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**Engineering Review**

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**EPC Planning & Community  
Development Department**



## **COMPENSATORY MITIGATION PLAN**

### ***The Retreat at Timber Ridge Residential Development – Filing No. 2 El Paso County, CO***

**PREPARED FOR:**

Classic Communities  
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Colorado Springs, CO 80919  
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**PREPARED BY:**

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October 2022

SF-21-021

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## I.0 INTRODUCTION

CORE Consultants, Inc. (CORE) was retained by Classic Communities (Applicant) to provide a compensatory mitigation plan for the proposed The Retreat at Timber Ridge Residential Development – Filing No. 2 (“Project”). The Project is located southeast of the intersection of Vollmer Road and Arroya Lane in El Paso County, Colorado, and is on the U.S. Geological Survey (USGS) Falcon NW 7.5-minute quadrangle (**Attachment I: Project Location Map**). It encompasses approximately 50 acres on Sections 27 and 28 of Township 12 South, Range 65 West. The approximate coordinates of the Project center are 38.980928° North and -104.663394° West (WGS 84 datum). Project elevation ranges from 7,200 to 7,280 feet above mean sea level.

The proposed Project would include the development of single-family residential lots, trails, permanent access roads, and associated stormwater facilities. The Project would permanently impact wetlands and streams from the installation of four check dams, a stormwater outfall structure, riprap for bank stabilization, and grading for residential lots. The Project would also include temporary impacts to wetlands and streams by creating temporary workspaces to complete the proposed work.

The Project proposes 0.005 acres of temporary and 0.090 acres of permanent discharges of fill material to stream channels (**Attachment II: Potential WOTUS Impact Map**). Additionally, the Project proposes 0.104 acres of temporary and 0.074 acres of permanent discharges of fill material to wetlands. The temporary and permanent impacts proposed are for the installation of four check dams, a stormwater outfall structure, riprap for bank stabilization, and grading for residential lots.

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## 2.0 SITE DESCRIPTION

CORE conducted a formal wetland delineation on May 15 and 16, 2017 in accordance with the U.S. Army Corps of Engineers' (USACE) 1987 USACE Wetland Delineation Manual (USACE 1987) and the Western Mountains, Valleys, and Coasts Regional Supplement (Version 2.0) (USACE 2010). The regulatory status of the wetlands and waters considered herein are assumed jurisdictional for the purpose of quantifying impacts to WOTUS.

The main channel of Sand Creek drains the Project in a southerly direction. Two eastern tributaries identified in NHD spatial data, and one unidentified western tributary are located in the proposed Project area (**Appendix II**). The majority of the main channel of Sand Creek and its associated tributaries were characterized as stream channels containing potentially jurisdictional persistent emergent (PEM) wetlands; short stretches of the main channel throughout the Project area were characterized as potentially jurisdictional stream channels lacking wetlands (**Appendix II**). Sand Creek and its tributaries flow to the Fountain Creek watershed approximately 20 miles downstream.

The Environmental Protection Agency (EPA) Section 303(d) list identifies stream segments that do not meet water quality standards. Selenium and *E. coli* are listed as causes for impairment of Sand Creek within the Fountain watershed (EPA 2016). As such, primary needs for the watershed headwaters include mechanisms to reduce waste runoff into watercourses, as well as mechanisms to capture and uptake excess nutrients and waste. The mitigation proposed is anticipated to encourage the removal of excess nutrients and prevent additional nutrient runoff through the creation of wetlands. Creation of wetlands would improve local habitats and water quality. Improved water quality would be expected as a result of locating the mitigation wetlands upslope and upstream of the majority of the areas of wetland impacts within the Project area.

### 3.0 COMPENSATORY MITIGATION PLAN

This compensatory mitigation plan was prepared to compensate for the loss of 0.09 acre of ephemeral stream habitat and 0.074 acres of wetland habitat through the enhancement of the existing riparian habitat along Sand Creek and the establishment of new emergent wetlands within the Project Area. Coordinates of the wetland areas to be impacted are shown in Table 3-I below, and depicted in **Appendix II**.

**TABLE 3-I: LOCATIONS OF IMPACTED WETLANDS**

| WOTUS Type/WOTUS ID   | Latitude (°N) | Longitude (°W) | Impact Duration | Acres   |
|-----------------------|---------------|----------------|-----------------|---------|
| Wetland / W-3         | 38.981969     | -104.661782    | Permanent       | 0.001   |
| Wetland / W-3         | 38.981969     | -104.661782    | Temporary       | 0.007   |
| Wetland / SCCW 3      | 38.981964     | -104.661650    | Permanent       | 0.004   |
| Wetland / SCCW 3      | 38.980789     | -104.661178    | Permanent       | 0.003   |
| Wetland / SCCW 3      | 38.981964     | -104.661650    | Temporary       | 0.022   |
| Wetland / SCCW 3      | 38.980796     | -104.661274    | Temporary       | 0.032   |
| Wetland / SCCW 4      | 38.979390     | -104.660969    | Permanent       | 0.009   |
| Wetland / SCCW 5      | 38.979100     | -104.661903    | Permanent       | < 0.001 |
| Wetland / SCCW 5      | 38.979221     | -104.661477    | Permanent       | 0.033   |
| Wetland / SCCW 5      | 38.979100     | -104.661903    | Temporary       | 0.003   |
| Wetland / SCCW 6      | 38.978956     | -104.662849    | Permanent       | 0.005   |
| Wetland / SCCW 6      | 38.979121     | -104.663246    | Permanent       | 0.017   |
| Wetland / SCCW 6      | 38.978359     | -104.663778    | Permanent       | 0.001   |
| Wetland / SCCW 6      | 38.979073     | -104.663265    | Temporary       | 0.005   |
| Wetland / SCCW 6      | 38.979047     | -104.662813    | Temporary       | 0.029   |
| Wetland / SCCW 6      | 38.978341     | -104.663774    | Temporary       | 0.007   |
| Stream / JD Channel A | 38.979481     | -104.661556    | Permanent       | 0.007   |
| Stream / JD Channel B | 38.979190     | -104.663177    | Permanent       | 0.022   |
| Stream / JD Channel C | 38.979303     | -104.661190    | Permanent       | 0.056   |

| WOTUS Type/WOTUS ID   | Latitude (°N) | Longitude (°W) | Impact Duration | Acres   |
|-----------------------|---------------|----------------|-----------------|---------|
| Stream / JD Channel D | 38.978902     | -104.662857    | Permanent       | < 0.001 |
| Stream / JD Channel D | 38.978802     | -104.662402    | Permanent       | < 0.001 |
| Stream / JD Channel D | 38.978792     | -104.662527    | Permanent       | 0.005   |
| Stream / JD Channel D | 38.978907     | -104.662879    | Temporary       | 0.005   |

### 3.1 Objectives

Mitigation of the cumulative permanent impacts to 0.163 acre of wetlands and ephemeral streams.

- The creation and enhancement of wetlands in Sand Creek would provide more functions and services to the watershed than wetlands in an ephemeral tributary to Sand Creek since the benefits of wetlands in Sand Creek would extend to upstream tributaries of Sand Creek.
- 0.24 acre of wetland habitat creation and 0.08 acre of wetland habitat enhancement
- A total of 0.32 acre of wetlands would be established within the Project and would offset the 0.163 acre of permanent wetland and stream losses resulting from the construction of the Project.

### 3.2 Site Selection

Completing the majority of mitigation near the site of impacts would ensure the mitigation directly offsets the on-site Project impacts. Moreover, on-site mitigation ensures that hydrologic and soil conditions are conducive to successful mitigation implementation. Hydrology for the mitigation area would be supplied in part by runoff from the proposed Project, and by contouring adjacent to the existing channel and upland within the proposed mitigation area to ensure sufficient saturation. The NRCS identifies Project area soils as hydric (NRCS 2014). Therefore, retention of on-site soils would further facilitate the establishment and longevity of the proposed mitigation area. Salvaged soils from impacted wetland areas on the Project site would be utilized to prepare the mitigation area.

The Proposed mitigation area would consist of a wetland and stream complex along Sand Creek within the project area. The proposed location of the mitigation area would serve to increase the riparian habitat along Sand Creek and to enhance the existing riparian habitat thereby serving to increase filtration of additional stormwater runoff resulting from Project construction.

### 3.3 Mitigation Area Protection

The mitigation area will be owned by the Applicant and authorized access would require permission from the Applicant. According to the USACE's *Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division* (2015), the mitigation area requires protection of the site in the form of a deed restriction, easement or similar legally-binding document. The signed agreement between the Applicant and El Paso County titled 'PRIVATE STORMWATER FACILITY AND WETLAND MAINTENANCE AGREEMENT AND EASEMENT' will provide adequate maintenance and protection of the mitigation area (Appendix IV).

### 3.4 Baseline Information

The Project proposes 0.005 acres of temporary and 0.090 acres of permanent discharges of fill material to stream channels (Attachment II: Potential WOTUS Impact Map). Additionally, the Project proposes 0.104 acres of temporary and 0.074 acres of permanent discharges of fill material to wetlands. Wetland vegetation was dominant during the 2017 wetland delineation within the channel where impacts are proposed: vegetation consisted of Arctic rush (*Juncus arcticus* syn. *J. balticus*), Nebraska sedge (*Carex nebrascensis*), clustered field sedge (*Carex praegracilis*), and common spike rush (*Eleocharis palustris*).

### 3.5 Mitigation Work Plan

The mitigation area would be created immediately adjacent to and within the main channel of Sand Creek (**Appendix III**). Soil preparation and amendments, seeding, and installation of wetland plugs would result in the enhancement and establishment of the wetland would augment water filtration capacity of anticipated runoff resulting from the proposed Project, and would support the Sand Creek watershed priority to reduce selenium and *E. coli* within the watershed.

Native wetland plant communities would be established within the mitigation area through seeding and the installation of wetland plugs. Newly seeded areas and plugs would be protected by erosion control mats. A CORE biologist would determine, upon a site assessment of the mitigation area, if transplanting of neighboring wetland plants would expedite the establishment of the proposed wetland mitigation area. Potential wetland plant populations that would be utilized for transplant include Arctic rush, Nebraska sedge, and clustered field sedge.

### 3.6 Mitigation Work Plan Schedule

Mitigation work would begin immediately in conjunction with the commencement of construction activities and would be completed within three months of commencement. Project construction is anticipated to begin in fall of 2022. Construction is expected to be completed in summer or fall of 2024; restoration and mitigation installation measures would be completed by fall 2024. Primary mitigation measures and an estimated schedule of activities implementation are outlined below:

- Year 1
  - Grading, clearing, and other site preparation as needed for construction of the wetland mitigation site;
  - Documentation of baseline conditions and seeding of mitigation area; installation of wetland plugs.
- Year 2
  - Monitoring and management: set up monitoring locations and collect relevant data, control noxious weeds (if needed), and transplant wetland vegetation from existing on-site wetlands (if needed).
- Years 3, 4, and 5
  - Site monitoring to determine whether performance standards are met and request concurrence from USACE;

- If standards are not met, continue monitoring and management until they are met.

### **3.7 Operation and Maintenance**

The Applicant would be responsible for monitoring the proposed mitigation area throughout the life of the Project. The Applicant, or an authorized representative for the Applicant familiar with wetland ecology would monitor the condition of the mitigation site and would make adjustments on an as-needed basis in accordance with USACE mitigation requirements and permit conditions.

### **3.8 Performance Standards and Monitoring Requirements**

Performance standards would be used to assess the success of mitigation measures implemented at the Project. Performance standards are required and must be met in order for mitigation activities to be approved by the USACE. However, performance standards may change based on the conditions included in the approved Section 404 permit to be issued for the Project. The mitigation area would be monitored for a period of five years, or until performance standards are met. If performance standards are met during the first year of monitoring, additional monitoring would not be required. Performance standards should be met by the end of the five-year monitoring period. If standards are not met within five years, additional monitoring and corrective action may be required at the request of the USACE.

