Wetlands currently on the site are dominated by both wetland and upland plants relatively common to the region and ecological setting. Plants found in wetlands range from upland (UPL) to obligate (OBL) wetland indicator status, though plants rated OBL and facultative wetland (FACW) are dominant. The wettest areas, typically along the active channel of Sand Creek, are dominated Nebraska sedge (*Carex nebrascensis*) and beaked sedge (*C. utriculata*); Rocky Mountain rush (*Juncus saximontanus*) is also dominant. Other dominant hydrophytes include arctic rush (*Juncus arcticus*), which is widespread and not restricted to the wettest areas, and redtop (*Agrostis gigantea*), which is locally common in some wetlands and absent in others. Other common, though not dominant, wetland species include paniced bulrush (*Scirpus microcarpus*) and saltgrass (*Distichlis spicata*), both found in wetter areas, and switchgrass (*Panicum virgatum*) and slender wheatgrass (*Elymus trachycaulus*), found in drier areas and on slopes just above the active channel. There are a few inline ponds along Sand Creek that support dense stands of broadleaf cattail (*Typha latifolia*) and hardstem bulrush (*Schoenoplectus acutus*), but these species are dominant only in a few areas. Sandbar willow (*Salix exigua*) is abundant in somewhat lower densities (average cover 10-25 percent) along the banks of Sand Creek.

Wetlands along the northern portion of the western tributary are dominated by herbaceous species. The wettest areas are dominated by sedges. In drier wetland areas, rushes and grasses are dominant.

The southern half of the western tributary (Wetland 2) is a relatively dry wetland that does not appear to have been grazed in the past year. There are few sedges and more common species include redtop, arctic rush, and Canada wildrye (*Elymus canadensis*). At the southern end of the western tributary there is a small scrub-shrub wetland where snowberry (*Symphoricarpos occidentalis*), peachleaf willow (*Salix amygdaloides*), and plains and narrowleaf cottonwood (*Populus deltoides*, *P. angustifolia*) are associated with the channel.

These species provide a baseline for wetland vegetation success at the site, and will be used to establish a selection of wetland plants that are anticipated to be similarly successful in wetland mitigation areas.

According to the Natural Resource Conservation Service (NRCS), the site is made up of hydrologic Group A and Group B soils. Group A soils cover roughly 65% of the site while Group B soils cover the remaining 35% of the site. Hydrologic Group A soils have a high infiltration rate when thoroughly wet. Hydrologic Group B soils have a moderate infiltration when thoroughly wet. The majority of the Sand Creek drainageway is made up of the Pring soil series (3 to 8 percent slopes), which is in hydrologic Group B. The Pring series is not hydric in El Paso County; however, the Pleasant series, which is rated hydric, is often a minor component of the Pring series and is likely present along Sand Creek. There are well-developed hydric soils in Sand Creek that will be salvaged to the greatest extent practicable in order to increase the chance of survival of wetland plants in mitigation areas. Based on the extent of existing wetlands in the channel, it is anticipated that the soils present, especially salvaged hydric soils from the channel, will be sufficient for mitigation area establishment.

An exhibit depicting the planned locations of mitigation areas is provided in **Appendix E: Compensatory Mitigation Plan Map**.

### 3.5 Mitigation Work Plan

Wetland mitigation will begin in the spring of 2022 following the loss of the western tributary and impacts to Sand Creek from the construction of Briargate Parkway during the winter of 2021-2022 (see **Appendix E**). Construction of Briargate Parkway will begin as soon as authorization from the USACE is received, and mitigation will occur in Reach 1 for the 0.69 acres of impacts. The western tributary is expected to be lost during the summer of 2022, and additional mitigation in Reach 1 will offset a portion of the loss. Soils from the western tributary will be salvaged and reestablished in Reach 1. With a total of 2.26 acres of mitigation available in Reach 1, compensating Briargate Parkway and the western tributary will not be possible entirely in Reach 1. The planned detention pond north of Sterling Ranch Road (SRR) will be the next feature to be constructed and will generally coincide with the timing of the improvements/mitigation in Reach 1. The SRR detention pond is entirely off-line and will not incur additional impacts to WOTUS but will provide additional mitigation (approximately 0.5 acre) once constructed. Since the existing pond near this location north of SRR will be preserved, additional mitigation will be immediately available (2.39 acres) in the form of preservation during this first phase of construction, helping avoid temporal losses from the western tributary and Briargate Parkway construction.

The next phase of construction/mitigation will involve the long stretch of Reach 2 between the SRR pond and Briargate Parkway. This reach has the most available mitigation at 20.75 acres, as well as the second-most impacts from the stream improvement project at 3.58 acres. Floodplain mapping will be

required through FEMA for this reach which will cause it to lag behind Reach 1 in both impacts and mitigation, though this timing will again be a benefit to avoiding/minimizing temporal losses. Timing will likely occur in early 2023 and continue through the year in this reach, and possibly into early 2024.

Reach 3 will likely be the final stretch of the stream improved and mitigated, though this is dependent upon floodplain hydraulics and possibly a FEMA process as well. If a conditional letter of map revision (CLOMR) is required for this reach, it will be the last reach developed. If it is determined that a CLOMR is not required, Reach 3 will be impacted/mitigated concurrently with Reach 1, beginning in early 2022. As a rule, wherever floodplain permitting is not a critical path, channel work will be accomplished as quickly as possible, which will in turn allow mitigation to be accomplished nearly as quickly. The goal is to make as much mitigation available as quickly as possible by proceeding with the channel improvement work immediately, and independently of other permitting/construction efforts at Sterling Ranch. Reach 3 has 3.91 acres of impacts planned and 7.39 acres of mitigation available.

Hydrology for mitigation areas will continue to be provided by baseline flows in Sand Creek as well as precipitation event. In order to establish new mitigation areas (versus restoration/re-establishment), particularly in areas where hydric soils cannot be salvaged from existing wetlands, watering will be necessary to begin to establish plants and convert new hydric soils. An irrigation system will be established to provide water to newly established mitigation areas and ensure the proper conversion of soils and the success of plants. It is anticipated that the irrigation system will need 3-5 years to supply the necessary hydrology to establish new mitigation areas. Watering will be tapered as new flows become available from the surrounding developments as impermeable surfaces increase and new detention facilities are able to provide consistent stormwater releases and groundwater from lawns.

Native wetland plant communities will be established within mitigation areas through natural succession and via transplanting. Effective mitigation is best accomplished through salvaging hydric soils and wetland vegetation on site. As much soil and vegetation as practicable will be salvaged from the western tributary and reestablished along Sand Creek in prepared mitigation areas. Salvage will occur outside of the primary growing season (May 1<sup>st</sup> through September 30<sup>th</sup>), with April and May being the best months for successful establishment. Salvage material will be replanted as quickly as practicable, and enough soil will be salvaged so as not to expose roots to direct sunlight. The presence of existing wetlands within close proximity to the proposed wetland mitigation areas are anticipated to facilitate rapid reestablishment of wetland vegetation. Additional transplanting of wetland vegetation from neighboring wetlands may be utilized to support establishment of vegetative cover if monitoring indicates it is necessary. Seeding of mitigation areas will supplement transplanting, or seeding alone will be used if materials for transplant are no longer available. Transplanting and seeding will occur within 3 days of topsoil removal unless delayed by weather, and neither shall occur when the ground is frozen. Wetland mitigation area construction and wetland soil salvage shall only be performed by a contractor qualified in wetland restoration/establishment.

The following seed mixes have been identified as suitable to the ecological setting and should be readily available from Arkansas Valley Seed, a local seed supplier. Species have been identified based on baseline information from the site and recommendations for revegetation along riparian areas of Colorado's eastern plains (Colorado DNR 1998). Two seed mixtures will be used to establish mitigation areas, with the first six plants below comprising one mixture and the last nine comprising a second mixture. Having two mixtures will allow the obligate wetland species more time to establish as more

water becomes available and soils become increasingly hydric over time, while the six grasses will provide temporary stability, and will include sloped banks above mitigation areas in need of reseeding.

**Table 1. Wetland Seeding Mixes for Mitigation Areas**

Common Name	Scientific Name (Variety)	Percent of Total Mixture	PLS (lb./acre) <sup>1</sup>
Switchgrass	<i>Panicum virgatum</i> (NE28, Greenville, Blackwell)	25	0.75 - 1.25
Prairie cordgrass	<i>Spartina pectinata</i>	20	1.40 - 1.60
Foxtail barley	<i>Hordeum jubatum</i>	20	1.20 - 2.00
Saltgrass	<i>Distichlis spicata</i>	15	1.05 - 1.50
Canada wildrye	<i>Elymus canadensis</i>	15	1.80 - 2.70
American sloughgrass	<i>Beckmannia syzigachne</i> (Egan)	5	0.04
<b>TOTAL</b>		<b>100</b>	<b>6.64 - 9.89</b>
Common spikerush	<i>Eleocharis palustris</i>	18	0.40 - 0.60
Arctic rush	<i>Juncus arcticus</i>	17	0.18 - 0.36
Hardstem bulrush	<i>Schoenoplectus acutus</i>	12	0.60 - 1.20
Softstem bulrush	<i>Schoenoplectus tabernaemontani</i>	12	0.60 - 1.20
Nebraska sedge	<i>Carex nebrascensis</i>	10	0.33
Water sedge	<i>Carex aquatilis</i>	10	0.03
Woolly sedge	<i>Carex pellita</i>	8	0.55 - 1.10
Torrey's rush	<i>Juncus torreyi</i>	8	0.09
Fowl mannagrass	<i>Glyceria striata</i>	5	0.49 - 0.84
<b>TOTAL</b>		<b>100</b>	<b>3.27 - 5.75</b>

Finally, the establishment of woody vegetation will be accomplished to help stabilize the channel and banks and contribute to the creation of mitigation areas. Sandbar willow cuttings from available willow saplings on the property and/or offsite sources will be planted in wetland mitigation areas. Willows will be cut in the spring while plants are still dormant, typically before April 15<sup>th</sup>. Willow stakes will be used in wetland areas where ground water is within 2.5 feet of the surface, in densities of 1-3 feet apart. Established willow root systems are effective at stabilizing soils in active stream systems and adjacent flood terraces, and will complete the wetlands establishment effort.

Construction, grading, erosion control, and stormwater quality notes, as well as details about proposed fill materials, are provided in **Appendix C**.

In addition to the timing/sequencing of the construction of Project facilities and mitigation areas, an estimated general schedule for mitigation implementation and monitoring is outlined below. This schedule is subject to changes, as discussed below in Section 4.

- Year 1
  - Grading, clearing, and other site preparation as needed for construction of the wetland mitigation sites.
  - Transplanting wetland soils and vegetation from existing wetlands that are impacted to the prepared mitigation sites.
  - Seeding with approved wetland seed mixes and cutting/transplanting of willows from willows on-site.
  - Documentation of baseline conditions and seeding of uplands.
- Year 2
  - Reseeding as needed based on initial performance of seeded areas.
  - Supplemental transplanting of additional willows as needed.
  - Control noxious weeds as needed.
  - Establish monitoring locations and begin collecting relevant data.
- Years 3, 4, and 5
  - Monitor mitigation sites and determine whether performance standards are being met.
  - If standards are met, request concurrence from USACE. If standards are not met, continue monitoring and implement adaptive management as necessary until standards are met.

### 3.6 Performance Standards & Monitoring Requirements

Performance standards will be used to assess the success of mitigation measures implemented in the project area. Performance standards are required and must be met in order for mitigation activities to be approved by the USACE. In accordance with the Section 404 authorization, the mitigation areas will be monitored for a period of five (5) years, or until the USACE has determined that performance standards are met, whichever comes first. If performance standards are met during the first year of monitoring, additional monitoring will not be required; only sites where standards are not met will continue to be assessed. Performance standards should be met by the end of the five-year monitoring period; if standards are not met within five years, additional monitoring may be required by the USACE. The five-year minimum monitoring period will commence immediately following completion of the wetland mitigation areas.

The Proponent, or a designated entity controlled by the Proponent, will be responsible for the activities at the proposed mitigation areas throughout the life of the Project. The Proponent, or an authorized representative of the Proponent, familiar with wetland ecology, will monitor the condition of the mitigation sites and recommend adjustments on an as-needed basis in accordance with USACE mitigation requirements and permit conditions.

The mitigation efforts outlined in this CMP will be determined successful and complete when the following standards of performance are met:

- Wetland mitigation areas will maintain a vegetative cover of at least 80 percent, and wetland vegetation must be composed of at least 50 percent wetland species (i.e. species rated

facultative [FAC], facultative wetland [FACW], or obligate [OBL] on the USACE’s National Wetland Plant List for the Great Plains Region). The 50-percent requirement would satisfy the “dominance test” on a USACE wetland determination data form. Alternatively, a “prevalence index” test of less than or equal to 3.0 may be used to satisfy the vegetative cover requirement. For mitigation areas not meeting either of these requirements, corrective measures may include transplanting appropriate wetland species and salvaged hydric soils or eradicating noxious weeds if they have become established.

- Coverage in wetland mitigation areas by noxious weeds will not exceed 5 percent of the total vegetative cover within the mitigation area. Plants listed as noxious weeds by the State of Colorado that are found in El Paso County are listed in **Table 2** below.
- Upland mitigation areas are not planned and seeding with upland vegetation is not anticipated. However, if upland vegetation is established for any reason, the criteria for success will include vegetative ground cover of 85 percent by native upland species and less than one percent cover by invasive weeds.

### 3.7 Financial Assurances

The Proponent will be responsible for the activities at the proposed mitigation areas throughout the life of the Project. The Proponent, or an authorized representative of the Proponent, familiar with wetland ecology, will monitor the condition of the mitigation sites and make adjustments on an as-needed basis in accordance with USACE mitigation requirements and permit conditions. Financial assurances to ensure mitigation area success will be provided as a letter of credit from the Proponent’s financial institution. As it is the district engineer’s authority to determine the amount of financial assurance required to guarantee the mitigation project, documentation of the financial assurance reflecting the designated amount will be provided at the request of the USACE pending determination of the value of the assurance.