The mitigation plan for The Retreat at Timber Ridge – Filing No. 2 would be determined successful and complete when the following standards of performance are met:

1. Wetland vegetation areas and buffers should have a vegetation cover of at least 75 percent, and the vegetation must be composed of at least 50 percent emergent wetland species (i.e., species rated facultative, facultative wetland, or obligate wetland plant species on the National Wetland Plant List) and at least 50 percent of dominant species shall be newly established. Mitigation areas (wetlands) will have no more than 20 percent non-native species coverage. Vegetation maintenance activities for locations not meeting these requirements may include transplanting the appropriate wetland species and eradication of non-native species if necessary.
2. Coverage of noxious weed species, List A species shall be 100 percent eradicated across all mitigation areas (wetland) and maintained as such in perpetuity. List B species will be present as 10% or less across the mitigation area.
3. Documentation shall demonstrate consistent wetland hydrology during the growing season. Data shall indicate 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface. Data must demonstrate the presence of wetland hydrology with 50% or higher probability. Documentation of recorded data will be presented with photographs, moisture probe data, and/or the collection of multiple soil pit samples during the growing season.
4. Soil documentation and morphologic description should demonstrate the development of redoximorphic features or other hydric soil indicators over time, and progression toward hydric soil conditions. Documentation would include pre-and post-construction, and during the 3rd, 5th, and final years of wetland establishment and would be collected according to the Western Mountains, Valleys, and Coasts Regional Supplement (Version 2.0) (USACE 2010) to the 1987 USACE Wetland Delineation Manual (USACE 1987).



Monitoring would be conducted during the growing season by qualified personnel experienced in wetland ecology and mitigation. Monitoring would occur for a minimum of five years post-construction, unless conditions are met in prior years. Results of monitoring visits would be used to assess and modify maintenance and operations plans as appropriate and implement adaptive management strategies as necessary. Monitoring would entail annual site visits to assess progress in meeting performance standards, and to evaluate establishment, development, and maintenance of the mitigation area. The mitigation area would be monitored to ensure the establishment of desirable wetland characteristics. Standardized plots would be established to confirm the dominance of emergent wetland species at the wetland establishment location. A report detailing the results of each monitoring survey would be submitted to the USACE within two months of any site visit. The site would also be monitored incidentally while walking between sampling points. During incidental observations, areas of concern would be noted, including areas of erosion, significant areas of bare ground, and areas where invasive species have become established. Incidental observations would be included in the annual report and would be considered for maintenance and adaptive management. The monitoring reports will include:

- Vicinity map(s)
- Compensatory Mitigation Site Map(s) (including the following information): Polygons by compensatory mitigation type as described in the approved mitigation plan; photo station locations; and annotated locations of sample points/transects/quadrants/soil pits/monitoring stations. Note: maps will comply with the SPD Map and Drawings Standard
- Photographic record of the site during most recent monitoring visit at designated photo stations.
- Results of functional/condition assessments if required to be used for the compensatory mitigation project.
- Narrative report (optional).
- Critical survey elevations, properly benchmarked (if applicable).
- As-built drawing(s) (if any change from authorized design).

## 4.0 LONG TERM MANAGEMENT PLAN

Funding for the management of the mitigation plan would be provided by the Applicant and the Applicant would be responsible for the monitoring and long-term management of the proposed mitigation area. Since the mitigation site would be located on the Applicant's property, access to the site could be controlled to protect the area. Periodic inspections would also be conducted by the Applicant or by the Applicant's authorized personnel to ensure that the desired site characteristics are maintained including maintaining proper hydrology through the mitigation area, controlling invasive plants (if any), and other maintenance as needed. If invasive species are detected during inspections, invasive species control measures would be implemented. Where invasive plants are limited, control methods would consist of removal by hand or mechanical methods. If invasive plants become established beyond a point of mechanical control, chemical control methods would be initiated. Appropriate herbicides would be selected based on target species and would be applied in accordance with manufacturer and invasive species control recommendations. Herbicide application would not occur when rain is forecasted, or during or immediately following precipitation events to prevent herbicides from running into sensitive water features. Invasive species control would be conducted in a manner that minimizes impacts to desirable species to the extent practicable. Where significant invasive species infestations have occurred, the area would be transplanted with local wetland plant sources, or re-seeded with desirable vegetation after control of invasives. Alternative methods of invasive species control would 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 would be mowed on an as-needed basis. Signage may also be used along the boundaries of the proposed mitigation area identifying the area as such. If control of the development were to transfer from the Applicant to a different entity, that entity would become responsible for the maintenance and upkeep of the mitigation area.

The principal management concerns for the mitigation area are maintaining suitable hydrology to support wetland growth and the maintenance of vegetation, including the control of invasive and weedy species. Operation and maintenance activities would generally ensure compliance with the conditions of the USACE permit. Project area management needs would be assessed during monitoring sessions and on an as-needed basis. Operation and maintenance activities would be modified as appropriate in accordance with principles of adaptive management and based on observations during mitigation monitoring activities.

### 4.1 Adaptive Management Strategy

Management objectives and techniques may be modified in response to feedback such as monitoring results. Adaptive management is based on the idea that the collective general understanding of natural system is necessarily incomplete, and thus new information should be allowed to influence the potential re-evaluation of strategies for management.

Management techniques would be modified as appropriate to ensure performance standards are met, based on monitoring and incidental observations. Potential management modifications or corrective actions that may be taken to ensure standards are met include: alternative vegetation management, modification of hydrology, alternative control measures for invasive species, re-seeding or planting, stabilization of banks or other areas.

If the mitigation area should fail to meet performance standards, corrective action would be taken. If necessary, corrective action may be taken prior to the end of the five-year monitoring period.

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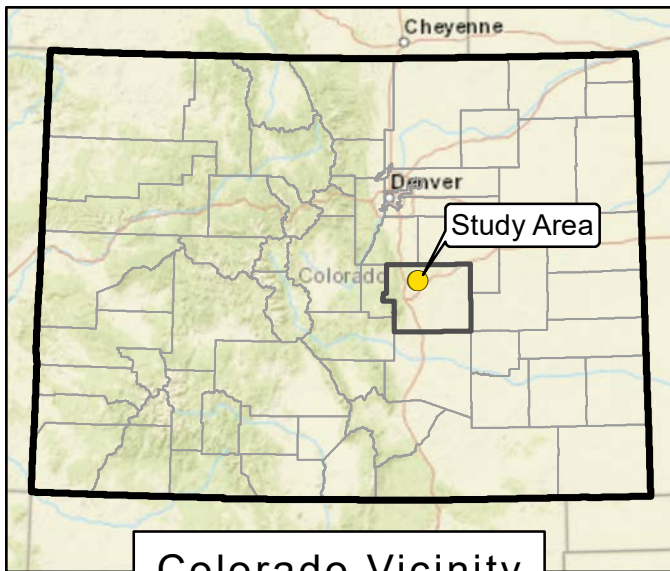
## REFERENCES

- Chapman, S.S., Griffith, G.E., Omernik, J.M., Price, A.B., Freeouf, J., and Schrupp, D.L., 2006, ECOREgions of Colorado. Reston, Virginia, U.S. Geological Survey (map scale 1:1,200,000). [ftp://ftp.epa.gov/wed/eCOREgions/co/co\\_front.pdf](ftp://ftp.epa.gov/wed/eCOREgions/co/co_front.pdf)
- Environmental Protection Agency (EPA). 2016. *Watershed Assessment, Tracking, and Environmental Results System*. [https://ofmpub.epa.gov/waters10/attains\\_watershed.control](https://ofmpub.epa.gov/waters10/attains_watershed.control) Accessed July 2019.
- Natural Resources Conservation Service. 2014. List of Hydric Soils.
- U.S. Army Corps of Engineers (USACE). 1987. Wetlands Delineation Manual.
- \_\_\_\_\_. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2).
- \_\_\_\_\_. 2015. Final Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division USACE. Albuquerque District.

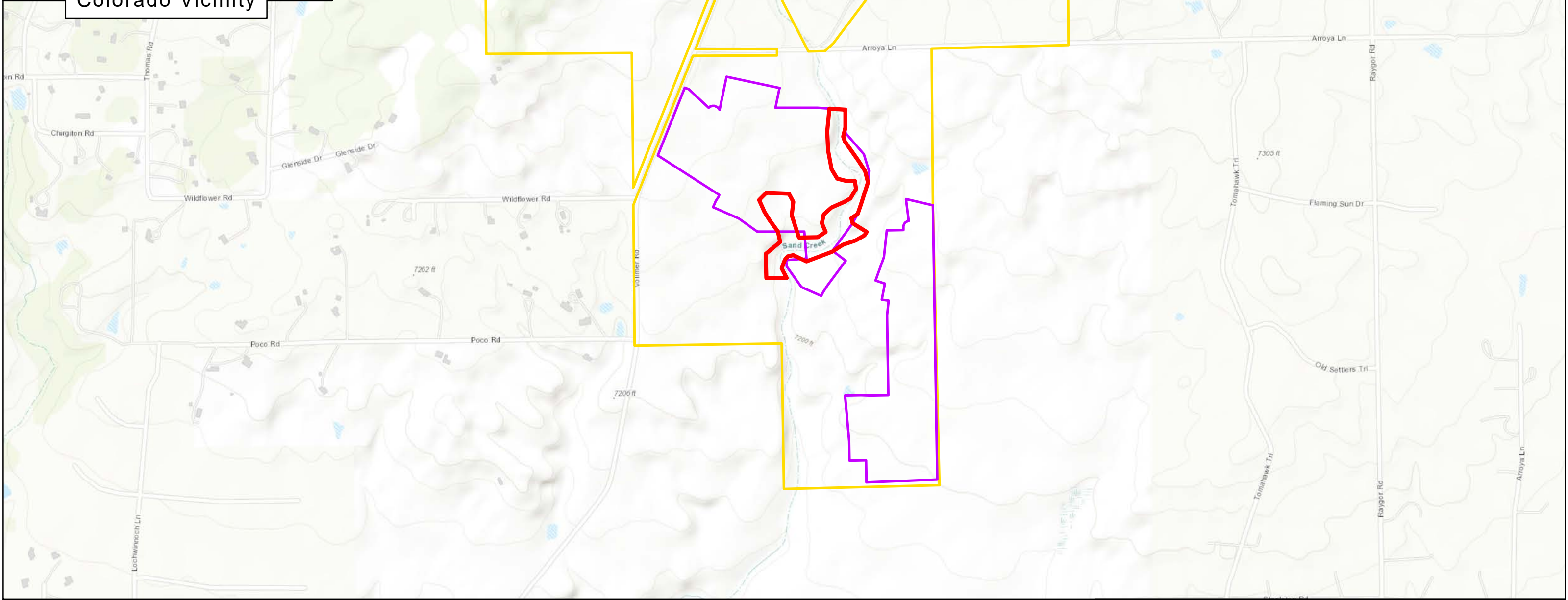


# APPENDIX I

*SITE LOCATION MAP*



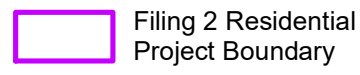
Colorado Vicinity



Study Area



Proposed WOTUS Impact Area



Filing 2 Residential Project Boundary

# Retreat at Timber Ridge

## Filing 2 - Project Location Map

El Paso County, CO

Reference: USGS Topo. Quads - Falcon NW. ESRI (2022).



Project #: 19-113  
Date: 4/28/2022

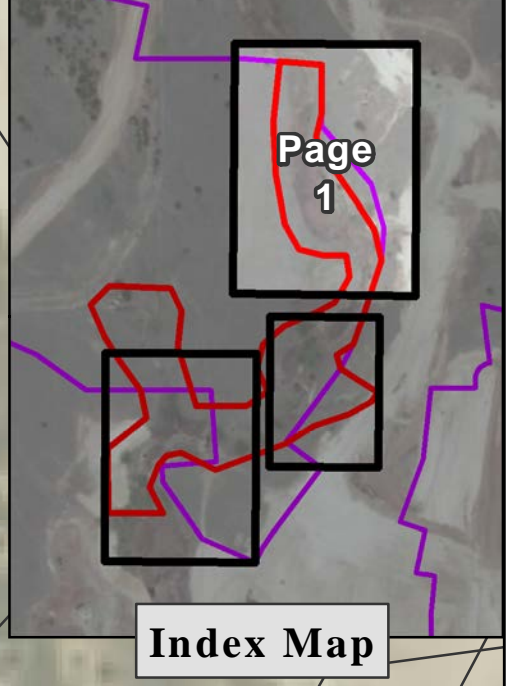
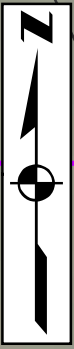




## **APPENDIX II**

*POTENTIAL WOTUS IMPACT MAP*





Wetland (W-3)  
± 0.001 ac  
Check dam installation  
Permanent

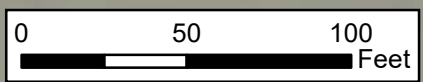
Wetland (SCCW 3)  
± 0.004 ac  
Check dam installation  
Permanent

Wetland (W-3)  
± 0.007 ac  
Temporary workspace for  
check dam installation  
Temporary

Wetland (SCCW 3)  
± 0.022 ac  
Temporary workspace for  
check dam installation  
Temporary

Wetland (SCCW 3)  
± 0.003 ac  
Grading  
Permanent

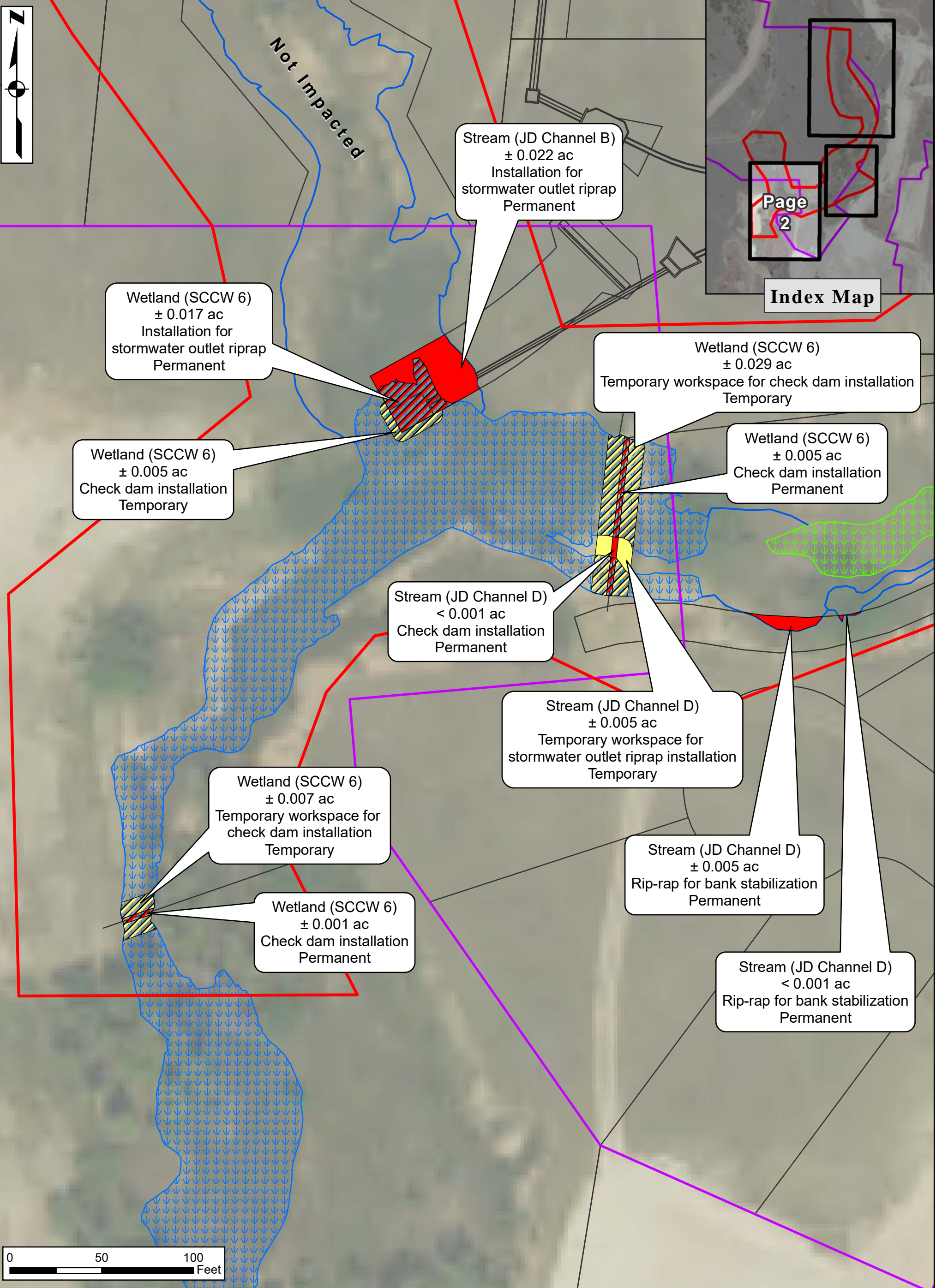
Wetland (SCCW 3)  
± 0.032 ac  
Temporary workspace  
for grading access  
Temporary



|                                       |                         |                                    |
|---------------------------------------|-------------------------|------------------------------------|
| Filing 2 Residential Project Boundary | <b>Filing 2 Impacts</b> | Stream Channel Containing Wetlands |
| Proposed WOTUS Impact Area            | Permanent, Stream       | Wetland                            |
| Site Layout                           | Permanent, Wetland      | Pond                               |
|                                       | Temporary, Stream       | JD Channel (OHWM)                  |
|                                       | Temporary, Wetland      |                                    |

Reference: USDA (2021)





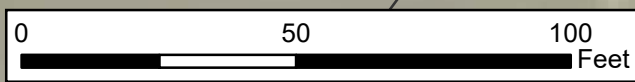
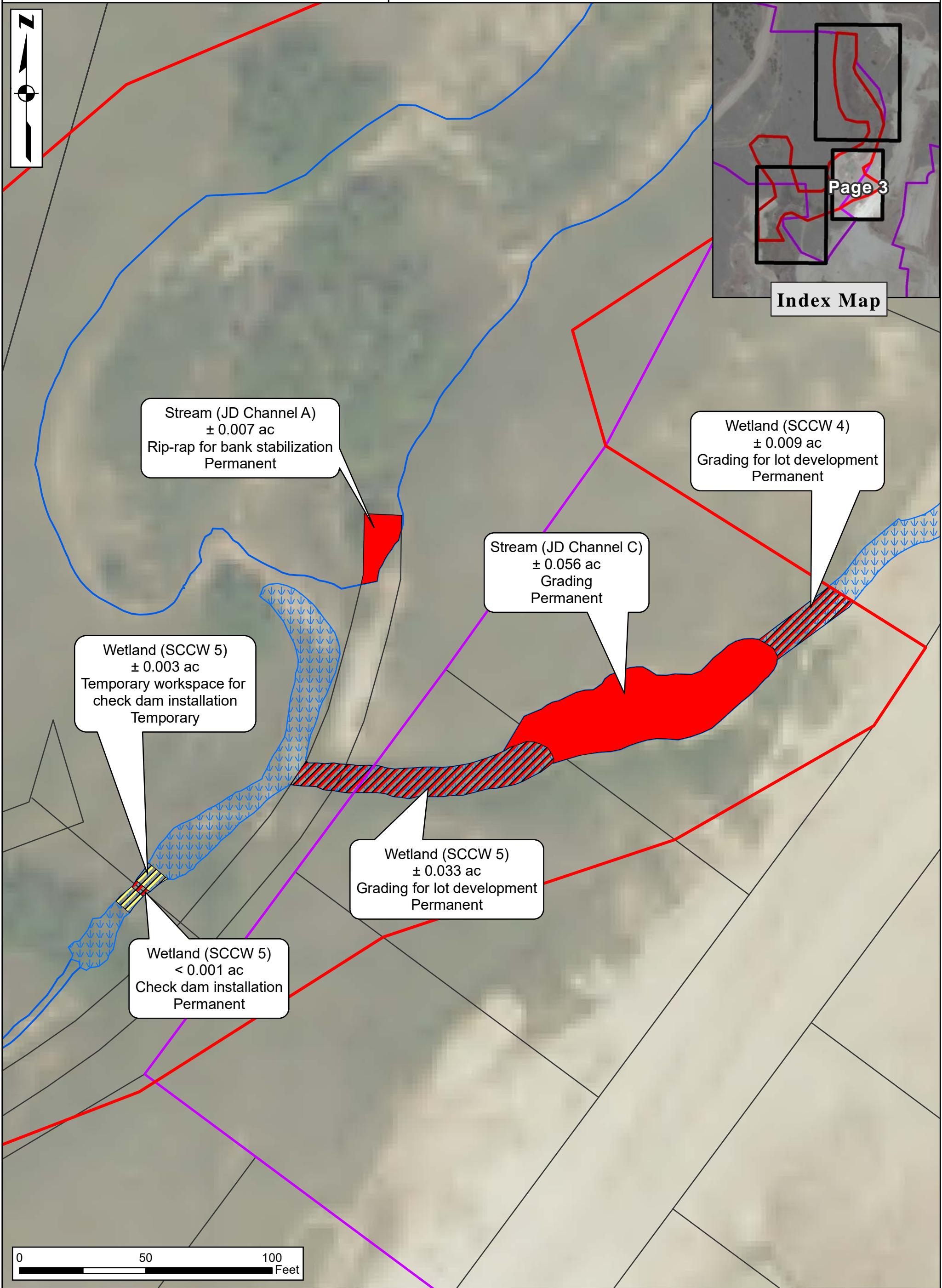
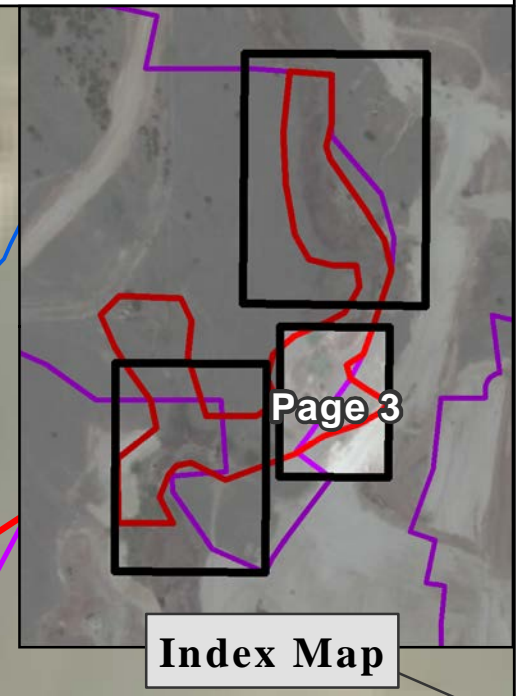
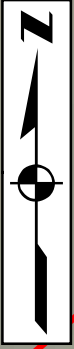
- Filing 2 Residential Project Boundary
- Proposed WOTUS Impact Area
- Site Layout

- Filing 2 Impacts**
- Permanent, Stream
  - Permanent, Wetland
  - Temporary, Stream
  - Temporary, Wetland

- Stream Channel Containing Wetlands
- Wetland
- Pond
- JD Channel (OHWM)

Reference: USDA (2021)





|                                       |                         |                                    |
|---------------------------------------|-------------------------|------------------------------------|
| Filing 2 Residential Project Boundary | <b>Filing 2 Impacts</b> | Stream Channel Containing Wetlands |
| Proposed WOTUS Impact Area            | Permanent, Stream       | Wetland                            |
| Site Layout                           | Permanent, Wetland      | Pond                               |
|                                       | Temporary, Stream       | JD Channel (OHWM)                  |
|                                       | Temporary, Wetland      |                                    |

Reference: USDA (2021)

Date: 4/28/2022  
CORE Project #: 19-113



# **APPENDIX III**

*COMPENSATORY MITIGATION PLAN*



# TIMBER RIDGE FILING 2 SAND CREEK MITIGATION

## STREAM MITIGATION PLANS

CONCEPTUAL DESIGN  
AUGUST, 2022

Copyright Reserved  
The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to WaterVation without delay.  
The Copyrights to all designs and drawings are the property of WaterVation. Reproduction or use for any purpose other than that authorized by WaterVation is forbidden.