**Table 2. El Paso County Noxious Weed List**

<b>List A Species</b>	
Cypress spurge	<i>Euphorbia cyparissias</i>
Dyer's woad	<i>Isatis tinctoria</i>
Bohemian knotweed	<i>Polygonum bohemicum</i>
Giant knotweed	<i>Polygonum sachalinense</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>
Myrtle spurge	<i>Euphorbia myrsinites</i>
Orange hawkweed	<i>Hieracium aurantiacum</i>
Purple loosestrife	<i>Lythrum salicaria</i>
<b>List B Species</b>	
Absinth wormwood	<i>Artemisia absinthium</i>
Bouncingbet	<i>Saponaria officinalis</i>
Bull thistle	<i>Cirsium vulgare</i>
Canada thistle	<i>Cirsium arvense</i>
Chinese clematis	<i>Clematis orientalis</i>
Common teasel	<i>Dipsacus fullonum</i>
Dalmatian toadflax	<i>Linaria dalmatica</i>
Dame's rocket	<i>Hesperis matronalis</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Hoary cress (whitetop)	<i>Cardaris draba</i>
Houndstongue	<i>Cynoglossum officinale</i>
Leafy spurge	<i>Euphorbia esula</i>
Musk thistle	<i>Carduus nutans</i>
Perennial pepperweed	<i>Lepidium latifolium</i>
Russian knapweed	<i>Acroptilon repens</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Scentless chamomile	<i>Matricaria perforata</i>
Scotch thistle	<i>Onopordum acanthium</i>
Tamarisk (salt cedar)	<i>Tamarix ssp.</i>
Yellow toadflax	<i>Linaria vulgaris</i>
<b>List C Species</b>	
Common mullein	<i>Verbascum thapsus</i>
Downy brome (cheatgrass)	<i>Bromus tectorum</i>
Field bindweed	<i>Convolvulus arvensis</i>
Poison hemlock	<i>Conium maculatum</i>
Puncturevine	<i>Tribulus terrestris</i>

## 4 LONG-TERM MANAGEMENT

Funding for the management of the mitigation plan will be provided by the Proponent and the Proponent will be responsible for the monitoring and long-term management of the mitigation areas. Since the mitigation sites will be located on the Proponent's property, access to the site can be controlled to protect the area. Access will be restricted, and preservation will be assured at mitigation sites through the use of a deed restriction affirmed by the USACE. In addition to regular monitoring of the site, periodic inspections will be conducted by the Proponent or by the Proponent's authorized staff to ensure that the desired site characteristics are being maintained including maintaining proper hydrology through the mitigation area, controlling invasive plants (if any), and other maintenance as needed.

Long-term management will include inspections of the mitigation sites for noxious weeds and other invasive species. If invasive species are detected during inspections, invasive species control measures will be implemented. Where invasive plants are limited, control methods will consist of removal by hand or mechanical methods. If invasive plants become established beyond the ability of mechanical methods to control, chemical control methods will be used. Appropriate herbicides will be selected based on target species and will be applied in accordance with manufacturer and invasive species control recommendations, as well as El Paso County recommendations for control (EPC 2018). Herbicide application will not occur when rain is forecasted, or during or immediately following precipitation events to prevent herbicides from washing into sensitive water features. Invasive species control will be conducted in order to minimize impacts to desirable species to the extent practicable. Where significant infestations have occurred, following appropriate control and removal the area will be transplanted with local wetland plant sources, or re-seeded with desirable vegetation. Alternative methods of invasive species control will be utilized as appropriate based on target species. For example, prolonged flooding followed by heavy seeding has been documented to control Johnsongrass (*Sorghum halepense*).

Wetland and transitional vegetation will be mowed on an as-needed basis; signage may also be used along the boundaries of the mitigation area identifying the areas as such. If control of the development were to transfer to a different entity, that entity would become responsible for the maintenance and upkeep of the mitigation areas. The USACE will be notified of the need to transfer ownership/control of the mitigation area in advance and the Proponent will await USACE approval before initiating any such transfer in accordance with 33 CFR 332.7(d).

### 4.1 Post-Mitigation Monitoring

Protocols for post-mitigation monitoring have been established to ensure successful establishment of both restored and newly created habitats. It will be the Proponent's responsibility to ensure monitoring is performed, and it is recommended that the Proponent contract a qualified wetland ecologist to monitor for the successful establishment of wetland mitigation areas and to perform noxious weed control. For such monitoring, the Proponent shall use a USACE-approved contractor. In addition to third-party monitoring by an approved ecologist, a representative from the USACE, with advance notice, shall be allowed to inspect the site conditions to determine the success of mitigation efforts. Monitoring protocols are summarized below.

#### 4.1.1 Wetland Mitigation Monitoring

Immediately following the establishment of mitigation areas, a vegetation survey would be conducted within the mitigation areas to establish a baseline for vegetative development in future survey years. To measure the success of mitigation activities accurately, monitoring would be conducted during the growing season of the following year after mitigation is completed. Monitoring will be continued until success criteria are met, but not less than five years, pursuant to 33 CFR 332.6(b).

#### 4.1.2 Mitigation Monitoring Reports

Results of the vegetation monitoring efforts will be assessed annually to determine the success of wetland mitigation area creation. Annual wetland mitigation monitoring will be conducted for at least five years following construction and habitat restoration, and until all measures of successful wetland mitigation have been met. Mitigation monitoring reports prepared by a qualified wetland ecologist will detail each measure of mitigation efforts based on the success criteria established in Section 3.6. Reports will be prepared following inspections during the growing season and sent to the USACE before the end of each calendar year. Mitigation monitoring reports will include recommendations for adaptive measures if observations indicate that corrections are warranted. In addition, mitigation monitoring reports will include the following:

- The South Pacific Division's (SPD's) required mitigation monitoring form (**Appendix H**).
- A comparison between pre-construction site conditions and as-built plans of mitigated areas.
- Maps depicting the limits of original WOTUS prior to construction and a delineation of the limits of WOTUS following the construction of mitigation areas.
- Photographs from established mitigation monitoring sample locations.
- Data documenting whether each mitigation site is achieving performance standards and an accompanying narrative. Vegetative cover will be determined based on a standardized plot-based ocular sampling methodology, such as a Daubenmire cover class estimation.
- Fish and wildlife observations at each of the mitigation sites.
- A statement regarding the perceived success of the mitigation areas and any problem areas and recommended corrective actions.

#### 4.2 Adaptive Management

Adaptive management is a principle of resource management that dictates that management approaches and techniques should be flexible to revision and modification based on success/failure in order to meet goals. Management objectives and techniques may be modified in response to feedback, such as the results of mitigation monitoring. Adaptive management is based on the idea that the understanding of natural systems is incomplete, and thus should allow new information to influence the potential re-evaluation of strategies for management.

Should the compensatory mitigation area fail to meet performance standards as stated in the monitoring plan, corrective action will be taken if necessary/appropriate, and may be taken prior to the end of the monitoring period of five years. Mitigation monitoring or site inspection may reveal the need for additional, adaptive measures to be taken. Such measures could include improving hydrology, increased or alternative control measures for invasive species, streambank stabilization, or reseeding, replanting, or other modifications to vegetation management. The Proponent would be responsible for continued improvement of the mitigation area, including supplying additional hydrology, stabilizing streambanks, seeding, planting, or weed removal. The USACE will be notified of the need for such actions prior to further mitigation. It may also be necessary to adapt management practices for wetland mitigation areas based on future regulatory and legal developments regarding WOTUS. The Proponent agrees to adapt the management and mitigation practices outlined herein, if necessary, through consultation with the USACE and wetland ecologists.

Should you have any questions regarding the information or recommendations provided in this report, please feel free to contact Bristlecone Ecology at [dmaynard@bristleconeecology.com](mailto:dmaynard@bristleconeecology.com).

Sincerely,

**Bristlecone Ecology, LLC**



**Daniel Maynard**  
Ecologist

## 5 LITERATURE CITED

- Colorado DNR (Department of Natural Resources). 1998. Native plant revegetation guide for Colorado. Caring for the land series, Vol. III. In partnership with Colorado Natural Areas Program and Colorado State Parks. October 1998.
- EPC (El Paso County). 2018. Noxious Weeds and Control Methods. El Paso County Community Services Department, Environmental Division. Available at <https://assets-communityservices.elpasoco.com/wp-content/uploads/Environmental-Division-Picture/Noxious-Weeds/Noxious-Weed-Control-Book.pdf>. Accessed November 2021.
- EPC. 2017. El Paso County Noxious Weed Management Plan. Approved by Board of County Commissioners on December 28, 2017. <https://communityservices.elpasoco.com/wp-content/uploads/Environmental-Division-Picture/Noxious-Weeds/Weed-Management-Plan-December-2017.pdf>. Accessed November 2021.
- USGS (U.S. Geological Survey). 2019. Geographic map of the Falcon NW, CO quadrangle. Scale = 1:24,000.



## **APPENDIX A**

### PROJECT LOCATION MAP





## **APPENDIX B**

### TOLLING AGREEMENT

## TOLLING AGREEMENT

WHEREAS, the United States of America, on behalf of the United States Army Corps of Engineers (Corps) may file a complaint against Jim Morley and/or SR Land, LLC ("potential defendant(s)"), for, inter alia, alleged violations of Sections 301(a), 309, & 404 of the Clean Water Act ("CWA"), 33 U.S.C. Sections 1311(a), 1319, & 1344 and/or Section 9, 10, or 13 of the Rivers and Harbors Act of 1899, 33 U.S.C. Sections 401, 403, or 407, and/or Ocean Dumping Act Sections 101 and/or 103 (33 U.S.C. 1411, 1413), at a site commonly known as Sterling Ranch Residential Development; located at approximately 39.9645, -104.6649; El Paso County, CO.

WHEREAS, the purpose of any such complaint would be to obtain appropriate injunctive relief and to impose appropriate civil or criminal penalties for potential defendant'(s) alleged violations of the statute(s) cited above;

WHEREAS, the Corps accepted an after-the-fact (ATF) permit application from the potential defendant(s) in an attempt to settle the above claims;

WHEREAS, both parties believe that their interests will best be served by continuing the ATF permit process without the disruption that might be occasioned should the United States file a complaint in the immediate future;

AND, WHEREAS, both parties acknowledge the requirement found at 33 CFR 331.11(c) for an applicant for an ATF permit to provide a signed tolling agreement.

THEREFORE, the United States and potential defendant(s) stipulate and agree as follows:

1. The United States and potential defendant(s) agree that the time between the acceptance by the Corps of the ATF permit application and the final Corps decision (as defined at 33 CFR 331.10), plus one year thereafter will not be included in calculating any statute of limitations that might be applicable to the alleged statutory violation(s) described above. Potential defendants agree not to assert, plead, or raise in any fashion on behalf of any party, whether by answer, motion, or otherwise, any defense or avoidance based on the running of any statute of limitations that may apply during that period or any defense or avoidance based on laches or other principle concerning the timeliness of commencing a civil action, based on the failure of the United States to file its complaint during that period.

2. Potential defendants further agree not to transfer the property in question during the pendency of this tolling agreement nor during the pendency of any civil action brought as described above, without first notifying the United States and giving the United States a reasonable opportunity to oppose such transfer.

3. Nothing in this tolling agreement shall restrict or otherwise prevent the United States from filing a complaint regarding any alleged statutory violation(s) not described above, at any time.

4. This tolling agreement does not constitute any admission of liability on the part of potential defendants; nor does it constitute any admission or acknowledgment on the part of the United States that any statute of limitations has run or that any statute of limitations is applicable to the statutory claims described above.

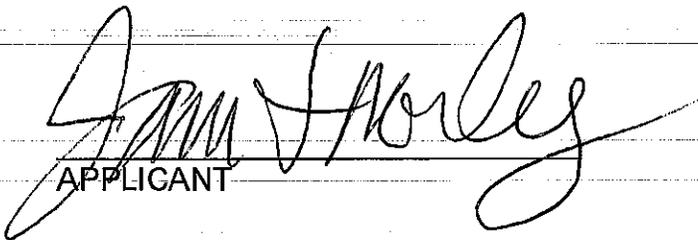
5. This tolling agreement contains the entire agreement between the parties, and no statement, promise or inducement made by any party to this agreement, or any agent of such parties, that is not set forth in this agreement shall be valid or binding. This tolling agreement may not be enlarged, modified, or altered except in writing signed by the parties. This tolling agreement may be executed in counterparts.

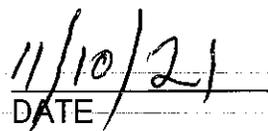
FOR the United States of America:

\_\_\_\_\_  
DISTRICT COUNSEL  
Albuquerque District  
U.S. Army Corps of Engineers

\_\_\_\_\_  
DATE

FOR Potential Defendant(s):

  
\_\_\_\_\_  
APPLICANT

  
\_\_\_\_\_  
DATE



## **APPENDIX C**

### PROJECT DESIGN PLANS



**CONSTRUCTION NOTES:**

- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH EL PASO COUNTY ALLY ENGINEERING CRITERIA MANUAL AND EL PASO COUNTY DRAINAGE CRITERIA MANUAL.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1&2
- THE CONTRACTOR WILL HOLD A PRE-CONSTRUCTION MEETING WITH THE EL PASO COUNTY ENGINEERING DEPARTMENT REPRESENTATIVE AND THE ENGINEER PRIOR TO CONSTRUCTION OF PUBLIC IMPROVEMENTS.
- ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT, REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND EPC. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER OR APPLICABLE ENTITY.
- EL PASO COUNTY SHALL BE NOTIFIED 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- ALL RANGE POINTS, TIES, BENCH MARKS, AND OTHER SURVEY CONTROL POINTS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION MUST BE PRESERVED.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS AND CROSS SECTIONS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS AS APPROVED.
- CONSTRUCTION ACTIVITY SHALL BE SCHEDULED WITH MINIMUM IMPACT TO PEDESTRIAN AND VEHICULAR TRAFFIC. ALLOWABLE WORK HOURS SHALL BE AS SPECIFIED IN THE PROJECT SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES AND STRUCTURES AFFECTED BY THE WORK AND ANY DAMAGE SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE ENGINEER OR APPLICABLE ENTITY.
- THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES NECESSARY THROUGHOUT THE DURATION OF CONSTRUCTION IN CONFORMANCE WITH TRAFFIC CONTROL PLANS. NO LANE CLOSURES WILL BE PERMITTED UNLESS OTHERWISE SPECIFIED IN THE PROJECT SPECIAL PROVISION "TRAFFIC CONTROL".
- THE CONTRACTOR SHALL MAINTAIN PAVEMENT MARKINGS ON THE ROADWAYS DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH MUTCD AND CDOT STANDARDS.
- WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS ORDERED. WATER WILL NOT BE PAID FOR SEPARATELY.
- THE CONTRACTOR SHALL OBTAIN A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FOR DISCHARGES TO ANY ROADWAY DITCHES, STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREAM THAT IS TRIBUTARY TO THE AFOREMENTIONED FACILITIES, OR ANY WATERS OF THE UNITED STATES.
- DEWATERING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 107 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR SHALL NOTIFY ALL BUSINESSES AND RESIDENTS, IN WRITING, PRIOR TO ANY INTERRUPTION IN UTILITY SERVICE. NOTICE MUST BEAR ALL APPROPRIATE CONTACT INFORMATION, AND AN EMERGENCY NUMBER FOR AFTER HOURS CALLS.
- AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO PROJECT CLOSEOUT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PLANS MARKED "AS-BUILT". THE PLANS SHALL SHOW ANY AND ALL VARIATIONS FROM THE APPROVED PLAN SET.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SITE SPECIFIC STAGING PLAN FOR ACCESS TO THE WORK AREAS AND FIELD FACILITIES TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF TEMPORARY INGRESS/EGRESS SHALL BE PAID FOR UNDER THE LUMP SUM TRAFFIC CONTROL, EARTHWORK, DRAINAGE, AND OTHER ITEMS RELATED TO THE ACCESS SHALL BE SUBSIDIARY TO THE WORK INCLUDING EROSION CONTROL MEASURES FOR RESTORATION OF THE SITE TO ORIGINAL CONDITION.
- THE CONTRACTOR SHALL PROTECT EXISTING WETLANDS WITH TEMPORARY FENCING BEFORE ANY GROUND DISTURBANCE BEGINS. WETLANDS AREAS TO BE PROTECTED ARE SHOWN ON THE PLANS.