Sub-Consultants

Horizontal Scale & Orientation

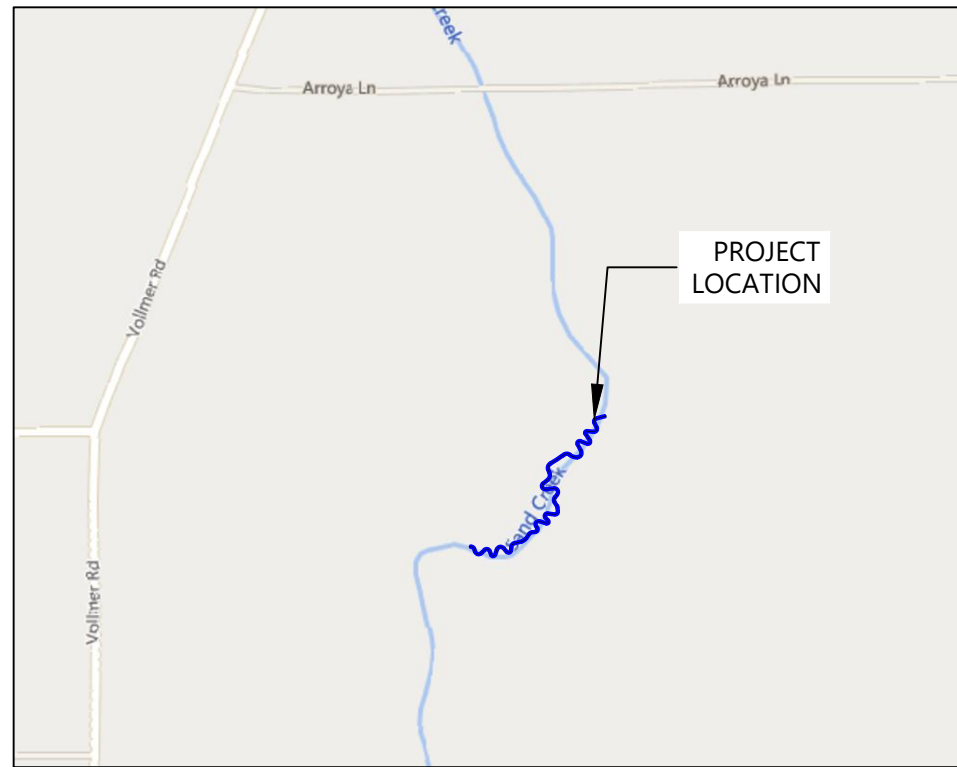
Legend

### PROJECT DESCRIPTION

THE PURPOSE OF THE TIMBER RIDGE SAND CREEK MITIGATION PROJECT IS TO MITIGATE IMPACTS TO SAND CREEK FROM THE ADJACENT DEVELOPMENT. THE PRIMARY MODE OF UPLIFT IS BY IMPROVEMENTS TO THE REACH RIPARIAN VEGETATION.



### VICINITY MAP



| Revision    | By   | Appd. | YY.MM.DD       |
|-------------|------|-------|----------------|
|             |      |       |                |
|             |      |       |                |
|             |      |       |                |
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| Issued      | By   | Appd. | YY.MM.DD       |
|             |      |       |                |
| File Name:  | MAJ  | ----  | ----           |
|             | Dwn. | Chkd. | Dsgn. 22.06.24 |
| Permit-Seal |      |       |                |

Client/Project  
**CORE CONSULTANTS, INC**  
**TIMBER RIDGE SAND CREEK MITIGATION**

**COLORADO SPRINGS, CO**

Project Milestone  
**CONCEPTUAL DESIGN**

Sheet Name  
**COVER**

Project No.    1" = 100'  
Horizontal Scale











## **APPENDIX IV**

PRIVATE STORMWATER FACILITY AND WETLAND MAINTENANCE AGREEMENT AND  
EASEMENT

**PRIVATE STORMWATER FACILITY AND WETLAND  
MAINTENANCE AGREEMENT AND EASEMENT**

This PRIVATE STORMWATER FACILITY MAINTENANCE AGREEMENT AND EASEMENT (Agreement) is made by and between EL PASO COUNTY by and through THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO (County) and TIMBERRIDGE DEVELOPMENT GROUP, LLC (Developer) and THE RETREAT METROPOLITAN DISTRICT (Metro District), a quasi-municipal corporation and political subdivision of the State of Colorado. The above may occasionally be referred to herein singularly as “Party” and collectively as “Parties.”

Recitals

A. WHEREAS, the Metro District provides various municipal services to certain real property in El Paso County, Colorado referred to as THE RETREAT AT TIMBERRIDGE; and

B. WHEREAS, Developer is the owner of certain real estate (the Subject Property) in El Paso County, Colorado, which Property is legally described in Exhibit A attached hereto and incorporated herein by this reference; and

C. WHEREAS, Developer desires to plat and develop on the Subject Property a Subdivision to be known as THE RETREAT AT TIMBERRIDGE FILING NO. 2 (the Development); and

D. WHEREAS, the development of the Subject Property will materially increase the volume and decrease the quality of stormwater runoff from the Property; therefore, it is in the best interest of the public health, safety and welfare for the County to condition approval of this Development on Developer’s promise to construct adequate stormwater control facilities including permanent stormwater quality structural Best Management Practices (“BMPs”) for the Development; and

E. WHEREAS, the El Paso County Land Development Code, as periodically amended, requires the construction and maintenance of detention ponds and other drainage facilities adequate to maintain historic stormwater flow patterns, protect natural and man-made drainage conveyances, and prevent property damage in connection with land development and subdivisions, and further requires that developers enter into maintenance agreements and easements with the County for such drainage facilities; and

F. WHEREAS, the El Paso County Drainage Criteria Manual, Volume 2, as amended by Appendix I of the El Paso County Engineering Criteria Manual (ECM), as each may be periodically amended, promulgated pursuant to the County’s Colorado Discharge Permit System General Permit (MS4 Permit), which MS4 Permit requires that the County take measures to protect the quality of stormwater from sediment and other contaminants, requires subdividers, developers, landowners, and owners of facilities located in the County’s rights-of-way or easements to provide adequate permanent stormwater quality facilities and BMPs with new development or significant



redevelopment and to enter into maintenance agreements and easements with the County for such facilities and BMPs; and

G. WHEREAS, Section 2.9 of the El Paso County Drainage Criteria Manual, Volume I provides for a developer's promise to maintain a development's drainage facilities in the event the County does not assume such responsibility; and

H. WHEREAS, Developer desires to construct for the Development drainage conveyance facilities, detention basins, stormwater control measures, and/or permanent stormwater quality BMPs (collectively, "Stormwater Facilities") as the means for providing adequate drainage and stormwater runoff control and to meet the requirements of the County's MS4 Permit, and to operate, clean, maintain and repair such Stormwater Facilities; and

I. WHEREAS, Developer desires to construct the Stormwater Facilities on property as set forth on Exhibit B attached hereto and incorporated herein by this reference (the Stormwater Facilities Area); and

J. WHEREAS, Developer desires to construct and/or maintain wetlands on property as set forth on Exhibit C attached hereto and incorporated herein by this reference (the Wetlands Maintenance Area) in conjunction with the Development, as required by the U.S. Army Corps of Engineers; and

K. WHEREAS, Developer shall be charged with the duty of constructing the Stormwater Facilities and wetlands and the Metro District shall be charged with the duties of operating, maintaining and repairing the Stormwater Facilities and any appurtenant improvements on the property described in Exhibit B and the wetlands on the property described in Exhibit C; and

L. WHEREAS, the County, in order to protect the public health, safety and welfare, desires the means to access, construct, maintain, and repair the Stormwater Facilities, and to recover its costs incurred in connection therewith, in the event the Developer or District fails to meet their obligations to do the same; and

M. WHEREAS, the County conditions approval of this Development on the Developer's promise to construct the Stormwater Facilities, and further conditions approval on the Metro District's promise to clean, maintain and repair the Stormwater Facilities, and on the Metro District's promise to reimburse the County in the event the burden falls upon the County to construct, clean, maintain or repair the Stormwater Facilities serving this Development; and

N. WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this Development upon Developer's grant herein of a perpetual Easement over the Stormwater Facilities Area as described in Exhibit B for the purpose of allowing the Metro District access to construct, upgrade, clean, maintain and/or repair the Stormwater Facilities, and allowing the County to periodically access and inspect the Stormwater Facilities and, when necessary, to construct, clean, maintain or repair the Stormwater Facilities; and

O. WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this Development upon Developer's grant herein of a perpetual Easement over the Wetlands Maintenance Area described in Exhibit C for the purposes of allowing the Metro District access to maintain the wetlands existing and constructed thereon and allowing the County to periodically access and inspect the Wetlands Maintenance Area and, when necessary, to clean, maintain or repair the wetlands; and

P. WHEREAS, Pursuant to Colorado Constitution, Article XIV, Section 18(2) and Section 29-1-203, Colorado Revised Statutes, governmental entities may cooperate and contract with each other to provide any function, services, or facilities lawfully authorized to each.

### Agreement

NOW, THEREFORE, in consideration of the mutual Promises contained herein, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals: The Parties incorporate the Recitals above into this Agreement.

2. Covenants Running with the Land: Developer agrees that this entire Agreement and the performance thereof shall become a covenant running with the land, which land is legally described in Exhibit A attached hereto, and that this entire Agreement and the performance thereof shall be binding upon itself and its successors and assigns.

3. Construction: In accordance with the Retreat at TimberRidge Filing No. 2 Construction Drawings dated March 23, 2022, Developer shall construct the following Stormwater Facilities on the Stormwater Facilities Area described in Exhibit B: Sand Creek riprap bank stabilization and revegetation for a length of approximately 350 feet, three (3) channel grade control structures, and drainageway stabilization within Lots 4, 5, 7, 10, and 11. Developer shall not commence construction of the Stormwater Facilities until the El Paso County Planning and Community Development Department (PCD) has approved in writing the plans and specifications for the Stormwater Facilities and this Agreement has been signed by all Parties and returned to the PCD. Developer shall complete construction of the Stormwater Facilities in substantial compliance with the County-approved plans and specifications for the Stormwater Facilities and shall provide certification from a Colorado registered Professional Engineer that the Stormwater Facilities were constructed in compliance with and provide the volume and capacity required by such plans and specifications in accordance with ECM requirements. Failure to meet these requirements shall be a material breach of this Agreement and shall entitle the County to pursue any remedies available to it at law or in equity to enforce the same. Construction of the Stormwater Facilities shall be substantially completed within one (1) year (defined as 365 days), which one-year period will commence to run on the date the Erosion and Stormwater Quality Control Permit (ESQCP) and associated Construction Permit are issued. Rough grading of the permanent stormwater BMP facilities must be completed and inspected by the PCD prior to commencing road construction, and water quality capture volume (WQCV) outlet control structures must be substantially complete prior to paving roads or parking areas.

In the event construction of the Stormwater Facilities is not substantially completed within the one (1) year period, or if the Development is in violation of its ESQCP terms and conditions and Developer has not made an effort to remedy the violation in a reasonable amount of time as determined by the County, then the County may exercise its discretion to complete the Stormwater Facilities and shall have the right to seek reimbursement from the Developer and its respective successors and assigns for its actual costs and expenses incurred in the process of completing construction.

If Developer is required by the U.S. Army Corps of Engineers or other agency to construct and/or mitigate wetlands on the Wetlands Maintenance Area described in Exhibit C in conjunction with the Development, the wetlands mitigation plan shall be provided to the County after completion of construction, representing the as-built conditions. The County may require proof of a conservation easement or other documentation if an entity other than the Metro District is proposed to maintain jurisdictional wetlands areas as required under the USACE permit.

4. Maintenance of Stormwater Facilities and Wetlands: The Metro District agrees for itself and its successors and assigns that it will regularly and routinely inspect, clean and maintain the Stormwater Facilities in compliance with the County-reviewed Operation and Maintenance Manual, attached hereto and incorporated herein by this reference as Exhibit D, and otherwise keep the same in good repair, all at its own cost and expense. The Metro District's obligation to maintain the Stormwater Facilities in the Stormwater Facilities Area within Tract B shall terminate upon County acceptance of the Stormwater Facilities and conveyance of Tract B, The Retreat at TimberRidge Filing No. 2 to the County. No trees or shrubs that will impair the structural integrity of the Stormwater Facilities shall be planted or allowed to grow within or adjacent to the Stormwater Facilities.

The Metro District agrees for itself and its successors and assigns, that it will maintain and properly manage the grasses, wetlands and other vegetation in the Stormwater Facility Areas in compliance with the USACE conditions, the "Routine Maintenance Activities" specified in Exhibit D and other requirements or conditions of approval. Such obligation with respect to the Stormwater Facility Area shall continue even after conveyance of the property described in Exhibit B to the County.

If the County maintains or repairs any wetlands or non-structural vegetated areas in the course of properly maintaining the structural Stormwater Facilities or to protect the structural facilities from erosion or other hazards, the provisions described in Section 6 of this Agreement may apply.

5. Creation of Easements: Developer hereby grants the County and the Metro District a non-exclusive perpetual easement upon and across the property described in Exhibit B. The purpose of the easement is to allow the County and the Metro District to access, inspect, clean, repair and maintain the Stormwater Facilities and wetlands; however, the creation of the easement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the Stormwater Facilities or any appurtenant improvements until the time of County acceptance of the public Stormwater Facilities.

6. County's Rights and Obligations: Any time the County determines, in the sole exercise of its discretion, that the Stormwater Facilities have not been properly cleaned, maintained, or otherwise kept in good repair, the County shall give reasonable notice of such to the responsible Party and its successors and assigns. The notice shall provide a reasonable time to correct the problems. Should the responsible Parties fail to correct the specified problems, the County may enter upon the property described in Exhibit B to perform the needed work and shall have the right to seek reimbursement from the responsible Parties for its actual costs and expenses in performing the work. Notice shall be effective to the above by the County's deposit of the same into the regular United States mail, postage pre-paid. Notwithstanding the foregoing, this Agreement does not expressly or implicitly impose on the County a duty to inspect, construct, clean, repair or maintain the Stormwater Facilities.

7. Actual Costs and Expenses: The Developer and the Metro District agree and covenant, for themselves and their successors and assigns, that they will reimburse the County for its actual costs and expenses incurred in the process of completing construction of, cleaning, maintaining, or repairing the Stormwater Facilities, wetlands, or non-structural vegetated areas pursuant to the provisions of this Agreement.

The term "actual costs and expenses" as used in this Agreement shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tools and equipment costs, supply costs, engineering and design costs, and costs to contract with specialized professionals or consultants, including but not limited to wetlands scientists, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to perform the work. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney's fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

8. Contingencies of Land Use/Land Disturbance Approval: Developer's and the Metro District's execution of this Agreement is a condition of subdivision, land use, or land disturbance approval. Additional conditions of this Agreement include, but are not limited to, the following:

- a. Conveyance of property described in Exhibit B from Developer to the County and recording of the Deed for the same upon County acceptance of the required improvements; and

The County shall have the right, in the sole exercise of its discretion, to approve or disapprove any documentation submitted to it under the conditions of this Paragraph, including but not limited to, any separate agreement or amendment, if applicable, identifying any specific maintenance responsibilities not addressed herein. The County's rejection of any documentation submitted hereunder shall mean that the appropriate condition of this Agreement has not been fulfilled.

9. Agreement Monitored by El Paso County Planning and Community Development Department and/or El Paso County Department of Public Works: Any and all actions and

decisions to be made hereunder by the County shall be made by the Executive Director of the El Paso County Planning and Community Development Department and/or the Executive Director of the El Paso County Department of Public Works. Accordingly, any and all documents, submissions, plan approvals, inspections, etc. shall be submitted to and shall be made by the Executive Director of the Planning and Community Development Department and/or the Executive Director of the El Paso County Department of Public Works.

10. Indemnification and Hold Harmless: Developer and the Metro District agree, for themselves, their successors and assigns, that they will indemnify, defend, and hold the County harmless from any and all loss, costs, damage, injury, liability, claim, lien, demand, action and causes of action whatsoever, whether at law or in equity, arising from or related to their intentional or negligent acts, errors or omissions or that of their agents, officers, servants, employees, invitees and licensees in the construction, operation, inspection, cleaning (including analyzing and disposing of any solid or hazardous wastes as defined by State and/or Federal environmental laws and regulations), maintenance, and repair of the Stormwater Facilities or wetlands, and such obligation arising under this Paragraph shall be joint and several. Nothing in this Paragraph shall be deemed to waive or otherwise limit the defense available to the County pursuant to the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq.* C.R.S., or as otherwise provided by law.

11. Severability: In the event any Court of competent jurisdiction declares any part of this Agreement to be unenforceable, such declaration shall not affect the enforceability of the remaining parts of this Agreement.

12. Third Parties: This Agreement does not and shall not be deemed to confer upon or grant to any third party any right to claim damages or to bring any lawsuit, action or other proceeding against the County, the Developer, the Metro District, or their respective successors and assigns, because of any breach hereof or because of any terms, covenants, agreements or conditions contained herein.

13. Solid Waste or Hazardous Materials: Should any refuse from the stormwater facilities be suspected or identified as solid waste or petroleum products, hazardous substances or hazardous materials (collectively referred to herein as “hazardous materials”), the Developer and the Metro District shall take all necessary and proper steps to characterize the solid waste or hazardous materials and properly dispose of it in accordance with applicable State and/or Federal environmental laws and regulations, including, but not limited to, the following: Solid Wastes Disposal Sites and Facilities Acts, §§ 30-20-100.5 – 30-20-119, C.R.S., Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities, 6 C.C.R. 1007-2, *et seq.*, Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k, and Federal Solid Waste Regulations 40 CFR Ch. I. The County shall not be responsible or liable for identifying, characterizing, cleaning up, or disposing of such solid waste or hazardous materials. Notwithstanding the previous sentence, should any refuse cleaned up and disposed of by the County be determined to be solid waste or hazardous materials, the Developer and the Metro District, but not the County, shall be responsible and liable as the owner, generator, and/or transporter of said solid waste or hazardous materials.

14. Applicable Law and Venue: The laws, rules, and regulations of the State of Colorado and El Paso County shall be applicable in the enforcement, interpretation, and execution

of this Agreement, except that Federal law may be applicable regarding solid waste or hazardous materials. Venue shall be in the El Paso County District Court.

15. Limitation on Developer's Obligation and Liability: The obligation and liability of the Developer hereunder shall only continue until such time as the Final Plat as described in the third paragraph (Paragraph C) of the Recitals set forth above is recorded (if applicable) and the Developer completes the construction of the Stormwater Facilities and wetlands and transfers all applicable maintenance and operation responsibilities to the Metro District. By execution of this agreement, the Metro District agrees to accept all responsibilities and to perform all duties assigned to it, including those of the Developer, as specified herein, upon transfer of the property described in Exhibit B from Developer to the Metro District.

*[Remainder of page intentionally left blank]*

Executed this 20<sup>th</sup> day of June, 2022, by:

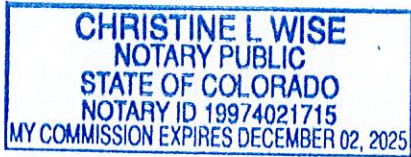
TIMBERRIDGE DEVELOPMENT GROUP, LLC


By:   
DOUGLAS M. STIMPLE, CEO

The foregoing instrument was acknowledged before me this 20<sup>th</sup> day of June, 2022, by DOUGLAS M. STIMPLE, CEO, TIMBERRIDGE DEVELOPMENT GROUP, LLC.

Witness my hand and official seal.

My commission expires: 12-02-2025




  
Notary Public

Executed this 20<sup>th</sup> day of June, 2022, by:

THE RETREAT METROPOLITAN DISTRICT

By:   
GEORGE LENZ, President

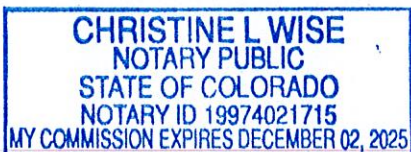
Attest:


By:   
NATE LENZ, Corporate Counsel

The foregoing instrument was acknowledged before me this 20<sup>th</sup> day of June, 2022, by GEORGE LENZ, President, and NATE LENZ, Corporate Counsel, THE RETREAT METROPOLITAN DISTRICT

Witness my hand and official seal.

My commission expires: 12-02-2025



  
Notary Public

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by:

BOARD OF COUNTY COMMISSIONERS  
OF EL PASO COUNTY, COLORADO

By: \_\_\_\_\_  
Kevin Mastin, Interim Executive Director  
El Paso County Planning and Community Development Department  
Authorized Signatory pursuant to LDC

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, Executive Director, Planning and Community Development Department.

Witness my hand and official seal.

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

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

Approved as to Content and Form:

Hori L. Seago  
Assistant County Attorney



**EXHIBIT A**  
**Subject Property**



JOB NO.1185.20-01R  
JANUARY 4, 2021  
REVISED FEBRUARY 12, 2021  
PAGE 1 OF 2

619 N. Cascade Avenue, Suite 200 (719) 785-0790  
Colorado Springs, Colorado 80903 (719) 785-0799 (Fax)

**LEGAL DESCRIPTION:**

TWO (2) PARCELS OF LAND BEING A PORTION OF SECTIONS 27 AND 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

**BASIS OF BEARINGS:** THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE WEST END WHICH IS THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI PLS 10376, 2006" AND AT THE EAST END, WHICH IS A 30' WITNESS CORNER TO THE EAST OF THE EAST QUARTER CORNER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI 10376, 2006", IS ASSUMED TO BEAR S89°08'28"W A DISTANCE OF 1356.68 FEET.

**PARCEL A**

COMMENCING AT THE NORTHWEST CORNER OF RETREAT AT TIMBERRIDGE FILING NO. 1 RECORDED UNDER RECEPTION NO. 220714653, EL PASO COUNTY, COLORADO, SAID POINT BEING ALSO ON THE EASTERLY RIGHT OF WAY LINE OF VOLMER ROAD AS RECORDED IN BOOK 2678 AT PAGE 430, SAID POINT BEING THE POINT OF BEGINNING;

THENCE N21°41'10"E, ON THE EASTERLY RIGHT OF WAY LINE OF SAID VOLMER ROAD, A DISTANCE OF 657.86 FEET;  
THENCE S68°18'50"E, A DISTANCE OF 40.00 FEET;  
THENCE S46°30'00"E, A DISTANCE OF 243.59 FEET TO A POINT ON CURVE;  
THENCE ON THE ARC OF A CURVE TO THE RIGHT WHOSE CENTER BEARS S46°30'00"E, HAVING A DELTA OF 114°51'36", A RADIUS OF 60.00 FEET AND A DISTANCE OF 120.28 FEET TO A POINT ON CURVE;  
THENCE N12°00'00"E, A DISTANCE OF 307.77 FEET;  
THENCE S78°00'00"E, A DISTANCE OF 490.00 FEET;  
THENCE S12°00'00"W, A DISTANCE OF 183.00 FEET;  
THENCE N90°00'00"E, A DISTANCE OF 378.68 FEET;  
THENCE S86°05'18"E, A DISTANCE OF 253.40 FEET;  
THENCE S00°00'00"E, A DISTANCE OF 208.46 FEET;  
THENCE S41°00'00"E, A DISTANCE OF 256.15 FEET;  
THENCE S16°19'41"E, A DISTANCE OF 155.30 FEET;  
THENCE S03°30'00"W, A DISTANCE OF 107.28 FEET;  
THENCE S17°19'01"W, A DISTANCE OF 103.72 FEET;  
THENCE S18°00'00"W, A DISTANCE OF 100.00 FEET;  
THENCE S19°43'22"W, A DISTANCE OF 95.70 FEET;  
THENCE S27°50'00"W, A DISTANCE OF 94.45 FEET;  
THENCE S35°37'50"W, A DISTANCE OF 108.98 FEET;  
THENCE S36°37'30"W, A DISTANCE OF 200.00 FEET;  
THENCE S53°22'30"E, A DISTANCE OF 150.00 FEET;  
THENCE S36°37'30"W, A DISTANCE OF 10.00 FEET TO THE NORTHWESTERLY CORNER OF SAID RETREAT AT TIMBERRIDGE FILING NO. 1;

THENCE ON THE BOUNDARY OF SAID RETREAT AT TIMBERRIDGE FILING NO. 1 THE FOLLOWING TWELVE (12) COURSES:

1. S36°37'30"W, A DISTANCE OF 263.98 FEET TO A POINT OF CURVE;
2. ON THE ARC OF A CURVE TO THE LEFT HAVING A DELTA OF 12°37'30", A RADIUS OF 525.00 FEET AND A DISTANCE OF 115.68 FEET TO A POINT ON CURVE;
3. N66°00'00"W, A DISTANCE OF 197.47 FEET;
4. N35°00'00"W, A DISTANCE OF 230.09 FEET;
5. N05°00'00"W, A DISTANCE OF 55.08 FEET;
6. N85°00'00"E, A DISTANCE OF 184.29 FEET;
7. N04°30'10"W, A DISTANCE OF 243.01 FEET;
8. N90°00'00"W, A DISTANCE OF 424.49 FEET;
9. N54°48'53"W, A DISTANCE OF 205.37 FEET;
10. N66°30'00"W, A DISTANCE OF 255.51 FEET TO A POINT ON CURVE;

11. ON THE ARC OF A CURVE TO THE RIGHT WHOSE CENTER BEARS S66°30'00"E, HAVING A DELTA OF 09°20'00", A RADIUS OF 770.00 FEET AND A DISTANCE OF 125.43 FEET TO A POINT ON CURVE;
12. N57°10'00"W, A DISTANCE OF 661.28 FEET TO THE POINT OF BEGINNING;

CONTAINING A CALCULATED AREA OF 45.715 ACRES.