**GRADING NOTES:**

- SAND CREEK IS AN ACTIVE MAJOR DRAINAGEWAY WITH PERENNIAL BASE FLOWS. CONTRACTOR SHALL ANTICIPATE STORMWATER INFLOWS TO THE SITE DURING CONSTRUCTION AND PROVIDE A MEANS OF CONVEYANCE/STORAGE OF ANY CONTINUOUS INFLOWS.
- THERE IS A LIKELIHOOD FOR LARGE FLOW EVENTS IN SAND CREEK WHICH COULD JEOPARDIZE CONSTRUCTION. THE LIKELIHOOD OF THESE EVENTS CHANGES WITH THE SEASONS. THE CONTRACTOR SHOULD ACCOUNT FOR THE EVENTUALITY OF THESE LARGE FLOW EVENTS BASED ON THE TIMING OF CONSTRUCTION.
- DEWATERING:
  - DEWATERING/BYPASS PUMPING OF SAND CREEK SHALL OCCUR IN ADVANCE OF CONSTRUCTION ACTIVITIES.
  - THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION DEWATERING (CDW) PERMIT FROM COPHE ANYTIME GROUNDWATER, INCLUDING GROUNDWATER THAT IS COMMINGLED WITH STORMWATER OR SURFACE WATER, IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES AND THE GROUNDWATER OR COMMINGLED WATER NEEDS TO BE DISCHARGED TO SURFACE WATER.
  - WATER FROM DEWATERING OPERATIONS SHALL ONLY BE DISCHARGED INTO STATE WATERS IF ALLOWED BY A PERMIT.
- MUCK EXCAVATION IS NOT ANTICIPATED FOR THIS PROJECT. IF ENCOUNTERED, CONTRACTOR SHALL REMOVE UNSUITABLE ORGANIC MATERIAL TO THE DEPTH AS DETERMINED BY THE ENGINEER AND REPLACE THE EXCAVATED VOLUME WITH SUITABLE APPROVED FILL MATERIAL PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- THE MAXIMUM SLOPE FOR EXCAVATION AND PLACEMENT OF FILL IS 4:1 HORIZONTAL:VERTICAL, UNLESS OTHERWISE SHOWN IN THE PLANS.
- THE EXISTING DROP STRUCTURE, ANY ASSOCIATED FEATURES, AND DEBRIS SHOULD BE REMOVED FROM THE PROPOSED CONSTRUCTION AREA. EXPOSED SURFACES SHOULD BE FREE OF MOUNDS AND DEPRESSIONS WHICH COULD PREVENT UNIFORM COMPACTION.
- EXPOSED AREAS WHICH WILL RECEIVE FILL, ONCE PROPERLY CLEARED WHERE NECESSARY, SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES, CONDITIONED TO NEAR OPTIMUM WATER CONTENT, AND COMPACTED.
- A GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR OVER-EXCAVATION AND FILL OPERATIONS.
- THE EARTHWORK EFFORTS SHOULD BE MONITORED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. MONITORING SHOULD INCLUDE DOCUMENTATION OF ADEQUATE REMOVAL OF VEGETATION AND TOP SOIL, PROOF-ROLLING AND MITIGATION OF AREAS DELINEATED BY THE PROOF-ROLL TO REQUIRE MITIGATION.
- EACH LIFT OF COMPACTED FILL SHOULD BE TESTED, EVALUATED, AND REWORKED AS NECESSARY UNTIL APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ADDITIONAL LIFTS. EACH LIFT OF FILL SHOULD BE TESTED FOR DENSITY AND WATER CONTENT AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 2,500 SQUARE FEET OF COMPACTED FILL PLACED BENEATH THE DROP STRUCTURE, OR WITHIN CONSTRUCTED SLOPES.
- IN AREAS OF FOUNDATION EXCAVATIONS, THE BEARING SUBGRADE SHOULD BE EVALUATED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. IN THE EVENT UNANTICIPATED CONDITIONS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER SHOULD PRESCRIBE MITIGATION OPTIONS.
- THE ON-SITE SOILS ARE GENERALLY CONSIDERED SUITABLE FOR REUSE AS STRUCTURAL AND/OR GENERAL FILL. IMPORTED SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF AS DIRECTED. PARTIAL REMOVAL OF THE FILL SOILS SHOULD INCLUDE OVER-EXCAVATING A MINIMUM OF 4 FEET OF THE FILL SOILS, PROCESSING AS REQUIRED, MOISTURE CONDITIONING, AND RECOMPACTING AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE FILL SHALL BE PLACED IN THIN, LOOSE LIFTS OF 8 INCHES OR LESS (WHEN HEAVY SELF-PROPELLED COMPACTION EQUIPMENT IS USED) OR 4-6 INCHES (WHEN HAND-GUIDED EQUIPMENT IS USED). WATER CONTENT SHALL BE WITHIN 3 PERCENT OF OPTIMUM. FILL IS TO BE COMPACTED TO A MINIMUM OF:
  - 95 PERCENT OF MAXIMUM DRY DENSITY
  - GENERAL FILL OUTSIDE OF STRUCTURAL AREAS: 90 PERCENT OF MAXIMUM DRY DENSITY
- A COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) WATER QUALITY DIVISION STORMWATER DISCHARGE PERMIT SHALL BE OBTAINED AND A COPY SHALL BE SUBMITTED TO EL PASO COUNTY.
- PROPOSED SPOT ELEVATIONS REFLECT MEAN FINISHED GROUND GRADES IRRESPECTIVE OF VARIATIONS DUE TO PROPOSED GROUT, BOULDER, AND RIPRAP.
- EXISTING GRADES REFLECT CHANNEL CONDITIONS AS OF AUGUST 1, 2017. CHANNEL SCOUR MAY AFFECT SHOWN ELEVATIONS.
- TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICAL ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS. THE MINIMUM THICKNESS OF TOPSOIL SHALL BE 4" AND SHALL BE OBTAINED BY STOCKPIILING EXISTING TOPSOIL. THE TOPSOIL SHALL BE APPLIED TO ALL SURFACES REQUIRING SEEDING OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL DISPOSE OF EXCESS TOPSOIL IN A DESIGNATED AREA ON SITE.

**ABBREVIATIONS**

AC ACRE	DU DWELLING UNITS	LOMR LETTER OF MAP REVISION	TB THRUST BLOCK
AD ALGEBRAIC DIFFERENCE	LP LOW POINT	LP LOW POINT	TBC TOP BACK OF CURB
AH AHEAD	E EAST	LS LUMP SUM	TBW TOP BACK OF WALK
ARCH ARCHITECT	EA EACH	LT LEFT	TEL TELEPHONE
ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS	EGL ENERGY GRADE LINE	MAX MAXIMUM	TN TON
ASSY ASSEMBLY	ELEV ELEVATION	M/D MOISTURE DENSITY	TOA TOP OF ASPHALT
AVE AVENUE	ELEC ELECTRIC	MDDP MASTER DEVELOPMENT DRAINAGE PLAN	TOB TOP OF BOX
BB BOX BASE	EOA EDGE OF ASPHALT	MH MANHOLE	TOC TOP OF CURB OR CONCRETE
BK BACK	EPC EL PASO COUNTY	MIN MINIMUM	TOF TOP OF FOUNDATION
BNDY BOUNDARY	ERCP ELLIPTICAL RCP	MS MOUNTABLE SIDEWALK	TOP TOP OF PIPE
BOP BOTTOM OF PIPE	ESMT EASEMENT	N NORTH	TW TYPICAL
BOV BLOW OFF VALVE	EX EXISTING	NRCP NON-REINFORCED CONCRETE	UDFCD URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
BVF BUTTERFLY VALVE	FDP FINAL DEVELOPMENT PLAN	OP PIPE	UE UTILITY EASEMENT
BLVD BOULEVARD	FDR FINAL DRAINAGE REPORT	OHE OVERHEAD ELECTRIC	U&DE UTILITY & DRAINAGE EASEMENT
BW BOTTOM OF WALL	FES FLARED END SECTION	OHU OVERHEAD UTILITY	UGE UNDERGROUND ELECTRIC
C&G CURB & GUTTER	FF FINISHED FLOOR ELEVATION	PC POINT OF CURVATURE	VCP VITRIFIED CLAY PIPE
CATV CABLE TELEVISION	FG FINISHED GRADE	PCC POINT OF COMPOUND	VPC VERTICAL POINT OF CURVATURE
CB CATCH BASIN	FH FIRE HYDRANT	PCR CURVATURE	VPI VERTICAL POINT OF INTERSECTION
CBC CONCRETE BOX CULVERT	FL FLOWLINE	PCR POINT OF CURB RETURN	VPT VERTICAL POINT OF TANGENCY
CDOT COLORADO DEPARTMENT OF TRANSPORTATION	FIL FILING	PDP PRELIMINARY DEVELOPMENT PLAN	VTC VEHICLE TRACKING CONTROL
CDS CUL-DE-SAC	GB GRADE BREAK	PE PROFESSIONAL ENGINEER	W WEST
CF CUBIC FOOT	GE GAS EASEMENT	PI POINT OF INTERSECTION	WL WATER LINE
CFS CUBIC FEET PER SECOND	GIS GEOGRAPHIC INFORMATION SYSTEM	PKWY PARKWAY	WM WATER MAIN
CIP COMPLETE IN PLACE	GL GAS LINE	PL PROPERTY LINE	WRD WATER RESOURCES DEPARTMENT
CL CENTER LINE	GPS GLOBAL POSITIONING SYSTEM	PR PROPOSED	WS WATER SURFACE
CLOMR CONDITIONAL LETTER OF MAP REVISION	GV GATE VALVE	PRC POINT OF REVERSE CURVATURE	WSE WATER SURFACE ELEVATION
CLR CLEAR	HBP HOT BITUMINOUS PAVEMENT	PT POINT OF TANGENCY	WTR WATER
CMF CORRUGATED METAL PIPE	HC CORRUGATED METAL PIPE	PT POINT OF TANGENCY	YR YEAR
CO CLEAN OUT	HDC HIGH DEFLECTION COUPLING	PVC POLYVINYL CHLORIDE	
COCS CITY OF COLORADO SPRINGS CONCRETE	HDPE HIGH DENSITY POLYETHYLENE	R RADIUS	
CONC CONCRETE	HGL HYDRAULIC GRADE LINE	RCBC REINFORCED CONCRETE BOX CULVERT	
CR CIRCLE	HMA HOT MIX ASPHALT	RCP REINFORCED CONCRETE PIPE	
CSP CORRUGATED STEEL PIPE	HQA HOME OWNERS ASSOCIATION	RD ROAD	
CSU COLORADO SPRINGS UTILITIES	HP HIGH POINT	ROW RIGHT OF WAY	
CT COURT	HR HOUR	RT RIGHT	
CTRB CONCRETE THRUST REDUCER BLOCK	I INLET	S SOUTH	
CY CUBIC YARD	IE IRRIGATION EASEMENT	INT INTERSECTION	
DBPS DRAINAGE BASIN PLANNING STUDY	INV INVERT	SAN SANITARY SEWER	
DE DRAINAGE EASEMENT	IRR IRRIGATION	SF SQUARE FOOT	
DIA DIAMETER	KB KICK (THRUST) BLOCK	ST STREET	
DIP DUCTILE IRON PIPE	LE LEANDSCAPE EASEMENT	STA STATION	
DR DRIVE	LF LINEAR FOOT	STM STORM SEWER	
DRC DESIGN REVIEW COMMITTEE	LN LANE	SY-IN SQUARE YARD INCH	

**GRADING, EROSION AND STORMWATER QUALITY NOTES:**

- ALL CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH EL PASO COUNTY DRAINAGE CRITERIA MANUALS AND ENGINEERING CRITERIA MANUAL.
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
- CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.
- VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
- ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE CITY ENGINEER, IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORMWATER QUALITY CONTROL PLAN APPROVED BY EL PASO COUNTY, IF REQUIRED.
- ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS AND THE MANUAL AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION. THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
- ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
- ALL EARTH DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH DISTURBANCE.
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
- TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS PRESCRIBED IN THE MANUAL, AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER QUALITY CONTROL PLANS APPROVED BY EL PASO COUNTY, IF REQUIRED.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- NO PERSON SHALL CAUSE, PERMIT, OR CONTRIBUTE TO THE DISCHARGE INTO THE MUNICIPAL SEPARATE STORM SEWER POLLUTANTS THAT COULD CAUSE EL PASO COUNTY TO BE IN VIOLATION OF ITS COLORADO DISCHARGE PERMIT SYSTEM MUNICIPAL STORMWATER DISCHARGE PERMIT.
- THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMPING WITH MATERIALS FOR VEHICLE ACCESS.
- INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344). REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE MANUAL, IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO A STATE WATER AT ANY TIME.
- SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT STORAGE, AND EQUIPMENT FUELING AND SERVICING AREAS TO PREVENT THE POLLUTION OF ANY STATE WATERS, INCLUDING WETLANDS. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY, OR CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.
- THE CONTRACTOR SHALL OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER TO BE KEPT ONSITE DURING THE CONSTRUCTION PHASES.
- THOSE PORTIONS WITHIN LIMITS OF CONSTRUCTION SHALL BE CLEARED AND GRUBBED OF ALL VEGETATIVE AND ORGANIC MATERIALS. A MINIMUM OF 0.5' BELOW EXISTING GRADE, THE CLEARED MATERIAL SHALL BE REUSED IN AREAS NOT REQUIRED FOR STRUCTURAL FILL.
- MAXIMUM CUT/FILL SLOPES SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
- ALL GRADING, EROSION CONTROL, AND STORMWATER MANAGEMENT SHALL BE IN CONFORMANCE WITH EL PASO COUNTY STANDARDS AND SPECIFICATIONS.
- ALL PROPOSED MODIFICATIONS TO THE APPROVED GRADING AND EROSION CONTROL PLANS MUST BE SUBMITTED ALONG WITH SUPPORTING MATERIALS TO THE ENGINEERING DIVISION. NO WORK IN CONNECTION WITH THE PROPOSED MODIFICATIONS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL, APPROVAL FOR WHICH MAY BE ISSUED IF THE APPLICANT CAN DEMONSTRATE THAT THE MODIFICATIONS WILL PROVIDE SOIL EROSION CONTROLS EQUIVALENT TO, OR BETTER THAN THAT OF THE ORIGINALLY APPROVED SOIL DISTURBANCE PLANS.
- AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION (SEE BELOW). THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORM WATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART.

COPHE WATER QUALITY CONTROL DIVISION  
ATTN: PERMITS UNIT  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530

**IRIPRAP NOTES:**

- WHERE "SOIL RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH APPROVED FILL. THE RIPRAP SHALL BE PRE-MIXED WITH THE APPROVED FILL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65 PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.
- PLACE ALL RIPRAP AND SOIL-RIPRAP TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND ALL LEVEL TO ELIMINATE VOIDS AND ROCKS PROJECTING DESIGN ABOVE RIPRAP TOP GRADE.
- ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.
- CRIMP OR TACKIFY MULCH OR USE APPROVED HYDROMULCH AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- ELEVATION TOLERANCES FOR RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.

IRIPRAP DESIGNATION	INTERMEDIATE ROCK DIMENSION (IN.)	PERCENT PASSING (%)	D50 (IN.)
TYPE VL	12 9 6 2	70-100 50-70 35-50 2-10	6
TYPE M	21 18 12 4	70-100 50-70 35-50 2-10	12
TYPE H	30 24 18 6	70-100 50-70 35-50 2-10	18



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**ENGINEER'S STATEMENT**

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

MIKE A. BRAMLETT, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING, LLC.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**SR LAND, LLC**  
20 BOULDER CRESCENT  
2ND FLOOR  
COLORADO SPRINGS, CO 80903  
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(719) 419-3024

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Fort Collins 970-491-9888 • www.jrengineering.com

DATE	BY	NO.	REVISION

H-SCALE	N/A	V-SCALE	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				10/21/21	SCH	SCH	

**SAND CREEK RESTORATION**  
**GENERAL NOTES**







DEMOLITION PLANS  
EX STA 11+00.00 TO 38+00.00  
SCALE: 1"=100'

Sand Creek Demolitions		
Totals	Sq Ft	Acres
Reach 1 Loss	136,986.84	3.14
Reach 2 Loss	136,406.07	3.82
Reach 3 Loss	152,410.55	3.55
<b>Total Permanent Loss</b>	<b>425,803.46</b>	<b>10.51</b>

**BENCHMARK**

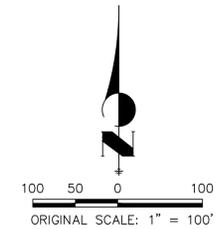
1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
NORTHING = 411416.273  
EASTING = 235167.071  
ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION  
NORTHING = 410095.404  
EASTING = 235052.131  
ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
NORTHING = 411399.962  
EASTING = 233849.817  
ELEVATION = 7030.82



Know what's below.  
Call before you dig.

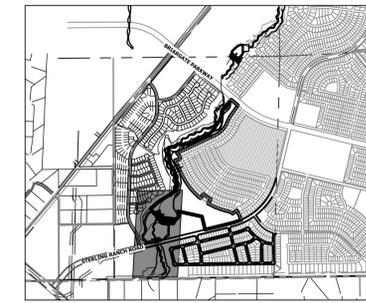
**BASIS OF BEARINGS**

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.



**LEGEND**

- WETLAND: DISTURBED AREAS [Cross-hatched symbol]
- DISTURBED BY OTHERS [Diagonal line symbol]



KEY MAP  
SCALE: 1"=2000'

PREPARED FOR  
**SR LAND, LLC**  
20 BOULDER CRESCENT  
2ND FLOOR  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 419-3024

**J.R. ENGINEERING**  
A Westman Company  
Central 300-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

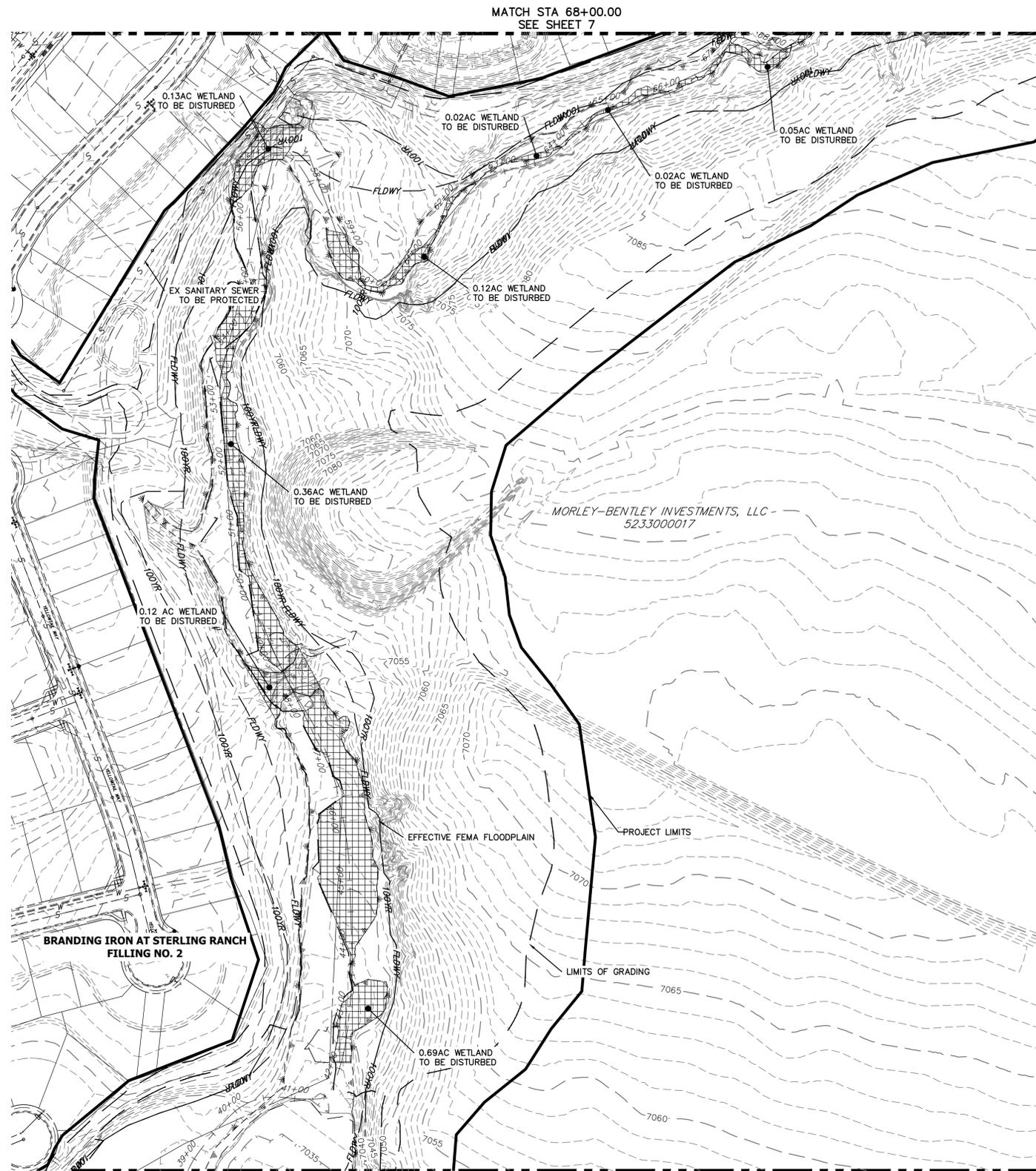
H-SCALE	1"=100'	N/A
V-SCALE	10/21/21	DJV
DESIGNED BY	DJV	SCH
DRAWN BY		
CHECKED BY		

**SAND CREEK RESTORATION**  
**DEMOLITION PLAN**

**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION  
**PRELIMINARY NOT FOR CONSTRUCTION**  
MIKE A. BRAMLEY  
COLORADO P.E. 33212  
FOR AND ON BEHALF OF J.R. ENGINEERING, LLC

SHEET 5 OF 52  
JOB NO. 25188.04

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**DEMOLITION PLANS**  
 EX STA: 38+00.00 TO 68+00.00  
 SCALE: 1"=100'

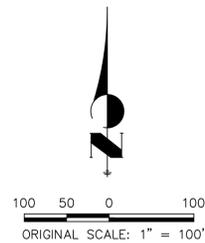
Sand Creek Demolitions		
Totals	Sq Ft	Acres
Reach 1 Loss	136,986.84	3.14
Reach 2 Loss	136,406.07	3.82
Reach 3 Loss	152,410.55	3.55
<b>Total Permanent Loss</b>	<b>425,803.46</b>	<b>10.51</b>

**BENCHMARK**

1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
 NORTHING = 411416.273  
 EASTING = 235167.071  
 ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PANNEE RANCHEROS SUBDIVISION  
 NORTHING = 410095.404  
 EASTING = 235052.131  
 ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
 NORTHING = 411339.962  
 EASTING = 233849.817  
 ELEVATION = 7030.82

**BASIS OF BEARINGS**

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E, A DISTANCE OF 2,722.69 FEET.



**LEGEND**

- WETLAND: DISTURBED AREAS
- DISTURBED BY OTHERS



**KEY MAP**  
 SCALE: 1"=2000'

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**SR LAND, LLC**  
 20 BOULDER CRESCENT  
 2ND FLOOR  
 COLORADO SPRINGS, CO 80903  
 JAMES F. MORLEY  
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 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=100'	N/A	10/21/21	DJV	SCH	

**SAND CREEK RESTORATION**  
**DEMOLITION PLAN**  
 SHEET 6 OF 52  
 JOB NO. 25188.04

**ENGINEER'S STATEMENT**

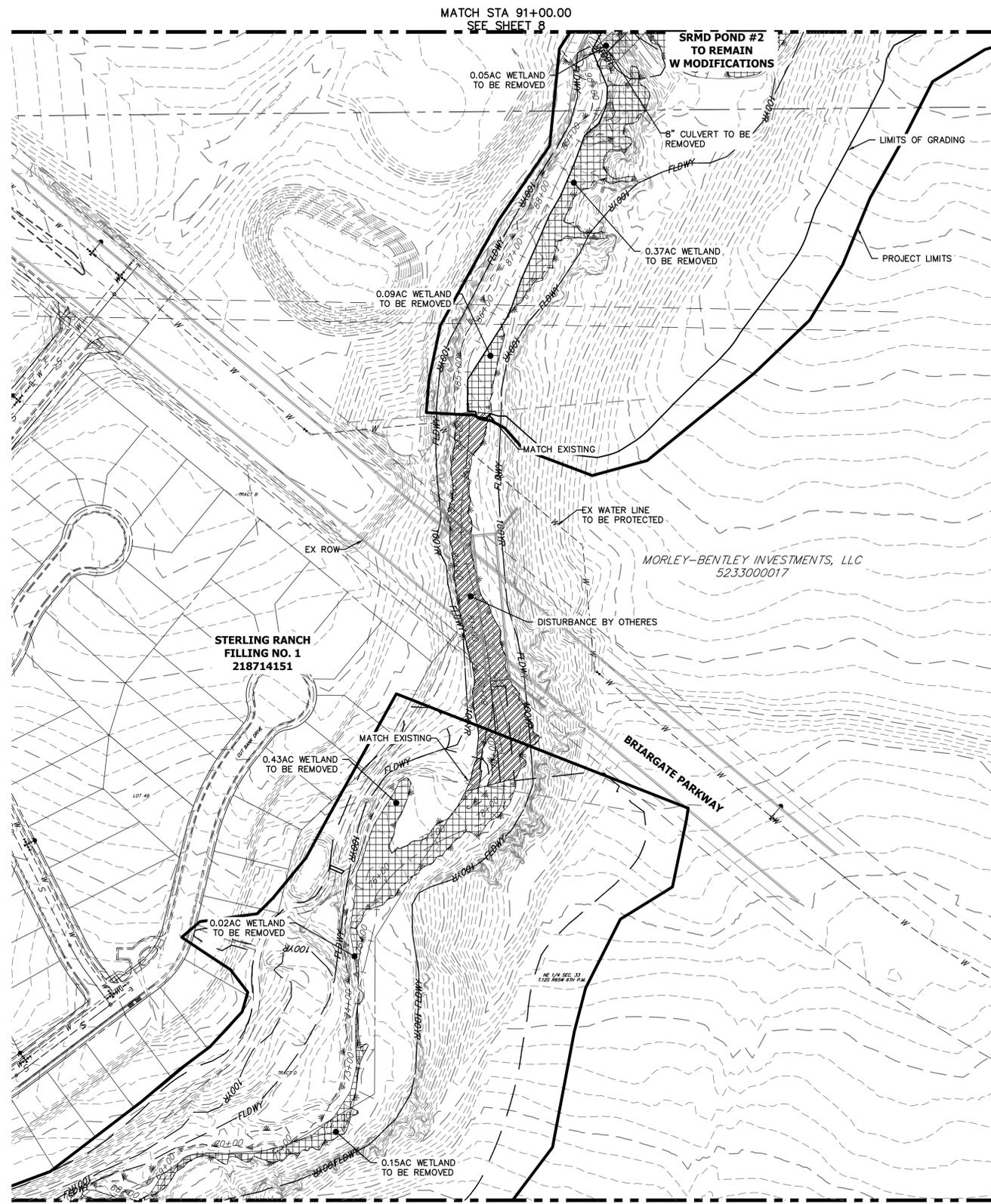
PREPARED UNDER MY DIRECT SUPERVISION

**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**

MIKE A. BRAMLEY  
 COLORADO P.E. 30112  
 FOR AND ON BEHALF OF J.R. ENGINEERING, LLC



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DEMOLITION PLANS  
 EX STA: 68+00.00 TO 91+00.00  
 SCALE: 1"=100'