**PARCEL B**

COMMENCING AT THE SOUTHEAST CORNER OF RETREAT AT TIMBERRIDGE FILING NO. 1 RECORDED UNDER RECEPTION NO. 220714653, EL PASO COUNTY, COLORADO, SAID POINT BEING THE POINT OF BEGINNING;

THENCE ON THE BOUNDARY OF SAID RETREAT AT TIMBERRIDGE FILING NO. 1 THE FOLLOWING FOURTEEN (14) COURSES:

1. N02°25'00"W, A DISTANCE OF 18.66 FEET TO A POINT OF CURVE;
2. ON THE ARC OF A CURVE TO THE RIGHT HAVING A DELTA OF 01°30'30", A RADIUS OF 1025.00 FEET AND A DISTANCE OF 26.98 FEET TO A POINT OF TANGENT;
3. N00°54'30"W, A DISTANCE OF 154.28 FEET;
4. S89°05'30"W, A DISTANCE OF 150.00 FEET;
5. N00°54'30"W, A DISTANCE OF 175.00 FEET;
6. N05°04'00"W, A DISTANCE OF 416.10 FEET;
7. N89°05'30"E, A DISTANCE OF 145.17 FEET;
8. S88°03'59"E, A DISTANCE OF 85.10 FEET;
9. N89°05'30"E, A DISTANCE OF 160.00 FEET;
10. N00°54'30"W, A DISTANCE OF 720.00 FEET;
11. N06°02'18"E, A DISTANCE OF 136.13 FEET TO A POINT ON CURVE;
12. ON THE ARC OF A CURVE TO THE RIGHT WHOSE CENTER BEARS N06°02'18"E, HAVING A DELTA OF 05°02'42", A RADIUS OF 725.00 FEET AND A DISTANCE OF 63.84 FEET TO A POINT ON CURVE;
13. N11°05'00"E, A DISTANCE OF 147.40 FEET;
14. N71°41'17"W, A DISTANCE OF 87.90 FEET;

THENCE N19°50'00"E, A DISTANCE OF 225.69 FEET;  
THENCE N05°57'53"E, A DISTANCE OF 241.74 FEET;  
THENCE N89°05'30"E, A DISTANCE OF 150.00 FEET;  
THENCE N00°54'30"W, A DISTANCE OF 28.43 FEET TO A POINT OF CURVE;  
THENCE ON THE ARC OF CURVE TO THE RIGHT HAVING A DELTA OF 83°24'30", A RADIUS OF 55.00 FEET AND A DISTANCE OF 80.07 FEET TO A POINT ON CURVE;  
THENCE N07°30'00"W, A DISTANCE OF 198.00 FEET;  
THENCE S77°00'00"E, A DISTANCE OF 251.41 FEET;  
THENCE S00°54'30"E, A DISTANCE OF 2478.00 FEET TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 27 TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN;  
THENCE S87°35'00"W, ON SAID SOUTH LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 27, A DISTANCE OF 639.38 FEET TO THE POINT OF BEGINNING;

CONTAINING A CALCULATED AREA OF 30.114 ACRES.

**CONTAINING A TOTAL CALCULATED AREA OF 75.829 ACRES.**

**LEGAL DESCRIPTION STATEMENT:**

I, DOUGLAS P. REINELT, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE THAT THE ABOVE LEGAL DESCRIPTION WAS PREPARED UNDER MY RESPONSIBLE CHARGE AND ON THE BASIS OF MY KNOWLEDGE, INFORMATION AND BELIEF, IS CORRECT.



DOUGLAS P. REINELT, PROFESSIONAL LAND SURVEYOR  
COLORADO P.L.S. NO. 30118  
FOR AND ON BEHALF OF CLASSIC CONSULTING  
ENGINEERS AND SURVEYORS

MARCH 12, 2021  
DATE

**EXHIBIT B**  
**Stormwater Facilities Area**

Tract B and the platted drainage easements containing the drainageways within Lots 4, 5, 7, 10, and 11, Retreat at TimberRidge Filing No. 2

**EXHIBIT C**  
**Wetlands Maintenance Area**  
**(Describe wetlands mitigation area)**



# TIMBER RIDGE FILING 2 SAND CREEK MITIGATION

## STREAM MITIGATION PLANS

CONCEPTUAL DESIGN

AUGUST, 2022



**WATERVATION**

123 G Street, Suite 18  
Salida, CO 81201  
www.water-vation.com

**Copyright Reserved**

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to WaterVation without delay. The Copyrights to all designs and drawings are the property of WaterVation. Reproduction or use for any purpose other than that authorized by WaterVation is forbidden.

**Sub-Consultants**

**Horizontal Scale & Orientation**

**Legend**

**PROJECT DESCRIPTION**

THE PURPOSE OF THE TIMBER RIDGE SAND CREEK MITIGATION PROJECT IS TO MITIGATE IMPACTS TO SAND CREEK FROM THE ADJACENT DEVELOPMENT. THE PRIMARY MODE OF UPLIFT IS BY IMPROVEMENTS TO THE REACH RIPARIAN VEGETATION.

**VICINITY MAP**



|             |      |       |       |          |
|-------------|------|-------|-------|----------|
| Revision    |      | By    | Appd. | YY.MM.DD |
|             |      |       |       |          |
|             |      |       |       |          |
|             |      |       |       |          |
|             |      |       |       |          |
|             |      |       |       |          |
| Issued      |      | By    | Appd. | YY.MM.DD |
|             |      |       |       |          |
| File Name:  | MAJ  | ----  | ----  | 22.06.24 |
| Permit-Seal | Dwn. | Chkd. | Dsgn. | YY.MM.DD |

Client/Project  
**CORE CONSULTANTS, INC**  
**TIMBER RIDGE SAND CREEK MITIGATION**

**COLORADO SPRINGS, CO**

Project Milestone  
**CONCEPTUAL DESIGN**

Sheet Name  
**COVER**

2021009009 1" = 100'  
 Project No. Horizontal Scale

C:\Users\mjohnson\OneDrive\Documents\Drawings\2022\2021009009\_Timber\_Ridge\_Sand\_Creek\_Mitigation\2022\2021009009\_10\_21\_Aug\_By\_Matthew\_Johnson.dwg



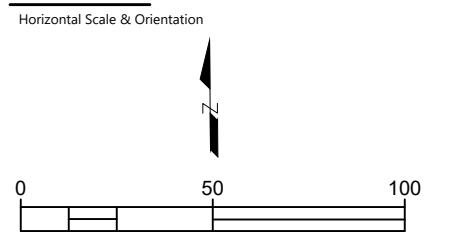






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The Copyrights to all designs and drawings are the property of WaterVation. Reproduction or use for any purpose other than that authorized by WaterVation is forbidden.

Sub-Consultants

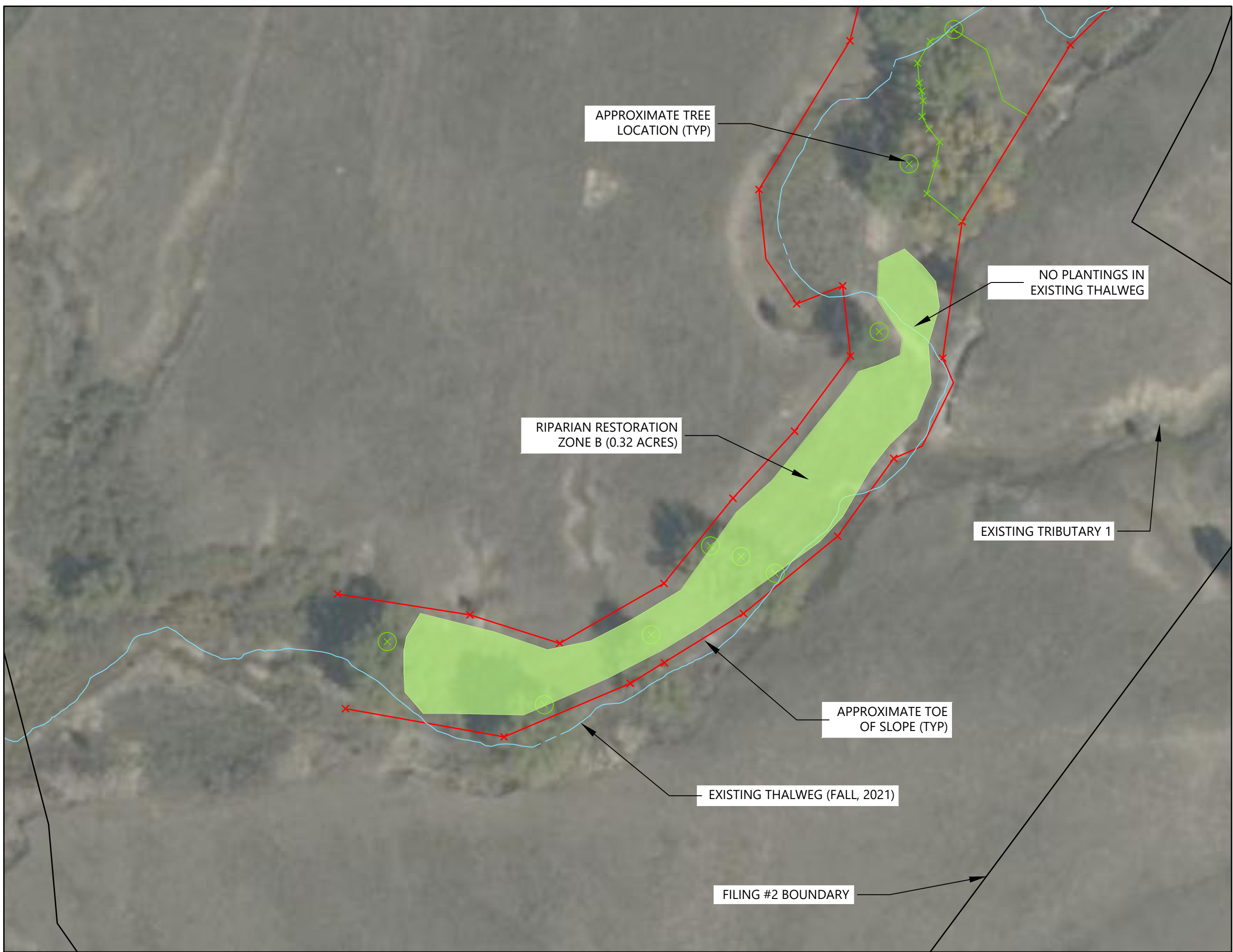


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Permit-Seal

Client/Project  
**CORE CONSULTANTS, INC**  
TIMBER RIDGE SAND CREEK MITIGATION  
COLORADO SPRINGS, CO  
Project Milestone  
CONCEPTUAL DESIGN  
Sheet Name  
PLAN (1)



APPROXIMATE TREE  
LOCATION (TYP)

NO PLANTINGS IN  
EXISTING THALWEG

RIPARIAN RESTORATION  
ZONE B (0.32 ACRES)

EXISTING TRIBUTARY 1

APPROXIMATE TOE  
OF SLOPE (TYP)

EXISTING THALWEG (FALL, 2021)

FILING #2 BOUNDARY

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**TOPSOIL STOCKPILE NOTES:**

1. The ecologist will oversee and inspect topsoil stockpiling activities.
2. Stockpile topsoil from wetlands separately in windrows, piles should be uncompacted and low in height with soil mounds no higher than 10 feet to preserve soil microbes and ideally no higher than 4 feet if space onsite allows.
3. Stockpile topsoil (separately from subgrade) from all other areas disturbed by the project in windrows, piles should be uncompacted and low in height with soil mounds no higher than 10 feet to preserve soil microbes and ideally no wider than 4 feet if space onsite allows.
4. Use a placard to identify stockpiles as "Wetland Topsoil", "Topsoil", or "Subgrade".
5. All topsoil stockpiled longer than 1 month should be seeded with Italian rye (*Lolium multiflorum*) at a rate of 2 lbs/1000 square feet.
6. Test all topsoil stockpiles for standard nutrient tests and USDA texture analysis and provide test results to the ecologist for review prior to application. Soil amendments may be adjusted based on these test results.
7. Prior to topsoil placement, the top one foot of the stockpile material should be mixed with the remainder of the stockpile to distribute living organisms.