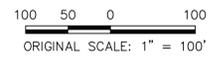
Sand Creek Demolitions		
Totals	Sq Ft	Acres
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Reach 2 Loss	136,406.07	3.82
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<b>Total Permanent Loss</b>	<b>425,803.46</b>	<b>10.51</b>

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1. THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
 NORTHING = 411416.273  
 EASTING = 235167.071  
 ELEVATION = 7023.42
2. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION  
 NORTHING = 410095.404  
 EASTING = 235052.131  
 ELEVATION = 7000.40
3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION  
 NORTHING = 411399.962  
 EASTING = 233849.817  
 ELEVATION = 7030.82

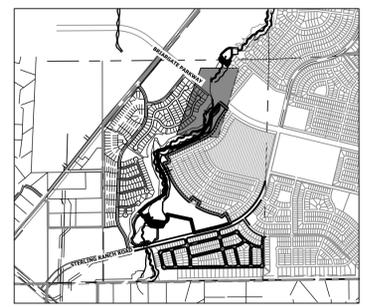
**BASIS OF BEARINGS**

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**LEGEND**

- WETLAND: DISTURBED AREAS
- DISTURBED BY OTHERS



KEY MAP  
 SCALE: 1"=2000'

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**SR LAND, LLC**  
 20 BOULDER CRESCENT  
 2ND FLOOR  
 COLORADO SPRINGS, CO 80903  
 JAMES F. MORLEY  
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 Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE	1"=100'	
				H-SCALE	V-SCALE
					N/A
			10/21/21		DJV
					SCH

SAND CREEK RESTORATION  
 DEMOLITION PLAN

SHEET 7 OF 52  
 JOB NO. 25188.04

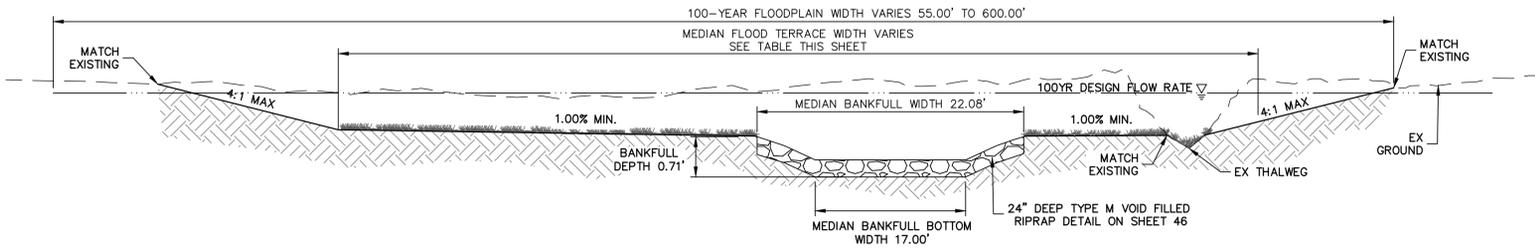


Know what's below.  
 Call before you dig.

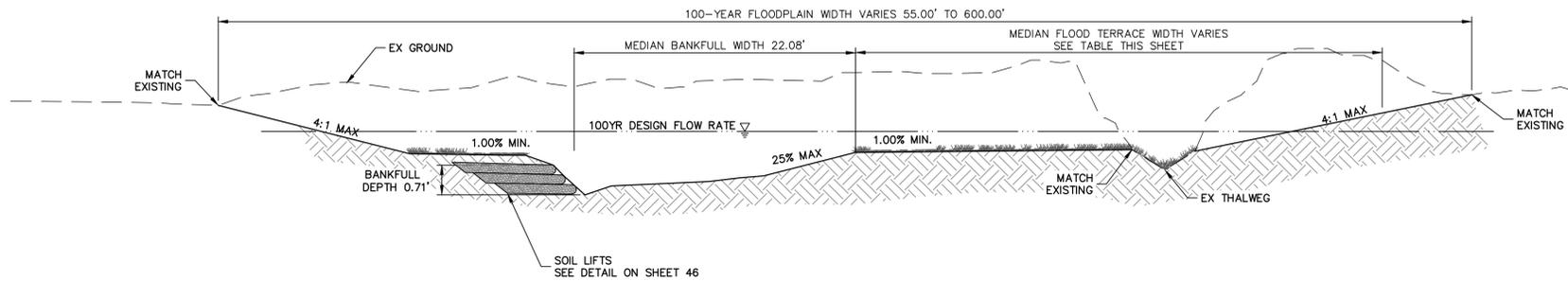
**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND CONTROL BY  
**PRELIMINARY NOT FOR CONSTRUCTION**  
 MIKE A. BRAMLEY  
 COLORADO P.E. 30117  
 FOR AND ON BEHALF OF J.R. ENGINEERING, LLC

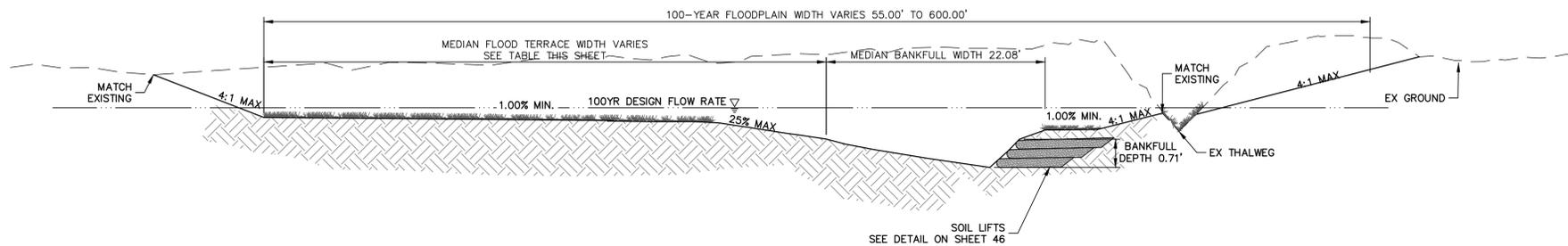




**RIFFLE TYPICAL SECTION A-A**  
SCALE: N.T.S.



**LEFT POOL TYPICAL SECTION B-B**  
SCALE: N.T.S.

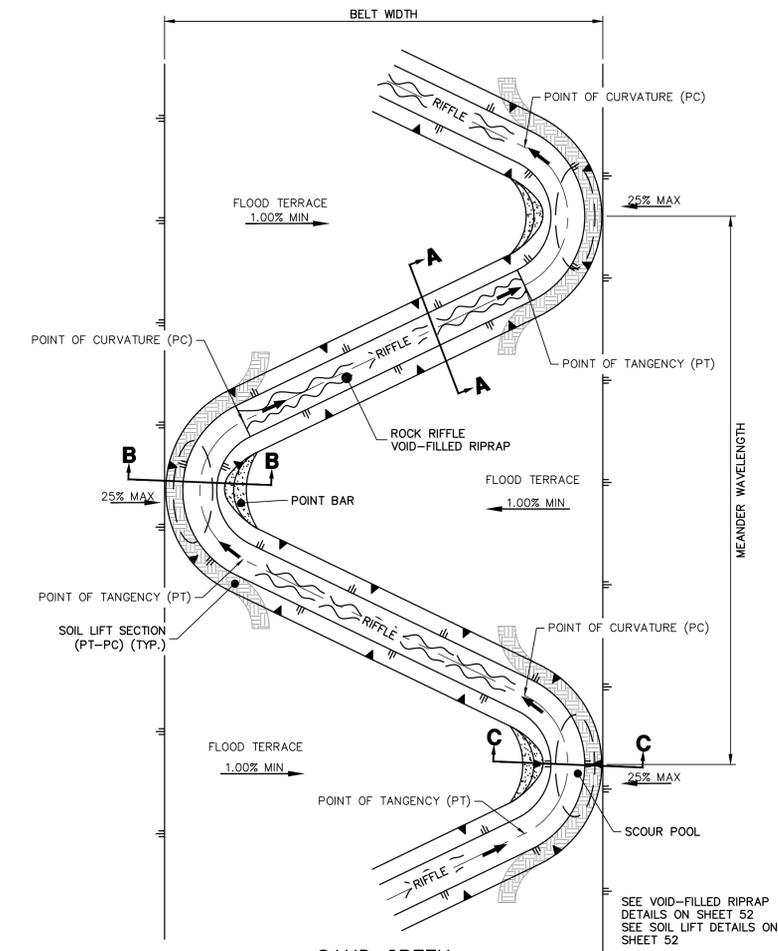


**RIGHT POOL TYPICAL SECTION C-C**  
SCALE: N.T.S.

**SAND CREEK TYPICAL SECTIONS**

REACH 1: STA: 1+00.00 TO 10+05.89  
 REACH 2: STA: 11+18.00 TO 59+27.25  
 REACH 3: STA: 61+54.83 TO 88+62.94

REACH STA	MDDP (100YR)	MEDIAN FLOOD TERRACE WIDTH
1+00.00 TO 10+05.89	1591 cfs	52.00' TO 270.00'
11+18.00 TO 59+27.25	2036 cfs	160.00' TO 410.00'
61+54.83 TO 88+62.94	1834 cfs	180.00' TO 255.00'



**SAND CREEK STREAM LAYOUT TYPICAL - PLAN**  
SCALE: N.T.S.

Sand Creek Performance Standards			Alternative 2
Parameter	Measurement Method	Functioning	
<b>Hydrology</b>			
Low Flow Channel (B) Discharge (cfs)	Drainage Area Relationship		
Bankfull Channel Discharge (cfs)	Regional Curve and Existing Condition		
Floodplain Terrace Discharge (cfs)	Drainage Area Relationship		
100-year Discharge (cfs)	F15		
<b>Hydraulics</b>			
Flow Dynamics (Bankfull Velocity)		<9.0 fps	
Floodplain Shear Stress		<1.2 psf	
<b>Geometry (Refer to typical section)</b>			
Proposed Stream Type	Stream Classification		C4
Valley Type	Stream Classification		Terraced Alluvial
Floodplain Connectivity	Bank Height Ratio (BHR)	1.0	1.1
	Entrenchment Ratio (ER)	6.0	8.0
<b>Low Flow Channel (B)</b>			
Width, ft			17.0
Mean Depth, ft			0.71
Max Depth, ft			1.00
Inner Bank Bench Width, ft			4.6
Area (35% Bankfull Area), sqft			14.0
<b>Bankfull Channel</b>			
Width, ft			77
Mean Depth, ft			43
Max Depth, ft			60
Area, sqft			102
Bend to Bend Spacing, ft	4.5 - 6 times Bankfull Width		43
Radius of Curvature (ROC), ft	2.5 - 3.5 times Bankfull Width		26
Tangent Lengths, ft	1.5 - 2.5 times Bankfull Width		153
Meander Wavelength, ft	9 - 12 times Bankfull Width		204
Meander Beltwidth, ft	2 - 3.5 times Bankfull Width		34
<b>Flood Terrace</b>			
Width, ft			0
Area (300% of Bankfull Area), sqft			0
Bend to Bend Spacing, ft	Same as Bankfull Pattern		0
Radius of Curvature, ft	2 - 4 times the Flood Terrace Width		0
Tangent Riffle Lengths, ft	1 - 2 times the Bankfull Width		17
Meander Beltwidth, ft	1.5 - 2 times the Flood Terrace Width		0
Expansion and Contraction Ratios	greater than 10:1		0
<b>100-year Floodplain</b>			
Width, ft			0
Radius of Curvature, ft	2 - 50 times the Floodplain Width		0
Tangent Lengths, ft	1 - 2 times the Bankfull Width		17
Meander Beltwidth, ft	1.0 - 2 times the Floodplain Width		0
Expansion and Contraction Ratios	greater than 10:1		0



**ENGINEER'S STATEMENT**  
 PREPARED UNDER MY DIRECT SUPERVISION  
 PRELIMINARY NOT FOR CONSTRUCTION  
 MIKE A. BRAMLEY  
 COLORADO P.E. 30000  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**SR LAND, LLC**  
 20 BOULDER CRESCENT  
 2ND FLOOR  
 COLORADO SPRINGS, CO 80903  
 JAMES F. MORLEY  
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**J.R. ENGINEERING**  
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 Centennial 300-740-9383 • Colorado Springs 719-583-2583  
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION

H-SCALE: N/A  
 V-SCALE: N/A  
 DATE: 10/21/21  
 DESIGNED BY: DJV  
 DRAWN BY: SCH  
 CHECKED BY: 