**SEEDING AND MULCHING NOTES:**

1. No construction equipment will be allowed in the project area after seeding.
2. All seed bags found onsite should be tagged and labeled. Seed bag tags should have the following information; project Name, total pounds, and the scientific names and seeding rate for each species.
3. The contractor will stake the seeding limits and obtain approval from the ecologist prior to seeding.
4. Seeding will only be performed between October 1 and when the ground freezes, and when the ground thaws and June 1, unless approved by the ecologist.
5. All areas in Zone A will be seeded with the Wetland Seed Mix.
6. Seeding rates shown in the tables are for drill seeding, double the rate for broadcast seeding.
7. Adjacent seed mixes will be overlapped by each other a minimum of 3 feet.
8. After seeding, all areas that lack erosion control blanket will be hydromulched with mechanically defibrated virgin wood fiber at a rate of 2,500 lbs/acre with 150 lbs/acre of organic psyllium derived tackifier.

**WETLAND PLANTINGS**

| ZONE A WETLAND PLANTINGS              |                    |       |                |
|---------------------------------------|--------------------|-------|----------------|
| SCIENTIFIC NAME                       | COMMON NAME        | SIZE  | SPACING (O.C.) |
| <i>Bolboschoenus maritimus</i>        | Alkali bulrush     | 10 ci | 1.5'           |
| <i>Carex nebrascensis</i>             | Nebraska sedge     | 10 ci | 1.5'           |
| <i>Distichlis stricta</i>             | Inland saltgrass   | 10 ci | 1.5'           |
| <i>Eleocharis palustris</i>           | Common spikerush   | 10 ci | 1.5'           |
| <i>Juncus balticus</i>                | Baltic's rush      | 10 ci | 1.5'           |
| <i>Juncus torreyi</i>                 | Torrey's rush      | 10 ci | 1.5'           |
| <i>Schoenoplectus pungens</i>         | Common threesquare | 10 ci | 1.5'           |
| <i>Schoenoplectus tabernaemontani</i> | Softstem bulrush   | 10 ci | 1.5'           |
| <i>Salix amygdaloides</i>             | Peachleaf willow   | 5-gal | 10'            |

PROVIDED BY CORE CONSULTANTS

**WETLAND SEEDING PLAN**

| SCIENTIFIC NAME                        | COMMON NAME        | VARIETY | % in Mix | PLS lbs/ac* (broadcast) |
|--|--------------------|---------|----------|-------------------------|
| <b>Graminoids</b>                      |                    |         |          |                         |
| <i>Andropogon gerardii</i>             | Big bluestem       | Pawnee  | 5        | 2.5                     |
| <i>Carex nebrascensis</i>              | Nebraska sedge     | Native  | 3        | 0.4                     |
| <i>Carex praegracilis</i>              | Meadow sedge       | Native  | 3        | 0.3                     |
| <i>Distichlis stricta (D. spicata)</i> | Inland saltgrass   | Native  | 15       | 1.9                     |
| <i>Eleocharis palustris</i>            | Creeping spikerush | Native  | 3        | 0.3                     |

| SCIENTIFIC NAME                                    | COMMON NAME                           | VARIETY | % in Mix | PLS lbs/ac* (broadcast) |
|--|---------------------------------------|---------|----------|-------------------------|
| <i>Elymus lanceolatus ssp. psammophilus</i>        | Streambank wheatgrass                 | Sodar   | 15       | 6.3                     |
| <i>Elymus trachycaulus</i>                         | Slender wheatgrass                    | Pryor   | 5        | 2.1                     |
| <i>Hordeum jubatum (syn: Critesion jubatum)</i>    | Foxtail barley                        | Native  | 3        | 1.4                     |
| <i>Juncus arcticus (syn: Juncus balticus)</i>      | Baltic rush/Arctic rush               | Native  | 10       | 0.1                     |
| <i>Pascopyrum smithii (syn: Agropyron smithii)</i> | Western wheatgrass                    | Rosanna | 20       | 11.9                    |
| <i>Puccinellia nuttalliana (Syn: P. airoides)</i>  | Nuttal alkaligrass (alkali saltgrass) | Native  | 5        | 0.1                     |
| <i>Spartina pectinata</i>                          | Prairie cordgrass                     | Native  | 3        | 1.0                     |
| <i>Sporobolus airoides</i>                         | Alkali sacaton                        | Native  | 10       | 0.4                     |
| *Halve rate for drill seeding.                     |                                       |         |          | <b>28.7</b>             |

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**WATERVATION**  
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Salida, CO 81201  
www.water-vation.com

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Horizontal Scale & Orientation

Legend

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Permit-Seal

Client/Project  
CORE CONSULTANTS, INC  
TIMBER RIDGE WETLAND MITIGATION

COLORADO SPRINGS, CO

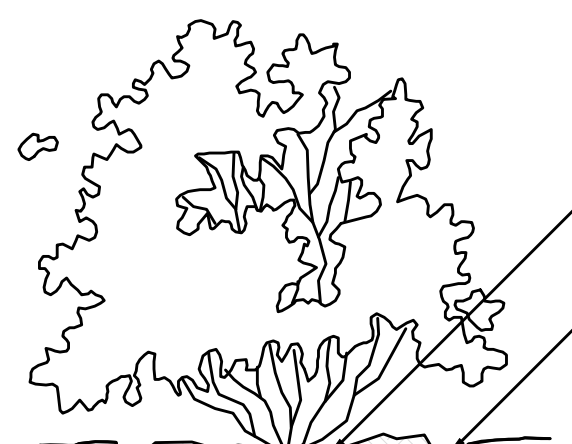
Project Milestone  
CONCEPTUAL DESIGN

Sheet Name  
NOTES (2)

2021009009 1" = 100'  
Project No. Horizontal Scale

**NOTES**

1. KEEP PLANT MOIST AND SHADED IN MULCH BEDS ON SITE UNTIL TIME OF PLANTING.
2. FOR ROOT BOUND CONTAINER PLANTS, MAKE 4-5" DEEP VERTICAL CUTS INTO ROOT BALL EDGE AND PLANT IMMEDIATELY.
3. DO NOT CUT LEADER, PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING, KEEP CROWN SHAPE TYPICAL OF SPECIES, REMOVE ALL PLANTING TAGS, TAPE AND LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT OR ECOLOGIST.
4. PROVIDE WILDLIFE PROTECTION AROUND PLANTED SHRUB AS NEEDED.



PLANT SO THAT TOP OF ROOTBALL IS LEVEL W/ FINISH GRADE.

FEATHER MULCH TO BASE OF SHRUB BRANCHES. FORM 3" DEEP SOIL SAUCER 2' IN DIAMETER WITH 3" WIDE CONTINUOUS SOIL RIM.

SCARIFY ALL SIDES AND BOTTOM WITH SPADE.

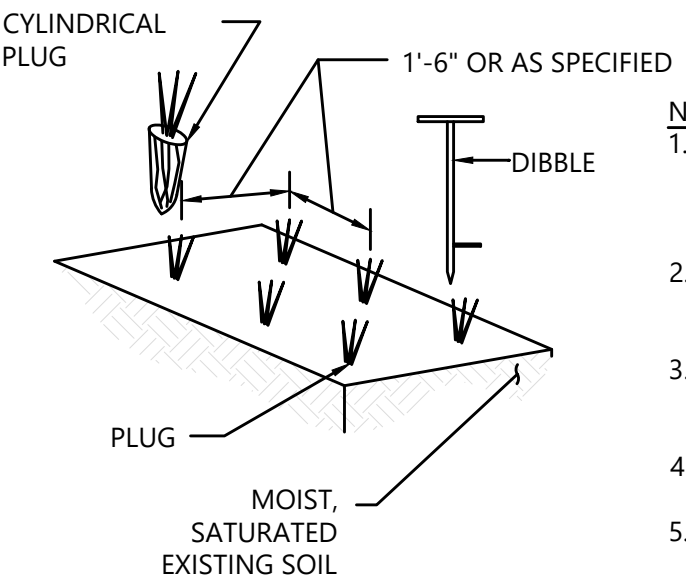
BACKFILL PLANT PIT, DEEPLY WATER THEN TAMP POCKETS TO REMOVE AIR.

REMOVE ALL CONTAINER MATERIAL. PLACE ON SCORED UNDISTURBED SOIL.

UNDISTURBED SOIL

ROOTBALL + 1'-0"

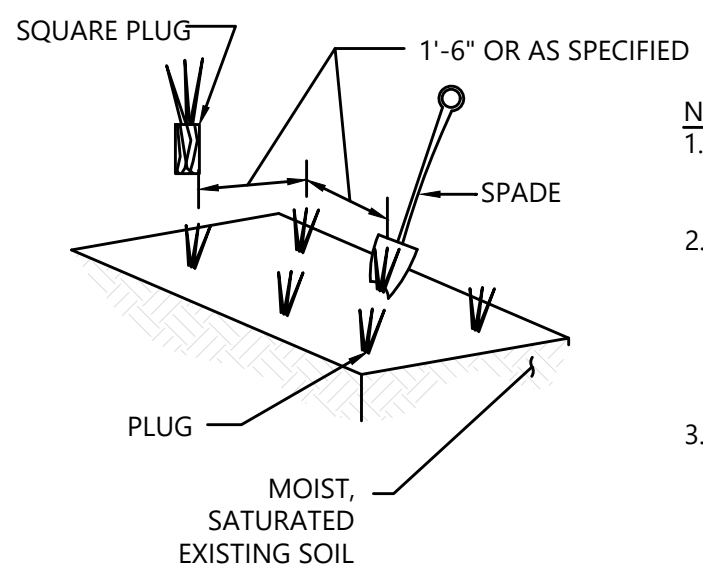
**SHRUB PLANTING CONTAINER**



**NOTES**

1. DROP WOODEN DIBBLE STICK WITH APPROPRIATELY SIZED STEEL END INTO SOIL AT SPECIFIED SPACING FROM OTHER PLUGS.
2. STEP ON STEEL FOOT PLATE TO CREATE DEEPER HOLE. REMOVE DIBBLE STICK.
3. REMOVE WETLAND PLUG FROM CONTAINER AND PLANT ROOTS DOWN.
4. DO NOT FOLD OR BEND ROOTS. PLANT TO FULL DEPTH.
5. COVER NURSERY SOIL AROUND PLANT WITH 1/2" TO 1" NATIVE SOIL TAMP ON SOIL AROUND PLANT TO SECURE.

**CYLINDRICAL CONTAINER PLUGS**



**NOTES**

1. DROP SPADE INTO SOIL APPROXIMATELY 1'-6" FROM OTHER PLUGS.
2. STEP ON SPADE AND MOVE BACK AND FORTH TO CREATE AN OPEN POCKET LARGE ENOUGH FOR THE ROOT MASS TO BE INSTALLED FULLY WITHOUT HAVING TO BEND THE ROOTS.
3. REMOVE WETLAND PLUG FROM CONTAINER AND PLANT ROOTS DOWN SO THAT THE TOP OF THE ROOTS ARE JUST BELOW THE SOIL SURFACE IN THE HOLE.
4. COVER NURSERY SOIL AROUND PLANTS WITH 1/2" TO 1" NATIVE SOIL.
5. TAMP ON SOIL AROUND PLANT TO SECURE.

**NOTES**

1. UPON ARRIVAL CHECK THAT WETLAND PLUGS ARE HEALTHY, MOIST, AND FREE OF INJURIES OR INSECT DAMAGE.
2. KEEP WETLAND PLUGS MOIST AND SHADED BEFORE PLANTING.
3. SOILS SHOULD BE MOIST TO SATURATED BEFORE PLANTING.
4. WATER THE PLANTED AREA AFTER PLANTING IF NEEDED.
5. INSTALL WATERFOWL GRAZING CONTROL AS REQUIRED.