**SAND CREEK RESTORATION**  
 TYPICAL SECTIONS

SHEET 9 OF 52  
 JOB NO. 25188.04



## **APPENDIX D**

### AQUATIC RESOURCE DESCRIPTION TABLES



Sterling Compensatory Ranch Mitigation Plan - Impact Sites									
Pre-Construction Site Conditions						Post-Construction Site Conditions			
Site No.	Habitat Types	Vegetation Communities	Cowardin Classification	Hydrogeomorphic Classification	Hydrology	Activity	Permanent Loss	Temporary Loss	Linear Feet
<b>Wetland Waters of the U.S. - Reach 1</b>									
1	River bottom	Willow-rush complex	R4SB	Riverine	Seasonally Flooded	Channel realignment & stabilization	1.00	0.00	717
2	River bottom	Willow-rush complex	R4SB	Riverine	Seasonally Flooded	Bridge/Road Crossing	0.69	0.00	891
<b>Wetland Waters of the U.S. - Reach 2</b>									
3	River bottom	Sedge meadow	R4SB	Riverine	Seasonally Flooded	Channel realignment & stabilization	1.61	0.00	1486
4	River bottom	Mudflat	R4SB	Lacustrine Fringe	Seasonally Flooded	Channel realignment & stabilization	0.21	0.00	141
5	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.48	0.00	411
6	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.36	0.00	662
7	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.11	0.00	171
8	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.10	0.00	159
9	River bottom	Sedge meadow	R4SB	Riverine	Seasonally Flooded	Channel realignment & stabilization	0.08	0.00	473
10	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.63	0.00	436
11	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Bridge/Road Crossing	0.74	0.00	635
<b>Wetland Waters of the U.S. - Reach 3</b>									
12	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.17	0.00	199
13	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.29	0.00	310
14	Open Water	Submergent Aquatics	PUB	Lacustrine Fringe	Semi-permanently Flooded	Channel realignment & stabilization	0.94	0.00	251
15	River bottom	Willow-rush complex	R4SB	Riverine	Intermittent	Channel realignment & stabilization	0.14	0.00	99
16	Sedge Meadow	Sedge meadow	R4SB	Riverine	Temporarily Flooded	Channel realignment & stabilization	0.18	0.00	255
17	Sedge Meadow	Sedge meadow	R4SB	Riverine	Temporarily Flooded	Channel realignment & stabilization	0.59	0.00	436
18	Sedge Meadow	Sedge meadow	R4SB	Riverine	Temporarily Flooded	Channel realignment & stabilization	0.39	0.00	646
19	Open Water	Submergent Aquatics	PUB	Lacustrine Fringe	Seasonally Flooded	Channel realignment & stabilization	0.38	0.00	299
20	Sedge Meadow	Sedge meadow	R4SB	Riverine	Temporarily Flooded	Channel realignment & stabilization	0.26	0.00	251
<b>Non-Wetland Waters of the U.S. - Reach 3</b>									
21	Riparian Meadow	Mesic Meadow	R4SB	Riverine	Ephemeral	Channel realignment & stabilization	0.24	0.00	381
22	Riparian Meadow	Mesic Meadow	R4SB	Riverine	Ephemeral	Channel realignment & stabilization	0.19	0.00	166
23	Riparian Meadow	Mesic Meadow	R4SB	Riverine	Ephemeral	Channel realignment & stabilization	0.14	0.00	116



Sterling Compensatory Ranch Mitigation Plan - Mitigation Sites									
Site No.	Pre-Construction Site Conditions	Post-Construction Site Conditions							
	Habitat Type(s)	Habitat Type(s)	Vegetation	Hydrology	Mitigation Method	Acres	Linear Feet	Cowardin Classification	Hydrogeomorphic Classification
<b>Wetland Waters of the U.S. - Reach 1</b>									
1	River bottom	River bottom	Willow-rush complex	Intermittent	Enhancement	0.27	193	R4SB	Riverine
2	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.86	423	PEM	Riverine
3	Native Grassland	Flood terrace	Willow-rush complex	Seasonally Flooded	Establishment	0.13	120	PEM	Riverine
4	River bottom	Flood terrace	Willow-rush complex	Seasonally Flooded	Re-Establishment	1.00	717	PEM	Riverine
<b>Wetland Waters of the U.S. - Reach 2</b>									
5	Native Grassland	Sedge Meadow	Palustrine sedges/rushes	Seasonally Flooded	Establishment	3.83	798	PEM	Riverine
6	Native Grassland	Sedge Meadow	Palustrine sedges/rushes	Seasonally Flooded	Establishment	2.21	584	PEM	Riverine
7	Sedge Meadow	Sedge Meadow	Palustrine sedges/rushes	Seasonally Flooded	Re-Establishment	1.61	1486	R4SB	Riverine
8	Open Water	Open Water	Submergent Aquatics; Bulrush/Cattail Fringe	Semi-permanently Flooded	Preservation	2.22	545	PUB	Depressional
9	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	4.02	832	R4SB	Riverine
10	River bottom	River bottom	Willow-rush complex	Intermittent	Enhancement	0.80	489	R4SB	Riverine
11	River bottom	River bottom	Willow-rush complex	Intermittent	Enhancement	0.45	323	R4SB	Riverine
12	River bottom	River bottom	Willow-rush complex	Intermittent	Enhancement	0.20	251	R4SB	Riverine
13	River bottom	River bottom	Sedge Meadow	Saturated	Enhancement	0.39	395	R4SB	Riverine
14	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	1.32	853	R4SB	Riverine
15	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.76	611	R4SB	Riverine
16	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.85	523	R4SB	Riverine
17	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.44	378	R4SB	Riverine
18	River bottom	Flood terrace	Willow-rush complex	Intermittent	Re-Establishment	0.48	411	R4SB	Riverine
19	River bottom	Flood terrace	Willow-rush complex	Intermittent	Re-Establishment	0.36	662	R4SB	Riverine
20	River bottom	Flood terrace	Willow-rush complex	Intermittent	Re-Establishment	0.10	159	R4SB	Riverine
21	River bottom	Flood terrace	Sedge Meadow	Saturated	Re-Establishment	0.08	473	R4SB	Riverine
22	River bottom	Flood terrace	Willow-rush complex	Intermittent	Re-Establishment	0.63	436	R4SB	Riverine

Sterling Compensatory Ranch Mitigation Plan - Mitigation Sites									
Site No.	Pre-Construction Site Conditions	Post-Construction Site Conditions							
	Habitat Type(s)	Habitat Type(s)	Vegetation	Hydrology	Mitigation Method	Acres	Linear Feet	Cowardin Classification	Hydrogeomorphic Classification
<b>Wetland Waters of the U.S. - Reach 3</b>									
23	River bottom	Flood terrace	Willow-rush complex	Seasonally Flooded	Re-Establishment	0.29	326	R4SB	Riverine
24	Open Water	Open Water	Submergent Aquatics; Bulrush/Cattail Fringe	Semi-permanently Flooded	Re-Establishment	0.94	452	PUB	Lacustrine Fringe
25	Sedge Meadow	Sedge Meadow	Sedge Meadow	Saturated	Re-Establishment	0.18	121	R4SB	Riverine
26	River bottom	Flood terrace	Willow-rush complex	Intermittent	Re-Establishment	0.59	248	R4SB	Riverine
27	River bottom	River bottom	Sedge-Rush	Saturated	Re-Establishment	0.39	263	R4SB	Riverine
28	River bottom	River bottom	Sedge-Rush	Saturated	Re-Establishment	0.38	248	R4SB	Riverine
29	Mesic Meadow	Sedge Meadow	Sedge Meadow	Intermittent	Re-Establishment	0.19	149	R4SB	Riverine
30	Mesic Meadow	Sedge Meadow	Sedge Meadow	Intermittent	Re-Establishment	0.14	127	R4SB	Riverine
31	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.88	324	R4SB	Riverine
32	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	0.54	497	R4SB	Riverine
33	Native Grassland	Flood terrace	Willow-rush complex	Intermittently Flooded	Establishment	1.53	543	R4SB	Riverine
34	Mesic Meadow	Sedge Meadow	Sedge Meadow	Intermittent	Enhancement	1.14	510	R4SB	Riverine
35	River bottom	River bottom	Willow-rush complex	Seasonally Flooded	Enhancement	0.20	88	R4SB	Riverine



## **APPENDIX E**

### COMPENSATORY MITIGATION PLAN MAP

# SAND CREEK RESTORATION – WETLANDS EXHIBIT



PRELIMINARY GRAZING TOTALS

REACH 1	-23,724 CY CUT
	4,216 CY FILL
	19,208 NET
REACH 2	-580,195 CY CUT
	10,932 CY FILL
	569,263 CY NET
REACH 3	-114,831 CY CUT
	3,218 CY FILL
	111,614 CY NET
TOTAL	-718,750 CY CUT
	18,666 CY FILL
	700,084 CY NET

- LEGEND**
- PERMANENT LOSSES FROM DITCHES
  - PERMANENT LOSSES FROM BRIDGES
  - MITIGATION AREAS
  - PRESERVED WETLANDS



## **APPENDIX F**

### EXAMPLE DEED RESTRICTION

## **Appendix C: Deed Restriction**

### COVENANT OF DEDICATION

(PERMITTEE) now stipulates to the following statements of fact, and further agrees to restrict the use and title of the realty described in Attachment 1 to this document (hereinafter referred to as the "Land") in accordance with the terms and conditions set forth herein.

### STIPULATIONS OF FACT

1. That (PERMITTEE) is the applicant for Department of the Army permit number (NUMBER) to place fill material in the wetlands located in (LEGAL DESCRIPTION); and that the U.S. Army Corps of Engineers has regulatory jurisdiction over the discharge of dredged or fill material into said wetlands pursuant to Section 404 of the Clean Water (33 USC 1344).

2. That (PERMITTEE) is the owner in fee of the real estate described in Attach 1.

3. That (PERMITTEE) and the Albuquerque District of the U.S. Army Corps of Engineers have reached an agreement whereby (PERMITTEE) will be permitted to discharge fill material in wetlands in accordance with the terms and conditions of Department of the Army permit number (NUMBER); and that in consideration for said discharge of fill material in the wetland, (PERMITTEE) will provide mitigation for the adverse environmental effects resulting from the placement of fill material in the wetland by dedicating the realty described in Attachment 1 for perpetual use as a conservancy area in accordance with the terms and conditions of this document and the above-mentioned permit.

4. That the above-mentioned dedication shall consist of the execution of this document by all parties necessary to restrict the use and title of the land; and that this document shall be recorded in the Office of the Register of Deeds for (COUNTY), (STATE).

5. That upon receipt of a certified copy of this document, as recorded in the Office of the County Register of Deeds for (COUNTY), (STATE), the District Engineer of the Albuquerque District of the U.S. Army Corps of Engineers will issue a validated permit, number (NUMBER) to (PERMITTEE); and that said permit shall be issued in consideration for the execution of this Covenant.

6. That the terms and conditions of this Covenant of Dedication shall, as of the date of execution of this document, bind (PERMITTEE) to the extent of his legal and/or equitable interest in the land; and that this Covenant shall run with the land and be binding on (PERMITTEE) and its successors and assigns forever.

7. That the terms and conditions of this Covenant shall be both implicitly and explicitly included in any transfer, conveyance, or encumbrance of the Land or any part thereof, and that any instrument of transfer, conveyance, or encumbrance affecting all or any part of the Land shall set forth the terms and conditions of this document either by reference to this document or set forth in full text.

DEED AND USE RESTRICTIONS

(PERMITTEE) hereby warrants that he is the owner in fee of the realty described in Attachment 1; and that the Land is hereby dedicated in perpetuity for use as a conservancy area.

(PERMITTEE) hereby agrees to restrict the use and title of the Land as follows:

1. There shall be no construction or placement of structures or mobile homes, fences, signs, billboards or other advertising material, or other structures, whether temporary or permanent, on the land.

2. There shall be no filling, draining, excavating, dredging, mining, drilling or removal of topsoil, loam, peat, sand, gravel, rock, minerals or other materials.

3. There shall be no building of roads or paths for vehicular or pedestrian travel or any change in the topography of the land.

4. There shall be no removal, destruction, or cutting of trees or plants; spraying with biocides, insecticides, or pesticides; grazing of animals, farming, tilling of soil, or any other agricultural activity. Management activities are acceptable upon approval from the Corps.

5. There shall be no operation of all-terrain vehicles or any other type of motorized vehicle on the land.

6. This Covenant of Dedication may be changed, modified or revoked only upon written approval of the District Engineer of the Albuquerque District of the U.S. Army Corps of Engineers. To be effective, such approval must be witnessed, authenticated, and recorded pursuant to the law of the State of (STATE).

This Covenant needs to be reviewed by the Corps of Engineers prior to signature to assure compliance with permit conditions.

COE representative's initial \_\_\_\_\_

7. This Covenant is made in perpetuity such that the present owner and its heirs and assigns forever shall be bound by the terms and conditions set forth herein.

By:  
(PERMITTEE)

Executed before me this \_\_\_\_ day of \_\_\_\_\_, 20, by (PERMITTEE) who is personally known to me.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_



**APPENDIX G**  
CSQT DATA SHEETS

Site Information and Reference Selection	
Project Name:	Sterling Ranch
Reach ID:	Lower
Restoration Potential:	Partial
Project Reach Stream Length - Existing (ft):	4502
Project Reach Stream Length - Proposed (ft):	3925
Drainage Area (sq.mi.):	
Flow Permanence:	Intermittent
Strahler Stream Order:	Second
Ecoregion:	Plains
Biotype:	3
Proposed Bankfull Width (ft):	21
Stream Slope (%):	1.1
River Basin:	Arkansas
Stream Temperature:	WS-III
Reference Vegetation Cover:	Herbaceous
Stream Productivity Class:	
Valley Type:	Confined Alluvial
Reference Stream Type:	C
Sediment Regime:	Transport

Notes
1. Users input values that are highlighted based on restoration potential
2. Users select values from a pull-down menu
3. Leave values blank for field values that were not measured and/or autopopulate.

FUNCTIONAL CHANGE SUMMARY	
Change in Overall Condition	-0.08
Existing Stream Length (ft)	4502
Proposed Stream Length (ft)	3925
Change in Stream Length (ft)	-577
Existing Functional Feet (FF)	2255.5
Proposed Functional Feet (FF)	1648.5
Proposed FF - Existing FF (ΔFF)	-607.0
Yield (ΔFF/ Proposed LF)	-0.15
ΔFF from Flow Alteration Module	
Total Proposed FF - Existing FF (ΔFF)	-607.0

MITIGATION SUMMARY	
Intermittent Second Order Stream	
-607.0	(FF) Loss

FUNCTION BASED PARAMETERS SUMMARY			
Functional Category	Function-Based Parameters	Existing Parameter	Proposed Parameter
Reach Hydrology & Hydraulics	Reach Runoff	0.84	0.35
	Baseflow Dynamics		
	Floodplain Connectivity	0.89	1.00
Geomorphology	Large Woody Debris		
	Lateral Migration	1.00	0.59
	Bed Form Diversity	0.51	0.96
	Riparian Vegetation	0.89	0.63
Physicochemical	Temperature		
	Dissolved Oxygen		
	Nutrients		
Biology	Macroinvertebrates		
	Fish		

FUNCTIONAL CATEGORY REPORT CARD				
Functional Category	ECS	PCS	Change in Condition Scores	ΔFF
Reach Hydrology & Hydraulics	0.87	0.67	-0.20	-386.1
Geomorphology	0.80	0.73	-0.07	-220.9
Physicochemical				
Biology				

EXISTING CONDITION ASSESSMENT					Scoring		
Functional Category	Function-Based Parameter	Metric	Field Value	Index Value	Parameter	Category	Category
Reach Hydrology & Hydraulics	Reach Runoff	Land Use Coefficient	61	0.74	0.84	0.87	Functioning
		Concentrated Flow Points (#/1000 LF)	0.2	0.94			
	Baseflow Dynamics	Average Velocity (fps) Average Depth (ft)		--			
Floodplain Connectivity		Bank Height Ratio	1.1	0.86	0.89		
		Entrenchment Ratio Percent Side Channels (%)	3.7	0.92			
Geomorphology	Large Woody Debris	LWD Index No. of LWD Pieces/ 100 meters				0.80	Functioning
	Lateral Migration	Greenline Stability Rating			1.00		
		Dominant BEHI/NBS	L/M	1.00			
		Percent Streambank Erosion (%) Percent Armoring (%)	0 0	1.00 1.00			
Bed Form Diversity		Pool Spacing Ratio	16.6	0.00	0.51		
		Pool Depth Ratio Percent Riffle (%) Aggradation Ratio	1.9 60	0.52 1.00			
Riparian Vegetation		Riparian Extent (%) Woody Vegetation Cover (%) Herbaceous Vegetation Cover (%) Percent Native Cover (%)	94 14.5 91 99	0.89 FALSE 0.81 0.96	0.89		
Physicochemical	Temperature	Daily Maximum Temperature (°C)					
		MWAT (°C)					
	Dissolved Oxygen	Dissolved Oxygen Concentration (mg/L)					
Nutrients	Chlorophyll α (mg/m2)						
Biology	Macroinvertebrates	CO MMI					
	Fish	Native Fish Species Richness (% of Expected) SGCN Absent Score Wild Trout Biomass (% Change)					

PROPOSED CONDITION ASSESSMENT					Scoring		
Functional Category	Function-Based Parameter	Metric	Field Value	Index Value	Parameter	Category	Category
Reach Hydrology & Hydraulics	Reach Runoff	Land Use Coefficient	83	0.00	0.35	0.67	Functioning At Risk
		Concentrated Flow Points (#/1000 LF)	1	0.69			
	Baseflow Dynamics	Average Velocity (fps)	9	--	1.00		
		Average Depth (ft)	0.71	FALSE			
	Floodplain Connectivity	Bank Height Ratio	1	1.00	1.00		
		Entrenchment Ratio Percent Side Channels (%)	6	1.00			
Geomorphology	Large Woody Debris	LWD Index			0.73	Functioning	
		No. of LWD Pieces/ 100 meters					
	Lateral Migration	Greenline Stability Rating					0.59
		Dominant BEHI/NBS	L/M	1.00			
		Percent Streambank Erosion (%) Percent Armoring (%)	33 21	0.46 0.30			
	Bed Form Diversity	Pool Spacing Ratio	5.38	1.00			0.96
		Pool Depth Ratio	2.82	0.89			
		Percent Riffle (%)	60	1.00			
Aggradation Ratio							
Riparian Vegetation	Riparian Extent (%)	75	0.56	0.63			
	Woody Vegetation Cover (%)	15	FALSE				
	Herbaceous Vegetation Cover (%)	90	0.81				
	Percent Native Cover (%)	80	0.53				
Physicochemical	Temperature	Daily Maximum Temperature (°C)					
		MWAT (°C)					
	Dissolved Oxygen	Dissolved Oxygen Concentration (mg/L)					
Nutrients	Chlorophyll α (mg/m2)						
Biology	Macroinvertebrates	CO MMI					
	Fish	Native Fish Species Richness (% of Expected)					
		SGCN Absent Score Wild Trout Biomass (% Change)					

Site Information and Reference Selection	
Project Name:	Sterling Ranch
Reach ID:	Upper
Restoration Potential:	Partial
Project Reach Stream Length - Existing (ft):	3401
Project Reach Stream Length - Proposed (ft):	4400
Drainage Area (sq.mi.):	
Flow Permanence:	Perennial
Strahler Stream Order:	Second
Ecoregion:	Plains
Biotype:	3
Proposed Bankfull Width (ft):	17
Stream Slope (%):	1.3
River Basin:	Arkansas
Stream Temperature:	WS-III
Reference Vegetation Cover:	Herbaceous
Stream Productivity Class:	
Valley Type:	Confined Alluvial
Reference Stream Type:	C
Sediment Regime:	Transport

Notes
1. Users input values that are highlighted based on restoration potential
2. Users select values from a pull-down menu
3. Leave values blank for field values that were not measured and/or autopopulate.

FUNCTIONAL CHANGE SUMMARY	
Change in Overall Condition	-0.10
Existing Stream Length (ft)	3401
Proposed Stream Length (ft)	4400
Change in Stream Length (ft)	999
Existing Functional Feet (FF)	1632.5
Proposed Functional Feet (FF)	1676.4
Proposed FF - Existing FF (ΔFF)	43.9
Yield (ΔFF/ Proposed LF)	0.01
ΔFF from Flow Alteration Module	
Total Proposed FF - Existing FF (ΔFF)	43.9

MITIGATION SUMMARY	
Perennial Second Order Stream	
43.9	(FF) Lift

FUNCTION BASED PARAMETERS SUMMARY			
Functional Category	Function-Based Parameters	Existing Parameter	Proposed Parameter
Reach Hydrology & Hydraulics	Reach Runoff	0.87	0.35
	Baseflow Dynamics		
	Floodplain Connectivity	0.93	1.00
Geomorphology	Large Woody Debris		
	Lateral Migration	0.89	0.45
	Bed Form Diversity	0.42	0.72
	Riparian Vegetation	0.79	0.63
Physicochemical	Temperature		
	Dissolved Oxygen		
	Nutrients		
Biology	Macroinvertebrates		
	Fish		

FUNCTIONAL CATEGORY REPORT CARD				
Functional Category	ECS	PCS	Change in Condition Scores	ΔFF
Reach Hydrology & Hydraulics	0.90	0.67	-0.23	-33.9
Geomorphology	0.70	0.60	-0.10	77.8
Physicochemical				
Biology				

EXISTING CONDITION ASSESSMENT					Scoring		
Functional Category	Function-Based Parameter	Metric	Field Value	Index Value	Parameter	Category	Category
Reach Hydrology & Hydraulics	Reach Runoff	Land Use Coefficient	61	0.74	0.87	0.90	Functioning
		Concentrated Flow Points (#/1000 LF)	0	1.00			
	Baseflow Dynamics	Average Velocity (fps) Average Depth (ft)		--			
Floodplain Connectivity		Bank Height Ratio	1.1	0.86	0.93		
		Entrenchment Ratio	4.2	1.00			
		Percent Side Channels (%)					
Geomorphology	Large Woody Debris	LWD Index				0.70	Functioning
		No. of LWD Pieces/ 100 meters					
	Lateral Migration	Greenline Stability Rating			0.89		
		Dominant BEHI/NBS	L/L	1.00			
Percent Streambank Erosion (%)		13	0.67				
Bed Form Diversity		Percent Armoring (%)	0	1.00	0.42		
		Pool Spacing Ratio	18	0.00			
		Pool Depth Ratio	1.6	0.35			
		Percent Riffle (%)	63	0.90			
Riparian Vegetation		Aggradation Ratio			0.79		
		Riparian Extent (%)	100	1.00			
		Woody Vegetation Cover (%)	18.75	FALSE			
		Herbaceous Vegetation Cover (%)	92.25	0.82			
Physicochemical	Temperature	Daily Maximum Temperature (°C)					
		MWAT (°C)					
		Dissolved Oxygen	Dissolved Oxygen Concentration (mg/L)				
Nutrients		Chlorophyll α (mg/m2)					
Biology	Macroinvertebrates	CO MMI					
		Fish	Native Fish Species Richness (% of Expected)				
			SGCN Absent Score				
		Wild Trout Biomass (% Change)					

PROPOSED CONDITION ASSESSMENT					Scoring		
Functional Category	Function-Based Parameter	Metric	Field Value	Index Value	Parameter	Category	Category
Reach Hydrology & Hydraulics	Reach Runoff	Land Use Coefficient	83	0.00	0.35	0.67	Functioning At Risk
		Concentrated Flow Points (#/1000 LF)	1	0.69			
	Baseflow Dynamics	Average Velocity (fps)	9	--	1.00		
		Average Depth (ft)	0.71	FALSE			
	Floodplain Connectivity	Bank Height Ratio	1	1.00	1.00		
		Entrenchment Ratio Percent Side Channels (%)	6	1.00			
Geomorphology	Large Woody Debris	LWD Index			0.60	Functioning At Risk	
		No. of LWD Pieces/ 100 meters					
	Lateral Migration	Greenline Stability Rating					0.45
		Dominant BEHI/NBS	L/M	1.00			
		Percent Streambank Erosion (%) Percent Armoring (%)	50 28	0.28 0.07			
	Bed Form Diversity	Pool Spacing Ratio	8.1	0.37			0.72
		Pool Depth Ratio	2.82	0.89			
		Percent Riffle (%) Aggradation Ratio	63	0.90			
Riparian Vegetation	Riparian Extent (%)	75	0.56	0.63			
	Woody Vegetation Cover (%)	15	FALSE				
	Herbaceous Vegetation Cover (%)	90	0.81				
	Percent Native Cover (%)	80	0.53				
Physicochemical	Temperature	Daily Maximum Temperature (°C)					
		MWAT (°C)					
	Dissolved Oxygen	Dissolved Oxygen Concentration (mg/L)					
Nutrients	Chlorophyll α (mg/m2)						
Biology	Macroinvertebrates	CO MMI					
	Fish	Native Fish Species Richness (% of Expected)					
		SGCN Absent Score Wild Trout Biomass (% Change)					



## **APPENDIX H**

### **SOUTH PACIFIC DIVISION – MITIGATION MONITORING REPORT FORM**

<b>Section A: General Project Information</b>		
1. Project name: Click here to enter text.	2. DA file number(s): Click here to enter text.	3. Project type: Choose an item.
4. Permittee, bank or in-lieu fee sponsor name and work phone number: Click here to enter text.	5. Permittee, bank or in-lieu fee sponsor mailing address: Click here to enter text.	6. Permittee, bank or in-lieu fee sponsor e-mail address: Click here to enter text.
7. Agent name and work phone number: Click here to enter text.	8. Agent mailing address: Click here to enter text.	9. Agent e-mail address: Click here to enter text.
<b>Section B: Notice of Commencement/Completion of Compensatory Mitigation Project</b>		
1. Commencement: Y <input type="checkbox"/> N <input type="checkbox"/> Click here to enter a date.	2. Completion: Y <input type="checkbox"/> N <input type="checkbox"/> Click here to enter a date.	3. Financial assurance remains in place : Y <input type="checkbox"/> N <input type="checkbox"/>
4. Requesting release of a financial assurance? Y <input type="checkbox"/> N <input type="checkbox"/>	5. Name of contractor (if any): Click here to enter text.	6. Phone number of contractor (if any): Click here to enter text.
<b>Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.</b>		
<b>SECTION C: Mitigation Monitoring Status</b>		
1. Final monitoring completed and verification requested? Y <input type="checkbox"/> N <input type="checkbox"/>	2. Date of monitoring reported here: Click here to enter a date.	3. Monitoring report no. Choose an item. of Choose an item.
4. Management and maintenance activities completed (for example: fencing installation/repair or trash removal (include dates): Click here to enter text.		
5. Adaptive management activities completed (include dates): Click here to enter text.		

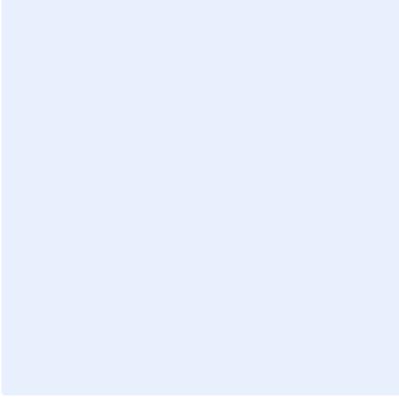
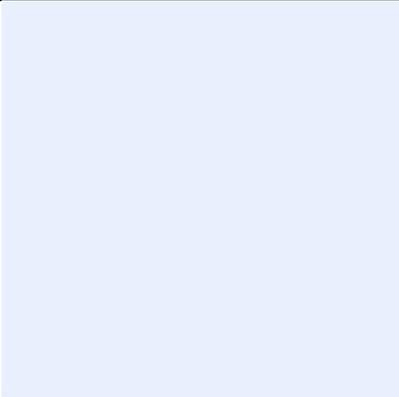
**SECTION C: Mitigation Monitoring Status (continued from page 1)**

**6. Performance standards**

Year	Performance Standard	Goal	Results
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			
Click here to enter text.			

**7. Short statement on whether the performance standards are being met:** Click here to enter text.

**8. Conclusions and adaptive management activities proposed (addressing unresolved issues, failure to meet performance standards):** Click here to enter text.

<b>SECTION D: Photo Log</b>	
<p>1. Number: <a href="#">Click here to enter text.</a></p> <p>2. Date: <a href="#">Click here to enter a date.</a></p> <p>3. Compass direction taken:                      Degrees: <a href="#">Click here to enter text.</a>                      Cardinal/intercardinal: <a href="#">Click here to enter text.</a></p> <p>4. Coordinates (decimal degrees):                      Latitude: <a href="#">Click here to enter text.</a>                      Longitude: <a href="#">Click here to enter text.</a></p> <p>5. Photographer name: <a href="#">Click here to enter text.</a></p> <p>6. Description: <a href="#">Click here to enter text.</a></p>	
<p>1. Number: <a href="#">Click here to enter text.</a></p> <p>2. Date: <a href="#">Click here to enter a date.</a></p> <p>3. Compass direction taken:                      Degrees: <a href="#">Click here to enter text.</a>                      Cardinal/intercardinal: <a href="#">Click here to enter text.</a></p> <p>4. Coordinates (decimal degrees):                      Latitude: <a href="#">Click here to enter text.</a>                      Longitude: <a href="#">Click here to enter text.</a></p> <p>5. Photographer name: <a href="#">Click here to enter text.</a></p> <p>6. Description: <a href="#">Click here to enter text.</a></p>	

## Instructions

### General instructions:

This form should be returned annually (or per the schedule included in the Corps-approved final mitigation plan) to the Corps project manager via electronic or physical mail (see District Regulatory websites for contact information).