**SQUARE CONTAINER PLUGS**

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Client/Project  
 CORE CONSULTANTS, INC  
 TIMBER RIDGE WETLAND MITIGATION

COLORADO SPRINGS, CO

Project Milestone  
 CONCEPTUAL DESIGN

Sheet Name  
 NOTES (3)

2021009009 1" = 100'  
 Project No. Horizontal Scale

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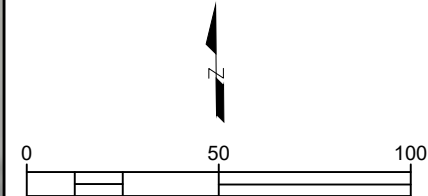




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Horizontal Scale & Orientation



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Permit-Seal

Client/Project  
**CORE CONSULTANTS, INC**  
**TIMBER RIDGE WETLAND MITIGATION**

**COLORADO SPRINGS, CO**

Project Milestone  
**CONCEPTUAL DESIGN**

Sheet Name  
**PLAN (1)**

**2021009009** 1" = 50'  
 Project No. Horizontal Scale

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FIELD-FIT BYPASS CHANNEL

WETLAND RESTORATION ZONE A (0.44 ACRES)

EXISTING TRIBUTARY

APPROXIMATE TOE OF SLOPE (TYP)

APPROXIMATE TREE LOCATION (TYP)

EXISTING THALWEG (FALL, 2021)

FILING #2 BOUNDARY

**EXHIBIT D**  
**Open Drainage Channel Inspections, Operations and Maintenance (O&M)**

Routine maintenance of the open drainage channel system consists of litter and debris pickup, vegetation management, erosion control, and sediment removal when necessary. Removal of excessive shrubs and trees is required to ensure that the channel will flow in conformance with the original design. Mowing and vegetation management shall be performed with care to ensure that soils remain stable and not to cause erosion. Noxious weed management shall be performed as necessary and as required under project approval conditions. All dead trees and trees growing in the flowline of a structure such as a bridge or culvert shall be removed.

Removal of sediment shall be performed with the use of equipment such as a skid steer, backhoe, and front-end loader. The removed materials shall be hauled to an acceptable landfill site unless otherwise legally permitted to be utilized elsewhere. Materials are not to be stored onsite. Equipment shall utilize the designated access roads and shall not be used in a manner to cause damage to adjacent vegetated and stable areas to the extent possible. If drainage channels contain wetlands many activities, including maintenance, may be subject to regulation and permitting.

Erosion control and restoration work such as side slope reconstruction, revegetation, riprap installation, and other stabilization methods will require the use of heavy equipment.

|  |
|--|
| Maintaining altered watercourses is a minimum requirement of the National Flood Insurance Program (NFIP). In fact, failure to maintain such watercourses may result in a revision to the community's Flood Insurance Rate Map (FIRM). If a stream is altered after the community's FIRM is published, the NFIP requires the community to ensure that the channel's carrying capacity is not adversely altered. This is required in 44 CFR 60.3(b)(7) of the Federal Emergency Management Agency's (FEMA's) NFIP regulations. |
|--|

**Table 1 – General Channel Maintenance Guidelines**

| <b>Activity</b>                              | <b>Maintenance Action</b>   | <b>Frequency of Action</b>   |
|--|---|--|
| Mowing, vegetation management, and lawn care | Occasional mowing to limit unwanted vegetation. Maintain irrigated turf grass as 2 to 4 inches tall and non-irrigated native grasses at 4 to 6 inches tall.   | Routine – depending on aesthetic requirements.   |
| Debris and litter removal                    | Remove debris and litter from the entire channel to improve flow characteristics and aesthetics. Dispose of as appropriate.   | Routine – including annual, pre-storm season (April and May) and following significant rainfall events.                                |
| Erosion and sediment control                 | Repair and revegetate eroded areas in the channel.  | Non-routine –as necessary based on inspection.   |
| Structural                                   | Repair inflow structures, low flow channel linings, and energy dissipation structures as needed.  | Non-routine – repair as needed based on regular inspections.   |
| Inspections                                  | Inspect channel to ensure continued function as initially intended. Check for erosion, slumping, excessive sedimentation, overgrowth, embankment and inflow integrity, and damage to any structural elements. Report any illicit discharge immediately. | Routine – annual inspection of hydraulic and structural facilities. Also check for obvious problems during routine maintenance visits. |
| Nuisance control                             | Address odor, insects, and other issues associated with stagnant or standing water.   | Non-routine –as necessary per inspection or complaint.   |
| Sediment removal                             | Remove accumulated sediment from the channel bottom.  | Non-routine –as necessary per inspection.  |

**Routine Maintenance Activities**

The majority of this work consists of scheduled mowing, litter and debris pickups for the drainage channel during the growing season. It also includes activities such as weed control. These activities normally will be performed numerous times during the year. These items typically do not require any prior correspondence with EPC, however, completed inspection and maintenance forms shall be retained and submitted to EPC for each inspection and maintenance upon request. The Routine Maintenance Activities are summarized below, and further described in the following sections.

**Table 2 – Summary of Routine Maintenance Activities**

| <b>Activity</b>                     | <b>Maintenance Action</b>                               | <b>Look for:</b>                      | <b>Minimum Frequency</b>         |
|-------------------------------------|---|---------------------------------------|----------------------------------|
| Mowing                              | 2"-4" irrigated grass height; 4-6" natural grass height | Excessive grass height/aesthetics     | Routine – twice annually         |
| Litter / Debris Removal             | Remove and dispose of litter and debris                 | Litter / debris in drainage channel   | Routine – twice annually         |
| Woody growth control / weed removal | Treat w/herbicide or hand pull                          | Noxious weeds, undesirable vegetation | Routine – minimum twice annually |



Properly dispose of litter and debris materials at an approved landfill or recycling facility. It should be noted that major debris removal may require other regulatory permits prior to completing the work.

Noxious weeds and other unwanted vegetation must be treated as needed throughout the drainage channel. This activity can be performed either through mechanical means (mowing/pulling) or with herbicide. Consultation with the County Environmental Division is recommended prior to the use of herbicide. Herbicides should be utilized sparingly and as a last resort. All herbicide applications should be in accordance with the manufacturer’s recommendations.

Minor Maintenance Activities

This work consists of a variety of isolated or small-scale maintenance/operational problems. Most of this work can be completed by a small crew, hand tools, and small equipment. These items may require prior approval from EPC depending on the scope of work. Completed inspection and maintenance forms shall be retained for each inspection and maintenance period. In the event that the drainage channel needs to be dewatered, care should be given to ensure sediment, filter material and other pollutants are not discharged. The appropriate permits shall be obtained prior to any dewatering activity.

**Table 3 – Summary of Minor Maintenance Activities**

| <b>Activity</b>            | <b>Maintenance Action</b>   | <b>Look for:</b>   | <b>Minimum Frequency</b>                      |
|----------------------------|---|--|---|
| Sediment/Pollutant Removal | Remove and dispose of accumulated sediment from the channel bottom. | Minor sediment and pollution build-up in channel bottom; potential decrease in channel flow rate | Non-routine – as needed based on inspection.  |
| Erosion Repair             | Repair eroded areas and revegetate; address cause.                  | Rills/gullies on sides of channel  | Non-routine – as needed, based on inspection. |

Major Maintenance Activities

This work consists of larger maintenance/operational problems and failures within the stormwater drainage facilities. This work will likely require approval from EPC Engineering to ensure the proper maintenance is performed. This work requires that Engineering Staff review the original design and construction drawings to assess the situation and necessary maintenance activities. This work may also require more specialized maintenance equipment, design plans/details, surveying, and assistance through private contractors and consultants. In the event that the drainage channel needs to be dewatered, care should be given to ensure sediment, filter material and other pollutants are not discharged. The appropriate permits shall be obtained prior to any dewatering activity.

**Table 4 – Summary of Major Maintenance Activities**

| <b>Activity</b>                    | <b>Maintenance Action</b>   | <b>Look for:</b>   | <b>Minimum Frequency</b>   |
|------------------------------------|---|--|--|
| Major Sediment / Pollutant Removal | Remove and dispose of sediment. Repair vegetation as necessary              | Large quantities of sediment in the channel and reduced conveyance rate/capacity   | Non-routine –as necessary based on inspection.                     |
| Major Erosion Repair               | Repair erosion – find cause of problem and address to avoid future erosion  | Severe erosion including gullies, excessive soil displacement, unusual areas of settlement, holes                          | Non-routine –as necessary based on inspection.                     |
| Structural Repair                  | Structural repair to restore portions of the channel to its original design | Deterioration and/or damage to structural components – broken concrete, damaged pipe, drop/check structures or dissipators | Non-routine –as necessary based on inspection.                     |
| Drainage Channel Rebuild           | Contact EPC Engineering   | Overall channel failure  | Non-routine –as needed due to complete failure of drainage channel |

Inspection Procedures

Periodic inspections of drainage channels and associated stormwater control measures in developed areas are needed in every community to prevent the accumulation of debris deposited by storms, dumping, or natural processes. Inspections must be conducted at least once each year and after each storm that could adversely impact the drainage system. Inspections are also needed in response to citizen complaints.

Conduct annual visual inspections during the dry season to determine if there are problem inlets where sediment/trash or other pollutants accumulate. Inspection and maintenance records should be used to determine problem areas that may need to be checked more often. Appropriate action must be taken after an inspection identifies the need for maintenance or cleaning.

The attached form includes the typical information necessary for and during an inspection. Similar forms or electronic record keeping may be utilized if all relevant information is recorded. The entity responsible for channel maintenance is required to submit the periodic inspection reports upon request by County Staff. Inspections involving decisions about structural issues shall be signed by a licensed professional engineer.

Inspections of inflow structures including detention spillways and water quality outlet pipes discharging to the channel shall be coordinated with channel inspections.

Illicit discharges such as dumping of home goods or garbage, appliances, yard wastes, paint spills, abandoned oil containers and other pollutants shall be immediately reported to EPC Staff and other agencies as appropriate. Reference El Paso County Ordinance No. 07-01, as amended. EPC recommends that the responsible entity encourage public

reporting of improper waste disposal by posting “No Dumping” signs, neighborhood notices, and/or social media when available, with contact information to report violations.

### Wetlands

If drainage channels contain wetlands many activities, including maintenance, may be subject to regulation and permitting. The responsible maintenance entity shall maintain wetlands vegetation as appropriate and in consultation with the proper authorities including the U.S. Army Corps of Engineers when applicable. The responsible maintenance entity shall ensure proper training / licensing of contractors and staff to minimize the potential for damages to the wetlands.

All applicable safety and environmental considerations with regards to the application of any pesticides or herbicides shall be verified. It is also strongly encouraged that the responsible entity employ or consult a wetlands specialist or certified arborist with the ability to identify invasive/exotic species. Due to the sensitive nature of using chemicals near water bodies, a written Quality Assurance/Quality Control (QA/QC) plan shall be implemented.

Employees shall be trained in accordance with any local, state, and federal regulations and laws prior to any application of chemicals. A copy of the QA/QC plan must be submitted to the County Environmental Division prior to any chemical applications. In addition to the QA/QC plan, copies of the Safety Data Sheets (SDS) for all the chemicals being used shall be provided upon request.

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

Section 404 - establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. CWA Section 404(b)(1) Guidelines – U.S. Environmental Protection Agency (EPA) (Although they are called “guidelines,” these criteria are established in regulations (40 CFR Part 230) and are legally binding.)

<https://www.epa.gov/cwa-404/clean-water-laws-regulations-and-executive-orders-related-section-404>

Open Drainage Channel Inspection Report Form

Date: \_\_\_\_\_ Inspector: \_\_\_\_\_

Type of inspection: Post-Storm \_\_\_\_\_ Complaint \_\_\_\_\_ Routine \_\_\_\_\_

Location: (Identify stream or basin name, downstream and upstream streets or reference points, and location of problem. Provide sketch as needed.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Type of problem: Litter \_\_\_ Minor \_\_\_ Obstruction \_\_\_ Structural \_\_\_ Illicit Discharge\*\* \_\_\_

Recommended maintenance: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Is equipment needed? \_\_\_\_\_ If so, list equipment needed: \_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_ Offsite Right of entry needed? \_\_\_\_\_

Work order description: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

State permit(s) needed? \_\_\_\_\_ Work order number: \_\_\_\_\_

Date: \_\_\_\_\_ Crew chief: \_\_\_\_\_

Maintenance performed: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspected by: \_\_\_\_\_

Use other side for additional recommendations for this site.

**\*\*Report illicit discharges to the County and appropriate agencies.**