### Detailed instructions:

Sections A-C: Please insert the most current information annually.

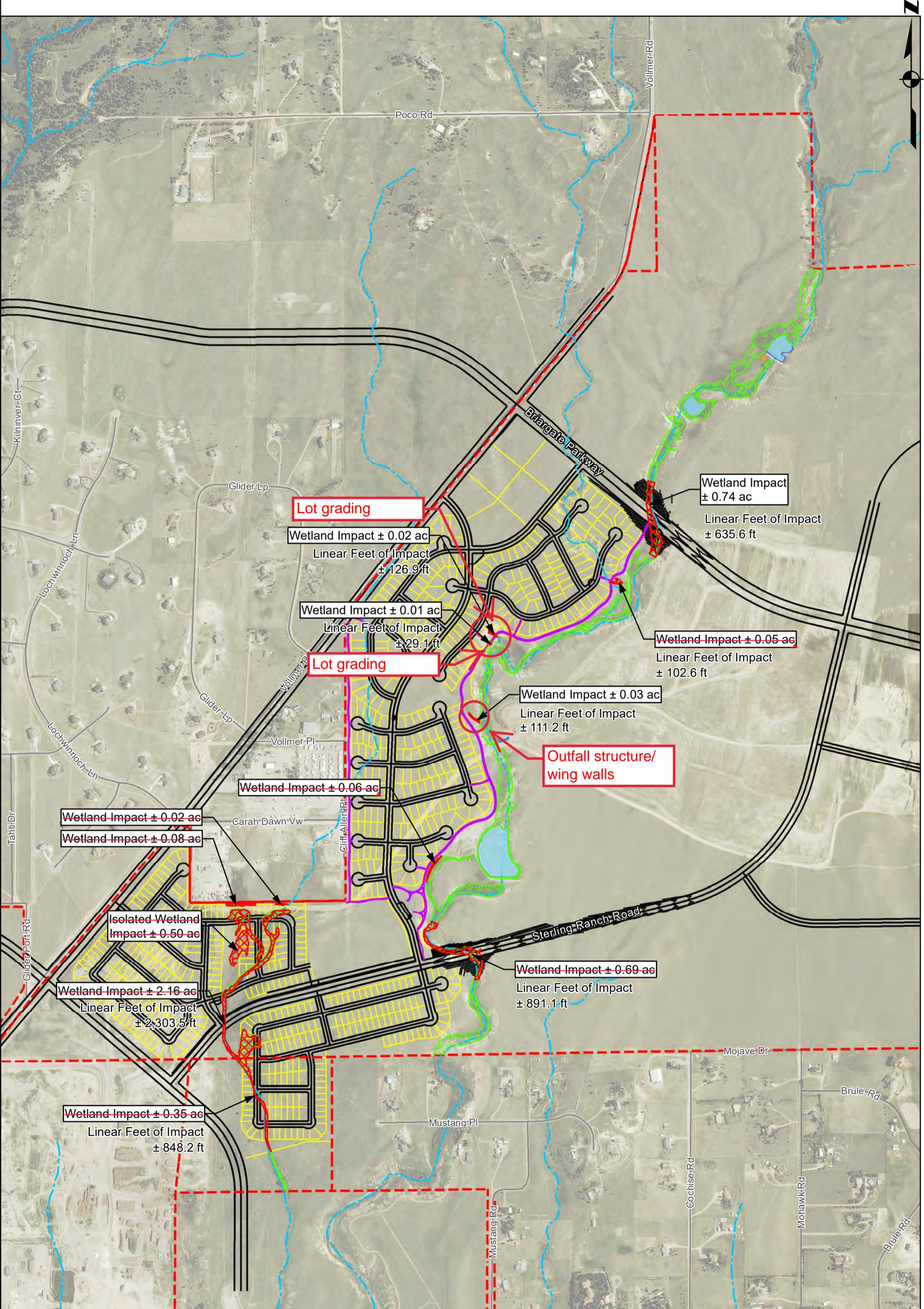
Section D: Color photographs should be inserted with all corresponding information completed (items 1-6). Photograph locations should be identified on a map (See Section E).

Section E: Insert photograph map(s), one per a page. Portrait or landscape orientations are acceptable. Locations of photographs should be labeled by photograph number. Compass direction of each photograph should be shown using an arrow.



Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

**Enclosure 3**  
Sterling Ranch Wetland Impact  
Location Map Markup



**Lot grading**

Wetland Impact ± 0.02 ac  
Linear Feet of Impact ± 126.9 ft

Wetland Impact ± 0.01 ac  
Linear Feet of Impact ± 29.1 ft

**Lot grading**

**Outfall structure/  
wing walls**

Wetland Impact ± 0.74 ac  
Linear Feet of Impact ± 635.6 ft

Wetland Impact ± 0.05 ac  
Linear Feet of Impact ± 102.6 ft

Wetland Impact ± 0.03 ac  
Linear Feet of Impact ± 111.2 ft

Wetland Impact ± 0.06 ac

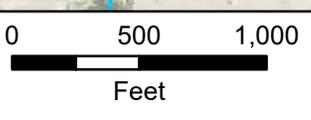
Wetland Impact ± 0.02 ac  
Wetland Impact ± 0.08 ac

Isolated Wetland  
Impact ± 0.50 ac

Wetland Impact ± 2.16 ac  
Linear Feet of Impact ± 2,303.5 ft

Wetland Impact ± 0.69 ac  
Linear Feet of Impact ± 891.1 ft

Wetland Impact ± 0.35 ac  
Linear Feet of Impact ± 848.2 ft



- |                           |                 |                    |                  |
|---------------------------|-----------------|--------------------|------------------|
| Permanent Impact          | Pond            | Proposed Road      | Proposed Contour |
| Existing Wetland          | Dry Wash        | Proposed Trail     | Parcel Boundary  |
| Existing Isolated Wetland | NHD Watercourse | Proposed Lot Lines |                  |

**Enclosure 4**  
Impacts and Mitigation Tables

Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

**Table 1.** Authorized impacts to aquatic resources on Sand Creek associated with the Sterling Ranch Residential Development, as modified from the original permit, including location and acreage.

Impact Site / Activity	Changes	Location		Original Impacts		Modified Impacts	
		Latitude	Longitude	Temporary	Permanent	Temporary	Permanent
Utility line crossing <sup>1</sup>	New impacts	38.9551	-104.6746	-		0.09	-
Impact Site No. 3 / Sterling Ranch Road	Removed	38.9583	-104.6746	-	0.69	-	-
Impact Site No. 6 / Sterling Ranch Road	Removed	38.9595	-104.6748	-	0.06	-	-
Impact Site No. 10 / Outfall structure <sup>1</sup>	No change	38.9629	-104.6739	-	0.03	-	0.03
Impact Site No. 11 / Lot grading <sup>1</sup>	No change	38.9644	-104.6732	-	0.01	-	0.01
Impact Site No. 12 / Lot grading <sup>1</sup>	No change	38.9650	-104.6728	-	0.02	-	0.02
Temporary road crossing <sup>1</sup>	New impacts	38.9644	-104.6714	-	-	0.05	-
Impact Site No. 19 / Lot grading	Removed	38.9675	-104.6683	-	0.05	-	-
Impact Site No. 22 / Briargate Parkway <sup>2</sup>	No change	38.9675	-104.6683	-	0.74	-	0.74
Impact Site No. 23 / Channel realignment	New impacts	38.9682	-104.6682	-	-	-	0.09
Impact Site No. 24 / Ecological Restoration	New impacts	38.9690	-104.6676	-	-	0.33	-
Impact Site No. 25 / Trail	New impacts	38.9696	-104.6676	-	-	-	0.01
Impact Site No. 26 / Dam modification	New impacts	38.9696	-104.6673	-	-	-	0.04
Western Tributary wetlands	Removed	38.9583	-104.6793	-	0.02	-	-
Western Tributary wetlands	Removed	38.9583	-104.6805	-	0.08	-	-
Western Tributary wetlands	Removed	38.9559	-104.6810	-	2.16	-	-
Western Tributary wetlands	Removed	38.9542	-104.6801	-	0.35	-	-
<b>TOTAL</b>	-	-	-	-	<b>4.21</b>	<b>0.47</b>	<b>0.94</b>

<sup>1</sup> Completed: 0.14 acre of unauthorized impacts and 0.06 acre of prior authorized impacts

<sup>2</sup> Partially completed: 0.10 acre of 0.74 acre of wetlands have been filled in association with the construction of Briargate Parkway

**Table 2.** Compensatory mitigation for the impacts associated with the Sterling Ranch Residential Development.

Mitigation Site	Location		Acreage
	Latitude	Longitude	
Mitigation Site No. 35 / Enhancement	38.9687	-104.6682	0.47
Mitigation Site No. 36 / Establishment	38.9687	-104.6678	0.21
Mitigation Site No. 37 / Re-establishment	38.9690	-104.6678	0.33
Mitigation Site No. 38 / Establishment	38.9691	-104.6676	0.21
Mitigation Site No. 39 / Establishment	38.9692	-104.6671	4.74
<b>TOTAL</b>	-	-	<b>5.96</b>

Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

## **Enclosure 5**

Revised Compensatory Mitigation Plan: Appendix E  
Sand Creek Restoration – Wetlands Exhibit

Revised, November 29, 2021



Permit Modification for the Sterling Ranch Residential Development Project  
(Action No. SPA-2015-00428)

## **Enclosure 6**

Revised Compensatory Mitigation Plan: Appendix F

Draft Deed Restriction

Revised, April 28, 2022

COVENANT OF DEDICATION

\_\_\_\_\_ (the "Permittee") now stipulates to the following statements of fact, and further agrees to restrict the use and title of the realty described in Attachment 1 to this document (hereinafter referred to as the "Land") in accordance with the terms and conditions set forth herein.

STIPULATIONS OF FACT

1. That the Permittee is the applicant for Department of the Army permit number SPA-2015-00428 to place fill material in the wetlands located approximately 1.5 miles north of East Woodmen Road and approximately 0.25 miles east of Vollmer Road on an approximately 1,433.7-acre site that is bisected by Sand Creek in unincorporated El Paso County; and that the U.S. Army Corps of Engineers (the "Corps") has regulatory jurisdiction over the discharge of dredged or fill material into said wetlands pursuant to Section 404 of the Clean Water Act, 33 U.S.C. § 1344.

2. That the Permittee is the owner in fee of the real estate described in Attachment 1.

3. That the Permittee and the Corps (the "Parties") have reached an agreement whereby the Permittee will be allowed to discharge fill material in wetlands in accordance with the terms and conditions of Department of the Army permit number SPA-2015-00428; and that in consideration for said discharge of fill material in the wetland, the Permittee will provide mitigation for the adverse environmental effects resulting from the placement of fill material in the wetland by dedicating the realty described in Attachment 1 for perpetual use as a conservancy area in accordance with the terms and conditions of this document and the above-mentioned permit.

4. That the above-mentioned dedication shall consist of the execution of this document by all parties necessary to restrict the use and title of the land; and that this document shall be promptly recorded in the Office of the Clerk and Recorder for El Paso County, Colorado.

5. That upon receipt of a certified copy of this document, as recorded in the Office of the Clerk and Recorder for El Paso County, Colorado, the Corps will notify the permittee in writing that said permit has been issued in consideration for the execution of this Covenant.

6. This Covenant is made in perpetuity such that the present owner and its heirs and assigns forever shall be bound by the terms and conditions set forth herein.

DEED AND USE RESTRICTIONS

The Permittee hereby warrants that he is the owner in fee of the realty described in Attachment 1; and that the Land is hereby dedicated in perpetuity for use as a conservancy area.

The Permittee hereby agrees to restrict the use and title of the Land as follows:

1. There shall be no construction or placement of structures or mobile homes, fences, signs, billboards or other advertising material, or other structures, whether temporary or permanent, on the land.

2. There shall be no filling, draining, excavating, dredging, mining, drilling or removal of topsoil, loam, peat, sand, gravel, rock, minerals, or other materials.

3. There shall be no building of roads or paths for vehicular or pedestrian travel or any change in the topography of the land.

4. There shall be no removal, destruction, or cutting of trees or plants; spraying with biocides, insecticides, or pesticides; grazing of animals, farming, tilling of soil, or any other agricultural activity. Management activities are acceptable only upon express written approval from the Corps.

5. There shall be no operation of all-terrain vehicles or any other type of motorized vehicle on the land.

6. The Permittee shall notify the Corps in writing at least 60 days before any action is taken to change, modify, or revoke this Covenant, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site. This Covenant may be changed, modified, or revoked only upon express written approval of the Corps. To be effective, such approval must be witnessed, authenticated, and recorded pursuant to the laws of the State of Colorado.

7. Employees of the Corps will have the right to view the Land in its natural, scenic, and open condition and the right to enter the Land at all reasonable times for the purpose of inspecting the Land to determine if the Permittee, or its heirs or assigns, is complying with the covenants and deed restrictions herein.

8. The Corps will have the right to enforce by proceedings in law or equity the covenants and deed restrictions set out herein and this right shall not be waived by one or more incidents of failure to enforce said right.

9. That the terms and conditions of this Covenant of Dedication shall, as of the date of execution of this document, bind the Permittee to the extent of its legal and/or equitable interest in the land; and that this Covenant shall run with the land and be binding on the Permittee and its successors and assigns forever.

10. That the terms and conditions of this Covenant shall be both implicitly and explicitly included in any transfer, conveyance, or encumbrance of the Land or any part thereof, and that any instrument of transfer, conveyance, or encumbrance affecting all or any part of the Land shall set forth the terms and conditions of this document either by reference to this document or set forth in full text.

By: \_\_\_\_\_  
Permittee

Executed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2022, by the Permittee who is personally known to me.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_ .